

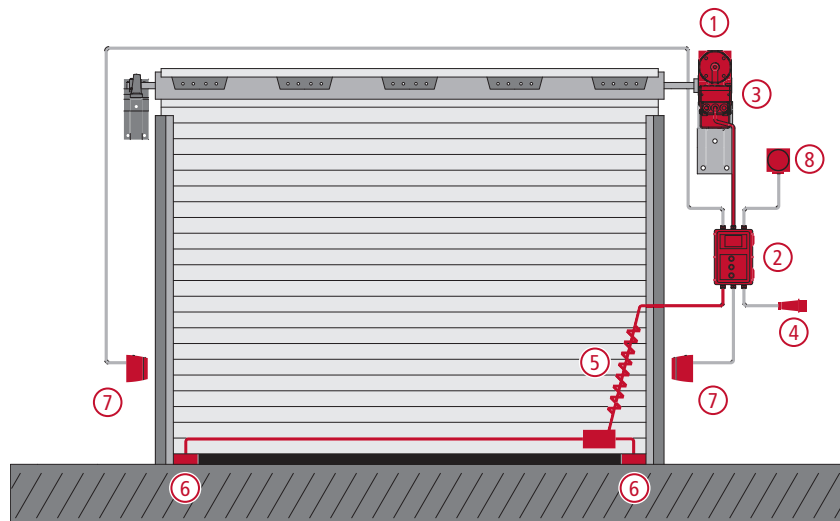
Roller shutter doors

Informations | Door system

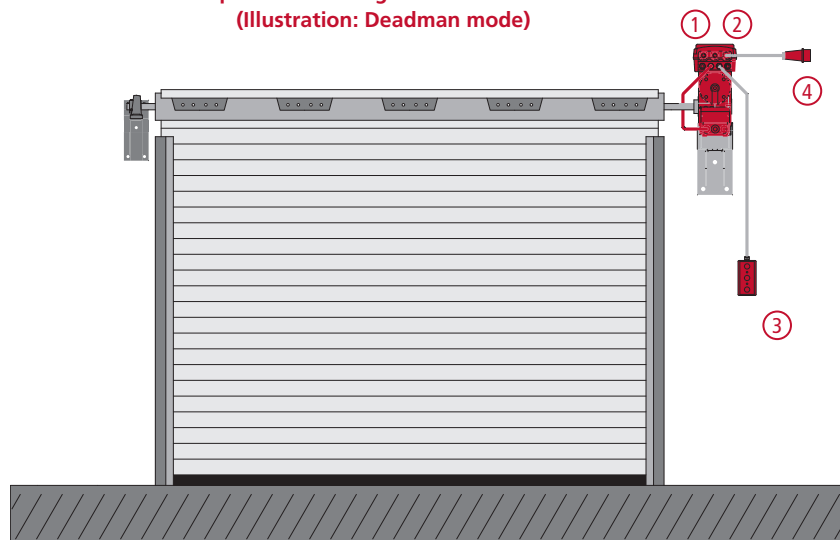
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Roller shutter doors

Opener with external control unit



Opener with integrated control unit (Illustration: Deadman mode)



Opener with external control unit

- 1 Opener
- 2 Control unit
- 3 Cable loom
- 4 CEE plug or Schuko plug
- 5 Spiral cable with junction box
- 6 Optosensors, e.g. type M
- 7 Photocell, e.g. Special 630
- 8 Traffic light or signal light, e.g. Light 100

Opener with integrated control unit

- 1 Opener
- 2 Control unit
- 3 Push button
- 4 CEE plug or Schuko plug

Product name

<i>MDF</i>	Opener 3-PH
<i>MWF</i>	Opener 1-PH

Torque index

The torque index number multiplied by factor 10 is the drive torque (Nm): $22 \times 10 = 220 \text{ Nm}$

Type of emergency operation

<i>KU</i>	Emergency hand crank
<i>KE</i>	Emergency hand chain

Nominal voltage

MDF 20-22-12 KU 400V/3PH 80%

Gear size index

Nominal rotational speed

The speed (min^{-1}) with which the gear hollow shaft rotates.

