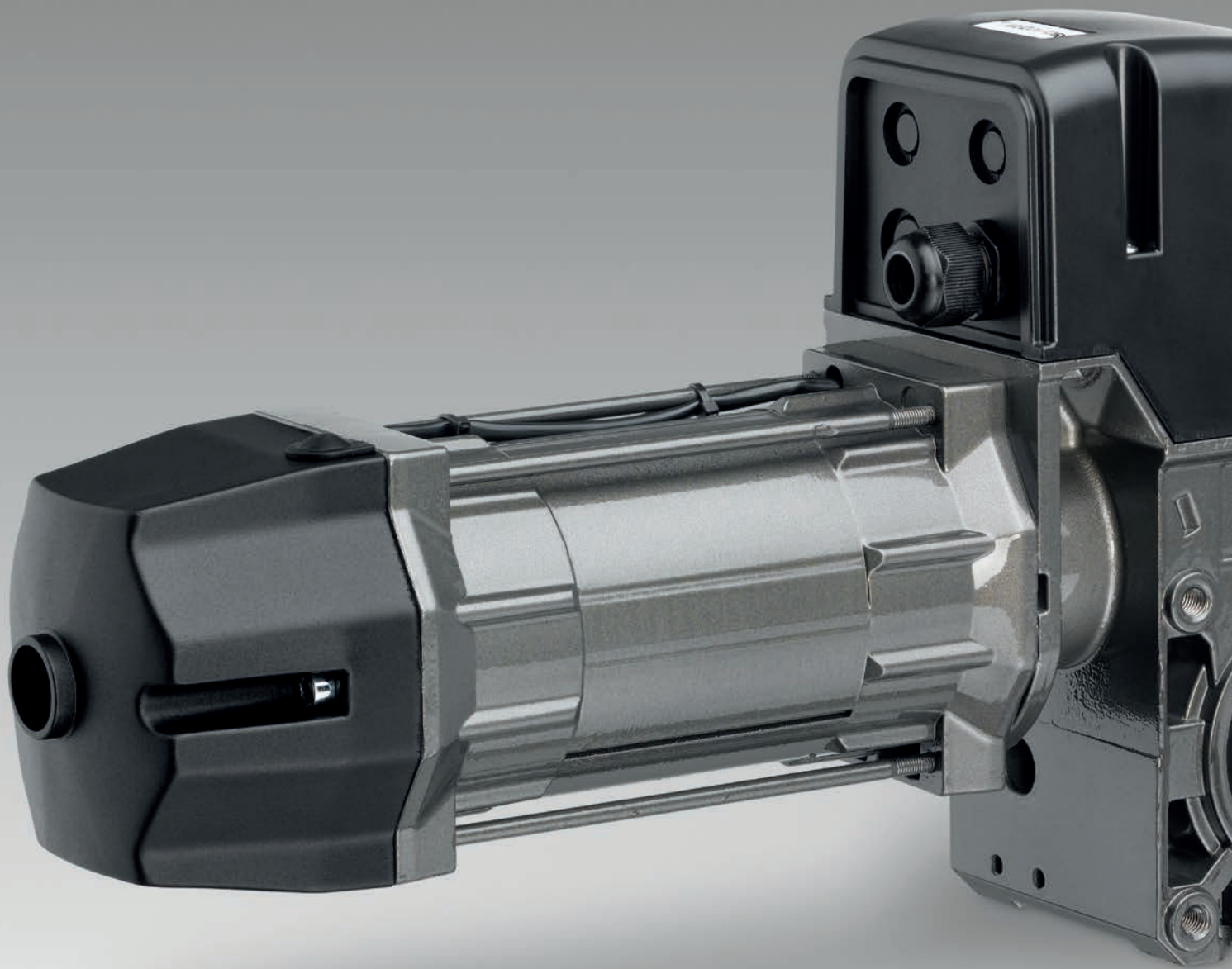


SERVICE.
DIVERSITY.
QUALITY.
INDIVIDUAL SOLUTIONS.

**THIS IS WHAT
DRIVES US.**

2018

SECTIONAL DOOR DRIVES





Section on sectional door drives

STA / STAC 1

for spring-balanced sectional doors
Starting on page 54

MDF 2

for sectional doors without springs
Starting on page 60

STAI / STAIC 3

Overhead rails for spring-balanced sectional doors
Starting on page 66

MDF

MDF Sectional door drives for doors without springs

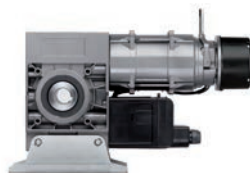
The powerful MDF series drives are the optimum solution for sectional doors without springs. The maintenance-free safety catch device is already integrated and therefore offers the safest option for the door. With a complete series from 140 to 1650 Nm, MFZ provides the right solution in this segment for every on-site situation. The drives are straightforward and easy to install thanks to their compact size. We have the flexibility to quickly realise custom solutions for individual customer requirements at any time.

