

RIGA DOOR SYSTEMS SIA  
Zeltritu street 6-5  
Marupe, Marupe district  
Riga region  
LV-2167  
Latvia

## Summary of Initial Type Testing Reports for Industrial Doors

SP Technical Research Institute of Sweden has as Notified Body no. 0402, performed Initial Type-Testing of the products mentioned below according to the requirements in the harmonized standard **EN 13241-1:2003+A1:2011** Industrial, commercial and garage doors and gates – Product standard - Part 1: Products without fire resistance or smoke control characteristics. This report may be used as support for an EC Declaration of Conformity in accordance with the Construction Products Directive CPD, 89/106/EEC.

### Product name and description

Industrial door name/type	RDS 1000 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 width 4000 mm; height 3400 mm (for panels Italpanelli)
Panel manufacturer (type of panel)	Kingspan Tekla Teckentrup, Metecno Door Panel, Tecsedo, Italpanelli, Flexi-Force (Full vision)
Hardware Flexi-Force	<b>2"</b> tracks, code 2V - rollers 2" code 574-60, 575-100, 584-60, 585-60 - vertical angle code 9VB, 9K, 9ZR, 9VD - side seal code 1085, 1094-40, 1084, 1088 - top seal code 1036-36, 1036, 1036-52  <b>3"</b> tracks, code 13155 and 13236 - rollers 3" code 579-11-198, 578-12-198 - vertical angle code 9K - side seal code 1085, 1094-40 - top seal code 1036-36, 1036, 1036-52
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

## 1. Test of fully assembled Door

### 1.1 Wind Load

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
Tekla Teckentrup covered	4	-	1
Tekla Teckentrup covered, with pass door SafeStep	1	-	1, 10
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
Italpanelli, Italdoor STD, 40 mm, nfs, cov	2	-	4
Italpanelli, Italdoor STD, 40 mm, nfs, cov with pass door	0	-	4, 10
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

Test reports SP No: see below chapter 1.2.1

## 1.2 Determination of air permeability

### 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
Tekla Teckentrup covered	3	1
Tekla Teckentrup covered, with pass door SafeStep	1	1, 10
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
Italpanelli, Italdoor STD, 40 mm, nfs, cov	2	4
Italpanelli, Italdoor STD, 40 mm, nfs, cov with pass door	0	4, 10
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

Test reports SP No: 1) P403429, 2005-08-26 4) P805340B, 2008-12-15 10) P900807-03B, 2010-06-02  
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 <sup>3</sup> /h	Window type, No	Note	Air leakage, m <sup>3</sup> /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 Resistance to water penetration

#### 1.3.1 Door test

Door panel type	Water penetration 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
Tekla Teckentrup covered	3	70	1
Tekla Teckentrup covered, with pass door SafeStep	0	-	1, 10
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
Italpannelli, Italdoor STD, 40 mm, nfs, cov	3	70	4
Italpannelli, Italdoor STD, 40 mm, nfs, cov with pass door	0	-	4, 10
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

Test reports SP No: 1) P403429, 2005-08-26 4) P805340B, 2008-12-15 10) P900807-03B, 2010-06-02  
 Fv=full vision; fs=fingersafe; nfs=non-fingersafe; cov=covered

### 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

Door panel type	Note	Thermal transmittance [W/(m²K)]						
		p	pw	pd	pdS	pwd	g	gd
Kingspan, Nouveau 500, 610 mm	1, 5	0.9	1.0	1.0	1.0	1.1	-	-
Kingspan, Industrial 500, 610 mm	1, 5	0.9	1.0	1.0	1.0	1.1	-	-
Kingspan, t=80 mm	1	0.54	-	-	-	-	-	-
Metecno Door Panel, Monowall	1	0.8	0.9	0.9	-	1.0	-	-
Tecsedo	1	0.8	0.9	1.0	-	1.0	-	-
Tekla Teckentrup	1, 5	1.1	1.2	1.2	1.2	1.3	-	-
Italpannelli, Italdoor STD, 40 mm, nfs, 4000x3400 mm	2, 5	1.2	-	1.3	-	-	-	-
Italpannelli, Italdoor STD, 40 mm, nfs, 8500x7000 mm	2, 5	0.9	-	1.0	-	-	-	-
Flexi-Force, Full vision, nfs	1	-	-	-	-	-	5.6	5.6
Flexi-Force – Kingspan / Metecno/Tecsedo/ Epcó, Full vision, fs	1, 5	-	-	-	-	-	5.6	5.6

