

Translation of the original
operating instructions



**Screw-to-connect couplings according to
ISO 14541*, HS series**

Designation: QRC-HS-...

Old designation: HS...

*Applies to the HS-06, HS-10, HS-12 and HS-19 series. Larger nominal diameters are not covered by this standard.

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1. Preliminary remarks

Please read the operating instructions for the HS series screw-to-connect coupling carefully and observe the stated guidelines and specifications before starting up the system.

The coupling series for the individual application always has to be selected by qualified personnel based on the operating conditions (pressure, temperature, media).

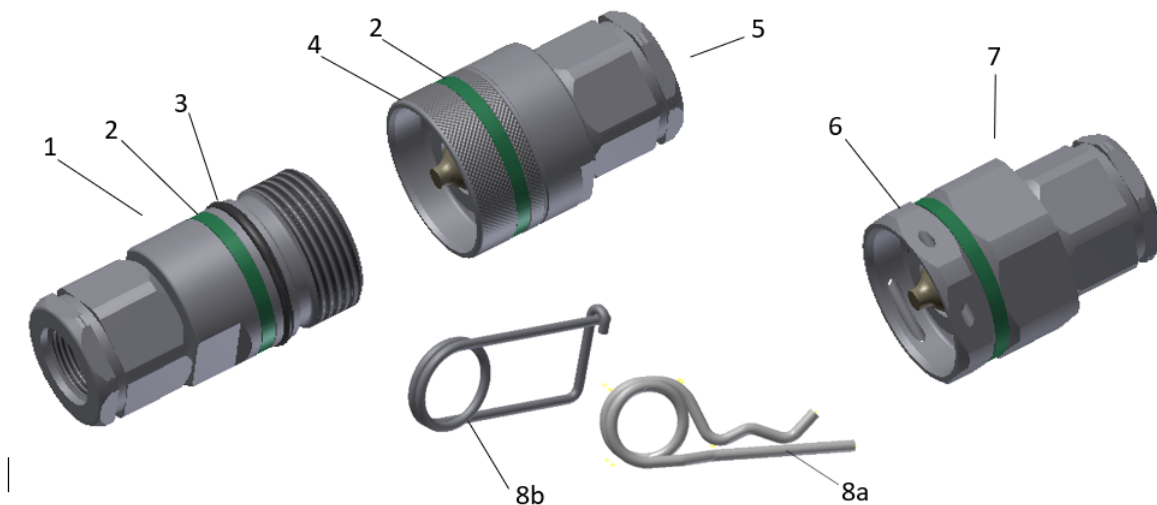
The coupling halves have to be checked for damage and corrosion before initial installation or after prolonged storage.

Safety-relevant warnings are set in **bold type** in this manual.

The screw-to-connect couplings QRC-HS... are operated with high internal pressure. Therefore, incorrect maintenance as well as improper use can result in injury, damage or malfunctions.

Consequently, compliance with the information in these instructions as well as regular maintenance checks are mandatory. Damaged or worn parts must be replaced.

2. Terms and definitions



Components of the HS screw-to-connect coupling

- | | |
|----------------------------|--|
| 1: Female body | 6: Hexagon screw sleeve with holes for 8 |
| 2: Marking ring (optional) | 7: Male tip for use with 8 |
| 3: Stop ring | 8: Retaining device |
| 4: Screw sleeve | a: Spring cotter |
| 5: Male tip | b: Fokker pin |

[Fig. 1] Terms/components

3. Before coupling

Remove the dust caps and screw them into the dust cap of the other half of the coupling. This protects both dust caps against dirt. If necessary, remove the locking device first. Carry out a visual check for cleanliness, damage and completeness on both coupling halves, including the visible seal.

Use suitable products to clean the coupling halves if they are soiled. Use lint-free cloths and never use products that could corrode the seals or metallic surfaces of the couplings or that have a strong degreasing effect (e.g. brake cleaner).

Do not allow foreign substances, such as cleaning agents, water or dirt, to enter into the hydraulic system during cleaning. For this reason, never direct high-pressure cleaners directly at the valves of the coupling halves.

Replace any damaged couplings. Replace any coupling halves on which individual parts have become detached. Always replace the components in pairs.

4. Connecting the coupling halves

If a male tip with a retaining device is used, remove the stop ring from the sleeve before first use. The groove in the stop ring is then required for securing the retaining device.

Place the loose part (male tip) onto the fixed half (female body) without canting and connect them with the screw sleeve.

Do not exceed the residual pressure when coupling. Take the permitted residual pressures during coupling from the following table [tab. 1]. Coupling at a higher pressure can damage the seals.

