

# Accessories

## Counterflanges

The simplest method of installing any TriMod BESTA level switch of the Standard Range is to use our standard weld-on counterflanges. Table 33 shows the two different lengths of counterflanges and stud extensions available in C22.8 carbon steel or 1.4401 stainless steel. Please note that with the float modules in Table 24 on page 29, only the short counterflanges ( $v = 38$  mm) can be used.

The standard counterflange is shaped to allow the following three options of welding.

- Butt welding on the wall of the tank with a hole diameter in the tank of 65 mm. The welding seam is at the front face of the flange end.
- Welding in a clearance hole of 76.1 mm in the wall of the tank. The welding seam is around the machined cylindrical surface of the flange end.
- Butt welding on to a 75 x 5 mm tube at the front face. In this case (ideal for thick tank insulation), lengths up to  $V$  max. = 150 mm are possible. However, to assure free float movement, a rod extension G1 of at least 100 mm is required.

Temperature range:

Material C22.8 (A105 equiv.): -10 to +400°C

Material 1.4401 (SS316 equiv.): -196 to +300°C

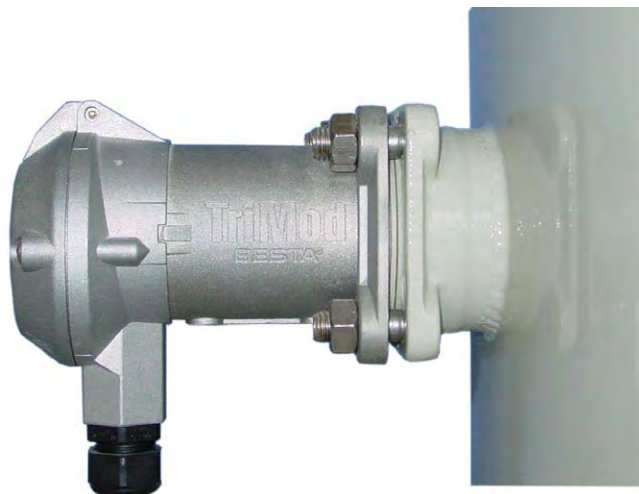


Table 33

Type	Specification	Flange material	Stud material	Drawing
2829.1 2831.3	Counterflange	C22.8 1.4401	5.8 A 2	
2829.2 2831.4	Counterflange with extended studs to accommodate a test actuator unit	C22.8 1.4401	5.8 A 2	
2829.1 V80 2831.3 V80	Extended counterflange (e.g. thick tank insulation)	C22.8 1.4401	5.8 A 2	
2829.2 V80 2831.4 V80	Extended counterflange with extended studs to accommodate a test actuator unit (for example for thick flange insulation)	C22.8 1.4401	5.8 A 2	

## Test actuators

The test actuator allows a periodic manual function check of the level switch in operating status. Depending on the type of actuator and the orientation of installation, one or more of the following functions can be tested (see also Table 35):

- Function of the switching element (microswitch, proximity switch, pneumatic valve).
- Movement of the float
- Leak testing of the float

Test actuators can be used with all horizontal mounted TriMod BESTA level switches of the Standard Range (square flange). Like the level switches, they are designed for operating pressures of -1 to 25 bar. The test actuator is mounted between the flange of the level switch and the counterflange on the tank, or float chamber. For combination with bellows please inquire with factory.

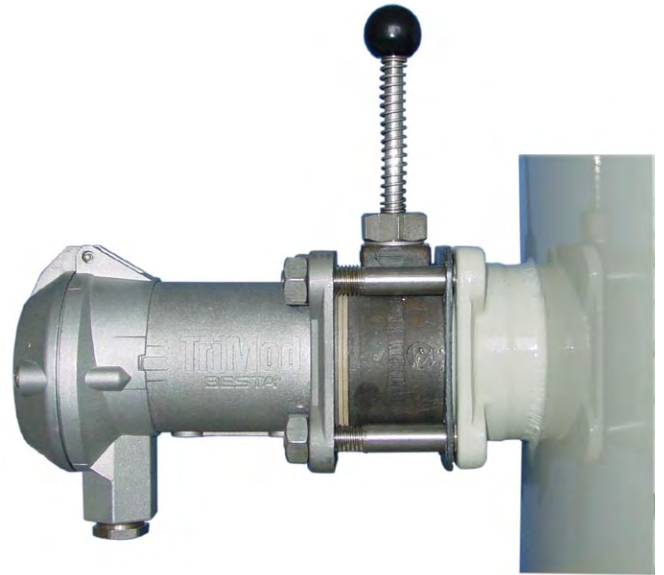


Table 34

Type	Specifications	Material	Gasket material	Temperature range in °C	Dimensions
2383.2	Test actuator L with intermediary	CrNi C22.8	CrNi/Viton	0 to +150	
2383.3	Test actuator L with intermediary	CrNi CrNiMo	CrNi/Viton	0 to +150	
2384.2	Test actuator L	CrNi	CrNi/Viton	0 to +150	
2383.4	Test actuator K with intermediary	CrNiMo CrNiMo	PTFE	-200 to +200	
2383.5	Test actuator K with intermediary	CrNiMo C22.8	PTFE	- 10 to +100	
2384.4	Test actuator K	CrNiMo	PTFE	-200 to +200	

Test actuators are supplied with flat gaskets.

Table 35

Applications	Use as high (HA) or low ( LA) alarm	Test actuator type and mounting position	
		L	K
Checking switch function and float movement under depressurized operating conditions (OP = 1 bar absolute)	HA LA		
Checking switch function and float movement under operating conditions (OP = 0 to 25 bar)	HA LA		
Checking switch function and float movement under depressurized operating conditions with the level below the float (OP = 1 bar absolute)	HA LA		
Checking whether the float is punctured under depressurized operating conditions (OP = 1 bar absolute)	HA LA		
Checking whether the float is punctured under depressurized operating conditions with the level below the float (OP = 1 bar absolute)	HA LA		

The plunger on the test actuator type K is designed to operate without friction. The force necessary for testing can be defined and measured. By comparing this force under operating conditions with the reference condition, it is possible to check for a punctured float. This leak test with test actuator type K can, however, only be carried out under depressurized operating conditions with the level below the float.