p = door with covered panels only  
pw = covered panels with windows  
pd = covered panels with a pass door  
1) Test report SP No. P403429, 2005-08-26  
2) P805340L, rev2 2013-06-06

pwd = covered panels with windows and a pass door  
g = fully glazed door (full vision), gd = glazed door with a pass door  
pdS = covered and with pass door SafeStep  
Fv = Full vision; fs=fingersafe; nfs=non-fingersafe; cov=covered  
5) P900807-03B, 2010-06-02

### 1.5 Safe opening

Component (Flexi-Force types)	Door weight	Test report SP No, date
<b>Spring break devices</b>		
type 670, 675 and 675-125	225 kg/ SBD	P403429, 2005-08-26
type 670S	105 kg	P900807-03B, 2010-06-02
<b>Cable break devices</b>		
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 Dangerous substances

Requirement	Result	Test Report, dated
Dangerous substances	Pass	SP No. P403429, 2005-08-26 SP No. P900807-02B, 2009-06-26 SP No. P905811-03B, 2009-09-23

## 1.7 Durability of water tightness, thermal resistance and air permeability

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. Single panel test, resistance to wind load

### 2.1 Kingspan

Door panel type <b>Kingspan 40 mm</b> (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

### 2.2 Tekla Teckentrup

Door panel type <b>Tekla Teckentrup 40 mm</b> (SP No. P403429, 2005-08-26)	Width [mm]	Height [mm]	Wind load Class	[Pa]	Maximum pressure [Pa]
covered	4000	550	5	1156	1590
4 windows	4000	550	2	-	645
covered	6000	550	2	-	721
6 windows	6000	550	0	-	293
reinforcement profile 65S	7500	550	2	-	902
reinforcement profile 68SC	7500	550	2	-	850
reinforcement profile 110S	8500	560	3	-	1073
7 windows, reinforcement profile 65S	7500	560	1	-	531
7 windows, reinforcement profile 68SC	7500	560	1	-	480
8 windows, reinforcement profile 110S	8525	560	2	-	954

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

### 2.3 Metecno Door Panel

Door panel type <b>Metecno Door Panel 40 mm</b>	Width [mm]	Height [mm]	Wind load Class	Wind load [Pa]	Maximum pressure [Pa]
<b>Monowall</b> (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
<b>Secuwall</b> (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 I 2010-11-01

### 2.4 Tecsedo

Door panel type <b>Tecsedo 40 mm</b> (SP No. P403429, 2005-08-26)	Width [mm]	Height [mm]	Wind load Class	Wind load [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 I 2010-11-01

### 2.5 Italpannelli

Door panel type Italpannelli STD, non-fing-safe 40 mm (SP No. P805340-02B, 2009-03-25)	Width [mm]	Height [mm]	Wind load Class	[Pa]	Maximum pressure [Pa]
covered	4000	610	5	1300	1797
covered	6000	610	2	-	606
65S	7500	610	2	-	757
68SC	7500	610	2	-	700
110S	8500	610	4	-	1160

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

### 2.6 Flexi-Force

Door panel type Flexi-Force full vision (SP No. P403429, 2005-08-26)	Width [mm]	Height [mm]	Wind load Class	[Pa]	Maximum pressure [Pa]
<b>40 mm</b>					
Full vision, 4 large windows	4000	610	4	-	1107
Full vision, 4 large windows	4500	610	3	-	1022
Full vision, 6 large windows	6000	610	2	-	765
Full vision, 8 large windows, reinforcement profile	8500	610	0	-	390

