

ROBOTICS

Product specification

Robot stopping distances according to
ISO 10218-1



Trace back information:
Workspace Main version a563
Checked in 2024-02-05
Skribenta version 5.5.019

Product specification
Robot stopping distances according to ISO 10218-1

Document ID: 3HAC048645-001

Revision: AB

The information in this manual is subject to change without notice and should not be construed as a commitment by ABB. ABB assumes no responsibility for any errors that may appear in this manual.

Except as may be expressly stated anywhere in this manual, nothing herein shall be construed as any kind of guarantee or warranty by ABB for losses, damage to persons or property, fitness for a specific purpose or the like.

In no event shall ABB be liable for incidental or consequential damages arising from use of this manual and products described herein.

This manual and parts thereof must not be reproduced or copied without ABB's written permission.

Keep for future reference.

Additional copies of this manual may be obtained from ABB.

Original instructions.

© Copyright 2013-2024 ABB. All rights reserved.
Specifications subject to change without notice.

Table of contents

Overview of this specification	9
1 About the data	13
2 Measuring stopping distance and time	17
3 IRB 910SC	19
3.1 IRB 910SC 0.45 m 3 kg	19
3.2 IRB 910SC 0.55 m 3 kg	28
3.3 IRB 910SC 0.65 m 3 kg	37
4 IRB 1200	47
4.1 IRB 1200 0.7 m 7 kg	47
4.2 IRB 1200 0.7 m 7 kg	56
4.3 IRB 1200 0.9 m 5 kg	65
4.4 IRB 1200 0.9 m 5 kg	74
5 IRB 1410	83
5.1 IRB 1410 1.44 m 5 kg	83
6 IRB 1510	93
6.1 IRB 1510ID 1.5 m 4 kg	93
7 IRB 1520	103
7.1 IRB 1520ID 1.5 m 4 kg	103
8 IRB 1600	113
8.1 IRB 1600 1.2 m 6 kg	113
8.2 IRB 1600 1.2 m 10 kg	122
8.3 IRB 1600 1.45 m 6 kg	131
8.4 IRB 1600 1.45 m 10 kg	140
8.5 IRB 1600ID 1.5 m 4 kg	149
9 IRB 1660	159
9.1 IRB 1660ID 1.55 m 4 kg	159
9.2 IRB 1660ID 1.55 m 6 kg	168
10 IRB 2400	177
10.1 IRB 2400 1.5 m 10 kg	177
10.2 IRB 2400 1.5 m 16 kg	186
11 IRB 2600	195
11.1 IRB 2600 1.65 m 12 kg	195
11.2 IRB 2600 1.65 m 20 kg	204
11.3 IRB 2600 1.85 m 12 kg	213
11.4 IRB 2600ID 1.85 m 15 kg	222
11.5 IRB 2600ID 2.00 m 8 kg	231
12 IRB 4400	241
12.1 IRB 4400 1.95 m 45 kg	241
12.2 IRB 4400 1.95 m 60 kg	250
12.3 IRB 4400 2.6 m 10 kg	259

Table of contents

13 IRB 4600	269
13.1 IRB 4600 2.05 m 45 kg	269
13.2 IRB 4600 2.05 m 60 kg	278
13.3 IRB 4600 2.50 m 20 kg	287
13.4 IRB 4600 2.55 m 40 kg	296
14 IRB 6620	305
14.1 IRB 6620 2.20 m 150 kg	305
15 IRB 6650	315
15.1 IRB 6650S 3.00 m 200 kg	315
15.2 IRB 6650S 3.45 m 125 kg	324
15.3 IRB 6650S 3.90 m 90 kg	333
15.4 IRB 6650SLeanID 3.0 m 190 kg	342
15.5 IRB 6650SLeanID 3.5 m 100 kg	351
16 IRB 6660	361
16.1 IRB 6660 1.90 m 205 kg	361
16.2 IRB 6660 3.10 m 130 kg	370
16.3 IRB 6660 3.35 m 100 kg	379
17 IRB 6700	389
17.1 IRB 6700 2.60 m 200 kg	389
17.2 IRB 6700 2.65 m 235 kg	398
17.3 IRB 6700 2.70 m 300 kg	407
17.4 IRB 6700 2.80 m 205 kg	416
17.5 IRB 6700 2.85 m 155 kg	425
17.6 IRB 6700 3.00 m 245 kg	434
17.7 IRB 6700 3.05 m 175 kg	443
17.8 IRB 6700 3.20 m 150 kg	452
17.9 IRB 6700Inv LeanID m 2.60 kg	461
17.10 IRB 6700Inv LeanID m 2.90 kg	470
17.11 IRB 6700Inv 2.60 m 300 kg	479
17.12 IRB 6700Inv 2.90 m 245 kg	488
17.13 IRB 6700LeanID 2.60 m 175 kg	497
17.14 IRB 6700LeanID 2.65 m 220 kg	506
17.15 IRB 6700LeanID 2.70 m 270 kg	515
17.16 IRB 6700LeanID 2.80 m 200 kg	524
17.17 IRB 6700LeanID 2.85 m 140 kg	533
17.18 IRB 6700LeanID 3.00 m 220 kg	542
17.19 IRB 6700LeanID 3.05 m 155 kg	551
17.20 IRB 6700LeanID 3.20 m 145 kg	560
18 IRB 6790	569
18.1 IRB 6790 2.65 m 235 kg	569
18.2 IRB 6790 2.80 m 205 kg	578
19 IRB 7600	587
19.1 IRB 7600 2.55 m 400 kg	587
19.2 IRB 7600 2.55 m 500 kg	596
19.3 IRB 7600 2.80 m 340 kg	605
19.4 IRB 7600 3.05 m 325 kg	614
19.5 IRB 7600 3.50 m 150 kg	623
19.6 IRB 7600LeanID 2.55 m 390 kg	632
19.7 IRB 7600LeanID 2.8 m 320 kg	641
19.8 IRB 7600LeanID 3.1 m 290 kg	650

20	IRB 8700	659
20.1	IRB 8700 3.50 m 800 kg	659
20.2	IRB 8700 4.20 m 550 kg	668
20.3	IRB 8700LeanID 3.50 m 630 kg	677
20.4	IRB 8700LeanID 4.20 m 475 kg	686
21	IRB 460	695
21.1	IRB 460 2.4 m 110 kg	695
22	IRB 660	705
22.1	IRB 660 3.15 m 180 kg	705
22.2	IRB 660 3.15 m 250 kg	714
23	IRB 760	723
23.1	IRB 760 3.2 m 445 kg	723
23.2	IRB 760 3.2 m 450 kg	732
24	IRB 360	741
24.1	IRB 360 0.8 m 1 kg	741
24.2	IRB 360 1.13 m 1 kg	745
24.3	IRB 360 1.13 m 3 kg	750
24.4	IRB 360 1.13 m 8 kg	755
24.5	IRB 360 1.6 m 1 kg	757
24.6	IRB 360 1.6 m 6 kg	759
25	IRB 365	761
25.1	IRB 365 0.8 m 1.5 kg	761
25.2	IRB 365 1.1 m 1.5 kg	763
25.3	IRB 365 1.3 m 1.5 kg	765
26	IRB 390	767
26.1	IRB 390 1.3 m 10 kg	767
26.2	IRB 390 1.3 m 15 kg	769
27	IRBP A	771
27.1	A250_D1000	771
27.2	A500_D1000	775
27.3	A500_D1450	779
27.4	A750_D1000	783
27.5	A750_D1450	787
28	IRBP B	791
28.1	B250_D1000	791
28.2	B500_D1450	797
28.3	B750_D1450	803
29	IRBP C	809
29.1	C500	809
29.2	C1000	811
30	IRBP D	813
30.1	D300_L1250_D1000	813
30.2	D300_L1600_D1000	819
30.3	D600_L1600_D1000	825
30.4	D600_L1600_D1200	831

Table of contents

30.5	D600_L2000_D1000	837
30.6	D600_L2000_D1200	843
31	IRBP K	849
31.1	K1000_D1200	849
31.2	K1000_D1400	853
31.3	K300_D1000	857
31.4	K300_D1200	861
31.5	K600_D1200	865
31.6	K600_D1400	869
32	IRBP L	873
32.1	L1000	873
32.2	L2000	875
32.3	L300	877
32.4	L5000	879
32.5	L600	881
33	IRBP R	883
33.1	R1000_L1600_D1000	883
33.2	R1000_L1600_D1200	887
33.3	R1000_L2000_D1000	891
33.4	R1000_L2000_D1200	895
33.5	R300_L1250_D1000	899
33.6	R300_L1600_D1000	903
33.7	R600_L1600_D1000	907
33.8	R600_L1600_D1200	911
33.9	R600_L2000_D1000	915
33.10	R600_L2000_D1200	919
Index		923

Overview of this specification

About this specification

This specification contains stopping distances and times for category 0 and category 1 stops, as required by EN ISO 10218-1 Annex B.

Usage

This specification should be used when calculating the safe distance in applying safeguarding devices.

Who should read this manual?

This specification is intended for:

- Personnel working with planning of robot systems

References

Documentation referred to in the manual, is listed in the table below.

Document name	Document ID
<i>Safety manual for robot - Manipulator and IRC5 or OmniCore controller</i> ⁱ	3HAC031045-001
Product specifications for the respective robots	
Standard: <i>EN ISO 10218-1, Annex B</i>	

ⁱ This manual contains all safety instructions from the product manuals for the manipulators and the controllers.




Revisions

Revision	Description
-	First edition. Release 13.2.
A	Release 14.1. The following robots are added: <ul style="list-style-type: none"> • IRB 120 • IRB 140 • IRB 6700 • IRB 260 • IRB 460 • IRB 660 • IRB 760
B	Release 15.1. The following robots are added: <ul style="list-style-type: none"> • IRB 6700 variants • IRB 1200 • IRB 1520 • IRB 1600 Descriptions about the data and measurements are updated.
C	Release 15.2. The following robots are added: <ul style="list-style-type: none"> • IRB 2400

Continues on next page

Overview of this specification

Continued

Revision	Description
	<ul style="list-style-type: none"> IRB 4400 IRB 8700  Note Category 0 values are missing for IRB 7600 2.80 m 340 kg.
D	Release 16.1. The following robots are added: <ul style="list-style-type: none"> New variants for IRB 1600ID This revision includes the following additions and/or changes: <ul style="list-style-type: none"> A description of how to measure the stopping distance and time for your installation is added, see Measuring stopping distance and time on page 17.
E	Release 16.1. <ul style="list-style-type: none"> Rename of the new variant IRB 1600ID - 6/1.55 to IRB 1660ID - 6/1.55. Re-inserted IRB 1600ID-4/1.5 that was missing in the previous revision.
F	Release 16.2. <ul style="list-style-type: none"> Improved measurements for 4-axis articulated robots. Category 0 values are added for IRB 7600 340/2.80.
G	Release 17.2. <ul style="list-style-type: none"> Updated data for all previously published robots. Added information about naming conventions, see Naming of product variants in this document on page 15. The following robots are added: <ul style="list-style-type: none"> IRB 360  Note For stop category 0, the robot may hit the mechanical stops before the speed is reduced to 0. <ul style="list-style-type: none"> IRB 6700Inv
H	Release 19A. The following robots are added: <ul style="list-style-type: none"> IRB 6790 IRBP K, IRBP L, IRB R  Note Data for IRBP C will be added in a later release.
J	The following robots are added: <ul style="list-style-type: none"> IRB 910SC
K	The following robots are added: <ul style="list-style-type: none"> IRBP A, IRBP B, IRBP D Corrected names in tables for IRBP R.
L	The following robots are added: <ul style="list-style-type: none"> IRB 910INV IRB 1100 IRBP C
M	Added back IRB 2600, that was accidentally removed from revision L.

Continues on next page

Revision	Description
N	Added correct graphics for IRB 2600. The graphics used in revisions J to M are not correct.
P	Release 20C. The category 0 stop data for all IRBP is updated with graphics. The following robots are added: <ul style="list-style-type: none"> • IRB 1300
Q	Release 20C. The following robots are added: <ul style="list-style-type: none"> • IRB 760, 445 kg variant The description about measurement and calculation is updated.
R	Release 21A. The following robots are added: <ul style="list-style-type: none"> • IRB 390
S	Release 21B. The following robots are added: <ul style="list-style-type: none"> • CRB 1100 • CRB 15000
T	Release 21C. The following robots are added: <ul style="list-style-type: none"> • IRB 920 The graphs for IRB 1660ID are corrected.
U	Release 22A. The following robots are added: <ul style="list-style-type: none"> • IRB 1300-12/1.4 • IRB 5710 • IRB 5720 The robot IRB 260 is removed as it is phased out from the official product offer.
V	Release 22B. The following robots are added: <ul style="list-style-type: none"> • IRB 365
W	Release 22C. The following robots are added: <ul style="list-style-type: none"> • IRB 1010 • IRB 920, new variants
X	Release 22D. The following robots are added: <ul style="list-style-type: none"> • CRB 1300
Y	Release 23A. <ul style="list-style-type: none"> • IRB 365, new variants • The robot IRB 140 is removed as it is phased out from the official product offer. • The robot IRB 6640 is removed as it is phased out from the official product offer.
Z	Release 23B. <ul style="list-style-type: none"> • The data for the CRB 15000 and IRB 5710/5720 robots is moved to their respective product specification. All documents are available on www.abb.com/robotics. The data for new robots is included in their respective product specification.

Continues on next page

Overview of this specification

Continued

Revision	Description
	<ul style="list-style-type: none">Removed duplicated pages for IRB 1010.
AA	<p>Release 23C.</p> <p>The following robots are added:</p> <ul style="list-style-type: none">IRB 1510 <p>The data for the CRB 1100, CRB 1300, IRB 1010, IRB 1100, IRB 1300, IRB 910INV, and IRB 920 robots is moved to their respective product specification. All documents are available on www.abb.com/robotics.</p> <p>The data for new robots is included in their respective product specification.</p>
AB	<p>Release 24A.</p> <ul style="list-style-type: none">Corrected the category 0 stop data for IRB 1600.IRB 120 is phased out from the product offer.

1 About the data

Robot stopping distances and times

For articulated and SCARA robots, all measurements and calculations of stopping distances and times are done according to ISO 10218-1, with single axis motion on axes 1, 2, and 3. If more than one axis is used for the movement, then the stopping distance and time can be longer. Normal delays of the hardware and software are taken into account.

For delta robots (parallel arm) the values are based on movement by all axes, as these axes always move together. Only stopping times are presented.

For positioners the values are based on single axis movement.

The stop categories 0 and 1 are according to IEC 60204-1.

Category 0 stops

The stopping distance and time for category 0 stops are simulated using maximum speed, maximum payload, and the arm stretched out to the maximum reach.



Note

For SCARA robots without brakes on axis 1 and 2, the stopping distances for category 0 stops in actual applications can be longer than those stated in this document because without brakes, it is the friction that will stop the robot (on axes without brakes).

Category 1 stops

The stop category 1 data are based on calculations in simulation of worst case scenarios. The data for stop category 1 are verified by measurements.

The simulations and verifications are done with the default value (100%) for the system parameter *AccSet*. Changing this value will affect the stopping distances and times (only for robots running on versions prior to RobotWare 6.01).



Note

The stop category 1 is a controlled stop and will therefore have less deviation from the programmed path compared with a stop category 0.

Robots

For robots the stopping distance and time for category 1 stop is provided for three arm extensions and three payloads. These variables are 100%, 66%, and 33% of the maximum values for the robot.

The speed and zone data in the simulations are based on TCP0.

Positioners

For positioners the stopping distance and time is provided for three payloads. No extension zones are applicable. The payloads are 100%, 66%, and 33% of the maximum values for the positioner.

Continues on next page

1 About the data

Continued

Positioners with more than one station are presented with only one station data as the stations are identical.

Loads

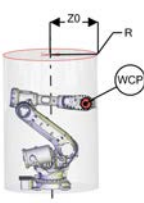
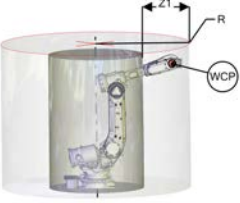

The used loads represent the rated load, with rated inertia in the load diagram, maximum cog z, and zero cog x and cog y. No arm load is used. The load diagrams are available in the respective product specification.

At 66% load and 33% load, the mass and inertia are reduced to 66% and 33% but cog z is the same as for 100% load.

Extension zones for articulated robots

The extension zone for the stop category 1 is based on the wrist center point (WCP).

The extension zone limits describe the size of the respective zones. Radius R is measured from the axis-1 center.

Zone 0 (Z0)	Zone 1 (Z1)	Zone 2 (Z2)
Radius (R) is 0-33% of maximum reach of the wrist center point (WCP).	Radius (R) is 33-66% of maximum reach of the wrist center point (WCP).	Radius (R) is 66-100% of maximum reach of the wrist center point (WCP).
 xx1300002264	 xx1300002265	 xx1300002266

Speed

For robots the TCP0 speed is measured in meters per second when the stop is triggered.

For positioners the speed is the angular speed in radians per second.

Stopping distances

The stopping distance is measured in degrees.



Note

The stopping distances are presented as angles. Large angles with TCP0 close to the rotation center do not necessarily correspond to a long stopping distance. Therefore a large stop angle can represent a short TCP stop distance.



Note

The stopping distance for delta robots is measured in meters.

Stopping times

The stopping time is measured in seconds.

Continues on next page

Limitations

The stopping distance can vary depending on additional loads on the robot.

The stopping distance for category 0 stops can vary depending on the individual brakes and their friction.

This document includes the robot variants that are part of the official product offer at the time of the release of this revision.

Naming of product variants in this document

The product variants presented in this document are named according to their reach and capacity. This corresponds to their official variant name but there are a few exceptions where the the names do not match due to different data sources. For example, IRB 6650S 125/3.5 is listed as IRB 6650S 3.45 m 125 kg.

This page is intentionally left blank

2 Measuring stopping distance and time

Preparations before measuring

For measurement and calculation of overall system stopping performance, see ISO 13855:2010.

The measurement shall be done for the selected stop category. The emergency stop button on the robot controller is configured for stop category 0 on delivery. A risk assessment can conclude the need for another stop category. The stop category can be changed through the system parameter *Function* (topic *Controller*, type *Safety Run Chain*). In case of deviations of the default configuration of stop category 0, then this is detailed in the product specification for the respective manipulator.



CAUTION

The measurement and calculation of overall stopping performance for a robot must be tested with its correct load, speed, and tools, in its actual environment, before the robot is taken into production.

All load and tool data must be correctly defined (weight, CoG, moment of inertia). The load identification service routine can be used to identify the data.



CAUTION

Follow the safety instructions in the respective product manual for the robot.

Measuring with TuneMaster

The software TuneMaster can be used to measure stopping distances and times for ABB robots. The TuneMaster software contains documentation on how to use it.

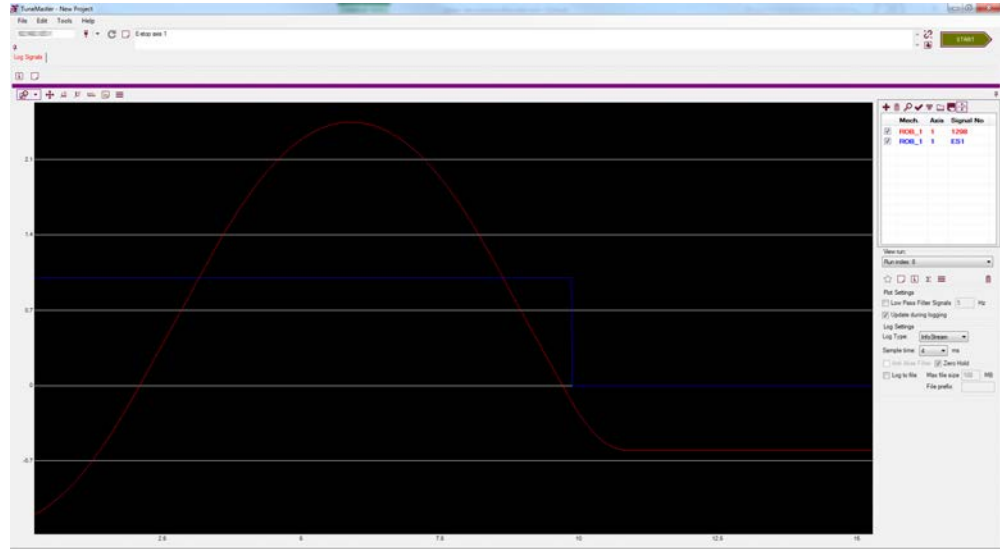
- 1 Download TuneMaster from www.abb.com/robotics, section **RobotStudio - Downloads - RobotWare Tools and Utilities**.
- 2 Install TuneMaster on a computer. Start the TuneMaster app and select **Log Signals**.
- 3 Connect to the robot controller.
- 4 Define the I/O stop signal to use for measurement, for example, ES1 for emergency stop.
- 5 Define the signal number to use for measurement, 1298 for axis position. The value is given in radians.
- 6 Start the logging in TuneMaster.
- 7 Start the test program on the controller.
- 8 When the axis has reached maximum speed, press the emergency stop button.
- 9 In TuneMaster, measure the stopping distance and time.
- 10 Repeat for all installed emergency stop buttons until the identified hazards due to stopping distance and time for axes have been verified.

Continues on next page

2 Measuring stopping distance and time

Continued

Example from TuneMaster



xx160000386

3 IRB 910SC

3.1 IRB 910SC 0.45 m 3 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	42.9	0.21
2	72.2	0.22
3	3.98	0.16

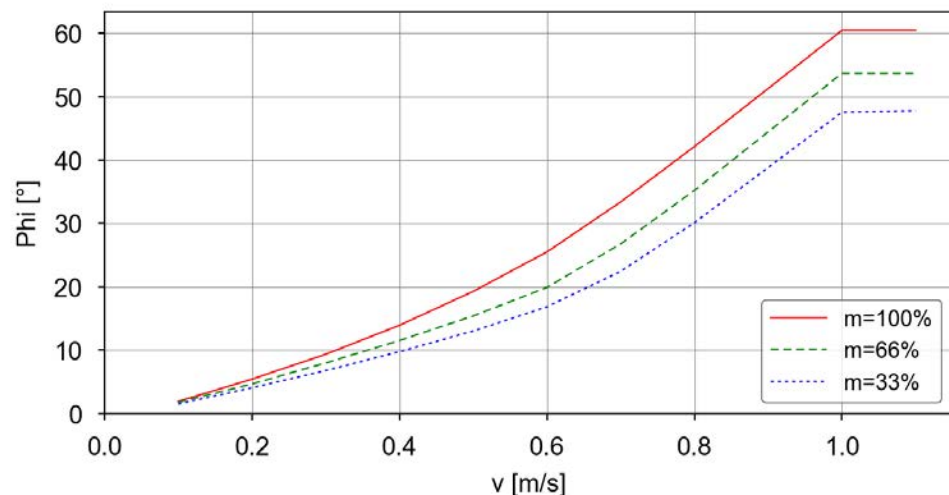
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.15
1	0.15	0.3
2	0.3	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

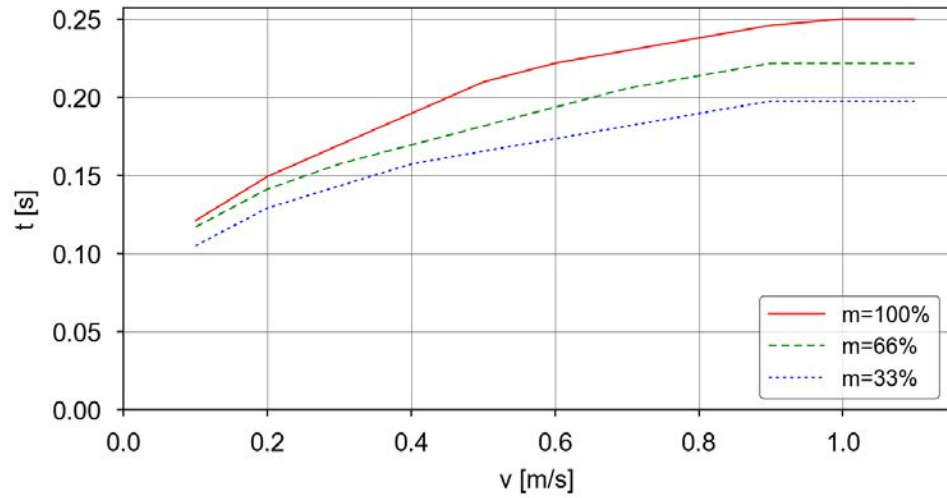


Continues on next page

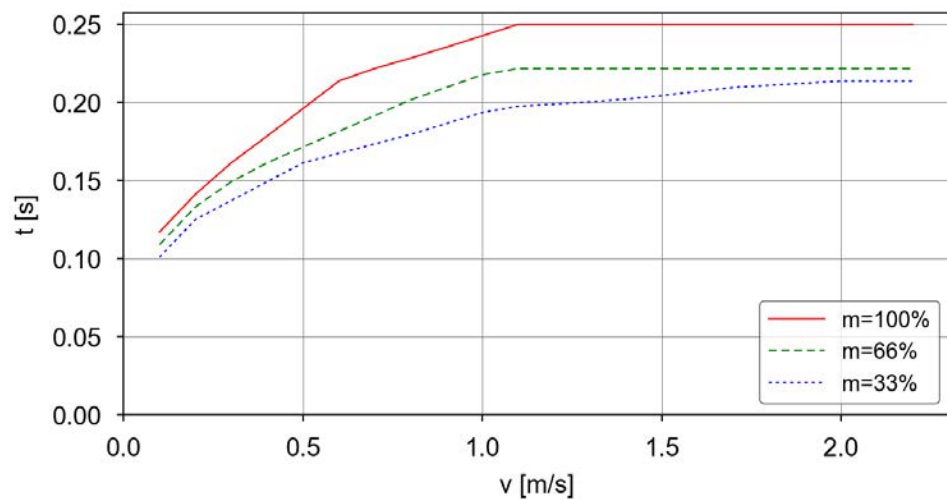
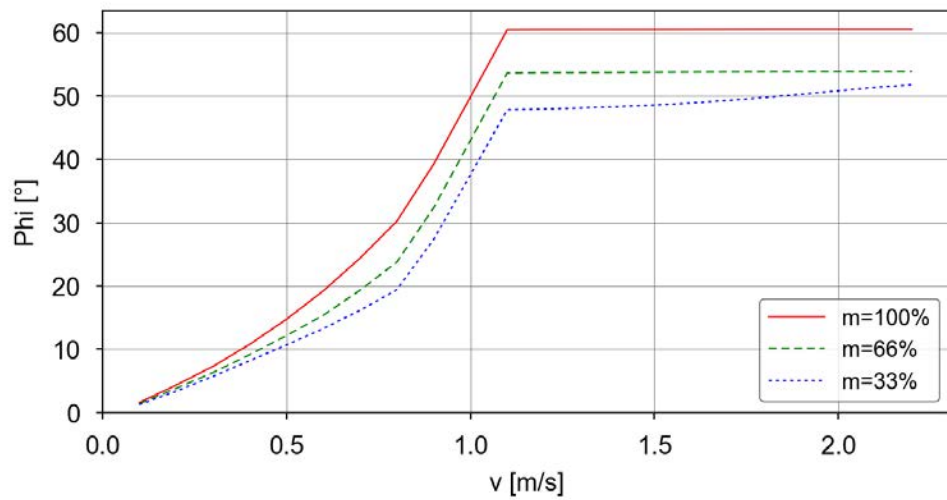
3 IRB 910SC

3.1 IRB 910SC 0.45 m 3 kg

Continued

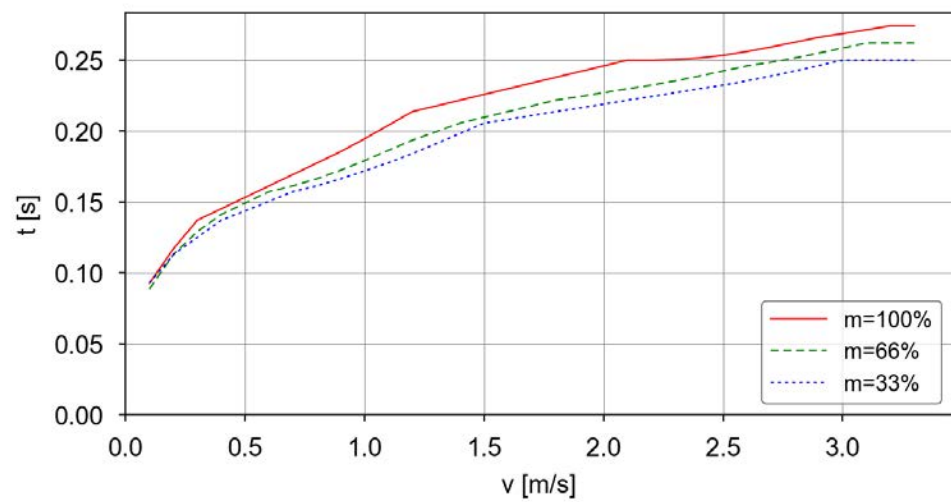
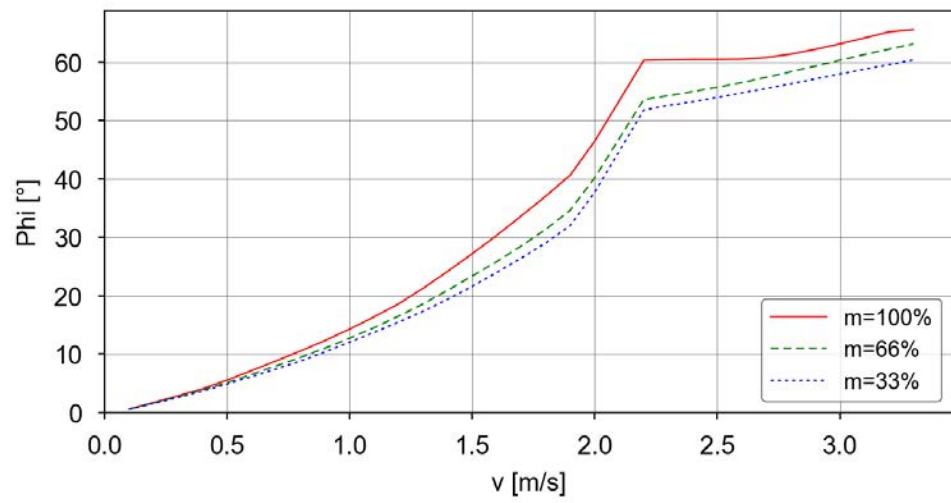


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

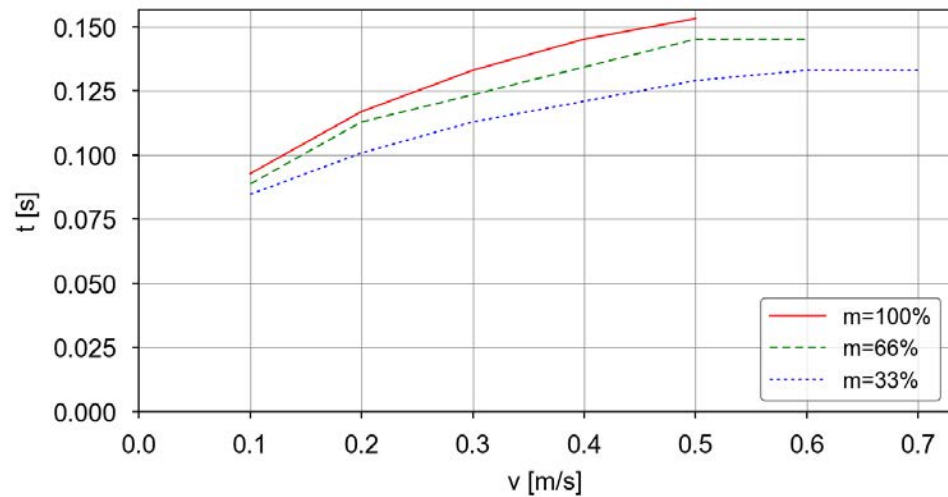
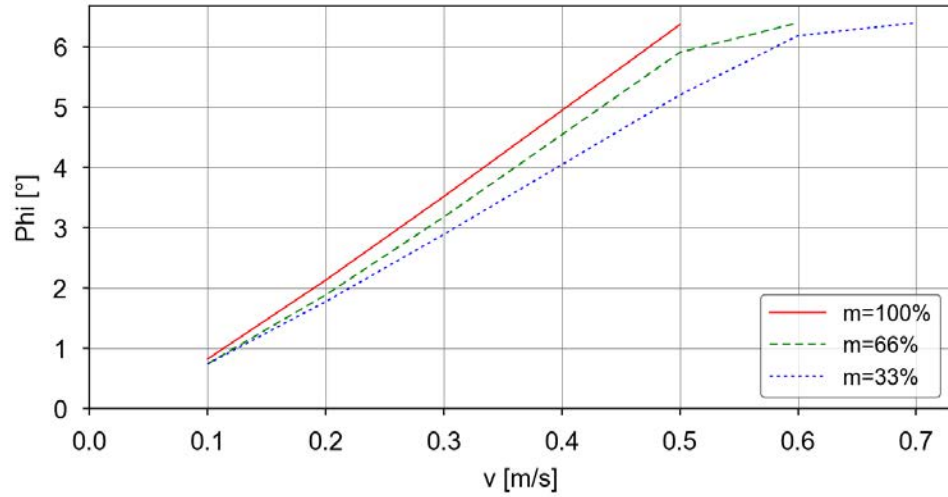
3 IRB 910SC

3.1 IRB 910SC 0.45 m 3 kg

Continued

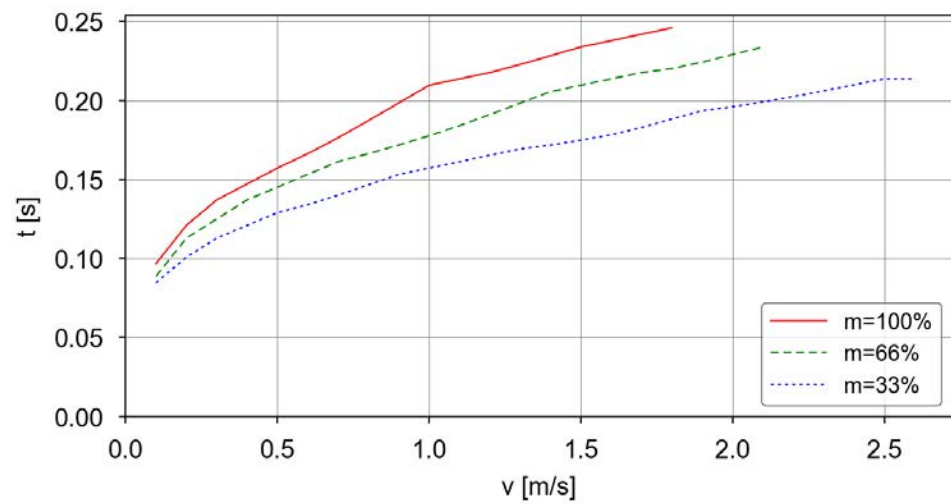
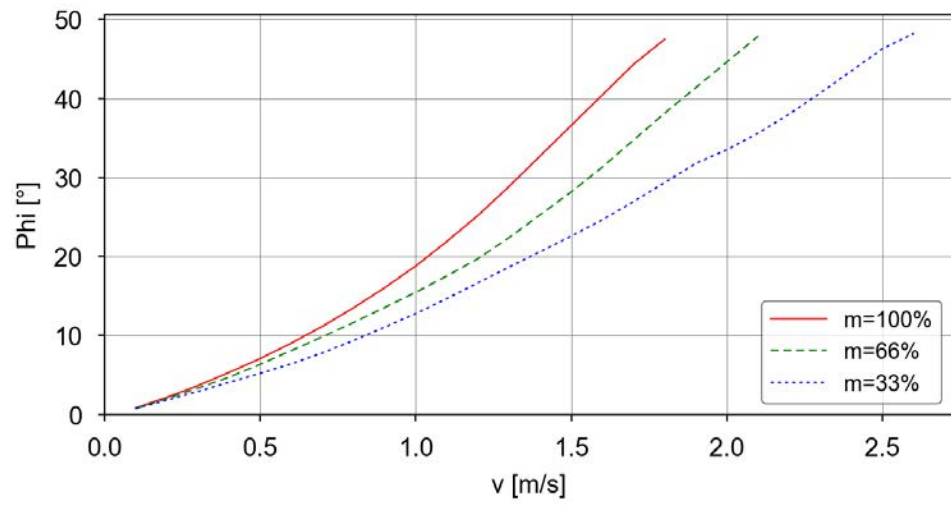
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



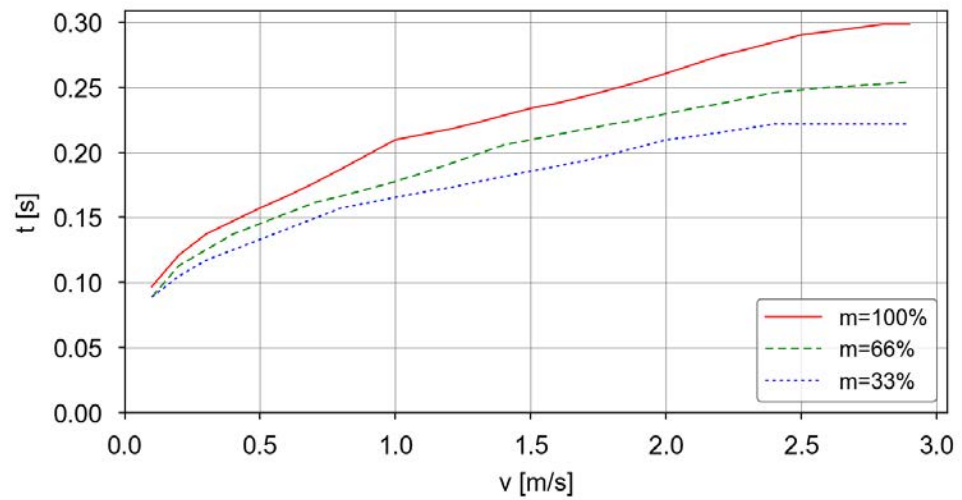
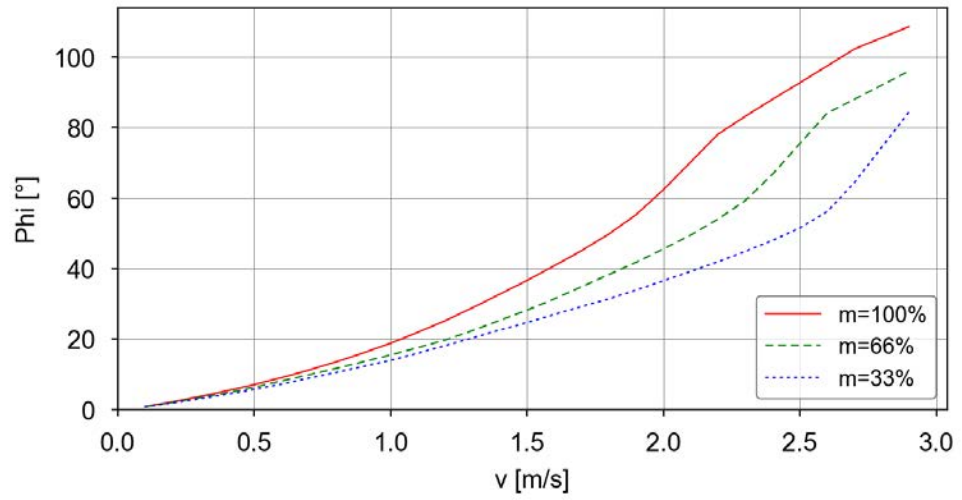
Continues on next page

3 IRB 910SC

3.1 IRB 910SC 0.45 m 3 kg

Continued

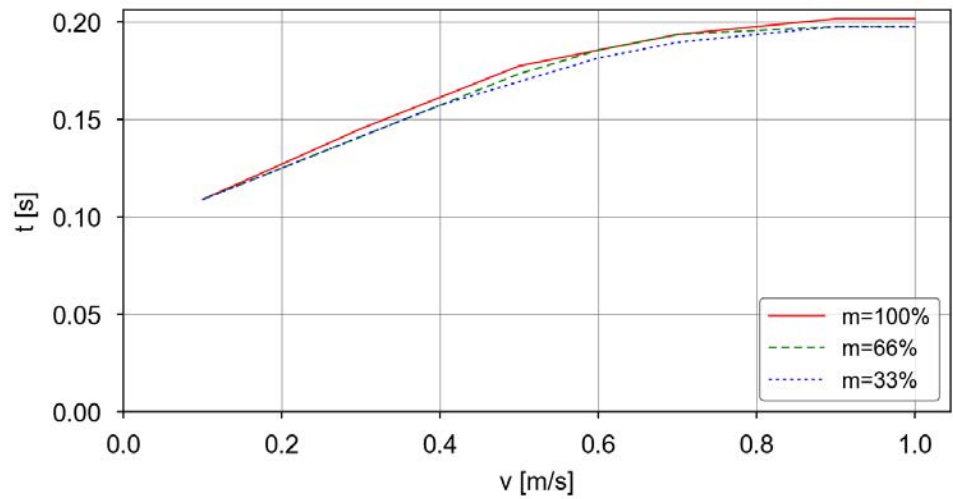
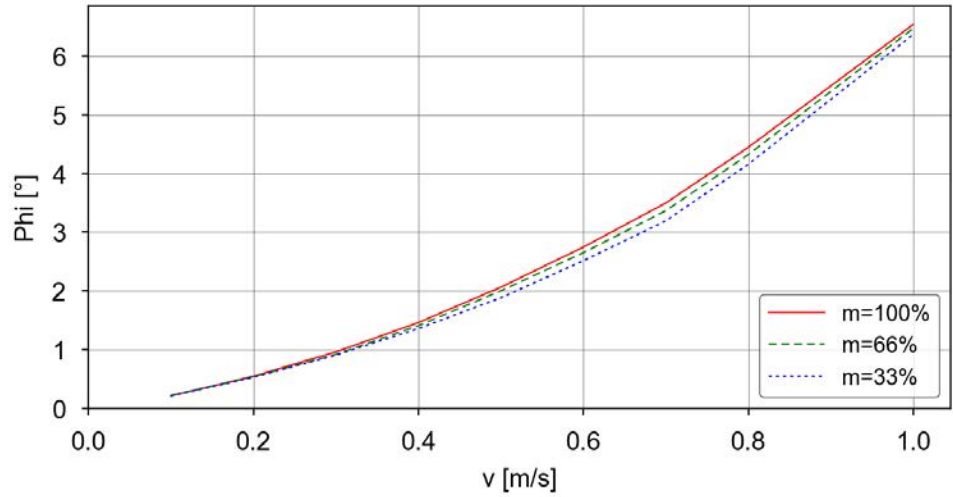
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



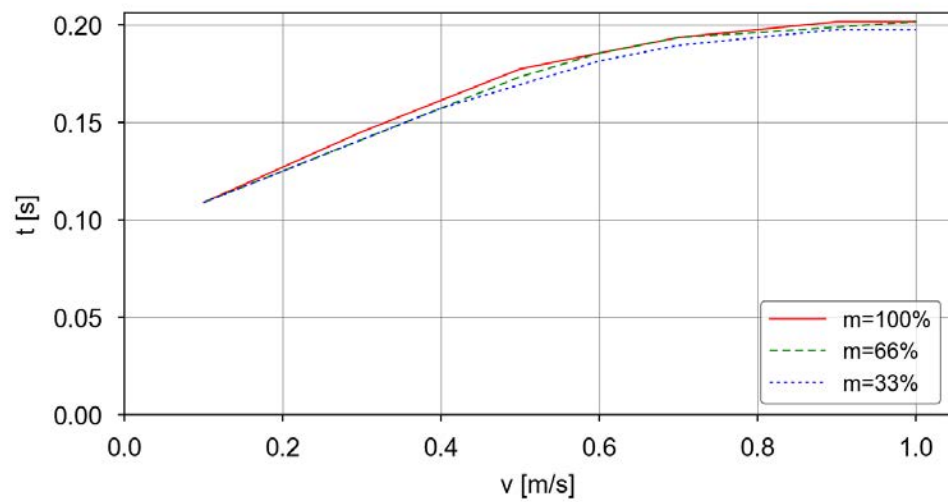
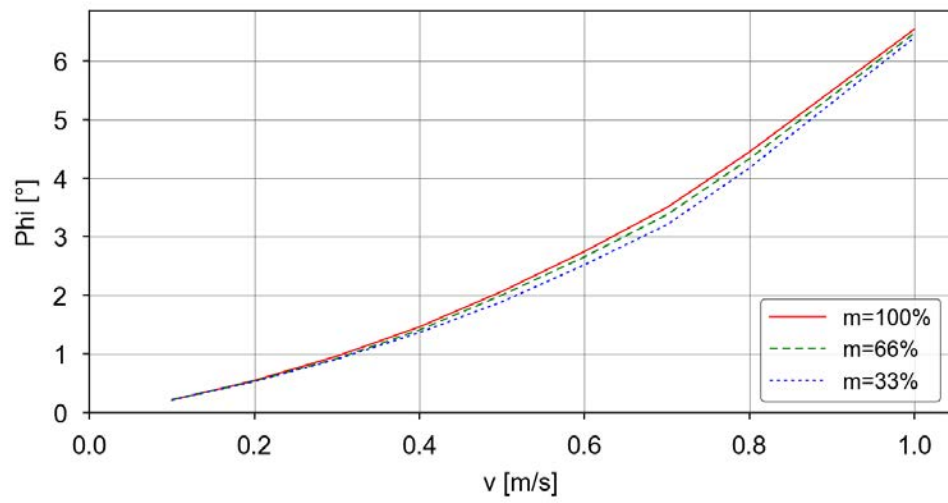
Continues on next page

3 IRB 910SC

3.1 IRB 910SC 0.45 m 3 kg

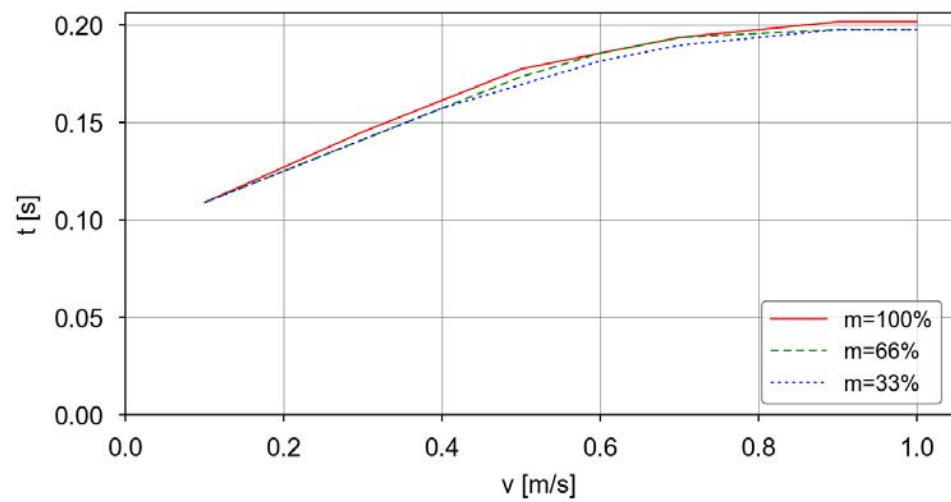
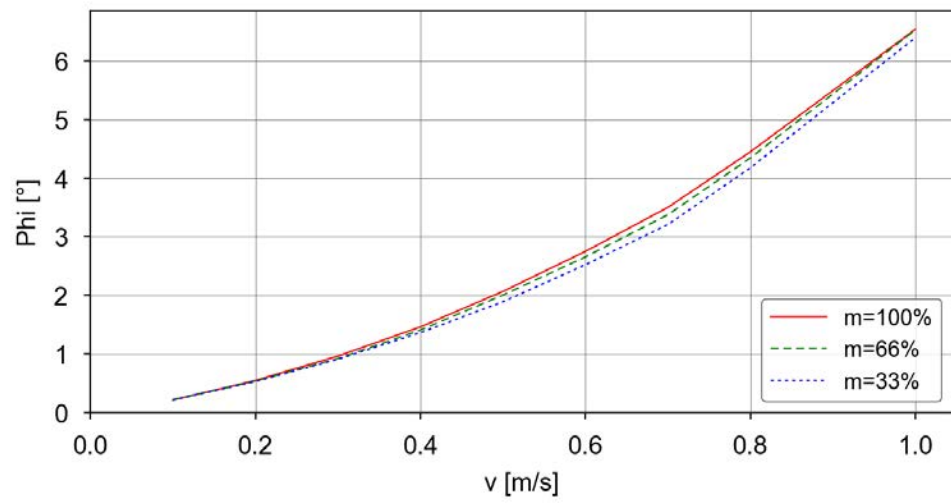
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



3 IRB 910SC

3.2 IRB 910SC 0.55 m 3 kg

3.2 IRB 910SC 0.55 m 3 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	52.75	0.27
2	71.9	0.23
3	3.98	0.16

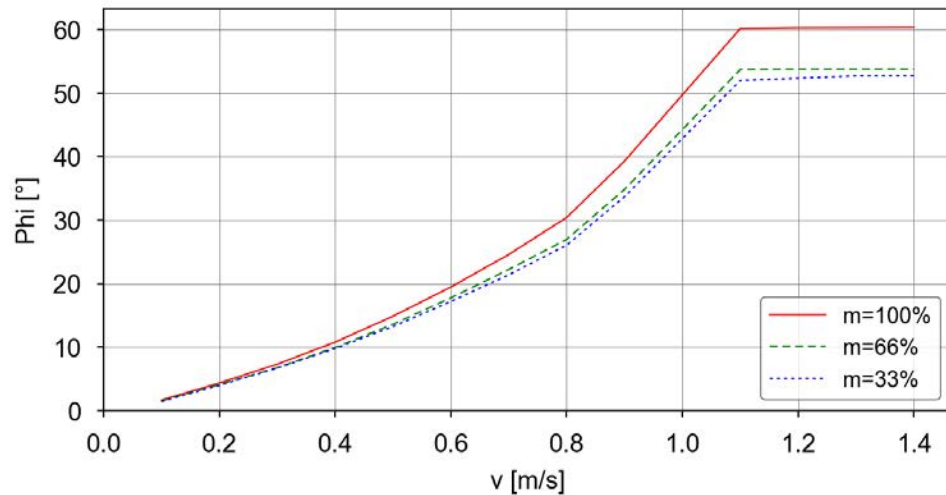
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

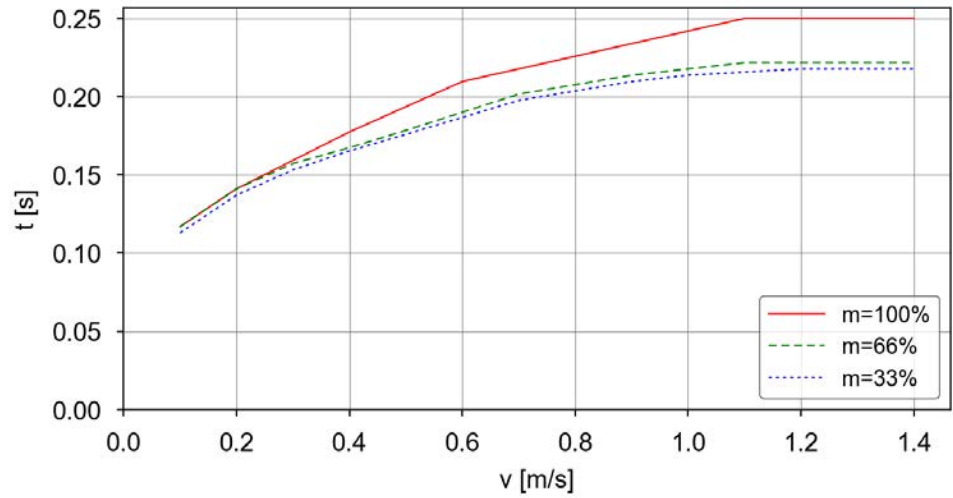
Zone	wcp min (m)	wcp max (m)
0	0	0.183
1	0.183	0.367
2	0.367	max reach

Category 1, Axis 1

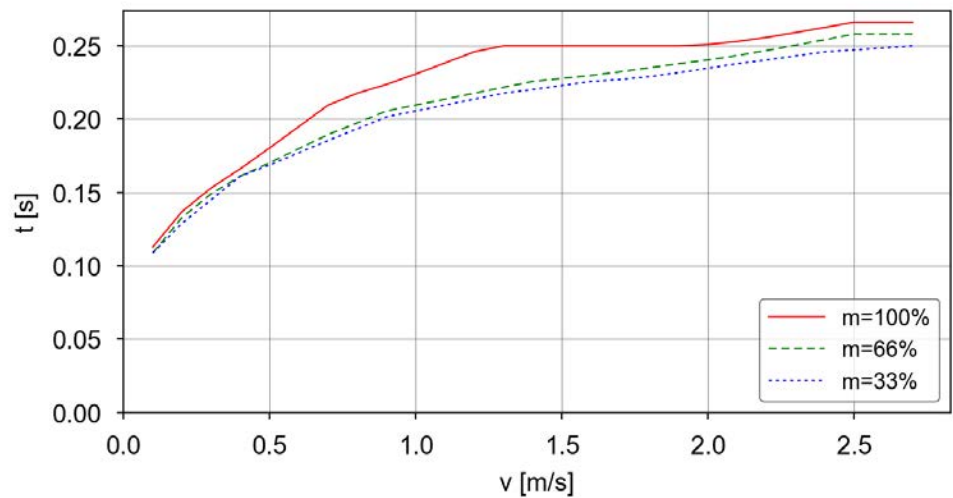
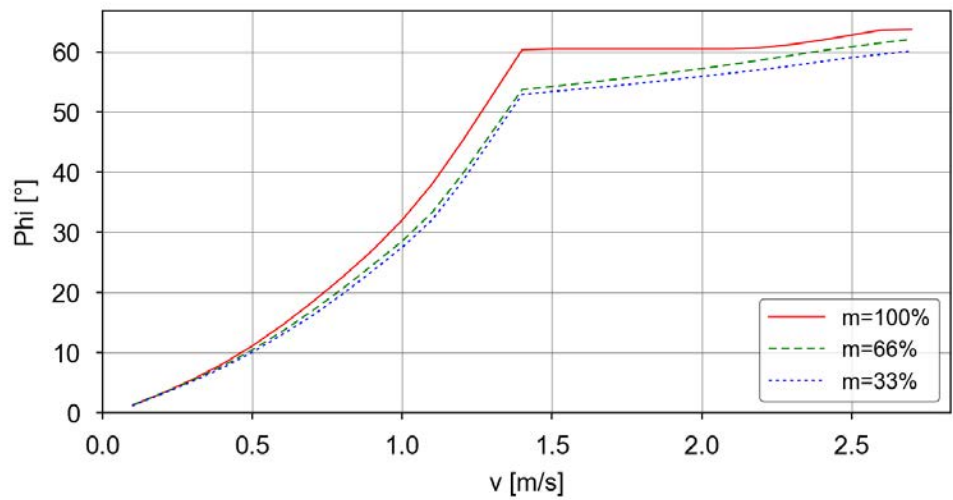
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



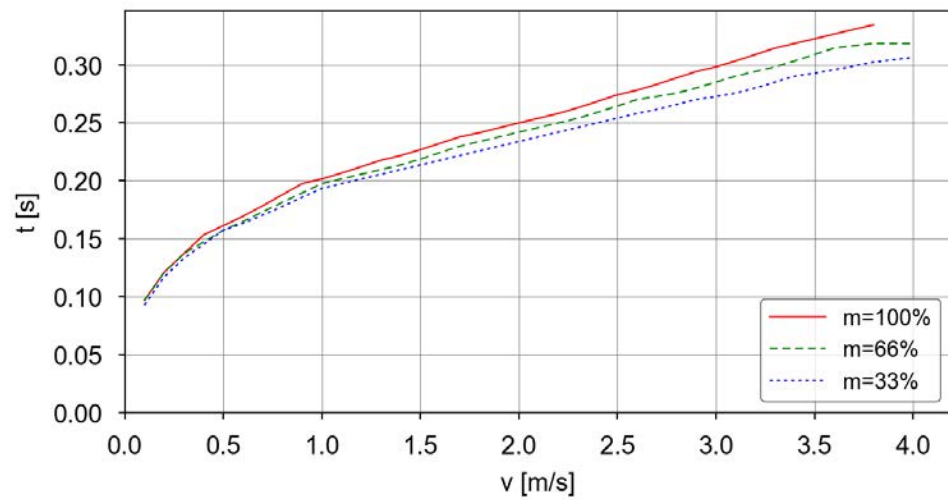
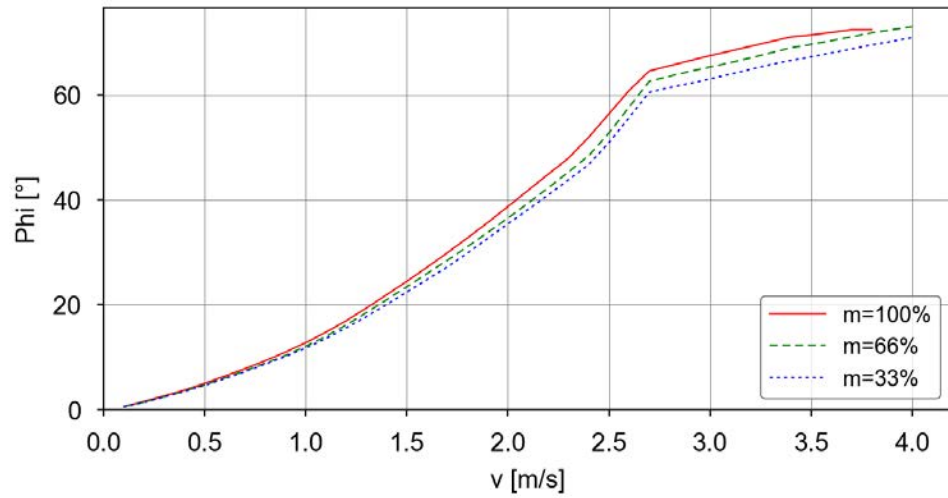
Continues on next page

3 IRB 910SC

3.2 IRB 910SC 0.55 m 3 kg

Continued

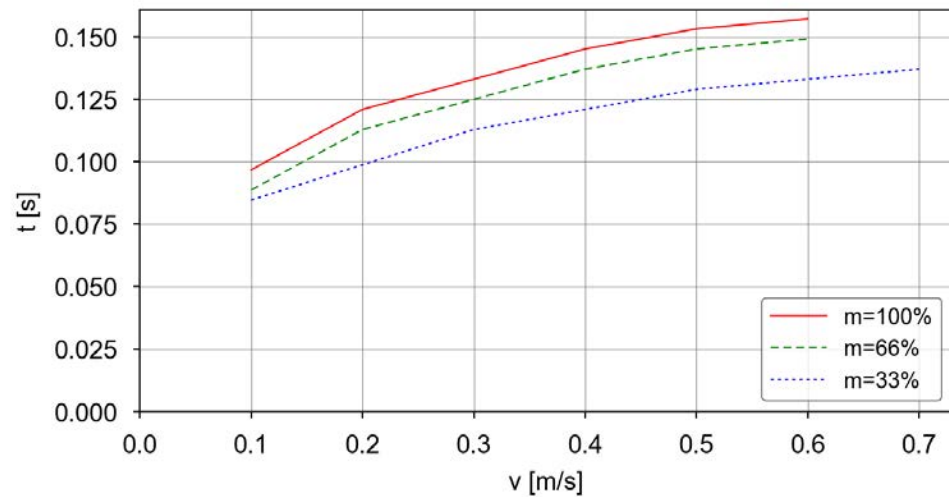
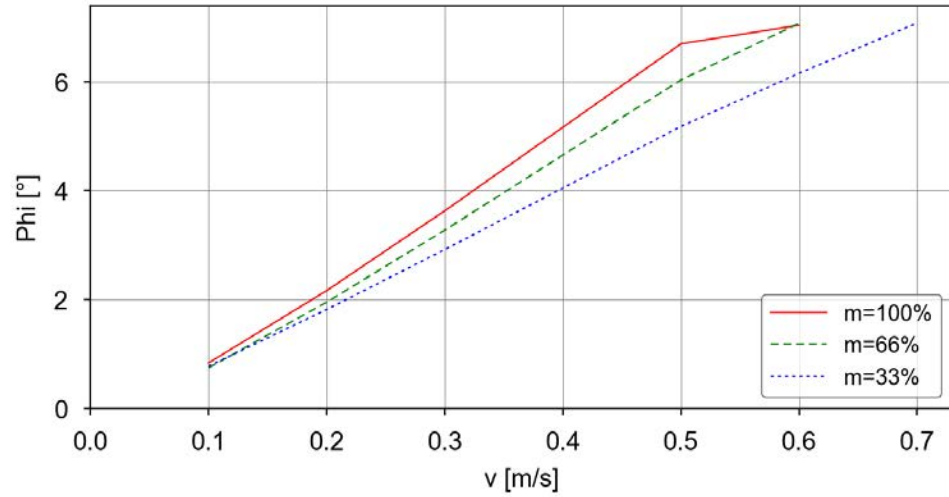
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



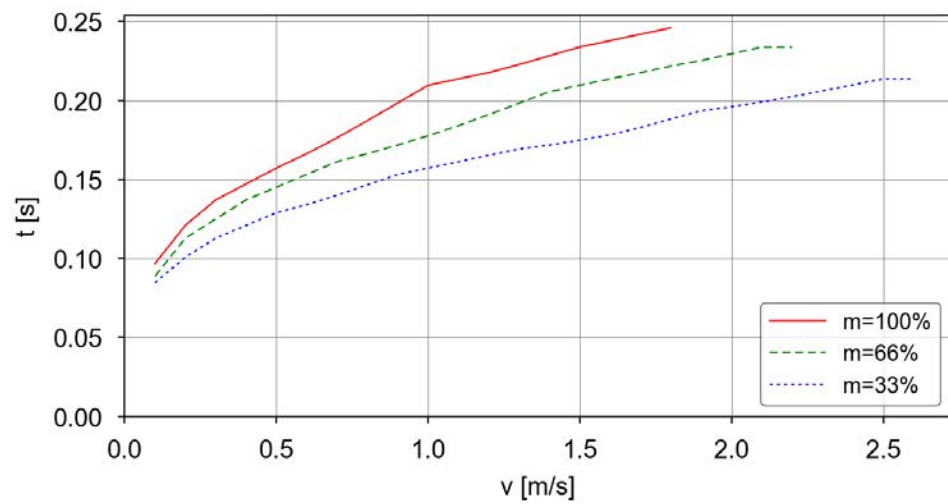
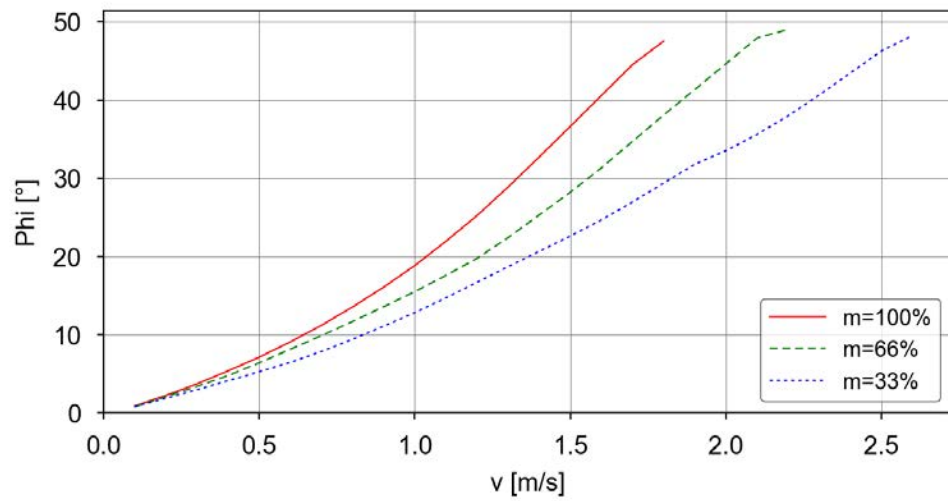
Continues on next page

3 IRB 910SC

3.2 IRB 910SC 0.55 m 3 kg

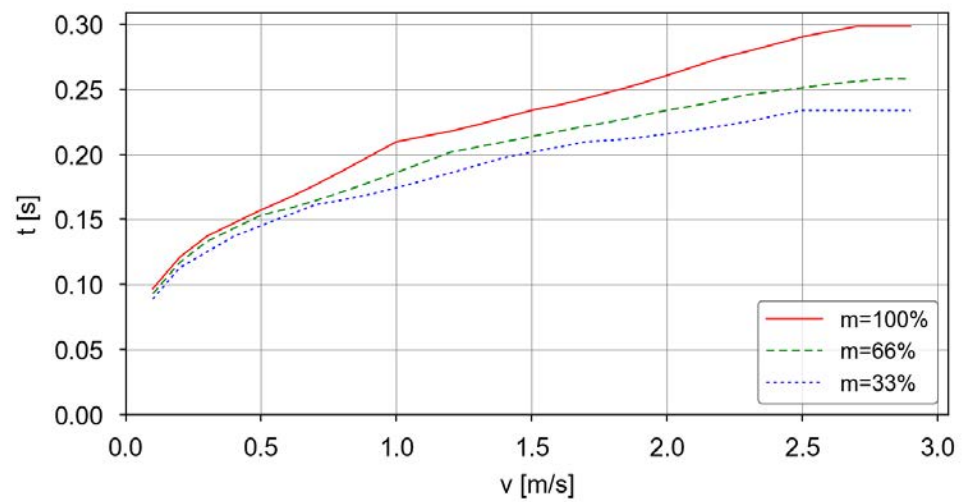
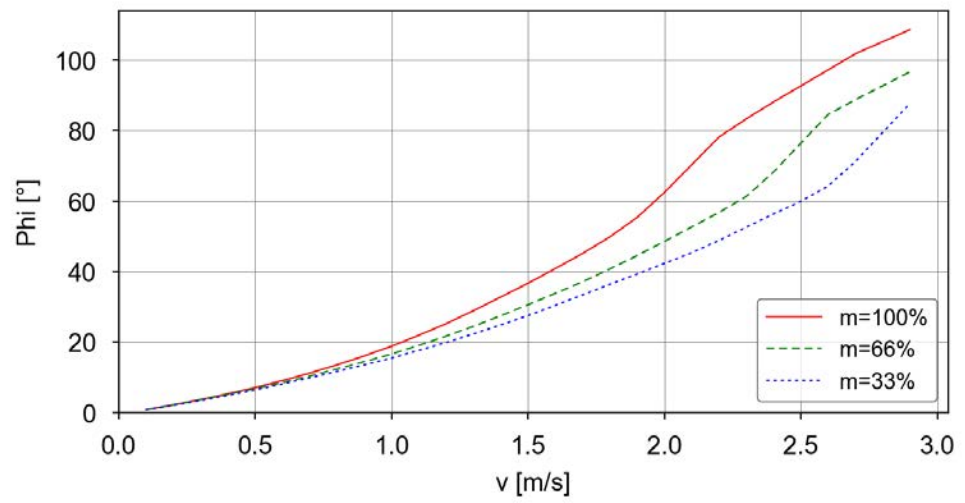
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

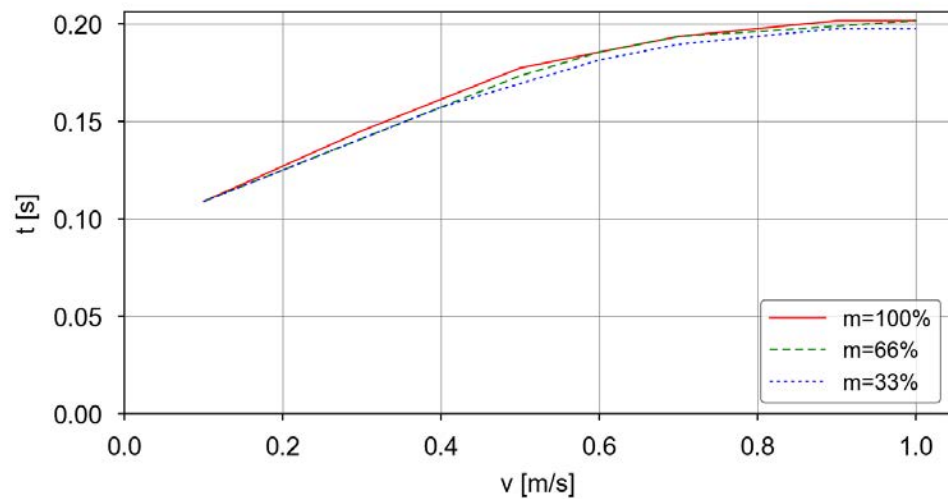
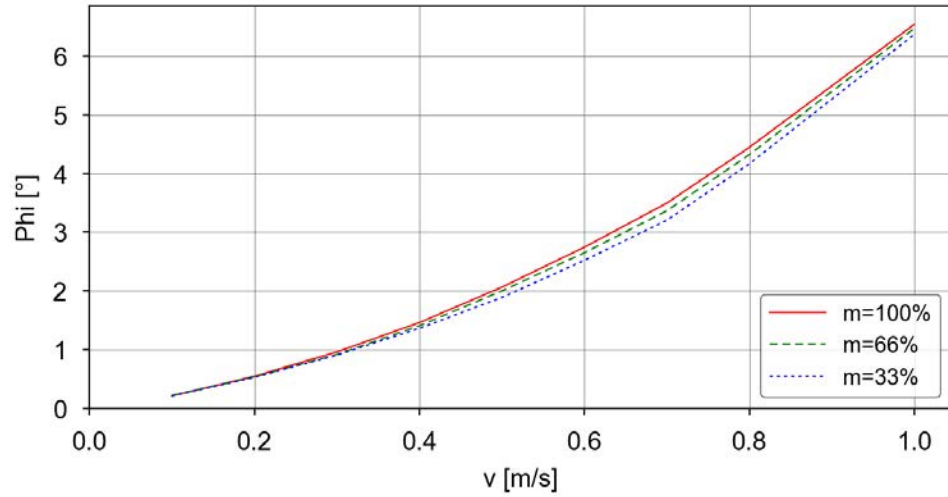
3 IRB 910SC

3.2 IRB 910SC 0.55 m 3 kg

Continued

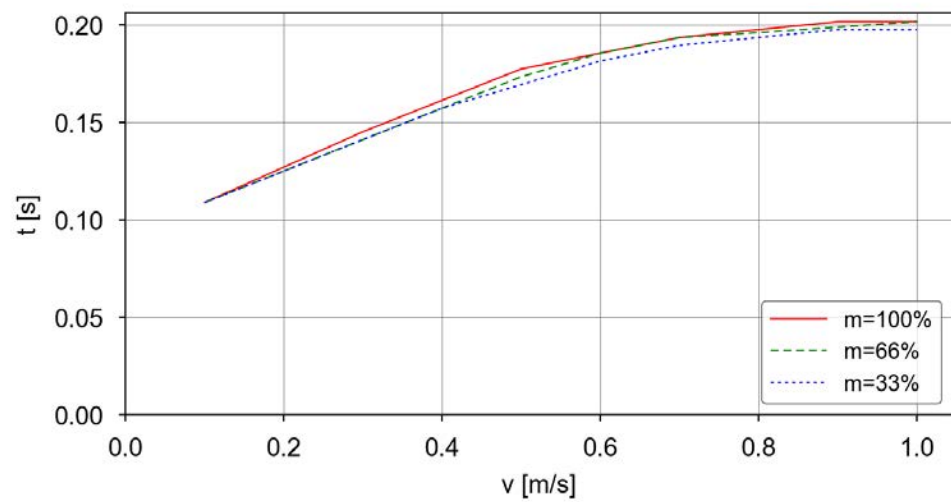
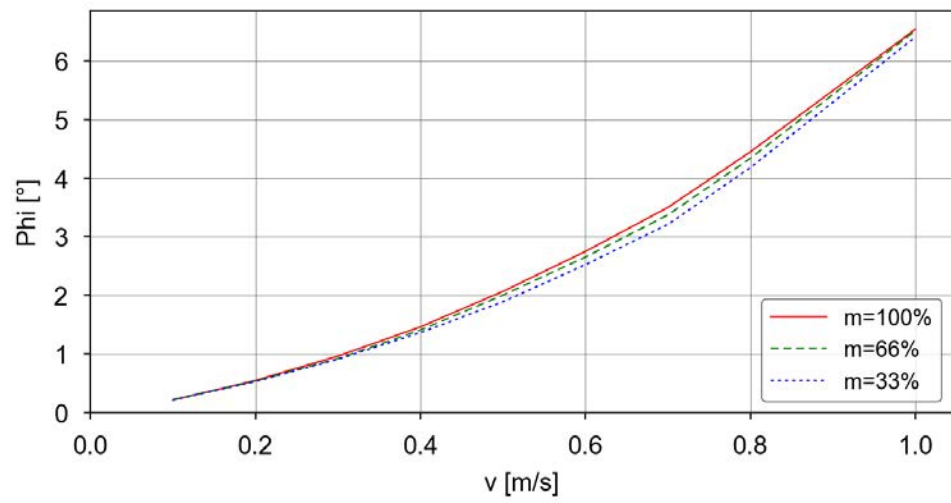
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



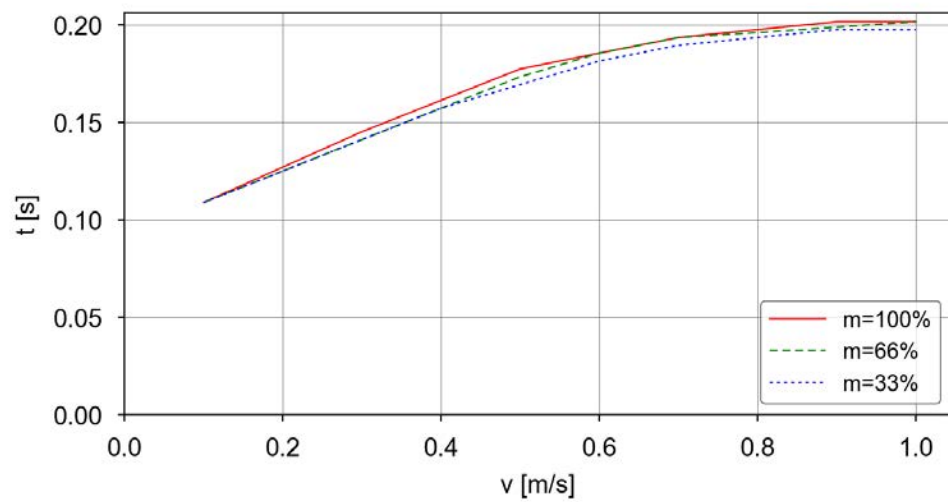
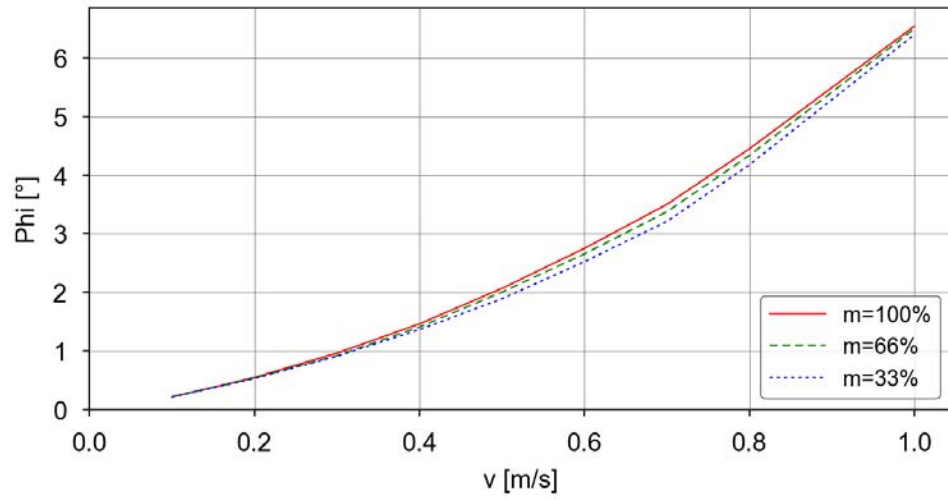
Continues on next page

3 IRB 910SC

3.2 IRB 910SC 0.55 m 3 kg

Continued

Extension zone 2, stopping distance and stopping time



3.3 IRB 910SC 0.65 m 3 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	49.33	0.29
2	66.6	0.22
3	3.98	0.16

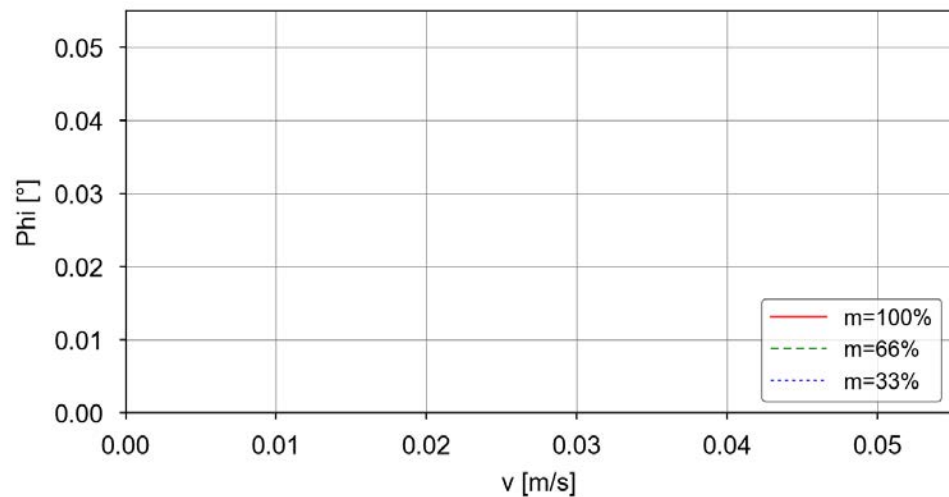
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.217
1	0.217	0.433
2	0.433	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

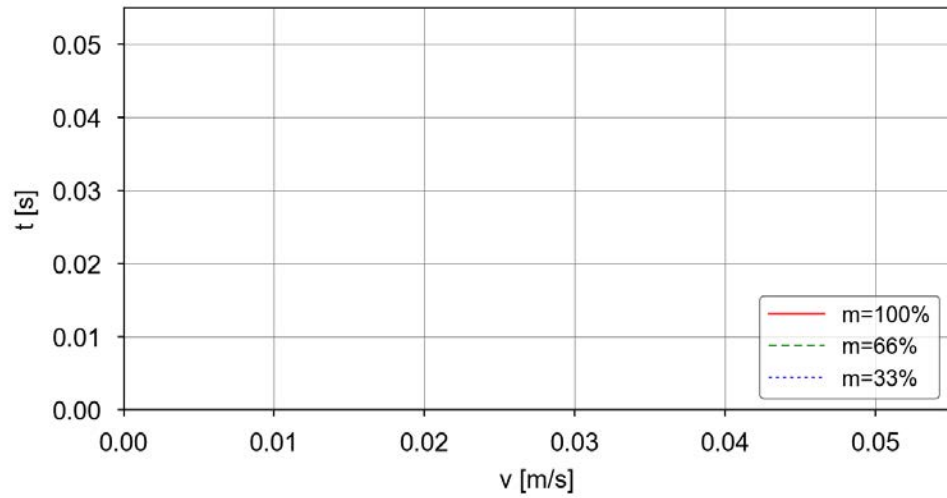


Continues on next page

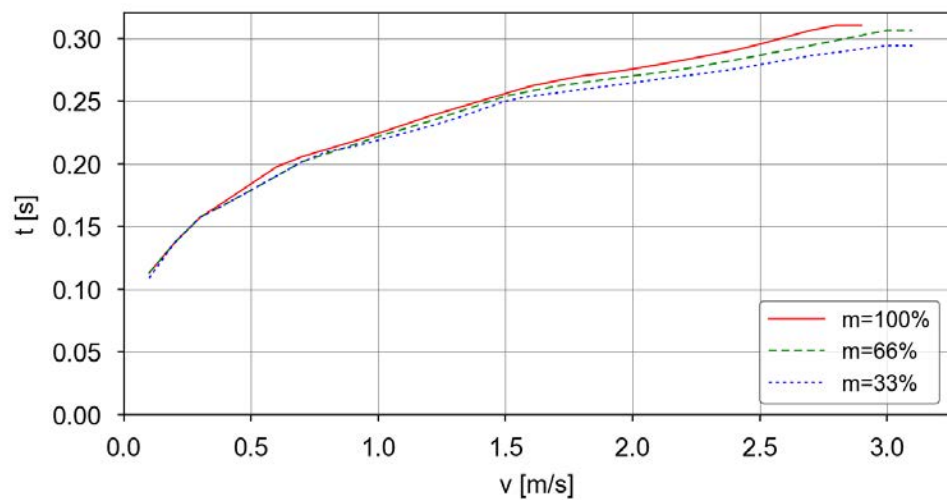
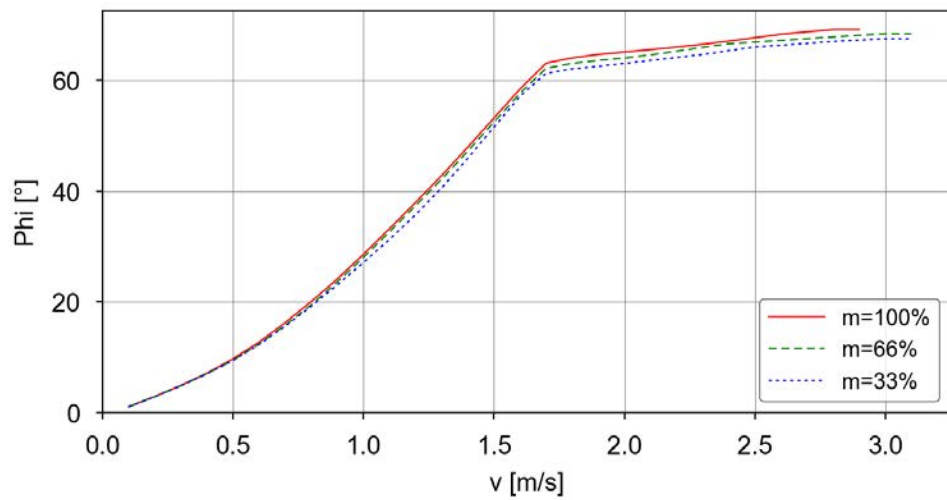
3 IRB 910SC

3.3 IRB 910SC 0.65 m 3 kg

Continued

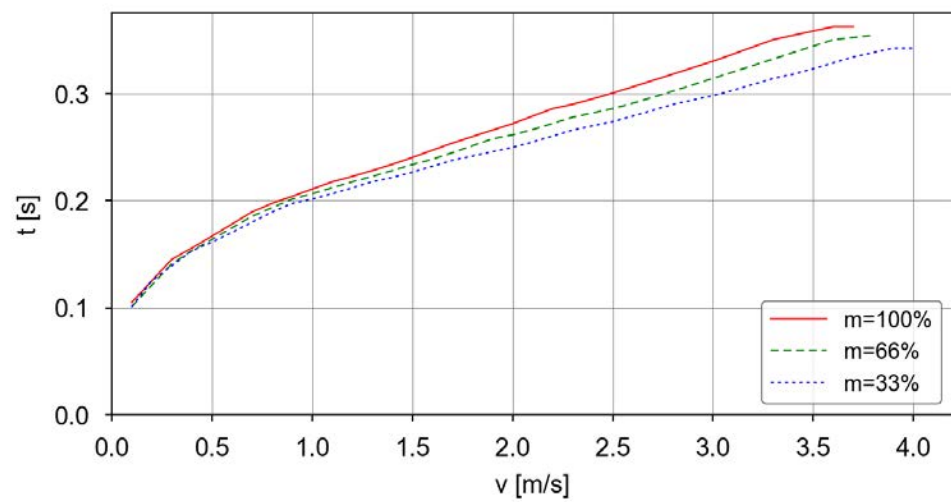
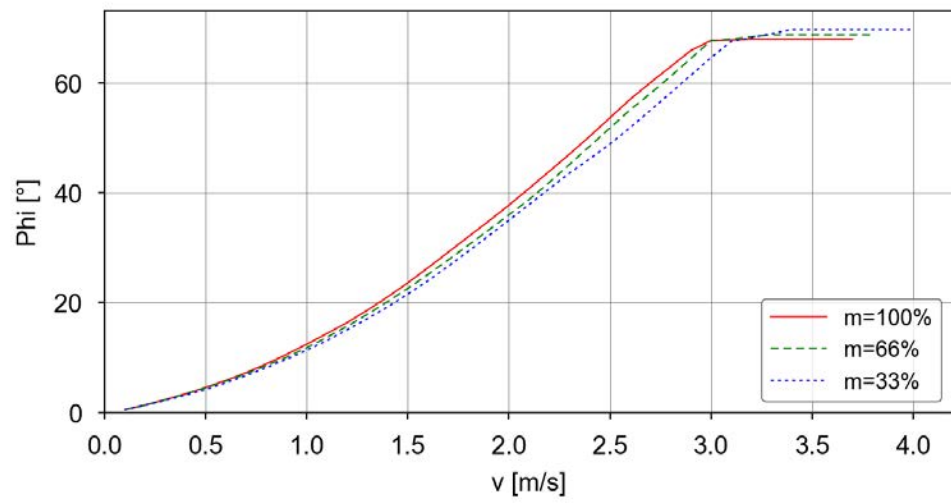


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

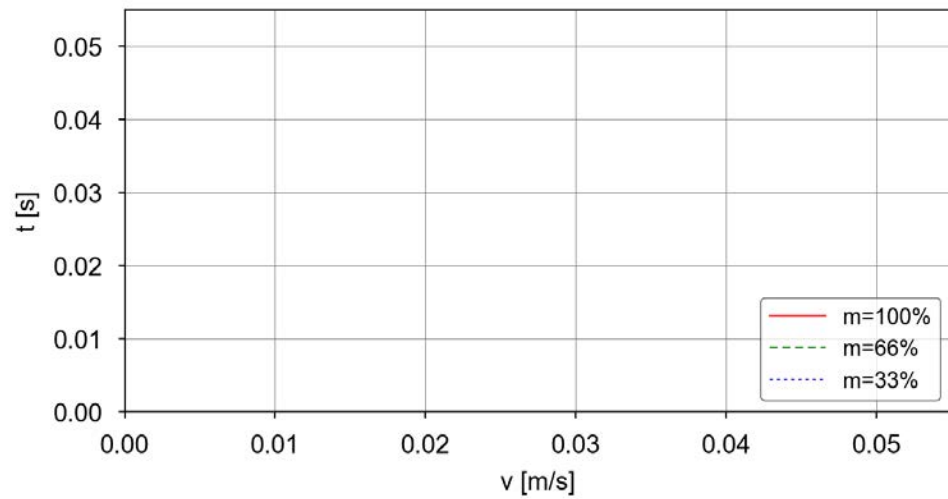
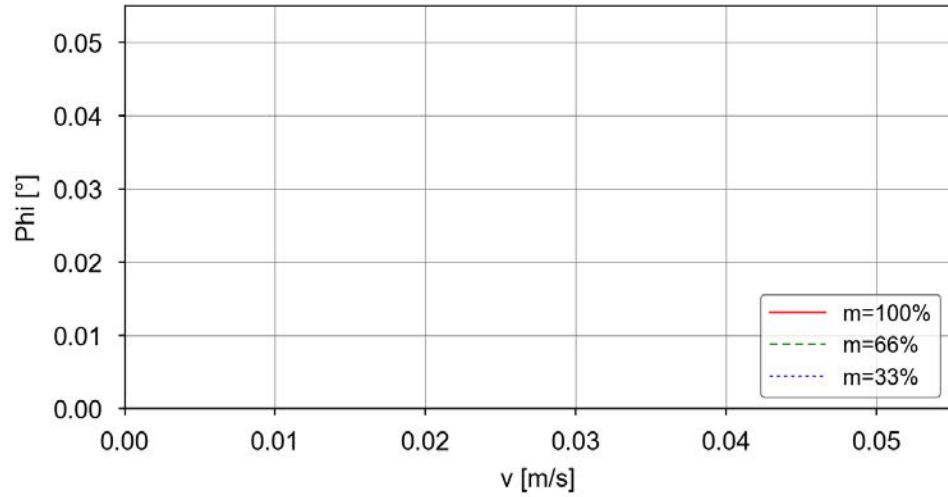
3 IRB 910SC

3.3 IRB 910SC 0.65 m 3 kg

Continued

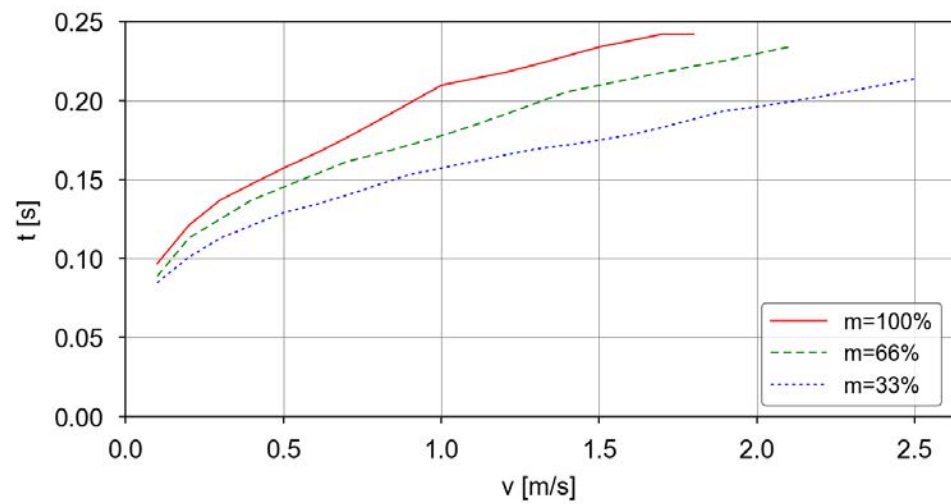
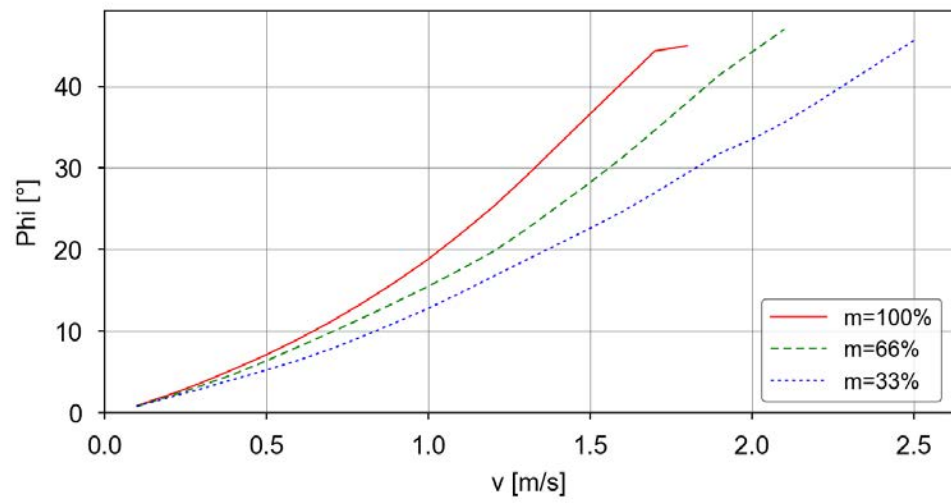
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



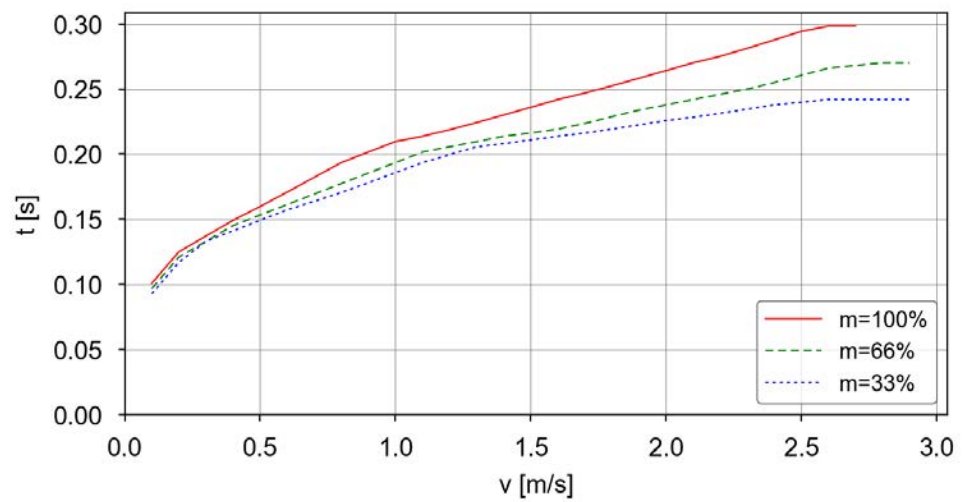
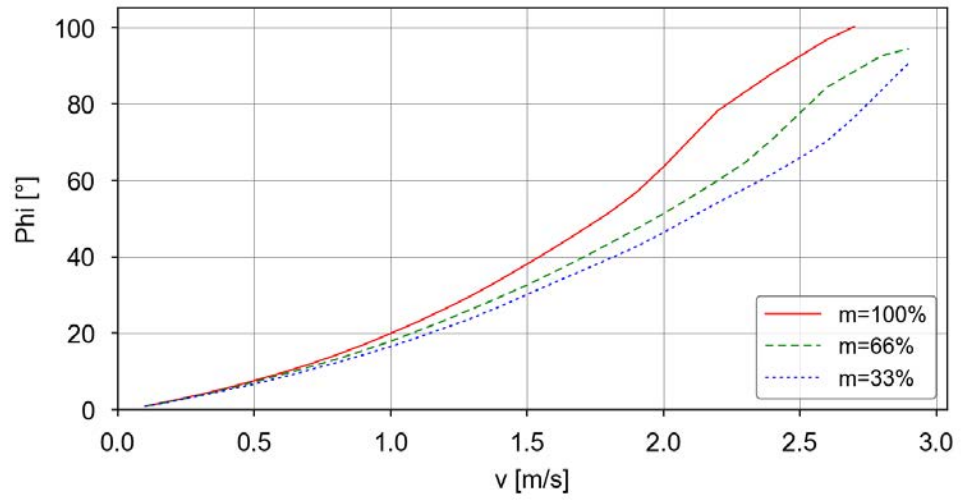
Continues on next page

3 IRB 910SC

3.3 IRB 910SC 0.65 m 3 kg

Continued

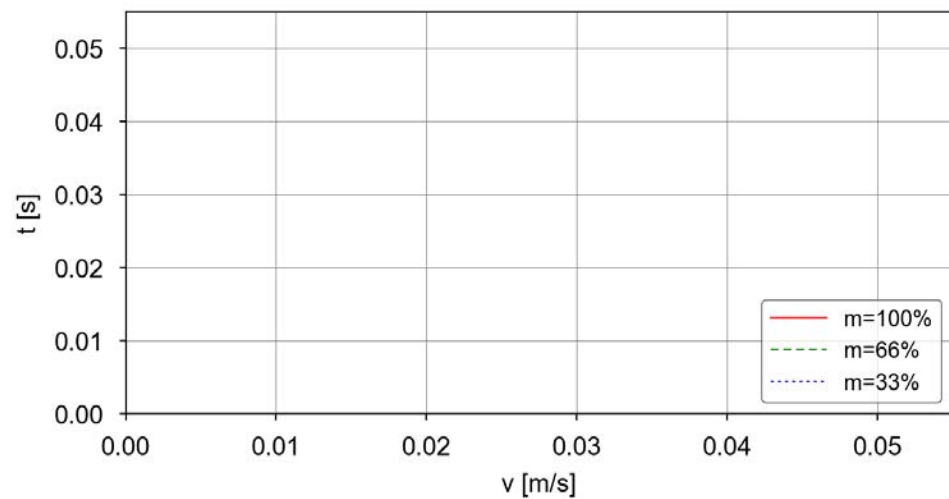
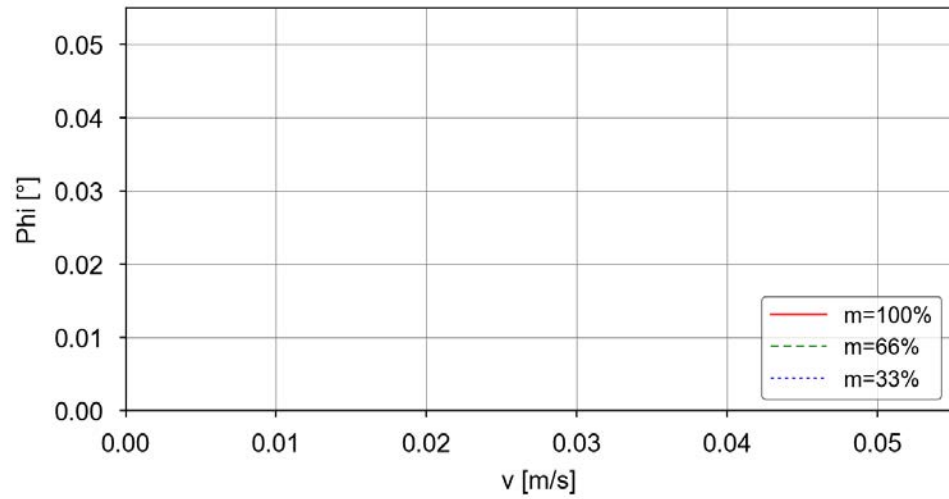
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



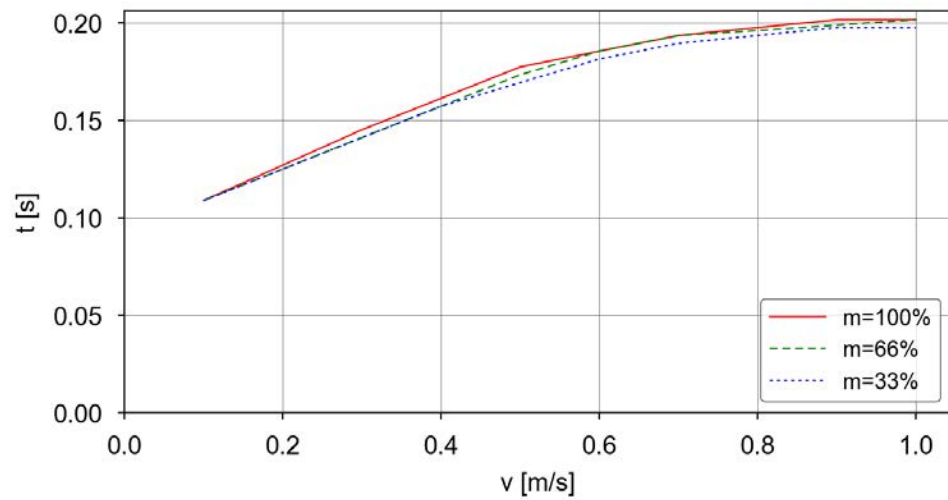
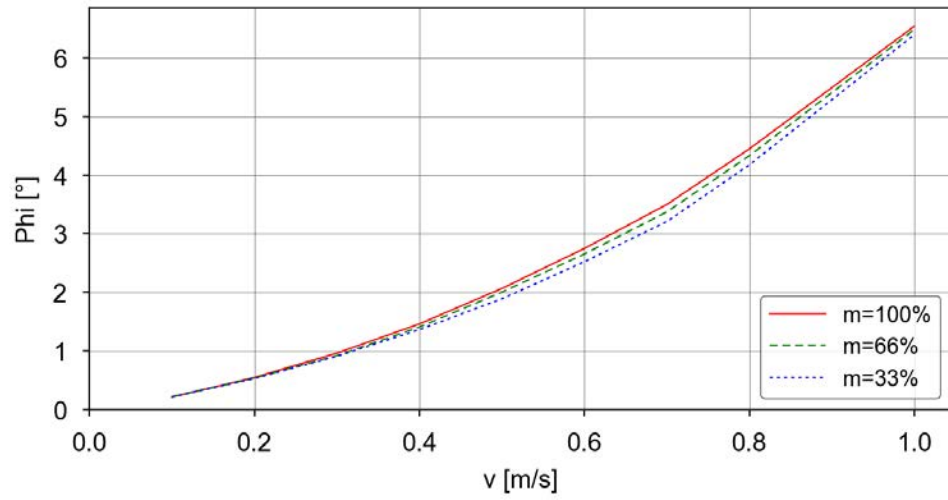
Continues on next page

3 IRB 910SC

3.3 IRB 910SC 0.65 m 3 kg

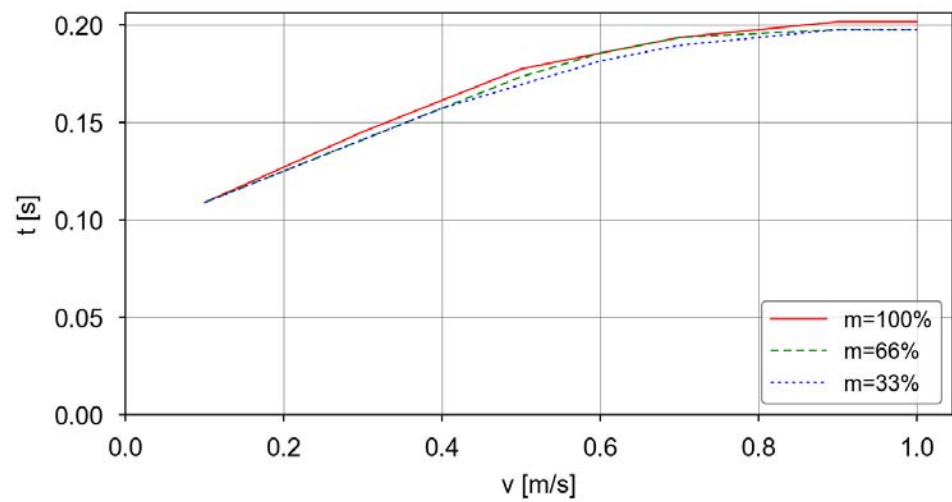
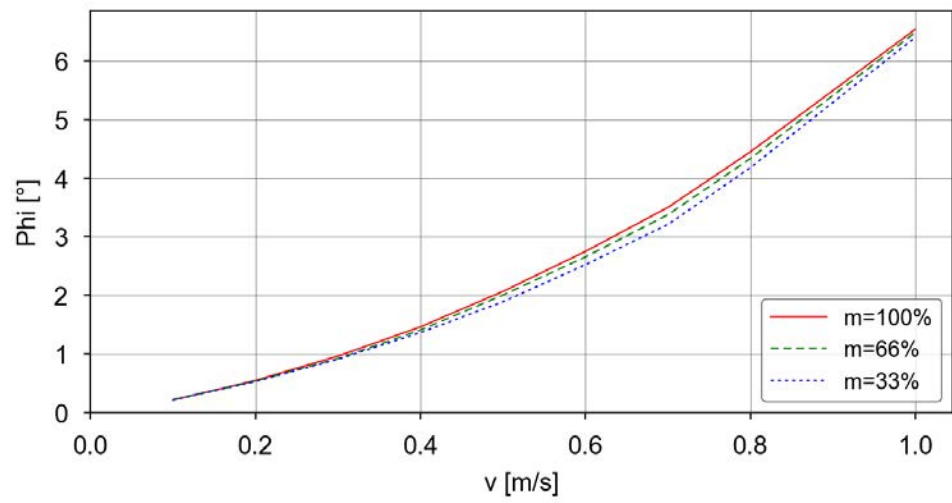
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

4 IRB 1200

4.1 IRB 1200 0.7 m 7 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	32.7	0.14
2	37.2	0.22
3	37.6	0.16

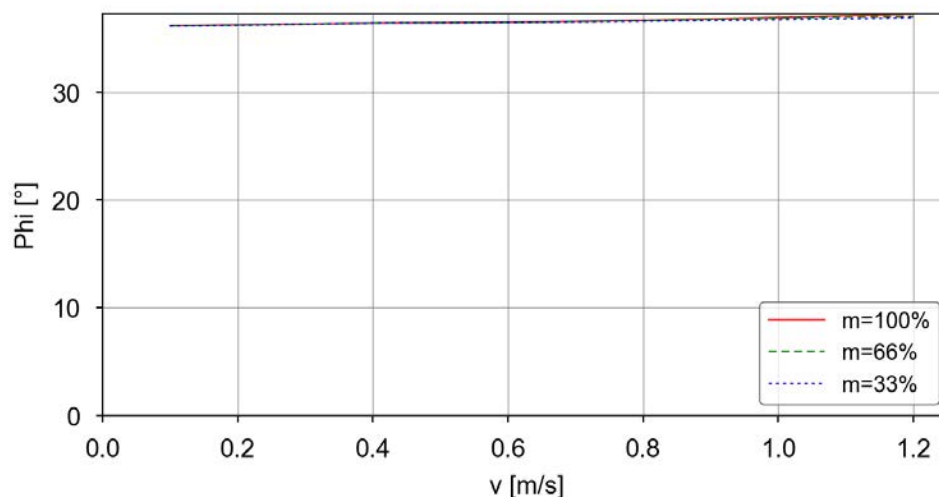
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.235
1	0.235	0.469
2	0.469	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

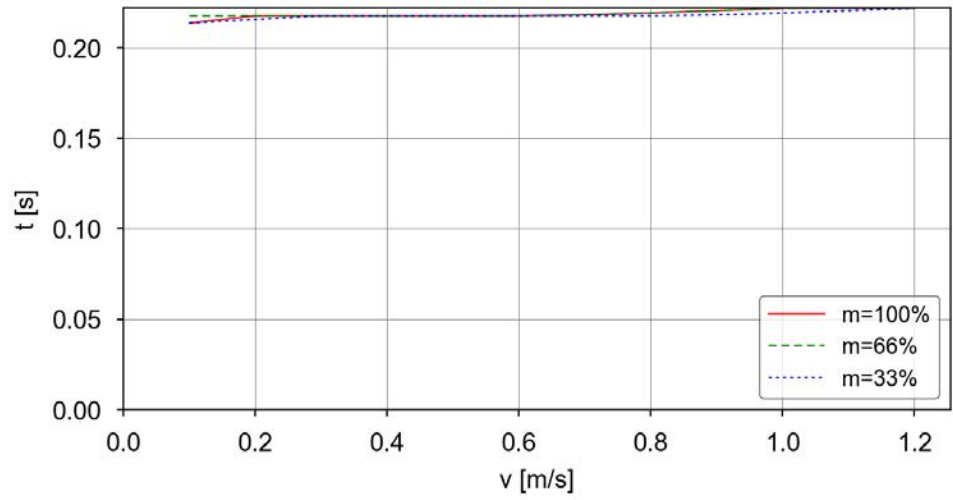


Continues on next page

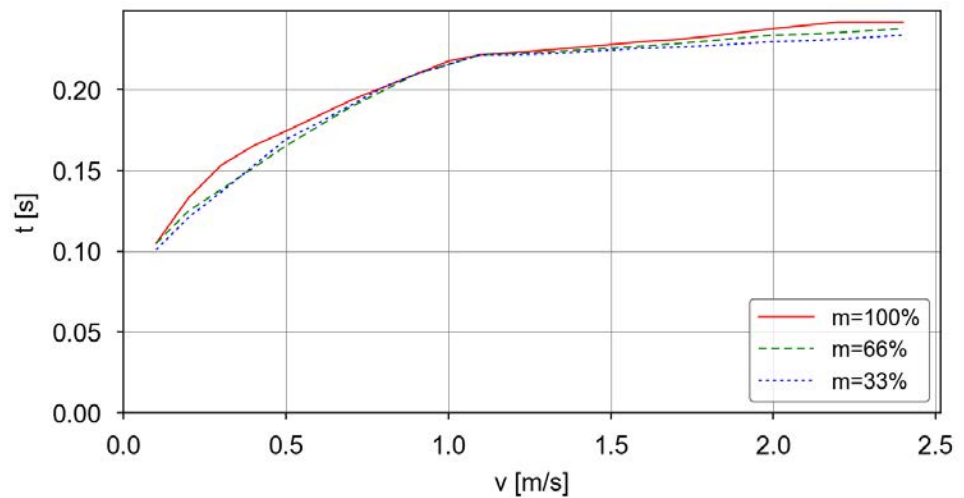
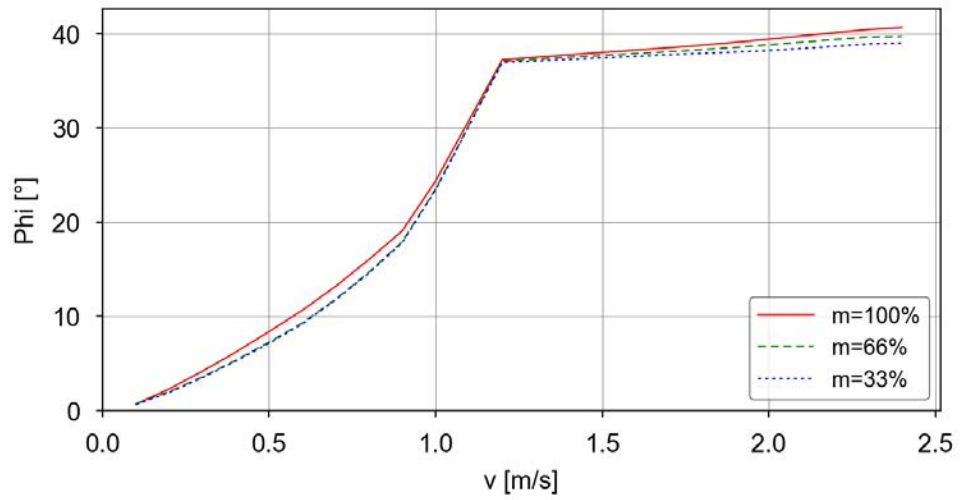
4 IRB 1200

4.1 IRB 1200 0.7 m 7 kg

Continued

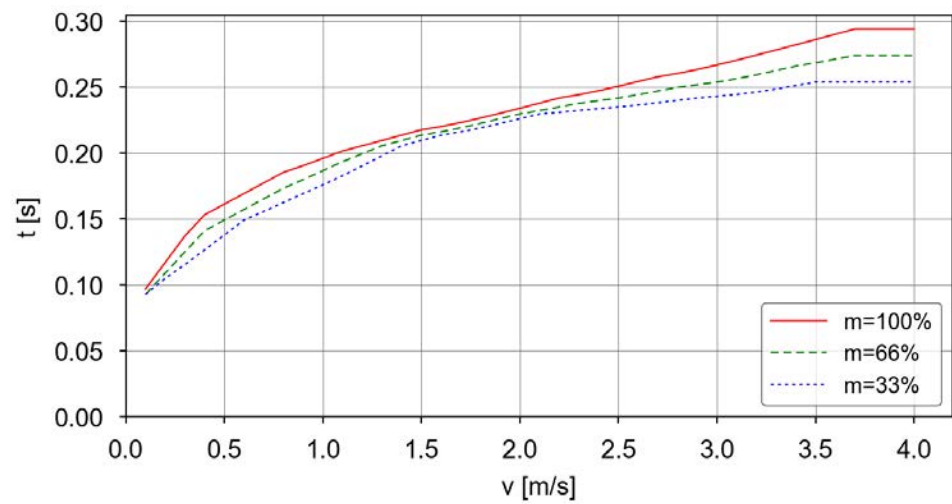
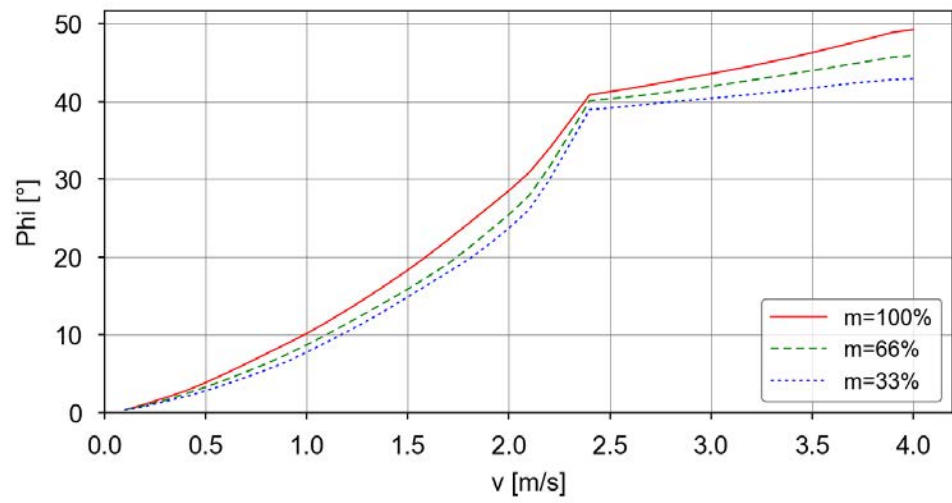


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

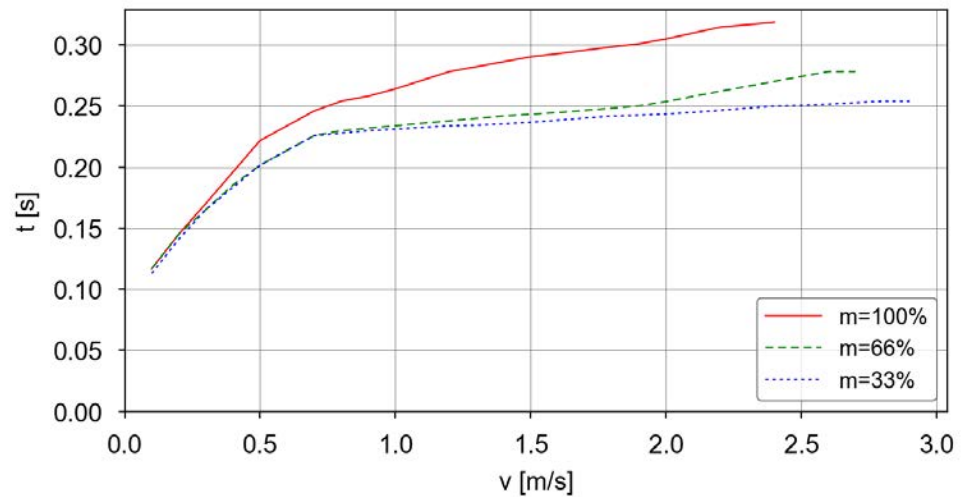
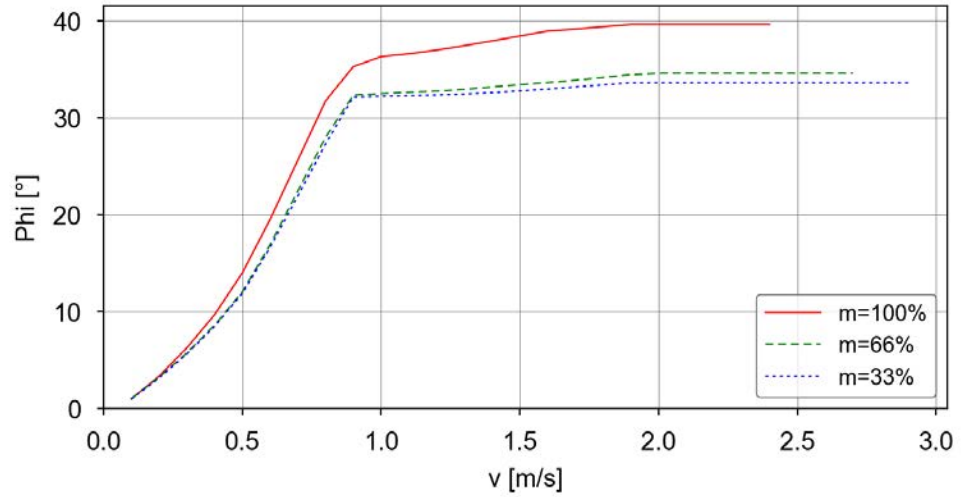
4 IRB 1200

4.1 IRB 1200 0.7 m 7 kg

Continued

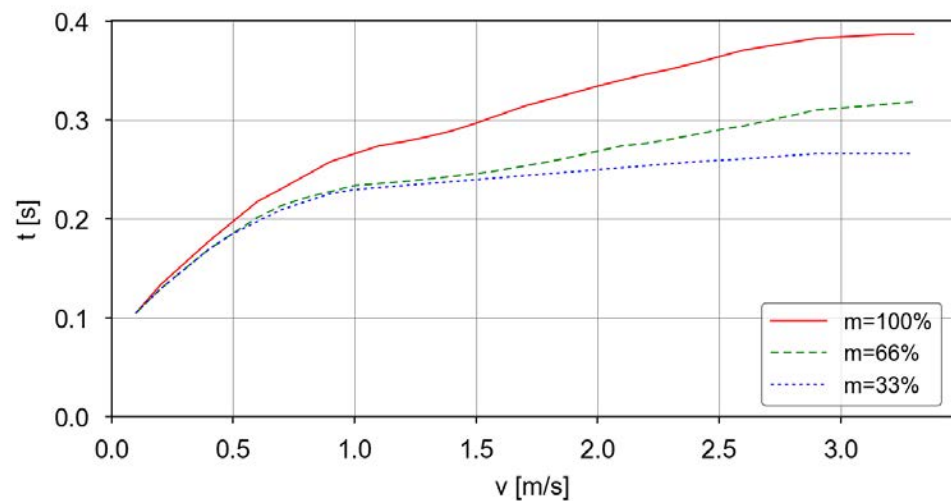
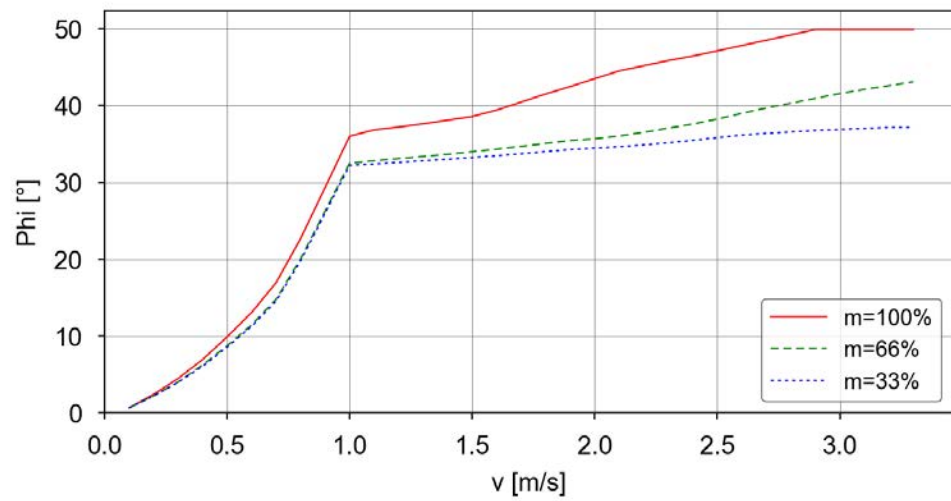
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



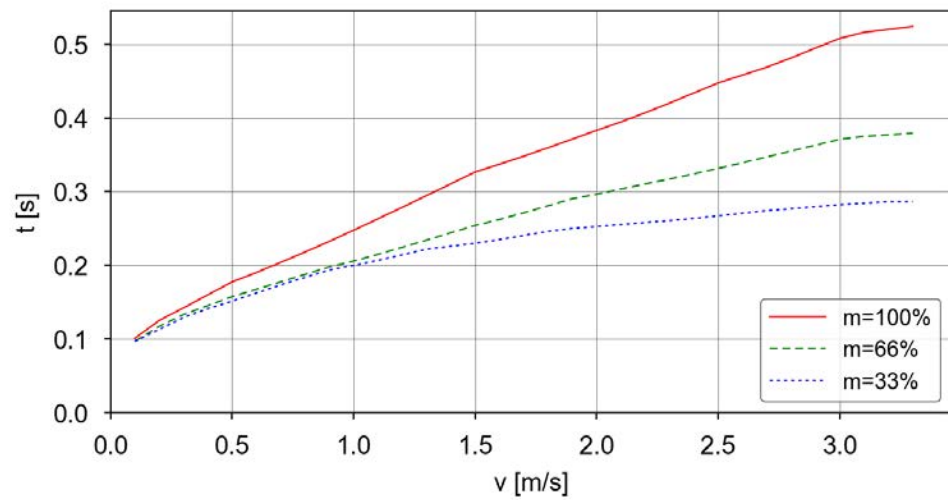
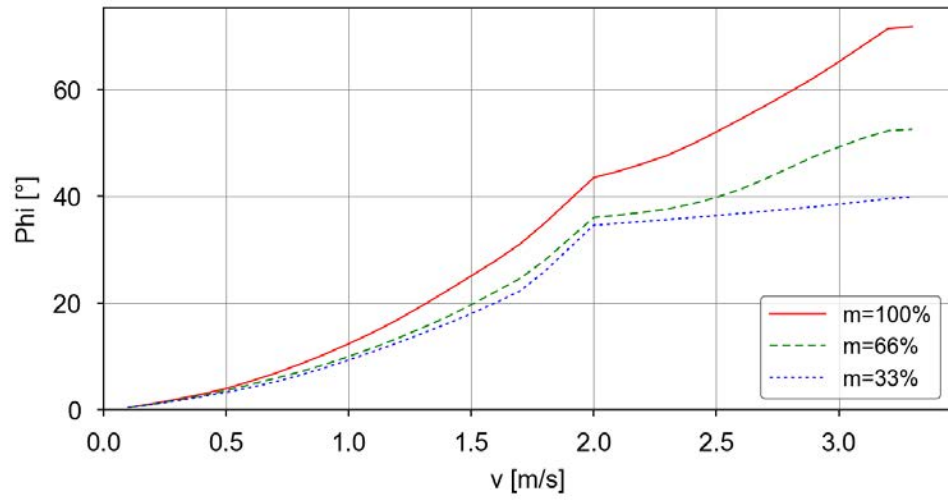
Continues on next page

4 IRB 1200

4.1 IRB 1200 0.7 m 7 kg

Continued

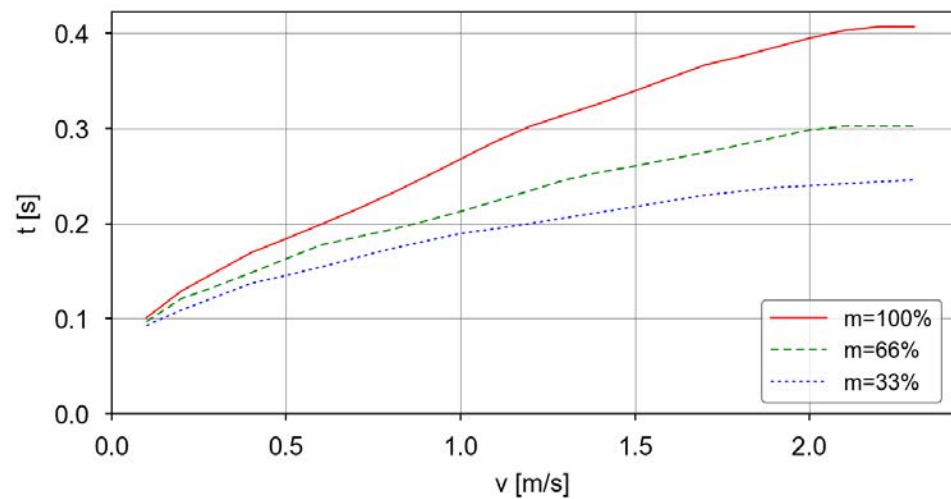
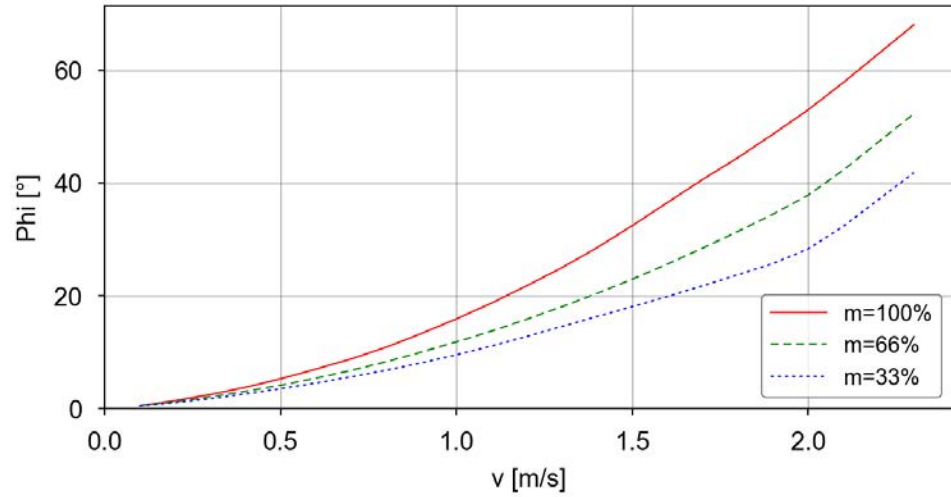
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



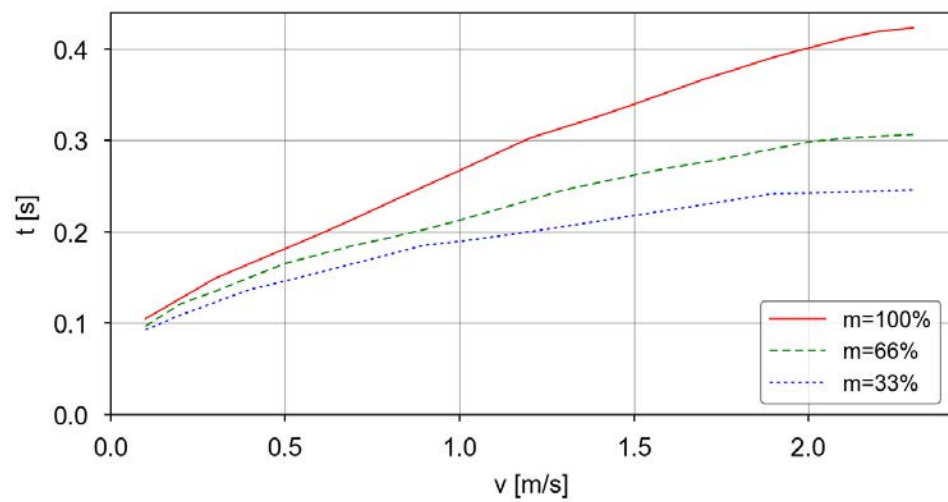
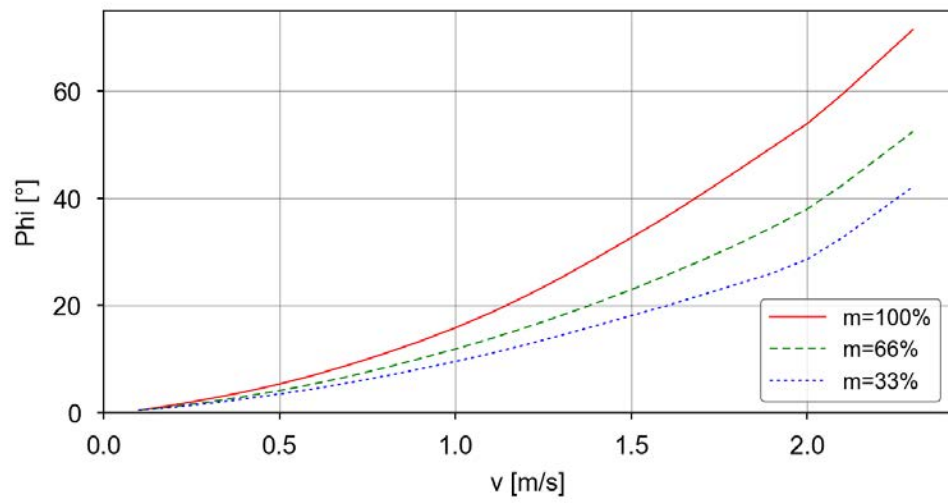
Continues on next page

4 IRB 1200

4.1 IRB 1200 0.7 m 7 kg

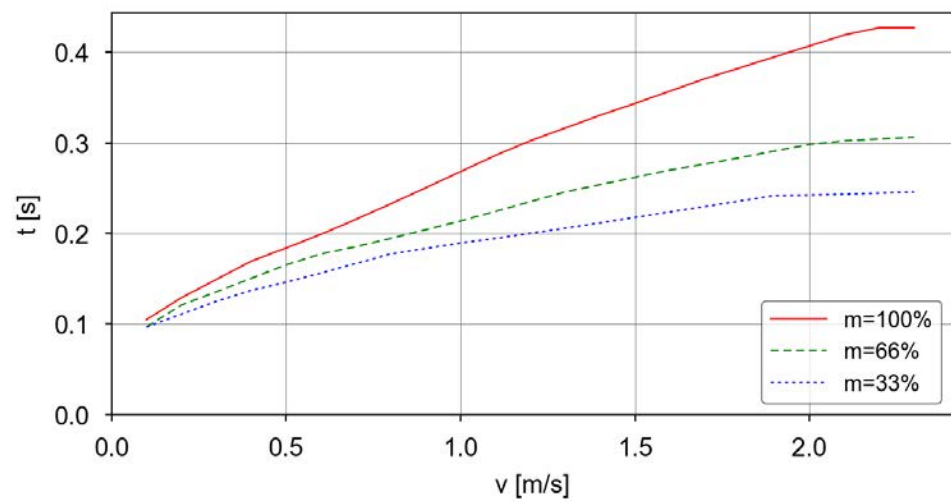
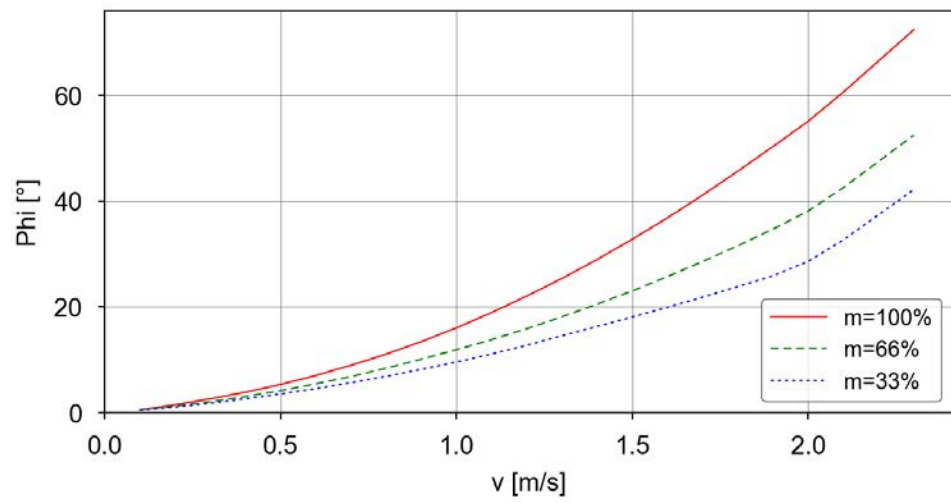
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



4 IRB 1200

4.2 IRB 1200 0.7 m 7 kg

4.2 IRB 1200 0.7 m 7 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	32.7	0.14
2	37.1	0.22
3	37.6	0.16

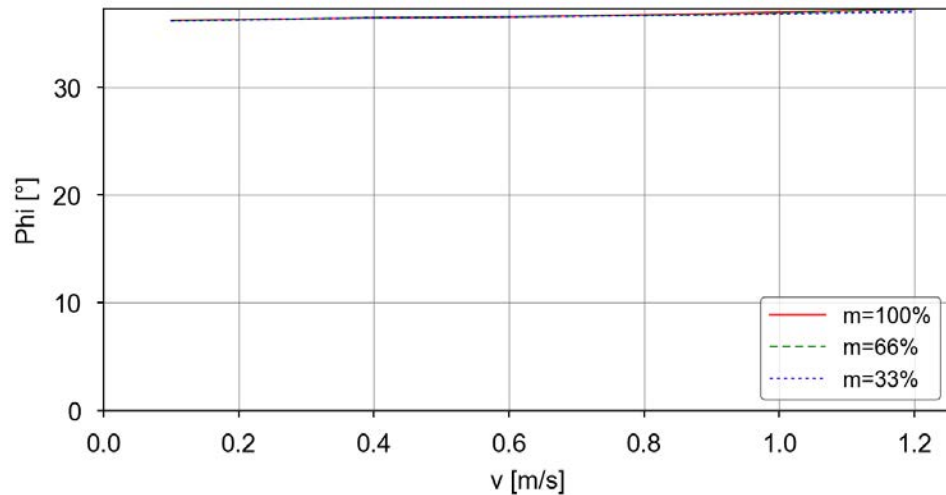
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

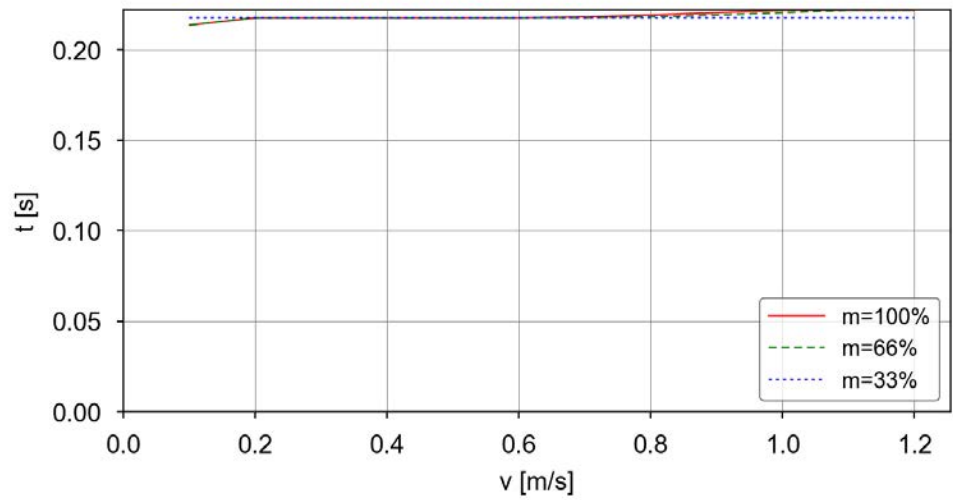
Zone	wcp min (m)	wcp max (m)
0	0	0.235
1	0.235	0.469
2	0.469	max reach

Category 1, Axis 1

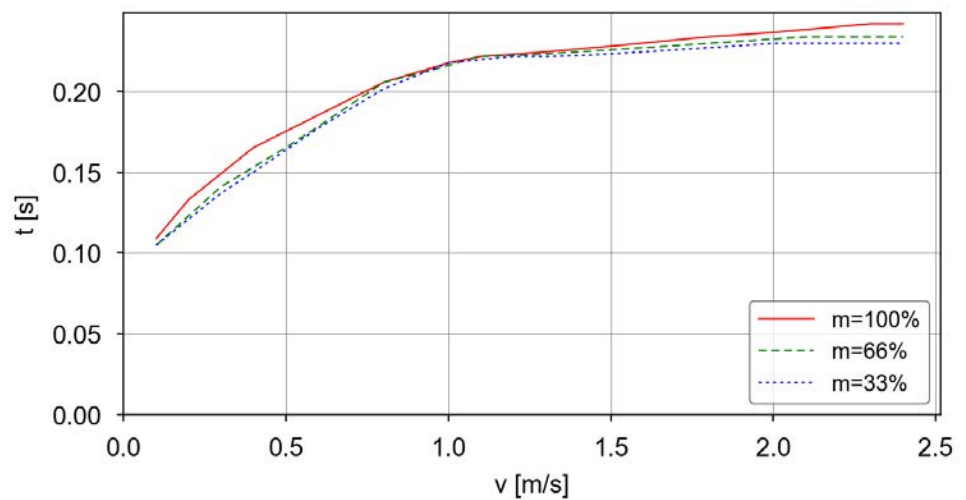
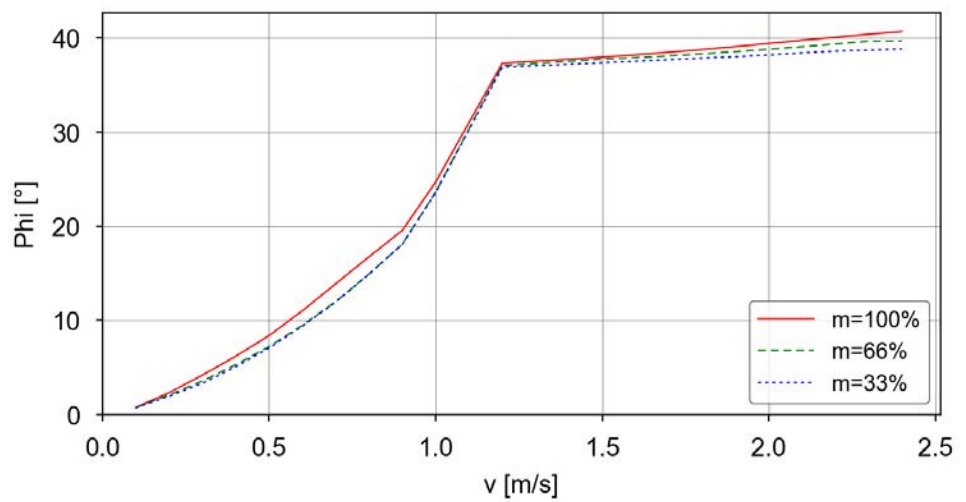
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



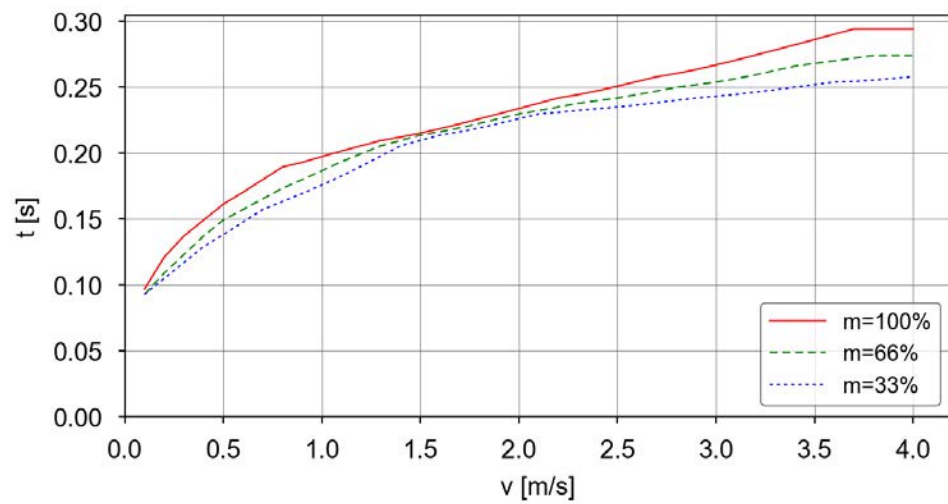
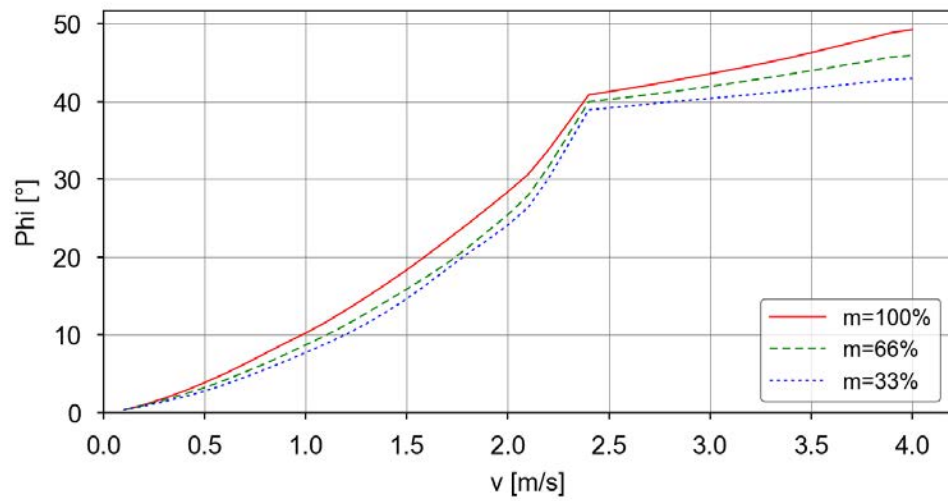
Continues on next page

4 IRB 1200

4.2 IRB 1200 0.7 m 7 kg

Continued

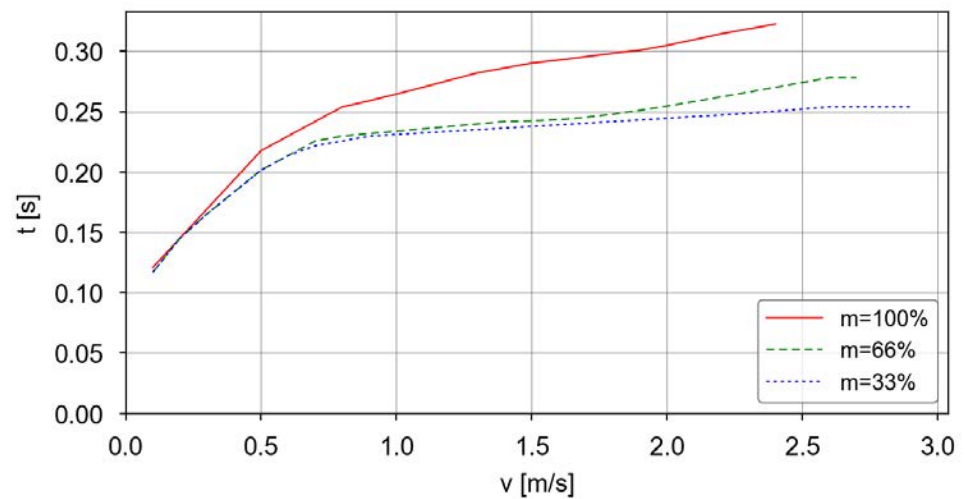
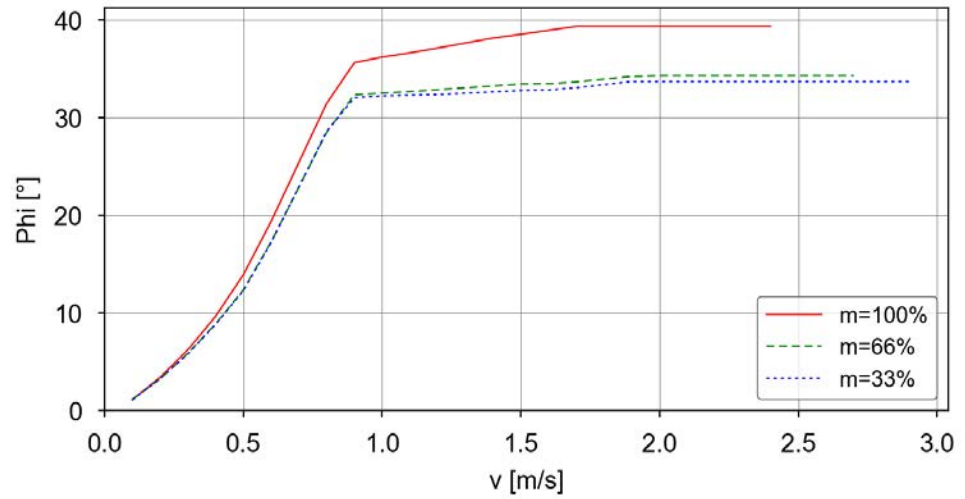
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



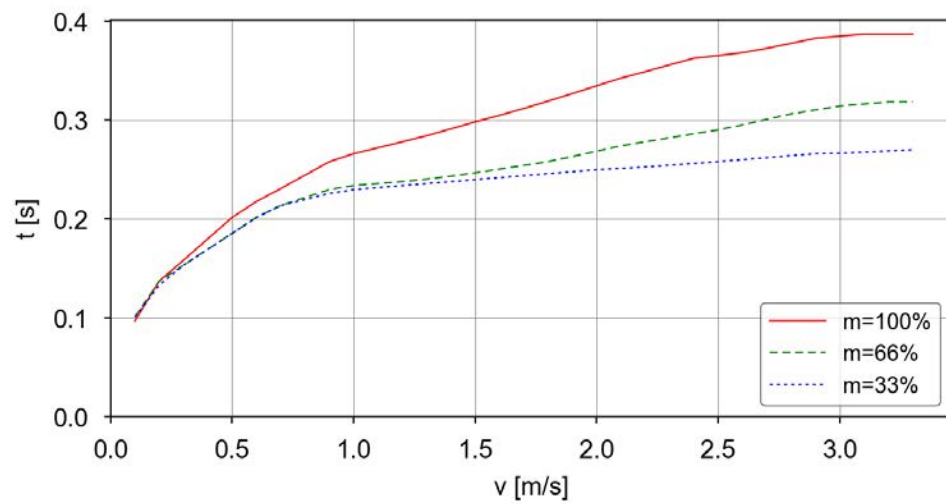
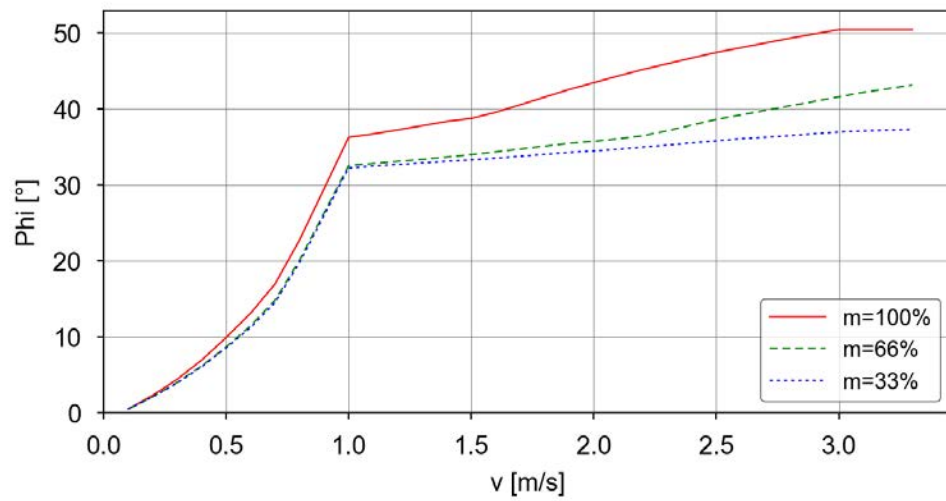
Continues on next page

4 IRB 1200

4.2 IRB 1200 0.7 m 7 kg

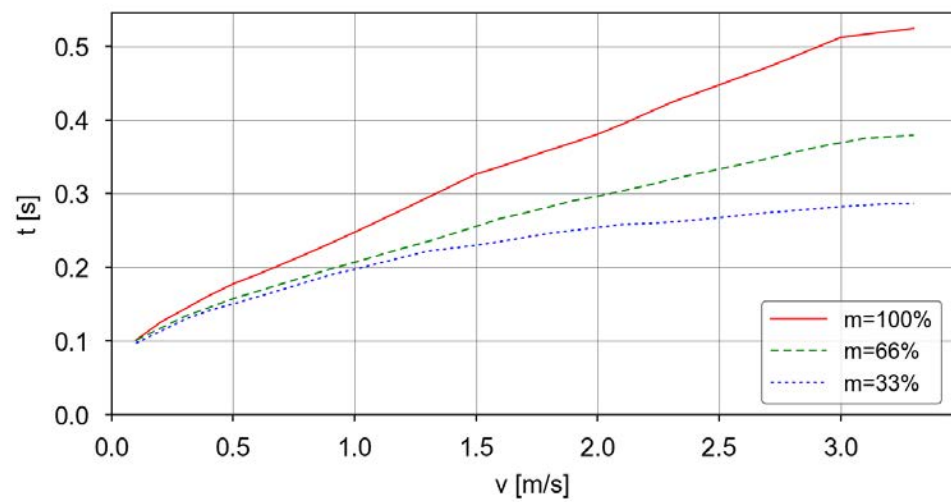
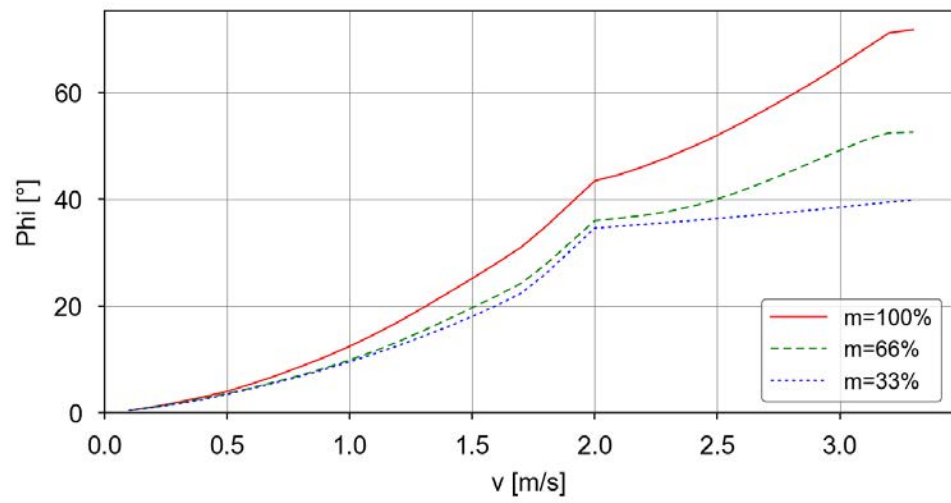
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

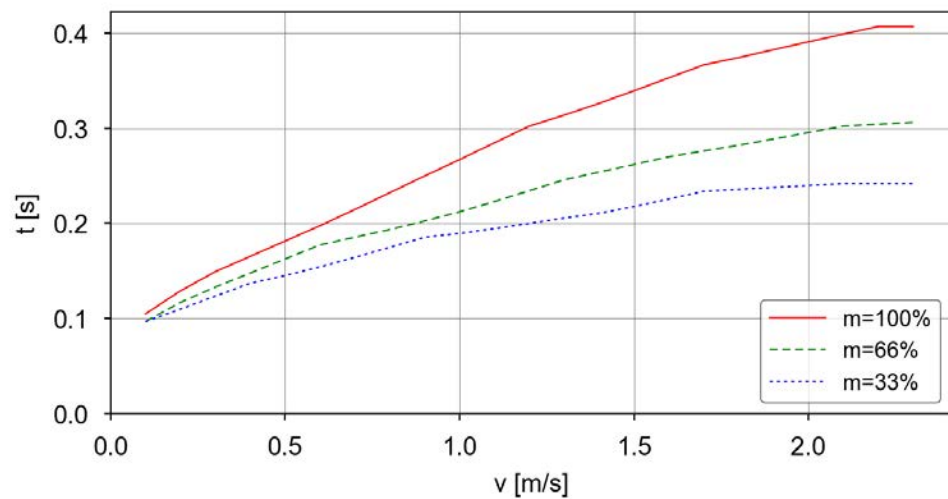
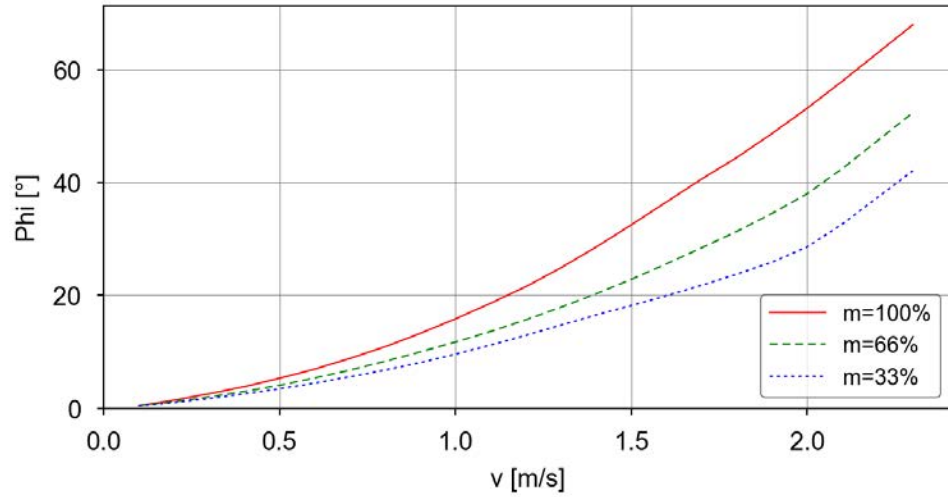
4 IRB 1200

4.2 IRB 1200 0.7 m 7 kg

Continued

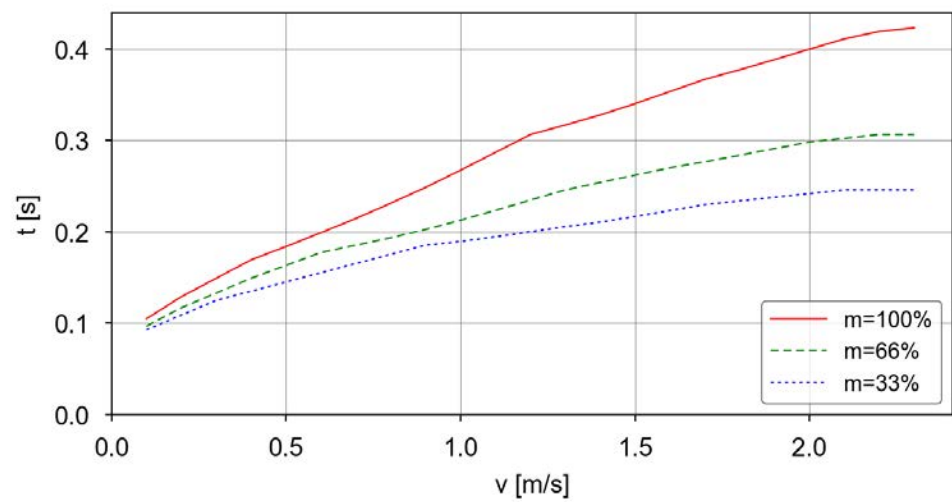
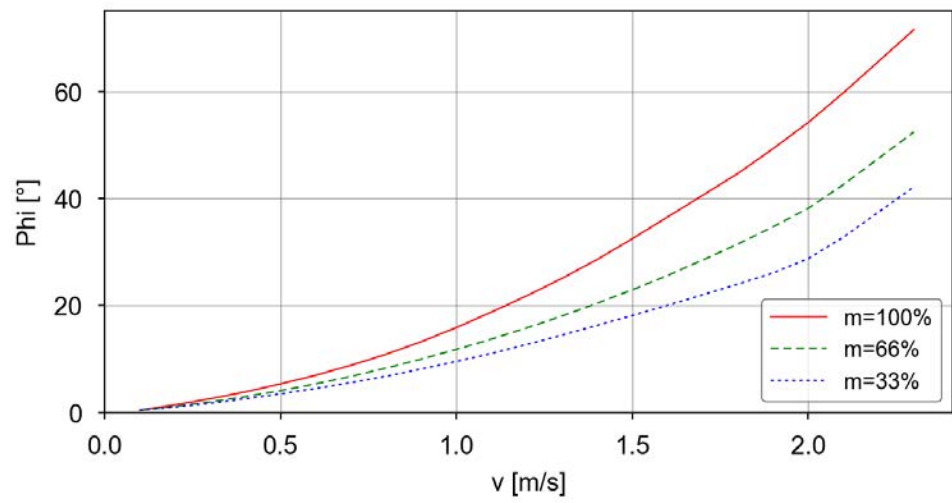
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



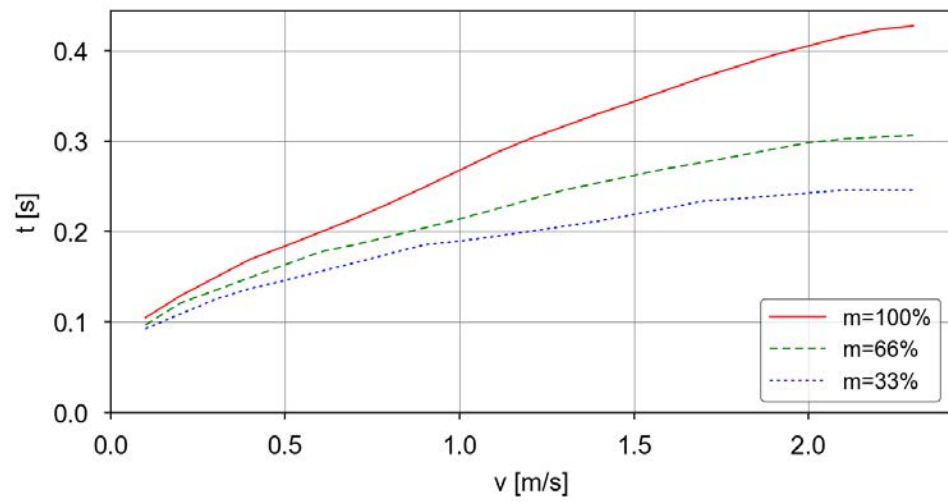
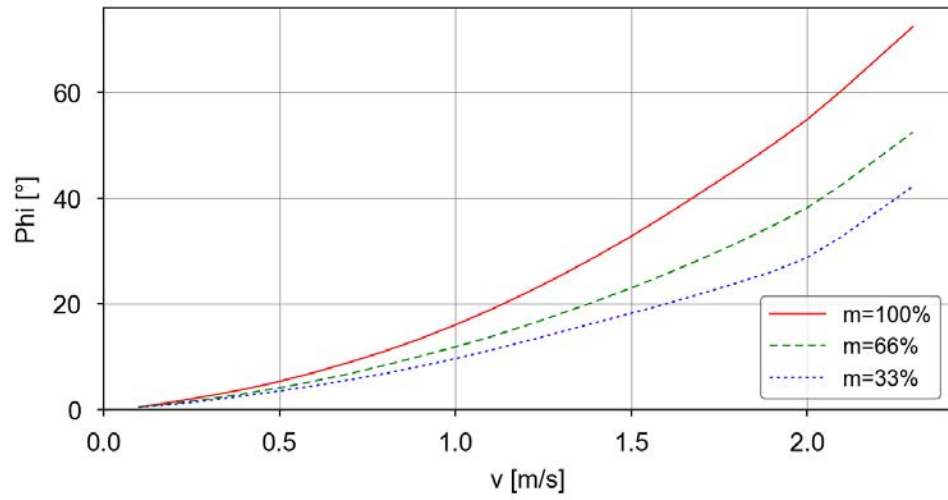
Continues on next page

4 IRB 1200

4.2 IRB 1200 0.7 m 7 kg

Continued

Extension zone 2, stopping distance and stopping time



4.3 IRB 1200 0.9 m 5 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	39.1	0.19
2	45.8	0.29
3	42.1	0.2

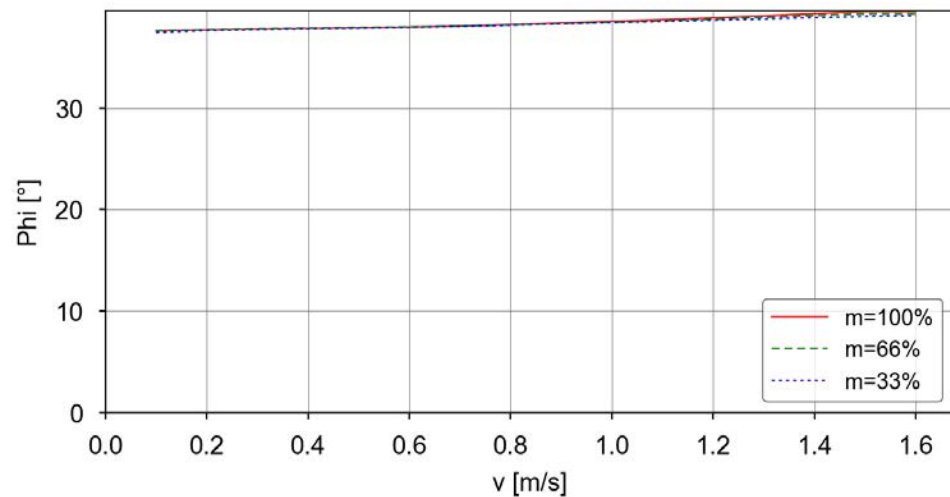
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.3
1	0.3	0.601
2	0.601	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

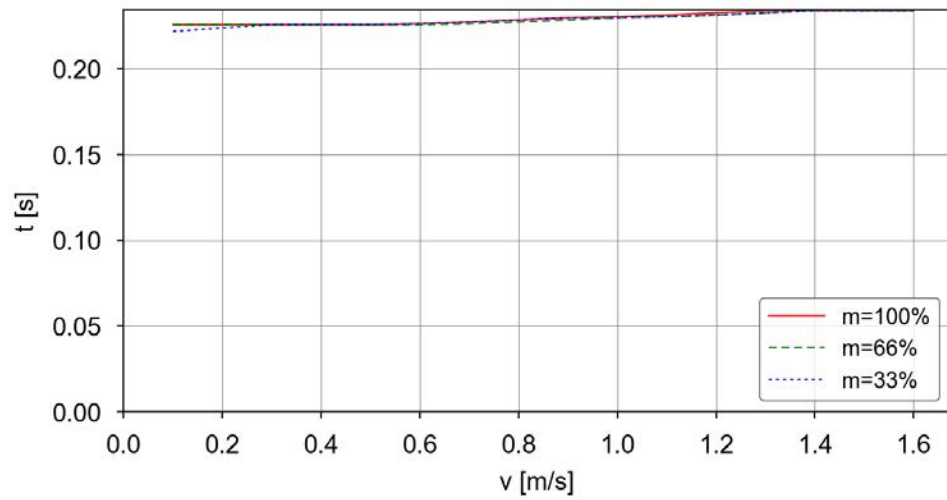


Continues on next page

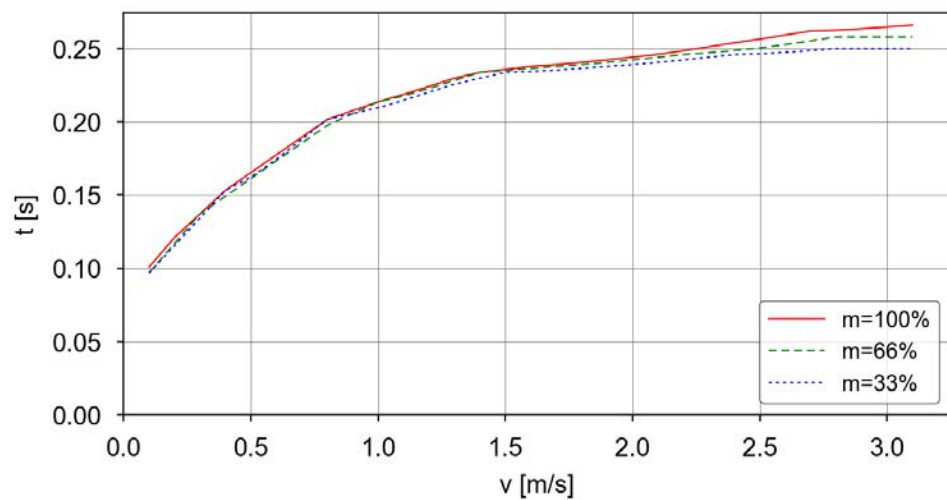
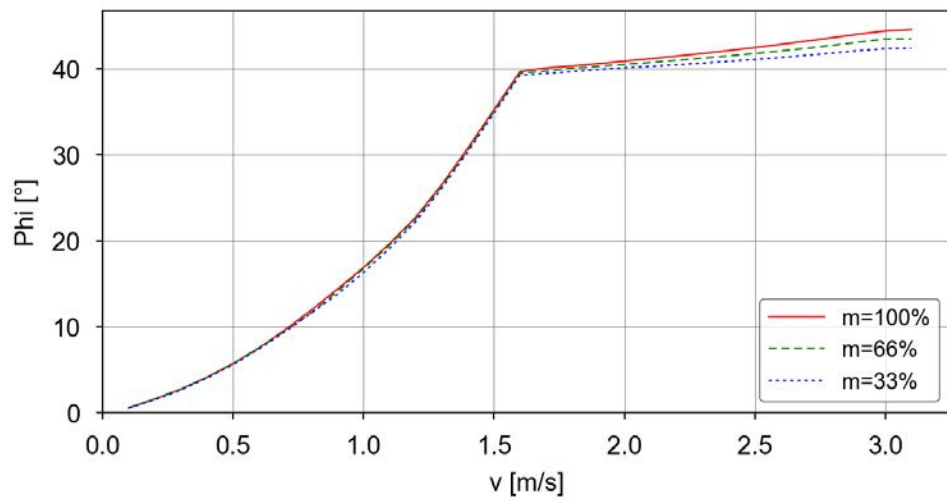
4 IRB 1200

4.3 IRB 1200 0.9 m 5 kg

Continued

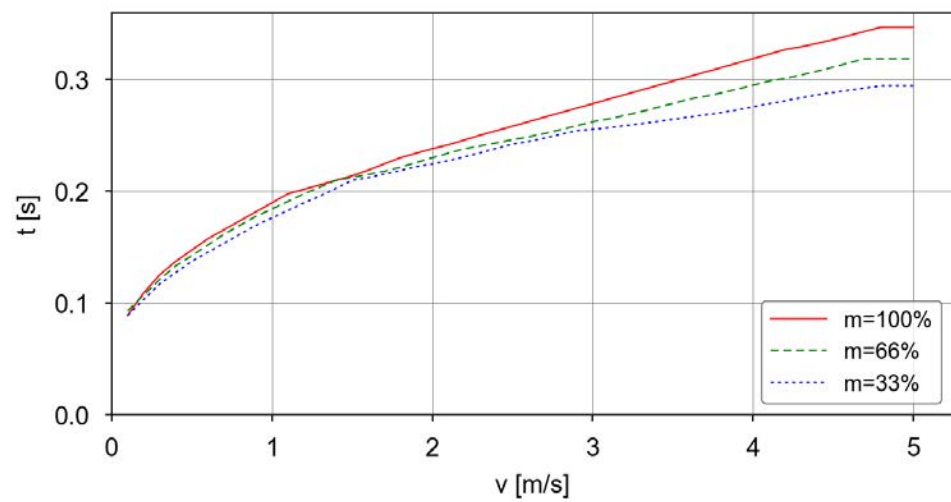
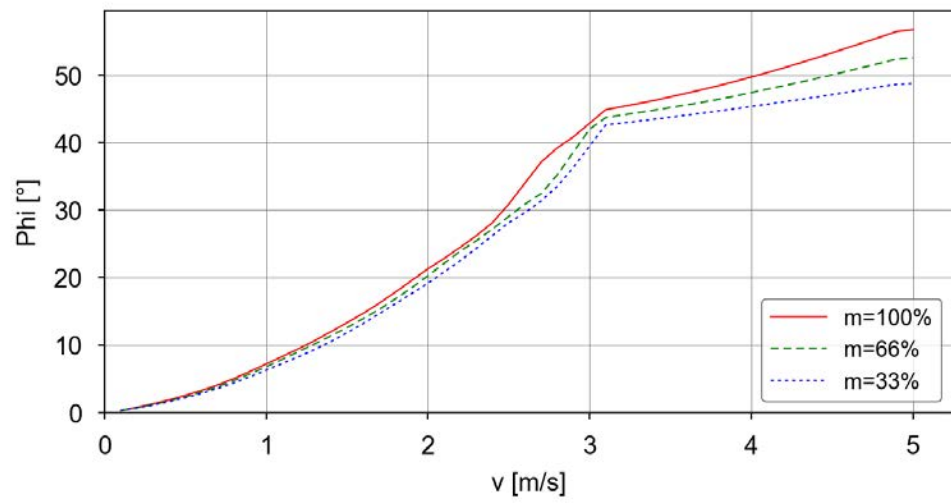


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

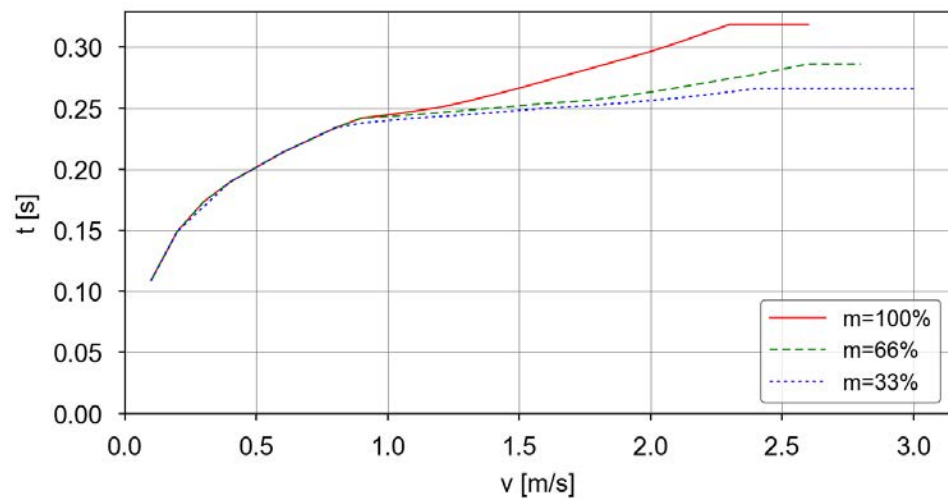
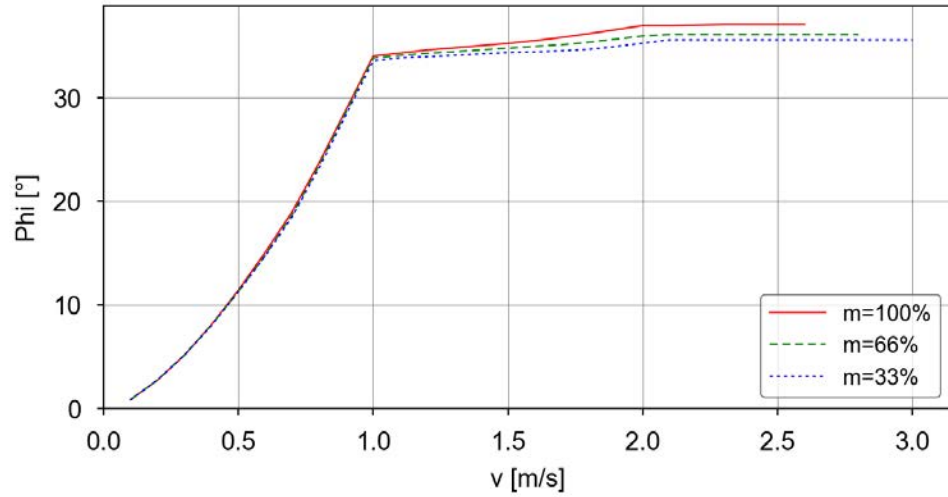
4 IRB 1200

4.3 IRB 1200 0.9 m 5 kg

Continued

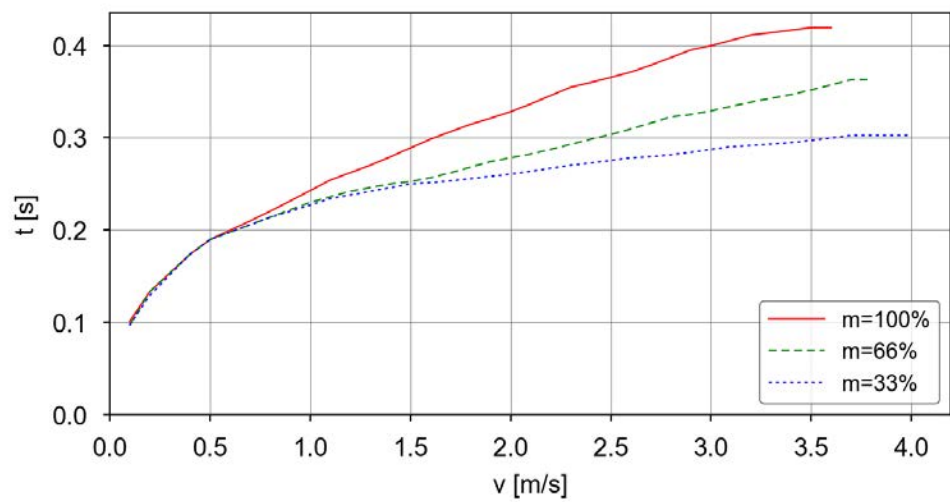
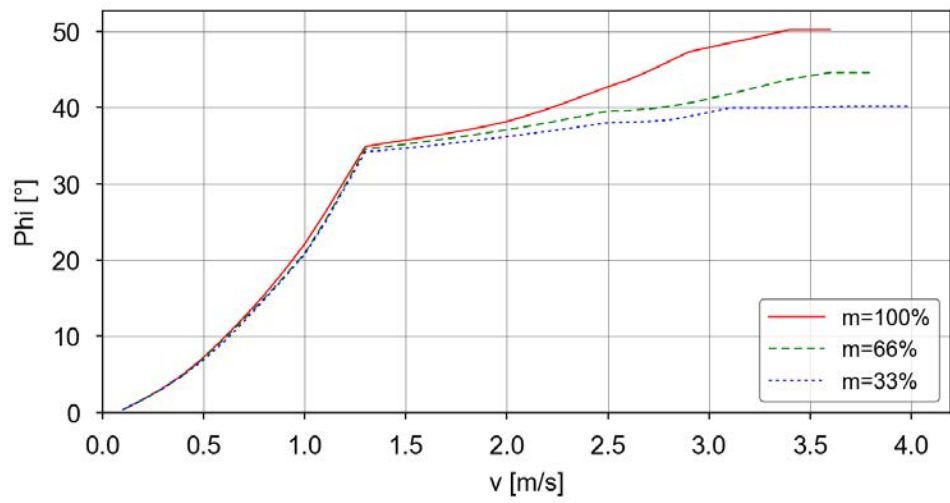
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



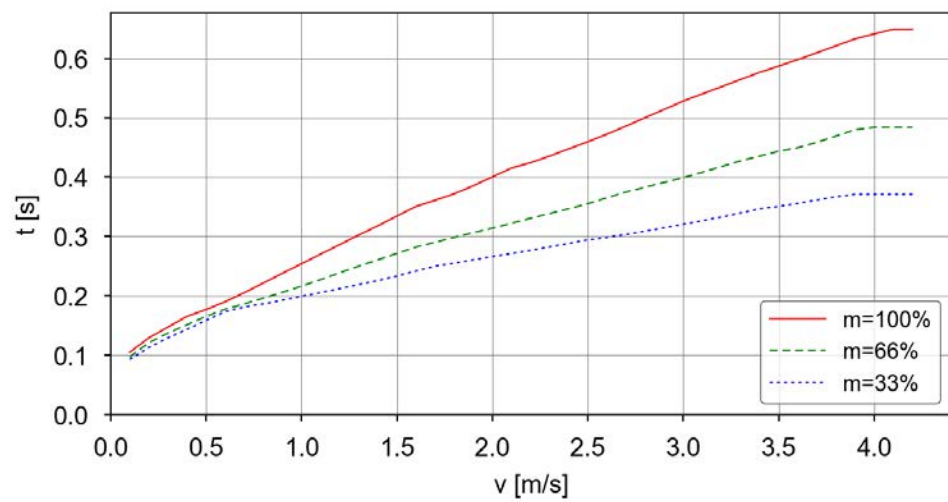
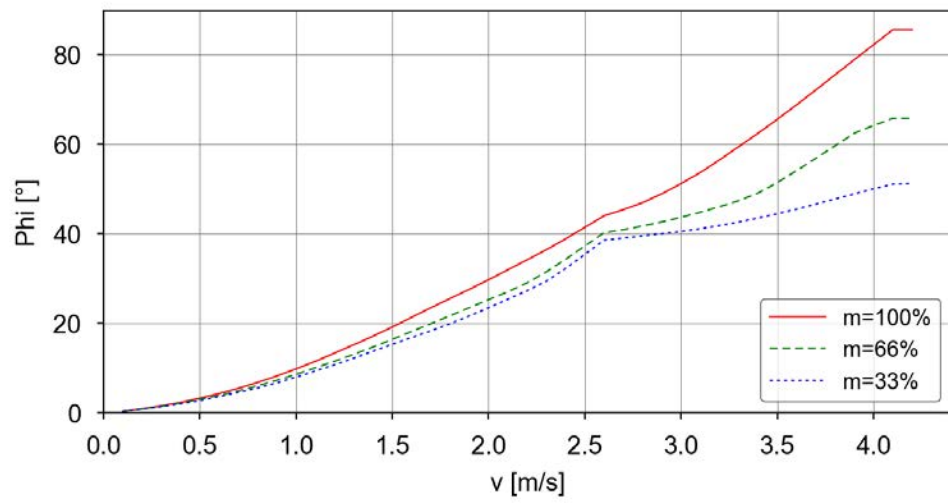
Continues on next page

4 IRB 1200

4.3 IRB 1200 0.9 m 5 kg

Continued

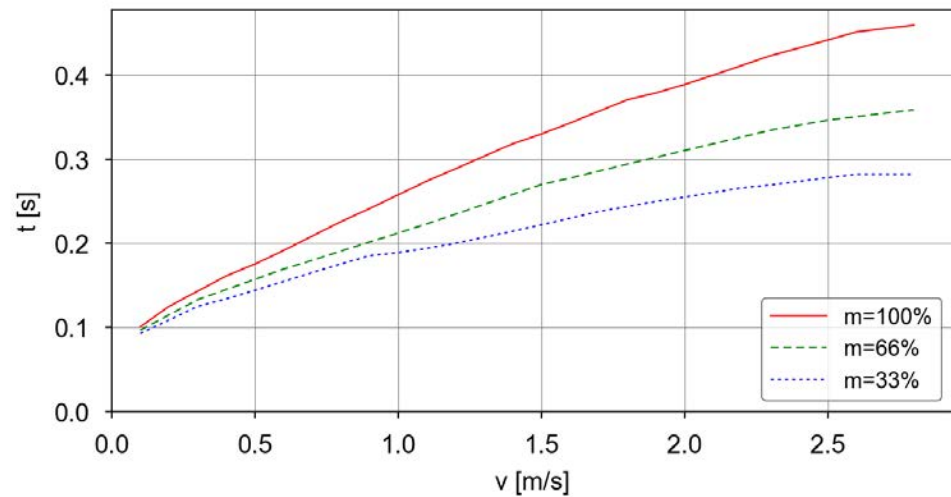
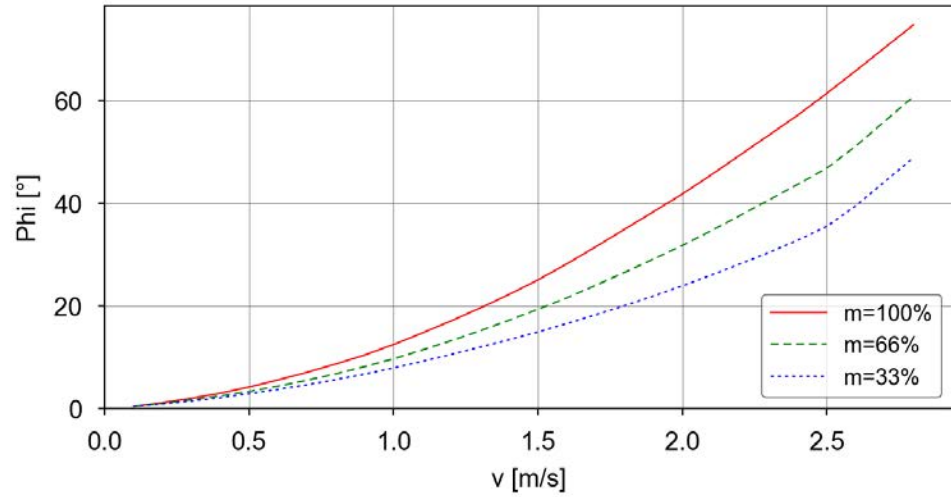
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



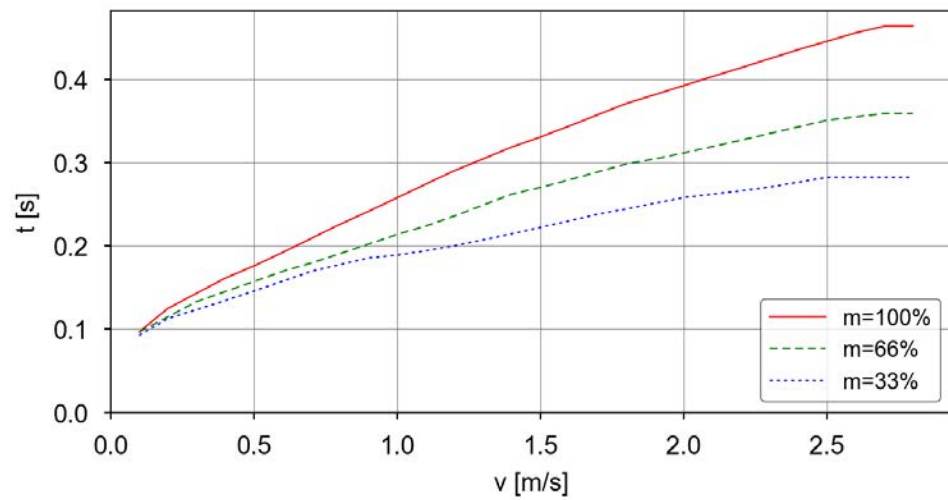
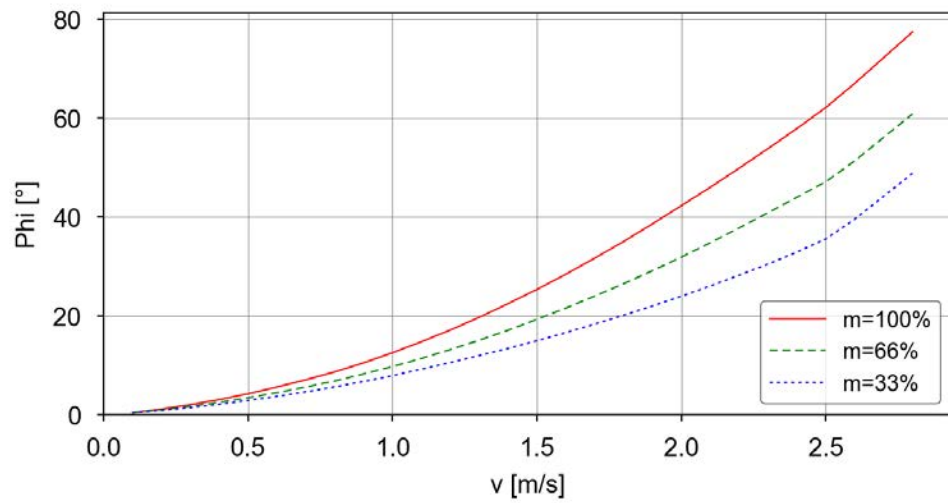
Continues on next page

4 IRB 1200

4.3 IRB 1200 0.9 m 5 kg

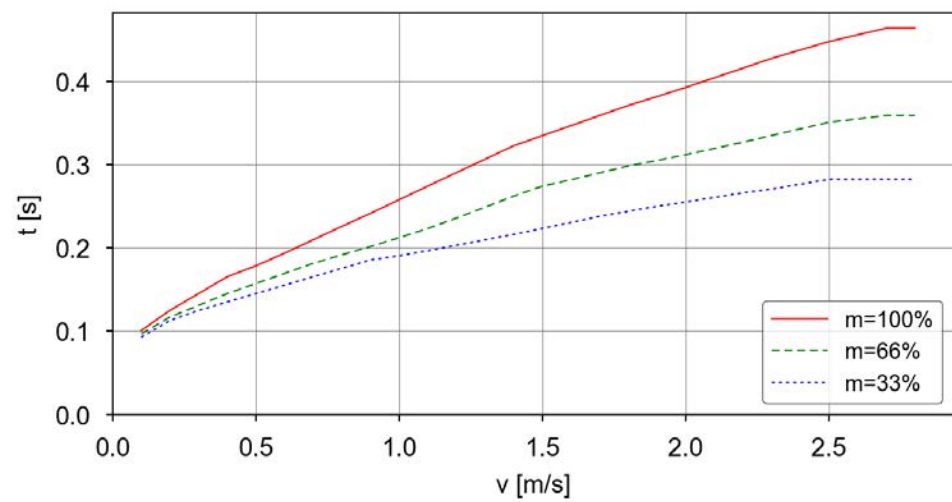
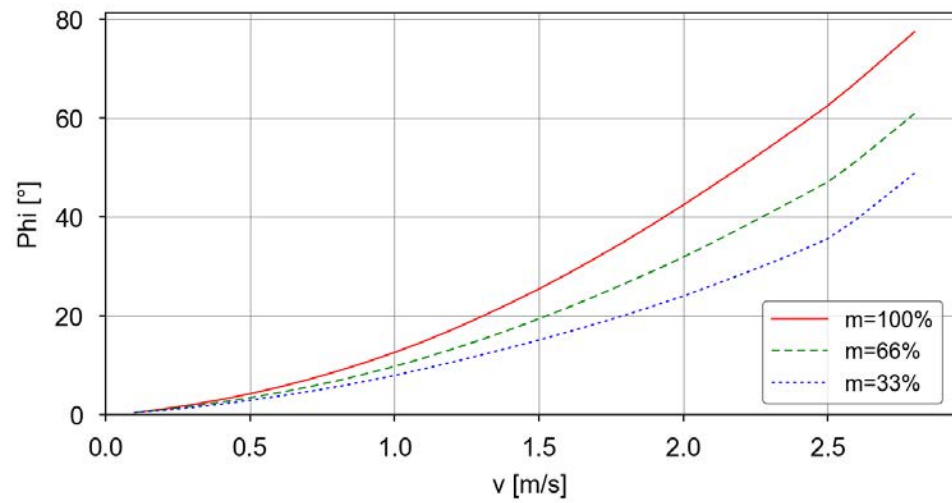
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



4 IRB 1200

4.4 IRB 1200 0.9 m 5 kg

4.4 IRB 1200 0.9 m 5 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	39.1	0.19
2	45.6	0.29
3	41.9	0.2

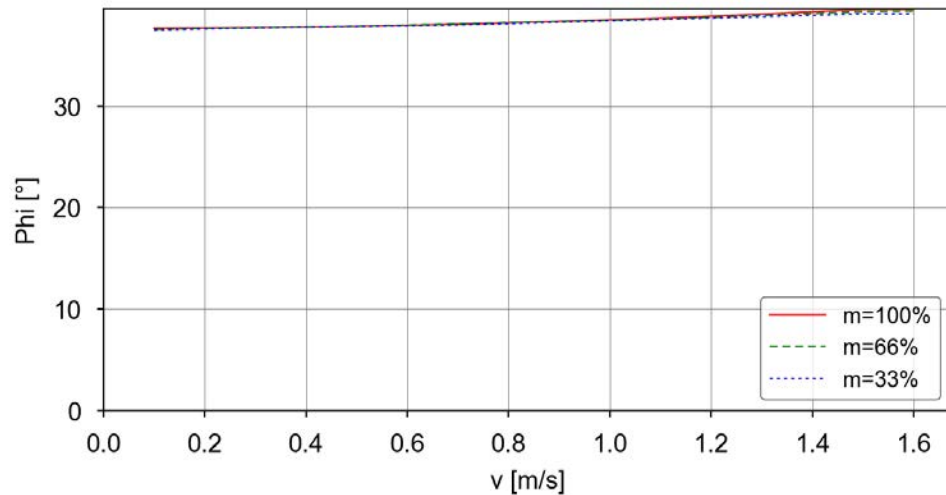
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

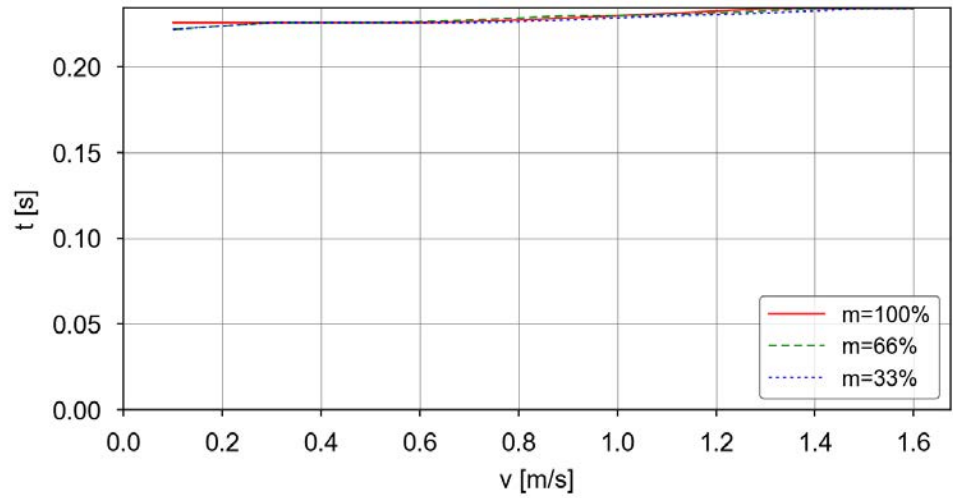
Zone	wcp min (m)	wcp max (m)
0	0	0.3
1	0.3	0.601
2	0.601	max reach

Category 1, Axis 1

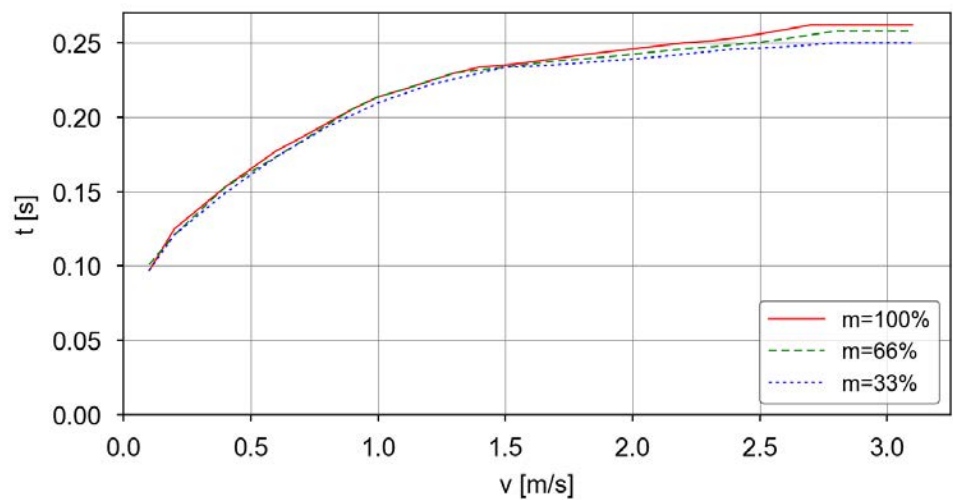
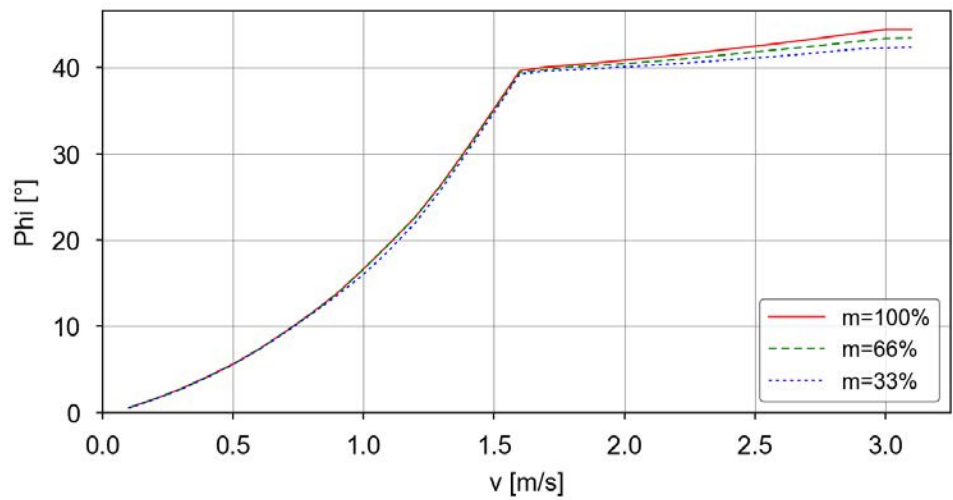
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



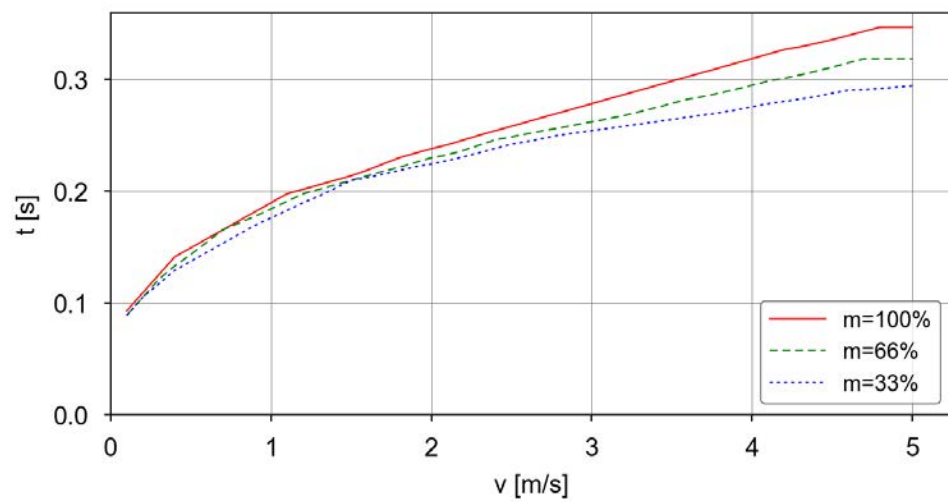
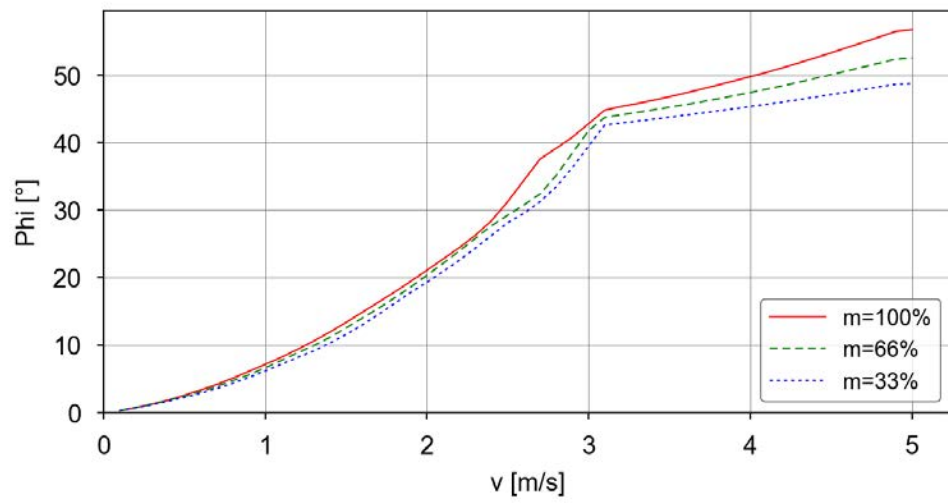
Continues on next page

4 IRB 1200

4.4 IRB 1200 0.9 m 5 kg

Continued

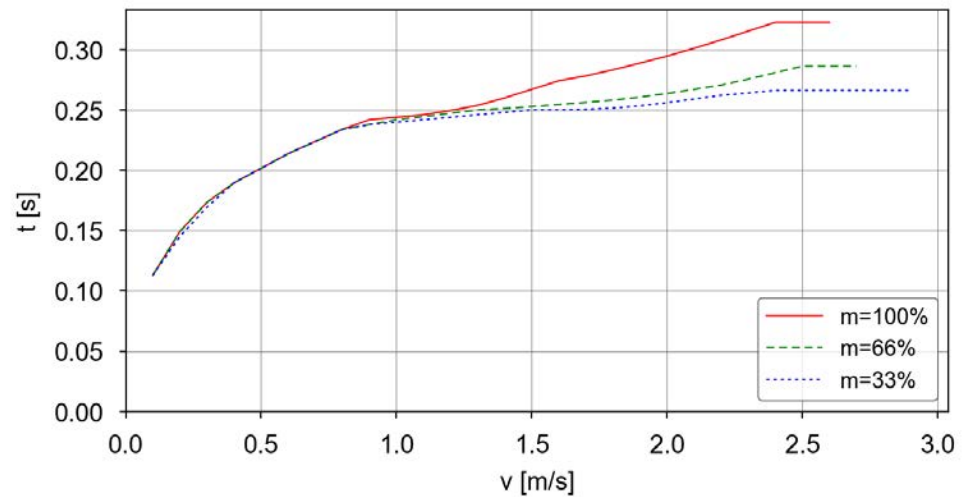
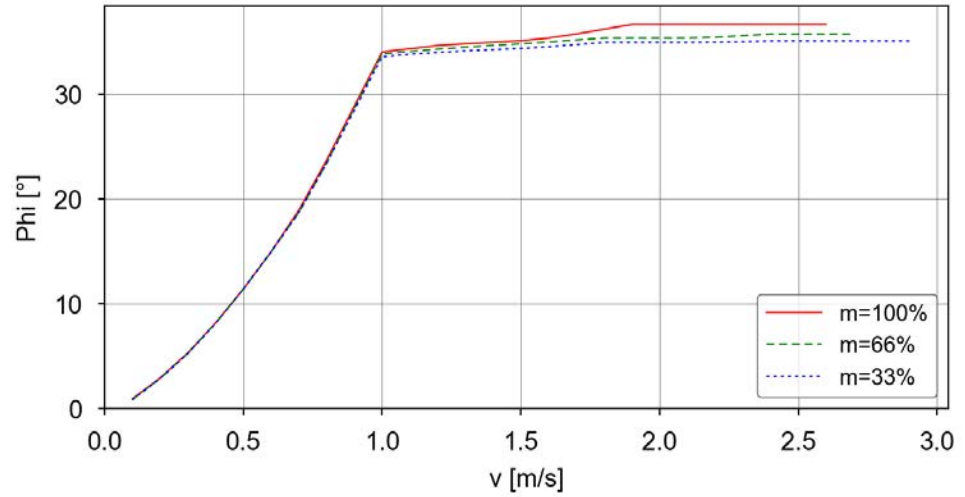
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



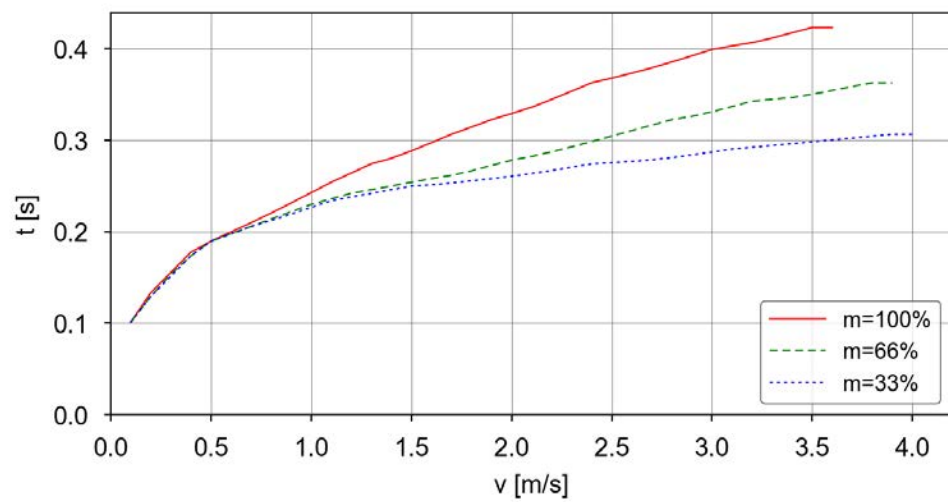
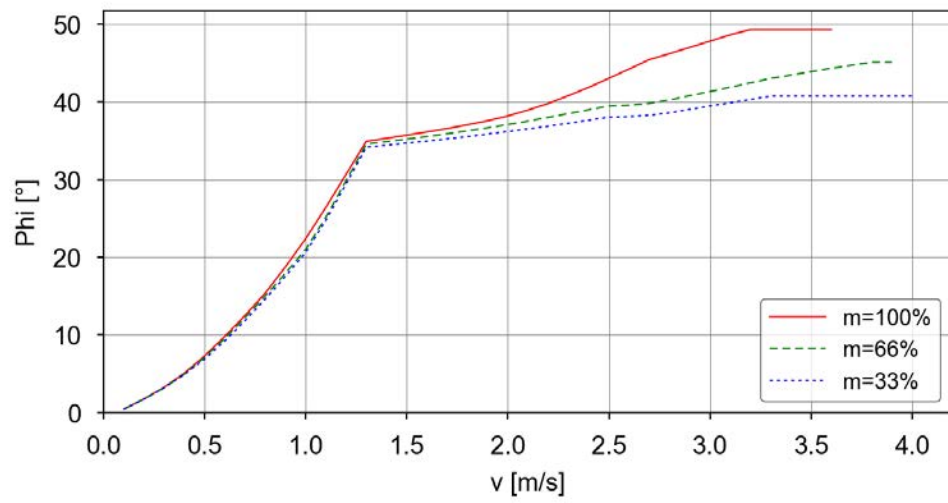
Continues on next page

4 IRB 1200

4.4 IRB 1200 0.9 m 5 kg

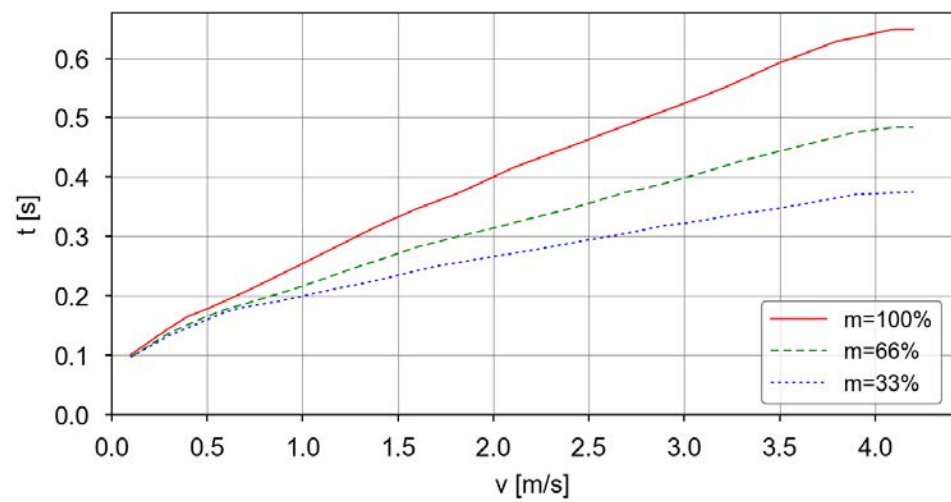
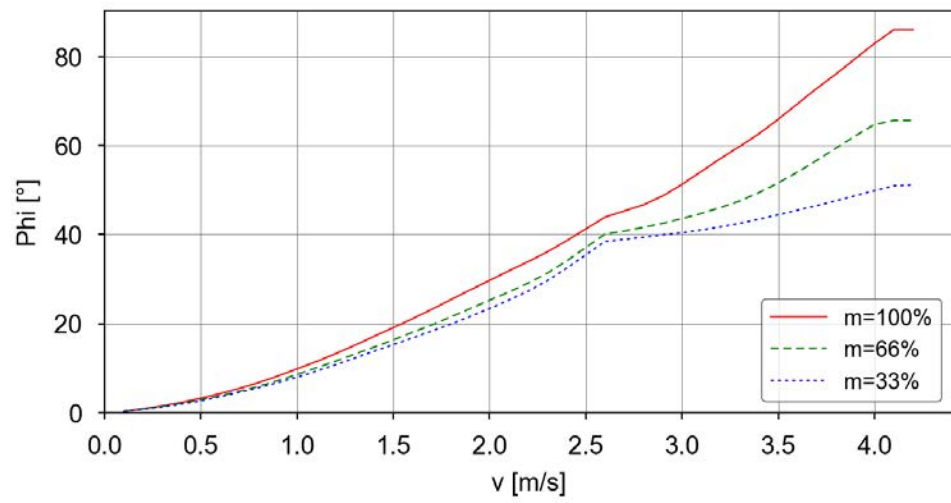
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

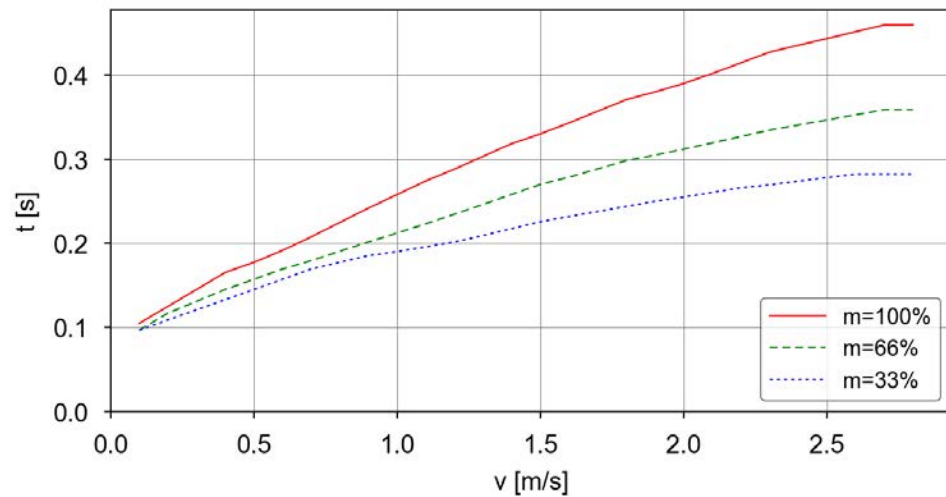
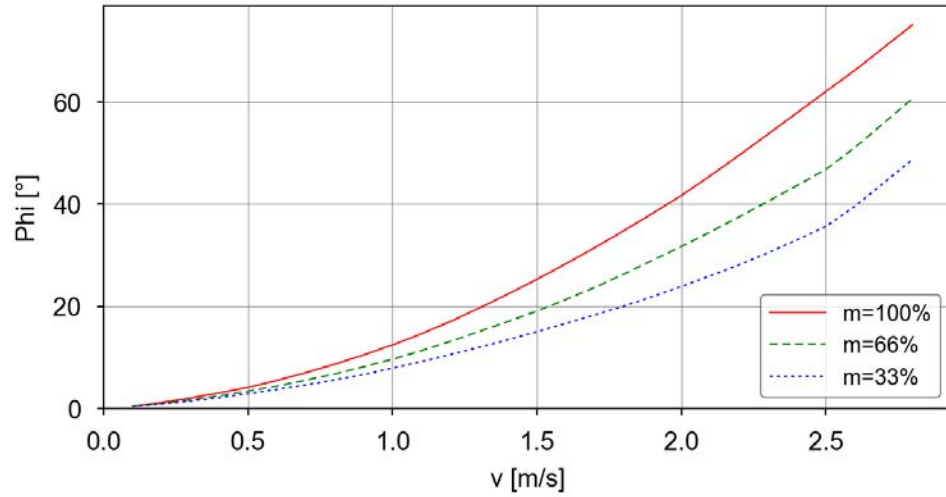
4 IRB 1200

4.4 IRB 1200 0.9 m 5 kg

Continued

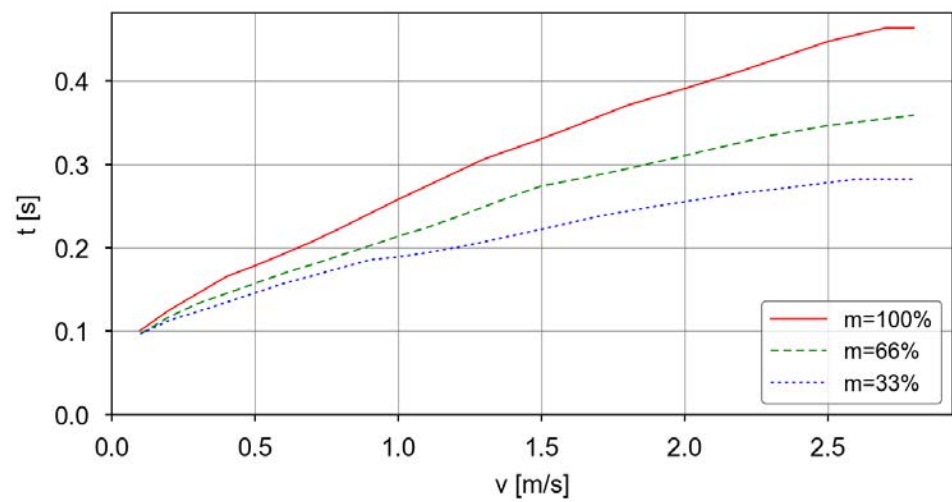
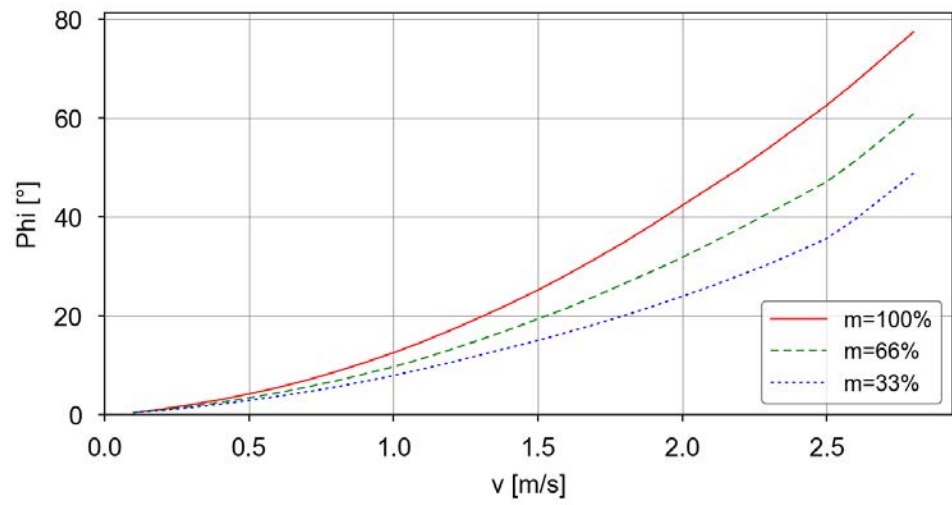
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



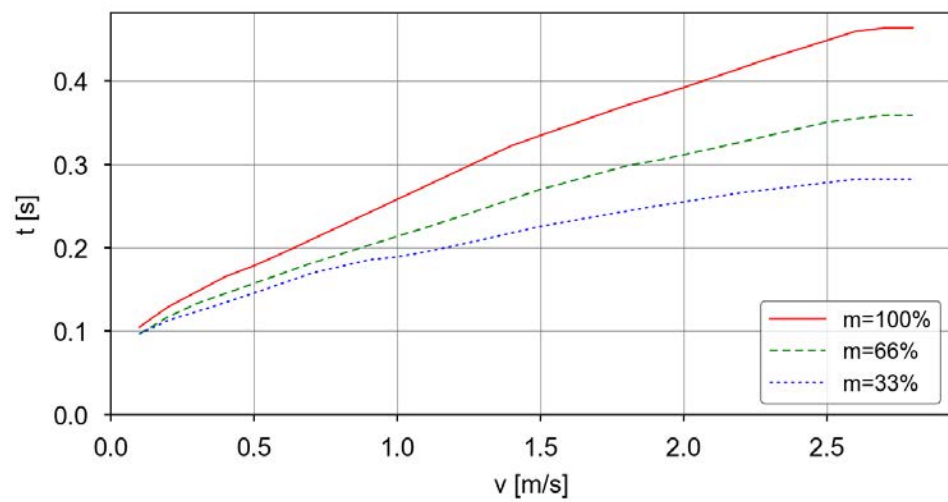
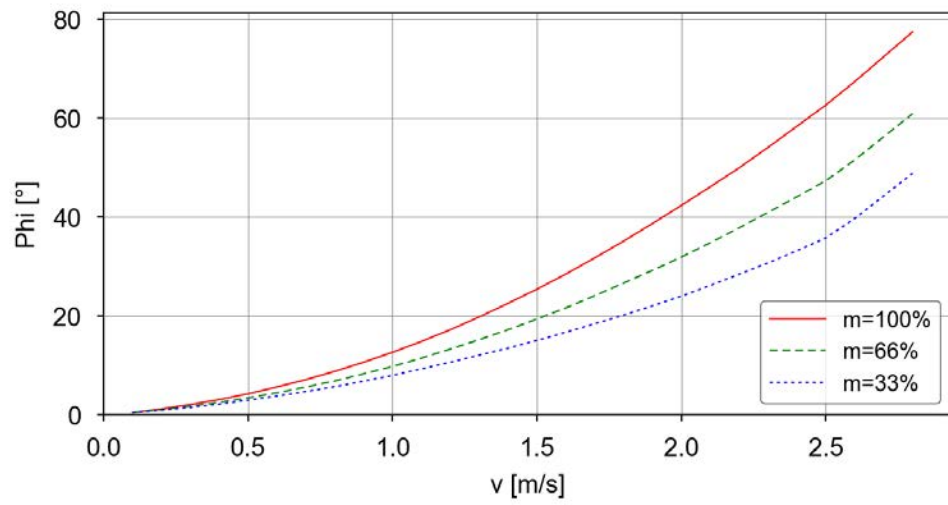
Continues on next page

4 IRB 1200

4.4 IRB 1200 0.9 m 5 kg

Continued

Extension zone 2, stopping distance and stopping time



5 IRB 1410

5.1 IRB 1410 1.44 m 5 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	26.2	0.34
2	19.4	0.2
3	14.0	0.15

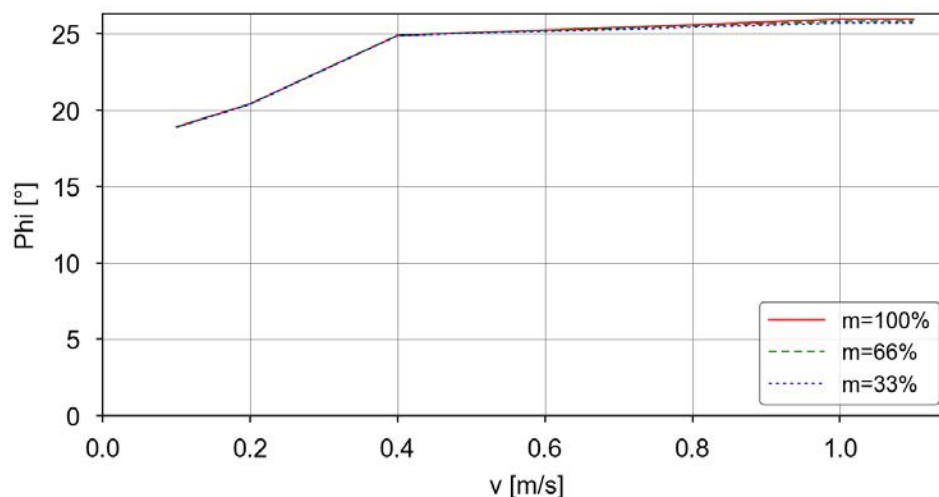
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.481
1	0.481	0.962
2	0.962	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

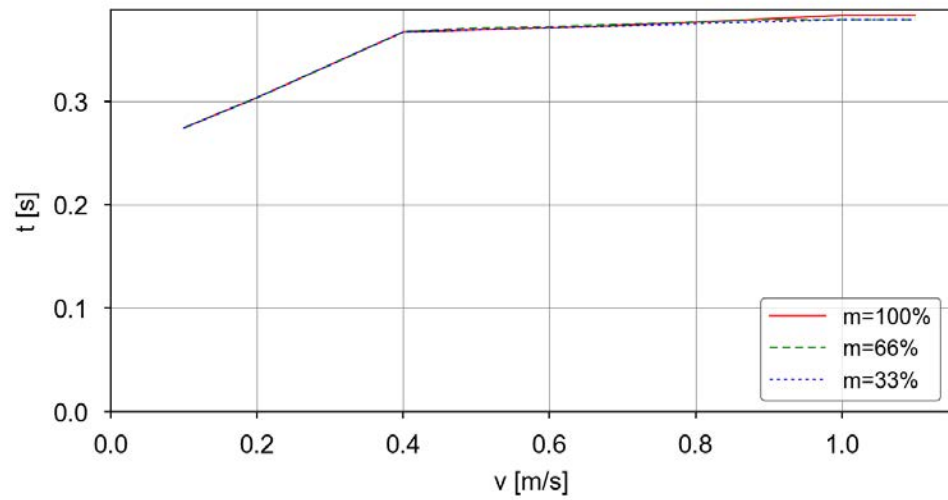


Continues on next page

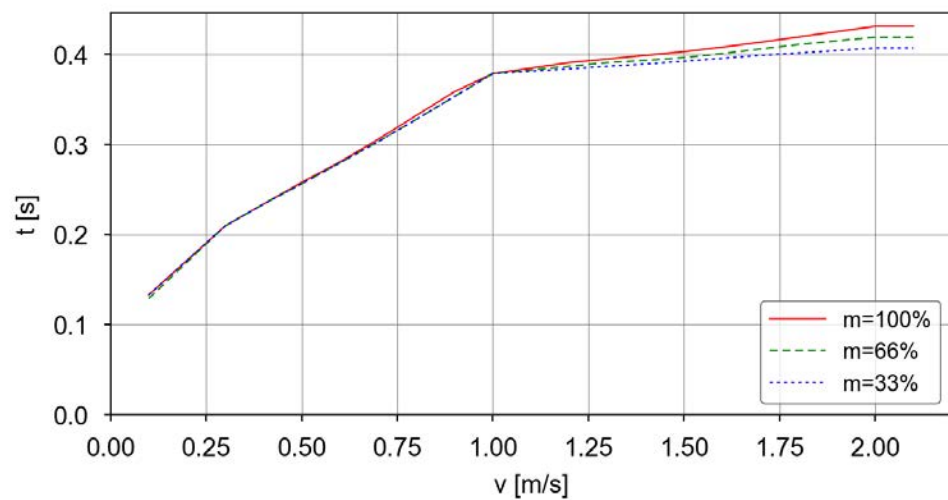
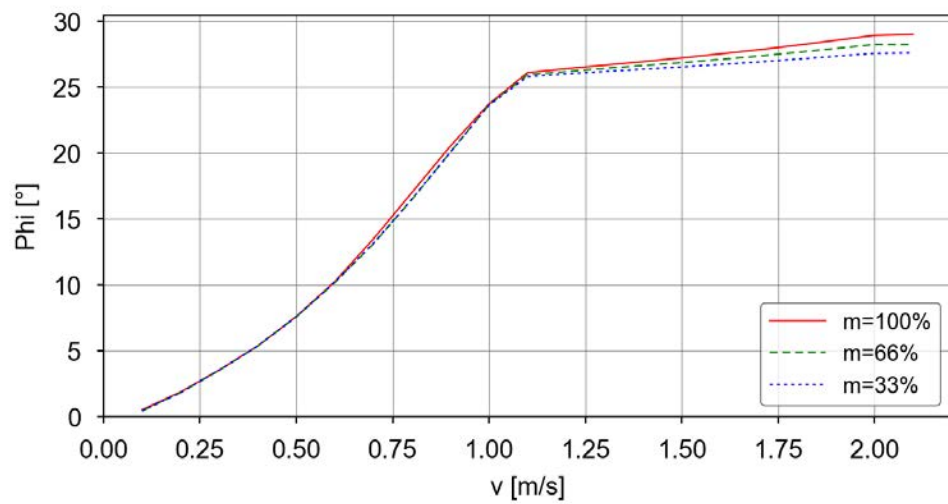
5 IRB 1410

5.1 IRB 1410 1.44 m 5 kg

Continued

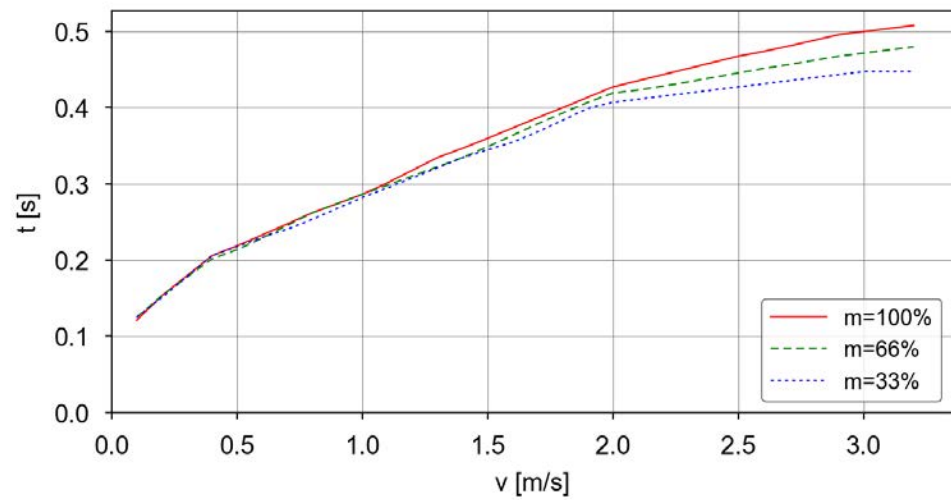
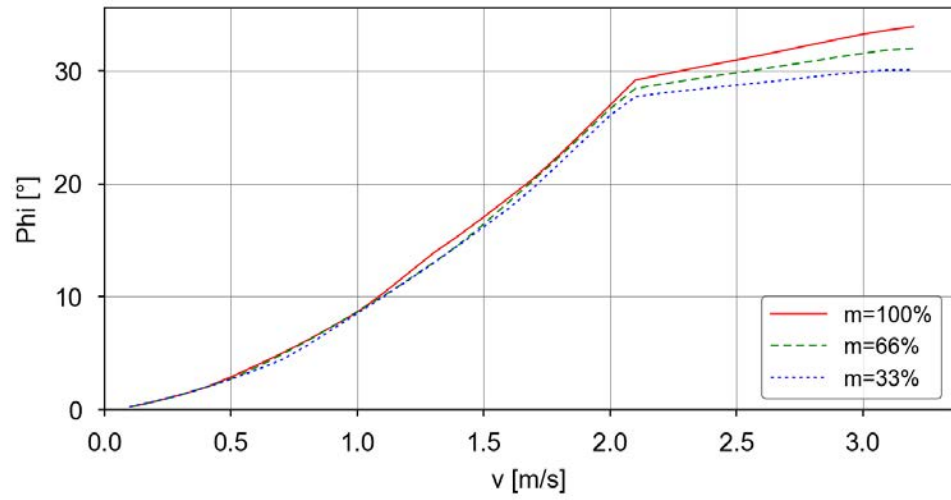


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

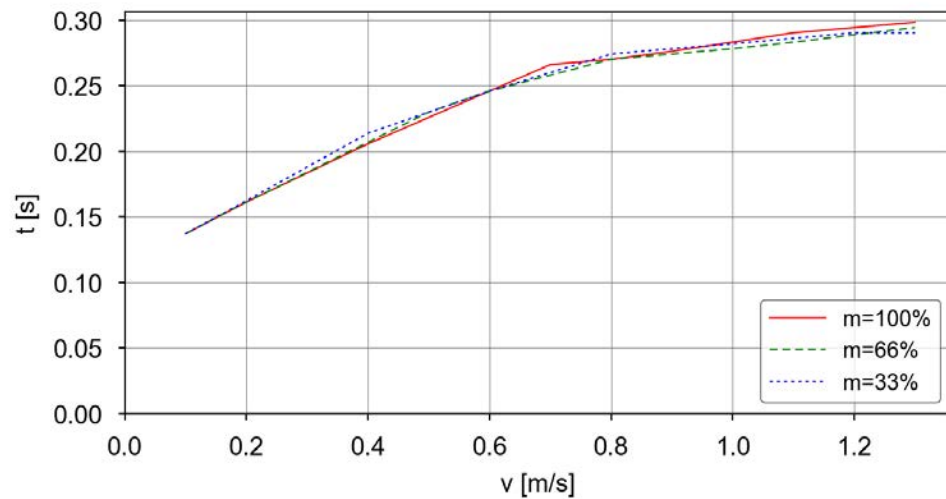
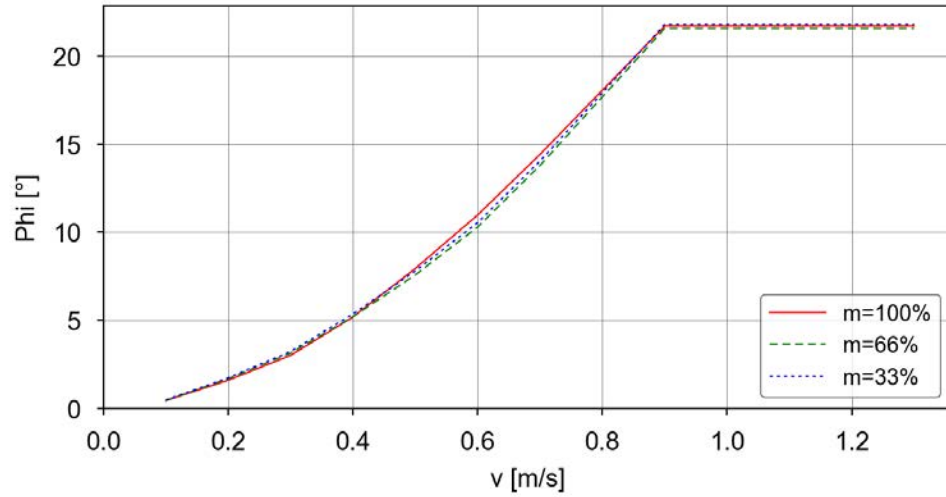
5 IRB 1410

5.1 IRB 1410 1.44 m 5 kg

Continued

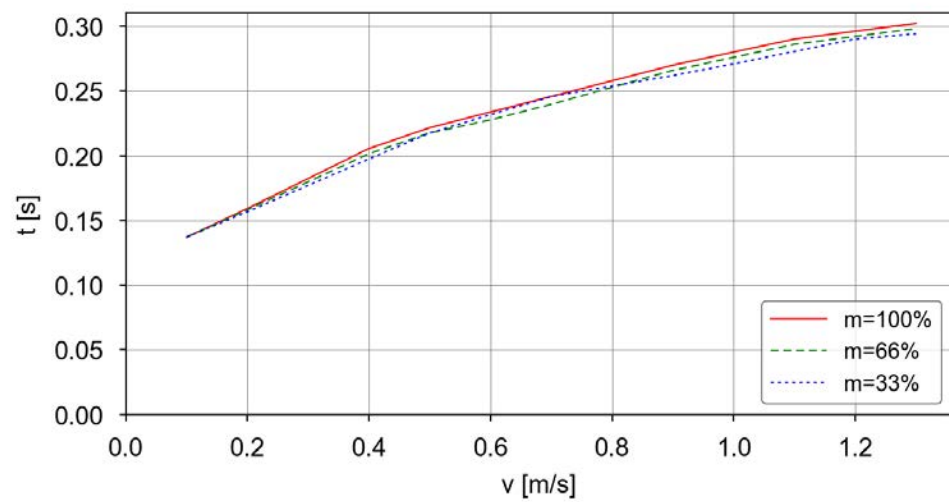
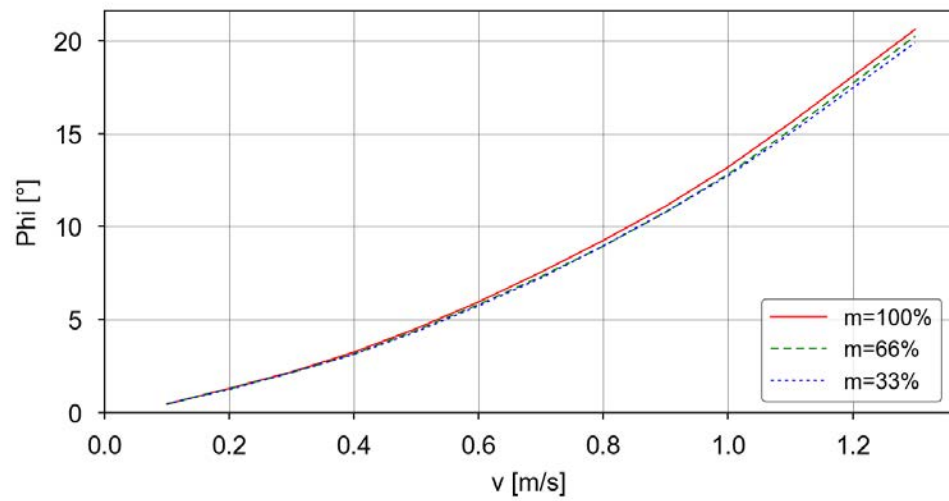
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



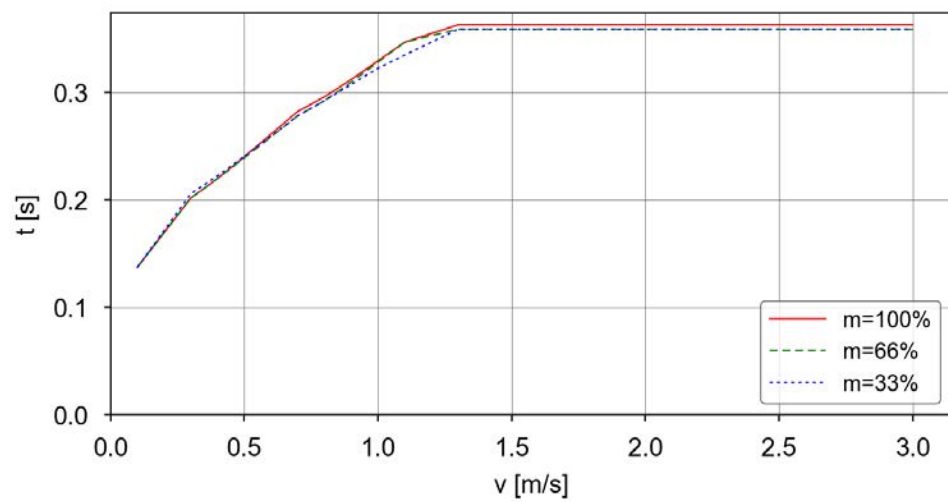
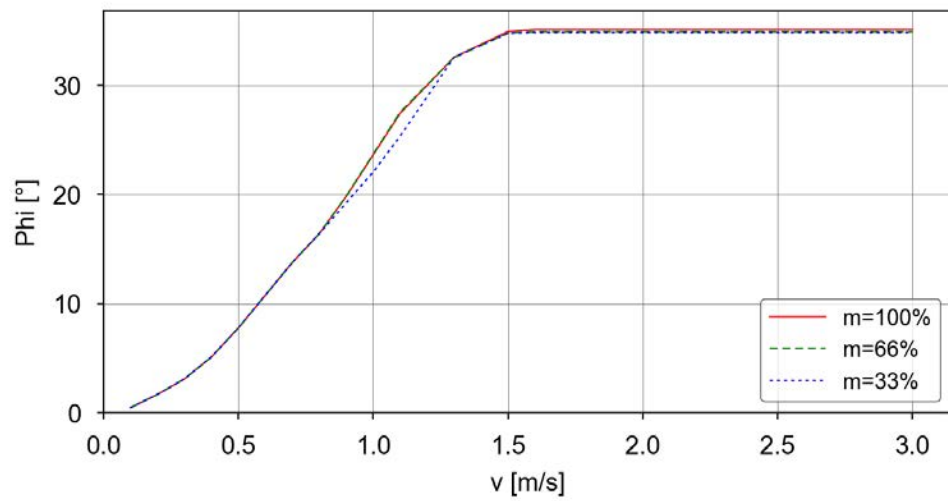
Continues on next page

5 IRB 1410

5.1 IRB 1410 1.44 m 5 kg

Continued

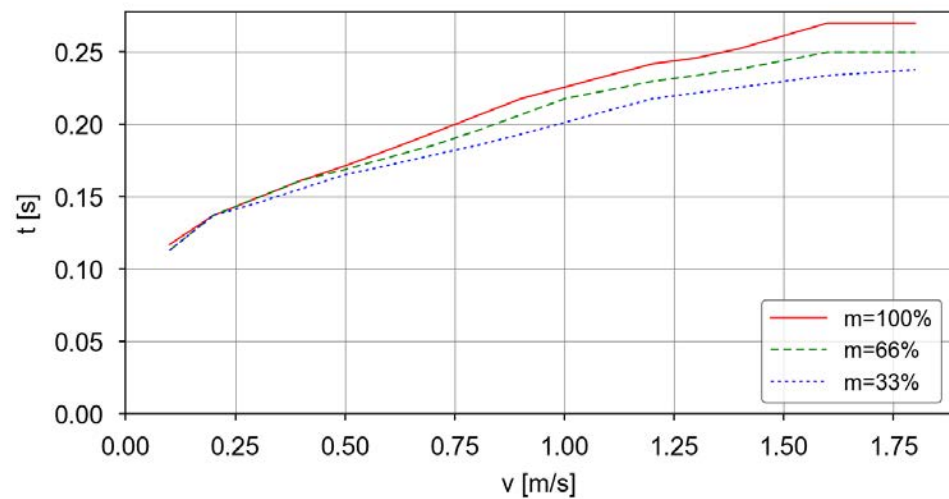
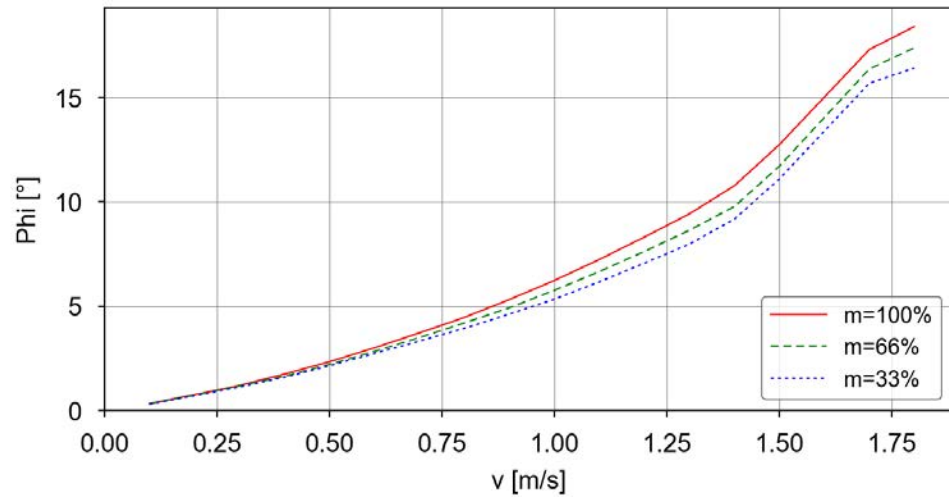
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



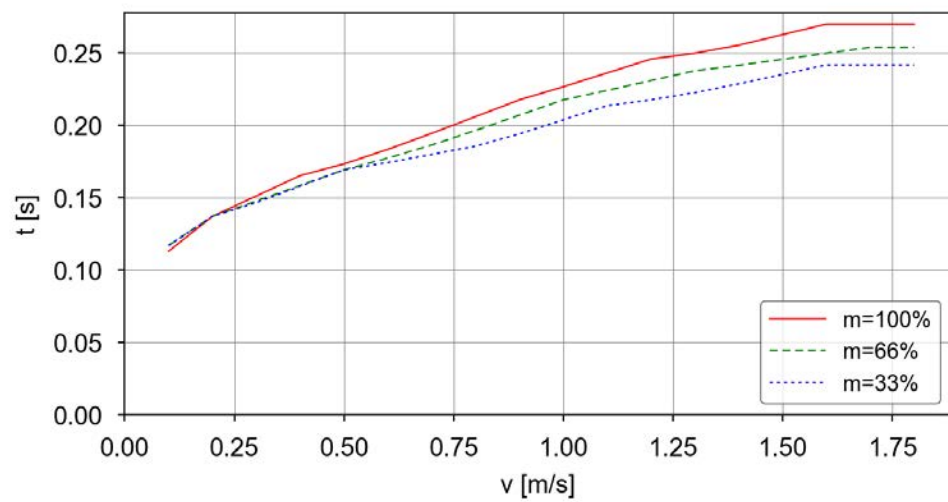
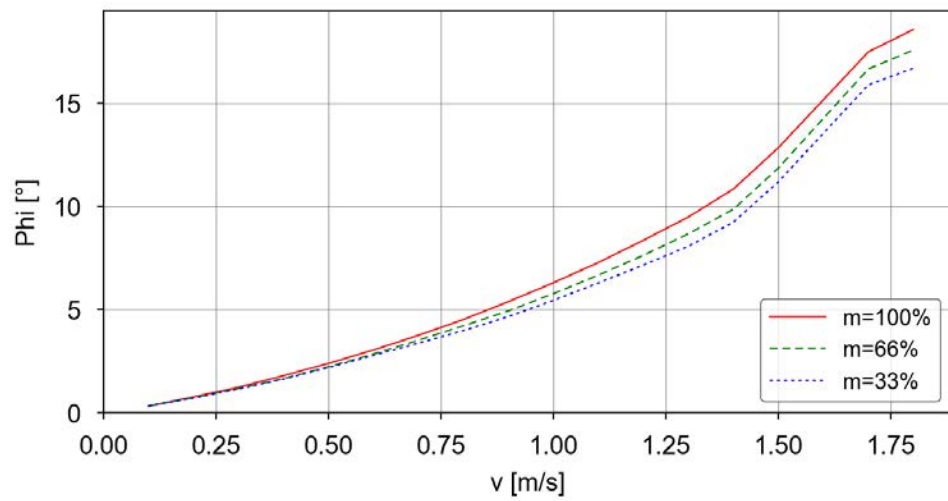
Continues on next page

5 IRB 1410

5.1 IRB 1410 1.44 m 5 kg

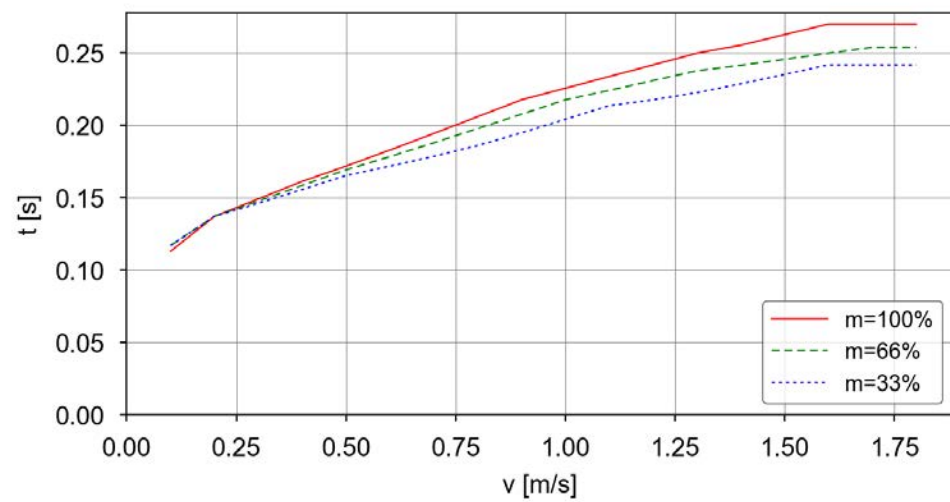
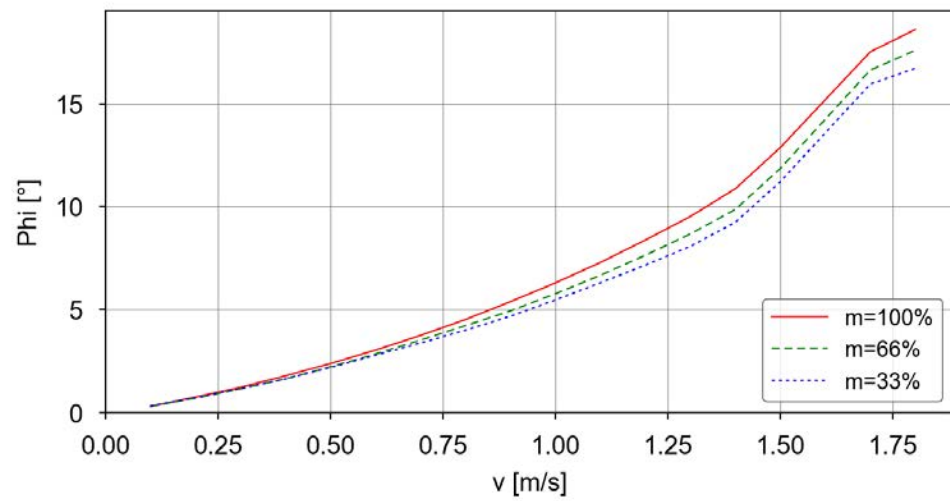
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

6 IRB 1510

6.1 IRB 1510ID 1.5 m 4 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	20.2	0.22
2	18.5	0.17
3	15.0	0.12

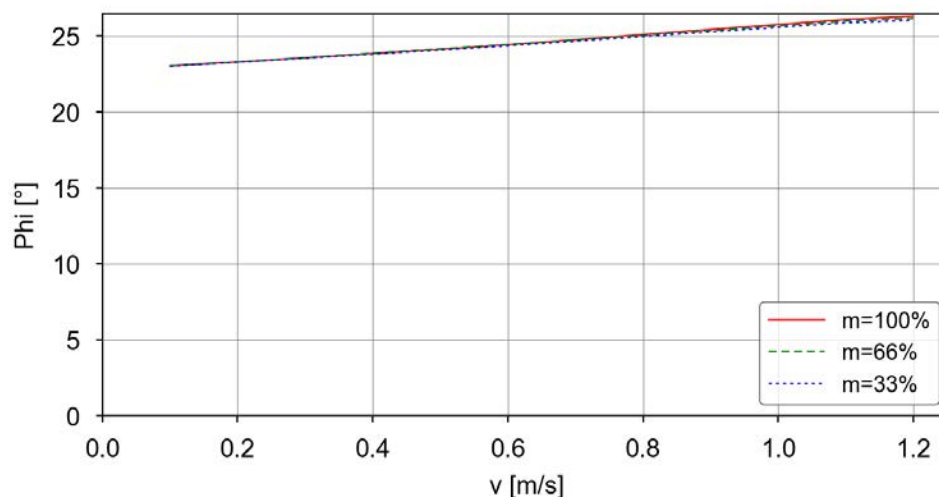
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.5
1	0.5	1.0
2	1.0	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

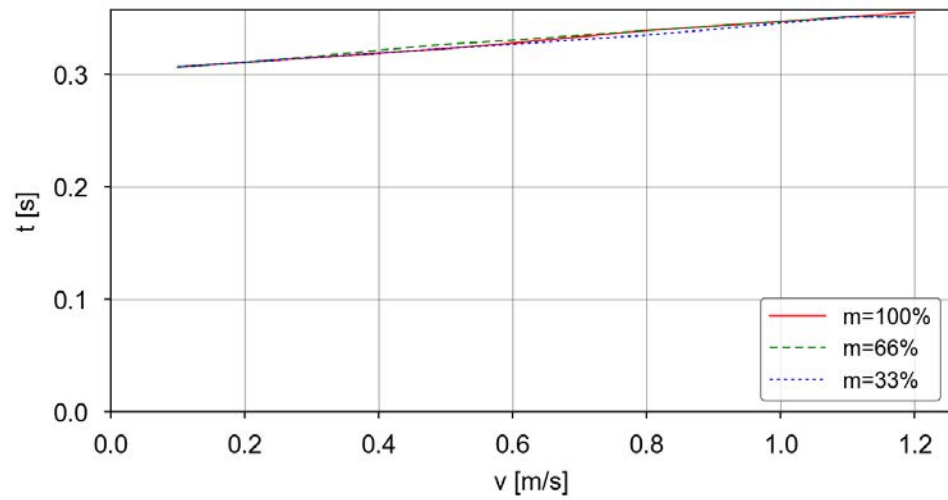


Continues on next page

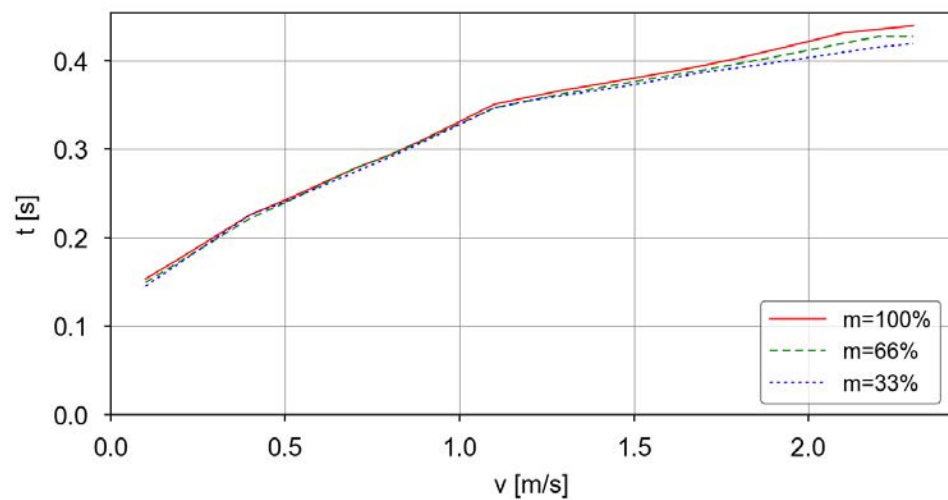
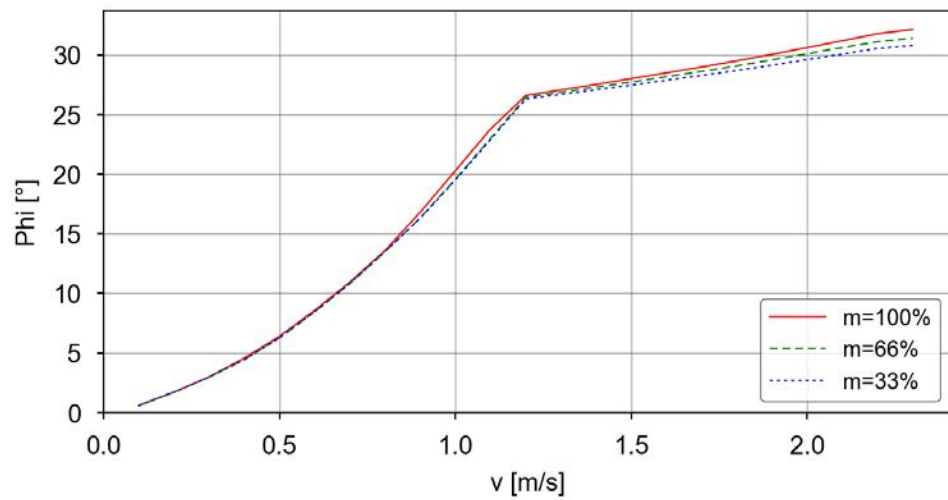
6 IRB 1510

6.1 IRB 1510ID 1.5 m 4 kg

Continued

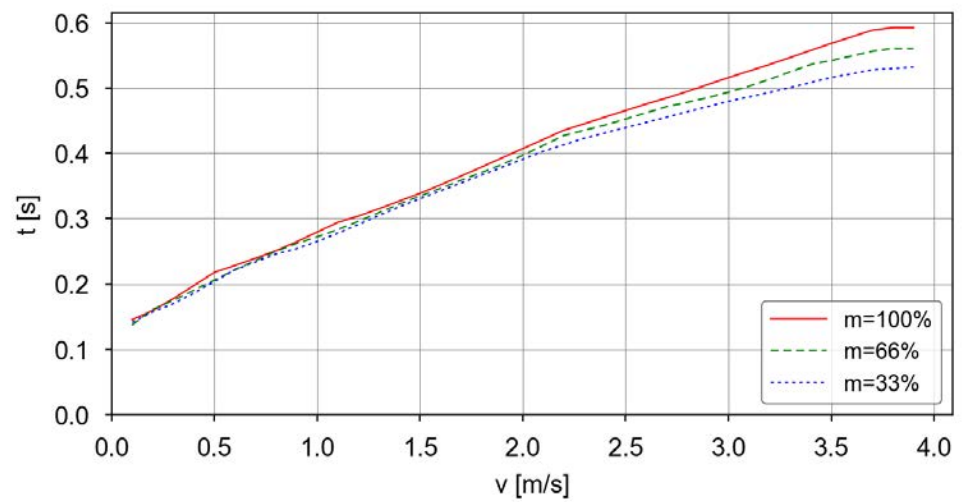
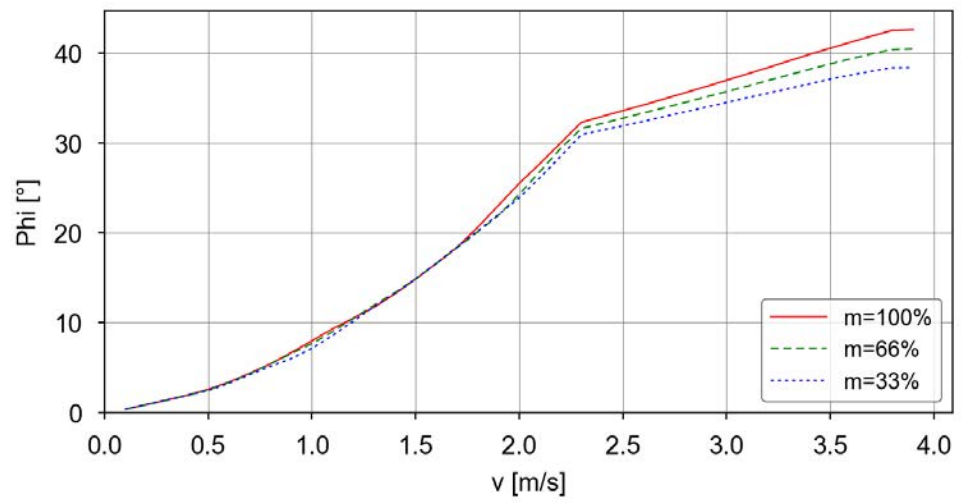


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

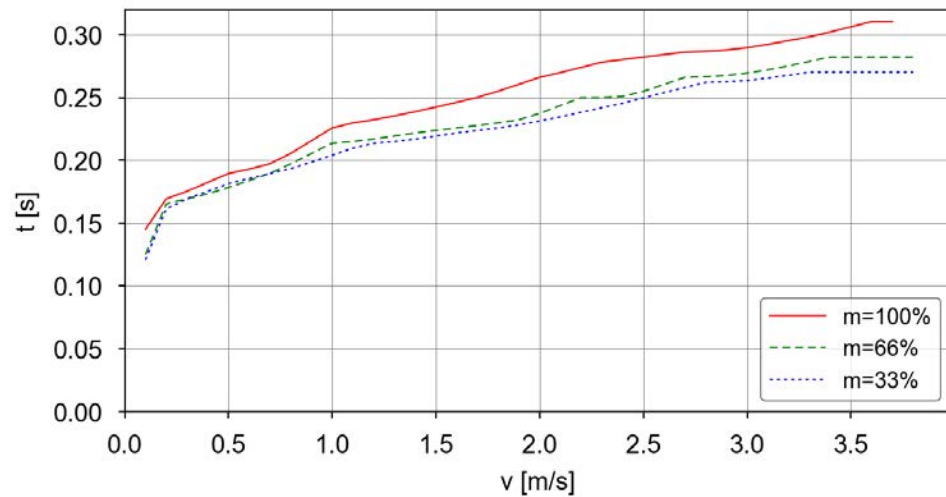
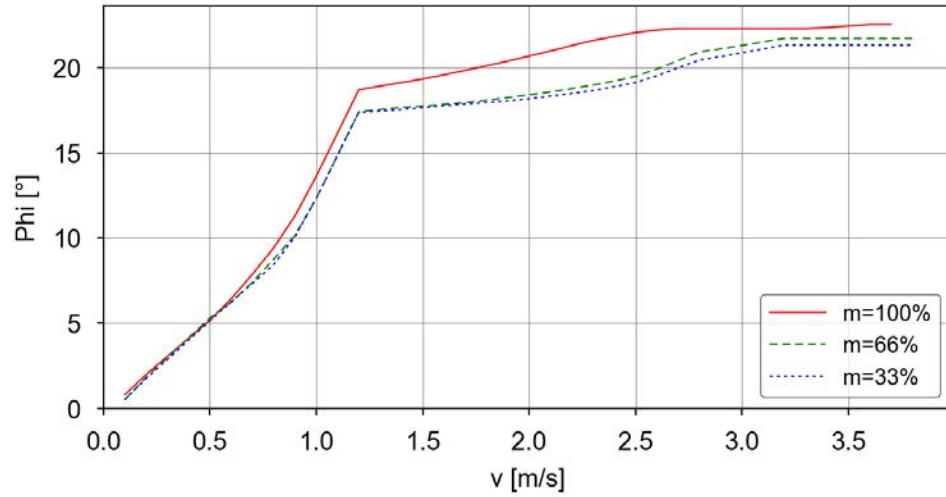
6 IRB 1510

6.1 IRB 1510ID 1.5 m 4 kg

Continued

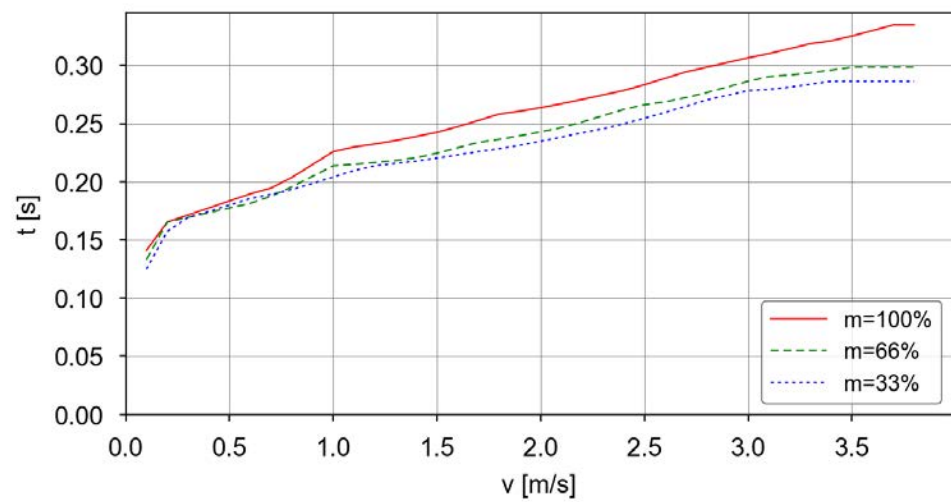
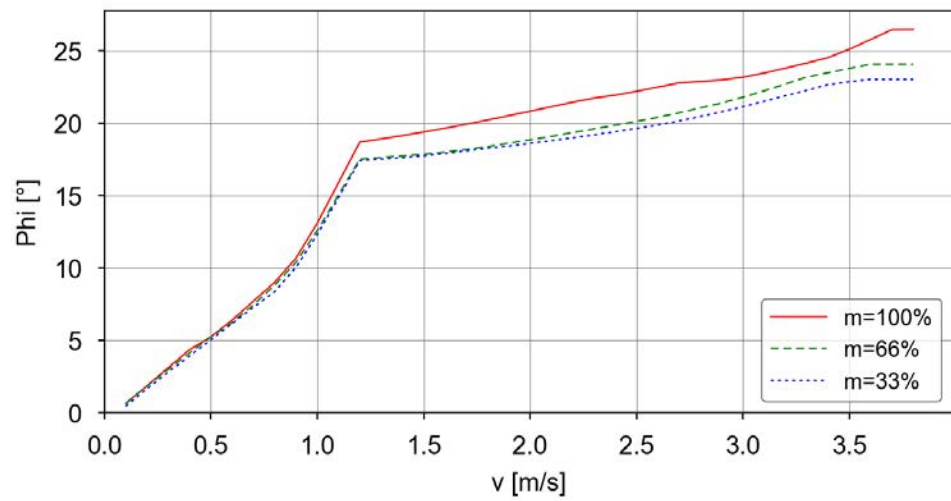
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



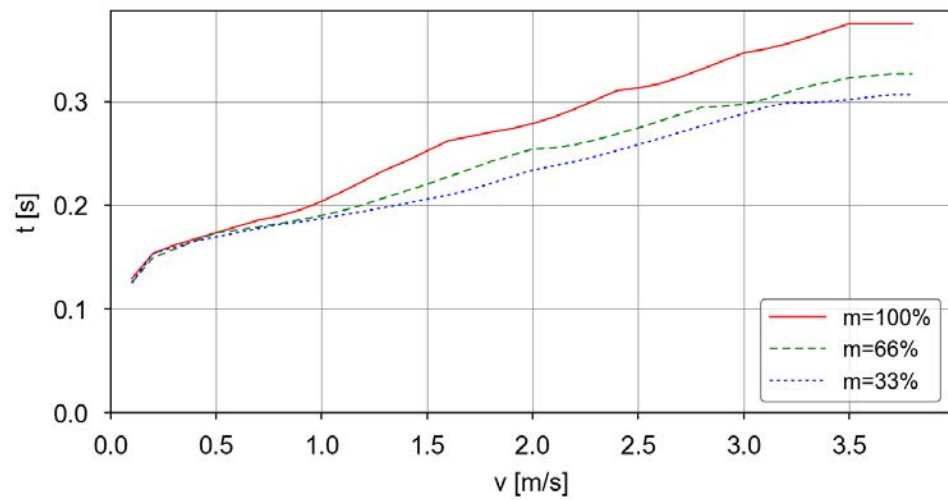
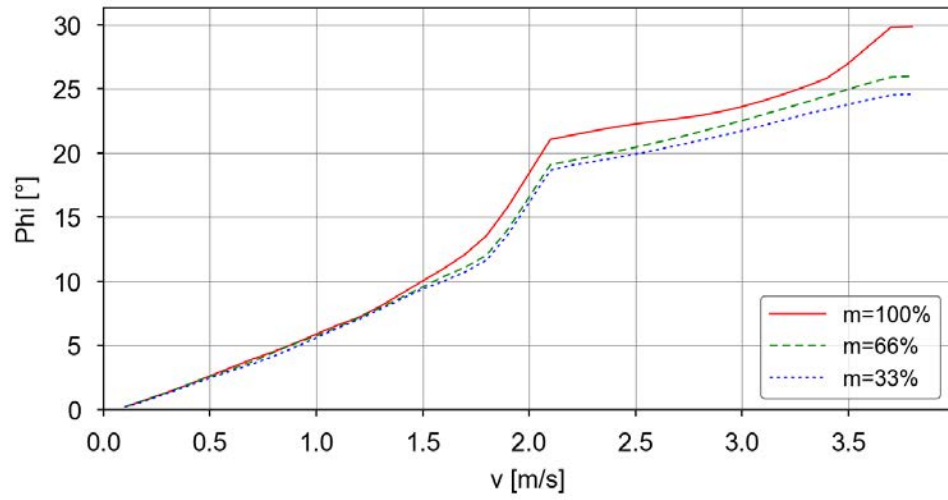
Continues on next page

6 IRB 1510

6.1 IRB 1510ID 1.5 m 4 kg

Continued

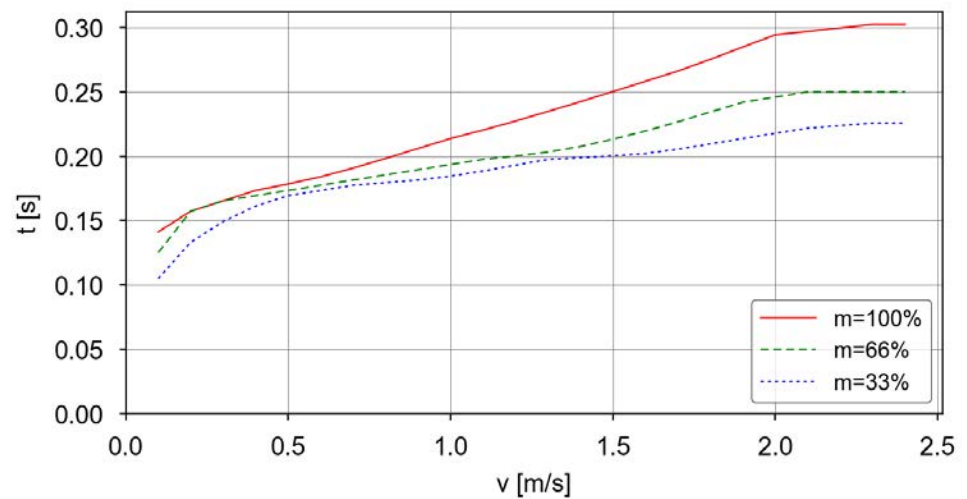
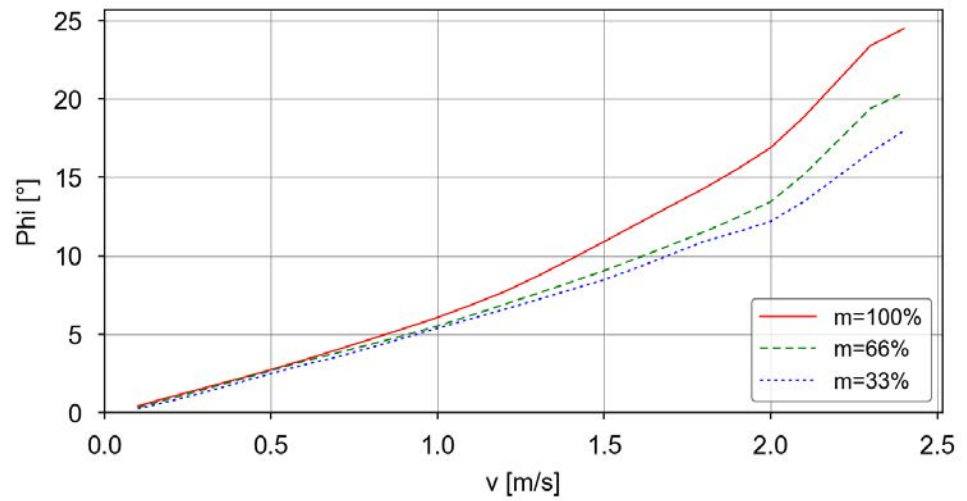
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



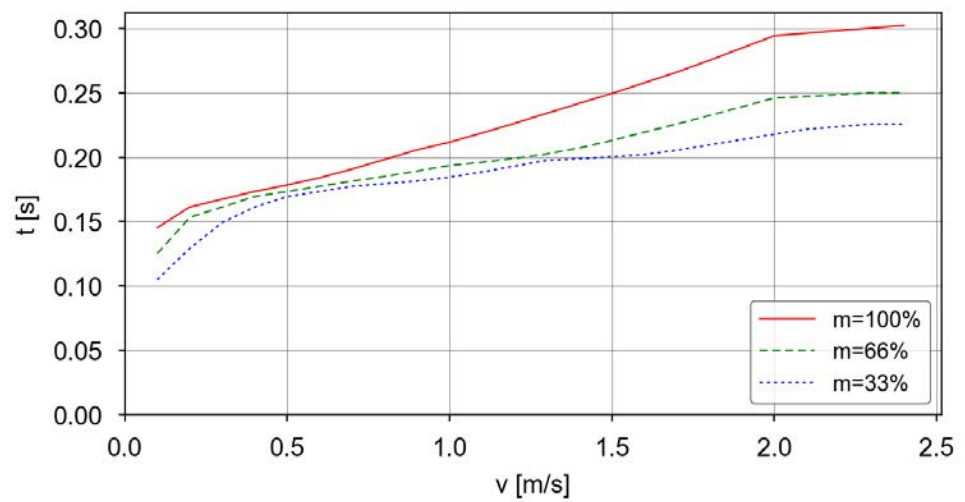
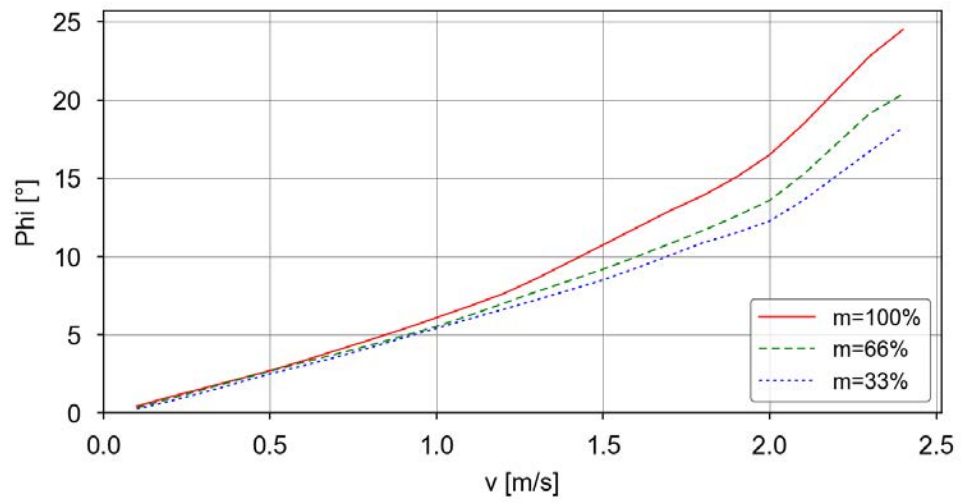
Continues on next page

6 IRB 1510

6.1 IRB 1510ID 1.5 m 4 kg

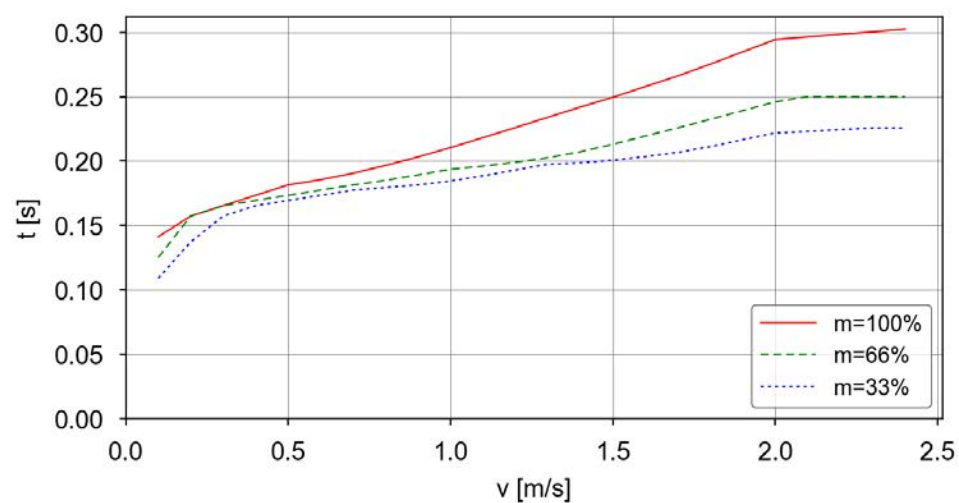
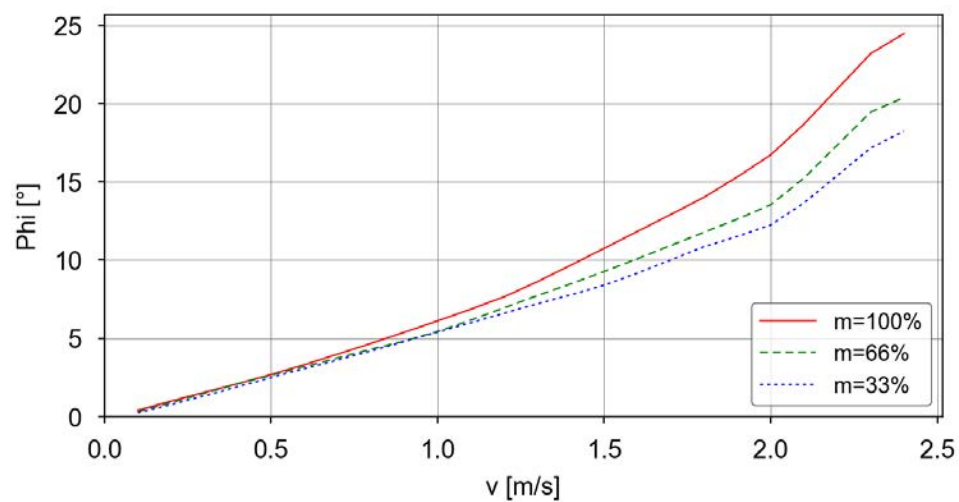
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

7 IRB 1520

7.1 IRB 1520ID 1.5 m 4 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	20.2	0.22
2	18.5	0.17
3	15.0	0.12

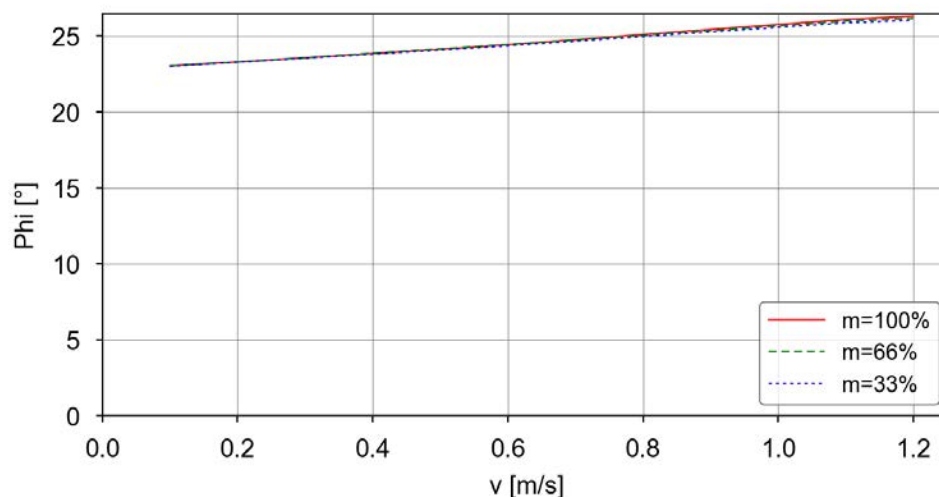
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.5
1	0.5	1.0
2	1.0	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

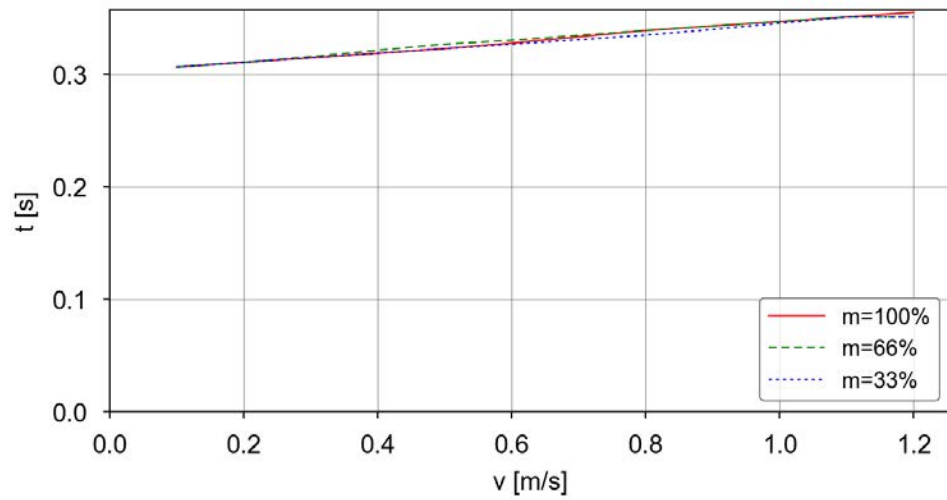


Continues on next page

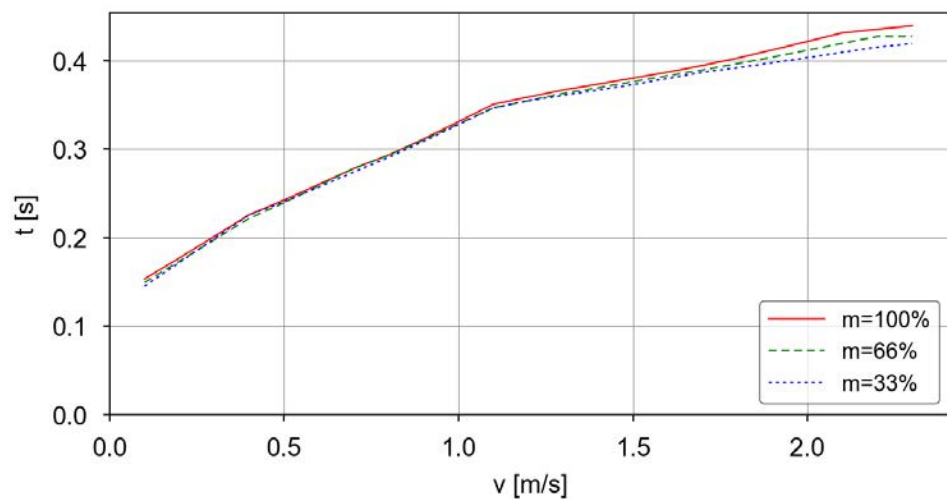
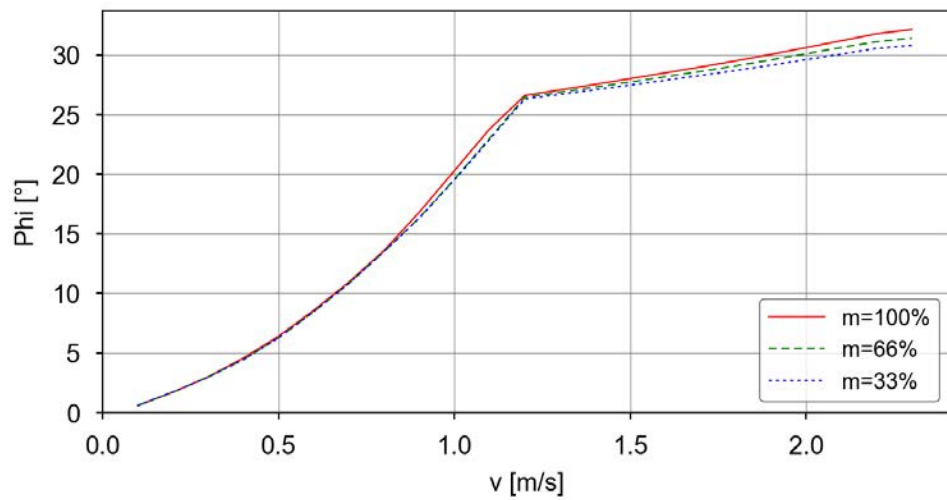
7 IRB 1520

7.1 IRB 1520ID 1.5 m 4 kg

Continued

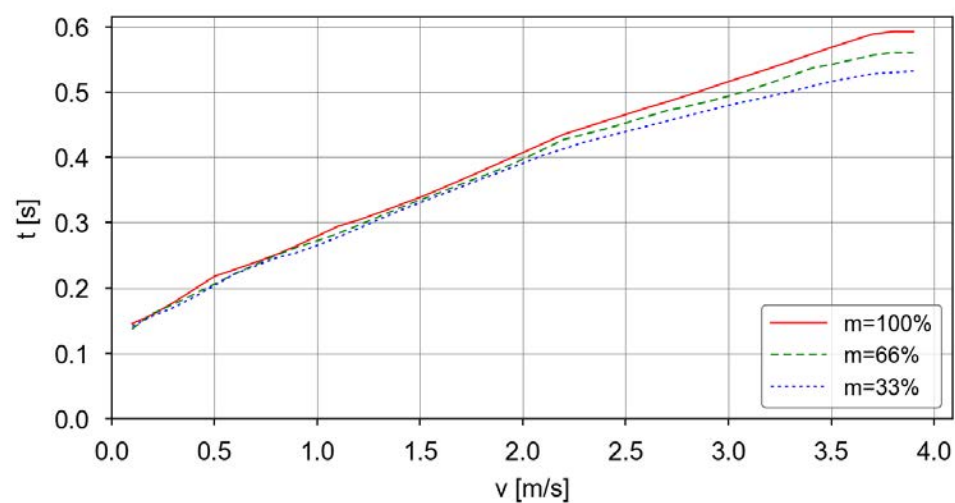
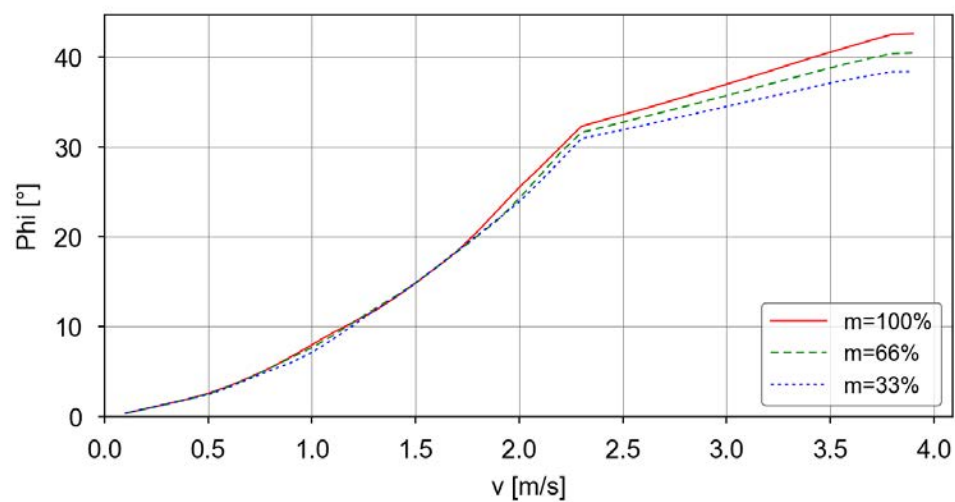


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

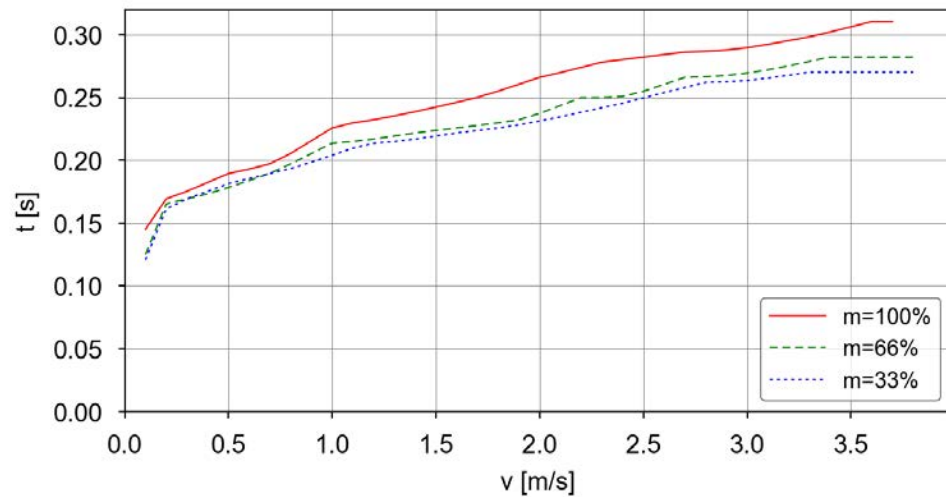
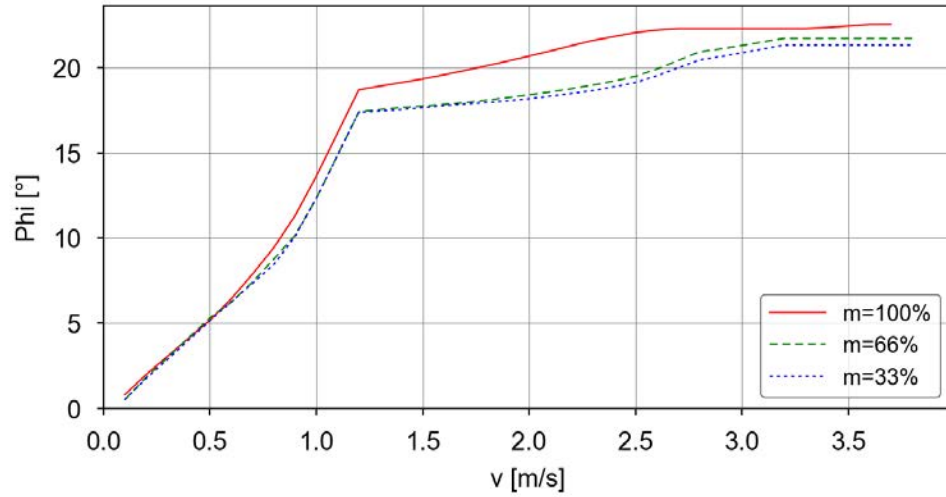
7 IRB 1520

7.1 IRB 1520ID 1.5 m 4 kg

Continued

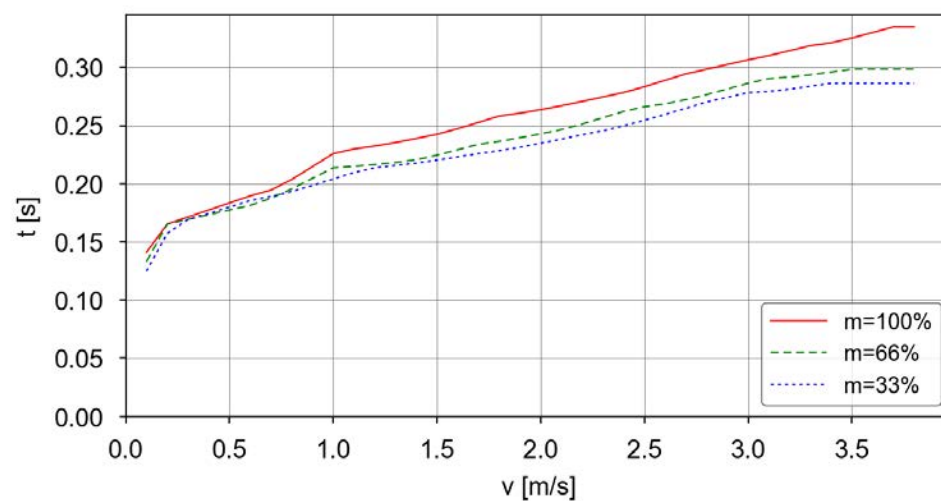
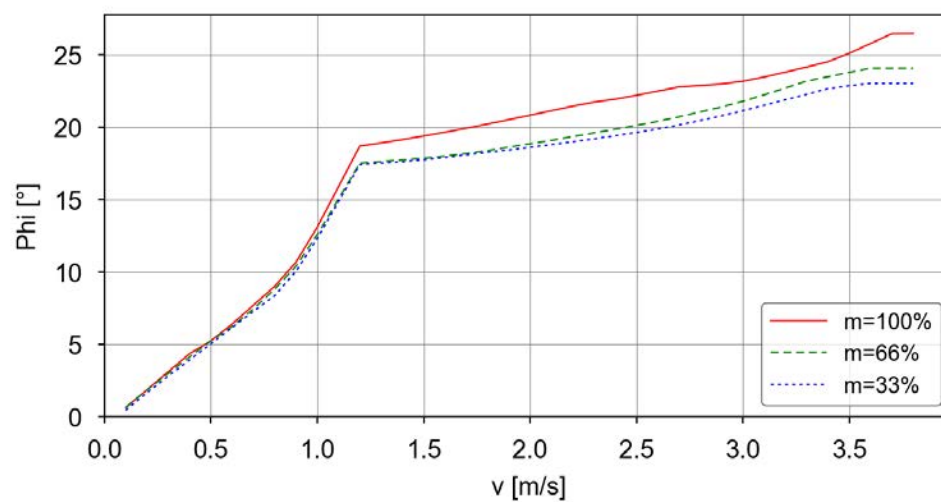
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



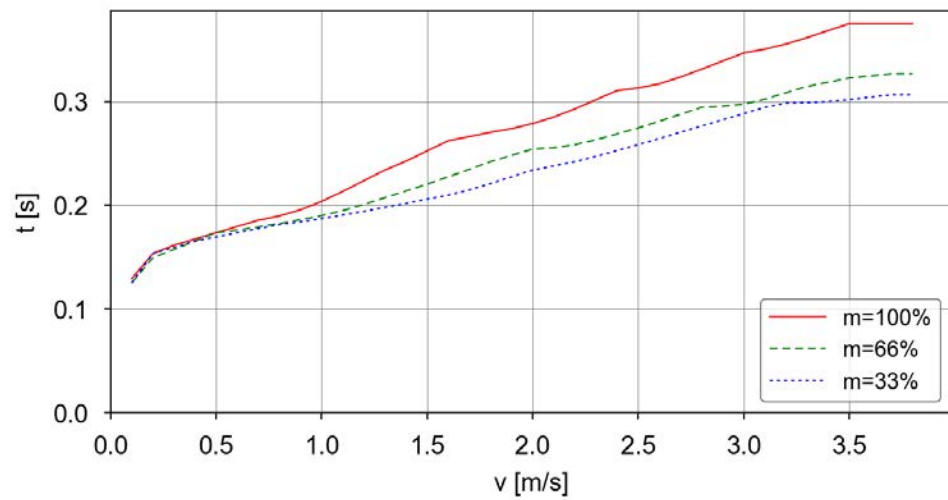
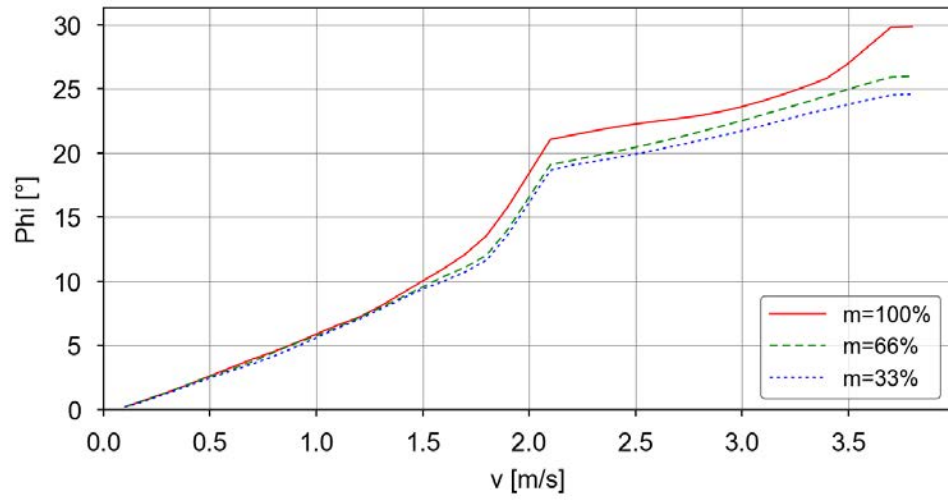
Continues on next page

7 IRB 1520

7.1 IRB 1520ID 1.5 m 4 kg

Continued

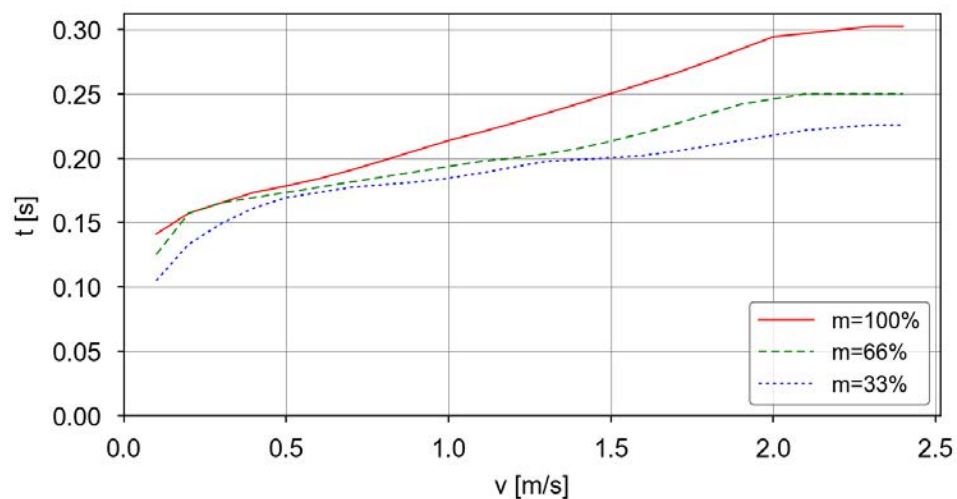
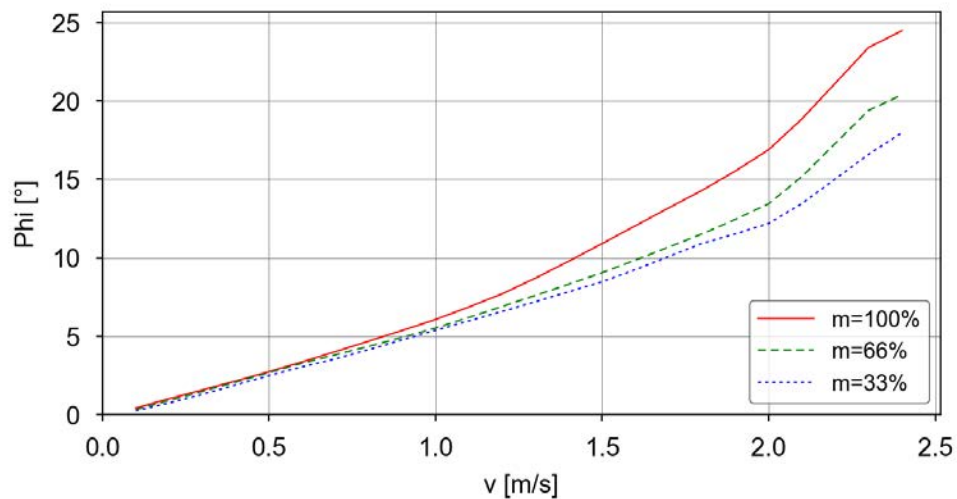
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



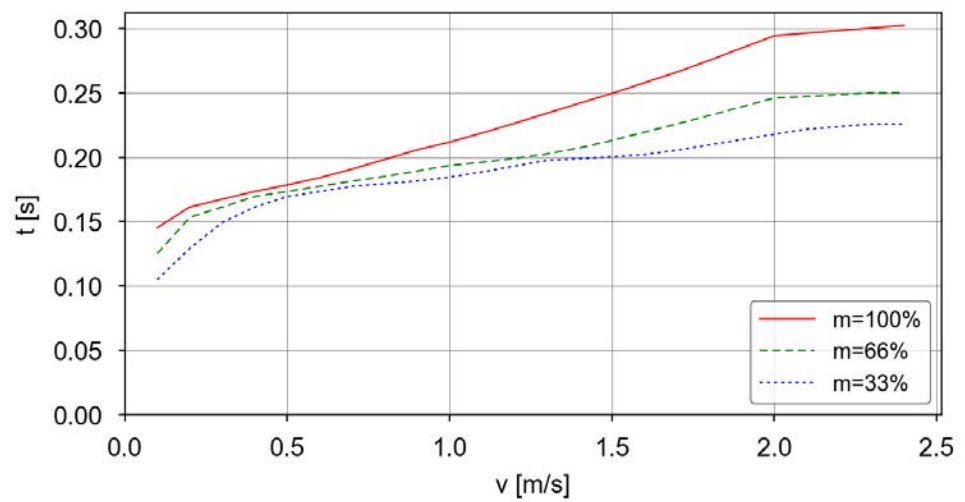
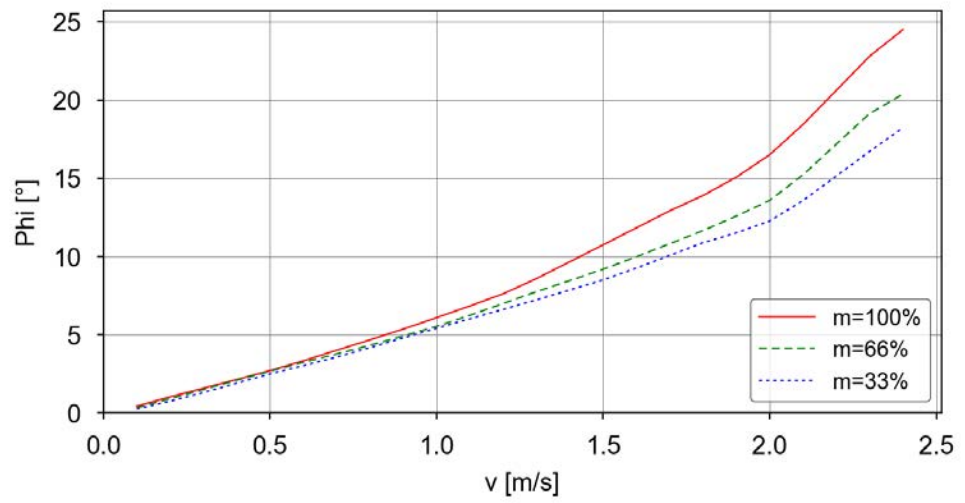
Continues on next page

7 IRB 1520

7.1 IRB 1520ID 1.5 m 4 kg

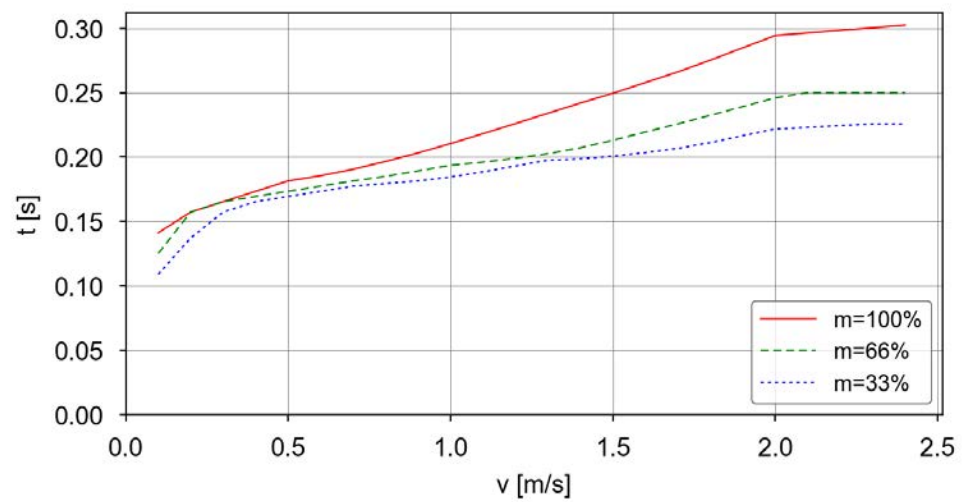
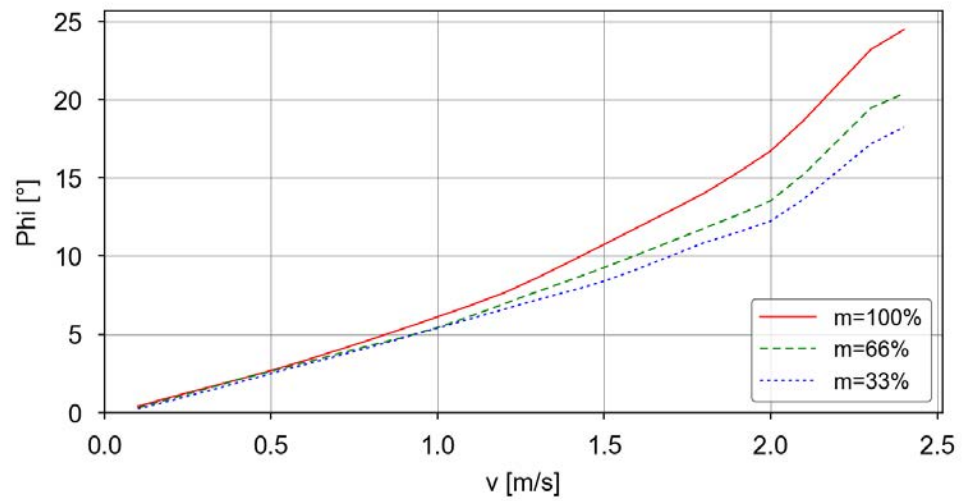
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

8 IRB 1600

8.1 IRB 1600 1.2 m 6 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	19.7	0.17
2	16.8	0.12
3	16.1	0.1

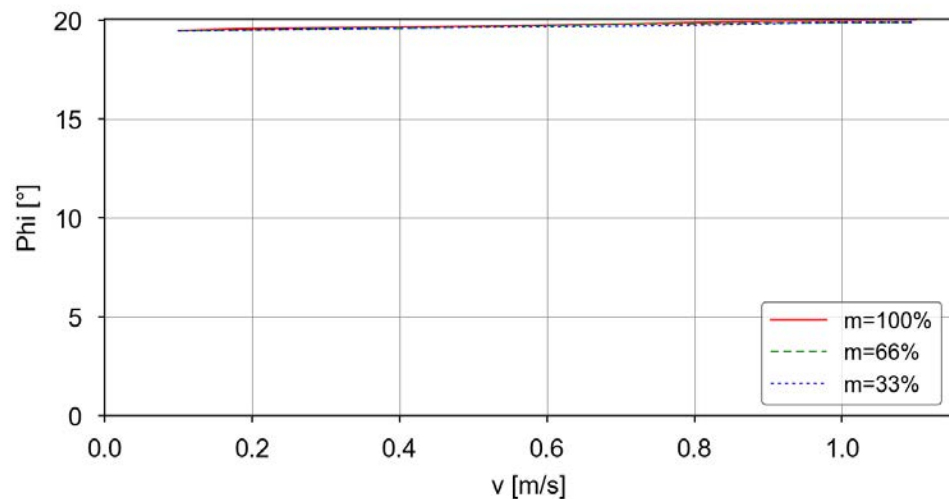
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.408
1	0.408	0.817
2	0.817	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

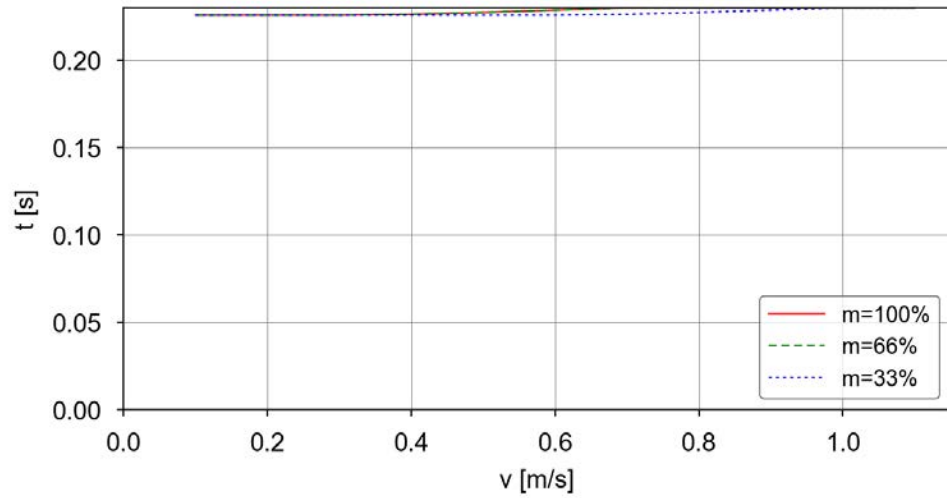


Continues on next page

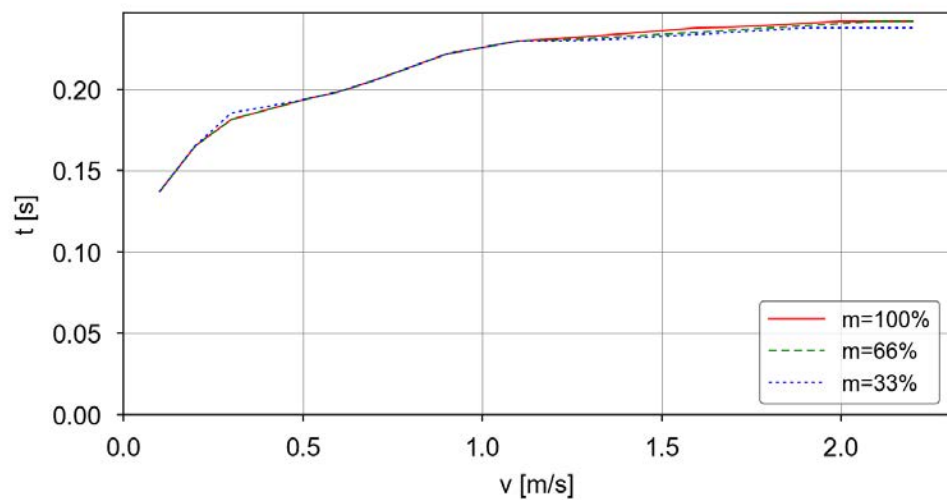
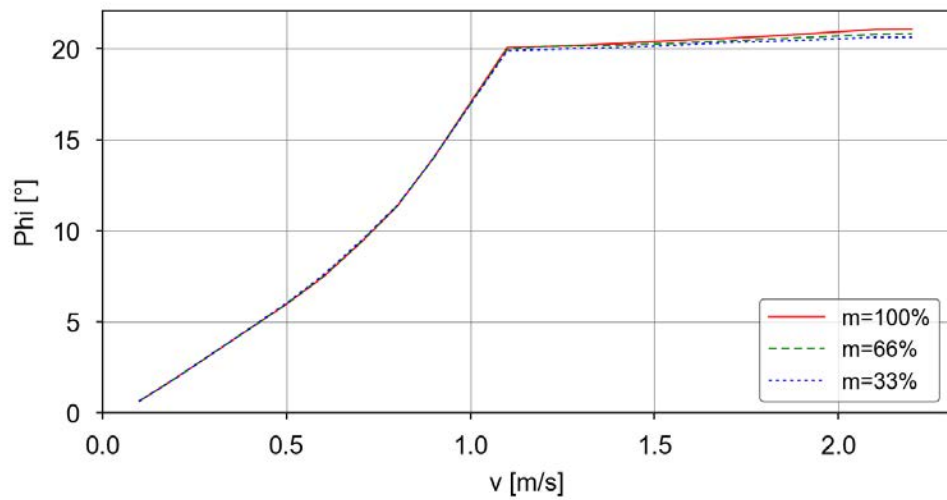
8 IRB 1600

8.1 IRB 1600 1.2 m 6 kg

Continued

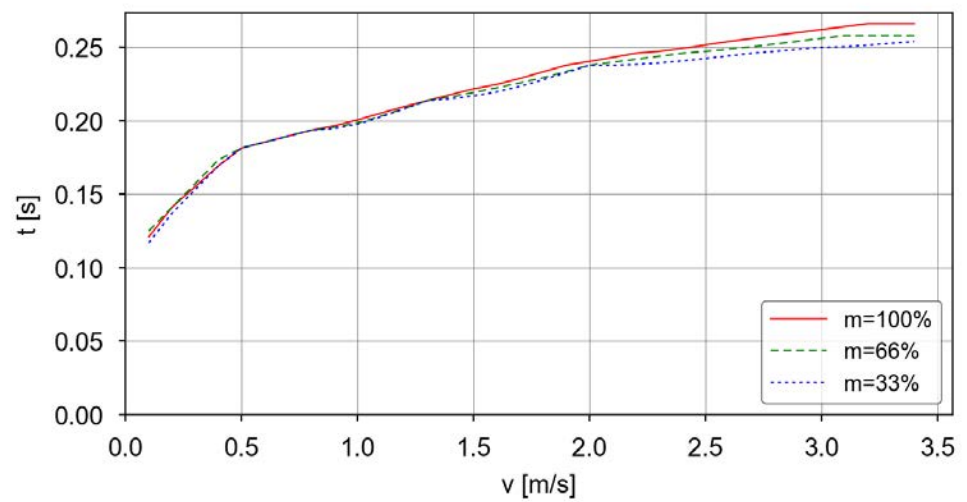
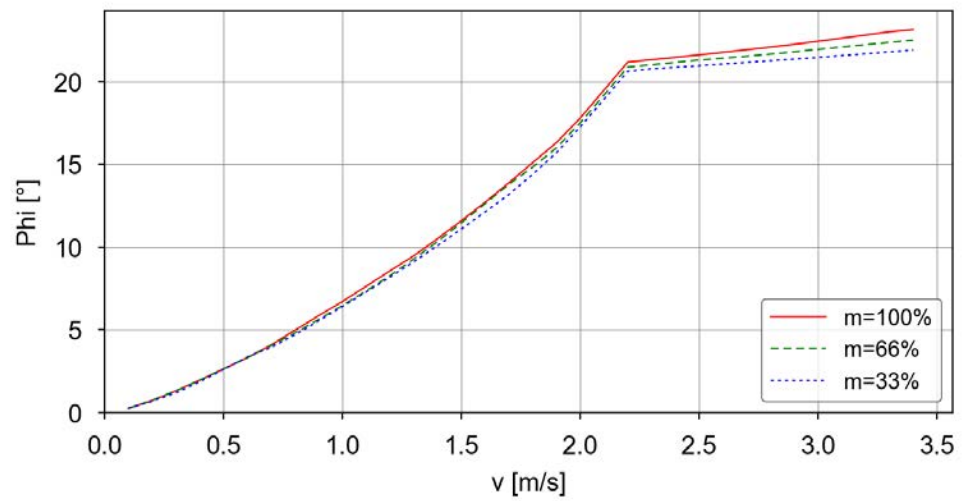


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

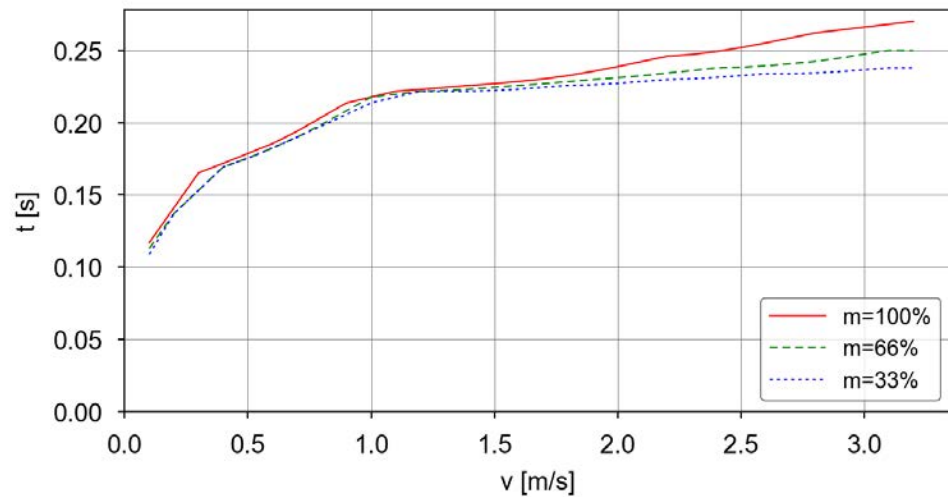
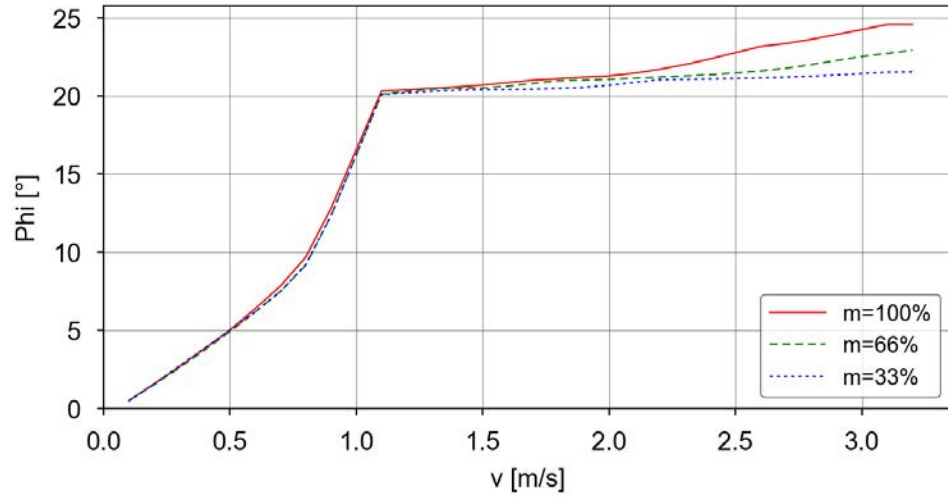
8 IRB 1600

8.1 IRB 1600 1.2 m 6 kg

Continued

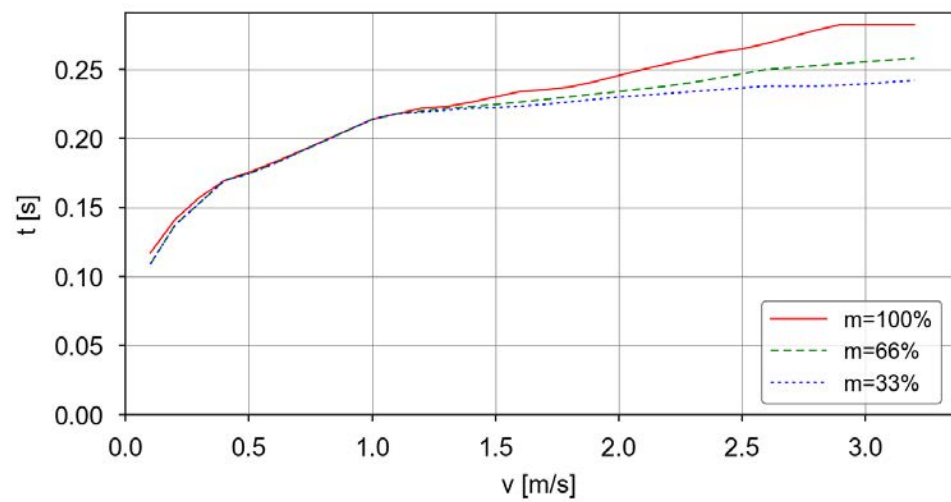
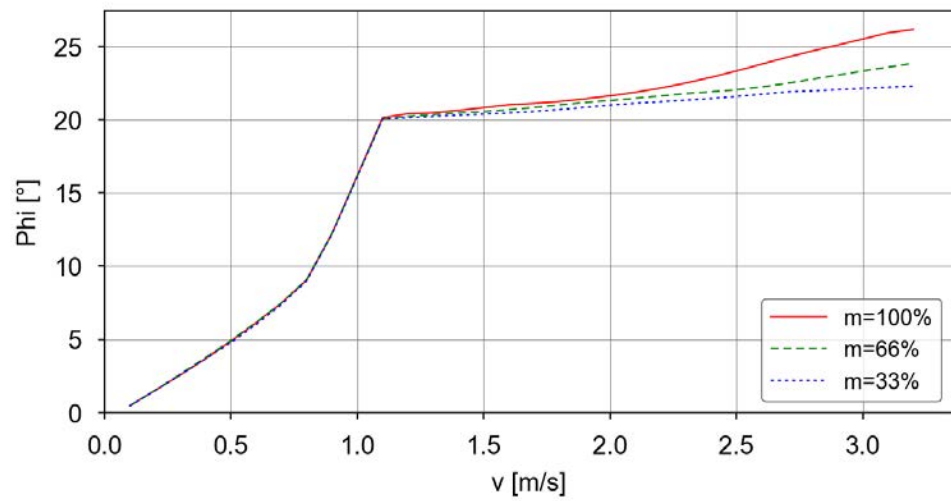
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



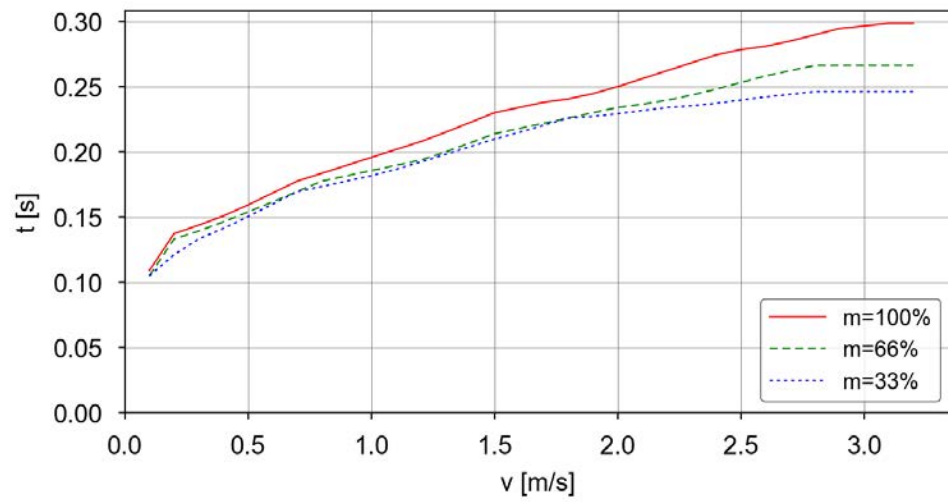
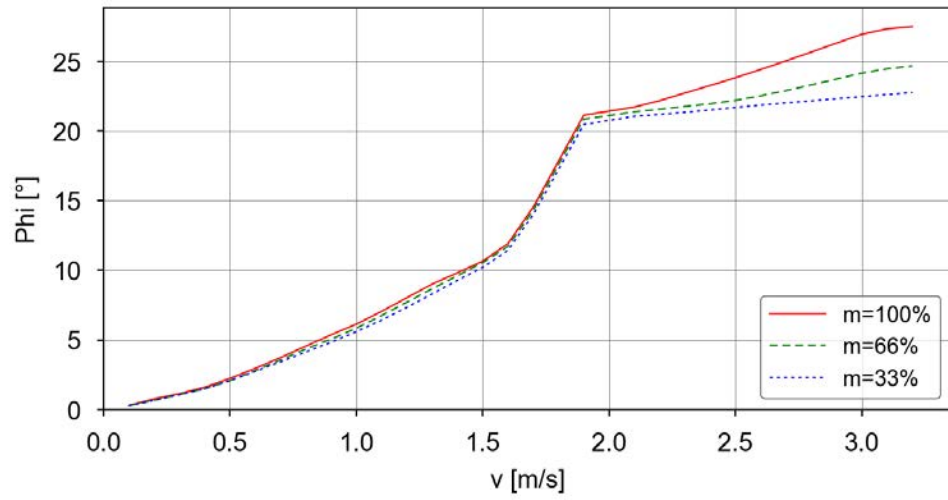
Continues on next page

8 IRB 1600

8.1 IRB 1600 1.2 m 6 kg

Continued

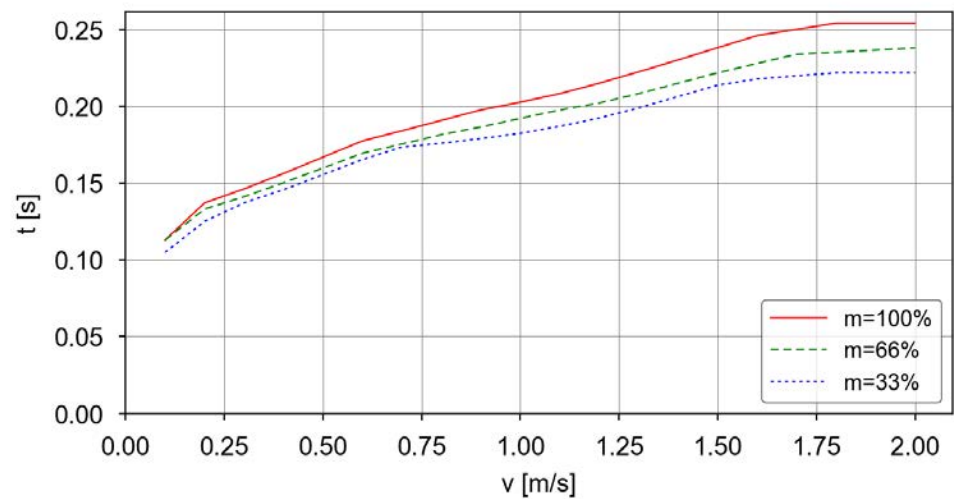
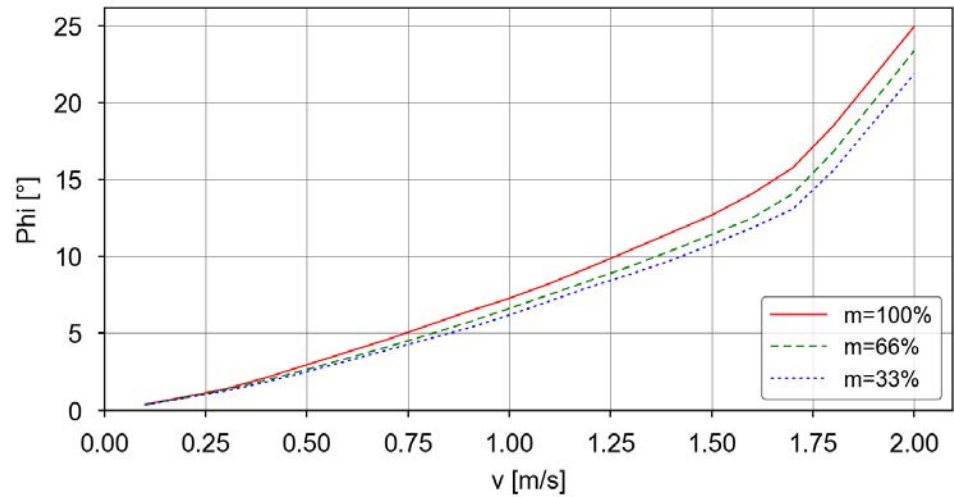
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



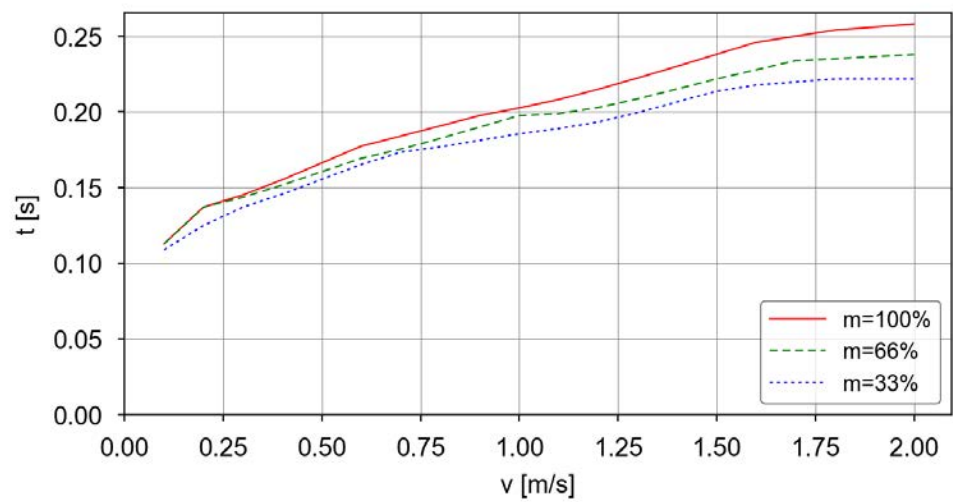
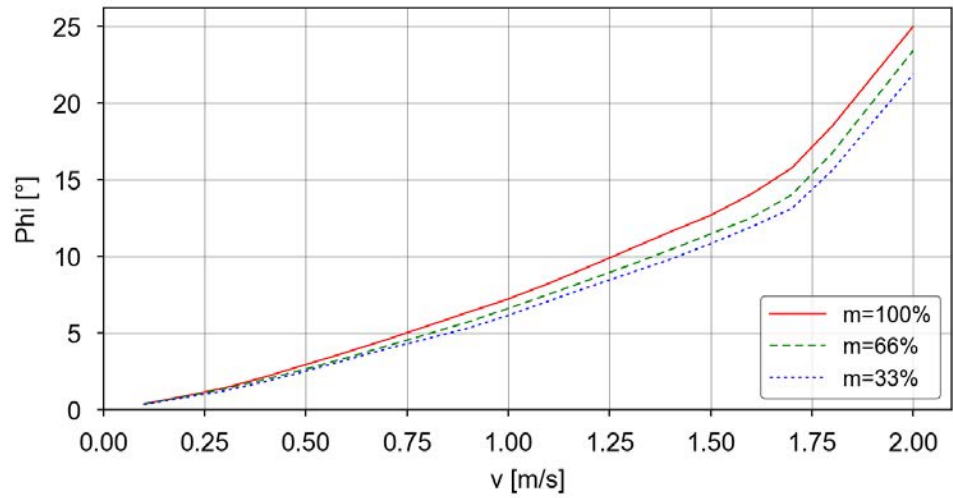
Continues on next page

8 IRB 1600

8.1 IRB 1600 1.2 m 6 kg

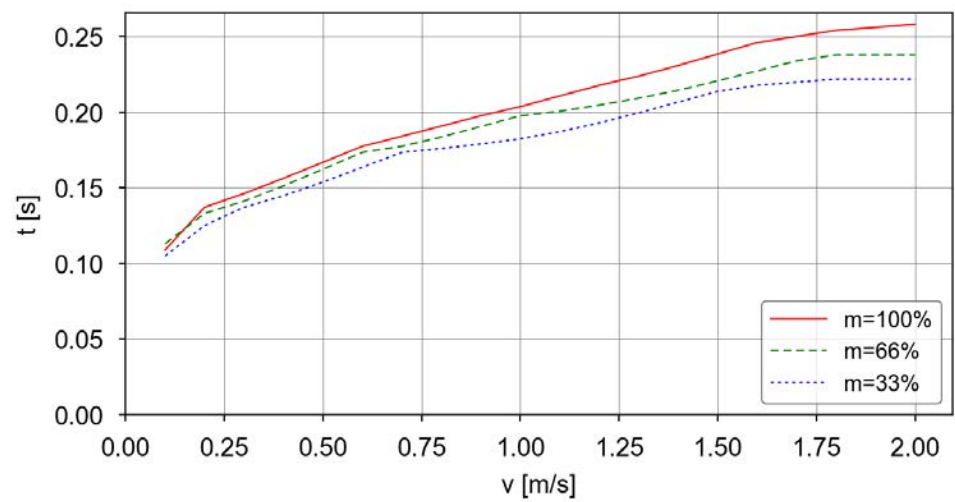
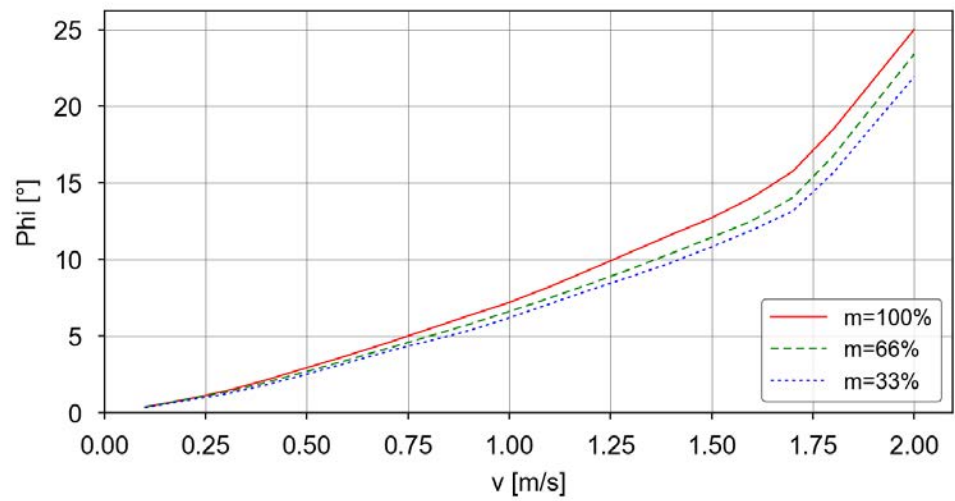
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



8 IRB 1600

8.2 IRB 1600 1.2 m 10 kg

8.2 IRB 1600 1.2 m 10 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	22.7	0.17
2	26.1	0.2
3	22.3	0.15

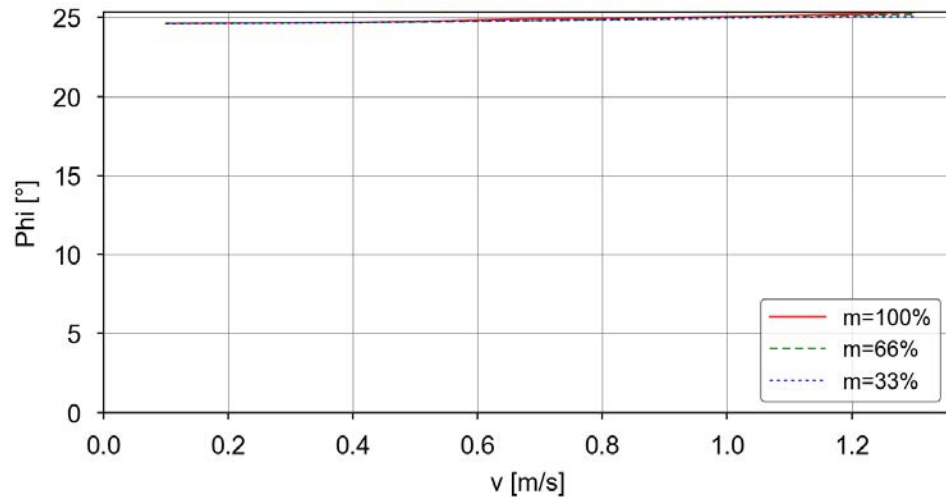
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

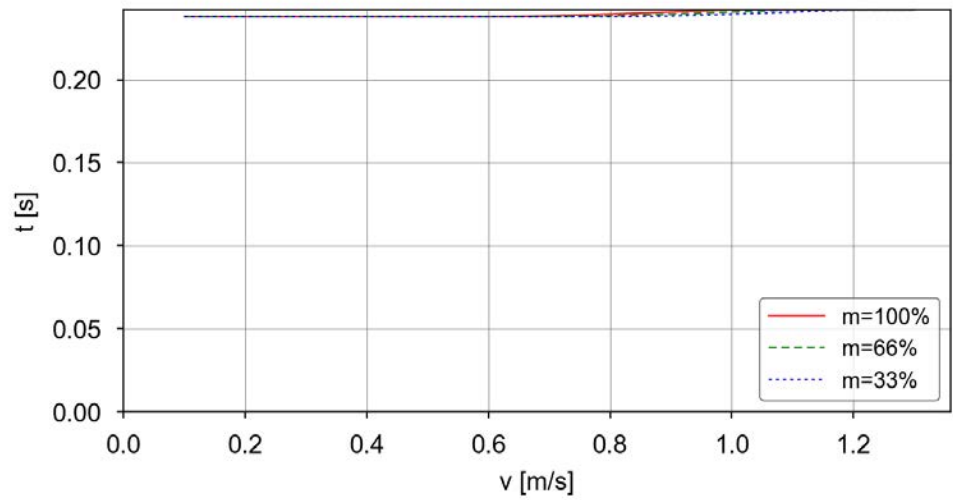
Zone	wcp min (m)	wcp max (m)
0	0	0.408
1	0.408	0.817
2	0.817	max reach

Category 1, Axis 1

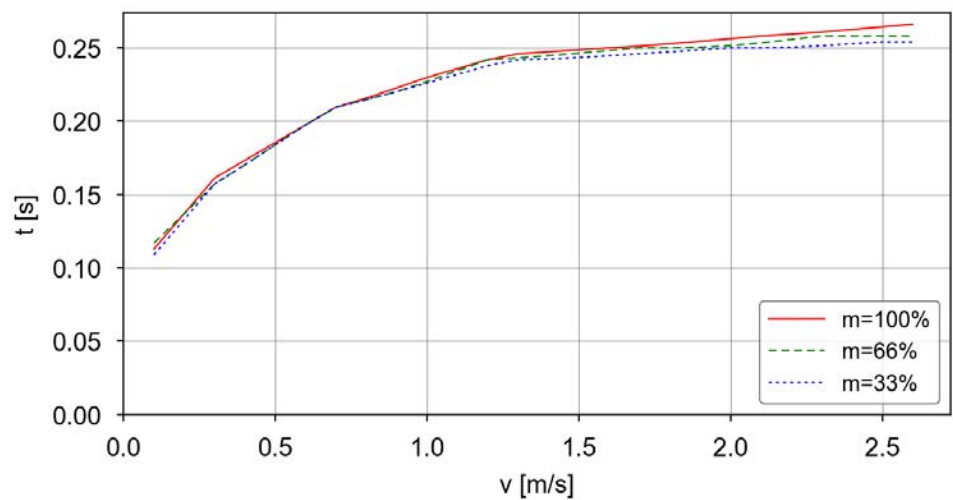
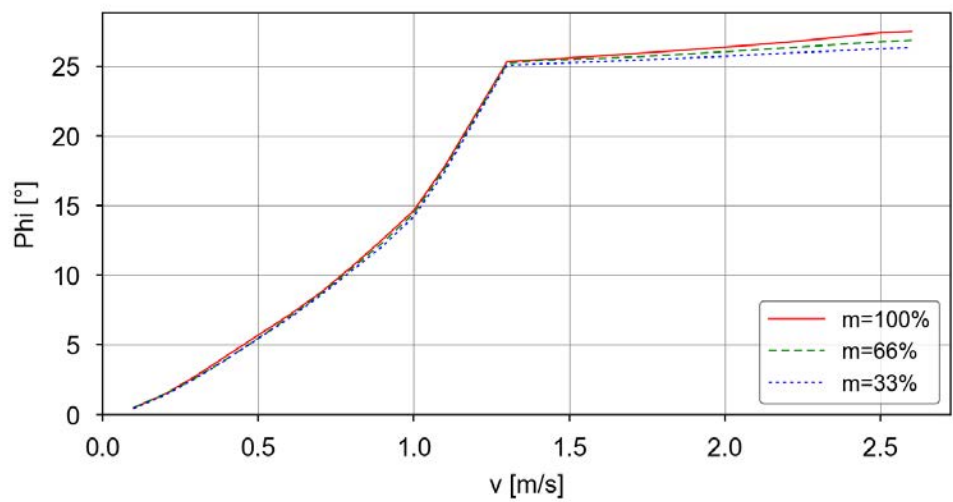
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



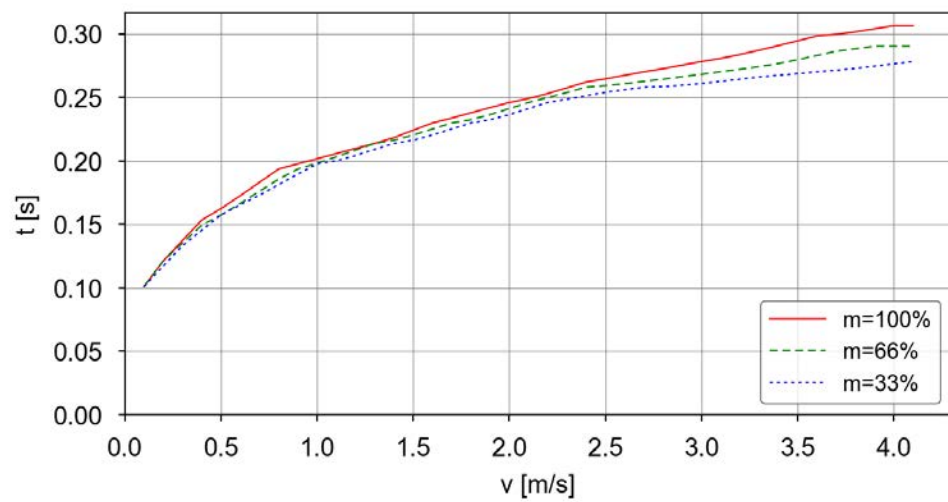
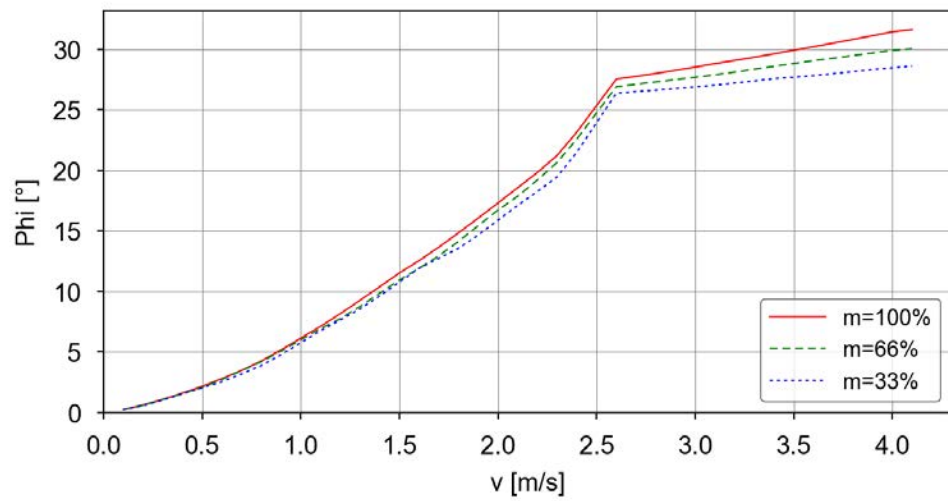
Continues on next page

8 IRB 1600

8.2 IRB 1600 1.2 m 10 kg

Continued

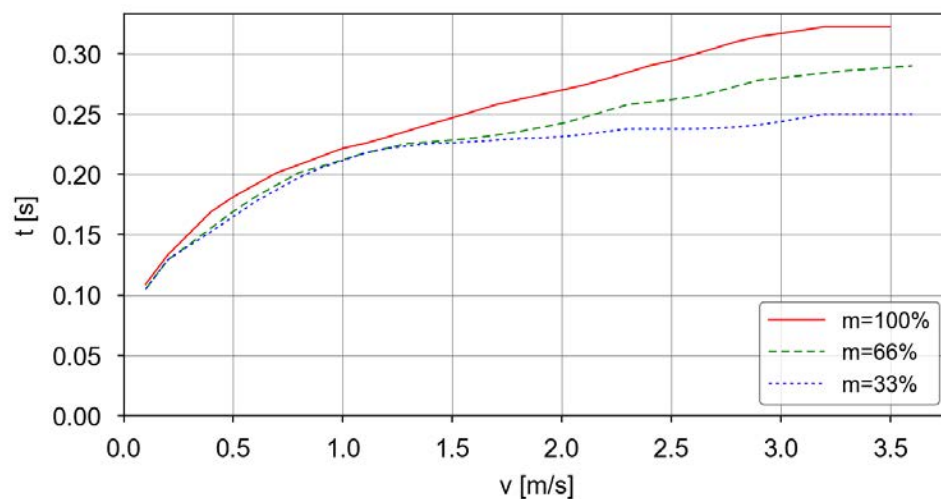
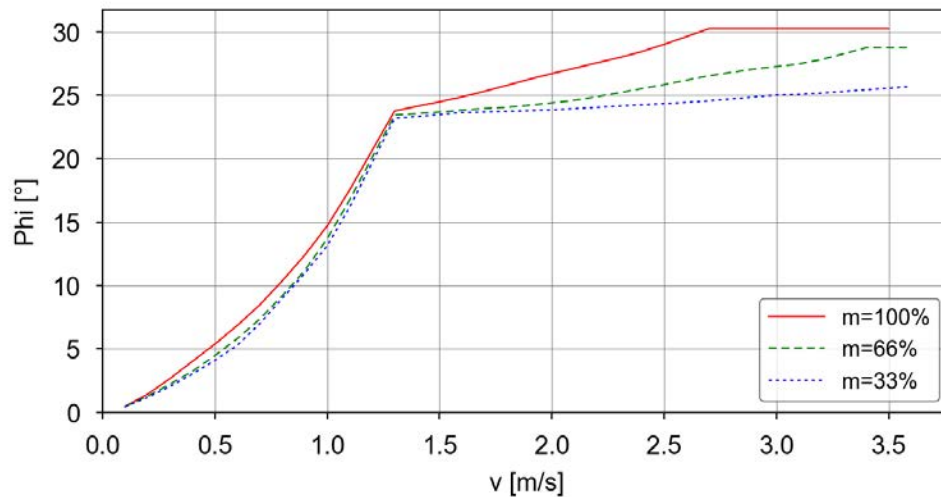
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



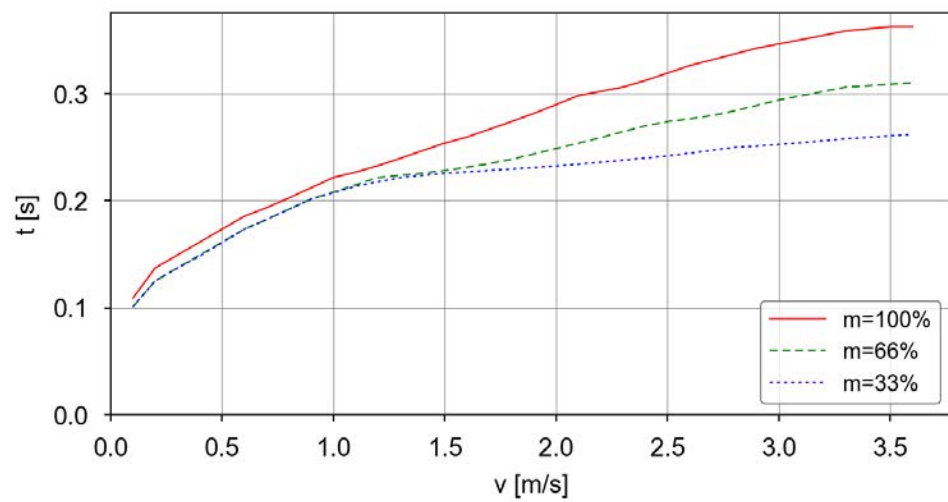
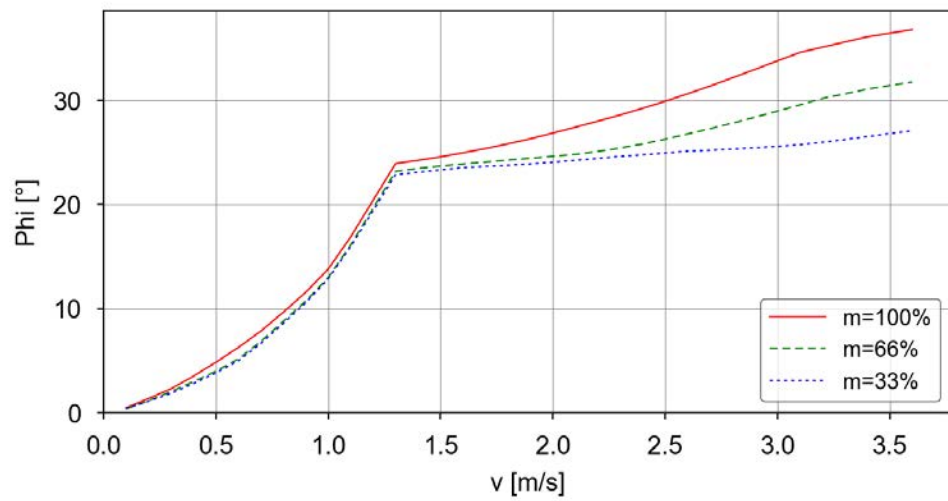
Continues on next page

8 IRB 1600

8.2 IRB 1600 1.2 m 10 kg

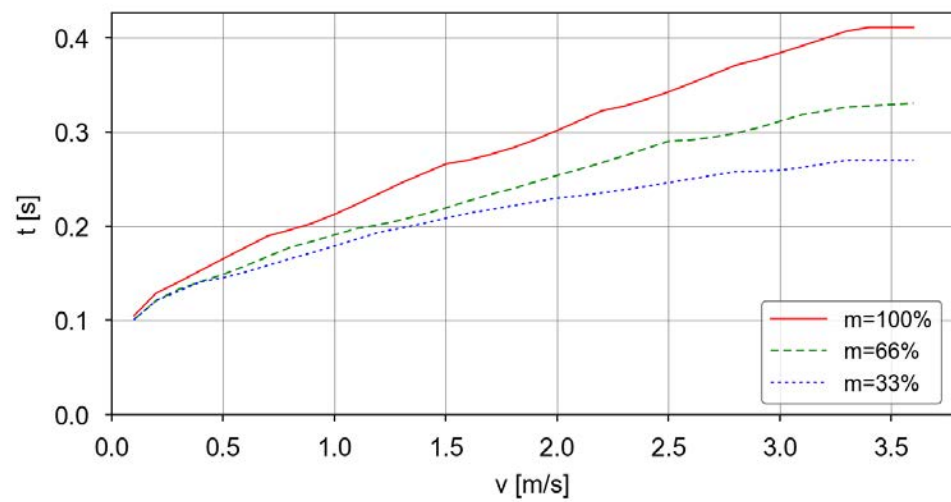
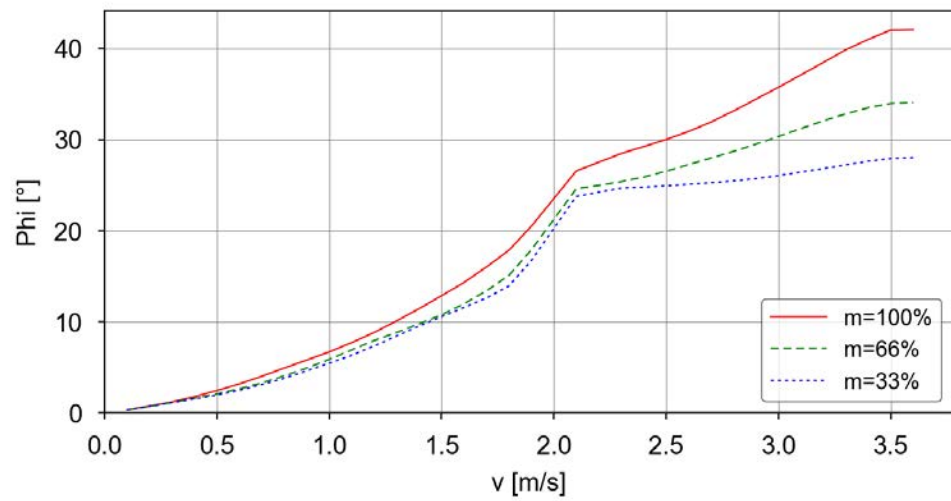
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

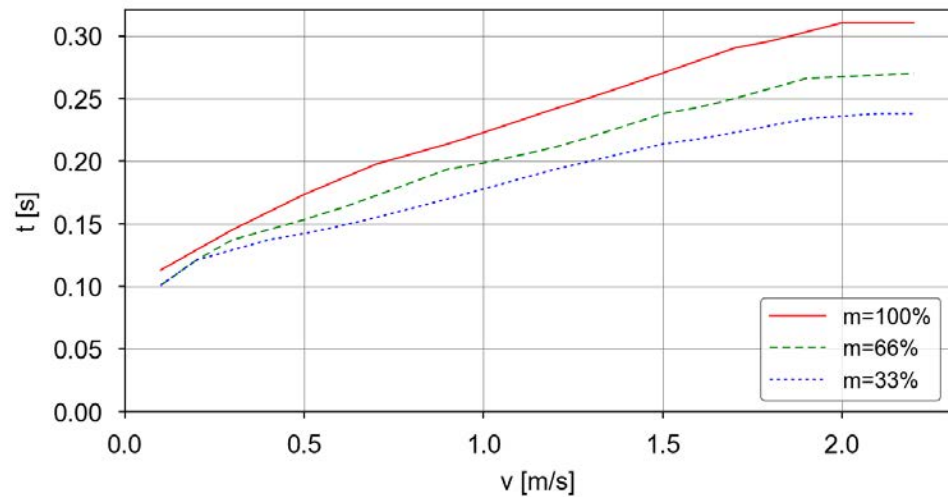
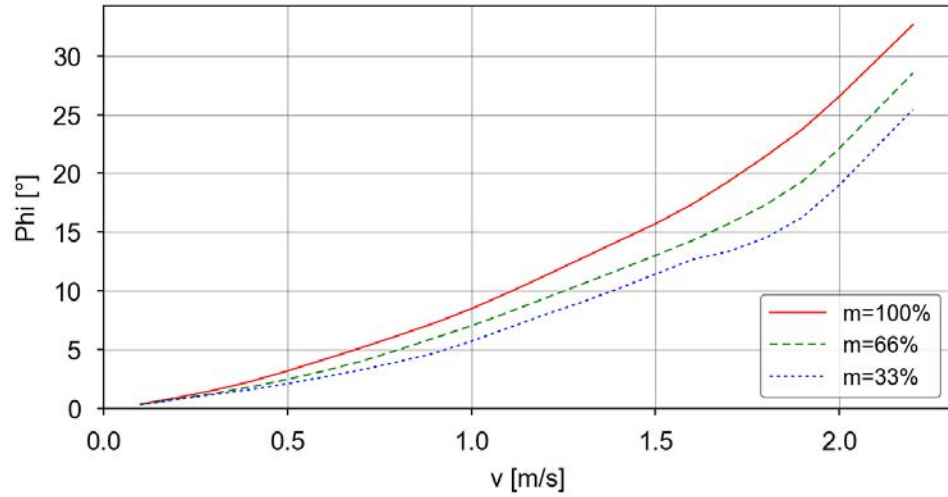
8 IRB 1600

8.2 IRB 1600 1.2 m 10 kg

Continued

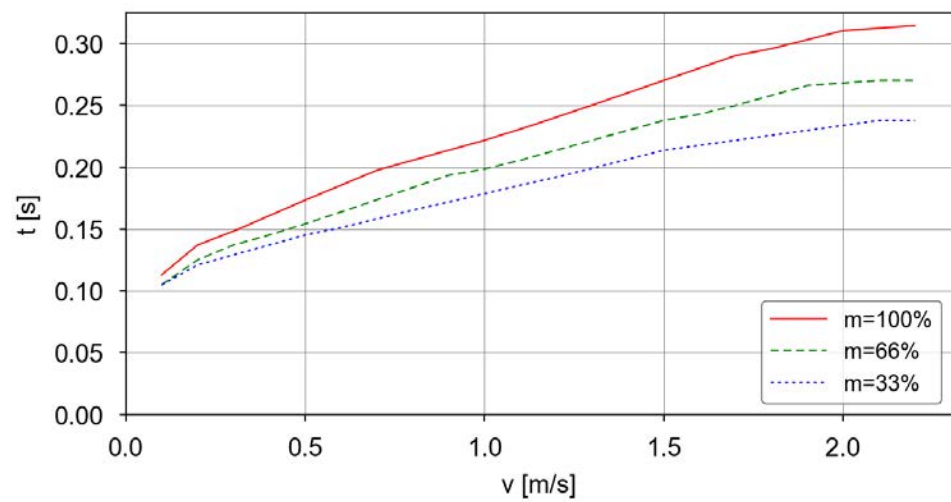
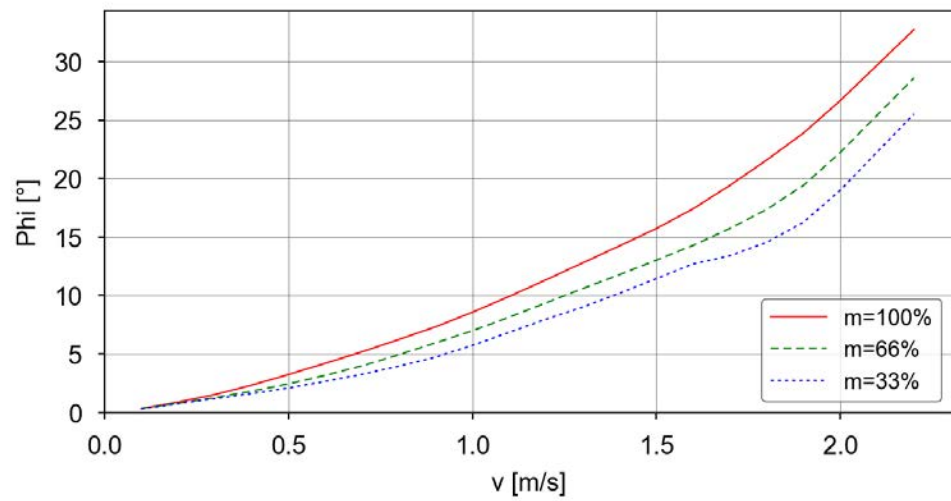
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



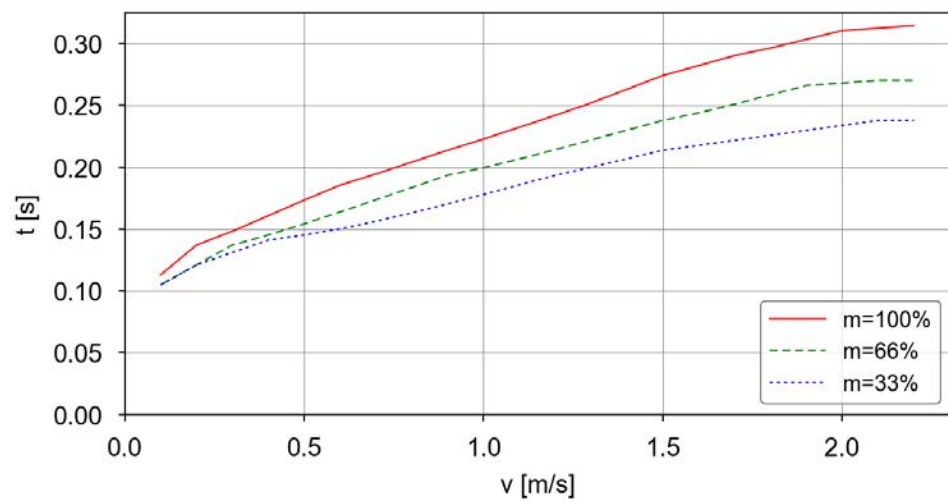
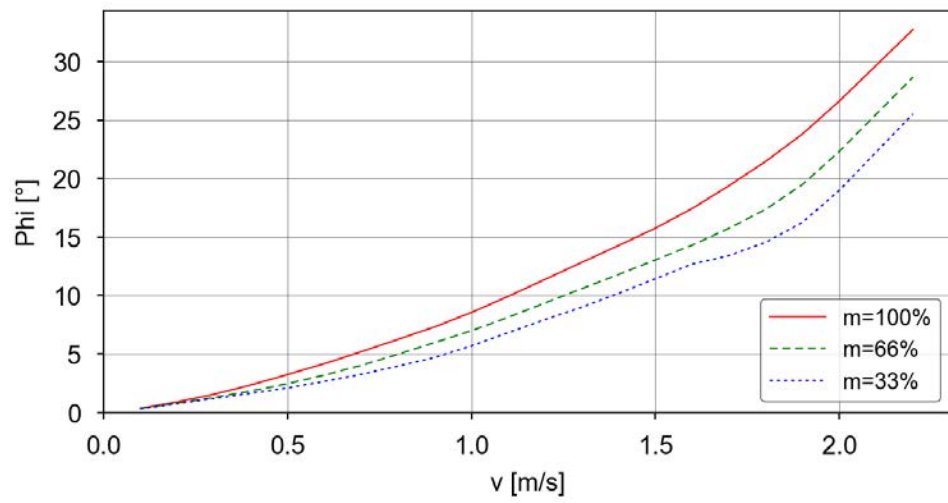
Continues on next page

