

1 GENERAL

These operating instructions must be observed before installing and operating. It is also essential to observe the operating and repair instructions for the machines and systems in which the connectors are installed.

When performing work make sure to wear your personal protective equipment!

2 PRODUCT DESCRIPTION

Single Plane Connectors are intended to connect chain strands of mining conveyor chains at their end links.

The connectors consist of two symmetrical forged halves which are locked against unintended opening by a plug-in module. The plug-in module is secured by two dowel pins assembled into each other, a screw and a nut with a clamping part. Single Plane Connectors must only be used horizontally. (SP-type connector: Only in a single plane, means only horizontal plane.)

SP-Connectors must drive only in a horizontal orientation around the sprocket.

The halves are manufactured as a matched module and should be used together. For simple identification each half is marked by a number (as shown in Figure 2).

Each lock is supplied in individual parts, the screw is fixed to the associated lock half for transport.

The radial/symmetric lock allows for easy assembly and disassembly.

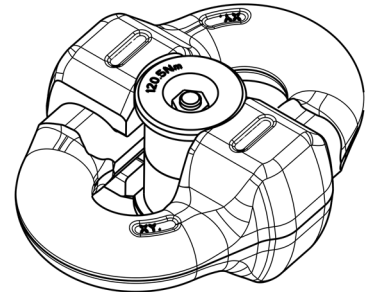
The lock does not freely spin.

Use only original THIELE spare parts.

3 ASSEMBLY / DISASSEMBLY

3.1 Preparation

- Check the Single Plane Connector for completeness and identical marking.
- Shut down the conveyor and take appropriate measures to isolate in accordance with site requirements.
- These instructions are to be read in accordance with all other relevant site requirements and documents, in particular any conveyor operating instructions.



3.2 Assembly

Tools:

- Hammer
- Socket wrench (size see table 2)
- Torque wrench
- Underlay

Work steps:

- Only for deliveries made in the past: Open the connector by sliding the halves apart. Hitting the connector side vertical on a flat massive surface simplifies this (the 3 bottom arrows in Figure 1 show the best hitting area). Take care, that nothing is in the opening area when the connector opens (Figure 1)!

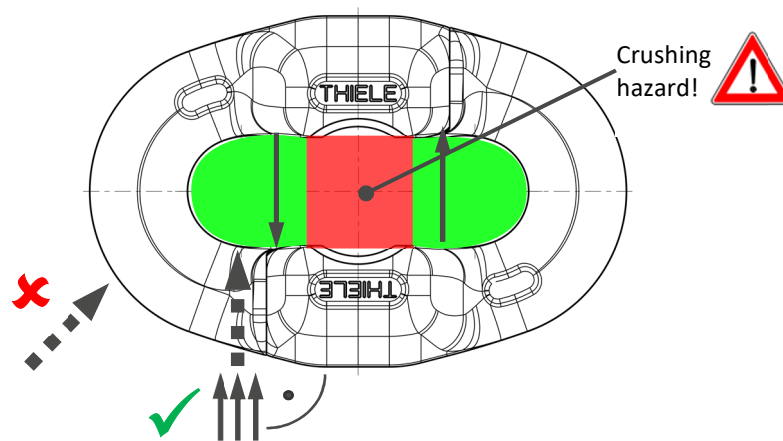


Figure 1: Open the pre-assembled connector

- Position the two connector halves and the chain ends to be connected as shown in Figure 2.
- Slide the two halves together as far as they will go. Make sure the mating faces are free of any foreign bodies/material prior to sliding the halves together.

