Translation of the original

operating instructions

Flat Face Male tips FC Series

Designation: QRC-FC-...-M-...

Contents

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1. Preliminary remarks

Please read the operating instructions for the FC series flat face male tip coupling carefully.

The selection of the coupling series for the respective application with regard to the operating conditions (pressures, temperatures, media) must always be carried out by specialised personnel.

Coupling halves must be checked for damage and corrosion before initial installation or after prolonged storage.

Safety-related warnings **appear in bold type** in these instructions.

The QRC-FC-... male tip couplings are operated with high internal pressures. Incorrect maintenance and improper use can therefore cause damage to persons and/or goods and lead to malfunctions.

It is therefore essential that the instructions in this manual are followed and that regular maintenance checks are carried out. Damaged or worn parts must be replaced.

2. Compatibility

The FC type male tips are designed in accordance with ISO 16028 and are compatible with sockets of this type. To ensure optimum compatibility and performance, we recommend using the FC series male tips with the FF series female bodies.

3. Before coupling

If present, remove the dust caps and connect them to the dust cap of the other coupling half. This protects both dust caps against soiling. Visually inspect both coupling halves for cleanliness, damage and completeness.

We recommend wiping the flat end faces of the male tips and the female bodies with a lint-free cloth before coupling.

Dirty coupling halves must be cleaned with suitable agents. Non-fraying cleaning cloths must be used and no agents may be used that could attack the seals or the metallic surfaces of the couplings.

No foreign substances, such as cleaning agents, water or dirt, may enter the hydraulic system during cleaning. High-pressure cleaners should therefore never be aimed directly at the valves of the coupling halves.

Damaged couplings must be replaced. Coupling halves in which individual parts have come loose must also be replaced. Replacement should be carried out in pairs.

4. Connecting the coupling halves

The male tip must placed concentrically on the female body without tilting and pushed in the direction of the female body. The two halves are connected when the male tip engages in the female body. The correct connection of the two halves can be recognised by the following features:

- The male tip cannot be retracted.
- The sliding sleeve on the female body has moved in the direction of the male tip
- You will hear a "soft click" when the male tip engages.
- The sliding sleeve of the female body can be turned easily.

Figures one to three show the coupling process schematically.

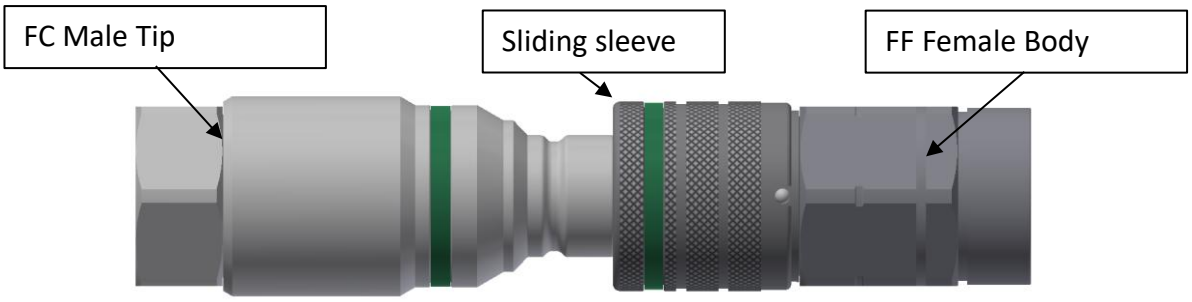

Figure1 . Coupling process: FC male tip concentrically applied to FF female body

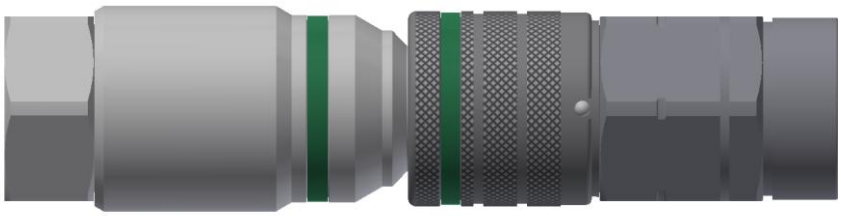

Figure2 . Coupling process: FC male tip inserted into the FF female body shortly before engaging

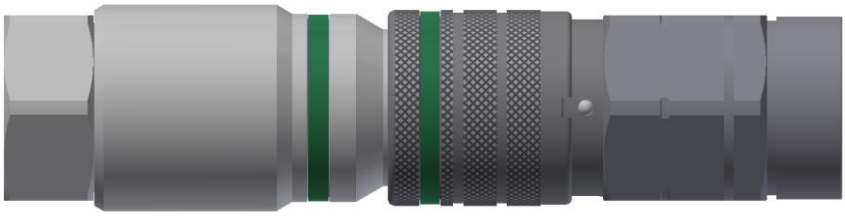

Figure3 . Coupling process: FC male tip with FF female body fully engaged. The sliding female body of the FF female body can be easily rotated.

Incomplete connection of the coupling halves can result in the male tip and female body coming loose during operation. Seals may be destroyed and leaks may occur in the coupling.

The FC series male tips are designed for occasional coupling under residual pressure.

The maximum residual pressures specified in Table 1 must not be exceeded when engaging the coupling.

Residual pressure in this context is the pressure prevailing in a fluid when it is enclosed in a solid volume.