Characteristics

- 01 Integrated safety catch device, independent of position and speed, free of maintenance and wear, integrated damping
- 02 Self-aligning bearings
- 03 Rolled worm shaft
- 04 High holding force via additional magnetic brake
- 05 Dimension between centre lines 145 mm or 120 mm (only for MDF 20 / MDF 30)
- 06 Emergency hand crank for emergency operation (KU) or emergency hand chain (KE)
- 07 Straightforward conversion from crank to chain
- 08 End position setting via electronic absolute encoder or mechanical limit switch
- 09 Thermal protection in the motor windings
- 10 Higher motor duty cycle available. Identified by the addendum **HD**
- 11 Supply 230 / 400V / 50Hz / 3~ (custom solutions on request)
- 12 Plug-in connections
- 13 Version with external control, for combination with an extensive control programme
Supply: 230 / 400V / 3~
Frequency: 50 / 60 Hz
Control voltage: 24V-DC (Section 10 "Controls")
- 14 Frequency converter control optional. Increasing the drive motor speed (operation with frequency converter) reduces the drive torque. The following applies in this case: Increasing the drive motor speed by 10% reduces the drive torque by 5%.
- 15 Custom versions, such as different voltages and frequencies, other drive motor speeds, higher protection classes and sleeve shaft diameters, on request.
- 16 Cable drums in different sizes and versions



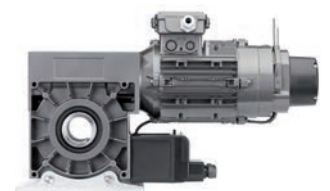
MDF 05



MDF 20



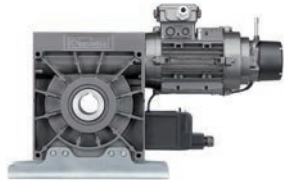
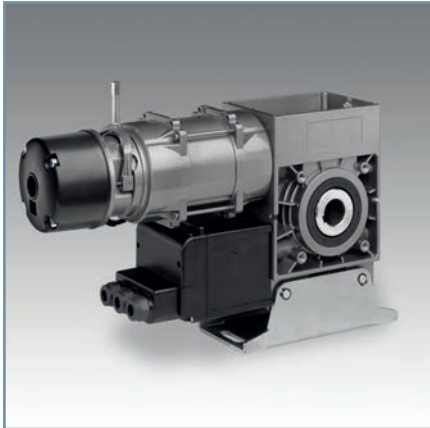
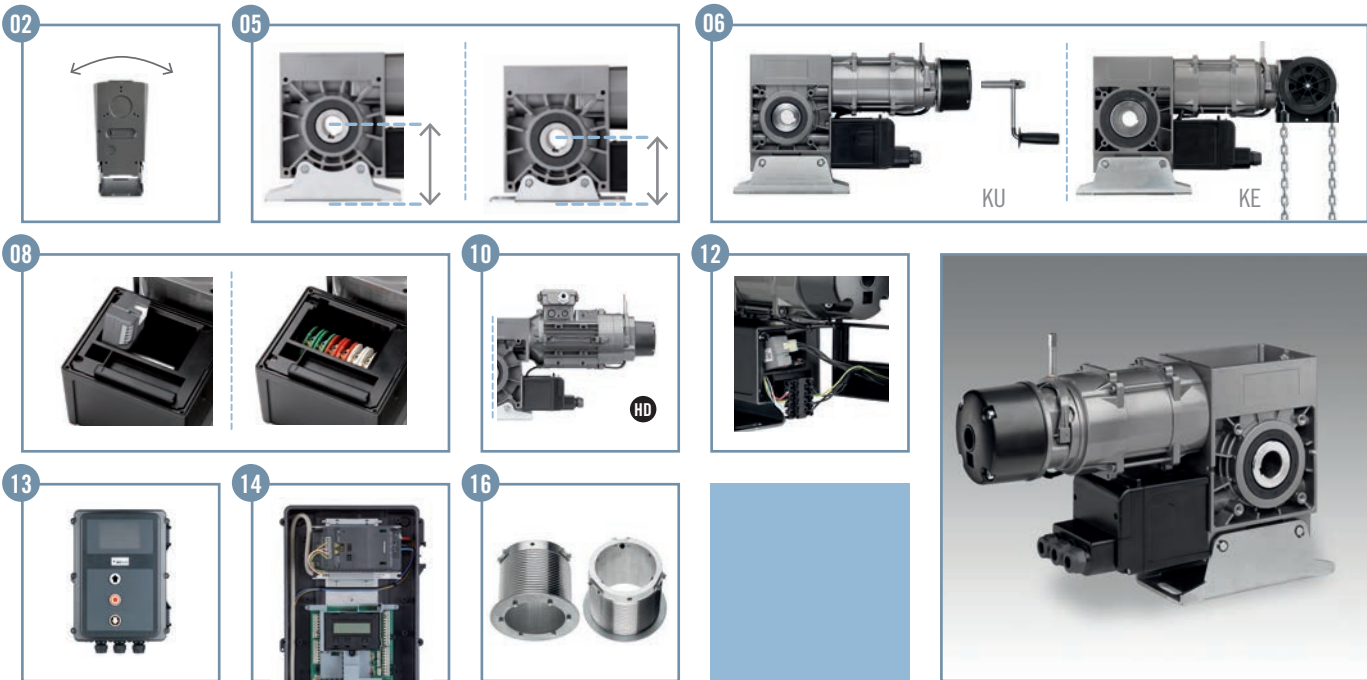
MDF 30