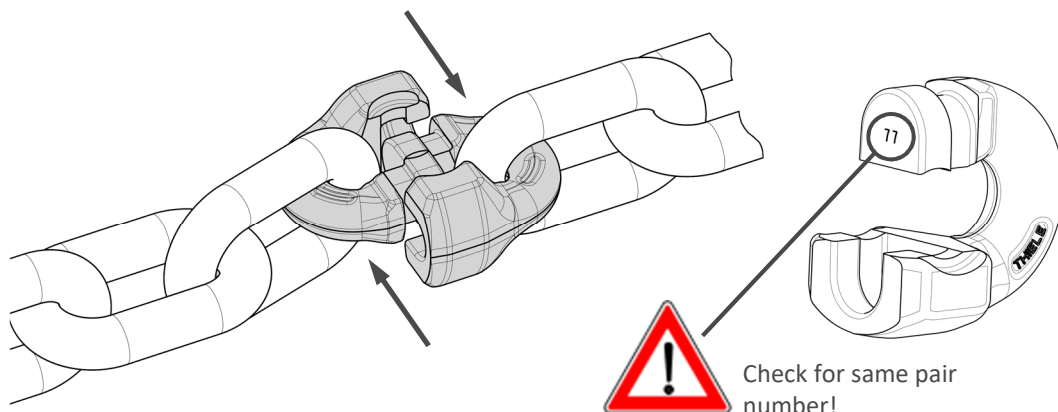


Figure 2: Assemble connector halves

- Move the lower lock half with the preassembled screw from the bottom into the connector (step 1, Figure 3) and position it on a pad or flat surface. The screw is glued in place to prevent moving. The following assembly is made simpler if the two dowel pins align with the chain center line.
- Place the upper lock half (Step 2, Figure 3) centrally above the lower lock half. Take care, that the holes to accept the dowel pins align correctly.
Underlay the lower lock half.
- Push both halves together until the mating faces are flush.

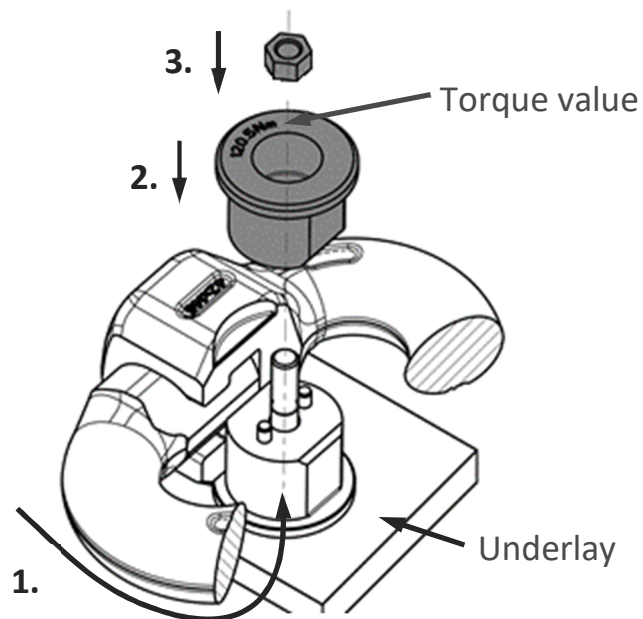


Figure 3: Lock assembly

- Secure the lock module with the nut. Torque the nut in accordance with torque values displayed on the upper lock half or in the table below (section 4.2).

Once completed remove any tools and material from the area prior to starting the conveyor.

Used bolts and nuts must necessarily be replaced with new ones. This also applies after one-time assembly.

3.3 Disassembly

Tools:

- Hammer
- Socket wrench (size see table 2)
- Punch

Work steps:

- Shut down the conveyor and take appropriate measures to isolate in accordance with site requirements.
- Remove any tension on the chain and provide slack to allow for removal.
- Loose and remove the nut.
- To disassemble the lock halves, strike the lock on the lower overhang (refer Figure 4 below) using the hammer and punch. Alternate between both sides until the two halves are free.

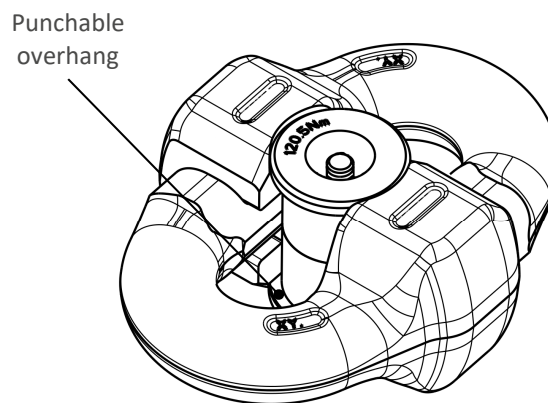


Figure 4: Remove lock

- Remove the lower and upper lock module halves.
- Slide the connector halves apart.

