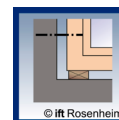


# MBS | MBZ

## SELF-TAPPING SCREW FOR MASONRY



### TIMBER AND PVC DOORS/WINDOWS

The countersunk head (MBS) allows PVC window frames to be installed without damaging the frame. The cylindrical head (MBZ) is able to penetrate and remain embedded in timber frames.

### IFT CERTIFICATION

Strength values in different substrates tested in cooperation with the Institute for Window Technology (IFT) in Rosenheim.

### HI-LOW THREADING

The HI-LOW thread allows for safe fastening even near the edges of the support, thanks to the reduced tension induced on the material, ideal for frames.

|                         |                                                                              |
|-------------------------|------------------------------------------------------------------------------|
| DIAMETER [in]           | 0.24 <input type="radio"/> 0.30 <input checked="" type="radio"/> 0.63        |
| LENGTH [in]             | 2 1/16 <input checked="" type="radio"/> 9 19/36 <input type="radio"/> 15 3/4 |
| EXPOSURE CONDITION      | EC1 <input checked="" type="radio"/> DRY <input type="radio"/>               |
| ATMOSPHERIC CORROSIVITY | C1 <input checked="" type="radio"/> C2 <input type="radio"/>                 |
| WOOD CORROSIVITY        | T1 <input checked="" type="radio"/> T2 <input type="radio"/>                 |
| MATERIAL                | <b>Zn</b><br>ELECTRO<br>PLATED electrogalvanized carbon steel                |



MBS



MBZ

## CODES AND DIMENSIONS

### MBS - countersunk screw

| d <sub>1</sub><br>[mm]<br>[in] | CODE     | L<br>[mm]<br>[in] | pcs |
|--------------------------------|----------|-------------------|-----|
| 7,5<br>0.30<br>TX 30           | MBS7552  | 52<br>2 1/16      | 100 |
|                                | MBS7572  | 72<br>2 13/16     | 100 |
|                                | MBS7592  | 92<br>3 5/8       | 100 |
|                                | MBS75112 | 112<br>4 7/16     | 100 |
|                                | MBS75132 | 132<br>5 3/16     | 100 |
|                                | MBS75152 | 152<br>6          | 100 |
|                                | MBS75182 | 182<br>7 3/16     | 100 |
|                                | MBS75212 | 212<br>8 3/8      | 100 |
|                                | MBS75242 | 242<br>9 1/2      | 100 |

### MBZ - cylindrical head

| d <sub>1</sub><br>[mm]<br>[in] | CODE     | L<br>[mm]<br>[in] | pcs |
|--------------------------------|----------|-------------------|-----|
| 7,5<br>0.30<br>TX 30           | MBZ7552  | 52<br>2 1/16      | 100 |
|                                | MBZ7572  | 72<br>2 13/16     | 100 |
|                                | MBZ7592  | 92<br>3 5/8       | 100 |
|                                | MBZ75112 | 112<br>4 7/16     | 100 |
|                                | MBZ75132 | 132<br>5 3/16     | 100 |
|                                | MBZ75152 | 152<br>6          | 100 |
|                                | MBZ75182 | 182<br>7 3/16     | 100 |
|                                | MBZ75212 | 212<br>8 3/8      | 100 |
|                                | MBZ75242 | 242<br>9 1/2      | 100 |

