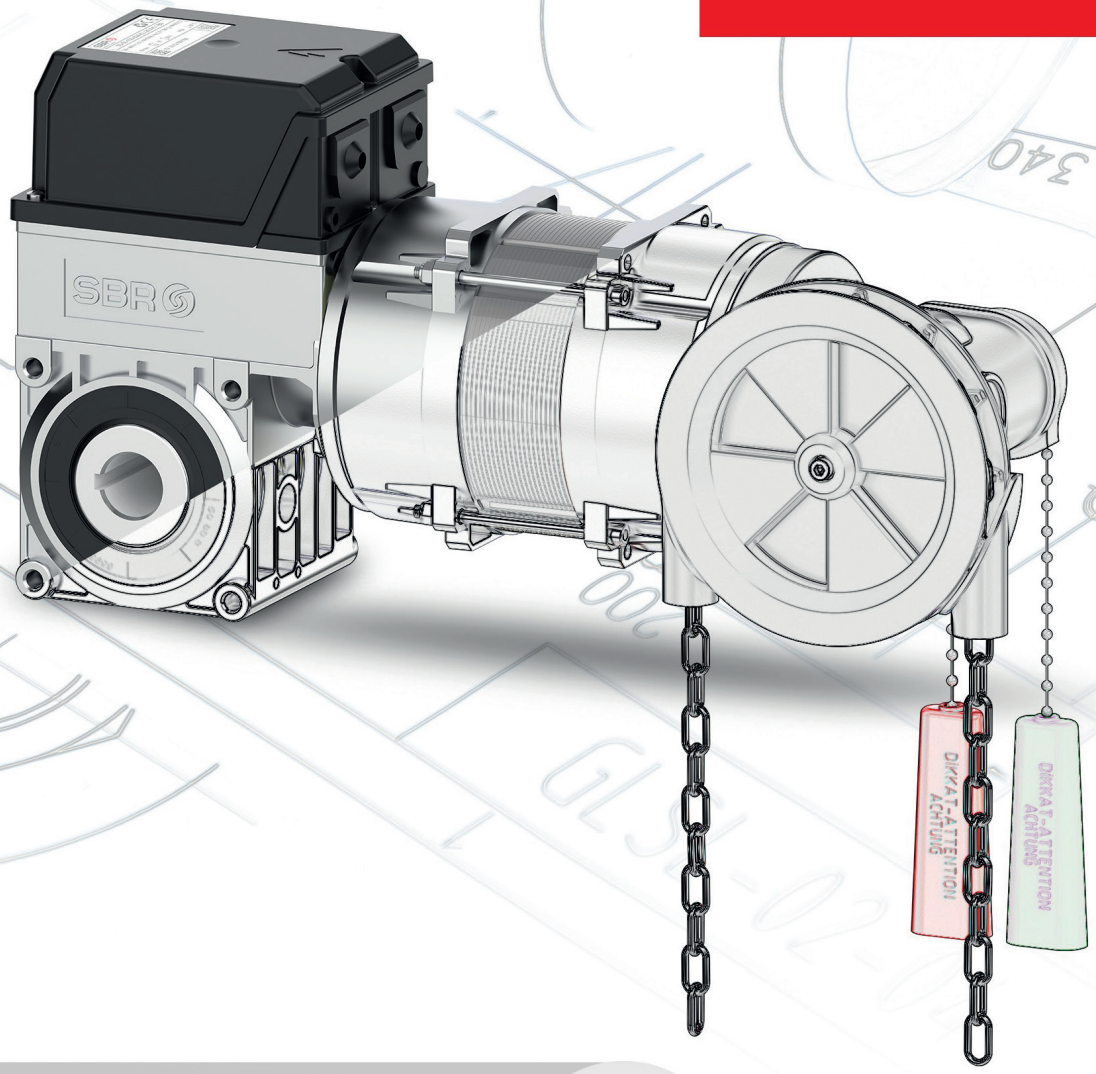
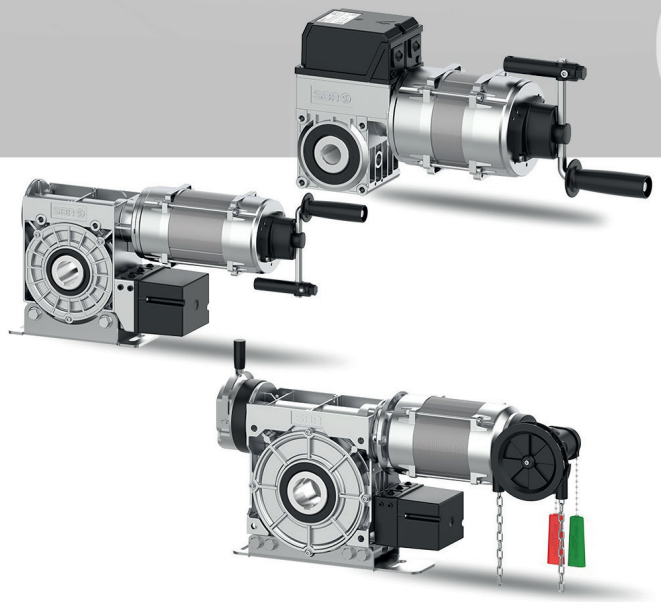
# TECHNICAL **PRODUCT** CATALOG




SBR

ENGINEERING



SBR intelligence & life


ID ITEM DESCRIPTION 3

SD SPRING-BALANCED SECTIONAL DOORS DRIVES 6

DS NON BALANCED SECTIONAL DOORS DRIVES 12

RD ROLLER SHUTTER DOORS DRIVES 24

PS HIGH SPEED DOORS DRIVES 38

KD CHAIN TRANSMISSION DOORS DRIVES 49

CU CONTROL UNIT 59

AC ACCESSORIES 70

# ITEM DESCRIPTION

| 1 | 2 | | | 3 | 4 | | 5 | | 6 |
|---|---|---|---|---|---|---|---|---|---|
| SD | – 050 | – 0100 | – 048 | – D25.4 | – E20 | - 0.75KW | – 3N400 | - C2 | - B2 - FI |

### PRODUCT GROUP

| | |
|---|---|
| **SD** | SECTIONAL DOOR DRIVES |
| **DS** | NON BALANCED SECTIONAL DOOR DRIVES |
| **RD** | ROLLER SHUTTER DOOR DRIVES |
| **PS** | HIGH SPEED DOOR DRIVES |
| **KD** | CHAIN DRIVE DOOR DRIVES |

### BODY SIZE

| | |
|---|---|
| **050** | 50 TYPE BODY |
| **063** | 63 TYPE BODY |
| **085** | 85 TYPE BODY |
| **110** | 110 TYPE BODY |

### OUTPUT TORQUE

| | |
|---|---|
| **0060** | 60 Nm |
| **0080** | 80 Nm |
| **0100** | 100 Nm |
| **0120** | 120 Nm |

### OUTPUT SPEED

| | |
|---|---|
| **010** | 10 rpm |
| **015** | 15 rpm |
| **024** | 24 rpm |
| **048** | 48 rpm |
| **140** | 140 rpm |

### OUTPUT SHAFT

| | |
|---|---|
| **D25.0** | Ø25.00 mm |
| **D25.4** | Ø25.40 mm |
| **D30.0** | Ø30.00 mm |
| **D31.7** | Ø31.75 mm |
| **D40.0** | Ø40.00 mm |
| **D55.0** | Ø55.00 mm |

### LIMIT SWITCH

| | |
|---|---|
| **E15** | ELECTRONIC LIMIT SWITCH |
| **E20** | ELECTRONIC LIMIT SWITCH |
| **M15** | MECHANIC LIMIT SWITCH |
| **M20** | MECHANIC LIMIT SWITCH |

### MOTOR POWER

| | |
|---|---|
| **0.37KW** | 0,37 kW MOTOR |
| **0.55KW** | 0,55 kW MOTOR |
| **0.75KW** | 0,75 kW MOTOR |
| **1.10KW** | 1,10 kW MOTOR |
| **1.50KW** | 1,50 kW MOTOR |
| **2.20KW** | 2,20 kW MOTOR |
| **3.00KW** | 3,00 kW MOTOR |

### OPERATING VOLTAGE

| | |
|---|---|
| **1N230** | 1N~230 V |
| **3N400** | 3N~400 V |

### EMERGENCY OPERATION

| | |
|---|---|
| **C1** | HAND CHAIN OPERATOR C1 |
| **C2** | HAND CHAIN OPERATOR C2 |
| **C3** | HAND CHAIN OPERATOR C3 |
| **M1** | HAND CRANK |
| **M2** | HAND CRANK |
| **RK** | RELEASE CRANK |

### BRAKE

| | |
|---|---|
| **B0** | NON BRAKE |
| **B1** | 5 Nm BRAKE |
| **B2** | 10 Nm BRAKE |
| **B3** | 20 Nm BRAKE |
| **R1** | 5 Nm FRONT BRAKE |
| **R2** | 10 Nm FRONT BRAKE |

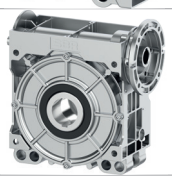
### EXTRA FEATURE

| | |
|---|---|
| **FI** | FREQUENCY INVERTER |
| **HD** | REFRIGERATED BODY |

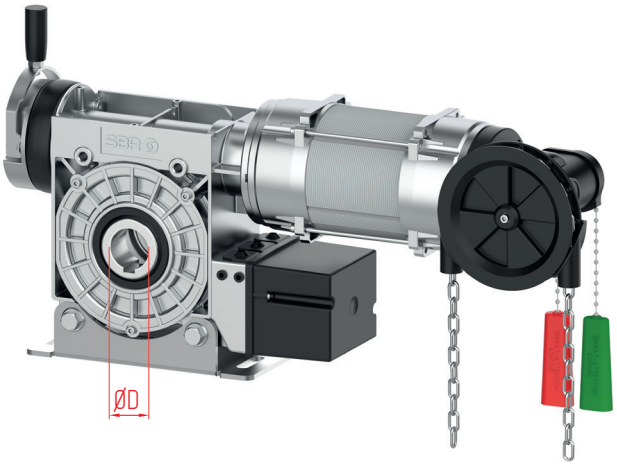
## 1-PRODUCT GROUP

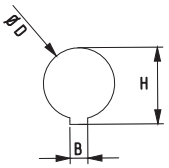
| | | Output Torque (Nm) | Output Speed (rpm) |
|---|---|---|---|
| **SD** | SECTIONAL DOOR DRIVES | 80-140 | 15-80 |
| **DS** | NON BALANCED SECTIONAL DOOR DRIVES | 140-1000 | 15-24 |
| **RD** | ROLLER SHUTTER DOOR DRIVES | 130-1800 | 10-15 |
| **PS** | HIGH SPEED PVC DOOR DRIVES | 40-250 | 35-140 |
| **KD** | CHAIN TRANSMISSION DOOR DRIVES | 100-1000 | 24 |

## 2- BODY SIZE

| | | |
|---|---|---|
| **50** | GEARBOX 50 |  |
| **63** | GEARBOX 63 |  |
| **85** | GEARBOX 85 |  |
| **110** | GEARBOX 110 |  |

## 3- OUTPUT SHAFT




| ØD | H | B |
|---|---|---|
| **D25.0** | 28,3 | 8,00 |
| **D25.4** | 28,4 | 6,35 |
| **D30.0** | 33,3 | 8,00 |
| **D31.75** | 34,7 | 6,35 |
| **D40.0** | 43,3 | 12,00 |
| **D55.0** | 64,4 | 16,00 |

## 4- LIMIT SWITCH

| | | |
|---|---|---|
| **E15**<br>**E20** | ELECTRONIC LIMIT SWITCH |  |
| **M15**<br>**M20** | MECHANIC LIMIT SWITCH |  |

## 5-EMERGENCY OPERATION

| | | |
|---|---|---|
| **C1** | C1 RAPID HAND CHAIN OPERATOR |  |
| **C2** | C2 HAND CHAIN OPERATOR |  |
| **C3** | C3 HAND CHAIN OPERATOR |  |
| **M1** | HAND CRANK |  |
| **M2** | HAND CRANK |  |
| **RK** | RELEASE CRANK |  |

# SD SERIES

# SPRING-BALANCED SECTIONAL DOORS DRIVES



| | | SD-50-100-24 | SD-50-100-30 | SD-50-110-24 | SD-50-130-15 | SD-50-120-20 | SD-50-140-20 | SD-50-80-30-FI | SD-50-100-48-FI |
|---|---|---|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | | | | |
| Output Torque | Nm | 100 | 100 | 110 | 130 | 120 | 140 | 80 | 100 |
| Output Speed | rpm | 24 | 30 | 24 | 15 | 20 | 20 | 15-45 | 15-80 |
| Output Shaft [1] | mm | 25,4 | 25,4 | 25,4 | 25,4<br>31,75 | 25,4<br>31,75 | 25,4<br>31,75 | 25,4 | 25,4<br>31,75 |
| Max. Cycles Per Hour [2] | h | 12 | 14 | 10 | 10 | 8 | 8 | 25 | 20 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Max. Output Speed OPEN / CLOSE For Frequency Inverter Operation | rpm | 42 / 30 | 52 / 30 | 42 / 30 | 26 / 20 | 34 / 30 | 34 / 30 | -- | -- |
| Door Size [3] | $m^2$ | 30 | 30 | 45 | 45 | 50 | 50 | 30 | 45 |
| **Electrical Properties** | | | | | | | | | |
| Motor Power | kW | 0,37 | 0,55 | 0,55 | 0,37 | 0,37 | 0,55 | 0,55 | 0,75 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 1N~230 | 1N~230 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50 | 50 |
| Operating Current [4] | A | 2,7/1,6 | 3,8/2,2 | 3,8/2,2 | 2,3/1,3 | 1,8/1,1 | 3,9/2,3 | 5,0 | 6,0 |
| Fuse Protection, On Site | A | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [5] | °C | –20<br>40 (+60) | –20<br>+40 (+60) | –20<br>40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 |

1- Output shafts Ø25,0-Ø25,4-Ø30,0-Ø31,75 mm etc. can be made upon request.

2- One cycle corresponds to two door movements (opening and closing). The specified values represent 10 revolutions of the drive shaft per movement and an even distribution is assumed. Other limit speed ranges, ambient temperature and extra friction affect the value.

3- The values in the table take into account a weight of 13 kg/$m^2$ and assume full spring balance.In some cases the friction may be greater and this must be taken into account when calculating the values.

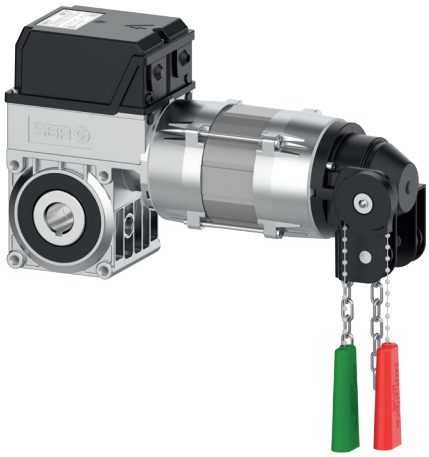
4- The current in door drives can reach up to 4 times the rated operating current for limited times.

5- Allowable temperature -20°C..+40°C (+60°C). When using the +40°C..+60°C temperature range, half of the maximum movements per hour should be used.

↘ If frequency inverter drives are used, increasing the driving speed by 10% will cause a 5% decrease in drive torque.This should be considered when choosing a driver.

↘ In gearmotors powered at a frequency of 60Hz (and at the same voltage), multipliers are used for some performance figures: Output torque: 0,83 , and rotations in output: 1,2

# SD-50 WITH C1



## INCLUDED



Torque Bracket



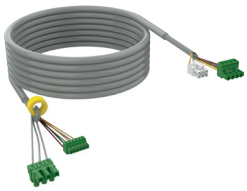
Pull Pope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

*PAGE 72*



**Opto-Sensor**

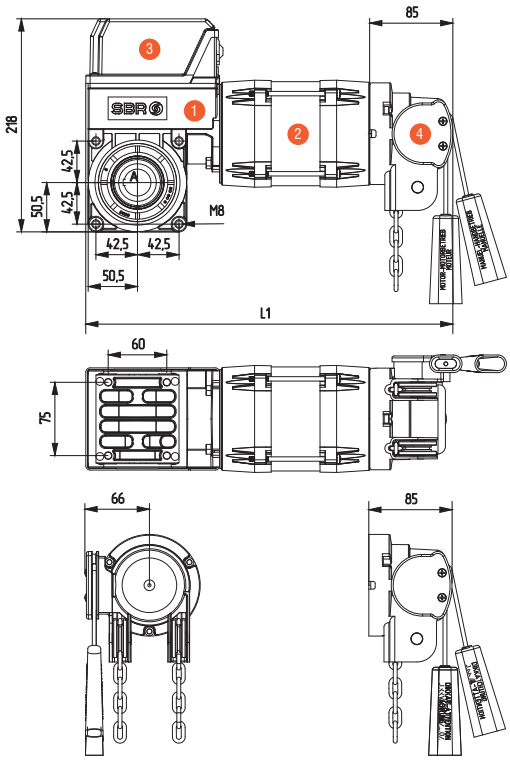
*PAGE 72*

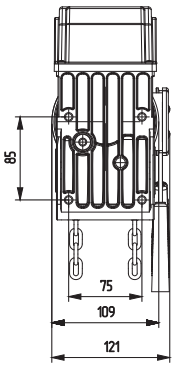


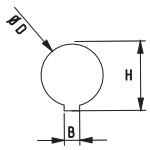
**Chain**

*PAGE 77*

## DIMENSION DRAWING



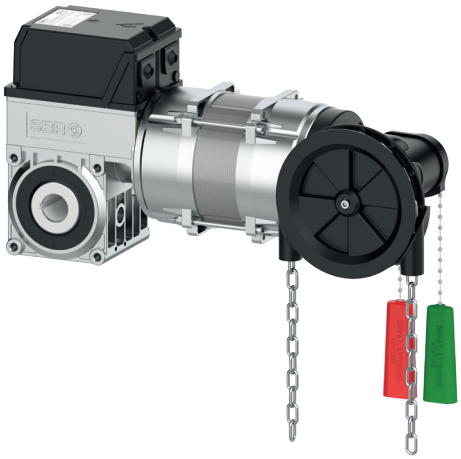




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C1 |

| SD SERIES | L1 |
|---|---|
| SD-50-100-24 | 376 |
| SD-50-100-30 | 391 |
| SD-50-110-24 | 391 |
| SD-50-130-15 | 390 |
| SD-50-140-20 | 410 |
| SD-50-80-30-FI | 391 |

| ØD | H | B |
|---|---|---|
| D25.4 | 28,4 | 6,35 |
| D31.75 | 34,7 | 6,35 |

# SD-50 WITH C2



## INCLUDED



Torque Bracket



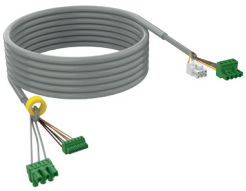
Pull Pope

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

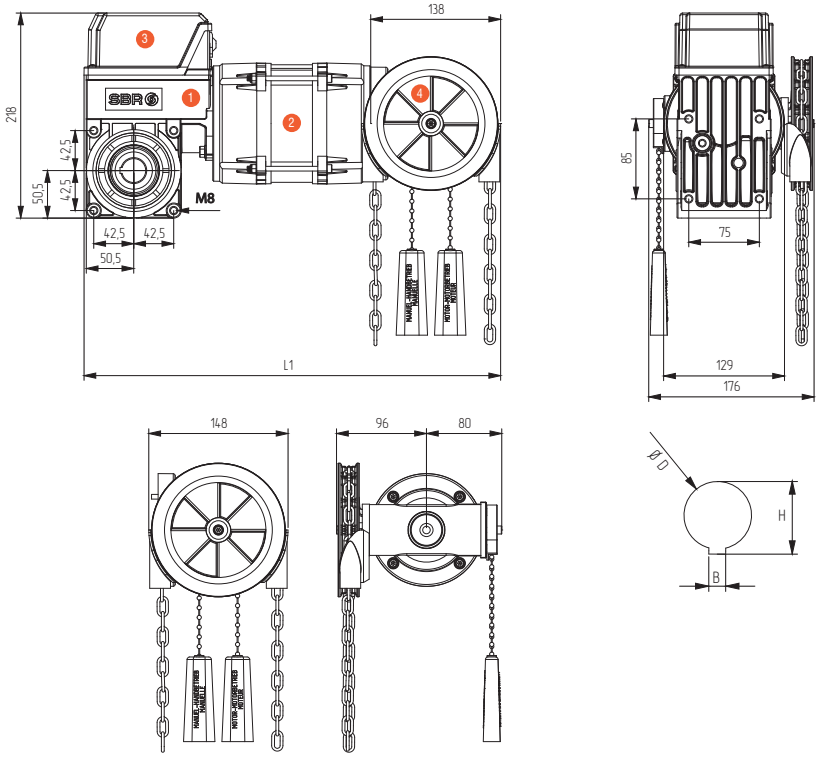
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING

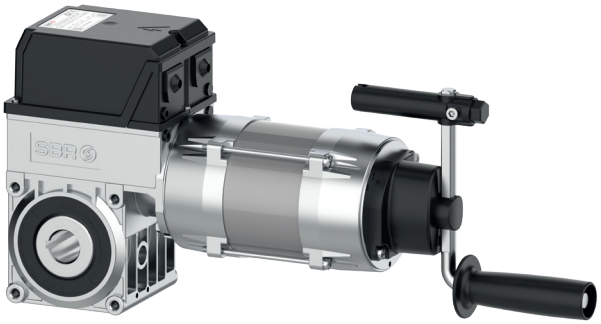



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |

| SD SERIES | L1 |
|---|---|
| SD-050-0130-015 | 443 |
| SD-050-0140-020 | 463 |
| SD-050-0100-048-FI | 453 |

| ØD | H | B |
|---|---|---|
| D25.4 | 28,4 | 6,35 |
| D31.75 | 34,7 | 6,35 |

# SD-50 WITH MK



## INCLUDED



Torque Bracket



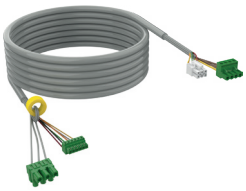
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

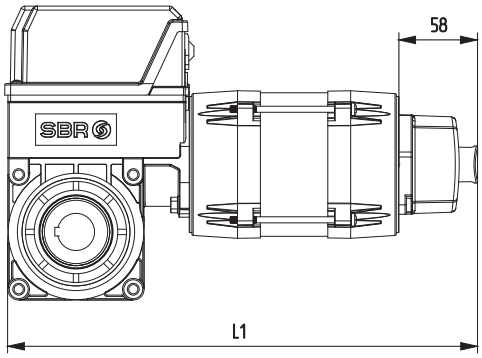
*PAGE 72*

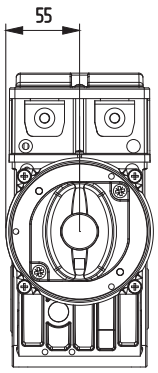


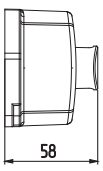
**Opto-Sensor**

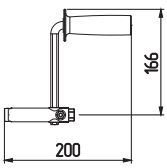
*PAGE 72*

## DIMENSION DRAWING



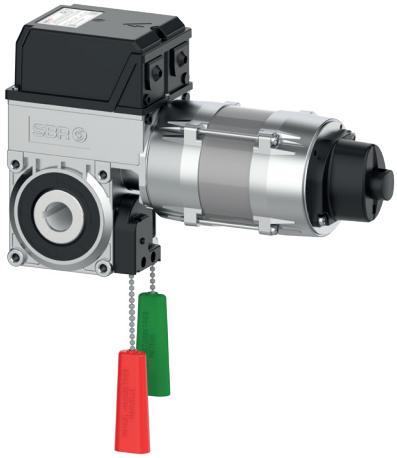




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |

| SD SERIES | L1 |
|---|---|
| SD-050-0130-015 | 443 |
| SD-050-0140-020 | 463 |
| SD-050-0100-048-FI | 453 |

| ØD | H | B |
|---|---|---|
| D25.4 | 28,4 | 6,35 |
| D31.75 | 34,7 | 6,35 |

# SD-50 WITH RK



## INCLUDED



Torque Bracket



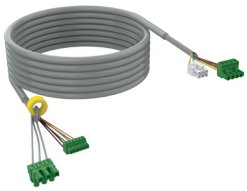
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

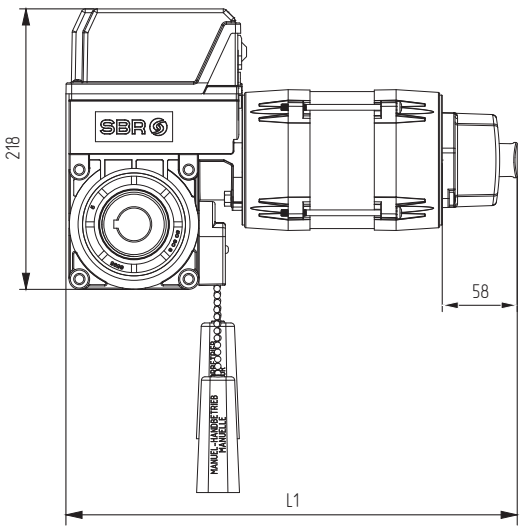
*PAGE 72*

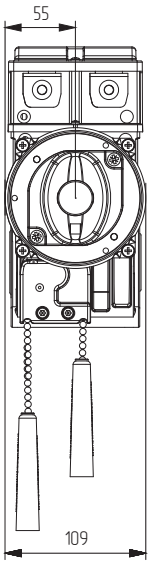


**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |

| SD SERIES | L1 |
|---|---|
| SD-050-0130-015 | 443 |
| SD-050-0140-020 | 463 |
| SD-050-0100-048-FI | 453 |

| ØD | H | B |
|---|---|---|
| D25.4 | 28,4 | 6,35 |
| D31.75 | 34,7 | 6,35 |

# DS SERIES NON BALANCED SECTIONAL DOORS DRIVES



| | | DS-50-140-20 | DS-63-170-24 | DS-63-200-19 | DS-85-250-24 | DS-85-350-24 |
|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | |
| Output Torque | Nm | 140 | 170 | 200 | 250 | 350 |
| Output Speed | rpm | 20 | 24 | 19 | 24 | 24 |
| Output Shaft [1] | mm | 25,4<br>31,75 | 25,0<br>25,4<br>30,0<br>31,75 | 25,0<br>25,4<br>30,0<br>31,75 | 30,0<br>31,75<br>40,0 | 30,0<br>31,75<br>40,0 |
| Max. Cycles Per Hour [2] | h | 8 | 10 | 10 | 11 | 11 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 |
| Max. Output Speed OPEN / CLOSE For Frequency Inverter Operation | rpm | 35 / 20 | 42 / 24 | 18 / 15 | 42 / 30 | 42 / 30 |
| **Electrical Properties** | | | | | | |
| Motor Power | kW | 0,55 | 0,75 | 0,75 | 0,75 | 1,10 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Current [3] | A | 3,9/2,3 | 4,4/2,6 | 4,6/2,7 | 4,6/2,7 | 5,6/3,3 |
| Fuse Protection, On Site | A | 10 | 10 | 10 | 10 | 10 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [4] | °C | –20<br>40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 |

**Application**

| | | kg | cm/sn | kg | cm/sn | kg | cm/sn | kg | cm/sn | kg | cm/sn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sectional Doors Cable Drum [mm] [A] | FF NL 18 | 177 | 15,2 | 215 | 18,2 | 253 | 14,4 | 316 | 18,2 | 443 | 18,2 |
| | F-160 | 161 | 16,7 | 195 | 20,1 | 229 | 15,9 | 287 | 20,1 | 401 | 20,1 |
| | F-200 | 128 | 20,9 | 156 | 25,1 | 183 | 19,9 | 229 | 25,1 | 321 | 25,1 |

| | mm | Maximum Suspend Weight In kg | | | | |
|---|---|---|---|---|---|---|
| Roller Door Shaft / Winding Tube EN 10220 [mm] [B] | 101,6 | 180 | 219 | 258 | 322 | 451 |
| | 108,0 | 172 | 208 | 245 | 307 | 429 |
| | 114,3 | 164 | 199 | 234 | 293 | 410 |
| | 133,0 | 145 | 175 | 206 | 258 | 361 |
| | 159,0 | 124 | 151 | 177 | 222 | 310 |
| | 177,8 | -- | 137 | 161 | 201 | 281 |
| | 193,7 | -- | -- | 149 | 186 | 261 |
| | 219,1 | -- | -- | -- | 167 | 234 |

| | | DS-85-450-24 | DS-85-600-15 | DS-110-600-24 | DS-110-800-24-HD | DS-110-1000-24-HD |
|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | |
| Output Torque | Nm | 450 | 600 | 600 | 800 | 1000 |
| Output Speed | rpm | 24 | 15 | 24 | 24 | 24 |
| Output Shaft [1] | mm | 30,0<br>31,75<br>40,0 | 40,0 | 55,0 | 55,0 | 55,0 |
| Max. Cycles Per Hour [2] | h | 11 | 9 | 10 | 10 | 7 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 |
| Max. Output Speed OPEN / CLOSE For Frequency Inverter Operation | rpm | 42 / 30 | 26 / 18 | 42 /30 | 42 / 30 | 34 / 24 |
| **Electrical Properties** | | | | | | |
| Motor Power | kW | 1,5 | 1,1 | 1,5 | 2,2 | 3,0 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Current [3] | A | 7,7/4,5 | 7,7/4,5 | 7,7/4,5 | 12,3/7,2 | 15,3/9 |
| Fuse Protection, On Site | A | 10 | 10 | 10 | 10 | 10 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [4] | °C | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 |

**Application**

| | | kg | cm/sn | kg | cm/sn | kg | cm/sn | kg | cm/sn | kg | cm/sn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sectional Doors Cable Drum [mm] [A] | F-160 | 516 | 20,1 | 688 | 12,6 | 688 | 20,1 | -- | -- | -- | -- |
| | F-200 | 413 | 25,1 | 550 | 15,7 | 550 | 25,1 | 734 | 25,1 | 917 | 25,1 |

| | mm | Maximum Suspend Weight In kg | | | | |
|---|---|---|---|---|---|---|
| Roller Door Shaft / Winding Tube EN 10220 [mm] [B] | 108,0 | 552 | -- | -- | -- | -- |
| | 114,3 | 527 | 703 | -- | -- | -- |
| | 133,0 | 465 | 619 | 619 | 826 | 1032 |
| | 159,0 | 399 | 532 | 532 | 709 | 886 |
| | 177,8 | 362 | 483 | 483 | 643 | 804 |
| | 193,7 | 336 | 447 | 447 | 597 | 746 |
| | 219,1 | 301 | 401 | 401 | 535 | 668 |
| | 244,5 | -- | 363 | 363 | 484 | 605 |
| | 273,0 | -- | 328 | 328 | 438 | 547 |
| | 298,5 | -- | -- | 303 | 403 | 504 |

# DS-NON BALANCED SECTIONAL DOOR DRIVES

A safety brake antifall mechanism (parachute) which prevents free fall of the door just in case gear broken are built in gearbox.