MDF 50

SECTIONAL DOOR DRIVES

2



MDF 60



MDF 70

CABLE DRUMS

Selection and technical data

2

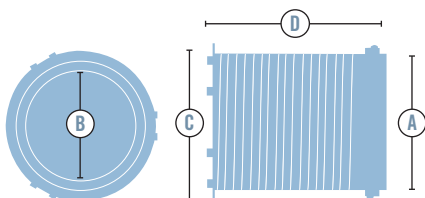
Sectional door drives

Cable drums

		STR 133-6	STR 133-8	STR 159-8	STR 159-10	STR 193-8	STR 193-10	STR 219-8	STR 219-10	STR 244-10	STR 244-12
Suspended weight	kg	750	800	1350	1400	1350	1400	1350	1400	1400	1750
Cable capacity	m	9	6,5	11,5	9,5	11,0	10,0	12,5	11,0	14,0	12,0
Cable diameter	mm	6	8	8	10	8	10	8	10	10	12
Safety windings		2	2	2	2	2	2	2	2	2	2
Material		Aluminium	Aluminium	Aluminium	Aluminium	Steel	Steel	Steel	Steel	Steel	Steel
Unit weight	kg	7	7	10	10	13	13	15	15	20	20
Delivery unit	Quantity	2 (left / right)									
Marking		6L134 6R134	6L134 6R134	8L160 8R160	10L160 10R160	8L193 8R193	10L193 10R193	8L219 8R219	10L219 10R219	10L244 10R244	12L244 12R244
A calculation diameter	mm	167	167	192	192	212	214	242	244	269	271
B internal diameter	mm	134	134	160	160	195	195	220	220	245	245
C external diameter	mm	180	180	220	220	224	224	250	250	275	275
D width	mm	176	176	251	251	260	280	240	220	250	220

Custom solutions on request.

Detailed drawings with all dimensions are available for download under www.mfz-antriebe.de.



Cable drum STR

SUSPENDED WEIGHTS

Selecting the right MDF sectional door drive

To select the optimum drive solution, you will need the calculation diameter of the chosen cable drum in mm, the diameter of the tubular shaft in mm and the suspended weight of the door in kg. With the help of these parameters, the appropriate MDF sectional door drive can be determined easily and reliably using this table.



