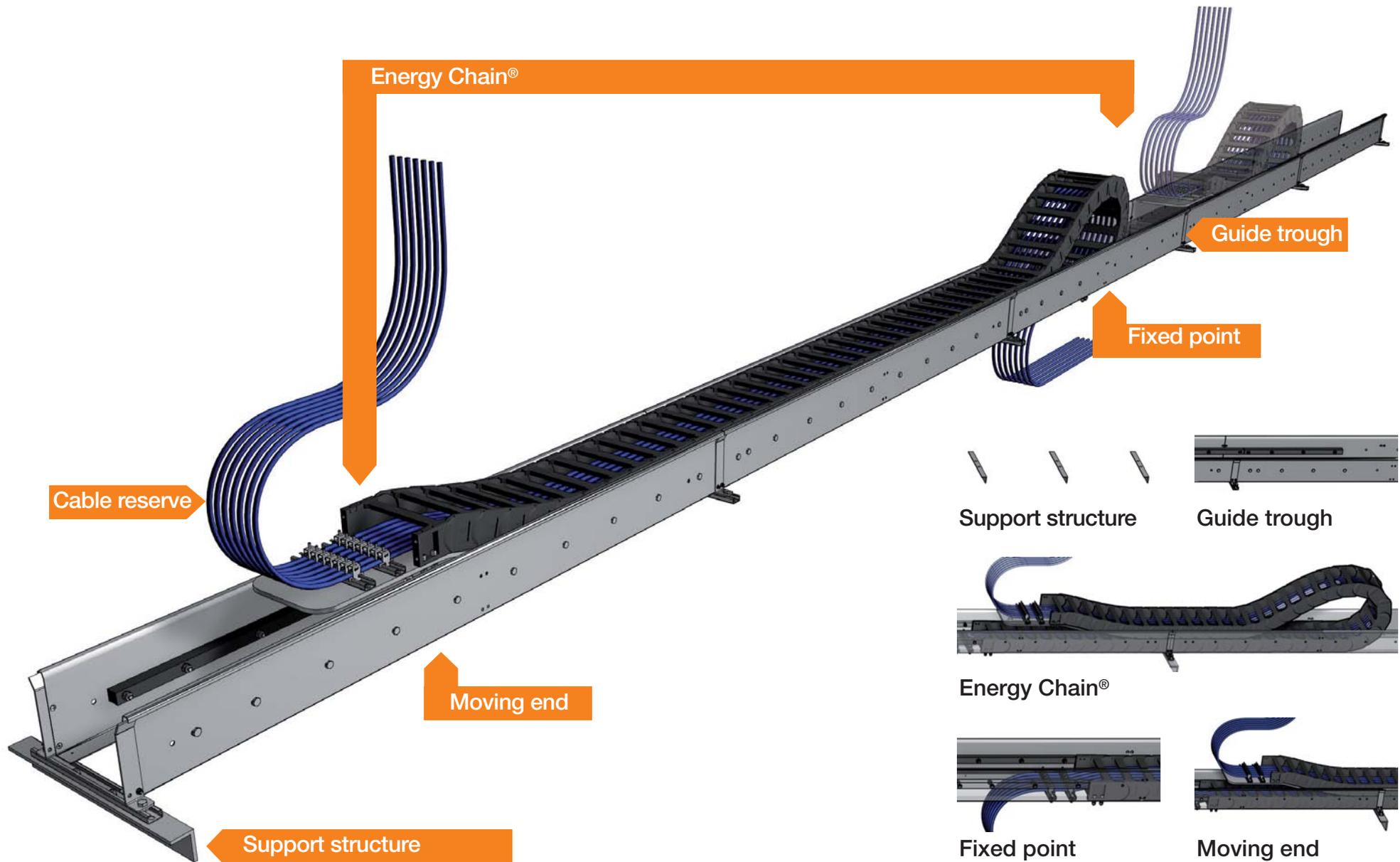
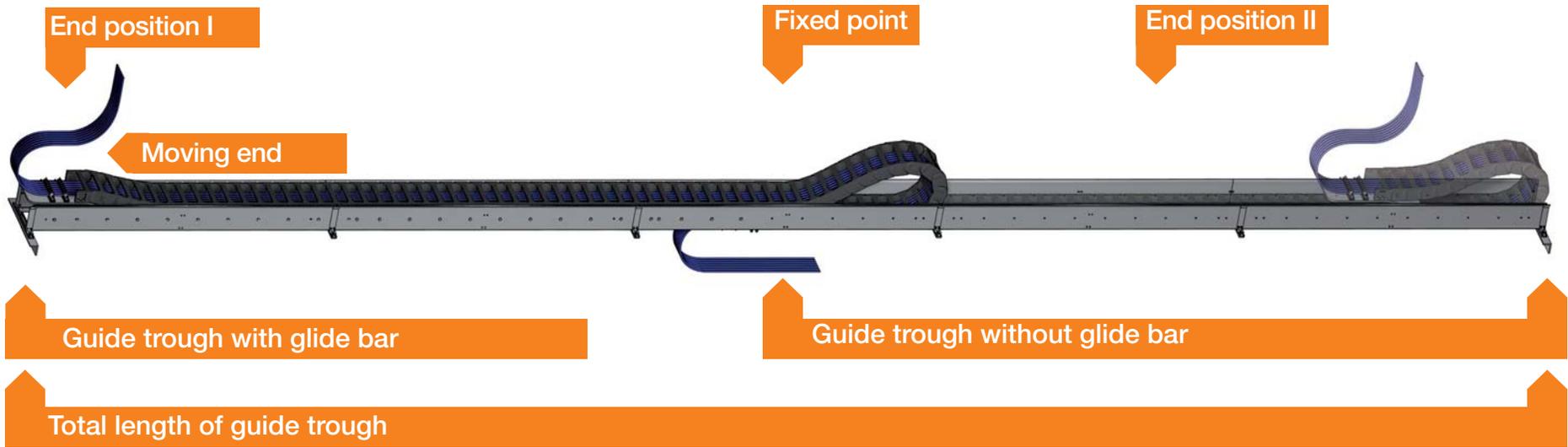