## 3. Operating forces

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
- 3.2 MFZ-STAI, SP No. P805340-01-A, dated 2009-01-20
- 3.3 NICE-Deutschland GmbH types SDL and SWL, SP No. P805340-01-J, dated 2009-01-20
- 3.4 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
- 3.5 GFA, SP No. PX02605A, dated 2010-04-15 and P900807-04 dated 2010-08-31.
- 3.6 SP No. P403429, dated 2005-08-26
- 3.7 BFT Ulisse, SP No. P702122D, dated 2007-05-14 and BFT others P907854B, 2009-12-11

### 3.1 Marantec operators

Door weight	Machinery Marantec, type	Control unit // Sensor	Safety edge	Speed [mm/s]
700 kg	Dynamic 3XX	Control 144N // SKS optosensor	Flexiforce 1039-95	~300
550 kg			Marantec 63826 Torabschlussprofil	~174
			Flexiforce 1039-52	~174
700 kg	Dynamic 3FU	Control 145FU-S // SKS optosensor	Flexiforce 1039-95	~363
550 kg	Dynamic 1XX	Control 14N // SKS optosensor	Flexiforce 1039-52	~174
			Marantec 63826 Torabschlussprofil	~174



**3.2 MFZ operators**

Door weight	Machinery MFZ, type	Control unit// Sensor	Safety edge	Speed [mm/s]
700 kg	MFZ MDF2-17	AS1.3 // OS12	Flexiforce 1039-95	~265
			MFZ P2	~198
			MFZ P6	~265
700 kg	MFZ SA-0,37-20	AS1.3 // OS12	Flexiforce 1039-52	~223
			Flexiforce 1039-95	~312
			MFZ P2	~233
			MFZ P6	~312
700 kg	MFZ SAC-0,37-20	AS2.1 // OS12	Flexiforce 1039-52	~163
			Flexiforce 1039-55	~163
			MFZ P2	~233
700 kg	MFZ STA-0,37-20	AS1.3 // OS12	Flexiforce 1039-52	~233
			Flexiforce 1039-55	~233
			Flexiforce 1039-95	~312
			MFZ P2	~233
			MFZ P6	~312
700 kg	MFZ STA-0,37-20	NM1 // OS12	Flexiforce 1039-52	~233
			Flexiforce 1039-55	~223
			Flexiforce 1039-95	~312
			MFZ P2	~233
			MFZ P6	~312
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



