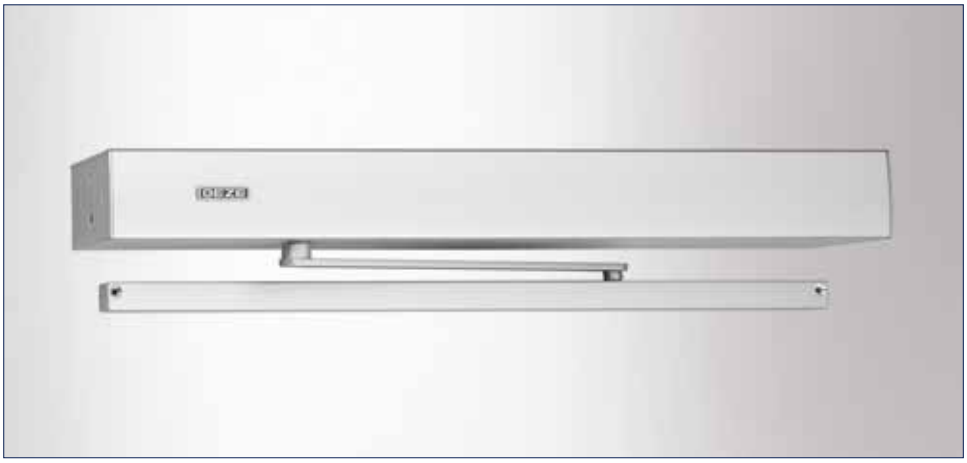
GEZE swing door drive Powerturn

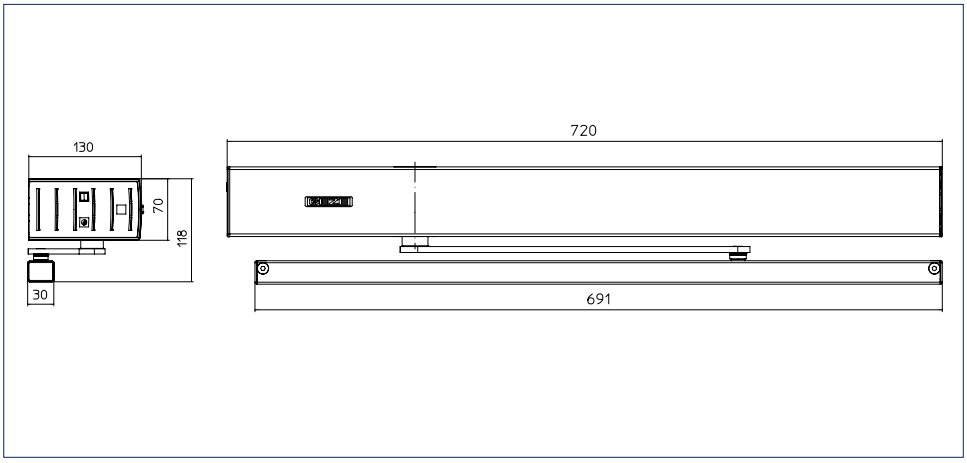
Fully automatic swing door drive for 1 and 2-leaf single-action doors

The new swing door drive Powerturn offers comfort and safety for every access situation. The fully automatic drive is powerful and opens doors with leaf widths of up to 1600 mm or leaf weights of up to 300 kg reliably and safely. It offers freedom to design for a wide range of uses. The unique „Smart swing" function allows for easy manual use even of large, heavy doors, e.g. fire protection doors or façade doors, at any time. The powerful closing spring is once pre-tensioned and does not have to be moved permanently during passage. In addition, the „Smart swing" function reduces energy costs during operation and in the „permanently open" position. The small overall height and discreet design make it flexible and future-proof for multifunction safety doors, safe escape and rescue routes and complex interlocking door systems. This makes the Powerturn an excellent example of „Universal Design - made in Germany". Installation is straightforward and safe due to the simple GEZE installation system.

GEZE Powerturn



GEZE Powerturn



Area of application

- Internal and external doors
- Railway stations and airports
- Hotels and gastronomy
- Hospitals and homes for the elderly
- Department stores and shopping centres
- Educational institutions, e.g. schools, nursery schools, day care centres
- Leisure facilities, e.g. baths, thermal baths, sport and wellness centres
- Administration and public buildings
- Food industry

Technical data

Product features	GEZE Powerturn 1-leaf / 2-leaf	GEZE Powerturn F	GEZE Powerturn F-IS	GEZE Powerturn F/R	GEZE Powerturn F/R-IS
Height	70 mm				
Width	720 mm				
Depth	130 mm				
Leaf weight (max.) 1-leaf	300 kg				
Hinge clearance (min.-max.) 2-leaf link arm	1480 - 3200 mm				
Hinge clearance (min.-max.) 2-leaf roller guide rail	1600 - 3200 mm				
Leaf width (min.-max.)	800 - 1600 mm				
Reveal depth (max.)*	-30 - 560 mm	0 - 300 mm			
Drive type	Electromechanical				
Door opening angle (max.)*	136 °				
Spring pre-load**	EN4 - EN7				
DIN left	●				
DIN right	●				
Transom installation opposite hinge side with link arm	●				
Transom installation opposite hinge side with roller guide rail	●				
Transom installation hinge side with roller guide rail	●				
Door leaf installation opposite hinge side with roller guide rail	●				
Door leaf installation hinge side with roller guide rail	●				
Door leaf installation hinge side with link arm	●				
Mechanical latching action	●				
Electrical latching action	●				
Electrical closing sequence control	●				
Mechanical closing sequence control***	●				
Disconnection from mains	all pole main switch in the drive				
Activation delay (max.)	10 s				
Operating voltage	230 V				
Frequency of supply voltage	50 - 60 Hz				
Capacity rating	200 W				
Power supply for external consumers (24 V DC)	1200 mA per drive				
Temperature range	-15 - 50 °C				
IP rating	IP 30				
Operating modes	Automatic, Night, Permanently open, Shop closing, Off				
Type of function	Fully automatic				
Automatic function	●				
Low-Energy function	●				
Smart swing function	●				
Key function	●				
Vestibule function	●				
Obstruction detection	●				
Automatic reversing	●				
Push & Go	adjustable				
Operation	GEZEconnects (PC + Bluetooth), Service terminal ST 220, Display programme switch DPS				
Parameter setting	GEZEconnects (PC + Bluetooth), Service terminal ST 220, Display programme switch DPS				
Approvals	DIN 18650, EN 16005, DIN 18263-4	DIN 18650, EN 16005, DIN 18263-4	DIN 18650, EN 16005, DIN 18263-4, Door closing sequence selector tested in accordance with EN 1158	DIN 18650, EN 16005, DIN 18263-4	DIN 18650, EN 16005, Door closing sequence selector tested in accordance with EN 1158
Integrated smoke switch (R-variant)	-			●	●