Energy Chain System® Installation Guide





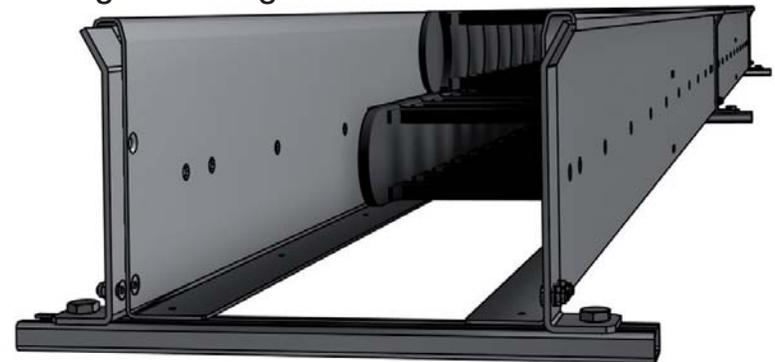
Guide trough with glide bar



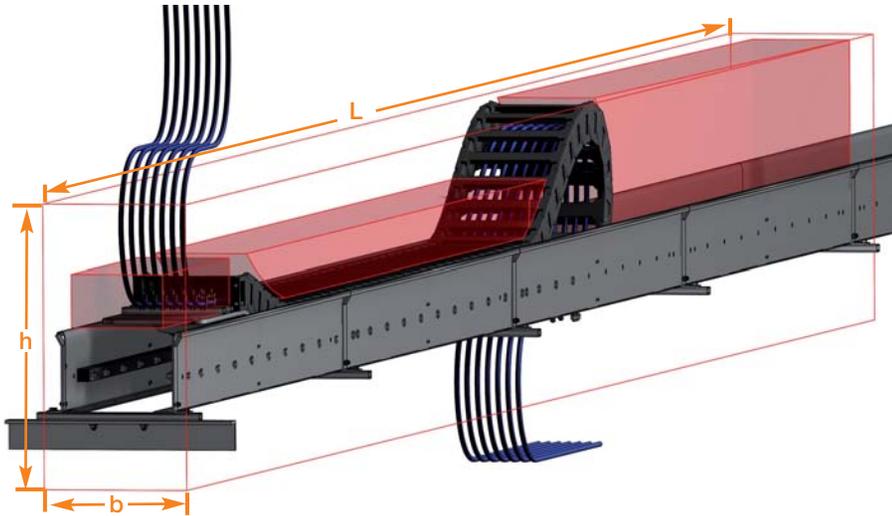
Fixed point



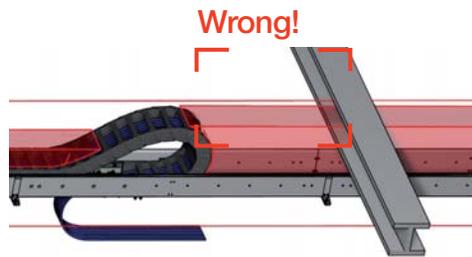
Guide trough without glide bar



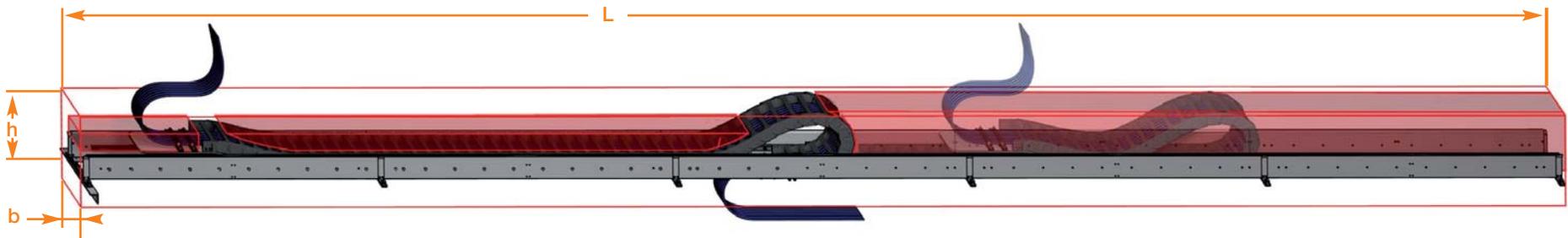
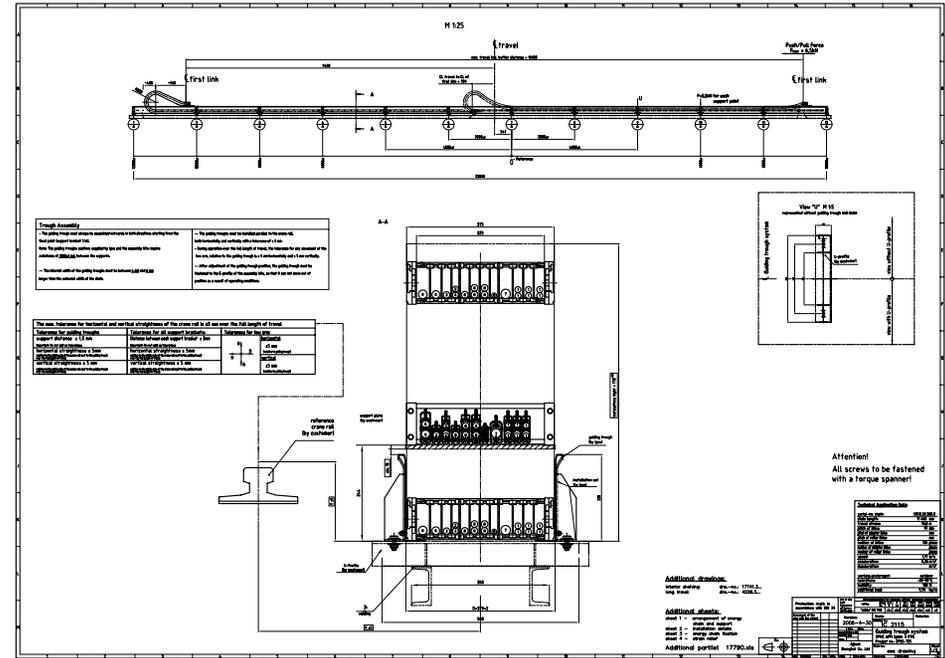
Space requirement for Energy Chain System®



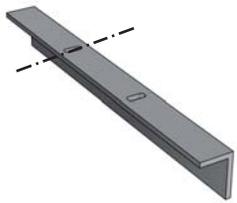
Energy Chain® has to move freely along the entire travel length. Other components or machine parts must not obstruct the operation area!



