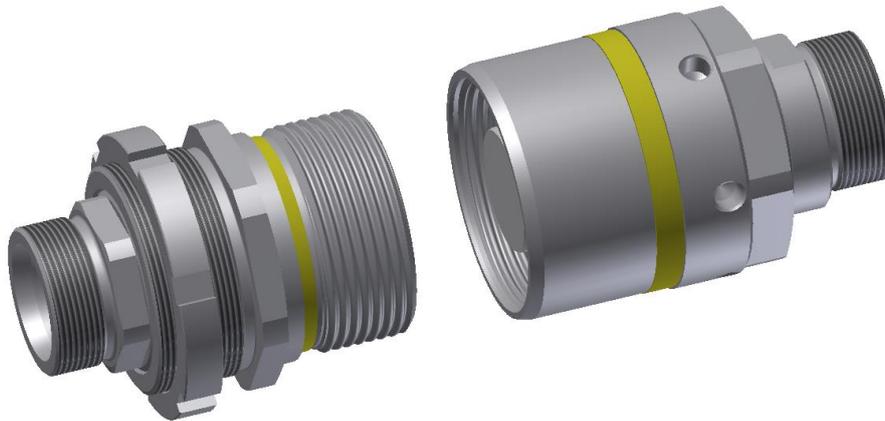


Translation of the original  
**operating instructions**



## Pipeline couplings, RH\* series

Designation: QRC-RH-...

\*Specifications equally apply to the RK predecessor series.

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## 1. Preliminary remarks

Please read the operating instructions for the pipeline couplings from the RH series 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).

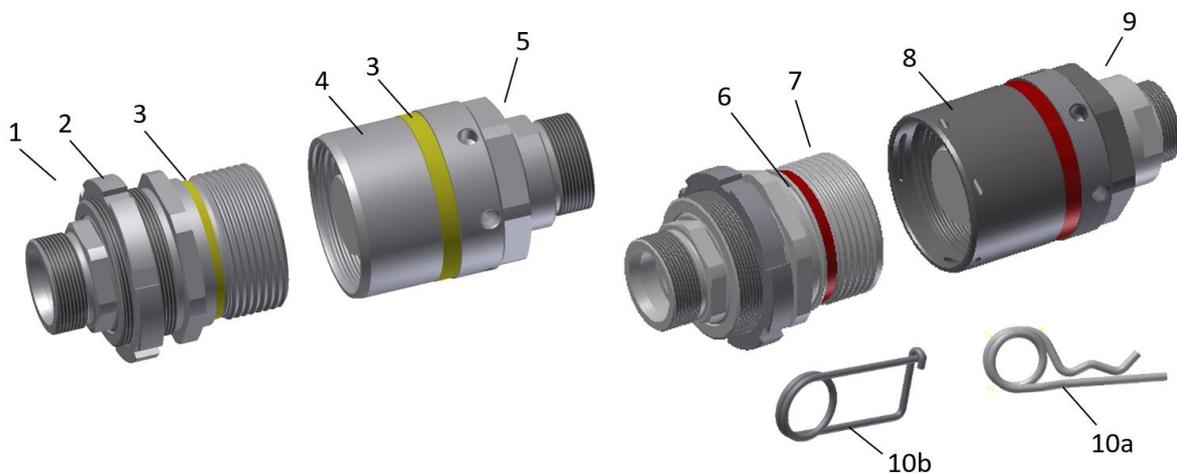
The coupling halves have to be checked for damage and corrosion before initial installation or after prolonged storage.

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

**The pipeline couplings QRC-RH... 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 screw-to-connect coupling type RH (left: variant without retaining device, right: variant with retaining device)

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| 1: Female body                  | 7: Male tip for use with 10       |
| 2: Locknut                      | 8: Screw sleeve with holes for 10 |
| 3: Marking ring (optional)      | 9: Male tip for use with 10       |
| 4: Screw sleeve                 | 10: Locking device                |
| 5: Male tip                     | a: Spring cotter                  |
| 6: Male body with groove for 10 | b: Fokker pin                     |

[Fig. 1] Terms/components

### 3. Before coupling

Remove the dust caps and store them in a location protected against dirt. If necessary, remove the retaining 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