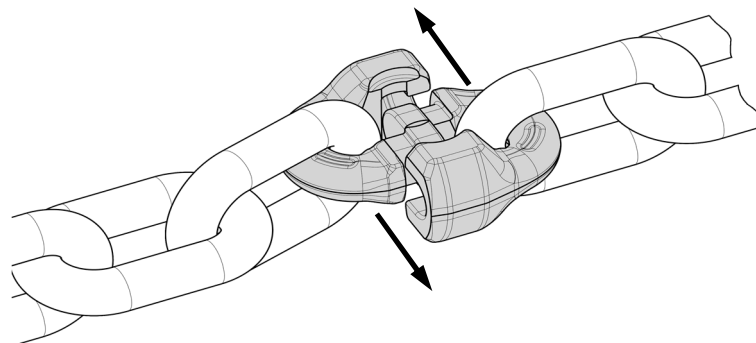


Figure 5: Slide apart

4 TECHNICAL DATA

4.1 Single Plane Connector

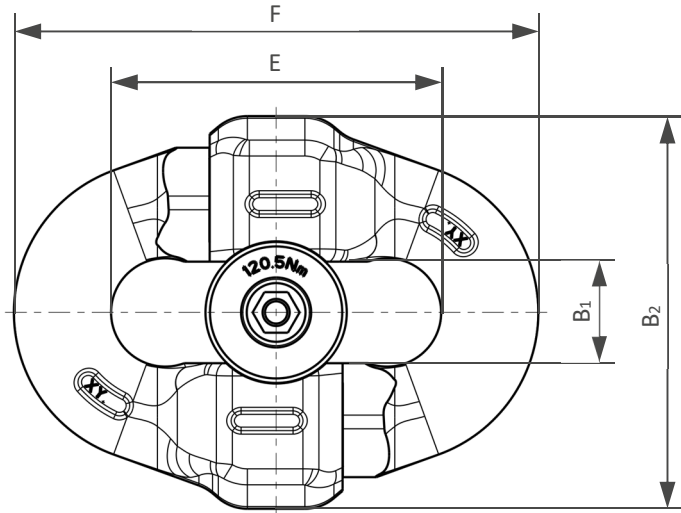


Table 1: Technical data Single Plane Connector

Size	Article-No.	Dimensions				Workforce max. [kN]	Breakforce (nsw) min. [kN]	Mass [kg]
		E [mm]	F [mm]	B1 min. [mm]	B2 max. [mm]			
30 x 108	F26142	108	172	35	111	707	1 130	4,1
34 x 126	F26152	126	194	37	122	907	1 550	5,8
34 x 131 BIG-T	F26154	131	205	45	115	907	1 450	5,3
38 x 126	F26166	126	202	42	134	1 130	1 820	7,2
38 x 137	F26162	137	213	42	134	1 130	1 820	7,5
38 x 148 BB	F26168	148	224	63	144	1 130	1 820	8,0
42 x 146	F26172	146	235	46	181	1 380	2 220	10,5

4.2 Lock

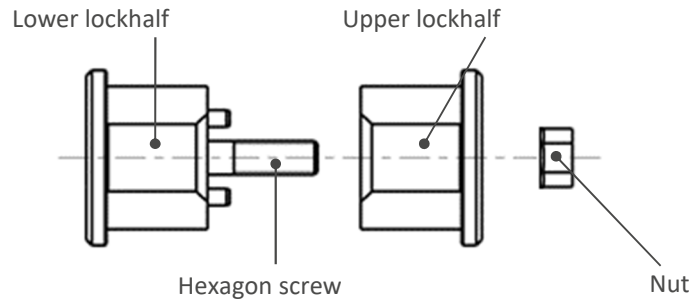


Table 2: Data of lock parts

Size	Lock, full set Article-No.	Tightening torque [Nm]	Screw type	Nut type #	Face pin wrench diameter [mm]	Wrench size ¹⁾ [mm]	Mass [kg]
30 x 108	F261421	70	ISO 4014 M10 x 60, 10.9 #	ISO 7042, M10	6	17	0,7
34 x 126	F261521	120	ISO 4014 M12 x 70, 10.9 #	ISO 7042, M12	6	19	0,9
34 x 131 BIG-T	F261541	120	ISO 4014 M12 x 70, 10.9 #	ISO 7042, M12	6	19	1,0
38 x 126	F261621	120	ISO 4014 M12 x 70, 10.9 #	ISO 7042, M12	6	19	1,0
38 x 137	F261621	120	ISO 4014 M12 x 70, 10.9 #	ISO 7042, M12	6	19	1,0
38 x 148 BB	F261681	120	ISO 4014 M12 x 70, 10.9 #	ISO 7042, M12	6	19	1,3
42 x 146	F261721	120	ISO 4014 M12 x 70, 10.9 #	ISO 7042, M12	6	19	1,3

1) Different from ISO-standard

5 INSPECTION AND MAINTENANCE

Check Single Plane Connectors at regular intervals, at least once a week.

In the event of damage (impact notches, cracks, corrosion) or pitch elongation of more than 3 % replacement is recommended.

6 THIELE OPERATING AND MOUNTING INSTRUCTIONS

Current operating and installation instructions are available as a PDF download on the homepage.



7 IMPRINT

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