

MAINTENANCE INSTRUCTIONS FOR "60" & "60X" SERIES LOW DEAD SPACE INSERTS

MS-INS-60-LD
CP Revision E
January, 2006

Kit Contents:

Low Dead Space Inserts Lubricant
Instruction Sheet Material Safety Data Sheet
*Seat Support Rings

NOTE: Refer to drawing throughout assembly procedure.

*Provided in 65, 65X, 68 and 68X series kits only

WARNING: Before servicing any installed valve, you must

- depressurize system
- cycle valve

WARNING: Residual materials may be left in valve and system.

1. Lock out valve by isolating from system and depressurize.
2. 2-way valves – Place and leave the valve in the open position and loosen the body studs/bolts. Remove the black stud/bolt and swingout the center body from between flanges.
3-way valves – Place and leave the valve handle in line with either side port. Make sure bottom port is disconnected from system. Loosen and remove the body studs/bolts. Remove the centerbody from between flanges.

3. Remove the flange seals, seat subassemblies, and seat support rings. Set them aside for re-use.

NOTE: On 65, 65X, 68, and 68X series ball valves, discard the seat support rings.

4. Clean all components and sealing surfaces carefully. DO NOT scratch or nick the ball or seats.
5. Lubricate flange seals and the concave surface of seat assemblies with lubricant provided, except for PEEK seats. Lubricate PEEK seats with a non-silicone based system compatible lubricant.
6. Place low dead space inserts around ball. Make sure stem cut-out on inserts are aligned with the valve stem. The 3-way insert has two identical cut outs - one for the stem and one for the bottom port opening.

NOTE: 65, 65X, 67, 67X, 68, and 68X series support rings should be installed with the chamfered side positioned toward the ball.

7. Position support rings onto seat subassemblies.
8. Install the seat subassemblies with support rings in the center body. Make sure lubricated concave surfaces of the seat subassemblies face the ball.
9. Position the flange seals in the center body around the outside diameter of the seat subassemblies.
10. **2-way valves** – Swing the center body back into position between the flanges and reinstall the body stud/bolt and nut(s).

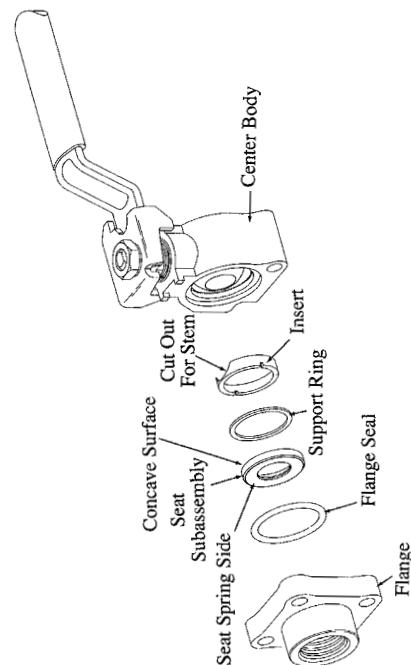
3-way valves – Return the center body to its position between the flanges and reinstall the body studs/bolts and nuts.

11. **2-way valves** – Place and leave the valve in the open position.

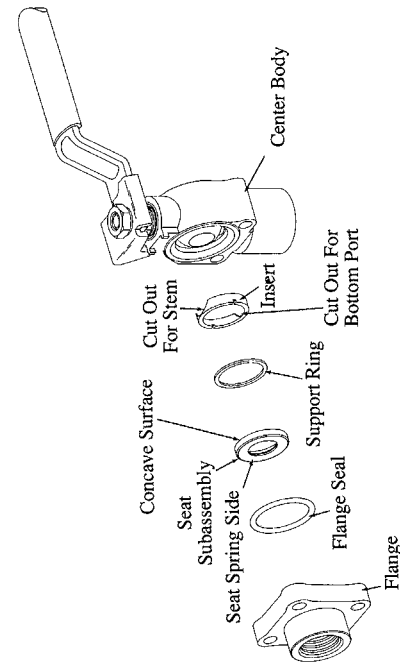
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STRAIGHT PATTERN ASSEMBLIES



X-PATTERN ASSEMBLIES



3-way valves – Place and leave the valve handle in line with either side port.