1- Output shafts Ø25,0-Ø25,4-Ø30,0-Ø31,75-Ø40,0 mm etc. can be made upon request.
2- One cycle corresponds to two door movements (opening and closing). The specified values represent 10 revolutions of the drive shaft per movement and an even distribution is assumed. For other limit speed ranges or for heavily used doors, drag forces must be reduced. A motor with cooler and higher duty cycle should be selected. (Please ask)
3- Max. current in door drives can reach up to 4 times the rated operating current for limited times.
4- Allowable temperature -20°C..+40°C (+60°C). When using the +40°C..+60°C temperature range, half of the maximum movements per hour should be used.

↘ If frequency inverter drives are used, increasing the driving speed by 10% will cause a 5% decrease in drive torque.This should be considered when choosing a driver.
↘ In gearmotors powered at a frequency of 60Hz (and at the same voltage), multipliers are used for some performance figures: Output torque: 0.83 , and rotations in output: 1.2

A- Driver Selection Table For Springless Doors
Using this table, the door drive can be determined easily and reliably.
The values in the table take into account safety reserve of 10%.
In some cases, the friction may be greater and these values should be taken into account when calculating.
For VL vertically raised doors, reduce weight by 20% more.

B- Selection Of Suitable Drivers For Roller Shutters
To select the optimum drive solution, you will need the diameter of the winding shaft in mm and the suspended weight of the door in kg.
With the help of these parameters, the appropriate roller shutter drive can be determined easily and reliably using this table.
All indicated weights take into account a safety reserve of 20 % and a slat thickness of 25 mm.
In some cases, the friction may be greater and this condition should be taken into account when calculating.
For double-walled, thick or deep-section insulated lamellas, reduce the weight in the table by 20%. The highest load normally occurs after 1-2 rotations of the shutter.
Their extra friction and possible diameter changes due to over-winding, must be taken into account when calculating these values.

Special solutions can be offered upon request. Please contact us for requests in different speeds and powers.

# DS-50 WITH MK



## INCLUDED



Torque Bracket



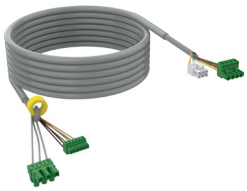
Crank

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

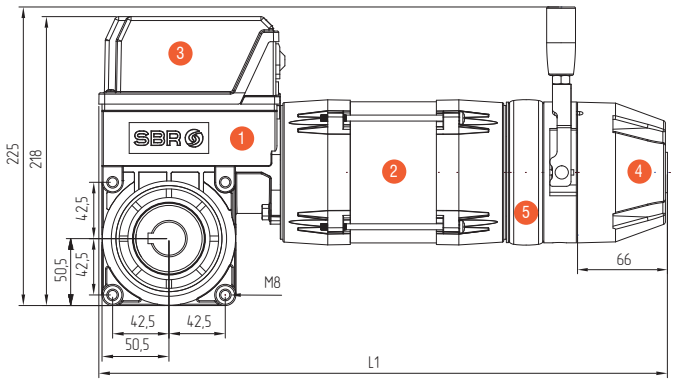
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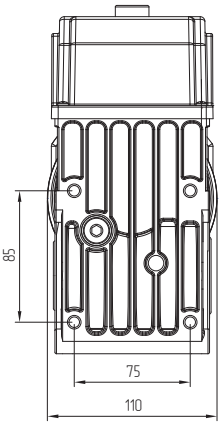


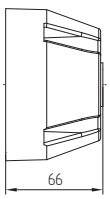
**Opto-Sensor**

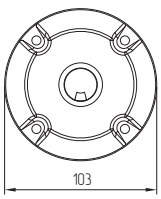
*PAGE 72*

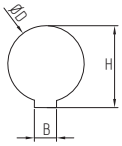
## DIMENSION DRAWING



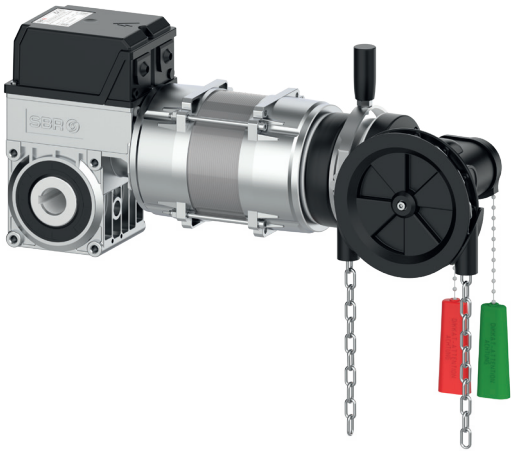




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Brake |

| DS SERIES | L1 |
|---|---|
| DS-50-140-20 | 410 |

| ØD | H | B |
|---|---|---|
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |
| D31.75 | 34,7 | 6,35 |

# DS-50 WITH C2



## INCLUDED



Torque Bracket



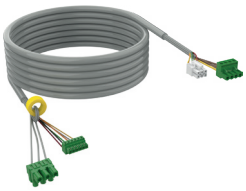
Pull Pope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

*PAGE 72*



**Opto-Sensor**

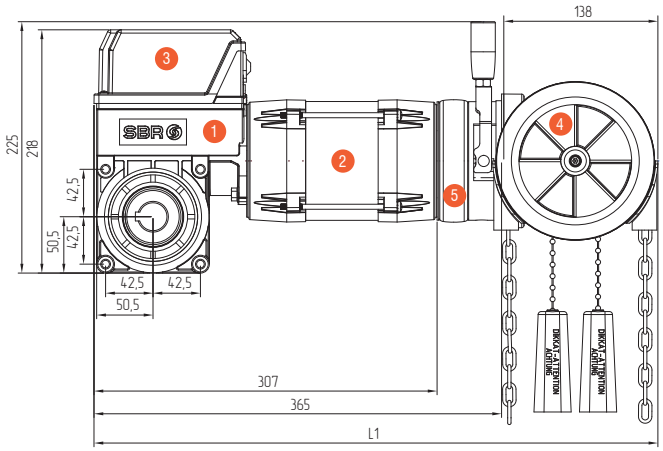
*PAGE 72*

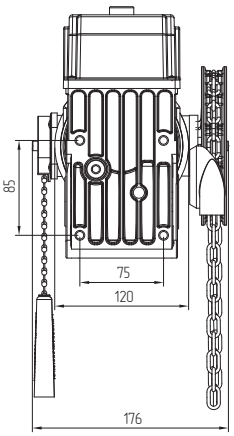


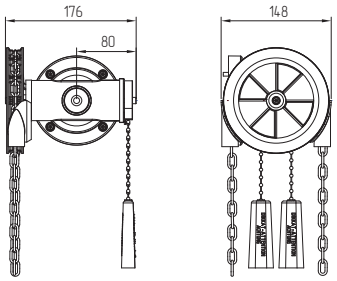
**Chain**

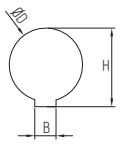
*PAGE 77*

## DIMENSION DRAWING



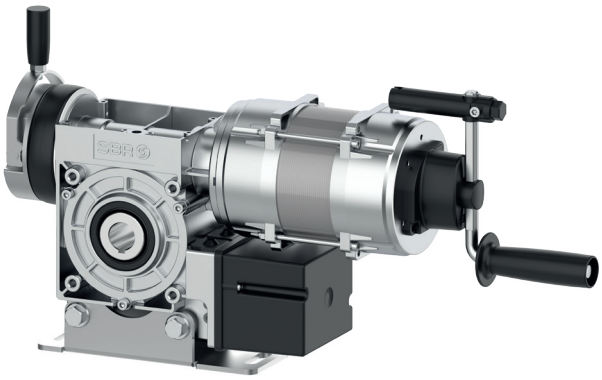




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Brake |

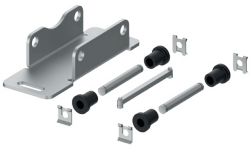
| DS SERIES | L1 |
|---|---|
| DS-50-140-20 | 463 |

| ØD | H | B |
|---|---|---|
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |
| D31.75 | 34,7 | 6,35 |

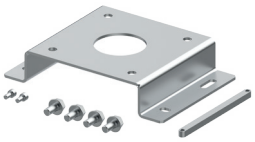
# DS-63 WITH MK



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



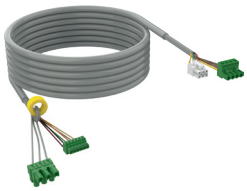
Crank

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

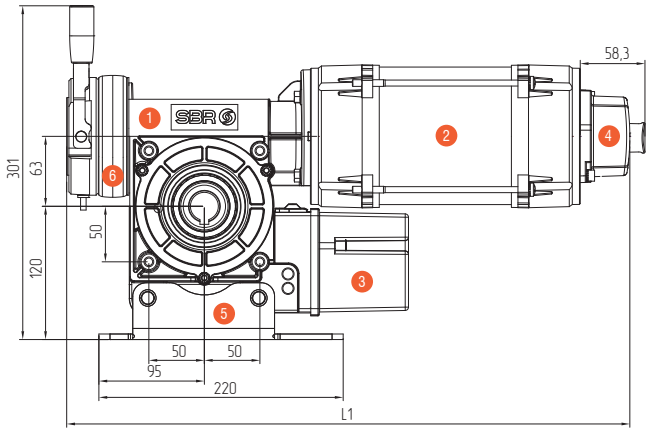
*PAGE 72*



**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING

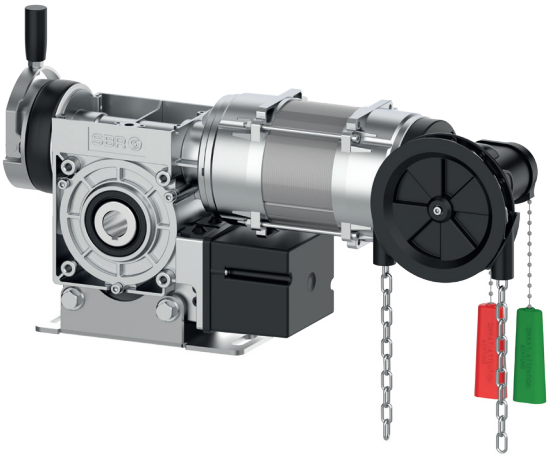



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |

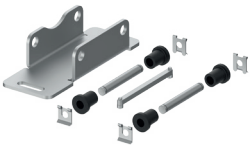
| DS SERIES | L1 |
|---|---|
| DS-63-170-24 | 455 |
| DS-63-200-19 | 455 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |
| D31.75 | 34,7 | 6,35 |

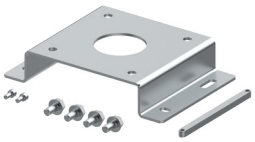
# DS-63 WITH C2



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



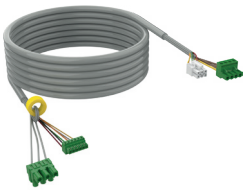
Pull Pope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

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**Opto-Sensor**

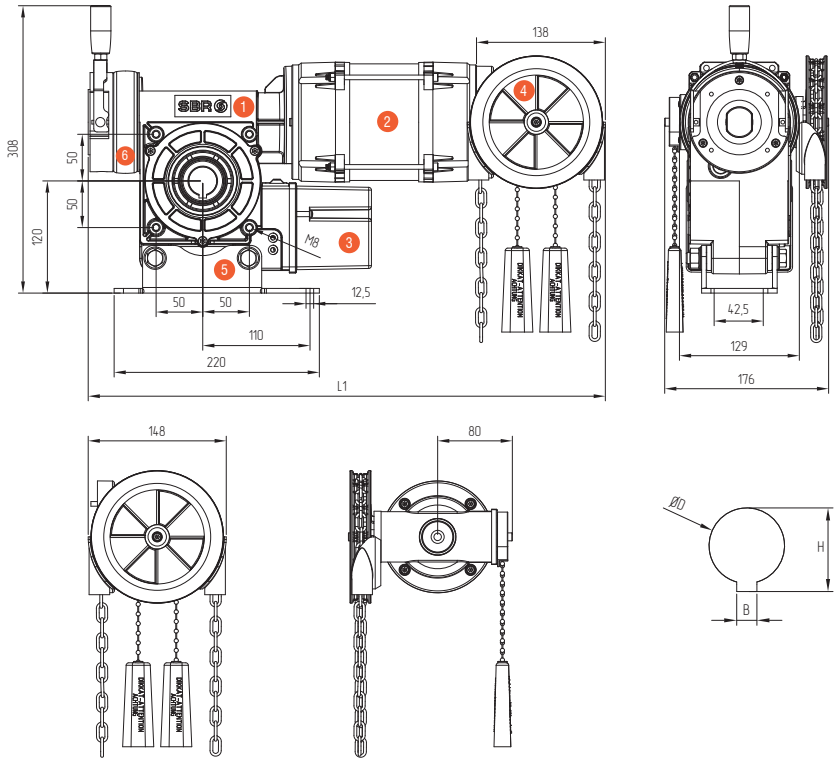
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING

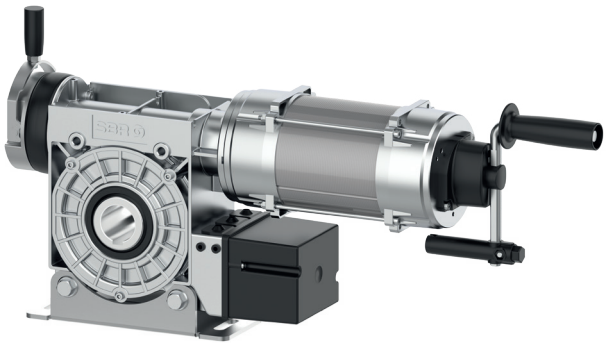



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

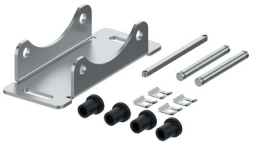
| DS SERIES | L1 |
|---|---|
| DS-63-170-24 | 534 |
| DS-63-200-19 | 534 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |
| D31.75 | 34,7 | 6,35 |

# DS-85 WITH MK



## INCLUDED



Torque Bracket



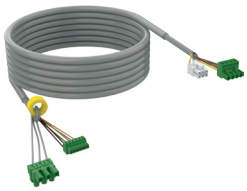
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

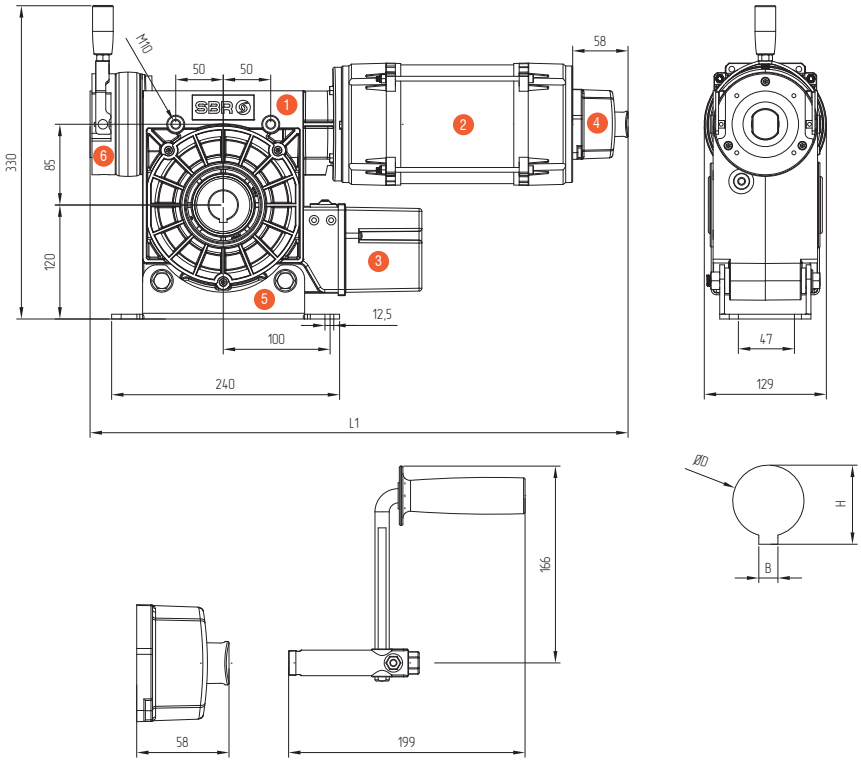
*PAGE 72*



**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING

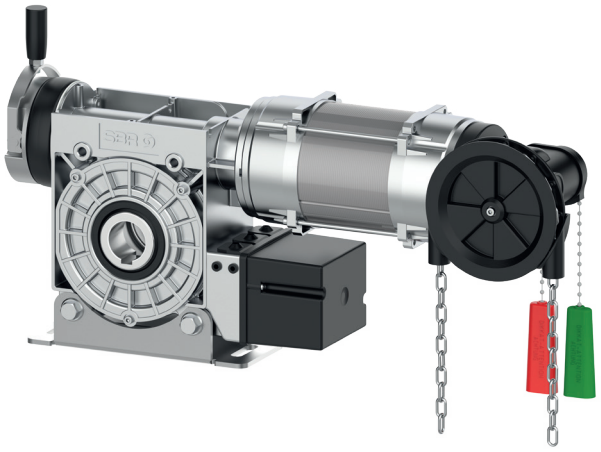



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

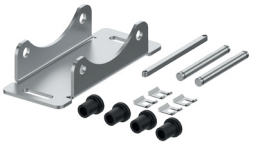
| DS SERIES | L1 |
|---|---|
| DS-63-170-24 | 534 |
| DS-63-200-19 | 534 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |
| D31.75 | 34,7 | 6,35 |

# DS-85 WITH C2



## INCLUDED



Torque Bracket



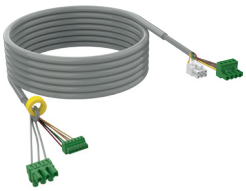
Pull Pope

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

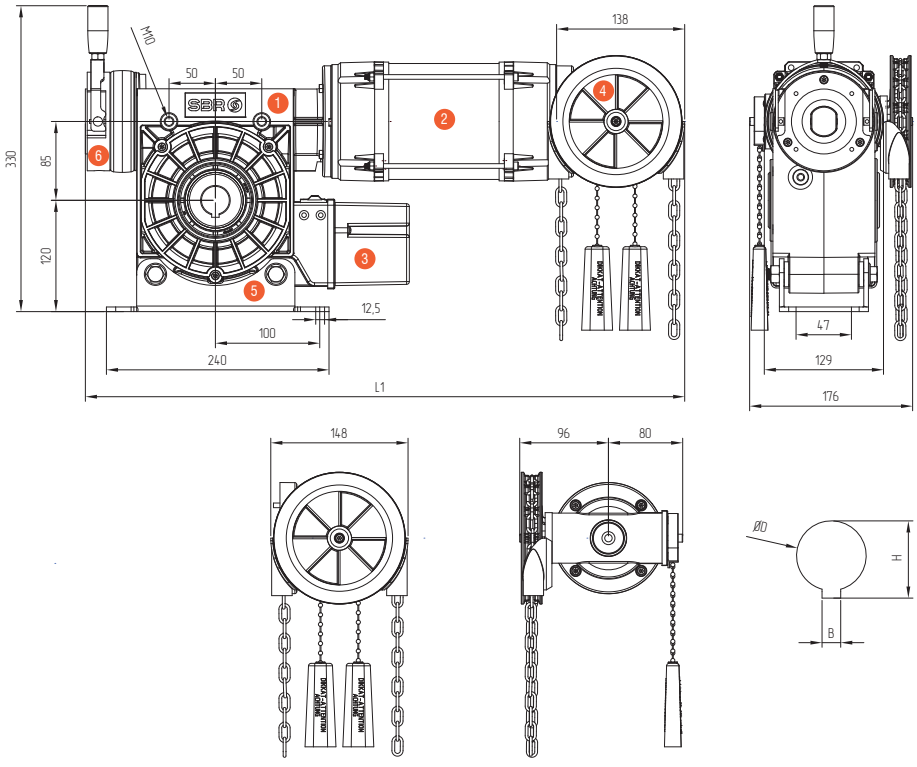
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING

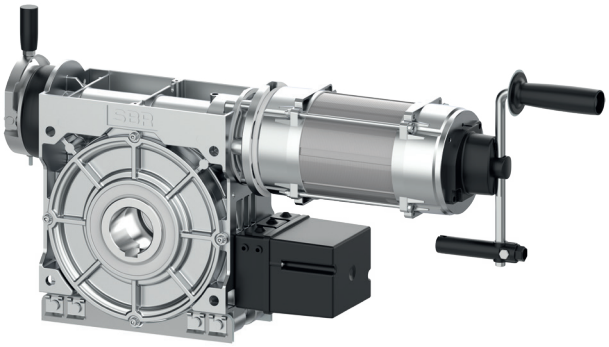



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

| DS SERIES | L1 |
|---|---|
| DS-63-170-24 | 534 |
| DS-63-200-19 | 534 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |
| D31.75 | 34,7 | 6,35 |

# DS-110 WITH MK



## INCLUDED



Torque Bracket



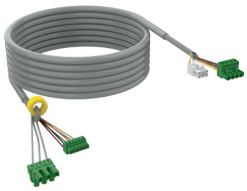
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

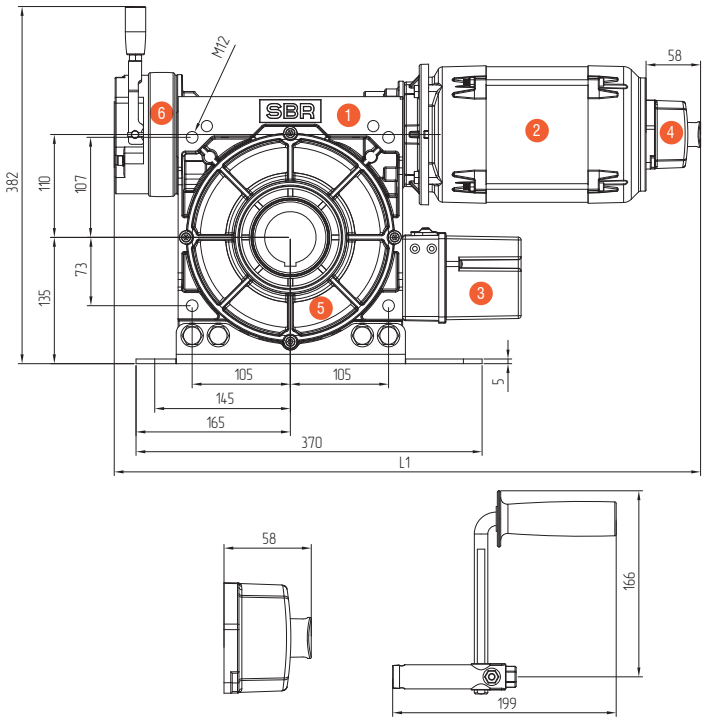
*PAGE 72*



**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING

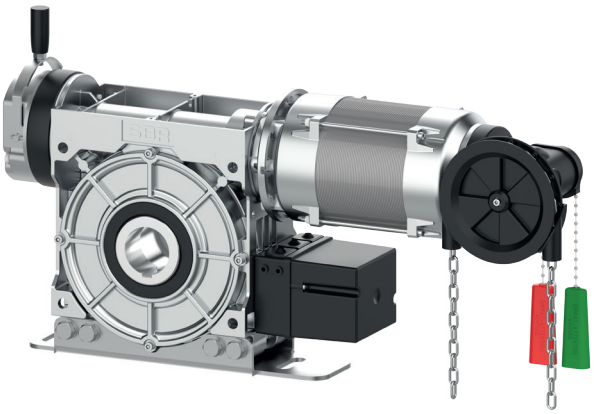



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |

| DS SERIES | L1 |
|---|---|
| DS-110-600-24 | 624 |
| DS-110-750-24 | 627 |
| DS-110-1000-24 | 627 |

| ØD | H | B |
|---|---|---|
| D55.0 | 64,4 | 16,00 |

# DS-110 WITH C2



## INCLUDED



Torque Bracket



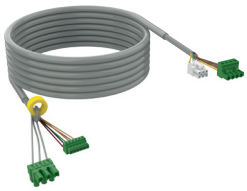
Pull Pope

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

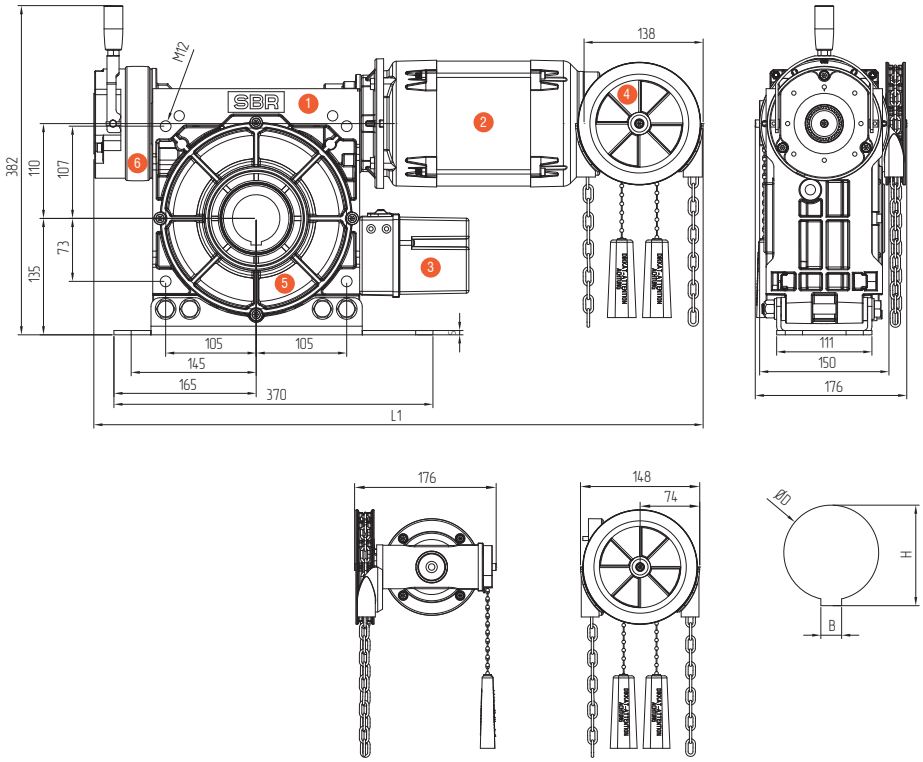
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

