REPORT

issued by notified body No. 0402

0402-CPR-566354

Contact person
Elin Granberg
Safety
+46 10 516 62 23
elin.granberg@ri.se

Date 2018-01-25 | Reference 8P00578 |

SP Testing

CSV NORDIC OU
Sorve mnt 17 93872 Nasva Saaremaa vald
Registry code 14187640
VAT EE 102017991
Estonia

Summary of Initial Type Testing Reports for Industrial Doors

RISE Research Institutes of Sweden has in its capacity as Notified Body no. 0402 assessed the performance of the construction product in accordance with the harmonized product standard **EN 13241:2003+A2:2016 Industrial, commercial, garage doors and gates –** Product standard, performance characteristics. Performances in this report can be used as support for a *Declaration of Performance* in accordance with *Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011* (the Construction Products Regulation or CPR).

This report is a summary of those reports and includes also results from type tests performed by other Notified Bodies. The content of this report may be used as support for an Declaration of Performance in accordance with the CPR. It shall be noted that the client shall specify all the involved Notified Bodies and their numbers in the Declaration of Performance.

Product name and description

Industrial door name/type	CTU type NL, HL, VL, FTR, FLH-CE, FHL, LHR-CE
Weight of door, maximum	700 kg
Day-light, maximum	width 8500 mm; height 7000 mm
Day-light, tested	width 4000 mm; height 3500 mm
Panel manufacturer (type of panel)	Tecsedo, Kingspan, Metecno Door Panel, Flexi-Force (Full vision)
Hardware Flexi-Force	**2”** tracks, code 2V - rollers 2” code 574-60, 575-100, 584-60, 585-60 - vertical angle code 9VB, 9K, 9ZR, 9VD, 9VL, 9VK - side seal code 1085, 1094-40, 1084, 1088, 1088T, 1888TF, 1088I, 1088IT - top seal code 1036-36, 1036, 1036-52, 1036D, 1036DN **3”** tracks, code 13155 and 13236 - rollers 3” code 579-11-198, 578-12-198 - vertical angle code 9K, 9VL, 9VK - side seal code 1085, 1094-40, 1088T, 1888TF, 1088I, 1088IT - top seal code 1036-36, 1036, 1036-52, 1036D, 1036DN
Machinery/ Operator	See chapter 3 in this report
Balancing system	Torsion springs
Spring break device Flexi-Force	Type 670, 670S, 675 and 675-125 (see also chapter 1.5)
Cable break device Flexi-Force	2” 440-600, 440LHR, 440REGL, 444, 440HD, 440, 440S 3” 440-3 (see also chapter 1.5)
Safety edge	See chapter 3 in this report

Swedish Notified Bodies are appointed by SWEDAC, the Swedish Board for Accreditation and Conformity Assessment, under the terms of Swedish legislation. This report may not be reproduced other than in full, except with the prior written approval of SP.

