SF₆ MAINTENANCE · DESICCANT SERVICE

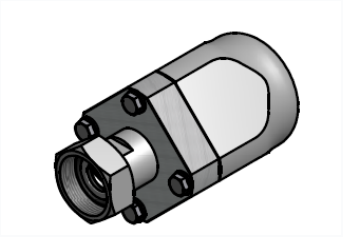
Recharging Desiccant Absorber Canisters

Procedure for recovering SF_6, replacing the bead desiccant, and reassembling GasQuip absorber canisters. Follow the steps in order; do not vent SF_6 to atmosphere at any point.

ABS1748	Large Canister
ABS7631	Small Canister

BOLT TORQUE	BOLT SIZE	RECOVER TO	RECHARGE FILL
30 N·m / 22.13 ft-lbs	M8 small · M10 large	<1 torr blank-off	10 psig SF_6

! **SF_6 caution.** On DN8 & DN20 absorbers the self-sealing valves retain SF_6 in both the equipment and the canister. Absorbers fitted with Malmquist valves equalize to atmosphere the instant they are disconnected — recover the gas before breaking any connection.



Desiccant Absorber Canister

Bolted flange cover with sealing o-ring and an integral self-sealing or Malmquist valve. The bead desiccant is housed behind the flange.

01 Recover & Remove

1. If the absorber is installed on equipment, use the correct-size wrench to remove it. On DN8 & DN20 absorbers the self-sealing valves contain the SF_6 in both the equipment and the canister. (Malmquist-valve units equalize to atmosphere immediately on disconnect.)
2. For DN8 & DN20 equipped absorbers, prepare your gas reclaiming device to recover SF_6.
3. Attach the absorber to a gas recovery system.

4. Recover to a blank-off pressure of <1 torr/mmHg, or the final blank-off pressure your system can achieve.

5. Break the vacuum by installing an open-ended male valve on the end of the canister. Leave it in place until the recharge is complete.

6. Position the canister so the valve is “up”.

7. Loosen each bolt one at a time. Once all are loose, remove the bolts one at a time.

   Note — Small canisters use M8 bolts; large canisters use M10.

02 Service the Canister

8. Remove the flange cover and the sealing o-ring. Inspect the o-ring, then either dispose of it or clean and reuse it.

9. Dispose of the bead desiccant inside the canister.

10. Using denatured alcohol and a lint-free rag, clean the inside of the canister and the sealing surfaces.

11. Lubricate the replacement o-ring with Molykote DC-111 or equivalent (non-oil-based lubricant).

12. Add replacement desiccant material into the housing.

13. Install the new o-ring, or reinstall the original.

14. Install the flange cover. Ensure the bolt holes are lined up and the o-ring is not pinched or unseated during assembly.

REPLACEMENT DESICCANT

SILIPORITE NK30 molecular sieve — synthetic 3 Å zeolite beads. Refer to the material datasheet for grain size and handling. (Supplied separately.)

03 Reassemble & Recharge

15. Reinstall the bolts in an “X” pattern. See **Figure 1**.

16. Snug the bolts until the two metal surfaces are touching.

17 Torque the bolts to **30 N·m** (22.13 ft-lbs).

18 Remove the open-ended male fitting that was installed in step 5.

19 Attach the desiccant canister to the gas recovery system.

20 Pull a vacuum on the canister to <0.75 torr/mmHg.

21 Fill to 10 psig of SF_6.

22 Perform a leak check around the flange joint.

23 Install the canister back on the equipment it was removed from, using the appropriately sized wrench. If it will not be used immediately, place it in a vacuum-sealed bag until it is required again.

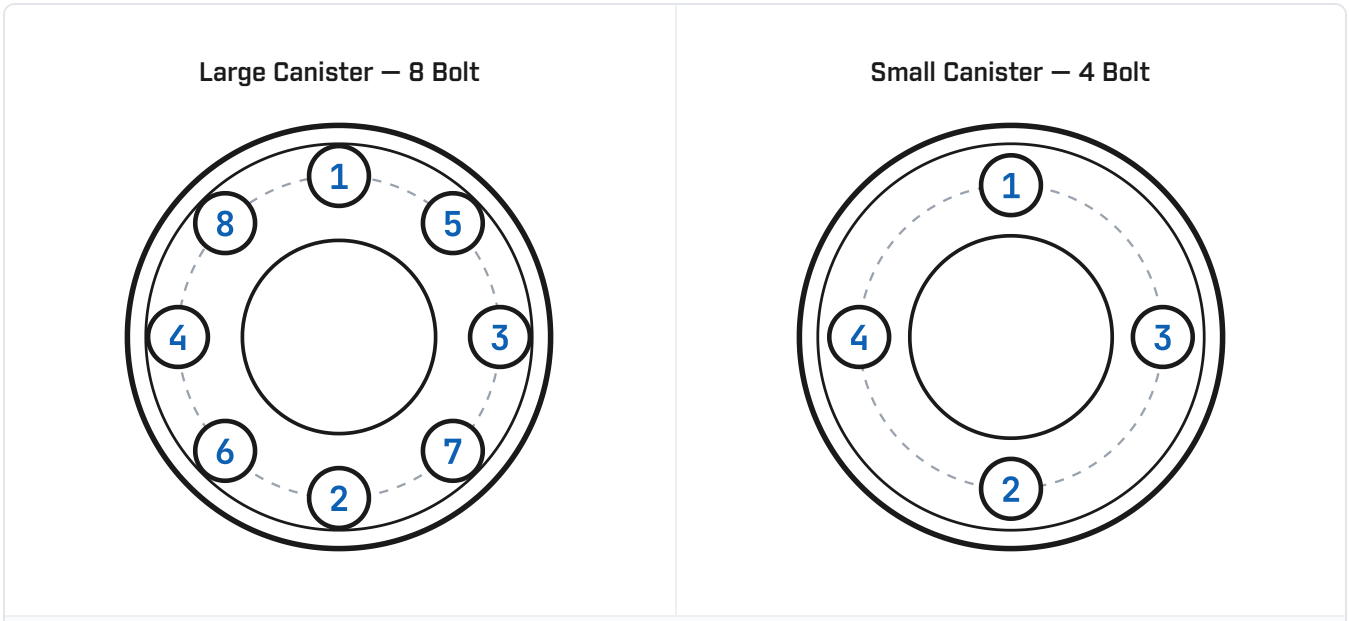


Figure 1. Bolt tightening sequence — work the numbered cross (“X”) pattern to seat the flange evenly. Large pattern at left, small pattern at right.