| DS SERIES | L1 |
|---|---|
| DS-110-600-24 | 704 |
| DS-110-750-24 | 707 |
| DS-110-1000-24 | 707 |

| ØD | H | B |
|---|---|---|
| D55.0 | 64,4 | 16,00 |

# RD SERIES ROLLER SHUTTER DOORS DRIVES



| | | RD-50-130-15 | RD-63-200-12 | RD-85-250-10 | RD-85-250-15 | RD-85-400-15 |
|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | |
| Output Torque | Nm | 130 | 200 | 250 | 250 | 400 |
| Output Speed | rpm | 15 | 12 | 10 | 15 | 15 |
| Output Shaft [1] | mm | 25,0<br>25,4<br>30 | 30,0 | 30,0<br>40,0 | 30,0<br>40,0 | 40,0 |
| Max. Cycles Per Hour [2] | h | 10 | 8 | 10 | 10 | 9 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 |
| Max. output speed OPEN / CLOSE for frequency inverter operation | rpm | 26 / 20 | 17 / 12 | 18 / 15 | 26 / 15 | 26 / 15 |
| **Electrical Properties** | | | | | | |
| Motor Power | kW | 0,37 | 0,55 | 0,55 | 0,75 | 1,10 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Current [3] | A | 2,6/1,5 | 3,8/2,2 | 3,6/2,1 | 4,4/2,6 | 6,2/3,6 |
| Fuse Protection, On Site | A | 10 | 10 | 10 | 10 | 10 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [4] | °C | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 |
| **Application** | | | | | | |
| | mm | Maximum Suspend Weight In kg | | | | |
| Roller Door Shaft / Winding Tube Tube EN 10220 [mm] [A] | 101,6 | 167 | 258 | 322 | 322 | 515 |
| | 108,0 | 159 | 245 | 307 | 307 | 491 |
| | 114,3 | 152 | 234 | 293 | 293 | 468 |
| | 133,0 | 134 | 206 | 258 | 258 | 413 |
| | 159,0 | 115 | 177 | 222 | 222 | 355 |
| | 177,8 | -- | 161 | 201 | 201 | 322 |
| | 193,7 | -- | -- | 186 | 186 | 298 |
| | 219,1 | -- | -- | -- | 167 | 267 |

| | | RD-85-400-10 | RD-85-600-15 | RD-110-800-15 | RD-110-800-10 | RD-110-1200-8 | RD-110-1500-7 | RD-110-1800-7 |
|---|---|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | | | |
| Output Torque | Nm | 400 | 600 | 800 | 800 | 1200 | 1500 | 1800 |
| Output Speed | rpm | 10 | 15 | 15 | 10 | 8 | 7 | 7 |
| Output Shaft [1] | mm | 40 | 40 | 55 | 55 | 55 | 55 | 55 |
| Max. Cycles Per Hour [2] | h | 9 | 9 | 9 | 7 | 6 | 5 | 5 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Max. output speed OPEN / CLOSE for frequency inverter operation | rpm | 18 / 15 | 26 / 15 | 26 / 26 | 18 / 18 | 20 / 20 | 18 / 18 | 18 / 18 |
| **Electrical Properties** | | | | | | | | |
| Motor Power | kW | 0,75 | 1,10 | 1,50 | 1,10 | 1,50 | 1,10 | 1,50 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Current [3] | A | 5,1/3,0 | 5,6/3,3 | 7,7/4,5 | 5,6/3,3 | 7,7/4,5 | 5,6/3,3 | 7,7/4,5 |
| Fuse Protection, On Site | A | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [4] | °C | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 |

**Application**

| | mm | Maximum Suspend Weight In kg | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Roller Door Shaft / Winding Tube Tube EN 10220 [mm] [A] | 108,0 | 491 | -- | -- | -- | -- | -- | -- |
| | 114,3 | 468 | 703 | -- | -- | -- | -- | -- |
| | 133,0 | 413 | 619 | 826 | 826 | 1239 | -- | -- |
| | 159,0 | 355 | 532 | 709 | 709 | 1064 | 1330 | -- |
| | 177,8 | 322 | 483 | 643 | 643 | 965 | 1206 | 1448 |
| | 193,7 | 298 | 447 | 597 | 597 | 895 | 1119 | 1342 |
| | 219,1 | 267 | 401 | 535 | 535 | 802 | 1002 | 1203 |
| | 244,5 | -- | 363 | 484 | 484 | 726 | 908 | 1089 |
| | 273,0 | -- | 328 | 438 | 438 | 657 | 821 | 985 |
| | 298,5 | -- | -- | 403 | 403 | 605 | 756 | 908 |

A safety brake antifall mechanism (parachute) which prevents free fall of the door just in case gear broken are built in gearbox.

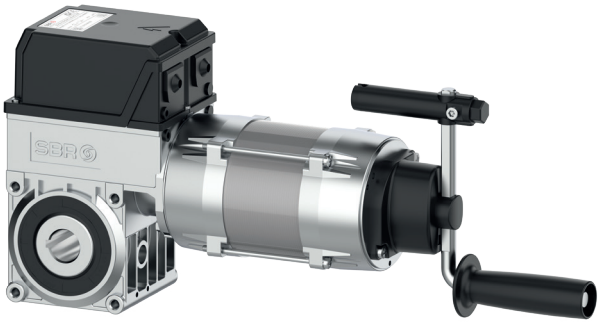
1- Output shafts Ø25,0-Ø25,4-Ø30,0-Ø31,75-Ø40,0 mm etc. can be made upon request.
2- One cycle corresponds to two door movements (opening and closing). The specified values represent 10 revolutions of the drive shaft per movement and an even distribution is assumed. For other limit speed ranges or for heavily used doors, drag forces must be reduced. A motor with cooler and higher duty cycle should be selected. (Please ask)
3- Max. current in door drives can reach up to 4 times the rated operating current for limited times.
4- Allowable temperature -20°C..+40°C (+60°C). When using the +40°C..+60°C temperature range, half of the maximum movements per hour should be used.

↘ If frequency inverter drives are used, increasing the driving speed by 10% will cause a 5% decrease in drive torque.This should be considered when choosing a driver.
↘ In gearmotors powered at a frequency of 60Hz (and at the same voltage), multipliers are used for some performance figures: Output torque: 0.83 , and rotations in output: 1.2

A - Selection Of Suitable Drivers For Roller Shutters
To select the optimum drive solution, you will need the diameter of the winding shaft in mm and the suspended weight of the door in kg.
With the help of these parameters, the appropriate roller shutter drive can be determined easily and reliably using this table.
All indicated weights take into account a safety reserve of 20 % and a slat thickness of 25 mm.
In some cases, the friction may be greater and this condition should be taken into account when calculating.
For double-walled, thick or deep-section insulated lamellas, reduce the weight in the table by 20%. The highest load normally occurs after 1-2 rotations of the shutter.
Their extra friction and possible diameter changes due to over-winding, must be taken into account when calculating these values.

Special solutions can be offered upon request. Please contact us for requests in different speeds and powers.

# RD-50 WITH MK



## INCLUDED



Torque Bracket



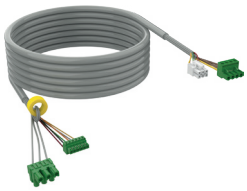
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

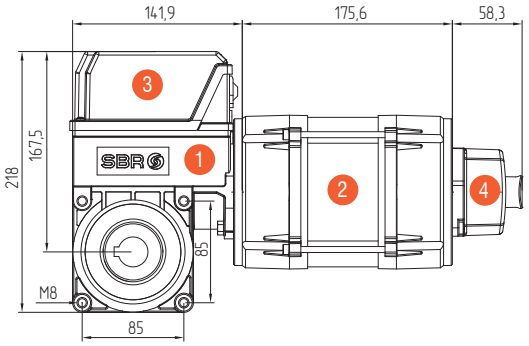
*PAGE 72*

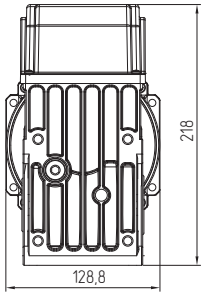


**Opto-Sensor**

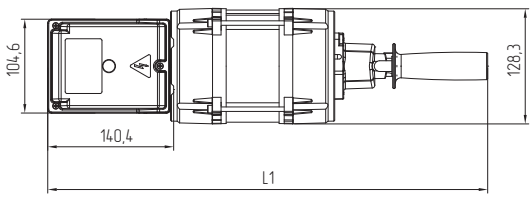
*PAGE 72*

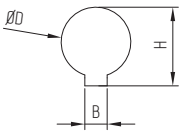
## DIMENSION DRAWING




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |

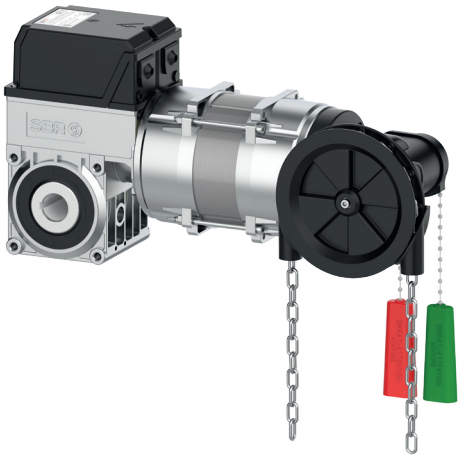



| RD SERIES | L1 |
|---|---|
| RD-50-130-15 | 363 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |

# RD-50 WITH C2



## INCLUDED



Torque Bracket



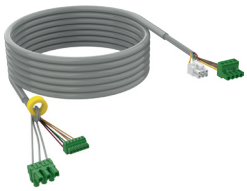
Pull Pope

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

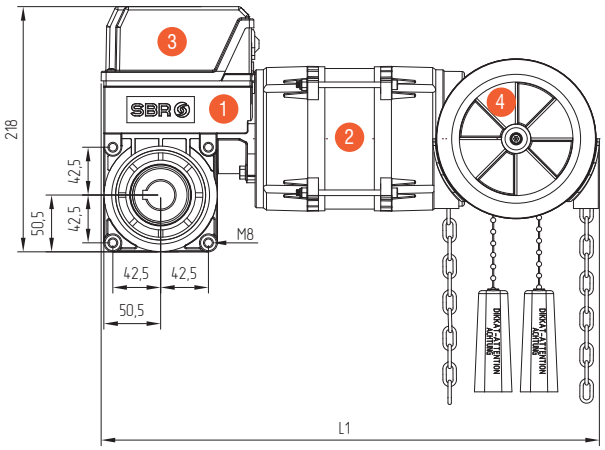
*PAGE 72*

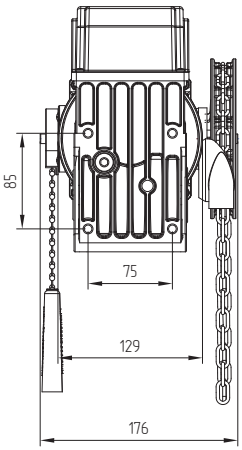


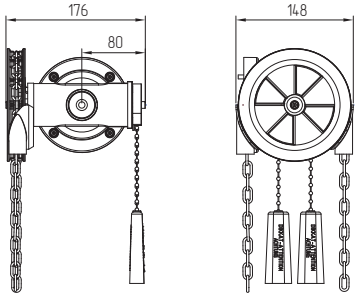
**Chain**

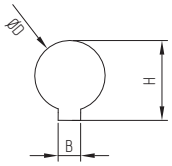
*PAGE 77*

## DIMENSION DRAWING



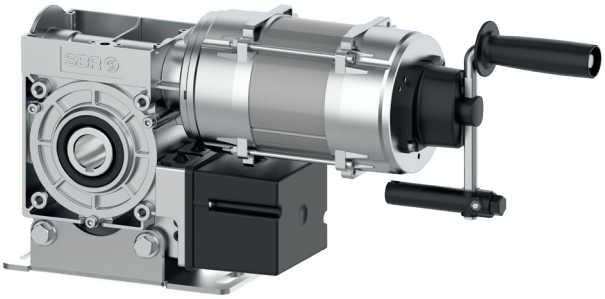




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |

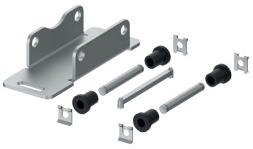
| RD SERIES | L1 |
|---|---|
| RD-50-130-15 | 443 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |

# RD-63 WITH MK



## INCLUDED



Torque Bracket



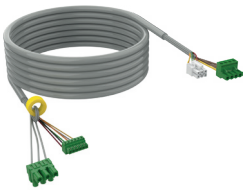
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

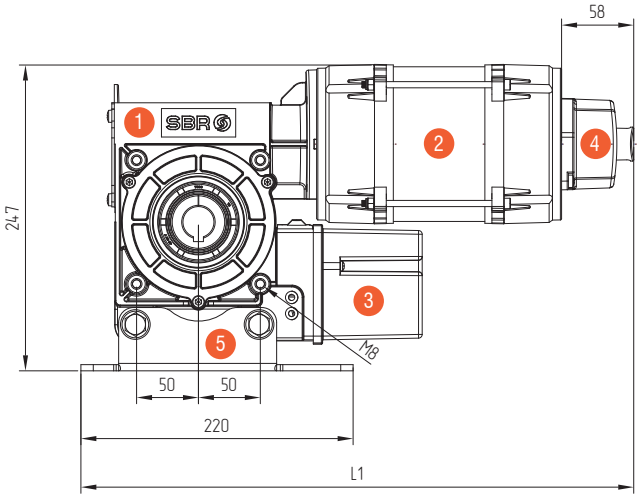
*PAGE 72*

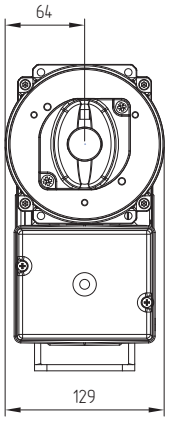


**Opto-Sensor**

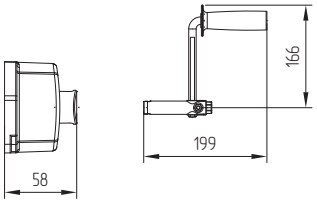
*PAGE 72*

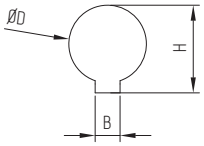
## DIMENSION DRAWING




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |

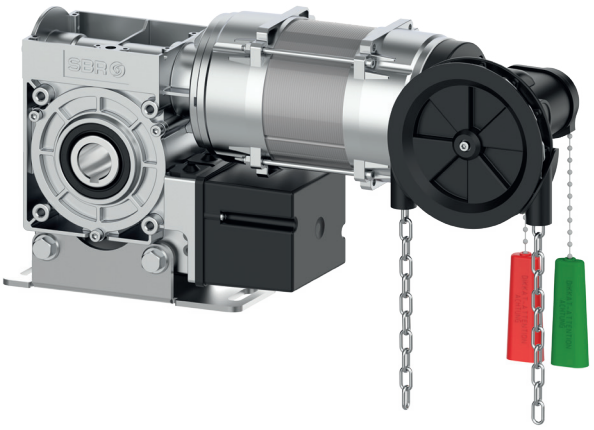


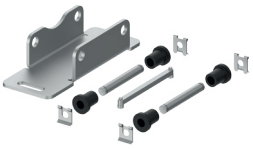

| RD SERIES | L1 |
|---|---|
| RD-63-200-012 | 447 |

| ØD | H | B |
|---|---|---|
| D30.0 | 33,3 | 8,00 |

# RD-63 WITH C2



## INCLUDED



Torque Bracket



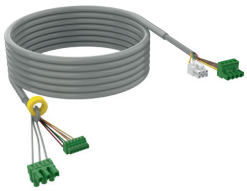
Pull Pope

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

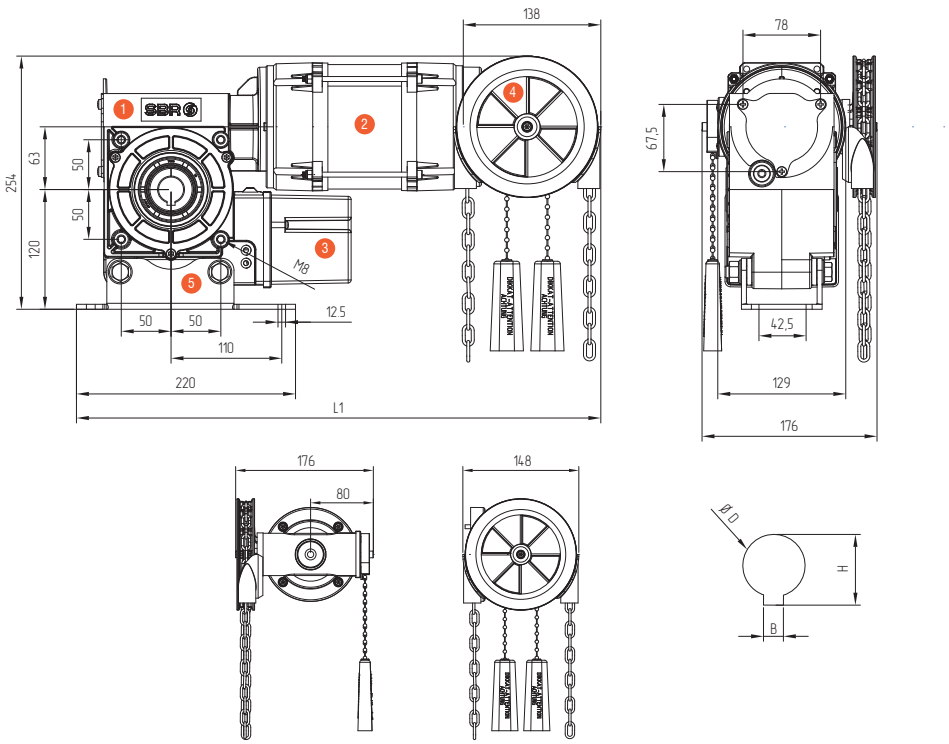
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING

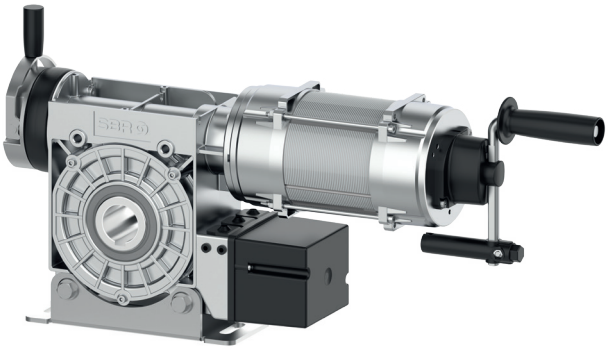



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |

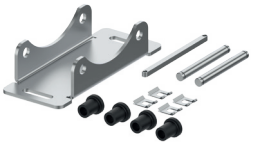
| RD SERIES | L1 |
|---|---|
| RD-63-200-012 | 527 |

| ØD | H | B |
|---|---|---|
| D30.0 | 33,3 | 8,00 |

# RD-85 WITH MK



## INCLUDED



Torque Bracket



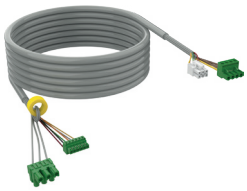
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

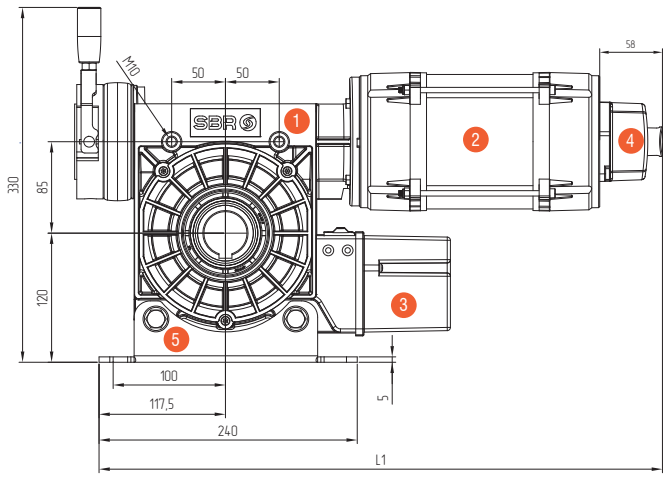
*PAGE 72*

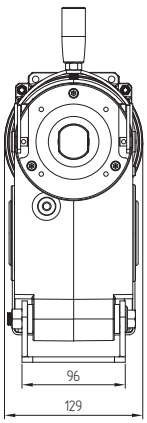


**Opto-Sensor**

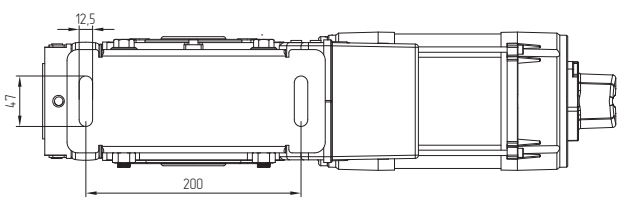
*PAGE 72*

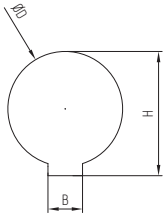
## DIMENSION DRAWING




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |

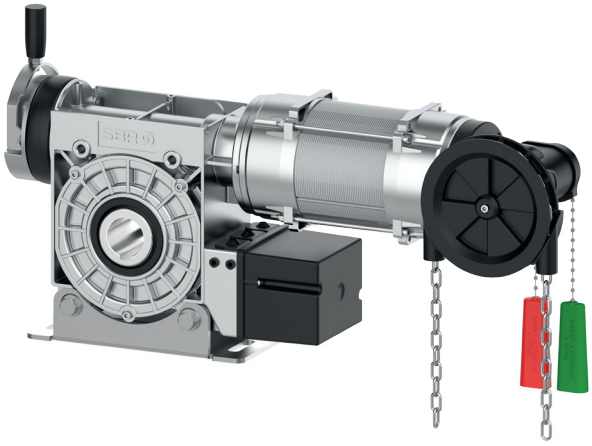


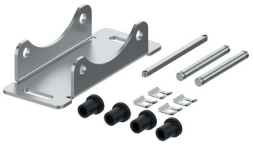

| RD SERIES | L1 |
|---|---|
| RD-85-250-010 | 499 |
| RD-85-250-015 | 479 |
| RD-85-400-015 | 499 |
| RD-85-400-10 | 524 |

| ØD | H | B |
|---|---|---|
| D30.0 | 33,3 | 8,00 |
| D40.0 | 43,3 | 12,00 |

# RD-85 WITH C2



## INCLUDED



Torque Bracket



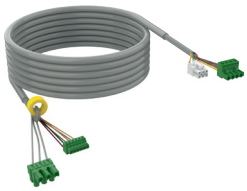
Pull Pope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

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**Opto-Sensor**

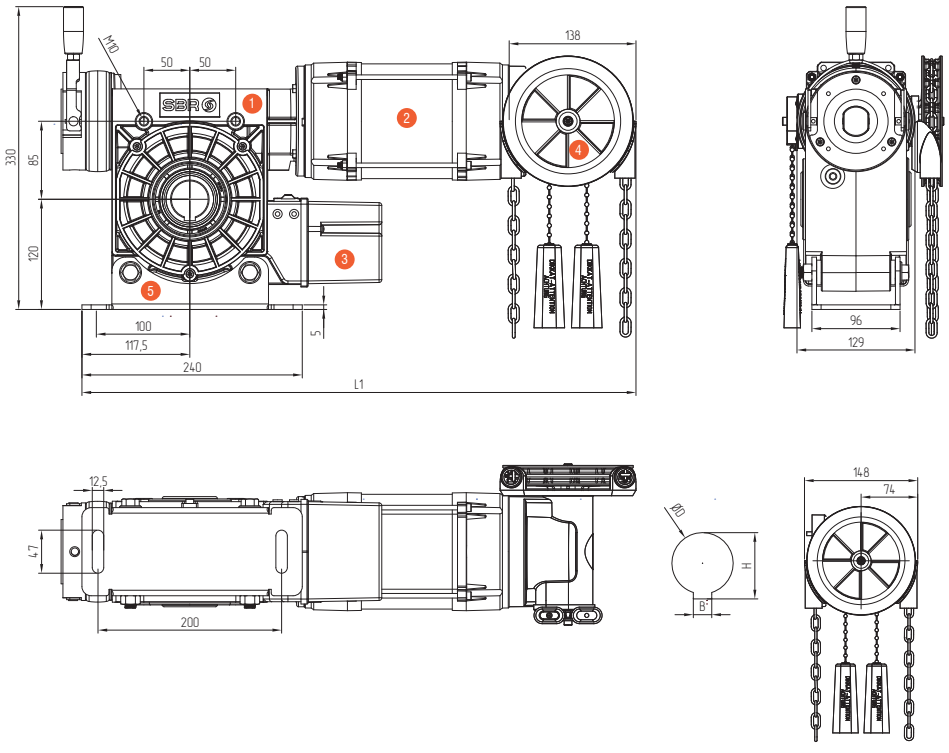
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**Chain**

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## DIMENSION DRAWING

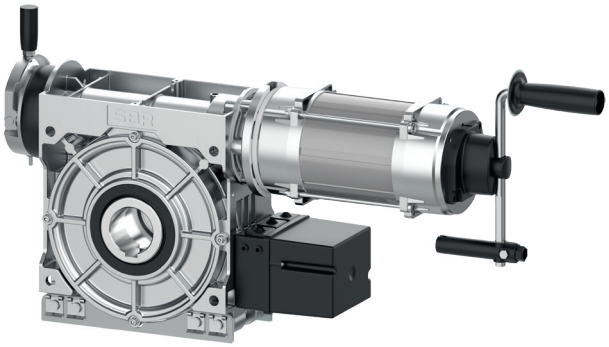



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |

| RD SERIES | L1 |
|---|---|
| RD-85-250-010 | 579 |
| RD-85-250-015 | 559 |
| RD-85-400-015 | 579 |
| RD-85-400-10 | 604 |

| ØD | H | B |
|---|---|---|
| D30.0 | 33,3 | 8,00 |
| D40.0 | 43,3 | 12,00 |

# RD-110 WITH MK



## INCLUDED



Torque Bracket



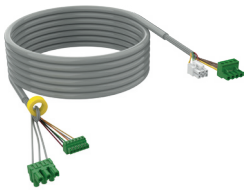
Crank

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

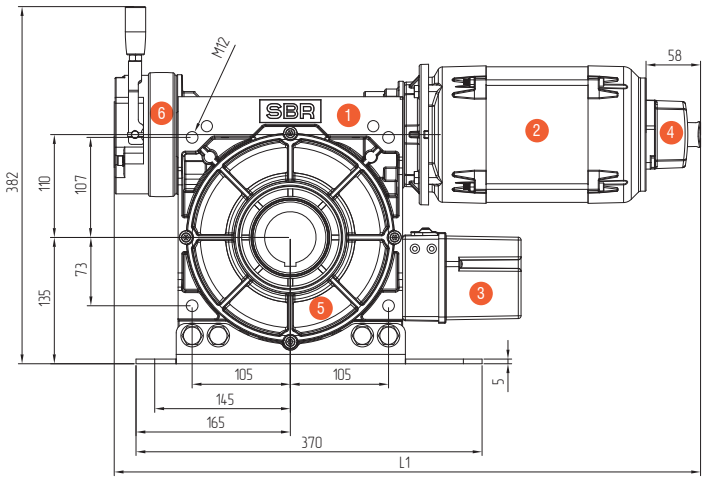
*PAGE 72*

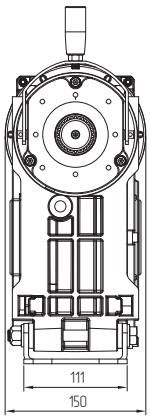


**Opto-Sensor**

*PAGE 72*

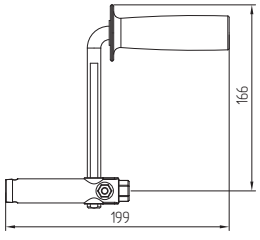
## DIMENSION DRAWING

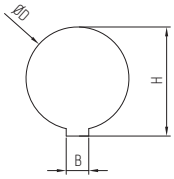



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |



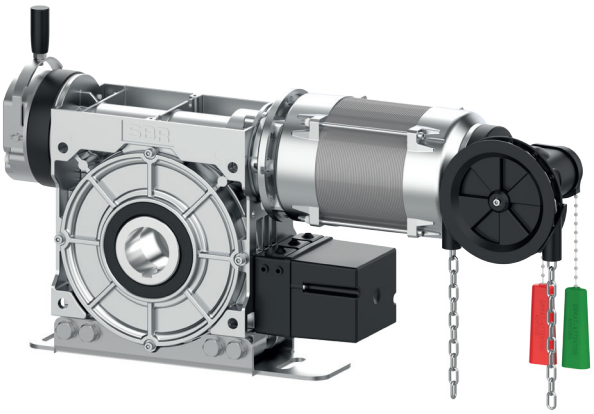




| RD SERIES | L1 |
|---|---|
| RD-110-800-15 | 695 |
| RD-110-800-10 | 685 |

| ØD | H | B |
|---|---|---|
| D55.0 | 64,4 | 16,00 |

# RD-110 WITH C3



## INCLUDED



Torque Bracket



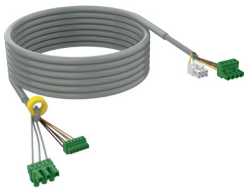
Pull Pope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