1. Test of fully assembled Door

1. 1 Resistance to wind load according to part 4.4.3 of EN 13241:2003+A2:2016

Door panel type	Wind load Class	Maximum pressure [Pa]	Test report
Tecsedo nfs covered t=40 mm	**3**	-	1
Tecsedo nfs covered t=40 mm with pass door	**1**	-	1, 10
Kingspan covered t=40 mm	**3**	-	1
Kingspan covered t=40 mm, with pass door SafeStep	**3**	-	1, 10
Kingspan covered t=80 mm	**4**	-	1
Kingspan (Ward) cov, t=80 mm, 4 windows	**4**	-	1
Metecno Door Panel Monowall nfs covered	**3**	-	1
Metecno Door Panel Monowall nfs covered, with pass door	**1**	-	1, 10
Metecno Door Panel Monowall nfs, with windows	**2**	-	1
Metecno Door Panel Monowall nfs, with windows and pass door	**0**	-	1, 10
Metecno Door Panel Monowall nfs, with windows, with cylinder lock & handle/footplate 1 or handle/footplate 2	**3**	-	1
Flexi-Force Full vision, non-fingersafe	**3**	-	1
Flexi-Force Full vision, non-fingersafe, with pass door	**1**	-	1, 10
Flexi-Force – Kingspan / Metecno / Tecsedo, Full vision, fingersafe	**4**	-	1
Flexi-Force – Kingspan / Metecno / Tecsedo, Full vision, fingersafe, with pass door SafeStep	**1**	-	1, 10
Flexi-Force – Kingspan / Metecno -Reflection full vison, finger safe, no reinforcement	**2**	-	20,21,22,23
Flexi-Force – Kingspan / Metecno -Reflection full vison, finger safe, reinforced profile	**2**	-	20,21,22,23
Flexi-Force – Reflection full vison, non finger safe, no reinforcement	**2**	-	20,21,22,23
Flexi-Force – Reflection full vison, non finger safe, reinforced profile	**2**	-	20,21,22,23
Flexi-Force – Thermal Break Reflection Fv, nfs, no reinforcement	**2**	-	20,21,22, 23,24
Flexi-Force – Thermal Break Reflection Fv, nfs, reinforced profile	**2**	-	20,21,22, 23,24

Test reports SP No:
1) P403429, 2005-08-26
2) F520020, 2005-10-24
3) P805340A, 2008-12-15
4) P805340B, 2008-12-15
5) P805340C, 2008-12-15
6) P805340D, 2008-12-15
7) P905811A, 2009-11-20
8) P905811-01A, 2009-10-01
9) P908002C, 2010-03-22
10) P900807-03B, 2010-06-02
11) PX04884A, 2010-11-01
12) PX04884C, 2010-09-15
13) PX20720-02D, 2012-07-10
14) 3P00645A, 2013-02-12
15) PX20720-03A, 2013-02-24
16) PX20720-03B, 2013-02-24
17) 3P05443B, 2013-09-02
18) 3P05443C, 2013-09-02
19) 3P05443A, 2013-09-02
20) 5P06232-1, 2015-08-24
21) 5P06232-2, 2015-08-24
22) 5P06232-3, 2015-08-24
23) 6P01821-1, 2016-04-18
24) 6P05181-2, 2016-06-16

Fv=full vision; fs=fingersafe; nfs=non-fingersafe; cov=covered

* only stated for class 5 results

1.2 Air permeability according to part 4.4.6 of EN 13241:2003+A2:2016

1.2.1 Door test

Door panel type	Air permeability Class	Test report
Tecsedo nfs covered t=40 mm	**3**	1
Tecsedo nfs covered t=40 mm with pass door	**1**	1, 10
Kingspan covered t=40 mm	**2**	1
Kingspan covered t=40 mm, with pass door SafeStep	**0**	1, 10
Kingspan covered t=80 mm	**4**	1
Kingspan (Ward), covered t=80 mm with 4 windows	**4**	1
Metecno Door Panel Monowall nfs covered	**4**	1
Metecno Door Panel Monowall nfs covered, with pass door	**2**	1
Metecno Door Panel Monowall nfs, with windows	**3**	1
Metecno Door Panel Monowall nfs, with windows and pass door	**1**	1, 10
Metecno Door Panel Monowall nfs with windows, with cylinder lock & handle/footplate 1 or handle/footplate 2	**3**	1
Flexi-Force Full vision, non fingersafe	**3**	1
Flexi-Force Full vision, non fingersafe, with pass door	**1**	1, 10
Flexi-Force – Kingspan / Metecno / Tecsedo, Full vision, fs	**4**	1
Flexi-Force – Kingspan / Metecno / Tecsedo, Full vision, fs, with pass door SafeStep	**1**	1, 10
Flexi-Force – Kingspan / Metecno -Reflection full vison, finger safe, no reinforcement	**3**	20,21,22,23
Flexi-Force – Kingspan / Metecno -Reflection full vison, finger safe, reinforced profile	**3**	20,21,22,23
Flexi-Force - Reflection full vison, non finger safe, no reinforcement	**3**	20,21,22,23
Flexi-Force - Reflection full vison, non finger safe, reinforced profile	**3**	20,21,22,23
Flexi-Force – Thermal Break Reflection Fv, nfs, no reinforcement	**3**	20,21,22, 23,24
Flexi-Force – Thermal Break Reflection Fv, nfs, reinforced profile	**3**	20,21,22, 23,24