It is advisable to connect the coupling halves without pressure, as coupling under residual pressure can lead to increased wear on the seals.

| | | | | | | |
|-------------------------------|------------------|------------------|------------------|------------------|---------------|------------------|
| Designation | QRC- HS-06... | QRC- HS-10... | QRC- HS-12... | QRC- HS-19... | QRC- HS-25 | QRC- HS-38... |
| Old article number | HS04-... | HS08- | HS10-... | HS12-... | HS20-... | HS25-... |
| Permissible residual pressure | 150 bar | 150 bar | 130 bar | 130 bar | 100 bar | 50 bar |

At the end of the coupling process, the screwing action becomes increasingly harder because the sleeve has to be moved over the stop ring and due to the counteraction of the spring force. We recommend the use of a face spanner, if necessary. When tightening, use a second face spanner to counter on the female body [fig. 2].

The couplings halves should be easily screwed together with a tool. If this is not the case, check the following:

- Has all pressure in the lines to be connected been **released** or is the **permissible residual pressure** in the lines exceeded?
- Are the threads of the coupling halves **canted**?
- Is there any **damage/dirt**?

For male tips with a retaining device, push the retaining device into the holes on the side of the screw sleeve [fig. 3] after completing the assembly.



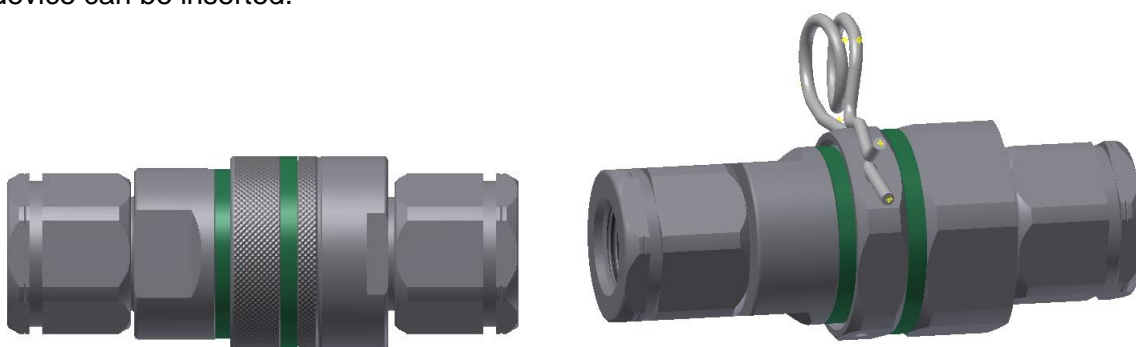
[Fig. 2] Diagram coupling halves: Tighten to the stop with a tool.

5. Checking the connection

It is essential that the coupling halves are screwed all the way to the stop during the coupling process [fig. 2]. This position is reached when the torque needed for screwing increases abruptly and when the stop ring (O-ring on the coupling sleeve) is fully covered by the screw sleeve of the male tip.

Verify correct installation to the stop by positioning the tool once again.

When using a retaining device, the coupling halves are assembled correctly if the retaining device can be inserted.



[Fig. 3] Condition: coupled/screwed fully to the stop. Left: without retaining device. Right: variant with retaining device.

Incomplete connection of the coupling halves can result in the male tip and female body (loose part and fixed part) separating during operation. Among other things, this can destroy the seals and cause leaks on the coupling.

6. During operation

Before each start-up and regularly during extended work phases, check whether the coupling halves are still fully connected and whether any damage is visible. If the coupling halves are no longer connected correctly, re-establish the correct connection (chapters 3 – 5).

Damaged couplings must be replaced.

7. Separating the connection

The operating temperature of the coupling can be above 100 °C/212 °F. For this reason, ensure that it has cooled down sufficiently after operation before touching. If in doubt, wear suitable gloves.

Before separating the connection, ensure that the line to be disconnected is not in operation, i.e. that there is neither pressure nor media flow in the line.