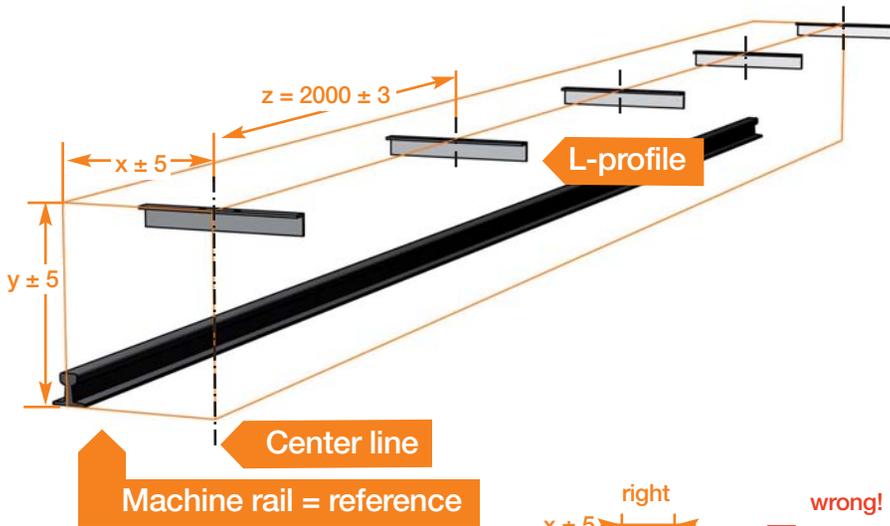
Installation has to be done according to igus® system drawings



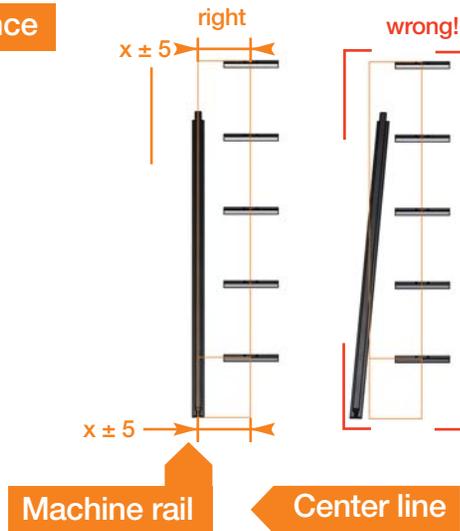
Support Structure for Guide Trough



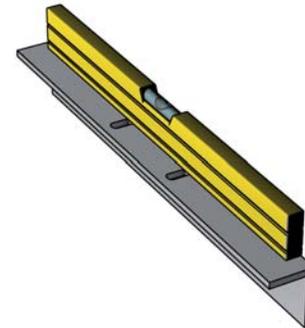
L-profile
oblong hole
drill pattern c-profile



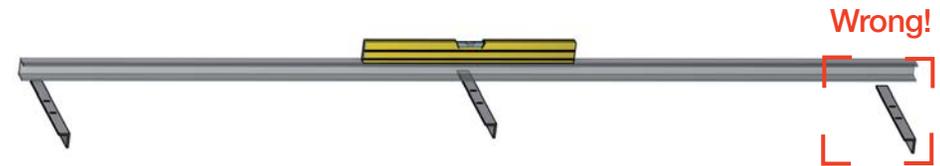
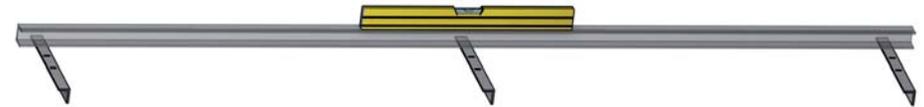
Machine rail and support structure have to be aligned.



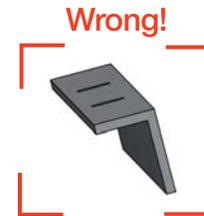
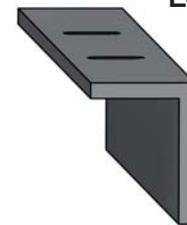
Support structure has to be aligned and level.



Level the support structure



Level the L-profile

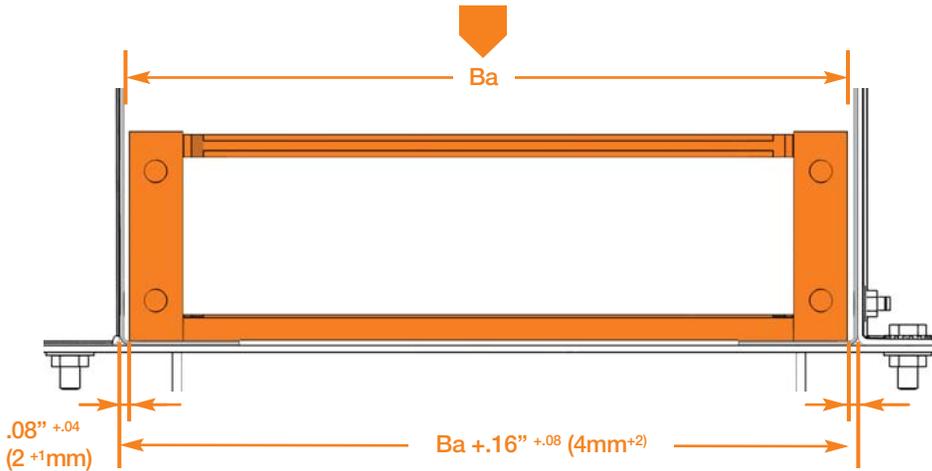


Check the support structure before trough installation. Any adjustments or corrections need to be made before next installation step.