Test reports SP No:
1) P403429, 2005-08-26 2) F520020, 2005-10-24 3) P805340A, 2008-12-15
4) P805340B, 2008-12-15 5) P805340C, 2008-12-15 6) P805340D, 2008-12-15 7) P905811A, 2009-11-20
8) P905811-01A, 2009-10-01 9) P908002C, 2010-03-22 10) P900807-03B, 2010-06-02 11) PX04884A, 2010-11-01
12) PX04884C, 2010-09-15 13) PX20720-02D, 2012-07-10 14) 3P00645A, 2013-02-12 15) PX20720-03A, 2013-02-24
16) PX20720-03B, 2013-02-24 17) 3P05443B, 2013-09-02 18) 3P05443C, 2013-09-02 19) 3P05443A, 2013-09-02
20) 5P06232-1, 2015-08-24 21) 5P06232-2, 2015-08-24 22) 5P06232-3, 2015-08-24 23) 6P01821-1, 2016-04-18
24) 6P05181-2, 2016-06-16
Fv=full vision; fs=fingersafe; nfs=non-fingersafe; cov=covered

1.2.2 Window test

FF window types tested separately. One window was tested except for window type 2230 and 2250, for which the worst case is shown in the table.

Window type, No	Note	Air leakage, m^3/h	Window type, No	Note	Air leakage, m^3/h
2210	1)	**<0.01**	2430	1)	**0.02**
2225	1)	**<0.01**	2250	1)	**0.04**
2230	1)	**0.77**	2450N	2)	**0.01**
2235	1)	**<0.01**	2460N	2)	**0.11**

Test reports SP: 1) P805340K, 2008-12-15 2) P908002A, 2010-02-19

1.3 Water tightness according to part 4.4.2 of EN 13241:2003+A2:2016

1.3.1 Door test

Door panel type	Water pene-tration class	Maximum pressure [Pa]	Test report
Tecsedo nfs covered t=40 mm	**1**	-	1
Tecsedo nfs covered t=40 mm with pass door	**0**	-	1, 10
Kingspan covered t=40 mm	**3**	**150**	1
Kingspan covered t=40 mm, with pass door SafeStep	**0**	**-**	1, 10
Kingspan covered t=80 mm	**3**	**110**	1
Kingspan (Ward) cov, t=80 mm, with 4 windows	**3**	**110**	1
Metecno Door Panel Monowall nfs covered	**3**	**70**	1
Metecno Door Panel Monowall nfs covered, with pass door	**0**	**-**	1
Metecno Door Panel Monowall nfs with all windows FF No. 2400-90	**0**	-	1
Metecno Door Panel Monowall nfs with all windows FF No. 2400-90 with pass door	**0**	-	1, 10
Metecno Door Panel Monowall nfs with: window no. 2380, window no. 2390 or window no. 2400-90 window no. 2445 or window no. 2397 cylinder lock no. 637 handle/footplate no. 640T handle/footplate no. 642BL	 **0** **0** **0** **0** **3**	 **-** **-** **-** **-** **70**	1
Metecno Door Panel Monowall nfs with: window no. 2400-90 window no. 2397 or cylinder lock no. 637 handle/footplate no. 640T	 **2** **0** **3**	 **-** **-** **70**	1
Flexi-Force, Full vision, non fingersafe	**3**	**-**	1
Flexi-Force, Full vision, non fingersafe, with pass door	**0**	**-**	1, 10
Flexi-Force – Kingspan / Metecno / Tecsedo, Fv, fs	**3**	**90**	1
Flexi-Force – Kingspan / Metecno / Tecsedo, Fv, fs, with pass door SafeStep	**0**	-	1, 10
Flexi-Force – Kingspan / Metecno -Reflection full vison, finger safe, no reinforcement	**3**	-	21,22,23, 24, 25
Flexi-Force – Kingspan / Metecno -Reflection full vison, finger safe, reinforced profile	**3**	-	21,22,23, 24, 25
Flexi-Force – Reflection full vison, non finger safe, no reinforcement	**3**	-	21,22,23, 24, 25
Flexi-Force - Reflection full vison, non finger safe, reinforced profile	**3**	-	21,22,23, 24, 25
Flexi-Force – Thermal Break Reflection Fv, nfs, no reinforcement	**3**	-	21,22,23, 24, 25,26
Flexi-Force – Thermal Break Reflection Fv, nfs, reinforced profile	**3**	-	21,22,23, 24, 25,26