Additional informations

<i>80%</i>	Duty cycle
<i>IP 65</i>	Protection category

Roller shutter doors

Informations | Table of weights

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Roller shutter doors

Outside diameter of the tube	101.6 mm	108.0 mm	127.0 mm	133.0 mm	139.7 mm	159.0 mm	165.0 mm	177.8 mm	193.7 mm	219.1 mm
Gear motor / Armour weight (max. kg)										
MDF 05-14-12 · 60%	180	172	150	145	139	124	120	113	104	94
MDF 20-15-17 · 60%	193	184	161	155	149	133	129	121	112	100
MDF 20-22-12 · 60%	283	270	236	227	218	195	189	177	164	147
MDF 30-30-12 · 60%	386	368	322	310	297	266	258	241	224	201
MDF 30-42-12 · 60%	541	515	451	434	416	372	361	338	313	281
MDF 30-50-12 · 60%	644	613	537	516	495	443	429	402	373	334
MDF 50-75-10 · 60%	966	920	805	774	743	665	644	603	559	501
MDF 60-100-9 · 60%	1,288	1,226	1,073	1,032	990	886	858	804	746	668
MDF 60-140-9 · 60%	1,804	1,717	1,502	1,445	1,386	1,241	1,202	1,126	1,044	935
MDF 70-165-8 · 60%	2,126	2,023	1,770	1,703	1,634	1,463	1,416	1,327	1,231	1,102
MDF 70-200-8 · 60%	2,577	2,453	2,146	2,065	1,981	1,773	1,717	1,608	1,492	1,336
MDF 20-15-12 · 80%	193	184	161	155	149	133	129	121	112	100
MDF 30-27-12 · 80%	348	331	290	279	267	239	232	217	201	180
MDF 50-65-10 · 80%	837	797	697	671	644	576	558	523	485	434
MWF 05-14-12 · 25%	180	172	150	145	139	124	120	113	104	94
MWF 20-22-12 · 25%	283	270	236	227	218	195	189	177	164	147
MWF 30-28-12 · 25%	361	343	300	289	277	248	240	225	209	187
MWF 30-38-12 · 25%	490	466	408	392	376	337	326	306	283	254

The values in the table take into account 20 % safety reserve and a lamella thickness of 25 mm. In certain situations, e.g. for additional door seals or double skin profiles, the friction can be greater than this and must be included when calculating the values. For doors with more cycles than usual, an opener with 80 % duty cycle should be chosen.

Roller shutter doors

Informations | Table of weights

Outside diameter of the tube	229.0 mm	244.5 mm	267.0 mm	273.0 mm	298.5 mm	323.9 mm	355.6 mm	368.0 mm	406.4 mm
Gear motor / Armour weight (max. kg)									
MDF 05-14-12 · 60%	90	85	78	77	71	65	60	58	53
MDF 20-15-17 · 60%	96	91	84	82	76	70	64	62	57
MDF 20-22-12 · 60%	141	133	123	120	111	103	94	91	83
MDF 30-30-12 · 60%	193	182	168	164	151	140	129	125	113
MDF 30-42-12 · 60%	270	254	235	230	212	196	180	174	159
MDF 30-50-12 · 60%	321	303	279	274	252	234	214	208	189
MDF 50-75-10 · 60%	482	454	419	410	378	351	321	311	284
MDF 60-100-9 · 60%	642	605	559	547	504	467	429	415	378
MDF 60-140-9 · 60%	899	847	782	766	706	654	600	581	529
MDF 70-165-8 · 60%	1,060	999	922	903	832	771	707	685	624
MDF 70-200-8 · 60%	1,284	1,210	1,117	1,095	1,008	935	857	830	756
MDF 20-15-12 · 80%	96	91	84	82	76	70	64	62	57
MDF 30-27-12 · 80%	173	163	151	148	136	126	116	112	102
MDF 50-65-10 · 80%	417	393	363	356	328	304	279	270	246
MWF 05-14-12 · 25%	90	85	78	77	71	65	60	58	53
MWF 20-22-12 · 25%	141	133	123	120	111	103	94	91	83
MWF 30-28-12 · 25%	180	169	156	153	141	131	120	116	106
MWF 30-38-12 · 25%	244	230	212	208	192	178	163	158	144

The values in the table take into account 20 % safety reserve and a lamella thickness of 25 mm. In certain situations, e.g. for additional door seals or double skin profiles, the friction can be greater than this and must be included when calculating the values. For doors with more cycles than usual, an opener with 80 % duty cycle should be chosen.