8 IRB 1600

8.2 IRB 1600 1.2 m 10 kg

Continued

Extension zone 2, stopping distance and stopping time



8.3 IRB 1600 1.45 m 6 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	23.4	0.2
2	22.0	0.17
3	15.8	0.1

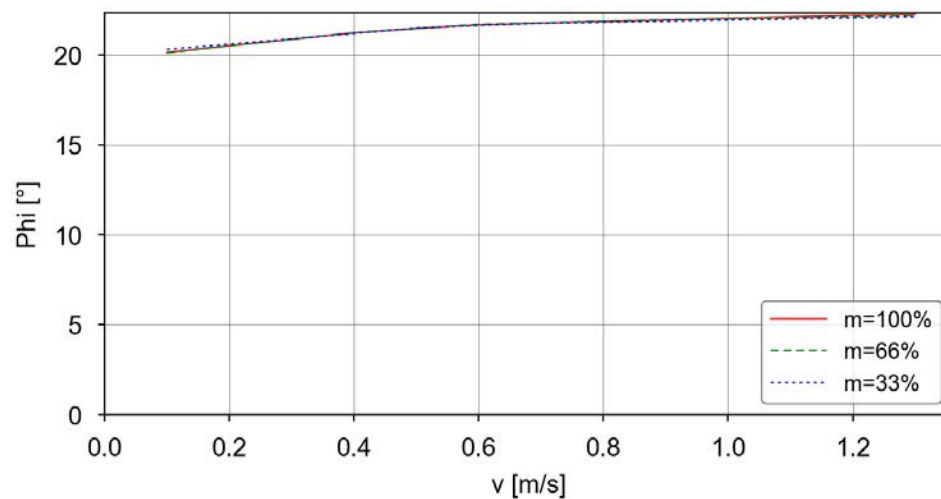
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.483
1	0.483	0.967
2	0.967	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

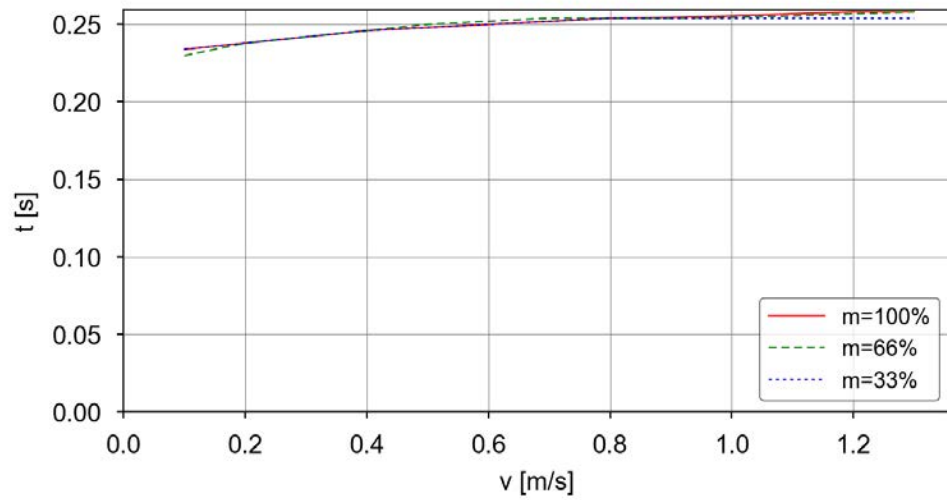


Continues on next page

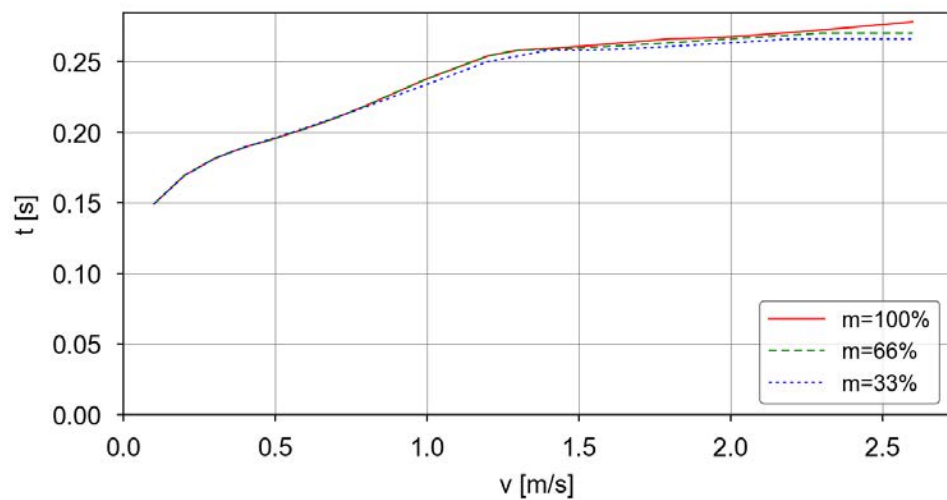
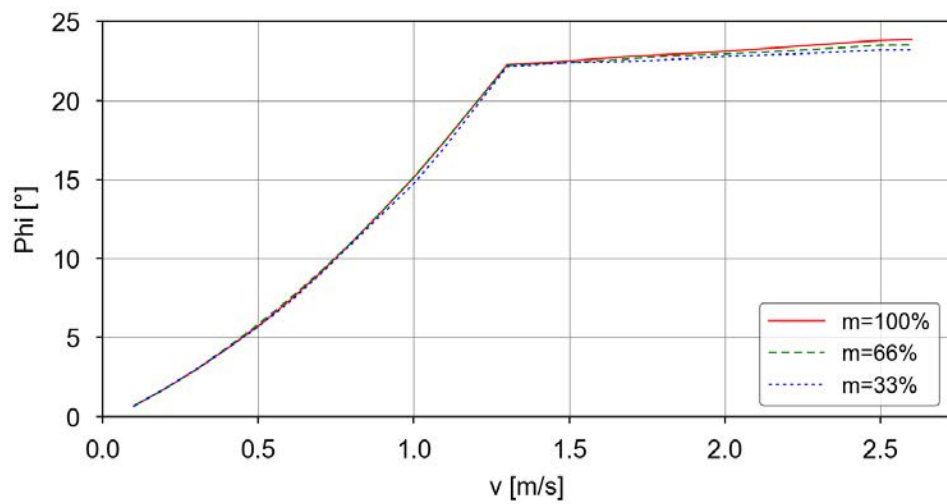
8 IRB 1600

8.3 IRB 1600 1.45 m 6 kg

Continued

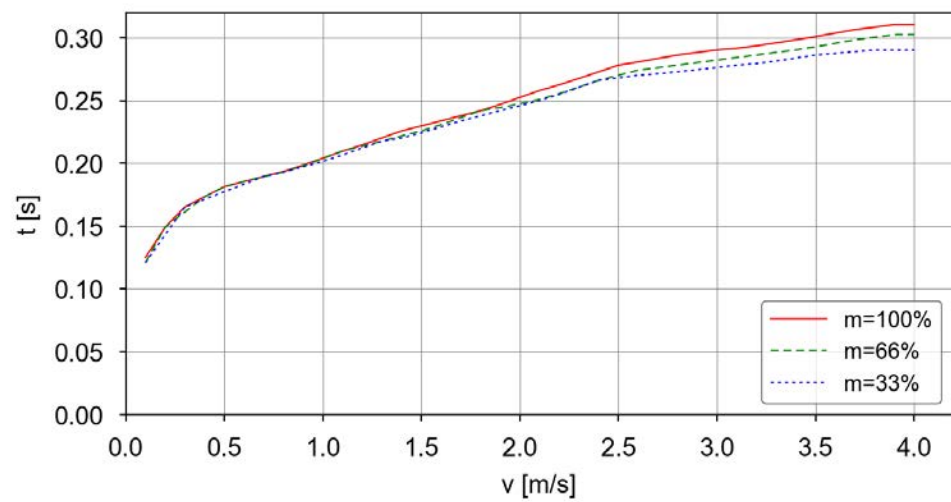
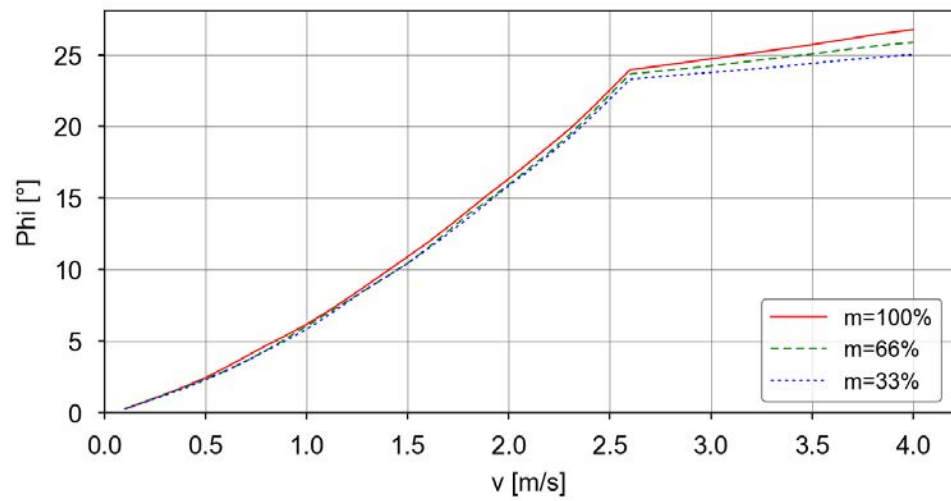


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

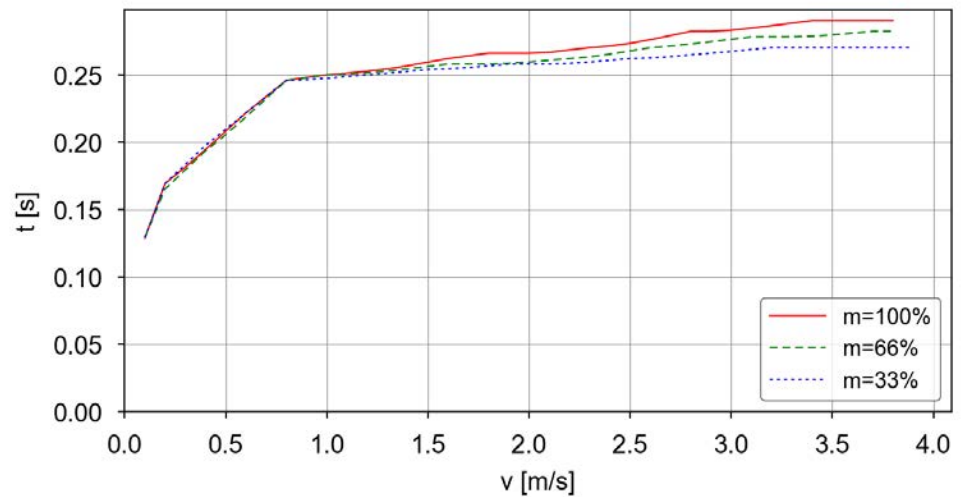
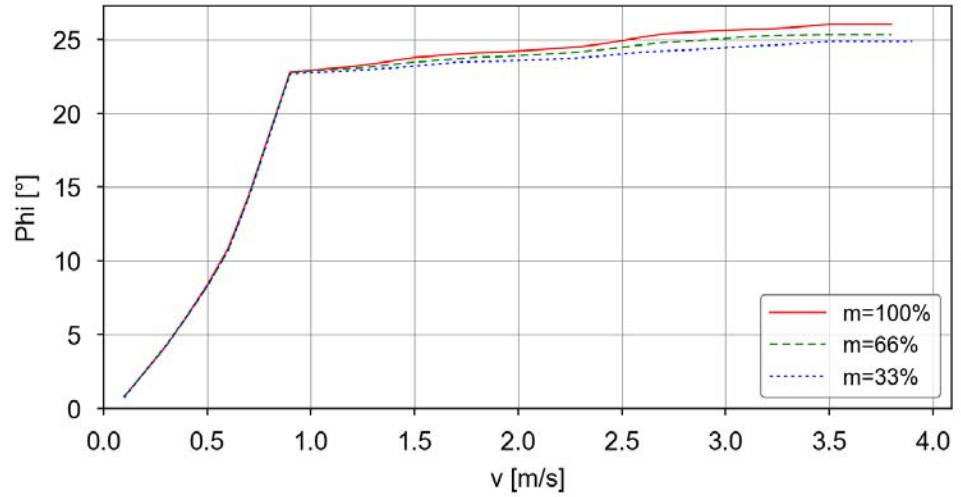
8 IRB 1600

8.3 IRB 1600 1.45 m 6 kg

Continued

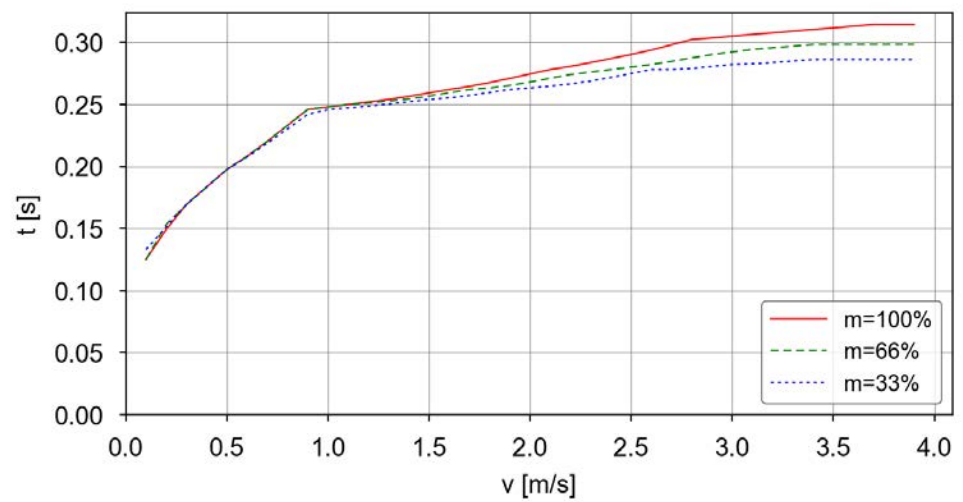
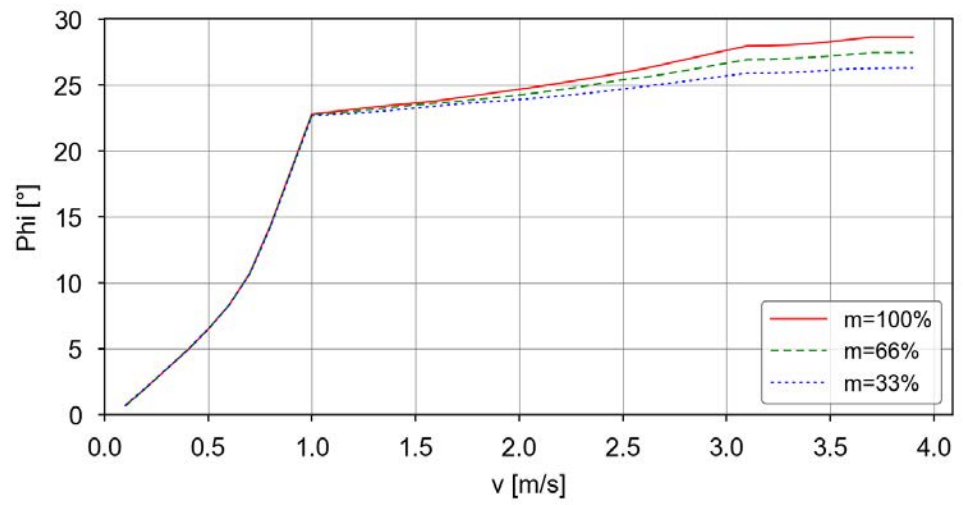
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



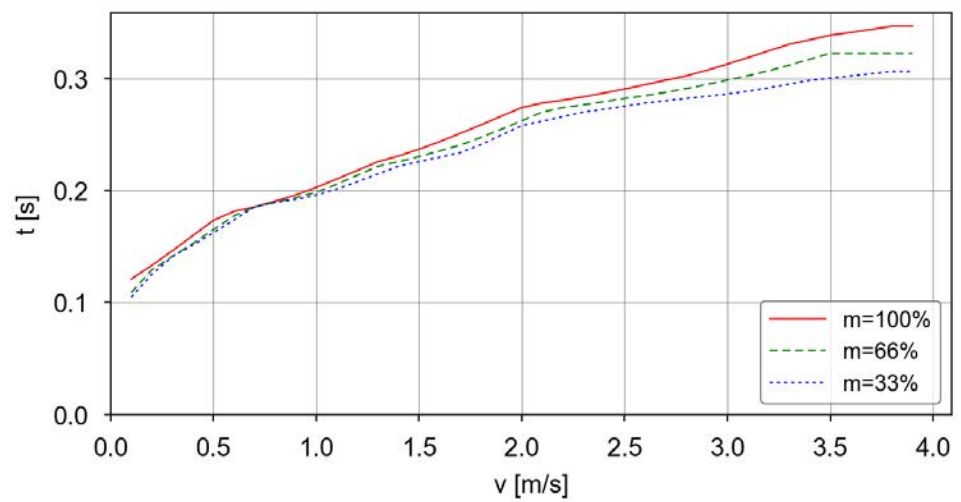
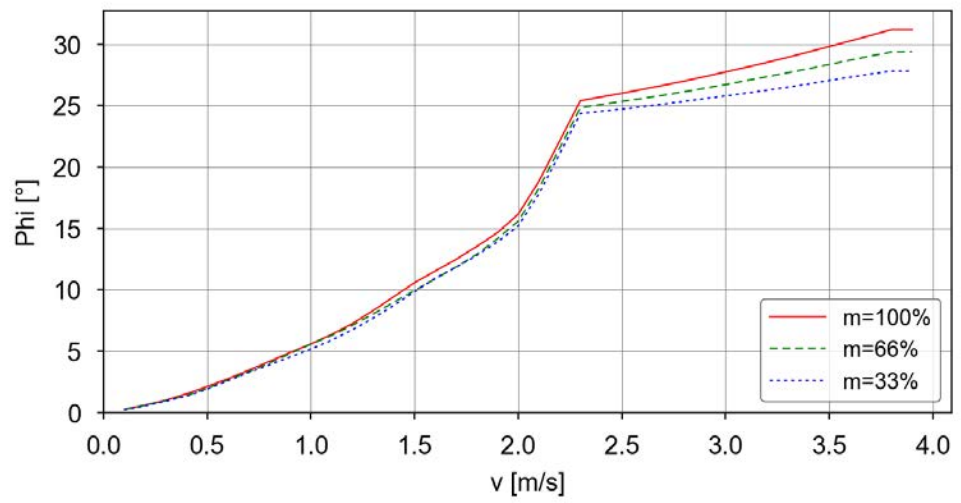
Continues on next page

8 IRB 1600

8.3 IRB 1600 1.45 m 6 kg

Continued

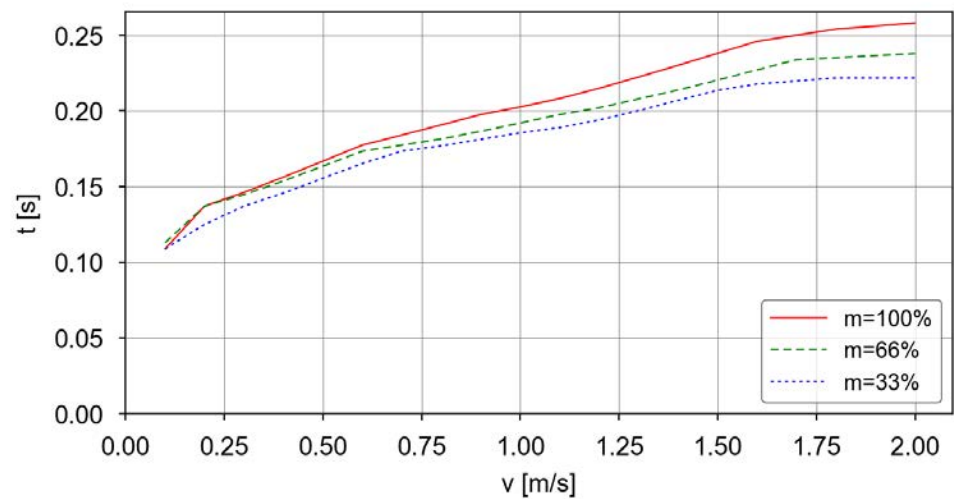
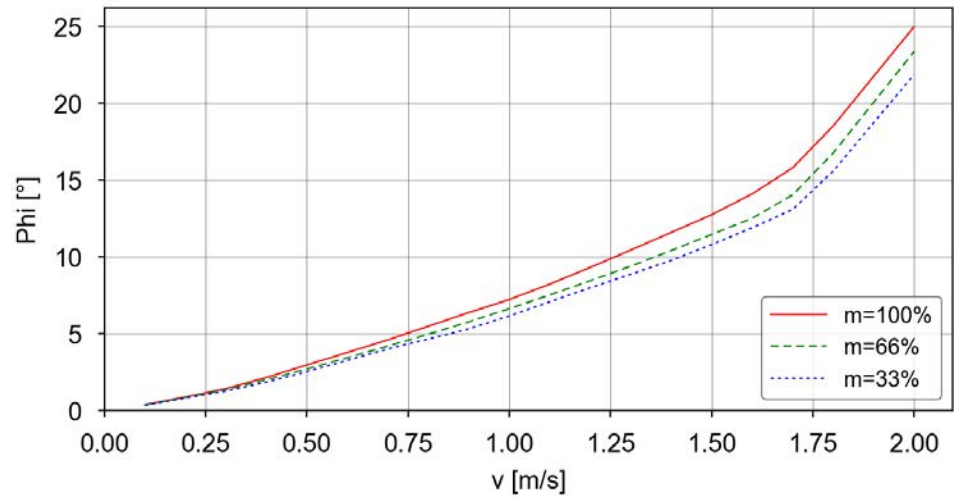
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



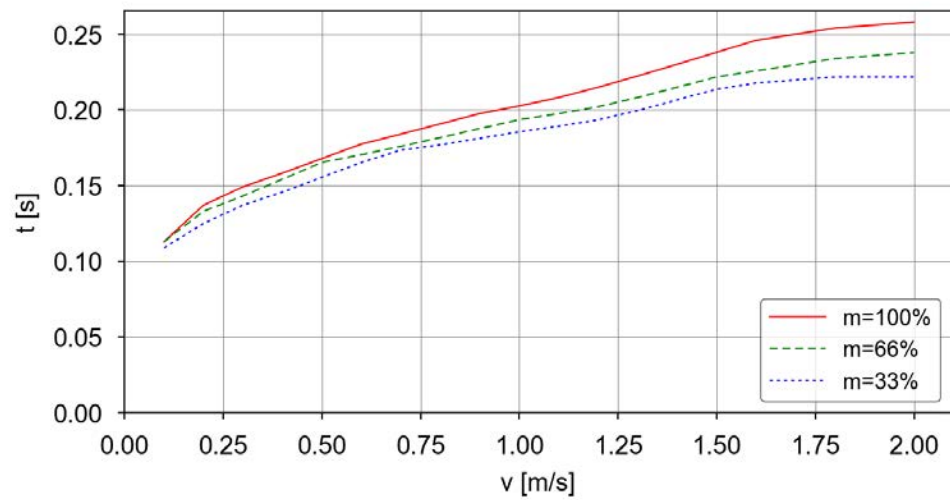
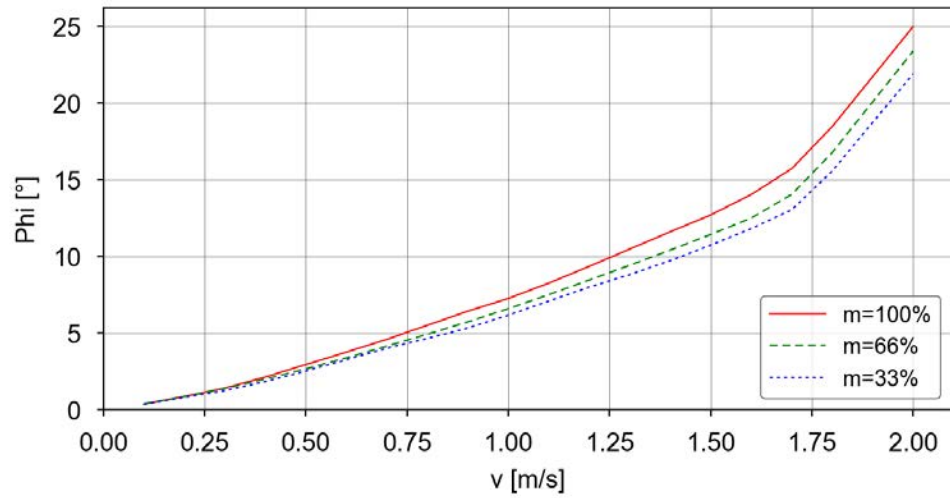
Continues on next page

8 IRB 1600

8.3 IRB 1600 1.45 m 6 kg

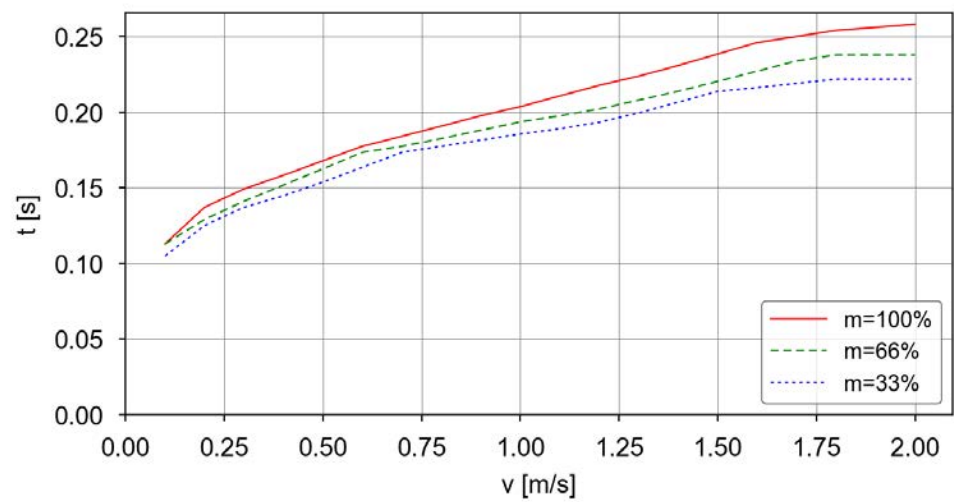
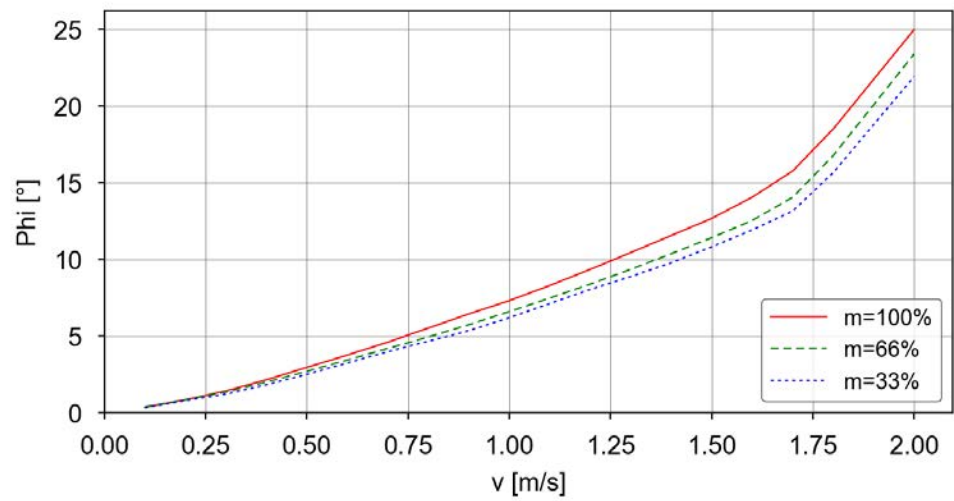
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



8 IRB 1600

8.4 IRB 1600 1.45 m 10 kg

8.4 IRB 1600 1.45 m 10 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	33.1	0.28
2	38.5	0.34
3	29.4	0.22

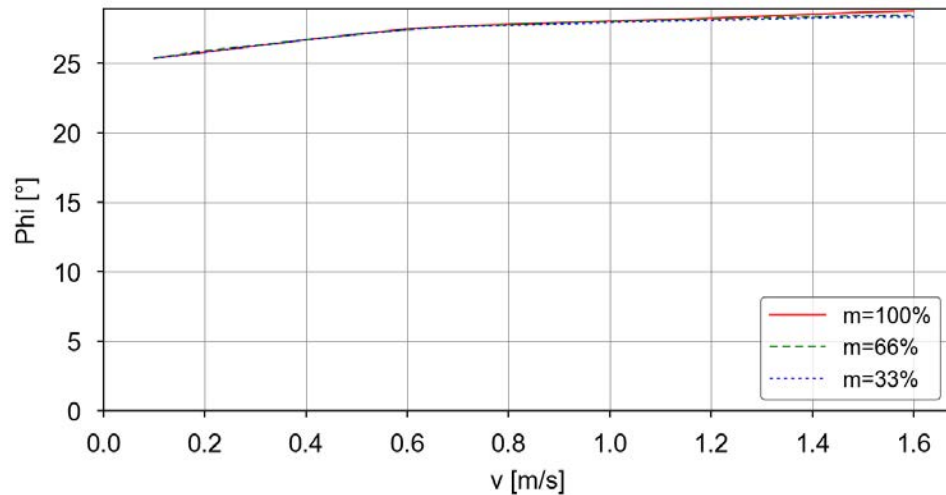
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

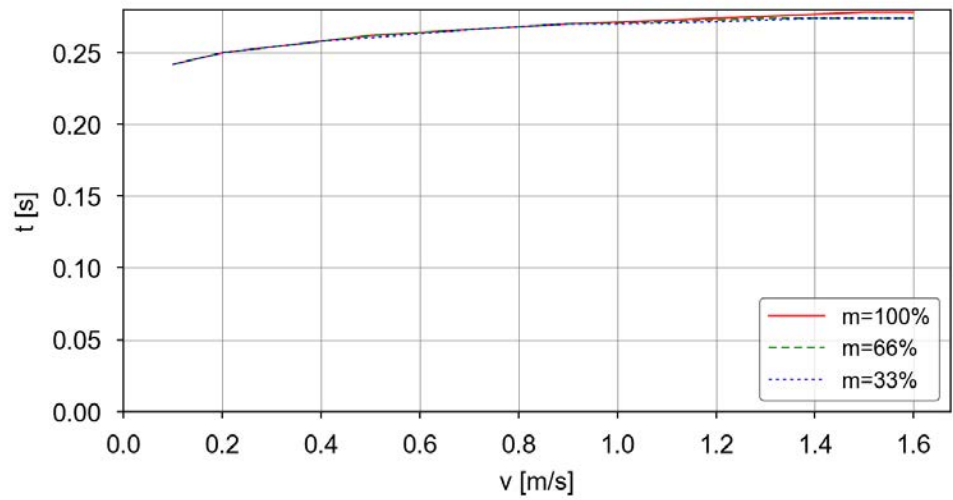
Zone	wcp min (m)	wcp max (m)
0	0	0.483
1	0.483	0.967
2	0.967	max reach

Category 1, Axis 1

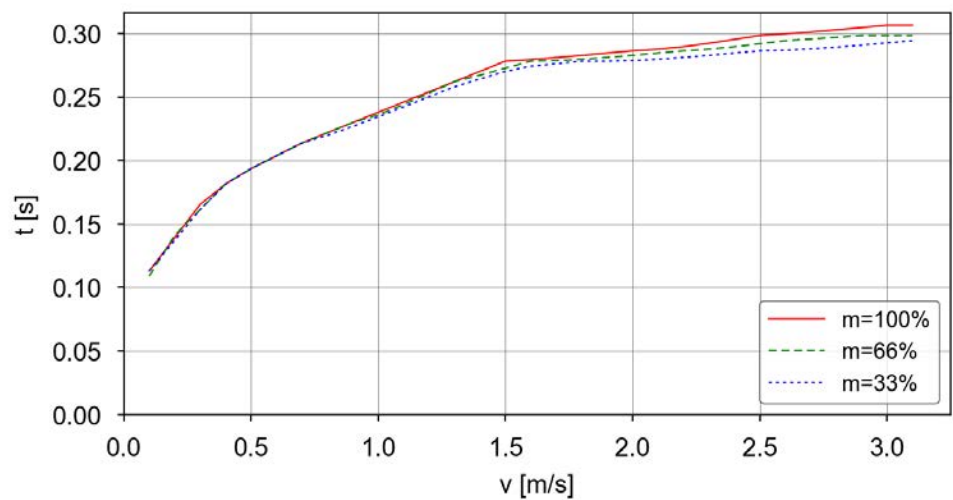
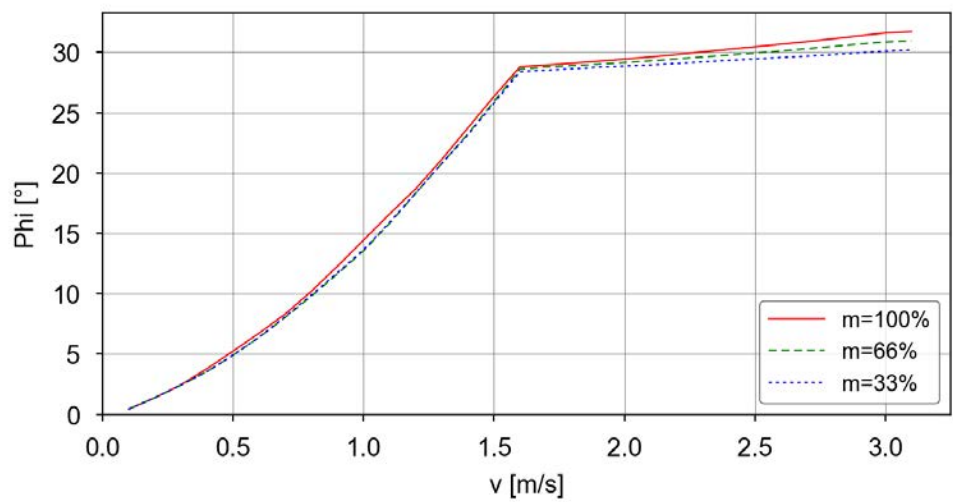
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



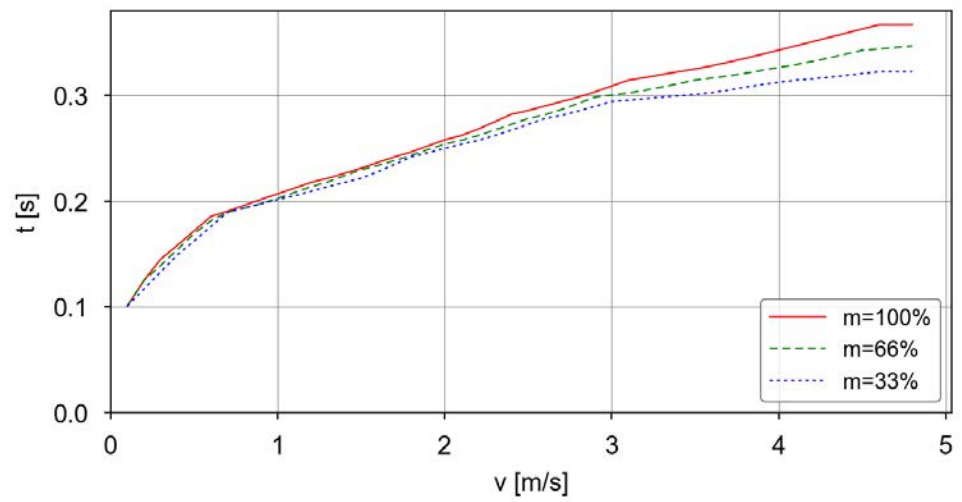
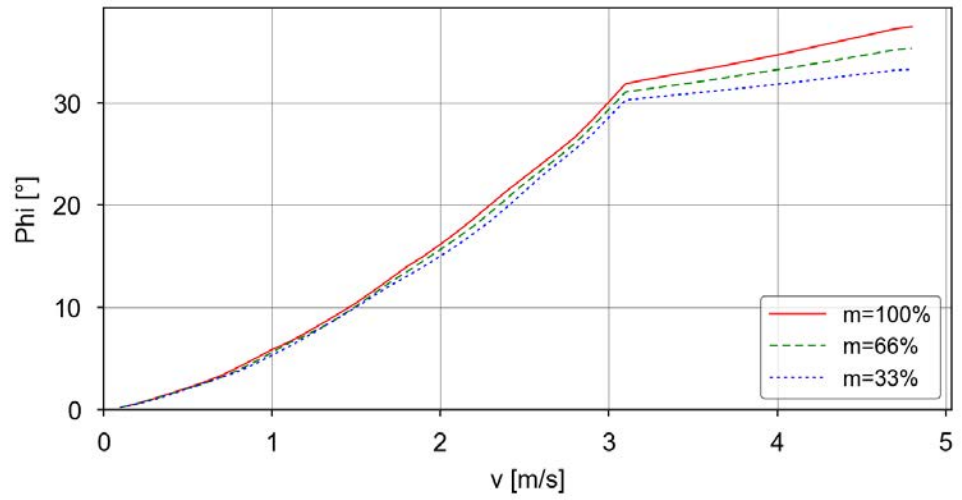
Continues on next page

8 IRB 1600

8.4 IRB 1600 1.45 m 10 kg

Continued

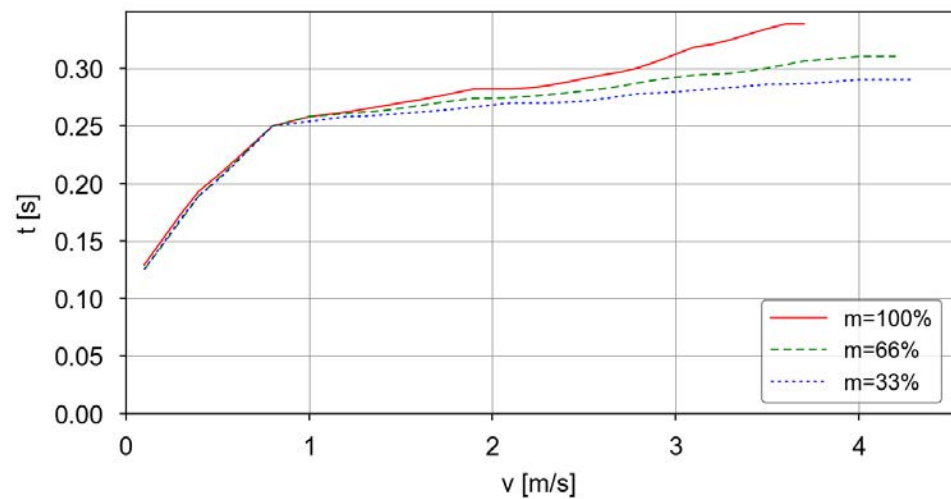
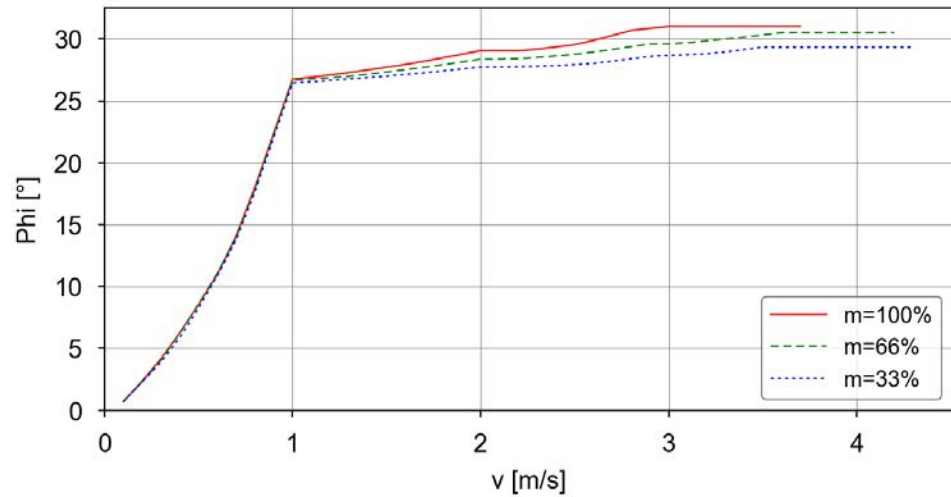
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



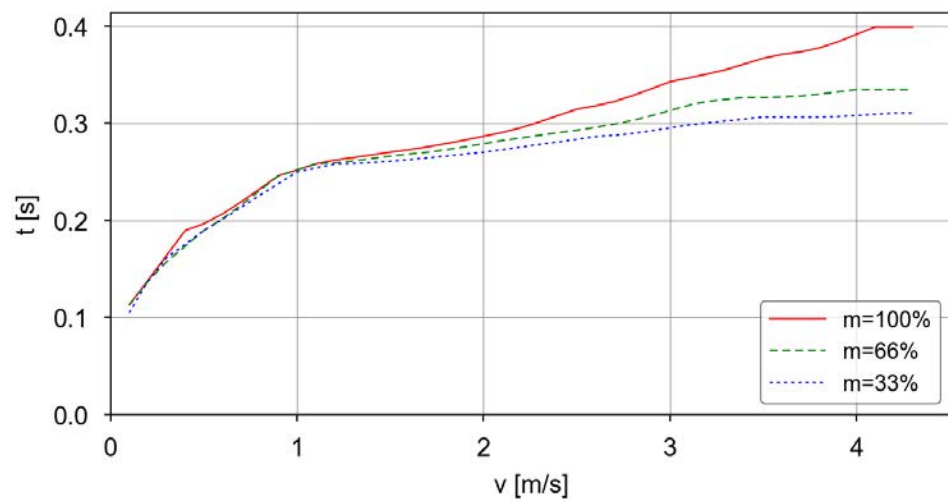
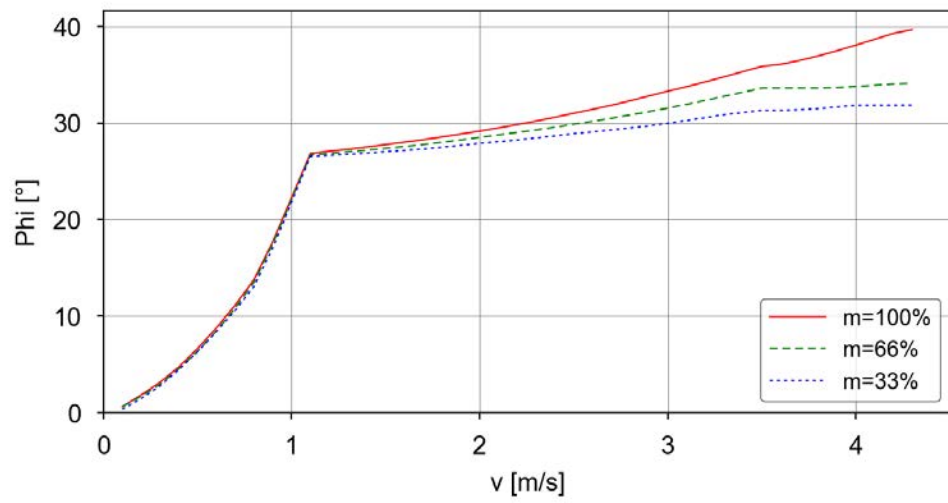
Continues on next page

8 IRB 1600

8.4 IRB 1600 1.45 m 10 kg

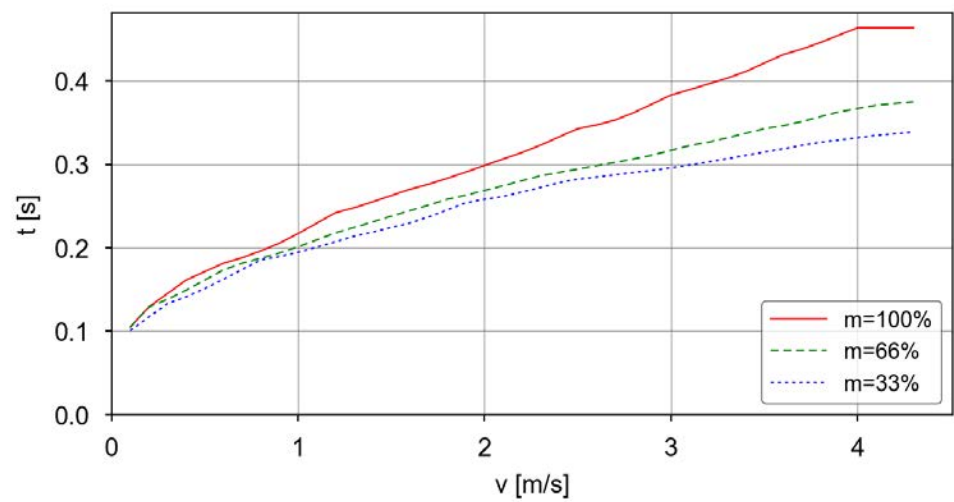
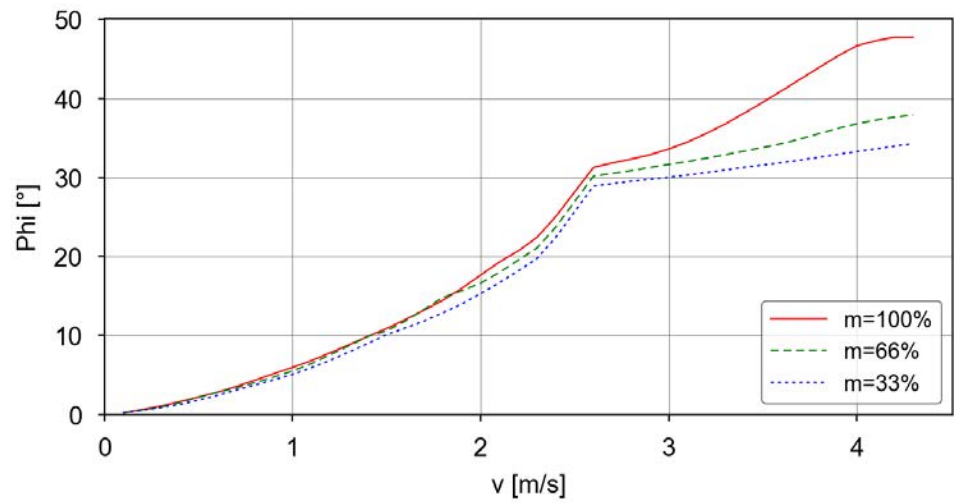
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

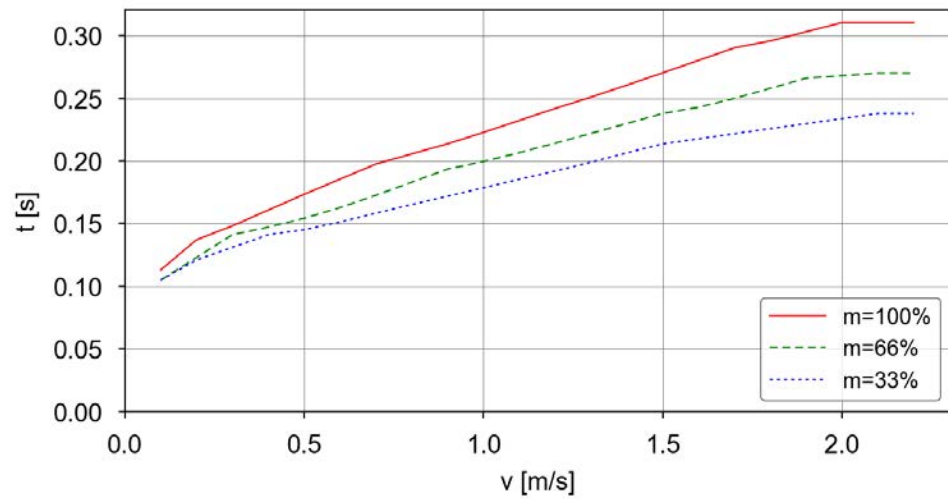
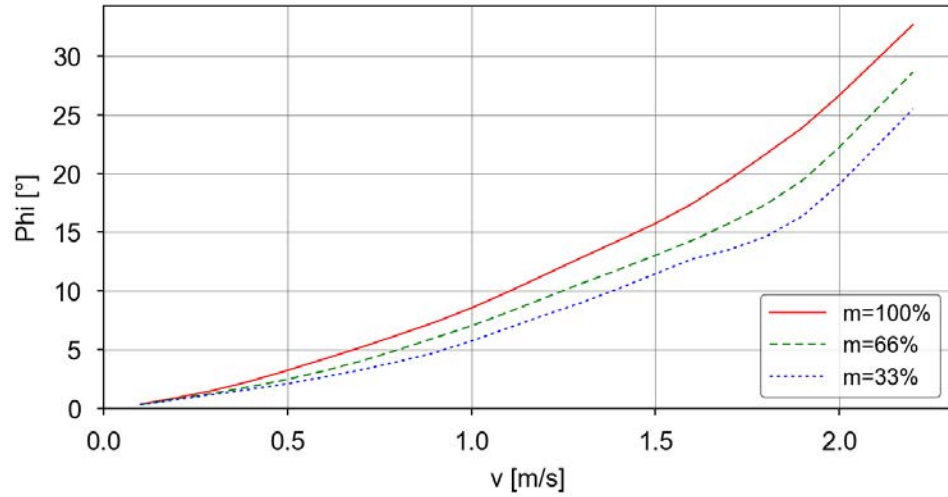
8 IRB 1600

8.4 IRB 1600 1.45 m 10 kg

Continued

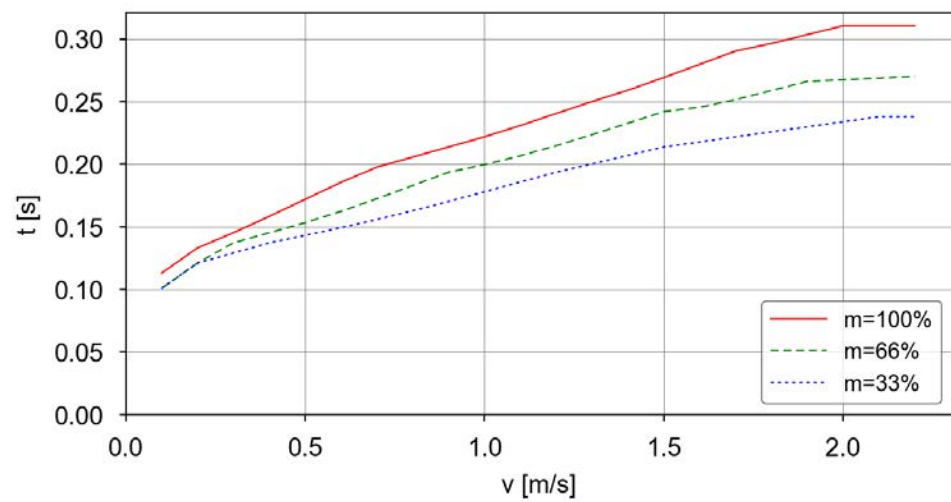
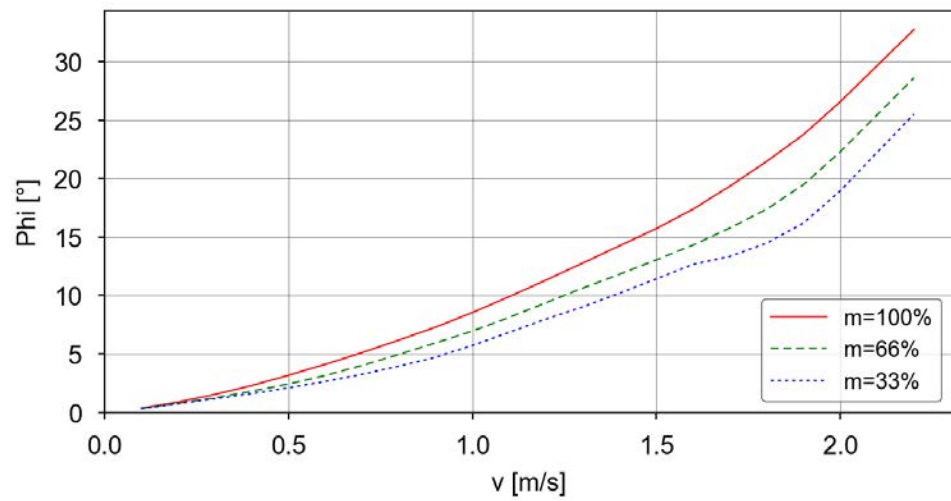
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



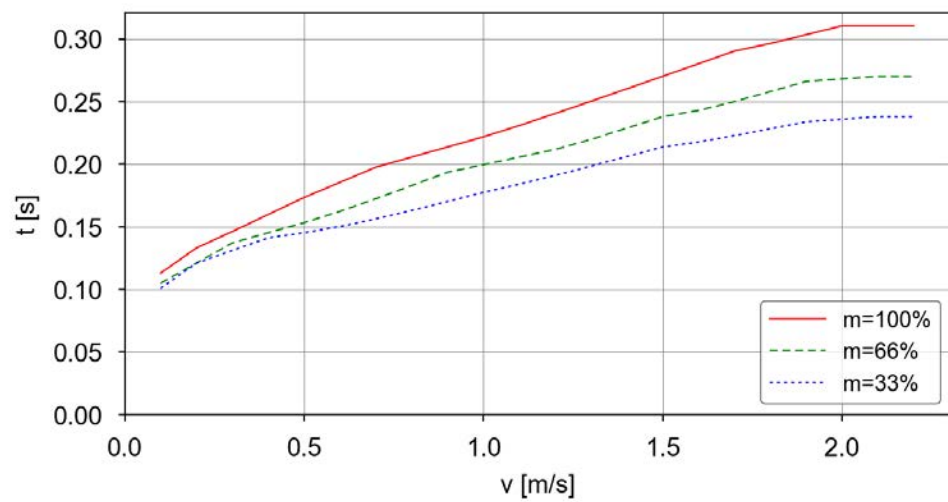
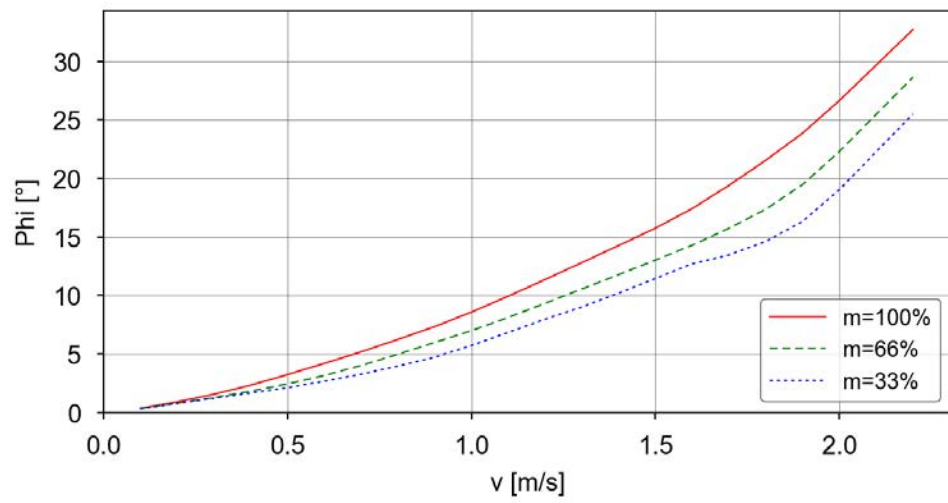
Continues on next page

8 IRB 1600

8.4 IRB 1600 1.45 m 10 kg

Continued

Extension zone 2, stopping distance and stopping time



8.5 IRB 1600ID 1.5 m 4 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	32.2	0.25
2	29.1	0.22
3	21.5	0.15

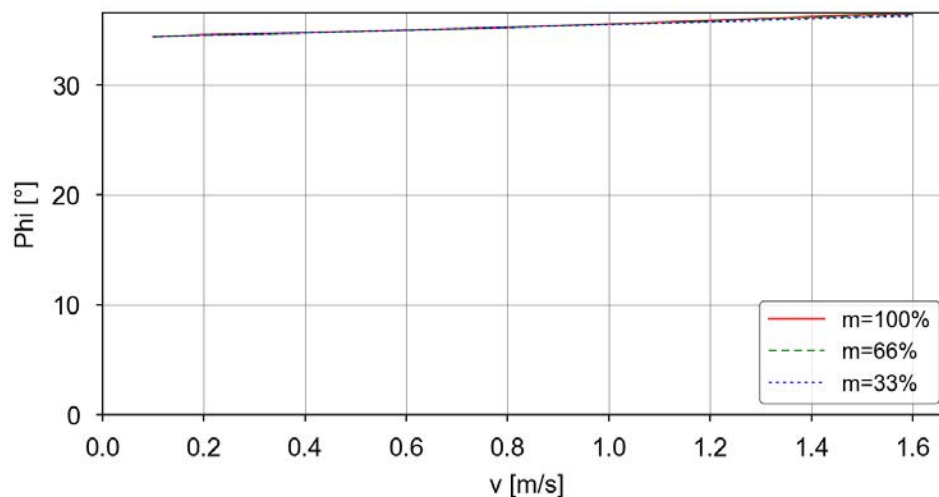
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.5
1	0.5	1.0
2	1.0	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

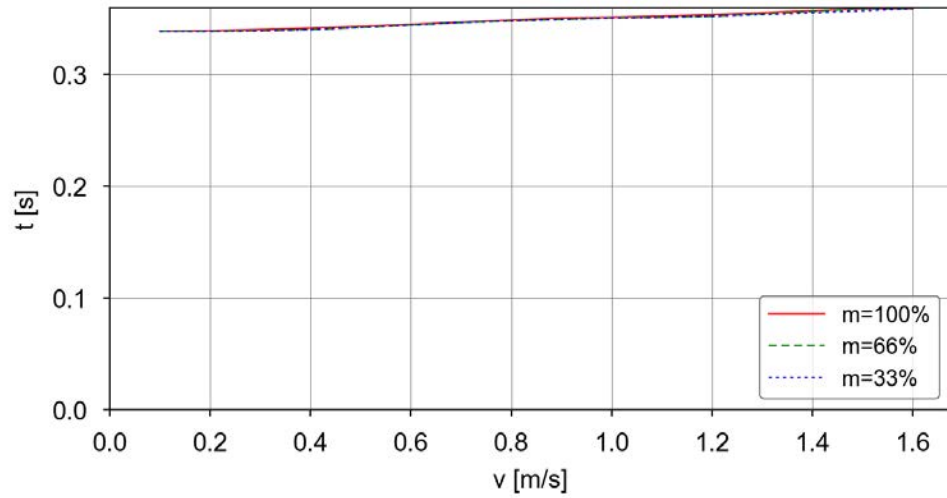


Continues on next page

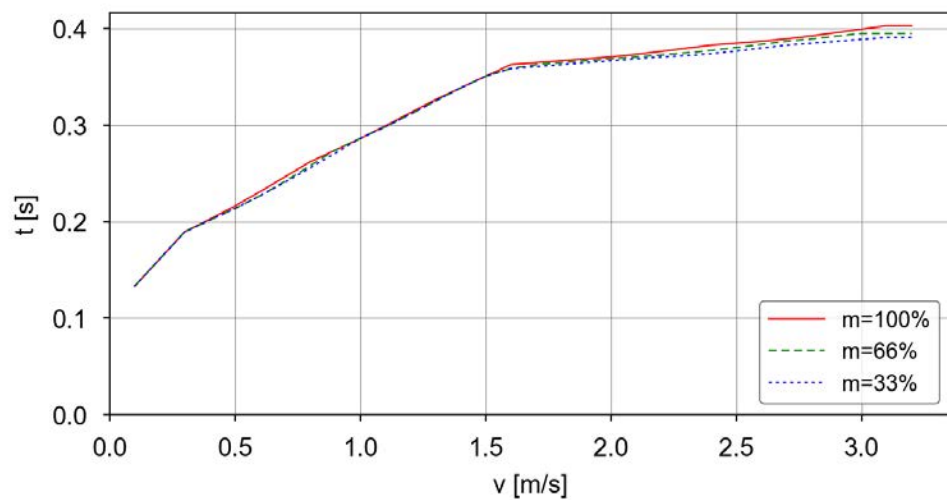
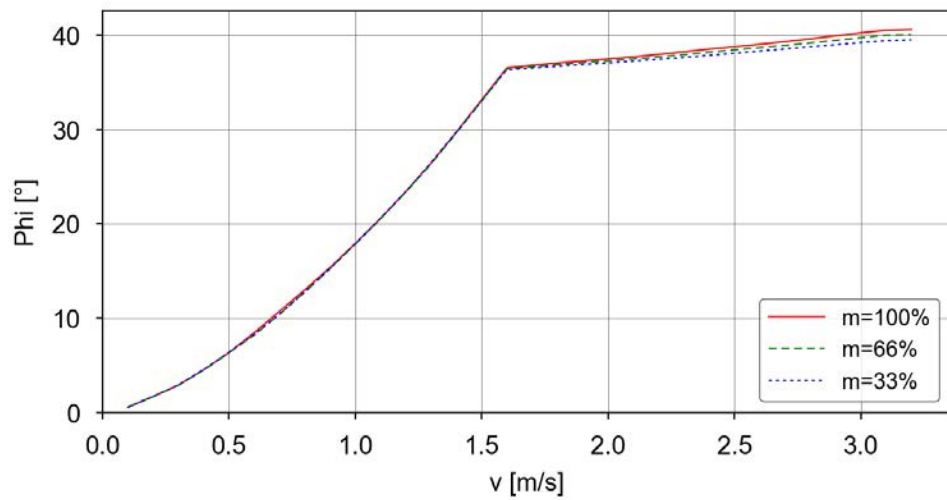
8 IRB 1600

8.5 IRB 1600ID 1.5 m 4 kg

Continued

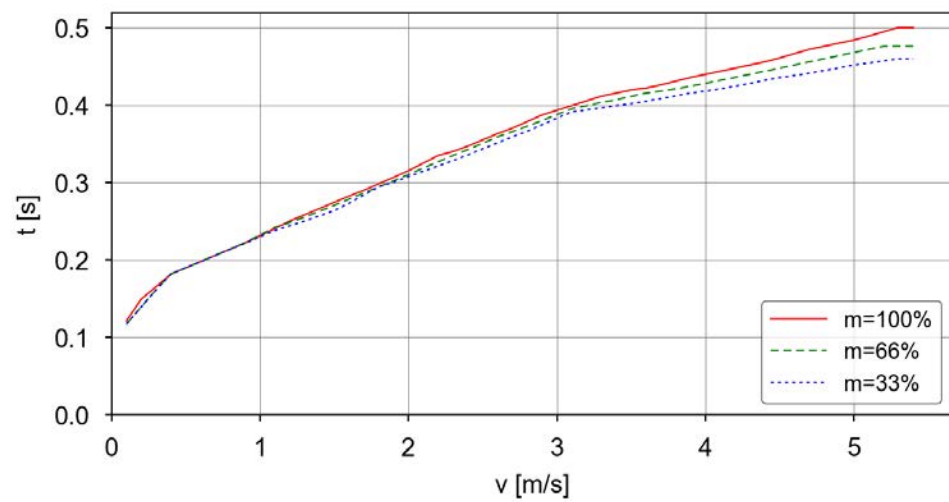
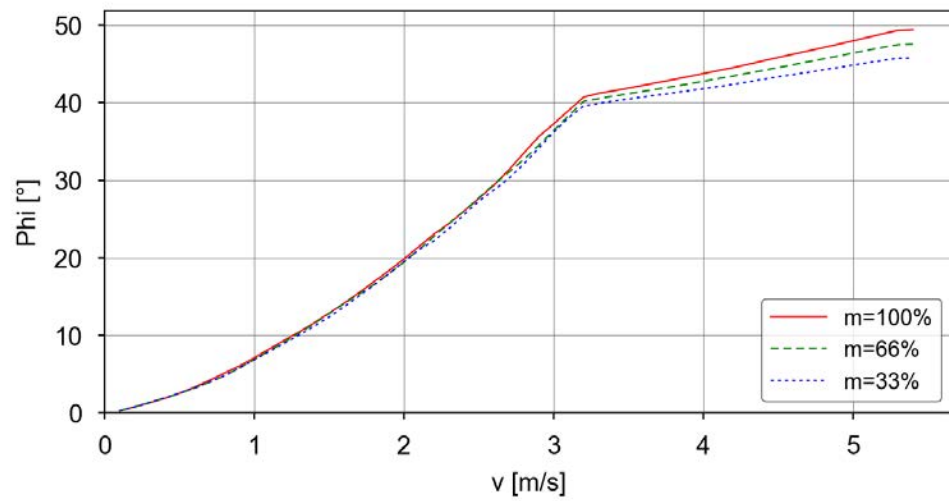


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

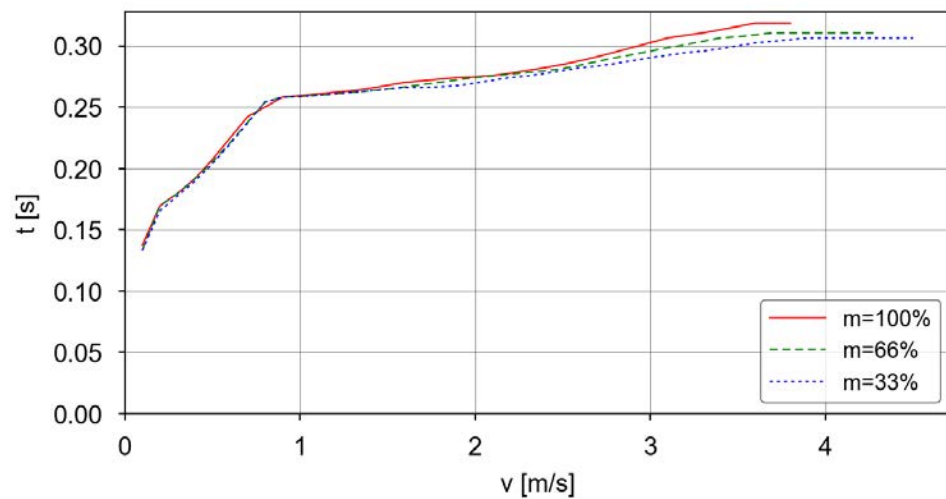
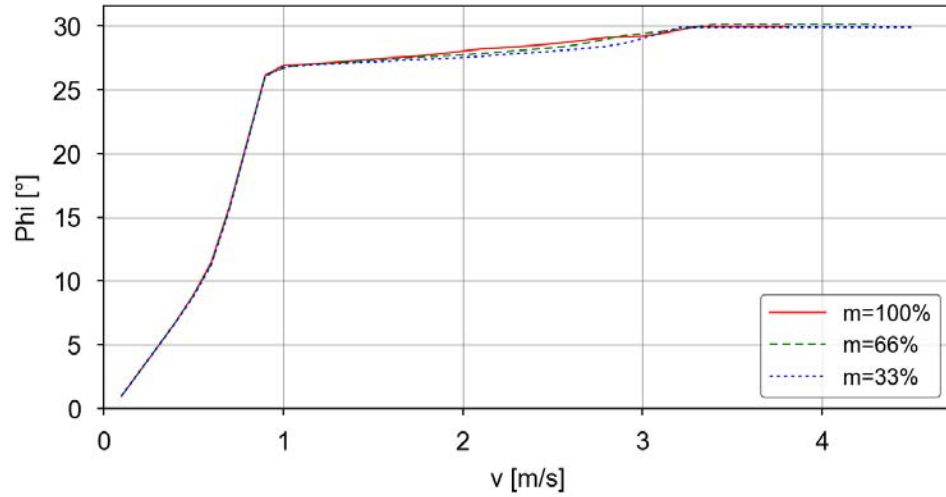
8 IRB 1600

8.5 IRB 1600ID 1.5 m 4 kg

Continued

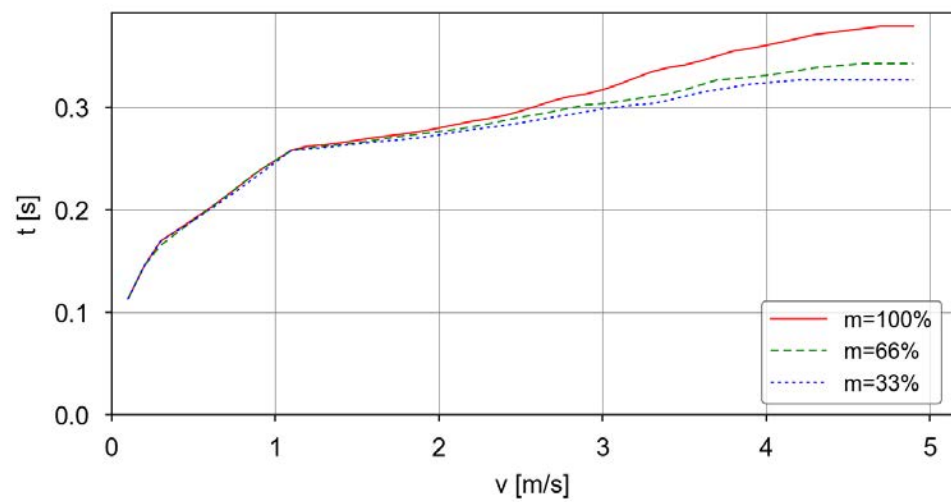
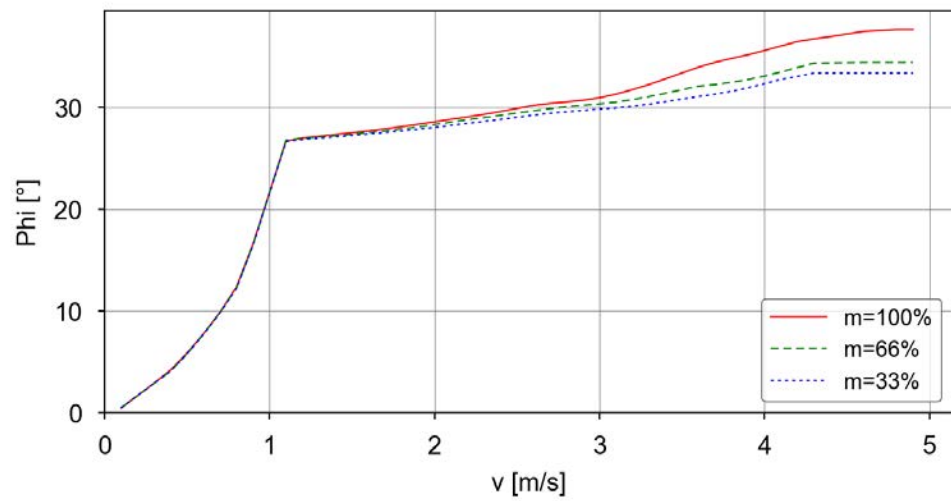
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



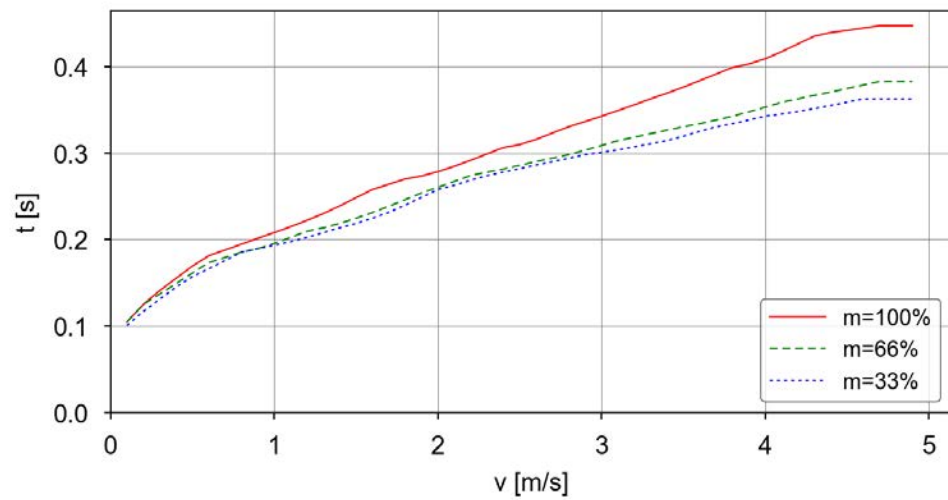
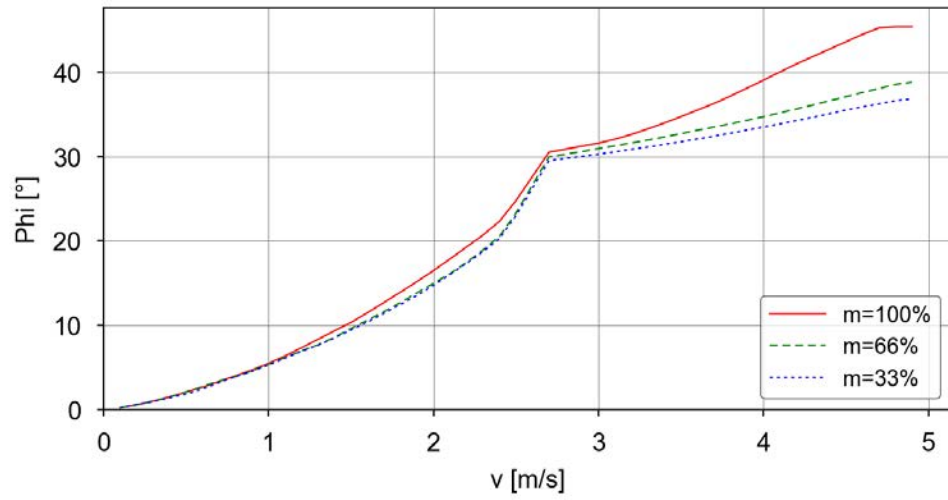
Continues on next page

8 IRB 1600

8.5 IRB 1600ID 1.5 m 4 kg

Continued

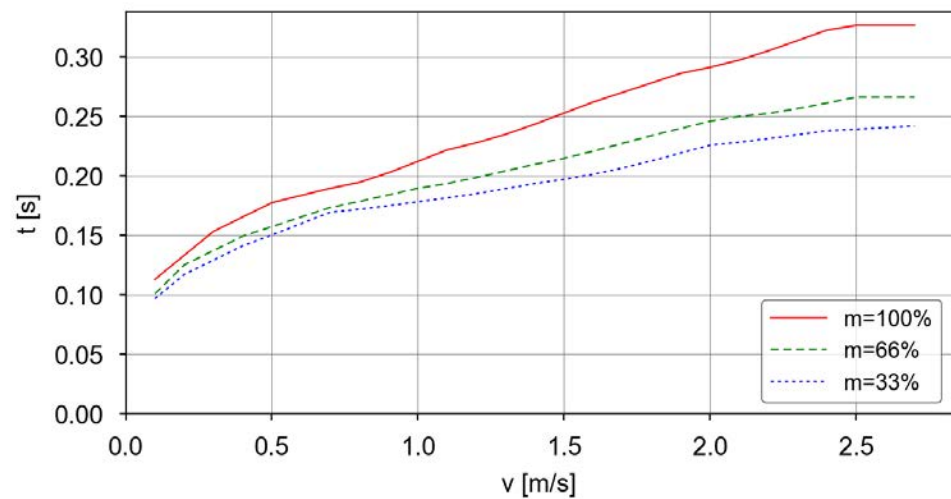
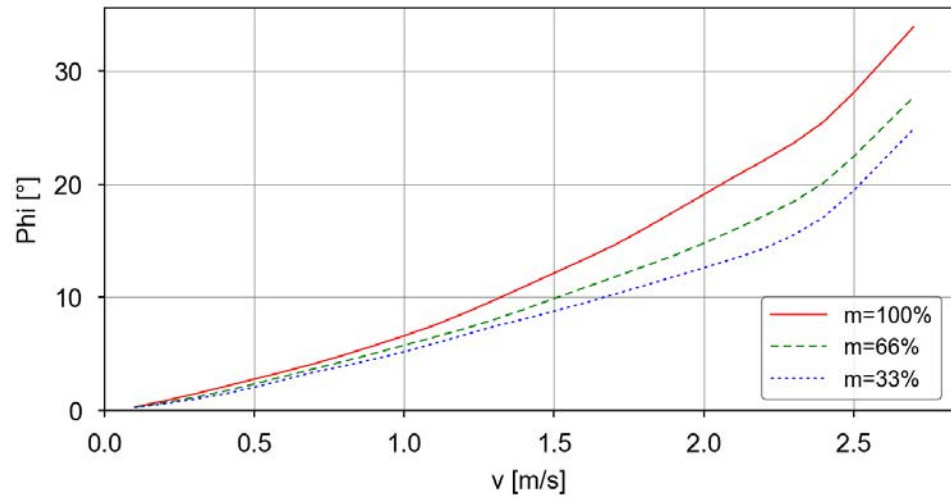
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



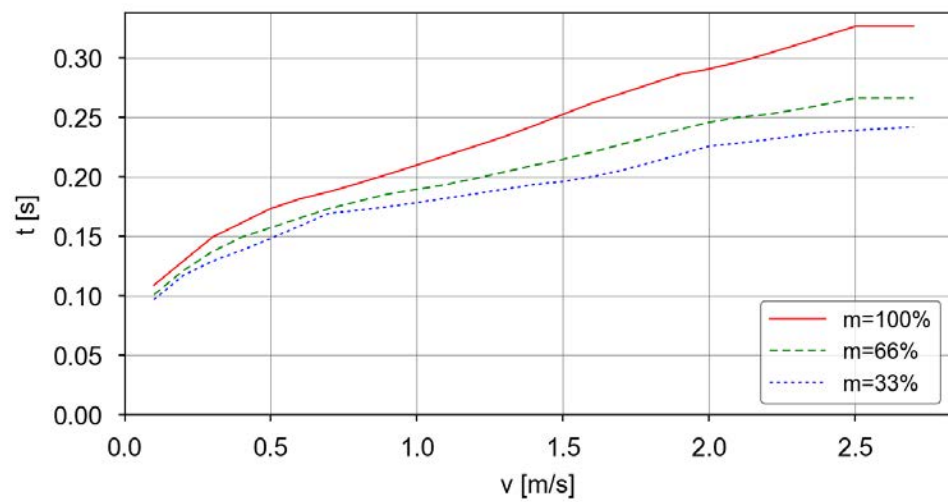
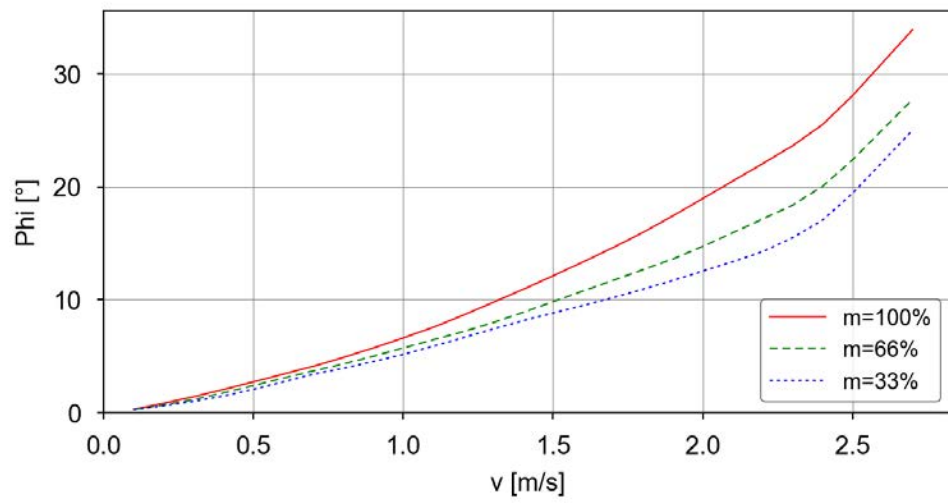
Continues on next page

8 IRB 1600

8.5 IRB 1600ID 1.5 m 4 kg

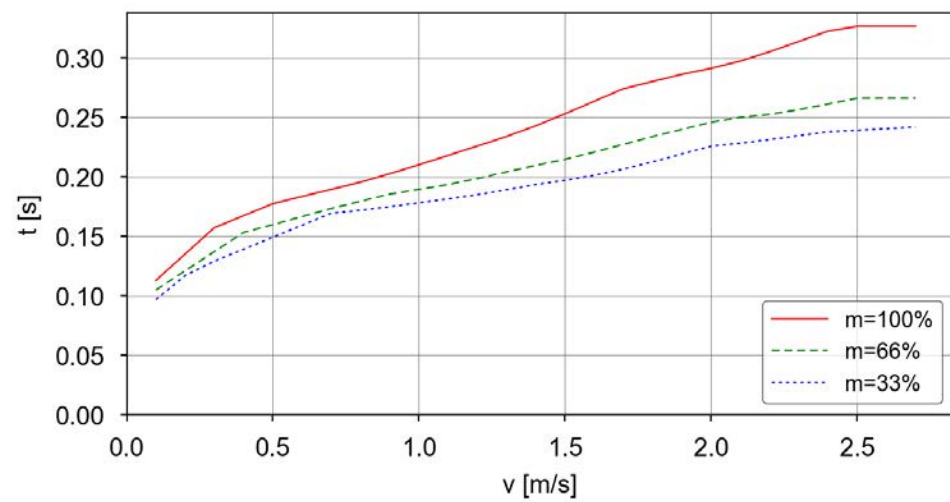
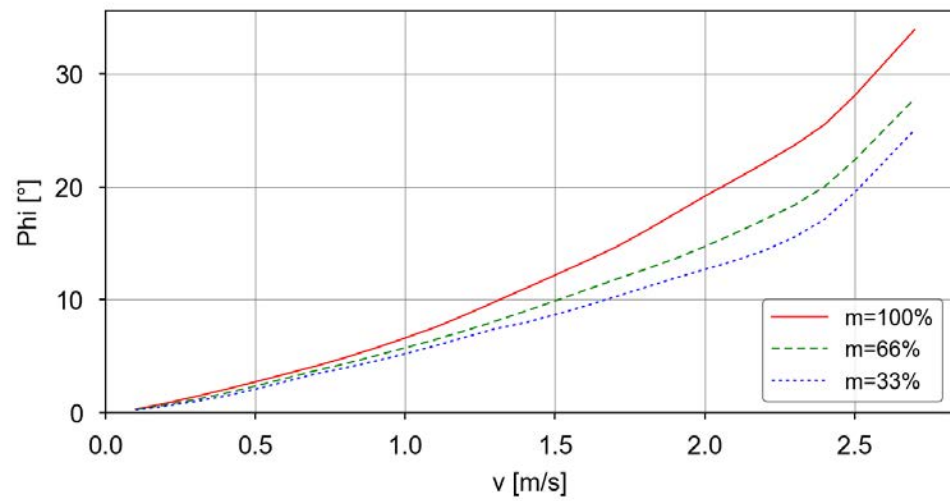
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

9 IRB 1660

9.1 IRB 1660ID 1.55 m 4 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	29.6	0.22
2	40.2	0.34
3	26.8	0.2

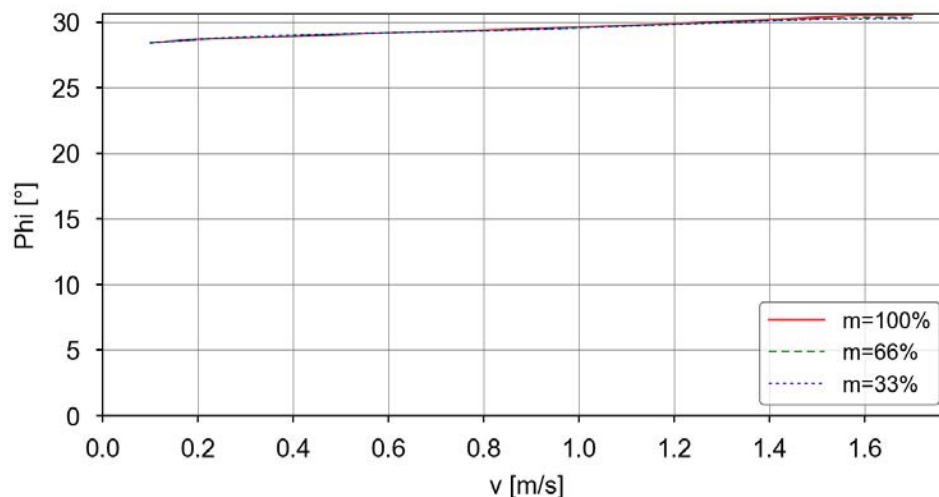
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.0
1	0.0	0.0
2	0.0	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

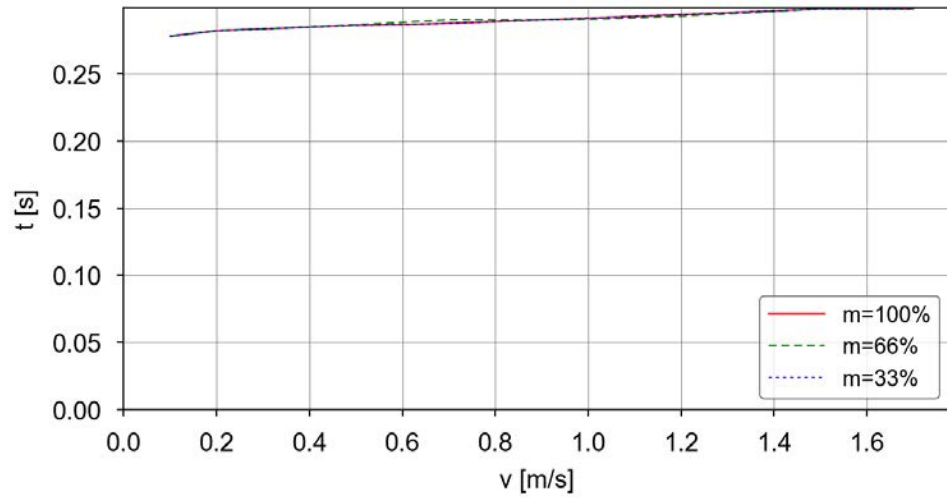


Continues on next page

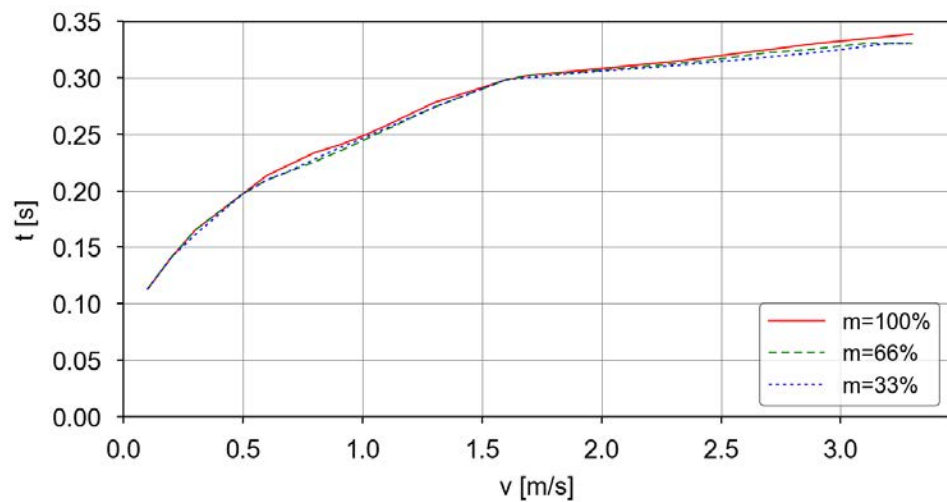
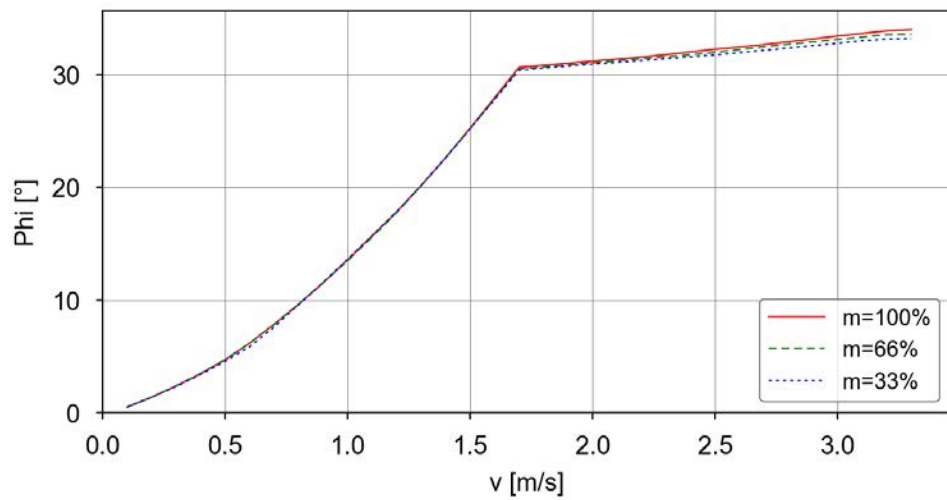
9 IRB 1660

9.1 IRB 1660ID 1.55 m 4 kg

Continued

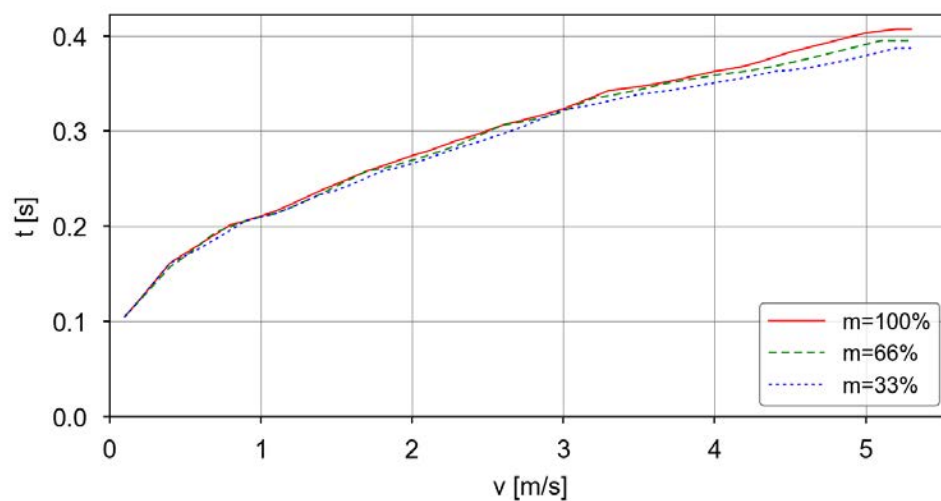
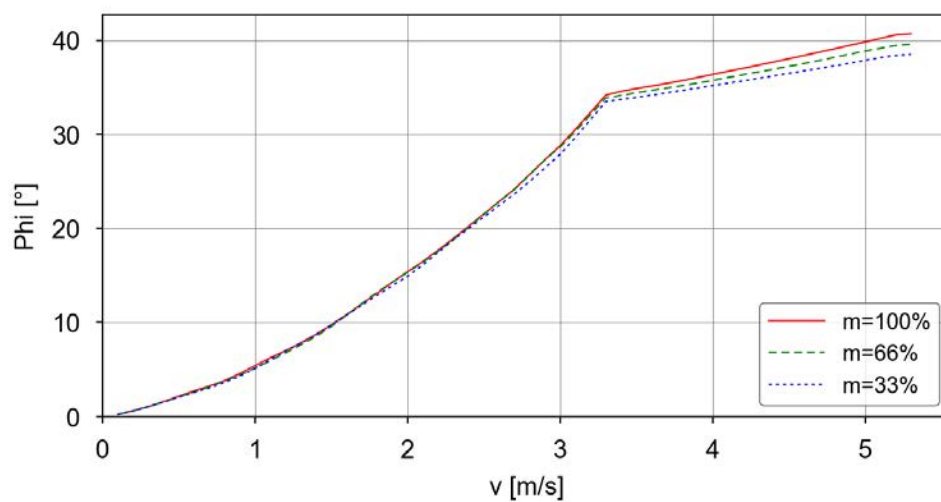


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

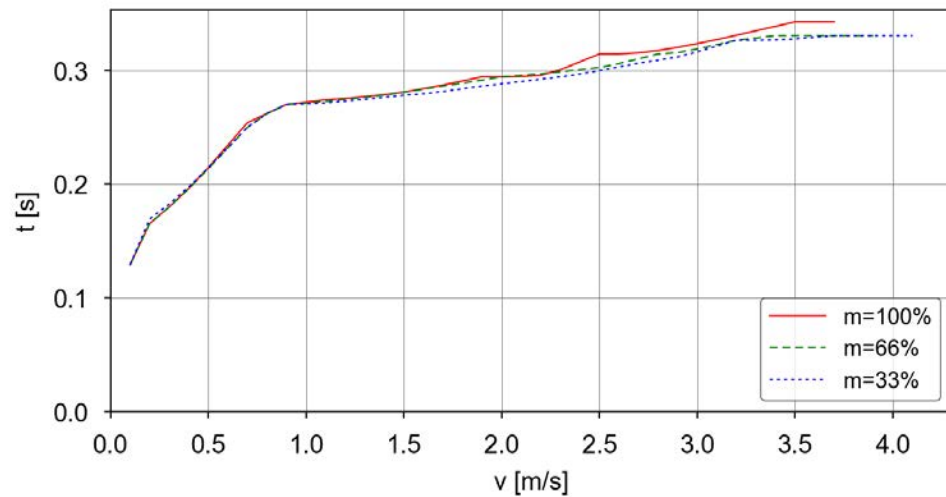
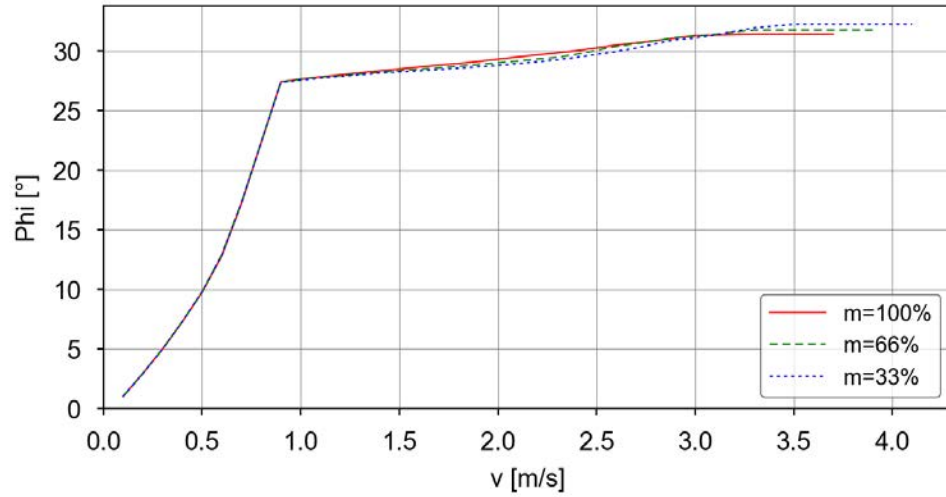
9 IRB 1660

9.1 IRB 1660ID 1.55 m 4 kg

Continued

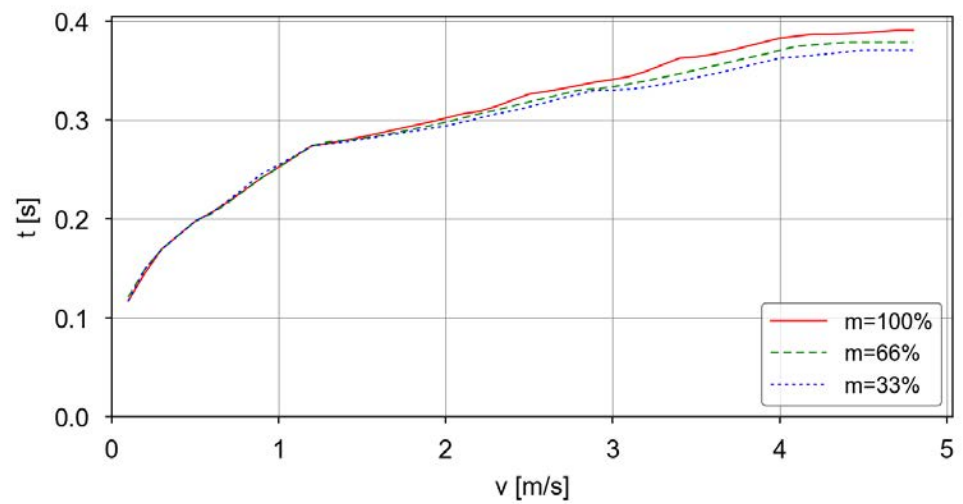
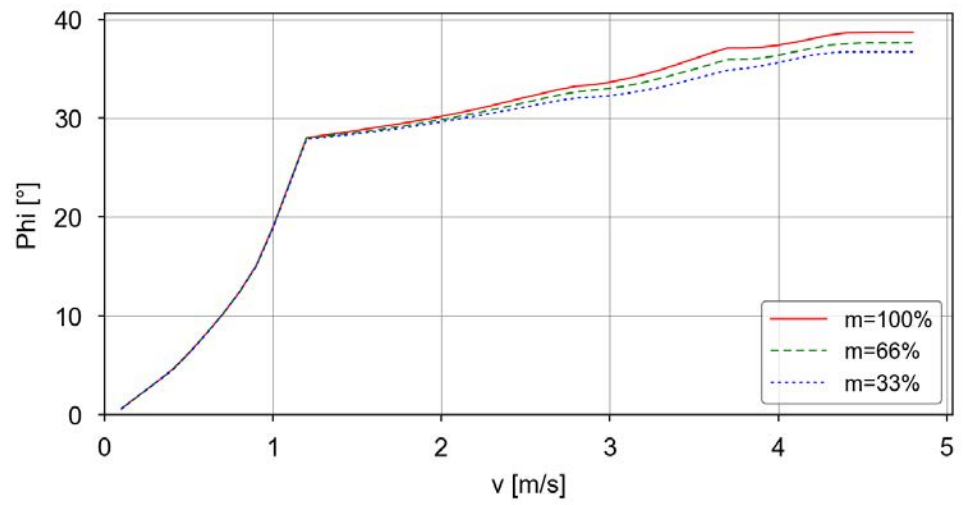
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



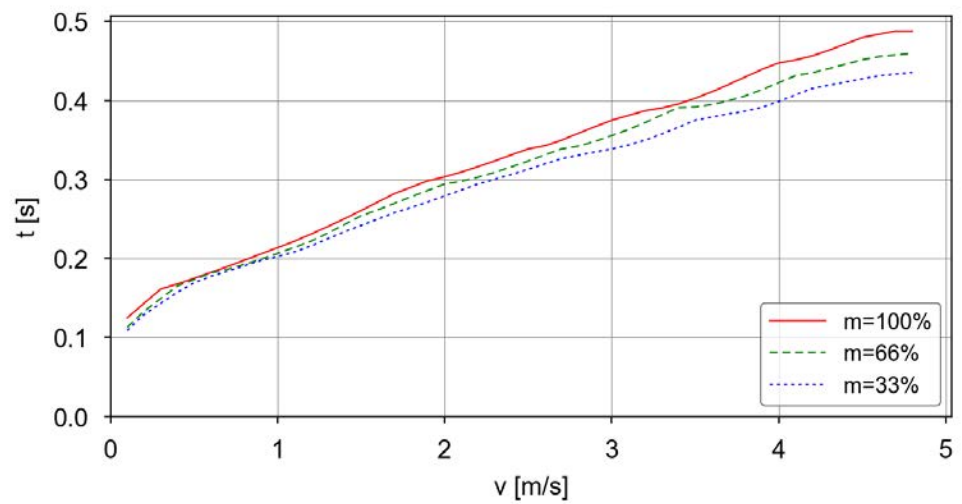
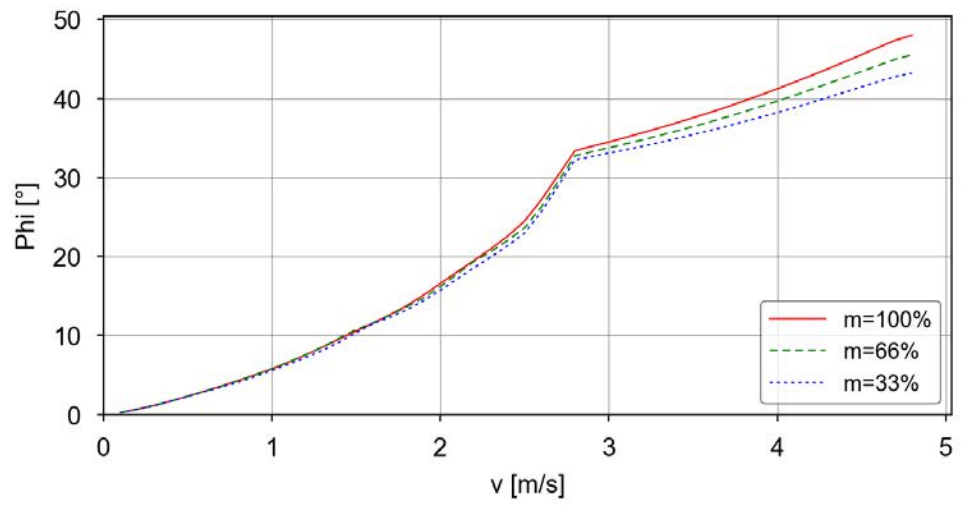
Continues on next page

9 IRB 1660

9.1 IRB 1660ID 1.55 m 4 kg

Continued

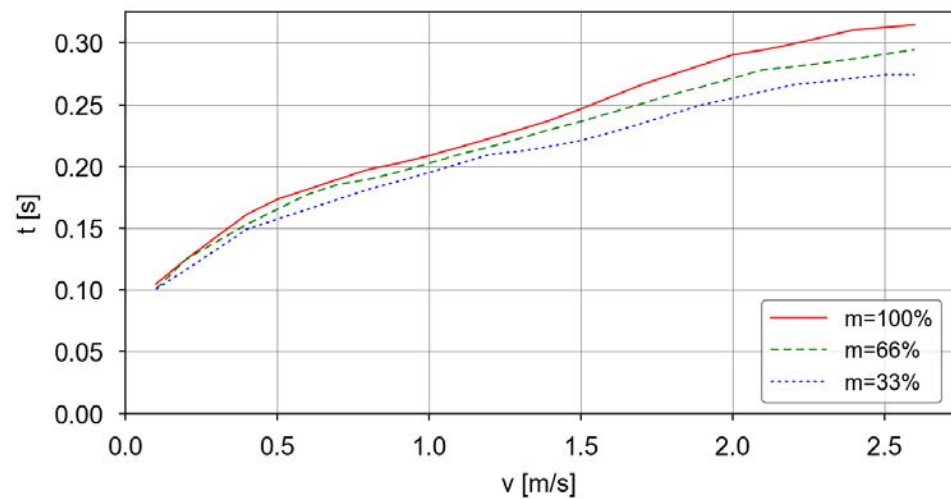
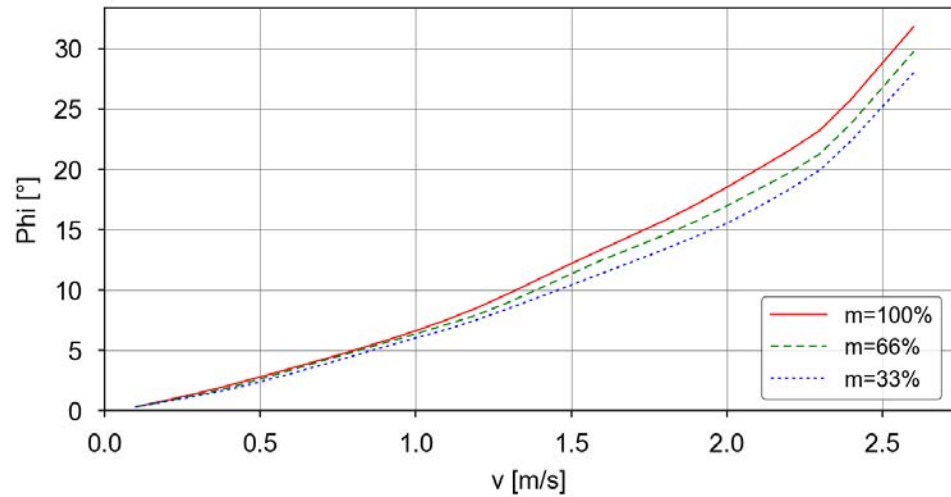
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



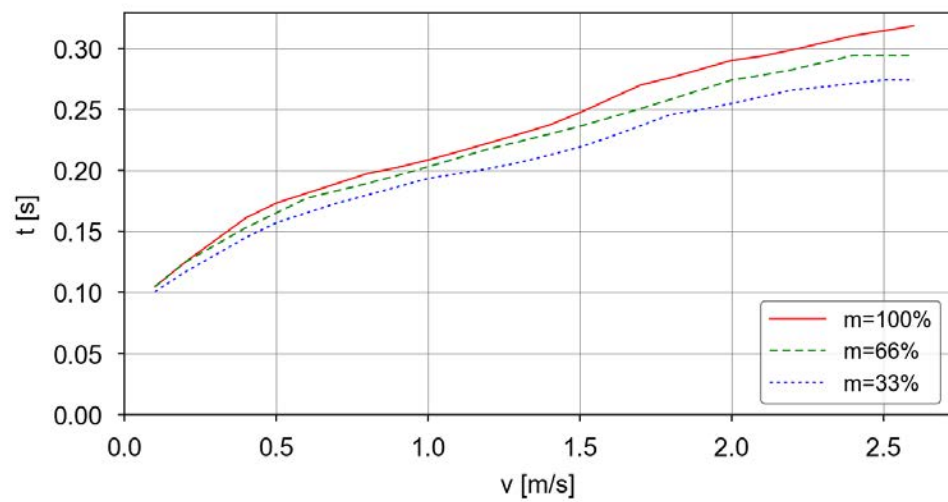
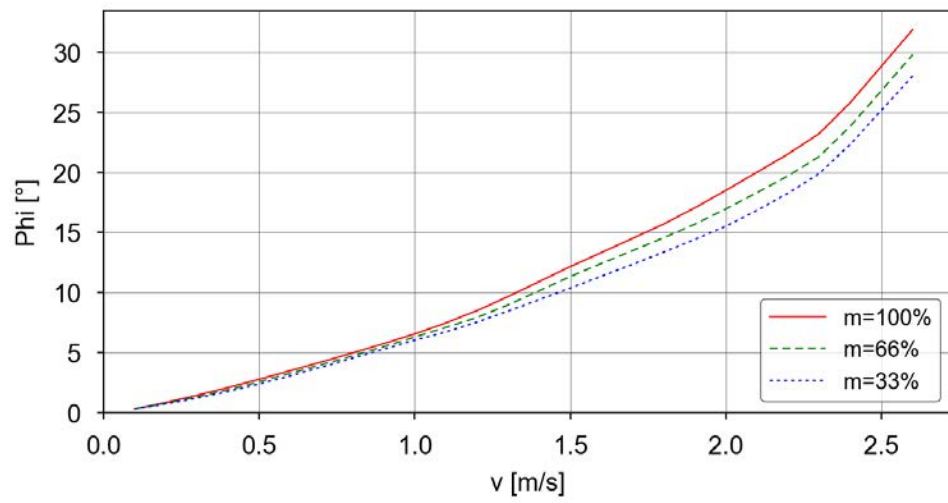
Continues on next page

9 IRB 1660

9.1 IRB 1660ID 1.55 m 4 kg

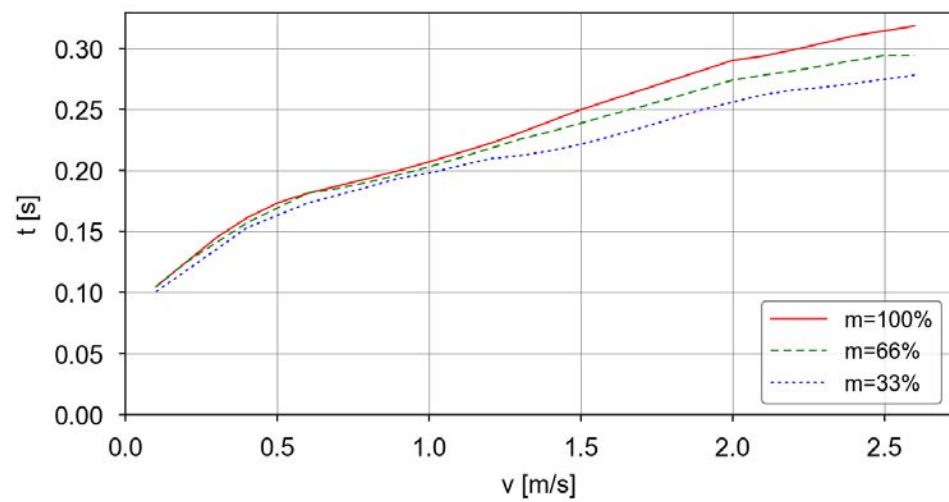
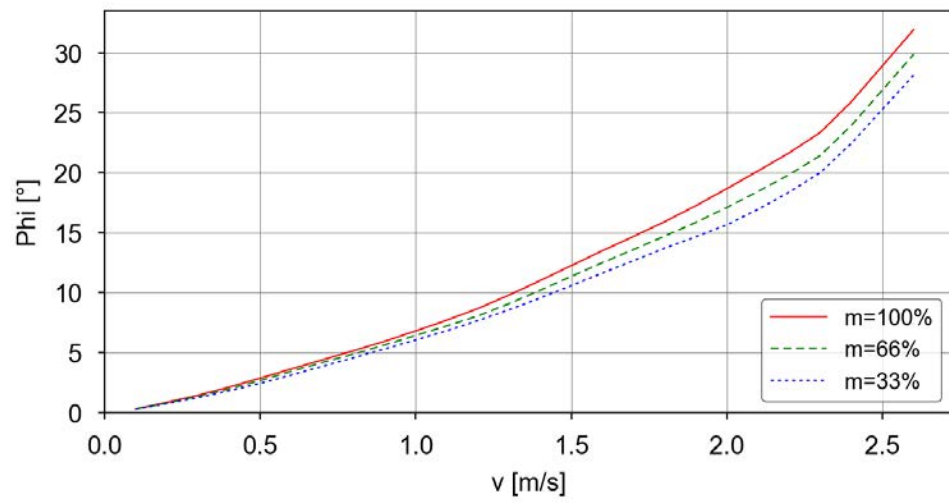
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



9 IRB 1660

9.2 IRB 1660ID 1.55 m 6 kg

9.2 IRB 1660ID 1.55 m 6 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	29.5	0.22
2	39.5	0.32
3	26.6	0.2

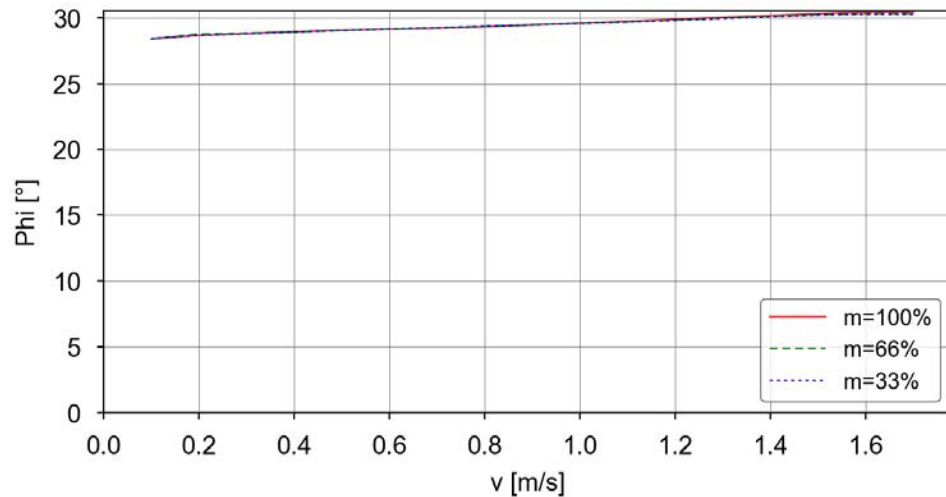
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

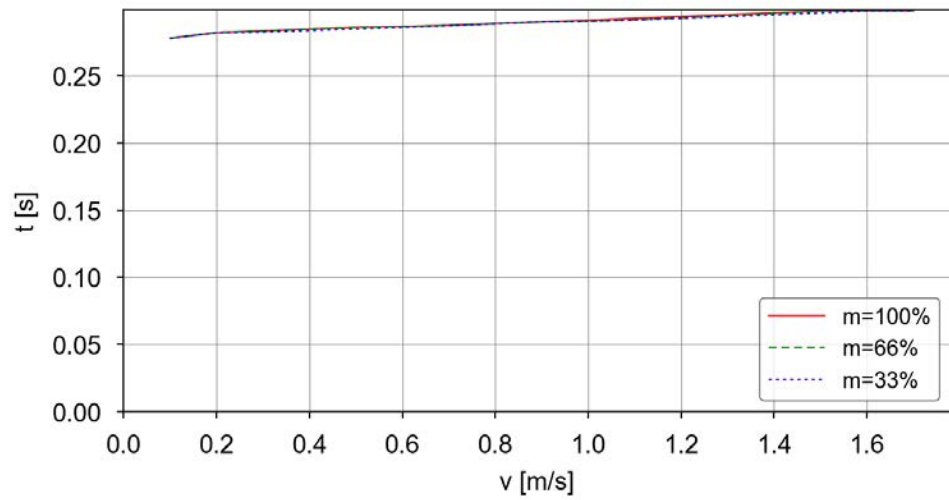
Zone	wcp min (m)	wcp max (m)
0	0	0.0
1	0.0	0.0
2	0.0	max reach

Category 1, Axis 1

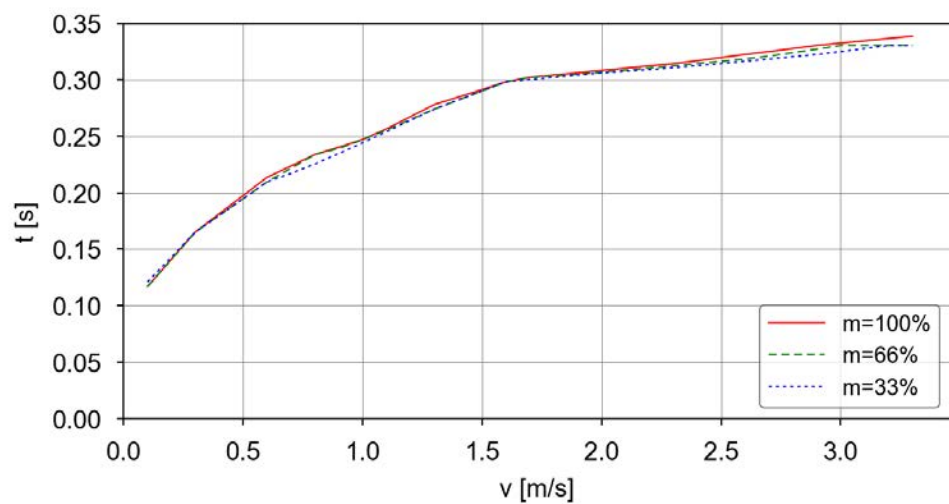
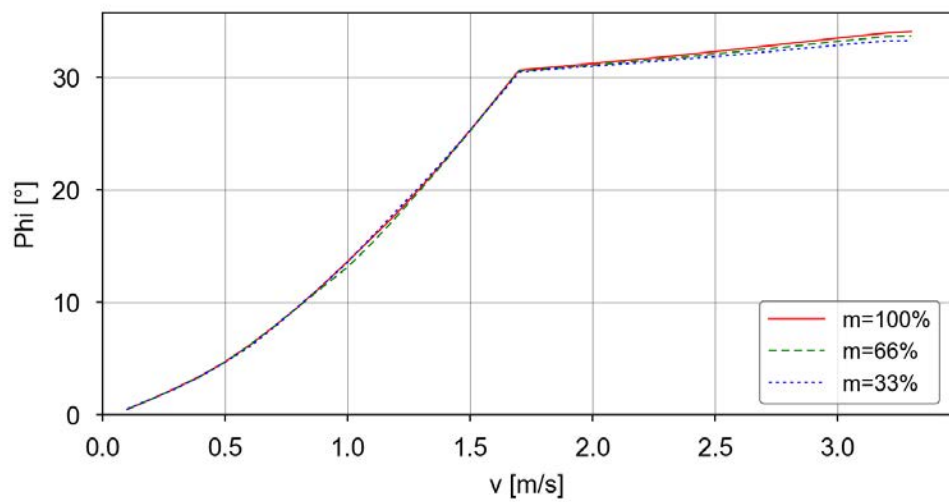
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



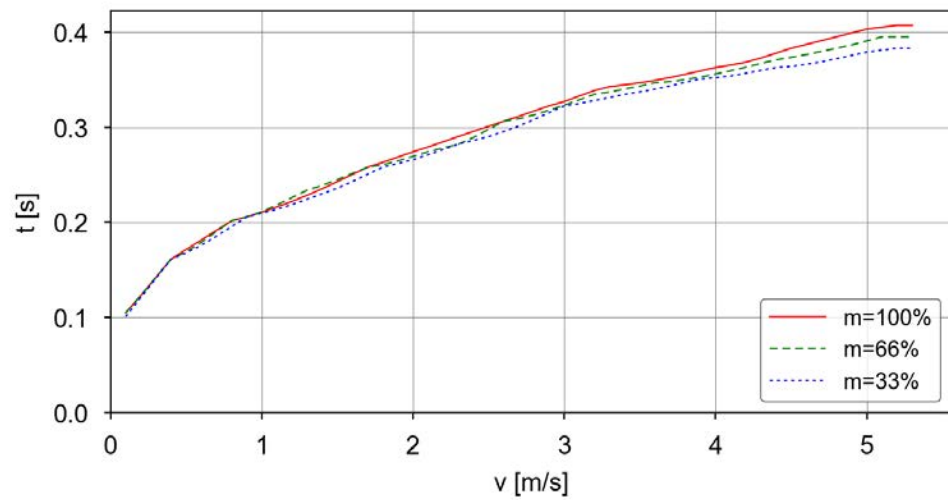
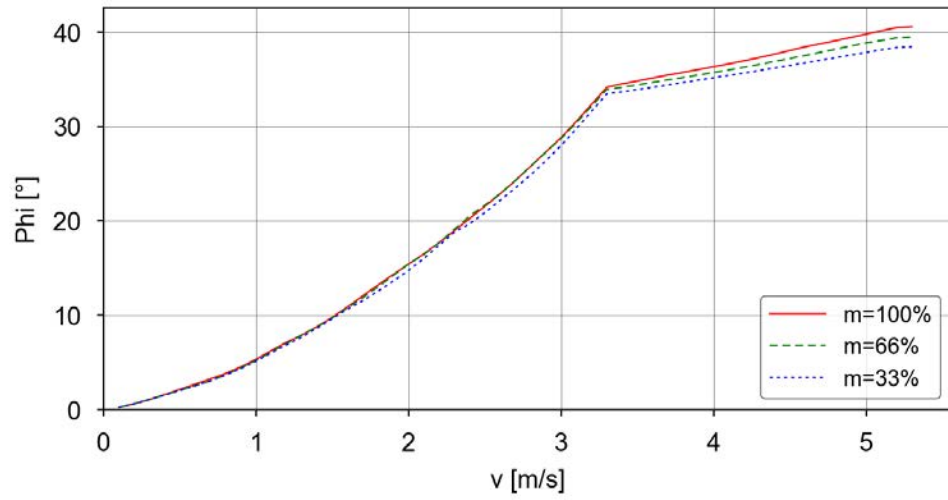
Continues on next page

9 IRB 1660

9.2 IRB 1660ID 1.55 m 6 kg

Continued

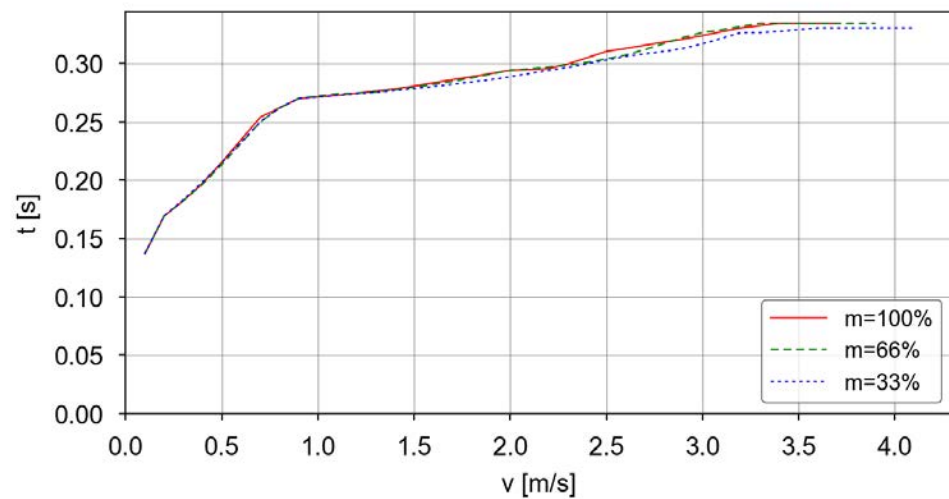
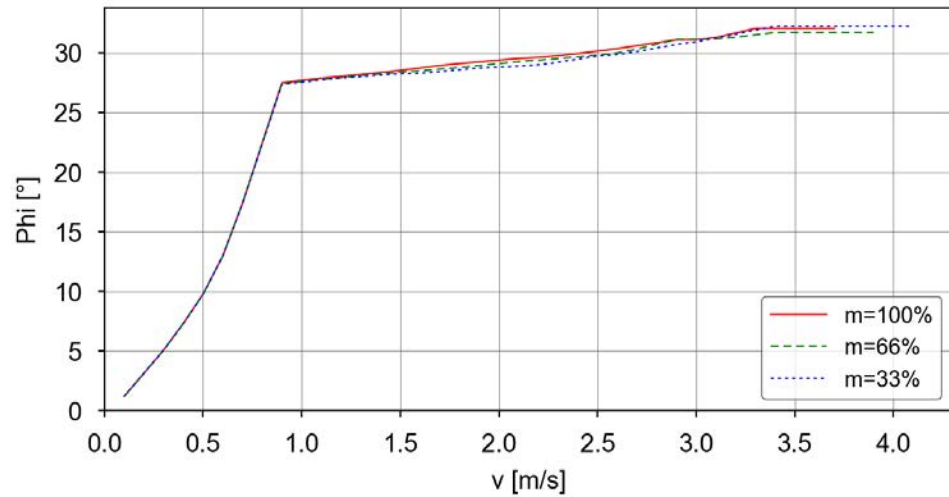
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



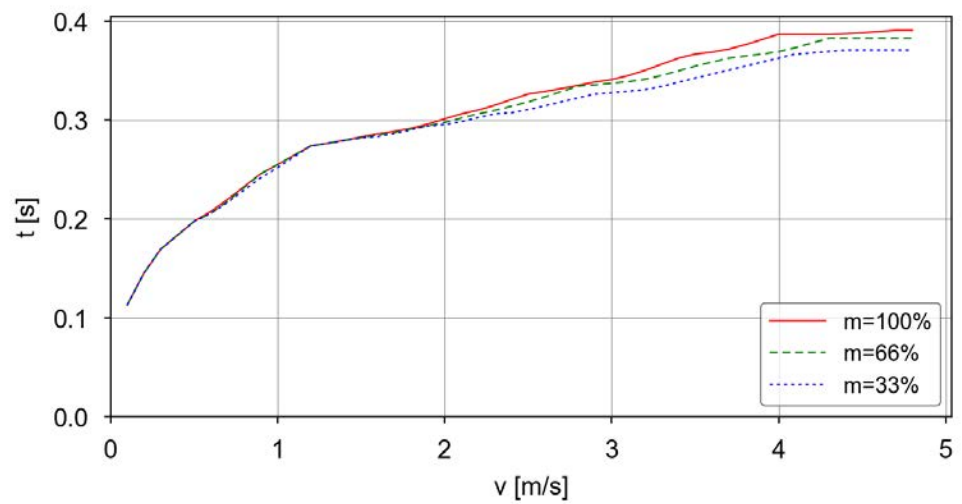
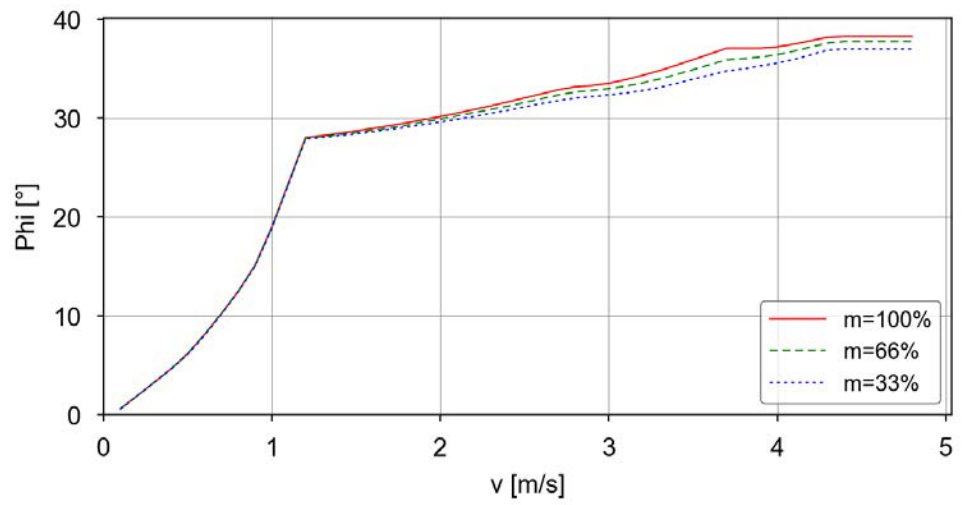
Continues on next page

9 IRB 1660

9.2 IRB 1660ID 1.55 m 6 kg

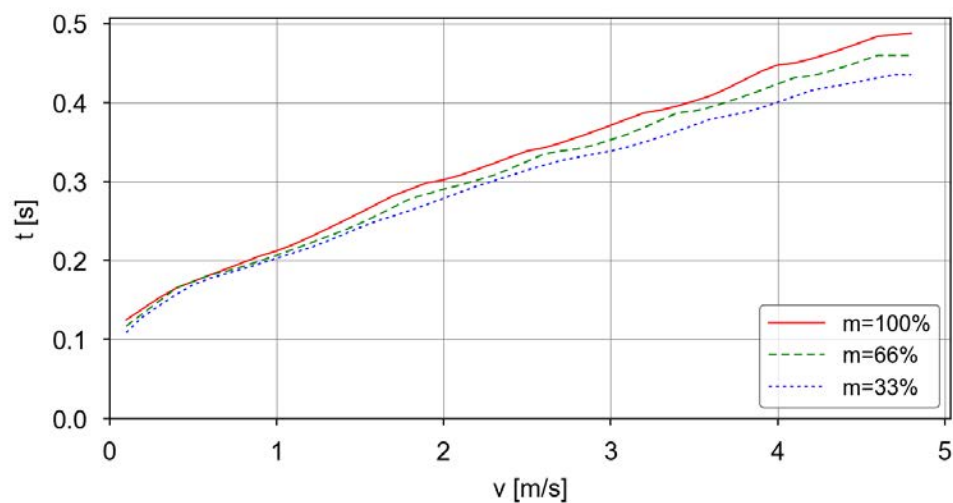
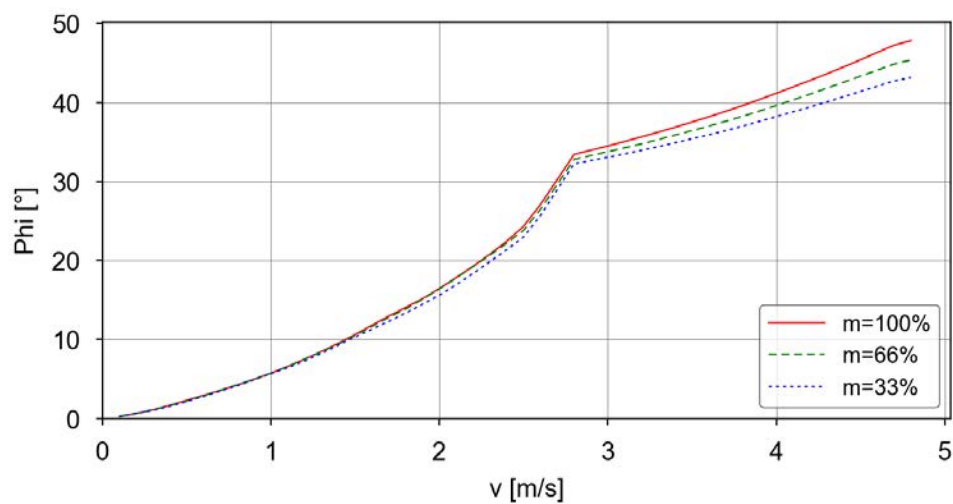
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

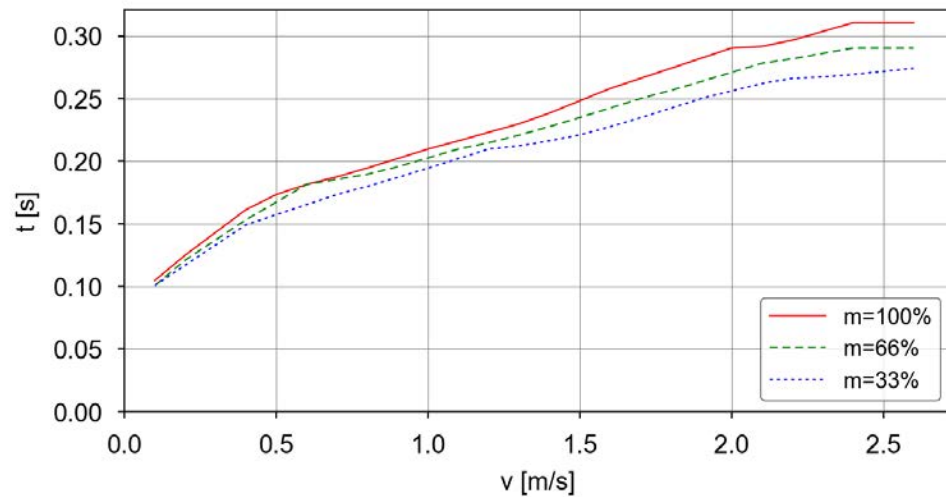
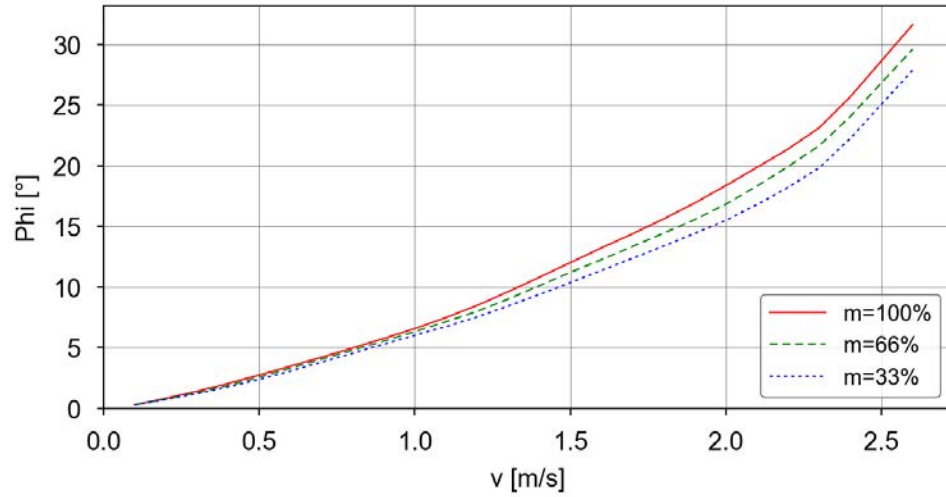
9 IRB 1660

9.2 IRB 1660ID 1.55 m 6 kg

Continued

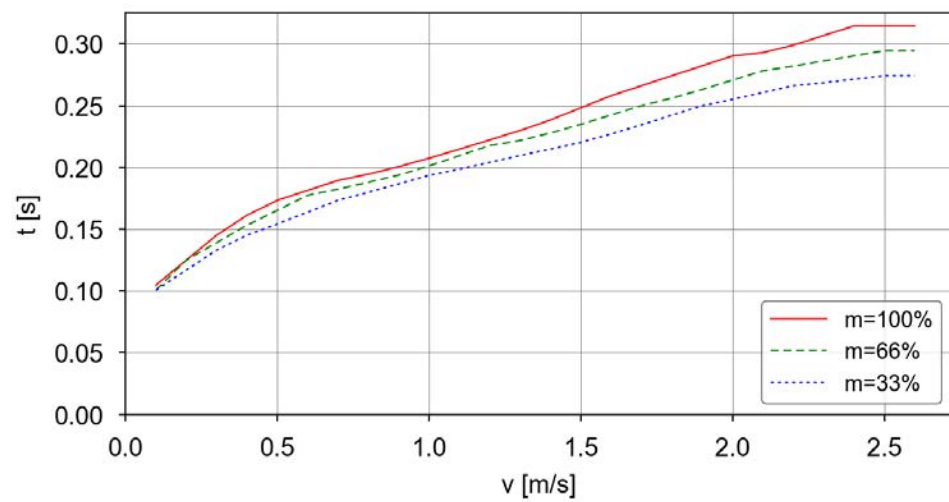
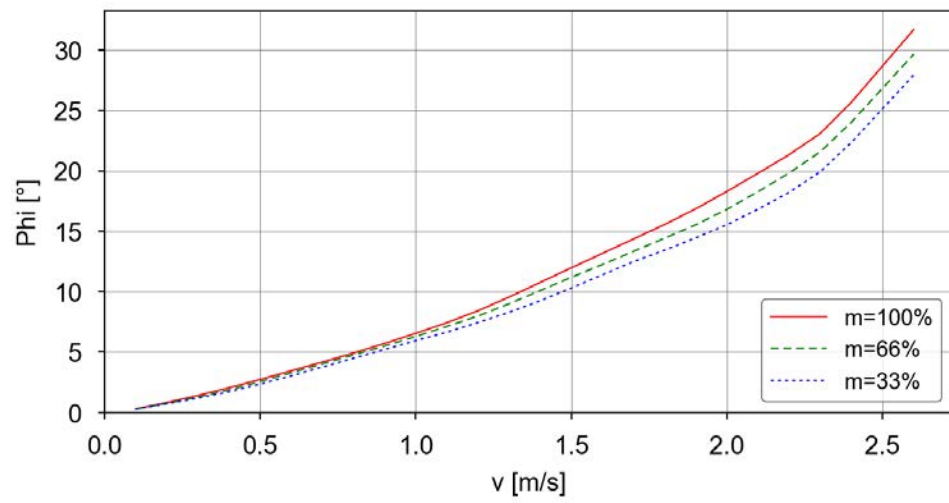
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



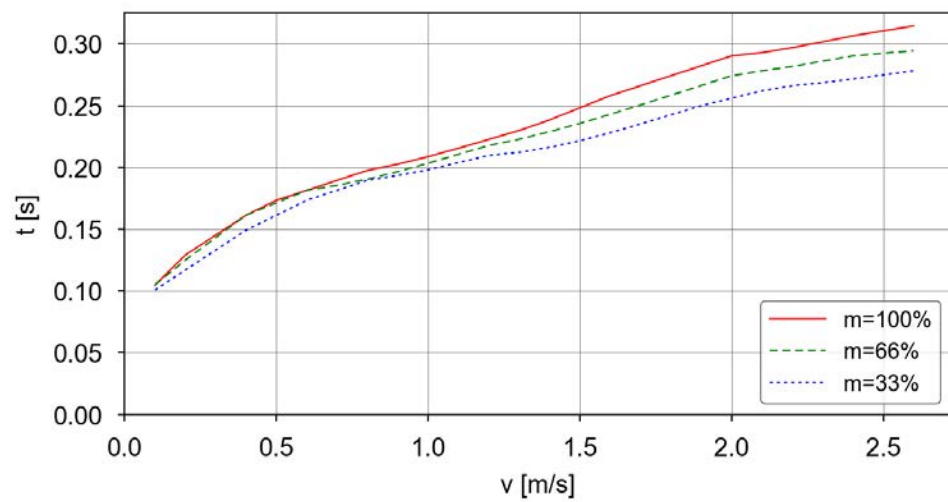
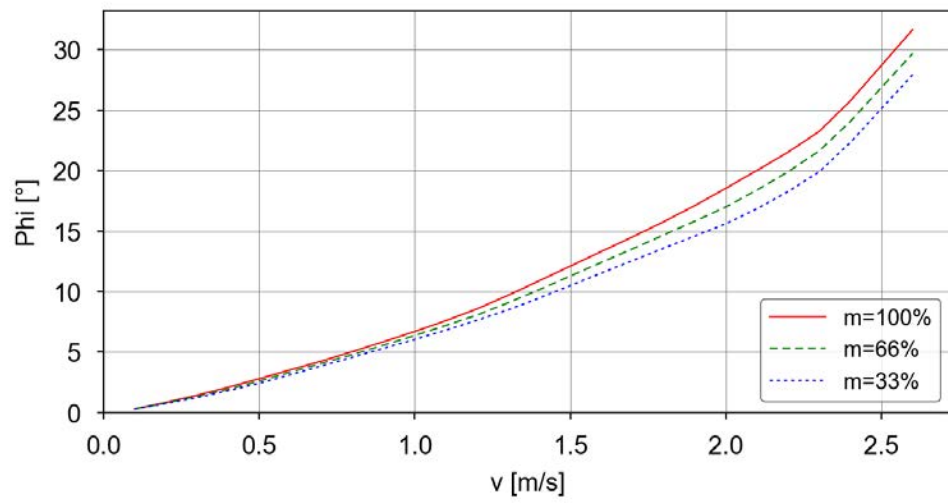
Continues on next page

9 IRB 1660

9.2 IRB 1660ID 1.55 m 6 kg

Continued

Extension zone 2, stopping distance and stopping time



10 IRB 2400

10.1 IRB 2400 1.5 m 10 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	46.9	0.51
2	36.4	0.32
3	22.8	0.2

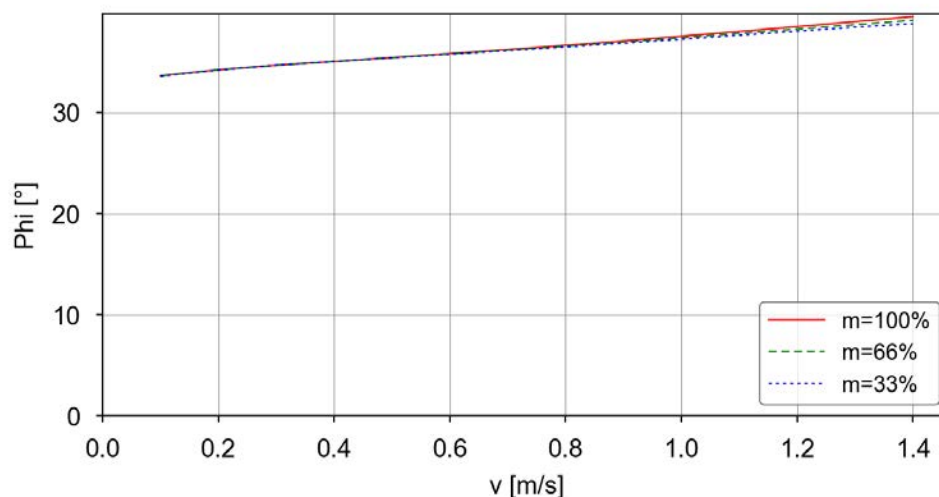
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.524
1	0.524	1.048
2	1.048	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

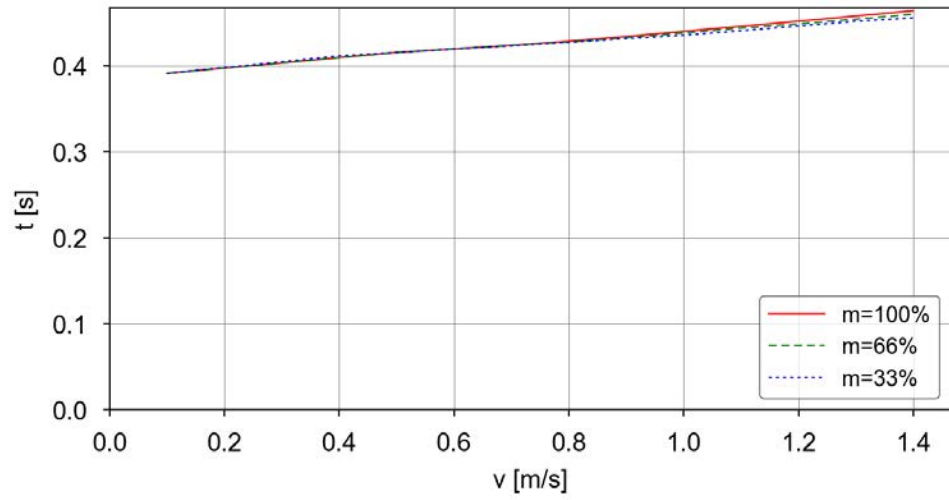


Continues on next page

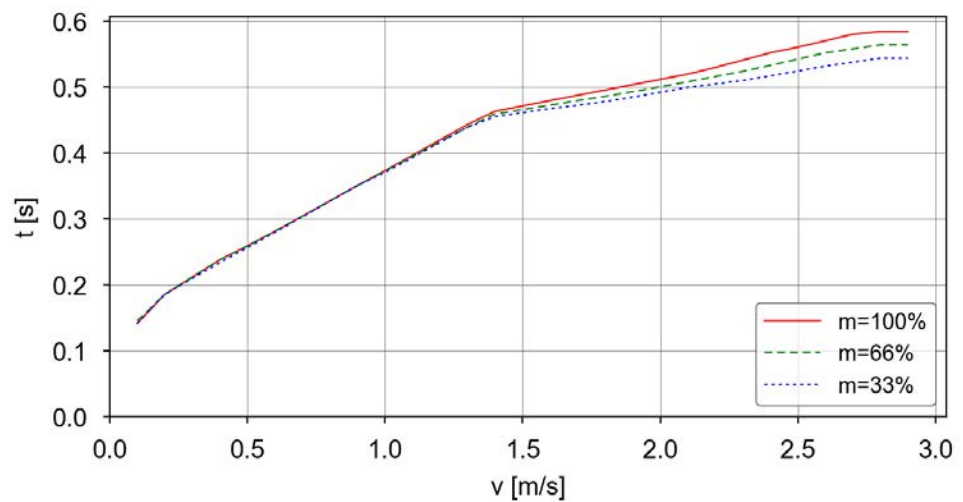
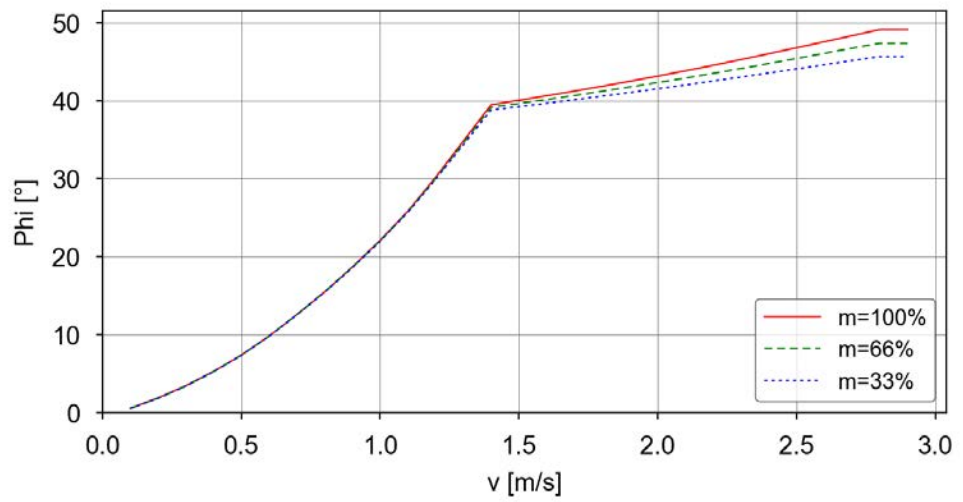
10 IRB 2400

10.1 IRB 2400 1.5 m 10 kg

Continued

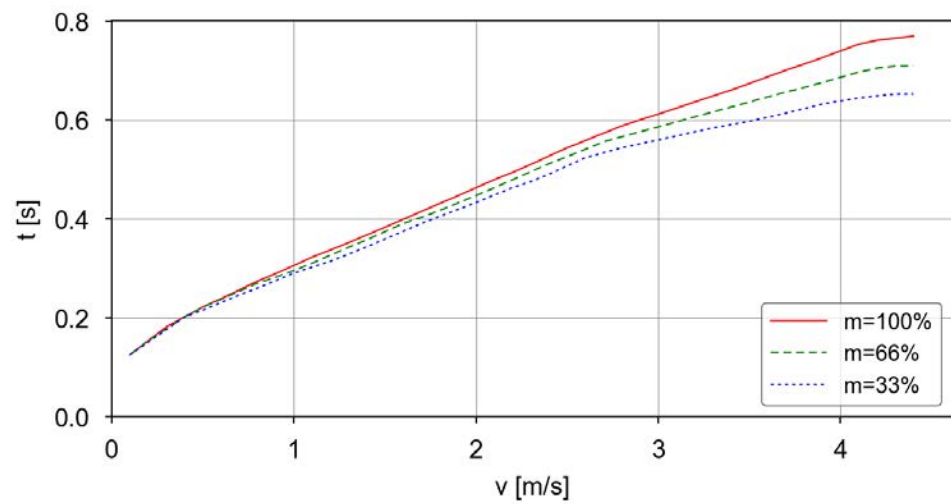
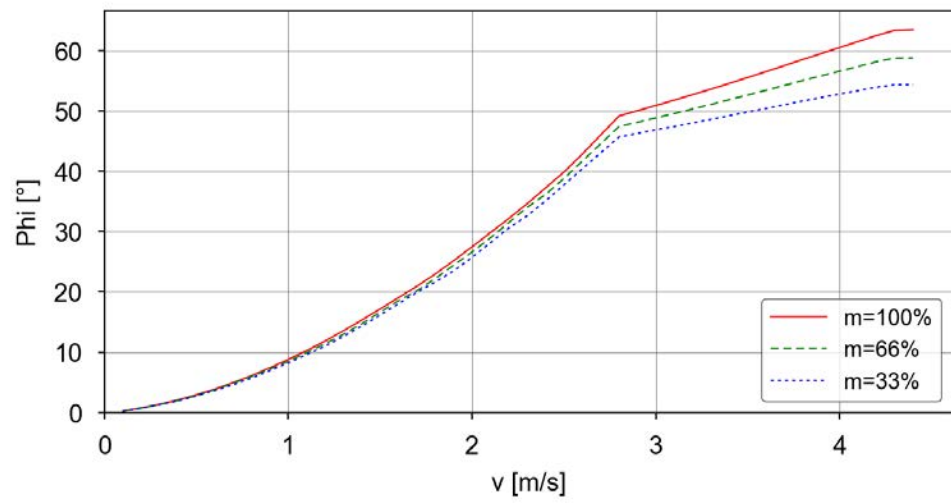


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

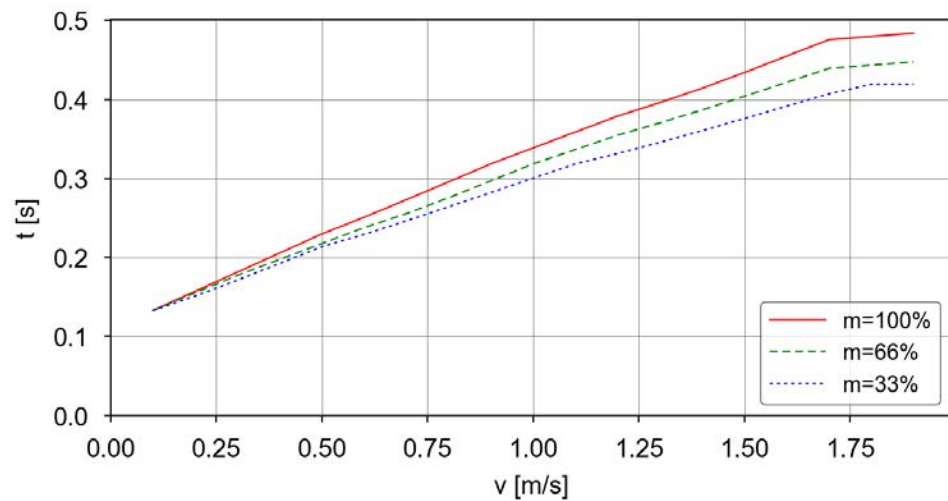
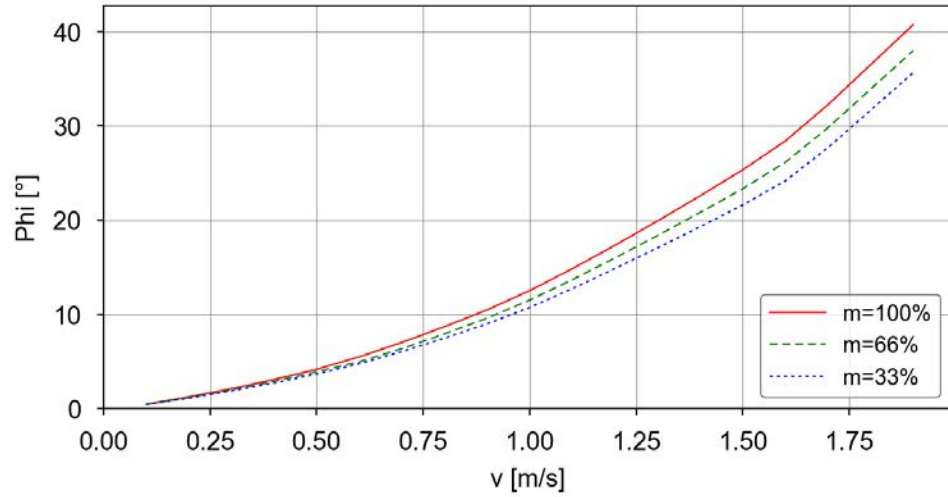
10 IRB 2400

10.1 IRB 2400 1.5 m 10 kg

Continued

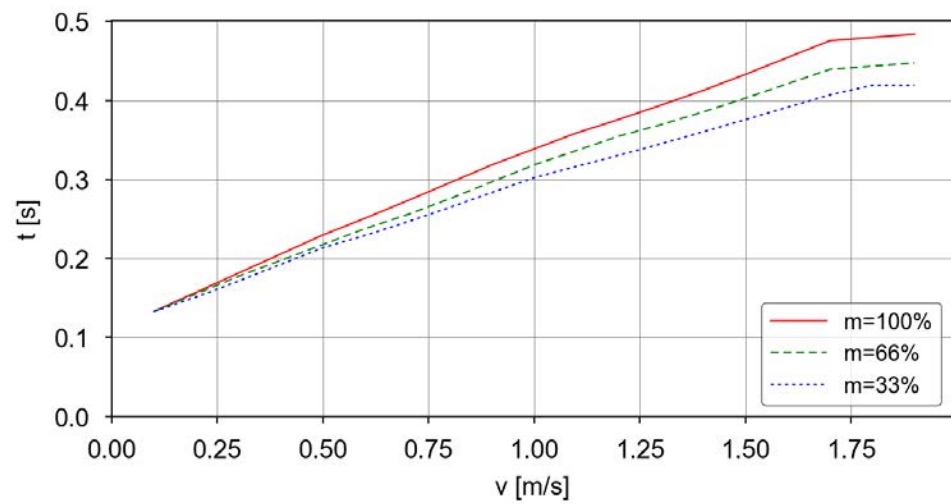
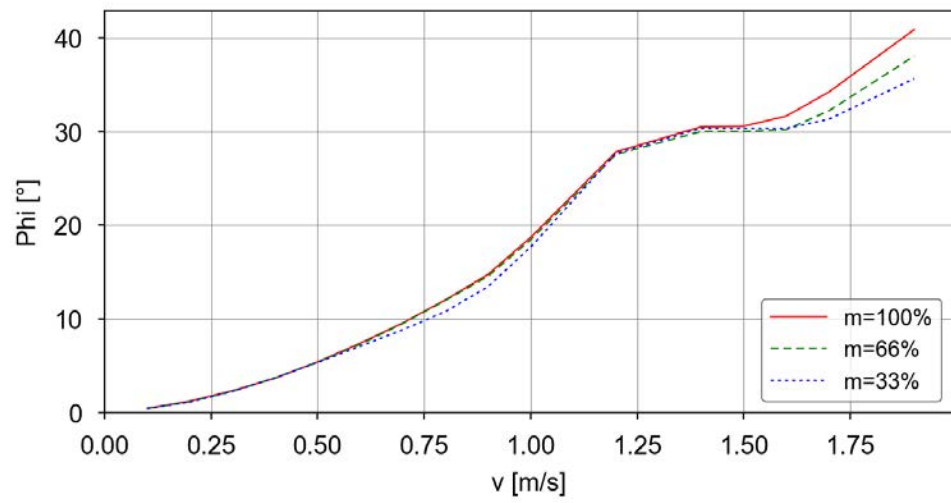
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



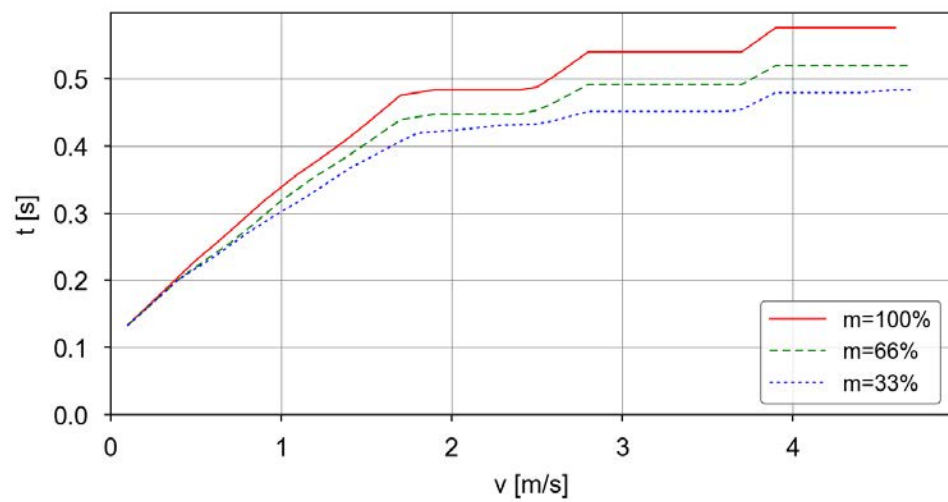
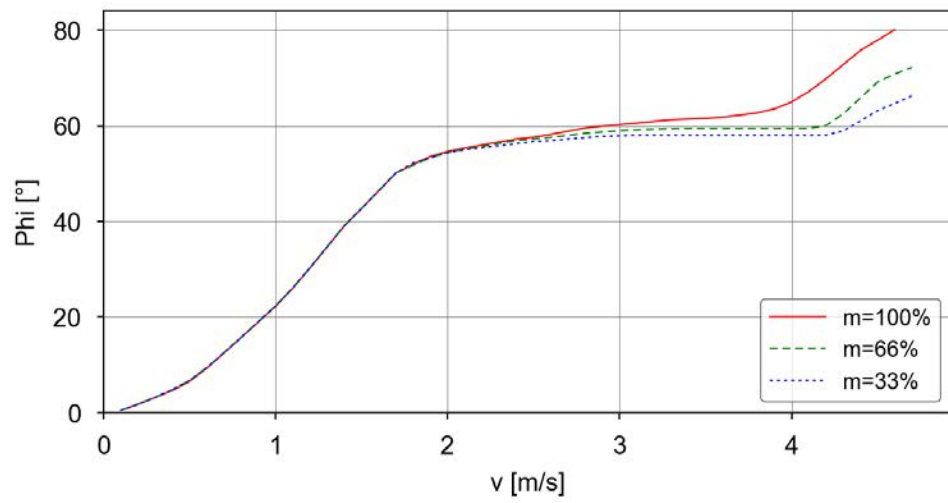
Continues on next page

10 IRB 2400

10.1 IRB 2400 1.5 m 10 kg

Continued

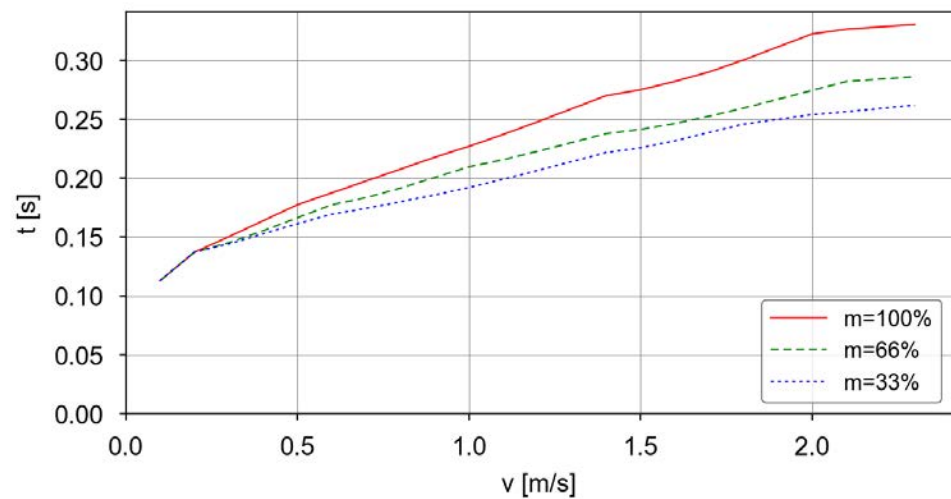
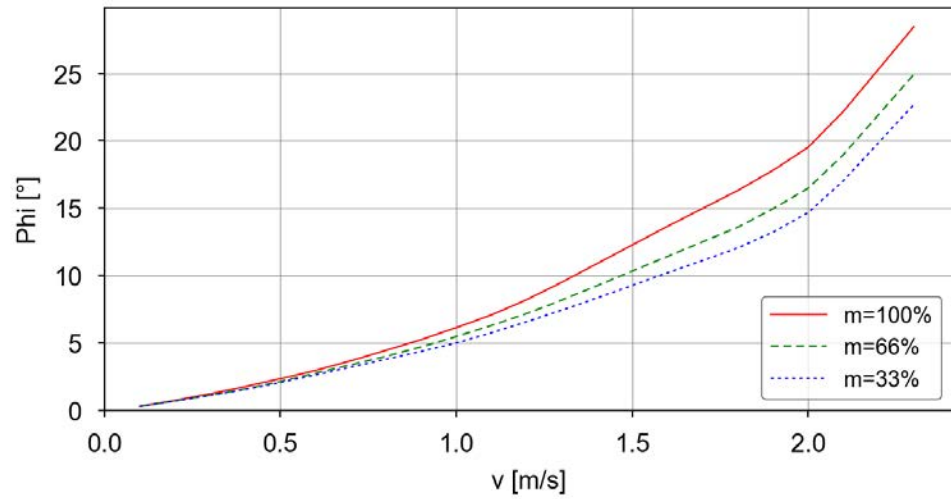
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



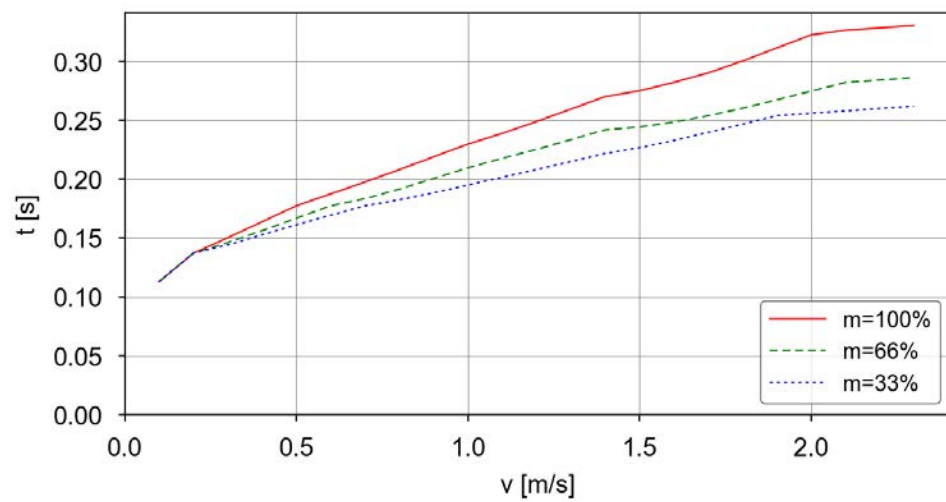
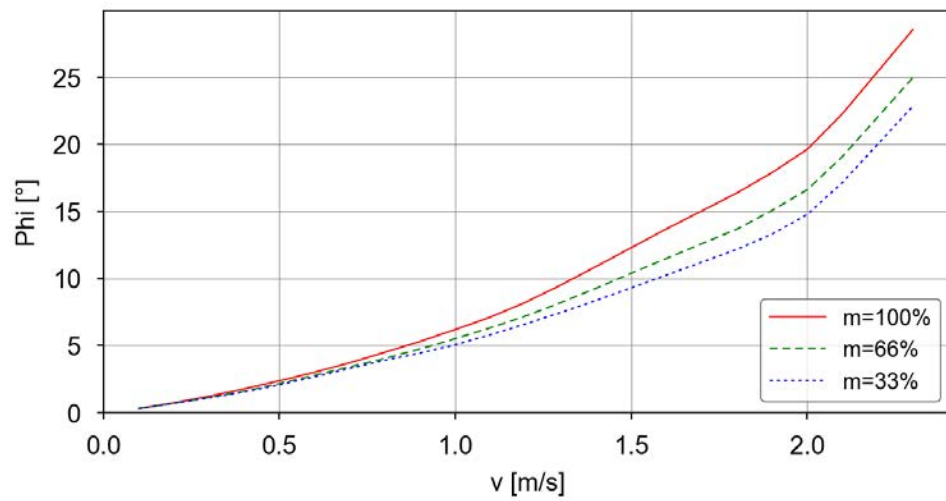
Continues on next page

10 IRB 2400

10.1 IRB 2400 1.5 m 10 kg

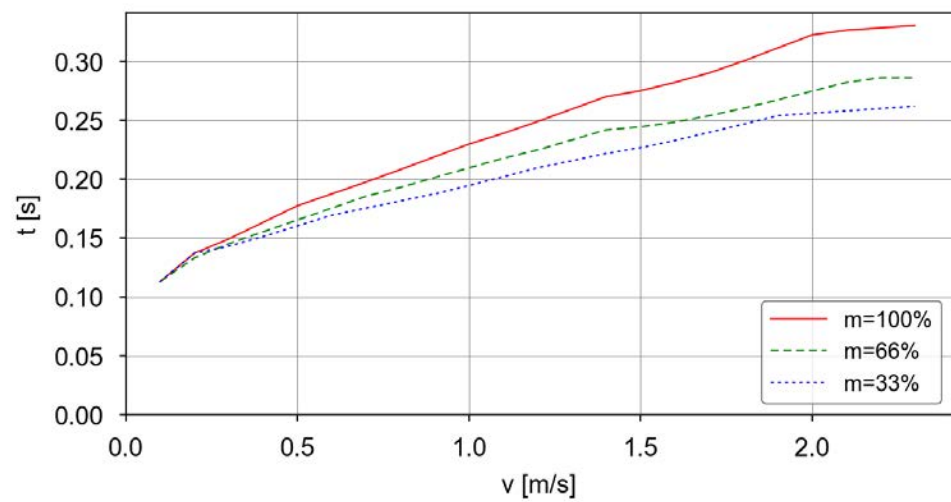
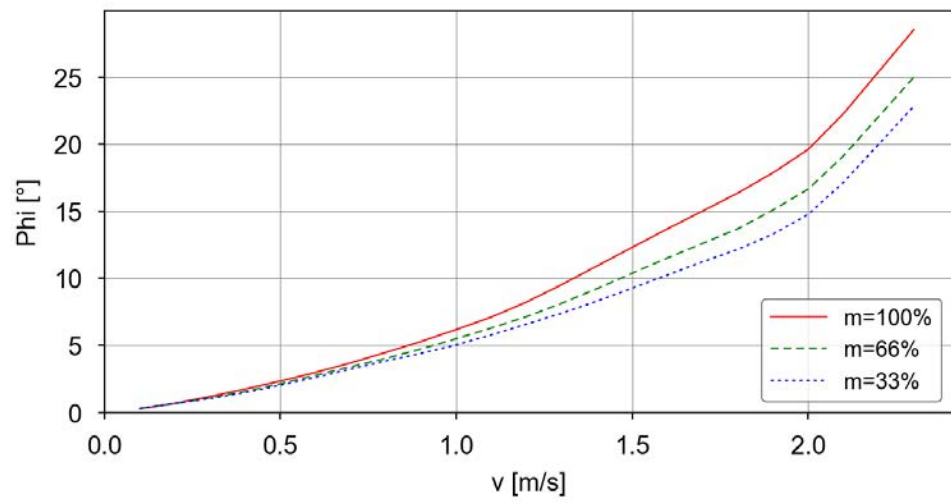
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



10 IRB 2400

10.2 IRB 2400 1.5 m 16 kg

10.2 IRB 2400 1.5 m 16 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	53.2	0.61
2	36.1	0.32
3	29.1	0.27

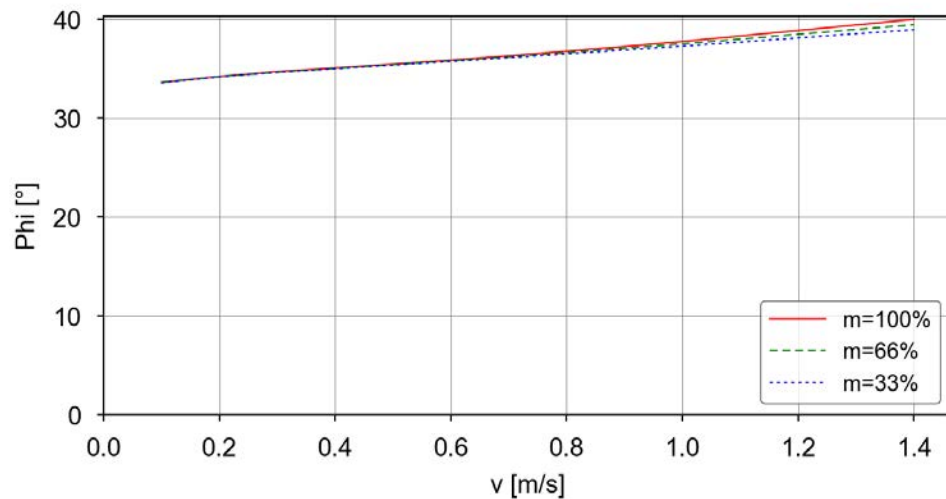
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

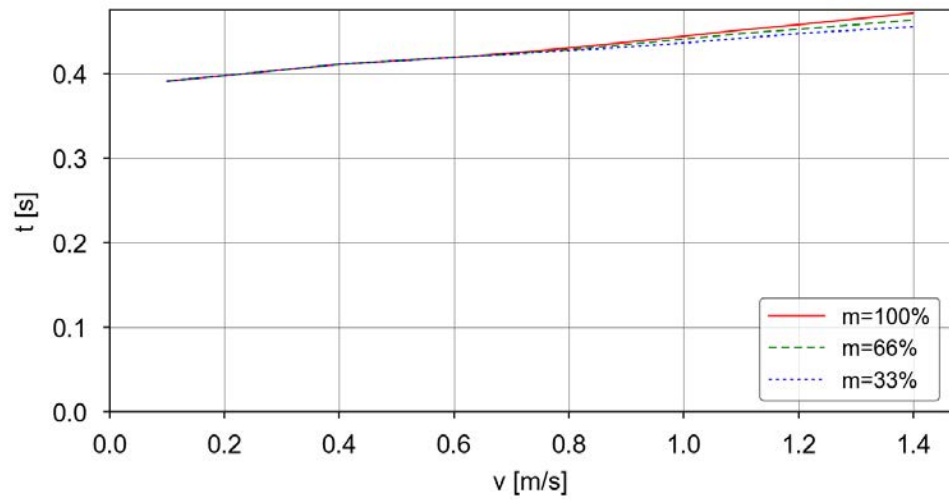
Zone	wcp min (m)	wcp max (m)
0	0	0.524
1	0.524	1.048
2	1.048	max reach

Category 1, Axis 1

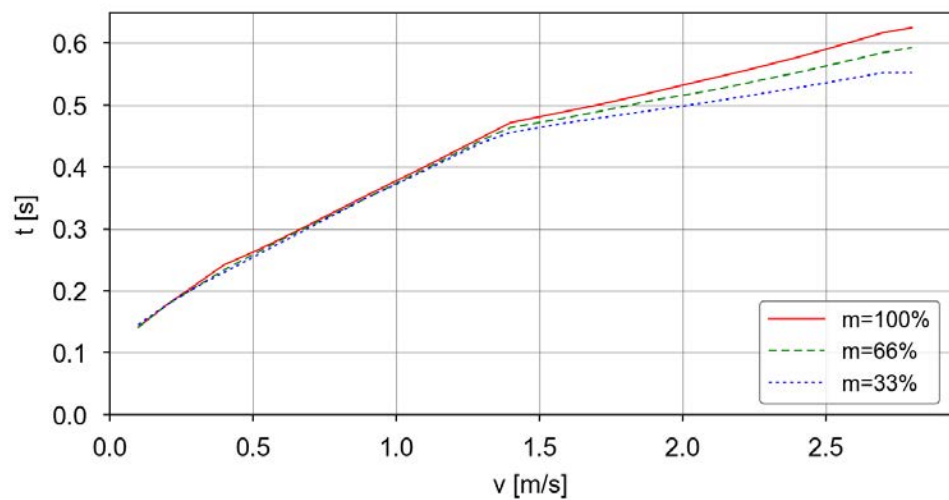
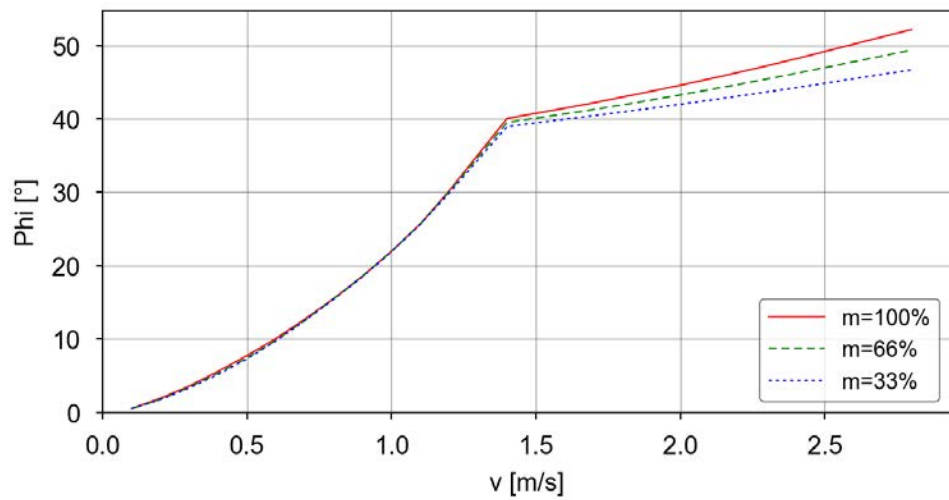
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



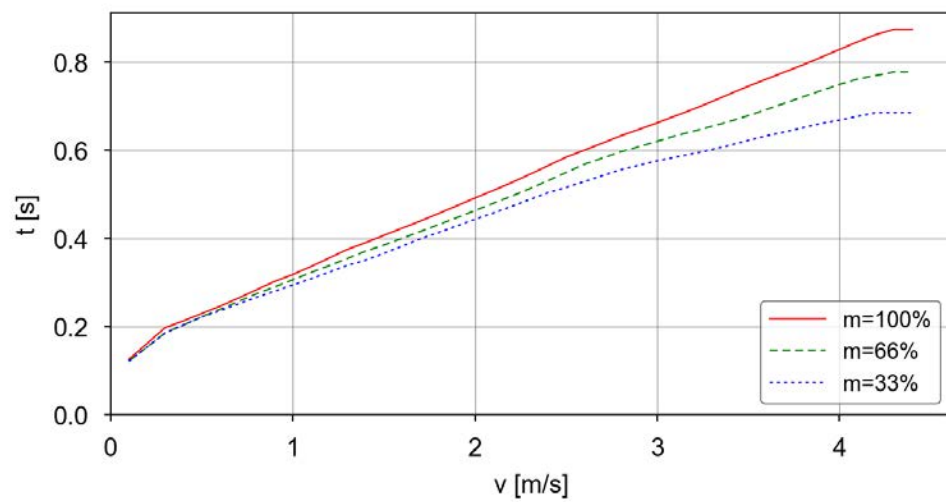
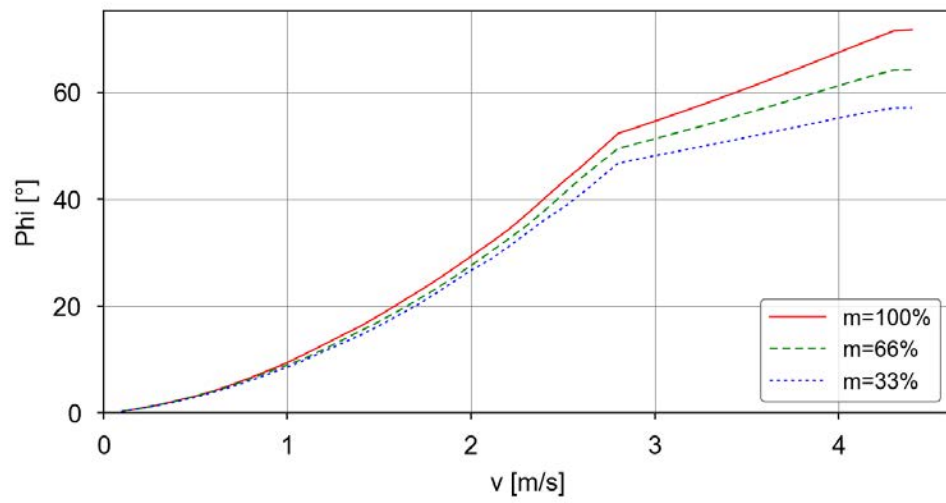
Continues on next page

10 IRB 2400

10.2 IRB 2400 1.5 m 16 kg

Continued

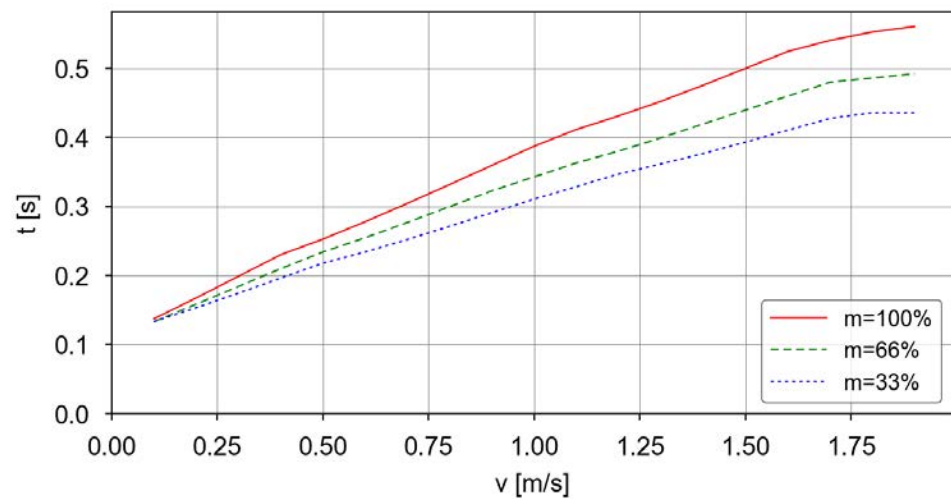
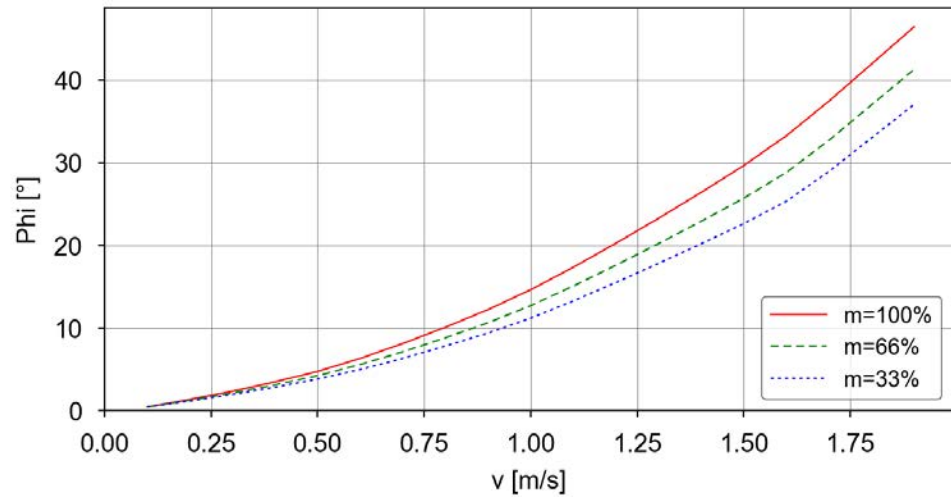
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



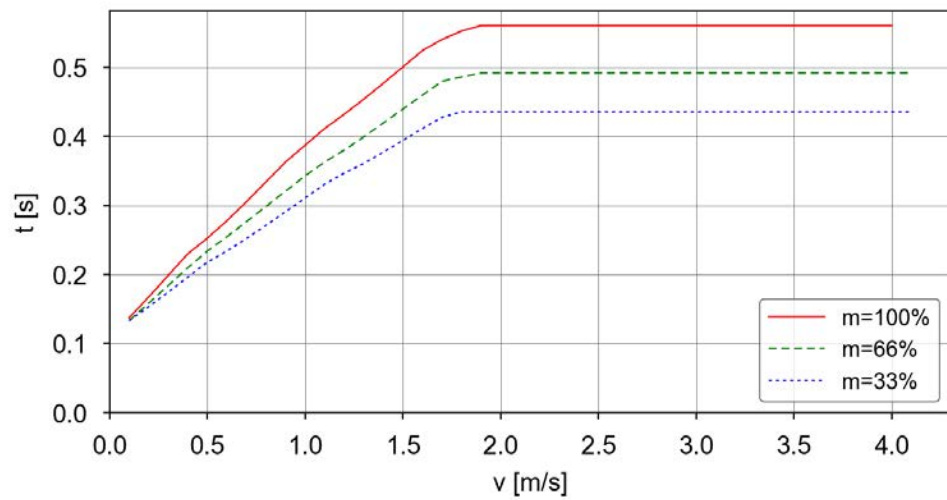
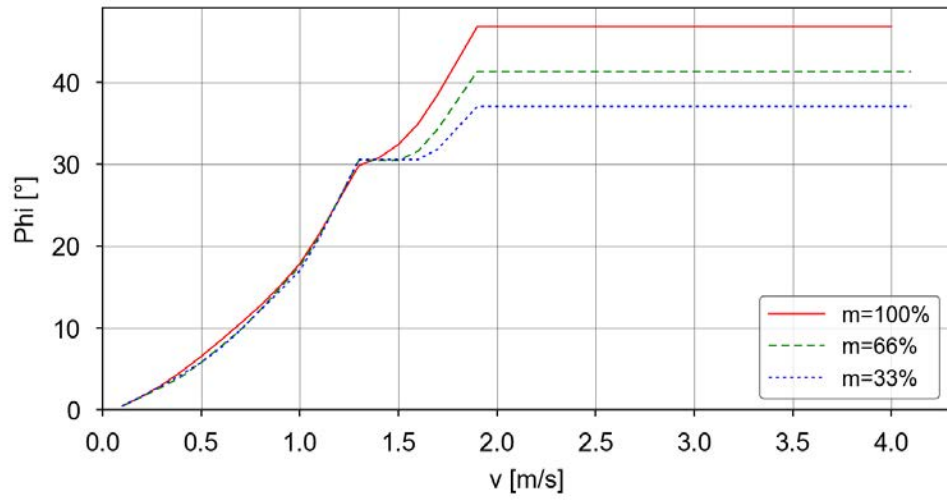
Continues on next page

10 IRB 2400

10.2 IRB 2400 1.5 m 16 kg

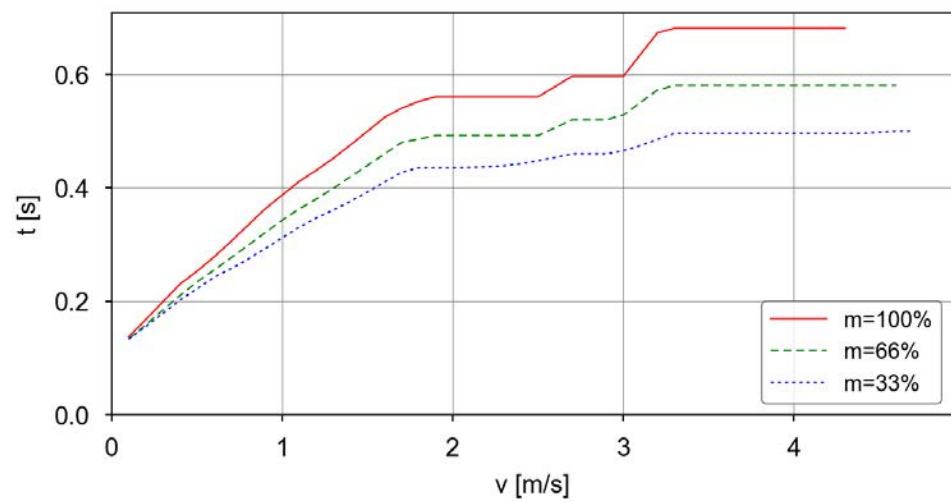
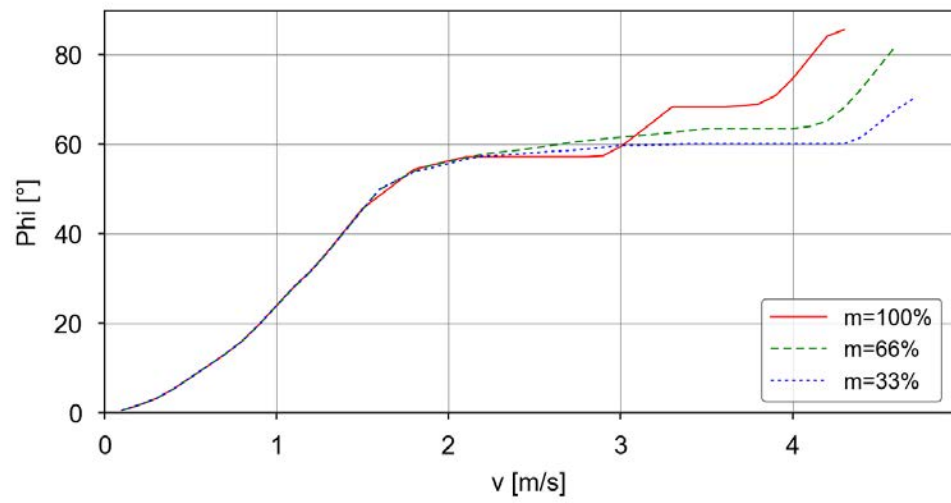
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

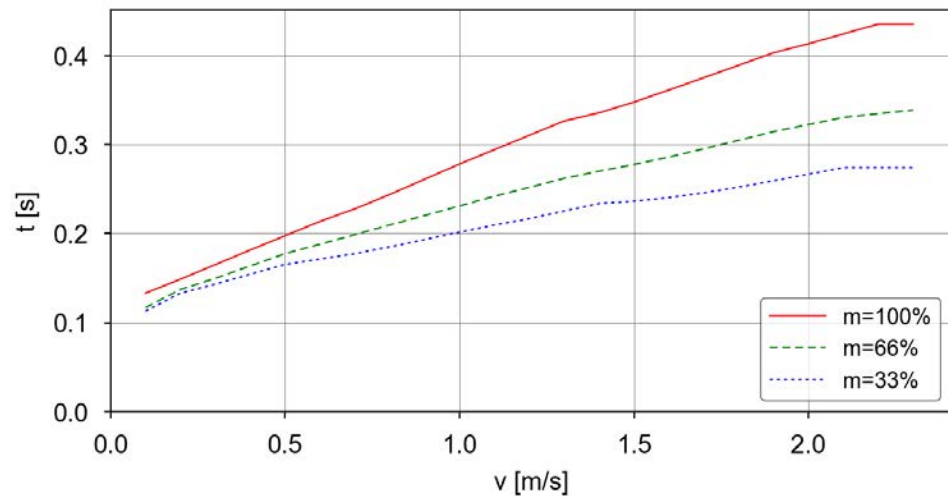
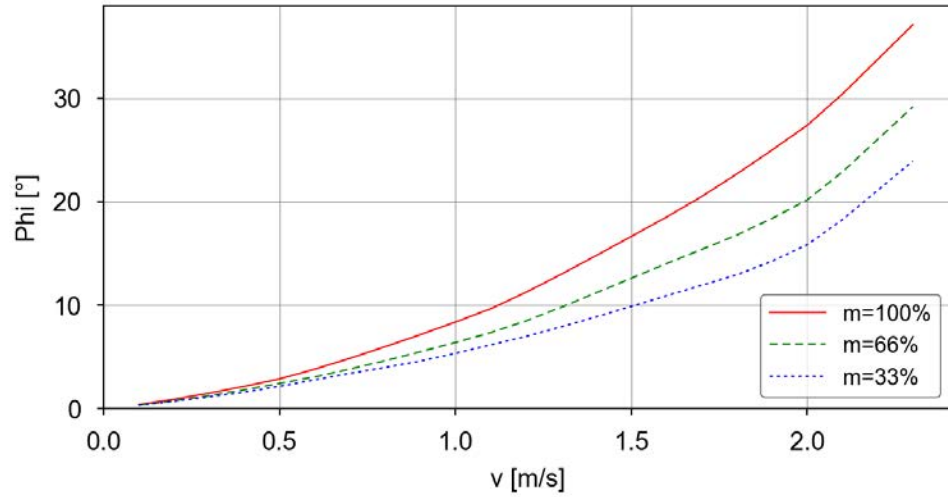
10 IRB 2400

10.2 IRB 2400 1.5 m 16 kg

Continued

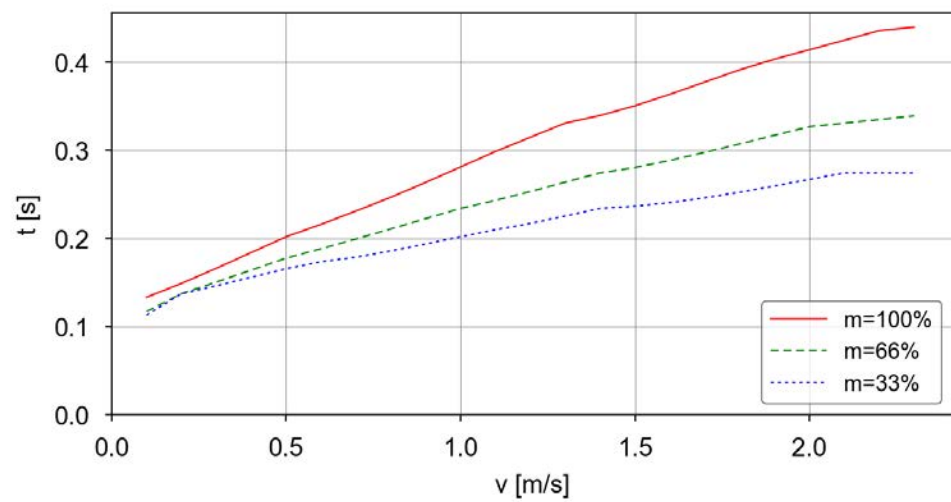
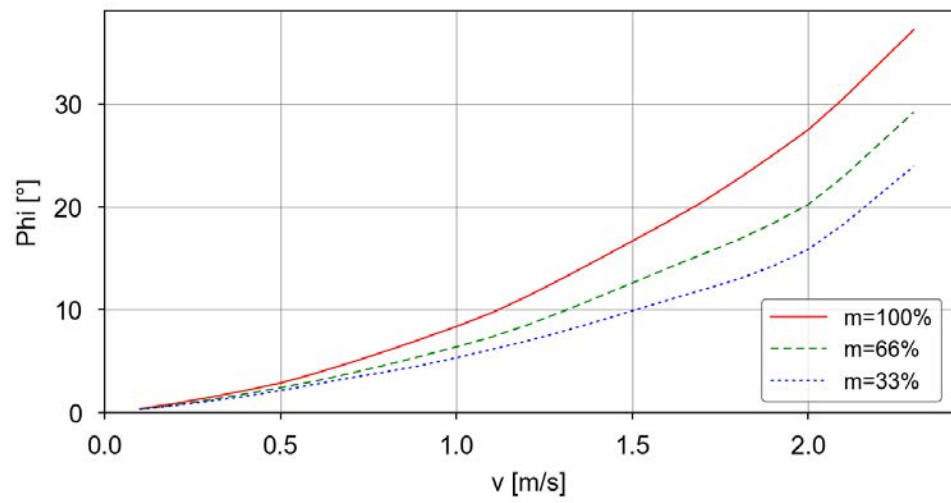
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



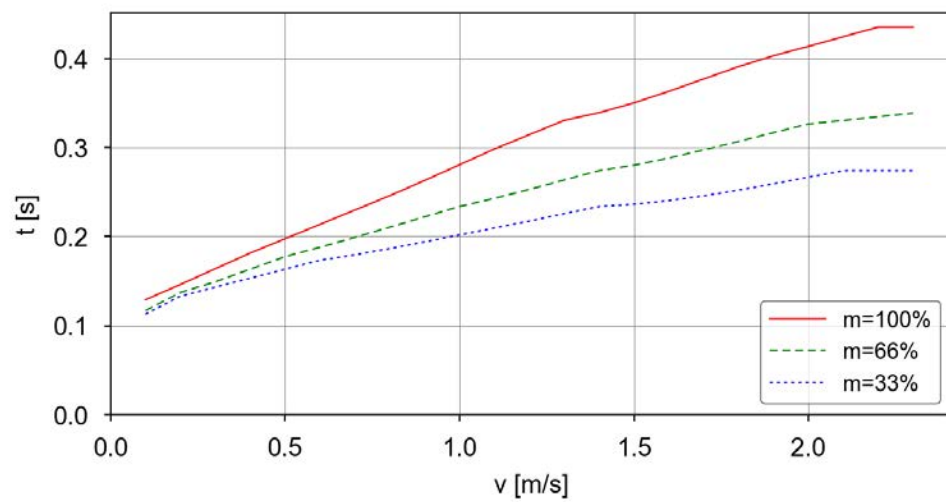
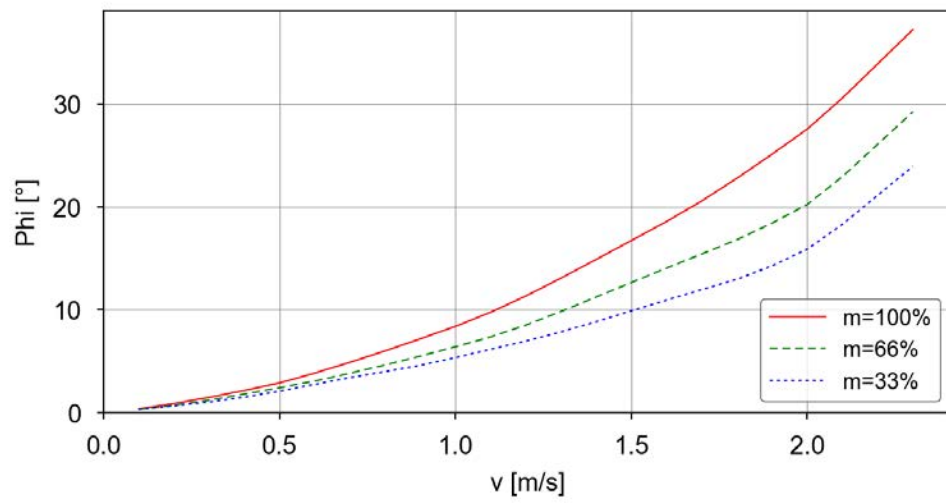
Continues on next page

10 IRB 2400

10.2 IRB 2400 1.5 m 16 kg

Continued

Extension zone 2, stopping distance and stopping time



11 IRB 2600

11.1 IRB 2600 1.65 m 12 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	26.6	0.2
2	26.9	0.2
3	18.2	0.12

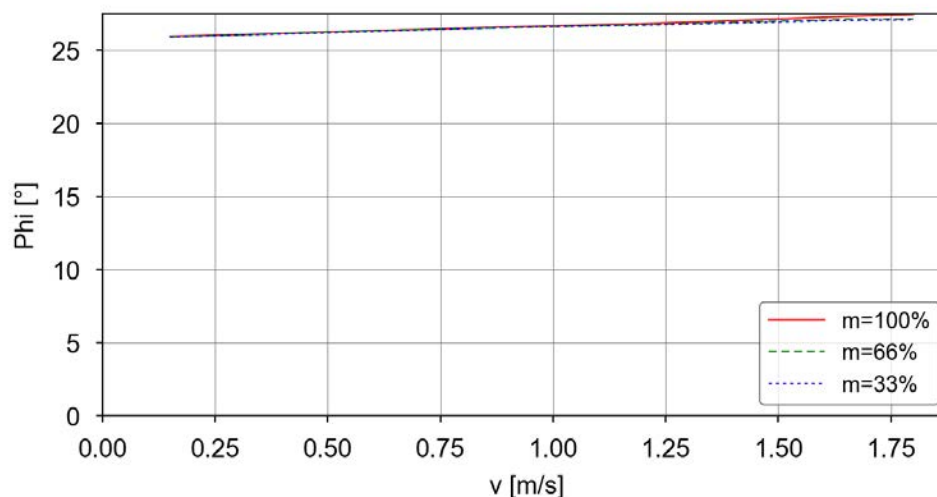
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.0
1	0.0	0.0
2	0.0	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

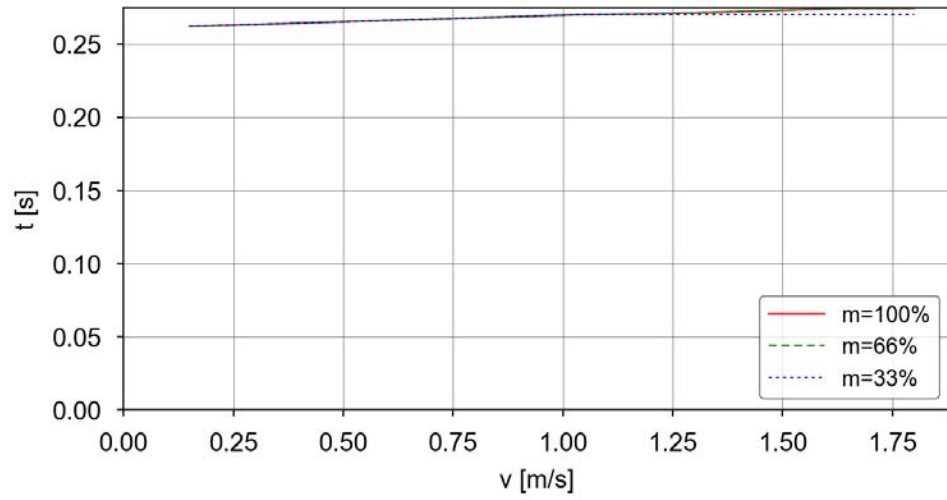


Continues on next page

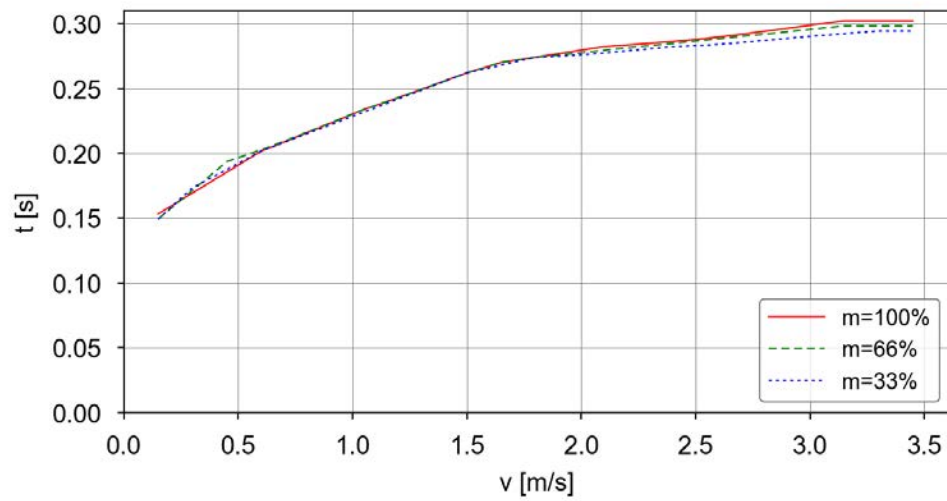
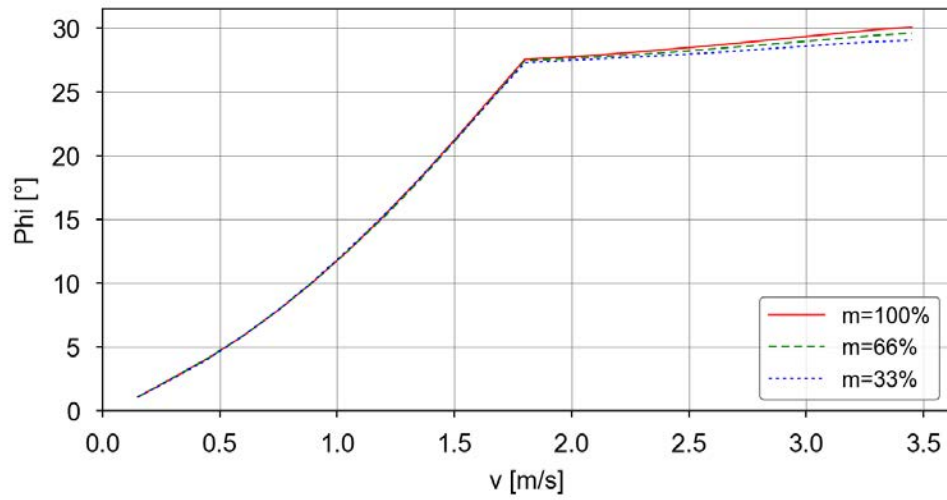
11 IRB 2600

11.1 IRB 2600 1.65 m 12 kg

Continued

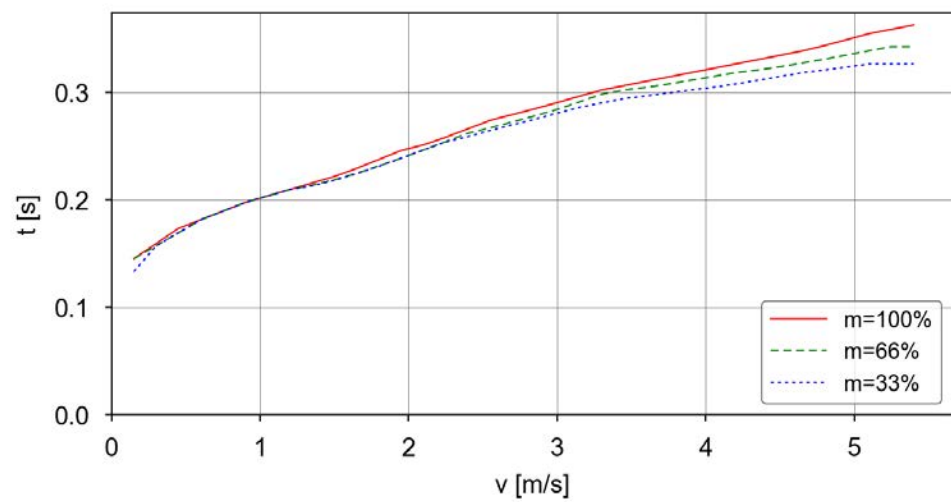
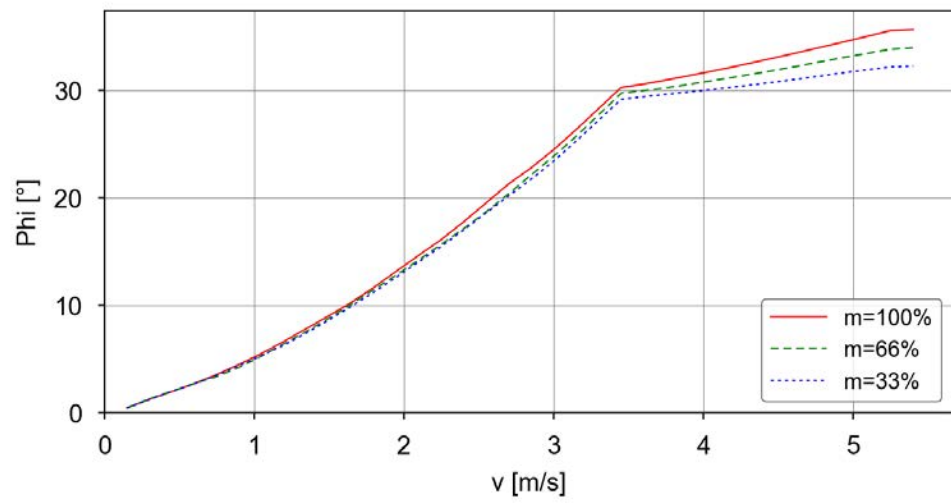


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

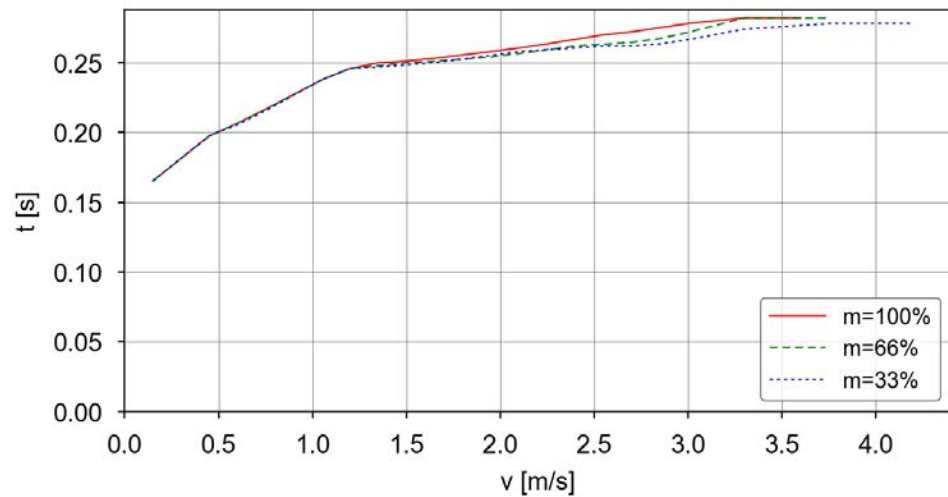
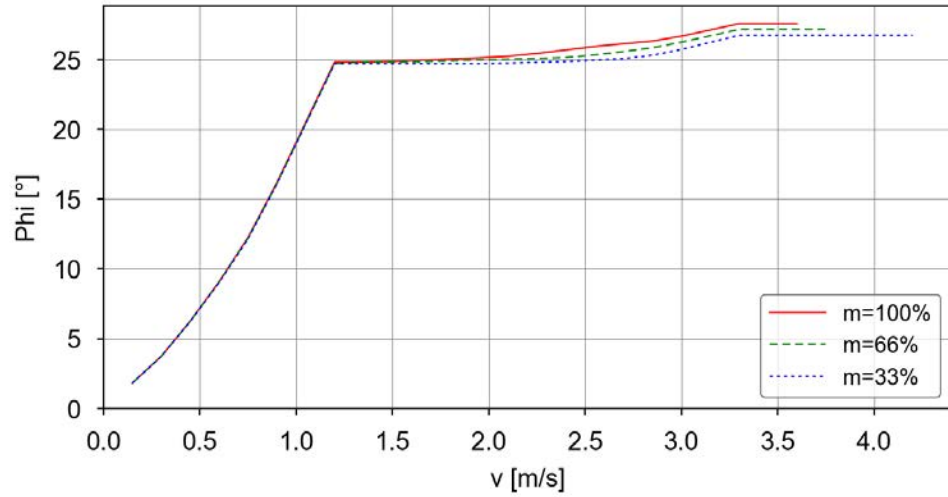
11 IRB 2600

11.1 IRB 2600 1.65 m 12 kg

Continued

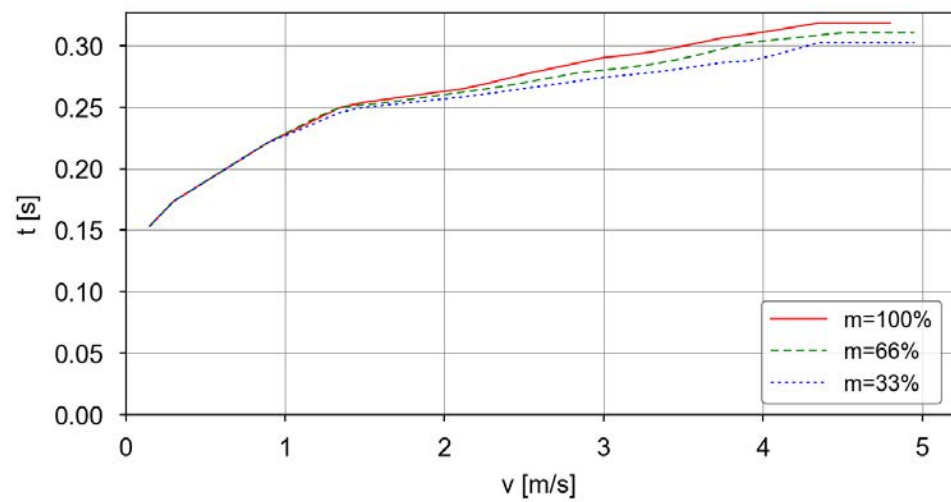
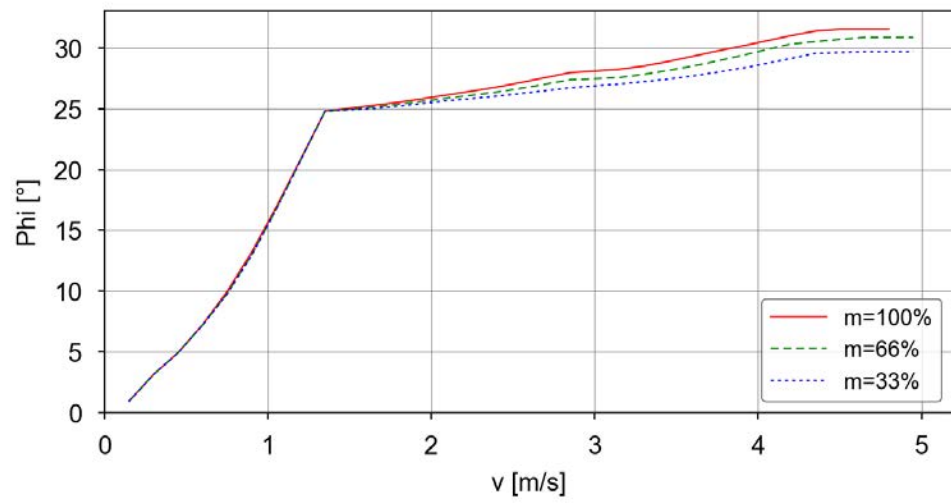
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



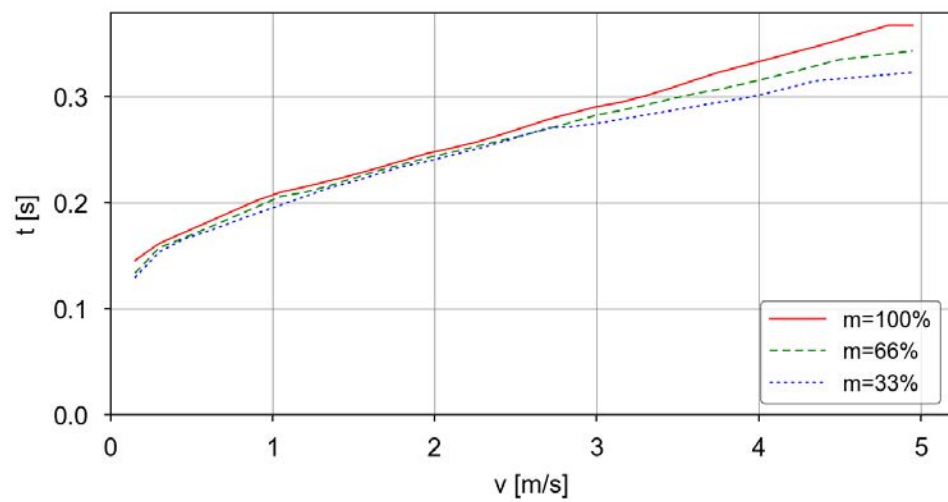
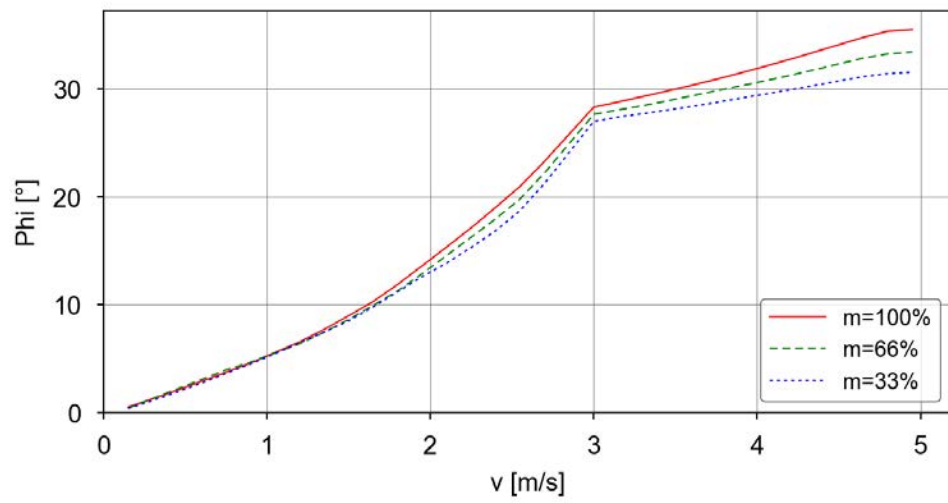
Continues on next page

11 IRB 2600

11.1 IRB 2600 1.65 m 12 kg

Continued

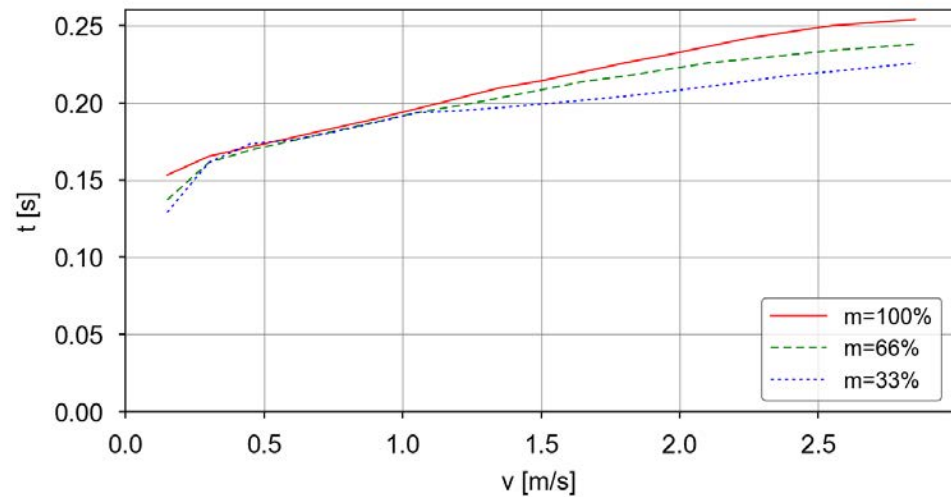
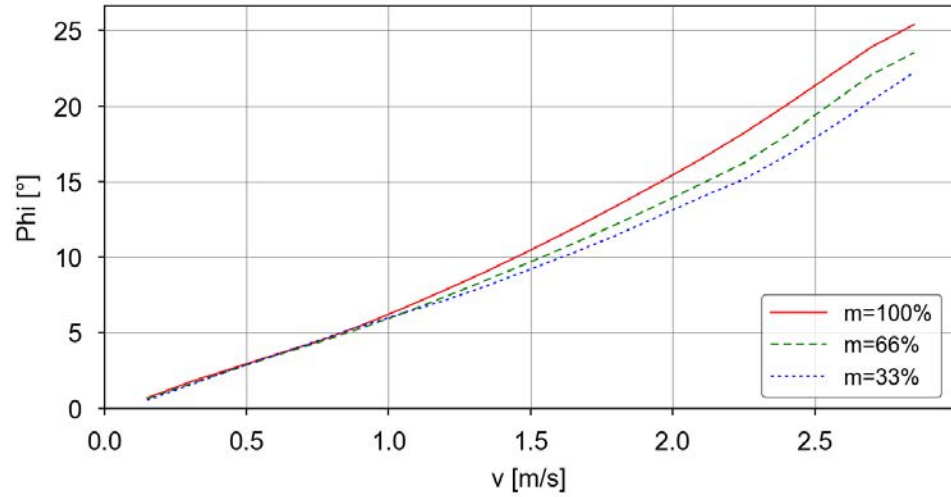
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



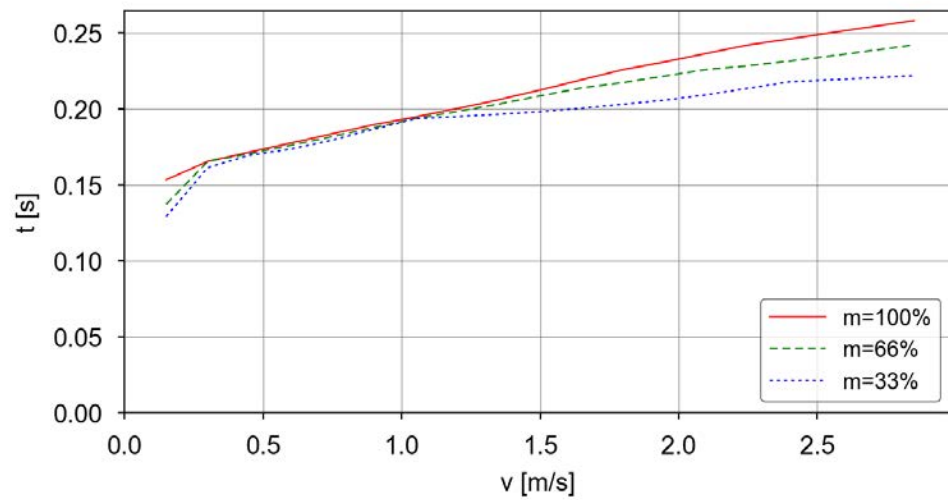
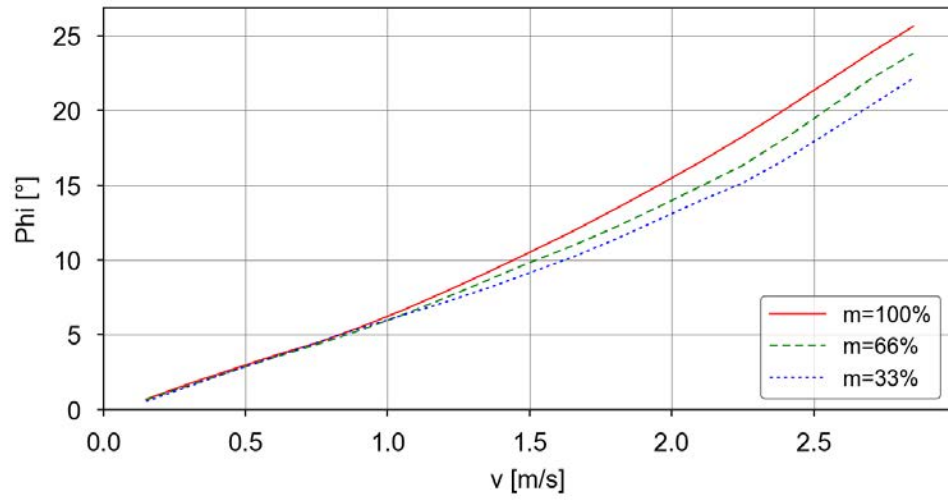
Continues on next page

11 IRB 2600

11.1 IRB 2600 1.65 m 12 kg

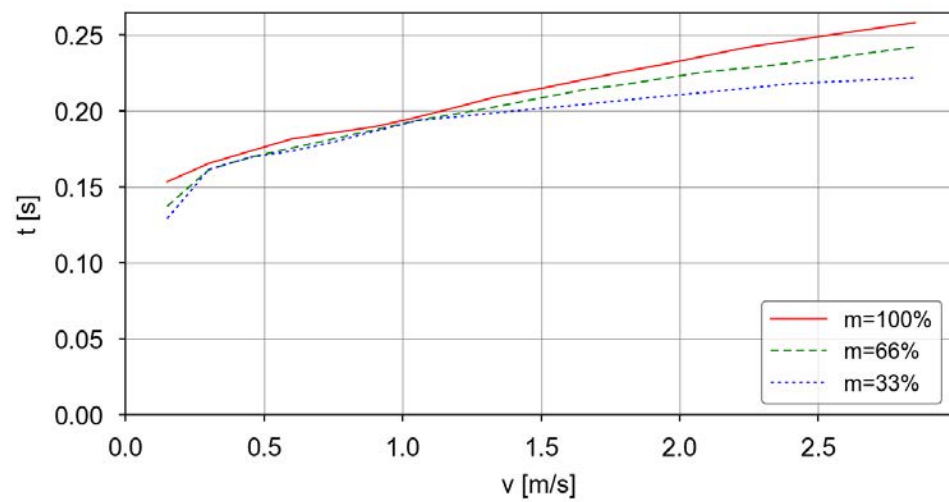
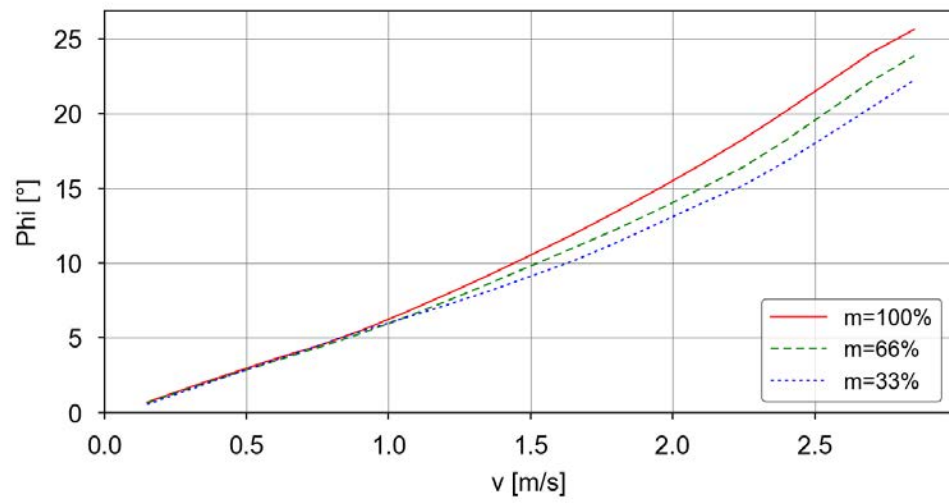
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



11 IRB 2600

11.2 IRB 2600 1.65 m 20 kg

11.2 IRB 2600 1.65 m 20 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	28.7	0.22
2	30.5	0.25
3	22.4	0.17

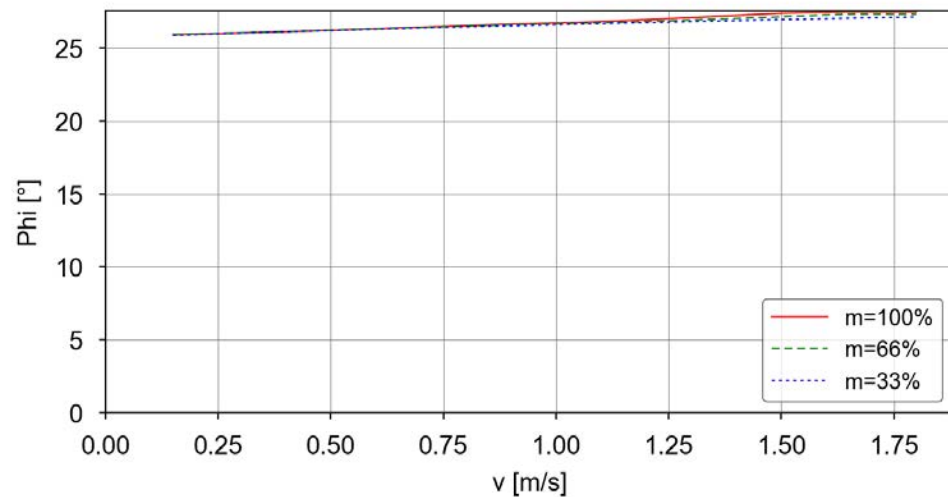
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

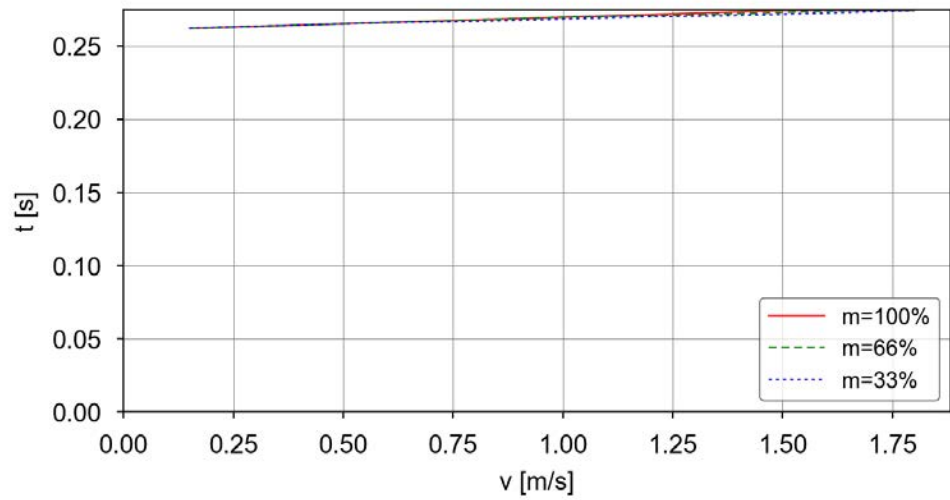
Zone	wcp min (m)	wcp max (m)
0	0	0.0
1	0.0	0.0
2	0.0	max reach

Category 1, Axis 1

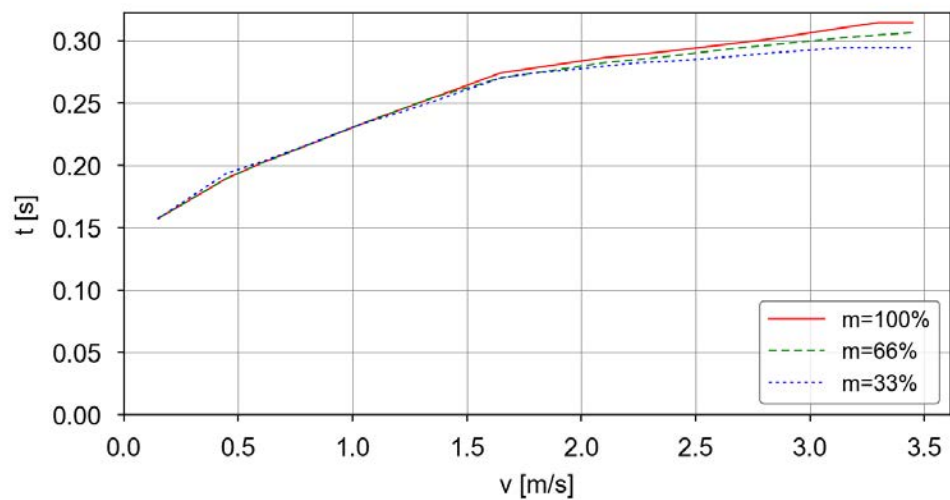
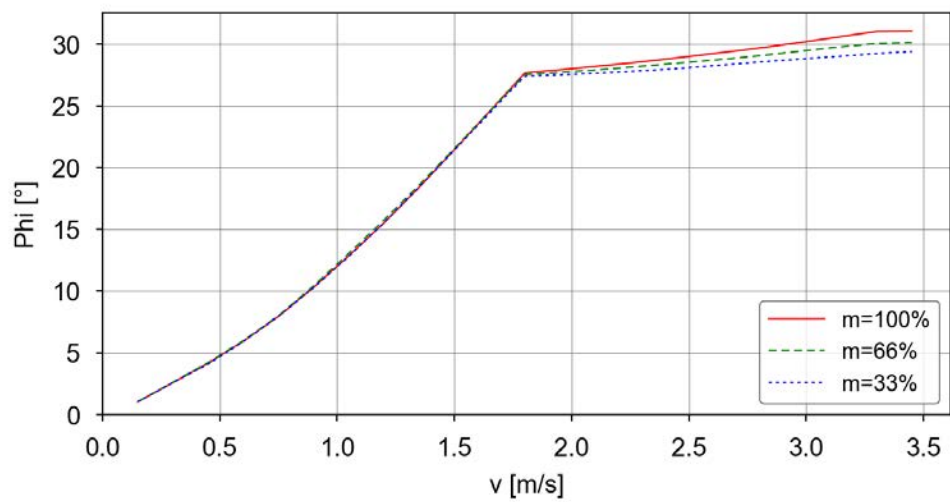
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



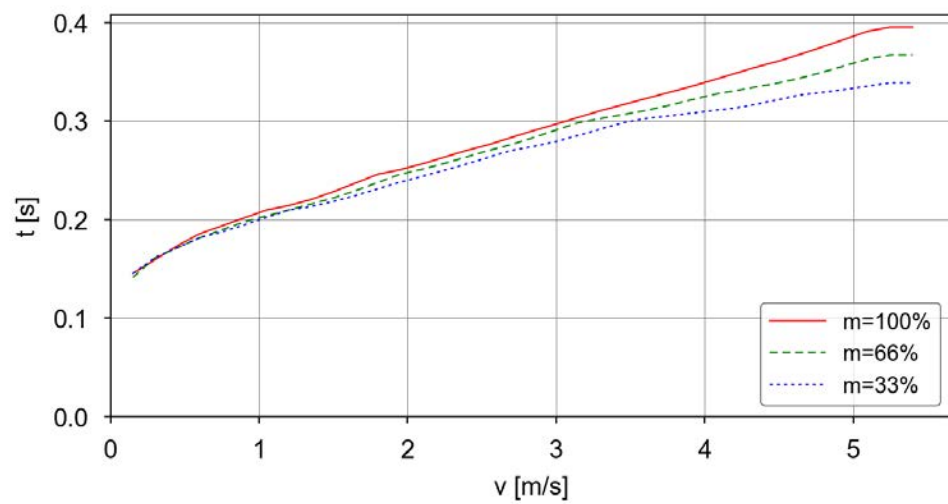
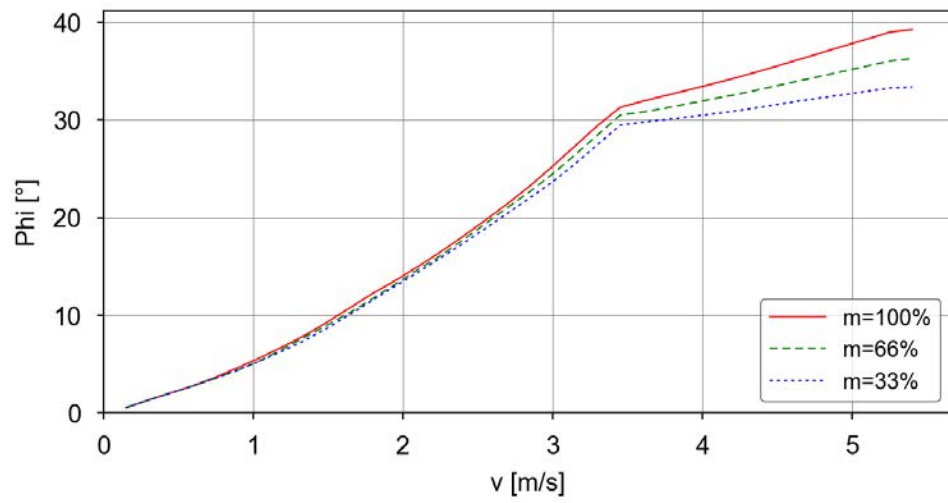
Continues on next page

11 IRB 2600

11.2 IRB 2600 1.65 m 20 kg

Continued

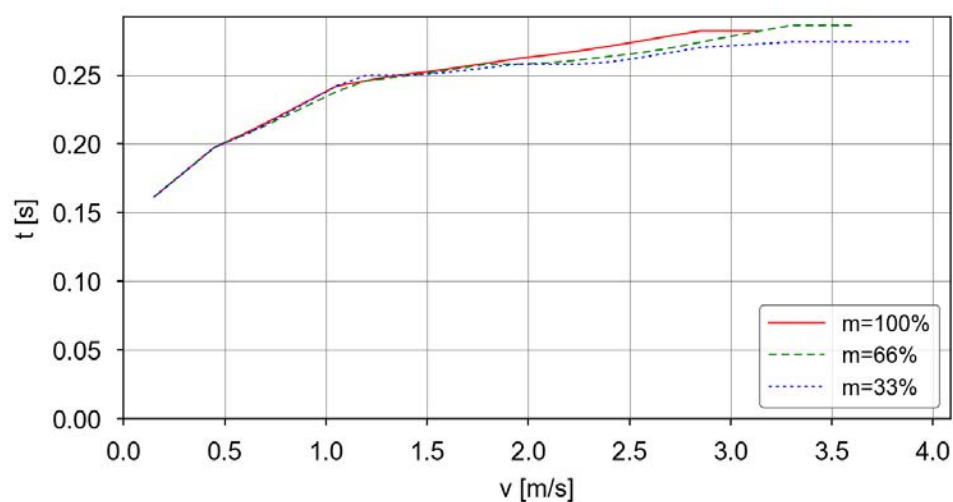
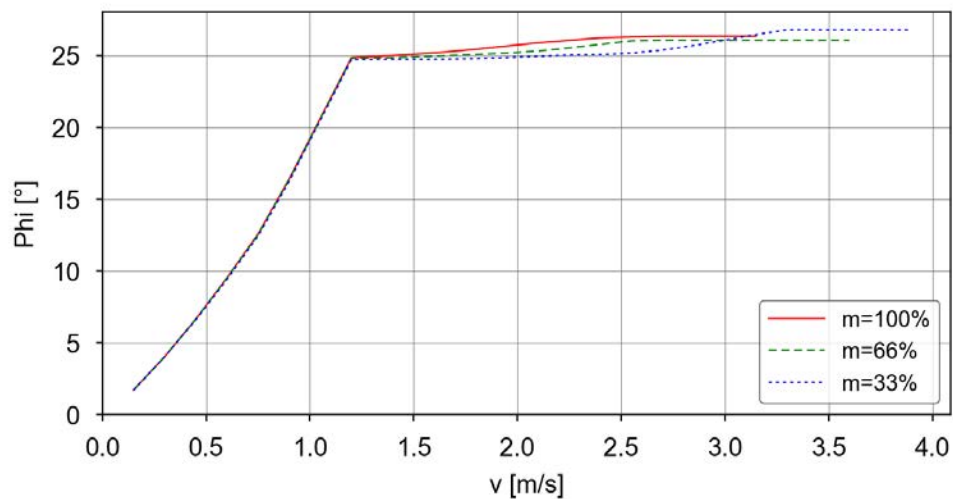
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



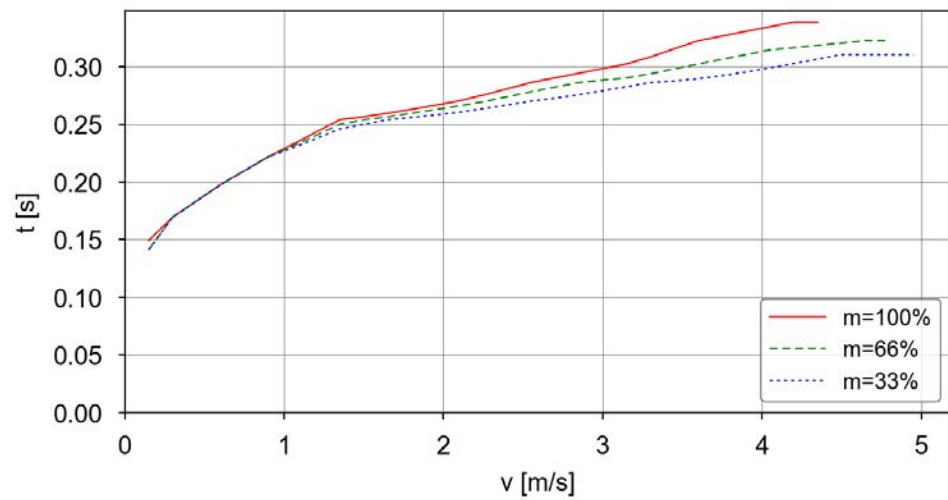
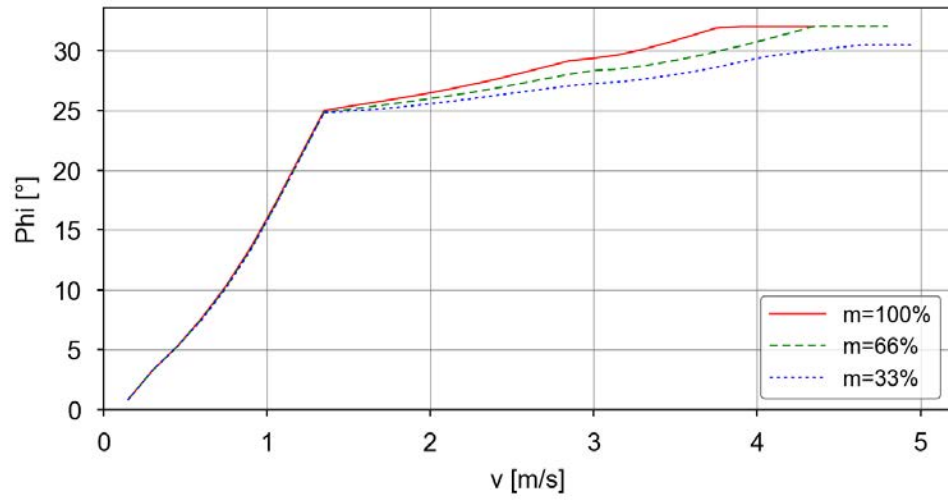
Continues on next page

11 IRB 2600

11.2 IRB 2600 1.65 m 20 kg

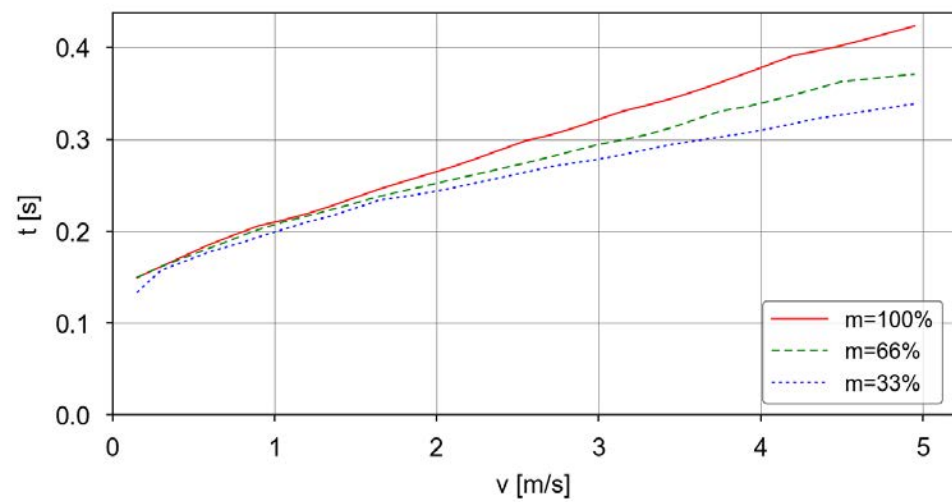
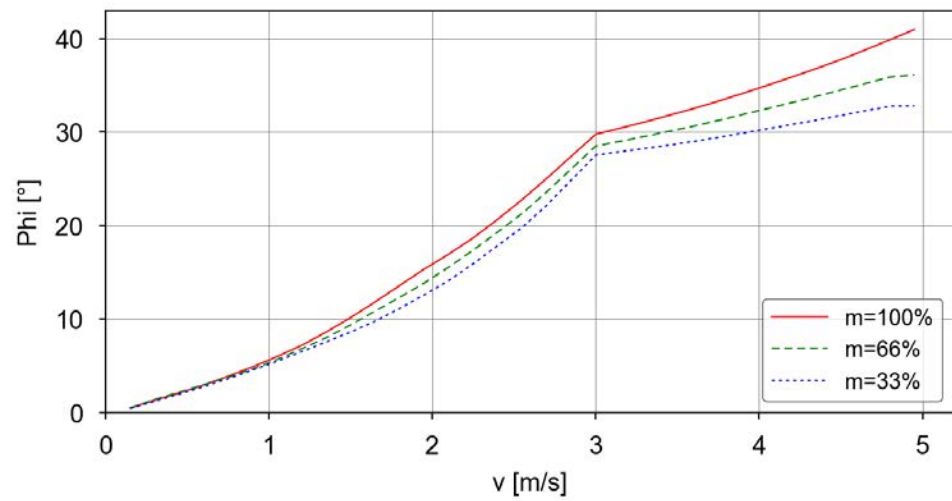
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

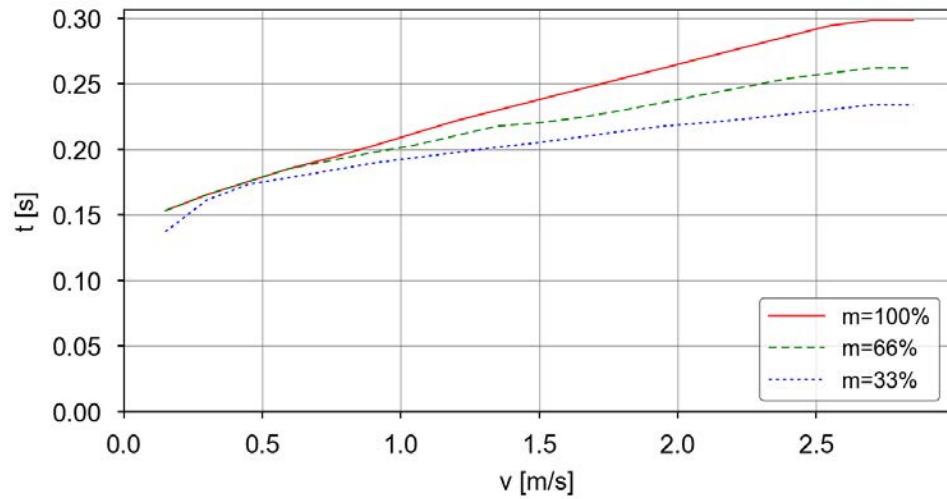
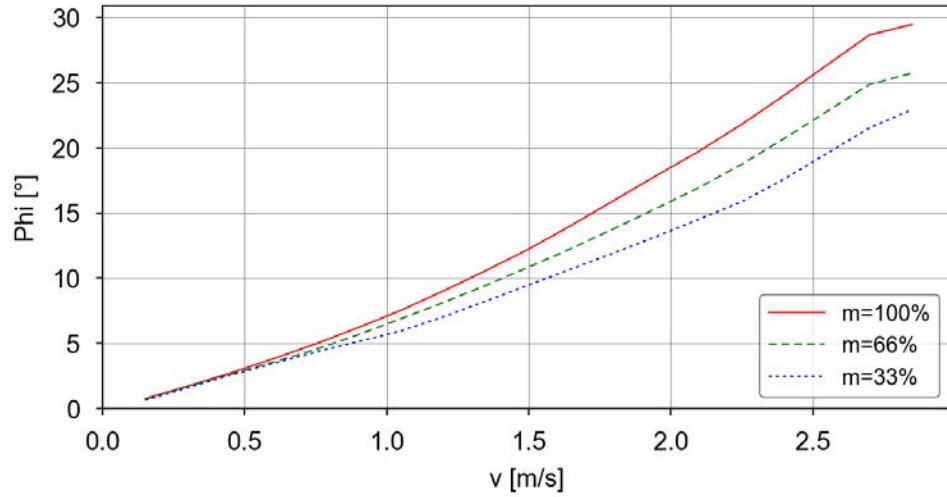
11 IRB 2600

11.2 IRB 2600 1.65 m 20 kg

Continued

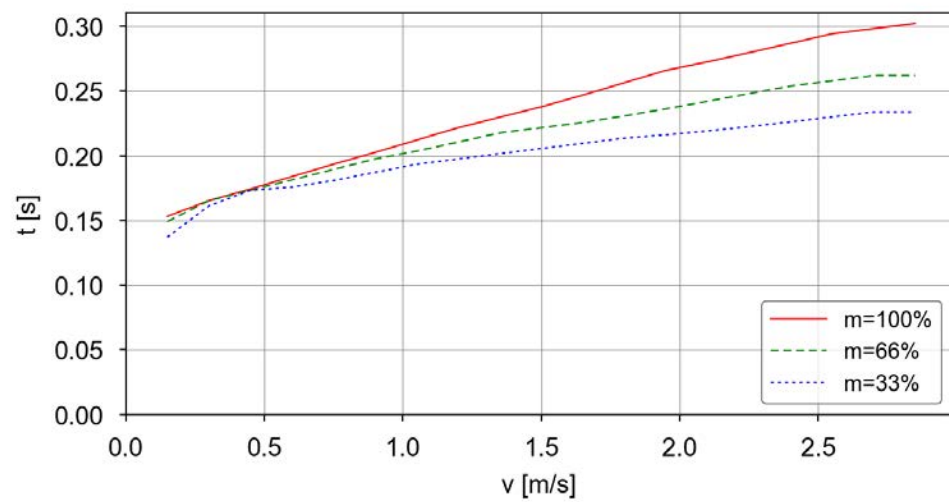
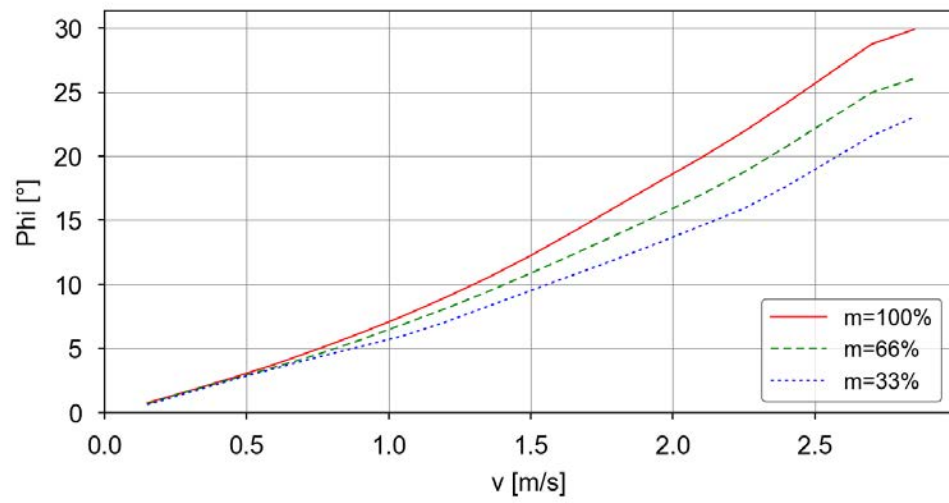
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



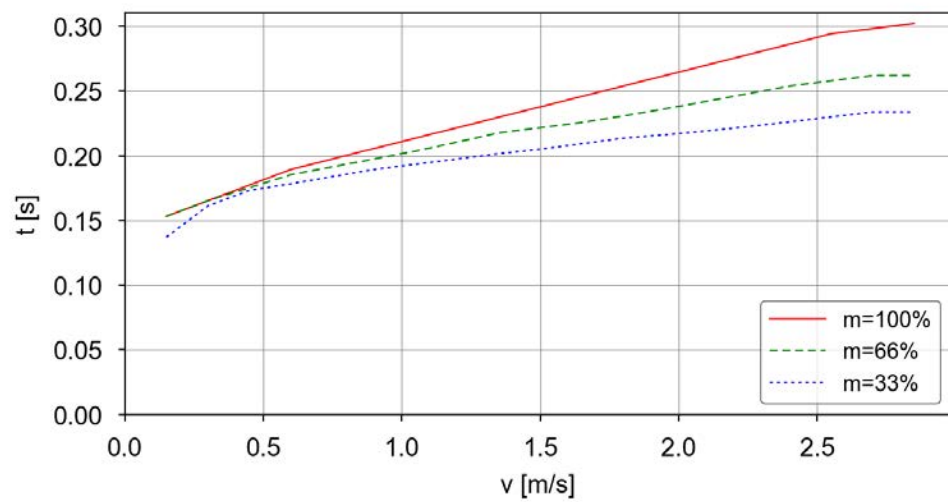
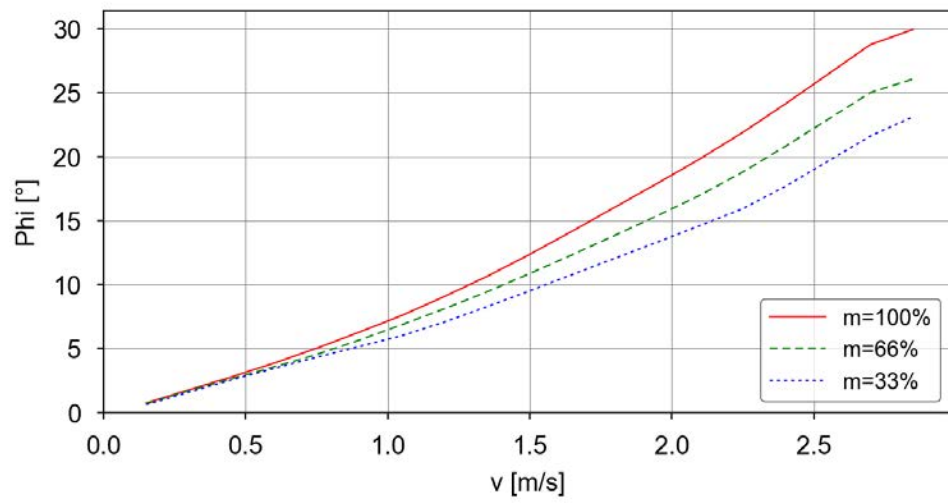
Continues on next page

11 IRB 2600

11.2 IRB 2600 1.65 m 20 kg

Continued

Extension zone 2, stopping distance and stopping time



11.3 IRB 2600 1.85 m 12 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	30.3	0.25
2	30.9	0.25
3	17.8	0.12

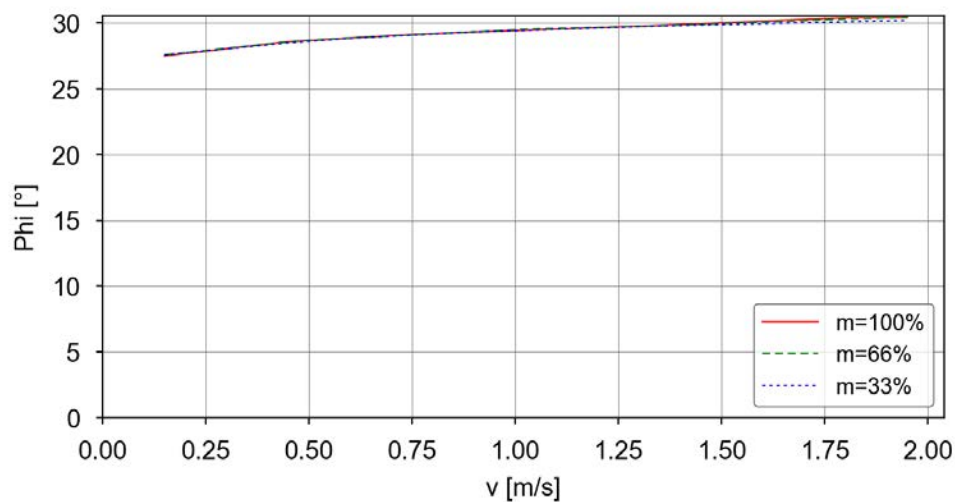
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.0
1	0.0	0.0
2	0.0	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

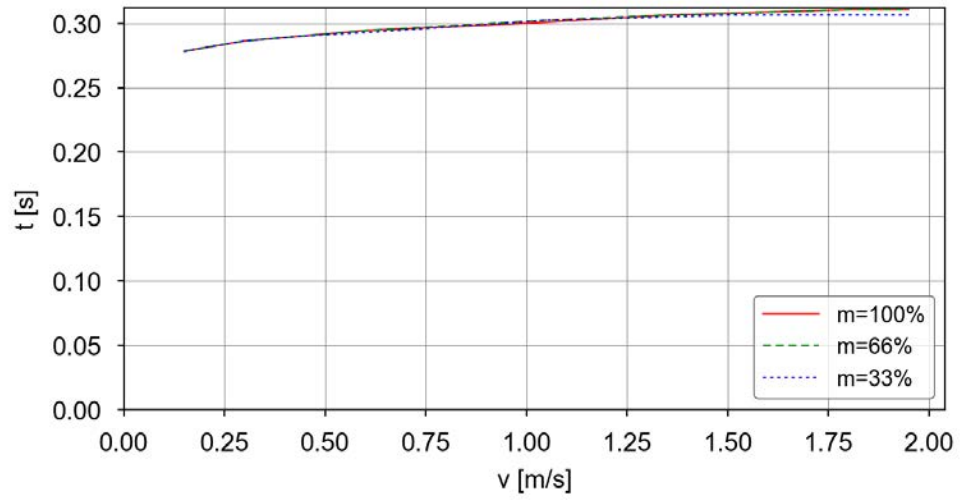


Continues on next page

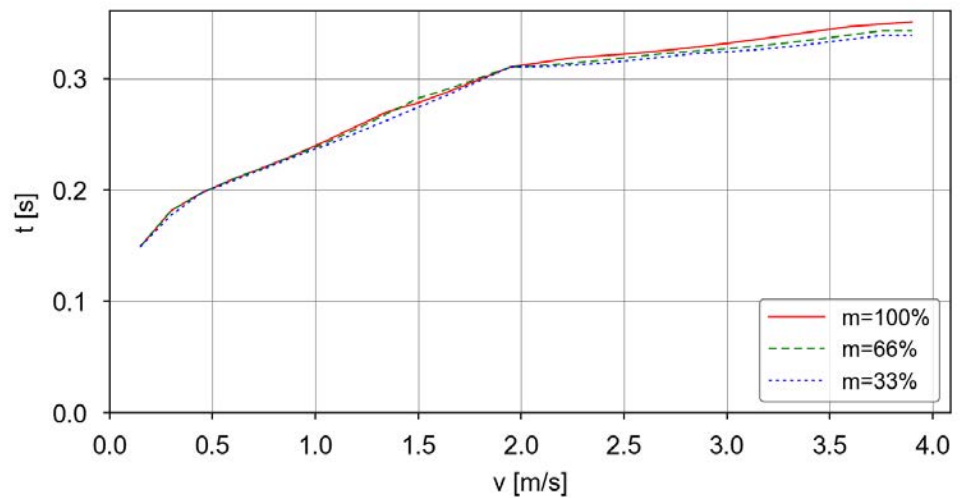
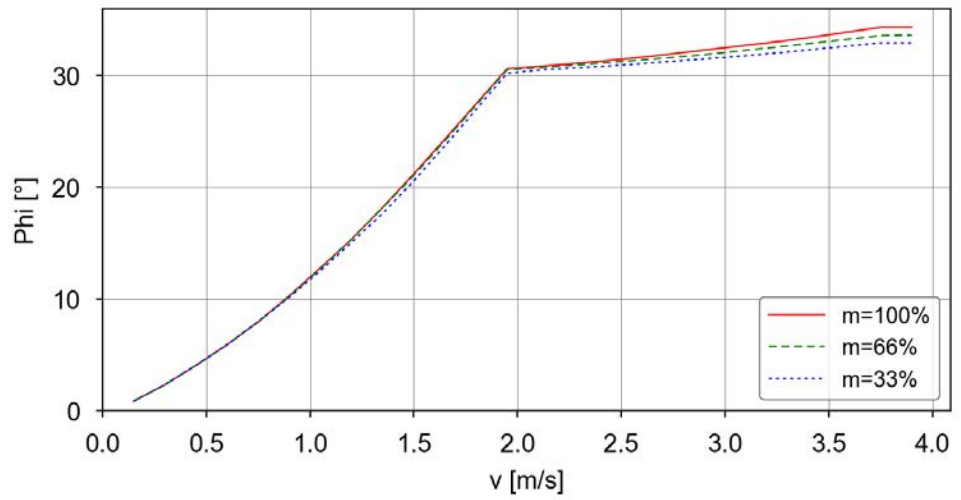
11 IRB 2600

11.3 IRB 2600 1.85 m 12 kg

Continued

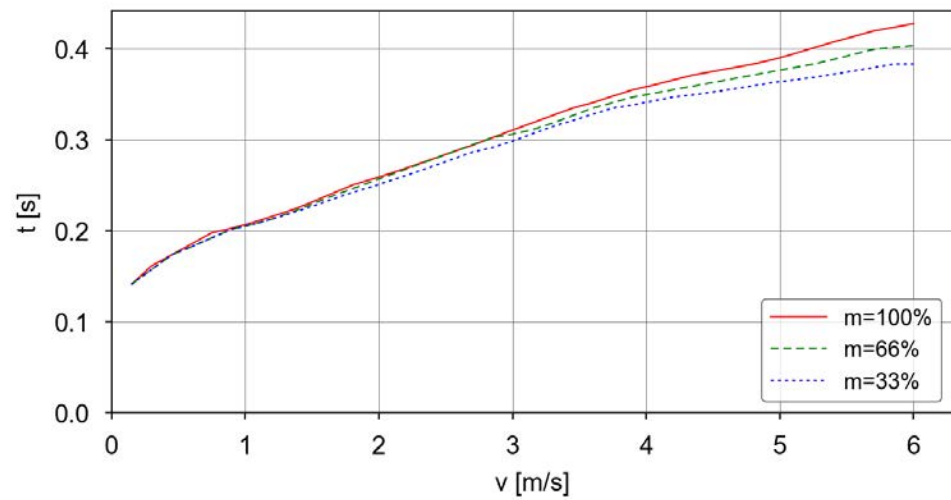
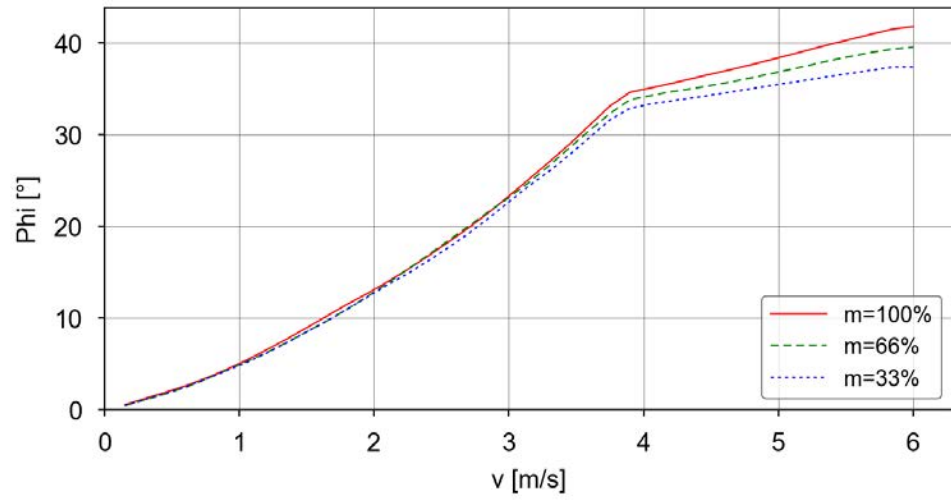


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

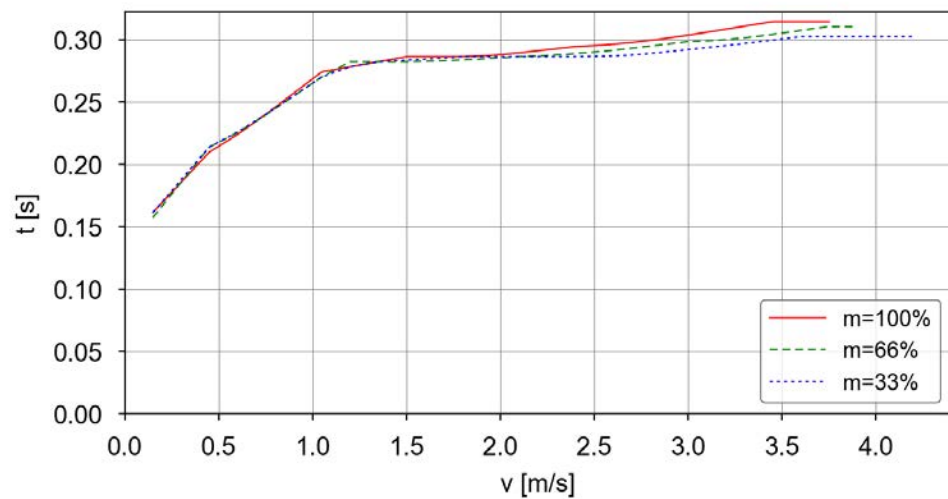
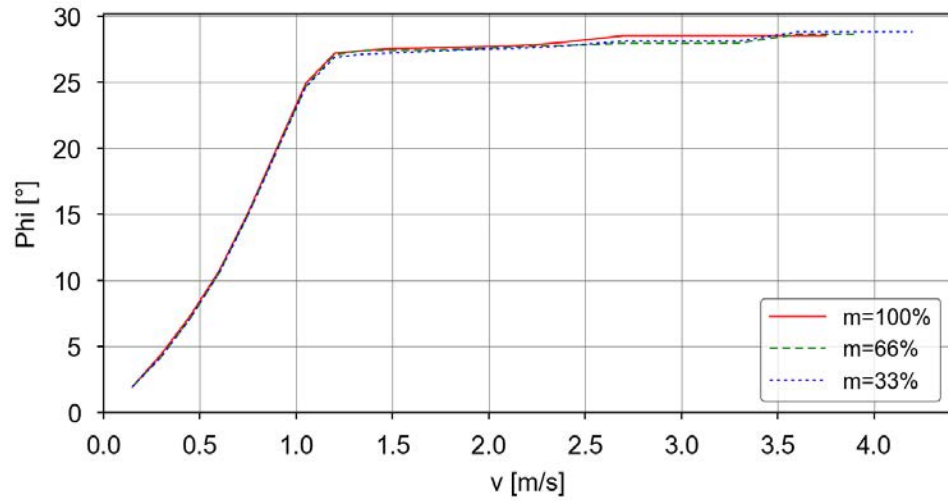
11 IRB 2600

11.3 IRB 2600 1.85 m 12 kg

Continued

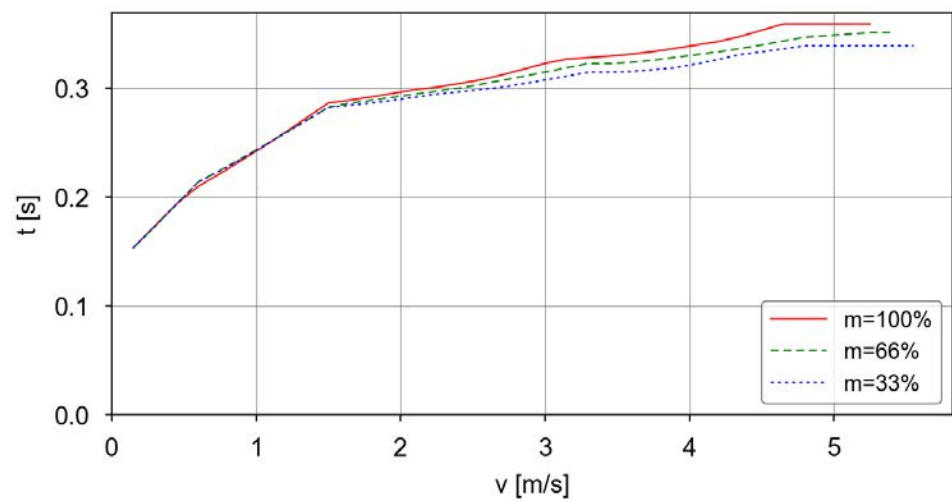
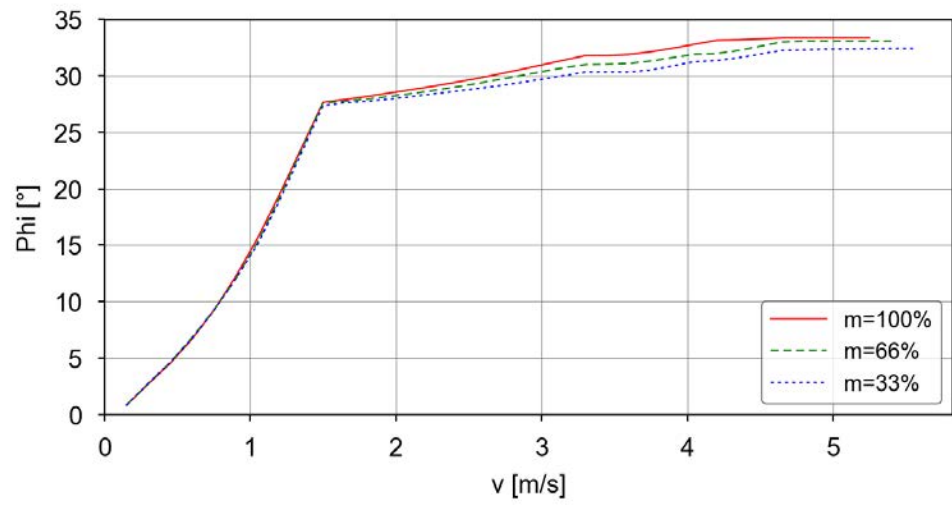
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



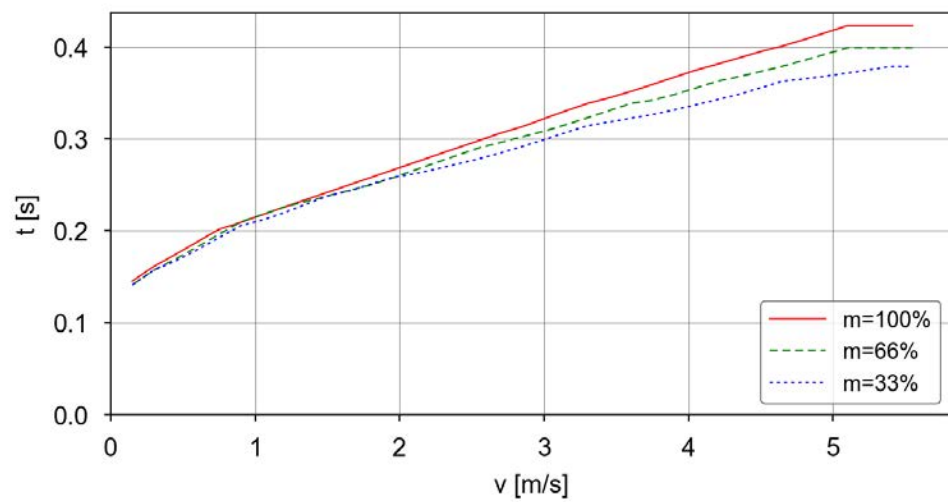
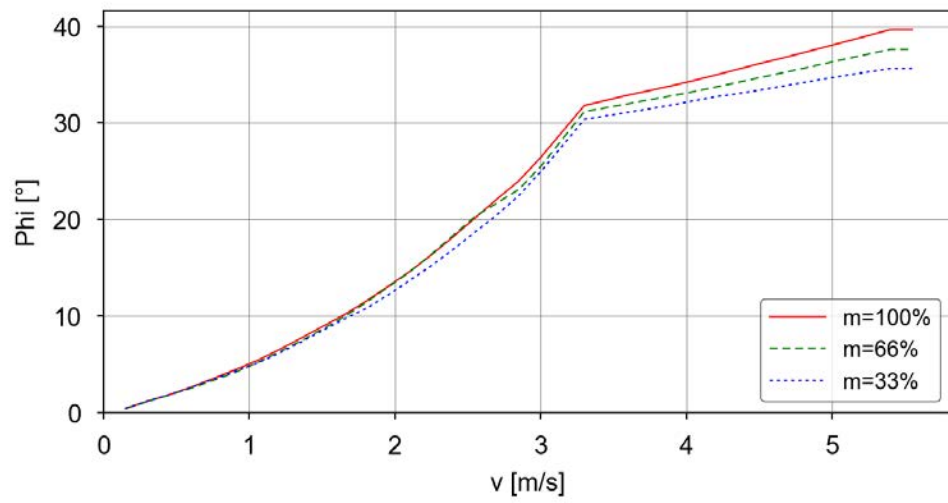
Continues on next page

11 IRB 2600

11.3 IRB 2600 1.85 m 12 kg

Continued

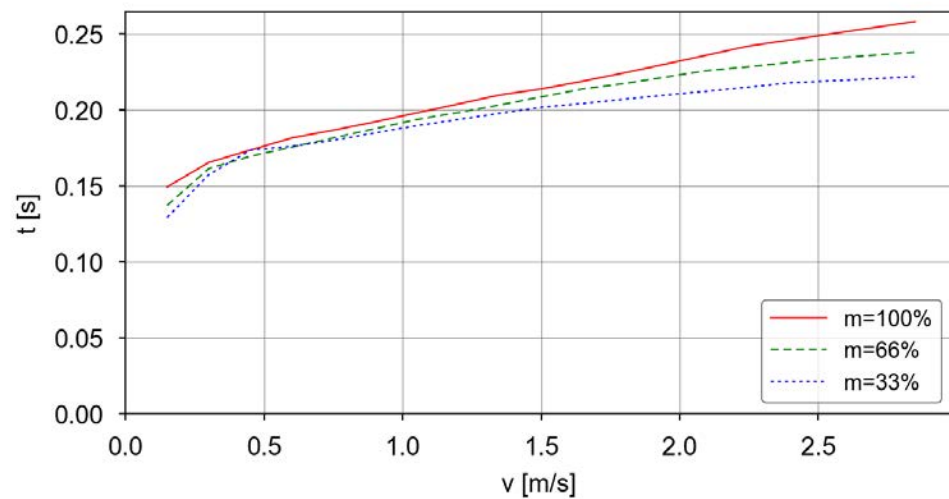
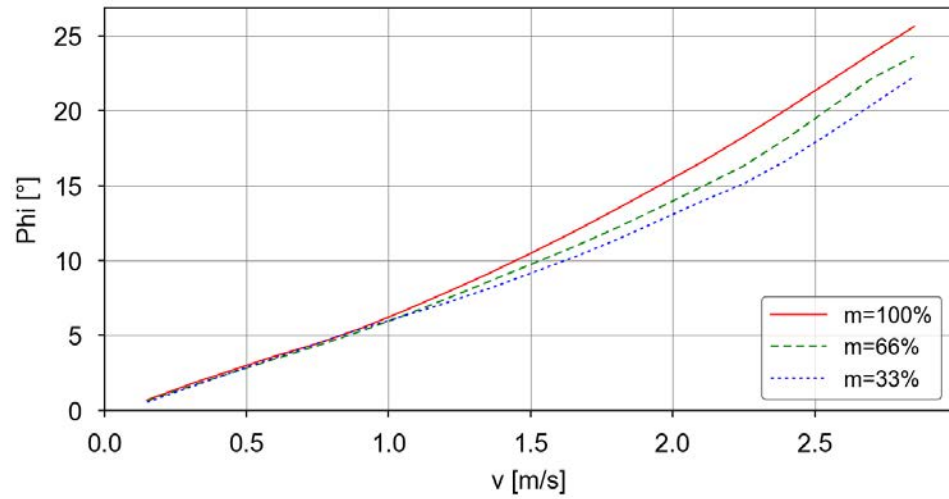
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



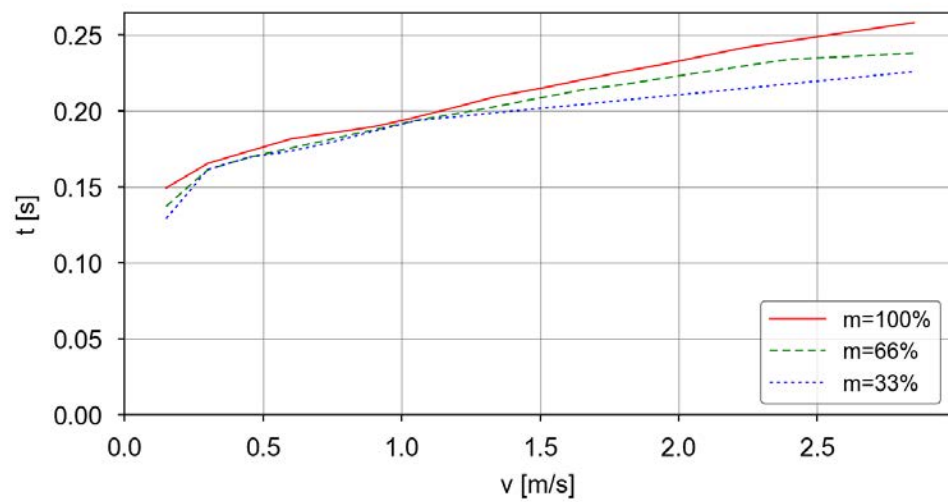
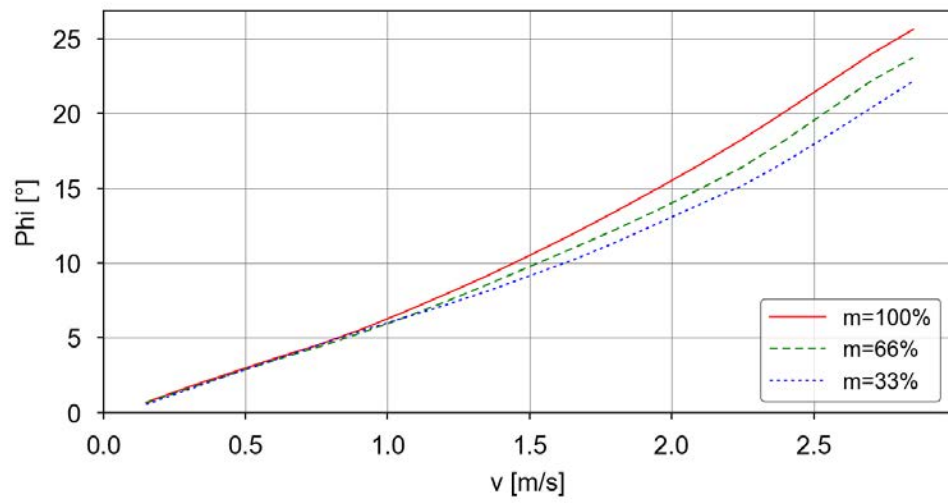
Continues on next page

11 IRB 2600

11.3 IRB 2600 1.85 m 12 kg

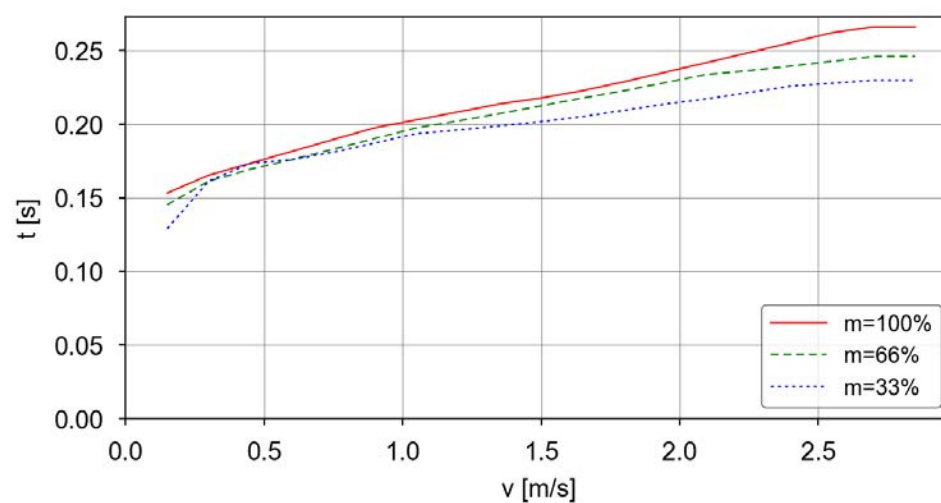
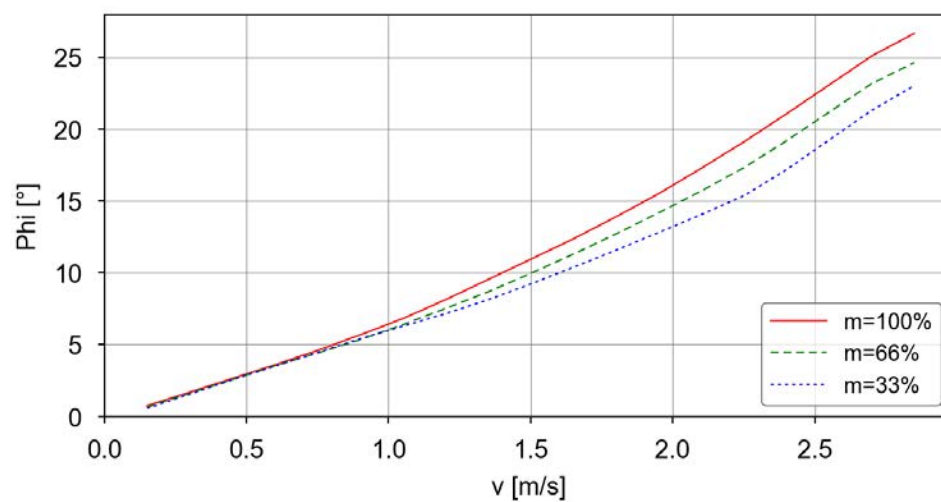
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



11 IRB 2600

11.4 IRB 2600ID 1.85 m 15 kg

11.4 IRB 2600ID 1.85 m 15 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	33.1	0.27
2	34.4	0.27
3	20.7	0.15

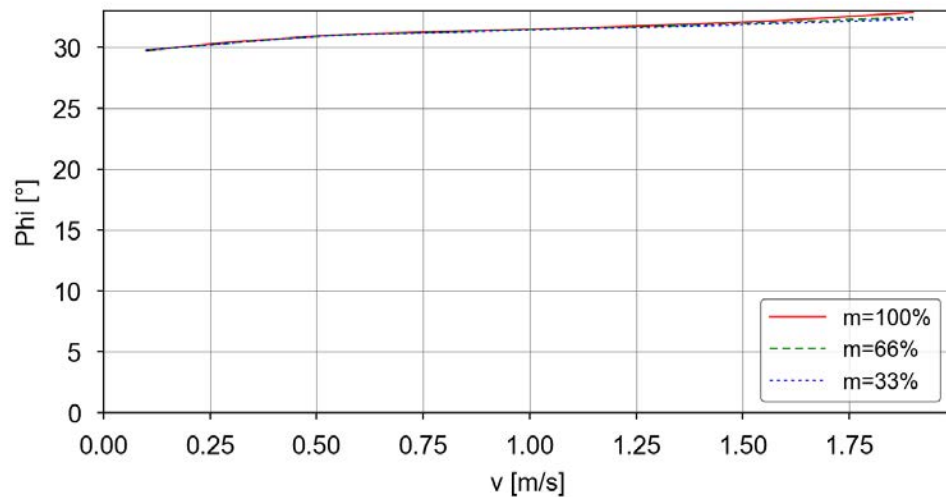
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

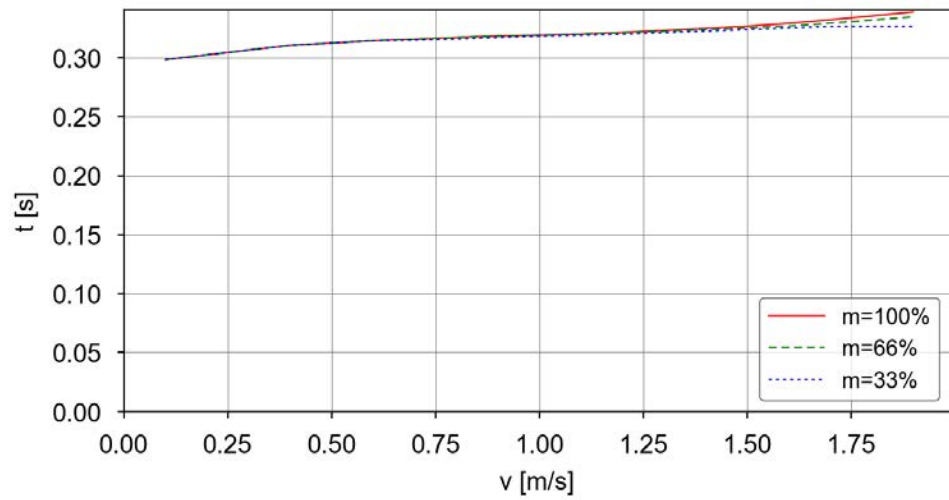
Zone	wcp min (m)	wcp max (m)
0	0	0.617
1	0.617	1.233
2	1.233	max reach

Category 1, Axis 1

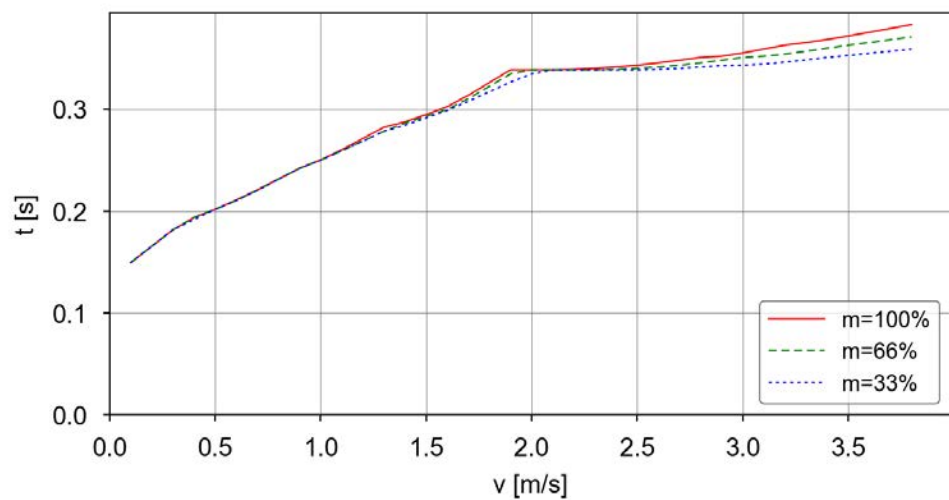
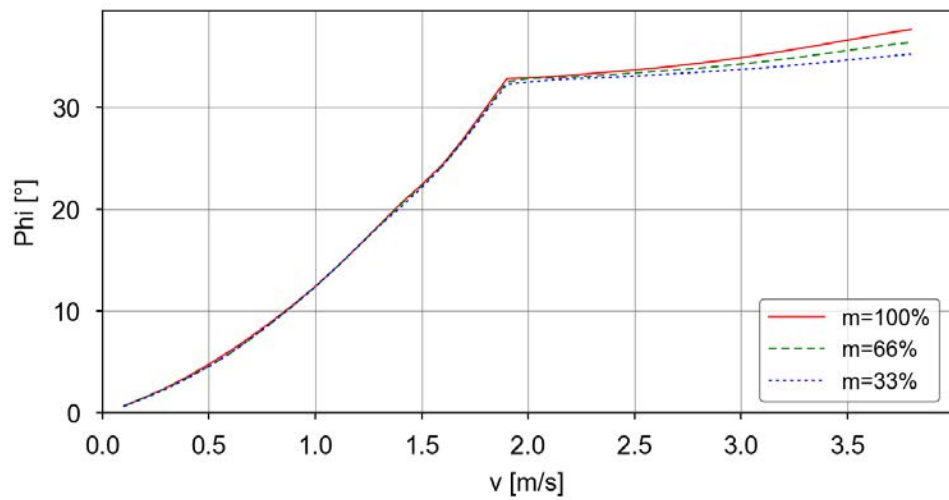
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



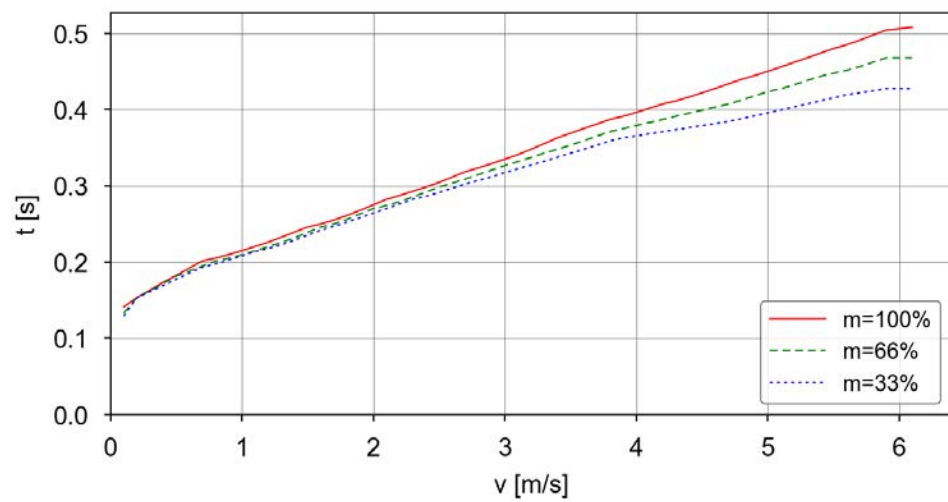
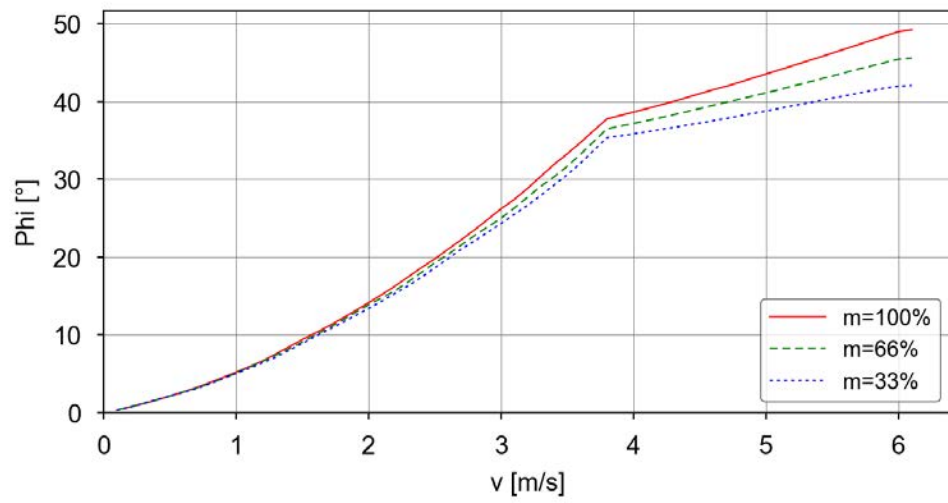
Continues on next page

11 IRB 2600

11.4 IRB 2600ID 1.85 m 15 kg

Continued

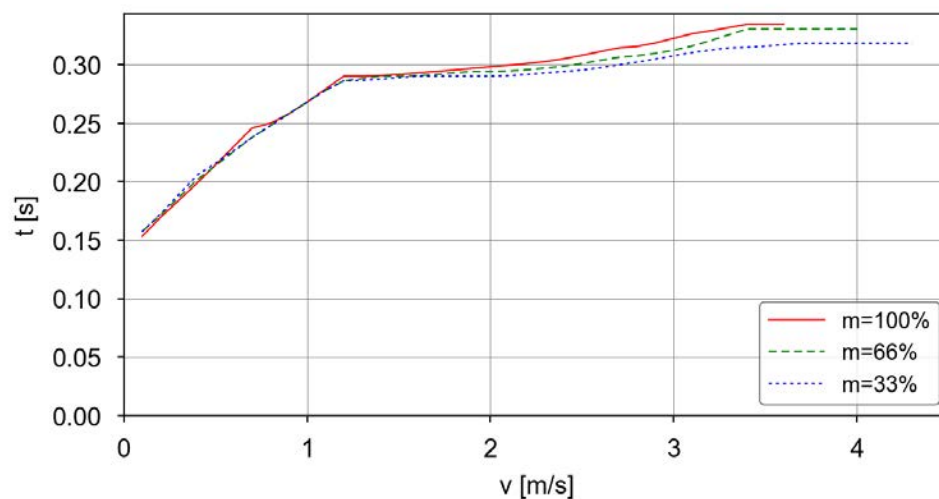
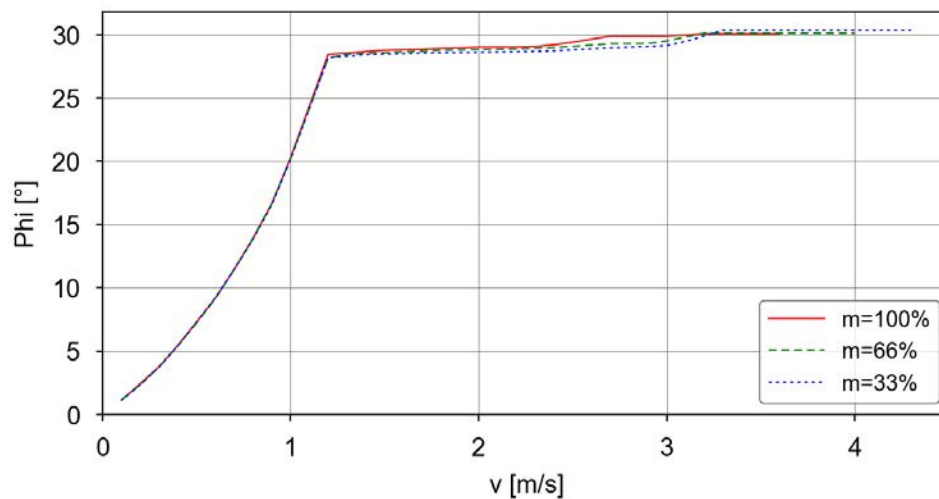
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



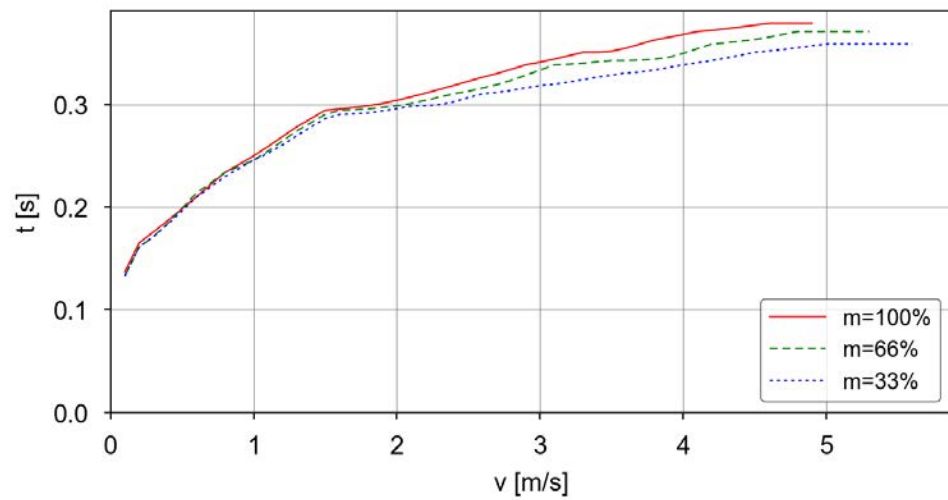
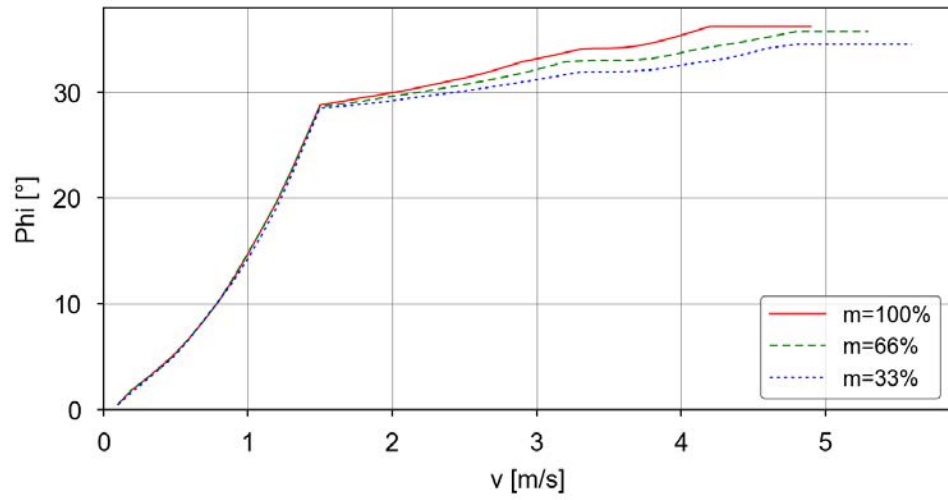
Continues on next page

11 IRB 2600

11.4 IRB 2600ID 1.85 m 15 kg

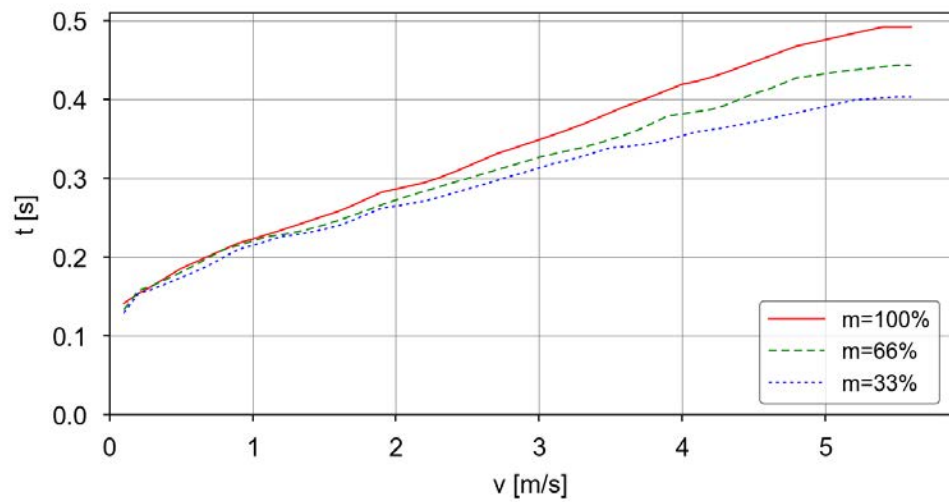
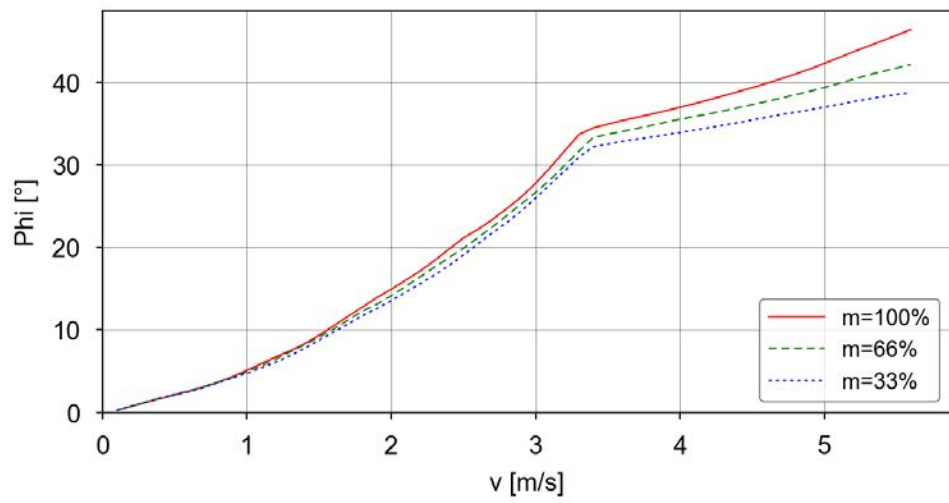
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

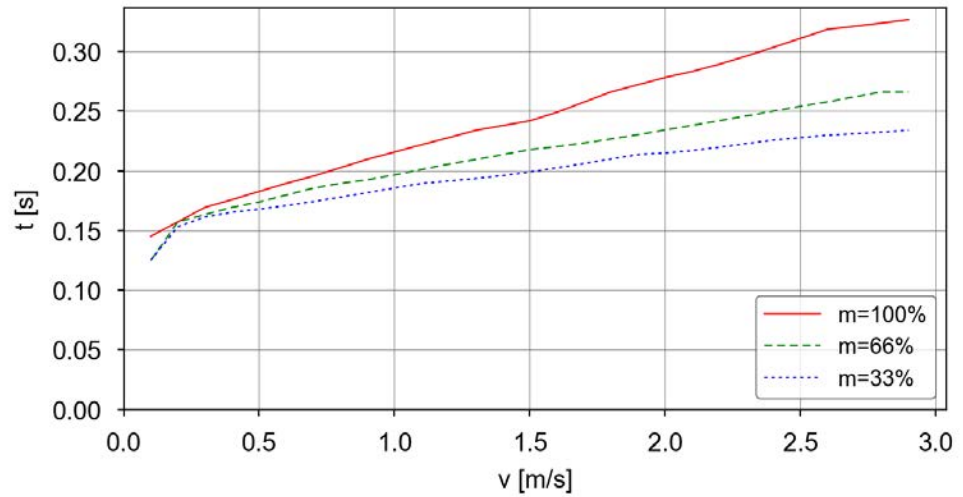
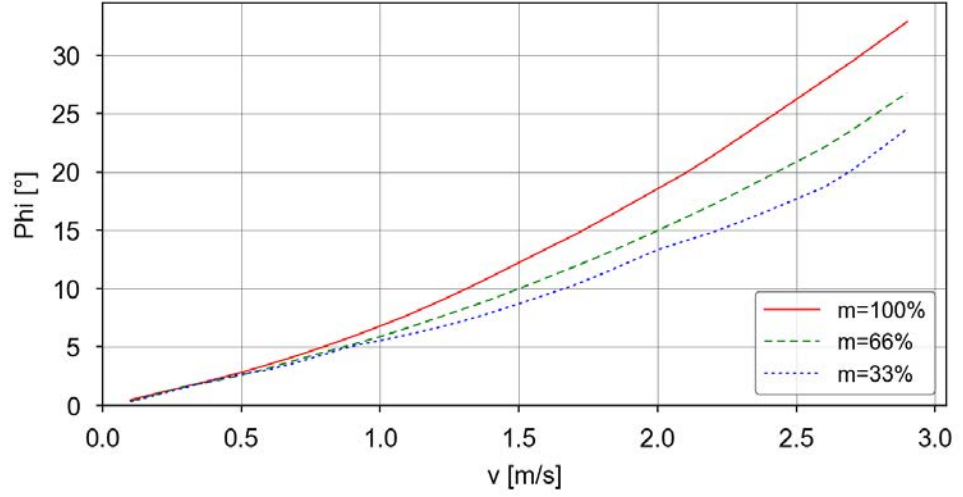
11 IRB 2600

11.4 IRB 2600ID 1.85 m 15 kg

Continued

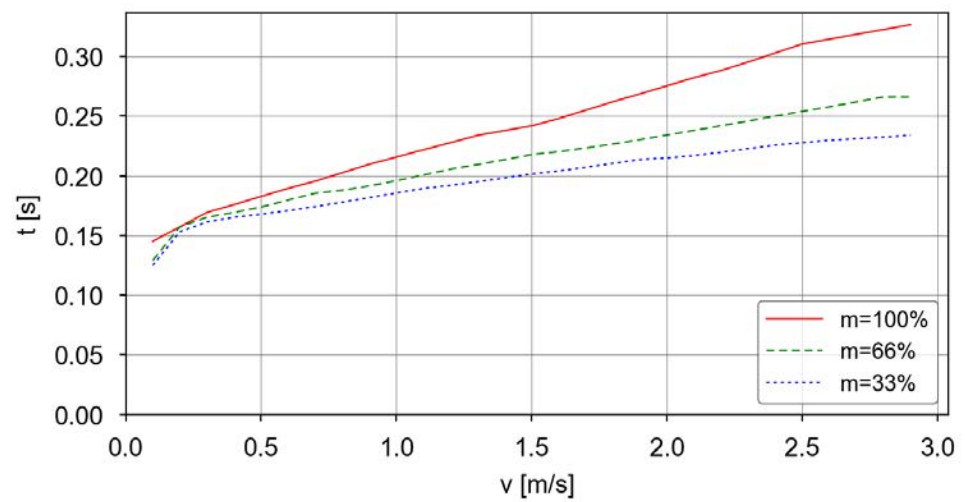
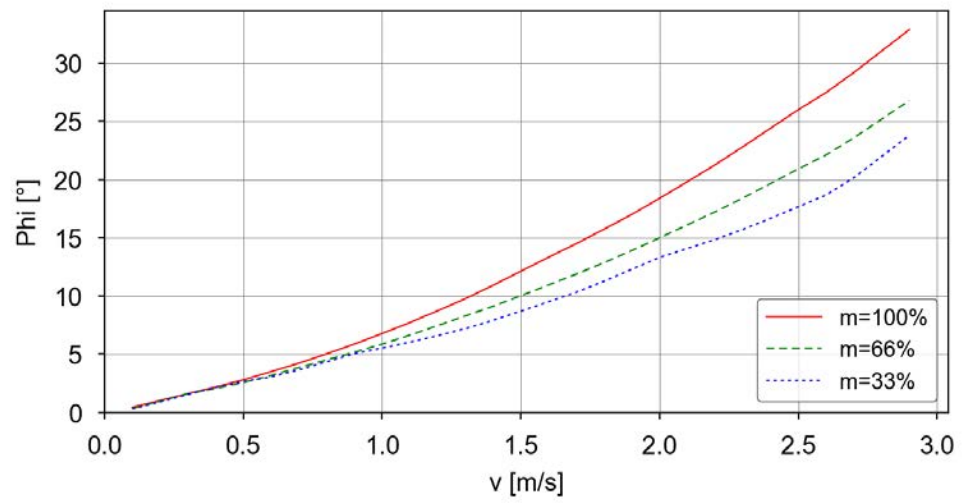
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



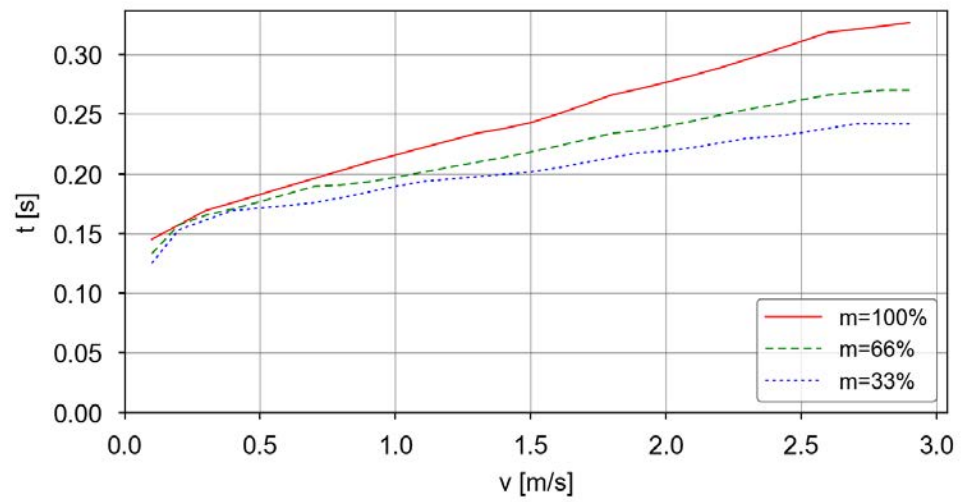
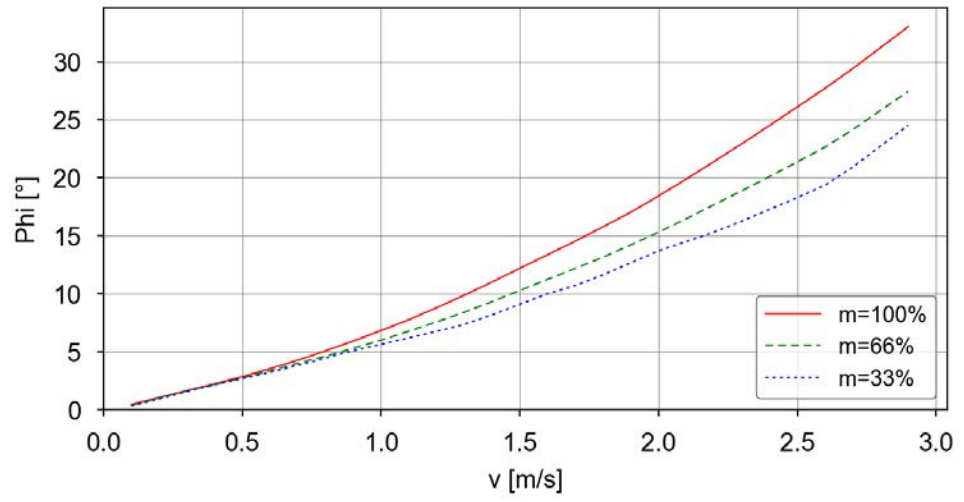
Continues on next page

11 IRB 2600

11.4 IRB 2600ID 1.85 m 15 kg

Continued

Extension zone 2, stopping distance and stopping time



11.5 IRB 2600ID 2.00 m 8 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	31.8	0.27
2	33.7	0.29
3	23.0	0.17

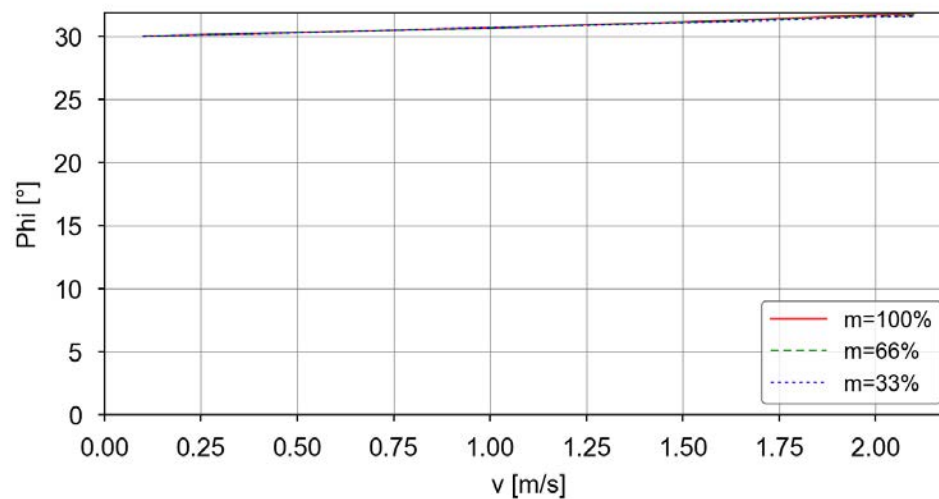
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.667
1	0.667	1.333
2	1.333	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

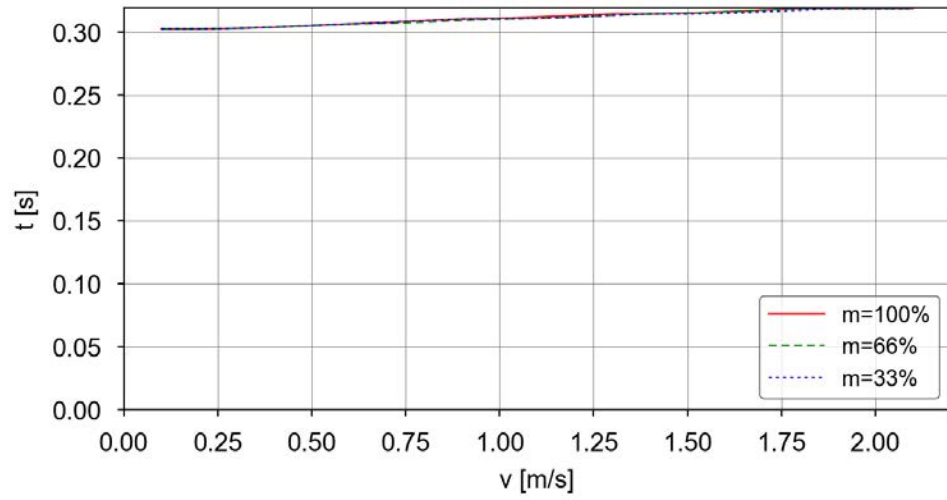


Continues on next page

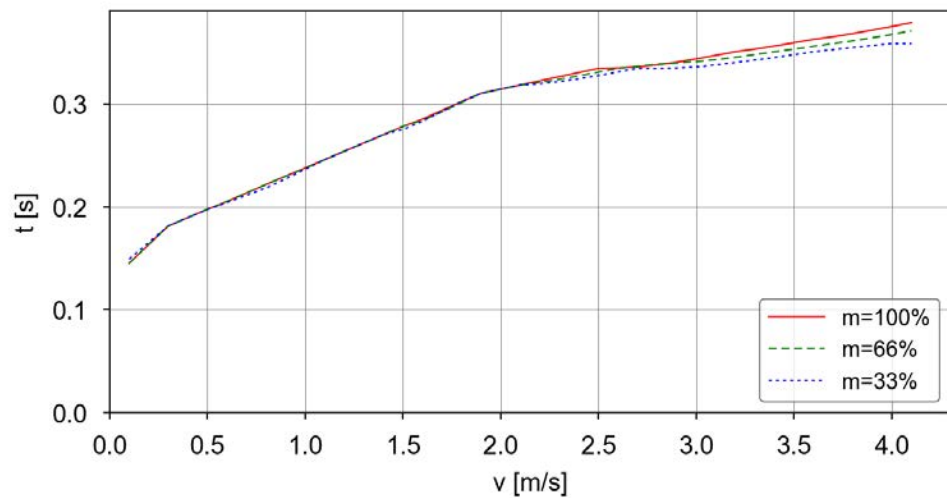
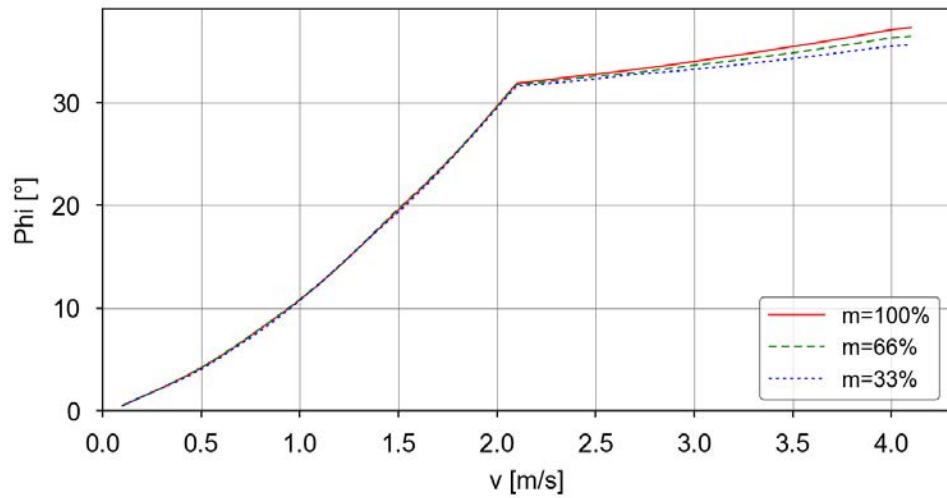
11 IRB 2600

11.5 IRB 2600ID 2.00 m 8 kg

Continued

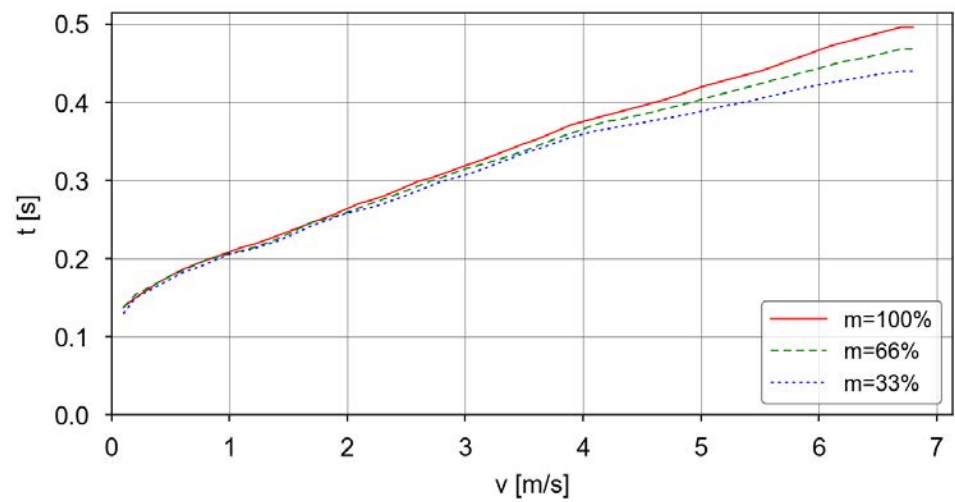
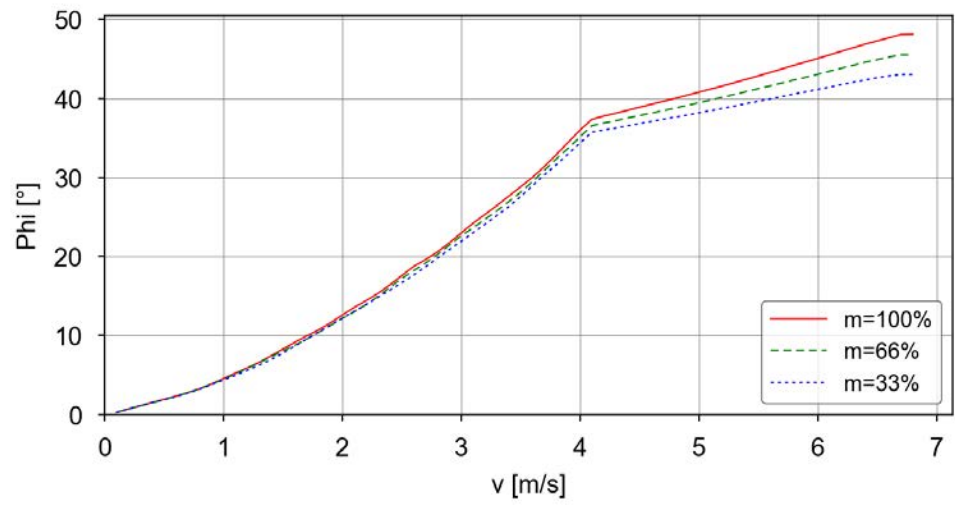


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

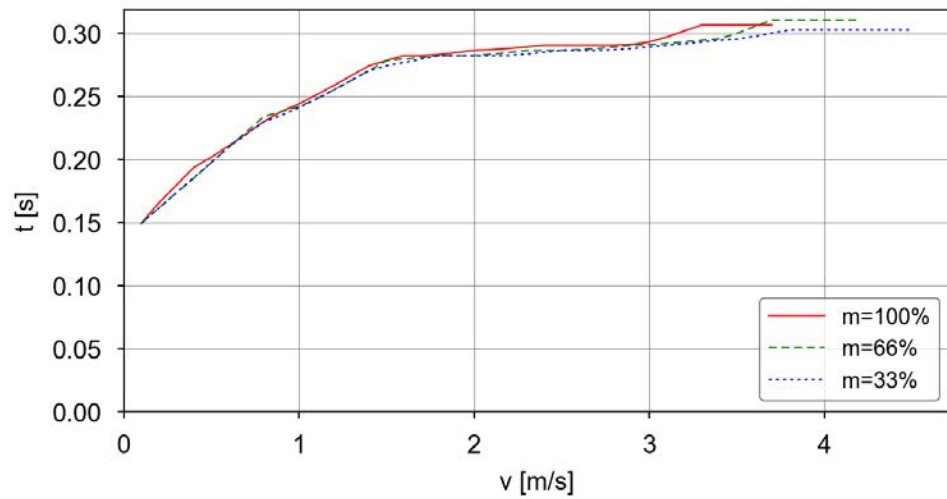
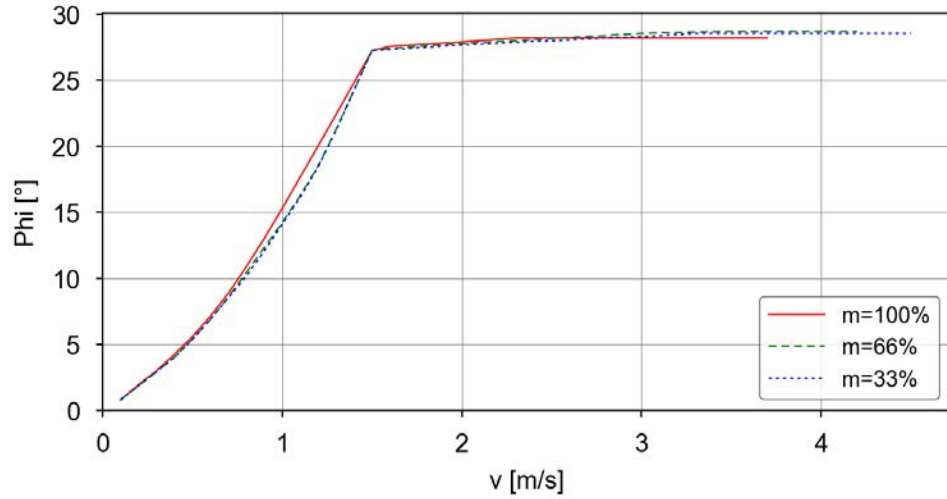
11 IRB 2600

11.5 IRB 2600ID 2.00 m 8 kg

Continued

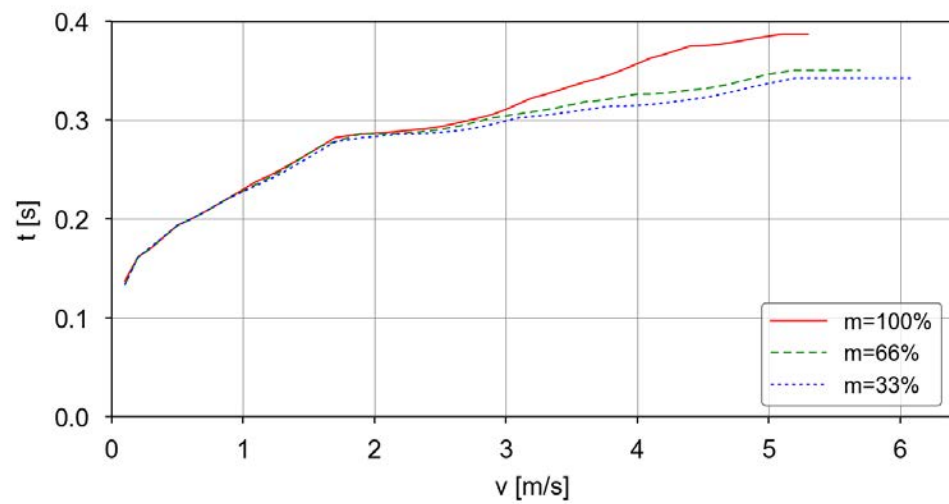
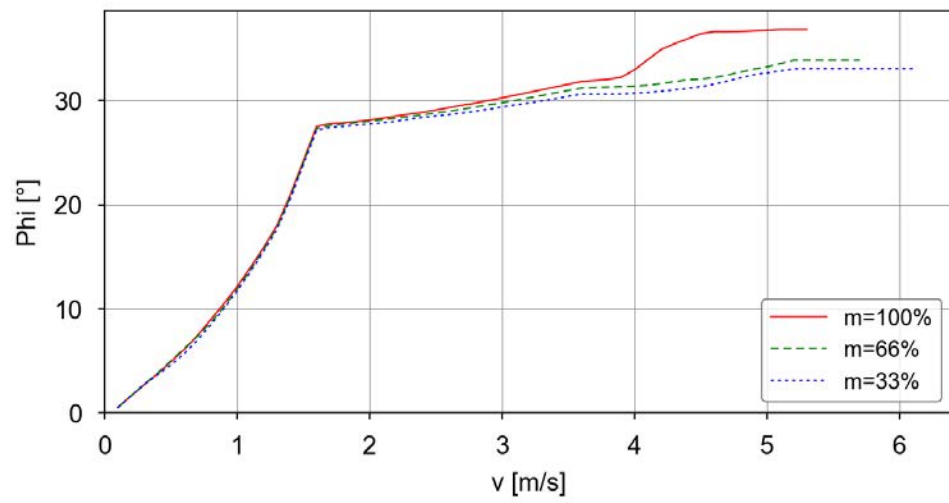
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



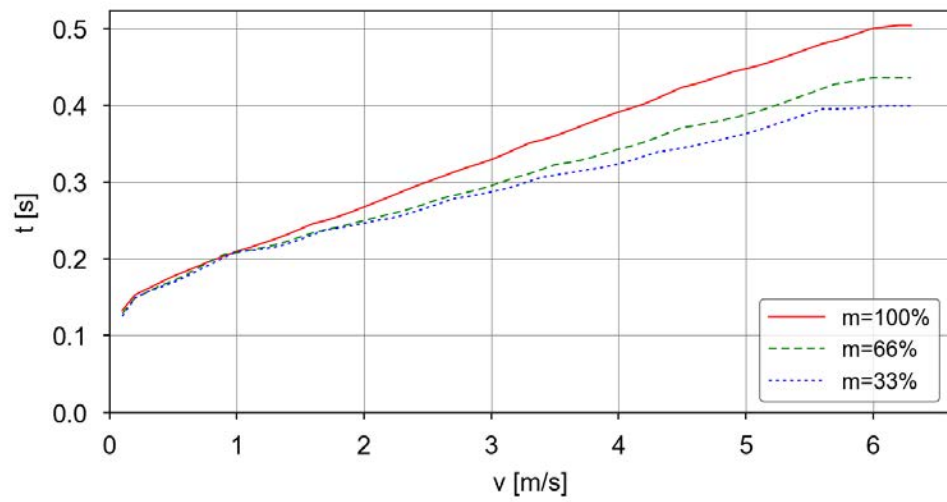
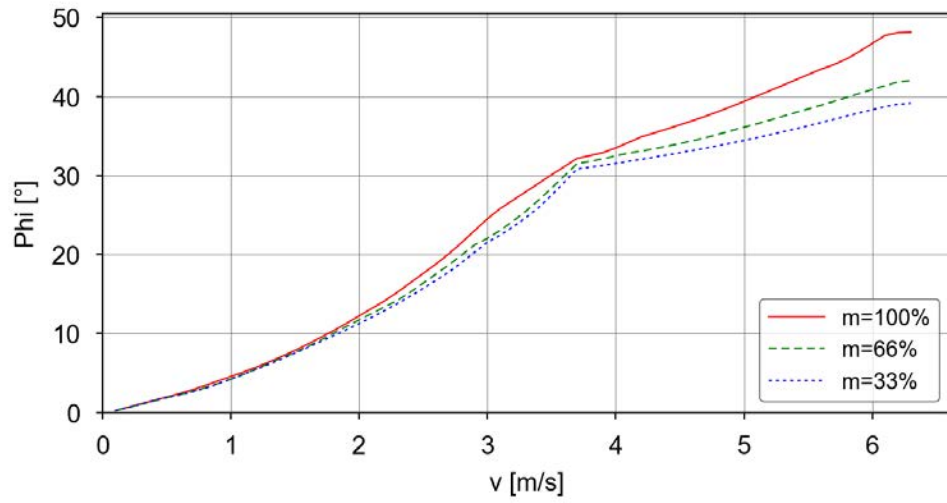
Continues on next page

11 IRB 2600

11.5 IRB 2600ID 2.00 m 8 kg

Continued

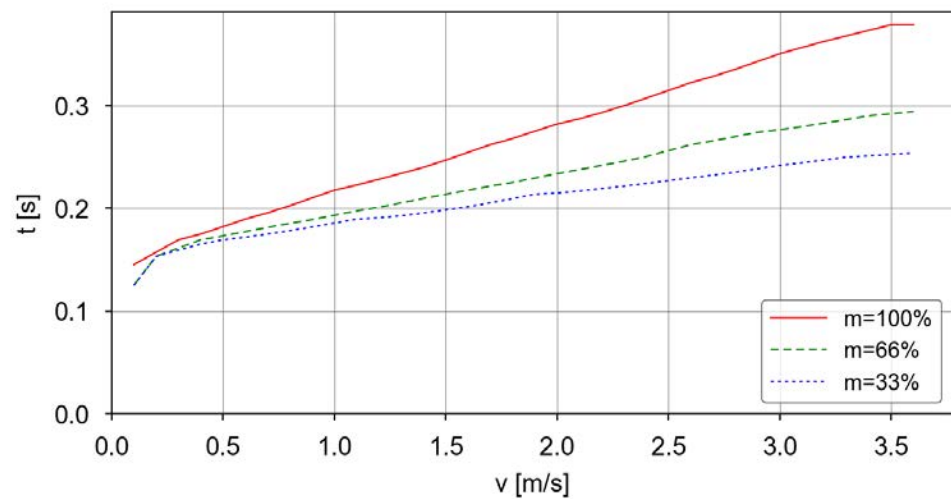
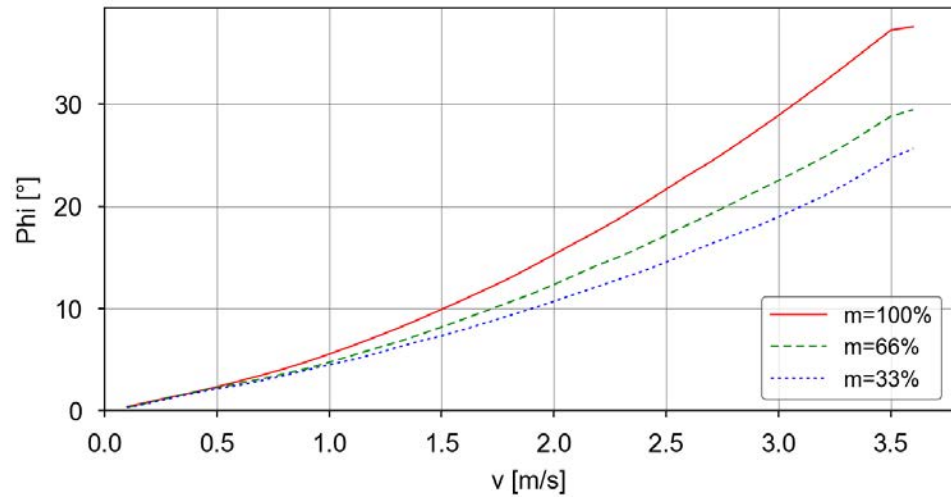
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



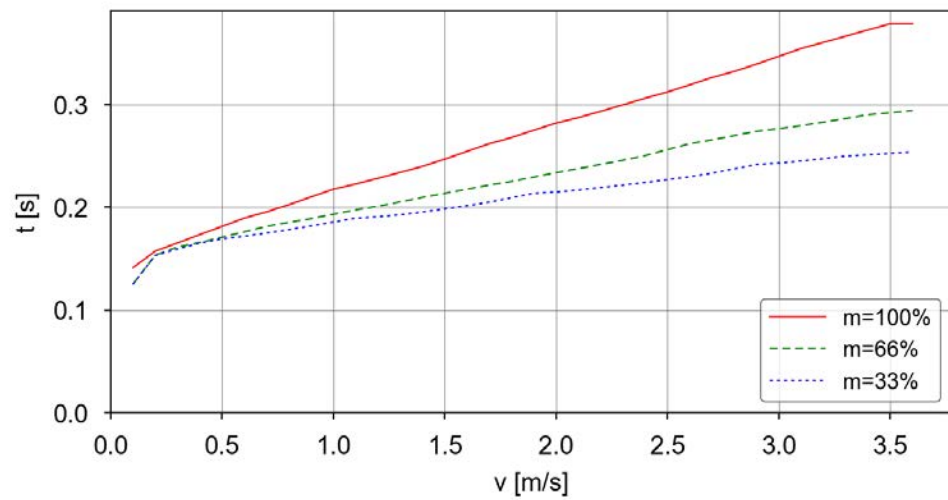
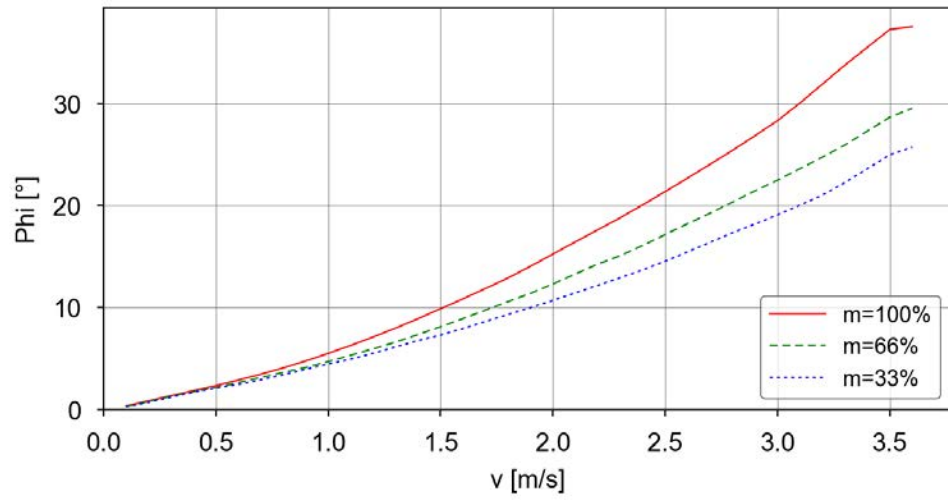
Continues on next page

11 IRB 2600

11.5 IRB 2600ID 2.00 m 8 kg

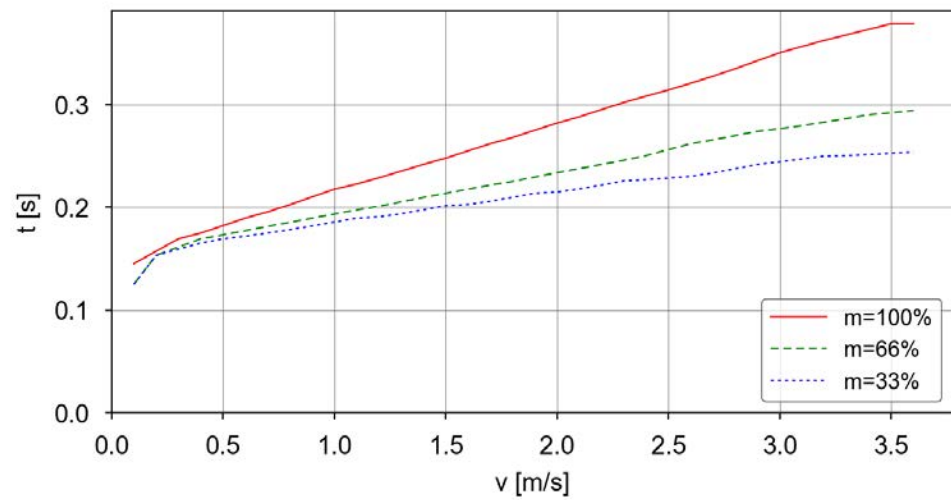
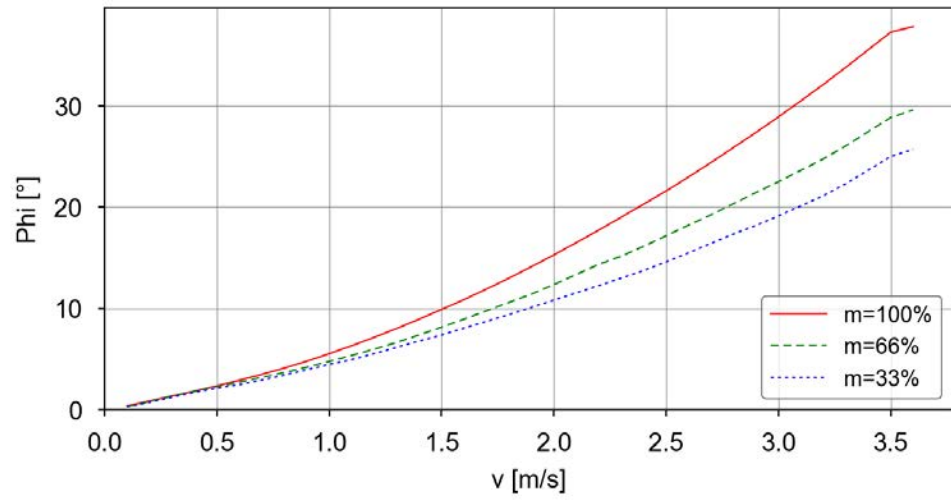
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

12 IRB 4400

12.1 IRB 4400 1.95 m 45 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	67.8	0.8
2	18.8	0.22
3	18.2	0.22

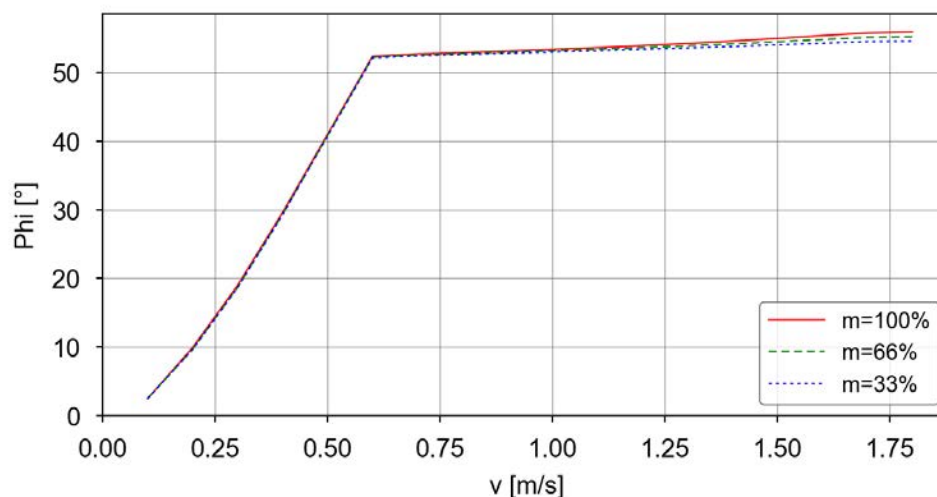
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.661
1	0.661	1.322
2	1.322	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

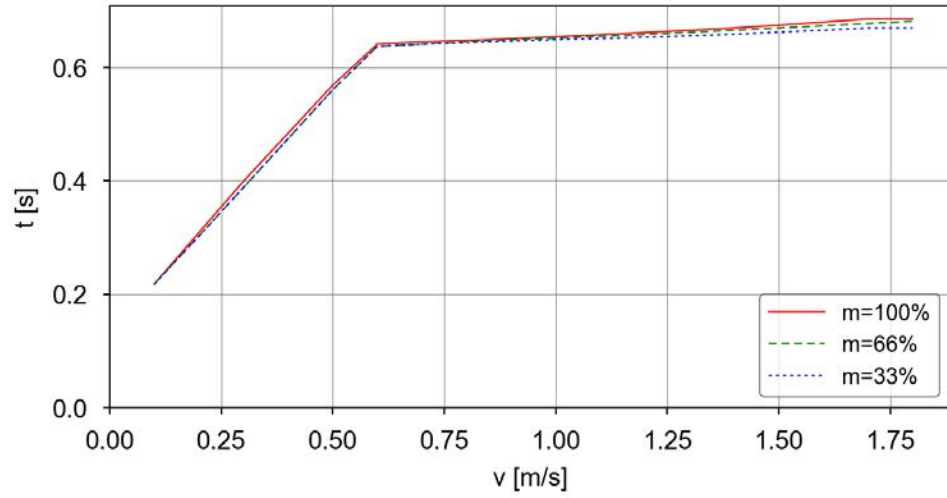


Continues on next page

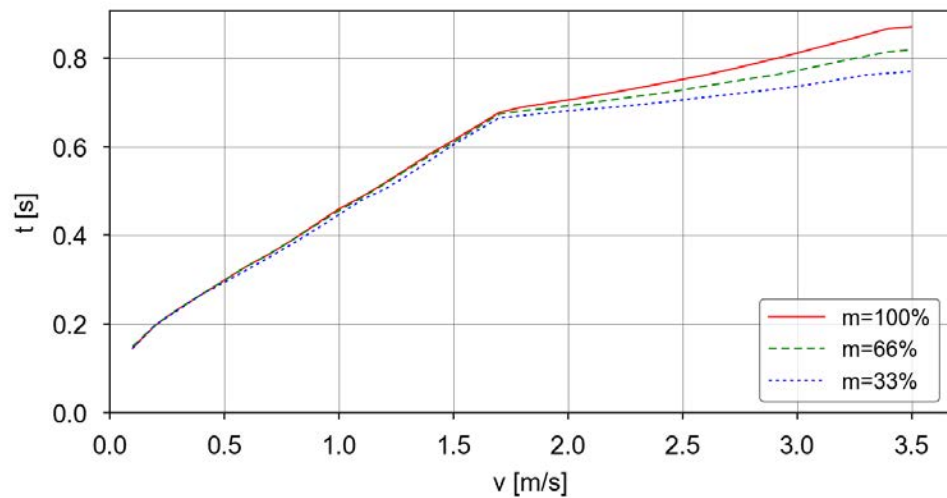
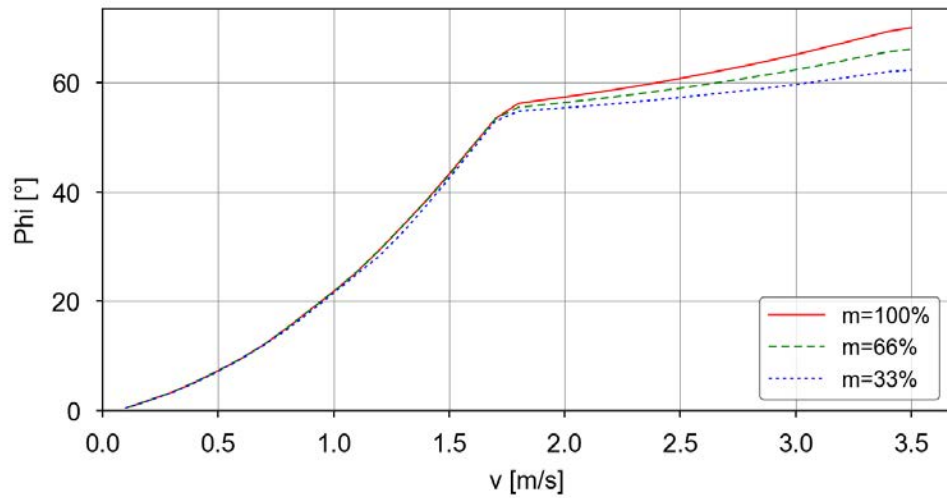
12 IRB 4400

12.1 IRB 4400 1.95 m 45 kg

Continued

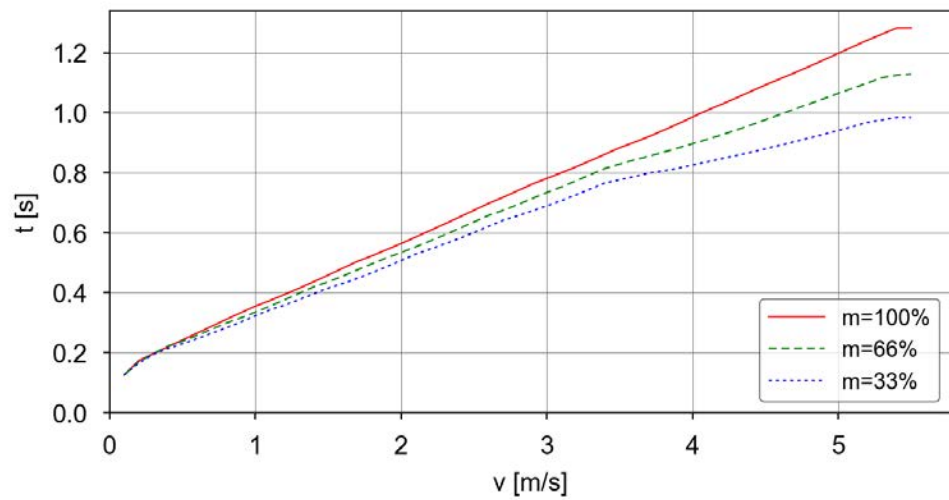
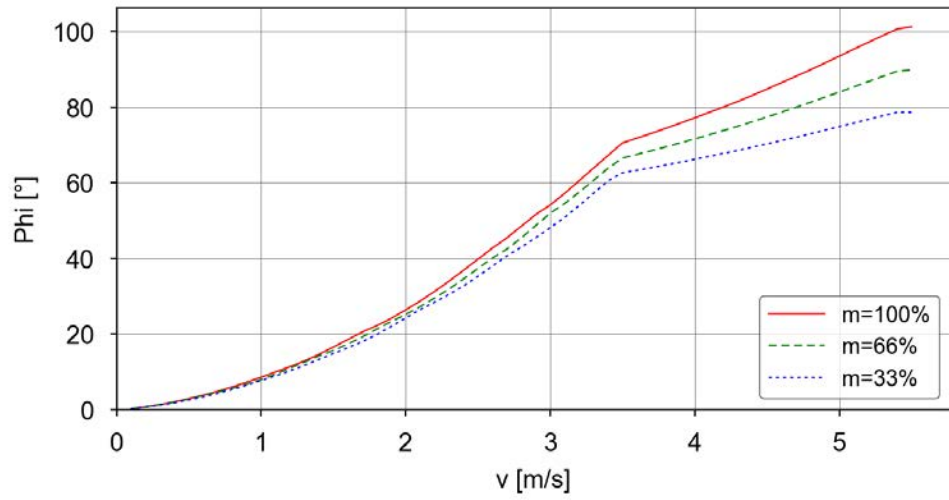


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

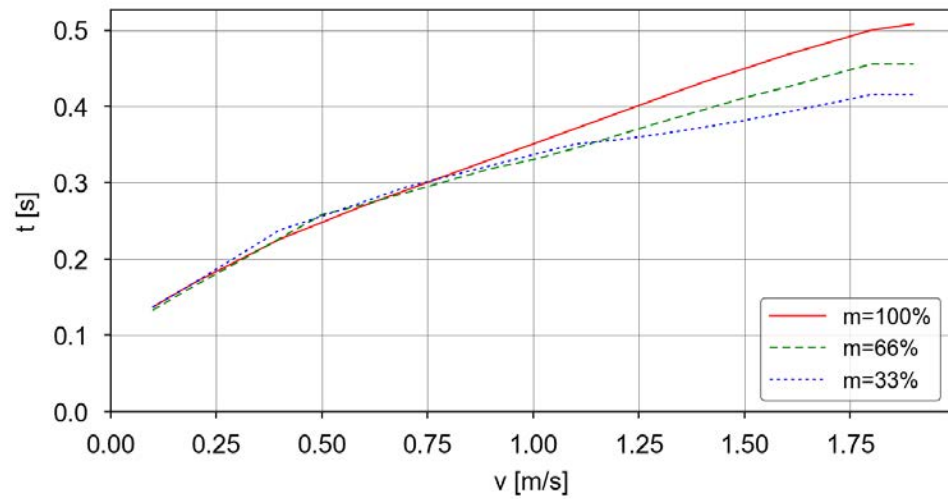
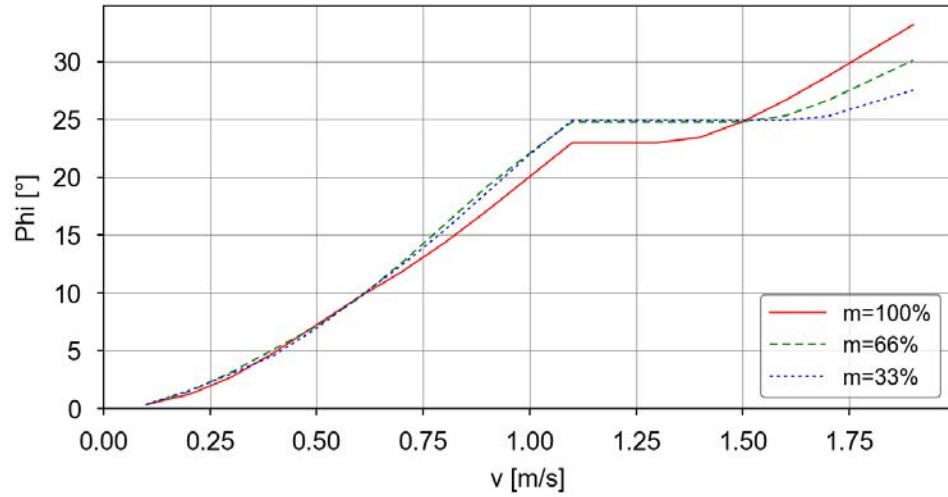
12 IRB 4400

12.1 IRB 4400 1.95 m 45 kg

Continued

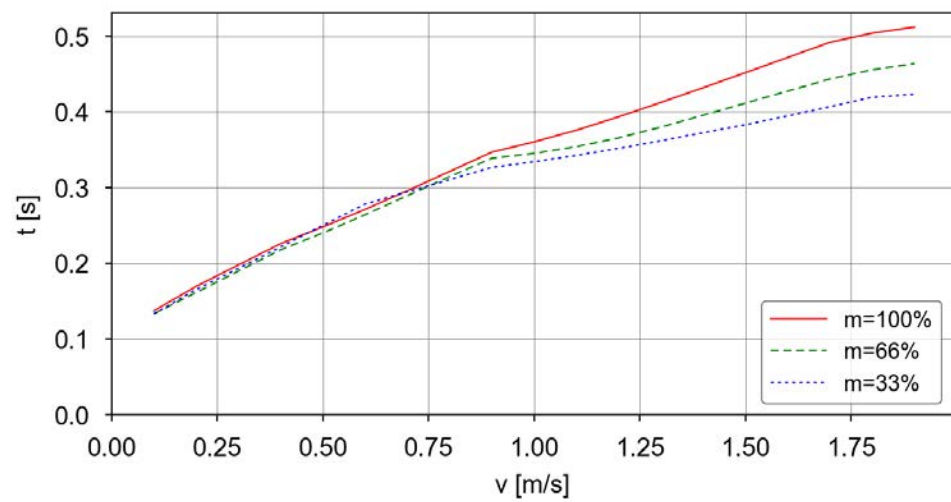
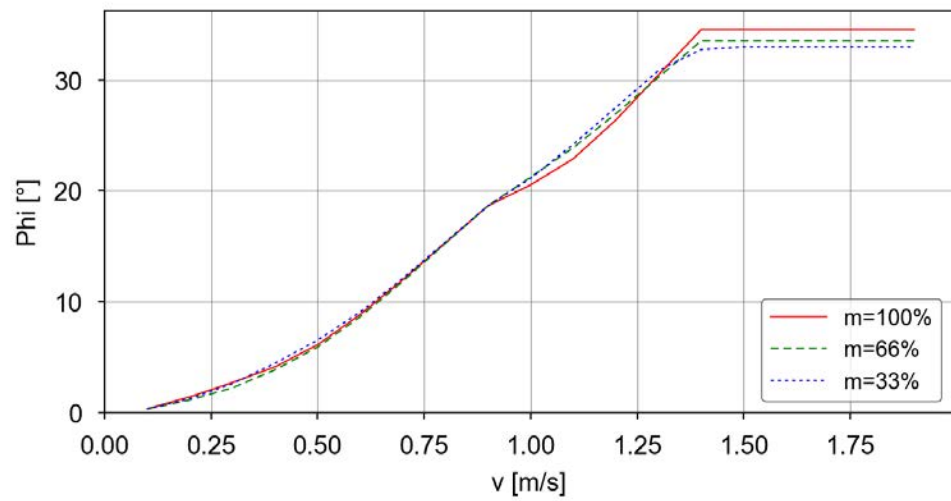
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



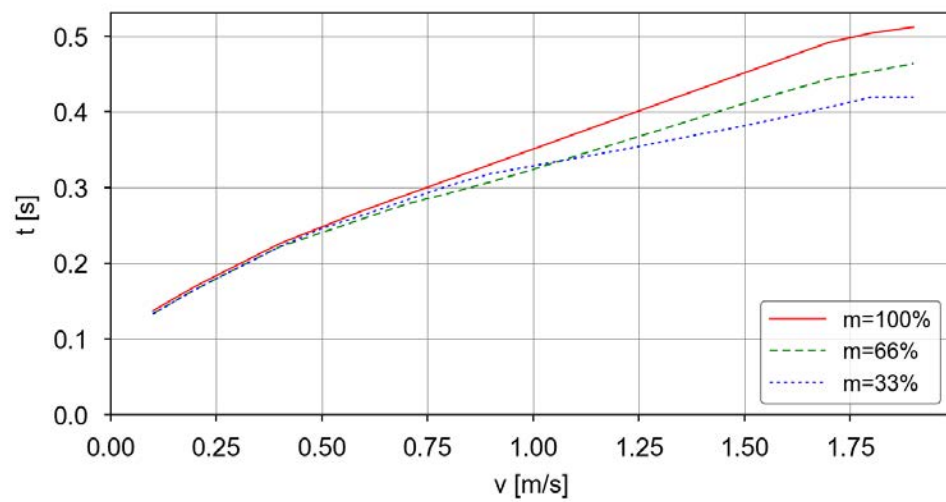
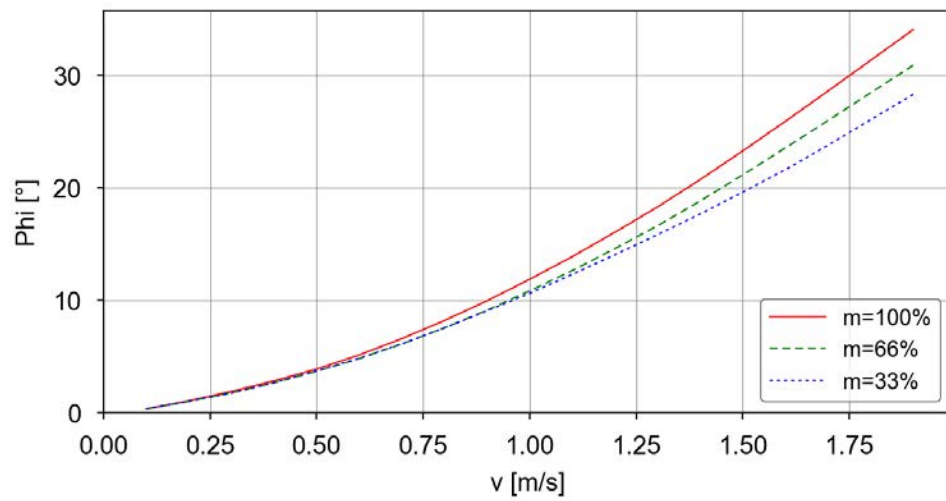
Continues on next page

12 IRB 4400

12.1 IRB 4400 1.95 m 45 kg

Continued

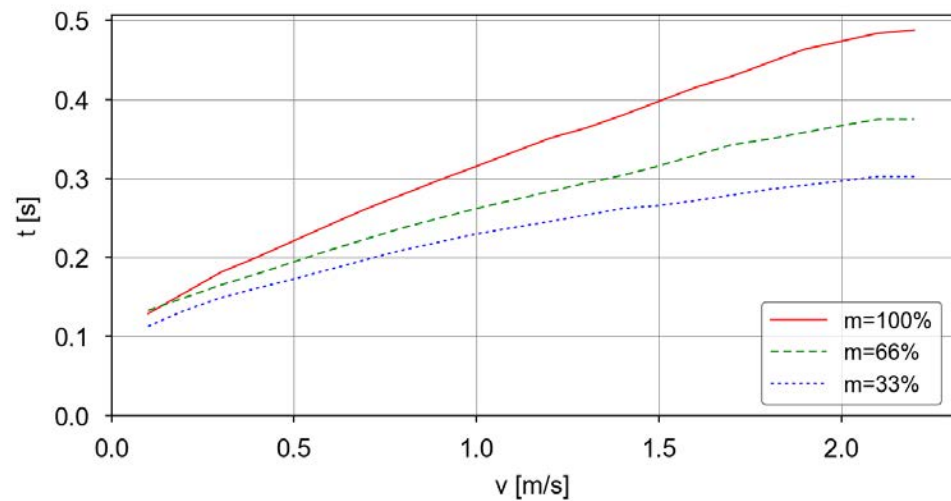
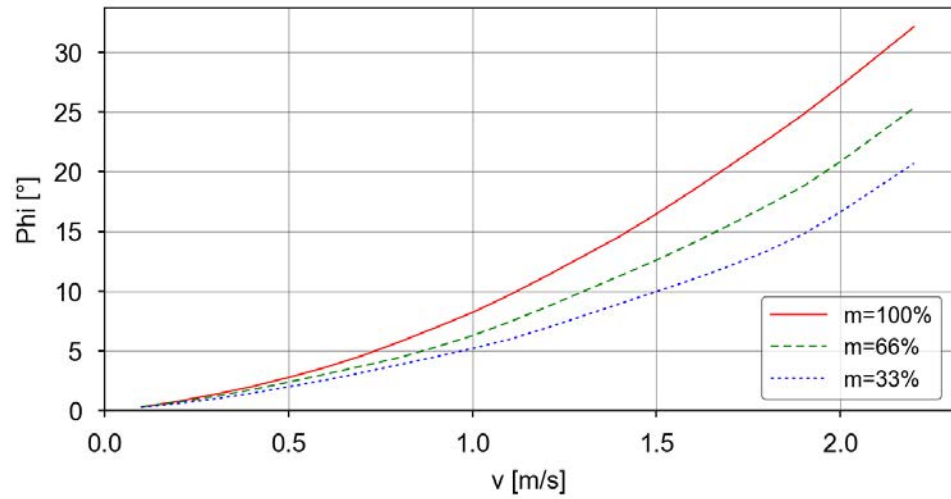
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