Test reports SP No:
1) P403429, 2005-08-26
2) F520020, 2005-10-24
3) P805340A, 2008-12-15
4) P805340B, 2008-12-15
5) P805340C, 2008-12-15
6) P805340D, 2008-12-15
7) P905811A, 2009-11-20
8) P905811-01A, 2009-10-01
9) P908002C, 2010-03-22
10) P900807-03B, 2010-06-02
11) PX04884A, 2010-11-01
12) PX04884C, 2010-09-15
13) PX04884I, 2010-12-02
14) PX20720-02D, 2012-07-10
15) 3P00645A, 2013-02-12
16) PX20720-03A, 2013-02-24
17) PX20720-03B, 2013-02-24
18) 3P05443B, 2013-09-02
19) 3P05443C, 2013-09-02
20) 3P05443A, 2013-09-02
21) 5P06232-1, 2015-08-24
22) 5P06232-2, 2015-08-24
23) 5P06232-3, 2015-08-24
24) 5P06232-5, 2015-09-18
25) 6P01821-1, 2016-04-18
26) 6P05181-2, 2016-06-16

Fv=full vision; fs=fingersafe; nfs=non-fingersafe; cov=covered
* only stated for class 3 results

1.3.2 Window test

FF window types tested separately. One window was tested except for window type 2230 and 2250 where 2 windows were tested for which the lowest class is given in the table below.

Window type, No	Note	Water penetration class	Maximum pressure [Pa]
2210	1)	**3**	**150**
2225	1)	**3**	**150**
2230	1)	**0**	**-**
2250	1)	**0**	**-**
2235	1)	**3**	**150**
2430	1)	**3**	**150**
2450N	2)	**3**	**110**
2460N	2)	**3**	**110**

Test reports SP: 1) P805340K, 2008-12-15 2) P908002A, 2010-02-19

1.4 Thermal resistance according to part 4.4.5 of EN 13241:2003+A2:2016

Door panel type	(door size mm)	Note	Thermal transmittance [W/(m²K)]						
			p	pw	pd	pdS	pwd	g	gd
Kingspan, Nouveau 500, 610 mm	(8500x7000)	1, 5	**0.9**	**1.0**	**1.0**	**1.0**	**1.1**	-	-
Kingspan, Industrial 500, 610 mm	(8500x7000)	1, 5	**0.9**	**1.0**	**1.0**	**1.0**	**1.1**	-	-
Kingspan, t=80 mm	(8500x7000)	1	**0.54**	-	-	-	-	-	-
Metecno Door Panel, Monowall	(8500x7000)	1	**0.8**	**0.9**	**0.9**	-	**1.0**	-	-
Tecsedo	(8500x7000)	1	**0.8**	**0.9**	**1.0**	-	**1.0**	-	-
Flexi-Force, Full vision, nfs	(8500x7000)	1	-	-	-	-	-	**5.6**	**5.6**
Flexi-Force – Kingspan / Metecno/Tecsedo Full vision, fs	(8500x7000)	1 ,5	-	-	-	-	-	**5.6**	**5.6**
Flexi-Force Kingspan / Metecno, (4000x3400mm) Reflection Fv, fs, no reinforcement, fully glazed		19, 20	-	-	-	-	-	**3.4**	-
Flexi-Force Kingspan / Metecno, (4000x3400mm) Reflection Fv, fs, reinforced profile, fully glazed		19, 20	-	-	-	-	-	**3.4**	-
Flexi-Force (4000x3400mm) Reflection Fv, nfs, no reinforcement, fully glazed		19, 20	-	-	-	-	-	**3.4**	-
Flexi-Force (4000x3400mm) Reflection Fv, nfs, reinforced profile, fully glazed		19, 20	-	-	-	-	-	**3.4**	-
Flexi-Force (4000x3400mm), Reflection Fv, fs		18, 20	-	**2.1**	-	-	-	-	-
Flexi-Force (4000x3400mm) fs		16,17, 20	**1.6**	-	**1.8**	-	-	-	-
Flexi-Force – Thermal Break Reflection Fv, nfs, no reinforcement		21	-	-	-	-	-	**3.0**	-
Flexi-Force – Thermal Break Reflection Fv, nfs, reinforced profile		21	-	-	-	-	-	**3.4**	-