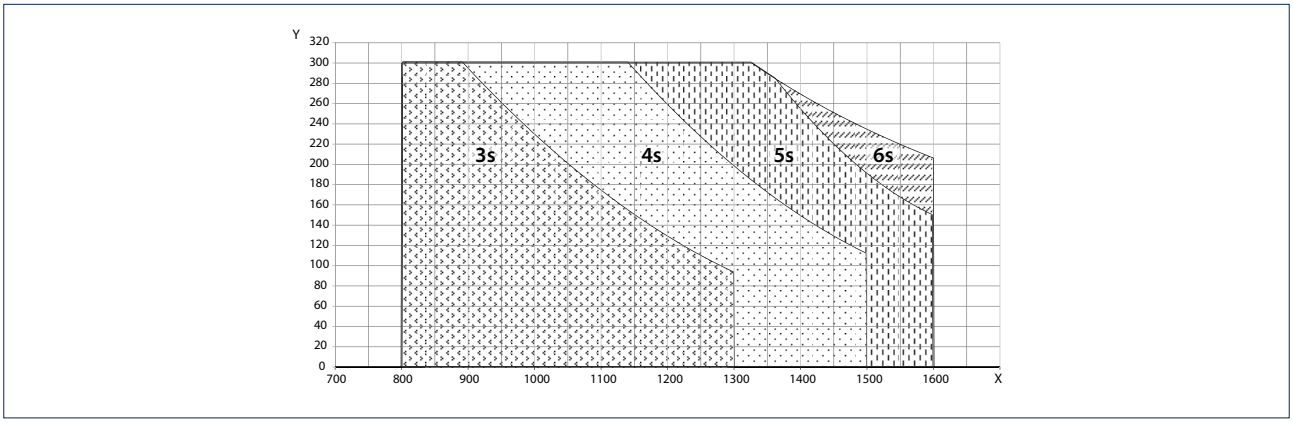
● = YES
* = DEPENDING ON THE TYPE OF INSTALLATION
** = SEE TABLE OVERVIEW OF TORQUES
*** = OPTIONAL FOR 2-LEAF SYSTEMS AND TRANSOM INSTALLATION OR ONLY FOR THE IS VARIANTS
NOTE: THE MAXIMUM POSSIBLE LEAF WEIGHT IN RELATION TO LEAF WIDTH CAN BE FOUND IN THE CHAPTER ON AREAS OF APPLICATION (DIAGRAMS)!

Area of application

Note

The movement parameters can be set in such a way that the safety requirements for low-energy operation in compliance with DIN 18650 / EN 16005 are met. The drive then moves the swing door at reduced speed. The use of safety sensors to safeguard the system is only necessary in individual cases, taking the user group into account. In automatic mode, however, the swing area of the door must always be safeguarded with safety sensors.

Diagram showing the use of Powerturn with opening times of up to 90° door opening angle



X = Door width (mm)
Y = Door weight (kg)

Opening times Powerturn

To ensure the safety requirements in low-energy operation

Leaf width (mm)	Door weight (kg) 60	90	120	150	180	210	240	270
800	2.7	3.4	3.9	4.3	4.7	5.1	5.5	5.8
900	3.1	3.8	4.4	4.9	5.3	5.8	6.2	6.5
1000	3.4	4.2	4.8	5.4	5.9	6.4	6.9	7.3
1100	3.8	4.6	5.3	6.0	6.5	7.1	7.5	8.0
1200	4.1	5.0	5.8	6.5	7.1	7.7	8.2	8.7
1300	4.5	5.5	6.3	7.0	7.7	8.3	8.9	9.5
1400	4.8	5.9	6.8	7.6	8.3	9.0	9.6	10.2
1500	5.1	6.3	7.3	8.1	8.9	9.6	10.3	10.9
1600	5.5	6.7	7.8	8.7	9.5	10.3	11.0	11.6

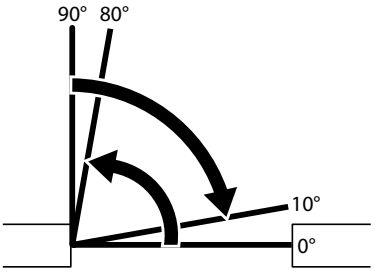


Illustration of the minimum opening times to be set depending on the door weight and door leaf width for a door opening from 0° to 80° or for a closing movement from 90° to 10° door opening angle.

Overview of Powerturn torques

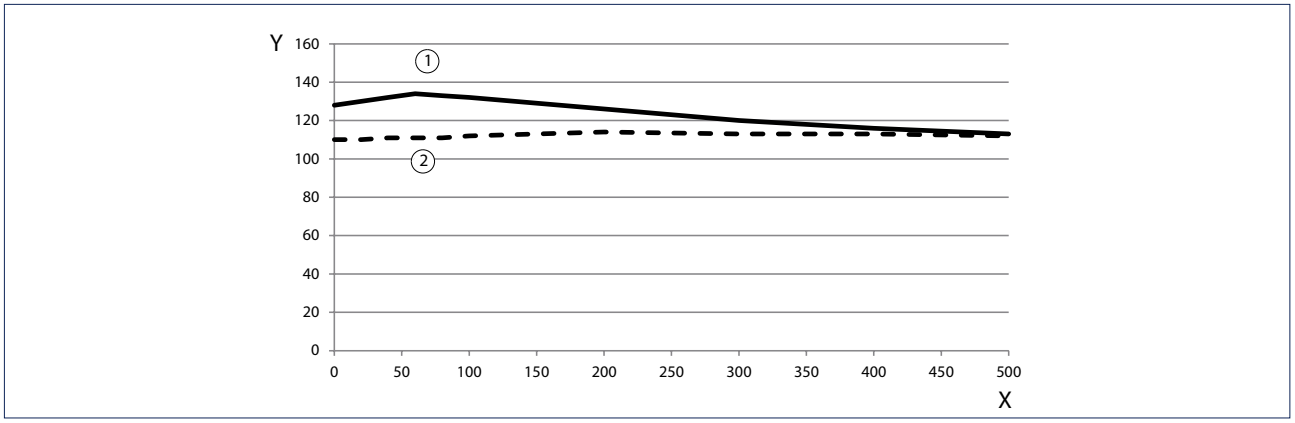
To ensure the safety requirements in low-energy operation in accordance with DIN 18650 / EN 16005

		1. K-BS-rail Min	Max	2. K-BGS-rail Min	Max	3. T-BS-rail Min	Max	4. T-BGS-rail Min	Max	5. K-BGS-link arm Min	Max	6. T-BS-link arm Min	Max
EN 1154	**EN Class**	4	6	5	6	4	6	4	6	6	7	6	7
Closing torques	**Nm (Door)**	0	60	0	60	0	60	0	60	0	100	0	100
Maximum opening torque (automatic)	**Nm (Door)**	135		121		143		127		180*		180*	
Manual opening torque (Operating mode Off)	**Nm (Door)**	10		9		11		10		19		21	

* = Restricted according to DIN 18263-4
K = Transom installation
T = Door leaf installation
BS = Hinge side
BGS = Opposite hinge side

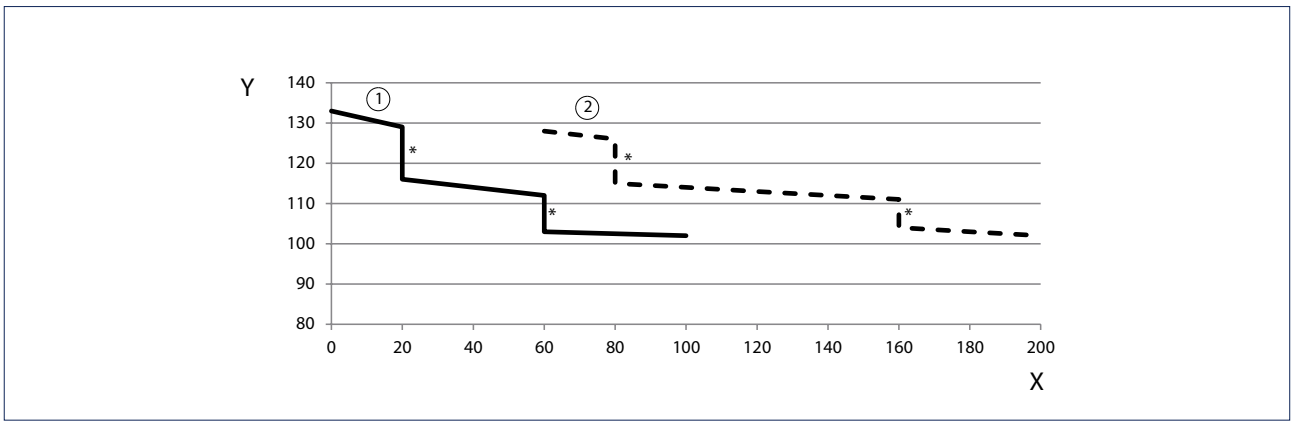
Reveal / max. door opening angle

Transom installation opposite hinge side link arm



X = Reveal depth (mm)
Y = Max. door opening angle (°)
1 = Door opening angle
2 = Door opening angle with sensor link arm