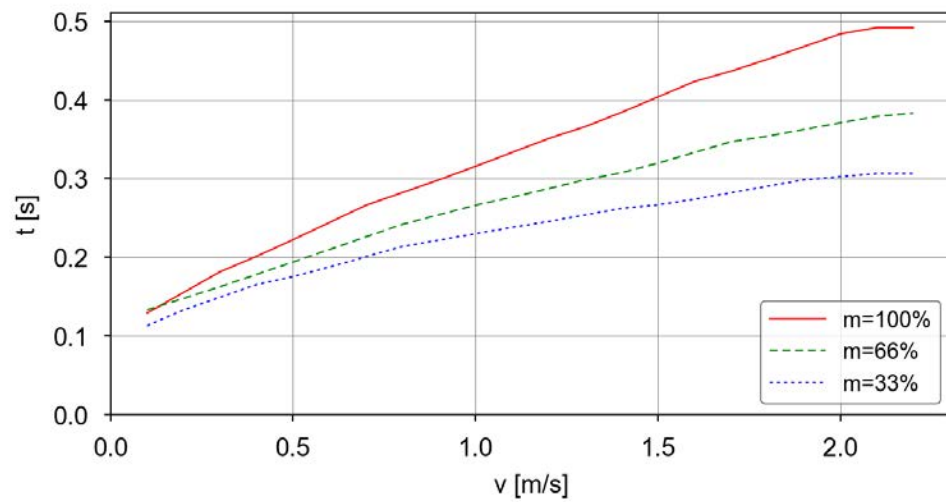
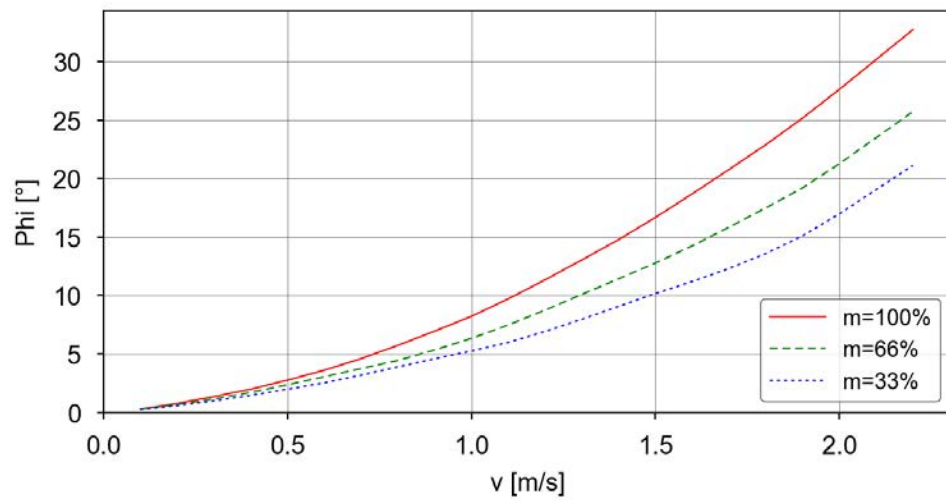
Continues on next page

12 IRB 4400

12.1 IRB 4400 1.95 m 45 kg

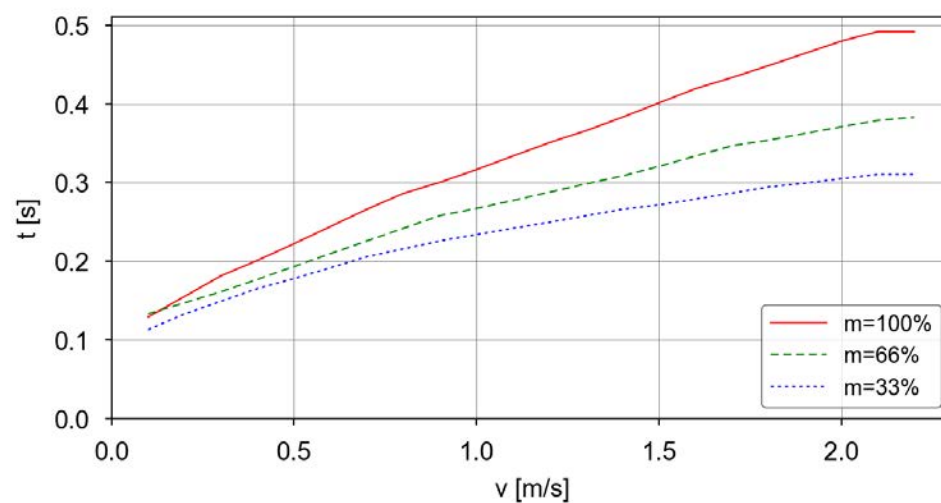
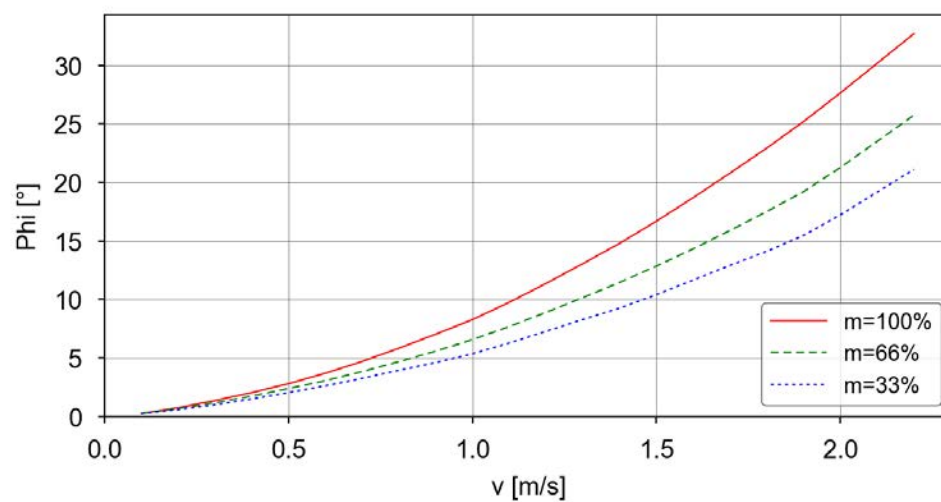
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



12 IRB 4400

12.2 IRB 4400 1.95 m 60 kg

12.2 IRB 4400 1.95 m 60 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	75.1	0.9
2	20.2	0.25
3	20.6	0.27

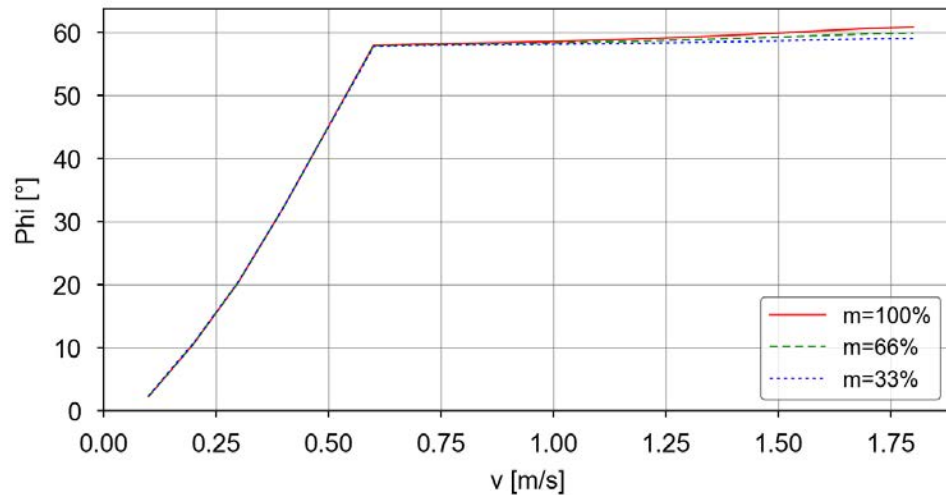
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

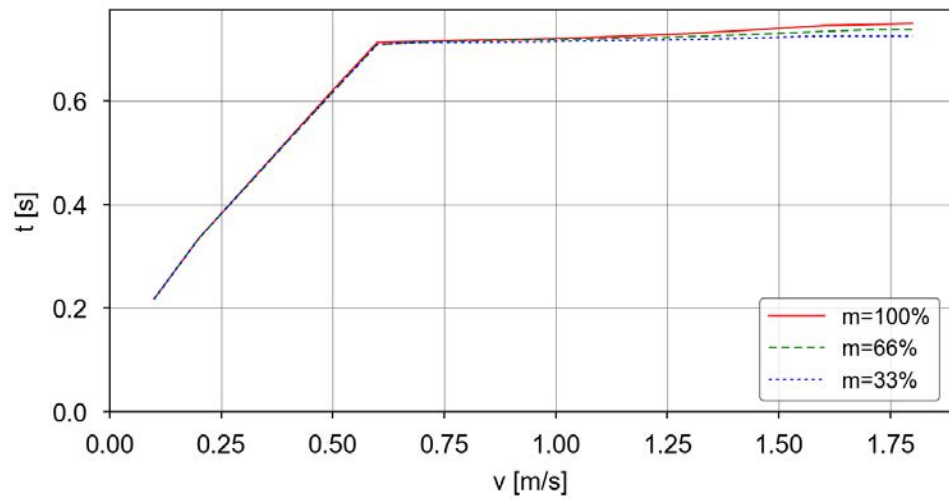
Zone	wcp min (m)	wcp max (m)
0	0	0.661
1	0.661	1.322
2	1.322	max reach

Category 1, Axis 1

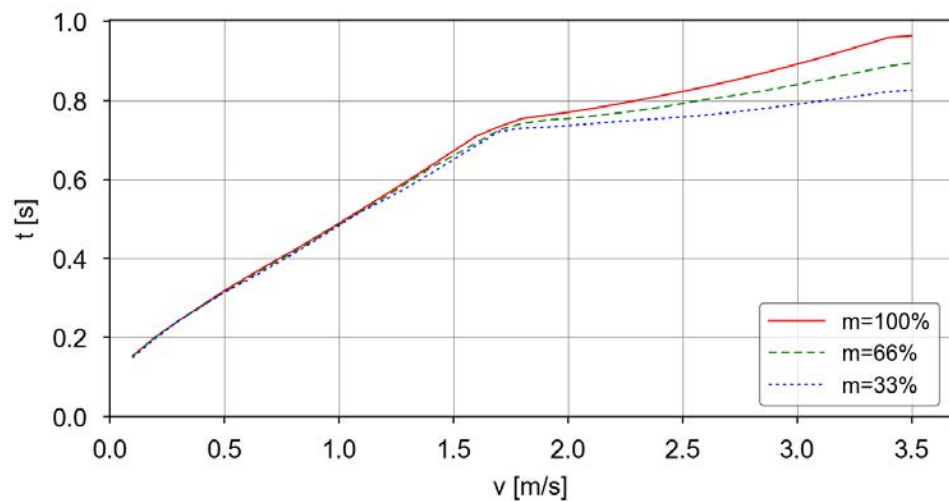
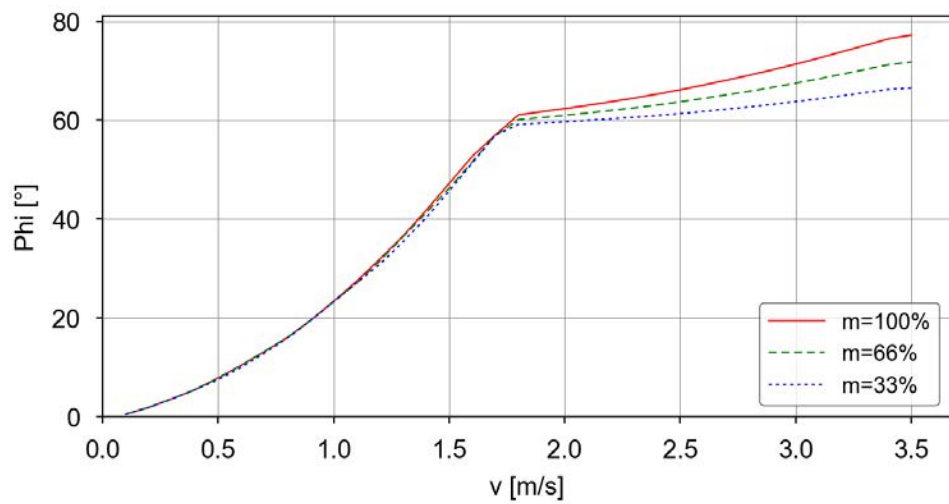
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



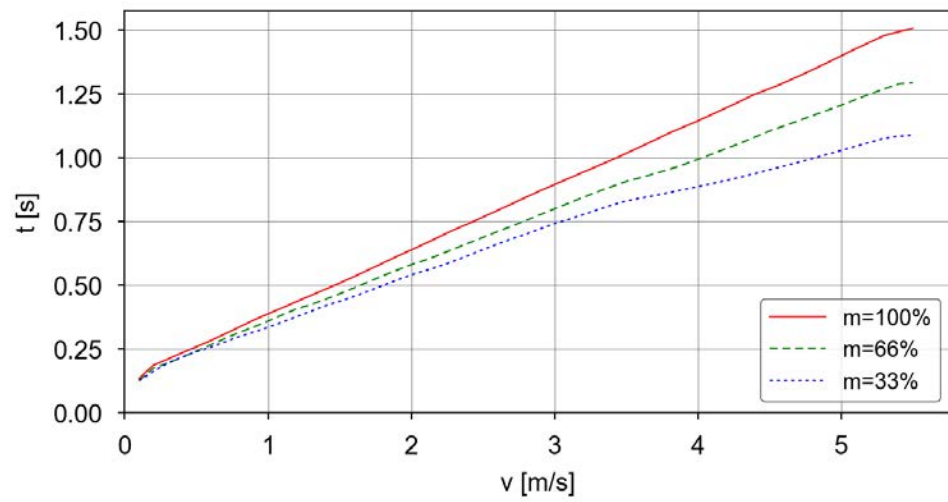
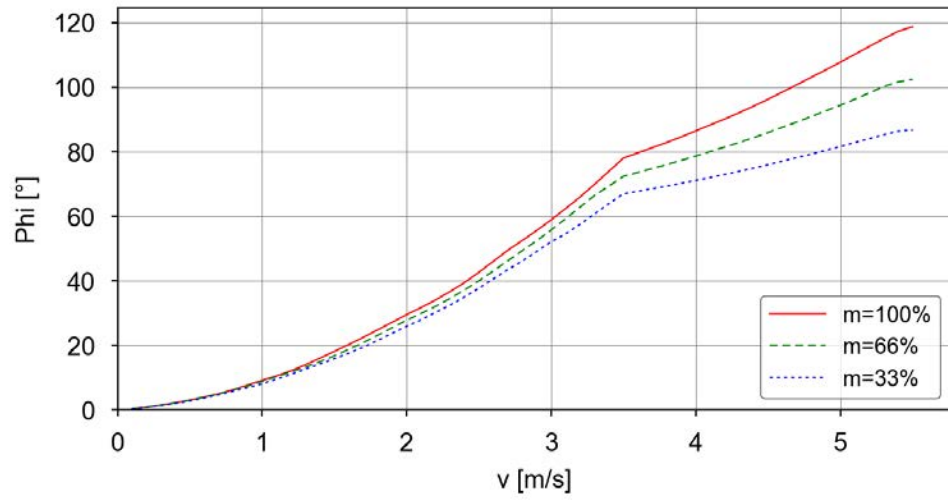
Continues on next page

12 IRB 4400

12.2 IRB 4400 1.95 m 60 kg

Continued

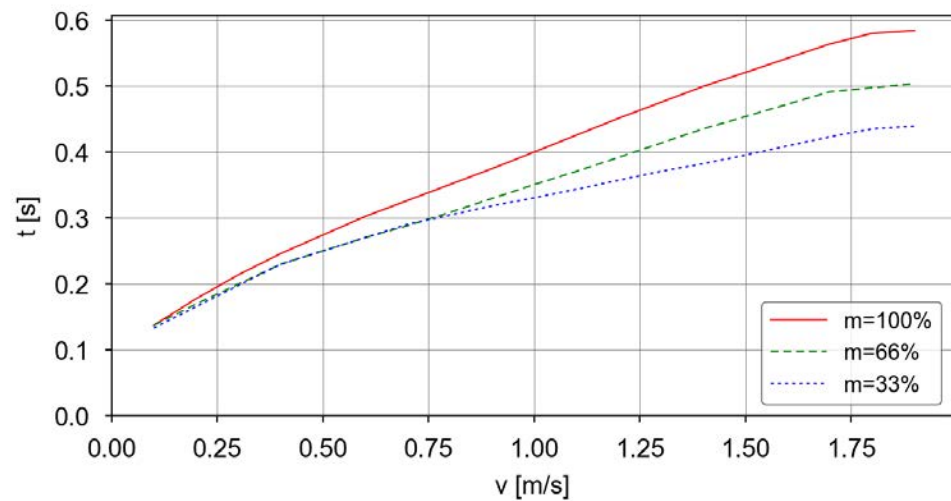
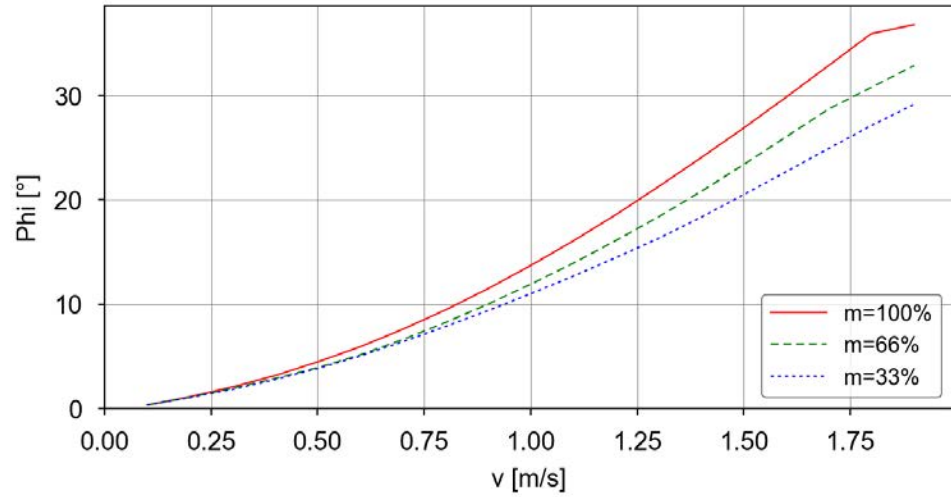
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



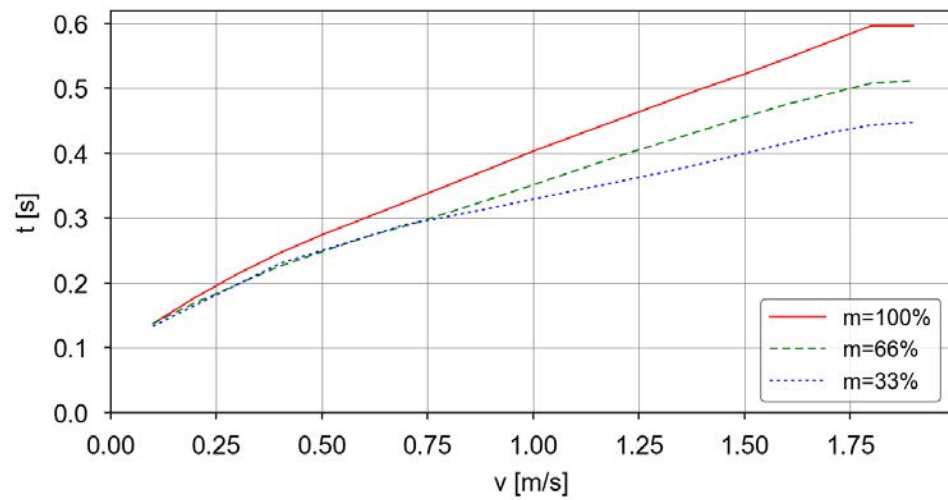
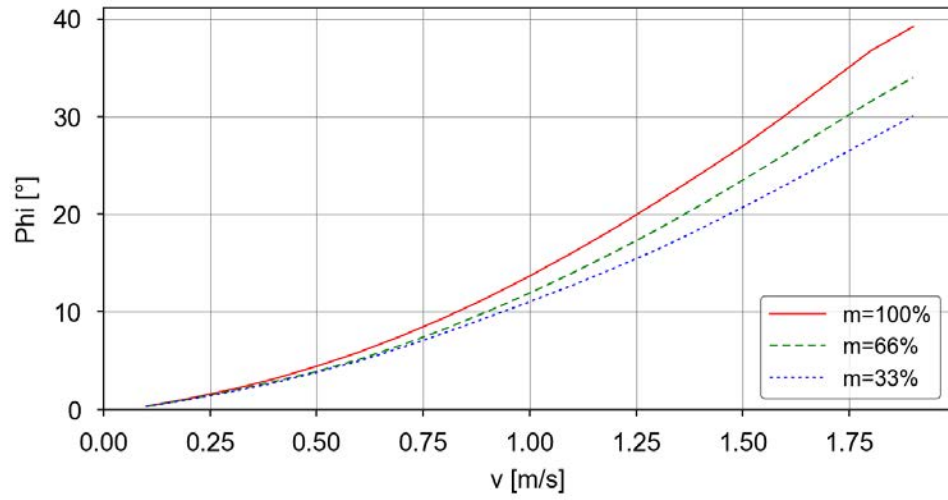
Continues on next page

12 IRB 4400

12.2 IRB 4400 1.95 m 60 kg

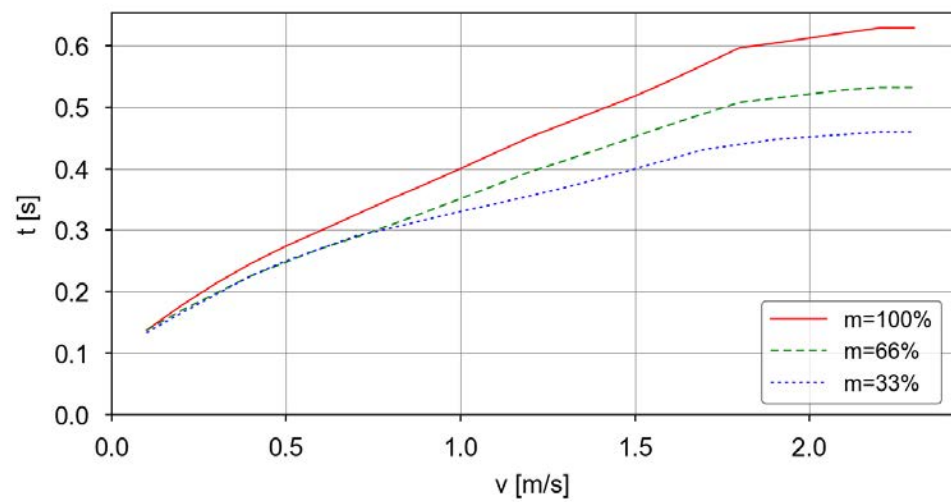
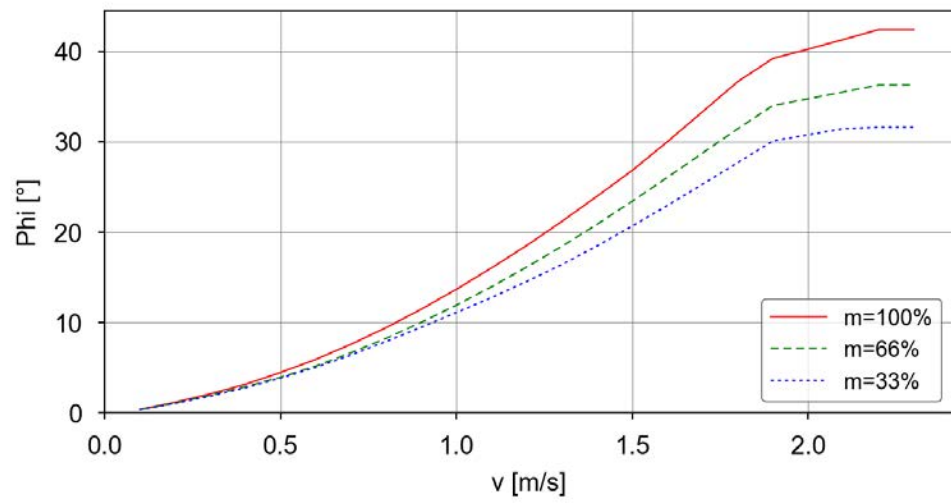
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

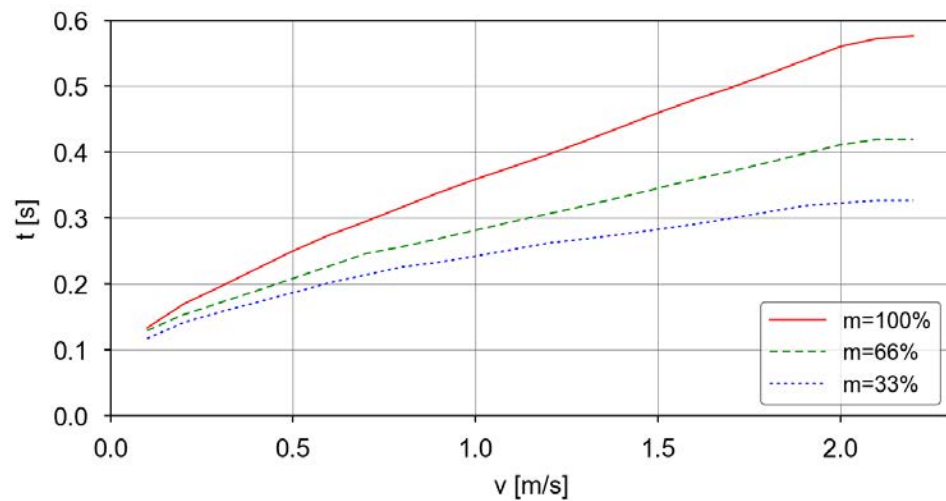
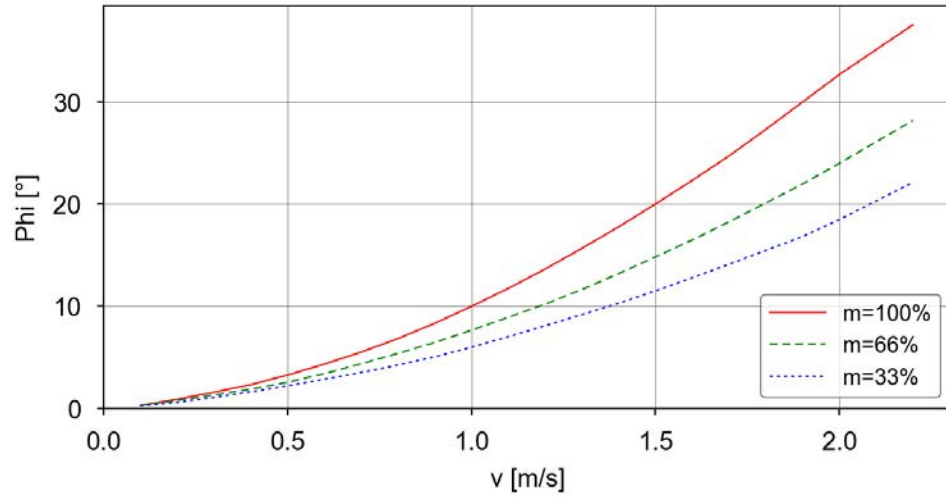
12 IRB 4400

12.2 IRB 4400 1.95 m 60 kg

Continued

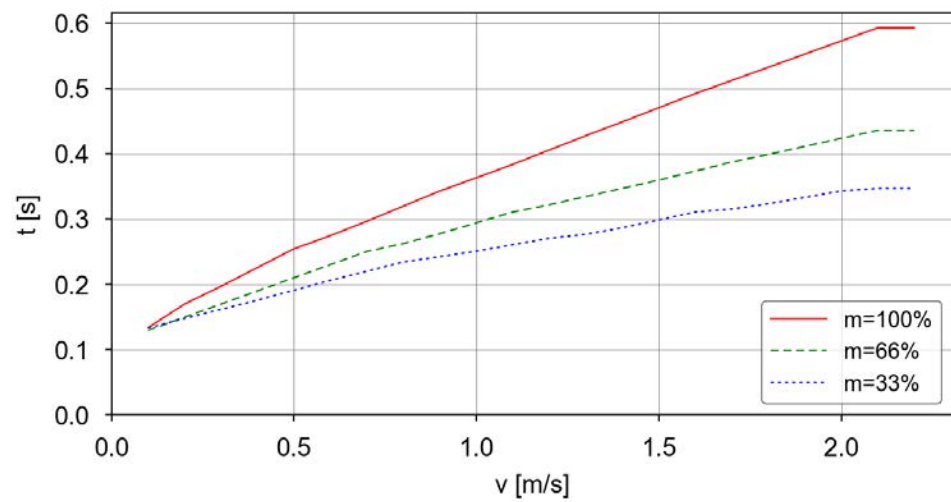
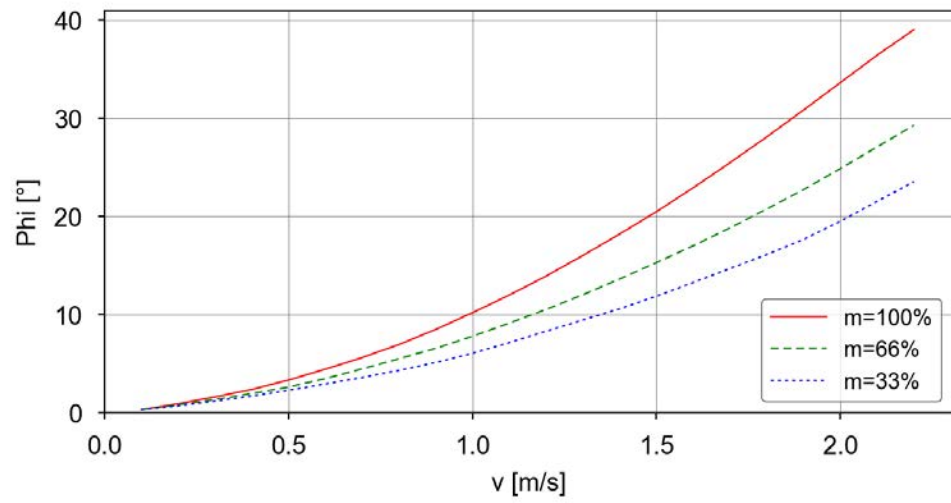
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



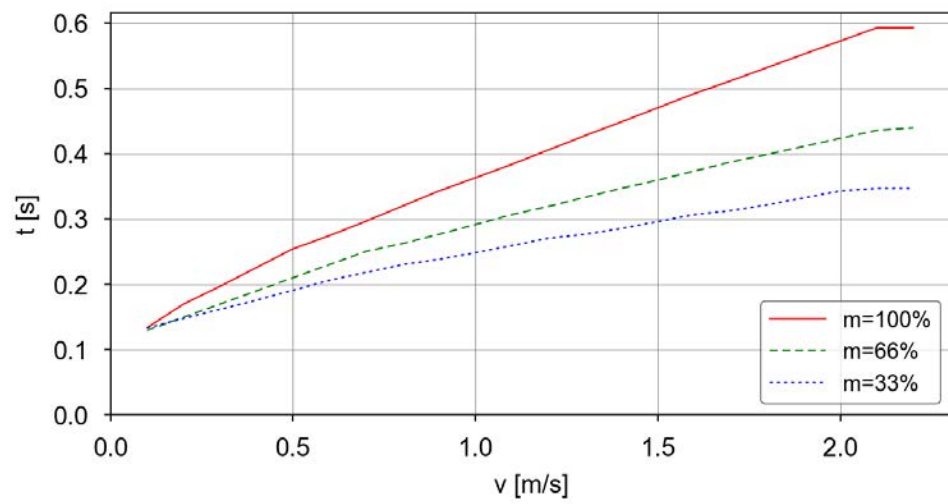
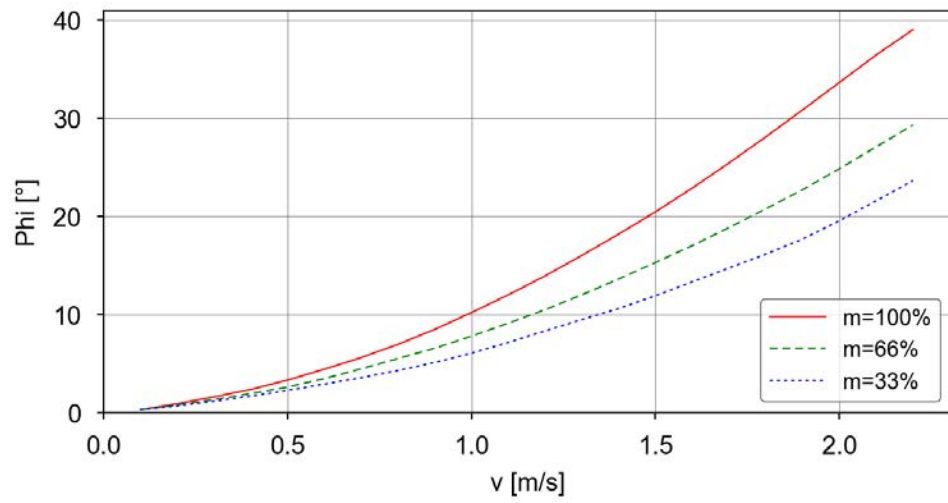
Continues on next page

12 IRB 4400

12.2 IRB 4400 1.95 m 60 kg

Continued

Extension zone 2, stopping distance and stopping time



12.3 IRB 4400 2.6 m 10 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	51.3	0.58
2	21.1	0.2
3	19.0	0.17

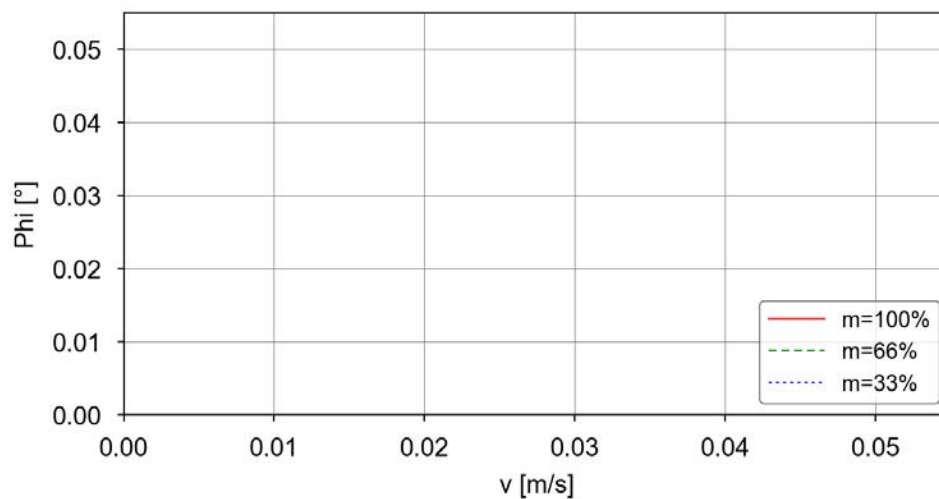
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.0
1	0.0	0.0
2	0.0	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

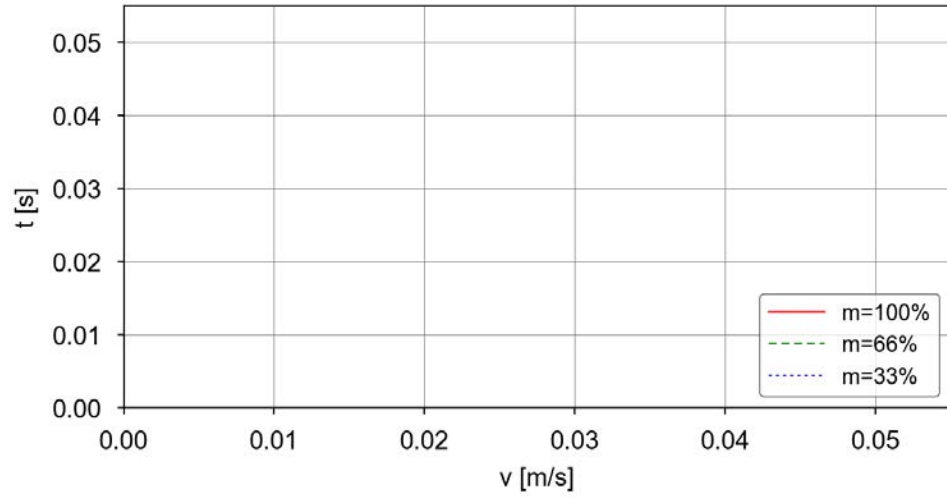


Continues on next page

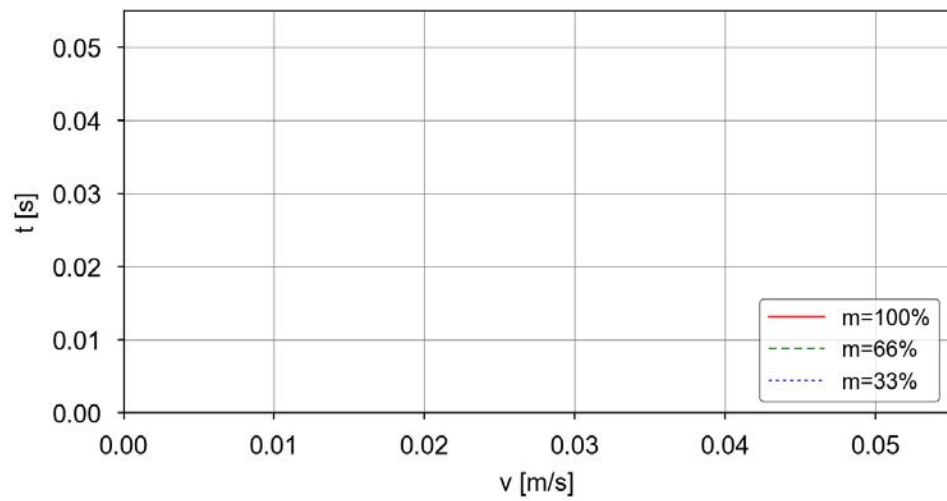
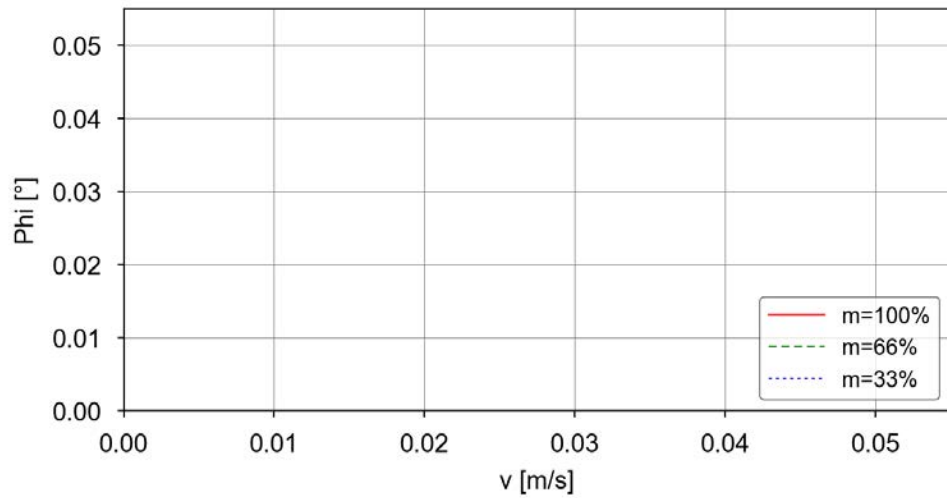
12 IRB 4400

12.3 IRB 4400 2.6 m 10 kg

Continued

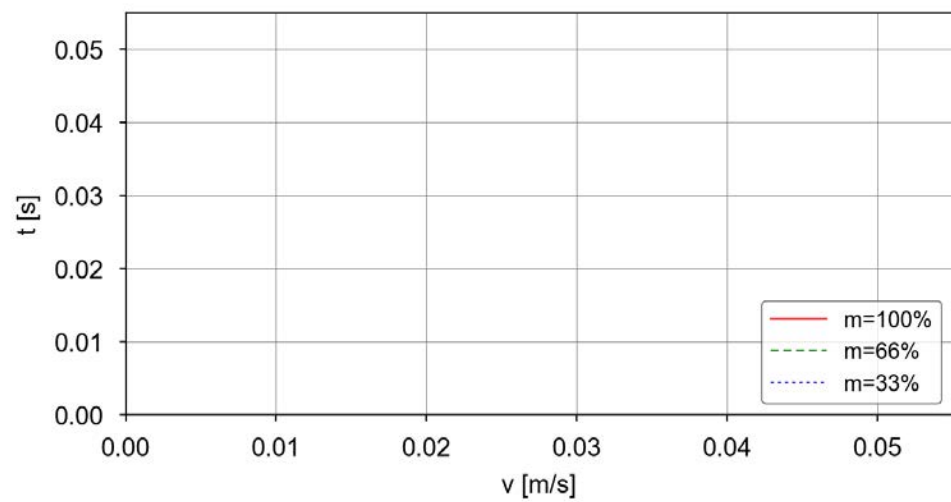
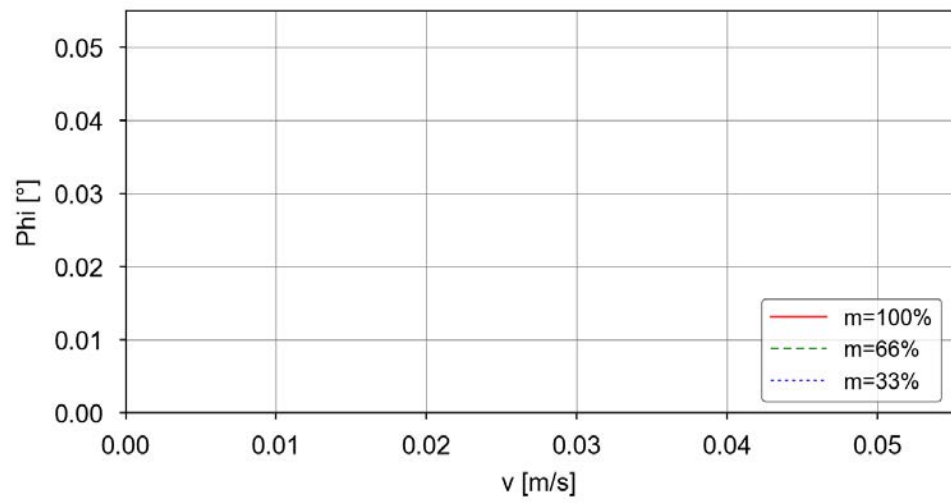


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

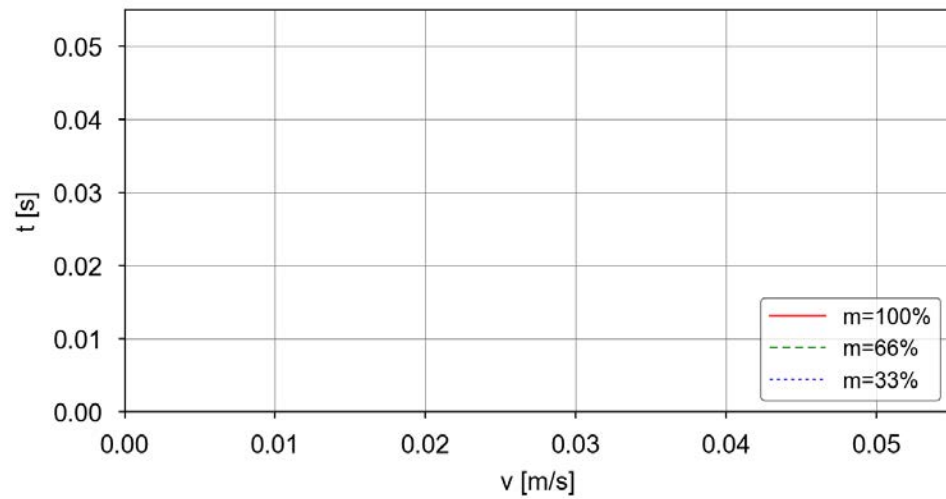
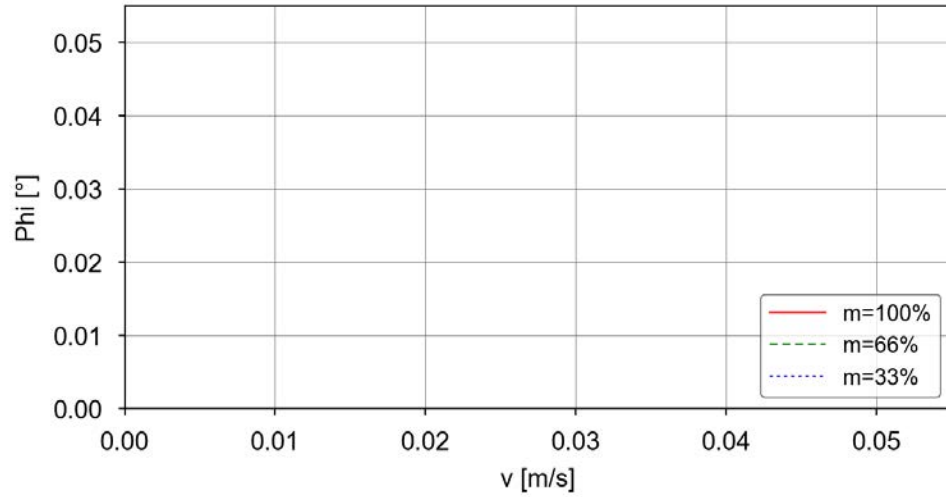
12 IRB 4400

12.3 IRB 4400 2.6 m 10 kg

Continued

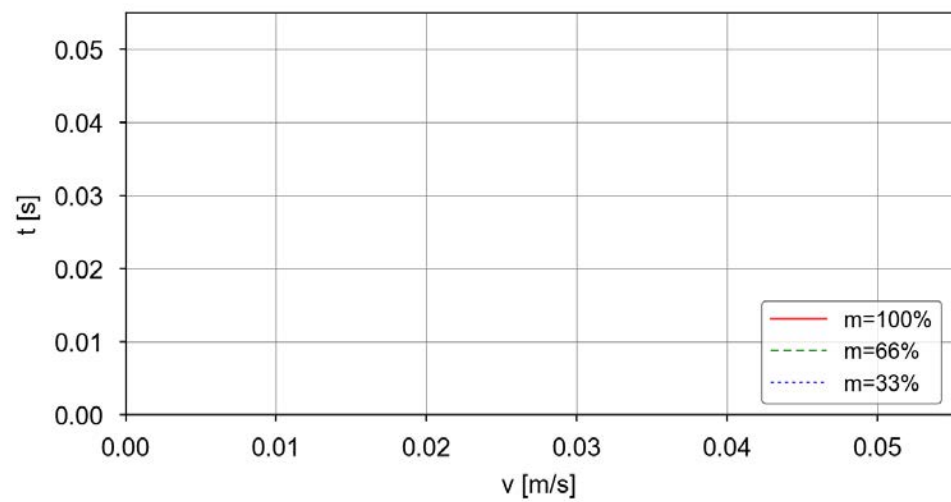
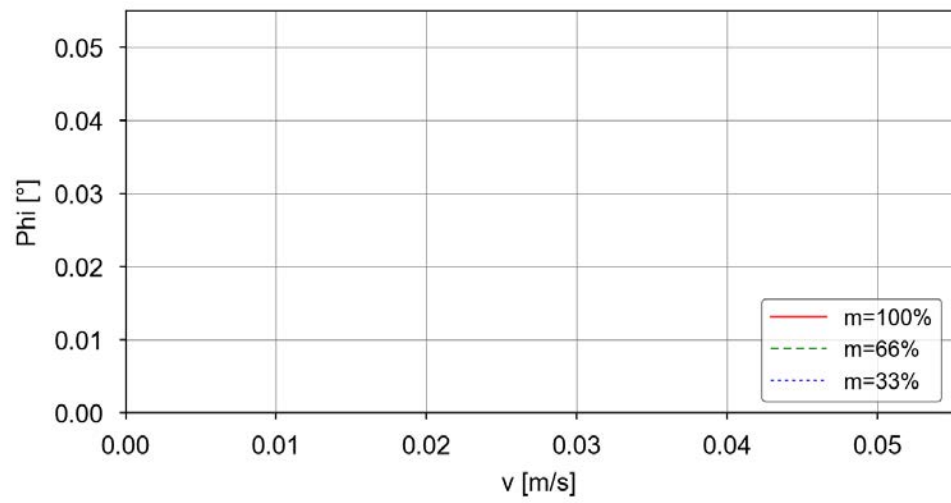
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



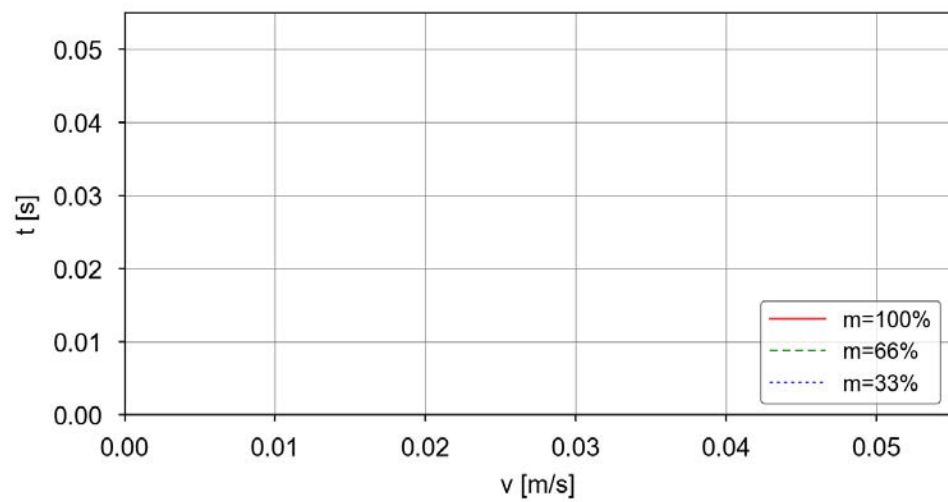
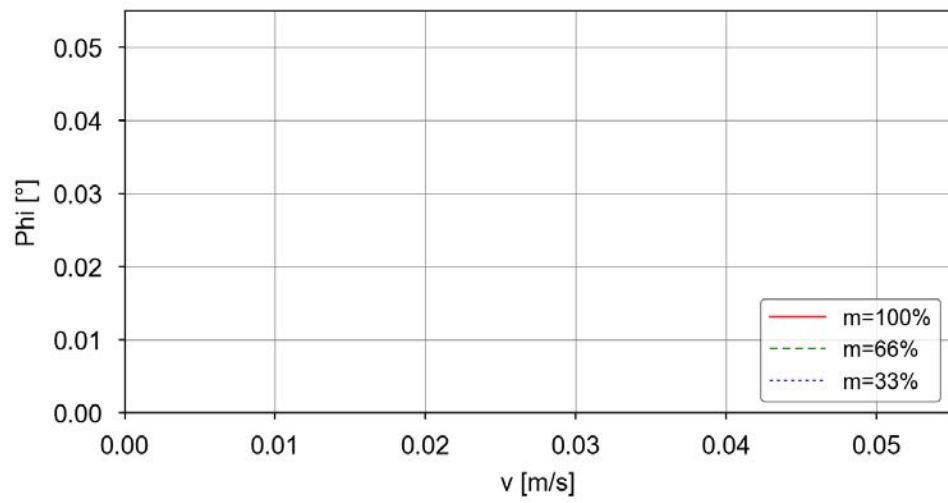
Continues on next page

12 IRB 4400

12.3 IRB 4400 2.6 m 10 kg

Continued

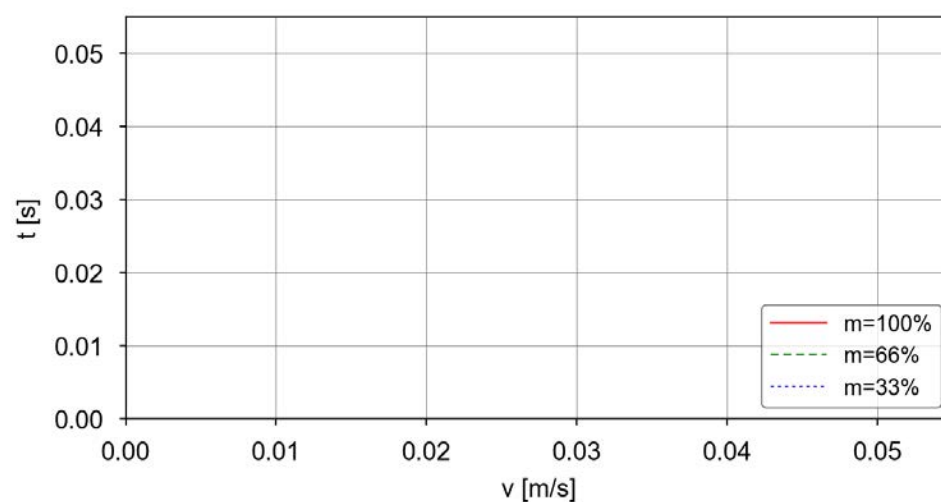
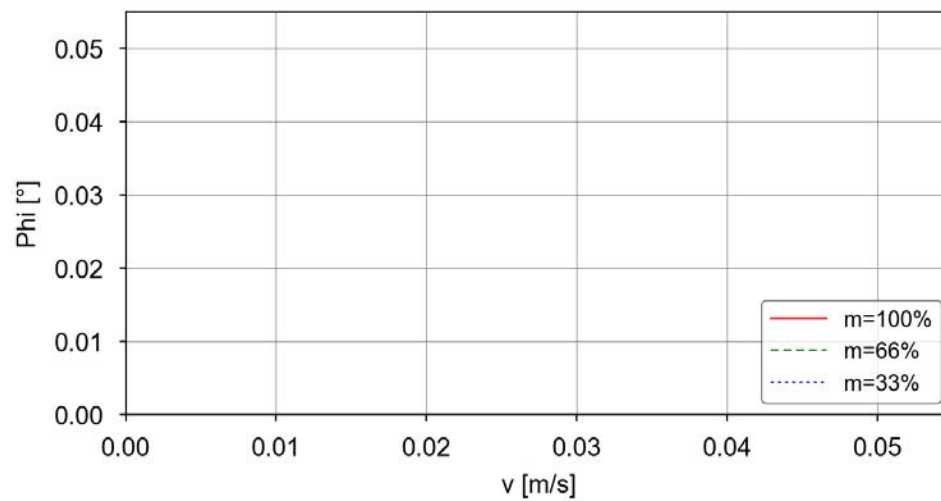
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



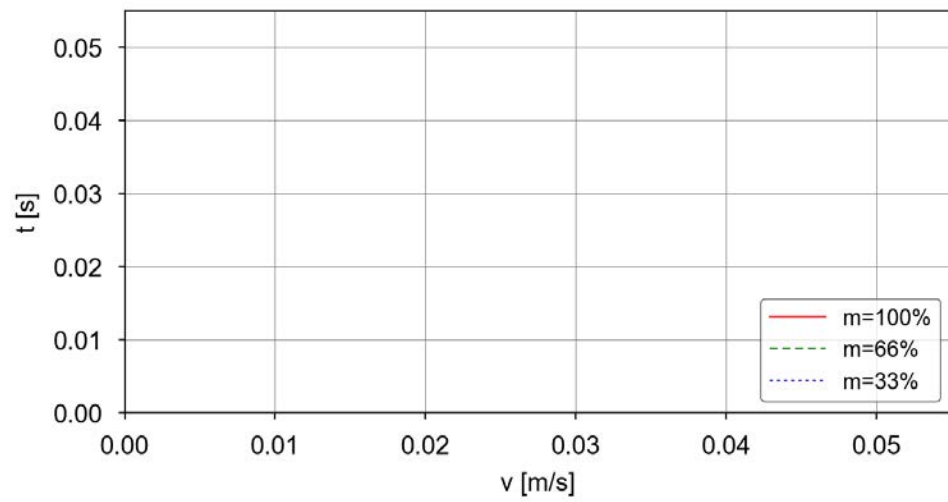
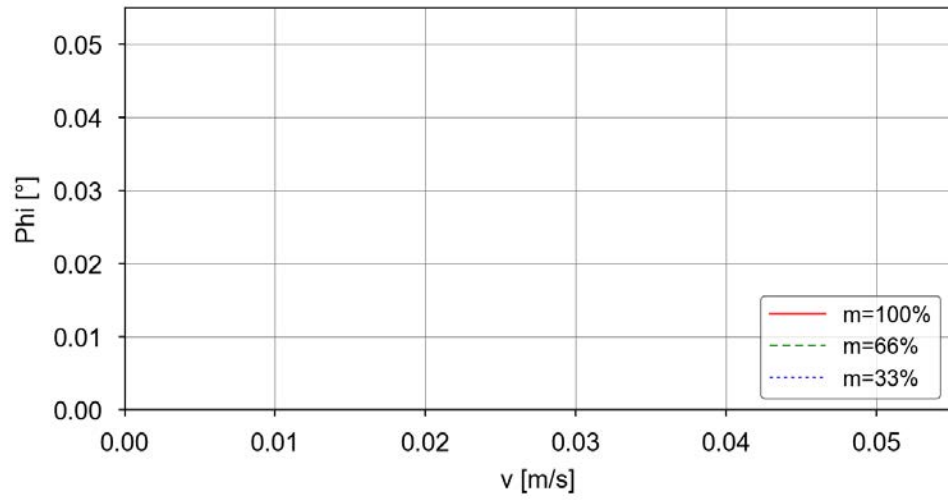
Continues on next page

12 IRB 4400

12.3 IRB 4400 2.6 m 10 kg

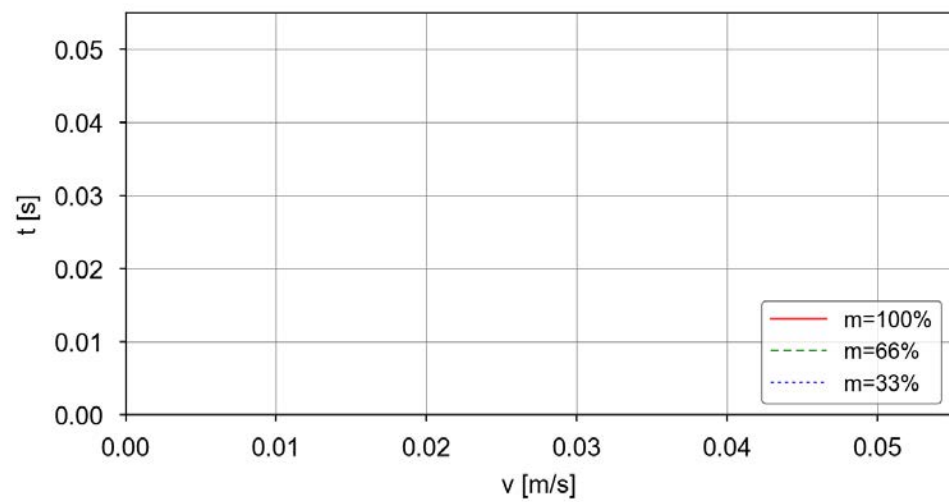
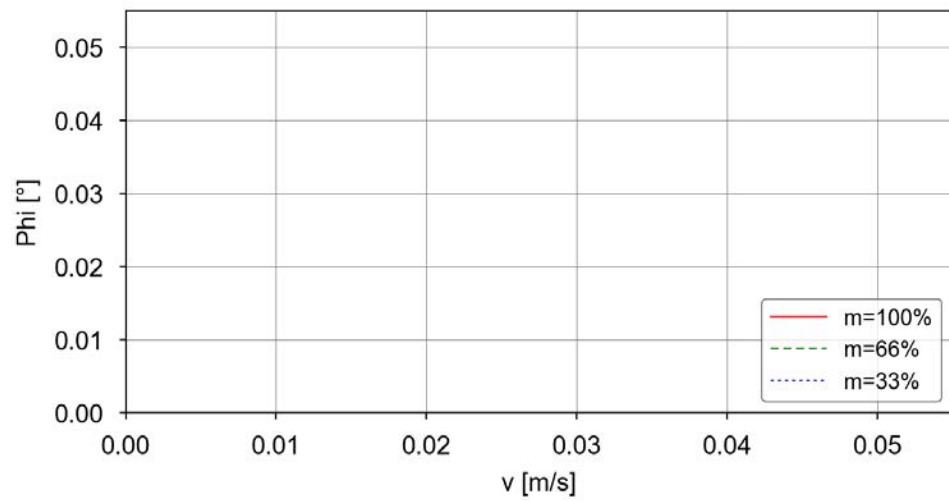
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

13 IRB 4600

13.1 IRB 4600 2.05 m 45 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	60.5	0.58
2	37.1	0.32
3	25.3	0.2

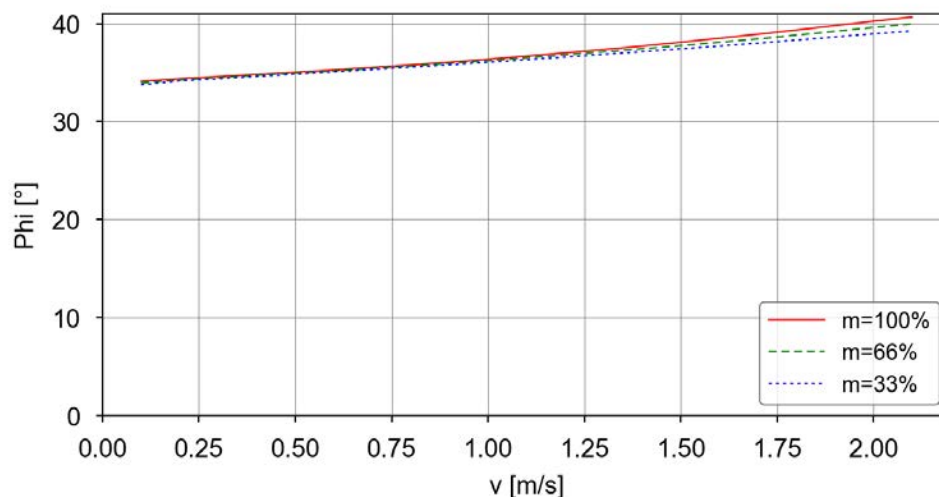
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.684
1	0.684	1.367
2	1.367	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

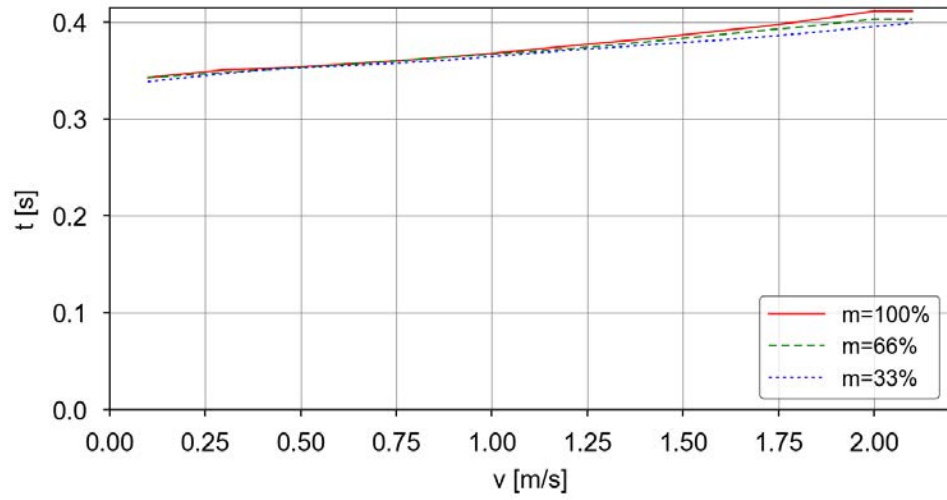


Continues on next page

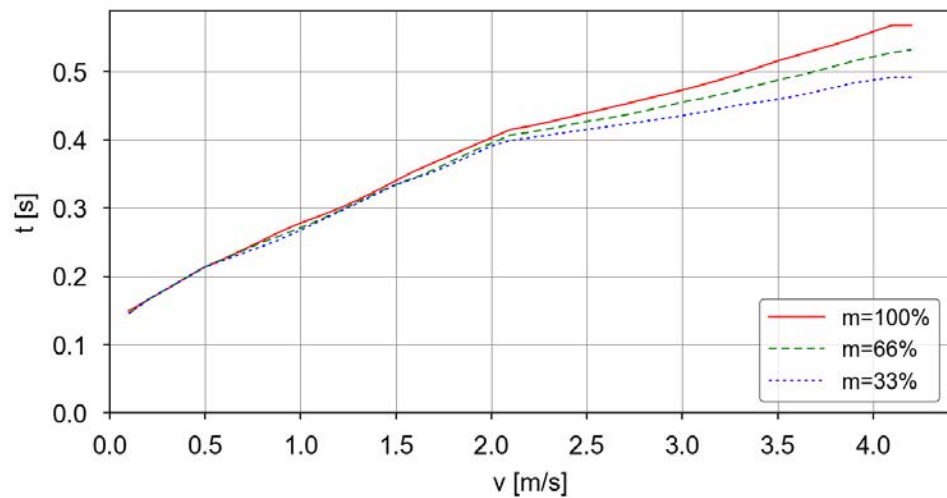
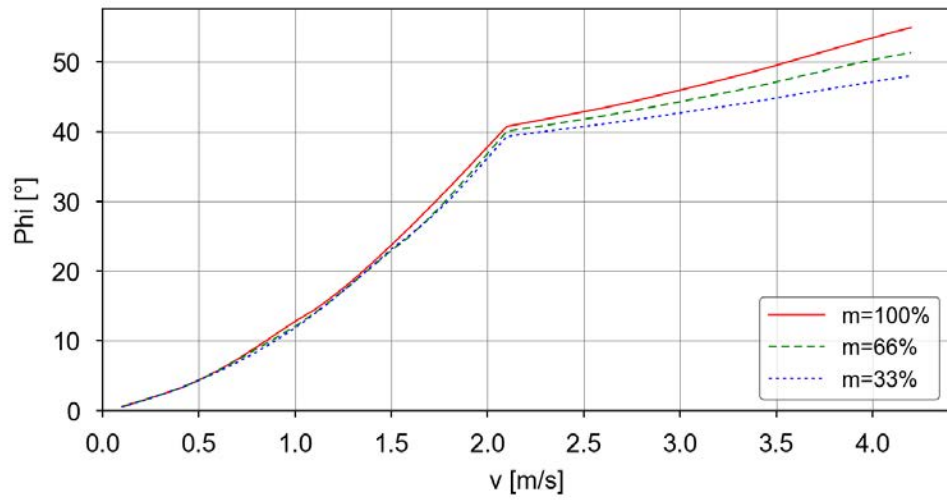
13 IRB 4600

13.1 IRB 4600 2.05 m 45 kg

Continued

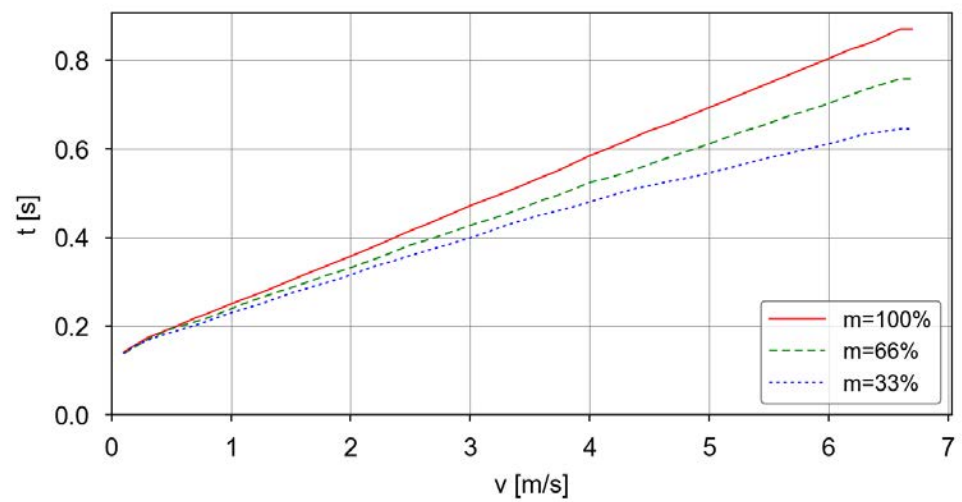
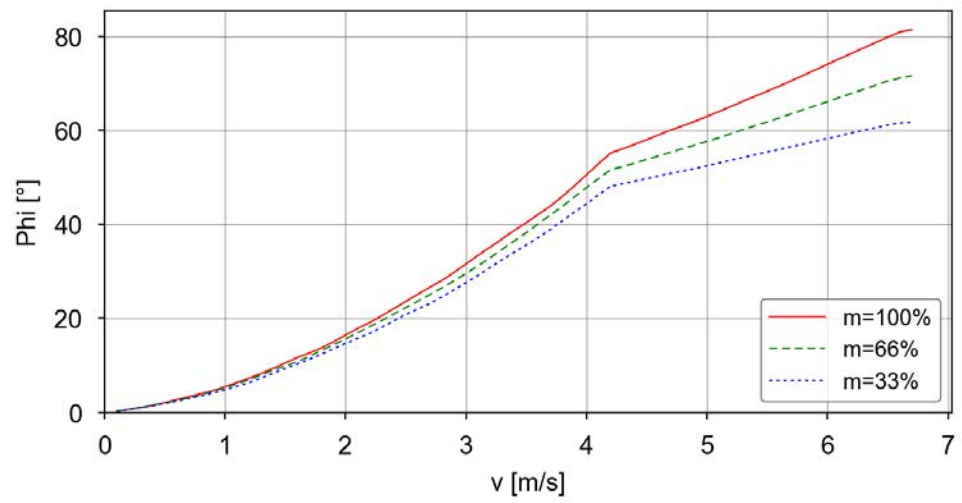


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

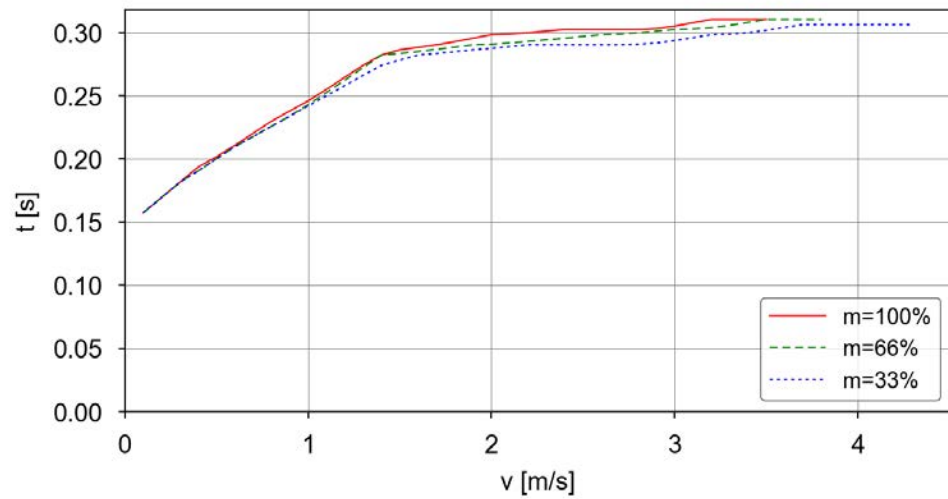
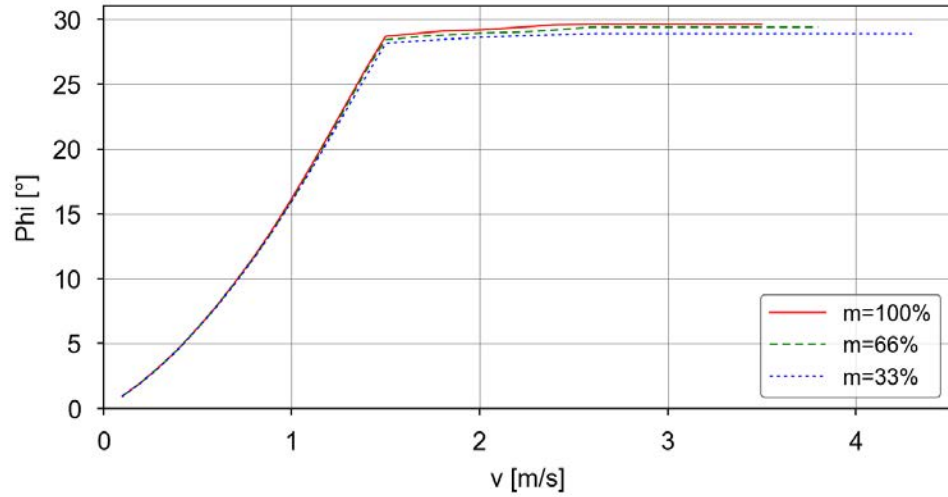
13 IRB 4600

13.1 IRB 4600 2.05 m 45 kg

Continued

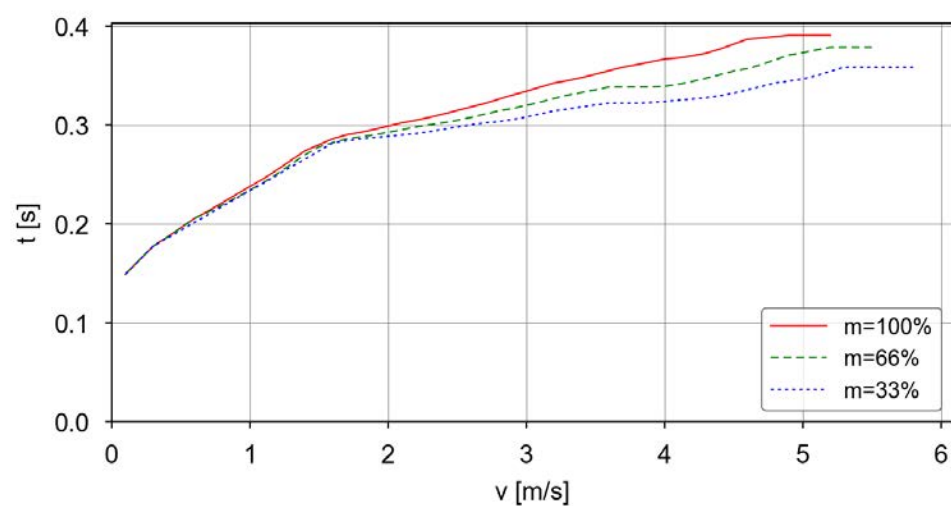
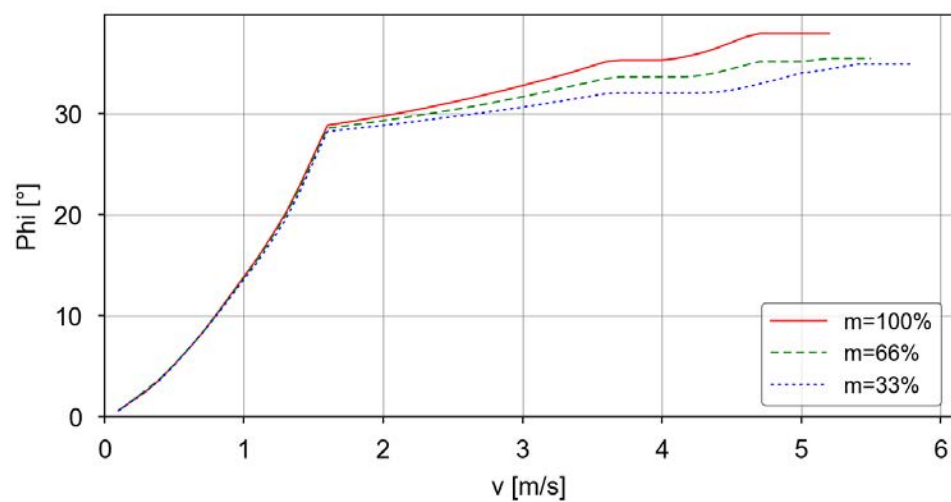
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



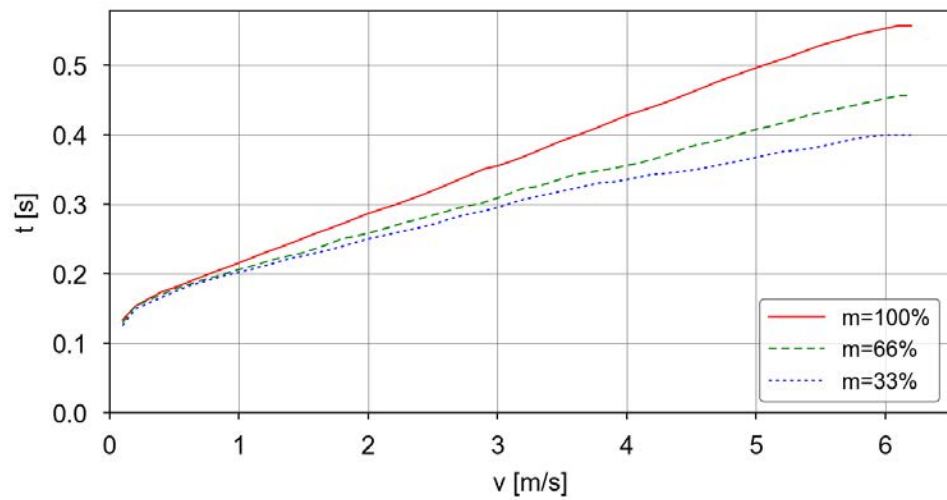
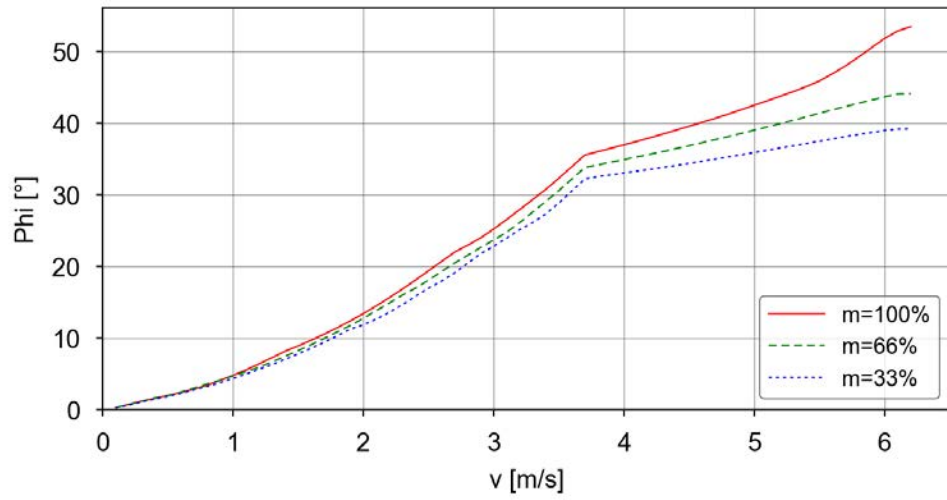
Continues on next page

13 IRB 4600

13.1 IRB 4600 2.05 m 45 kg

Continued

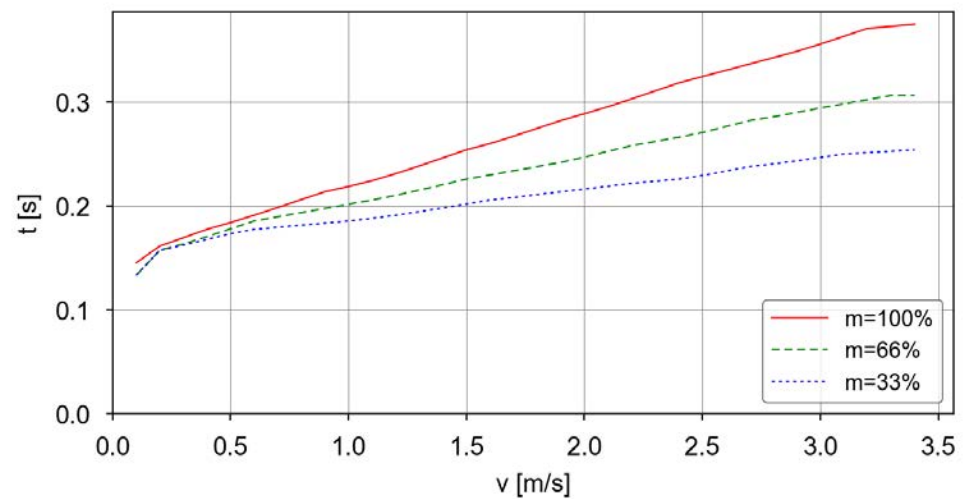
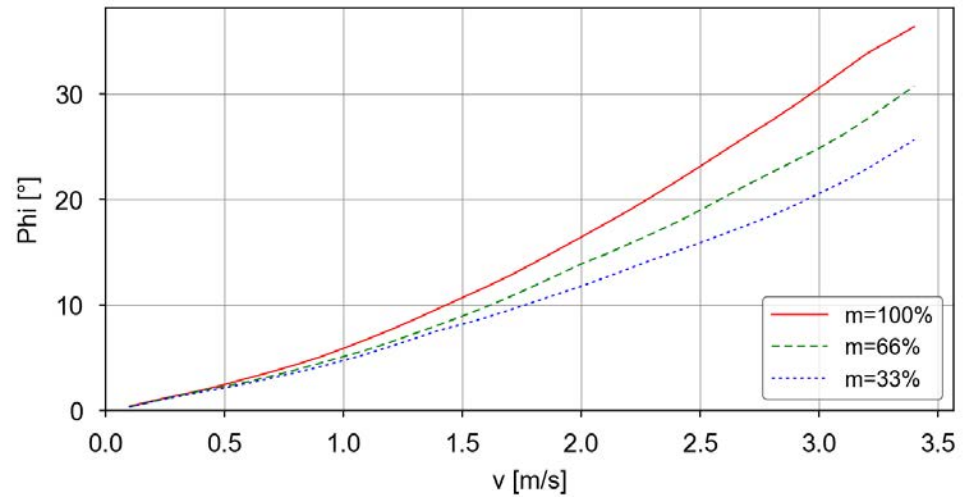
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



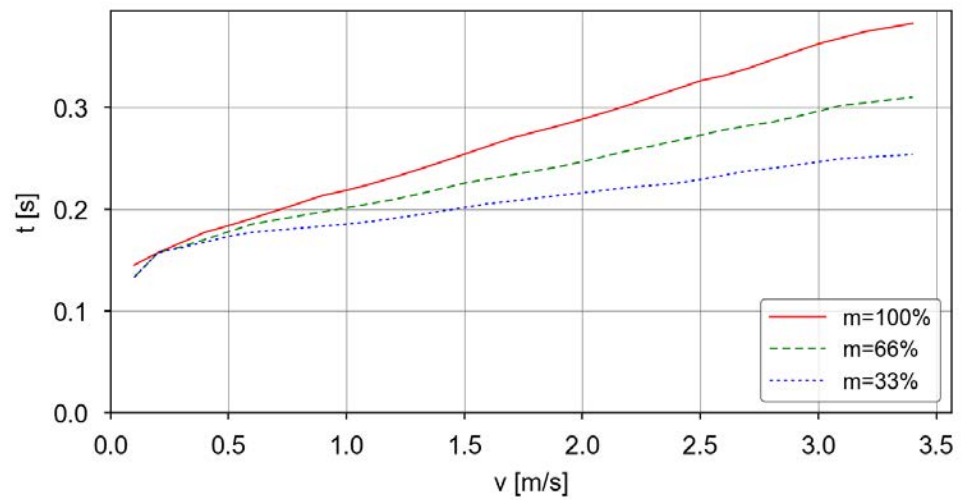
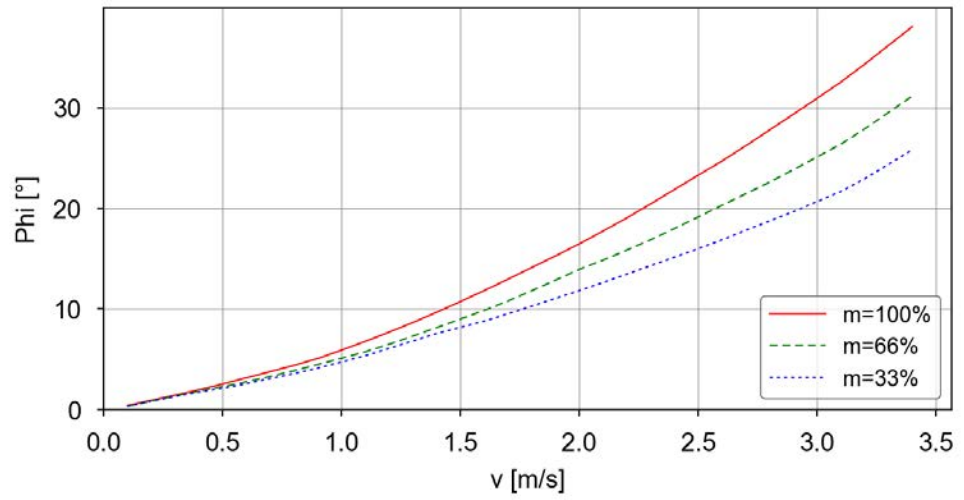
Continues on next page

13 IRB 4600

13.1 IRB 4600 2.05 m 45 kg

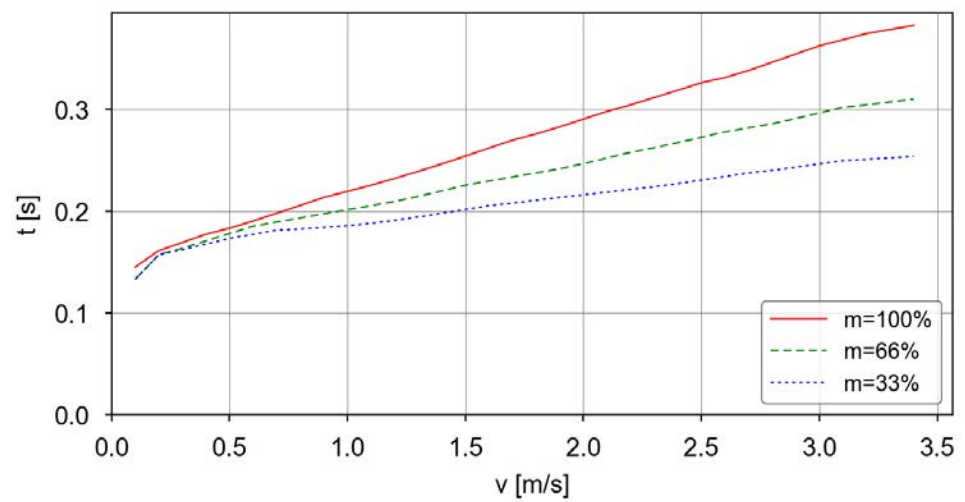
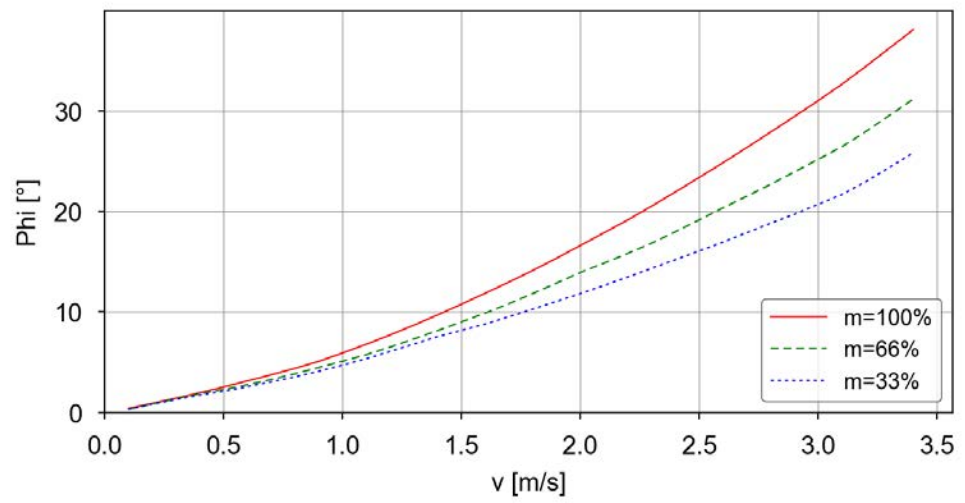
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



13 IRB 4600

13.2 IRB 4600 2.05 m 60 kg

13.2 IRB 4600 2.05 m 60 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	62.9	0.66
2	40.3	0.37
3	32.8	0.27

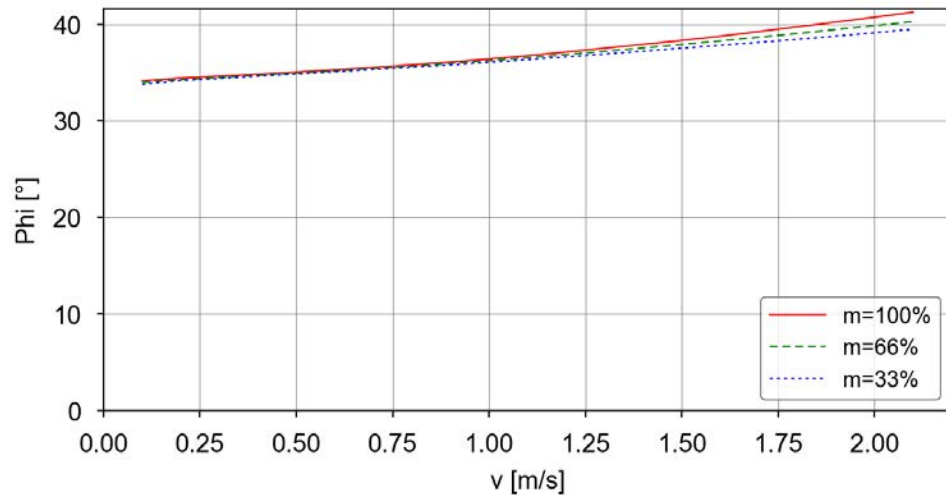
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

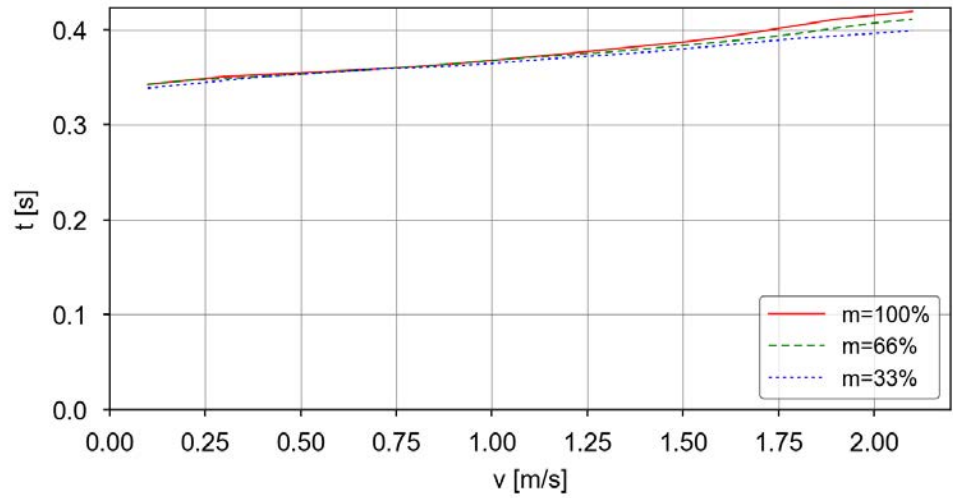
Zone	wcp min (m)	wcp max (m)
0	0	0.684
1	0.684	1.367
2	1.367	max reach

Category 1, Axis 1

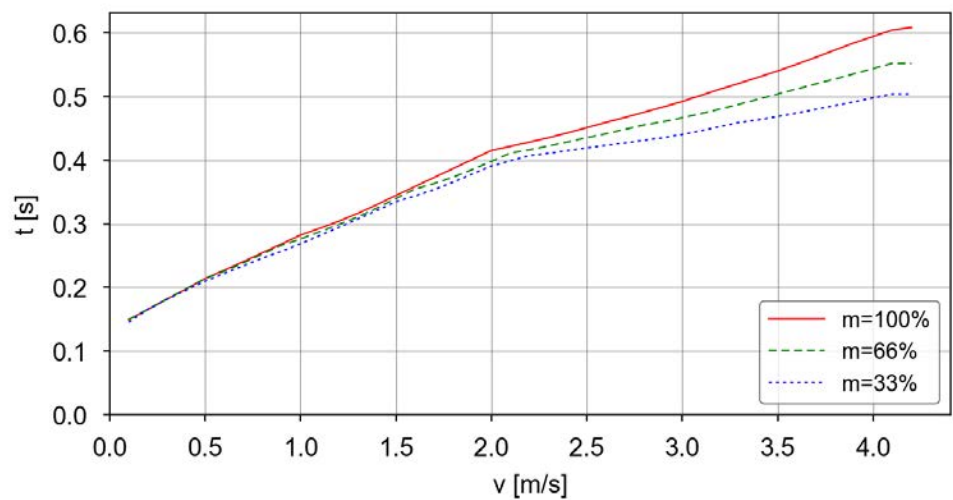
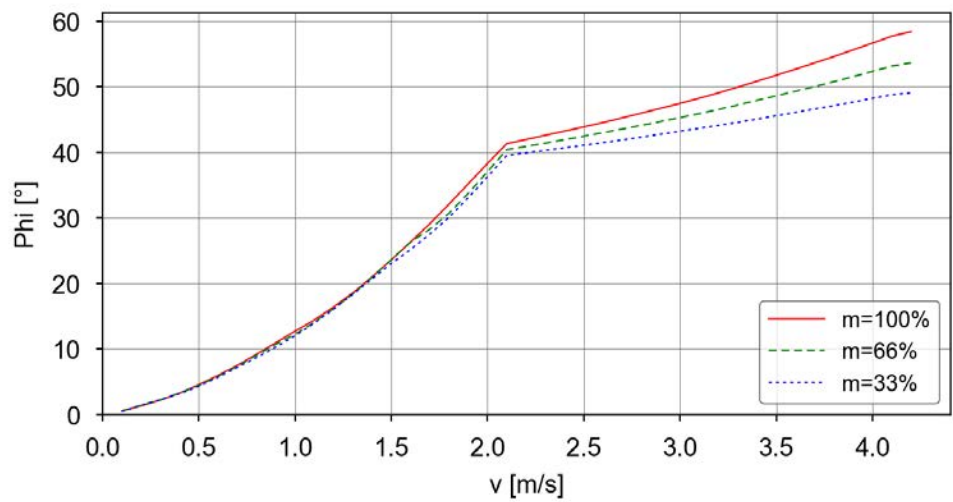
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



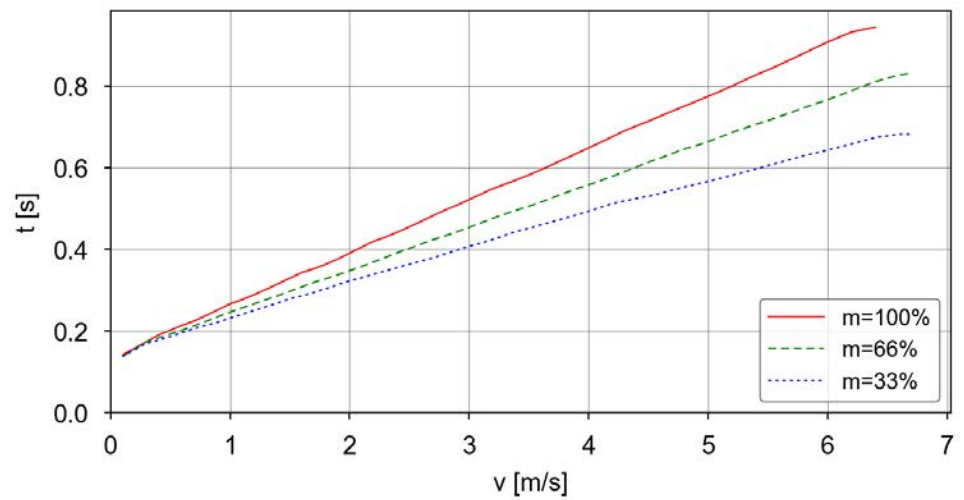
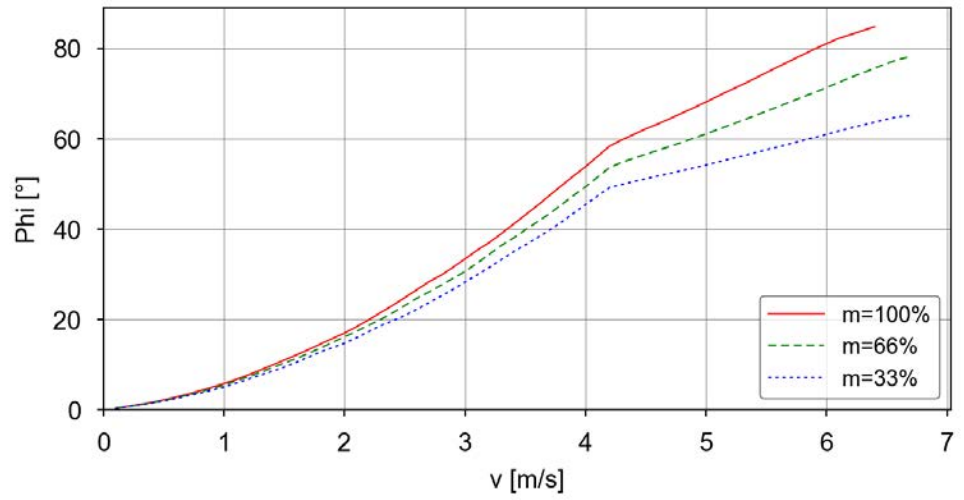
Continues on next page

13 IRB 4600

13.2 IRB 4600 2.05 m 60 kg

Continued

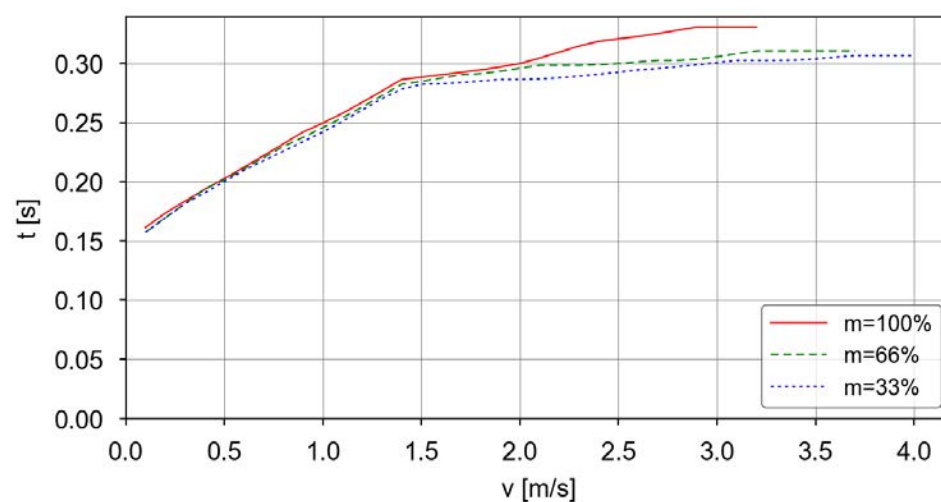
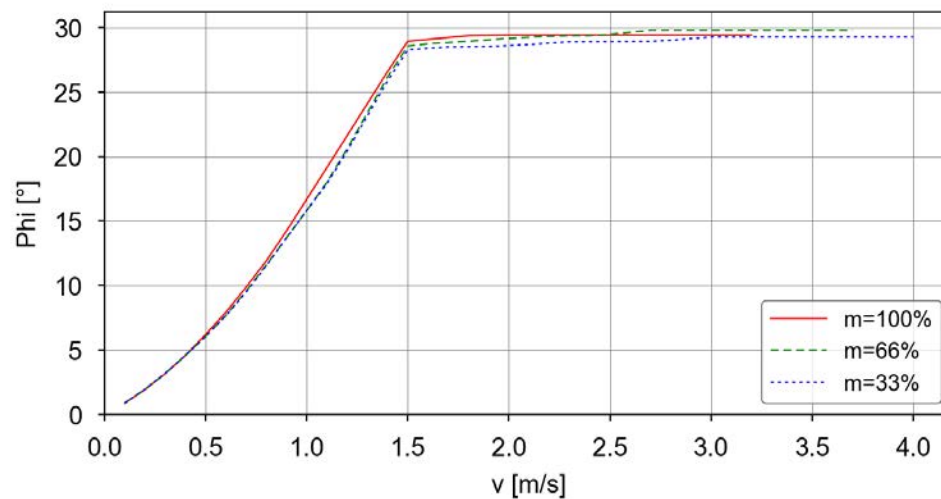
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



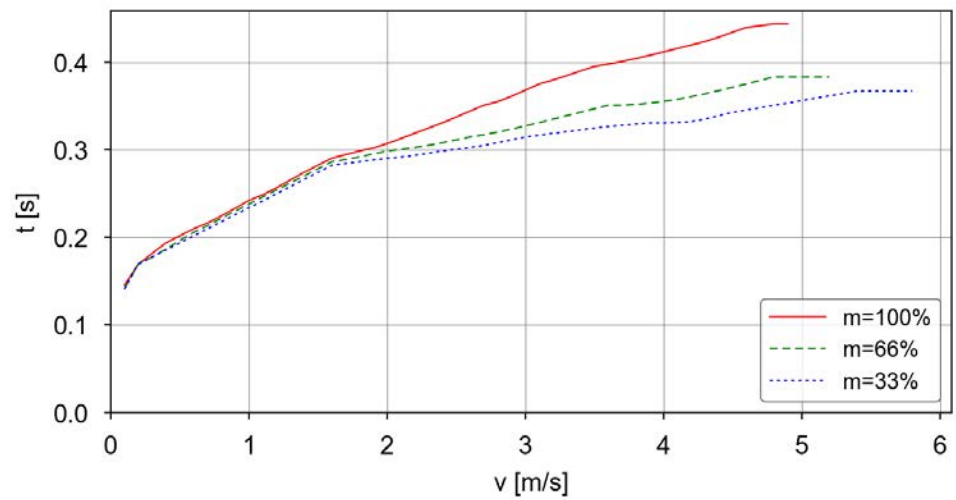
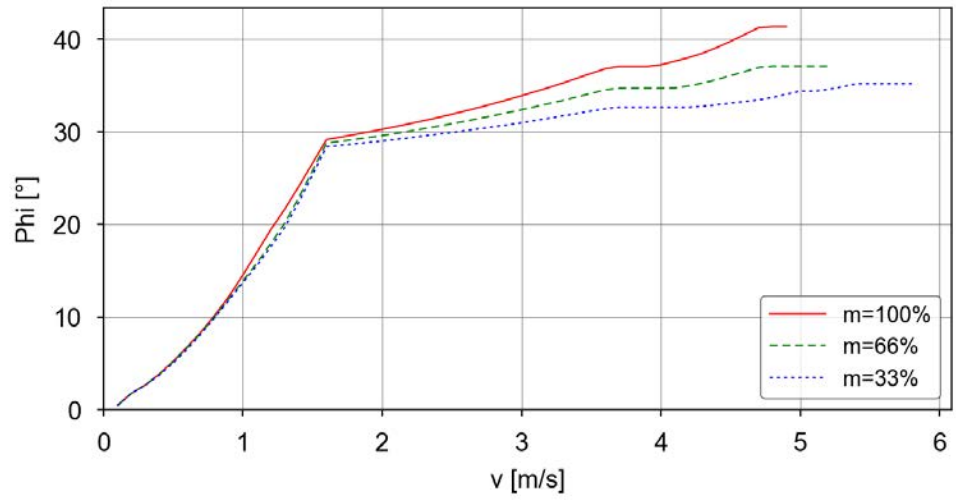
Continues on next page

13 IRB 4600

13.2 IRB 4600 2.05 m 60 kg

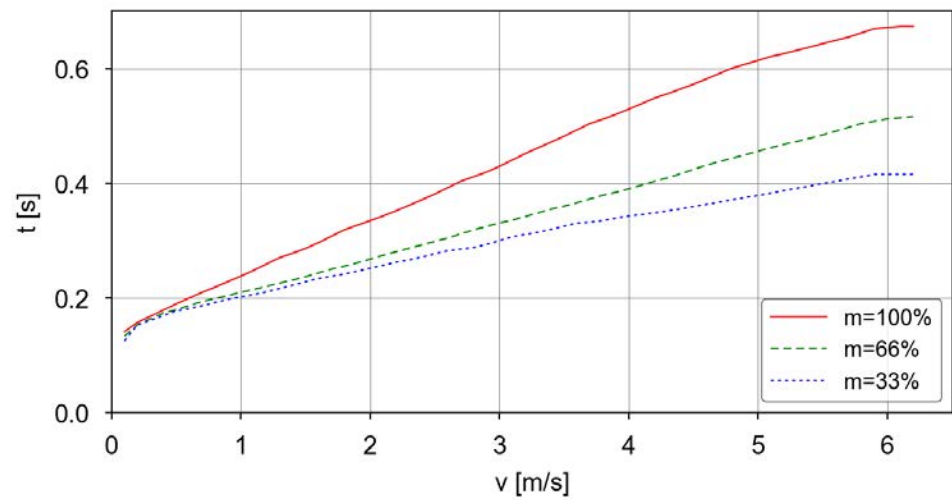
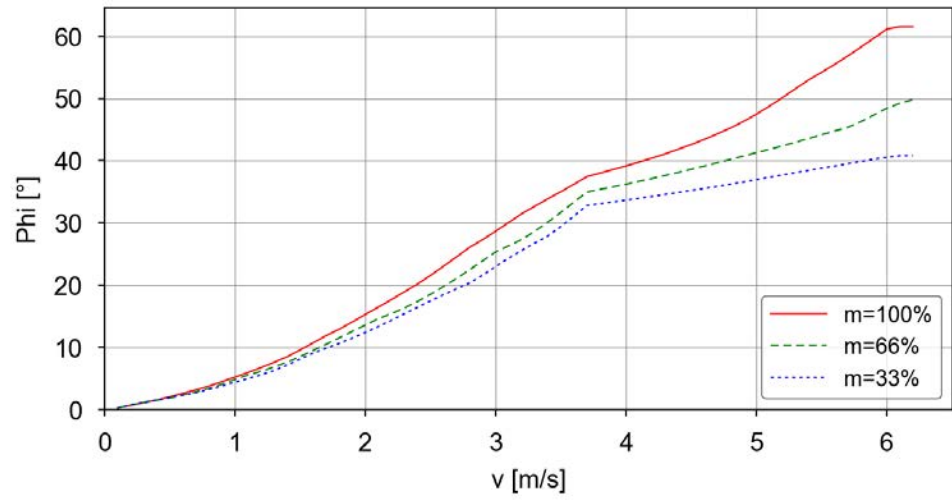
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

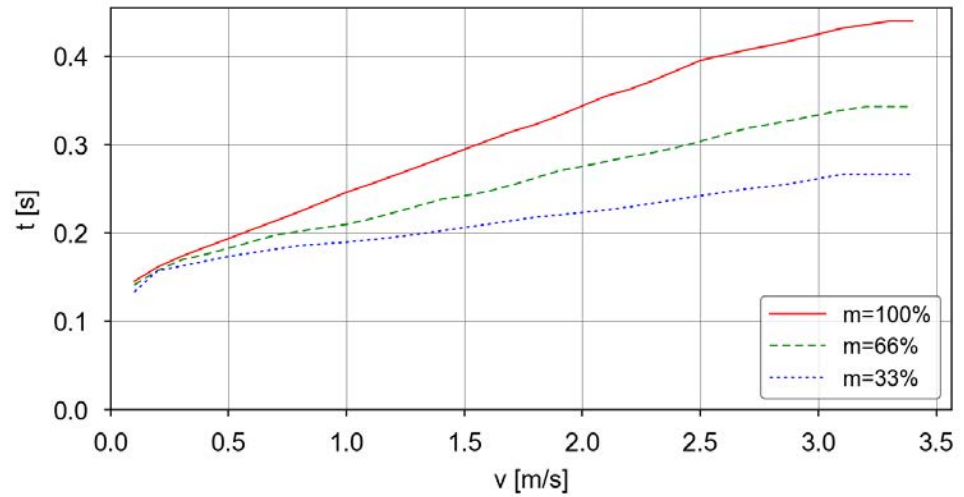
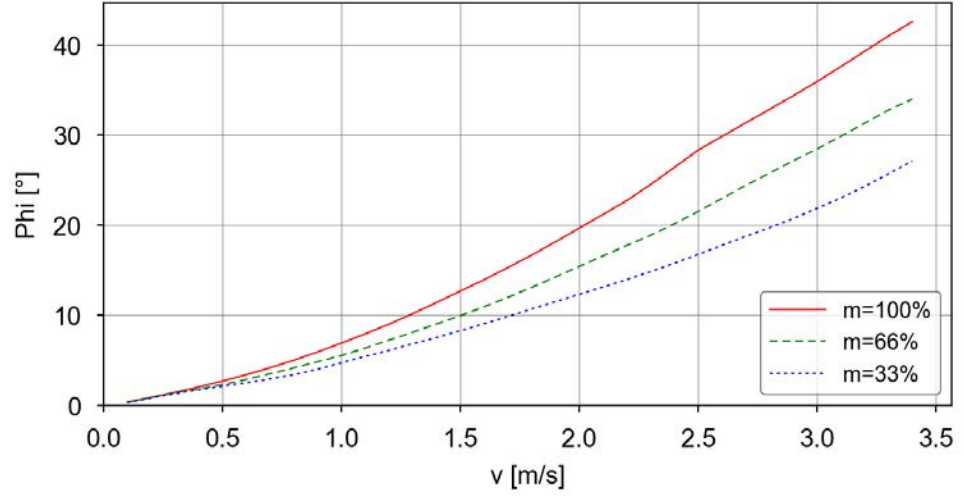
13 IRB 4600

13.2 IRB 4600 2.05 m 60 kg

Continued

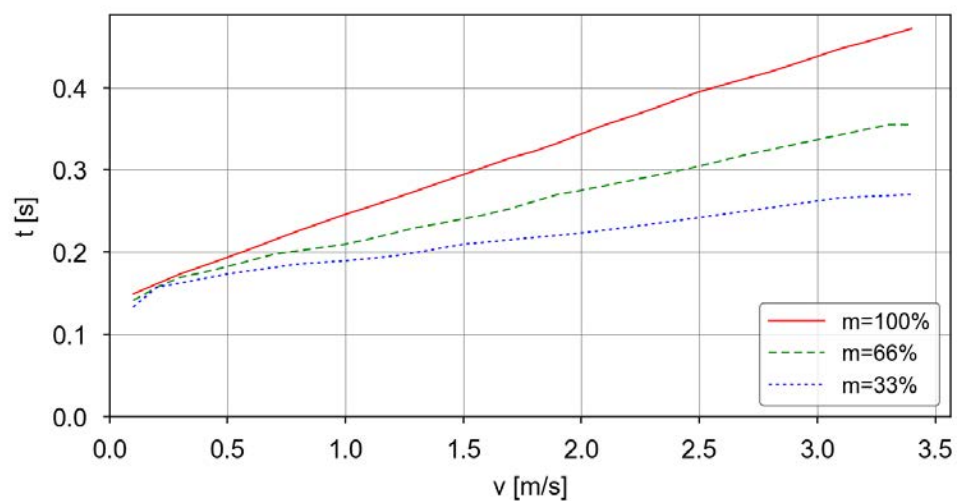
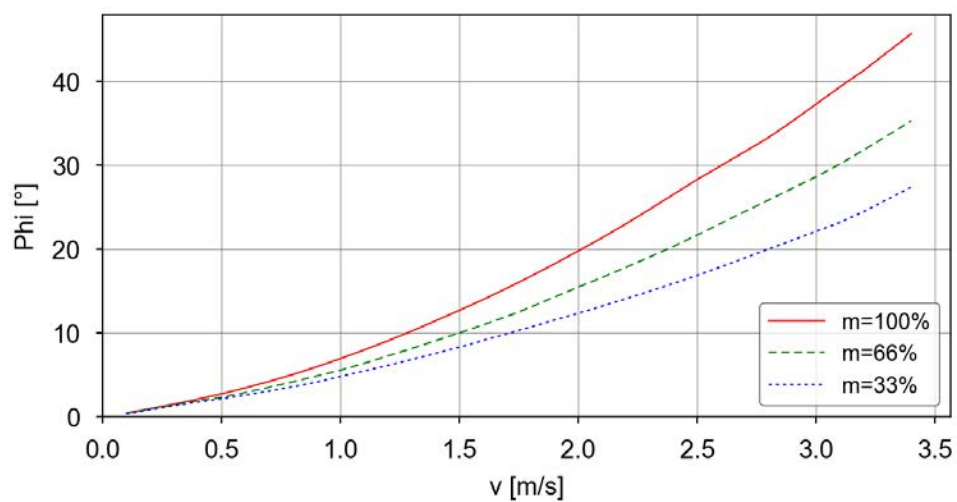
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



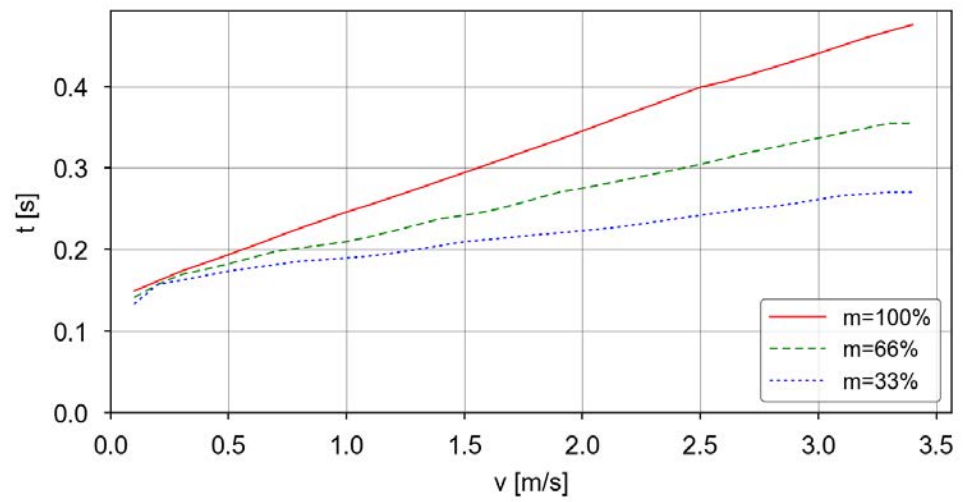
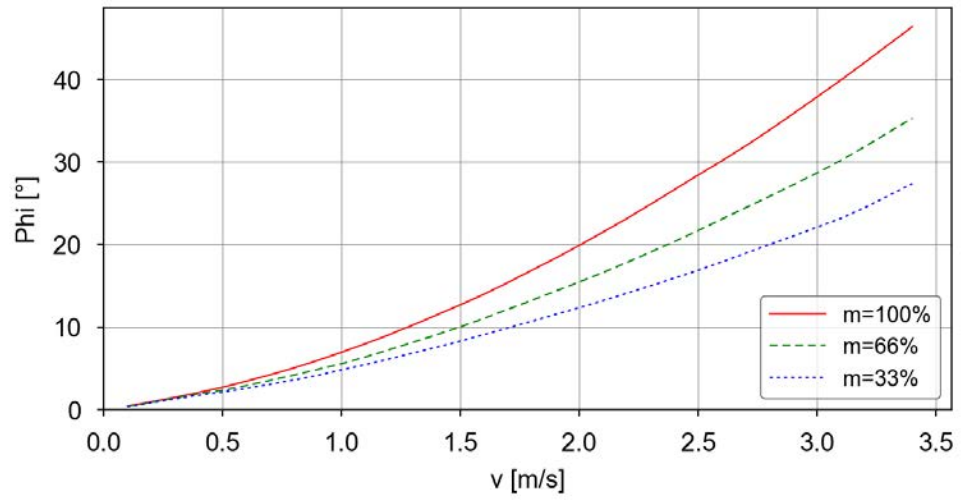
Continues on next page

13 IRB 4600

13.2 IRB 4600 2.05 m 60 kg

Continued

Extension zone 2, stopping distance and stopping time



13.3 IRB 4600 2.50 m 20 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	53.9	0.51
2	33.9	0.29
3	22.2	0.17

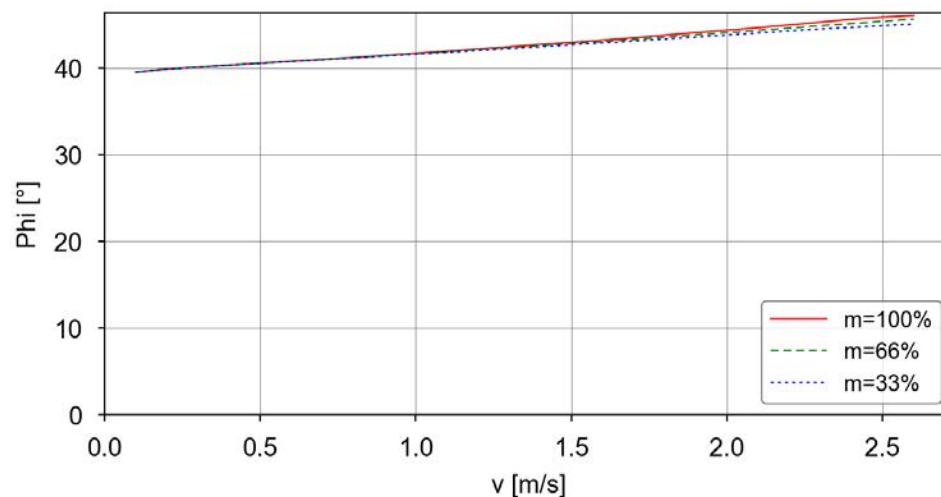
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.838
1	0.838	1.675
2	1.675	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

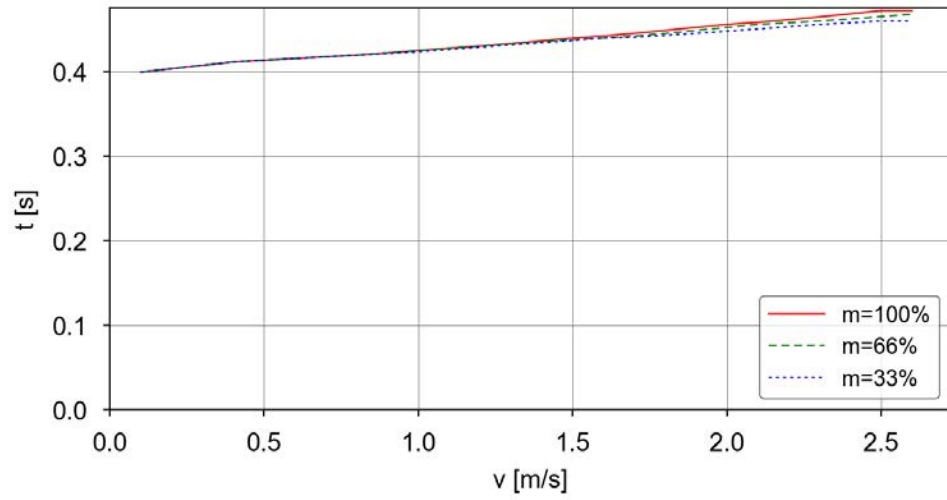


Continues on next page

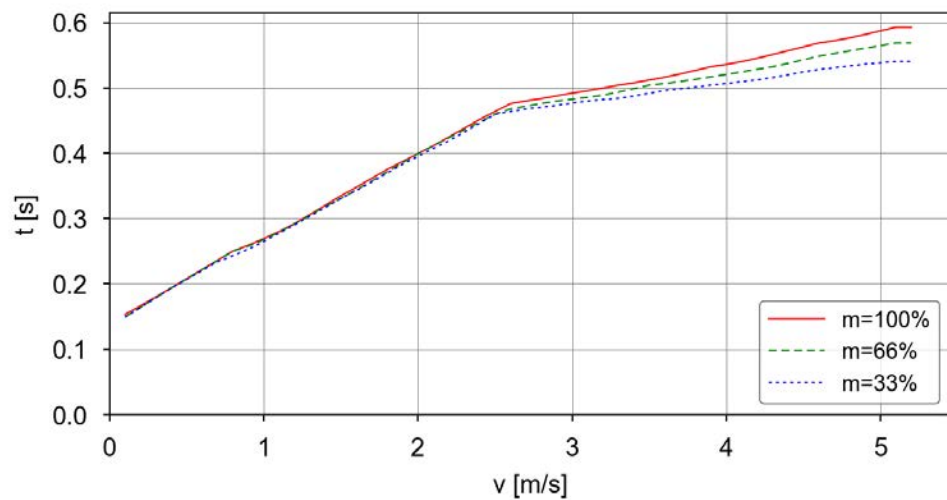
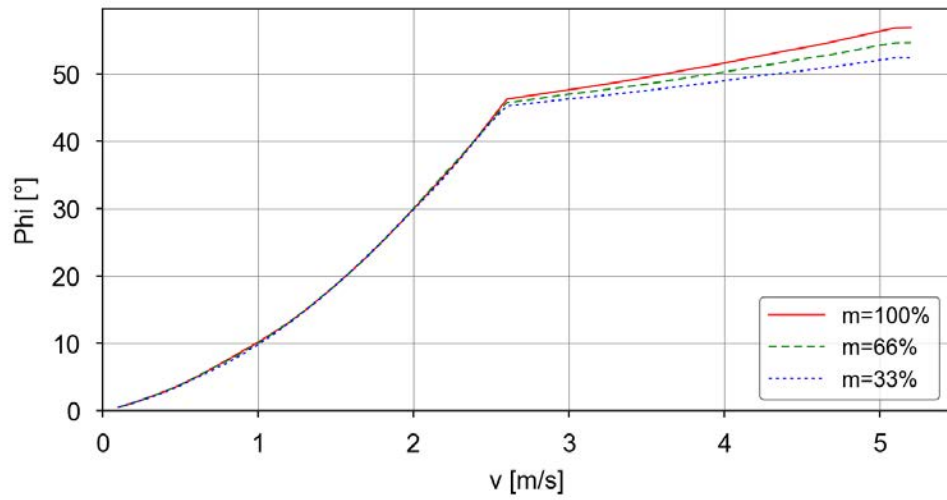
13 IRB 4600

13.3 IRB 4600 2.50 m 20 kg

Continued

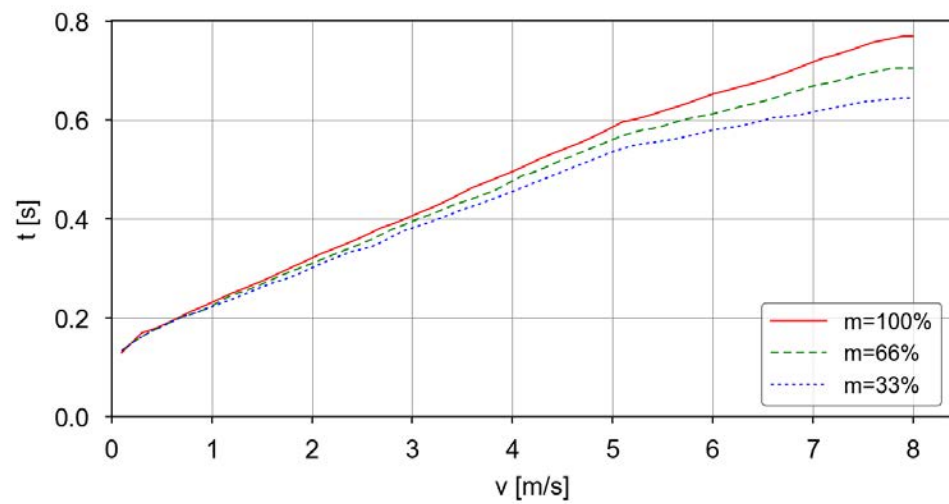
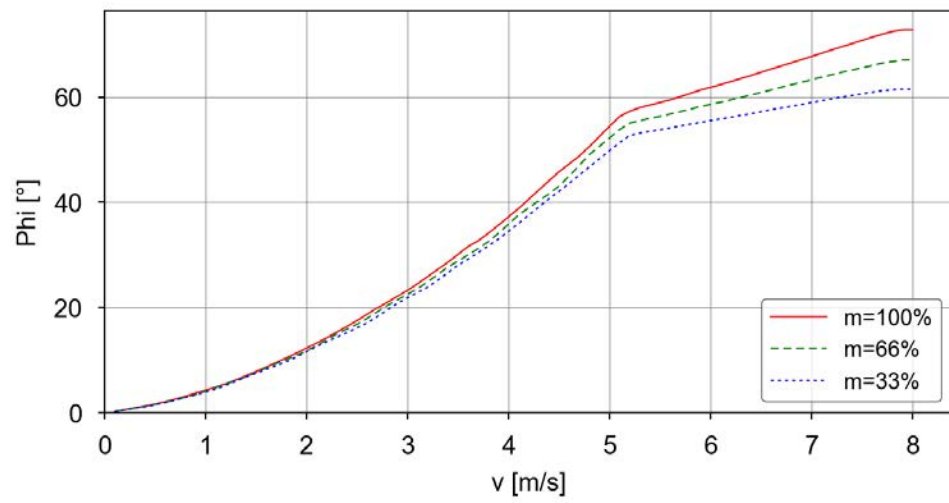


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

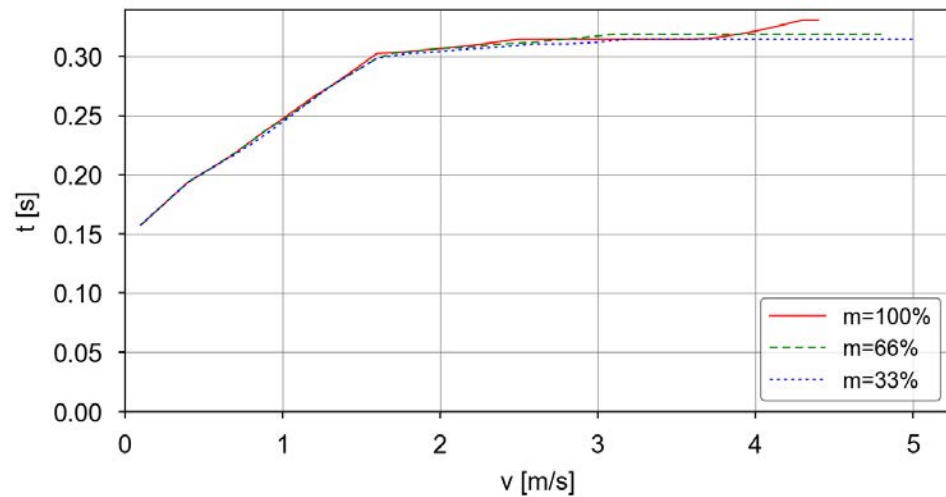
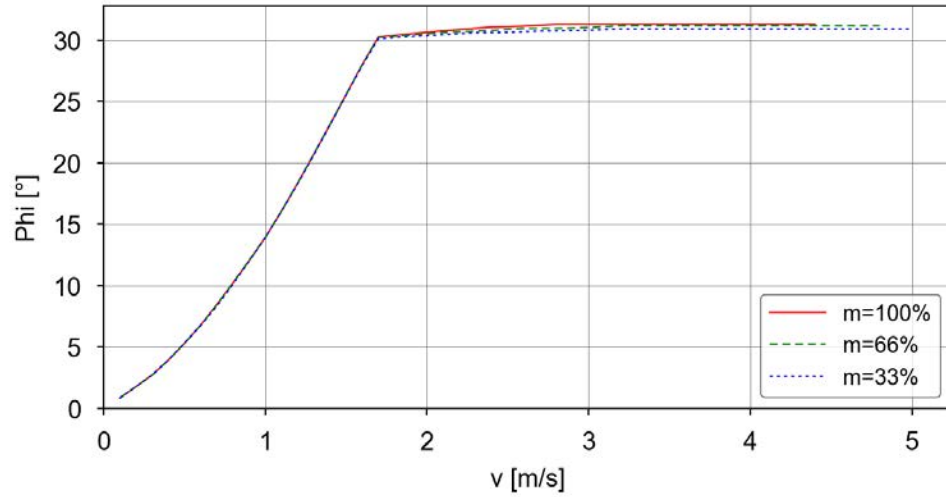
13 IRB 4600

13.3 IRB 4600 2.50 m 20 kg

Continued

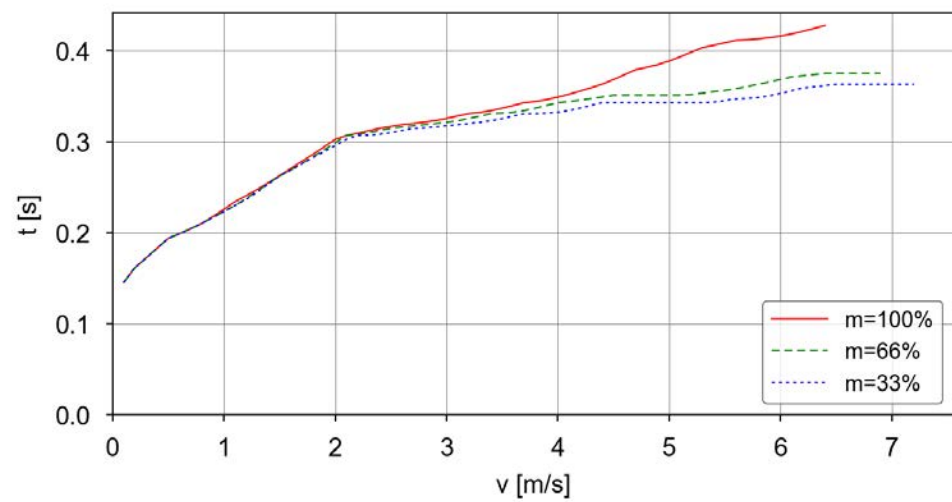
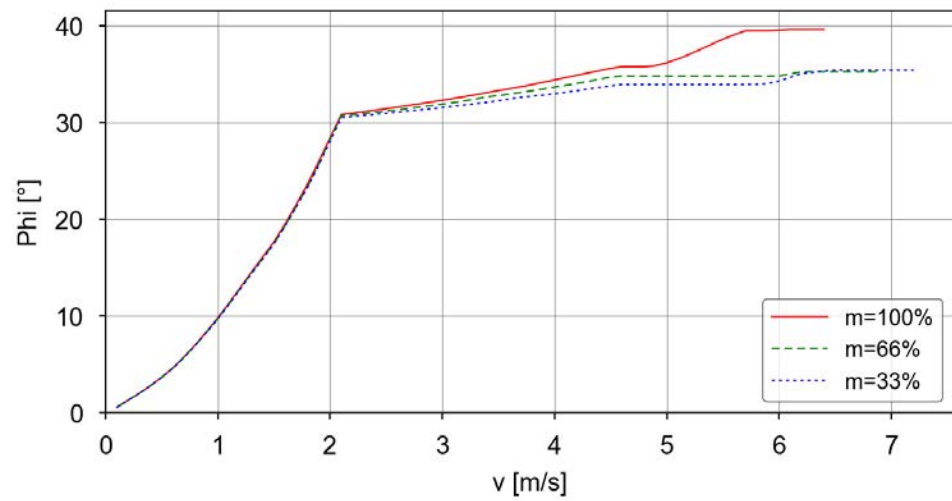
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



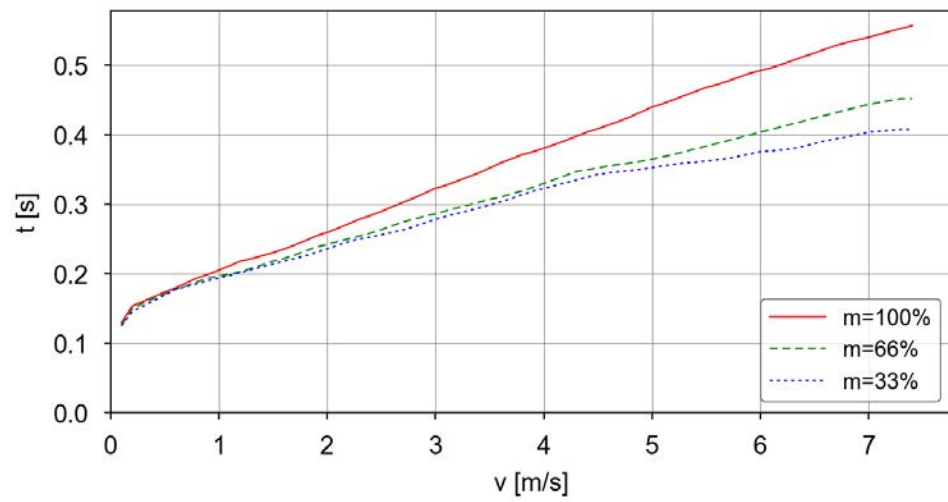
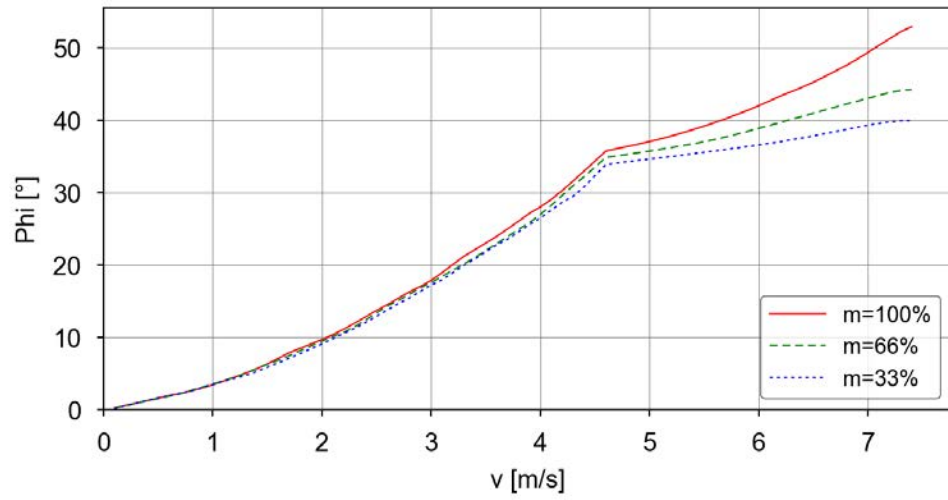
Continues on next page

13 IRB 4600

13.3 IRB 4600 2.50 m 20 kg

Continued

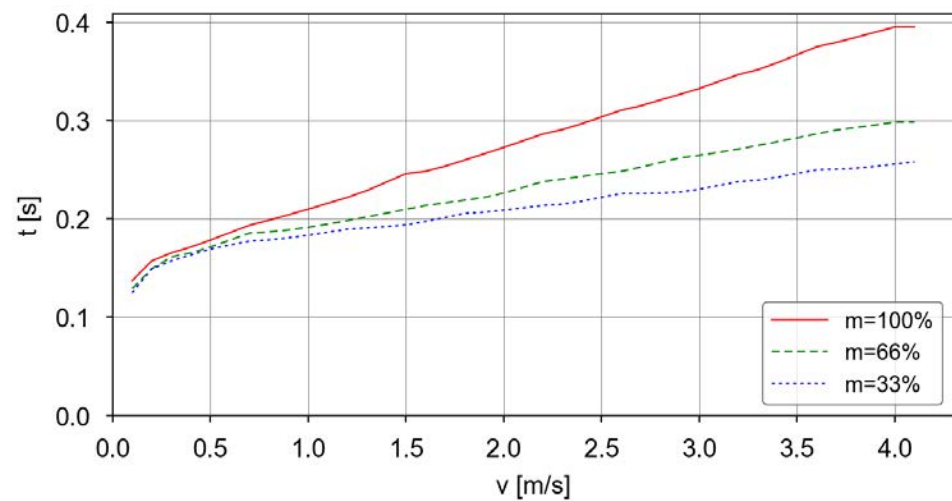
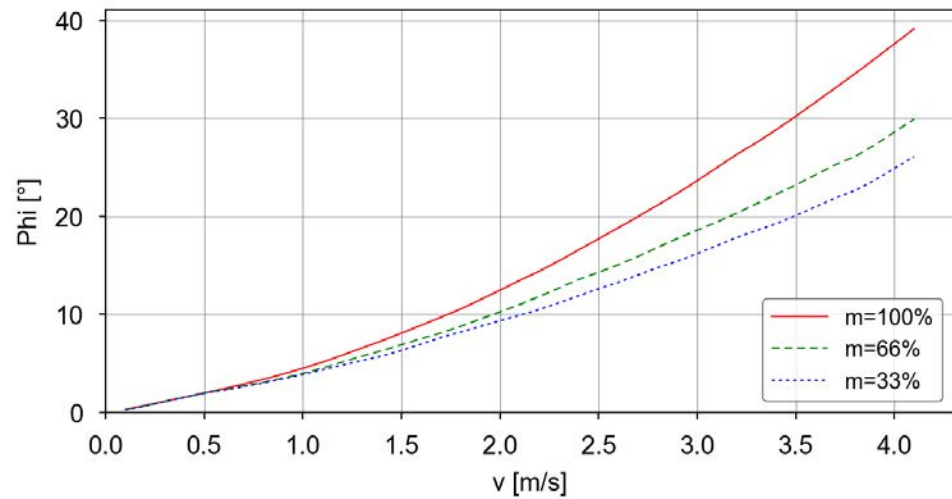
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



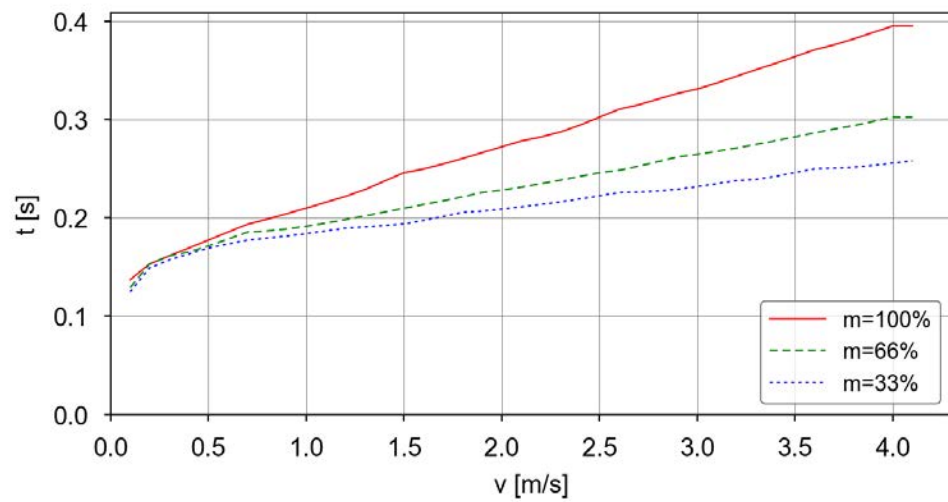
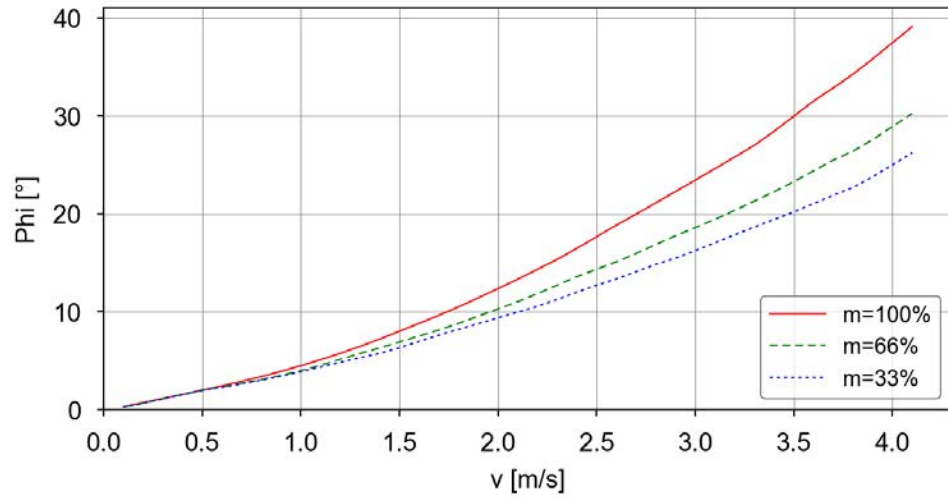
Continues on next page

13 IRB 4600

13.3 IRB 4600 2.50 m 20 kg

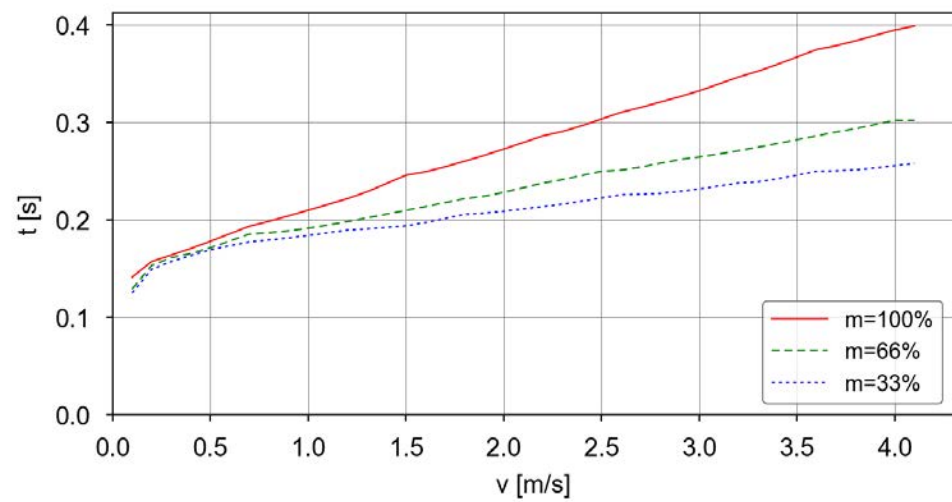
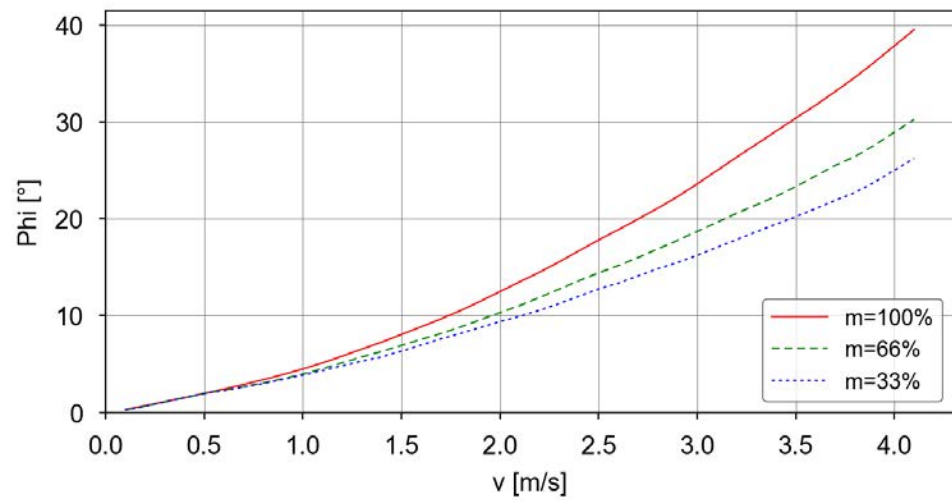
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



13 IRB 4600

13.4 IRB 4600 2.55 m 40 kg

13.4 IRB 4600 2.55 m 40 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	61.7	0.71
2	41.9	0.37
3	30.2	0.25

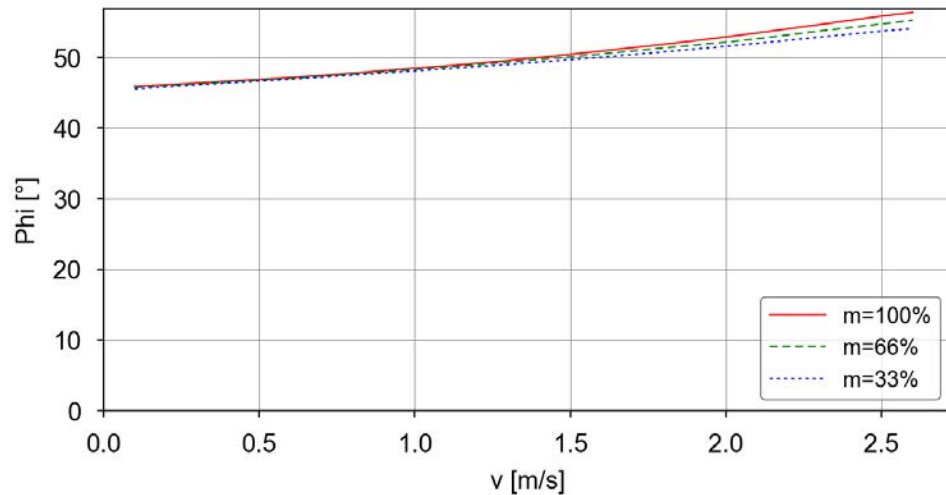
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

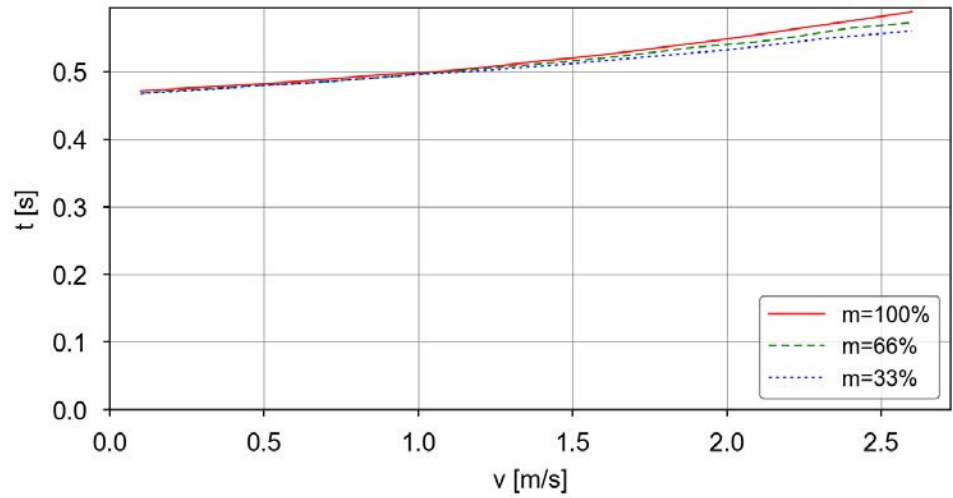
Zone	wcp min (m)	wcp max (m)
0	0	0.851
1	0.851	1.701
2	1.701	max reach

Category 1, Axis 1

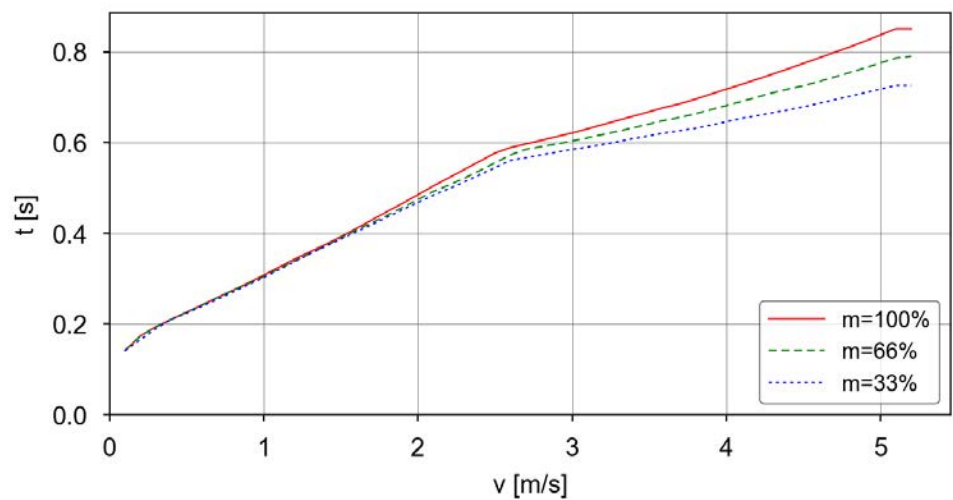
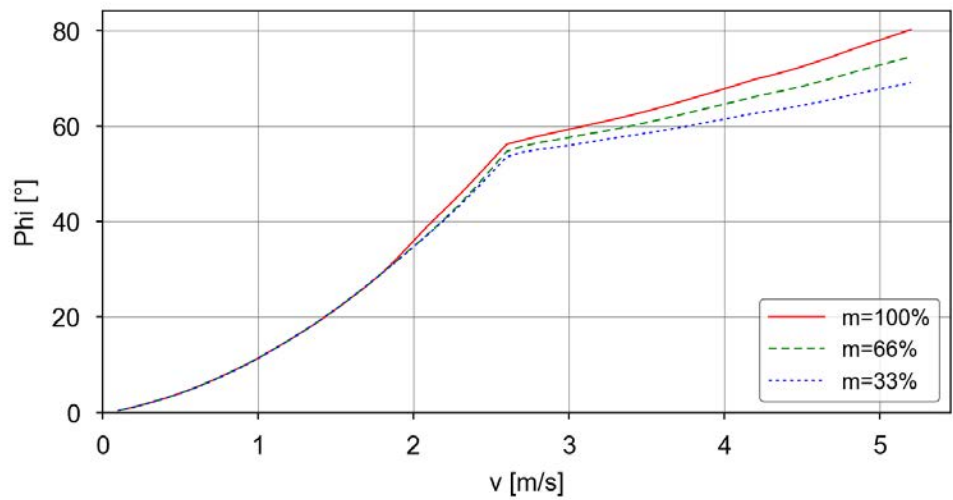
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



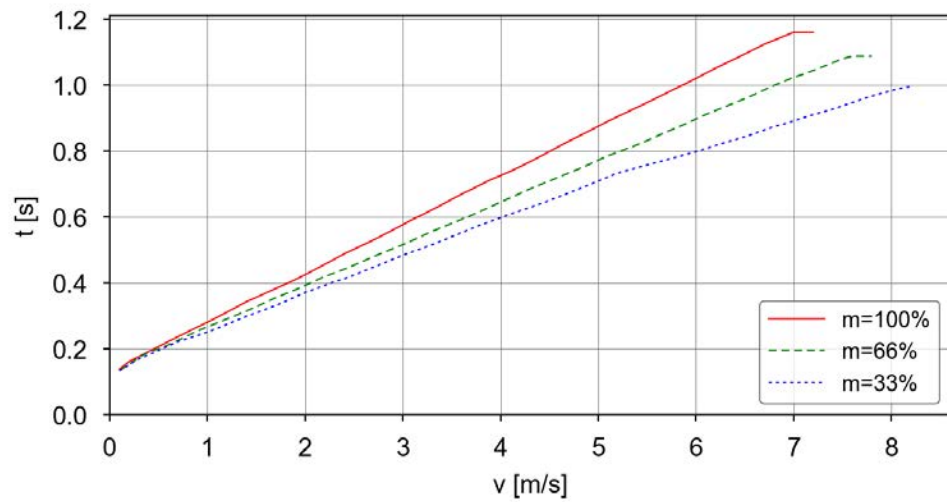
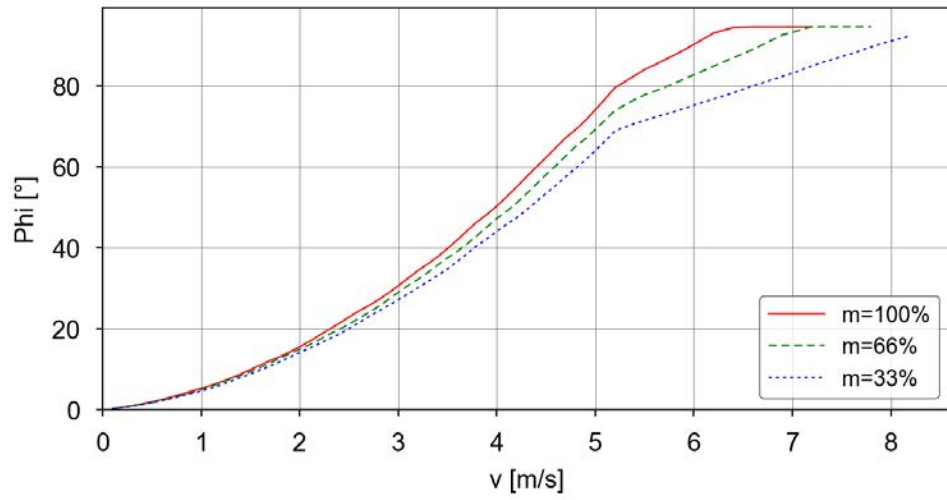
Continues on next page

13 IRB 4600

13.4 IRB 4600 2.55 m 40 kg

Continued

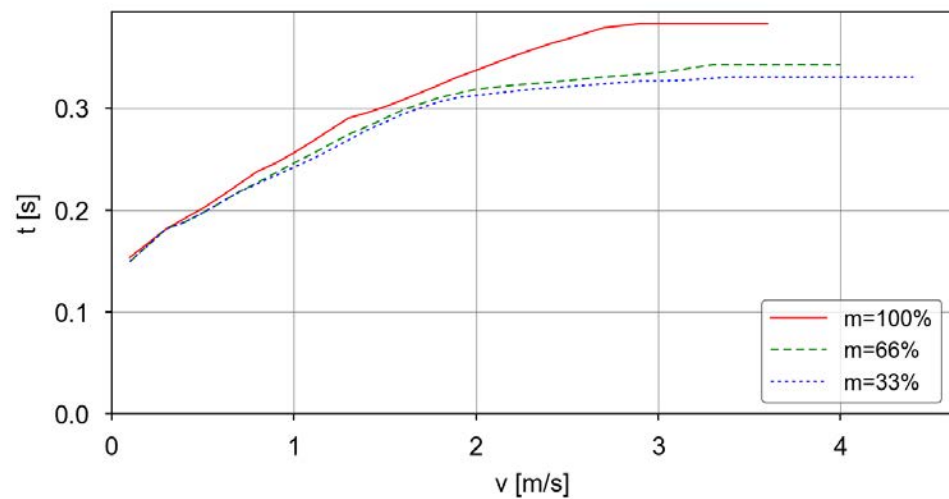
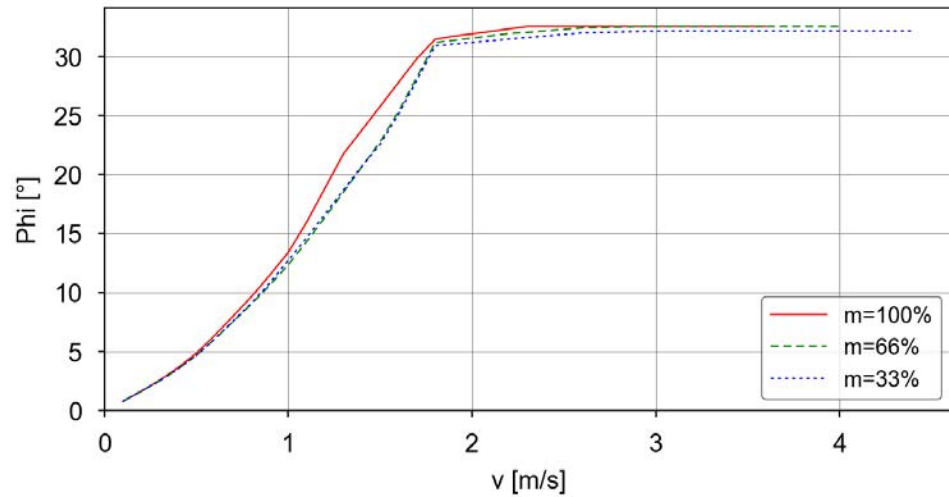
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



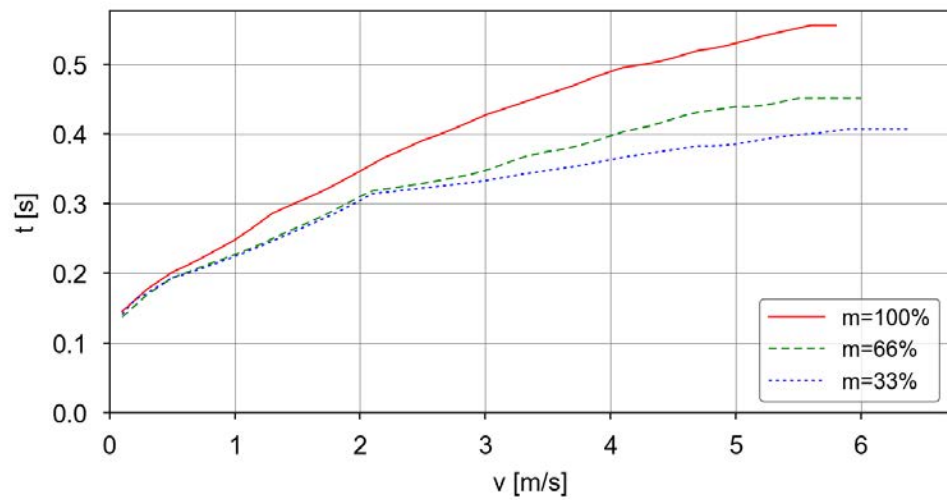
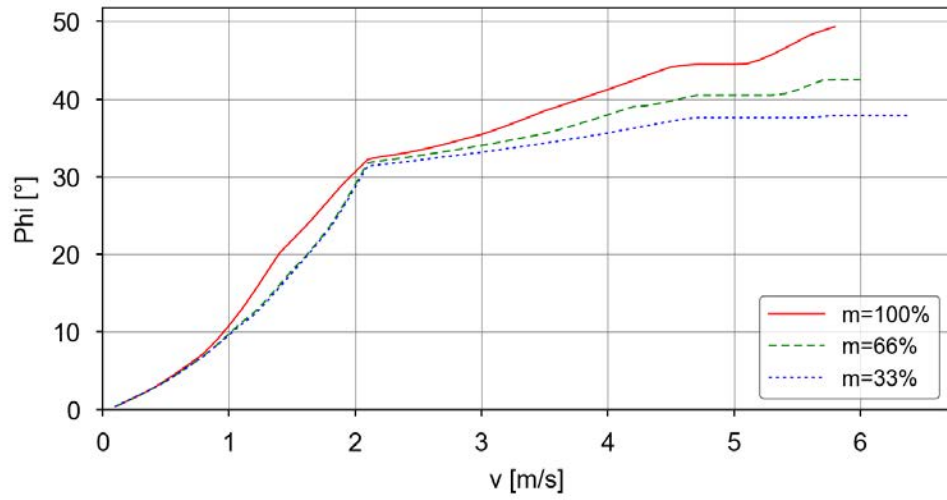
Continues on next page

13 IRB 4600

13.4 IRB 4600 2.55 m 40 kg

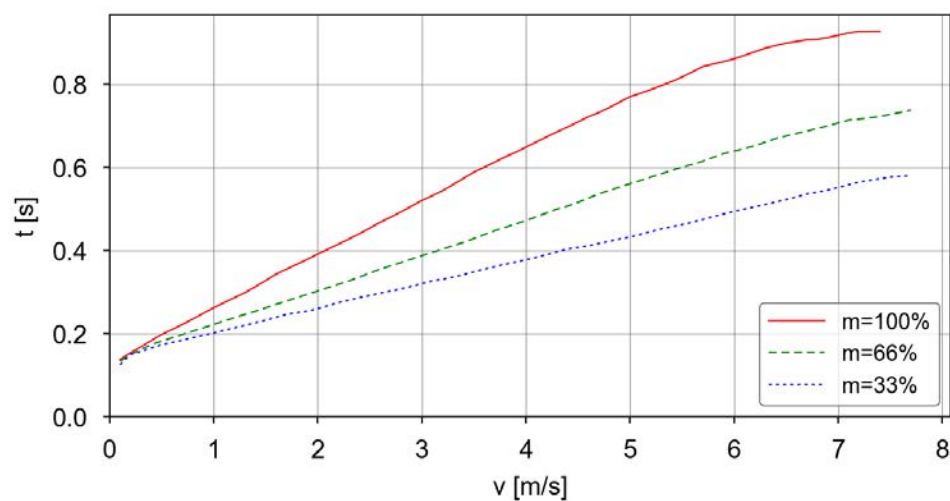
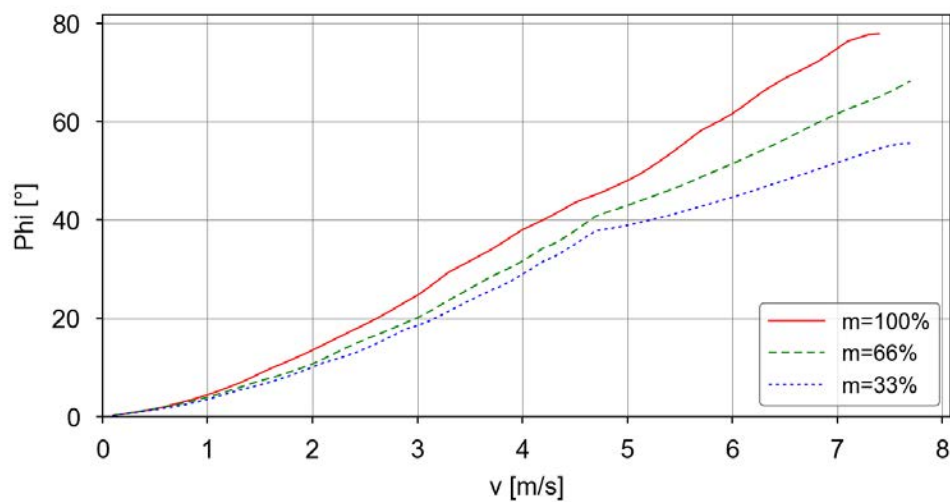
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

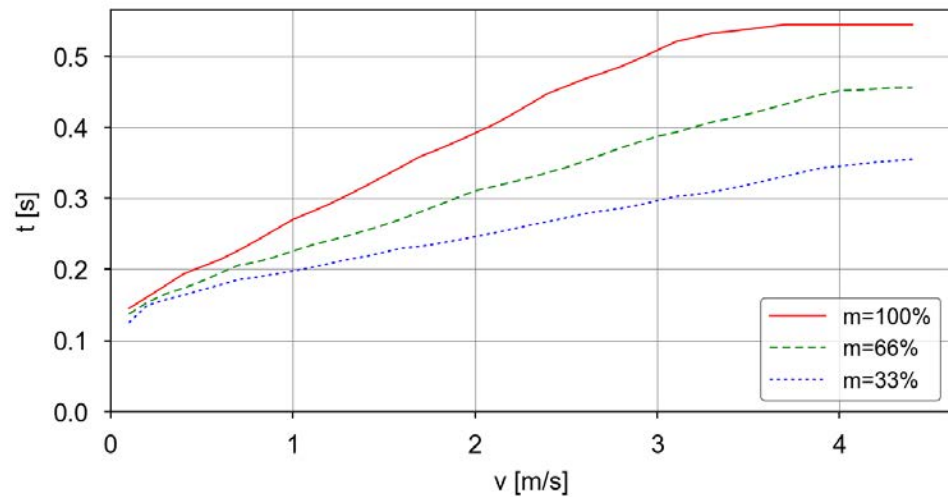
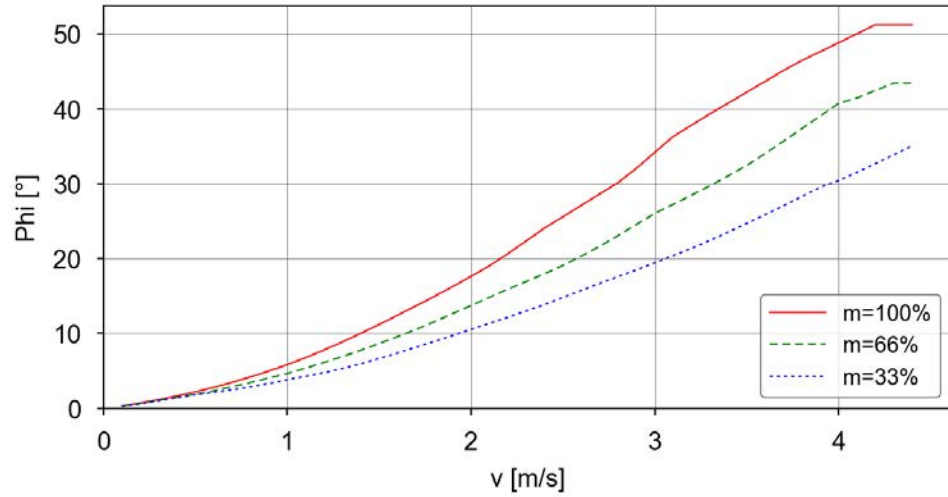
13 IRB 4600

13.4 IRB 4600 2.55 m 40 kg

Continued

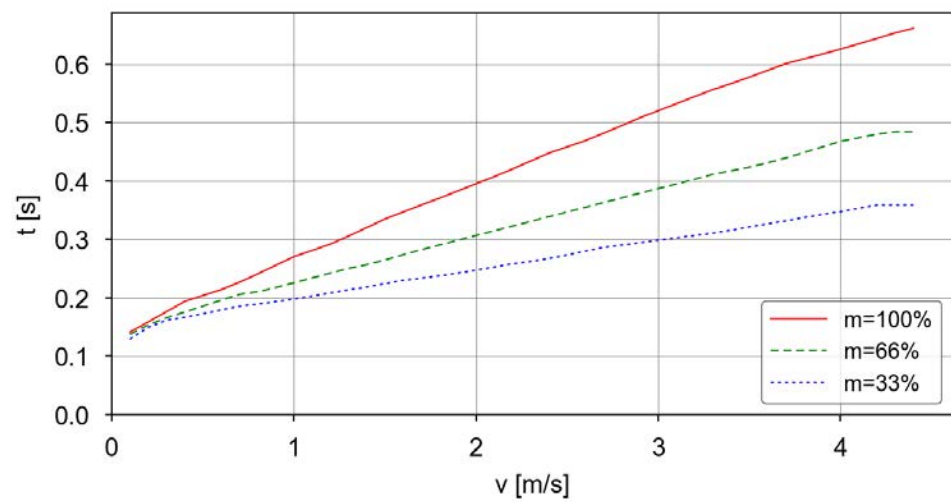
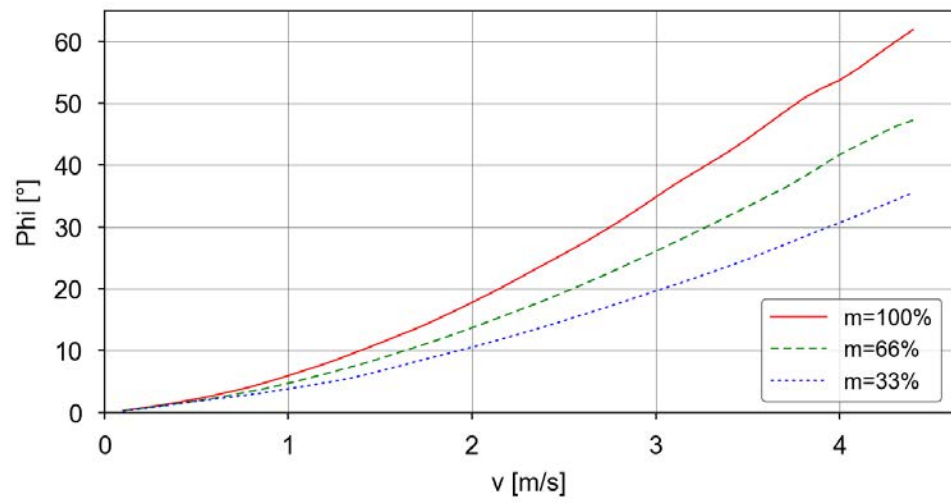
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



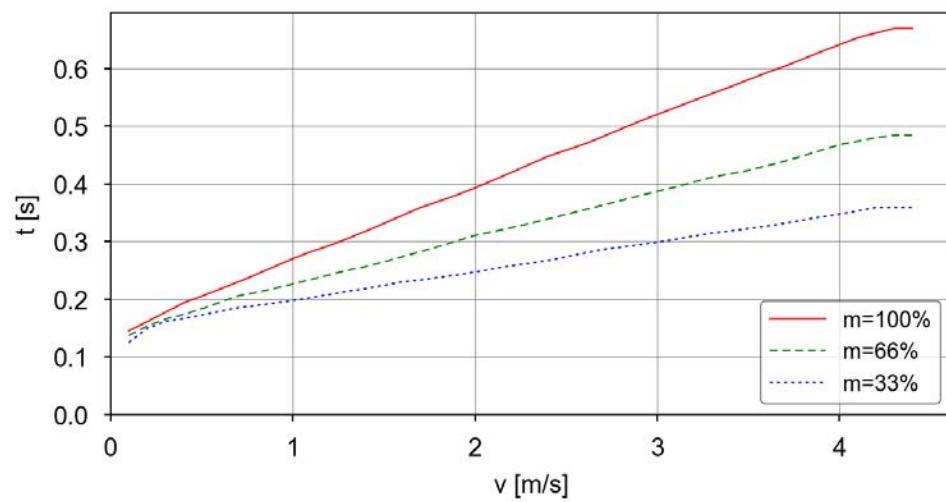
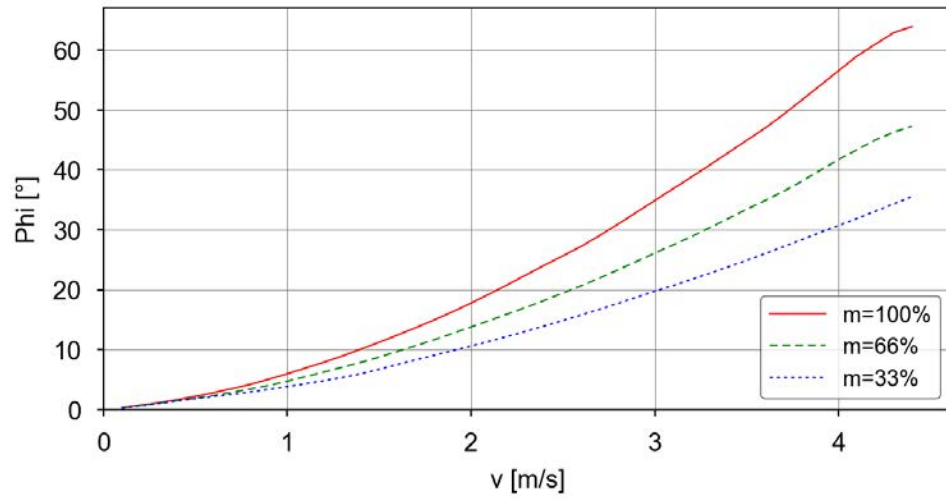
Continues on next page

13 IRB 4600

13.4 IRB 4600 2.55 m 40 kg

Continued

Extension zone 2, stopping distance and stopping time



14 IRB 6620

14.1 IRB 6620 2.20 m 150 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	29.1	0.49
2	25.2	0.44
3	19.0	0.29

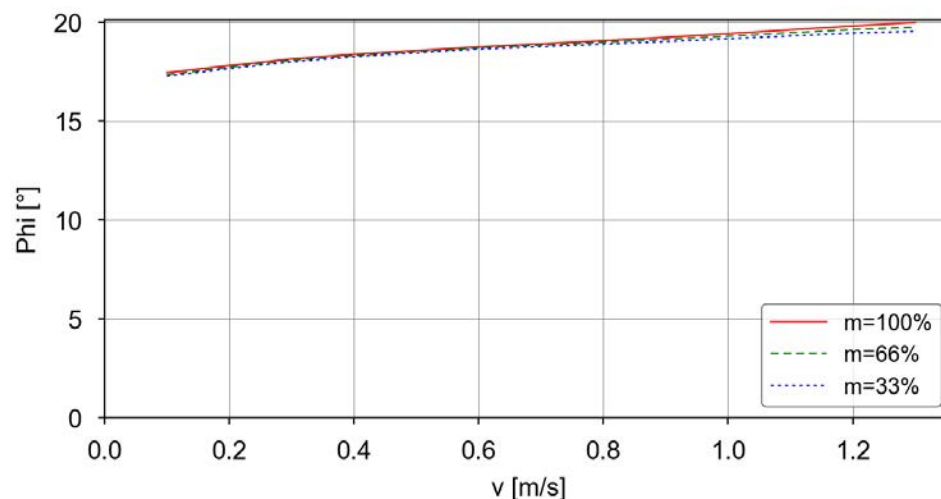
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.735
1	0.735	1.47
2	1.47	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

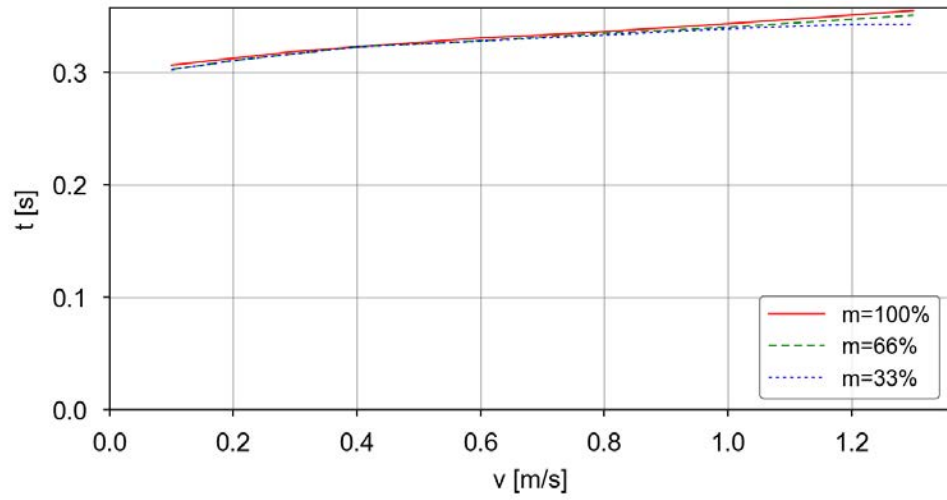


Continues on next page

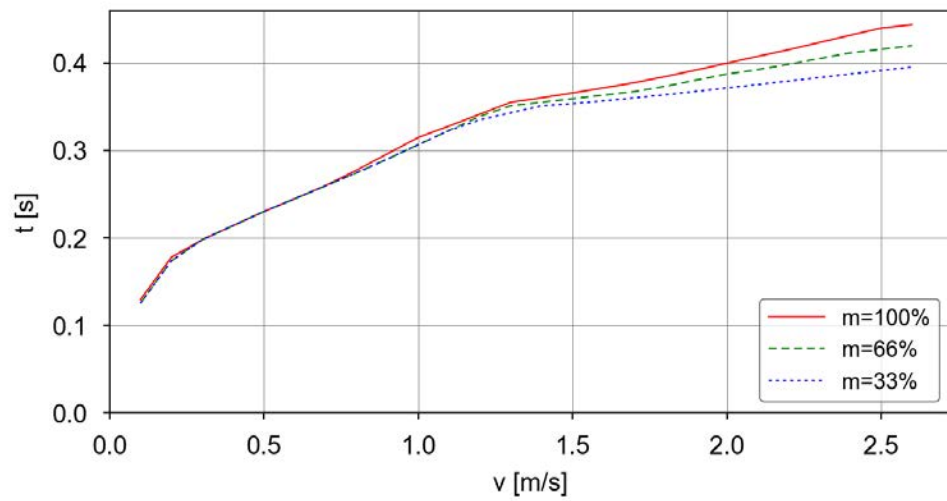
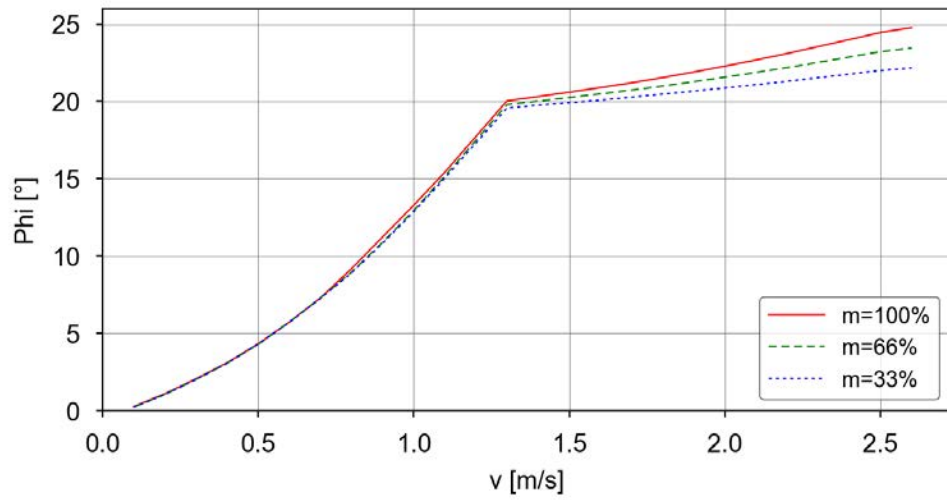
14 IRB 6620

14.1 IRB 6620 2.20 m 150 kg

Continued

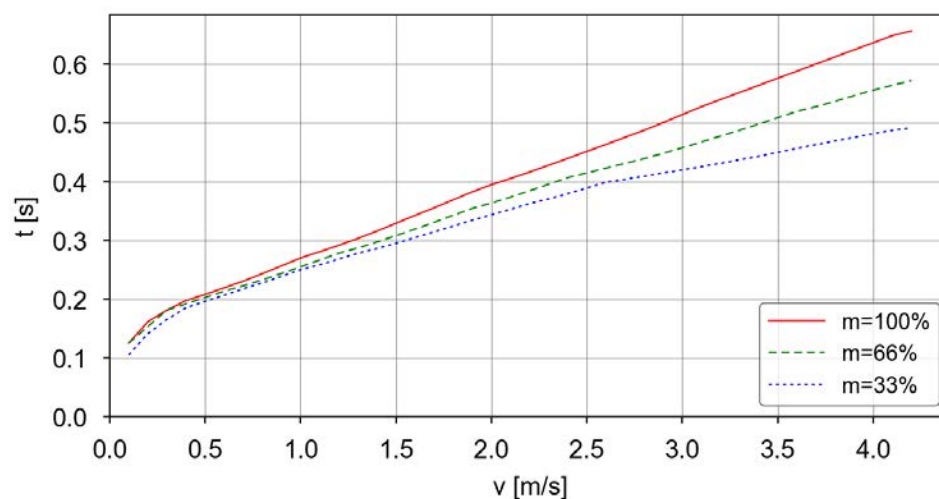
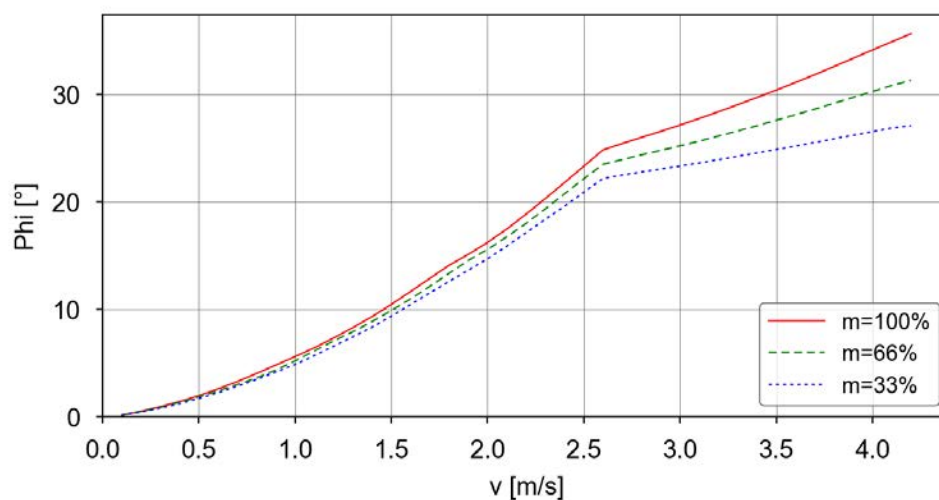


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

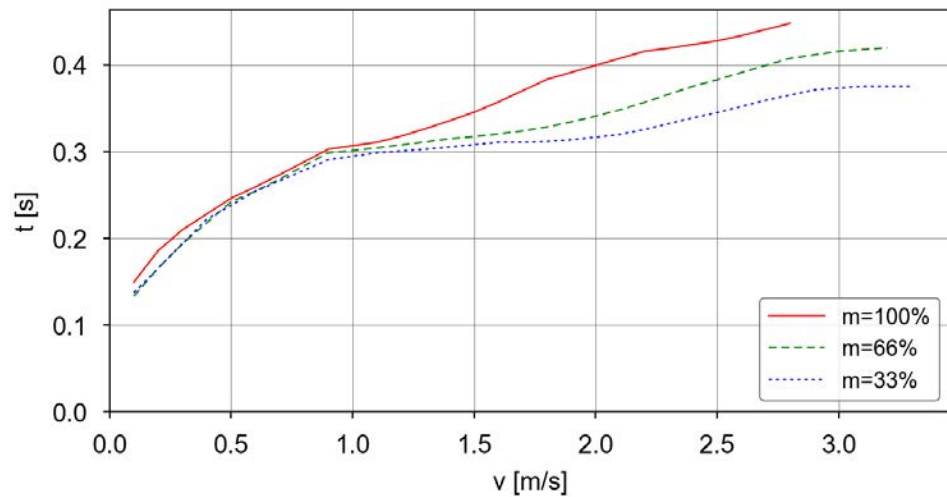
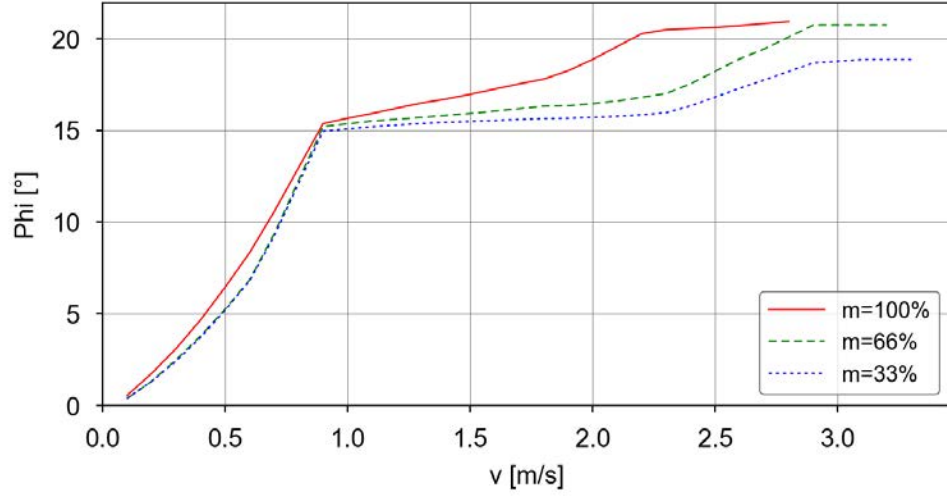
14 IRB 6620

14.1 IRB 6620 2.20 m 150 kg

Continued

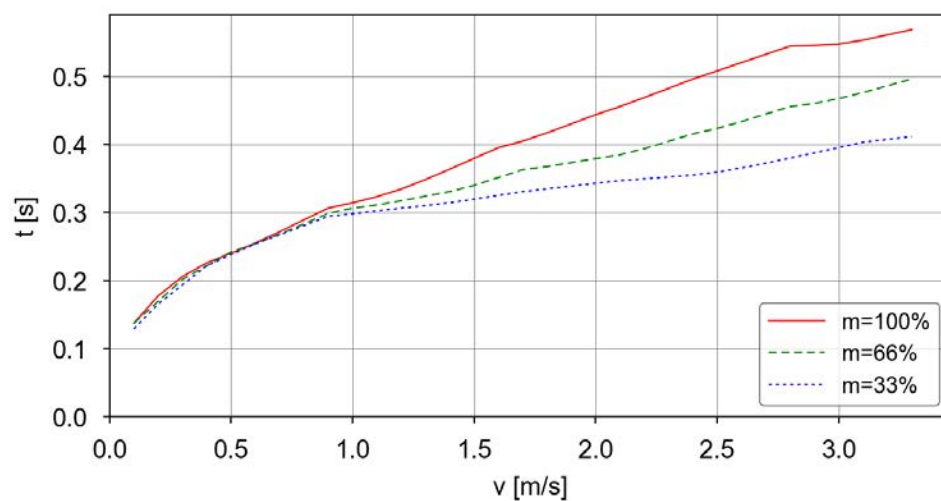
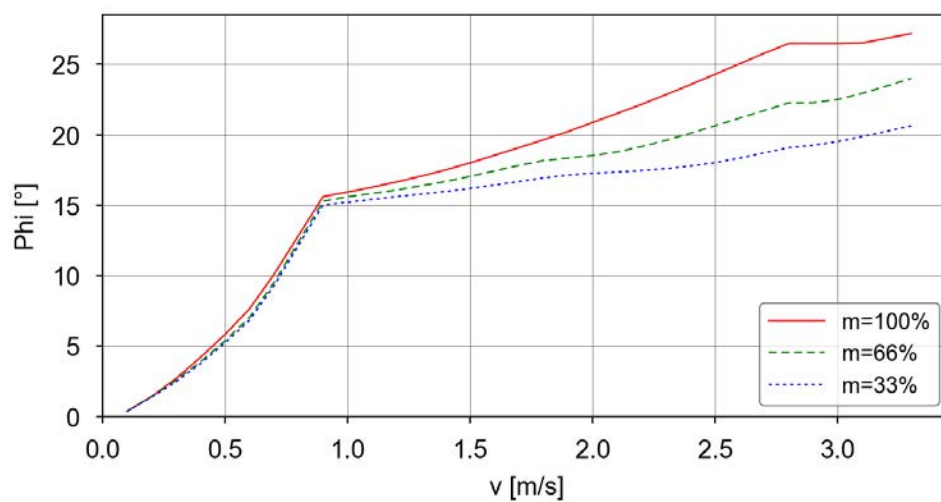
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



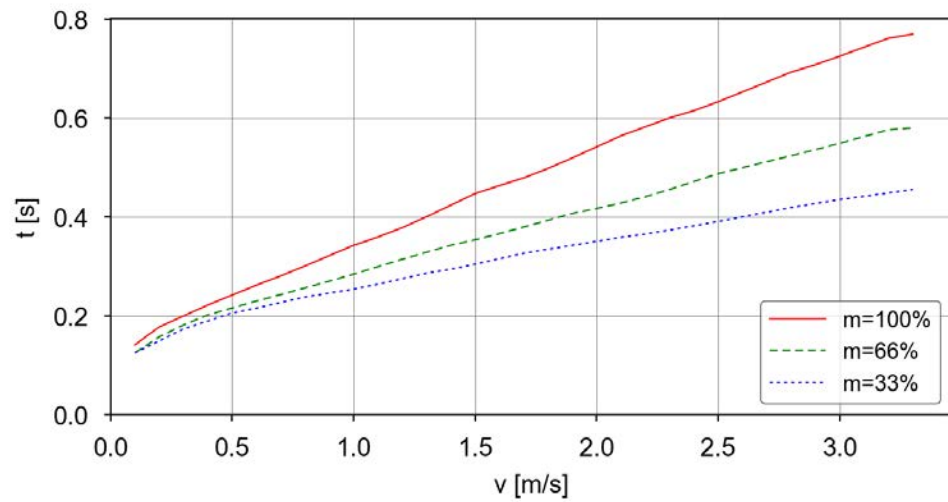
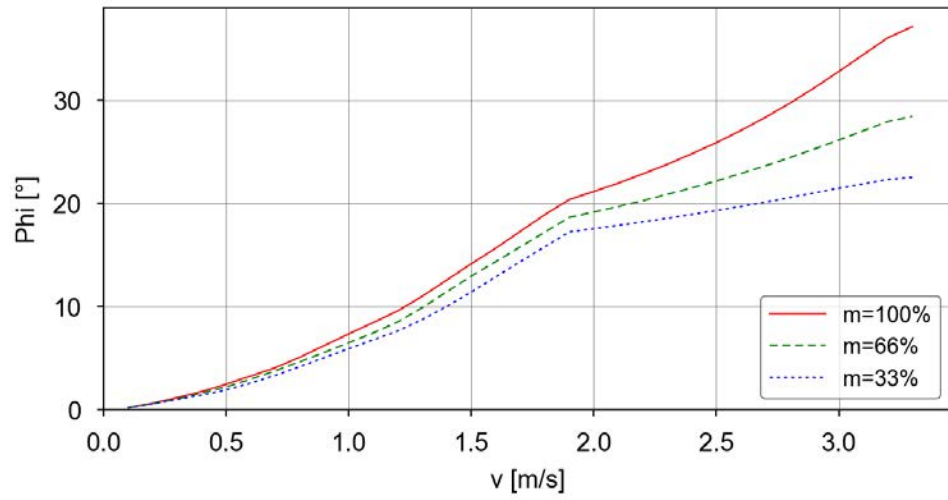
Continues on next page

14 IRB 6620

14.1 IRB 6620 2.20 m 150 kg

Continued

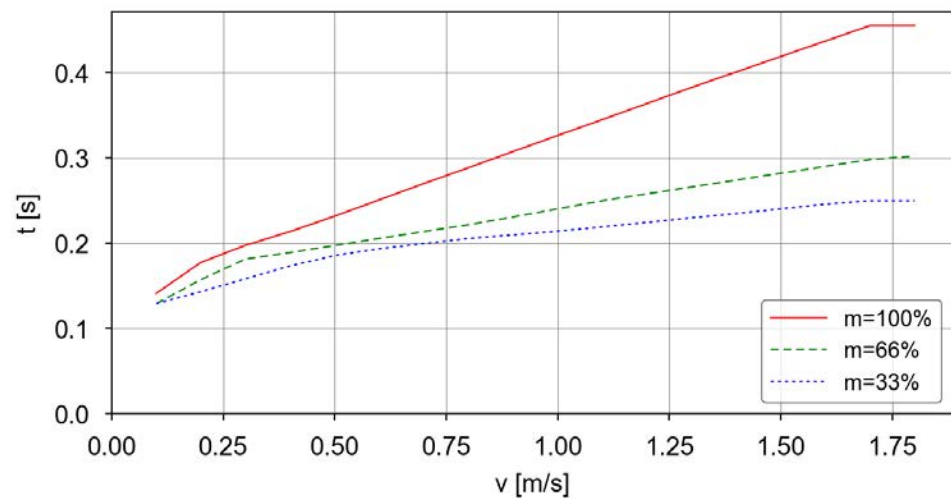
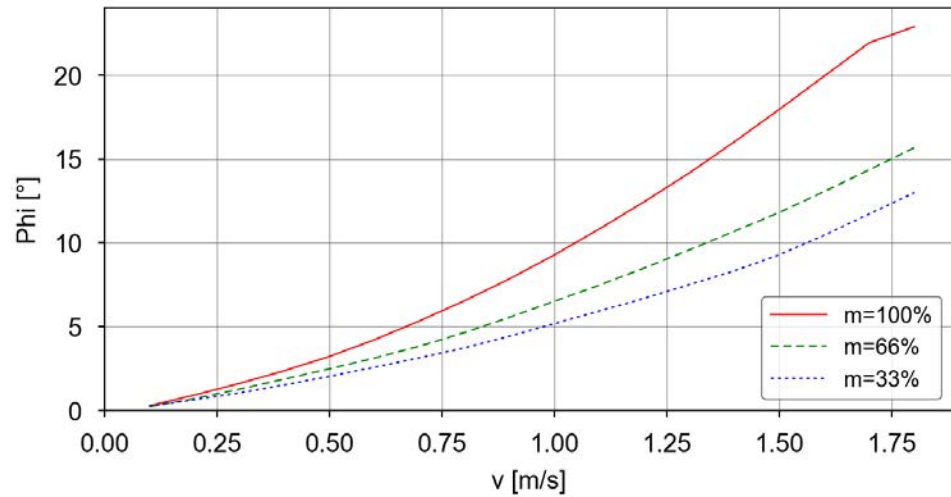
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



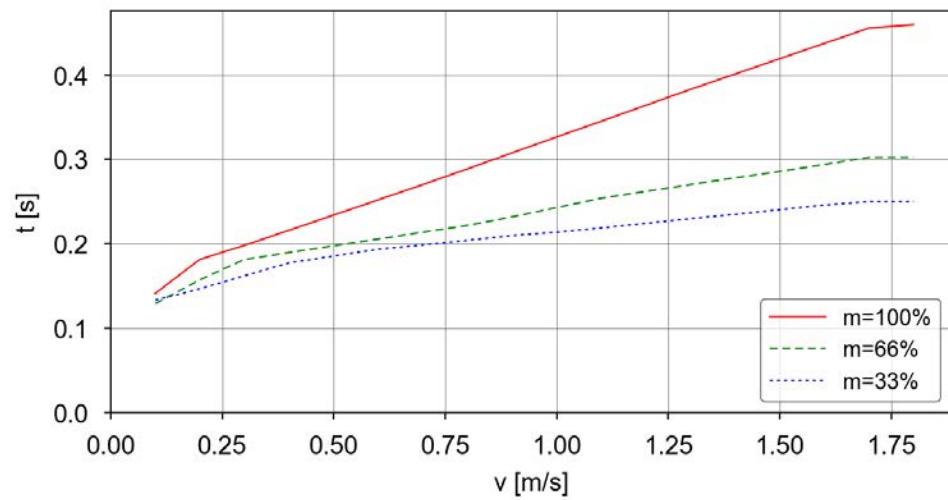
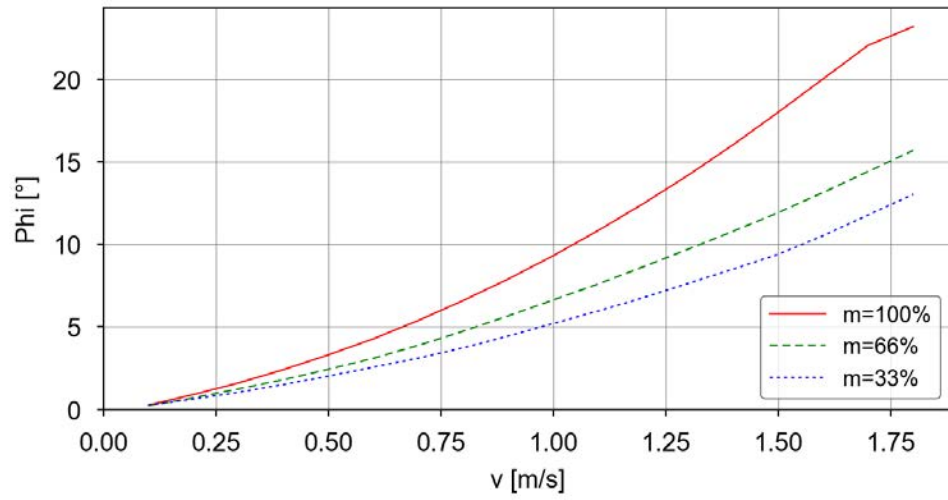
Continues on next page

14 IRB 6620

14.1 IRB 6620 2.20 m 150 kg

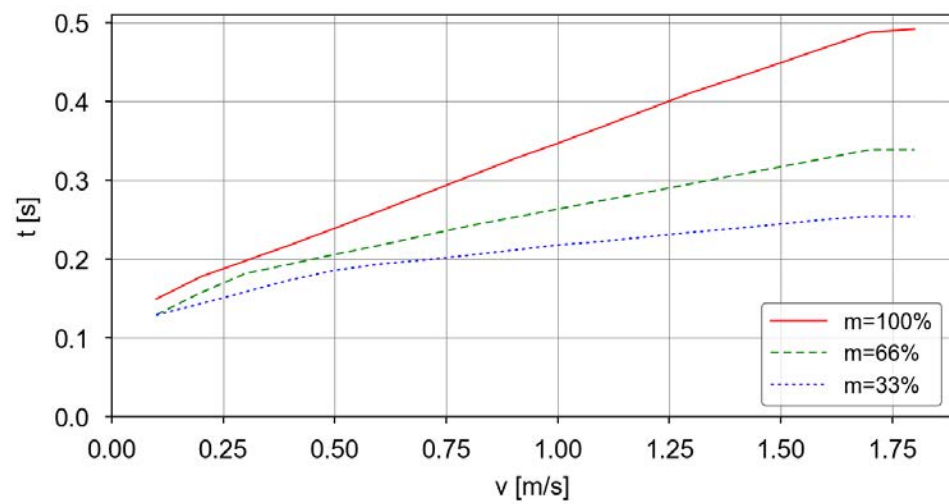
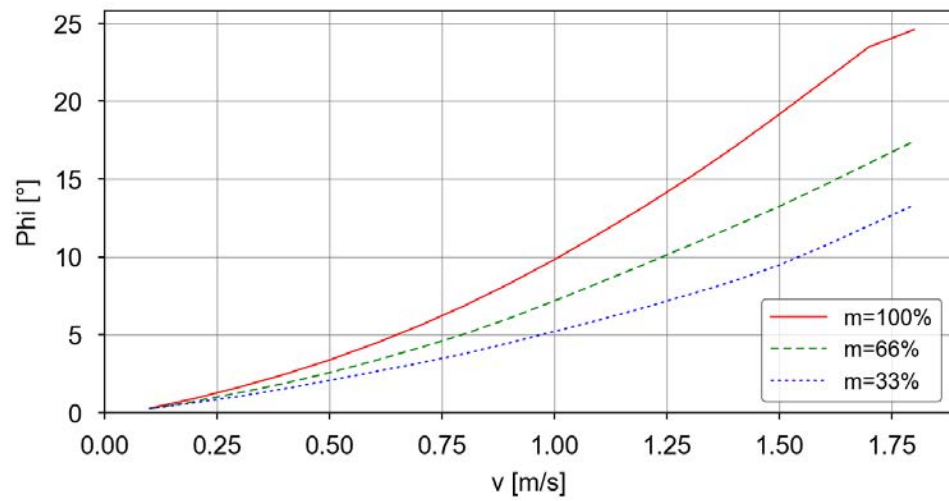
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

15 IRB 6650

15.1 IRB 6650S 3.00 m 200 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	51.5	0.95
2	34.5	0.63
3	20.0	0.32

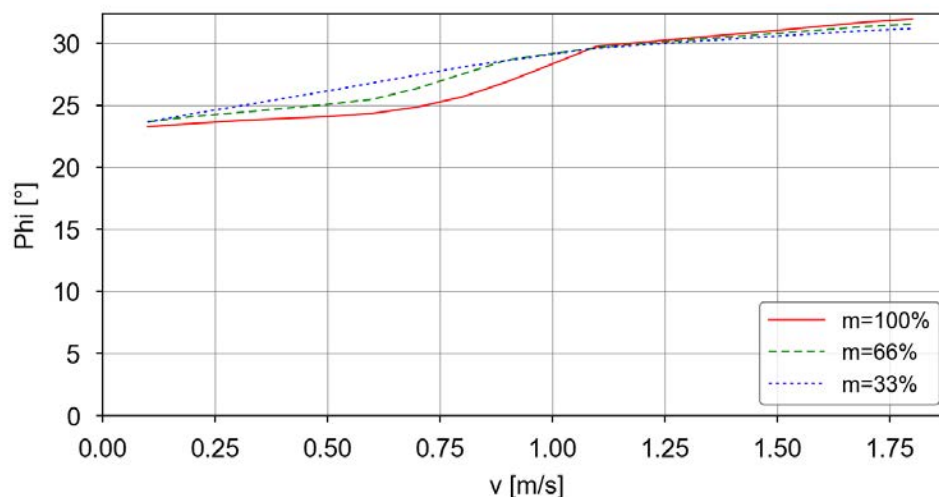
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.013
1	1.013	2.026
2	2.026	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

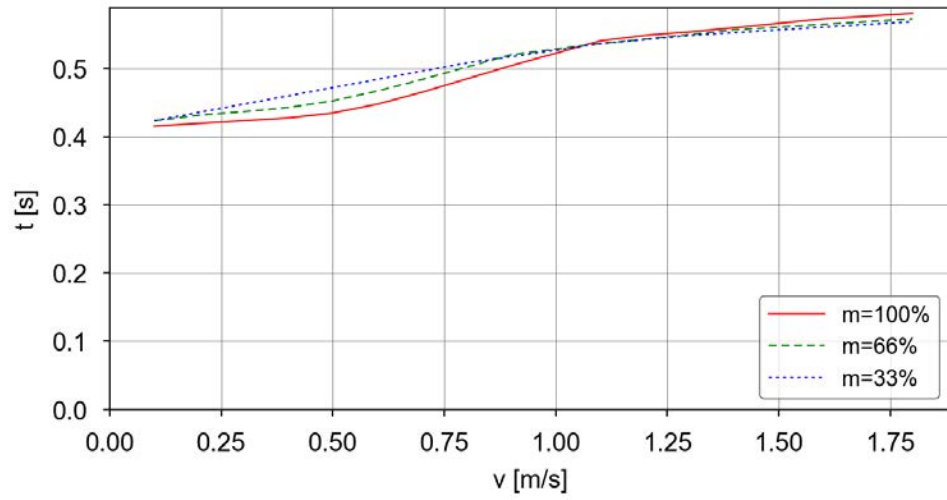


Continues on next page

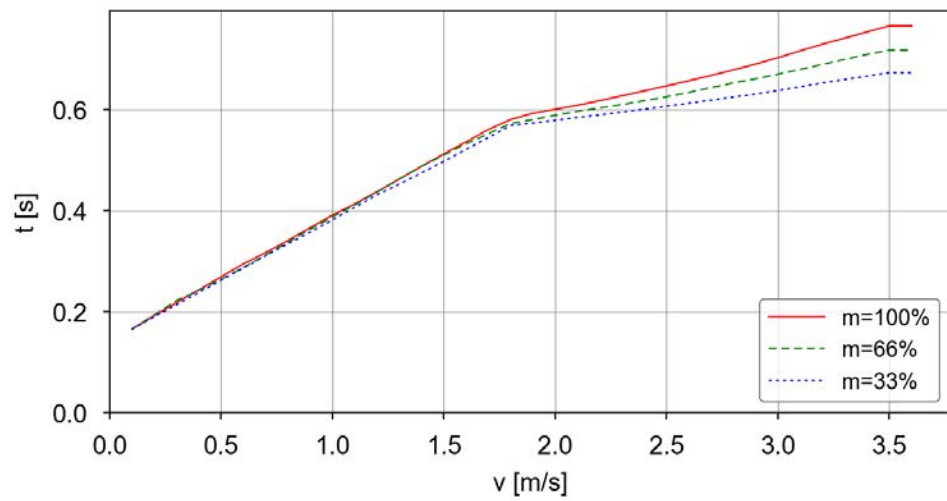
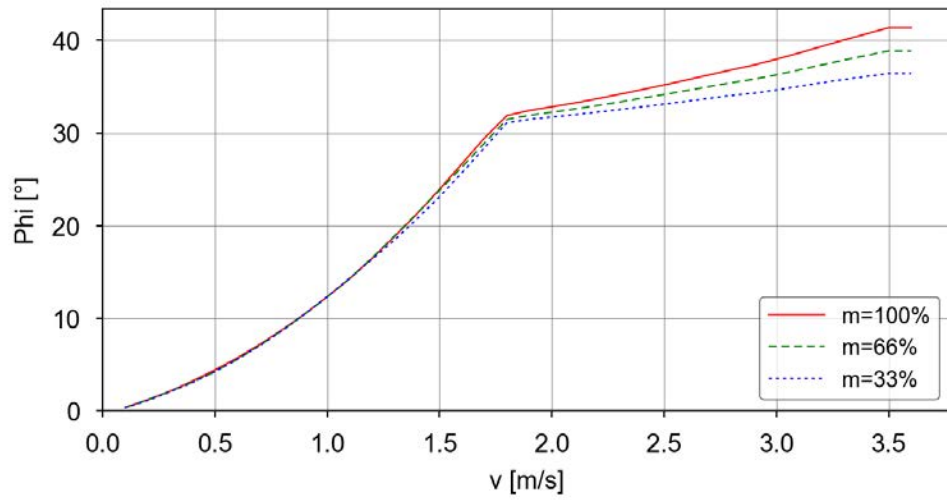
15 IRB 6650

15.1 IRB 6650S 3.00 m 200 kg

Continued

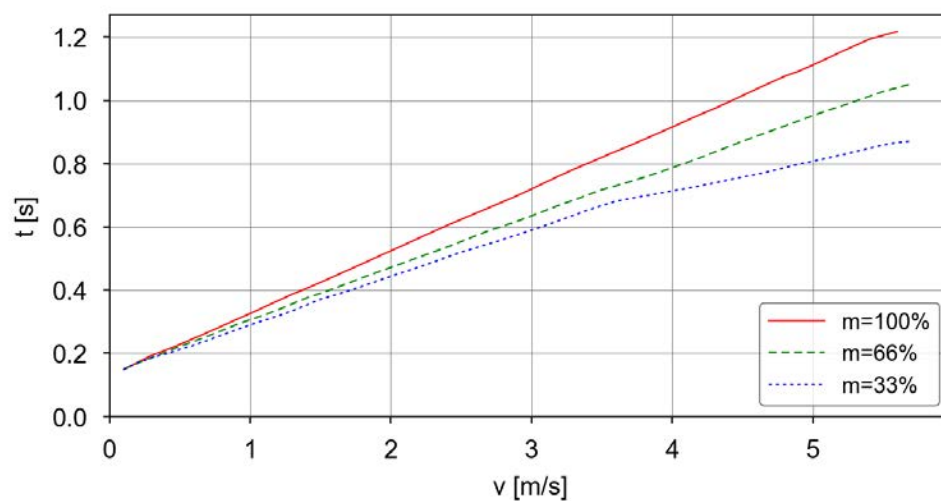
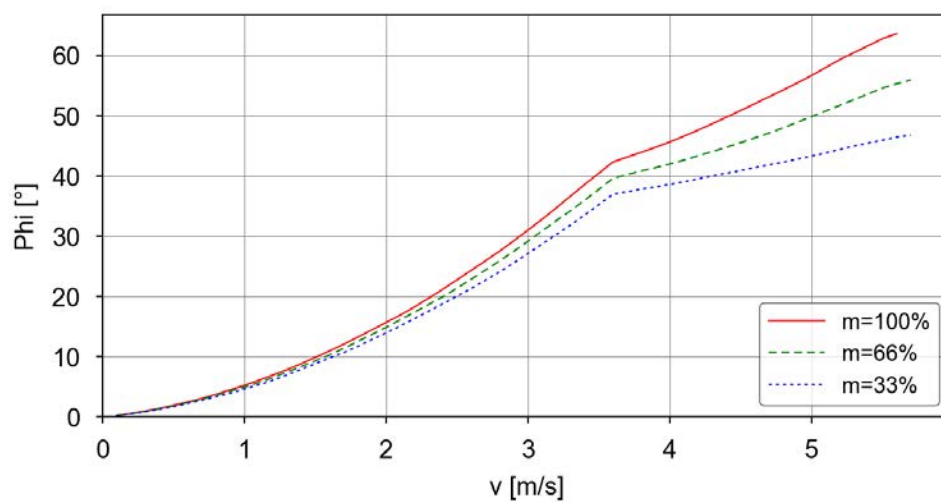


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

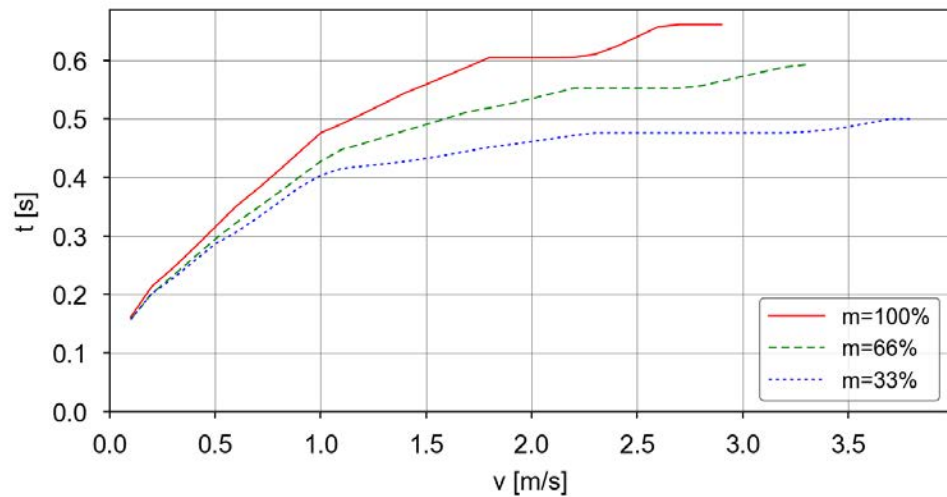
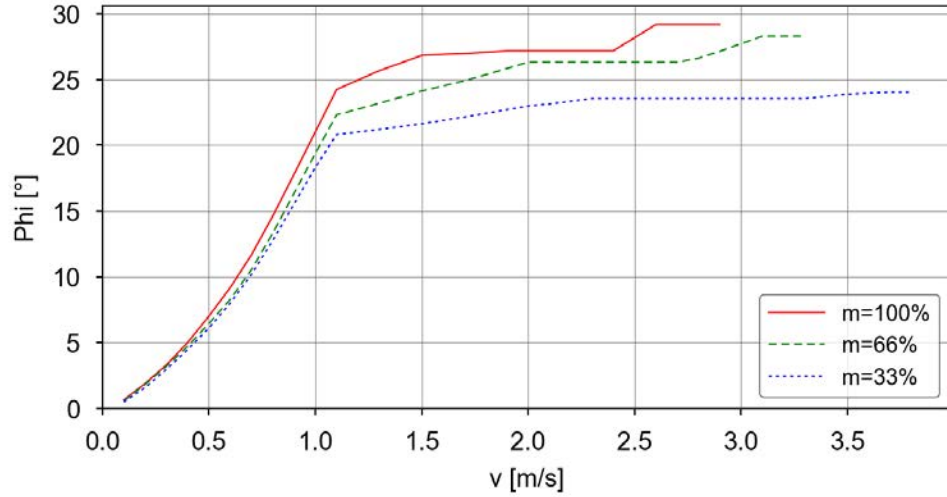
15 IRB 6650

15.1 IRB 6650S 3.00 m 200 kg

Continued

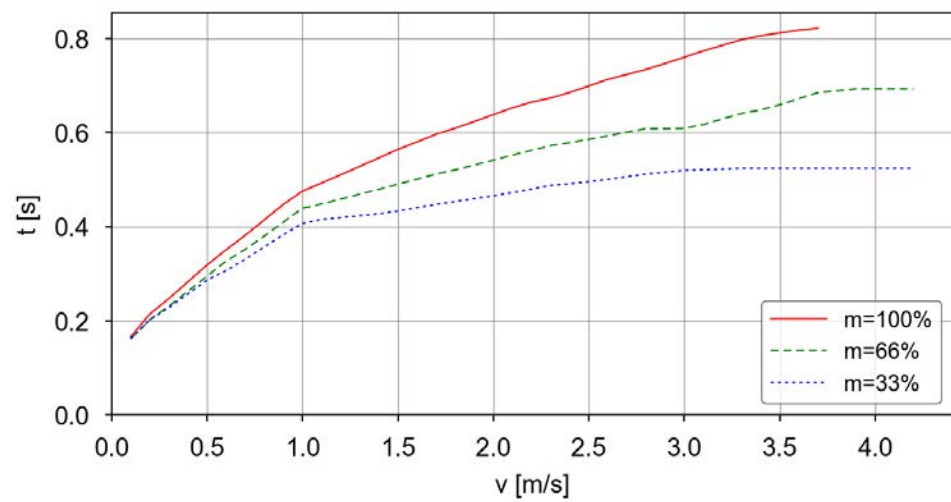
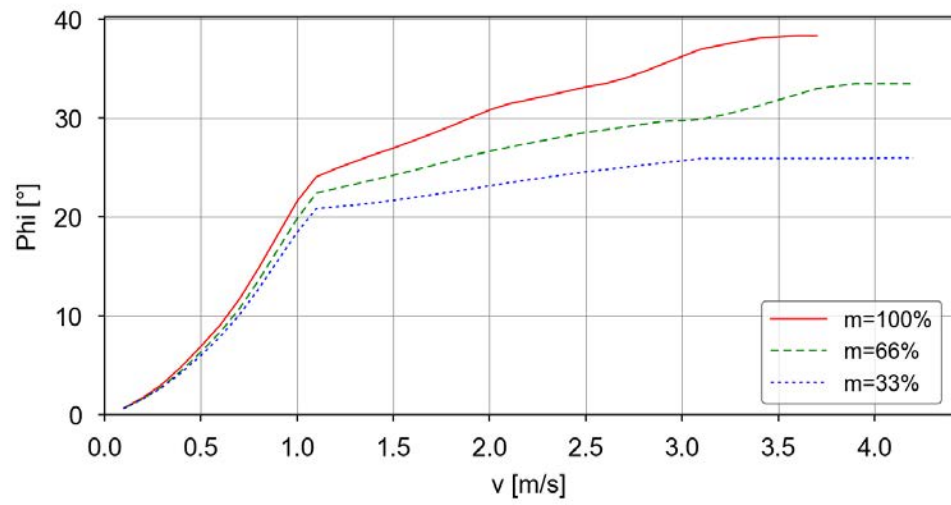
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



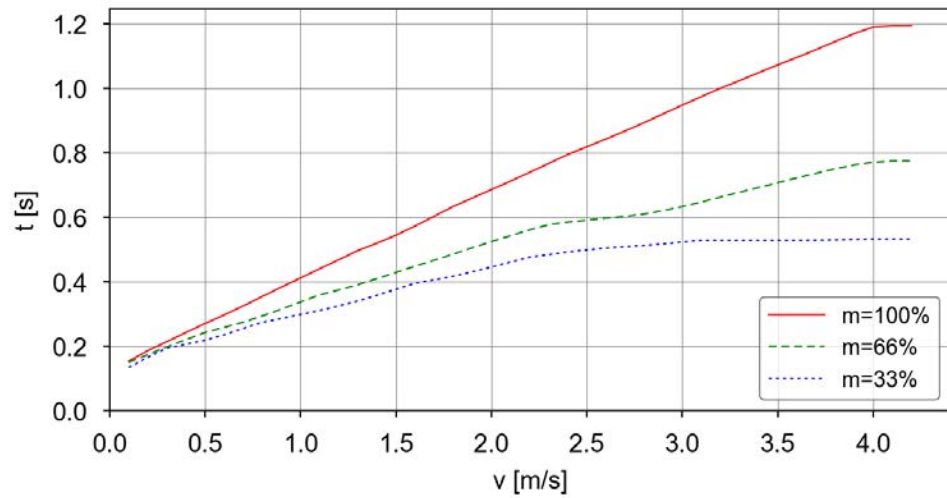
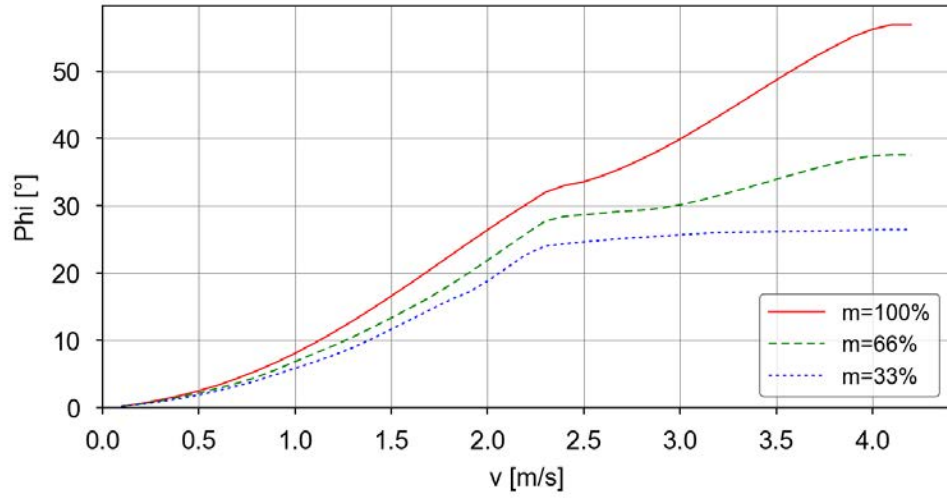
Continues on next page

15 IRB 6650

15.1 IRB 6650S 3.00 m 200 kg

Continued

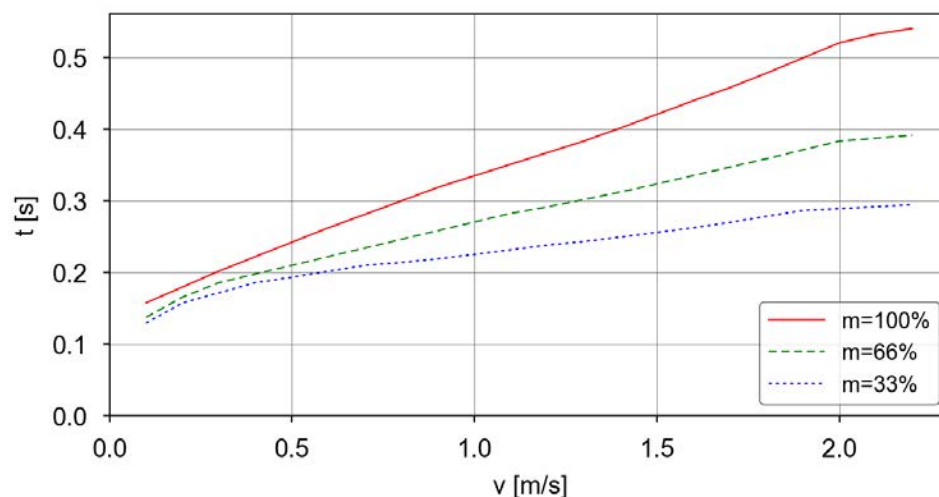
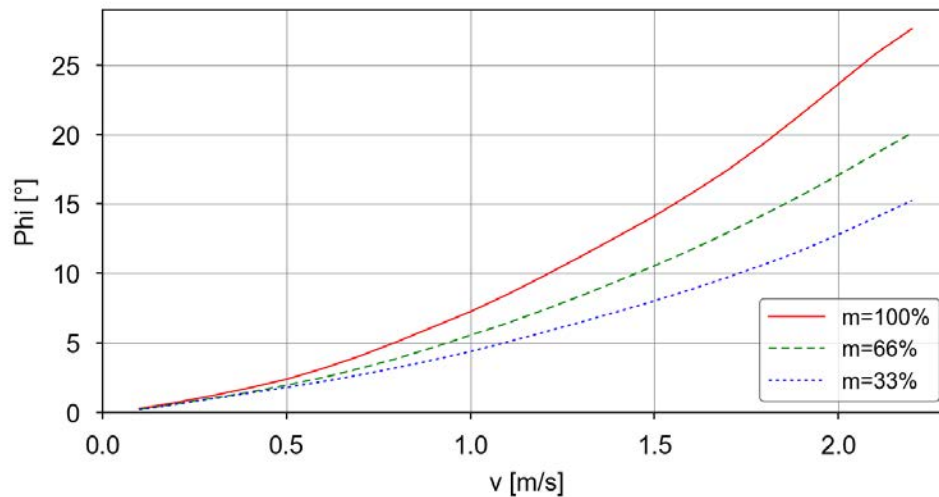
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



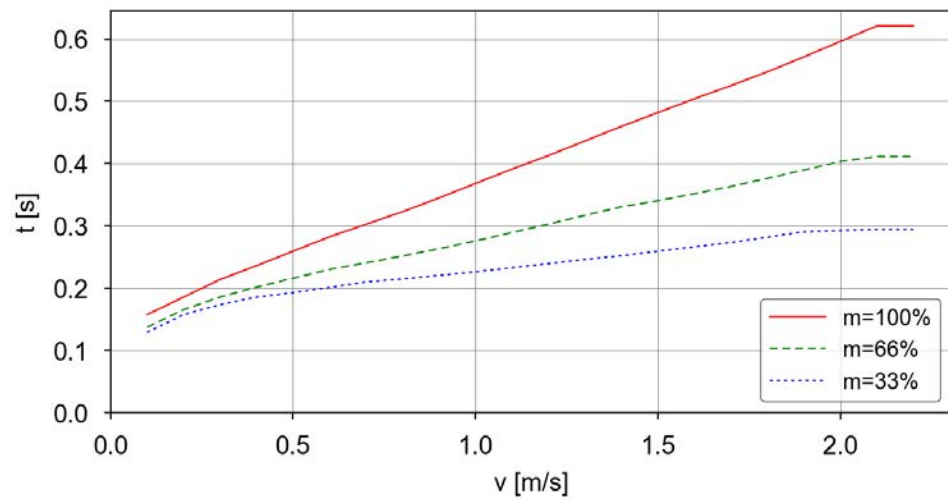
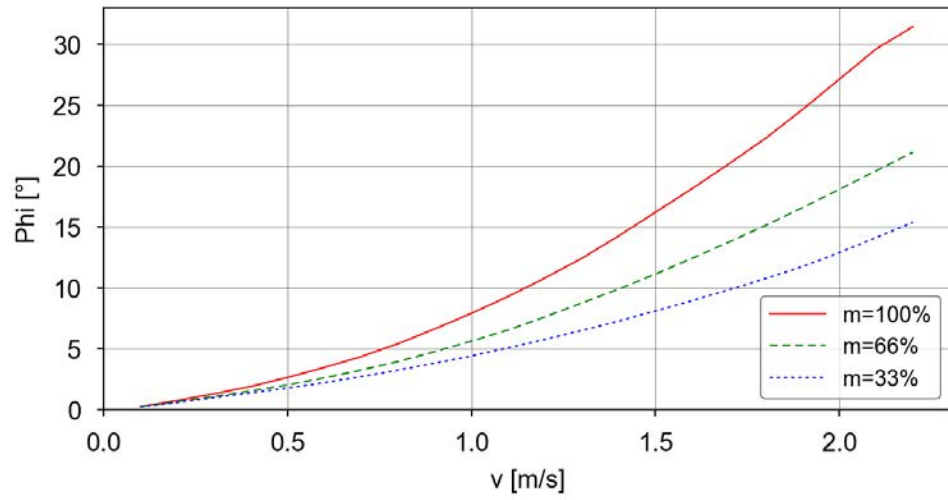
Continues on next page

15 IRB 6650

15.1 IRB 6650S 3.00 m 200 kg

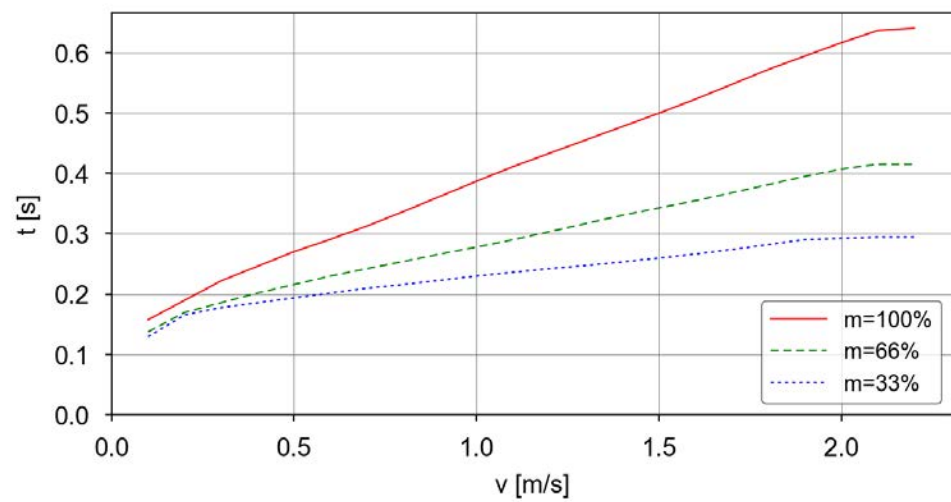
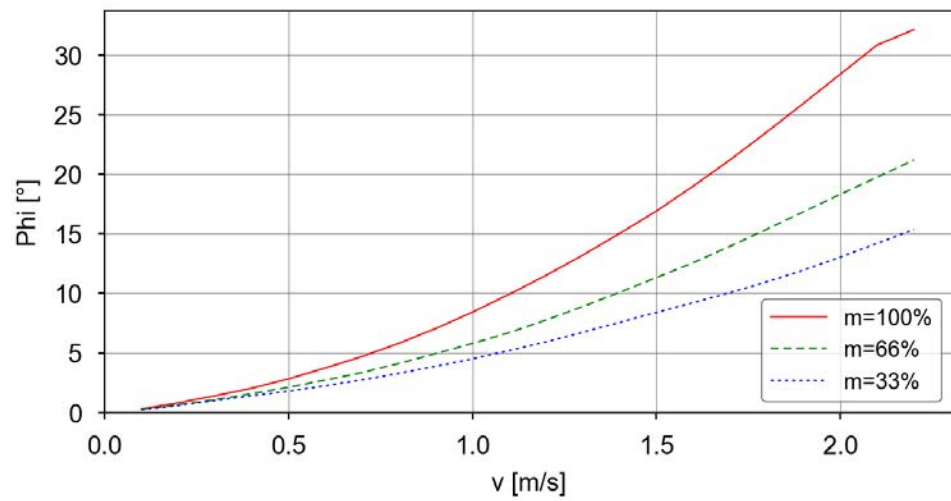
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



15.2 IRB 6650S 3.45 m 125 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	52.8	0.95
2	33.4	0.61
3	20.3	0.32

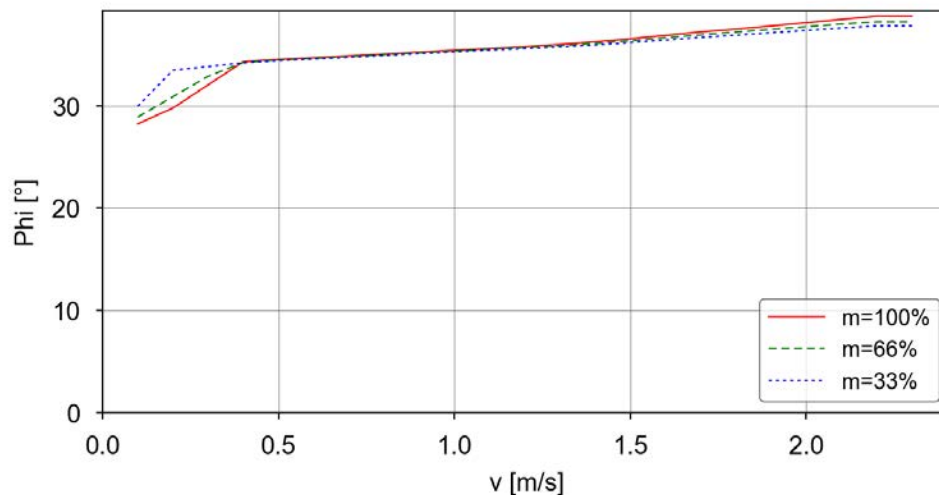
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

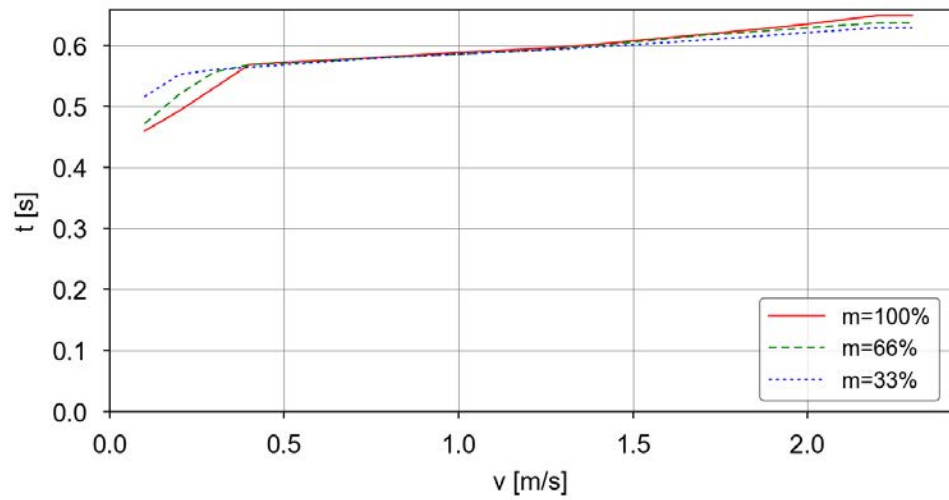
Zone	wcp min (m)	wcp max (m)
0	0	1.161
1	1.161	2.323
2	2.323	max reach

Category 1, Axis 1

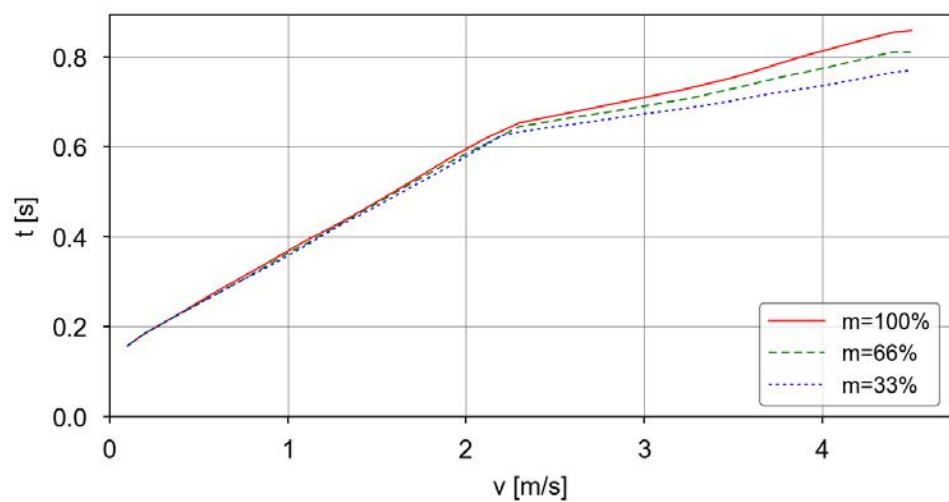
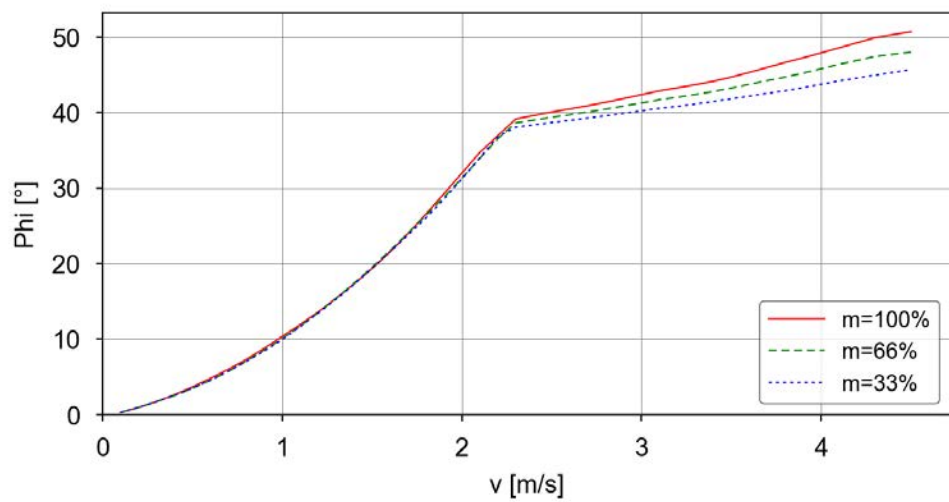
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



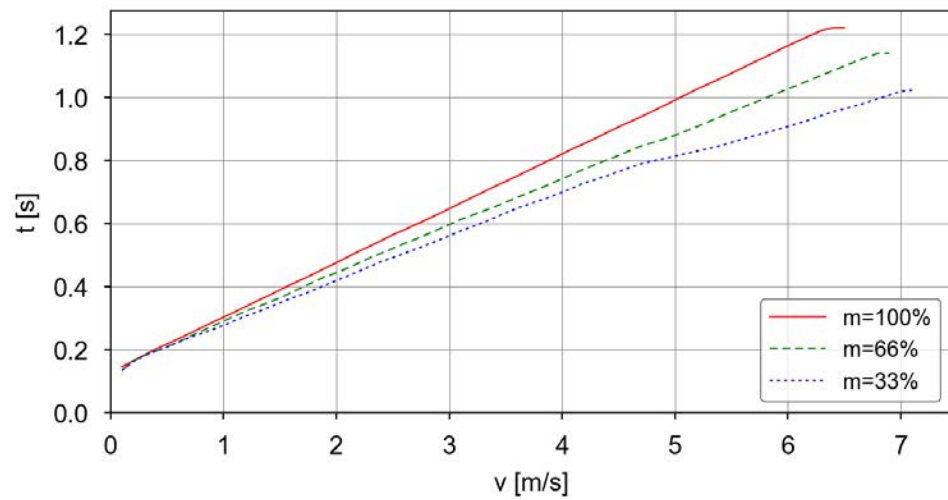
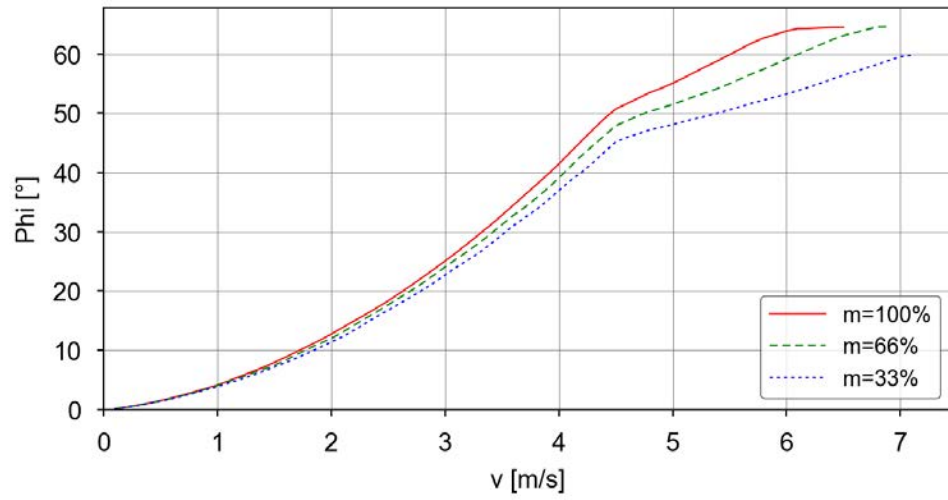
Continues on next page

15 IRB 6650

15.2 IRB 6650S 3.45 m 125 kg

Continued

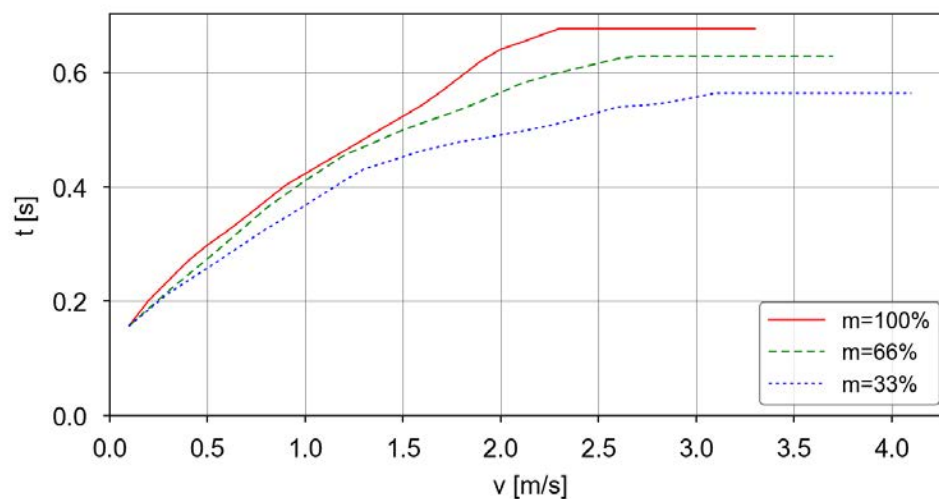
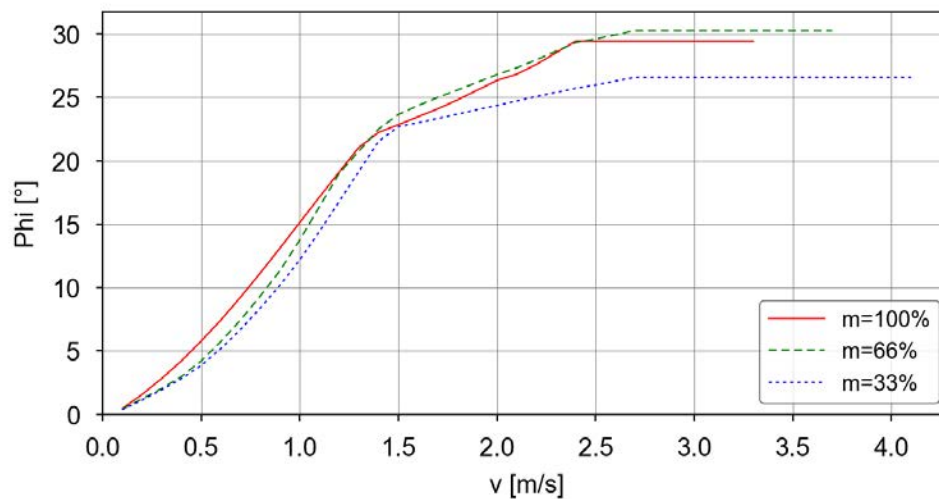
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



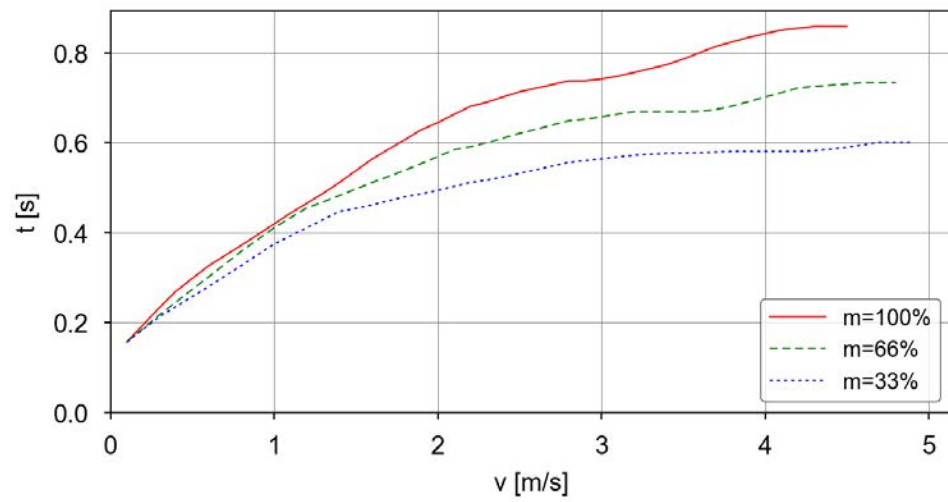
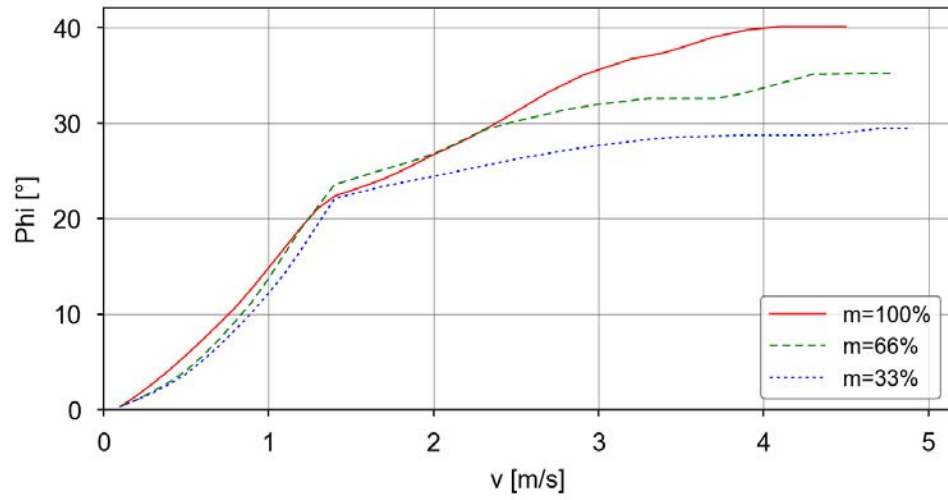
Continues on next page

15 IRB 6650

15.2 IRB 6650S 3.45 m 125 kg

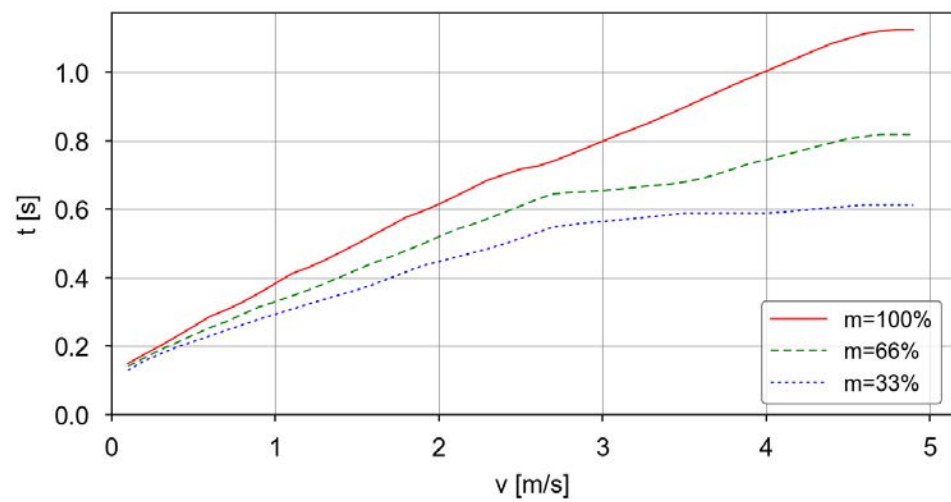
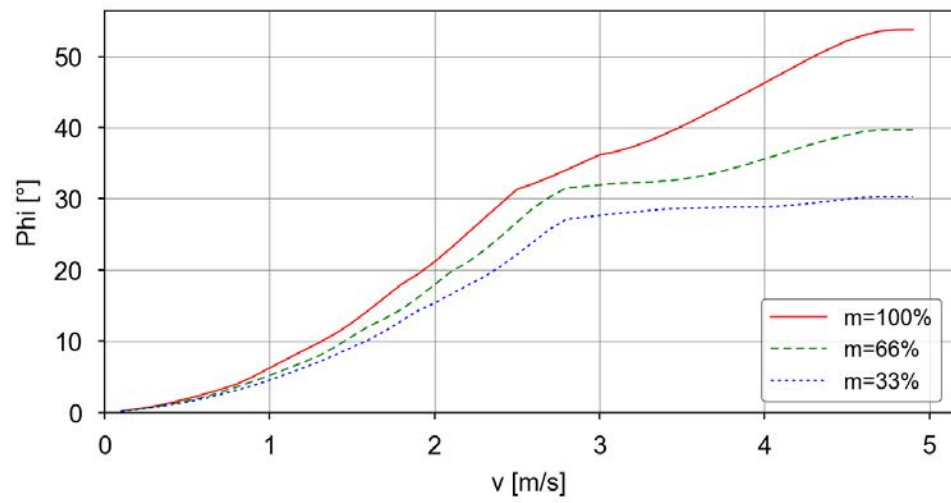
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

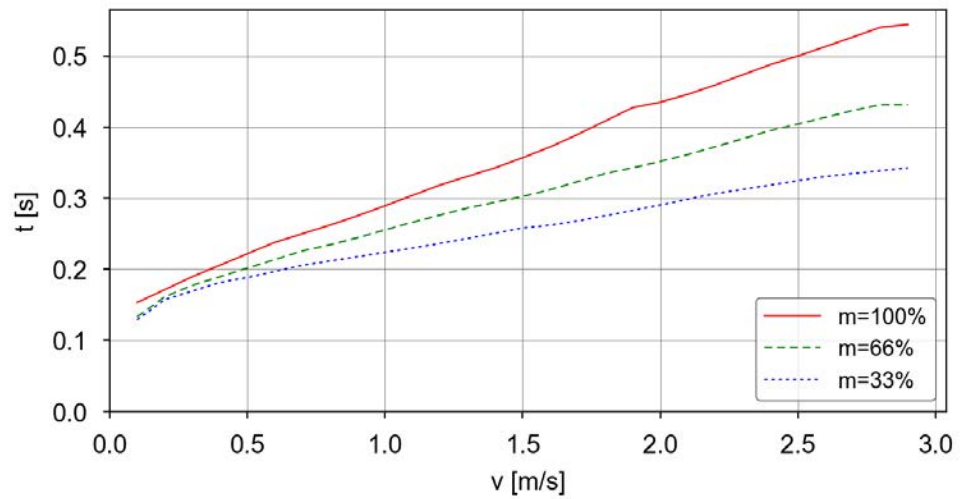
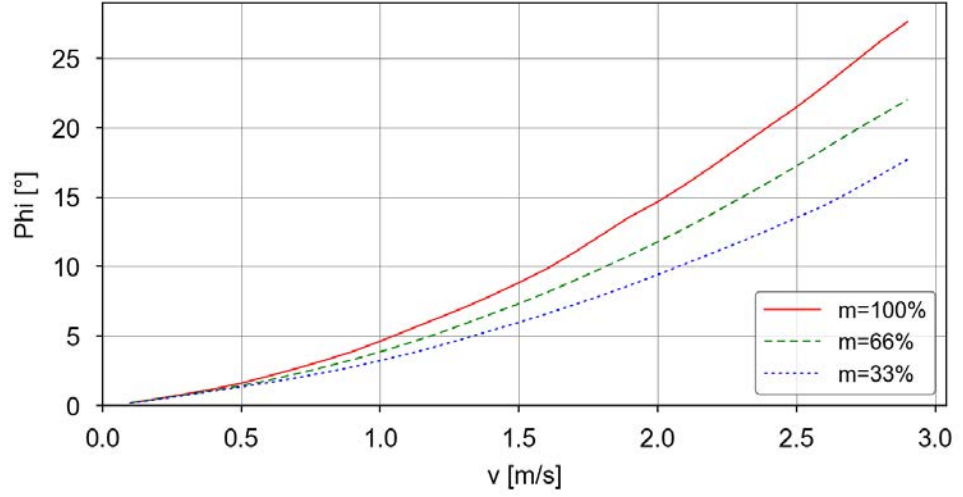
15 IRB 6650

15.2 IRB 6650S 3.45 m 125 kg

Continued

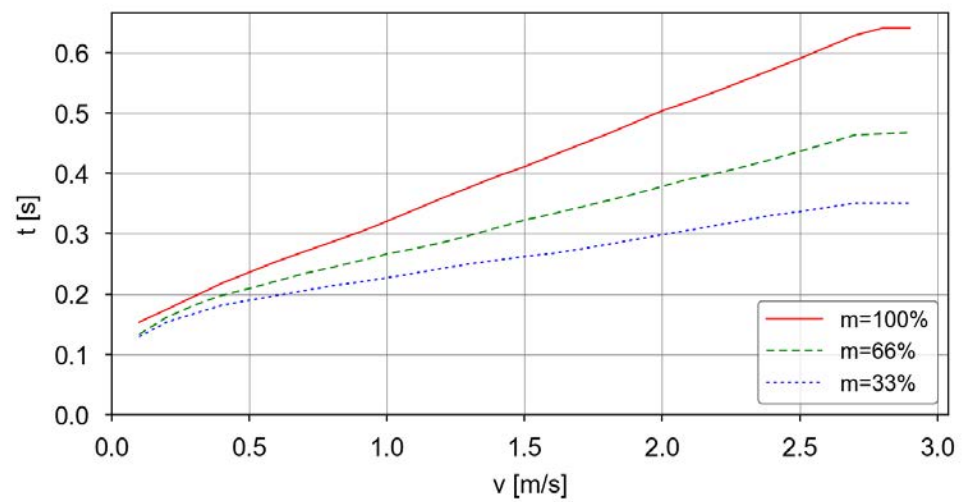
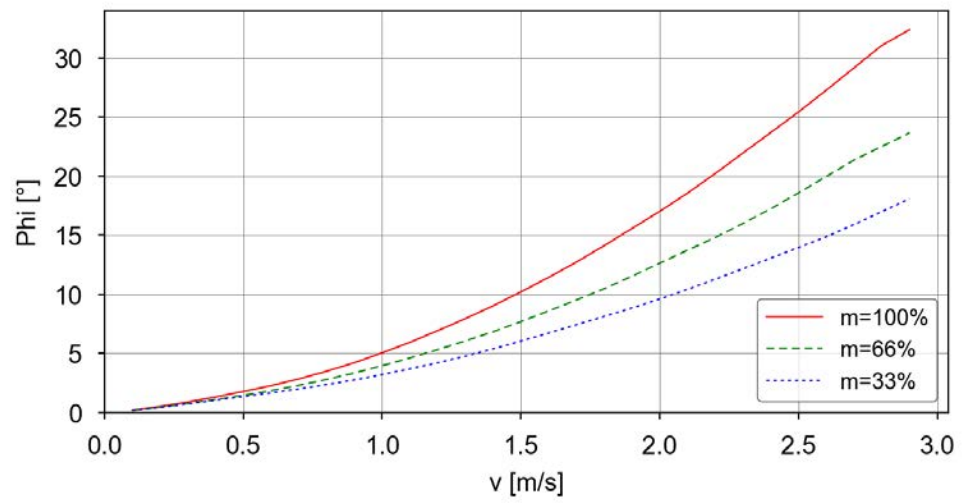
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



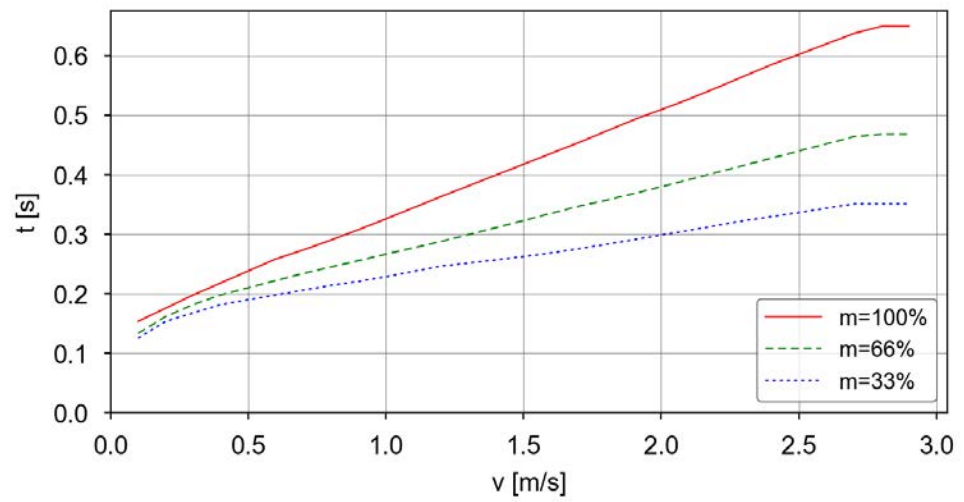
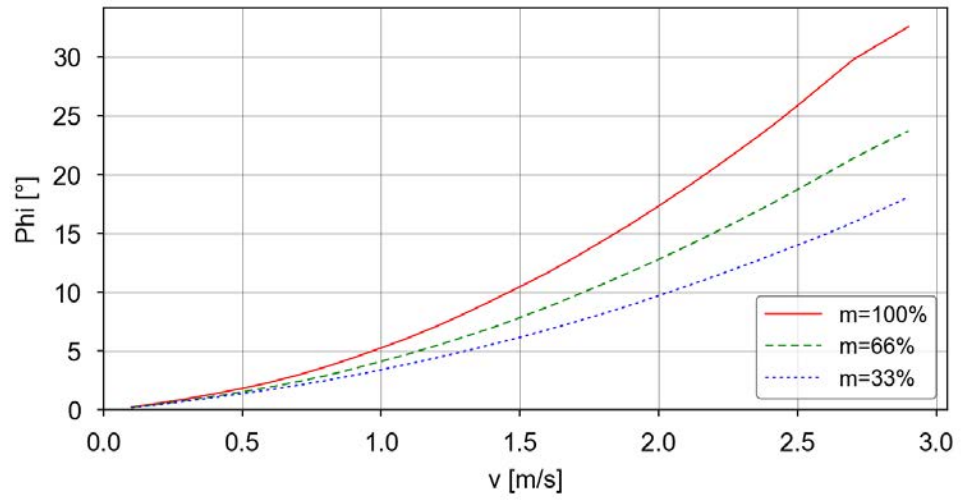
Continues on next page

15 IRB 6650

15.2 IRB 6650S 3.45 m 125 kg

Continued

Extension zone 2, stopping distance and stopping time



15.3 IRB 6650S 3.90 m 90 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	51.2	0.97
2	37.0	0.68
3	23.9	0.39

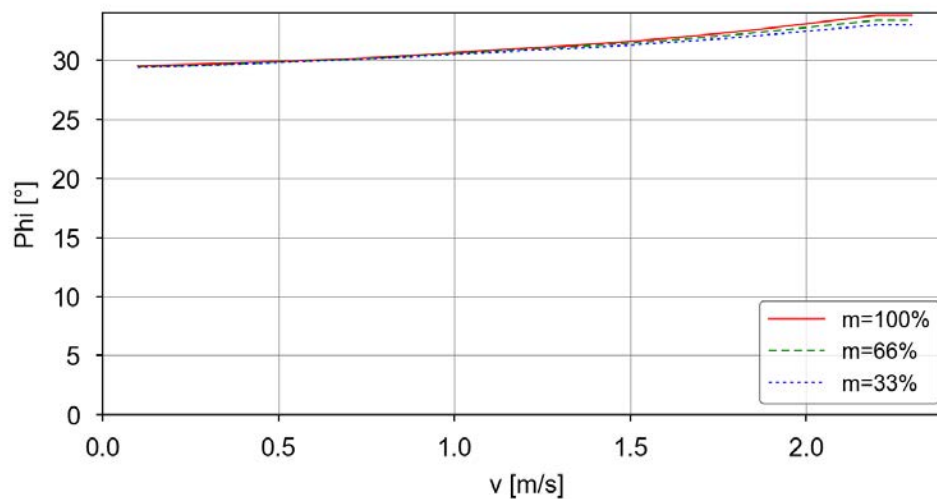
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.311
1	1.311	2.621
2	2.621	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

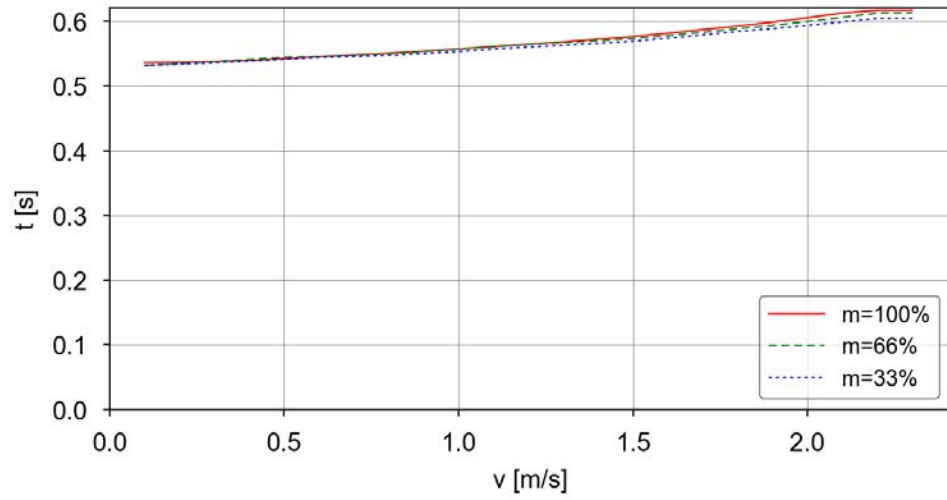


Continues on next page

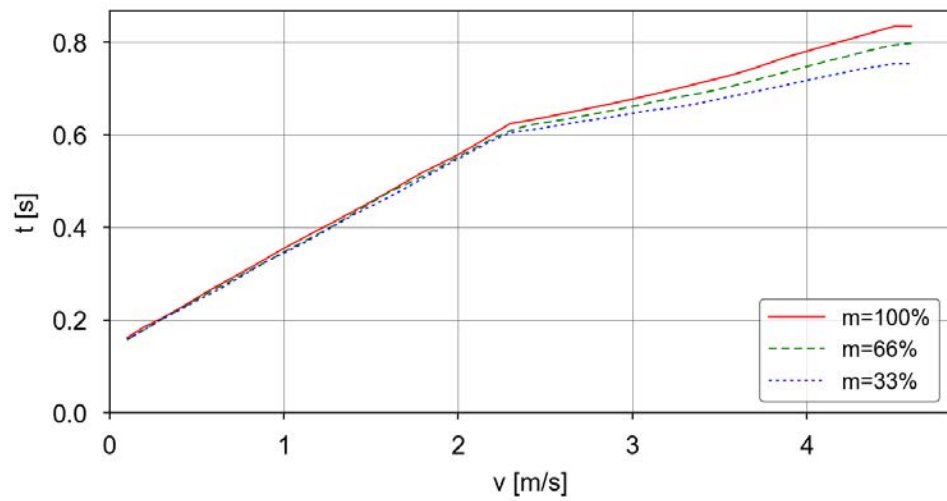
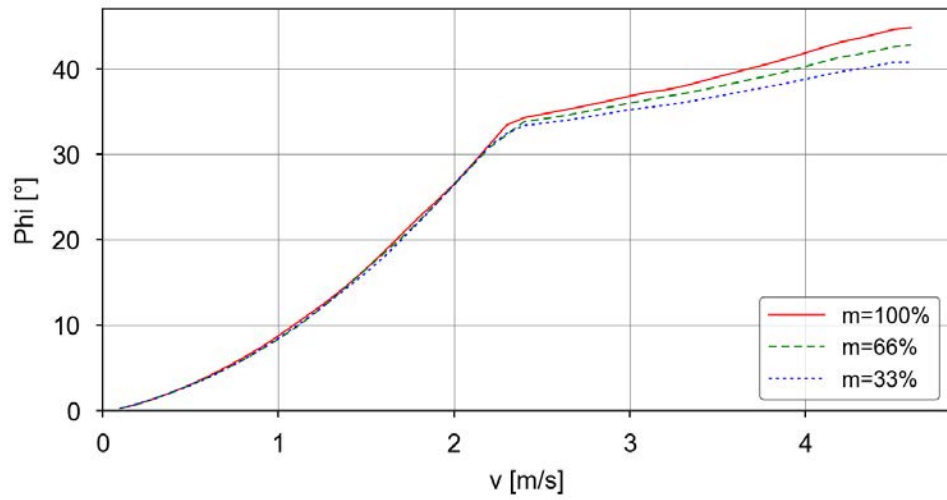
15 IRB 6650

15.3 IRB 6650S 3.90 m 90 kg

Continued

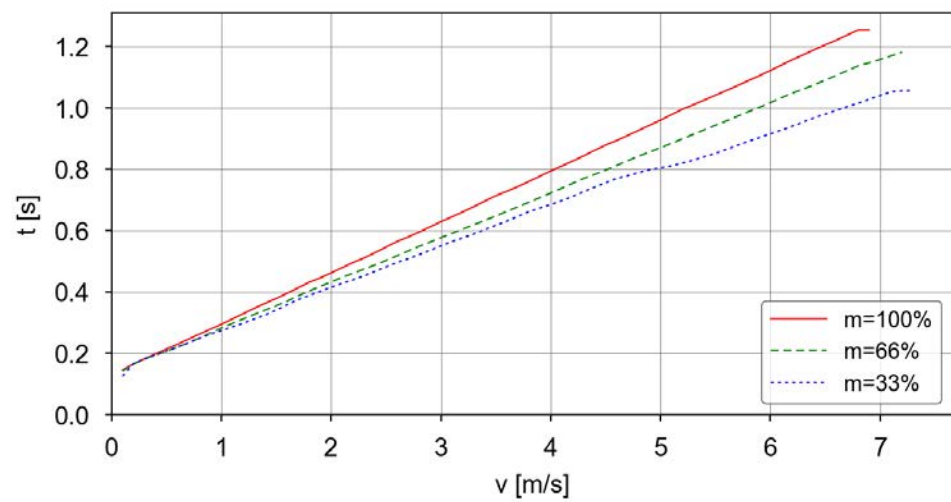
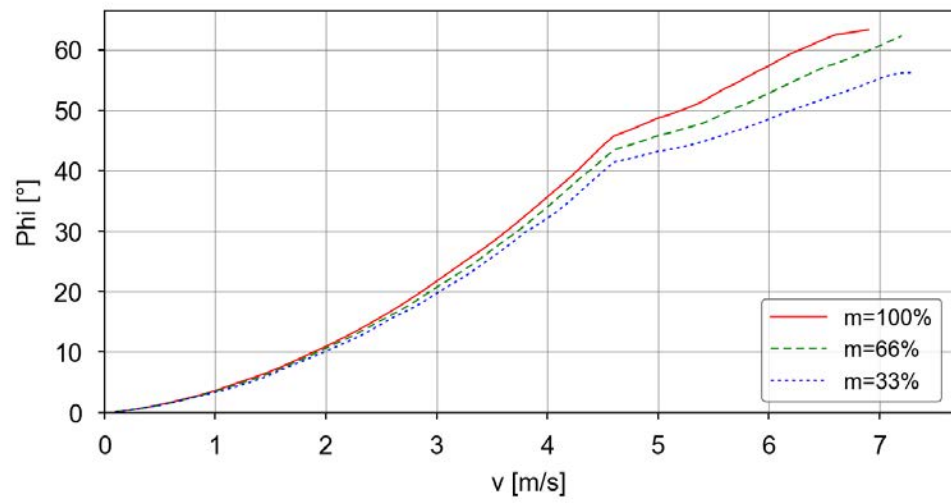


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

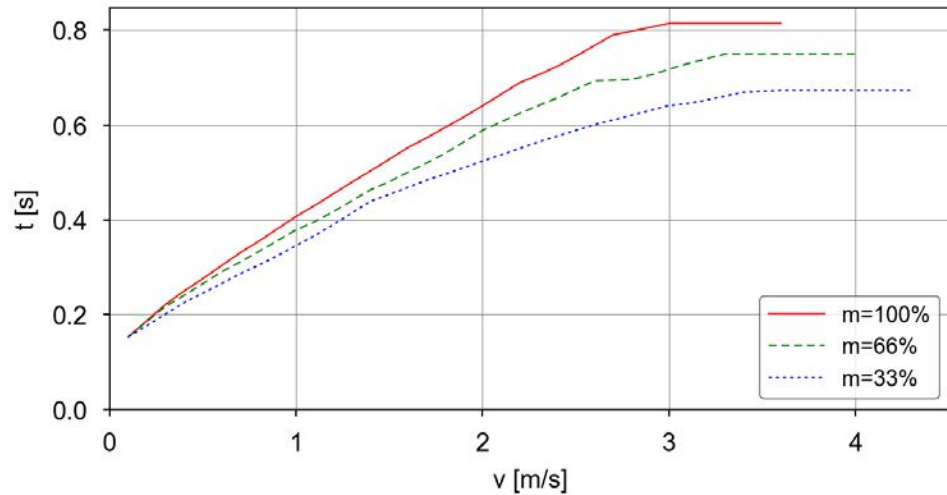
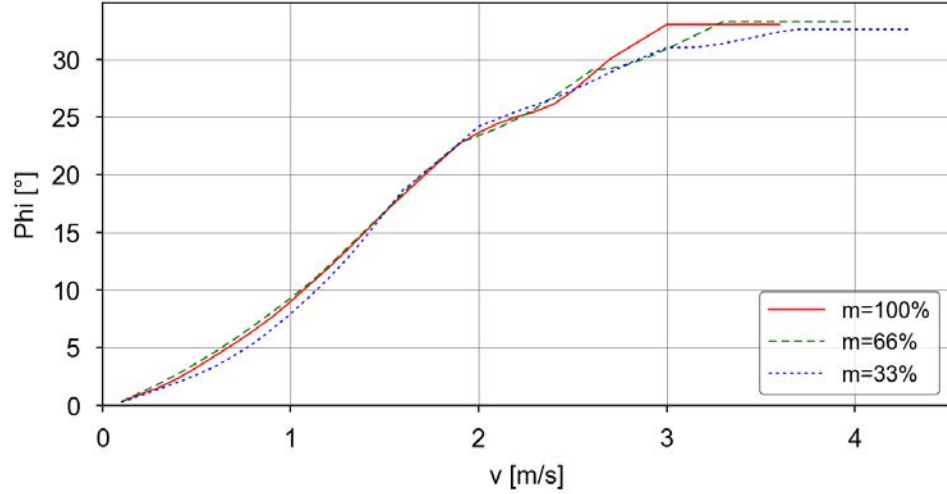
15 IRB 6650

15.3 IRB 6650S 3.90 m 90 kg

Continued

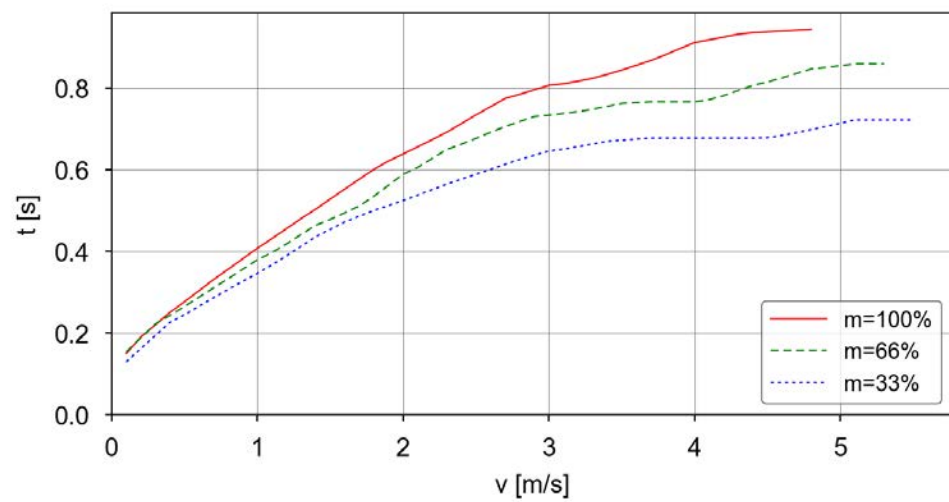
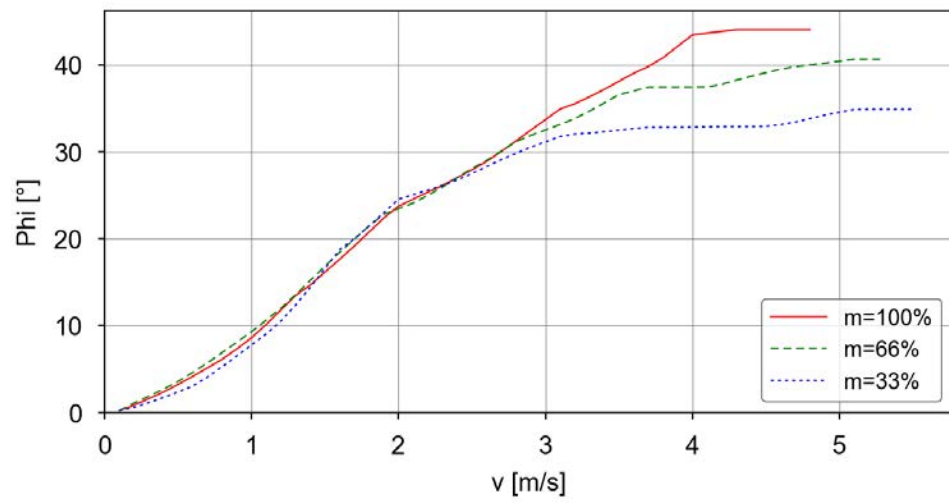
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

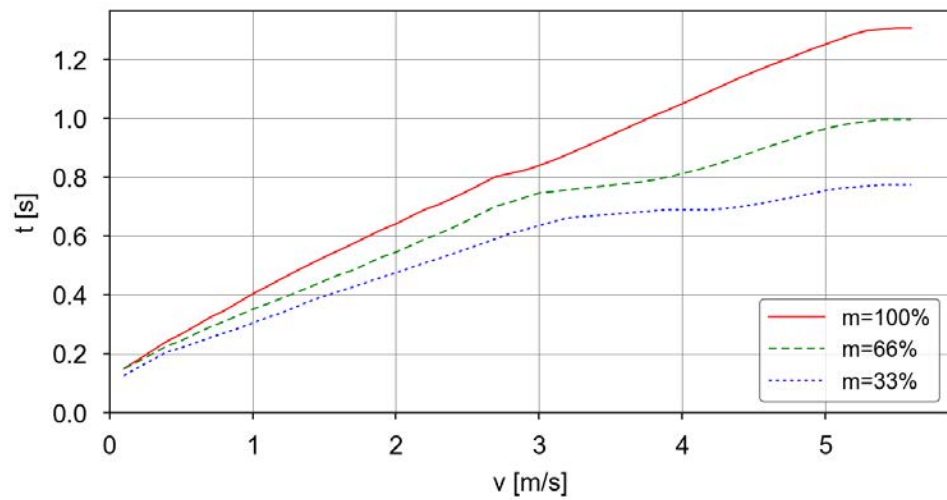
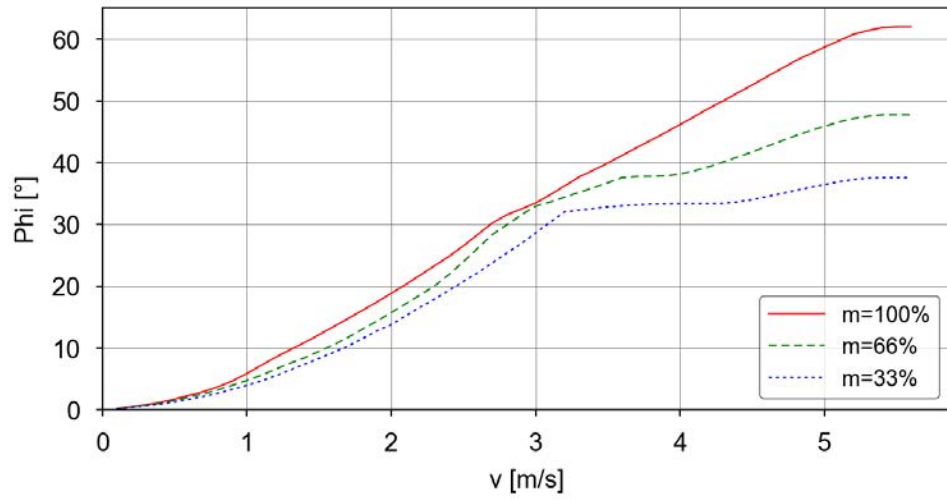
Extension zone 1, stopping distance and stopping time



Continues on next page

Continued

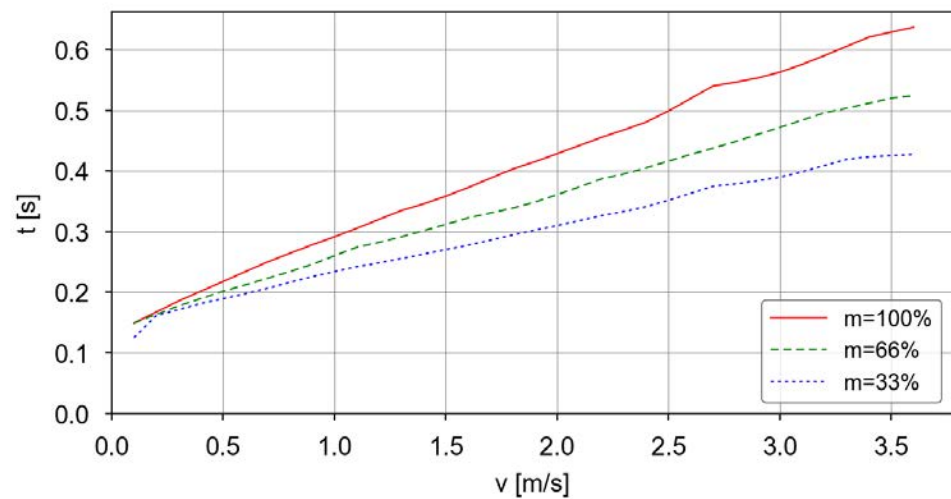
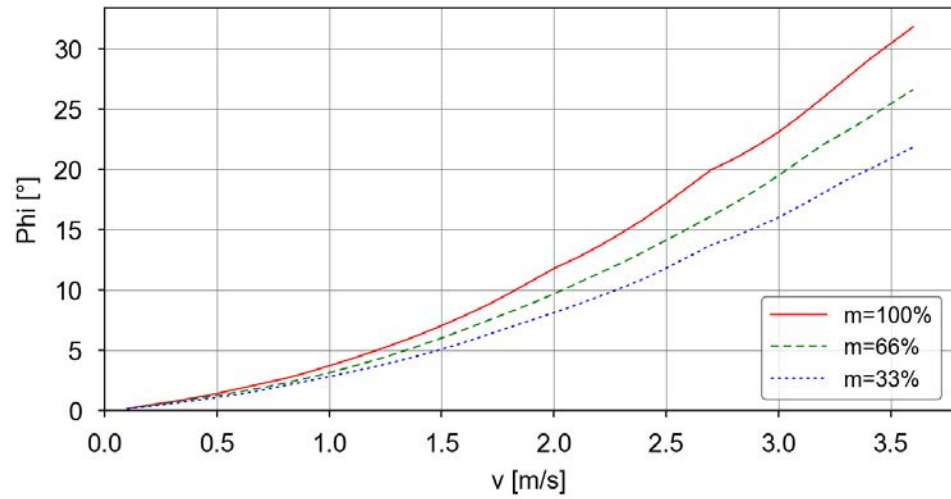
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

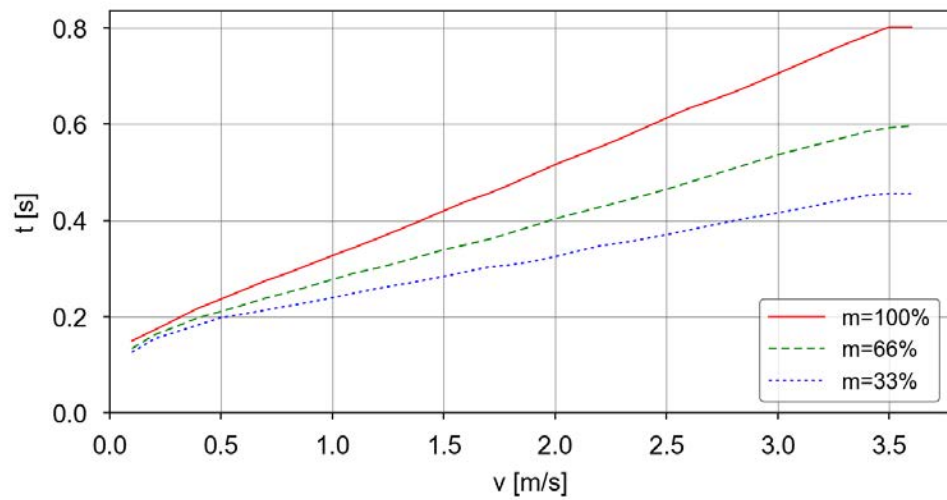
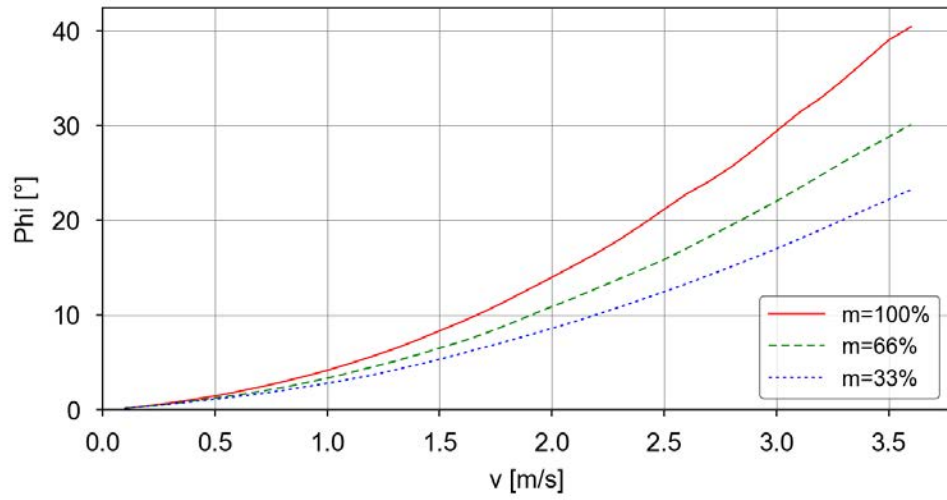
Extension zone 0, stopping distance and stopping time



Continues on next page

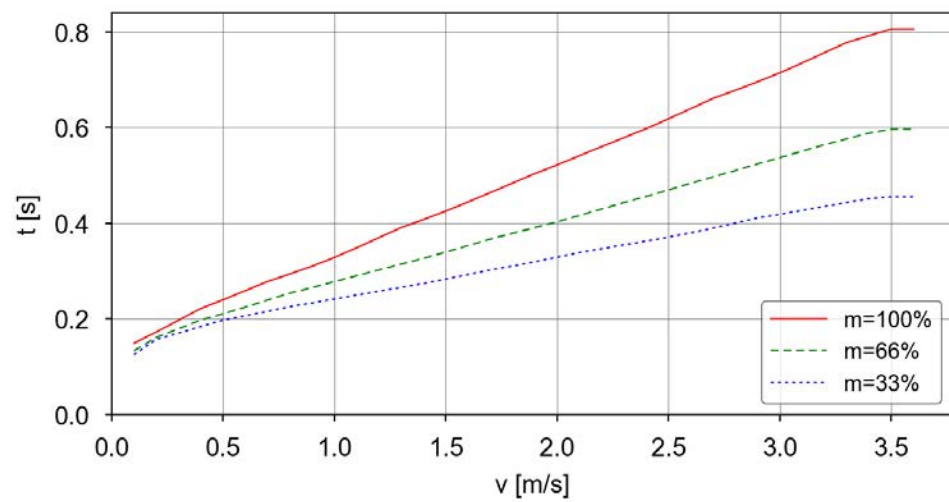
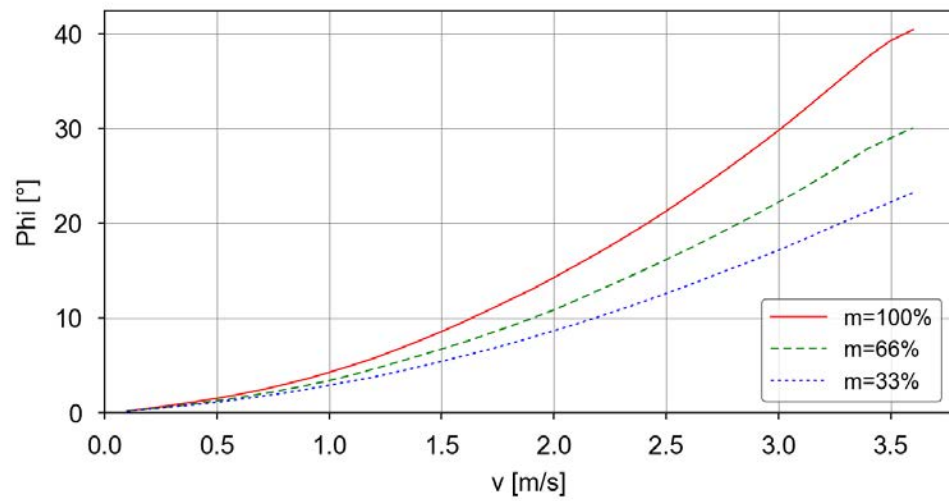
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



15.4 IRB 6650SLeanID 3.0 m 190 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	45.7	0.83
2	26.2	0.46
3	13.8	0.22

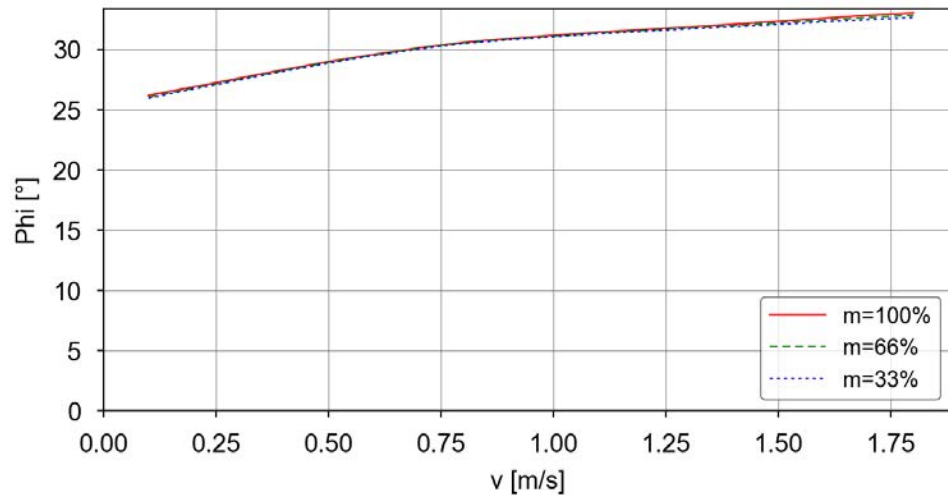
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

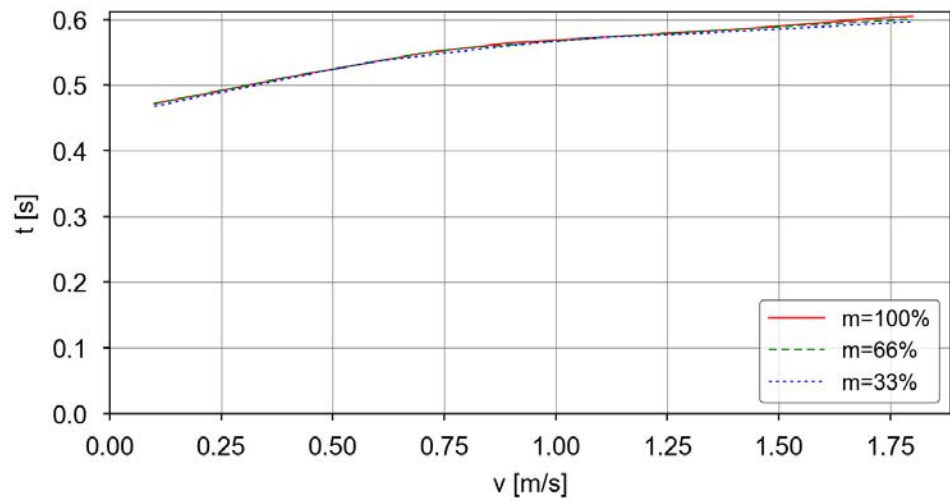
Zone	wcp min (m)	wcp max (m)
0	0	1.013
1	1.013	2.027
2	2.027	max reach

Category 1, Axis 1

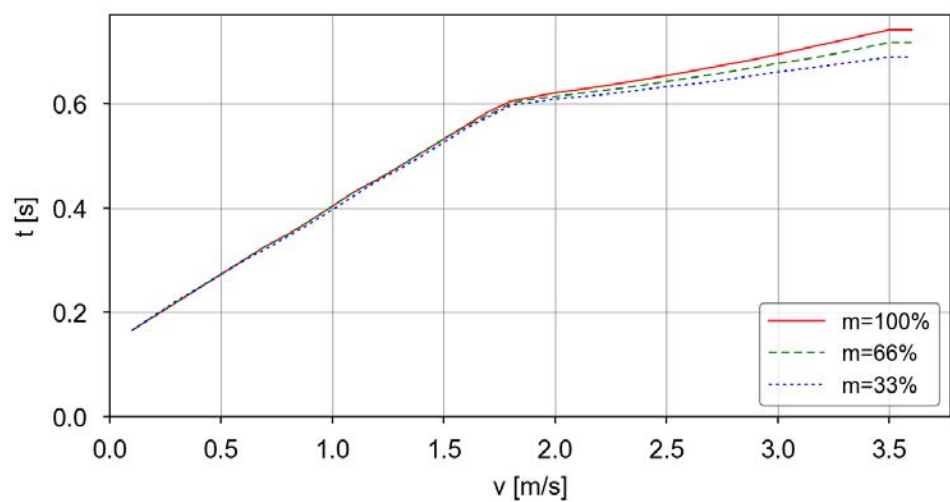
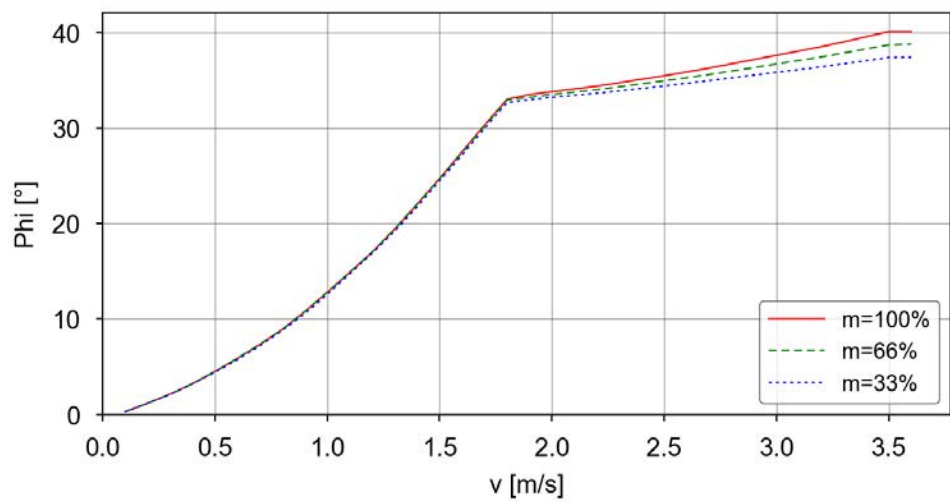
Extension zone 0, stopping distance and stopping time



Continues on next page

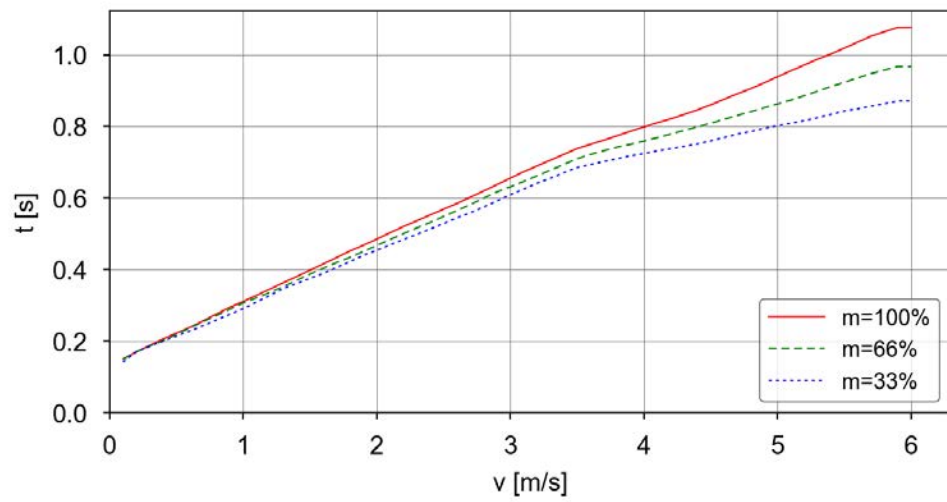
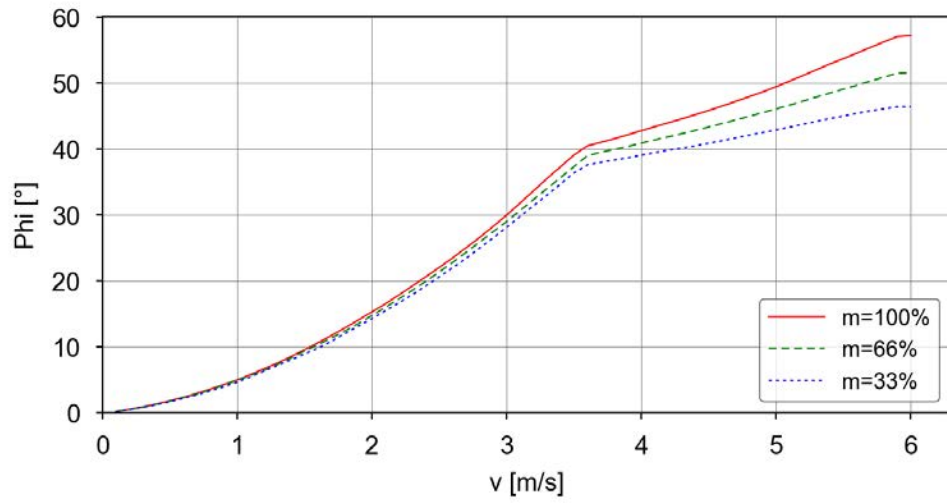


Extension zone 1, stopping distance and stopping time



Continues on next page

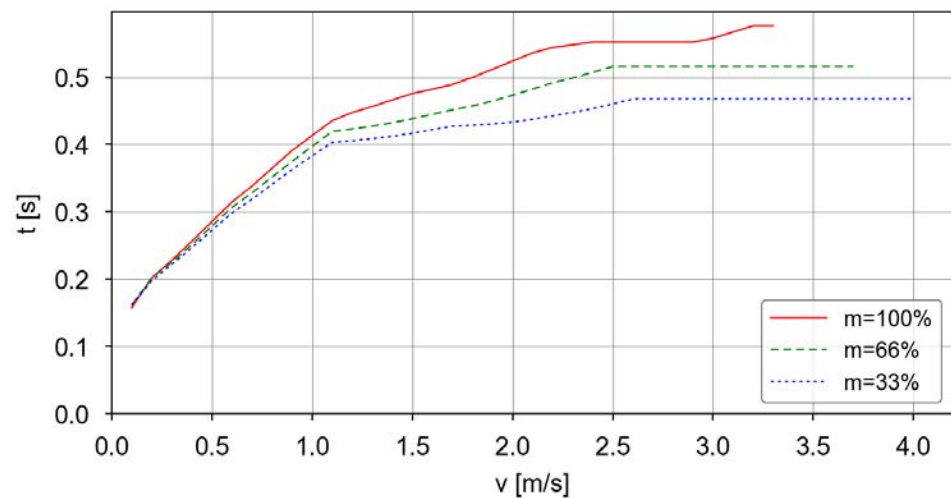
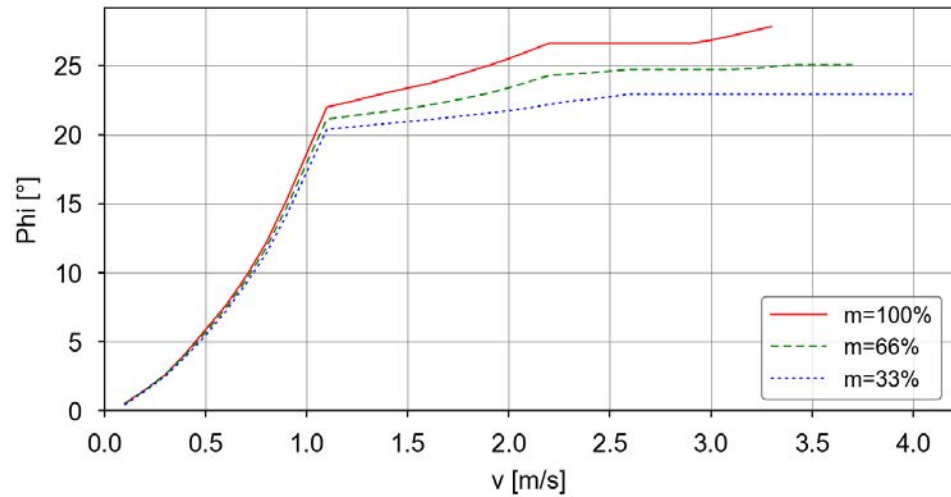
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

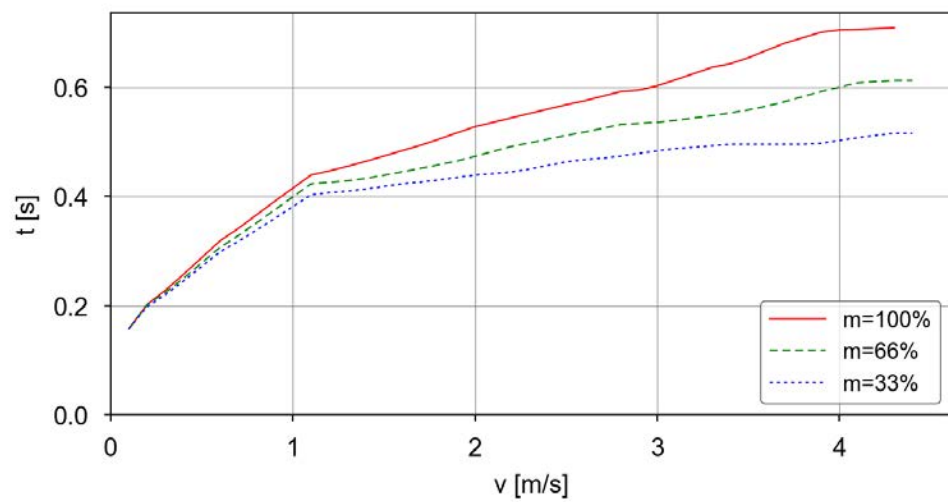
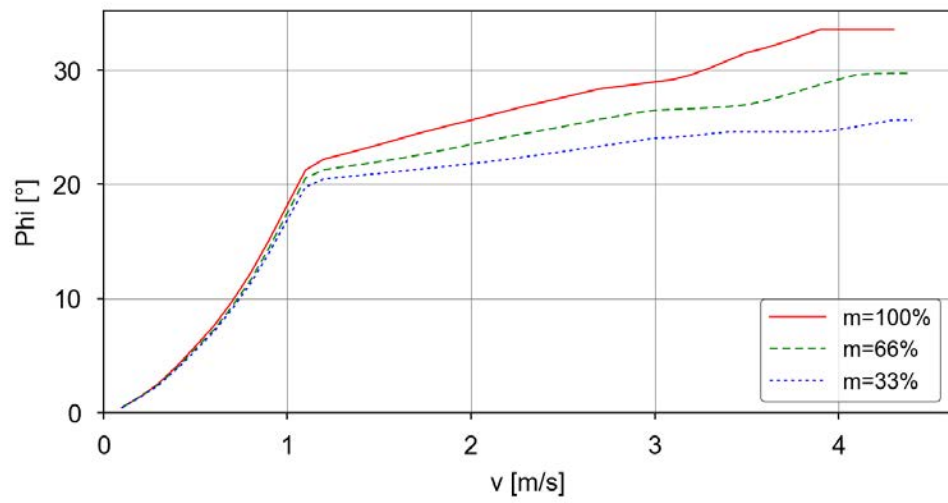
Extension zone 0, stopping distance and stopping time



Continues on next page

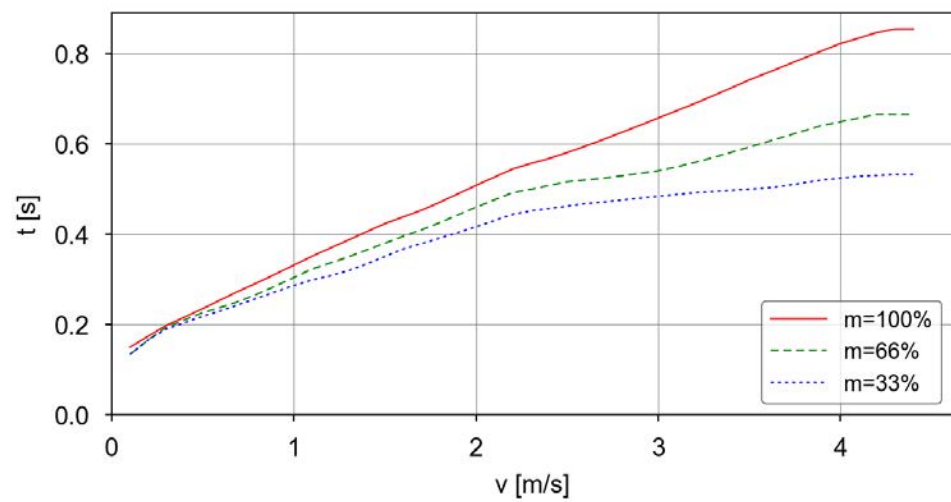
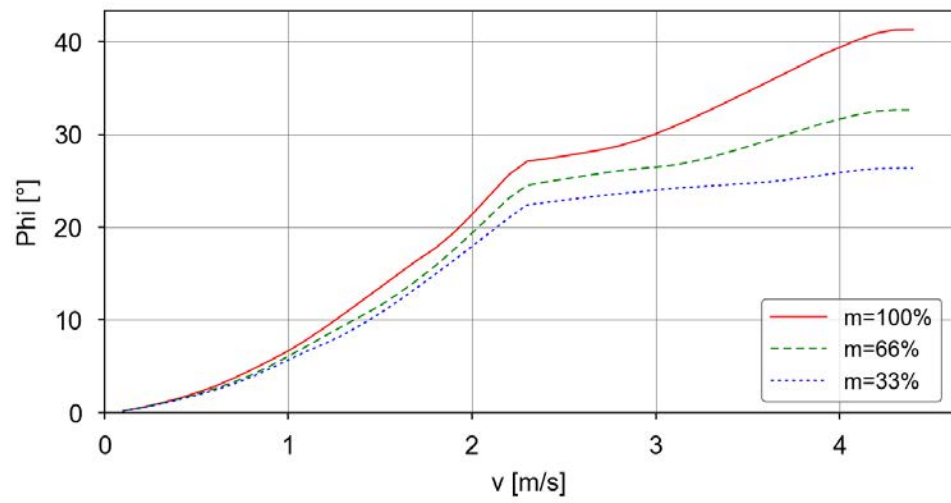
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

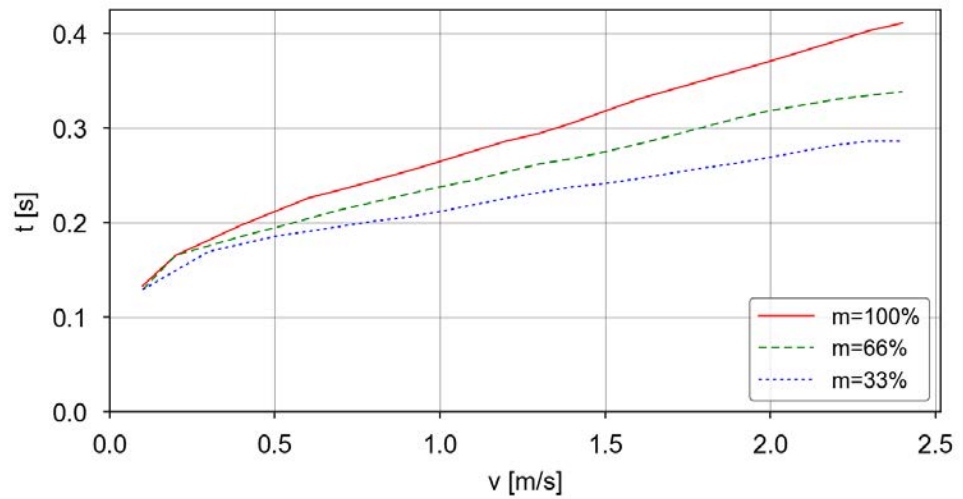
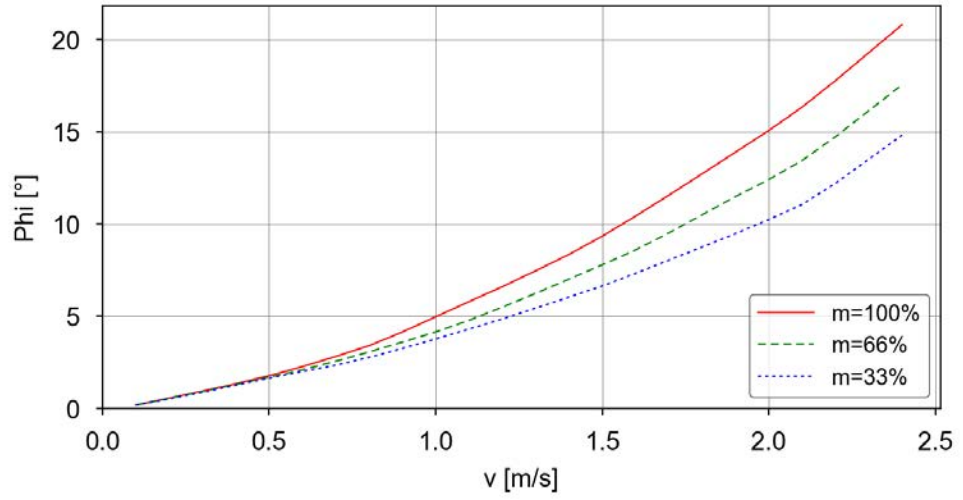
Extension zone 2, stopping distance and stopping time



Continues on next page

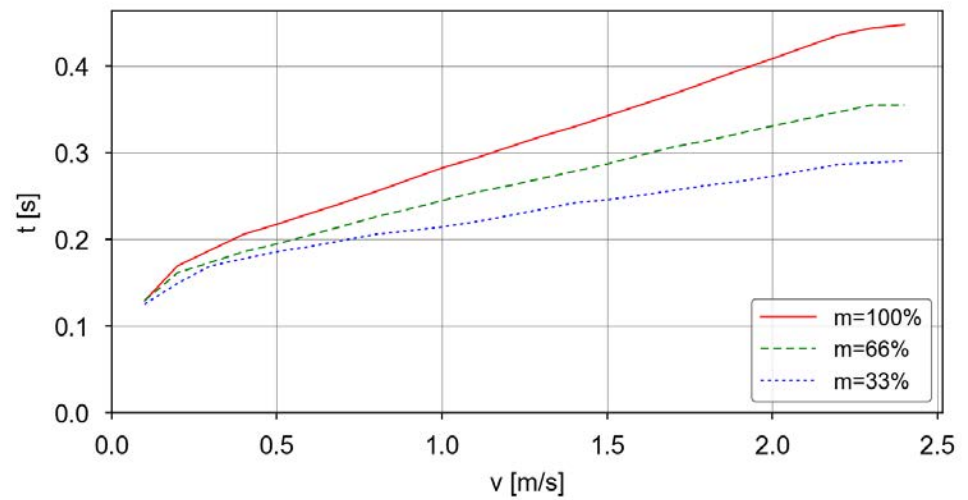
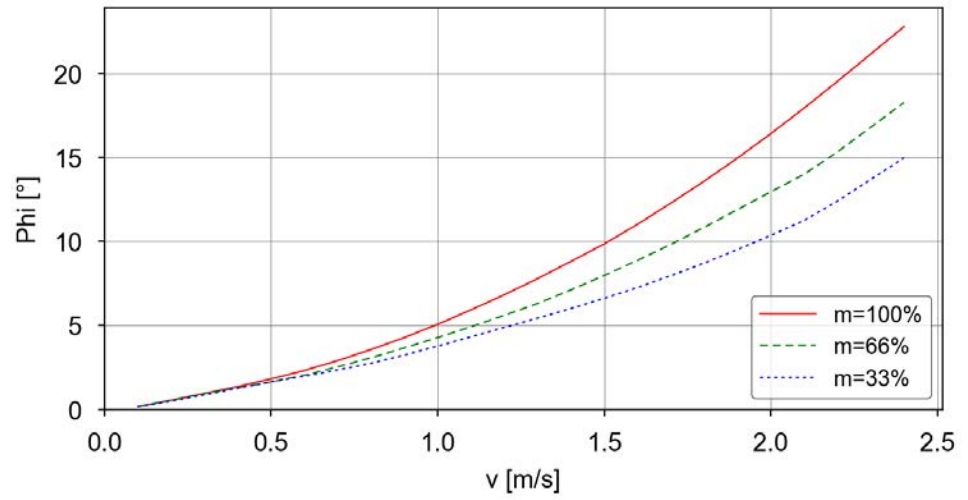
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

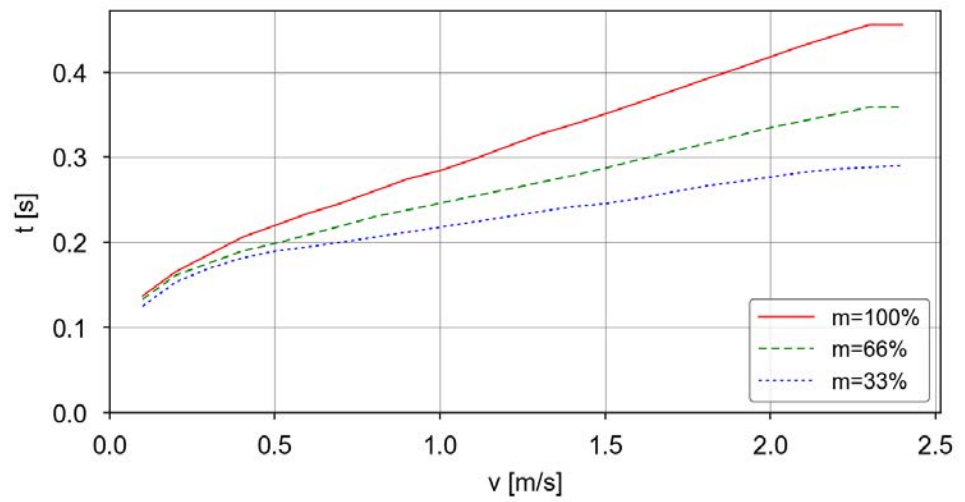
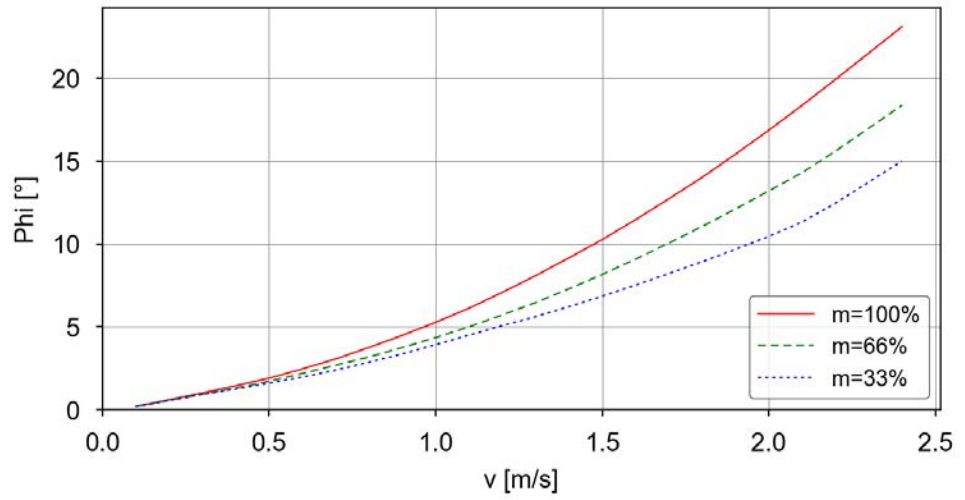
Extension zone 1, stopping distance and stopping time



Continues on next page

Continued

Extension zone 2, stopping distance and stopping time



15.5 IRB 6650SLeanID 3.5 m 100 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	50.6	0.9
2	34.9	0.66
3	20.5	0.34

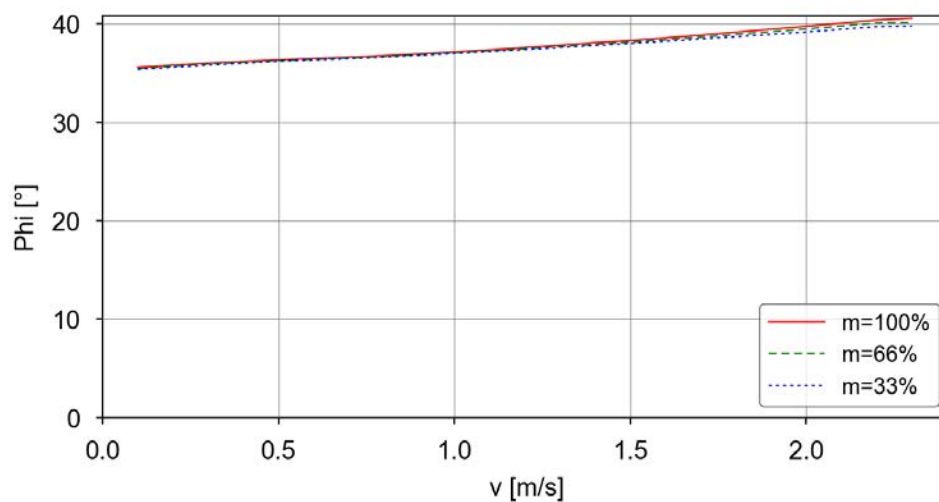
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.162
1	1.162	2.323
2	2.323	max reach

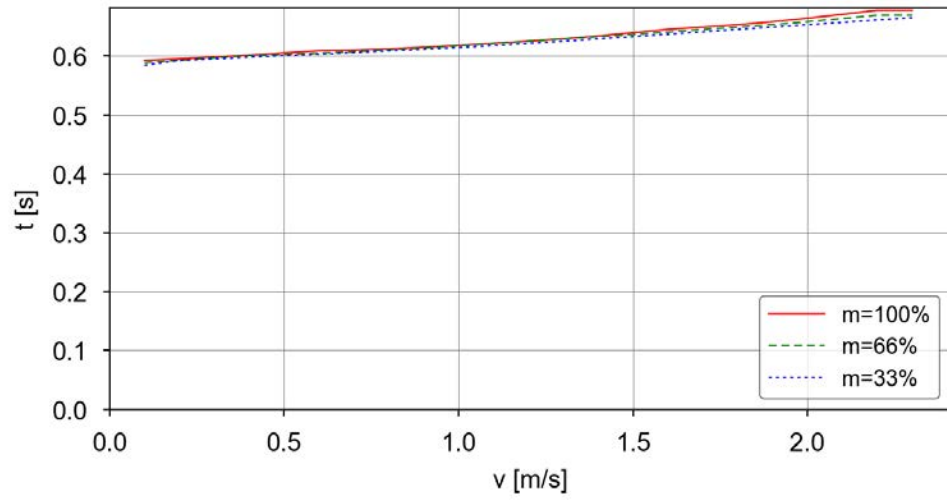
Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

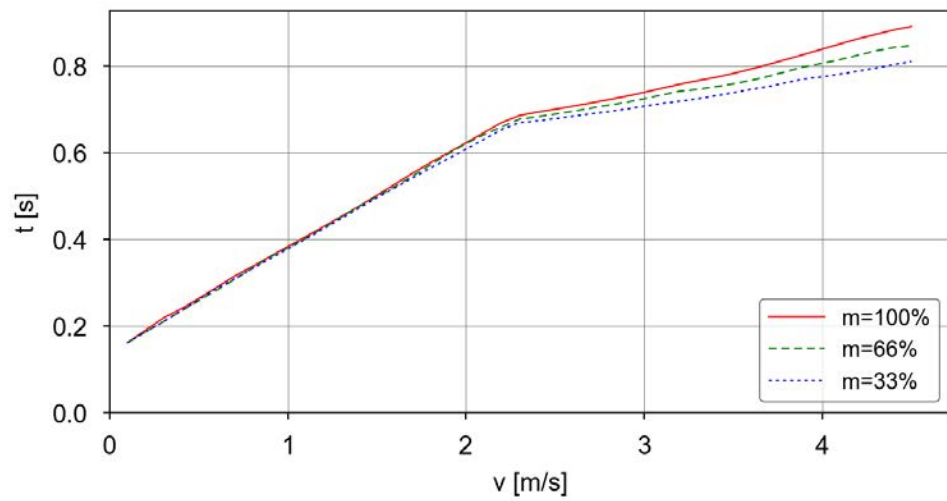
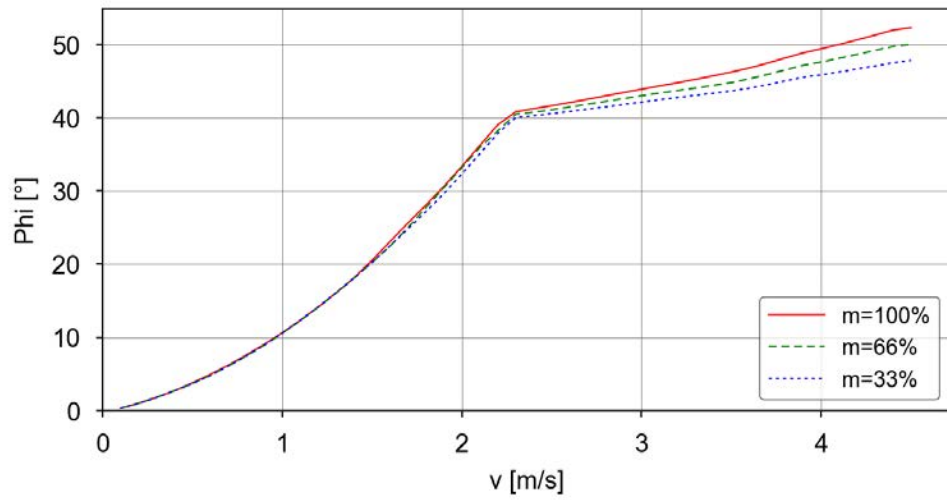


Continues on next page

Continued

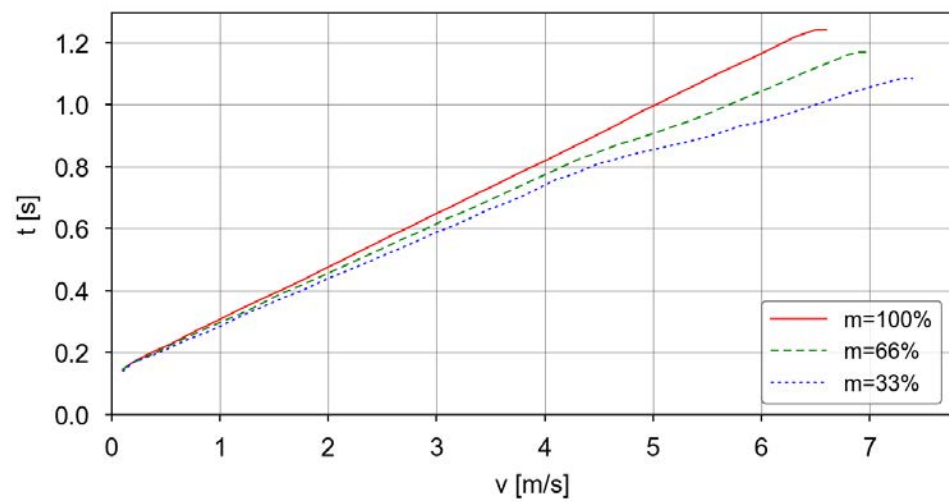
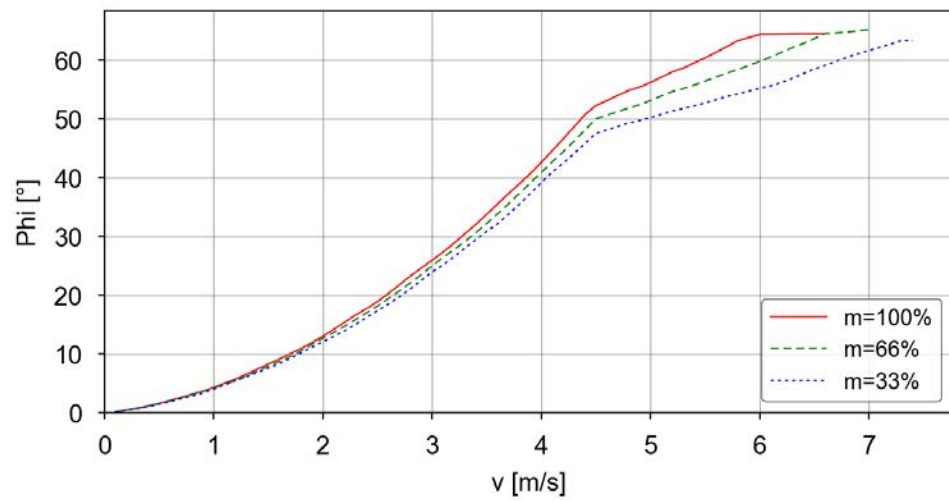


Extension zone 1, stopping distance and stopping time



Continues on next page

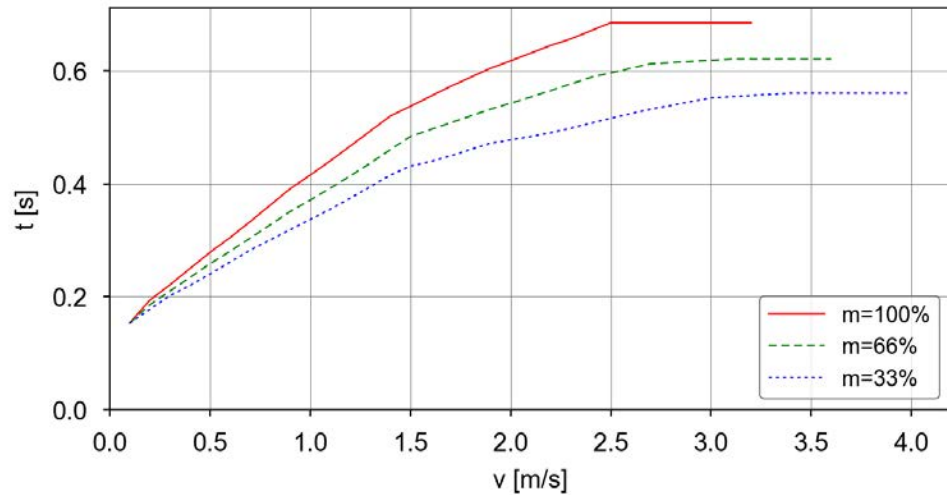
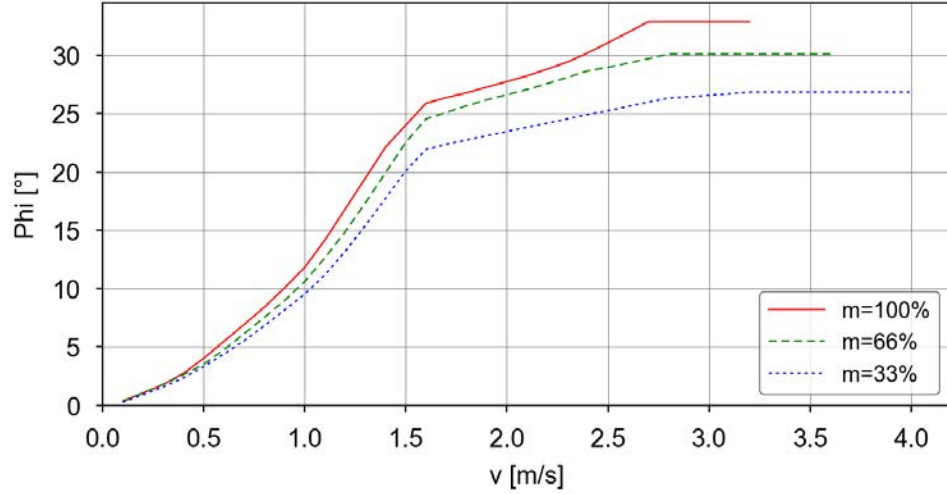
Extension zone 2, stopping distance and stopping time



Continues on next page

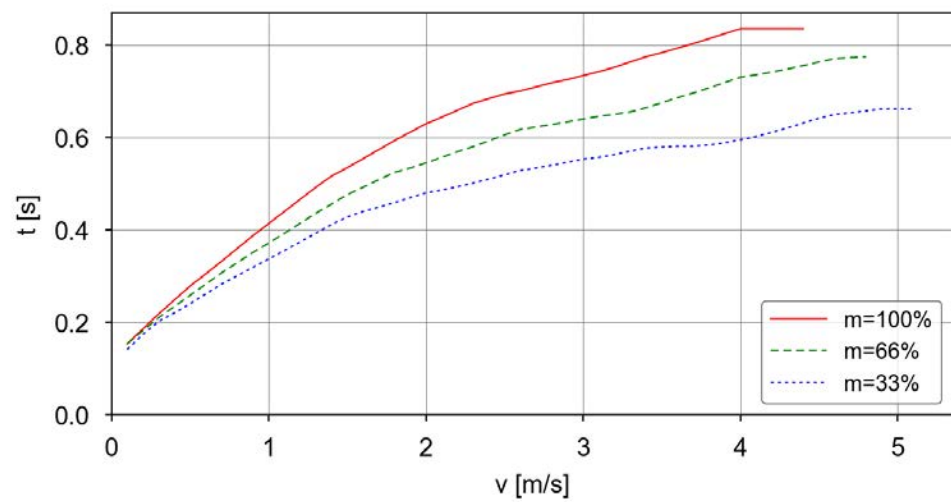
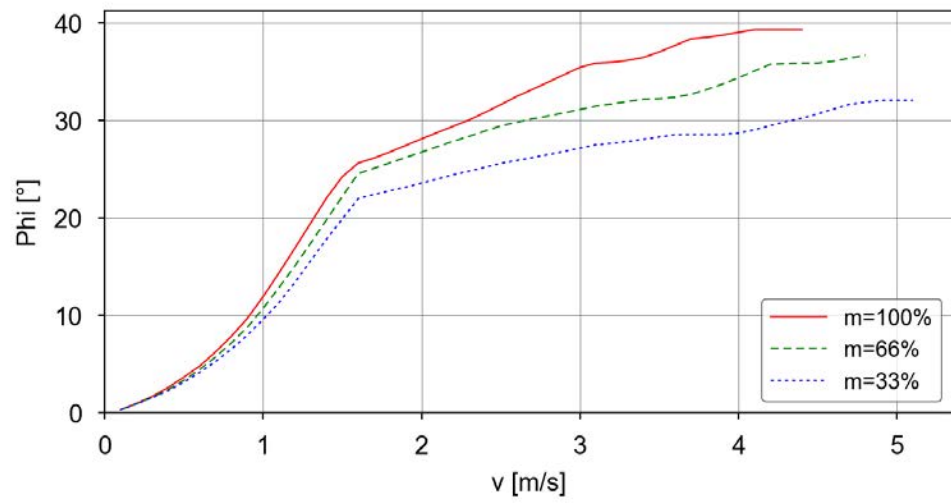
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



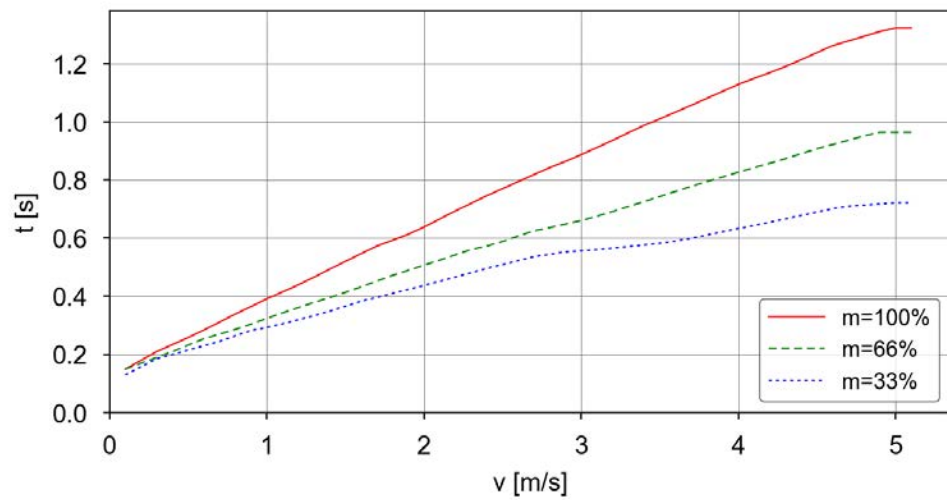
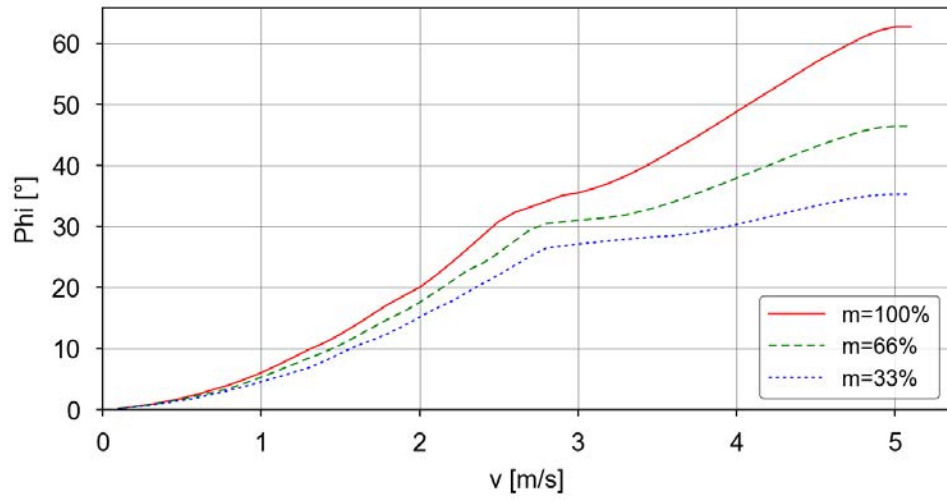
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

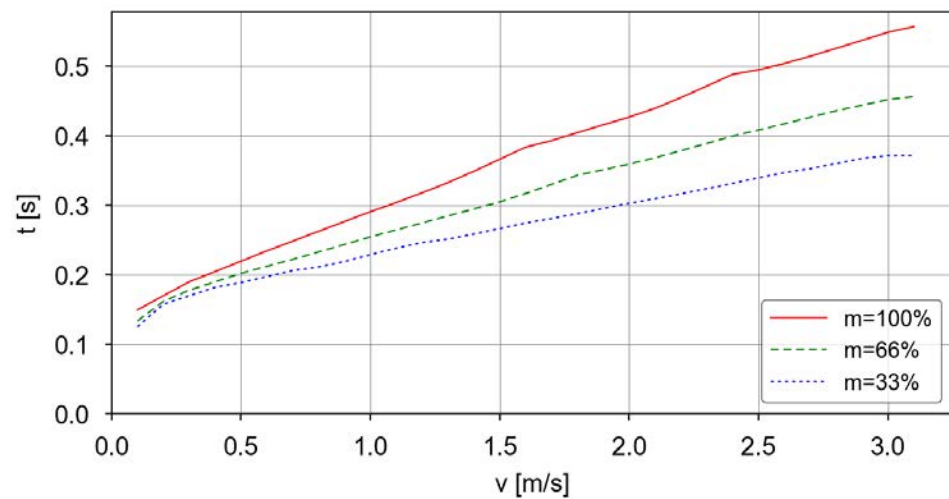
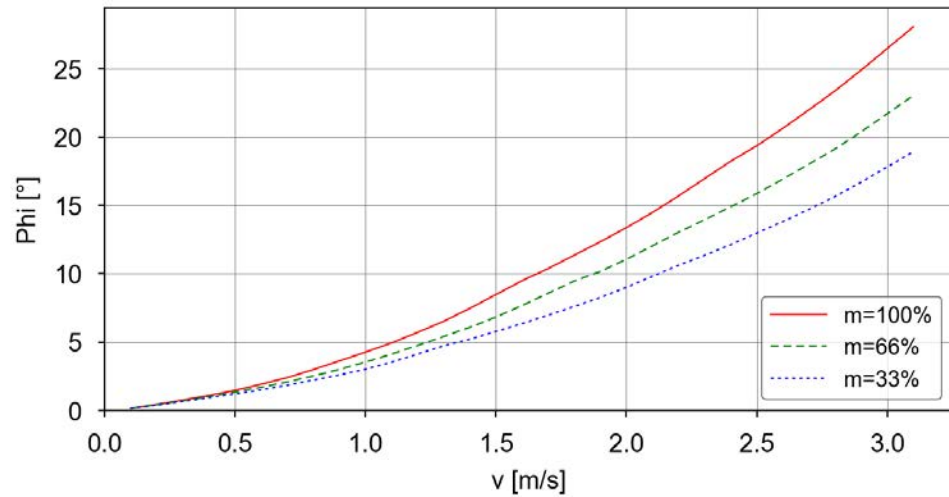
Extension zone 2, stopping distance and stopping time



Continues on next page

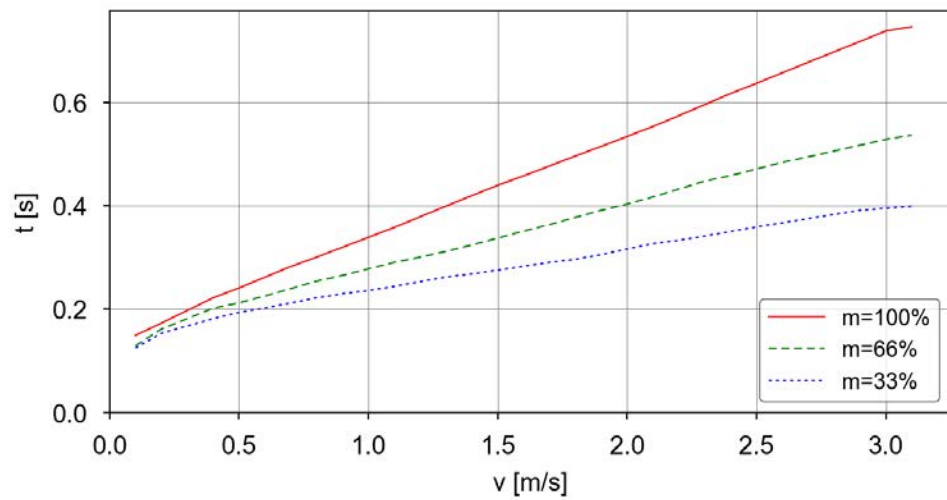
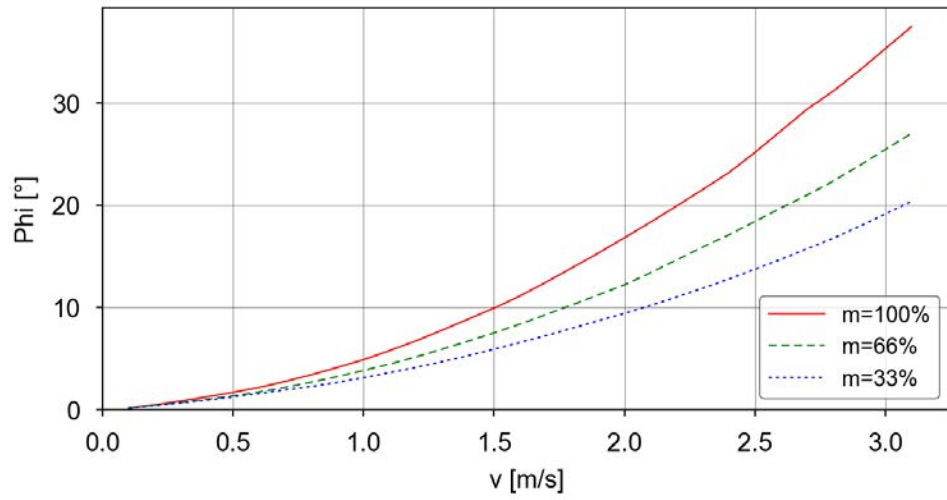
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



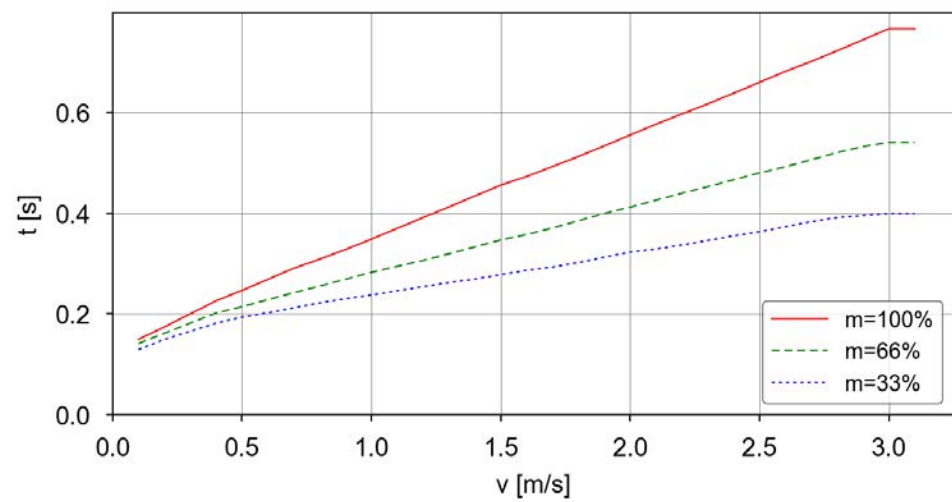
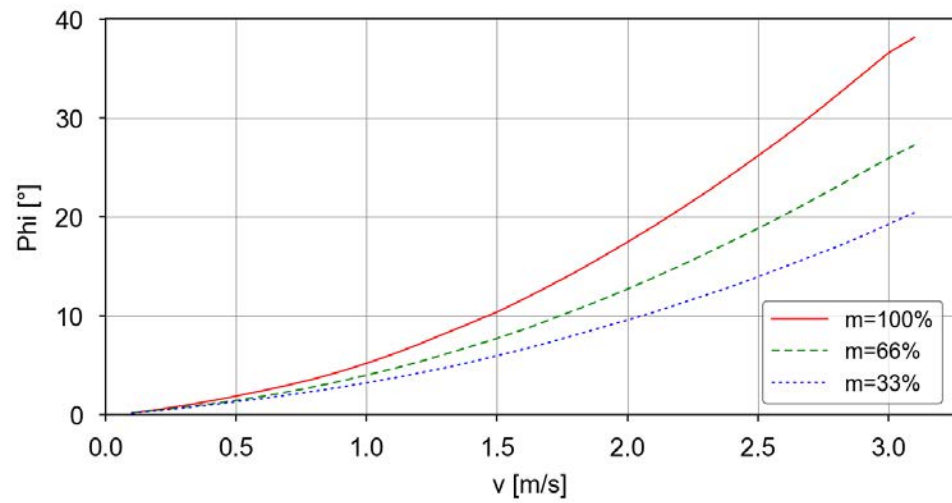
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

16 IRB 6660

16.1 IRB 6660 1.90 m 205 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	21.1	0.32
2	15.1	0.15
3	19.6	0.27

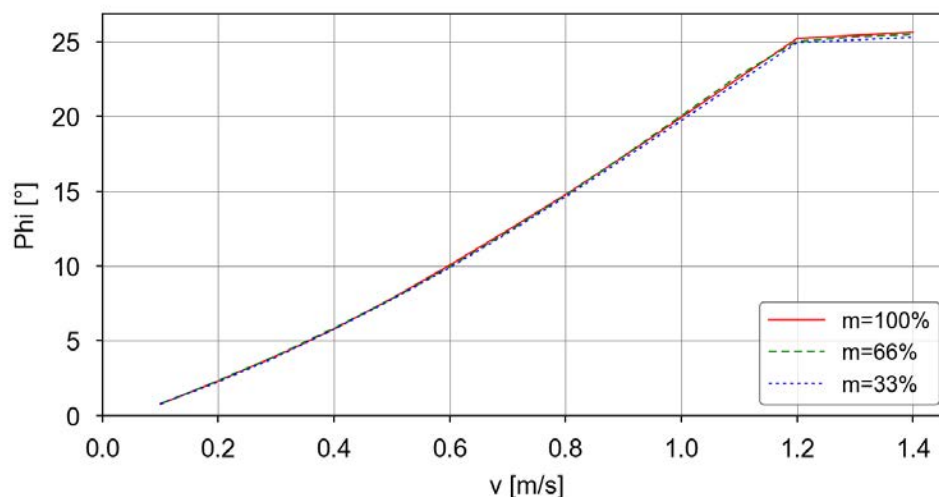
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.644
1	0.644	1.289
2	1.289	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

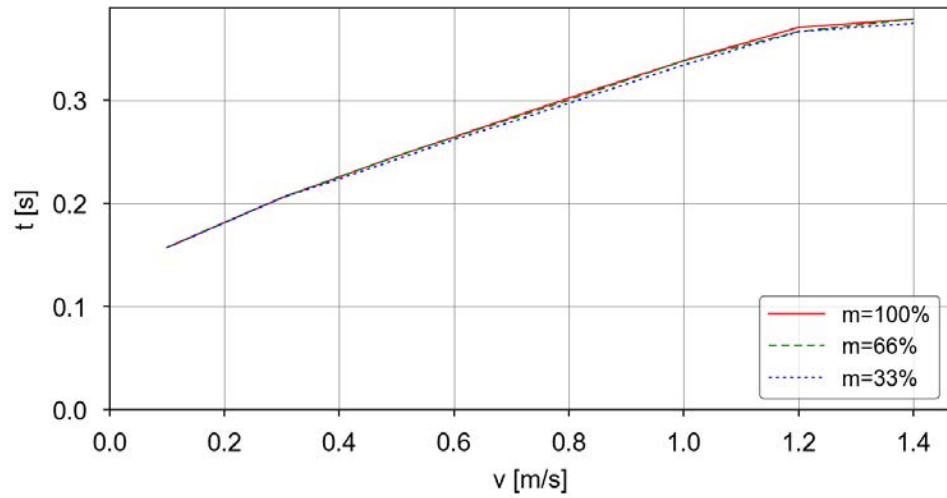


Continues on next page

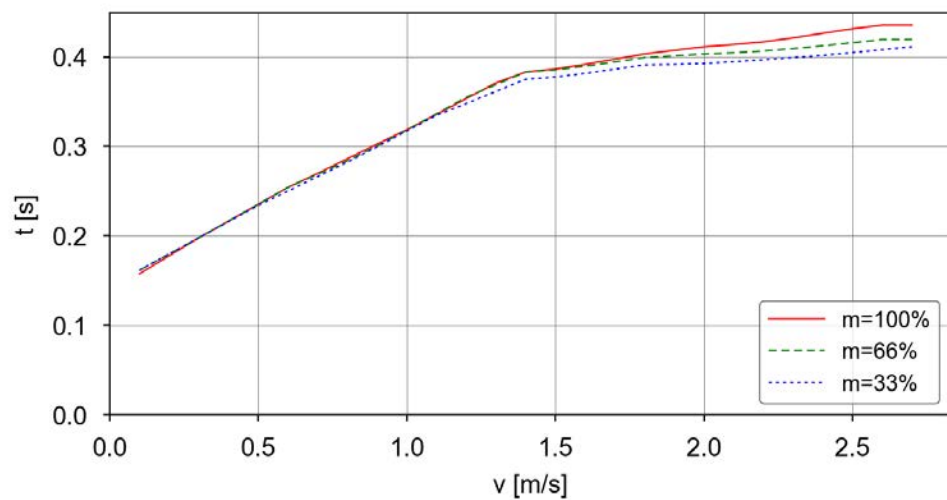
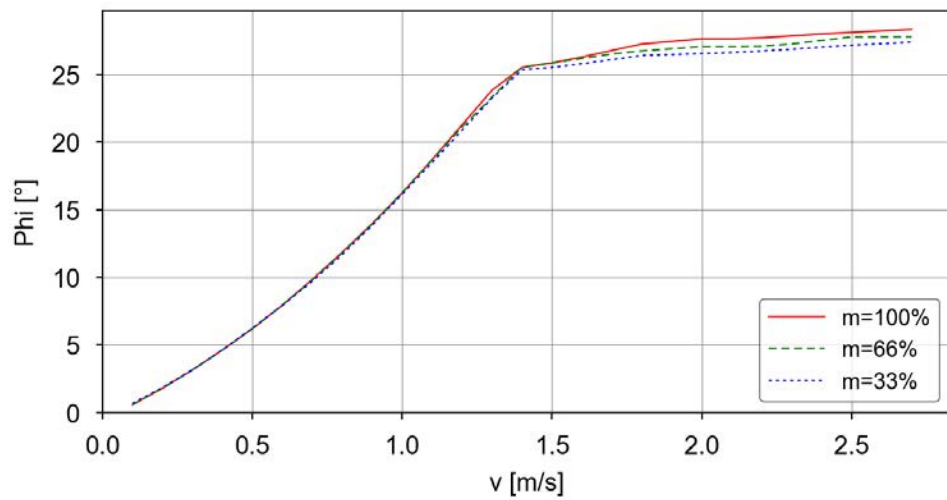
16 IRB 6660

16.1 IRB 6660 1.90 m 205 kg

Continued

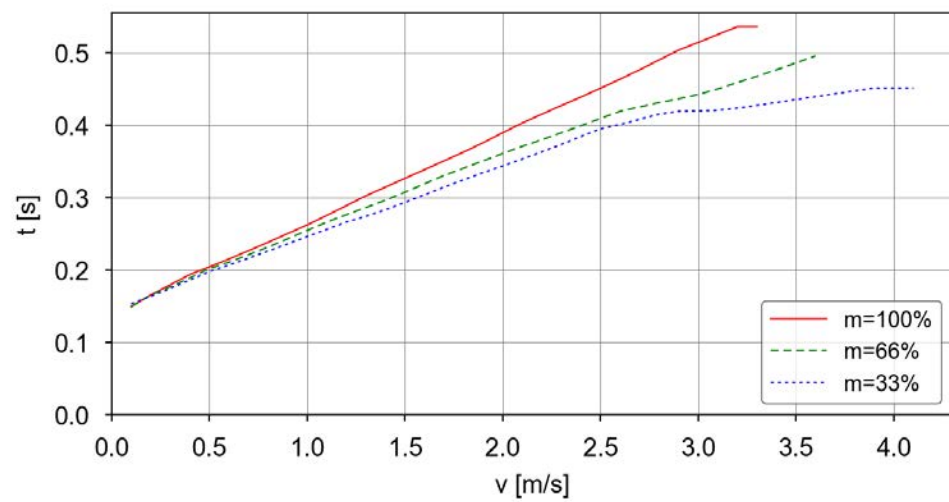
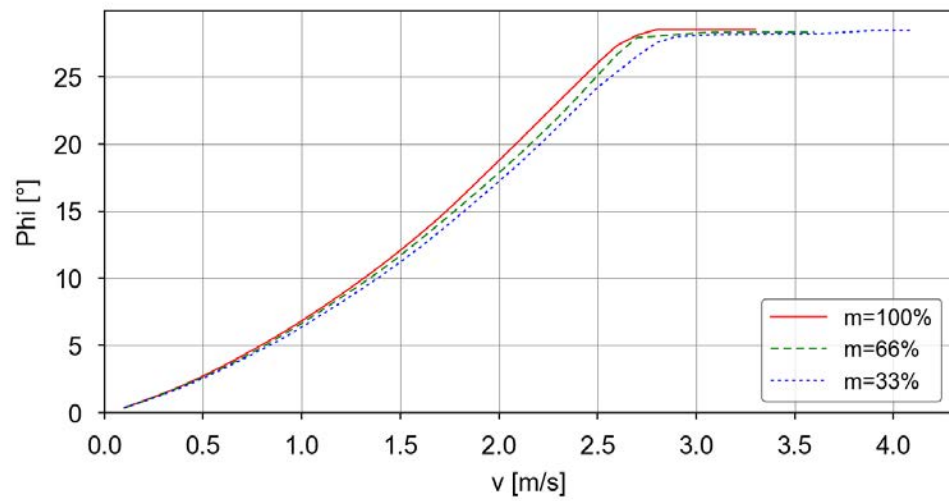


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

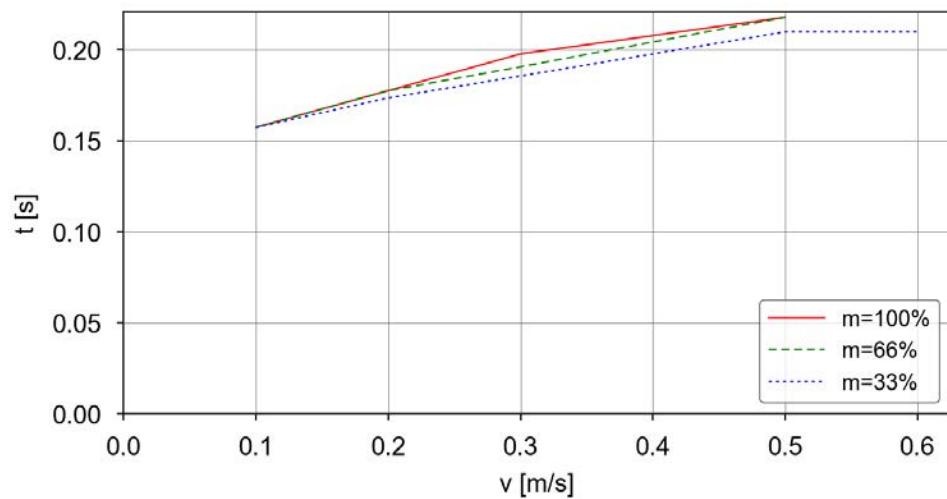
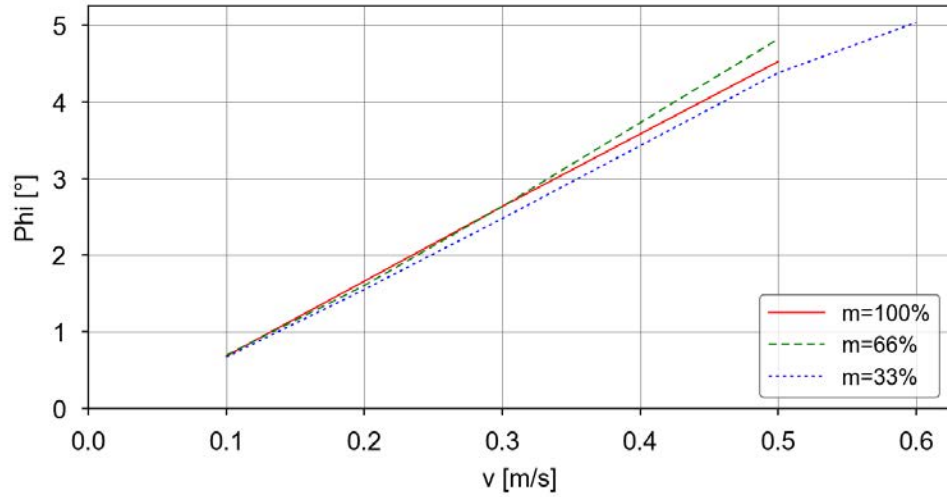
16 IRB 6660

16.1 IRB 6660 1.90 m 205 kg

Continued

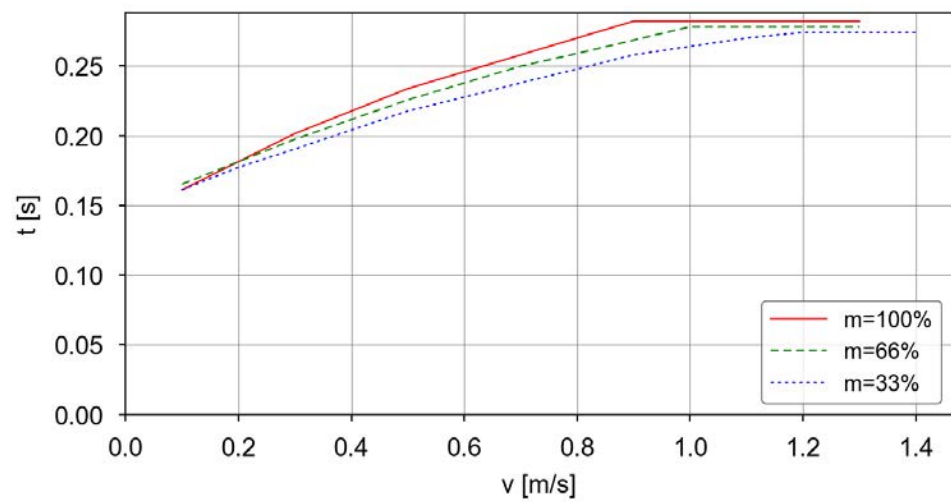
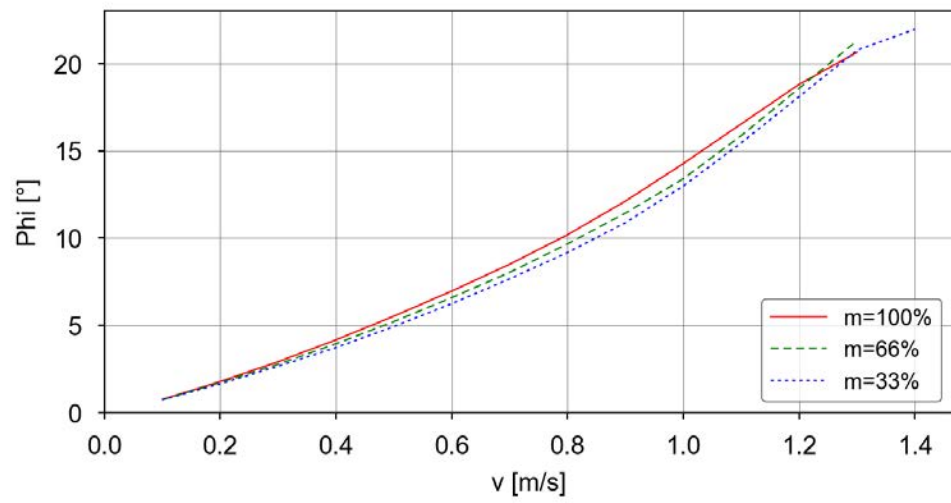
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