p = door with covered panels only
pw = covered panels with windows
gd = glazed door with a pass door
pdS = covered and with pass door SafeStep
pwd = covered panels with windows and a pass door
g = fully glazed door (full vision),
pd = covered panels with a pass door
NPD = No Performance Determined
Fv = Full vision; fs=fingersafe; nfs=non-fingersafe; cov=covered

1) Test report SP No. P403429, 2005-08-26
2) P805340L, rev2 2013-06-06
3) P905811-02, 2009-11-04 & P905811A, 2009-11-20
4) P908002U, 2010-04-06
5) P900807-03B, 2010-06-02
6) PX04884-01A, 2010-11-01
7) PX04884-01B, 2010-11-01
8) PX26056, 2012-08-20
9) PX20720-03A, 2013-02-24
10) PX20720-03B, 2013-02-24
11) PX29005r1, 2012-12-28
12) 3P08507-3, 2014-05-05
13) 3P08507-4, 2014-05-05
14) 3P08507-6, 2014-05-05
15) 3P08507-5, 2014-05-05
16) 5P06232-02-1, 2015-12-01
17) 5P06232-02-2, 2015-12-01
18) 5P06232-02-3, 2015-12-01
19) 5P06232-02-4, 2015-12-01
20) 6P01821-1, 2016-04-18
21) 6P01642, 2016-03-18

1.5 Safe opening according to part 4.2.8 of EN 13241:2003+A2:2016

Component (Flexi-Force types)	**Door weight**	**Test report SP No, date**
Spring break devices		
type 670, 675 and 675-125	225 kg/ SBD	P403429, 2005-08-26
type 670S	105 kg	P900807-03B, 2010-06-02
Cable break devices		
2" type: 444	400 kg	P602685B, 2006-06-21
2" type: 440-600, 440LHR, 440REGL	750 kg	P403429, 2005-08-26
2" type: 440, 440S	750 kg	P900807-03B, 2010-06-02
2" type: 440HD	960 kg	P403429, 2005-08-26
3" type: 440-3	750 kg	P403429, 2005-08-26

1.6 Durability of water tightness, thermal resistance and air permeability against degradation according to part 4.4.7 of EN 13241:2003+A2:2016

Requirement	**Result**	**Test Report, dated**
Durability of water tightness, thermal resistance and air permeability	**Pass**	TNO 2005-BCS-R0014, Jan 11, 2005 (TNO Built Environment and Geosciences, The Netherlands)