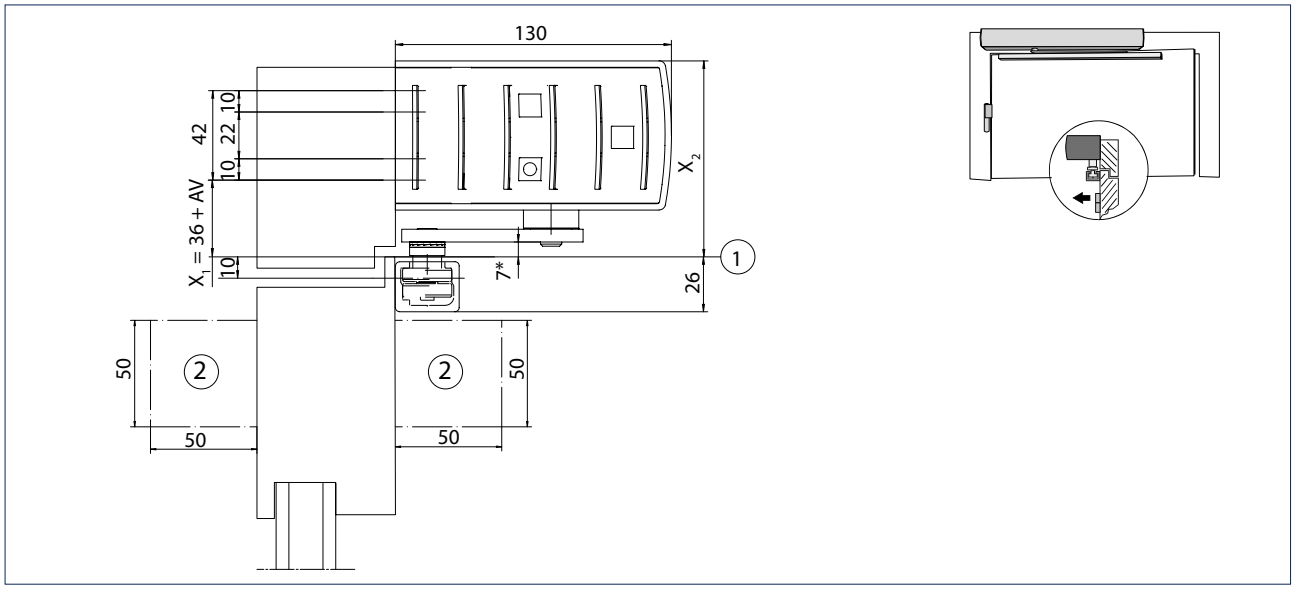
Transom installation hinge side roller guide rail



* = Preload
X = Reveal depth (mm)
Y = Max. door opening angle (°)
1 = Lever 330 mm
2 = Lever 450 mm

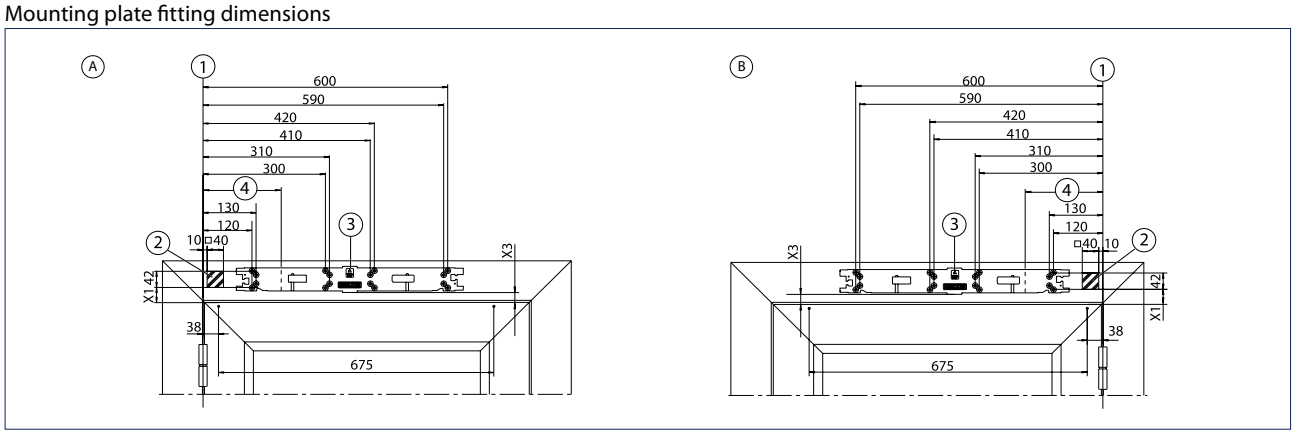
Transom installation with roller guide rail on the hinge side, 1-leaf and 2-leaf

Drawing no. 70109-ep01



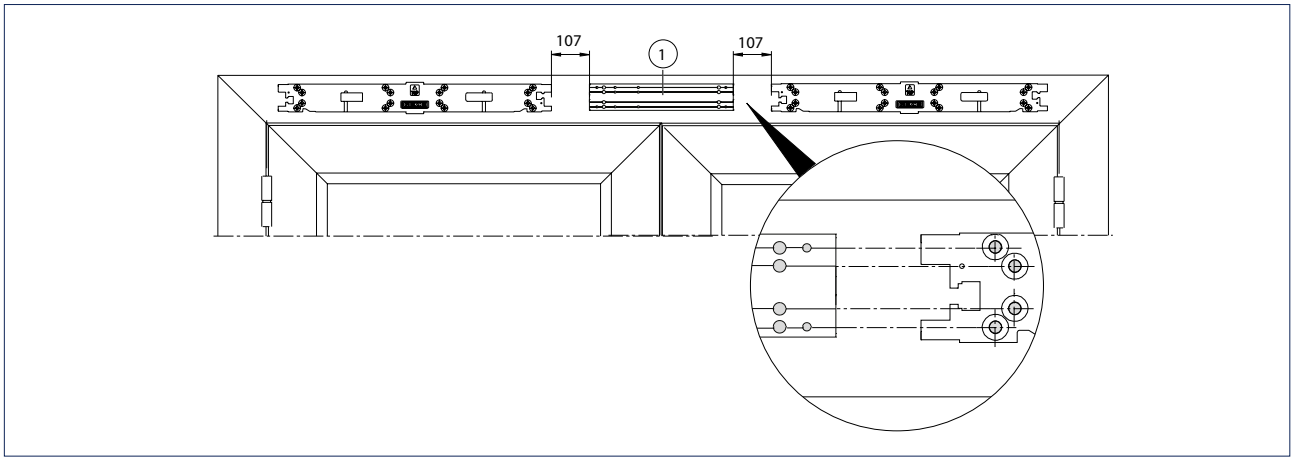
* = Important functional dimension
AV = Spindle extension
1 = Base upper edge of door
2 = Space requirement sensors

Mounting plate fitting dimensions



A = DIN left
B = DIN right
1 = Dimensional reference centre of hinge / upper edge of door
2 = Concealed cable routing possible in the hatched area, e.g. Ø 20 mm for the mains connection or low voltage connection
3 = Orientation arrow for precise positioning of the mounting plate
4 = Hinge size