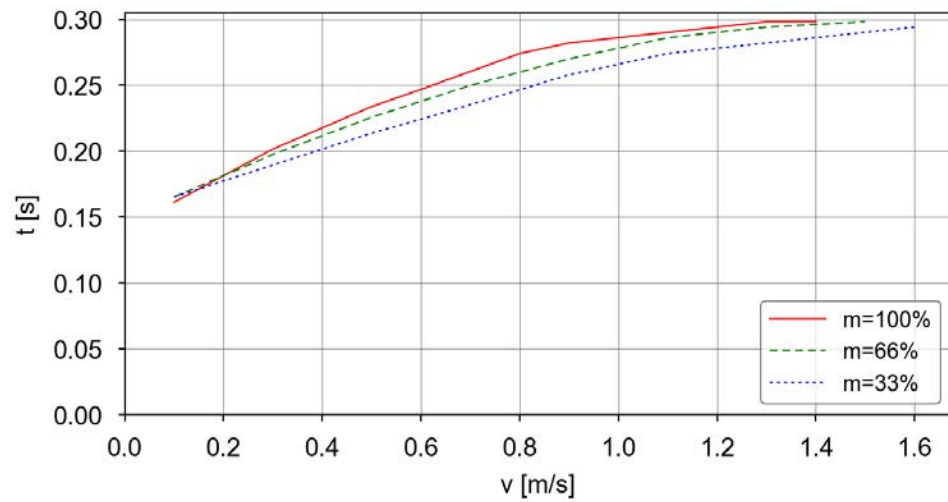
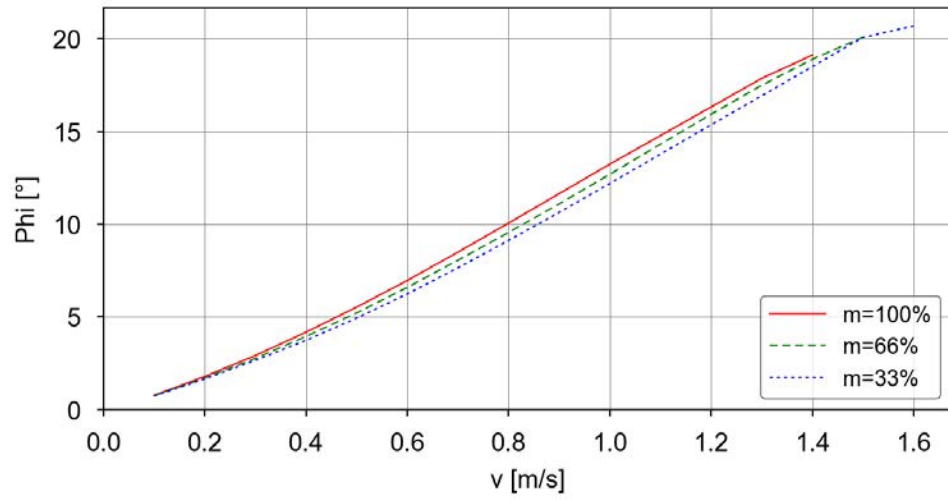
Continues on next page

16 IRB 6660

16.1 IRB 6660 1.90 m 205 kg

Continued

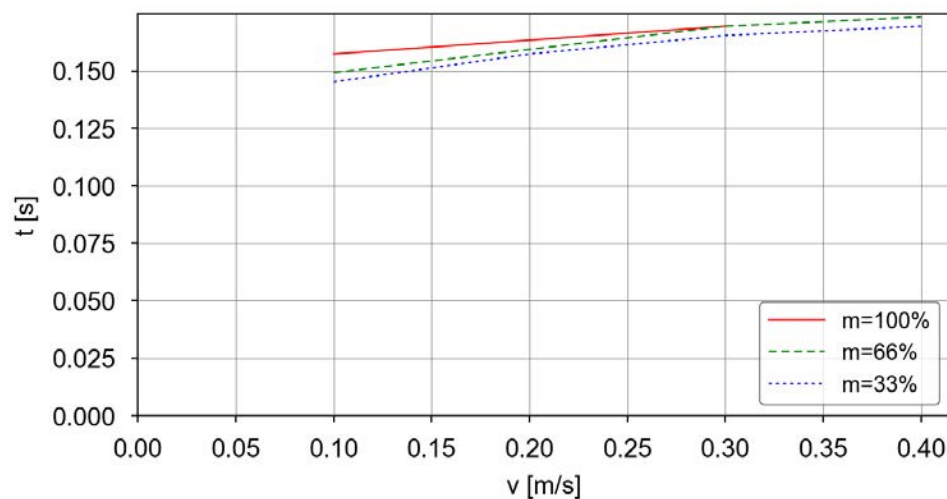
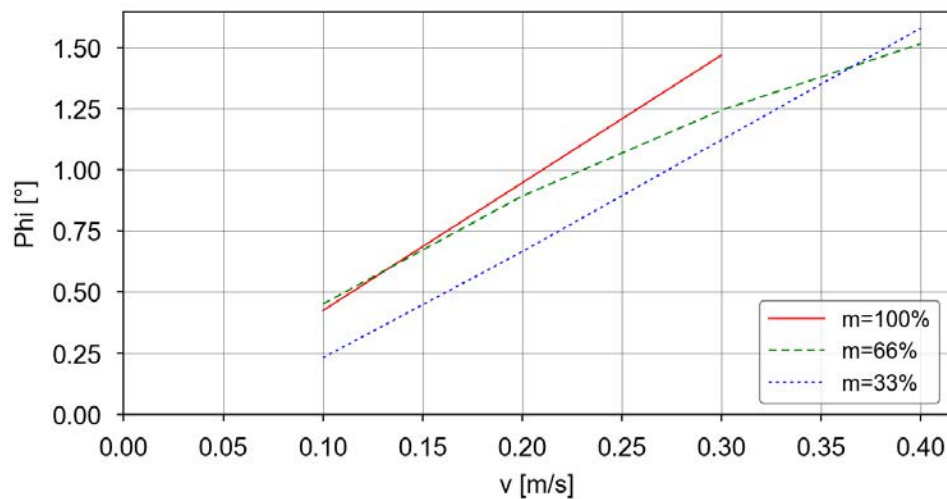
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



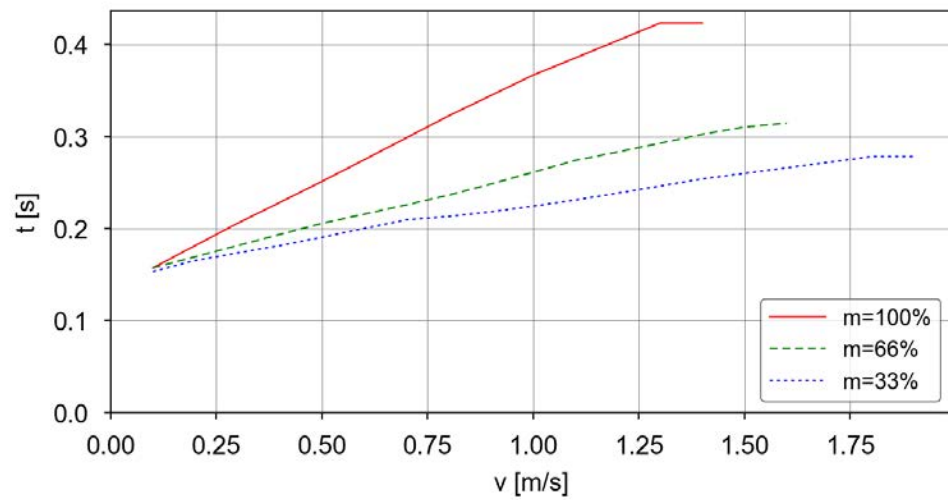
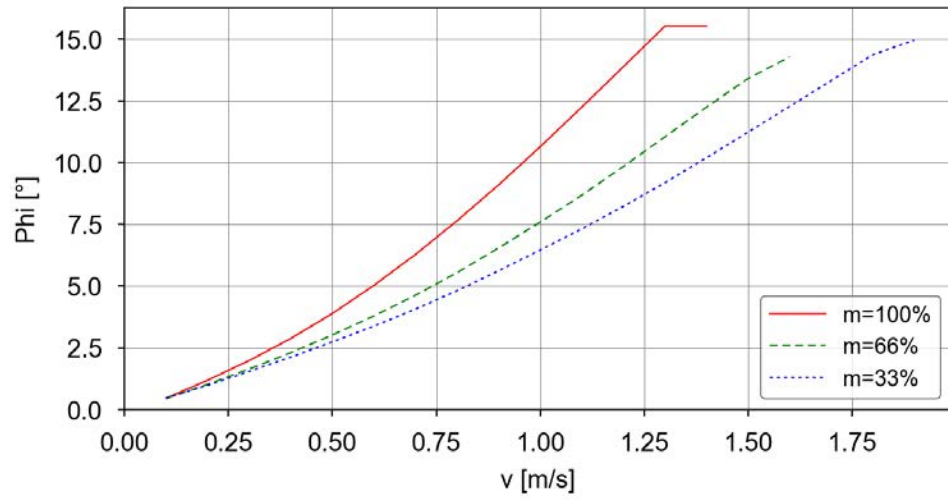
Continues on next page

16 IRB 6660

16.1 IRB 6660 1.90 m 205 kg

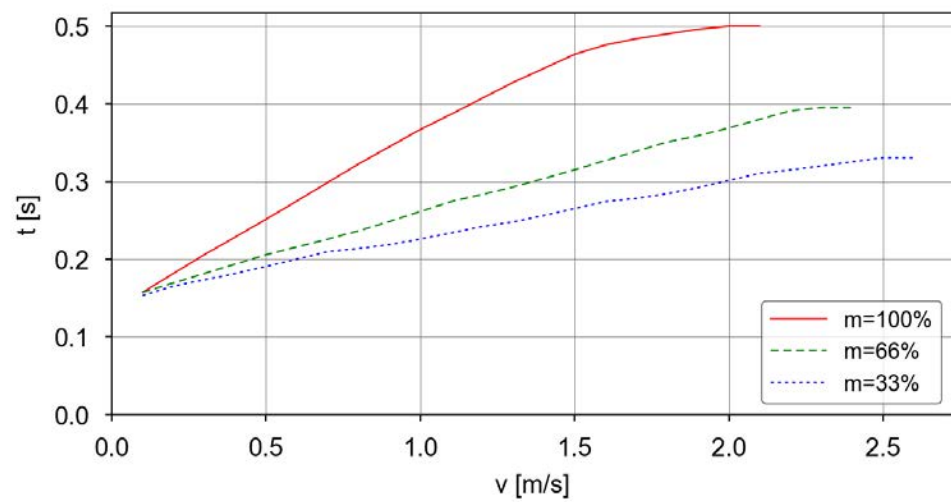
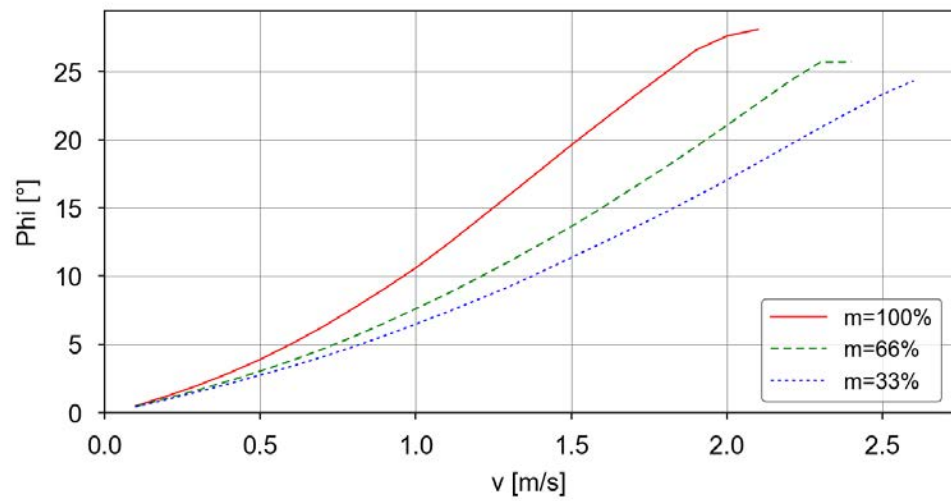
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



16.2 IRB 6660 3.10 m 130 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	39.8	0.61
2	34.0	0.42
3	36.6	0.44

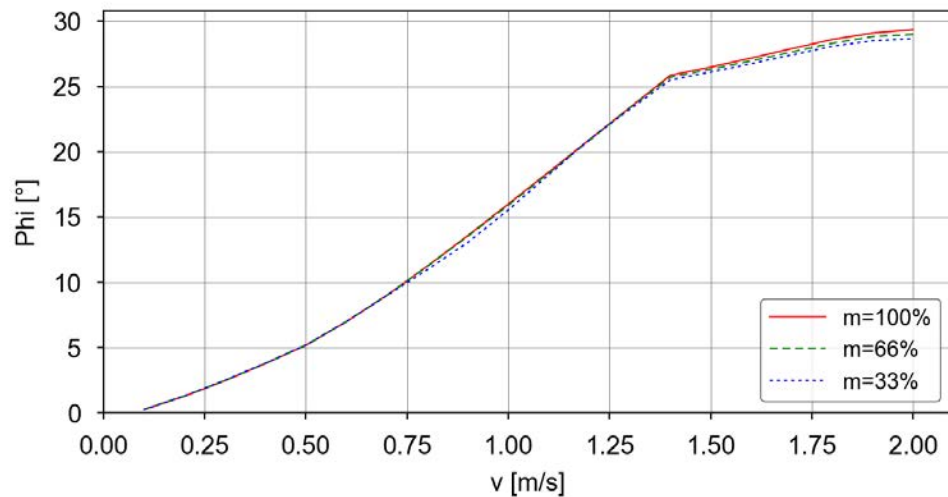
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

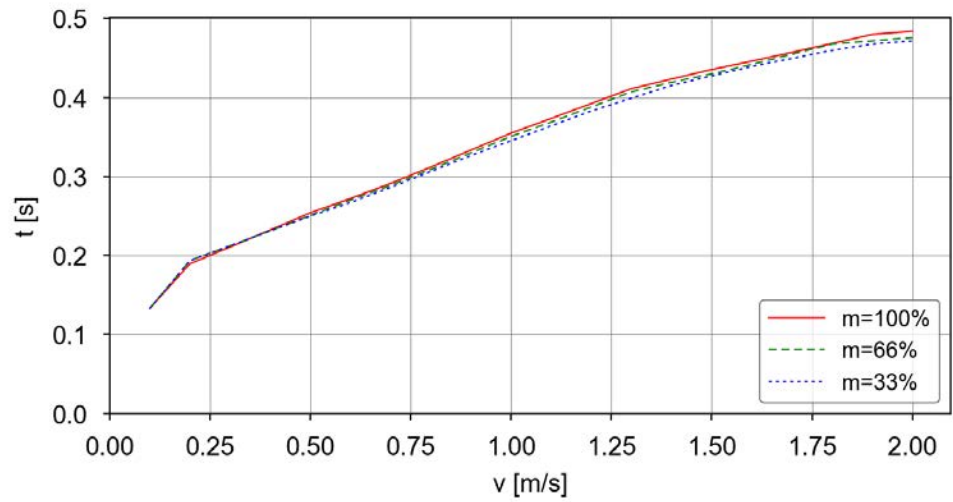
Zone	wcp min (m)	wcp max (m)
0	0	1.035
1	1.035	2.071
2	2.071	max reach

Category 1, Axis 1

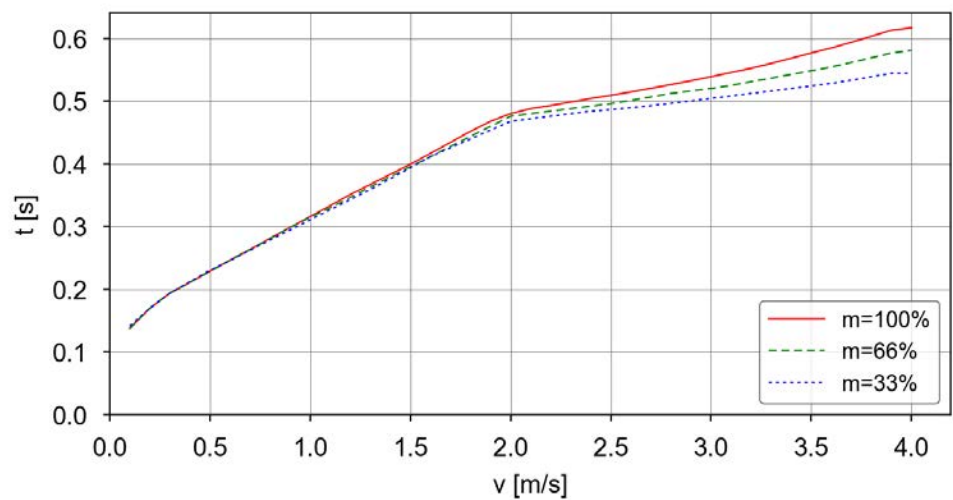
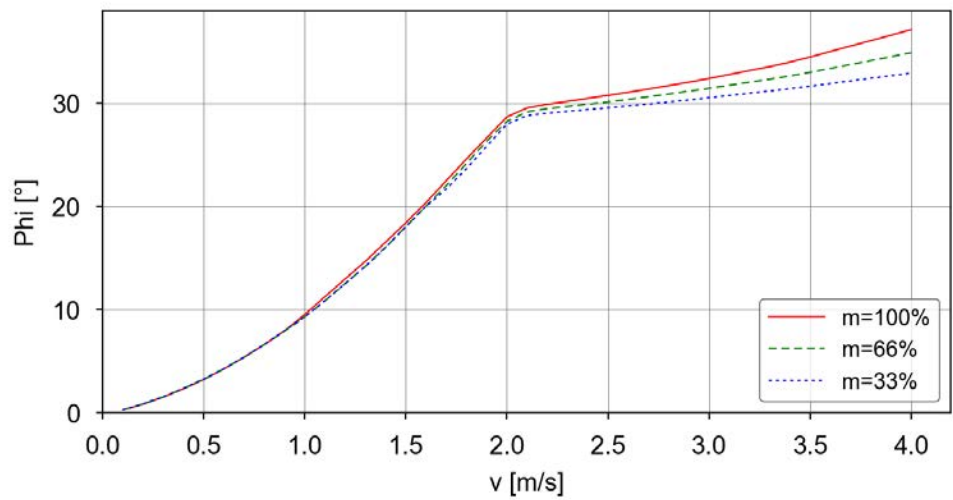
Extension zone 0, stopping distance and stopping time



Continues on next page

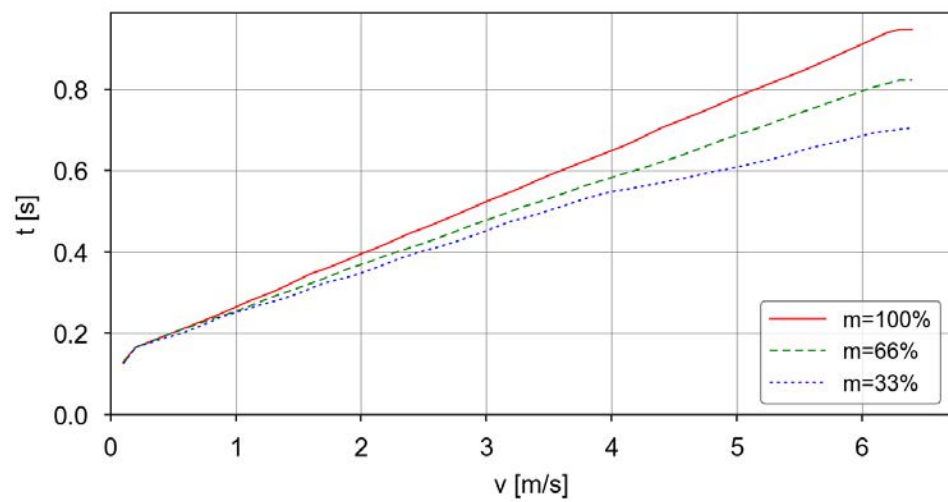
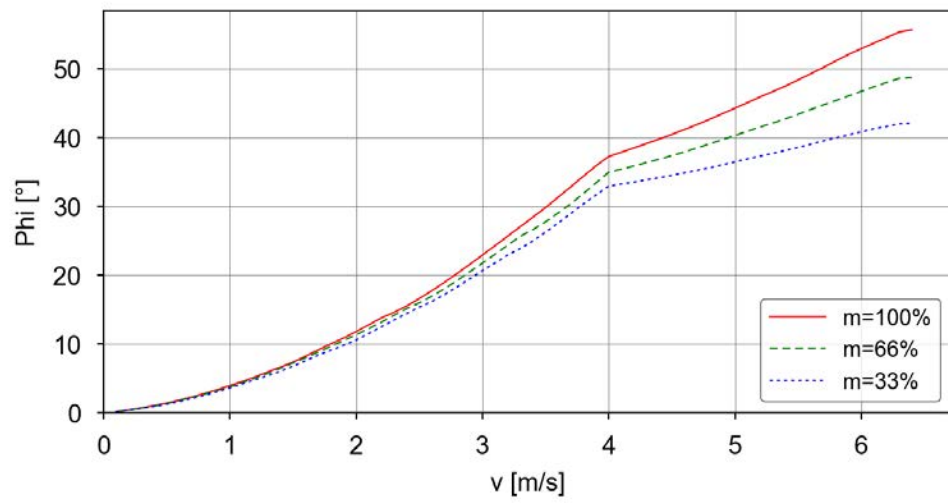


Extension zone 1, stopping distance and stopping time



Continues on next page

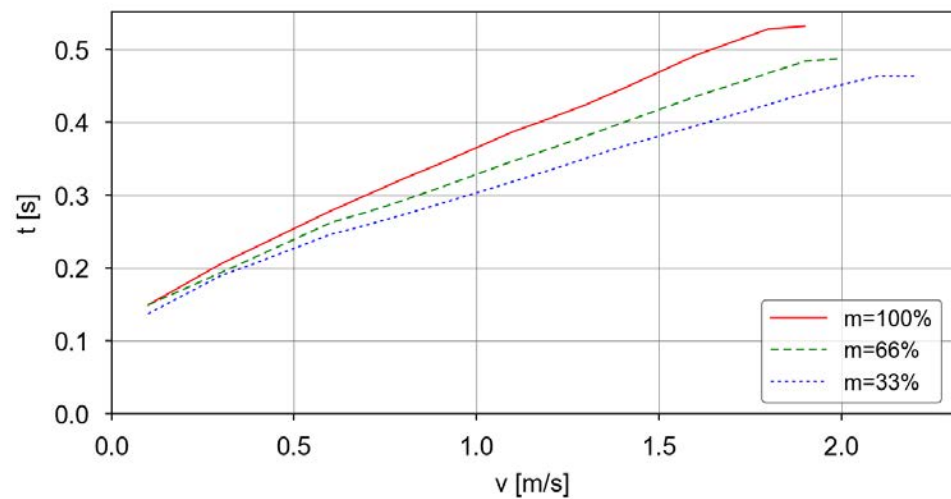
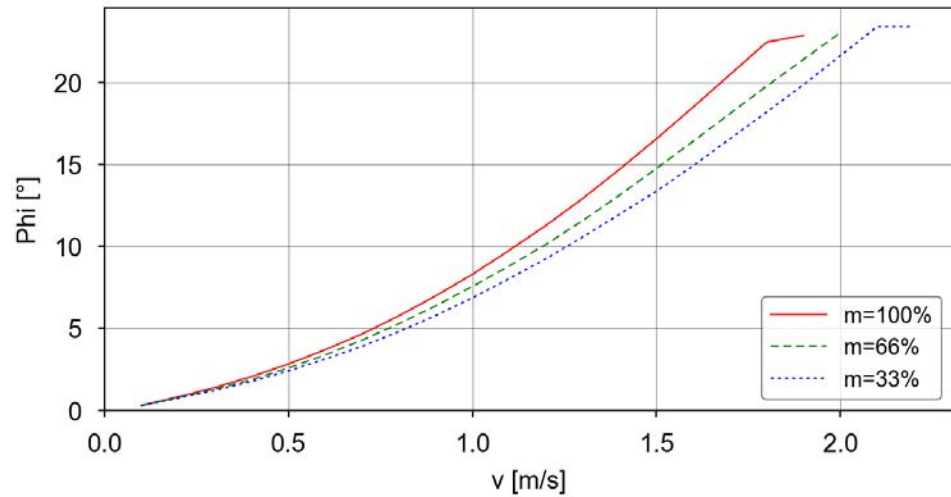
Extension zone 2, stopping distance and stopping time



Continues on next page

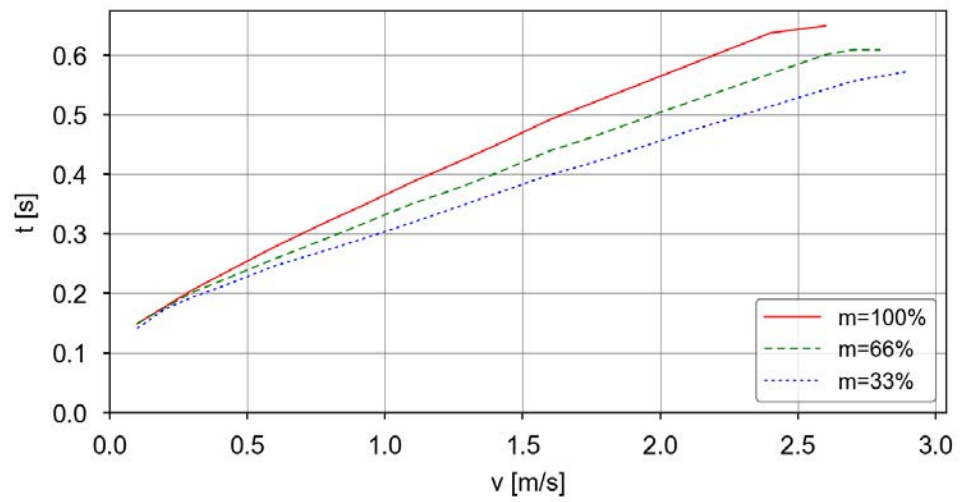
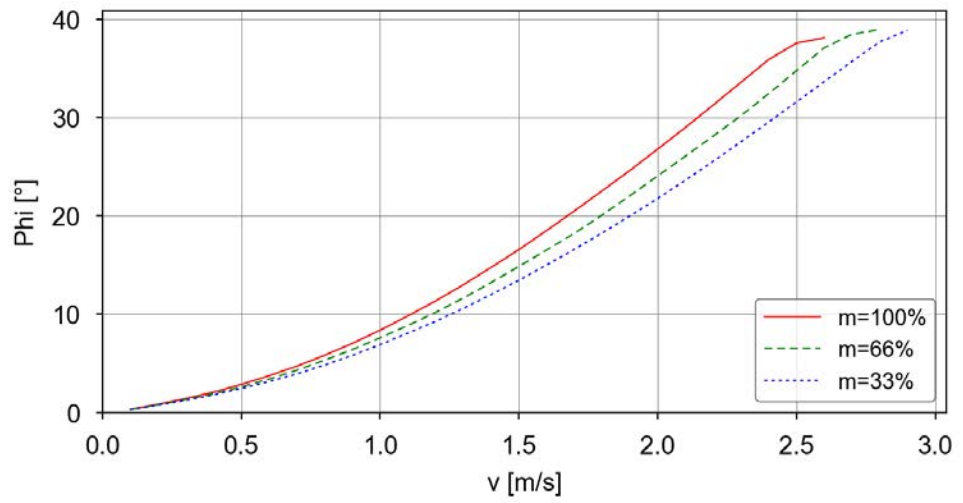
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



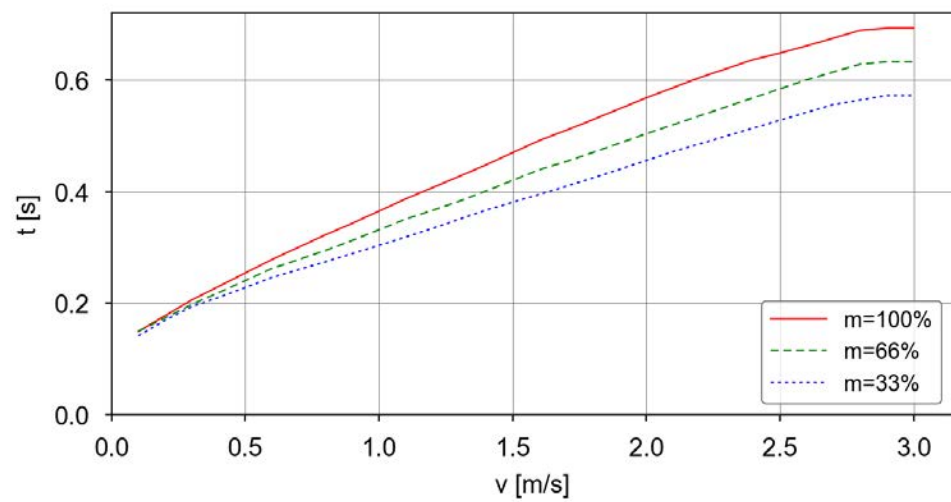
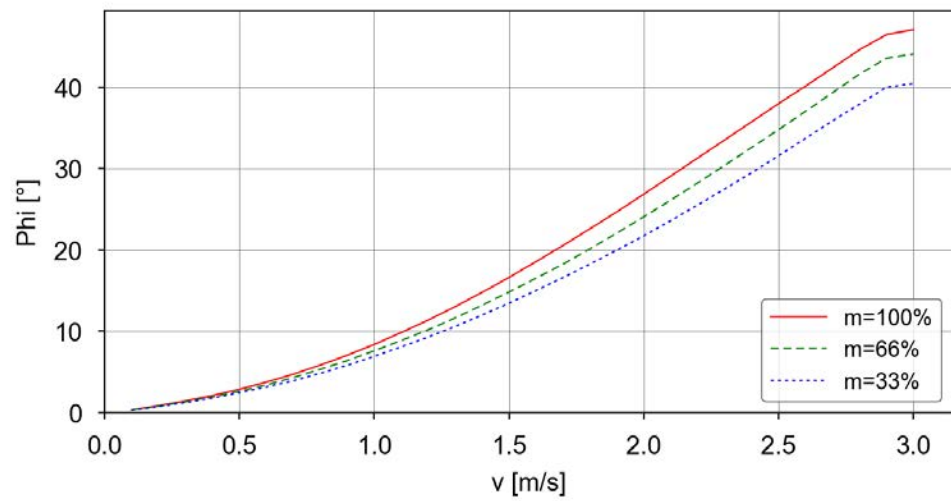
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

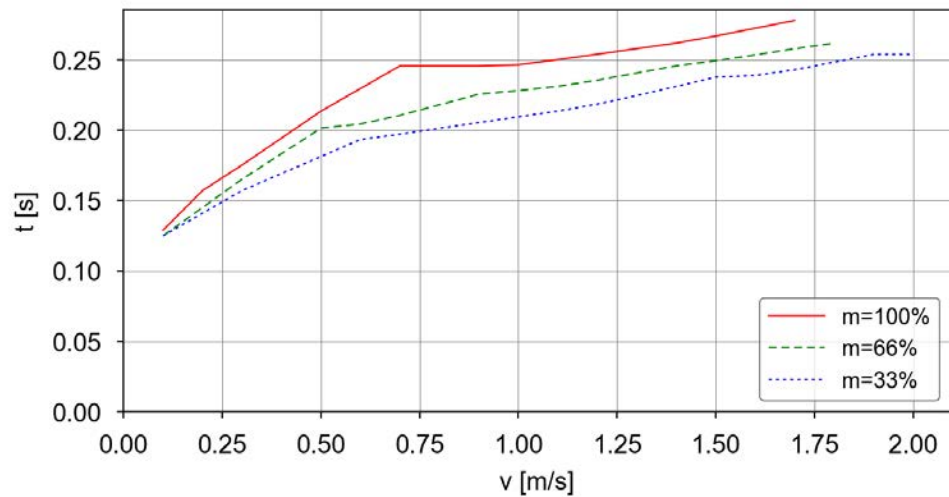
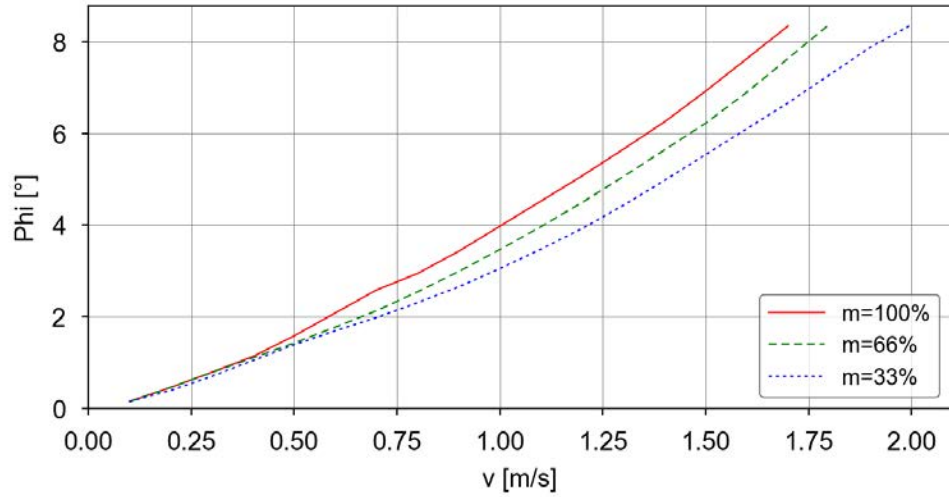
Extension zone 2, stopping distance and stopping time



Continues on next page

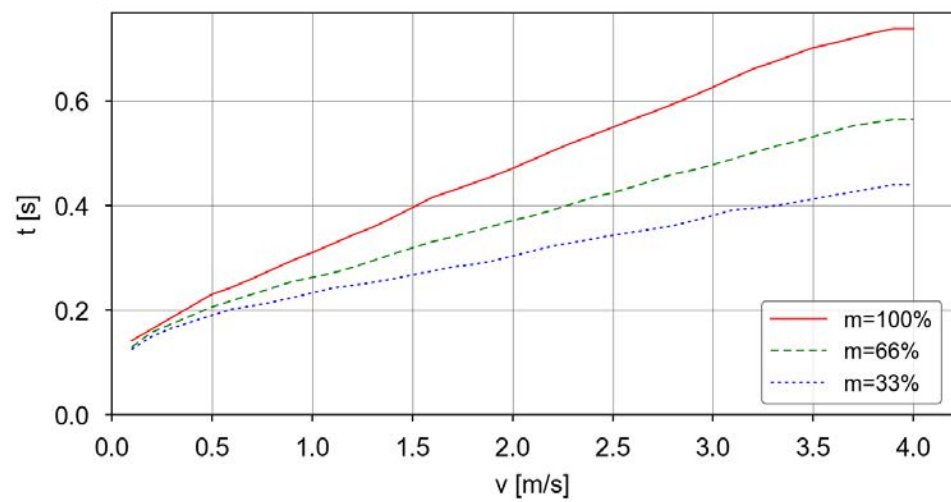
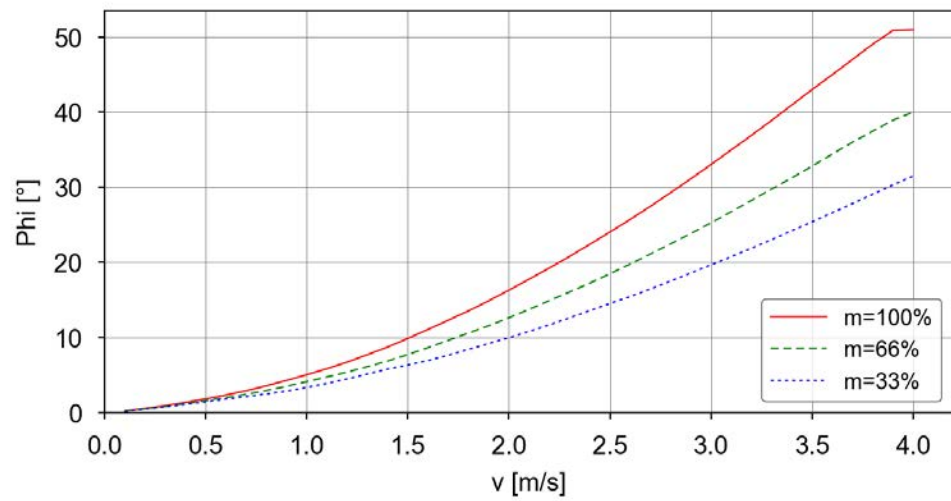
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



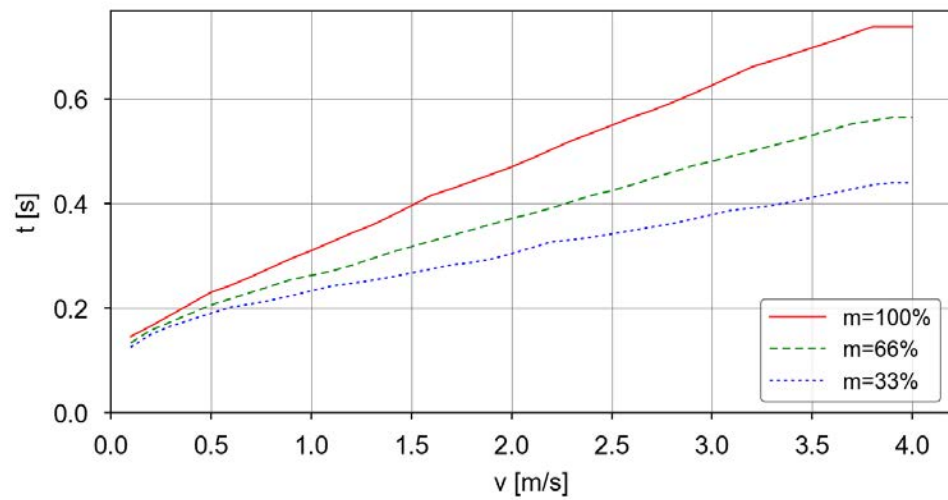
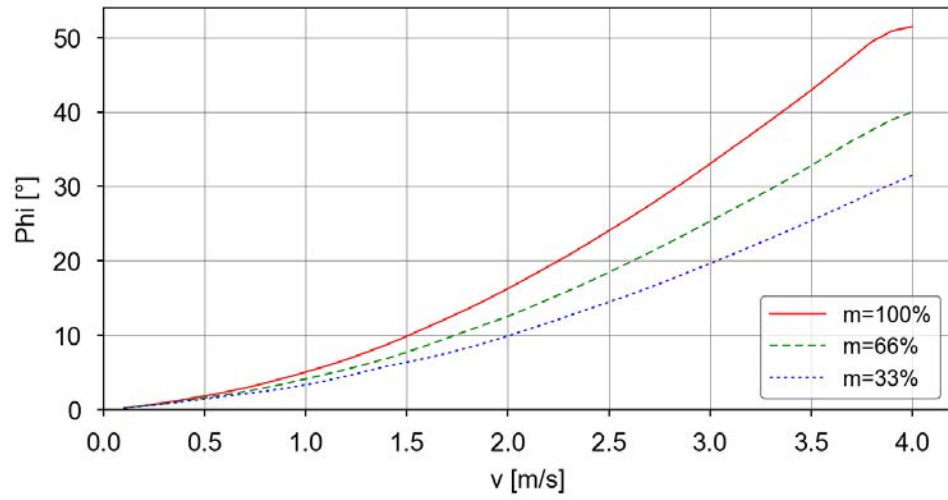
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



16.3 IRB 6660 3.35 m 100 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.1	0.63
2	33.9	0.42
3	36.5	0.46

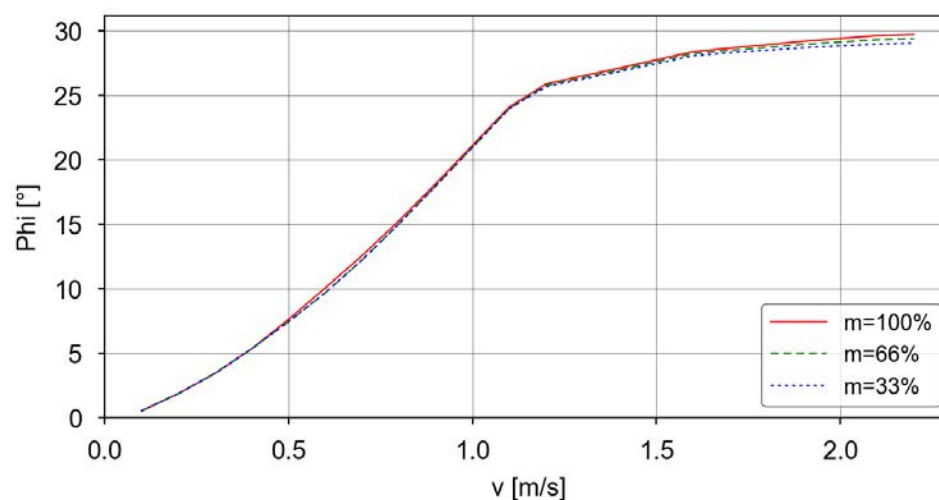
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.118
1	1.118	2.235
2	2.235	max reach

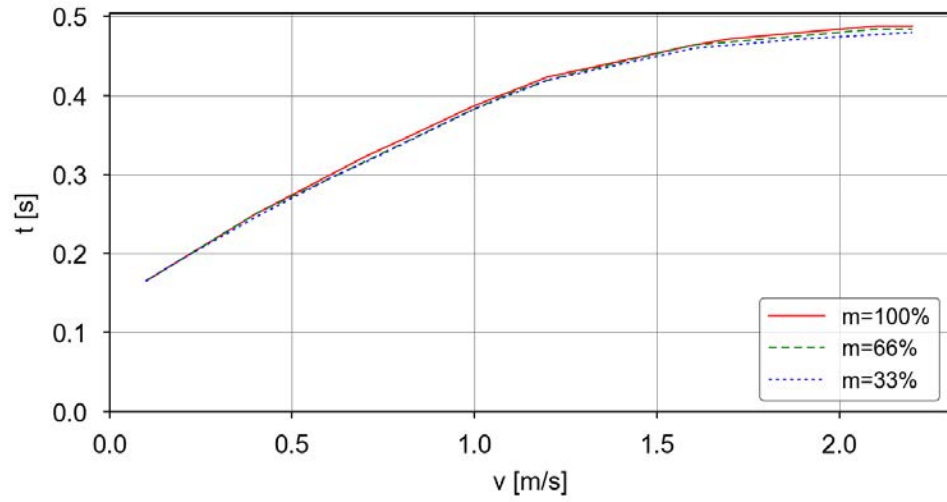
Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

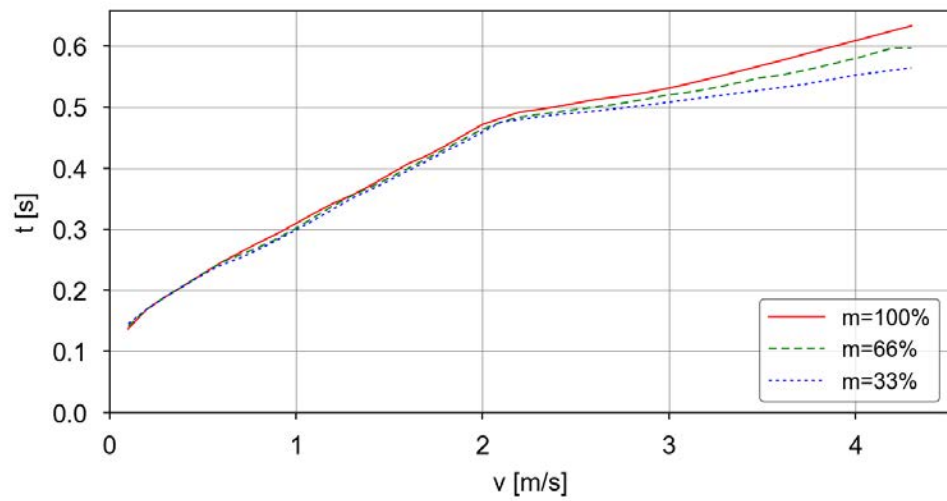
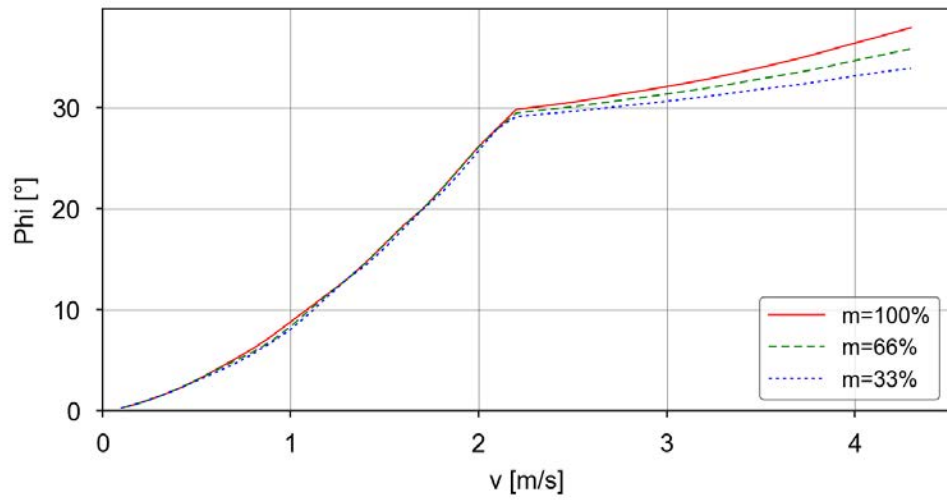


Continues on next page

Continued

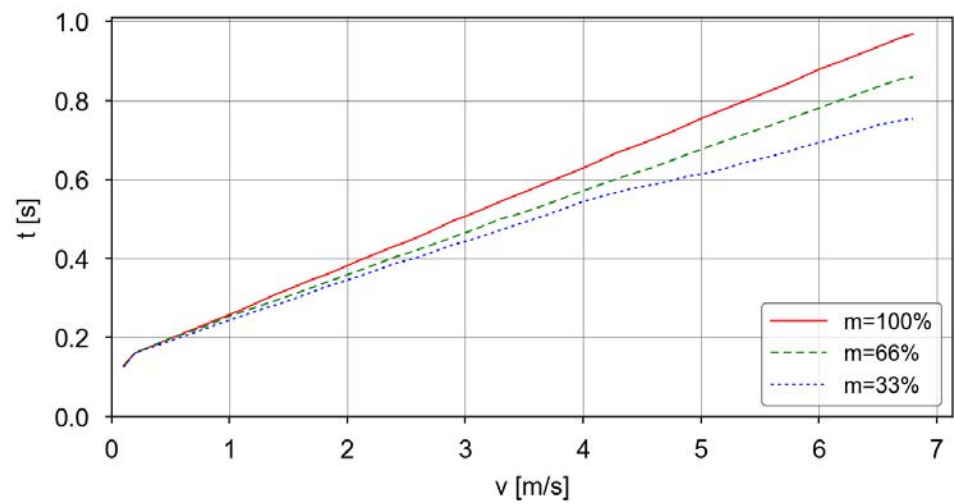
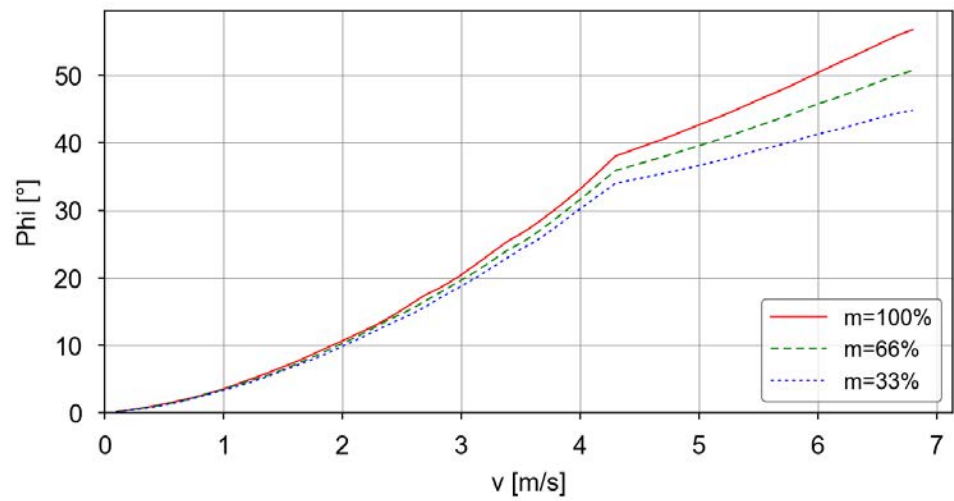


Extension zone 1, stopping distance and stopping time



Continues on next page

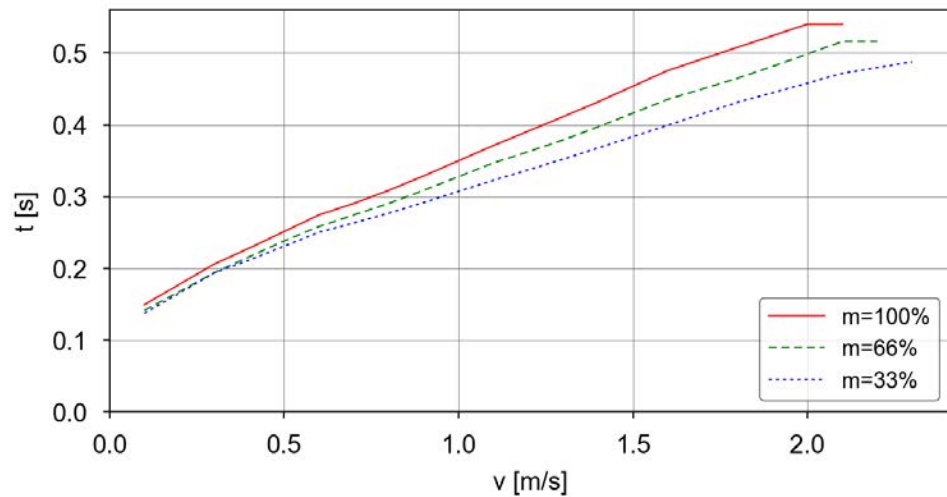
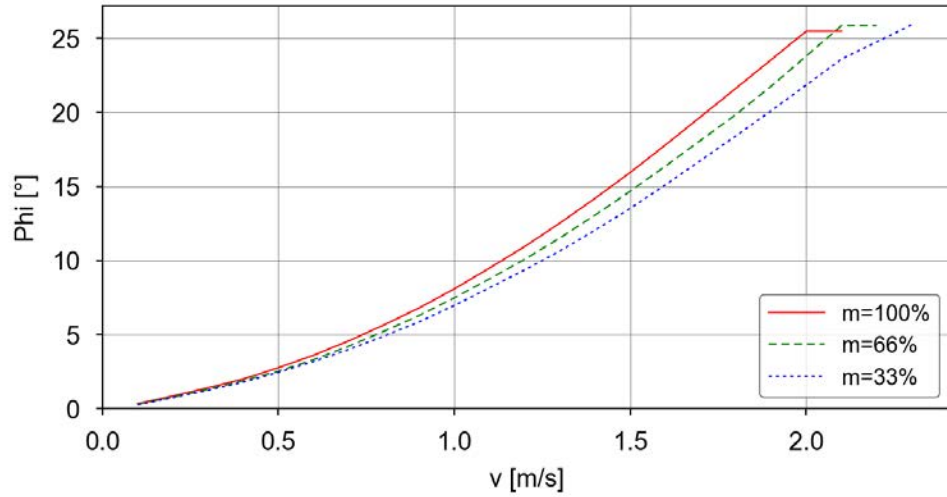
Extension zone 2, stopping distance and stopping time



Continues on next page

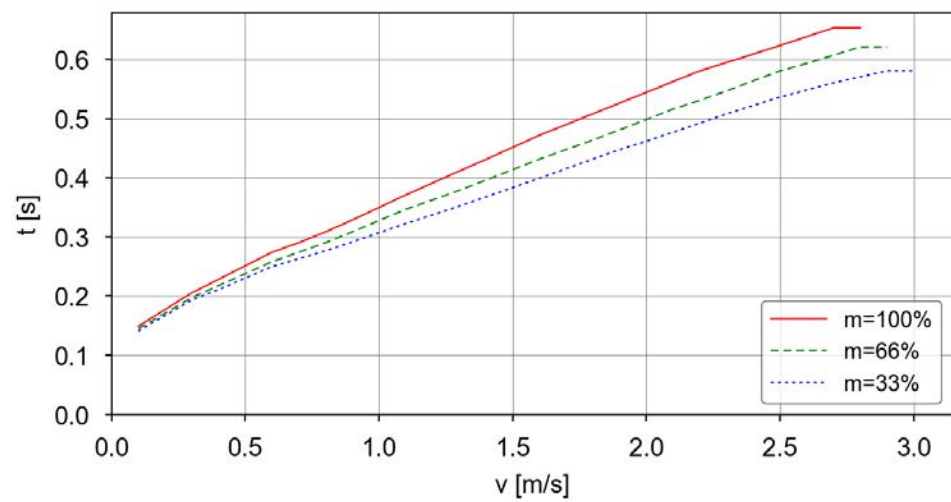
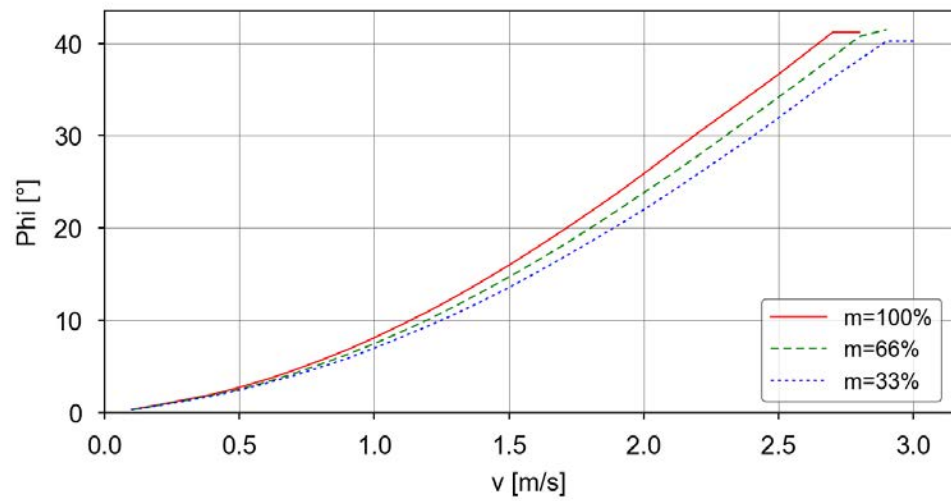
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

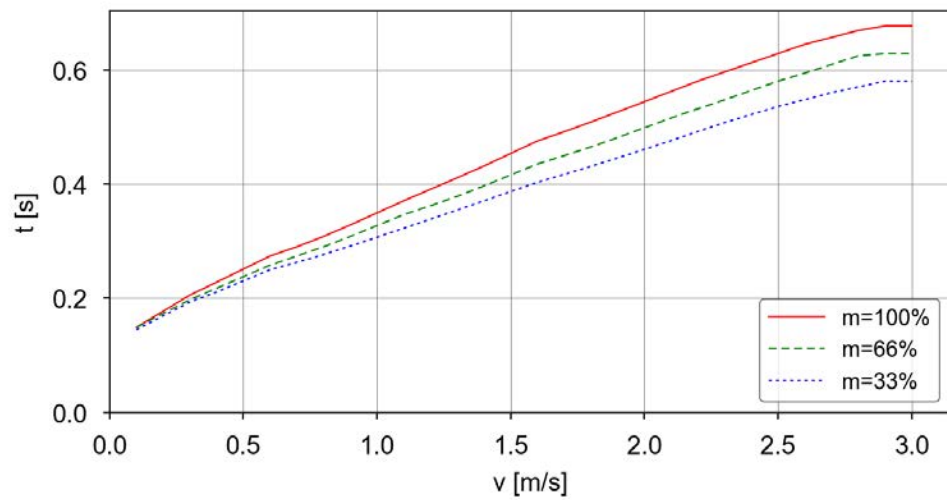
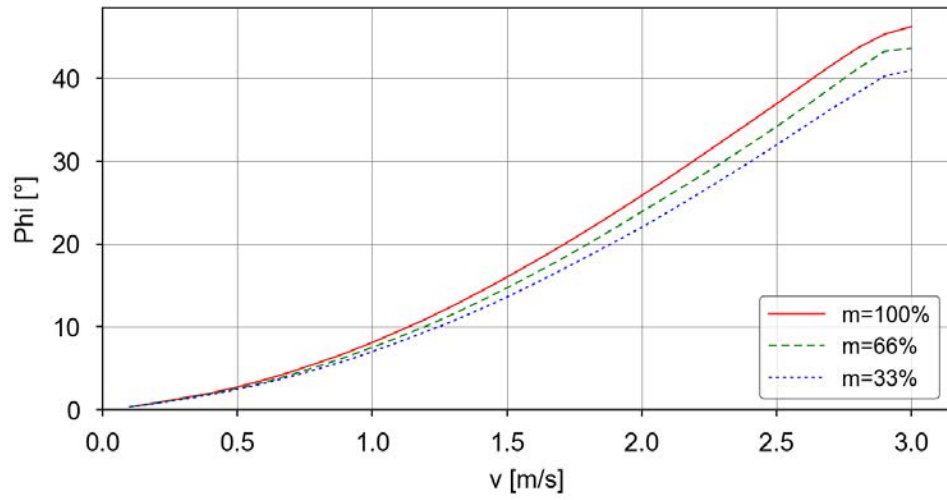
Extension zone 1, stopping distance and stopping time



Continues on next page

Continued

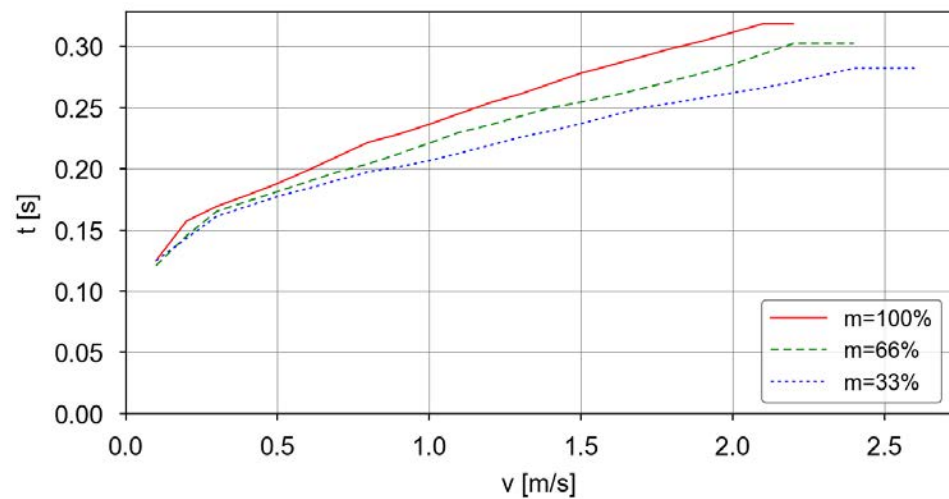
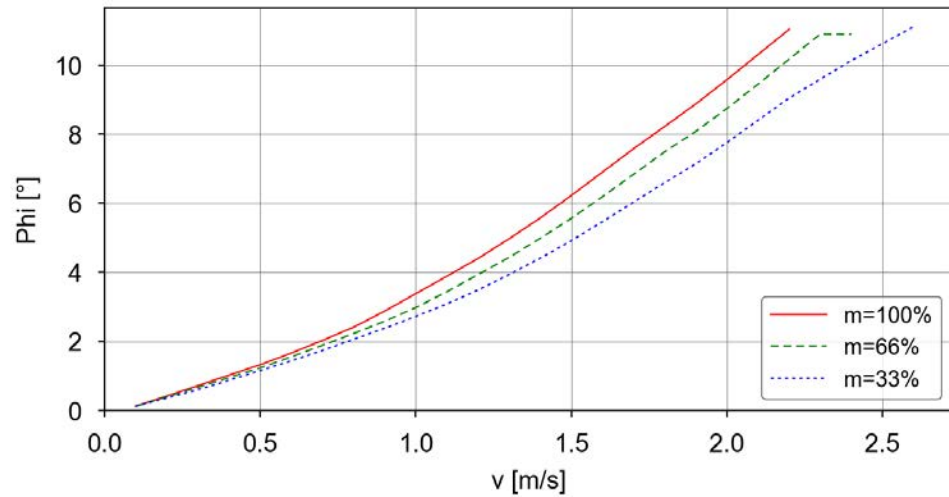
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

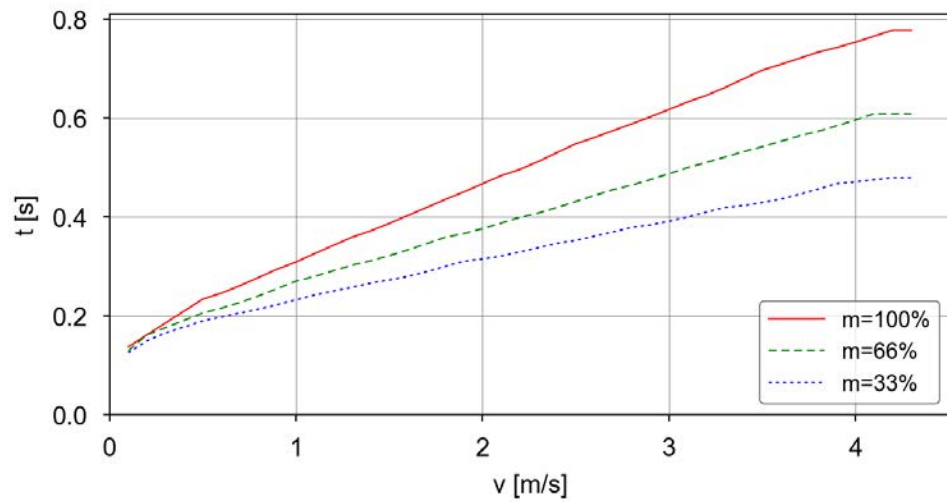
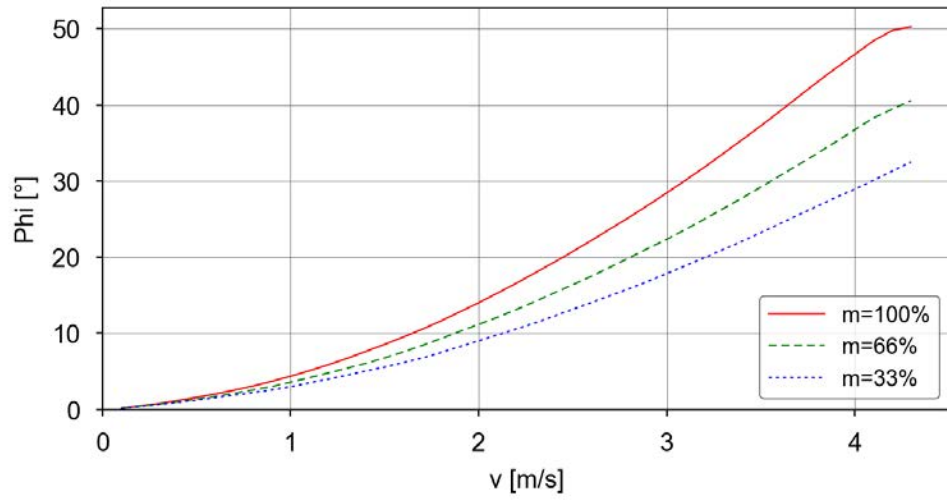
Extension zone 0, stopping distance and stopping time



Continues on next page

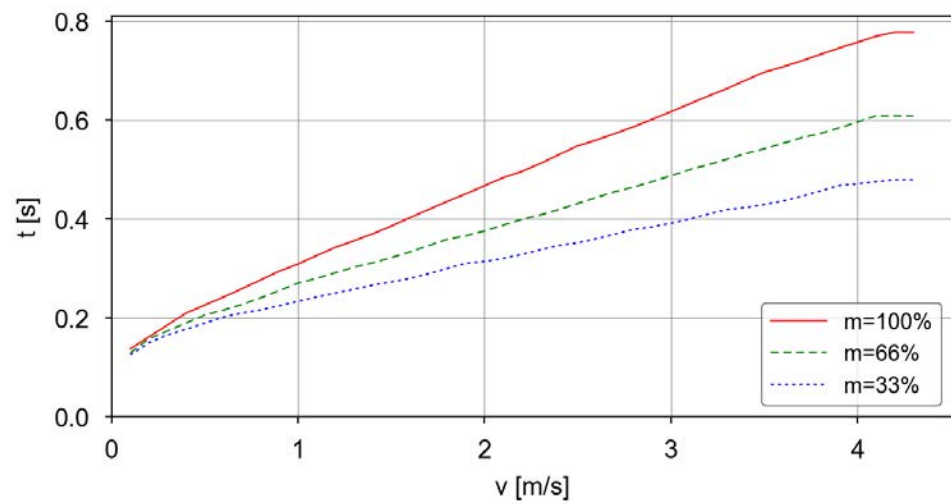
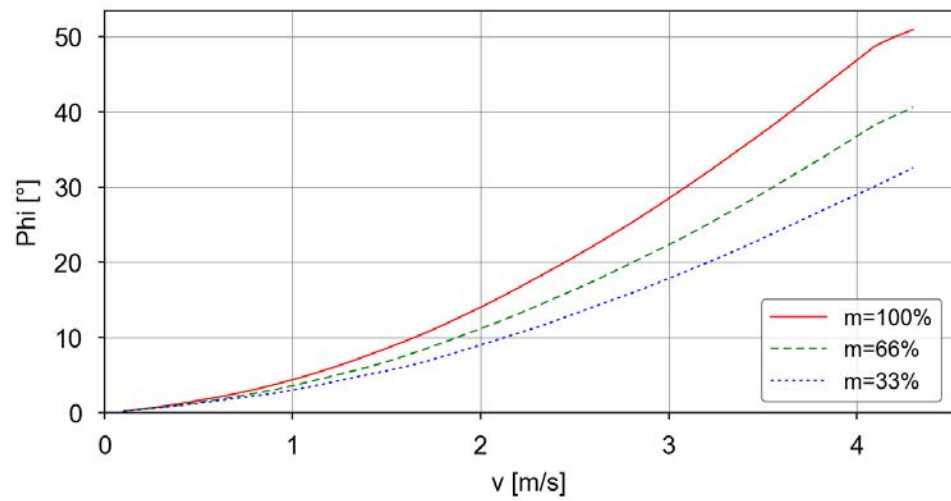
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

17 IRB 6700

17.1 IRB 6700 2.60 m 200 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.8	0.66
2	25.1	0.37
3	19.3	0.25

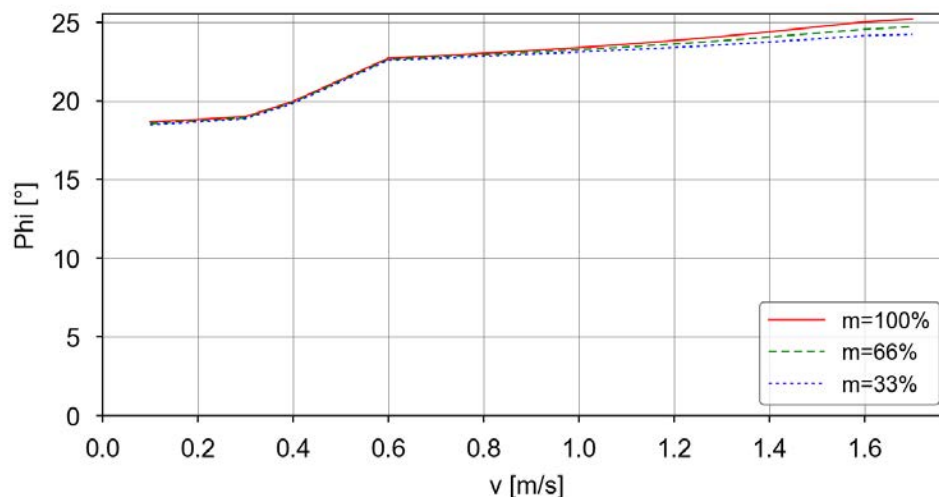
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.867
1	0.867	1.734
2	1.734	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

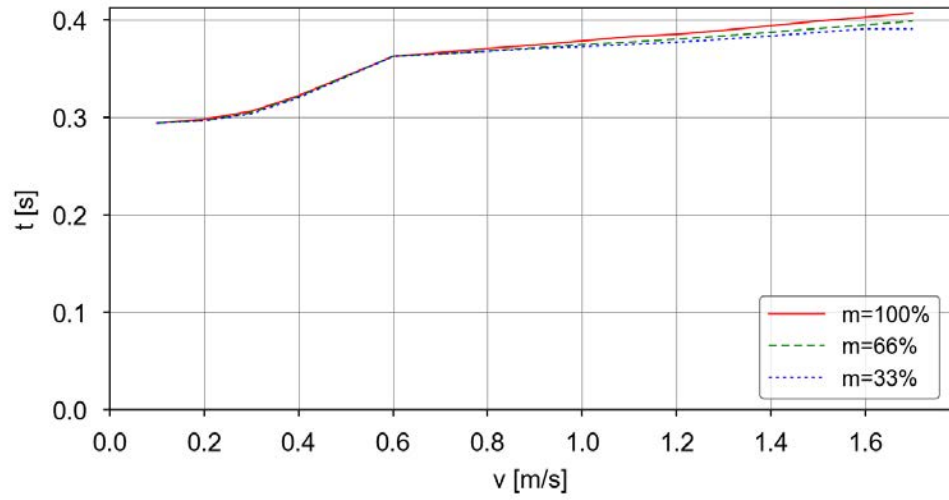


Continues on next page

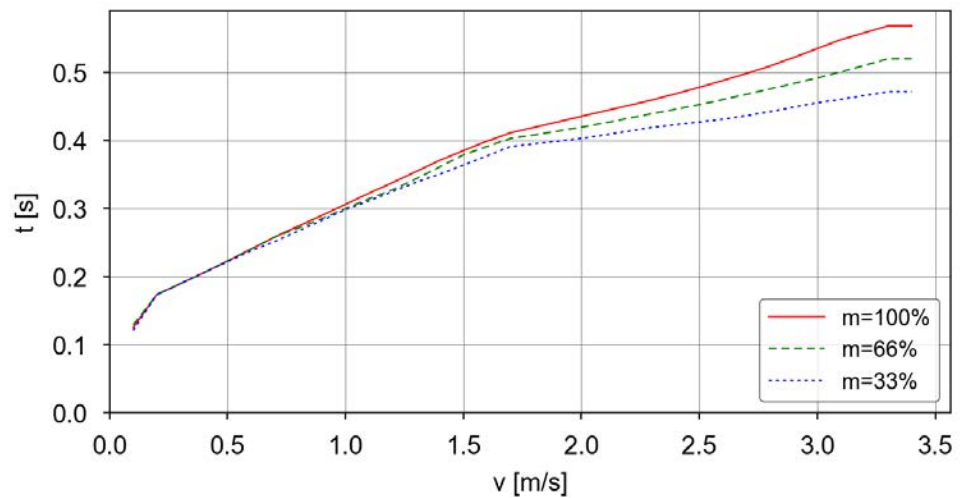
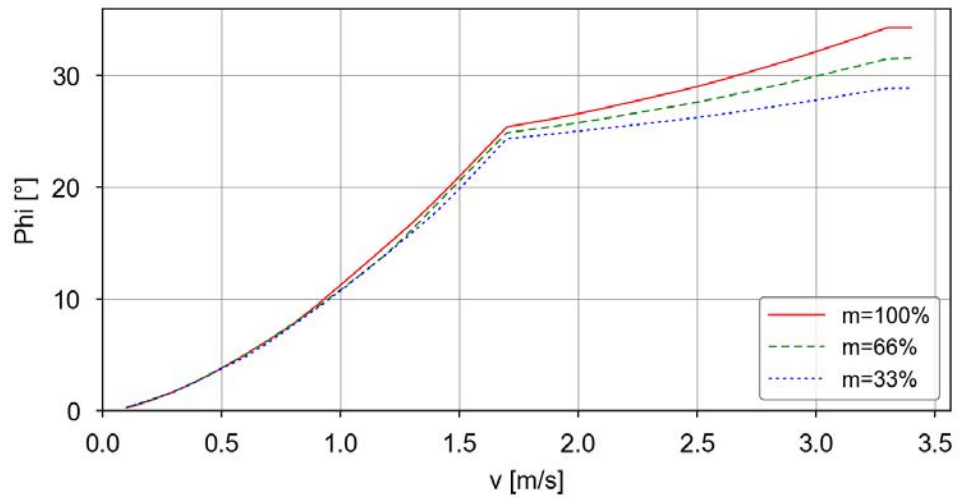
17 IRB 6700

17.1 IRB 6700 2.60 m 200 kg

Continued

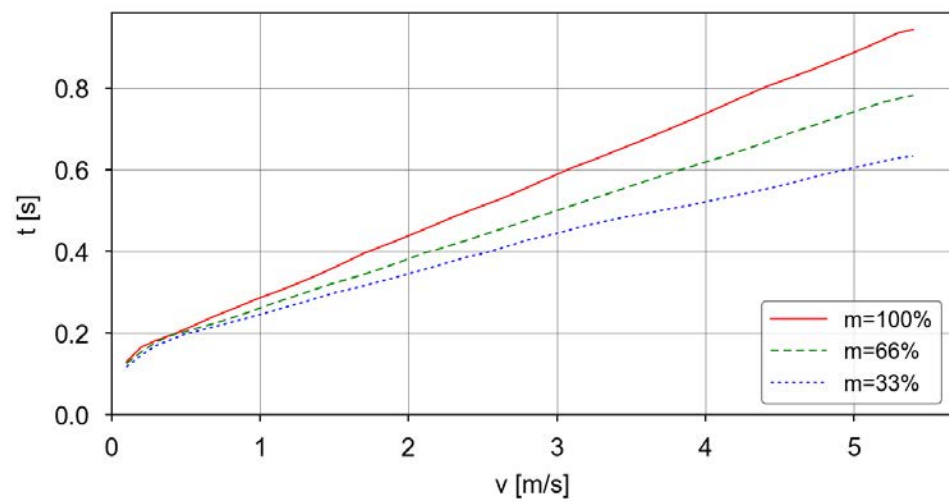
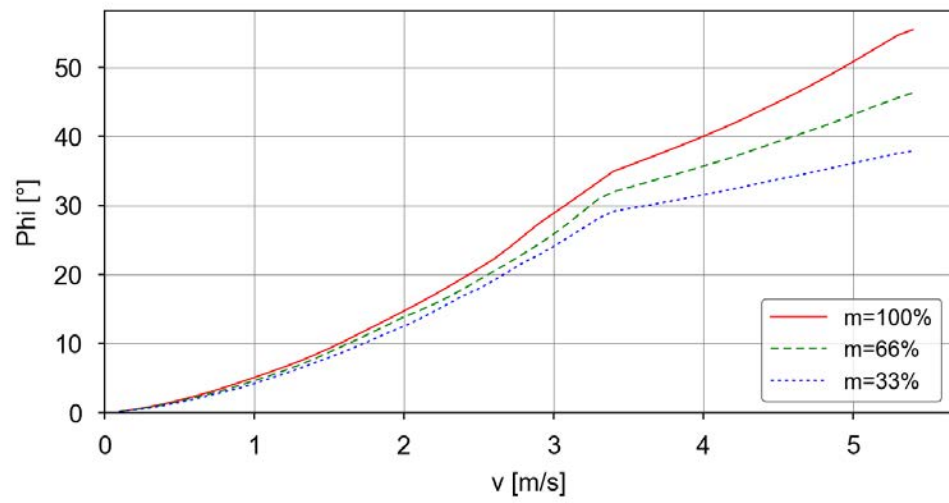


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

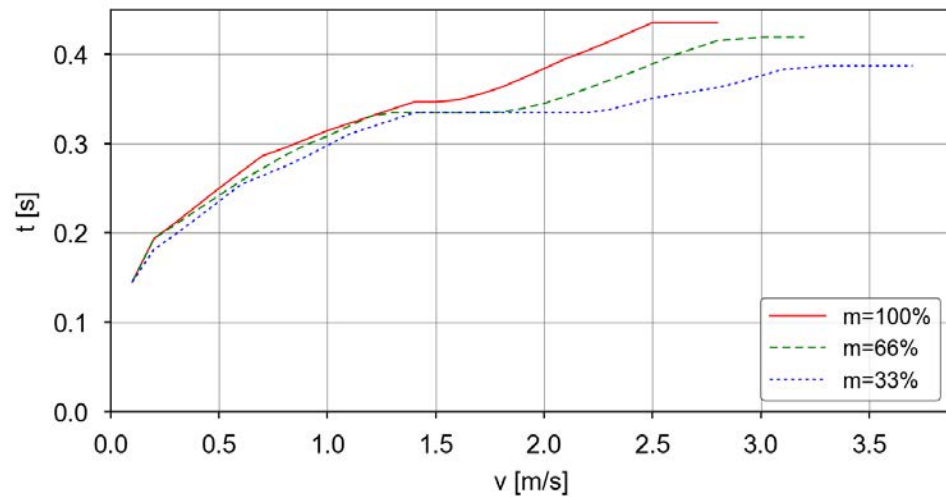
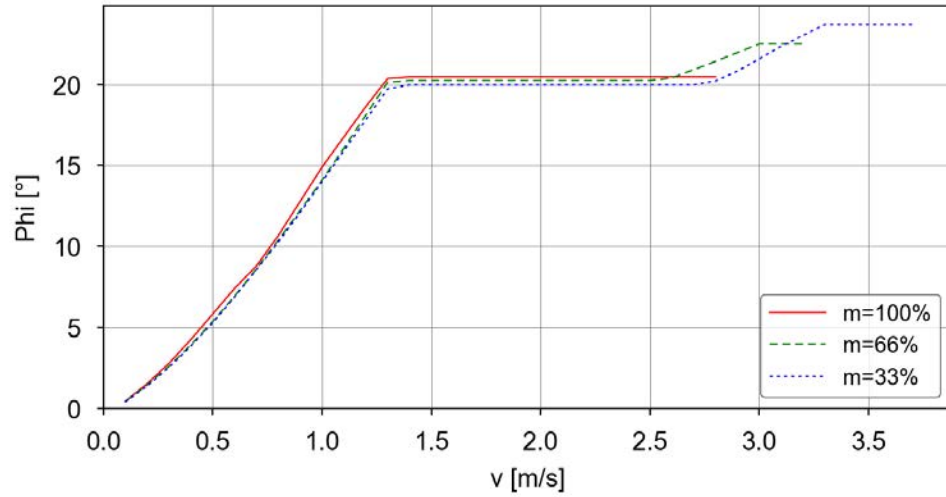
17 IRB 6700

17.1 IRB 6700 2.60 m 200 kg

Continued

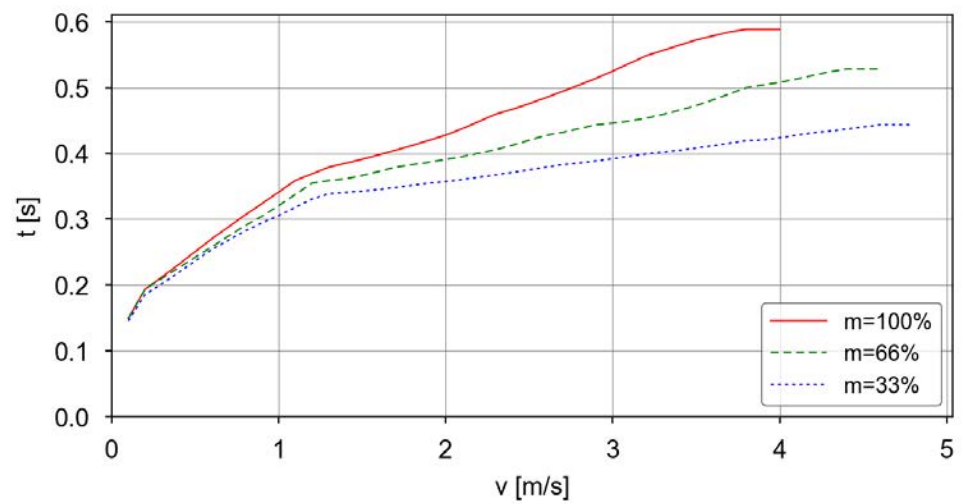
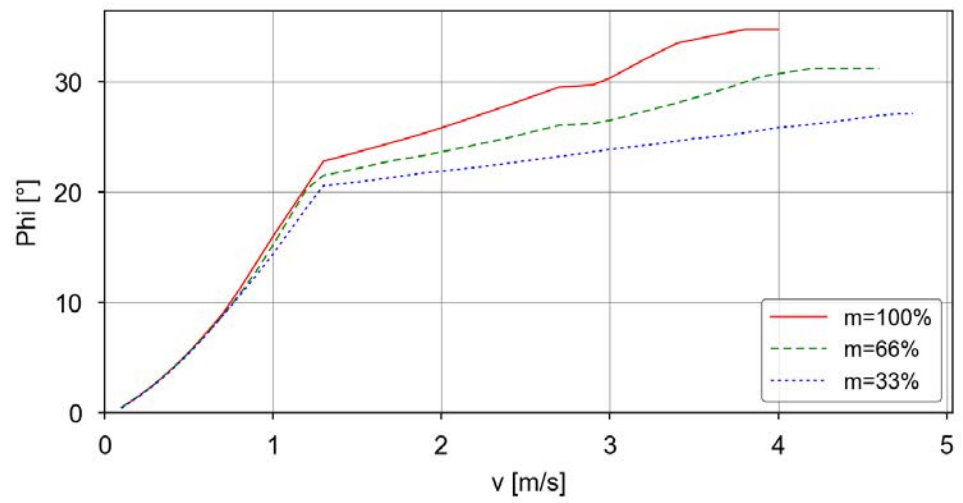
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



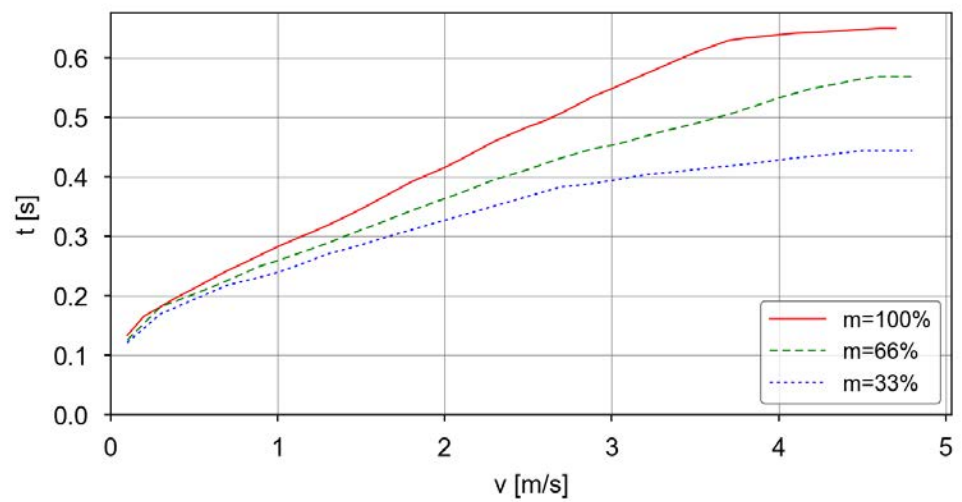
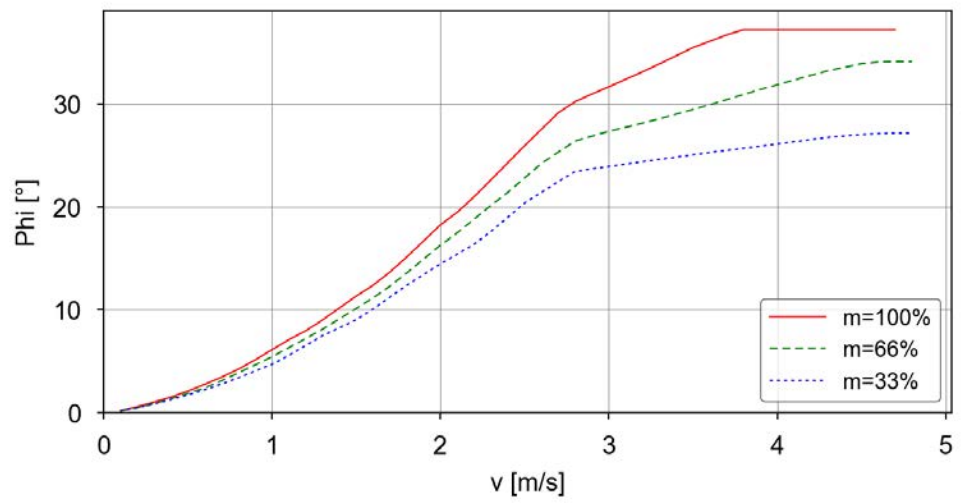
Continues on next page

17 IRB 6700

17.1 IRB 6700 2.60 m 200 kg

Continued

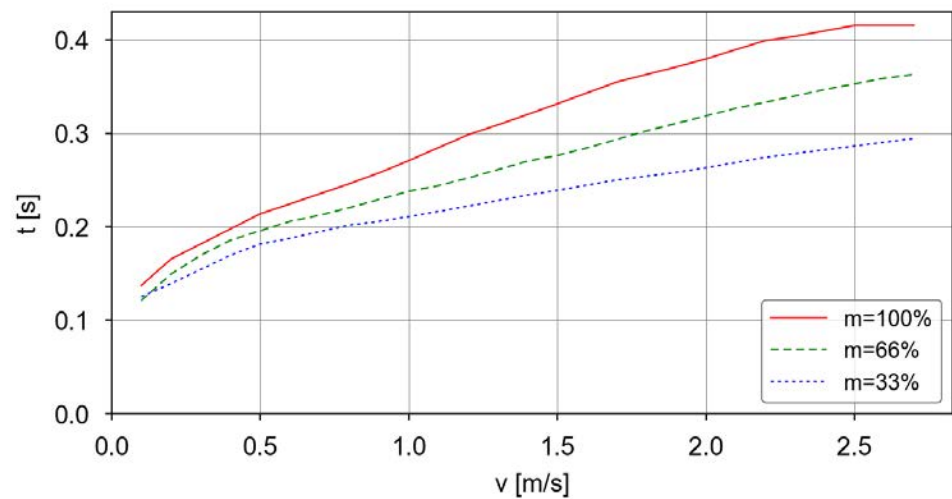
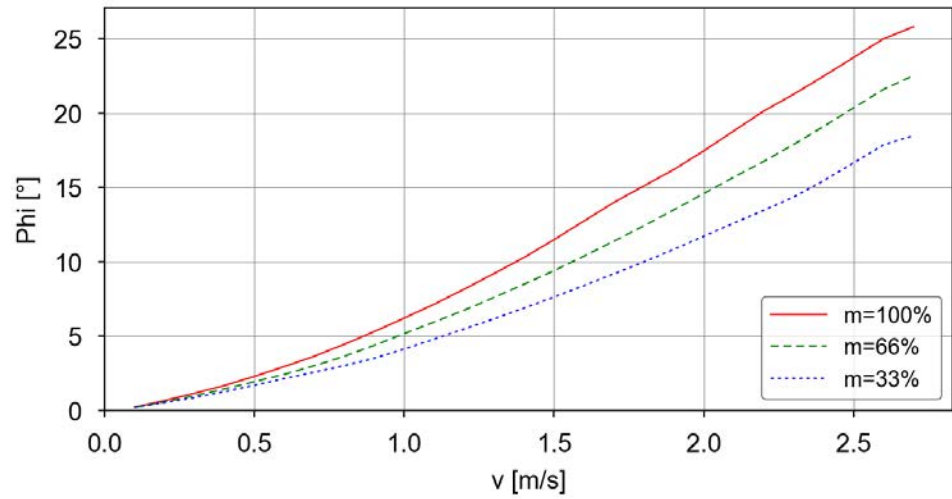
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



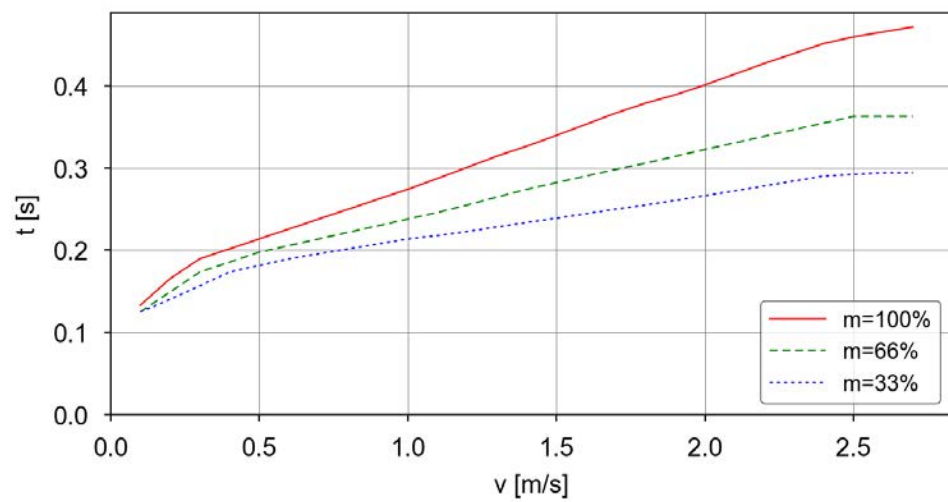
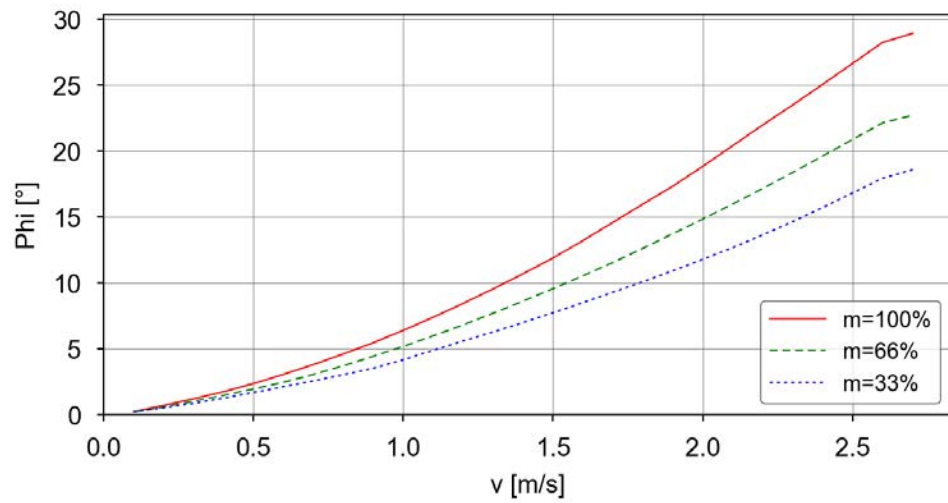
Continues on next page

17 IRB 6700

17.1 IRB 6700 2.60 m 200 kg

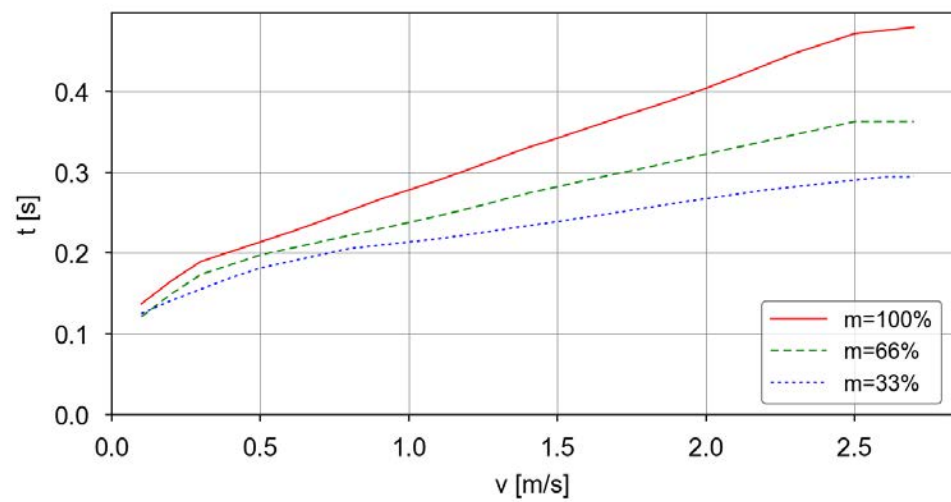
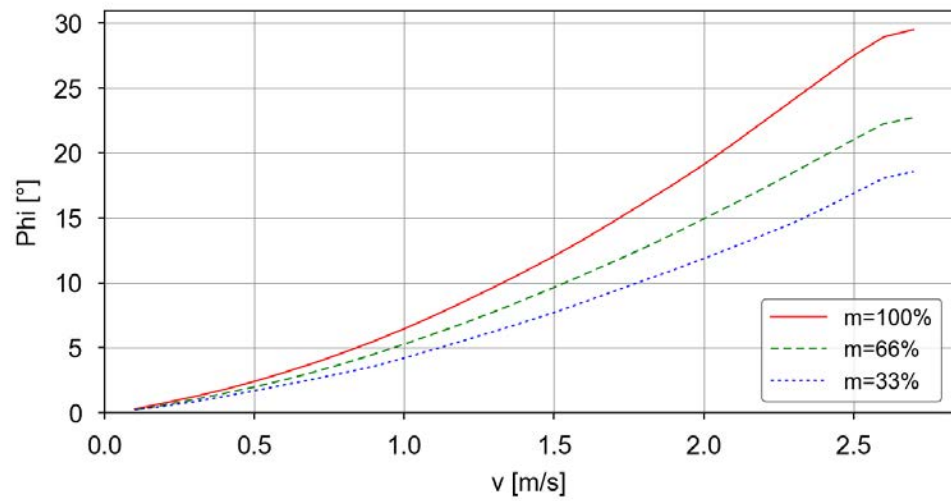
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17 IRB 6700

17.2 IRB 6700 2.65 m 235 kg

17.2 IRB 6700 2.65 m 235 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	38.2	0.68
2	20.3	0.37
3	14.4	0.22

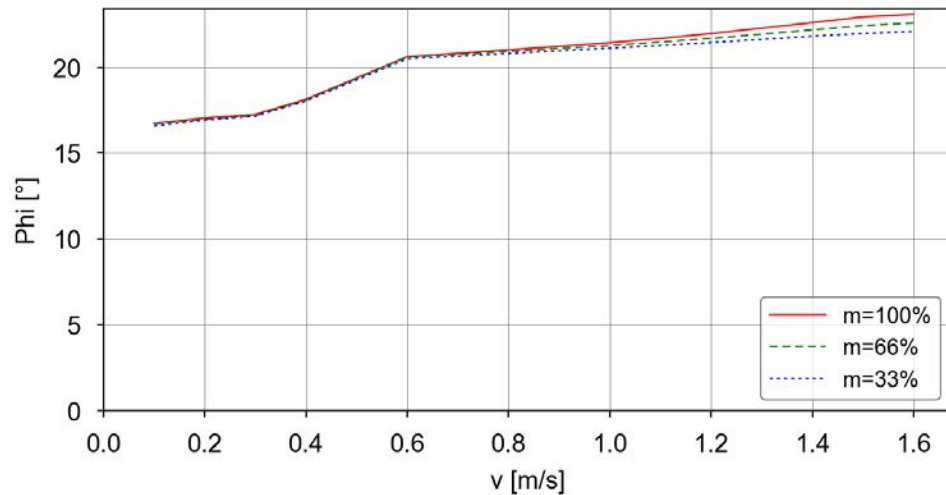
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

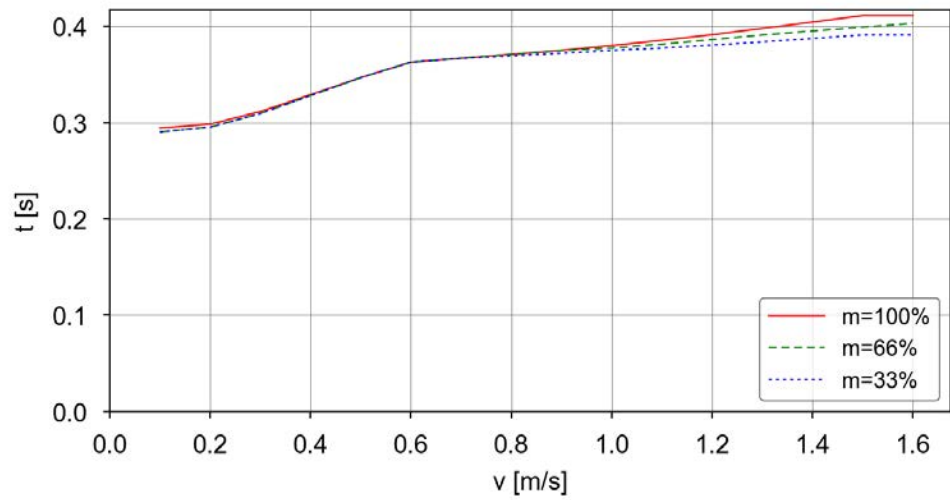
Zone	wcp min (m)	wcp max (m)
0	0	0.883
1	0.883	1.767
2	1.767	max reach

Category 1, Axis 1

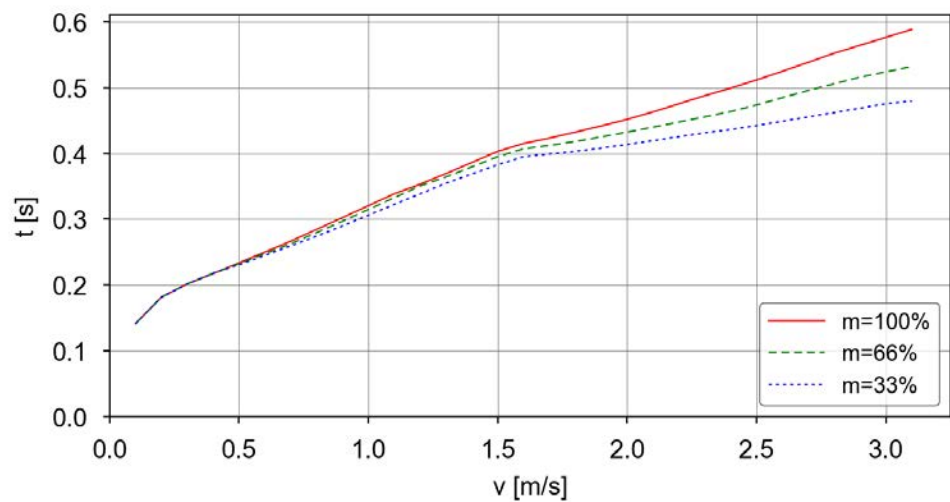
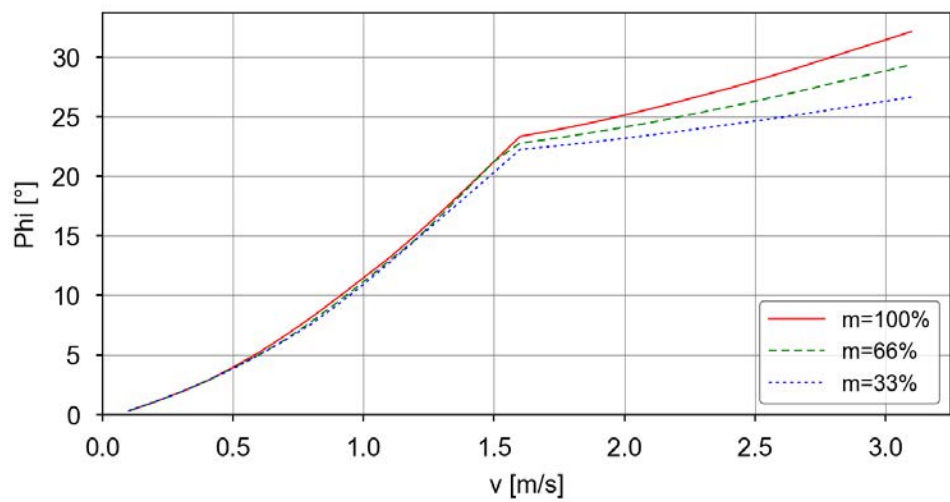
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



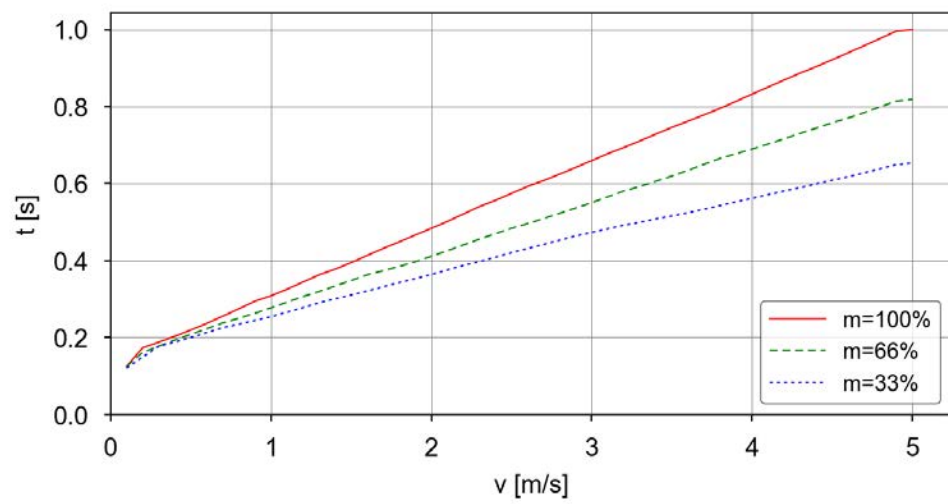
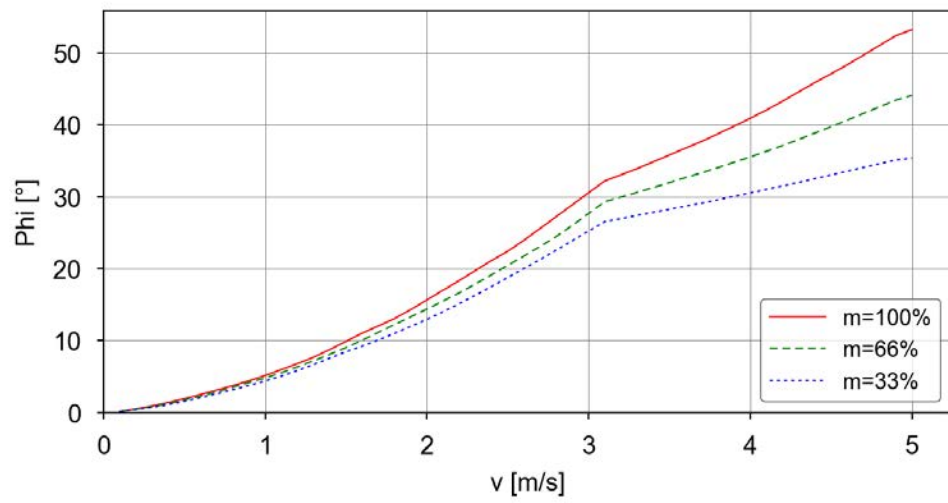
Continues on next page

17 IRB 6700

17.2 IRB 6700 2.65 m 235 kg

Continued

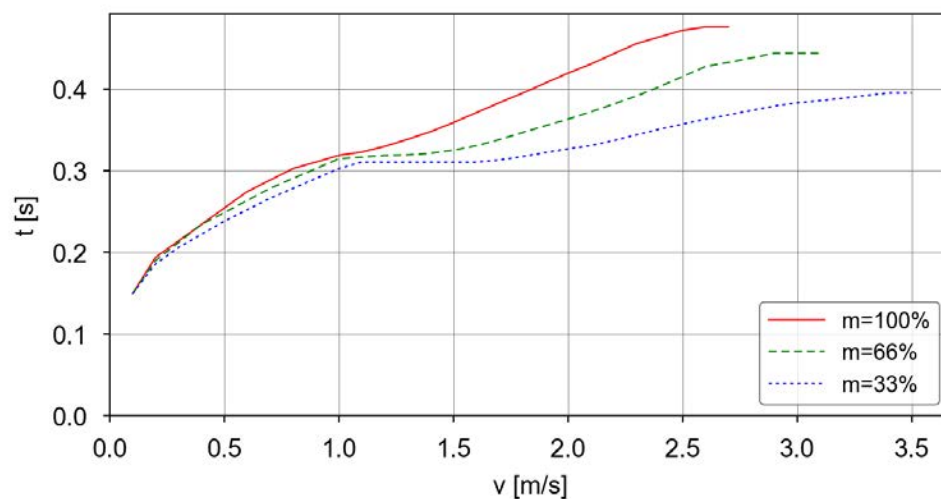
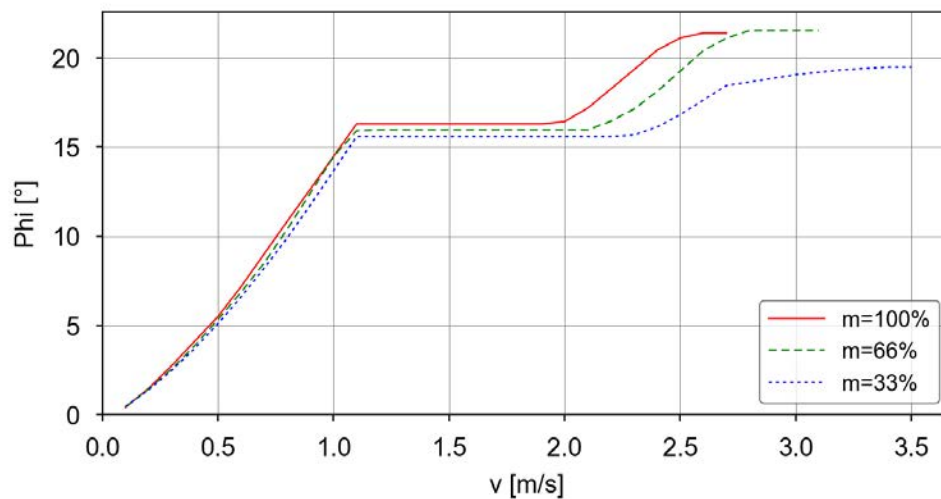
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



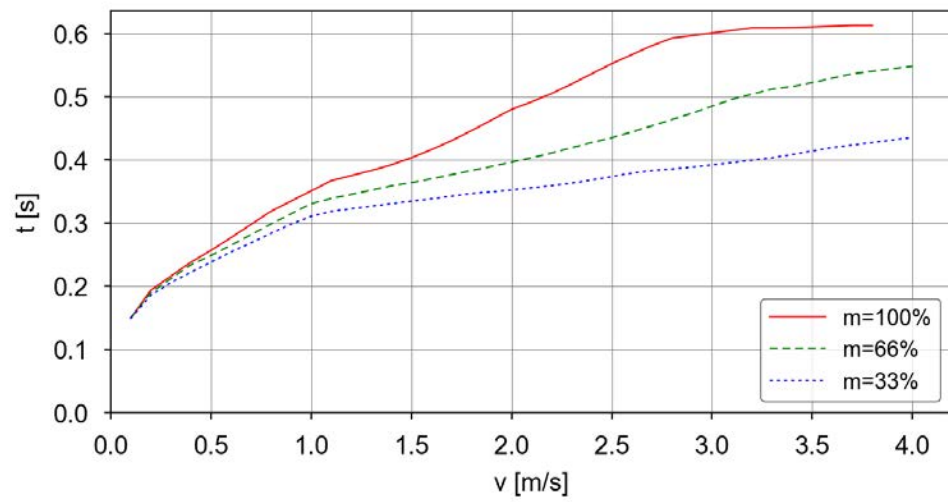
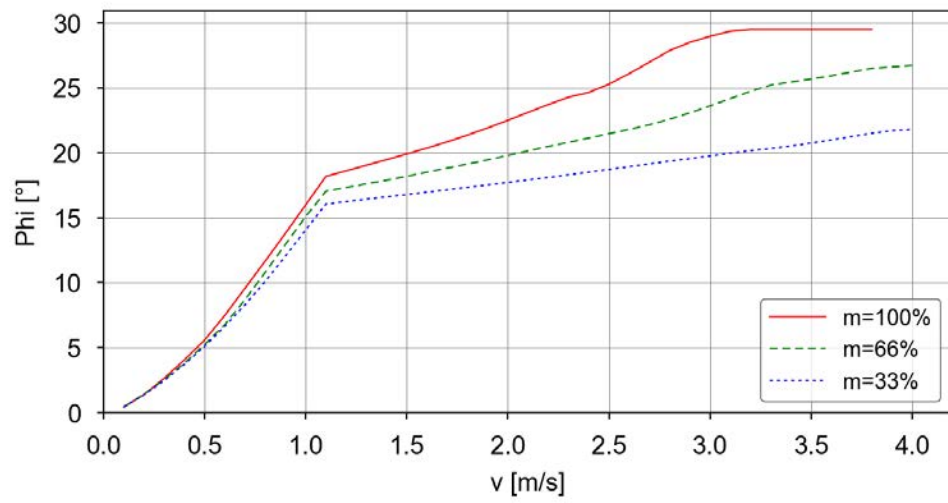
Continues on next page

17 IRB 6700

17.2 IRB 6700 2.65 m 235 kg

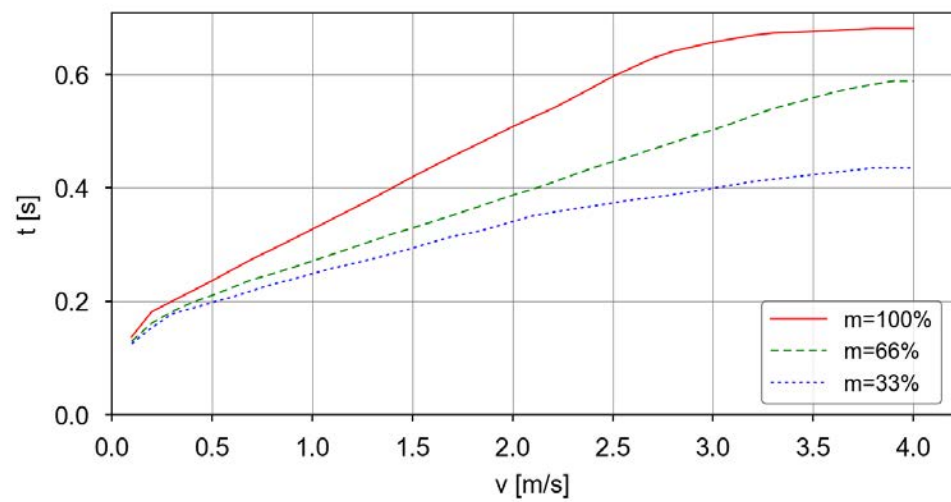
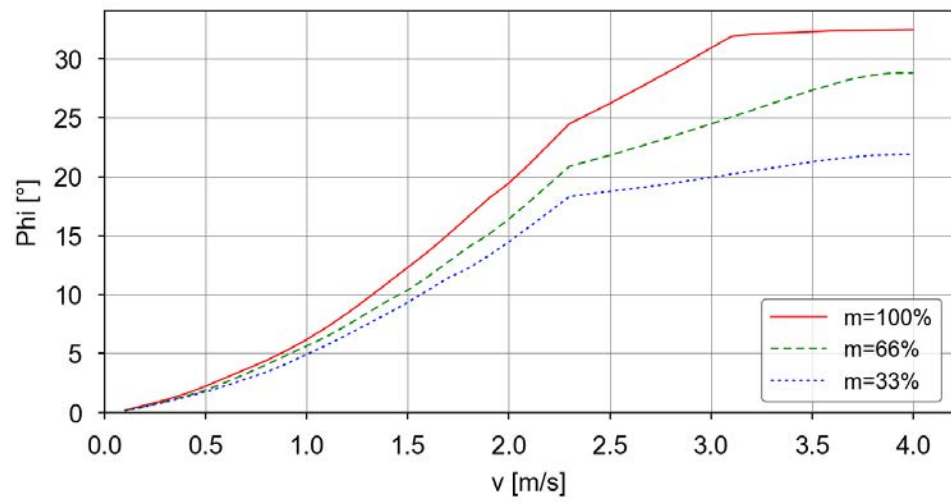
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

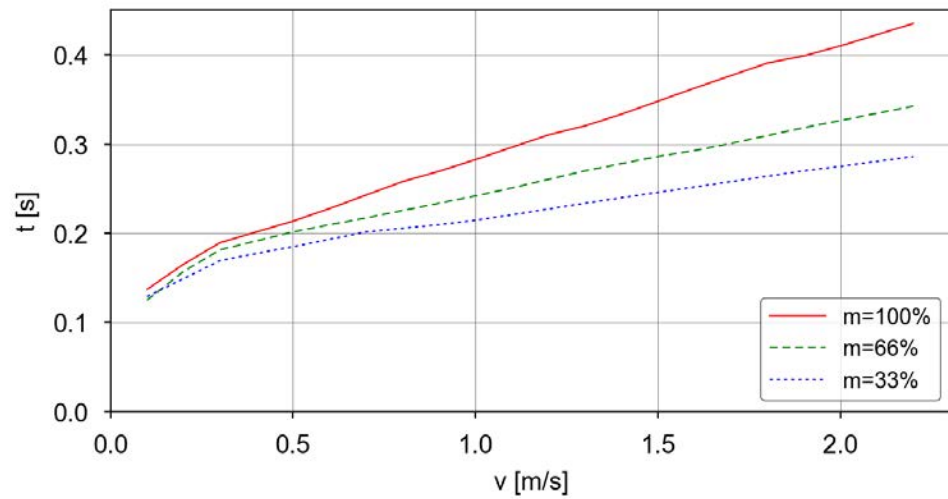
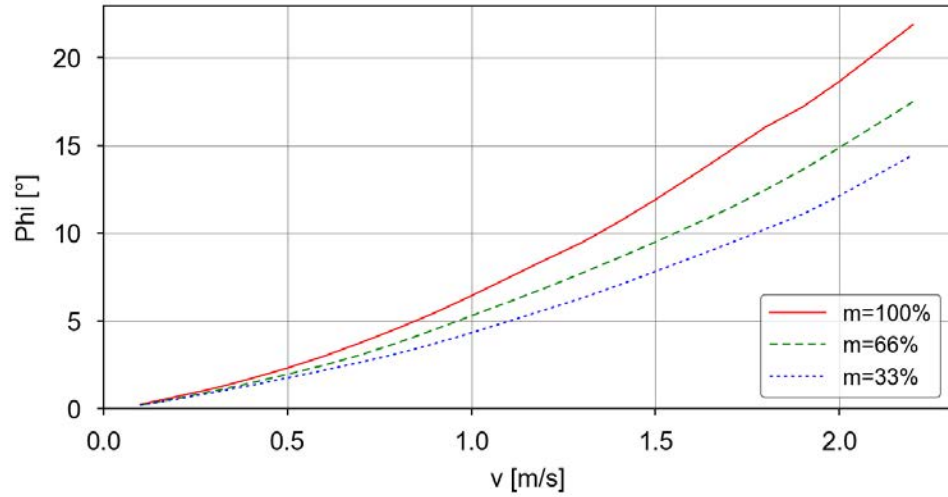
17 IRB 6700

17.2 IRB 6700 2.65 m 235 kg

Continued

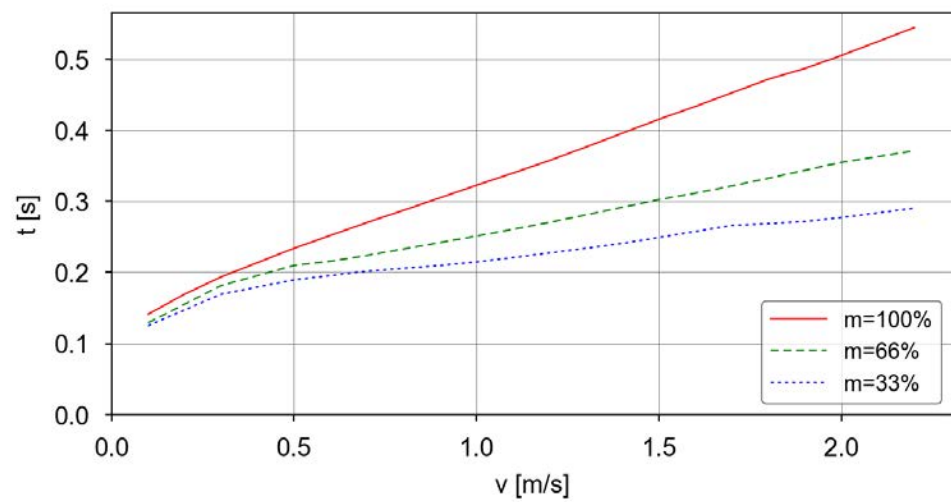
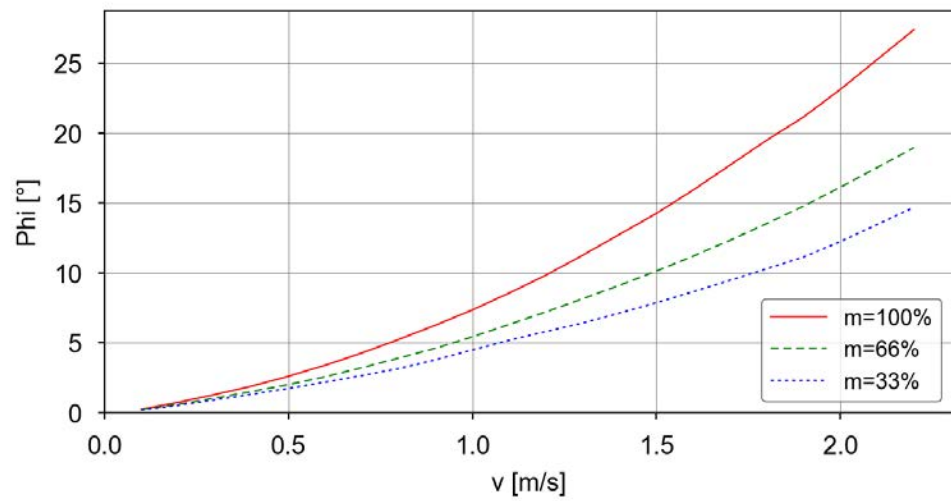
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



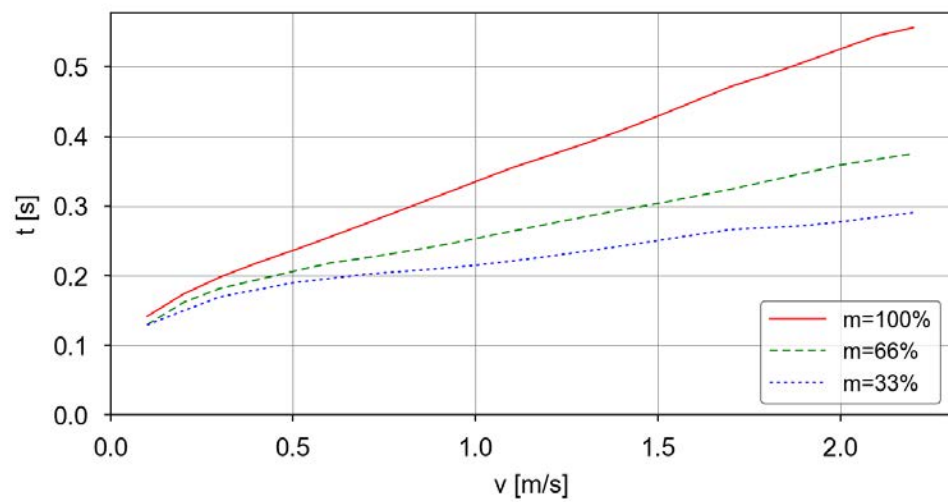
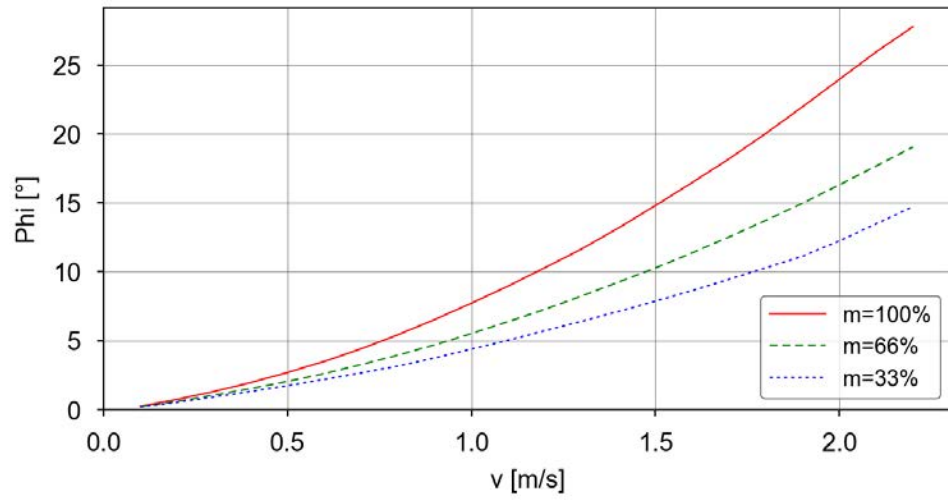
Continues on next page

17 IRB 6700

17.2 IRB 6700 2.65 m 235 kg

Continued

Extension zone 2, stopping distance and stopping time



17.3 IRB 6700 2.70 m 300 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	37.4	0.66
2	21.6	0.39
3	17.5	0.27

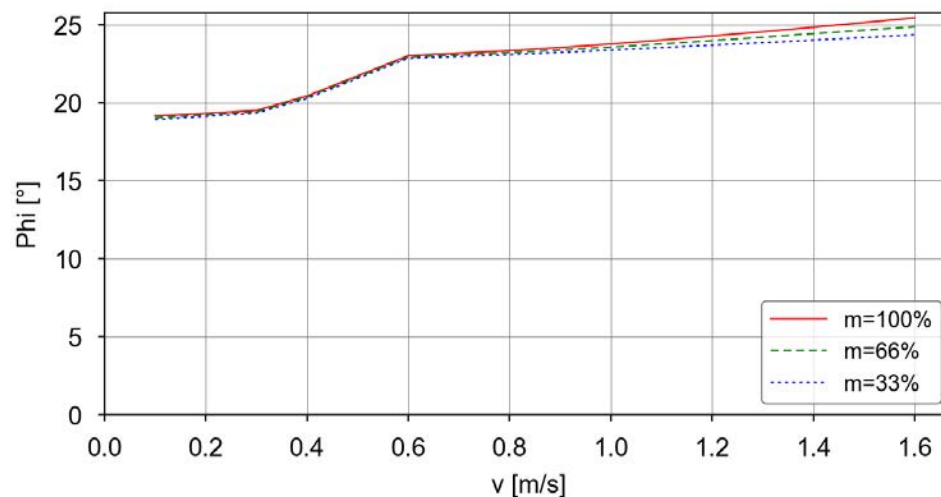
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.907
1	0.907	1.813
2	1.813	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

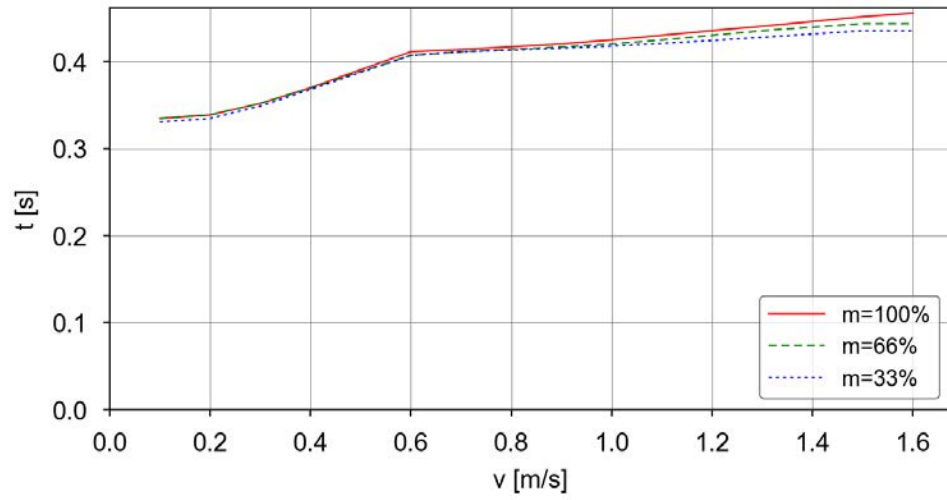


Continues on next page

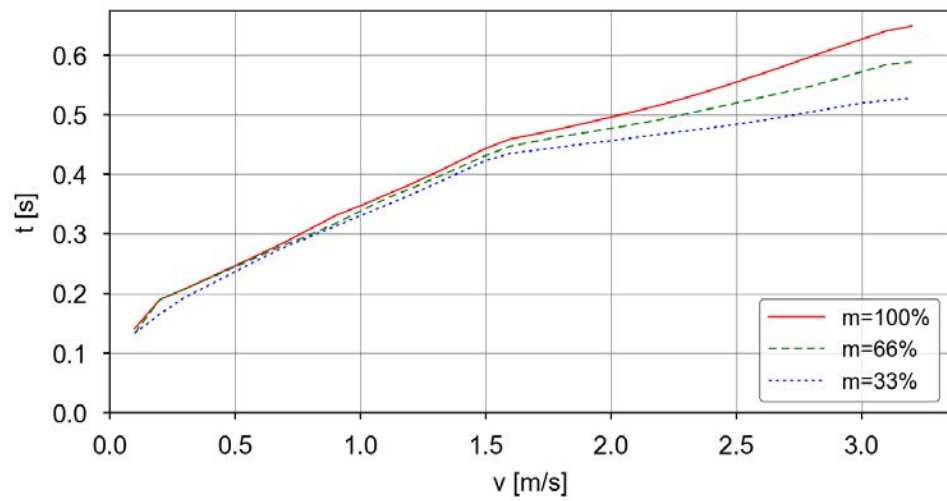
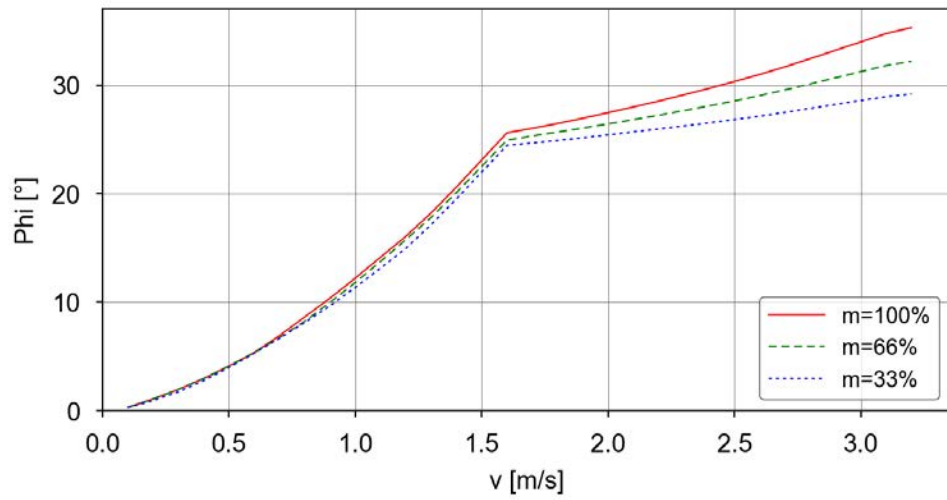
17 IRB 6700

17.3 IRB 6700 2.70 m 300 kg

Continued

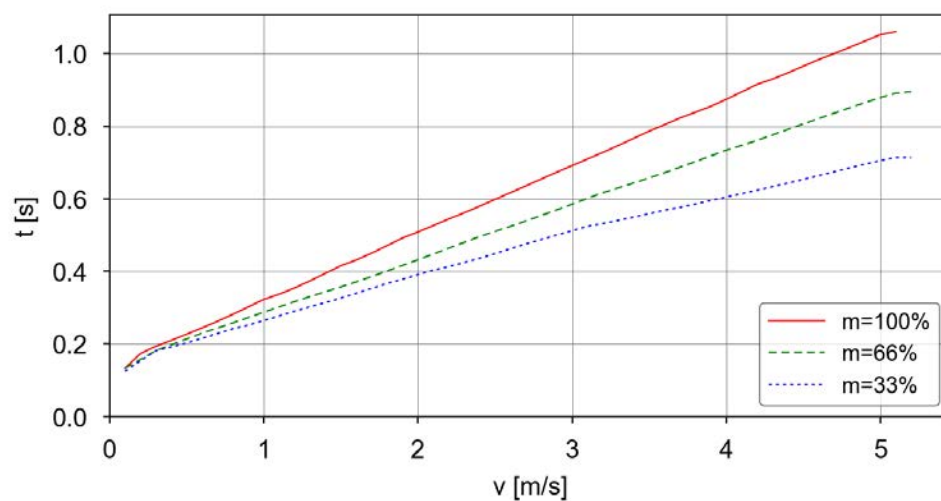
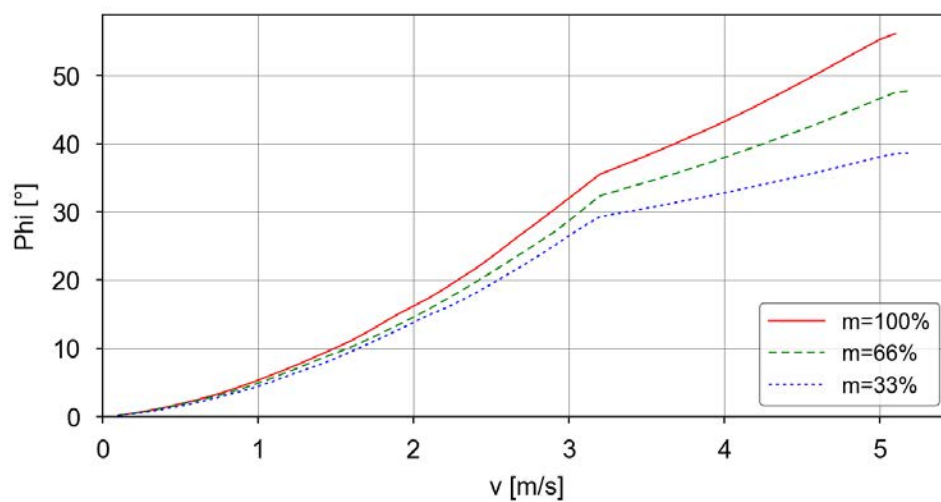


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

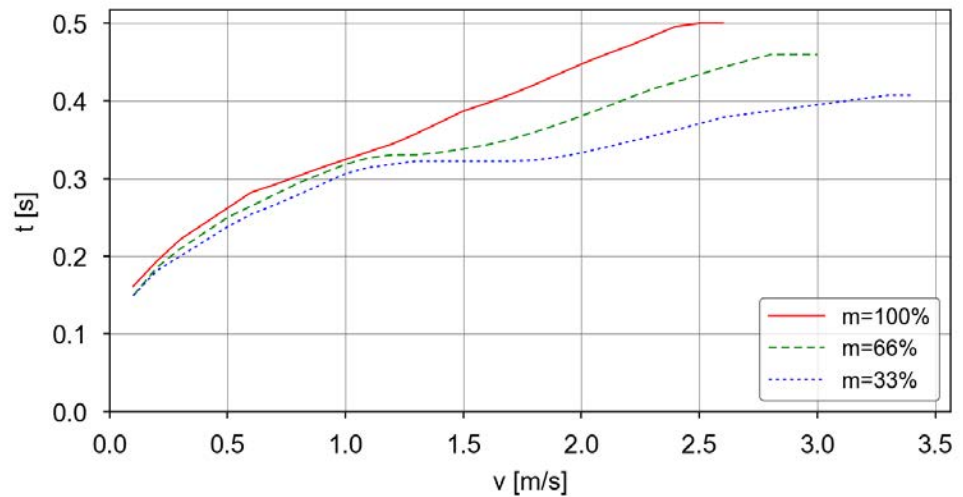
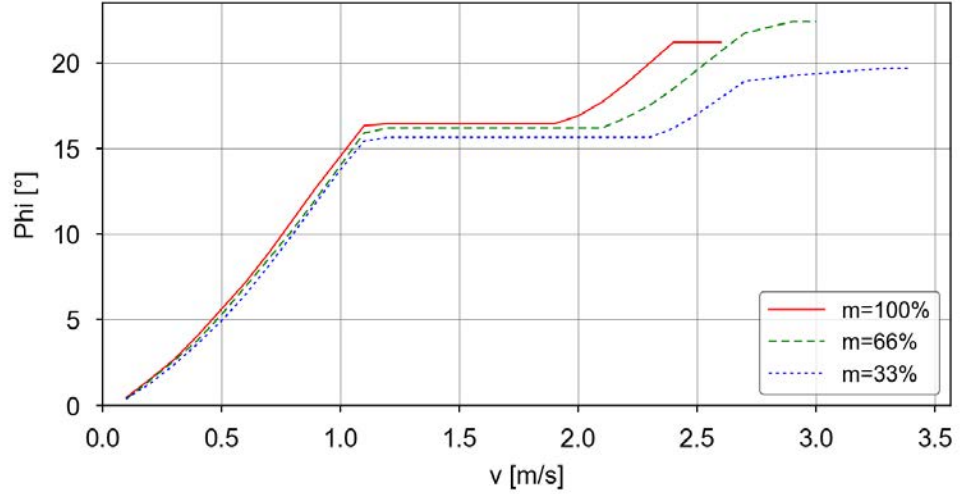
17 IRB 6700

17.3 IRB 6700 2.70 m 300 kg

Continued

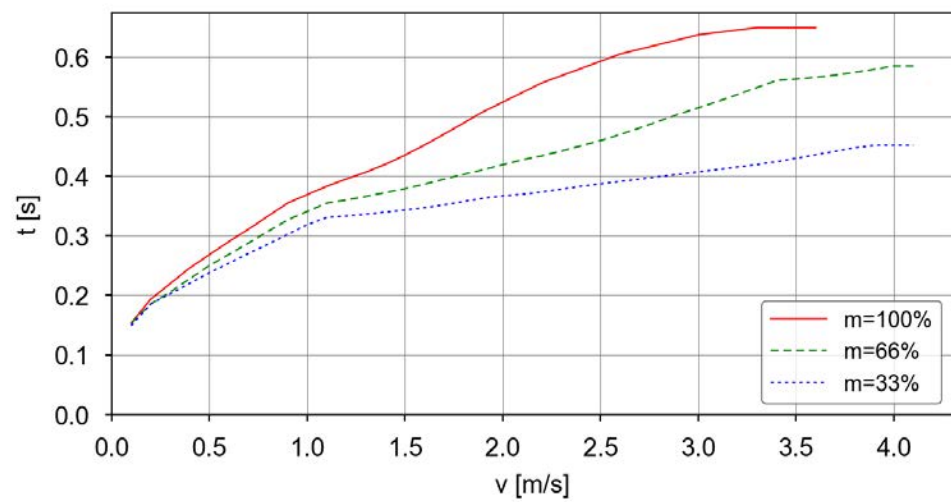
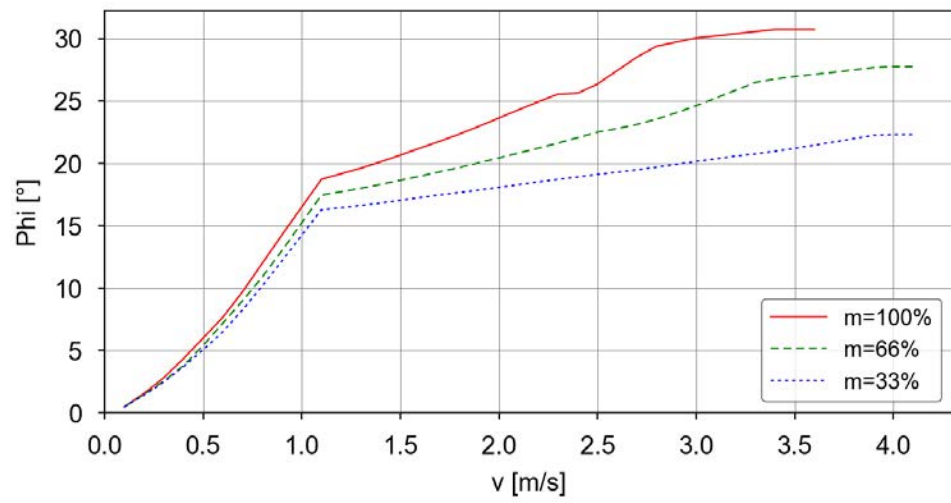
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



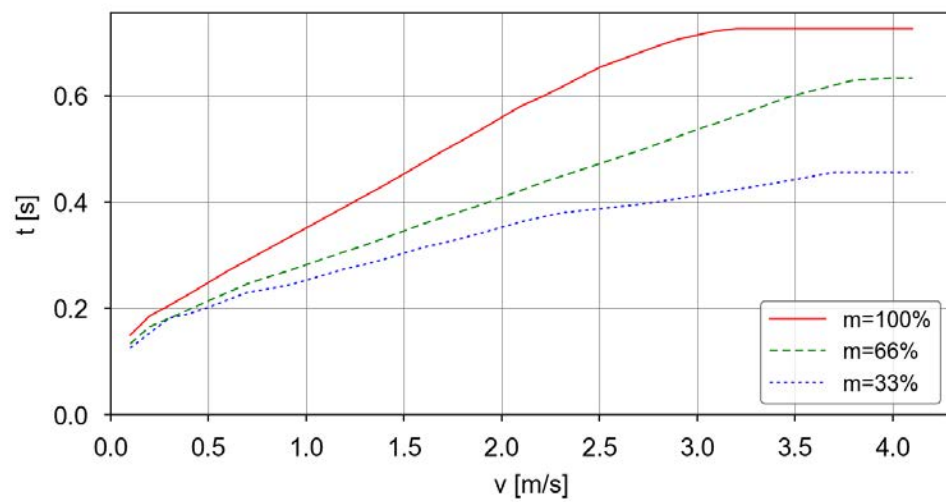
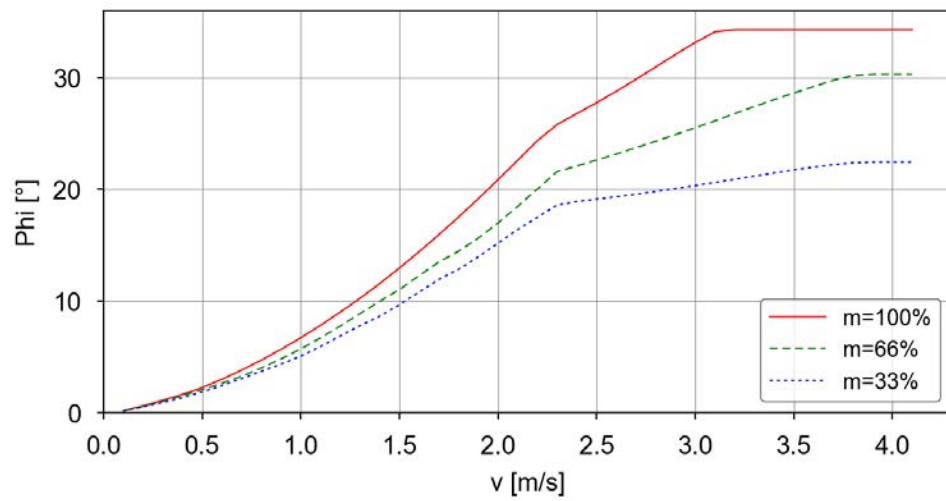
Continues on next page

17 IRB 6700

17.3 IRB 6700 2.70 m 300 kg

Continued

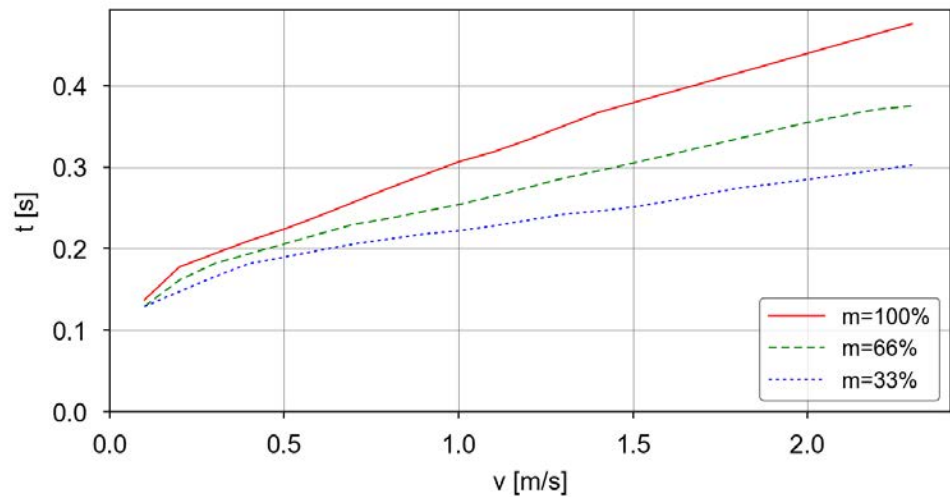
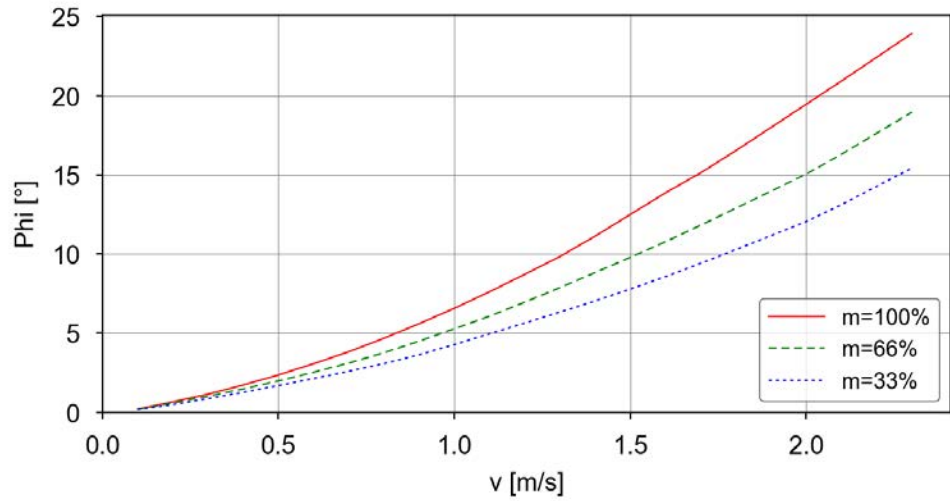
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



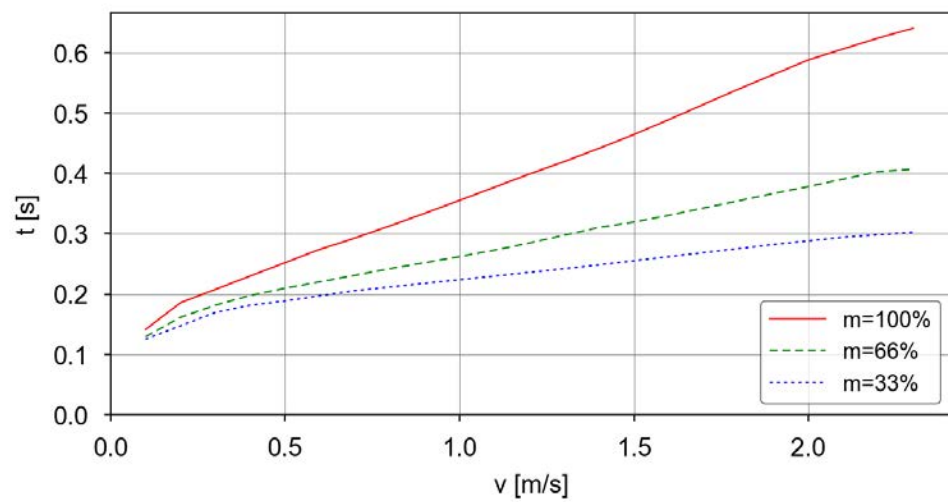
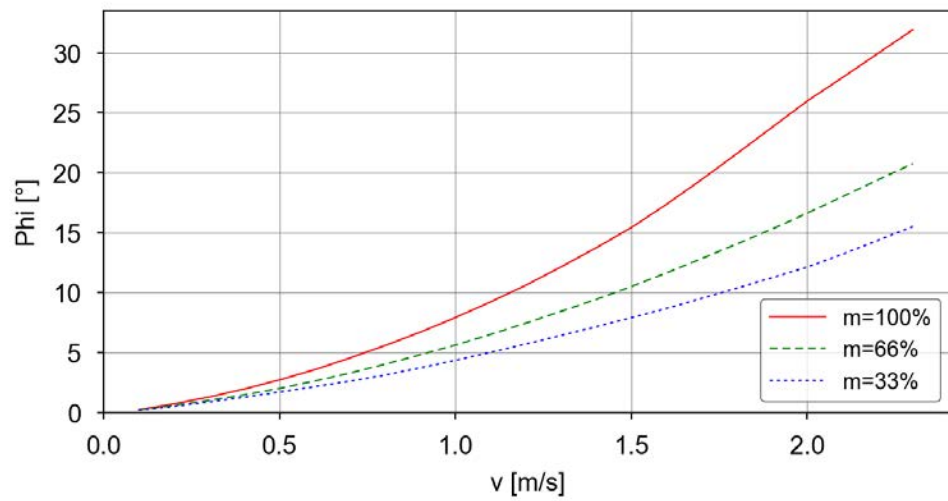
Continues on next page

17 IRB 6700

17.3 IRB 6700 2.70 m 300 kg

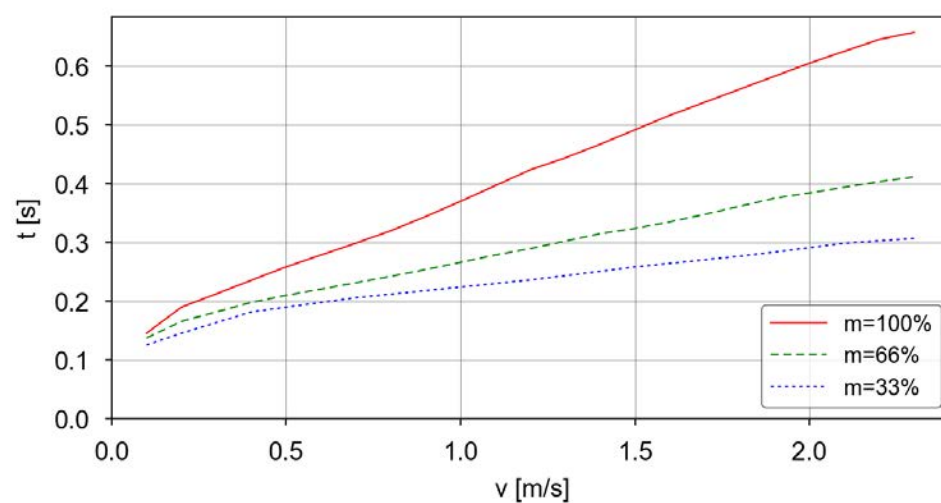
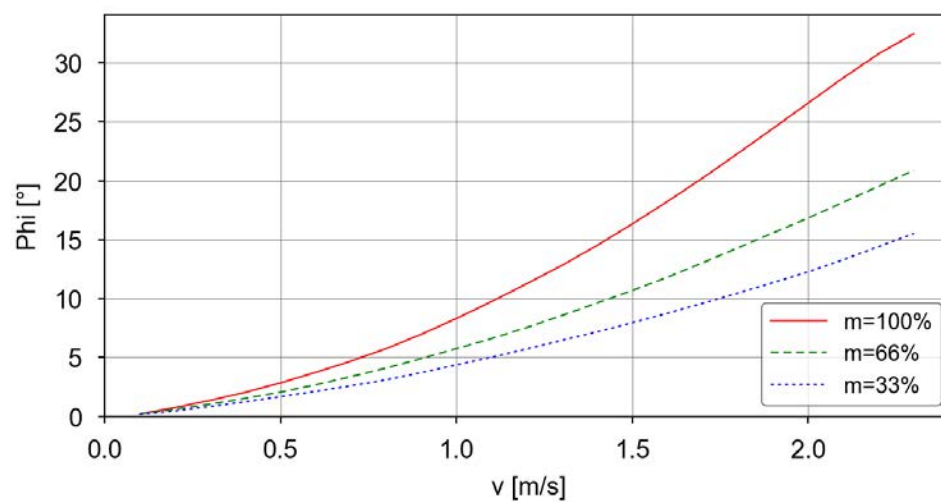
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17 IRB 6700

17.4 IRB 6700 2.80 m 205 kg

17.4 IRB 6700 2.80 m 205 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.0	0.71
2	20.6	0.37
3	14.1	0.22

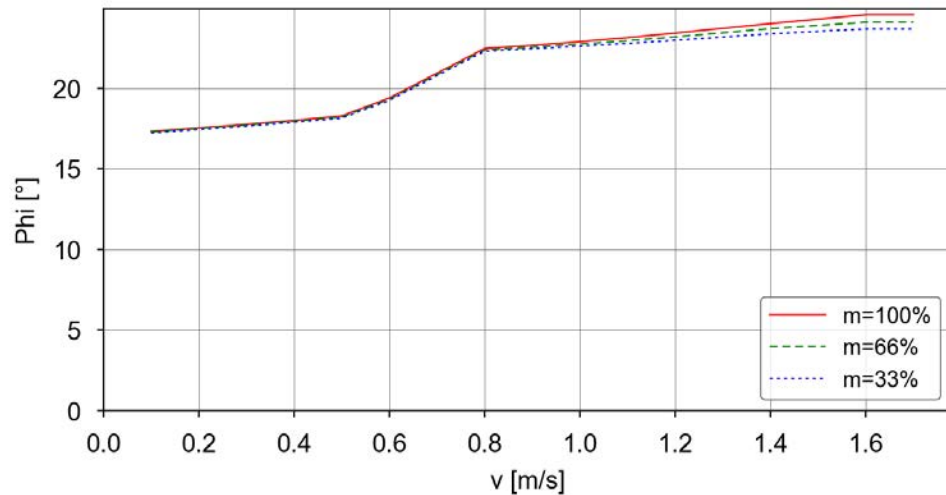
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

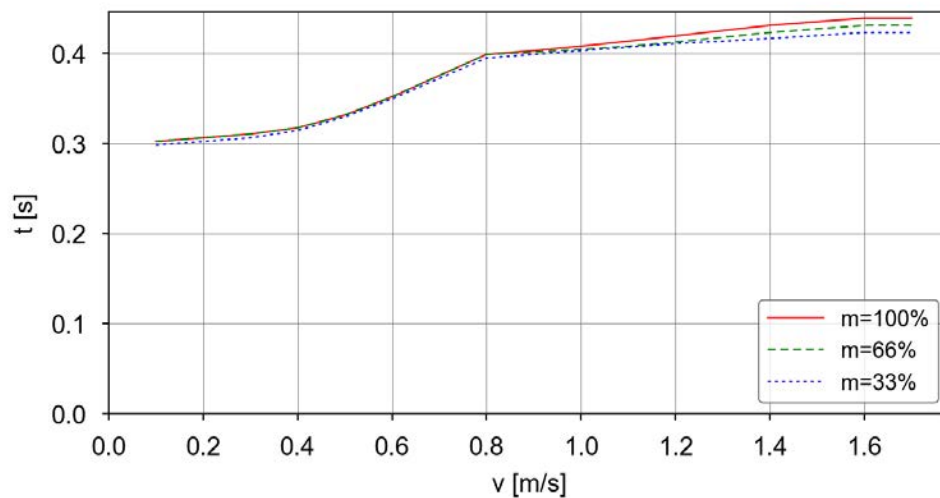
Zone	wcp min (m)	wcp max (m)
0	0	0.931
1	0.931	1.863
2	1.863	max reach

Category 1, Axis 1

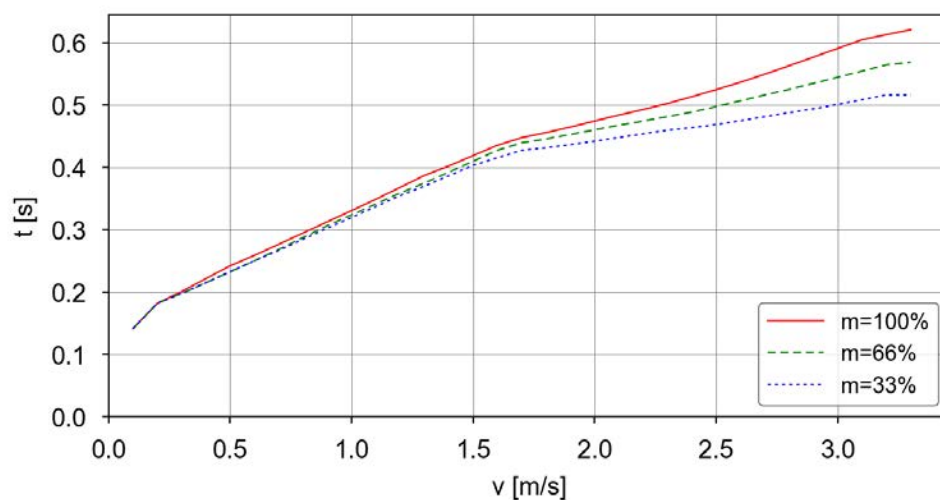
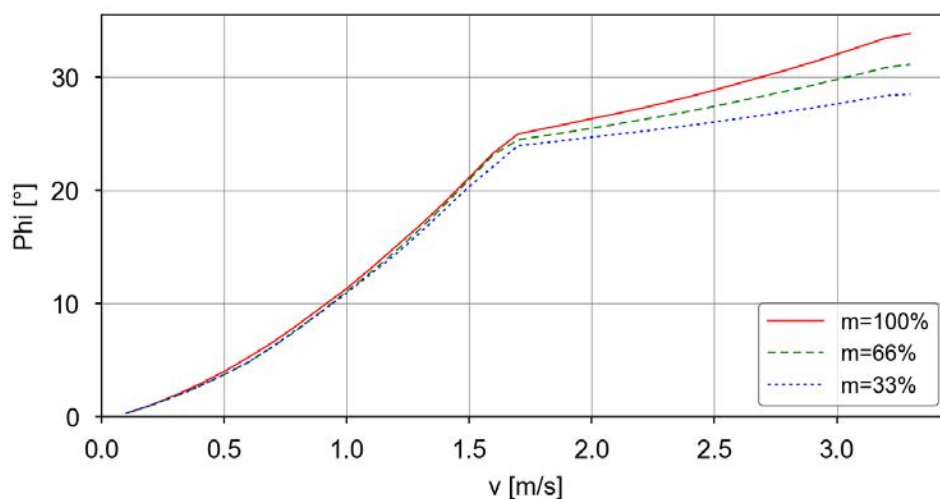
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



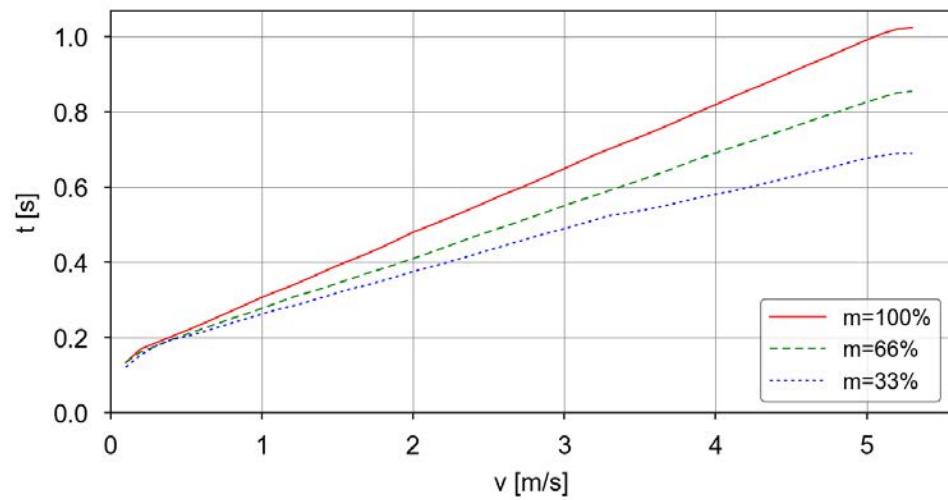
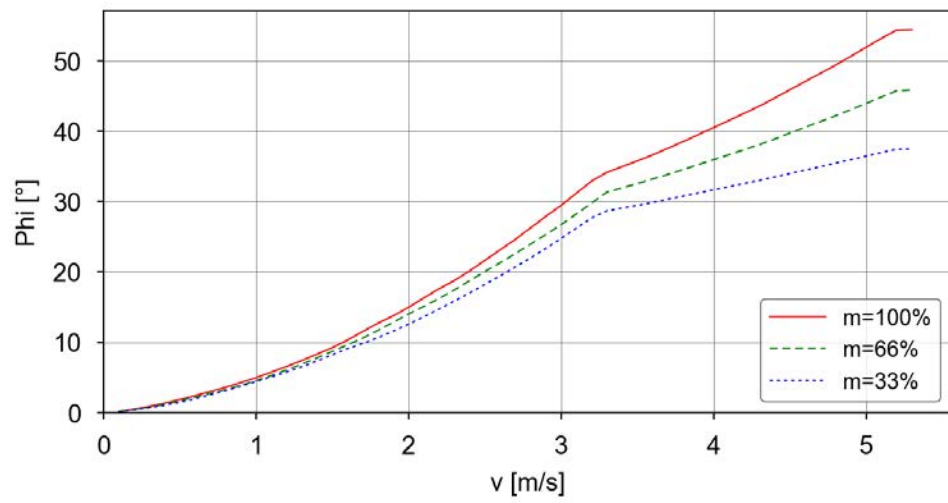
Continues on next page

17 IRB 6700

17.4 IRB 6700 2.80 m 205 kg

Continued

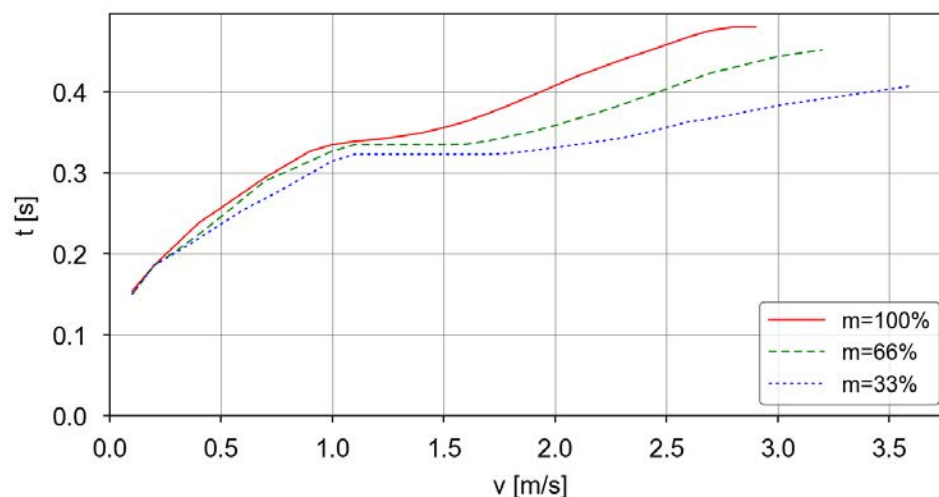
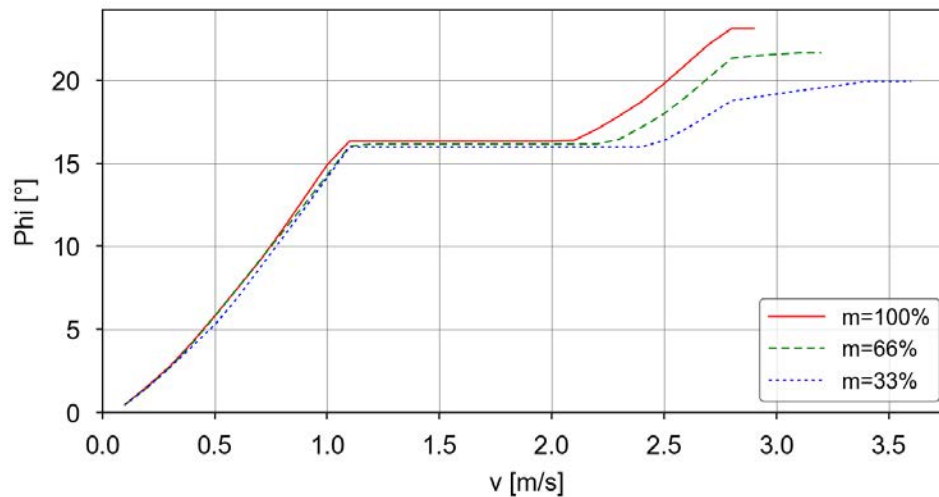
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



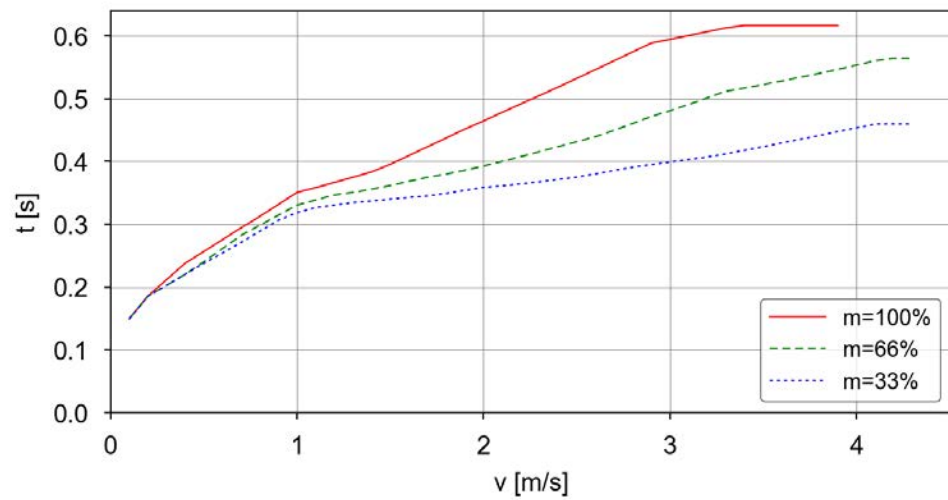
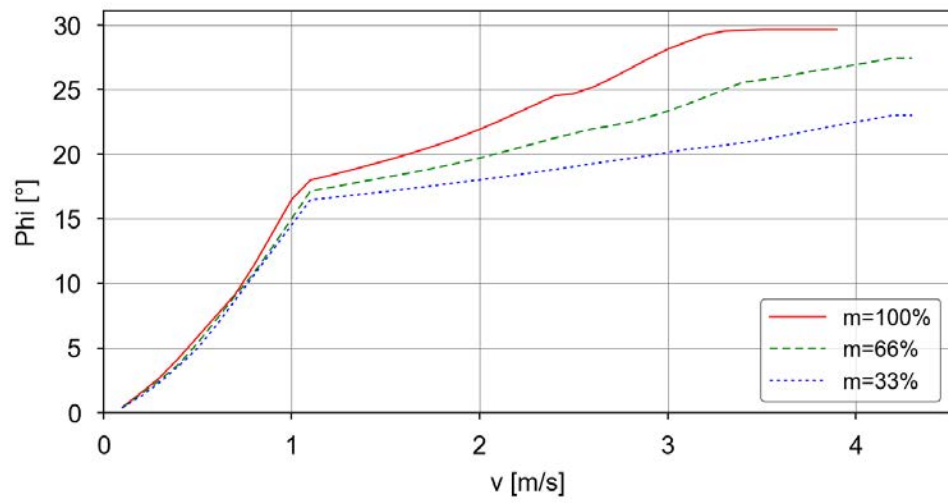
Continues on next page

17 IRB 6700

17.4 IRB 6700 2.80 m 205 kg

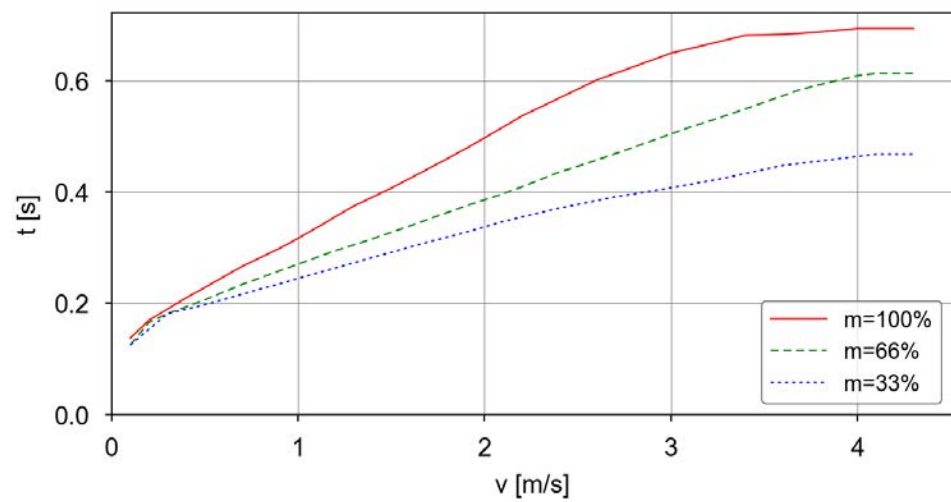
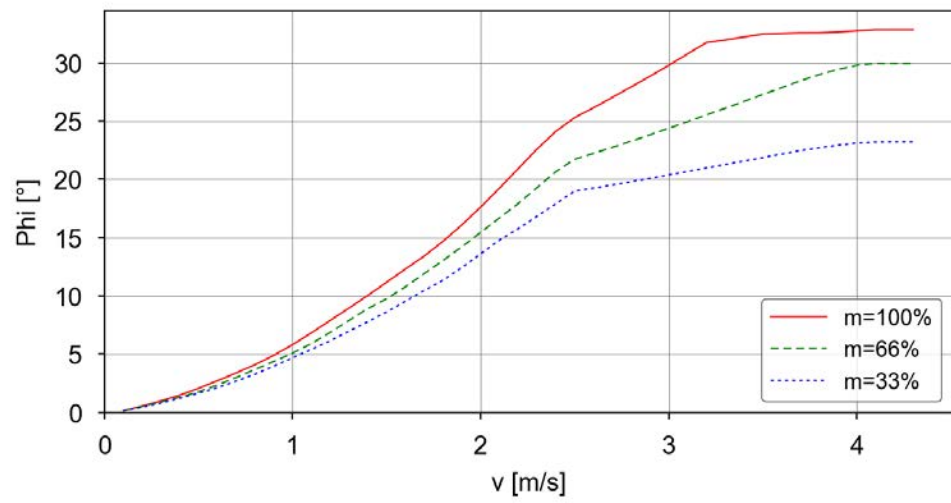
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

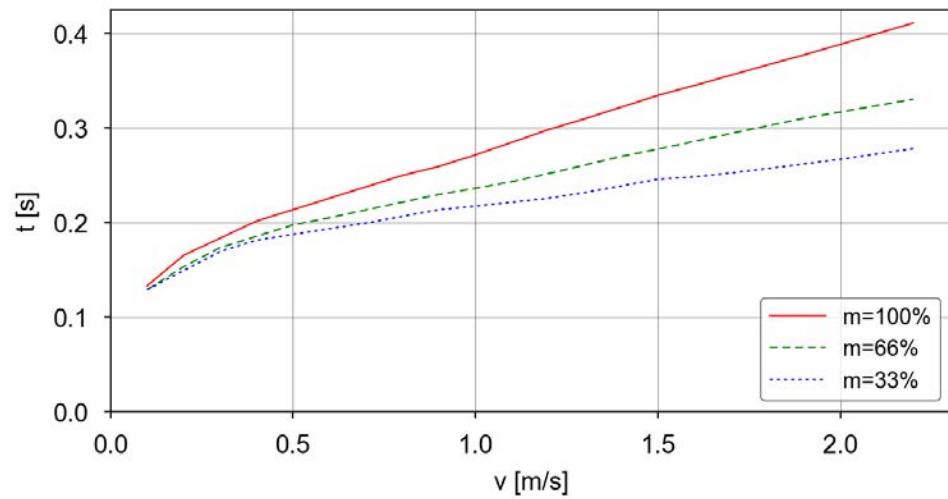
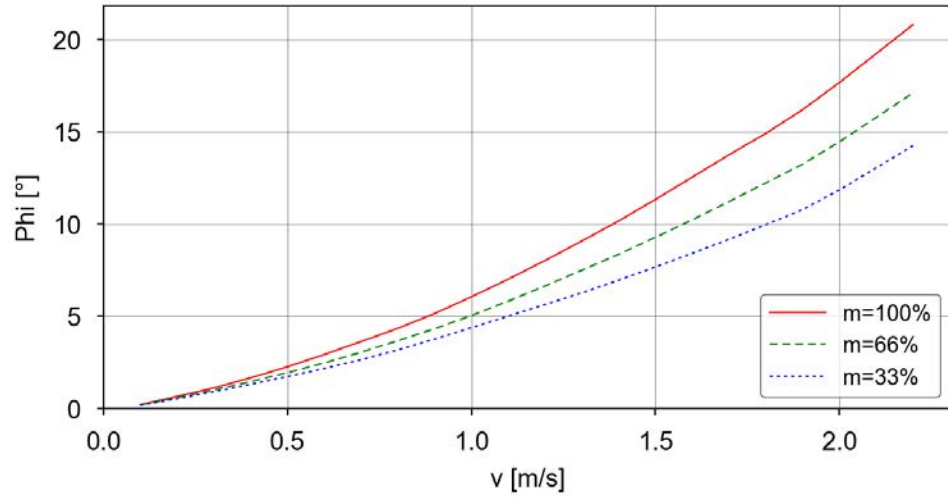
17 IRB 6700

17.4 IRB 6700 2.80 m 205 kg

Continued

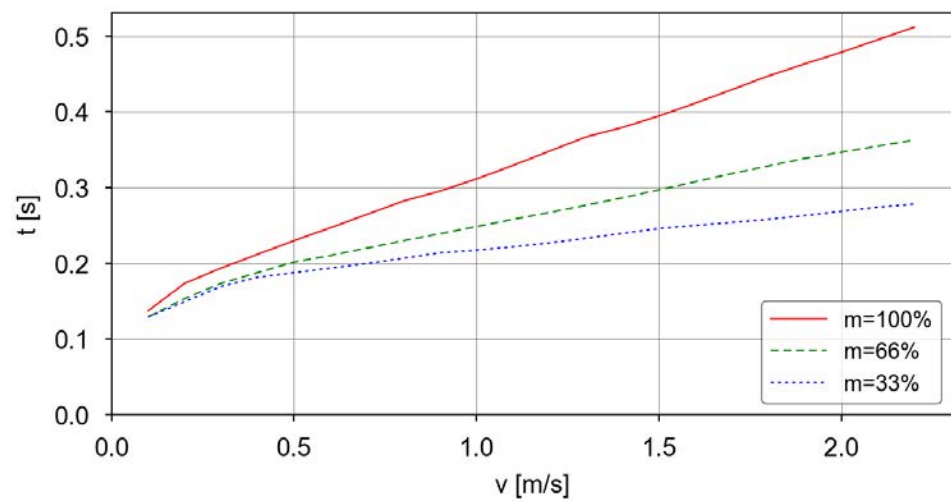
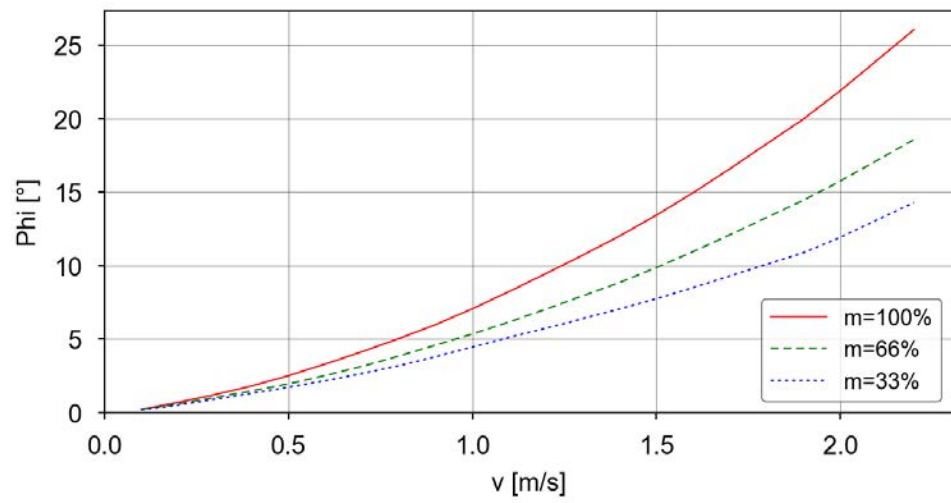
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



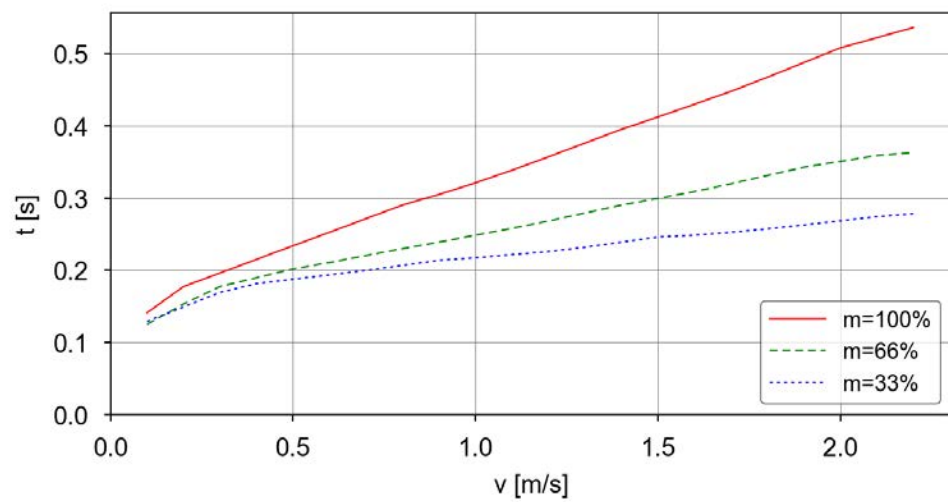
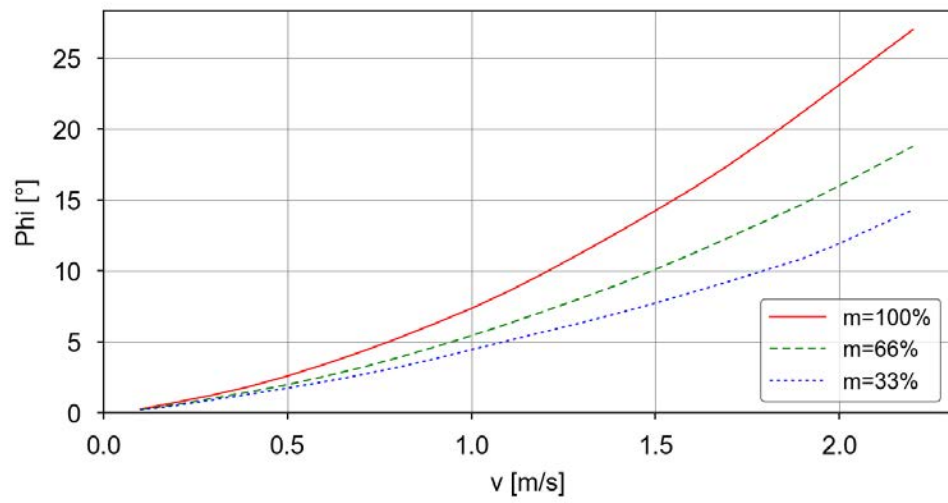
Continues on next page

17 IRB 6700

17.4 IRB 6700 2.80 m 205 kg

Continued

Extension zone 2, stopping distance and stopping time



17.5 IRB 6700 2.85 m 155 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.9	0.66
2	25.1	0.37
3	19.3	0.25

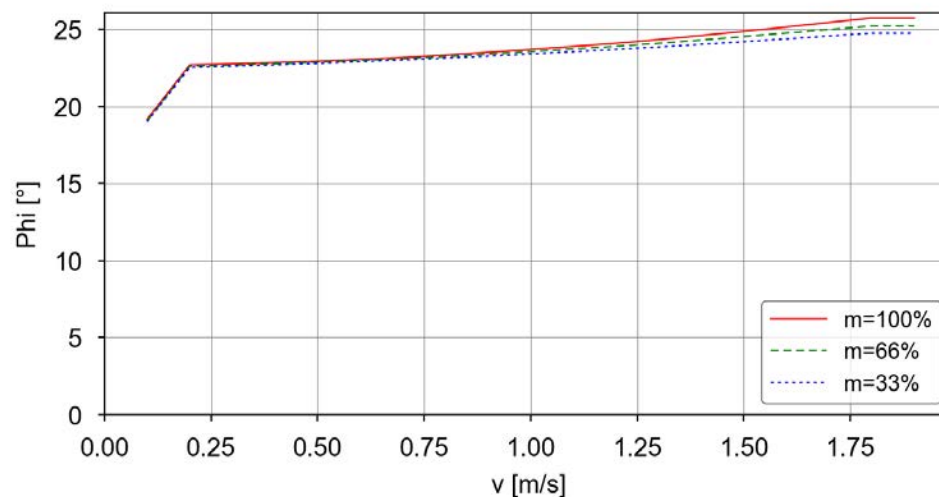
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.949
1	0.949	1.898
2	1.898	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

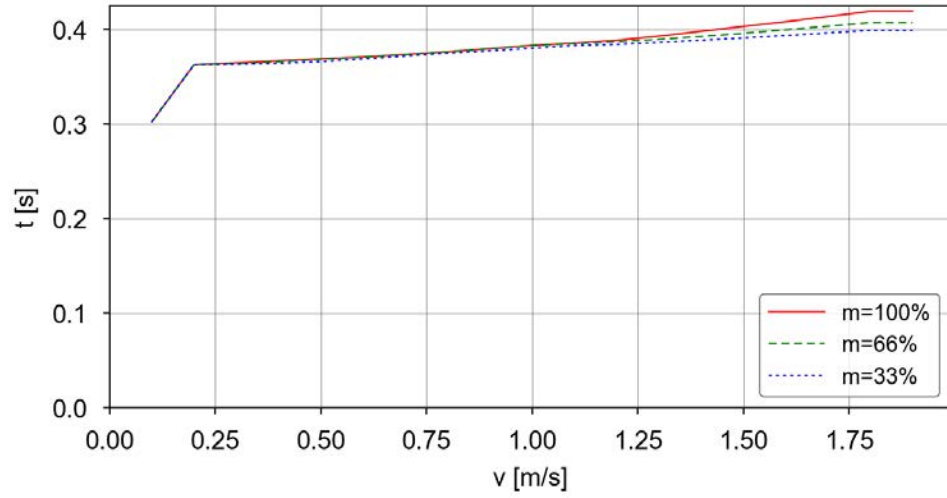


Continues on next page

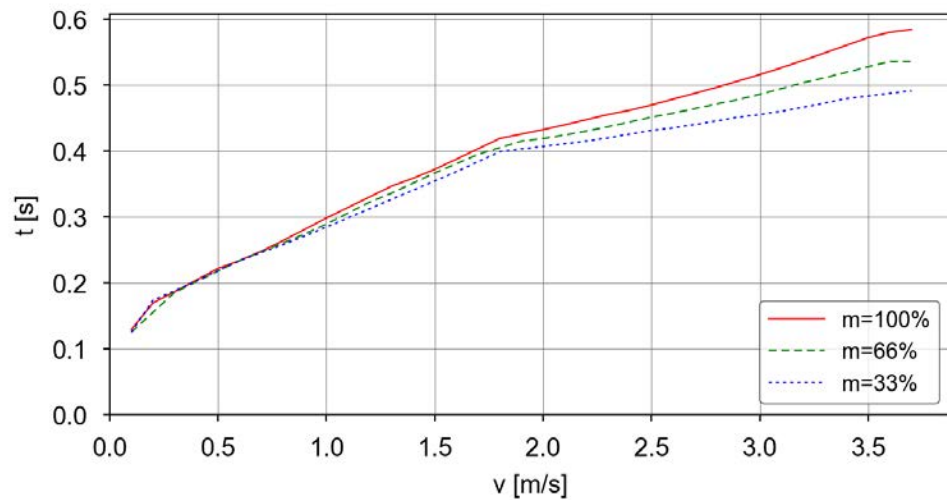
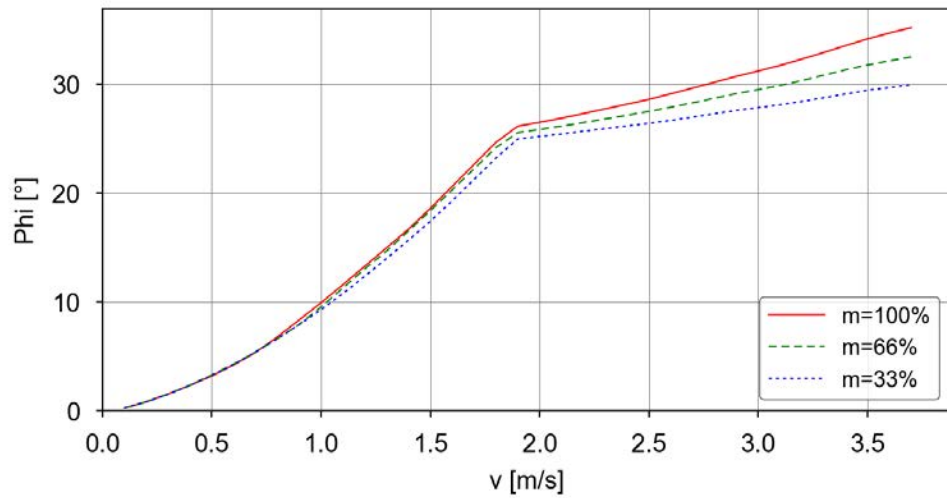
17 IRB 6700

17.5 IRB 6700 2.85 m 155 kg

Continued

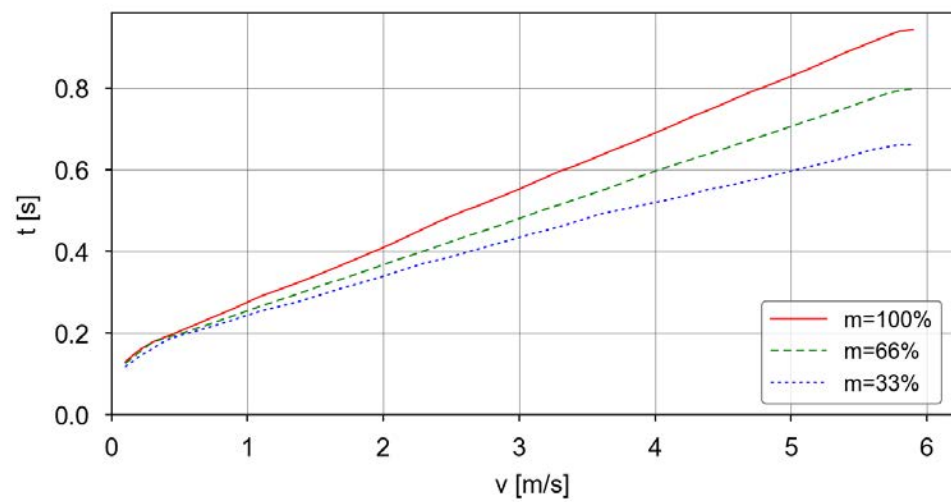
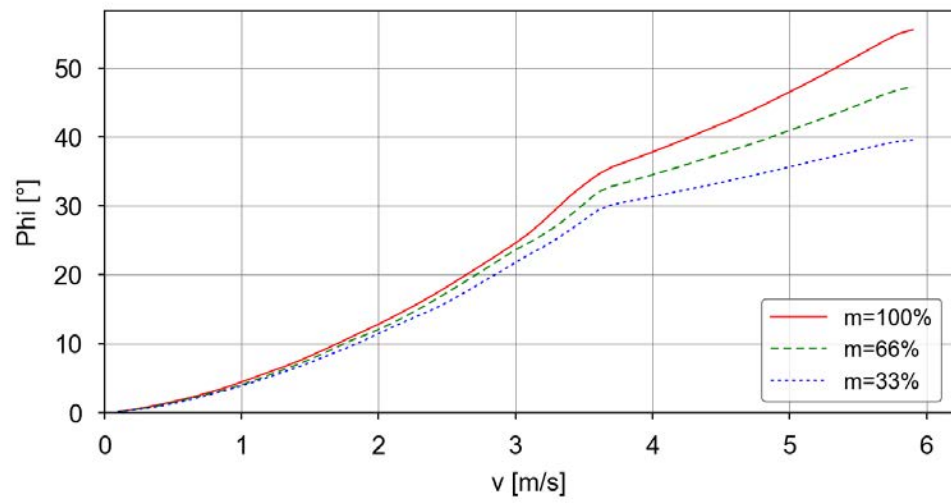


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

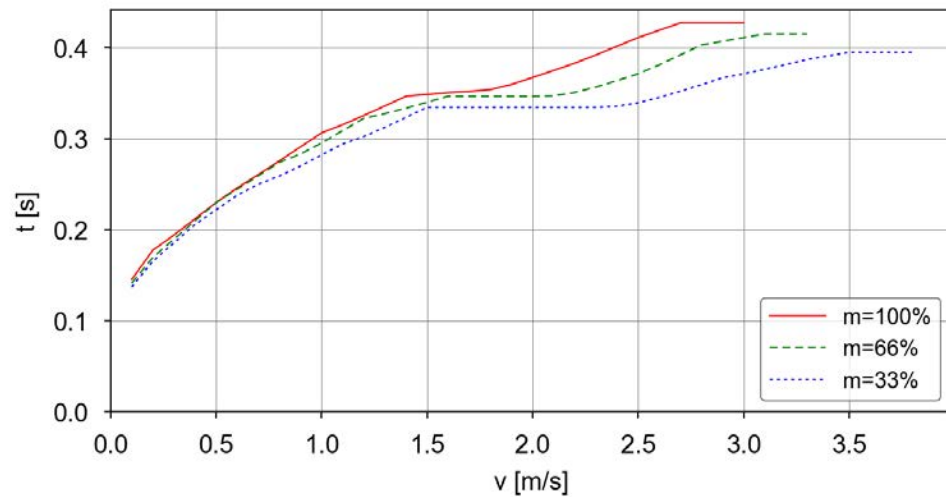
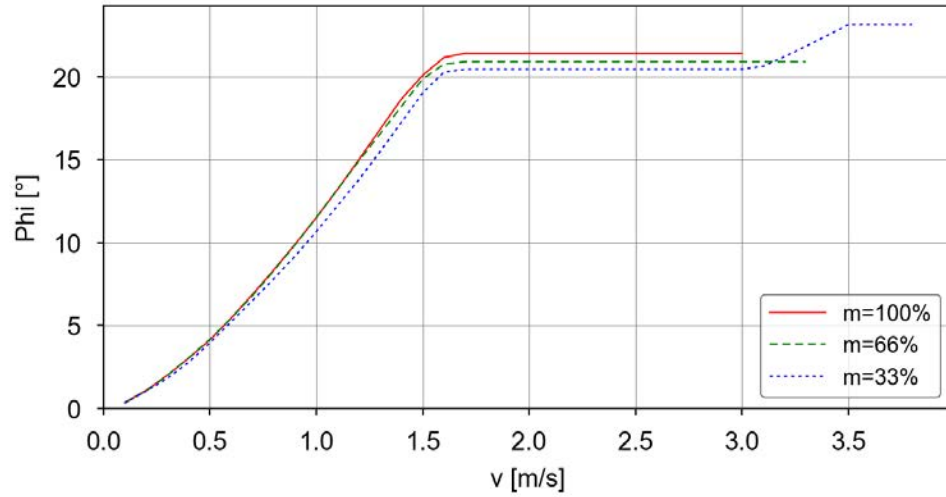
17 IRB 6700

17.5 IRB 6700 2.85 m 155 kg

Continued

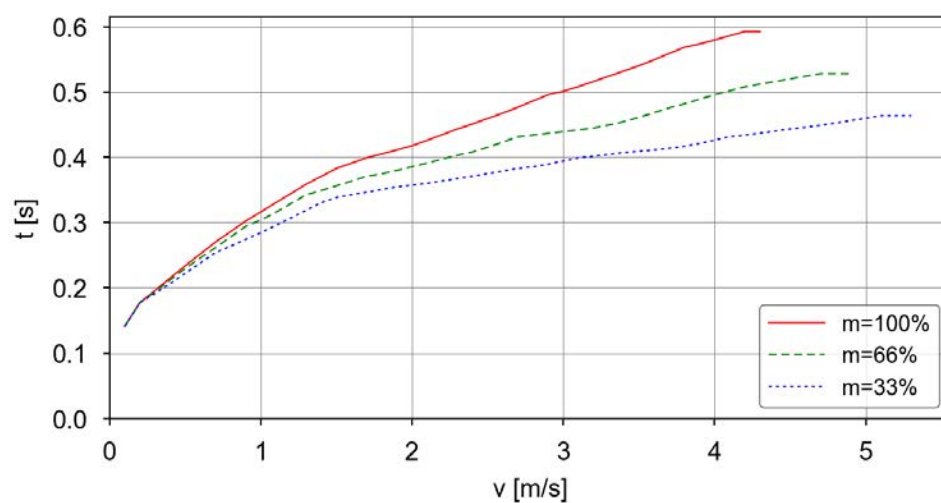
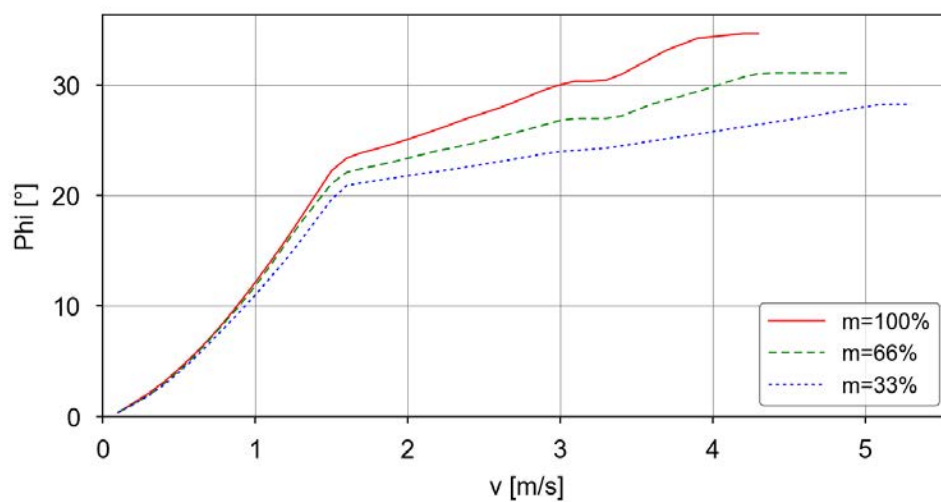
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



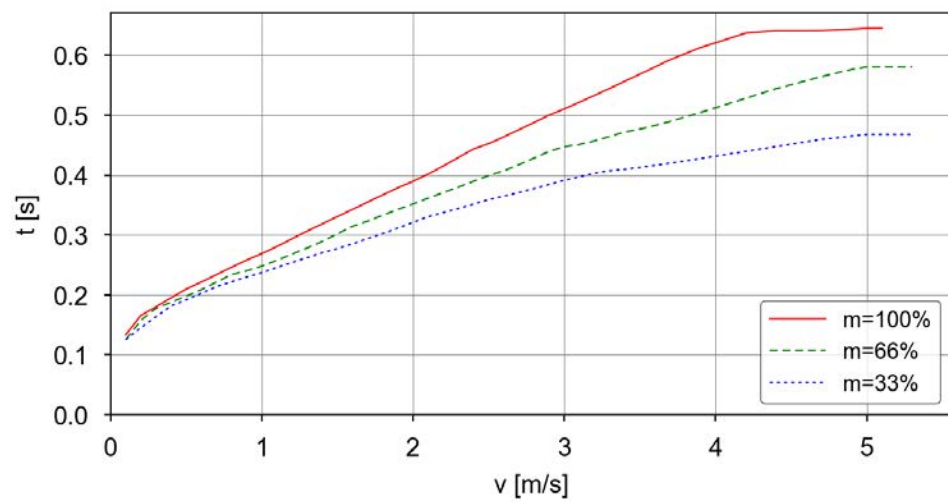
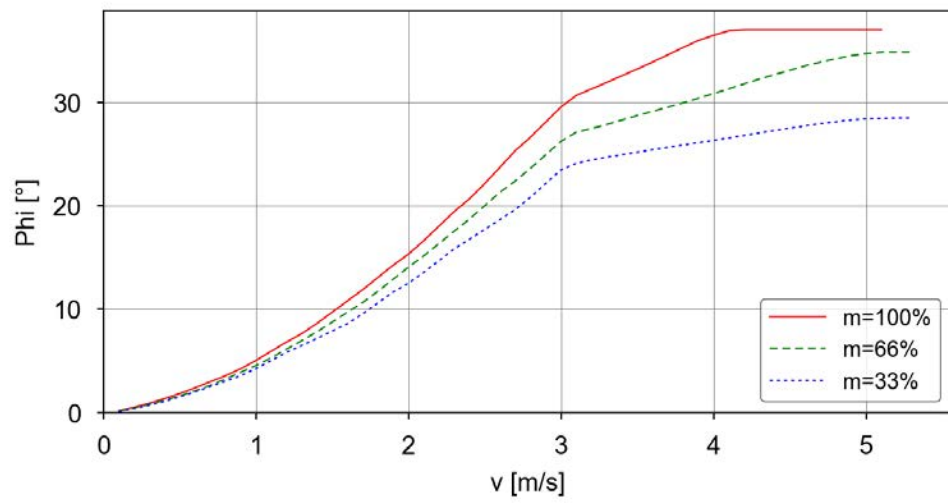
Continues on next page

17 IRB 6700

17.5 IRB 6700 2.85 m 155 kg

Continued

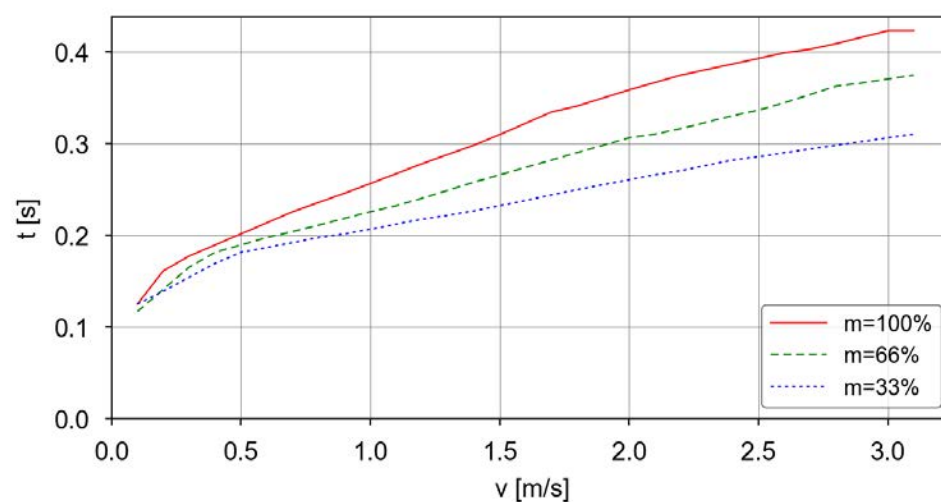
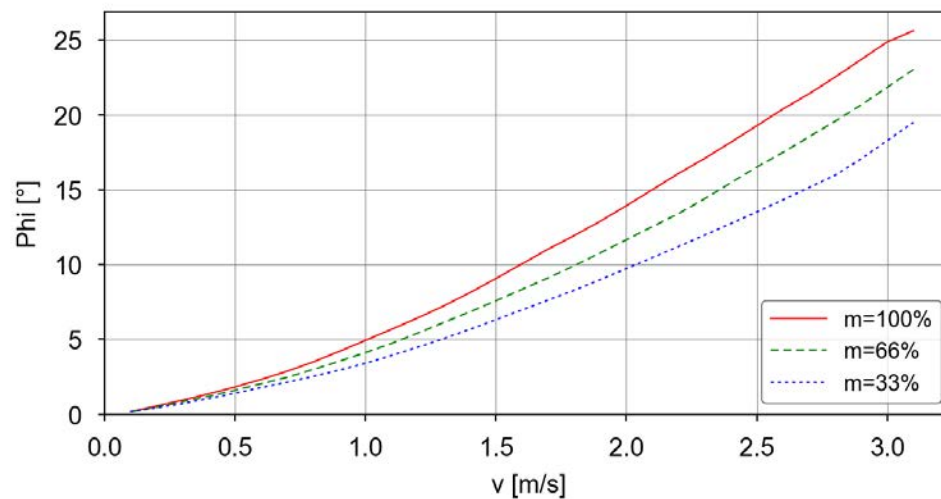
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



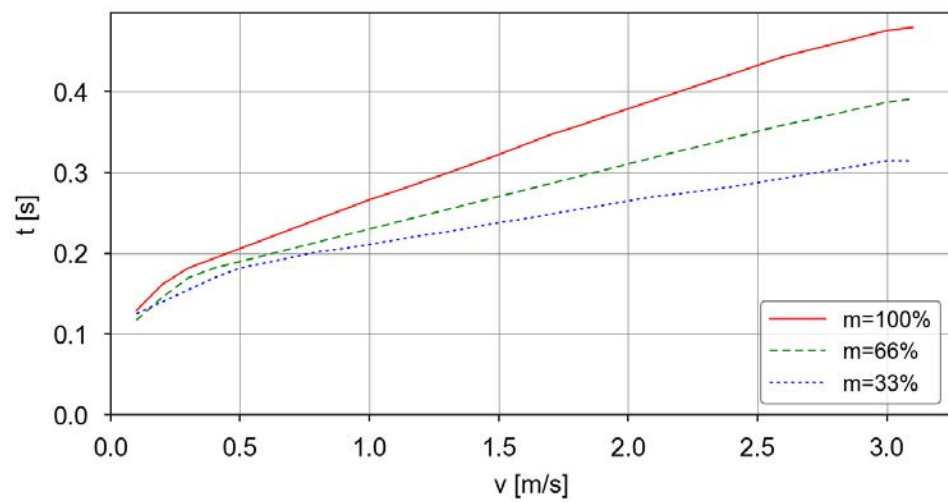
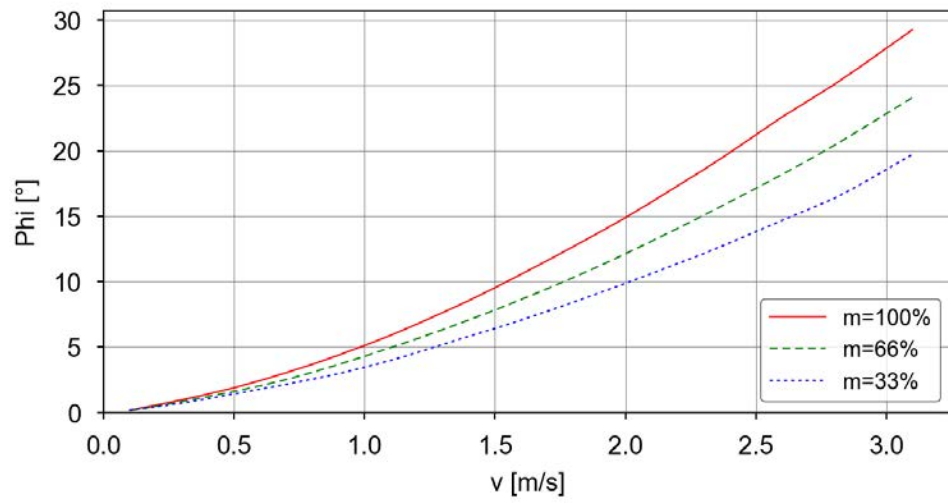
Continues on next page

17 IRB 6700

17.5 IRB 6700 2.85 m 155 kg

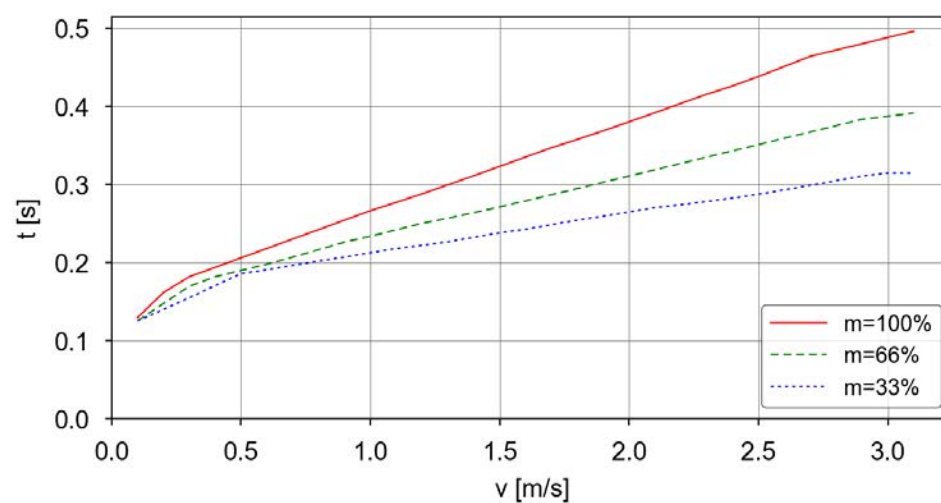
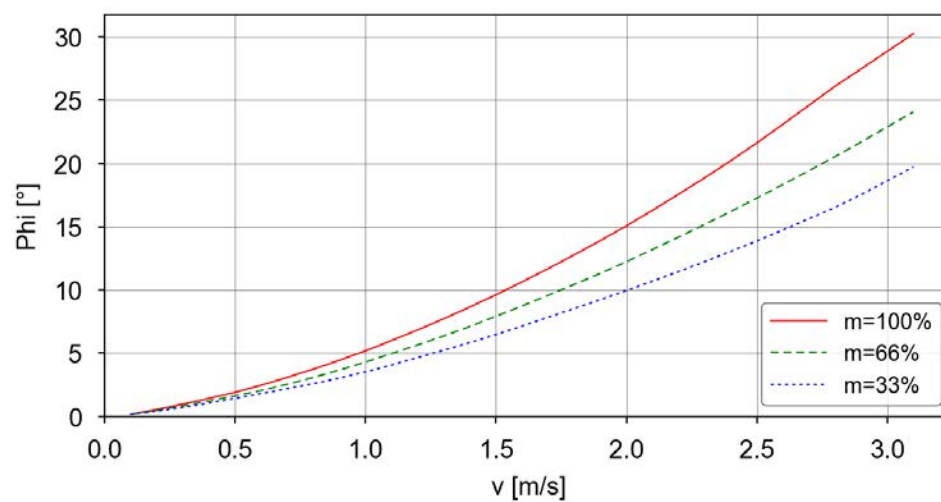
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17 IRB 6700

17.6 IRB 6700 3.00 m 245 kg

17.6 IRB 6700 3.00 m 245 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	38.8	0.68
2	21.7	0.39
3	17.9	0.29

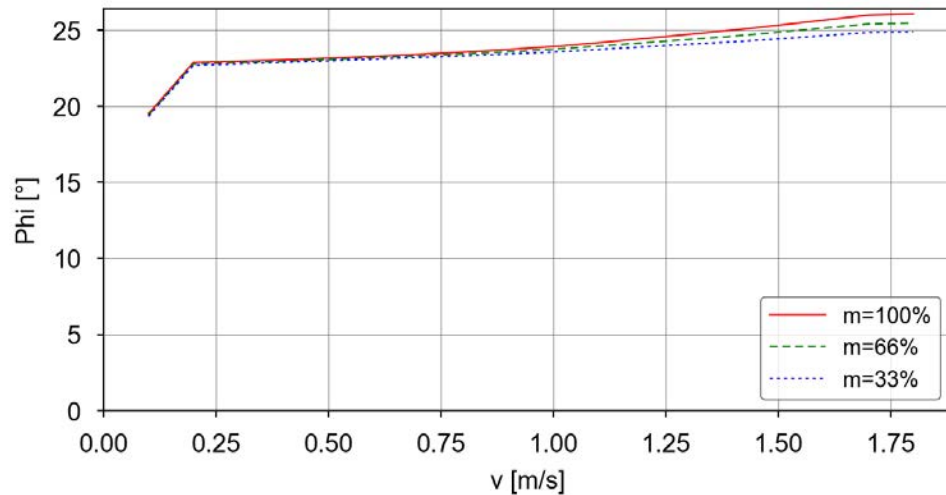
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

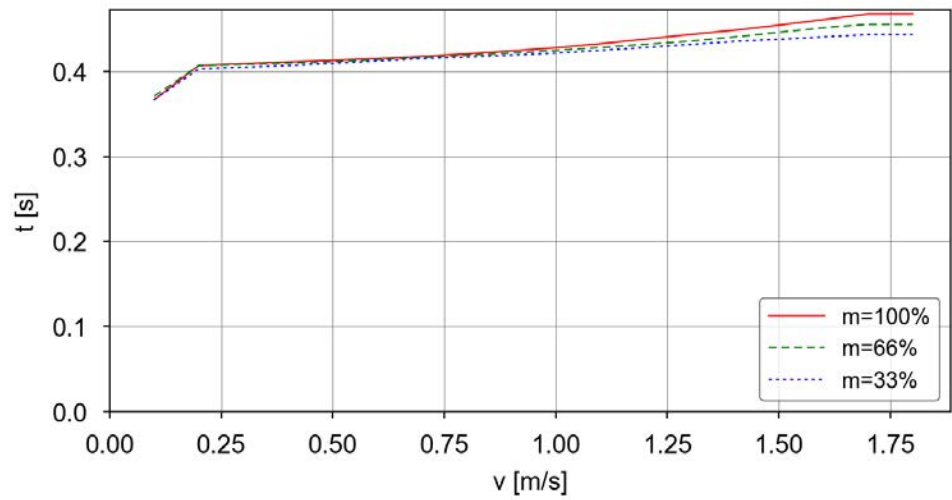
Zone	wcp min (m)	wcp max (m)
0	0	0.989
1	0.989	1.978
2	1.978	max reach

Category 1, Axis 1

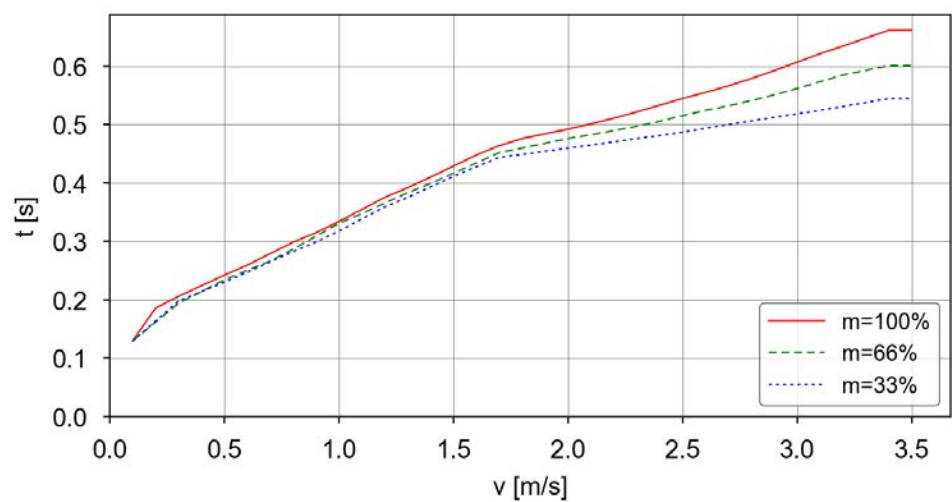
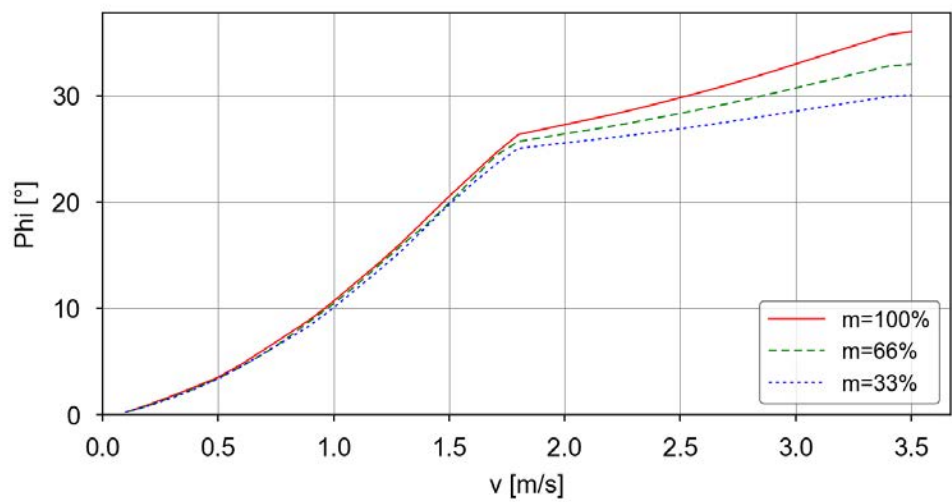
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



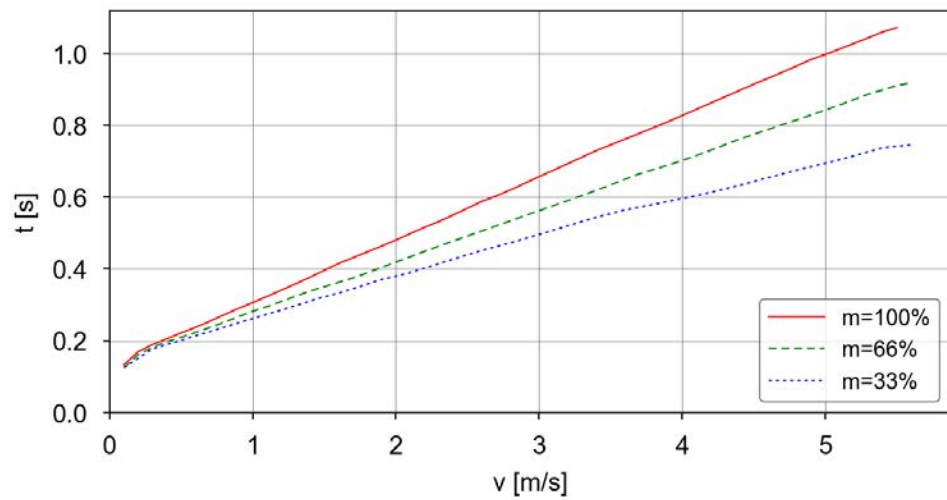
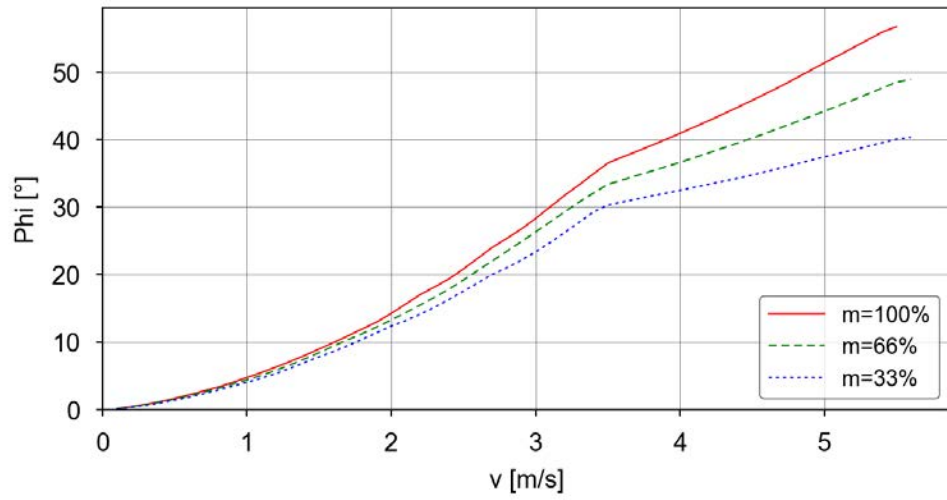
Continues on next page

17 IRB 6700

17.6 IRB 6700 3.00 m 245 kg

Continued

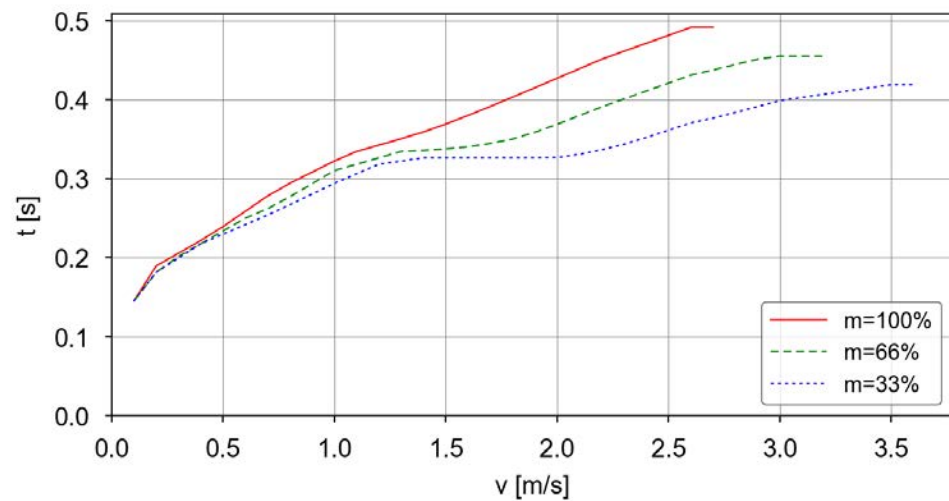
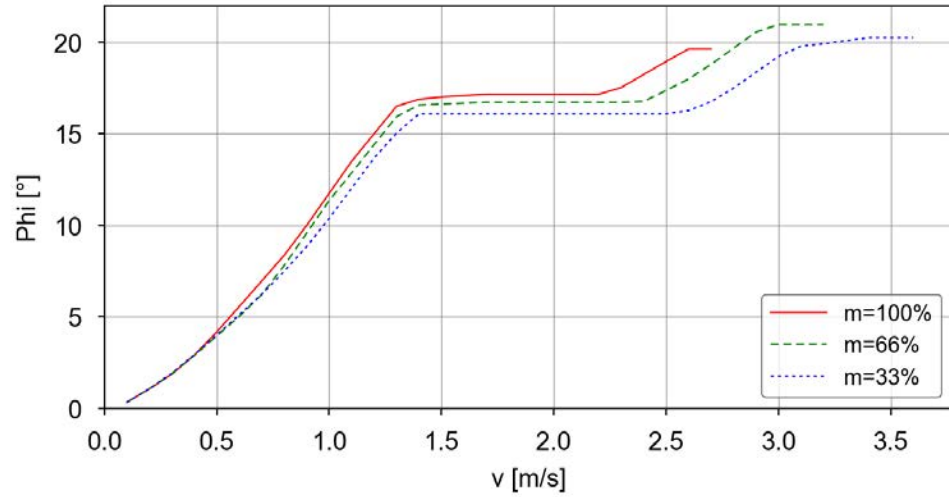
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



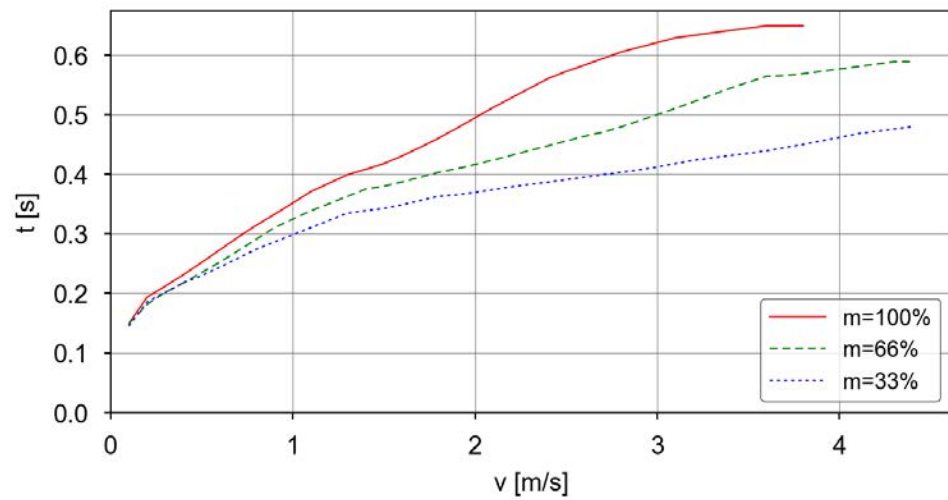
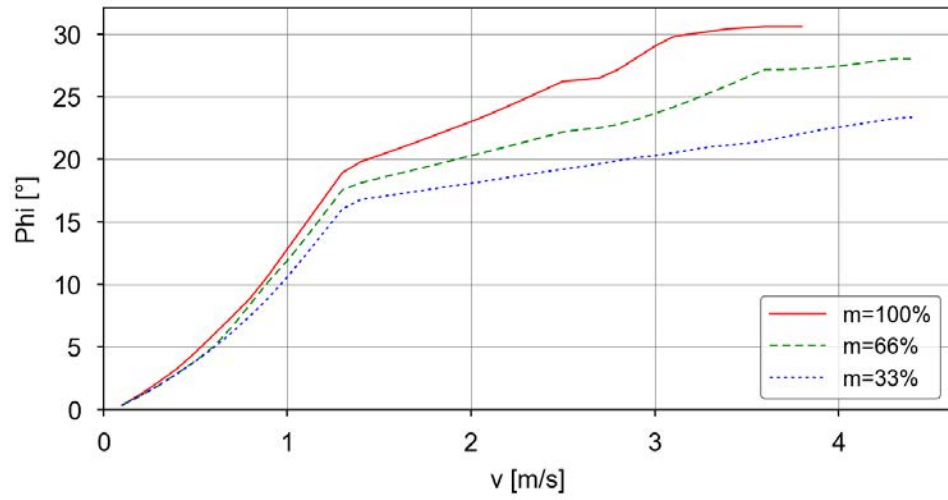
Continues on next page

17 IRB 6700

17.6 IRB 6700 3.00 m 245 kg

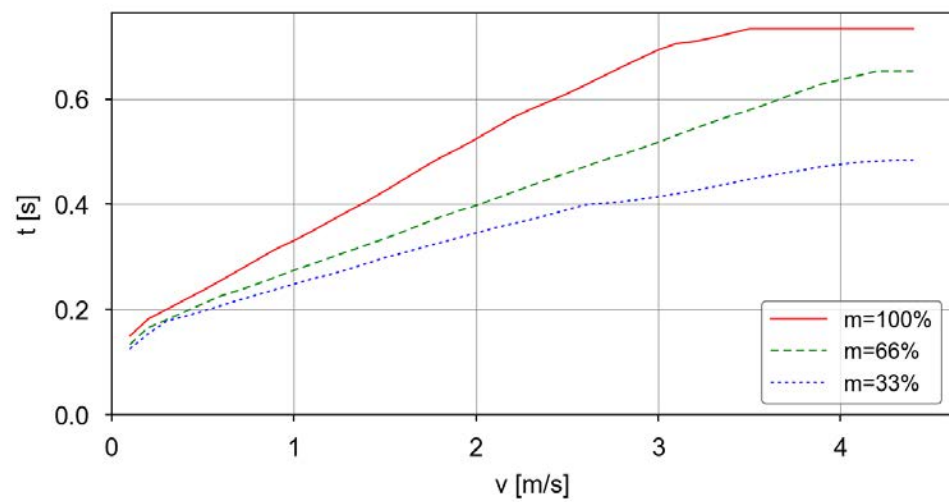
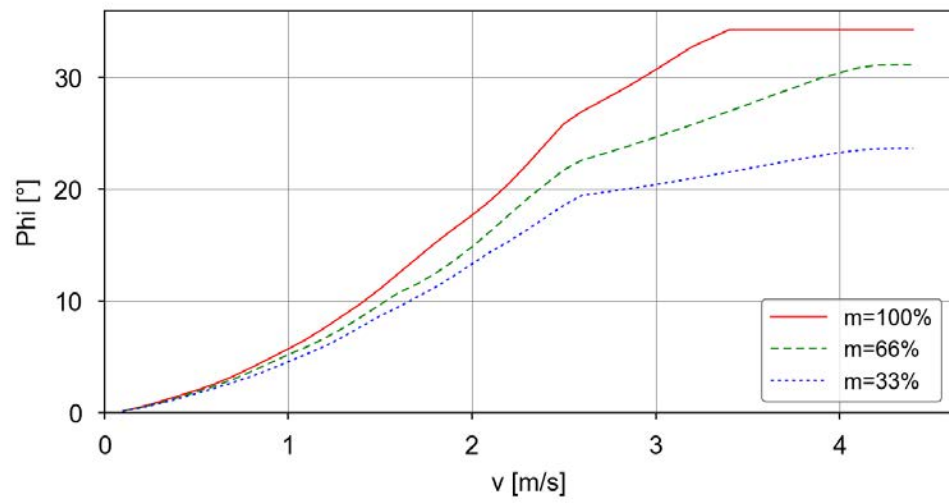
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

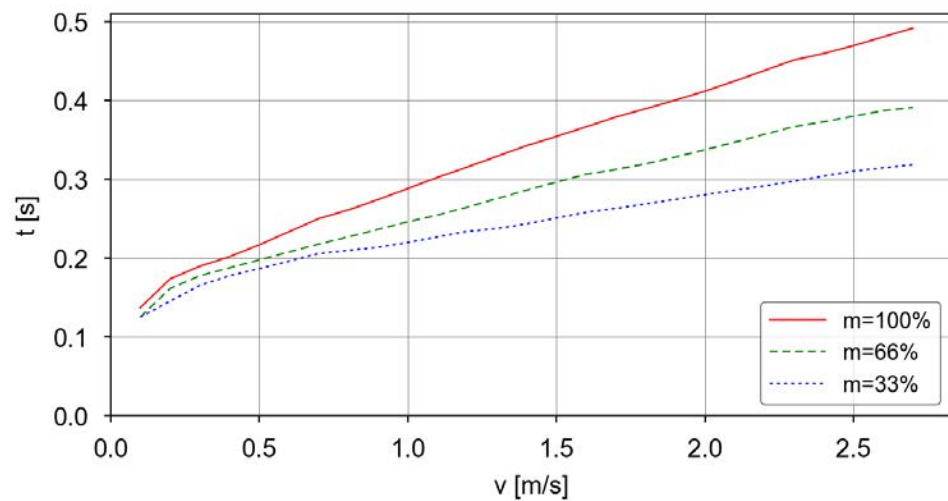
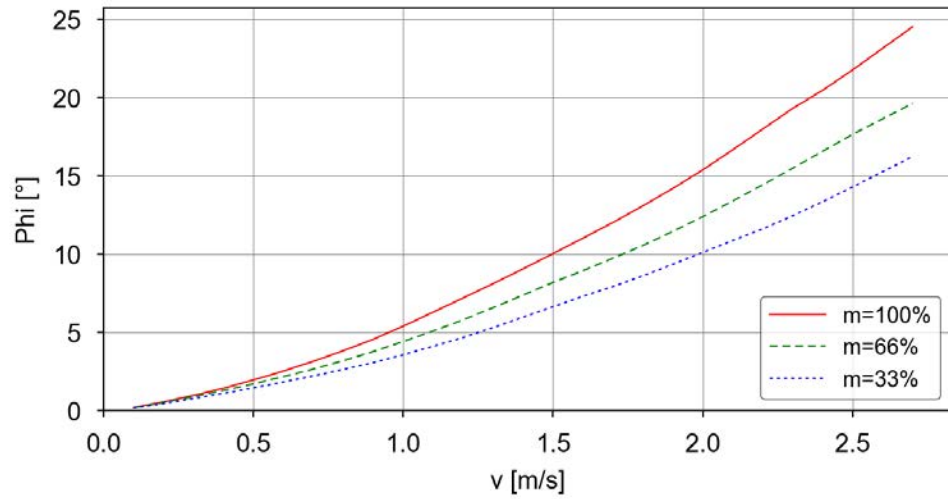
17 IRB 6700

17.6 IRB 6700 3.00 m 245 kg

Continued

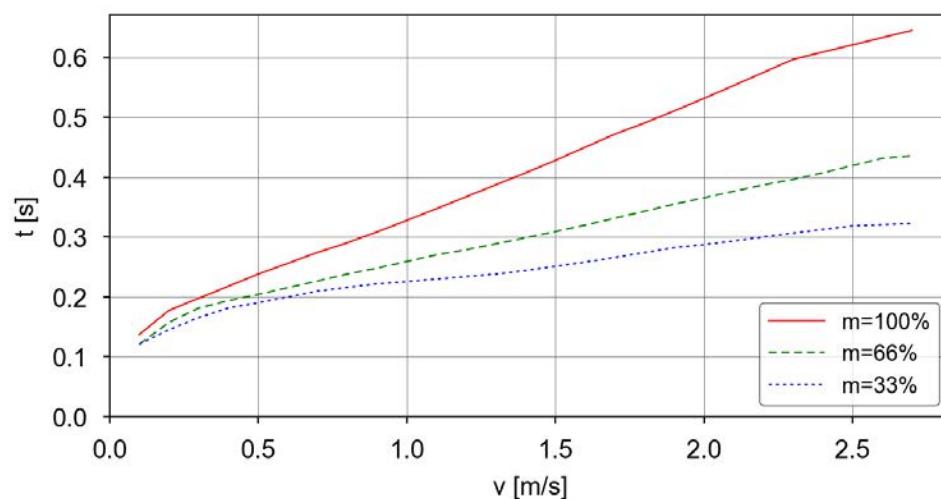
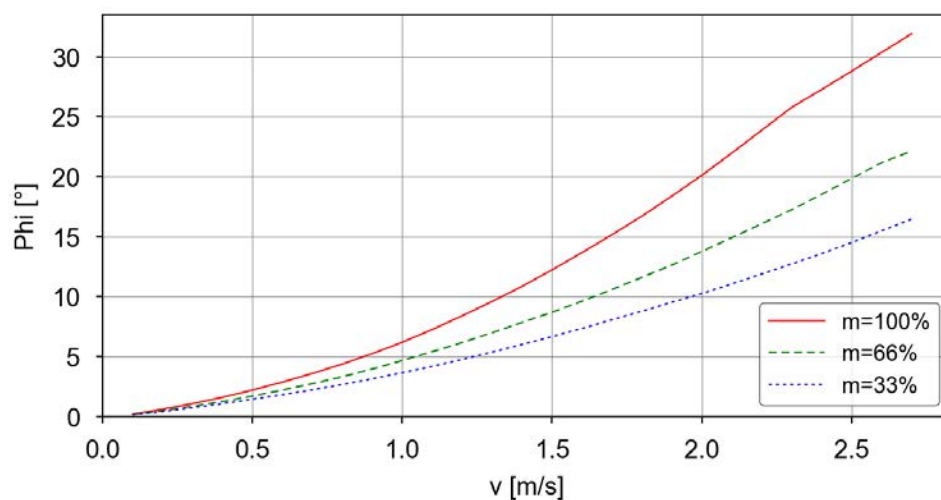
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



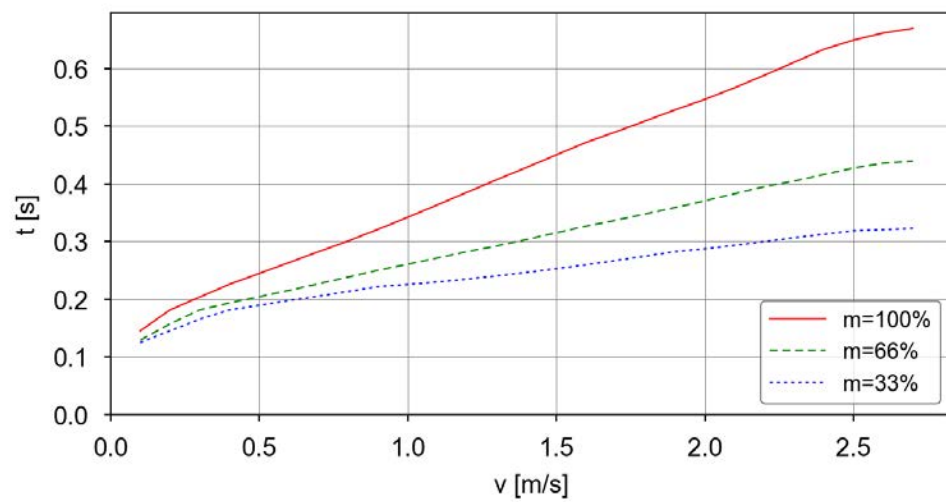
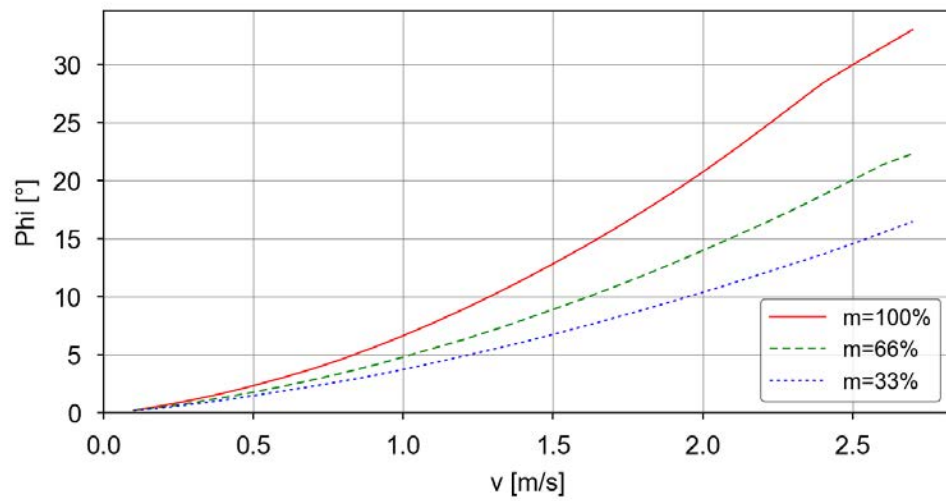
Continues on next page

17 IRB 6700

17.6 IRB 6700 3.00 m 245 kg

Continued

Extension zone 2, stopping distance and stopping time



17.7 IRB 6700 3.05 m 175 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.9	0.73
2	21.1	0.37
3	15.6	0.25

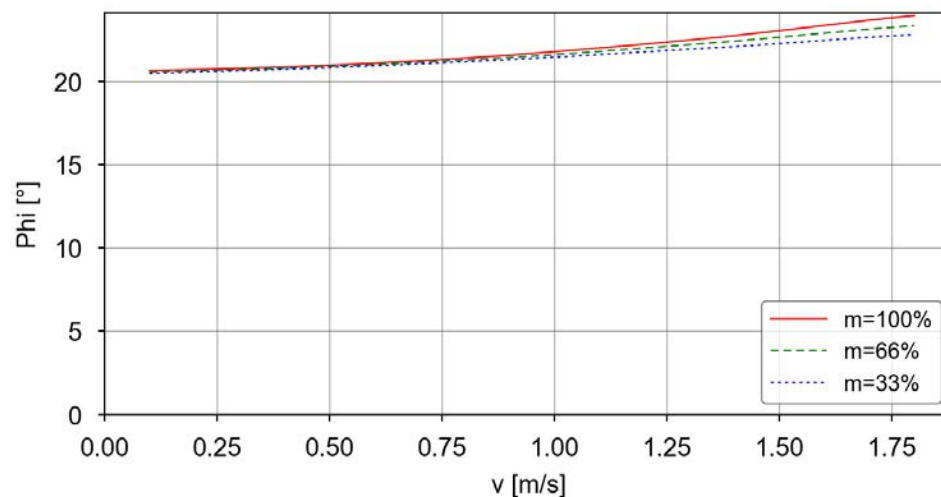
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.019
1	1.019	2.037
2	2.037	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

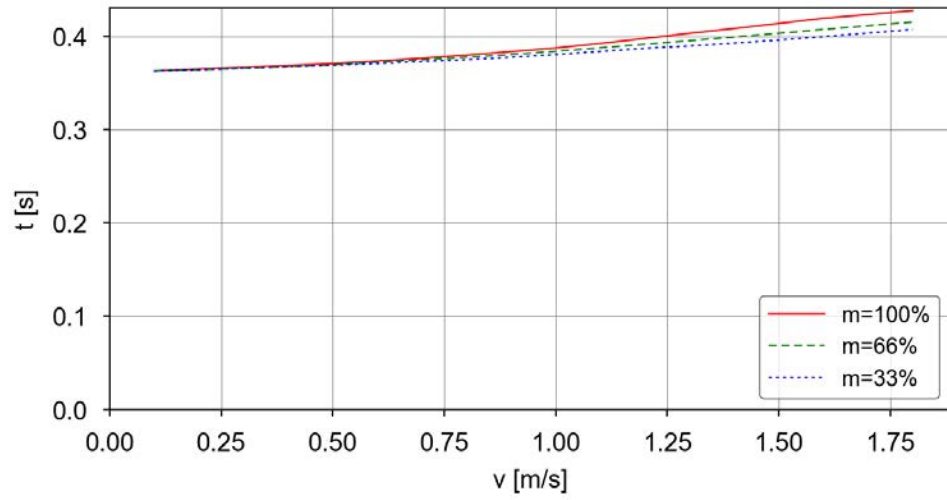


Continues on next page

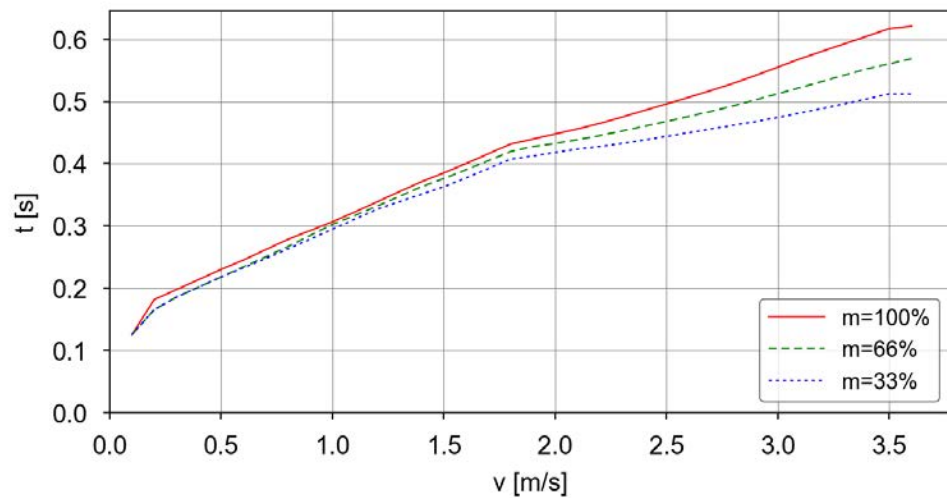
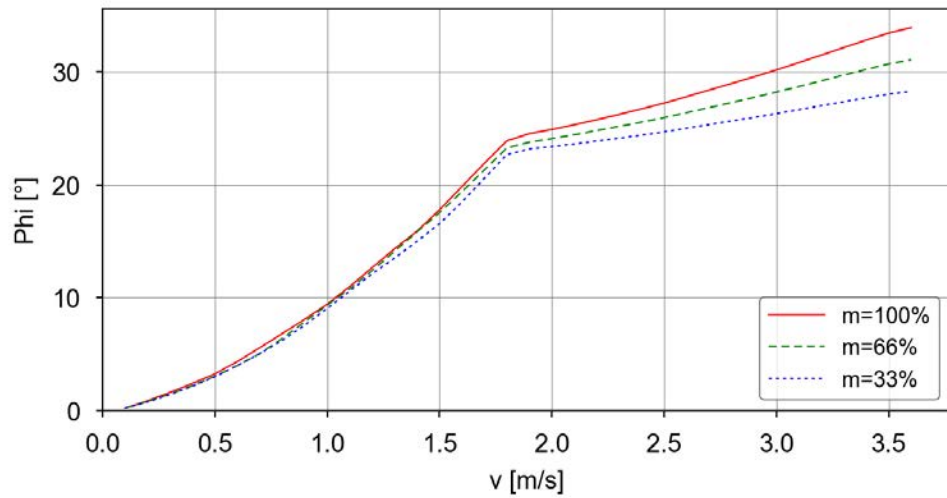
17 IRB 6700

17.7 IRB 6700 3.05 m 175 kg

Continued

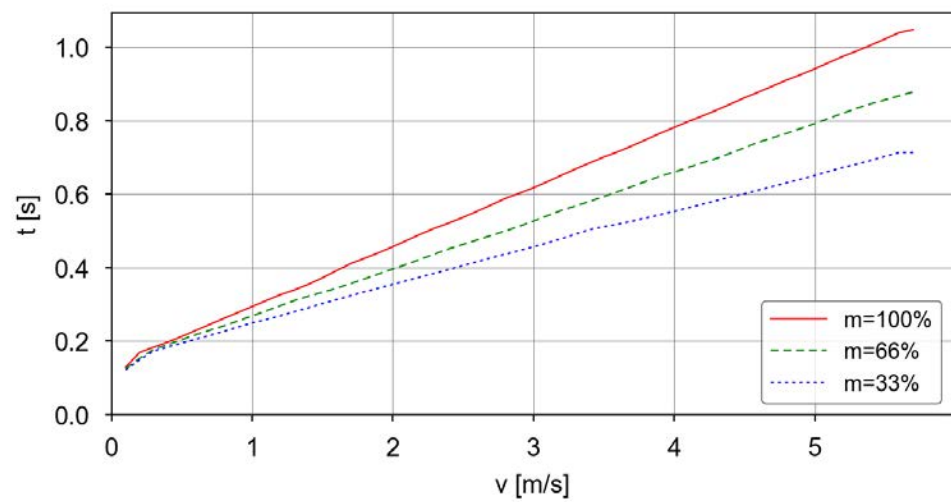
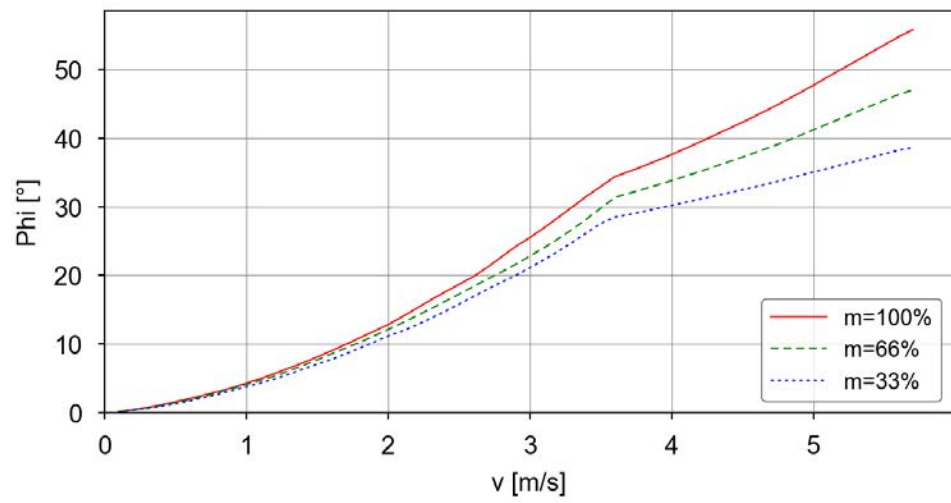


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

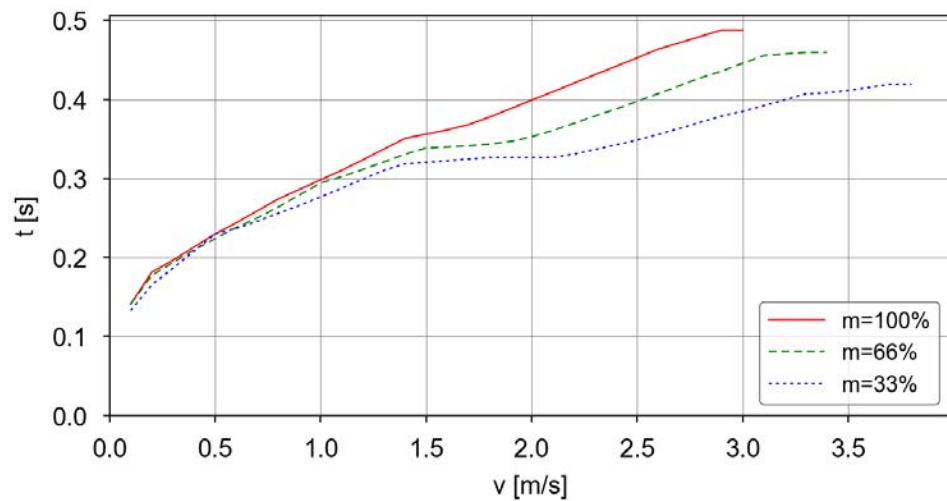
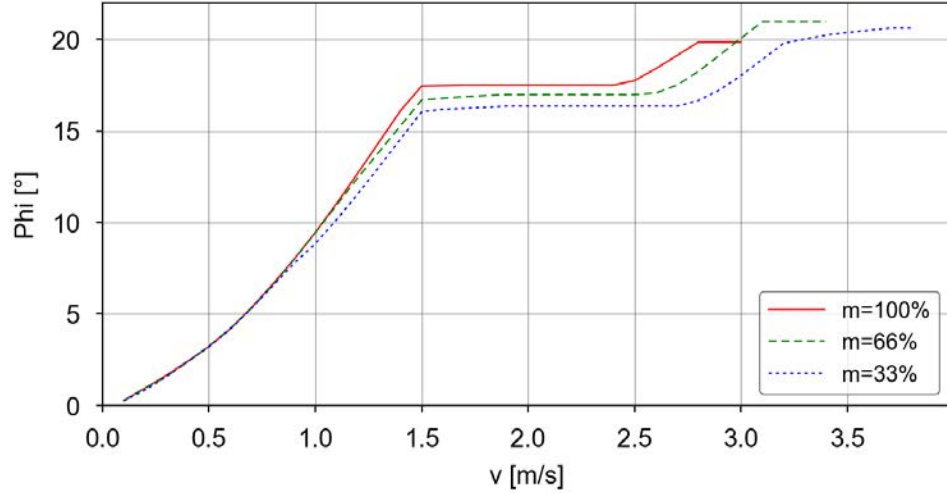
17 IRB 6700

17.7 IRB 6700 3.05 m 175 kg

Continued

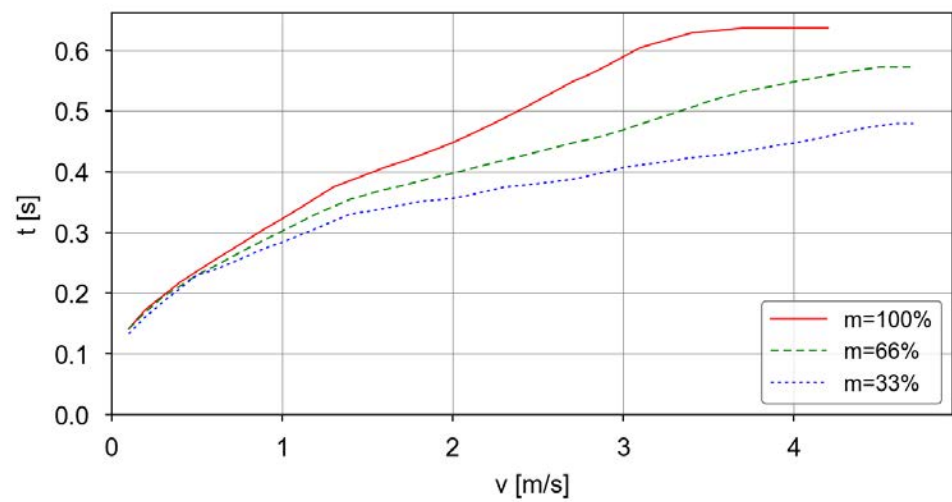
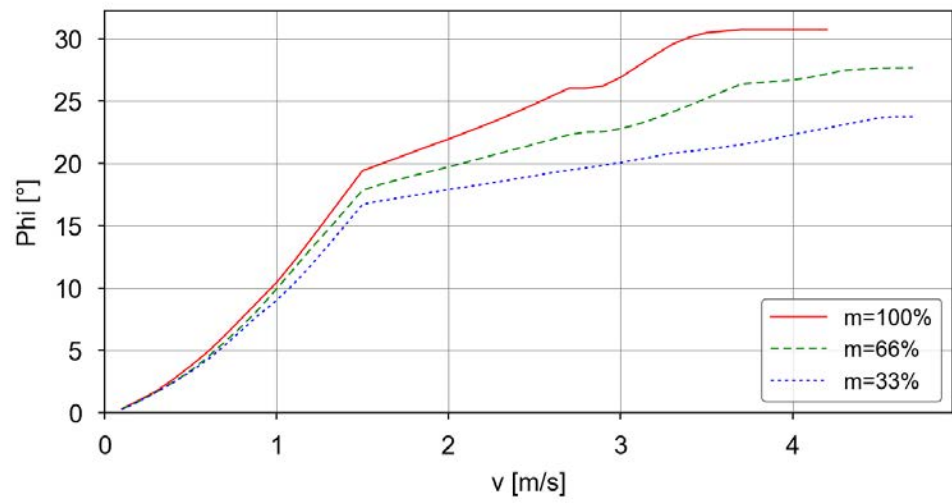
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



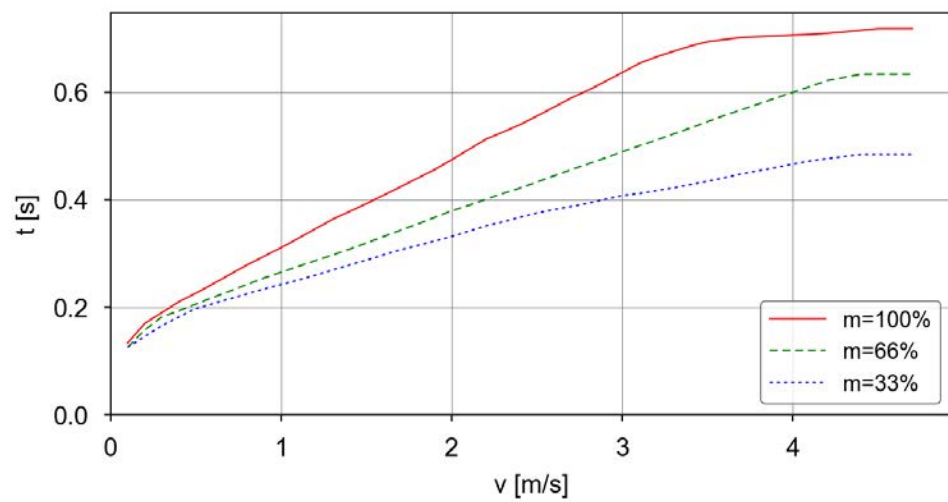
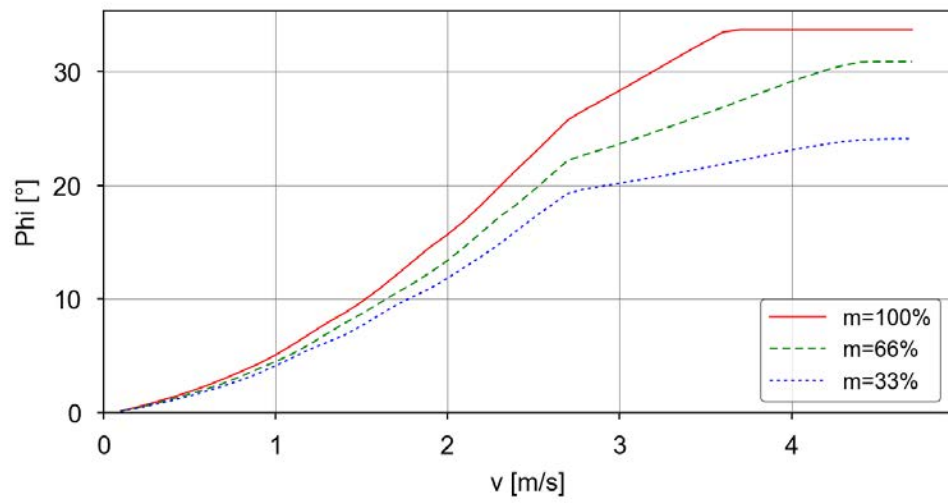
Continues on next page

17 IRB 6700

17.7 IRB 6700 3.05 m 175 kg

Continued

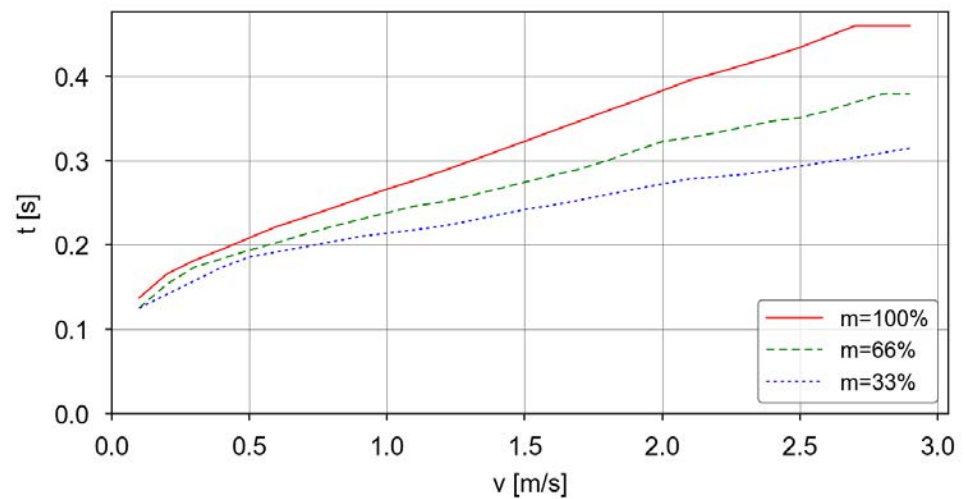
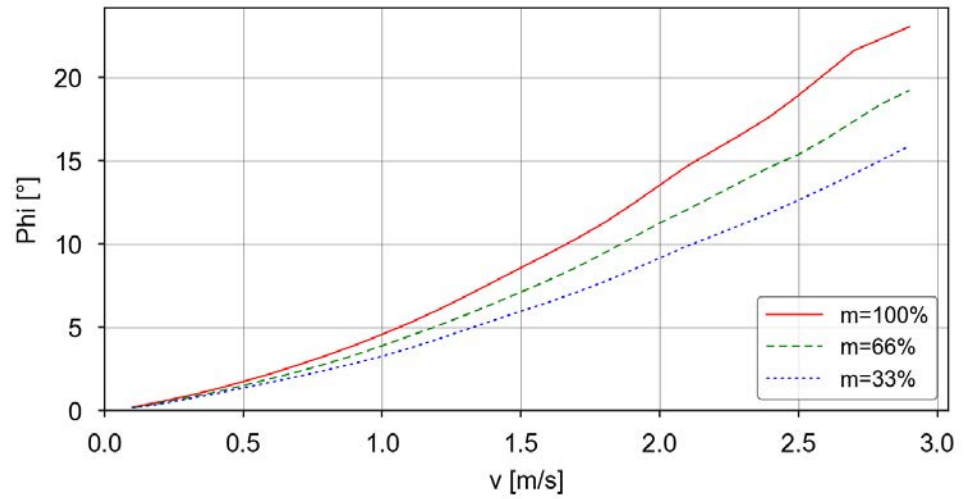
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



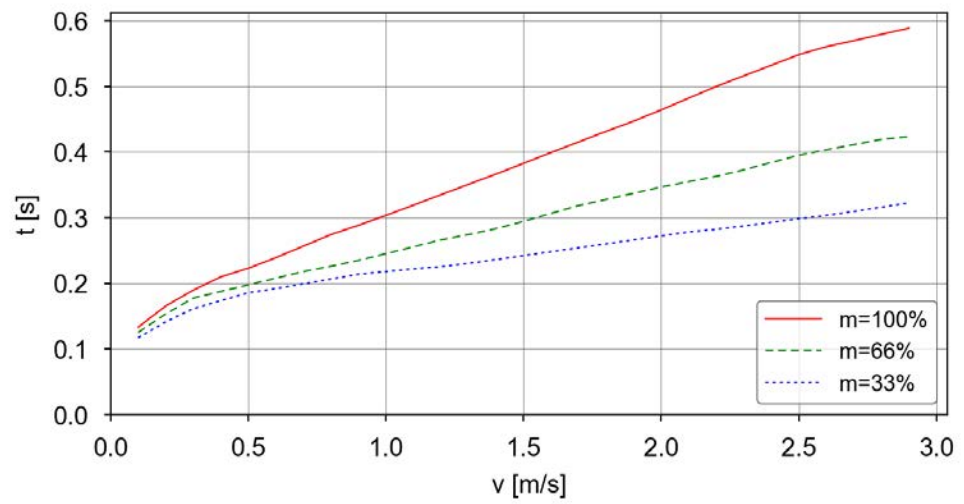
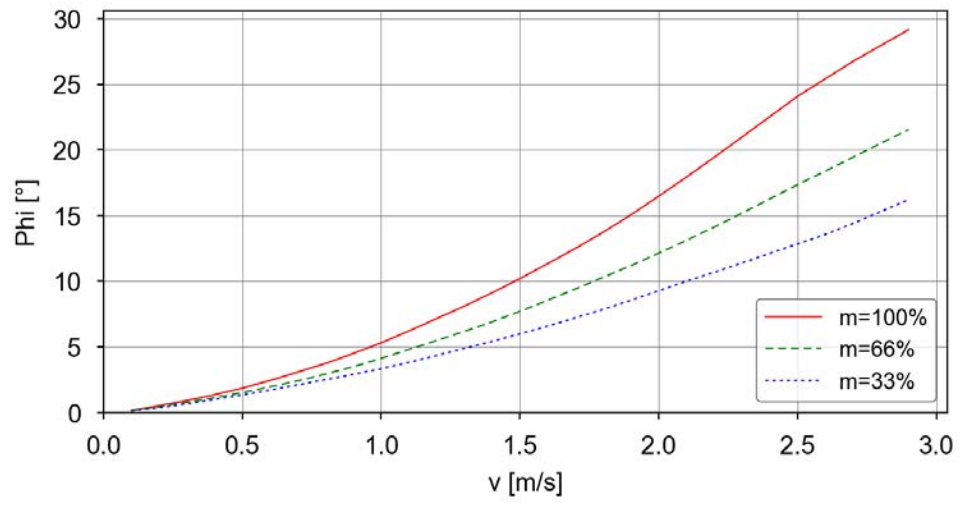
Continues on next page

17 IRB 6700

17.7 IRB 6700 3.05 m 175 kg

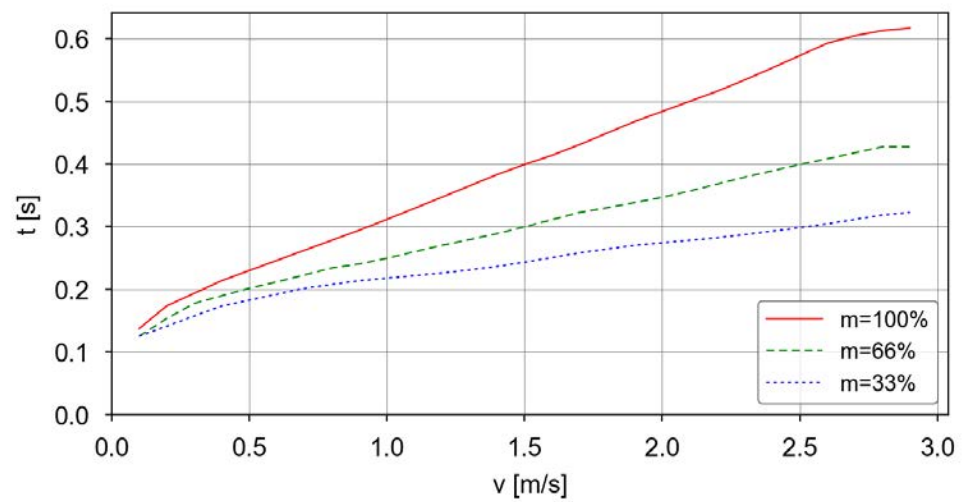
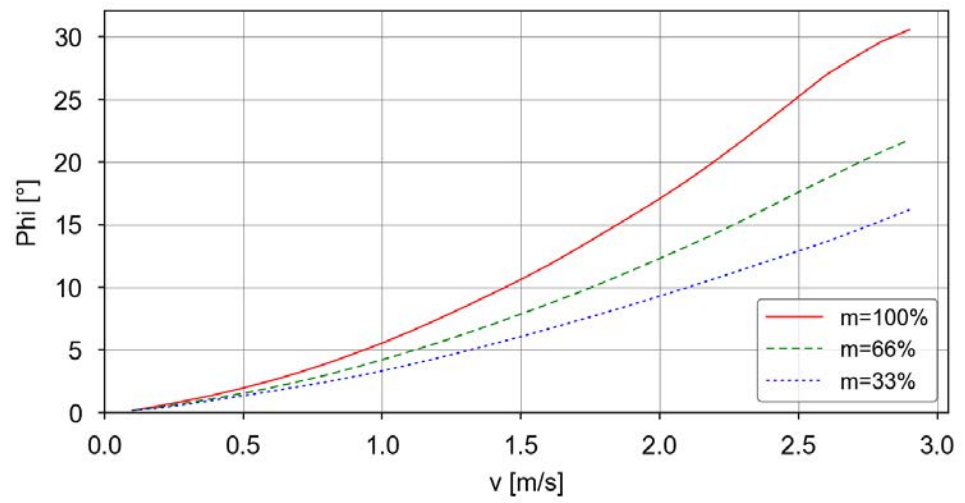
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17 IRB 6700

17.8 IRB 6700 3.20 m 150 kg

17.8 IRB 6700 3.20 m 150 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	41.7	0.75
2	21.3	0.39
3	15.7	0.25

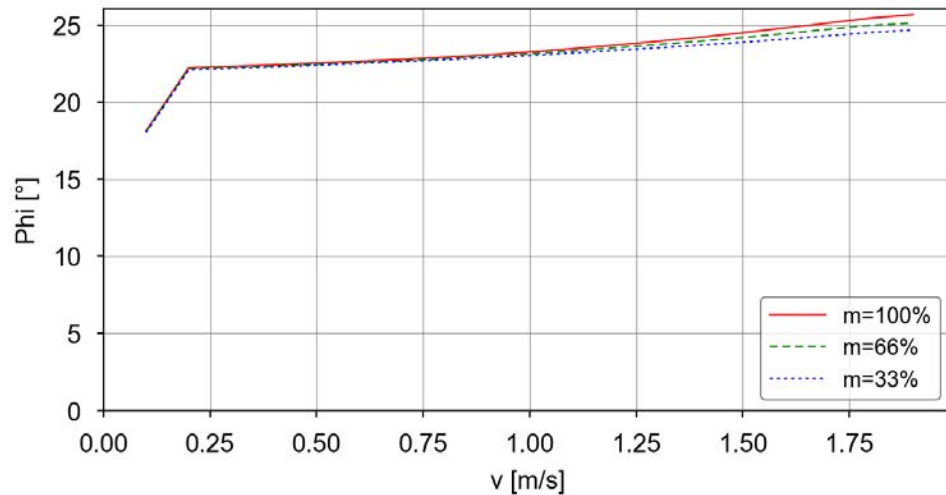
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

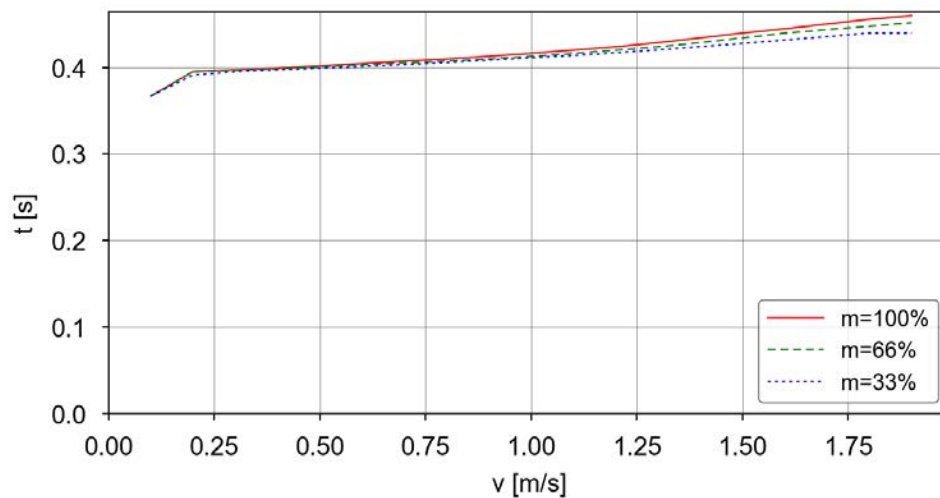
Zone	wcp min (m)	wcp max (m)
0	0	1.067
1	1.067	2.133
2	2.133	max reach

Category 1, Axis 1

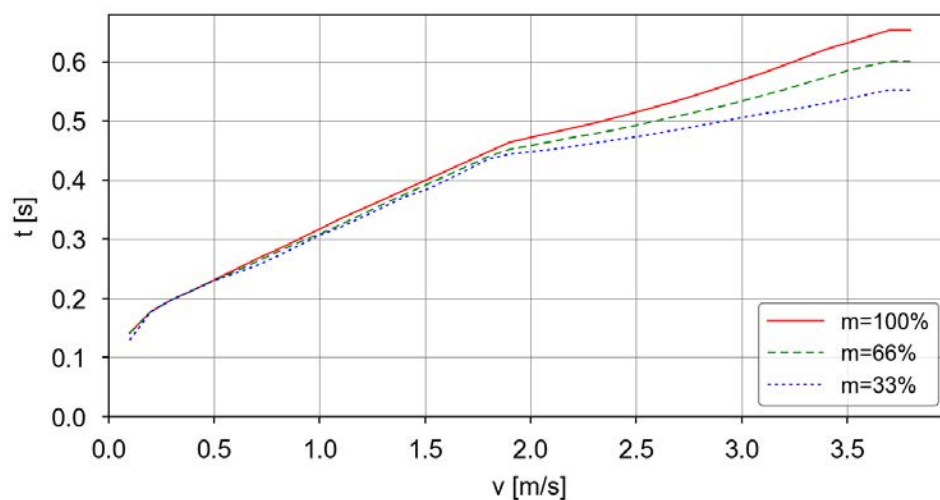
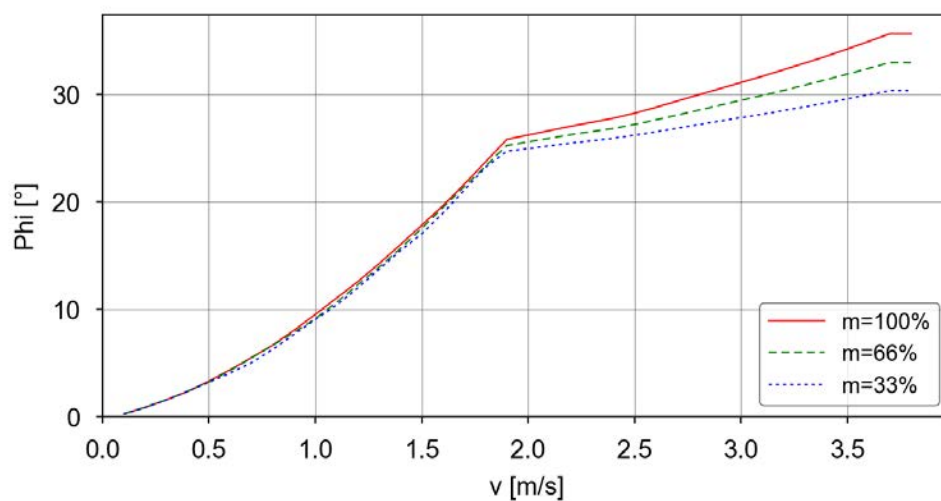
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



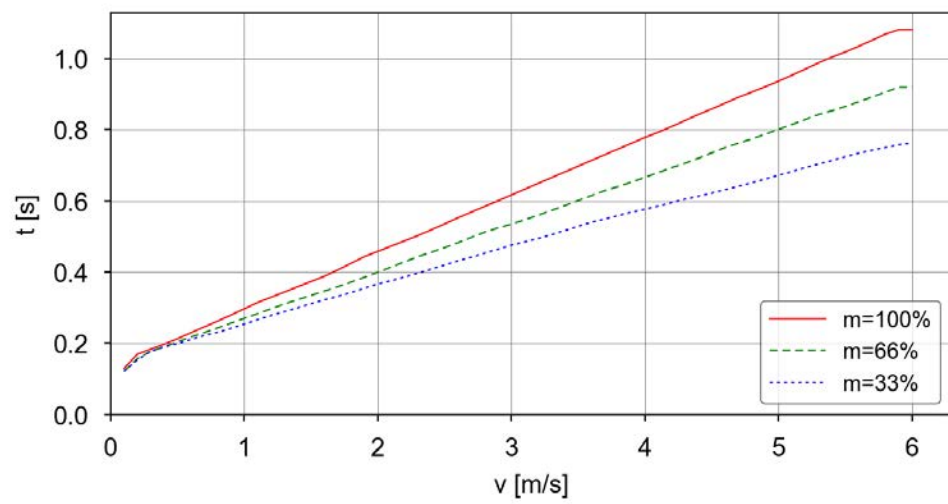
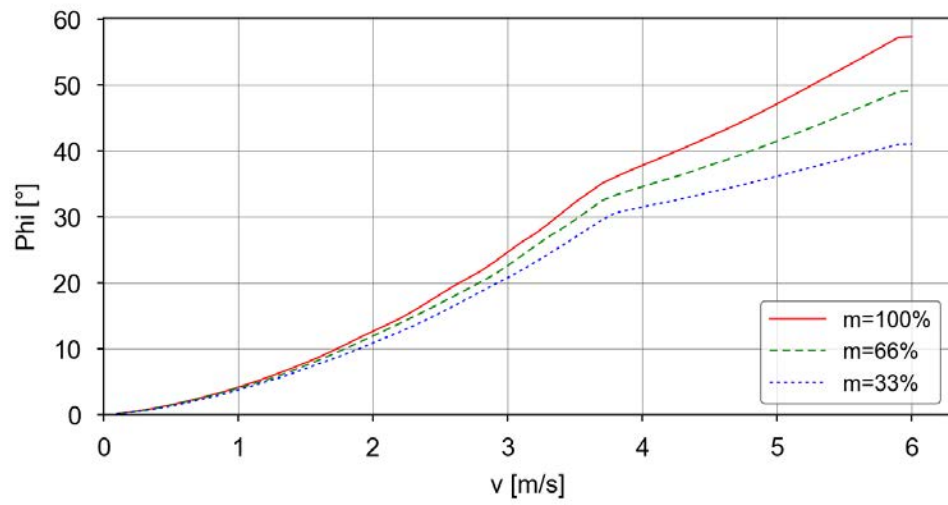
Continues on next page

17 IRB 6700

17.8 IRB 6700 3.20 m 150 kg

Continued

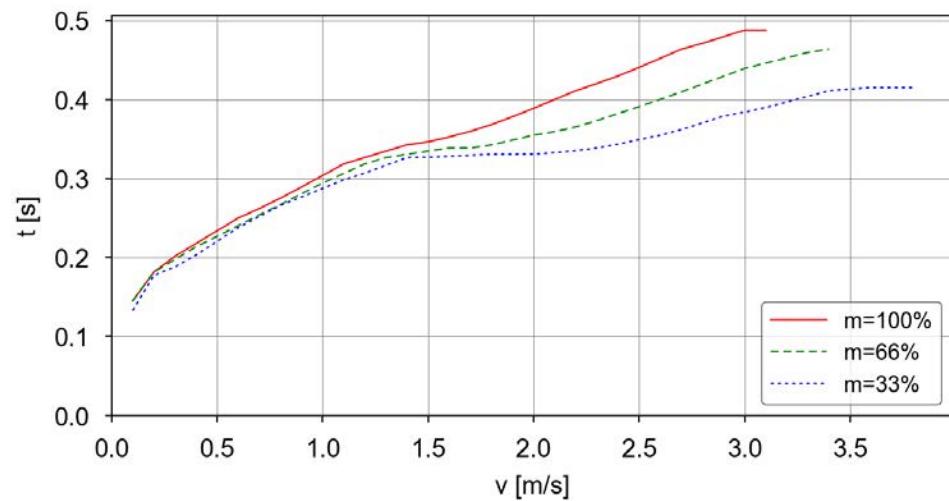
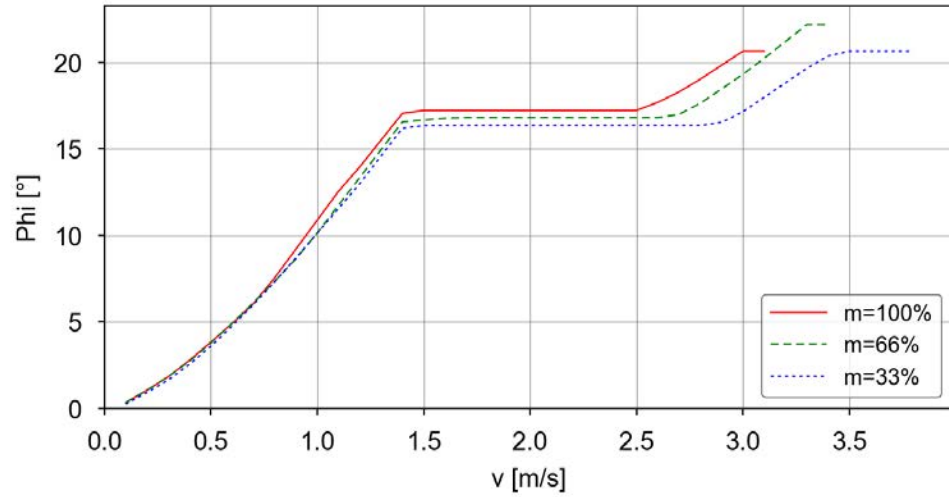
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



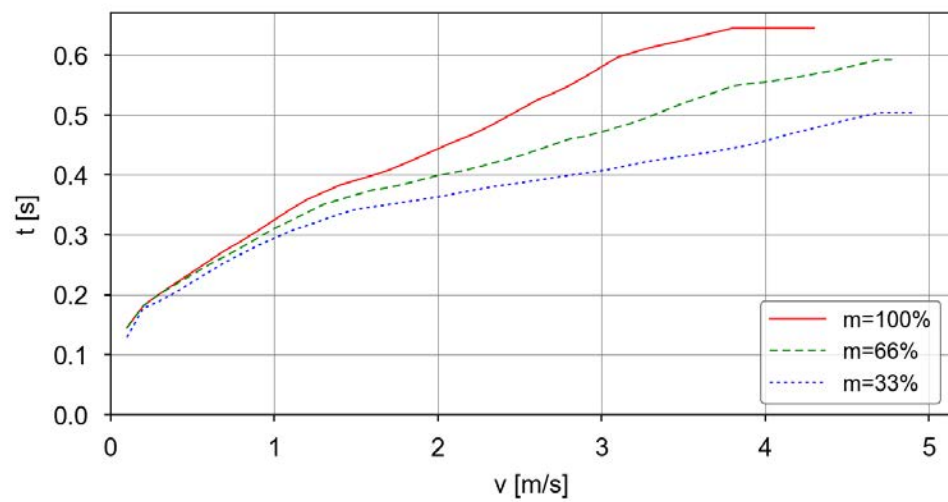
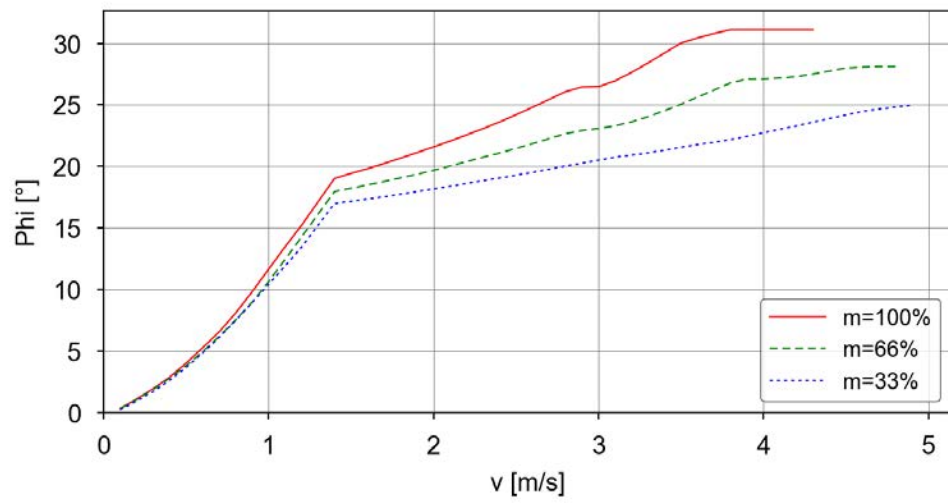
Continues on next page

17 IRB 6700

17.8 IRB 6700 3.20 m 150 kg

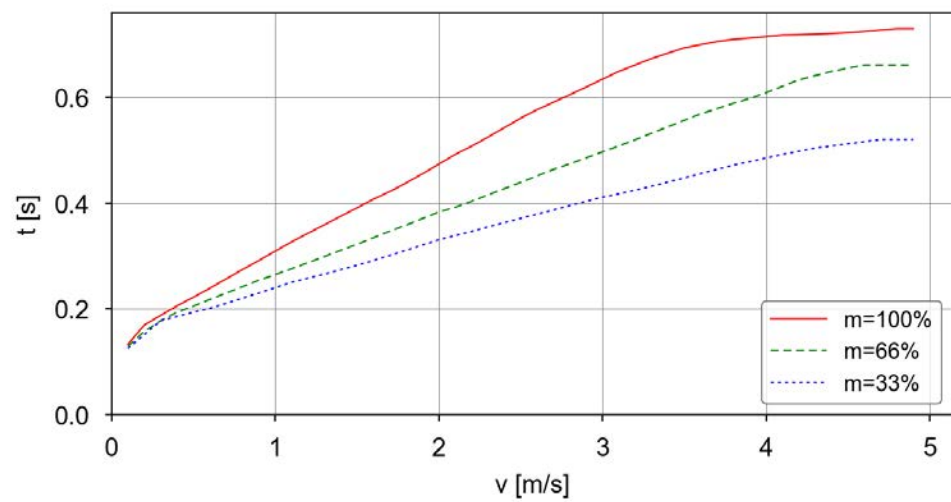
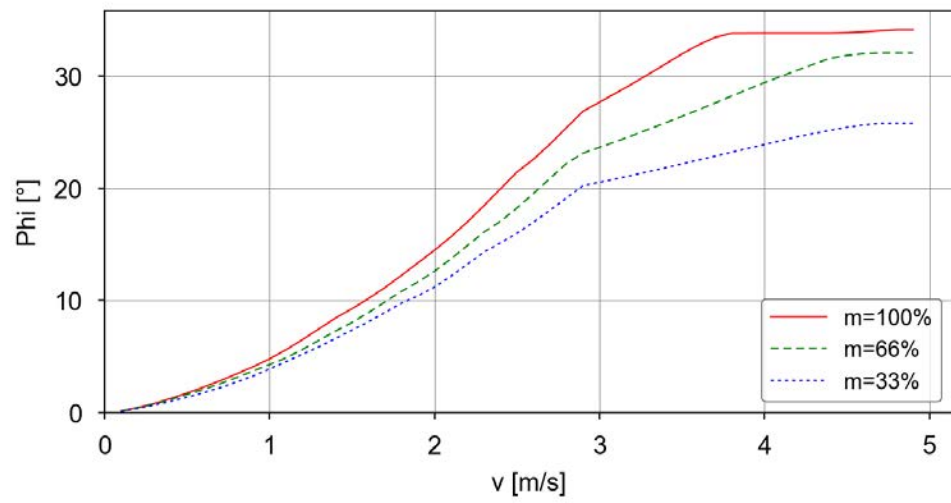
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

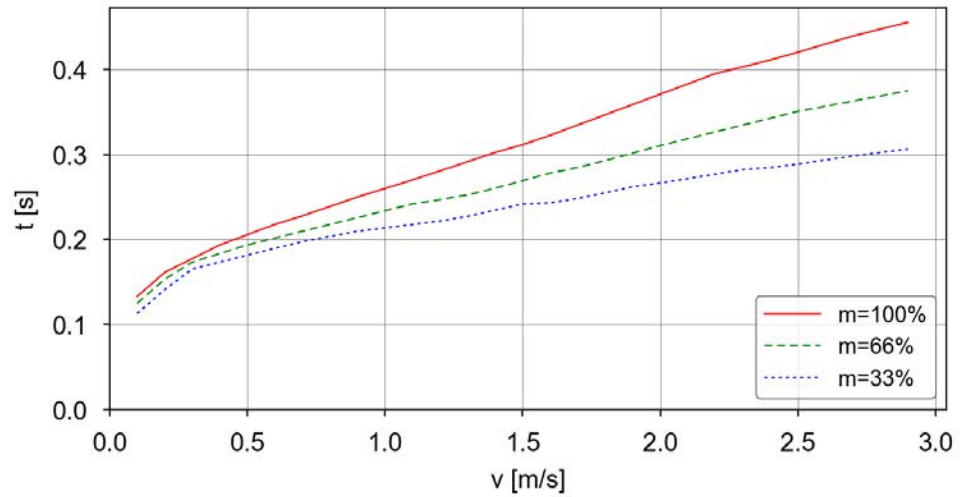
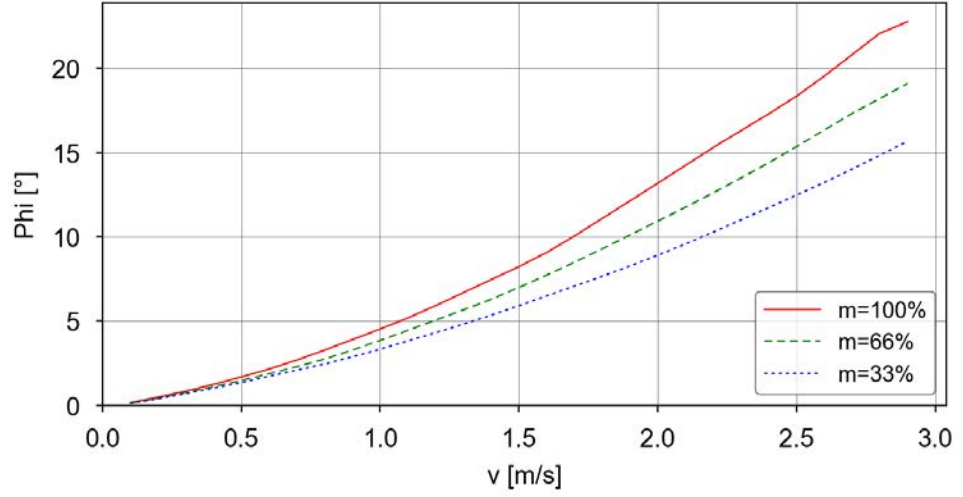
17 IRB 6700

17.8 IRB 6700 3.20 m 150 kg

Continued

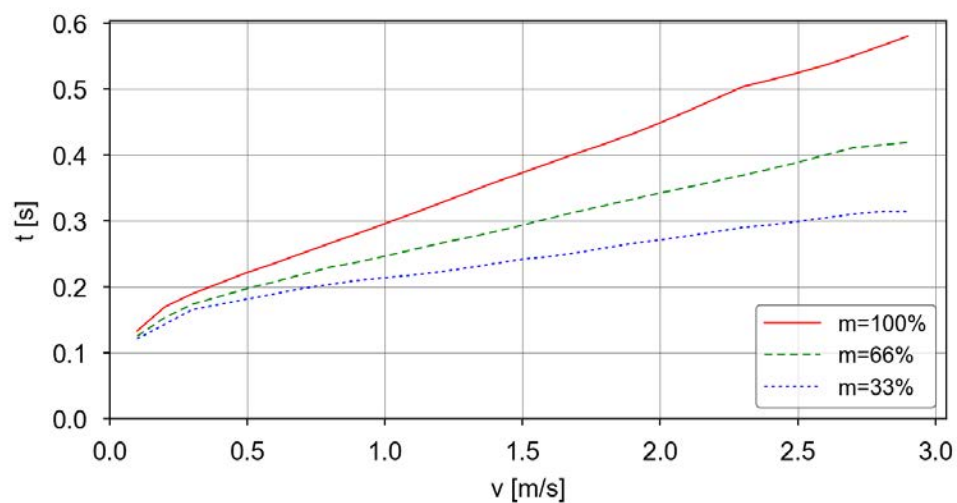
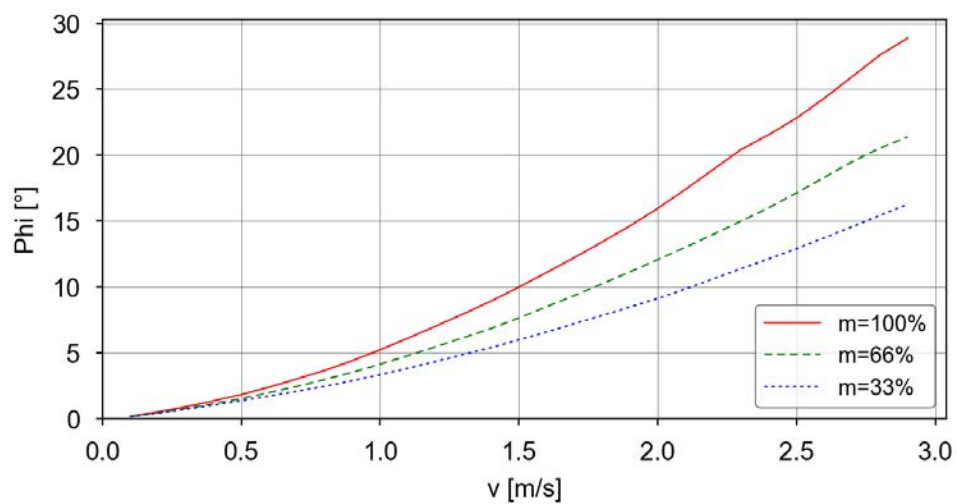
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



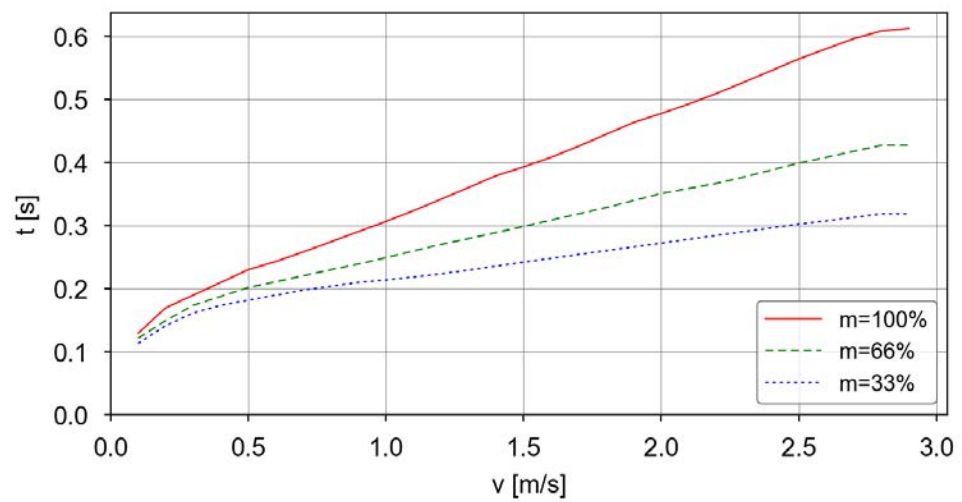
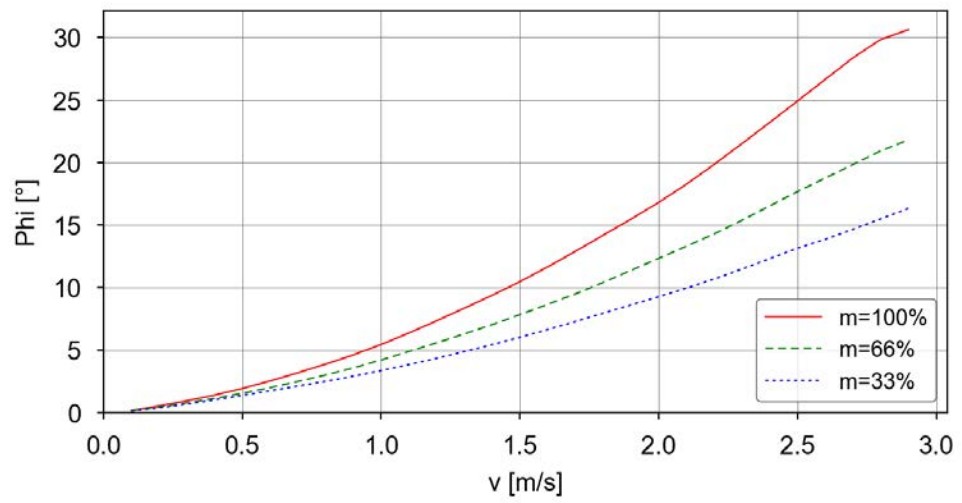
Continues on next page

17 IRB 6700

17.8 IRB 6700 3.20 m 150 kg

Continued

Extension zone 2, stopping distance and stopping time



17.9 IRB 6700Inv LeanID m 2.60 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	33.1	0.58
2	21.0	0.37
3	14.7	0.22

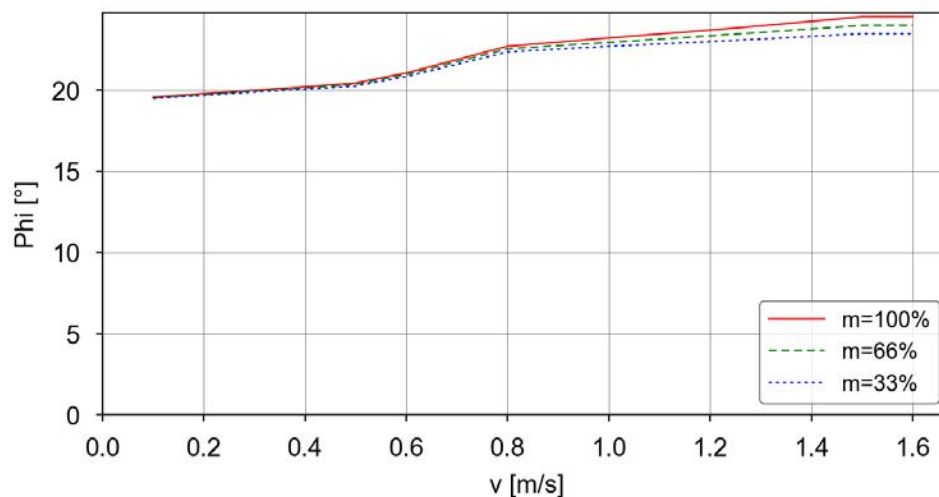
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.872
1	0.872	1.744
2	1.744	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

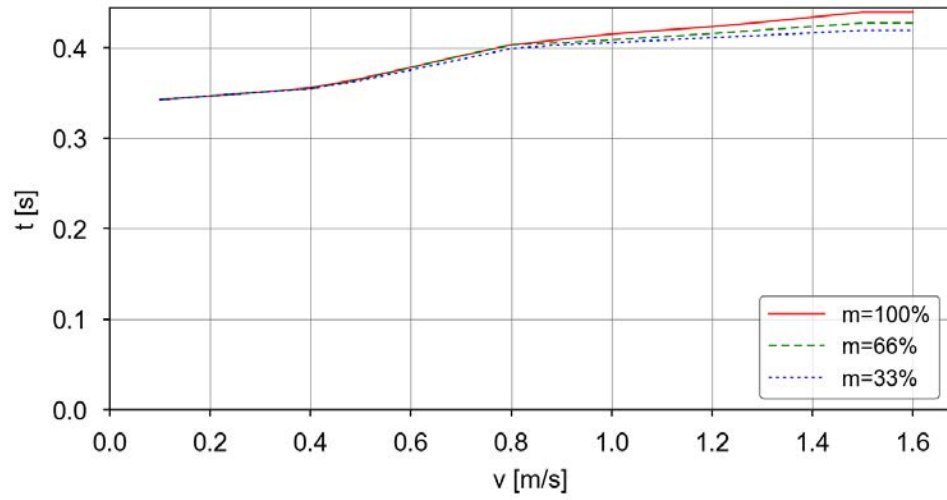


Continues on next page

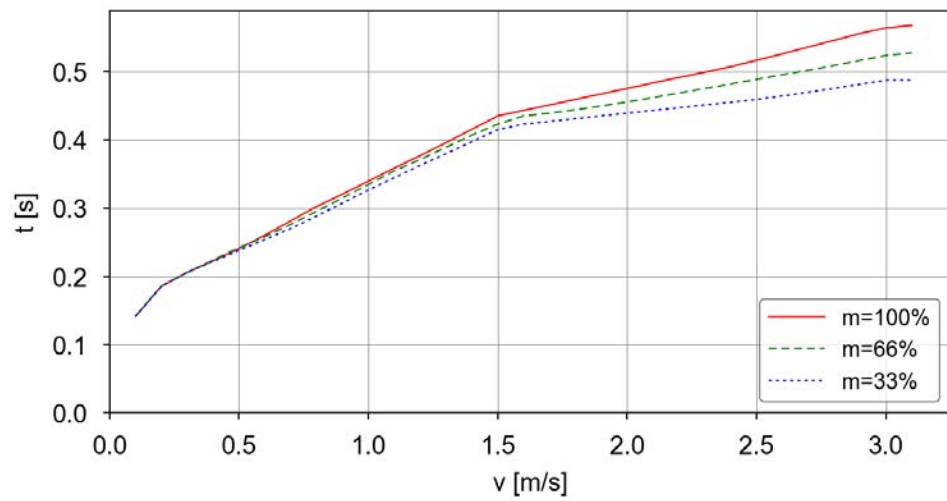
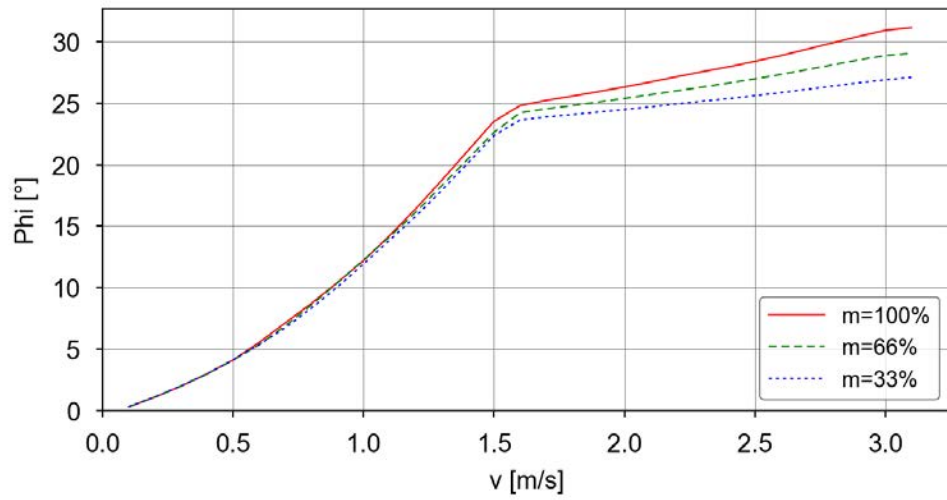
17 IRB 6700

17.9 IRB 6700Inv LeanID m 2.60 kg

Continued

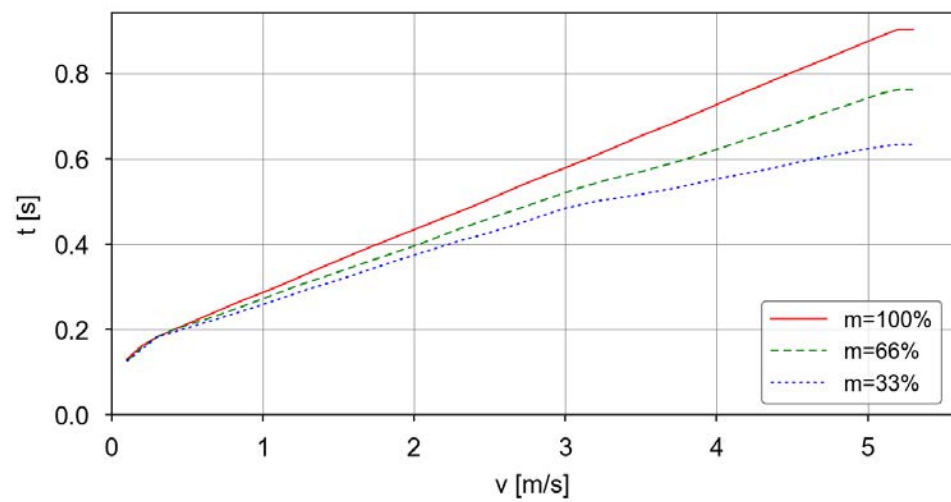
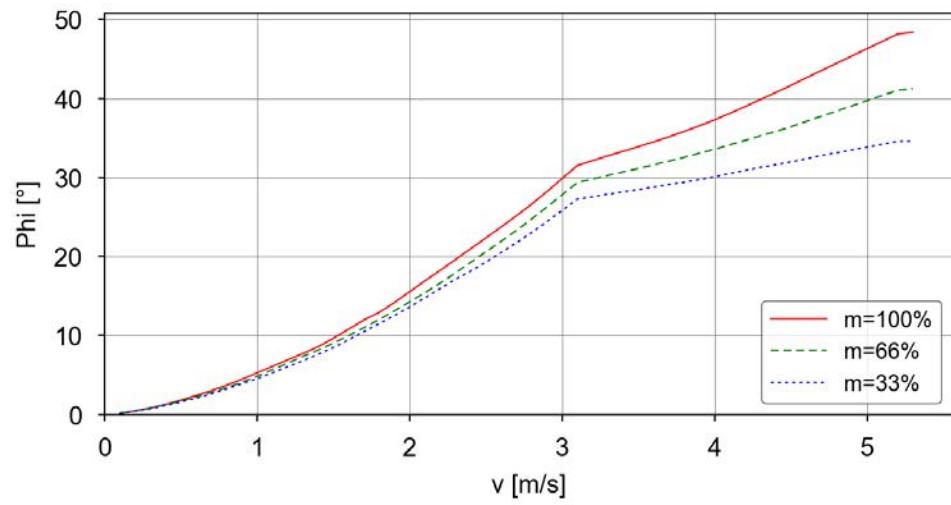


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

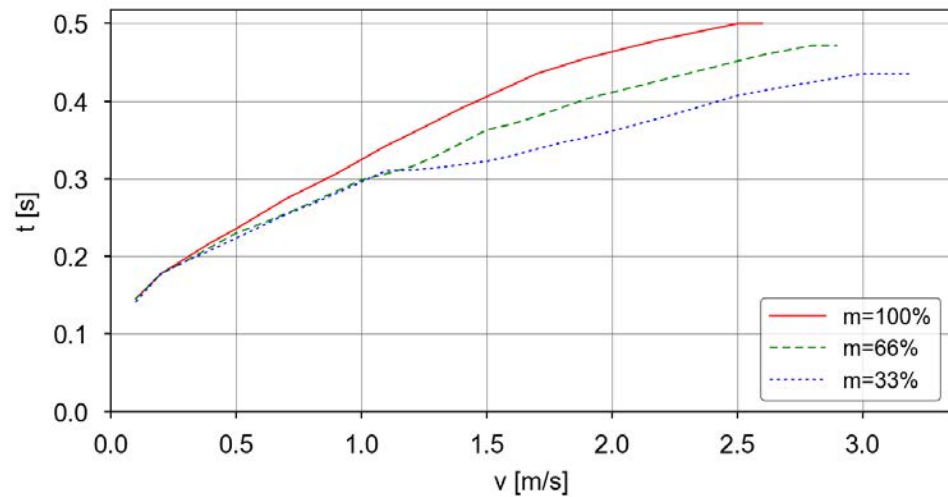
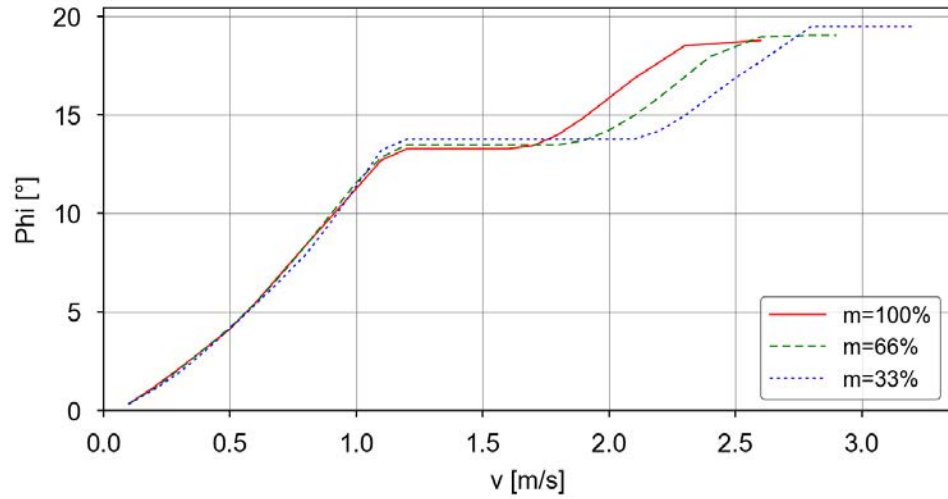
17 IRB 6700

17.9 IRB 6700Inv LeanID m 2.60 kg

Continued

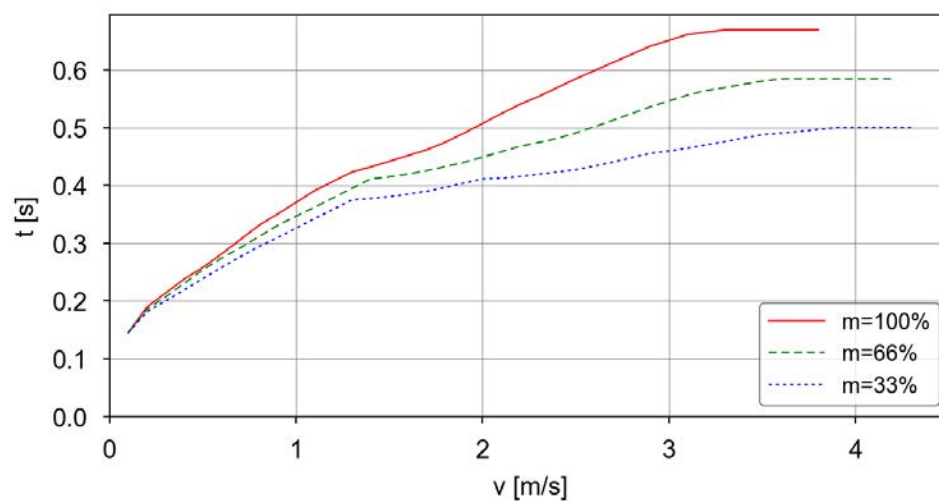
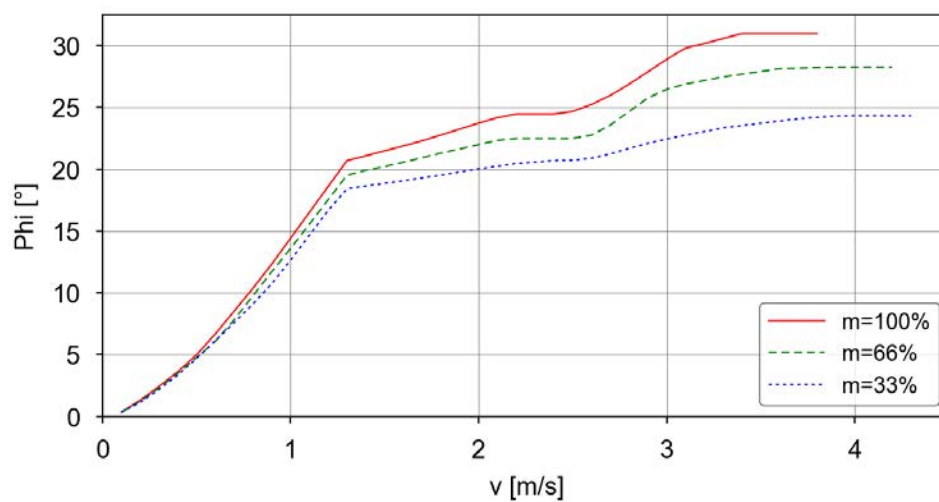
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



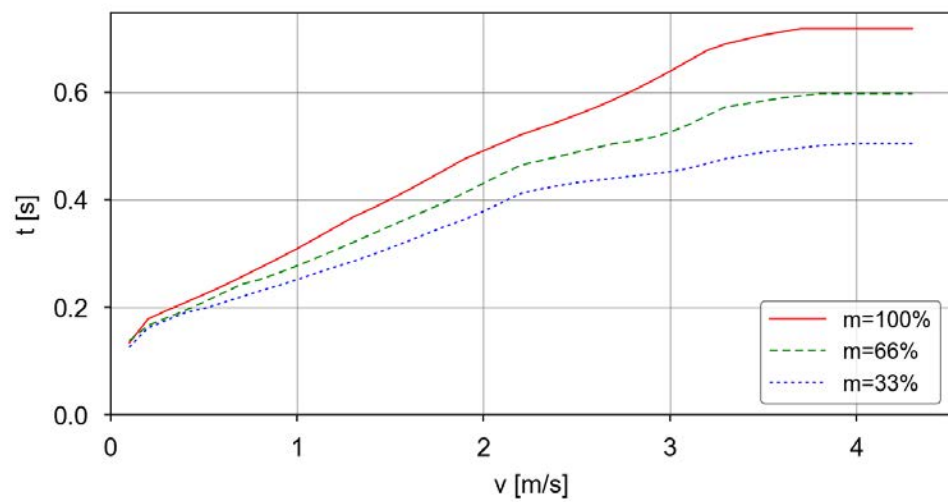
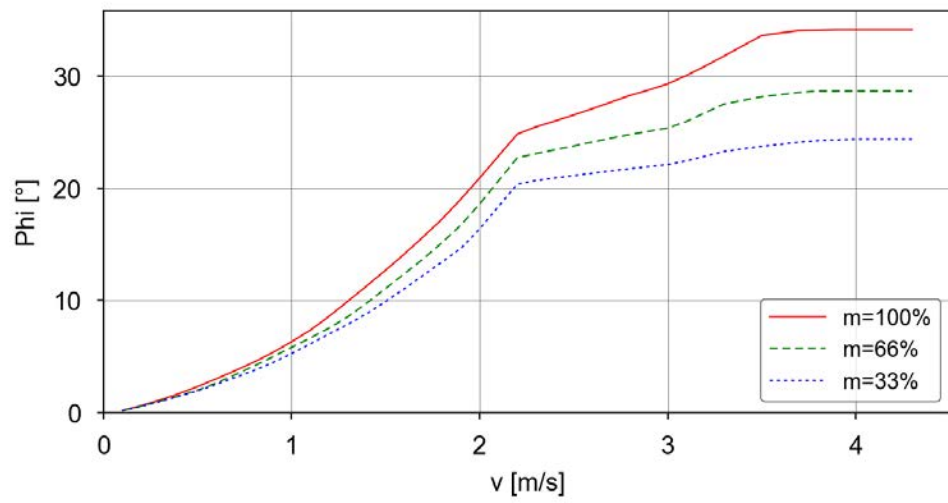
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

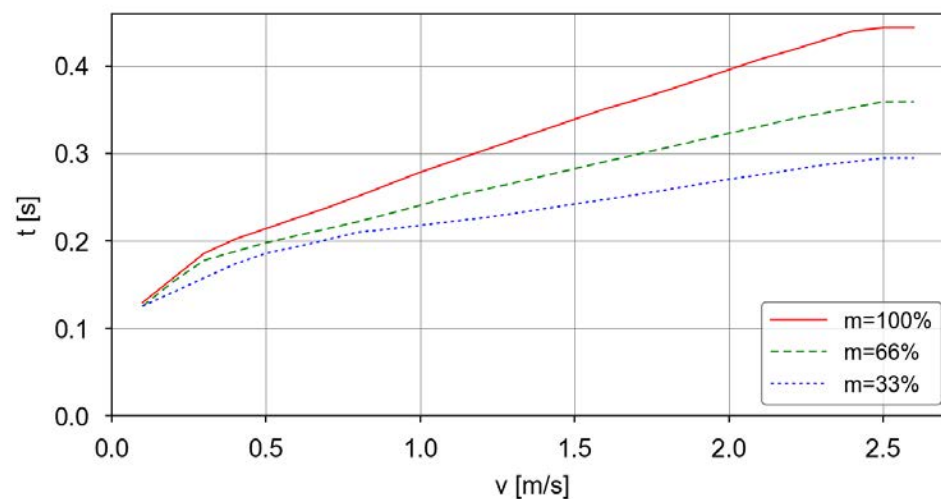
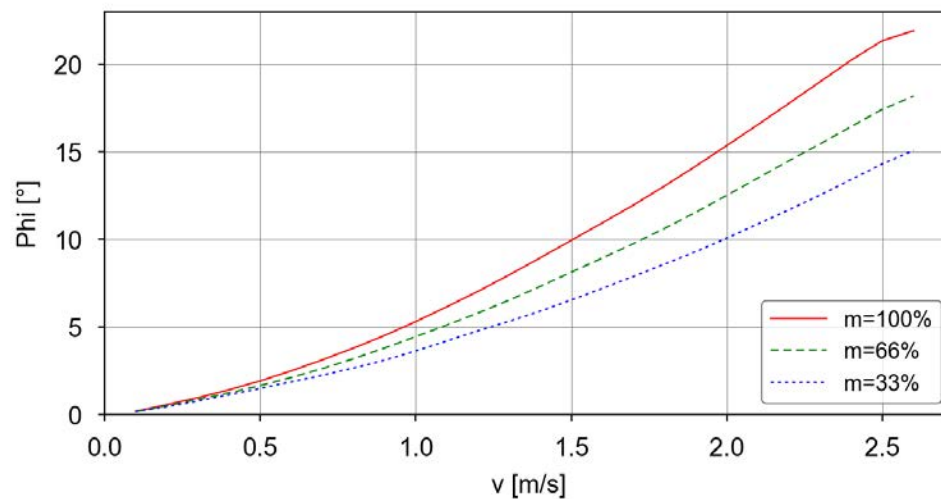
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



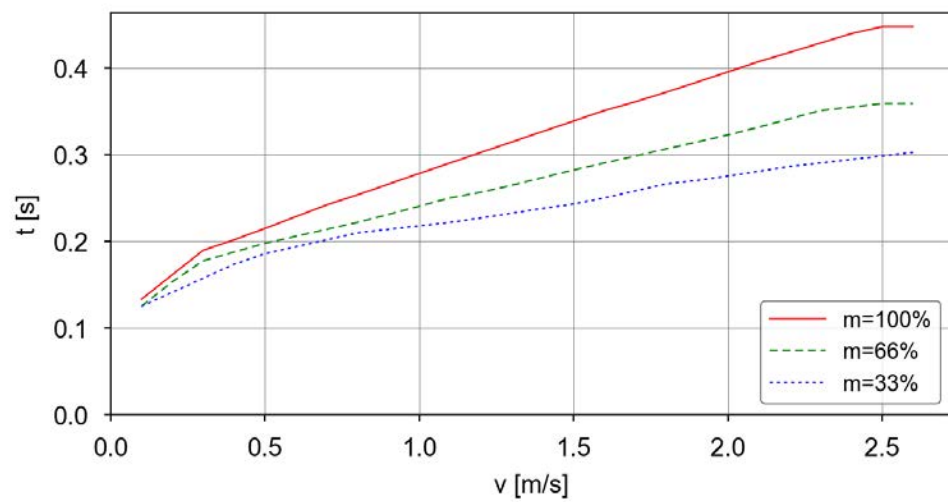
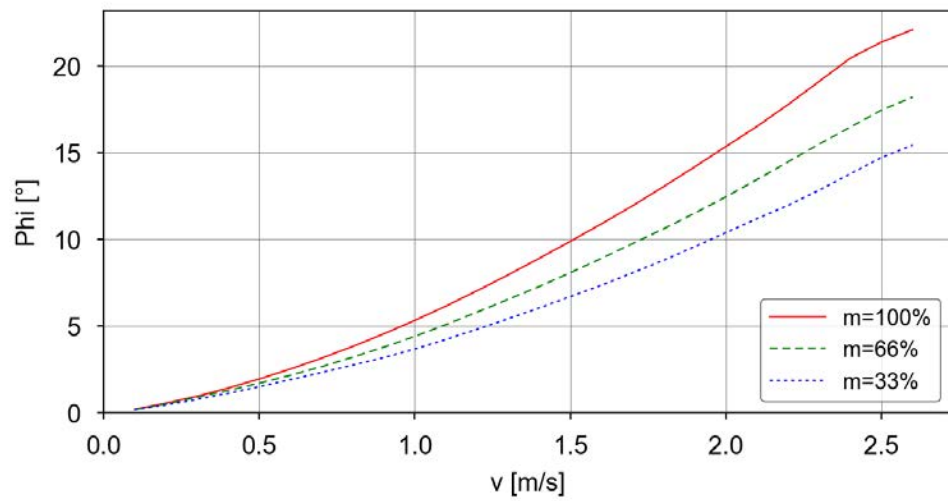
Continues on next page

17 IRB 6700

17.9 IRB 6700Inv LeanID m 2.60 kg

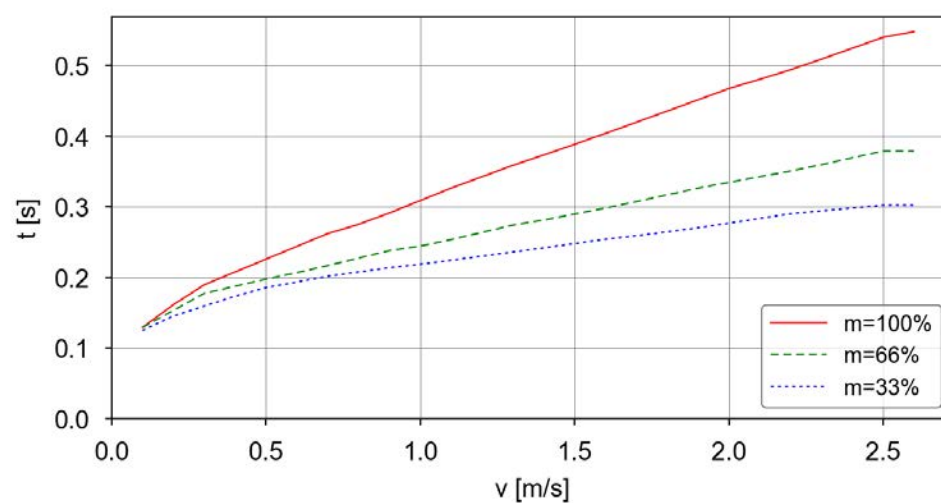
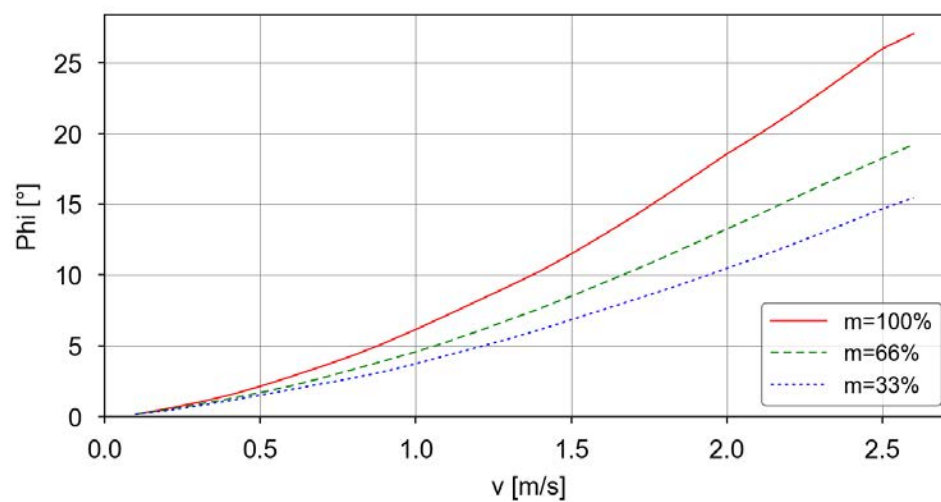
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17.10 IRB 6700Inv LeanID m 2.90 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	33.1	0.56
2	21.1	0.37
3	14.6	0.22

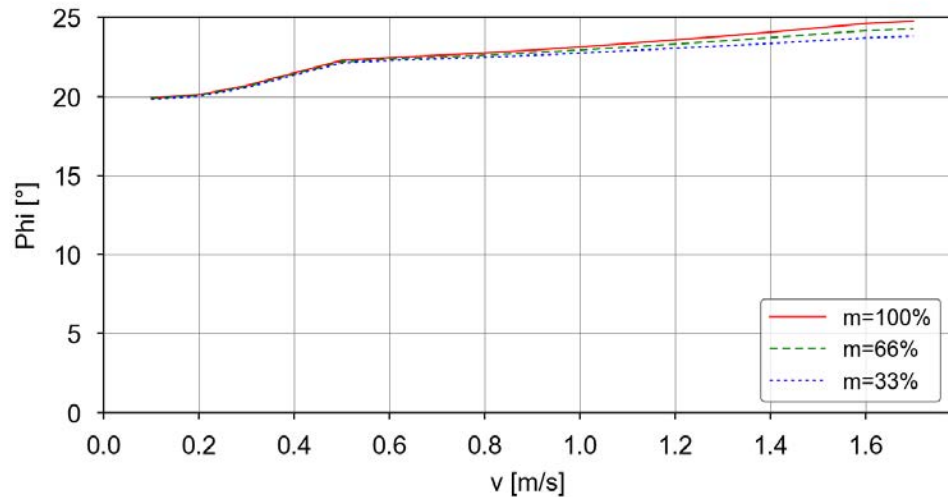
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

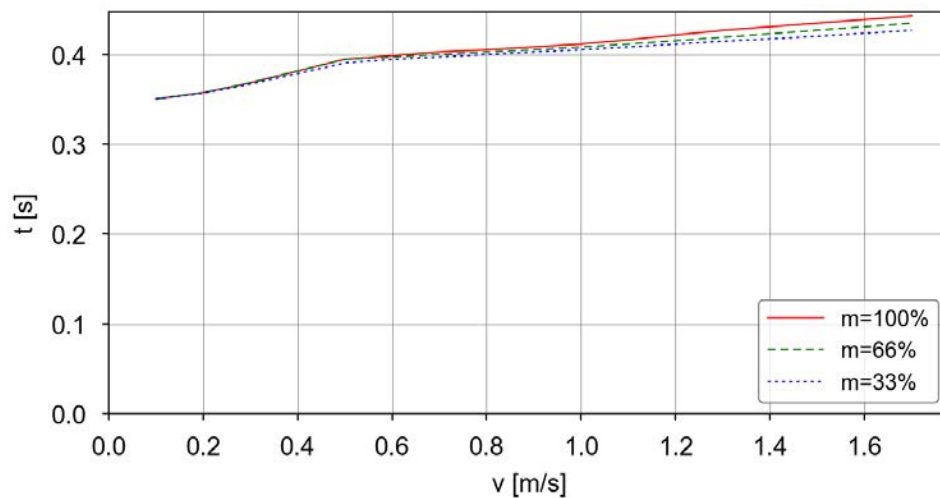
Zone	wcp min (m)	wcp max (m)
0	0	0.955
1	0.955	1.909
2	1.909	max reach

Category 1, Axis 1

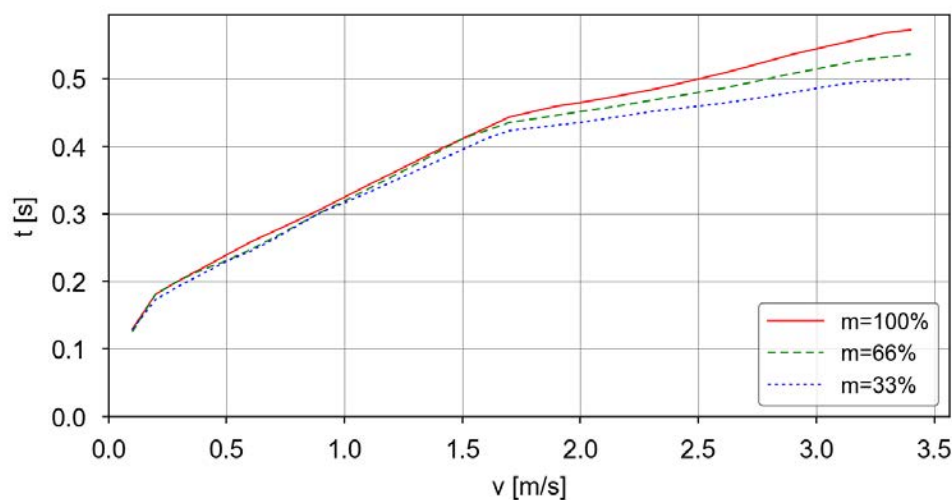
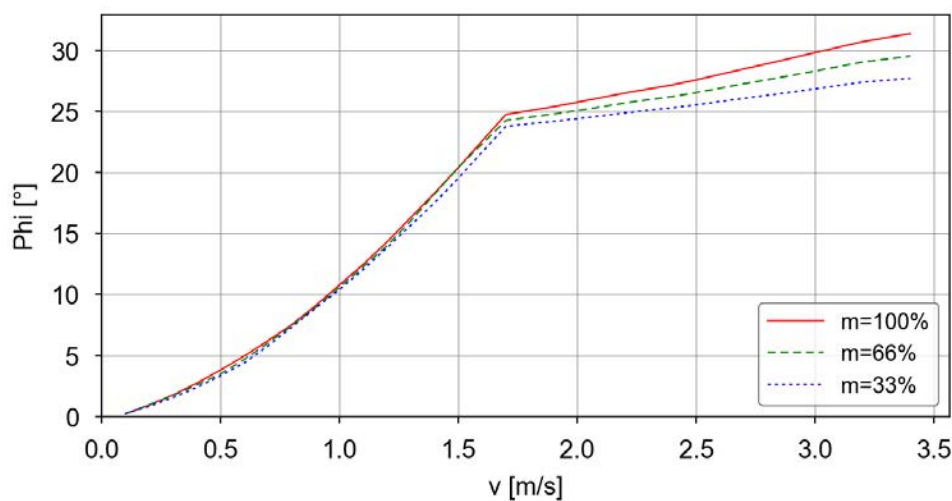
Extension zone 0, stopping distance and stopping time



Continues on next page

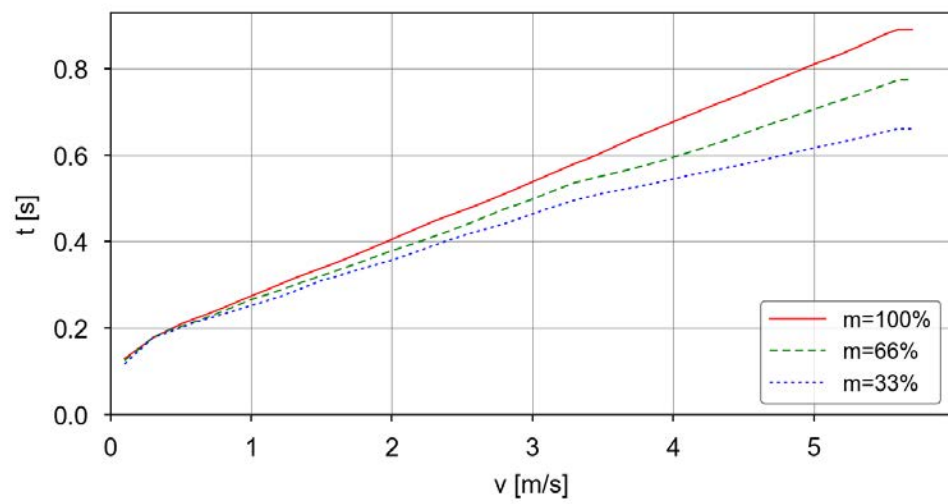
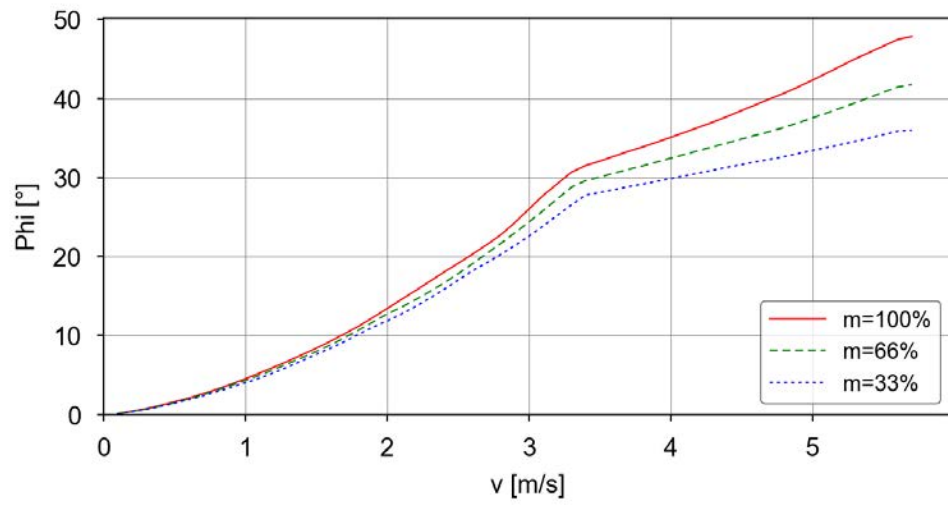


Extension zone 1, stopping distance and stopping time



Continues on next page

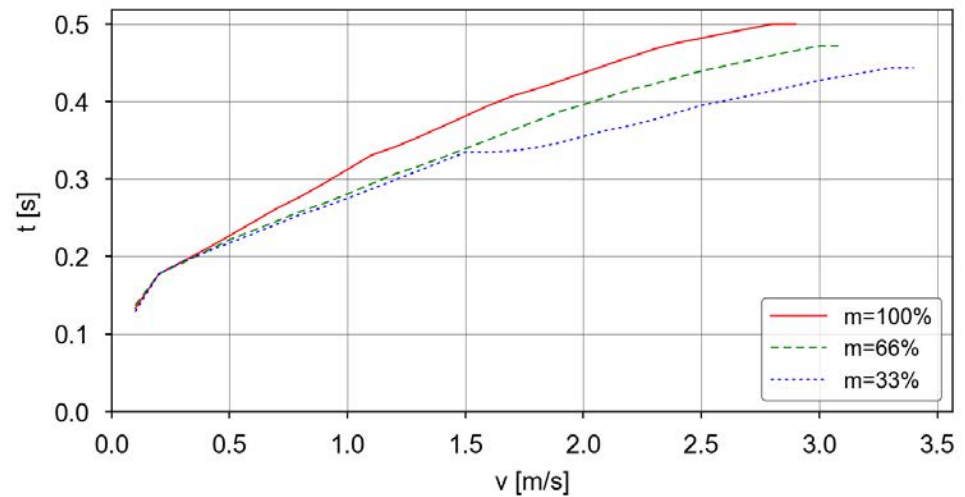
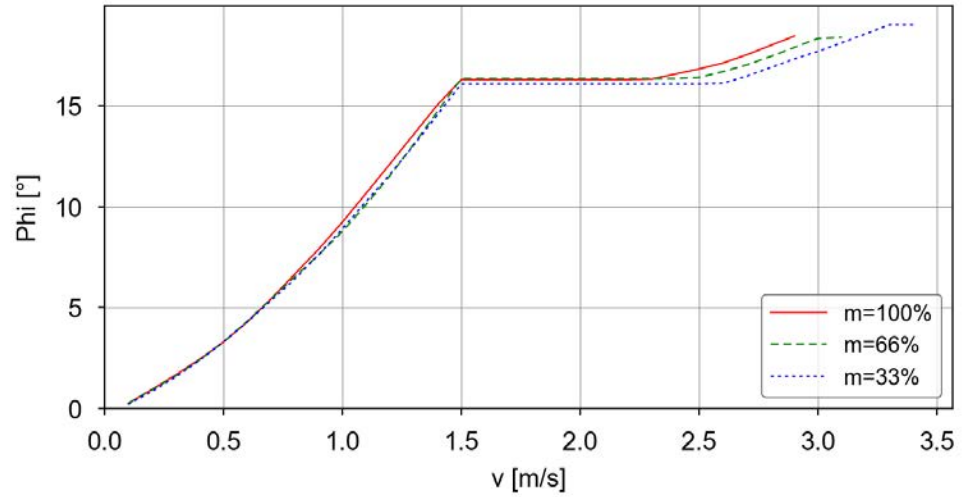
Extension zone 2, stopping distance and stopping time



Continues on next page

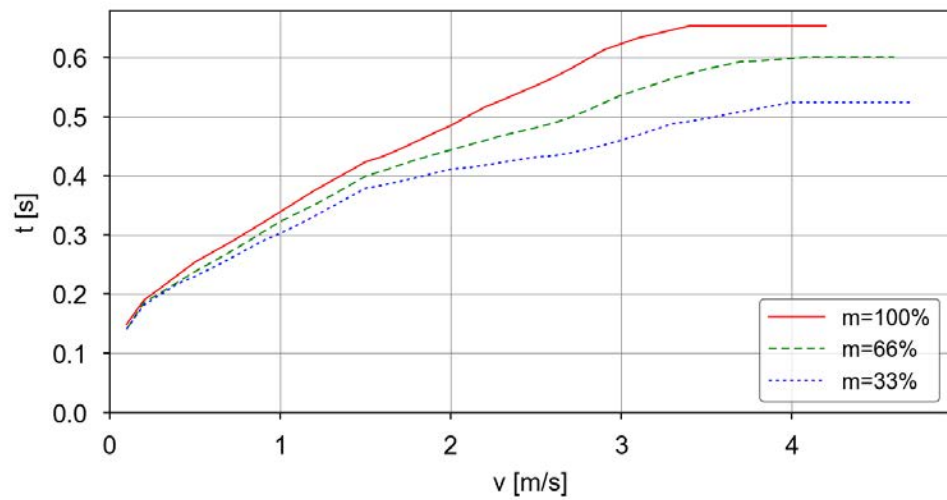
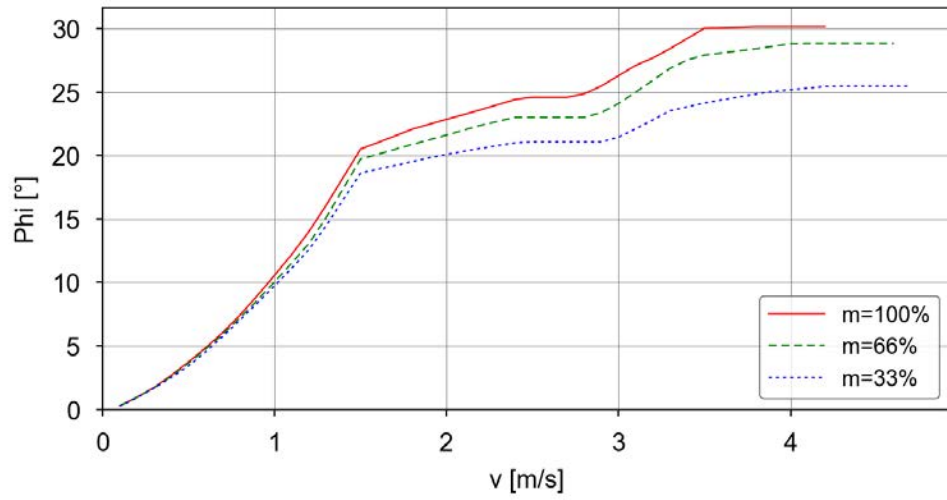
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



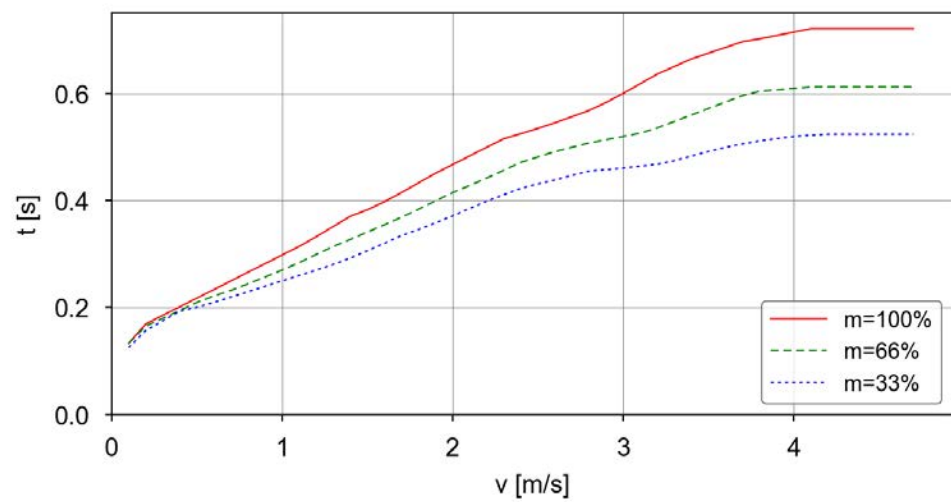
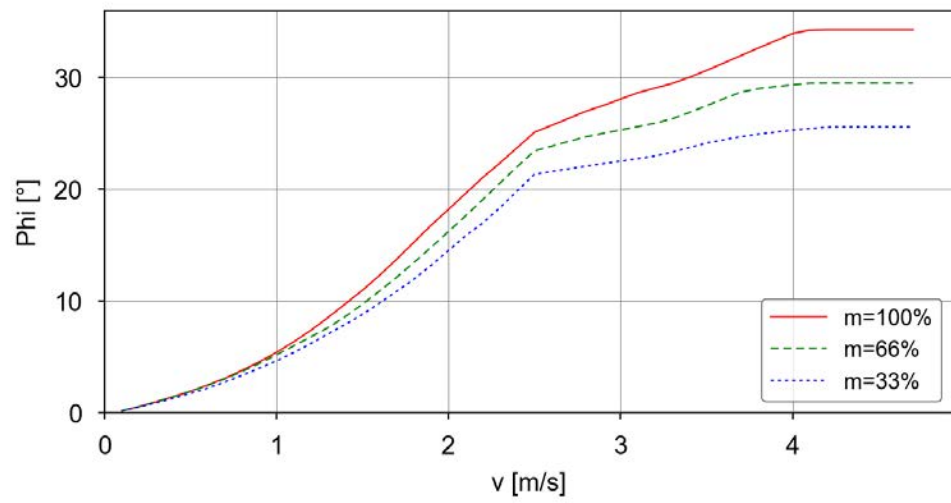
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

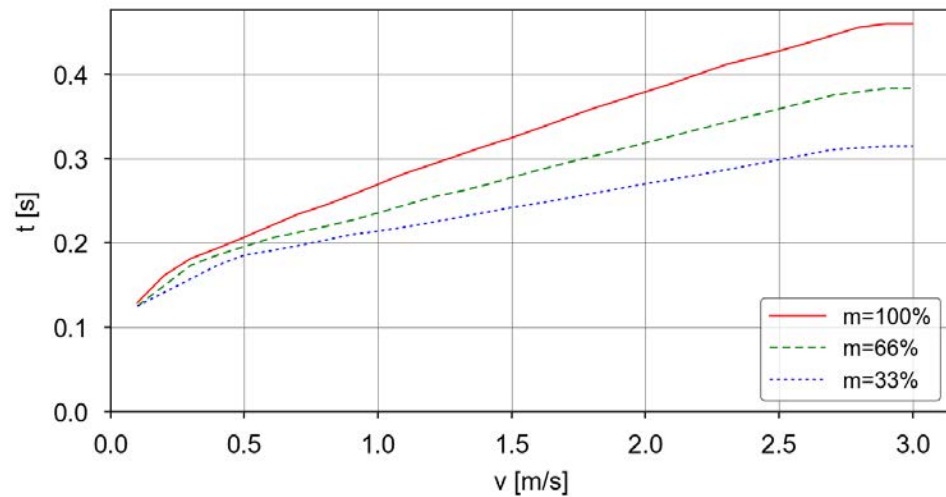
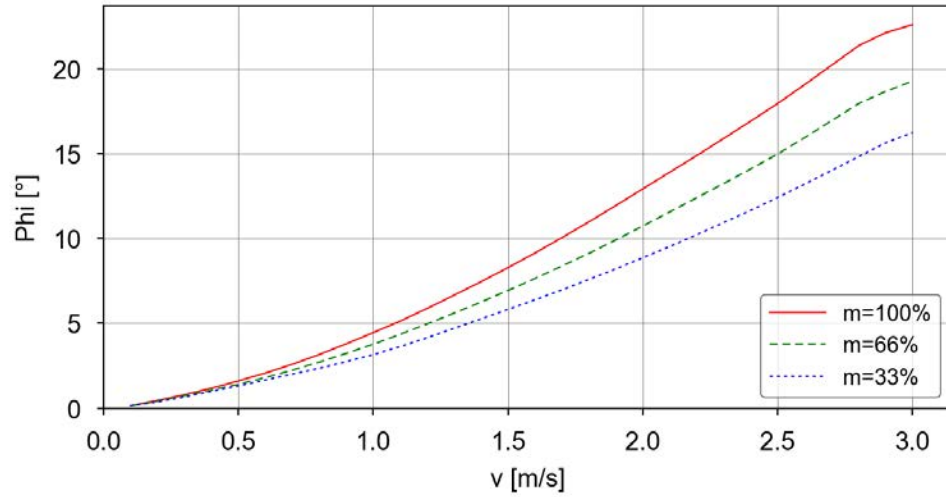
17 IRB 6700

17.10 IRB 6700Inv LeanID m 2.90 kg

Continued

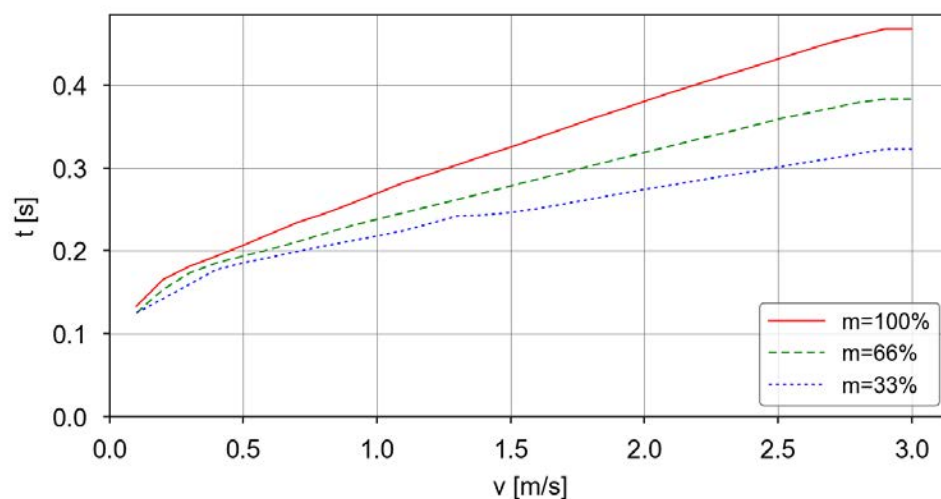
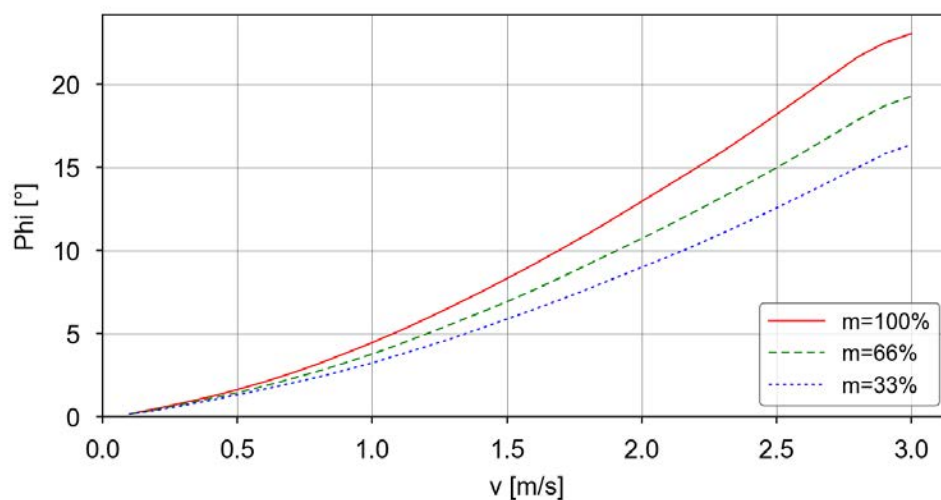
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



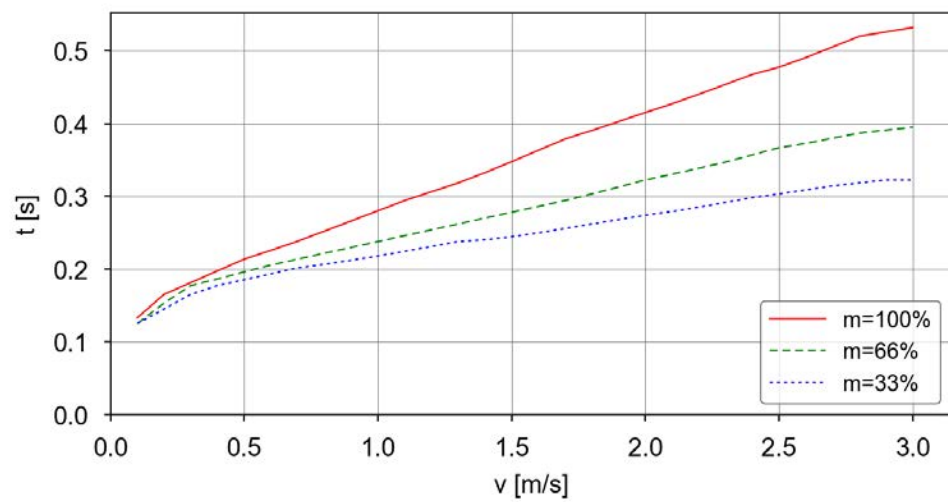
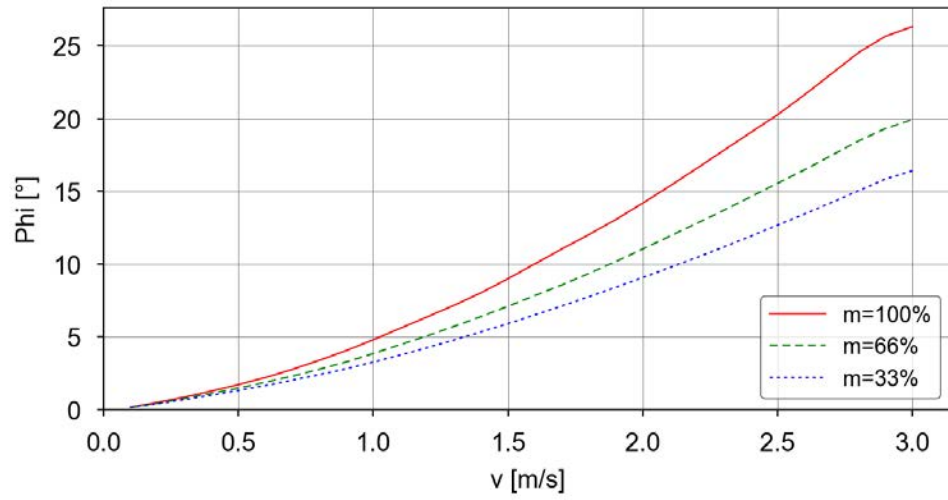
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17.11 IRB 6700Inv 2.60 m 300 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	32.5	0.56
2	20.3	0.34
3	13.8	0.2

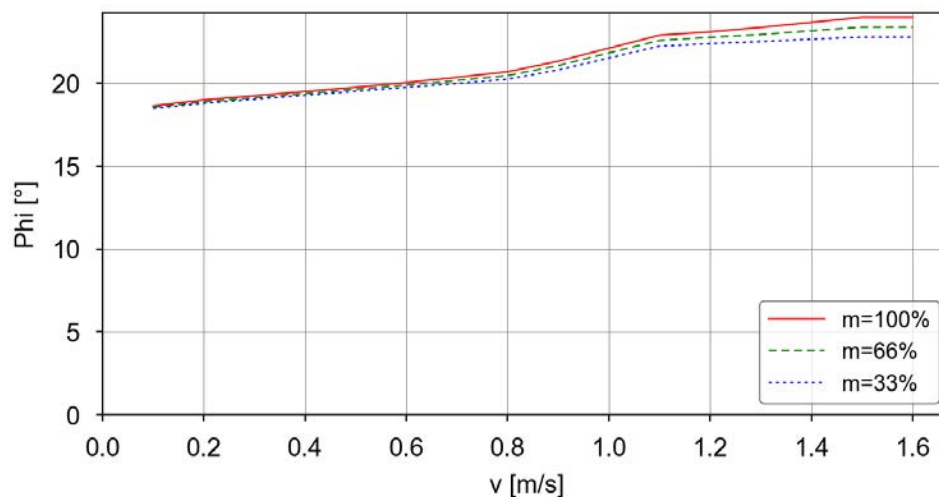
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.872
1	0.872	1.744
2	1.744	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

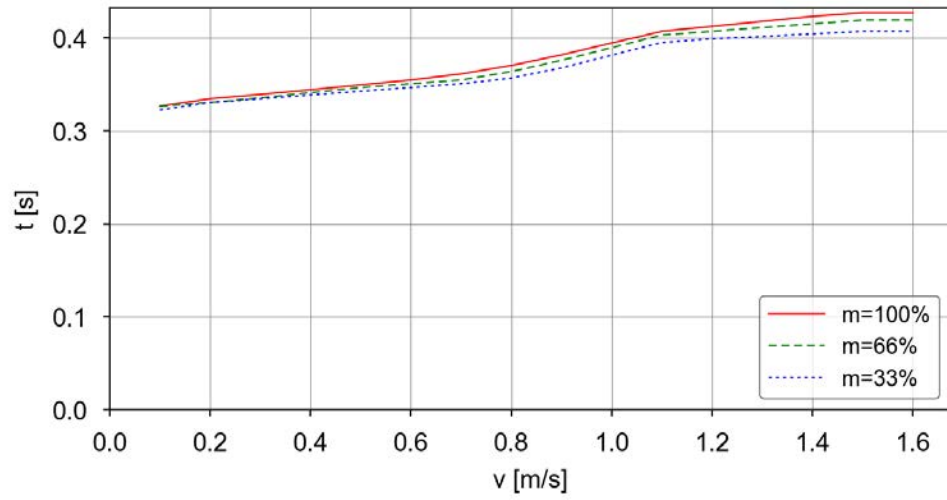


Continues on next page

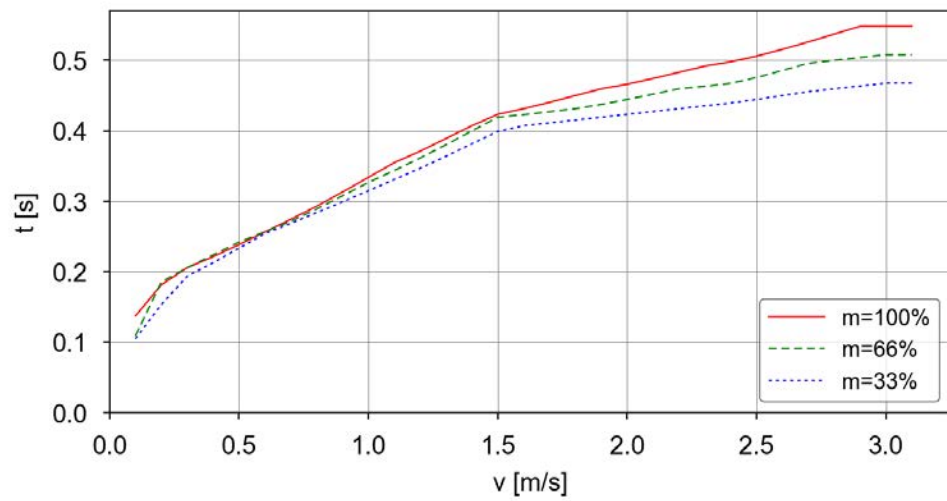
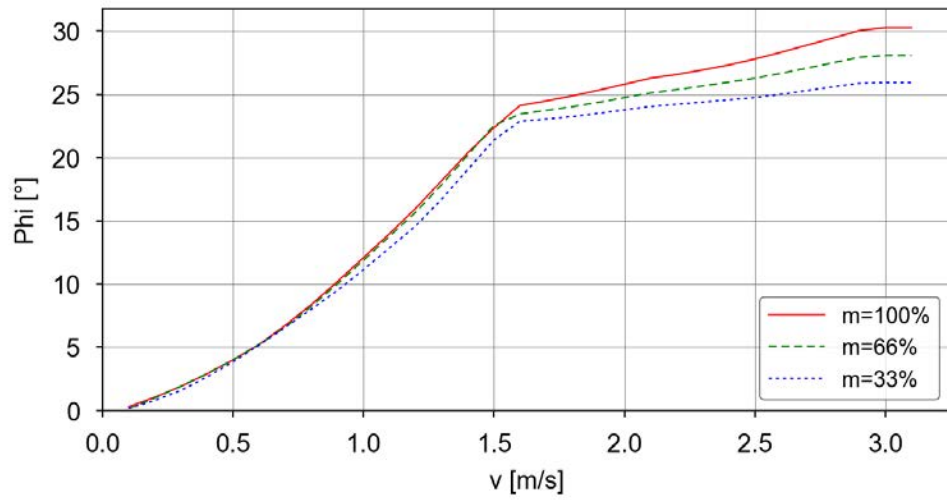
17 IRB 6700

17.11 IRB 6700Inv 2.60 m 300 kg

Continued

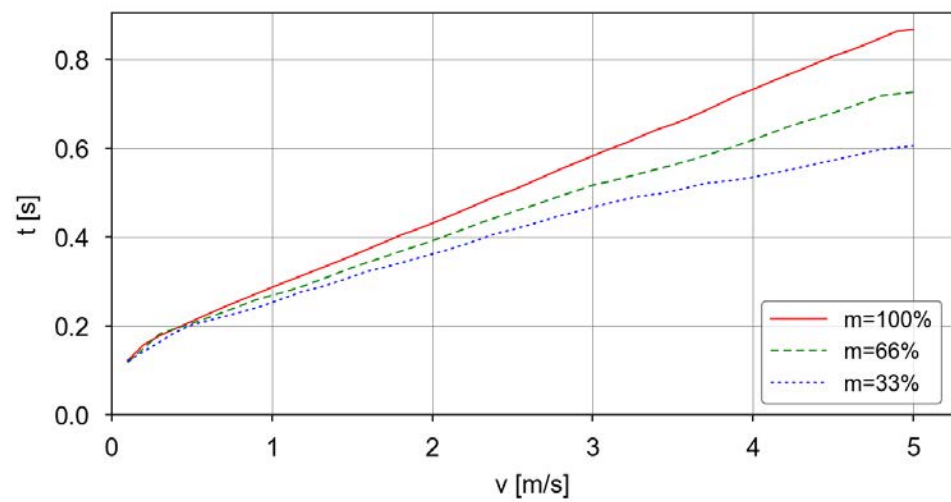
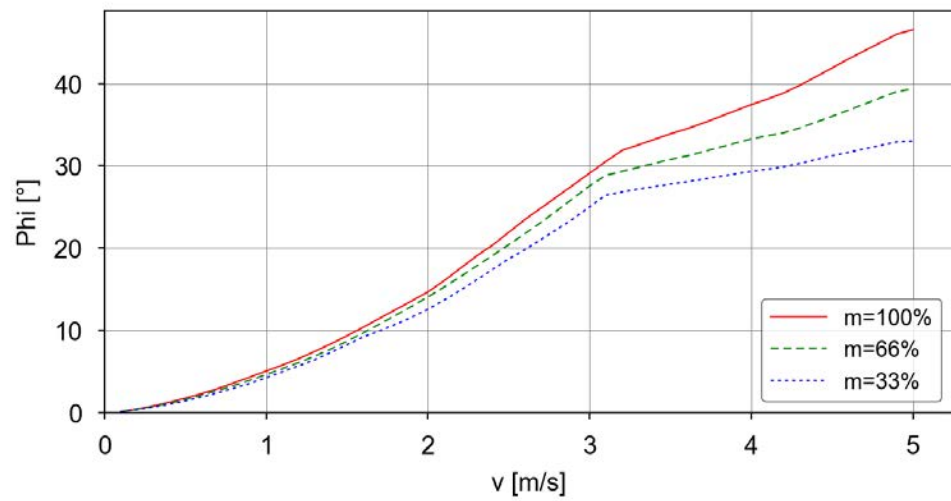