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**Opto-Sensor**

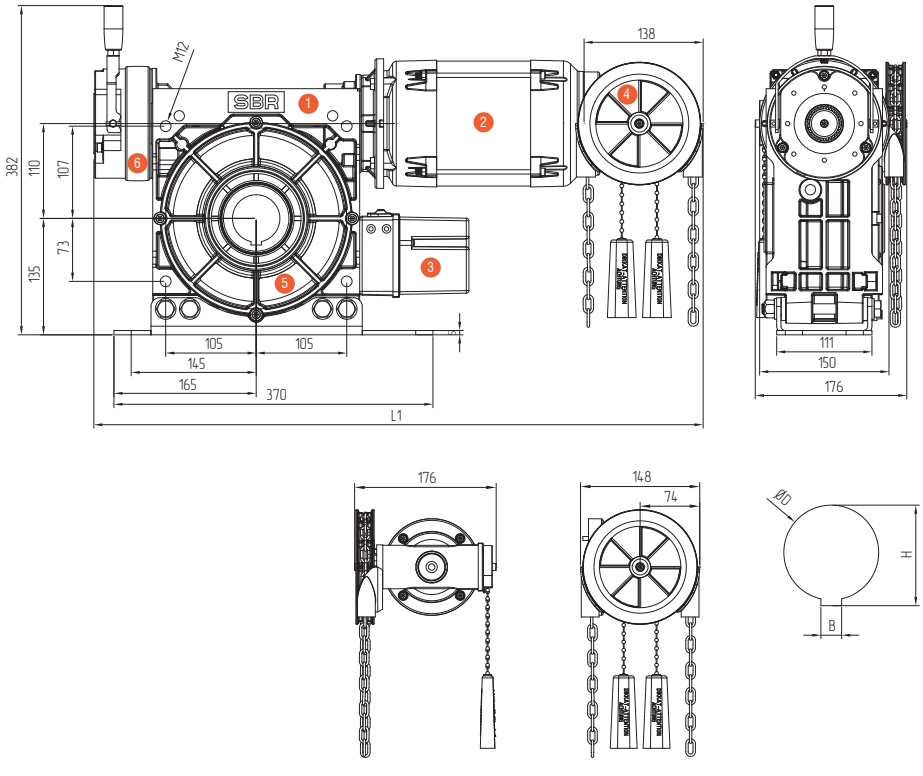
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**Chain**

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## DIMENSION DRAWING

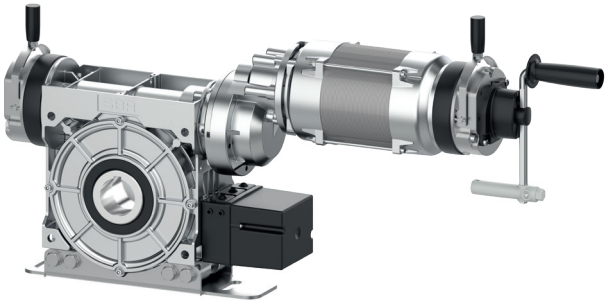



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

| RD SERIES | L1 |
|---|---|
| RD-110-800-15 | 775 |
| RD-110-800-10 | 765 |

| ØD | H | B |
|---|---|---|
| D55.0 | 64,4 | 16,00 |

# RD-110 WITH MK



## INCLUDED



Torque Bracket



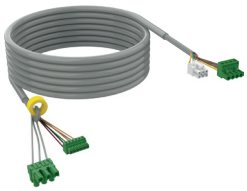
Crank

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

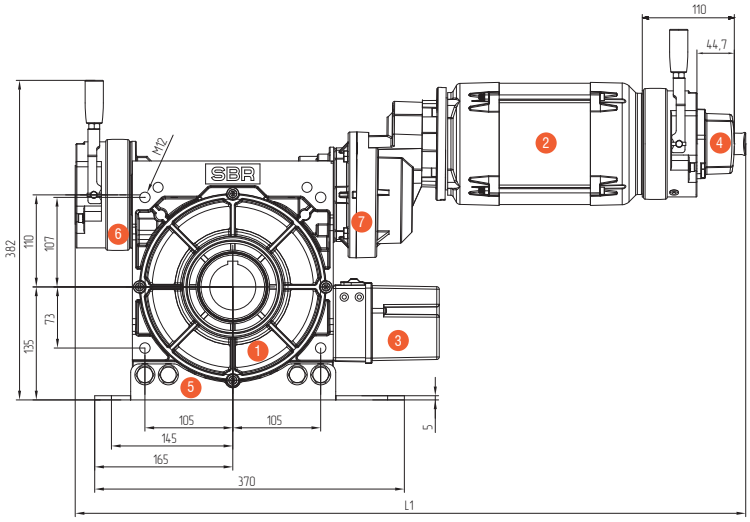
*PAGE 72*

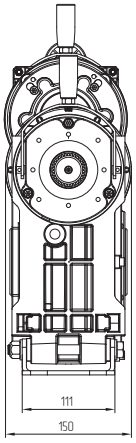


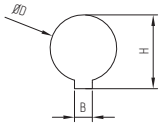
**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING



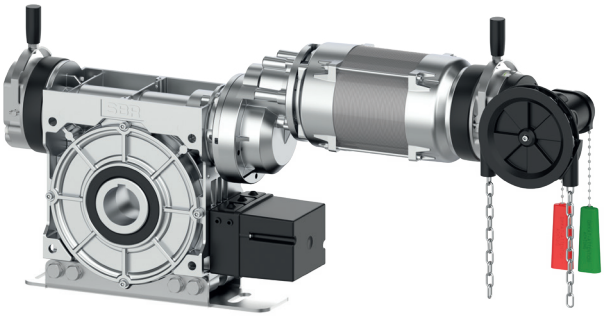




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |
| 7 | Intermediate Gear |

| RD SERIES | L1 |
|---|---|
| RD-110-1200-8 | 880 |
| RD-110-1500-7 | 870 |
| RD-110-1800-7 | 880 |

| ØD | H | B |
|---|---|---|
| D55.0 | 64,4 | 16,00 |

# RD-110 WITH C3



## INCLUDED



Torque Bracket



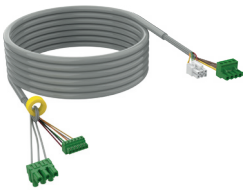
Pull Pope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

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**Opto-Sensor**

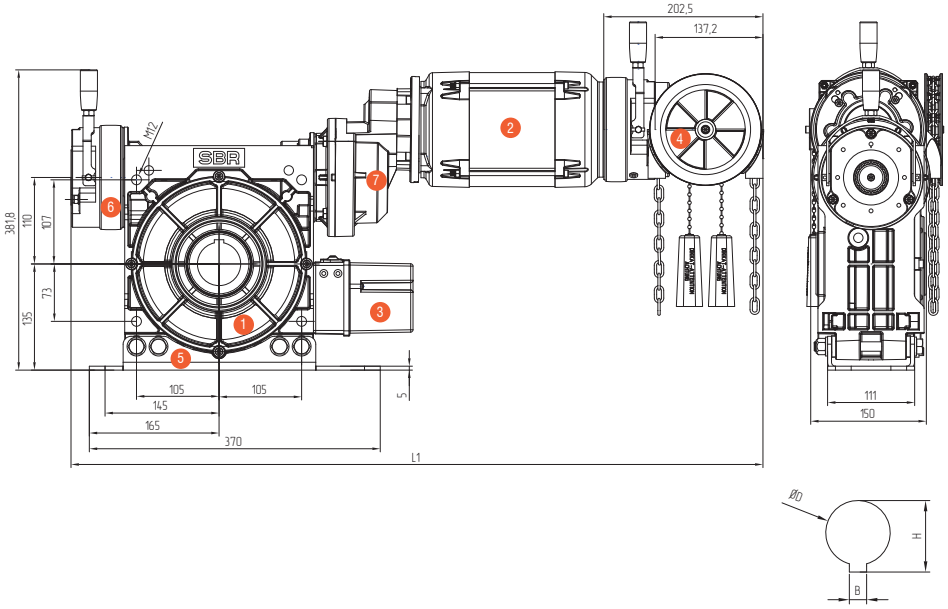
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**Chain**

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## DIMENSION DRAWING




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |
| 7 | Intermediate Gear |

| RD SERIES | L1 |
|---|---|
| RD-110-1200-8 | 880 |
| RD-110-1500-7 | 870 |
| RD-110-1800-7 | 880 |

| ØD | H | B |
|---|---|---|
| D55.0 | 64,4 | 16,00 |

# PS SERIES

# HIGH SPEED DOOR DRIVES



| | | PS-50-100-45 | PS-50-45-95 | PS-50-60-95 | PS-50-40-140 | PS-50-60-140 | PS-63-160-45 | PS-63-80-90 | PS-63-60-135-FI |
|---|---|---|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | | | | |
| Output Torque | Nm | 100 | 45 | 60 | 40 | 60 | 160 | 80 | 60 |
| Output Speed | rpm | 45 | 95 | 95 | 140 | 140 | 45 | 90 | 135 |
| Output Shaft [1] | mm | 25,0<br>25,4<br>30,0<br>31,75 | 25,0<br>30,0 | 25,0<br>30,0 | 25,0<br>30,0 | 25,0<br>30,0 | 25,0<br>30,0 | 25,0<br>30,0 | 25,0<br>30,0 |
| Max. Cycles Per Hour [2] | h | 20 | 30 | 30 | 45 | 30 | 20 | 30 | 45 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Max. output speed OPEN / CLOSE for frequency inverter operation | rpm | 78 / 50 | 165 / 100 | 166 / 100 | 200 / 140 | 200 / 140 | 78 / 50 | 155 / 100 | 200 / 140 |
| **Electrical Properties** | | | | | | | | | |
| Motor Power | kW | 0,75 | 0,55 | 0,75 | 0,75 | 1,10 | 1,10 | 1,10 | 1,10 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Current [3] | A | 3,6/1,9 | 2,8/1,6 | 3,6/1,9 | 3,6/1,9 | 5,0/2,9 | 5,0/2,9 | 5,2/3,0 | 5,2/3,0 |
| Fuse Protection, On Site | A | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [4] | °C | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 |

**Application**

| | PIPE (Ø) | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz |
|---|---|---|---|---|---|---|---|---|---|
| Weights That Motors Can Lift According To Winding Diameter For PS Roll Door (Kg) | 101,6 | 129 - (90) | 58 - (41) | 77 - (54) | 52 - (36) | 77 - (54) | 206 - (144) | 103 - (72) | 77 - (54) |
| | 108,0 | 123 - (86) | 55 - (39) | 74 - (52) | 49 - (34) | 74 - (52) | 195 - (137) | 98 - (69) | 74 - (52) |
| | 114,3 | 117 - (82) | 53 - (37) | 70 - (49) | 47 - (33) | 70 - (49) | 188 - (131) | 94 - (66) | 70 - (49) |
| | 133,0 | 103 - (72) | 46 - (33) | 62 - (43) | 41 - (29) | 62 - (43) | 165 - (116) | 83 - (58) | 62 - (43) |
| | 159,0 | 99 - (69) | 44 - (31) | 59 - (42) | 40 - (28) | 59 - (42) | 158 - (111) | 79 - (55) | 59 - (42) |
| | 177,8 | 89 - (62) | 40 - (28) | 53 - (37) | 35 - (25) | 53 - (37) | 142 - (99) | 71 - (50) | 53 - (37) |
| | 193,7 | 75 - (52) | 34 - (23) | 45 - (31) | 30 - (21) | 45 - (31) | 119 - (84) | 60 - (42) | 45 - (31) |
| | 219,1 | 67 - (47) | 30 - (21) | 40 - (28) | 55 - (39) | 37 - (26) | 25 - (17) | 37 - (26) | 55 - (39) |
| Weights That Motors Can Lift According To Winding Diameter For PS Folding Door (Kg) | 101,6 | 152 - (106) | 68 - (48) | 91 - (64) | 61 - (42) | 91 - (64) | 243 - (170) | 121 - (85) | 91 - (64) |
| | 108,0 | 143 - (100) | 64 - (45) | 86 - (60) | 57 - (40) | 86 - (60) | 229 - (160) | 114 - (80) | 86 - (60) |
| | 114,0 | 136 - (95) | 61 - (43) | 82 - (57) | 54 - (38) | 82 - (57) | 217 - (152) | 109 - (76) | 82 - (57) |
| | 133,0 | 117 - (82) | 53 - (37) | 70 - (49) | 47 - (33) | 70 - (49) | 188 - (131) | 94 - (66) | 70 - (49) |
| | 140,0 | 112 - (78) | 50 - (35) | 67 - (47) | 45 - (31) | 67 - (47) | 179 - (125) | 89 - (63) | 67 - (47) |
| | 159,0 | 99 - (69) | 44 - (31) | 59 - (42) | 40 - (28) | 59 - (42) | 158 - (111) | 79 - (55) | 59 - (42) |
| | 193,7 | 82 - (57) | 37 - (26) | 49 - (34) | 33 - (23) | 49 - (34) | 131 - (91) | 65 - (46) | 49 - (34) |
| | 219,1 | 72 - (51) | 33 - (23) | 43 - (30) | 29 - (20) | 43 - (30) | 116 - (81) | 58 - (41) | 43 - (30) |

Maximum suspended weight in kg

| | | PS-85-300-35 | PS-85-400-35 | PS-85-140-90 | PS-85-200-90-HD | PS-85-250-90-HD | PS-85-100-140-FI | PS-85-130-140-FI-HD |
|---|---|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | | | |
| Output Torque | Nm | 300 | 400 | 140 | 200 | 250 | 100 | 130 |
| Output Speed | rpm | 35 | 35 | 90 | 90 | 90 | 140 | 140 |
| Output Shaft [1] | mm | 30,0<br>40,0 | 30,0<br>40,0 | 30,0<br>40,0 | 30,0<br>40,0 | 30,0<br>40,0 | 30,0<br>40,0 | 30,0<br>40,0 |
| Max. Cycles Per Hour [2] | h | 45 | 20 | 45 | 30 | 20 | 45 | 30 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Max. output speed OPEN / CLOSE for frequency inverter operation | rpm | 60 / 40 | 60 / 40 | 155 / 100 | 155 / 100 | 155 / 100 | 240 / 140 | 240 / 140 |
| **Electrical Properties** | | | | | | | | |
| Motor Power | kW | 1,10 | 1,50 | 1,50 | 2,20 | 3,00 | 1,50 | 2,20 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Current [3] | A | 5,2/3,0 | 8,8/5,1 | 8,8/5,1 | 11,0/6,5 | 14,5/8,4 | 7,5/4,3 | 12,3/7,2 |
| Fuse Protection, On Site | A | 10 | 10 | 10 | 16 | 16 | 10 | 16 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [4] | °C | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 |
| **Application** | | | | | | | | |
| | PIPE (Ø) | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz |
| Weights That Motors Can Lift According To Winding Diameter For PS Roll Door (Kg) | 101,6 | 386 - (271) | 515 - (361) | 180 - (126) | 258 - (180) | 322 - (225) | 129 - (90) | 167 - (117) |
| | 114,0 | 352 - (246) | 469 - (329) | 164 - (115) | 235 - (164) | 293 - (205) | 117 - (82) | 153 - (107) |
| | 133,0 | 310 - (217) | 413 - (289) | 145 - (101) | 206 - (145) | 258 - (181) | 103 - (72) | 134 - (94) |
| | 159,0 | 266 - (186) | 355 - (248) | 124 - (87) | 177 - (124) | 222 - (155) | 89 - (62) | 115 - (81) |
| | 193,7 | 224 - (157) | 298 - (209) | 104 - (73) | 149 - (104) | 186 - (131) | 75 - (52) | 97 - (68) |
| | 219,1 | 200 - (140) | 267 - (187) | 94 - (65) | 134 - (94) | 167 - (117) | 67 - (47) | 87 - (61) |
| Weights That Motors Can Lift According To Winding Diameter For PS Folding Door (Kg) | 101,6 | 455 - (318) | 606 - (424) | 212 - (149) | 303 - (212) | 379 - (265) | 152 - (106) | 197 - (138) |
| | 108,0 | 429 - (300) | 572 - (401) | 200 - (140) | 286 - (200) | 358 - (250) | 143 - (100) | 186 - (130) |
| | 114,0 | 408 - (285) | 544 - (381) | 190 - (133) | 272 - (190) | 340 - (238) | 136 - (95) | 177 - (124) |
| | 133,0 | 352 - (246) | 469 - (329) | 164 - (115) | 235 - (164) | 293 - (205) | 117 - (82) | 153 - (107) |
| | 140,0 | 335 - (235) | 447 - (313) | 156 - (109) | 223 - (156) | 279 - (195) | 112 - (78) | 145 - (102) |
| | 159,0 | 297 - (208) | 395 - (277) | 138 - (97) | 198 - (138) | 247 - (173) | 99 - (69) | 129 - (90) |
| | 193,7 | 245 - (172) | 327 - (229) | 114 - (80) | 163 - (114) | 204 - (143) | 82 - (57) | 106 - (74) |
| | 219,1 | 217 - (152) | 290 - (203) | 101 - (71) | 145 - (101) | 181 - (127) | 72 - (51) | 94 - (66) |

Maximum suspended weight in kg

| | | PS-85-150-140-FI-HD | PS-85-80-180-FI | PS-85-100-180-FI-HD | PS-85-140-180-FI-HD | PS-110-600-30-FI-HD | PS-110-800-30-FI-HD | PS-110-1000-30-FI-HD |
|---|---|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | | | |
| Output Torque | Nm | 150 | 80 | 100 | 140 | 600 | 800 | 1000 |
| Output Speed | rpm | 140 | 180 | 180 | 180 | 30 | 30 | 30 |
| Output Shaft [1] | mm | 30,0<br>40,0 | 30,0<br>40,0 | 30,0<br>40,0 | 30,0<br>40,0 | 55,0 | 55,0 | 55,0 |
| Max. Cycles Per Hour [2] | h | 20 | 60 | 60 | 60 | 25 | 20 | 15 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Max. output speed OPEN / CLOSE for frequency inverter operation | rpm | 240 / 140 | 300 / 180 | 300 / 180 | 300 / 180 | 50 / 30 | 50 / 30 | 50 / 30 |
| **Electrical Properties** | | | | | | | | |
| Motor Power | kW | 3,00 | 1,50 | 2,20 | 3,00 | 2,20 | 3,00 | 4,00 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Current [3] | A | 15,3/9,0 | 7,5/4,3 | 12,3/7,2 | 15,3/9,0 | 12,3/7,2 | 15,3/9,0 | |
| Fuse Protection, On Site | A | 16 | 10 | 16 | 16 | 16 | 16 | 16 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [4] | °C | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) | –20<br>+40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 |
| **Application** | | | | | | | | |
| | PIPE (Ø) | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz | 50 - (87) Hz |
| Weights That Motors Can Lift According To Winding Diameter For PS Roll Door (Kg) | 101,6 | 193 - (135) | 103 - (72) | 129 - (90) | 180 - (126) | 773 - (541) | 1031 - (721) | 1288 - (902) |
| | 114,0 | 176 - (123) | 94 - (66) | 117 - (82) | 164 - (115) | 704 - (493) | 939 - (657) | 1173 - (821) |
| | 133,0 | 155 - (108) | 83 - (58) | 103 - (72) | 145 - (101) | 619 - (434) | 826 - (578) | 1032 - (723) |
| | 159,0 | 133 - (93) | 71 - (50) | 89 - (62) | 124 - (87) | 532 - (372) | 709 - (496) | 886 - (620) |
| | 193,7 | 112 - (78) | 60 - (42) | 75 - (52) | 104 - (73) | 447 - (313) | 597 - (418) | 746 - (522) |
| | 219,1 | 100 - (70) | 53 - (37) | 67 - (47) | 94 - (65) | 401 - (281) | 535 - (374) | 668 - (468) |
| Weights That Motors Can Lift According To Winding Diameter For PS Folding Door (Kg) | 101,6 | 227 - (159) | 106 - (74) | 152 - (106) | 212 - (149) | 909 - (637) | 1213 - (849) | 1516 - (1061) |
| | 108,0 | 215 - (150) | 100 - (70) | 143 - (100) | 200 - (140) | 858 - (601) | 1145 - (801) | 1431 - (1001) |
| | 114,0 | 204 - (143) | 95 - (67) | 136 - (95) | 190 - (133) | 815 - (571) | 1087 - (761) | 1359 - (951) |
| | 133,0 | 176 - (123) | 82 - (57) | 117 - (82) | 164 - (115) | 704 - (493) | 939 - (657) | 1173 - (821) |
| | 140,0 | 168 - (117) | 78 - (55) | 112 - (78) | 156 - (109) | 670 - (469) | 894 - (626) | 1117 - (782) |
| | 159,0 | 148 - (104) | 69 - (48) | 99 - (69) | 138 - (97) | 593 - (415) | 791 - (554) | 998 - (692) |
| | 193,7 | 123 - (86) | 57 - (40) | 82 - (57) | 114 - (80) | 490 - (343) | 653 - (457) | 817 - (572) |
| | 219,1 | 109 -(76) | 51 - (36) | 72 - (51) | 101 - (71) | 435 - (304) | 580 - (406) | 725 - (507) |

Maximum suspended weight in kg

# PS-HIGH SPEED DOOR DRIVES

A safety brake antifall mechanism (parachute) which prevents free fall of the door just in case gear broken are built in gearbox.

1- Output shafts Ø25,0-Ø25,4-Ø30,0-Ø31,75-Ø40,0 mm etc. can be made upon request.
2- One cycle corresponds to two door movements (opening and closing). The specified values represent 10 revolutions of the drive shaft per movement and an even distribution is assumed. Other limit speed ranges, ambient temperature and extra friction affect the value.
3- The current in door drives can reach up to 4 times the rated operating current for limited times.
4- Allowable temperature -20°C..+40°C (+60°C). When using the +40°C..+60°C temperature range, half of the maximum movements per hour should be used.

↘ If frequency inverter drives are used, increasing the driving speed by 10% will cause a 5% decrease in drive torque.This should be considered when choosing a driver.
↘ In gearmotors powered at a frequency of 60Hz (and at the same voltage), multipliers are used for some performance figures: Output torque: 0.83 , and rotations in output: 1.2
↘ For drives with external electromagnetic brakes, Brake inspection should always be performed by qualified service engineers.

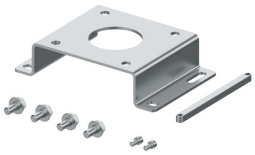
Selection Of Suitable Drive For Fast Pvc Door
To choose the optimal drive solution, you will need the diameter of the winding spindle in mm and the hanging weight of the door in kg.
With the help of these parameters, the appropriate door drive can be determined easily and reliably using this table.
Values in the table; It takes into account a curtain thickness of 25 mm for spiral PVC doors and 6 mm for folding PVC doors and a 20% safety reserve.
Extra friction and possible diameter changes due to over-winding in the first place should be taken into account when calculating these values.
The PS -FI series is for operation with a frequency converter. PS FI series; is the maximum weights at a frequency of 87 Hz, in the second row in the weight table.

Special solutions can be offered upon request. Please contact us for requests in different speeds and powers.