2. Resistance to wind load, Single panel test according to part 4.4.3 of EN 13241:2003+A2:2016

2.1 Flexi-Force

Door panel type **Flexi-Force full vision**		**Width [mm]**	**Height [mm]**	**Wind load Class**	**[Pa]**	**Maximum pressure [Pa]**
40 mm						
Full vision, 4 large windows	1)	4000	610	4	-	1107
Full vision, 4 large windows	1)	4500	610	3	-	1022
Full vision, 6 large windows	1)	6000	610	2	-	765
Full vision, 8 large windows, reinforcement profile	1)	8500	610	0	-	390
Reflection Full vision						
1.3 FS - No Reinforcement – 4 Windows	2) 3)	4045	610	4	-	1033
1.3 FS - No Reinforcement – 5 Windows	2) 3)	5045	610	2	-	556
1.6 NFS - Reinforced – 4 Windows	2) 3)	4045	610	4	-	1060
1.6 NFS - Reinforced – 5 Windows	2) 3)	5045	610	5	2806	2041
1.6 NFS - Reinforced – 6 Windows	2) 3)	6045	610	5	1789	1301
1.6 NFS - Reinforced – 7 Windows	2) 3)	7200	610	3	-	808
Thermal Break Reflection Full Vision						
NFS - No Reinforcement – 4 Windows	4)	4045	610	4	-	1033
NFS - No Reinforcement – 5 Windows	4)	5045	610	2	-	556
NFS - Reinforced – 4 Windows	4)	4045	610	4	-	1060
NFS - Reinforced – 5 Windows	4)	5045	610	5	2806	2041
NFS - Reinforced – 6 Windows	4)	6045	610	5	1789	1301
NFS - Reinforced – 7 Windows	4)	7200	610	3	-	808

Test report SP No. 1) P403429, 2005-08-26 2) 5P06232-01, 2015-09-28 3) 6P01821-1, 2016-04-18
4) 6P06003, 2016-07-05 * Only stated for class 5

2.2 Tecsedo

Door panel type **Tecsedo 40 mm** (SP No. P403429, 2005-08-26)	**Width [mm]**	**Height [mm]**	**Wind load Class**	**[Pa]**	**Maximum pressure [Pa]**
40 mm	4040	610	5	1020	1403
4 windows	4000	610	2	-	819
40 mm	6000	610	2	-	623
6 windows	6000	610	0	-	404
reinforcement profile 65S	7500	610	2	-	810
reinforcement profile 68SC *	7500	610	2	-	760
reinforcement profile 110S	8500	610	3	-	1018
7 windows, reinforcement profile 65S	7500	610	1	-	560
7 windows, reinforcement profile 68SC	7500	610	1	-	510
8 windows, reinforcement profile 110S	8525	610	2	-	829

* profile type 68SC, SP PX04884-03, rev 1 2010-11-01

2.5 Kingspan

Door panel type **Kingspan 40 mm** (SP No. P403429, 2005-08-26 fingersafe and SP No. P800398-01A, 2008-04-15 non-fingersafe)	**Width [mm]**	**Height [mm]**	**Wind load Class**	**[Pa]**	**Maximum pressure [Pa]**
fingersafe and non-fs	4000	610	3	-	1278
fingersafe and non-fs, 4 windows	4000	610	2	-	662
fingersafe and non-fs	6000	610	1	-	599
fingersafe and non-fs, 6 windows	6000	610	0	-	298
fingersafe and non-fs, reinf profile 65S	7500	610	2	-	786
fingersafe and non-fs, reinf profile 68SC	7500	610	2	-	730
fingersafe and non-fs, reinf profile 110S	8500	610	3	-	994
fingersafe and non-fs, 7 windows, reinf pr 65S	7500	610	1	-	557
fingersafe and non-fs, 7 windows, reinf pr 68SC	7500	610	1	-	500
fingersafe and non-fs, 8 windows, reinf profile 110S	8500	610	2	-	798

fs = fingersafe w=width, reinf pro= reinforcement profile * profile type 68SC, SP PX04884-03, rev 1 2010-11-01

