X-DHS MX DATA SHEET

Pipe support system
X-DHS MX Pipe support system

Product data

Dimensions
X-DHS 3/8” MX

Features and benefits
- Securely fastened threaded rod hangers to steel and concrete (soft and tough) base material
- Easy installation of threaded rods on floors, walls and ceiling

General information
Material specification
X-DHS:
Zinc coating 10-20 µm

Applications
Example
Hanger system for:
- Light-duty fastenings of pipes on ceilings
- Supporting pipes on floors
- Positioning of vertical pipes on walls

These fasteners are not recommended for fastening of suspended ceilings.
These zinc coated fasteners are not suitable for long-term service outdoors or in otherwise corrosive environments.
Load data

Recommended loads (Base material = concrete)

<table>
<thead>
<tr>
<th>Number of X-DHS MX elements per pipe</th>
<th>$N_{\text{rec}}$ [kN] per X-DHS MX</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\geq 5$</td>
<td>0.2</td>
</tr>
<tr>
<td>1 to 4 with fixed end supports</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Design conditions:
- Each X-DHS MX element has to be fastened with 2 nails
- All visible failures must be replaced.
- Predominantly static loading.
- Valid for soft and tough concrete with strength of $f_{c,\text{cub}} = 25-60$ N/mm$^2$. For more details regarding concrete types, please refer to Concrete Fastener Selection section in Hilti Direct Fastening Technology Manual (DFTM).
- Observance of all application limitations and recommendations.
- For wall application (i.e. vertical pipes on walls), X-DHS MX is used for positioning purpose only, with NO imposed loading.
- Maximum spacing = 100 cm

Recommended loads (Base material = steel)

<table>
<thead>
<tr>
<th>Fastener</th>
<th>$N_{\text{rec}}$ [kN]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended load per X-DHS MX element (fastened with 2 Nails)</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Nail recommendations

For **concrete** base material

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>BX3</td>
<td>X-P B3 MX</td>
<td>24</td>
<td>Balistic</td>
<td>3.0</td>
<td>Carbon steel</td>
<td>57.5</td>
<td>Zinc, 2-13 µm</td>
</tr>
<tr>
<td>GX3</td>
<td>X-P G3 MX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.5</td>
<td>Zinc, 2-13 µm</td>
</tr>
<tr>
<td>GX120</td>
<td>X-GHP MX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.5</td>
<td>Zinc, 2-13 µm</td>
</tr>
</tbody>
</table>

- For X-DHS MX element, only 24 mm length nails are recommended for concrete base material to ensure sufficient embedment depth.
- Premium nails (as listed above) are the only recommended nails based on intended use of X-DHS element (soft and some tough concrete, GX/BX tools). For more details regarding nail classification and concrete types, please refer to **Concrete Fastener Selection** section in Hilti Direct Fastening Technology Manual (DFTM).

For **steel** base material

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>BX3</td>
<td>X-P B3 MX</td>
<td>17</td>
<td>Balistic</td>
<td>3.0</td>
<td>Carbon steel</td>
<td>57.5</td>
<td>Zinc, 2-13 µm</td>
</tr>
<tr>
<td>GX3</td>
<td>X-P G3 MX</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td>57.5</td>
<td>Zinc, 2-13 µm</td>
</tr>
<tr>
<td>GX120</td>
<td>X-GHP MX</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>57.5</td>
<td>Zinc, 2-13 µm</td>
</tr>
</tbody>
</table>

- For X-DHS MX element, only 17-18 mm length nails are recommended for steel base material to ensure sufficient embedment depth.

Application requirements

**Thickness of base material**

- **Concrete**: X-GHP MX, X-P G3 MX, X-P B3 MX, \( h_{min} = 60 \text{ mm} \)
- **Steel**: X-GHP MX, X-P G3 MX, X-P B3 MX, \( t_{H} \geq 4.0 \text{ mm} \)
Application limits

**X-P 17 G3 MX, X-P 17 B3 MX, X-GHP 18 MX**

![Graph showing application limits for X-DHS MX fasteners.](image)

**Corrosion information**

These zinc-coated fasteners are not suitable for long-term service outdoors or in otherwise corrosive environments. For further detailed information on corrosion see relevant chapter in Direct Fastening Principles and Technique section.

**Fastener selection and system recommendation**

**Fastener program**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Item no.</th>
</tr>
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<tbody>
<tr>
<td>X-DHS 3/8” MX</td>
<td>2161569</td>
</tr>
</tbody>
</table>

**System recommendation**

- **GX 120-ME**: Gas can GC 20, GC 21 and GC 22
- **GX 3-ME**: Gas can GC 40, GC 41 and GC 42
- **BX 3-ME**: No gas can required

**Fastening quality assurance**

![Image of a fastener being fastened with a torque of 10 kg (22 lbs).](image)