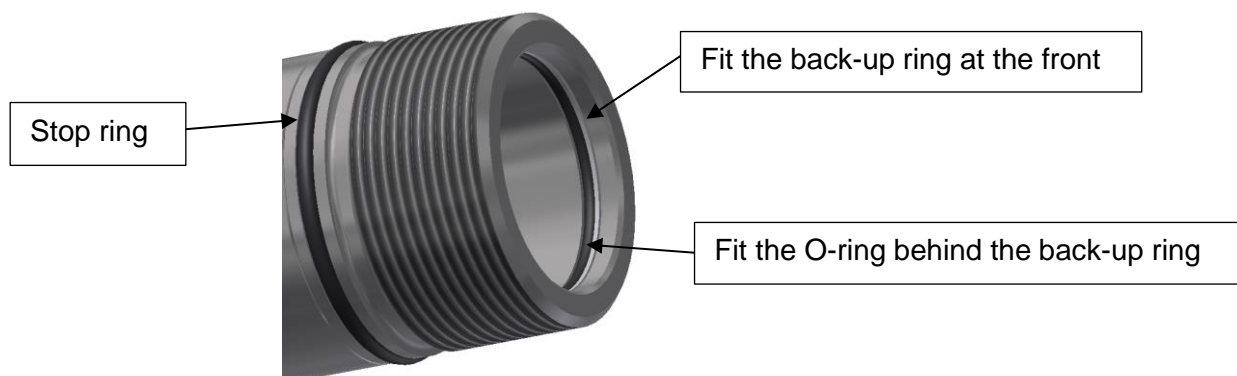
Use the above tools to separate the halves. Excessive release torque can indicate a high pressure in the connection. **If this is the case, release the pressure in the line before disconnecting.**

After the coupling halves have been separated, use appropriate products to clean them (see also chapter 3), use dust caps to prevent them from becoming soiled and store them so that they are protected against damage, e.g. from being knocked against other objects.

8. Replacing the seal

Seal kits are available for the female bodies.

Only visible seals can be replaced and are available as spare parts. Slightly oil seals before installation. Observe the installation sequence [fig. 4]!



[Fig. 4] Position of the seals

9. Spare parts

Seal kits and marking rings for couplings from the HS series

| Designation Female body | Designation Seal kit | Designation Marking ring |
|----------------------------|-------------------------|--------------------------------------|
| QRC-HS-06-F-BT-... | QRC-HS-06-FSK-BT | MR-QRC-20.1x1.2x2-K-“+colour code” |
| QRC-HS-10-F-BT-... | QRC-HS-10-FSK-BT | MR-QRC-24.1x1.2x3.6-K-“+colour code” |
| QRC-HS-12-F-BT-... | QRC-HS-12-FSK-BT | MR-QRC-29.9x1.2x4-K-“+colour code” |
| QRC-HS-19-F-BT-... | QRC-HS-19-FSK-BT | MR-QRC-37.9x1.4x4-K-“+colour code” |
| QRC-HS-25-F-BT-... | QRC-HS-25-FSK-BT | MR-QRC-43.5x1.4x5-K-“+colour code” |
| QRC-HS-38-F-BT-... | QRC-HS-38-FSK-BT | MR-QRC-65x1.4x6-K-“+colour code” |

The seal kits for female HS couplings consist of a stop ring, O-ring and back-up ring (also see fig. 4).

| Designation Male tip* | Designation Seal kit | Designation Marking ring |
|--------------------------|-------------------------|--------------------------------------|
| QRC-HS-06-M-BT-... | - | MR-QRC-29.9x1.2x4-K-“+colour code” |
| QRC-HS-06-M-BT-...-HX | - | MR-QRC-28x1.2x4-K-“+colour code” |
| QRC-HS-10-M-BT-... | - | MR-QRC-29.9x1.2x4-K-“+colour code” |
| QRC-HS-10-M-BT-...-HX | - | MR-QRC-32.1x1.2x4-K-“+colour code” |
| QRC-HS-12-M-BT-... | - | MR-QRC-37.9x1.4x4-K-“+colour code” |
| QRC-HS-12-M-BT-...-HX | - | MR-QRC-41.1x1.4x4-K-“+colour code” |
| QRC-HS-19-M-BT-... | - | MR-QRC-43.5x1.4x5-K-“+colour code” |
| QRC-HS-19-M-BT-...-HX | - | MR-QRC-46.1x1.4x5-K-“+colour code” |
| QRC-HS-25-M-BT-... | - | MR-QRC-49.4x1.4x5-K-“+colour code” |
| QRC-HS-25-M-BT-...-HX | - | MR-QRC-49.4x1.4x5-K-“+colour code” |
| QRC-HS-38-M-BT-... | - | MR-QRC-75.1x1.4x7.5-K-“+colour code” |

*HX in the designation indicates the variant with a hexagon screw sleeve.

A colour code is appended to the designation to indicate the respective colour of the marking ring.

Colour codes for the marking rings

| | |
|--------|----|
| Black | BK |
| Blue | BU |
| Green | GN |
| Grey | GY |
| Orange | OE |
| Purple | PU |
| Red | RD |
| Yellow | YE |

Note: Any dismantling of the individual coupling halves (male tip/ female body) will invalidate the warranty!!!

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