2.9 Metecno Door Panel

Door panel type **Metecno Door Panel 40 mm**	**Width [mm]**	**Height [mm]**	**Wind load Class**	**[Pa]**	**Maximum pressure [Pa]**
Monowall (SP No. P403429, 2005-08-26)					
non-fingersafe	4000	610	5	1075	1477
non-fingersafe, 4 windows	4000	610	2	-	842
non-fingersafe	6000	610	2	-	630
non-fingersafe, 6 windows	6000	610	0	-	314
non-fingersafe, reinforcement profile 65S	7500	610	2	-	766
non-fingersafe, reinforcement profile 68SC	7500	610	2	-	710
non-fingersafe, reinforcement profile 110S	8500	610	3	-	976
non-fingersafe, 7 windows, reinforcement profile 65S	7500	610	1	-	536
non-fingersafe, 7 windows, reinforcement profile 68SC	7500	610	1	-	480
non-fingersafe, 8 windows, reinforcement profile 110S	8525	610	2	-	793
Secuwall (SP No. P403429 J, 2005-10-11)					
fingersafe	4000	500	5	1100	1504
fingersafe, with 4 windows	4000	500	1	-	448
fingersafe	6000	500	2	-	709
fingersafe, with 6 windows	6000	500	0	-	191
fingersafe	7500	500	1	-	448
fingersafe, reinforcement profile 113 mm	7500	500	4	-	1399
fingersafe	8500	500	0		345
fingersafe, reinforcement profile 113 mm	8500	500	3	-	1116

* profile type 68SC, SP PX04884-03, rev 1 2010-11-01

3. Operating forces according to part 4.3.3 of EN 13241:2003+A2:2016

The operators were tested together with the test doors using Flexi-Force vertical lift track systems, different control units and safety edges. The configurations are shown in the following tables. The operators performed in accordance with the requirements according to test reports:

3.1 – 3.4 SP No. P403429, dated 2005-08-26 and for
3.1 MFZ-STA1, SP No. P805340-01-A, dated 2009-01-20
3.3 Force90AC /Dalmatic Dall, SP P805340-01-I, 2009-01-23
Force60AC, report SKG 11.1116 2011-11-30; Force140AC, report SKG 11.1117 dated 2011-11-30
Force70XC/70XQ, report SKG-13.00806, 2013-10-08
Force100XC/100XQ, report SKG-13.00805, 2013-10-08
Force 70AC/ 140xQ, SP report 5P08340A, 2015-11-12
Force 90TCM, RISE report 7P01864B, 2017-05-15
3.4 Nice, RISE No. 7P01864B, dated 2017-05-15

3.1 MFZ operators

Door weight	**Machinery MFZ,** type	**Control unit// Sensor**	**Safety edge**	**Speed [mm/s]**
700 kg	MFZ STA1-11-24 KU, 24 rpm	MFZ CS 300 // MFZ Opto sensor	Flexi-Force 1039-55	~183
			Flexi-Force 1039-52	~219
			MFZ P2	~219
700 kg	MFZ STA1-11-24 KU, 24 rpm	MFZ CS 300 // Flexiforce Opto sensor	Flexi-Force 1039-52	~219
700 kg	MFZ STA1-11-24 KU, 24 rpm	MFZ AS 130 // Flexiforce Opto sensor	Flexi-Force 1039-52	~207
700 kg	MFZ STA1-11-24 KU, 24 rpm	MFZ AS 130 // MFZ Opto sensor	Flexi-Force 1039-52	~195
			MFZ P2	~219
700 kg	MFZ STA1-11-24 KU, 24 rpm	MFZ AS210B // MFZ Opto sensor	MFZ P2	~219
			Flexi-Force 1039-52	~207
700 kg	MFZ STA1-12-19 KU, 19 rpm	MFZ AS210B // MFZ Opto sensor	Flexi-Force 1039-52	~193
			Flexi-Force 1039-55	~154
			MFZ P2	~193
700 kg	MFZ STA1-12-19 KU, 19 rpm	MFZ AS130 // MFZ Opto sensor	Flexi-Force 1039-52	~193
			Flexi-Force 1039-55	~154
			MFZ P2	~193

3.2 Chamberlain operators

Door weight	**Machinery**	**Control unit // Sensor**	**Safety edge**	**Speed [mm/s]**
200 kg	Chamberlain 3800	Internal // Internal	Flexiforce Standard	~195
			Flexiforce 1039-95	~176