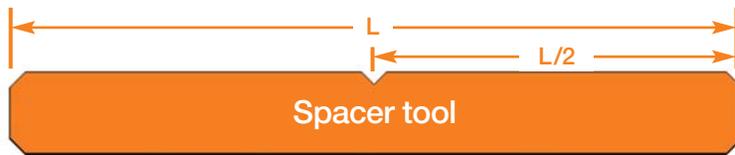
Guide Trough Installation

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

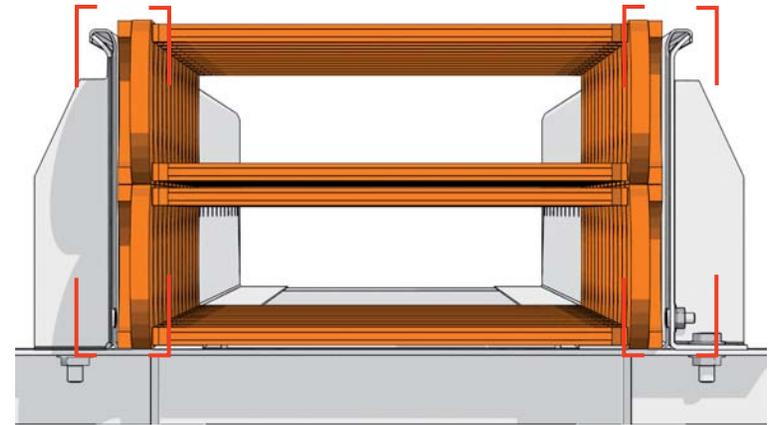
Energy Chain® outer width = Ba



$Ba + .16'' (4mm) = L$

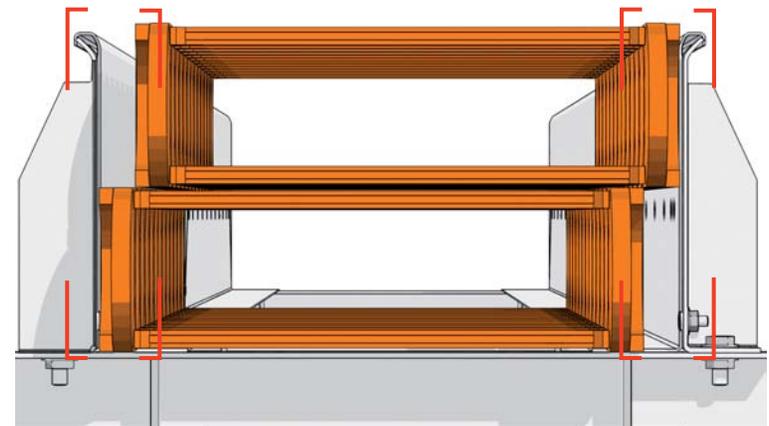


No gap = wrong!



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

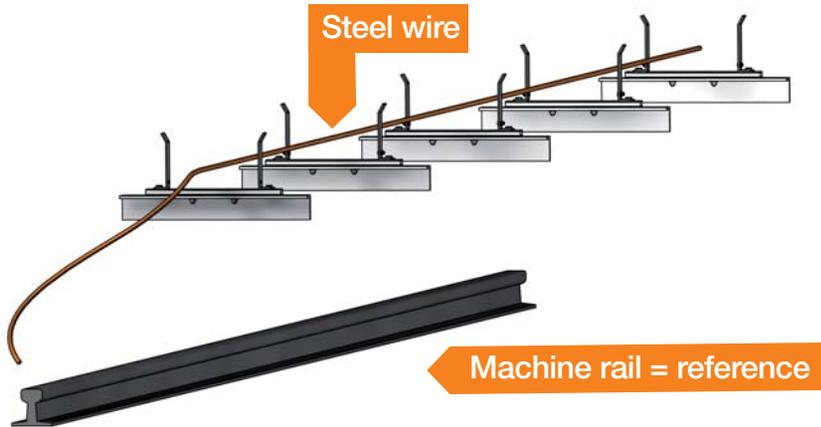


2. Preassemble installation angles



Loose pre-assembly

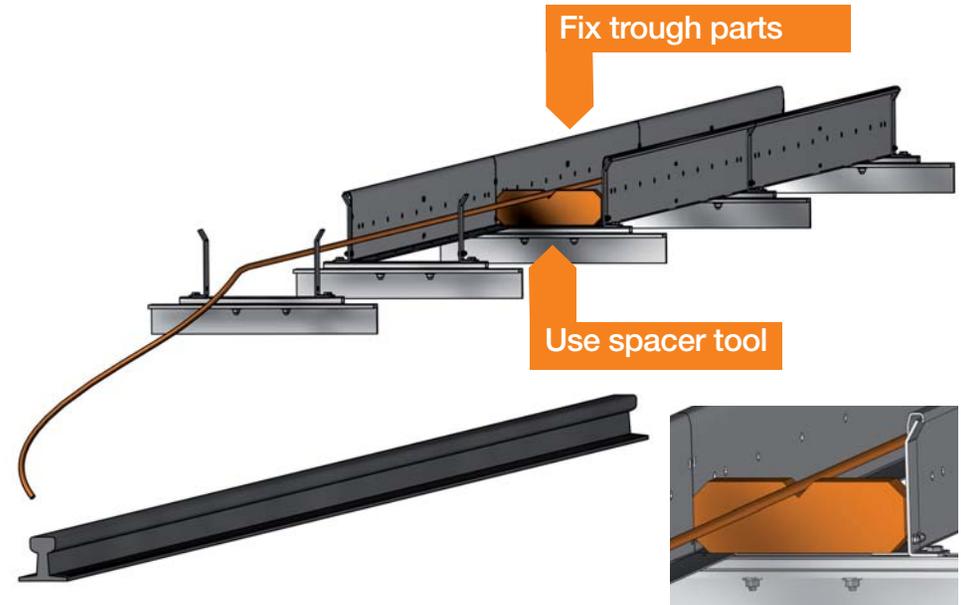
3. Install alignment wire parallel with the machine rail