**3.3 NICE-Deutschland GmbH operators**

Door weight	Machinery Note 1) and 2)	Control unit // Sensor	Safety edge	Speed [mm/s]
700 kg	MTec SD-1	MTec UST1 // Witt optosensor	Flexiforce 1039-52	~223
			Flexiforce 1039-55	~219
			MTec OSA-P1	~233
700 kg	MTec SD-2	MTec UST1 // Witt optosensor	Flexiforce 1039-52	~231
			Flexiforce 1039-55	~223
			MTec OSA-P1	~223
400 kg	Mtec SDL10024-EKU, 24 rpm	Mtec UST1KL // Flexiforce Opto sensor	Flexi-Force 1039-52	~207
			Flexi-Force 1039-55	~195
			Fraba Vitector OSE-P257500	~171
			Mtec OS-A-P1	~183
400 kg	Mtec SDL10024-EKU, 24 rpm	Mtec UST1KL // Mtec OS-SES-A	Mtec OS-A-P1	~183
			Flexi-Force 1039-55	~183
			Flexi-Force 1039-52	~207
400 kg	Mtec SDL10024-EKU, 24 rpm	Mtec UST2L // Mtec OS-SES-A	Flexi-Force 1039-52	~207
			Flexi-Force 1039-55	~183
			Mtec OS-A-P1	~207
400 kg	Mtec SDL10024-EKU, 24 rpm	Mtec UST2L // Flexiforce Opto sensor	Mtec OS-A-P1	~207
			Fraba Vitector OSE-P257500	~171
			Flexi-Force 1039-55	~183
			Flexi-Force 1039-52	~207
550 kg	Mtec SDL14017-EKU, 17 rpm	Mtec UST2L // Flexiforce Opto sensor	Flexi-Force 1039-52	~172
			Fraba Vitector OSE-P257500	~138
			Mtec OS-A-P1	~155
			Flexi-Force 1039-55	~138
550 kg	Mtec SDL14017-EKU, 17 rpm	Mtec UST1KL // Flexiforce Opto sensor	Flexi-Force 1039-55	~138
			Fraba Vitector OSE-P257500	~147
			Flexi-Force 1039-52	~172
			Mtec OS-A-P1	~155
350 kg	Mtec SWL07020, 20 rpm	Mtec UST1KL // Flexiforce Opto sensor	Mtec OS-A-P1	~203
			Flexi-Force 1039-52	~223
			Fraba Vitector OSE-P257500	~193
			Flexi-Force 1039-55	~173
350 kg	Mtec SWL07020, 20 rpm	Mtec UST1KL // Mtec OS-SES-A	Flexi-Force 1039-55	~173
			Mtec OS-A-P1	~203
			Flexi-Force 1039-52	~223
			Fraba Vitector OSE-P257500	~229
350 kg	Mtec SWL07020, 20 rpm	Mtec UST2L // Mtec OS-SES-A	Fraba Vitector OSE-P257500	~173
			Flexi-Force 1039-52	~223
			Mtec OS-A-P1	~203
			Flexi-Force 1039-55	~173
350 kg	Mtec SWL07020, 20 rpm	Mtec UST2L // Flexiforce Opto sensor	Flexi-Force 1039-55	~173
			Mtec OS-A-P1	~223
			Flexi-Force 1039-52	~223
			Fraba Vitector OSE-P257500	~173
550 kg	Mtec SDL14617, 17 rpm	Mtec UST1KL // Mtec OS-SES-A	Fraba Vitector OSE-P257500	~153
			Flexi-Force 1039-52	~172
			Mtec OS-A-P1	~147
			Flexi-Force 1039-55	~130
550 kg	Mtec SDL14617, 17 rpm	Mtec UST2L // Mtec OS-SES-A	Flexi-Force 1039-55	~138
			Flexi-Force 1039-52	~172
			Fraba Vitector OSE-P257500	~147
			Mtec OS-A-P1	~147
350 kg	Mtec SDL10024 24 rpm -- 50 Hz	Mtec UST1FU // Mtec OS-SES-A	Mtec OS-A-P1	~195
		Mtec UST1FU // FF Opto sensor	Mtec OS-A-P1	~207
350 kg	Mtec SDL10024 19.2 rpm -- 40 Hz	Mtec UST1FU // FF Opto sensor	Mtec OS-A-P1	~195
		Mtec UST1FU // Mtec OS-SES-A	Mtec OS-A-P1	~175

1) According to the manufacturer Mtec; MTec SD-1 is sold also under the brand name Nice TMS10024

2) According to the manufacturer Mtec; MTec SD-2 is sold also under the brand name Nice TMS14017

**3.4 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
			Albany 006-207	~207
			Novoferm 1286630	~219
			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
			Albany 006-207	~207
			Fraba 456000	~207
			Novoferm 1286630	~195
			Novoferm 1286000	~195
550 kg	Force90AC 24 rpm	STD V.7E // Vitector Fraba Opto sensor OSE-S 1100	Flexi-Force 1039-52	~207
			Fraba 456000	~195
			Novoferm 1286630	~207
			Novoferm 1286000	~195
300 kg	Force60AC	AERF, SIMPLY1H4 // OSE-1113926	OSE signal LP in 1039-52 rubber	~245
			OSE signal LP in 1039-55 rubber	~212