Drives for doors without spring balance

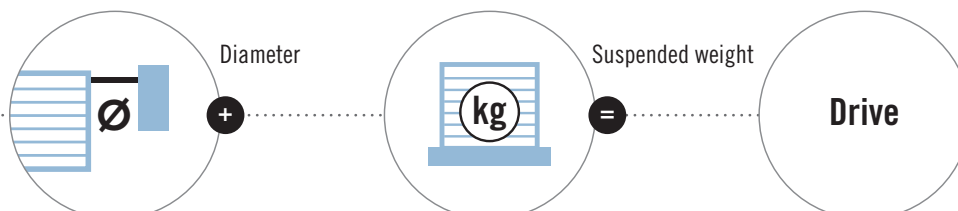
Cable drum STR

		STR 133	STR 159	STR 193	STR 219	STR 244
Tubular shaft	mm	133,0	159,0	193,7	219,1	244,5
Calculation diameter	mm	167	192	224	250	275
MDF 05-14-24		137	119	102	91	83
MDF 20-18-24		176	153	131	117	107
MDF 30-32-18		313	272	233	209	190
MDF 30-32-24		313	272	233	209	190
MDF 30-40-17		391	340	291	261	237
MDF 30-40-24		391	340	291	261	237
MDF 50-75-16		732	637	546	489	445
MDF 50-75-24 HD		732	637	546	489	445
MDF 60-100-17		977	849	728	652	593
MDF 60-100-24 HD		977	849	728	652	593
MDF 70-140-17 HD		1367	1189	1019	913	830
MDF 70-125-24 HD		1221	1062	910	815	741
MDF 70-165-17 HD		1611	1402	1201	1076	979
MDF 70-165-24 HD		1611	1402	1201	1076	979

Maximum suspended weight in kg

The values in the table take a 20% safety reserve into account. In certain situations, the friction can be greater and this must be considered when calculating the values.

Straightforward
drive selection



TECHNICAL DATA

Sectional door drives for doors without springs

MDF 05

MDF 20

MDF 30

		MDF 05-14-24	MDF 20-18-24	MDF 30-32-18	MDF 30-32-24	MDF 30-40-17	MDF 30-40-24
Drive torque	Nm	140	180	320	320	400	400
Drive motor speed	min ⁻¹	24	24	18	24	17	24
Maximum safety catch torque	Nm	309	784	2680	2680	2680	2680
Certificate no. of the safety catch device		Door FV 6 / 092	Door FV 9 / 147/1	24042140-1			
Motor output	kW	0,55	1,1	1,1	1,7	1,7	1,7
Operating voltage	V	230 / 400 / 3~	230 / 400 / 3~	230 / 400 / 3~	230 / 400 / 3~	230 / 400 / 3~	230 / 400 / 3~
Mains frequency	Hz	50	50	50	50	50	50
Control voltage	V	24	24	24	24	24	24
Motor current rating	A	3,0 / 1,7	4,7 / 2,7	5,7 / 3,3	8,3 / 4,8	8,3 / 4,8	8,3 / 4,8
Max. cycles per hour *		20	20	20	20	20	20
Fuse protection, on site (mains operation)	A	10	10	10	10	10	10
IP protection class		54	54	54	54	54	54
Temperature range **	°C	-20 / +60	-20 / +60	-20 / +60	-20 / +60	-20 / +60	-20 / +60
Continuous sound pressure level	dB (A)	< 70	< 70	< 70	< 70	< 70	< 70
Unit weight (approx.)	kg	19	23	28	30	30	30
Maximum output revolutions		13	18	18	18	18	18
Operation with CS310 FU (frequency converter)	kW	0,75	1,5	1,5	2,2	2,2	2,2
	V	230 / 1~	400 / 3~	400 / 3~	400 / 3~	400 / 3~	400 / 3~
Fuse protection, on site (frequency converter operation)	A	10	10	10	10	10	10
Efficiency factor cos Φ		0,76	0,78	0,71	0,8	0,8	0,8
A / height KU / KE	mm	290 / 290	318 / 318	335 / 335	335 / 335	335 / 335	335 / 335
B / width KU / KE	mm	111 / 192	114 / 192	122 / 192	122 / 192	122 / 192	122 / 192
C / length KU / KE	mm	442 / 484	501 / 589	536 / 625	536 / 625	536 / 625	536 / 625
A1	mm	100	145	145	145	145	145
C1	mm	85	110	130	130	130	130
Ø - Sleeve shaft diameter (standard)	mm	30	30	40	40	40	40

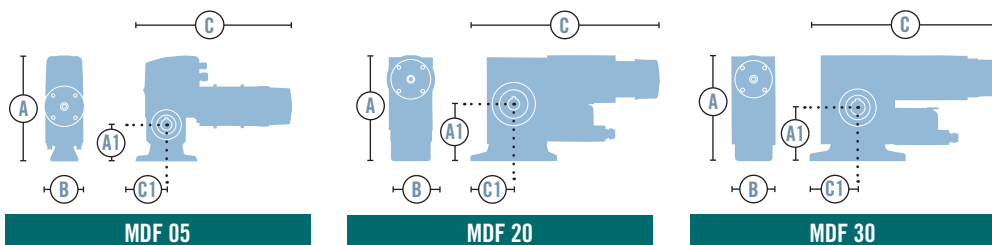
HD Drives with the addendum HD have a higher duty cycle.