Steel wire

Machine rail = reference

3. Align trough parts and angles with steel wire and spacer tool



Fix trough parts

Use spacer tool

Use torque wrench to tighten screws

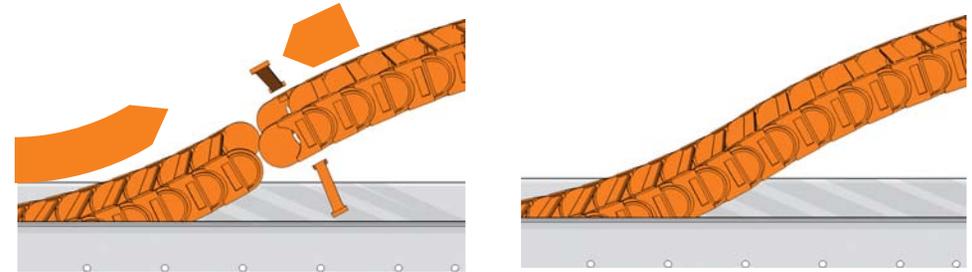
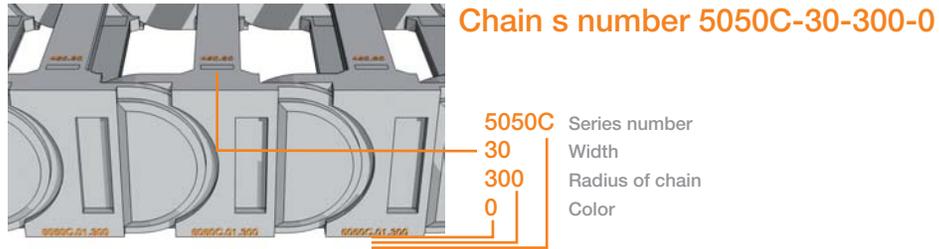
Thread size	Material	Torque
M6	8.8/A2/A4-70	10 Nm
M8	8.8/A2/A4-70	23 Nm
M10	8.8/A2/A4-70	35 Nm
M12	8.8/A2/A4-70	75 Nm
fastening of plastic slide bar		
M10	8.8/A2/A4-70	7 Nm



Check trough alignment and torque.
Make all adjustments before next installation step.

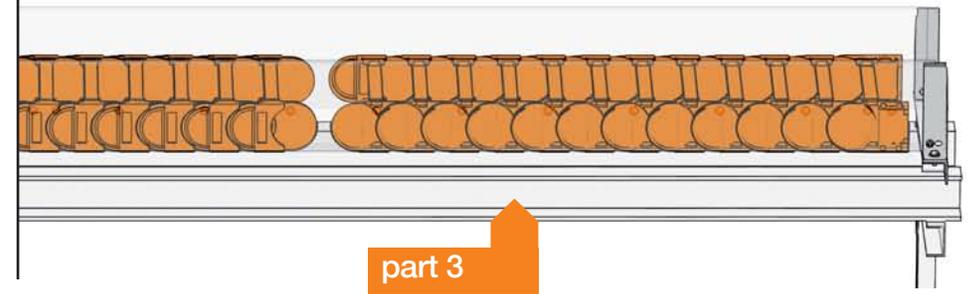
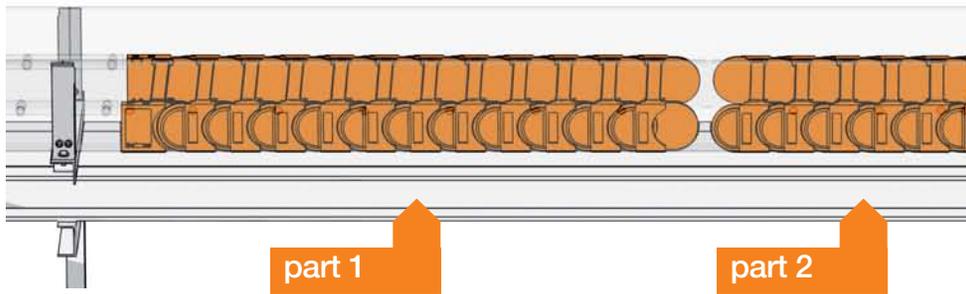
Energy Chain® Pre-Assembly

Check part no. on Energy Chain®, before assembly.
For example: 5050C- 4040C- Series



Energy Chain® assembly

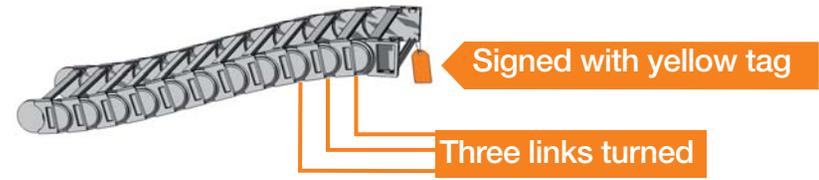
Lay the fixed point (part 3) into the trough and assemble parts until you reach the mounting end.