Roller shutter doors

Informations | Technical details

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Roller shutter doors

MDF 05-14-12
400V/3PH · 60%

MDF 20-15-17
400V/3PH · 60%

MDF 20-22-12
400V/3PH · 60%

MDF 30-30-12
400V/3PH · 60%

MDF 30-42-12
400V/3PH · 60%

MDF 30-50-12
400V/3PH · 60%

Mechanical details

		MDF 05-14-12	MDF 20-15-17	MDF 20-22-12	MDF 30-30-12	MDF 30-42-12	MDF 30-50-12
Drive torque	Nm	140	150	220	300	420	500
Safety catch torque of the integrated unit (max.)	Nm	309	784	784	2,680	2,680	2,680
Nominal rotational speed	min ⁻¹	12	17	12	12	12	12
Number of drive shaft revolutions (max.)		13	18	18	18	18	18
Hollow shaft		30	30	30	30	40	40
Emergency operation		KU KE	KU KE	KU KE	KU KE	KU KE	KU KE

Electrical details

		MDF 05-14-12	MDF 20-15-17	MDF 20-22-12	MDF 30-30-12	MDF 30-42-12	MDF 30-50-12
Nominal voltage	V AC	400/3~	400/3~	400/3~	400/3~	400/3~	400/3~
Nominal frequency	Hz	50	50	50	50	50	50
Power consumption	A	1.9	2.8	2.8	3.6	5.1	5.7
Motor output	kW	0.45	0.75	0.75	0.85	1.1	1.1
Cycles per hour (max.)		20	20	20	20	20	20
Protection category		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Protection class		I	I	I	I	I	I

General details

		MDF 05-14-12	MDF 20-15-17	MDF 20-22-12	MDF 30-30-12	MDF 30-42-12	MDF 30-50-12
Weight	kg	16	19	19	23	27	29
Range of temperature (min./max.)	°C	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60

KU: Emergency hand crank KE: Emergency hand chain

MDF 50-75-10
400V/3PH · 60%

MDF 60-100-9
400V/3PH · 60%

MDF 60-140-9
400V/3PH · 60%

MDF 70-165-8
400V/3PH · 60%

MDF 70-200-8
400V/3PH · 60%

MDF 20-15-12
400V/3PH · 80%

Mechanical details

		MDF 50-75-10	MDF 60-100-9	MDF 60-140-9	MDF 70-165-8	MDF 70-200-8	MDF 20-15-12
Drive torque	Nm	750	1,000	1,400	1,650	2,000	150
Safety catch torque of the integrated unit (max.)	Nm	5,136	3,974	3,974	7,738	7,738	784
Nominal rotational speed	min ⁻¹	10	9	9	8	8	12
Number of drive shaft revolutions (max.)		36	36	36	36	36	18
Hollow shaft		50	50	50	55	55	30
Emergency operation		KU KE	KU KE	KU KE	KU KE	KU KE	KU KE

Electrical details

		MDF 50-75-10	MDF 60-100-9	MDF 60-140-9	MDF 70-165-8	MDF 70-200-8	MDF 20-15-12
Nominal voltage	V AC	400/3~	400/3~	400/3~	400/3~	400/3~	400/3~
Nominal frequency	Hz	50	50	50	50	50	50
Power consumption	A	4.2	6.1	6.7	8.5	8.1	1.8
Motor output	kW	1.2	1.5	2.0	2.2	2.5	0.55
Cycles per hour (max.)		20	20	20	20	20	30
Protection category		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Protection class		I	I	I	I	I	I

General details

		MDF 50-75-10	MDF 60-100-9	MDF 60-140-9	MDF 70-165-8	MDF 70-200-8	MDF 20-15-12
Weight	kg	41	72	75	72	81	21
Range of temperature (min./max.)	°C	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60