* Increasing the drive motor speed (operation with frequency converter) reduces the drive torque. The following applies in this case: increasing the drive motor speed by 10% reduces the drive torque by 5%.

** One cycle corresponds to two door movements (opening and closing). The specified values refer to 10 revolutions of the drive shaft per movement and presume an even distribution.

*** Temperature range < -20°C: oil grade and electric heating on request.

Detailed drawings with all dimensions are available for download under www.mfz-antriebe.de.



MDF 50

MDF 60

MDF 70

		MDF 50-75-16	HD MDF 50-75-24	HD MDF 60-100-17	HD MDF 60-100-24	HD MDF 70-140-17	HD MDF 70-125-24	HD MDF 70-165-17	HD MDF 70-165-24
Drive torque	Nm	750	750	1000	1000	1400	1250	1650	1650
Drive motor speed	min ⁻¹	16	24	17	24	17	24	17	24
Maximum safety catch torque	Nm	4030	4030	3974	3974	7738	7738	7738	7738
Certificate no. of the safety catch device	 Door FV 6 / 099 11-003601-PR01 10-000808-PR03			
Motor output	kW	2,2	3,0	3,0	4,0	4,0	4,0	4,4	5,5
Operating voltage	V	230/400/3~	230/400/3~	230/400/3~	230/400/3~	230/400/3~	230/400/3~	230/400/3~	230/400/3~
Mains frequency	Hz	50	50	50	50	50	50	50	50
Control voltage	V	24	24	24	24	24	24	24	24
Motor current rating	A	11,3 / 6,5	12,1 / 7,0	12,1 / 7,0	18,2 / 10,5	18,2 / 10,5	18,2 / 10,5	19,5 / 11,3	22,8 / 13,2
Max. cycles per hour *		20	30	20	30	30	30	30	30
Fuse protection, on site (mains operation)	A	16 / 10	16 / 10	16 / 10	20 / 16	20 / 16	20 / 16	20 / 16	25 / 16
IP protection class		54	54	54	54	54	54	54	54
Temperature range **	°C	-20 / +60	-20 / +60	-20 / +60	-20 / +60	-20 / +60	-20 / +60	-20 / +60	-20 / +60
Continuous sound pressure level	dB (A)	< 70	< 70	< 70	< 70	< 70	< 70	< 70	< 70
Unit weight (approx.)	kg	39	43	67	72	72	72	77	81
Maximum output revolutions		36	36	36	36	36	36	36	36
Operation with CS310 FU (frequency converter)	kW	3,0	3,0	3,0	5,5	5,5	5,5	5,5	7,5
	V	400 / 3~	400 / 3~	400 / 3~	400 / 3~	400 / 3~	400 / 3~	400 / 3~	400 / 3~
Fuse protection, on site (frequency converter operation)	A	10	10	10	16	16	16	16	25
Efficiency factor cos Φ		0,7	0,8	0,8	0,73	0,73	0,73	0,78	0,78
A / height KU / KE	mm	341 / 341	375 / 375	433 / 433	460 / 481	460 / 481	460 / 481	491 / 491	491 / 491
B / width KU / KE	mm	122 / 195	174 / 220	174 / 221	194 / 244	194 / 244	194 / 244	216 / 255	216 / 255
C / length KU / KE	mm	576 / 638	614 / 677	687 / 750	766 / 873	766 / 873	766 / 873	785 / 893	785 / 893
A1	mm	135	135	185	200	200	200	200	200
C1	mm	130	130	200	200	200	200	200	200
Ø - Sleeve shaft diameter (standard)	mm	50	50	50	55	55	55	55	55

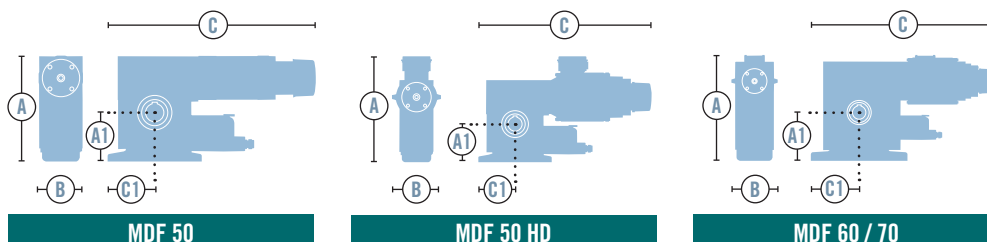
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