Guide trough with glide bar

End position I

Moving end

Total length of guide trough

Guide trough with glide bar
Space requirement for Energy Chain System®

Energy Chain® has to move freely along the entire travel length. Other components or machine parts must not obstruct the operation area!
Use igus® System Drawings

Installation has to be done according to igus® system drawings
Support Structure for Guide Trough

L-profile
oblong hole
drill pattern c-profile

Machine rail and support structure have to be aligned.
Support structure has to be aligned and level.

Level the support structure

Level the L-profile

Check the support structure before trough installation. Any adjustments or corrections need to be made before next installation step.
Guide Trough Installation

Prepare a spacer tool, to adjust the inner trough width.

**Energy Chain© outer width = Ba**

\[ Ba + .16" + .08 (4mm) = L \]

\[ .08" + .04 (2 +1mm) \]
No gap = wrong!

No gap causes wear on chain links and blocks the Energy Chain®.

Big gap = wrong!

Big gap causes wear on the chain links and crossbar.
Guide Trough Installation

Important: Guiding trough has to be parallel with the machine rail, both horizontally and vertically.

1. Mount Profile Rail

2. Preassemble installation angles

3. Install alignment wire parallel with the machine rail
3. Align trough parts and angles with steel wire and spacer tool

- Use torque wrench to tighten screws

<table>
<thead>
<tr>
<th>Thread size</th>
<th>Material</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>M6</td>
<td>8.8/A2/A4-70</td>
<td>10 Nm</td>
</tr>
<tr>
<td>M8</td>
<td>8.8/A2/A4-70</td>
<td>23 Nm</td>
</tr>
<tr>
<td>M10</td>
<td>8.8/A2/A4-70</td>
<td>35 Nm</td>
</tr>
<tr>
<td>M12</td>
<td>8.8/A2/A4-70</td>
<td>75 Nm</td>
</tr>
<tr>
<td>fastening of plastic slide bar</td>
<td>8.8/A2/A4-70</td>
<td>7 Nm</td>
</tr>
</tbody>
</table>

Check trough alignment and torque. Make all adjustments before next installation step.
Check part no. on Energy Chain®, before assembly. For example: 5050C- 4040C- Series

Chain’s number 5050C-30-300-0

Lay the fixed point (part 3) into the trough and assemble parts until you reach the mounting end.

Fixed point (KMA bracket attached)  Energy Chain® parts (meter sections)
Energy Chain® assembly

part 3

Signed with yellow tag

Three links turned

Moving end
(KMA attached)
Energy Chain® Pre-Assembly

Make sure the fixed-point position is according to igus® drawings, relative to the travel stroke.
Lay the preassembled Energy Chain® into the guiding tough.
Check fixed point position relative to the travel stroke.
Pull Cables Into Energy Chain®

Make sure cable arrangement is according to igus® interior shelving drawing.

Installation methods:
Pull cables into Energy Chain®

Alternative installation method:
Open the crossbars, lay the cables in the Energy Chain® and close it
Corkscrew or Cable damage

Correct!

Wrong!

All crossbars snapped in? Any broken parts?

Correct!

Wrong!

Check the interior separation of the Energy Chain®. Are all separators plumb and tight?

Correct!

Wrong!
Attach Energy Chain®

Leave a spare cable loop for cable adjustment at fixed point and moving end.

Make sure that the fixed point is in the correct position and affix it with Allen screws (DIN 912 / EN ISO 7462).

Spare cable min 1.64 ft. (0.5 m)

max. .12” (3 mm)
Moving end has to be installed according to system drawing.
Support plate has to be level!
Mounting height according to igus® drawing.

for E4-80/5050C \( h = 9.52'' + .39'' \) (242mm +10)

for E4-56/4040C/400 \( h = 10.47'' + .39'' \) (266mm +10)
Install moving end

Flip chain radius, move it to the moving arm and fix it with Allen screws (DIN 912 / EN ISO 7462).
Correct cable adjustment

Cable has to run slightly outside the centerline

Wrong!

Cable too tight

Wrong!

Cable too loose
Install strain relief clamps at moving end and fixed point.

Swing strain relief clamps in the profile-rail and tighten the screw.

Check height

Move the Energy Chain® slowly and carefully to both end positions and check the cable arrangement/position. Double check after a few test cycles.
Are screws in place and fixed with torque wrench?

Are moving-end height and Energy Chain® fixation correct?

Are there any obstructions or tools in the guide trough?

Are all strain relief clamps installed at both ends?

Is the cable arrangement correct?