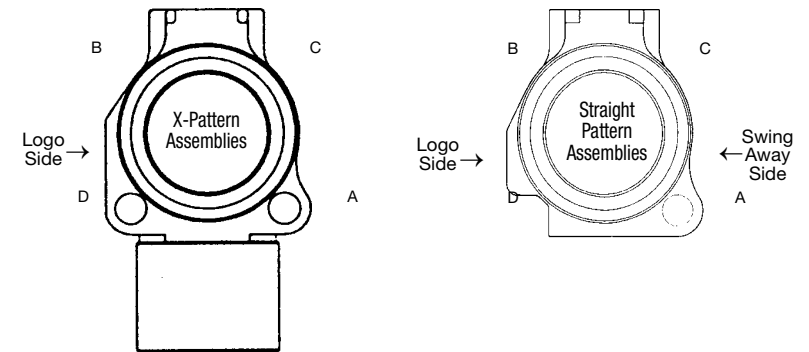
- Torque the body studs/bolts according to the TORQUE SEQUENCE illustration shown (Sequence is alphabetical). Torque the bolts/studs to the value listed in the “1st” column of the Torque Chart according to the appropriate Valve Series/Body Material and Fastener Type/Material. Repeat the sequence for the 2nd, 3rd, 4th and 5th torque.

TORQUE CHART in·lbs & (N·m)

Valve Series / Body Material	Fastener Type / Material	1st	2nd	3rd	4th	5th
62 Series Brass	Carbon Steel Bolts	5 (0.57)	10 (1.1)	20 (2.3)	30 (3.4)	30 (3.4)
62 Series Carbon -or- Stainless Steel	Stainless -or- Carbon Steel Studs/Bolts	5 (0.57)	10 (1.1)	20 (2.3)	40 (4.5)	40 (4.5)
62X Series Stainless Steel	Stainless Steel Studs/Bolts					
63 Series Brass	Carbon Steel Bolts	10 (1.1)	20 (2.3)	40 (4.5)	60 (6.8)	60 (6.8)
63 Series Carbon -or- Stainless Steel	Stainless -or- Carbon Steel Studs/Bolts	10 (1.1)	20 (2.3)	40 (4.5)	100 (11.3)	100 (11.3)
63X Series Stainless Steel	Stainless Steel Studs/Bolts					
65 Series Brass	Carbon Steel Bolts	25 (2.8)	50 (5.7)	100 (11.3)	180 (20.3)	180 (20.3)
65 Series Carbon -or- Stainless Steel	Stainless -or- Carbon Steel Studs/Bolts	25 (2.8)	50 (5.7)	100 (11.3)	300 (33.9)	300 (33.9)
65X Series Stainless Steel	Stainless Steel Studs/Bolts					
67 & 67X Series Stainless Steel	Stainless Steel Studs/Bolts	35 (4.0)	75 (8.5)	150 (17.0)	300 (33.9)	300 (33.9)
67 Series Carbon -or- Stainless Steel	Carbon Steel Studs/Bolts	35 (4.0)	75 (8.5)	150 (17.0)	400 (45.2)	400 (45.2)
68 & 68X Series Stainless Steel	Stainless Steel Studs/Bolts	40 (4.5)	100 (11.3)	200 (22.6)	500 (56.5)	500 (56.5)
68 Series Carbon -or- Stainless Steel	Carbon Steel Studs/Bolts	40 (4.5)	100 (11.3)	200 (22.6)	600 (67.8)	600 (67.8)

Note: 62 through 65 series torque's are the same for studs or bolts.

TORQUE SEQUENCE



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