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

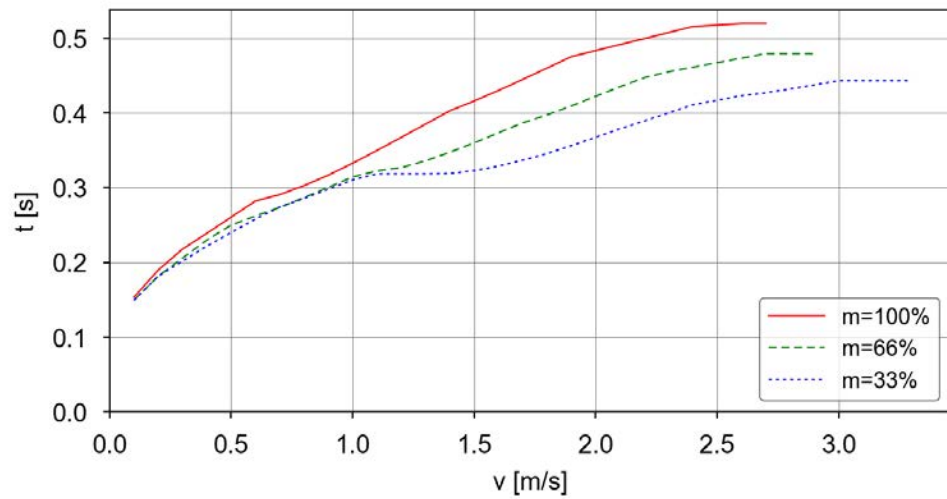
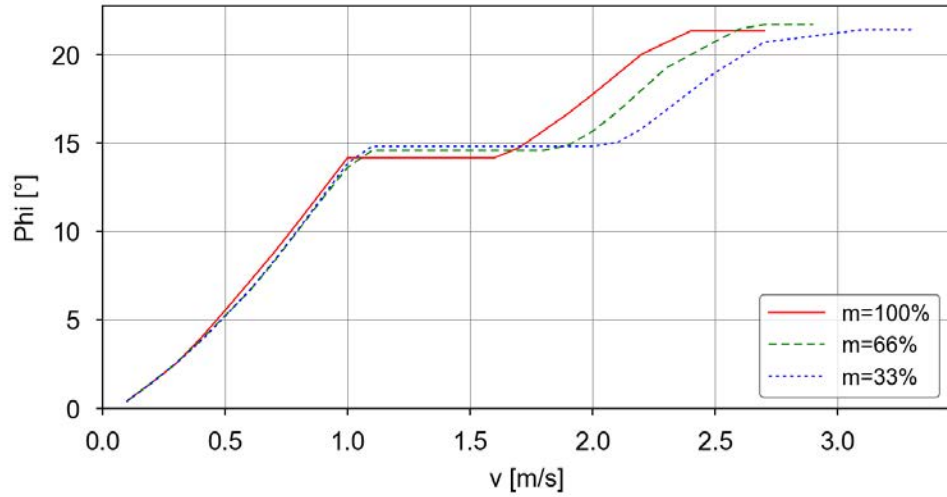
17 IRB 6700

17.11 IRB 6700Inv 2.60 m 300 kg

Continued

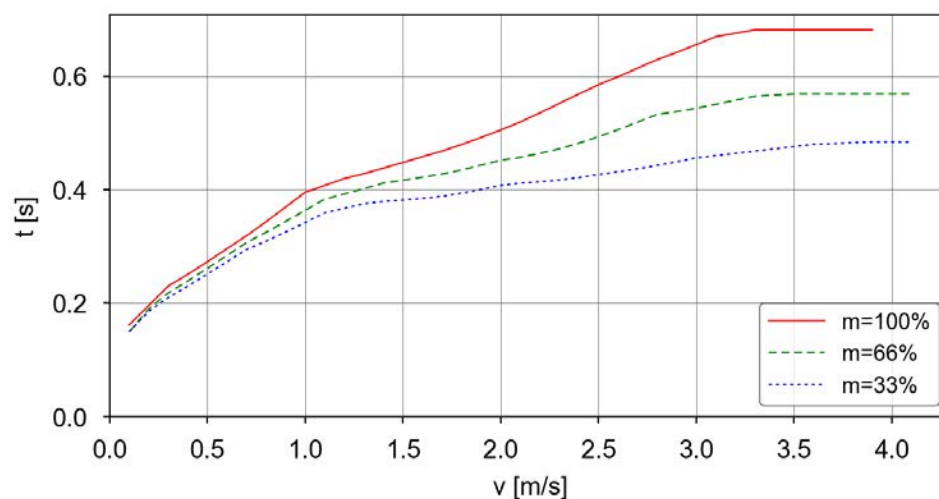
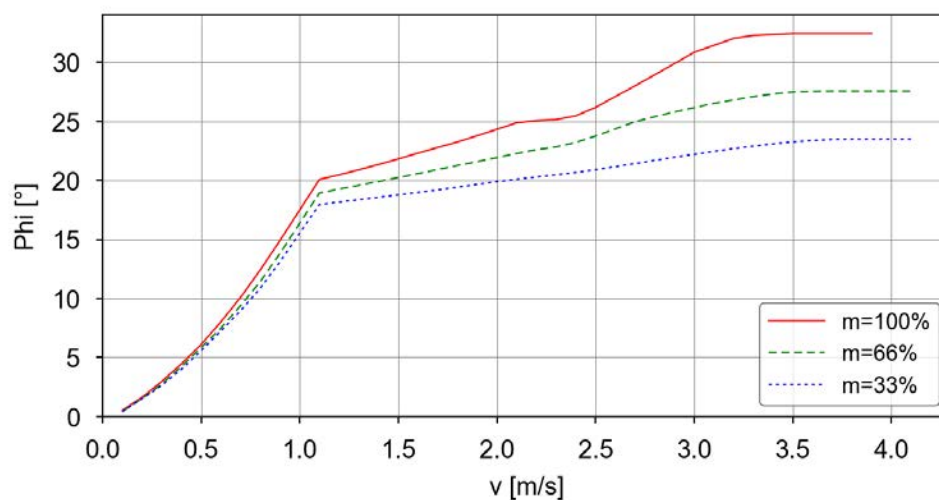
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



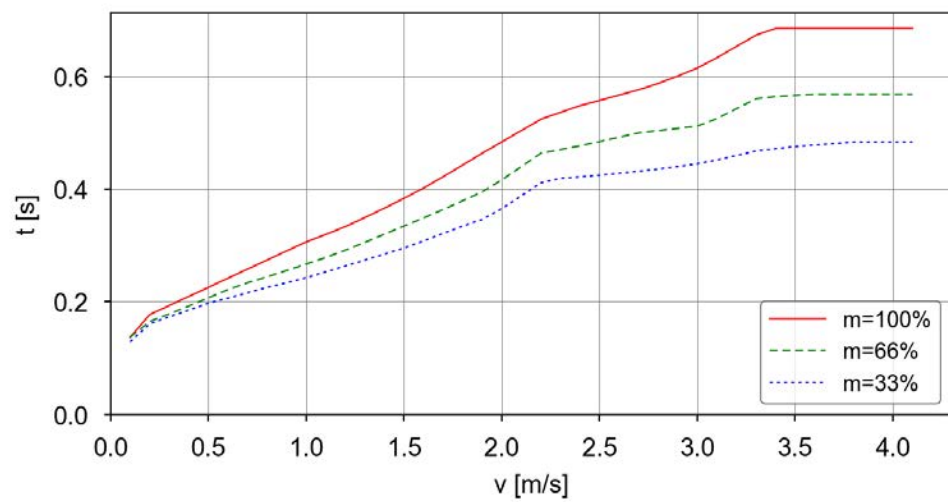
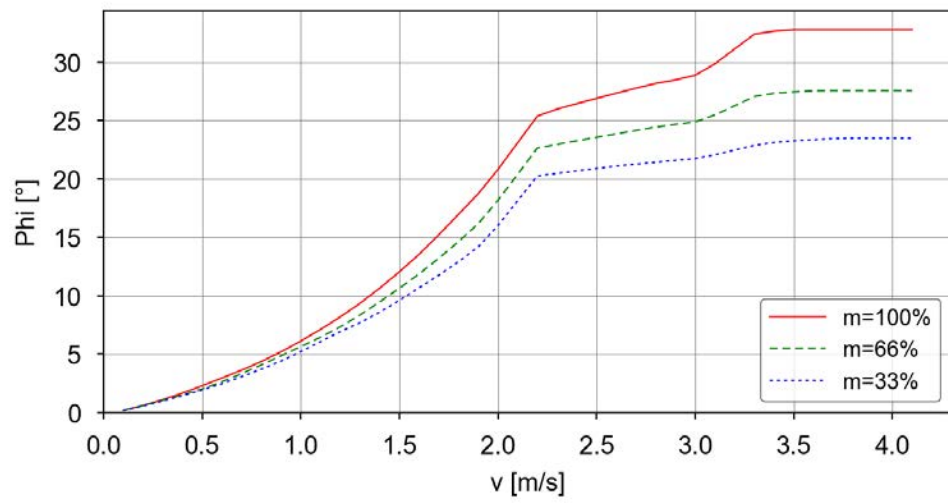
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

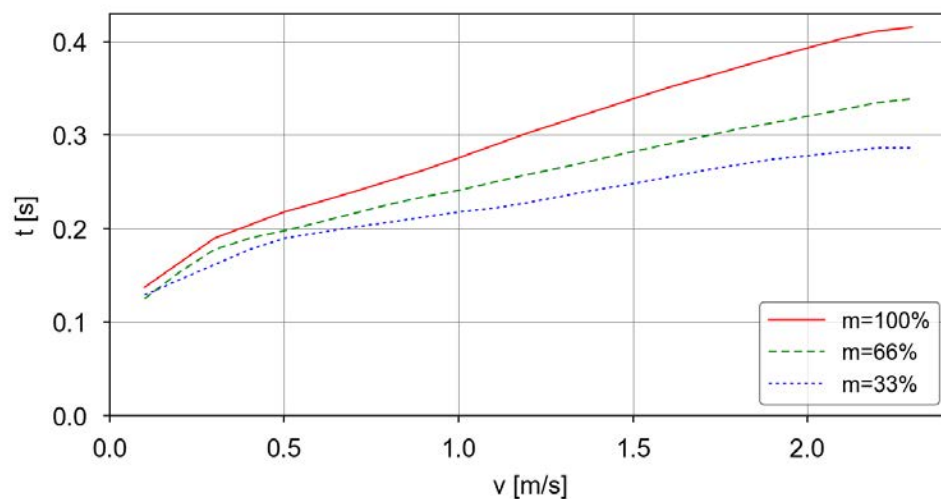
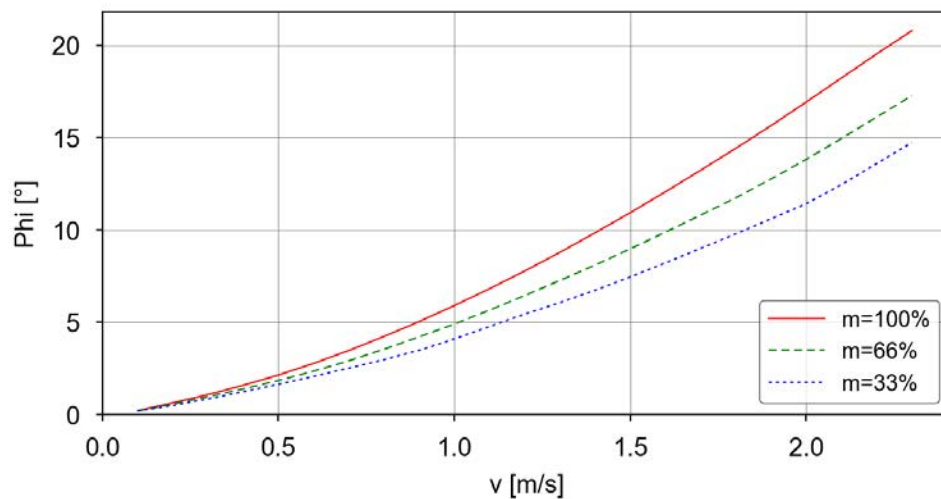
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



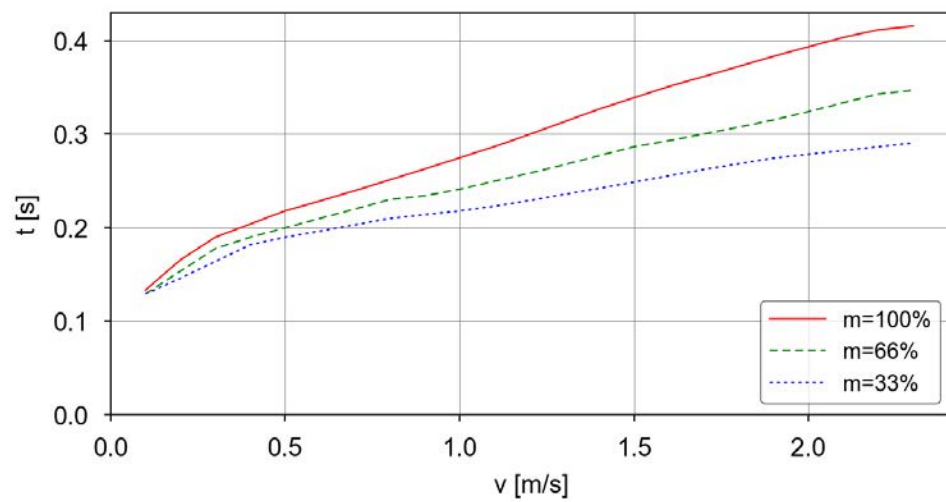
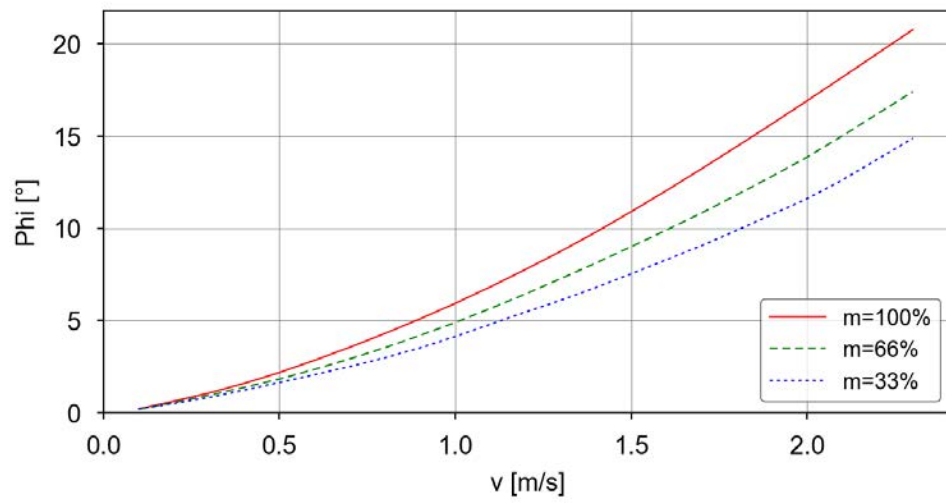
Continues on next page

17 IRB 6700

17.11 IRB 6700Inv 2.60 m 300 kg

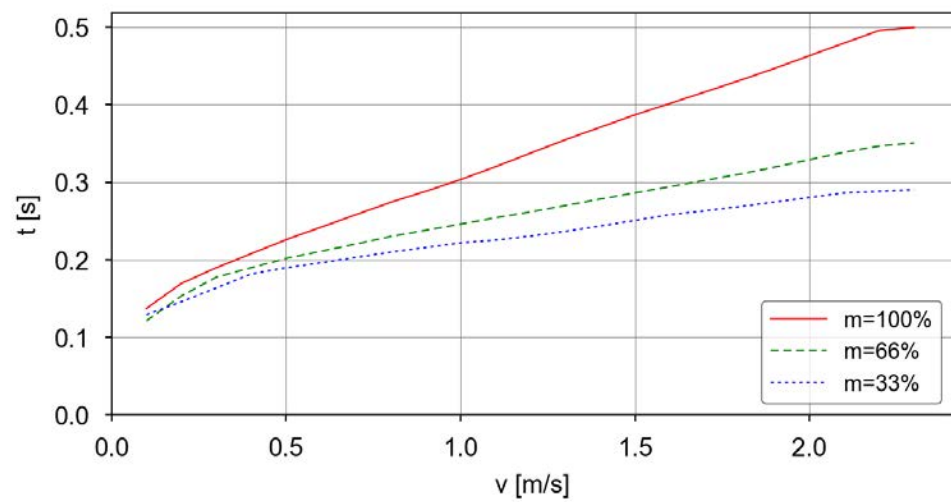
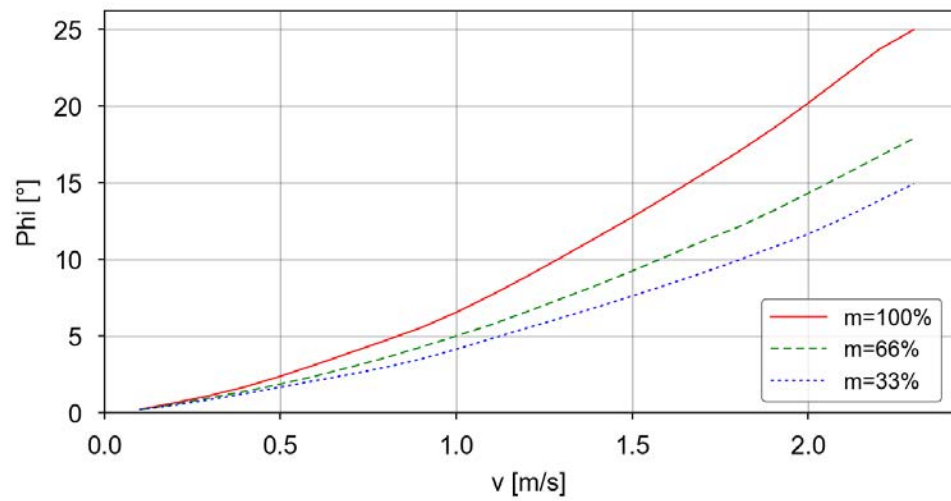
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17 IRB 6700

17.12 IRB 6700Inv 2.90 m 245 kg

17.12 IRB 6700Inv 2.90 m 245 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	31.4	0.54
2	20.0	0.34
3	13.2	0.2

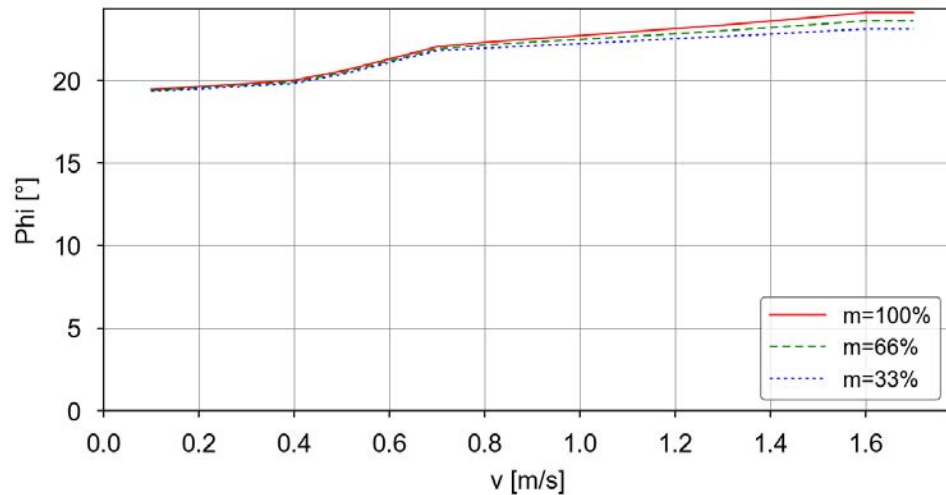
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

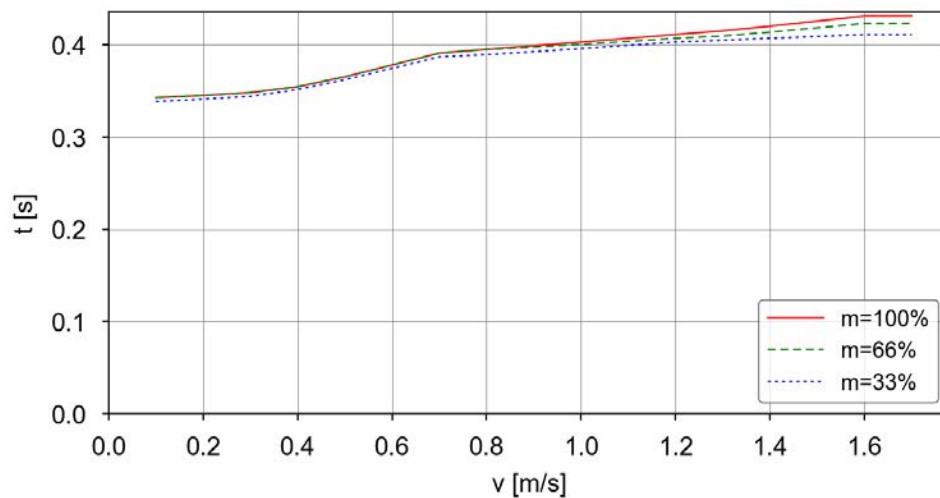
Zone	wcp min (m)	wcp max (m)
0	0	0.955
1	0.955	1.909
2	1.909	max reach

Category 1, Axis 1

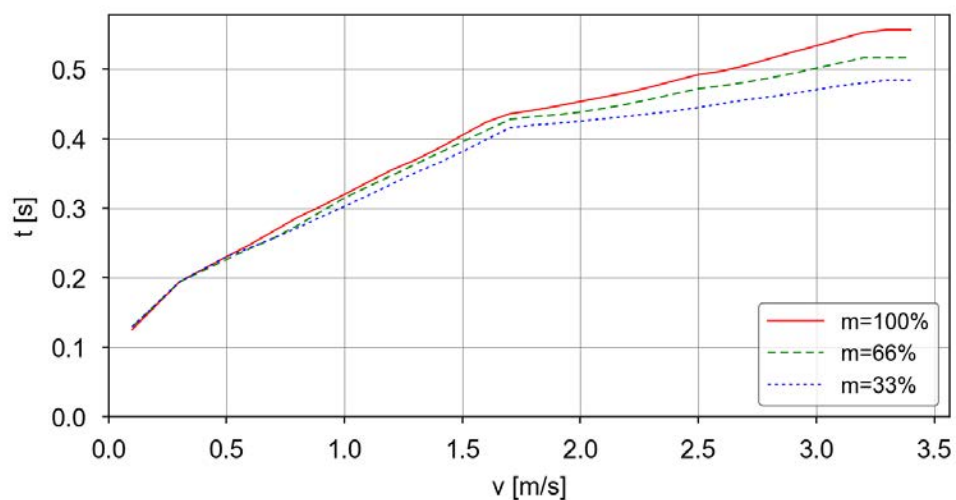
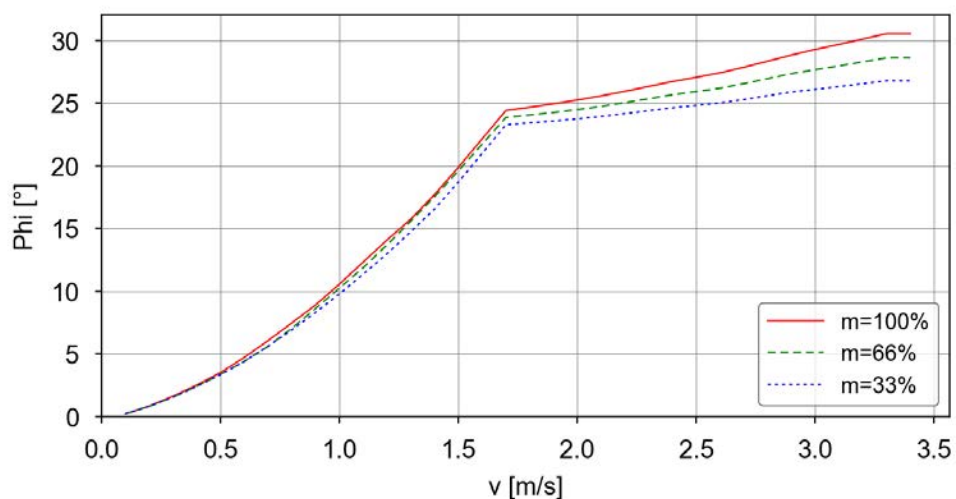
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



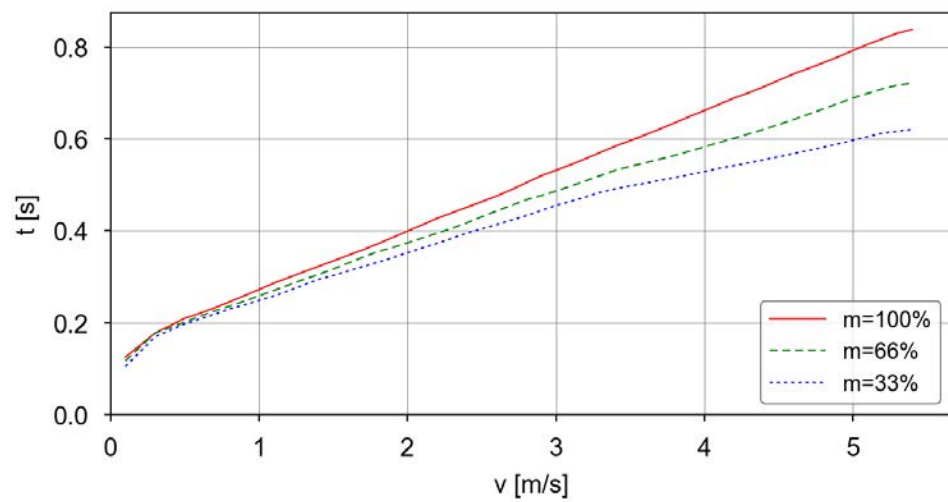
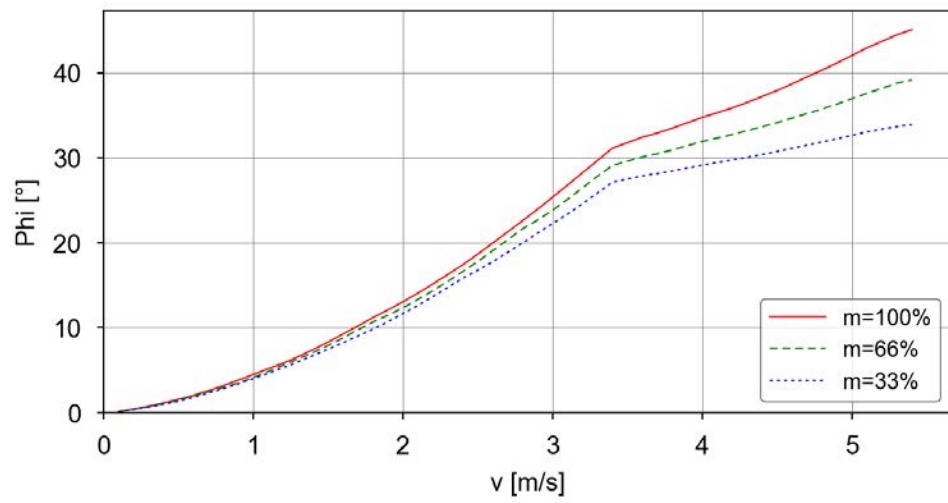
Continues on next page

17 IRB 6700

17.12 IRB 6700Inv 2.90 m 245 kg

Continued

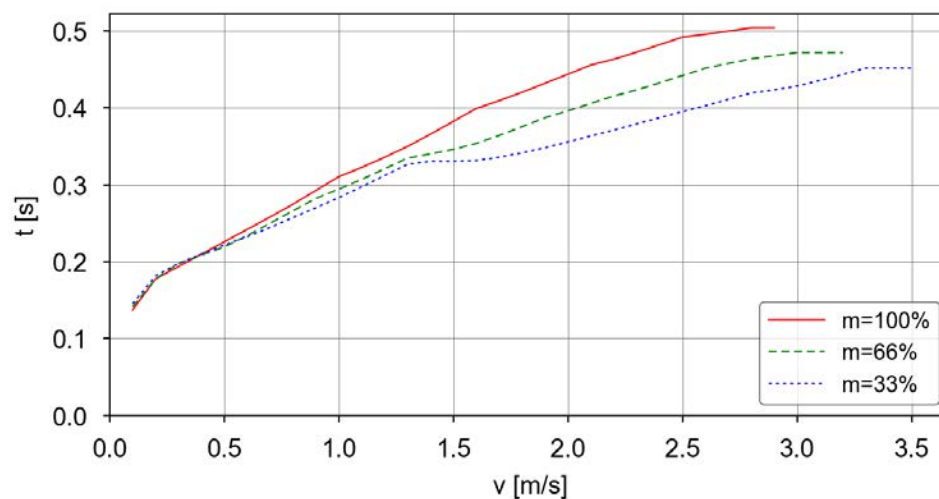
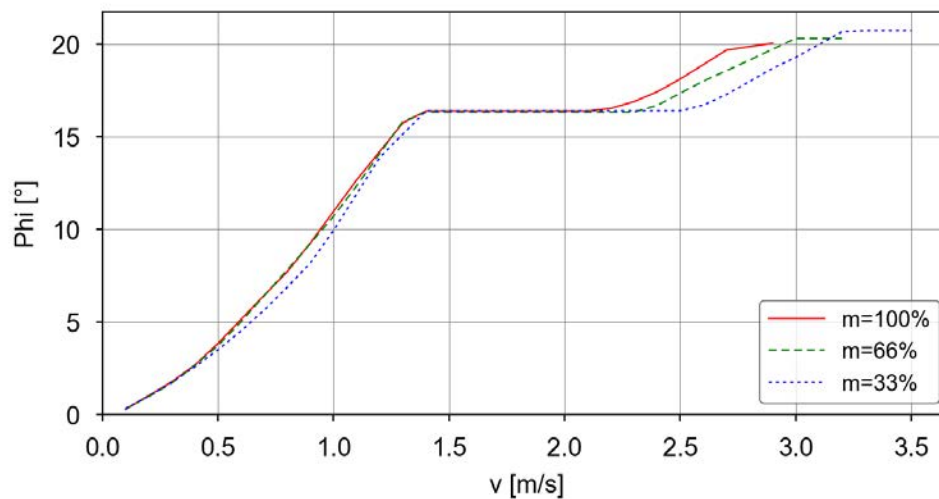
Extension zone 2, stopping distance and stopping time



Continues on next page

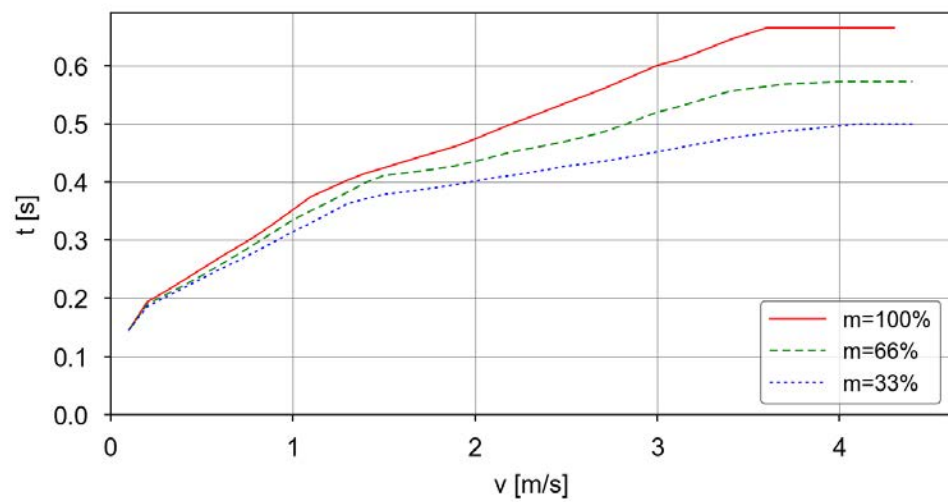
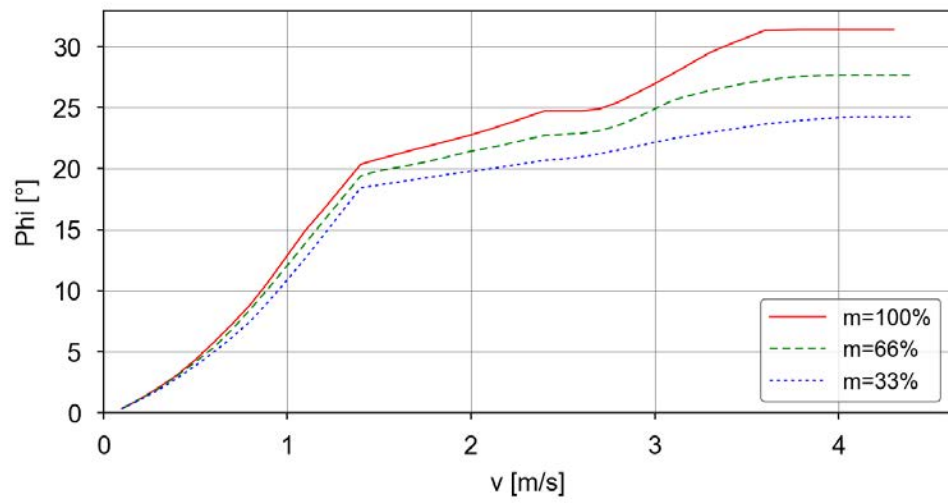
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



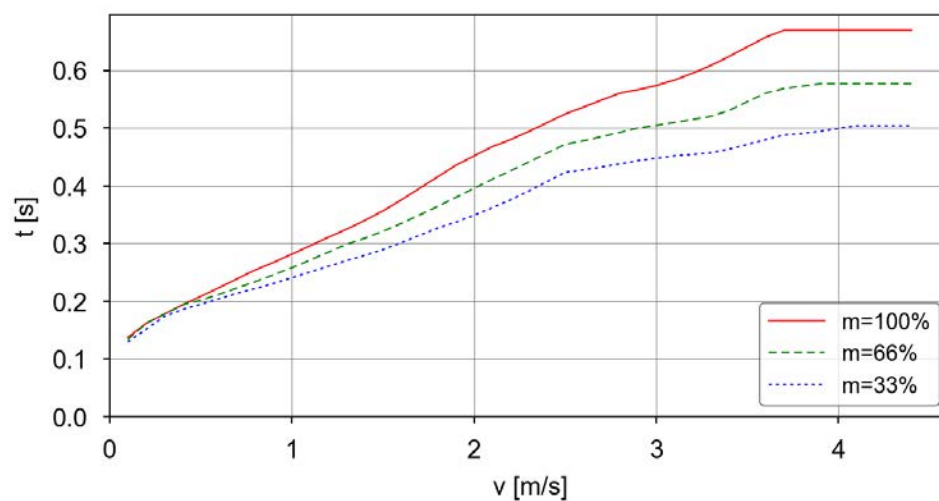
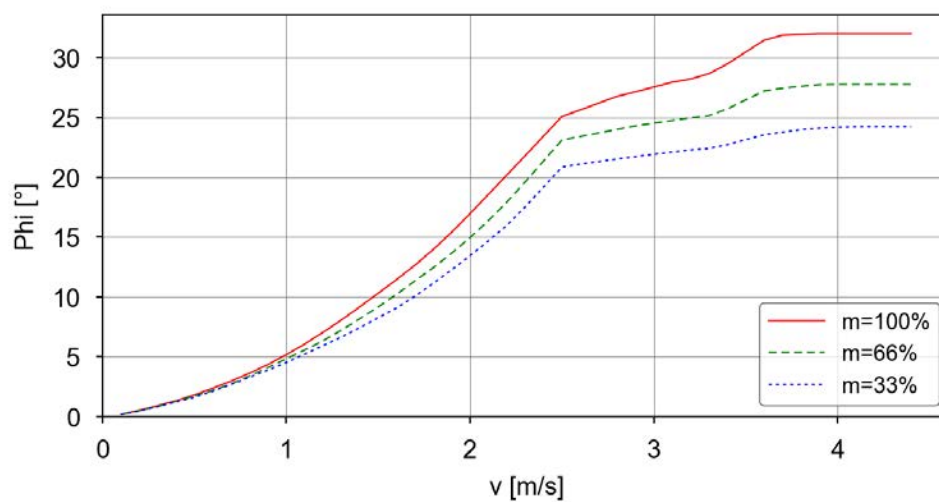
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

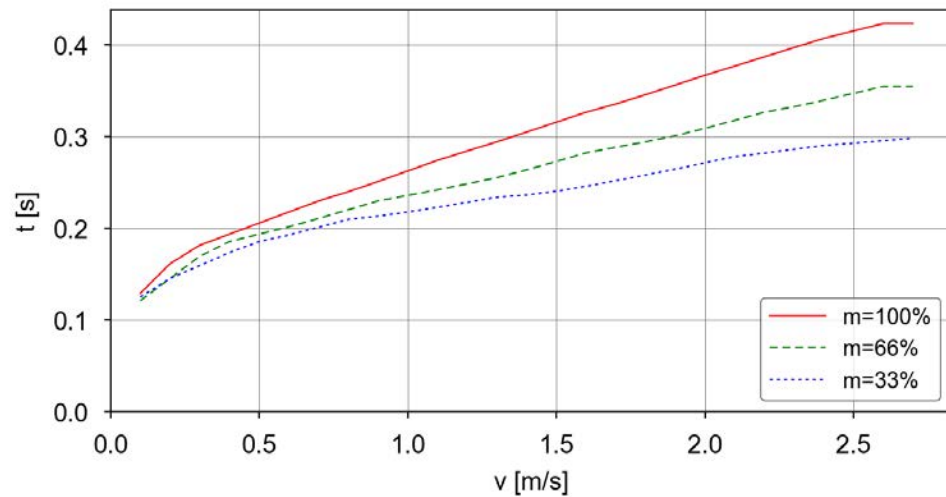
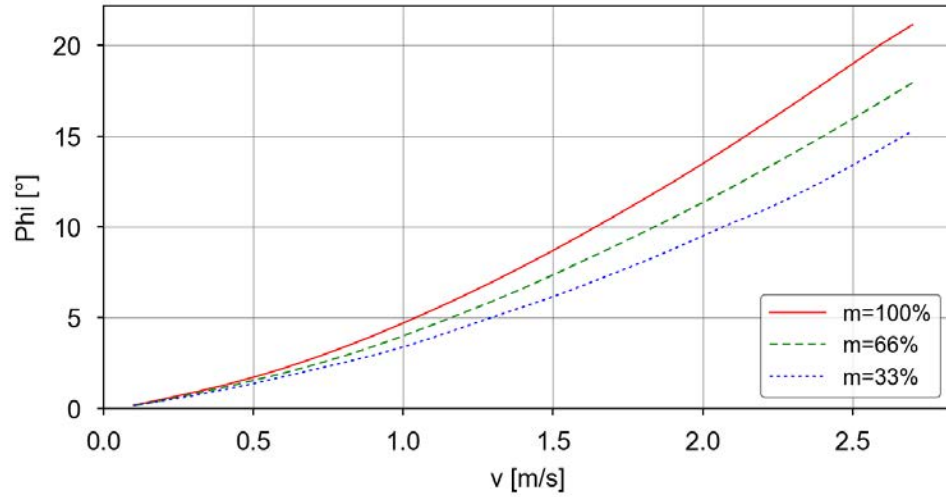
17 IRB 6700

17.12 IRB 6700Inv 2.90 m 245 kg

Continued

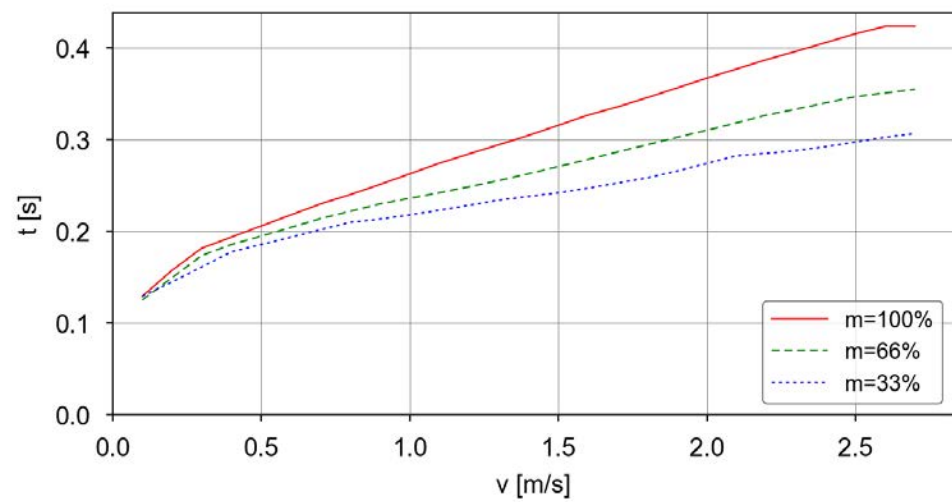
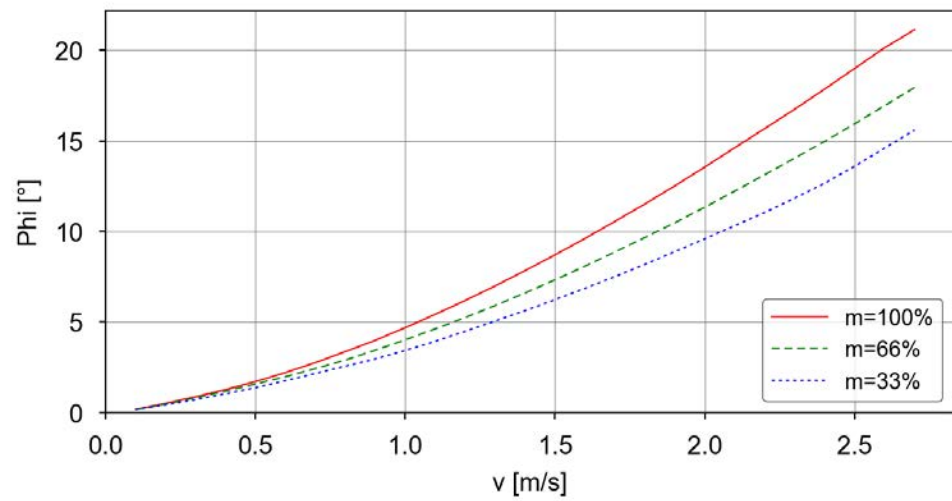
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



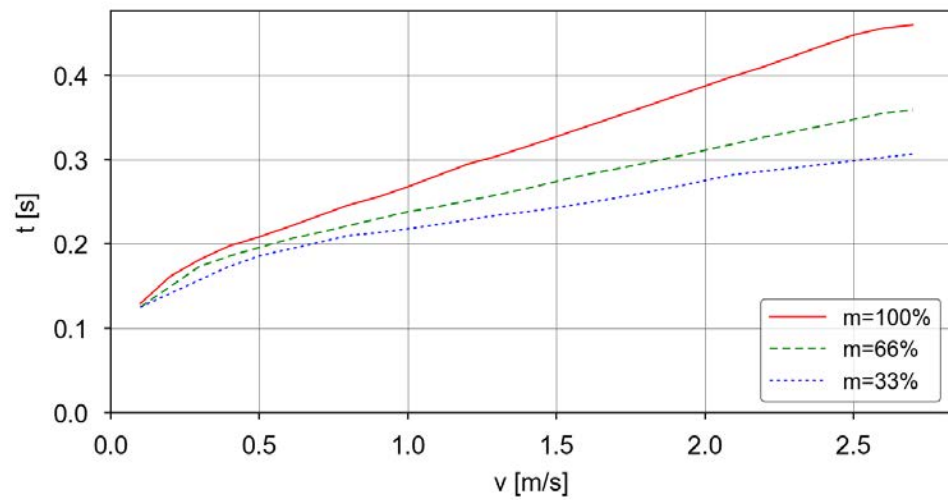
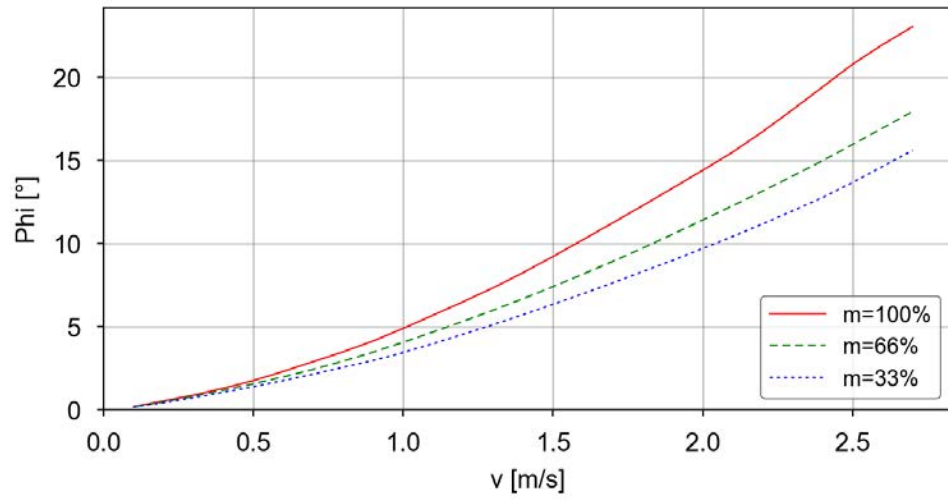
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17.13 IRB 6700LeanID 2.60 m 175 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	36.6	0.58
2	24.4	0.34
3	15.7	0.2

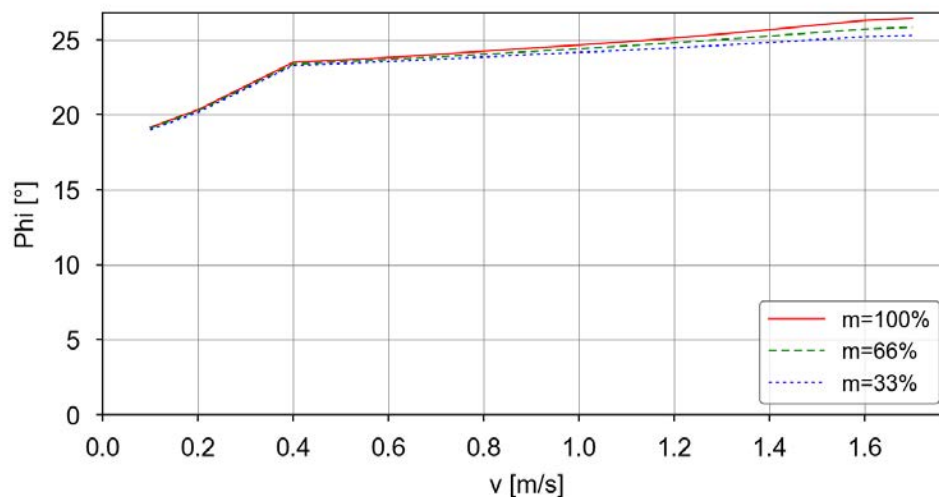
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.867
1	0.867	1.734
2	1.734	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

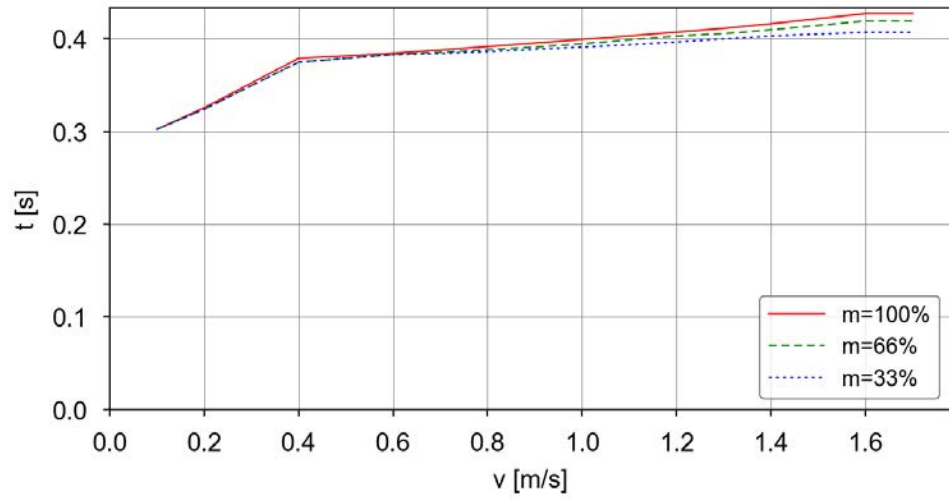


Continues on next page

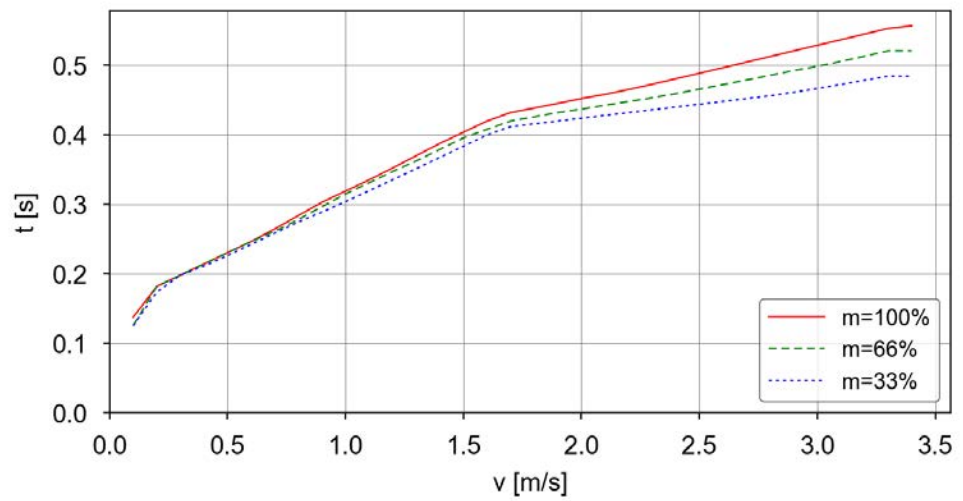
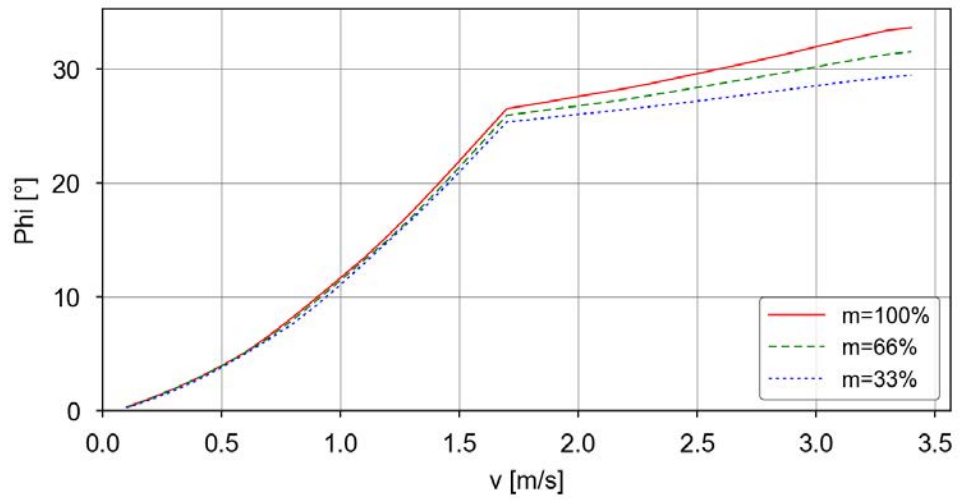
17 IRB 6700

17.13 IRB 6700LeanID 2.60 m 175 kg

Continued

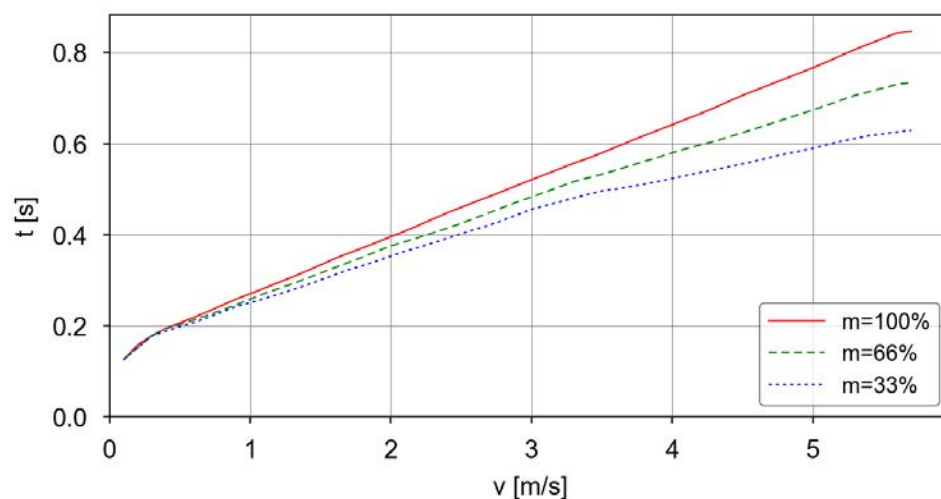
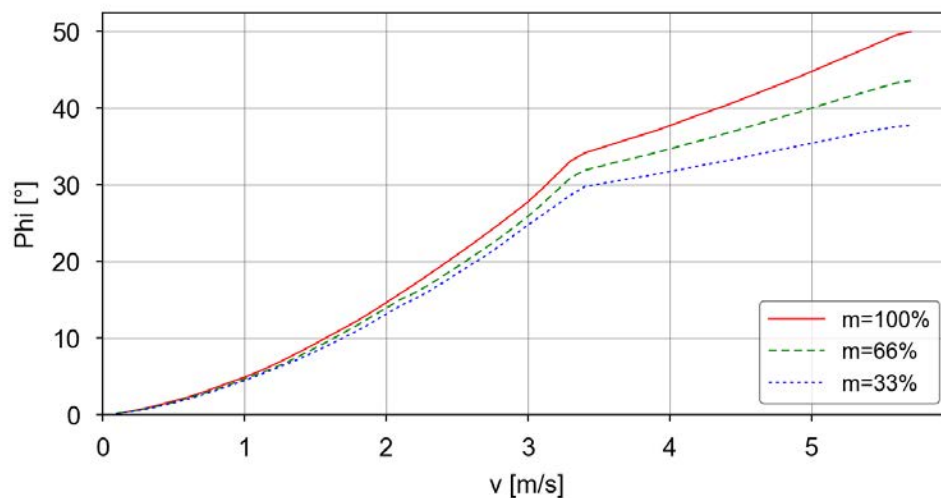


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

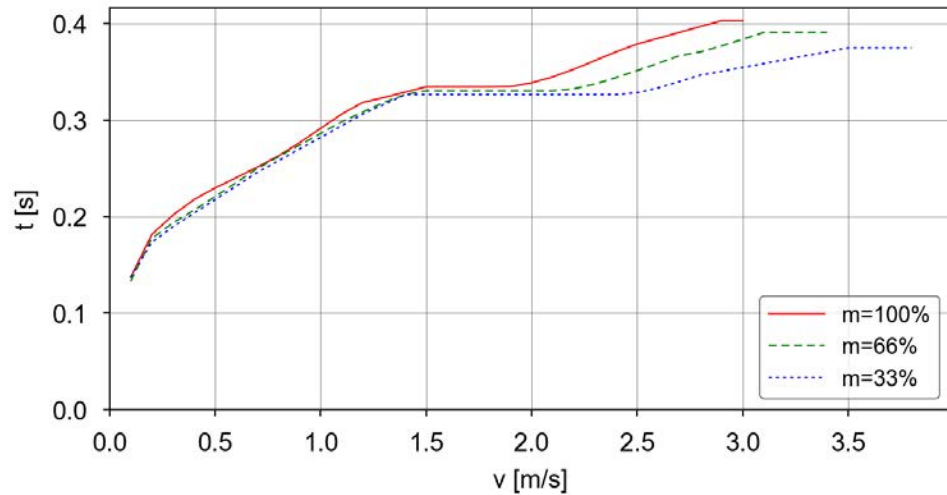
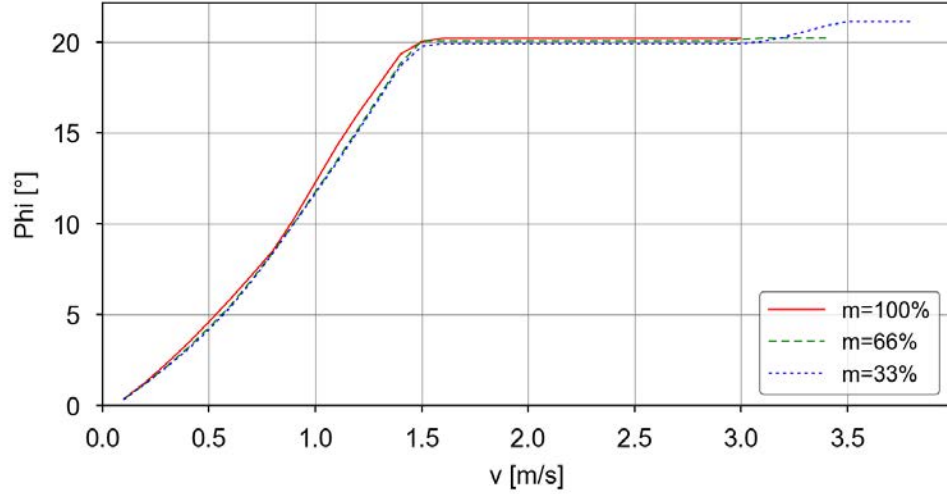
17 IRB 6700

17.13 IRB 6700LeanID 2.60 m 175 kg

Continued

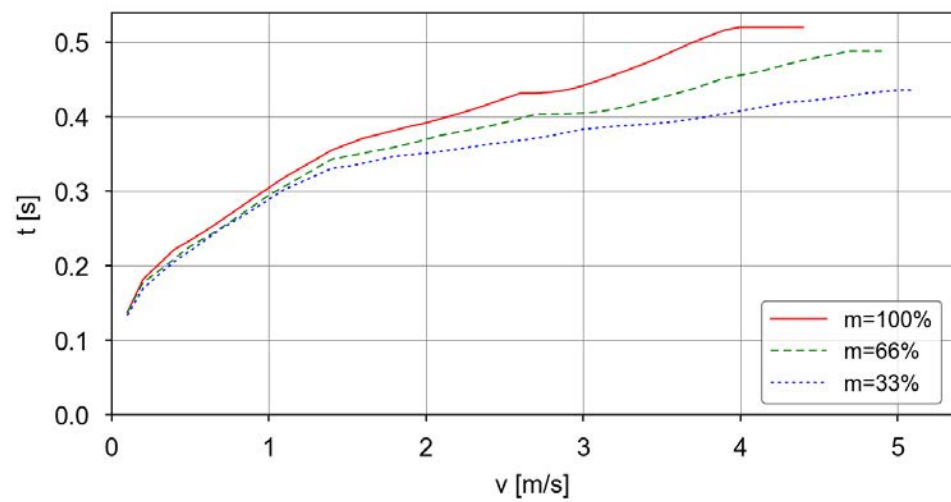
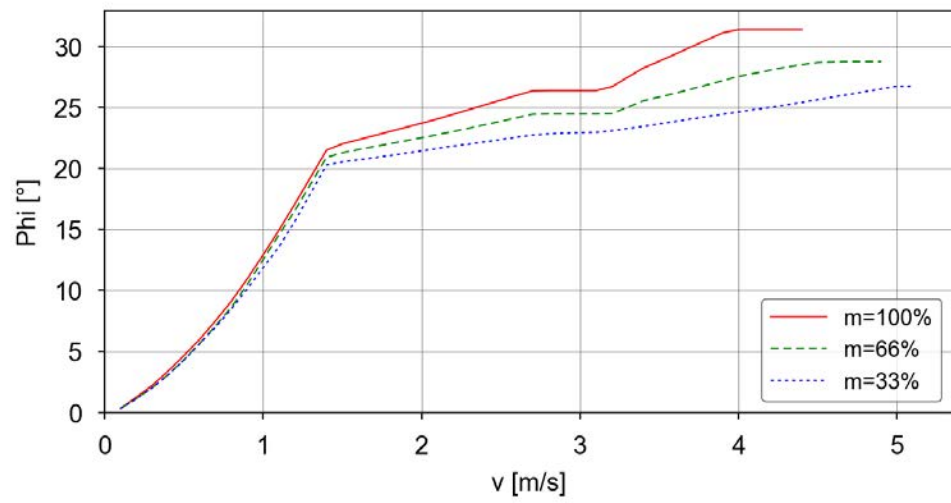
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



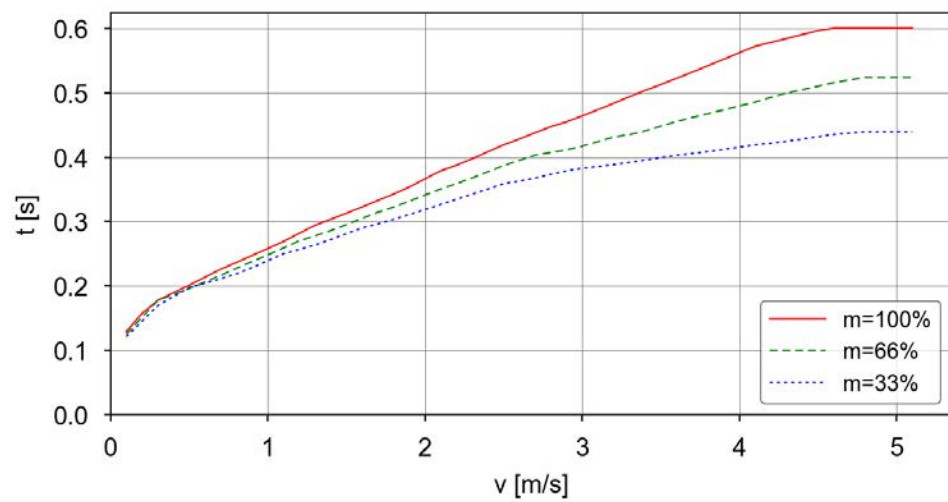
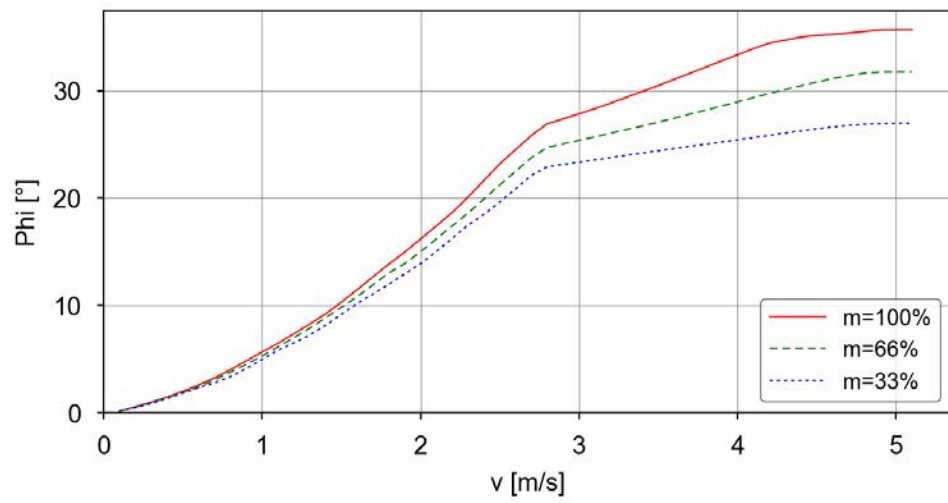
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

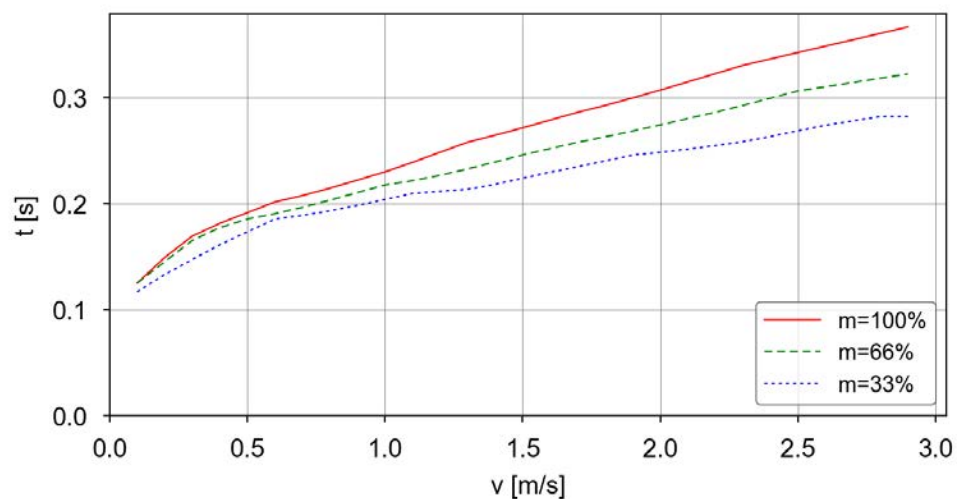
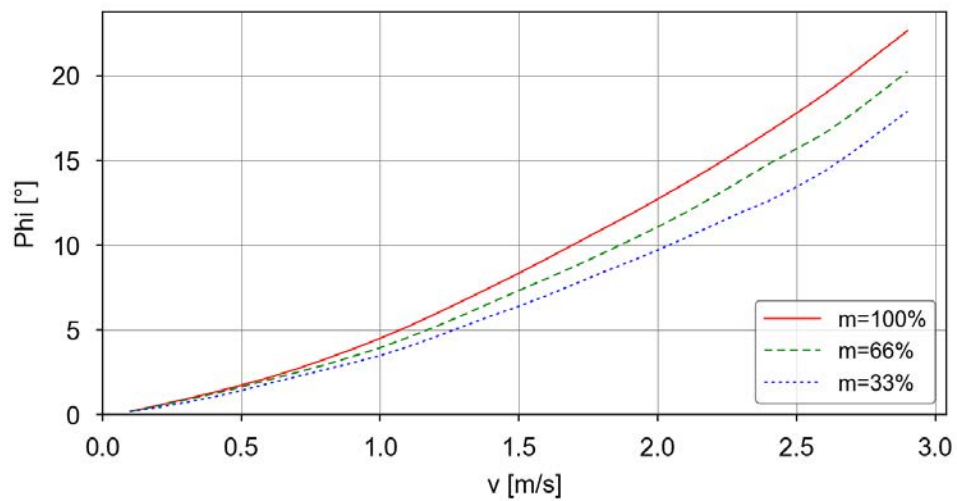
Extension zone 2, stopping distance and stopping time



Continues on next page

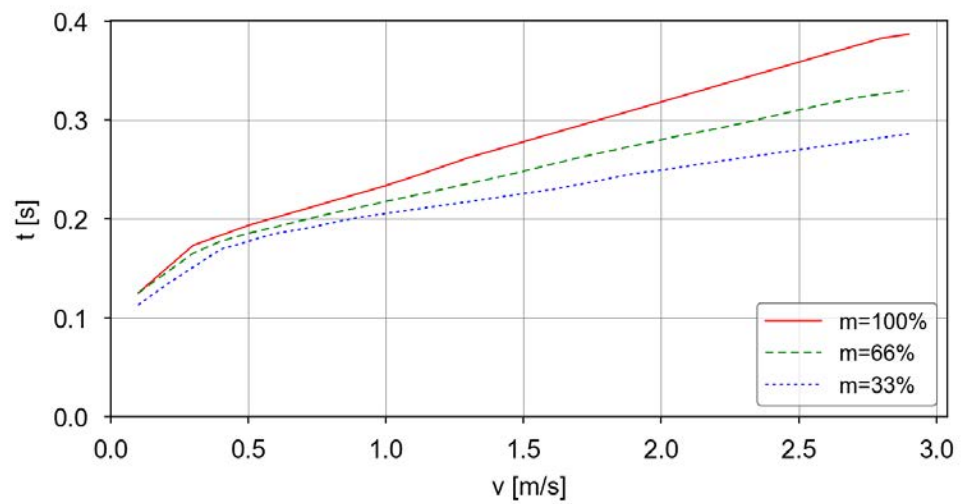
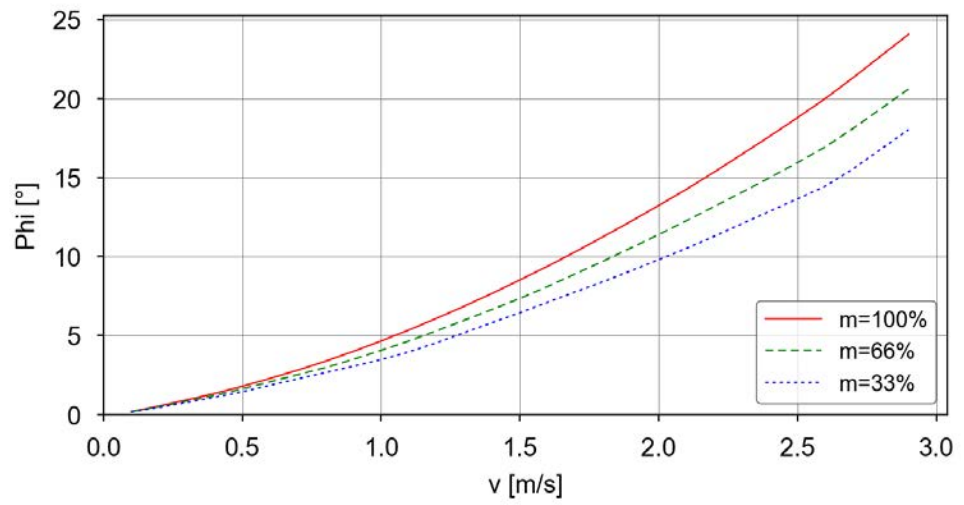
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



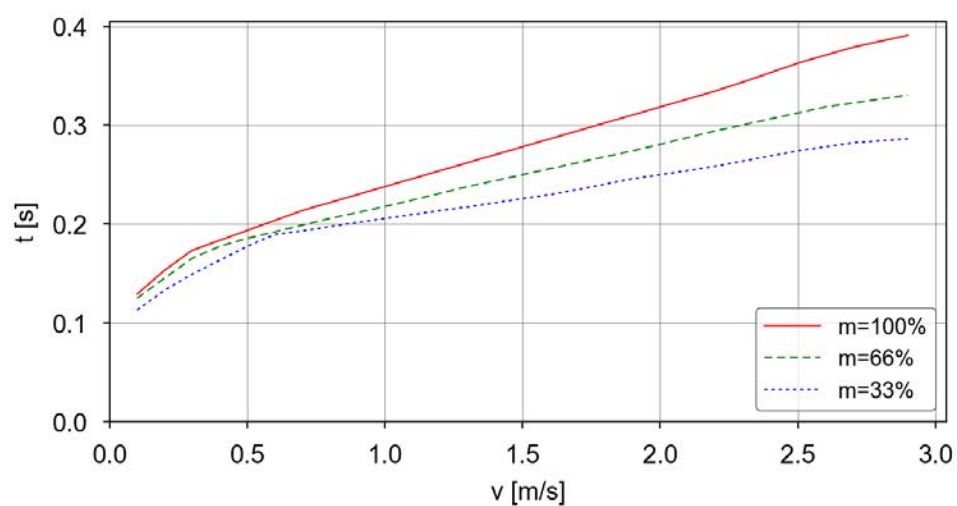
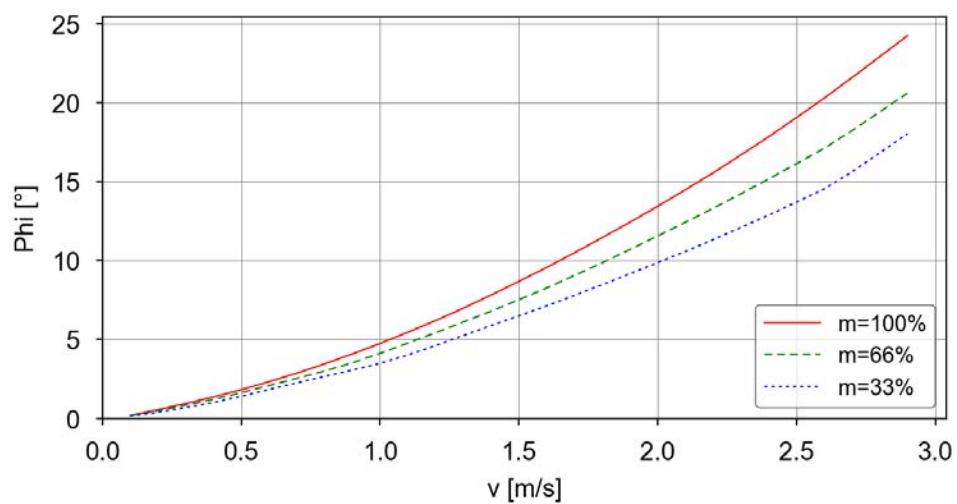
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17.14 IRB 6700LeanID 2.65 m 220 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	35.8	0.63
2	19.5	0.34
3	12.3	0.17

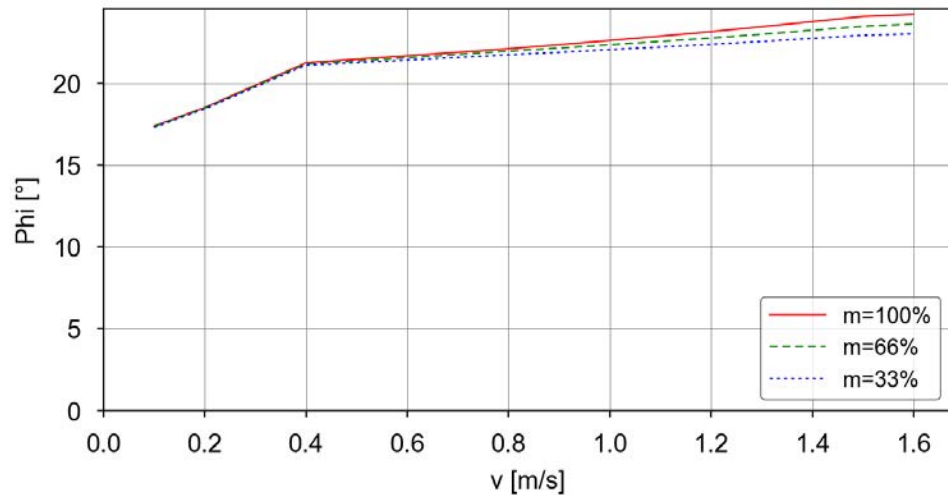
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

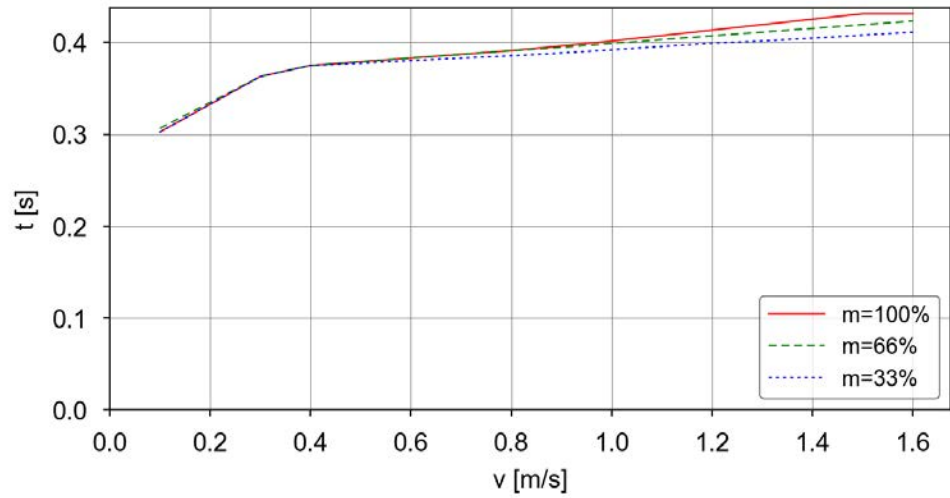
Zone	wcp min (m)	wcp max (m)
0	0	0.883
1	0.883	1.767
2	1.767	max reach

Category 1, Axis 1

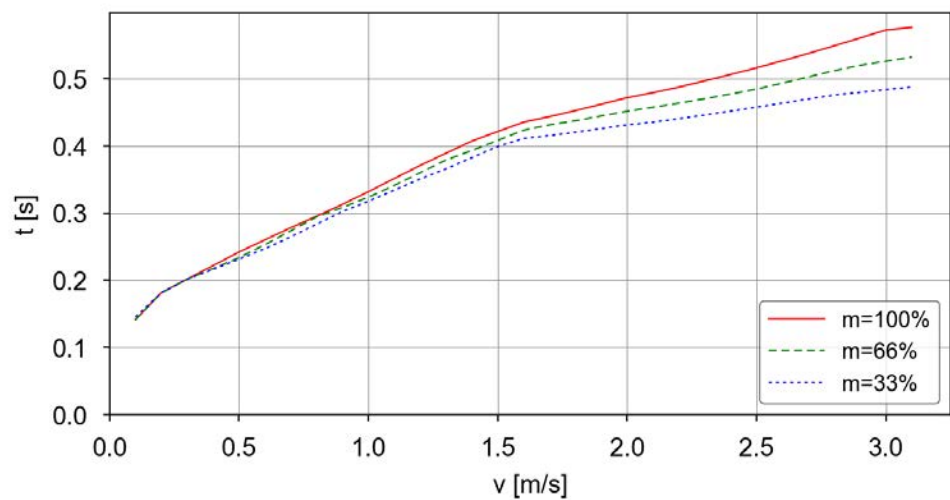
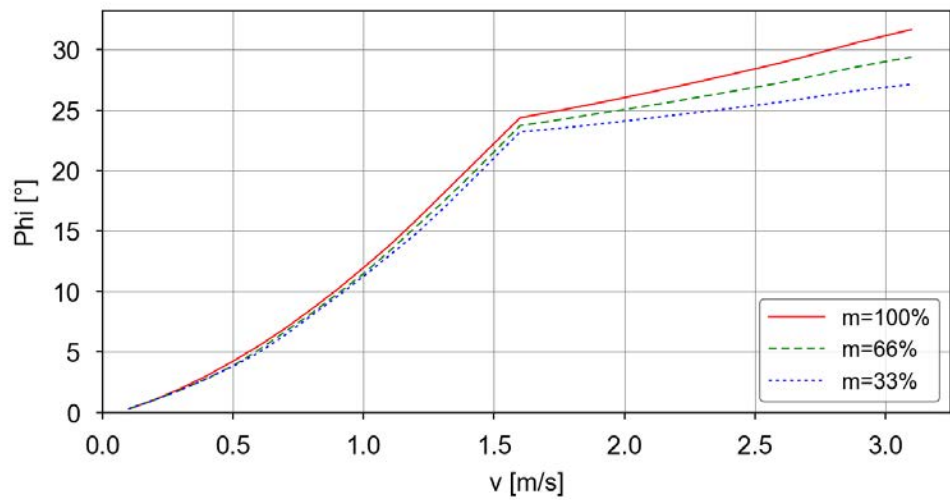
Extension zone 0, stopping distance and stopping time



Continues on next page

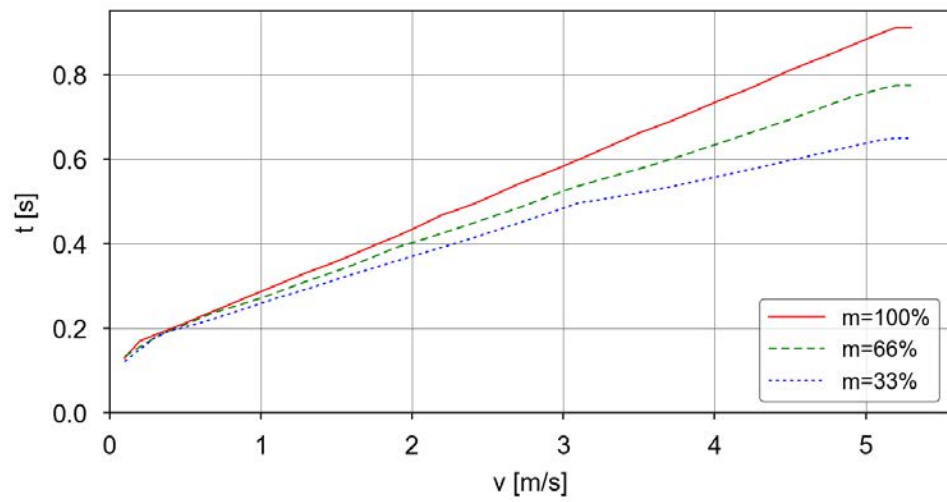
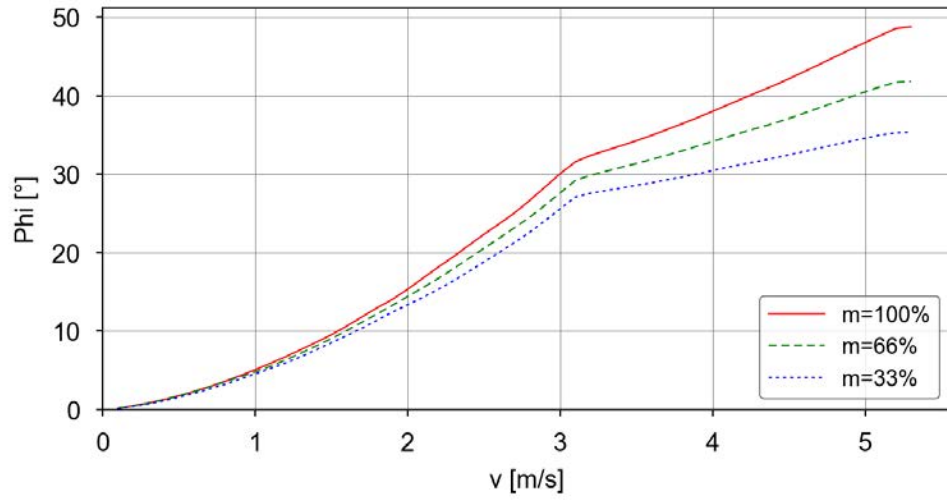


Extension zone 1, stopping distance and stopping time



Continues on next page

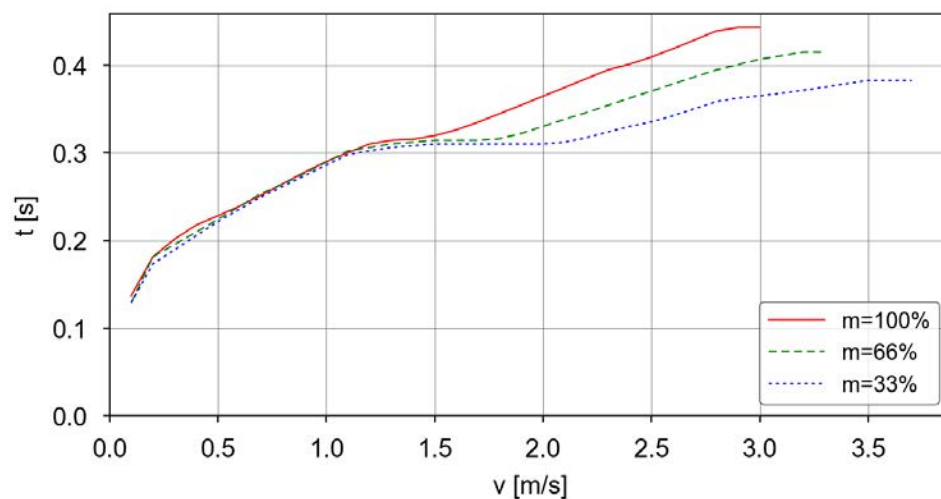
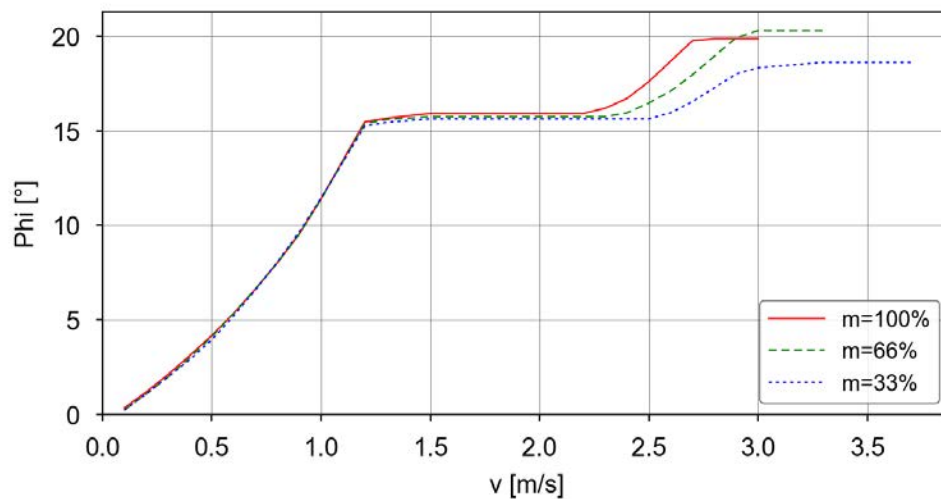
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



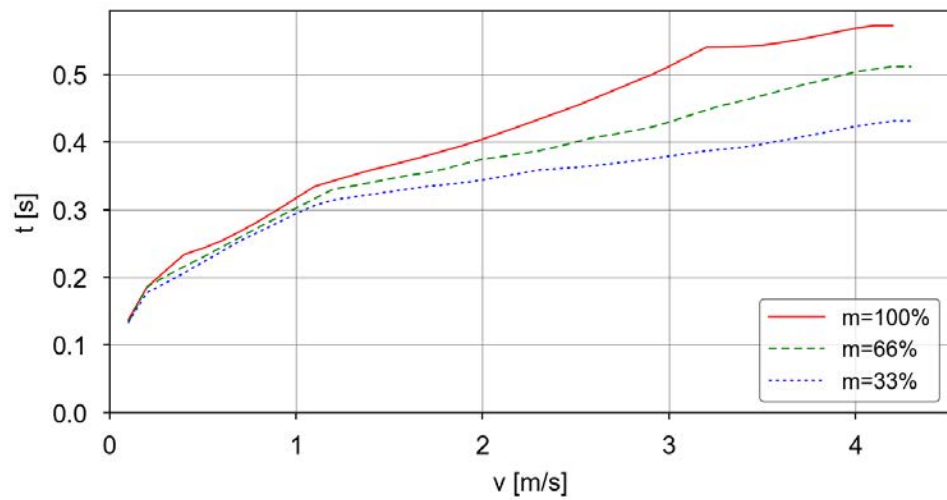
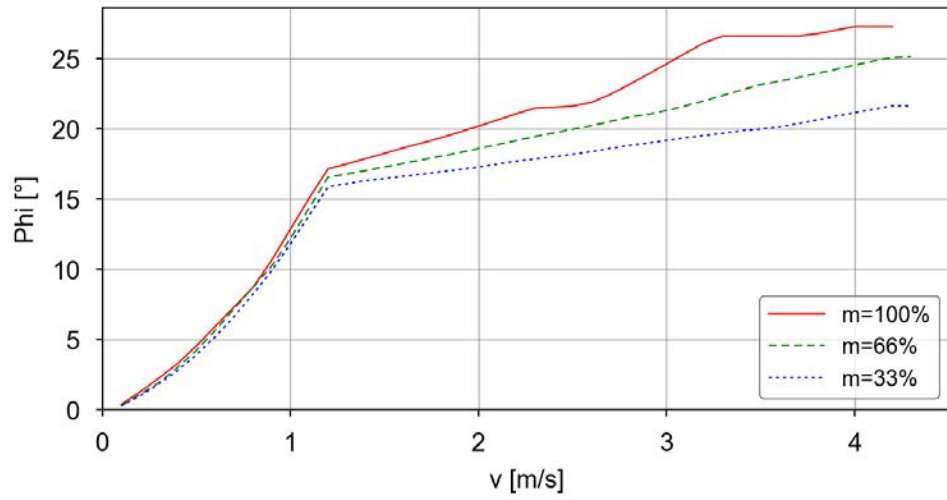
Continues on next page

17 IRB 6700

17.14 IRB 6700LeanID 2.65 m 220 kg

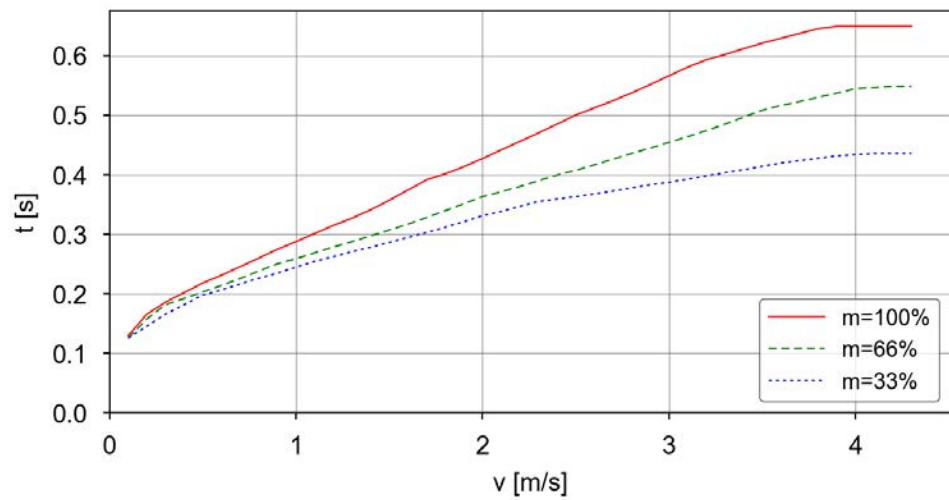
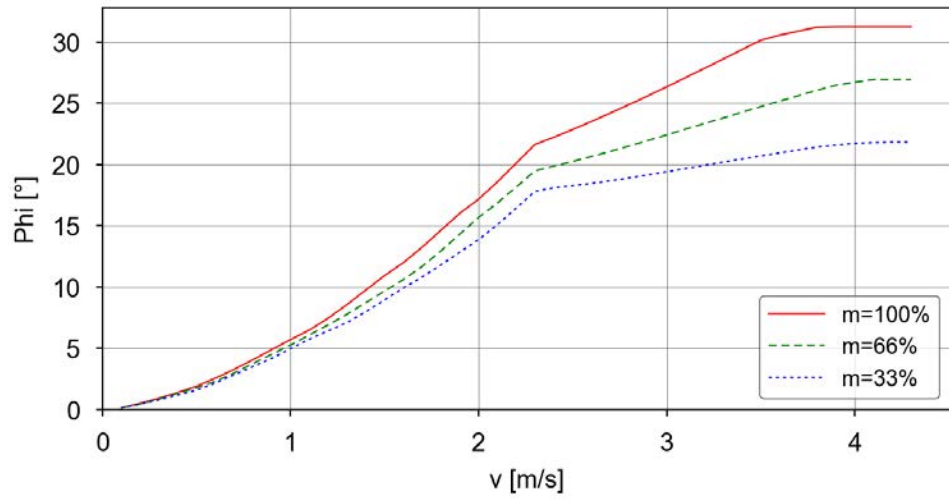
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

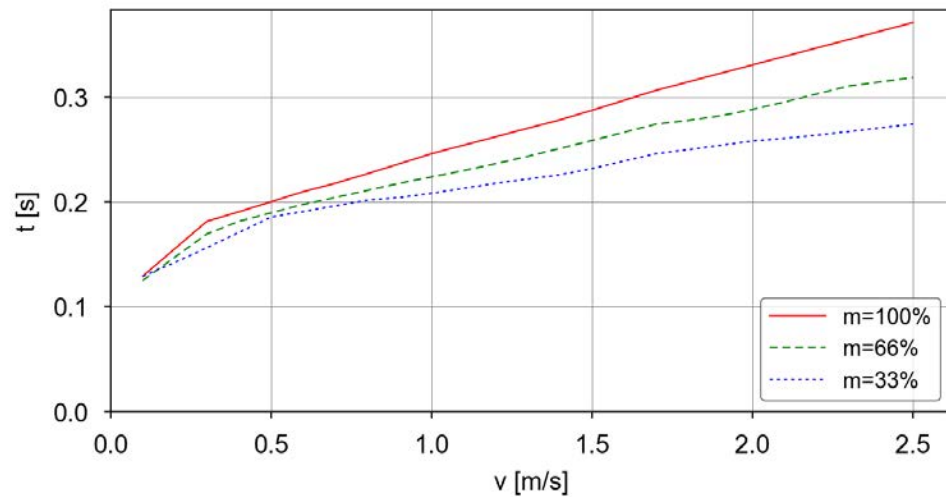
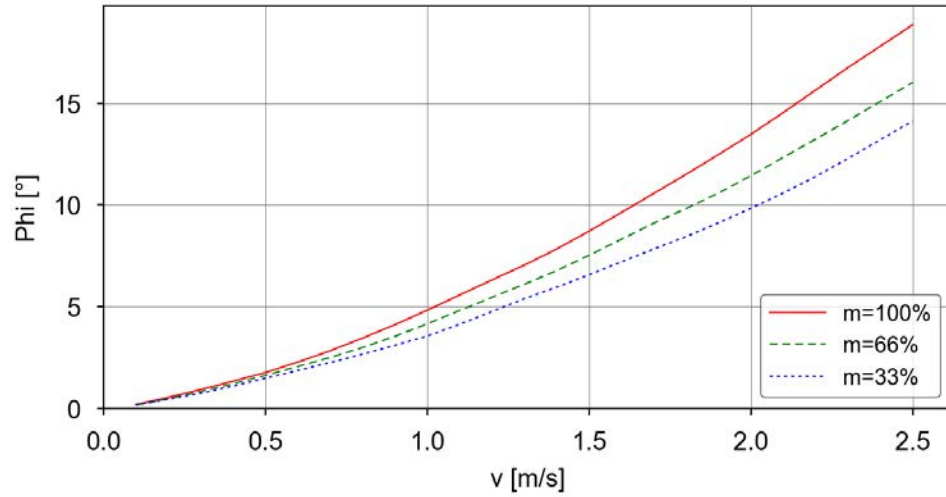
17 IRB 6700

17.14 IRB 6700LeanID 2.65 m 220 kg

Continued

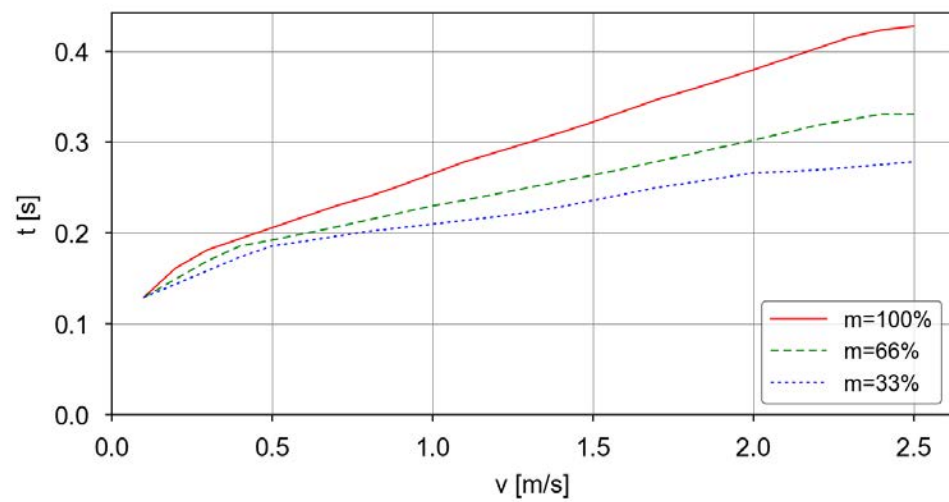
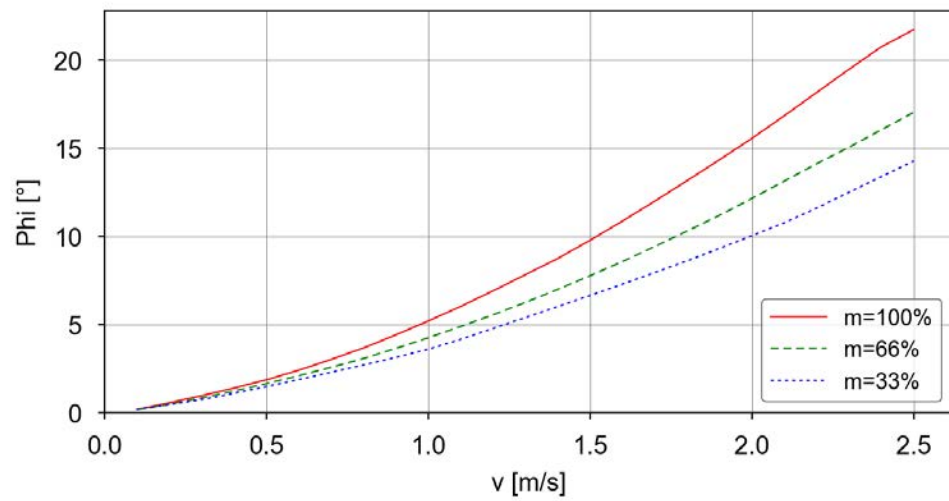
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



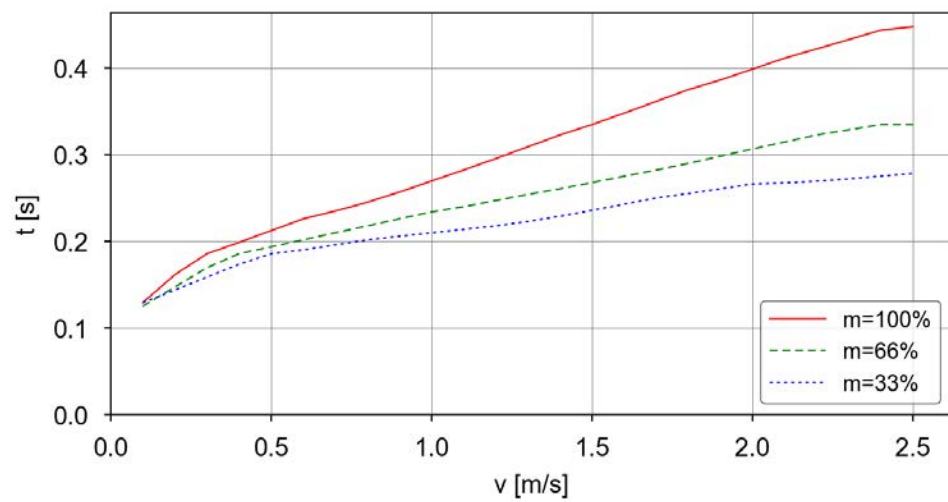
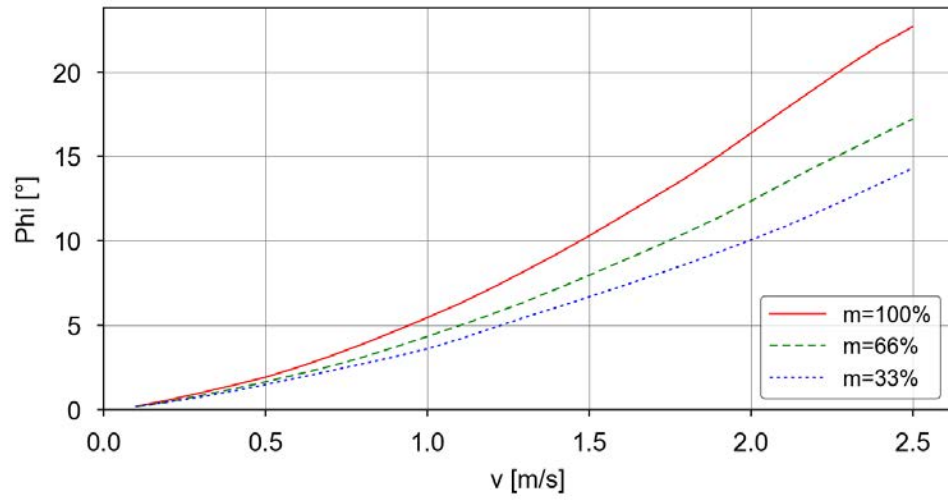
Continues on next page

17 IRB 6700

17.14 IRB 6700LeanID 2.65 m 220 kg

Continued

Extension zone 2, stopping distance and stopping time



17.15 IRB 6700LeanID 2.70 m 270 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	35.2	0.61
2	20.8	0.37
3	14.9	0.22

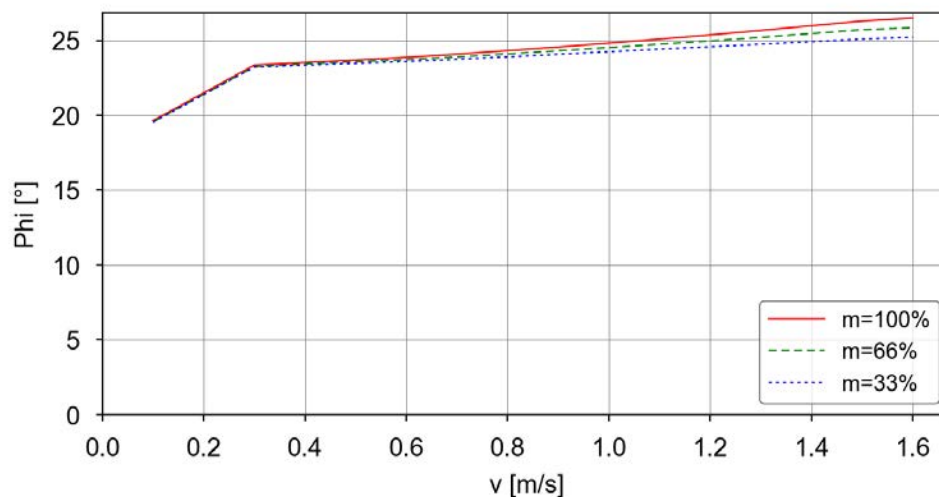
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.907
1	0.907	1.813
2	1.813	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

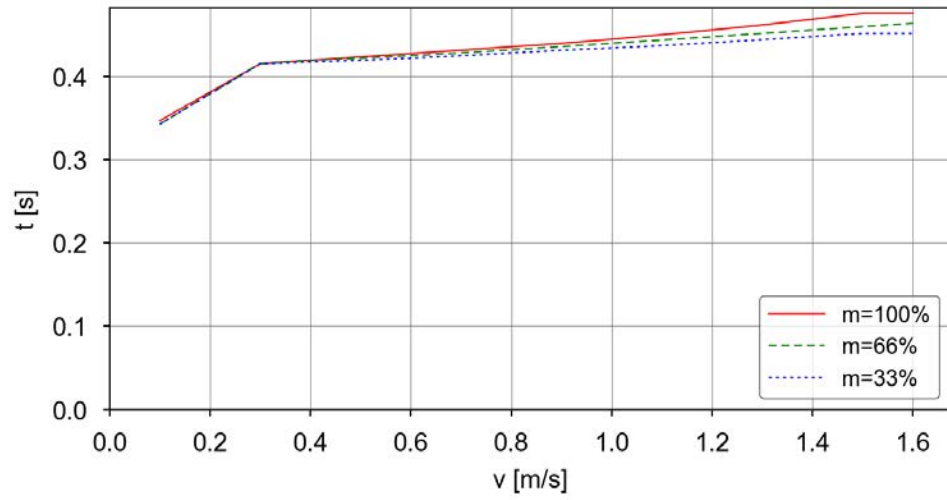


Continues on next page

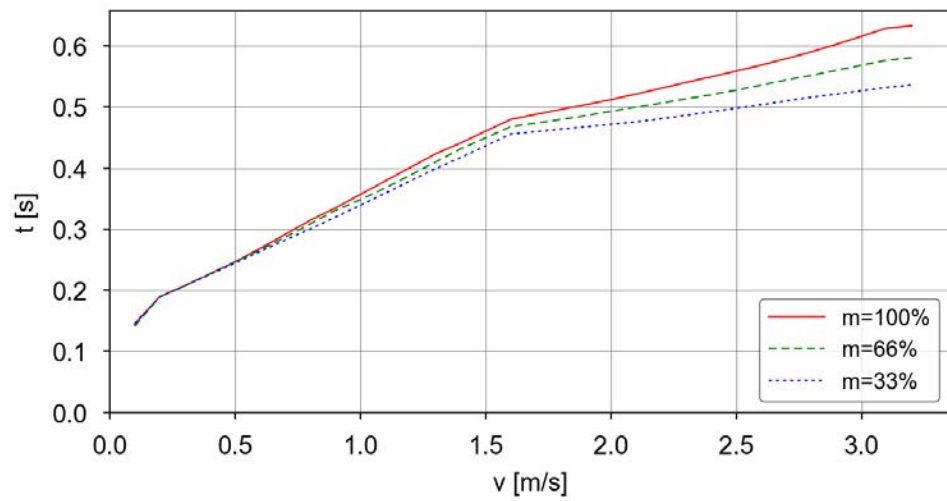
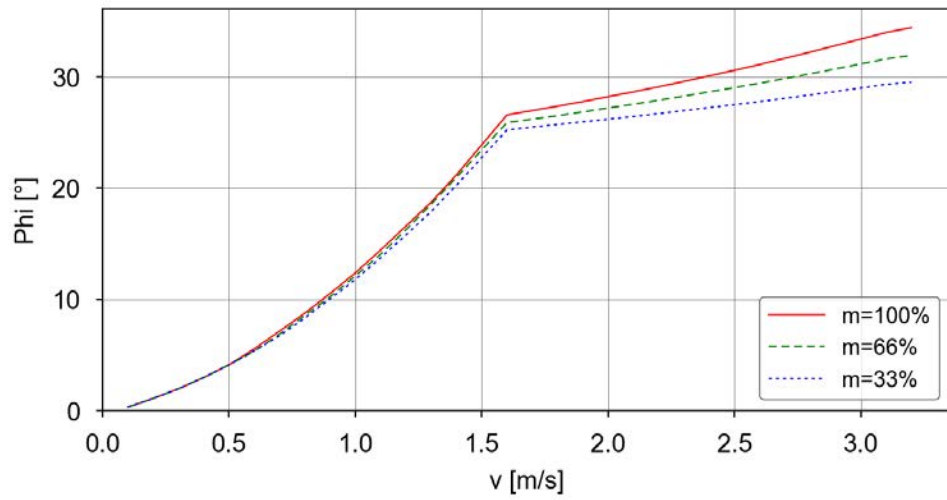
17 IRB 6700

17.15 IRB 6700LeanID 2.70 m 270 kg

Continued

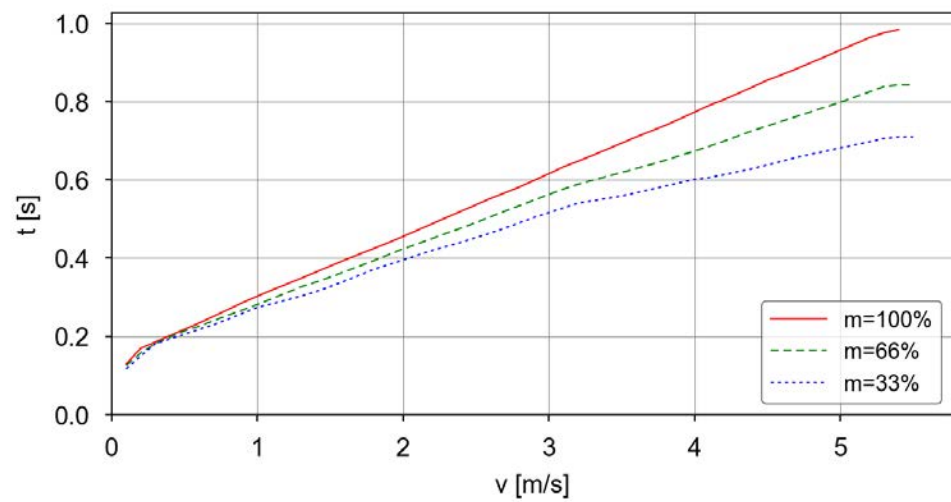
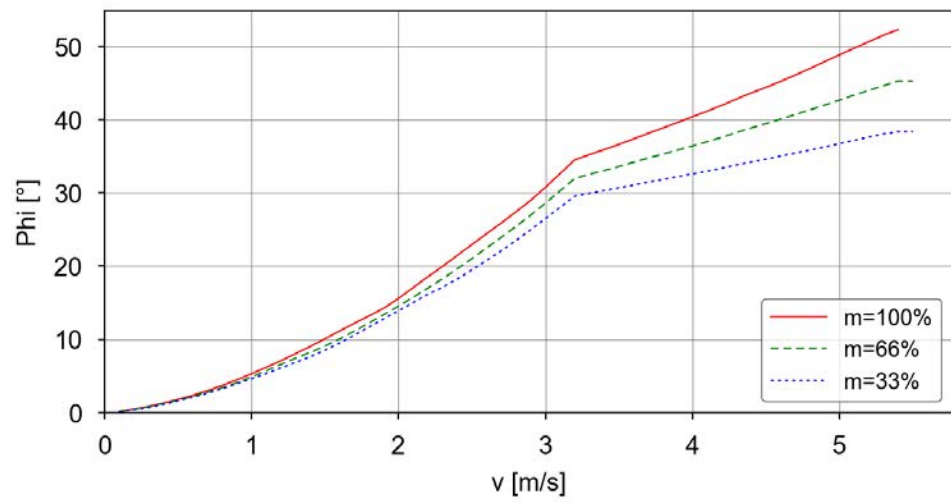


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

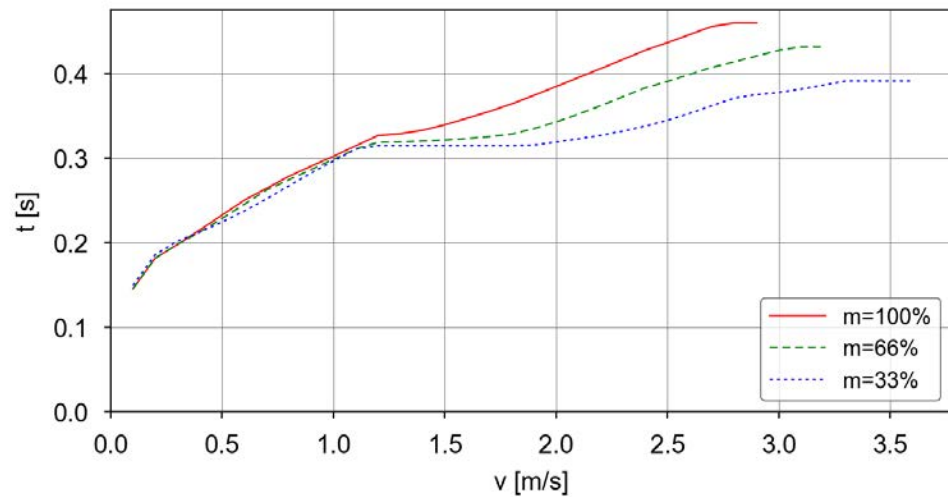
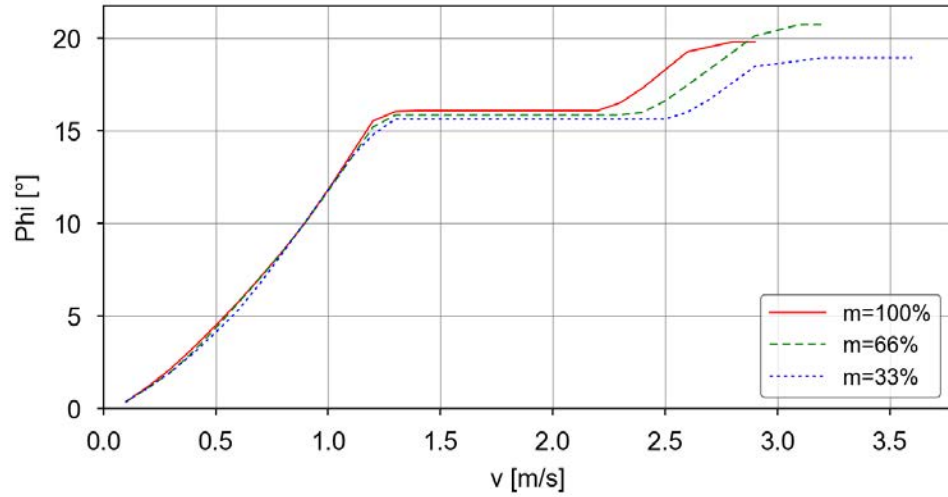
17 IRB 6700

17.15 IRB 6700LeanID 2.70 m 270 kg

Continued

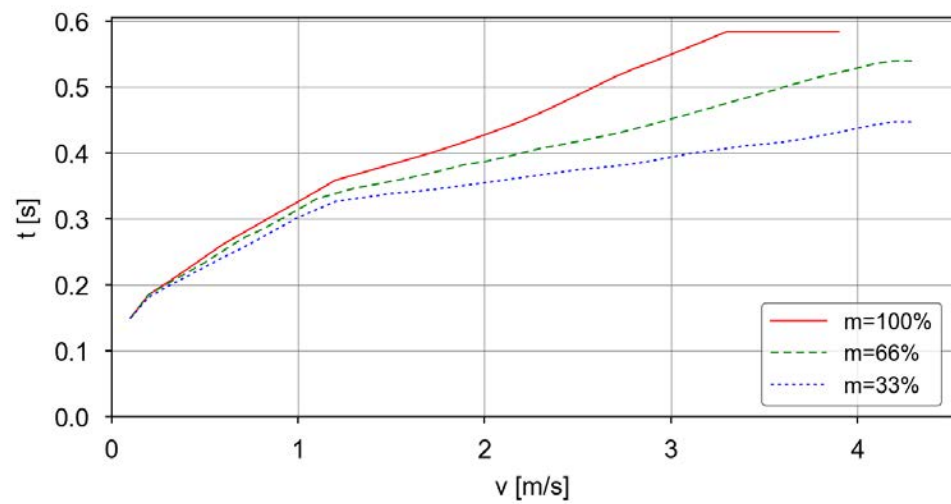
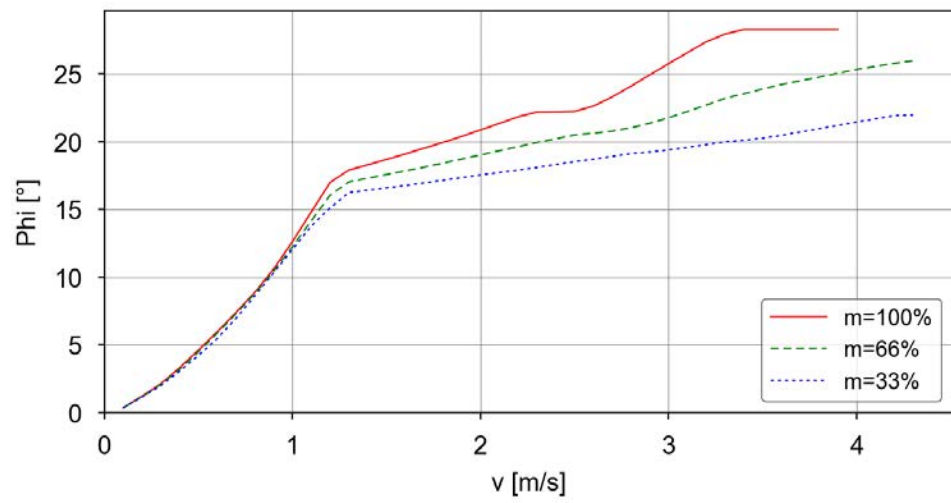
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



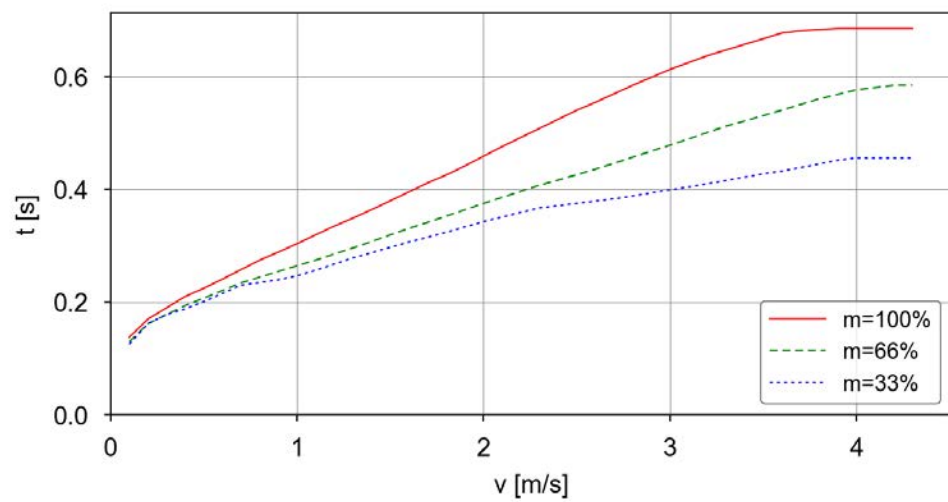
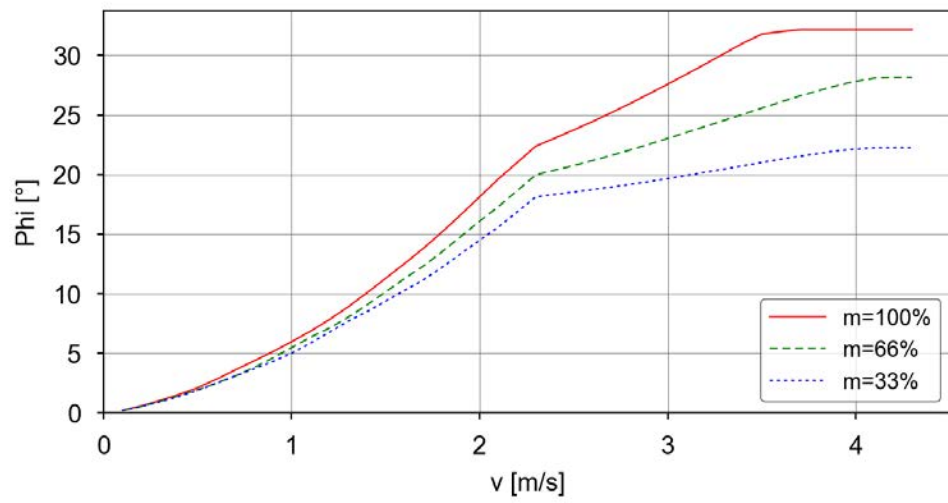
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

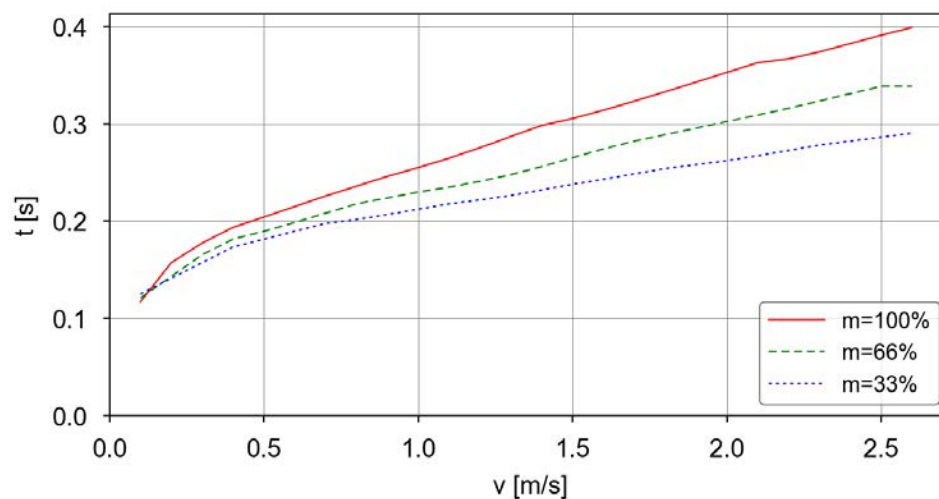
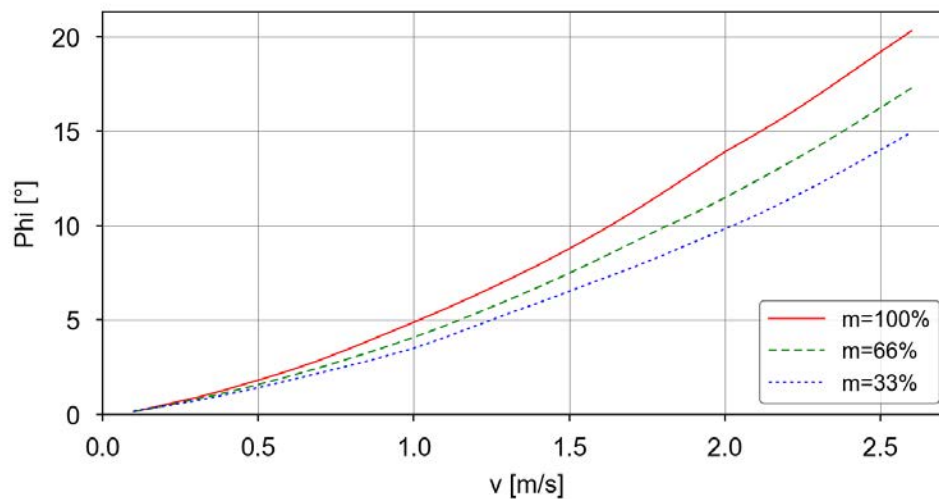
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



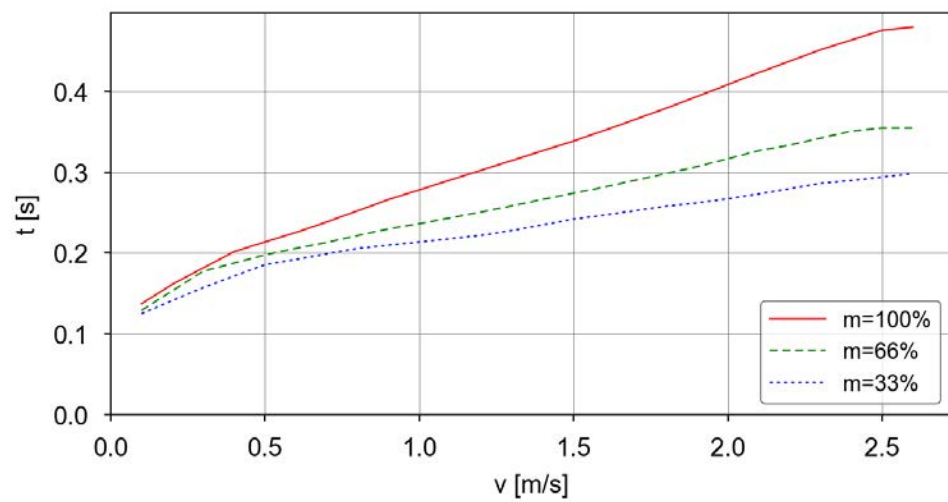
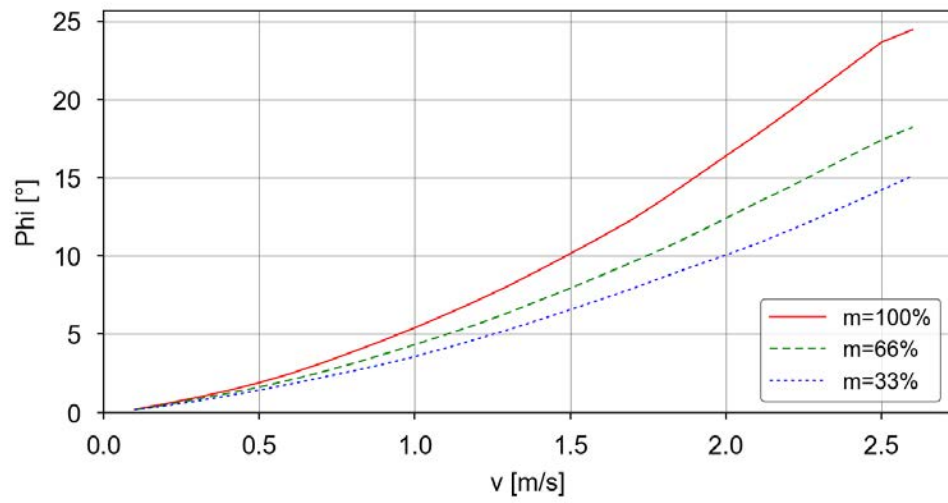
Continues on next page

17 IRB 6700

17.15 IRB 6700LeanID 2.70 m 270 kg

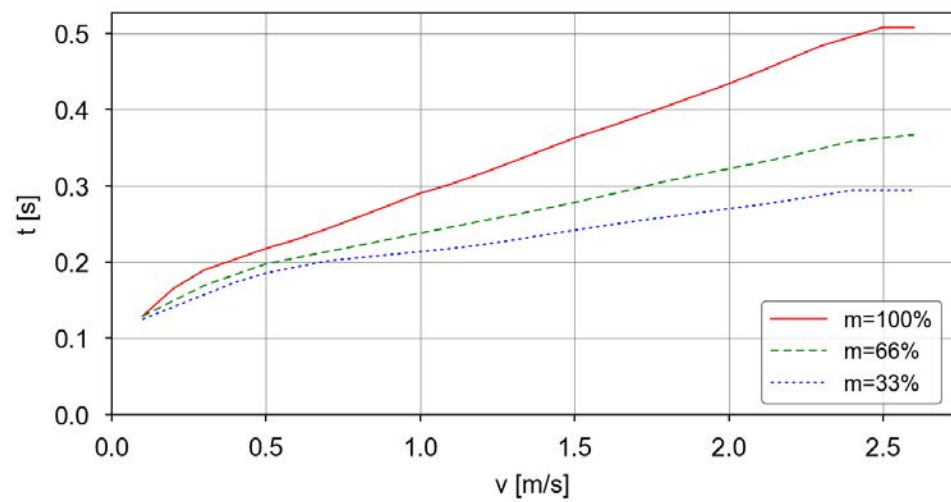
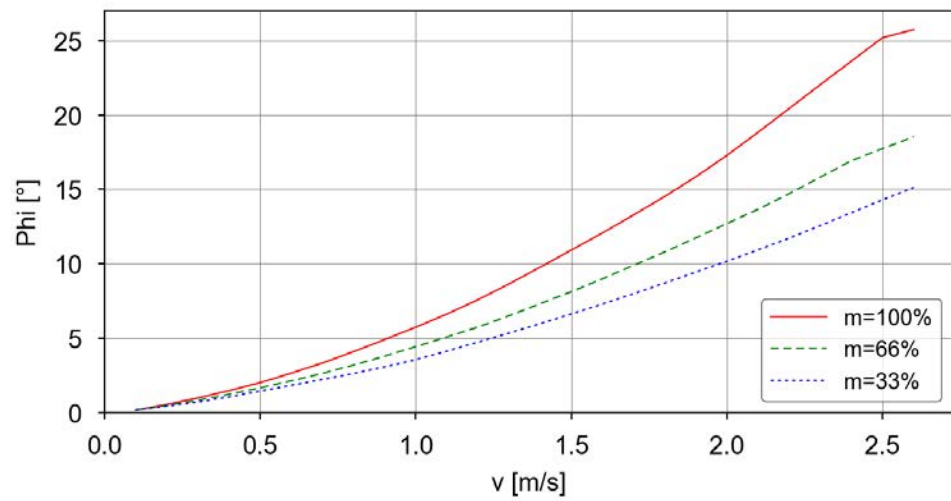
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17.16 IRB 6700LeanID 2.80 m 200 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	39.0	0.68
2	20.3	0.37
3	13.2	0.2

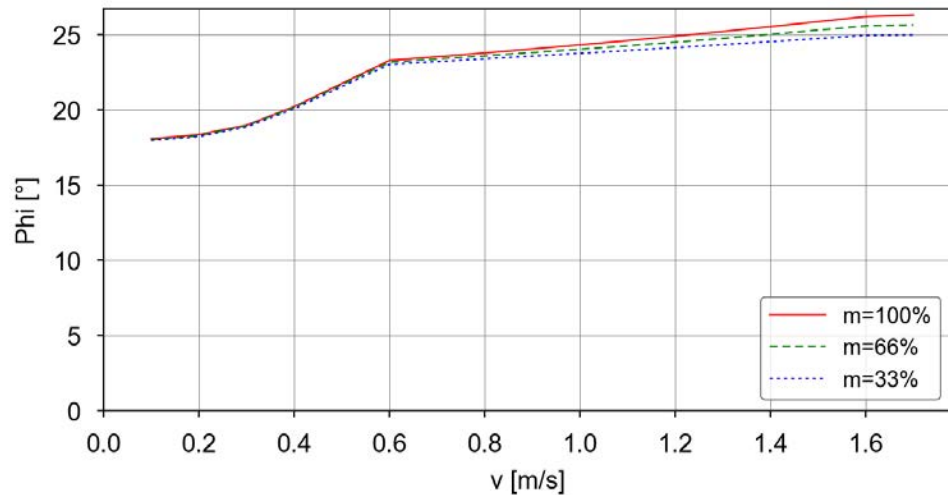
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

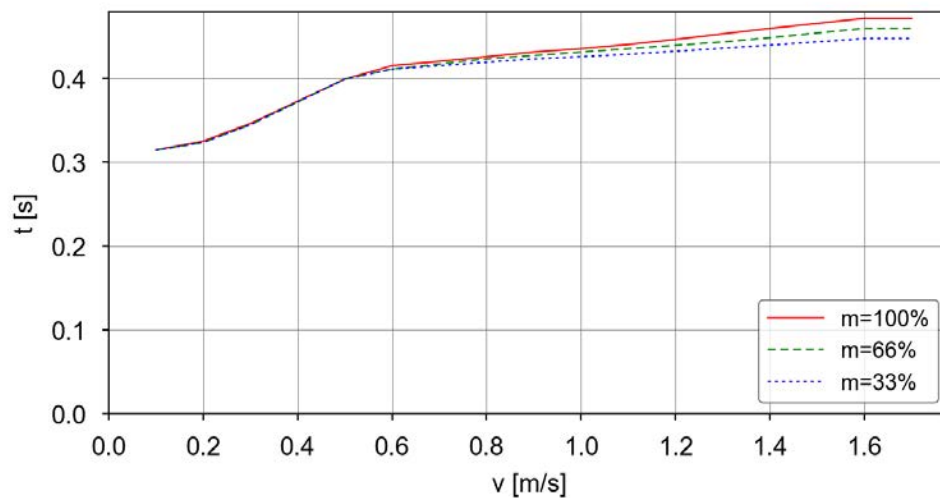
Zone	wcp min (m)	wcp max (m)
0	0	0.931
1	0.931	1.863
2	1.863	max reach

Category 1, Axis 1

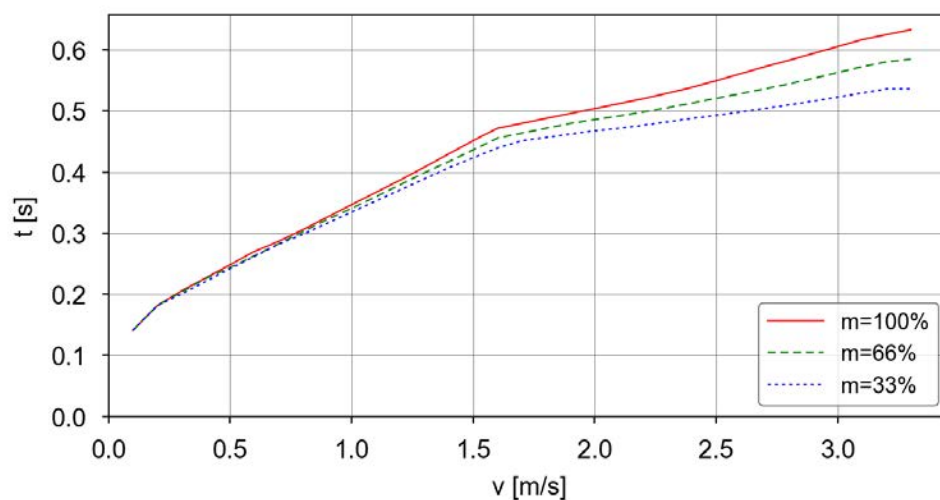
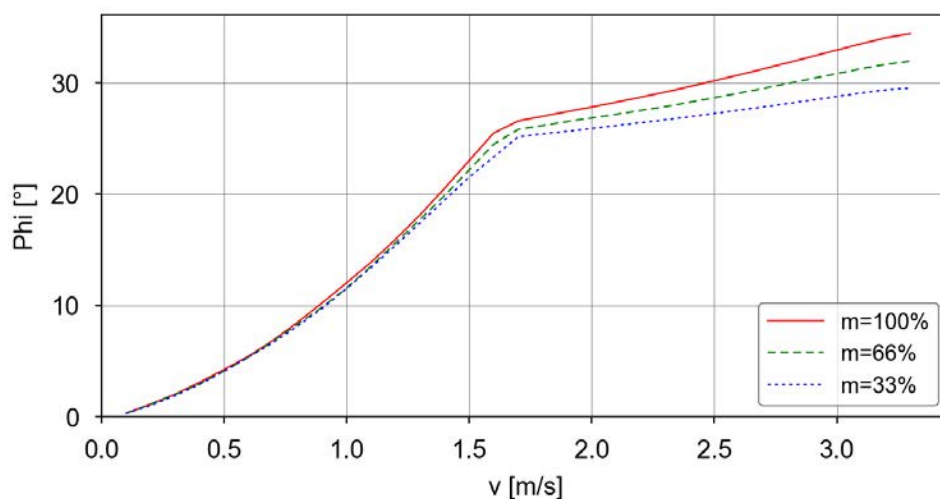
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



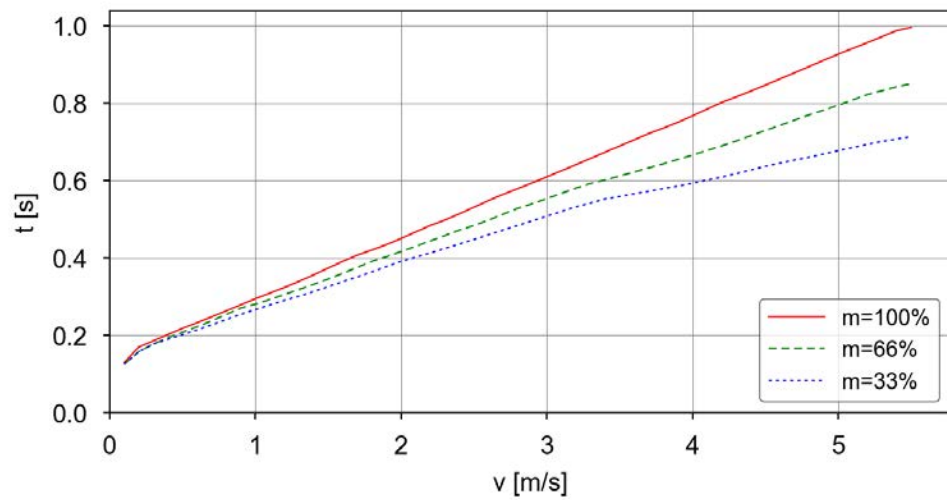
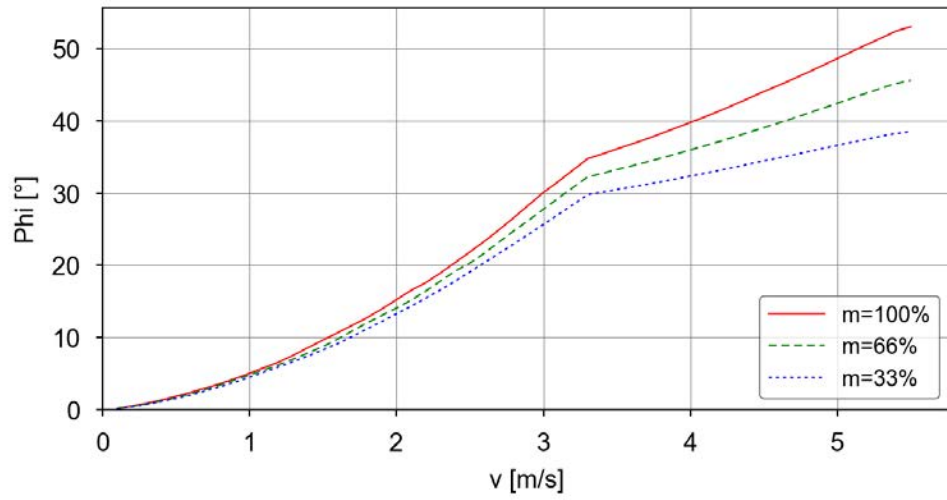
Continues on next page

17 IRB 6700

17.16 IRB 6700LeanID 2.80 m 200 kg

Continued

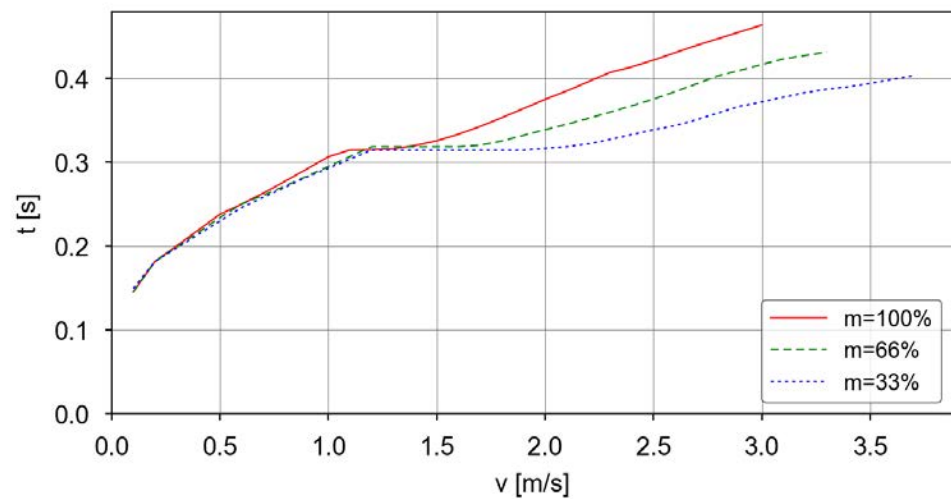
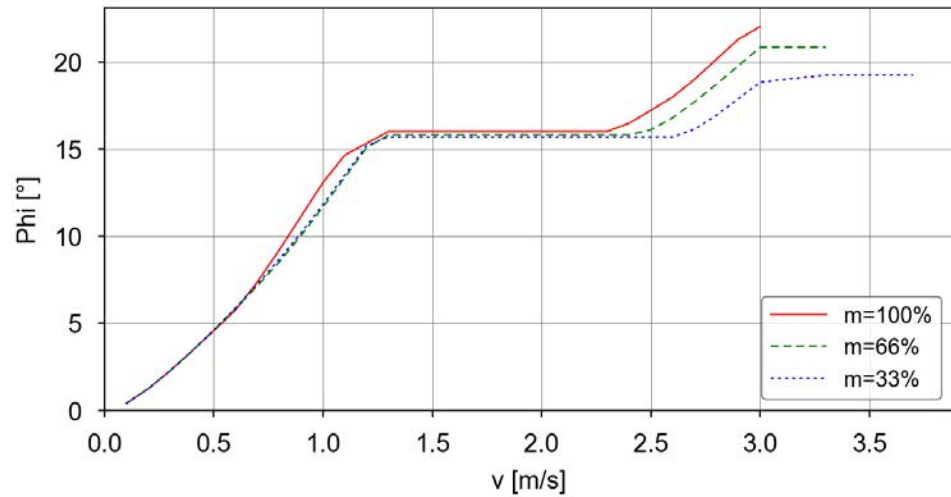
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



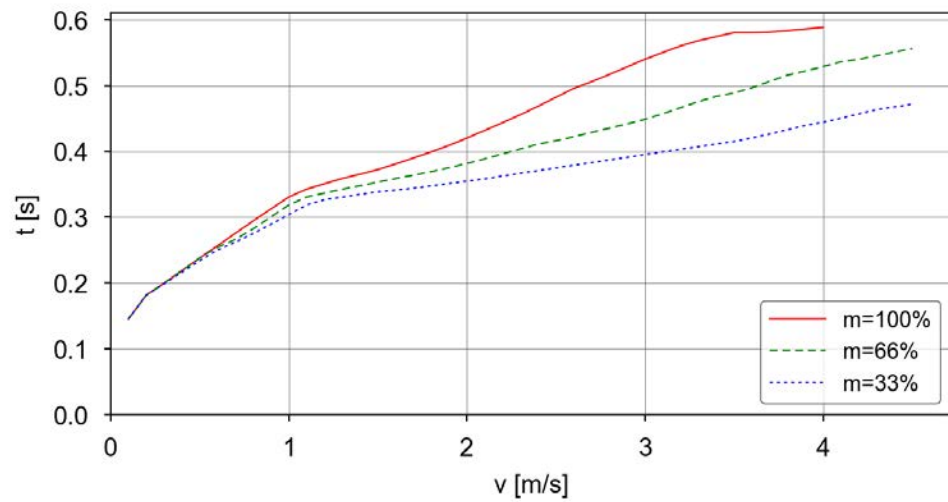
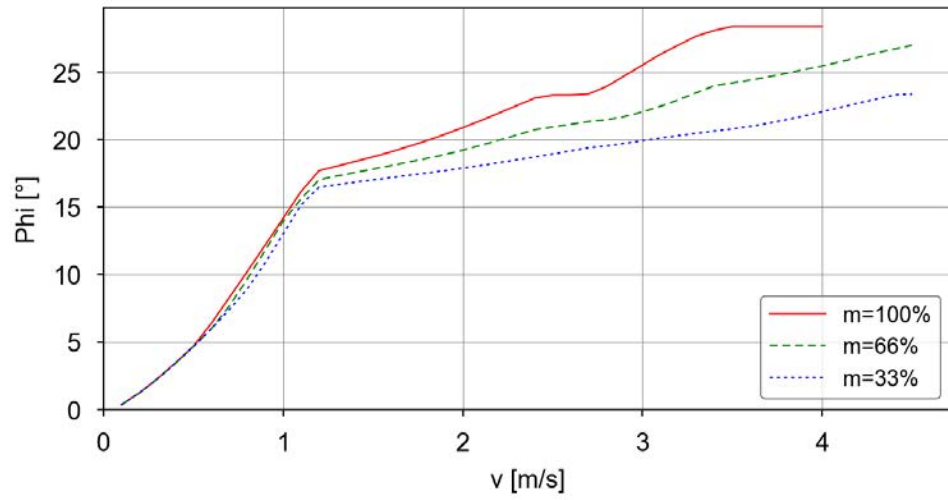
Continues on next page

17 IRB 6700

17.16 IRB 6700LeanID 2.80 m 200 kg

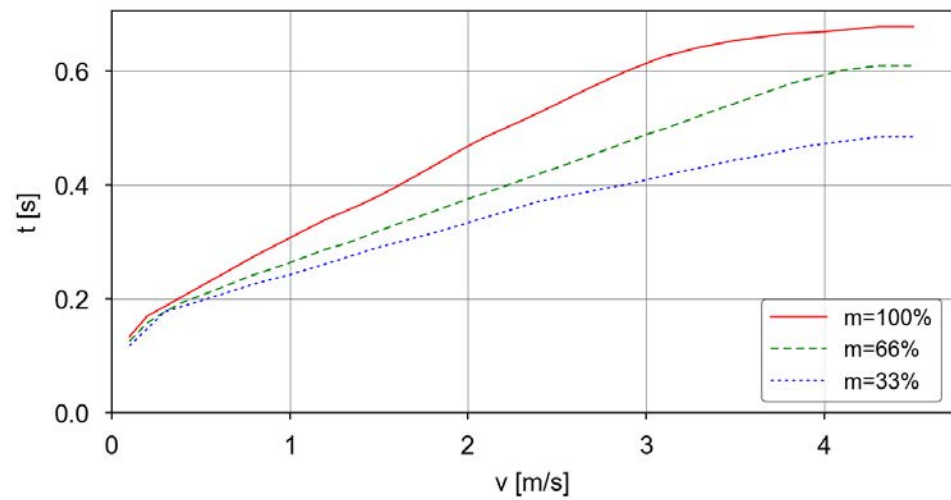
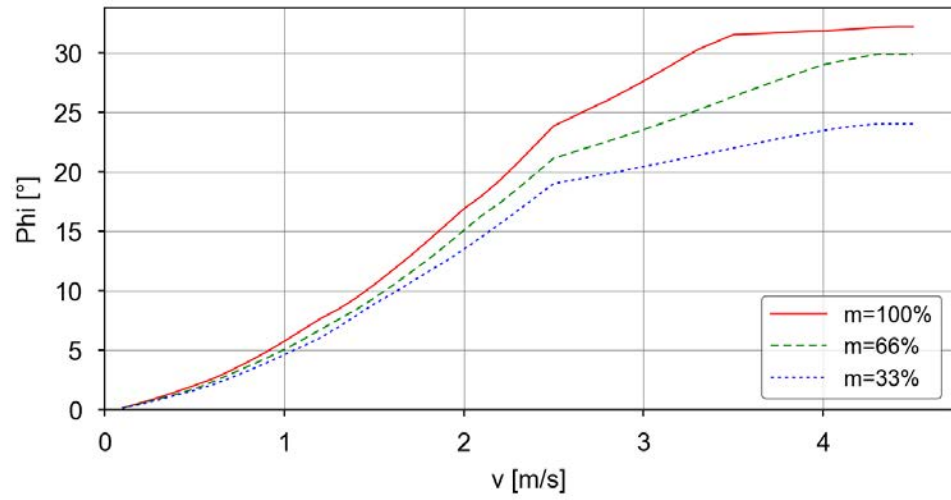
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

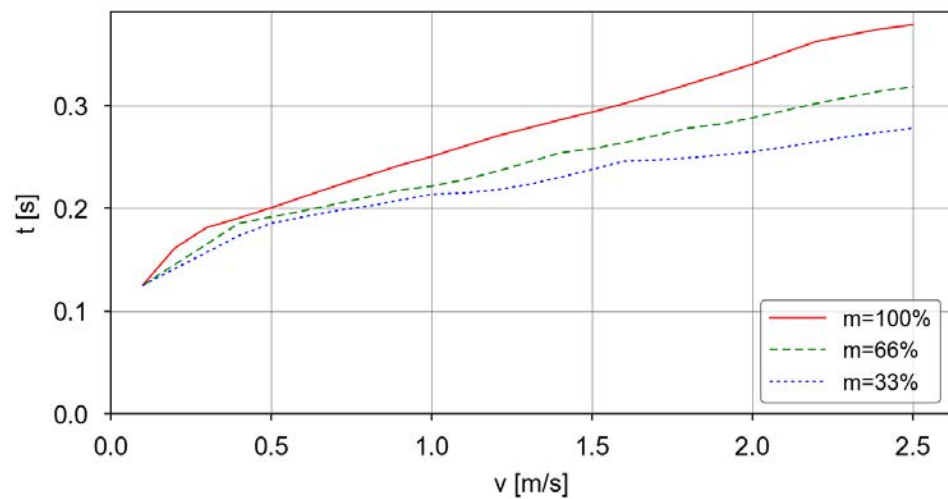
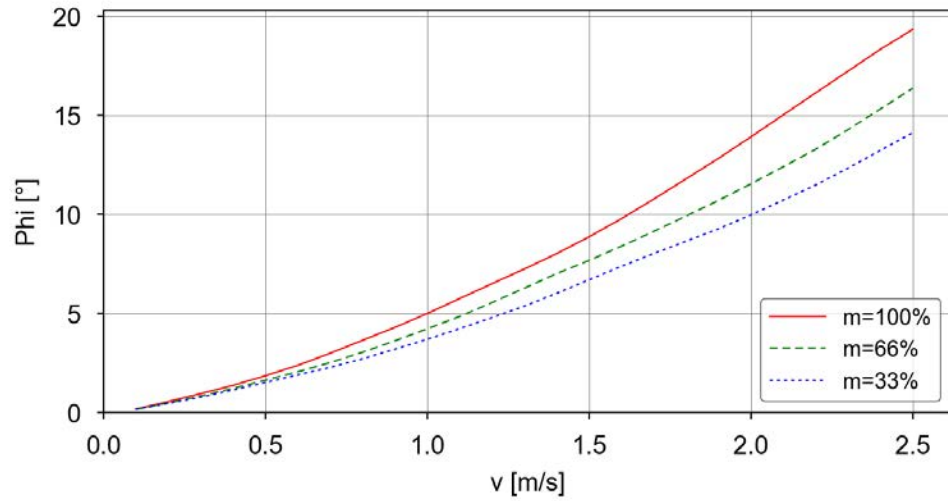
17 IRB 6700

17.16 IRB 6700LeanID 2.80 m 200 kg

Continued

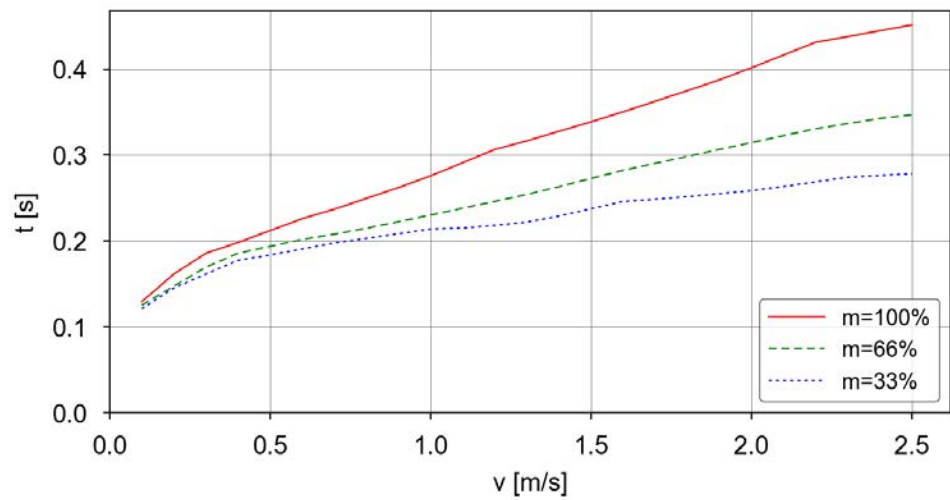
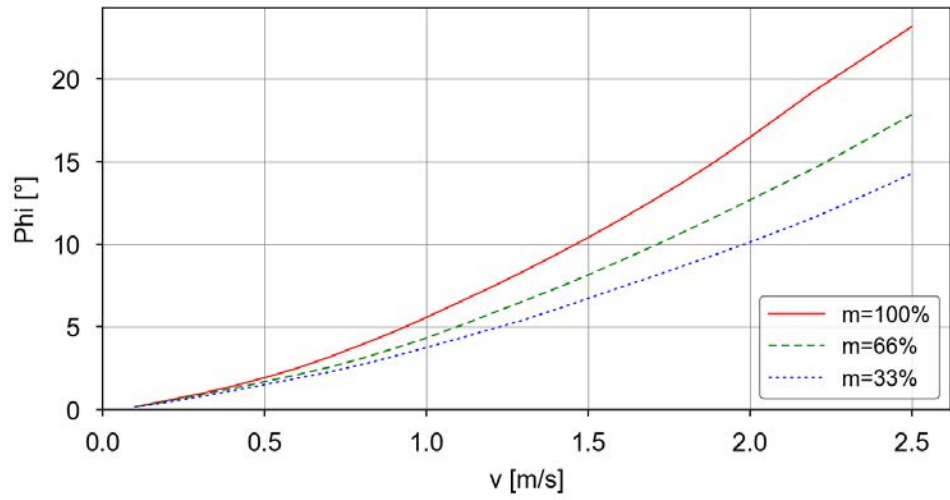
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



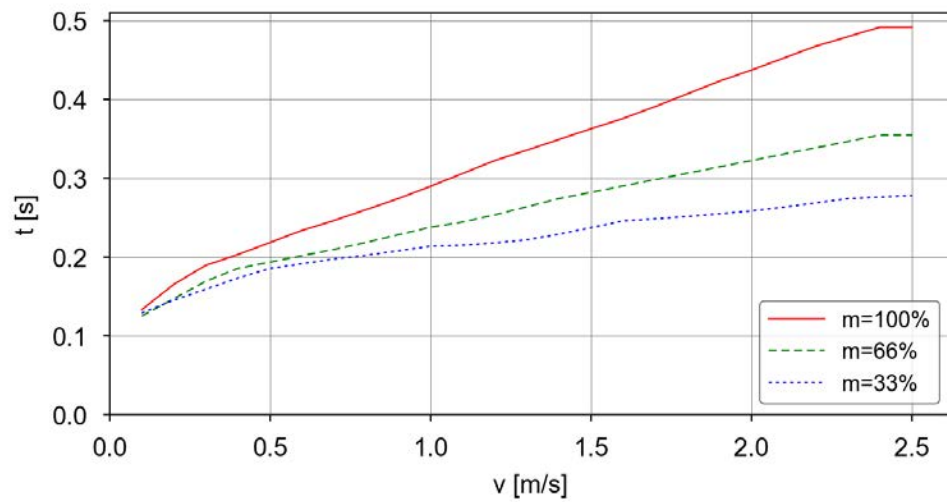
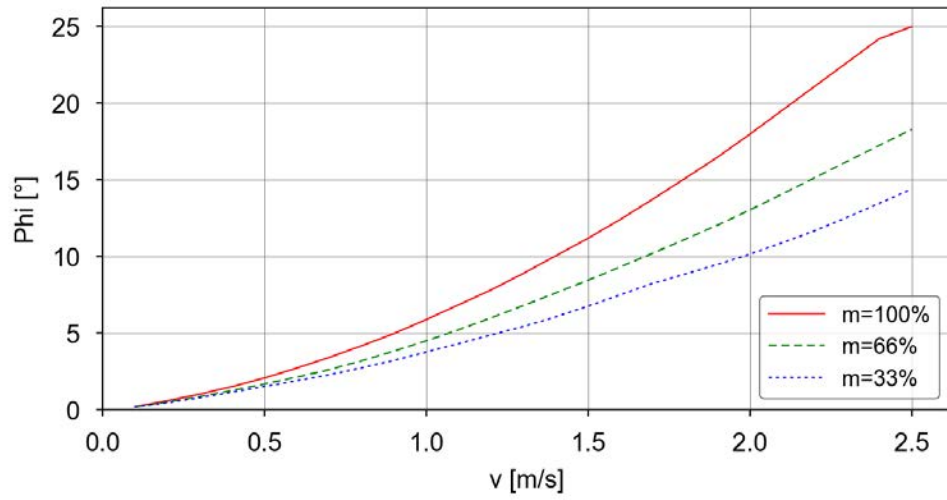
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17.17 IRB 6700LeanID 2.85 m 140 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	38.9	0.61
2	25.0	0.37
3	17.7	0.22

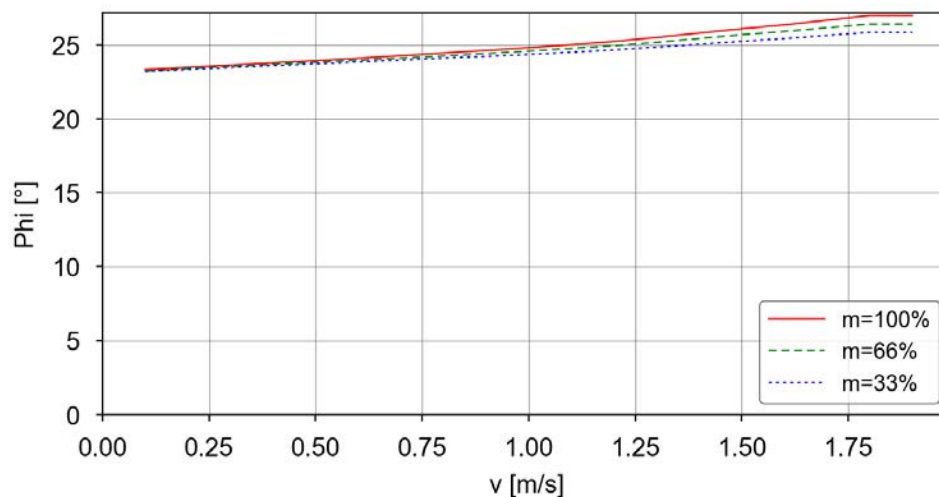
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.949
1	0.949	1.898
2	1.898	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

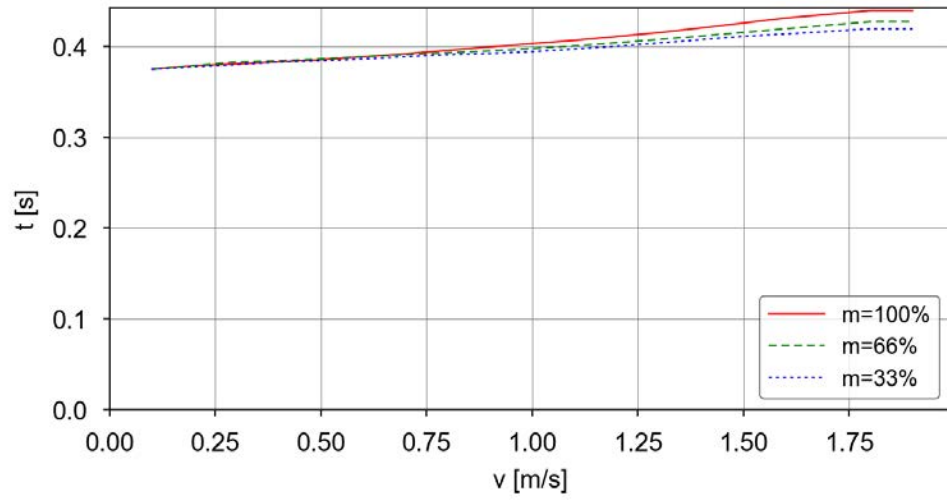


Continues on next page

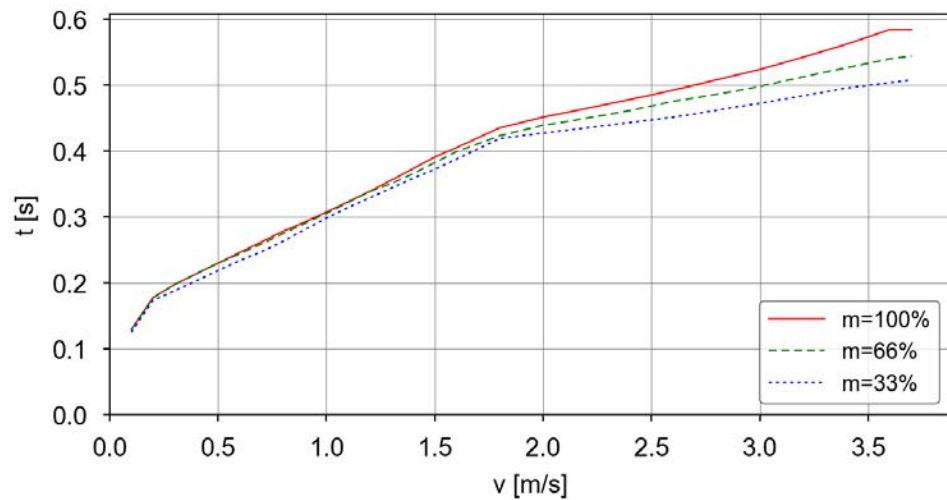
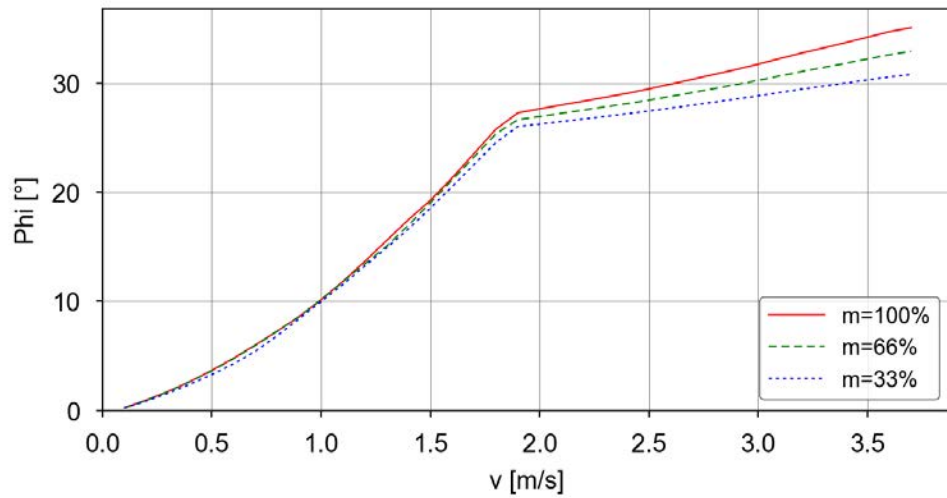
17 IRB 6700

17.17 IRB 6700LeanID 2.85 m 140 kg

Continued

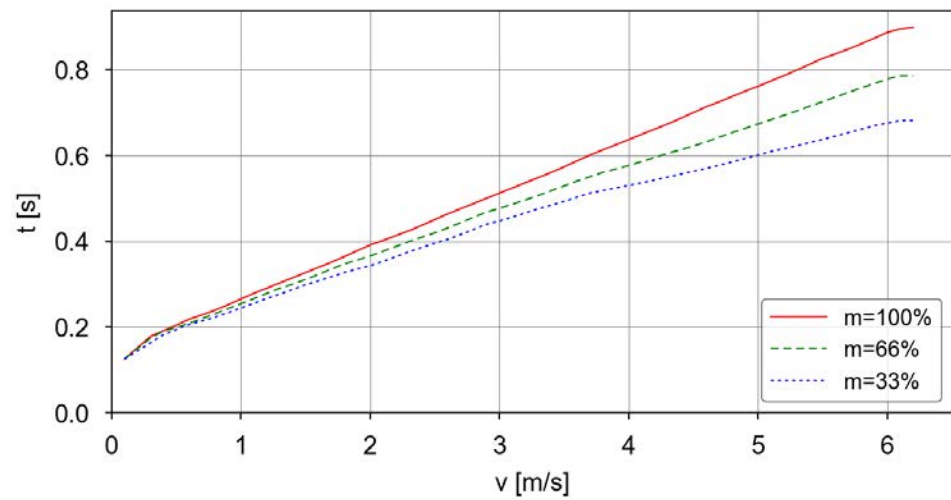
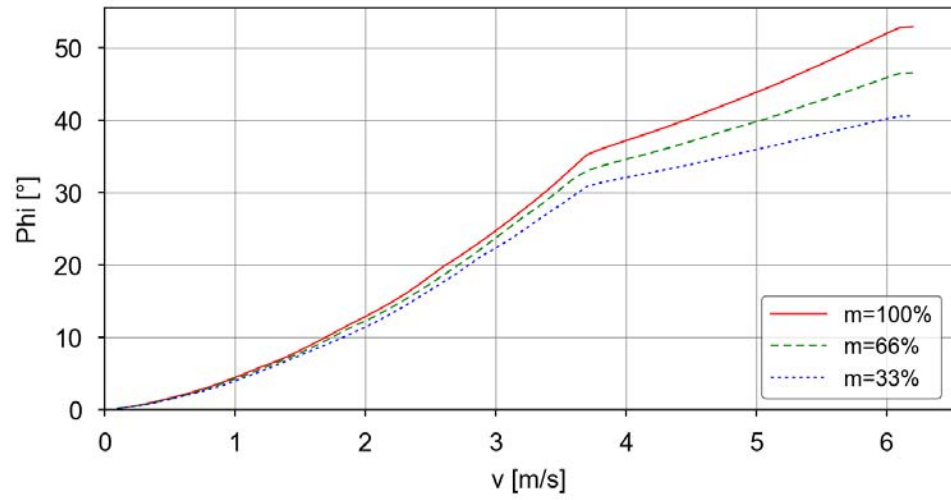


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

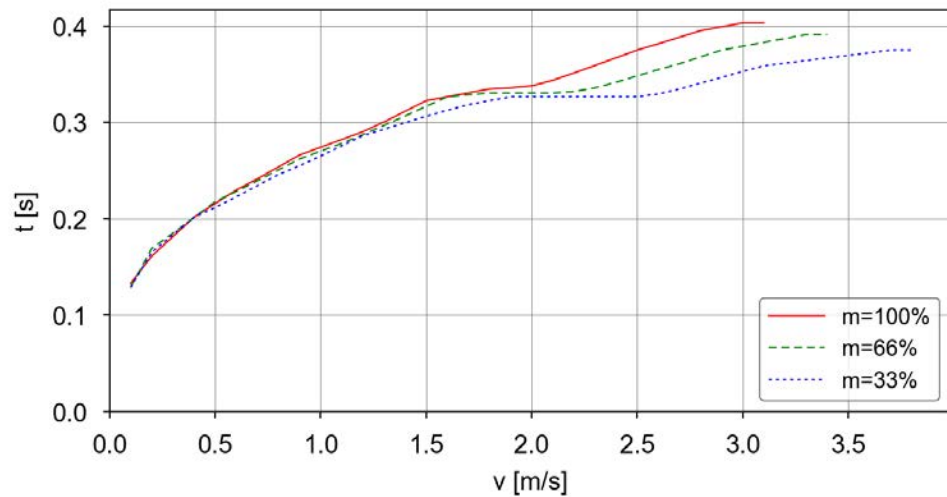
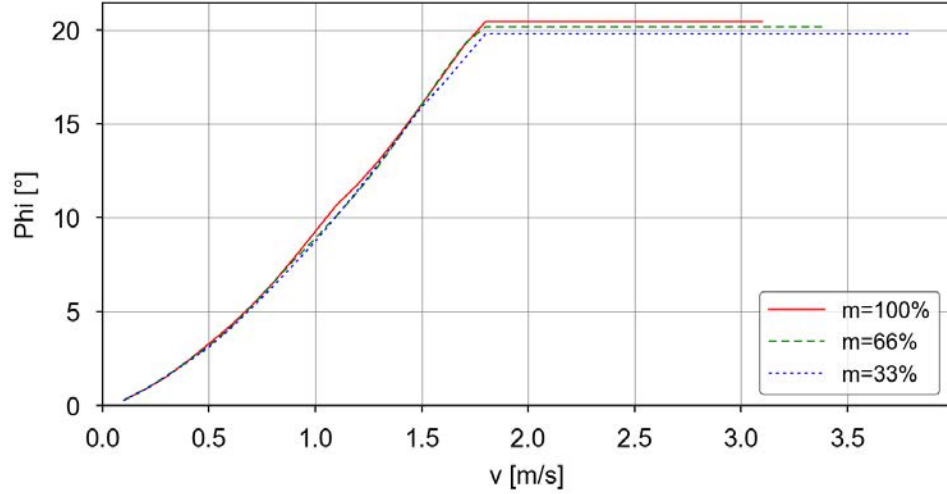
17 IRB 6700

17.17 IRB 6700LeanID 2.85 m 140 kg

Continued

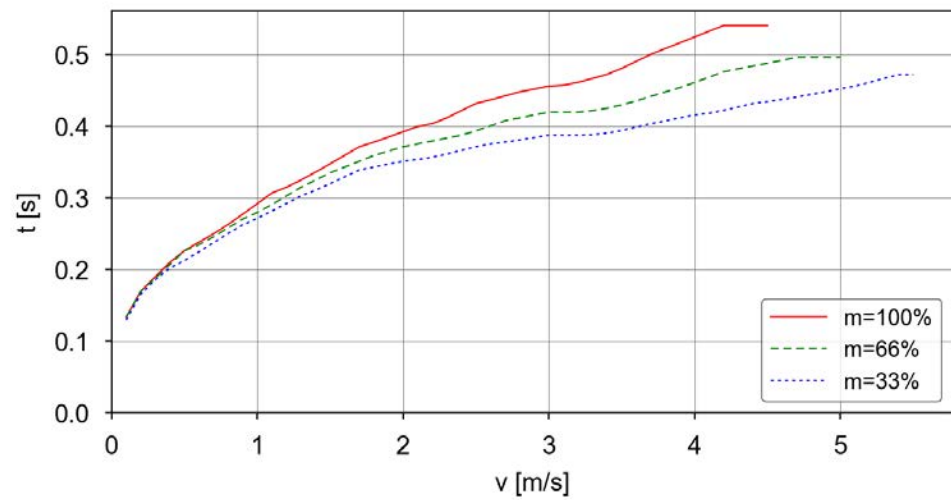
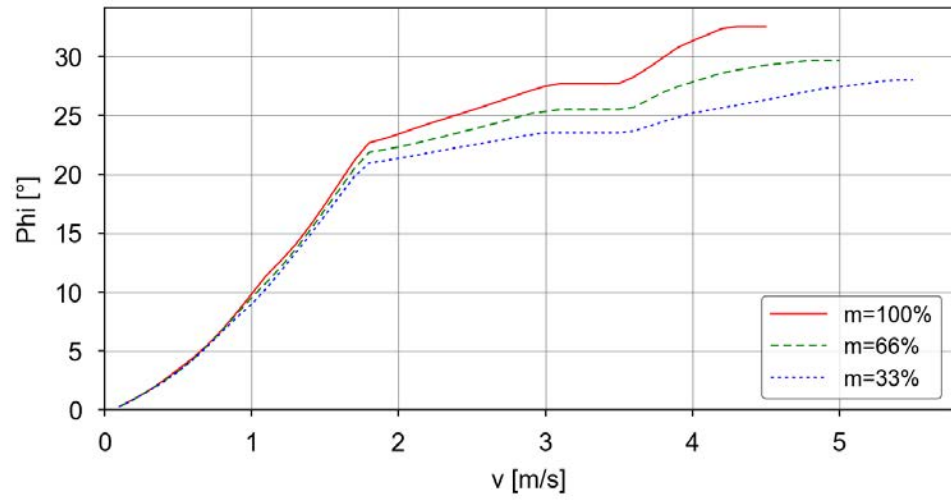
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



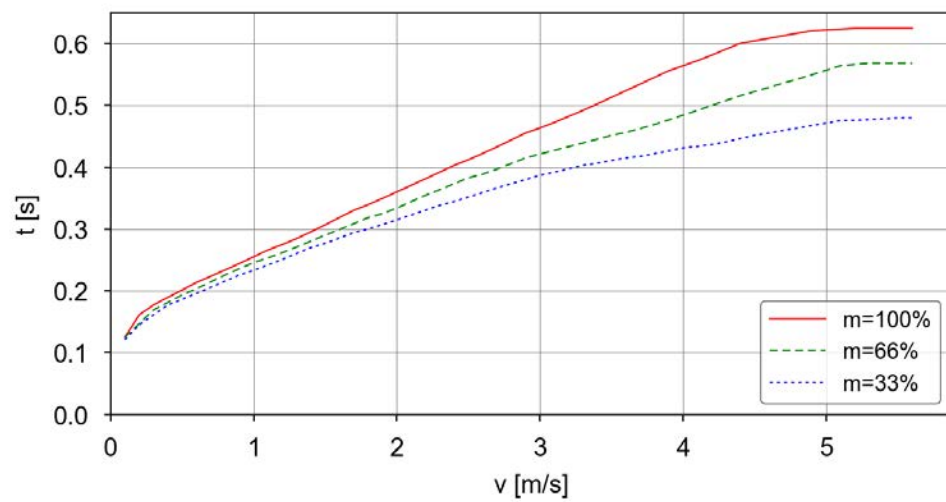
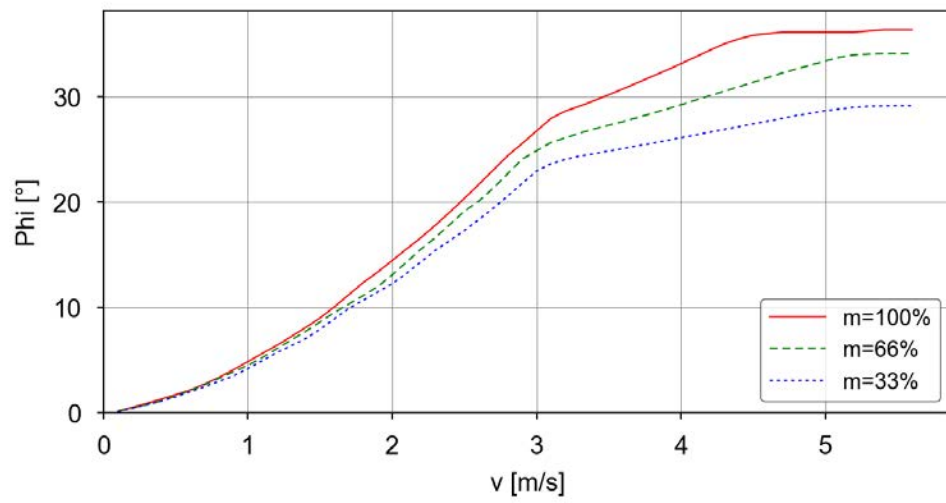
Continues on next page

17 IRB 6700

17.17 IRB 6700LeanID 2.85 m 140 kg

Continued

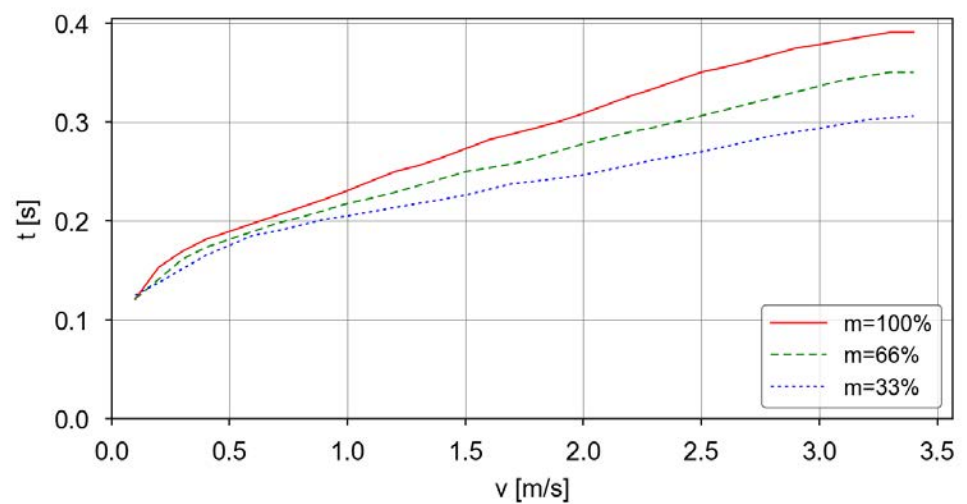
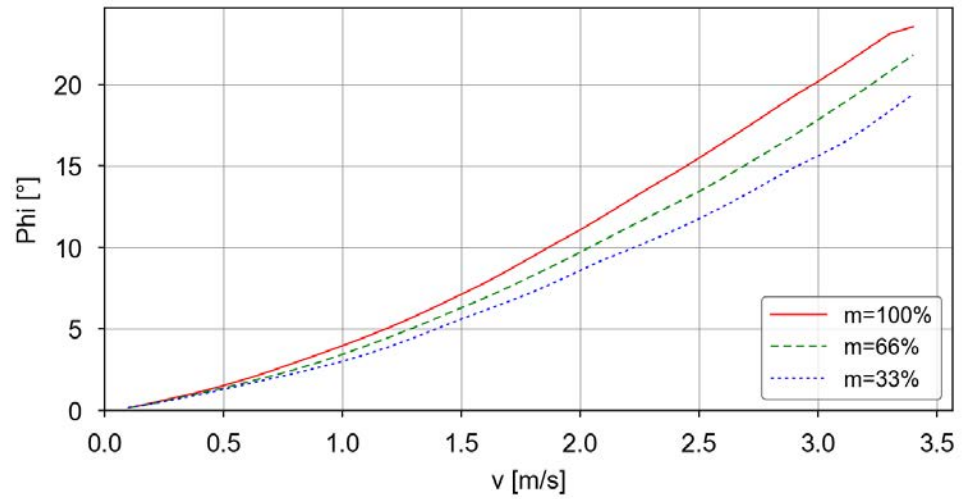
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



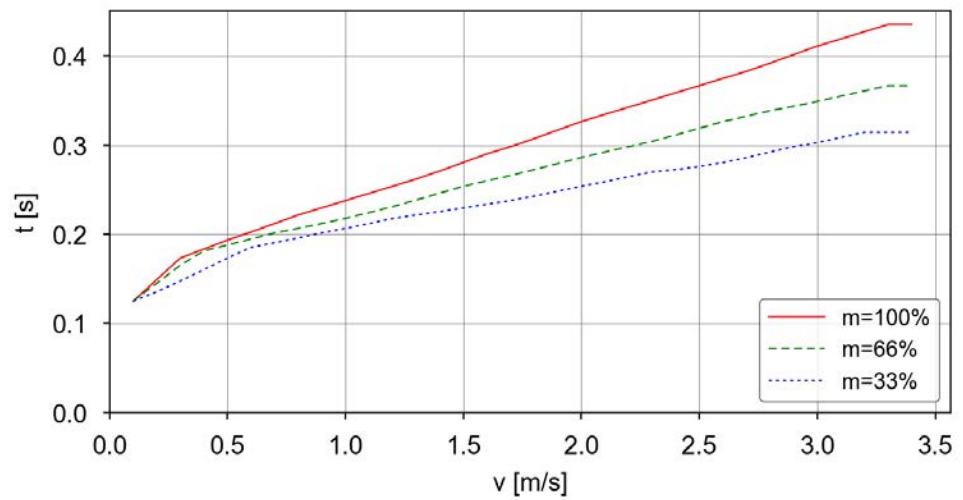
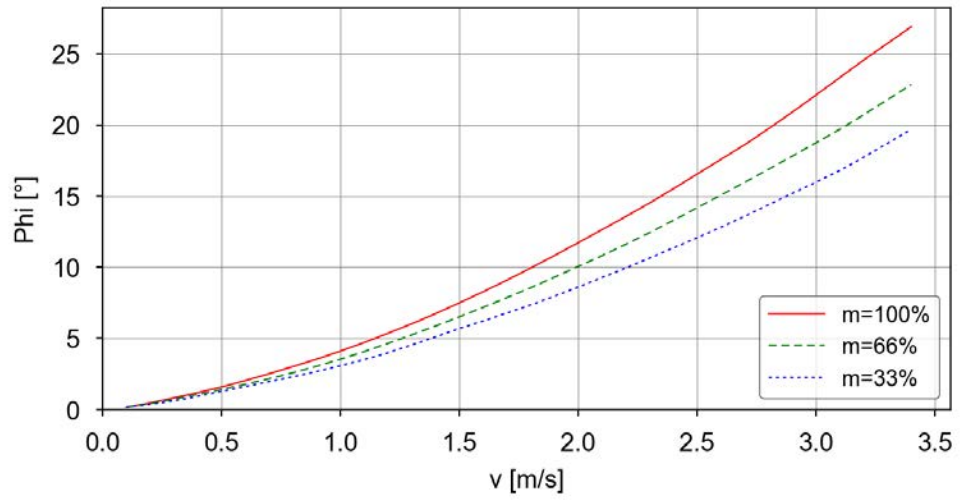
Continues on next page

17 IRB 6700

17.17 IRB 6700LeanID 2.85 m 140 kg

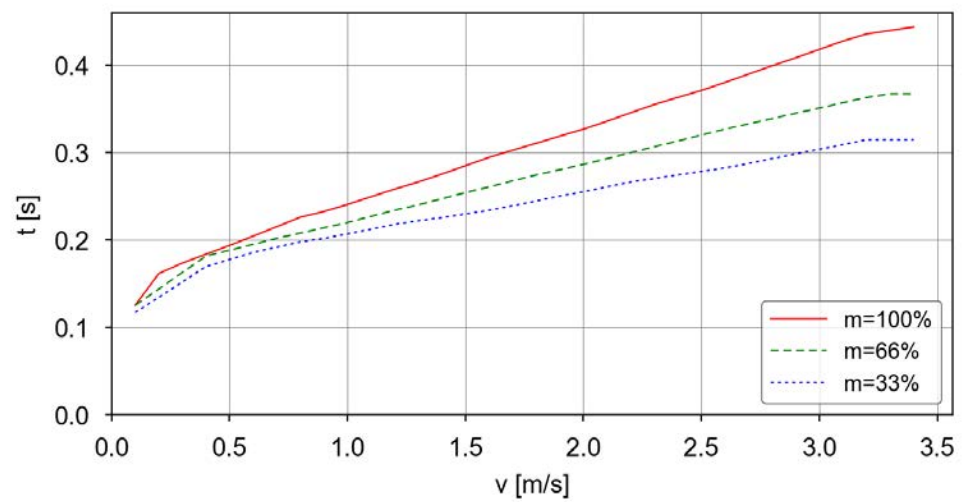
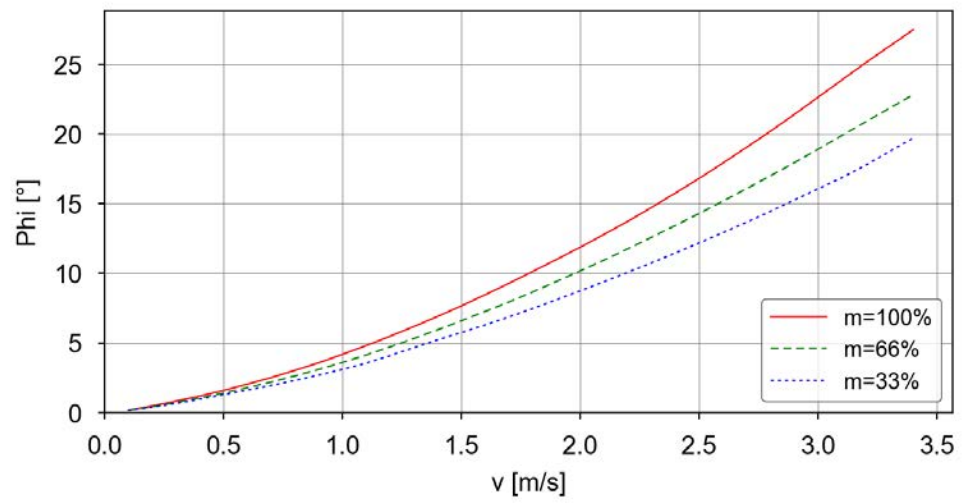
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17.18 IRB 6700LeanID 3.00 m 220 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	36.6	0.63
2	20.9	0.37
3	16.1	0.25

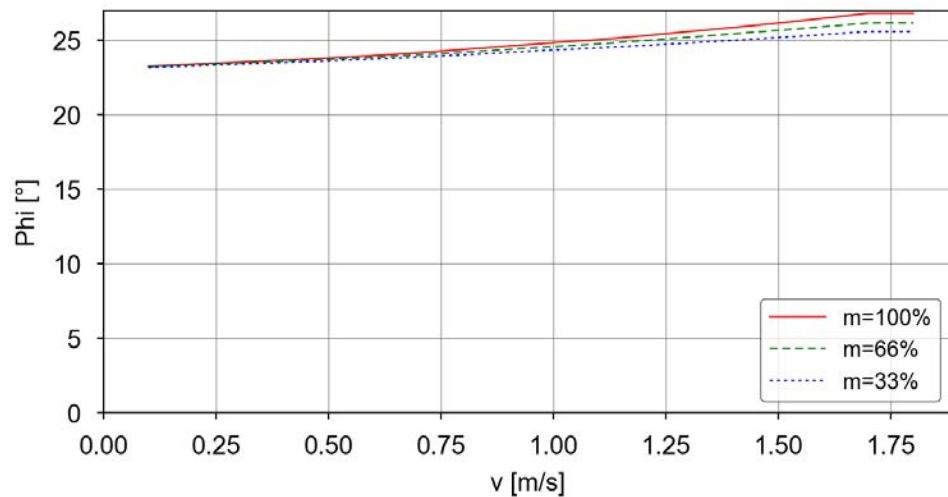
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

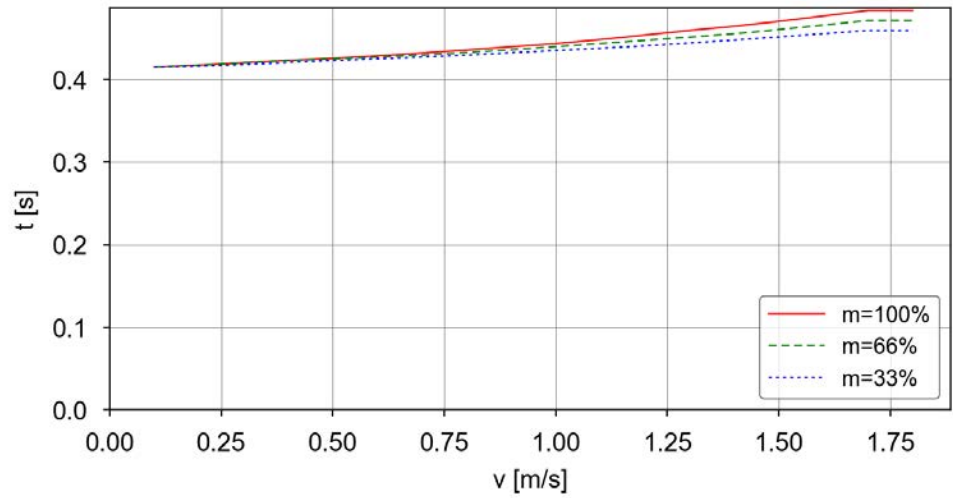
Zone	wcp min (m)	wcp max (m)
0	0	0.989
1	0.989	1.978
2	1.978	max reach

Category 1, Axis 1

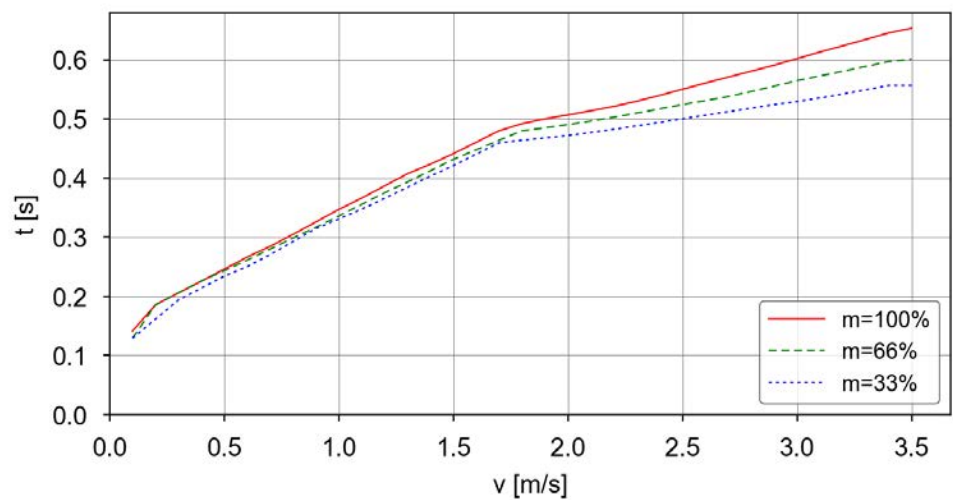
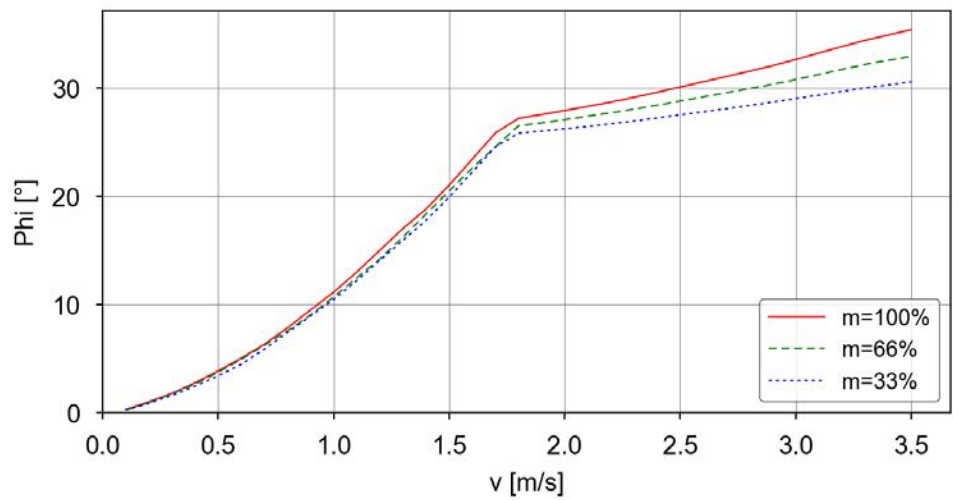
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



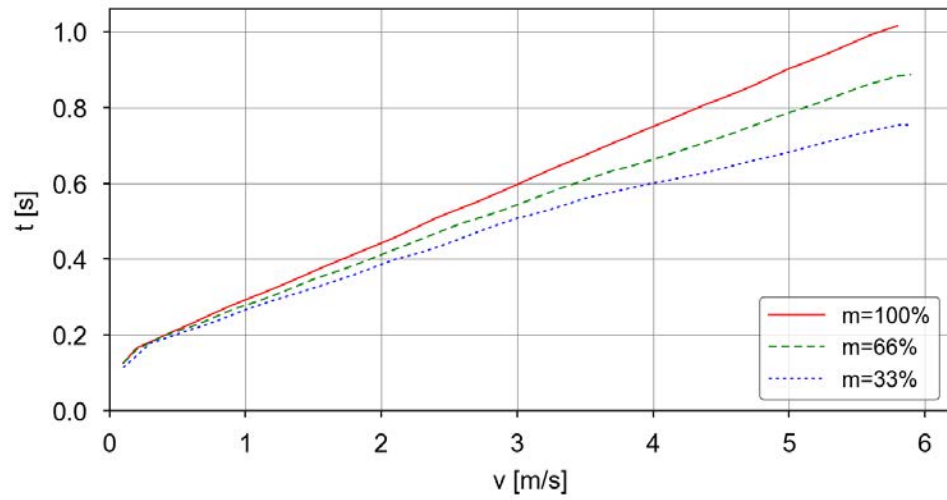
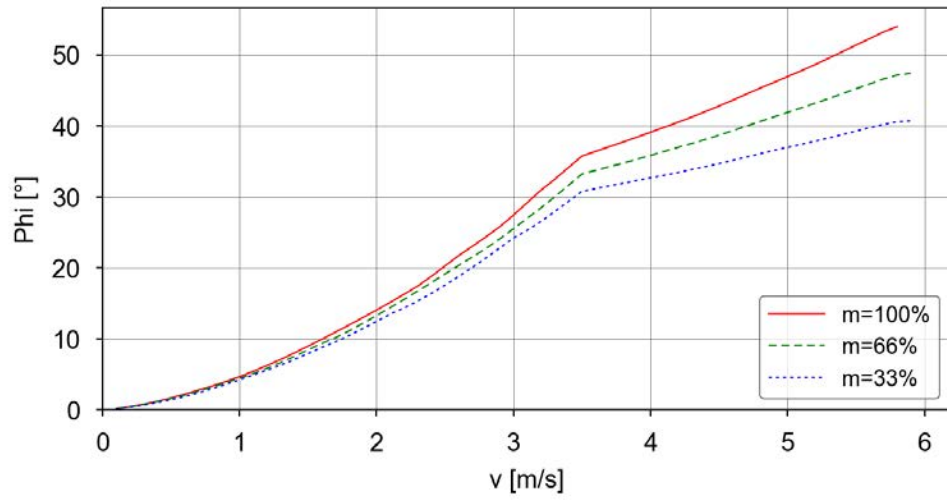
Continues on next page

17 IRB 6700

17.18 IRB 6700LeanID 3.00 m 220 kg

Continued

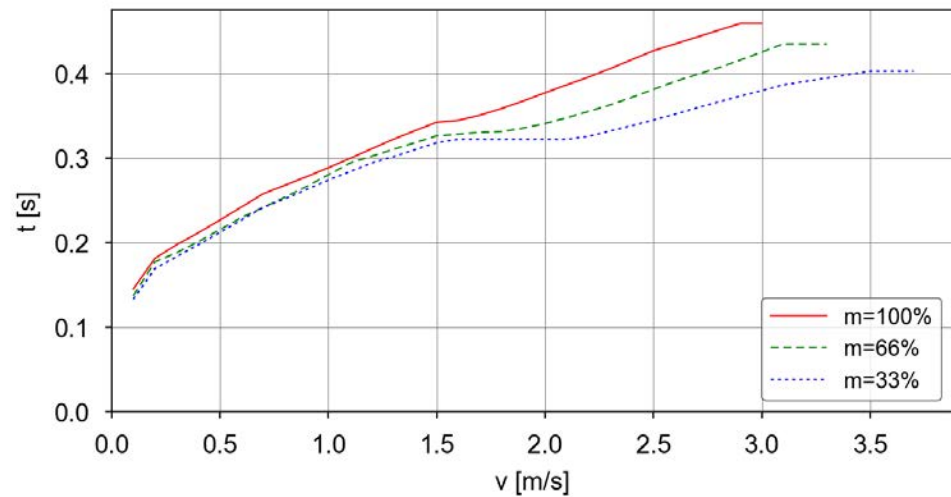
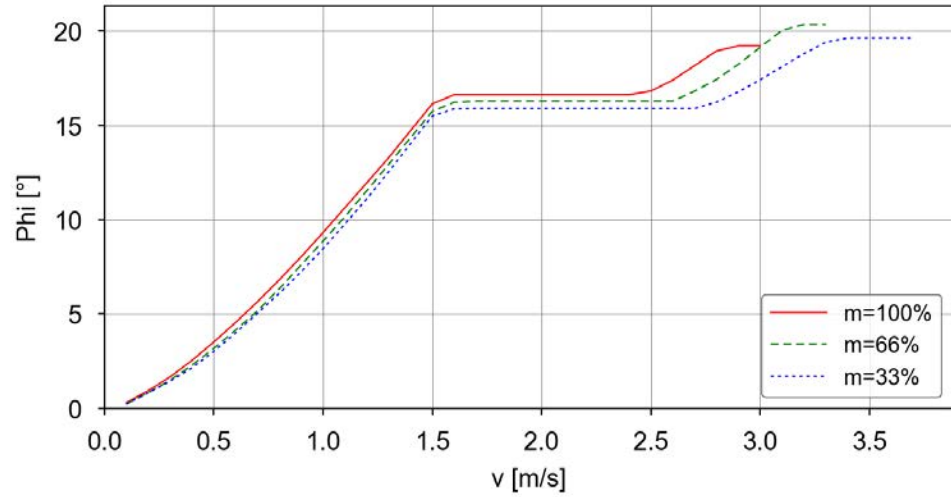
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



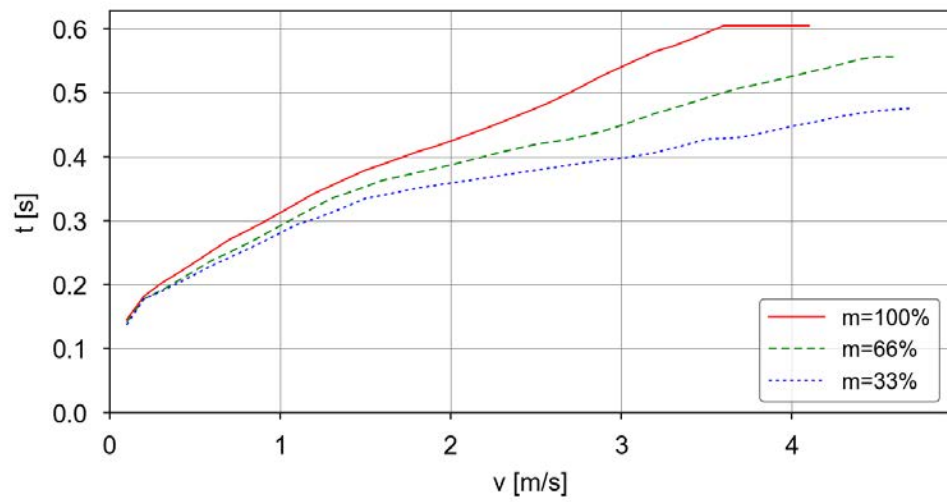
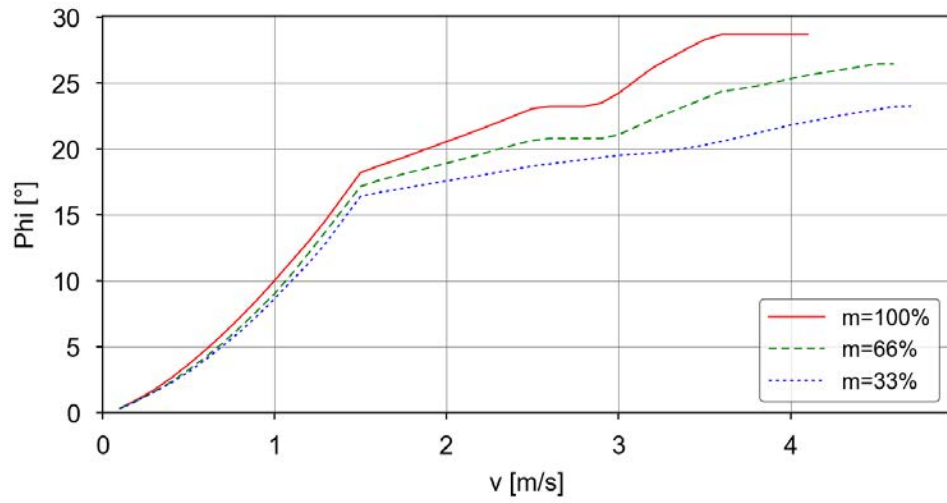
Continues on next page

17 IRB 6700

17.18 IRB 6700LeanID 3.00 m 220 kg

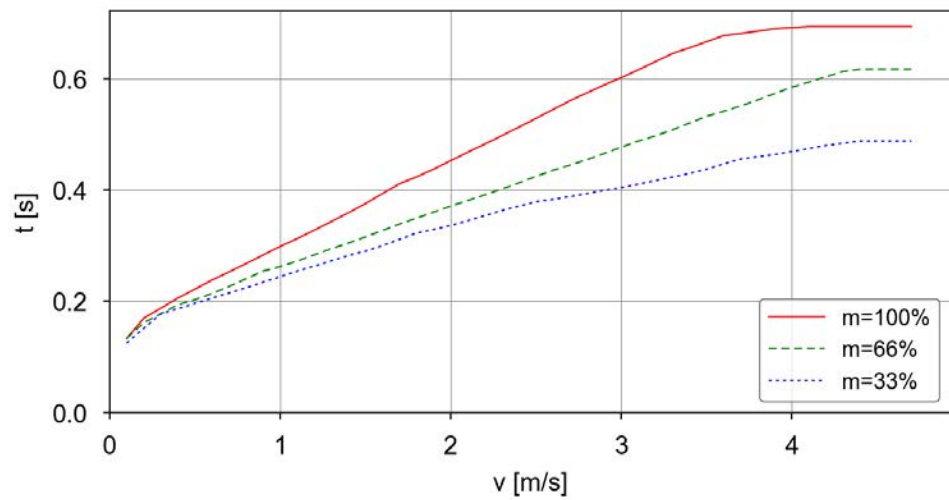
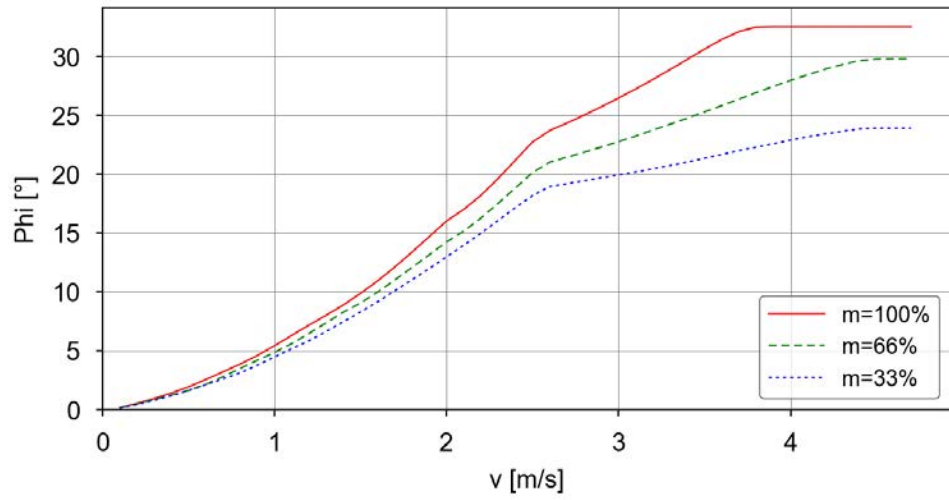
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

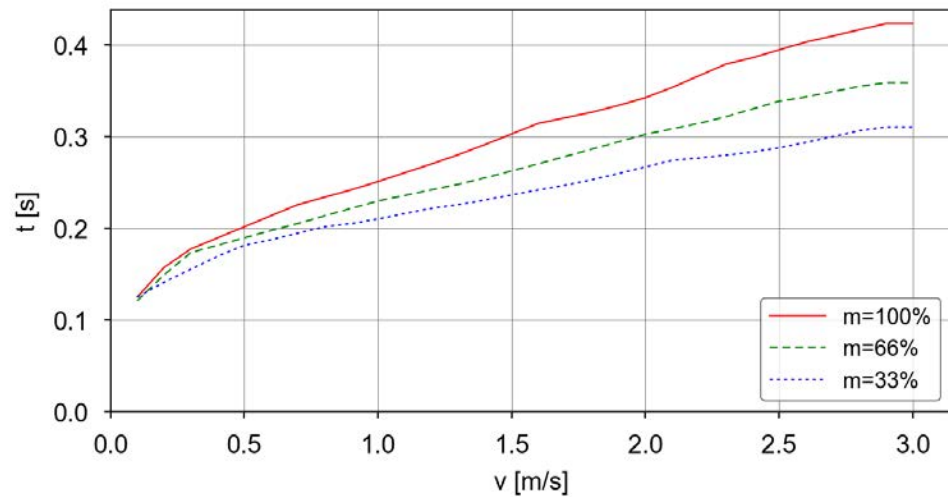
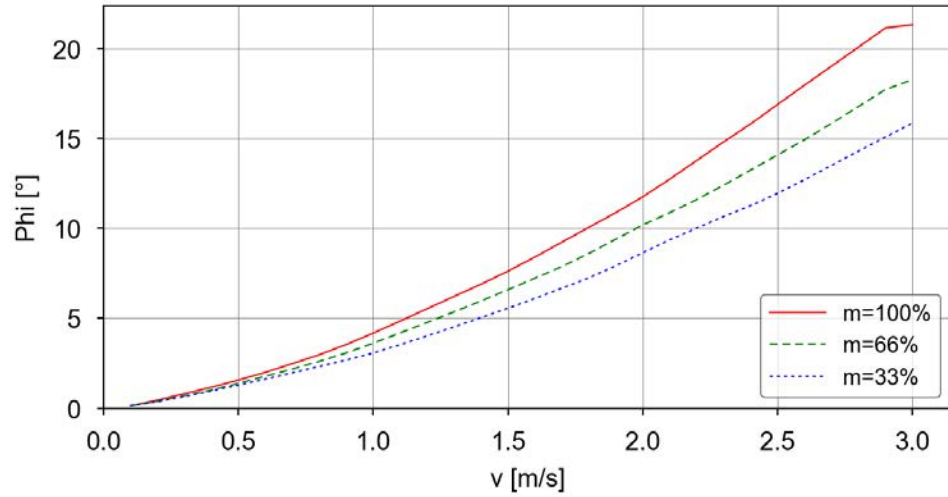
17 IRB 6700

17.18 IRB 6700LeanID 3.00 m 220 kg

Continued

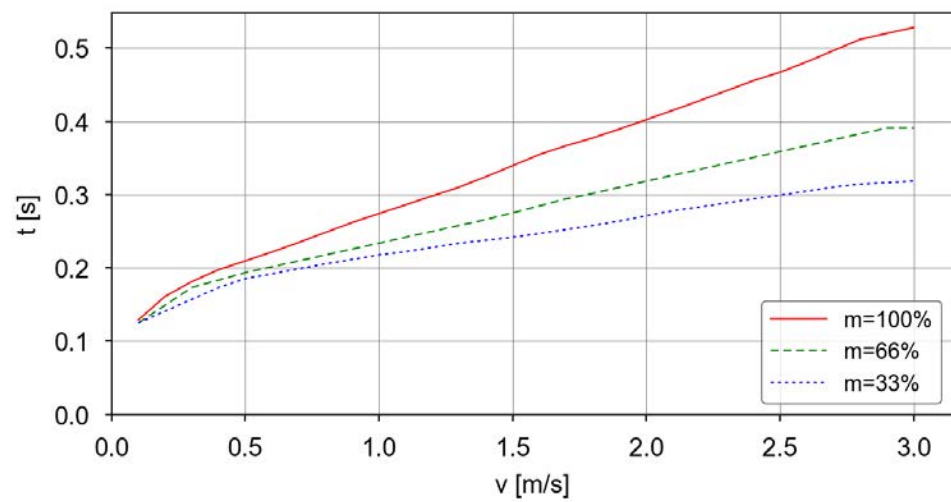
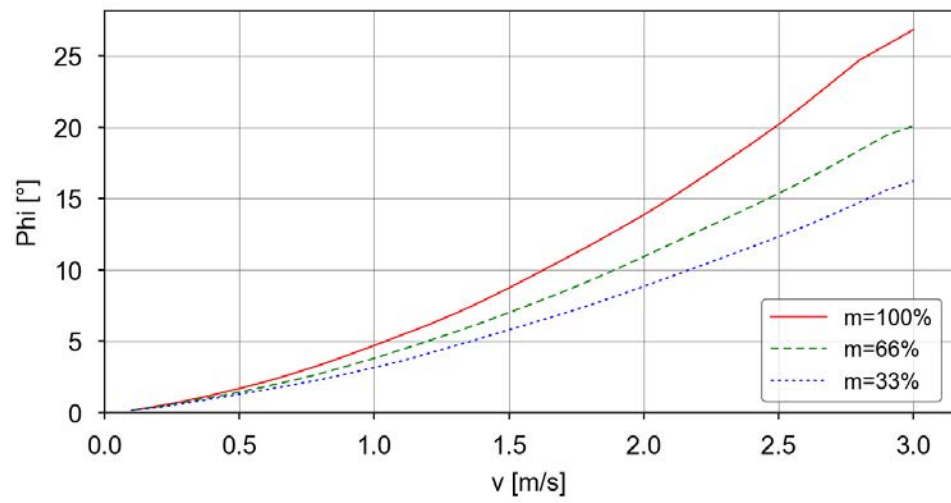
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



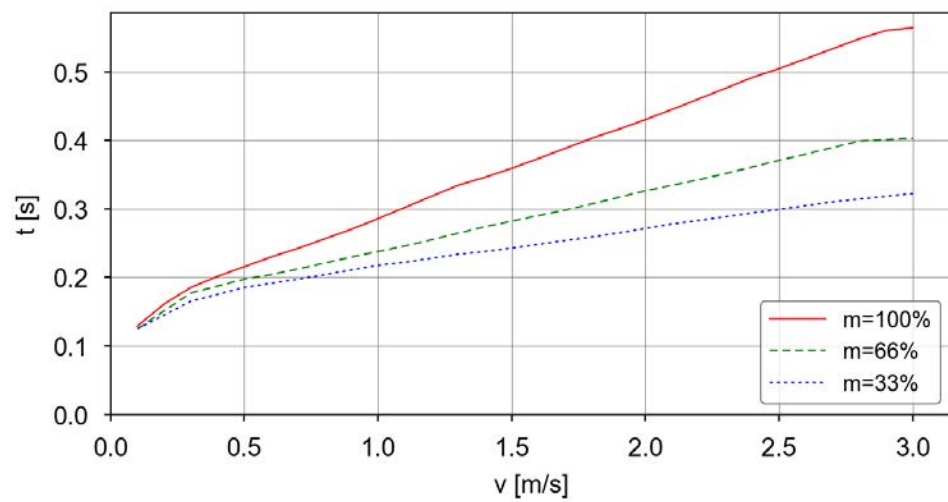
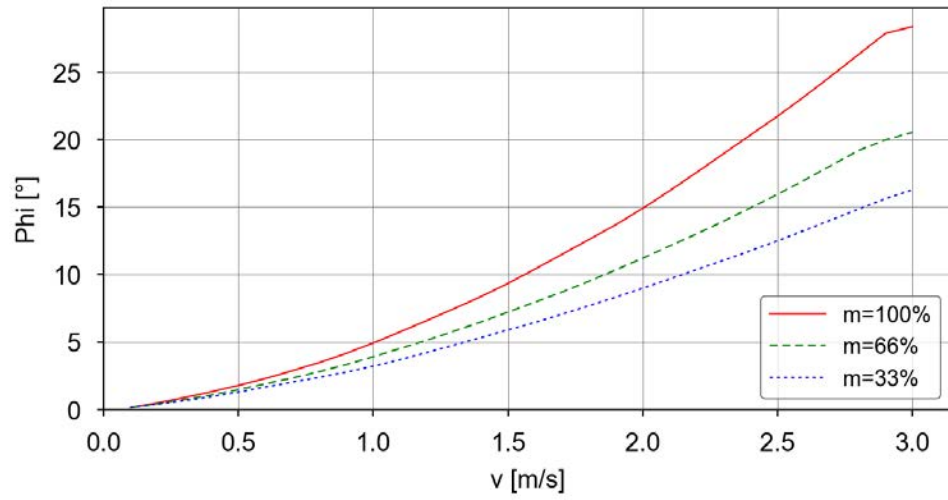
Continues on next page

17 IRB 6700

17.18 IRB 6700LeanID 3.00 m 220 kg

Continued

Extension zone 2, stopping distance and stopping time



17.19 IRB 6700LeanID 3.05 m 155 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	38.4	0.68
2	20.2	0.37
3	14.2	0.22

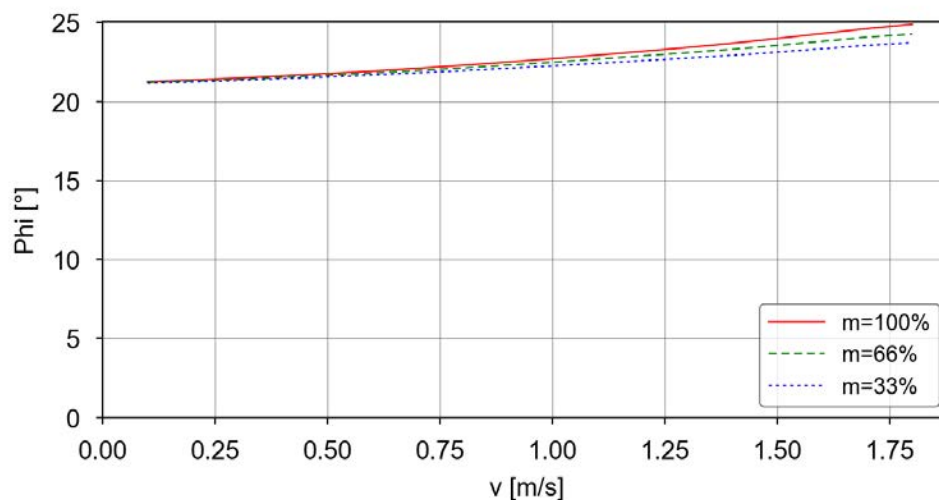
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.019
1	1.019	2.037
2	2.037	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

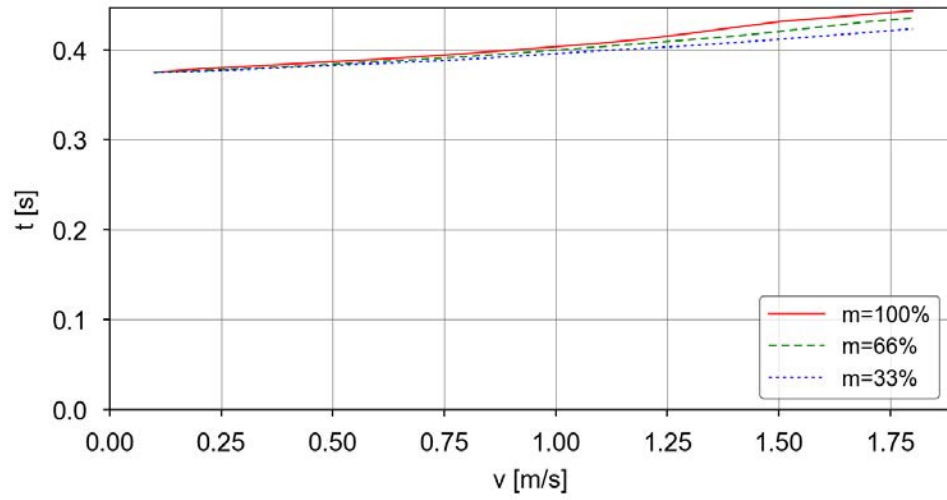


Continues on next page

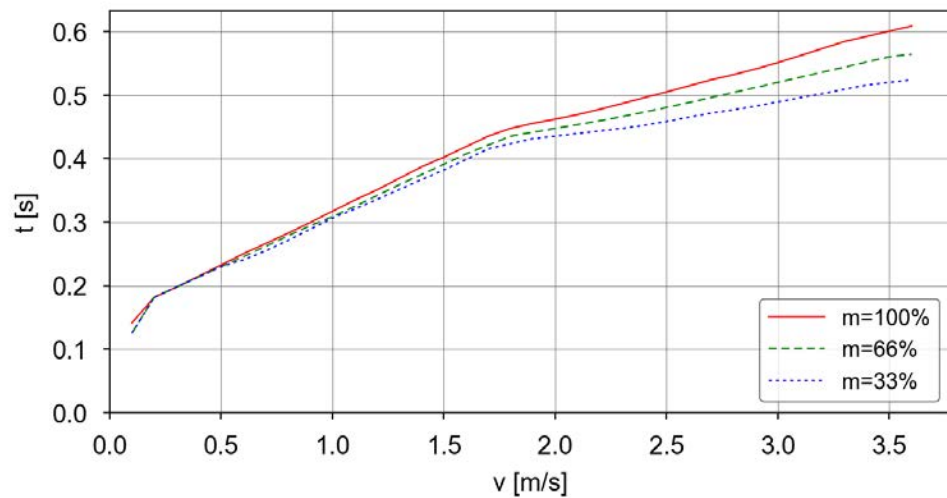
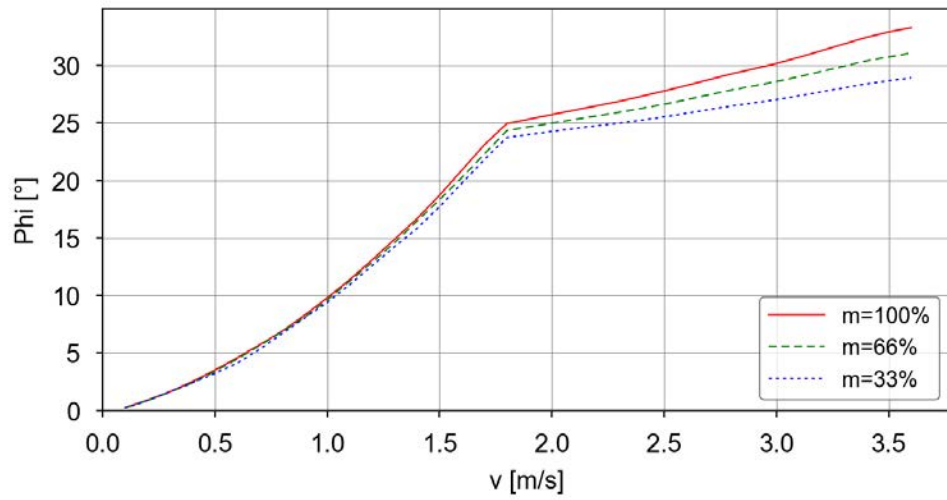
17 IRB 6700

17.19 IRB 6700LeanID 3.05 m 155 kg

Continued

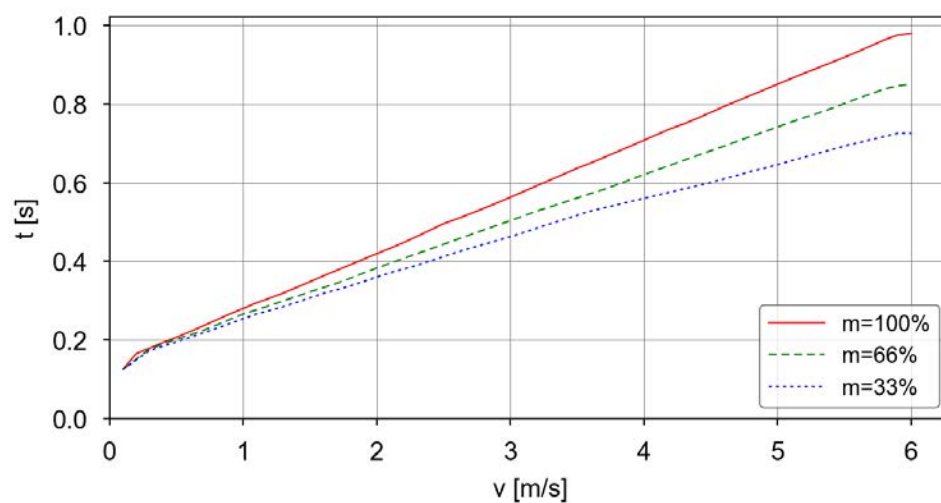
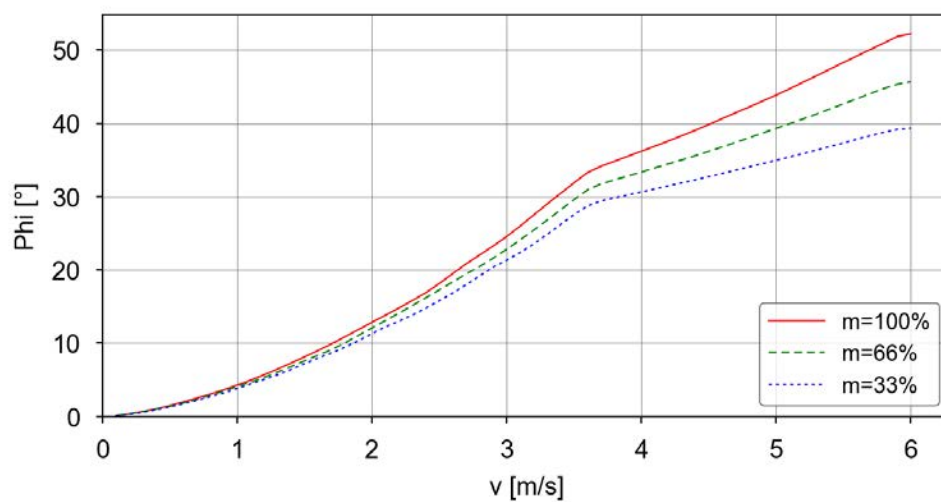


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

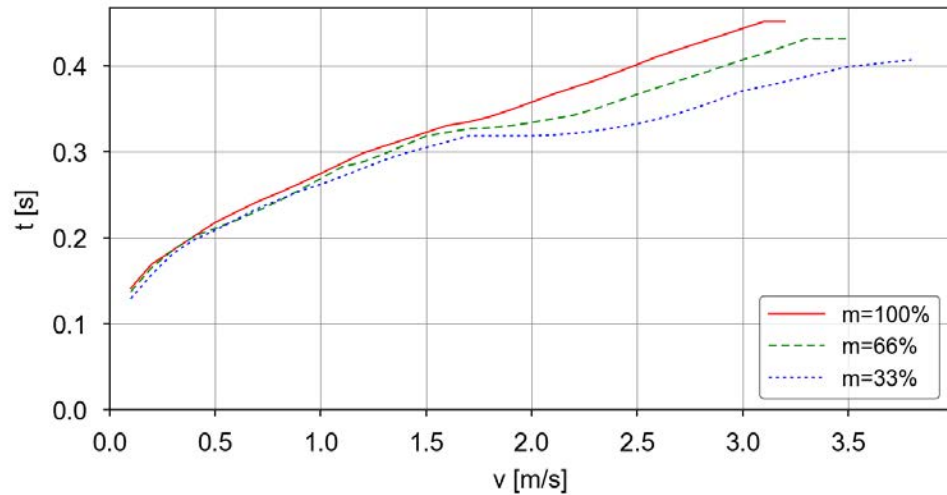
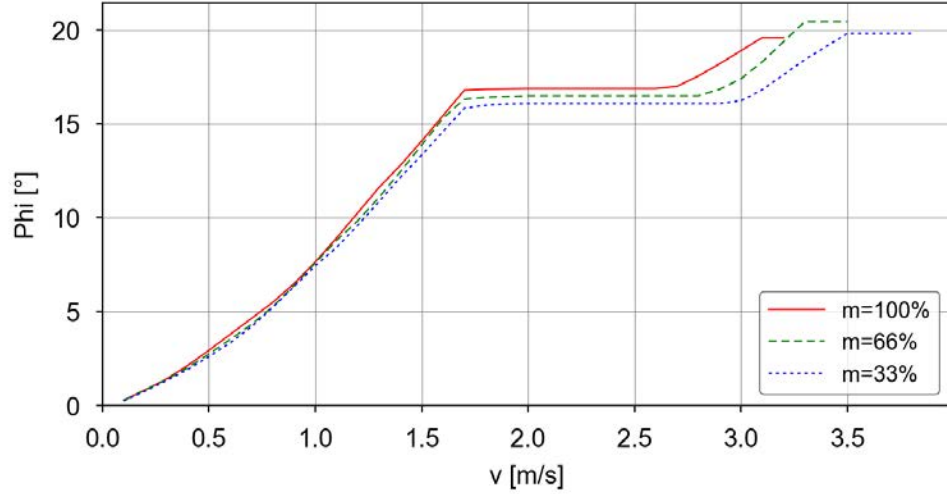
17 IRB 6700

17.19 IRB 6700LeanID 3.05 m 155 kg

Continued

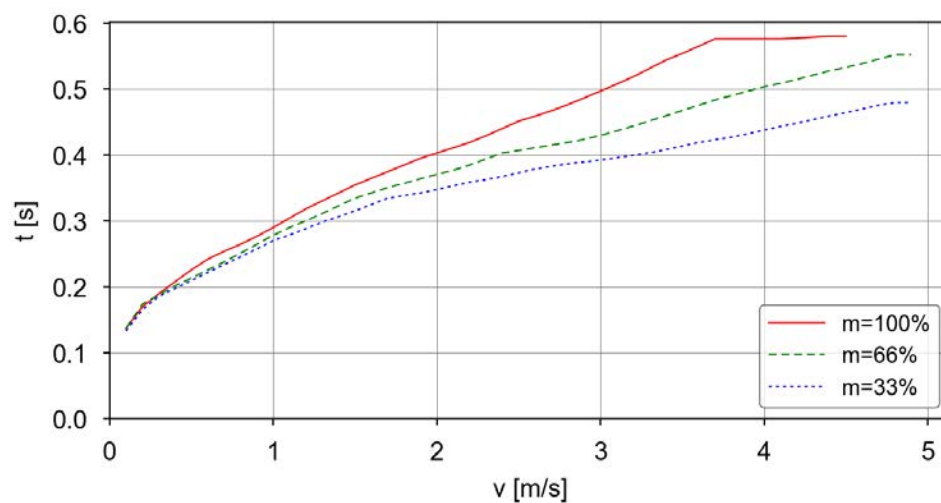
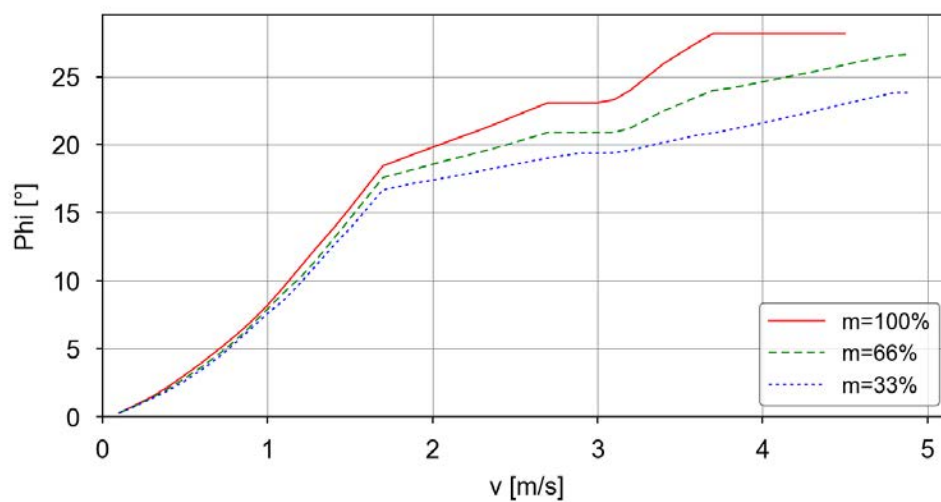
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



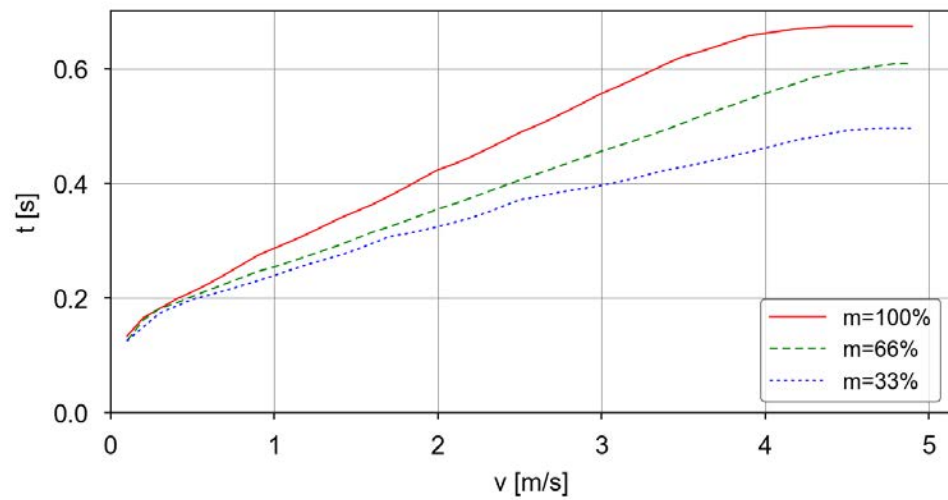
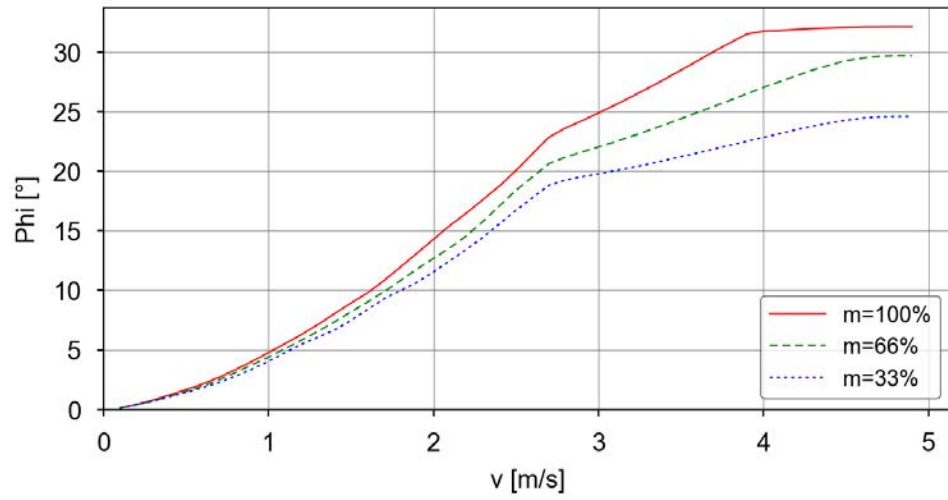
Continues on next page

17 IRB 6700

17.19 IRB 6700LeanID 3.05 m 155 kg

Continued

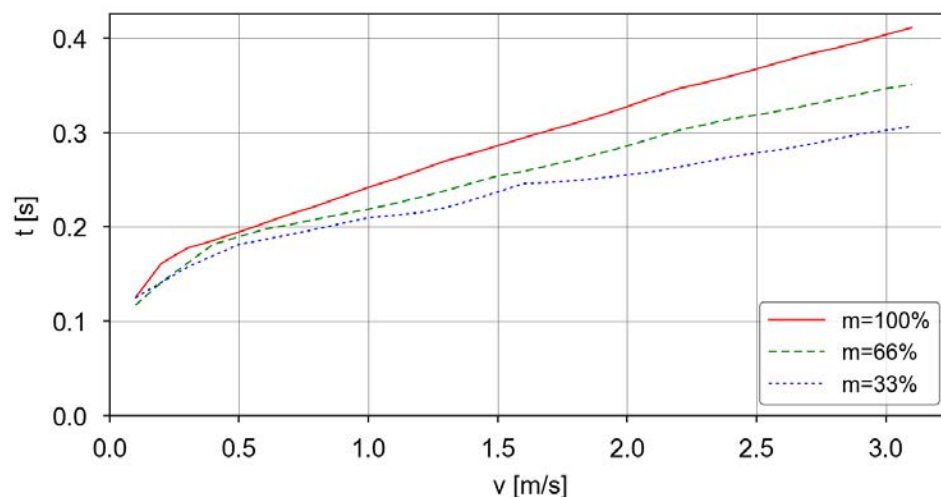
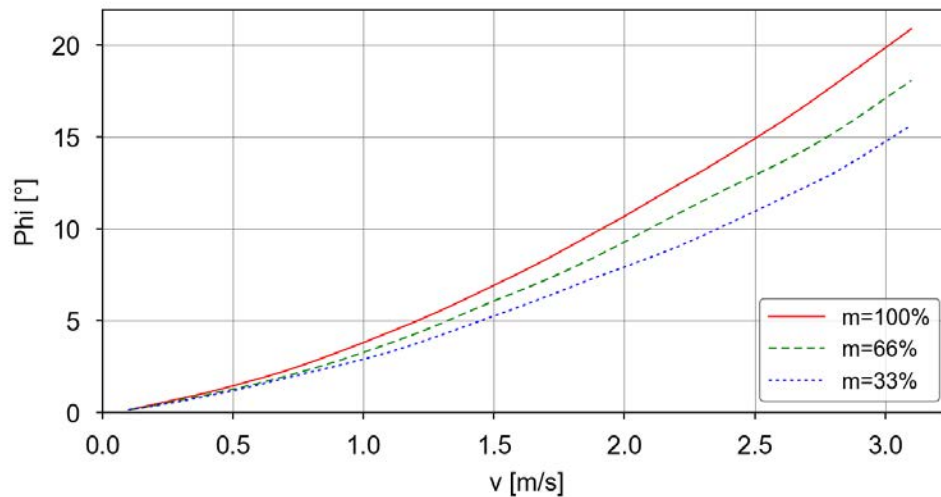
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



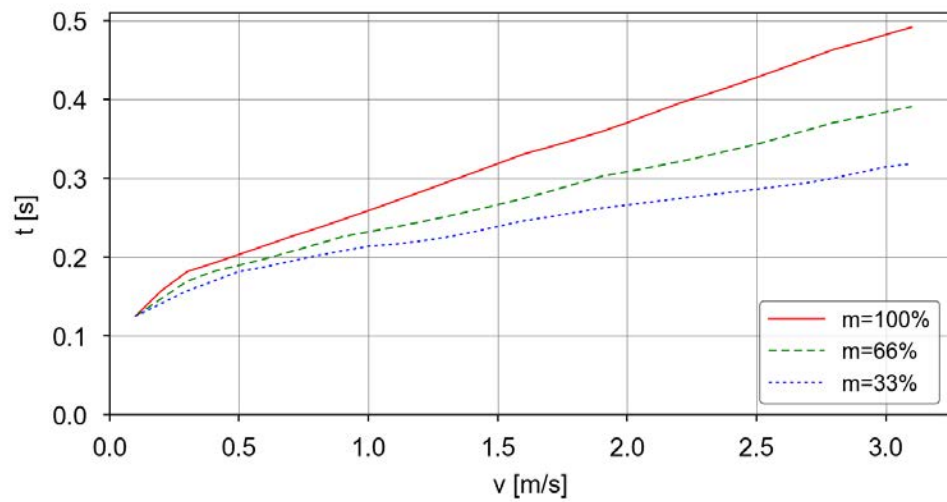
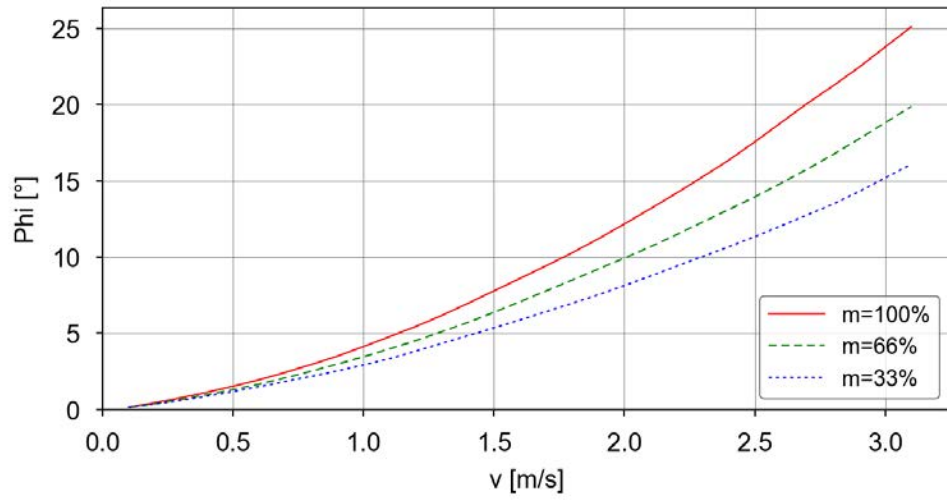
Continues on next page

17 IRB 6700

17.19 IRB 6700LeanID 3.05 m 155 kg

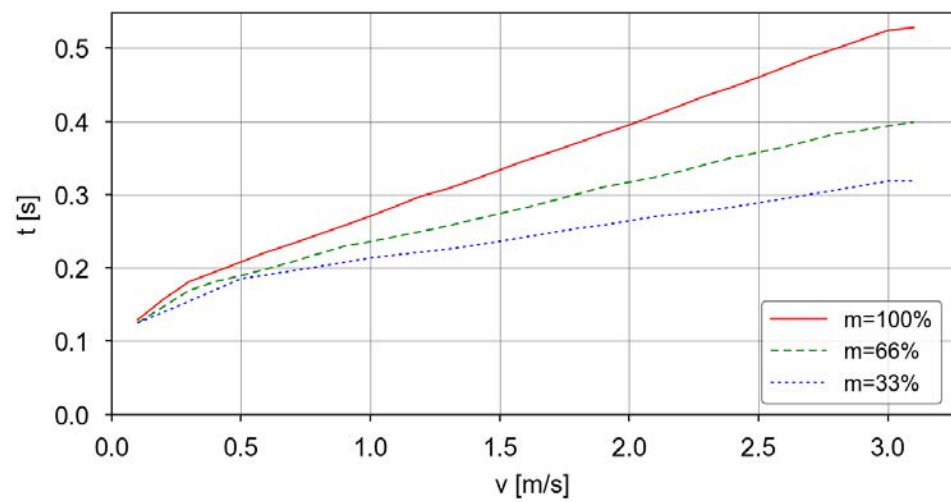
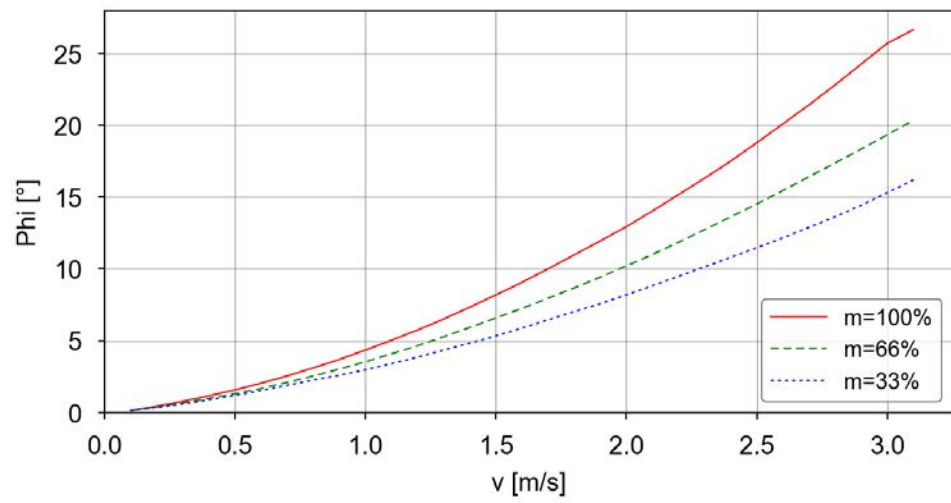
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



17.20 IRB 6700LeanID 3.20 m 145 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.6	0.73
2	20.9	0.37
3	14.7	0.22

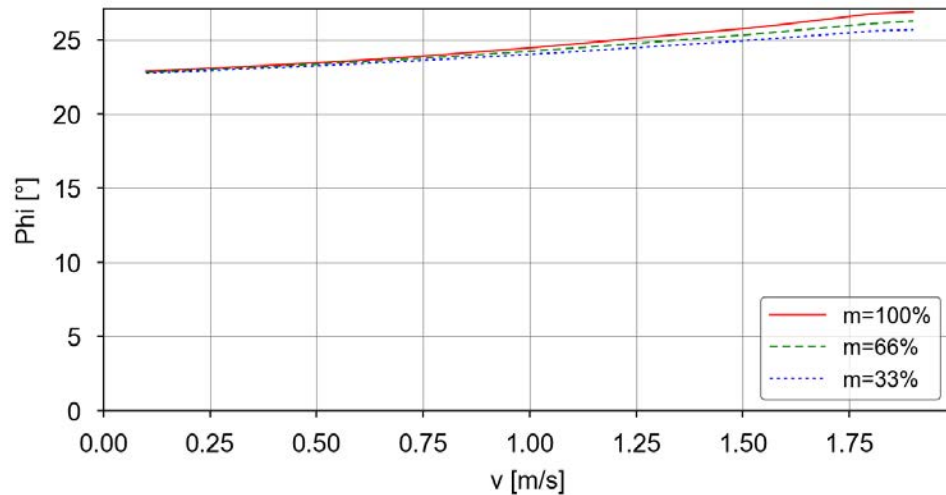
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

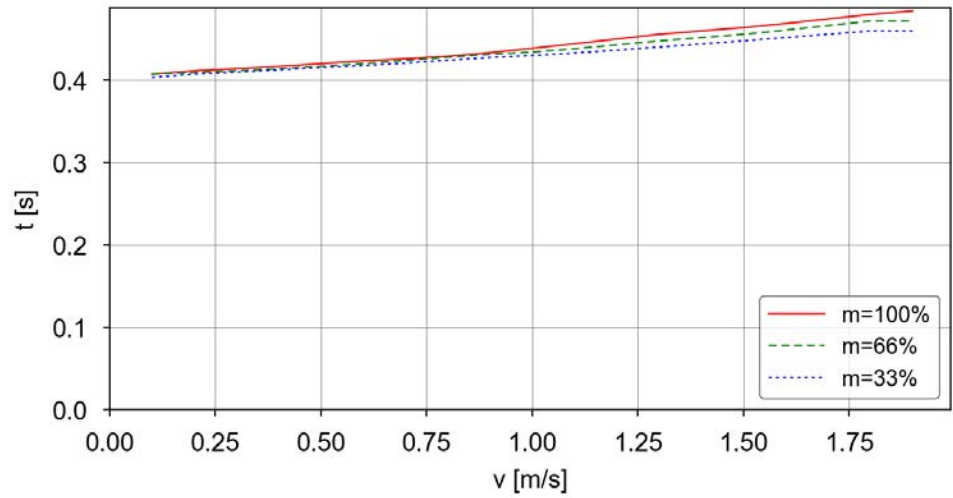
Zone	wcp min (m)	wcp max (m)
0	0	1.067
1	1.067	2.133
2	2.133	max reach

Category 1, Axis 1

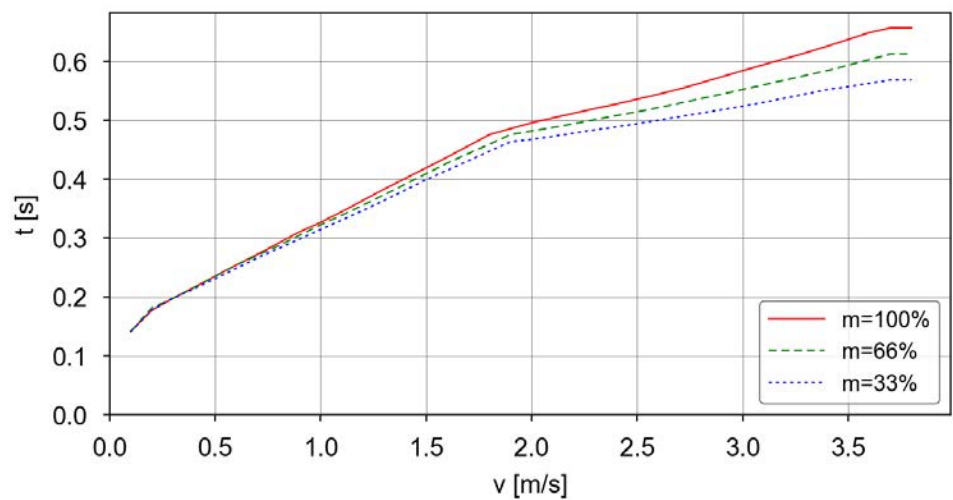
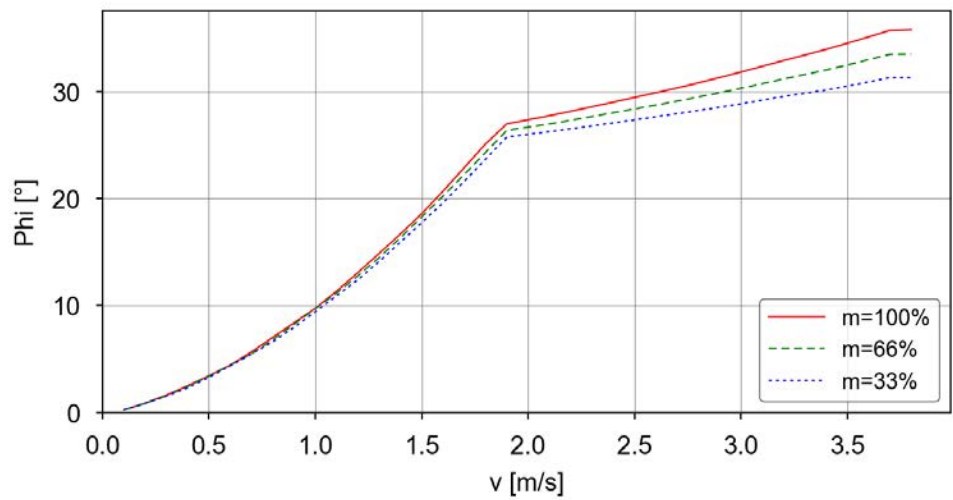
Extension zone 0, stopping distance and stopping time



Continues on next page

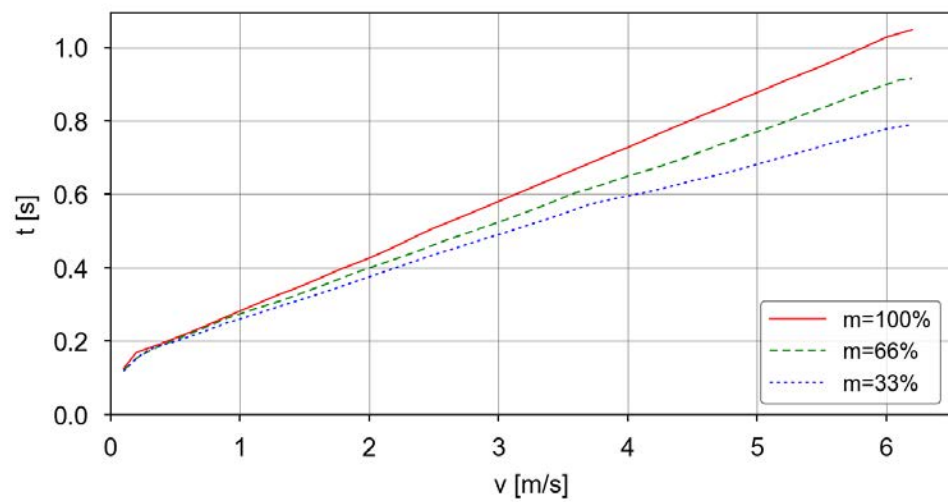
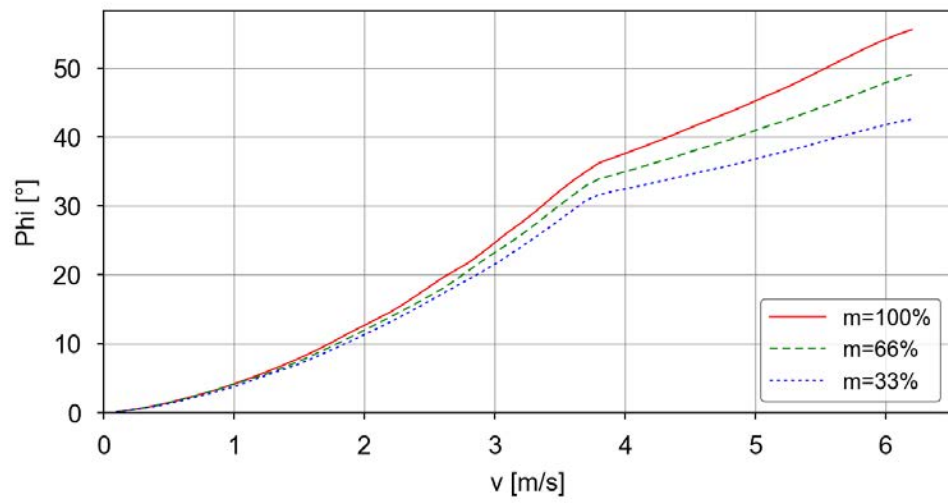


Extension zone 1, stopping distance and stopping time



Continues on next page

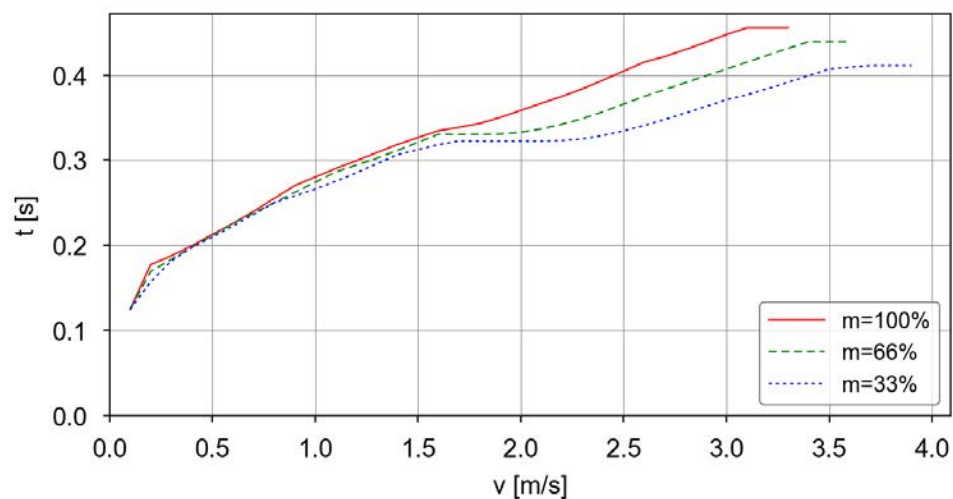
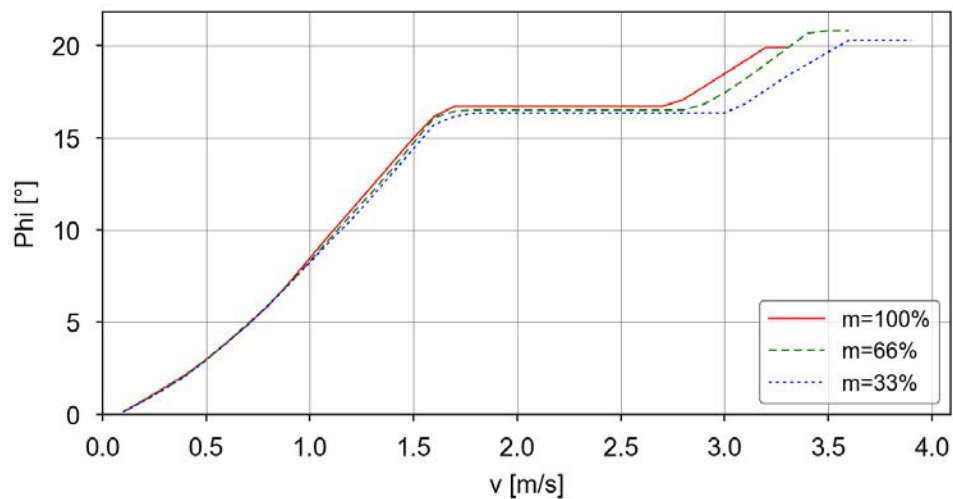
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



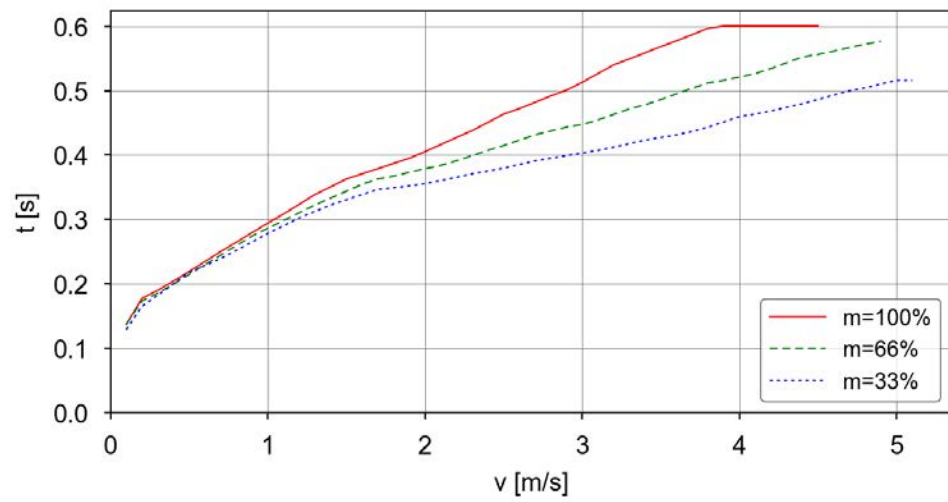
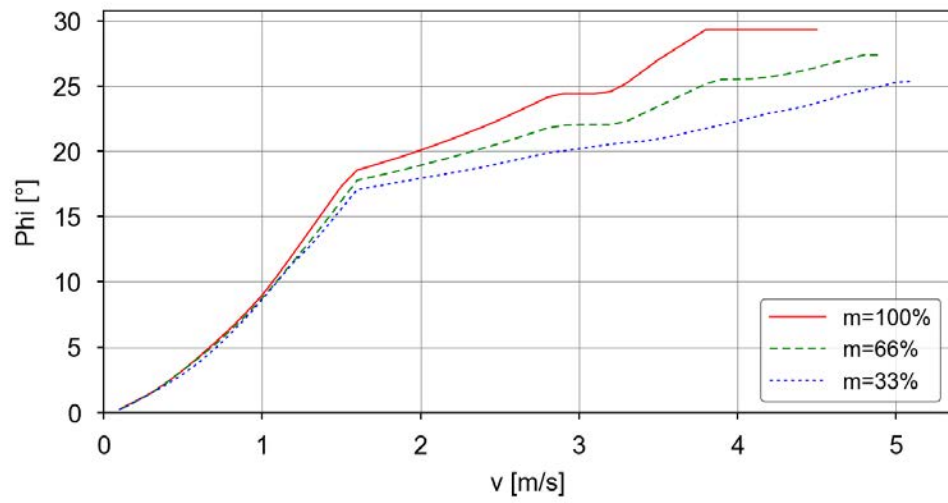
Continues on next page

17 IRB 6700

17.20 IRB 6700LeanID 3.20 m 145 kg

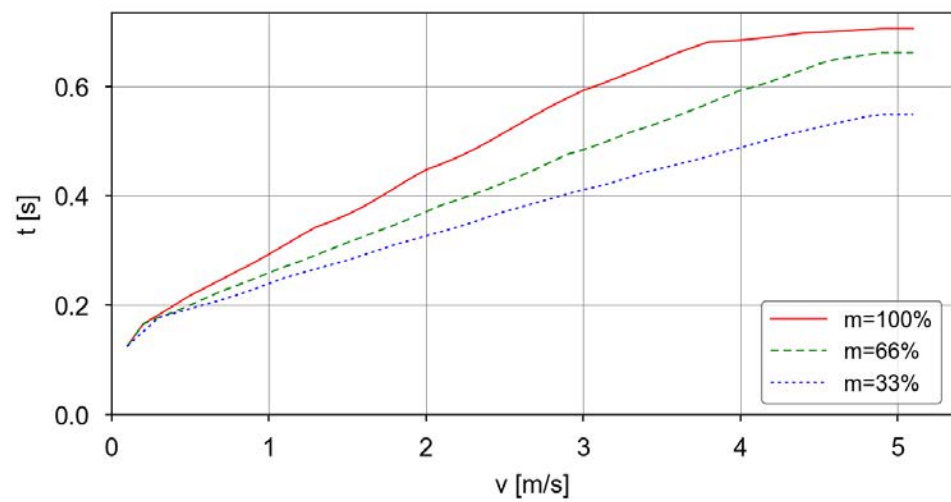
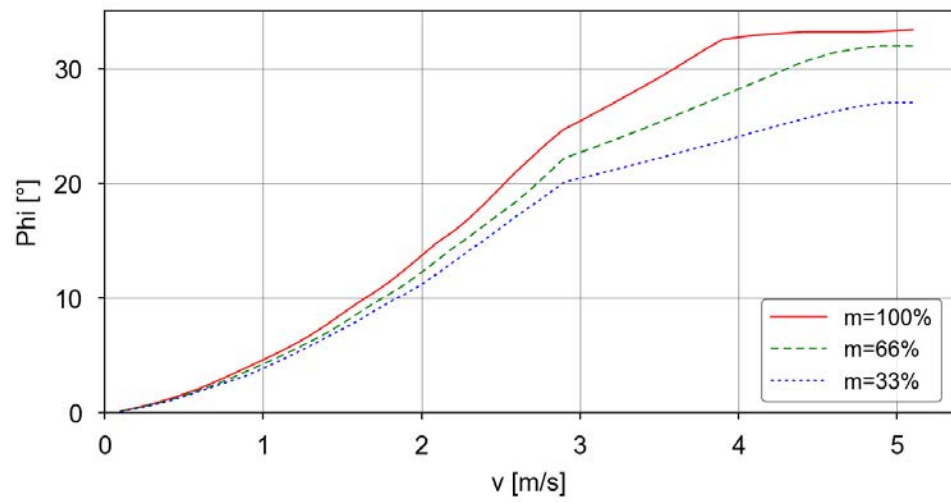
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

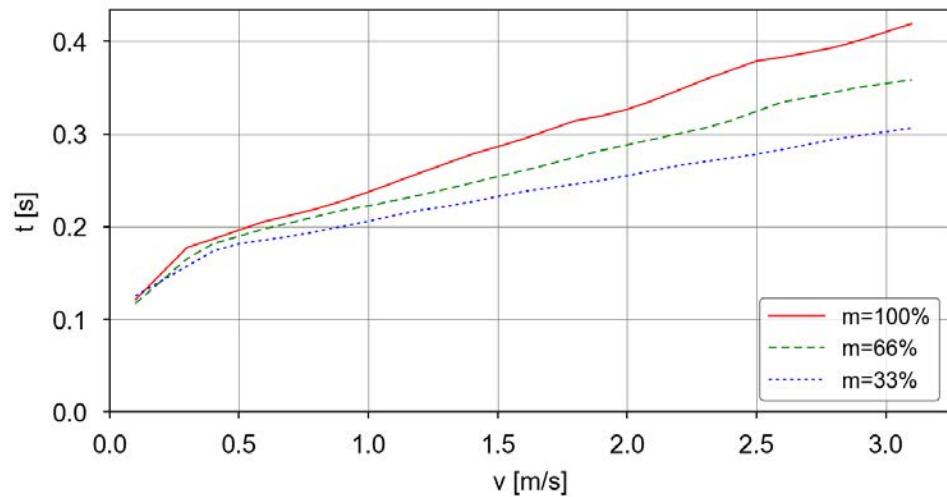
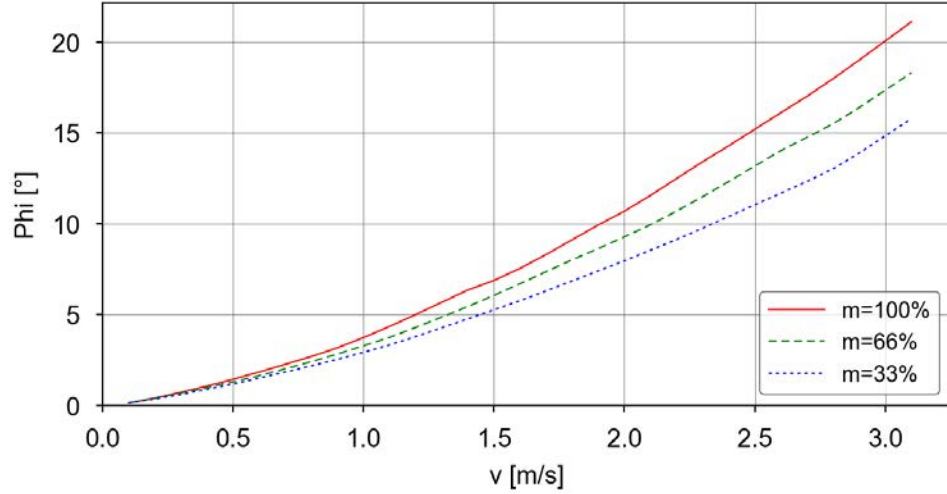
17 IRB 6700

17.20 IRB 6700LeanID 3.20 m 145 kg

Continued

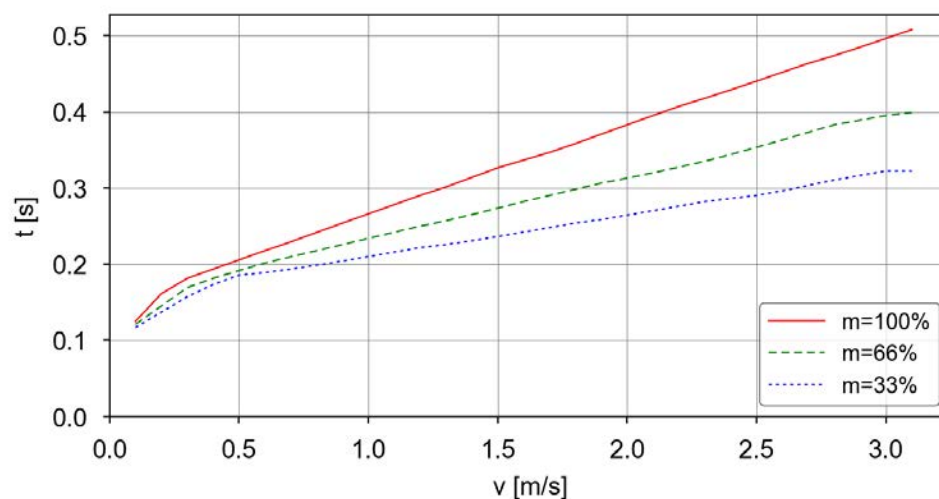
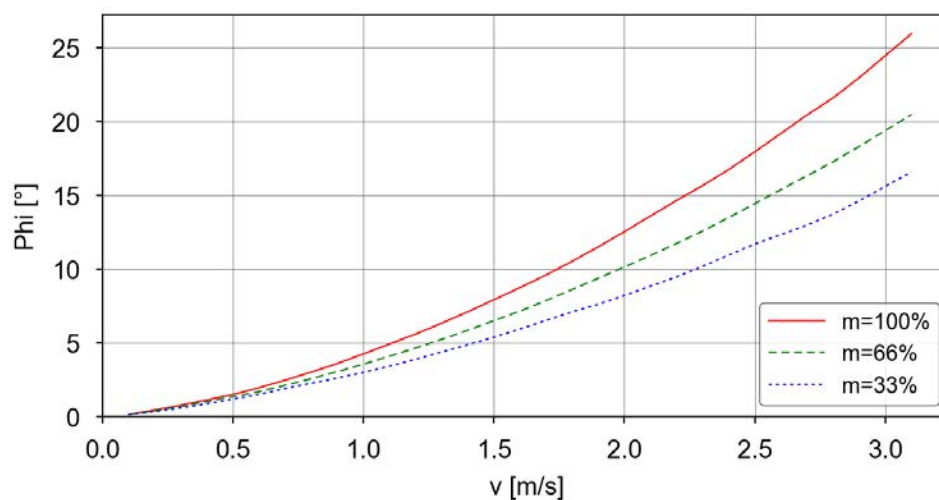
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



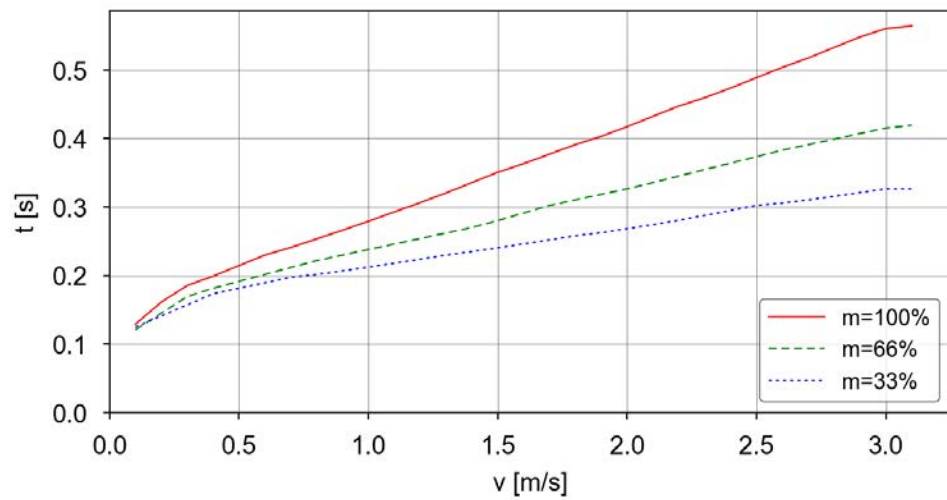
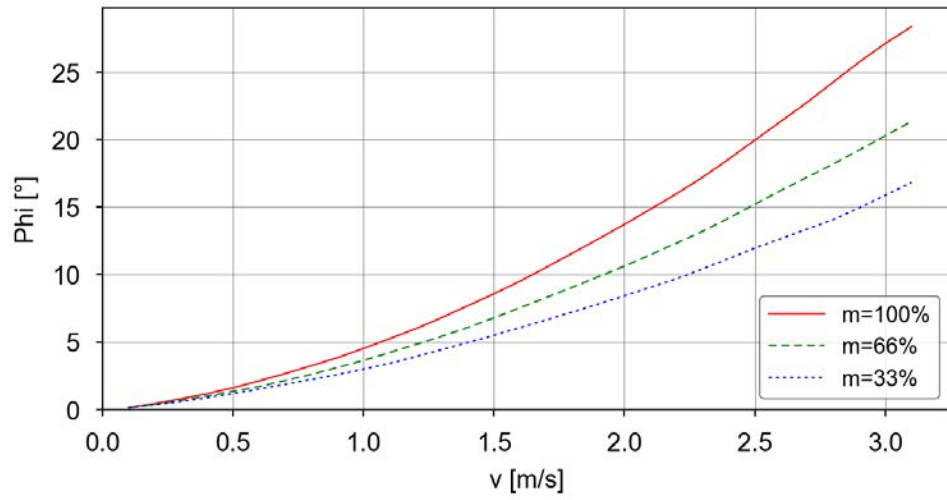
Continues on next page

17 IRB 6700

17.20 IRB 6700LeanID 3.20 m 145 kg

Continued

Extension zone 2, stopping distance and stopping time



18 IRB 6790

18.1 IRB 6790 2.65 m 235 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	38.2	0.68
2	20.3	0.37
3	14.4	0.22

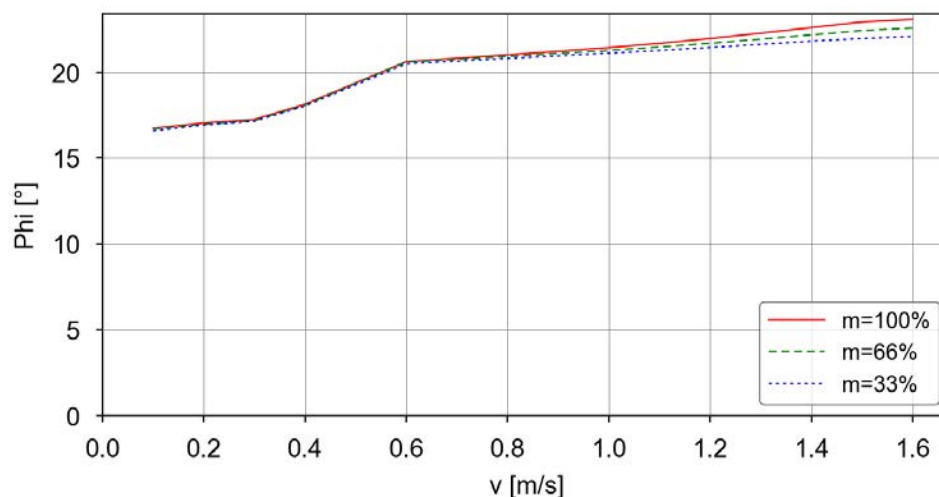
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.883
1	0.883	1.767
2	1.767	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

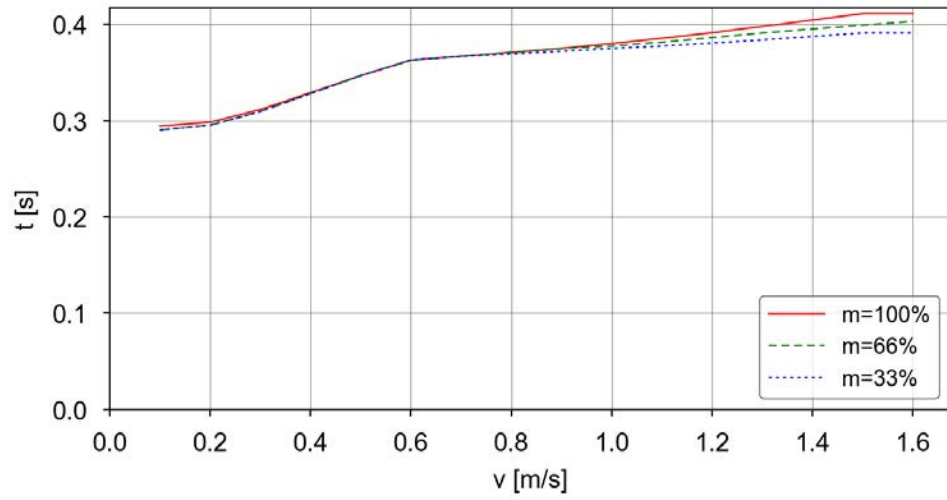


Continues on next page

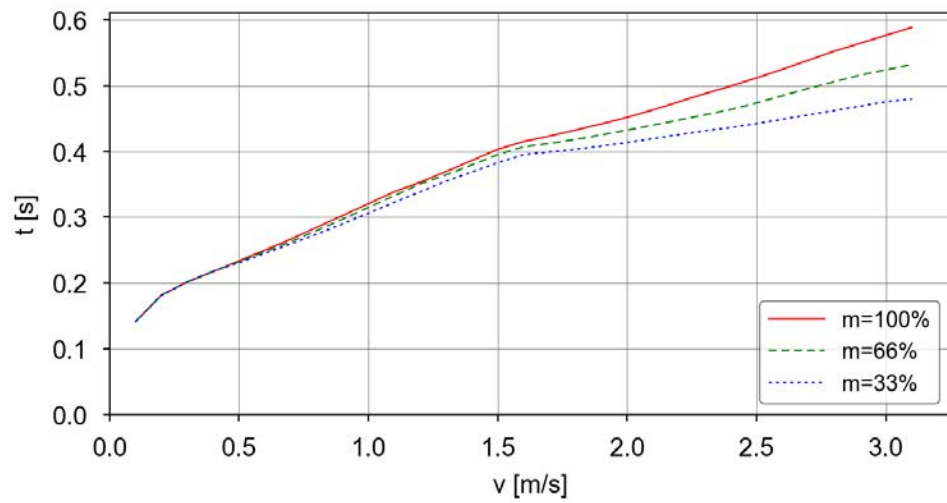
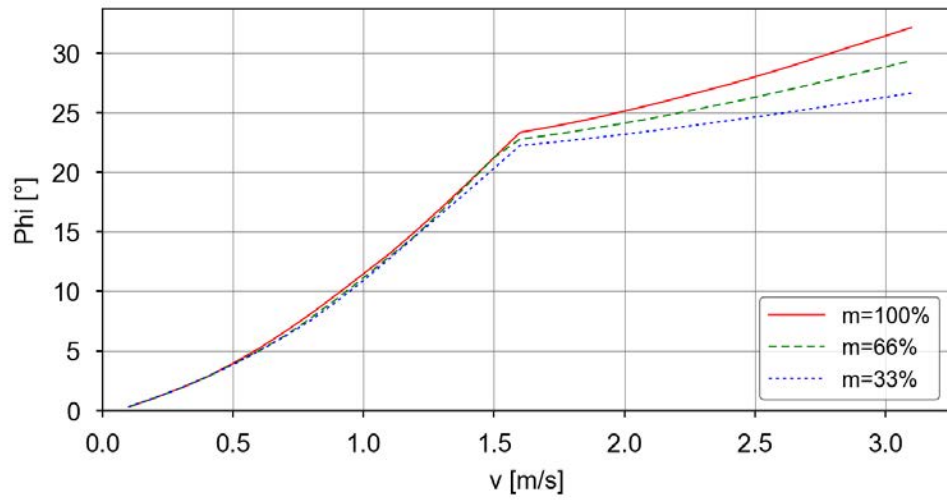
18 IRB 6790

18.1 IRB 6790 2.65 m 235 kg

Continued

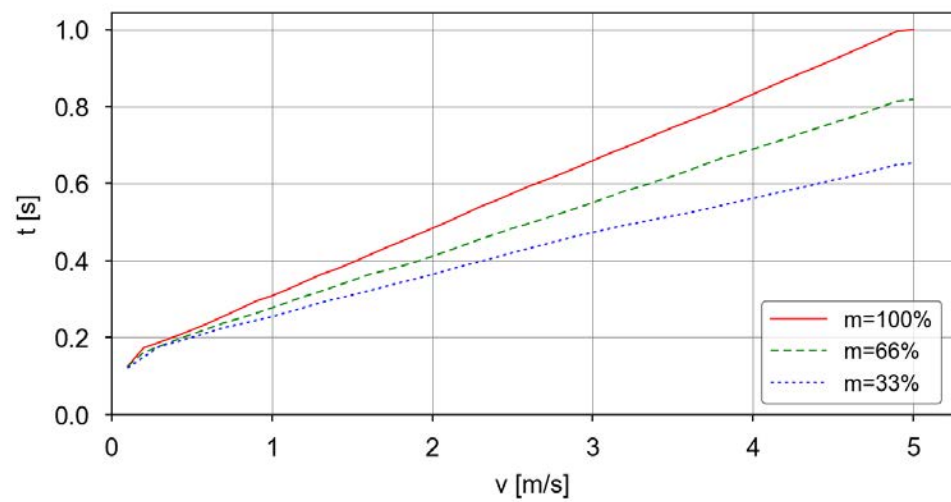
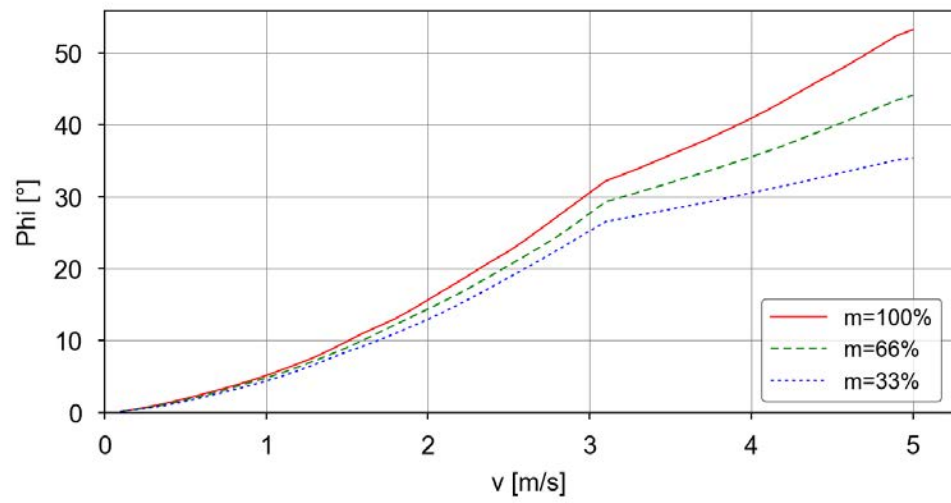


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

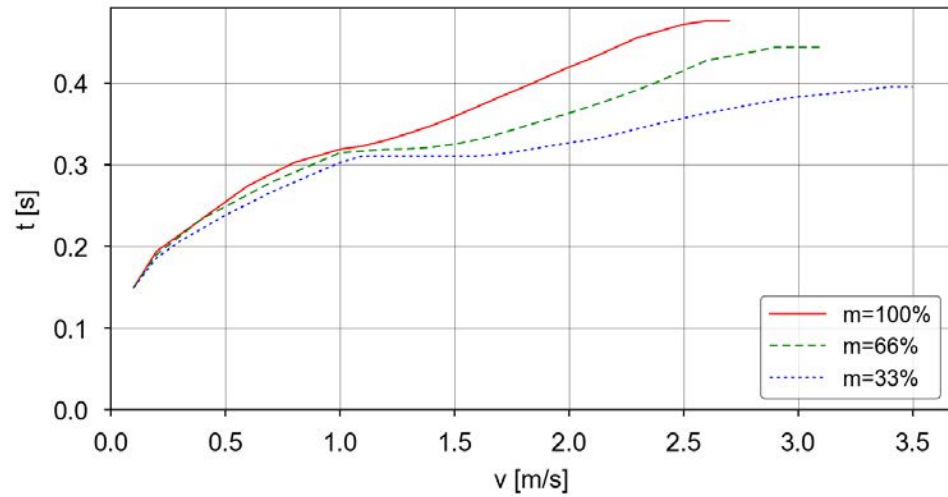
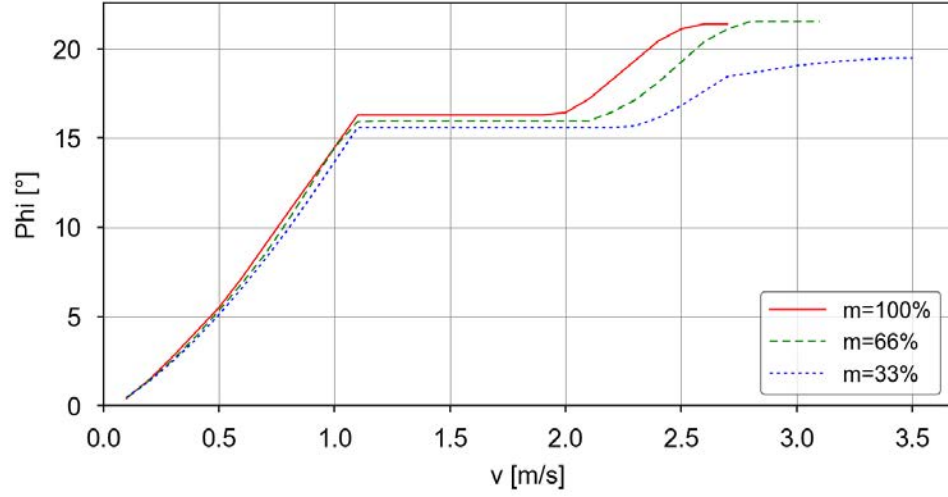
18 IRB 6790

18.1 IRB 6790 2.65 m 235 kg

Continued

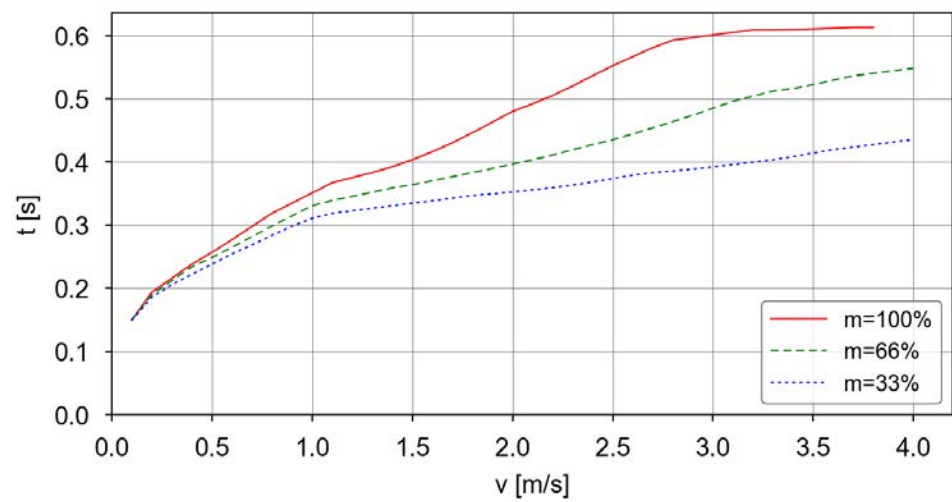
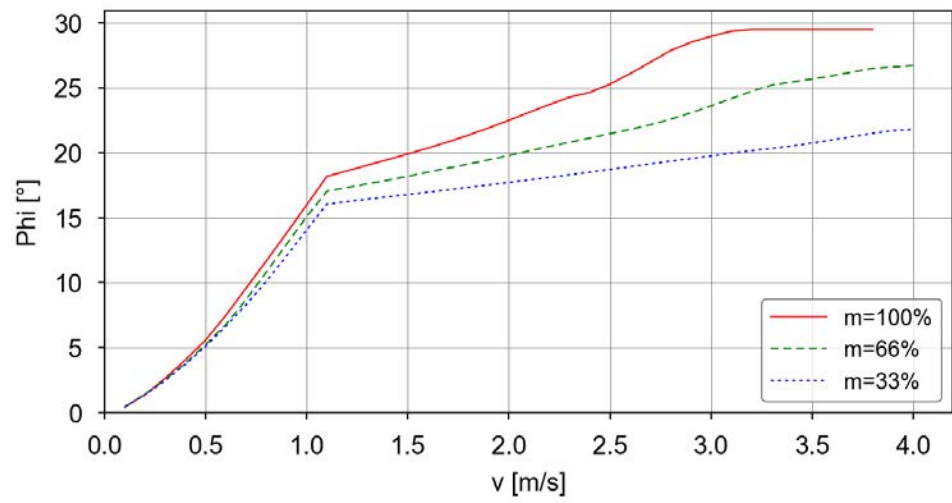
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



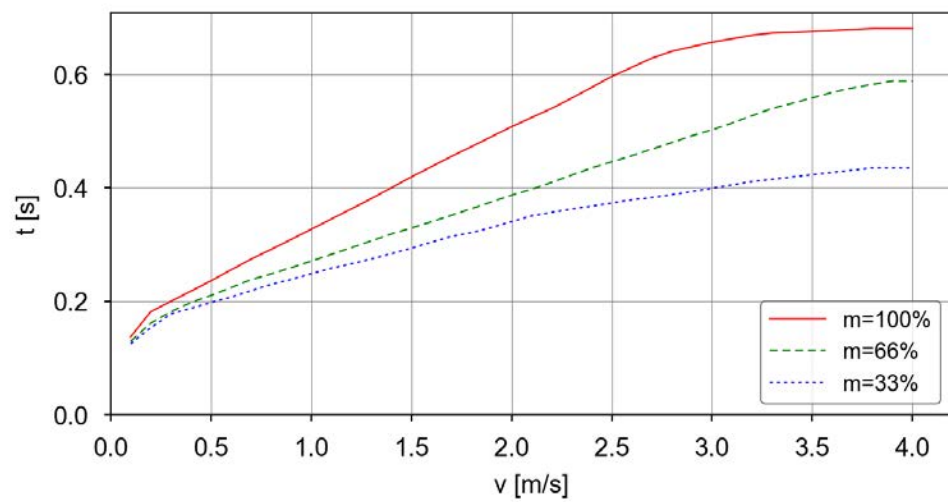
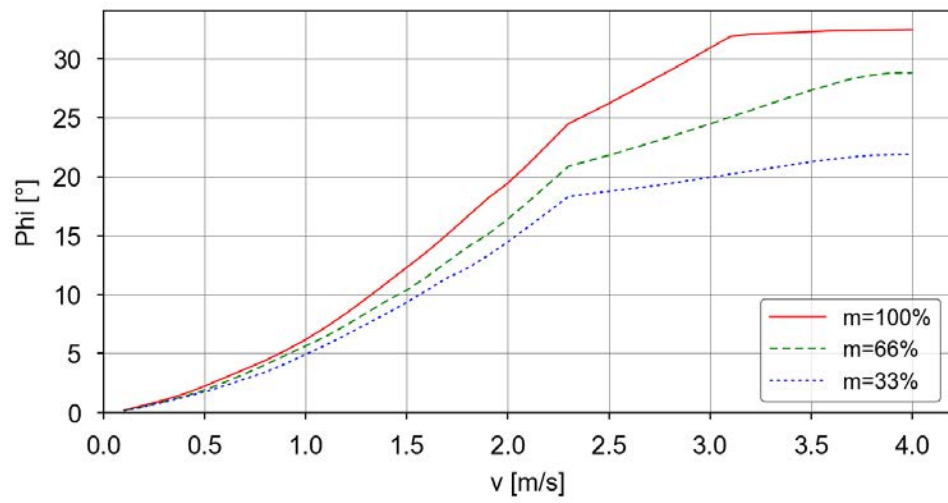
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

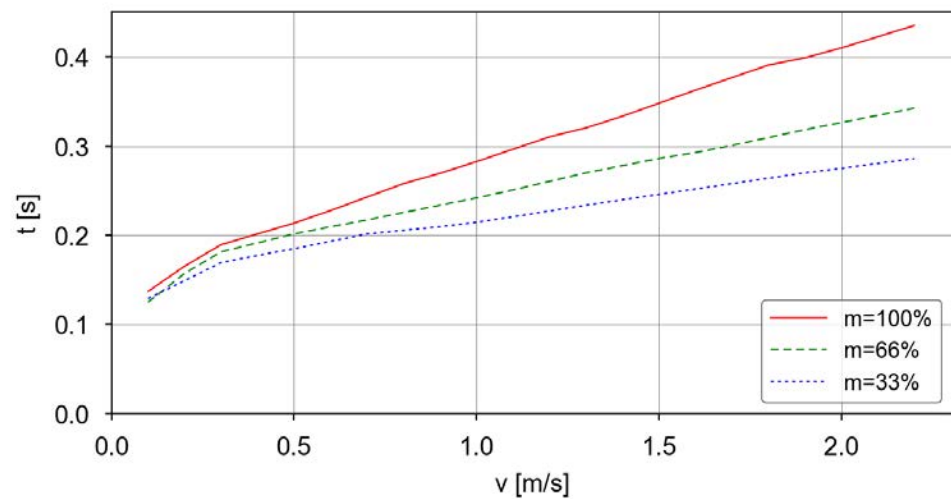
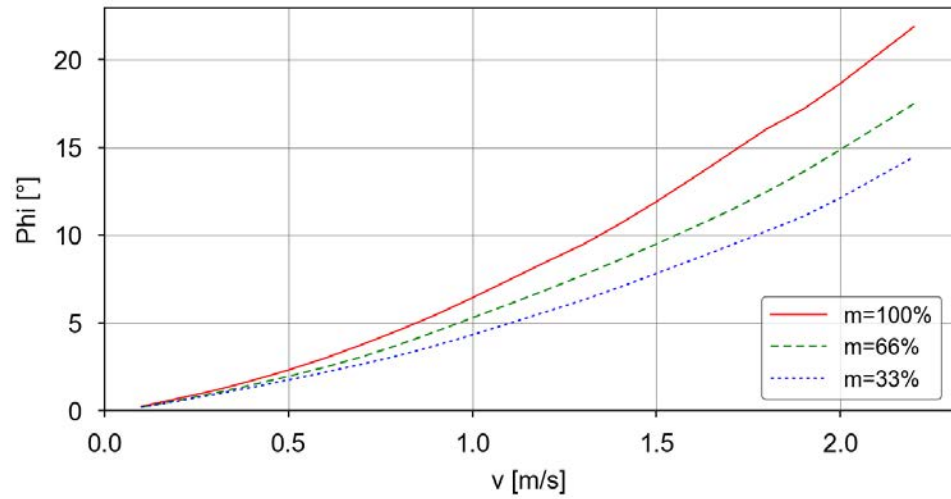
Extension zone 2, stopping distance and stopping time



Continues on next page

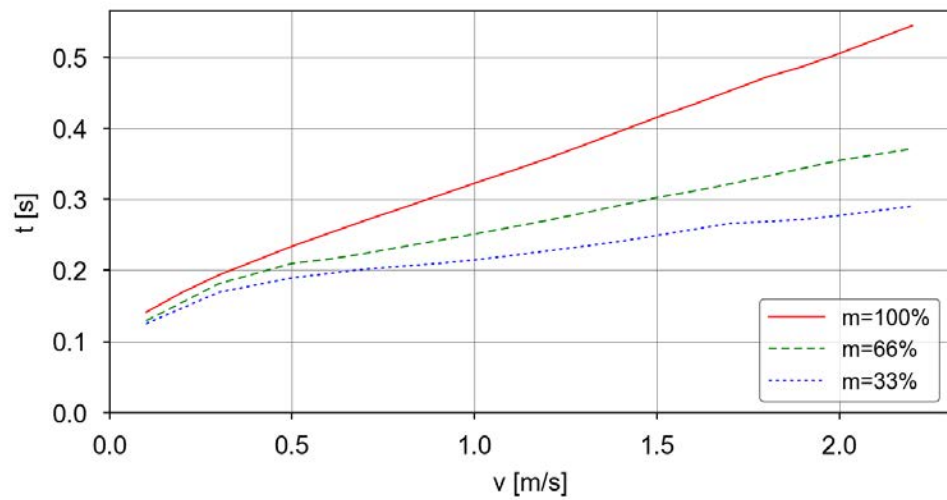
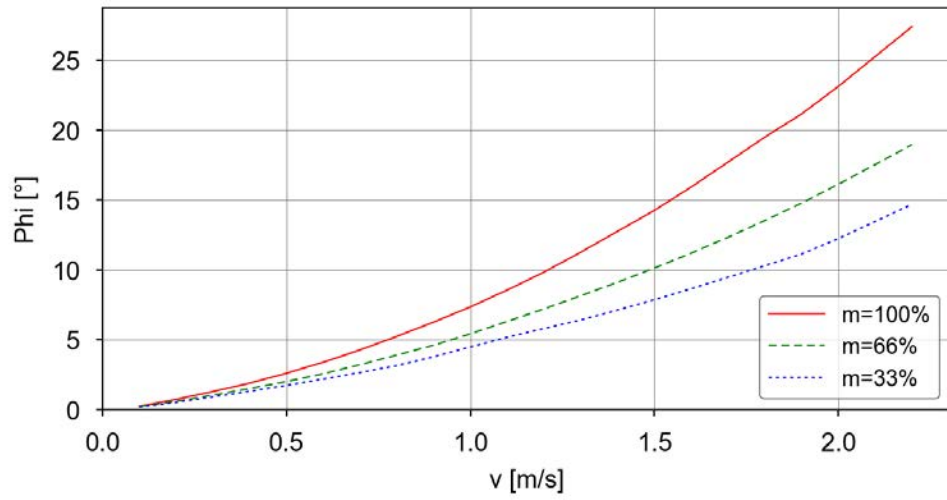
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



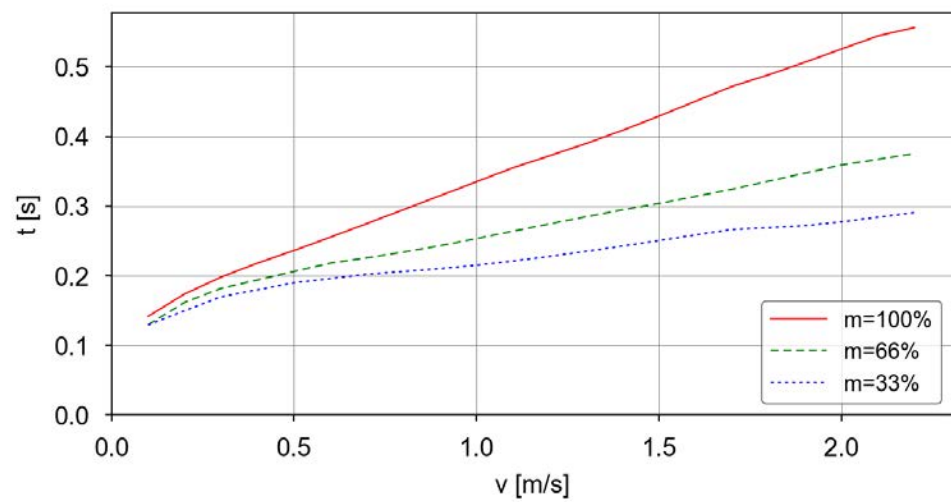
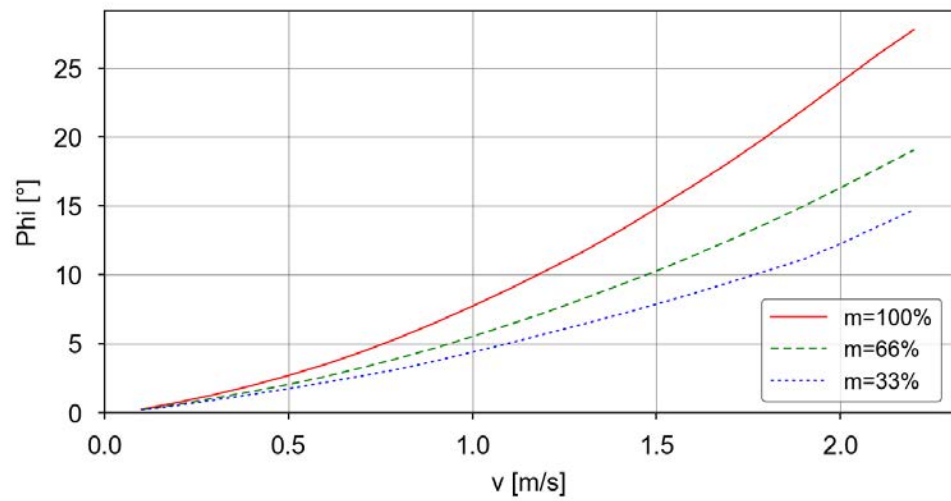
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



18.2 IRB 6790 2.80 m 205 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.0	0.71
2	20.6	0.37
3	14.1	0.22

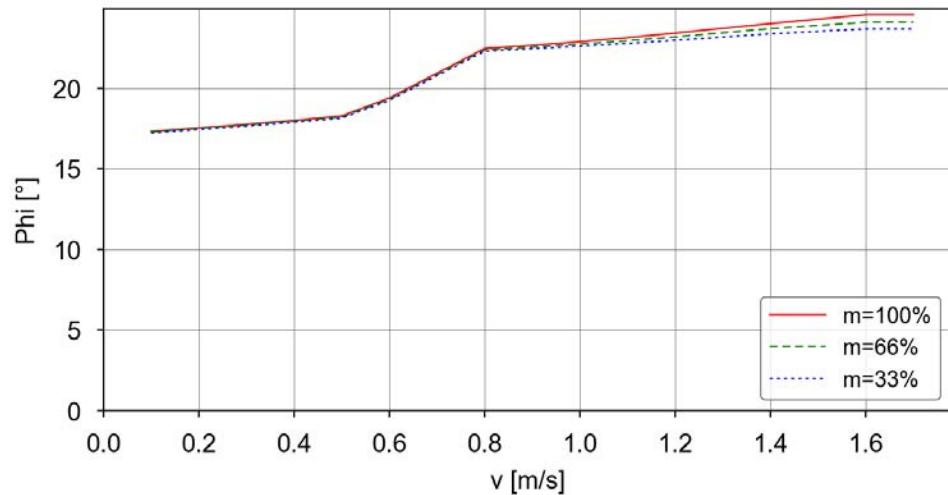
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

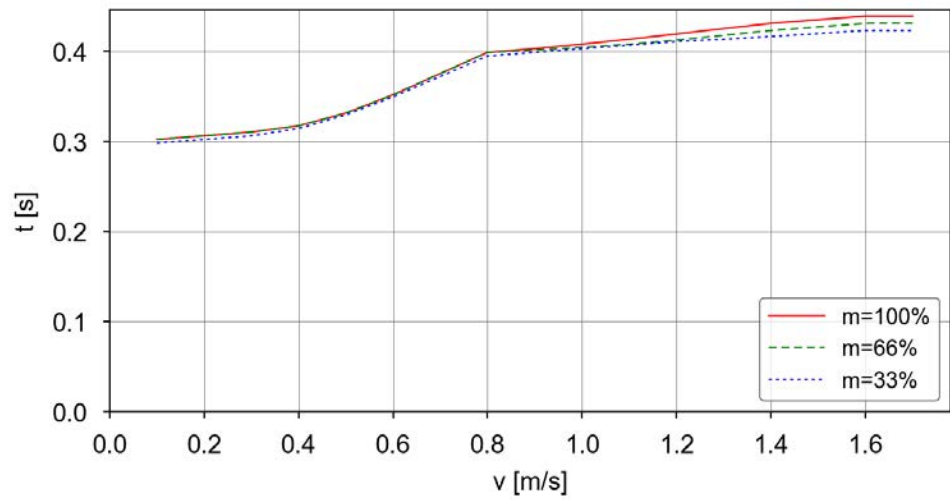
Zone	wcp min (m)	wcp max (m)
0	0	0.931
1	0.931	1.863
2	1.863	max reach

Category 1, Axis 1

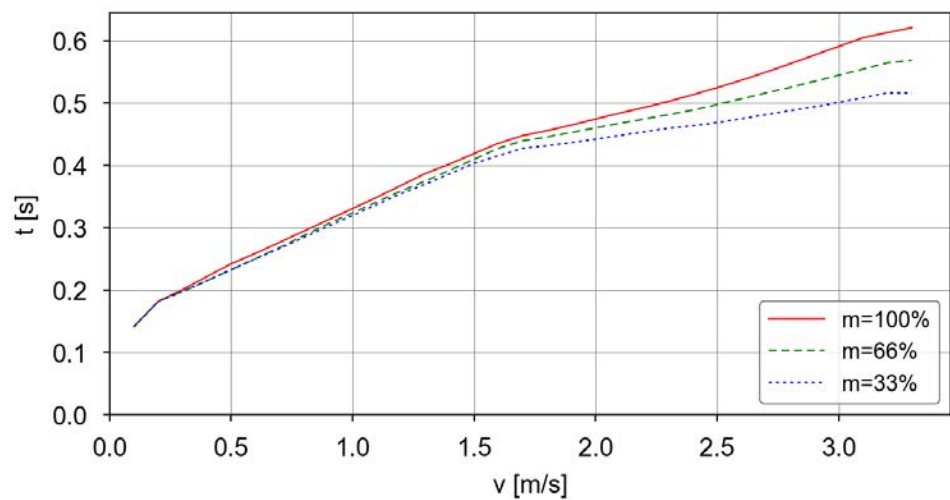
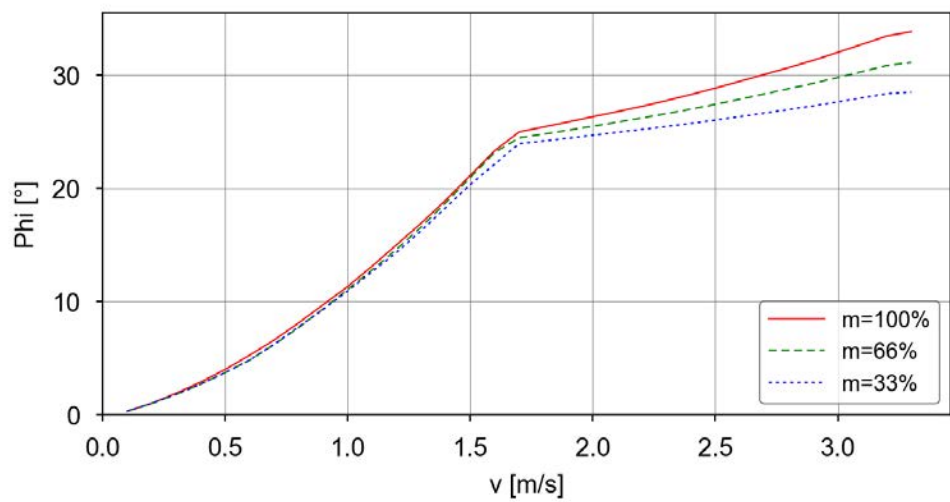
Extension zone 0, stopping distance and stopping time



Continues on next page

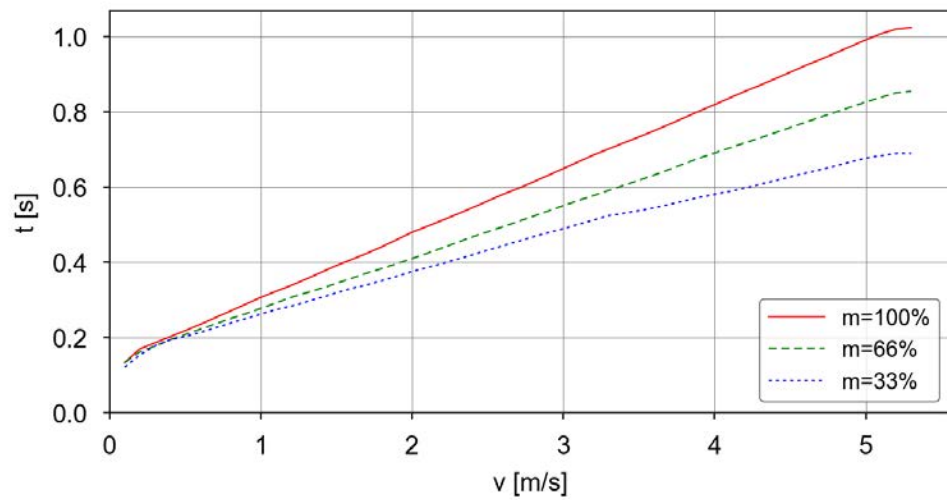
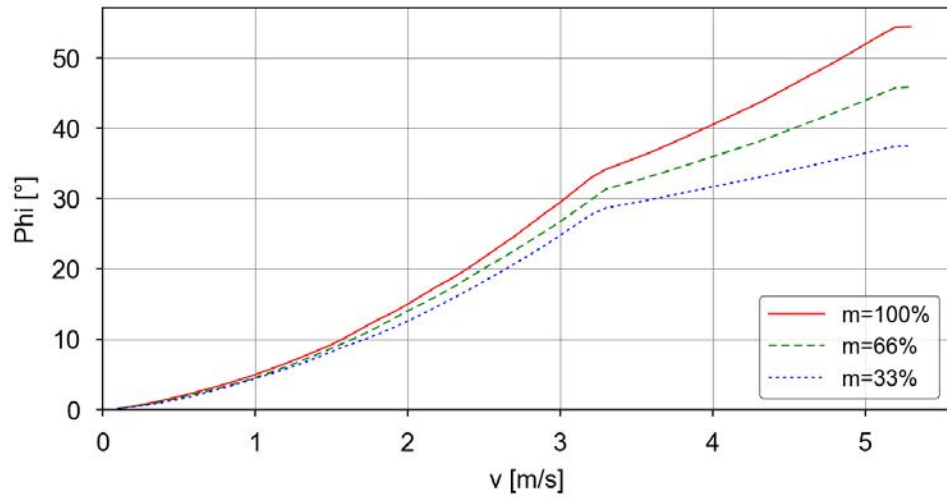


Extension zone 1, stopping distance and stopping time



Continues on next page

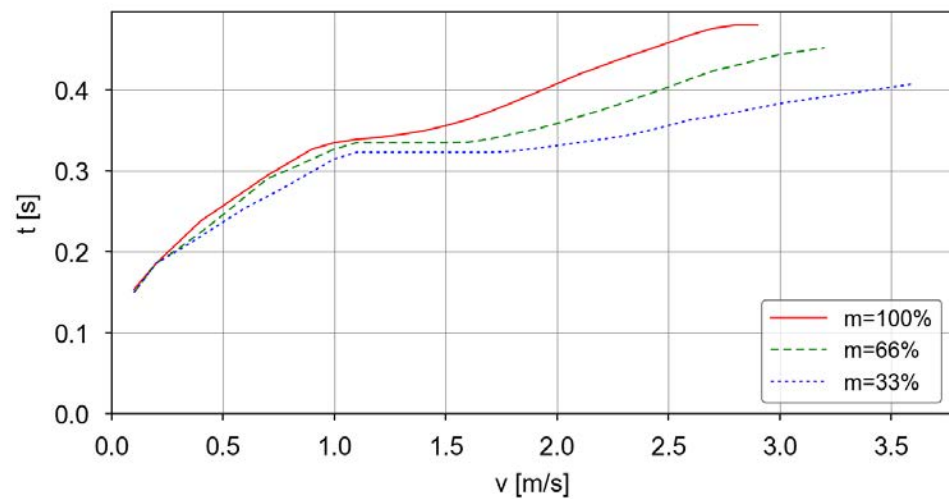
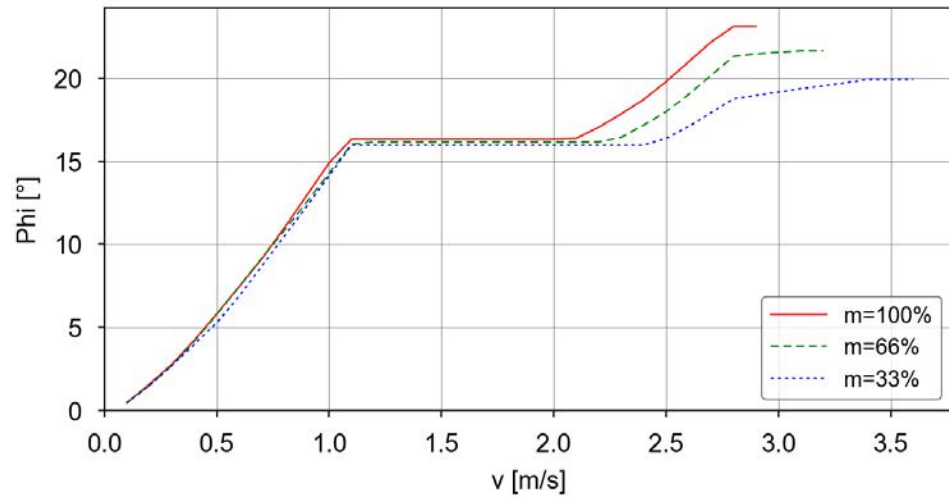
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



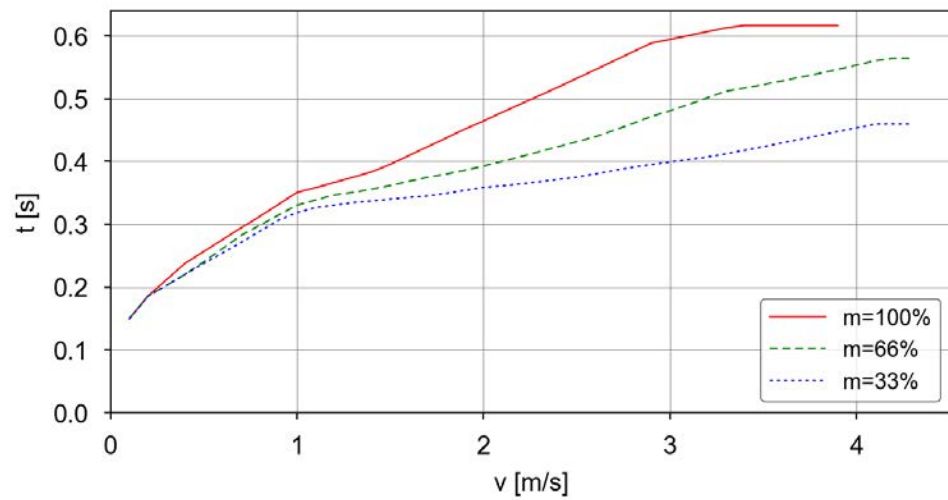
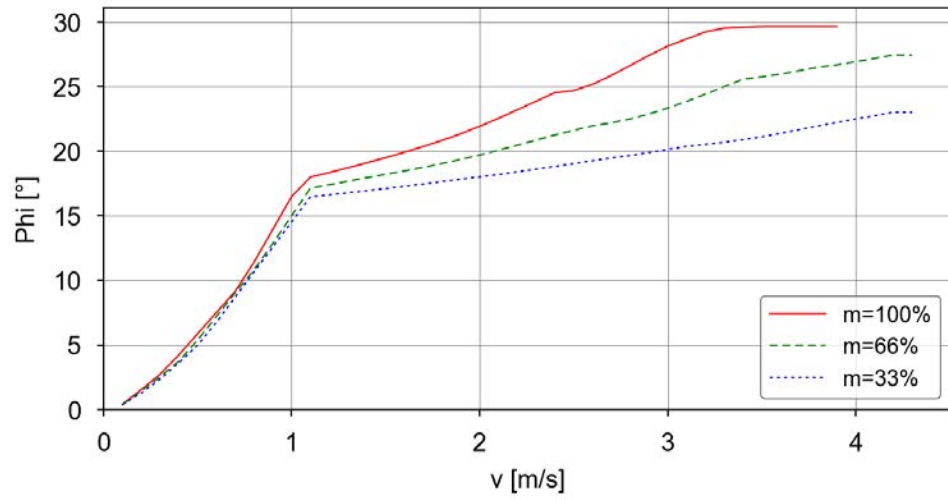
Continues on next page

18 IRB 6790

18.2 IRB 6790 2.80 m 205 kg

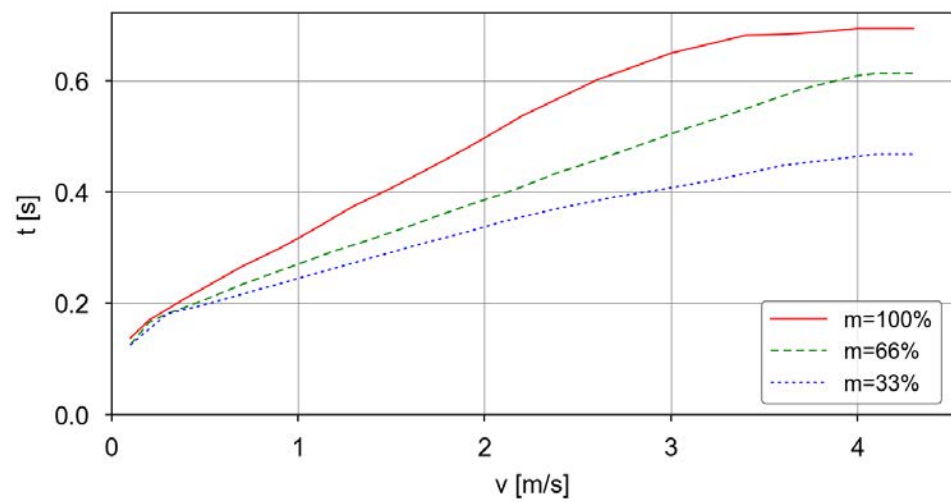
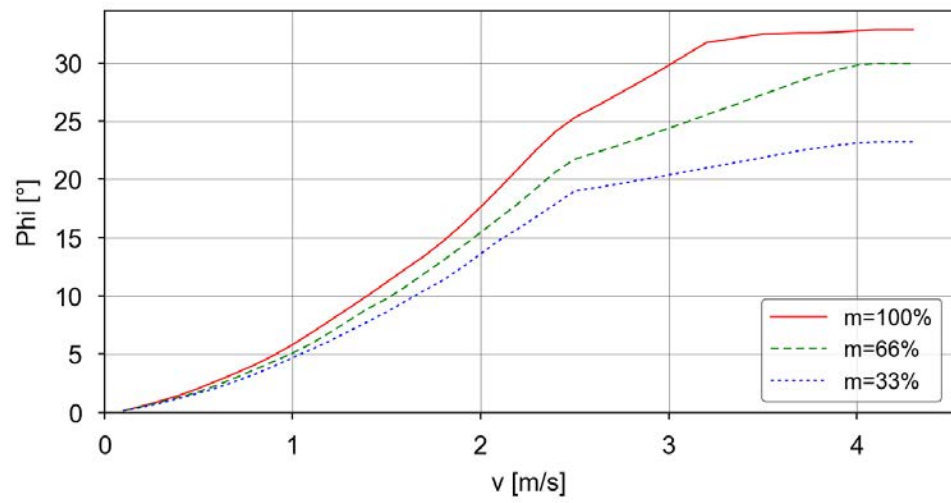
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

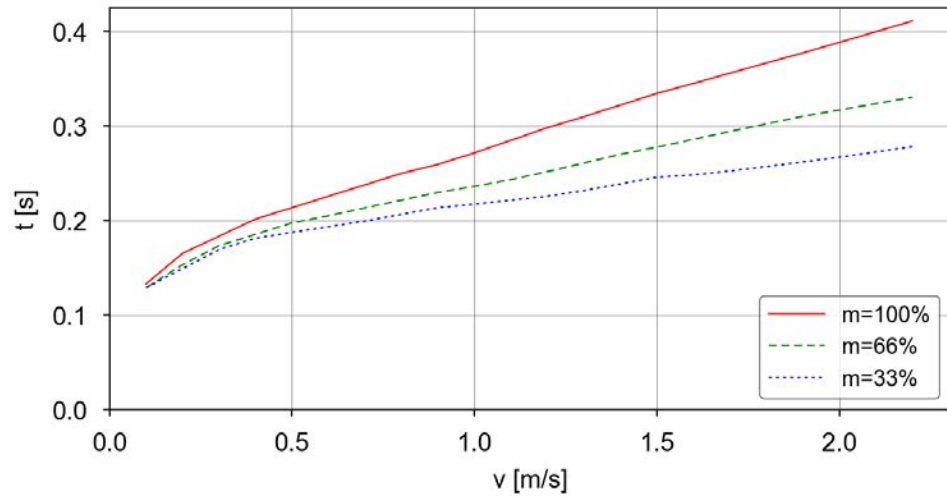
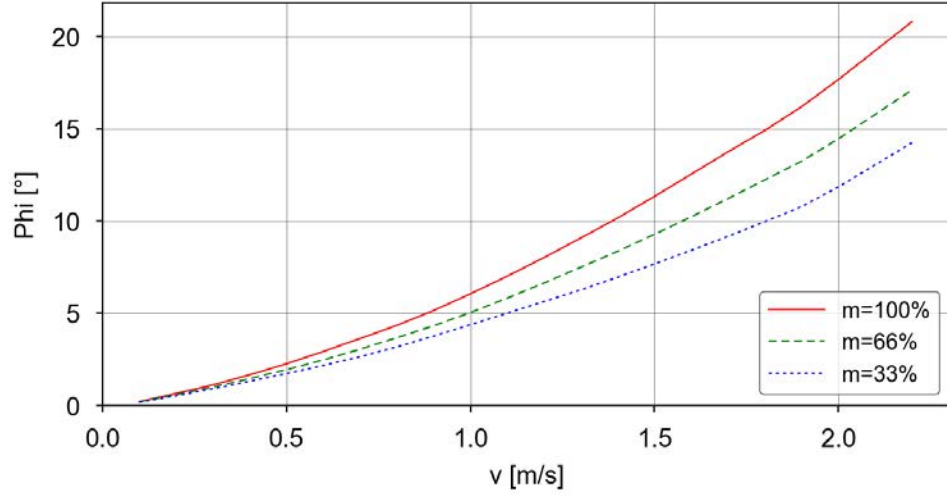
Extension zone 2, stopping distance and stopping time



Continues on next page

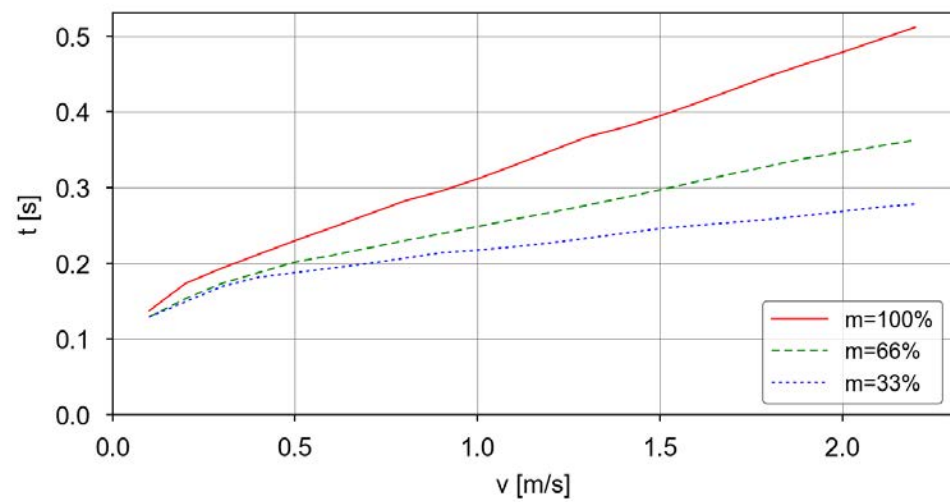
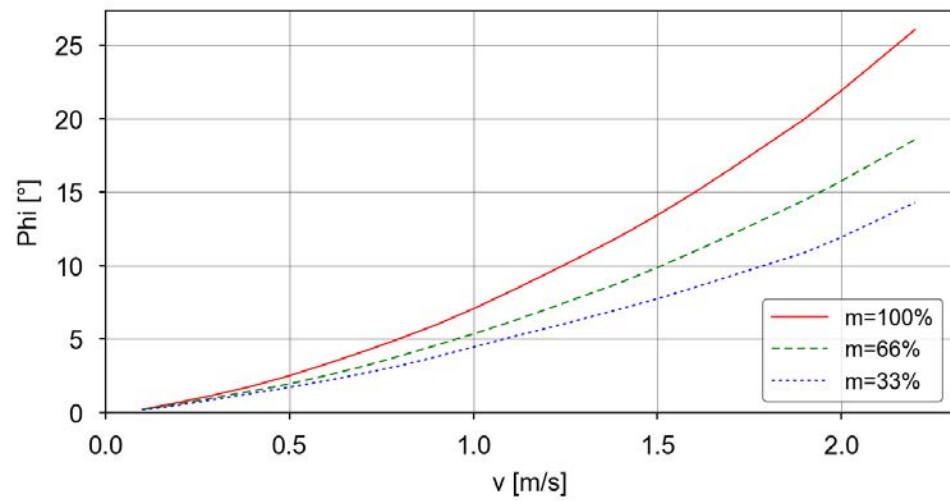
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



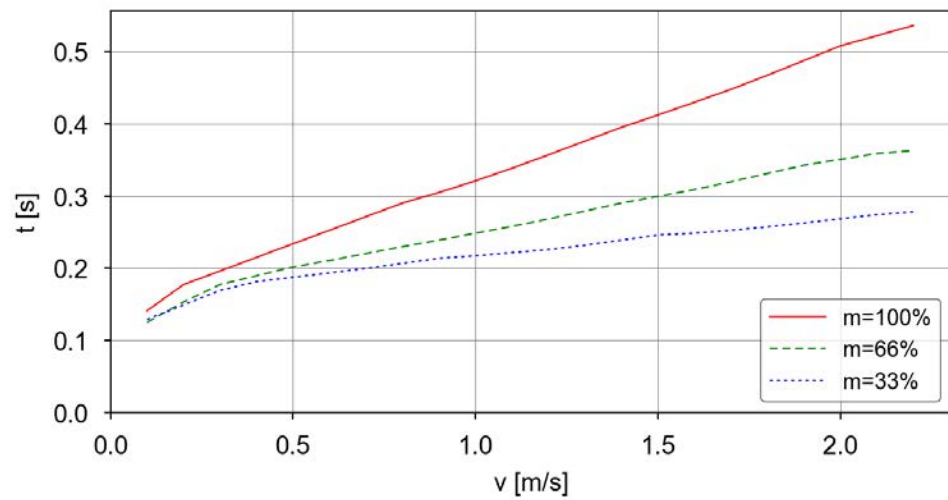
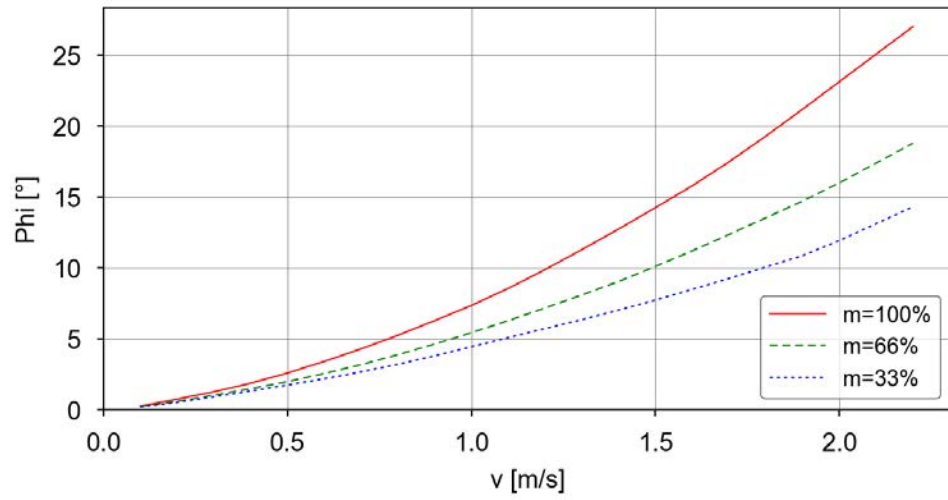
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



19 IRB 7600

19.1 IRB 7600 2.55 m 400 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	31.6	0.73
2	13.1	0.37
3	9.0	0.22

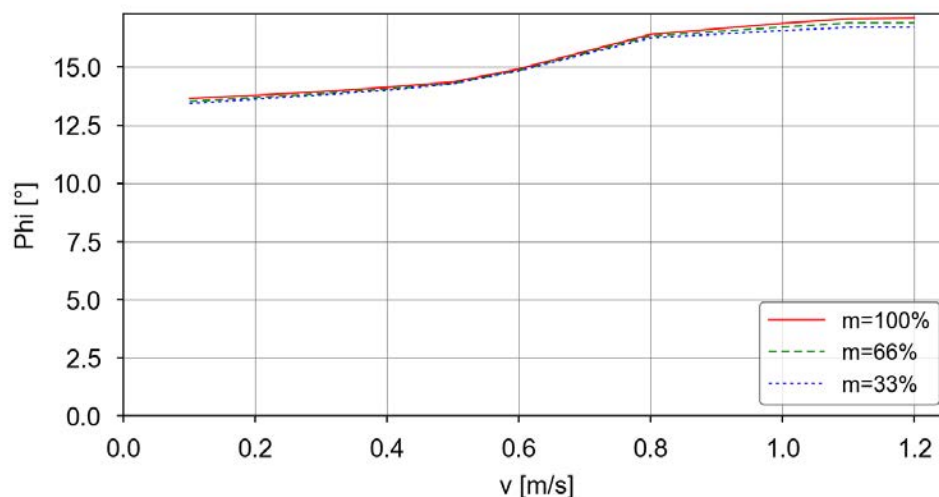
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.85
1	0.85	1.7
2	1.7	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

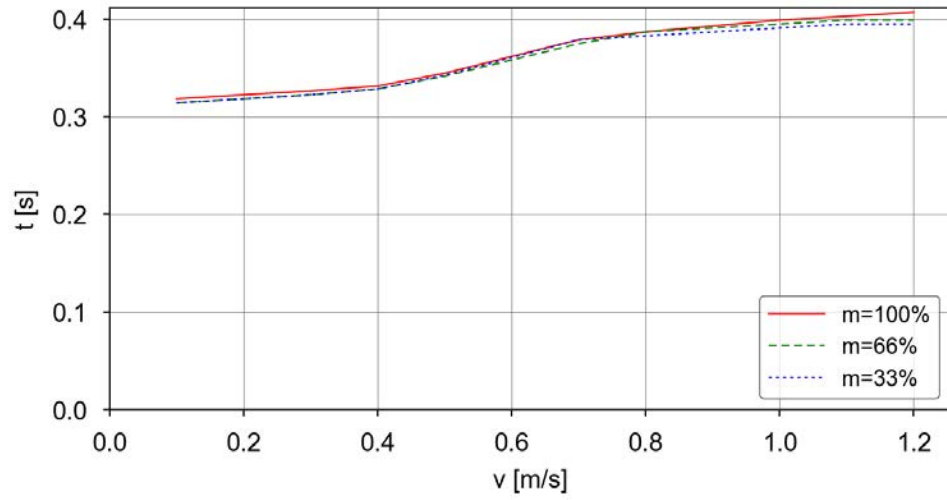


Continues on next page

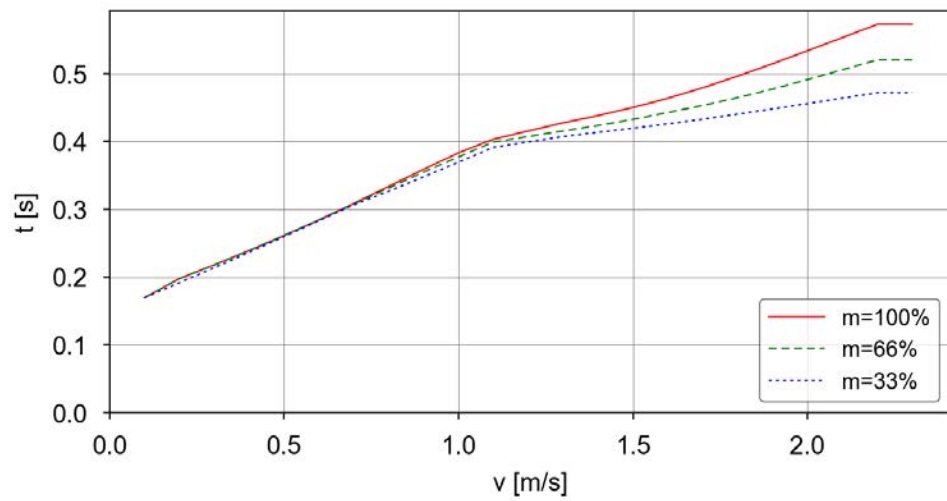
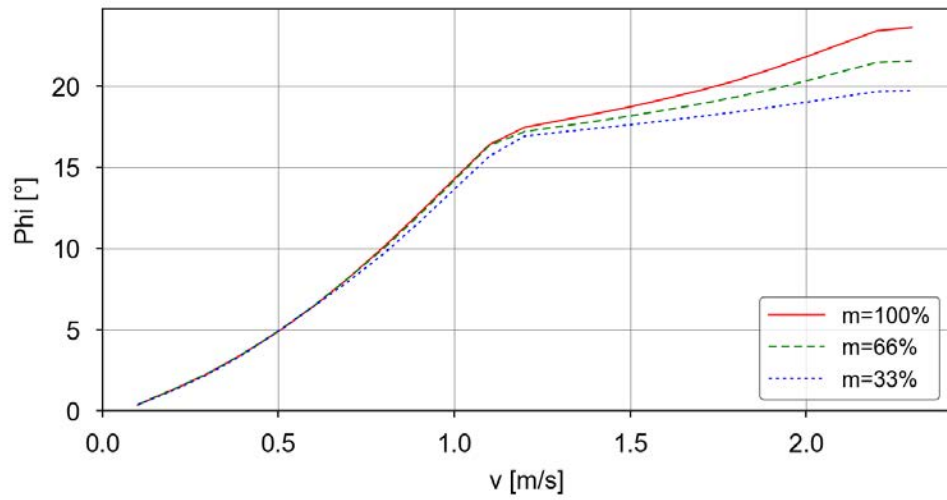
19 IRB 7600

19.1 IRB 7600 2.55 m 400 kg

Continued

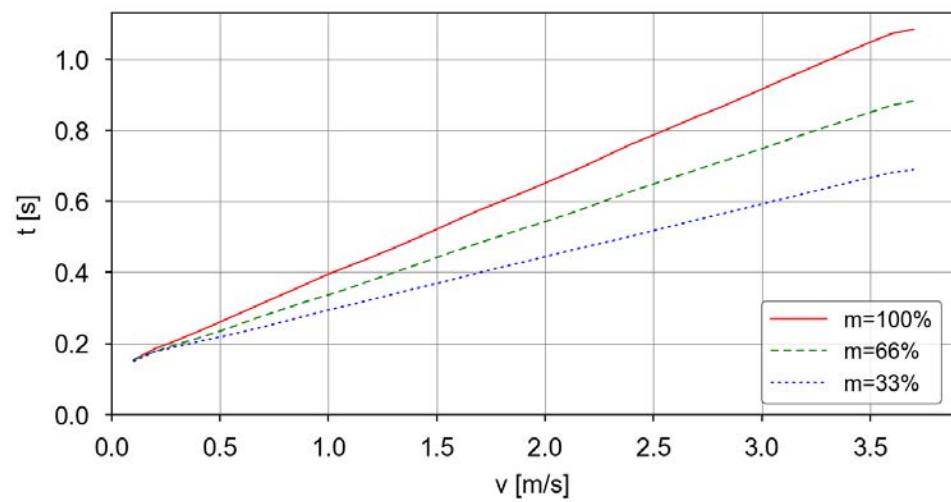
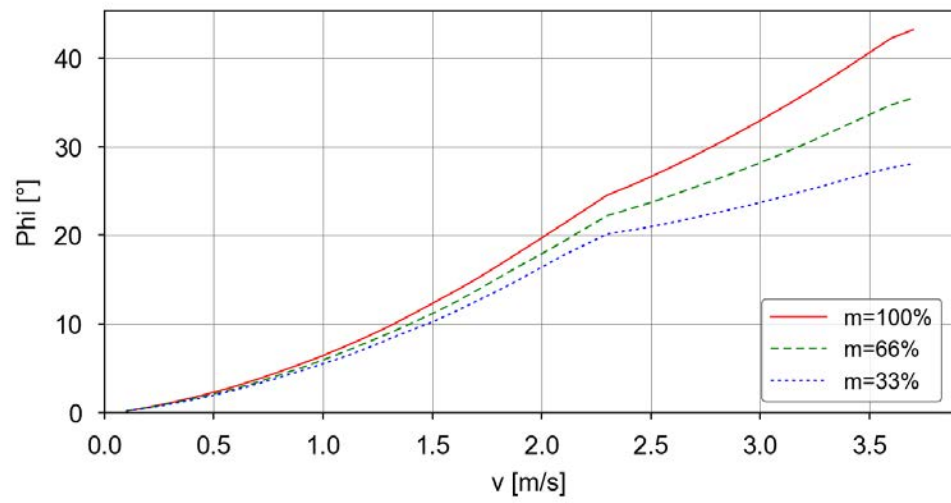


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

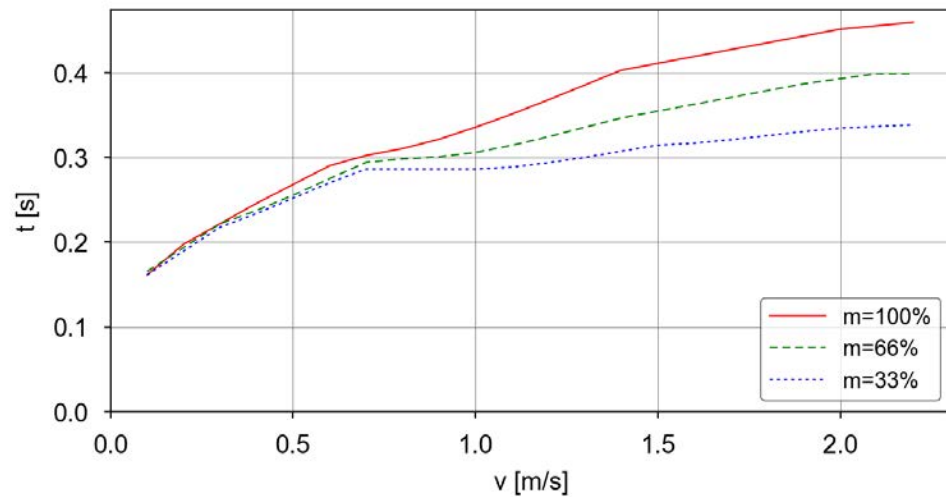
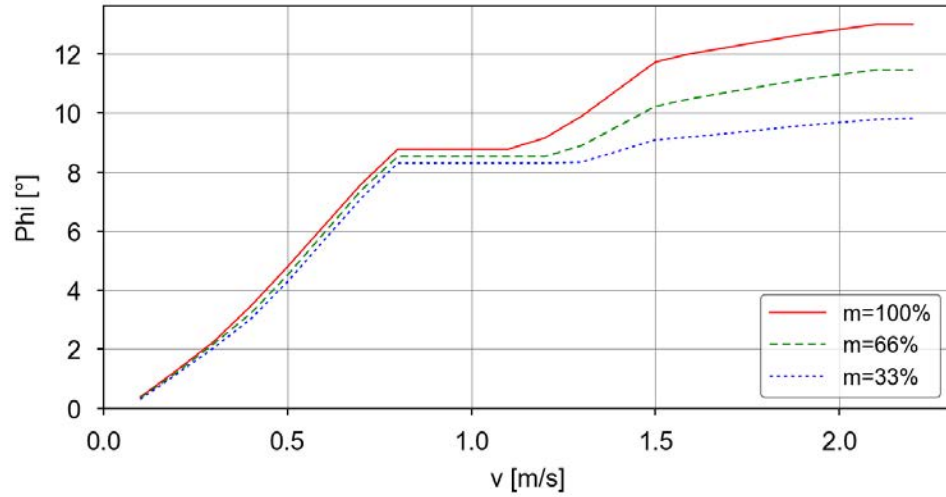
19 IRB 7600

19.1 IRB 7600 2.55 m 400 kg

Continued

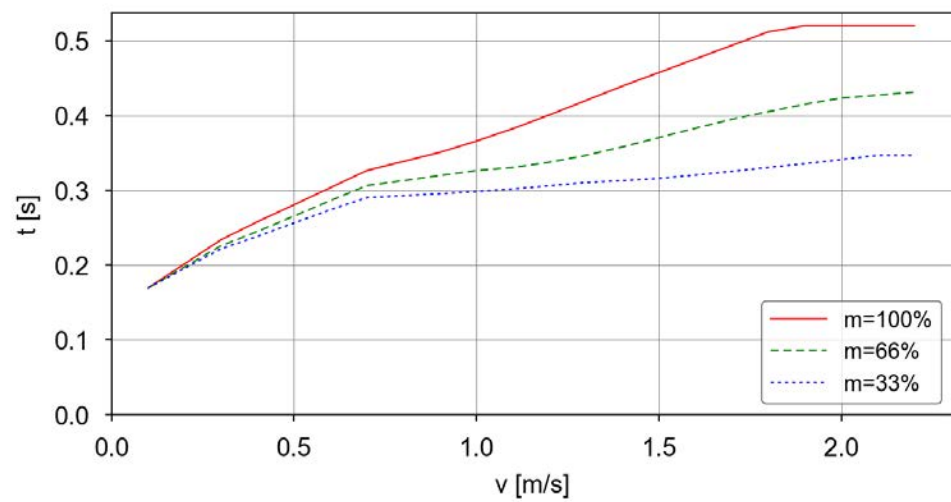
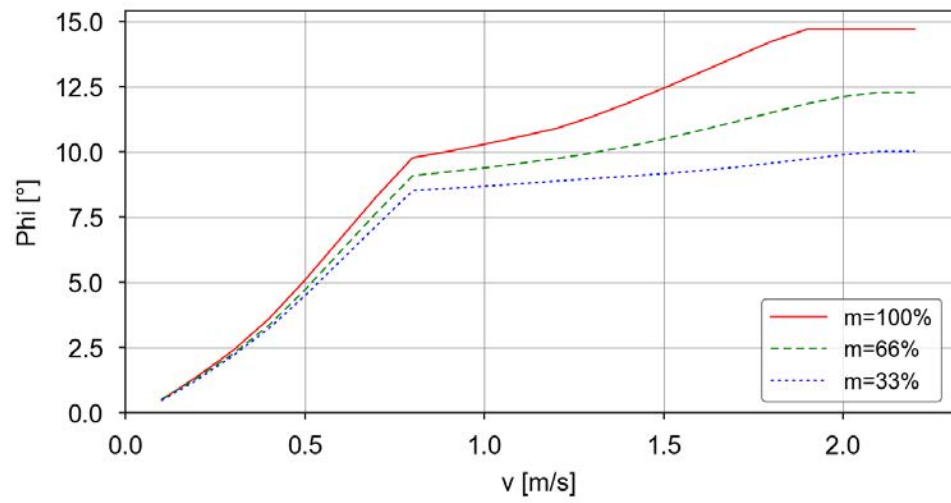
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



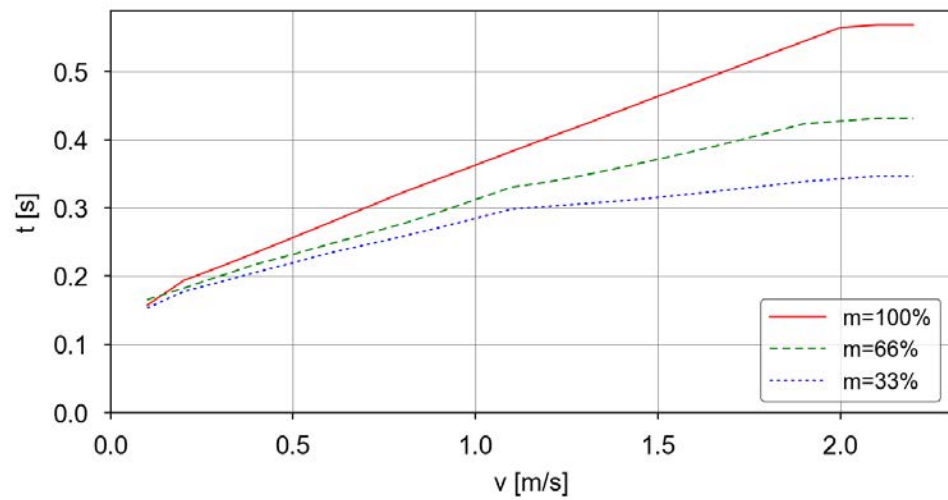
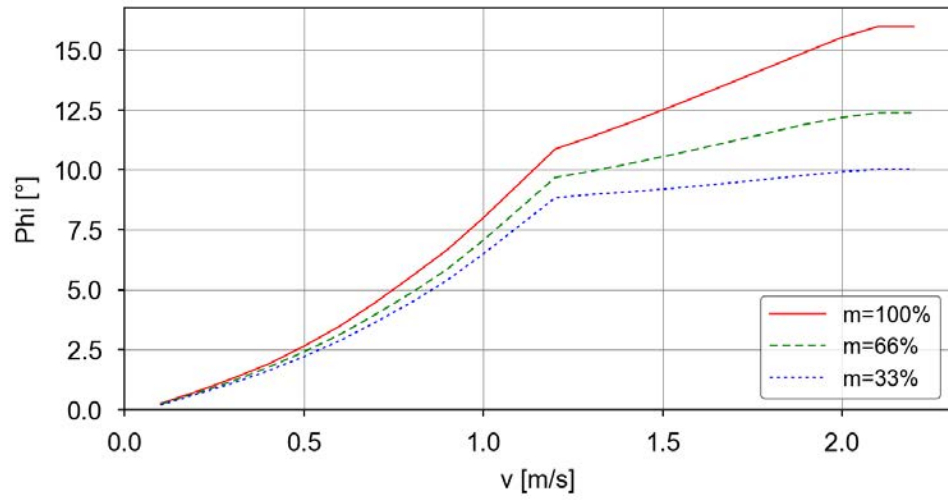
Continues on next page

19 IRB 7600

19.1 IRB 7600 2.55 m 400 kg

Continued

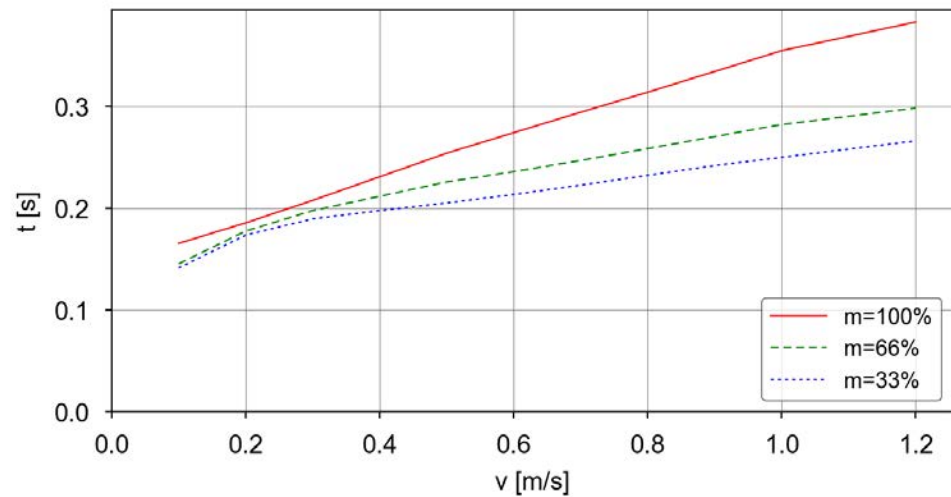
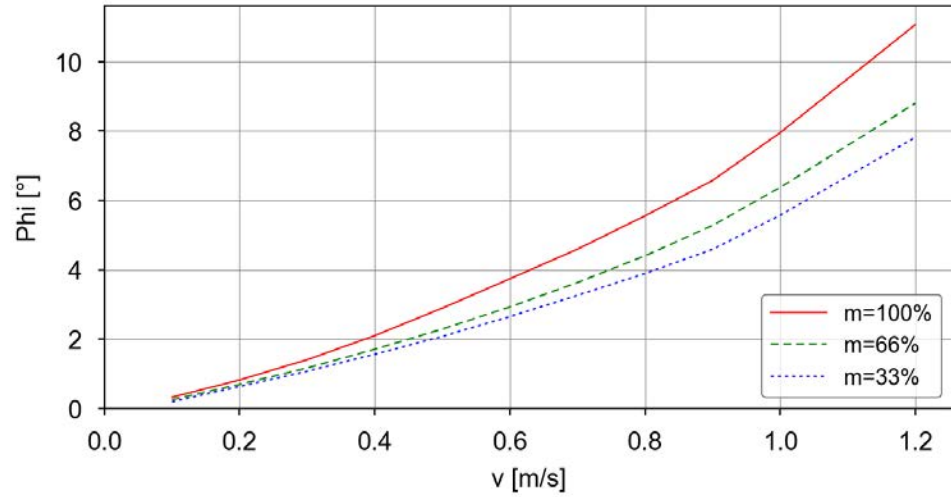
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



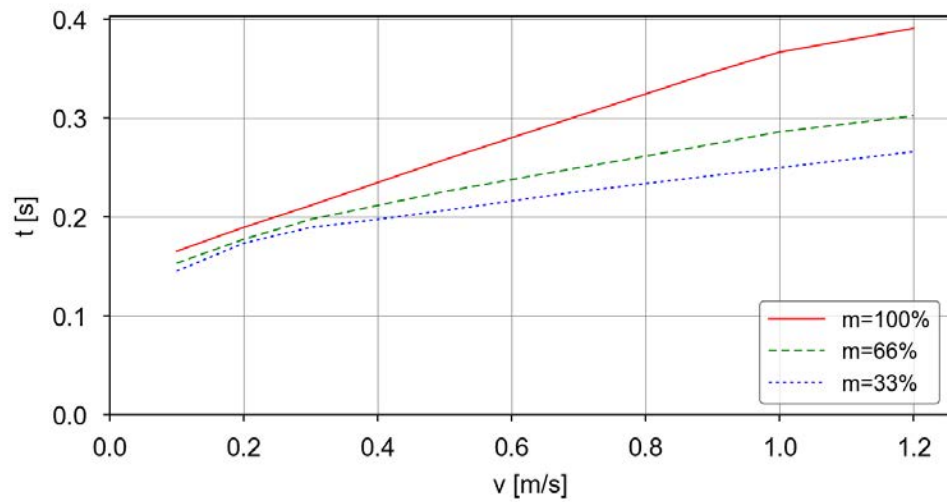
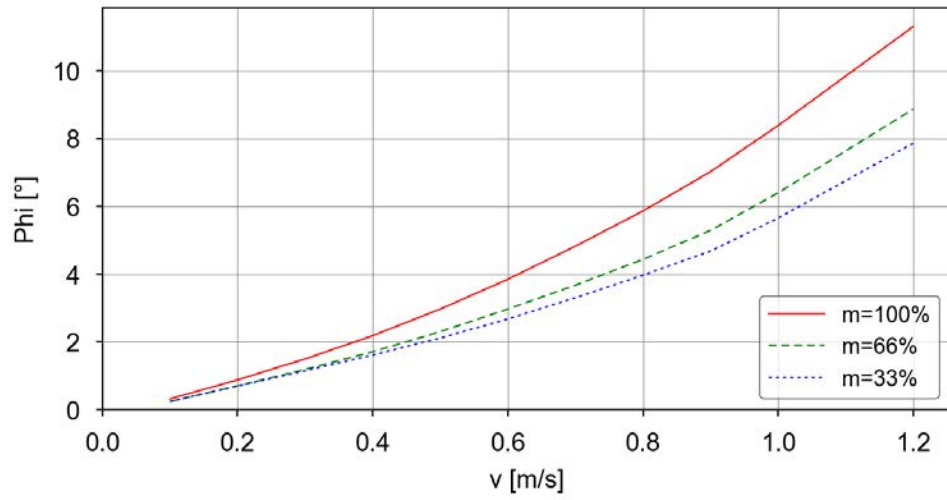
Continues on next page

19 IRB 7600

19.1 IRB 7600 2.55 m 400 kg

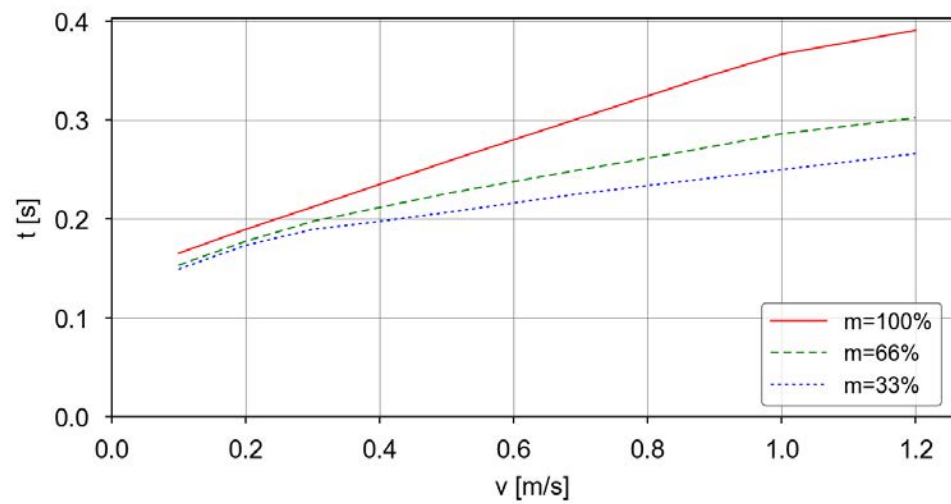
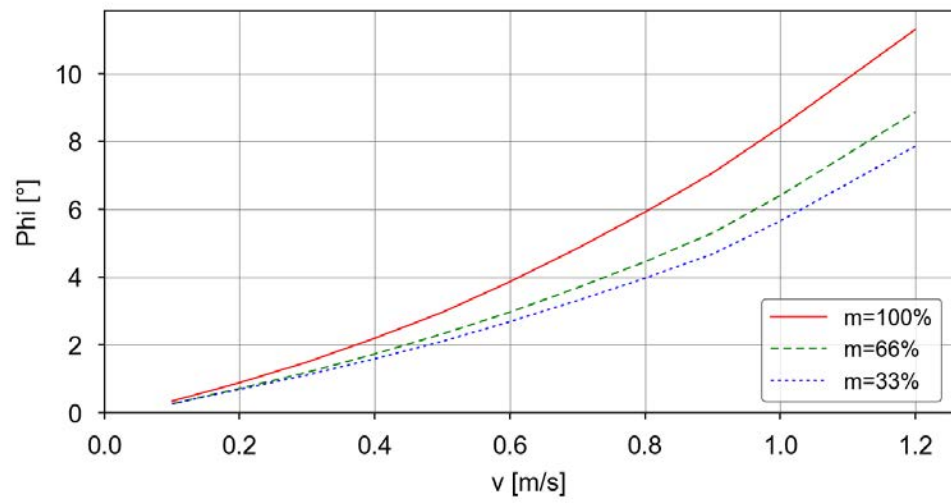
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



19 IRB 7600

19.2 IRB 7600 2.55 m 500 kg

19.2 IRB 7600 2.55 m 500 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	32.6	0.75
2	9.0	0.29
3	7.6	0.2

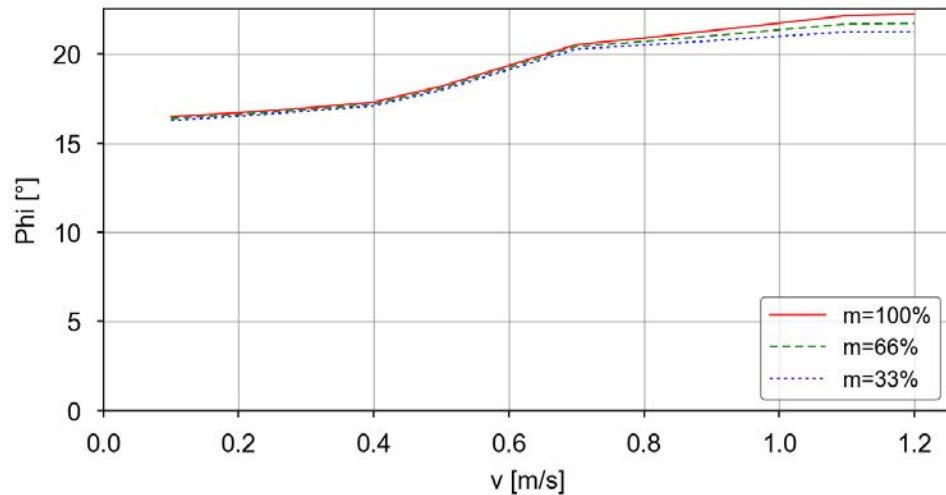
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

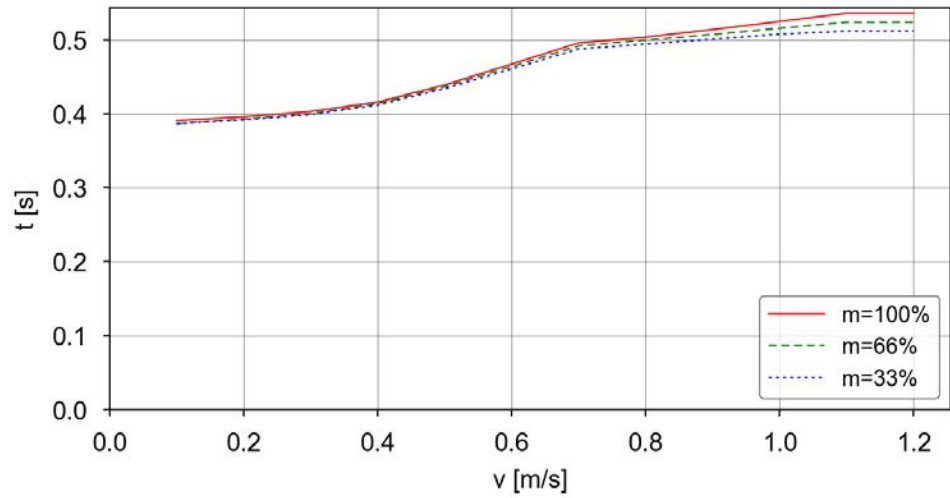
Zone	wcp min (m)	wcp max (m)
0	0	0.85
1	0.85	1.7
2	1.7	max reach

