



VAV terminal units

Replacing GUAC actuators

TROX GmbH

Heinrich-Trox-Platz
47504 Neukirchen-Vluyn
Germany
+49 (0) 2845 2020
+49 (0) 2845 202265
E-mail: trox@trox.de
www.troxtechnik.com

Replacing GUAC actuators

These instructions describe how to replace actuators with part nos. A00000028400 and A00000051738, (Fig. 1/1 + 2).

This applies to TROX VAV terminal units with the following attachments: XC3, XD3, XE3, XF3, XB4, XD4, XF4

Which actuator for which VAV terminal unit? (See Fig. 2):

- ① A00000038355 - TVJ, TVT, TVRK NW 315-400
- ② A00000038357 - TVR, TVA, TVZ, TA-/TZ-Silenzio, TVRK NW 125-250

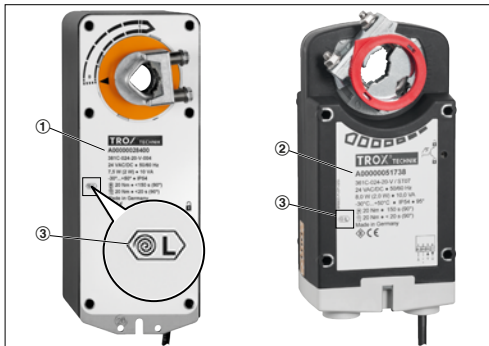


Fig. 1: Obsolete (defective) actuators

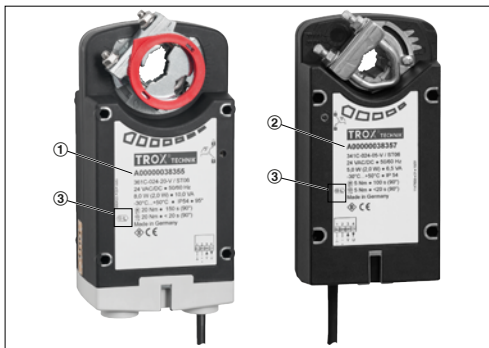


Fig. 2: New actuators

CAUTION!

Danger of injury from sharp edges and sheet metal parts.

- Always use personal protective equipment (protective clothing, safety shoes, protective gloves).
- Be careful when carrying out any work.

Removing a defective actuator

1. ▶ Disconnect the VAV terminal unit from the power supply and wait until the actuator has reached its end position (no tension on the spring mechanism).
2. ▶ Open the cover of the GUAC controller (Fig. 4 or Fig. 5/1) and pull out the connecting cable plug of the defective actuator.
3. ▶ Mark the installation side (L or R) of the defective actuator (Fig. 1/3).
 - ⇒ The installation side is important for the damper blade position of the VAV terminal unit when there is no power: NO = open, NC = closed.

- ▶ Remove the defective actuator. Keep the defective actuator as you may need the plug later.

Installing the new actuator

- ▶ If the existing anti-rotation lock no longer fits, remove it and fit the anti-rotation lock of the new actuator.

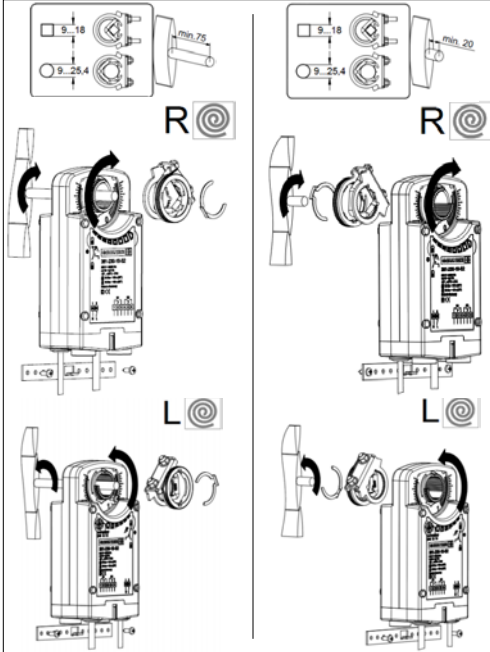


Fig. 3: Fitting the clamping device

- ▶ Install the new actuator the same way the defective actuator was installed; be sure to use the correct orientation (installation side R or L, Fig. 2/3). Depending on the shaft length and on the installation side, you may have to fit the clamping device on the opposite side (Fig. 3). Tighten the clamp with 10 Nm to the shaft.

Connection to GUAC-DM3 /-SM3 /-PM6



Fig. 4: GUAC-DM3

- ▶ Connect the actuator plug to the controller. Insert the cable gland and fix the cover again (Fig. 4/1).

Connection to GUAC-D3 /-S3 /-P1 /-P6

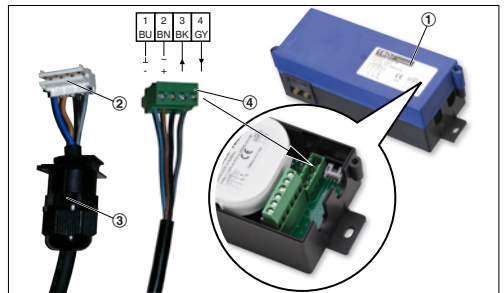


Fig. 5: GUAC-D3

- ▶ Remove the plug (Fig. 5/4) from the defective actuator.
- ▶ Take the new actuator, cut off the plug (Fig. 5/2) and remove the cable gland (Fig. 5/3).

Fit the now bare wire ends of the new actuator's connecting cable with wire end ferrules, then fix the wires to the plug (Fig. 5/4). Terminal connections: 1 = blue, 2 = brown, 3 = black, 4 = grey

3. ▶ Connect the plug to the controller and place the cable in the rubber cable gland.
4. ▶ Fix the cover (Fig. 5/1).

Functional test

1. ▶ Make sure that no voltage is present. Then check damper blade positions 'OPEN' and 'CLOSED' according to the mark on the damper blade shaft you made earlier.

Order code detail, see the rating plate on the VAV terminal unit:

NO - No power -> damper blade is open

NC - No power -> damper blade is closed

⇒ If the damper blade position does not correspond to this, you have to install the actuator the other way round.

2. ▶ Switch on the power supply.
3. ▶ Check the control behaviour, e.g. with operating points V_{min} and V_{max} .