

1 PRODUCT DESCRIPTION

1.1 General

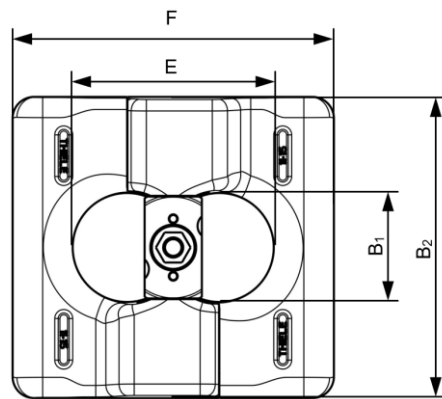
Single Plane Connectors are intended to connect chain strands of mining conveyor chains at their end links. The connectors consist of two symmetrical forged halves which are locked against unintended opening by a plug-in module. The plug-in module is secured by a screw and a self locking nut.

Single Plane Connectors must only be used horizontally. (SP-type connector: Only in a single plane, means only horizontal plane.) SP-Connectors drive only in a horizontal orientation around the sprocket.

The halves are manufactured as a matched pair and should be used together. For simple identification each half is marked by a number (as shown in figure 1).

The lock allows for easy assembly and disassembly.

1.2 Technical Data



| Nominal chain size [mm] | Article no. | Dimensions | | | | Tightening torque [Nm] | Workforce max. [kN] | Breaking force ¹⁾ max. [kN] | Mass [kg] |
|----------------------------|-------------|------------|-----------|----------------------------|----------------------------|---------------------------|---------------------------|--|--------------|
| | | E [mm] | F [mm] | B _{1 min} [mm] | B _{2 max} [mm] | | | | |
| 34 x 110 | F26257 | 110,5 | 178,5 | 62,0 | 166 | 121 | 910 | 1 460 | 7,8 |
| 42 x 140 | F26176 | 140,5 | 224,5 | 71,5 | 210 | 193 | 1 380 | 2 220 | 15 |

1) condition directly after heat treatment without blasting

Temperature range for use: +10° C to +100° C

2 COMMISSIONING

Prior to using the product for the first time make sure that

- the parts comply with the order and have not been damaged,
- test certificate and operating instructions are at hand,
- markings correspond with what is specified in the documentation,
- the documentation is safely kept in an orderly manner.

3 SAFETY NOTES

Read these instructions carefully before installing and using the Single Plane Connectors.

When performing work make sure to wear your personal protective equipment. Specific local provisions have to be observed.

4 ASSEMBLY / DISASSEMBLY

4.1 Preparation

- Check the Single Plane Connector for completeness and identical marking.
- Shut down the conveyor system and secure it against unintentional motion.
- Check the tight fit of the screw in the lower lockhalf.
- Check for the necessary tools: hammer, socket wrench, torque wrench, punch and underlay.
- These instructions are to be read in accordance with all other relevant site requirements and documents, in particular any conveyor operating instructions.

4.2 Assembly

- Separate the delivered connector parts. Instructions for removing the lock halves are given in 4.3. 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)!

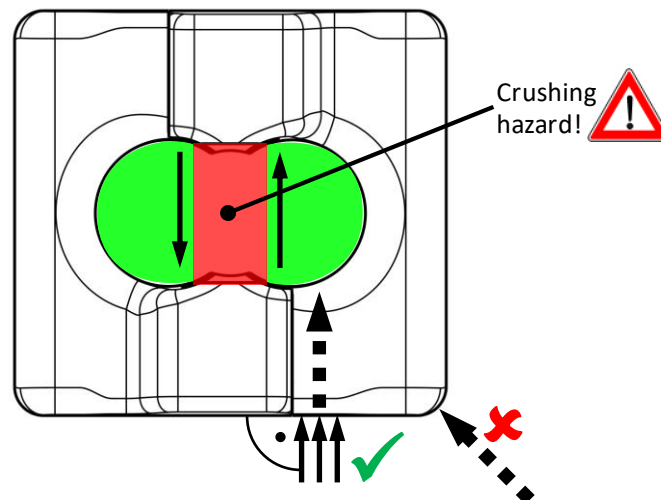


Figure 1: Open the pre-assembled connector

- 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.

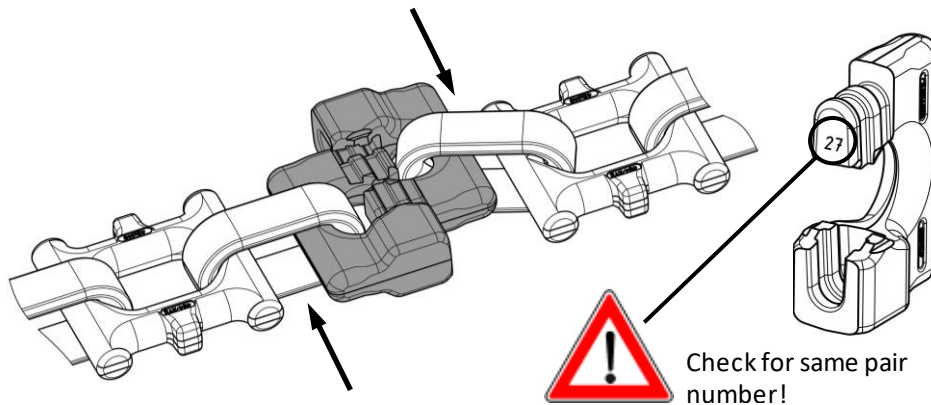


Figure 2: Assembly of connector halves

- Make sure you have a **new screw and a new self locking nut** on hand.
- 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.
- 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.
- Push both halves together until the mating faces are flush.