Category 1, Axis 1

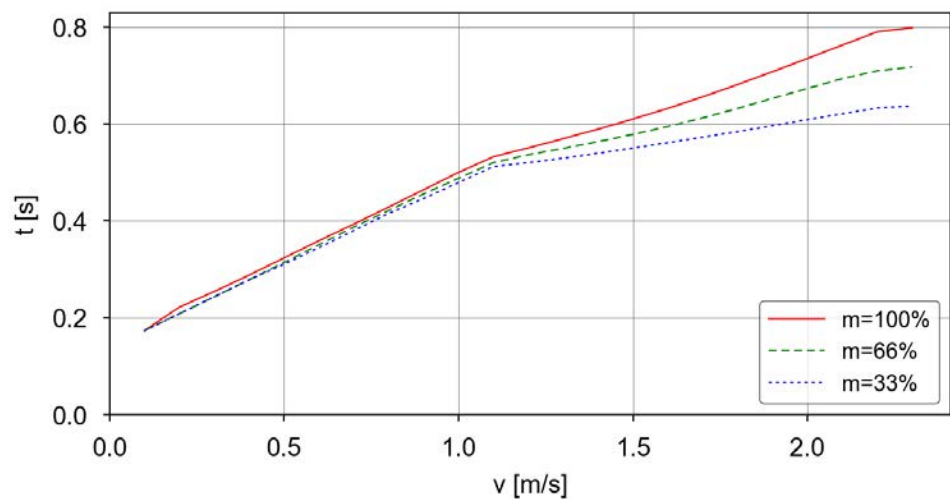
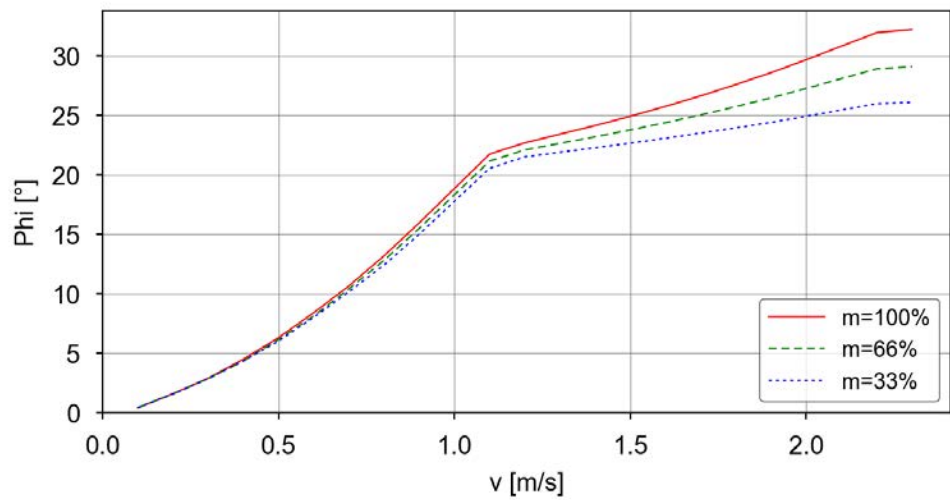
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



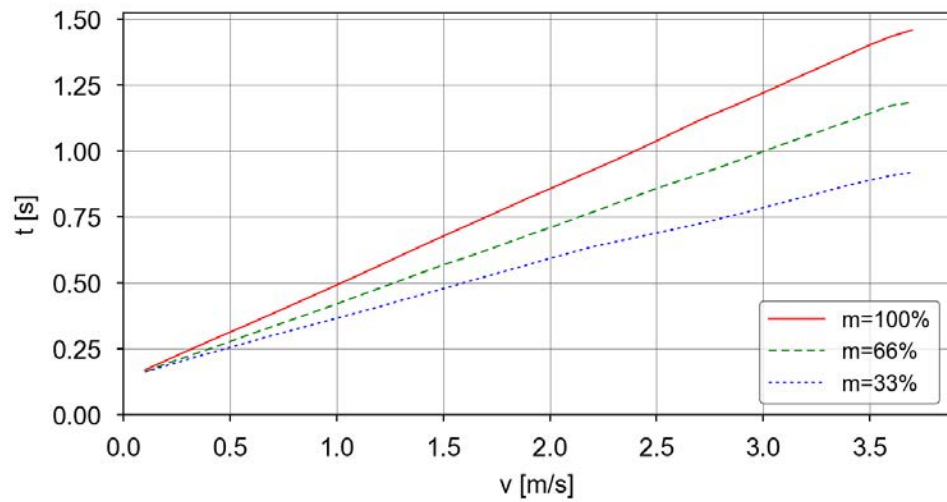
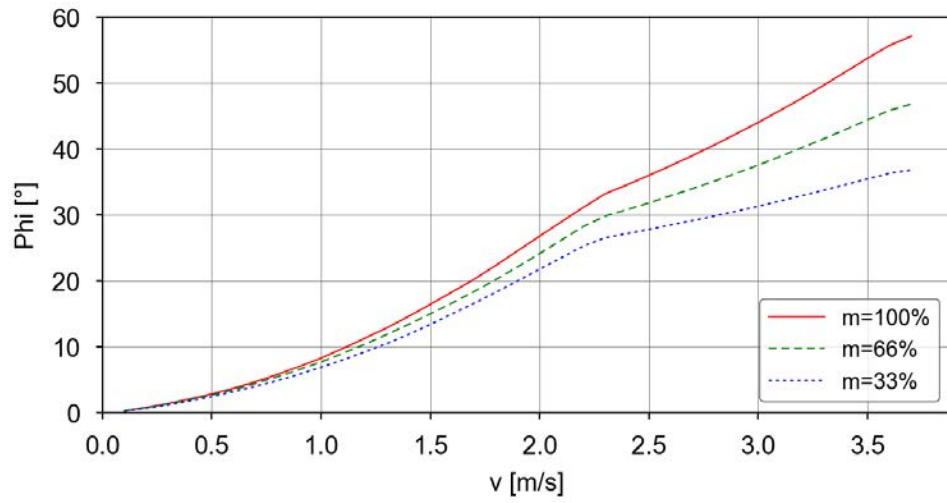
Continues on next page

19 IRB 7600

19.2 IRB 7600 2.55 m 500 kg

Continued

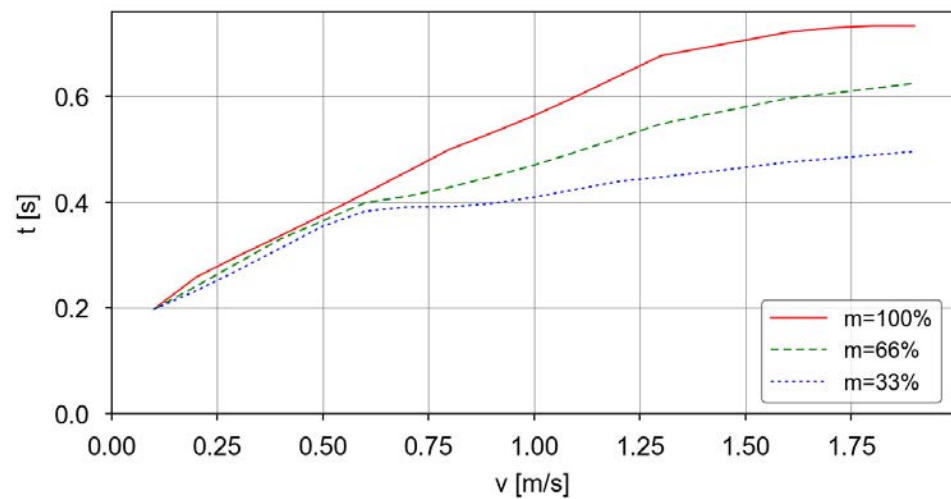
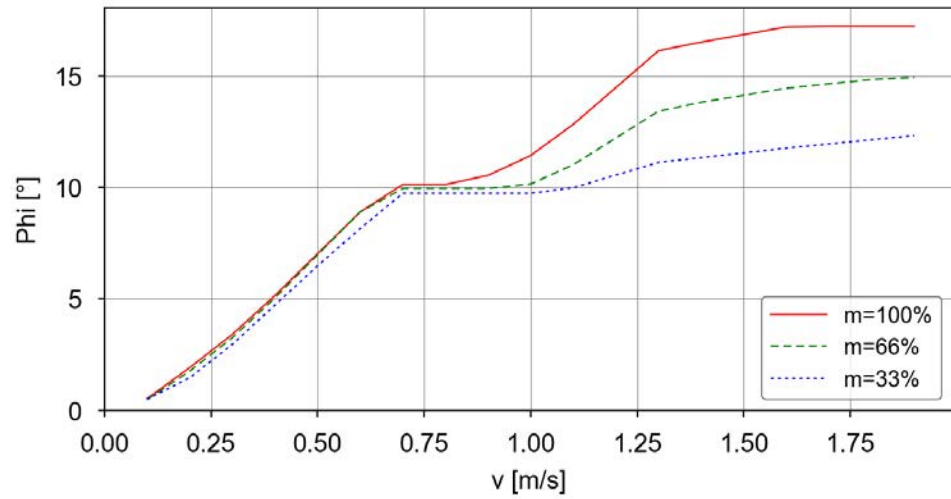
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



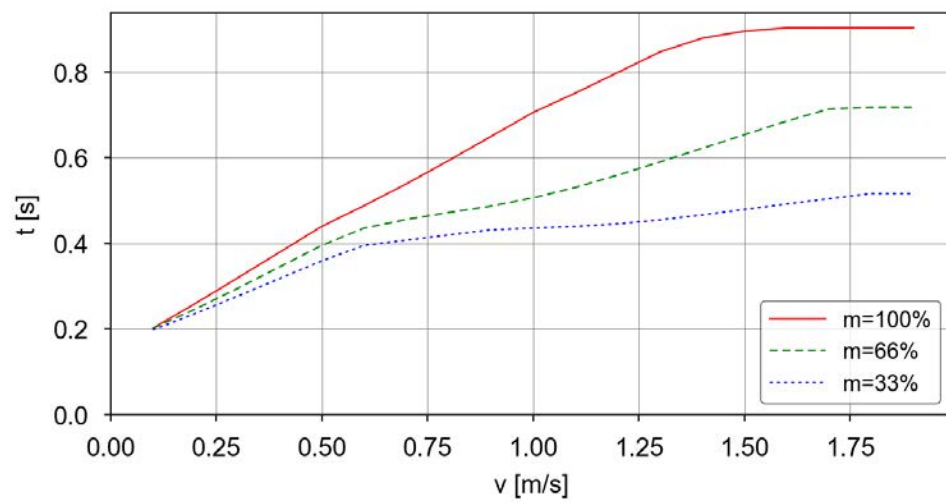
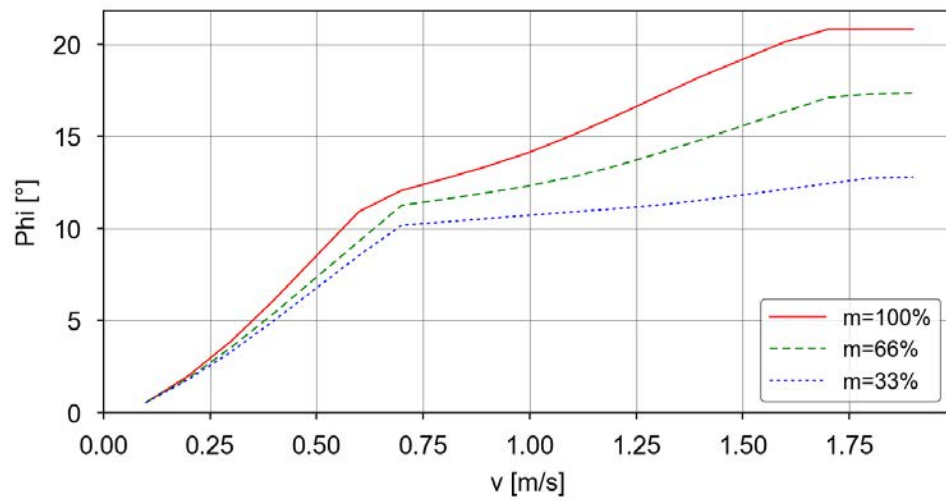
Continues on next page

19 IRB 7600

19.2 IRB 7600 2.55 m 500 kg

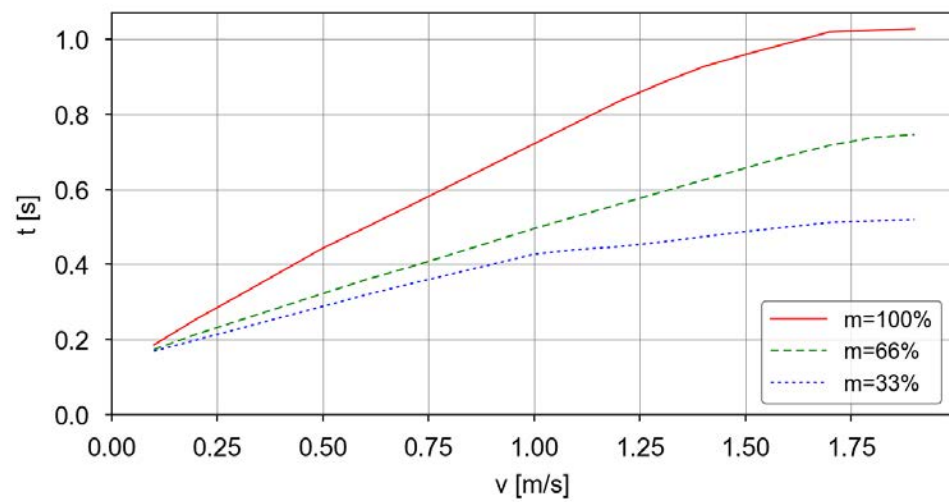
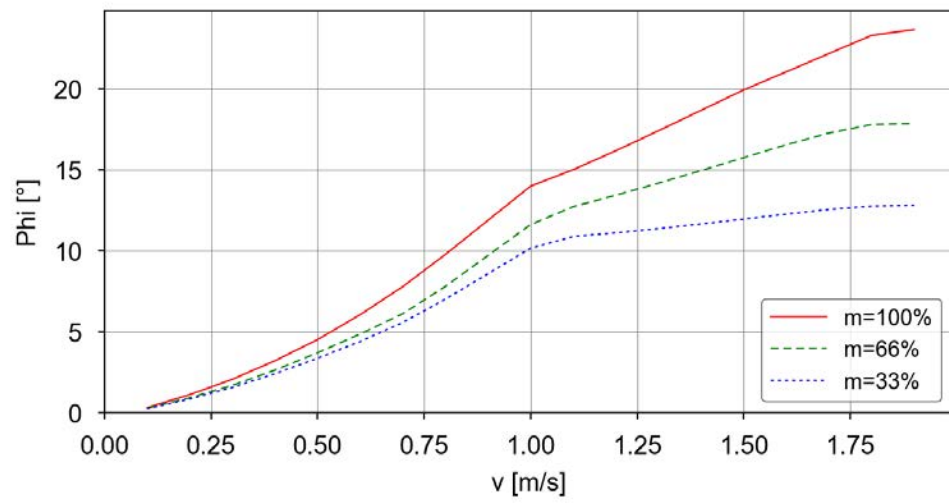
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

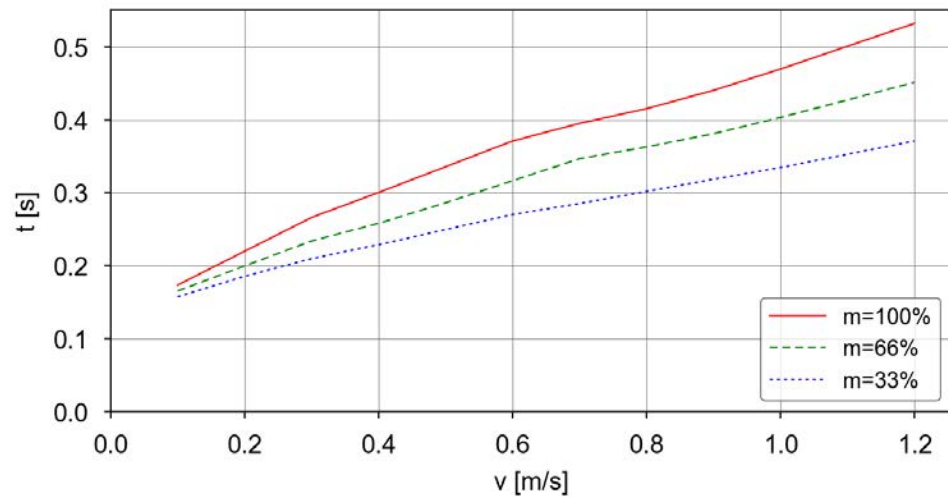
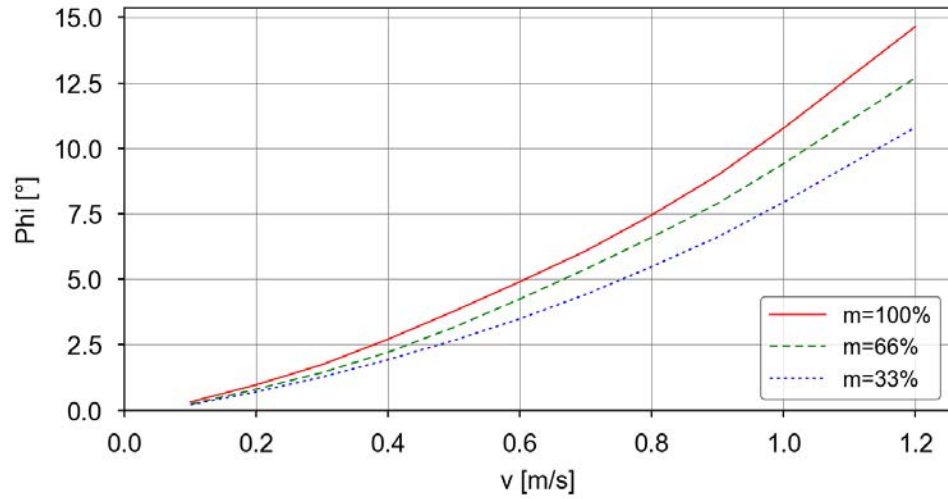
19 IRB 7600

19.2 IRB 7600 2.55 m 500 kg

Continued

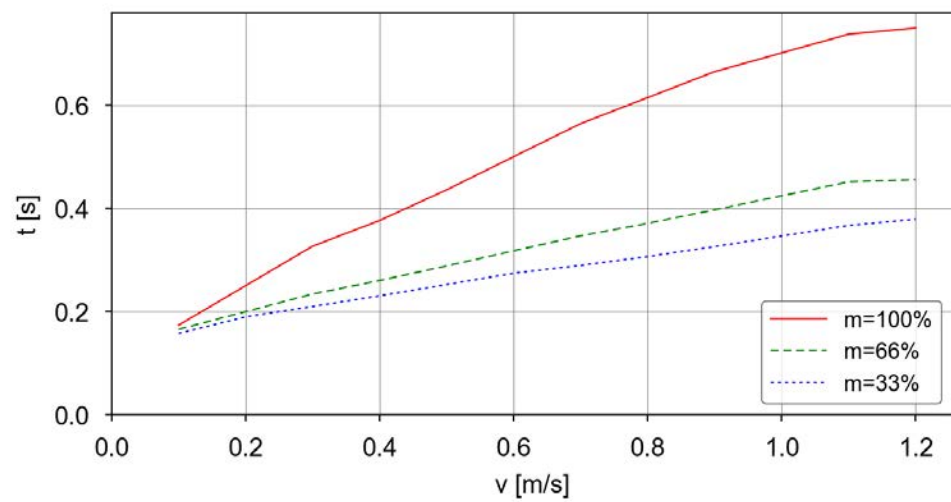
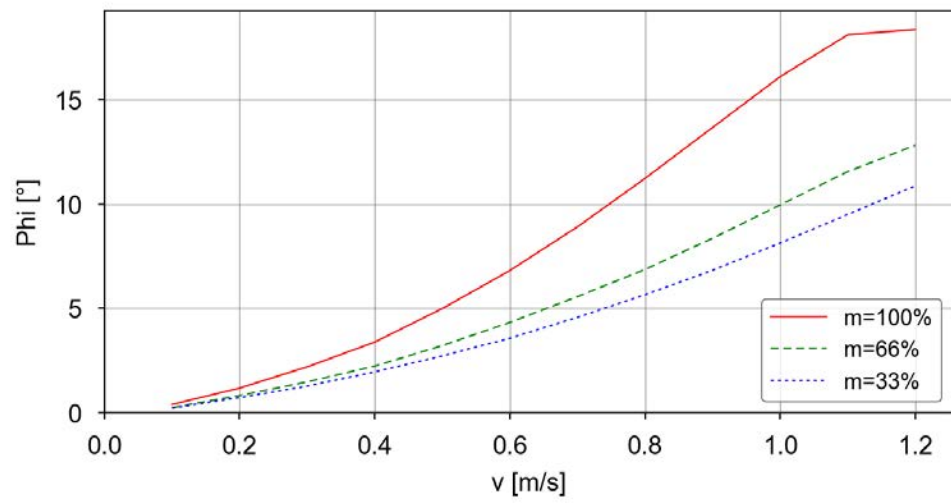
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



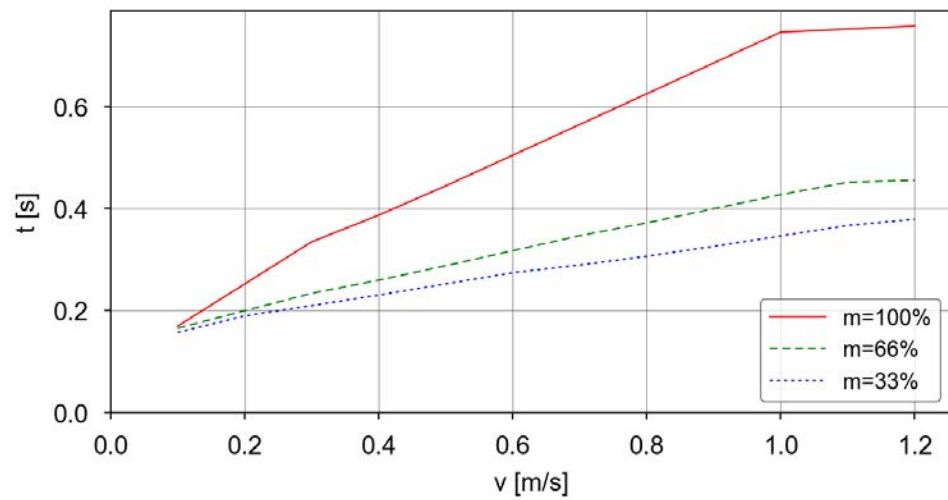
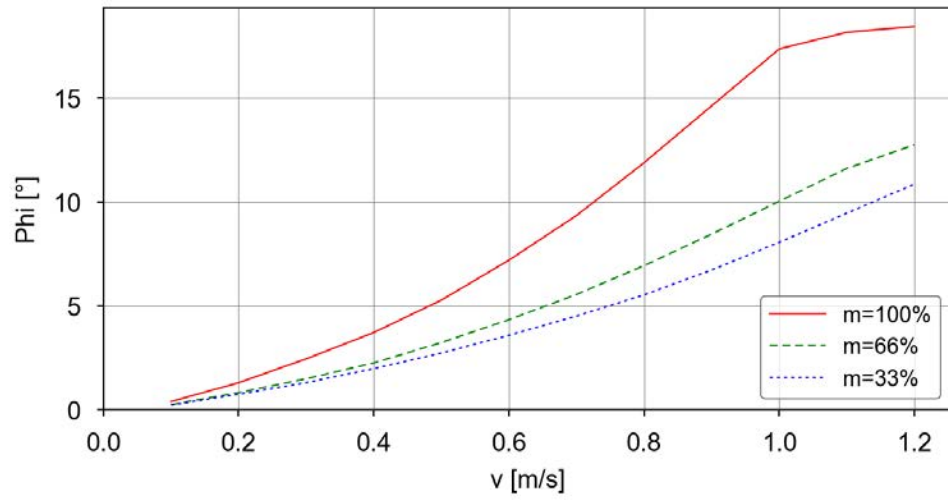
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



19.3 IRB 7600 2.80 m 340 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	31.1	0.71
2	12.9	0.37
3	9.0	0.22

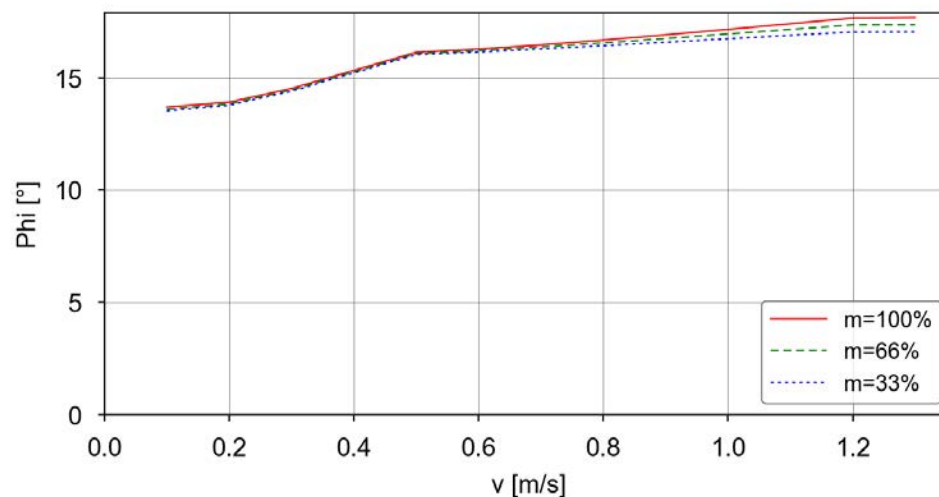
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.932
1	0.932	1.865
2	1.865	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

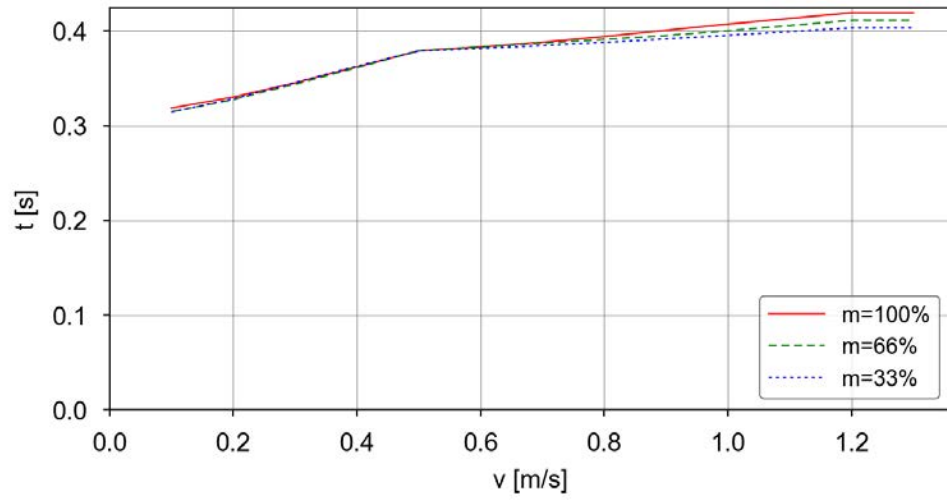


Continues on next page

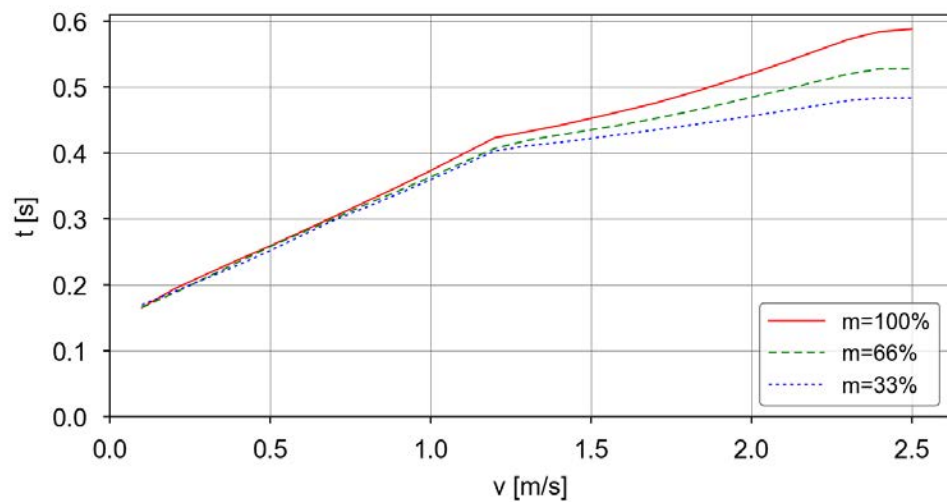
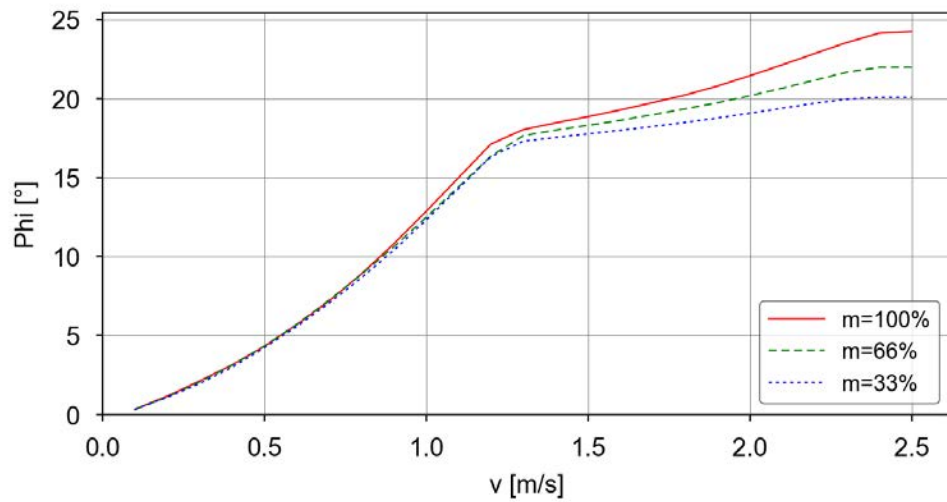
19 IRB 7600

19.3 IRB 7600 2.80 m 340 kg

Continued

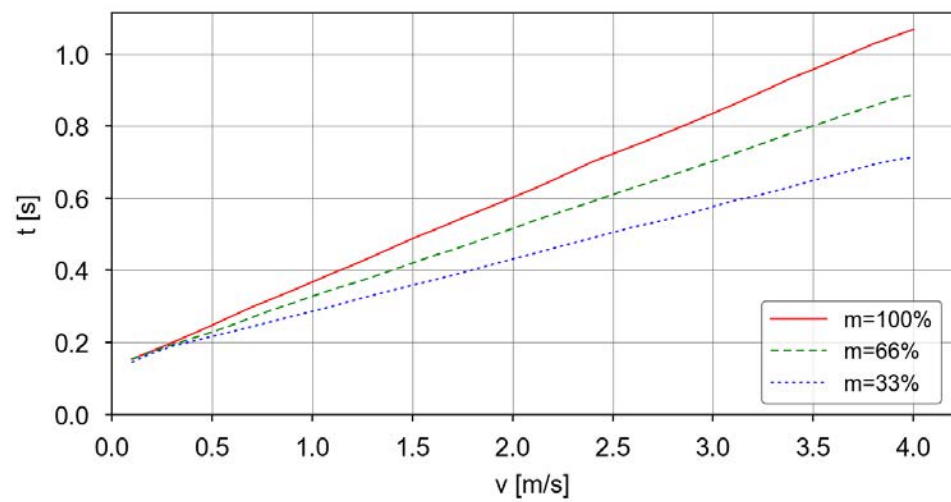
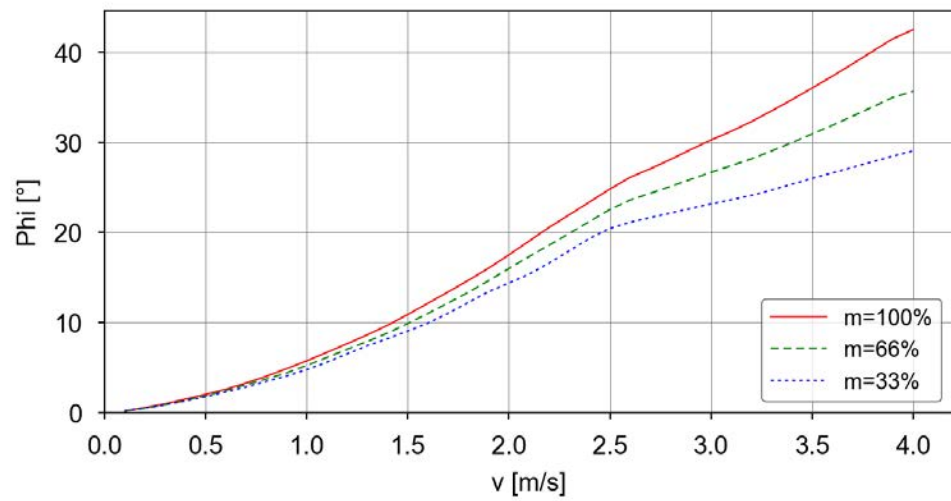


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

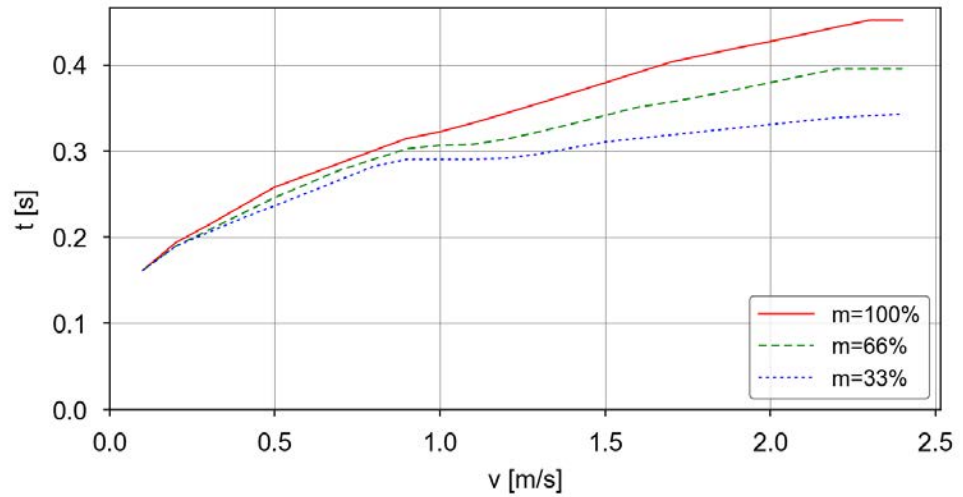
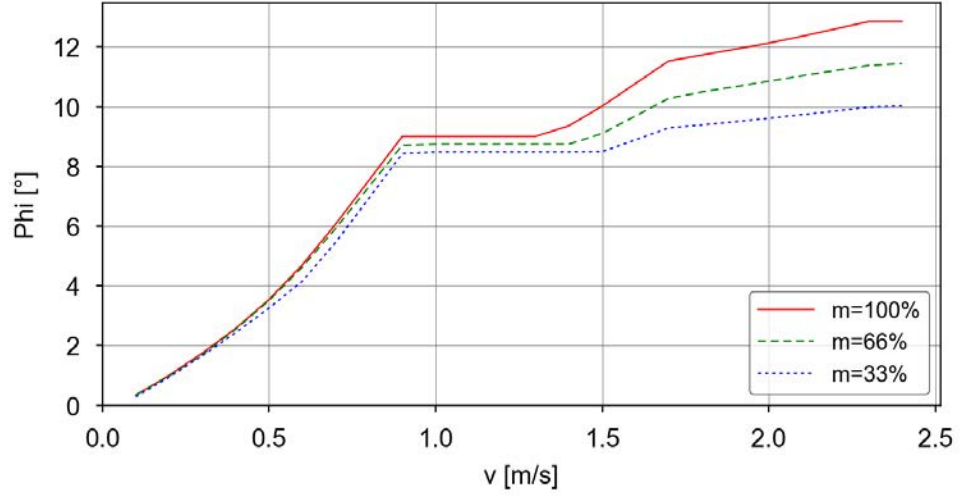
19 IRB 7600

19.3 IRB 7600 2.80 m 340 kg

Continued

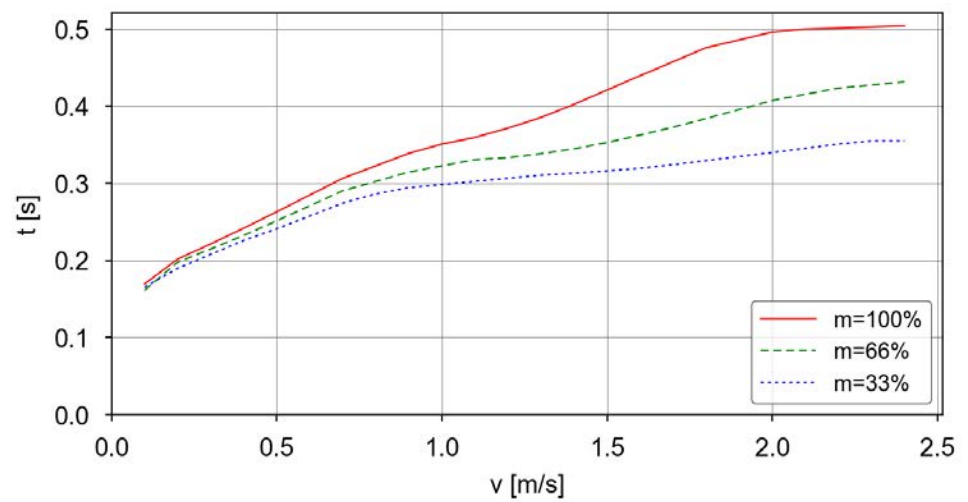
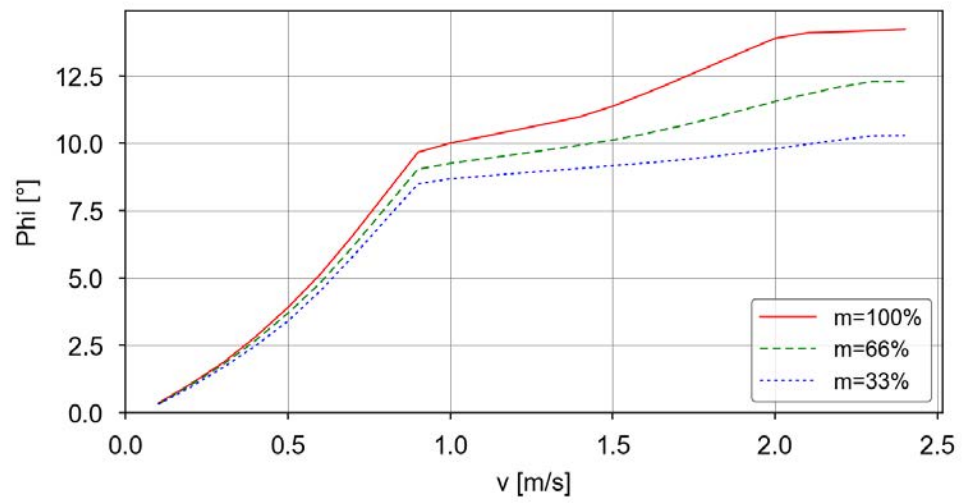
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



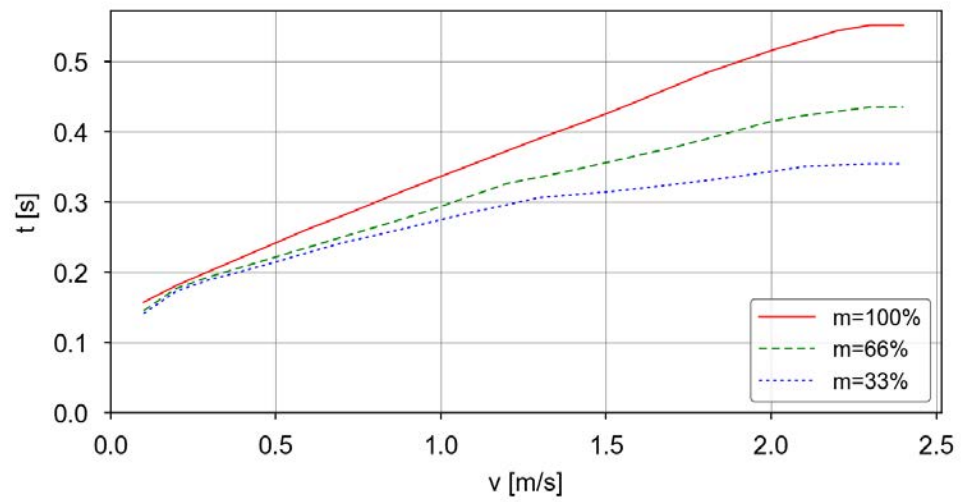
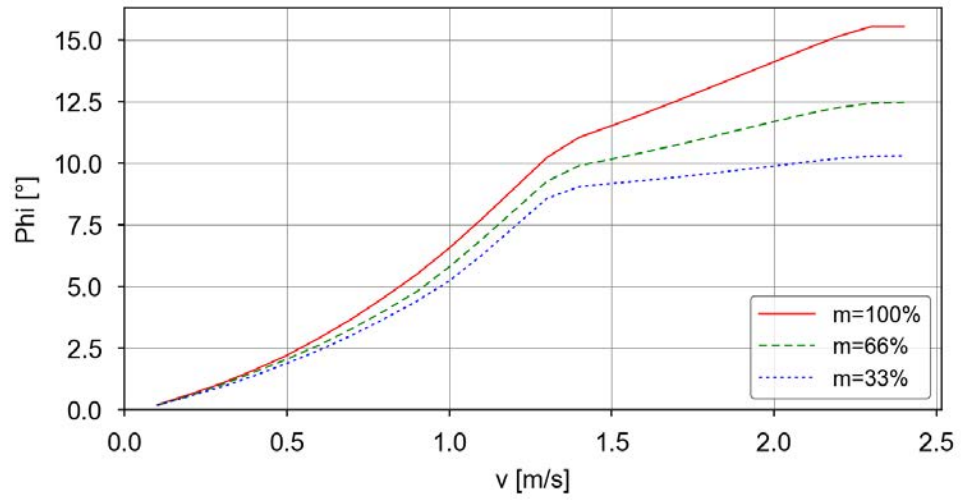
Continues on next page

19 IRB 7600

19.3 IRB 7600 2.80 m 340 kg

Continued

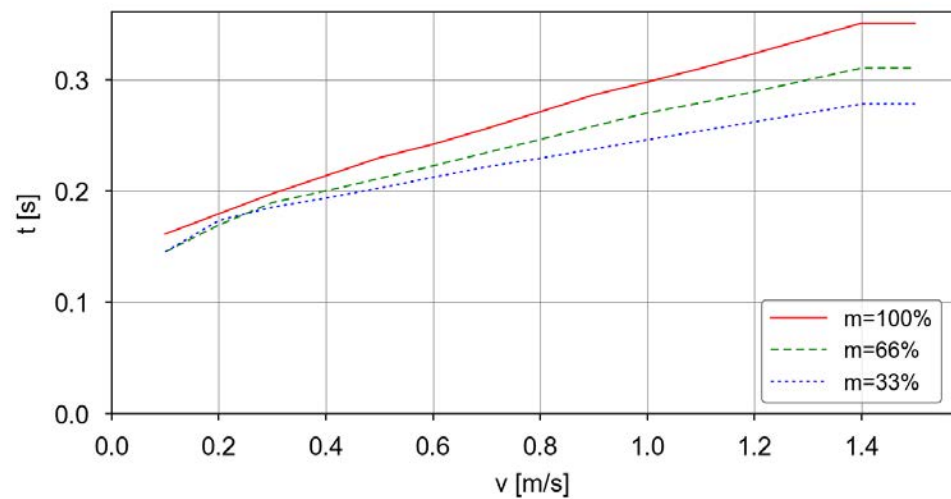
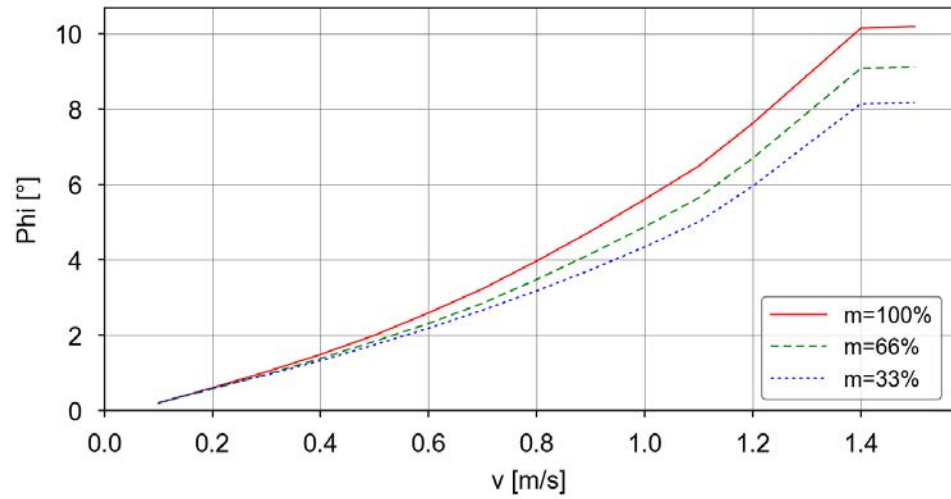
Extension zone 2, stopping distance and stopping time



Continues on next page

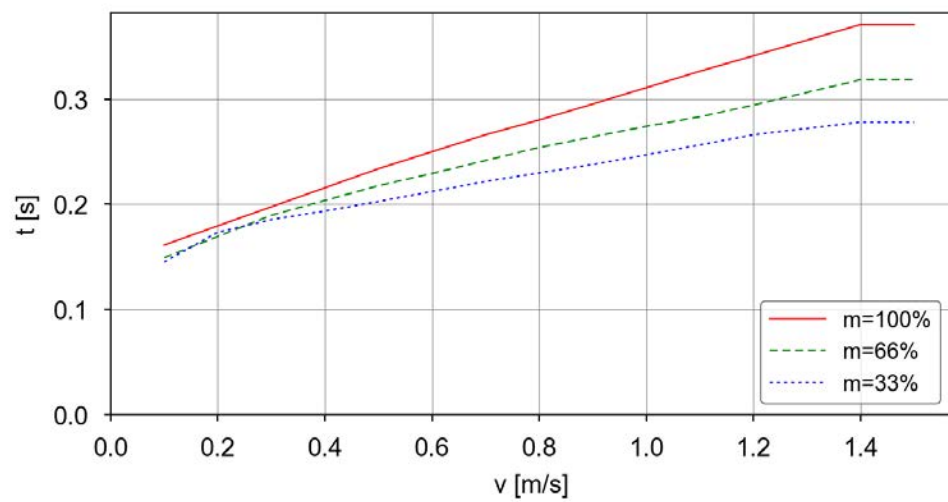
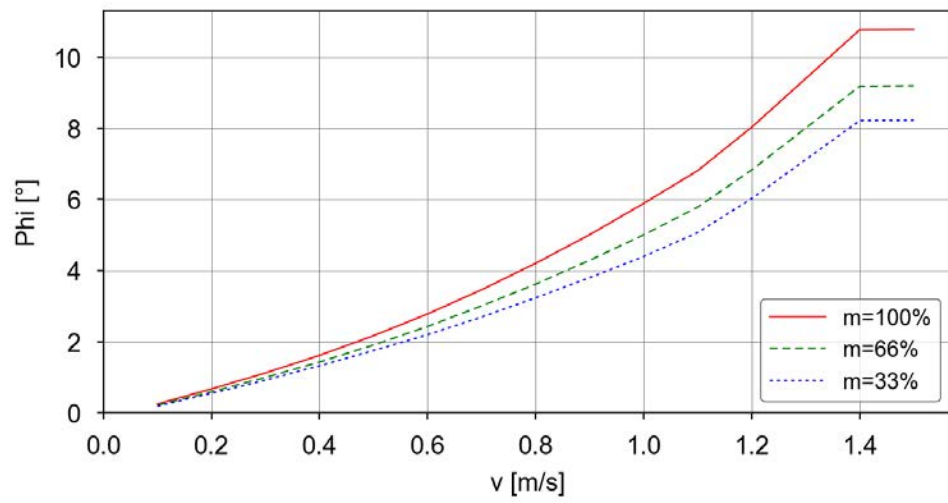
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



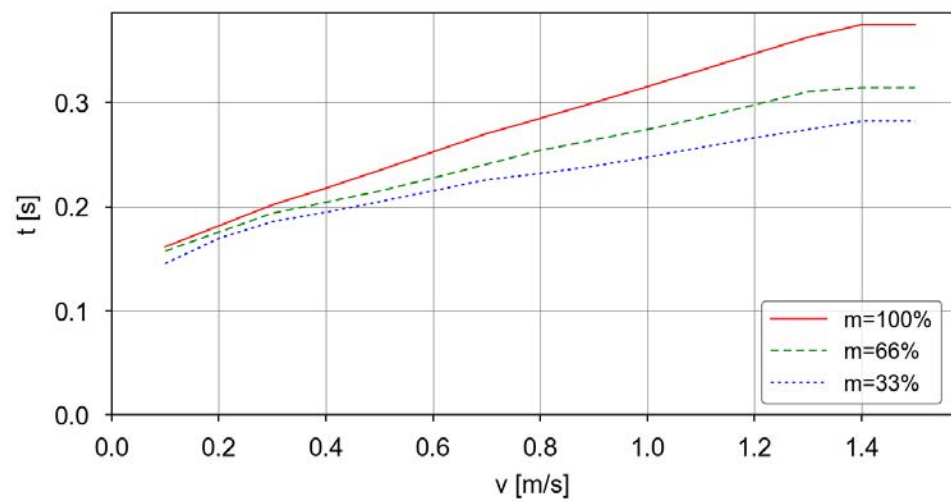
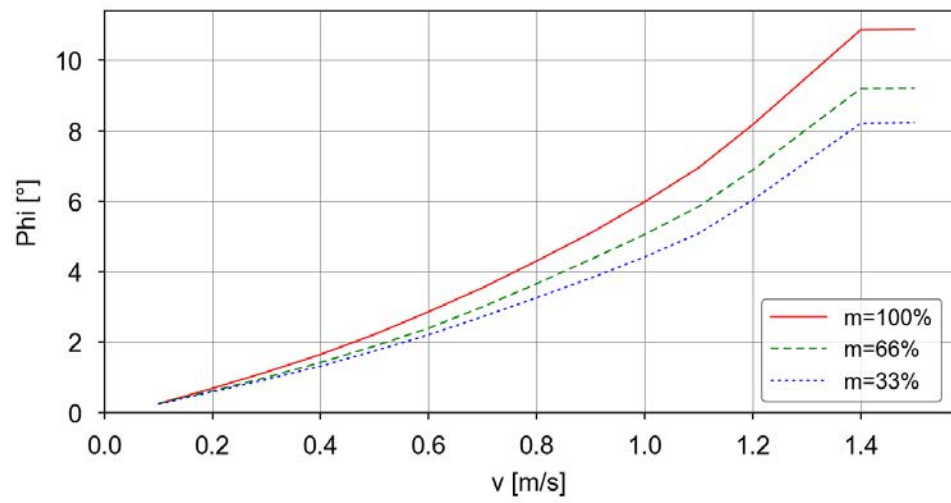
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



19 IRB 7600

19.4 IRB 7600 3.05 m 325 kg

19.4 IRB 7600 3.05 m 325 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	33.0	0.78
2	9.0	0.29
3	8.4	0.22

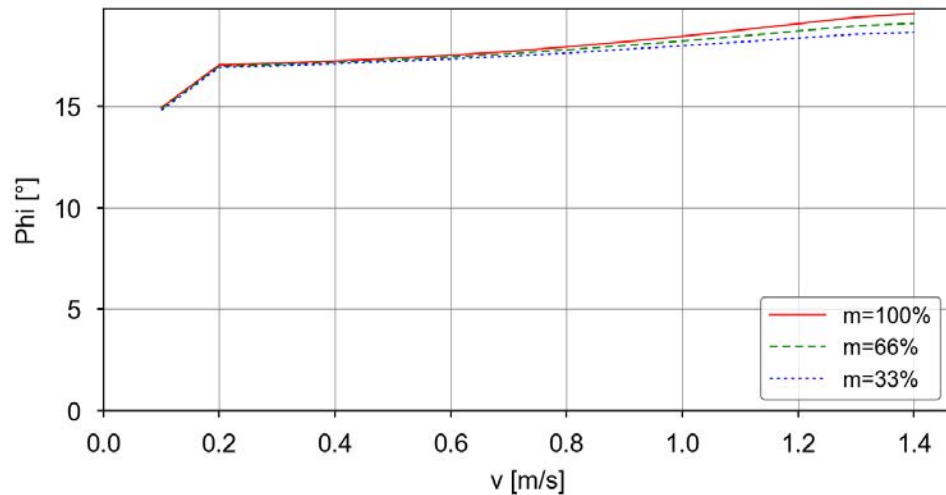
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

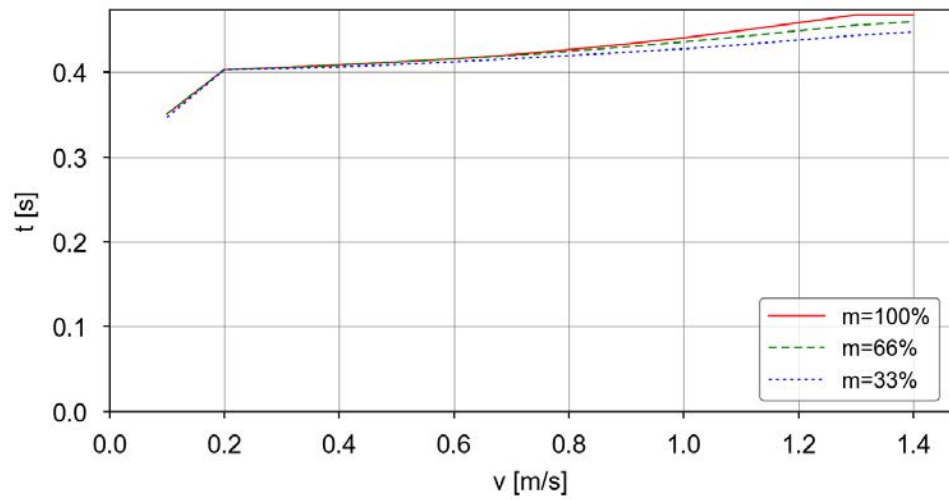
Zone	wcp min (m)	wcp max (m)
0	0	1.015
1	1.015	2.03
2	2.03	max reach

Category 1, Axis 1

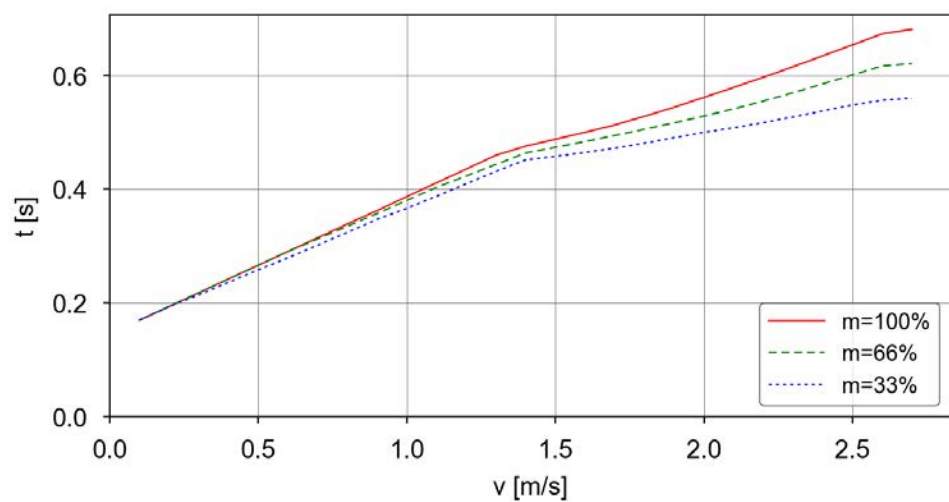
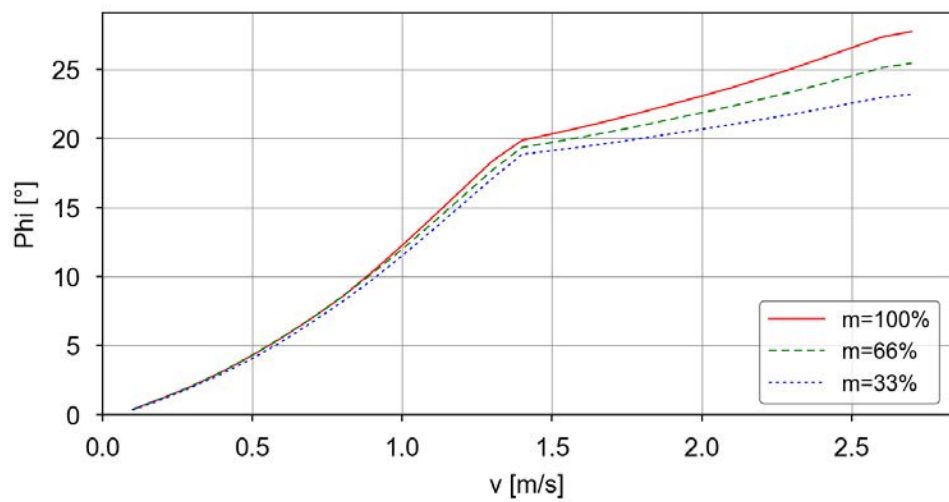
Extension zone 0, stopping distance and stopping time



Continues on next page

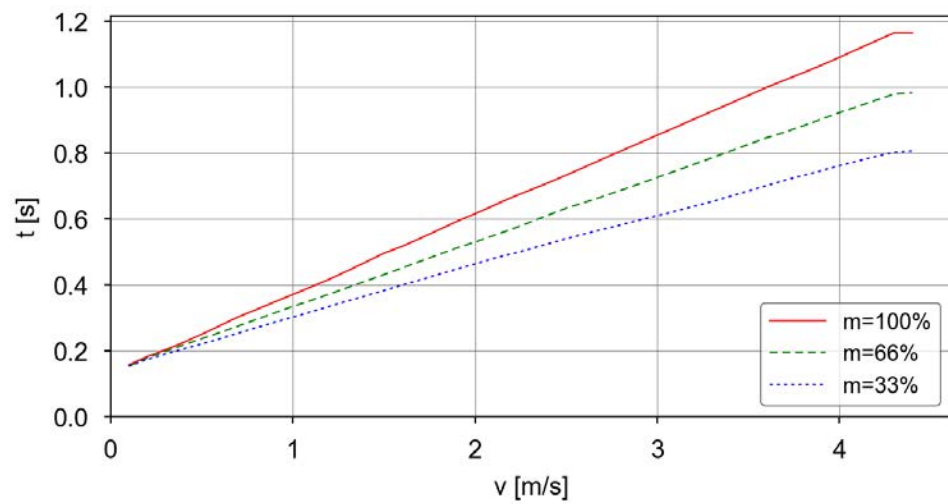
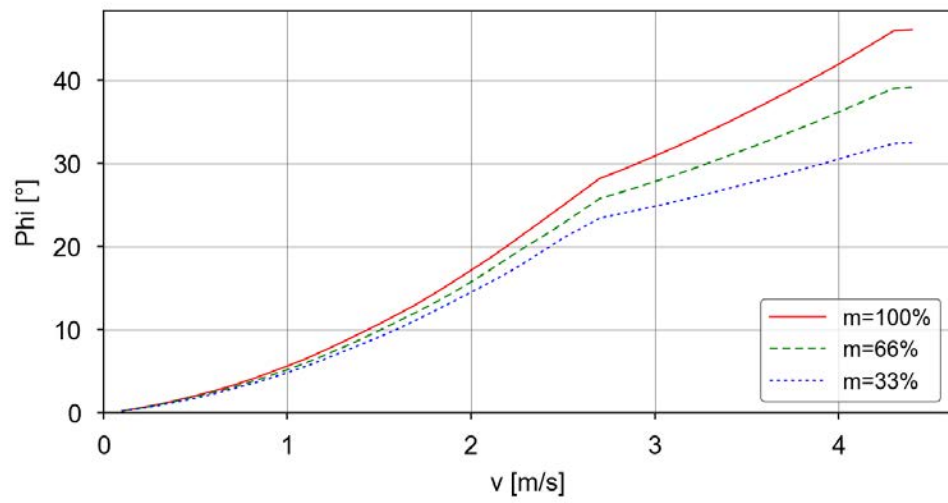


Extension zone 1, stopping distance and stopping time



Continues on next page

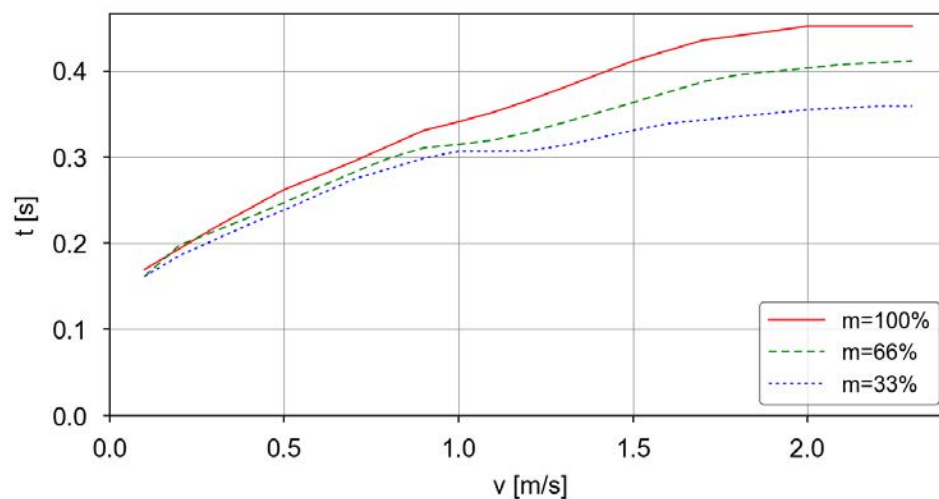
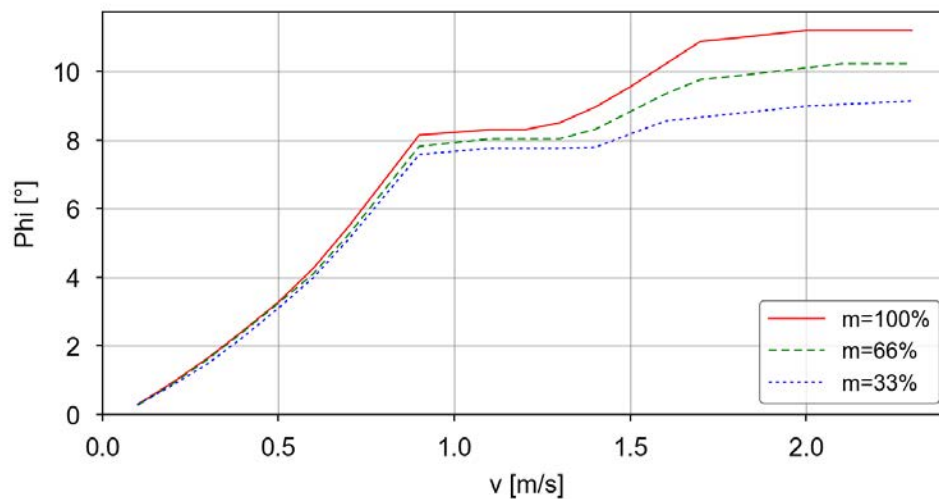
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



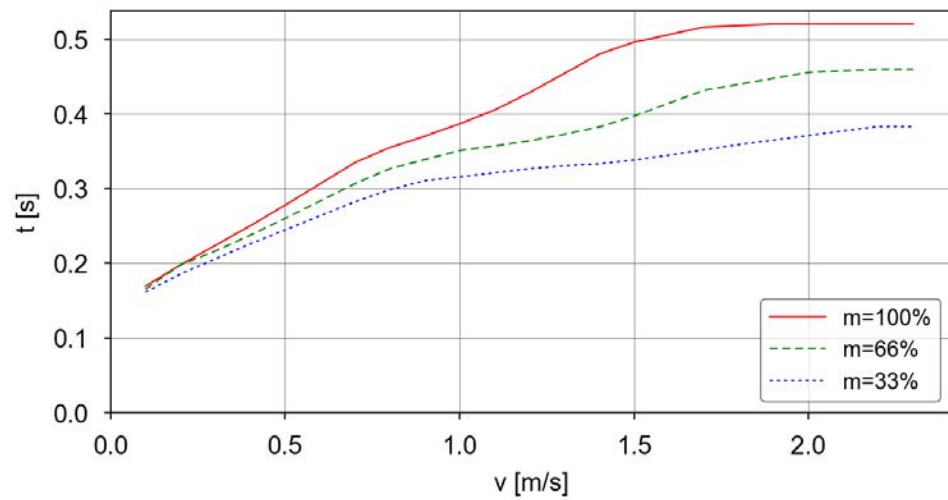
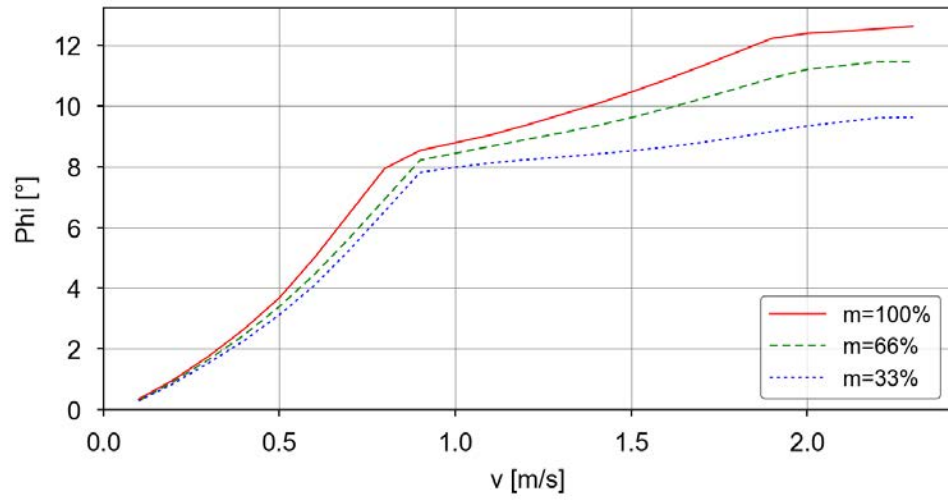
Continues on next page

19 IRB 7600

19.4 IRB 7600 3.05 m 325 kg

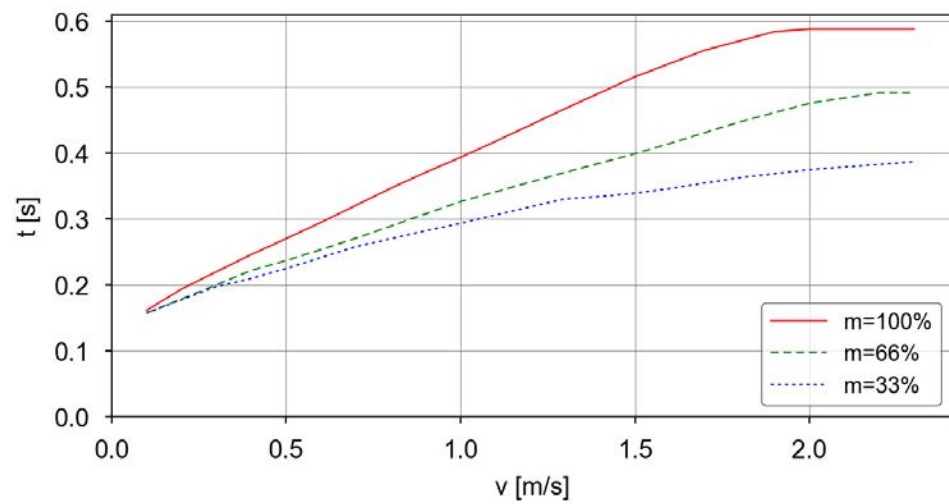
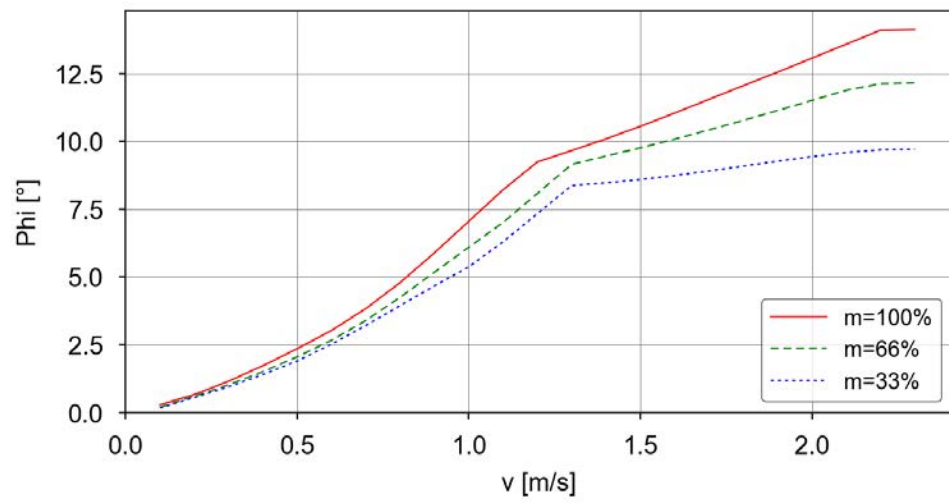
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

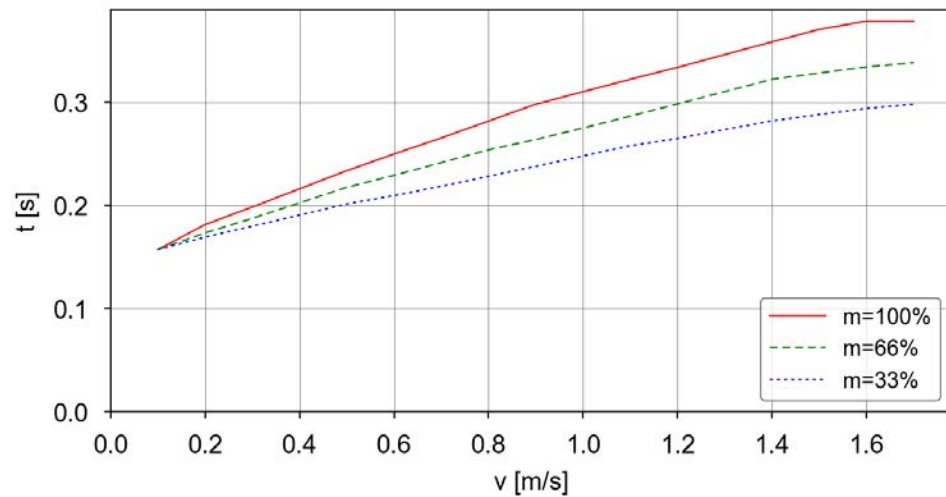
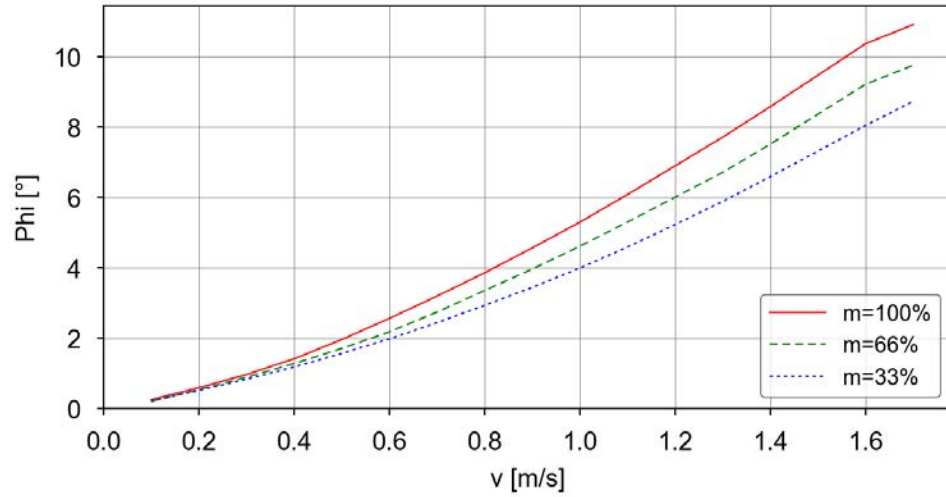
19 IRB 7600

19.4 IRB 7600 3.05 m 325 kg

Continued

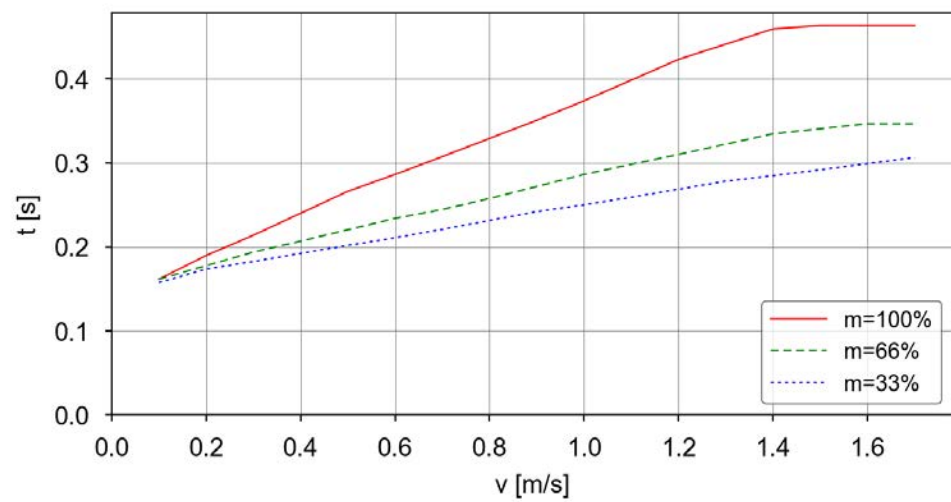
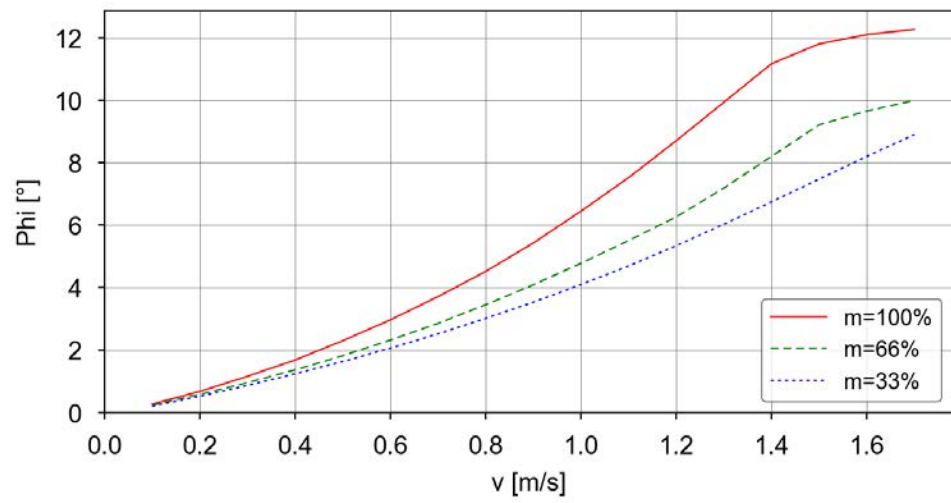
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



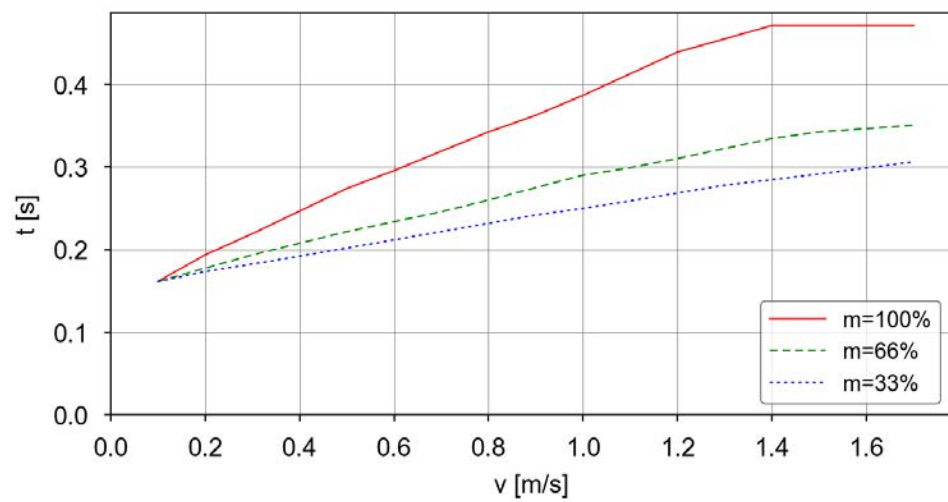
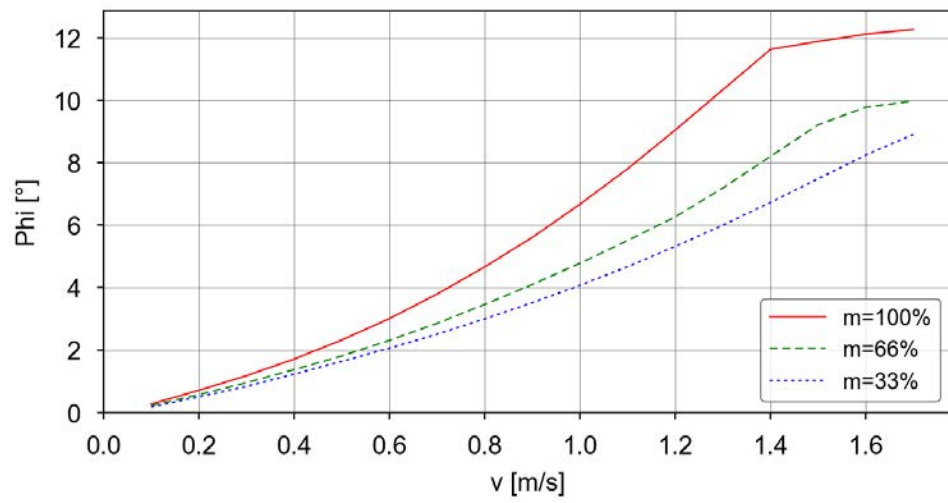
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



19.5 IRB 7600 3.50 m 150 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	47.1	0.85
2	11.5	0.32
3	8.8	0.22

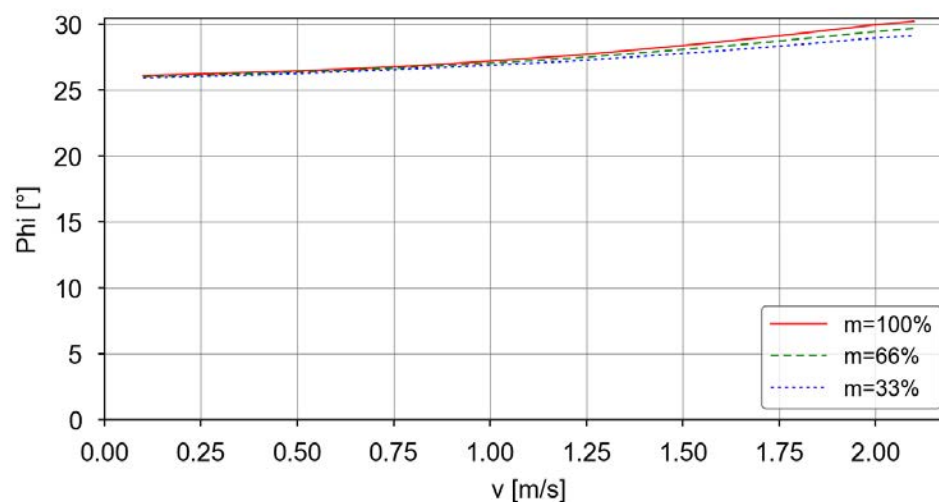
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.167
1	1.167	2.333
2	2.333	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

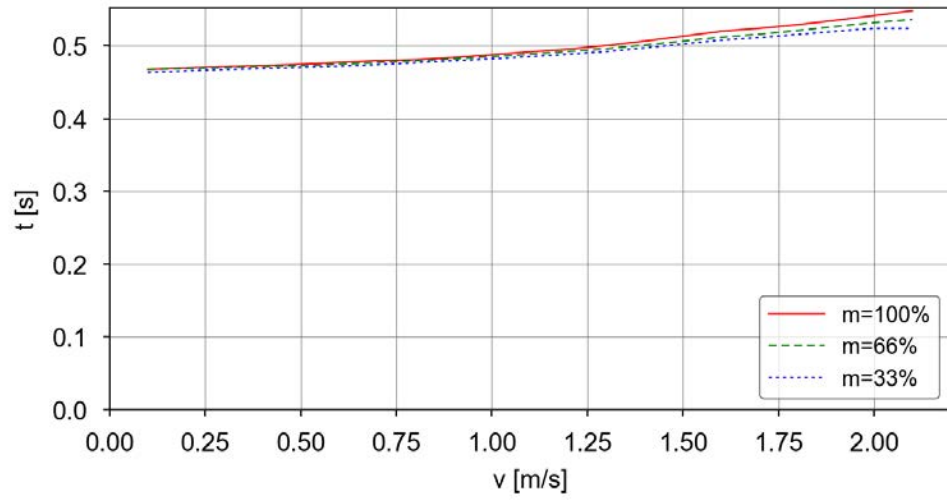


Continues on next page

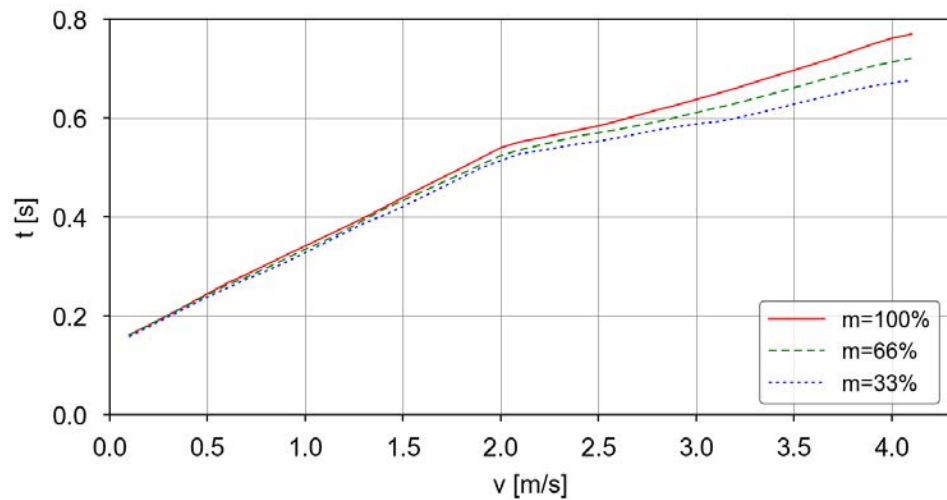
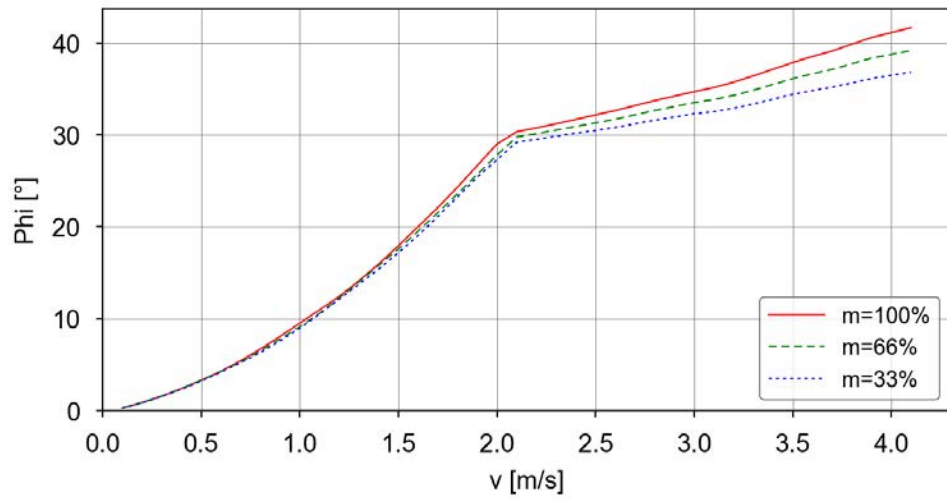
19 IRB 7600

19.5 IRB 7600 3.50 m 150 kg

Continued

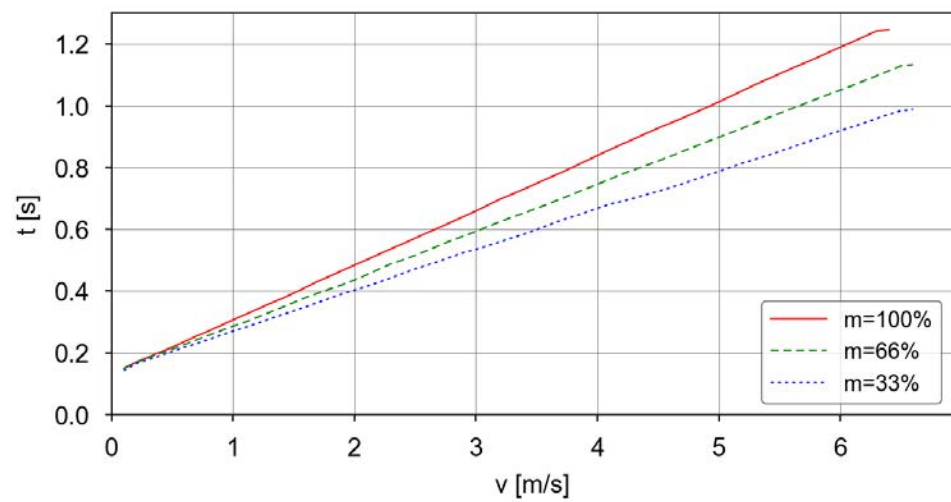
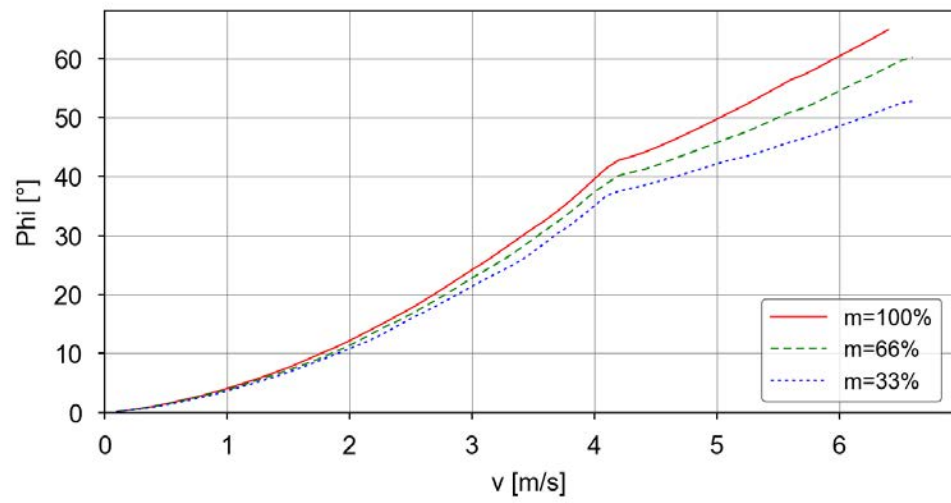


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

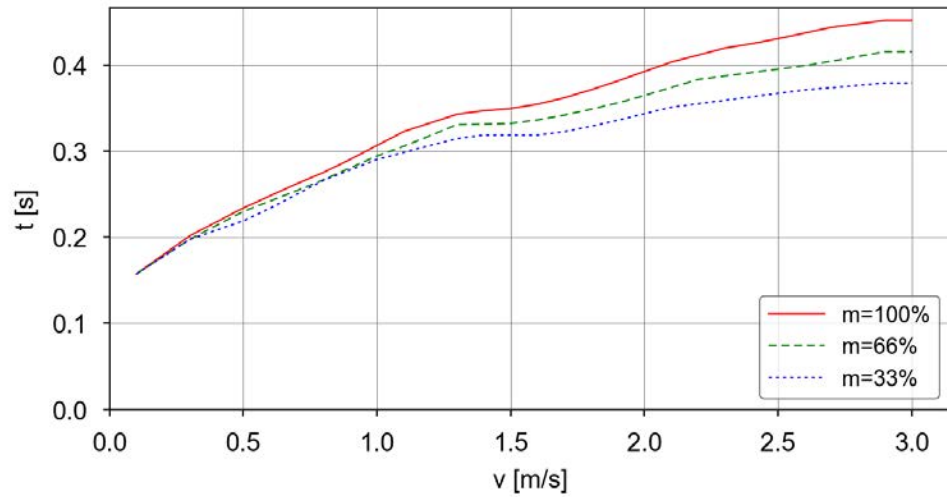
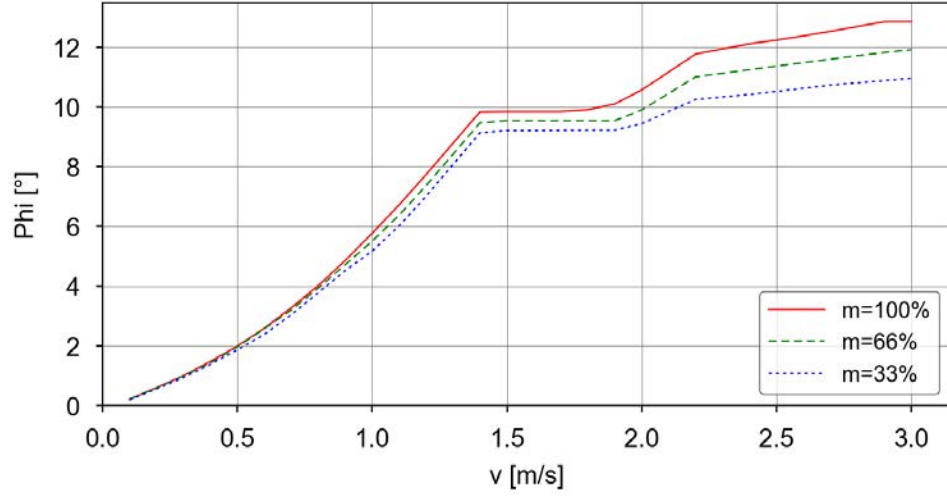
19 IRB 7600

19.5 IRB 7600 3.50 m 150 kg

Continued

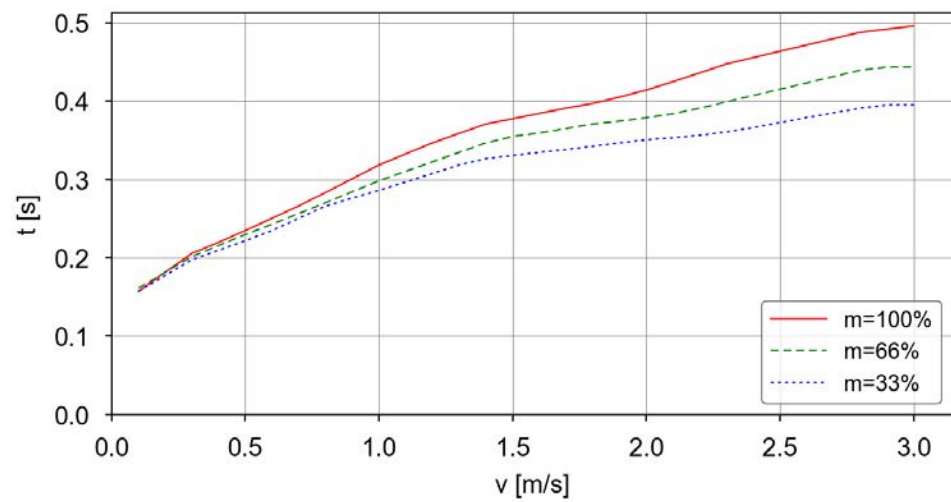
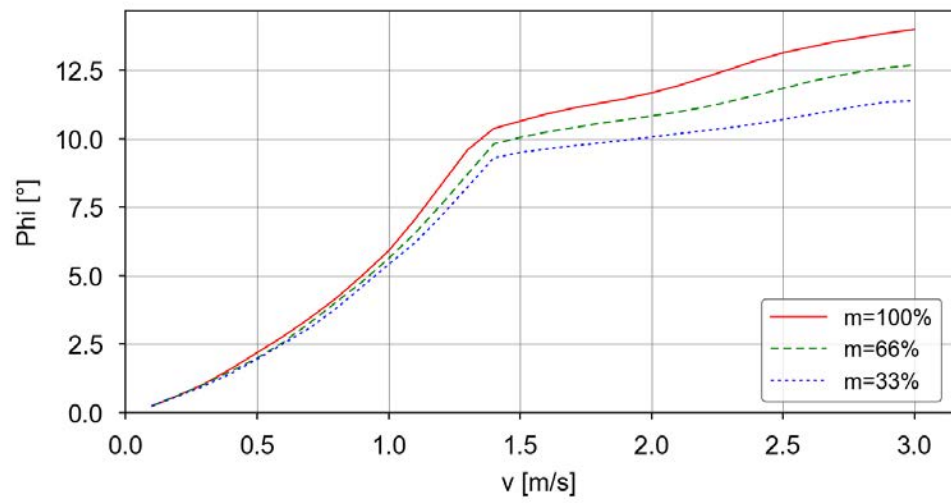
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



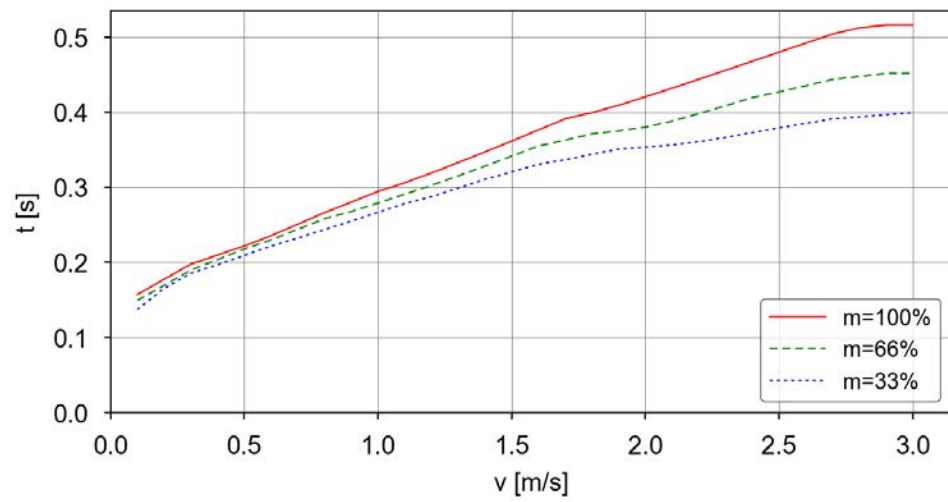
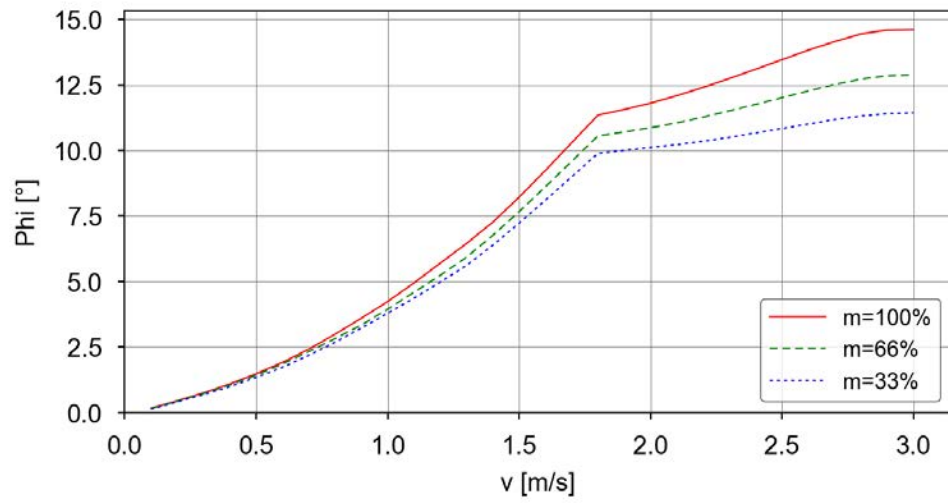
Continues on next page

19 IRB 7600

19.5 IRB 7600 3.50 m 150 kg

Continued

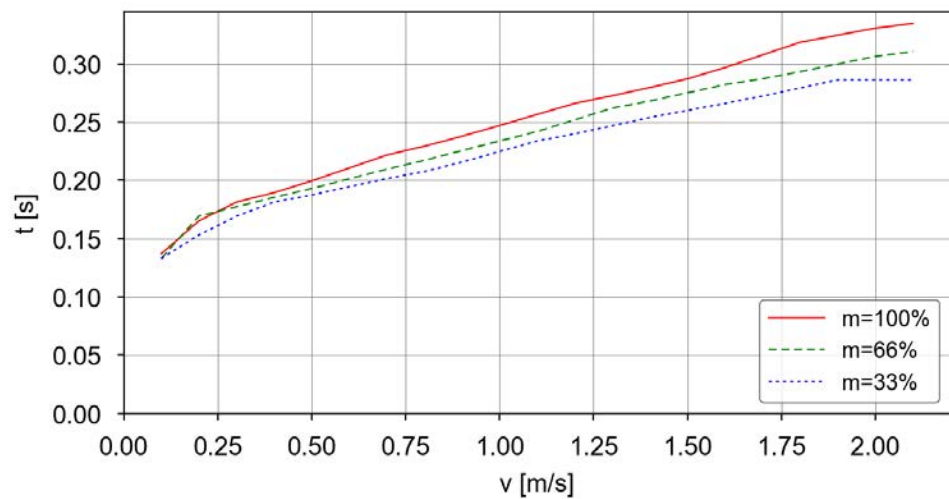
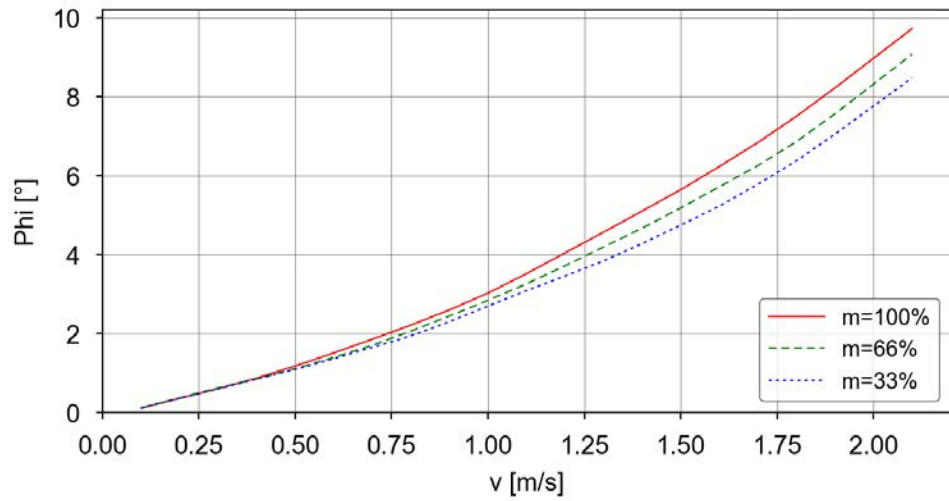
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



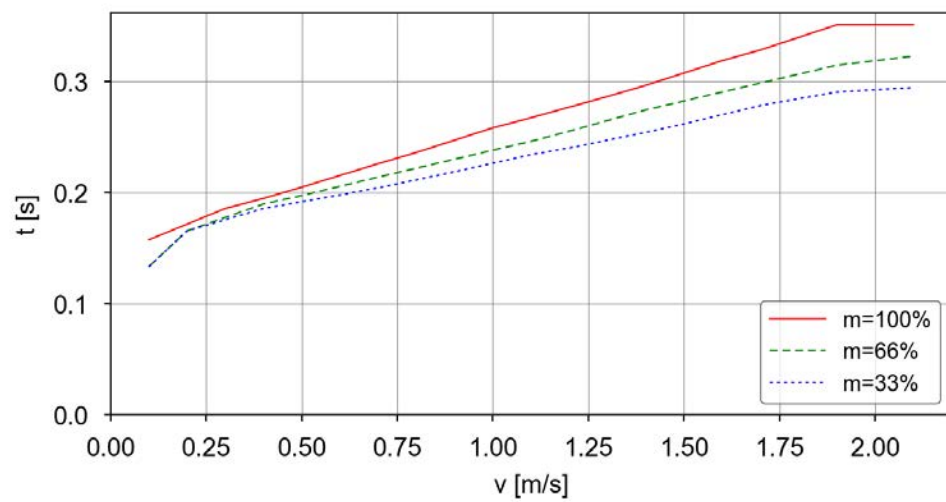
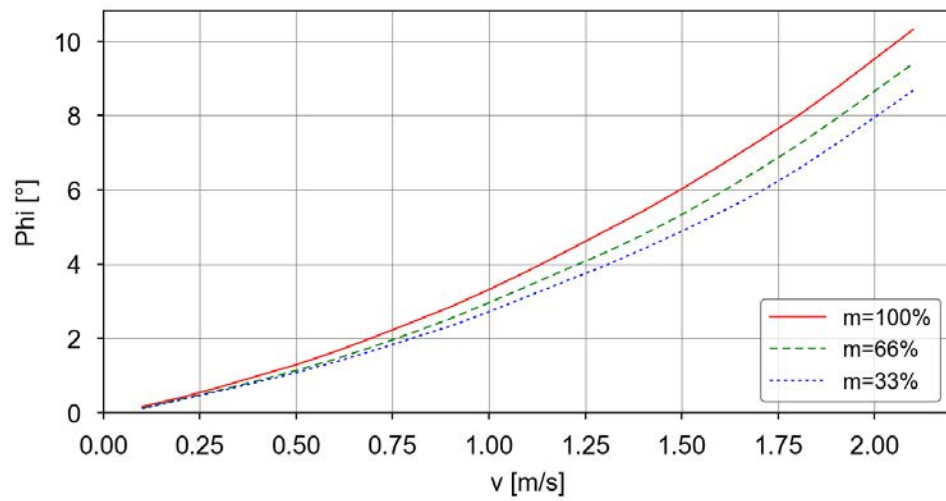
Continues on next page

19 IRB 7600

19.5 IRB 7600 3.50 m 150 kg

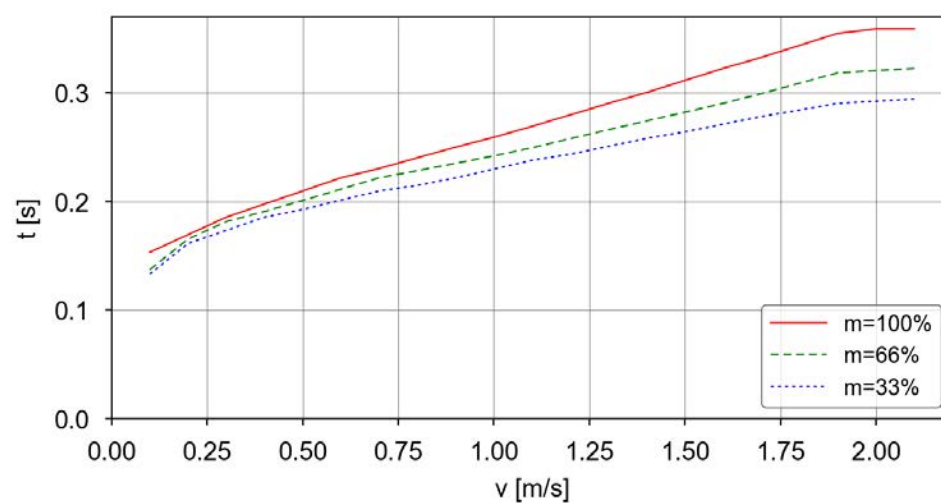
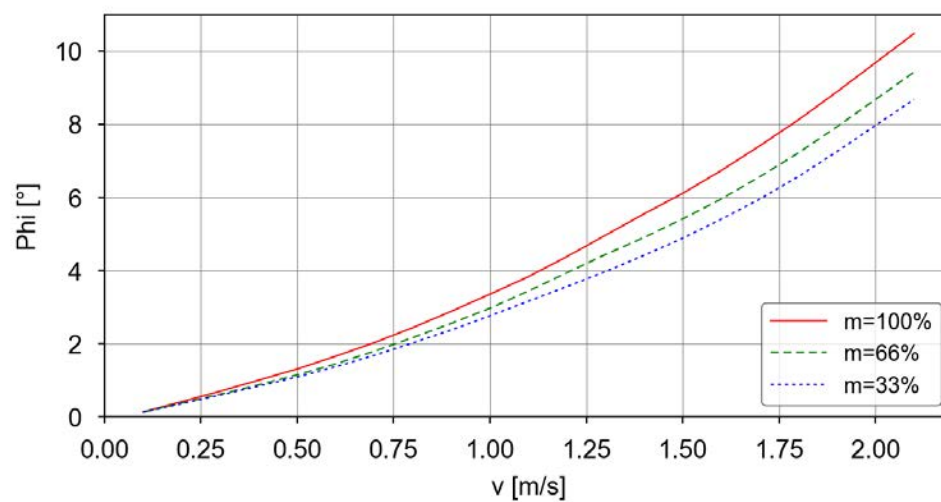
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



19.6 IRB 7600LeanID 2.55 m 390 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	27.5	0.63
2	10.3	0.29
3	6.8	0.17

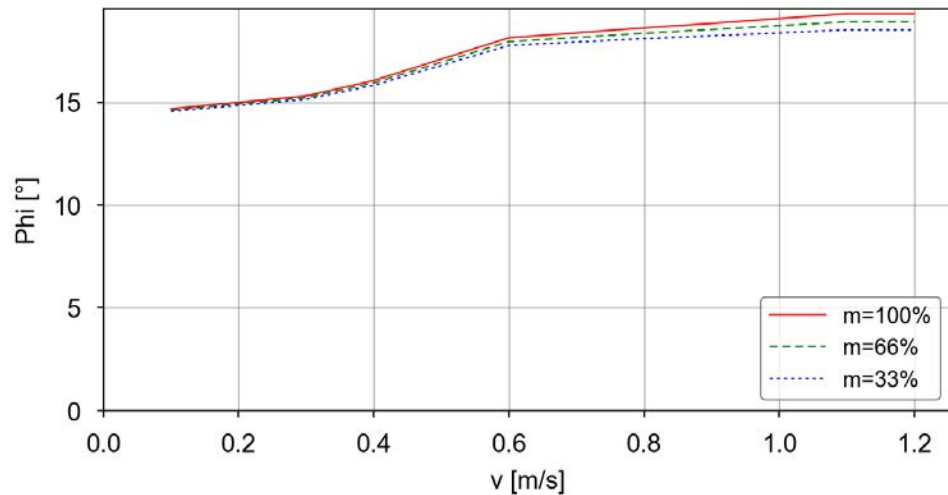
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

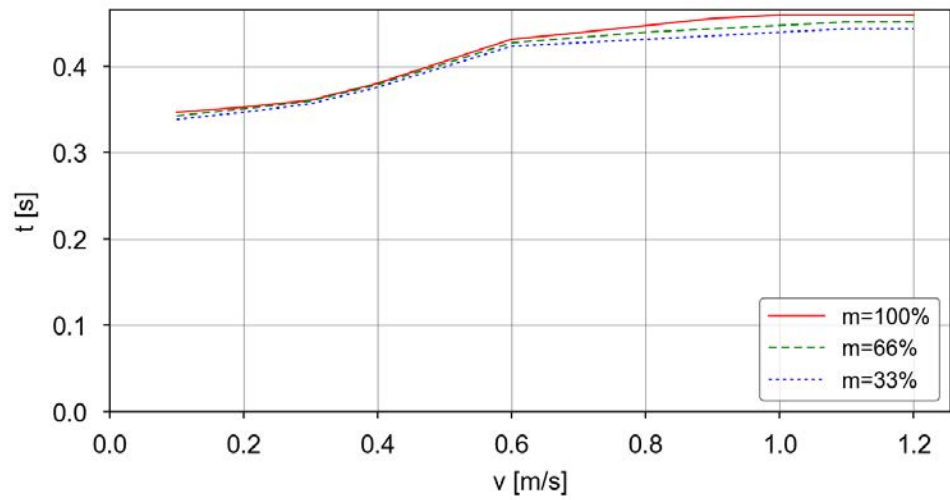
Zone	wcp min (m)	wcp max (m)
0	0	0.85
1	0.85	1.7
2	1.7	max reach

Category 1, Axis 1

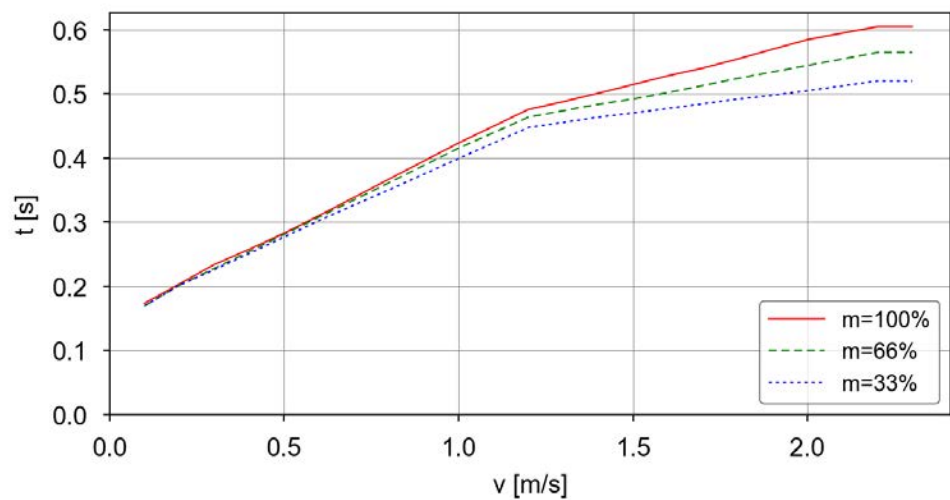
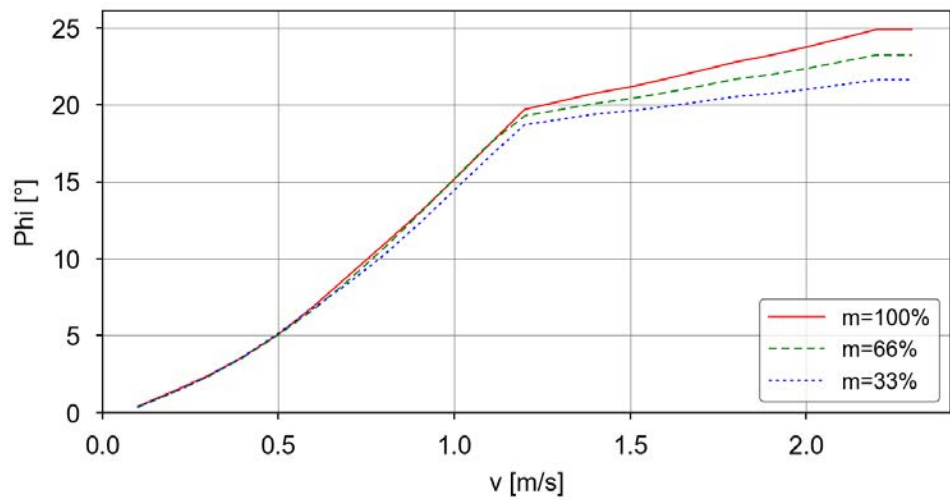
Extension zone 0, stopping distance and stopping time



Continues on next page



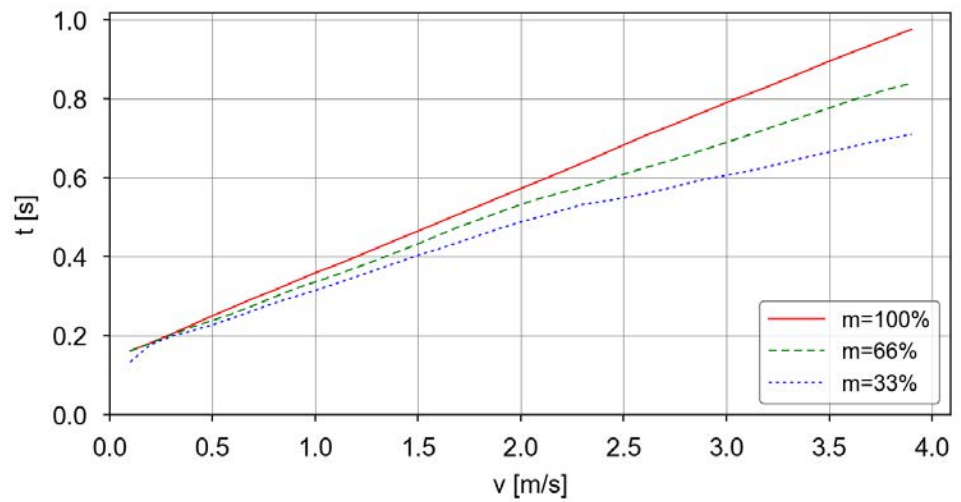
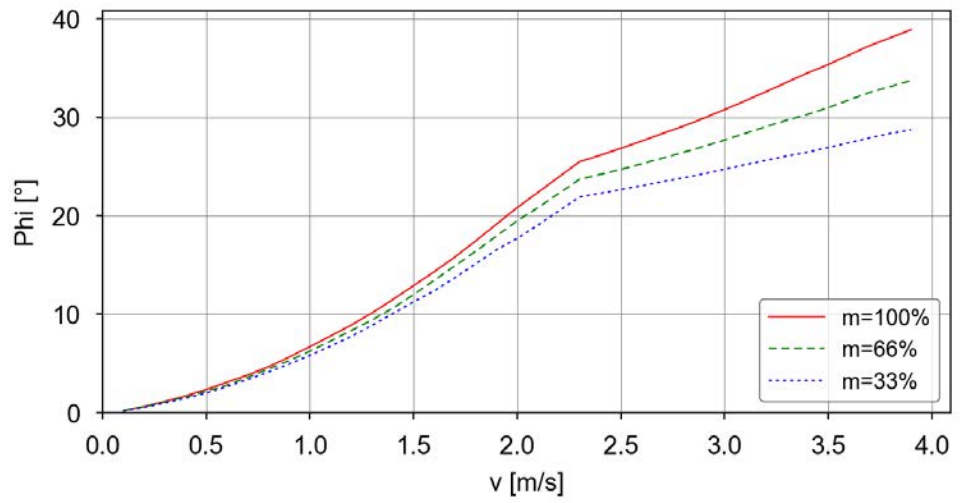
Extension zone 1, stopping distance and stopping time



Continues on next page

Continued

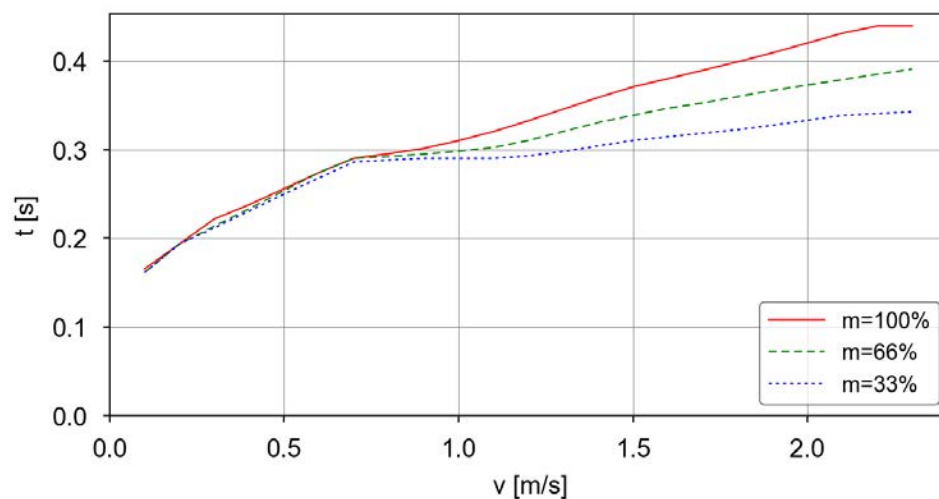
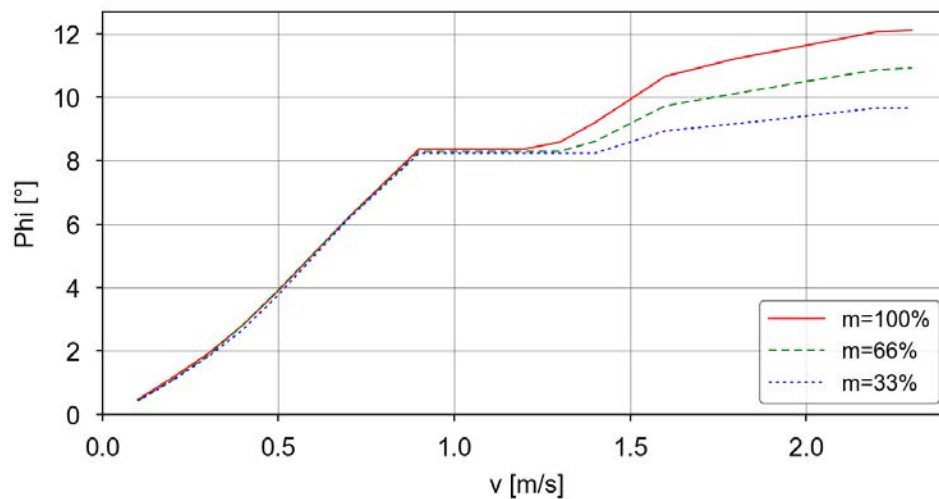
Extension zone 2, stopping distance and stopping time



Continues on next page

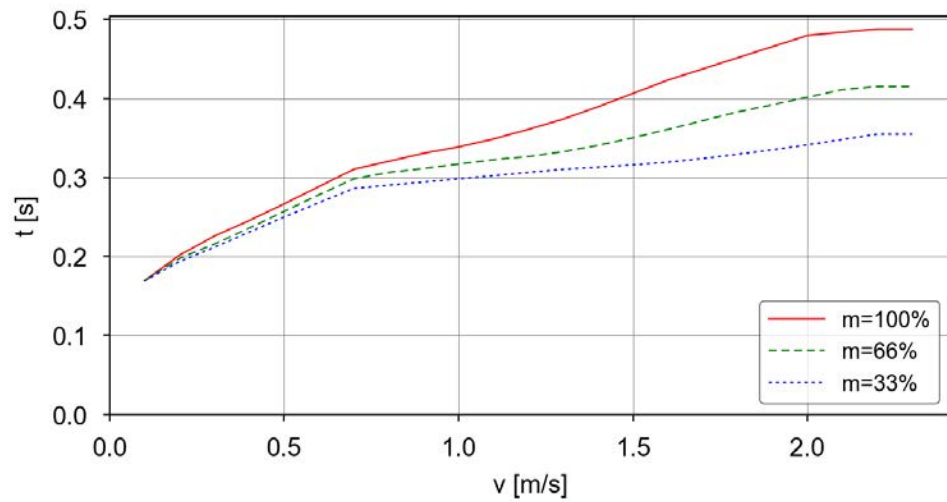
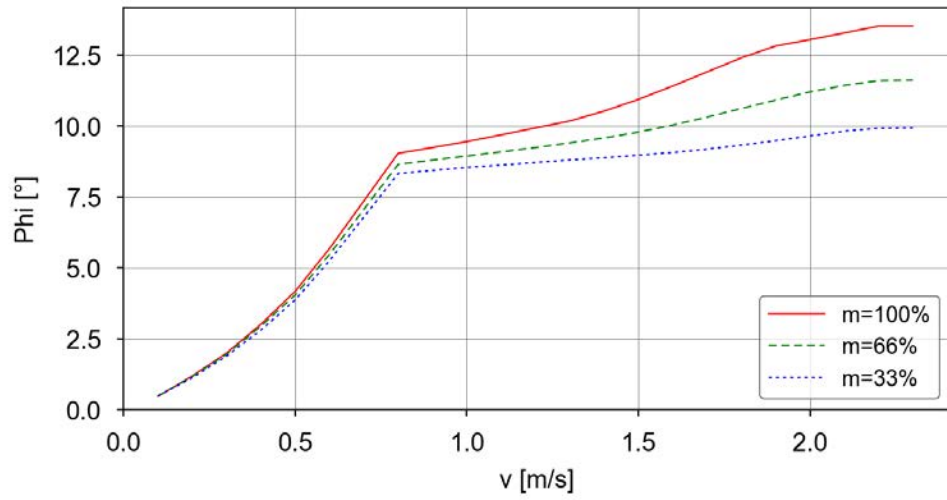
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



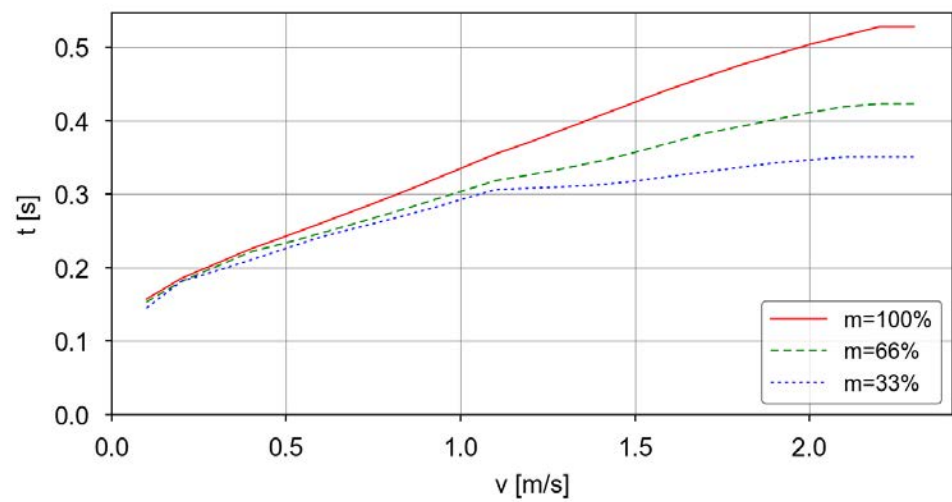
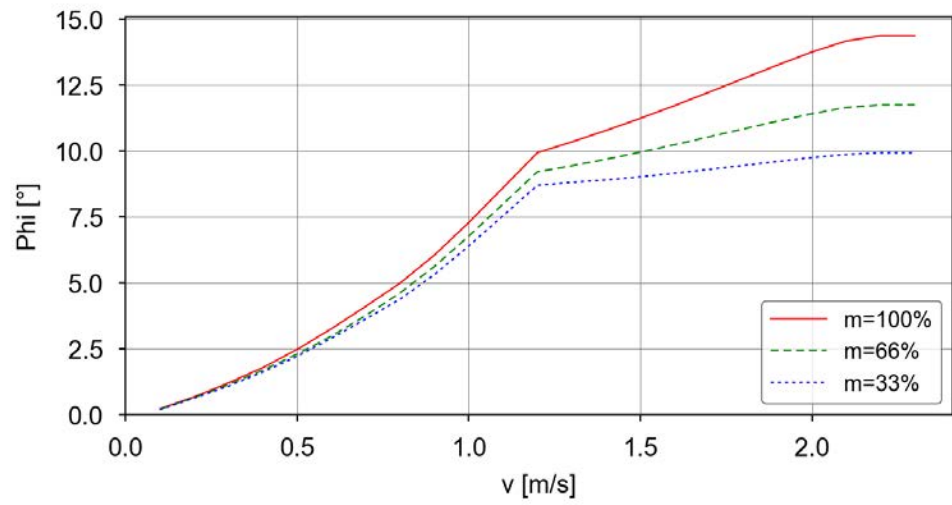
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

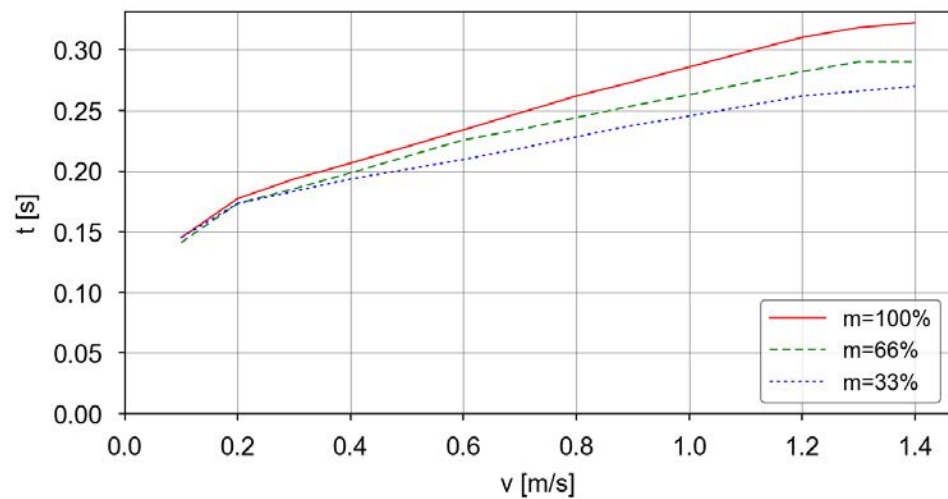
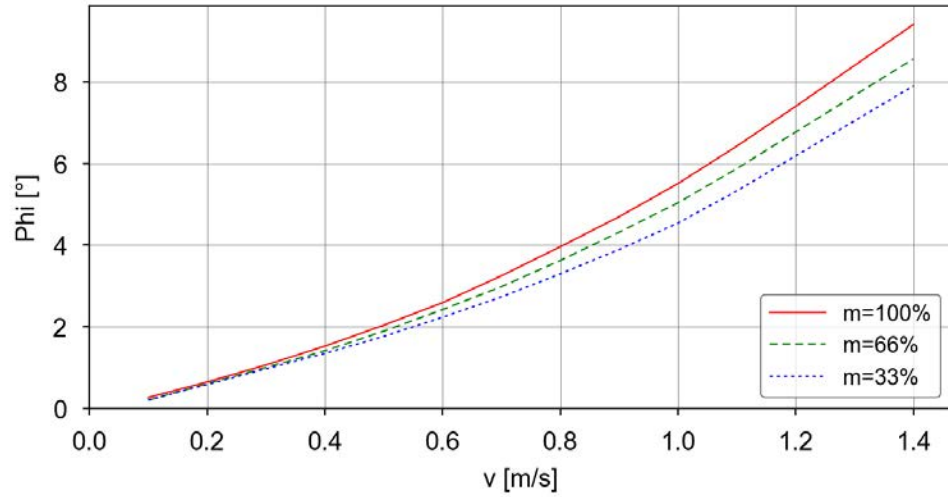
19 IRB 7600

19.6 IRB 7600LeanID 2.55 m 390 kg

Continued

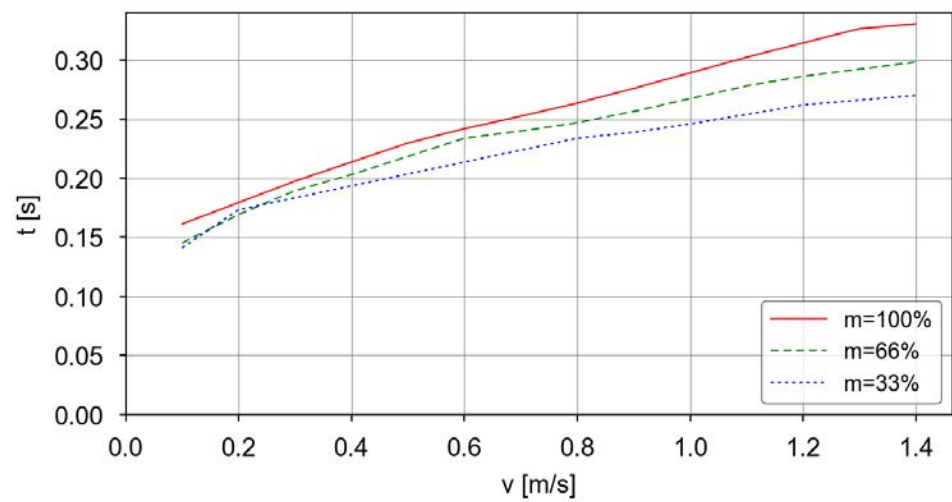
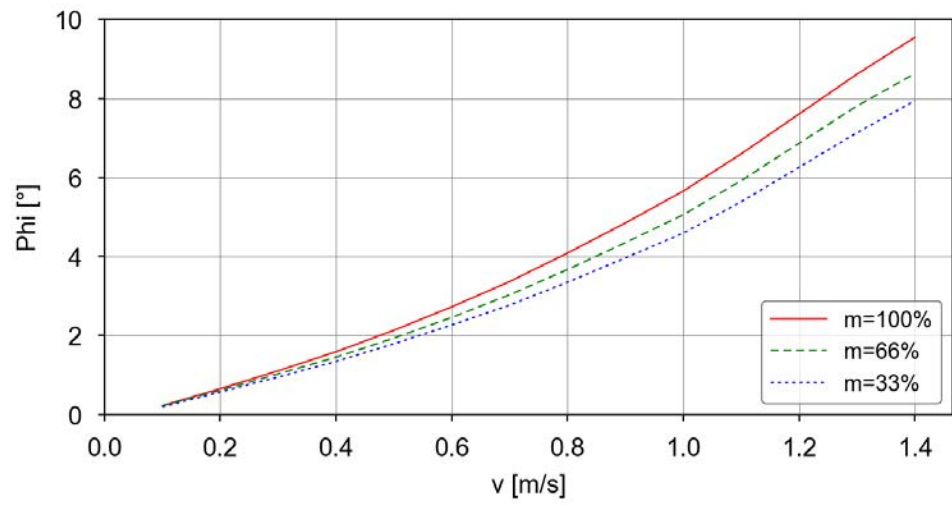
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



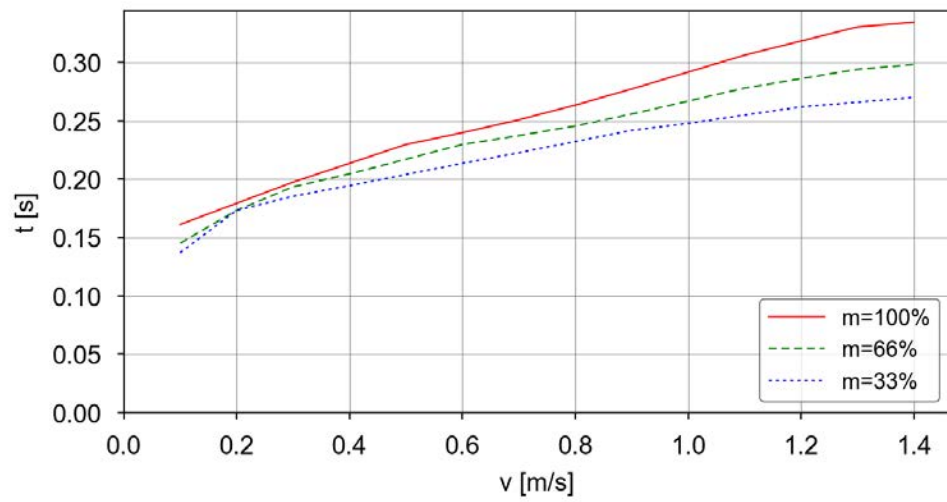
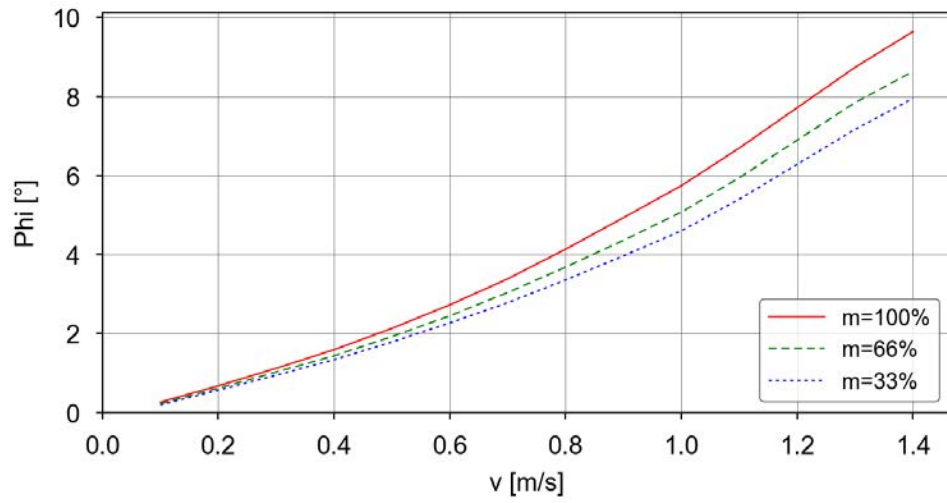
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



19.7 IRB 7600LeanID 2.8 m 320 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	28.3	0.66
2	10.7	0.32
3	7.2	0.17

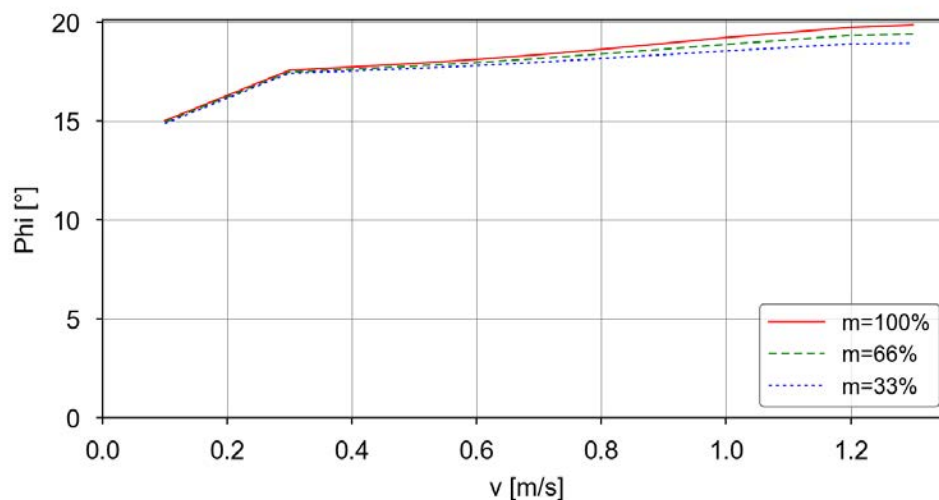
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.932
1	0.932	1.865
2	1.865	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

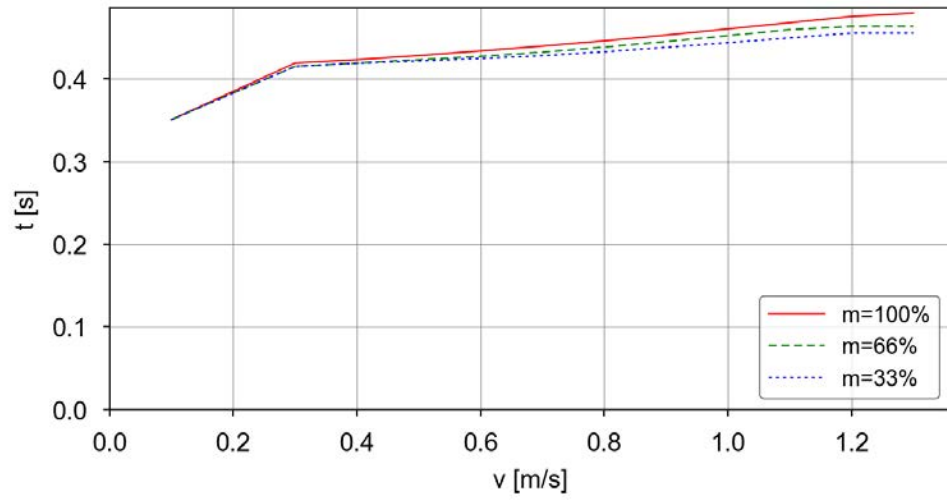


Continues on next page

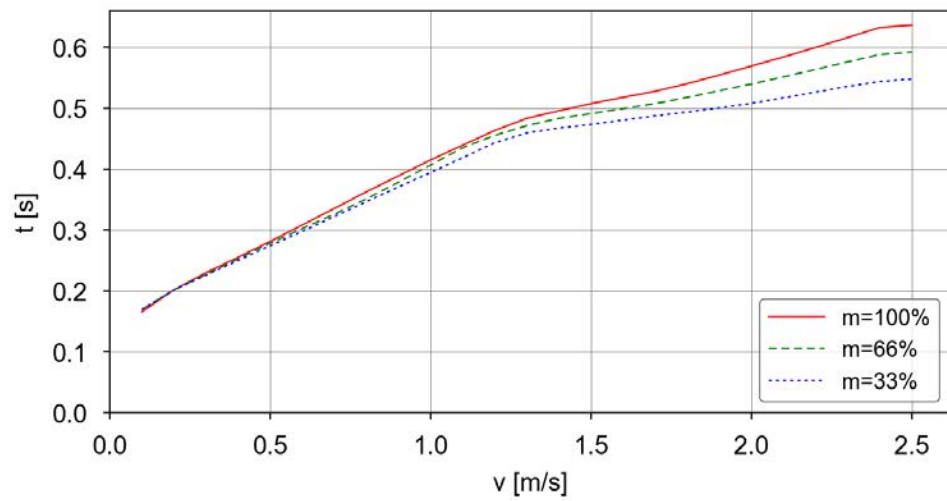
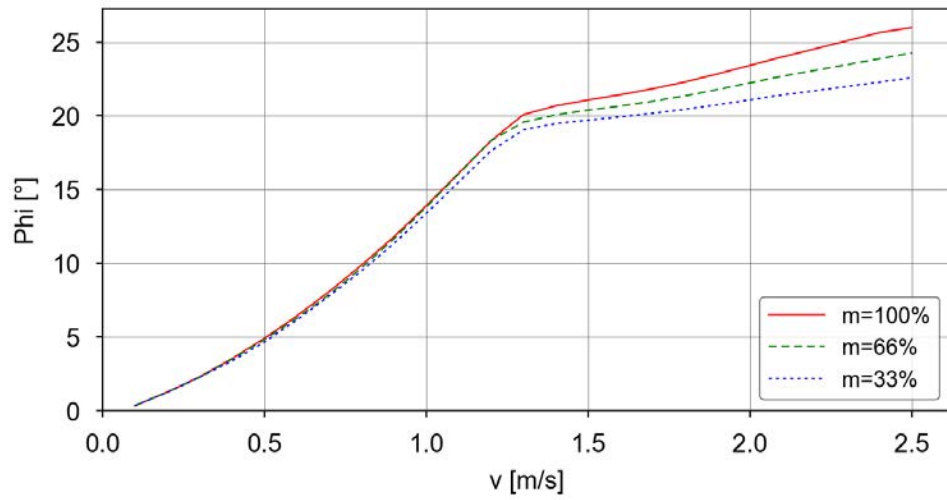
19 IRB 7600

19.7 IRB 7600LeanID 2.8 m 320 kg

Continued

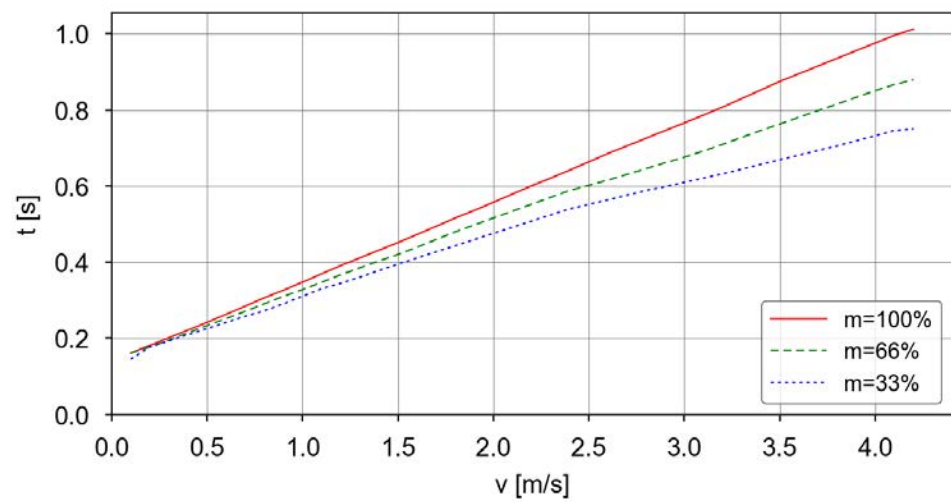
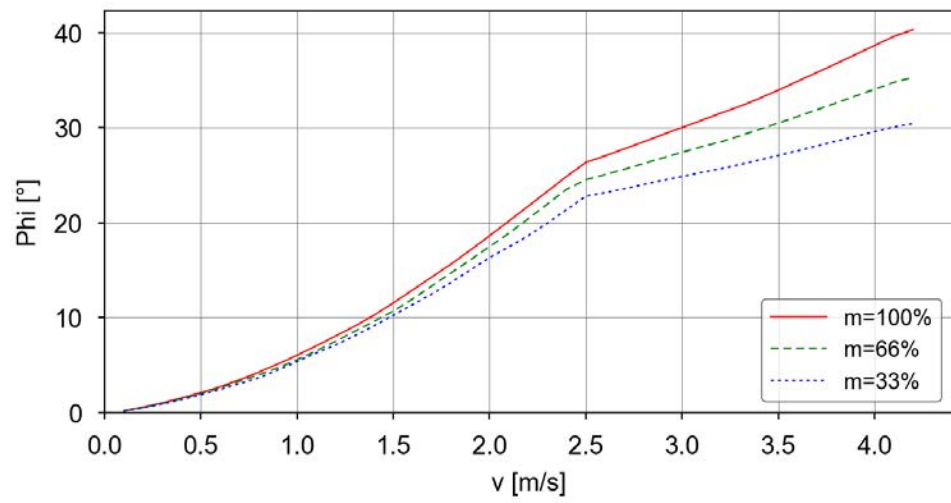


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

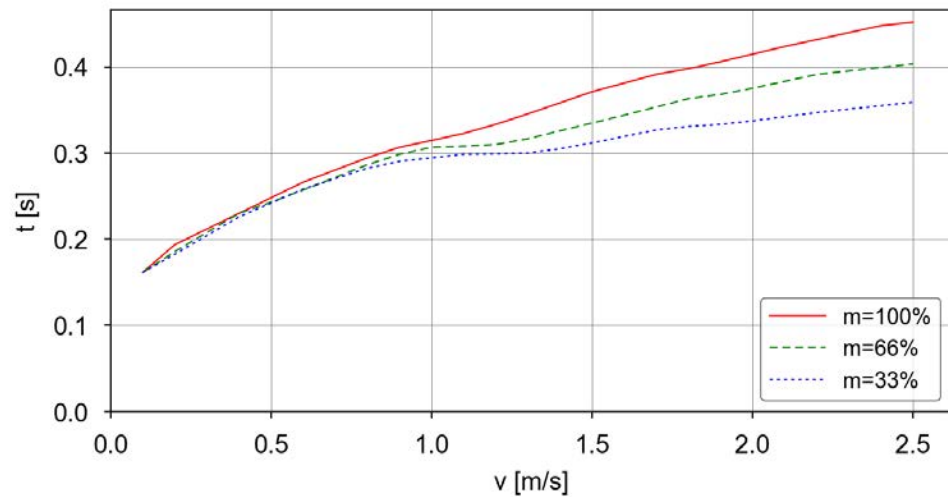
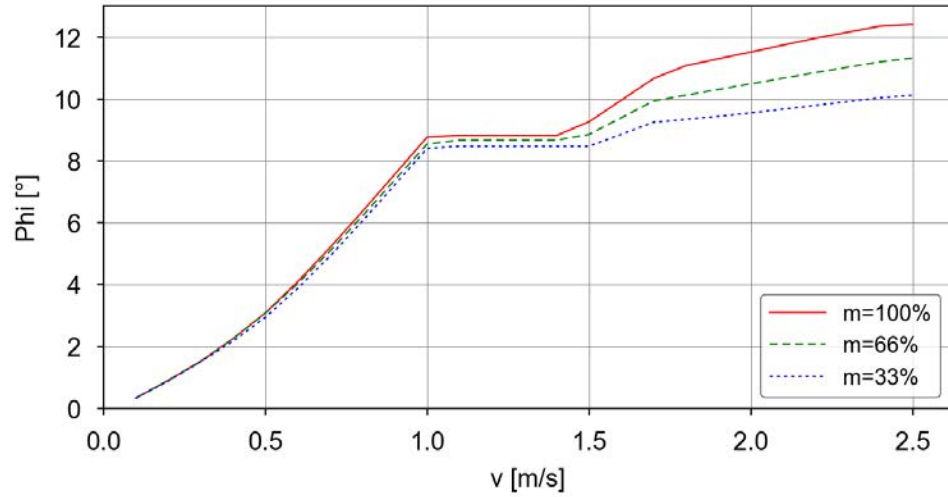
19 IRB 7600

19.7 IRB 7600LeanID 2.8 m 320 kg

Continued

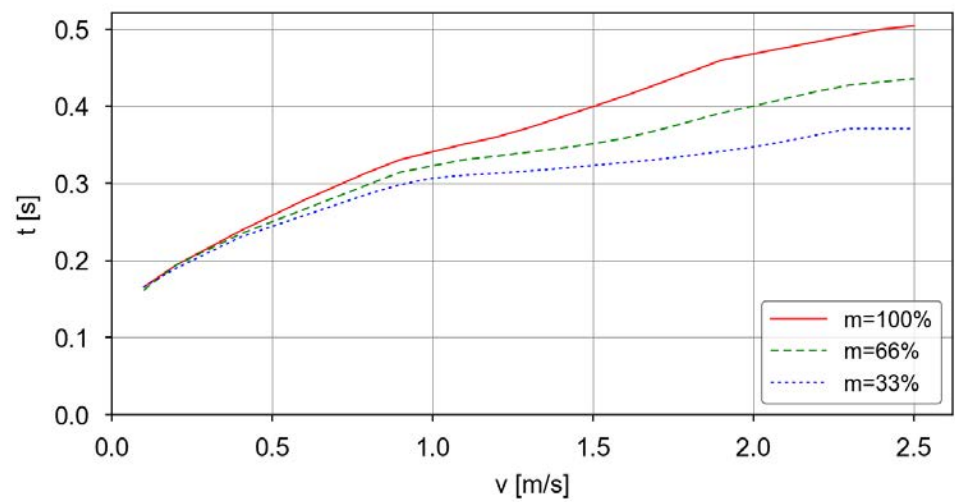
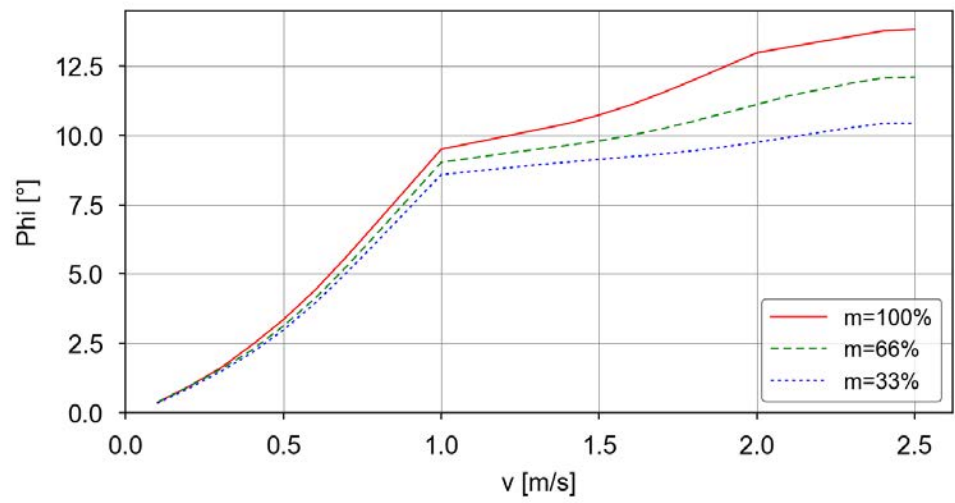
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



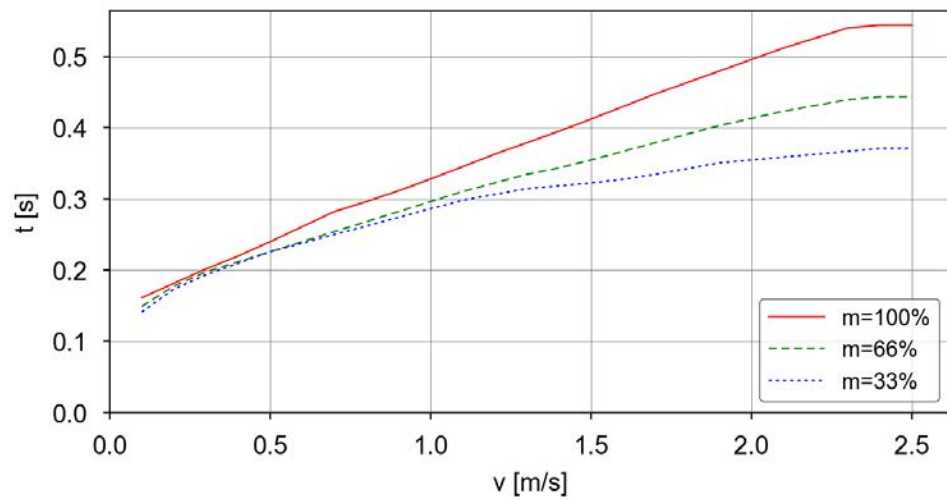
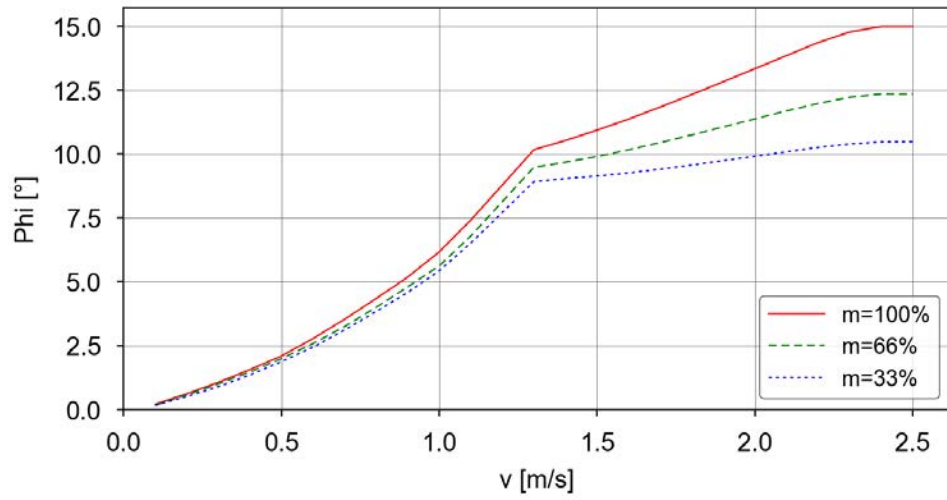
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

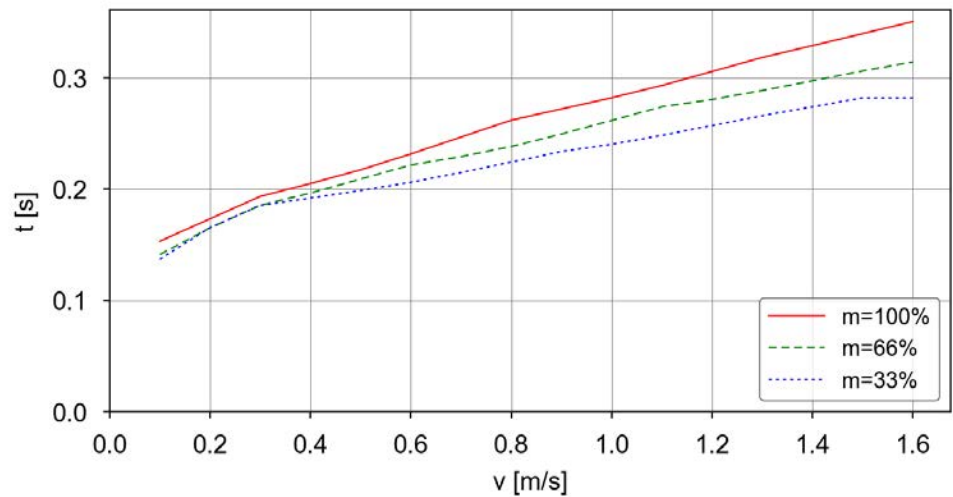
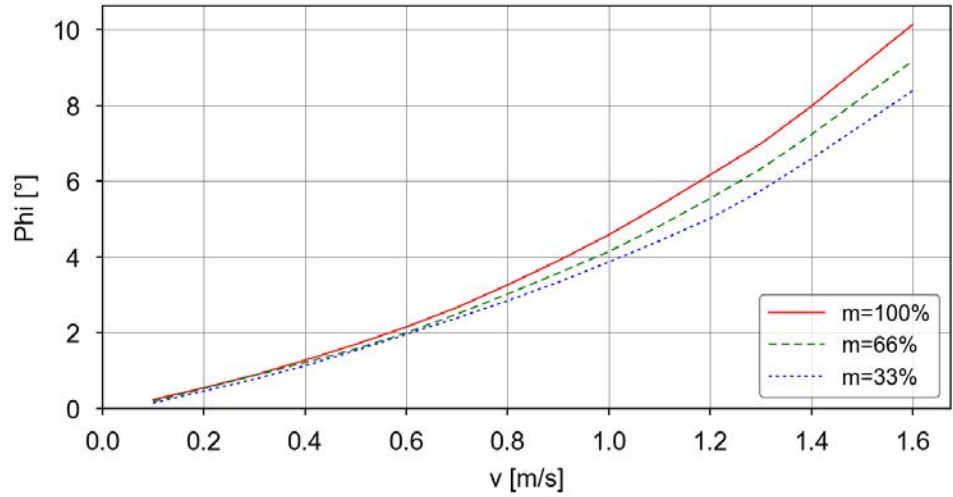
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

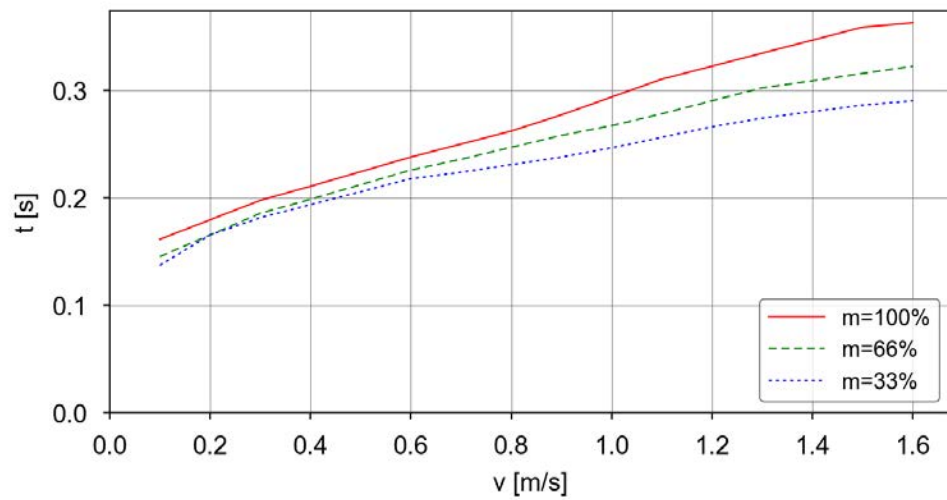
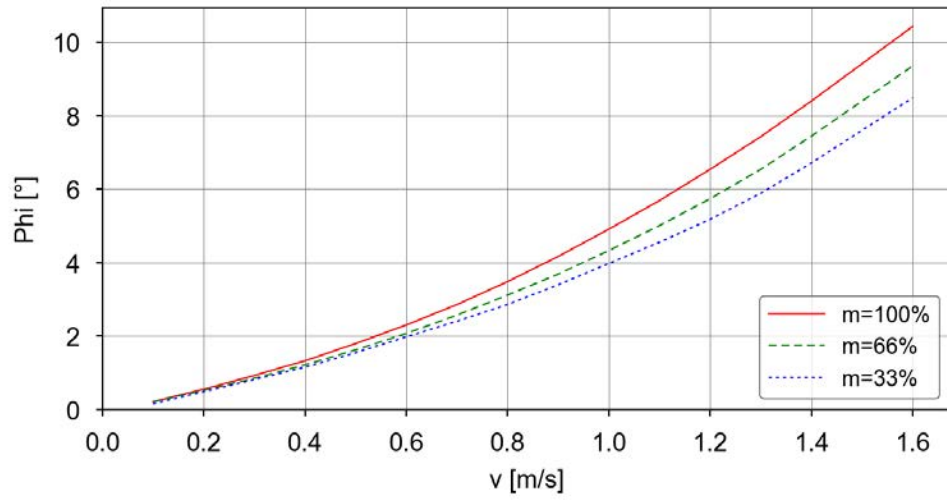
Extension zone 0, stopping distance and stopping time



Continues on next page

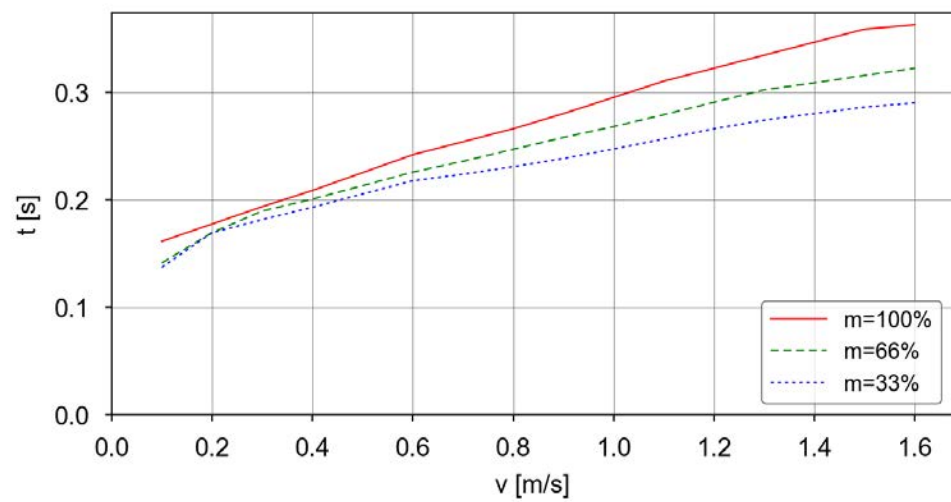
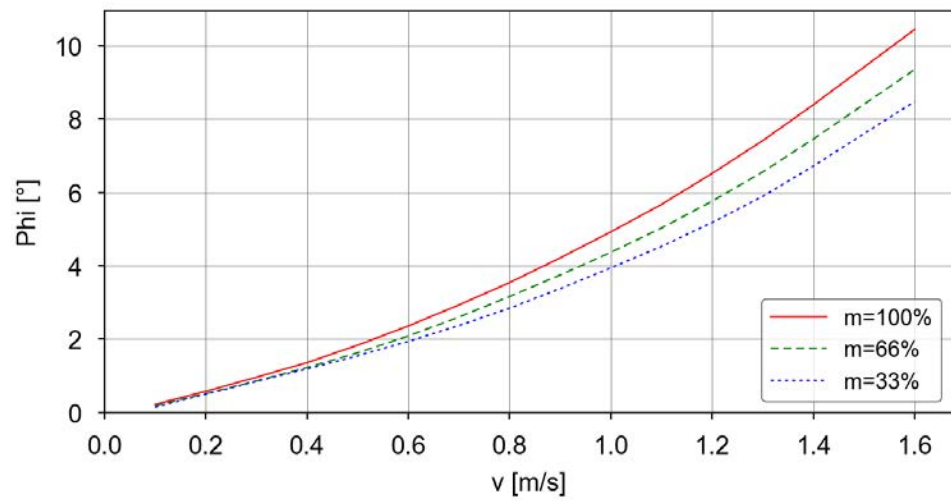
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



19.8 IRB 7600LeanID 3.1 m 290 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	30.1	0.71
2	8.4	0.27
3	6.7	0.17

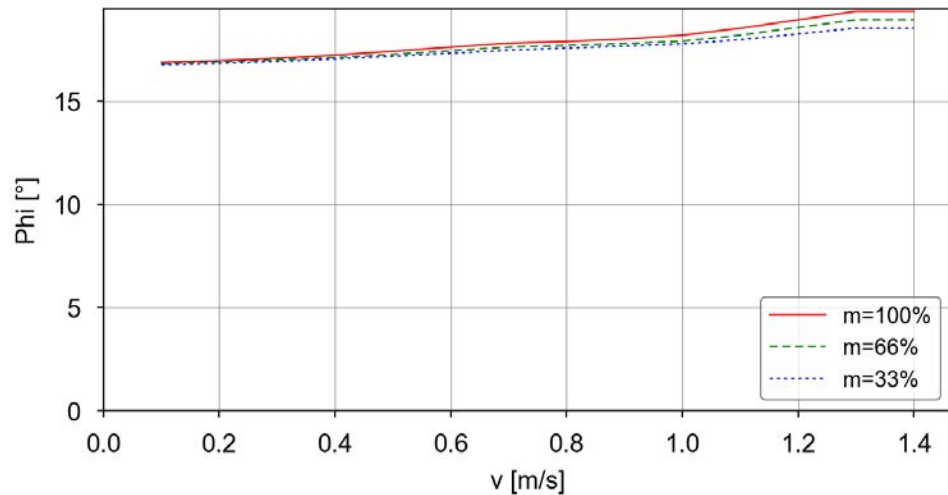
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

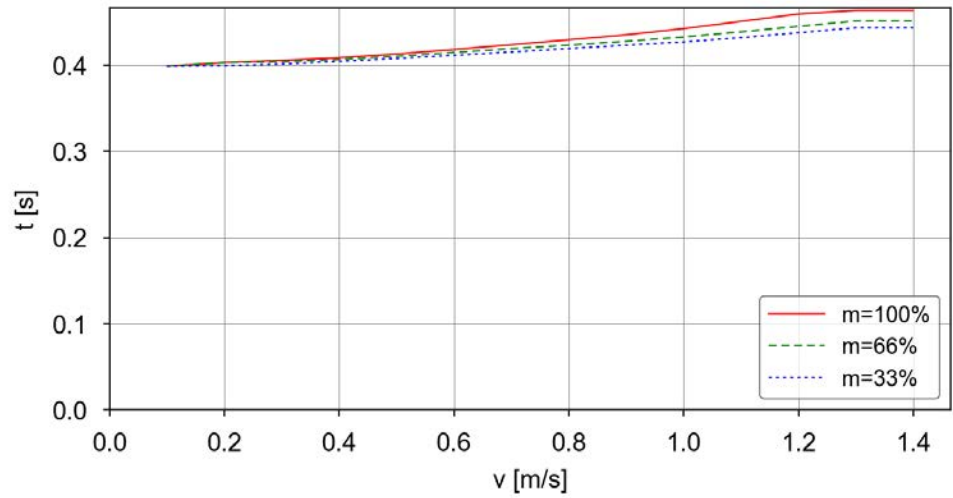
Zone	wcp min (m)	wcp max (m)
0	0	1.015
1	1.015	2.03
2	2.03	max reach

Category 1, Axis 1

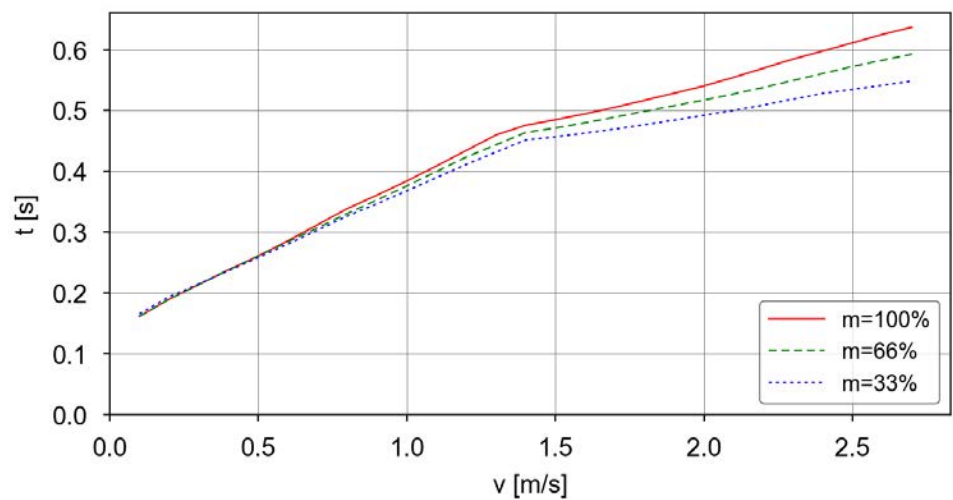
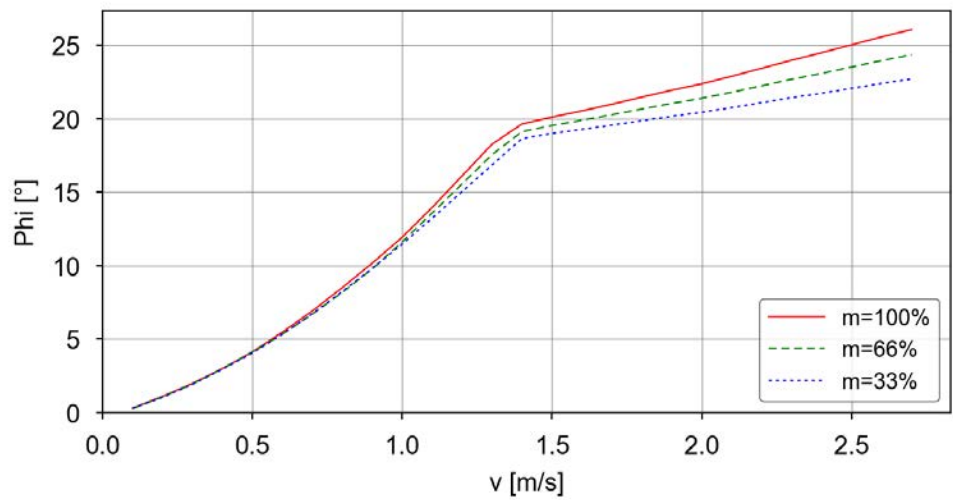
Extension zone 0, stopping distance and stopping time



Continues on next page

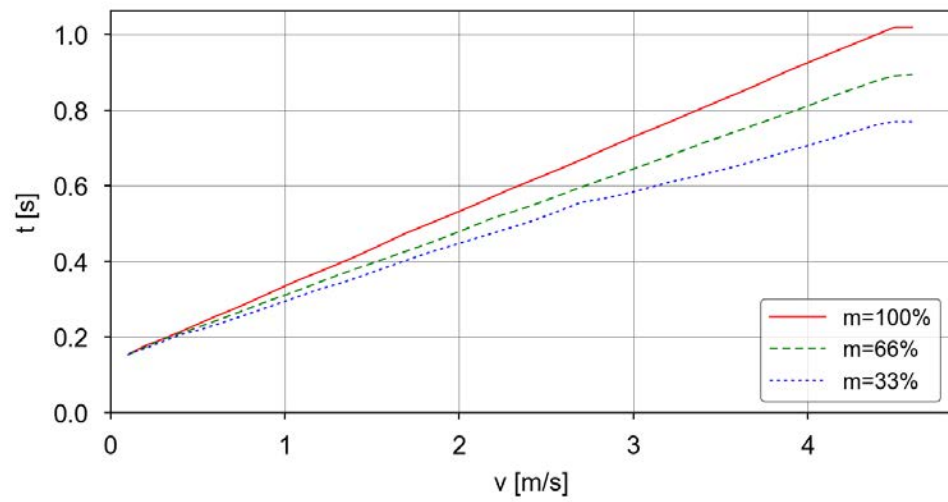
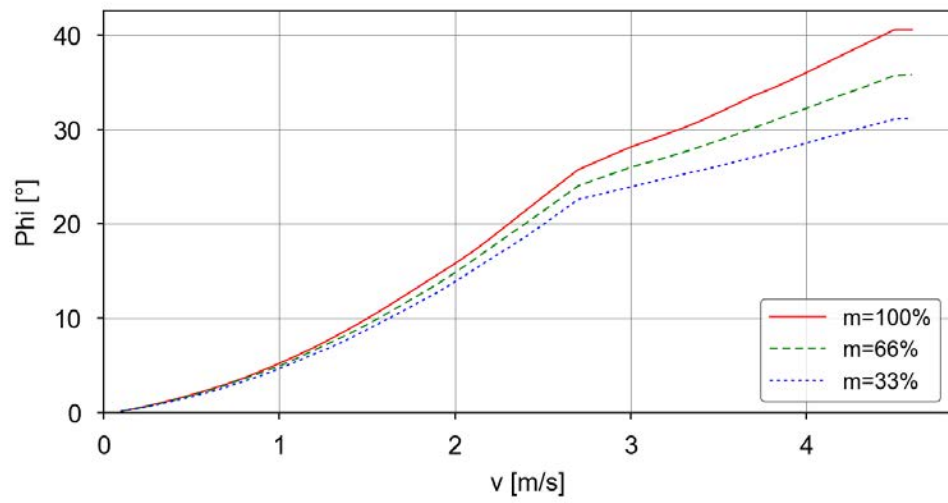


Extension zone 1, stopping distance and stopping time



Continues on next page

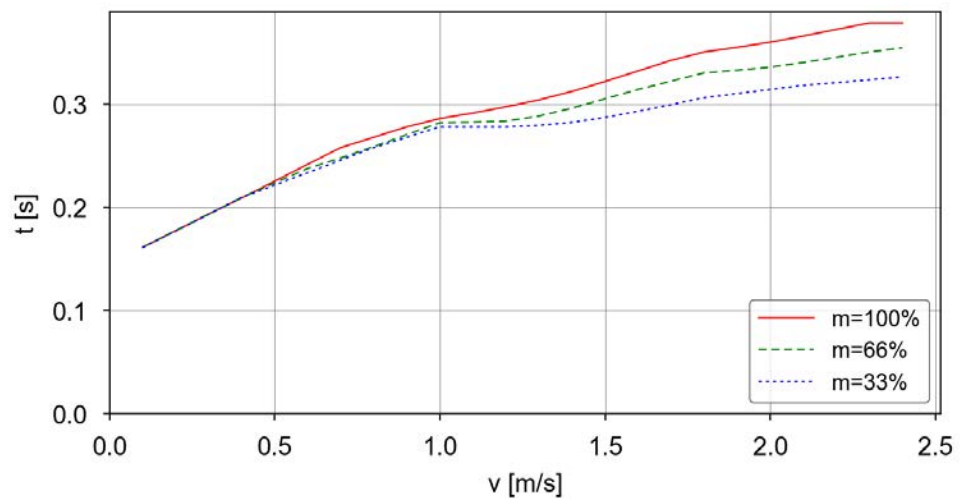
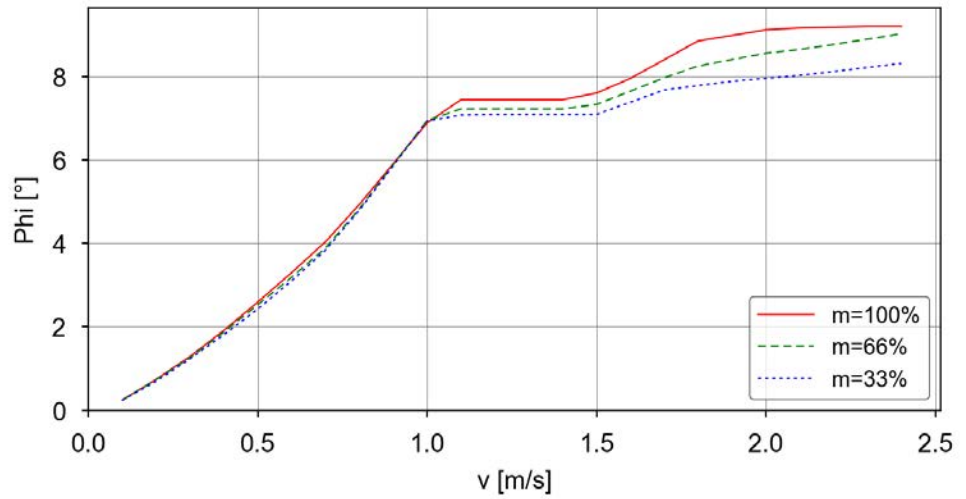
Extension zone 2, stopping distance and stopping time



Continues on next page

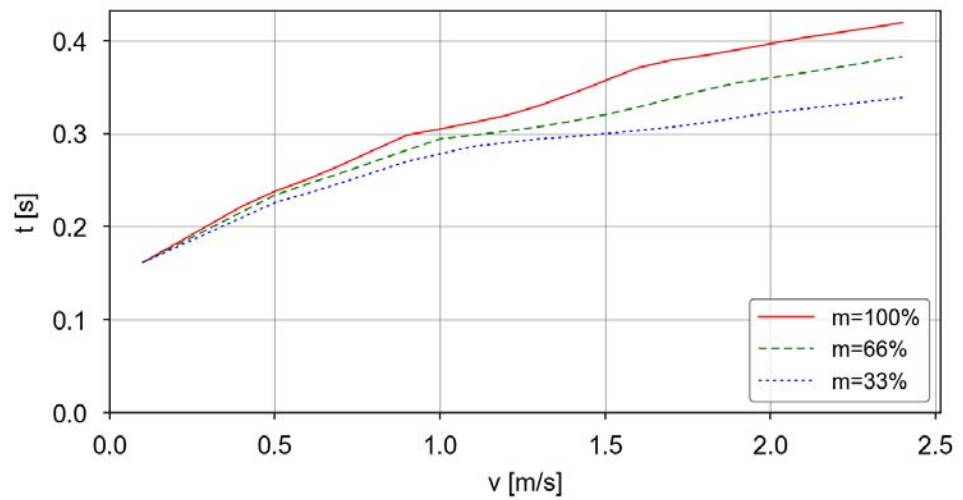
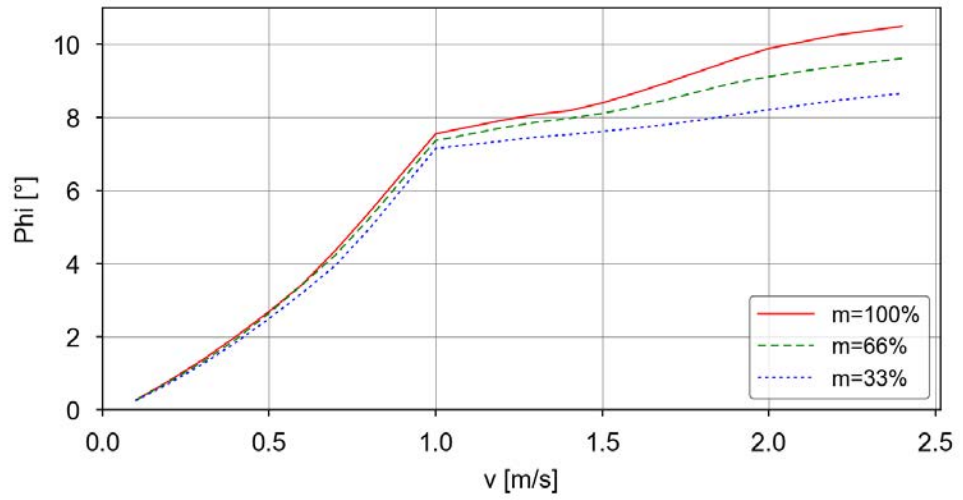
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



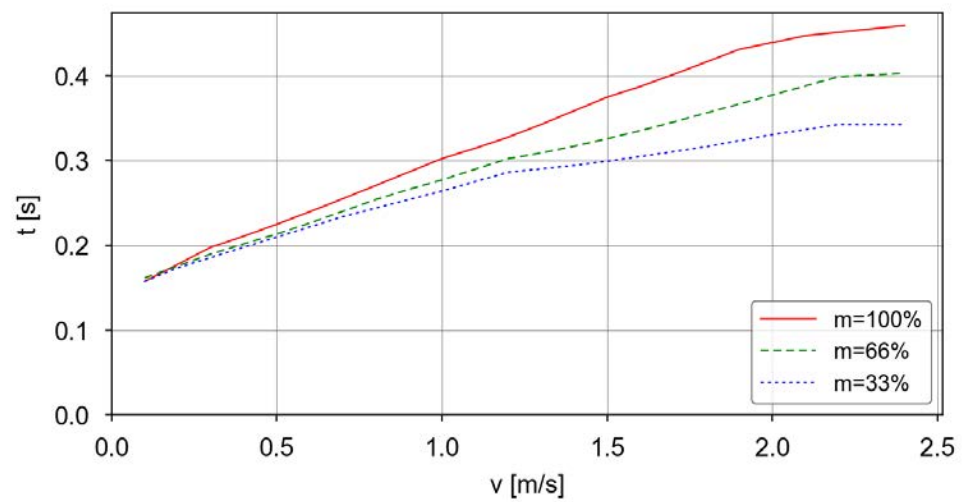
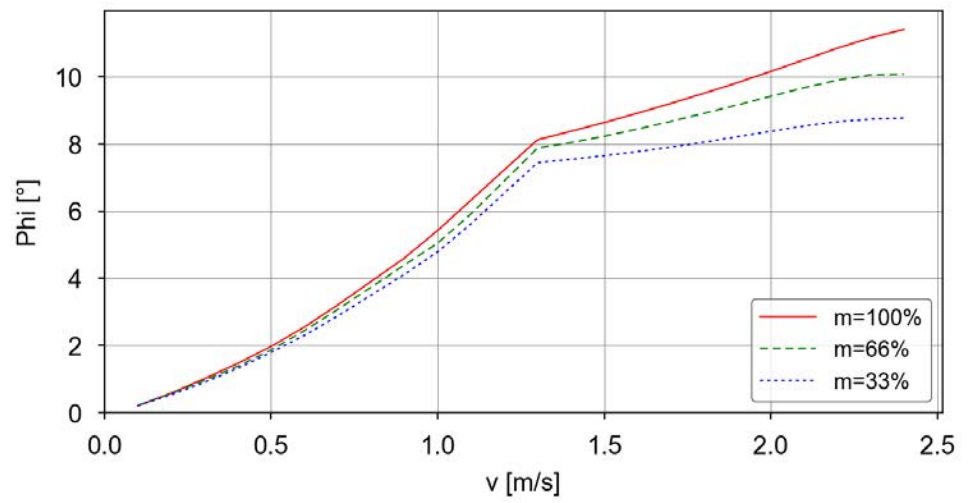
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

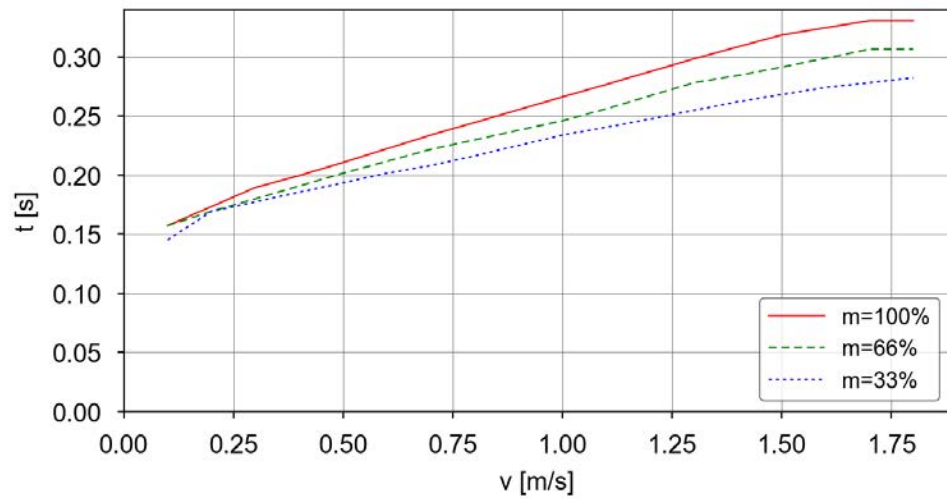
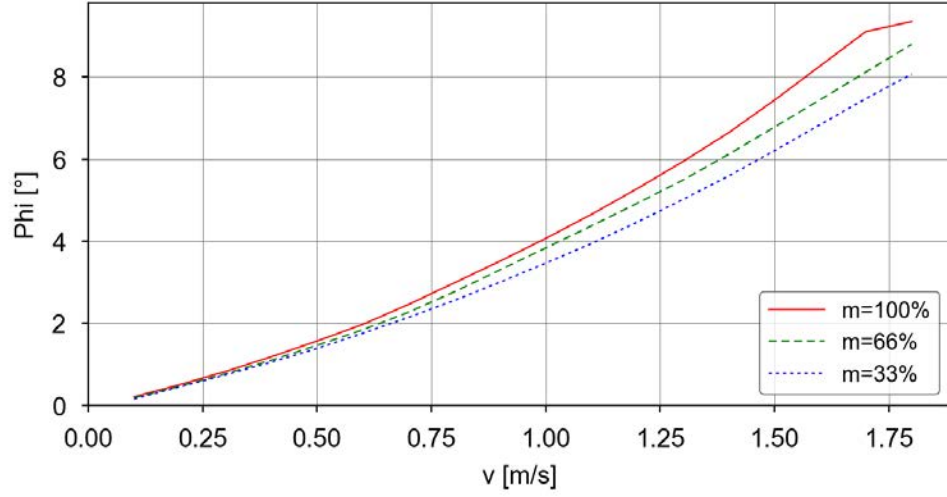
19 IRB 7600

19.8 IRB 7600LeanID 3.1 m 290 kg

Continued

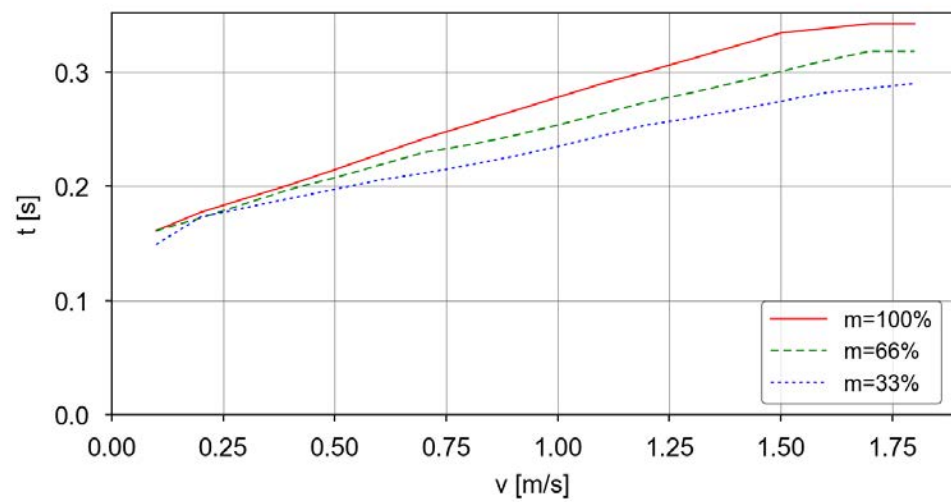
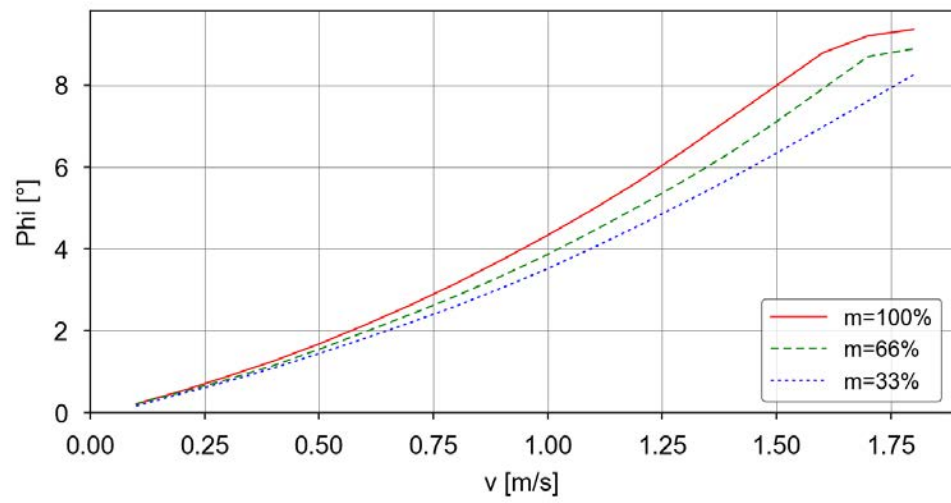
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



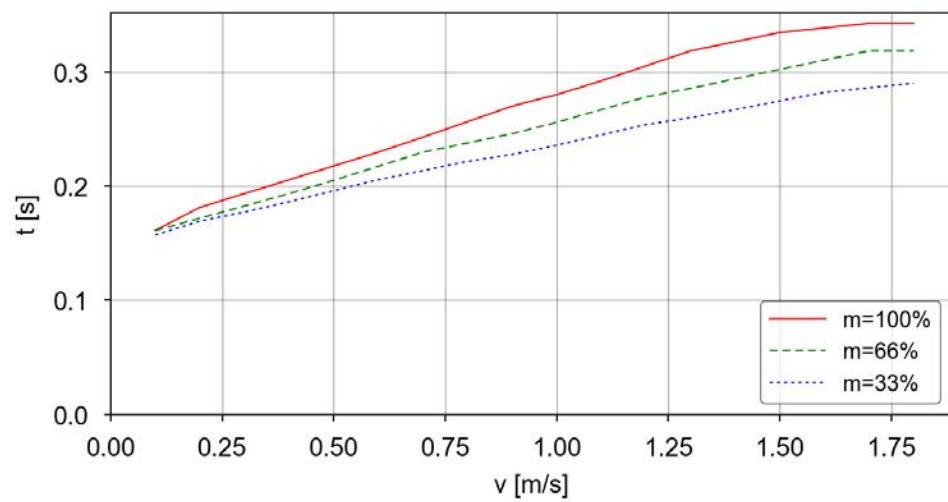
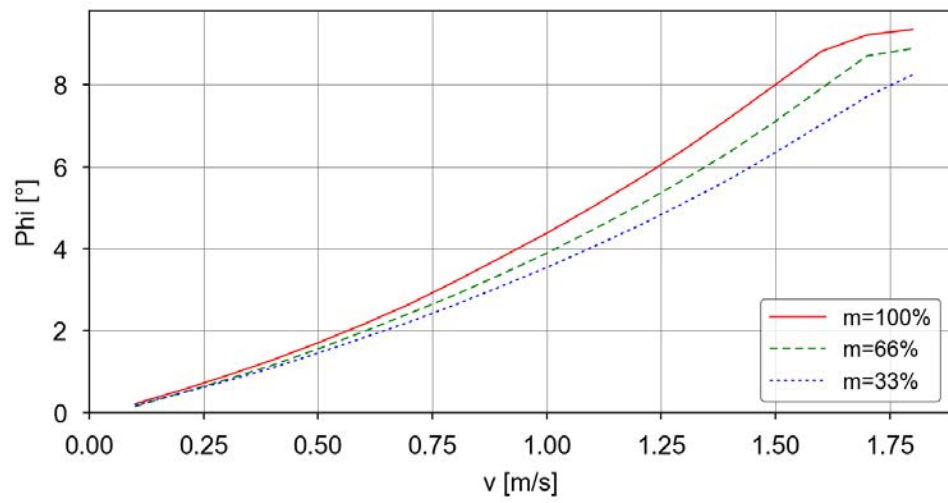
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



20 IRB 8700

20.1 IRB 8700 3.50 m 800 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	44.4	1.31
2	11.4	0.32
3	13.0	0.37

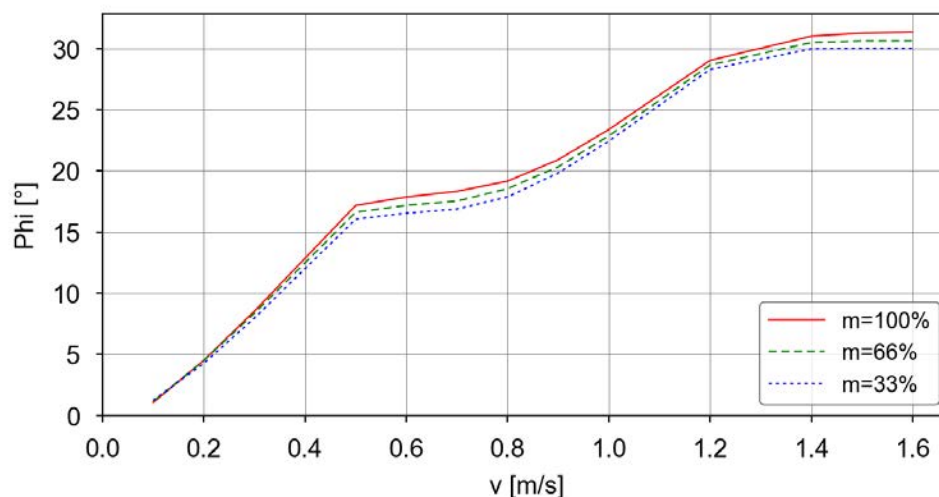
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.169
1	1.169	2.338
2	2.338	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

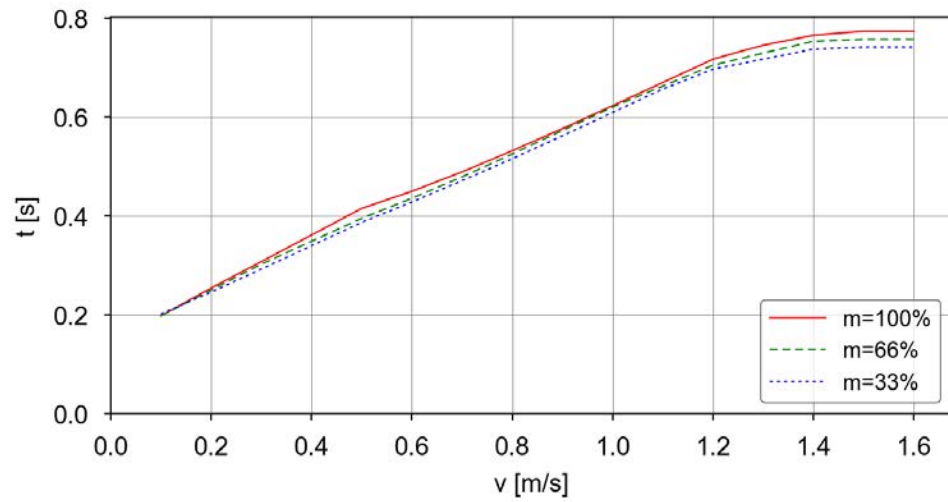


Continues on next page

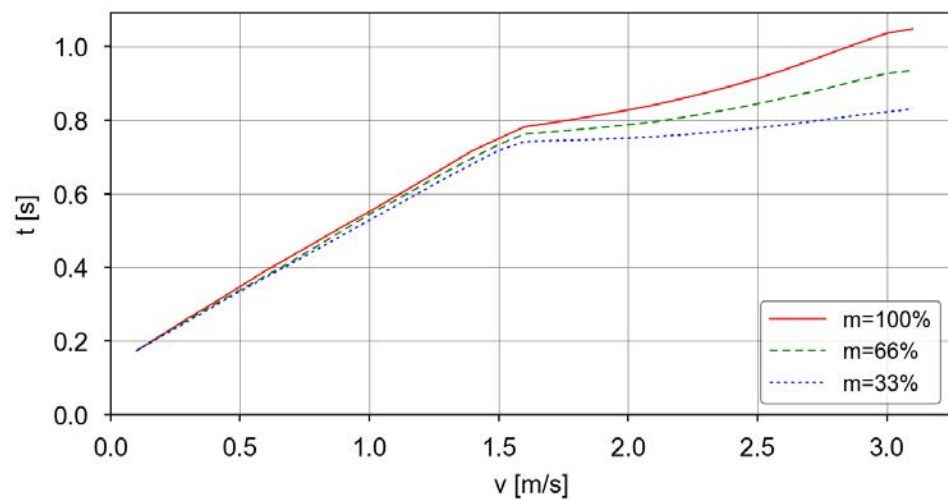
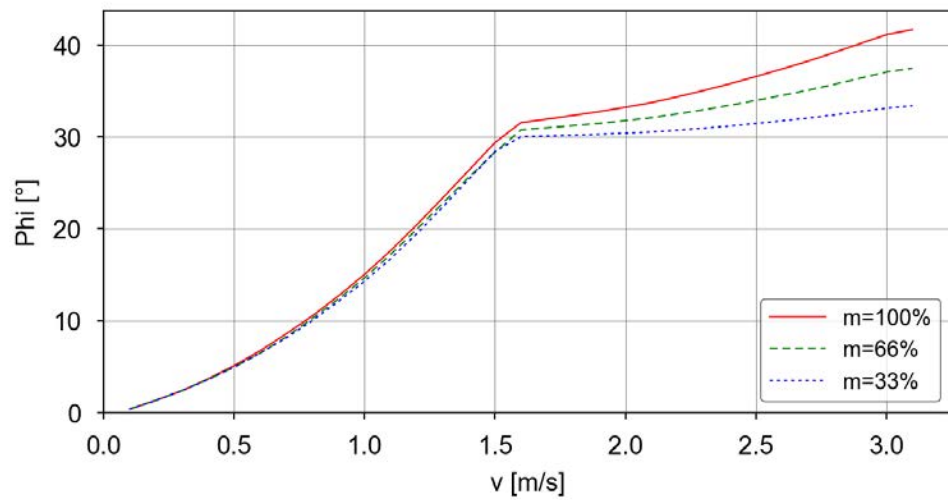
20 IRB 8700

20.1 IRB 8700 3.50 m 800 kg

Continued

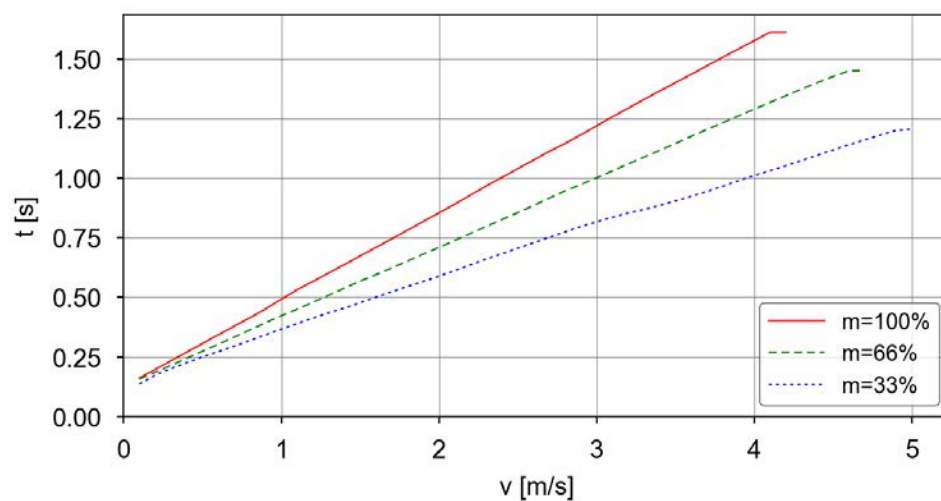
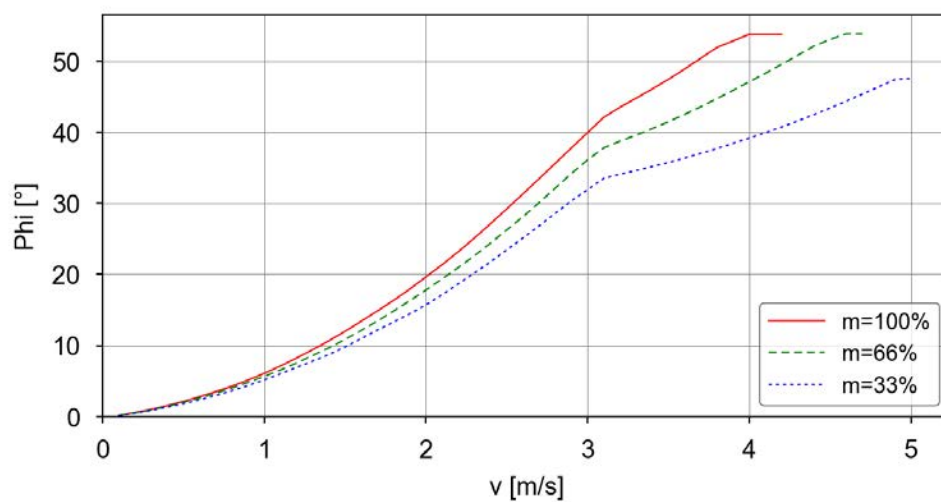


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

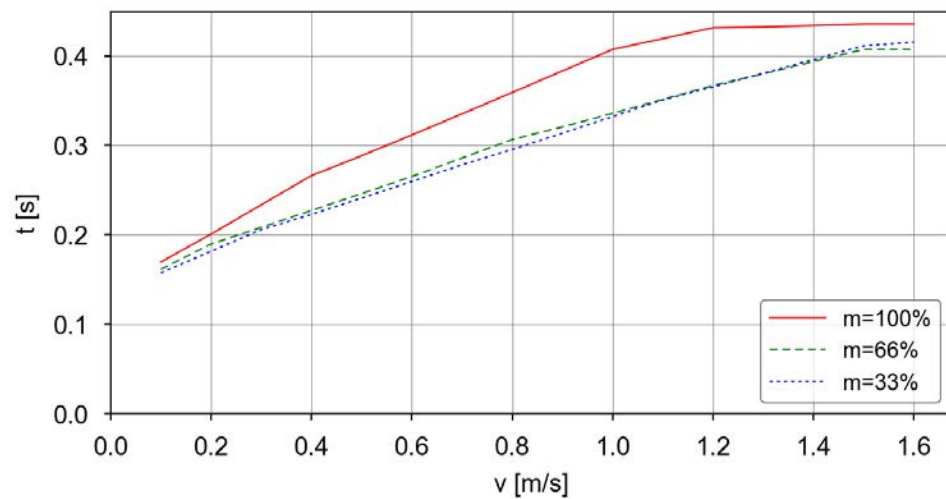
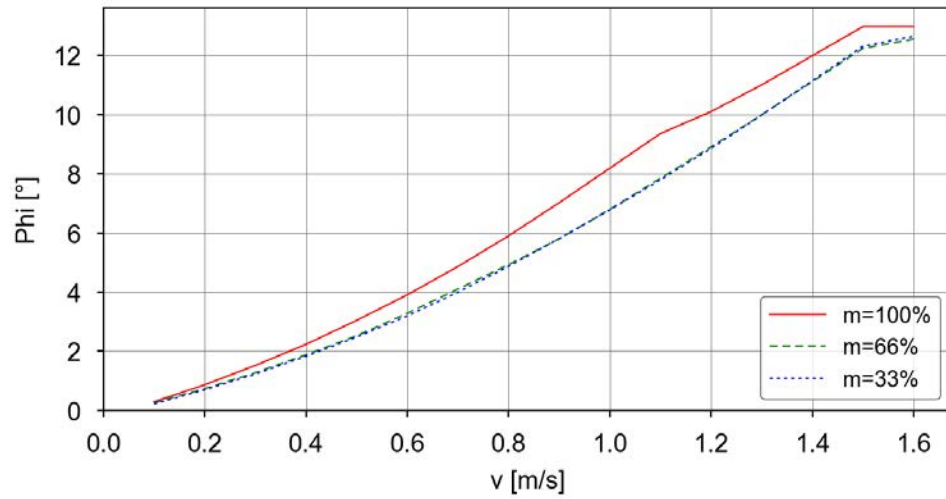
20 IRB 8700

20.1 IRB 8700 3.50 m 800 kg

Continued

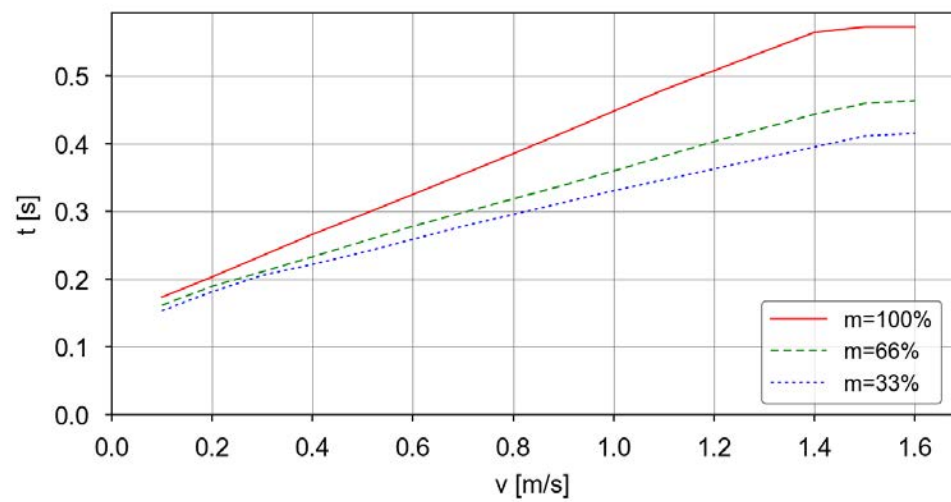
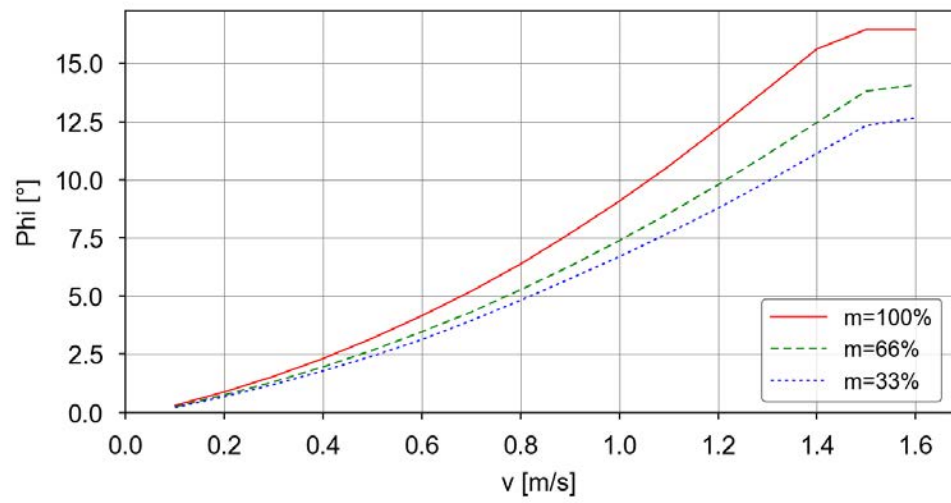
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



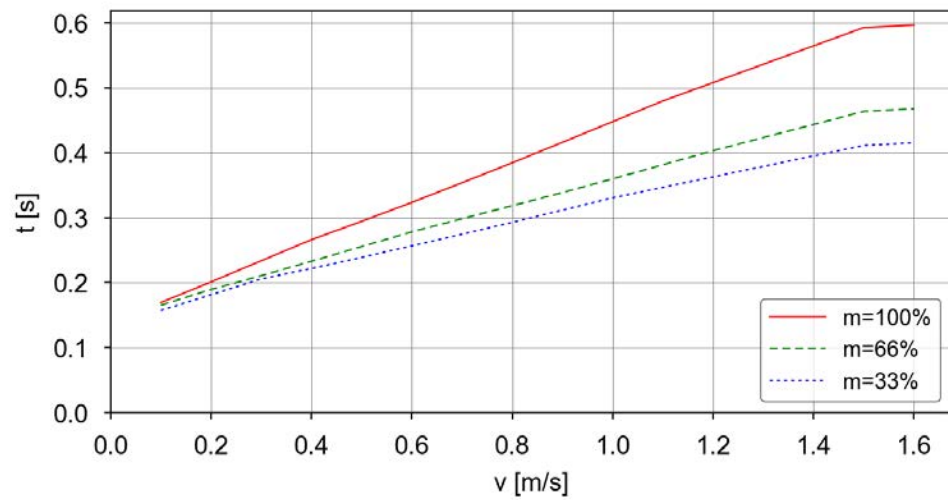
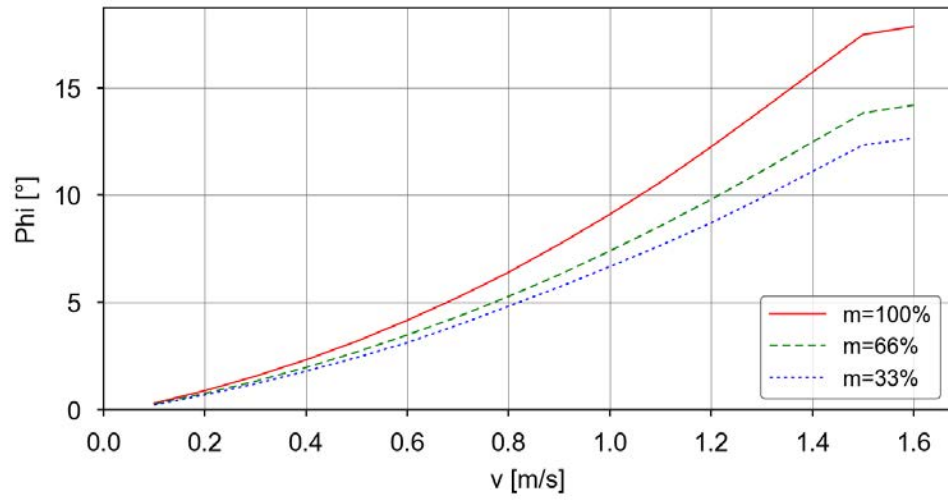
Continues on next page

20 IRB 8700

20.1 IRB 8700 3.50 m 800 kg

Continued

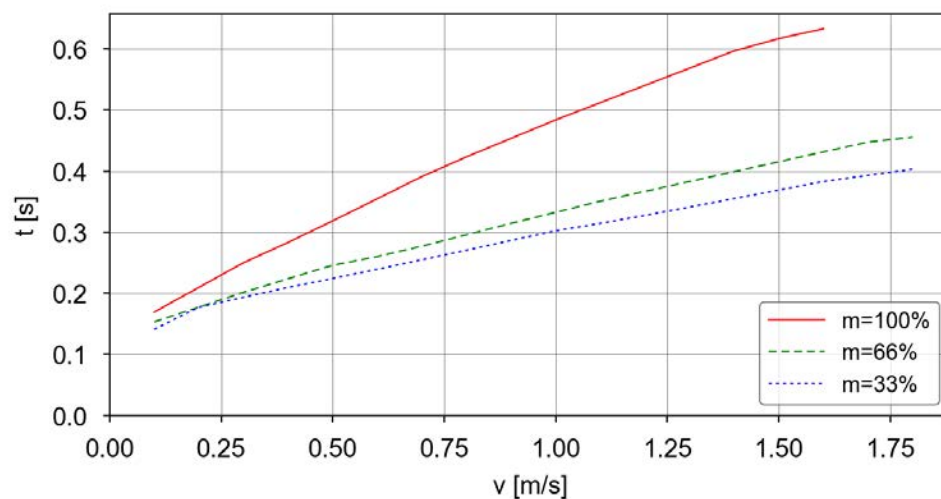
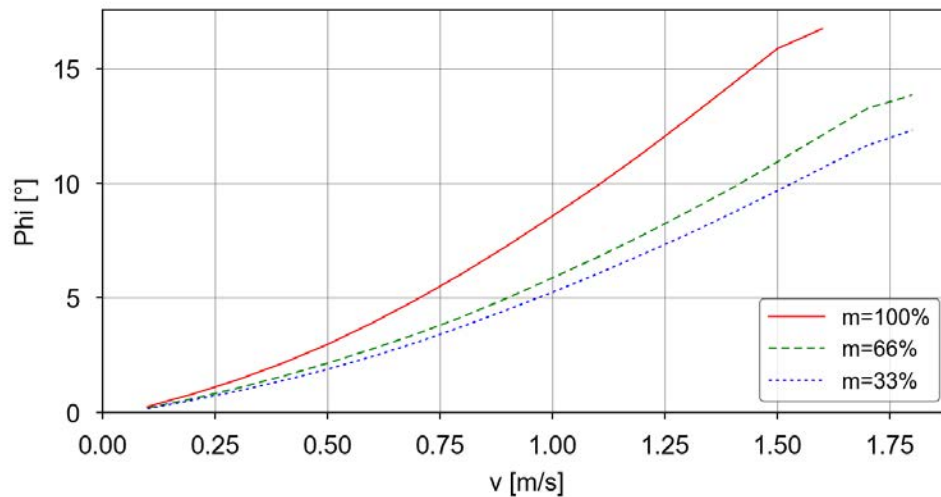
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



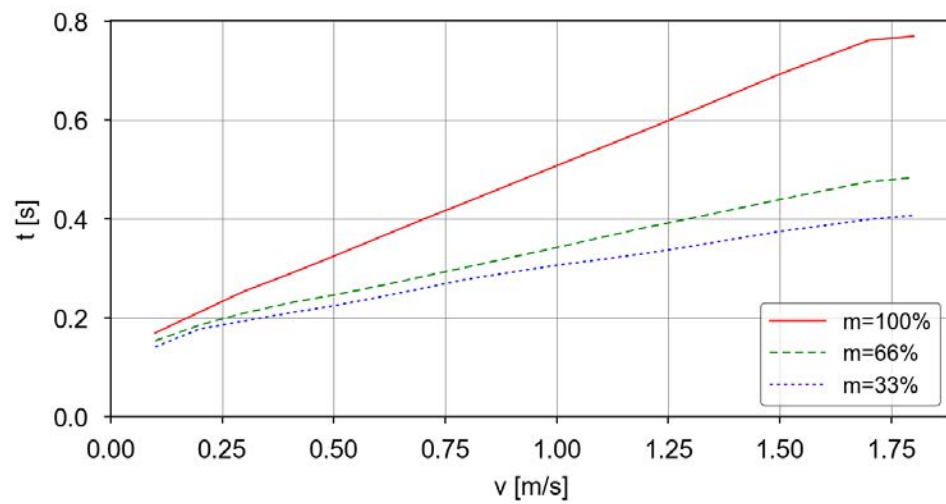
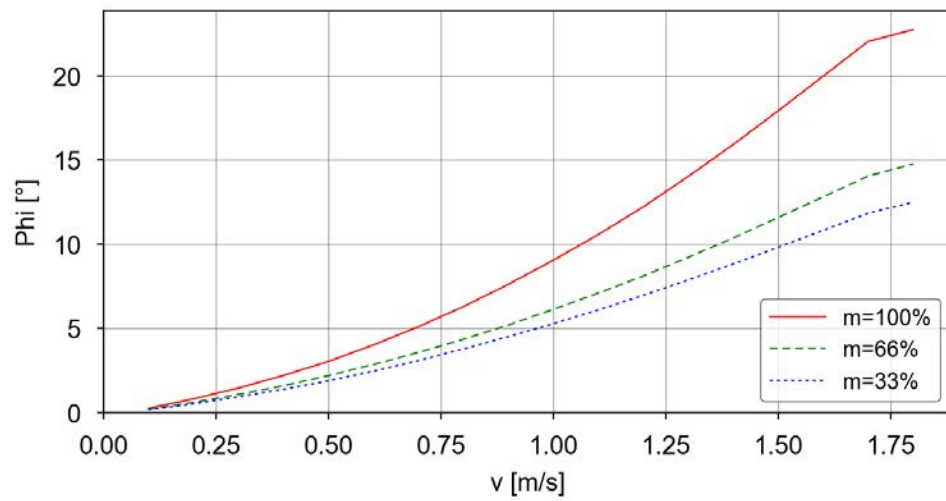
Continues on next page

20 IRB 8700

20.1 IRB 8700 3.50 m 800 kg

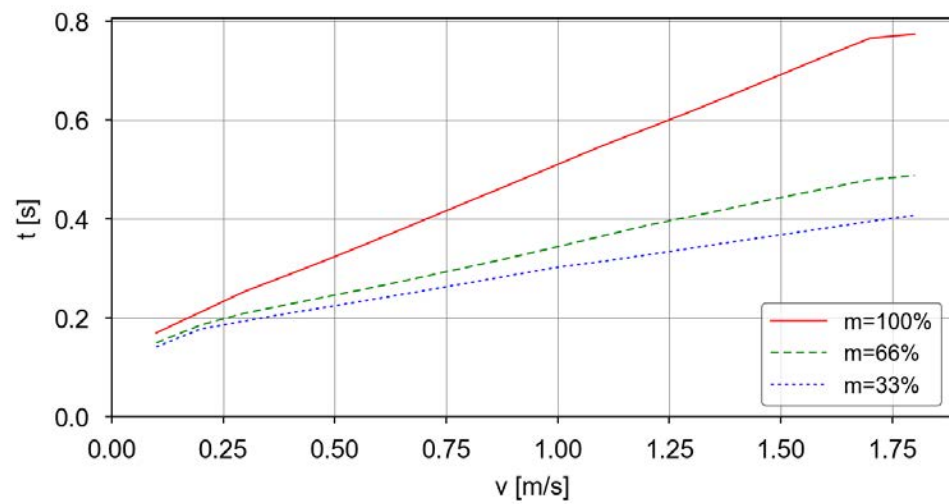
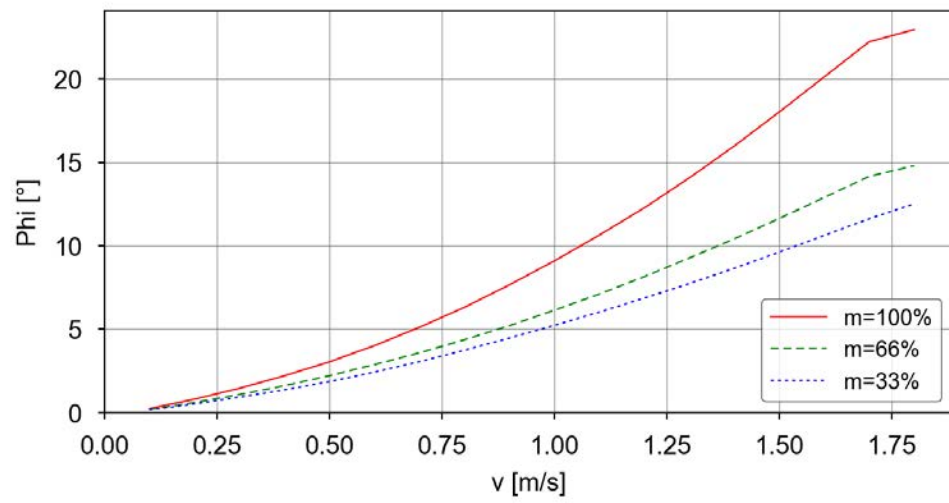
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



20 IRB 8700

20.2 IRB 8700 4.20 m 550 kg

20.2 IRB 8700 4.20 m 550 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	44.4	1.33
2	10.0	0.27
3	14.4	0.44

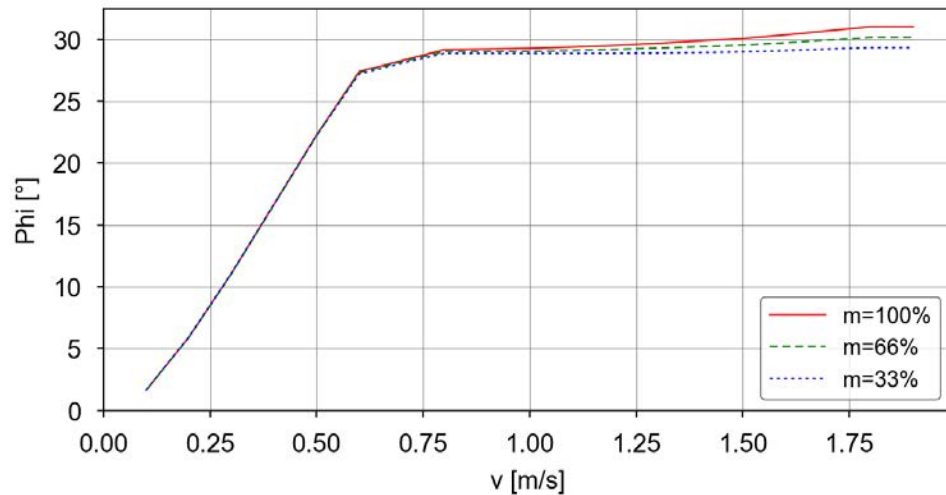
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

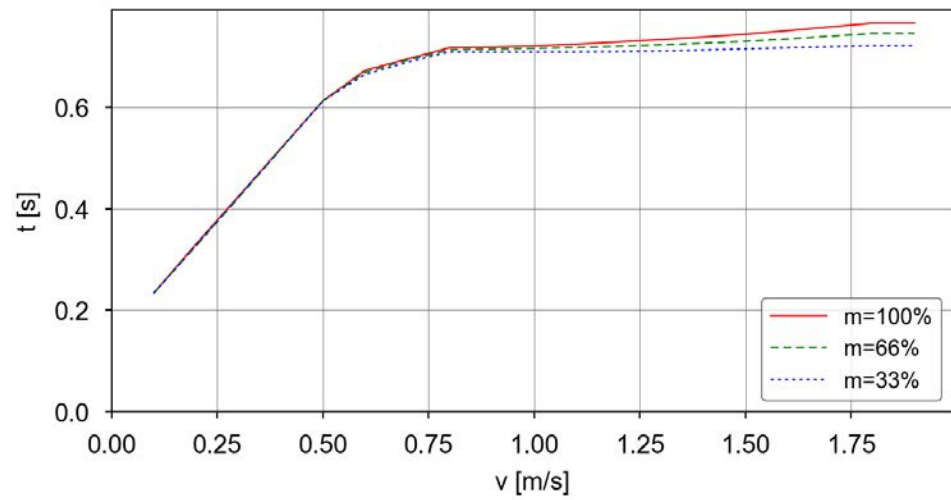
Zone	wcp min (m)	wcp max (m)
0	0	1.399
1	1.399	2.798
2	2.798	max reach

Category 1, Axis 1

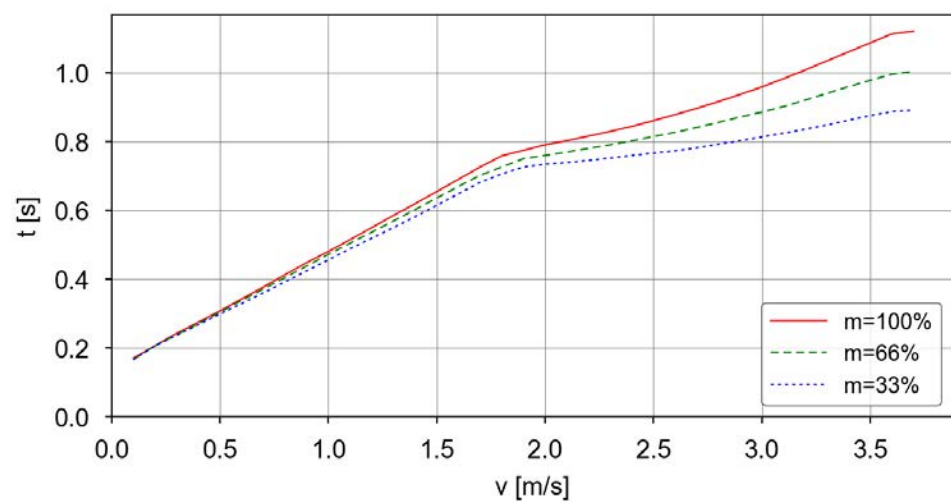
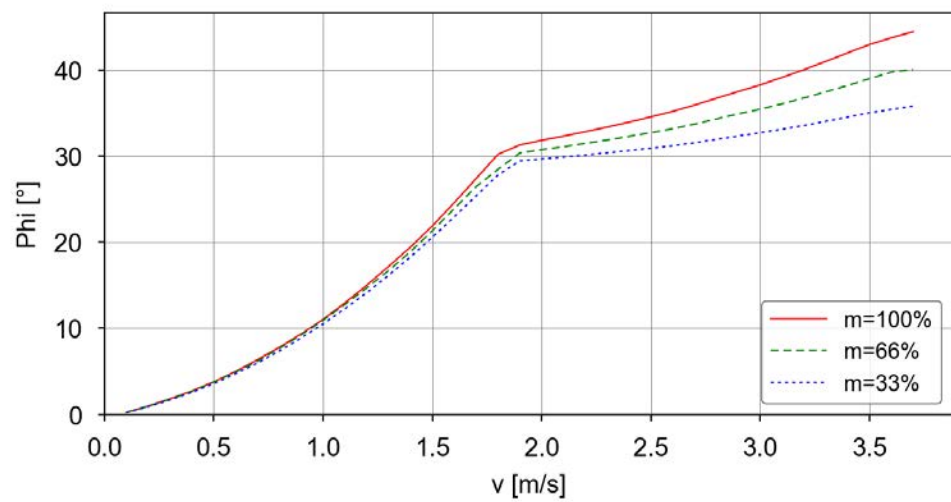
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



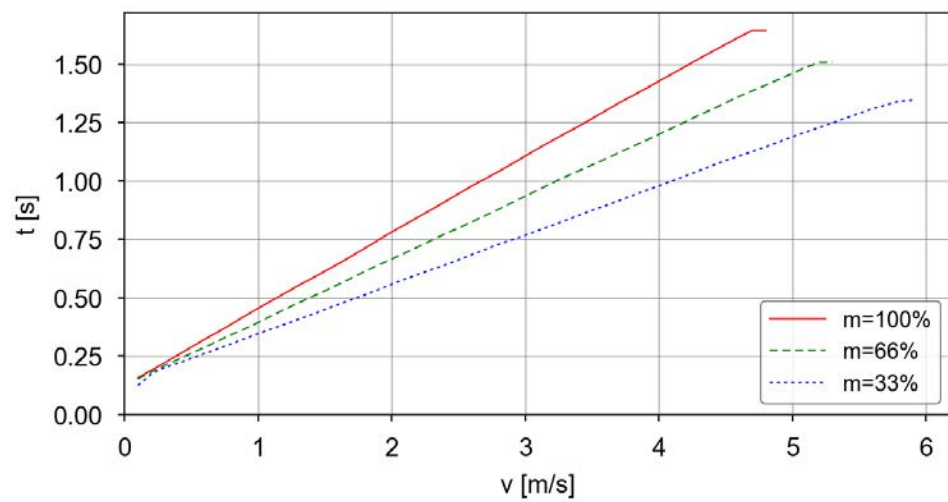
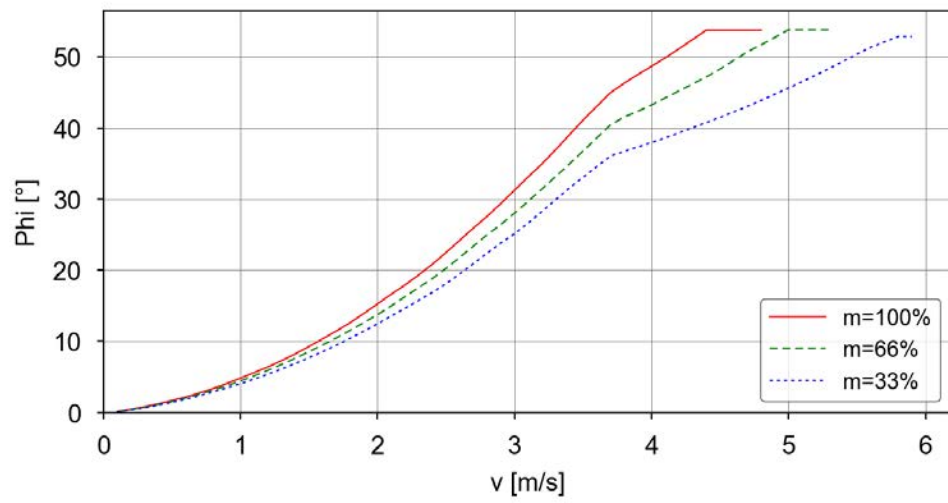
Continues on next page

20 IRB 8700

20.2 IRB 8700 4.20 m 550 kg

Continued

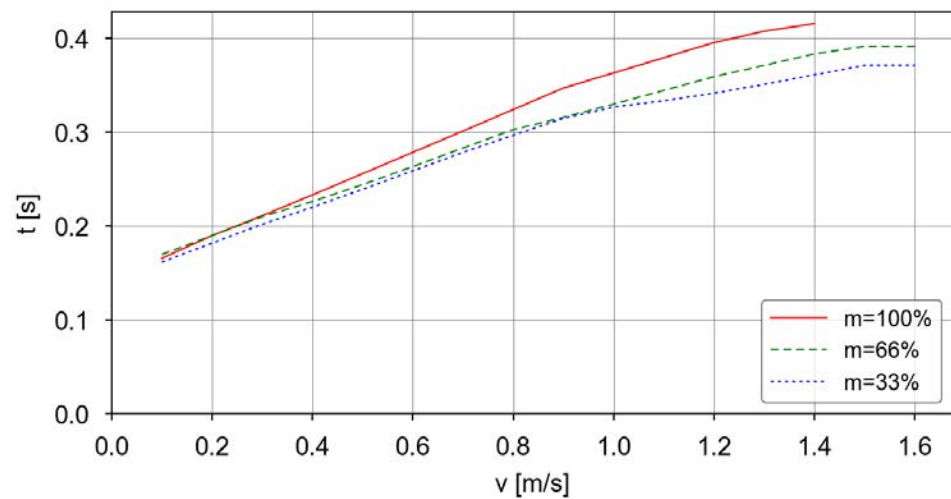
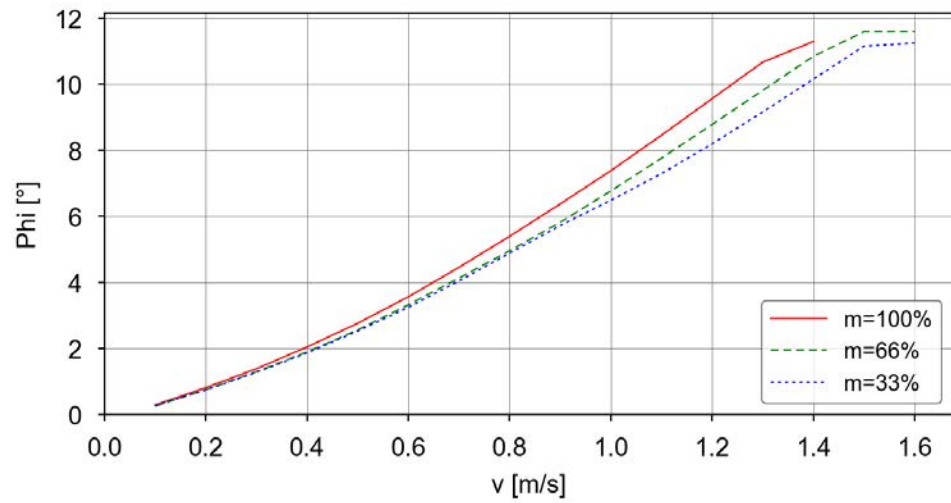
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



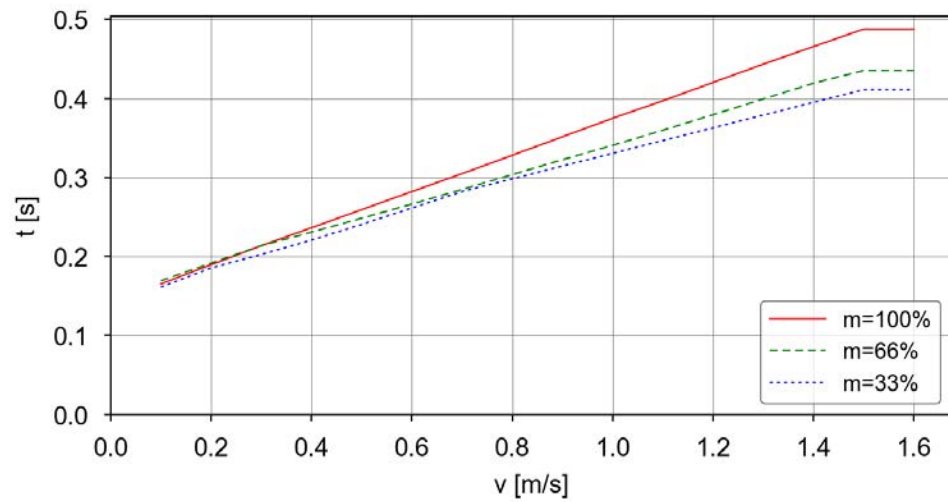
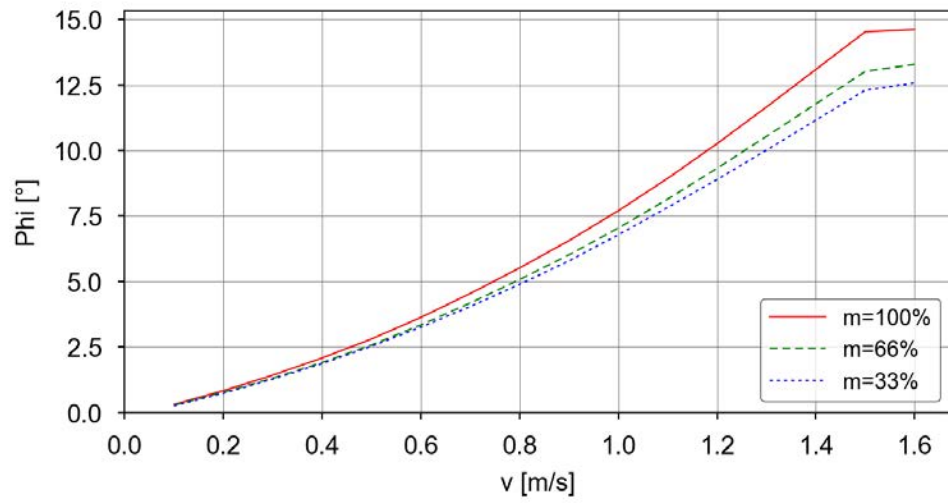
Continues on next page

20 IRB 8700

20.2 IRB 8700 4.20 m 550 kg

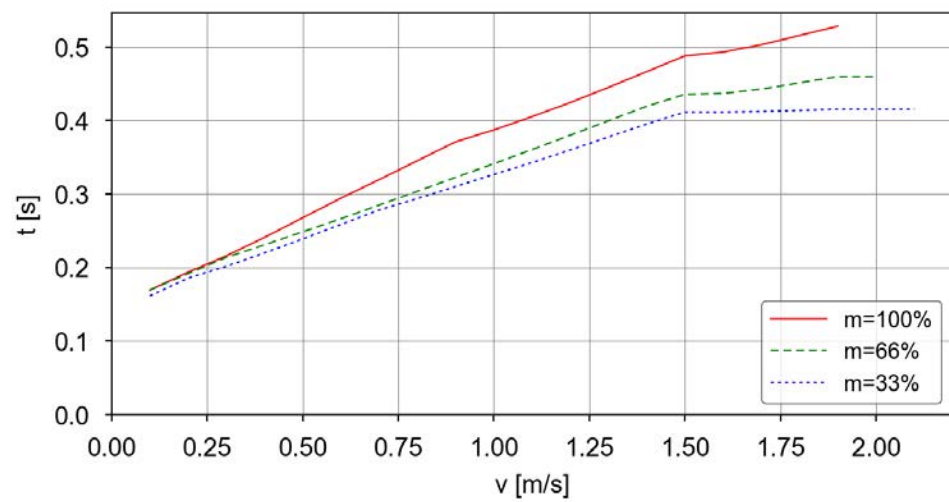
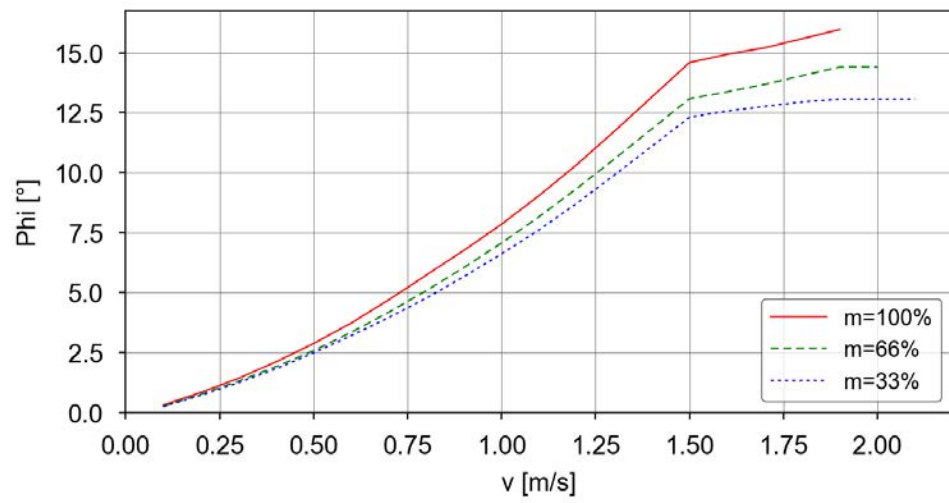
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

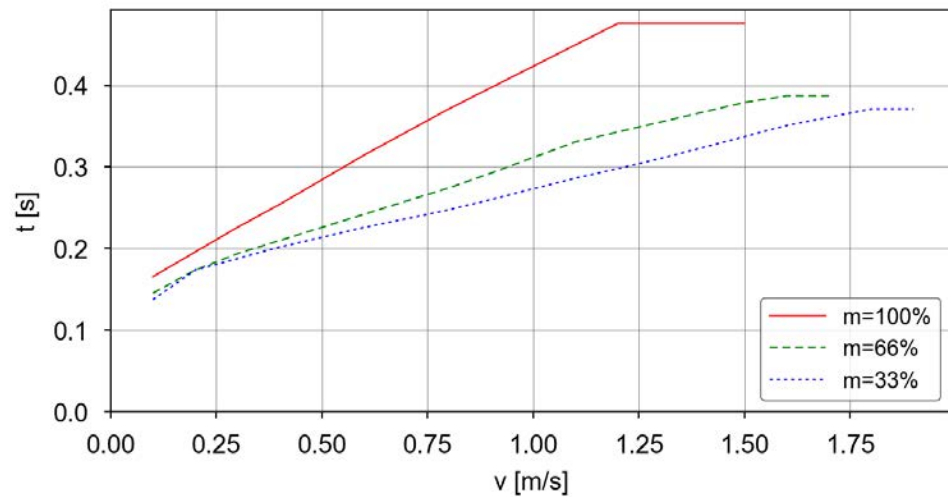
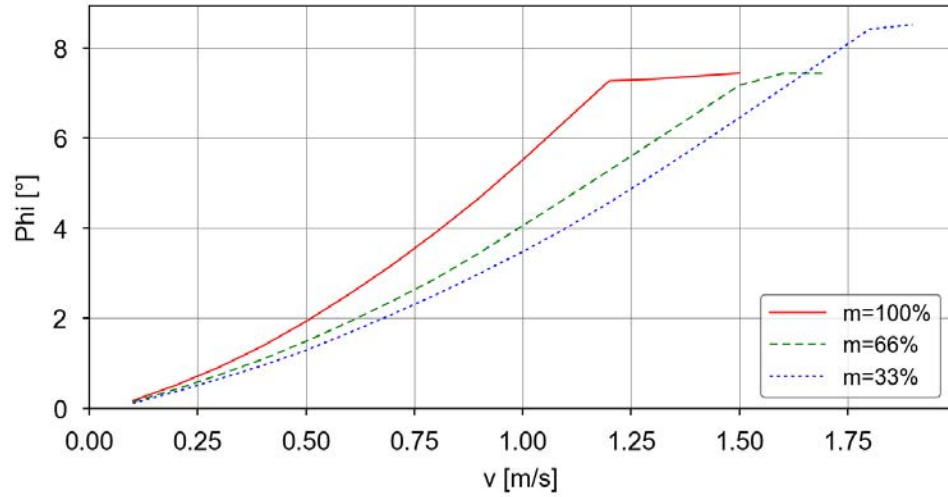
Extension zone 2, stopping distance and stopping time



Continues on next page

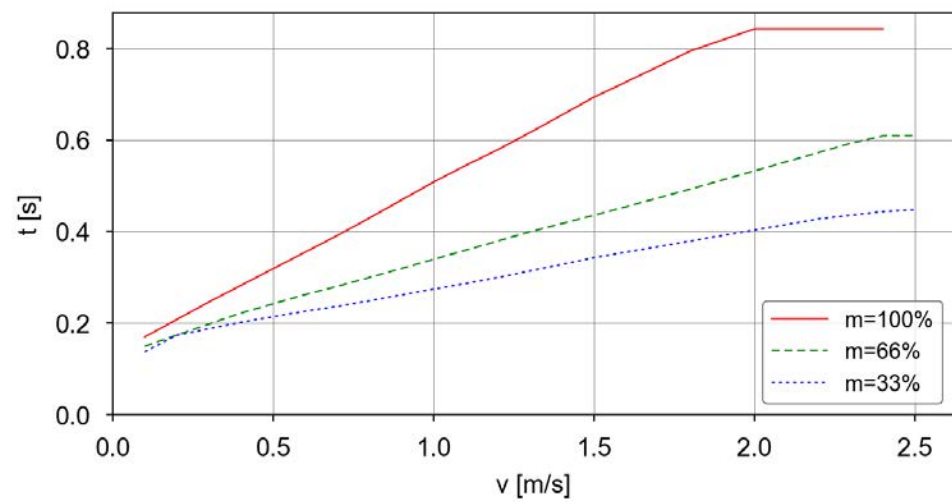
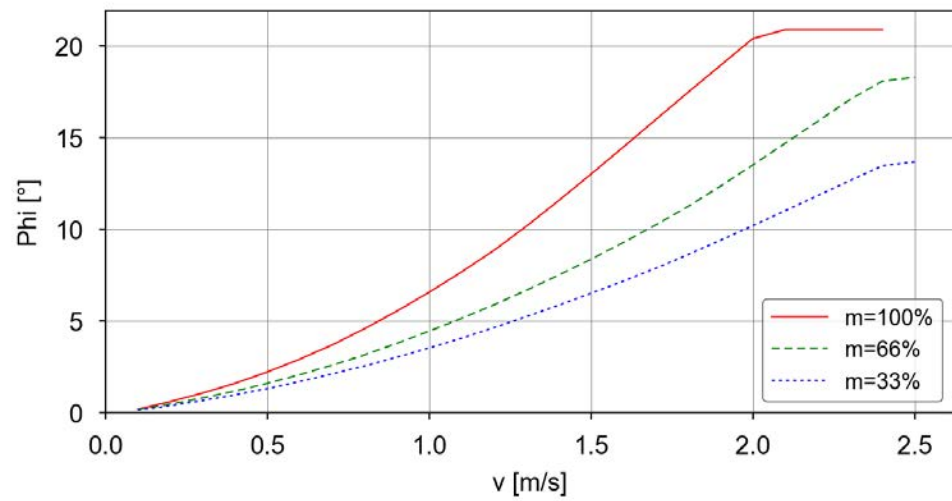
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



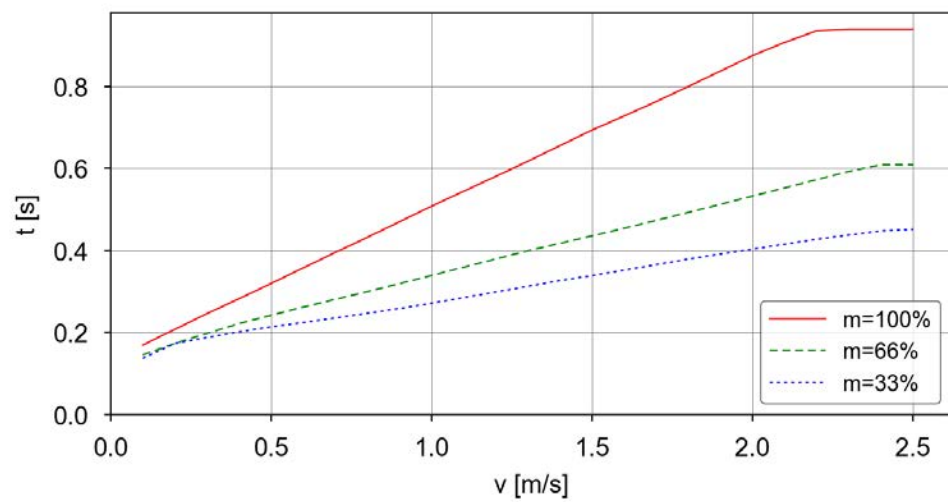
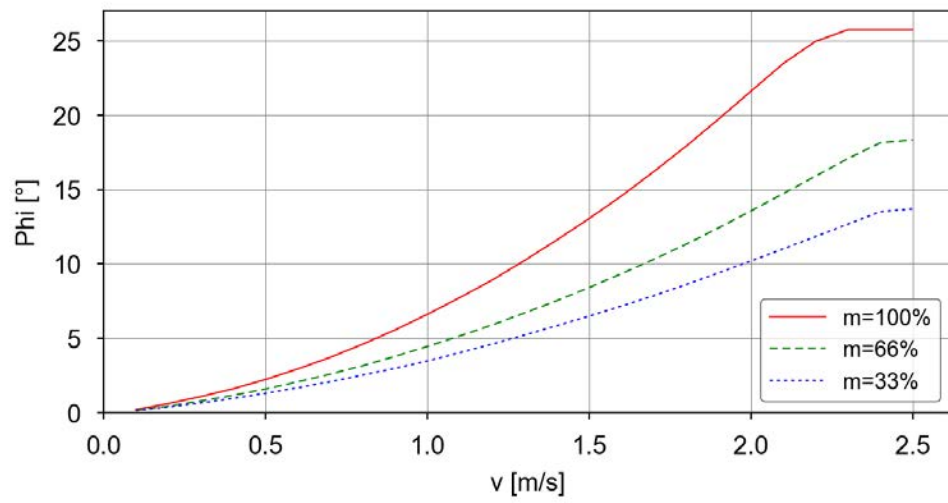
Continues on next page

20 IRB 8700

20.2 IRB 8700 4.20 m 550 kg

Continued

Extension zone 2, stopping distance and stopping time



20.3 IRB 8700LeanID 3.50 m 630 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	44.4	1.19
2	10.1	0.27
3	9.6	0.25

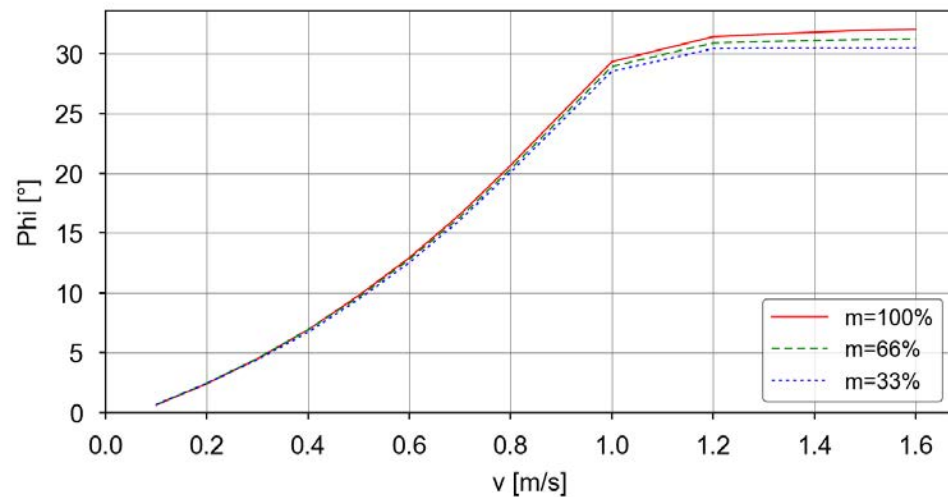
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.169
1	1.169	2.338
2	2.338	max reach

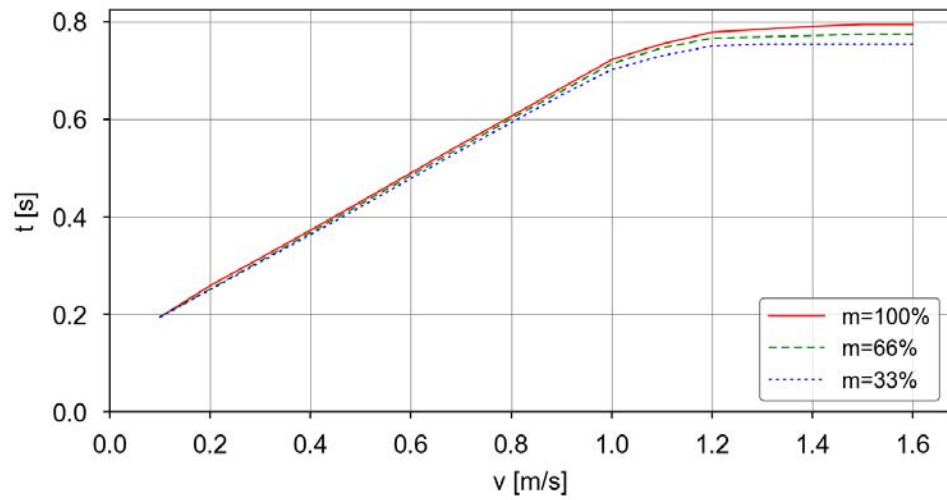
Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

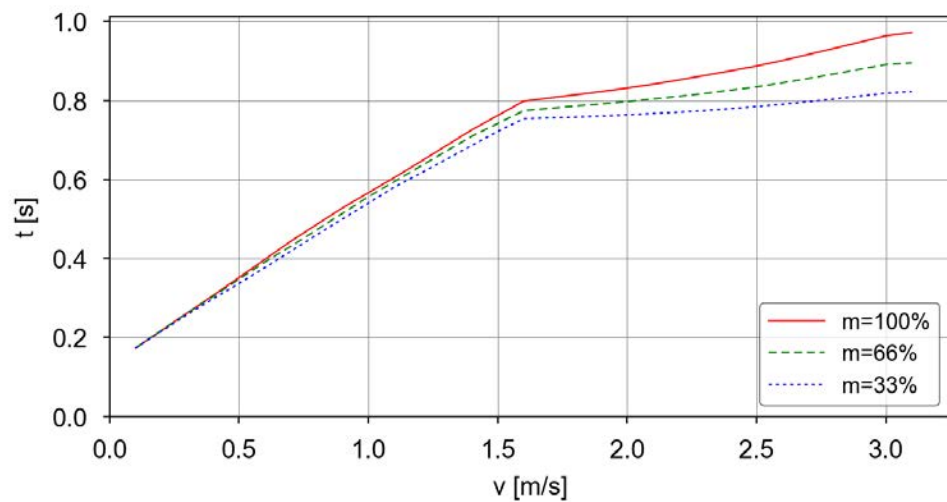
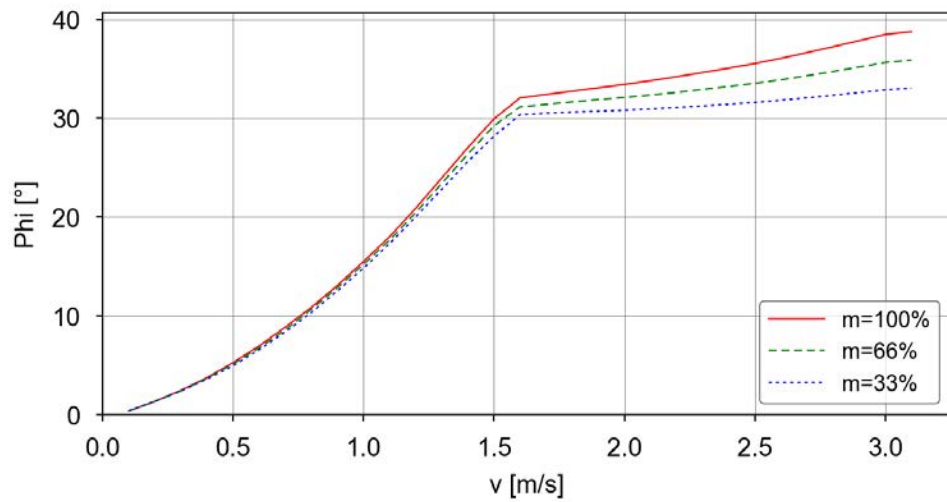


Continues on next page

Continued

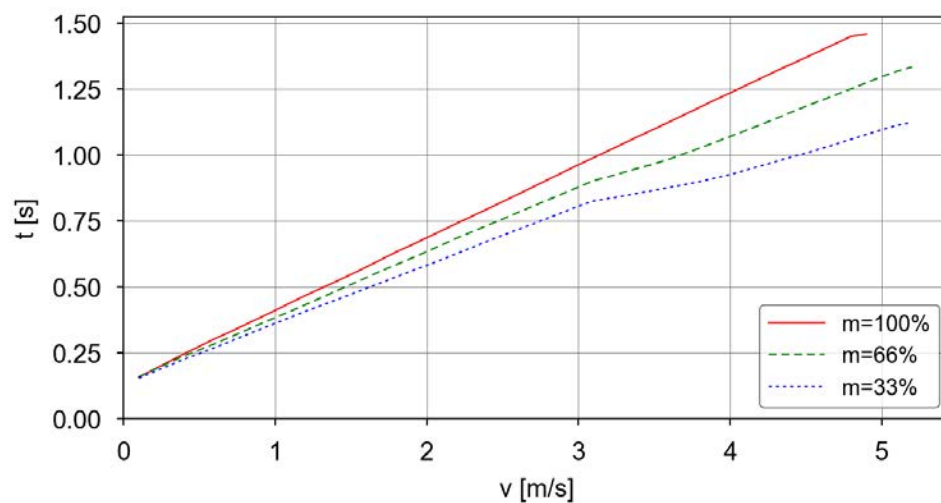
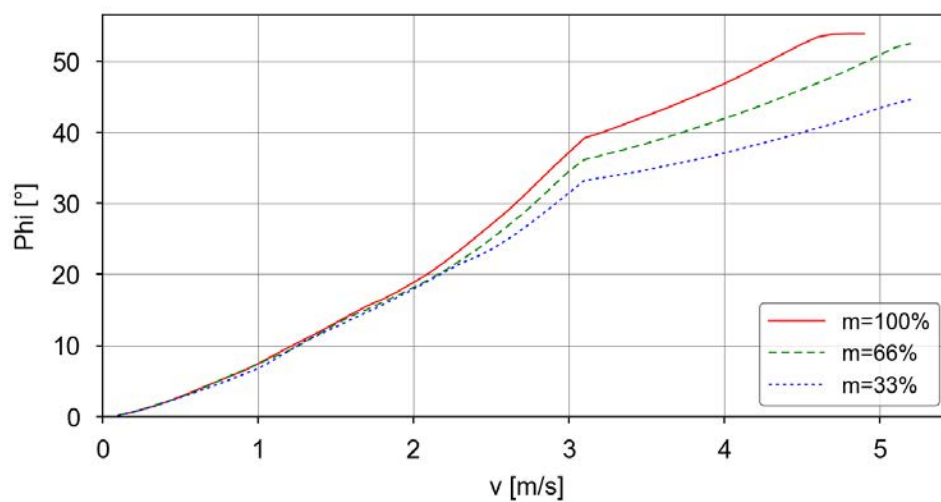


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

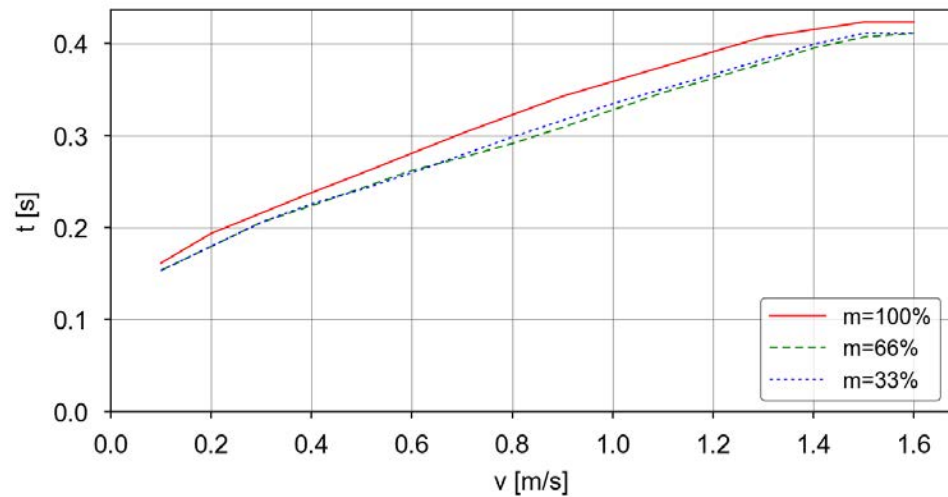
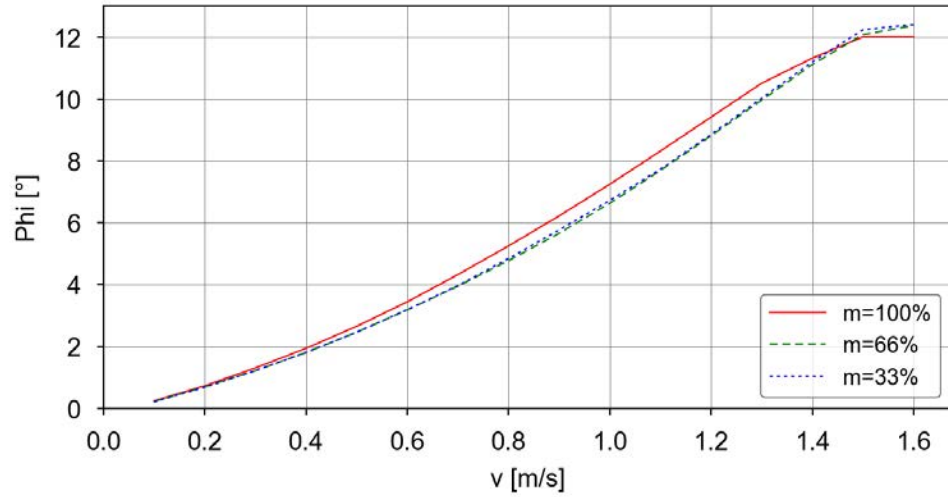
20 IRB 8700

20.3 IRB 8700LeanID 3.50 m 630 kg

Continued

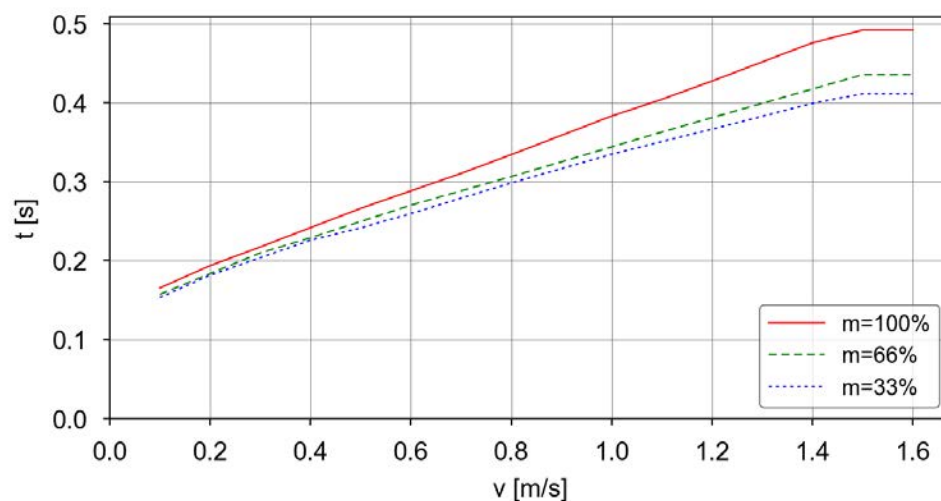
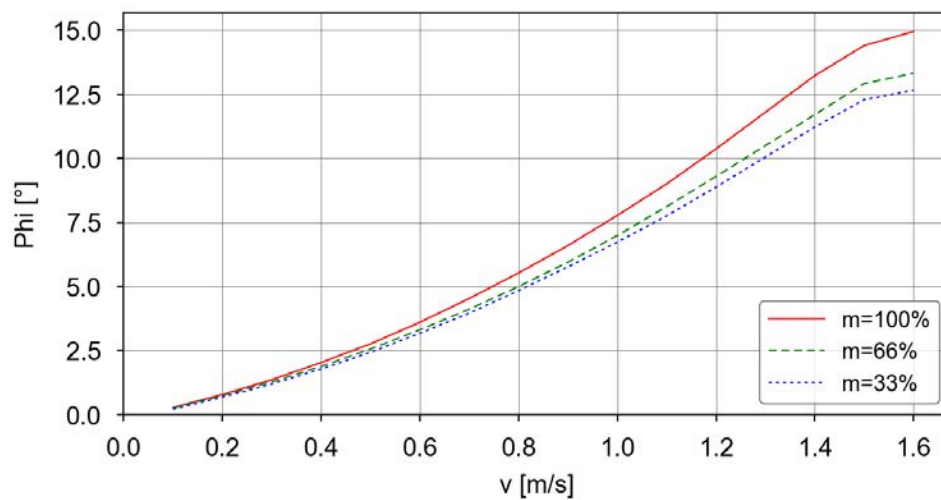
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



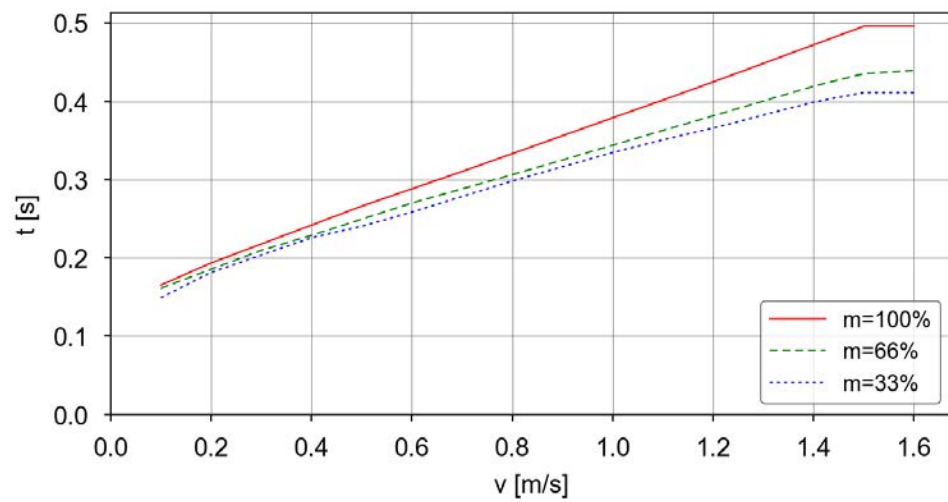
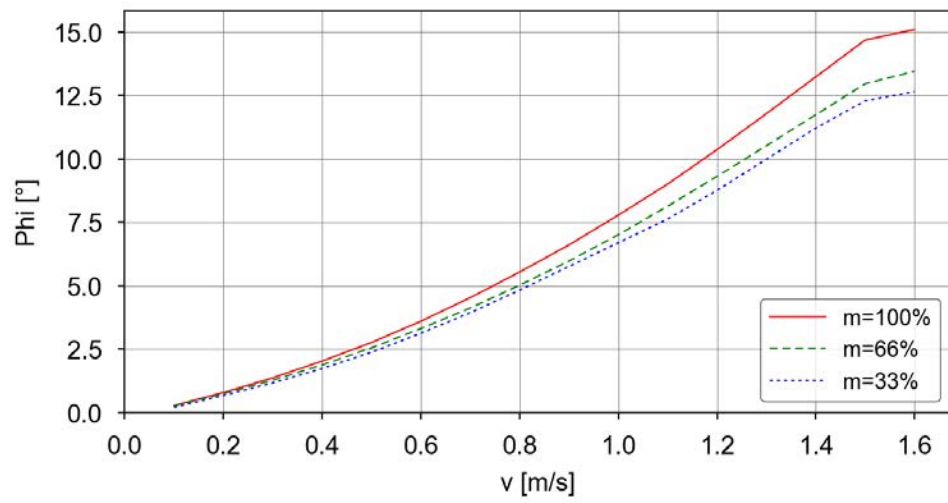
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

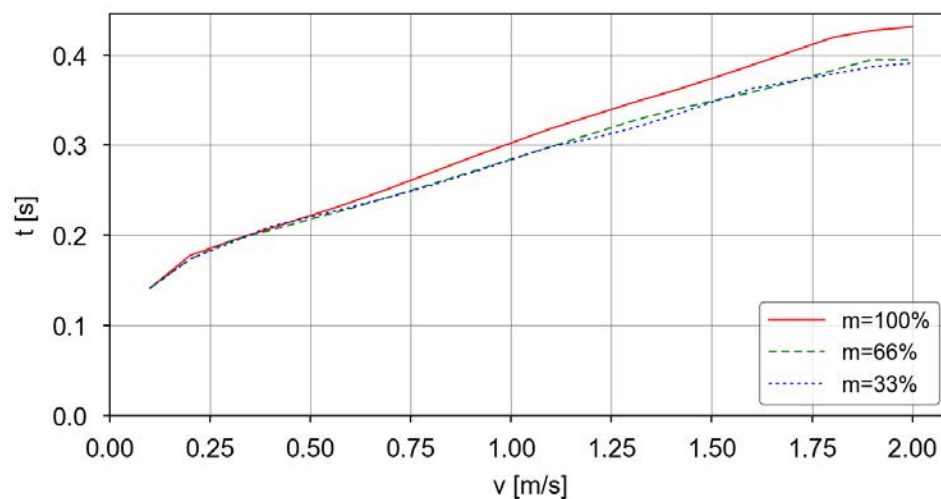
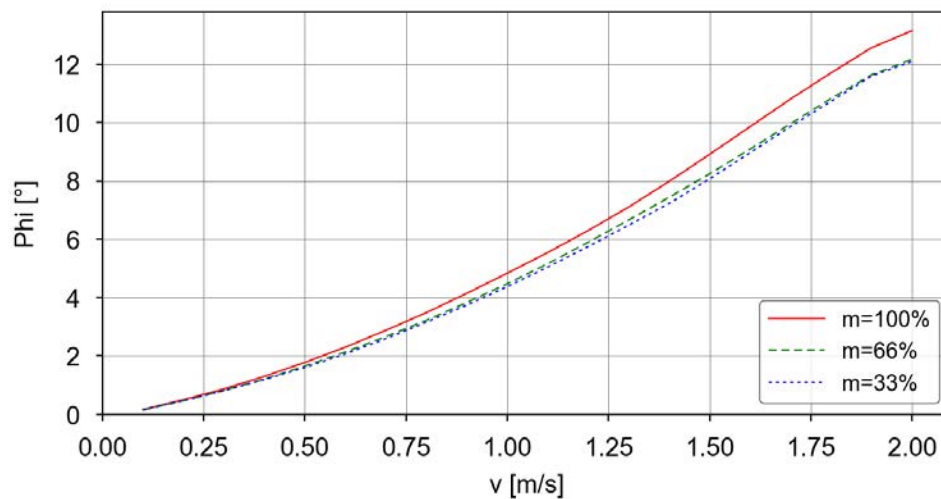
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

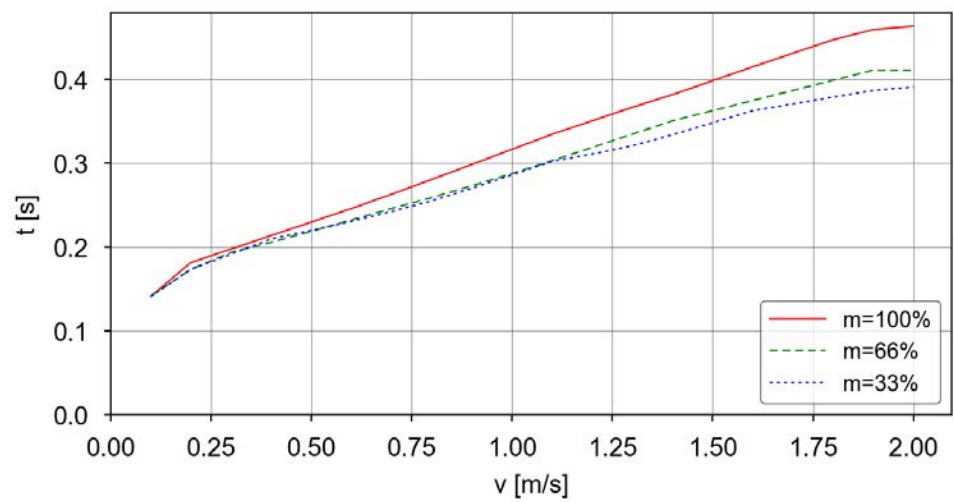
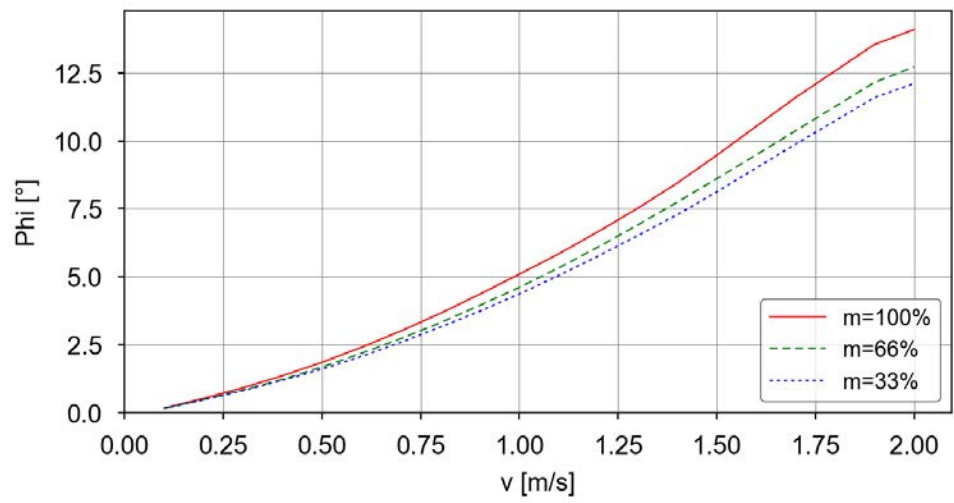
Extension zone 0, stopping distance and stopping time



Continues on next page

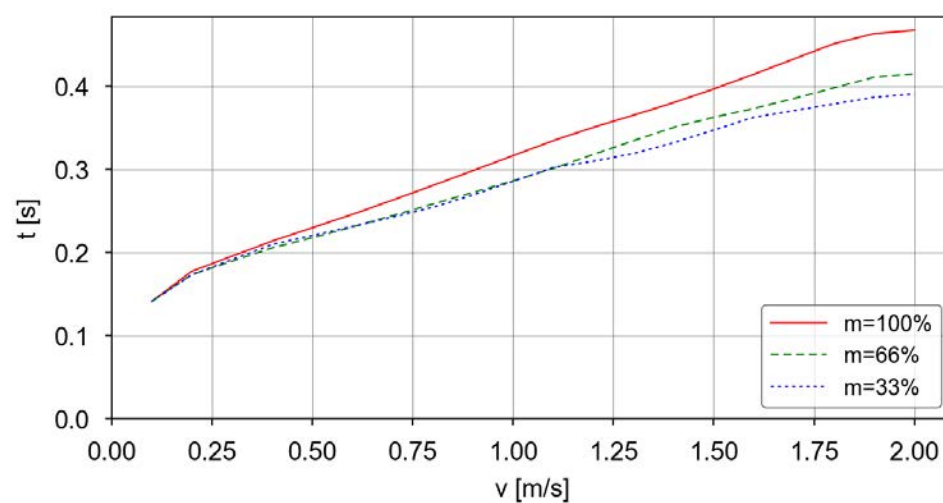
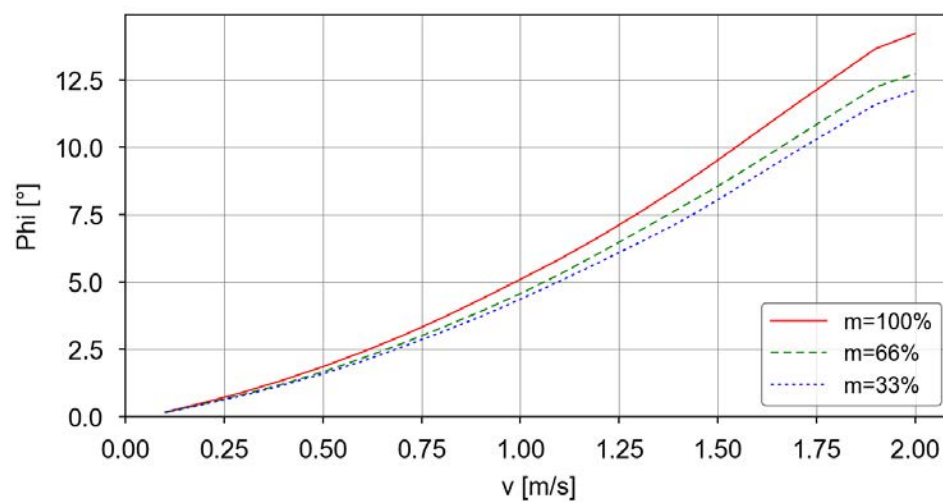
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



20.4 IRB 8700LeanID 4.20 m 475 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	44.4	1.26
2	9.5	0.25
3	12.0	0.34

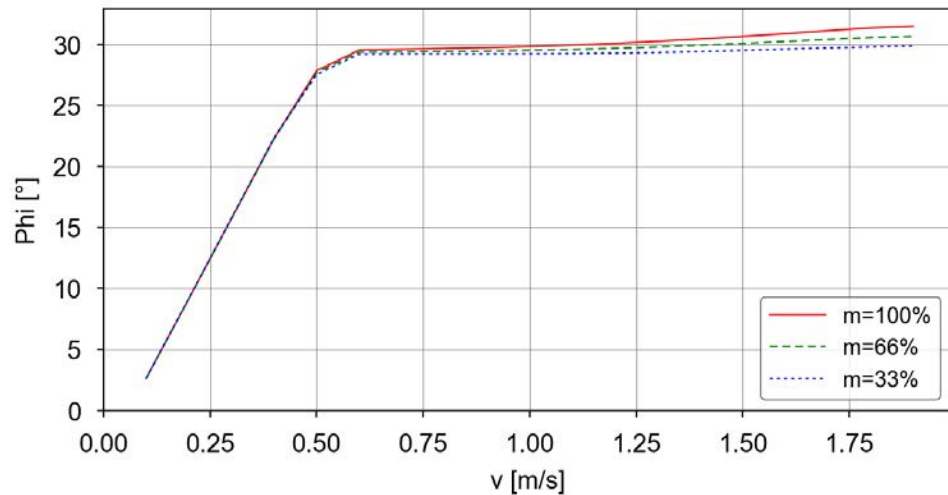
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

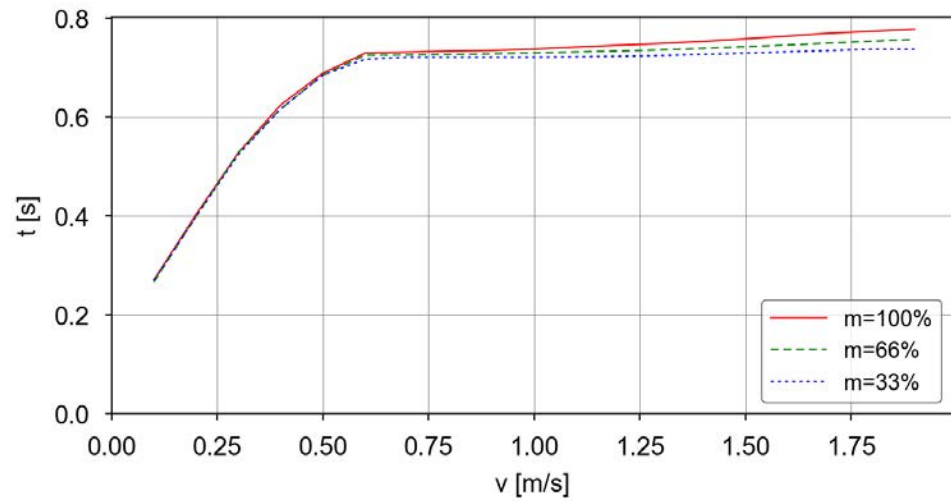
Zone	wcp min (m)	wcp max (m)
0	0	1.399
1	1.399	2.798
2	2.798	max reach

Category 1, Axis 1

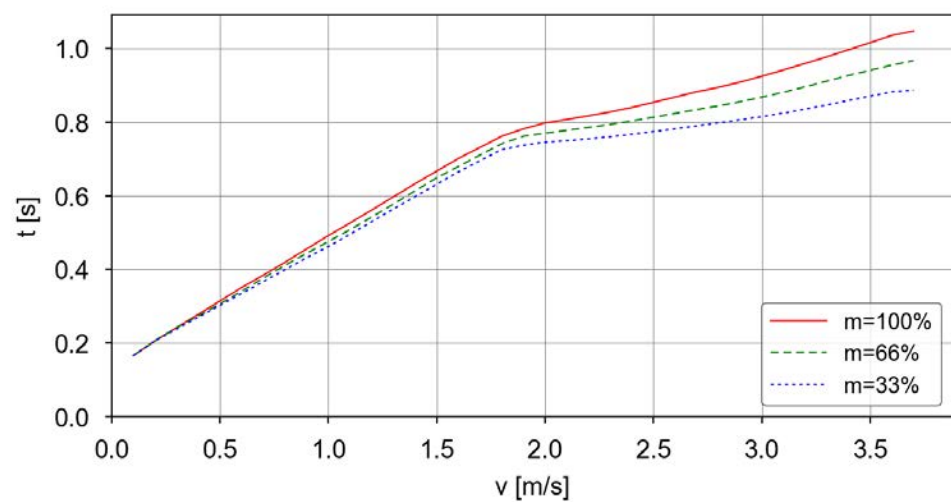
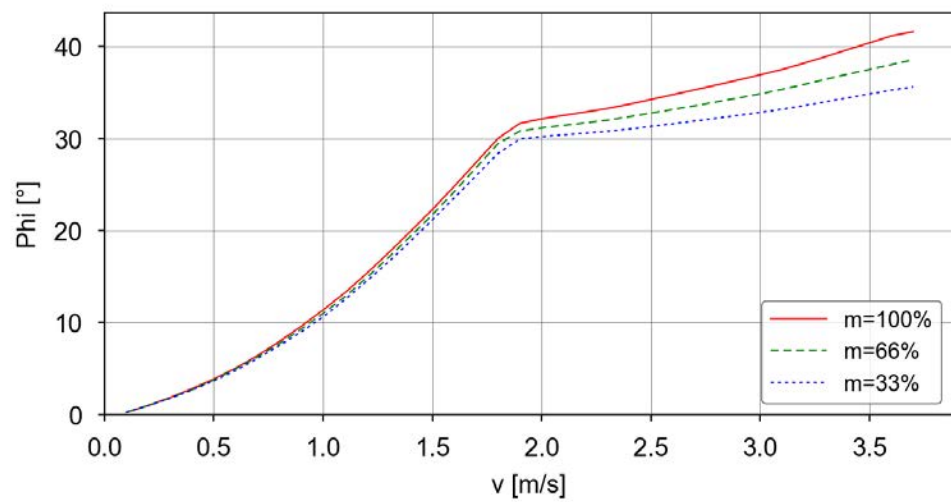
Extension zone 0, stopping distance and stopping time



Continues on next page

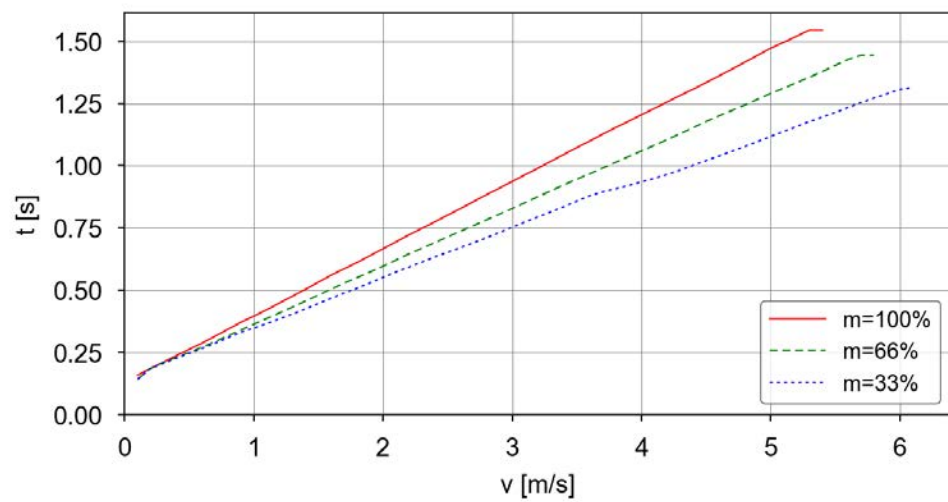
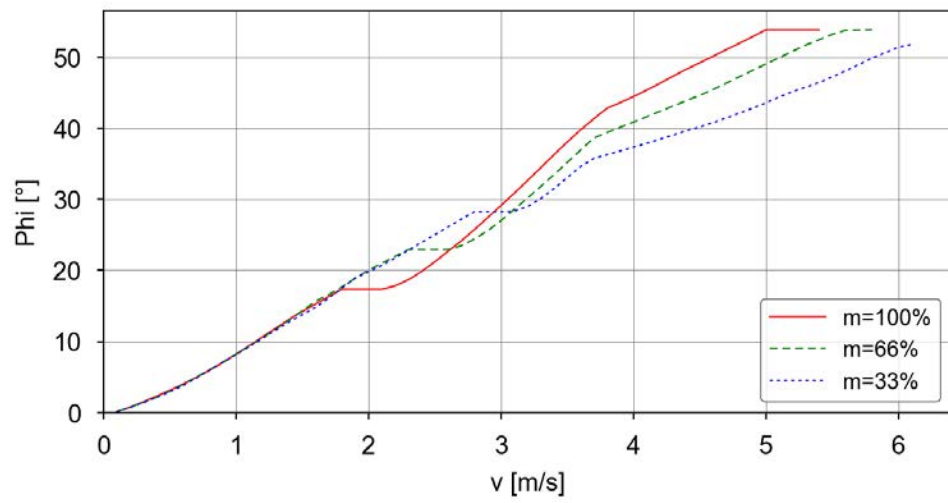


Extension zone 1, stopping distance and stopping time



Continues on next page

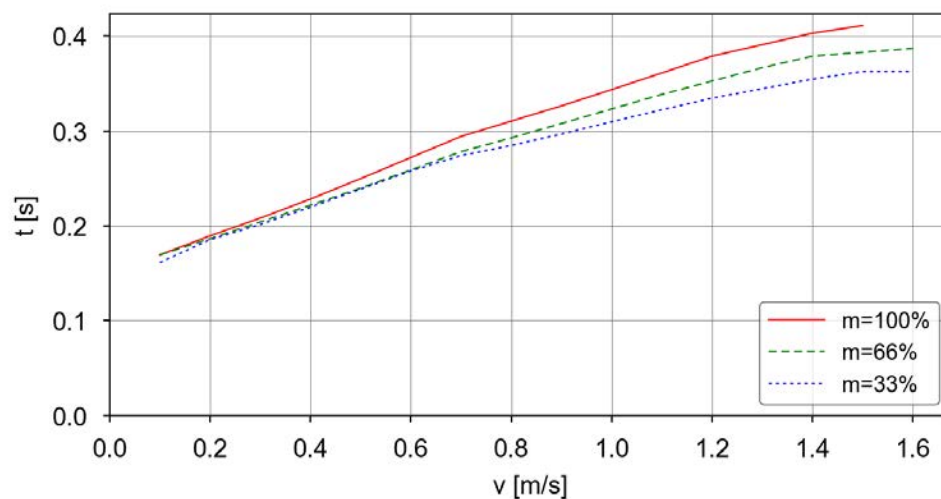
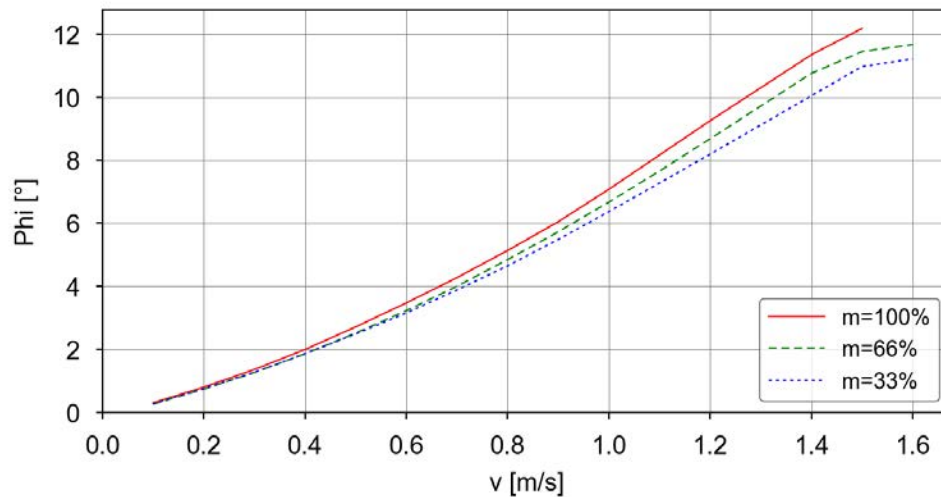
Extension zone 2, stopping distance and stopping time



Continues on next page

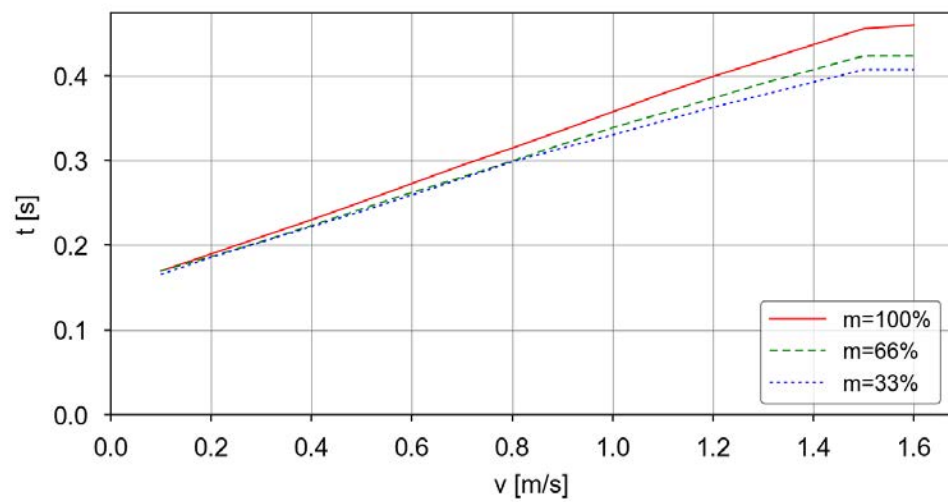
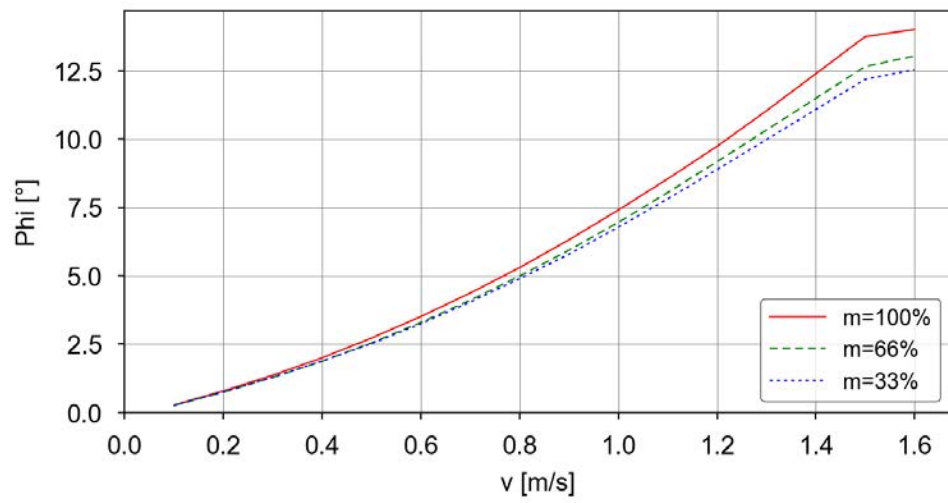
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



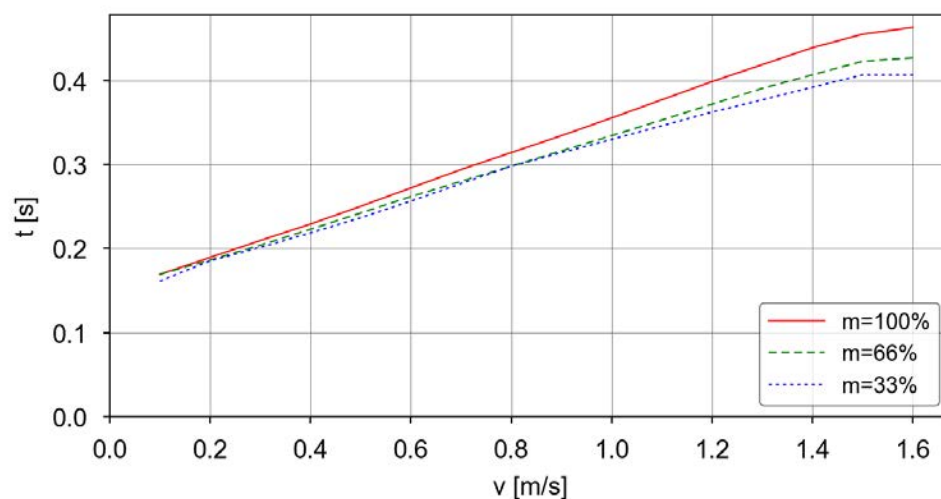
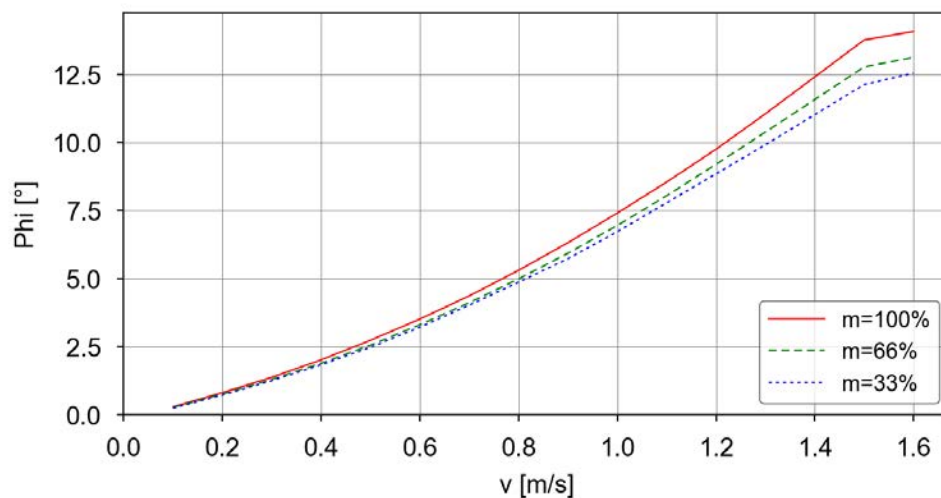
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

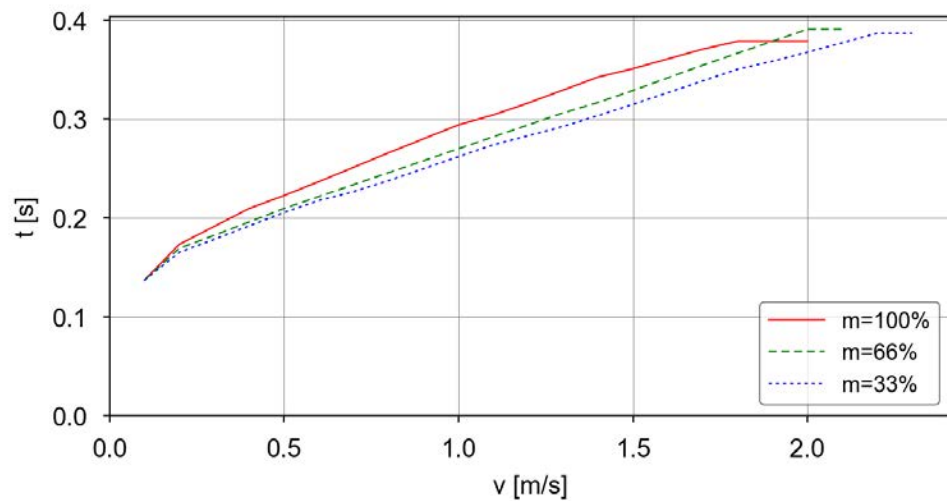
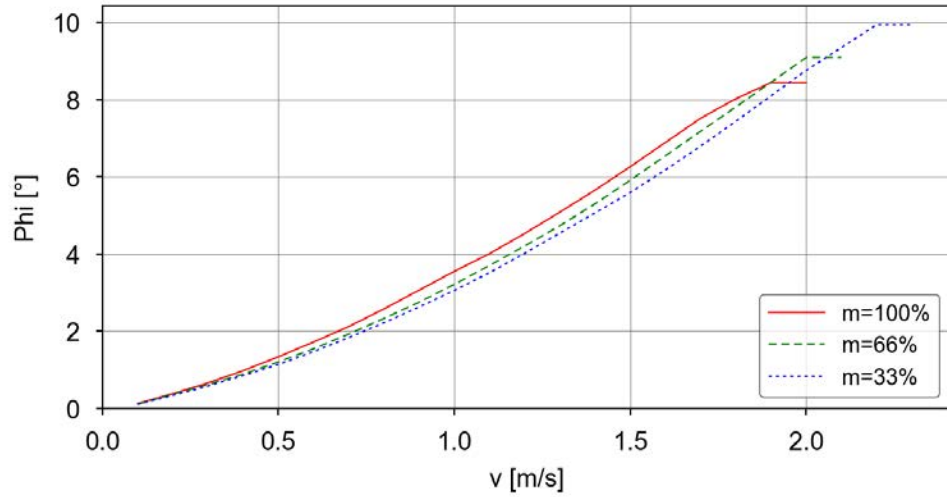
Extension zone 2, stopping distance and stopping time



Continues on next page

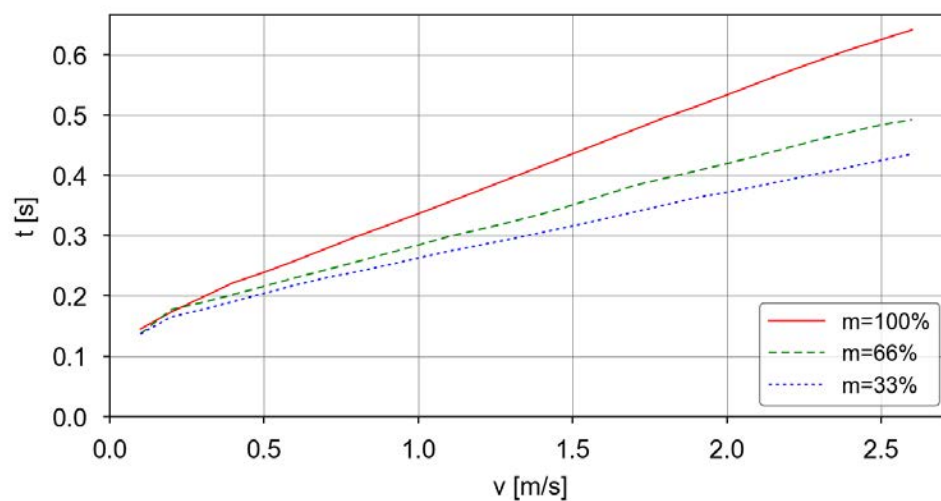
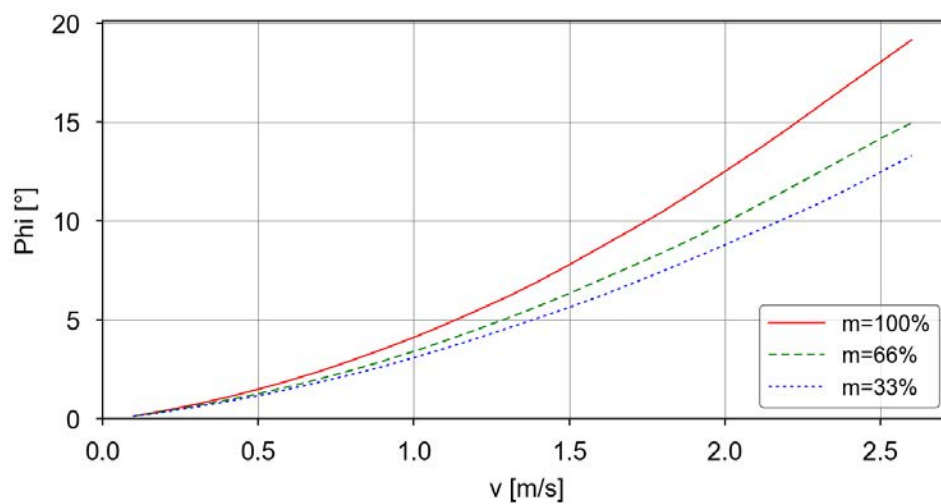
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



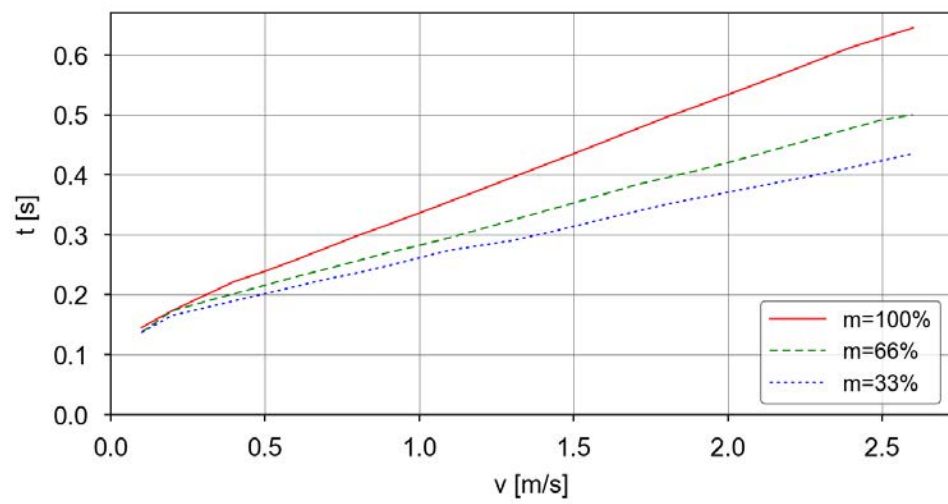
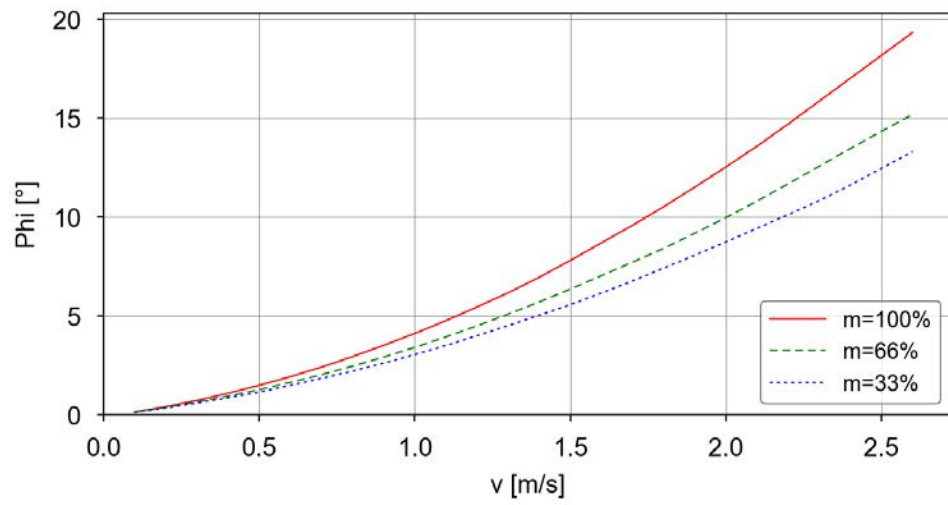
Continues on next page

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



21 IRB 460

21.1 IRB 460 2.4 m 110 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	41.5	0.49
2	14.6	0.17
3	13.6	0.15

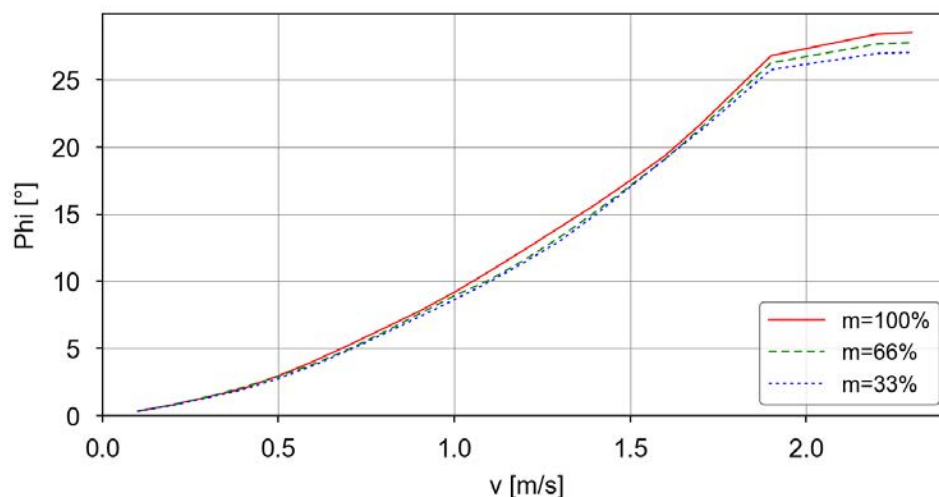
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	0.889
1	0.889	1.778
2	1.778	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

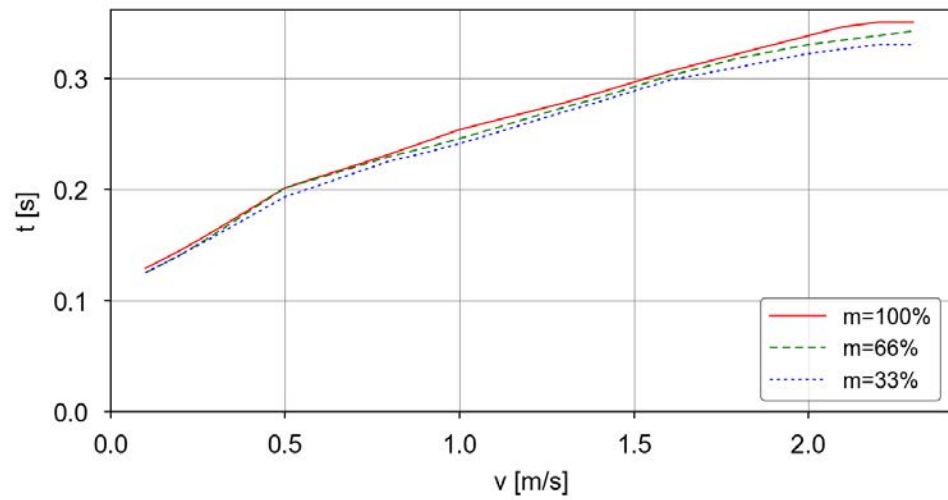


Continues on next page

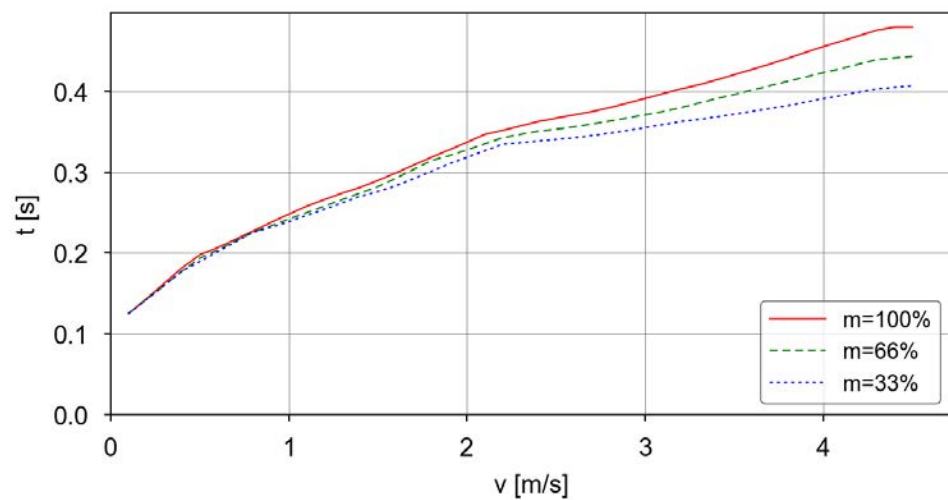
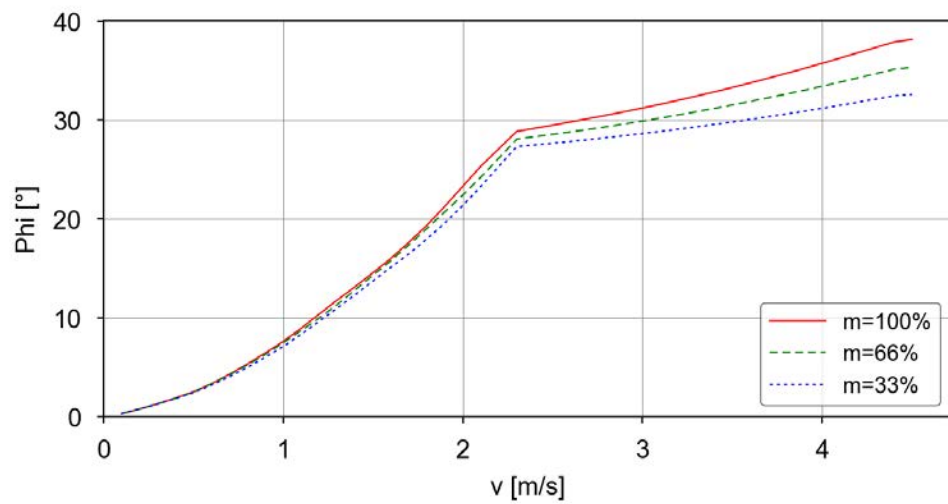
21 IRB 460

21.1 IRB 460 2.4 m 110 kg

Continued

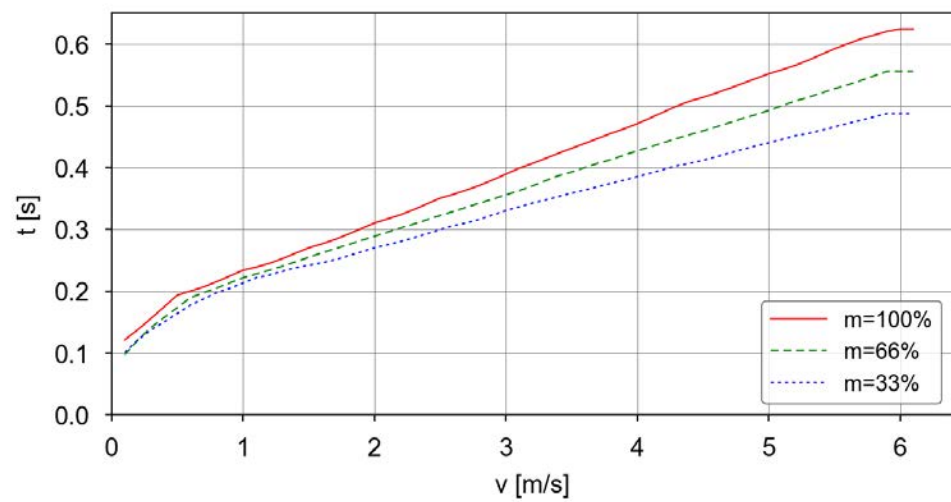
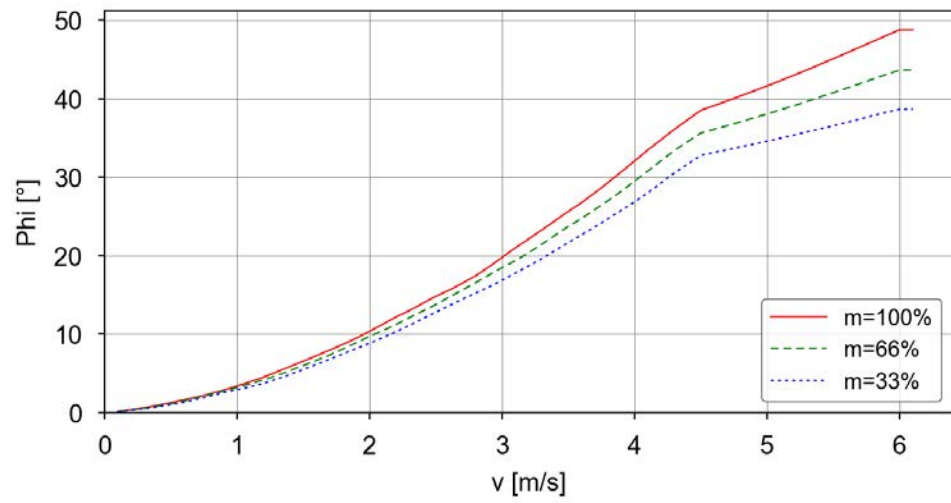


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

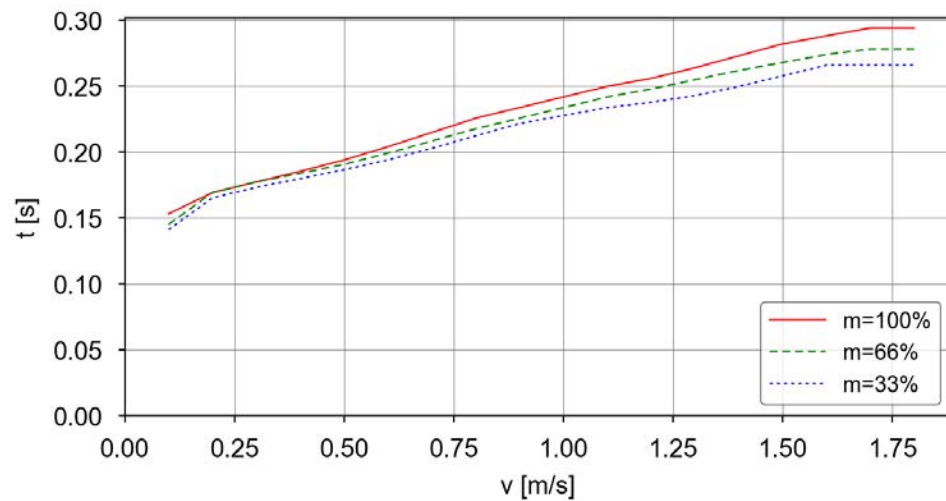
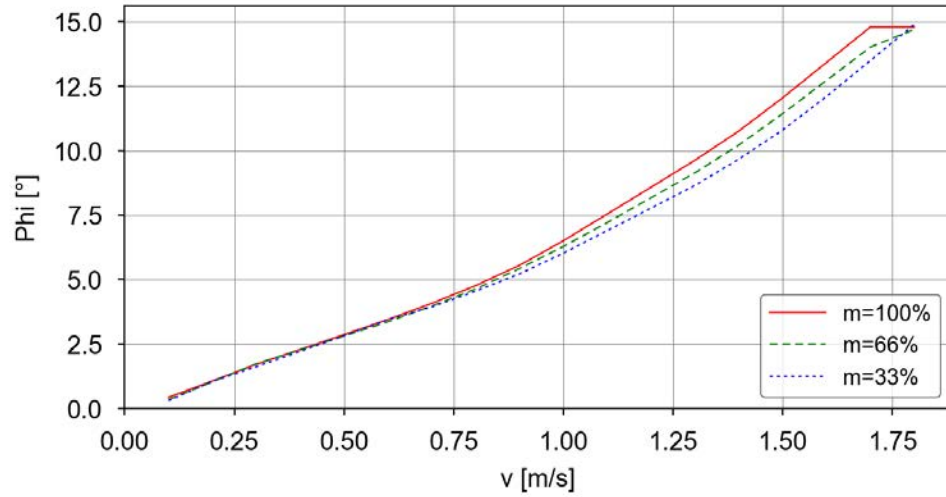
21 IRB 460

21.1 IRB 460 2.4 m 110 kg

Continued

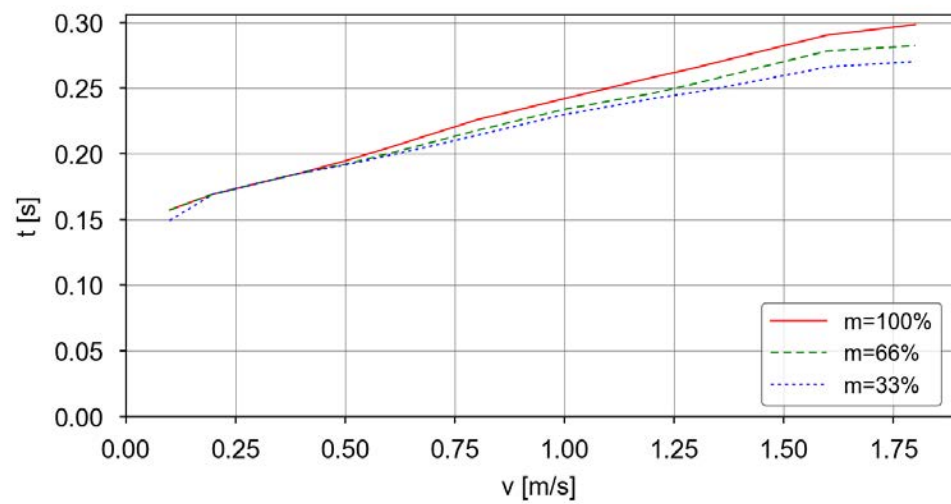
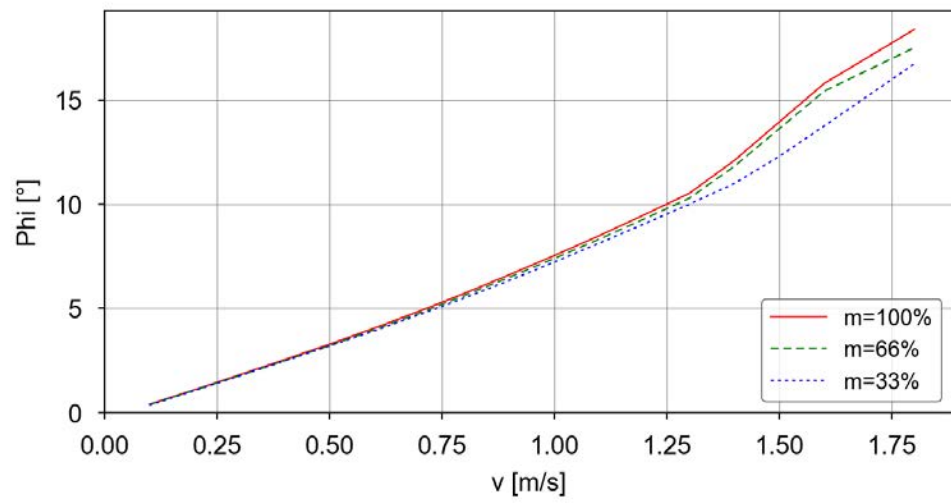
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



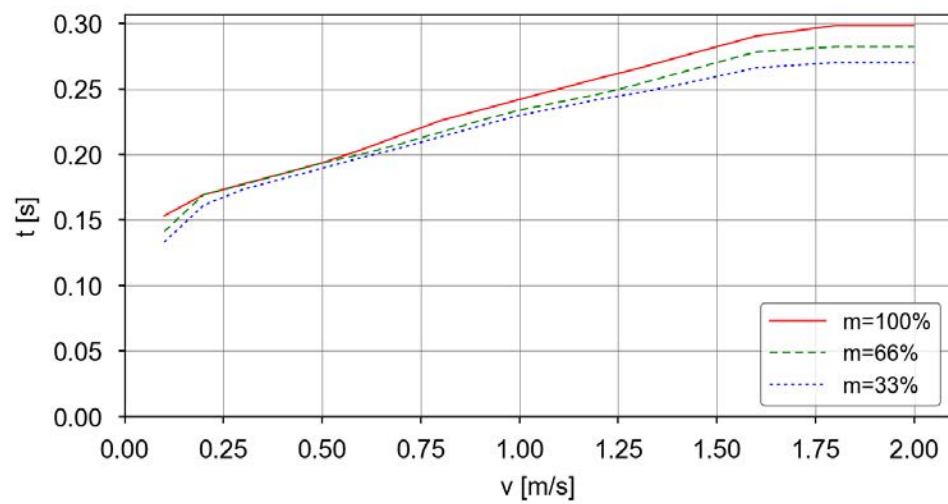
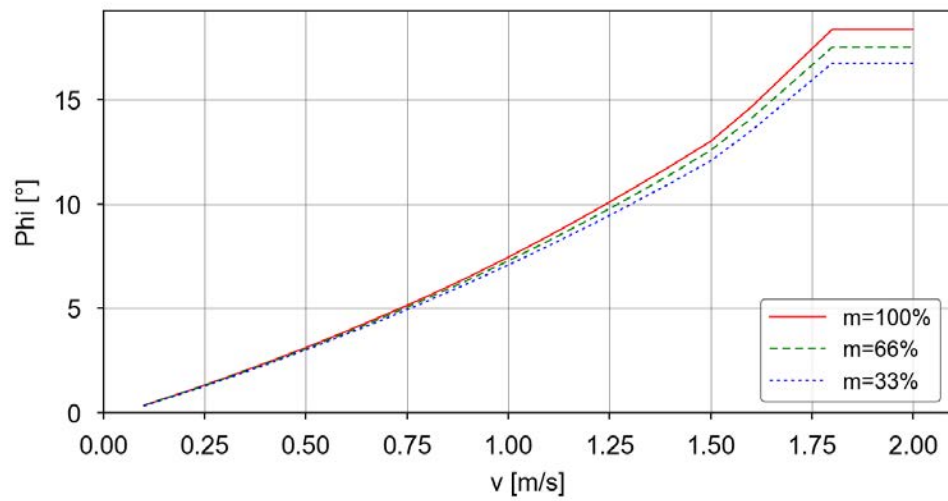
Continues on next page

21 IRB 460

21.1 IRB 460 2.4 m 110 kg

Continued

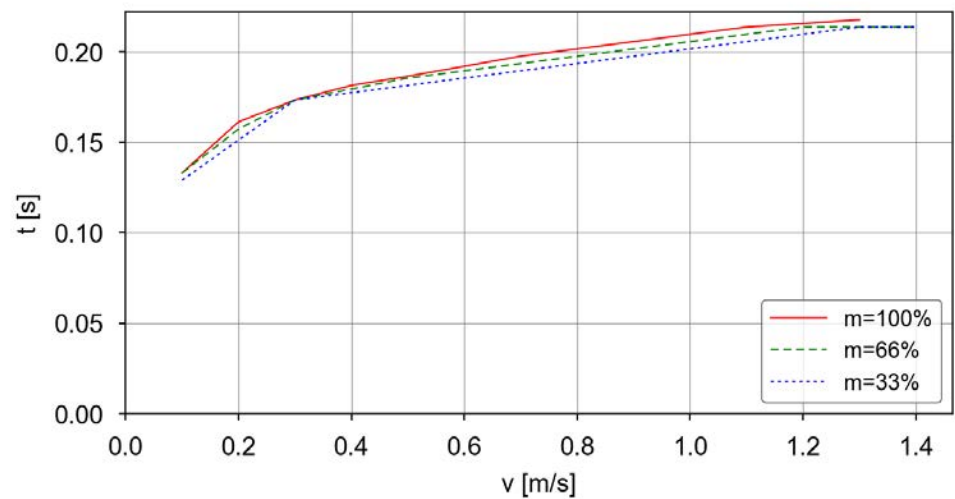
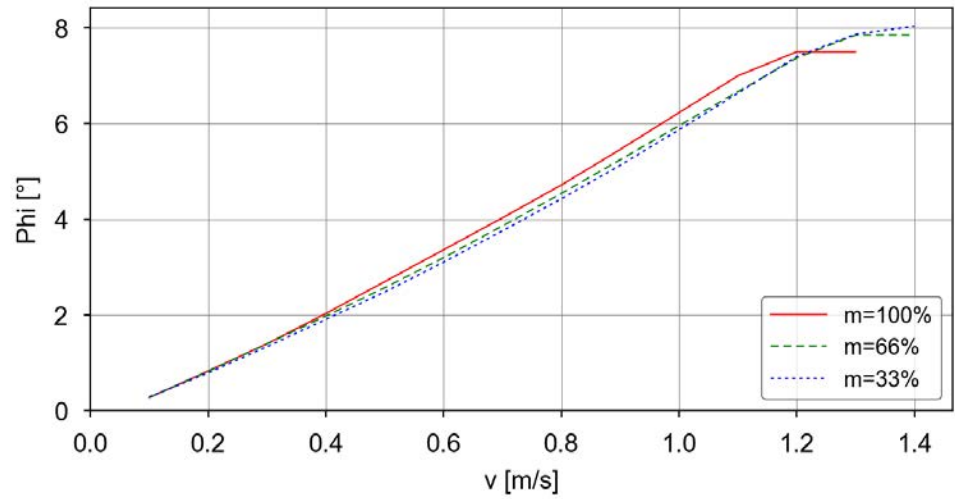
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



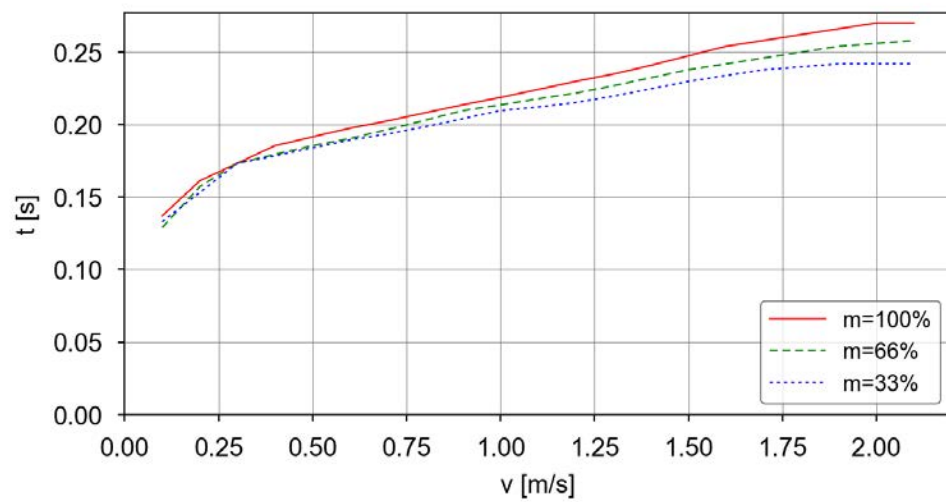
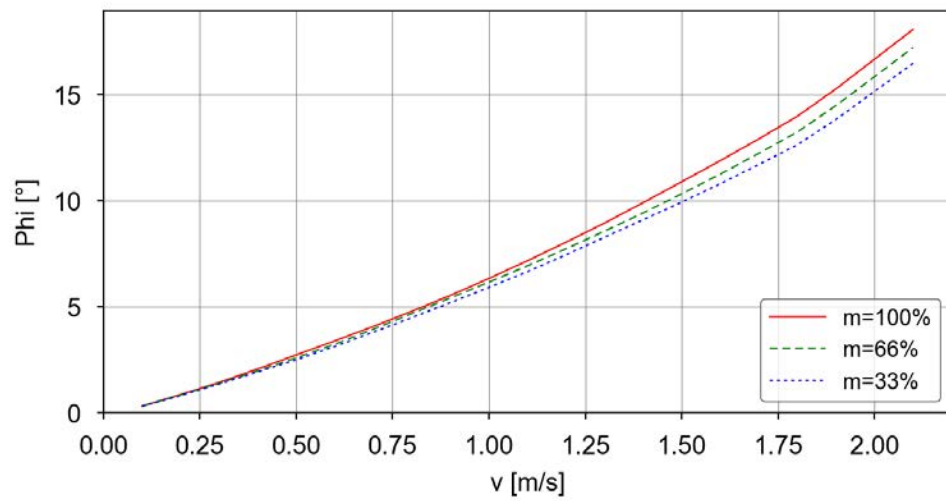
Continues on next page

21 IRB 460

21.1 IRB 460 2.4 m 110 kg

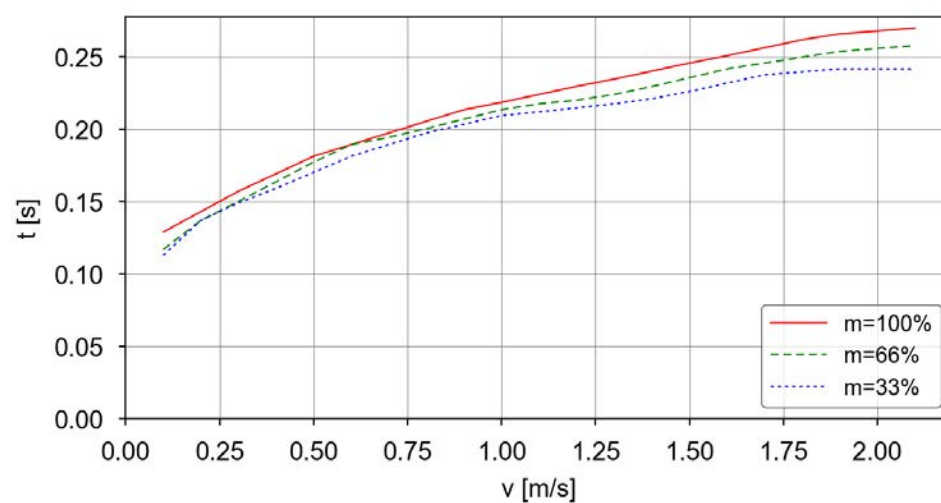
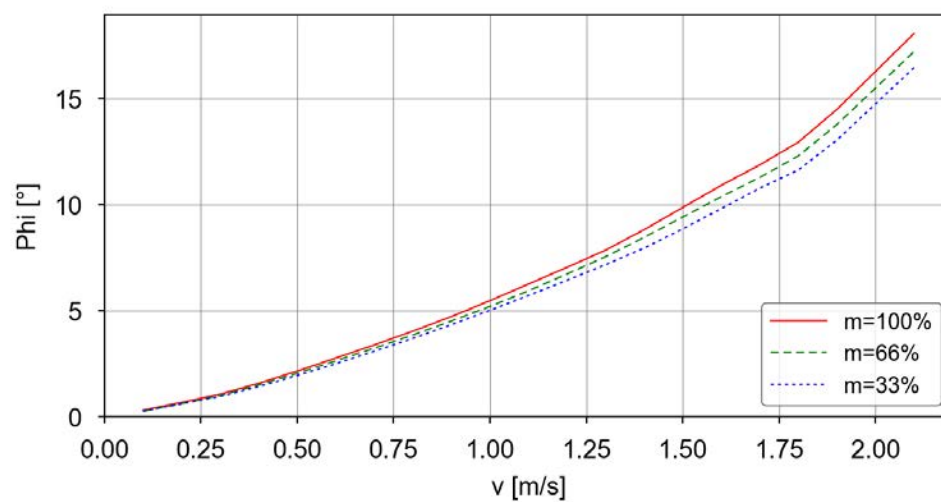
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



This page is intentionally left blank

22 IRB 660

22.1 IRB 660 3.15 m 180 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	64.4	0.9
2	32.6	0.39
3	27.0	0.29

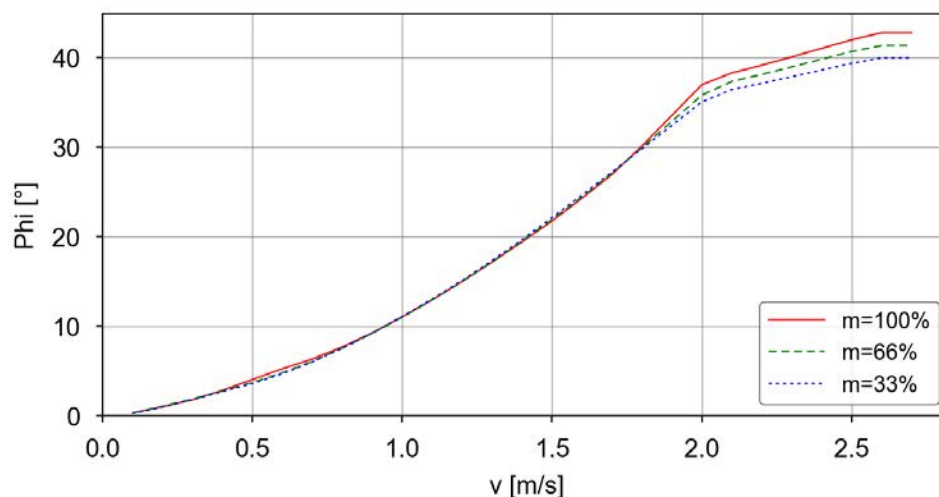
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.148
1	1.148	2.297
2	2.297	max reach

Category 1, Axis 1

Extension zone 0, stopping distance and stopping time

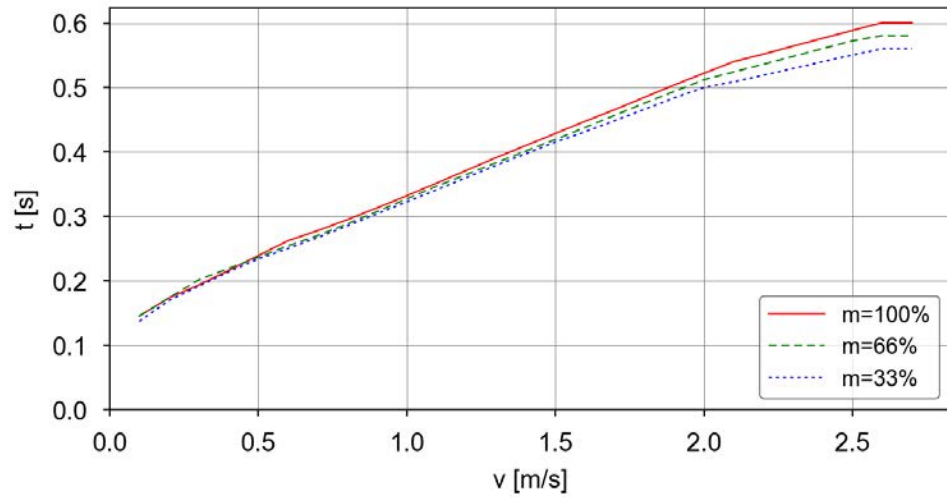


Continues on next page

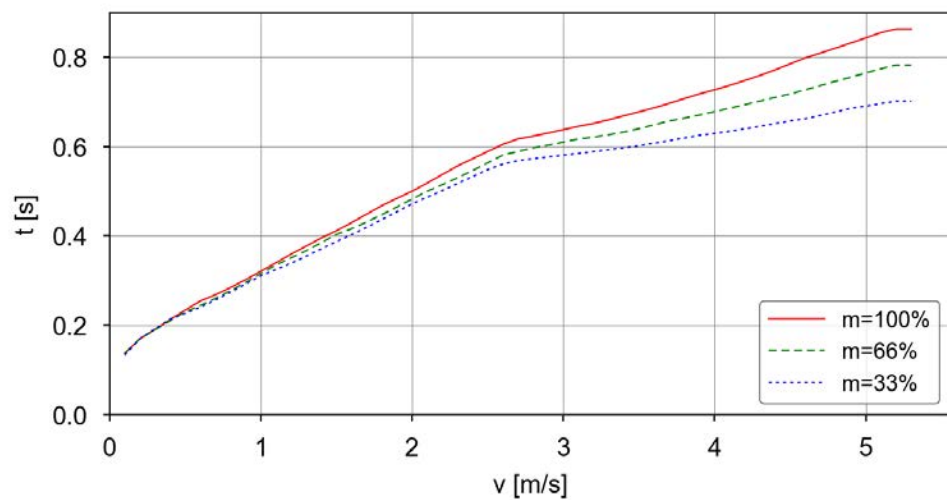
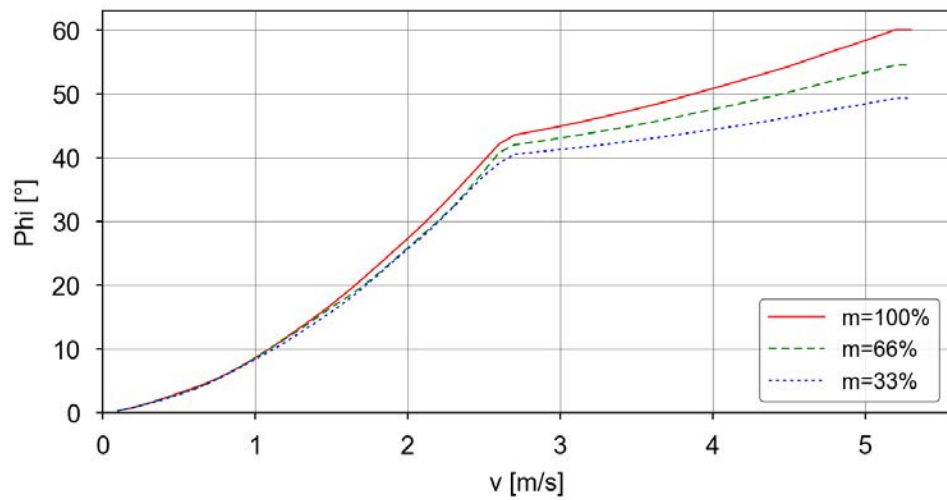
22 IRB 660

22.1 IRB 660 3.15 m 180 kg

Continued

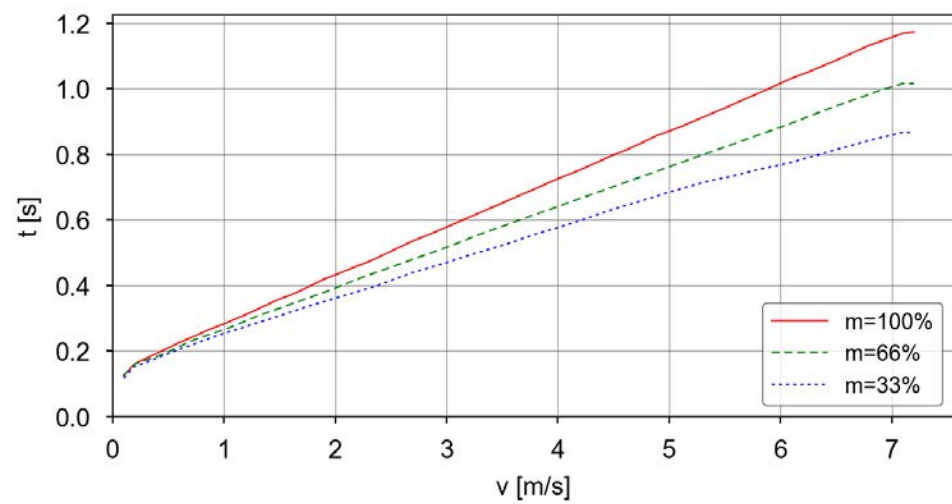
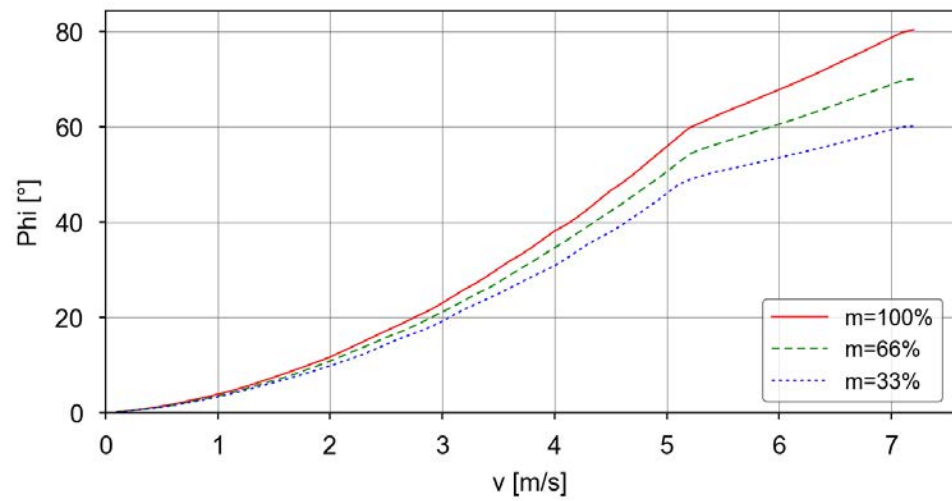


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

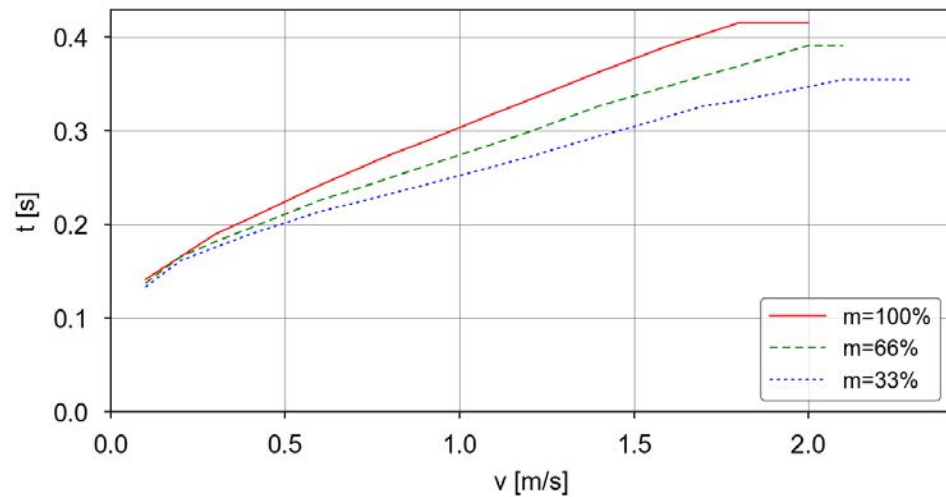
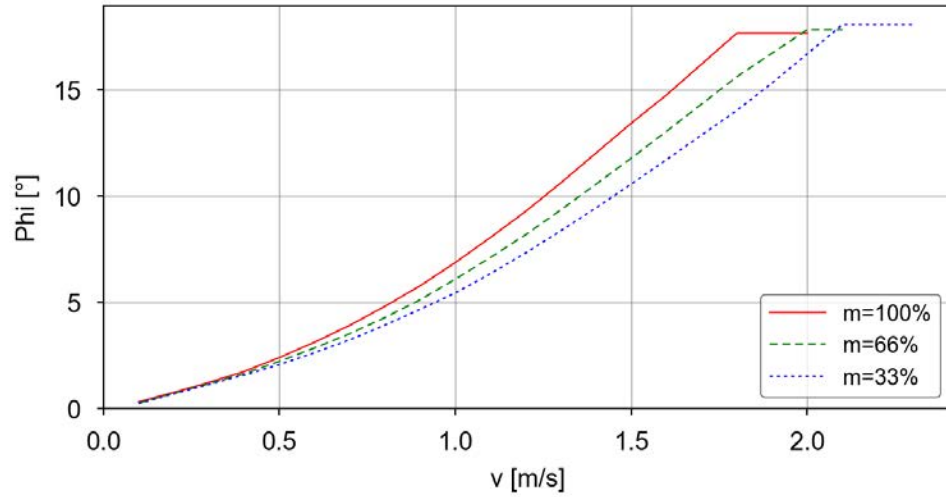
22 IRB 660

22.1 IRB 660 3.15 m 180 kg

Continued

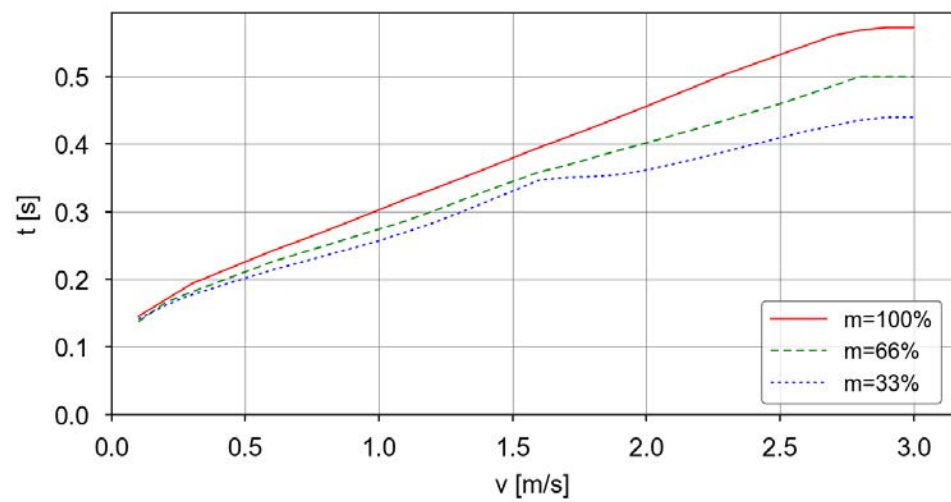
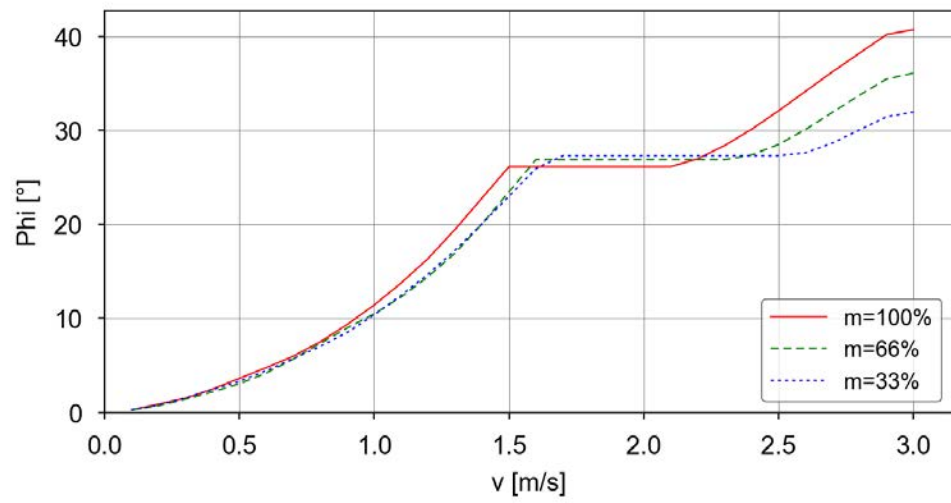
Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



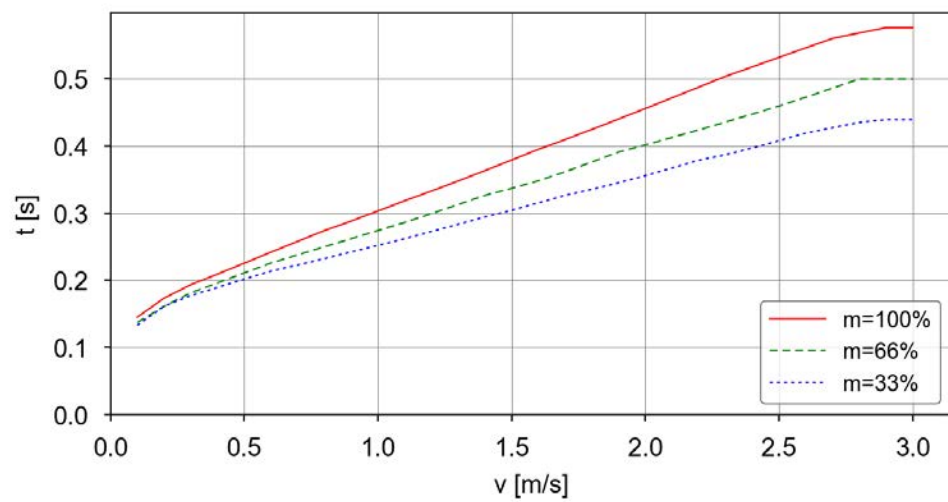
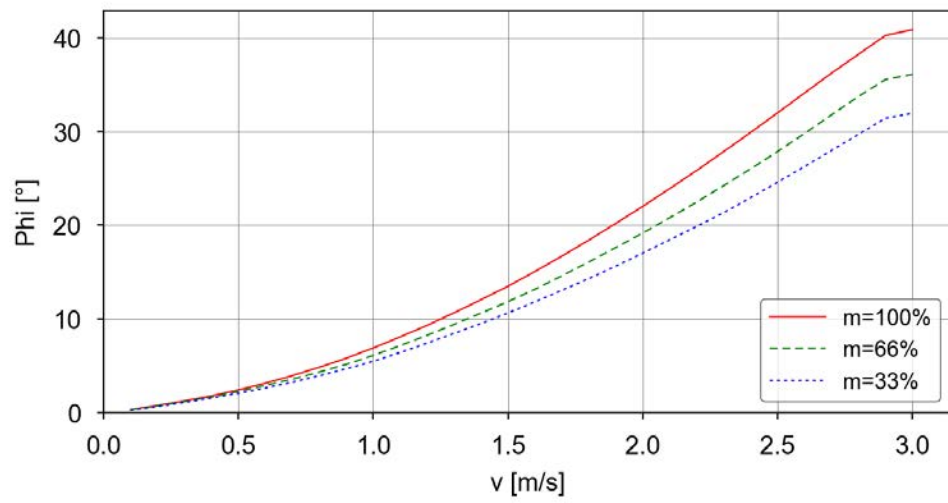
Continues on next page

22 IRB 660

22.1 IRB 660 3.15 m 180 kg

Continued

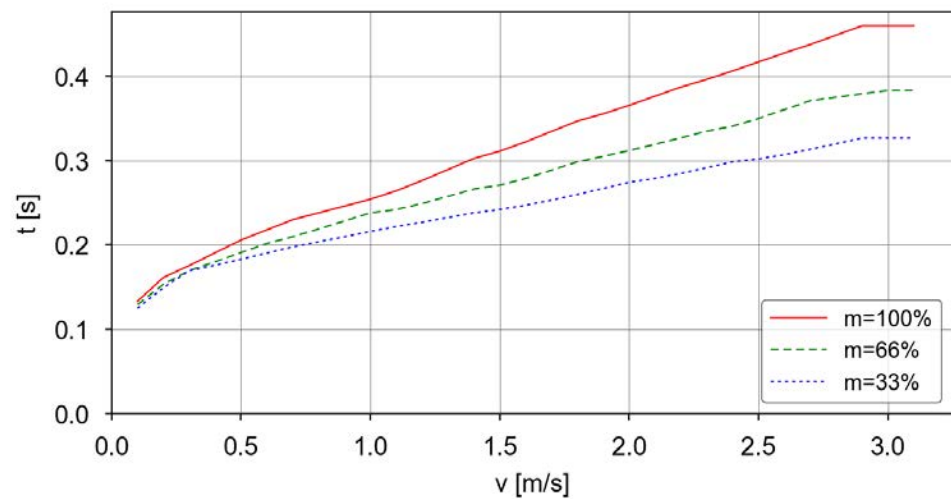
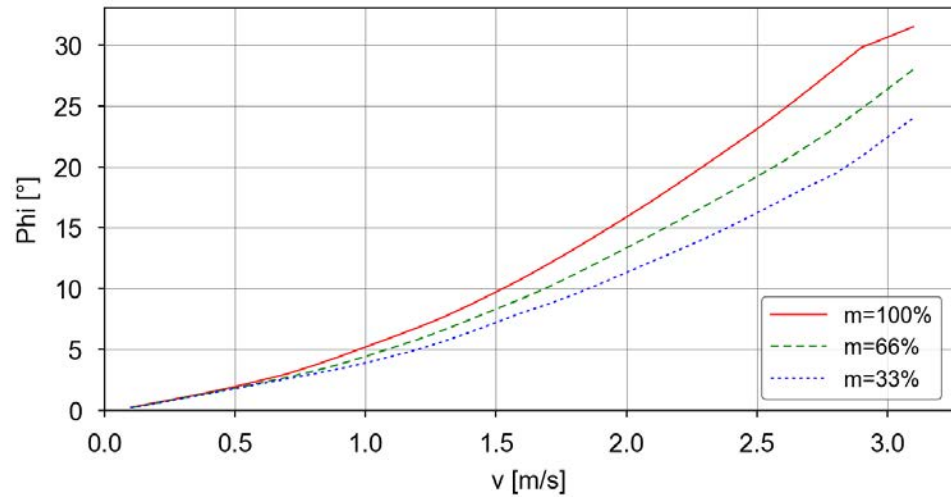
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



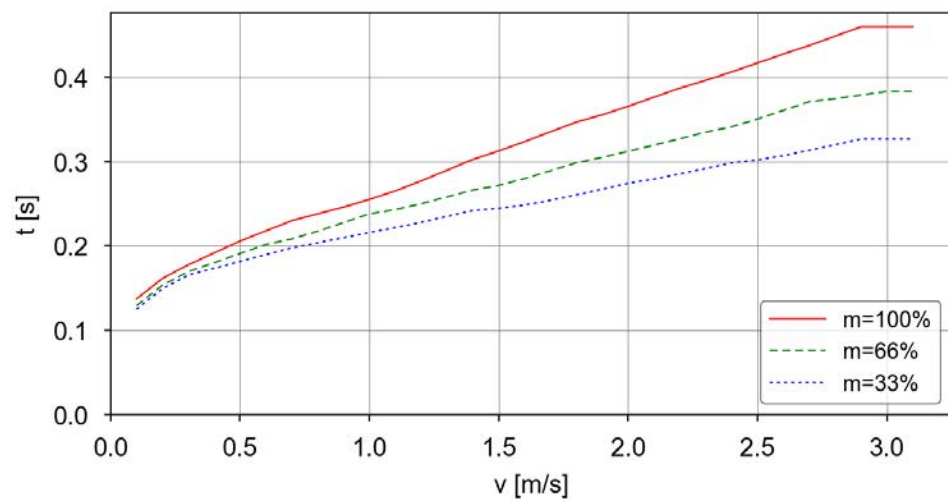
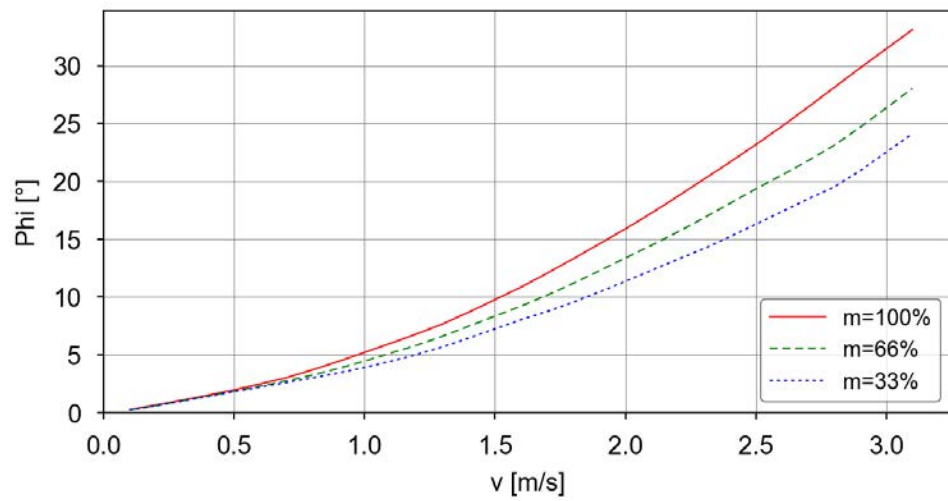
Continues on next page

22 IRB 660

22.1 IRB 660 3.15 m 180 kg

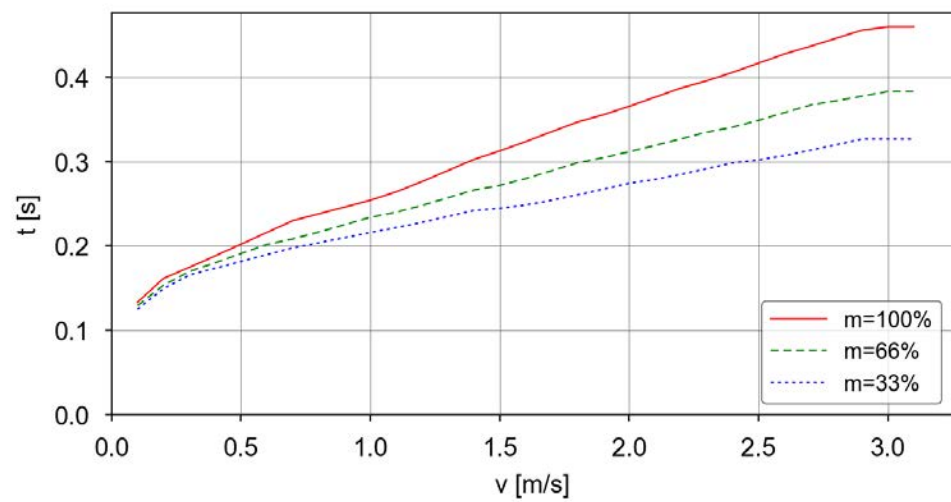
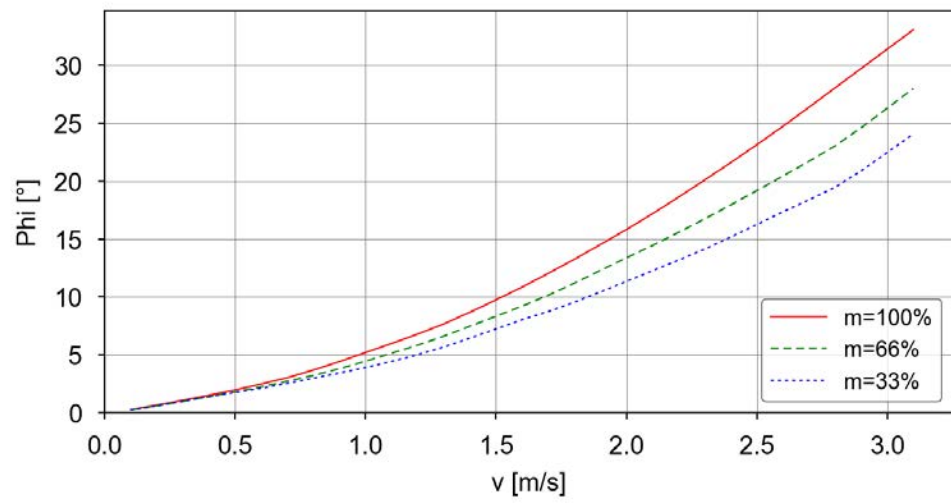
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



