



## Single leaf steel roller shutter.

<b>Sizes:</b>	Minimum Height 2000 mm, Maximum height 6000 mm Minimum Width 2000 mm, Maximum Width 6500 mm Other sizes on special request
<b>Space requirement:</b>	Fitting side need to be flat and smooth, construction need to be solid enough to bold/weld the side guide rails and header box. Head room 450 mm – 750 mm (depending on size door) Side room: Motor side 260 mm, other side 160 mm
<b>Classifications:</b>	Water tightness                      Class 0 Resistant to windload              Class 4 Air permeability                      Class 0 Thermal insulation value $R_c = 0,17 \text{ m}^2\text{K/W}$ (Calculated conform NEN 1068) Opening/closing speed          0,07 M/S
<b>Curtain:</b>	The shutter curtain is made of 75mm Height and 18mm wide superior single skin Galvanized steel slats, with thicknesses ranging from 0.8 mm to 1.2 mm, zinc coating 120 and its according ASTM A653. These slats are manufactured by a roll forming process and constructed of reinforced interlocking slat profiles and providing maximum strength and integrity. The edges of the slats are auto cut-off Holes to fix End Cap and lock the axial movement. Endcaps are made from galvanized steel.
<b>Guide Rails:</b>	The galvanized steel guide rail ASTM A 653 is G-shaped securing a strong and stable profile Due to the G-shape an integrated wind lock system can be used. The size of the guide rail for large doors is 90 mm wide x 82 mm deep x 3 mm thick For other sized doors the guide is 90 mm wide x 82 mm deep x 2 mm thick. A PVC seal is added to guide rail securing a smooth operation and sealing of the connection between slath and guide rail. PVC quality according to ISO 1183, 1.23 density

**Bottom Profile:** The Bottom Rail slat is an extruded aluminum profile shaped as a T-profile to secure maximum stability.

The integrated T-profile has a slope to secure that no parts can be laying on the profile during opening. This secures that heavy parts can fall off during opening. In case of wider doors than 5 m doors two steel angles 40 mm x 40 mm x 3 mm or 50 mm x 50 mm x 3 mm thick galvanized steel angle bars are bolted to down slat to form the bottom bar. The bottom bar is provided with an EPDM weather seal strip to secure that the door is tight closed to the floor. EPDM rubber tested according to DIN 7863, 70°±5° SHORE A

**Shutter Box:** The optional shutter box is on the side covered by two heavy duty steel endplates of thickness 4mm to 6mm according to the size of the shutter; joined with two 50mm x 50mm x 3 mm thick steel angles with slotted fixing holes are welded with the end plates to fix the shutter box to the building structure. The galvanized steel ASTM A653, zinc coated 120, plate of the cover is 0,8 mm thick.

**Barrel:** The barrel is made of a heavy-duty seamless steel pipe, welded with axles of dia 35 mm to dia 40 mm according to the size of the shutter. This barrel is fixed at the motor side direct to the sprocket of the operator plate. On the opposite side the barrel has a 35 mm or 40 mm solid axle which is supported by heavy duty sealed roller bearing.

**Powder coating:** Door leaf, guide rails and shutter box will be powder coated with one of the standard RAL colors (see color card). Standard thickness of the powder coat is 80µm. Other thickness on request.

**Motor Operation:** The motor is suitably sized with a fully enclosed design. The motor has a high starting torque, built-in gear box and a built-in thermal protector. The motor gearbox has an inbuilt centrifugal speed governor that ensures safety in the event of a free fall. The operator is via a chain connected to the door. In case of a chain failure a safety lock will be activated securing that the door cannot come in a free fall. In case of power failure, an endless hand chain is

provided for manual operation from the ground level. Adjustable limit switches are used to set the upper and lower limit for the travel of the curtain. 1 phase, 230V, 60Hz, 13A / 3 phase, 415V, 60Hz, 20A power supply at shutter box location. Electrical connections are IP 44 water protected.

**Control:** Push button control with 'up', 'down' and 'stop' buttons are housed in a lockable push button box. The outer cover of the push button box is made of stainless steel. Weatherproof NEMA rated push button boxes can be provided as an option.

**Options:**

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| Increased speed | Increased opening/closing speed to 0,14 m/s, operator will be mounted on the right side of the door (from inside seen)  |
| Photocell       | Doors can be equipped with photocells for additional safety.  |
| Motor Cover     | Advisable is not to cover the operator so the manual chain operation can easily be operated. A motor cover is optional made out of 0,8 mm galvanized steel and powder coated in the same color as the hood cover. |
| Remote control  | Instead of using a push button the door can additional be equipped with a remote control  |