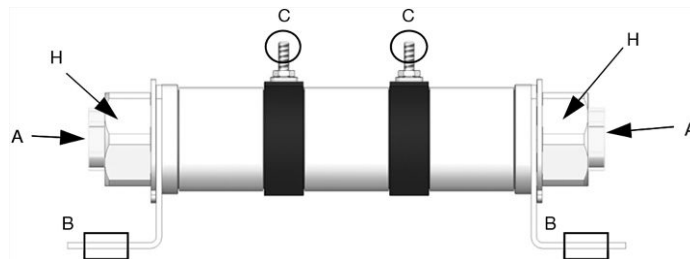




Recommended Installation Instructions for DCRF Ø 38 Direct-Cooled Resistors

By Thomas Boudinot

RESISTOR ILLUSTRATION

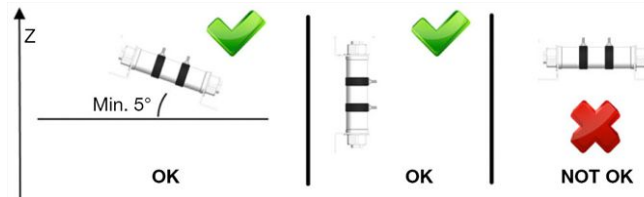


The resistors are supplied ready for electrical connection.

Warning: it is absolutely necessary to respect the order of the operations 1, 2, 3, and 4.

OPERATION 1: MECHANICAL INSTALLATION

- The resistor must be mounted vertically, or have a minimum angle of 5° to the horizontal



- Manually remove (without any tools) the two protective plastic plugs on the ends of the resistor (A)

OPERATION 2: HYDRAULIC CONNECTION

Connect the pipes on the hydraulic connections (SERTO, Parker, etc.) according to the supplier’s specifications by immobilizing the hexagon (H) of the hydraulic connection fixed on the resistor.

Be careful: it is absolutely necessary to immobilize the hexagon of the hydraulic connection (H) to avoid a leak during utilization or a deformation of the brackets.

- Apply a torque of 25 Nm, ± 1 Nm, or follow the supplier’s requirements for fittings tightening
- Do not try to turn the resistor relative with its fixing
- Use only deionized water with glycol 40 % max. with appropriate conductivity (refer to section “Commissioning”)
- In case of an extended non-utilization or transport period, first purge the hydraulic circuit

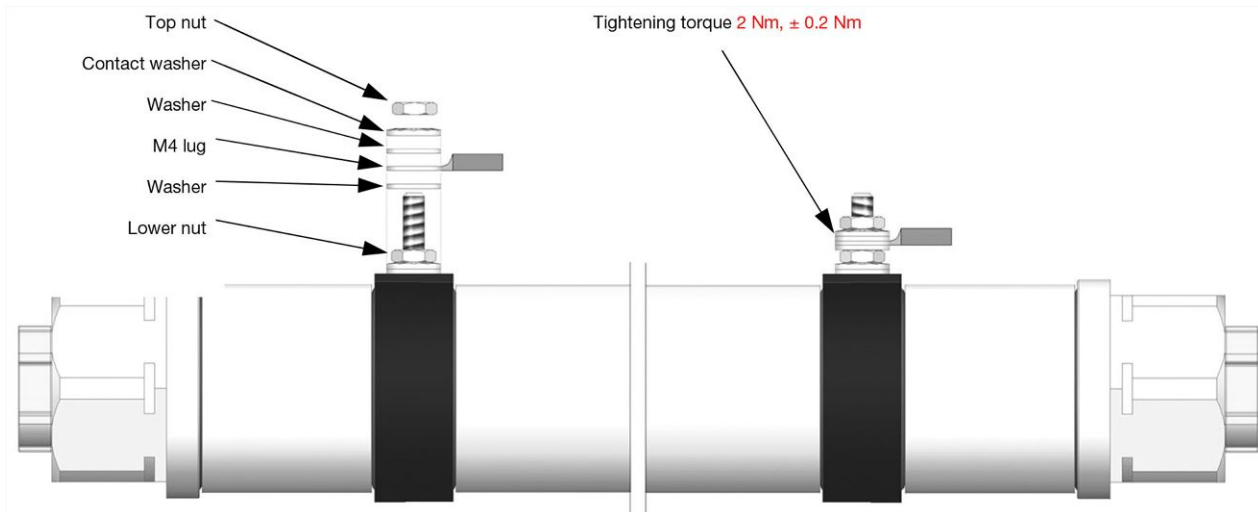
Attention: it is absolutely necessary to connect the water inlet by the lowest side.

OPERATION 3: BRACKET SETUP (B)

- The resistors are fixed with fork-type brackets
- Fix the brackets with screws or M8 studs (B)
- Use a flat washer plus a contact washer with a standard nut, or a flat washer with a self-locking nut
- Apply a maximum torque of 17 Nm, ± 1 Nm

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OPERATION 4: ELECTRICAL CONNECTION (C)



- Respect a nominal tightening torque of 2 Nm, ± 0.2 Nm, on the electrical connections (C). **Do not untighten the lower nut; if in doubt proceed to a tightening of the lower nut at 2 Nm, ± 0.2 Nm**
- Elements stacking must be performed following the correct order described in the figure above.
- Make sure that cables do not touch the resistor on the hydraulic connections (it will reduce the creepage and clearance distance)

COMMISSIONING

Before putting the equipment into service (before power up), it is imperative to make sure that the circulation of the water-glycol circuit works with a minimal flow of 8.33 l/min.

- Coolant medium shall be between 0.5 µs/cm and 2 µs/cm, before any power is applied on the DCRF resistor
- Mixed bed resin shall not pass through the resistor cooling circuit. The customer shall use the appropriate filter to avoid any pollution (at least < 200 µm filter for the Amberlite MB20)

Note

- **Only compliance with these recommendations and the datasheet DCRF (www.vishay.com/doc?32548) will ensure normal operation of the equipment and avoid any malfunction**