22.2 IRB 660 3.15 m 250 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	43.1	0.78
2	23.2	0.37
3	21.6	0.32

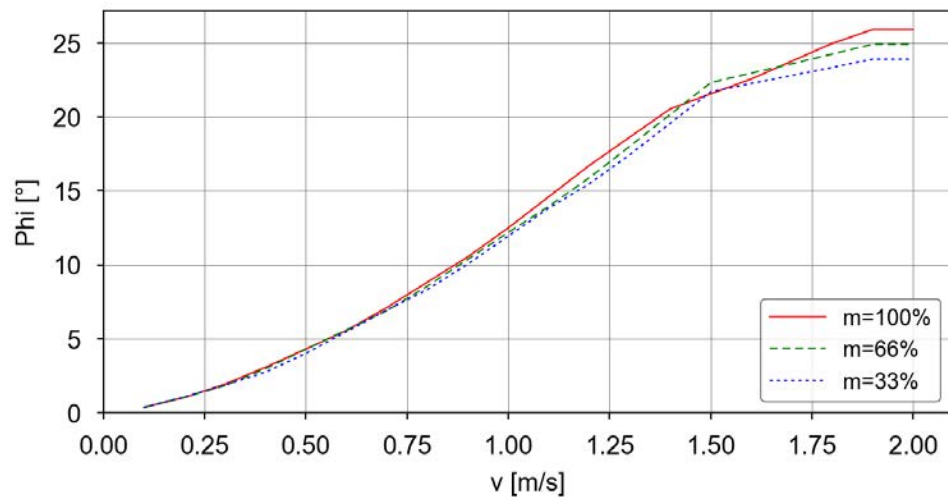
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

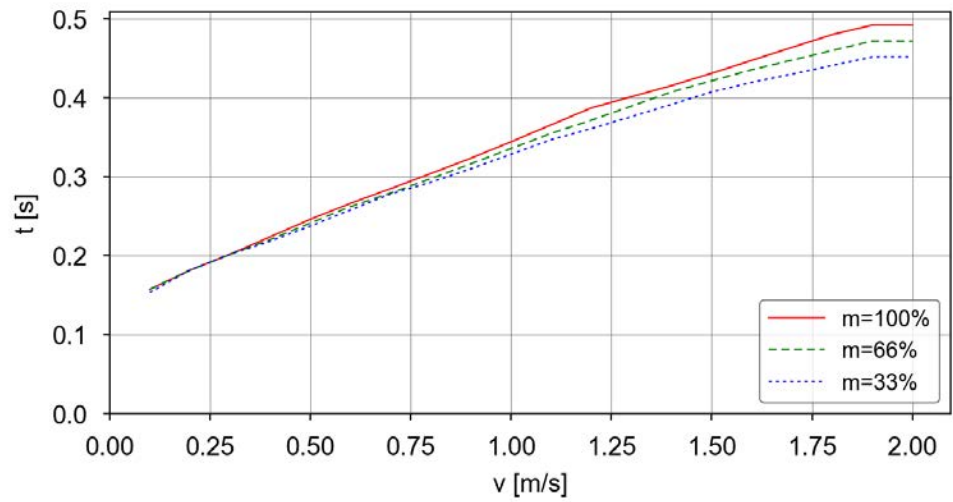
Zone	wcp min (m)	wcp max (m)
0	0	1.148
1	1.148	2.297
2	2.297	max reach

Category 1, Axis 1

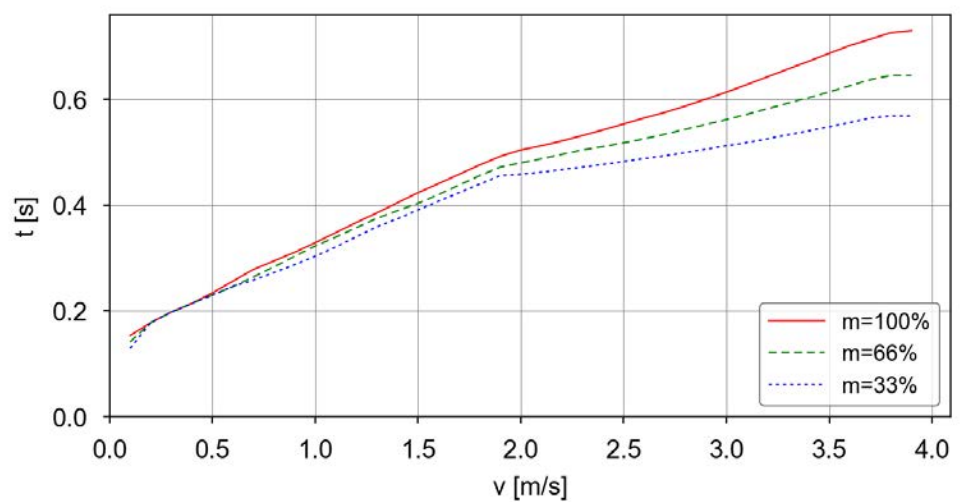
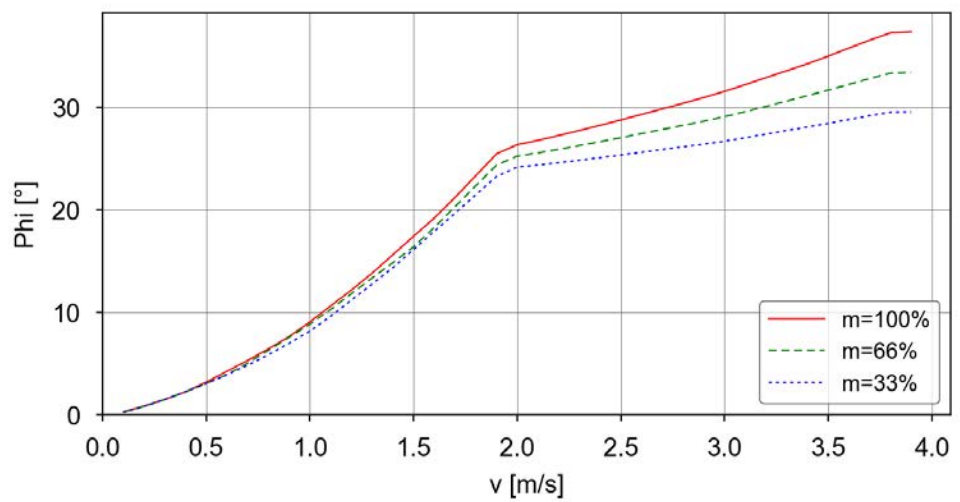
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



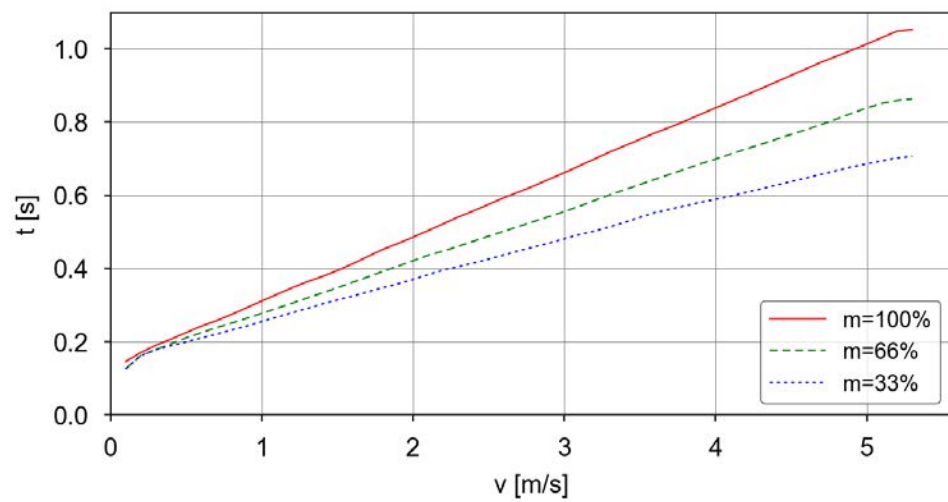
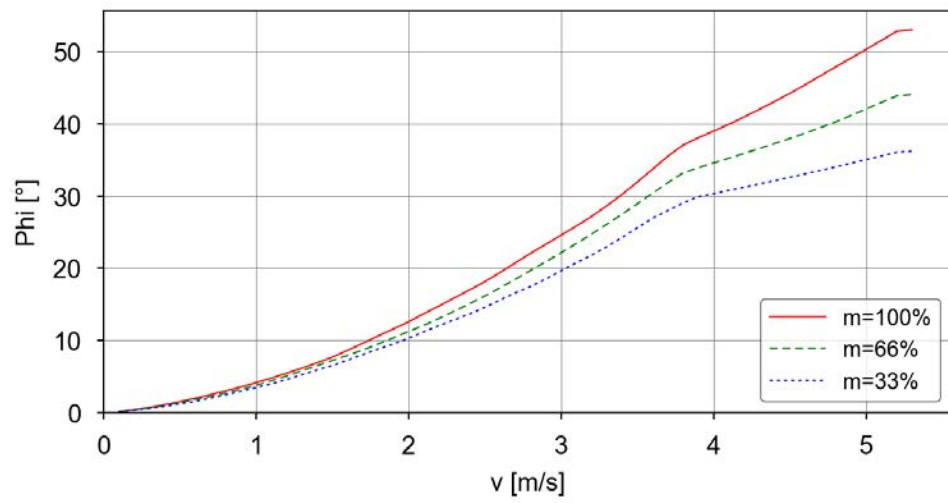
Continues on next page

22 IRB 660

22.2 IRB 660 3.15 m 250 kg

Continued

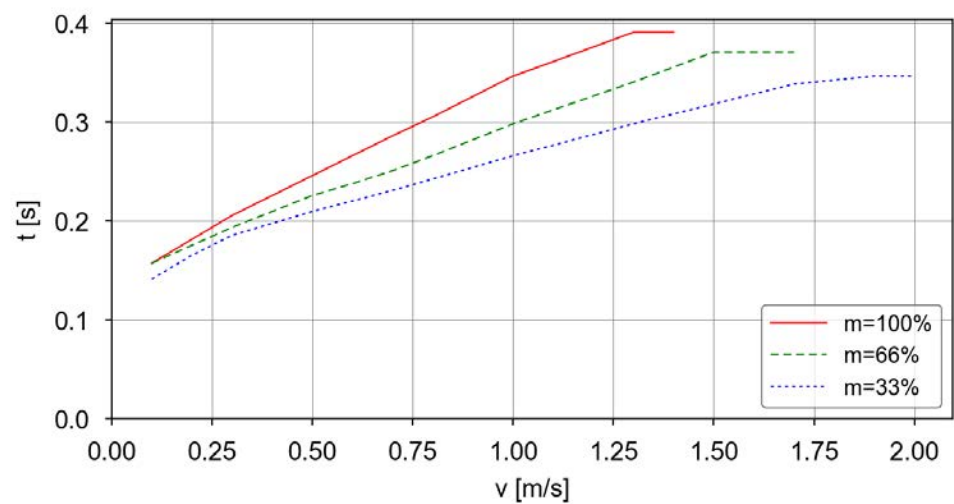
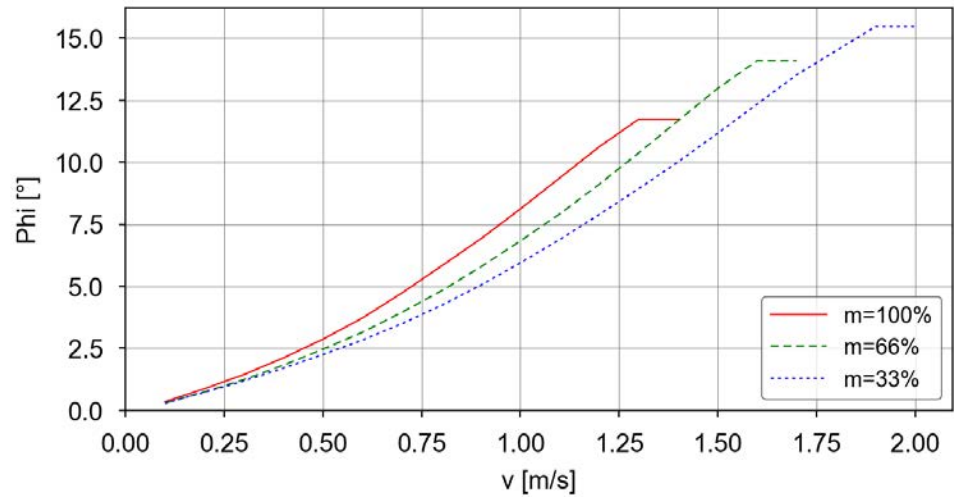
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



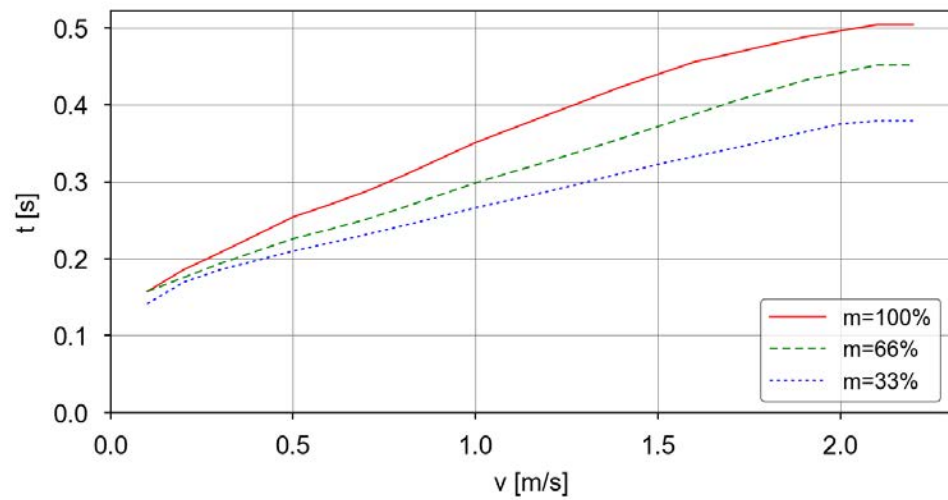
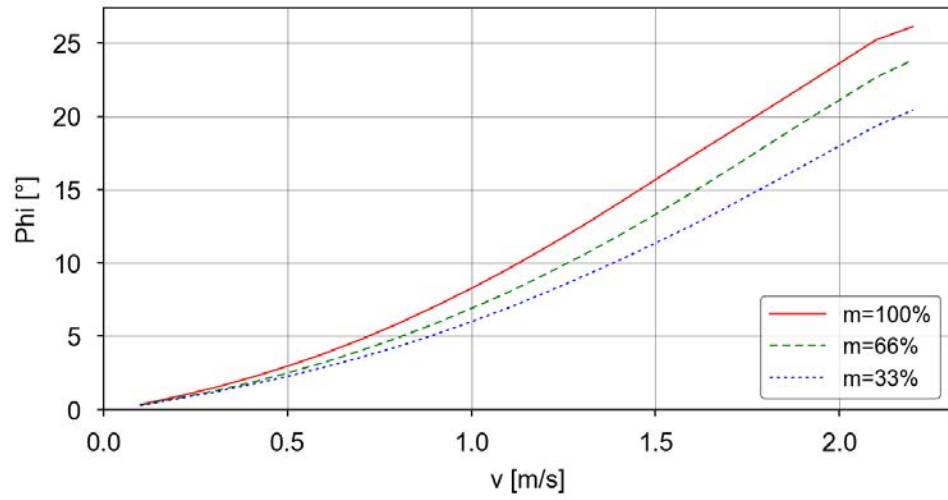
Continues on next page

22 IRB 660

22.2 IRB 660 3.15 m 250 kg

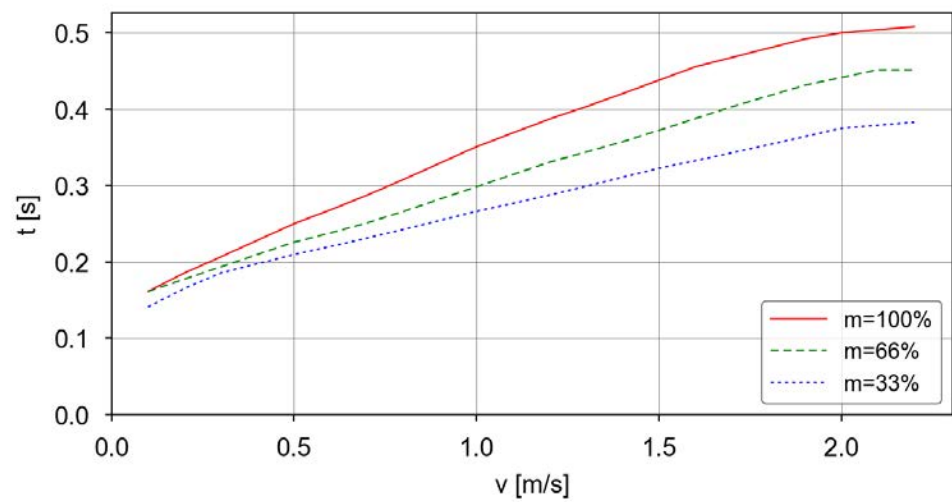
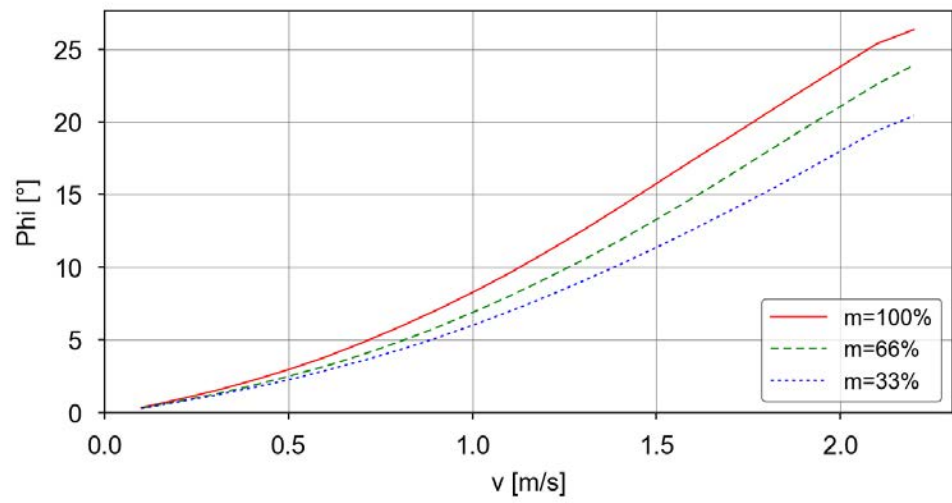
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

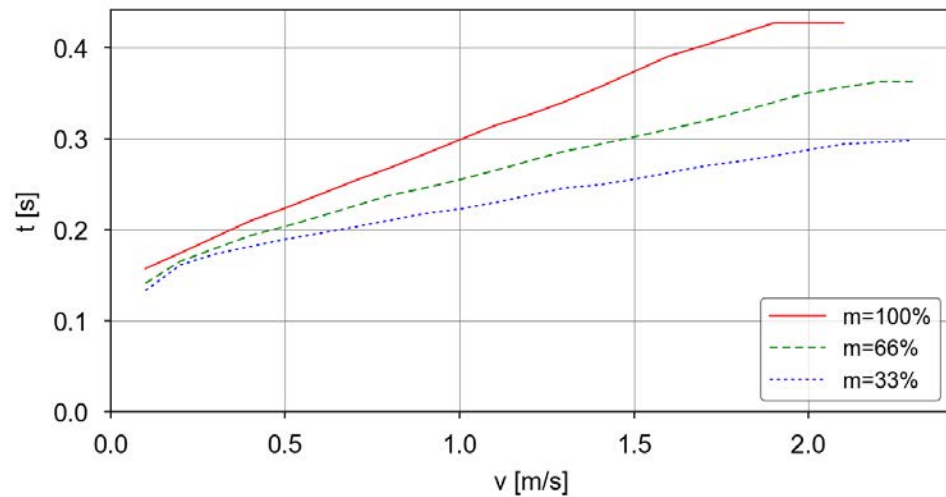
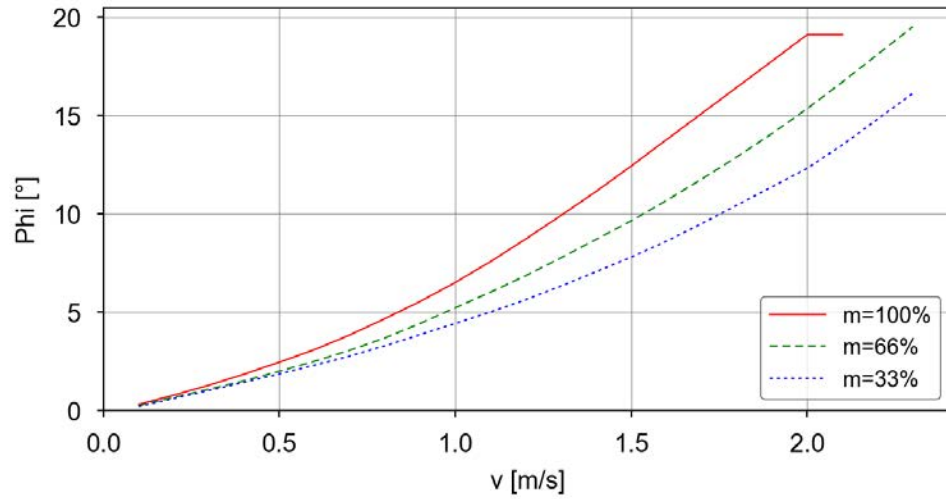
22 IRB 660

22.2 IRB 660 3.15 m 250 kg

Continued

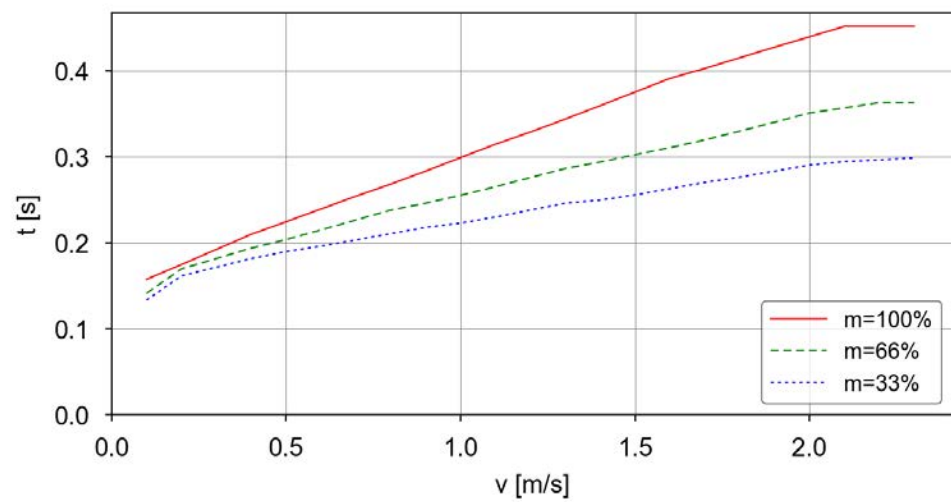
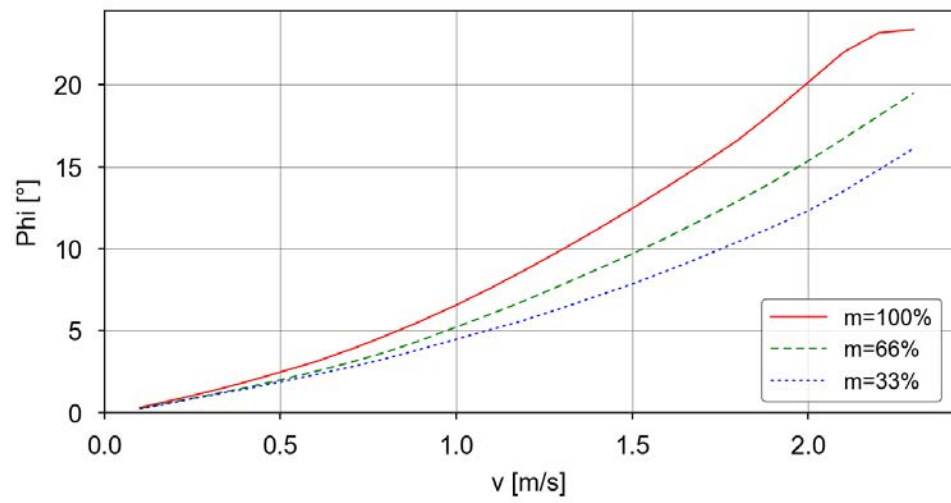
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



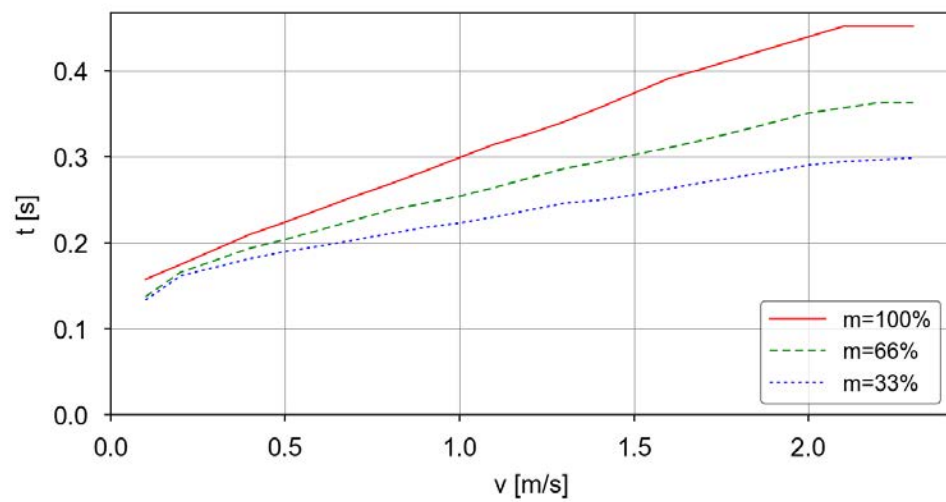
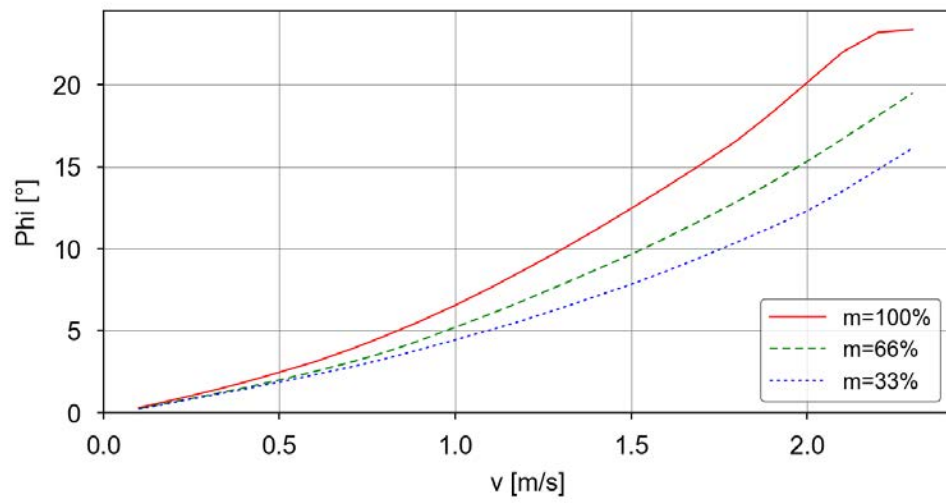
Continues on next page

22 IRB 660

22.2 IRB 660 3.15 m 250 kg

Continued

Extension zone 2, stopping distance and stopping time



23 IRB 760

23.1 IRB 760 3.2 m 445 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.7	0.89
2	24.4	0.54
3	26.9	0.56

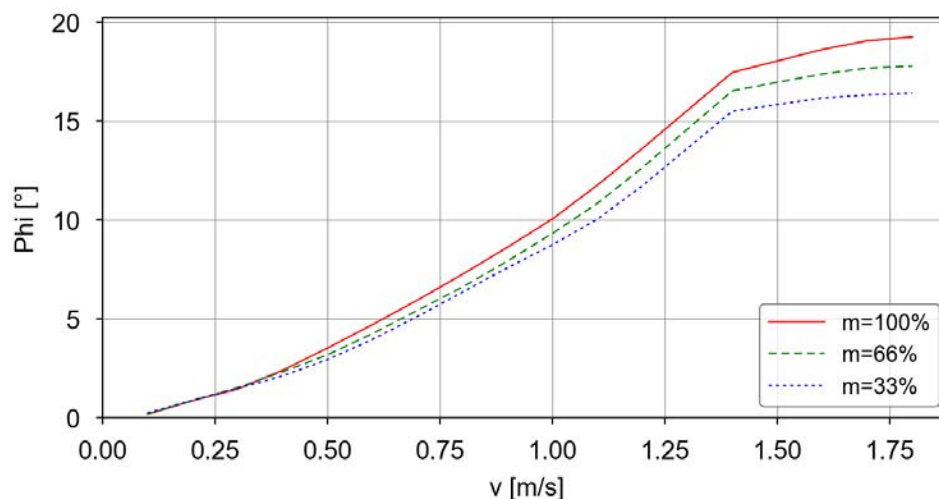
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

Zone	wcp min (m)	wcp max (m)
0	0	1.17
1	1.17	2.34
2	2.34	max reach

Category 1, Axis A1

Extension zone 0, stopping distance and stopping time

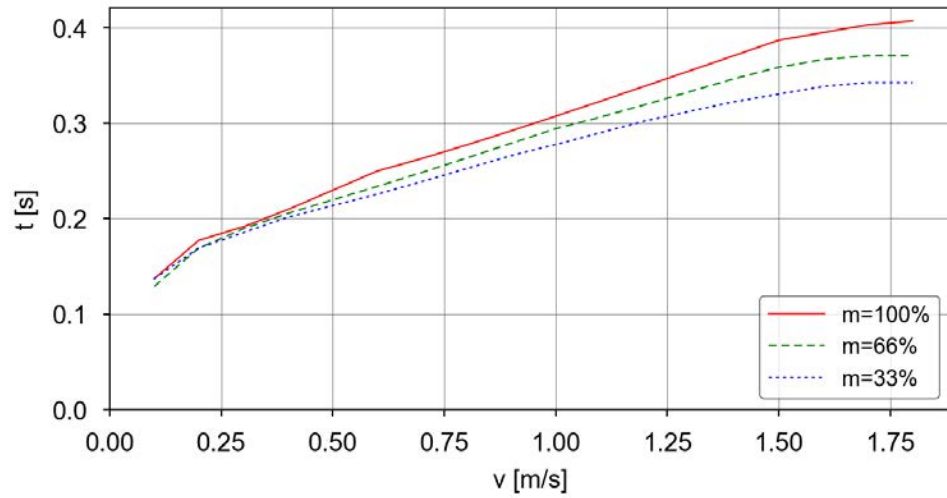


Continues on next page

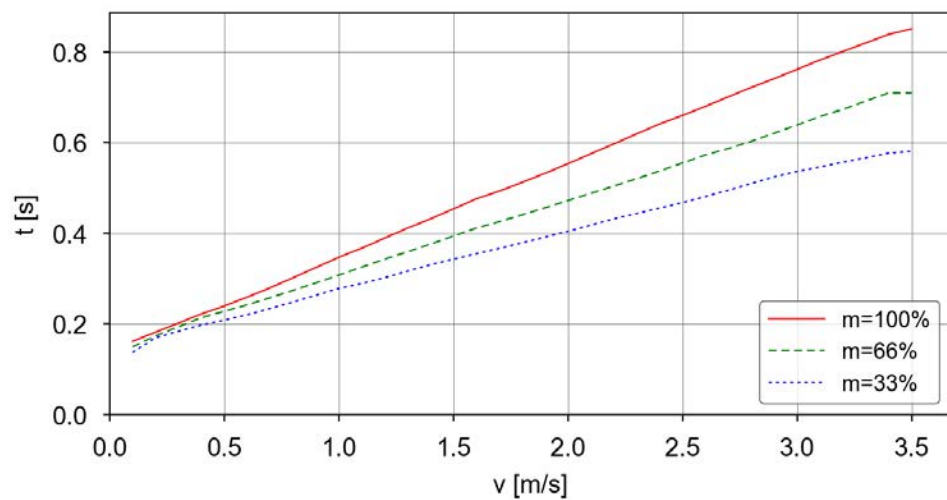
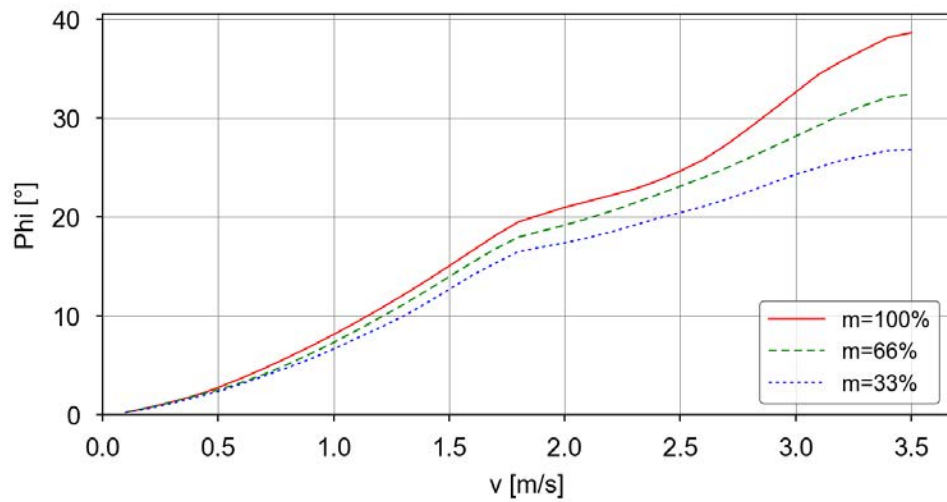
23 IRB 760

23.1 IRB 760 3.2 m 445 kg

Continued

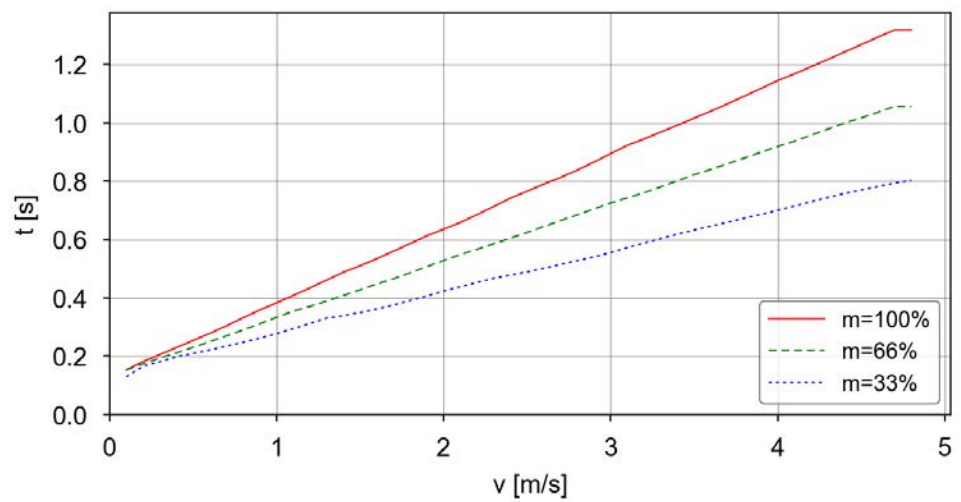
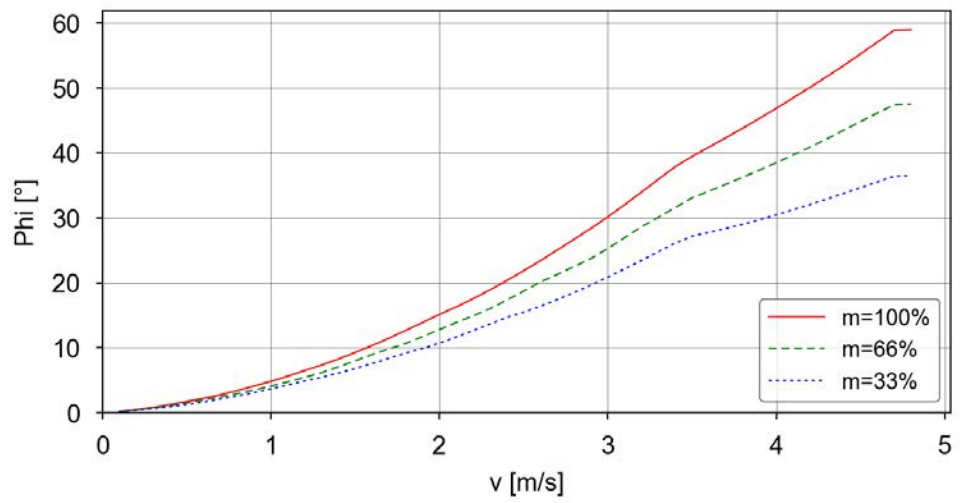


Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

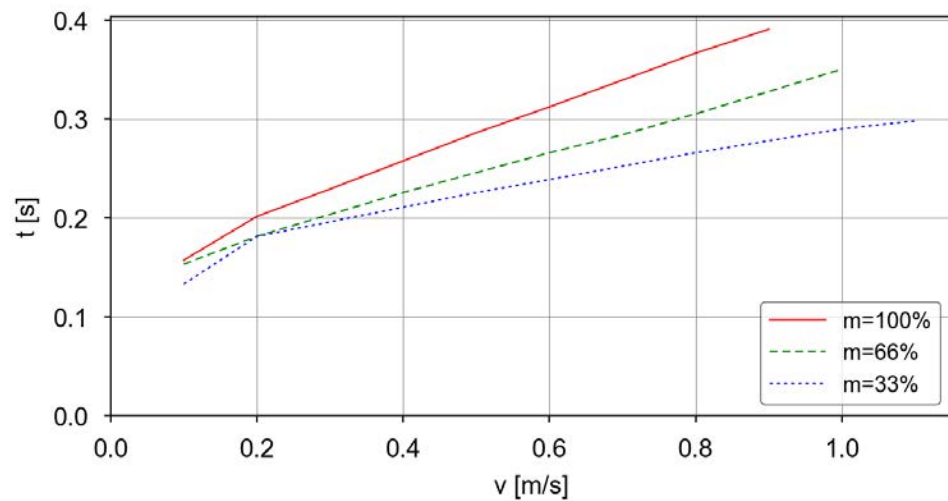
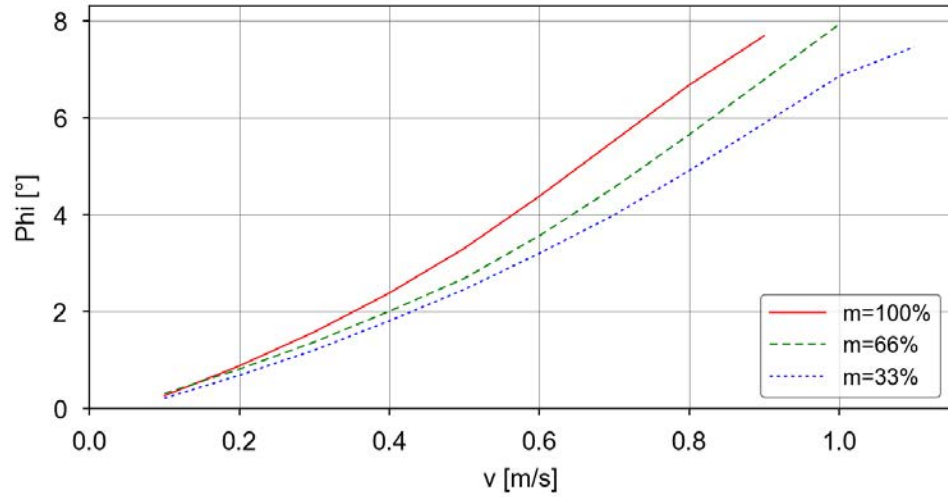
23 IRB 760

23.1 IRB 760 3.2 m 445 kg

Continued

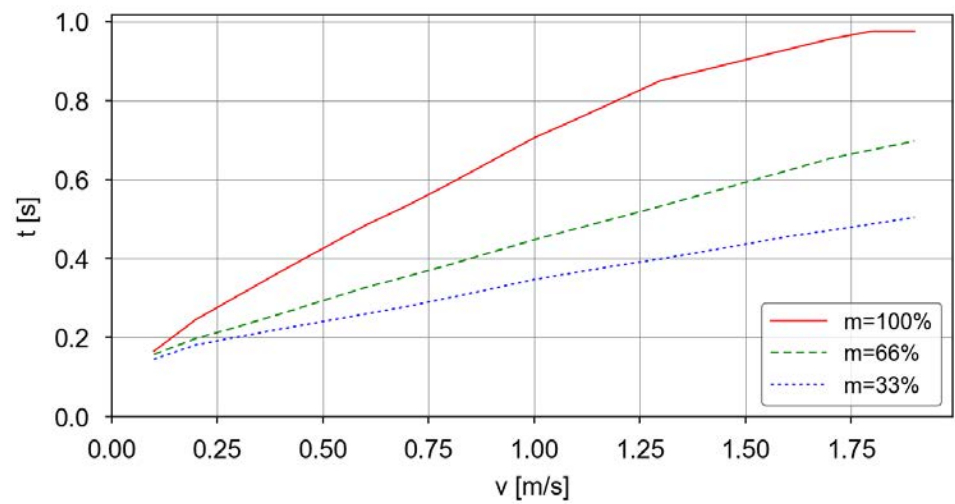
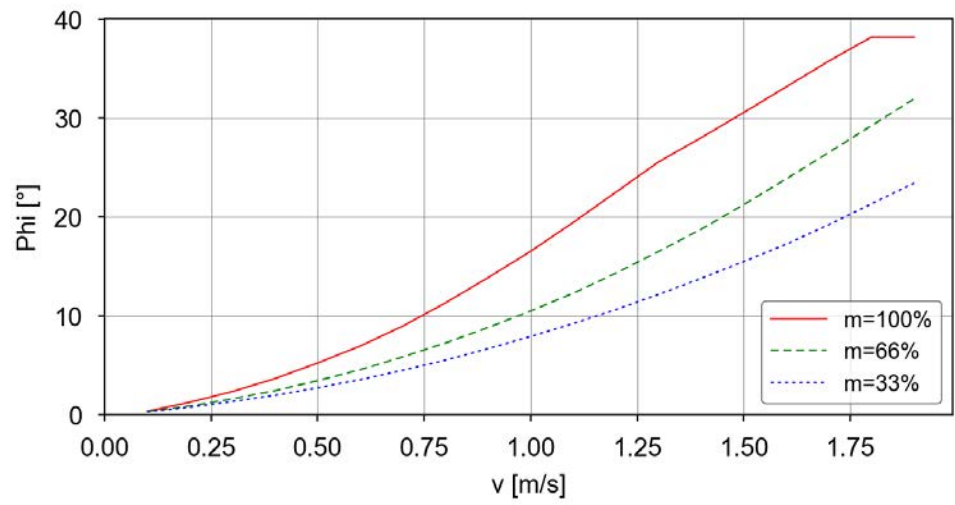
Category 1, Axis A2

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



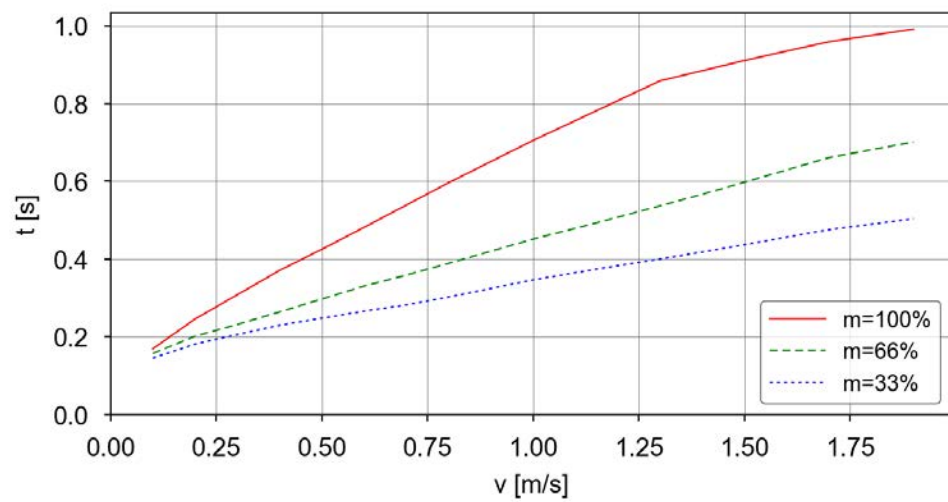
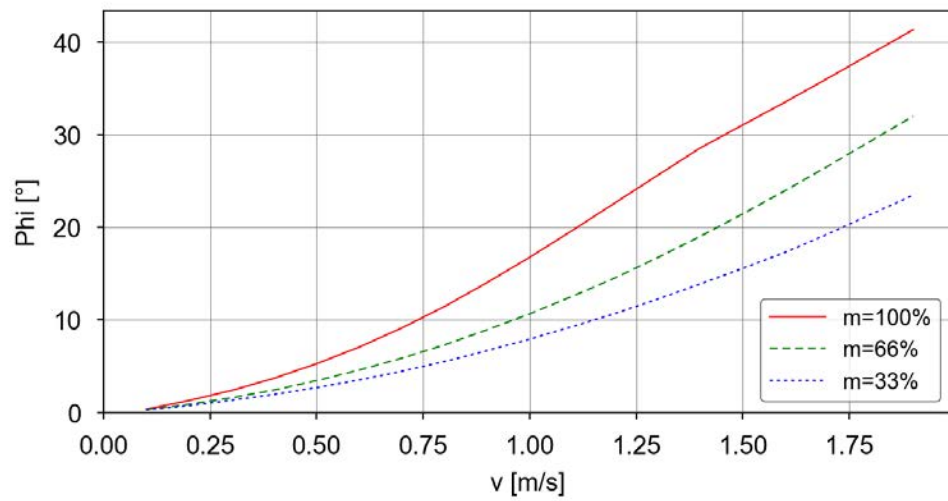
Continues on next page

23 IRB 760

23.1 IRB 760 3.2 m 445 kg

Continued

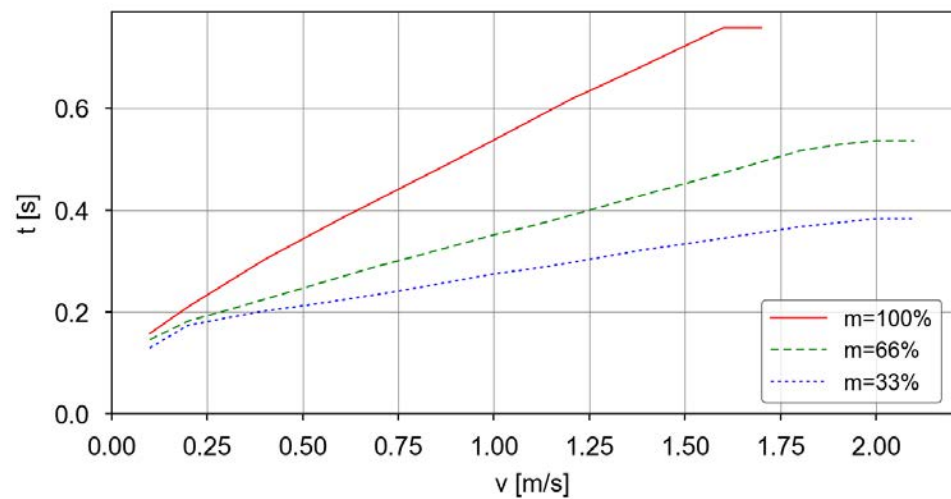
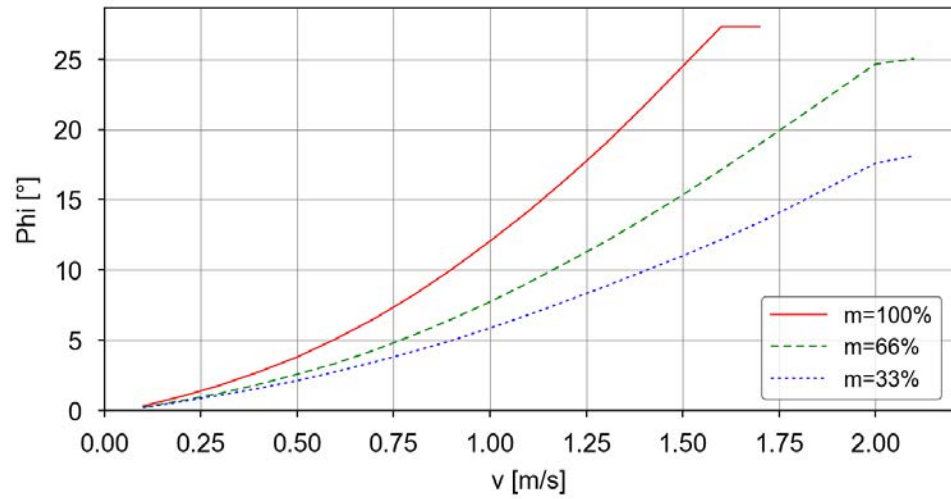
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis A3

Extension zone 0, stopping distance and stopping time



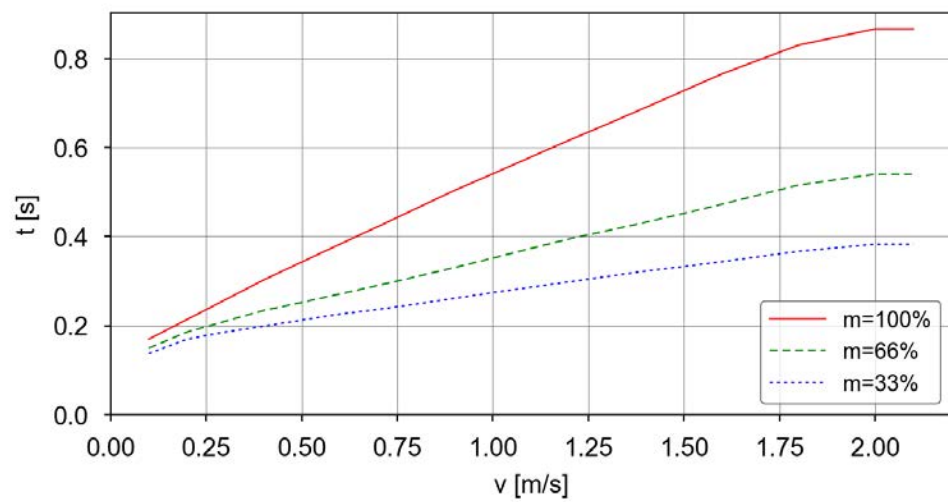
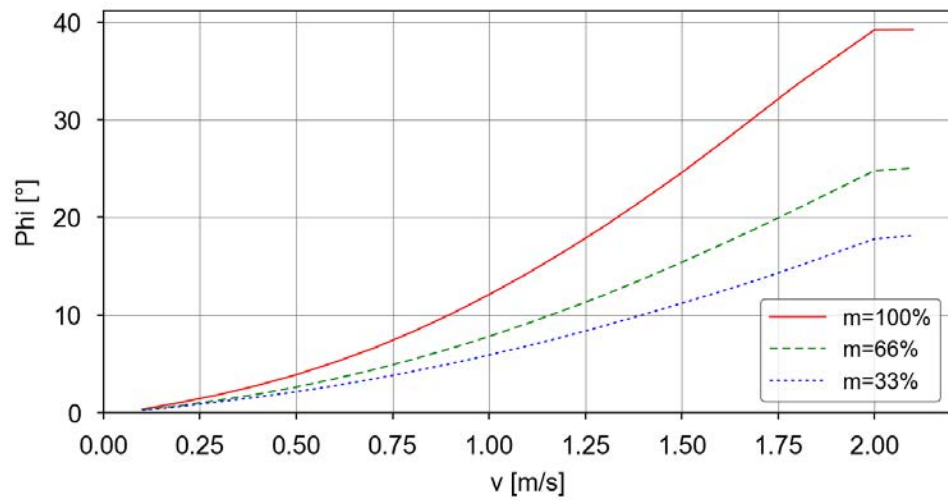
Continues on next page

23 IRB 760

23.1 IRB 760 3.2 m 445 kg

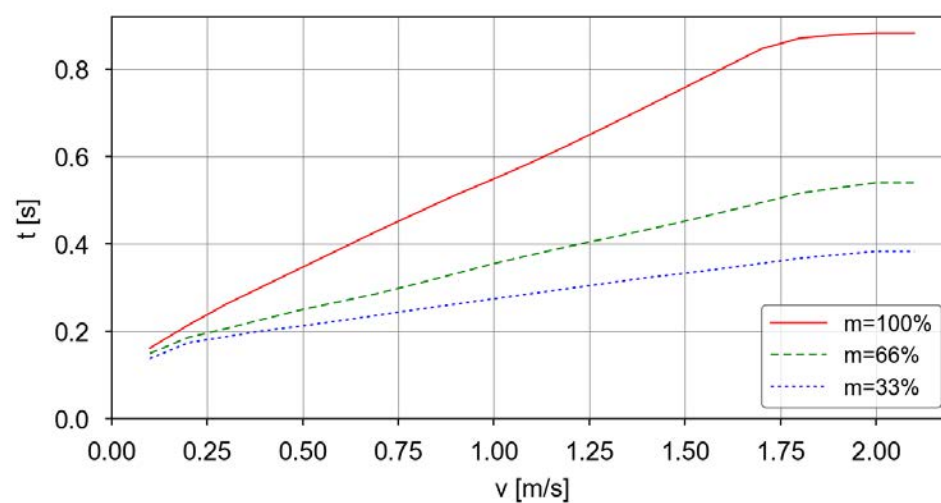
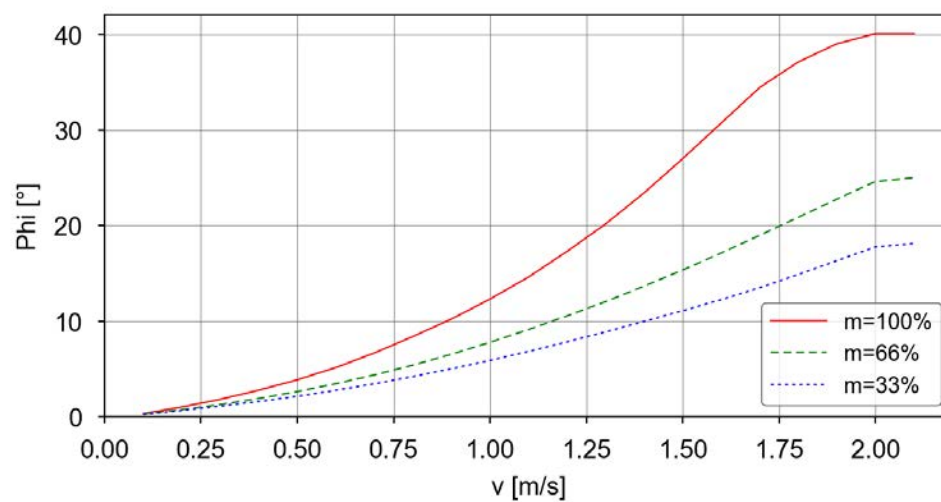
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



23 IRB 760

23.2 IRB 760 3.2 m 450 kg

23.2 IRB 760 3.2 m 450 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load. All results are from tests on one moving axis.

Axis	Distance (degrees)	Stop time (s)
1	40.2	0.83
2	0.0	0.0
3	26.4	0.49

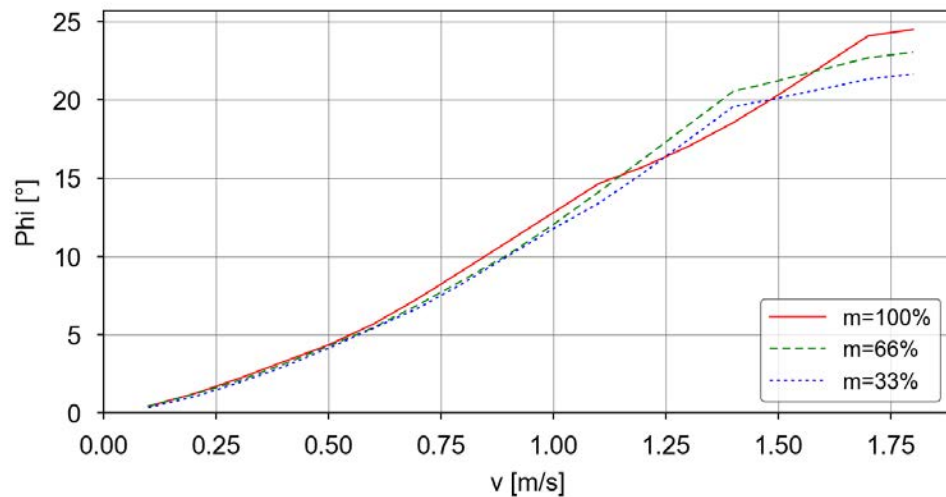
Category 1, extension zones

For definitions of the zones, see [Extension zones for articulated robots on page 14](#).

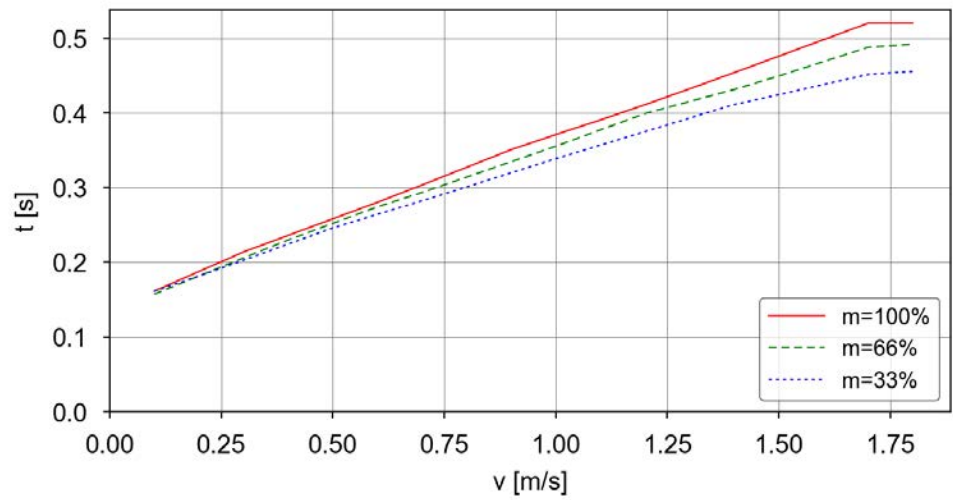
Zone	wcp min (m)	wcp max (m)
0	0	1.168
1	1.168	2.337
2	2.337	max reach

Category 1, Axis 1

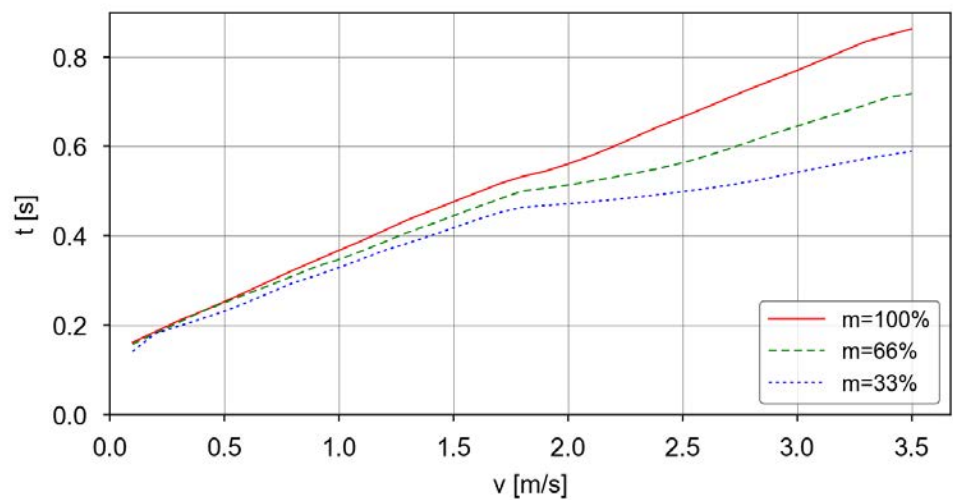
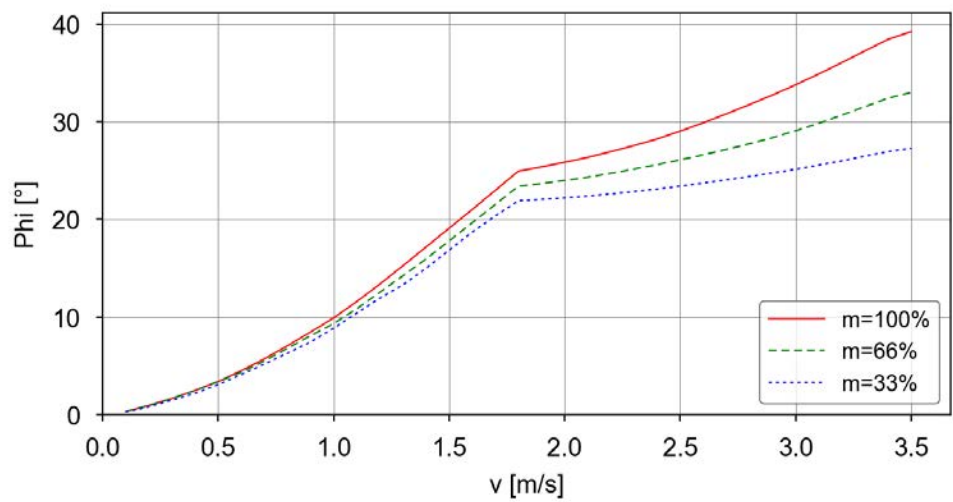
Extension zone 0, stopping distance and stopping time



Continues on next page



Extension zone 1, stopping distance and stopping time



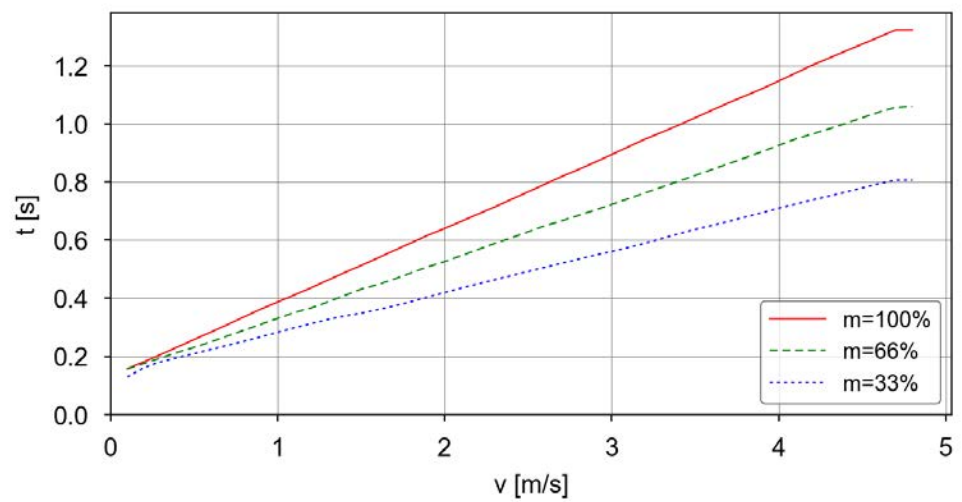
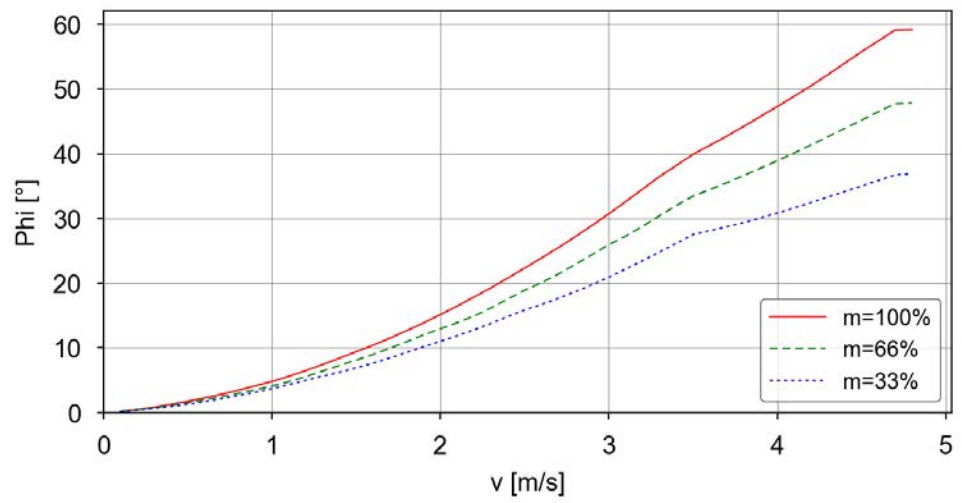
Continues on next page

23 IRB 760

23.2 IRB 760 3.2 m 450 kg

Continued

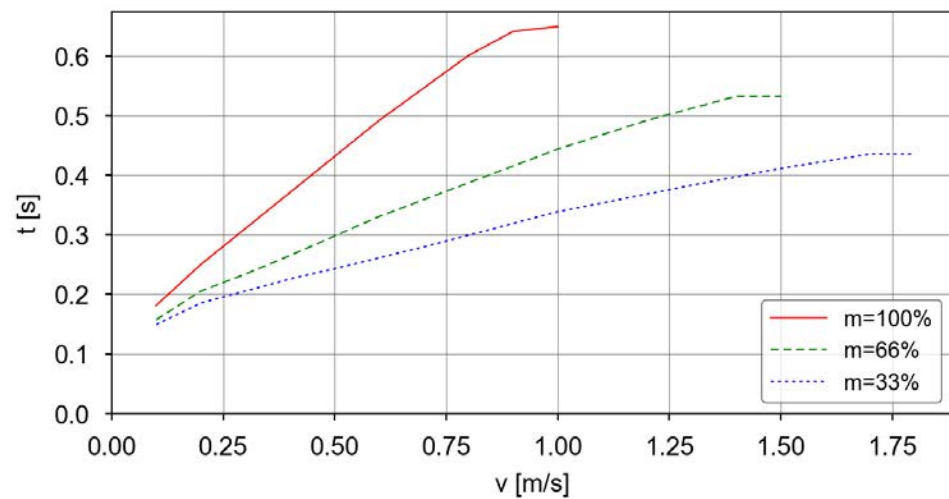
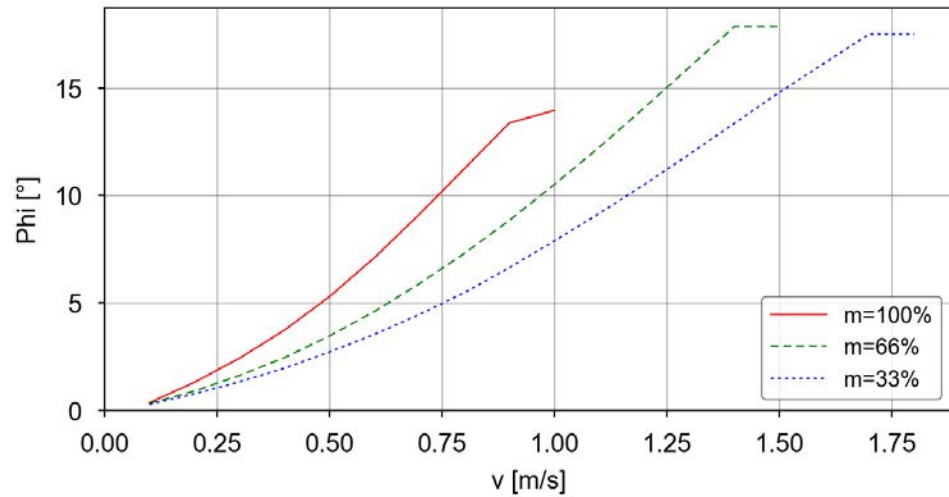
Extension zone 2, stopping distance and stopping time



Continues on next page

Category 1, Axis 2

Extension zone 0, stopping distance and stopping time



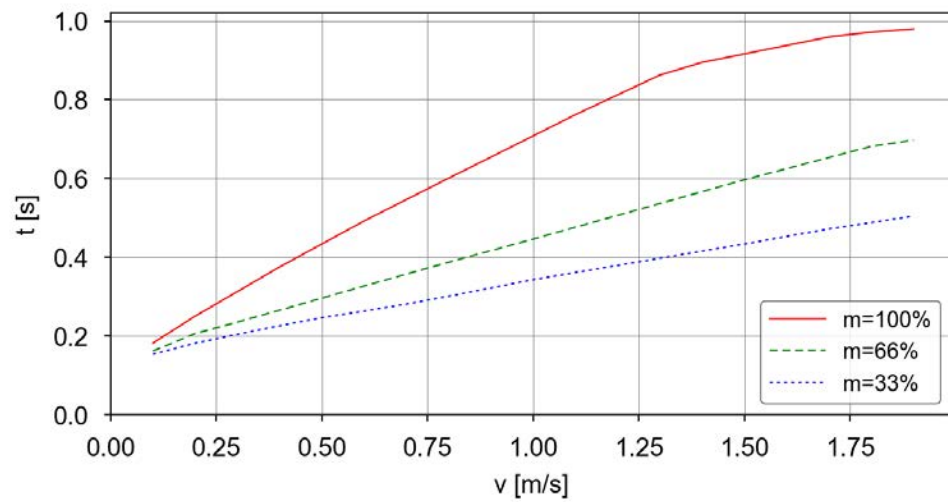
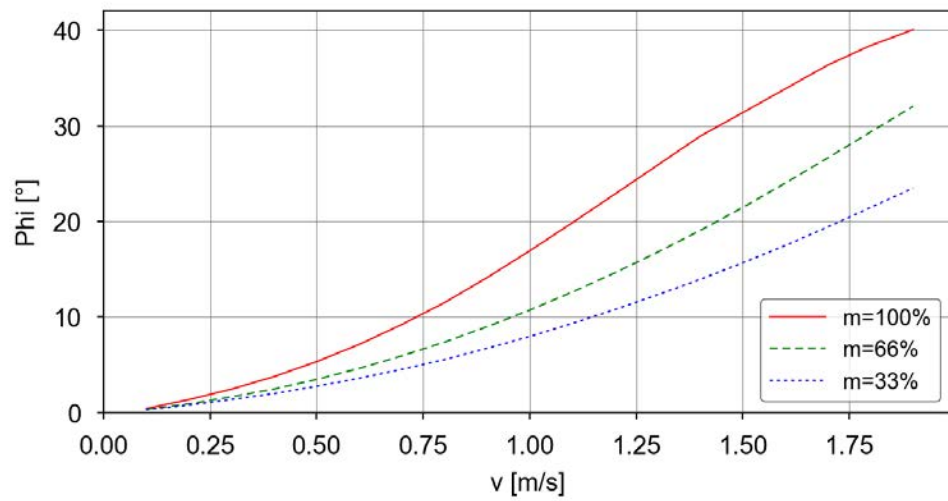
Continues on next page

23 IRB 760

23.2 IRB 760 3.2 m 450 kg

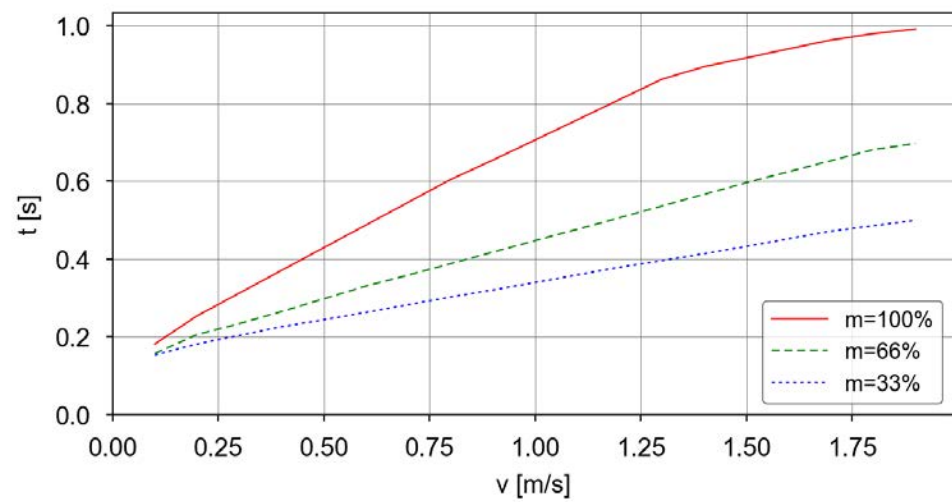
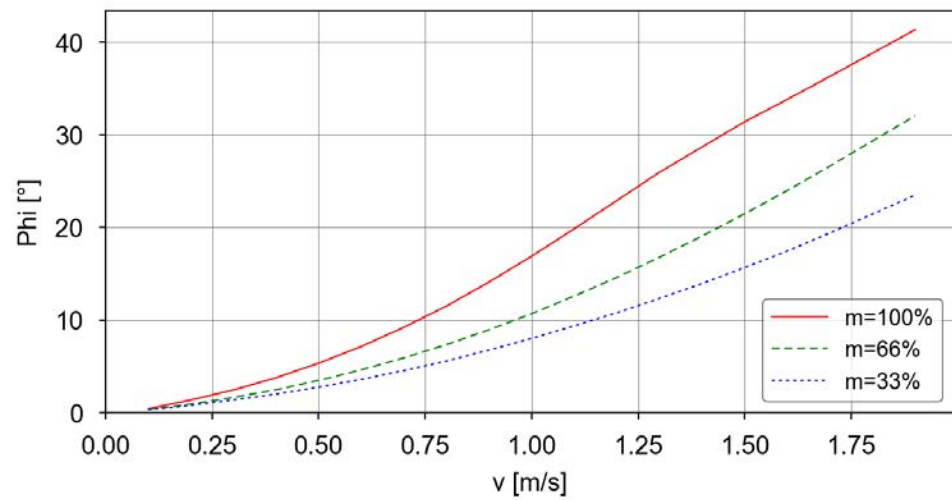
Continued

Extension zone 1, stopping distance and stopping time



Continues on next page

Extension zone 2, stopping distance and stopping time



Continues on next page

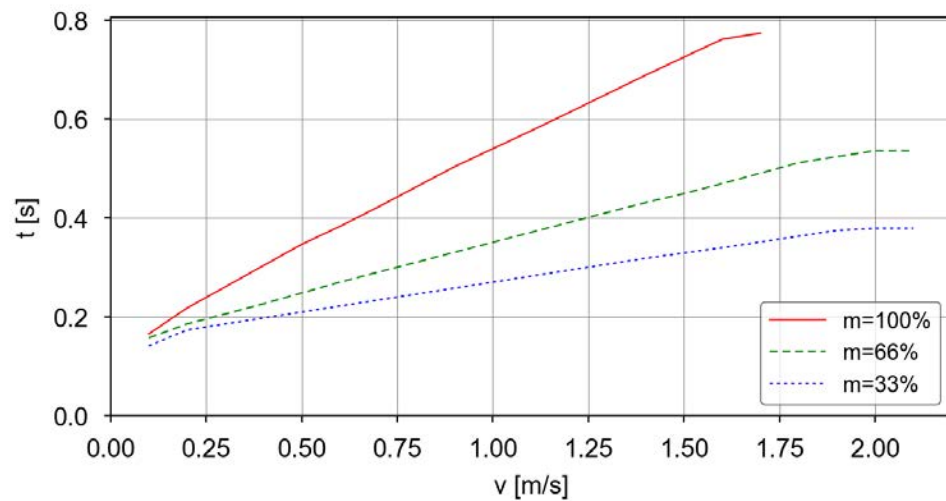
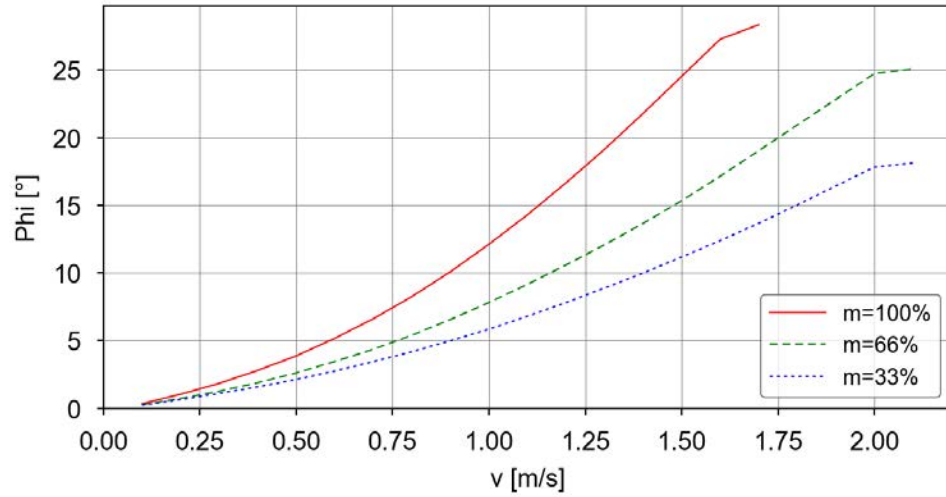
23 IRB 760

23.2 IRB 760 3.2 m 450 kg

Continued

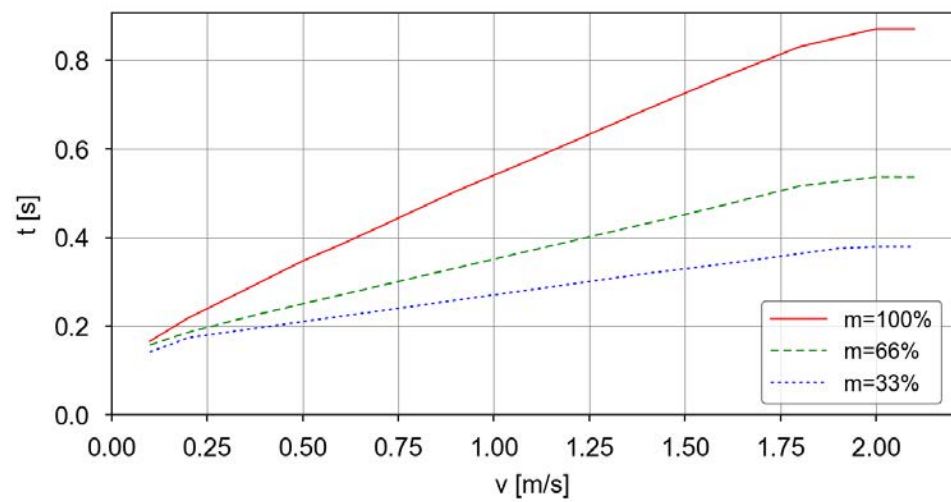
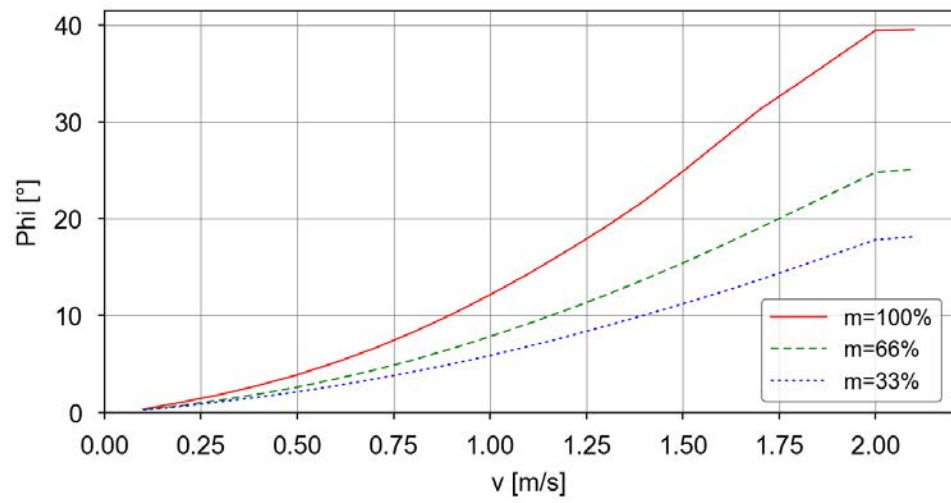
Category 1, Axis 3

Extension zone 0, stopping distance and stopping time



Continues on next page

Extension zone 1, stopping distance and stopping time



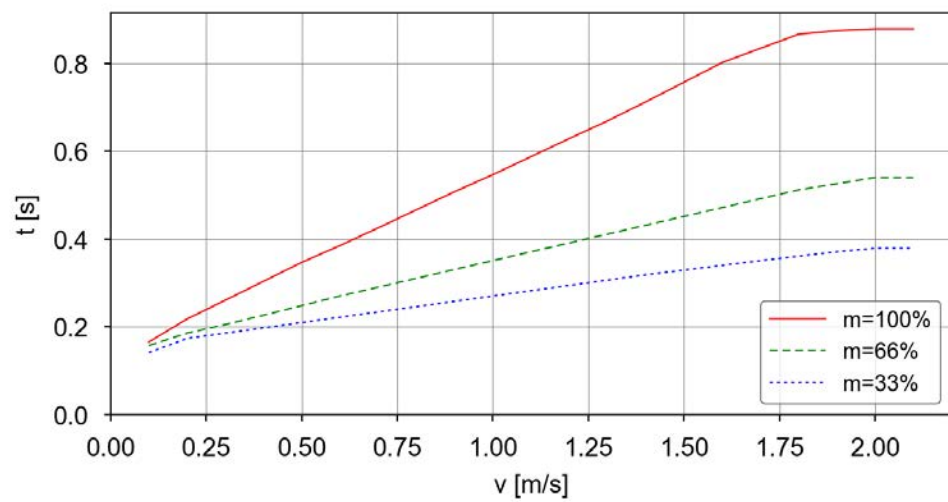
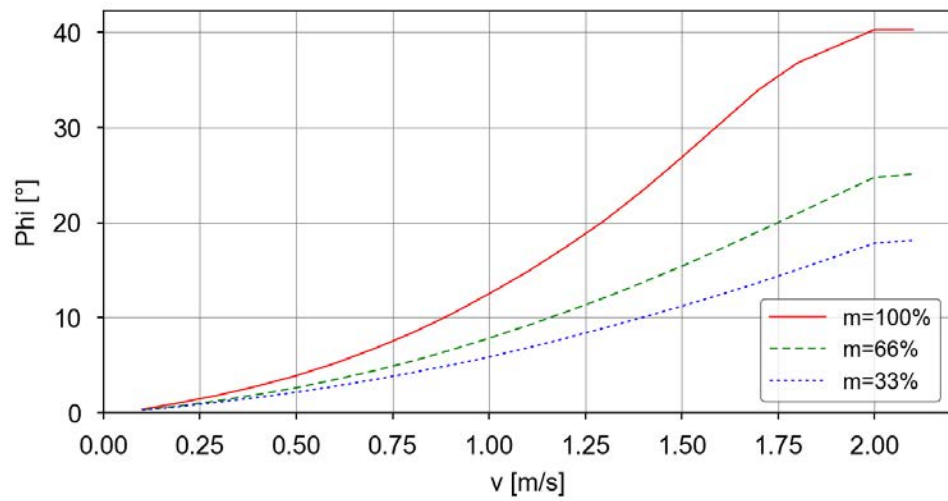
Continues on next page

23 IRB 760

23.2 IRB 760 3.2 m 450 kg

Continued

Extension zone 2, stopping distance and stopping time



24 IRB 360

24.1 IRB 360 0.8 m 1 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.57	0.18
Wash down	0.56	0.18
3AXES	0.57	0.17

Continues on next page

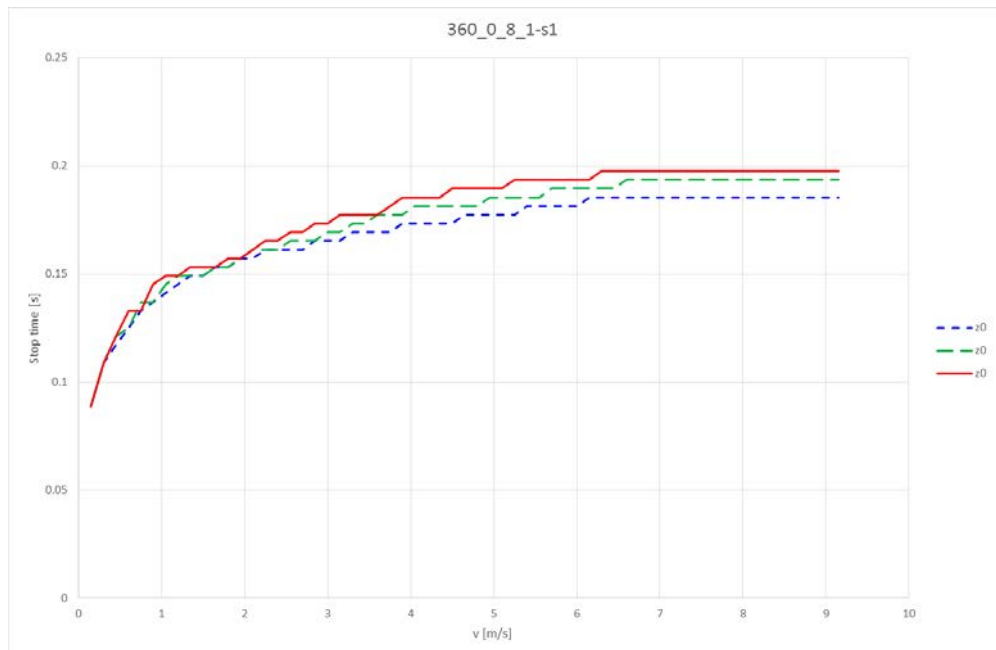
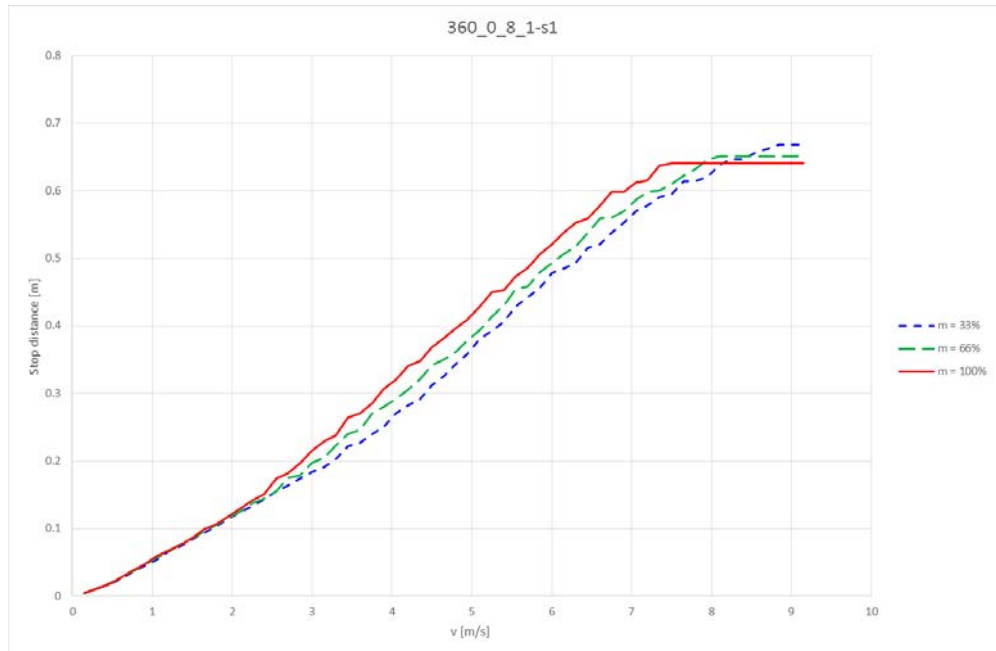
24 IRB 360

24.1 IRB 360 0.8 m 1 kg

Continued

Category 1, Standard

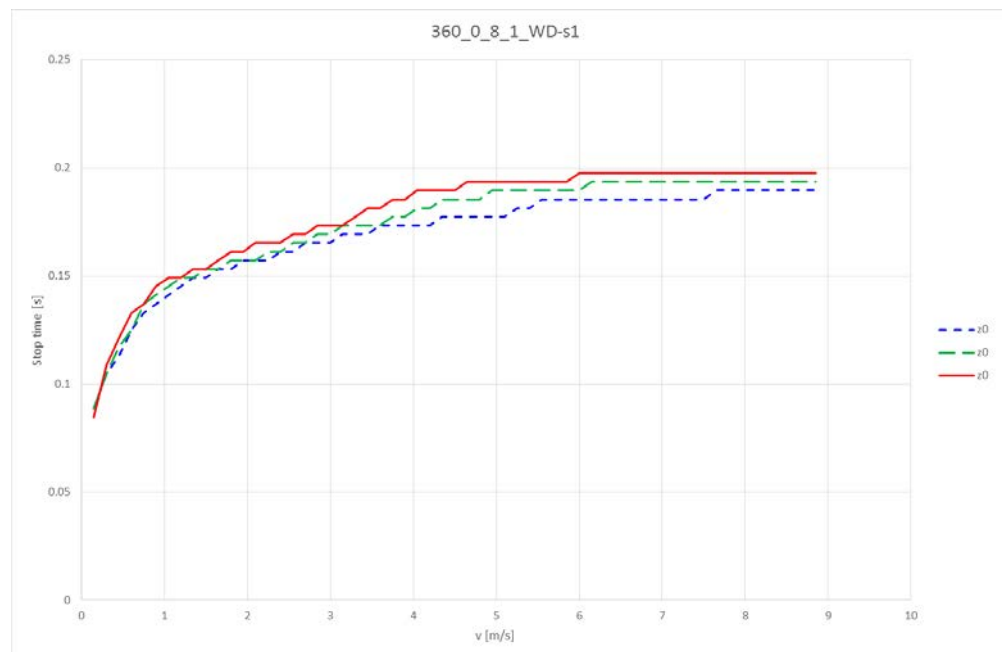
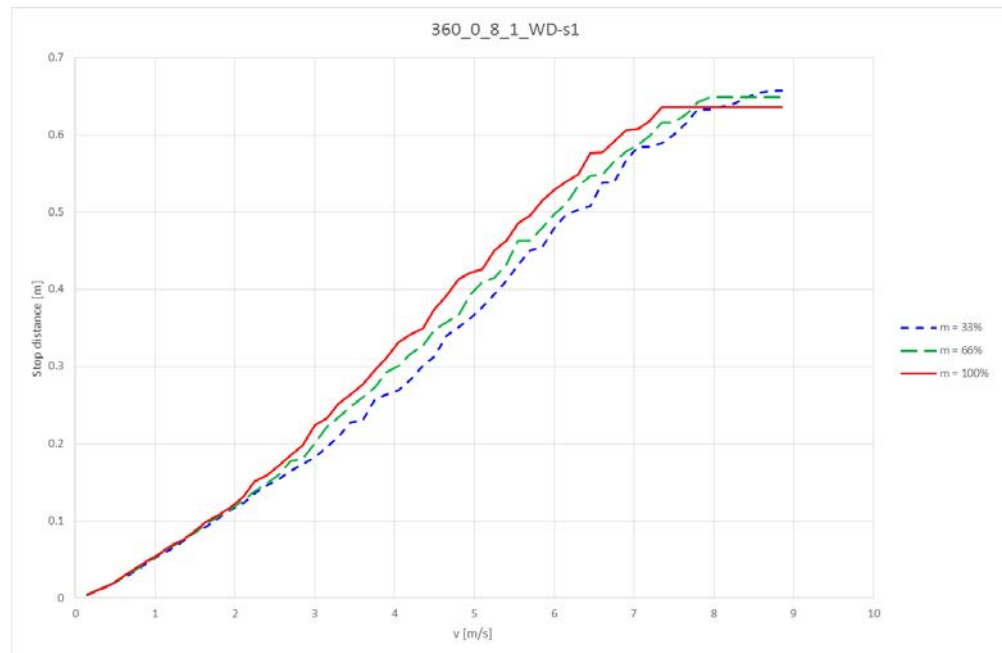
Stopping distance and stopping time



Continues on next page

Category 1, Wash Down

Stopping distance and stopping time



Continues on next page

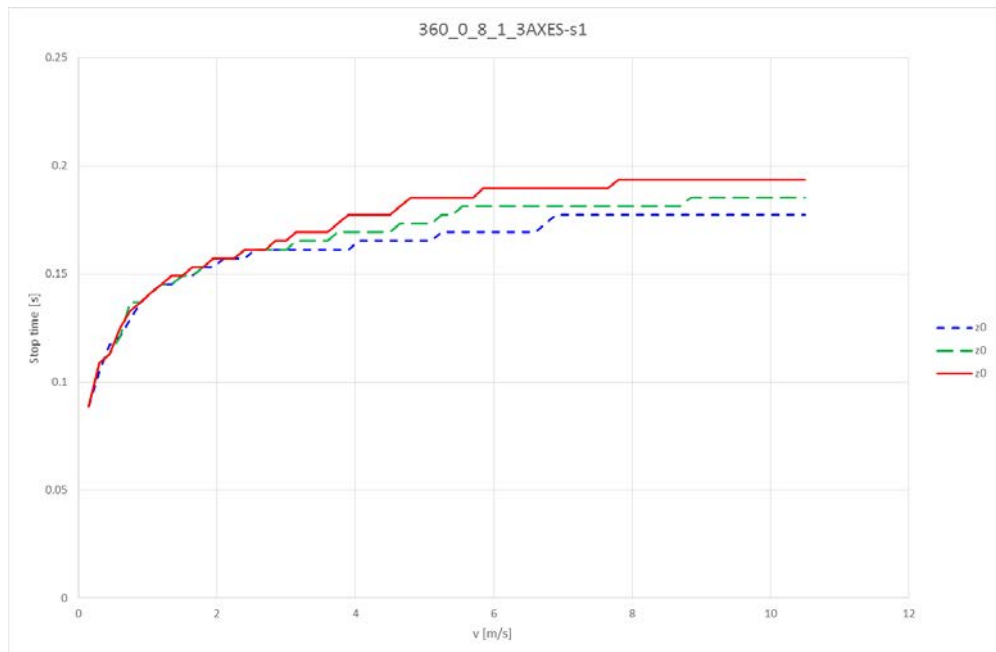
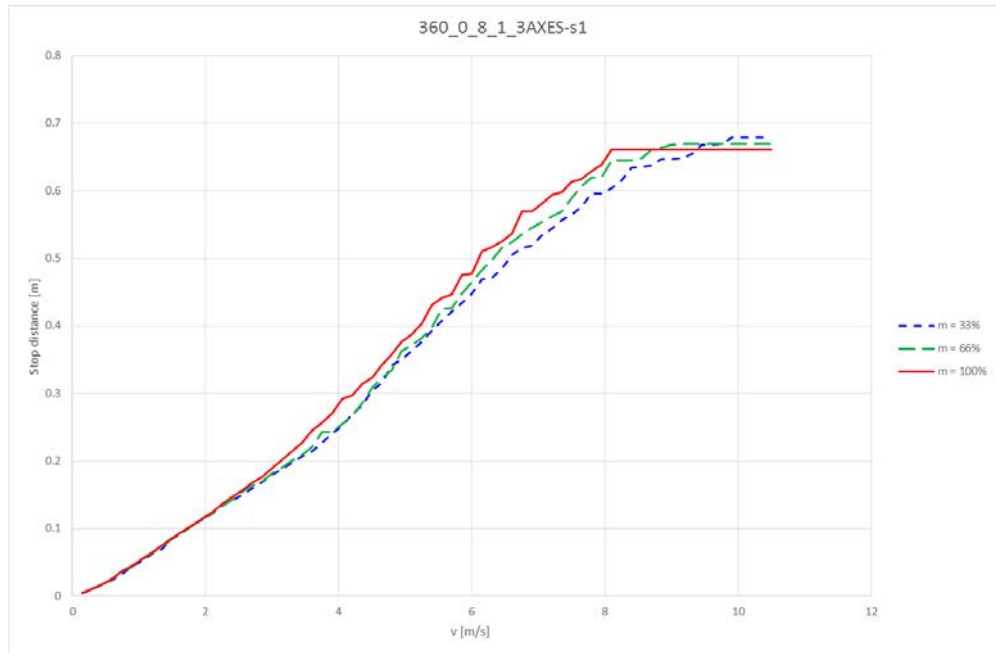
24 IRB 360

24.1 IRB 360 0.8 m 1 kg

Continued

Category 1, 3AXES

Stopping distance and stopping time



24.2 IRB 360 1.13 m 1 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.69	0.19
Wash down	0.69	0.19
3AXES	0.73	0.18
Stainless	0.67	0.19

Continues on next page

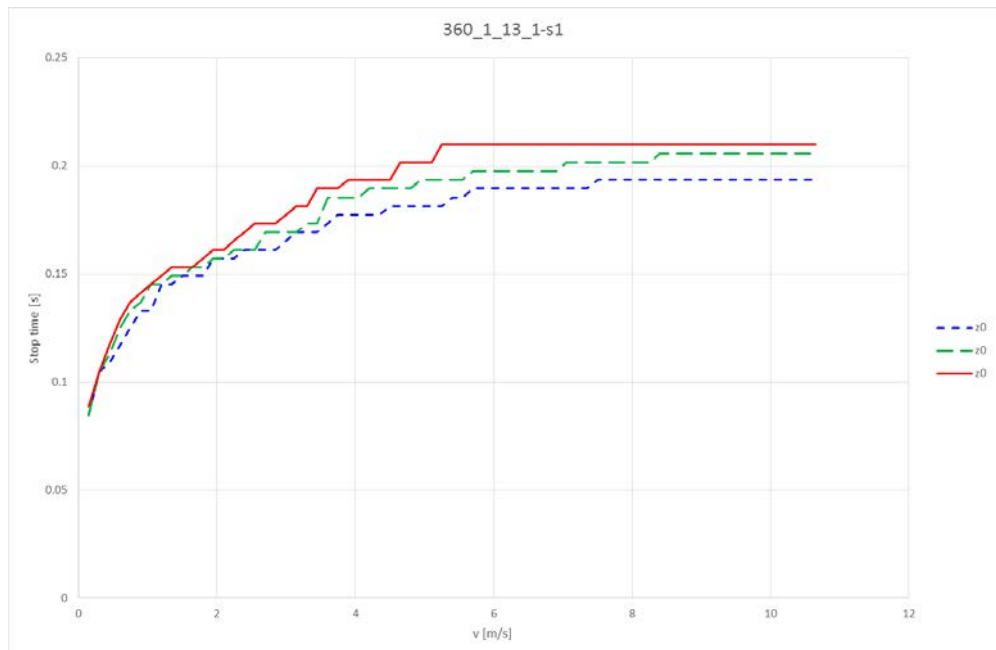
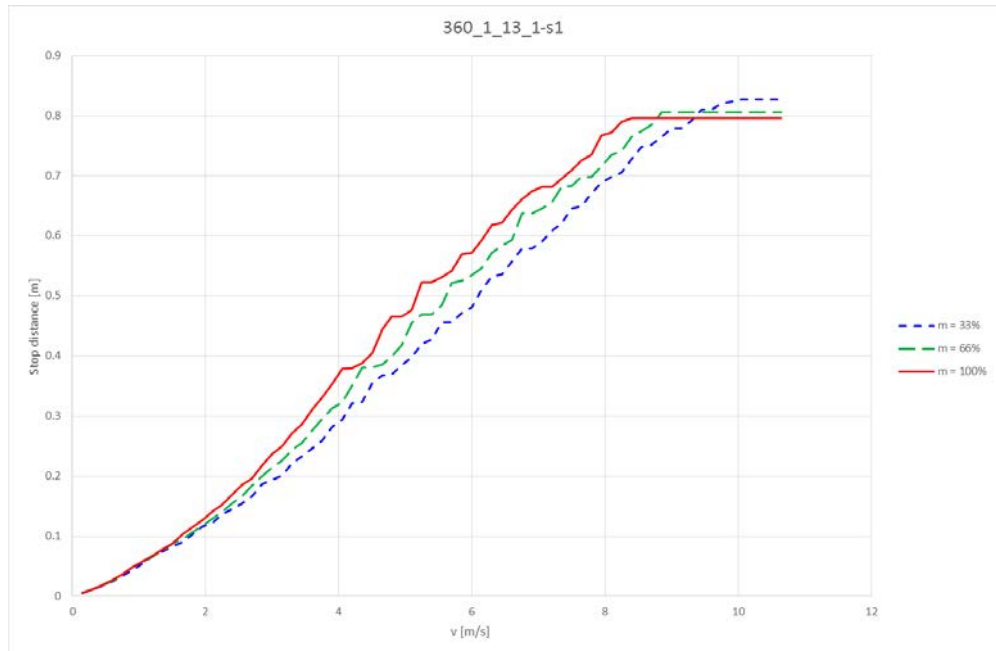
24 IRB 360

24.2 IRB 360 1.13 m 1 kg

Continued

Category 1, Standard

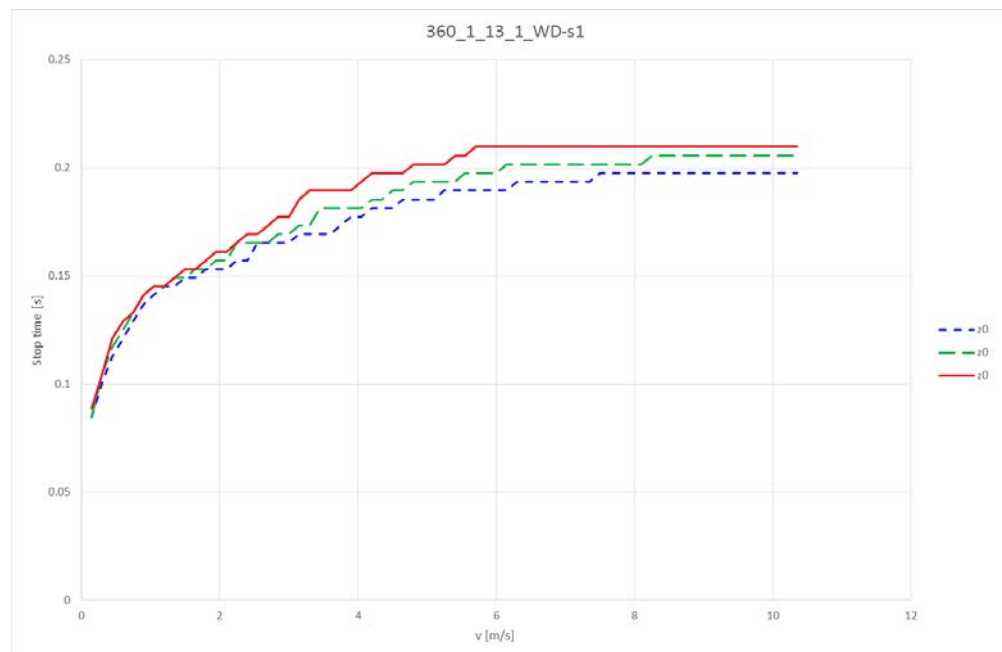
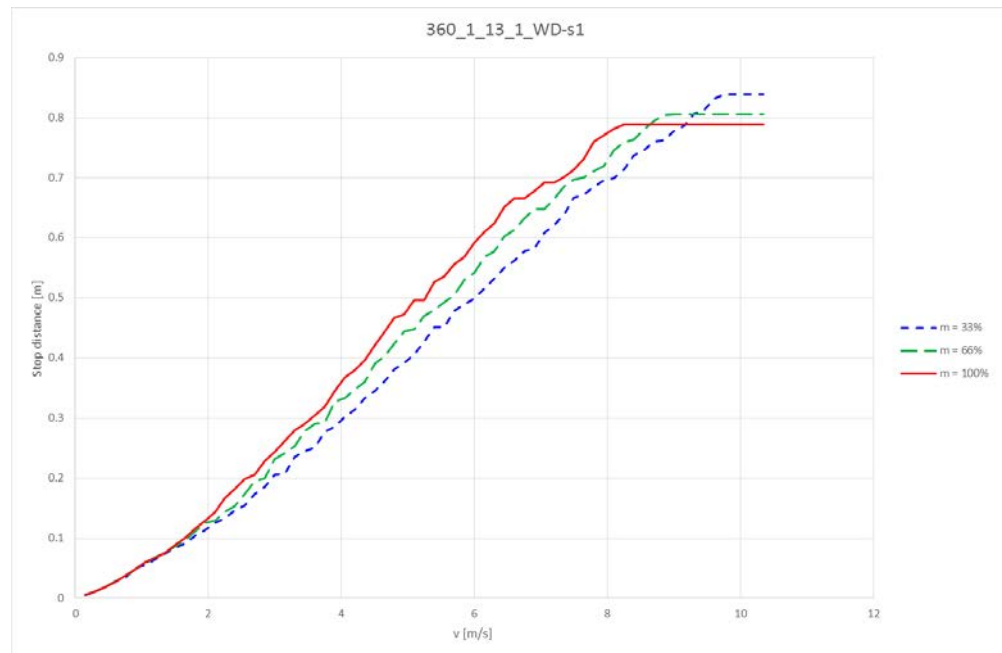
Stopping distance and stopping time



Continues on next page

Category 1, Wash Down

Stopping distance and stopping time



Continues on next page

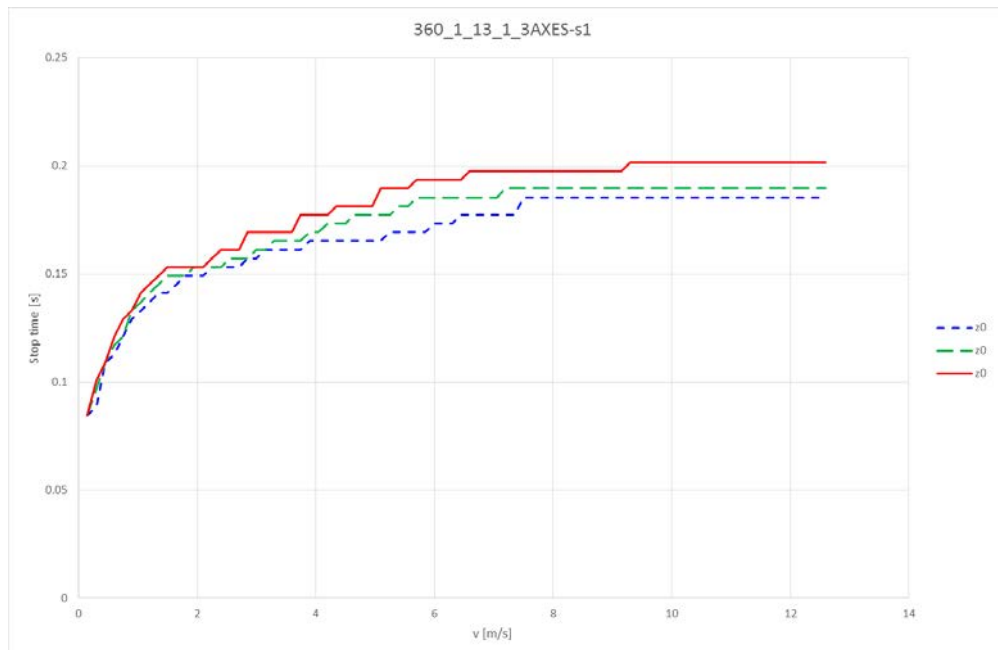
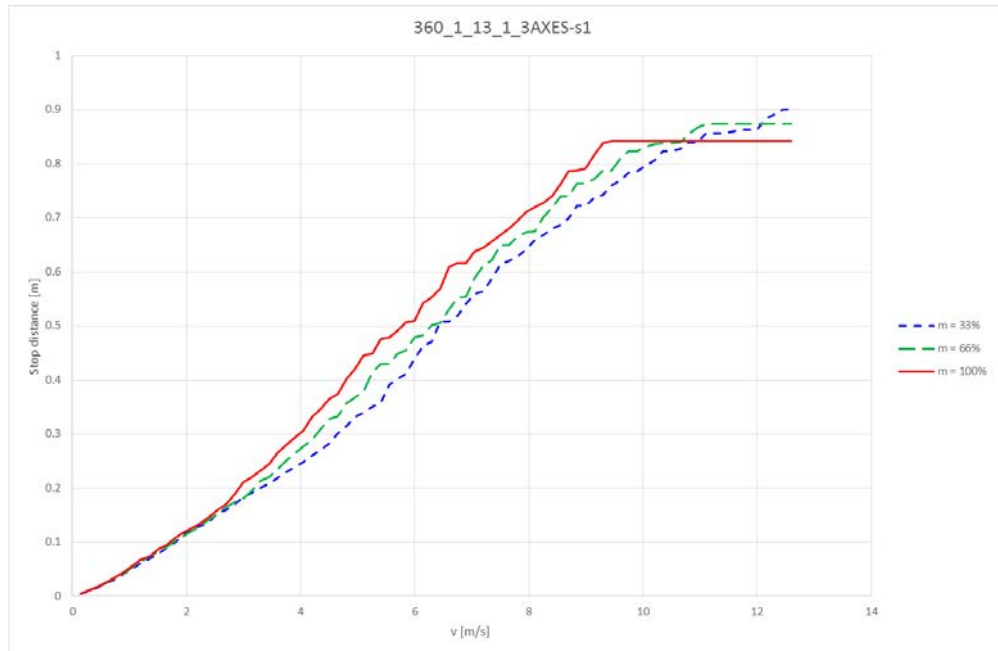
24 IRB 360

24.2 IRB 360 1.13 m 1 kg

Continued

Category 1, 3AXES

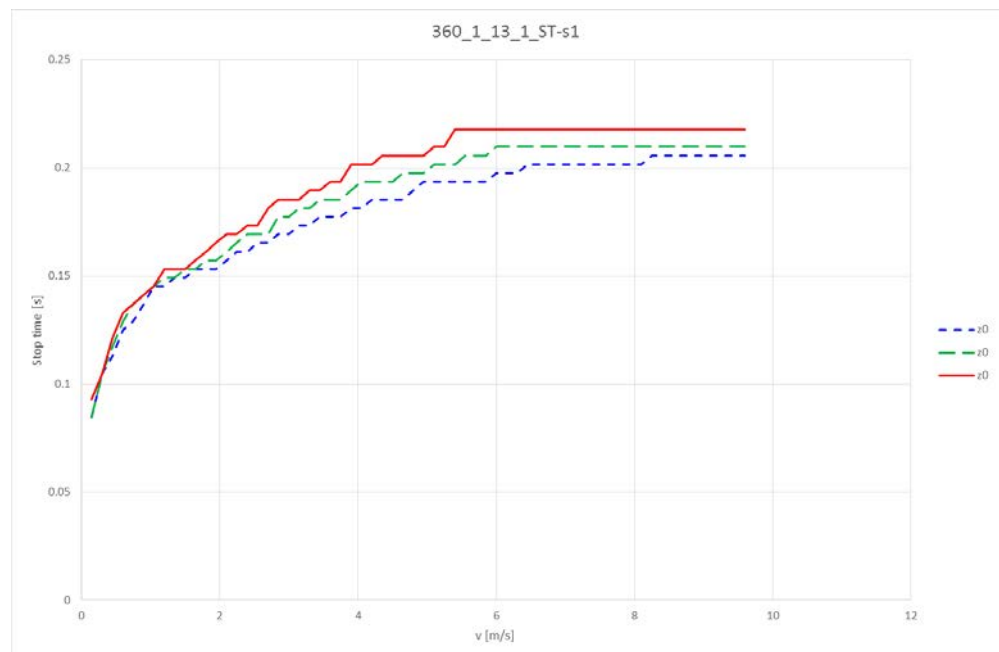
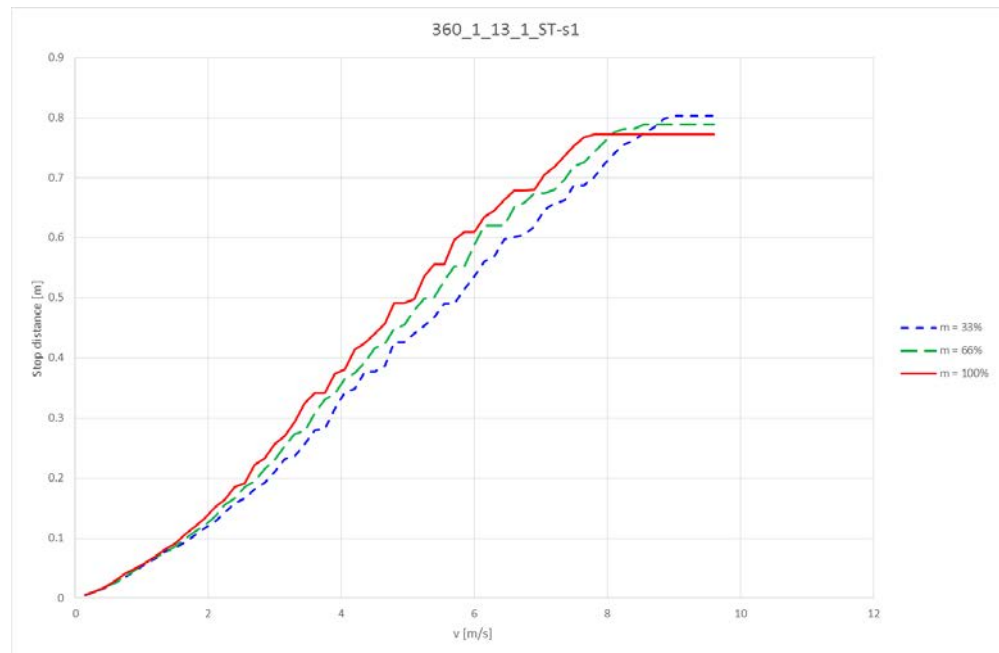
Stopping distance and stopping time



Continues on next page

Category 1, Stainless

Stopping distance and stopping time



24 IRB 360

24.3 IRB 360 1.13 m 3 kg

24.3 IRB 360 1.13 m 3 kg

Category 0

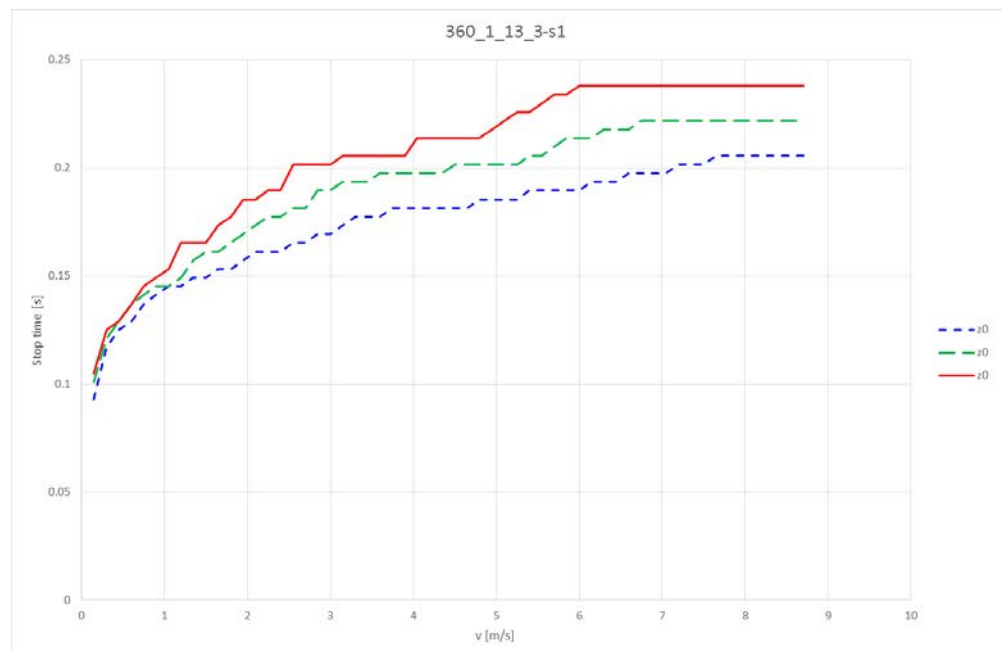
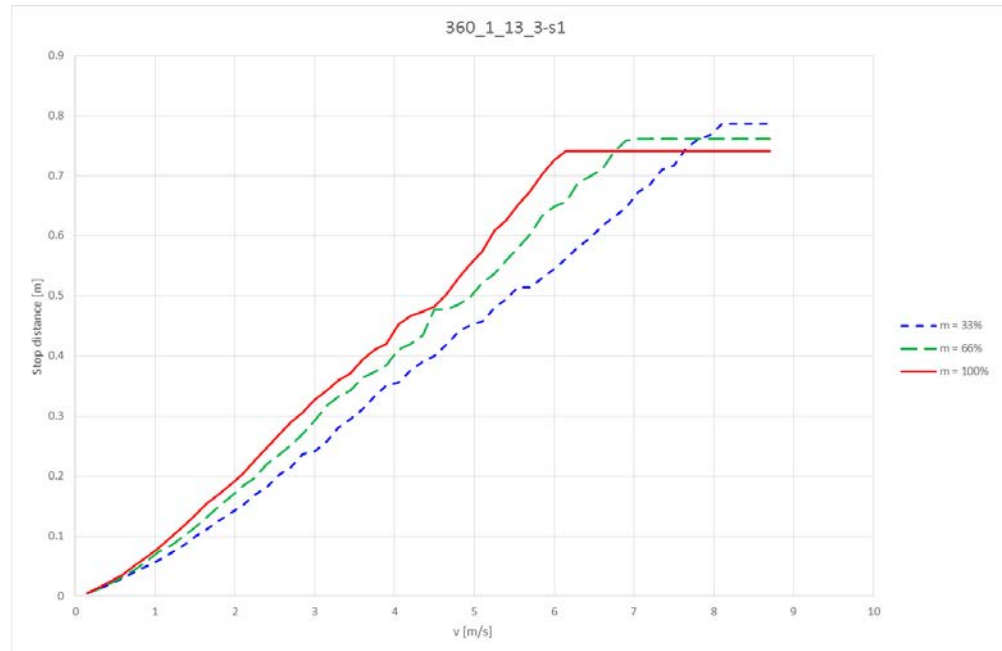
The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.65	0.21
Wash down	0.65	0.21
3AXES	0.62	0.20
Stainless	0.64	0.22

Continues on next page

Category 1, Standard

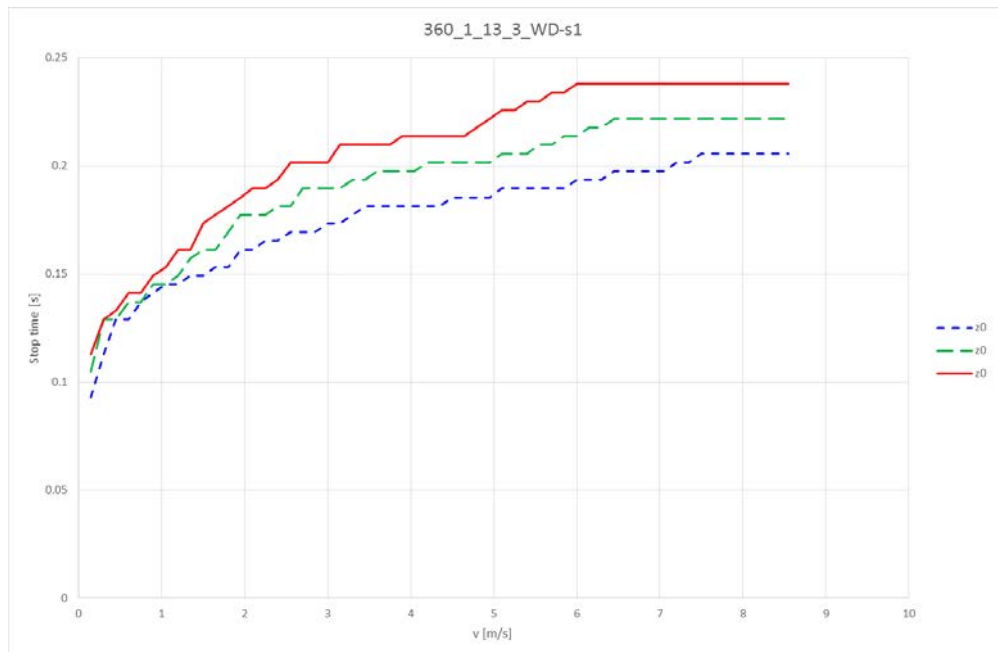
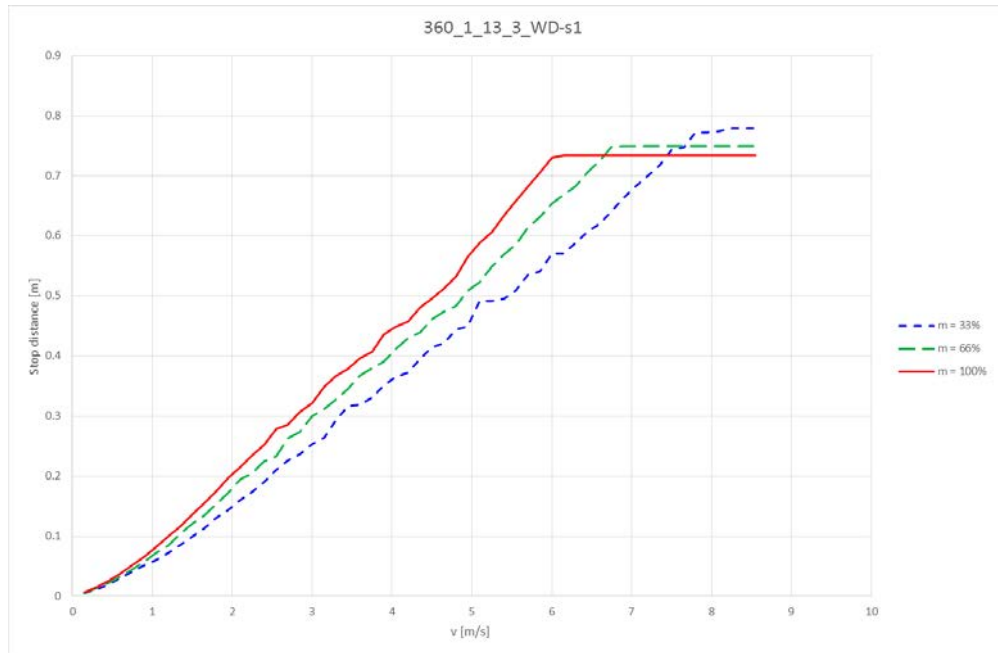
Stopping distance and stopping time



Continues on next page

Category 1, Wash Down

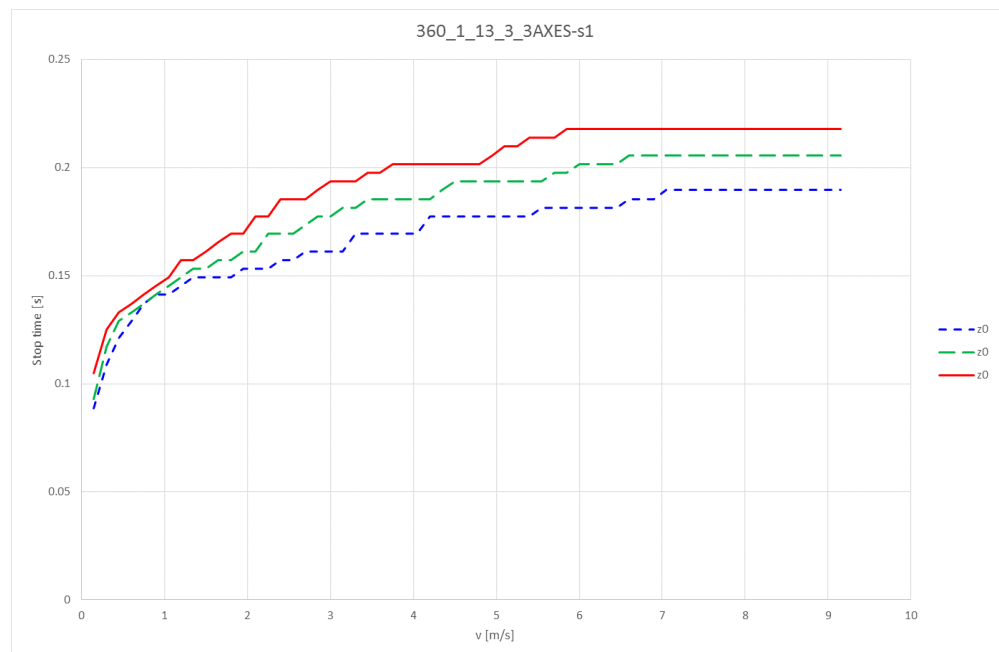
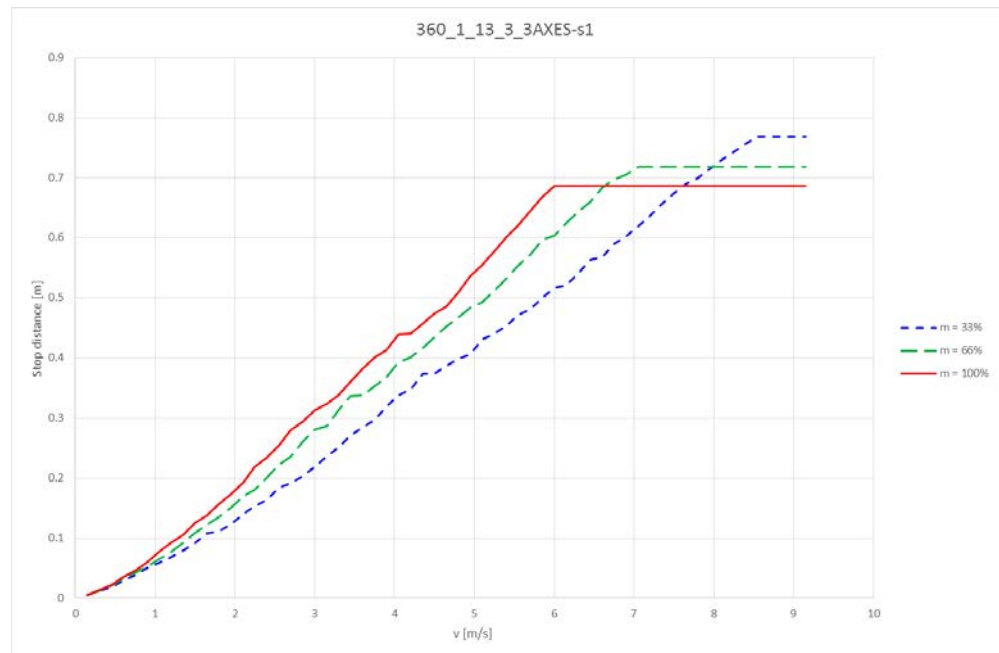
Stopping distance and stopping time



Continues on next page

Category 1, 3AXES

Stopping distance and stopping time



Continues on next page

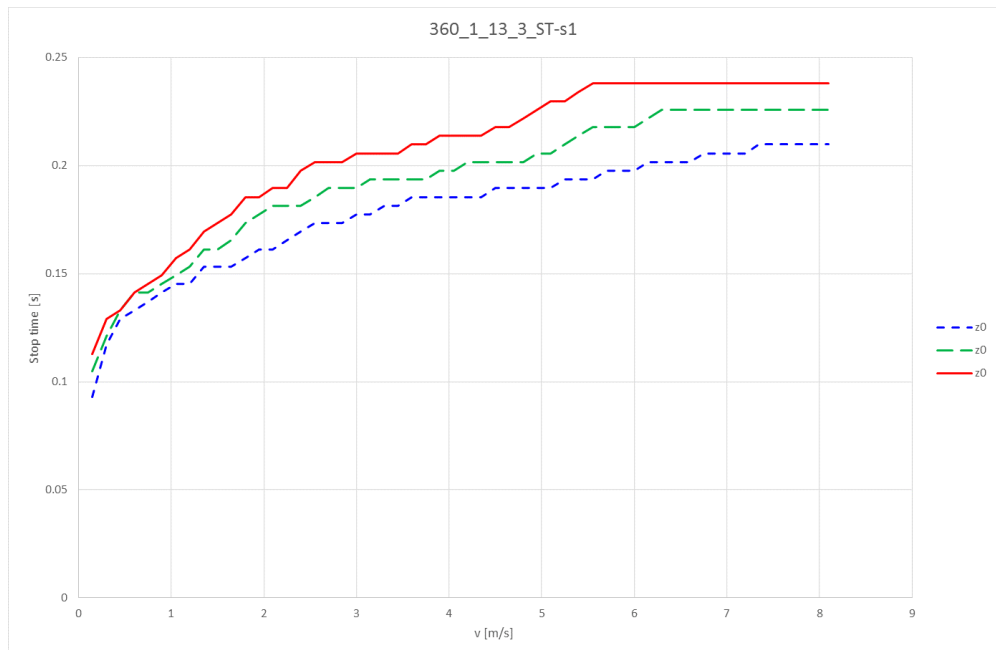
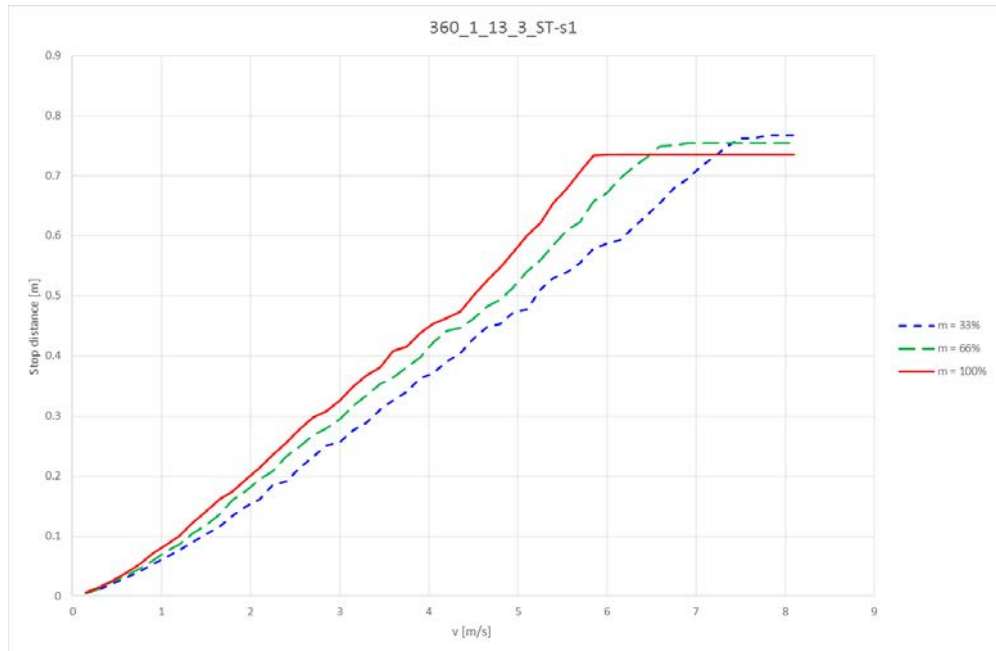
24 IRB 360

24.3 IRB 360 1.13 m 3 kg

Continued

Category 1, Stainless

Stopping distance and stopping time



24.4 IRB 360 1.13 m 8 kg

Category 0

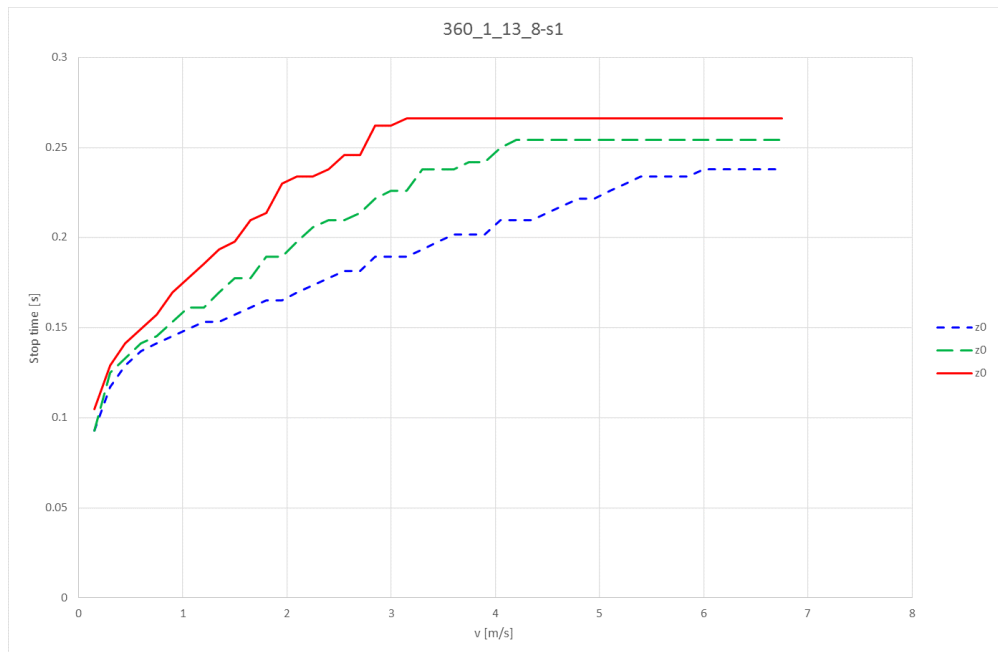
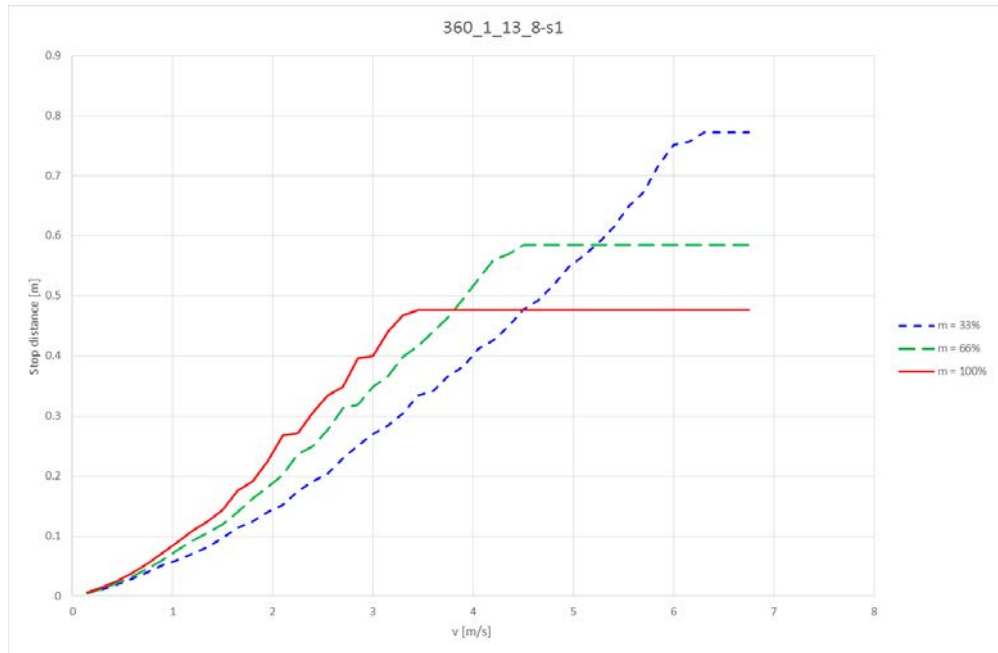
The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.65	0.33

Continues on next page

Category 1, Standard

Stopping distance and stopping time



24.5 IRB 360 1.6 m 1 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.90	0.22

Continues on next page

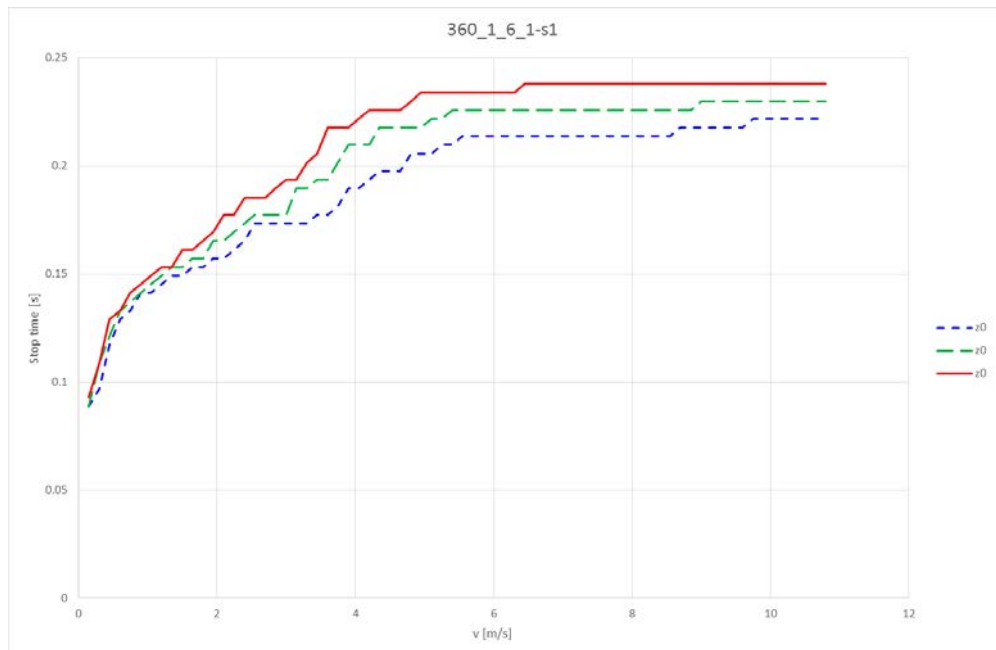
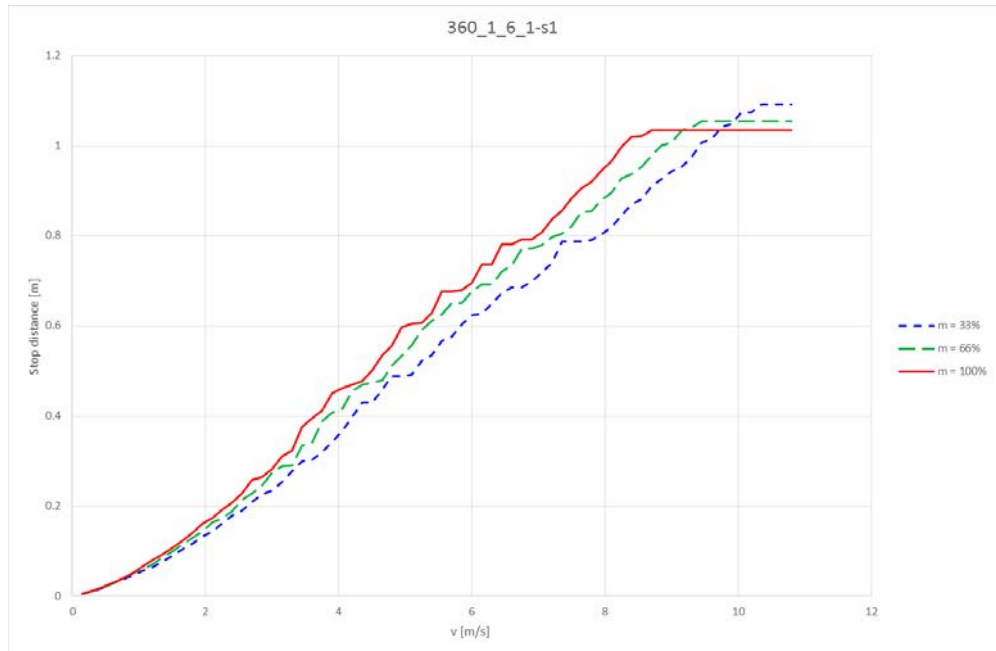
24 IRB 360

24.5 IRB 360 1.6 m 1 kg

Continued

Category 1, Standard

Stopping distance and stopping time



24.6 IRB 360 1.6 m 6 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.93	0.36

Continues on next page

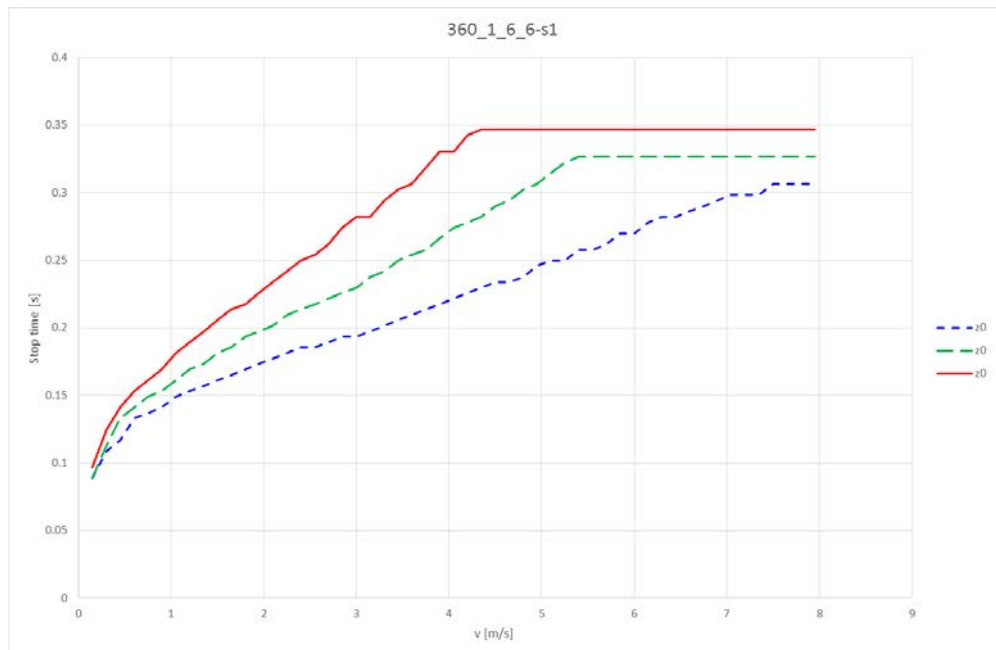
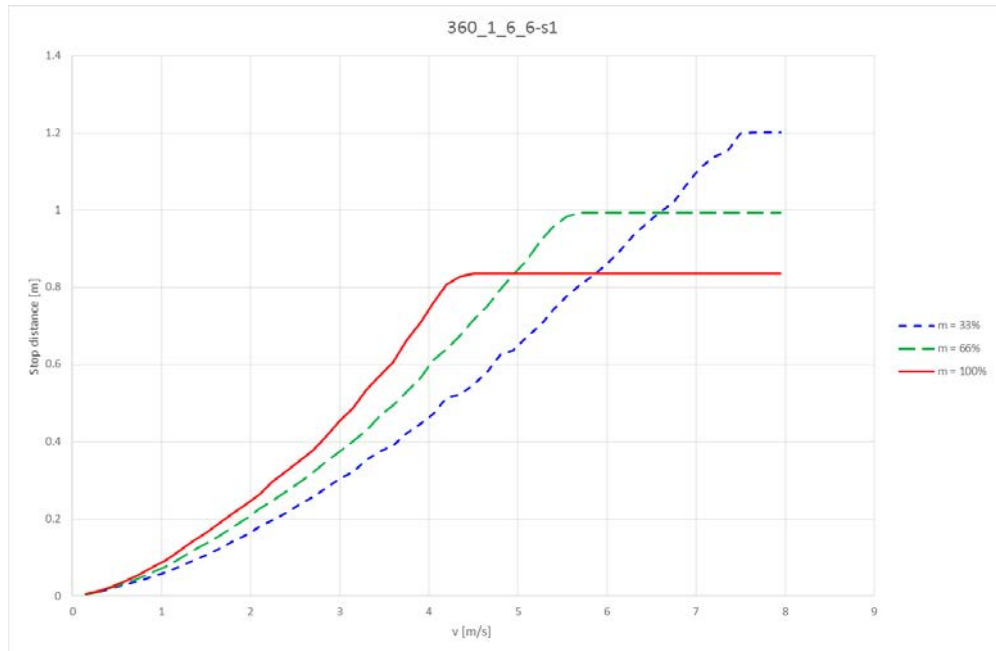
24 IRB 360

24.6 IRB 360 1.6 m 6 kg

Continued

Category 1, Standard

Stopping distance and stopping time



25 IRB 365

25.1 IRB 365 0.8 m 1.5 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.55	0.25

Continues on next page

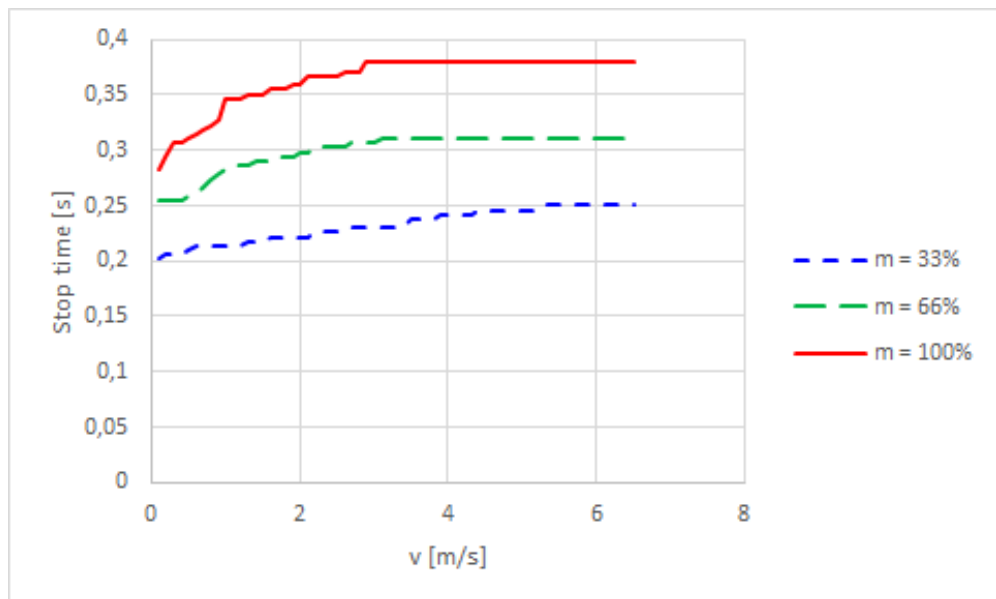
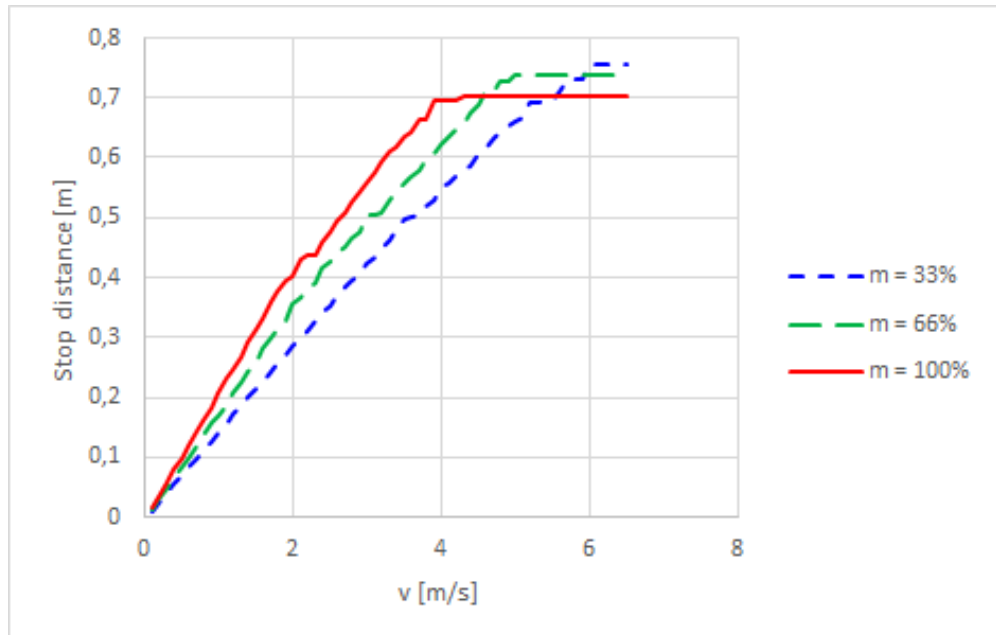
25 IRB 365

25.1 IRB 365 0.8 m 1.5 kg

Continued

Category 1, Standard

Stopping distance and stopping time



25.2 IRB 365 1.1 m 1.5 kg

Category 0

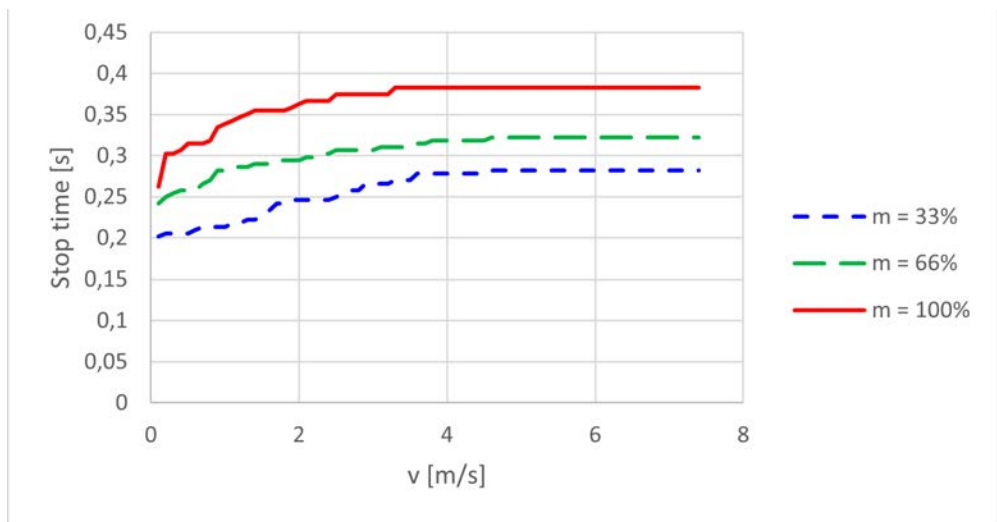
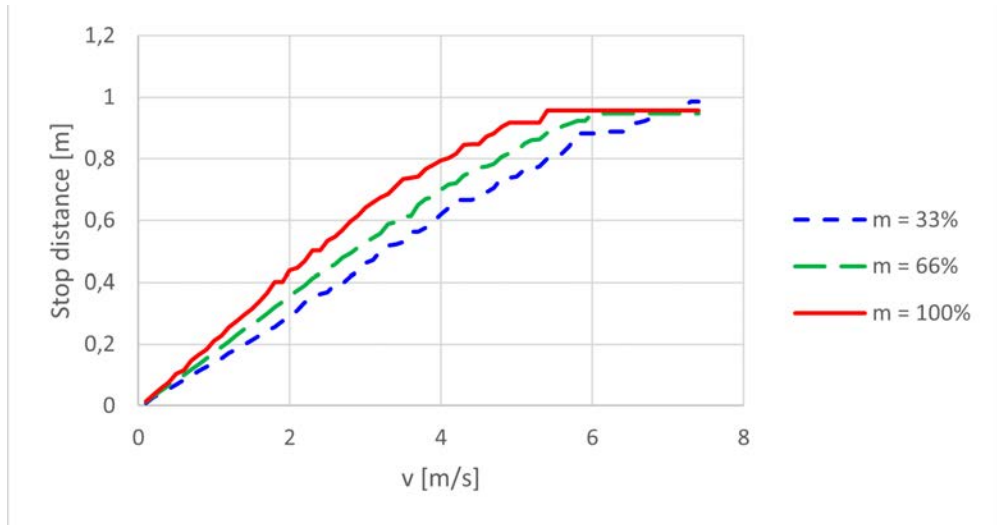
The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.41	0.29

Continues on next page

Category 1, Standard

Stopping distance and stopping time



25.3 IRB 365 1.3 m 1.5 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.73	0.26

Continues on next page

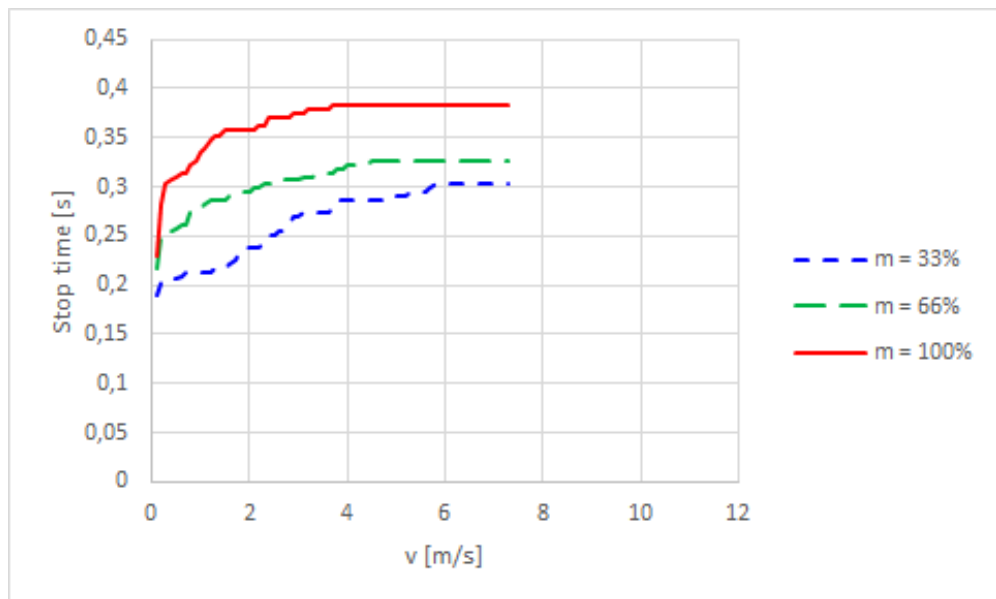
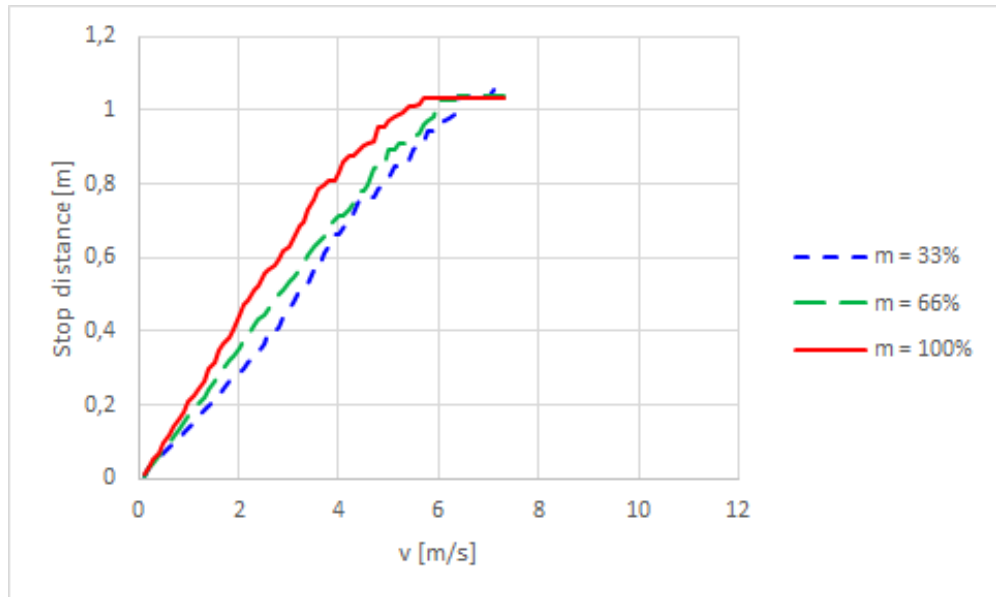
25 IRB 365

25.3 IRB 365 1.3 m 1.5 kg

Continued

Category 1, Standard

Stopping distance and stopping time



26 IRB 390

26.1 IRB 390 1.3 m 10 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.71	0.29

Continues on next page

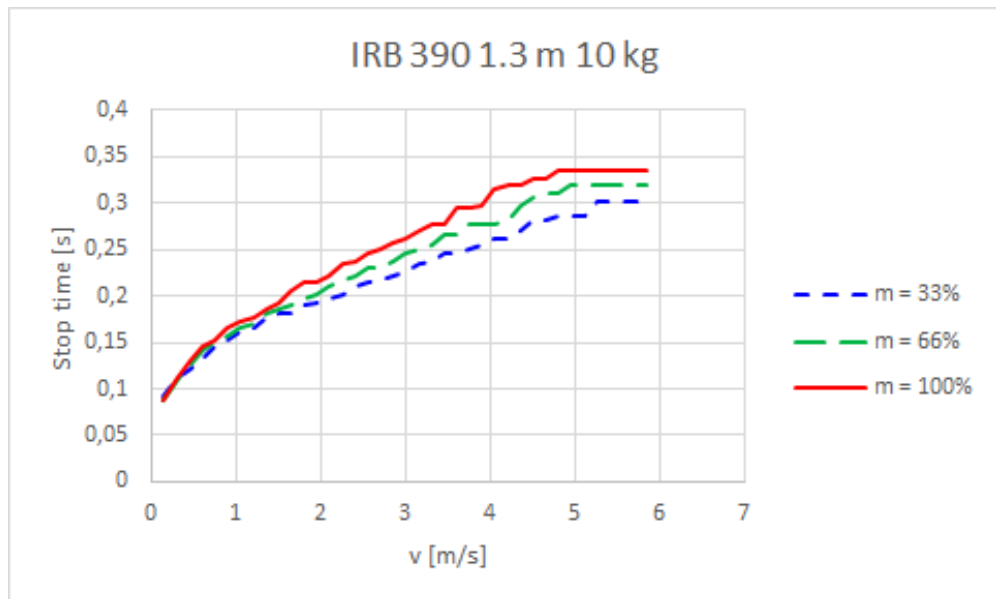
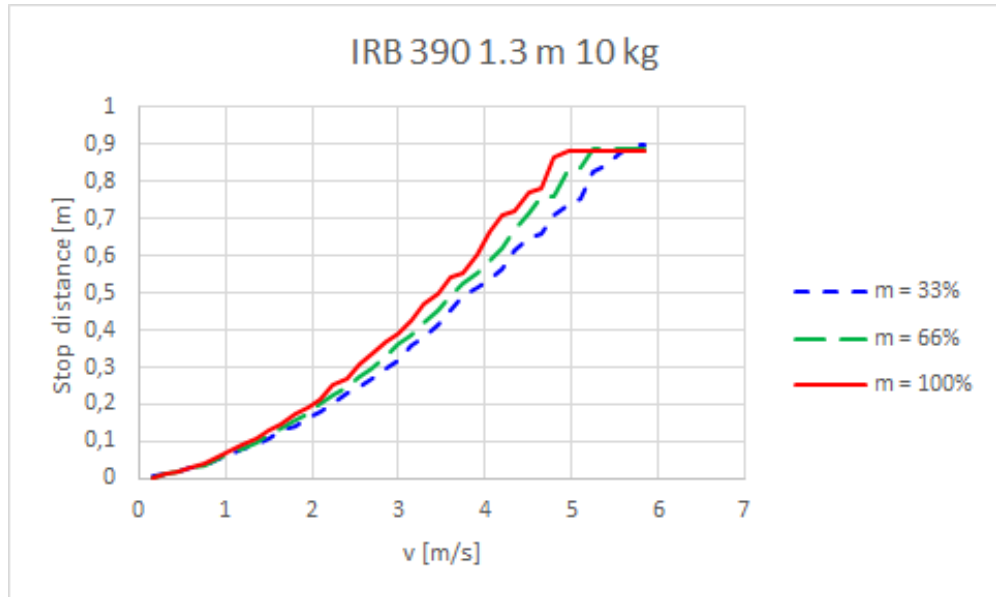
26 IRB 390

26.1 IRB 390 1.3 m 10 kg

Continued

Category 1, Standard

Stopping distance and stopping time



26.2 IRB 390 1.3 m 15 kg

Category 0

The following table describes the stopping distance and time for category 0 emergency stop at max speed, with the arm stretched out to the maximum with maximum load.

Protection type/variant	Distance (meters)	Stop time (s)
Standard	0.72	0.28

Continues on next page

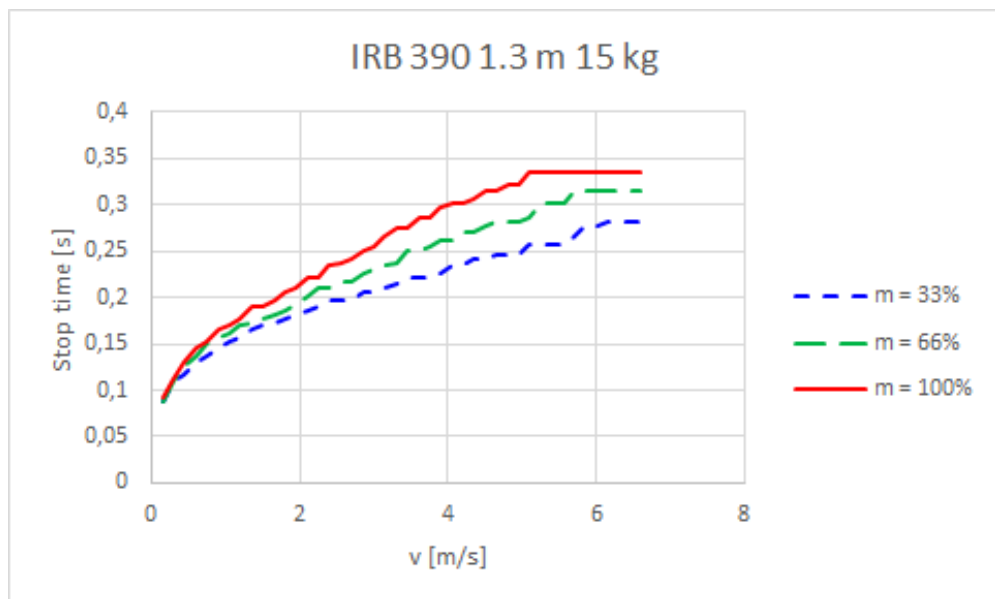
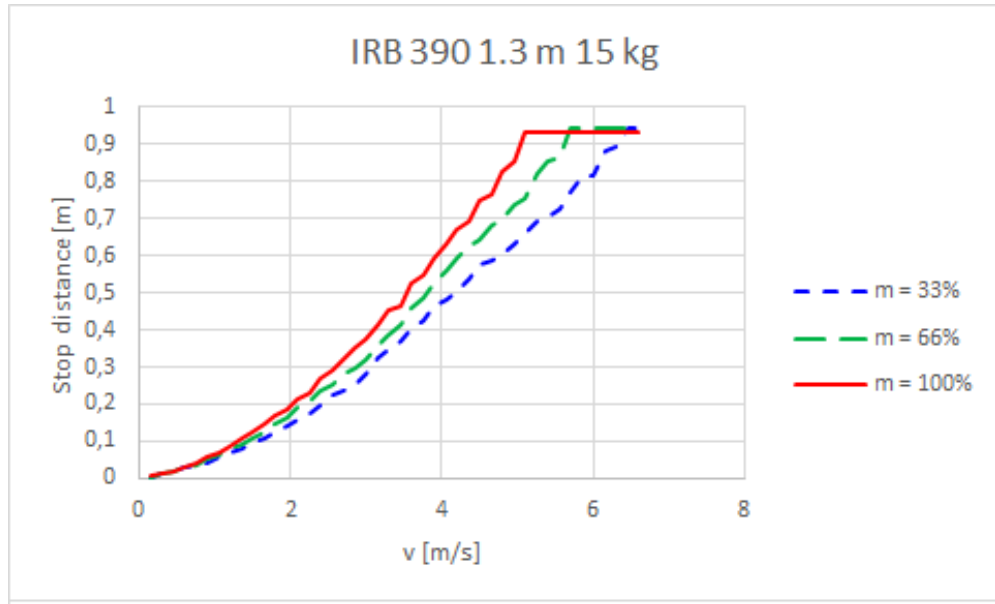
26 IRB 390

26.2 IRB 390 1.3 m 15 kg

Continued

Category 1, Standard

Stopping distance and stopping time

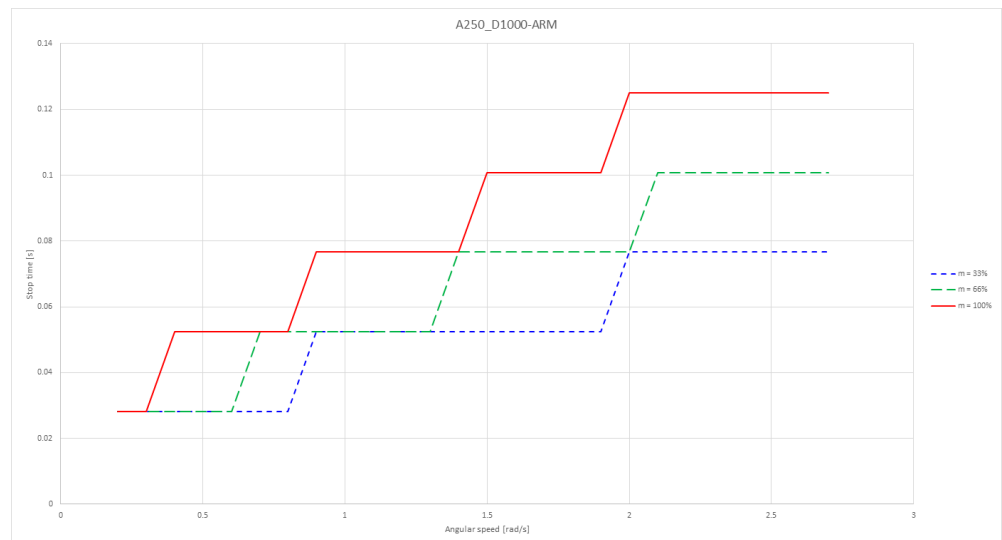
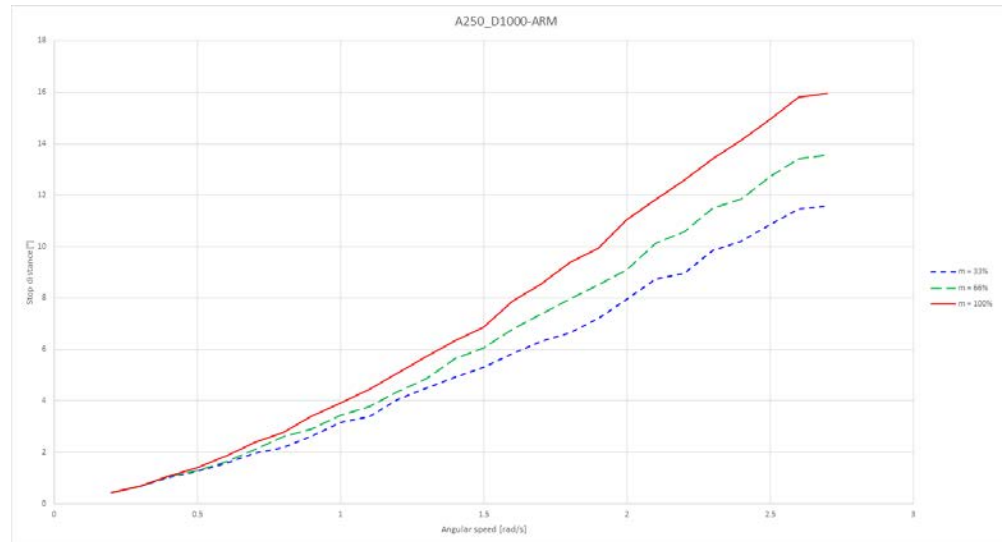


27 IRBP A

27.1 A250_D1000

Category 0, ARM

Stopping distance and stopping time



Continues on next page

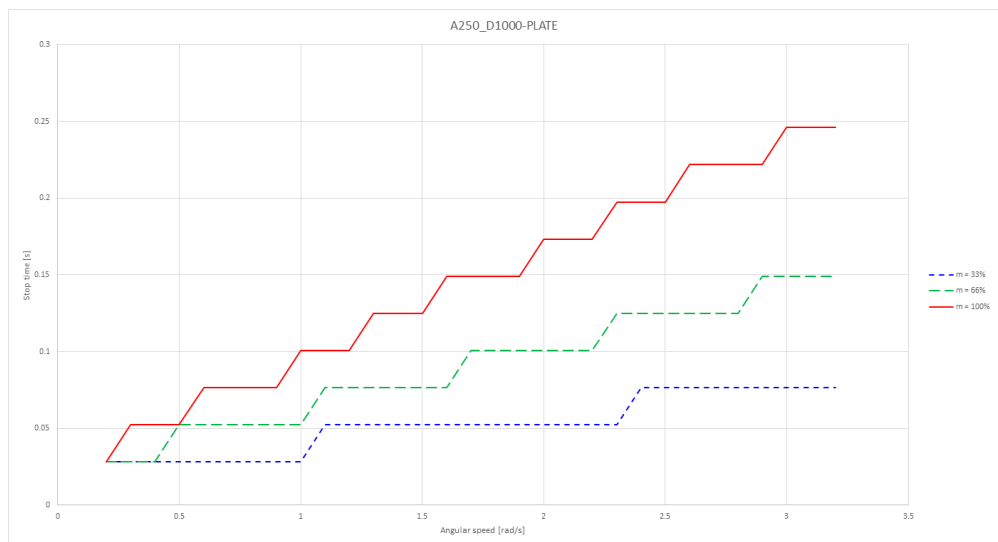
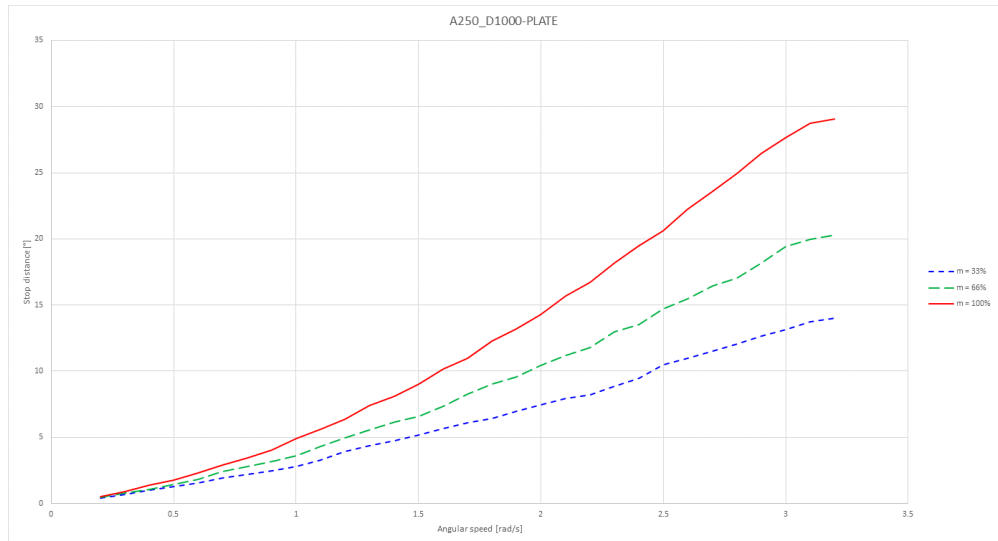
27 IRBP A

27.1 A250_D1000

Continued

Category 0, PLATE

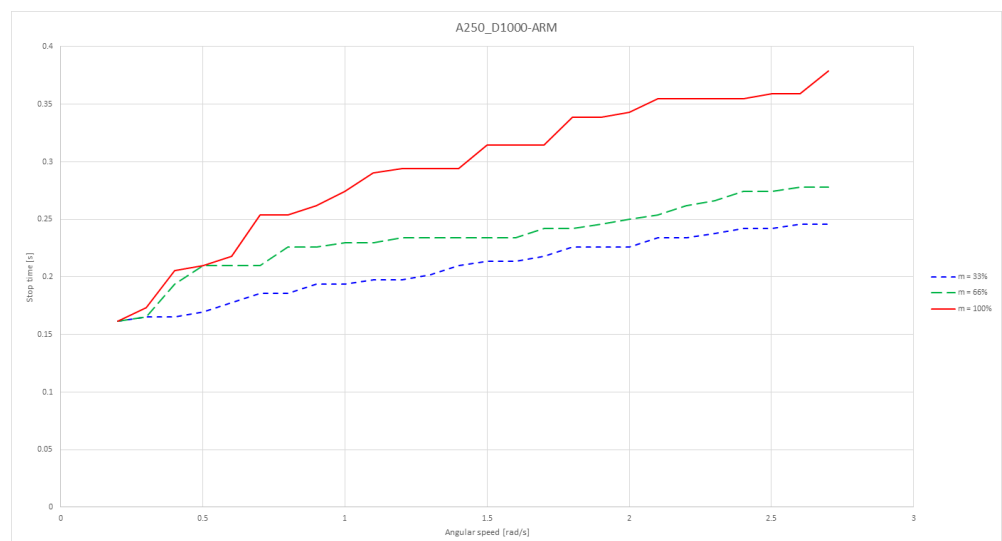
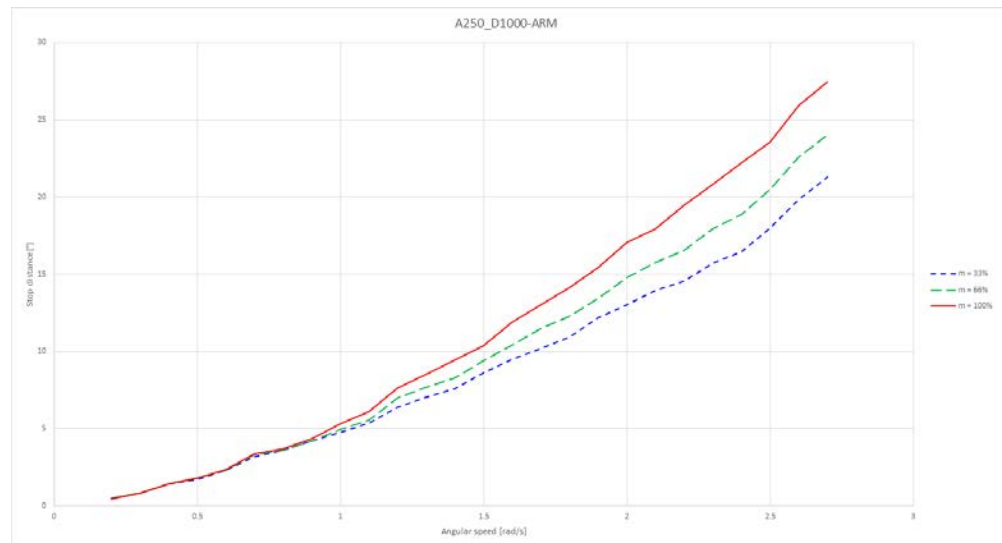
Stopping distance and stopping time



Continues on next page

Category 1, ARM

Stopping distance and stopping time



Continues on next page

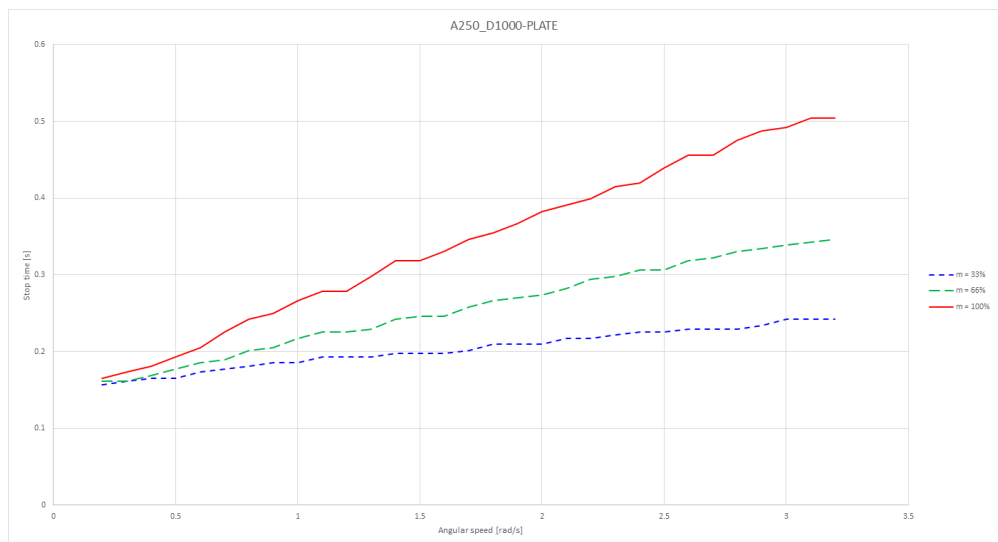
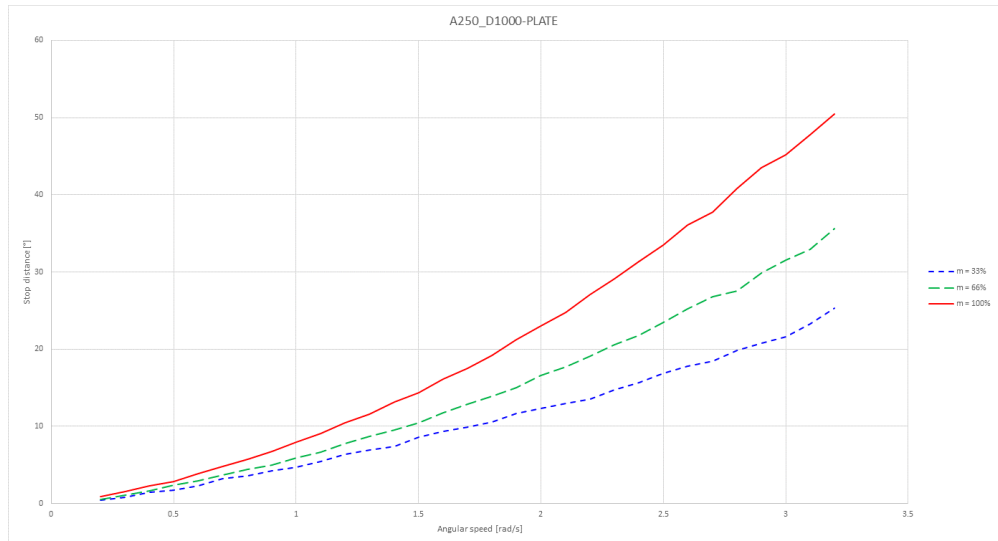
27 IRBP A

27.1 A250_D1000

Continued

Category 1, PLATE

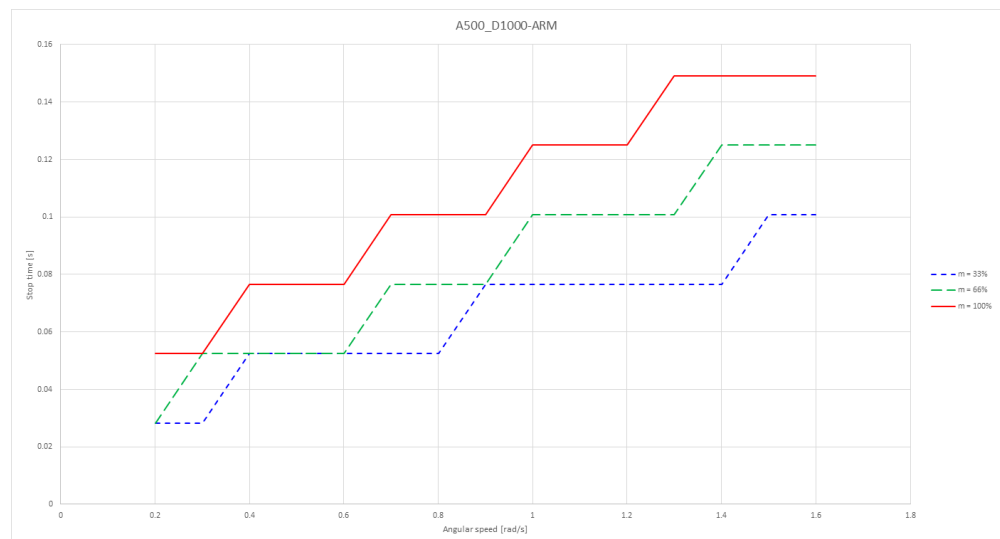
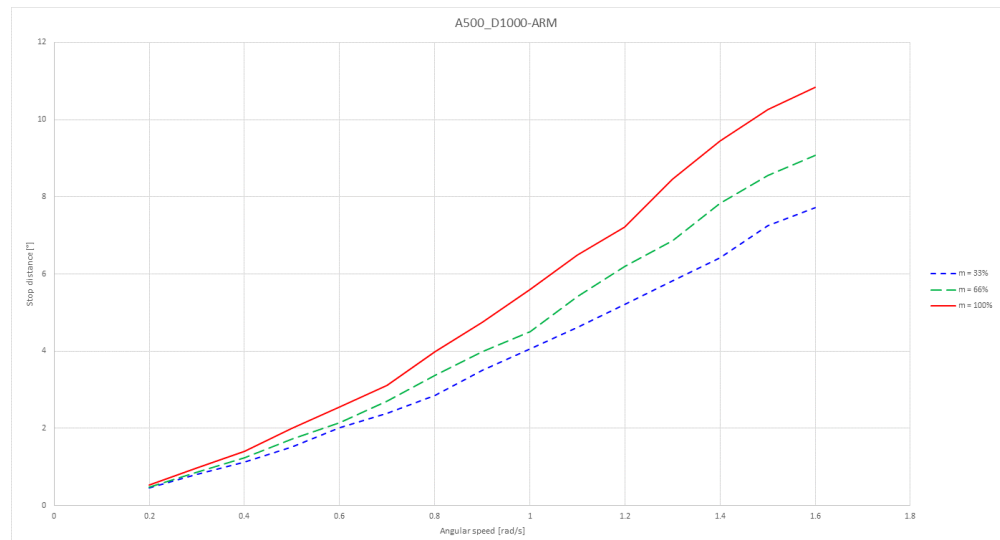
Stopping distance and stopping time



27.2 A500_D1000

Category 0, ARM

Stopping distance and stopping time

*Continues on next page*

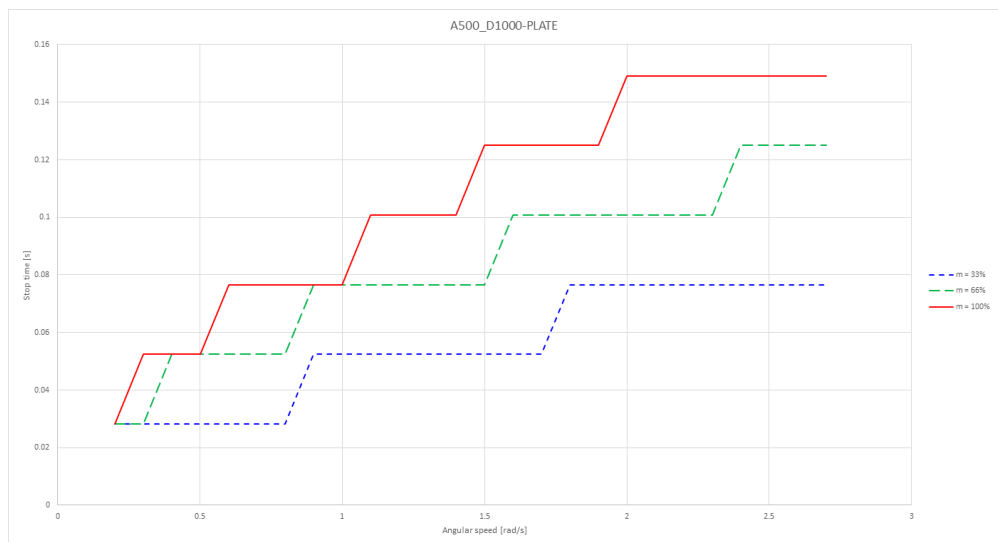
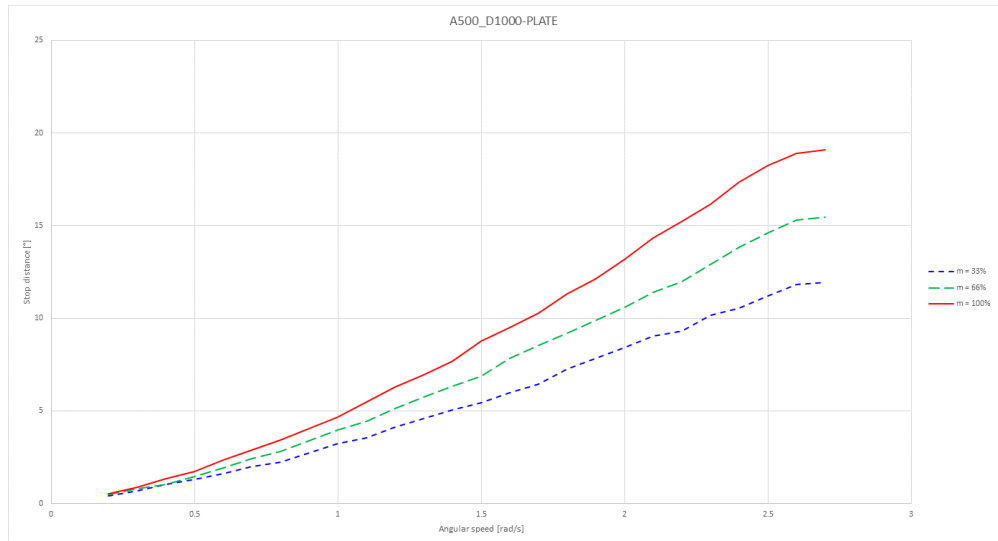
27 IRBP A

27.2 A500_D1000

Continued

Category 0, PLATE

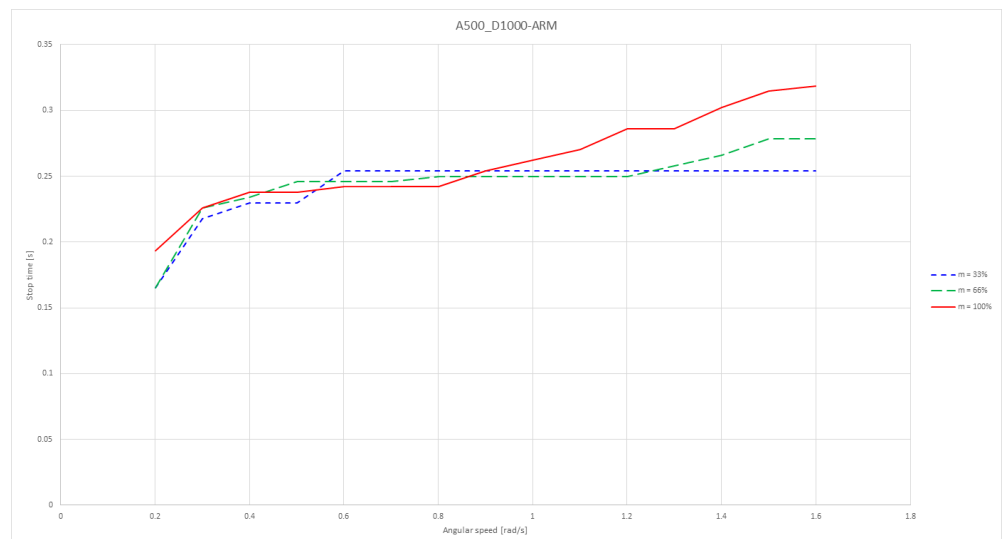
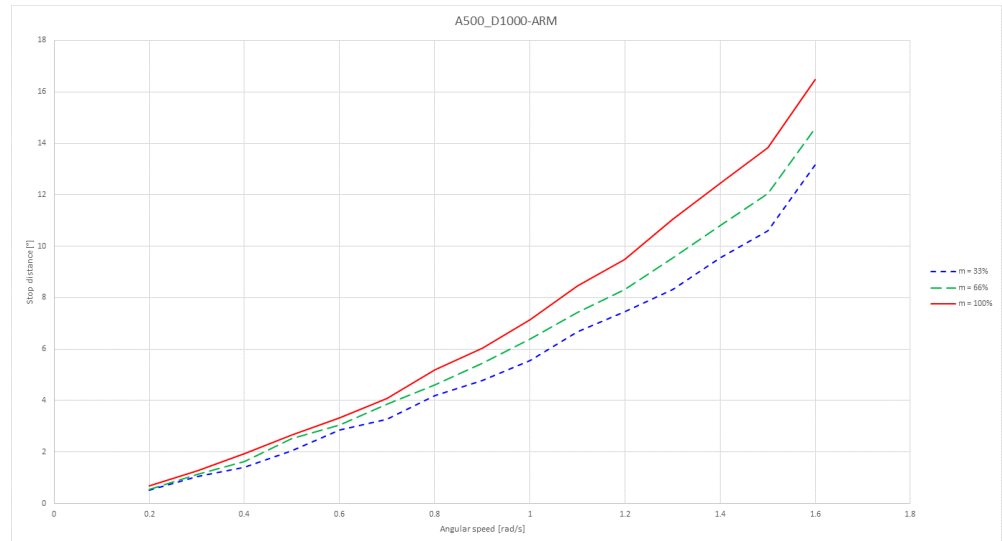
Stopping distance and stopping time



Continues on next page

Category 1, ARM

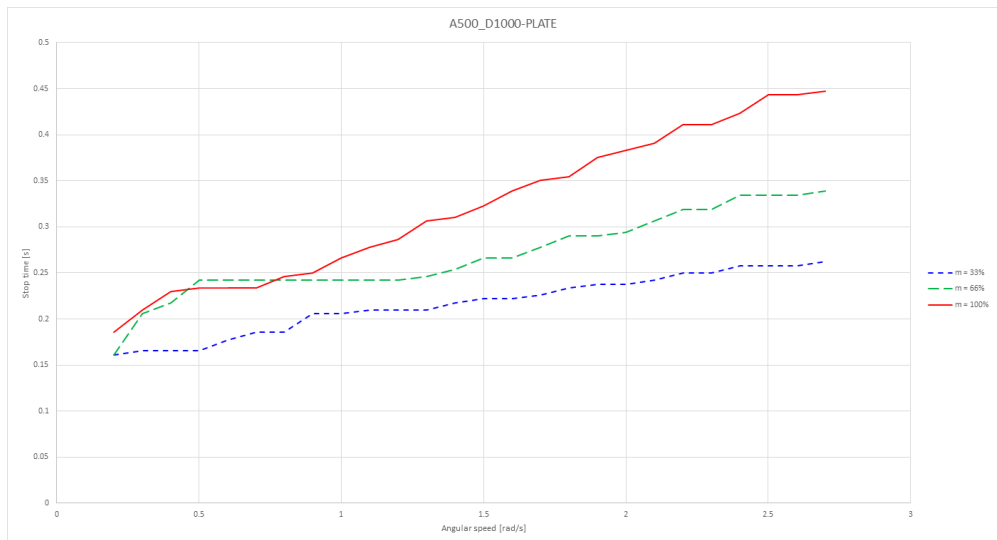
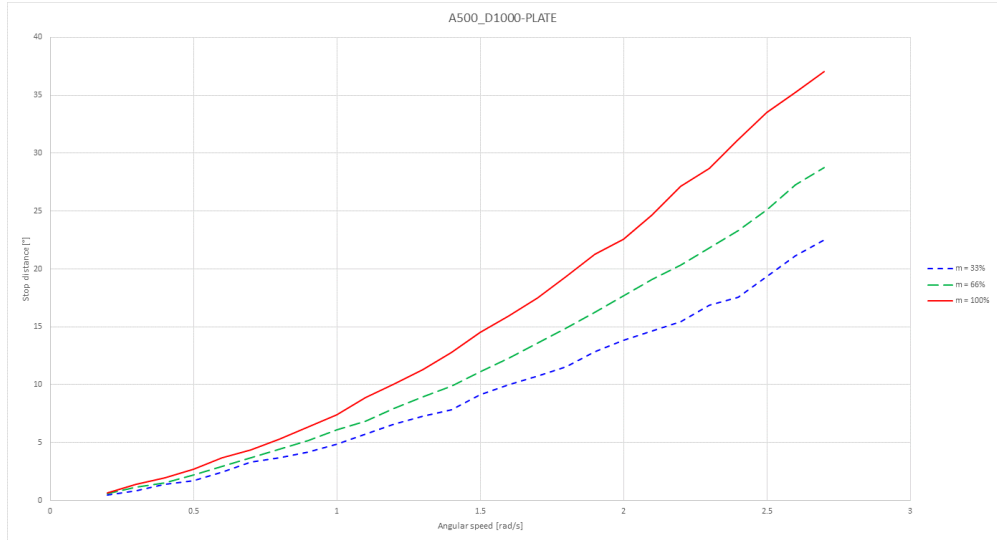
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

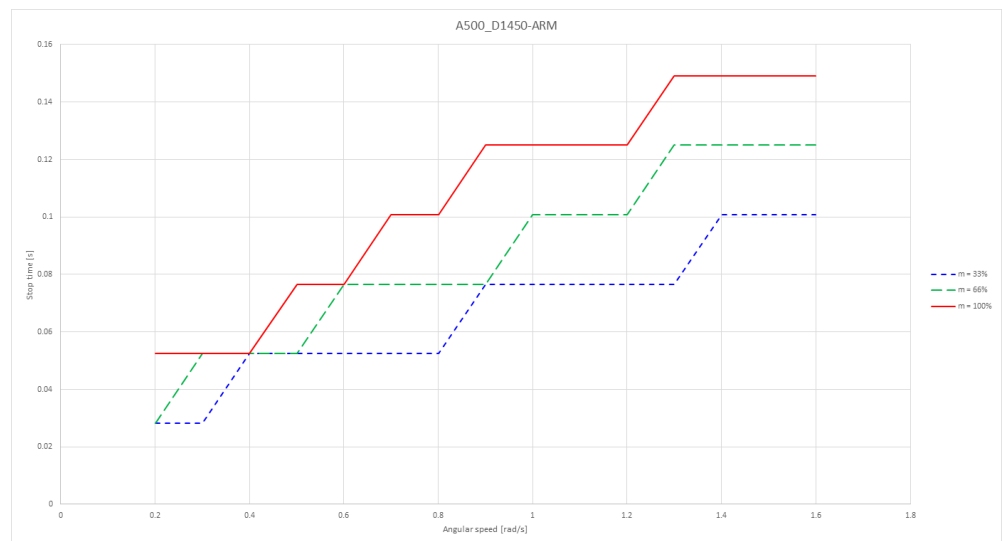
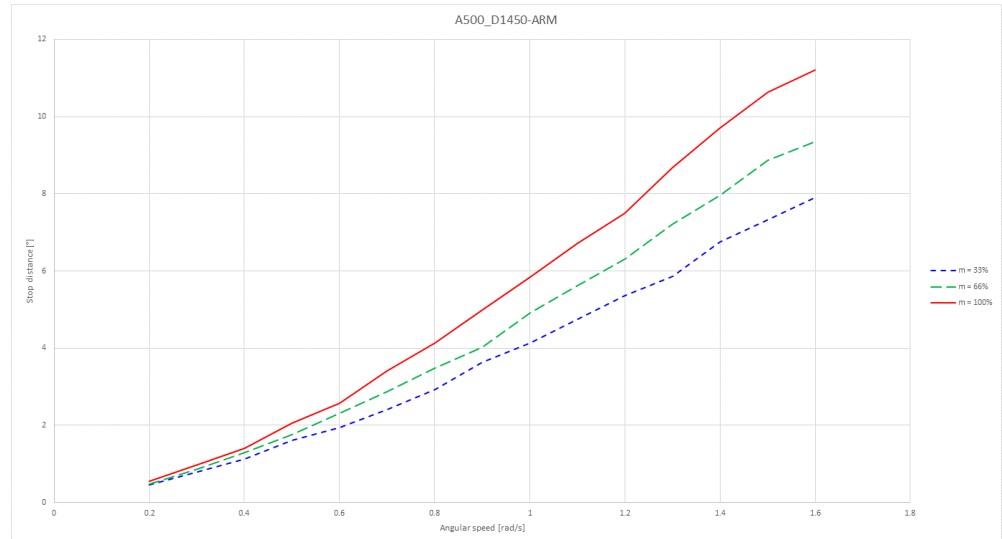
Stopping distance and stopping time



27.3 A500_D1450

Category 0, ARM

Stopping distance and stopping time



Continues on next page

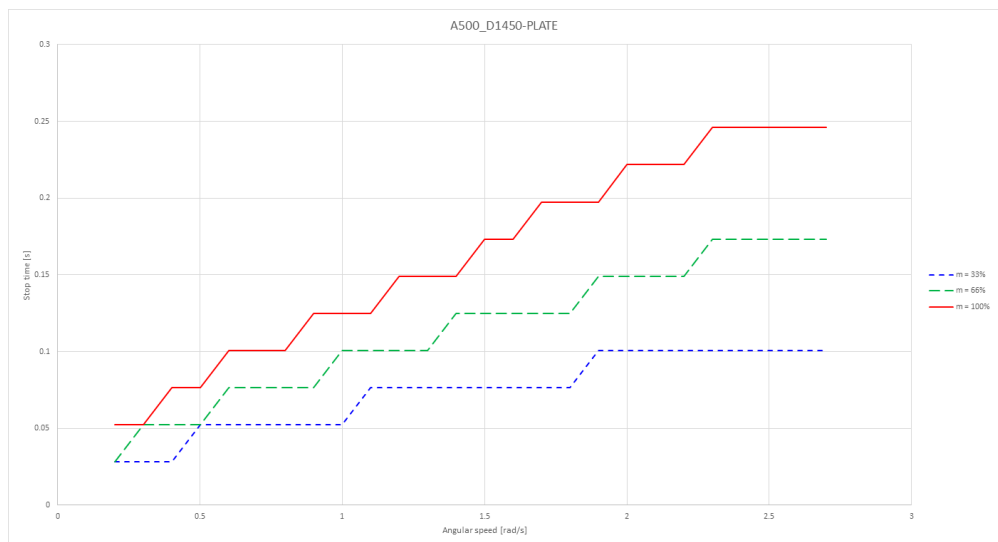
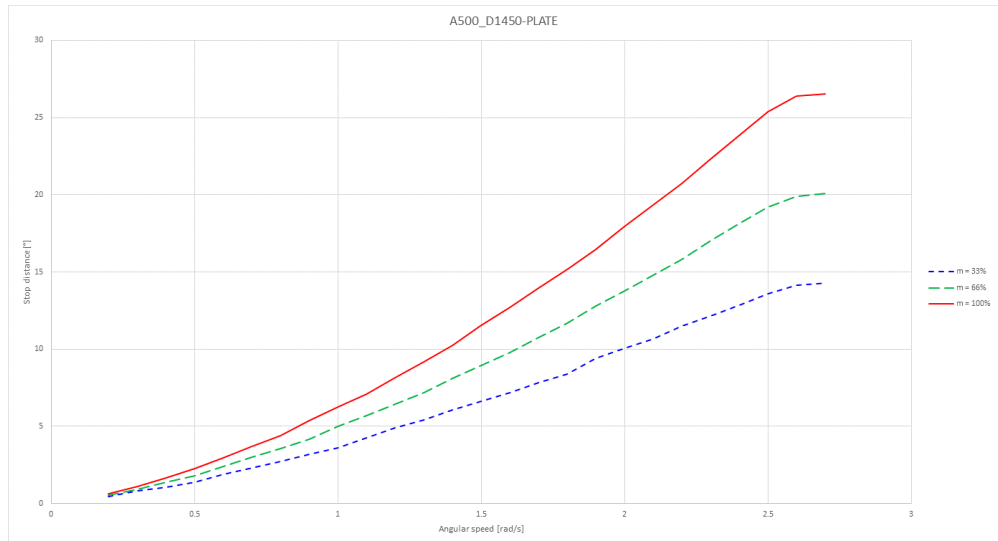
27 IRBP A

27.3 A500_D1450

Continued

Category 0, PLATE

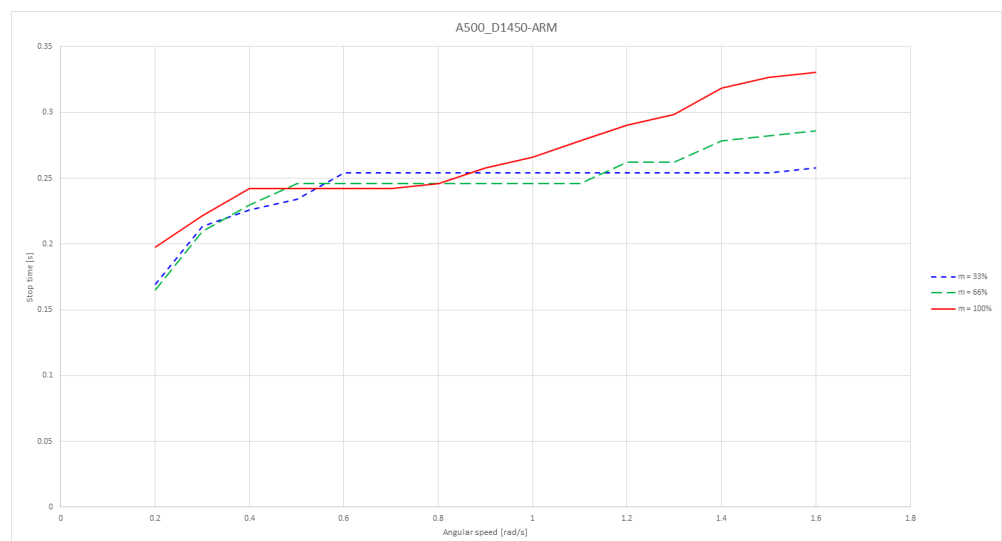
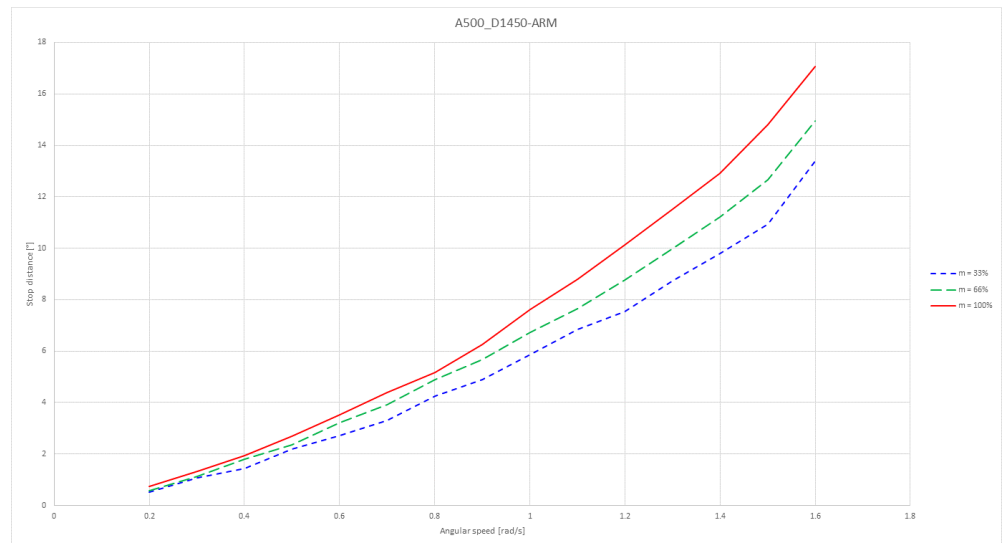
Stopping distance and stopping time



Continues on next page

Category 1, ARM

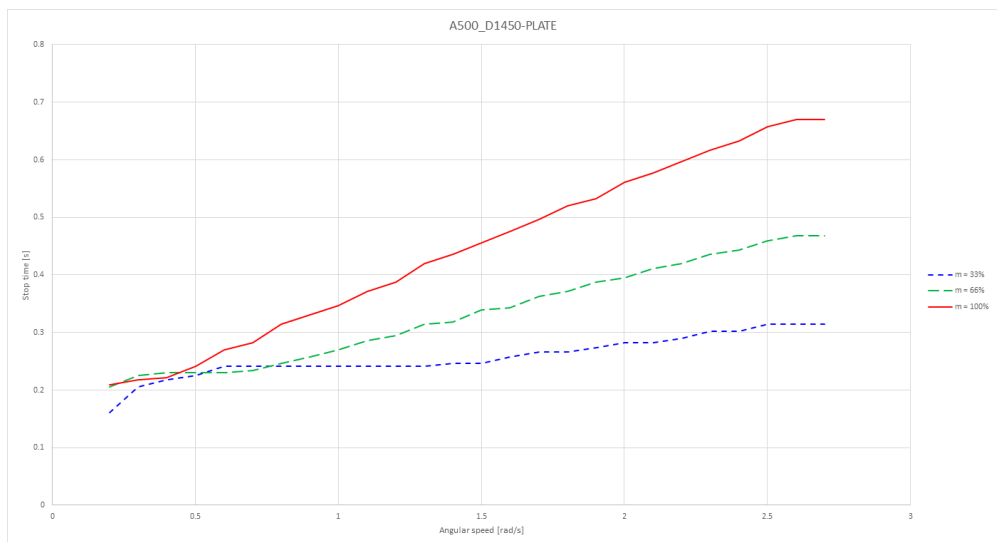
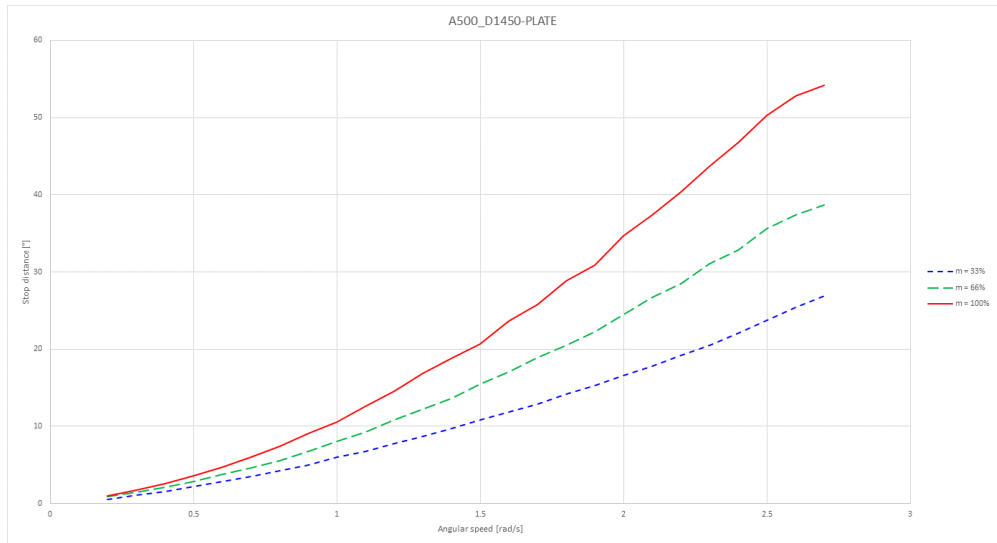
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

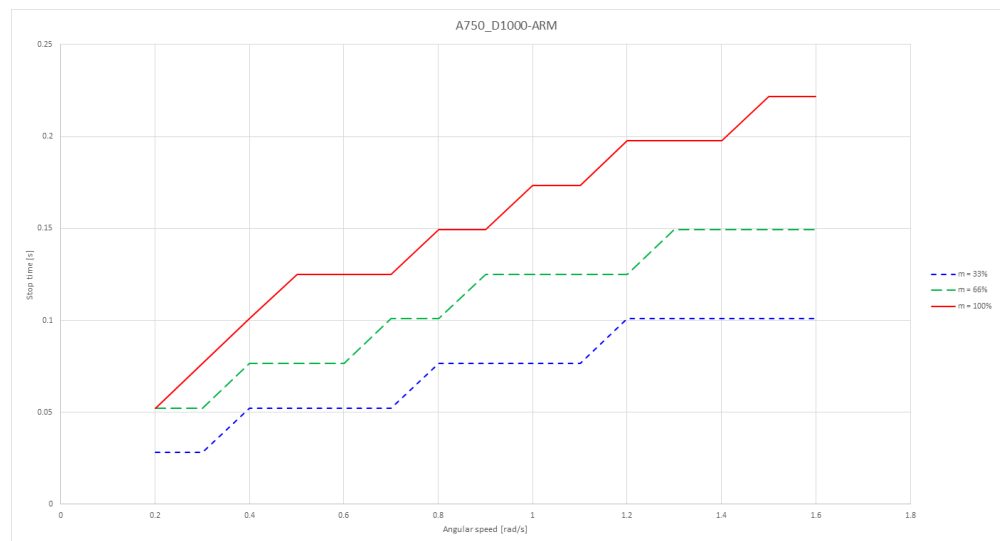
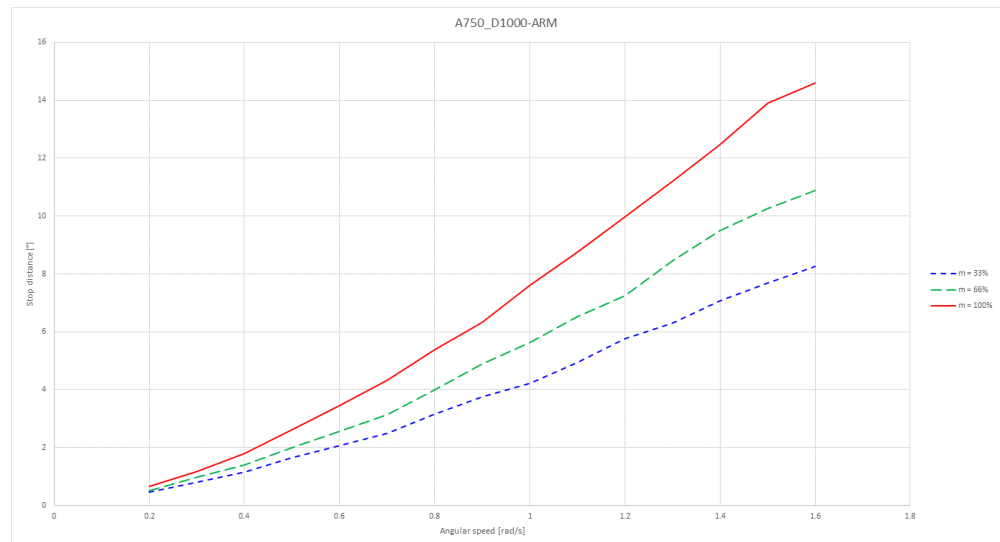
Stopping distance and stopping time



27.4 A750_D1000

Category 0, ARM

Stopping distance and stopping time

*Continues on next page*

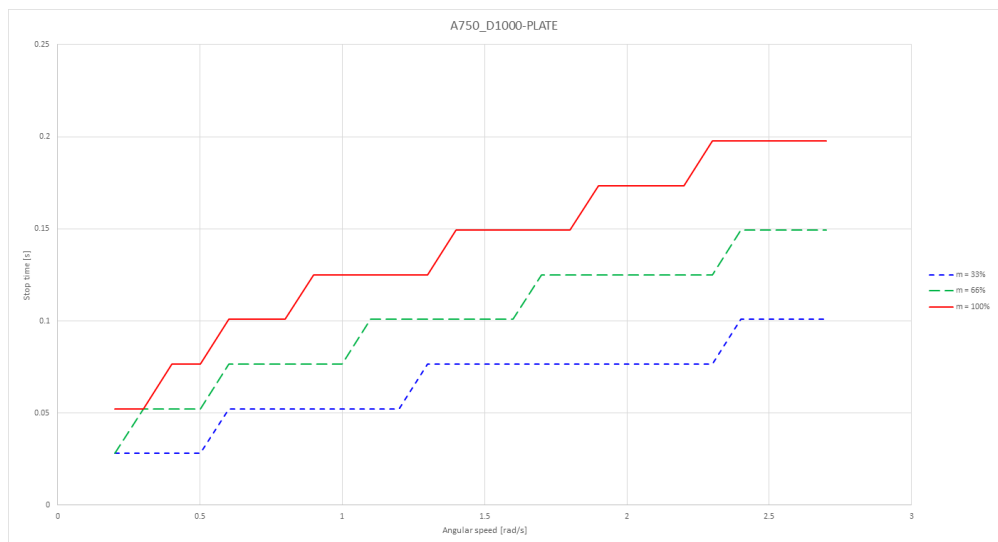
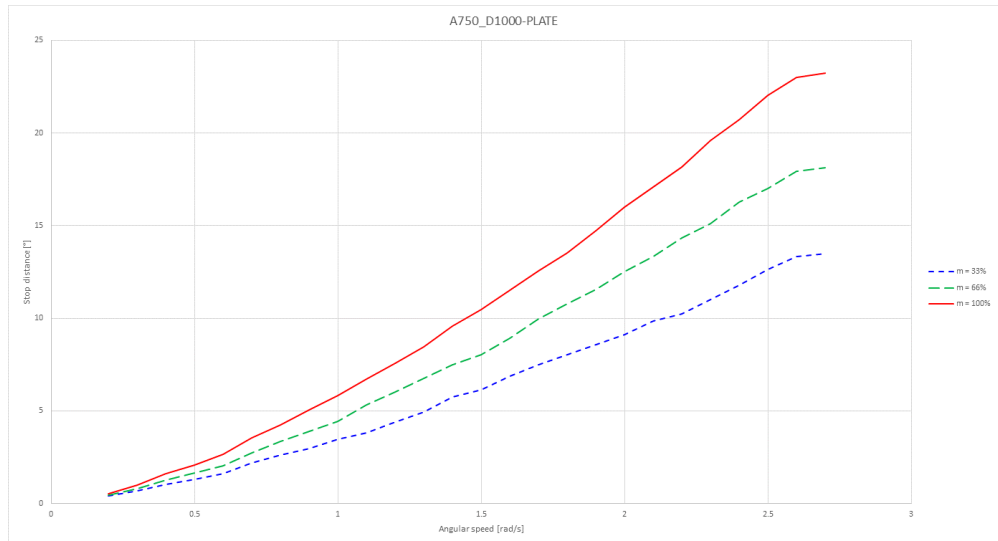
27 IRBP A

27.4 A750_D1000

Continued

Category 0, PLATE

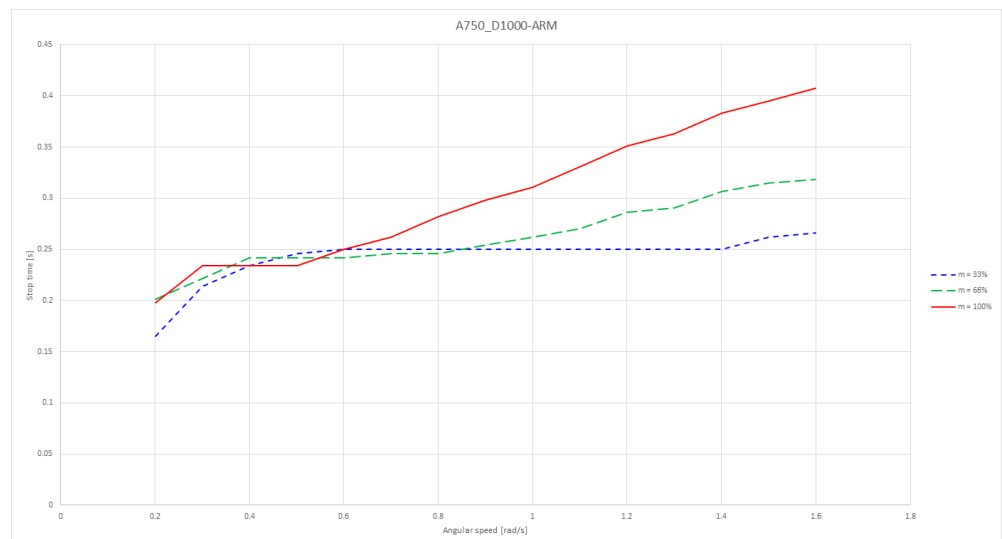
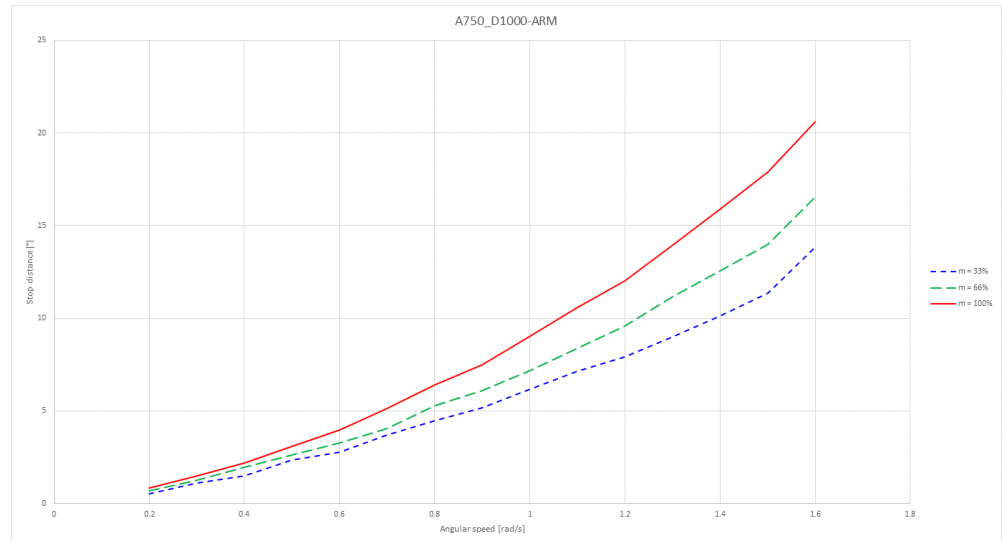
Stopping distance and stopping time



Continues on next page

Category 1, ARM

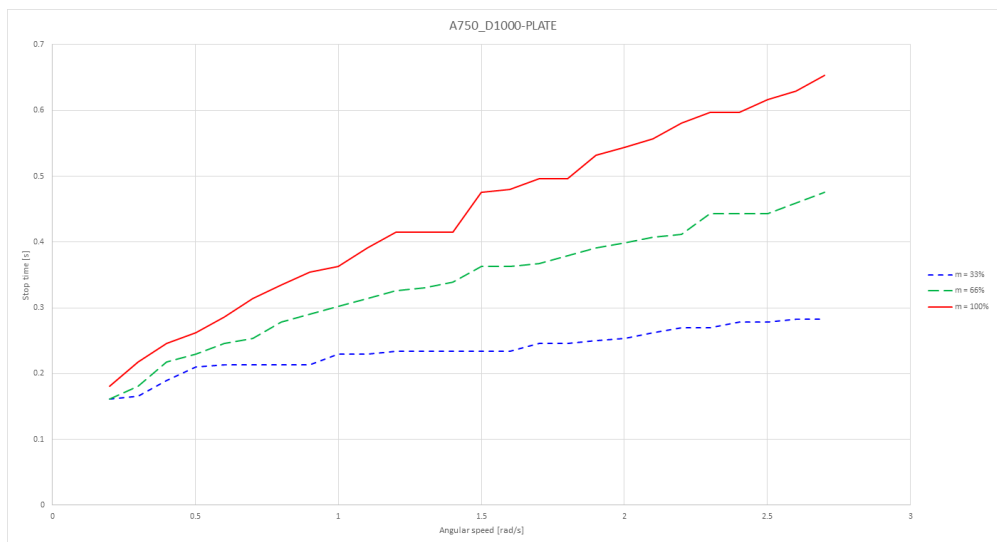
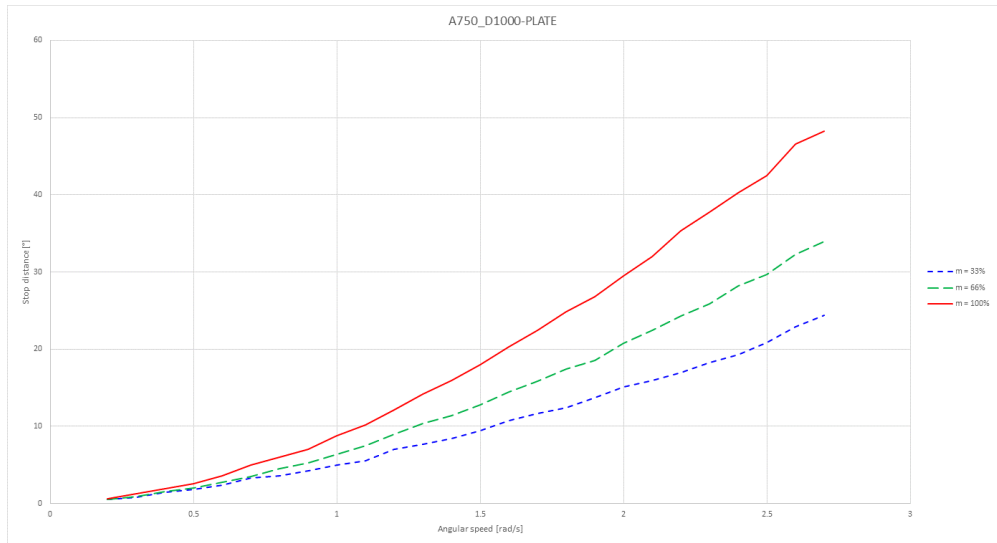
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

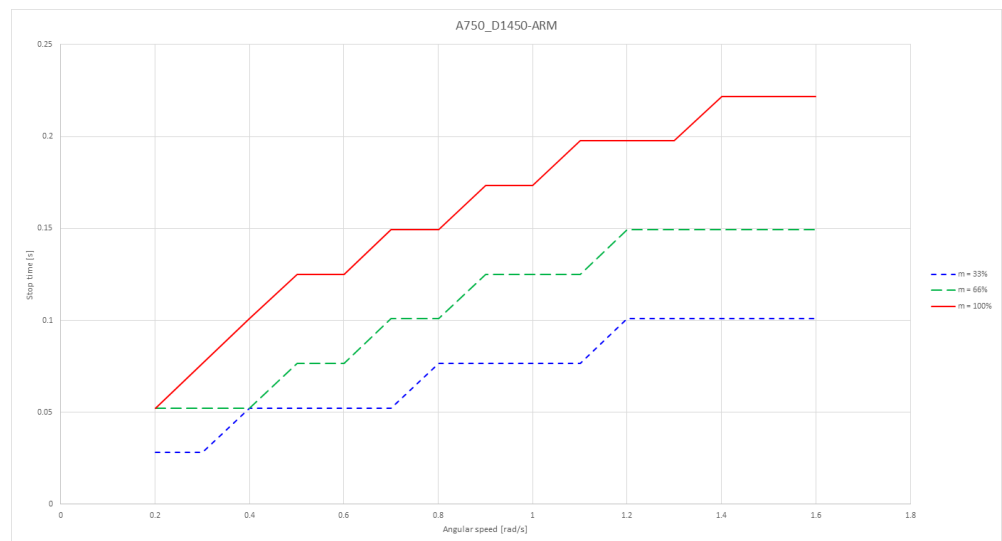
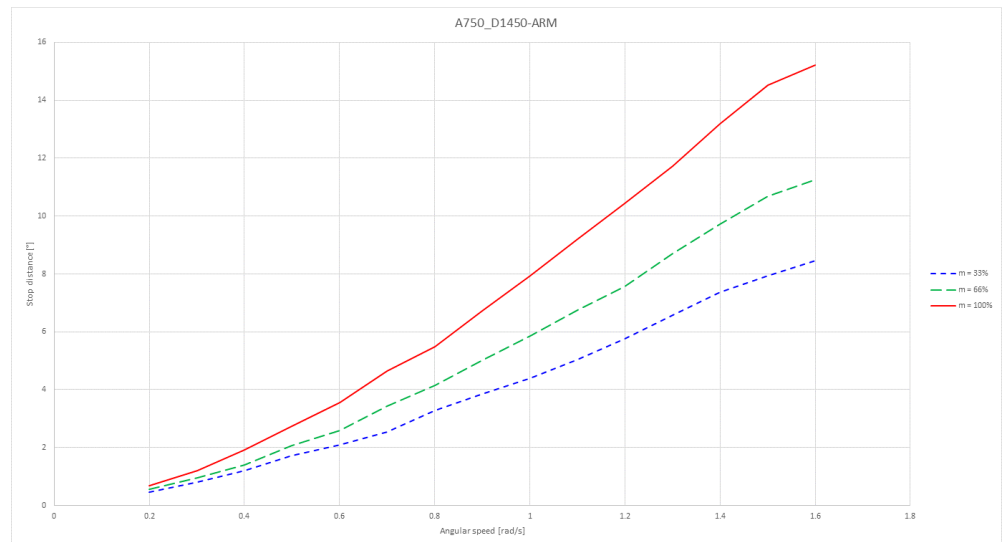
Stopping distance and stopping time



27.5 A750_D1450

Category 0, ARM

Stopping distance and stopping time



Continues on next page

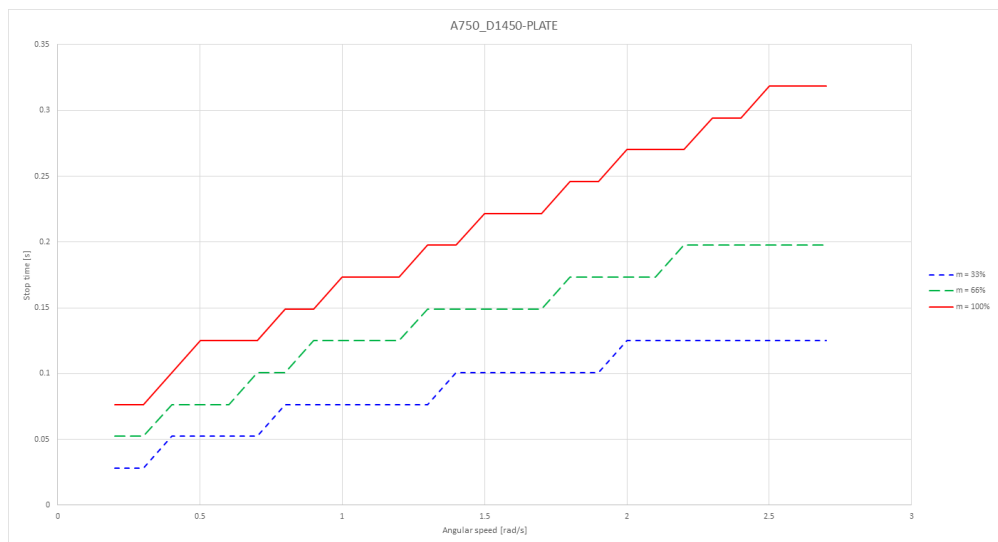
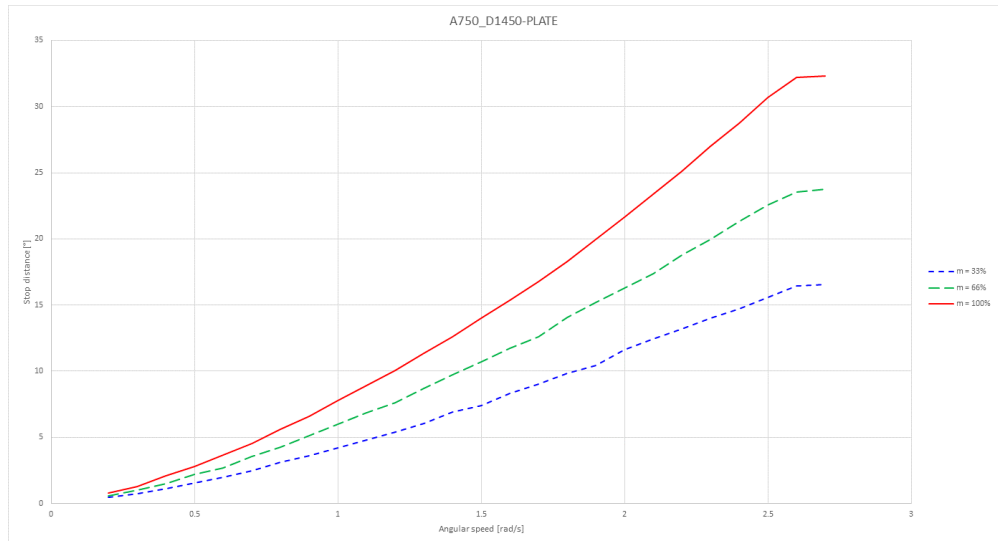
27 IRBP A

27.5 A750_D1450

Continued

Category 0, PLATE

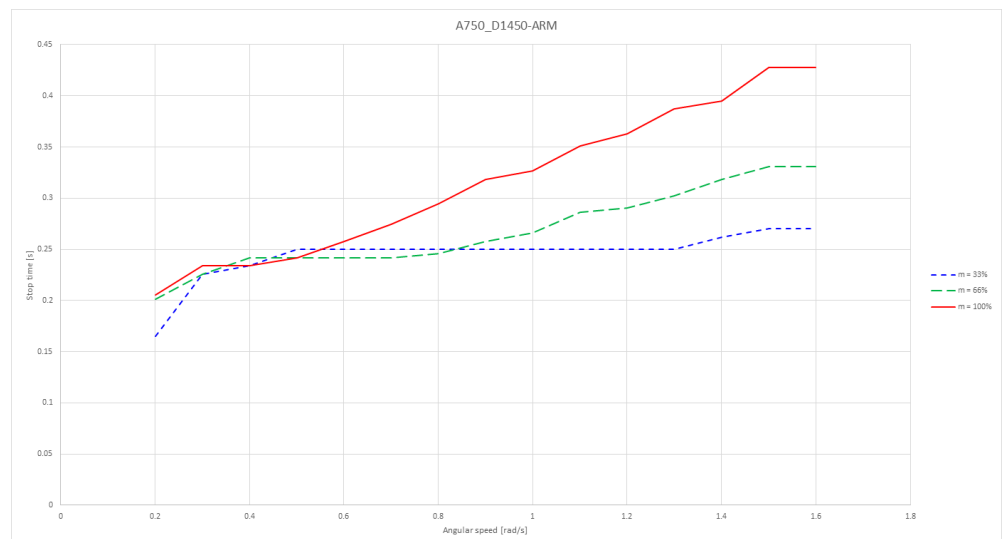
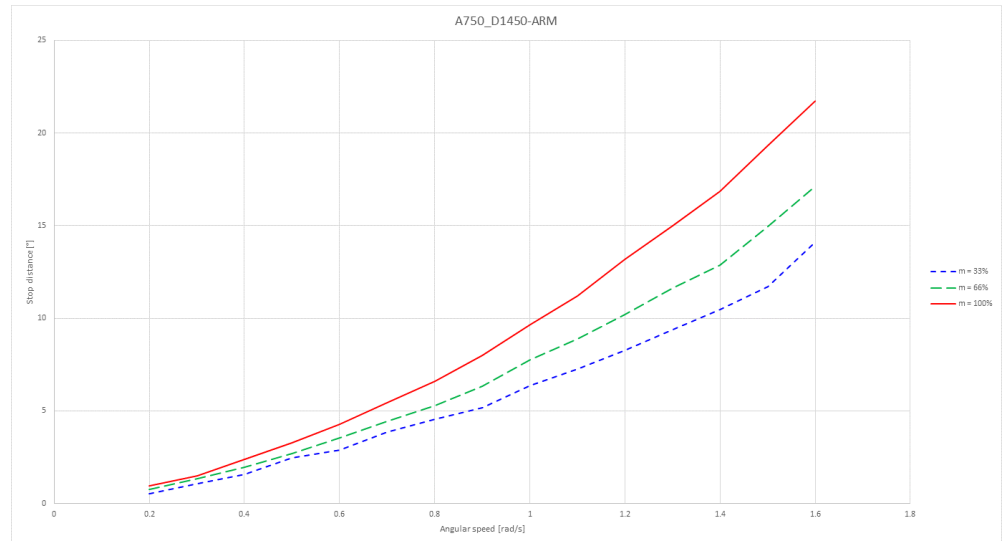
Stopping distance and stopping time



Continues on next page

Category 1, ARM

Stopping distance and stopping time



Continues on next page

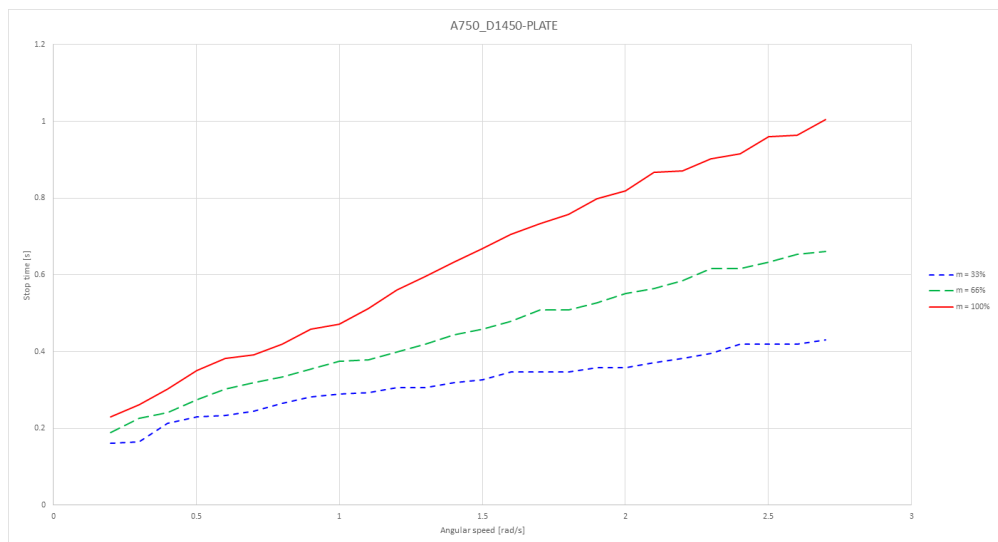
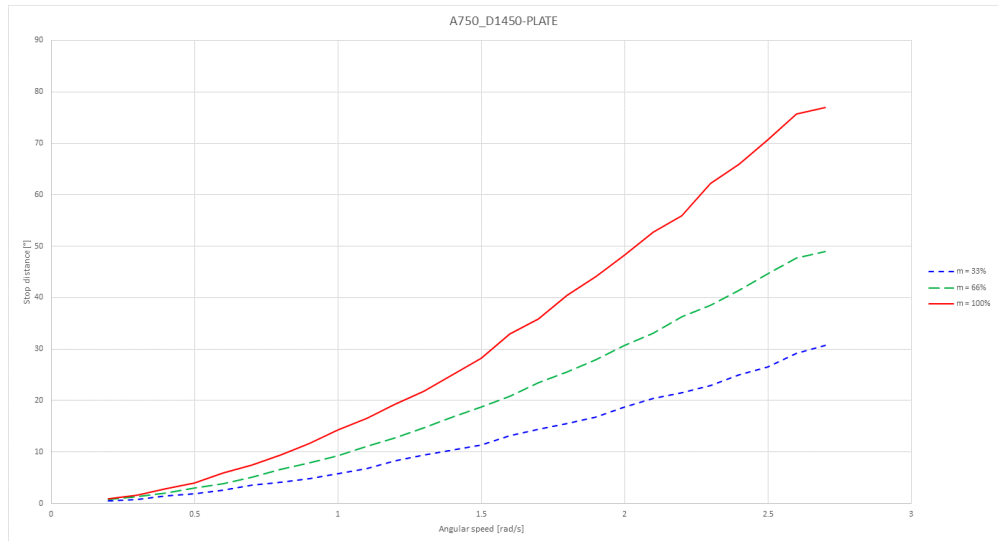
27 IRBP A

27.5 A750_D1450

Continued

Category 1, PLATE

Stopping distance and stopping time

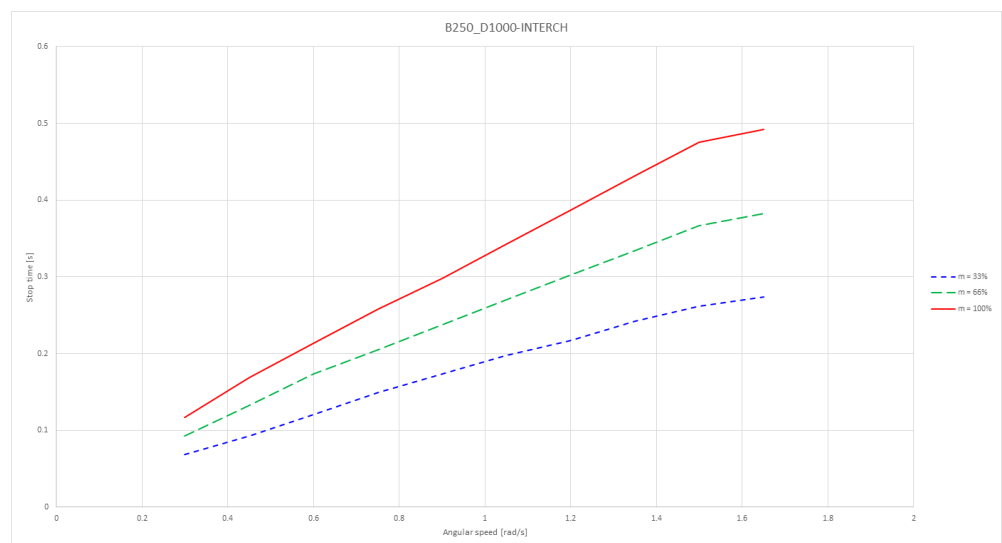
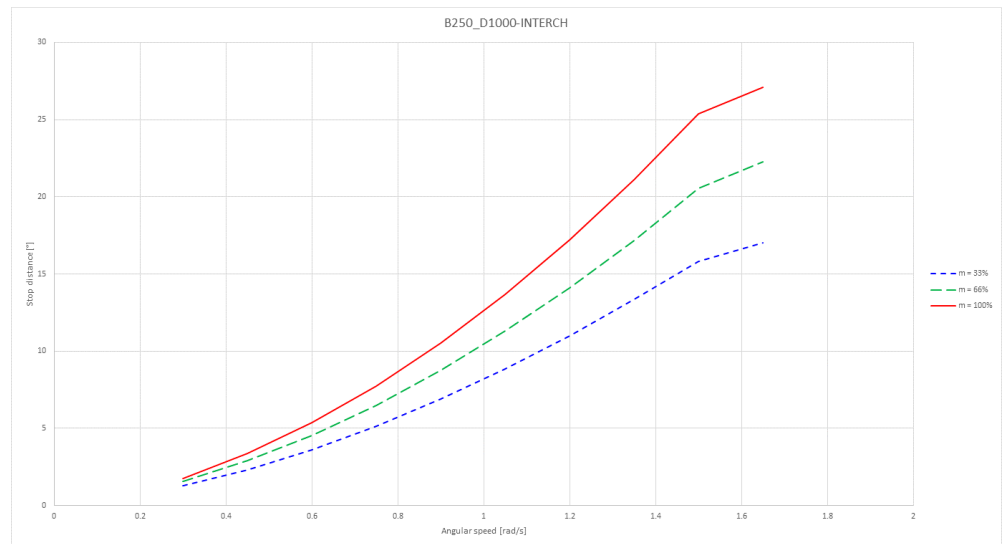


28 IRBP B

28.1 B250_D1000

Category 0, INTERCH

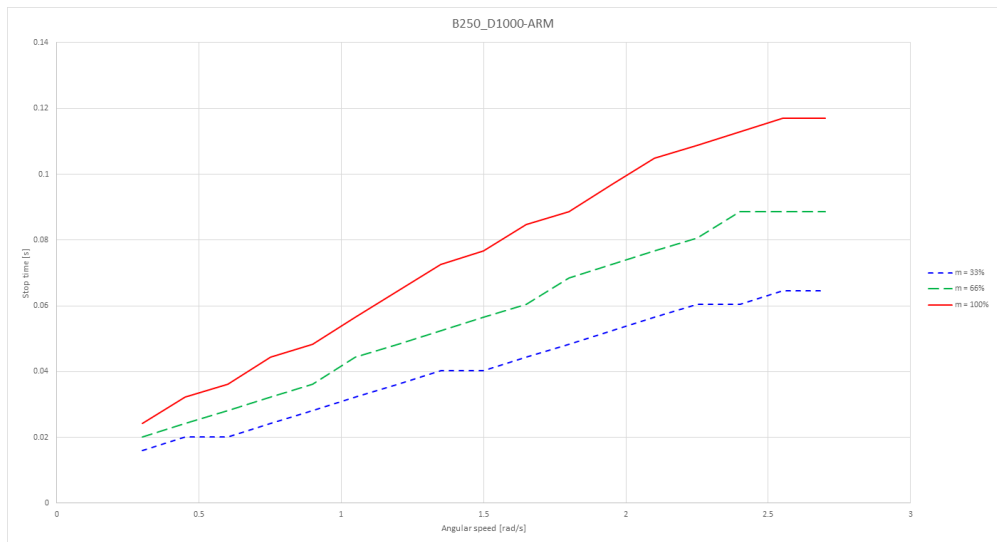
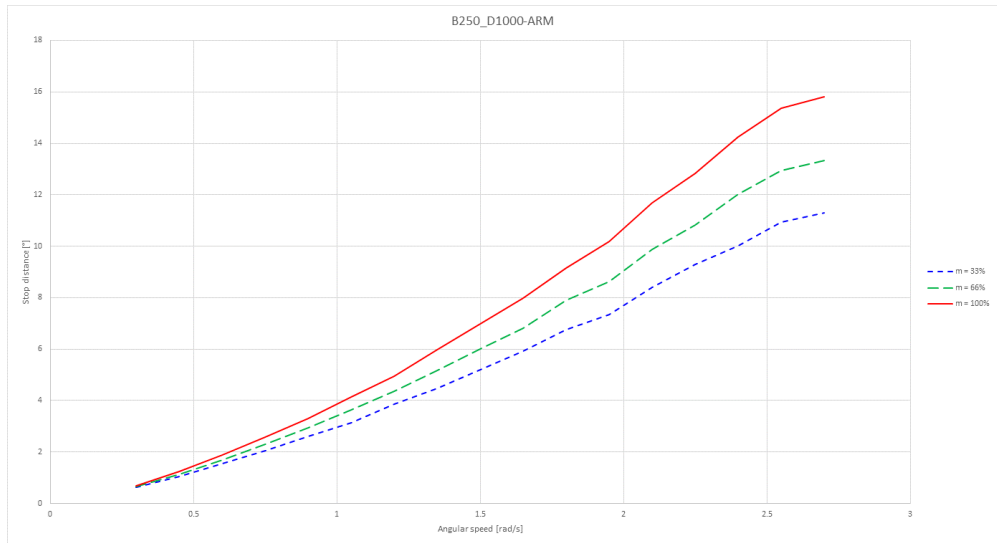
Stopping distance and stopping time



Continues on next page

Category 0, ARM

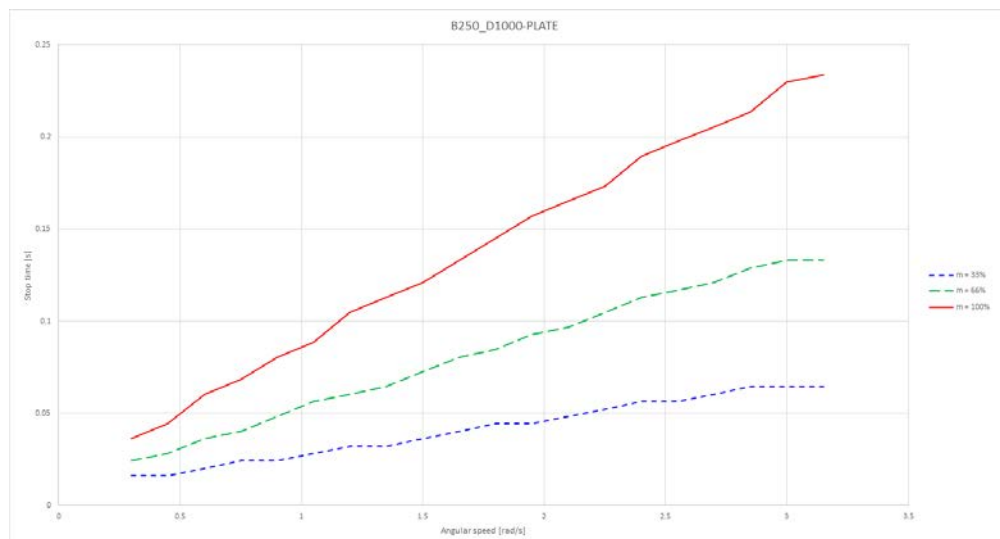
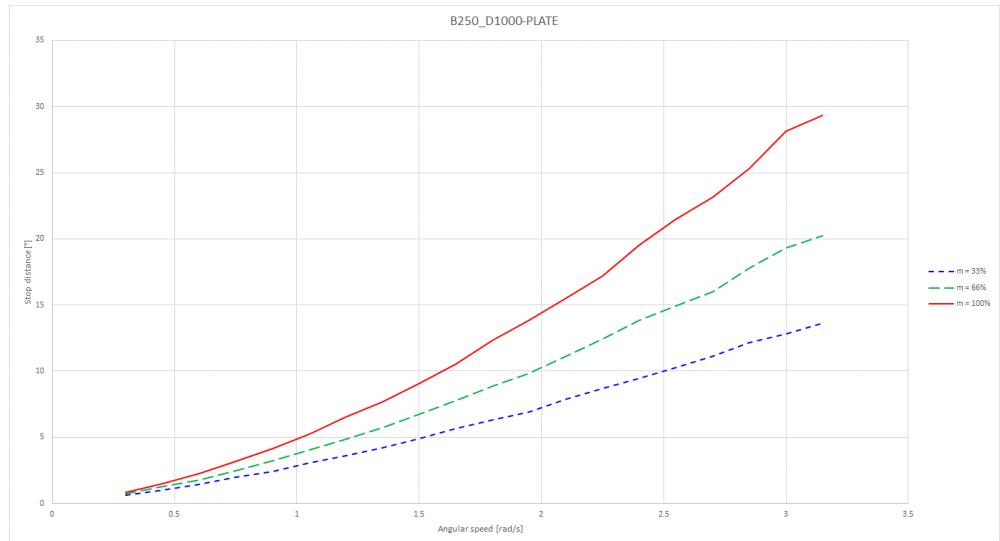
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

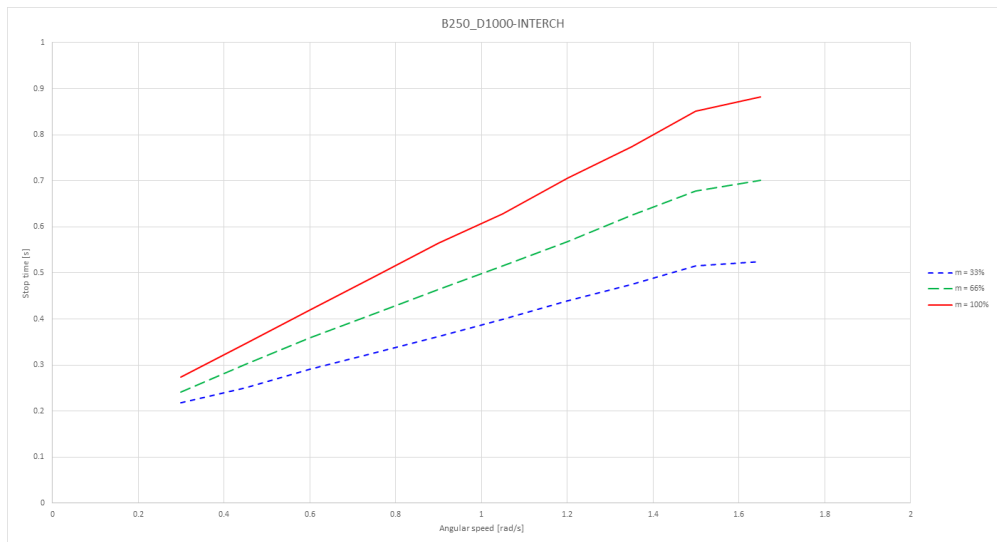
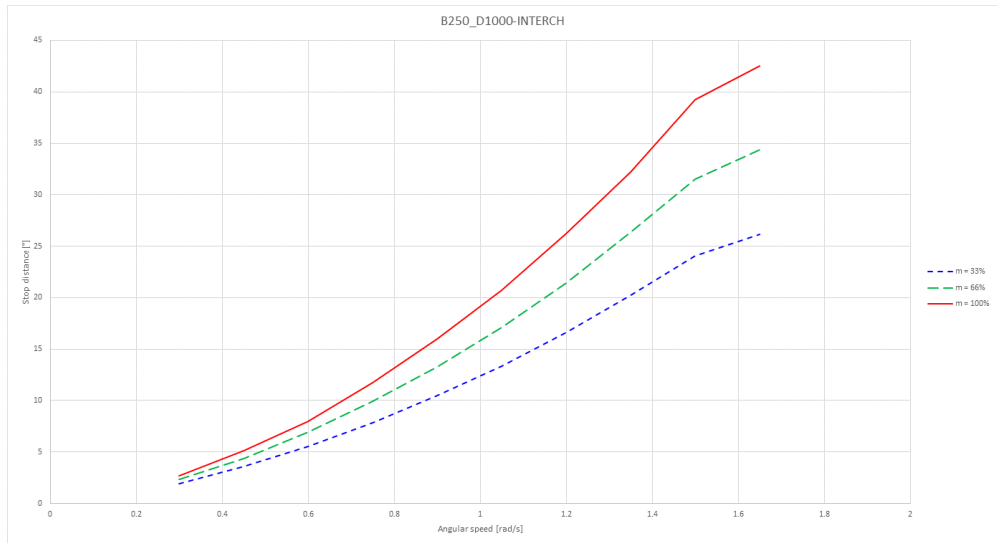
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

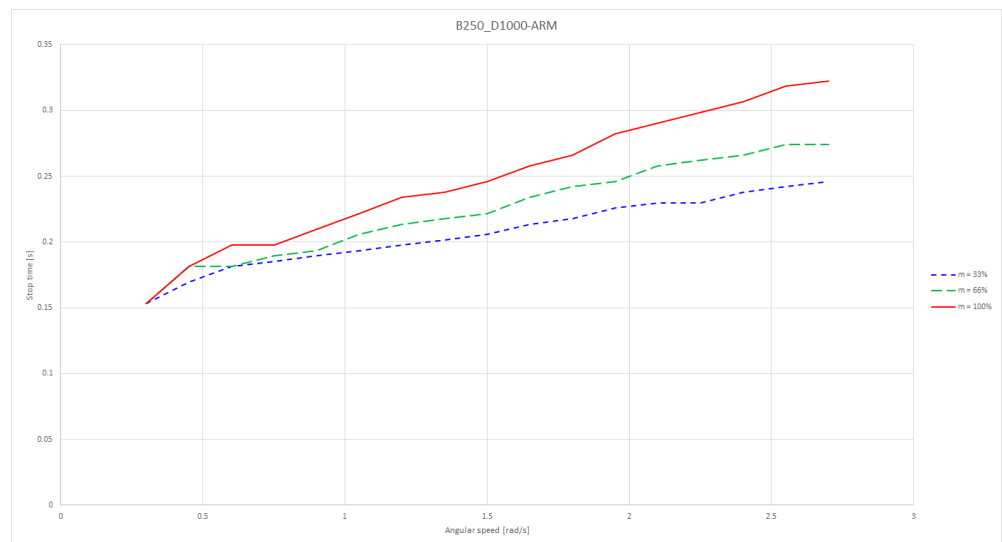
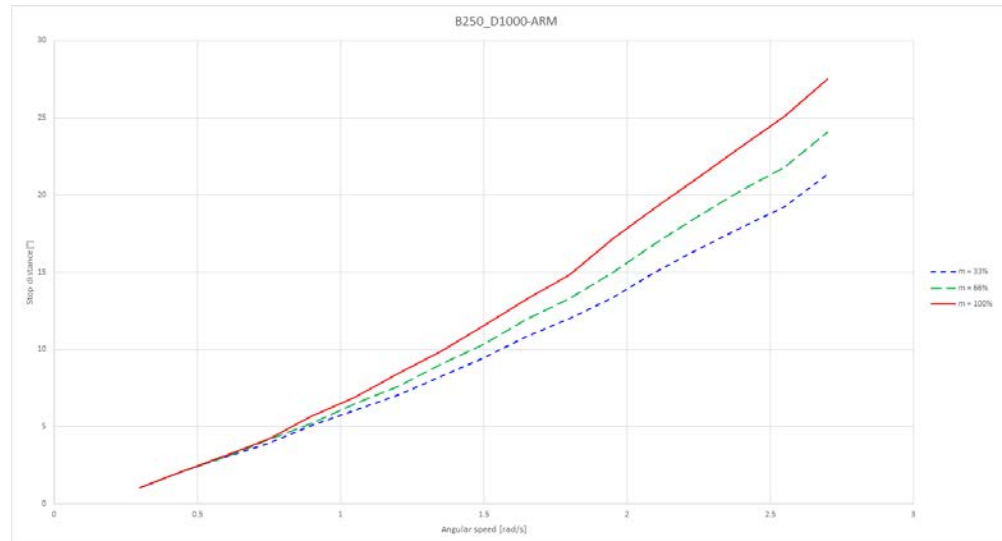
Stopping distance and stopping time



Continues on next page

Category 1, ARM

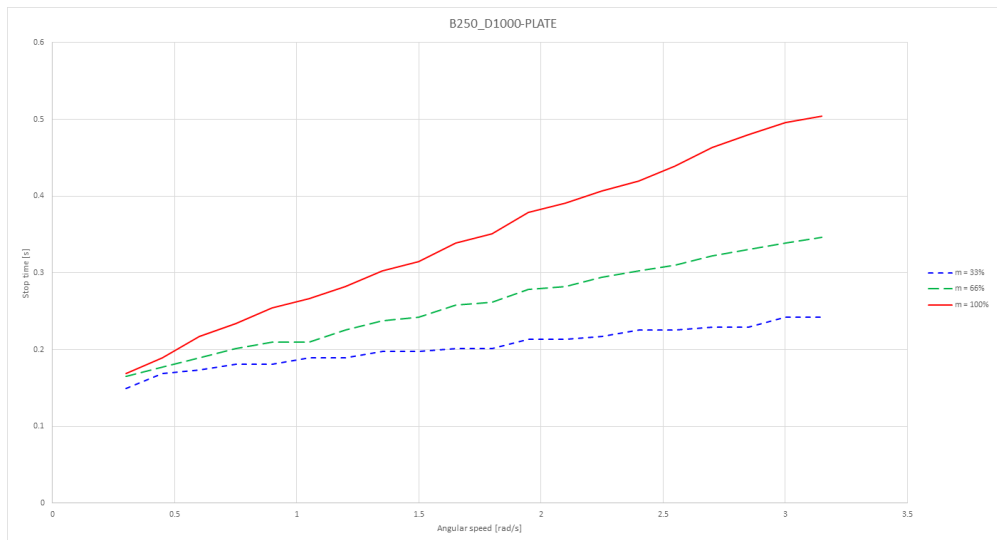
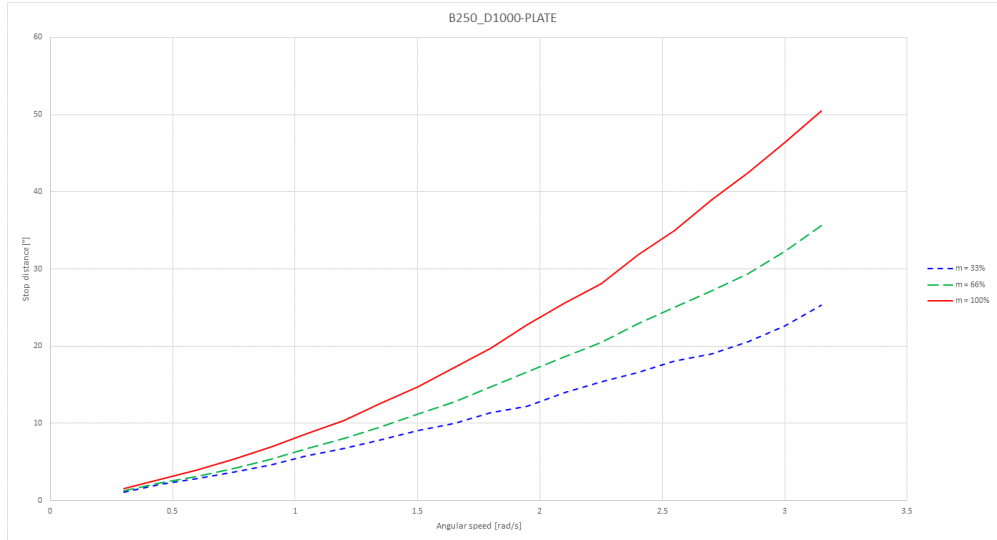
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

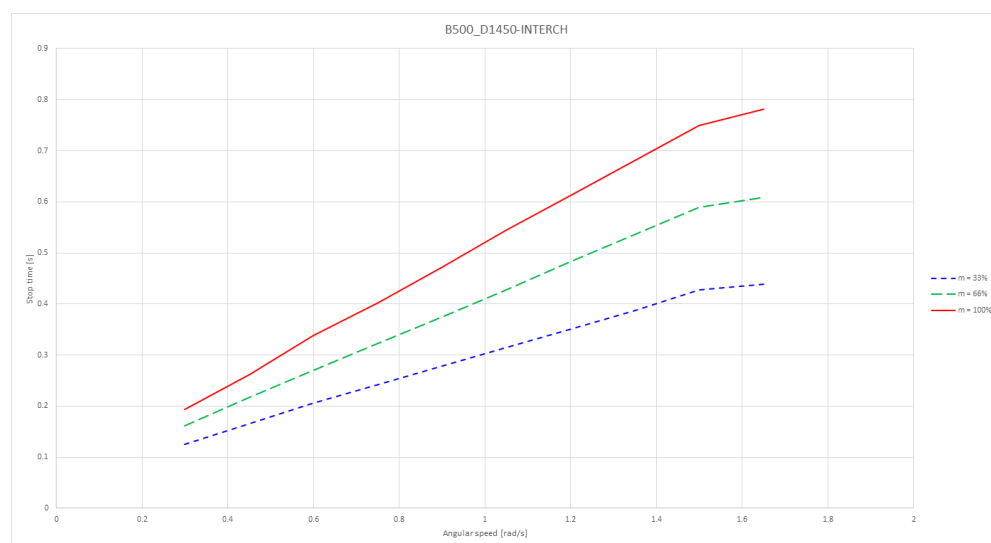
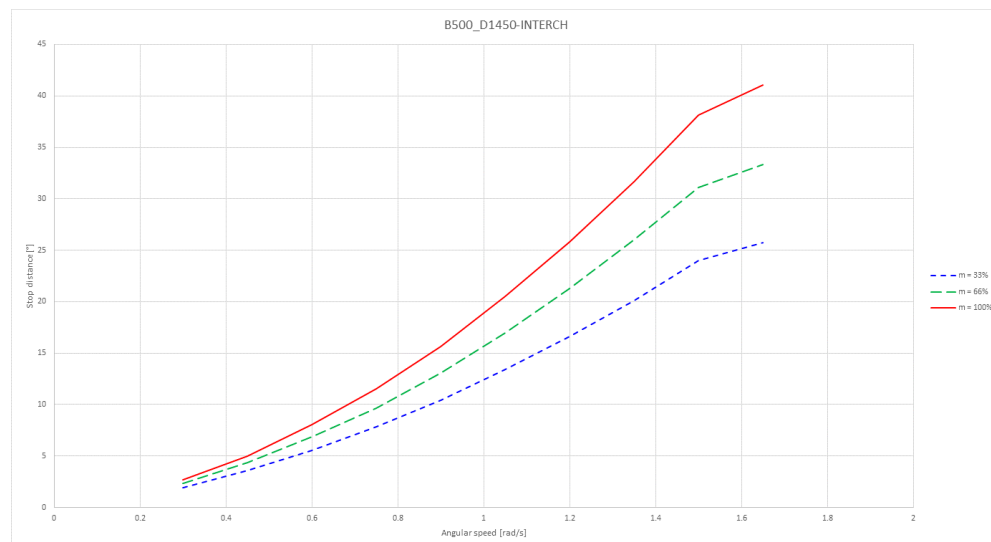
Stopping distance and stopping time



28.2 B500_D1450

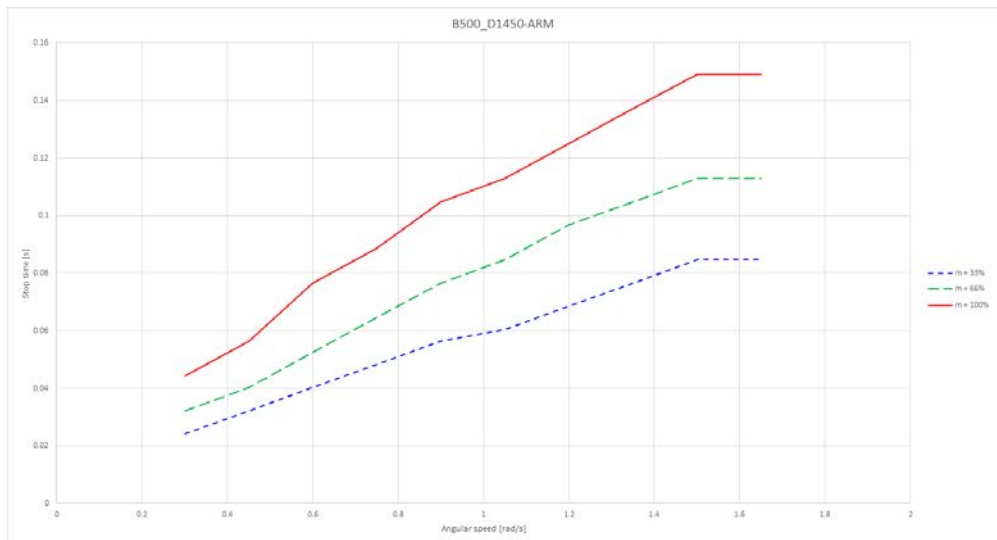
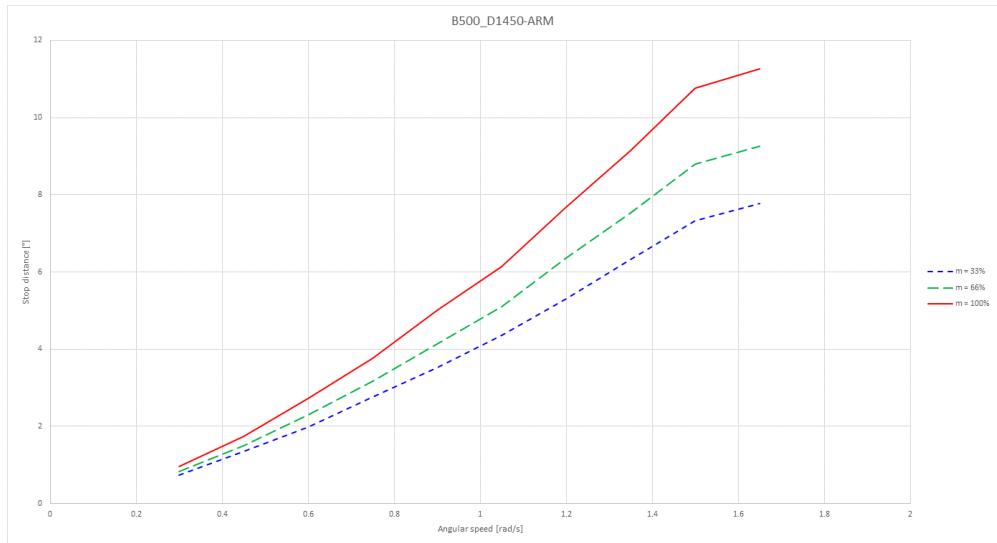
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, ARM

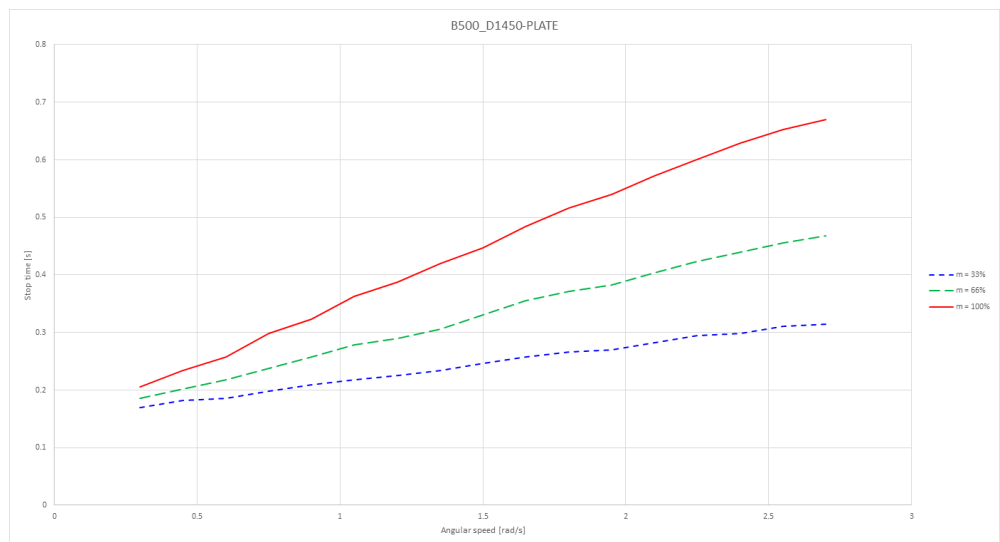
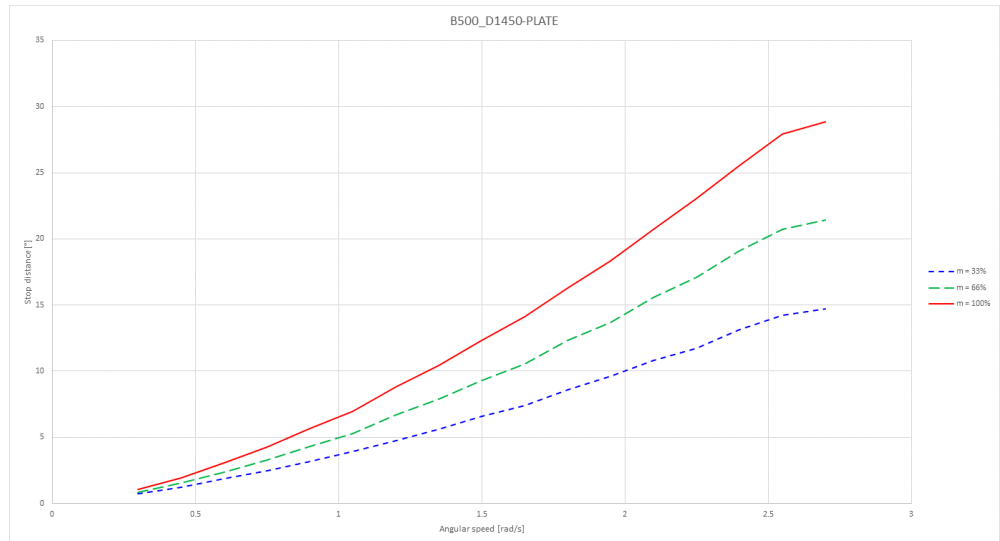
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

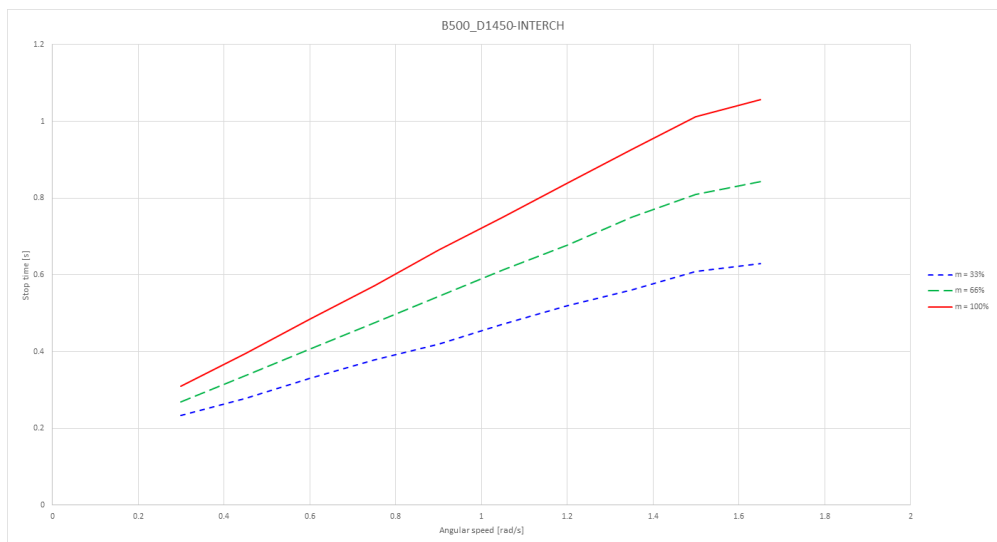
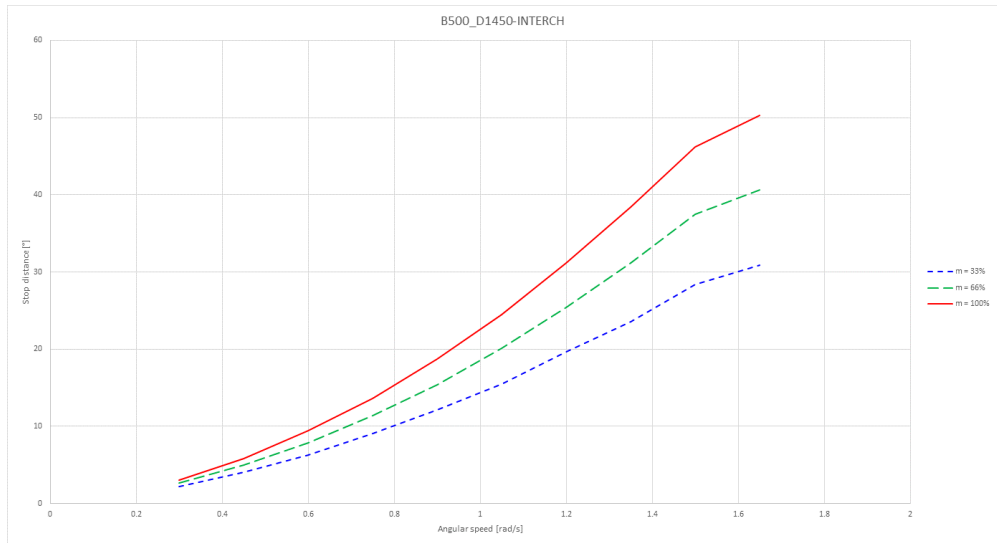
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

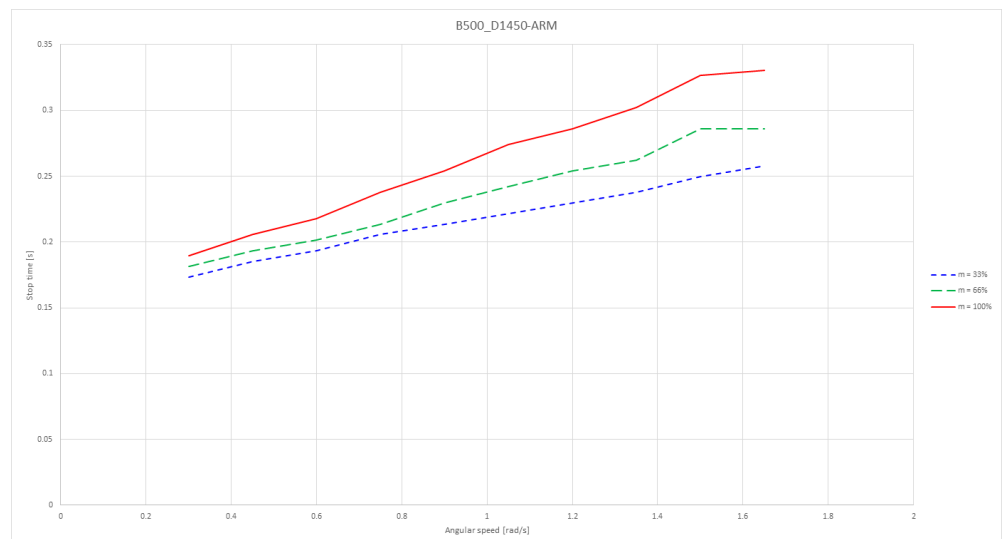
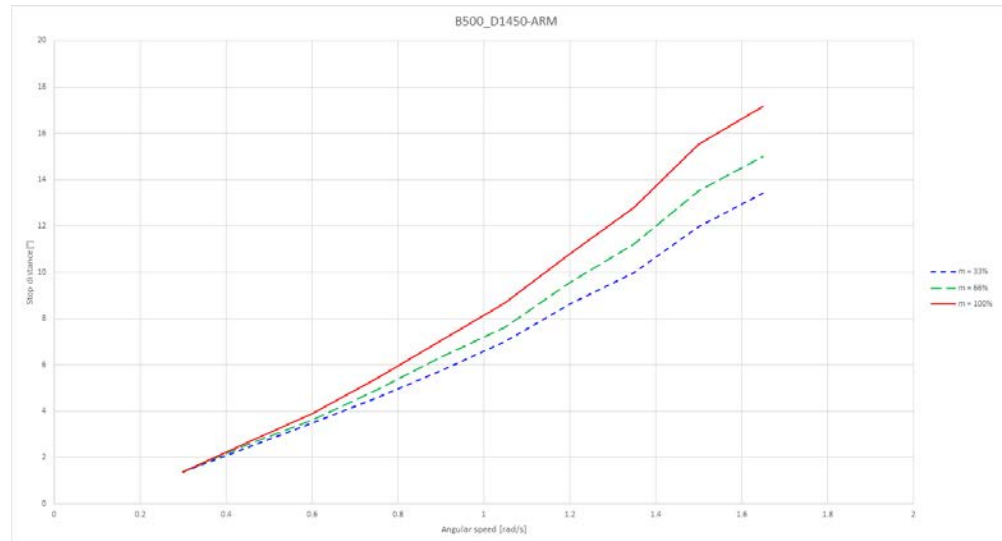
Stopping distance and stopping time



Continues on next page

Category 1, ARM

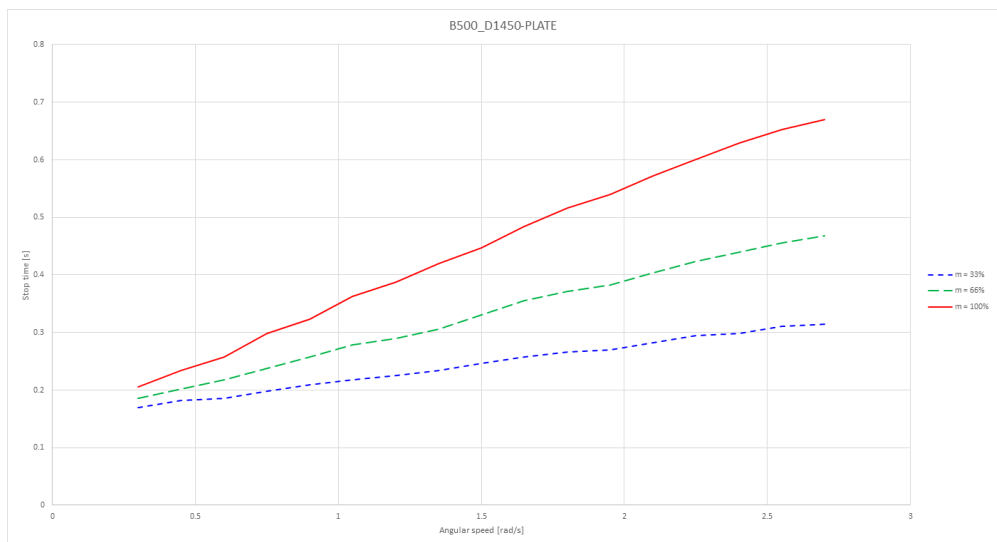
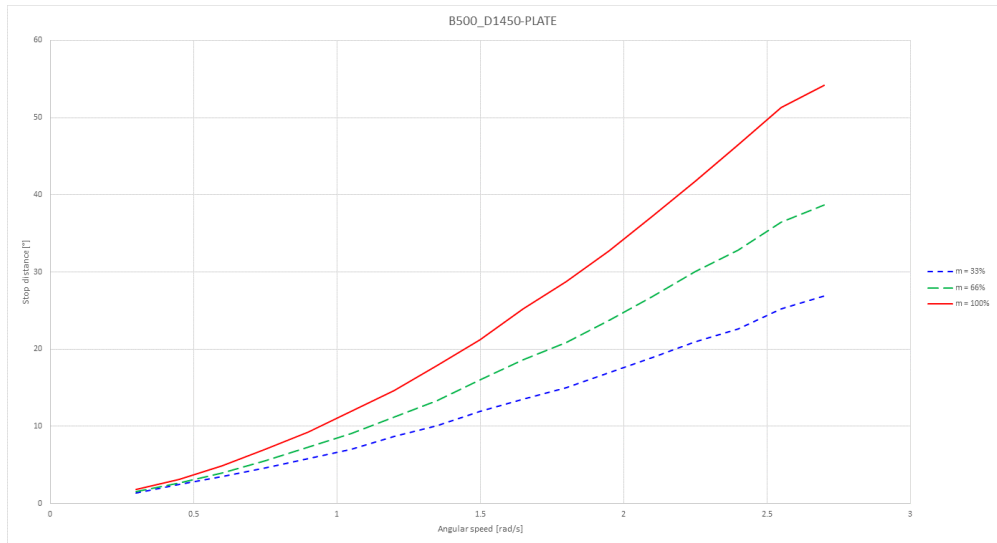
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

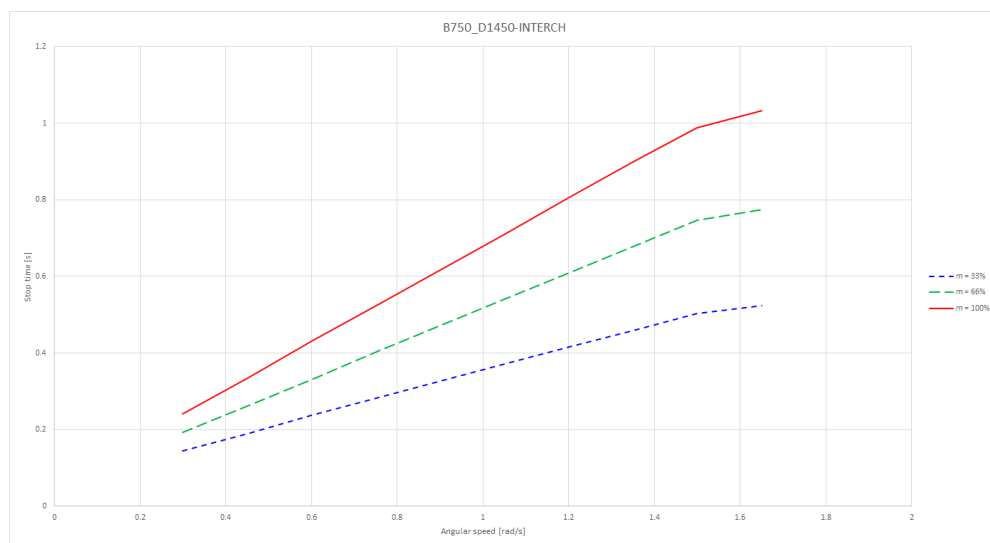
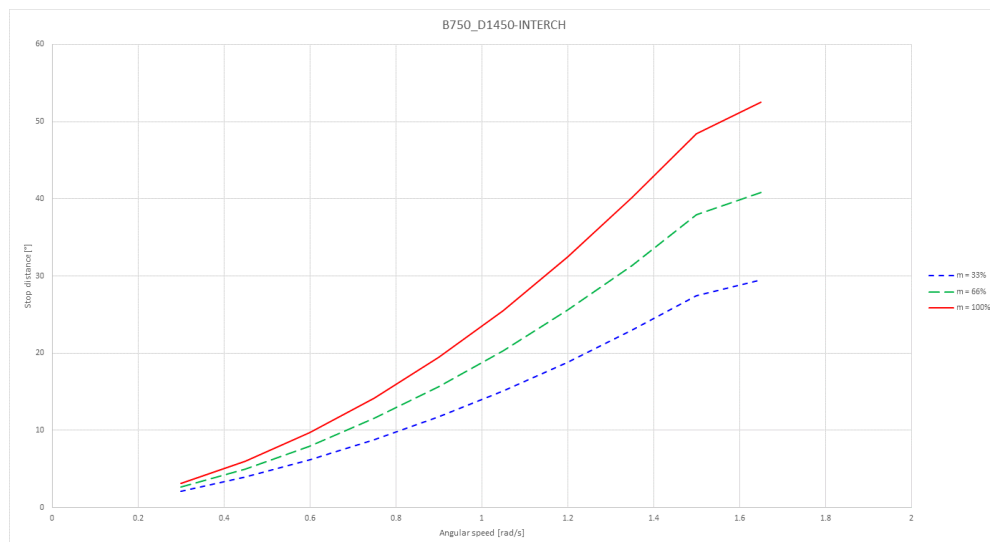
Stopping distance and stopping time



28.3 B750_D1450

Category 0, INTERCH

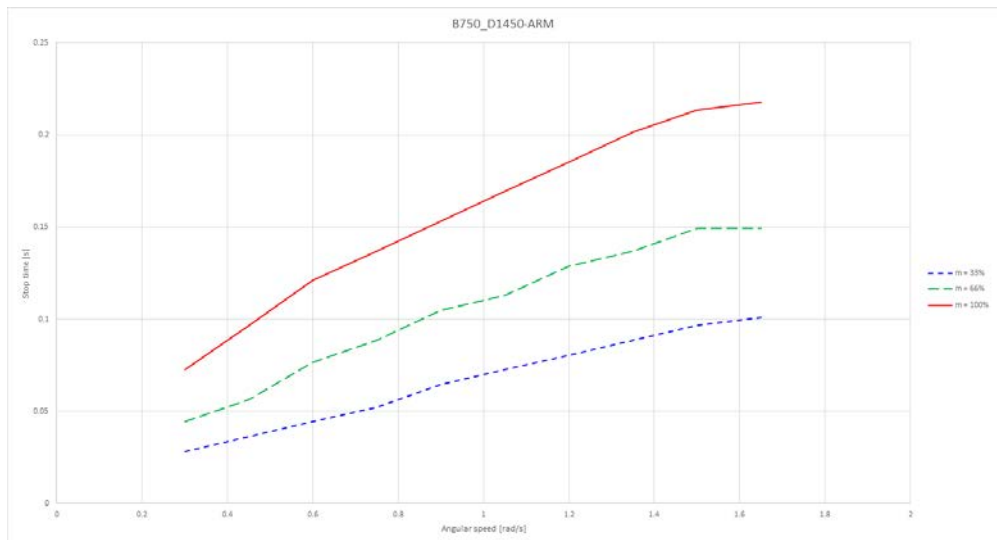
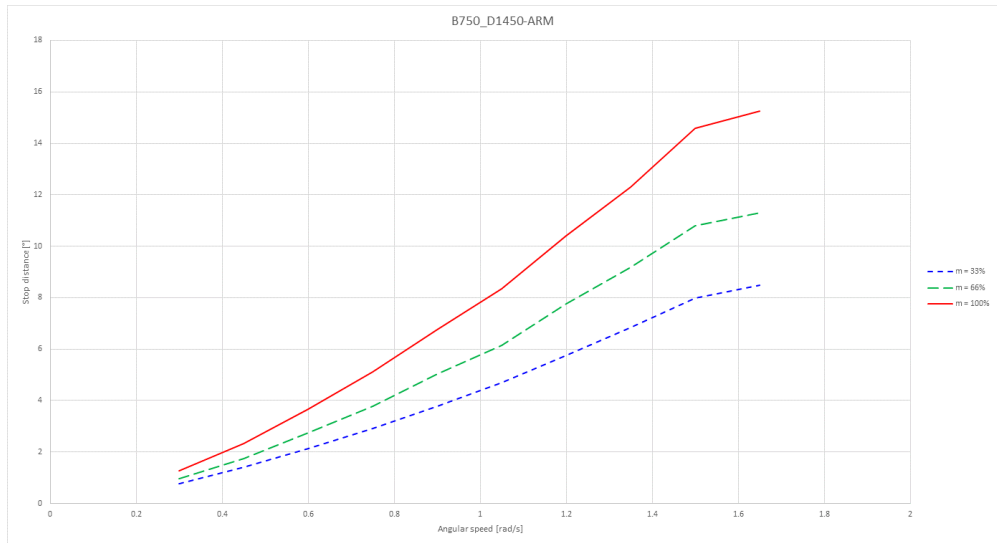
Stopping distance and stopping time



Continues on next page

Category 0, ARM

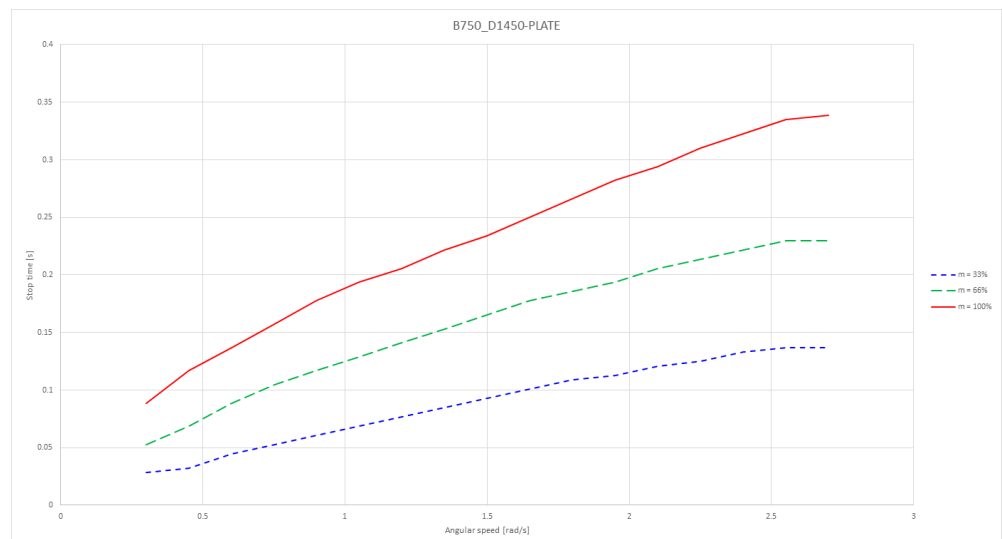
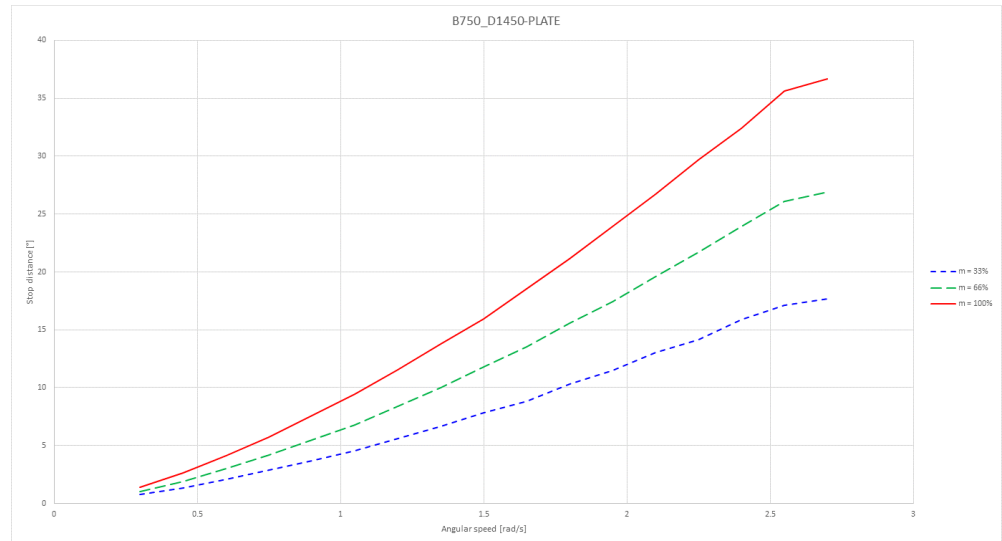
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

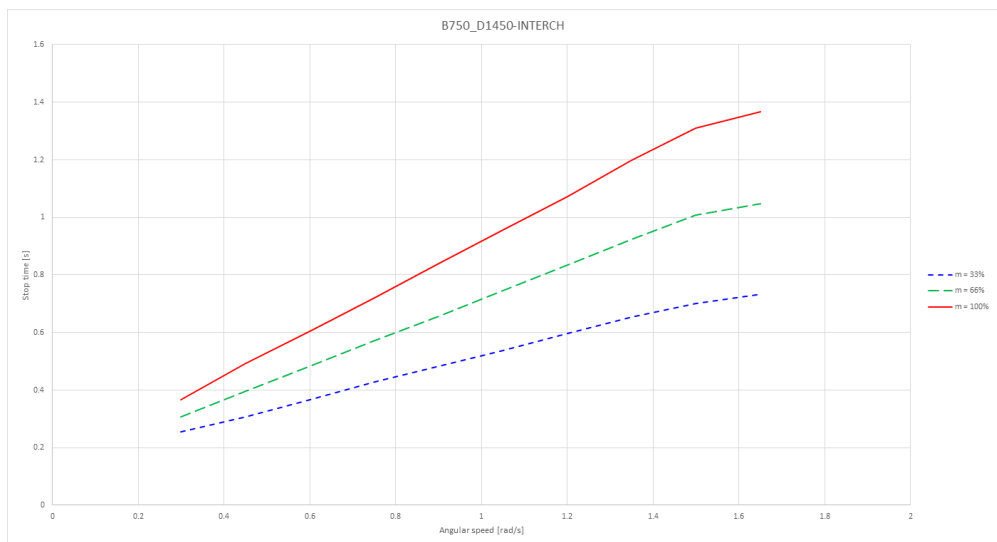
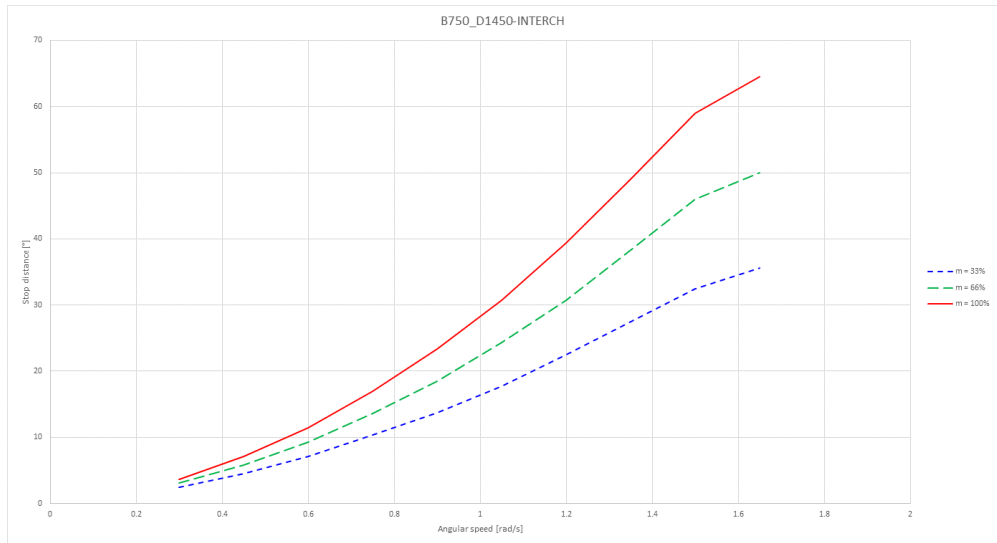
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

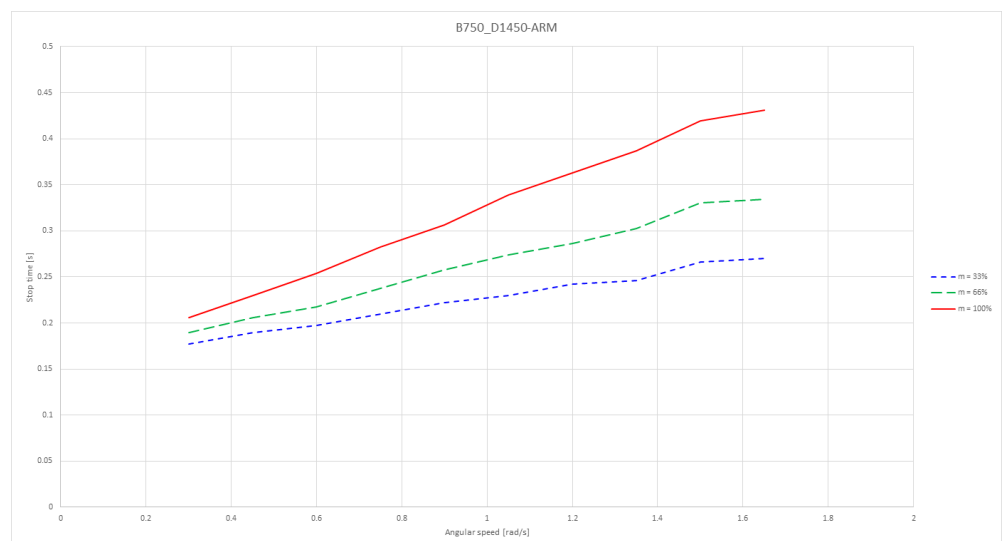
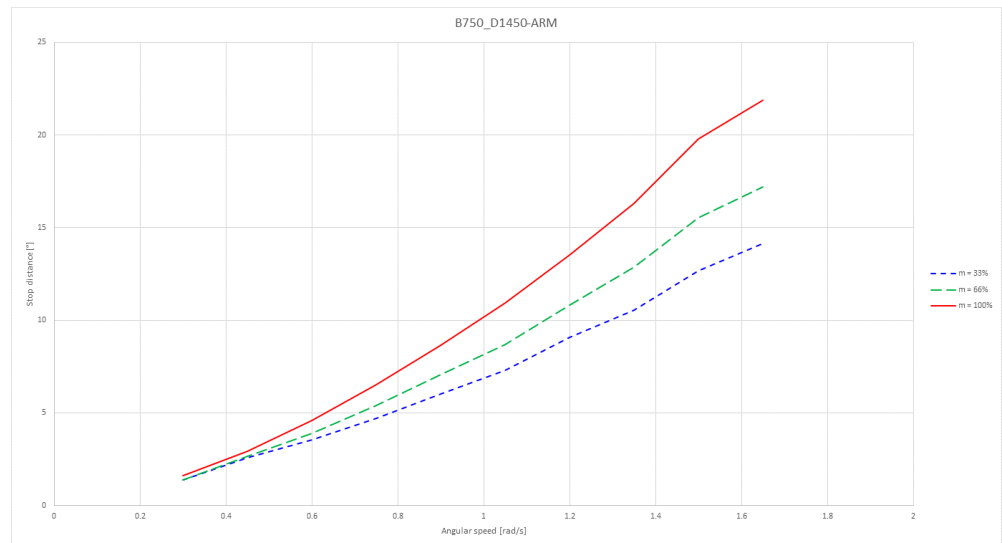
Stopping distance and stopping time



Continues on next page

Category 1, ARM

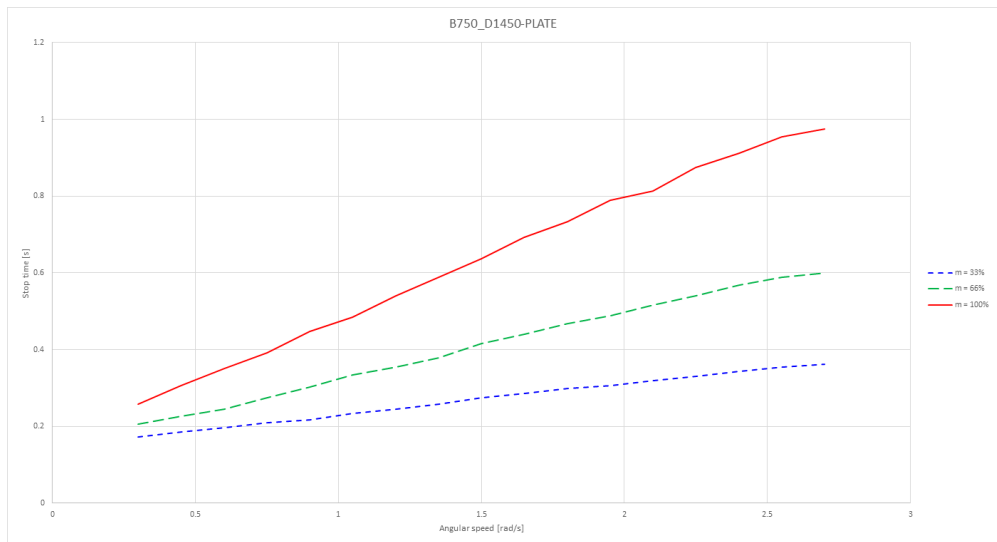
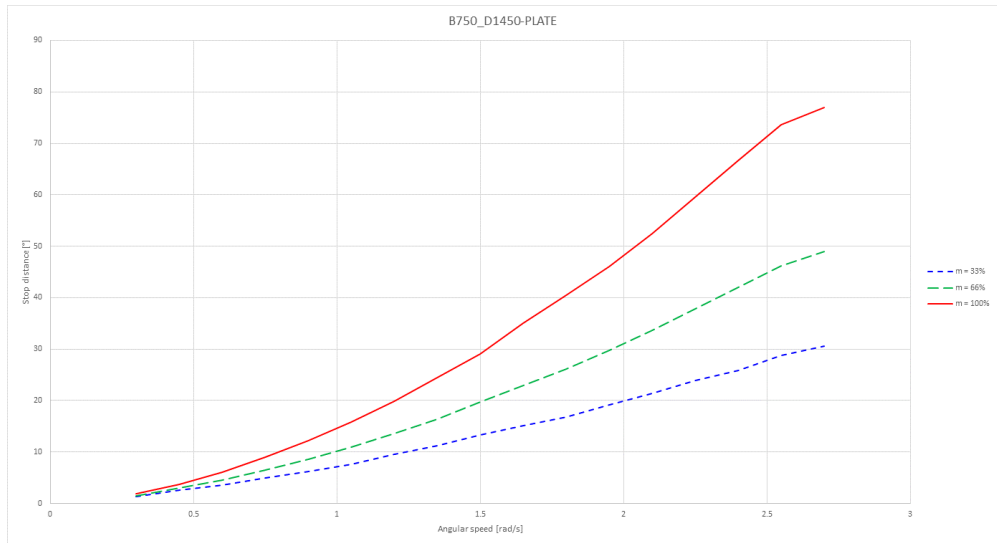
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

Stopping distance and stopping time

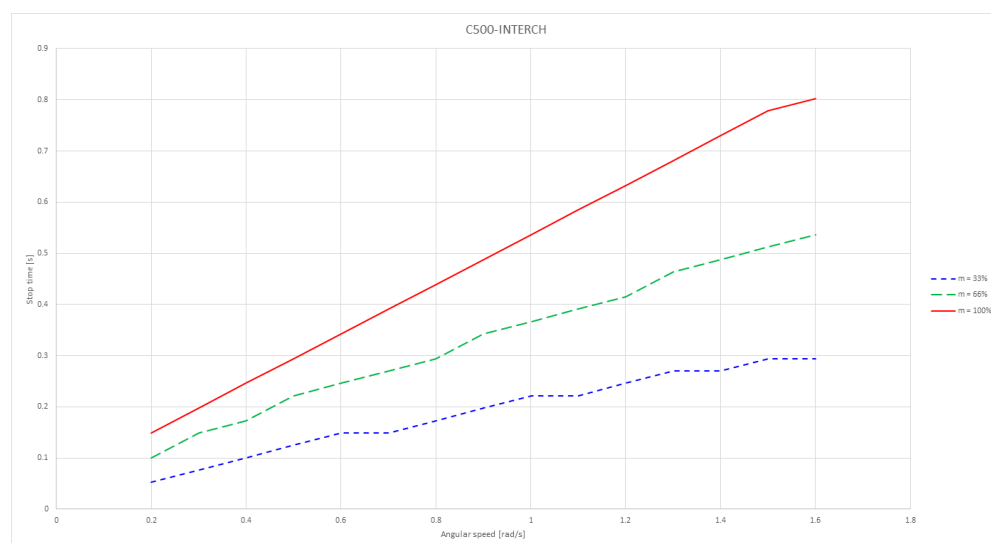
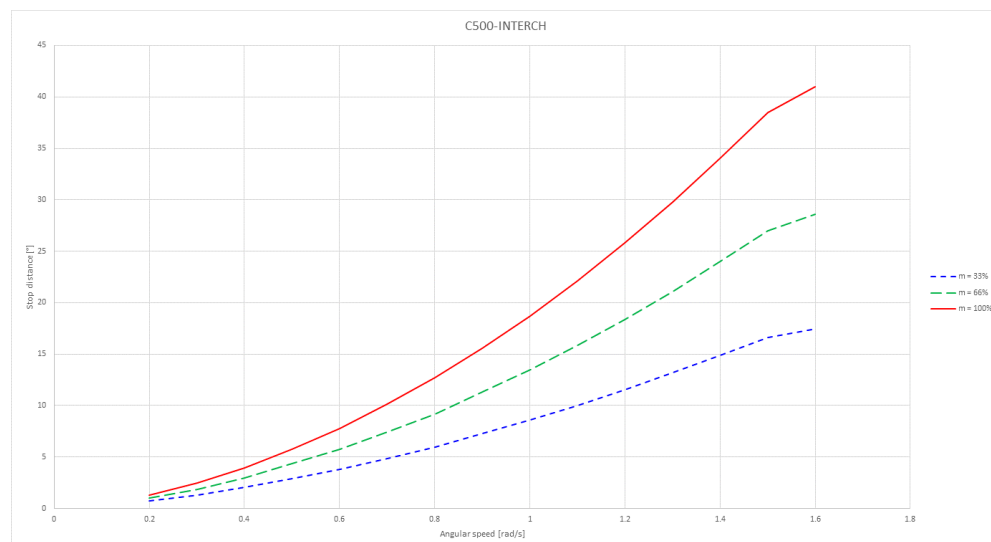


29 IRBP C

29.1 C500

Category 0, INTERCH

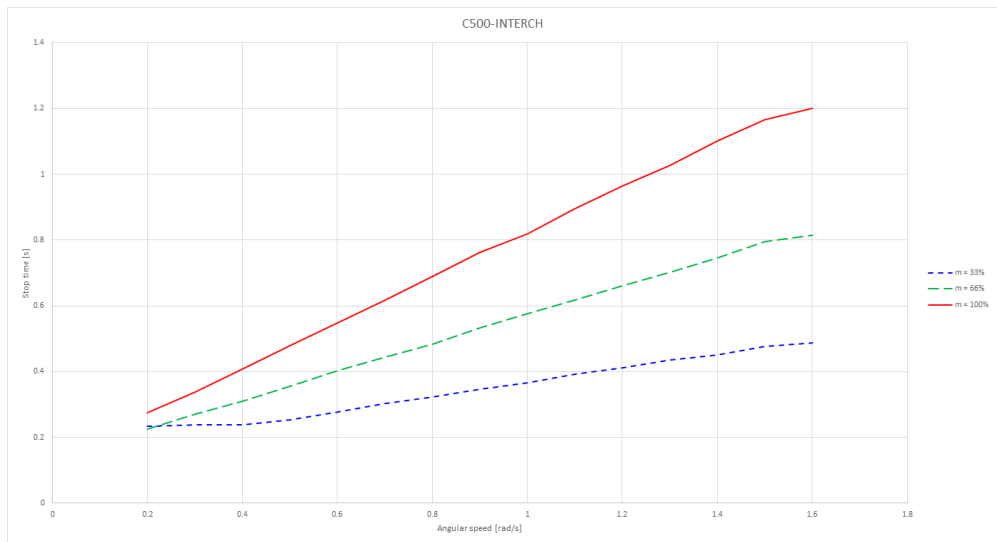
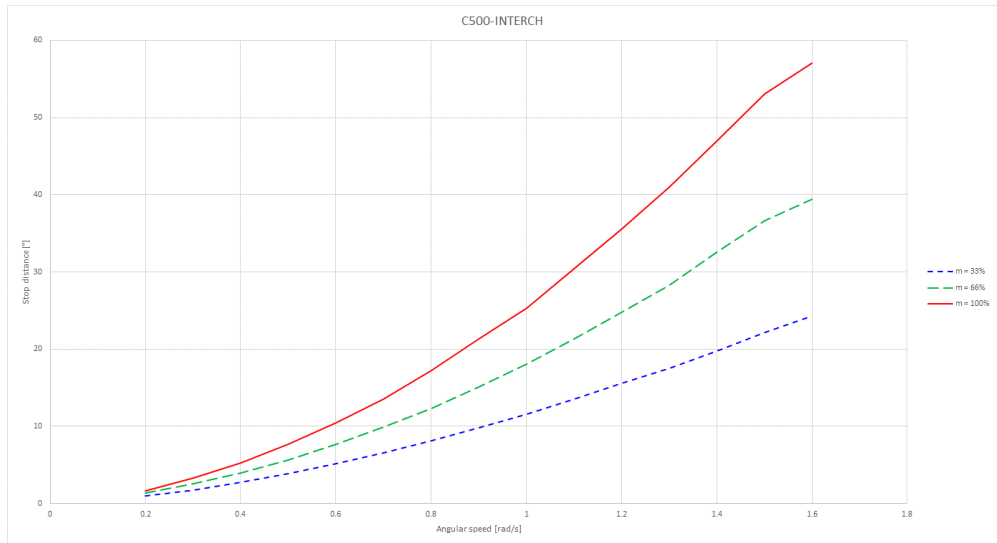
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

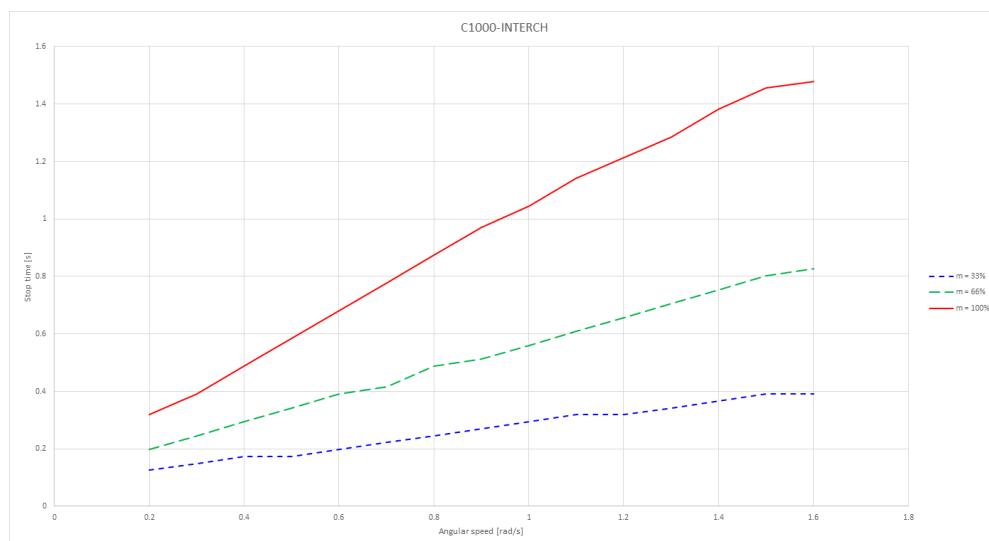
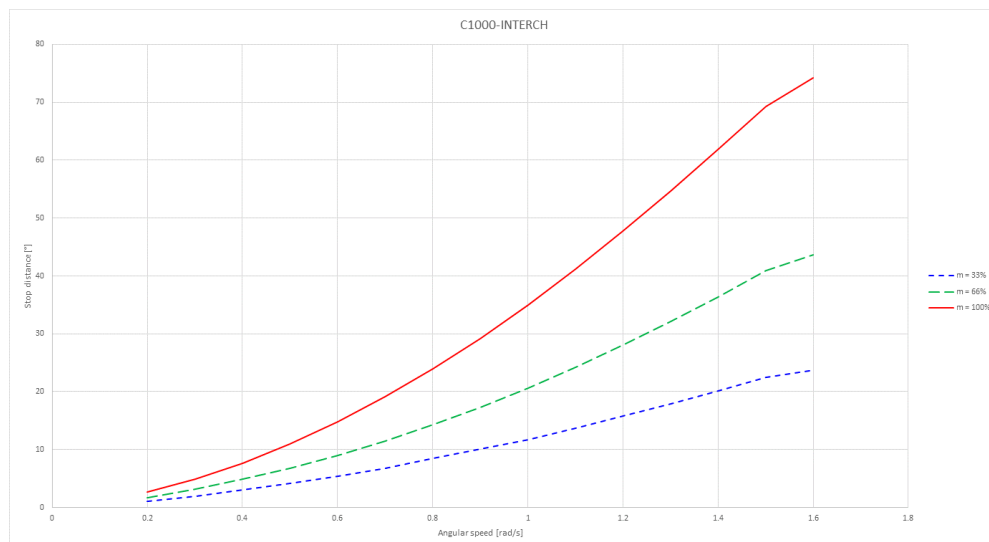
Stopping distance and stopping time



29.2 C1000

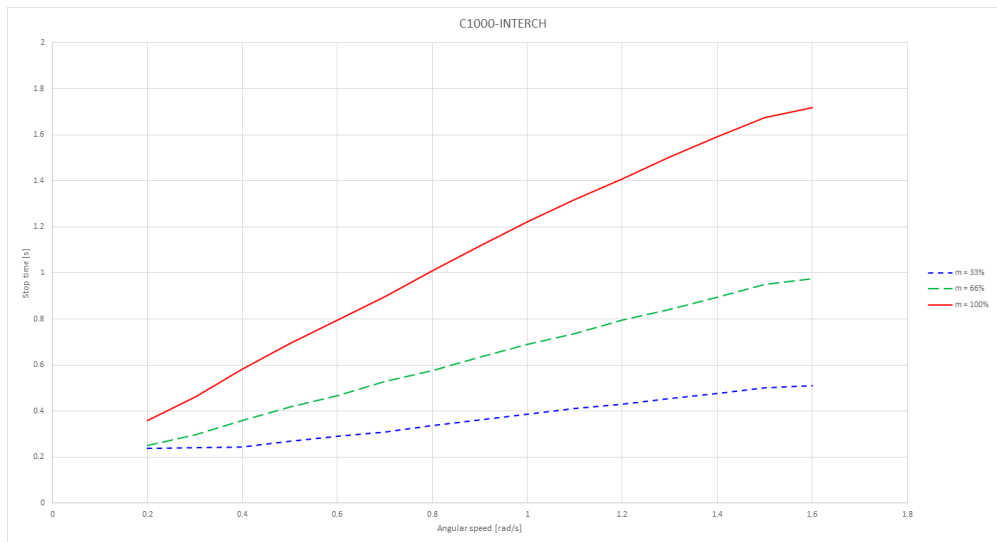
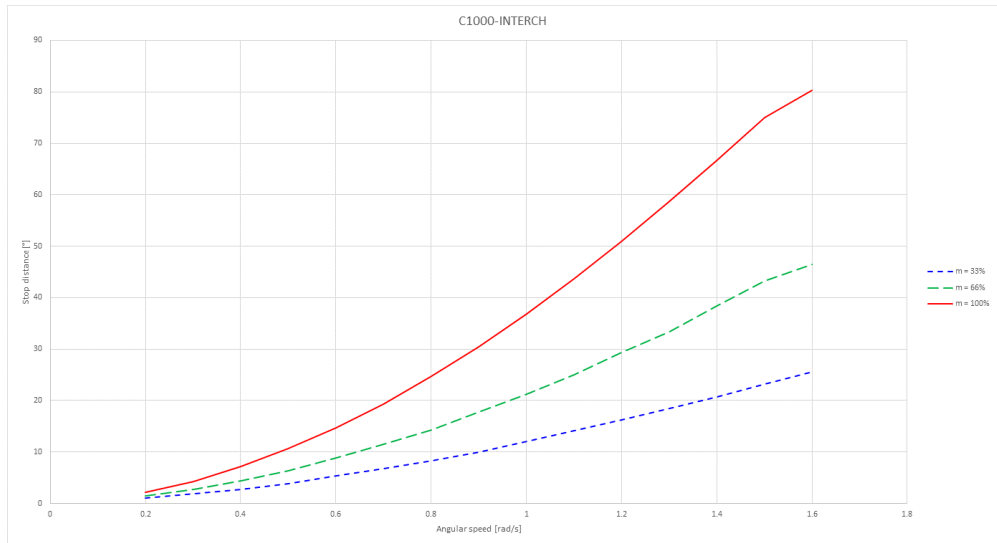
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 1, INTERCH

Stopping distance and stopping time

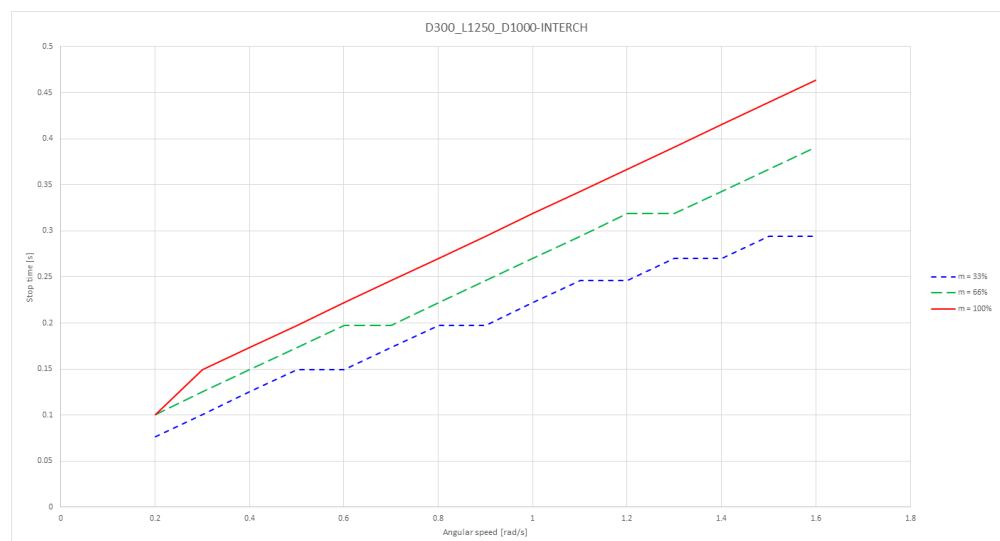
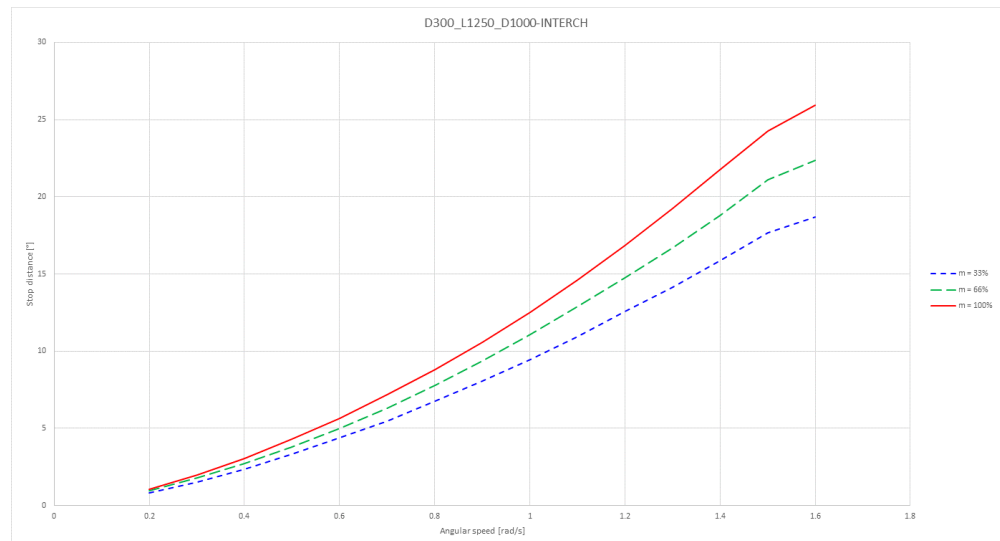


30 IRBP D

30.1 D300_L1250_D1000

Category 0, INTERCH

Stopping distance and stopping time



Continues on next page

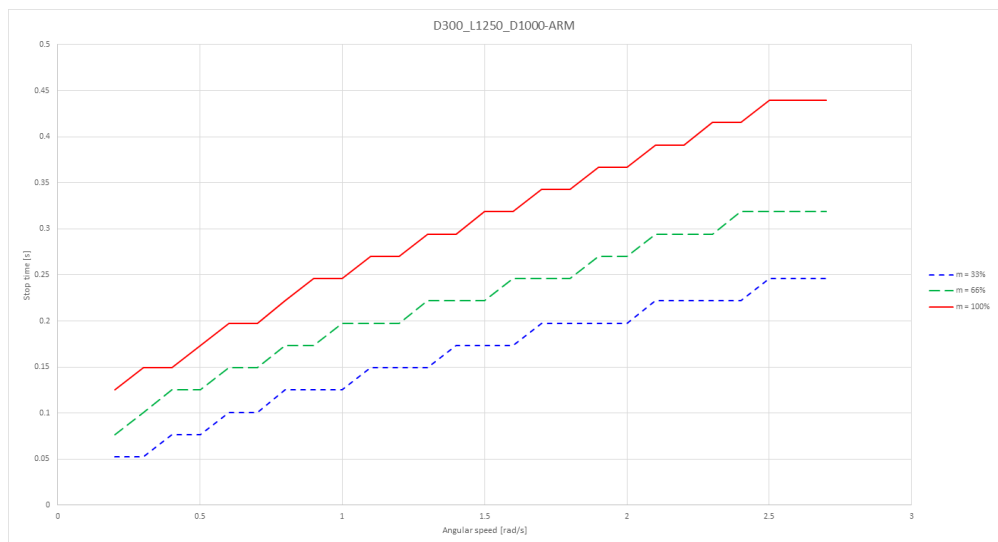
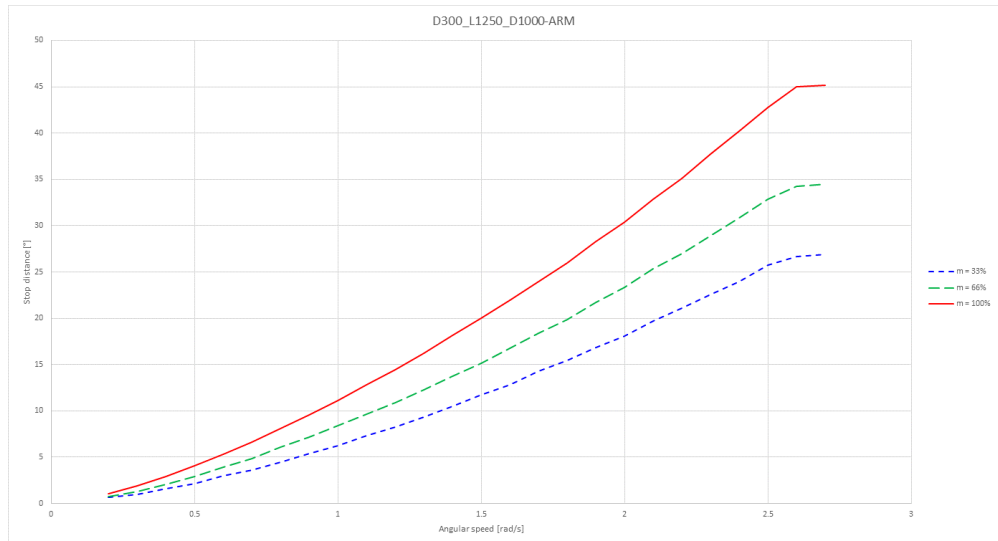
30 IRBP D

30.1 D300_L1250_D1000

Continued

Category 0, ARM

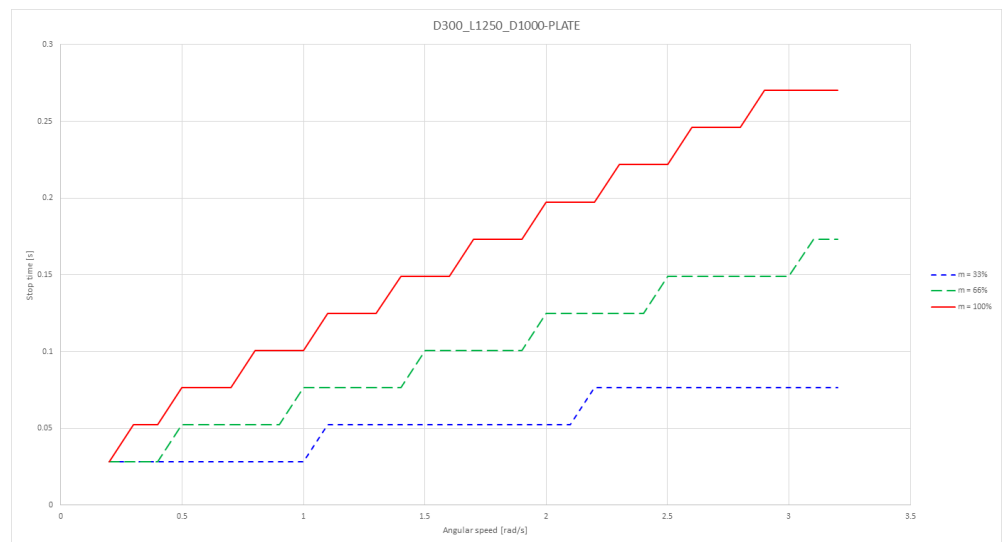
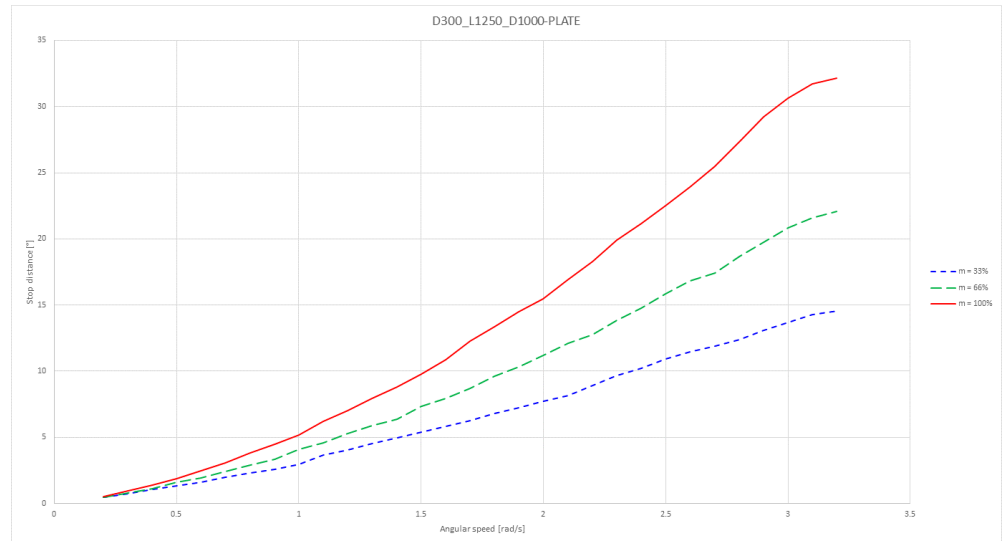
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

Stopping distance and stopping time



Continues on next page

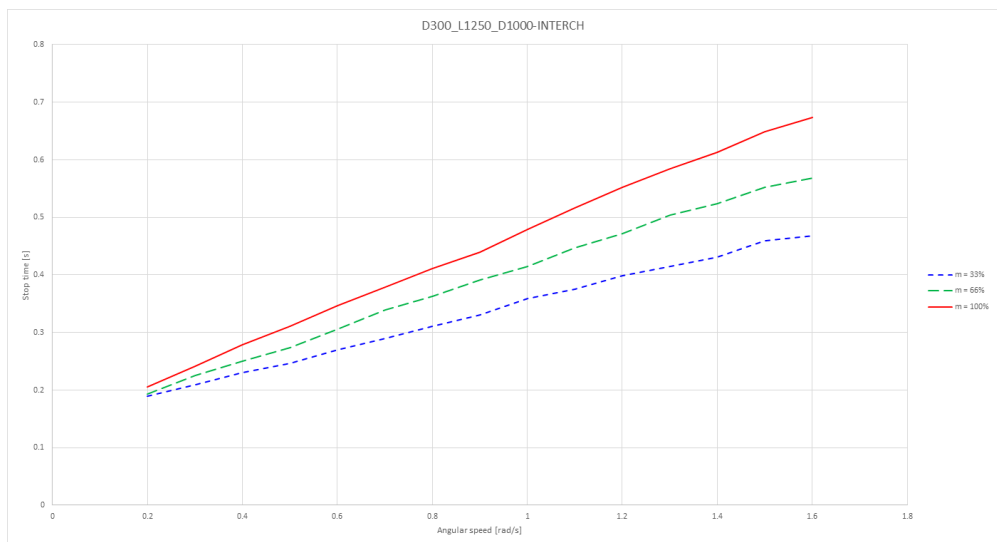
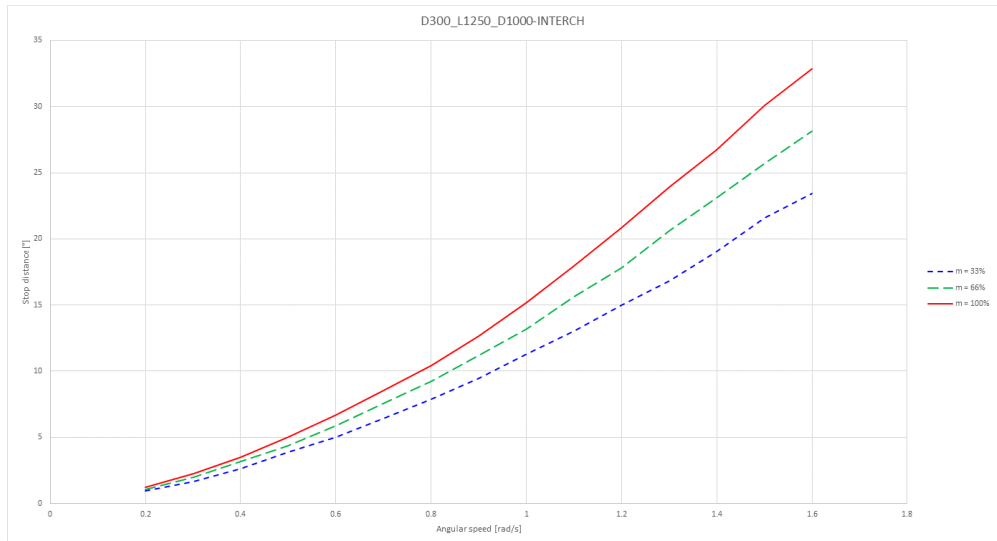
30 IRBP D

30.1 D300_L1250_D1000

Continued

Category 1, INTERCH

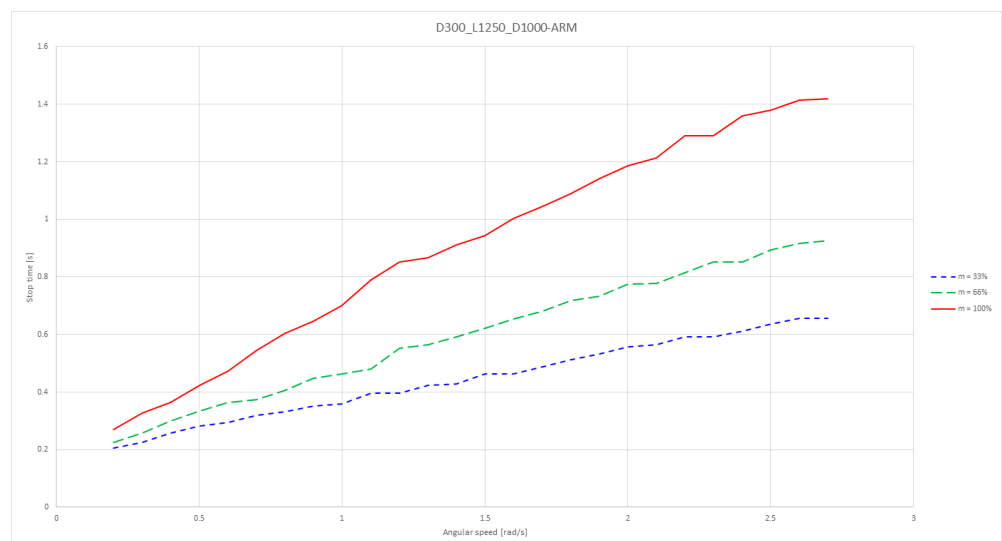
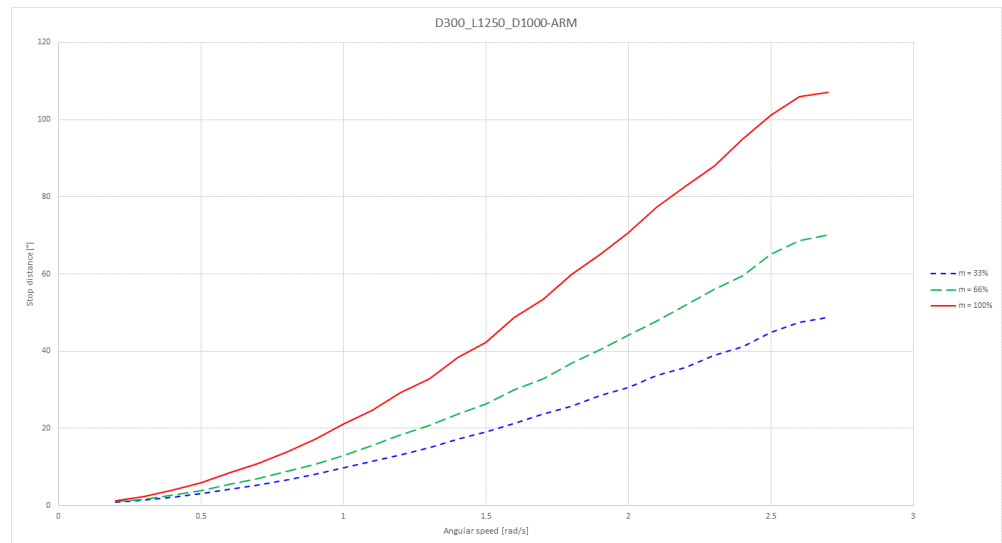
Stopping distance and stopping time



Continues on next page

Category 1, ARM

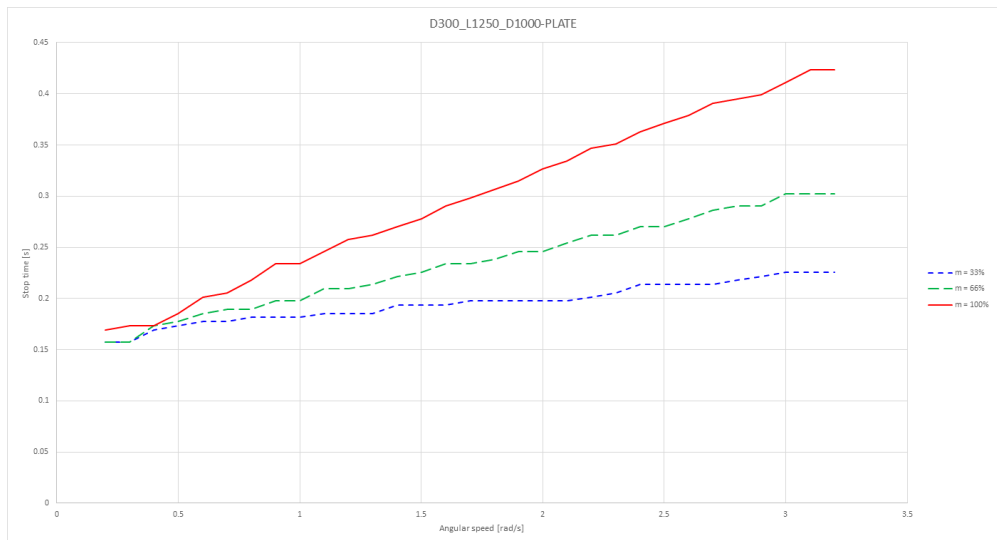
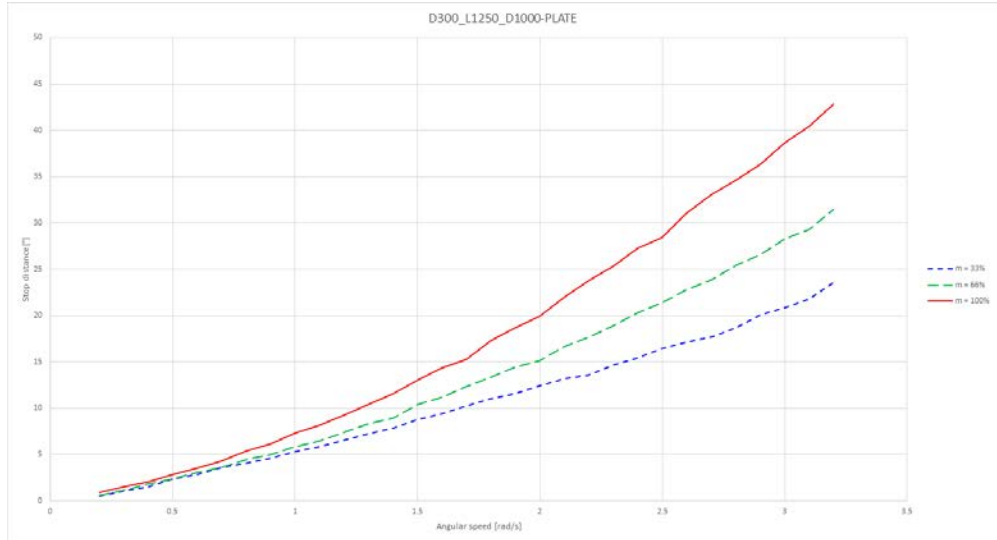
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

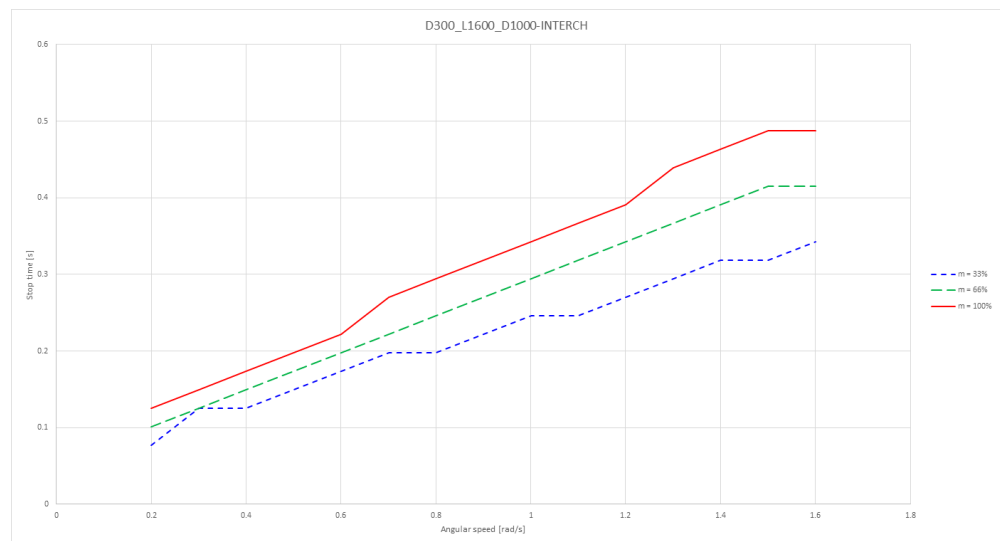
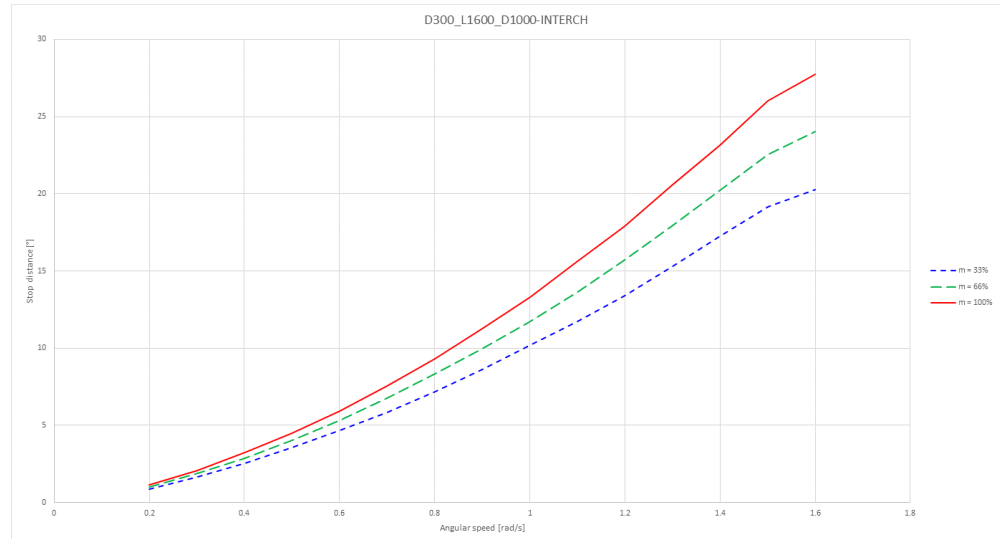
Stopping distance and stopping time



30.2 D300_L1600_D1000

Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

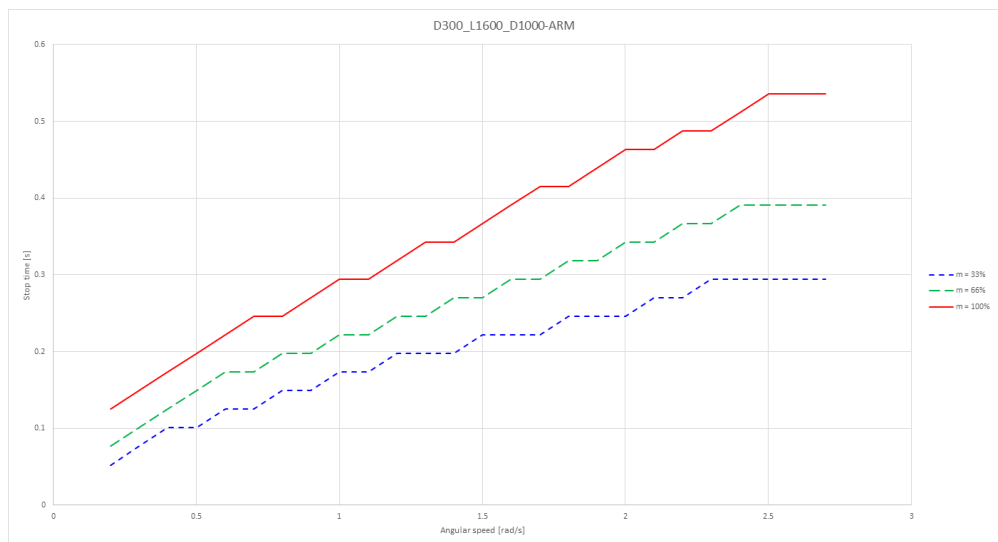
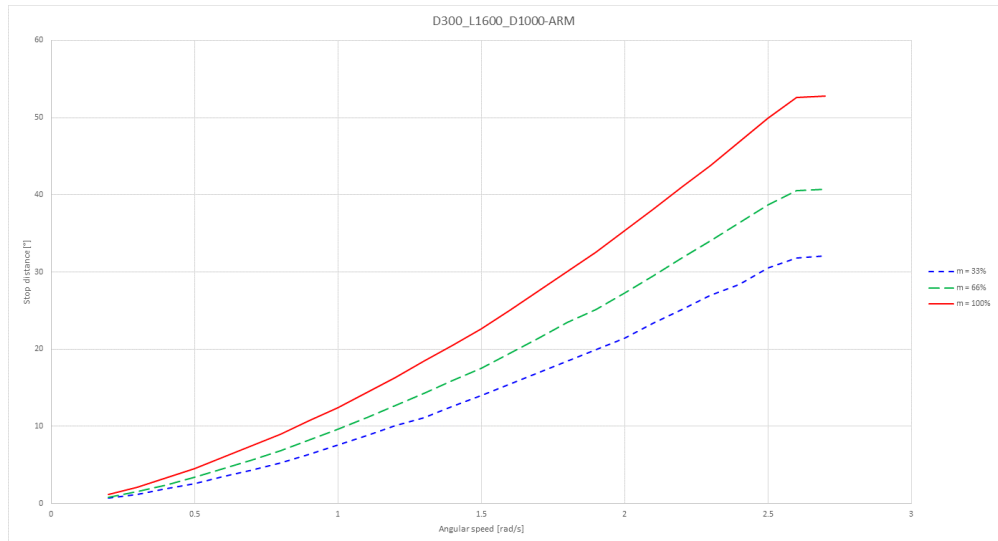
30 IRBP D

30.2 D300_L1600_D1000

Continued

Category 0, ARM

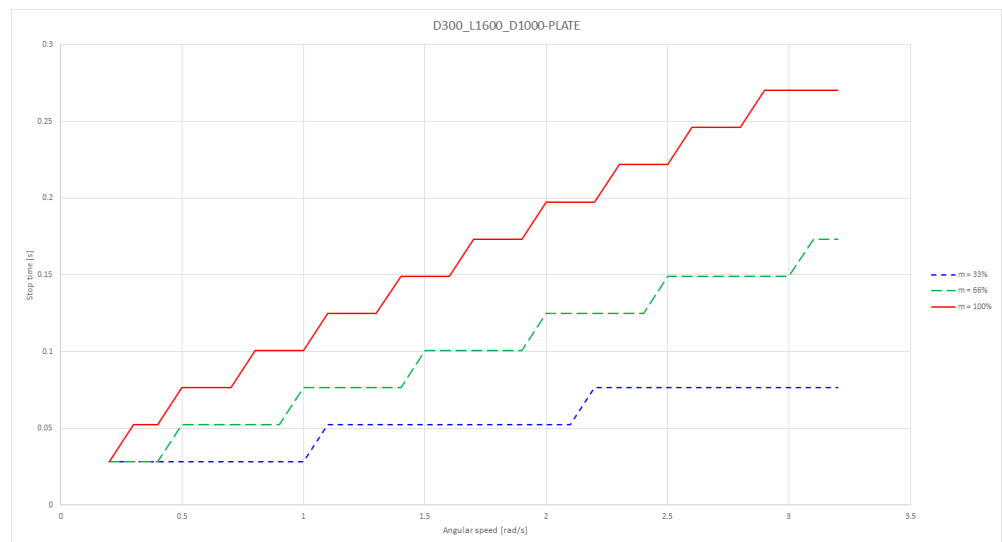
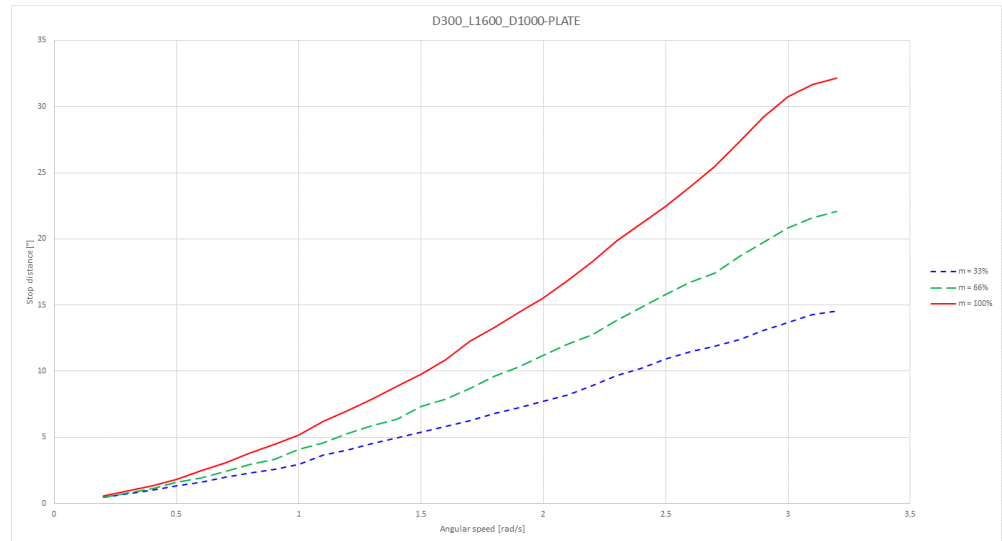
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

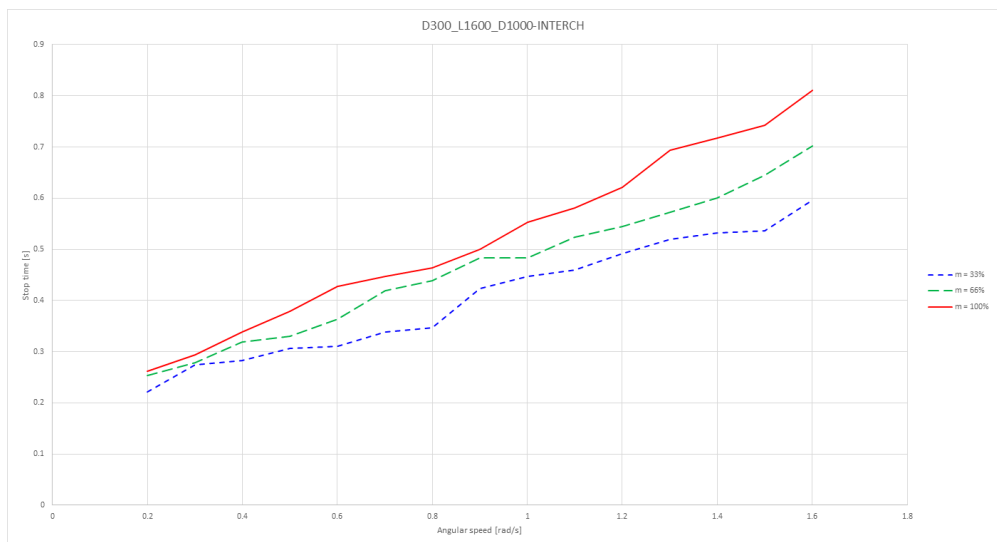
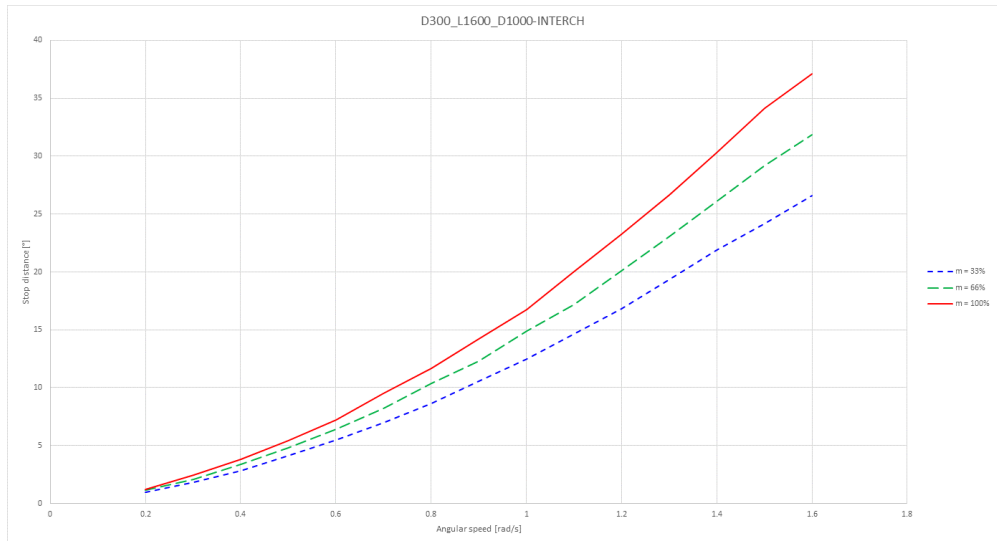
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

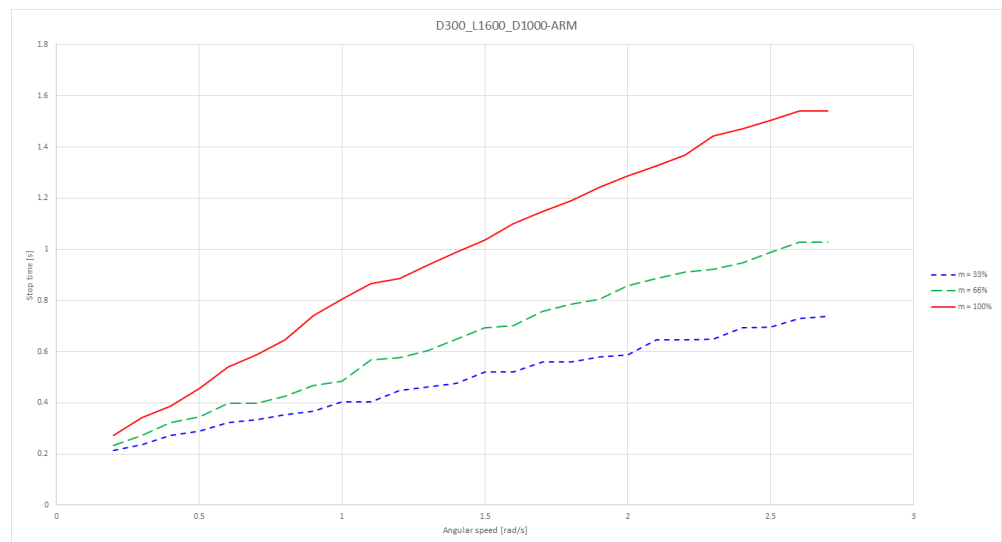
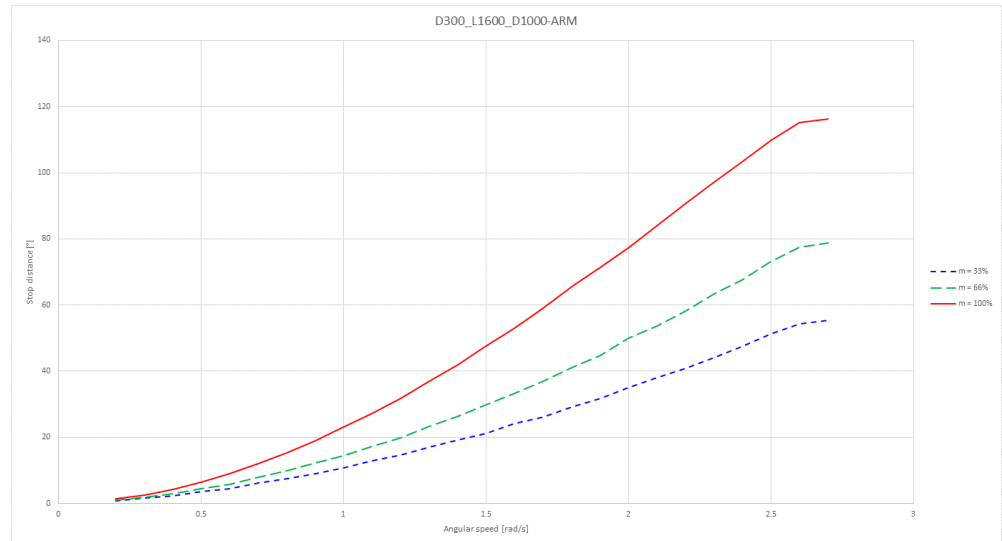
Stopping distance and stopping time



