X-UCS-S MX
DATA SHEET

Universal conduit saddle
for rigid pipe
# X-UCS-S MX Universal conduit saddle for rigid pipe

## Features and benefits

The X-UCS-S MX enables easy and convenient installation to concrete floor (soft and some tough concrete).

## General information

### Material specification

- **X-UCS-S MX**: HDPE (halogen and silicon free), light grey RAL 7035

## Applications

### Example

- Fastening rigid pipes and smooth surface pipes (without foam or grooved protection layer) for water and heating.

The intended use only comprises fastenings which are not directly exposed to external weather conditions or moist atmospheres.
Performance data

<table>
<thead>
<tr>
<th>Fastener</th>
<th>Concrete / Sandlime stone</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-UCS-S MX</td>
<td>0.02</td>
</tr>
</tbody>
</table>

**Design conditions:**
- For pipes fastened with less than 5 fasteners and without any fixed end support, a test load has to be applied to each fastener, see Instruction For Use.
- All visible failures must be replaced.
- Predominantly static loading.
- Valid for soft and some tough concrete with strength of $f_{c,\text{cube}} = 25-60 \text{ N/mm}^2$, that may contain medium sized aggregate e.g. limestone, pit gravel. Please refer to Concrete Fastener Selection section in Hilti Direct Fastening Technology Manual (DFTM).
- Observance of all application limitations and recommendations.
- Long-term behavior of X-UCS-S MX plastic material considered.

**Stick rate estimation**

<table>
<thead>
<tr>
<th>Fastener</th>
<th>Soft Concrete</th>
<th>Tough concrete</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-P B3</td>
<td>85% – 98%</td>
<td>70% – 85%</td>
</tr>
<tr>
<td>X-C B3</td>
<td>75% – 90%</td>
<td>55% – 70%</td>
</tr>
</tbody>
</table>

- The stick rate indicates the percentage of nails that were driven correctly to carry a load. Stick rate can vary from the above values depending on job site conditions.

**Nail recommendations**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BX 3-ME (02)</td>
<td>X-P B3 MX</td>
<td>17 - 24</td>
<td>Long conical</td>
<td>3.0</td>
<td>Carbon steel</td>
<td>57.5</td>
<td>Zinc, 2-10</td>
</tr>
<tr>
<td></td>
<td>X-C B3 MX</td>
<td>20 - 24</td>
<td>Cut</td>
<td></td>
<td></td>
<td>56.5</td>
<td>Zinc, 5-13</td>
</tr>
</tbody>
</table>

**Design conditions:**
- For more details regarding nail classification and concrete types, please refer to Concrete Fastener Selection section in Hilti Direct Fastening Technology Manual (DFTM).
Application requirements

Thickness of base material

\[ h_{\text{min}} = 60 \text{ mm} \]

Edge distance

Min. edge distance = 70 mm

Spacing

- 50-100 cm along the pipe. Adjust spacing as needed to achieve stability of the pipe.
- At pipe turning 90 degree area, please refer to picture for distance between fasteners and orientation of fasteners.

Corrosion information

Zinc-coated nails 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>
<th>Pipe Ø [mm]</th>
<th>d [mm]</th>
<th>W [mm]</th>
<th>H [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-UCS-S 13 MX</td>
<td>2212511</td>
<td>13.0</td>
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<td>45.8</td>
<td>18.3</td>
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<td>X-UCS-S 17 MX</td>
<td>2212512</td>
<td>17.0</td>
<td>17.4</td>
<td>49.4</td>
<td>22.2</td>
</tr>
<tr>
<td>X-UCS-S 21.5 MX</td>
<td>2212513</td>
<td>21.5</td>
<td>21.9</td>
<td>54.6</td>
<td>26.8</td>
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<tr>
<td>X-UCS-S 27 MX</td>
<td>2212429</td>
<td>27.0</td>
<td>27.4</td>
<td>59.6</td>
<td>32.3</td>
</tr>
</tbody>
</table>

**Tool selection**

X-P B3 MX, X-C B3 MX: BX 3-ME (02)

**System recommendation**

BX 3-ME (02): No gas can required

**Fastening quality assurance**

![Diagram showing BX 3-ME (02) fastener installation and quality assurance criteria.](image-url)