

### PRODUCT DESCRIPTION

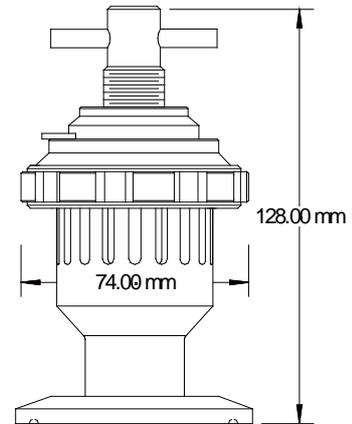
#### Gland body

**Material** : machined from 316L stainless steel round bar stock with the bore finished to 0.5Ra (25µ inch).

**Process connection** : 1", 1½", 2", 2½" or 3" Tri-clover flange.

**Capacity** : TCEG/1, 18 thermocouples, TCEG/2, 36 thermocouples.

**Thermocouple slots** : 4.0mm wide.

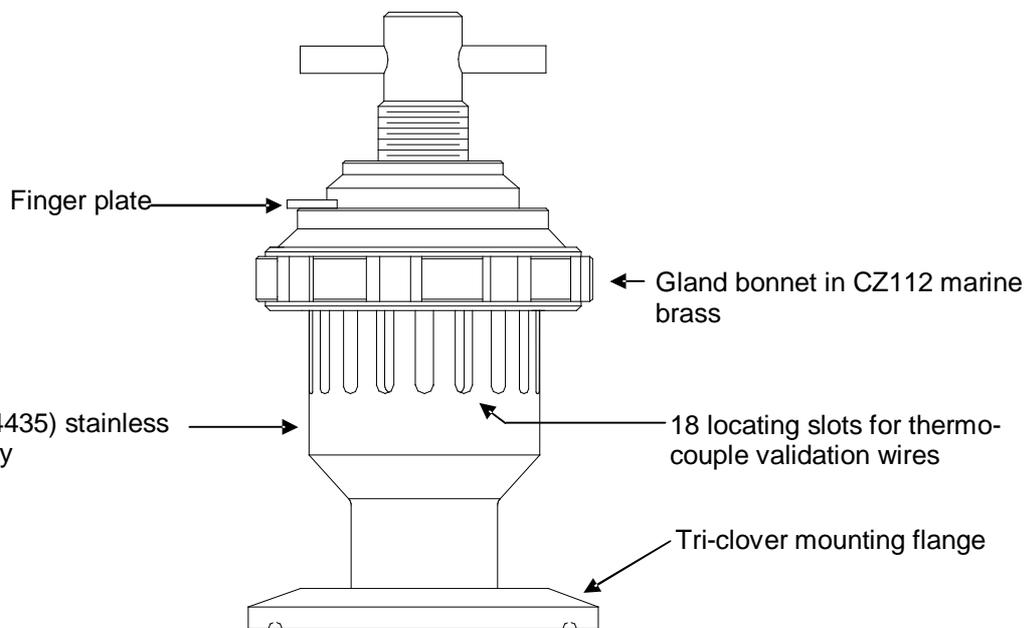


#### Gland bonnet

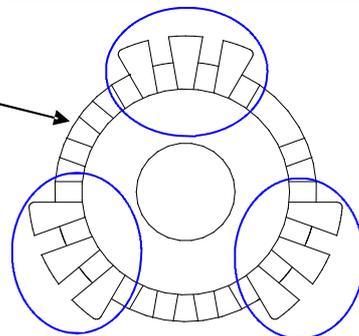
**Material** : cap is machined from CZ112 marine brass and the compression nose from CZ121 brass round bar stock with spring loaded quick release locking mechanism in 316L (1.4435) stainless steel.

#### Sealant ring and cap

**Material** : medical grade silicone to Shore 40 hardness and in accordance with FDA USP Class VI.



18 locating slots for thermocouple validation wires



Three groups of three locating spines for brass gland bonnet locking mechanism

Plan view of body with gland bonnet removed



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### USER INSTRUCTIONS

The TCEG is normally supplied with a Tri-clover flange, but can be supplied with a male threaded connection by special order. Before connecting the TCEG to the equipment's mating flange, ensure that both flange faces are clean, unmarked and that both slots for the 'O' ring seal contain no foreign matter.

Insert the 'O' ring seal into one of the flange slots ensuring that it nestles correctly in the slot and bring the two flange faces together. When the 'O' ring seal is correctly positioned in the slots of both flanges, slide the safety clamp over the two flanges and tighten.

Removal of the brass gland bonnet is effected first by unscrewing the stainless steel screwed bolt until approximately 17mm of thread is visible above the brass surface. Raise the stainless steel finger plate and rotate the bonnet in an anti-clockwise direction until it reaches its stop. At this point the three sets of three hooked splines of the gland body are clear of the catchment lips and the bonnet can be lifted off.

Place the lower silicone seal (with the 18mm wide hole) on top of the curved base of the gland body. Pass the thermocouple validation wires through the gland body (entering either from the chamber end or from the top of the gland) and lay each jacketed thermocouple pair in one of the 4mm wide slots. The slots have been designed to allow the use of most thermocouple jacket sizes. When the required number of thermocouples have been fitted, lay the upper silicone seal (with no through hole) on top of the positioned thermocouples.

If using more than 18 thermocouples (TCEG/2), a further silicone seal (with the 18mm hole) should be placed on top of the first layer of 18 thermocouples. The additional thermocouples (up to a further 18) are laid over this second seal and are again passed through the 4mm slots. When all the additional thermocouples have been fitted, lay the upper silicone seal (with no through hole) on top of the second row of positioned thermocouples.

Before replacing the brass bonnet ensure that the stainless steel screwed bolt is screwed back until 17mm of thread is showing above the brass surface. The bonnet can now be re-fitted by placing it above the splines of the stainless steel body and gently rotating it in a clockwise direction until it drops onto the lower splines.

Continue the rotation until reaching the stop and then apply a slight force to overcome the spring tension until a mechanical 'click' is heard. The bonnet is now locked in position and can only be released by raising the finger plate as described in paragraph 3 above.

The stainless steel screwed bolt should then be turned in a clockwise direction which forces down the compression nose against the upper silicone seal. This action compresses the silicone seals around the thermocouple jackets which are then securely held and sealed against chamber pressure.

#### **N. B.**

It is only necessary to turn the screwed bolt by hand to effect an adequate seal. Over tightening does not improve the sealing characteristics and can lead to damage of the silicone seals.



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