Fixed point
(KMA bracket attached)



Energy Chain® parts
(meter sections)



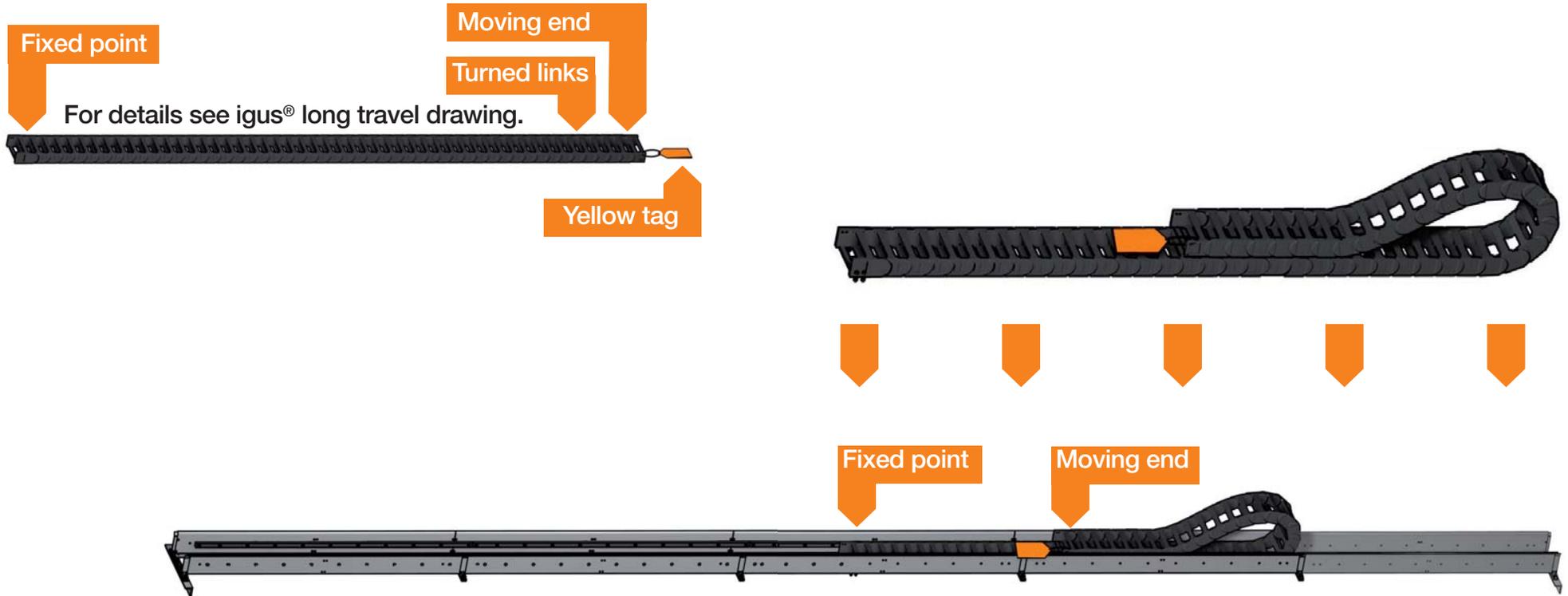
Moving end
(KMA attached)



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.

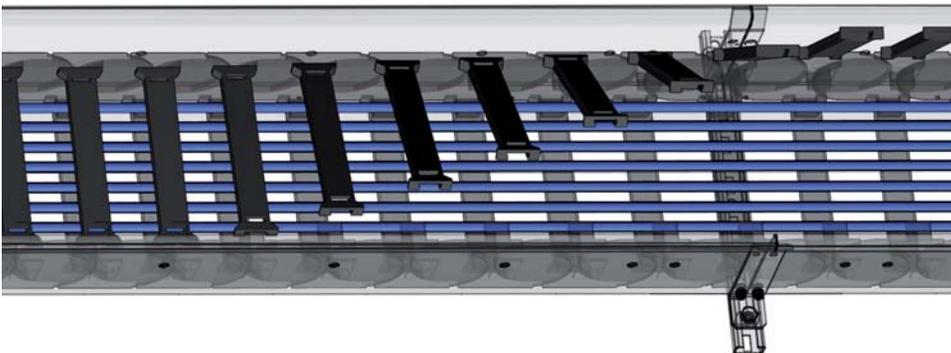
Pull Cables Into Energy Chain®

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

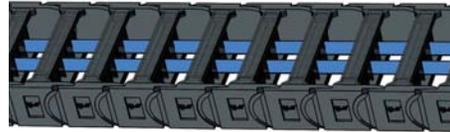


Corkscrew or
Cable damage

Wrong!



Correct!



Wrong!

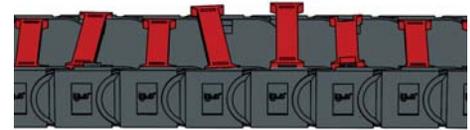


All crossbars snapped in? Any broken parts?

Correct!



Wrong!



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

Correct!

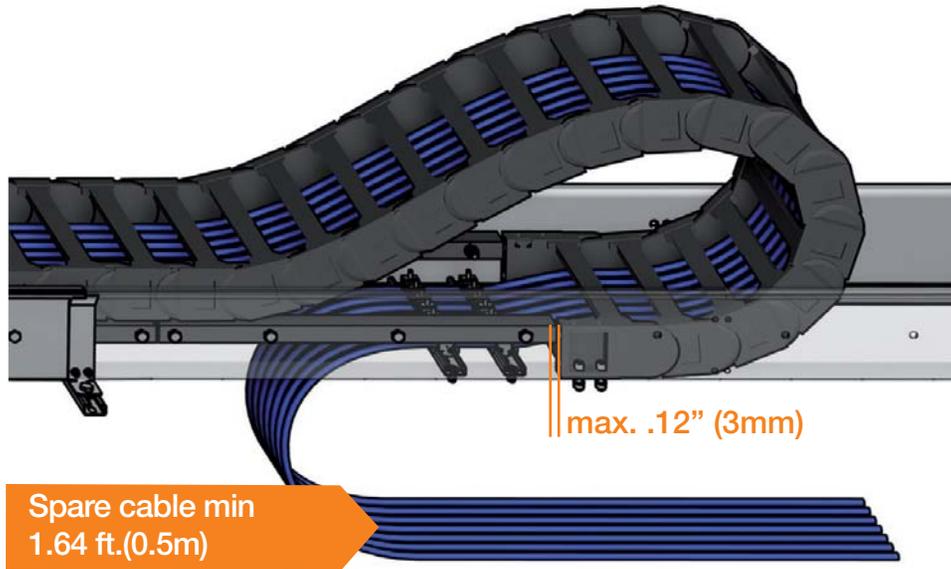


Wrong!