# PS-50 WITH MK



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



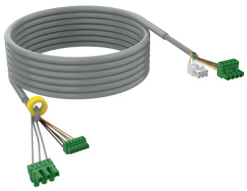
Crank

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

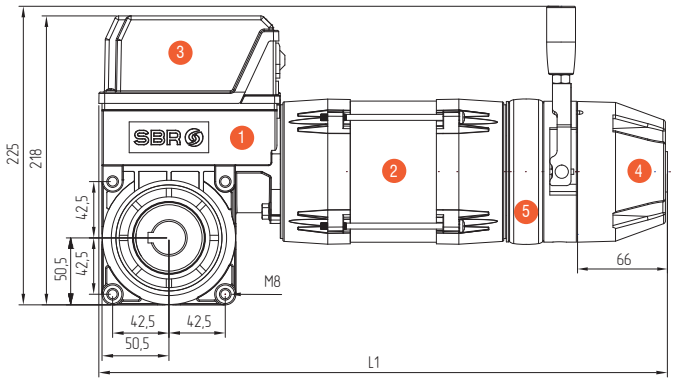
*PAGE 72*

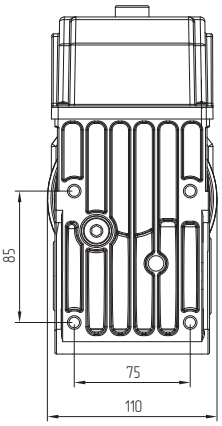


**Opto-Sensor**

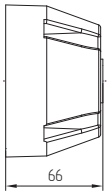
*PAGE 72*

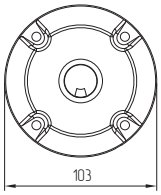
## DIMENSION DRAWING



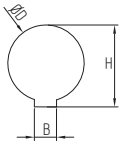




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Brake |



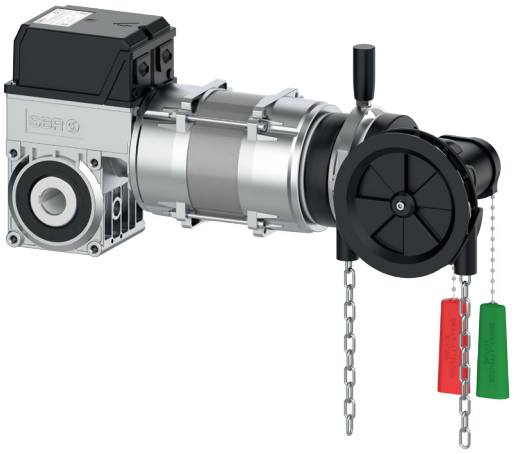




| PS SERIES | L1 |
|---|---|
| PS-50-100-45 | 410 |
| PS-50-45-95 | 405 |
| PS-50-60-95 | 410 |
| PS-50-40-140-FI | 410 |

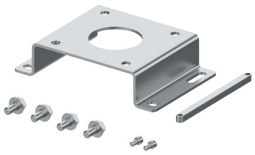



| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |
| D31.75 | 34,7 | 6,35 |

# PS-50 WITH C2



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



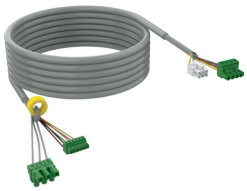
Pull Rope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

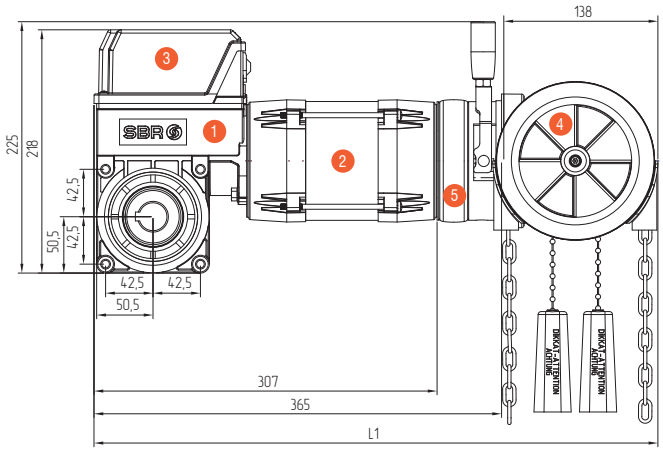
*PAGE 72*

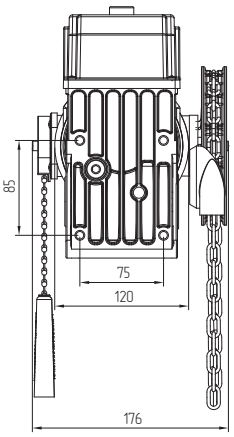


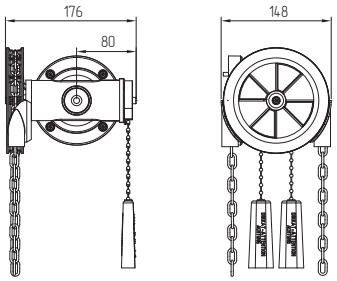
**Chain**

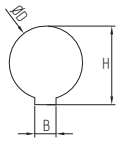
*PAGE 77*

## DIMENSION DRAWING



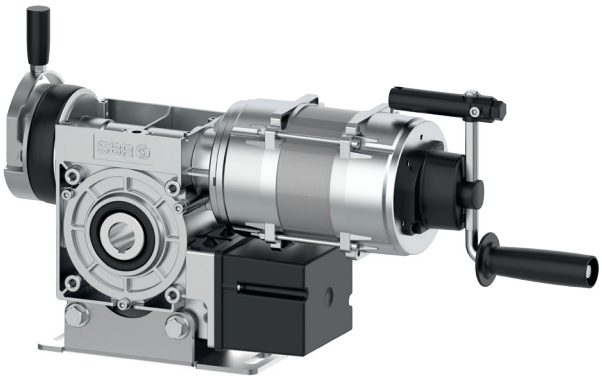




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Brake |

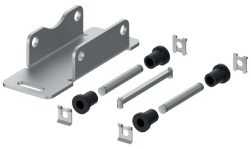
| PS SERIES | L1 |
|---|---|
| PS-50-100-45 | 490 |
| PS-50-45-95 | 495 |
| PS-50-60-95 | 490 |
| PS-50-40-140-FI | 490 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D25.4 | 28,4 | 6,35 |
| D30.0 | 33,3 | 8,00 |
| D31.75 | 34,7 | 6,35 |

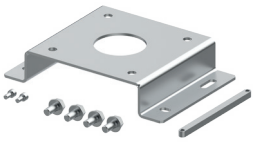
# PS-63 WITH MK



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



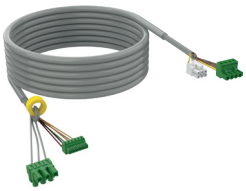
Crank

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

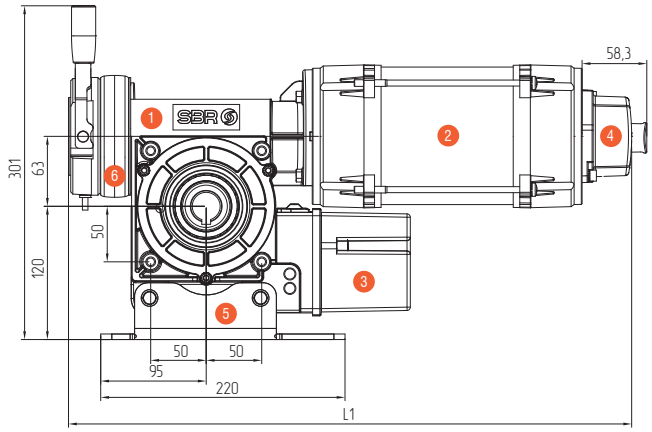
*PAGE 72*

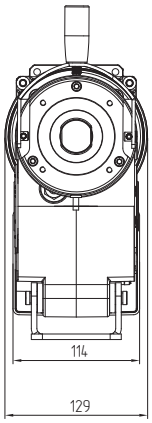


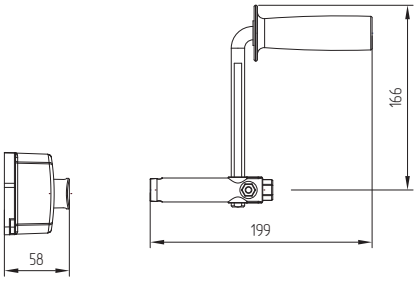
**Opto-Sensor**

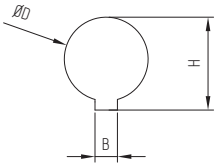
*PAGE 72*

## DIMENSION DRAWING



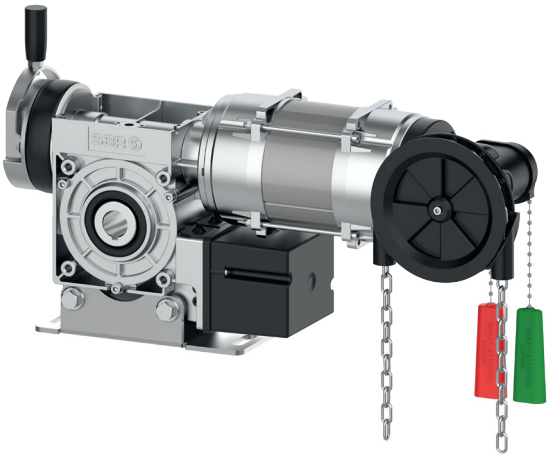




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |

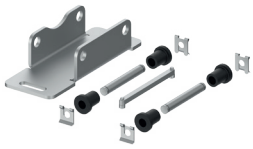
| PS SERIES | L1 |
|---|---|
| PS-63-160-45 | 455 |
| PS-63-80-90 | 455 |
| PS-63-60-135-FI | 455 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D30.0 | 33,3 | 8,00 |

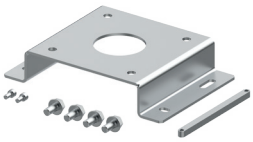
# PS-63 WITH C2



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



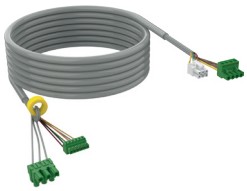
Pull Rope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

*PAGE 72*



**Opto-Sensor**

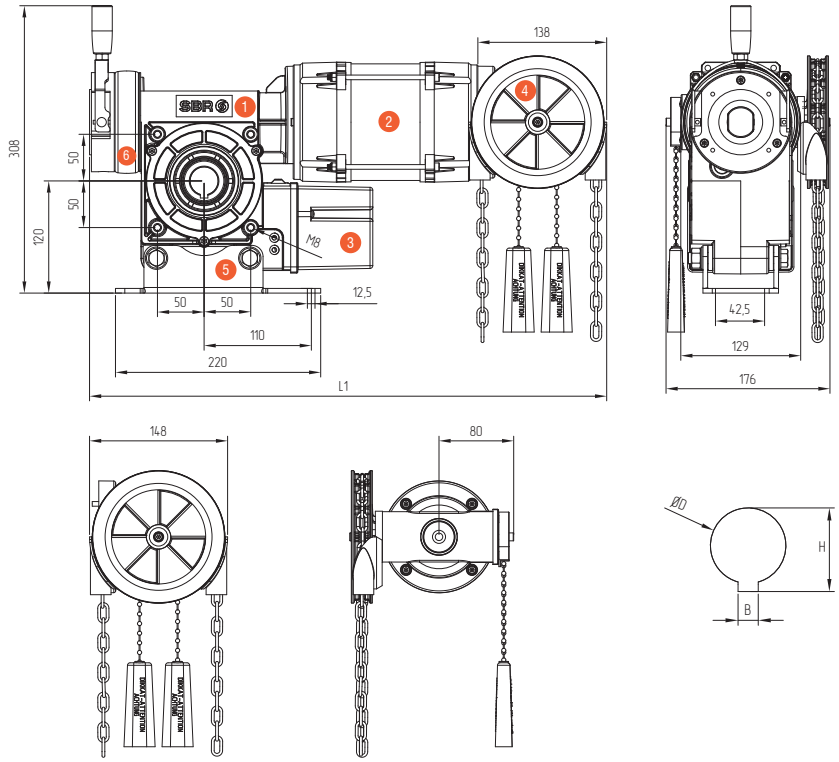
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING

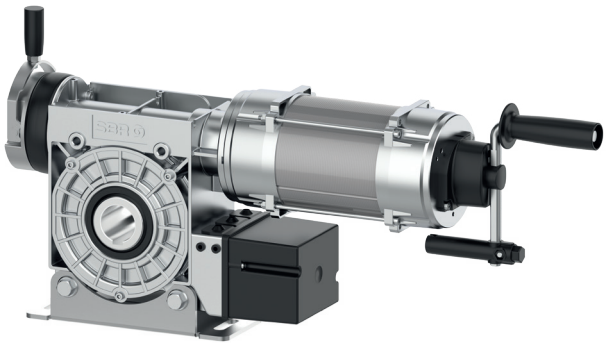



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

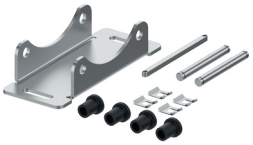
| PS SERIES | L1 |
|---|---|
| PS-63-160-45 | 535 |
| PS-63-80-90 | 535 |
| PS-63-60-135-FI | 535 |

| ØD | H | B |
|---|---|---|
| D25.0 | 28,3 | 8,00 |
| D30.0 | 33,3 | 8,00 |

# PS-85 WITH MK



## INCLUDED



Torque Bracket



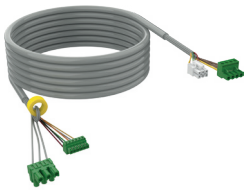
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

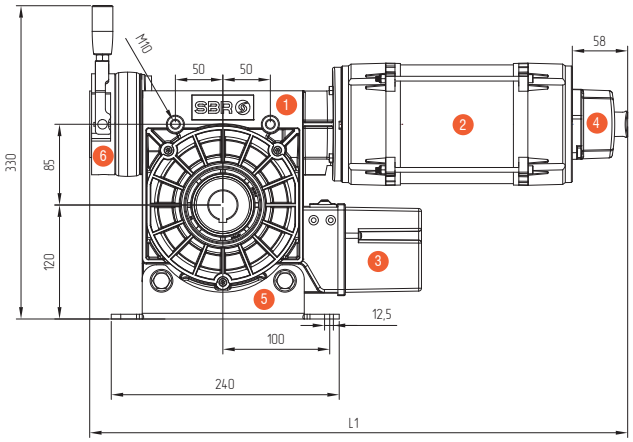
*PAGE 72*



**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING

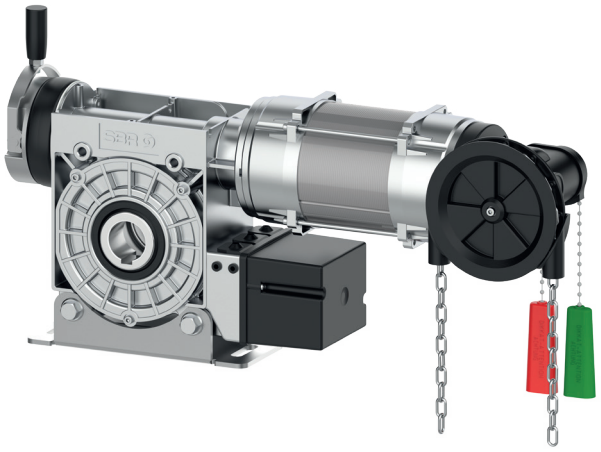



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |

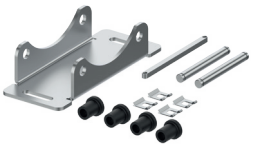
| PS SERIES | L1 |
|---|---|
| PS-85-300-35 | 520 |
| PS-85-140-90 | 566 |
| PS-85-200-90 | 570 |
| PS-85-250-90 | 570 |
| PS-85-100-140-FI | 571 |
| PS-85-130-140-FI | 575 |
| PS-85-150-140-FI | 575 |

| ØD | H | B |
|---|---|---|
| D30.0 | 33,3 | 8,00 |
| D40.0 | 43,3 | 12,00 |

# PS-85 WITH C2



## INCLUDED



Torque Bracket



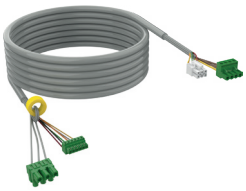
Pull Pope

## ACCESSORIES



**Control Unit**

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**EL-ML Special Cable**

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**380 V Cable**

*PAGE 72*



**Opto-Sensor**

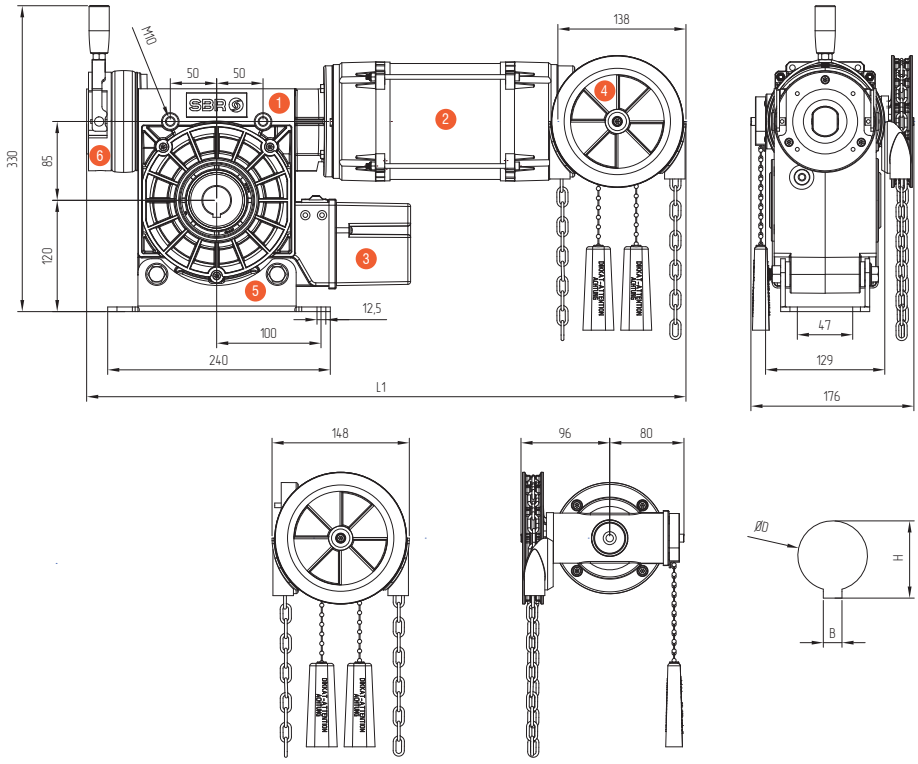
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

| PS SERIES | L1 |
|---|---|
| PS-85-300-35 | 600 |
| PS-85-140-90 | 646 |
| PS-85-200-90 | 650 |
| PS-85-250-90 | 650 |
| PS-85-100-140-FI | 651 |
| PS-85-130-140-FI | 655 |
| PS-85-150-140-FI | 655 |

| ØD | H | B |
|---|---|---|
| D30.0 | 33,3 | 8,00 |
| D40.0 | 43,3 | 12,00 |

# KD SERIES

# CHAIN TRANSMISSION DOORS DRIVES



# KD-CHAIN TRANSMISSION DOOR DRIVE

| | | KD-63-170-24 | KD-85-250-24 | KD-85-350-24 | KD-85-450-24 | KD-110-600-24 | KD-110-800-24-HD | KD-110-1000-24-HD |
|---|---|---|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | | | | |
| Output Torque | Nm | 170 | 250 | 350 | 450 | 600 | 800 | 1000 |
| Output Speed | rpm | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| Output Shaft [1] | mm | 30 | 40 | 40 | 40 | 40 | 40 | 40 |
| Max. Cycles Per Hour [2] | h | 10 | 11 | 11 | 11 | 7 | 7 | 7 |
| Limit Switch Range | rev | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| **Electrical Properties** | | | | | | | | |
| Motor Power | kW | 0,75 | 0,75 | 1,10 | 1,50 | 1,50 | 2,20 | 3,00 |
| Operating Voltage | V | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 | 3N~400 |
| Operating Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Current [3] | A | 4,4/2,6 | 4,6/2,7 | 5,6/3,3 | 7,7/4,5 | 7,7/4,5 | 12,3/7,2 | 15,3/9,0 |
| Fuse Protection, On Site | A | 10 | 10 | 10 | 10 | 10 | 15 | 15 |
| Duty Types | ED | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 | S3-%60 |
| IP Protection Class | IP | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| Temperature Range [4] | °C | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) | –20 +40 (+60) |
| Working Noise Level | dB (A) | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 | < 70 |

1- Output shafts Ø25,0-Ø25,4-Ø30,0-Ø31,75-Ø40,0 mm etc. can be made upon request.

2- One cycle corresponds to two door movements (opening and closing). The specified values represent 10 revolutions of the drive shaft per movement and an even distribution is assumed. Other limit speed ranges, ambient temperature and extra friction affect the value.

3- The current in door drives can reach up to 4 times the rated operating current for limited times.

4- Allowable temperature -20°C..+40°C (+60°C). When using the +40°C..+60°C temperature range, half of the maximum movements per hour should be used.

↘ If frequency inverter drives are used, increasing the driving speed by 10% will cause a 5% decrease in drive torque.This should be considered when choosing a driver.

↘ In gearmotors powered at a frequency of 60Hz (and at the same voltage), multipliers are used for some performance figures: Output torque: 0.83 , and rotations in output: 1.2

## DRIVES FOR SPECIAL DOORS WITH CHAIN DRIVE

| | | | | DIAMETER (Ø OUTSIDE) OF THE WINDING SHAFT (MM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 101,6 | 108,0 | 114,0 | 133,0 | 159,0 | 177,8 | 193,7 | 219,1 | 244,5 | 273,0 | 298,5 | 323,9 |
| **KD-63-170-24** | Chain Drive Ratio | 1:2 | Kg | 438 | 417 | 399 | 351 | 301 | 273 | 254 | 227 | 206 | 186 | 171 | 159 |
| | | | V (cm/sn) | 8,0 | 8,4 | 8,7 | 9,9 | 11,6 | 12,7 | 13,7 | 15,3 | 16,9 | 18,7 | 20,3 | 21,9 |
| | | 1:3 | Kg | 657 | 625 | 598 | 526 | 452 | 410 | 380 | 341 | 309 | 279 | 257 | 238 |
| | | | V (cm/sn) | 5,3 | 5,6 | 5,8 | 6,6 | 7,7 | 8,5 | 9,2 | 10,2 | 11,3 | 12,5 | 13,5 | 14,6 |
| | | 1:3,8 | Kg | 832 | 792 | 758 | 667 | 573 | 520 | 482 | 432 | 391 | 354 | 326 | 302 |
| | | | V (cm/sn) | 4,2 | 4,4 | 4,6 | 5,2 | 6,1 | 6,7 | 7,2 | 8,1 | 8,9 | 9,8 | 10,7 | 11,5 |
| | | 1:4,5 | Kg | 986 | 938 | 898 | 790 | 678 | 615 | 571 | 511 | 463 | 419 | 386 | 358 |
| | | | V (cm/sn) | 3,5 | 3,7 | 3,9 | 4,4 | 5,1 | 5,7 | 6,1 | 6,8 | 7,5 | 8,3 | 9,0 | 9,7 |
| **KD-85-250-24** | Chain Drive Ratio | 1:2 | Kg | | | | 516 | 443 | 402 | 373 | 334 | 303 | 274 | 252 | 234 |
| | | | V (cm/sn) | | | | 9,9 | 11,6 | 12,7 | 13,7 | 15,3 | 16,9 | 18,7 | 20,3 | 21,9 |
| | | 1:3 | Kg | | | | 774 | 665 | 603 | 559 | 501 | 454 | 410 | 378 | 351 |
| | | | V (cm/sn) | | | | 6,6 | 7,7 | 8,5 | 9,2 | 10,2 | 11,3 | 12,5 | 13,5 | 14,6 |
| | | 1:3,8 | Kg | | | | 981 | 842 | 764 | 708 | 635 | 575 | 520 | 479 | 444 |
| | | | V (cm/sn) | | | | 5,2 | 6,1 | 6,7 | 7,2 | 8,1 | 8,9 | 9,8 | 10,7 | 11,5 |
| | | 1:4,5 | Kg | | | | 1161 | 997 | 905 | 839 | 752 | 681 | 616 | 567 | 526 |
| | | | V (cm/sn) | | | | 4,4 | 5,1 | 5,7 | 6,1 | 6,8 | 7,5 | 8,3 | 9,0 | 9,7 |
| **KD-85-350-24** | Chain Drive Ratio | 1:2 | Kg | | | | | 620 | 563 | 522 | 468 | 424 | 383 | 353 | 327 |
| | | | V (cm/sn) | | | | | 11,6 | 12,7 | 13,7 | 15,3 | 16,9 | 18,7 | 20,3 | 21,9 |
| | | 1:3 | Kg | | | | | 931 | 844 | 783 | 702 | 635 | 575 | 529 | 491 |
| | | | V (cm/sn) | | | | | 7,7 | 8,5 | 9,2 | 10,2 | 11,3 | 12,5 | 13,5 | 14,6 |
| | | 1:3,8 | Kg | | | | | 1179 | 1070 | 992 | 889 | 805 | 728 | 671 | 622 |
| | | | V (cm/sn) | | | | | 6,1 | 6,7 | 7,2 | 8,1 | 8,9 | 9,8 | 10,7 | 11,5 |
| | | 1:4,5 | Kg | | | | | 1396 | 1267 | 1175 | 1052 | 953 | 862 | 794 | 736 |
| | | | V (cm/sn) | | | | | 5,1 | 5,7 | 6,1 | 6,8 | 7,5 | 8,3 | 9,0 | 9,7 |
| **KD-85-450-24** | Chain Drive Ratio | 1:2 | Kg | | | | | 798 | 724 | 671 | 601 | 545 | 493 | 454 | 421 |
| | | | V (cm/sn) | | | | | 11,6 | 12,7 | 13,7 | 15,3 | 16,9 | 18,7 | 20,3 | 21,9 |
| | | 1:3 | Kg | | | | | 1197 | 1086 | 1007 | 902 | 817 | 739 | 681 | 631 |
| | | | V (cm/sn) | | | | | 7,7 | 8,5 | 9,2 | 10,2 | 11,3 | 12,5 | 13,5 | 14,6 |
| | | 1:3,8 | Kg | | | | | 1516 | 1375 | 1275 | 1143 | 1035 | 936 | 862 | 799 |
| | | | V (cm/sn) | | | | | 6,1 | 6,7 | 7,2 | 8,1 | 8,9 | 9,8 | 10,7 | 11,5 |
| | | 1:4,5 | Kg | | | | | 1795 | 1629 | 1510 | 1353 | 1226 | 1108 | 1021 | 947 |
| | | | V (cm/sn) | | | | | 5,1 | 5,7 | 6,1 | 6,8 | 7,5 | 8,3 | 9,0 | 9,7 |

## DRIVES FOR SPECIAL DOORS WITH CHAIN DRIVE

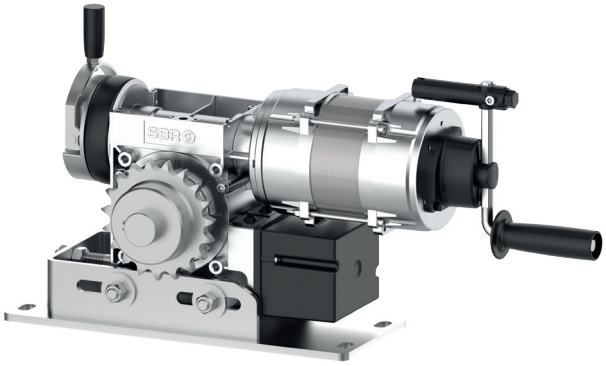
| | | | | DIAMETER (Ø OUTSIDE) OF THE WINDING SHAFT (MM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 101,6 | 108,0 | 114,0 | 133,0 | 159,0 | 177,8 | 193,7 | 219,1 | 244,5 | 273,0 | 298,5 | 323,9 |
| **KD-110-600-24** | Chain Drive Ratio | 1:2 | Kg | | | | | 1064 | 965 | 895 | 802 | 726 | 657 | 605 | 561 |
| | | | V (cm/sn) | | | | | 11,6 | 12,7 | 13,7 | 15,3 | 16,9 | 18,7 | 20,3 | 21,9 |
| | | 1:3 | Kg | | | | | 1596 | 1448 | 1342 | 1203 | 1089 | 985 | 908 | 841 |
| | | | V (cm/sn) | | | | | 7,7 | 8,5 | 9,2 | 10,2 | 11,3 | 12,5 | 13,5 | 14,6 |
| | | 1:3,8 | Kg | | | | | 2021 | 1834 | 1700 | 1523 | 1380 | 1248 | 1150 | 1066 |
| | | | V (cm/sn) | | | | | 6,1 | 6,7 | 7,2 | 8,1 | 8,9 | 9,8 | 10,7 | 11,5 |
| | | 1:4,5 | Kg | | | | | 2393 | 2171 | 2014 | 1804 | 1634 | 1478 | 1361 | 1262 |
| | | | V (cm/sn) | | | | | 5,1 | 5,7 | 6,1 | 6,8 | 7,5 | 8,3 | 9,0 | 9,7 |
| **KD-110-800-24** | Chain Drive Ratio | 1:2 | Kg | | | | | | 1287 | 1193 | 1069 | 968 | 876 | 807 | 748 |
| | | | V (cm/sn) | | | | | | 12,7 | 13,7 | 15,3 | 16,9 | 18,7 | 20,3 | 21,9 |
| | | 1:3 | Kg | | | | | | 1930 | 1790 | 1604 | 1452 | 1314 | 1210 | 1122 |
| | | | V (cm/sn) | | | | | | 8,5 | 9,2 | 10,2 | 11,3 | 12,5 | 13,5 | 14,6 |
| | | 1:3,8 | Kg | | | | | | 2445 | 2267 | 2031 | 1840 | 1664 | 1533 | 1421 |
| | | | V (cm/sn) | | | | | | 6,7 | 7,2 | 8,1 | 8,9 | 9,8 | 10,7 | 11,5 |
| | | 1:4,5 | Kg | | | | | | 2895 | 2685 | 2405 | 2179 | 1970 | 1815 | 1683 |
| | | | V (cm/sn) | | | | | | 5,7 | 6,1 | 6,8 | 7,5 | 8,3 | 9,0 | 9,7 |
| **KD-110-1000-24** | Chain Drive Ratio | 1:2 | Kg | | | | | | 1608 | 1492 | 1336 | 1210 | 1095 | 1008 | 935 |
| | | | V (cm/sn) | | | | | | 12,7 | 13,7 | 15,3 | 16,9 | 18,7 | 20,3 | 21,9 |
| | | 1:3 | Kg | | | | | | 2413 | 2237 | 2004 | 1816 | 1642 | 1513 | 1402 |
| | | | V (cm/sn) | | | | | | 8,5 | 9,2 | 10,2 | 11,3 | 12,5 | 13,5 | 14,6 |
| | | 1:3,8 | Kg | | | | | | 3056 | 2834 | 2539 | 2300 | 2080 | 1916 | 1776 |
| | | | V (cm/sn) | | | | | | 6,7 | 7,2 | 8,1 | 8,9 | 9,8 | 10,7 | 11,5 |
| | | 1:4,5 | Kg | | | | | | 3619 | 3356 | 3007 | 2723 | 2463 | 2269 | 2104 |
| | | | V (cm/sn) | | | | | | 5,7 | 6,1 | 6,8 | 7,5 | 8,3 | 9,0 | 9,7 |

All indicated weights in the table take into account a safety reserve of 20 % and a slat thickness of 25 mm.
In some cases, the friction may be greater and this condition should be taken into account when calculating.
Their extra friction and possible diameter changes due to over-winding, must be taken into account when calculating these values.