\* Force90AC tested under the name Dalmatic Dall

**3.5 GfA operators**

Door weight	Machinery type	Control unit // Sensor	Safety edge	Speed [mm/s]
200 kg	SE 5.24-25.4 WS SK DES	GFA TS 970 // Fraba opto sensor	Flexiforce 1039-52	~207
			Flexiforce 1039-55	~159
		GFA TS 970 // Flexiforce/Witt opto sensor	Flexiforce 1039-52	~207
200 kg	SE 5.24-25.4 SK DES SE 5.24-25.4 SK NES SE 5.24-25.4 ER DES	GFA TS 970 // Fraba opto sensor	Flexiforce 1039-52	~207
			Flexiforce 1039-55	~171
		GFA TS 970 // Flexiforce/Witt opto sensor	Flexiforce 1039-52	~207
400 kg	SE 9.20-25.4 SK DES	GFA TS 970 // Flexiforce/Witt opto sensor	Flexiforce 1039-52	~173
			Flexiforce 1039-55	~153
		GFA TS 970 // Fraba opto sensor	Flexiforce 1039-55	~133
400 kg	SE 9.24-25.4 SK DES SE 9.24-25.4 SK NES SE 9.24-25.4 ER DES	GFA TS 970 // Fraba opto sensor	Flexiforce 1039-52	~183
			Flexiforce 1039-52	~171
		GFA TS 970 // Flexiforce/Witt opto sensor	Flexiforce 1039-55	~159
700 kg	SE 14.15-25.4 SK DES SE 14.15-31.75 SK DES	GFA TS 970 // Fraba opto sensor	Flexiforce 1039-55	~115
			Flexiforce 1039-52	~152
		GFA TS 970 // Flexiforce/Witt opto sensor	Flexiforce 1039-55	~115
			Flexiforce 1039-52	~152



**3.6 Nice operators**

Door weight	Machinery	Control unit // Sensor	Safety edge	Speed [mm/s]
568 kg	Nice SU 2000	Nice A924 // Nice TCE	Nice TCB65	~186
550 kg	Nice SU 2000	Nice A924 // Fraba OSE-Fraba interface OSE-D-C	Flexiforce 1039-52	~178
			Flexiforce 1039-55	~178
			Flexiforce 1039-95	~250
			Fraba P259000	~186
330 kg	Nice SU 2000V	Nice A924 // Nice TCE	Nice TCB65	~227
330 kg	Nice SU 2000V	Nice A924 // Fraba OSE-Fraba interface OSE-D-C	Flexiforce 1039-52	~197
			Flexiforce 1039-55	~197
			Flexiforce 1039-95	~367
			Fraba P259000	~227

**3.7 BFT operators**

Door weight	Machinery	Control unit // Sensor	Safety edge	Speed [mm/s]
400 kg	BFT Ulisse C 400V	BFT Sirio TMA ver 1.05 // Ventimiglia NS Opto sensor	Bir C	~210
400 kg	BFT Ulisse C 230V with chain (rate 40/12)	BFT Sirio TMA ver 1.04 // Ventimiglia NS Opto sensor	Bir C	~125
200 kg	BFT Pegaso C Mono	Sirio MA // BFT Ventimiglia NS Opto sensor	BFT Bar CBA	~279
400 kg				~231
200 kg	BFT Pegaso TRI	Sirio MA // BFT Ventimiglia NS Opto sensor	BFT Bar CBA	~279
500 kg				~231
700 kg				~219
150 kg	BFT Argo G	Venere D MA // Built in	FF 1039-52, 1039-55 *	~136
200 kg			FF 1039-52, 1039-55 *	~116
350 kg			FF 1039-52, 1039-55 *	~110

\* FF = Flexi-Force; Sensor is not used, only bottom seal rubber

**4. Miscellaneous**

This report is a revision (No 3) and replaces the earlier report with the same number dated 2013-05-03. The revision of this report consists of change of U-value for panels Italpanelli in chapter 1.4 Thermal resistance.

**SP Technical Research Institute of Sweden  
Certification**



Lennart Aronsson  
Product Certification Manager



Susanne Hansson  
Technical Officer