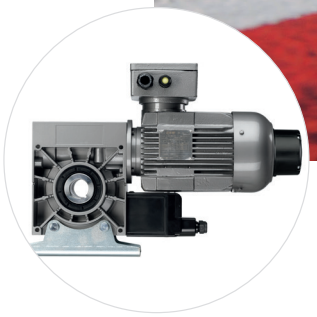
Operators for hazardous areas



Roller shutter operators for hazardous areas with integrated safety catches

Sectional door operators for hazardous areas

Controls for Ex operators

Accessories for Hazardous Areas

Roller shutter operators for hazardous areas with integrated safety catches

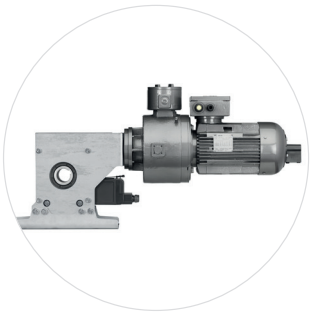
Sectional door operators for hazardous areas

MDF Ex

STA Ex

The operator series of the MDF and STA series in ATEX design are specially designed for use in potentially explosive atmospheres. The MDF series has an integrated, maintenance-free safety catch and thus offers the safest solution for roller shutter systems. The STA series is specially designed for use on spring-balanced sectional doors. Thus, our operator series in ATEX design offer the right solution for every on-site situation. A comprehensive range of controls and accessories in ATEX design complete the range.

MDF 30 Ex



MDF 50 Ex

STA 1 Ex

MDF Ex

Operator type
MDF 30-40-15 Ex de
MDF 30-40-15 Ex e
MDF 50-75-10 Ex de

STA Ex

Operator type
STA 1-11-24 Ex de
STA 1-11-24 Ex e

Features

MDF Ex

- Suitable for use in zones 1 and 2
- Integrated safety catch, independent of position and speed, maintenance- and wear-free, integrated cushioning
- Pendulum foot support
- Rolled worm shaft
- Emergency operation via emergency hand crank (KU) with encapsulated microswitch
- End position setting via encapsulated mechanical limit switch (MEC)
- Thermal protection in the motor winding
- Supply: 230/400 V/3~/50 Hz
- Can be combined with control program in ATEX design
- Can be combined with accessories program in ATEX design
- Special variants such as other output speeds and hollow shaft Ø on request

STA Ex

- Suitable for use in zones 1 and 2
- Sturdy die-cast aluminum housing and UV-resistant plastic covers
- Double worm shaft bearing
- Rolled worm shaft
- Emergency operation via emergency hand crank (KU) with encapsulated microswitch
- End position setting via encapsulated mechanical limit switch (MEC)
- Thermal protection in the motor winding
- Supply: 230/400 V/3~/50 Hz
- Can be combined with control program in ATEX design
- Can be combined with accessories program in ATEX design
- For temperature ranges below -20 °C there is suitable oil and electric heating on request

Mechanical limit switches encapsulated (MDF)

Mechanical limit switches encapsulated (STA)

Can be combined with ATEX control

Can be combined with ATEX accessories

Emergency hand crank encapsulated (KU)

Area of use

MDF Ex

To select the optimum operator solution, the diameter of the winding shaft in mm and the curtain weight of the door in kg are required. With the help of these parameters, the correct Ex slip-on operator can be determined easily and reliably using the table below.

MDF

Maximum curtain weights roller shutter operators 1:1 in kg

Ø Winding shaft	30-40-12 Ex e	30-40-12 Ex de	50-75-10 Ex de
101.6 mm	515	515	966
108.0 mm	491	491	920
133.0 mm	413	413	774
159.0 mm	355	355	665
177.8 mm	322	322	603
193.7 mm	298	298	559
219.1 mm	267	267	501
244.5 mm	242	242	454
273.0 mm	219	219	410
298.5 mm	202	202	378
323.9 mm	187	187	351

STA Ex

To select the optimal operator solution, the area of the door in m^2 is required. With the help of this parameter, the right sectional door operator can be determined easily and safely using the table below.

Door size

	Door area (max.) [m^2]
STA 1-11-24 Ex de **STA 1-11-24 Ex e**	45

The table values take into account a weight of 13 kg/m^2 and assume exact spring balancing. In certain situations, the friction may be greater and must be added up accordingly.