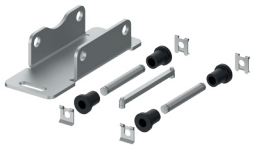
↘ If frequency inverter drives are used, increasing the driving speed by 10% will cause a 5% decrease in drive torque.This should be considered when choosing a driver.
↘ In gearmotors powered at a frequency of 60Hz (and at the same voltage), multipliers are used for some performance figures: Output torque: 0.83 , and rotations in output: 1.2

Special solutions can be offered upon request. Please contact us for requests in different speeds and powers.

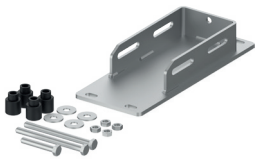
# KD-63 WITH MK



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



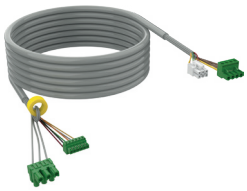
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

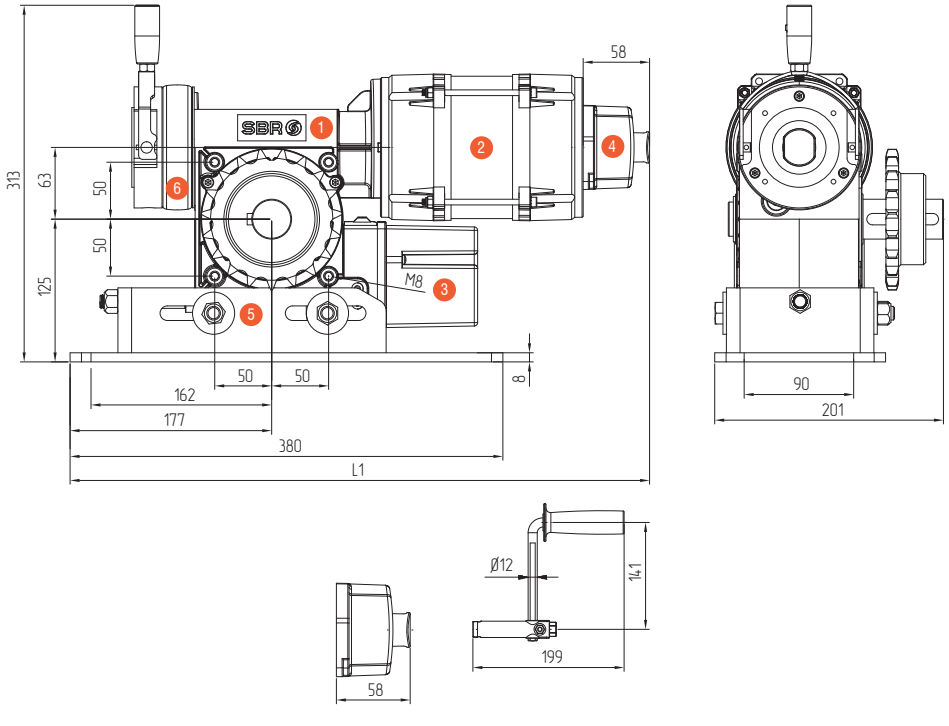
*PAGE 72*



**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING

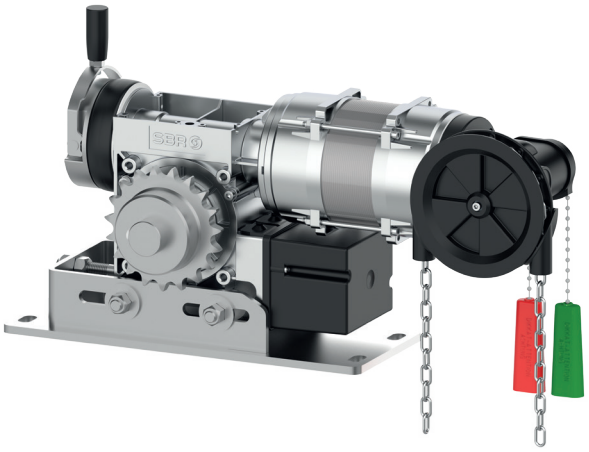



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |

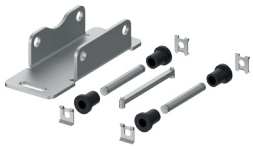
| KD SERIES | L1 |
|---|---|
| KD-63-170-24 | 455 |

| ØD | H | B |
|---|---|---|
| **D30.0** | 33,3 | 8,00 |

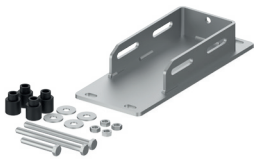
# KD-63 WITH C2



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



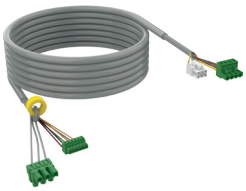
Pull Rope

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

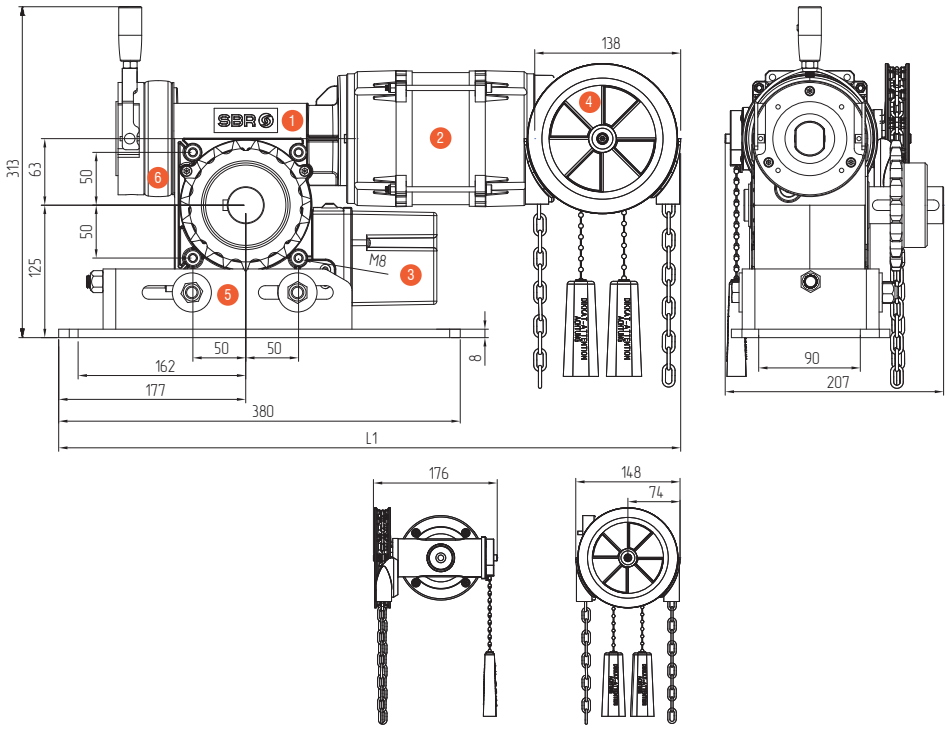
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING

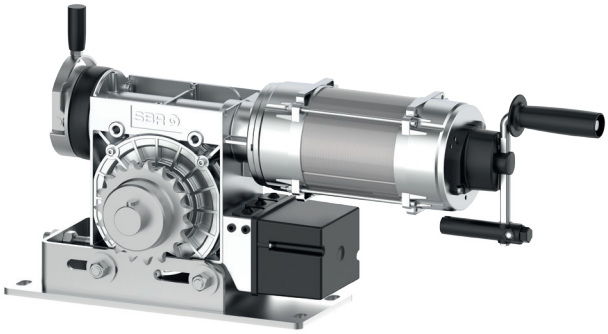



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

| KD SERIES | L1 |
|---|---|
| KD-63-170-24 | 534 |

| ØD | H | B |
|---|---|---|
| D30.0 | 33,3 | 8,00 |

# KD-85 WITH MK



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



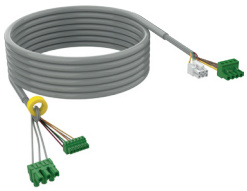
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

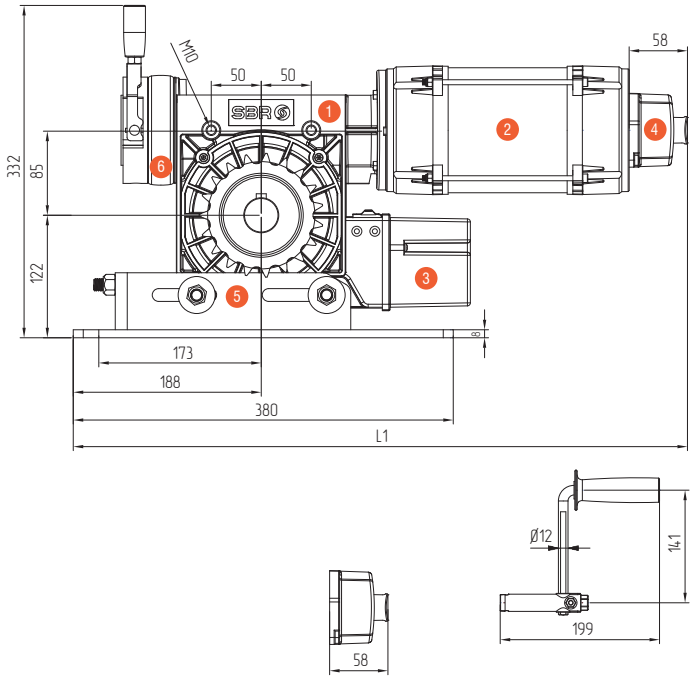
*PAGE 72*



**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING

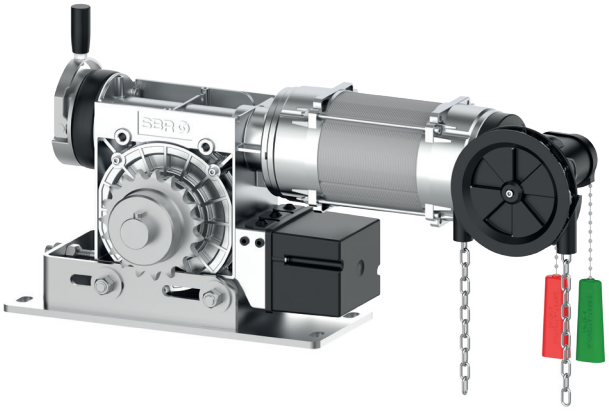



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |

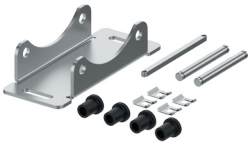
| KD SERIES | L1 |
|---|---|
| KD-85-250-24 | 539 |
| KD-85-350-24 | 568 |
| KD-85-450-24 | 614 |

| ØD | H | B |
|---|---|---|
| D40.0 | 43,3 | 12,00 |

# KD-85 WITH C3



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



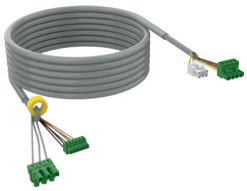
Pull Rope

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

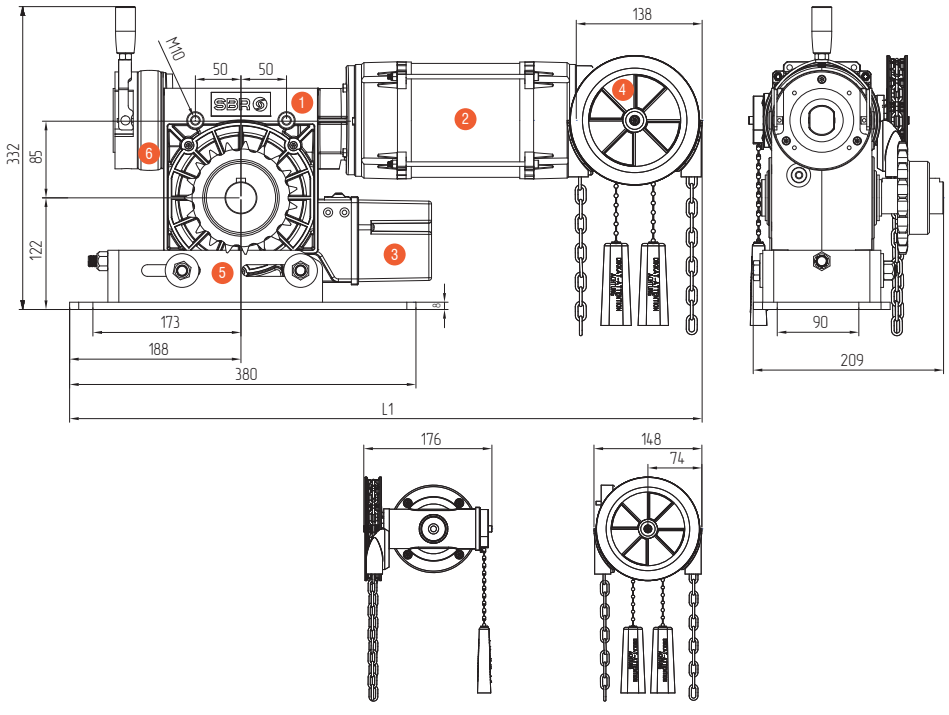
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING

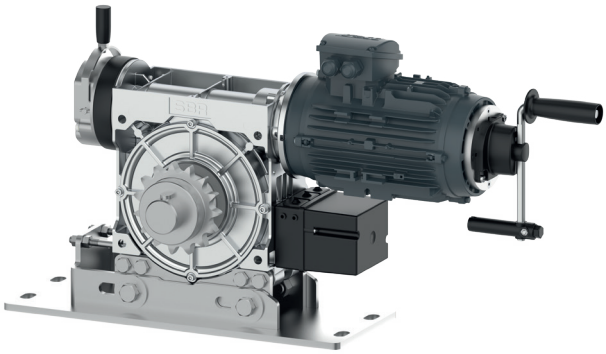



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

| KD SERIES | L1 |
|---|---|
| KD-85-250-24 | 619 |
| KD-85-350-24 | 648 |
| KD-85-450-24 | 694 |

| ØD | H | B |
|---|---|---|
| D40.0 | 43,3 | 12,00 |

# KD-110 WITH MK



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



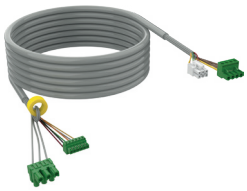
Crank

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

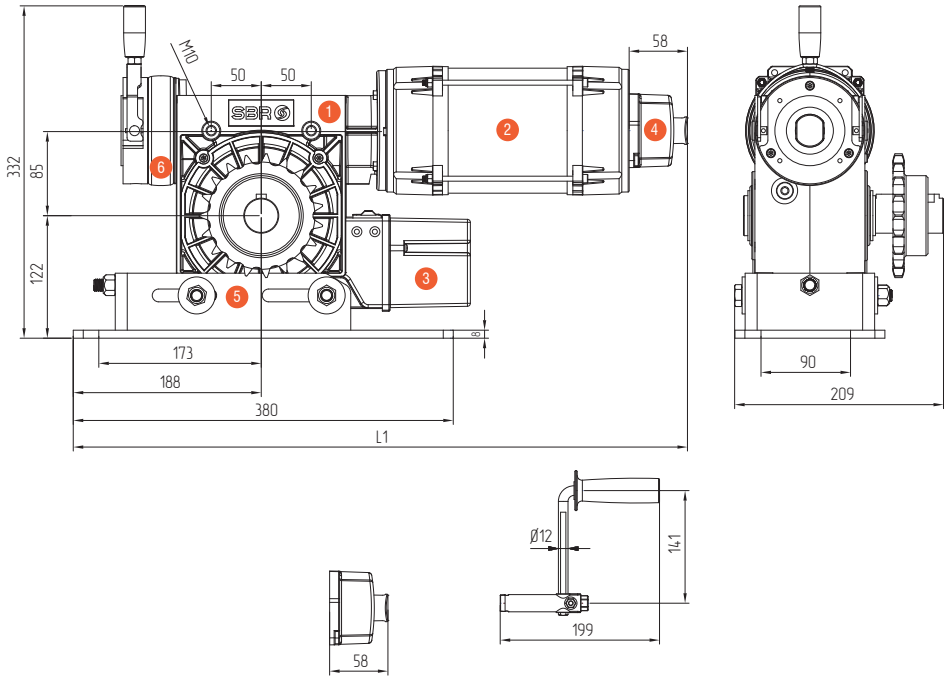
*PAGE 72*



**Opto-Sensor**

*PAGE 72*

## DIMENSION DRAWING

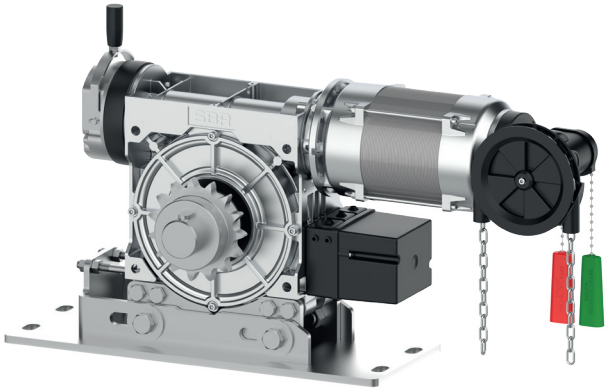



| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank MK |
| 5 | Floating Foot |
| 6 | Brake |

| KD SERIES | L1 |
|---|---|
| KD-110-600-24 | 711 |
| KD-110-750-24 | 715 |
| KD-110-1000-24 | 715 |

| ØD | H | B |
|---|---|---|
| D55.0 | 64,4 | 16,00 |

# KD-110 WITH C3



## INCLUDED



Torque Bracket



Torque Bracket (Optional)



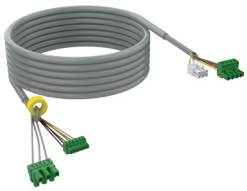
Pull Rope

## ACCESSORIES



**Control Unit**

*PAGE 59*



**EL-ML Special Cable**

*PAGE 71*



**380 V Cable**

*PAGE 72*



**Opto-Sensor**

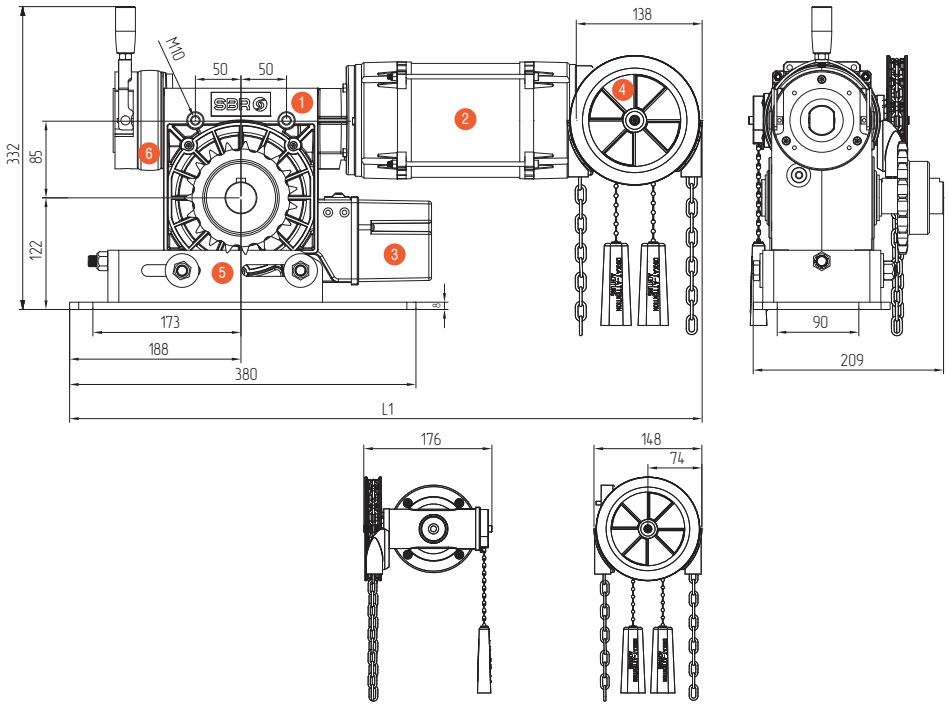
*PAGE 72*



**Chain**

*PAGE 77*

## DIMENSION DRAWING




| | |
|---|---|
| 1 | Gearbox |
| 2 | Motor |
| 3 | Limit Switch |
| 4 | Hand Crank C2 |
| 5 | Floating Foot |
| 6 | Brake |

| KD SERIES | L1 |
|---|---|
| KD-110-600-24 | 791 |
| KD-110-750-24 | 794 |
| KD-110-1000-24 | 794 |

| ØD | H | B |
|---|---|---|
| D55.0 | 64,4 | 16,00 |

# CONTROL UNIT ST - EP - FI - FE SERIES

# CONTROL
# SYSTEMS




**ST** SERIES

**EP** SERIES

**FE** SERIES

**FU** SERIES

**FI** SERIES

# ST 400




### Technical Data
- For SBR SD/DS/RD/PS/KD operators with ENC or MEC. (Up to 1,50 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,25 A)
- Operating Temperatures: -10 / +45 °C

### Cover
- Dimensions W x H x D [mm]:
- IP 54 Protection class
- Protection against contact is provided by covers for live parts for electrical shock hazard.

### Design
- Illuminated OPEN-STOP-CLOSE buttons
- LCD screen for easy adjustment
- Extension module connections

### Accessories
- Extension accessories:
  - Relay module (yellow-red-green traffic lights and 3 programmable relays)
  - Receiver module (2 channel 433 MHz)

### Functions
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing.
- Adjustable partial opening.
- Safety systems :
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Extension accessories:
  - Relay module (yellow-red-green traffic lights and 3 programmable relays)
  - Receiver module (2 channel 433 MHz)
- Internal error memory.

# EP 400




### Technical Data
- For SBR SD/DS/RD/KD operators with ENC or MEC. (Up to 0,75 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,25 A)
- Operating Temperatures: -10 / +45 °C

### Cover
- Dimensions W x H x D [mm]:
- IP 54 Protection class
- Protection against contact is provided by covers for live parts for electrical shock hazard.

### Design
- Illuminated OPEN-STOP-CLOSE buttons
- LCD screen for easy adjustment
- Programmable relay output

### Functions
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing. (Function can also be activated/deactivated).
  - When door reaches the open position, the door closes automatically after the set time.
  - Counter restarts after photocell activity.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval:
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# EP 500




**Technical Data**
- For SBR SD/DS/RD/PS/KD operators with ENC or MEC. (Up to 1,50 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class

**Design**
- Illuminated OPEN-STOP-CLOSE buttons
- LCD screen for easy adjustment with 3 buttons
- Emergency stop button

**Accessories**
- Extension accessories:
  - Relay module (yellow-red-green traffic lights and 3 programmable relays)
  - Receiver module (2 channel 433 MHz)

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing.
- Adjustable partial opening.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Extension accessories:
  - Relay module (yellow-red-green traffic lights and 3 programmable relays)
  - Receiver module (2 channel 433 MHz)
- Internal error memory.

# FE 500




**Technical Data**
- For SBR SD/DS/RD/KD operators with ENC or MEC. (Up to 2,20 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class

**Design**
- Illuminated OPEN-STOP-CLOSE buttons
- LCD screen for easy adjustment
- Emergency stop button

**Accessories**
- Extension accessories:
  - Relay module (yellow-red-green traffic lights and 3 programmable relays)
  - Receiver module (2 channel 433 MHz)

**Functions**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing.
- Adjustable partial opening.
- Emergency stop button.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval:
  - Visual warning when reached to value or transition to hold to run operating mode.
- Extension accessories:
  - Relay module (yellow-red-green traffic lights and 3 programmable relays)
  - Receiver module (2 channel 433 MHz)
- Internal error memory.

# EP 450 RP




**Technical Data**
- For SBR SD/DS/RD/PS/KD operators with ENC or MEC. (Up to 0,75 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,25 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class
- Protection against contact is provided by covers for live parts for electrical shock hazard.

**Design**
- Illuminated OPEN-STOP-CLOSE buttons
- LCD screen for easy adjustment with 3 buttons
- Controlling dock leveler with swing lip

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing (function can also be activated/deactivated).
  - When door reaches the open position, the door closes automatically after the set time.
  - Counter restarts after photocell activity.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# EP 450 TRP




**Technical Data**
- For SBR SD/DS/RD/PS/KD operators with ENC or MEC. (Up to 0,75 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,25 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class
- Protection against contact is provided by covers for live parts for electrical shock hazard.

**Design**
- Illuminated OPEN-STOP-CLOSE buttons
- LCD screen for easy adjustment with 3 buttons
- Controlling dock leveler with swing lip

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing (function can also be activated/deactivated).
  - When door reaches the open position, the door closes automatically after the set time.
  - Counter restarts after photocell activity.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# FE 5XX




**Technical Data**
- For SBR SD/DS/RD/PS/KD operators with ENC or MEC.
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class

**Design**
- Illuminated OPEN-STOP-CLOSE-PARTIAL OPEN buttons
- LCD screen for easy adjustment with 3 buttons
- Emergency stop button

**Accessories**
- Extension accessories:
  - Relay module (yellow-red-green traffic lights and 3 programmable relays)
  - Receiver module (2 channel 433 MHz)

**Products**
- FE 530 - Up to 0,75 kW
- FE 540 - Up to 1,50 kW
- FE 550 - Up to 2,20 kW
- FE 560 - Up to 4,00 kW
- FE 570 - Up to 5,50 kW

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing
- Adjustable partial opening.
- Emergency stop button.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Extension accessories:
  - Relay module (yellow-red-green traffic lights and 3 programmable relays)
  - Receiver module (2 channel 433 MHz)
- Internal error memory.