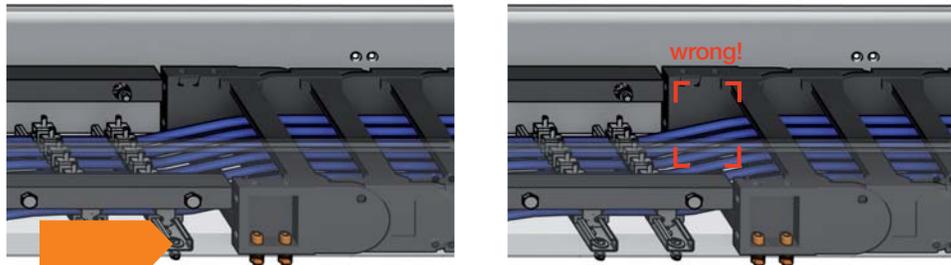


Attach Energy Chain®

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

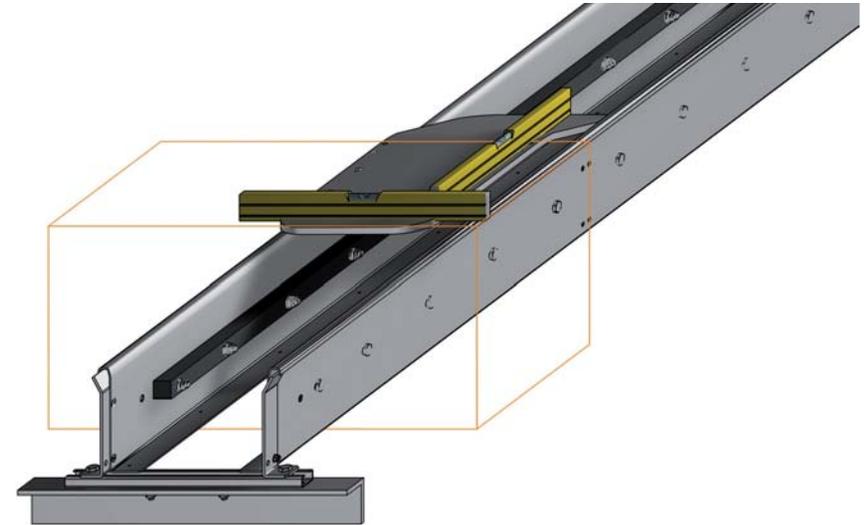


Make sure that the fixed point is in the correct position and affix it with Allen screws (DIN 912 / EN ISO 7462).



Level Moving End

Moving end has to be installed according to system drawing.
Support plate has to be level!
Mounting height according to igus^r drawing.

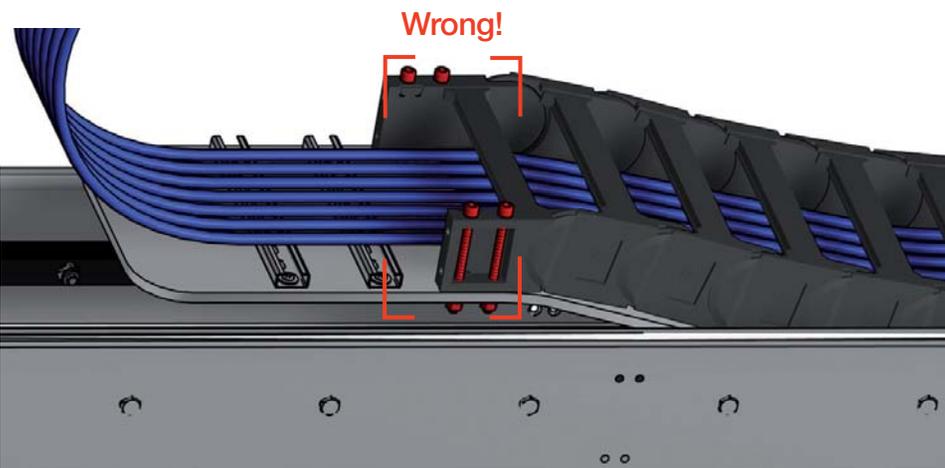


for E4-80/5050C $h = 9.52" + .39"$ (242mm +10)

for E4-56/4040C/400 $h = 10.47" + .39"$ (266mm +10)

