| MBS | MBZ

SELF-TAPPING SCREW FOR MASONRY









- Electrogalvanized carbon steel
- Suitable for dense and semi-hollow materials
- Fastening of doors and windows
- The countersunk head (MBS) allows PVC and aluminium window frames to be installed without damaging the frame
- The cylindrical head (MBZ) is able to penetrate and remain embedded in timber frames
- Strength values in different substrates tested in cooperation with the Institute for Window Technology (IFT) in Rosenheim
- The HI-LOW thread allows for safe fastening even near the edges of the support, thanks to the reduced tension induced on the material
- Through fastening

| SERVICE CLASS | SC) SC2 | |
|---------------|-----------------------------------|--|
| MATERIAL | Zn electrogalvanized carbon steel | |





CODES AND DIMENSIONS

MBS - countersunk screw

| CODE | d_1 | L | pcs. |
|----------|--------------|------|------|
| | [mm] | [mm] | |
| MBS7552 | 7,5 TX 30 | 52 | 100 |
| MBS7572 | | 72 | 100 |
| MBS7592 | | 92 | 100 |
| MBS75112 | | 112 | 100 |
| MBS75132 | | 132 | 100 |
| MBS75152 | | 152 | 100 |
| MBS75182 | | 182 | 100 |
| MBS75212 | | 212 | 100 |
| MBS75242 | | 242 | 100 |

MBZ - cylindrical head

| CODE | d_1 | L | pcs. |
|----------|--------------|------|------|
| | [mm] | [mm] | |
| MBZ7552 | | 52 | 100 |
| MBZ7572 | | 72 | 100 |
| MBZ7592 | | 92 | 100 |
| MBZ75112 | | 112 | 100 |
| MBZ75132 | 7,5 TX 30 | 132 | 100 |
| MBZ75152 | 17.30 | 152 | 100 |
| MBZ75182 | | 182 | 100 |
| MBZ75212 | | 212 | 100 |
| MBZ75242 | | 242 | 100 |

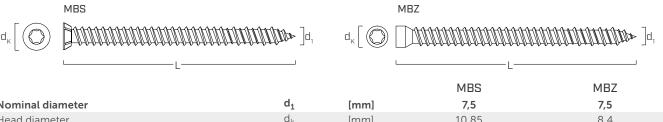


FIELDS OF USE

Fastening of timber (MBZ), PVC and aluminium (MBS) window frames on the following supports:

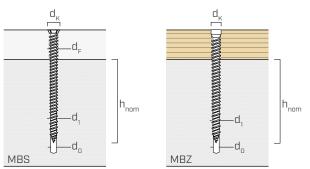
- solid and perforated brick
- solid and perforated concrete
- lightweight concrete
- autoclaved aerated concrete

GEOMETRY AND PARAMETERS OF INSTALLATION



| Nominal diameter d ₁ [mm] 7,5 7,5 Head diameter d _k [mm] 10,85 8,4 | | | | MBS | MBZ |
|--|--|----------------|------|-------|-----|
| Head diameter d_k [mm] 10,85 8,4 | Nominal diameter | d_1 | [mm] | 7,5 | 7,5 |
| | Head diameter | d _k | [mm] | 10,85 | 8,4 |
| Diameter of pre-drilling hole concrete/brickwork d_0 [mm] 6,0 6,0 | Diameter of pre-drilling hole concrete/brickwork | d ₀ | [mm] | 6,0 | 6,0 |
| Pre-drilling hole diameter in the timber element d_V [mm] 6,2 6,2 | Pre-drilling hole diameter in the timber element | d_V | [mm] | 6,2 | 6,2 |
| Hole diameter in the PVC element d _F [mm] 7,5 - | Hole diameter in the PVC element | d _F | [mm] | 7,5 | - |

 d_V



screw diameter d_1 d_K head diameter

diameter of pre-drilling hole concrete/brickwork do

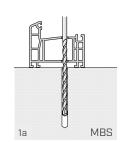
pre-drilling hole diameter in the timber element

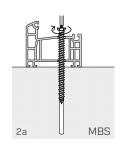
hole diameter in the PVC element d_{F}

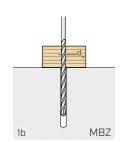
nominal anchoring depth h_{nom}

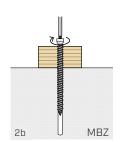
INSTALLATION











STRUCTURAL VALUES

BRICKS

| | | pull-out | compression | shear | shear with lever arm ⁽¹⁾ |
|-----------------|------------------------------|-------------------|----------------------|--------------------|-------------------------------------|
| | | | ↓ ↓ h _{nom} | → h _{nom} | b hoom |
| Type of support | h _{nom,min} [mm] | N _{Rk,p} | N _{Rk} | V _{Rk} | V _{Rk,b} [kN] |
| Solid brick | 40 | [kN] 0,31 | [kN] 9,02 | [kN] 2,93 | 2,14 |
| Hollow brick | 60 | _(2) | 0.13 | 2,93 | 0.57 |

Characteristic values tested at IFT ROSENHEIM®.

CONCRETE

Hollow brick

| Type of support | h _{nom,min} | $N_{Rk,p}$ |
|-----------------------------|----------------------|------------|
| | [mm] | [kN] |
| Concrete ⁽³⁾ | 30 | 0,89 |
| Lightweight concrete | 80 | 0,17 |
| Autoclaved aerated concrete | 80 | 0,11 |

The recommended withdrawal values are obtained considering a safety coefficient of 3.

60

⁽³⁾C20/25 grade concrete.



 $^{^{(1)}}$ The screws were tested considering a lever arm of b = 20 mm.

⁽²⁾Value not available.