Nominal diameter	10 mm / 3/8"	12.5 mm / ½"	16 mm / 5/8"	19 mm / ¾"	25 mm / 1"
STAUFF designation	QRC-FC-10-M...	QRC-FC-12-M...	QRC-FC-16-M...	QRC-FC-19-M...	QRC-FC-25-M...
Maximum residual pressure on the male tip when engaging, female body open to the tank	250 bar 25 MPa	250 bar 25 MPa	250 bar 25 MPa	250 bar 25 MPa	250 bar 25 MPa

Table1 Maximum permissible residual pressures when engaging the coupling

The force required to connect the two halves (insertion of the male tip) increases during the coupling process due to counteracting spring force and the engaging seals. Residual pressure on the male tip also increases the force required to join the two halves.

The use of additional tools to connect the two coupling halves is not intended or necessary. If the connection cannot be made, it must be checked:

- whether the lines to be connected are **depressurised** or whether the **permissible residual pressures** in the lines are not exceeded,
- whether the coupling halves are **tilted** against each other,
- or whether there is any **damage/soiling**.

If the FF female body is equipped with a safety ball, the connection can be secured against unintentional uncoupling of the two halves. To do this, the sliding sleeve on the female body is rotated after coupling. Make sure that the recesses in the female body, which are arranged at a 180° angle to each other, are not aligned with the ball in the base body, see Figure 4.

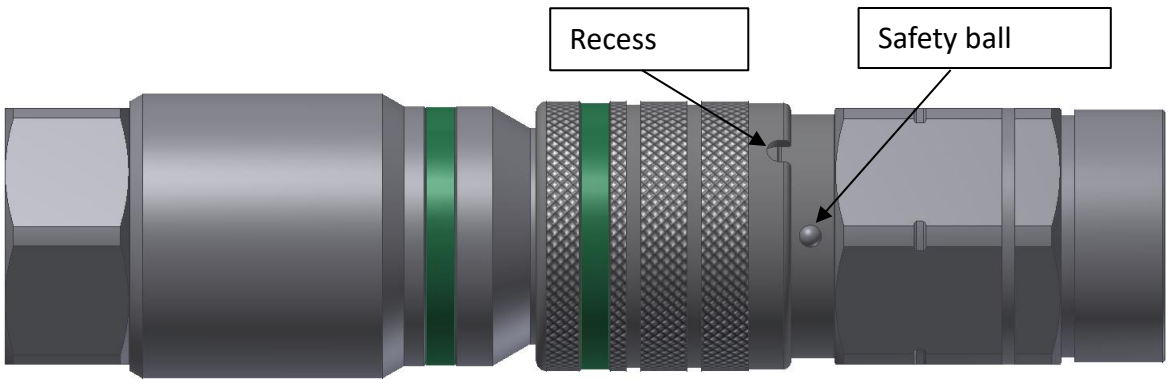

Figure4 . Fully engaged state Sliding female body rotated relative to the ball in the base body of the female body

5. In operation

Before each restart and regularly during longer work phases, check whether the coupling halves are still fully connected and whether any damage to them can be recognised. If the coupling halves are no longer properly connected, the proper connection must be re-established (chapters 1 - 4).

Damaged couplings must be replaced.

6. Disconnecting the connection

The operating temperature of the coupling can exceed 100°C / 212°F. Therefore, after operating the coupling and before touching the coupling, ensure that the coupling has cooled down sufficiently. If in doubt, wear suitable gloves.

Before disconnecting the connection, ensure that the tube to be disconnected is not in operation and that the line is neither pressurised by a pump nor has a flow through it.

To separate the coupling halves, align the recesses of the sliding sleeve with the ball in the base body (if present). The female body can now be pulled back from the male tip. The male tip is released and pops out of the female body or can be pulled out. **The male tip must be held firmly in order to avoid injury or damage to the male tip**.

After the coupling halves have been separated from each other, they must be cleaned with suitable agents (see also chapter 2), protected against soiling with dust caps and stored in such a way that they are protected against damage, e. from impact with other objects.

7. Replacing the seal

Sealing kits are available for the male tips. Gaskets should be lightly oiled before fitting. To replace the profile seal, use a blunt object to push the plug into the connector until the profile seal or groove is completely visible. The defective seal is then removed. Make sure that the sealing surfaces in the groove are not damaged and that no sealing material remains in the groove. The new profile seal can then be inserted into the groove. The profile seal must not be damaged in the process.

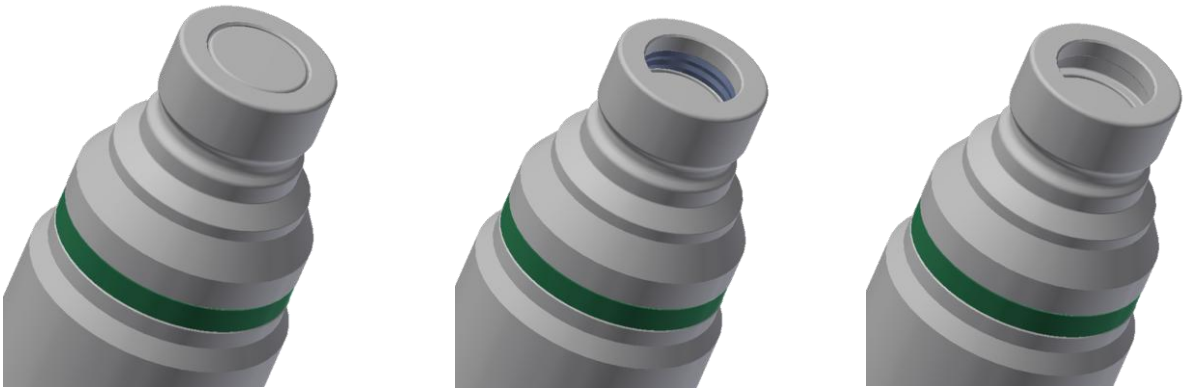

Figure5 . Male tip FC Replacing the profile seal

8. Notes and contact information

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

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