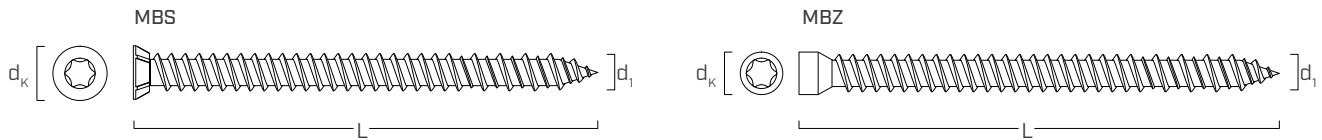


### FIELDS OF USE

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

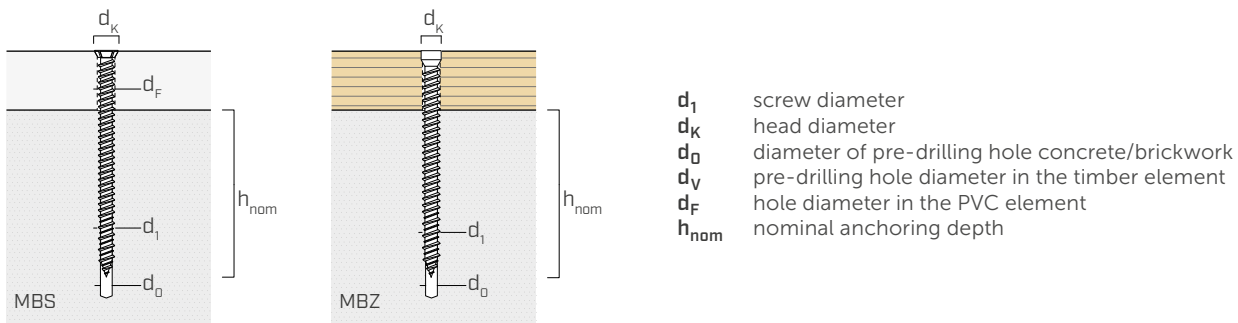
- solid and perforated brick
- solid and perforated concrete
- lightweight concrete
- autoclaved aerated concrete

## ■ GEOMETRY AND PARAMETERS OF INSTALLATION

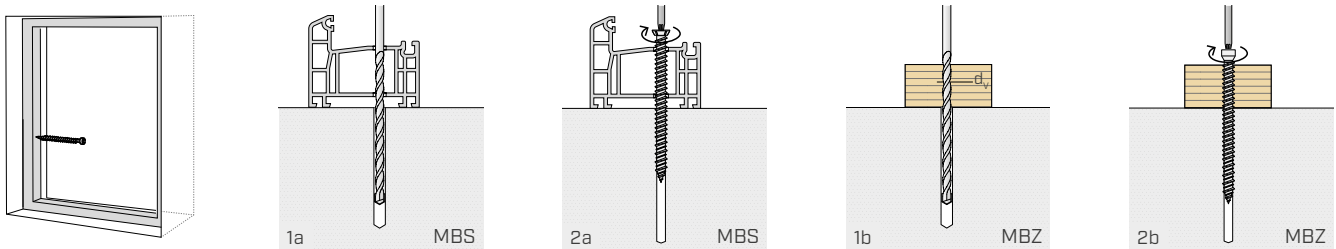


|                                                  |       |                     | MBS   | MBZ   |
|--------------------------------------------------|-------|---------------------|-------|-------|
| Nominal diameter                                 | $d_1$ | [in] <sup>(1)</sup> | 0.30  | 0.30  |
| Outer thread diameter                            | $d_1$ | [mm]                | 7,5   | 7,5   |
|                                                  |       | [in]                | 0.295 | 0.295 |
| Head diameter                                    | $d_K$ | [in]                | 0.427 | 0.331 |
| Pre-drilling hole diameter <sup>(2)</sup>        | $d_0$ | [in]                | 0.236 | 0.236 |
| Pre-drilling hole diameter in the timber element | $d_V$ | [in]                | 0.244 | 0.244 |
| Hole diameter in the PVC element                 | $d_F$ | [in]                | 19/64 | -     |

<sup>(1)</sup>The nominal diameter of the screw is converted into imperial units and rounded up to the nearest decimal point.



## ■ INSTALLATION



## ■ STRUCTURAL VALUES

### BRICKS

|                 |                       | pull-out            | compression       | shear             | shear with lever arm <sup>(1)</sup> |
|-----------------|-----------------------|---------------------|-------------------|-------------------|-------------------------------------|
|                 |                       |                     |                   |                   |                                     |
| Type of support | $h_{nom,min}$<br>[in] | $N_{Rk,p}$<br>[lbf] | $N_{Rk}$<br>[lbf] | $V_{Rk}$<br>[lbf] | $V_{Rk,b}$<br>[lbf]                 |
| Solid brick     | 1.57                  | 70                  | 2028              | 659               | 481                                 |
| Hollow brick    | 2.36                  | — <sup>(2)</sup>    | 29                | 299               | 128                                 |

Characteristic values tested at IFT ROSENHEIM®.

<sup>(1)</sup>The screws were tested considering a lever arm of  $b = 0.79$  in.

<sup>(2)</sup>Value not available.

### CONCRETE

| Type of support             | $h_{nom,min}$<br>[in] | $N_{Rk,p}$<br>[lbf] |
|-----------------------------|-----------------------|---------------------|
| Concrete <sup>(3)</sup>     | 1.18                  | 200                 |
| Lightweight concrete        | 3.15                  | 32                  |
| Autoclaved aerated concrete | 3.15                  | 25                  |

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

<sup>(3)</sup>C20/25 grade concrete.