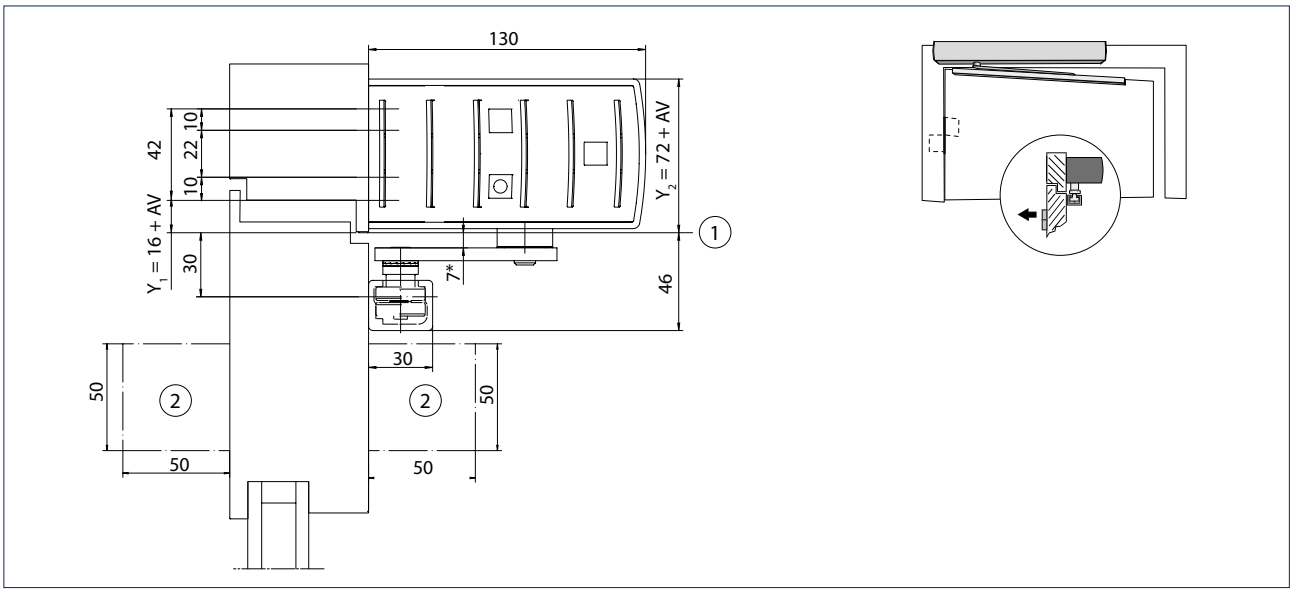
2-leaf installation with intermediate cover with divided or continuous cover



1 = Base plate

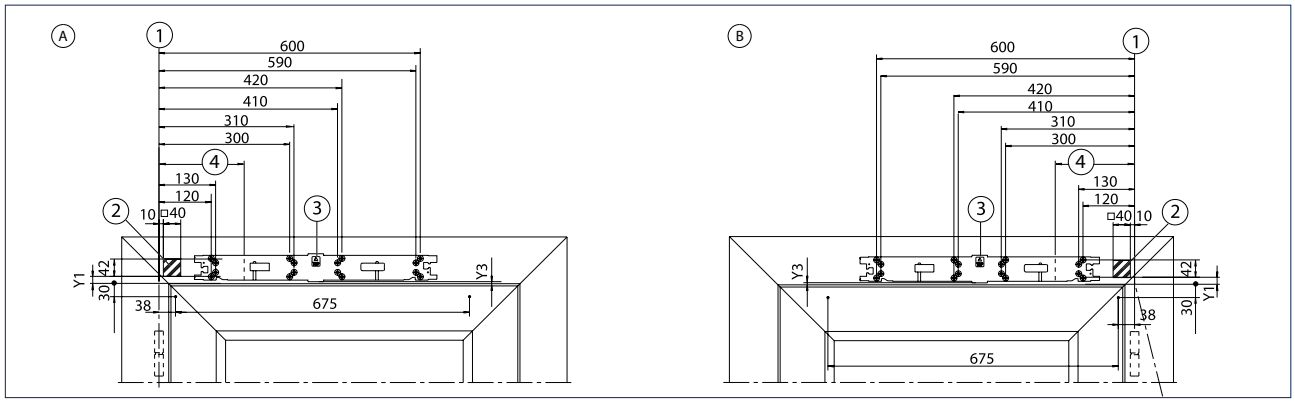
Transom installation with roller guide rail on the opposite hinge side, 1-leaf and 2-leaf

Drawing no. 70109-ep02



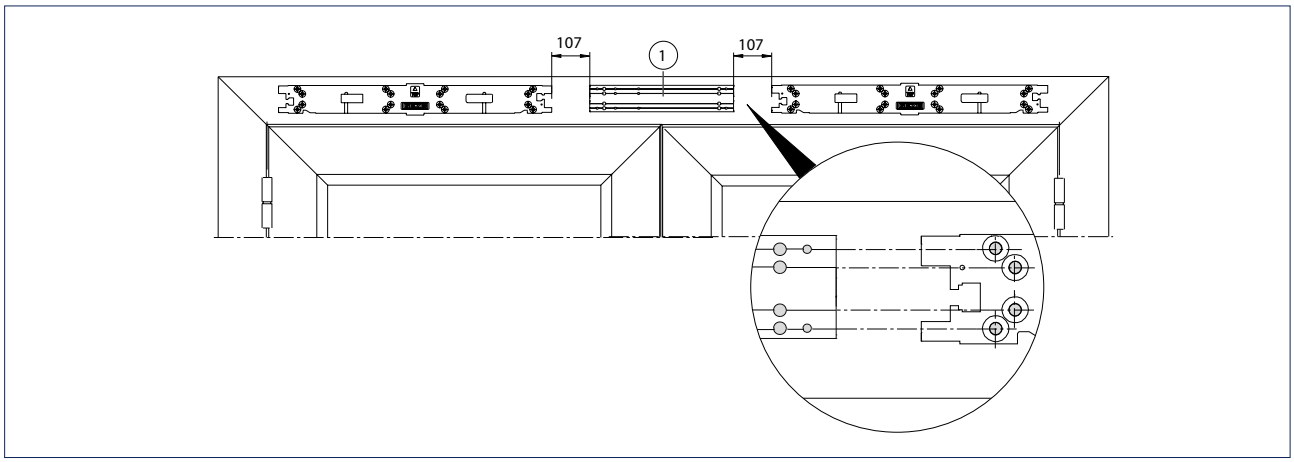
* = Important functional dimension
AV = Spindle extension
1 = Base lower edge of lintel
2 = Space requirement sensors