# FU 750 M




**Technical Data**
- For SBR SD operators with ENC or MEC. (Up to 0,75 kW)
- Supply voltage: 1N~230V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class

**Design**
- Illuminated OPEN-STOP-CLOSE-PARTIAL OPEN buttons
- LCD screen for easy adjustment with 3 buttons
- Emergency stop button
- Speed control

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing
- Adjustable partial opening.
- Emergency stop button.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Speed adjustment;
  - OPENING/CLOSING speed can be adjusted separately.
  - Adjustable deceleration range.
  - Soft start / soft stop.
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# FI 750 M



**Technical Data**
- For SBR DS/RD/PS/KD operators with ENC or MEC. (Up to 0,75 kW)
- Supply voltage: 1N~230V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class

**Design**
- Illuminated OPEN-STOP-CLOSE-PARTIAL OPEN buttons
- LCD screen for easy adjustment with 3 buttons
- Emergency stop button
- Speed control

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing
- Adjustable partial opening.
- Emergency stop button.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Speed adjustment;
  - OPENING/CLOSING speed can be adjusted separately.
  - Adjustable deceleration range.
  - Soft start / soft stop.
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# FI 1500 M



**Technical Data**
- For SBR DS/RD/PS/KD operators with ENC or MEC. (Up to 0,75 kW)
- Supply voltage: 1N~230V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class

**Design**
- Illuminated OPEN-STOP-CLOSE-PARTIAL OPEN buttons
- LCD screen for easy adjustment with 3 buttons
- Emergency stop button
- Speed control

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing
- Adjustable partial opening.
- Emergency stop button.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Speed adjustment;
  - OPENING/CLOSING speed can be adjusted separately.
  - Adjustable deceleration range.
  - Soft start / soft stop.
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# FI 1500 T




**Technical Data**
- For SBR DS/RD/PS/KD operators with ENC or MEC. (Up to1,50 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class

**Design**
- Illuminated OPEN-STOP-CLOSE-PARTIAL OPEN buttons
- LCD screen for easy adjustment with 3 buttons
- Emergency stop button
- Speed control

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing
- Adjustable partial opening.
- Emergency stop button.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Speed adjustment;
  - OPENING/CLOSING speed can be adjusted separately.
  - Adjustable deceleration range.
  - Soft start / soft stop.
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# FI 2200 T




**Technical Data**
- For SBR DS/RD/PS/KD operators with ENC or MEC. (Up to 2,0 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

**Cover**
- Dimensions W x H x D [mm]:
- IP 54 Protection class

**Design**
- Illuminated OPEN-STOP-CLOSE-PARTIAL OPEN buttons
- LCD screen for easy adjustment with 3 buttons
- Emergency stop button
- Speed control

**Functions:**
- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing
- Adjustable partial opening.
- Emergency stop button.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Speed adjustment;
  - OPENING/CLOSING speed can be adjusted separately.
  - Adjustable deceleration range.
  - Soft start / soft stop.
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# FI 4000 T




## Technical Data

- For SBR DS/RD/PS/KD operators with ENC or MEC. (Up to 4,00 kW)
- Supply voltage: 3N~400V AC
- Operating Frequency: 50 Hz / 60 Hz
- Control Voltage: 24 V DC
- Supply voltage for external devices: 24 V DC (0,30 A)
- Operating Temperatures: -10 / +45 °C

## Cover

- Dimensions W x H x D [mm]:
- IP 54 Protection class

## Design

- Illuminated OPEN-STOP-CLOSE-PARTIAL OPEN buttons
- LCD screen for easy adjustment with 3 buttons
- Emergency stop button
- Speed control

## Functions:

- Limit position adjustment (ENC only) and adjustment of all parameters from user level
- Selectable operating modes;
  - OPEN/CLOSE in self hold mode
  - OPEN in self hold / CLOSE in hold to run mode
  - OPEN/CLOSE in hold to run mode
- Time adjustable automatic closing
- Adjustable partial opening.
- Emergency stop button.
- Safety systems;
  - Photocell (NC)
  - Optical sensor (NC or NO)
  - Pneumatic sensor (NC or NO)
- Adjustable return time (for both direction change).
- Speed adjustment;
  - OPENING/CLOSING speed can be adjusted separately.
  - Adjustable deceleration range.
  - Soft start / soft stop.
- Strain detection.
- LCD screen for information and status monitoring.
- Door Operation-cycle counter (not resettable).
- Maintenance-cycle counter;
  - Value interval
  - Visual warning when reached to value or transition to hold to run operating mode.
- Internal error memory.

# CONTROL UNIT

| | ST 400 | EP 400 | EP 500 | FE 500 | EP 450 RP | EP 450 TRP |
|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |
| **SUITABLE SERIES** | SD<br>DS<br>RD<br>KD | SD<br>DS<br>RD<br>KD | SD<br>DS<br>RD<br>PS<br>KD | SD<br>DS<br>RD<br>PS<br>KD | SD<br>DS<br>RD<br>PS<br>KD | SD<br>DS<br>RD<br>PS<br>KD |
| Operating Voltage | 3N~400 V AC | 3N~400 V AC | 3N~400 V AC | 3N~400 V AC | 3N~400 V AC | 3N~400 V AC |
| Operating Frequency | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz |
| Max Motor Power | 1,50 kW | 0,75 kW | 1,50 kW | 2,20 kW | 0,75 kW | 0,75 kW |
| Control Voltage | 24 V | 24 V | 24 V | 24 V | 24 V | 24 V |
| 24V Output Supply | 24 V Dc Max<br>0,25 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A |
| Temperature Range | -10 / +45 | -10 / +45 | -10 / +45 | -10 / +45 | -10 / +45 | -10 / +45 |
| Digital Screen | ● | ● | ● | ● | ● | ● |
| End Position Setting | E/M | E/M | E/M | E/M | E/M | E/M |
| Adjustable Opening/Closing Speed | | | | | | |
| Soft Start/Stop | | | | | | |
| Illuminated Buttons (Find In The Dark) | ● | ● | ● | ● | ● | ● |
| Emergency Stop Button | | | ● | ● | ● | ● |
| Connection For Safety Edge System (Photocell, Optical Sensor, Air Pressure) | ● | ● | ● | ● | ● | ● |
| Programmable Relay Outputs | OP | ● | ● | ● | ● | ● |
| Remote Reciever Module Connections | ● | ● | ● | ● | ● | ● |
| Partial Opening Button | | | | | | |
| Expansion Module Support (Relay Module, Receiver Module) | ● / ● | | ● / ● | ● / ● | | |
| Controlling A Dock Leveller With Swing Lip | | | | | ● | |
| Controlling A Dock Leveller With Telescoping Lip | | | | | | ● |
| Integrated Door Operation Counter | ● | ● | ● | ● | ● | ● |
| Integrated Error Memory | ● | ● | ● | ● | ● | ● |

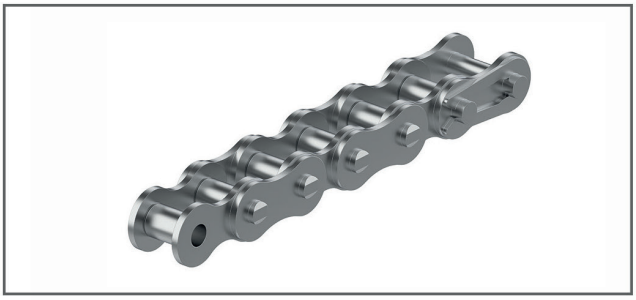
# CONTROL UNIT

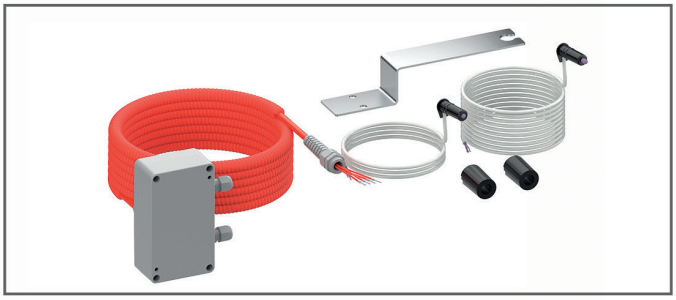
| | FE 530 | FE 540 | FE 550 | FE 560 | FE 570 |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| **SUITABLE SERIES** | SD<br>DS<br>RD<br>PS<br>KD | SD<br>DS<br>RD<br>PS<br>KD | SD<br>DS<br>RD<br>PS<br>KD | SD<br>DS<br>RD<br>PS<br>KD | SD<br>DS<br>RD<br>PS<br>KD |
| Operating Voltage | 3N~400 V AC | 3N~400 V AC | 3N~400 V AC | 3N~400 V AC | 3N~400 V AC |
| Operating Frequency | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz |
| Max Motor Power | 0,75 kW | 1,50 kW | 2,20 kW | 4,00 kW | 5,50 kW |
| Control Voltage | 24 V | 24 V | 24 V | 24 V | 24 V |
| 24V Output Supply | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A |
| Temperature Range | -10 / +45 | -10 / +45 | -10 / +45 | -10 / +45 | -10 / +45 |
| Digital Screen | ● | ● | ● | ● | ● |
| End Position Setting | E/M | E/M | E/M | E/M | E/M |
| Adjustable Opening/Closing Speed | | | | | |
| Soft Start/Stop | | | | | |
| Illuminated Buttons (Find In The Dark) | ● | ● | ● | ● | ● |
| Emergency Stop Button | ● | ● | ● | ● | ● |
| Connection For Safety Edge System (Photocell, Optical Sensor, Air Pressure) | ● | ● | ● | ● | ● |
| Programmable Relay Outputs | ● | ● | ● | ● | ● |
| Remote Reciever Module Connections | ● | ● | ● | ● | ● |
| Partial Opening Button | ● | ● | ● | ● | ● |
| Expansion Module Support (Relay Module, Receiver Module) | ● / ● | ● / ● | ● / ● | ● / ● | ● / ● |
| Controlling A Dock Leveller With Swing Lip | | | | | |
| Controlling A Dock Leveller With Telescoping Lip | | | | | |
| Integrated Door Operation Counter | ● | ● | ● | ● | ● |
| Integrated Error Memory | ● | ● | ● | ● | ● |

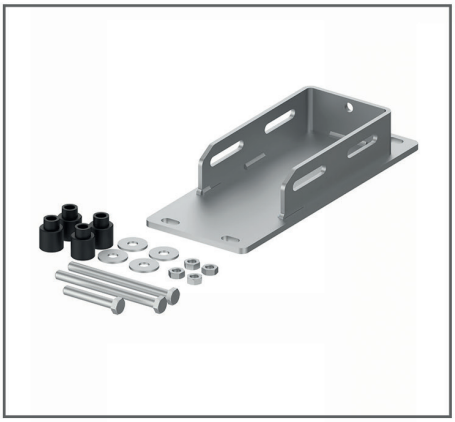
## CONTROL UNIT

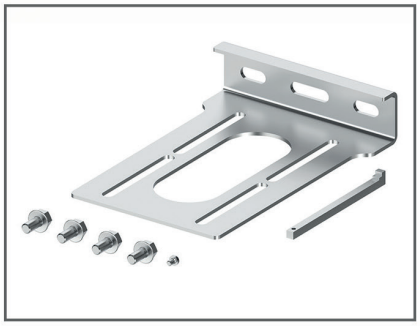
| | FU 750 M | FI 750 M | FI 1500 M | FI 1500 T | FI 2200 T | FI 4000 T |
|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |
| **SUITABLE SERIES** | SD | DS<br>RD<br>PS<br>KD | DS<br>RD<br>PS<br>KD | DS<br>RD<br>PS<br>KD | DS<br>RD<br>PS<br>KD | DS<br>RD<br>PS<br>KD |
| Operating Voltage | 1N~230 V AC | 1N~230 V AC | 1N~230 V AC | 3N~400 V AC | 3N~400 V AC | 3N~400 V AC |
| Operating Frequency | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz |
| Max Motor Power | 0,75 kW | 0,75 kW | 1,50 kW | 1,50 kW | 2,20 kW | 4,00 kW |
| Control Voltage | 24 V | 24 V | 24 V | 24 V | 24 V | 24 V |
| 24V Output Supply | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A | 24 V Dc Max<br>0,30 A |
| Temperature Range | -10 / +45 | -10 / +45 | -10 / +45 | -10 / +45 | -10 / +45 | -10 / +45 |
| Digital Screen | ● | ● | ● | ● | ● | ● |
| End Position Setting | E/M | E/M | E/M | E/M | E/M | E/M |
| Adjustable Opening/Closing Speed | ● | ● | ● | ● | ● | ● |
| Soft Start/Stop | ● | ● | ● | ● | ● | ● |
| Illuminated Buttons (Find In The Dark) | ● | ● | ● | ● | ● | ● |
| Emergency Stop Button | ● | ● | ● | ● | ● | ● |
| Connection For Safety Edge System (Photocell, Optical Sensor, Air Pressure) | ● | ● | ● | ● | ● | ● |
| Programmable Relay Outputs | ● | ● | ● | ● | ● | ● |
| Remote Reciever Module Connections | ● | ● | ● | ● | ● | ● |
| Partial Opening Button | ● | ● | ● | ● | ● | ● |
| Expansion Module Support (Relay Module, Receiver Module) | | | | | | |
| Controlling A Dock Leveller With Swing Lip | | | | | | |
| Controlling A Dock Leveller With Telescoping Lip | | | | | | |
| Integrated Door Operation Counter | ● | ● | ● | ● | ● | ● |
| Integrated Error Memory | ● | ● | ● | ● | ● | ● |

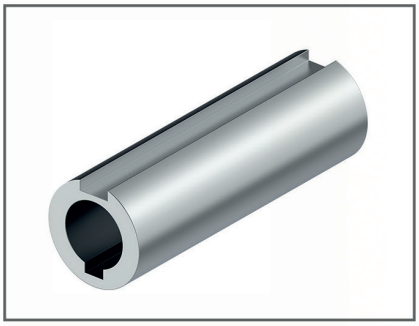
# ACCESSORIES SD-DS-RD-PS-KD SERIES

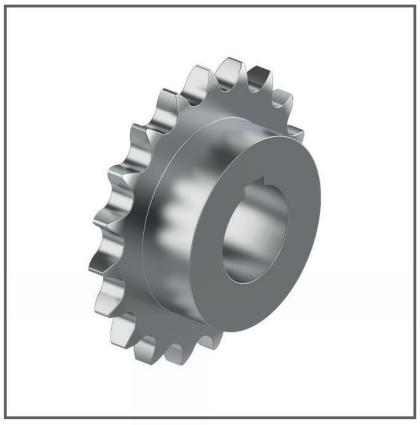


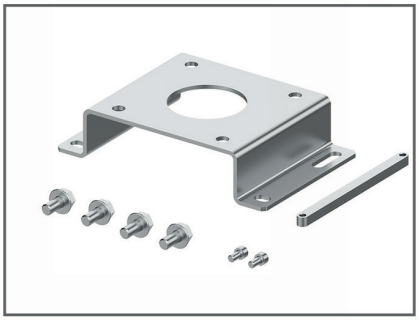


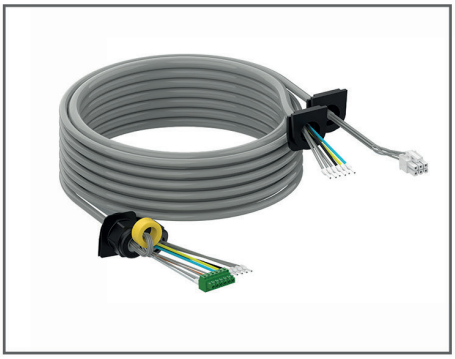


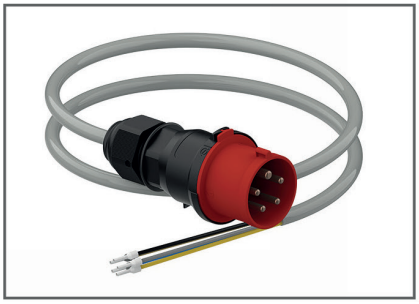




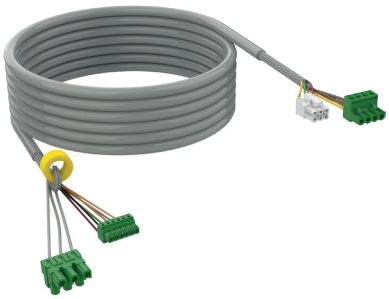








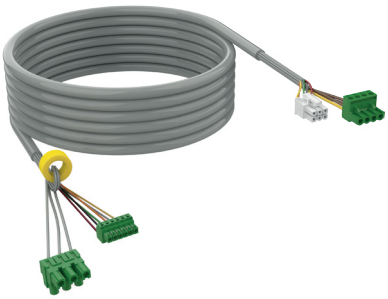
# CONNECTION CABLE



**ML SPECIAL CABLE**

*> It is used in motors with mechanical limit switches.*

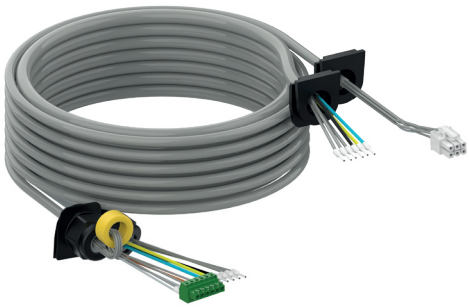
| | |
|---|---|
| 5310000000003 | ML Special Cable 3 M |
| 5310000000005 | ML Special Cable 5 M |
| 5310000000006 | ML Special Cable 6 M |
| 5310000000007 | ML Special Cable 7 M |
| 5310000000008 | ML Special Cable 8 M |
| 5310000000009 | ML Special Cable 9 M |
| 5310000000011 | ML Special Cable 11 M |
| 5310000000013 | ML Special Cable 13 M |



**EL SPECIAL CABLE**

*> It is used in motors with encoder limit switches.*

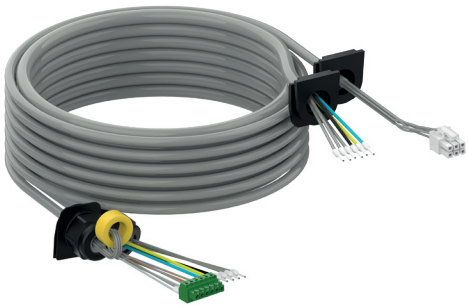
| | |
|---|---|
| 5320000000003 | EL Special Cable 3 M |
| 5320000000005 | EL Special Cable 5 M |
| 5320000000006 | EL Special Cable 6 M |
| 5320000000007 | EL Special Cable 7 M |
| 5320000000008 | EL Special Cable 8 M |
| 5320000000009 | EL Special Cable 9 M |
| 5320000000011 | EL Special Cable 11 M |
| 5320000000013 | EL Special Cable 13 M |



**ML SET1 SPECIAL CABLE**

*> It is used in motors with mechanical limit switches up to 1.10 kW.*

| | |
|---|---|
| 5330000000003 | ML Set1 Special Cable 3 M |
| 5330000000005 | ML Set1 Special Cable 5 M |
| 5330000000006 | ML Set1 Special Cable 6 M |
| 5330000000007 | ML Set1 Special Cable 7 M |
| 5330000000008 | ML Set1 Special Cable 8 M |
| 5330000000009 | ML Set1 Special Cable 9 M |
| 5330000000011 | ML Set1 Special Cable 11 M |
| 5330000000013 | ML Set1 Special Cable 13 M |

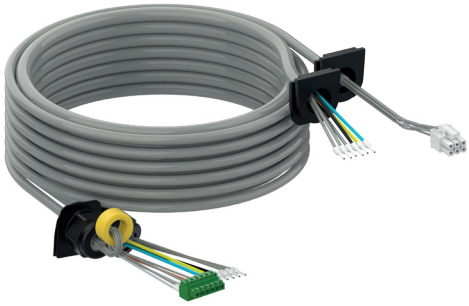


**EL SET1 SPECIAL CABLE**

*> It is used in motors with encoder limit switches up to 1.10 kW.*

| | |
|---|---|
| 5340000000003 | EL Set1 Special Cable 3 M |
| 5340000000005 | EL Set1 Special Cable 5 M |
| 5340000000006 | EL Set1 Special Cable 6 M |
| 5340000000007 | EL Set1 Special Cable 7 M |
| 5340000000008 | EL Set1 Special Cable 8 M |
| 5340000000009 | EL Set1 Special Cable 9 M |
| 5340000000011 | EL Set1 Special Cable 11 M |
| 5340000000013 | EL Set1 Special Cable 13 M |

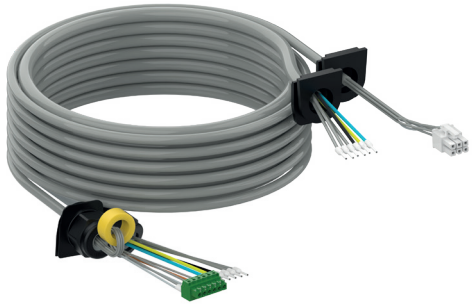
# CONNECTION CABLE



**ML SET2 SPECIAL CABLE**

*> It is used in motors with mechanical limit switches up to 1.10 kW.*

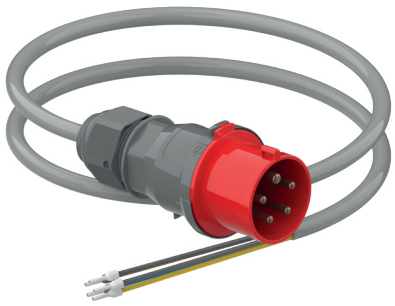
| | |
|---|---|
| 5350000000003 | ML Set2 Special Cable 3 M |
| 5350000000005 | ML Set2 Special Cable 5 M |
| 5350000000006 | ML Set2 Special Cable 6 M |
| 5350000000007 | ML Set2 Special Cable 7 M |
| 5350000000008 | ML Set2 Special Cable 8 M |
| 5350000000009 | ML Set2 Special Cable 9 M |
| 5350000000011 | ML Set2 Special Cable 11 M |
| 5350000000013 | ML Set2 Special Cable 13 M |



**EL SET1 SPECIAL CABLE**

*> It is used in motors with encoder limit switches up to 1.10 kW.*

| | |
|---|---|
| 5360000000003 | EL Set2 Special Cable 3 M |
| 5360000000005 | EL Set2 Special Cable 5 M |
| 5360000000006 | EL Set2 Special Cable 6 M |
| 5360000000007 | EL Set2 Special Cable 7 M |
| 5360000000008 | EL Set2 Special Cable 8 M |
| 5360000000009 | EL Set2 Special Cable 9 M |
| 5360000000011 | EL Set2 Special Cable 11 M |
| 5360000000013 | EL Set2 Special Cable 13 M |



**380 V SPECIAL CABLE**

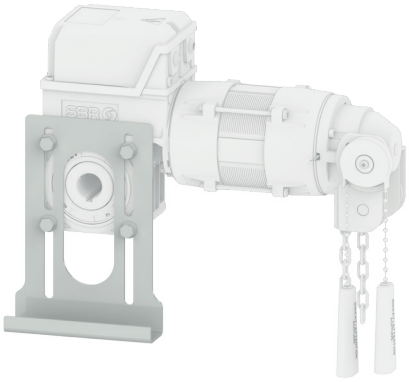
| | |
|---|---|
| 5370000000003 | 380 V Special Cable 1 M |

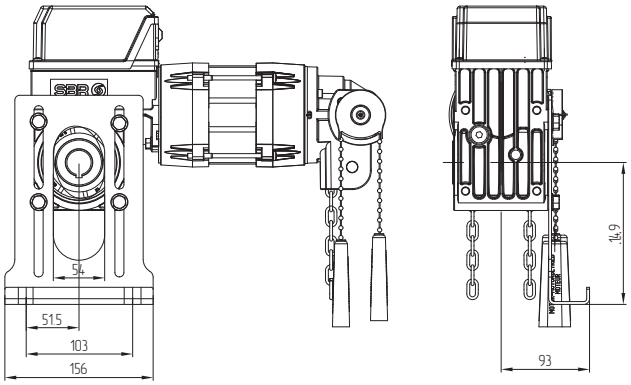


**OPTO SENSOR**

| | |
|---|---|
| 5410000104050 | Opto Sensor (IR Receiver Trans.+4X0.50 Spiral Cable) |
| 5410000105050 | Opto Sensor (IR Receiver Trans.+5X0.50 Spiral Cable) |