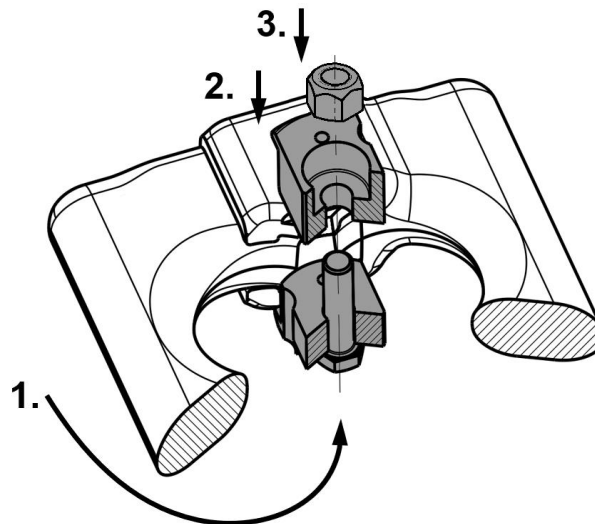


Figure 3: Lock assembly

- Secure the lock module with the self locking nut. Torque the self locking nut in accordance with torque values tabled in 1.2.

Important note

It is essential to ensure that the screw and self locking nut are only fitted once in order to guarantee the locking function. After every opening of the lock, it is essential to use a new screw and a new self locking nut for further use.

4.3 Disassembly

- 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 self locking nut of the lock.
- To disassemble the lock halves, strike the lock on the lower overhang using the hammer and punch. The side pockets in the upper half provide a space for the punch (refer Figure 4 below). Alternate between both sides until the two halves are free.

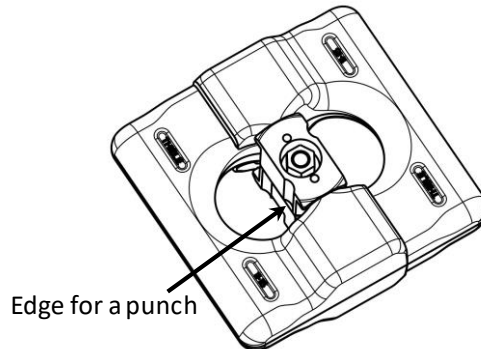


Figure 4: Lock remove

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

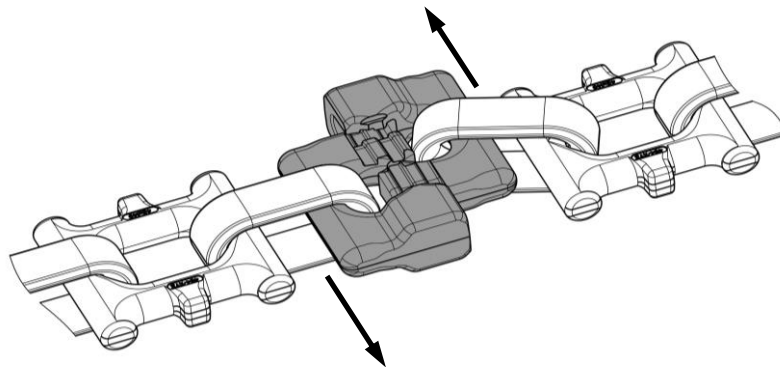


Figure 5: Slide apart

- Dispose of screw and self locking nut to ensure that only new ones are used if the connector is used again.

5 STORAGE

Store connectors in dry locations at temperatures ranging between 0 °C and +40 °C.

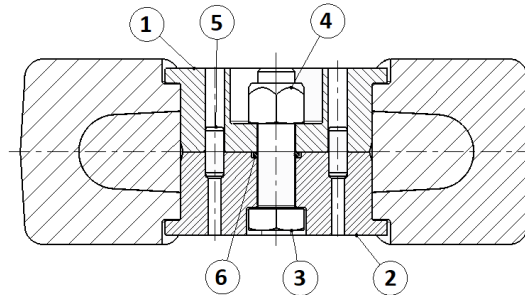
6 INSPECTION AND MAINTENANCE

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

The connectors have to be changed when the pitch E exceeds 3 % or there is serious damage and wear.

7 SPARE PARTS

Use only original THIELE-spare parts.



| Nominal chain size | Item | Quantity | Designation | Article no. |
|--------------------|-------|----------|----------------------------------|-------------|
| 34 x 110 | 1 - 6 | - | Complete lock set | F262571 |
| | 1 | 1 | Upper lock half | n/a |
| | 2 | 1 | Lower lock half | n/a |
| | 3 | 1 | Screw ISO 4014 M12x45 10.9 | Z03745 |
| | 4 | 1 | Self locking nut ISO 7042 M12 10 | Z09524 |
| | 5 | 2 | Parallel pin ISO 2338 6mx16 | Z10189 |
| 42 x 140 | 1 - 5 | - | Complete lock set | F261761 |
| | 1 | 1 | Upper lock half | n/a |
| | 2 | 1 | Lower lock half | n/a |
| | 3 | 1 | Screw ISO 4014 M14x60 10.9 | Z11038 |
| | 4 | 1 | Self locking nut ISO 7042 M14 10 | Z11816 |
| | 5 | 2 | Parallel pin ISO 2338 6mx16 | Z10189 |
| | 6 | - | n/a | n/a |

8 ENVIRONMENT AND PACKAGING

Dispose of the packaging in an environmentally compatible way according to local rules. All components and accessories of steel taken out of service are to be scrapped in line with local regulations and provisions.

9 THIELE OPERATING AND MOUNTING INSTRUCTIONS

Current mounting and operating instructions are available as a PDF download on the homepage www.thiele.de.



10 IMPRINT

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