Continues on next page

Category 1, ARM

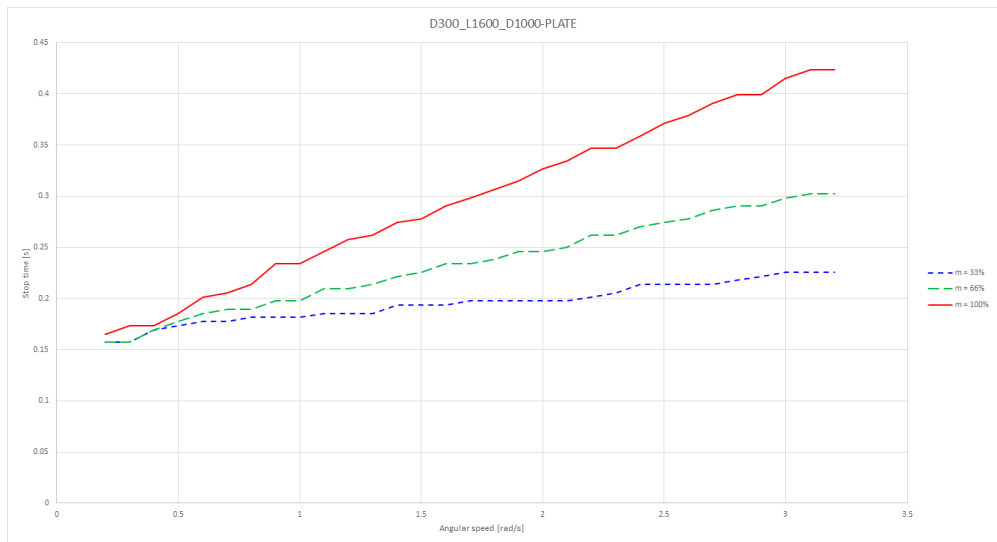
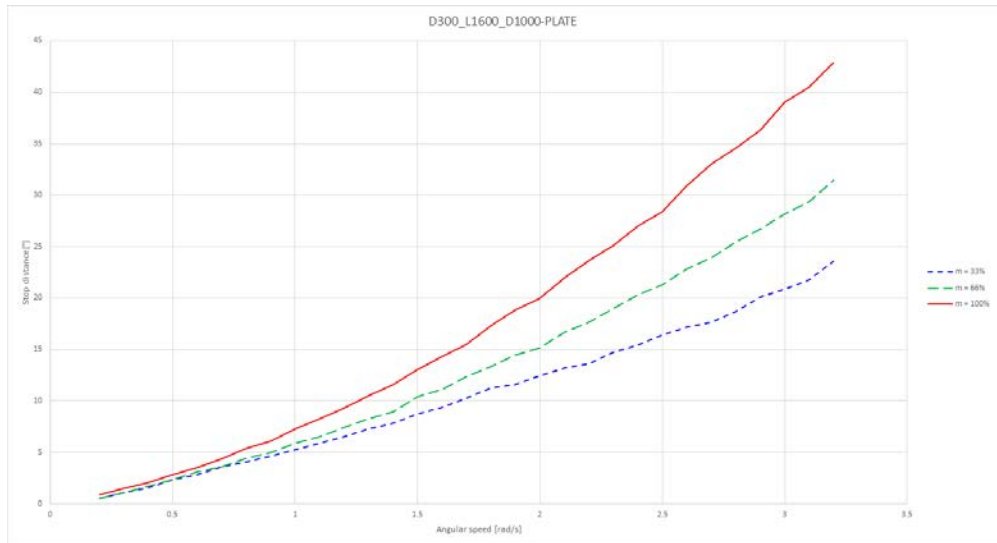
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

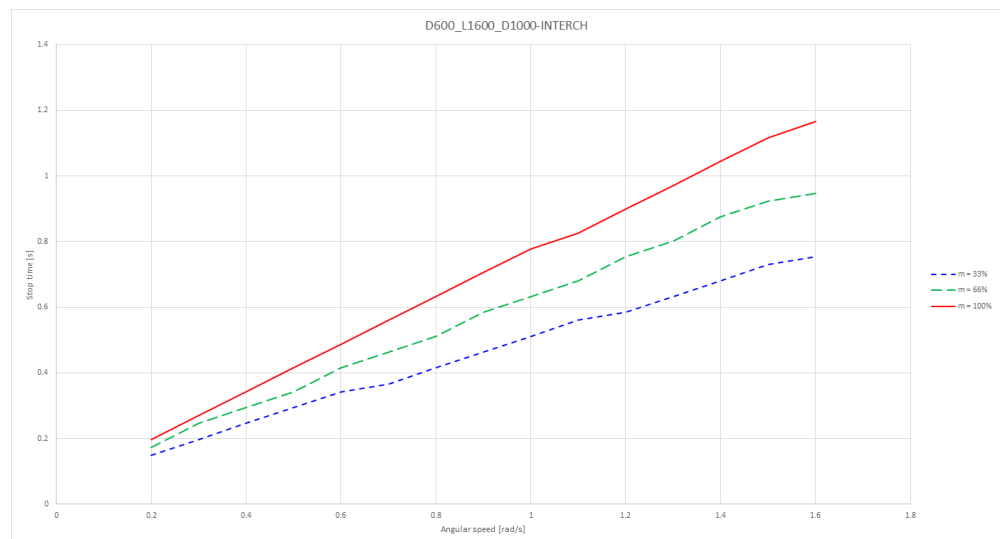
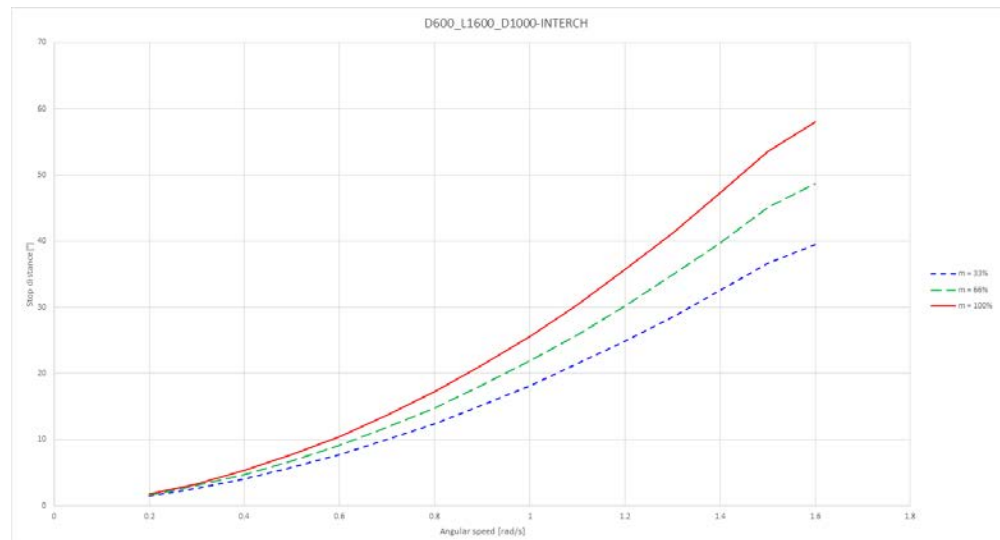
Stopping distance and stopping time



30.3 D600_L1600_D1000

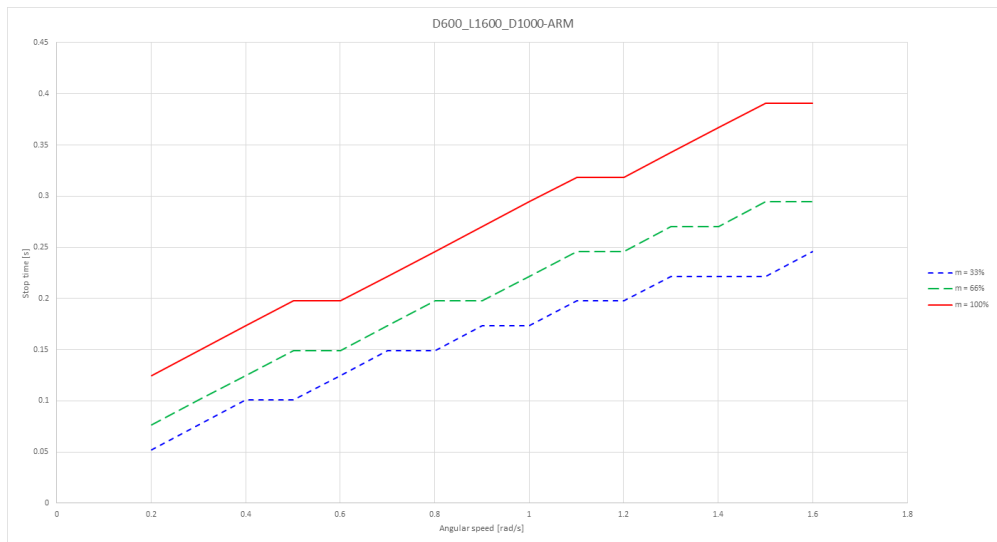
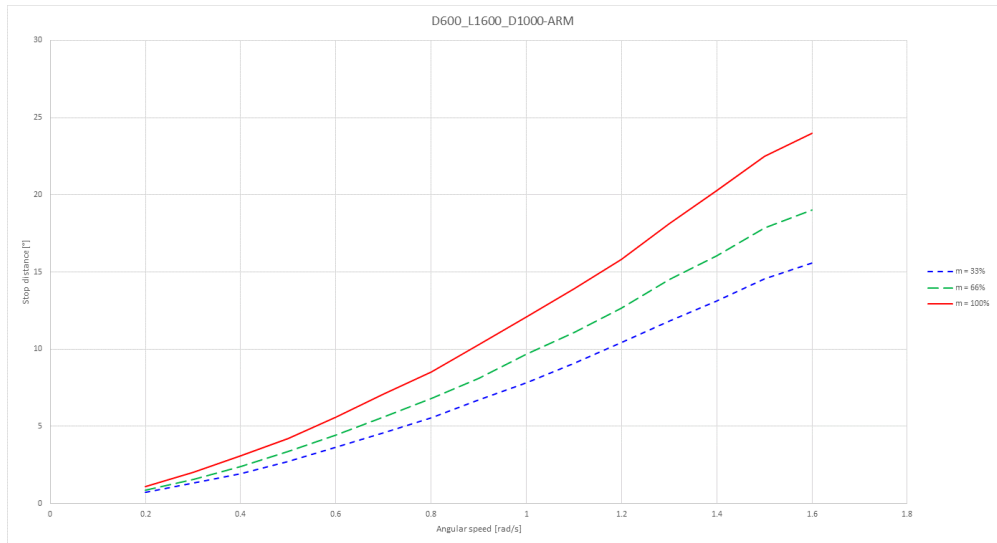
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, ARM

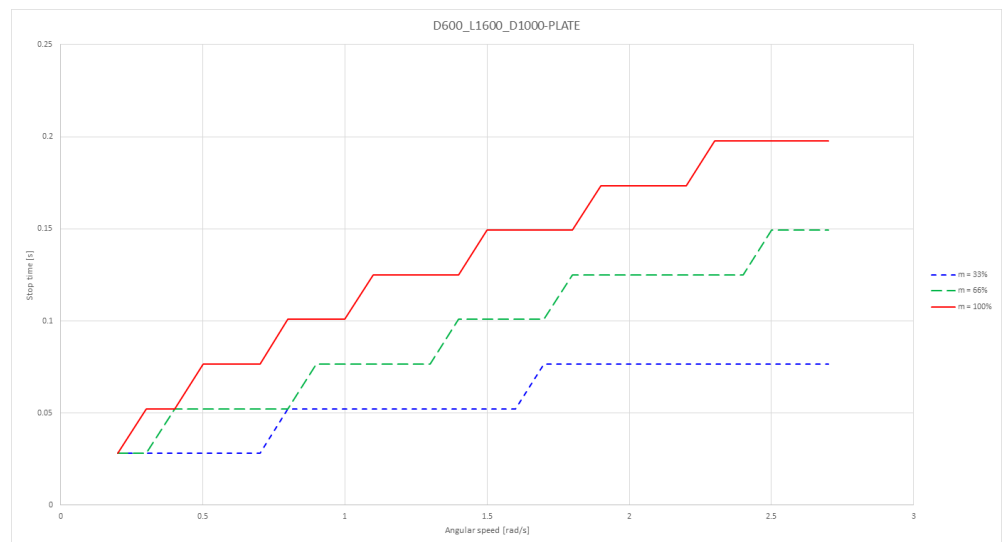
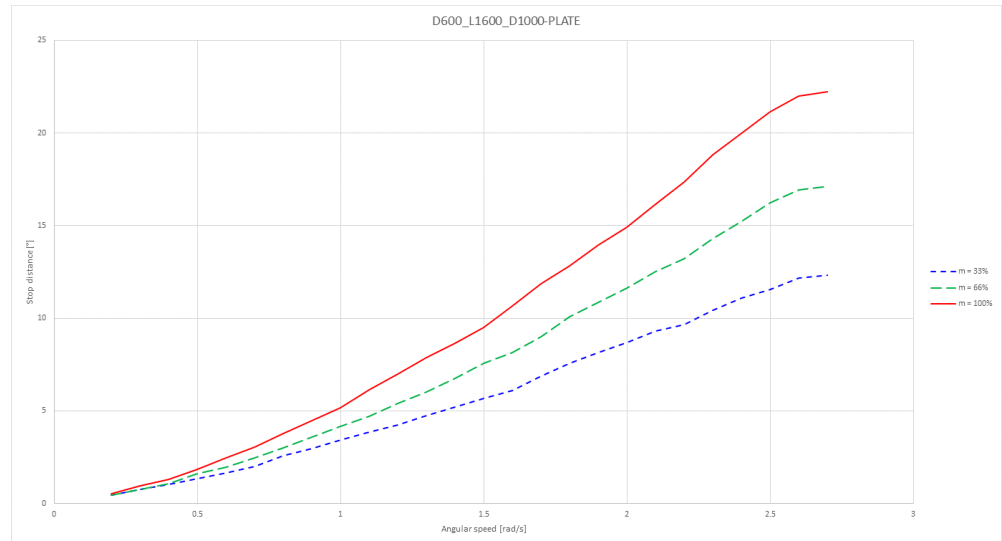
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

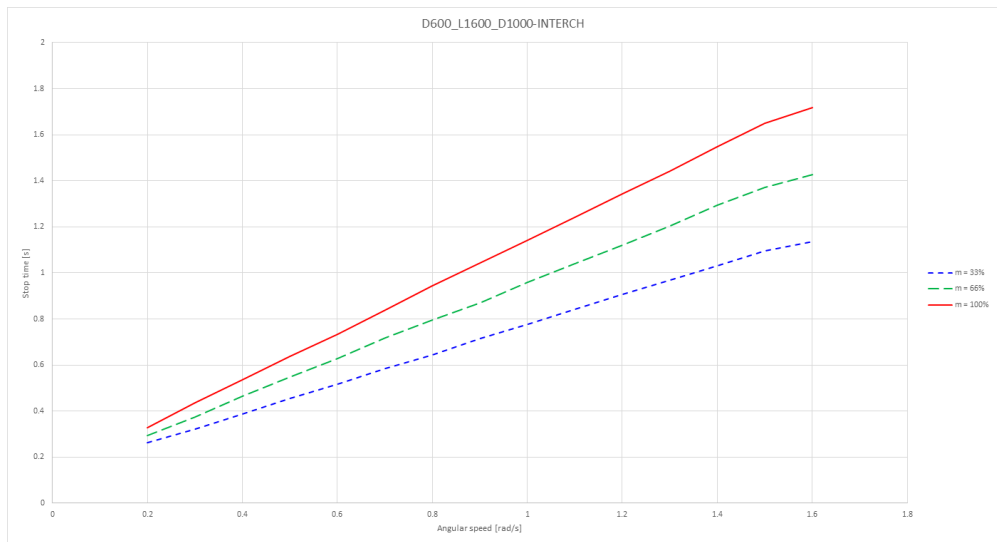
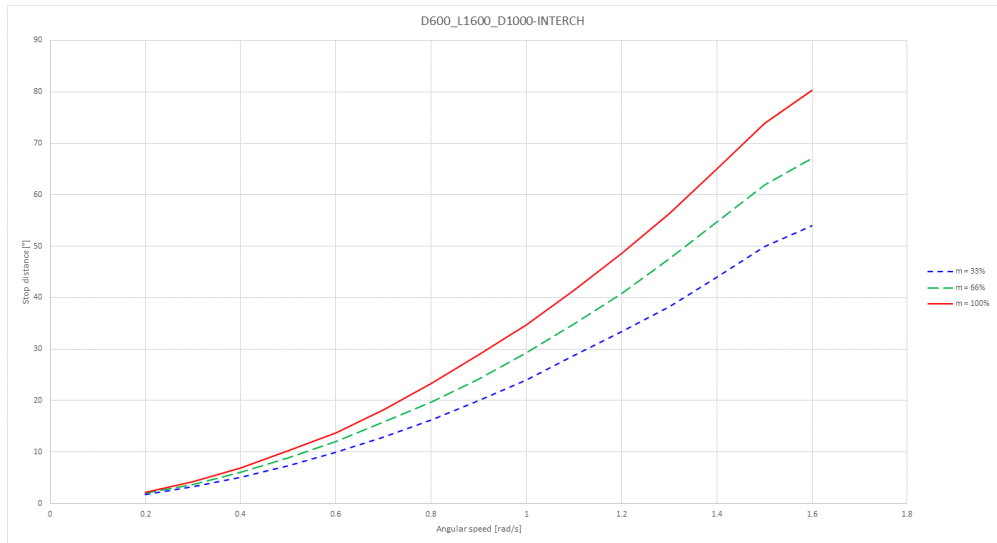
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

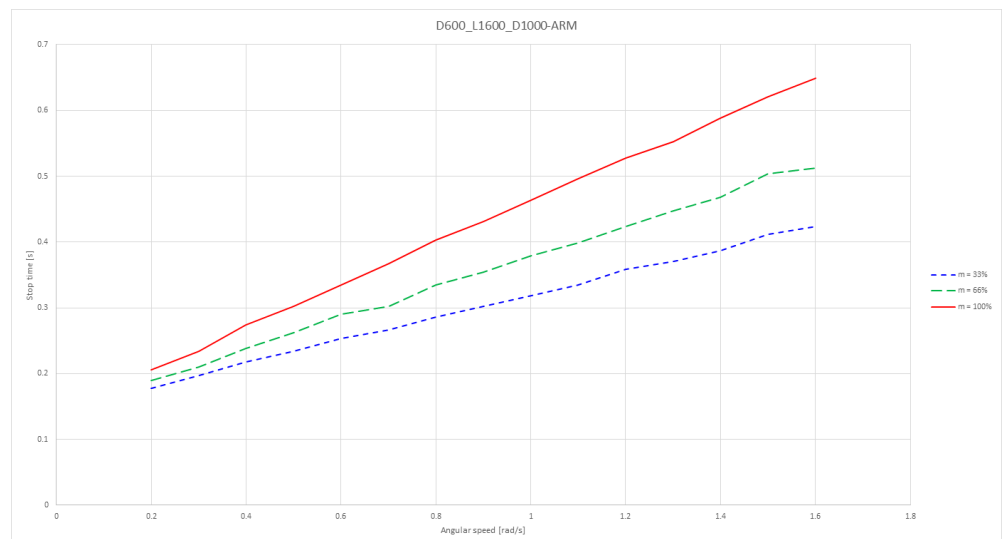
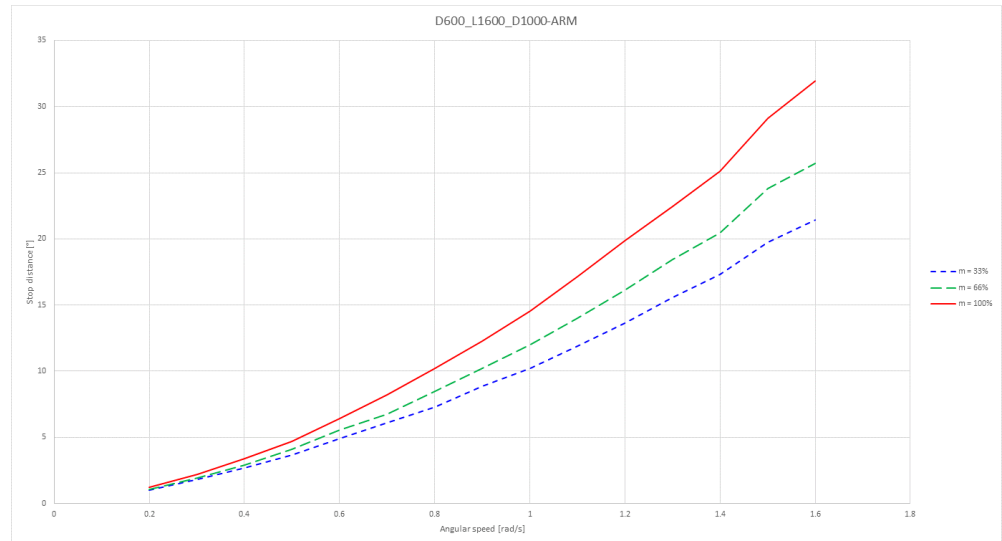
Stopping distance and stopping time



Continues on next page

Category 1, ARM

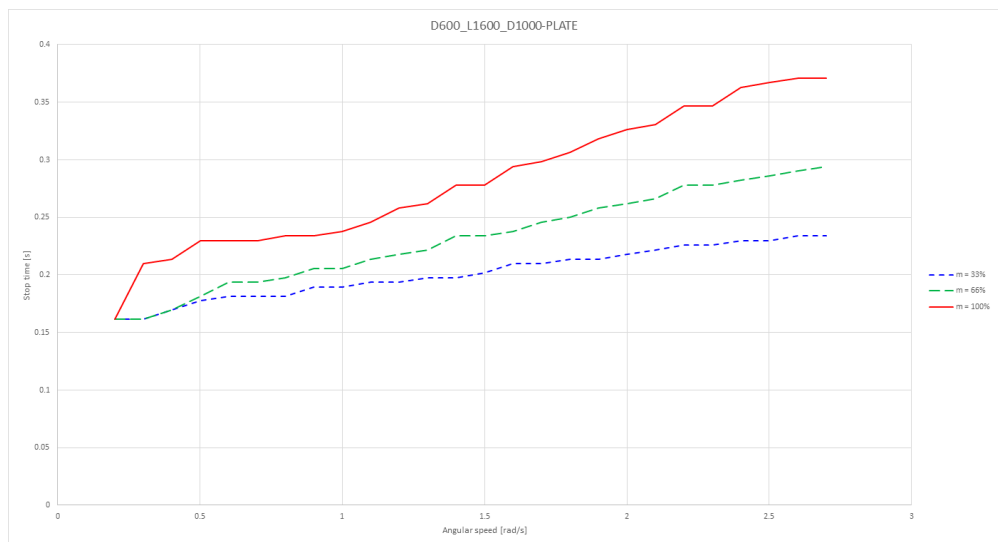
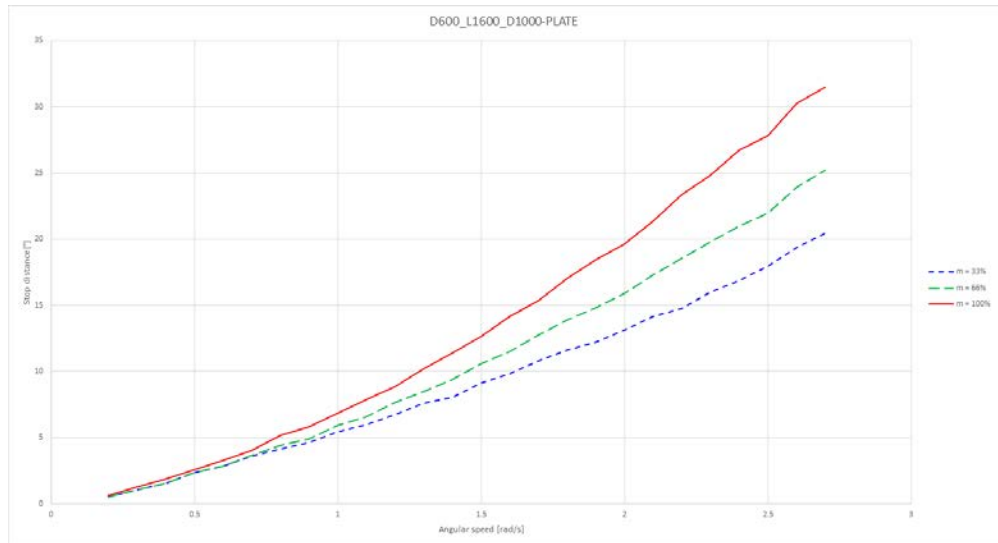
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

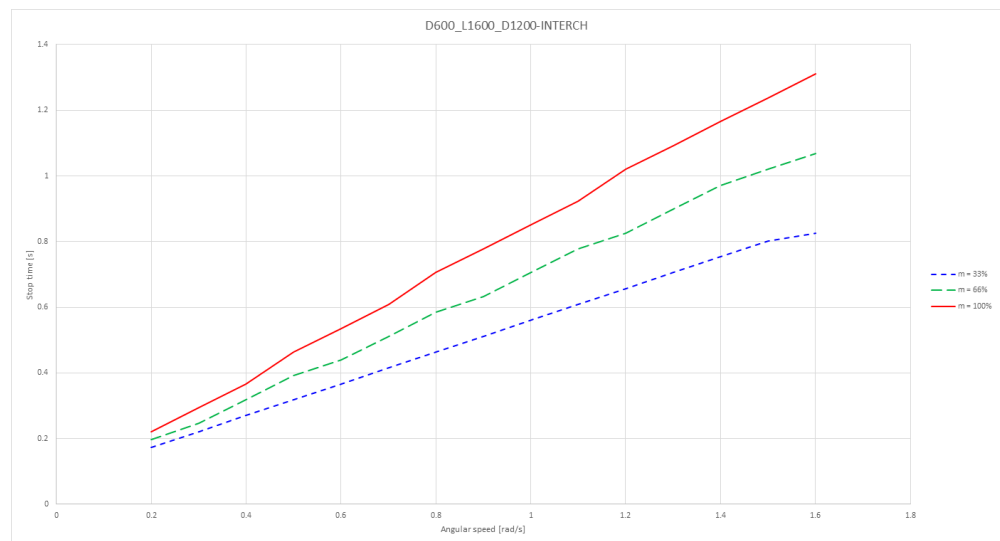
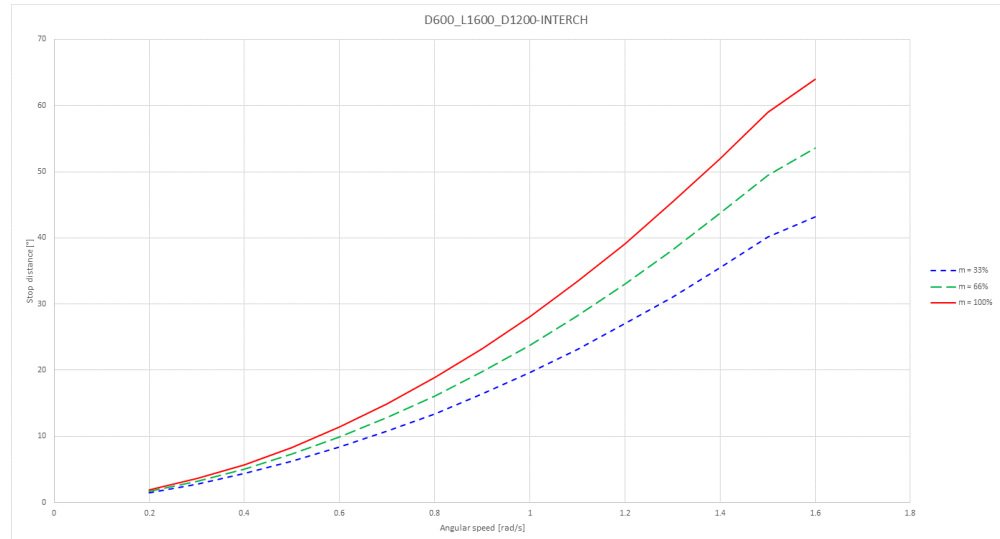
Stopping distance and stopping time



30.4 D600_L1600_D1200

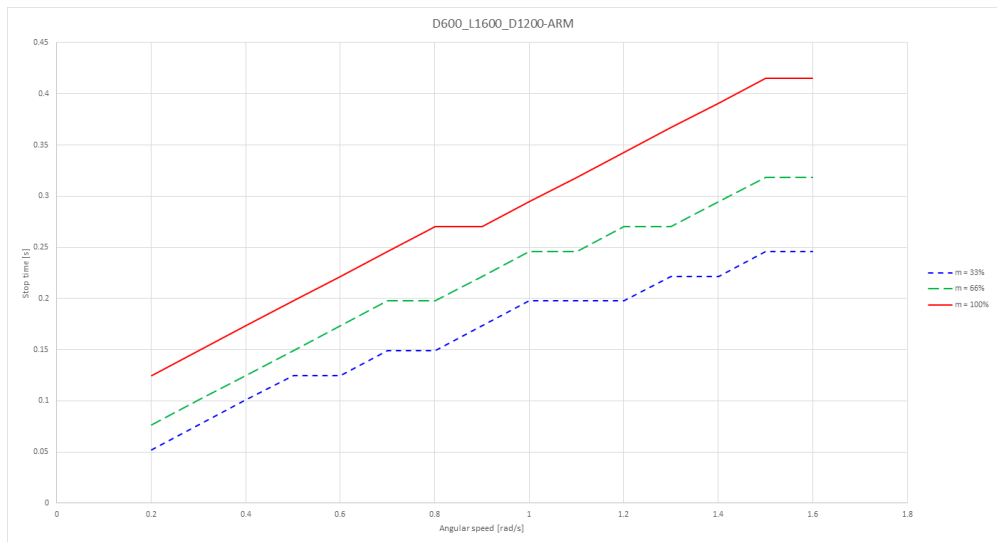
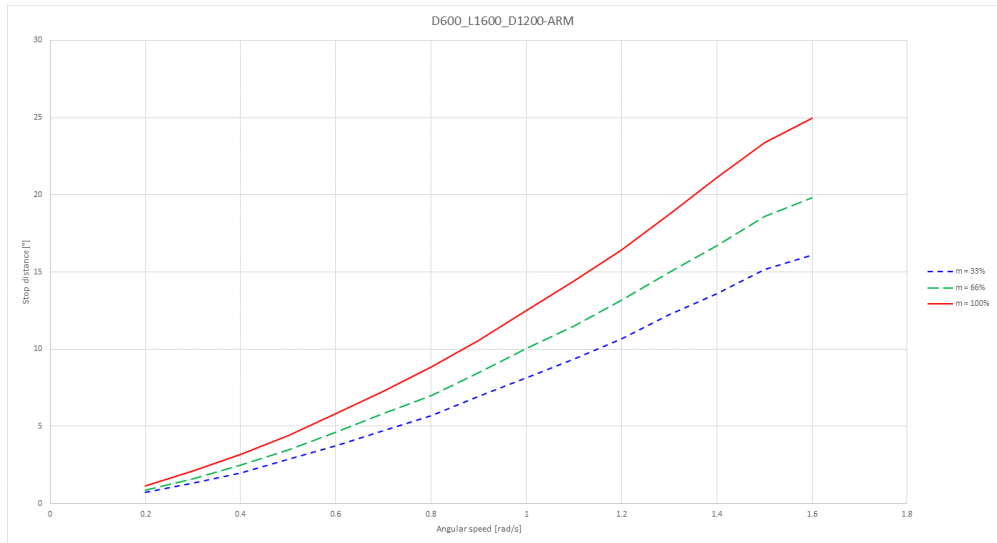
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, ARM

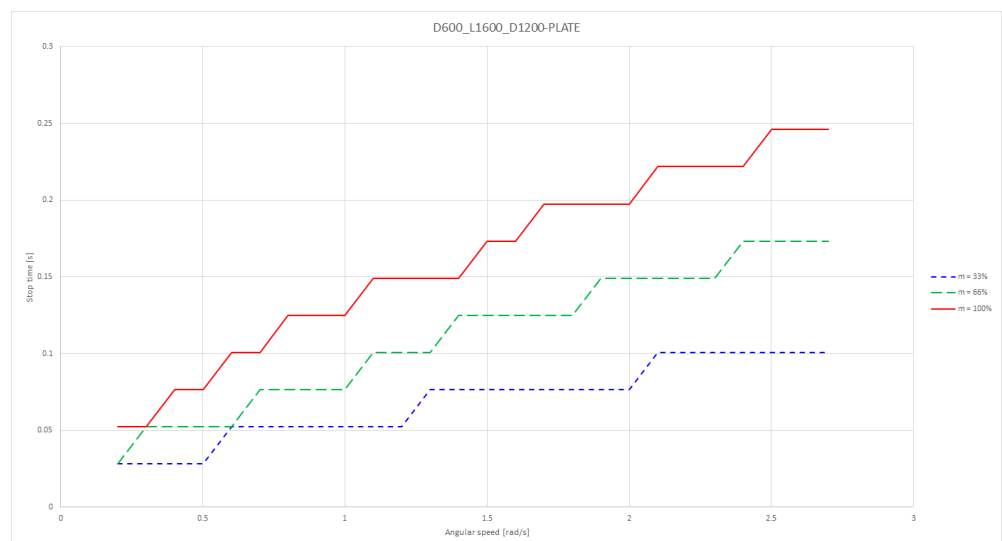
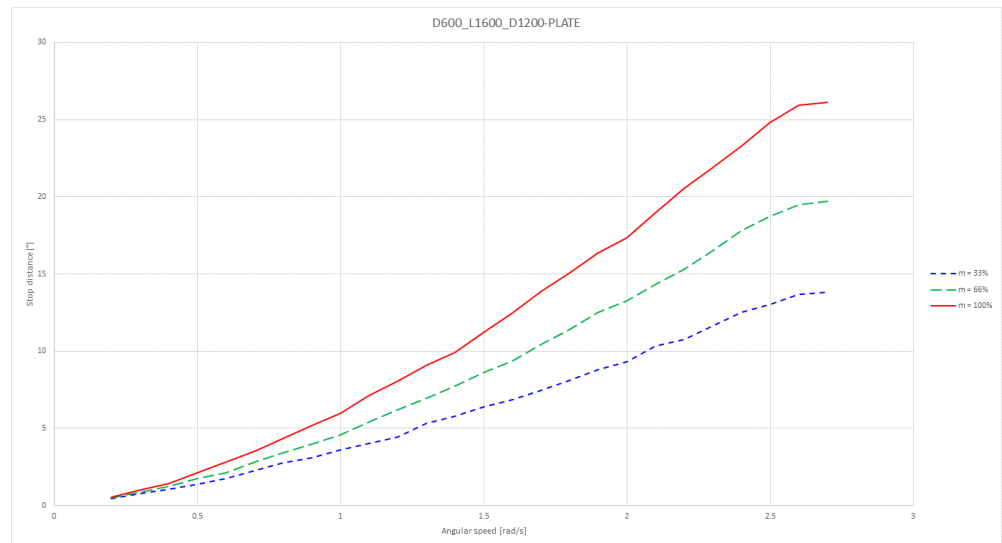
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

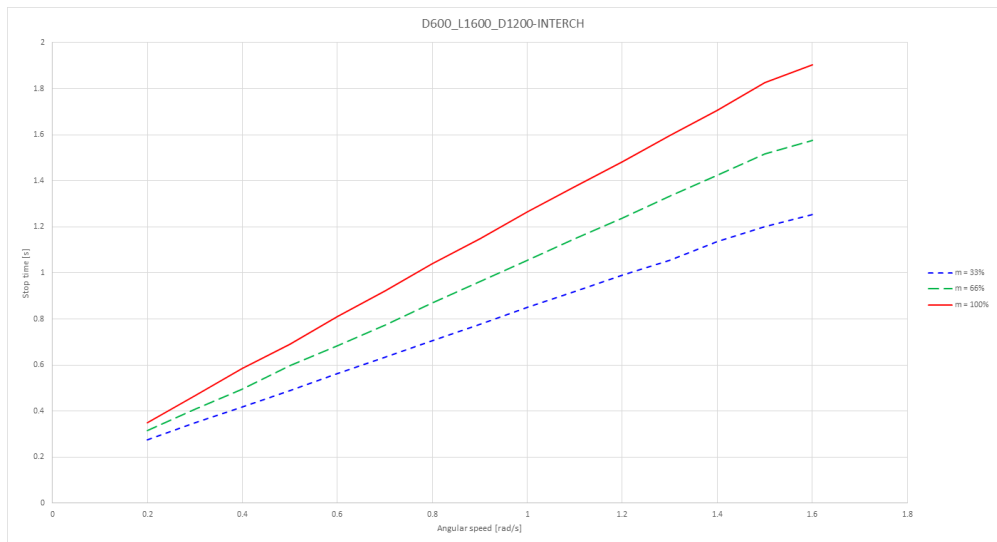
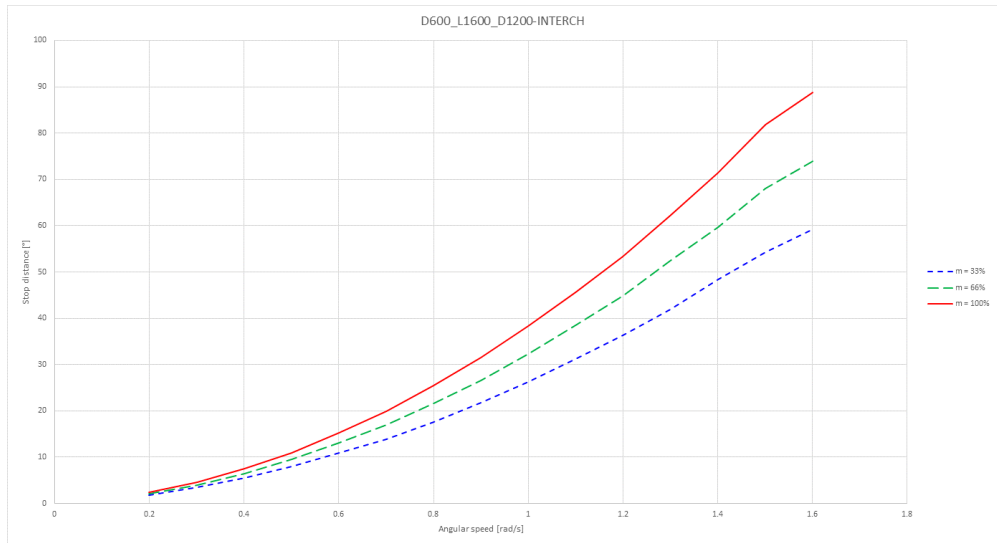
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

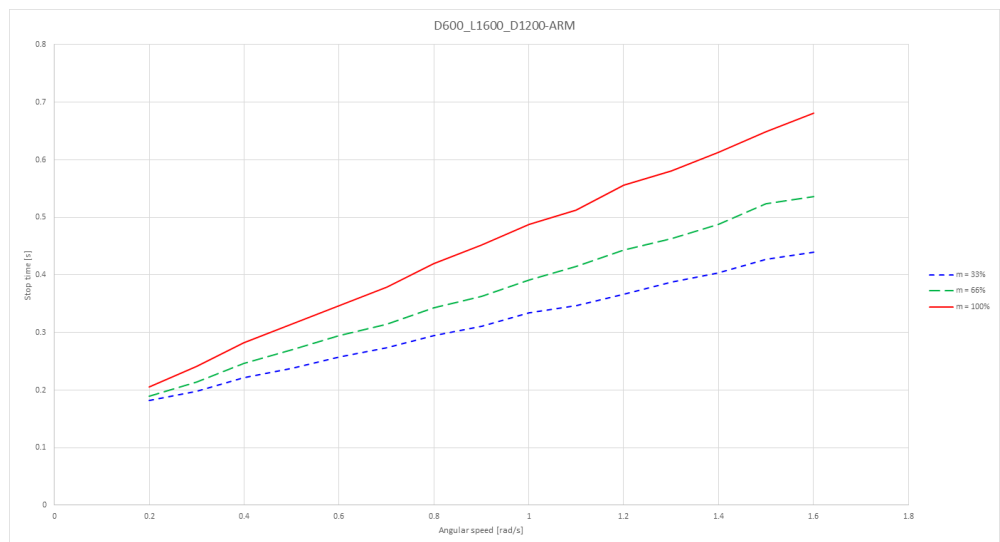
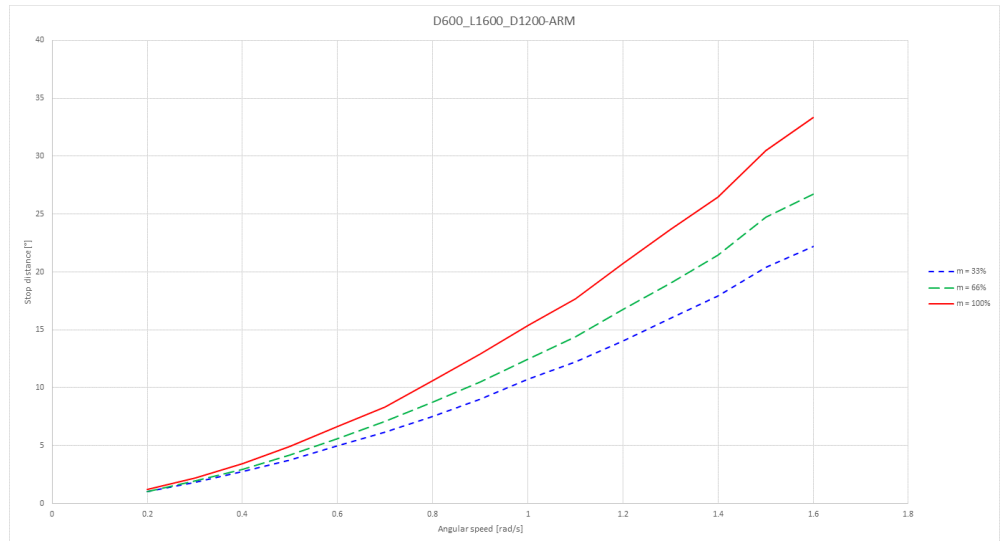
Stopping distance and stopping time



Continues on next page

Category 1, ARM

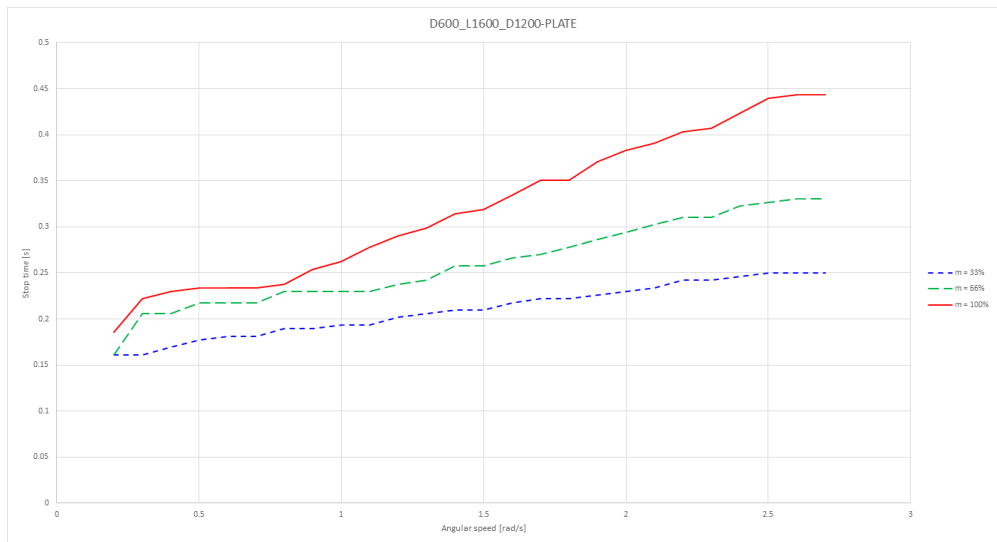
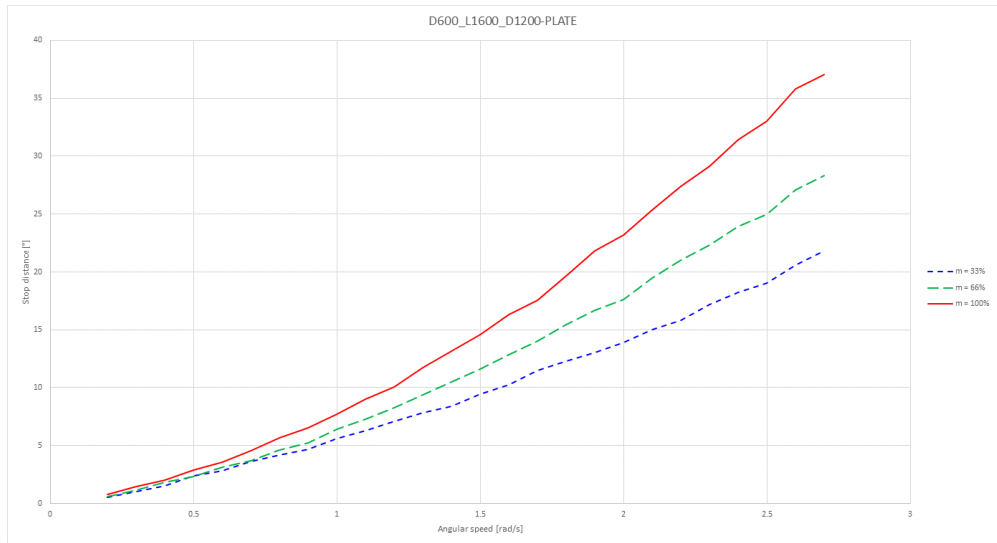
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

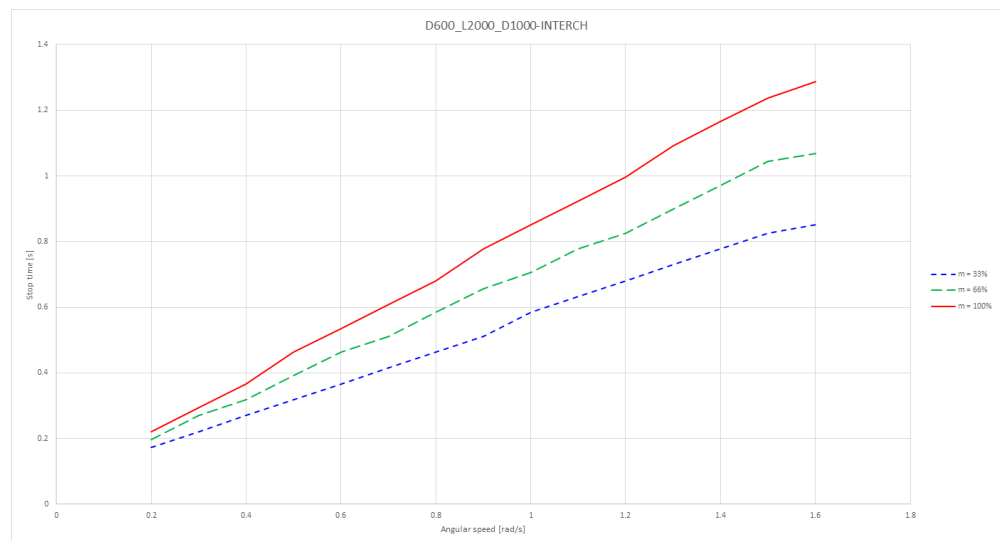
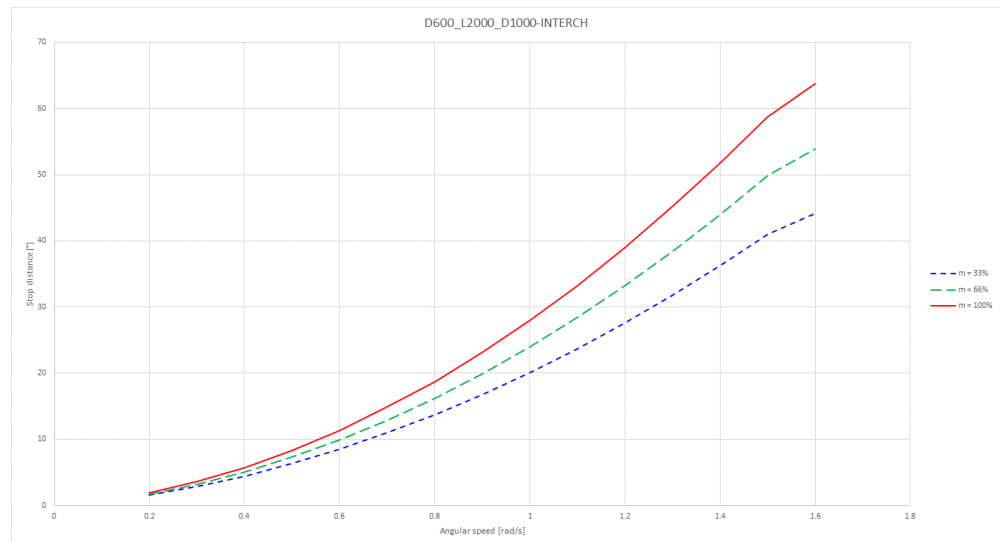
Stopping distance and stopping time



30.5 D600_L2000_D1000

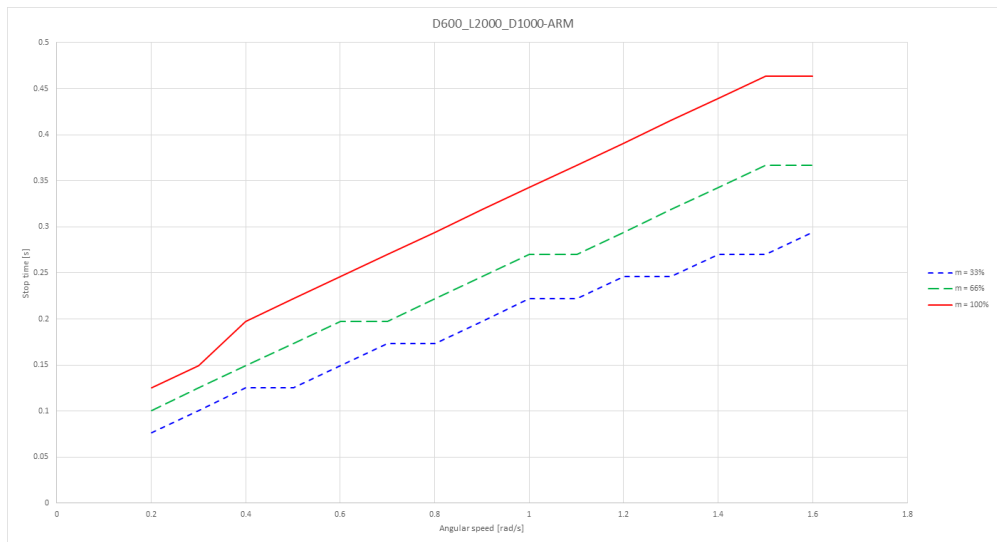
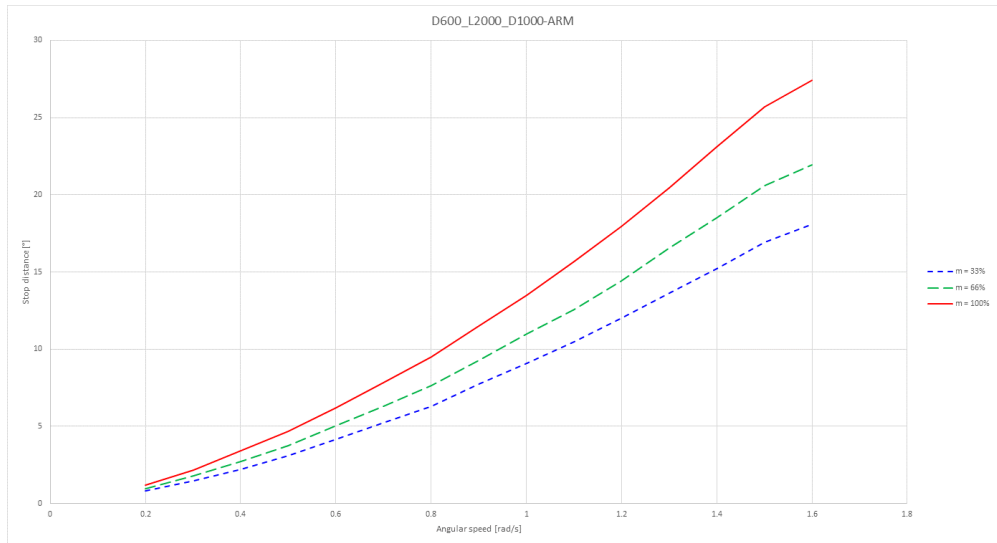
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, ARM

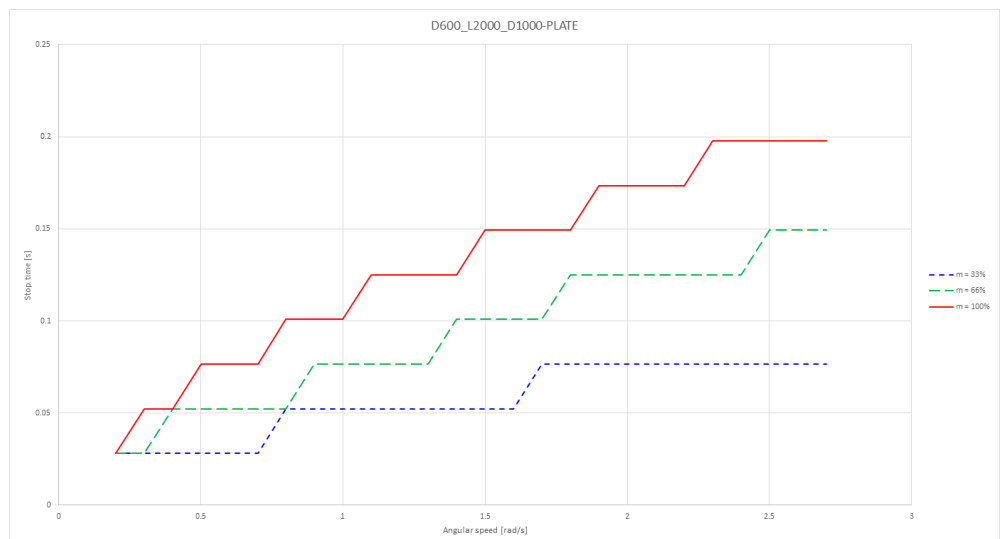
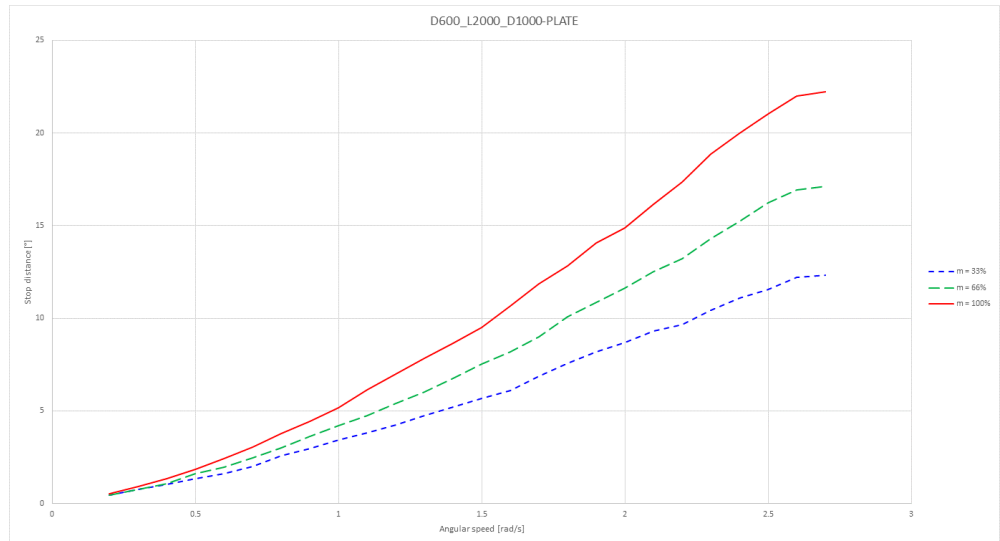
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

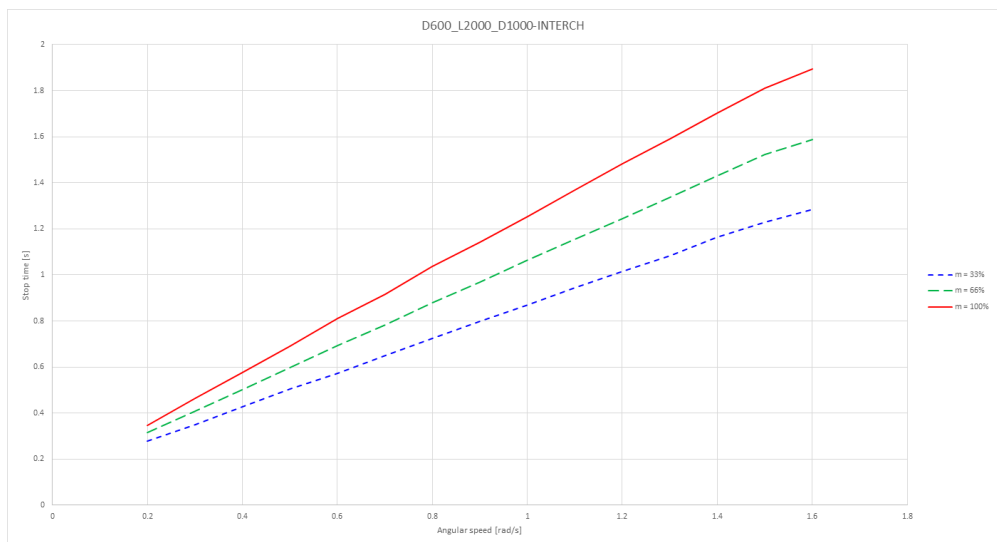
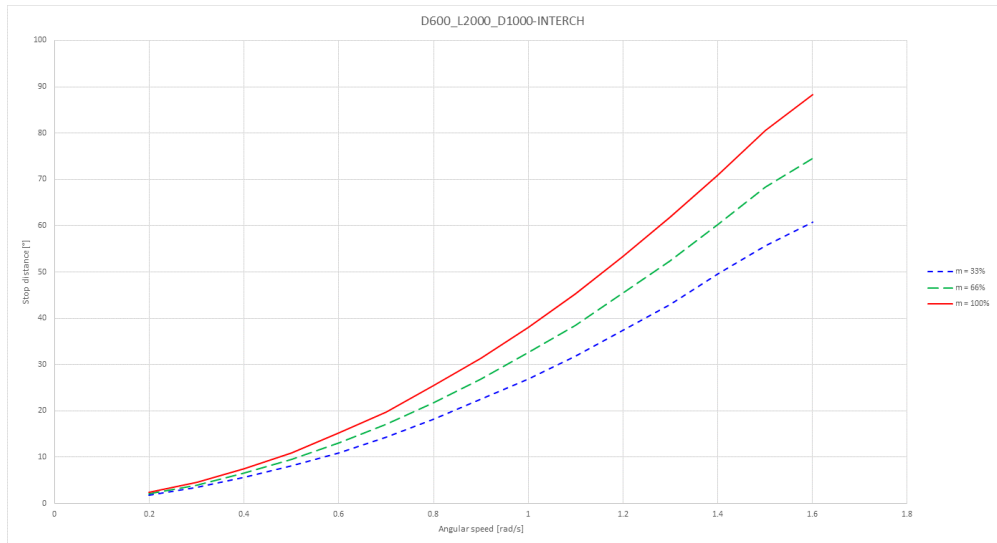
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

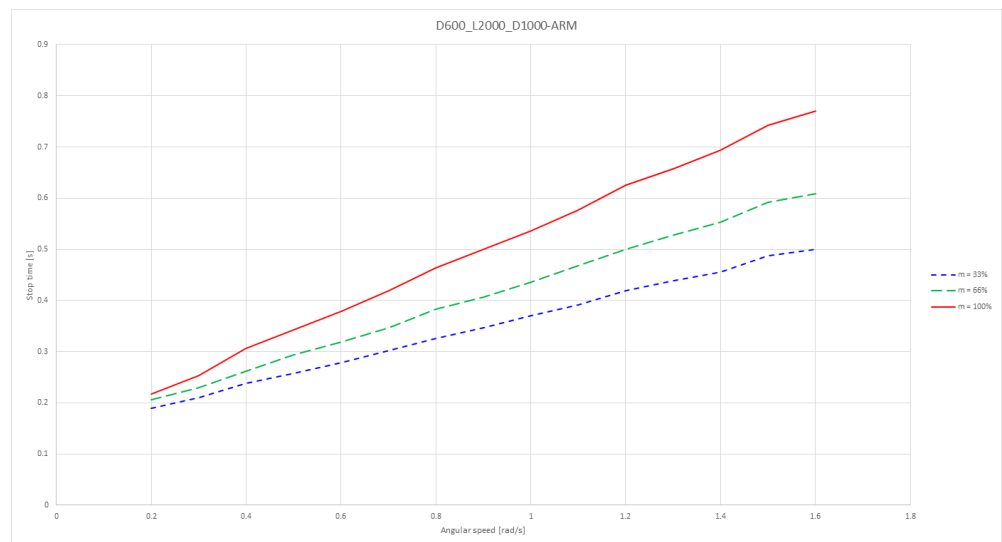
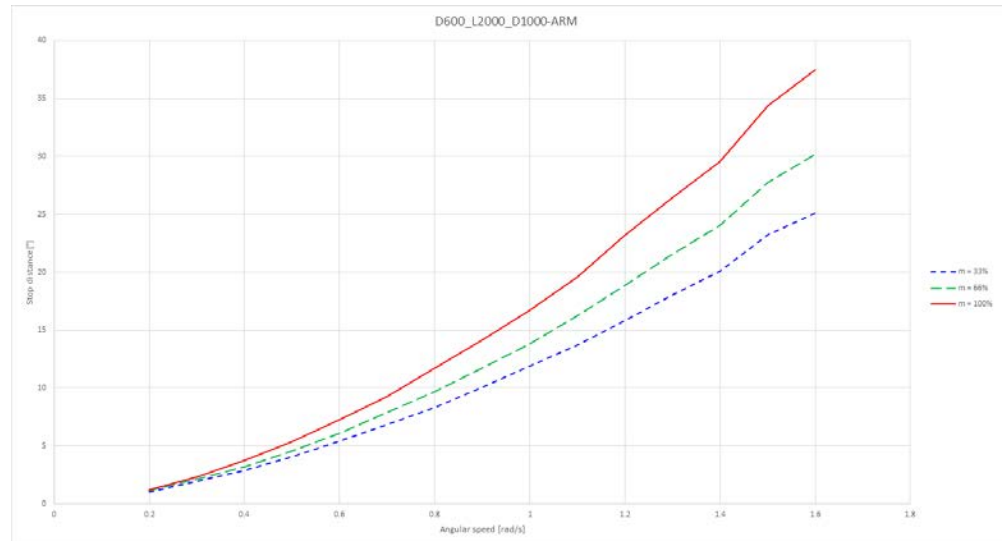
Stopping distance and stopping time



Continues on next page

Category 1, ARM

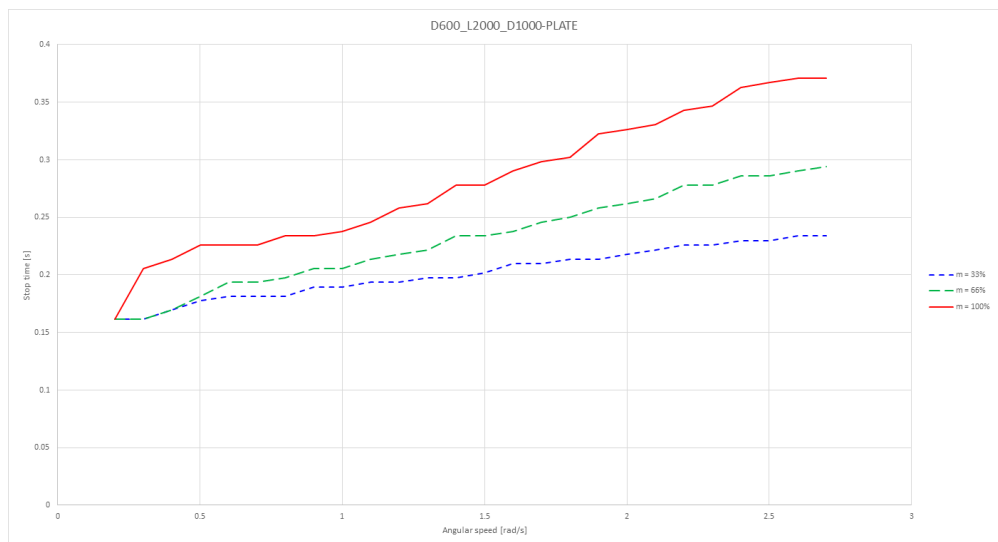
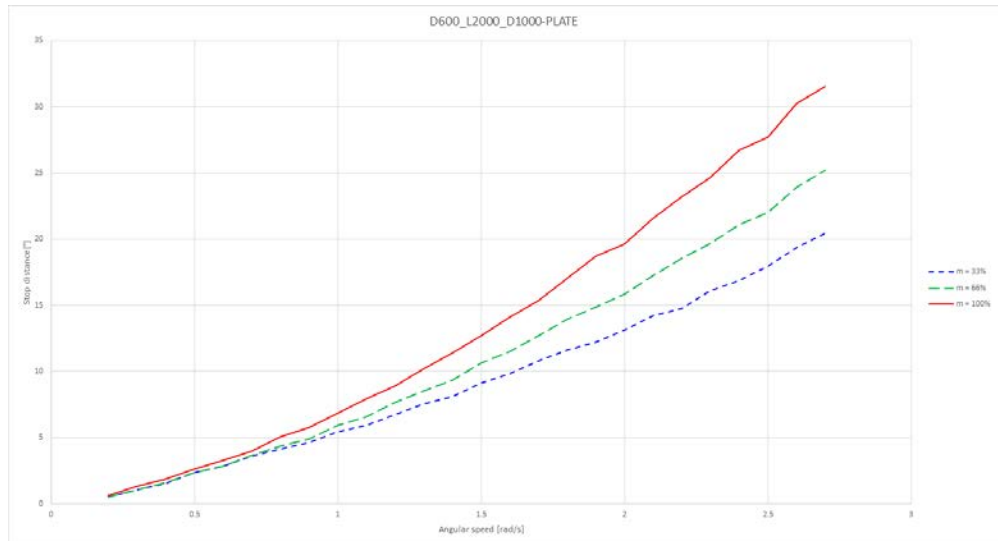
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

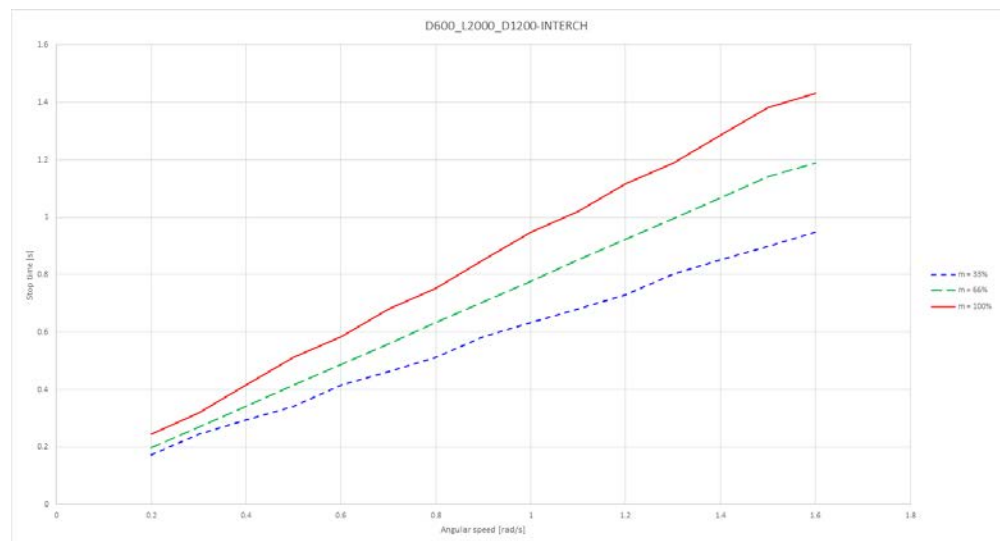
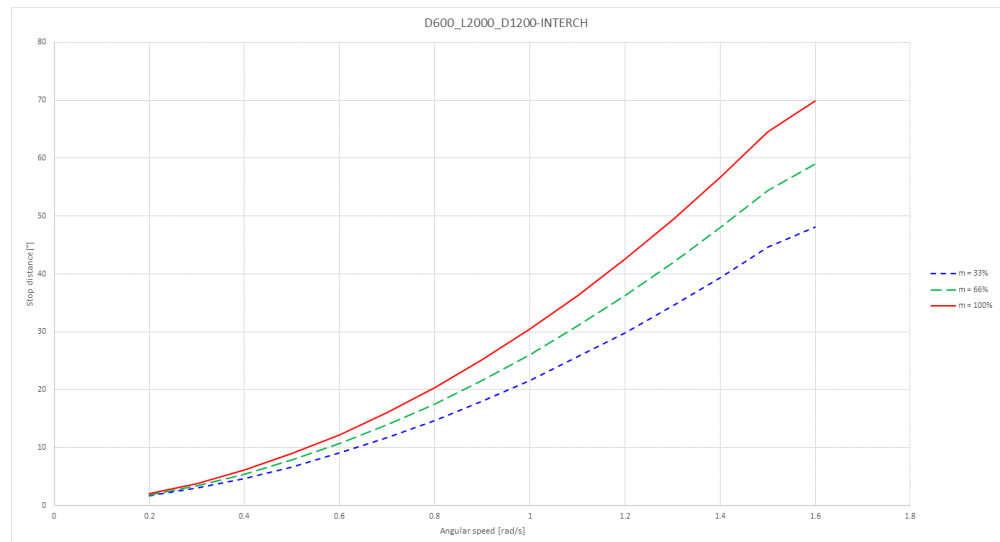
Stopping distance and stopping time



30.6 D600_L2000_D1200

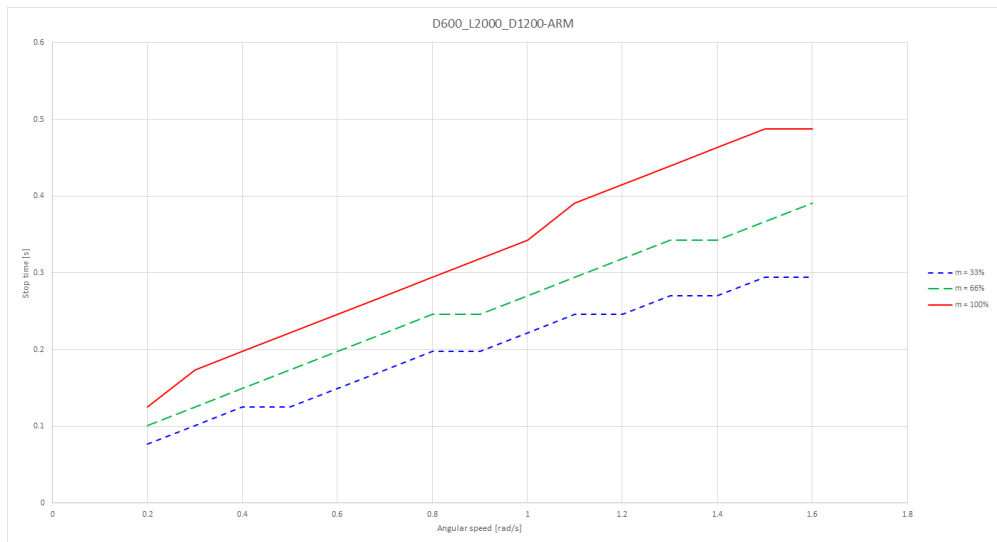
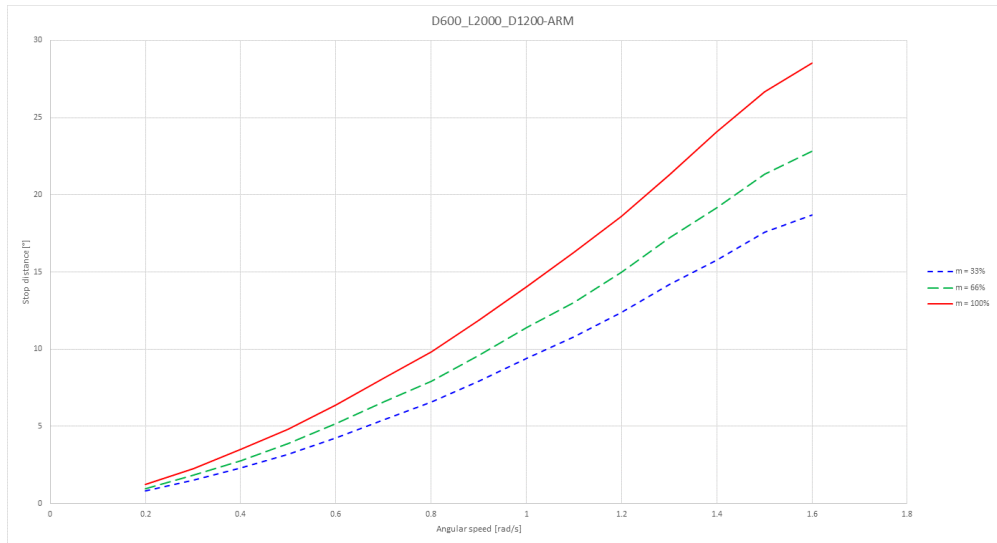
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, ARM

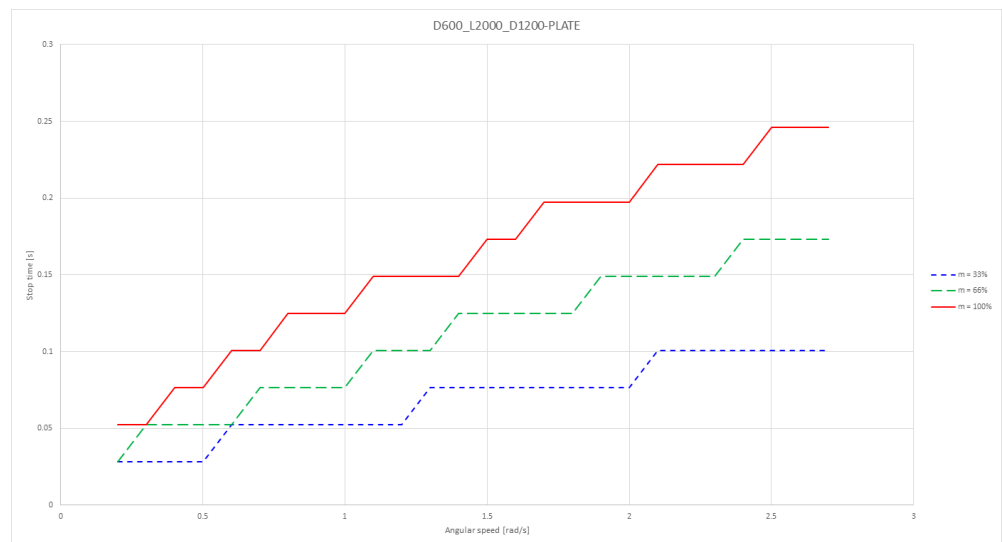
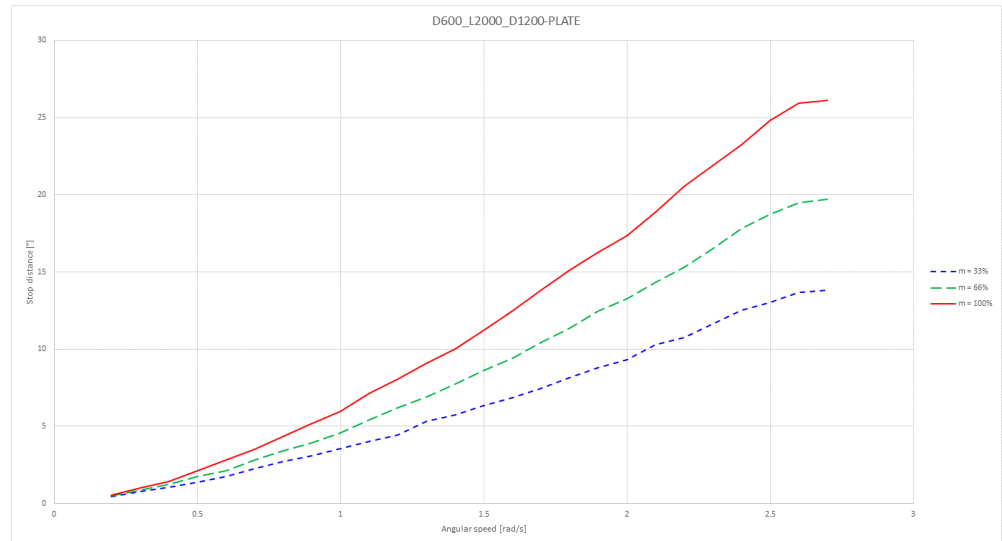
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

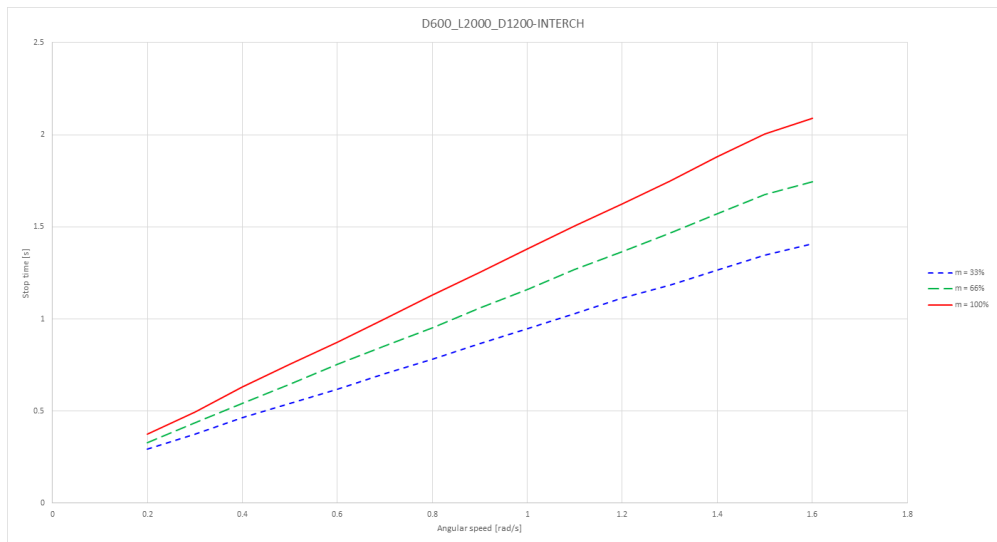
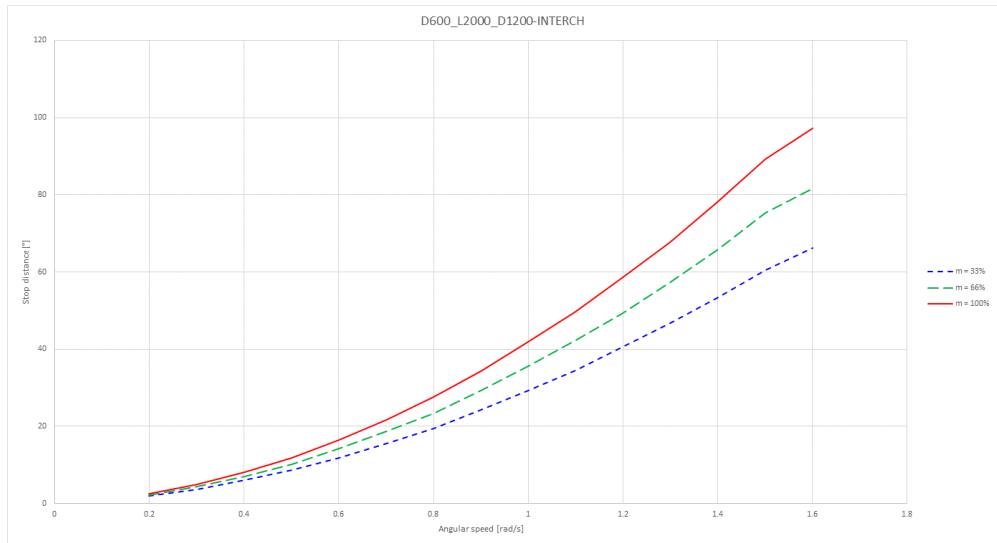
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

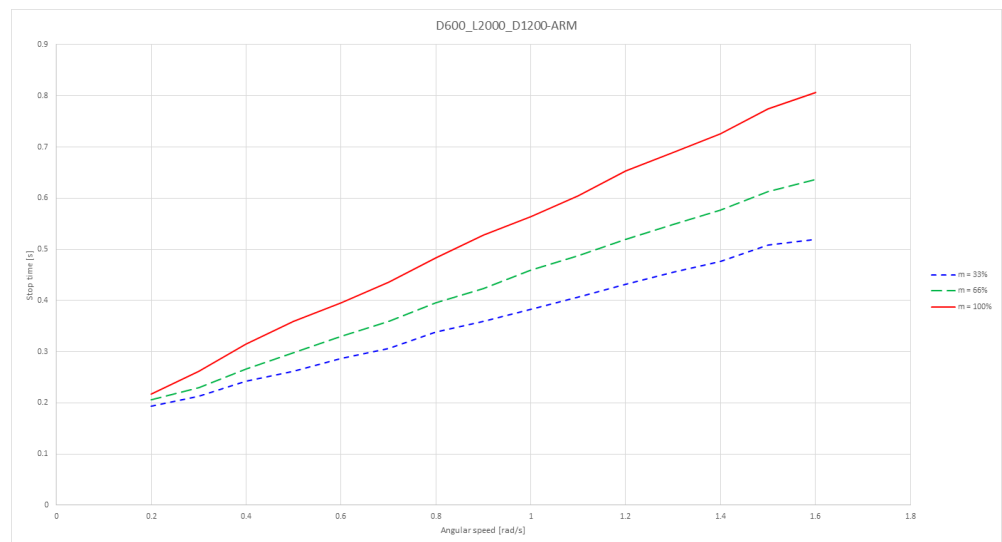
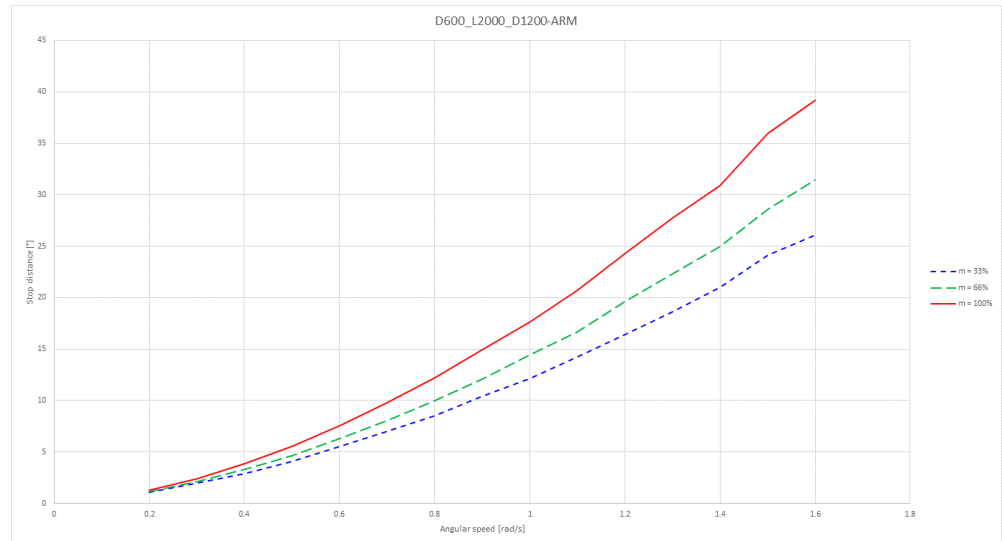
Stopping distance and stopping time



Continues on next page

Category 1, ARM

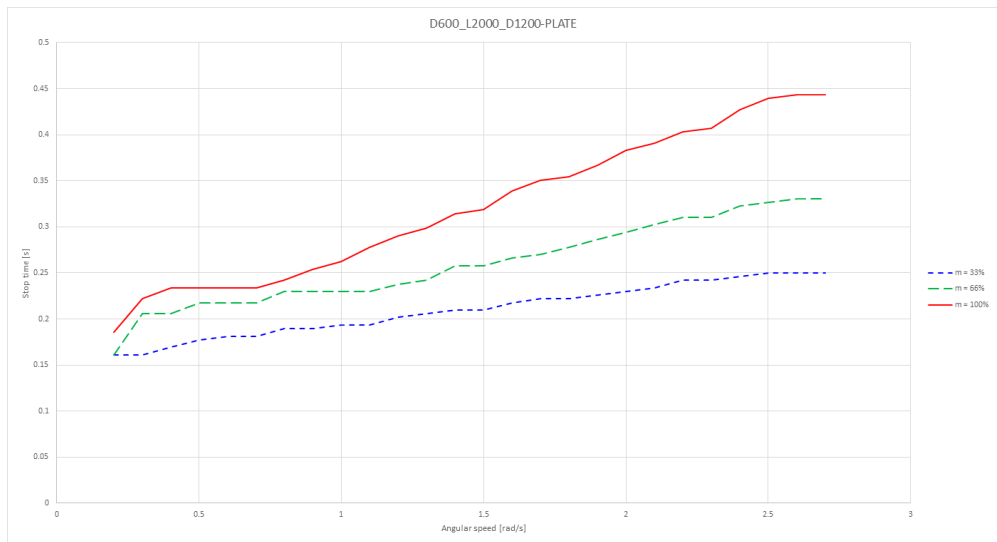
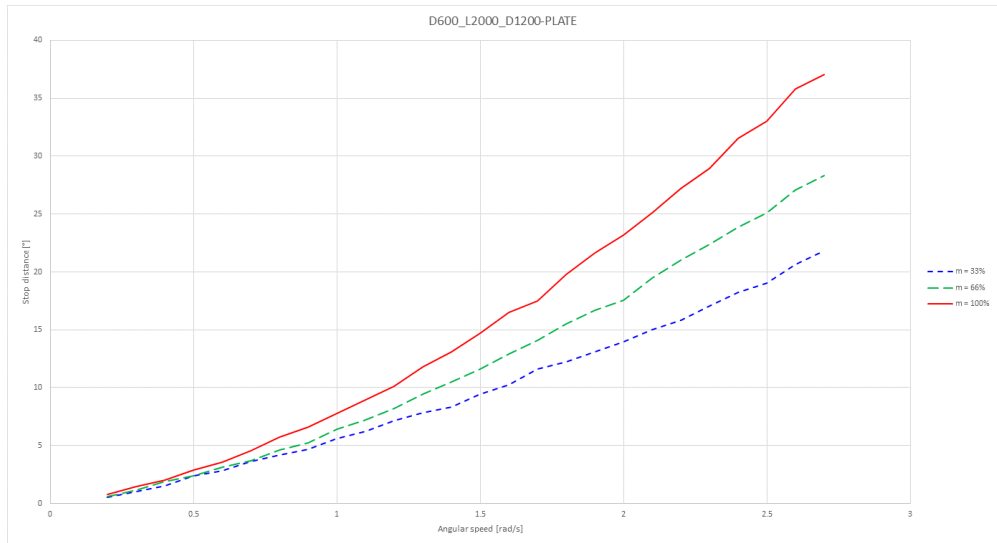
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

Stopping distance and stopping time

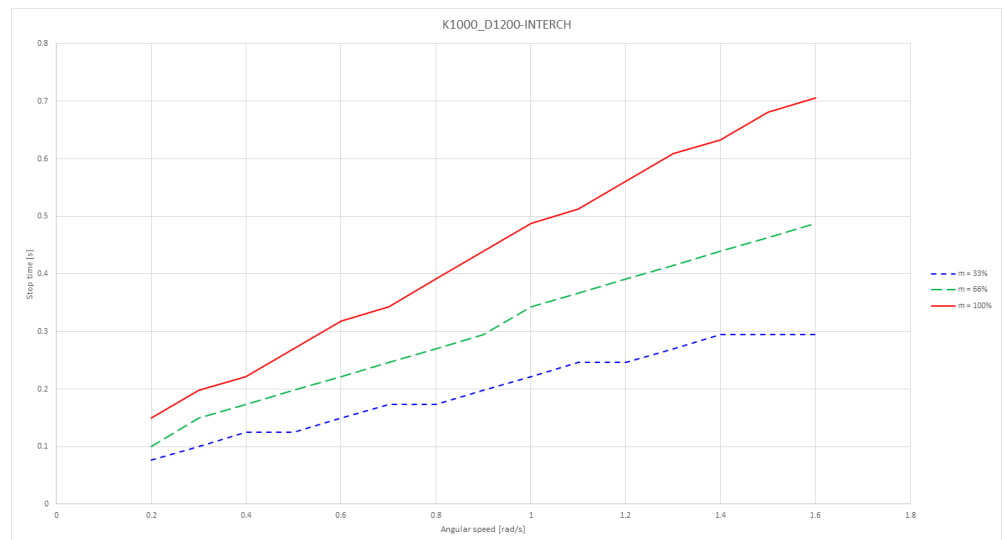
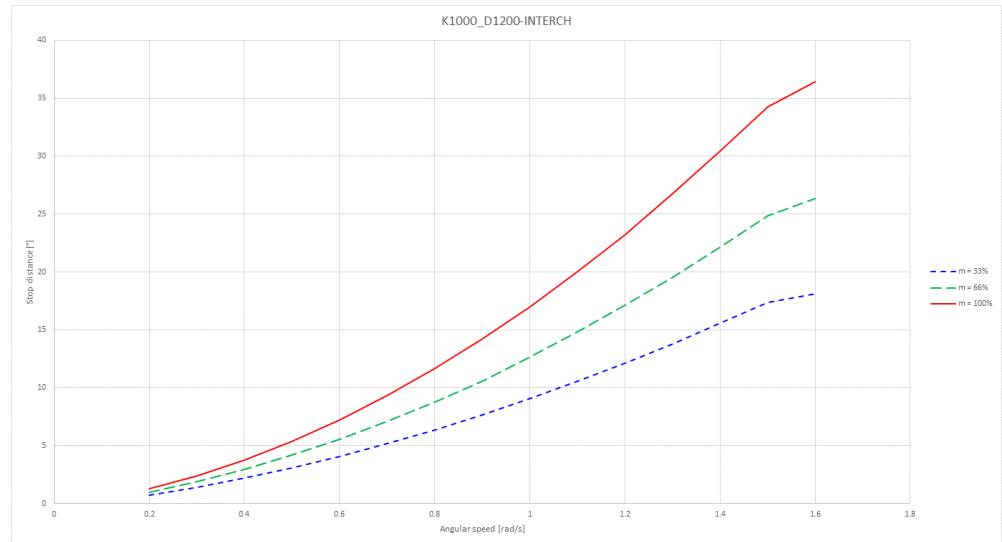


31 IRBP K

31.1 K1000_D1200

Category 0, INTERCH

Stopping distance and stopping time



Continues on next page

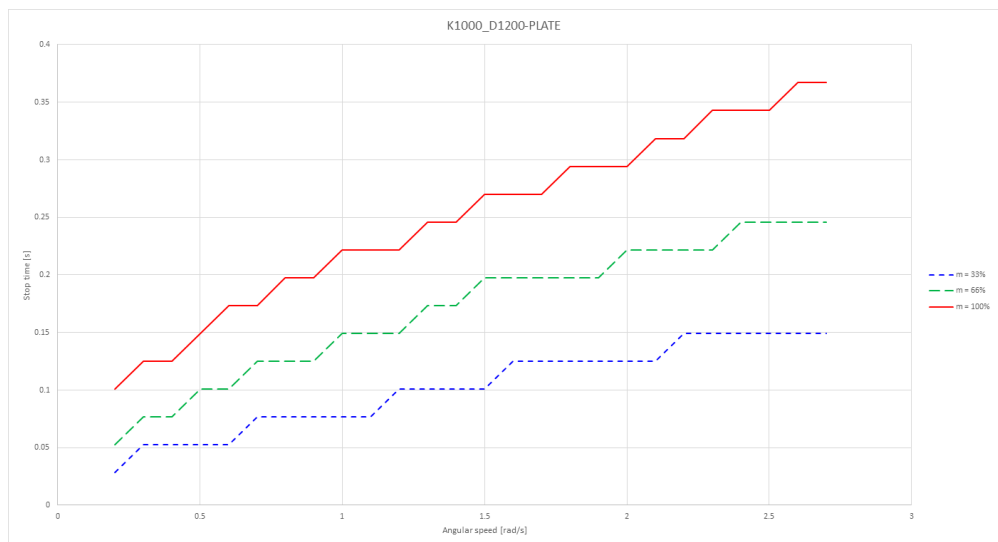
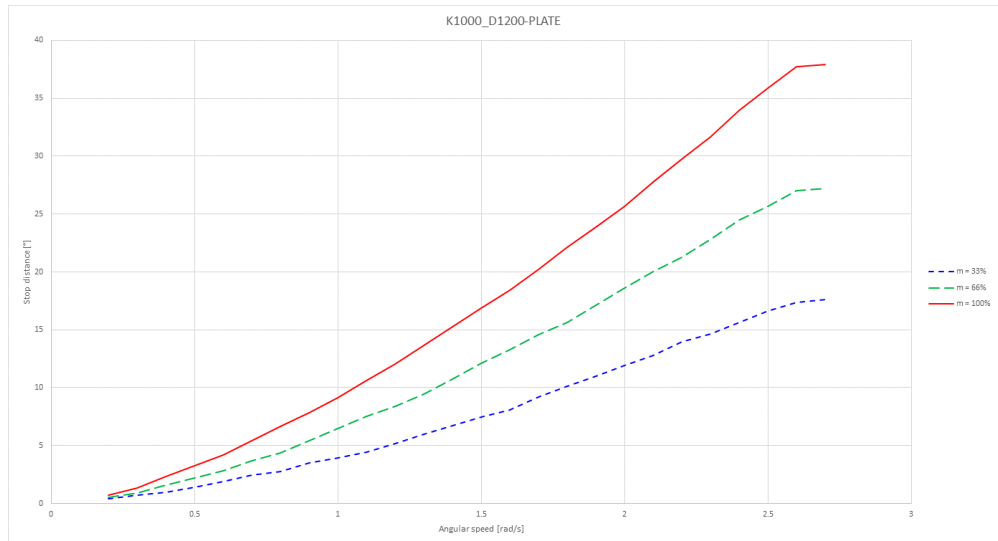
31 IRBP K

31.1 K1000_D1200

Continued

Category 0, PLATE

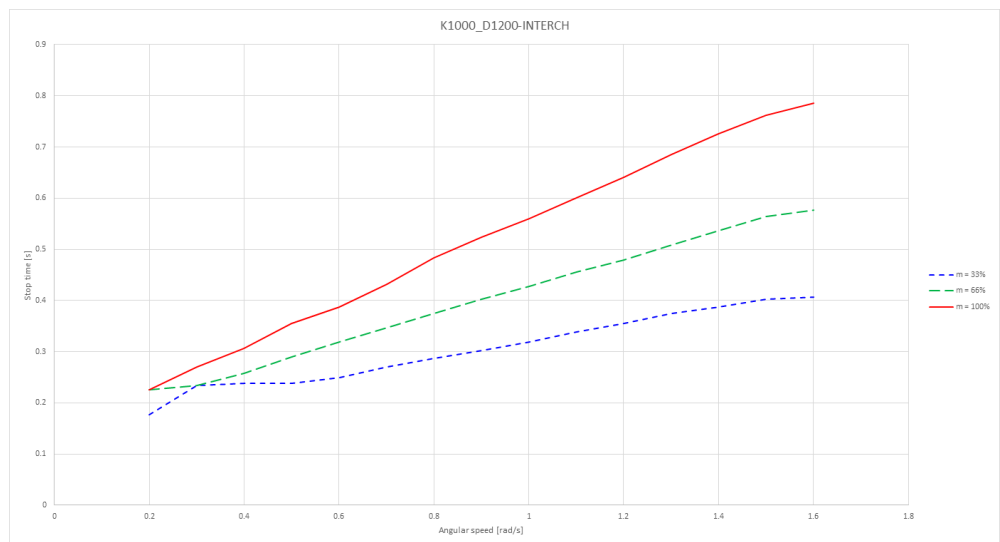
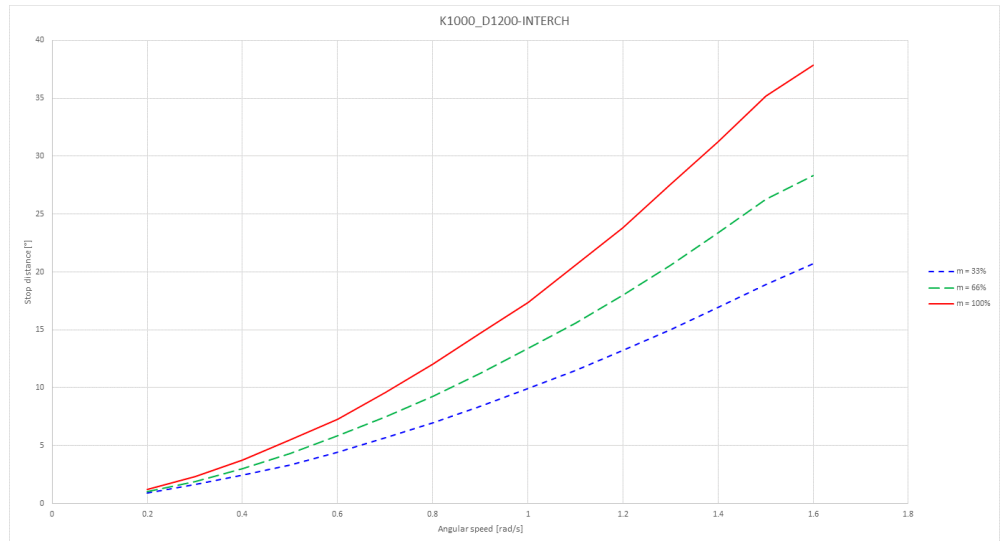
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

Stopping distance and stopping time



Continues on next page

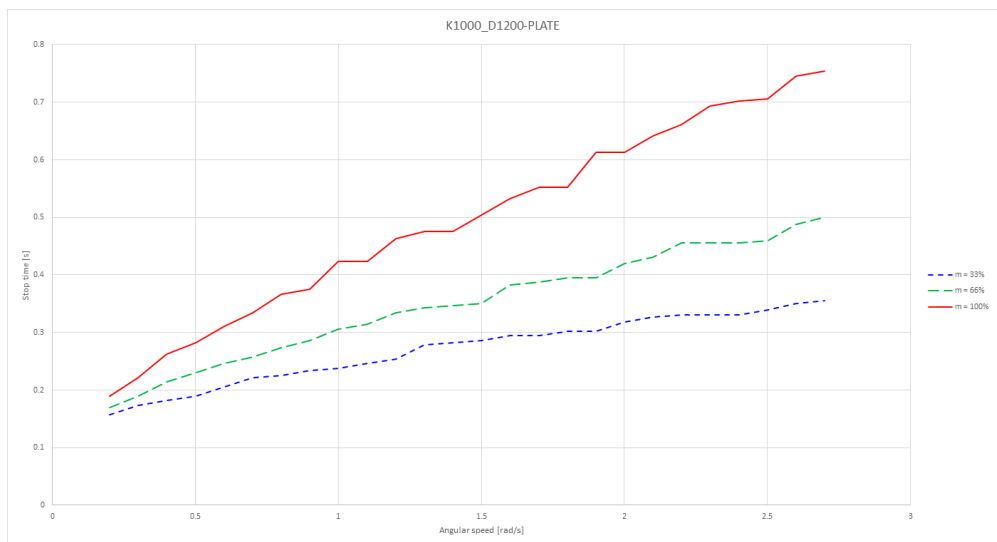
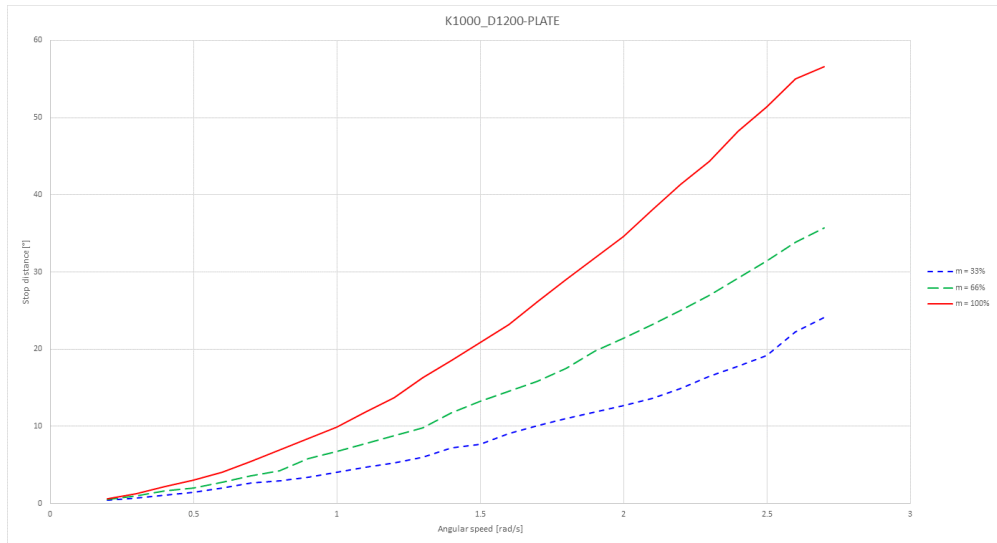
31 IRBP K

31.1 K1000_D1200

Continued

Category 1, PLATE

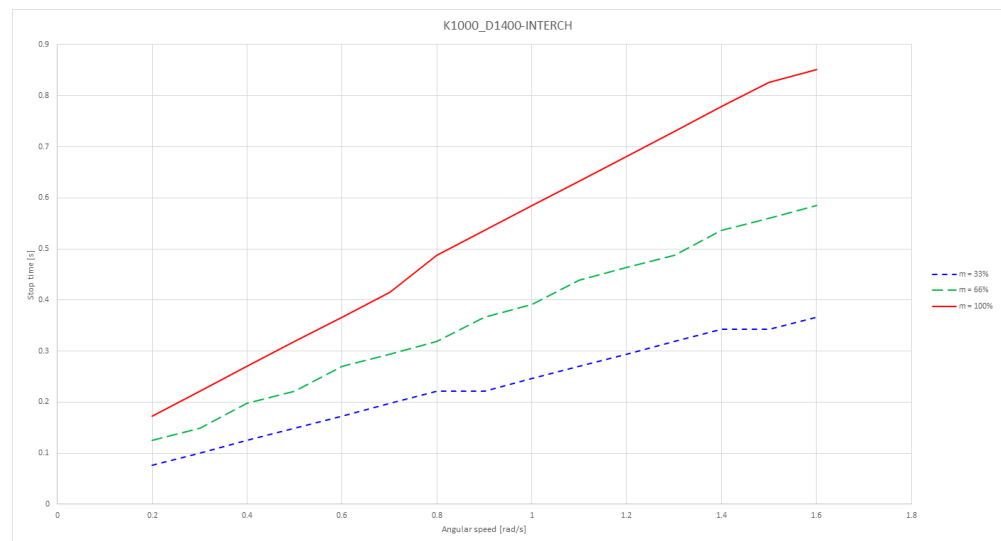
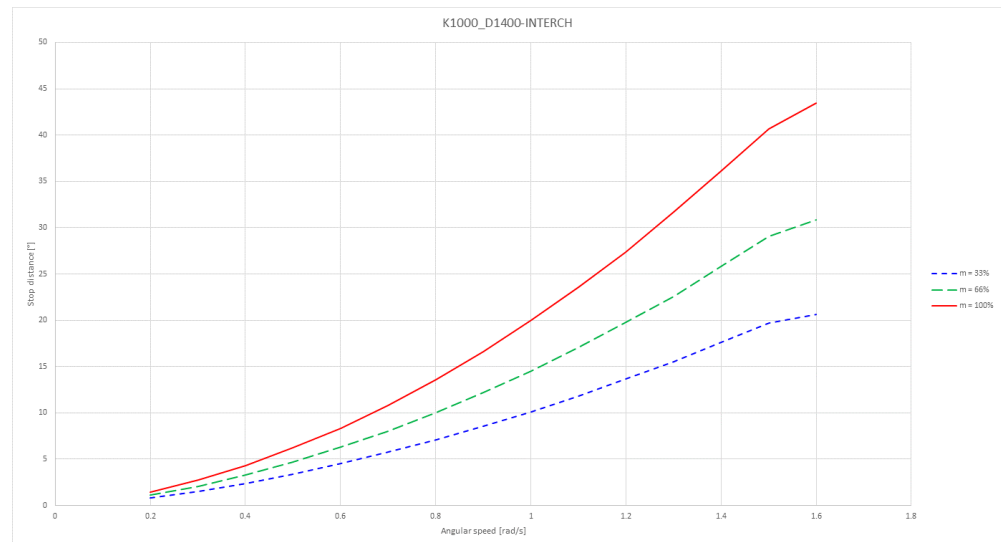
Stopping distance and stopping time



31.2 K1000_D1400

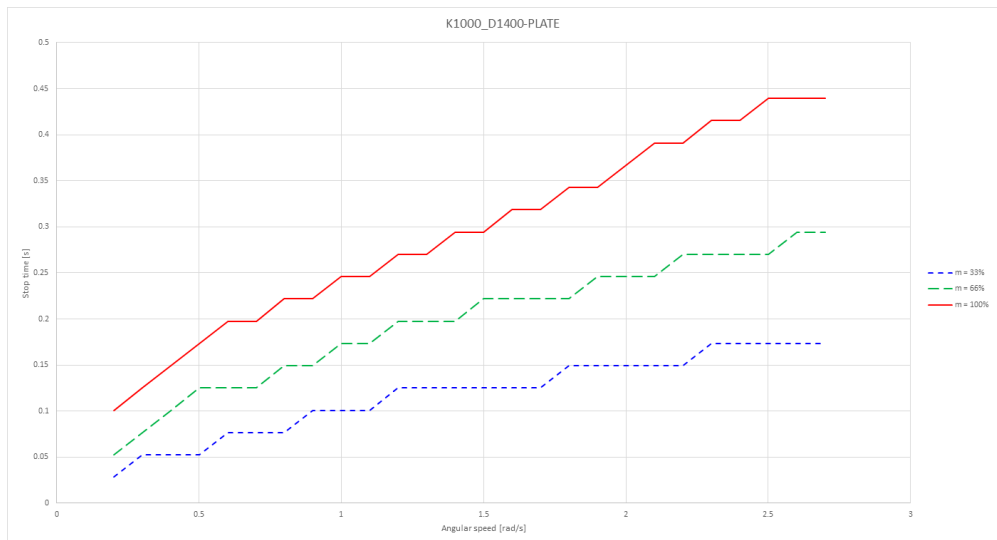
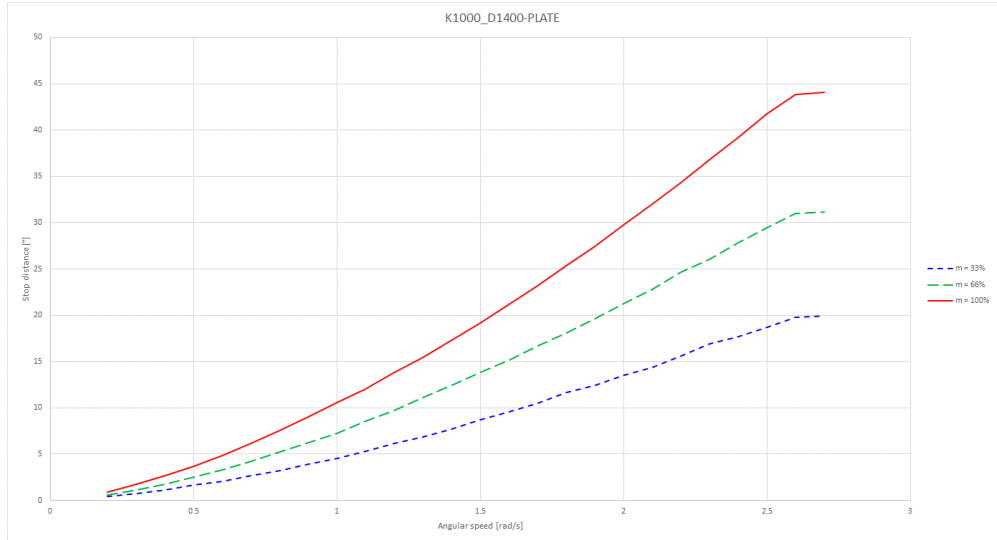
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, PLATE

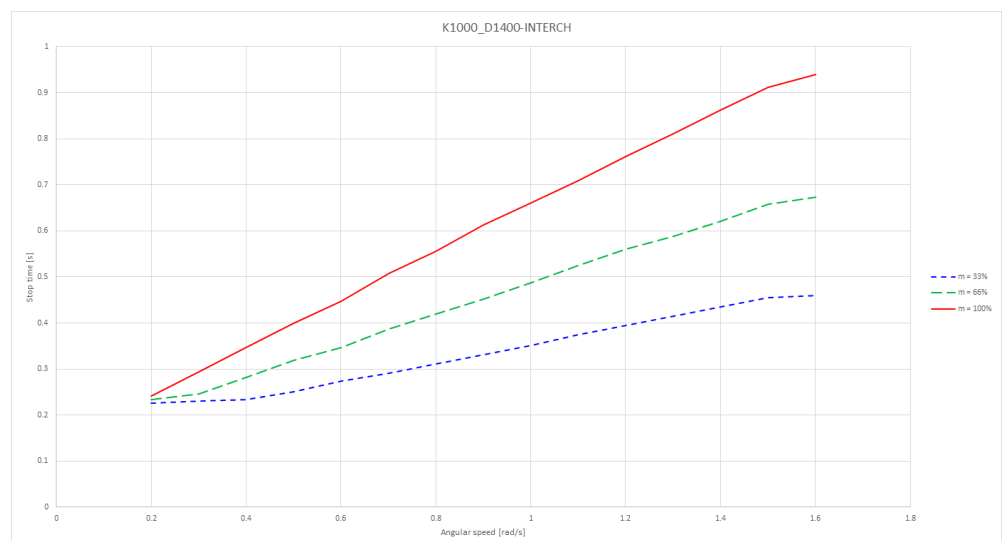
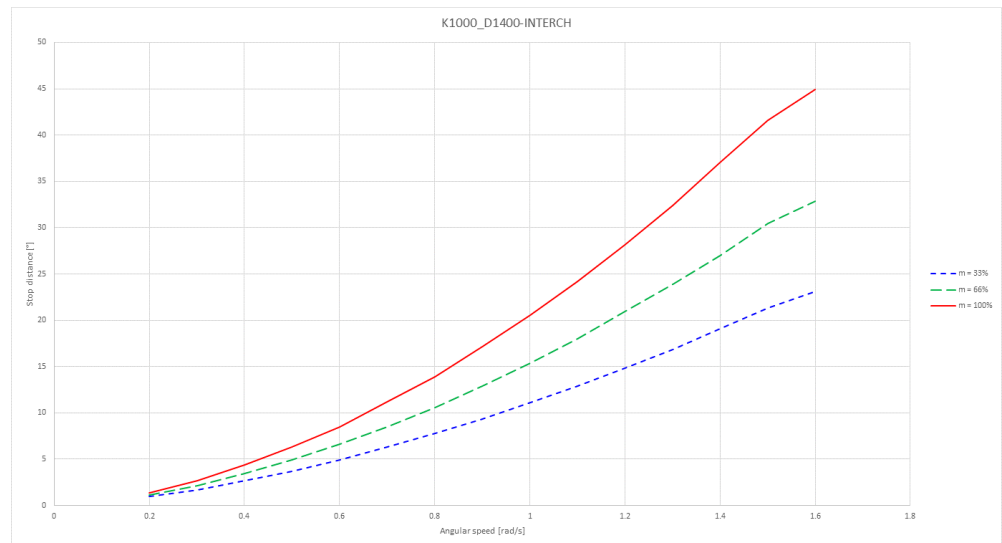
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

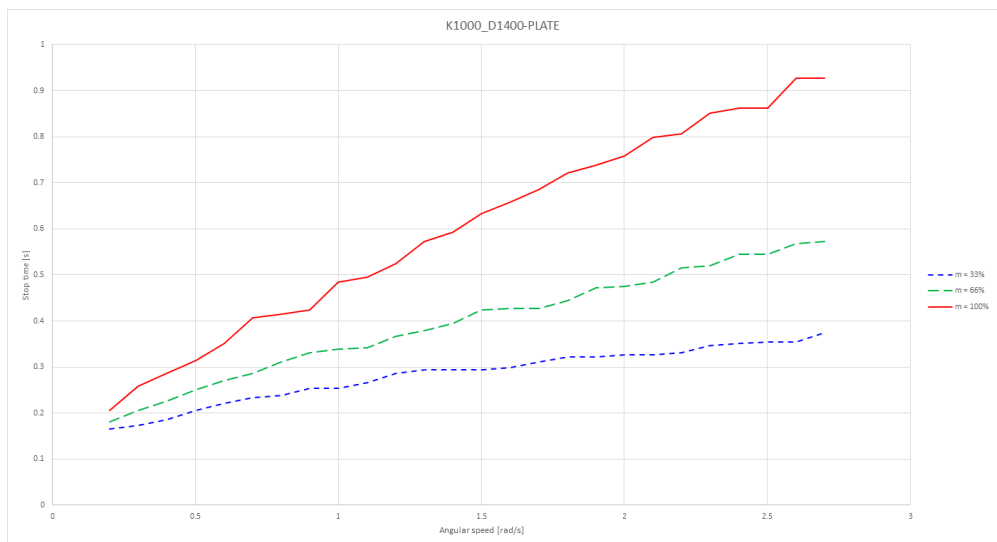
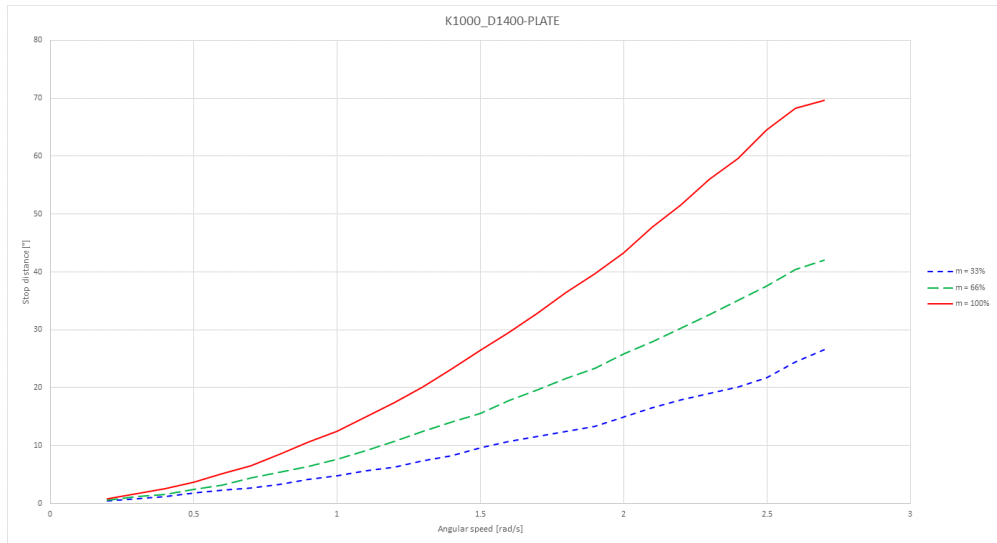
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

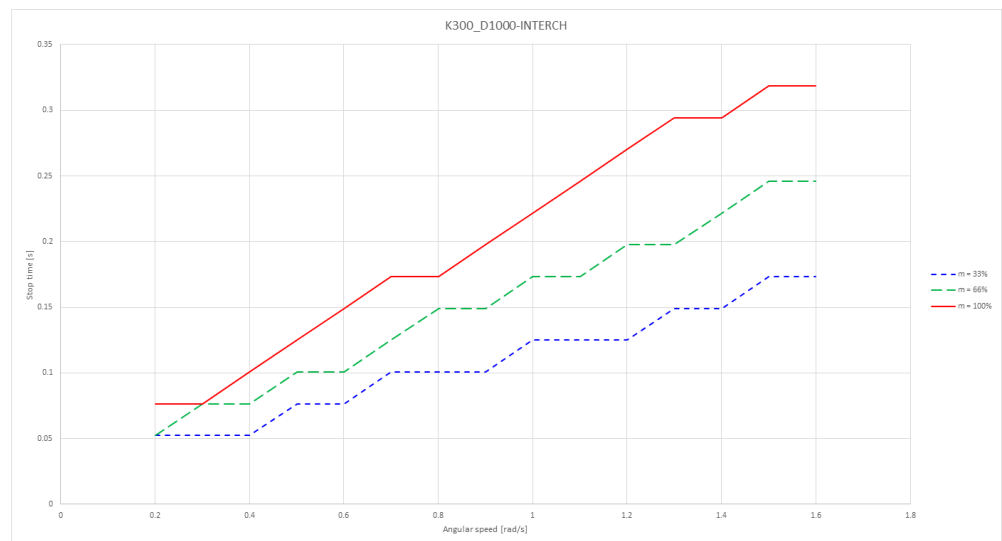
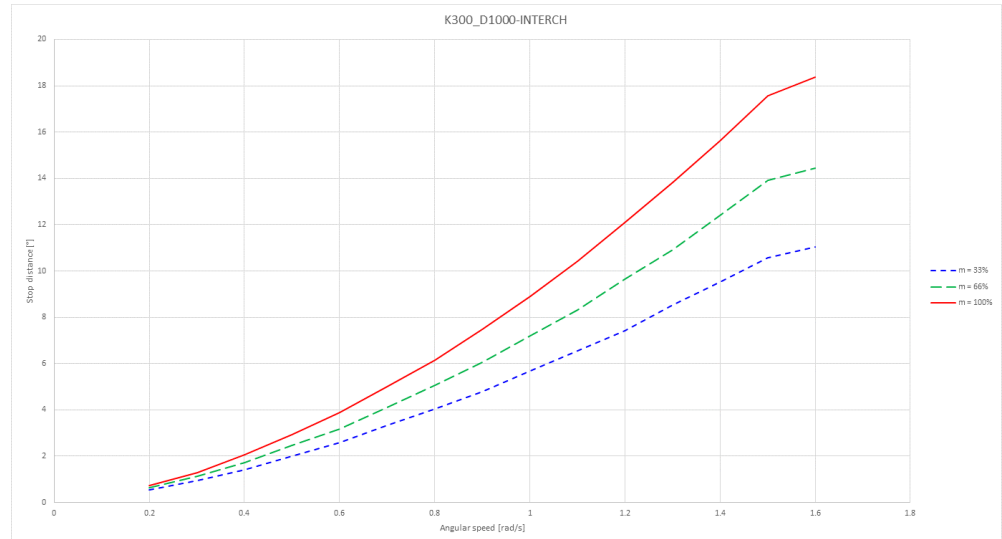
Stopping distance and stopping time



31.3 K300_D1000

Category 0, INTERCH

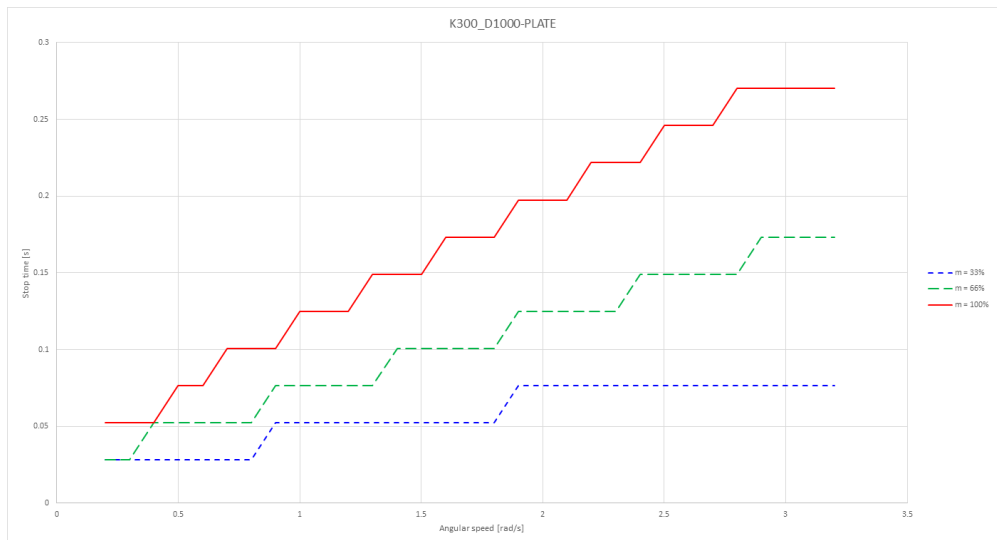
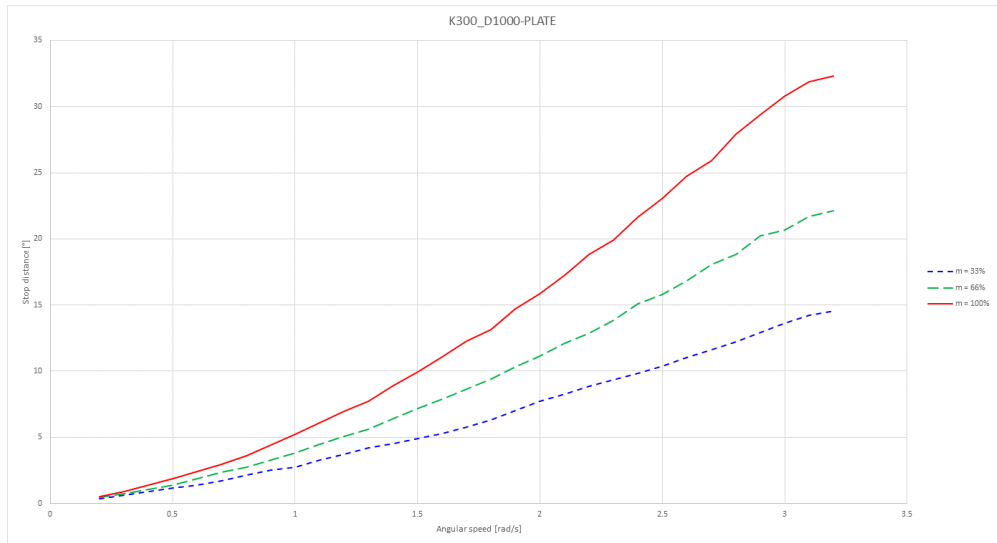
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

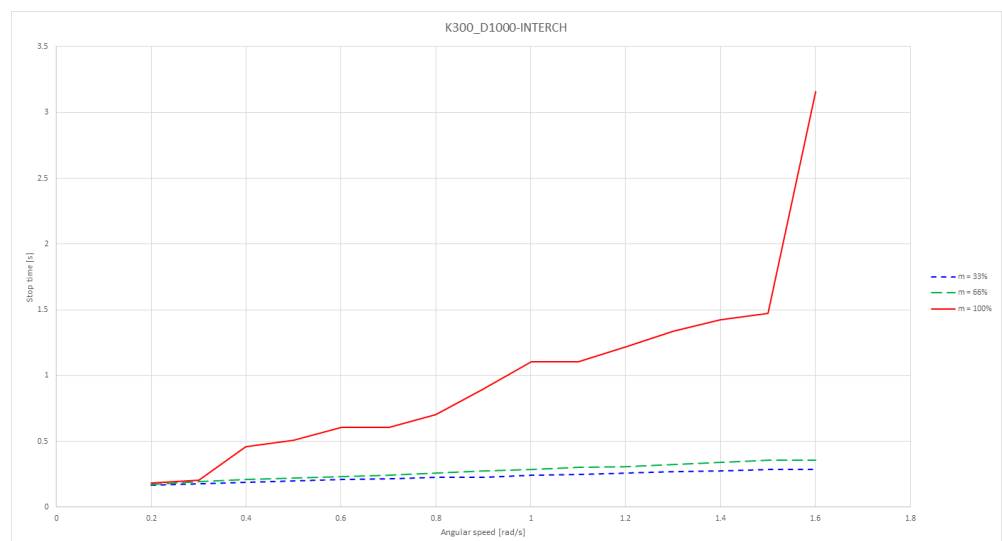
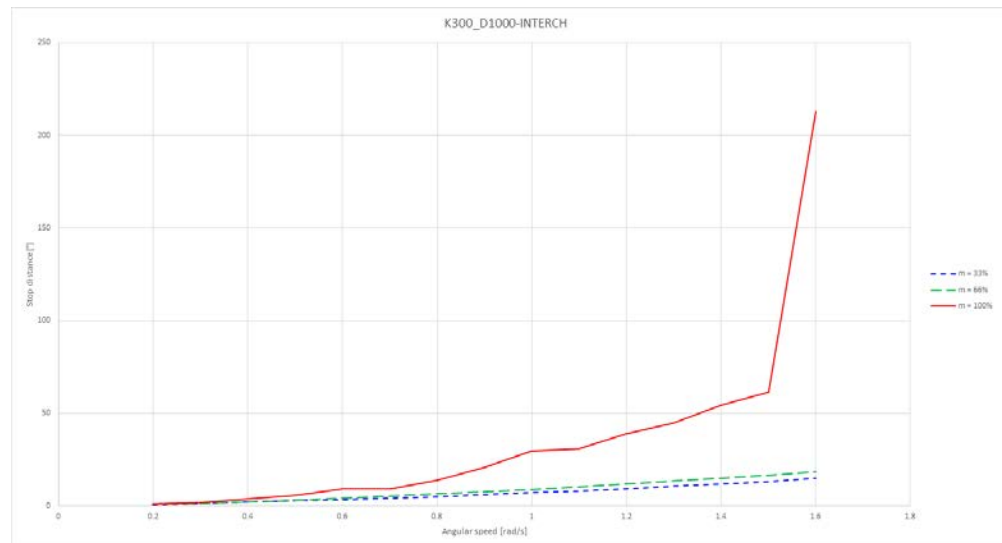
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

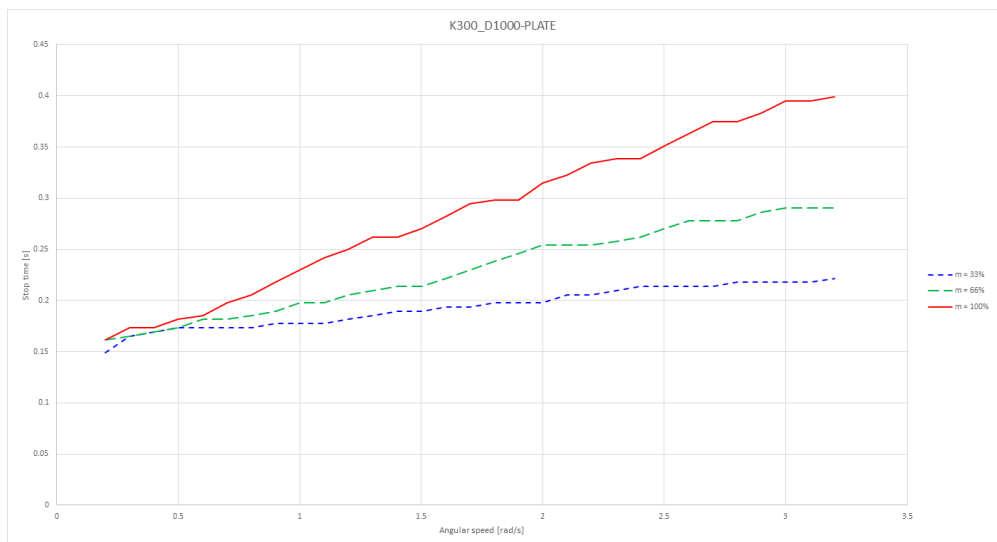
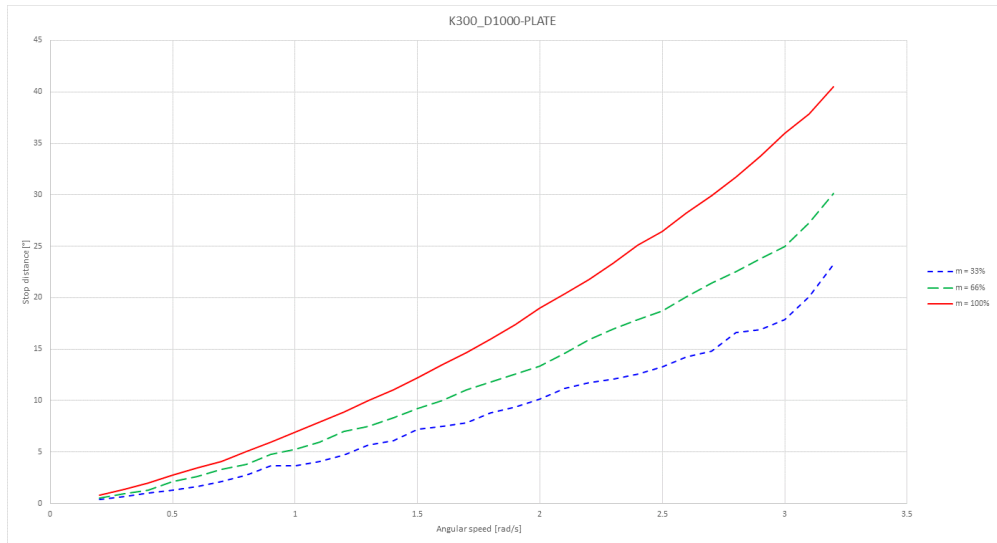
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

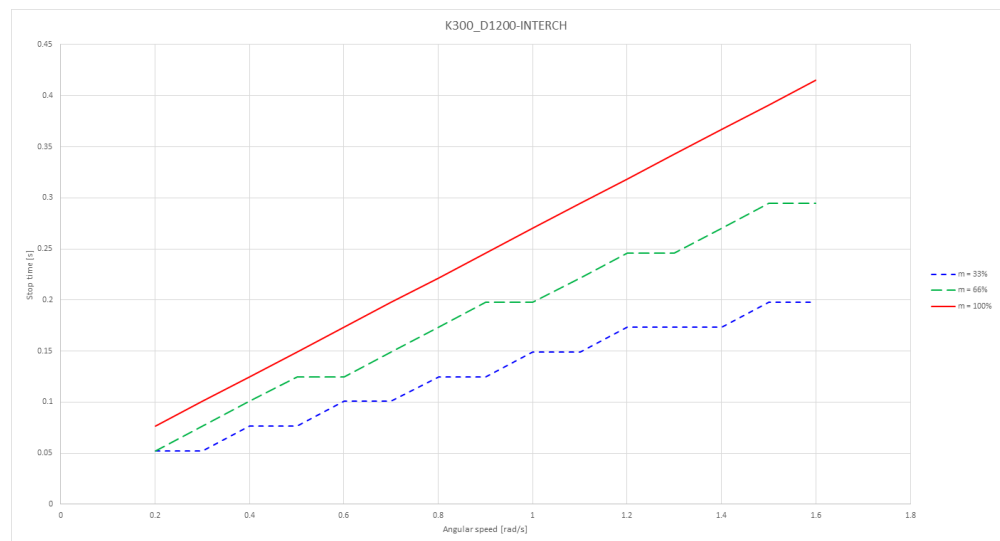
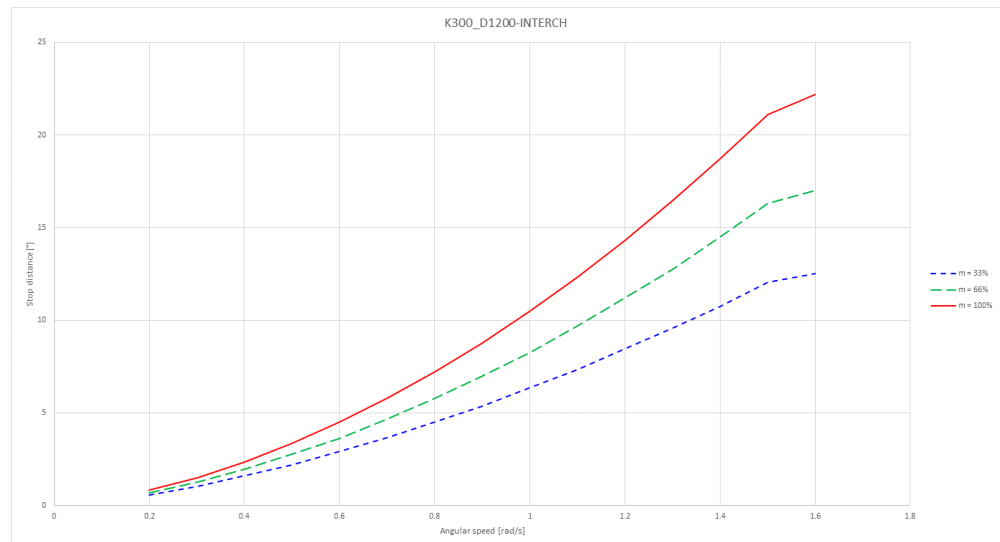
Stopping distance and stopping time



31.4 K300_D1200

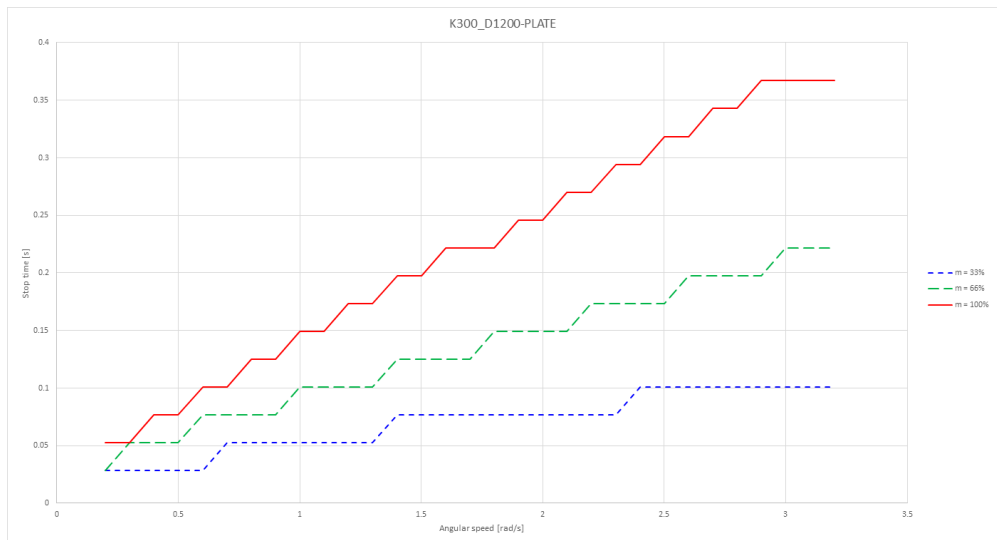
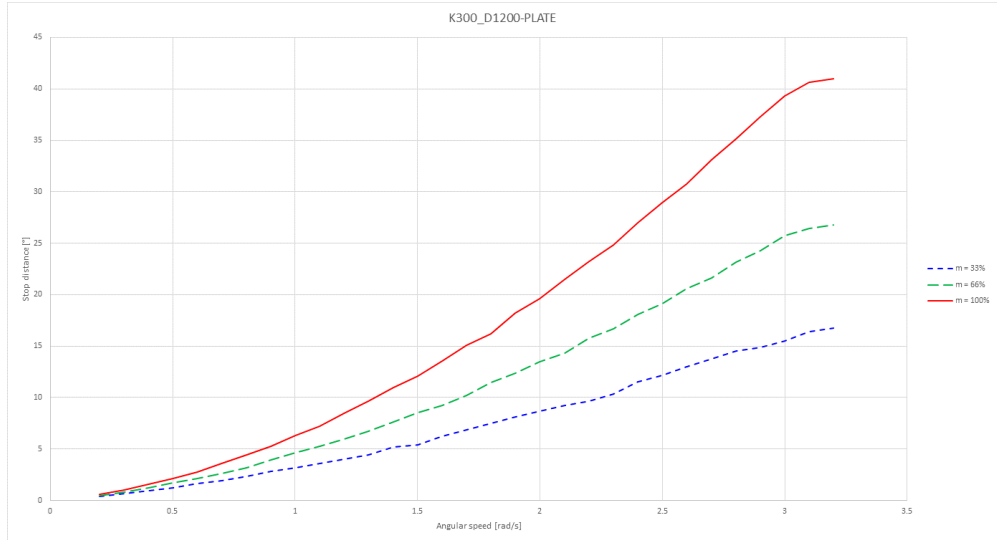
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, PLATE

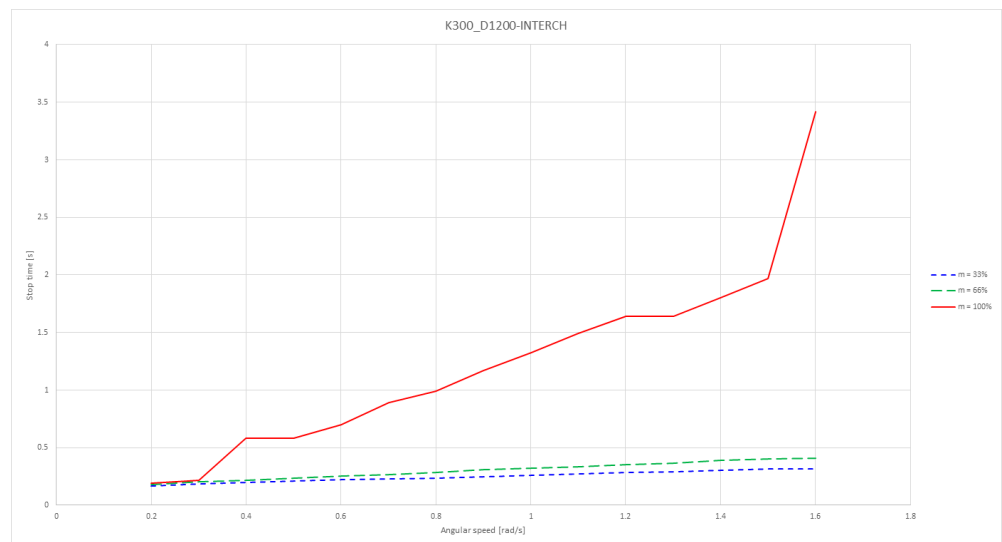
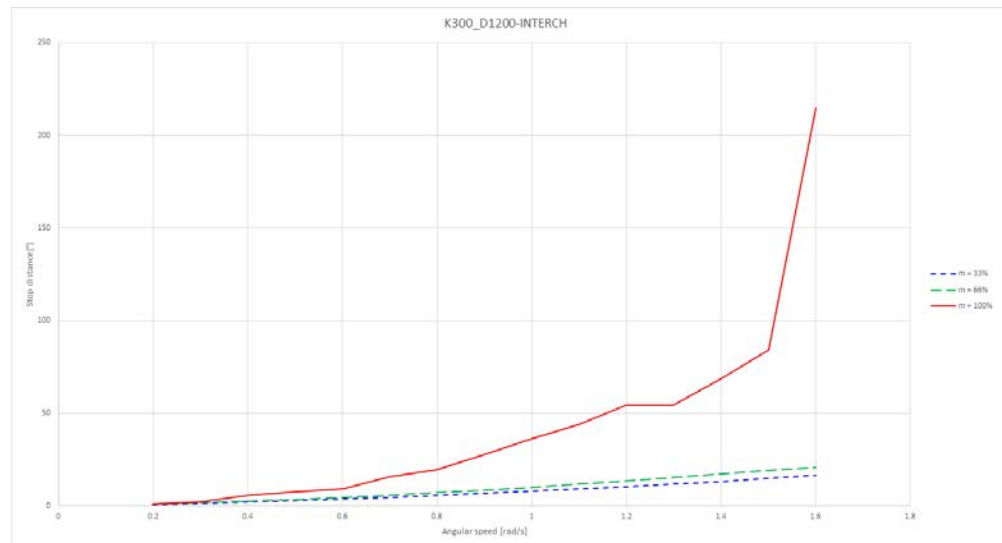
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

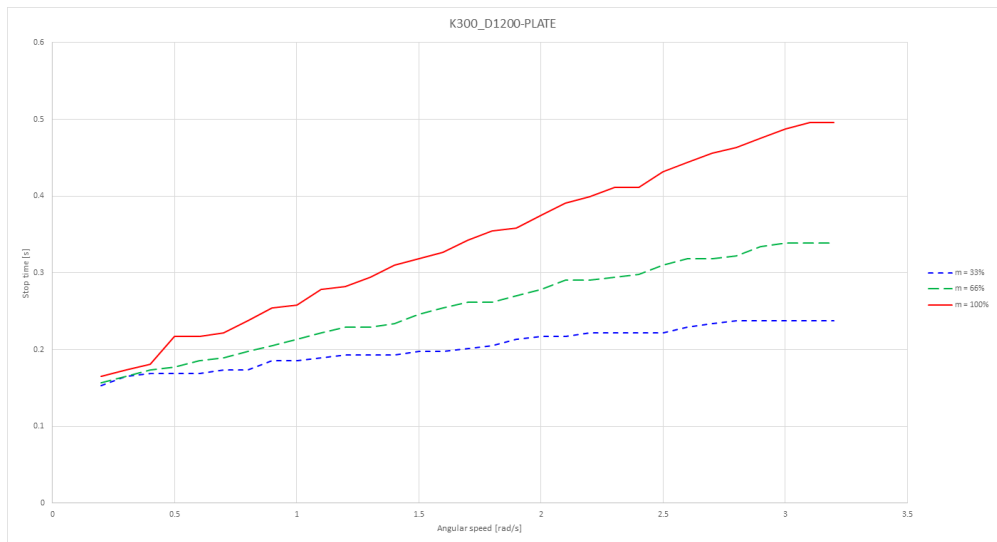
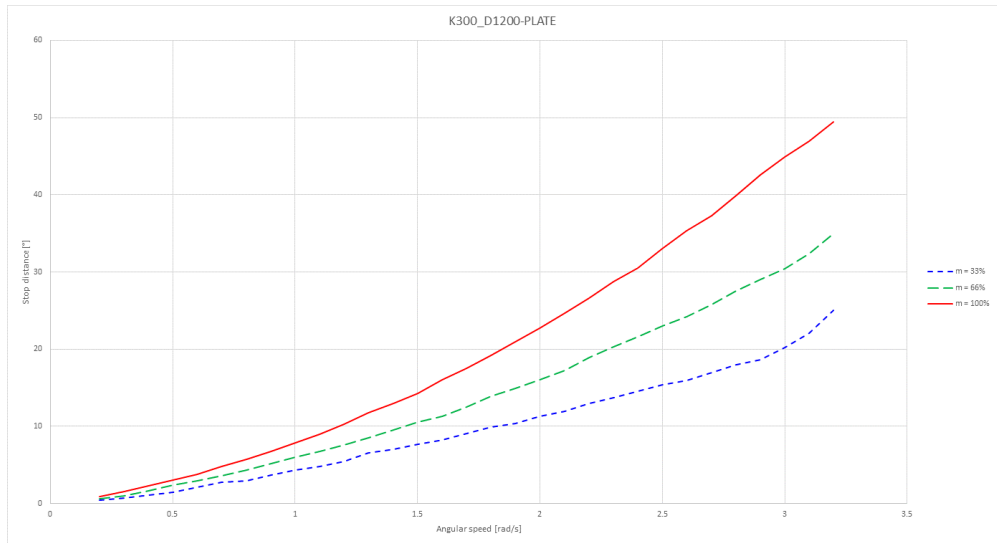
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

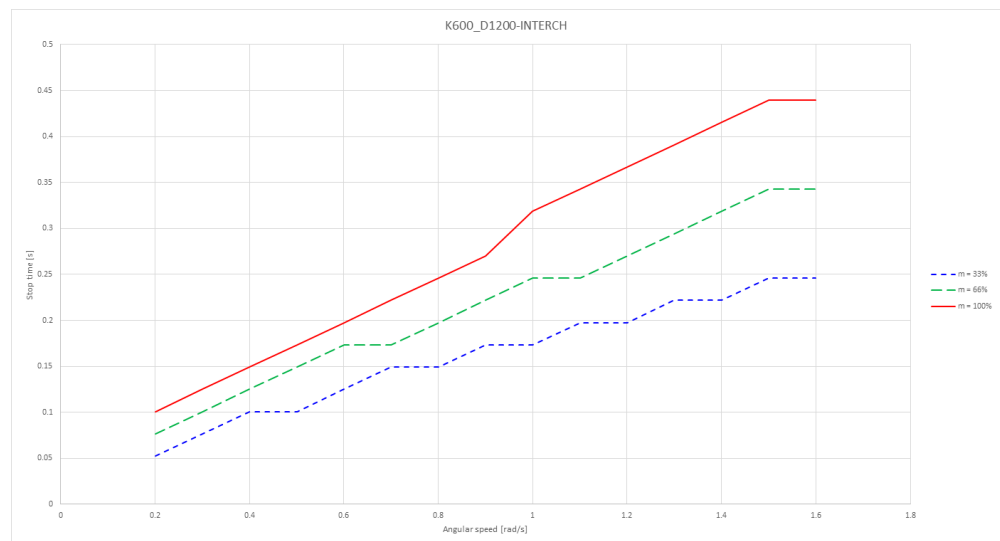
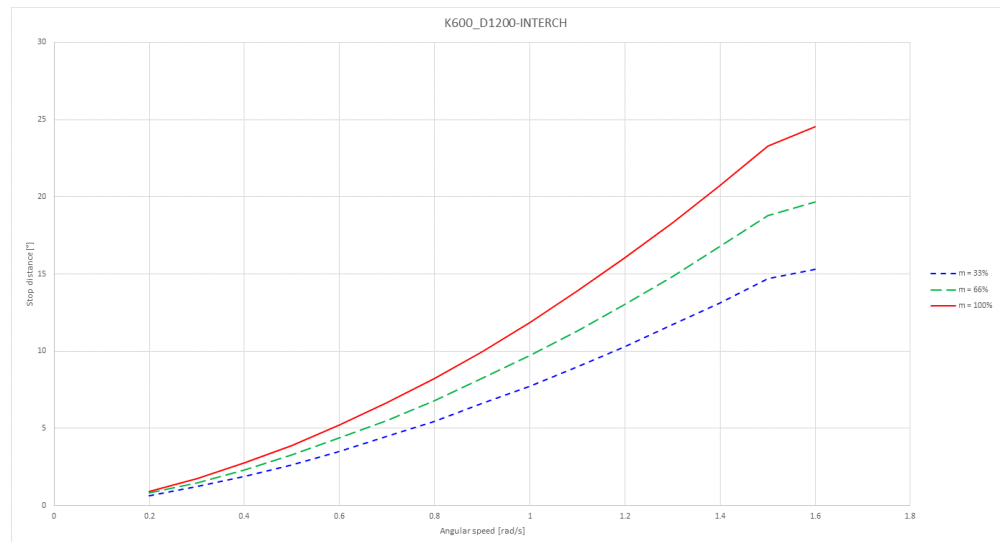
Stopping distance and stopping time



31.5 K600_D1200

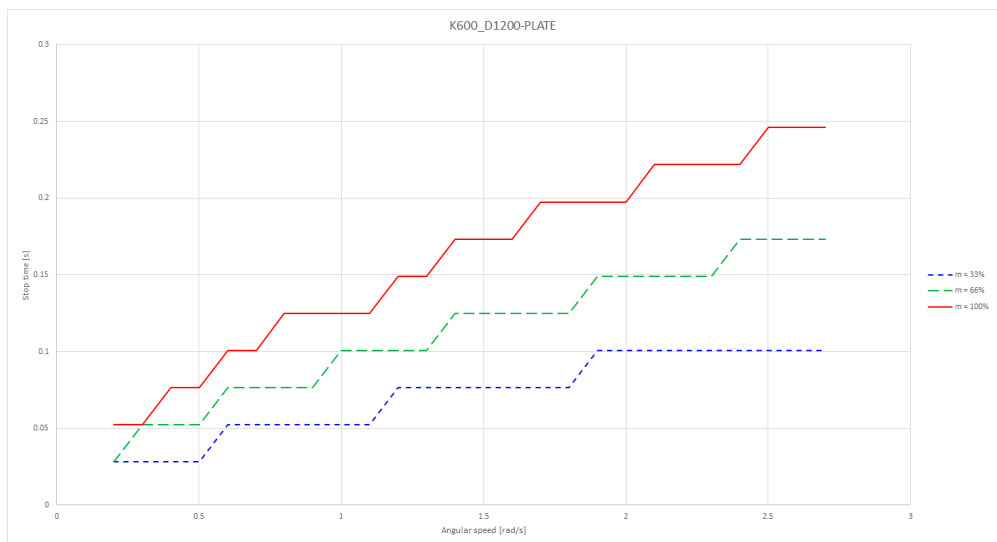
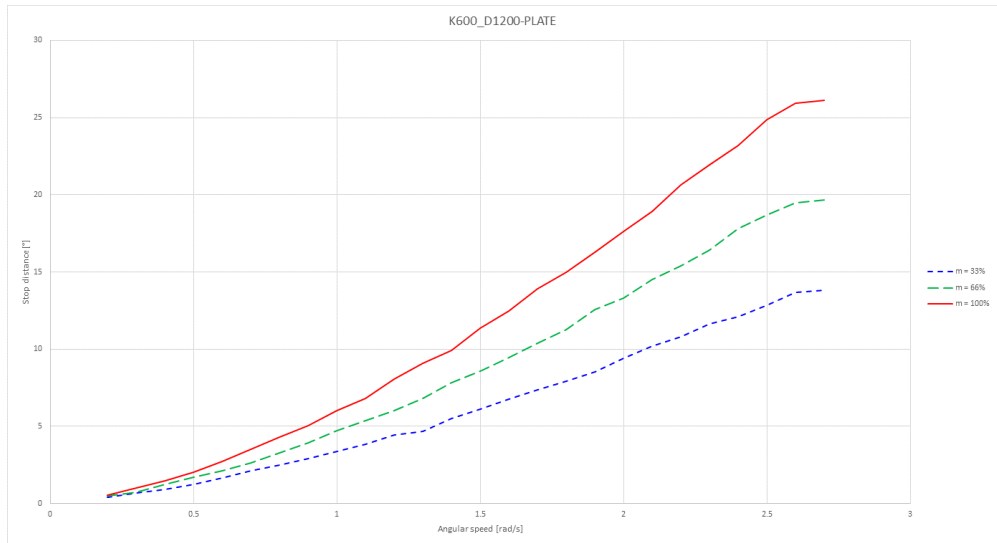
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, PLATE

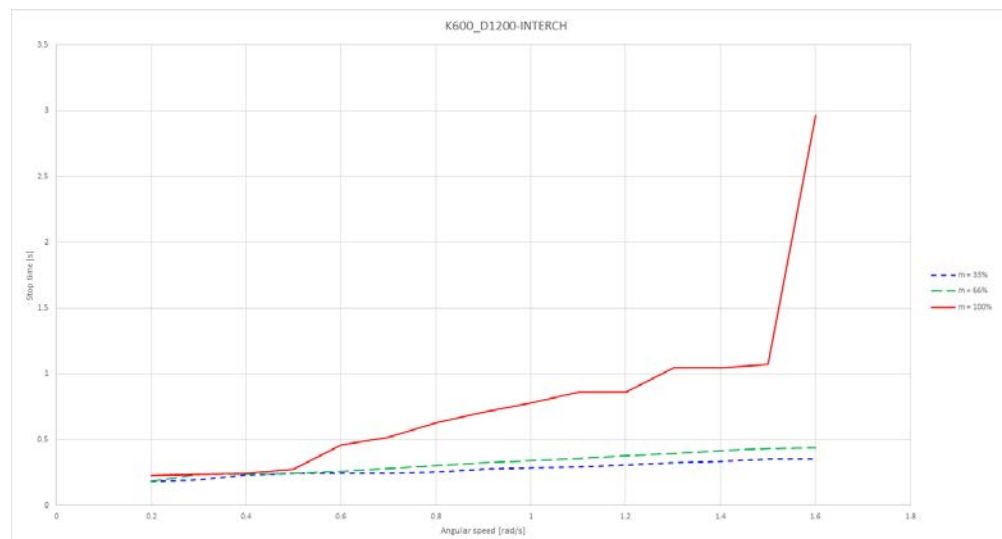
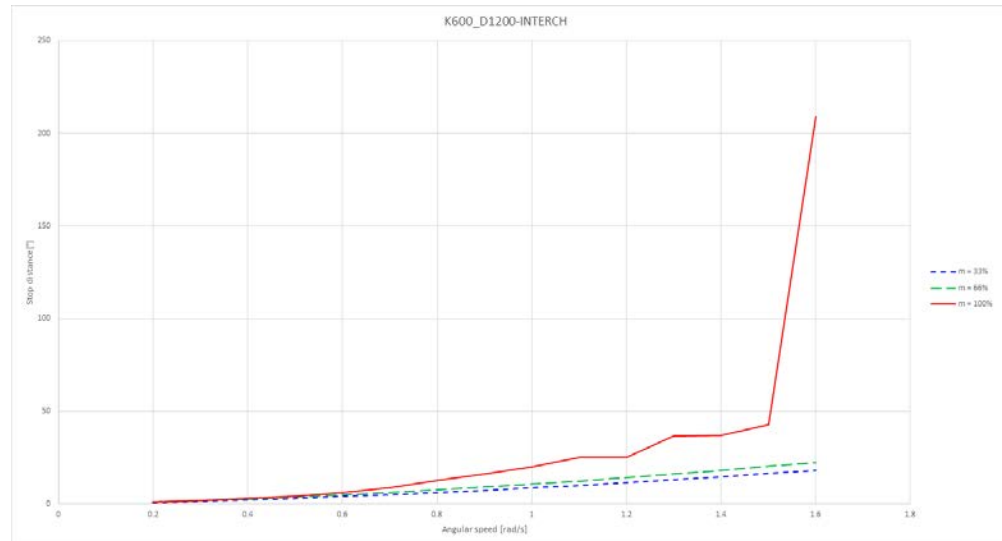
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

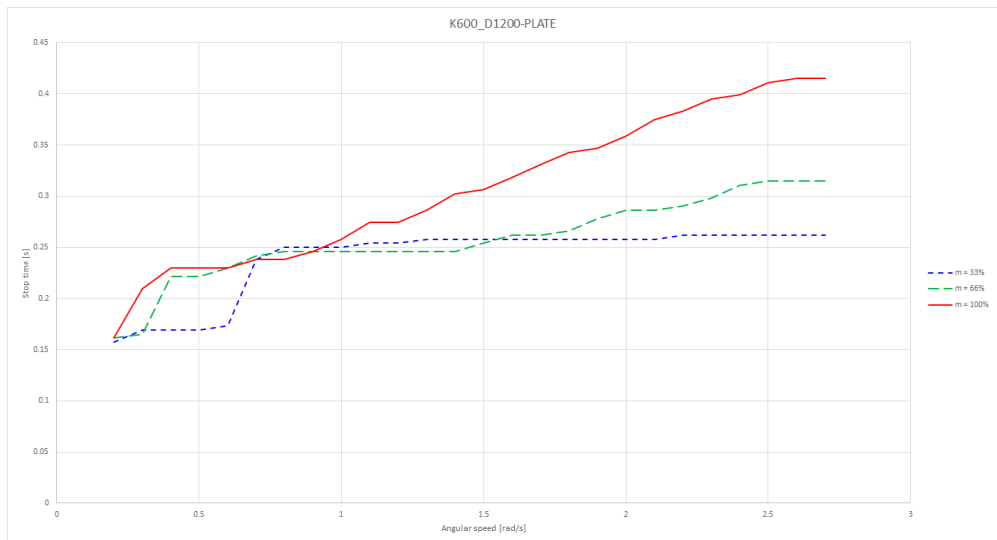
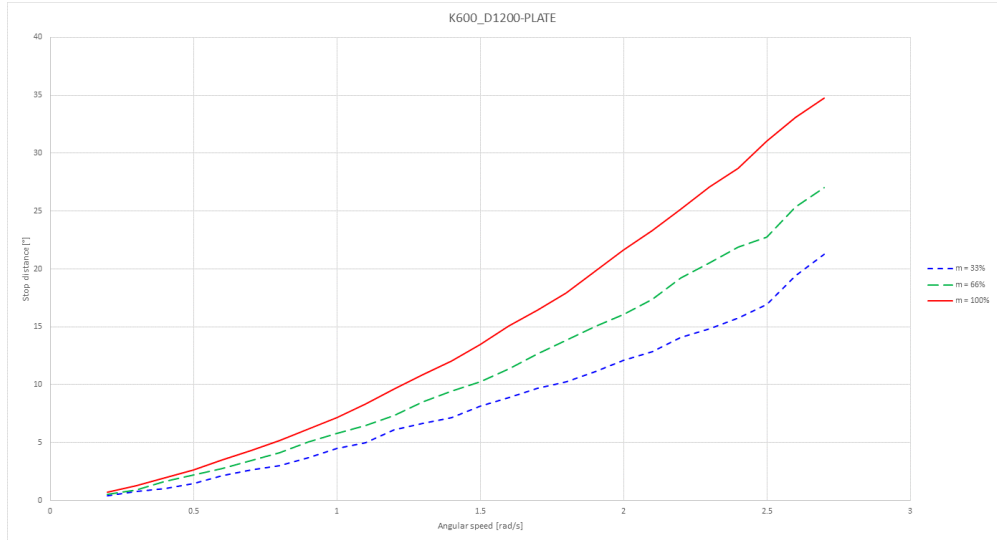
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

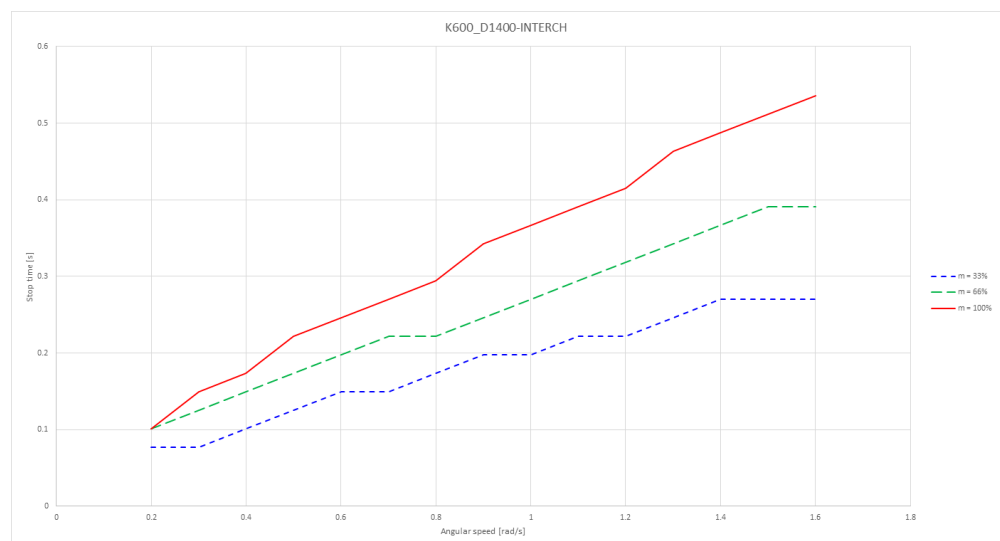
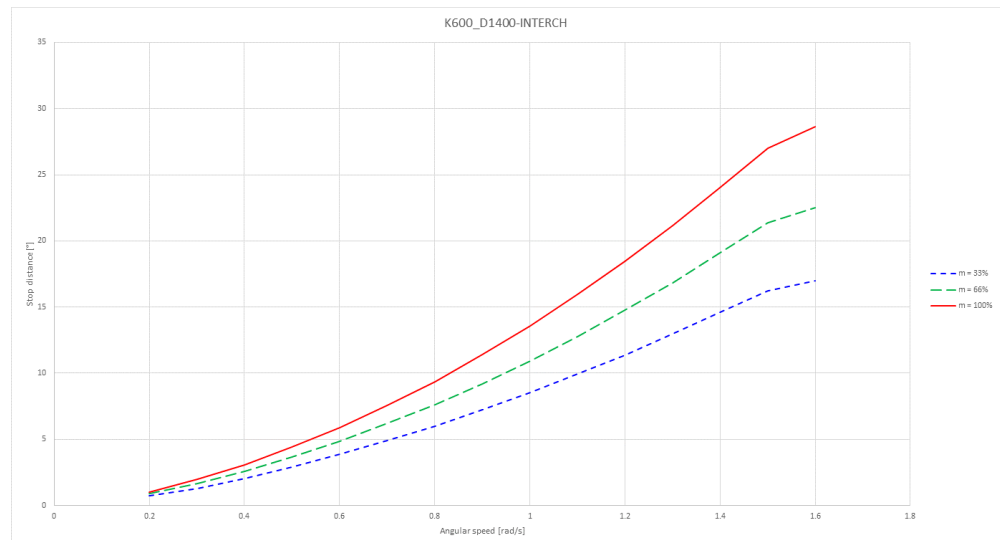
Stopping distance and stopping time



31.6 K600_D1400

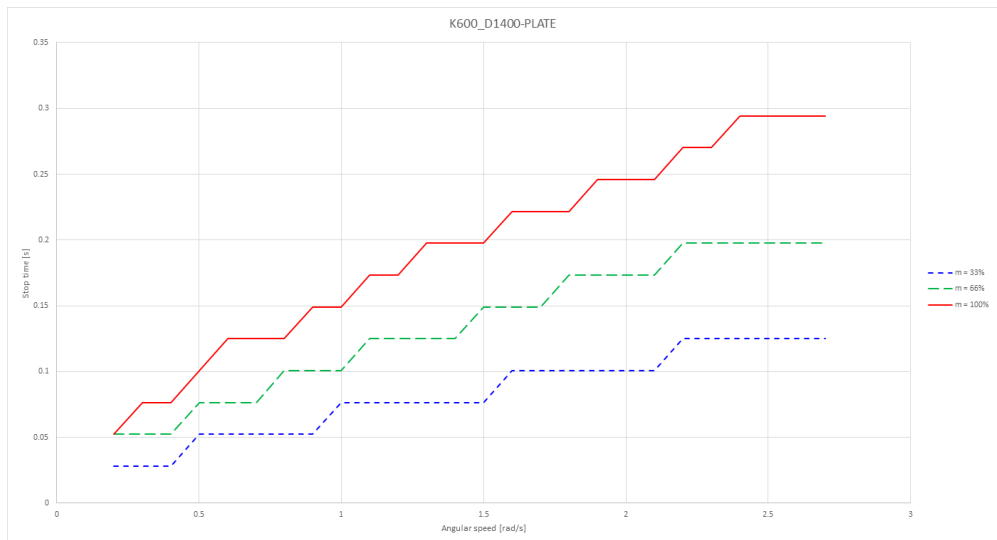
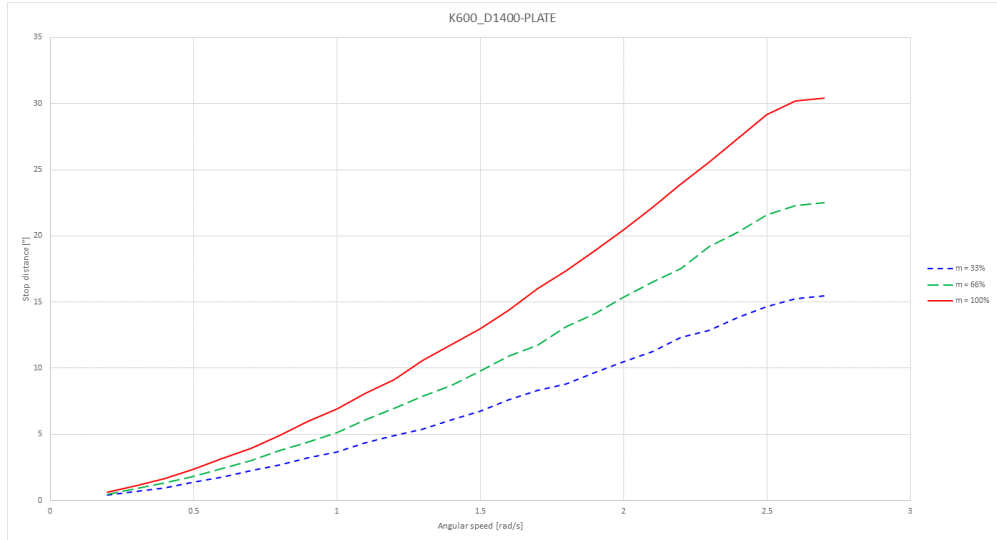
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, PLATE

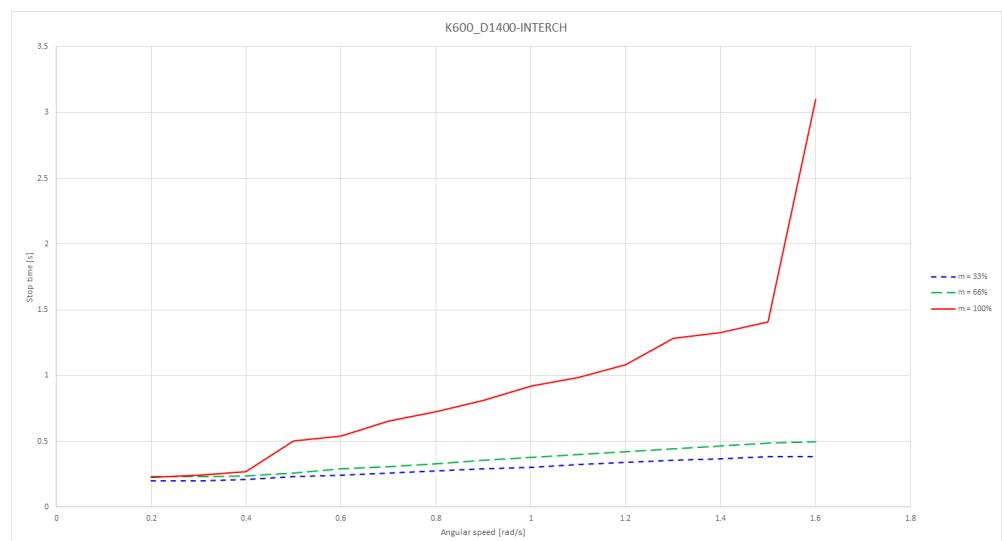
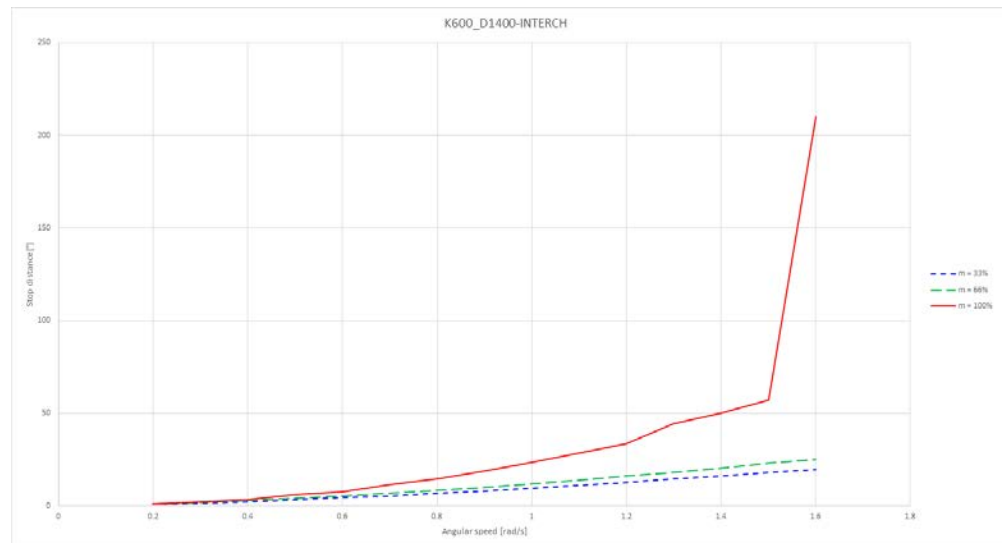
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

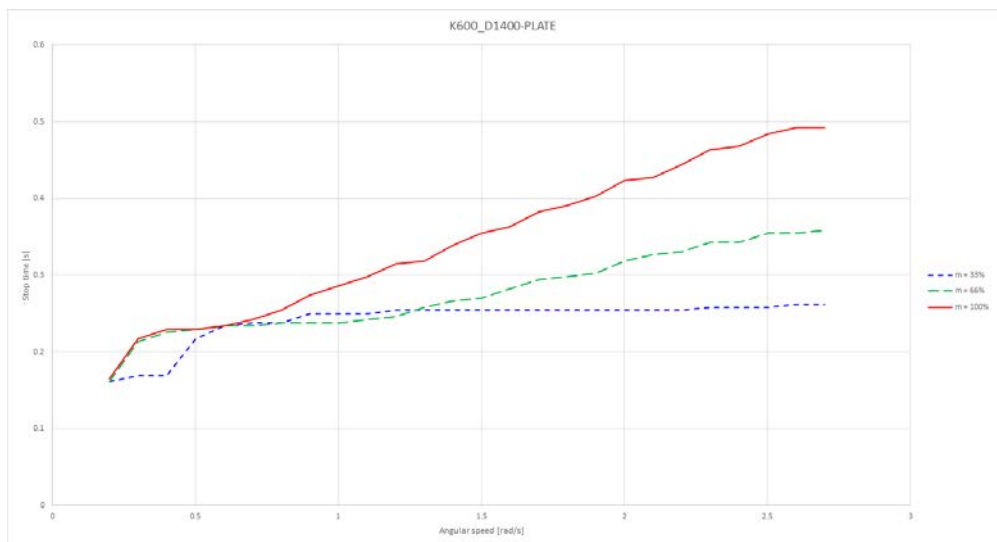
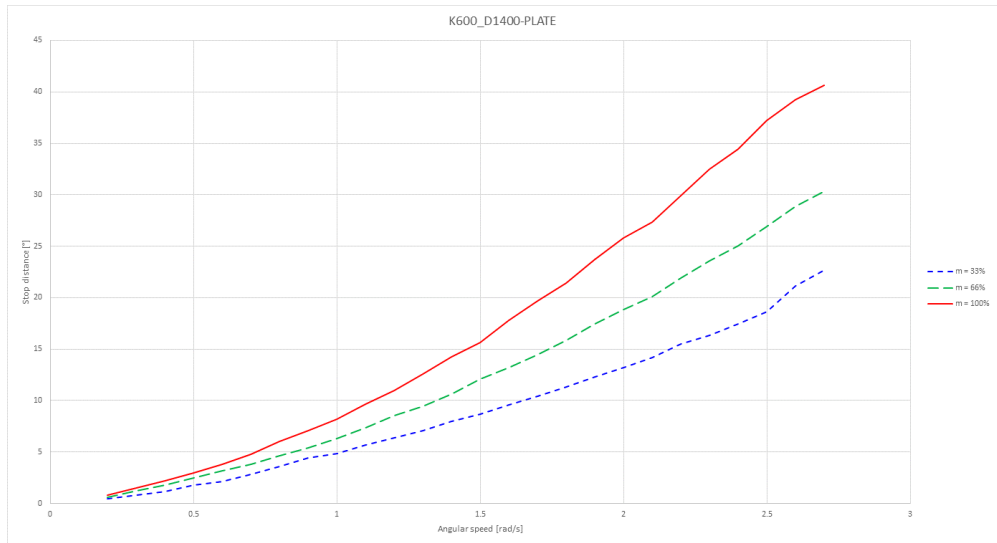
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

Stopping distance and stopping time

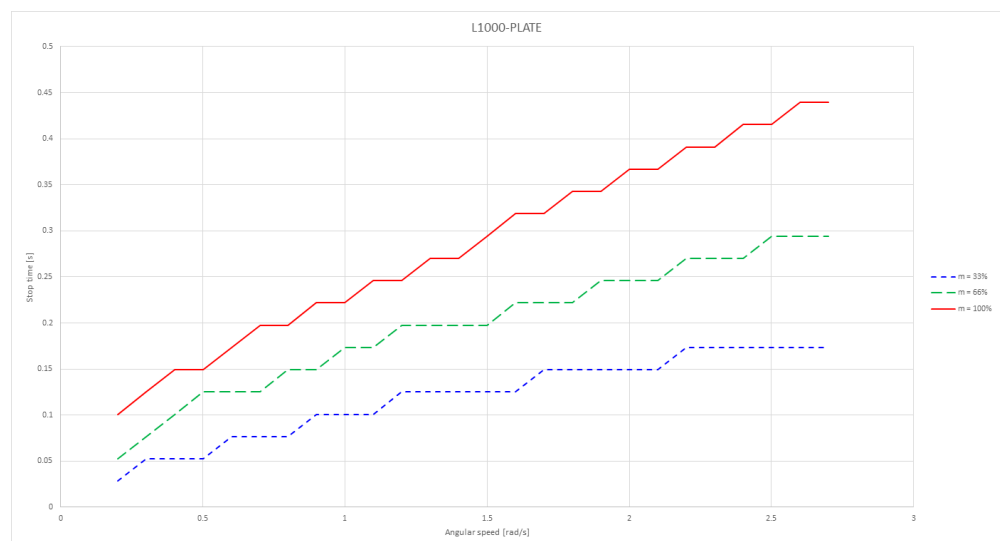
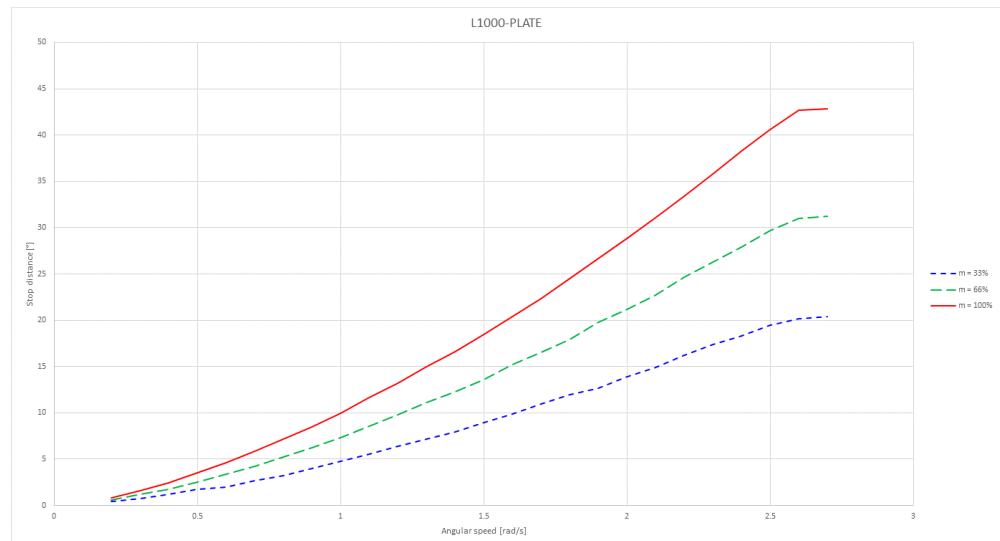


32 IRBP L

32.1 L1000

Category 0, PLATE

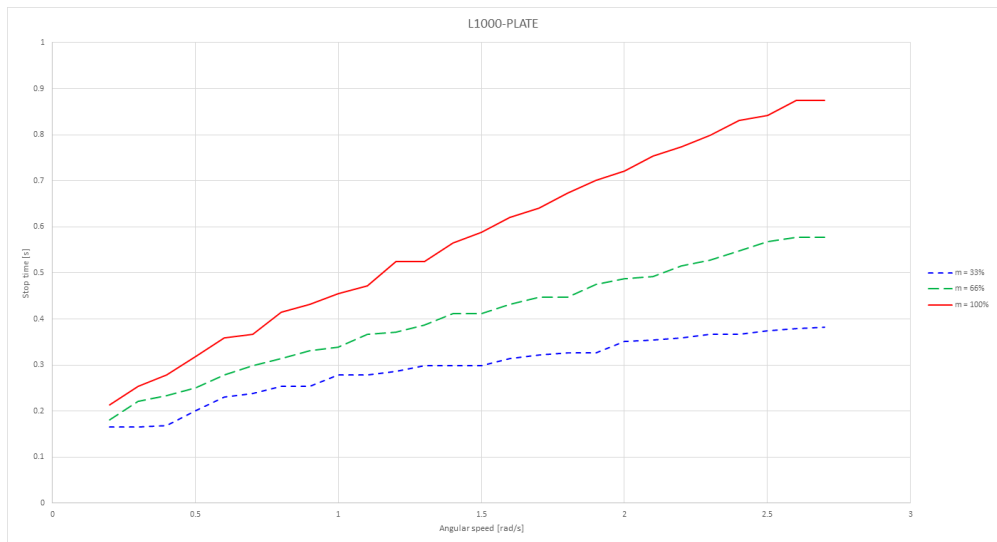
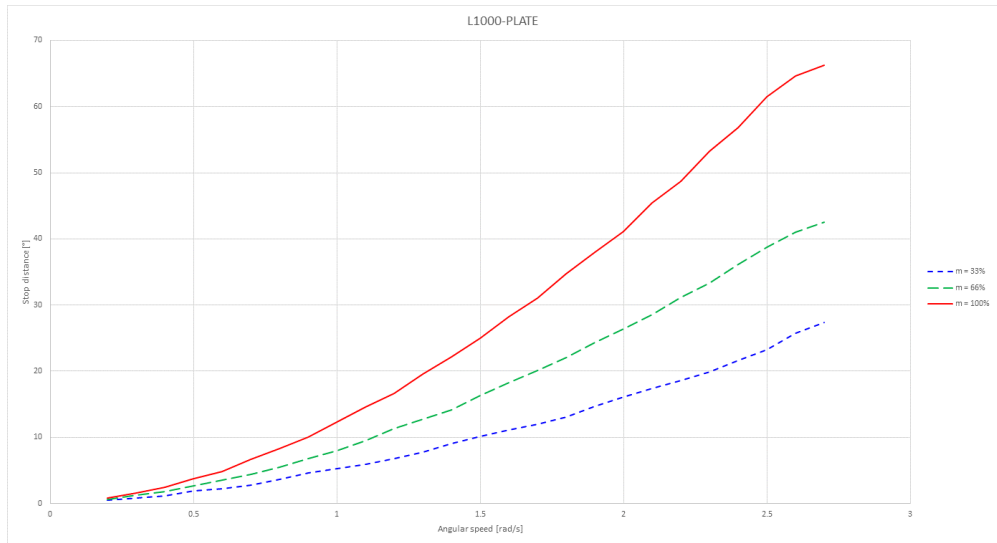
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

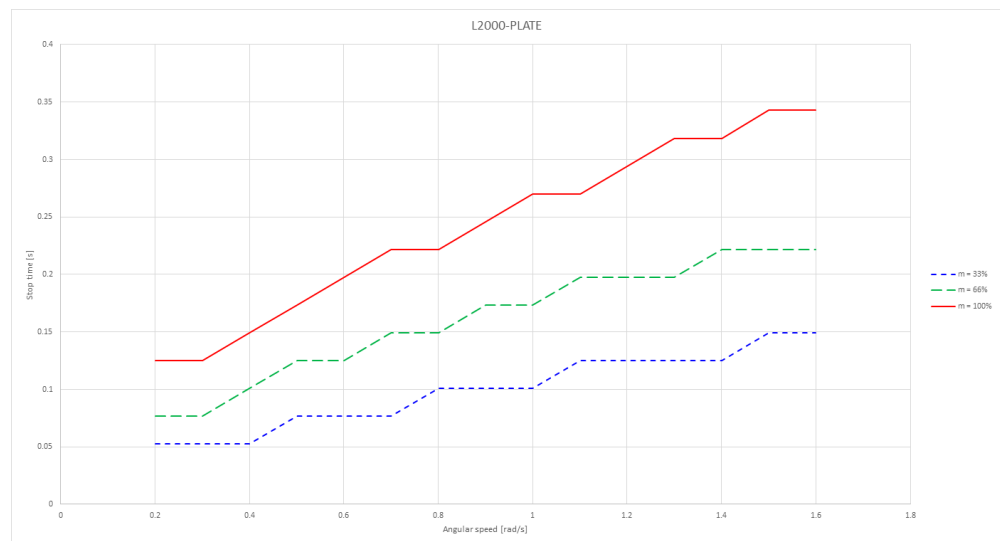
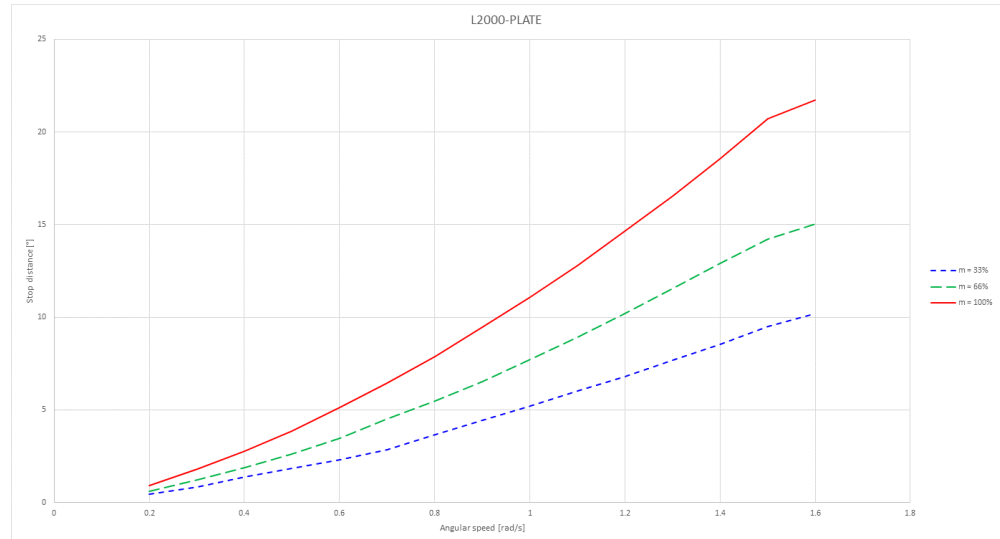
Stopping distance and stopping time



32.2 L2000

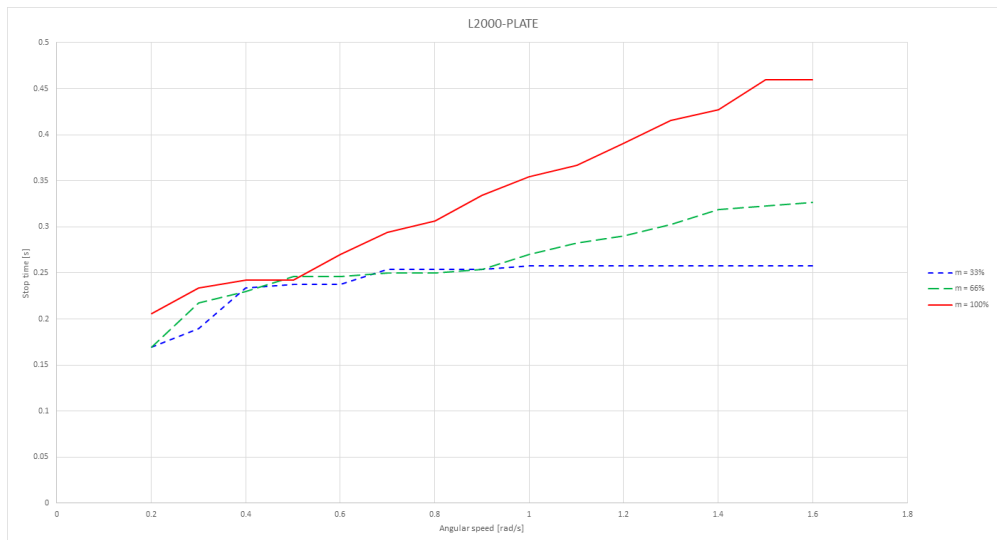
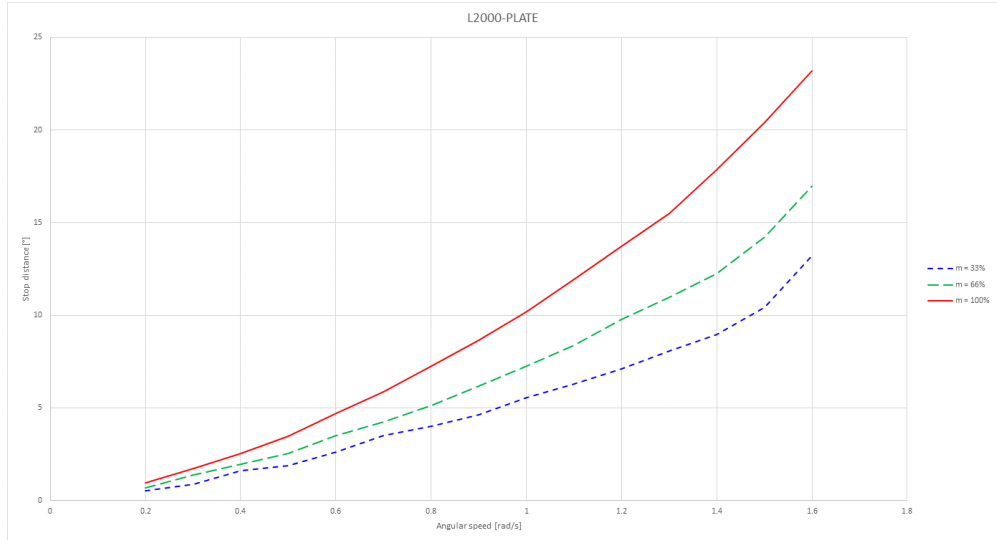
Category 0, PLATE

Stopping distance and stopping time

*Continues on next page*

Category 1, PLATE

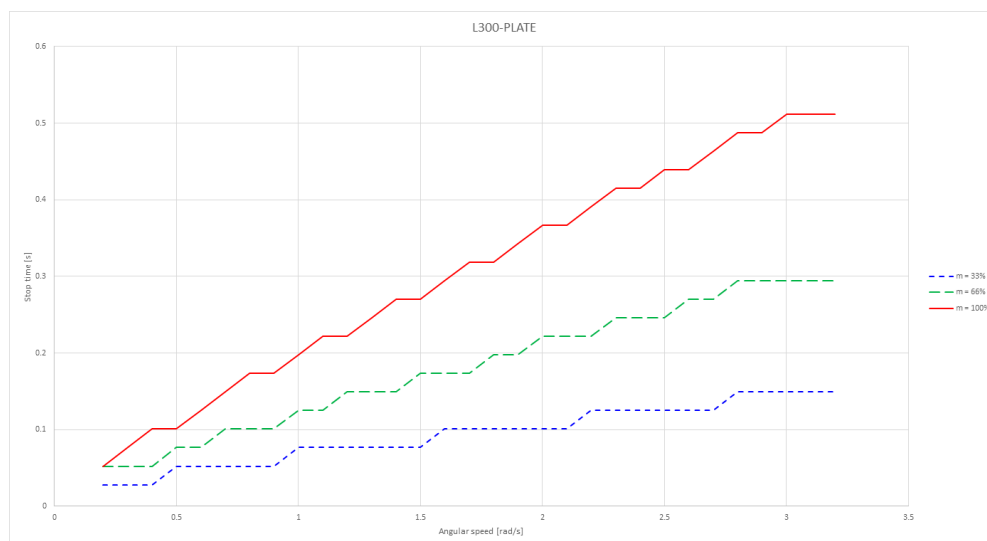
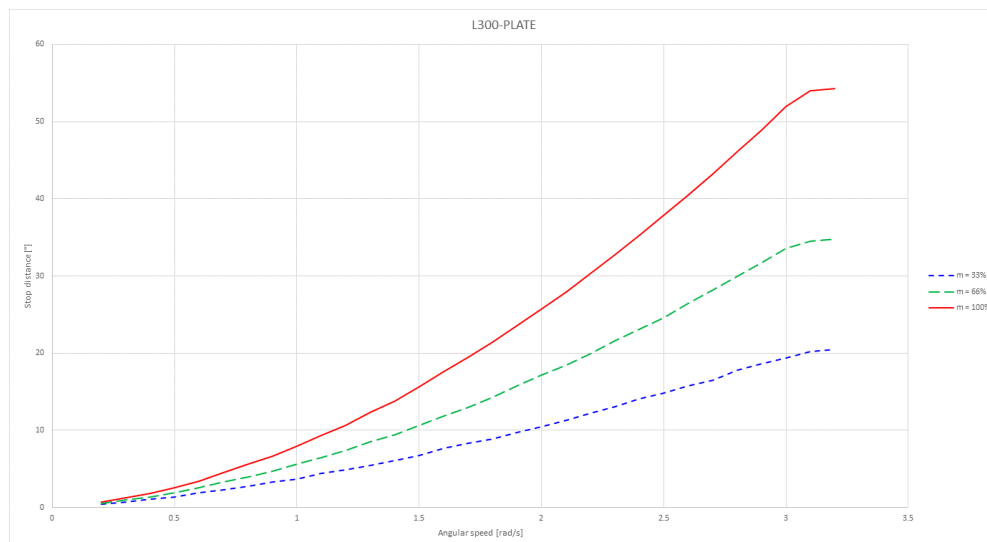
Stopping distance and stopping time



32.3 L300

Category 0, PLATE

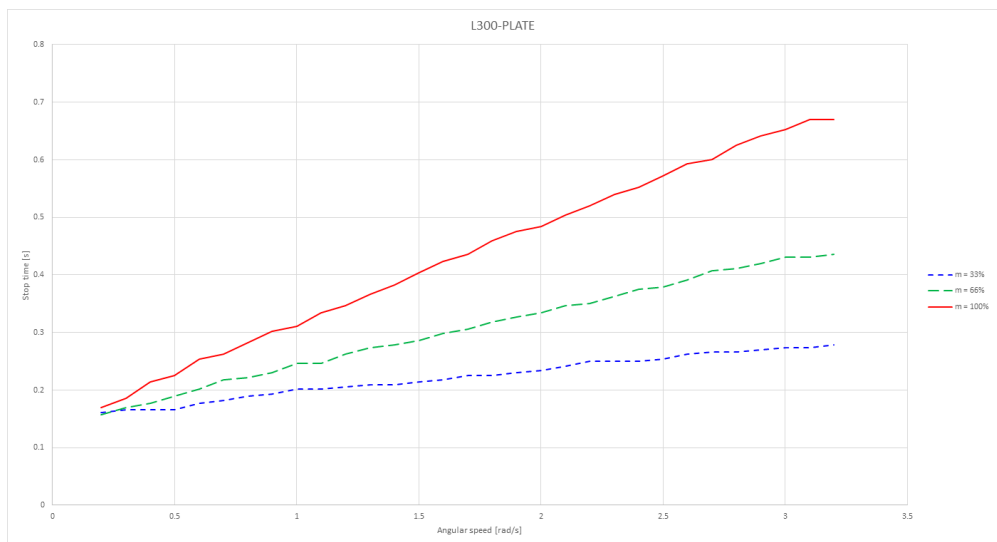
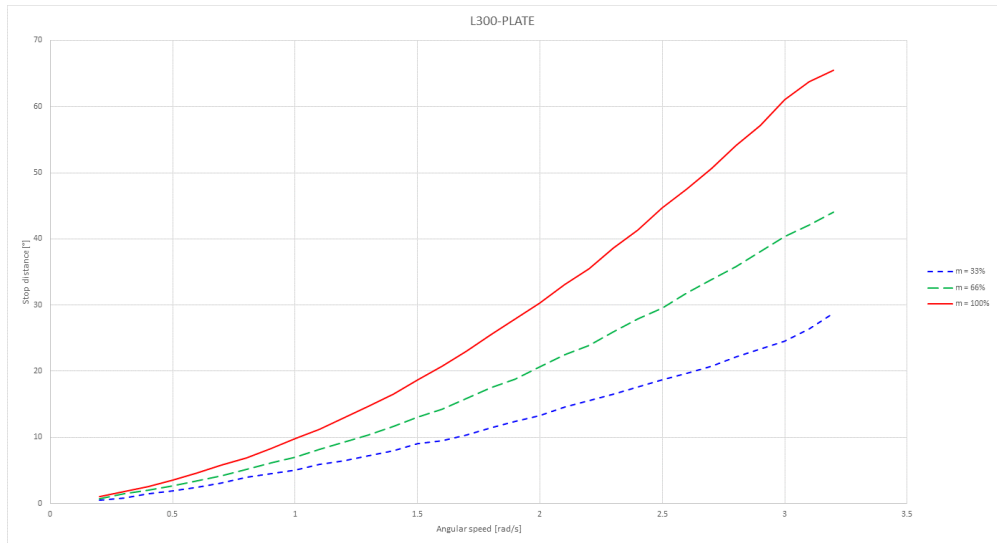
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

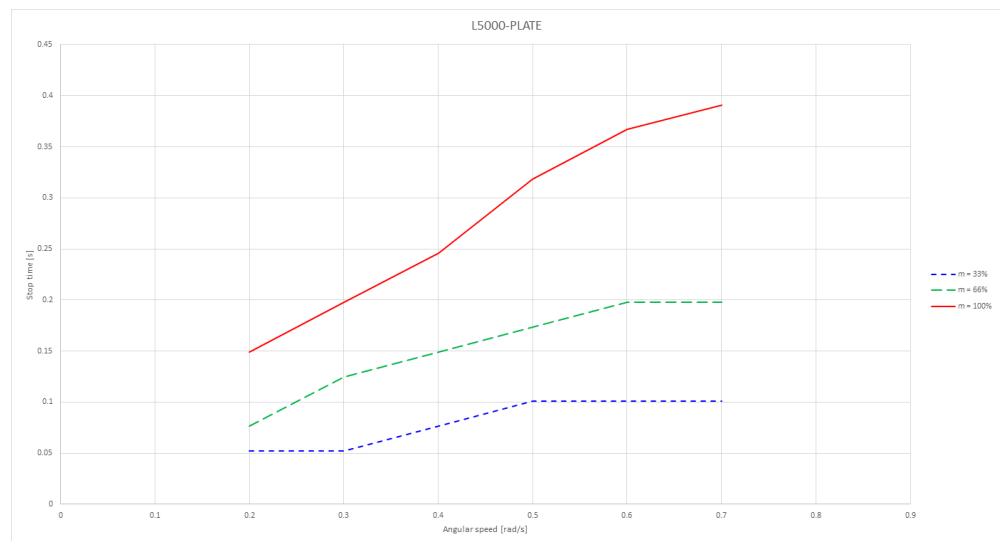
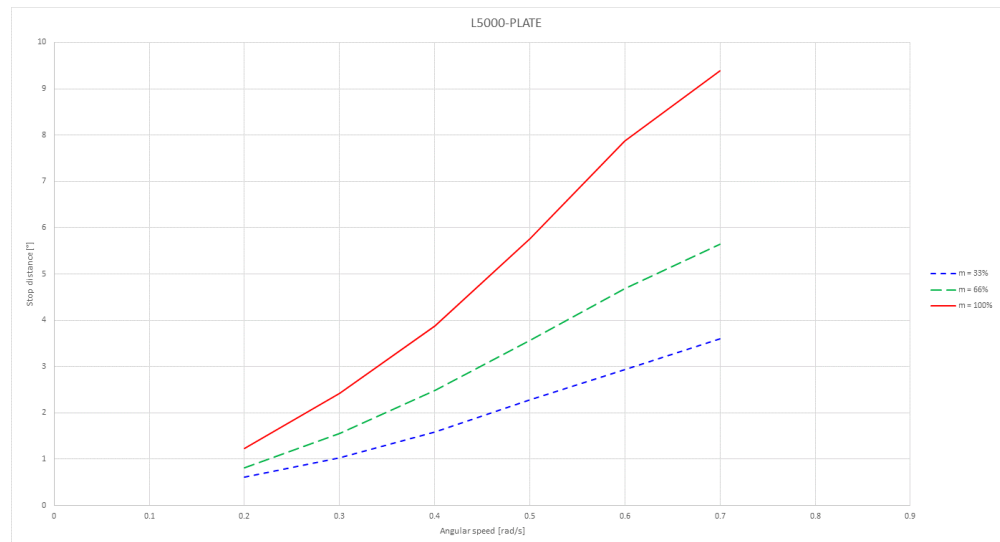
Stopping distance and stopping time



32.4 L5000

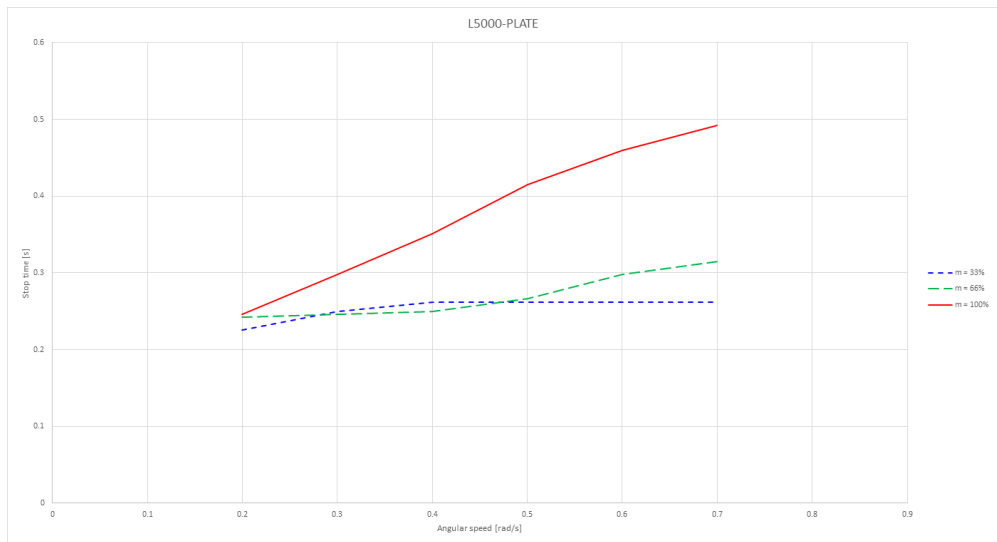
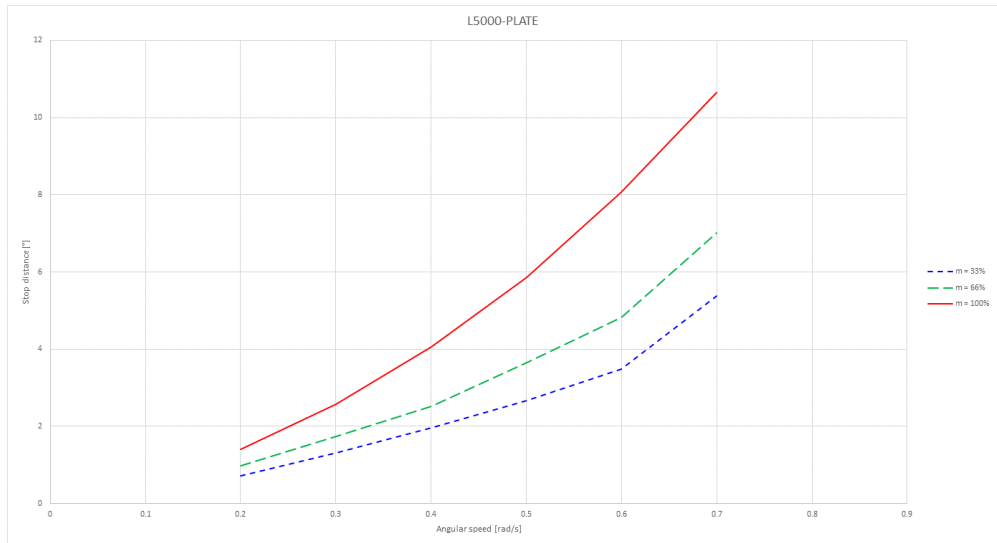
Category 0, PLATE

Stopping distance and stopping time

*Continues on next page*

Category 1, PLATE

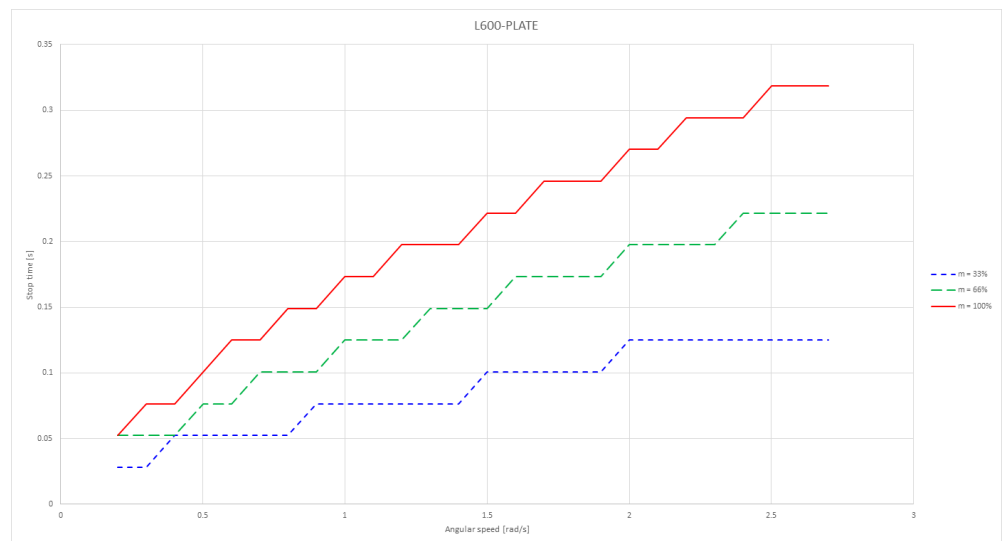
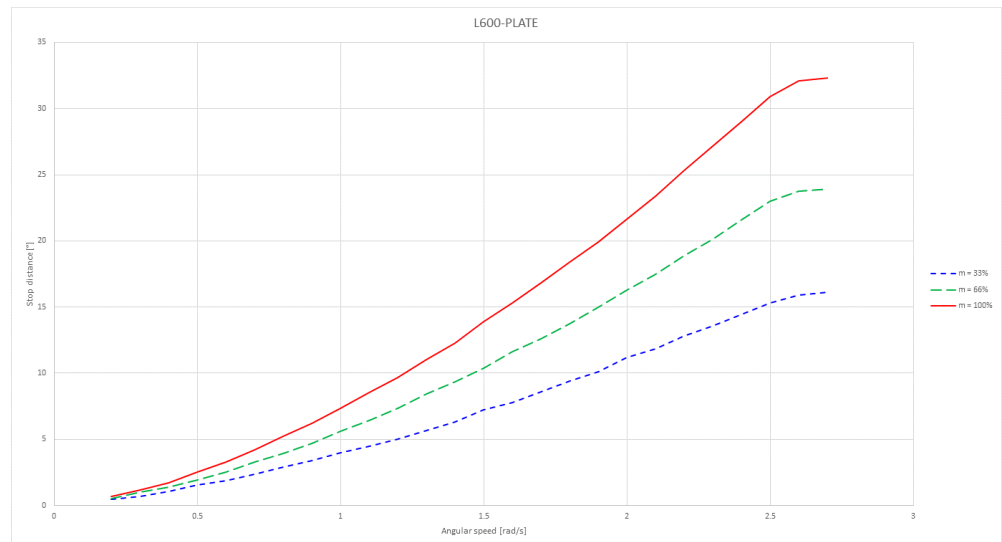
Stopping distance and stopping time



32.5 L600

Category 0, PLATE

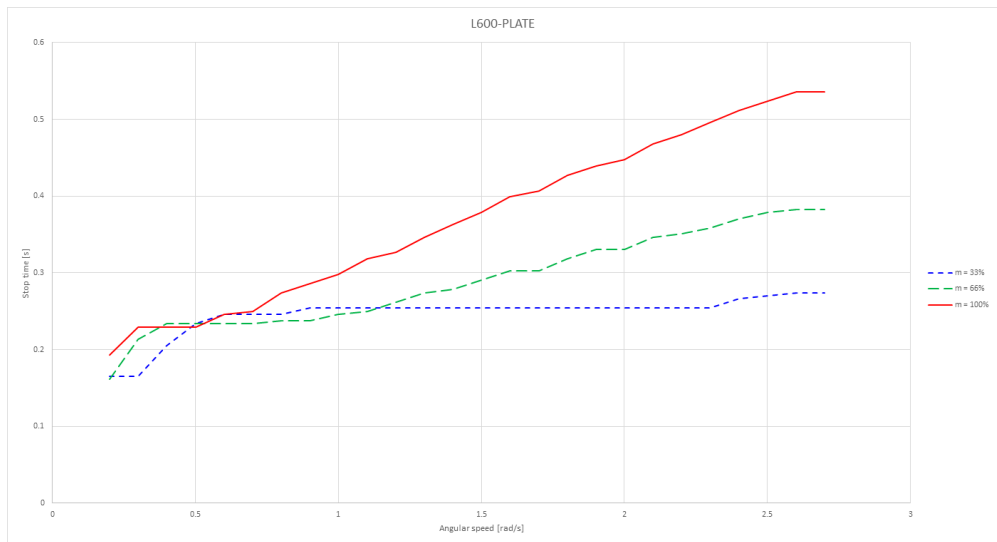
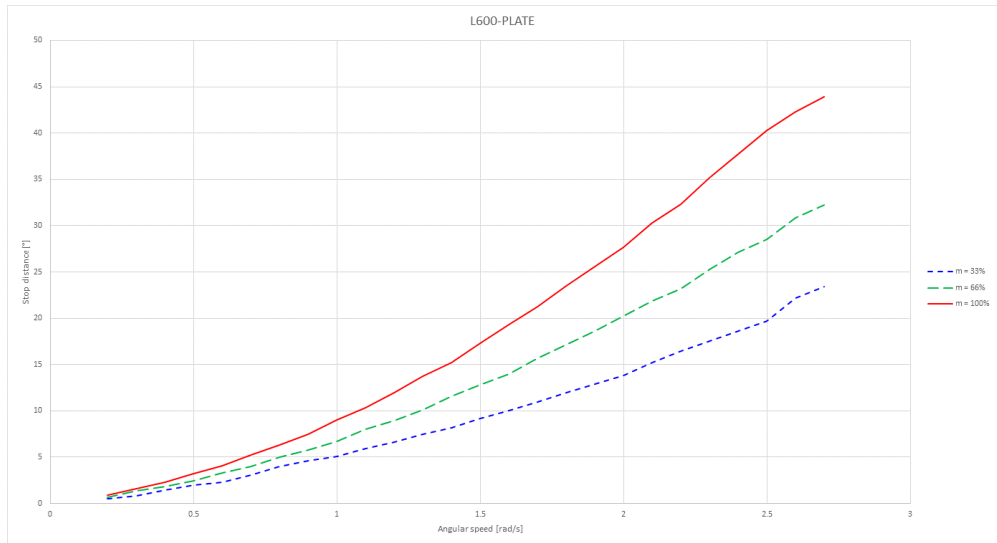
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

Stopping distance and stopping time

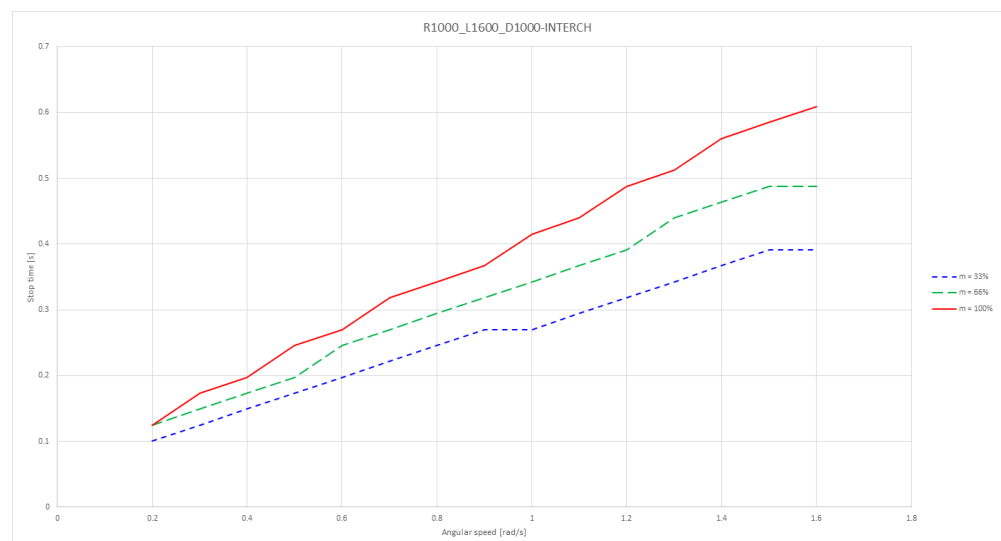
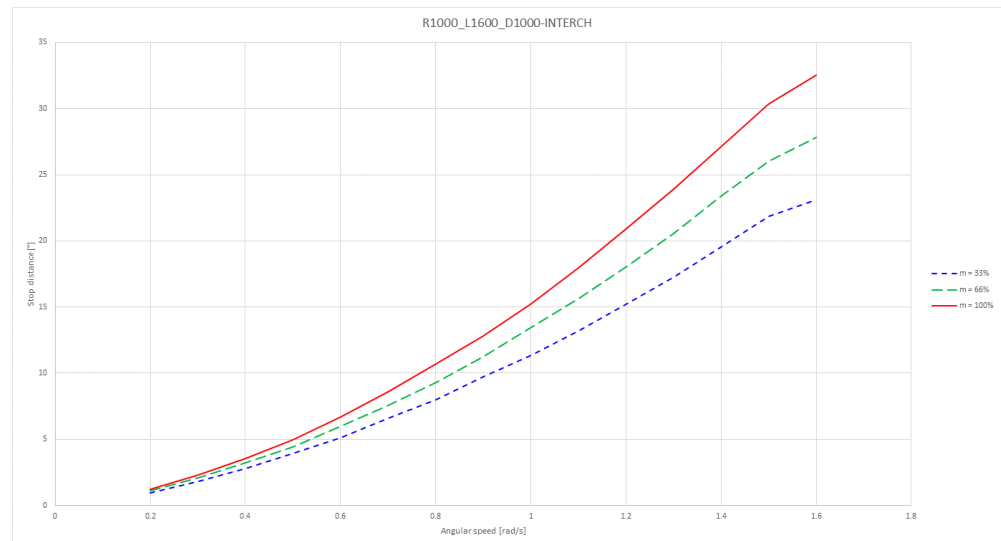


33 IRBP R

33.1 R1000_L1600_D1000

Category 0, INTERCH

Stopping distance and stopping time



Continues on next page

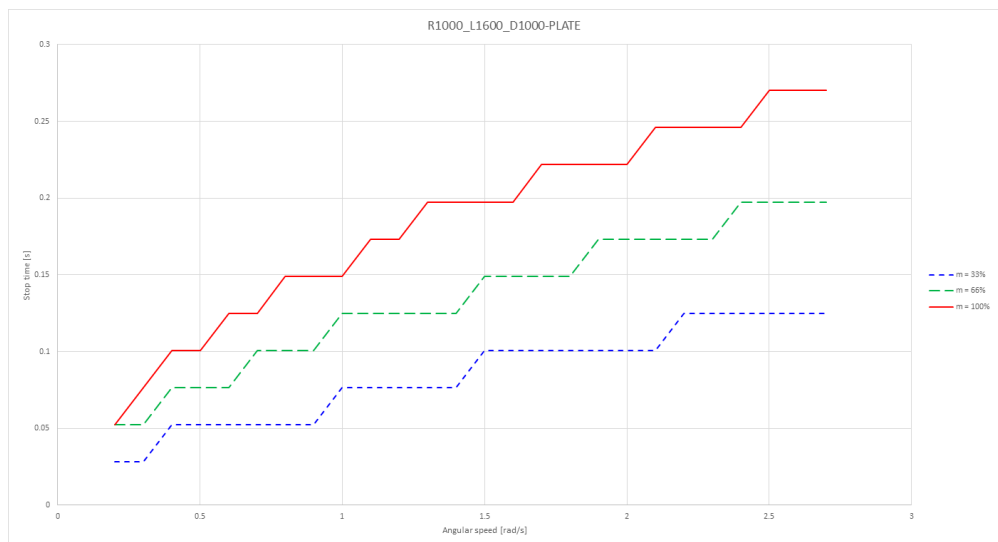
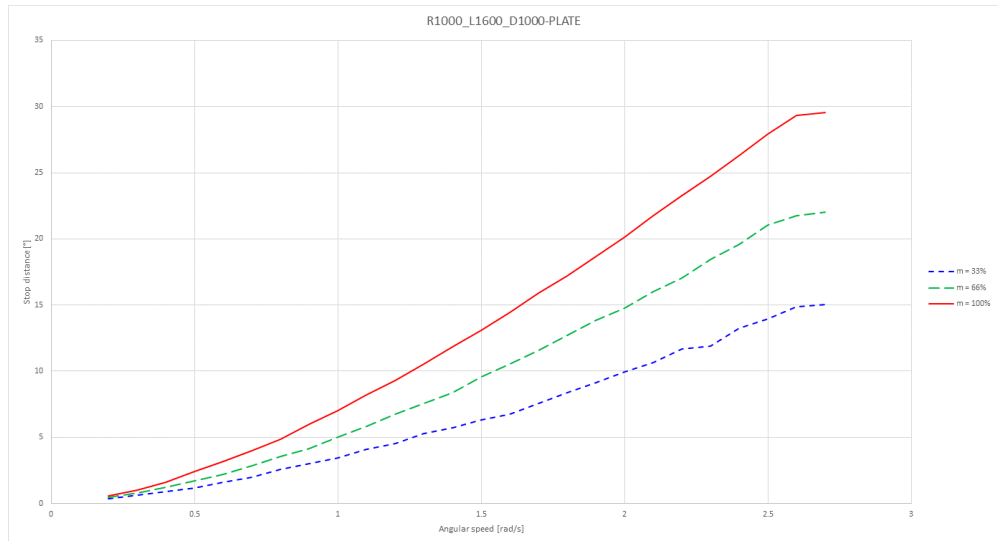
33 IRBP R

33.1 R1000_L1600_D1000

Continued

Category 0, PLATE

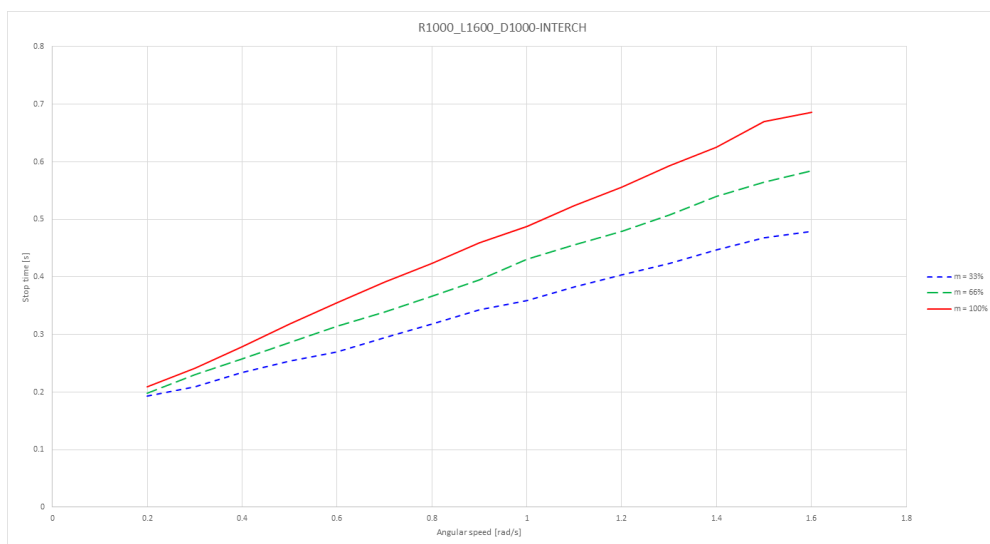
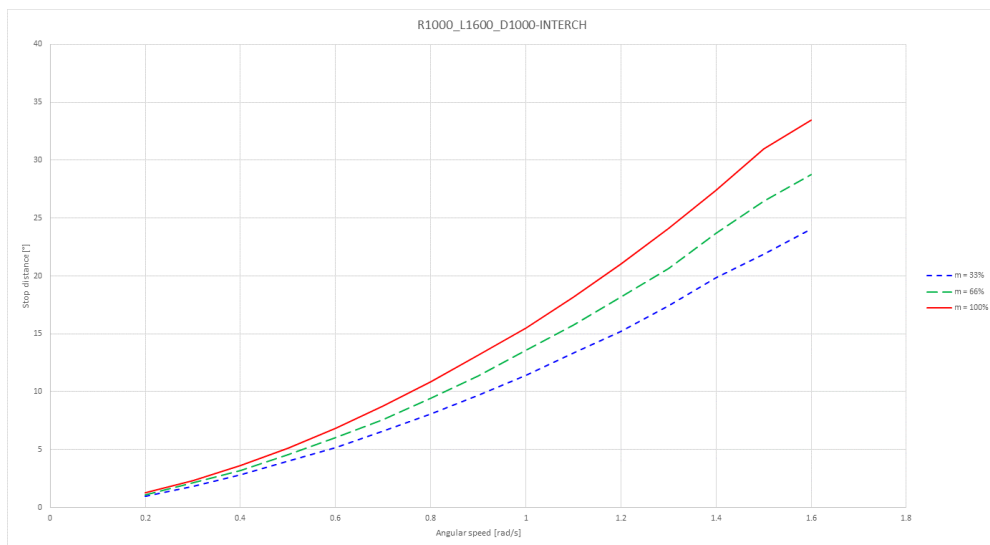
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

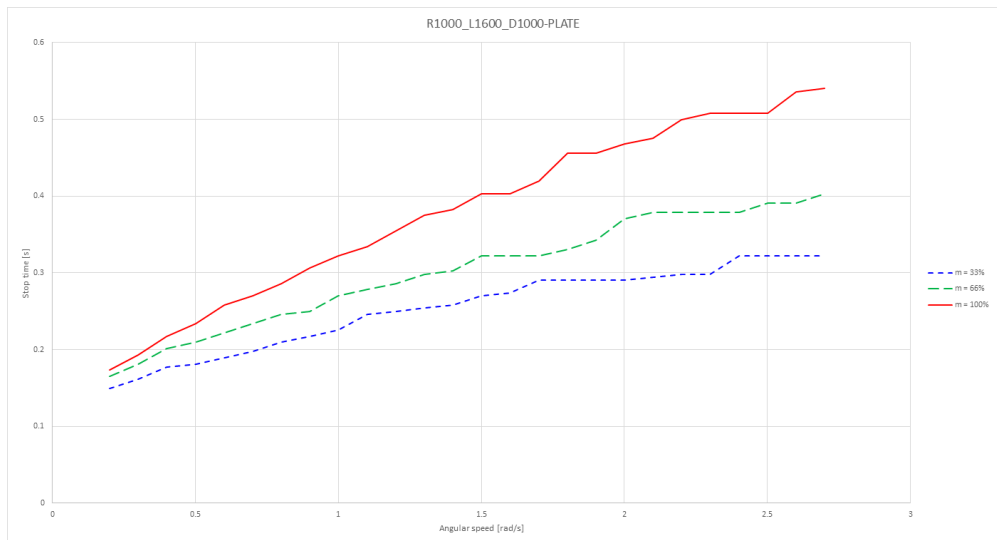
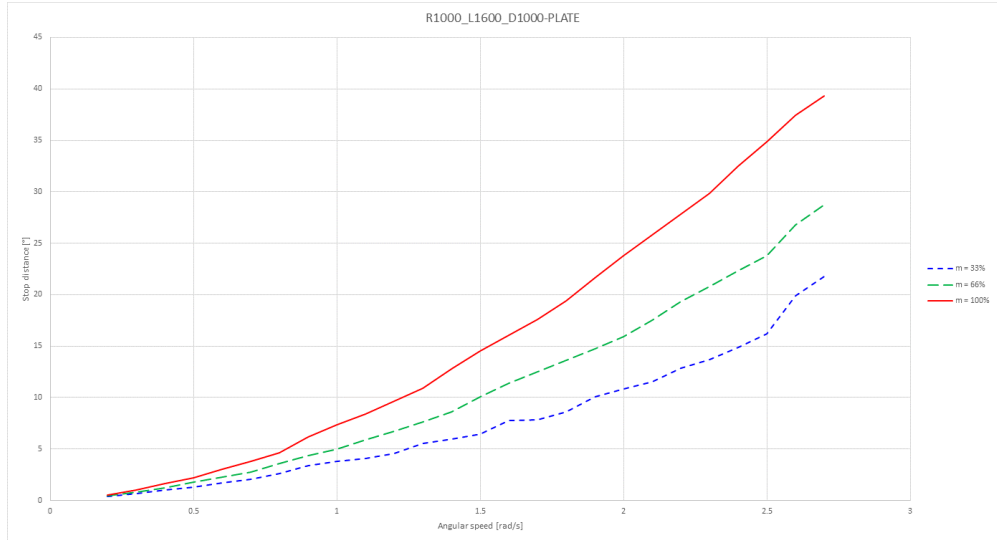
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

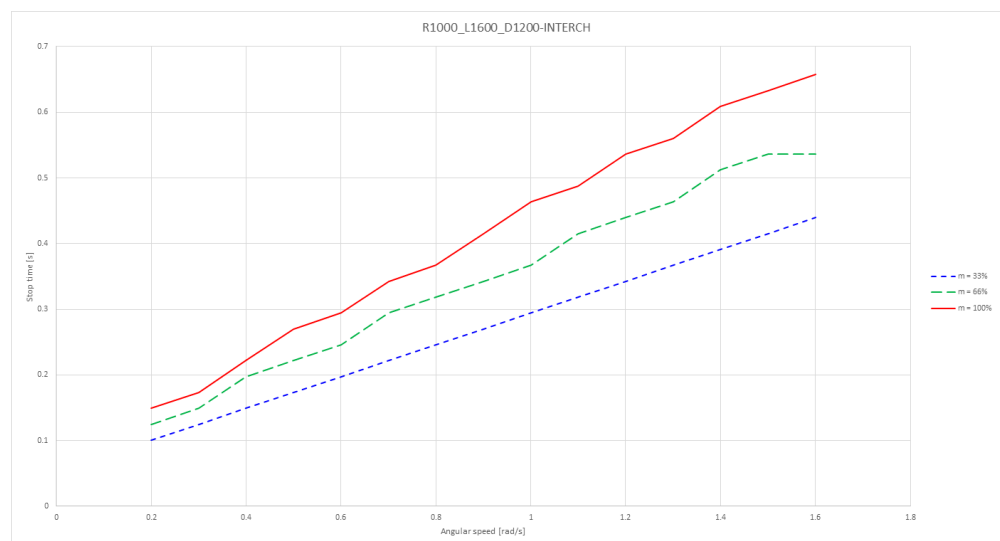
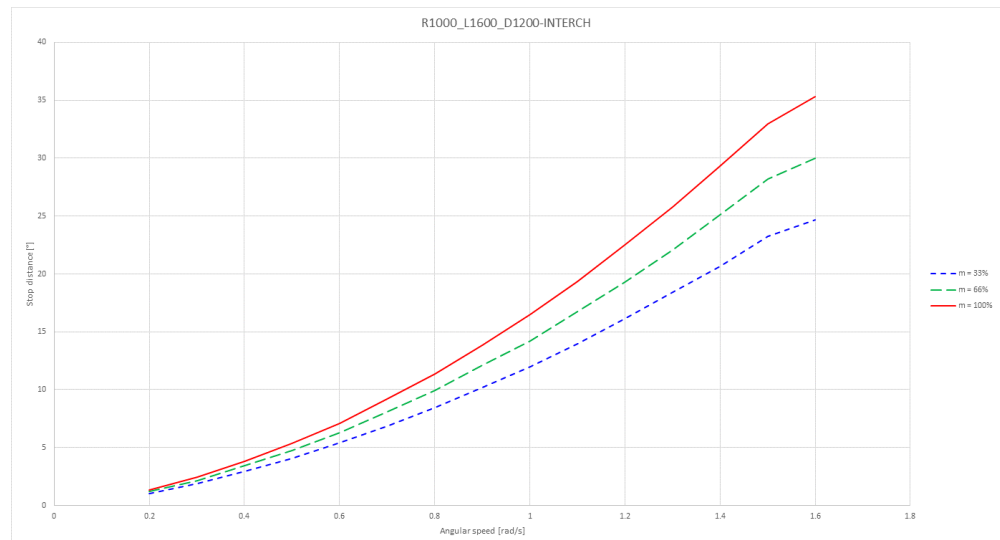
Stopping distance and stopping time



33.2 R1000_L1600_D1200

Category 0, INTERCH

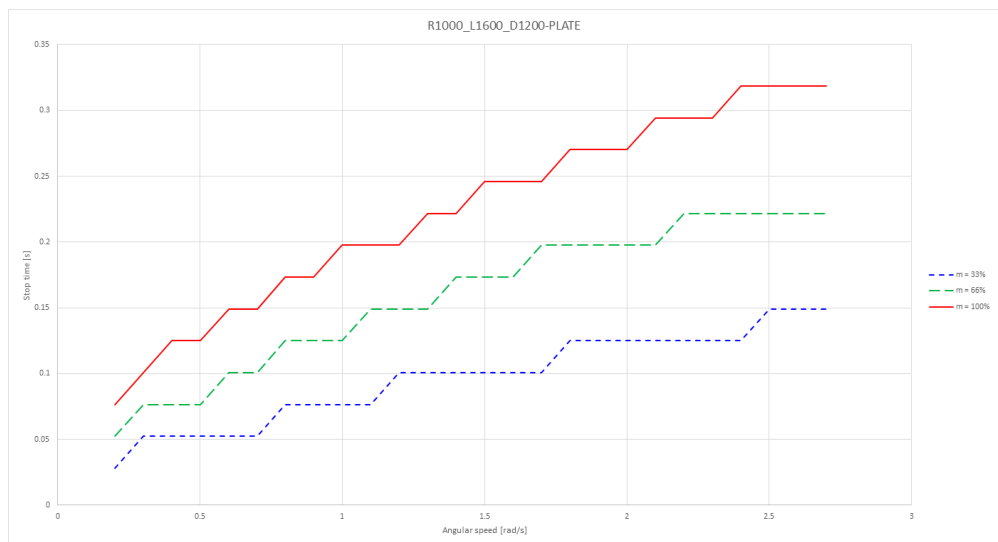
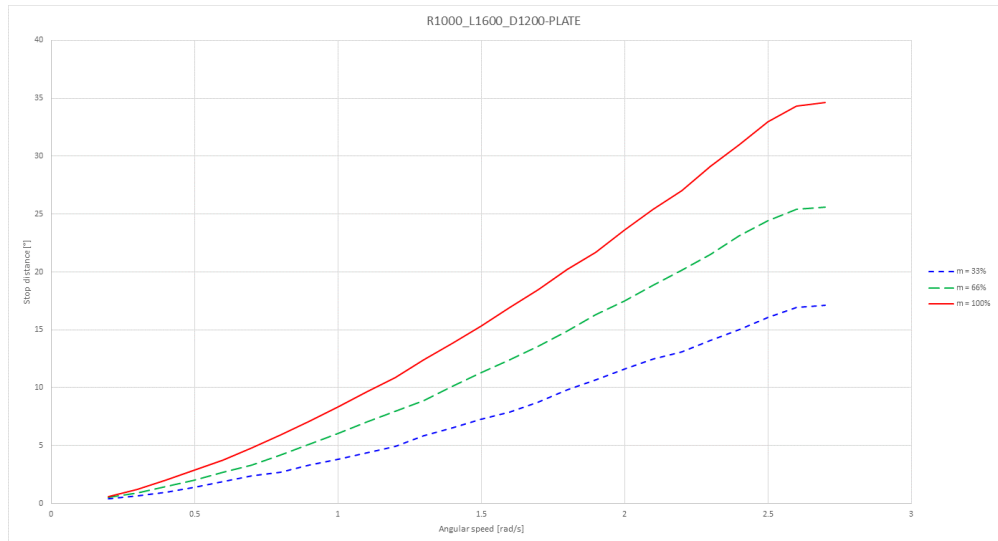
Stopping distance and stopping time

*Continues on next page*

Continued

Category 0, PLATE

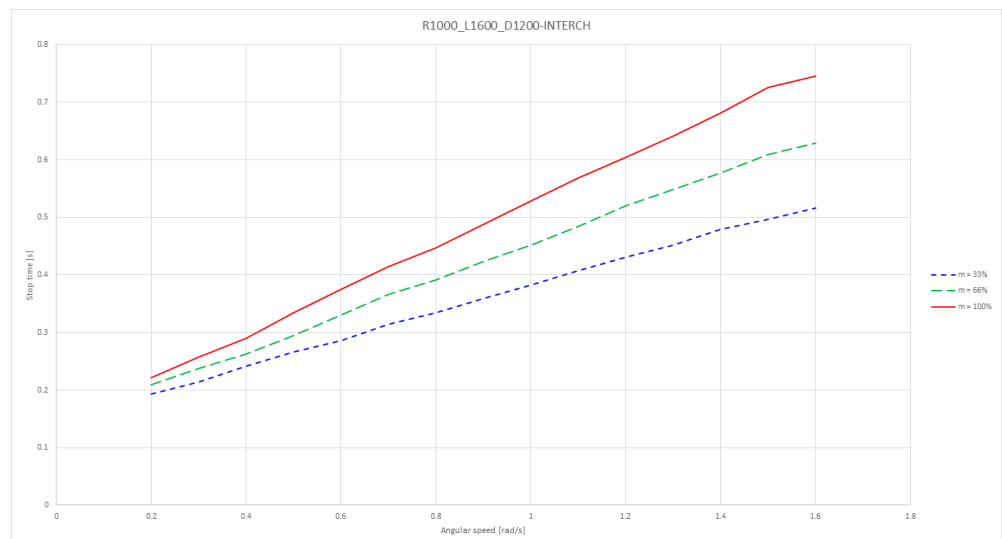
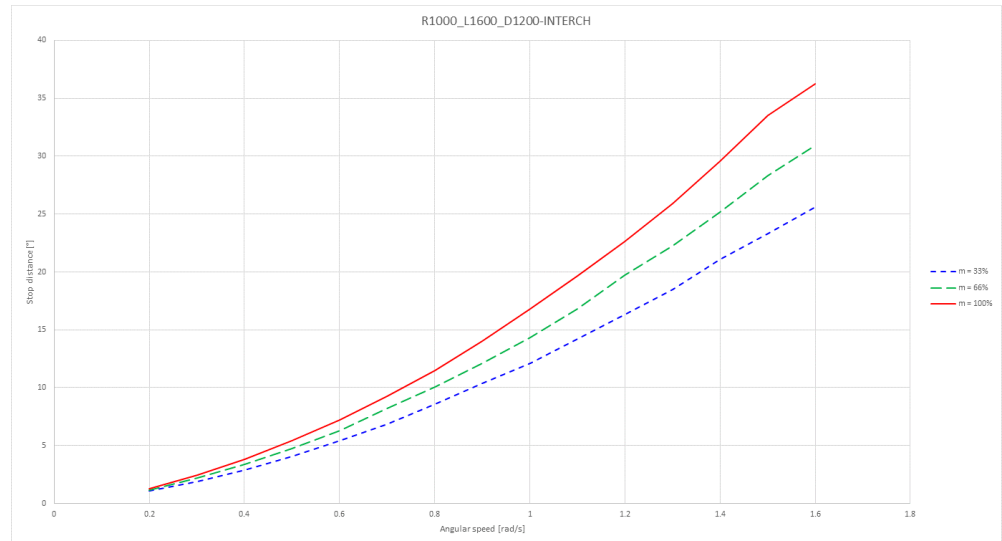
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

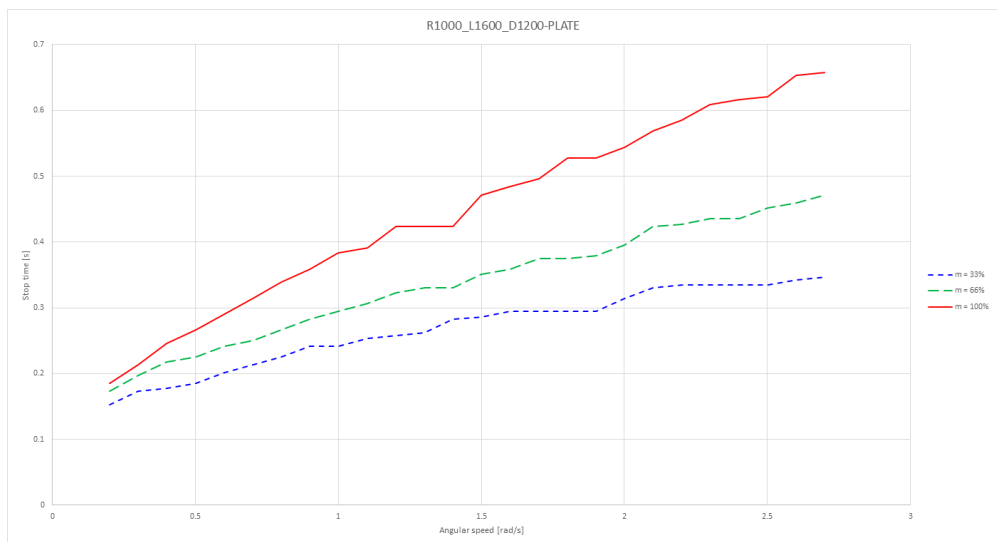
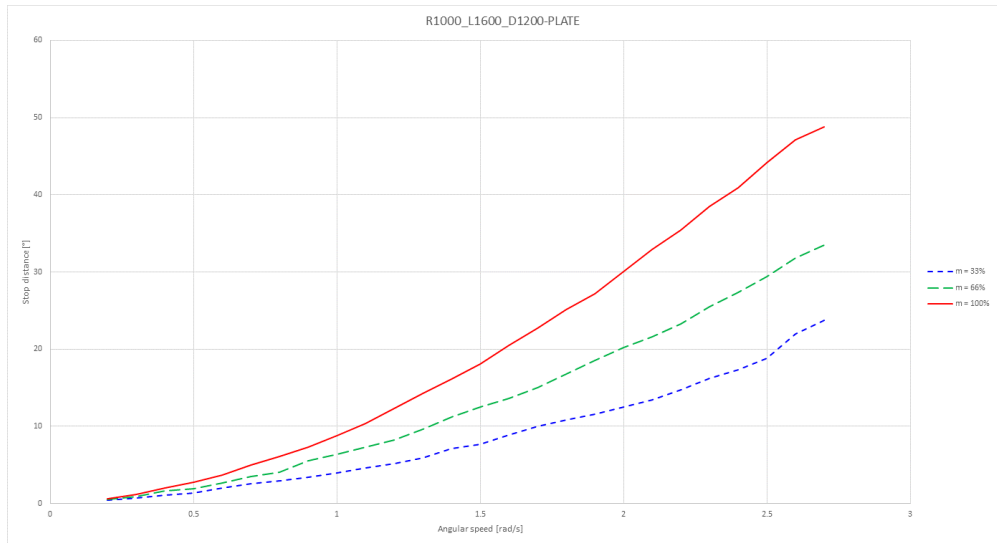
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

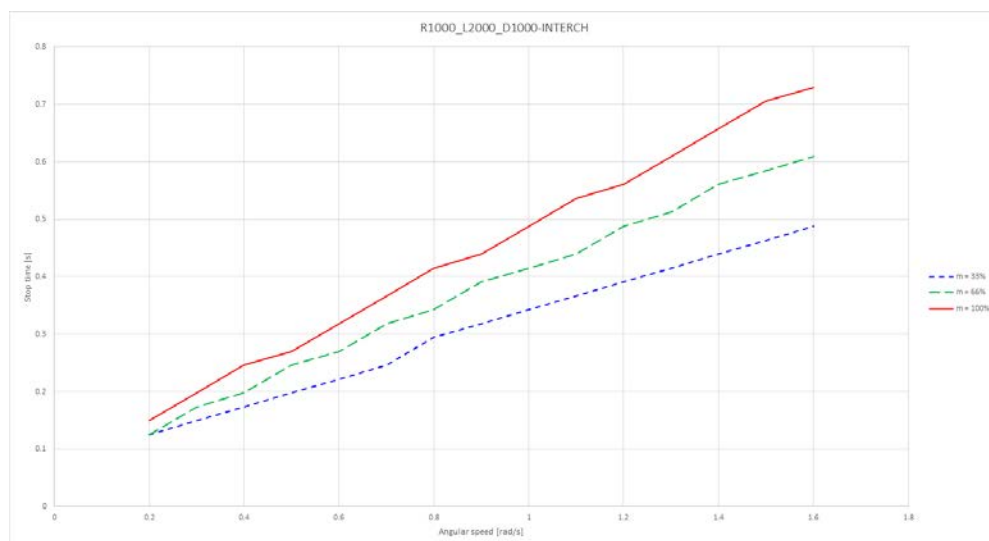
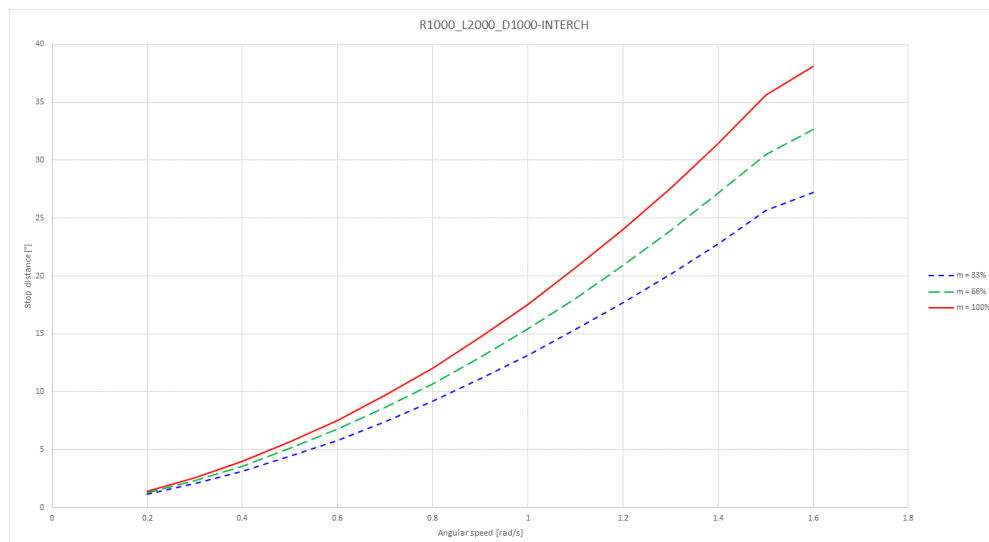
Stopping distance and stopping time



33.3 R1000_L2000_D1000

Category 0, INTERCH

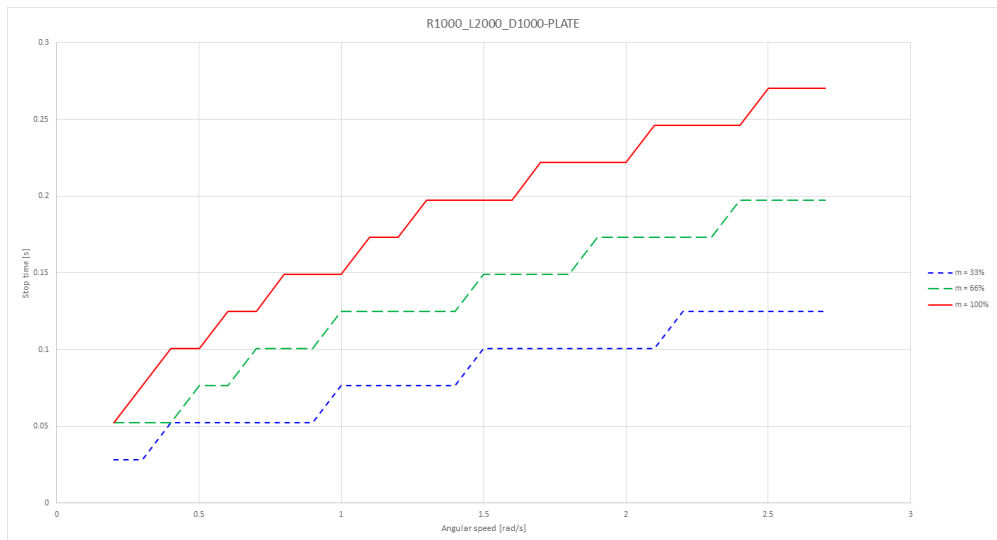
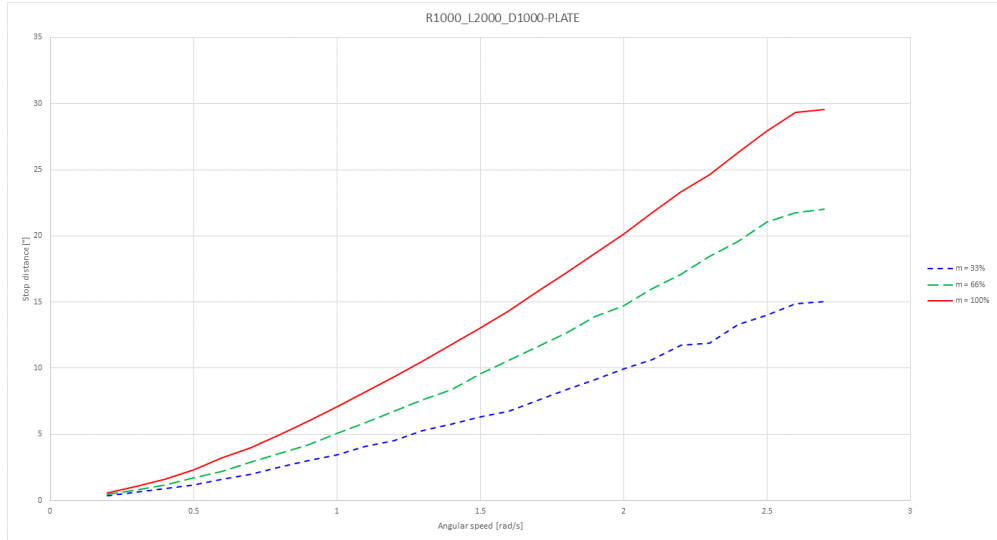
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

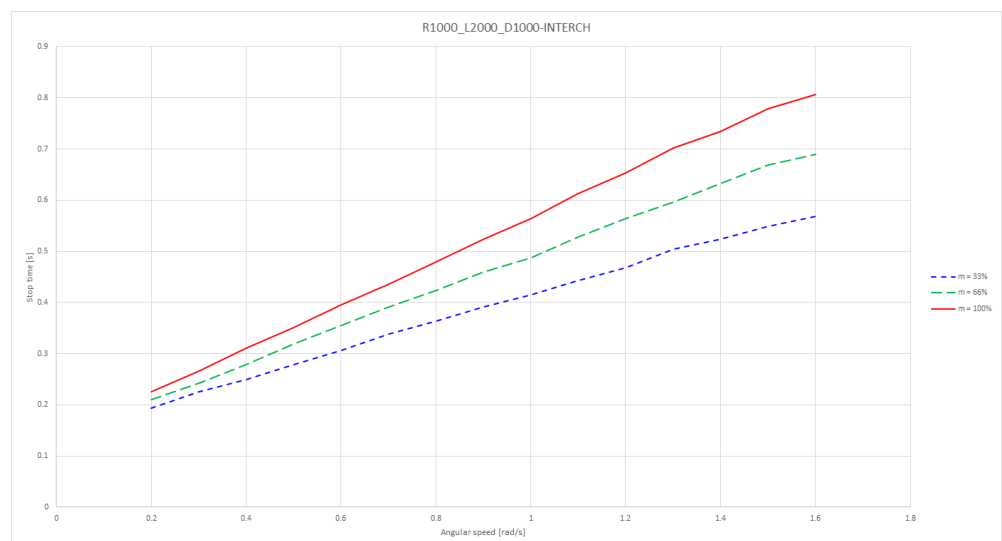
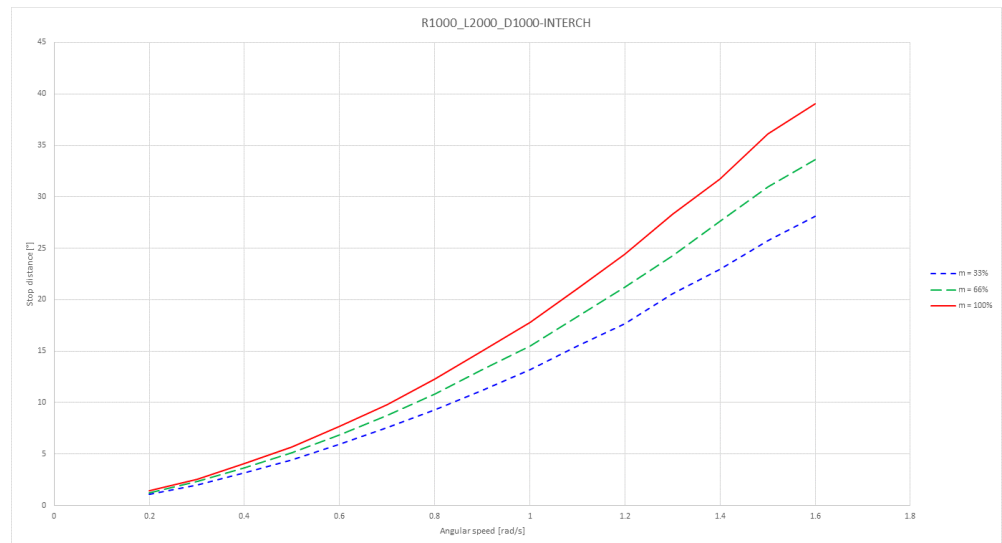
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

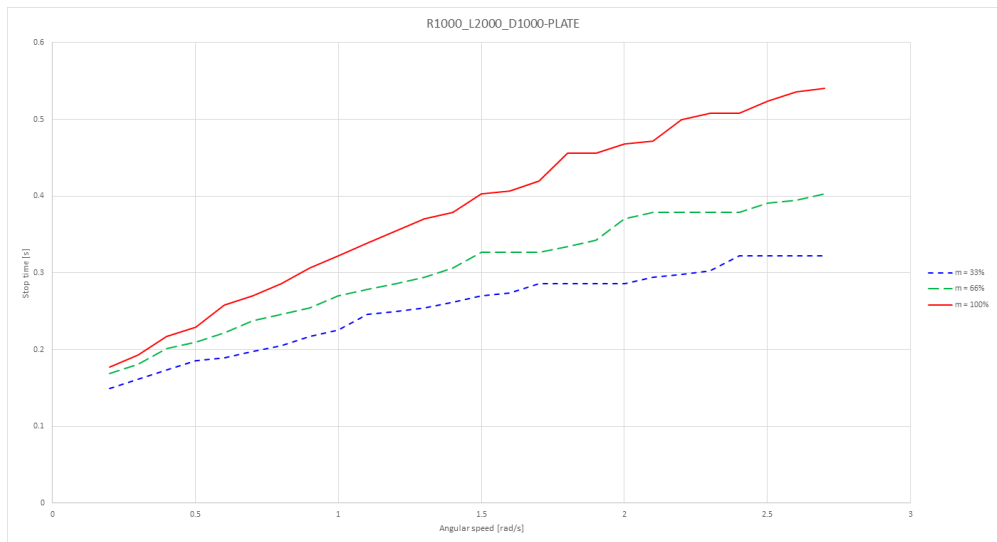
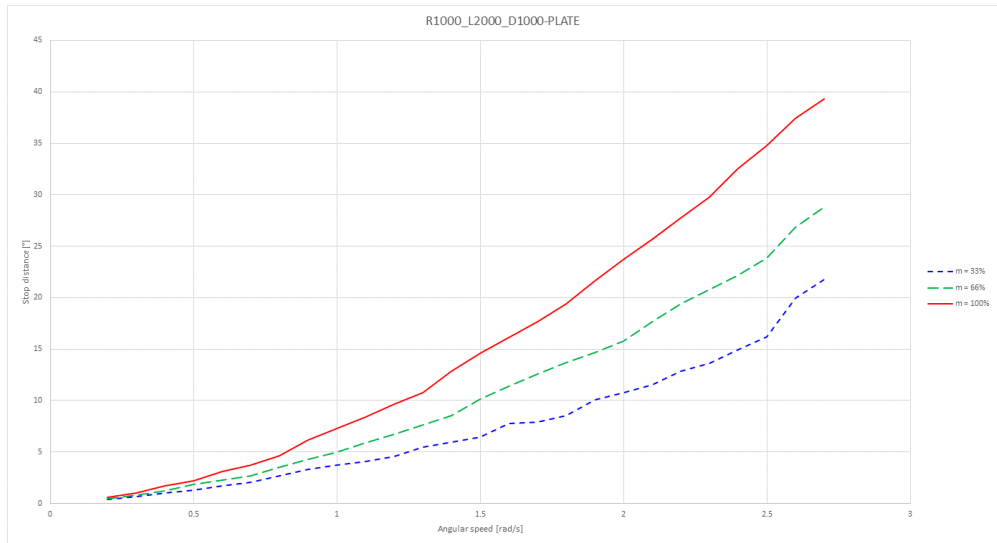
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

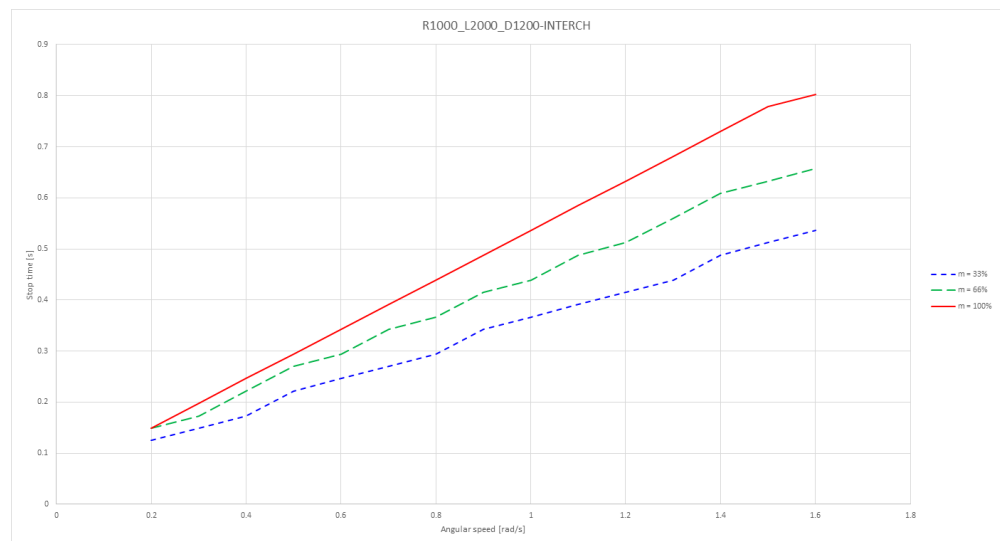
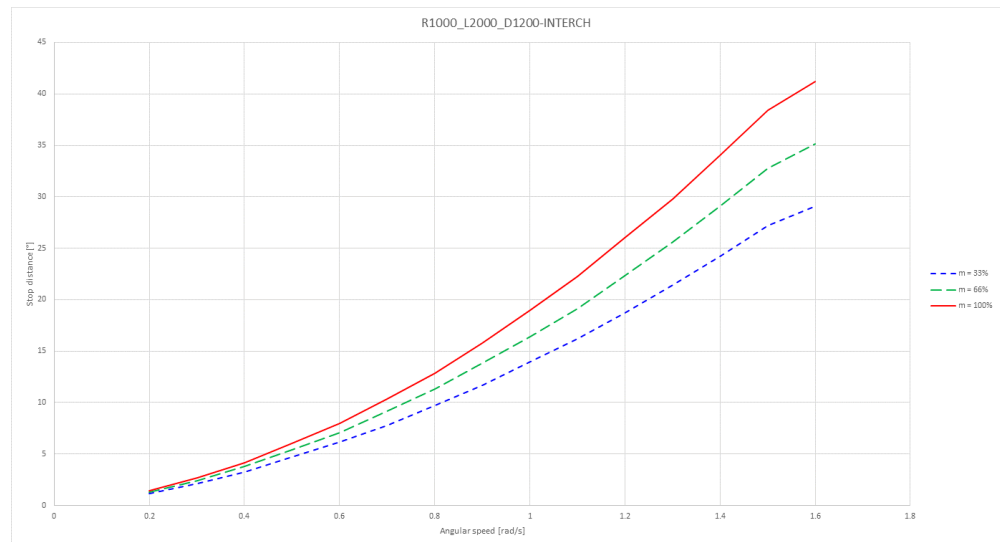
Stopping distance and stopping time



33.4 R1000_L2000_D1200

Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

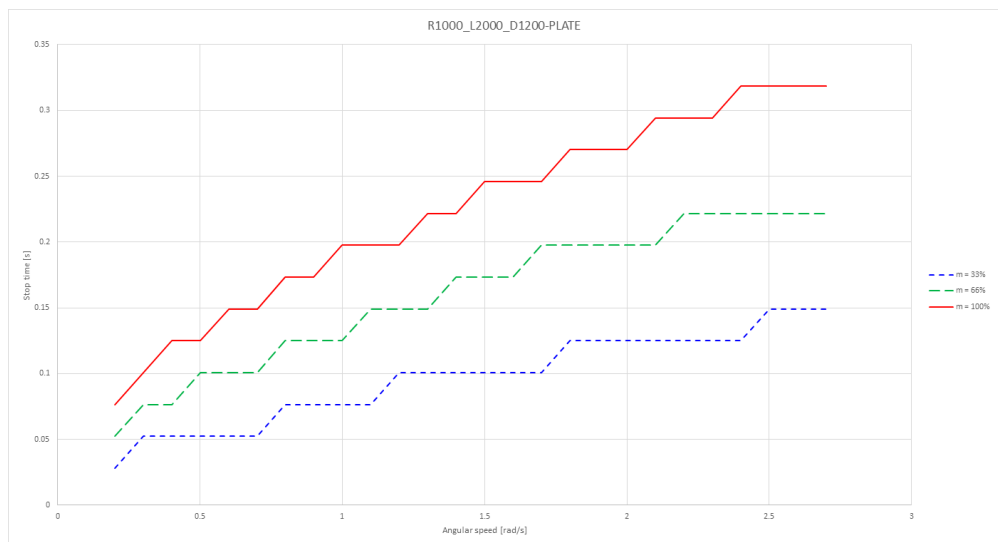
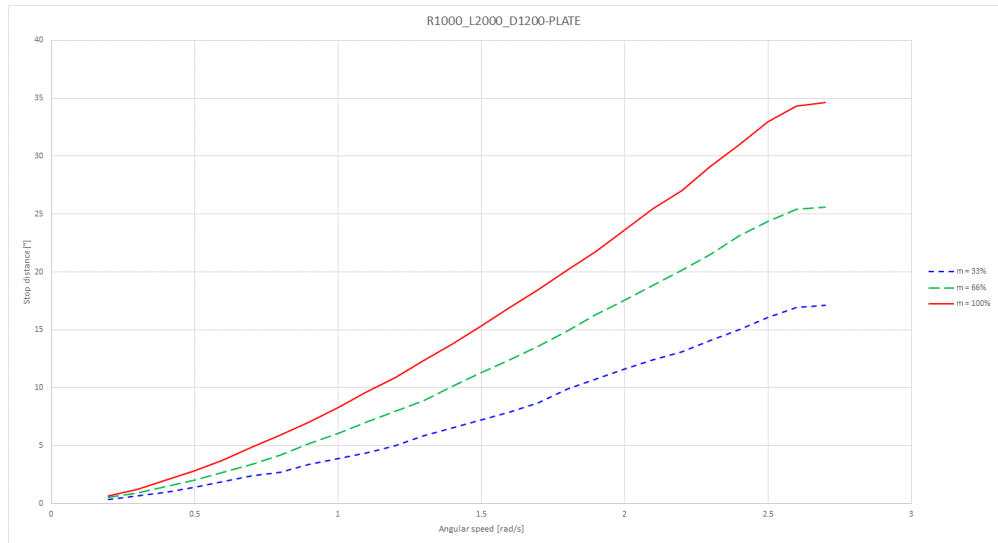
33 IRBP R

33.4 R1000_L2000_D1200

Continued

Category 0, PLATE

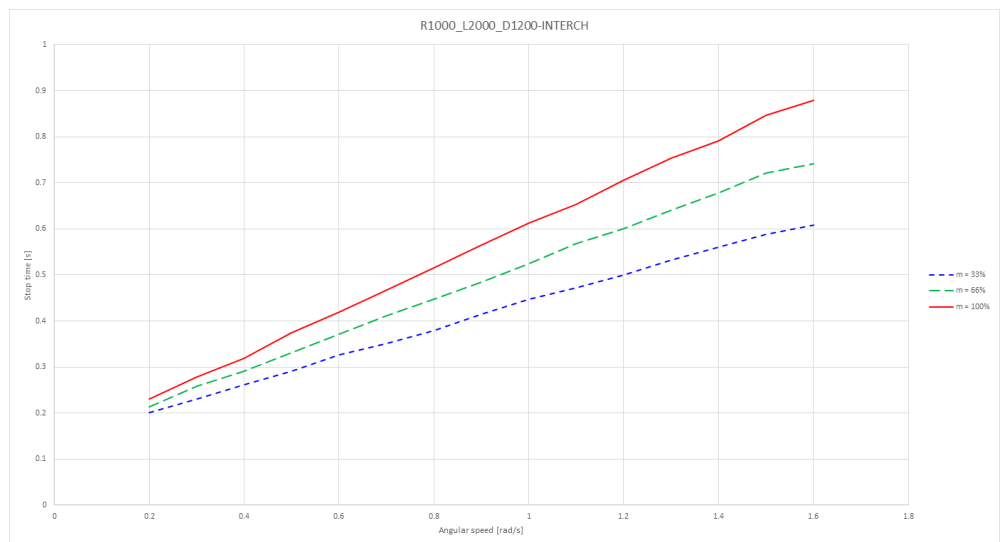
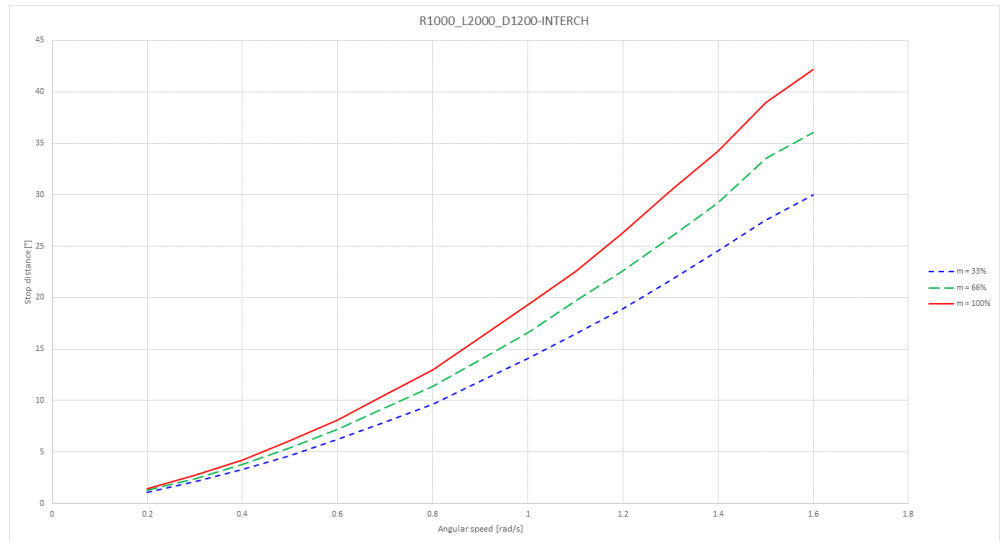
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

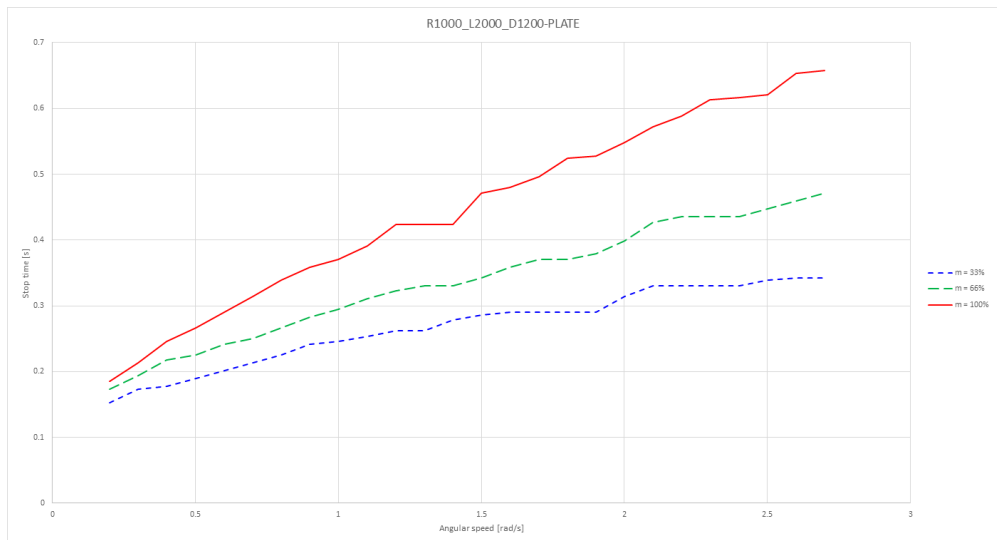
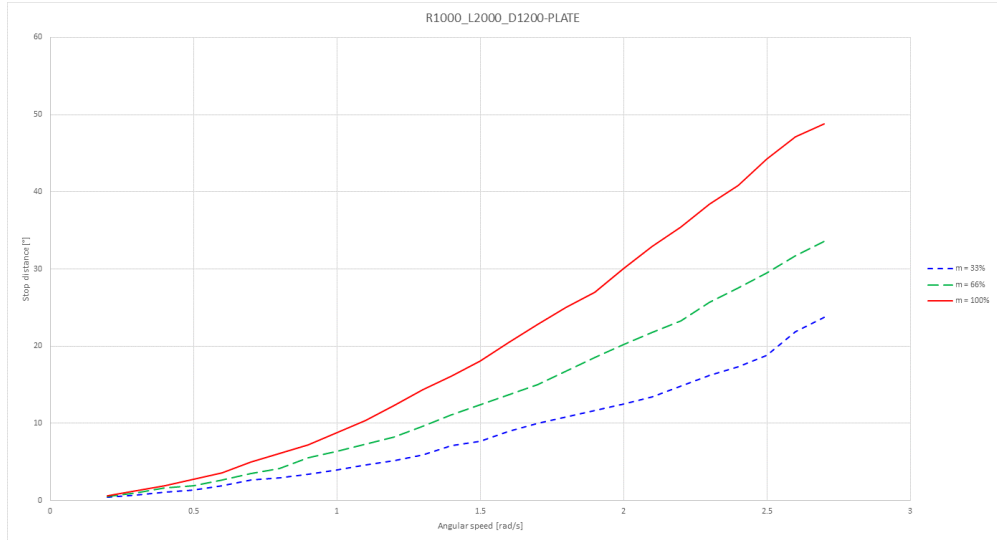
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

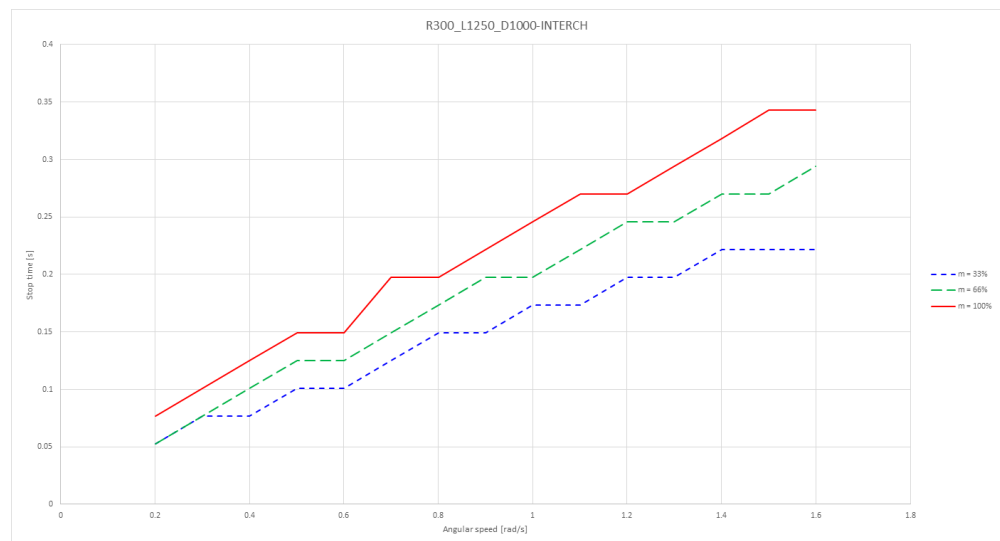
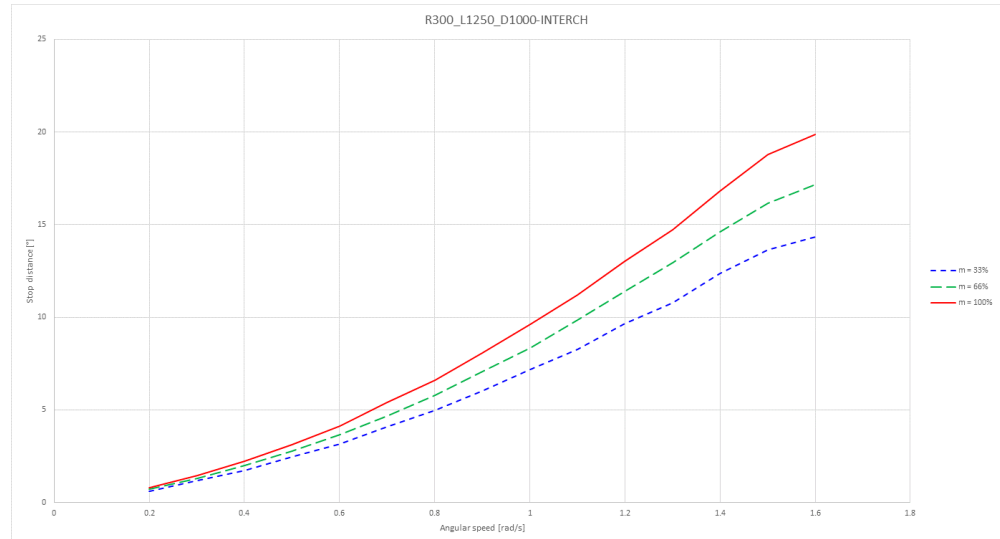
Stopping distance and stopping time



33.5 R300_L1250_D1000

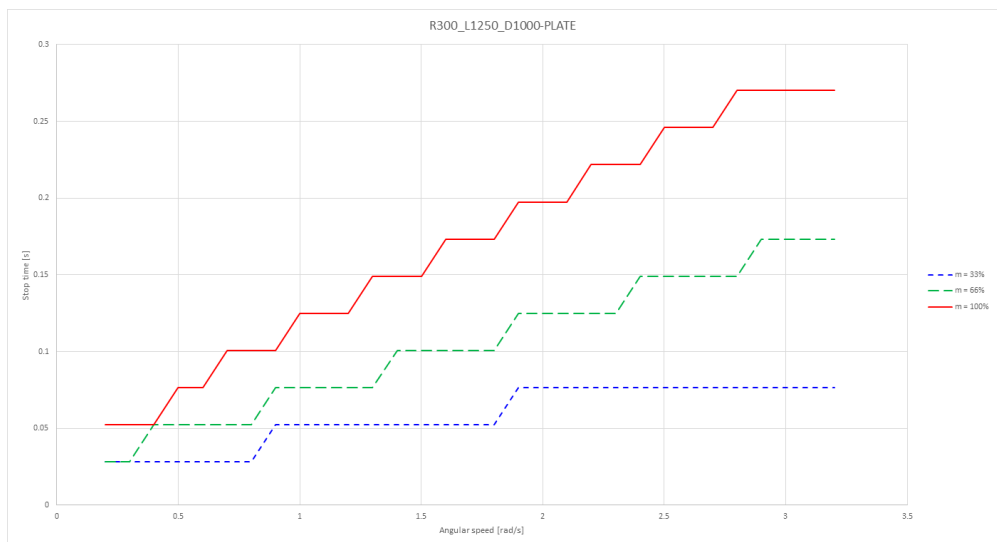
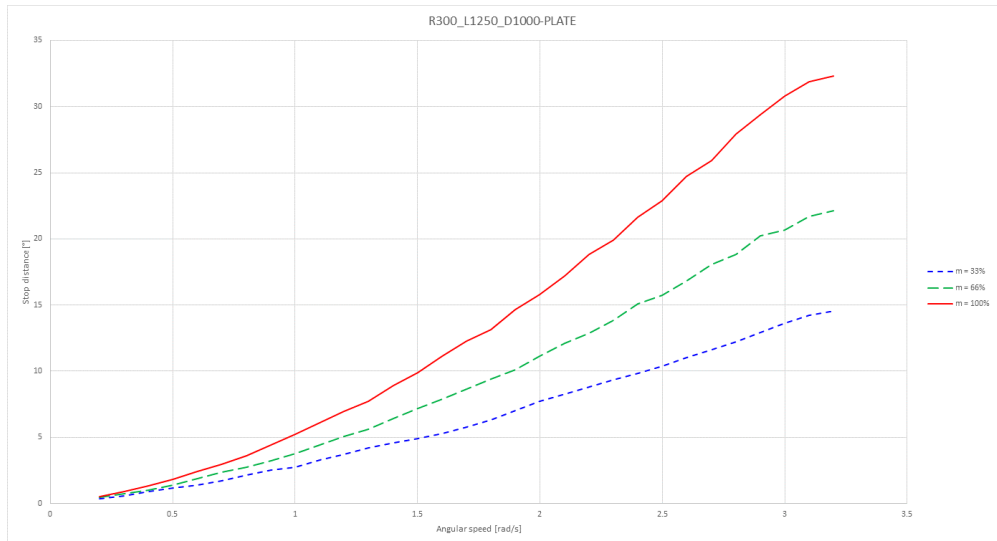
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, PLATE

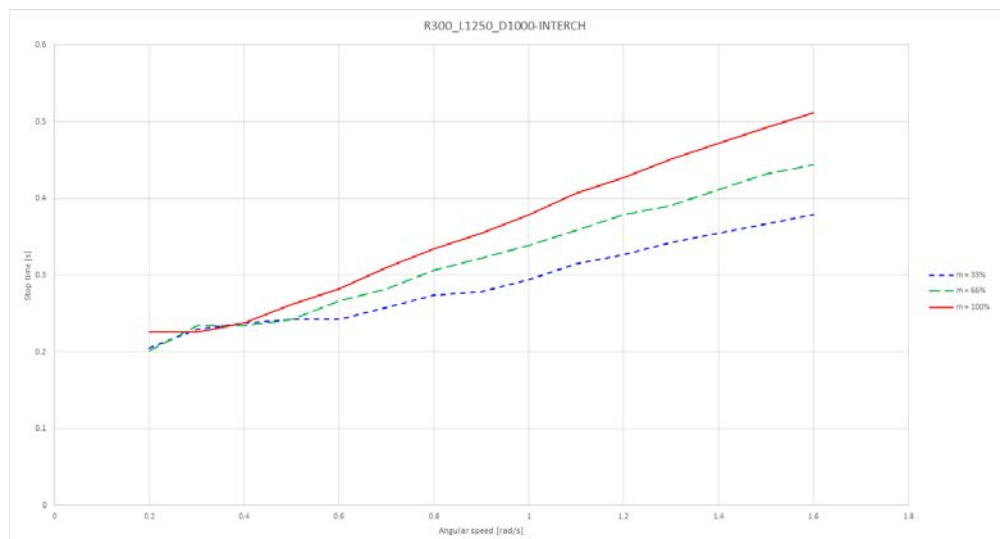
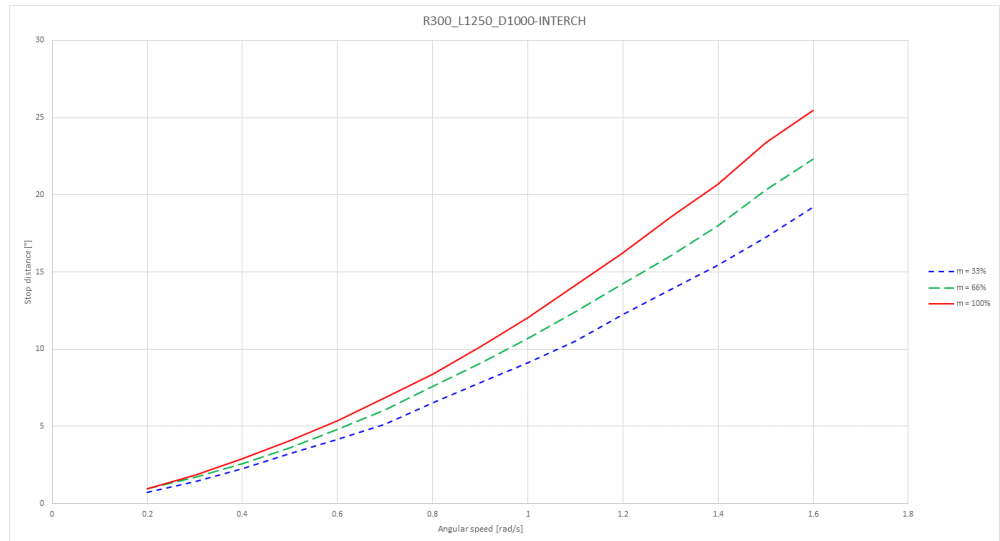
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

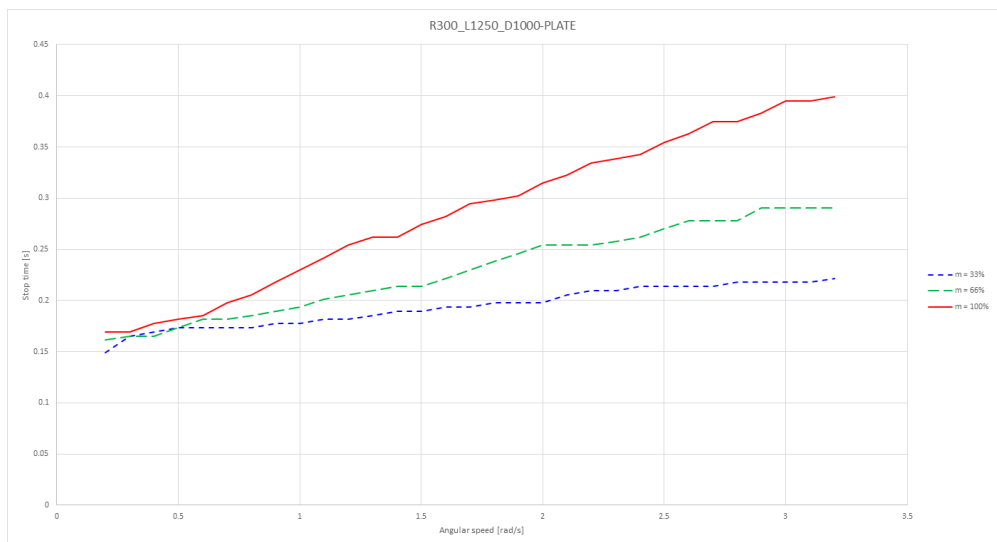
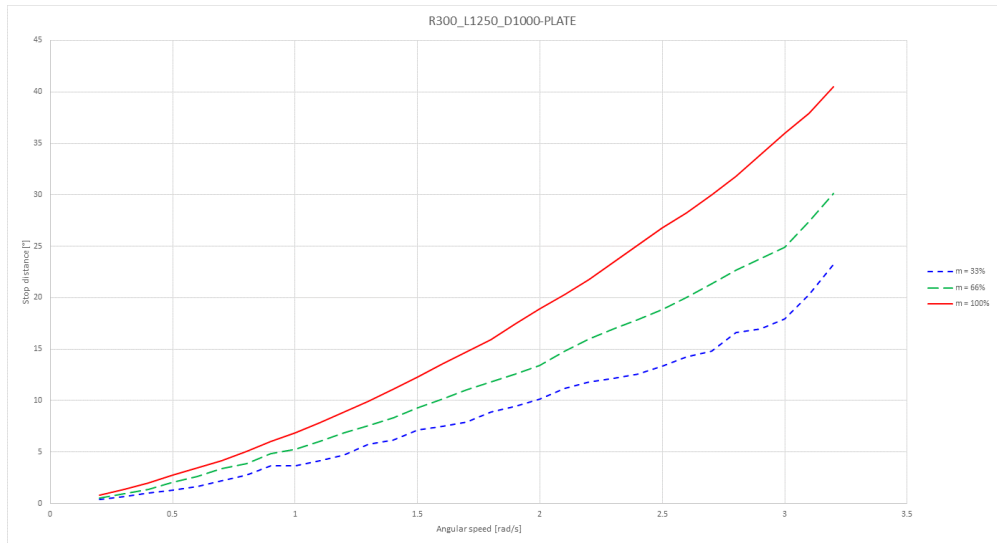
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

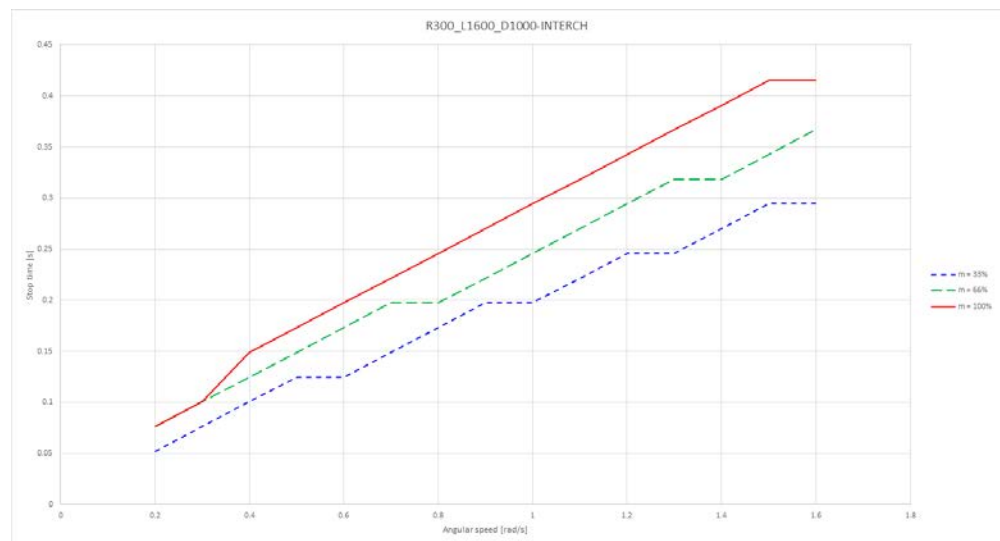
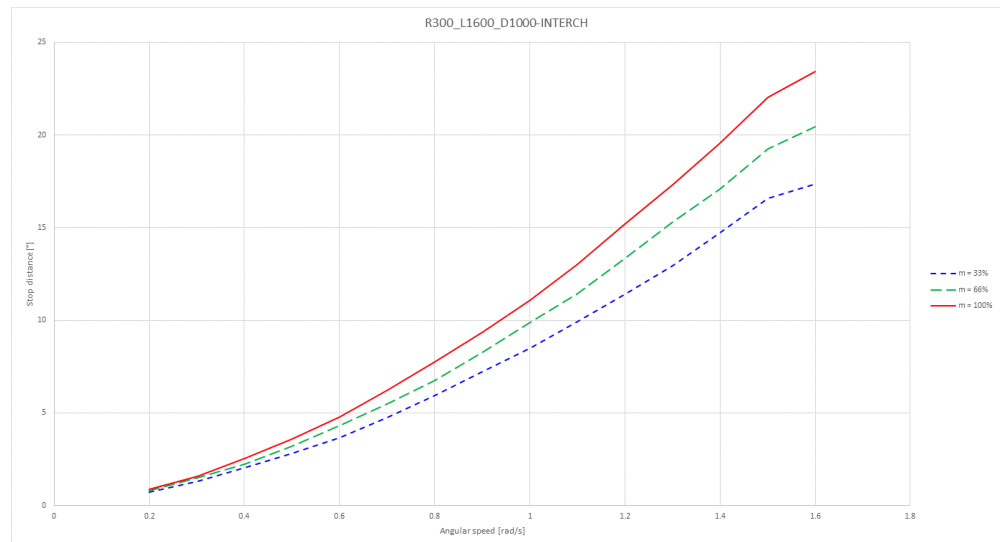
Stopping distance and stopping time



33.6 R300_L1600_D1000

Category 0, INTERCH

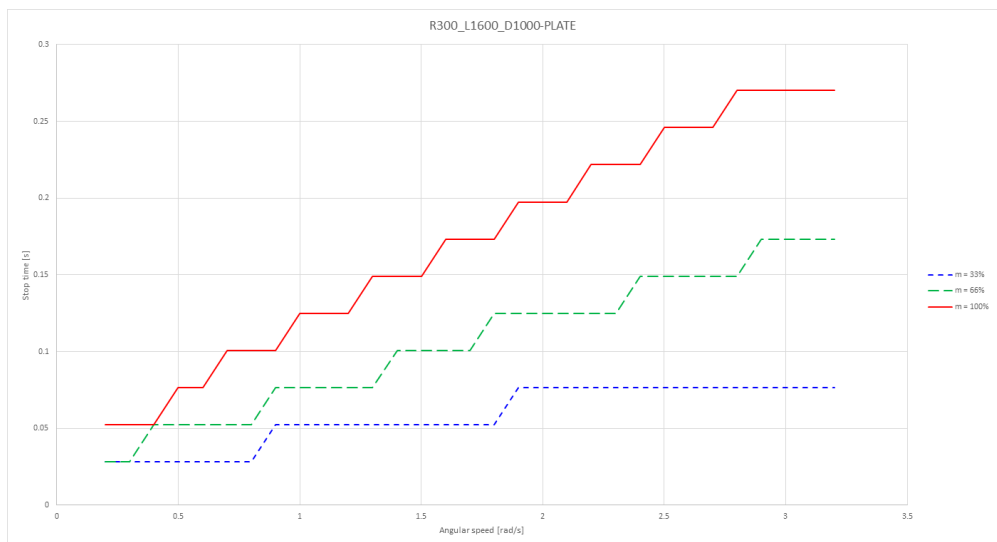
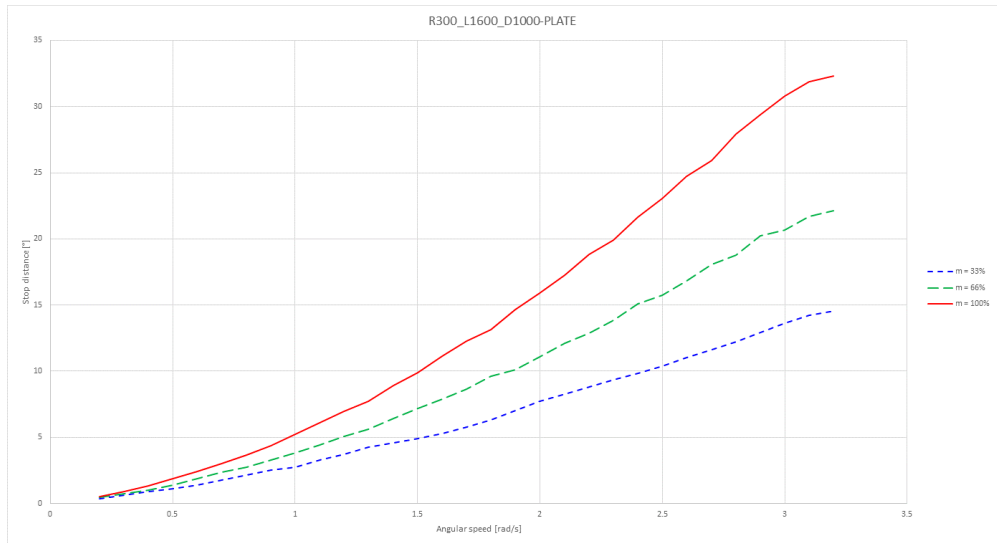
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

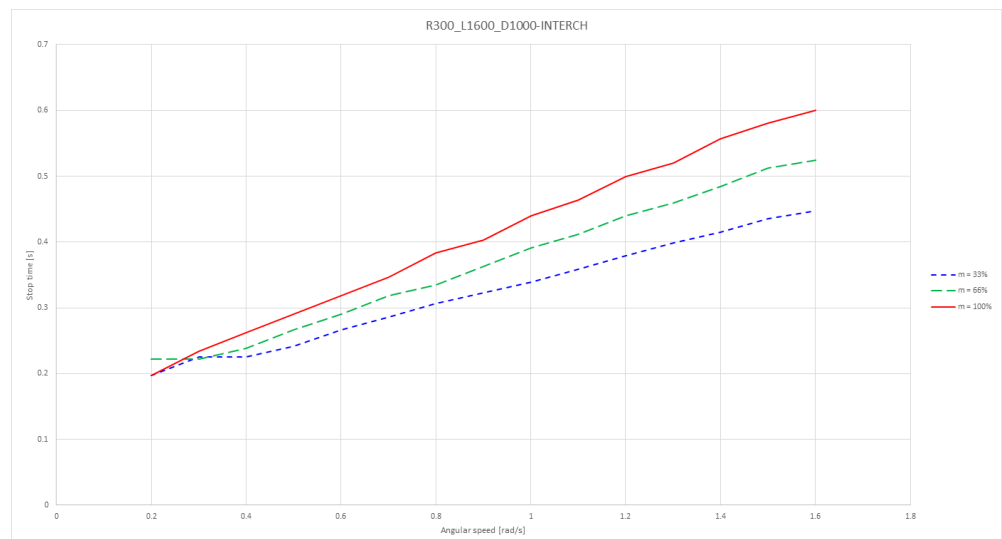
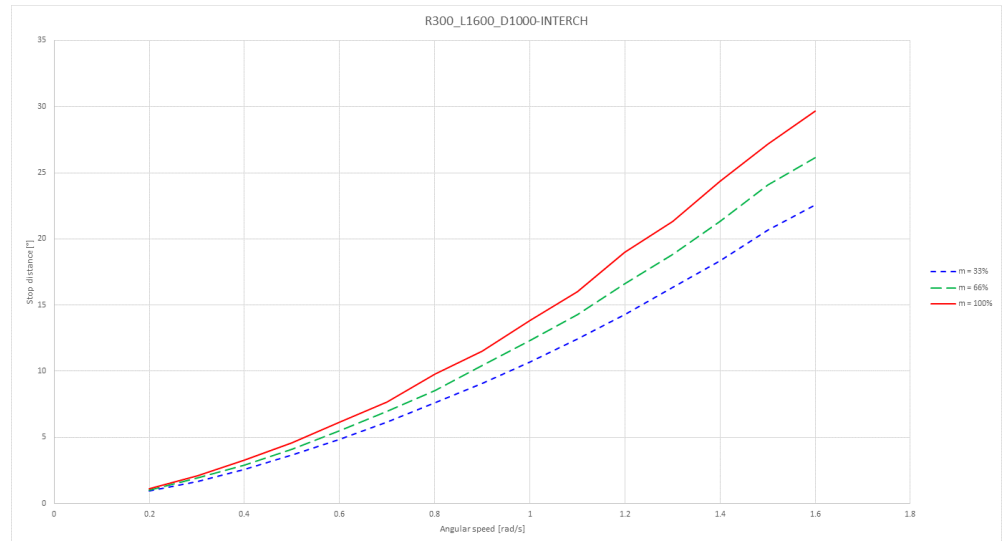
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

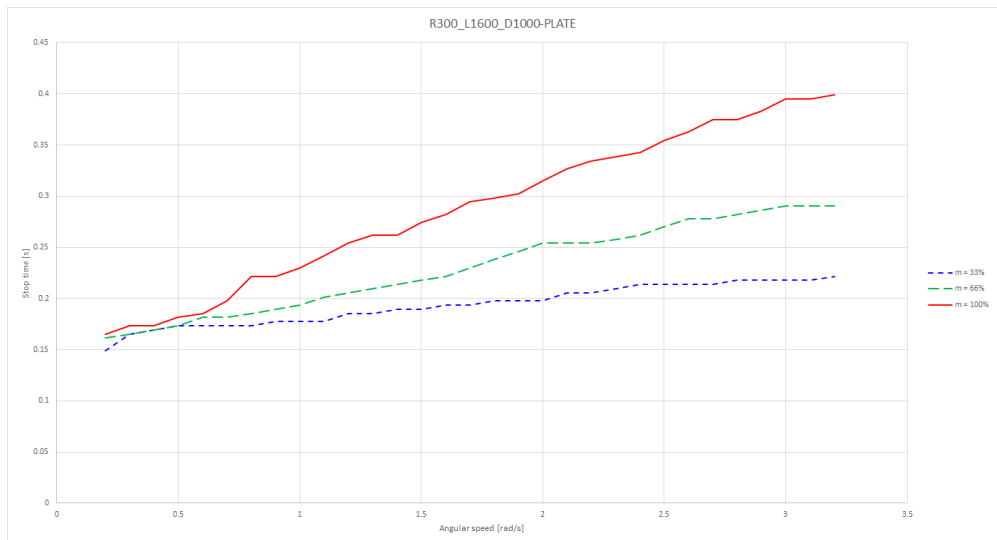
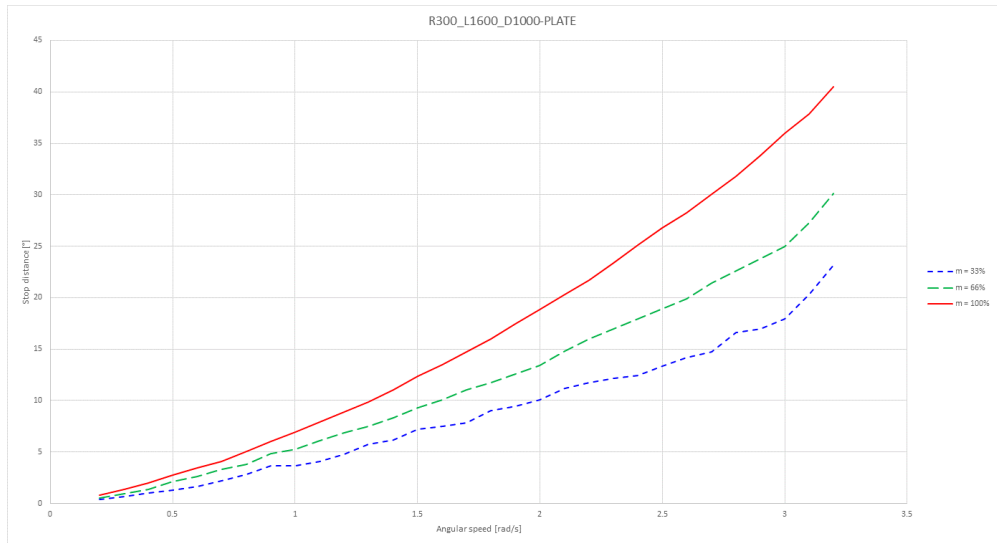
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

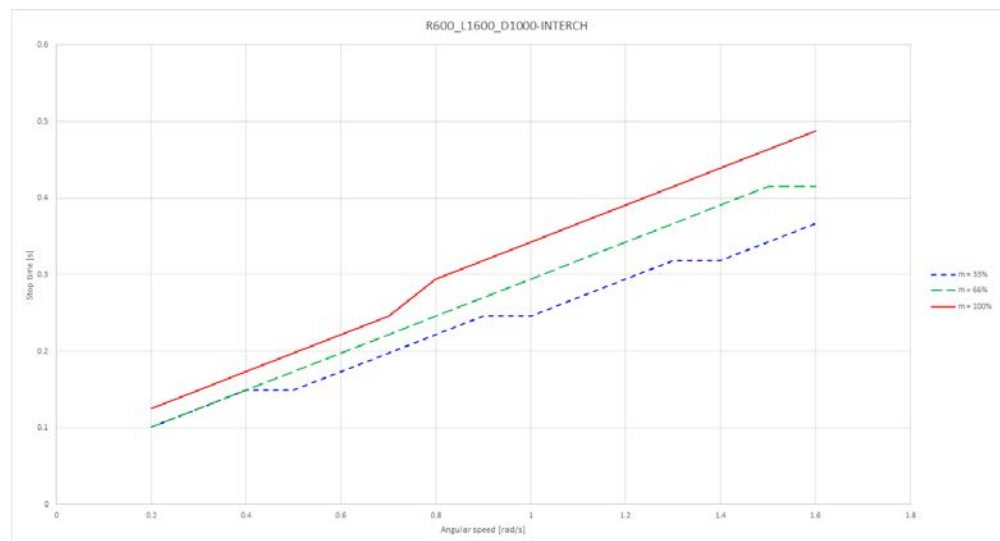
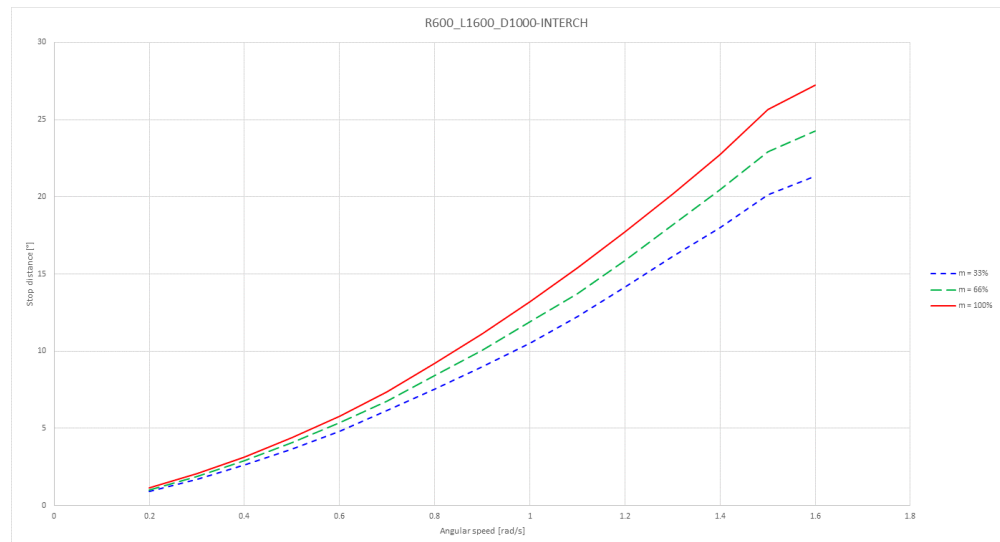
Stopping distance and stopping time



33.7 R600_L1600_D1000

Category 0, INTERCH

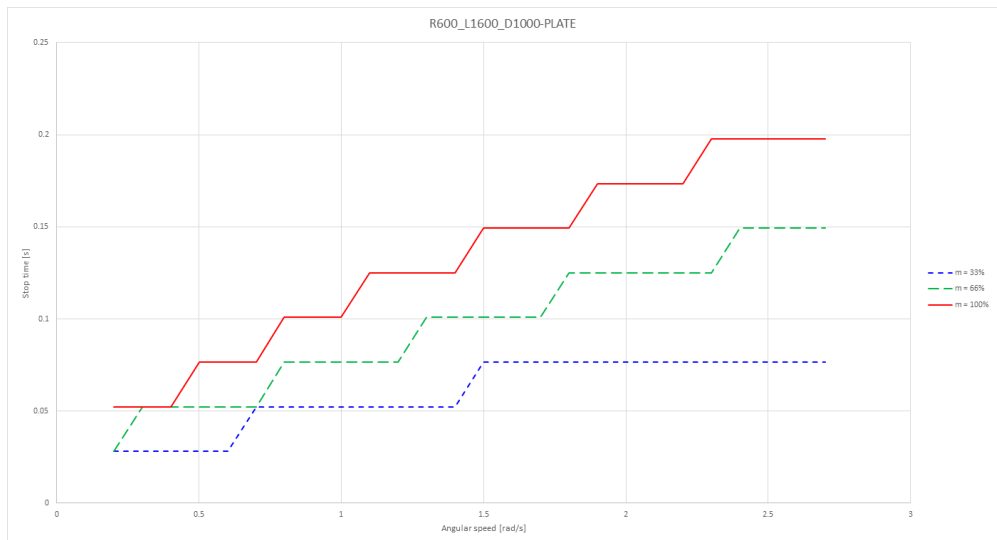
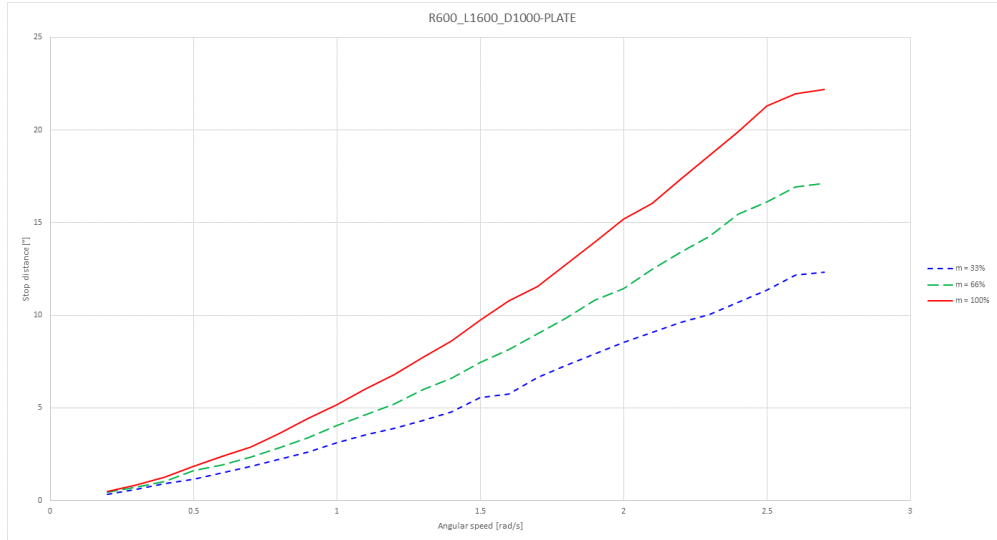
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

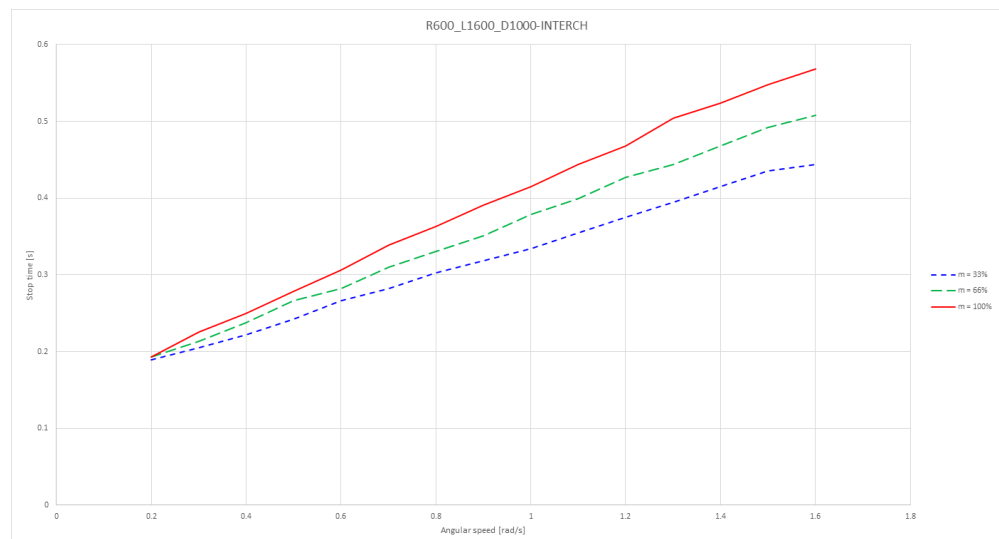
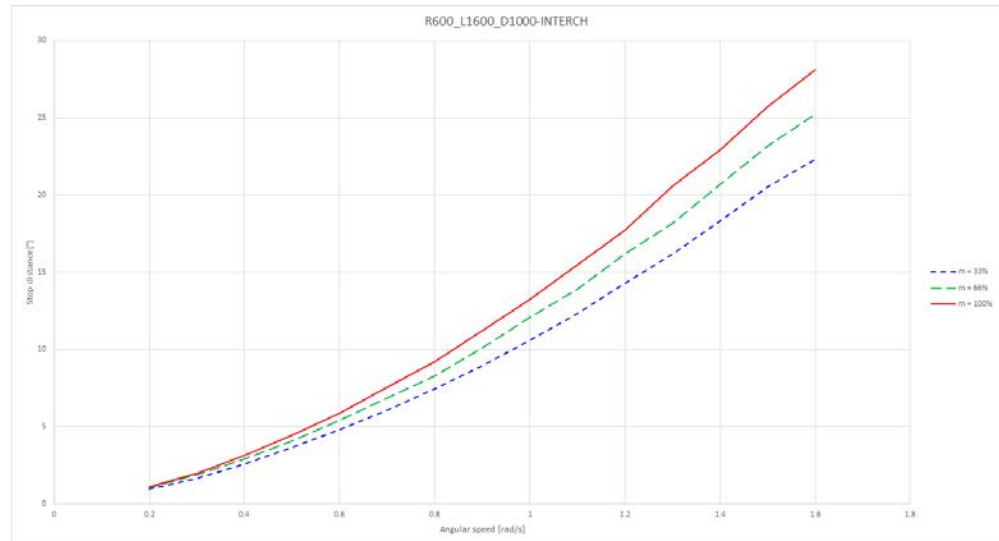
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

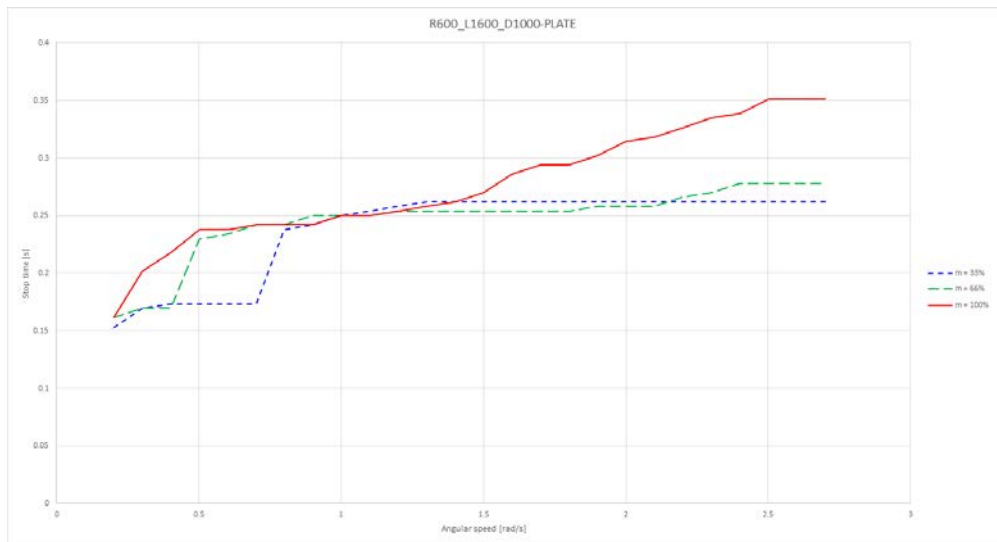
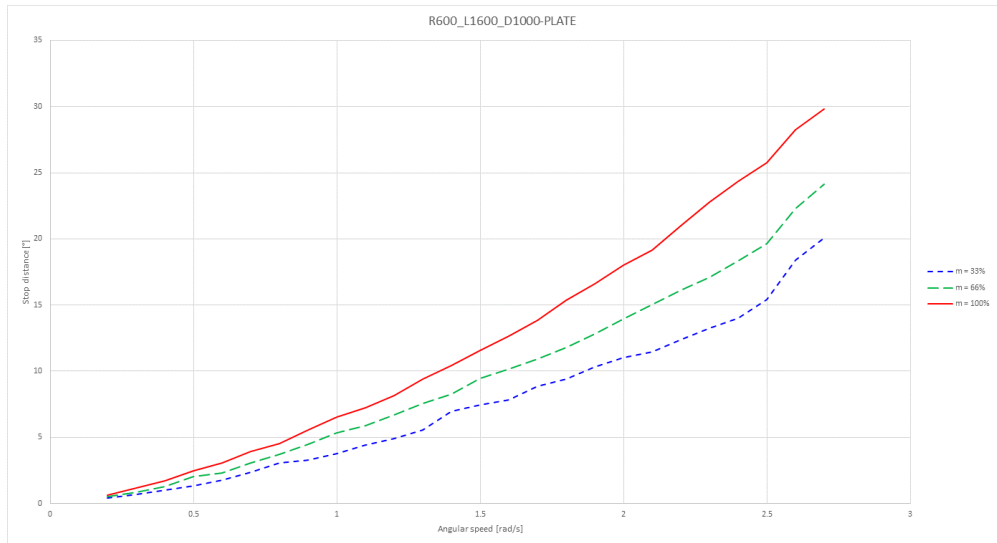
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

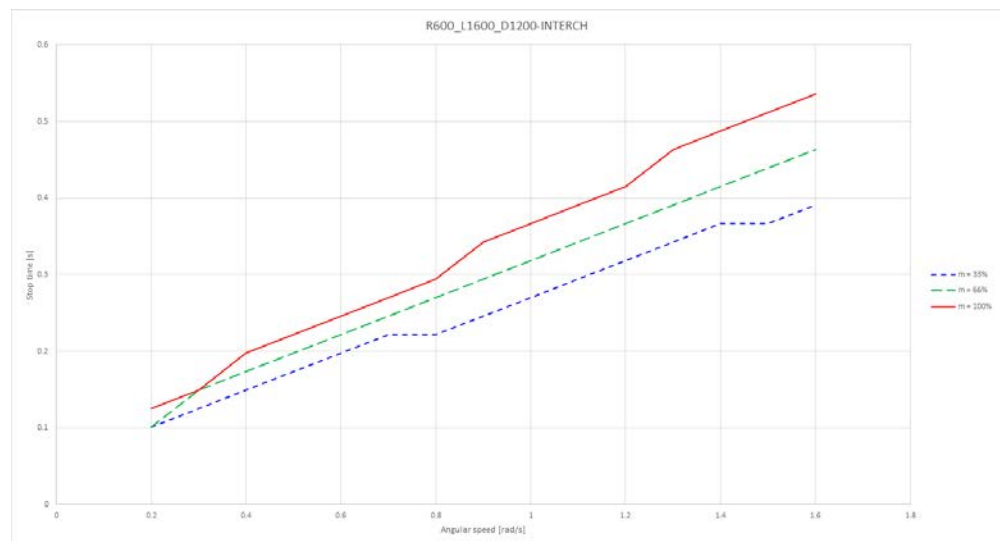
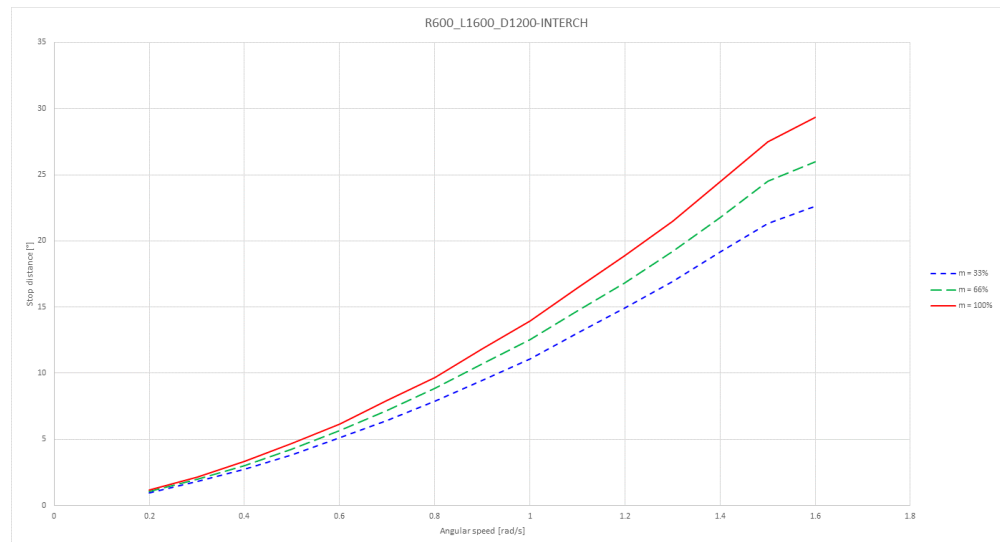
Stopping distance and stopping time



33.8 R600_L1600_D1200

Category 0, INTERCH

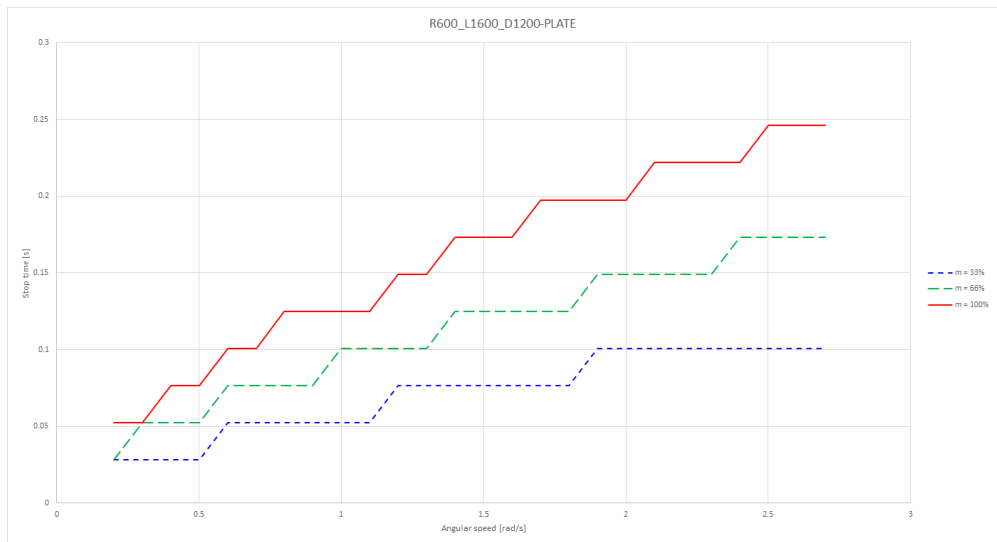
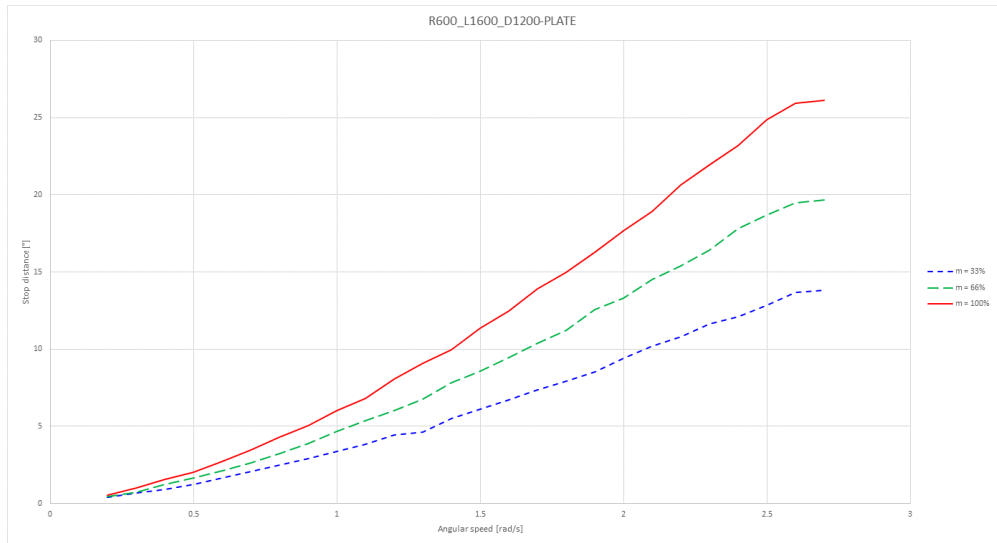
Stopping distance and stopping time



Continues on next page

Category 0, PLATE

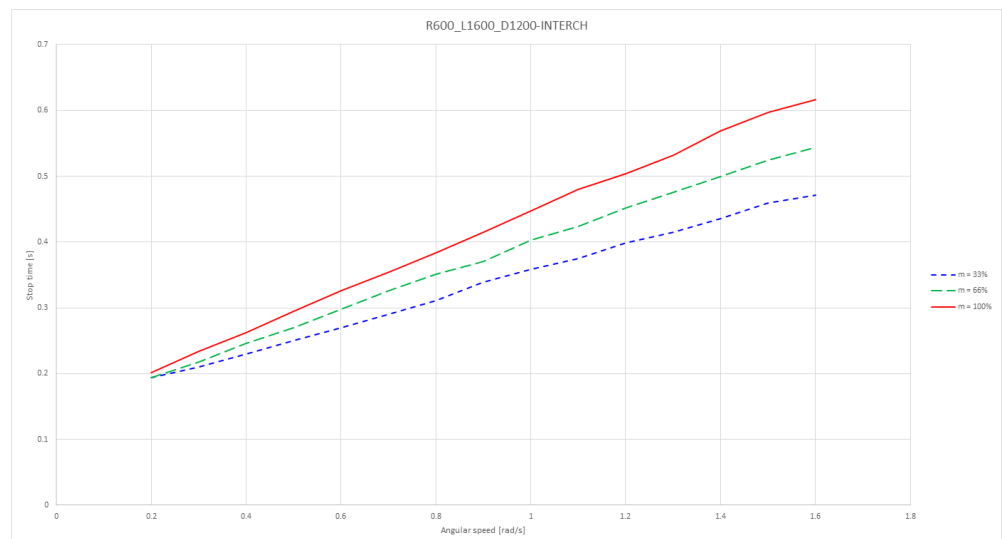
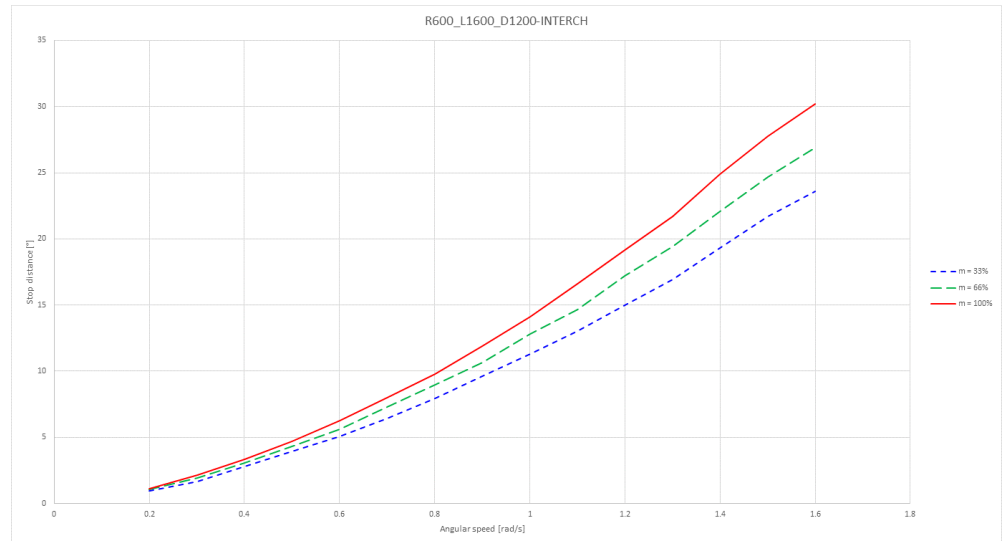
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

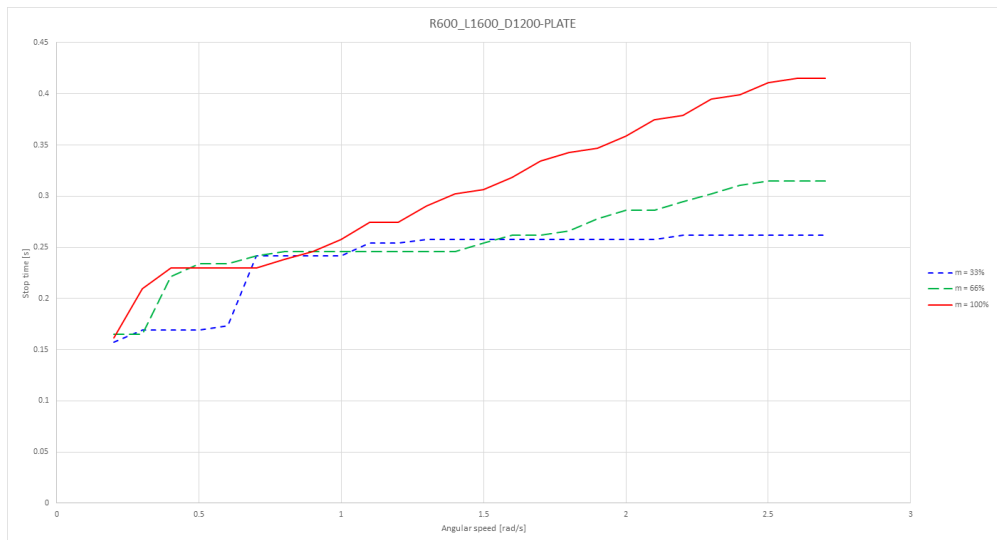
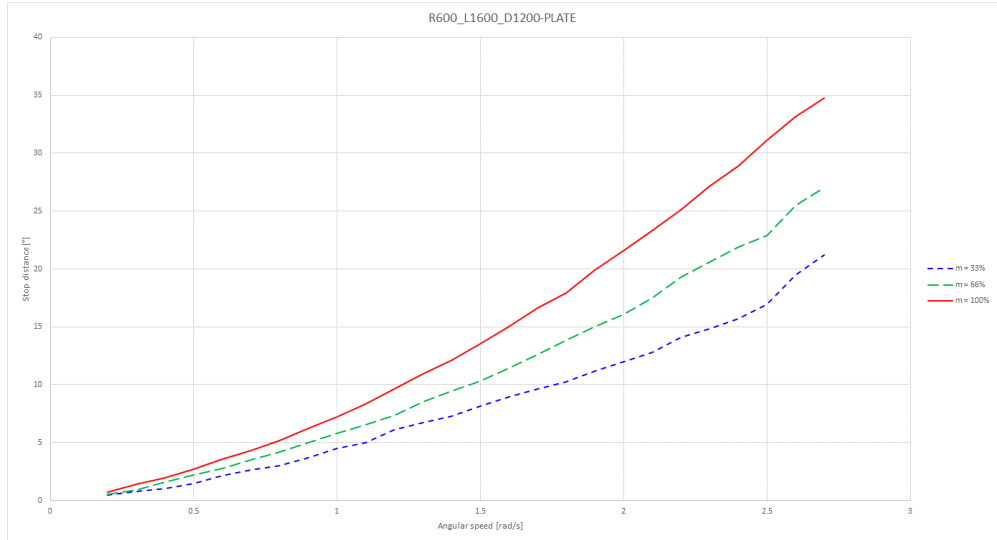
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

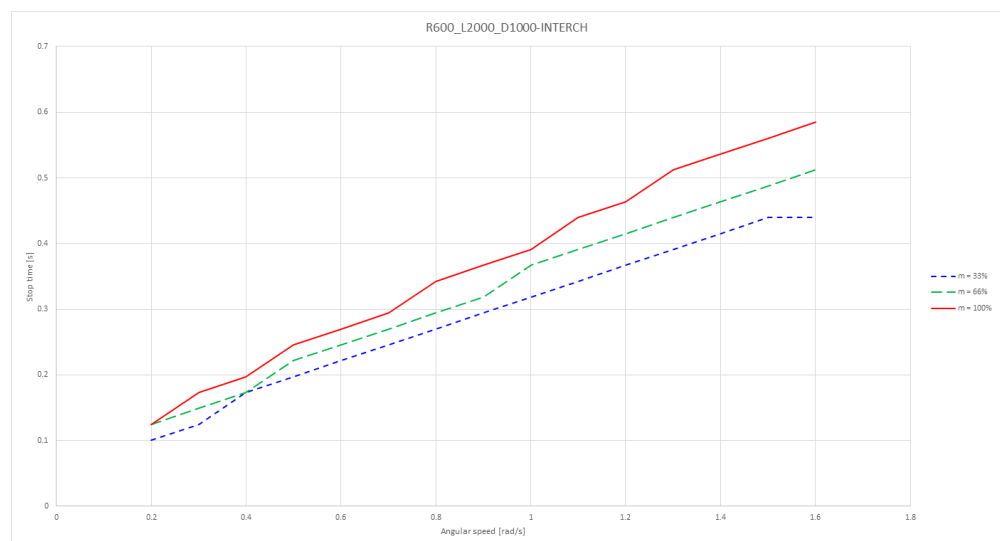
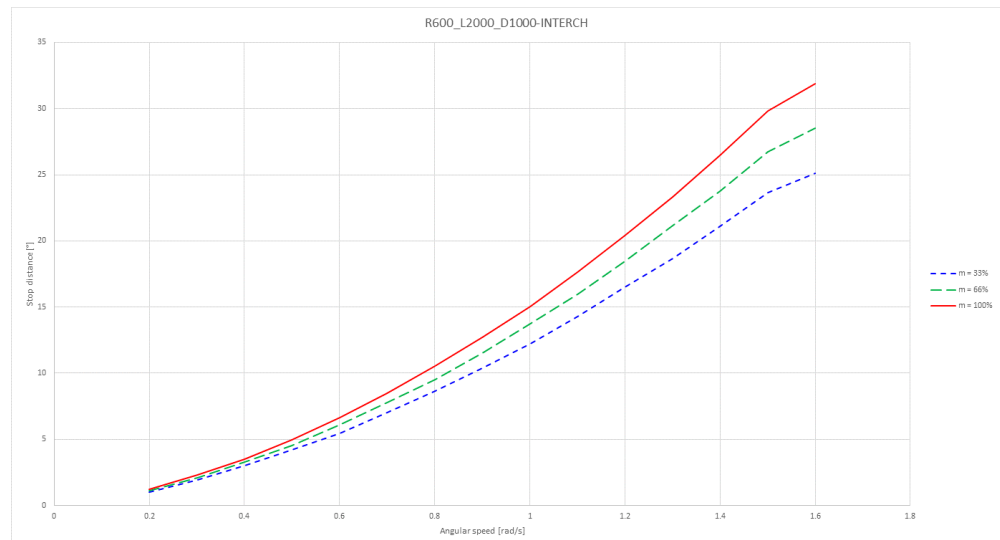
Stopping distance and stopping time



33.9 R600_L2000_D1000

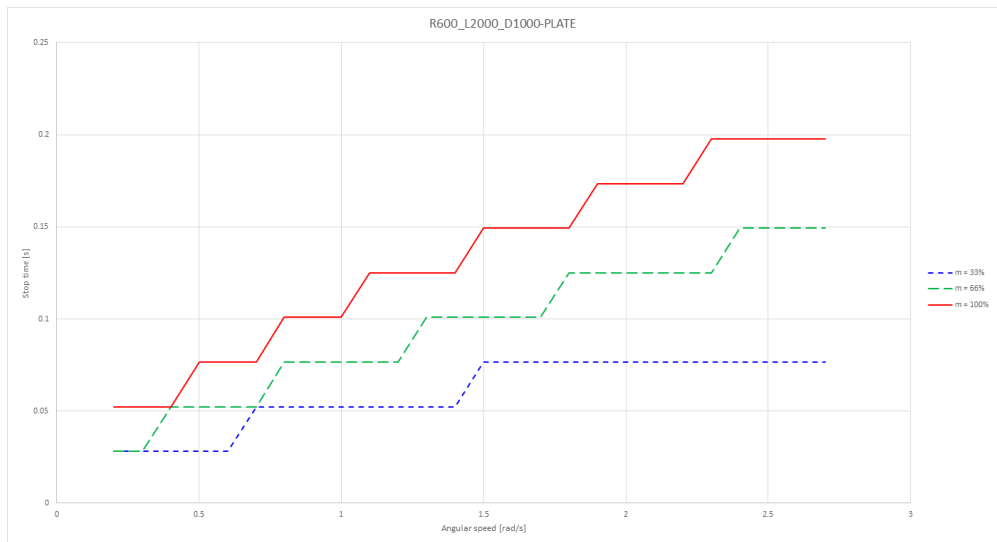
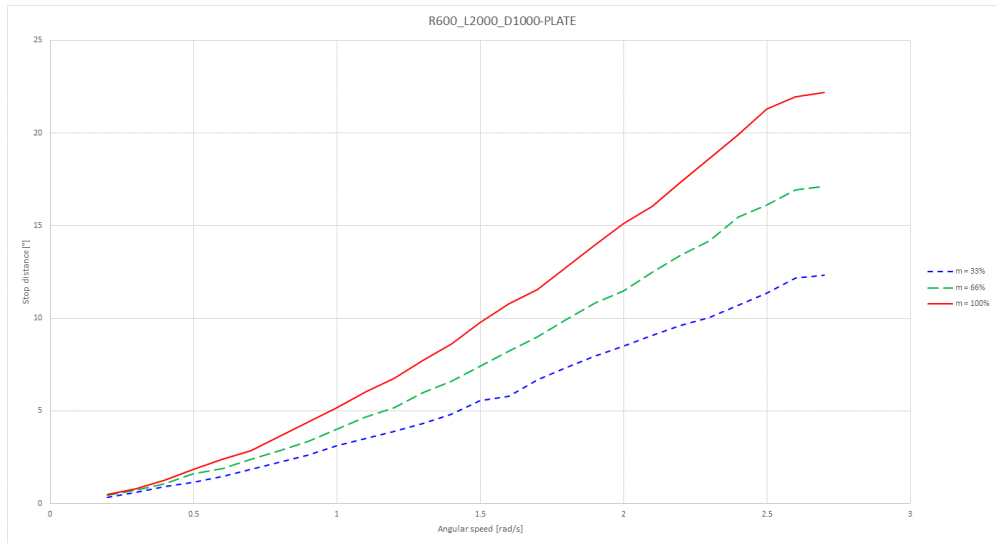
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, PLATE

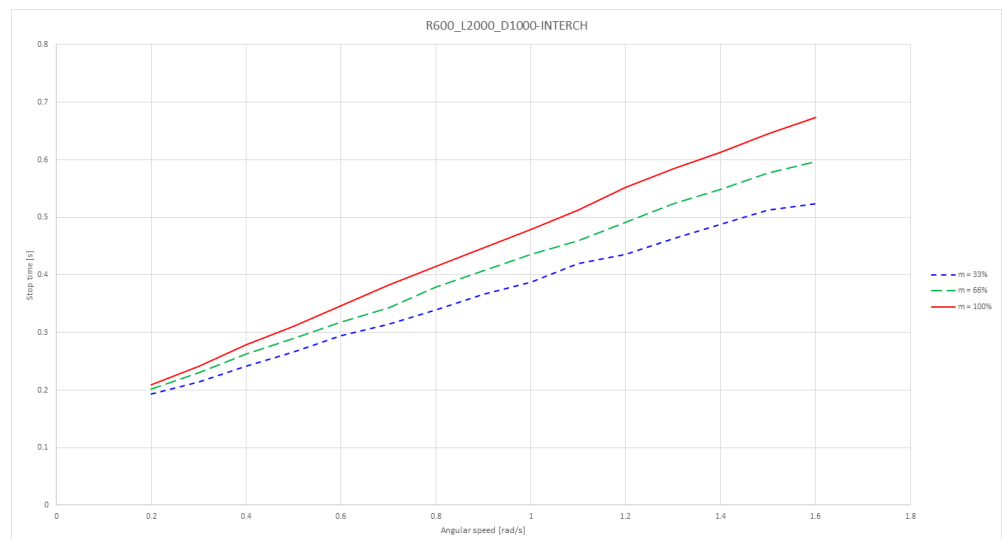
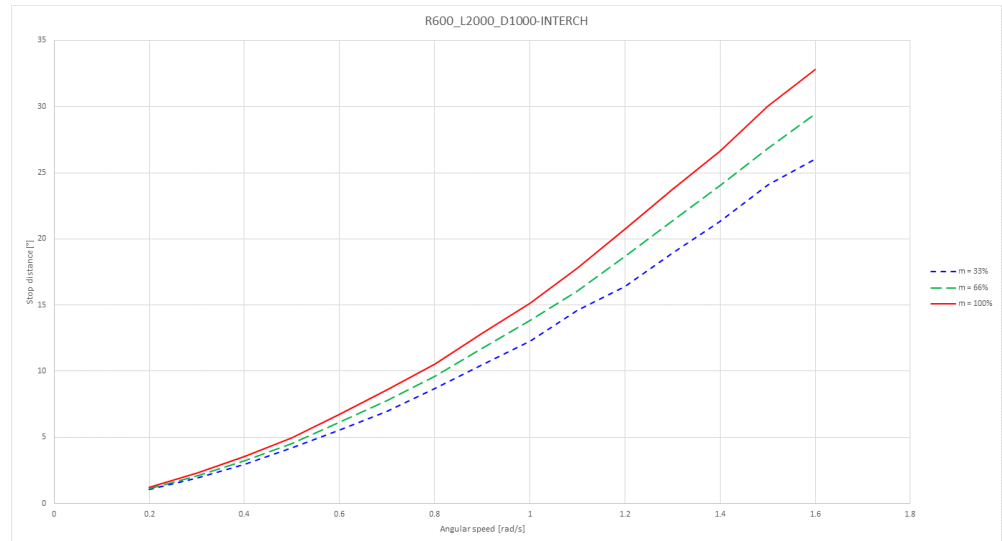
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

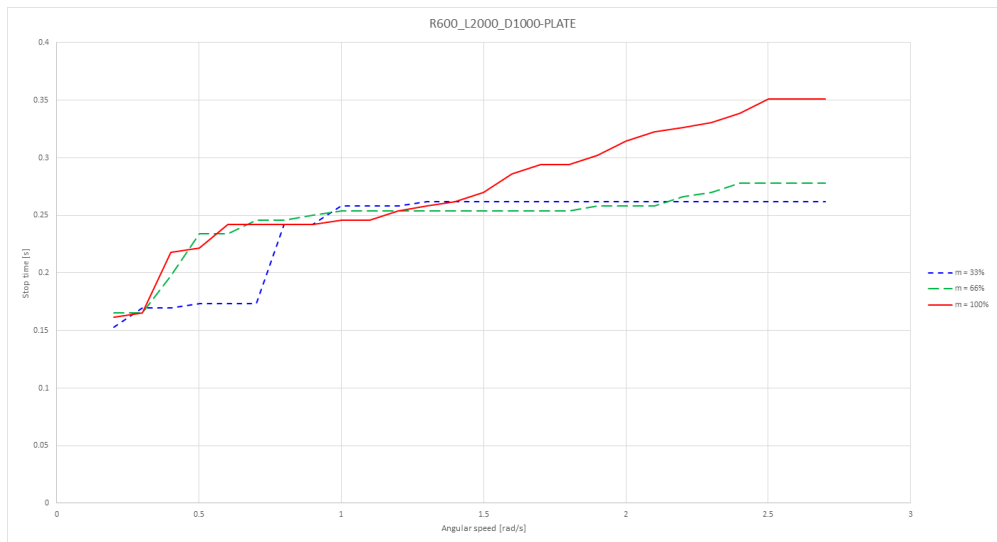
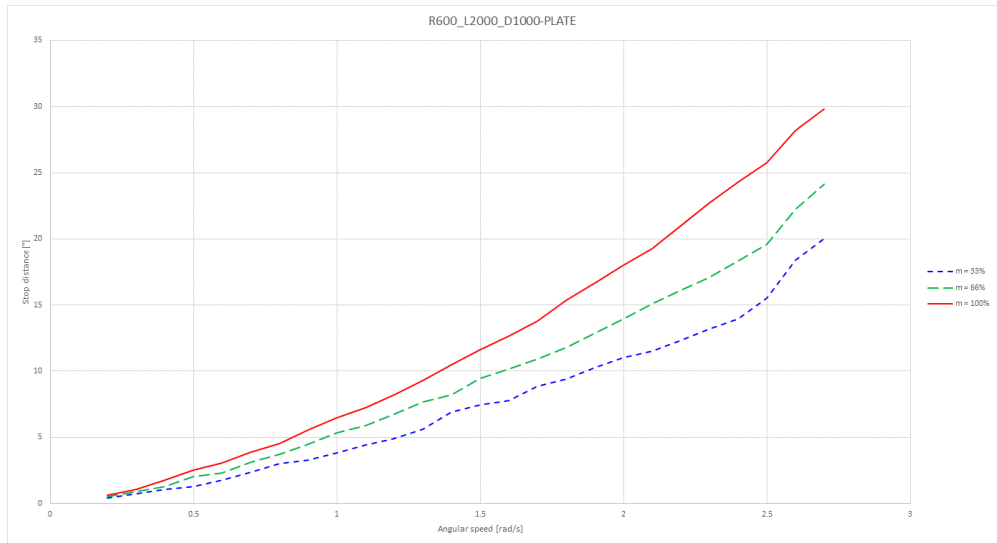
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

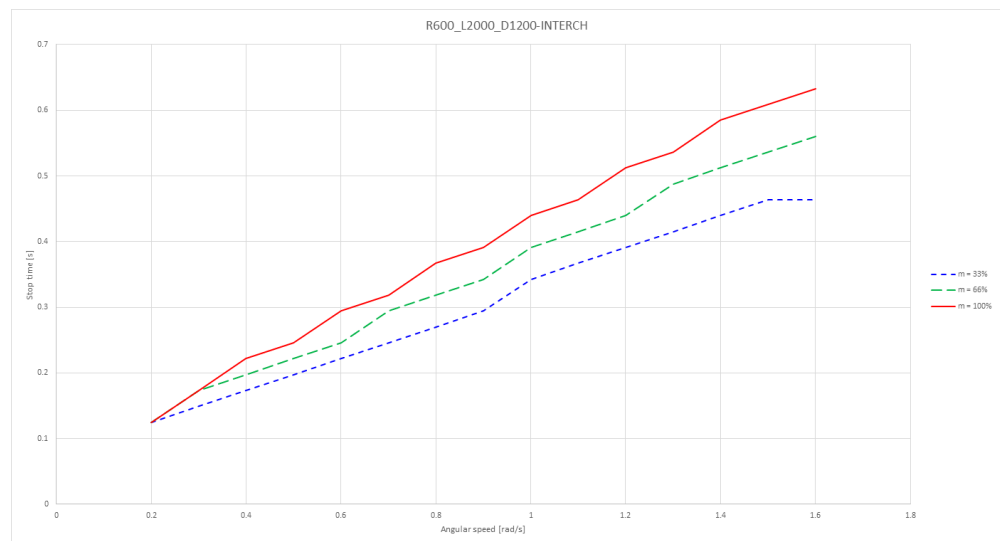
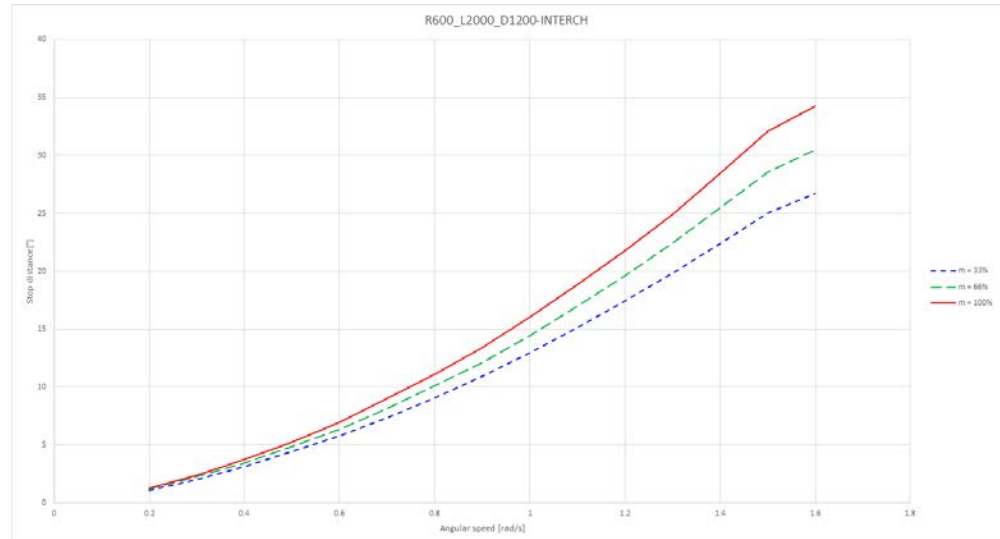
Stopping distance and stopping time



33.10 R600_L2000_D1200

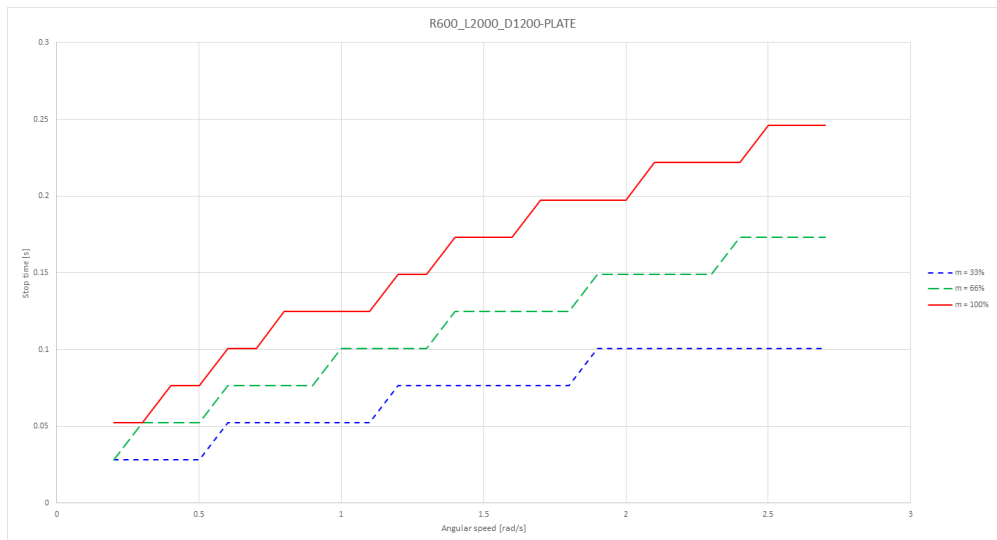
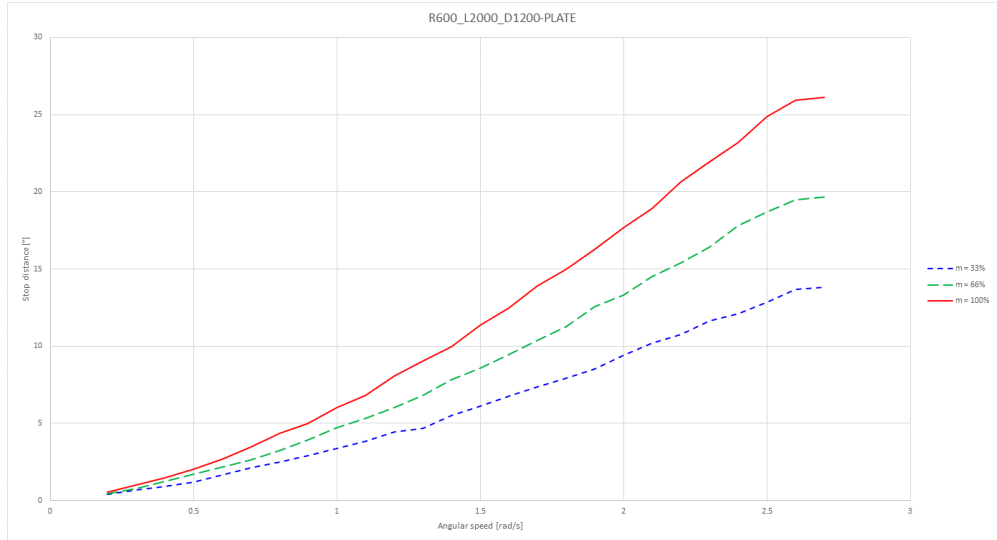
Category 0, INTERCH

Stopping distance and stopping time

*Continues on next page*

Category 0, PLATE

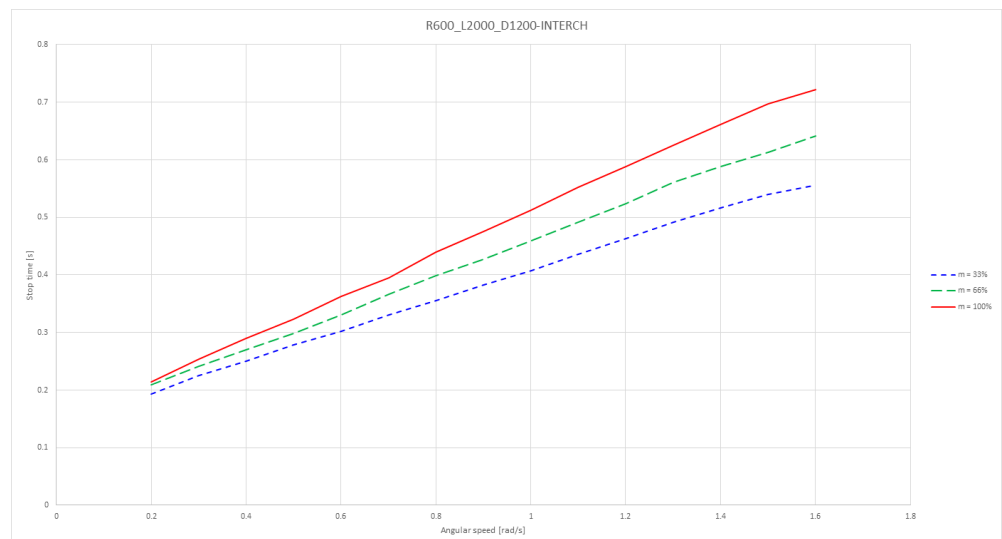
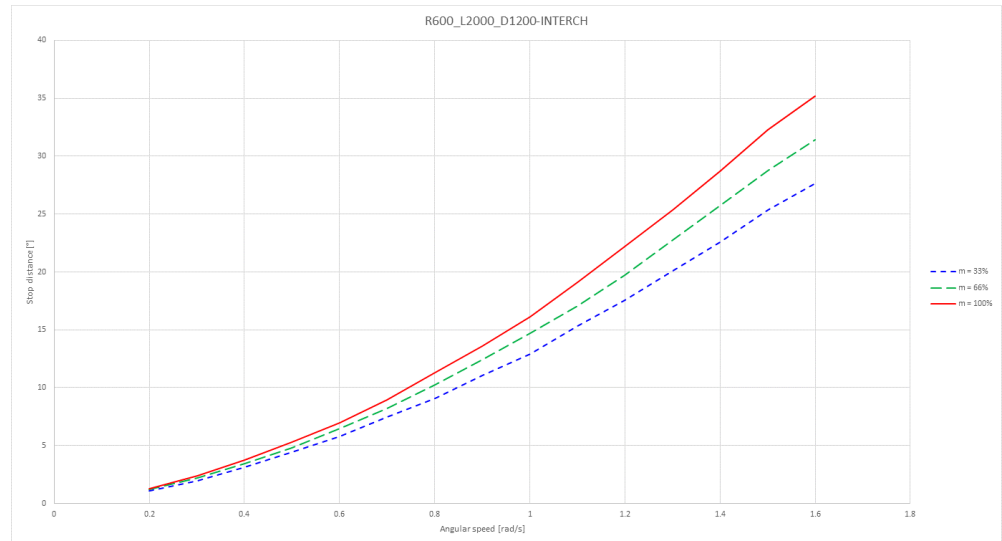
Stopping distance and stopping time



Continues on next page

Category 1, INTERCH

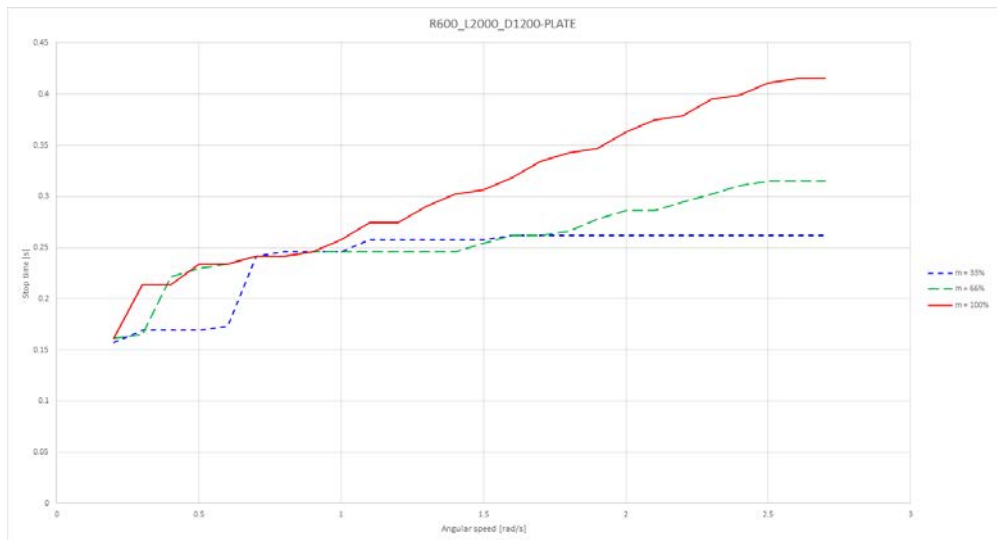
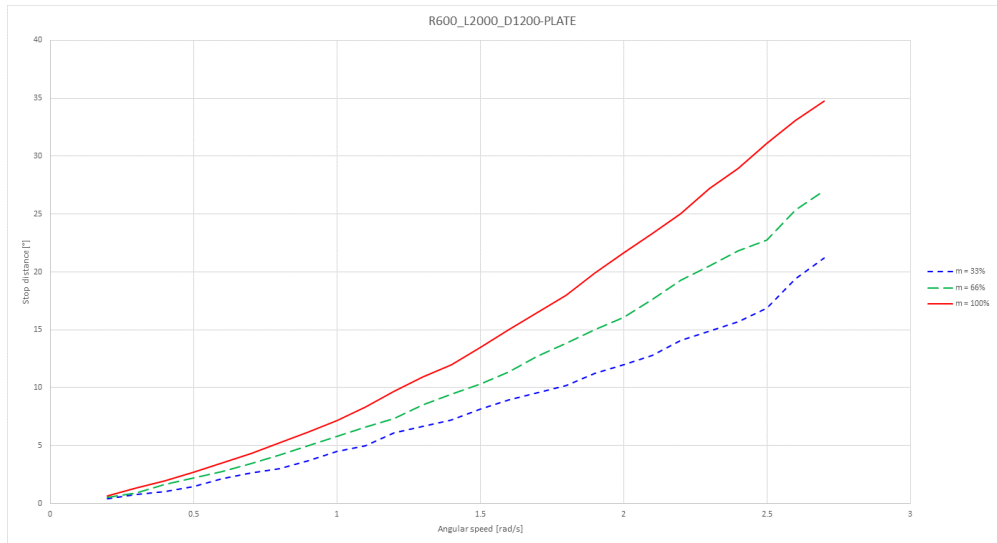
Stopping distance and stopping time



Continues on next page

Category 1, PLATE

Stopping distance and stopping time



Index

A

AccSet, 13

E

extension zone concept, 14

extension zone limits, 14

L

limitations, 15

load, 14

S

speed, 14

stopping distance, 14

stopping time, 14

W

wcp, 14



ABB AB

Robotics & Discrete Automation

S-721 68 VÄSTERÅS, Sweden

Telephone +46 10-732 50 00

ABB AS

Robotics & Discrete Automation

Nordlysvegen 7, N-4340 BRYNE, Norway

Box 265, N-4349 BRYNE, Norway

Telephone: +47 22 87 2000

ABB Engineering (Shanghai) Ltd.

Robotics & Discrete Automation

No. 4528 Kangxin Highway

PuDong New District

SHANGHAI 201319, China

Telephone: +86 21 6105 6666

ABB Inc.

Robotics & Discrete Automation

1250 Brown Road

Auburn Hills, MI 48326

USA

Telephone: +1 248 391 9000

abb.com/robotics