

Automatic Door System – Swing – TSA 160

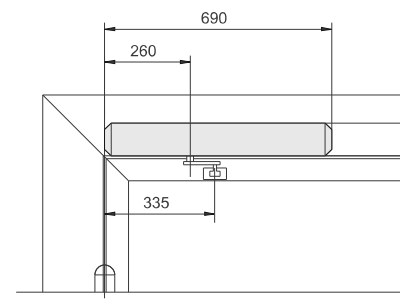
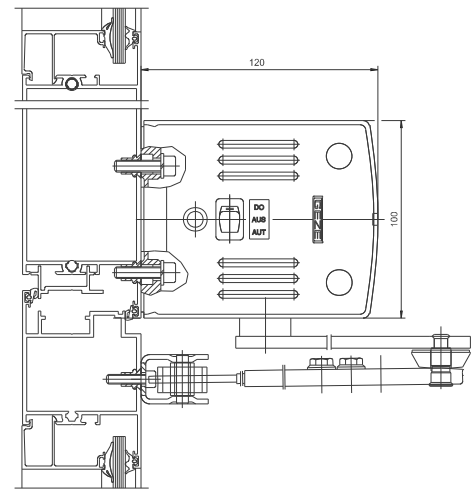
For **single-leaf** doors

Range of application of the TSA 160

Flexibility scores! The TSA 160 system is adaptable to your requirements. For new construction or refurbishment, for inside or out. And there is a broad range of materials to go with the TSA 160: timber, steel, plastic or aluminium, you can take your pick. The only condition: it should be dry and ambient temperatures should be within the usual limits ($-10\text{ }^{\circ}\text{C}$ till $+60\text{ }^{\circ}\text{C}$).

The small dimensions (100 x 120 x 690 mm) make it particularly easy for the designer and fitter. And of course, they fit well in a retrofit situation.

Nevertheless, TSA 160 actuators are rugged and powerful. They will open doors up to 250 kg in weight and with maximum door widths up to 1400 mm without any problem and still perfectly control the closing action. The same actuator can be used for doors handed left or right.



Functions and benefits

Anything left to be desired? No! The electrohydraulic swing door actuators TSA 160 ensure total satisfaction in connection with all doors. A hydraulic pump system controls the open state and the closing spring mechanism governs the closing process. But still optically and acoustically they are unobtrusive. The construction with vibration dampers makes them low in noise.

All TSA 160 are extremely frugal. They require very little energy and service. But as far as comfort is concerned, the TSA 160 are not at all modest. They can be combined with all known control options and offer a system ready to be fitted – if required with remote control.

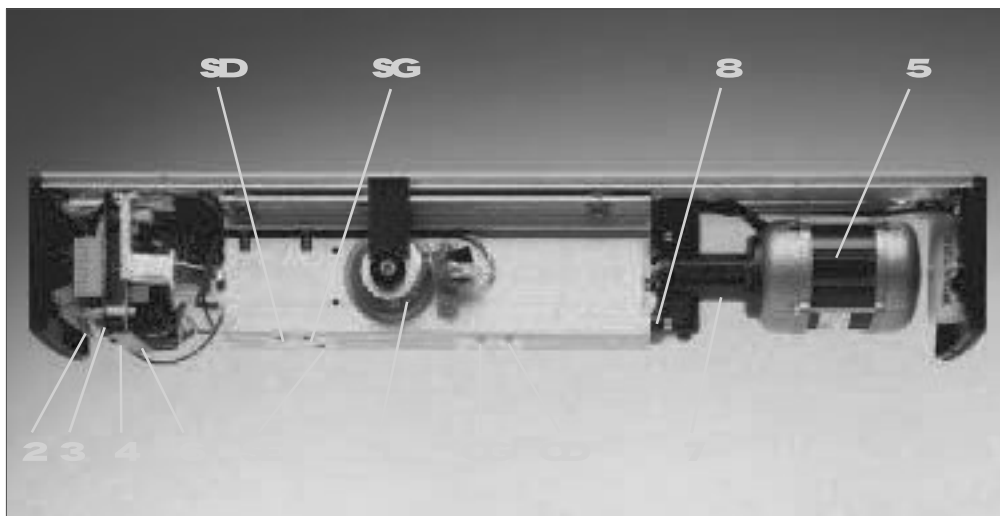
Even power cuts are no problem for the TSA 160. In this case the door can be opened by hand just as any normal door. Indeed, manual opening is possible at any time while the actuators are switched on.

TSA 160

TSA 160 is a swing door actuator with electronic control and integrated programme switch with the positions "off", "automatic" and "hold open". The system can be fitted to left and right handed doors with a pulling or pushing function - for pushing function with linkage and for pulling function with guide rail.

Depending on the design and arrangement it is possible to achieve opening angles of up to 115°. Apart from the opening speed, the closing force and closing speed can be adjusted fully. And the latching action can be adjusted as well through a valve. The TSA 160 is mounted at the head of the door on the hinge side or the opposite hinge side.

The TSA 160 is designed for door widths up to 1400 mm. In the pulling version the minimum door width is dependent on the mounting of the actuator (actuator offset) and the required opening angle of the door.



Swing door actuator TSA 160 in detail:

- 1 Motor shaft
- 2 Line fuse
- 3 Potentiometer Hold-open time (P1)
- 4 Potentiometer Drive delay (P2)
- 5 Electric motor
- 6 Control
- 7 Hydraulic pump
- 8 Closing force adjustment
- SG Closing speed
- SD Closing damping
- SE Latching adjustment
- OG Opening speed
- OD Back check