Mounting plate fitting dimensions



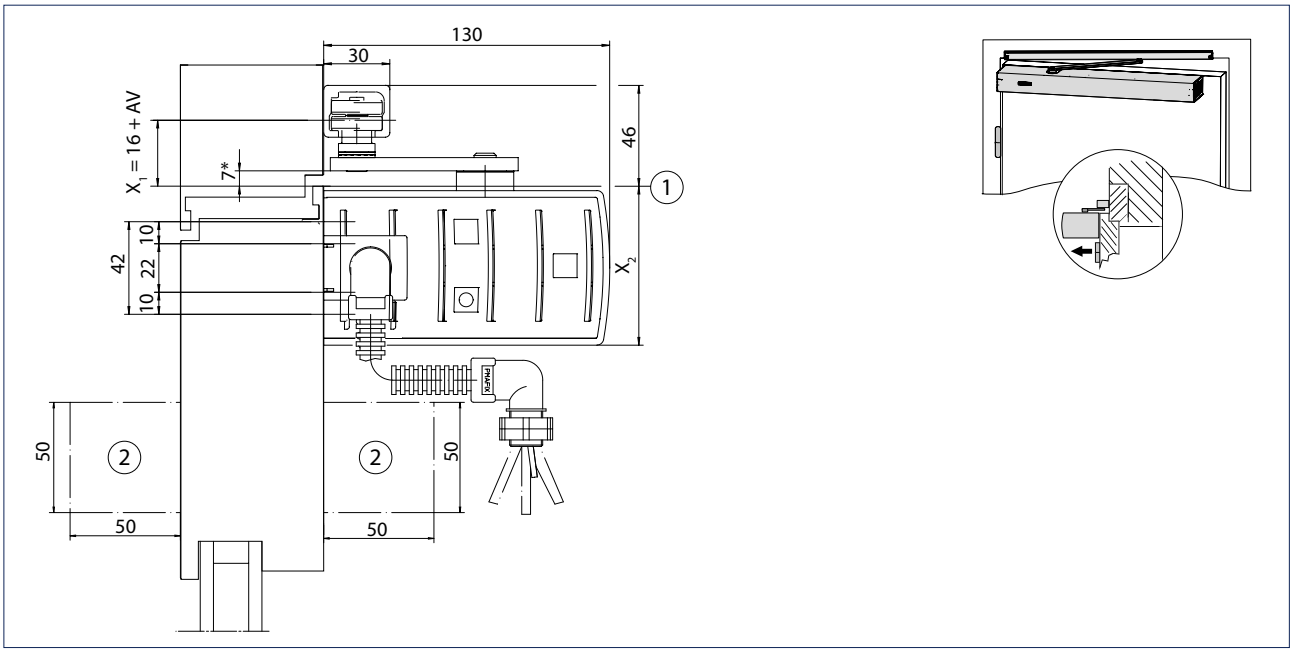
A = DIN left
B = DIN right
1 = Dimensional reference centre of hinge / lower edge of frame
2 = Concealed cable routing possible in the hatched area, e.g. Ø 20 mm for the mains connection or low voltage connection
3 = Orientation arrow for precise positioning of the mounting plate
4 = Hinge size

2-leaf installation with intermediate cover with divided or continuous cover



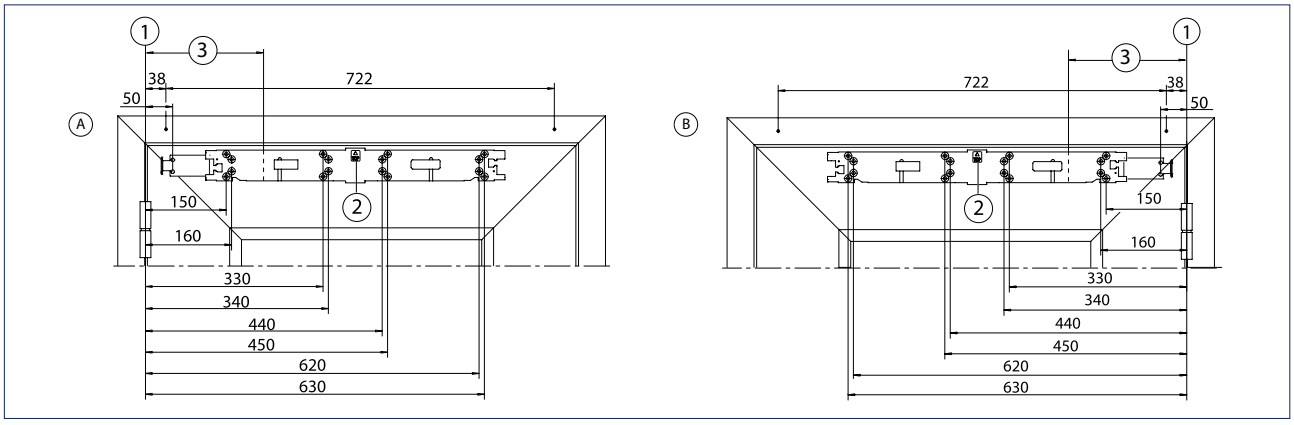
1 = Base plate

Door leaf installation with roller guide rail on the hinge side, 1-leaf and 2-leaf
Drawing no. 70109-ep03



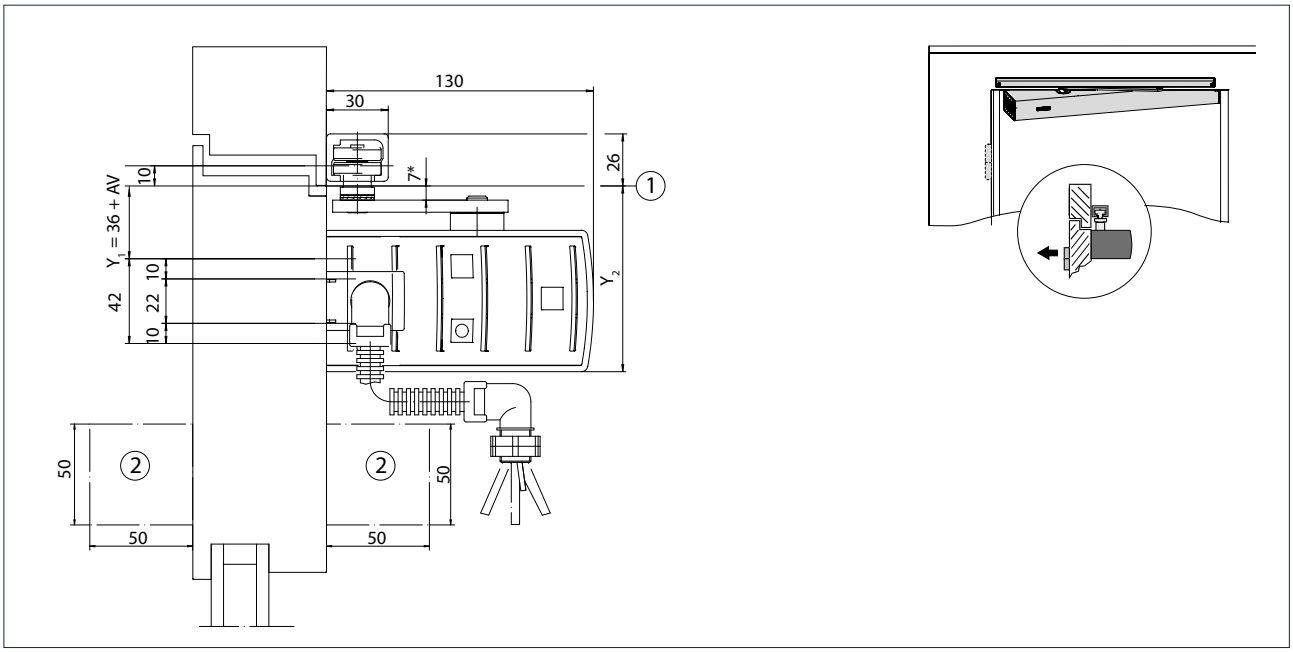
* = Important functional dimension
AV = Spindle extension
1 = Base upper edge of door
2 = Space requirement sensors