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

**Ensure that the coupling halves are not under pressure during coupling.**

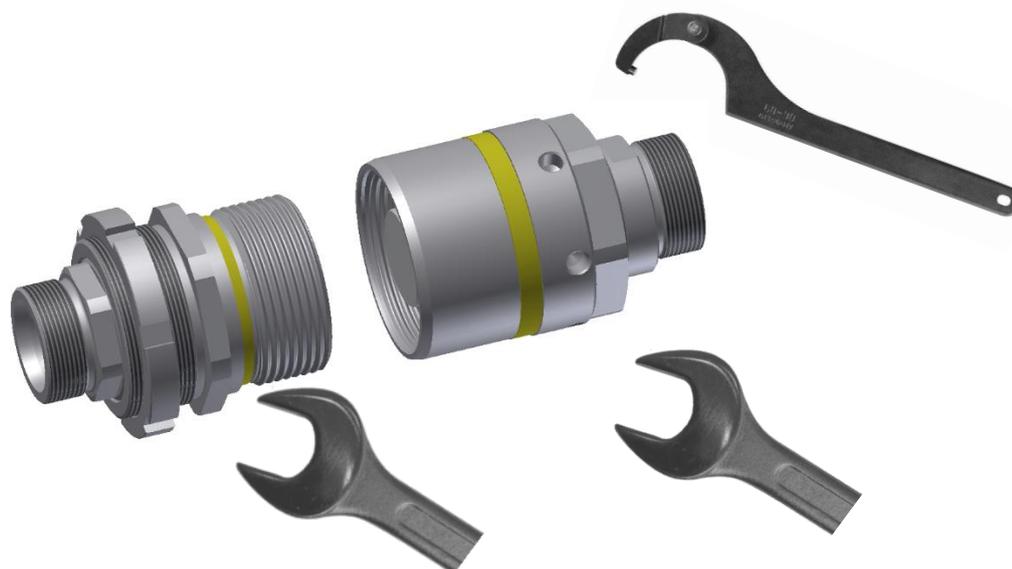
If the female body is not firmly clamped into a bulkhead wall by the locknut, use a face spanner to counter the hexagon profile on the female body when screwing on the screw sleeve of the male tip.

At the end of the coupling process, the screwing action becomes increasingly more difficult due to the counteraction of the spring force. We recommend using a face spanner, if necessary [fig. 2]. A pin with suitable diameter or a suitable hook spanner can be used as an alternative if the screw sleeve has holes.

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

- Are the connected lines **depressurised**?
- 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.



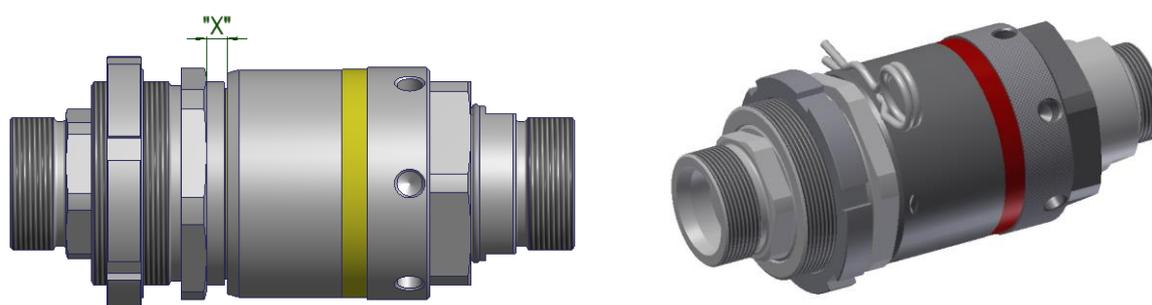
[Fig. 2] Diagram of coupling halves: Tighten to the stop with a tool.

## 5. Checking the connection

It is essential that the coupling halves are screwed all the way to the stop during the coupling process [fig. 3]. This position is reached when the torque required for the connection increases suddenly and when the position shown in figure 3 is reached.

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.



Size	QRC-RH-10...	QRC-RH-12...	QRC-RH-16...	QRC-RH-19...	QRC-RH-25...
Old size	RH08-...	RH12-...	RH16-...	RK19-...	RH25-...
Gap size "X"	2 mm / 08 in	0.8 mm / 03 in	0 mm / 0 in	3.3 mm / 13 in	8 mm / 3 in

[Fig. 3] Condition: coupled fully to the stop. Left: without retaining device, see table for gap sizes. Right: variant with retaining device inserted

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**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.

