Installation guide

Packing gland replacement
SVA-S/L, SVA-ST/LT, SVA-HS – size DN 200

148R9628

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General

All personnel working on valves must be qualified to work on refrigeration systems and be completely familiar with the system they are about to service.
Any person intending to service a valve should carefully read this Standard Operational Procedure and the description of the particular valve and its operation before any work begins.
If there are any questions, contact Danfoss before proceeding with the work.

Packing gland

As a general rule, the packing gland must not be removed if there is internal pressure in the valve. However, if the following precautionary measures are taken, the packing gland can be removed with the valve still under pressure, provided that the valve is safely back-seated.

Back-seating

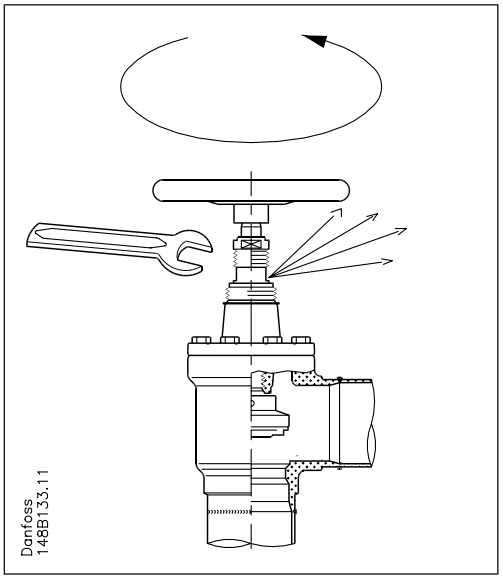
To back-seat the valve, turn the spindle counter-clockwise until the valve is fully open.
Use a 25 mm wrench.

Tighten the spindle counter-clockwise with 50 Nm ± 5 Nm (36.88 ft-lb ± 3.69 ft-lb) of force.

Pressure equalization

Important!
A small amount of refrigerant may still have accumulated behind the packing gland; it is extremely important that the service personnel are using appropriate protection equipment suitable for the actual refrigerant.
In some cases, pressure forms behind the packing gland. Therefore, it is important to mount a handwheel (or a similar device). It should be fastened on top of the spindle while the pressure is equalized in order to ensure that the packing gland can be safely removed. The pressure can be equalized by slowly unscrewing the gland.

Do not remove the packing gland if the valve is not completely back-seated (not sealed tight – see specifications above). If it is not possible to properly back-seat the valve (meaning potentially trapped refrigerant pressure behind the packing gland is not completely relieved within a few seconds when the packing gland is unscrewed), retighten the packing gland. Contact Danfoss (it may be necessary to pump out (evacuate) the system before proceeding with the removal of the packing gland). If pump-out is required, it is very important to ensure that the internal pressure is reduced to atmospheric pressure or below before the packing gland is unscrewed.



Inspect the internal surface

If two grooves can be seen on the surface, go to step 1.

If no groove is seen on the surface, go to step 2.

Step 1

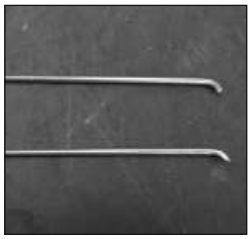
Measure the distance from the top side of the bushing to the top side of the bonnet.
The dimension should be between 50 mm and 52 mm (1.97 in. to 2.05 in.).
Be sure not to put the top side of the calipers into the groove of the bushing, **use a flashlight for assistance**.
If the measurement is within the specified range, please proceed to step 3.

If this measurement is not within the specified range of 50 mm – 52 mm (1.97 in. – 2.05 in.), reinstall the existing packing gland into the bonnet and contact your local Danfoss Representative for further details.

Step 2

Use the tools provided (number 9 in repair kit 148B6473) to remove the washer.

Be sure not to scratch the spindle while removing the washer with the wire tools.



Step 3

To install the new packing gland, apply some Molycote G4500 grease completely around the O-rings of the packing gland (see picture 1).

Place the protection cap (number 10 in repair kit 148B6473) on the top of the spindle. This will protect the packing gland from the spindle thread (see picture 2).

Place the packing gland on the spindle with caution in order not to damage the internal seals of the packing gland (see picture 3).

If you have a valve with seal cap, the seal cap can be utilized to assist in pushing the packing gland down into the bonnet assembly until the packing gland makes positive engagement between the packing gland and spindle threads (see picture 4). If you do not have a seal cap, a rubber mallet can replace the cap for this operation.

Step 4

Complete the installation of the packing gland into the bonnet by using a 46 mm wrench.

Tighten to a torque value of 80 Nm ± 10 Nm (59.01 ft-lb ± 7.38 ft-lb).

Step 5

Carefully move the valve off of its backseat position by turning the spindle ¼ to ½ of a turn.

Conduct a leak check via standard methods such as soap bubbles or refrigerant detection device to make sure that the packing gland has been installed properly and no leaks have occurred.

If leaks were detected; repeat the process from the beginning (page 1, Back-seating).

If no leaks were detected, the valve can be returned to operation, and the valve cone placed in either fully open or fully closed position.