Mounting plate fitting dimensions



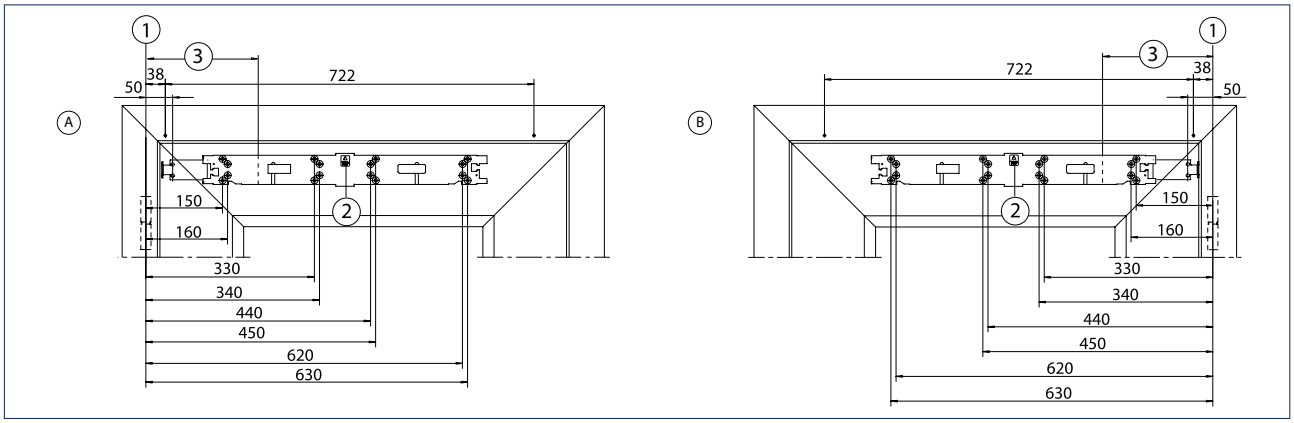
A = DIN left
B = DIN right
1 = Dimensional reference centre of hinge / upper edge of door
2 = Orientation arrow for precise positioning of the mounting plate
3 = Hinge size

Door leaf installation with roller guide rail on the opposite hinge side, 1-leaf and 2-leaf
Drawing no. 70109-ep04



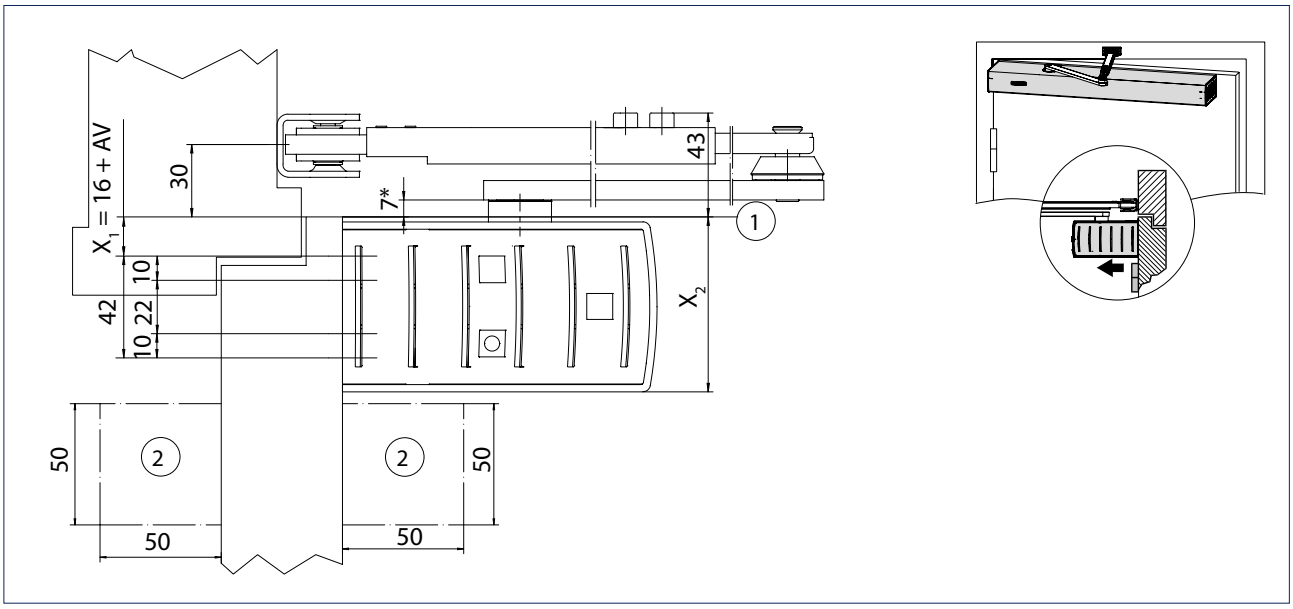
* = Important functional dimension
AV = Spindle extension
1 = Base lower edge of lintel
2 = Space requirement sensors

Mounting plate fitting dimensions



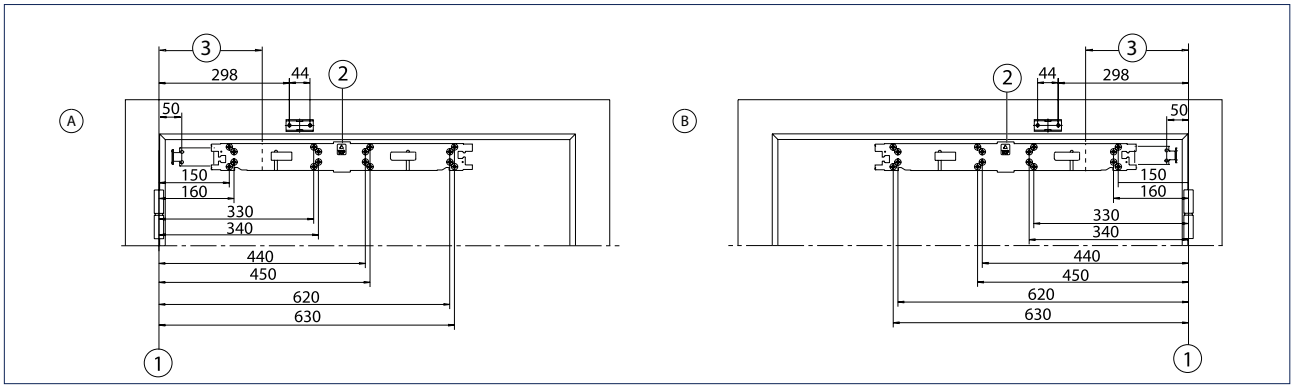
A = DIN left
B = DIN right
1 = Dimensional reference centre of hinge / lower edge of frame
2 = Orientation arrow for precise positioning of the mounting plate
3 = Hinge size

Door leaf installation with link arm on the hinge side, 1-leaf and 2-leaf
Drawing no. 70109-ep06



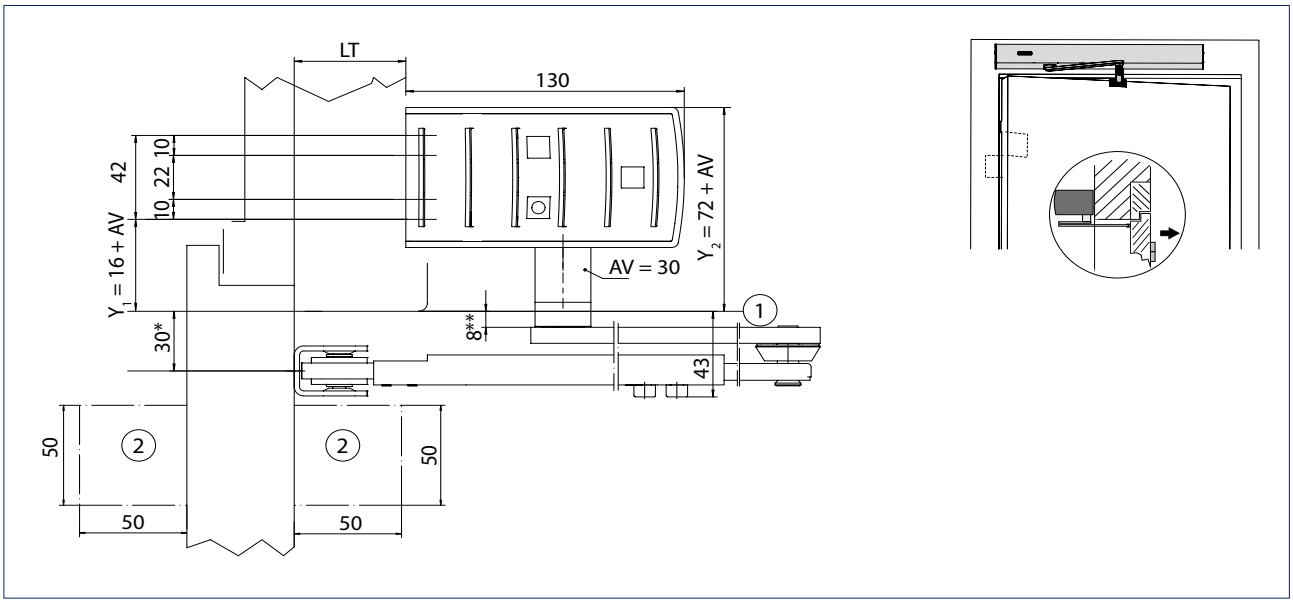
* = Important functional dimension
AV = Spindle extension
1 = Base upper edge of door
2 = Space requirement sensors