Technical data

MDF

	30-40-12 Ex e	30-40-12 Ex de	50-75-10 Ex de
Output torque [Nm]	400		750
Output speed [1/min]	12		10
Torque of the safety catch (max.) [Nm]	2,680		5,136
Test number of the safety catch	24042140-1		Tor FV 9/099/1
Output revolutions (max.)**	18		36
Cycles per hour (max.)*	5		10
Shaft support [mm]	40		50
Marking (gas)	II 2G Ex eb h IIC T3 Gb	II 2G Ex db eb h IIC T4 Gb	
Marking (dust)			
Test certificate number ATEX	IBExU 02 ATEX 1113	BVS 14 ATEX E 114 X	
Motor power [kW]	1.35	1.1	1.5
Operating voltage [V]	400 V/3~; 230 V/3~		
Control voltage [V]	24 V-DC		
Rated current in star connection [A]	2.85	2.65	3.92
Rated current in delta connection [A]	4.95	4.60	6.80
On-site fuse protection (mains operation 230 V/3~) [A]	10		
On-site fuse protection (mains operation 400 V/3~) [A]	10		
Protection class	IP65		
Continuous sound pressure level (max.) [dB(A)]	70		
Temperature (min./max.) [°C]	-5/40	-4/60	-5/40
Weight [kg]	46	56	149

STA

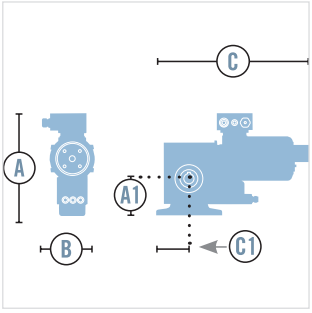
	1-11-24 Ex e	1-11-24 Ex de
Output torque [Nm]	110	
Output speed [1/min]	24	
Output revolutions (max.)**	20	
Cycles per hour (max.)*	10	
Shaft support [mm]	25.4	
Marking (gas)	II 2G Ex eb h IIC T3 Gb	II 2G Ex db eb h IIC T4 Gb
Marking (dust)		
Test certificate number ATEX	IBExU 02 ATEX 1112	BVS 14 ATEX E 114 X
Motor power [kW]	0.55	
Operating voltage [V]	400 V/3~; 230 V/3~	
Control voltage [V]	24 V-DC	
Rated current in star connection [A]	1.25	1.30
Rated current in delta connection [A]	2.15	2.25
On-site fuse protection (mains operation 230 V /1~) [A]		
Protection class	IP65	
Continuous sound pressure level (max.) [dB(A)]	70	
Temperature (min./max.) [°C]	-5/40	
Weight [kg]	27	29

* The values given were determined for an even distribution of the cycles. A cycle consists of two movements (opening and closing) and has a deflection of 10 revolutions of the output shaft in each direction. At ambient temperatures between 40°C and 60°C, a reduction of the maximum cycles per hour by 50% must be taken into account.
** For vertically moving doors and roller shutters, a reduction of the specified pull force by a further 20% may be necessary. Possible reasons for this are, for example, additional seals, double-walled profiles or an unfavorable winding ratio where the door height exceeds the door width. In addition, it should be noted that the maximum torque only occurs after one to two revolutions when thick or high profiles are used.
*** Alternative limit switch ratios are available upon request.

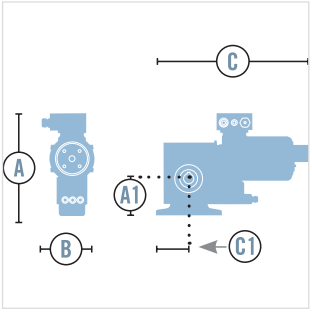
Technical data

MDF

	30-40-12 Ex e	30-40-12 Ex de	50-75-10 Ex de
A	371	409	546
B	177	186	262
C	619	650	1,142
A1	145	145	195
C1	130	130	200



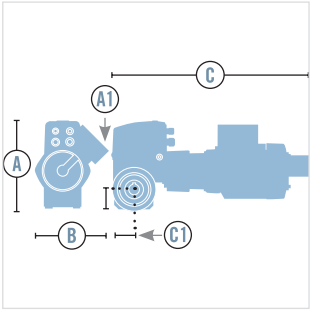
MDF 30 EX-E



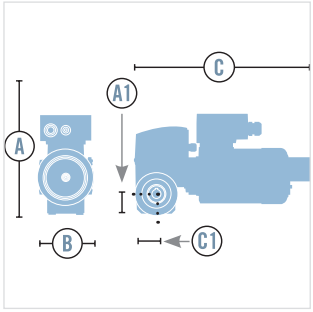
MDF 30 EX-DE

STA

	1-11-24 Ex e	1-11-24 Ex de
A	245	279
B	222	167
C	557	490
A1	55	55
C1	55	55



STA 1 EX-E



STA 1 EX-DE