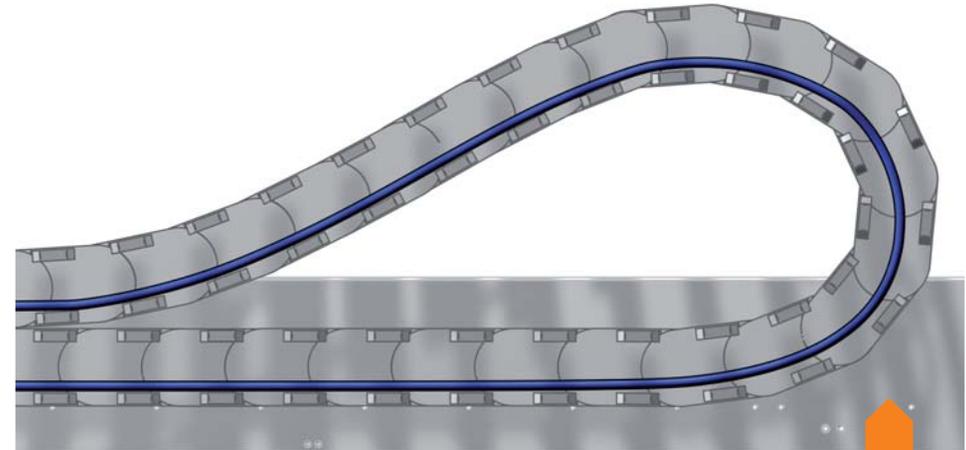
Install moving end

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

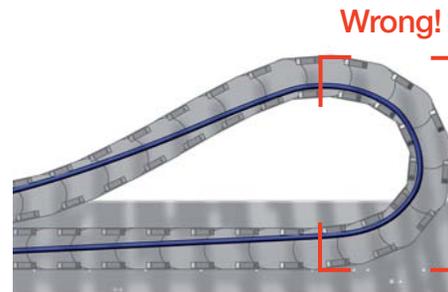


Adjust Cables

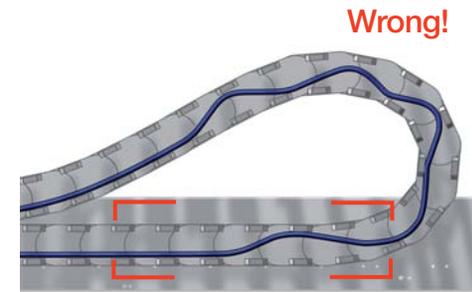
Correct cable adjustment



Cable has to run slightly outside the centerline



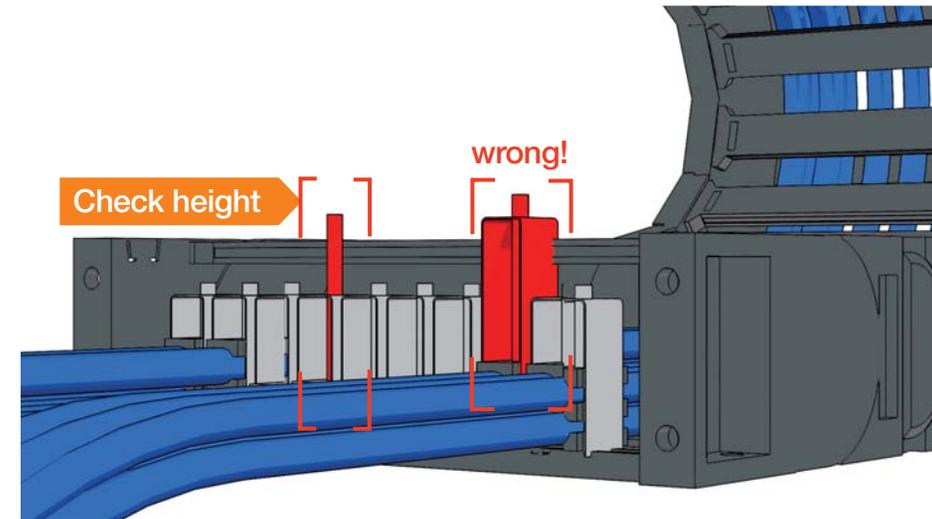
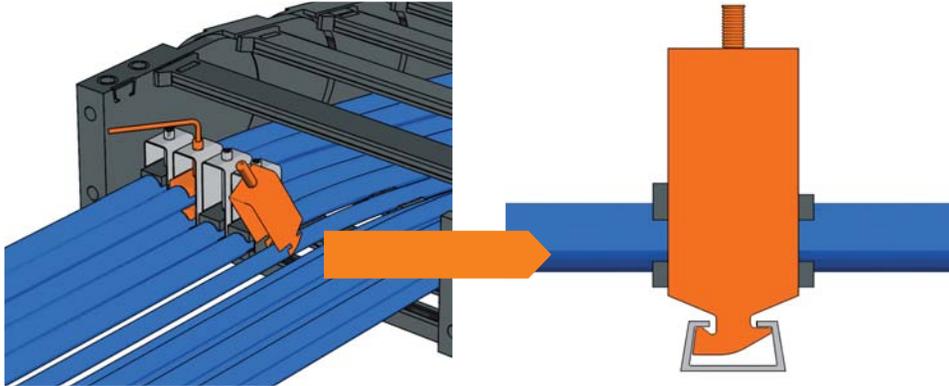
Cable too tight



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.

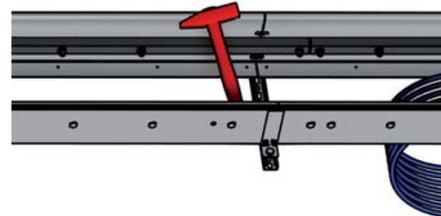


Move the Energy Chain® slowly and carefully to both end positions and check the cable arrangement/position. Double check after a few test cycles.

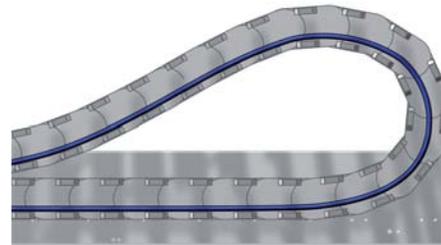
Are screws in place and fixed with torque wrench?



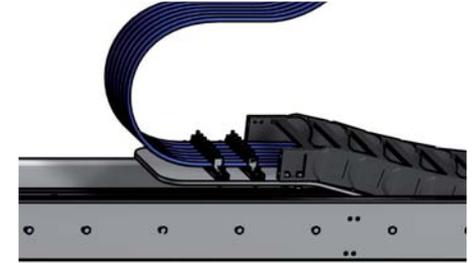
Are there any obstructions or tools in the guide trough?



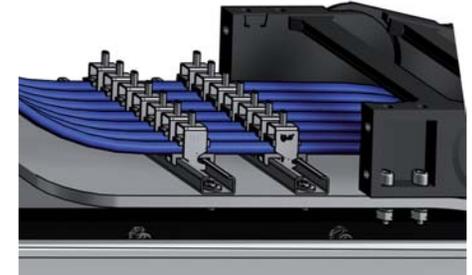
Is the cable arrangement correct?



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



Are all strain relief clamps installed at both ends?



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