3.3 force operators

Door weight	Machinery	Control unit // Sensor	Safety edge	Speed [mm/s]
700 kg	force140AC	Dalmatic STD V.7E // OSE-1113926	OSE signal LP in 1039-52 rubber	~198
			OSE signal LP in 1039-55 rubber	~164
700 kg	force140AC	Dalmatic STD V.7E // (wireless)	OSE WL kit in 1039-52 rubber	~164
			OSE WL kit in 1039-55 rubber	~138
550 kg	force90AC 24 rpm	STD V.7E // Witt Opto sensor	Flexi-Force 1039-55	~183
			Flexi-Force 1039-52	~231
			Fraba 456000	~207
550 kg	force90AC 24 rpm	STD V.7E // Dalmatic Opto sensor TSS10/RSS10	Flexi-Force 1039-52	~243
			Flexi-Force 1039-55	~183
			Fraba 456000	~207
550 kg	force90AC 24 rpm	STD V.7E // Vitector Fraba Opto sensor OSE-S 1100	Flexi-Force 1039-52	~207
			Fraba 456000	~195
400 kg	force 100XQ, 23 rpm force 100XC, 23 rpm	FF control unit FORCE IQ // FF OSE Optosensor	OSE signal LP in 1039-52 rubber	~210
350 kg	force 70XQ, 21rpm force 70XC, 21rpm	FF control unit FORCE IQ // FF OSE Optosensor	OSE signal LP in 1039-52 rubber	~202
			OSE signal LP in 1039-55 rubber	~171
300 kg	force 60AC	AERF, SIMPLY1H4 // OSE-1113926	OSE signal LP in 1039-52 rubber	~245
			OSE signal LP in 1039-55 rubber	~212
	force 100XQ, 23 rpm force 100XC, 23 rpm	FF control unit FORCE IQ // FF OSE Optosensor	OSE signal LP in 1039-52 rubber	~221
			OSE signal LP in 1039-55 rubber	~187
400 kg	force 70AC	F70AC-Control // OSE-SIGNAL-LP	Flexiforce 1039-55	~255
			Flexiforce 1039-52	~255
700 kg	force 140XQ	ForceIQ // OSE-SIGNAL-LP	Flexiforce 1039-55	~191
			Flexiforce 1039-52	~218
400 kg	force 90TCM	Force-300// OSE-SIGNAL-LP	Flexiforce 1039-52	~255
			Flexiforce 1039-55	~213
400 kg	force90TCE	Force-500E // OSE-SIGNAL-LP	Flexiforce 1039-52	~255
			Flexiforce 1039-55	~213
350 kg	force70AC3	Force-101// OSE-SIGNAL-LP	Flexiforce 1039-52	~255
			Flexiforce 1039-55	~202
400 kg	forceFU	Flexiforce AST-75-Combo // No sensor – Force sensing 40%	Flexiforce 1039-55	~110 25 Hz
			Flexiforce 1039-52	~84 20 Hz
400 kg	forceFU	Flexiforce AST-75-Combo // OSE-SIGNAL-LP	Flexiforce 1039-52	~208 45 Hz
			Flexiforce 1039-55	~133 30 Hz

3.4 Nice operators

Door weight	Machinery	Control unit // Sensor	Safety edge	Speed [mm/s]
400 kg	Nice SDL100C [1*] Nice SDL100Q	Nice D-PRO Action // OSE-SIGNAL-LP	Flexiforce 1039-55	~195
			Flexiforce 1039-52	~243
550 kg	Nice SDL140Q [2*] Nice SDL140C	Nice D-PRO Action // OSE-SIGNAL-LP	Flexiforce 1039-52	~267
			Flexiforce 1039-55	~219
350 kg	Nice SWL070C [3*]	Nice D-PRO Action 230// OSE-SIGNAL-LP	Flexiforce 1039-55	~193
			Flexiforce 1039-52	~233

RISE Research Institutes of Sweden AB
Notified Body No. 0402

Performed by

Signed by: Elin Granberg
Reason: I am the author of this document
Date & Time: 2018-01-25 15:50:17 +01:00

Elin Granberg

Examined by

Signed by: Lennart Aronsson
Reason: I have approved this document
Date & Time: 2018-01-30 08:23:02 +01:00

Lennart Aronsson