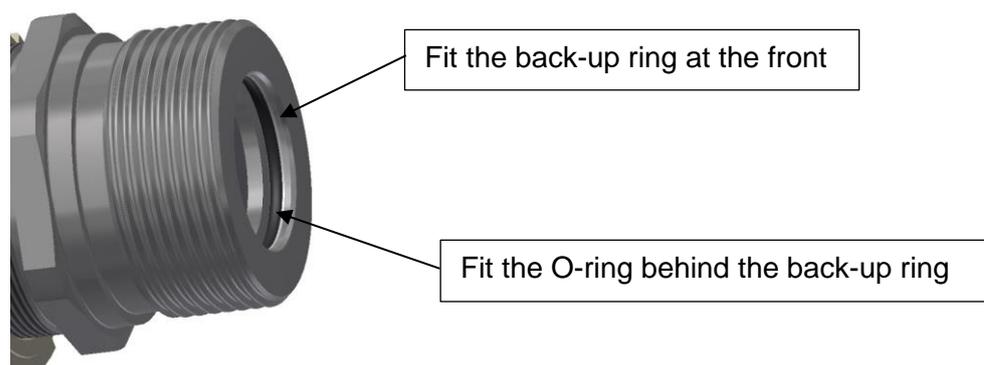
## **8. Replacing the seal**

Only visible seals can be replaced and are available as spare parts.

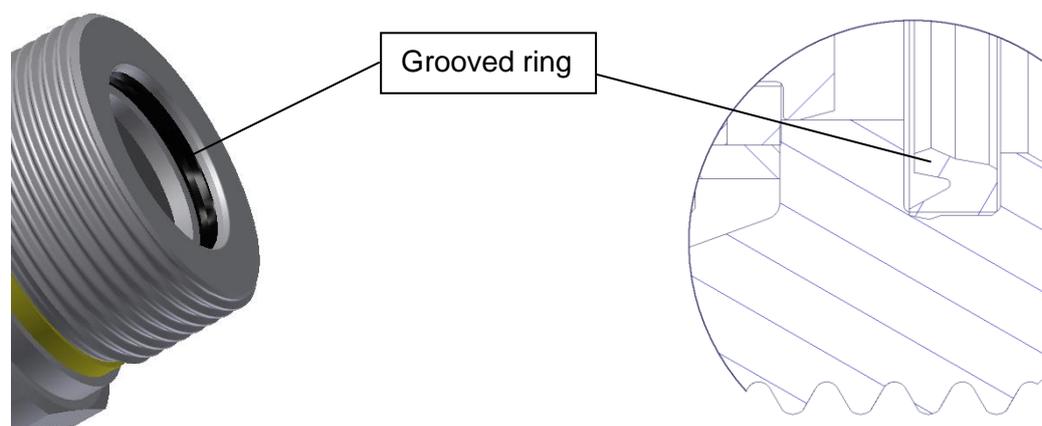
Slightly oil seals before installation.

Two different seals are available for the female bodies.

- A seal package consists of an O-ring and a back-up ring. Observe the installation sequence during assembly [fig. 4]!
- The grooved ring has to be installed with the closed side facing outwards [fig. 5]! The ring can be bent slightly during assembly but must not be folded or dented.



[Fig. 4] Position of the O-ring and back-up ring



[Fig. 5] Alignment and position of the grooved ring

## 9. Spare parts

Seal kits for couplings from the RH series

Designation	Designation	Designation
Female body	O-ring sealing package – back-up ring	Grooved ring
QRC-RH-10-F-BT-...	QRC-RH-10-FSK-BT-...	-
QRC-RH-12-F-BT-...	QRC-RH-12-FSK-BT-...	-
QRC-RH-16-F-BT-...	QRC-RH-16-FSK-BT-...	-
QRC-RH-19-F-BT-...	QRC-RH-19-FSK-BT-...	-
QRC-RH-25-F-BT-...	QRC-RH-25-FSK-BT-...	QRC-RH-25-FSK-PU-...

## Marking ring kits for couplings from the RH series

### Designation

Female body/  
male tip

Designation  
Marking ring

QRC-RH-10-F-BT-...	MR-QRC-25.9x1.2x3.8-“+colour code”
QRC-RH-12-F-BT-...	MR-QRC-29.9x1.2x4-“+colour code”
QRC-RH-16-F-BT-...	MR-QRC-41.1x1.4x4-“+colour code”
QRC-RH-19-F-BT-...	MR-QRC-46.1x1.4x5-“+colour code”
QRC-RH-25-F-BT-...	MR-QRC-70.2x1.4x5-“+colour code”
QRC-RH-10-M-BT-...	MR-QRC-35.6x1.2x4-“+colour code”
QRC-RH-12-M-BT-...	MR-QRC-41.1x1.4x4-“+colour code”
QRC-RH-16-M-BT-...	MR-QRC-53.8x1.4x6-“+colour code”
QRC-RH-19-M-BT-...	MR-QRC-59.3x1.4x6-“+colour code”
QRC-RH-25-M-BT-...	MR-QRC-84.8x1.4x10-“+colour code”

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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