# TORQUE BRACKET

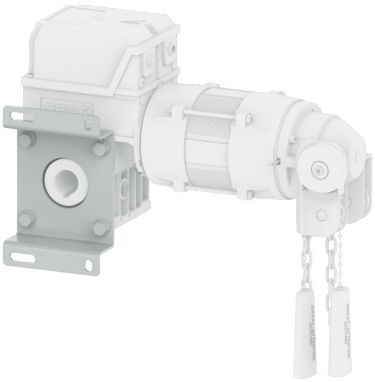


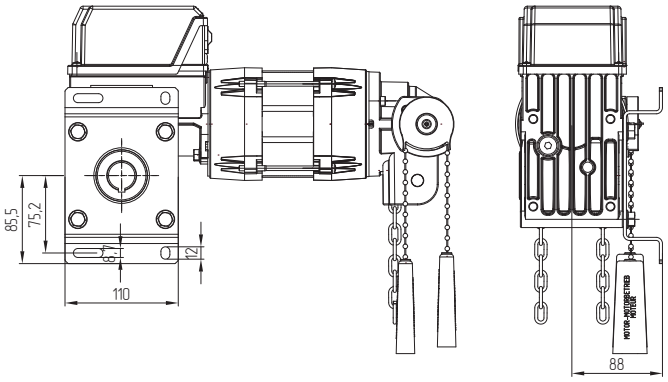



**Torque Bracket For 50 Series**

*> Steel, Electrogalvanised*

5650000500010

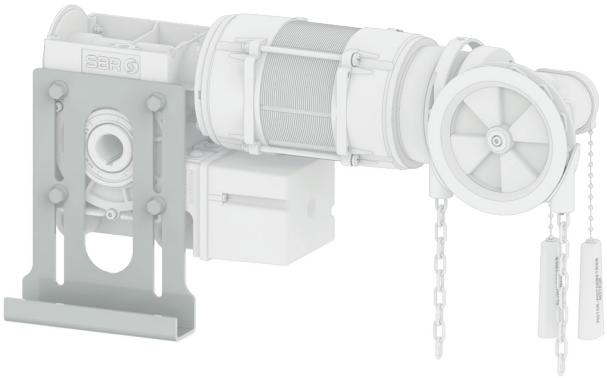


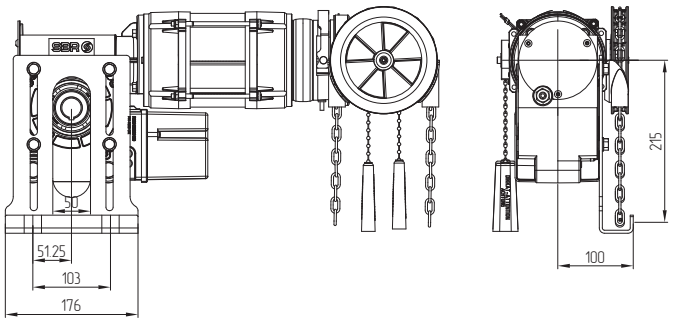



**Torque Bracket For 50 Series**

*> Steel, Electrogalvanised*

5650000500005



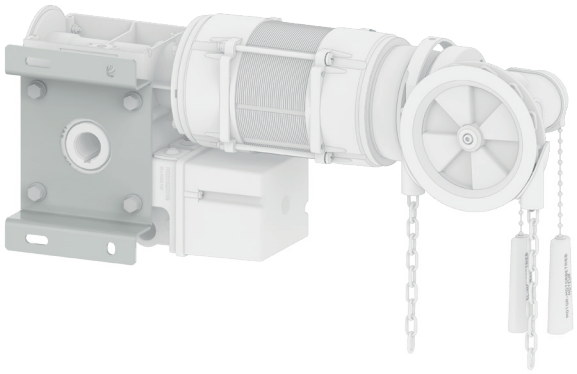


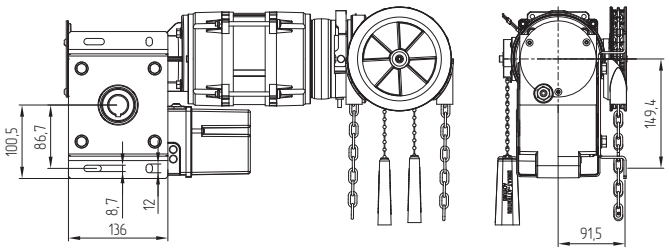

**Torque Bracket For 63 Series**

*> Steel, Electrogalvanised*

5650000630010

# TORQUE BRACKET

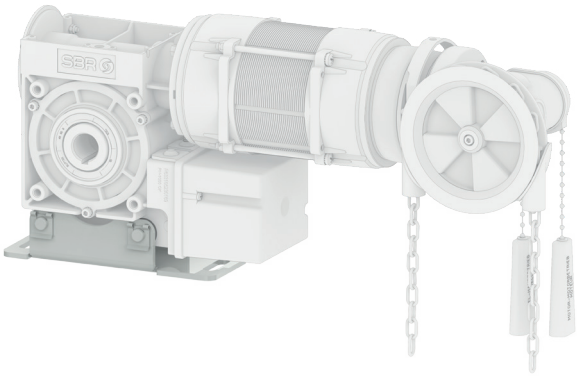


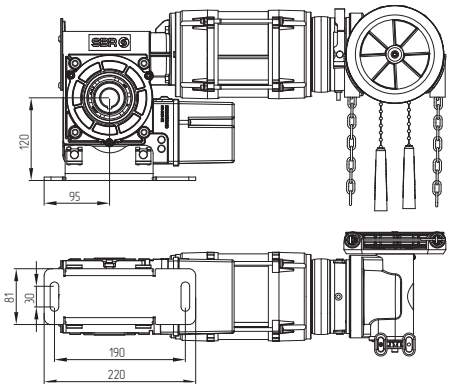



**Torque Bracket For 63 Series**

*> Steel, Electrogalvanised*

5650000630005

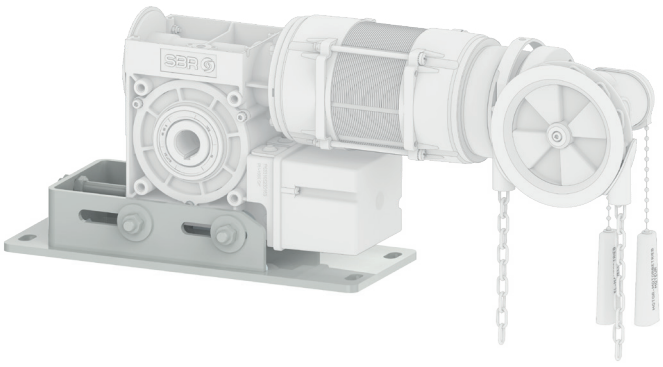


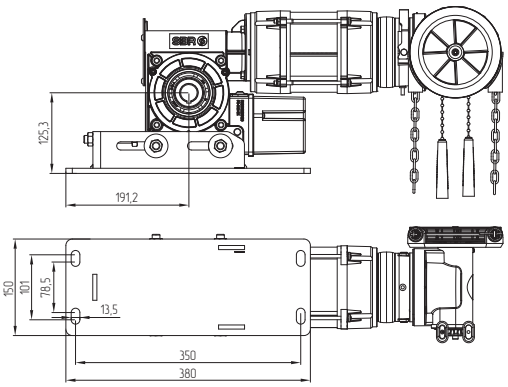



**Torque Bracket For 63 Series**

*> Steel, Electrogalvanised*

5650000630015



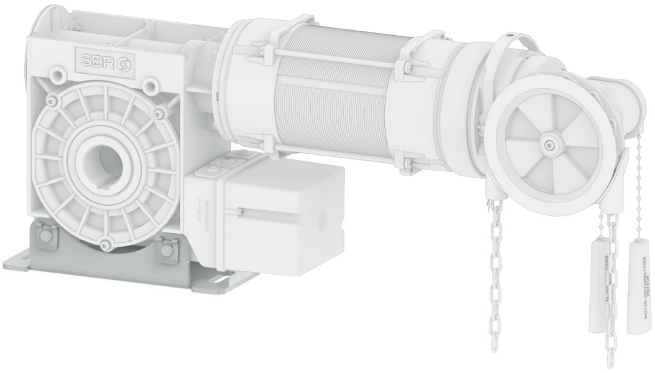


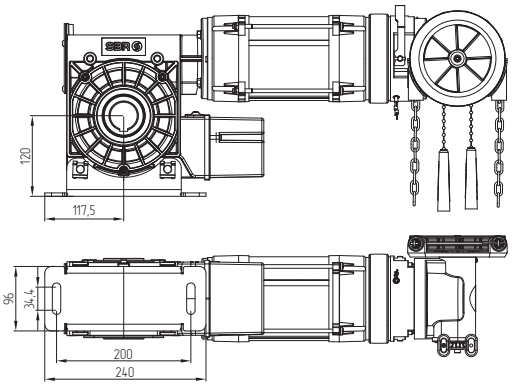

**Torque Bracket For 63 Series**

*> Steel, Electrogalvanised*

5650000630020

# TORQUE BRACKET

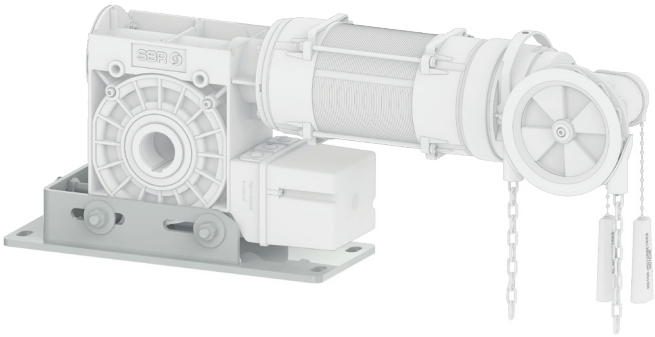


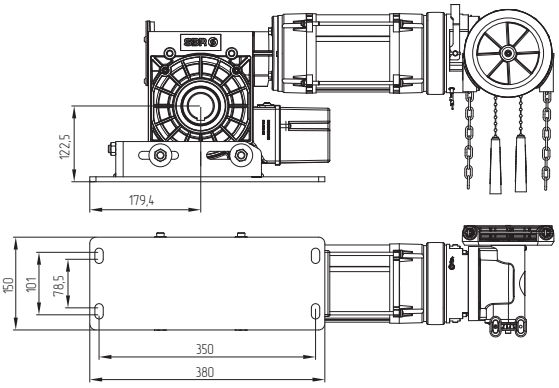



**Torque Bracket For 85 Series**

*> Steel, Electrogalvanised*

5650000850015

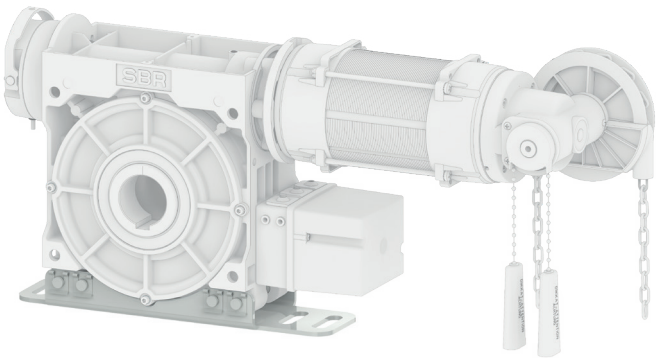


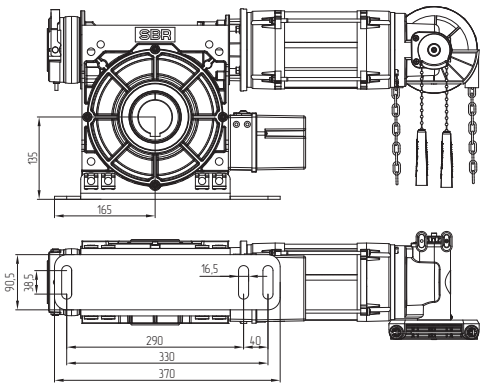



**Torque Bracket For 85 Series**

*> Steel, Electrogalvanised*

5650000850020



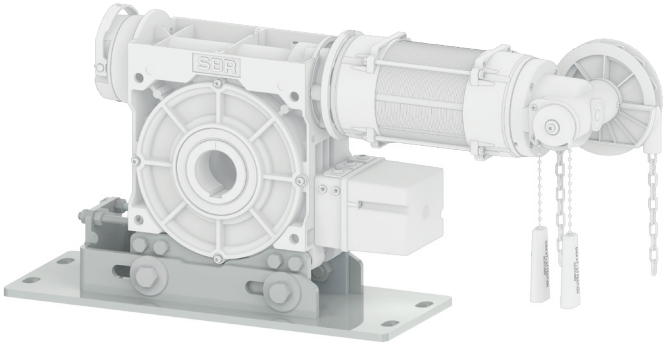


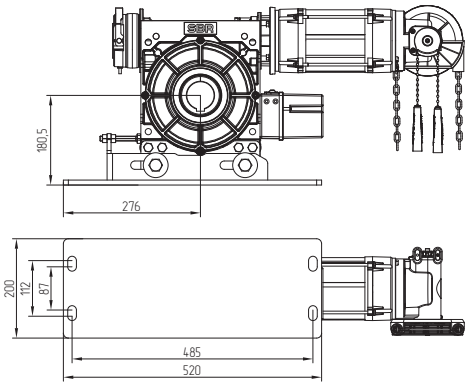

**Torque Bracket For 110 Series**

*> Steel, Electrogalvanised*

5650001100015

# TORQUE BRACKET

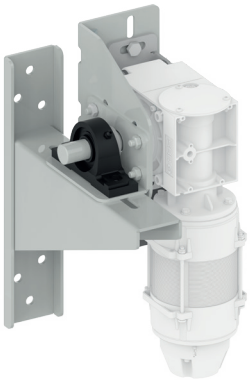





**Torque Bracket For 110 Series**

*> Steel, Electrogalvanised*

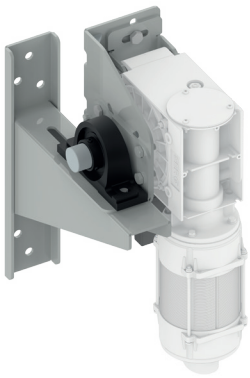
5650001100020



**Torque Mount For 63 Series**

*> Steel, Electrogalvanised*

5650000630120



**Torque Mount For 85 Series**

*> Steel, electrogalvanised*

5650000850120

# CHAIN AND CHAIN DRIVE



**CALIBER CHAIN**

*> For emergency hand chain.*

| | |
|---|---|
| 5510000000006 | Caliber Chain 6 Metre (H:3.0) |
| 5510000000008 | Caliber Chain 8 Metre (H:4.0) |
| 5510000000010 | Caliber Chain 10 Metre (H:5.0) |
| 5510000000012 | Caliber Chain 12 Metre (H:6.0) |
| 5510000000014 | Caliber Chain 14 Metre (H:7.0) |
| 5510000000016 | Caliber Chain 16 Metre (H:8.0) |
| 5510000000018 | Caliber Chain 18 Metre (H:9.0) |



**CONNECTION LINK FOR CALIBER CHAIN**

*> Emergency hand chain, galvanised.*

| | |
|---|---|
| 5520000000001 | Connection Link For Caliber Chain |

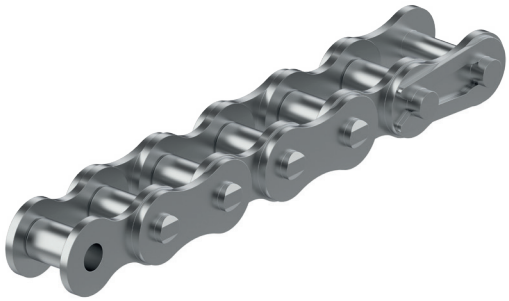


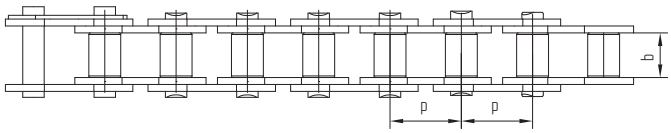
**CHAIN DRIVE 1:1**

*> Axial distance 555 mm*
*> Reduction ratio 1:1*
*> Door Ø25.4 mm*
*> Operator Ø25.4 mm*
*> With plug-in axle and Torque Bracket*

5610000000005

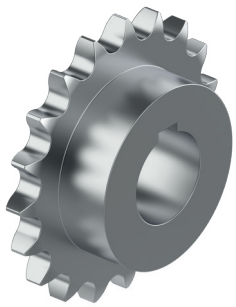
# ROLLER CHAIN

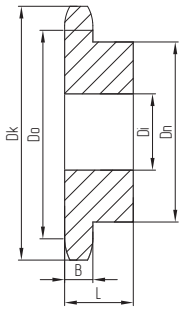


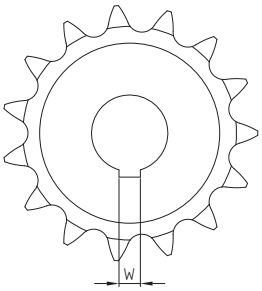



| Part No | Description | Designation | p x b [inch] | p x b [mm] | Ultimate load of chain DIN 8187 [N] | Number of teeth's |
|---|---|---|---|---|---|---|
| 53201000080015 | Roller Chain 08 B-1 1.5 M | 08 B-1 | 1/2" x 5/16" | 12,7 x 7,75 | 18.000 | 15 |
| 53201000080050 | Roller Chain 08 B-1 5.0 M | | | | | 19 |
| 53202000120020 | Roller Chain 12 B-1 2.0 M | 12 B-1 | 3/4" x 7/16" | 19,05 x 11,68 | 29.000 | 15 |
| 53202000120050 | Roller Chain 12 B-1 5.0 M | | | | | 19 |
| 53203000160025 | Roller Chain 16 B-1 2.5 M | 16 B-1 | 1" x 17,02 mm | 25,4 x 17,02 | 60.000 | 15 |
| 53203000160050 | Roller Chain 16 B-1 5.0 M | | | | | 19 |
| 53204000200020 | Roller Chain 20 B-1 2.0 M | 20 B-1 | 1 1/4" x 3/4" | 31,75 x 19,56 | 95.000 | 15 |
| 53204000200020 | Roller Chain 20 B-1 5.0 M | | | | | 19 |

# SPROCKETS

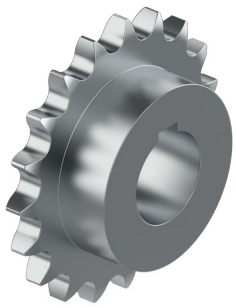


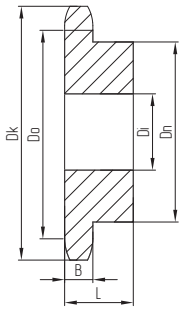


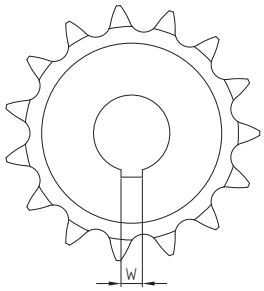




| | Part No | Number Of Teeth Z | Bore Ø Di [mm] | Pitch Circle Ø Do [mm] | Ø Dk [mm] | Hub Ø Dn [mm] | Tooth Width B [mm] | Total Width L [mm] | Width Of Key W [mm] |
|---|---|---|---|---|---|---|---|---|---|
| 08 B-1 (1/2" x 5/16") | 53251000152500 | 15 | 25 | 61,1 | 65,5 | 45 | 7,2 | 28 | 8 |
| | 53251000192500 | 19 | 25 | 77,2 | 81,7 | 60 | 7,2 | 28 | 8 |
| | 53251000192540 | 19 | 25,4 | 77,2 | 81,7 | 60 | 7,2 | 28 | 6,35 |
| | 53251000193175 | 19 | 31,75 | 77,2 | 81,7 | 60 | 7,2 | 28 | 6,35 |
| | 53251000252540 | 25 | 25,4 | 101,3 | 105,8 | 60 | 7,2 | 28 | 6,35 |
| | 53251000253175 | 25 | 31,75 | 101,3 | 105,8 | 60 | 7,2 | 28 | 6,35 |
| | 53251000303000 | 30 | 30 | 121,5 | 126,1 | 80 | 7,2 | 30 | 8 |
| | 53251000304000 | 30 | 40 | 121,5 | 126,1 | 80 | 7,2 | 30 | 12 |
| | 53251000453000 | 45 | 30 | 182,1 | 188 | 70 | 7,2 | 42 | 8 |
| | 53251000454000 | 45 | 40 | 182,1 | 188 | 70 | 7,2 | 42 | 12 |
| | 53251000573000 | 57 | 30 | 230,5 | 236,4 | 70 | 7,2 | 42 | 8 |
| | 53251000574000 | 57 | 40 | 230,5 | 236,4 | 70 | 7,2 | 42 | 12 |
| 12B-1 (3/4" x 7/16") | 53252000152500 | 15 | 25 | 91,6 | 99,8 | 70 | 11,1 | 35 | 8 |
| | 53252000153000 | 15 | 30 | 91,6 | 99,8 | 70 | 11,1 | 35 | 8 |
| | 53252000154000 | 15 | 40 | 91,6 | 99,8 | 70 | 11,1 | 35 | 12 |
| | 53252000192500 | 19 | 25 | 115,8 | 124,2 | 80 | 11,1 | 35 | 8 |
| | 53252000193000 | 19 | 30 | 115,8 | 124,2 | 80 | 11,1 | 35 | 8 |
| | 53252000194000 | 19 | 40 | 115,8 | 124,2 | 80 | 11,1 | 35 | 12 |
| | 53252000222500 | 22 | 25 | 133,9 | 141,8 | 90 | 11,1 | 40 | 8 |
| | 53252000304000 | 30 | 40 | 182,3 | 190,5 | 95 | 11,1 | 40 | 12 |
| | 53252000305000 | 30 | 50 | 182,3 | 190,5 | 95 | 11,1 | 40 | 14 |
| | 53252000455000 | 45 | 50 | 273,1 | 282,5 | 100 | 11,1 | 56 | 14 |
| | 53252000456000 | 45 | 60 | 273,1 | 282,5 | 100 | 11,1 | 56 | 18 |
| | 53252000575000 | 57 | 50 | 345,8 | 355,4 | 100 | 11,1 | 56 | 14 |

# SPROCKETS



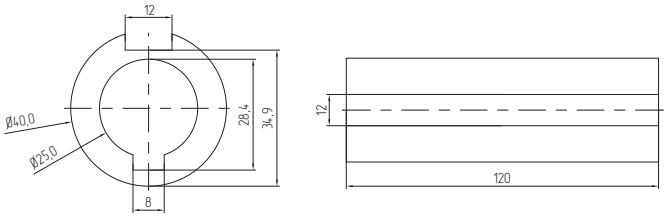



| | Part No | Number Of Teeth Z | Bore Ø Di [mm] | Pitch Circle Ø Do [mm] | Ø Dk [mm] | Hub Ø Dn [mm] | Tooth Width B [mm] | Total Width L [mm] | Width Of Key W [mm] |
|---|---|---|---|---|---|---|---|---|---|
| 16B-1 (1" x 17,02) | 53253000154000 | 15 | 40 | 122,2 | 133 | 92 | 16,2 | 40 | 12 |
| | 53252000155500 | 15 | 55 | 122,2 | 133 | 92 | 16,2 | 40 | 16 |
| | 53252000194000 | 19 | 40 | 154,3 | 165,2 | 100 | 16,2 | 45 | 12 |
| | 53252000195000 | 19 | 50 | 154,3 | 165,2 | 100 | 16,2 | 45 | 14 |
| | 53252000195500 | 19 | 55 | 154,3 | 165,2 | 100 | 16,2 | 45 | 16 |
| | 53252000305000 | 30 | 50 | 243 | 254 | 120 | 16,2 | 50 | 14 |
| | 53252000306000 | 30 | 60 | 243 | 254 | 120 | 16,2 | 50 | 18 |
| | 53252000455000 | 45 | 50 | 364,1 | 377,9 | 125 | 16,2 | 70 | 14 |
| | 53252000456000 | 45 | 60 | 364,1 | 377,9 | 125 | 16,2 | 70 | 18 |
| | 53252000575000 | 57 | 50 | 461,1 | 474,9 | 125 | 16,2 | 70 | 14 |
| | 53252000576000 | 57 | 60 | 461,1 | 474,9 | 125 | 16,2 | 70 | 18 |
| | 53252000578000 | 57 | 80 | 461,1 | 474,9 | 125 | 16,2 | 70 | 22 |
| 20B-1 (1 1/4" x 3/4") | 53254000155000 | 15 | 50 | 152,7 | 167,9 | 118 | 18,5 | 45 | 14 |
| | 53254000155500 | 15 | 55 | 152,7 | 167,9 | 118 | 18,5 | 45 | 16 |
| | 53254000195500 | 19 | 55 | 192,9 | 208,1 | 120 | 18,5 | 50 | 16 |
| | 53254000456000 | 45 | 60 | 455,2 | 470,3 | 150 | 18,5 | 70 | 18 |
| | 53254000458000 | 45 | 80 | 455,2 | 470,3 | 150 | 18,5 | 70 | 22 |
| | 53254000576000 | 57 | 60 | 576,4 | 592,3 | 150 | 18,5 | 80 | 18 |
| | 53254000578000 | 57 | 80 | 576,4 | 592,3 | 150 | 18,5 | 80 | 22 |

# ADAPTER





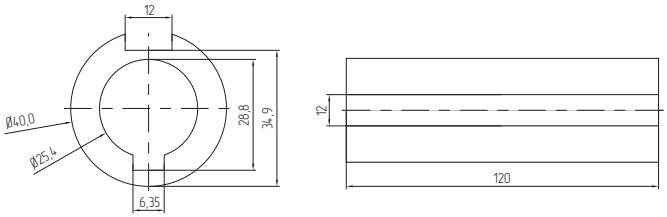

**SHAFT ADAPTER REDUCER SLEEVE SET**

*> Door : Hollow or solid shaft Ø25.00 mm*

*> Operator : Hollow shaft Ø40.00 mm*

53300000025040





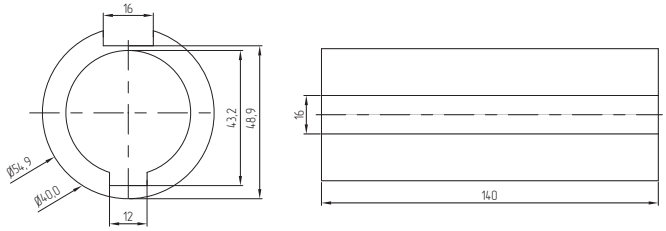

**SHAFT ADAPTER REDUCER SLEEVE SET**

*> Door : Hollow or solid shaft Ø25.40 mm*

*> Operator : Hollow shaft Ø40.00 mm*

53300000025440





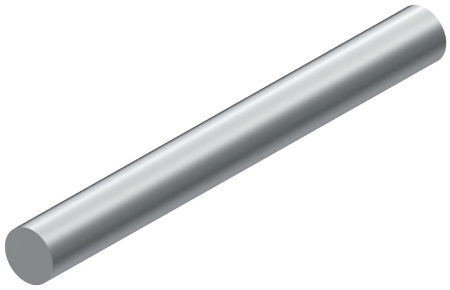

**SHAFT ADAPTER REDUCER SLEEVE SET**

*> Door : Hollow or solid shaft Ø40.00 mm*

*> Operator : Hollow shaft Ø55.00 mm*

53300000040055

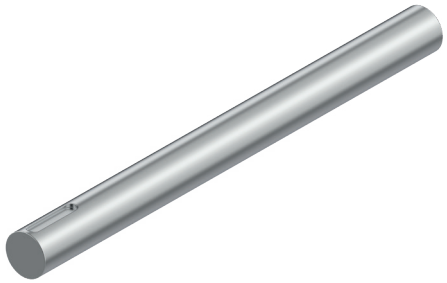
# SHAFTS



**SHAFT A**

*> Material S355J2C+C*
*> Without key*
*> For rolling doors*

| Part No | Ø D | L [mm] |
|---|---|---|
| 53351000025350 | 25 | 350 |
| 53351000030600 | 30 | 600 |
| 53351000040600 | 40 | 600 |
| 53351000050600 | 50 | 600 |
| 53351000055600 | 55 | 600 |
| 53351000060600 | 60 | 600 |
| 53351000080800 | 80 | 800 |
| 53351000100980 | 100 | 980 |

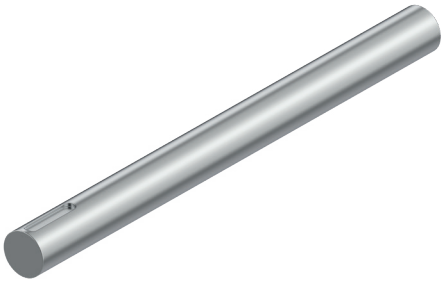


**SHAFT B**

*> Material S355J2C+C*
*> With key*
*> For rolling doors*

| Part No | | Ø D | L [mm] |
|---|---|---|---|
| 53352000030600 | 30 | 600 | 8x7x70 |
| 53352000040600 | 40 | 600 | 12x8x70 |
| 53352000050600 | 50 | 600 | 14x9x70 |
| 53352000060600 | 60 | 600 | 18x11x100 |
| 53352000060800 | 80 | 800 | 22x14x100 |

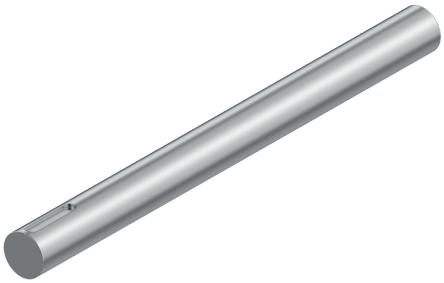
# SHAFTS



**SHAFT C**

*> Material S355J2C+C*
*> With keys*
*> For rolling doors*

| Part No | | Ø D | L [mm] |
|---|---|---|---|
| 53353000025350 | 25 | 350 | 8x7x100 |
| 53353000030600 | 30 | 600 | 8x7x120 |
| 53353000040600 | 40 | 600 | 12x8x120 |
| 53353000055600 | 55 | 600 | 16x10x140 |
| 53353000060600 | 60 | 600 | 18x11x140 |
| 53353000080600 | 80 | 800 | 22x14x200 |
| 53353000100800 | 100 | 980 | 28x16x210 |

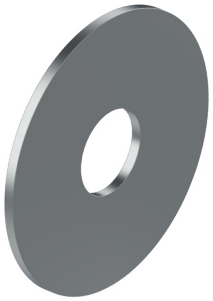


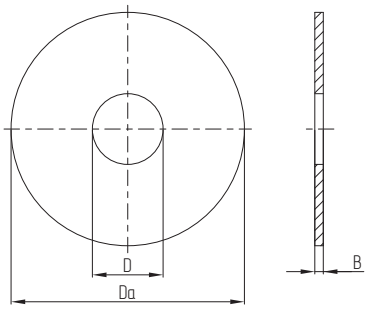
**SHAFT D**

*> Material S355J2C+C*
*> With keys*
*> For rolling doors*

| Part No | | Ø D | L [mm] |
|---|---|---|---|
| 53354000030600 | 30 | 600 | 8x7x120 |
| 53354000040600 | 40 | 600 | 12x8x120 |
| 53354000055600 | 55 | 600 | 16x10x140 |

# DISCS FOR TUBES






| Part No | D | $D_A$ | For Tube |
|---|---|---|---|
| 53400000030099 | 30 | 99 | 108,0 x 3,6 |
| 53400000030124 | 30 | 124 | 133,0 x 4,0 |
| 53400000040124 | 40 | 124 | 133,0 x 4,0 |
| 53400000055124 | 55 | 124 | 133,0 x 4,0 |
| 53400000030149 | 30 | 149 | 159,0 x 4,5 |
| 53400000040149 | 40 | 149 | 159,0 x 4,5 |
| 53400000050149 | 50 | 149 | 159,0 x 4,5 |
| 53400000055149 | 55 | 149 | 159,0 x 4,5 |
| 53400000030166 | 30 | 166 | 177,8 x 5,0 |
| 53400000040166 | 40 | 166 | 177,8 x 5,0 |
| 53400000050166 | 50 | 166 | 177,8 x 5,0 |
| 53400000055166 | 55 | 166 | 177,8 x 5,0 |
| 53400000030182 | 30 | 182 | 193,7 x 5,4 |
| 53400000040182 | 40 | 182 | 193,7 x 5,4 |
| 53400000050182 | 50 | 182 | 193,7 x 5,4 |
| 53400000055182 | 55 | 182 | 193,7 x 5,4 |
| 53400000060182 | 60 | 182 | 193,7 x 5,4 |
| 53400000040206 | 40 | 206 | 219,1 x 5,9 |
| 53400000050206 | 50 | 206 | 219,1 x 5,9 |
| 53400000055206 | 55 | 206 | 219,1 x 5,9 |
| 53400000060206 | 60 | 206 | 219,1 x 5,9 |
| 53400000040231 | 40 | 231 | 244,5 x 6,3 |
| 53400000050231 | 50 | 231 | 244,5 x 6,3 |
| 53400000055231 | 55 | 231 | 244,5 x 6,3 |
| 53400000060231 | 60 | 231 | 244,5 x 6,3 |
| 53400000070231 | 70 | 231 | 244,5 x 6,3 |
| 53400000055259 | 55 | 259 | 273,0 x 6,3 |
| 53400000060259 | 60 | 259 | 273,0 x 6,3 |
| 53400000070259 | 70 | 259 | 273,0 x 6,3 |
| 53400000080259 | 80 | 259 | 273,0 x 6,3 |
| 53400000055283 | 55 | 283 | 298,5 x 7,1 |
| 53400000060283 | 60 | 283 | 298,5 x 7,1 |
| 53400000055308 | 55 | 308 | 323,9 x 7,1 |
| 53400000060308 | 60 | 308 | 323,9 x 7,1 |
| 53400000070308 | 70 | 308 | 323,9 x 7,1 |
| 53400000080308 | 80 | 308 | 323,9 x 7,1 |

Fevzi Çakmak Mah. Sıla Cad. No:48/O Selçuklu/KONYA/TURKIYE

**+90 332 238 41 82** | info@sbr.com.tr - export@sbr.com.tr

V.2.1

