The pole grapple KM 930-1000 Special is a perfectly matched attachment for drilling sites. Poles can be gripped easily and positioned precisely.

The 3-Axes-Manipulator KM 931 features maximum manoeuvrability for your attachments at the loader crane’s tip – and provides flexibility of the loader crane’s use in any arc position.

- **3-axes-manipulator: maneuverability** by three hydraulic functions: gripping, rotating and tilting (3rd hydraulic circuit needed).
- **Endless rotation.**
- **High loads** up to 2200 lbs.
- **Precise positioning** guaranteed by self-locking worm drive (KM 931-1000).
- **5-line feedthrough.**
- **KM 930-1000 Special** provides an exchangeable jaw system.

### Pole Grapple KM 930-1000 Special

<table>
<thead>
<tr>
<th>Type</th>
<th>Load capacity</th>
<th>Gripping range (min./max.)</th>
<th>Width E</th>
<th>Number of tines</th>
<th>Self weight</th>
<th>Closing force</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM 930-1000 Special</td>
<td>2200</td>
<td>4 / 7.3</td>
<td>62.99</td>
<td>2</td>
<td>847</td>
<td>2 x 3520</td>
</tr>
<tr>
<td>Exchangeable jaws</td>
<td>-</td>
<td>6.6 / 8.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Package consists of:** manipulator, hydraulic pilot controlled brake, KINSHOFER rotator, non-return valve

**Please note:** tubes or poles have to be grabbed always in the centre of gravity

### 3-Axes-Manipulator KM 931-1000

<table>
<thead>
<tr>
<th>Type</th>
<th>Load capacity</th>
<th>Slewing angle</th>
<th>Tilting angle</th>
<th>Rotation</th>
<th>Self weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM 931-1000</td>
<td>2200</td>
<td>130°</td>
<td>± 80°</td>
<td>360° endless</td>
<td>638</td>
</tr>
</tbody>
</table>

**Package consists of:** manipulator, hydraulic pilot controlled brake, worm drive, non-return valve

**Please note:** tubes or poles have to be grabbed always in the center of gravity

**Accessories**

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM 980-2 c</td>
<td>solenoid valve KM 980-2 complete attachment kit including assembly components, hose guard, hoses and mounting on the KM 930 manipulator – 12 V or 24 V, working pressure max. 3650 psi, oil flow 16 GPM</td>
</tr>
</tbody>
</table>

**Requirements of Truck Crane**

Three hydraulic circuits needed

**Operating pressure:**

- **KM 930-1000 Special** 2900 psi
- **KM 931-1000** 2900 - 3500 psi

**Oil flow:**

- 5 - max. 8 GPM
- 5 - max. 10.5 GPM

**Technical Drawings**