KU: Emergency hand crank KE: Emergency hand chain

Roller shutter doors

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Roller shutter doors

MDF 30-27-12
400V/3PH · 80%

MDF 50-65-10
400V/3PH · 80%

MWF 05-14-12
230V/1PH · 25%

MWF 20-22-12
230V/1PH · 25%

MWF 30-28-12
230V/1PH · 25%

MWF 30-38-12
230V/1PH · 25%

Mechanical details

		MDF 30-27-12	MDF 50-65-10	MWF 05-14-12	MWF 20-22-12	MWF 30-28-12	MWF 30-38-12
Drive torque	Nm	270	650	140	220	280	380
Safety catch torque of the integrated unit (max.)	Nm	2,680	5,136	309	784	2,680	2,680
Nominal rotational speed	min ⁻¹	12	10	12	12	12	12
Number of drive shaft revolutions (max.)		18	36	13	18	18	18
Hollow shaft		40	50	30	30	40	40
Emergency operation		KU KE	KU KE	KU KE	KU KE	KU KE	KU KE

Electrical details

		MDF 30-27-12	MDF 50-65-10	MWF 05-14-12	MWF 20-22-12	MWF 30-28-12	MWF 30-38-12
Nominal voltage	V AC	400/3~	400/3~	230/1~	230/1~	230/1~	230/1~
Nominal frequency	Hz	50	50	50	50	50	50
Power consumption	A	2.1	3.1	6.5	9.5	12.0	14.0
Motor output	kW	0.75	1.1	0.4	0.6	0.75	1.2
Cycles per hour (max.)		30	30	12	12	12	12
Protection category		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Protection class		I	I	I	I	I	I

General details

		MDF 30-27-12	MDF 50-65-10	MWF 05-14-12	MWF 20-22-12	MWF 30-28-12	MWF 30-38-12
Weight	kg	30	42	16	19	27	27
Range of temperature (min./max.)	°C	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60

KU: Emergency hand crank KE: Emergency hand chain

Features	CS 310	CS 255 AC
Digital and mechanical end position processing	•	•
Programmable relay outputs	4	1
Programmable inputs	2	2
MS-Bus interface for connecting expansion modules	•	•
Transformer switchable from 400 V to 230 V	•	•
Short-circuit proof low voltage	•	•
Built in standard or large housing	•	
Built in small housing or built on gear motor		•
Protective housing for the circuit board	•	
Programming via buttons on the circuit board	•	•
Illuminated 3-button push button integrated into housing cover	•	•
Illuminated LC-display with clear text integrated	•	
Status and diagnostic messages via LEDs	•	•
Excess travel stop	•	•
Evaluation closing edge safety devices: optosensor, 8.2 kΩ, pressure switch bar, non-contact closing edge safety device	•	•
Evaluation photocells: 2-wire, relay, NPN, PNP	•	•
Programming and status indication via LEDs	•	•
Programming and status indication via LC-display	•	•
Direction of rotation monitoring and detection (only in combination with absolute value encoder)	•	•
Direction of rotation programmable	•	•
Automatic closing function (only usable in combination with photocell)	•	•
Door open duration and warning time programmable	•	•
Power limitation 'OPEN' programmable (only in combination with absolute value encoder)	•	•
Soft start/soft stop/soft run/fast run (only in combination with STA 1 FU/I)	•	
Partial opening programmable	•	•
Servicing counter and door cycle counter	•	•
Servicing interval programmable (PIN code protected)	•	•
Fault messages with memory	•	•
Multistage reset function	•	•
Connection for:		
Mechanical limit switches	•	•
Absolute value encoder	•	•
Frequency converter	•	
Push button (conventional)	•	•
Push button (system cabling)		•
Radio receiver (pluggable)	•	•
Week timer (pluggable)	•	
Marantec 2-wire photocell with testing 'CLOSE' (conventional)	•	•
Other's photocell relay, NPN, PNP with/without testing 'CLOSE' (conventional)	•	•
Hold circuit (conventional)	•	•
Wicket door contact 8.2 kΩ with/without testing (conventional)	•	•
Closing edge safety device optosensor, 8.2 kΩ, pressure switch bar, non-contact closing edge safety device 'CLOSE' (conventional)	•	•
Closing edge safety device 8.2 kΩ 'OPEN' (conventional)	•	•
Radio transmission system for closing edge safety device (pluggable)	•	
Expansion modules (MS-Bus)	•	•
Power supply for external elements 24 V DC (max. mA) (conventional)	500	200
Power supply for external elements 230 V AC (max. mA) (conventional)	1,000	