Mounting plate fitting dimensions



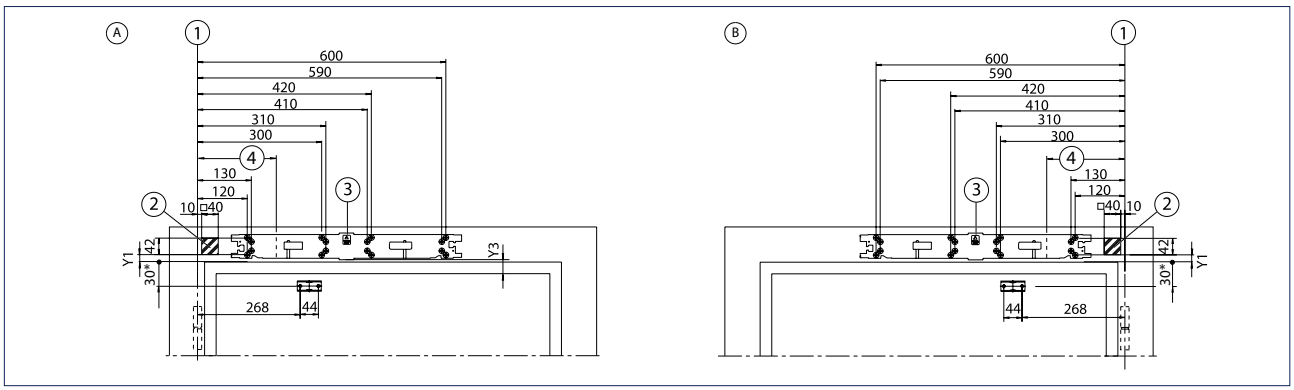
A = DIN left
B = DIN right
1 = Dimensional reference centre of hinge
2 = Orientation arrow for precise positioning of the mounting plate
3 = Hinge size

Transom installation with link arm on the opposite hinge side, 1-leaf and 2-leaf
Drawing no. 70109-ep05



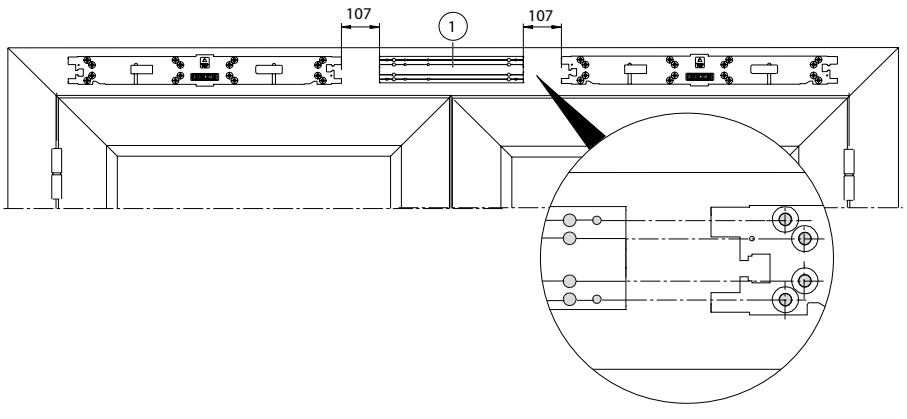
* = With sensor adapter 35.5 mm
** = Important functional dimension
AV = Spindle extension
LT = Reveal depth
1 = Base lower edge of lintel
2 = Space requirement sensors

Mounting plate fitting dimensions



* = With sensor adapter 35.5 mm
A = DIN left
B = DIN right
1 = Dimensional reference centre of hinge / upper edge of door
2 = Concealed cable routing possible in the hatched area, e.g. Ø 20 mm for the mains connection or low voltage connection
3 = Orientation arrow for precise positioning of the mounting plate
4 = Hinge size

2-leaf installation with intermediate cover with divided or continuous cover



1 = Base plate

Legend for the cable diagrams

Cable

1 = NYM-J 3 x 1.5 mm²
2 = J-Y(ST)Y 1 x 2 x 0.6 LG
3 = J-Y(ST)Y 2 x 2 x 0.6 LG
4 = J-Y(ST)Y 4 x 2 x 0.6 LG
5 = LiYY 2 x 0.25 mm²
6 = LiYY 4 x 0.25 mm²
7 = Scope of supply sensor strip or LiYY 5 x 0.25 mm²
8 = Route empty pipe with pull-wire inner diameter 10 mm

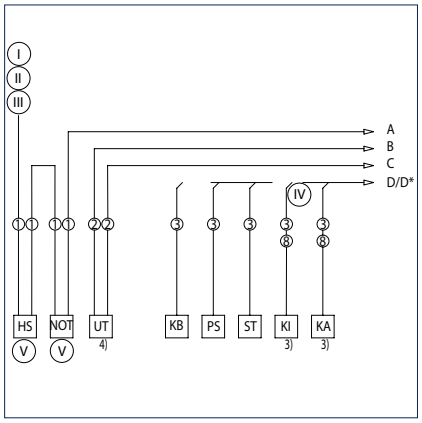
Notes

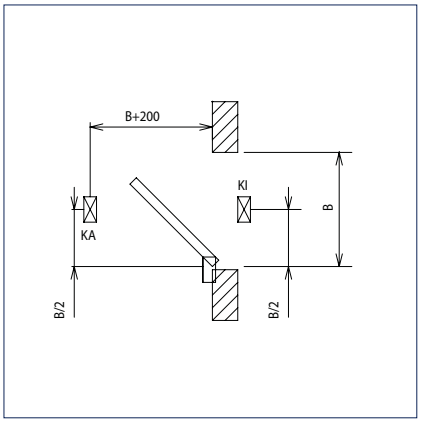
- Cable diagrams can also be prepared for specific building projects after receipt of order
- Version of standard cable diagrams in accordance with GEZE specifications
- Cable routing according to VDE0100/ IEE regulations
- Allow the cable for the drive to project at least 1500 mm out of the wall

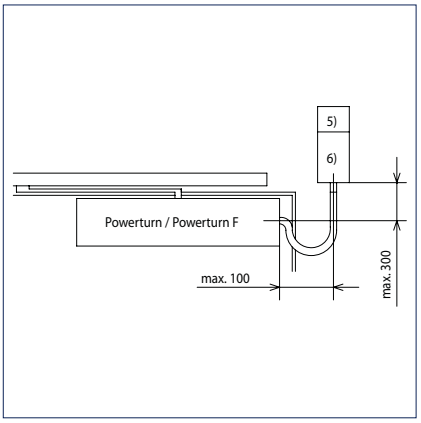
1) Door transmission cable (included in the scope of supply for sensor strip), cable routing through a hole in the door leaf is not permitted for fire control doors.
2) Cable exit for door drive, see installation drawings for Powerturn
3) Cable included in the scope of supply for the sensor
4) Install in the direct vicinity of the door
5) Mains connection box WxHxD min. 65 x 65 x 57 with PG-11 duct, on site
6) Low-voltage connection box WxHxD min. 94 x 65 x 57 with PG-11 duct, on site
7) E.g. door transmission cable, 8-wire, art. no. 066922
8) Branch box, on site

Abbreviations

HS = Main switch
NOT = Emergency-stop switch
UT = Circuit breaker CLOSE DOOR (only with F variant)
KB = Contact sensor authorised
PS = Programme switch
ST = Emergency stop
KI = Contact sensor inside
KA = Contact sensor outside
TOE = Door opener
RM = Bar message
RS = Smoke switch (only with F variant)
RSZ = Smoke switch control unit (only with F variant)
TS = Door closer
MK = Magnetic contact

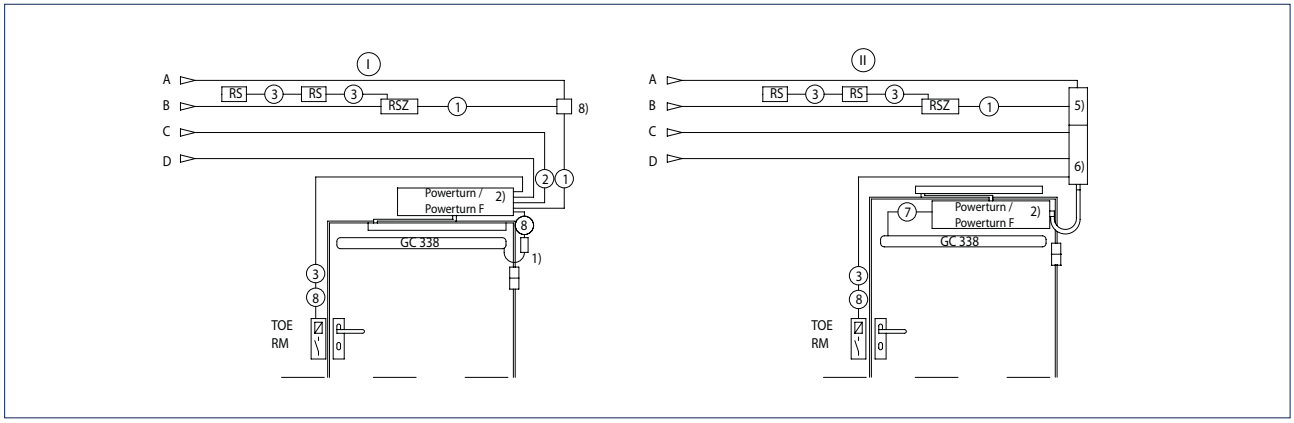




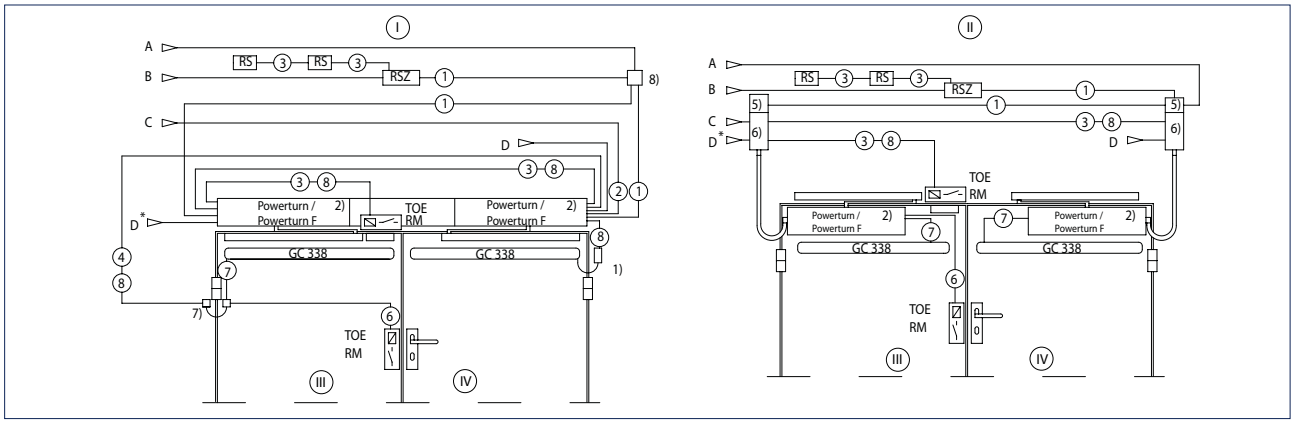


I = Feeder 230 V / 50 Hz
II = 10 A fuse
III = Connected value 230 W, 1 A 1-, 2-leaf with manual fixed leaf; connected value 400 W, 1 A with 2-leaf
IV = And / Or
V = Option

1-leaf



2-leaf



I = Transom installation
II = Door leaf installation
III = Fixed leaf
IV = Active leaf

Photo: GEZE GmbH

ACCESSORIES

Accessories for swing door systems

Hood, mounting plate, link arm, roller guide rail with lever

Hood

The hood is available in an anodised or coloured finish. In the case of double-leaf versions, the hood can be ordered as a continuous variant or with intermediate hood.

Mounting plate for drives (option)

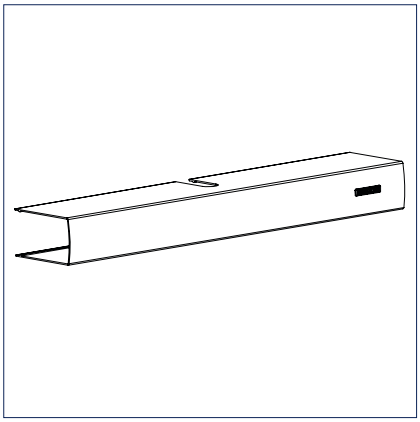
A mounting plate may be necessary, depending on the installation situation. A mounting plate is generally recommended to make installation easier. A respective mounting plate is supplied according to the hood version.

Link arms

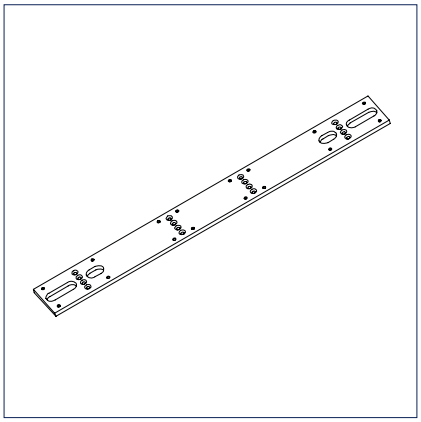
are offered for different reveal depths

Roller guide rail with lever

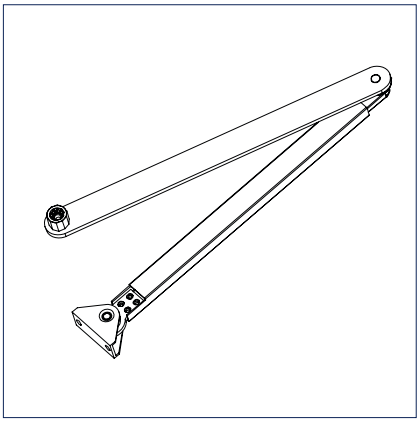
Installation depends on the type of hinge action chosen.



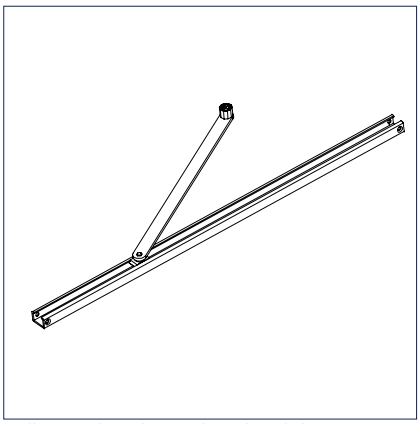
Cover



Mounting plate



Link arm



Roller guide rail / guide rail with lever