

# FLANGE SEAL INSTALLATION INSTRUCTIONS FOR A60T FIRE SERIES, S60P STEAM SERIES, AND T60M THERMAL SERIES BALL VALVES

MS-INS-F60-3  
CP Revision L  
November, 2016

Kit Contents:  
Flange Seals (2) Material Safety Data Sheets (4)  
Sealant\* Lubricant(s)  
Instruction Sheet

\*S62P, S63P, S65P, S67P, S68P, T67M, and T68M kits do not contain sealant.

**NOTE: MS-LT-RTV103 sealant has suggested minimum cure time of 24 hours for maximum performance.**

**WARNING: Before servicing any installed valve, you must**

- depressurize system
- cycle valve

**WARNING: Residual material may be left in the valve and system.**

**NOTE: It is important to refer to the exploded view drawing while following the maintenance instructions.**

## Disassembly

**NOTE: Do not remove replacement flange seals from the kit package until ready to place them into the valve.**

1. Leave the valve in the "open" position.

2. Remove the body bolts and flanges and set aside for later use.
3. Carefully mark the seat subassembly and centerbody as they must be placed in the identical position during reassembly. Do not rotate the seats.
4. Carefully remove the seat subassemblies and support rings from each side of the centerbody, keeping the seats separate as they will be reassembled on their original side.

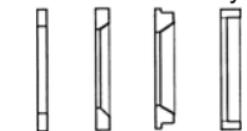
**NOTE:** Thermal (T60M) series do not contain support rings. Remove the metal seat and back seat and set aside for later use. Keep the seats separate as they will be reassembled on their original side.

5. Remove the flange seals from each side of the centerbody and discard.
6. Carefully clean the support rings, flange knurling and sealing groove.
7. Clean the seat subassemblies with a lint free cloth and set them aside for reassembly.

## Reassembly

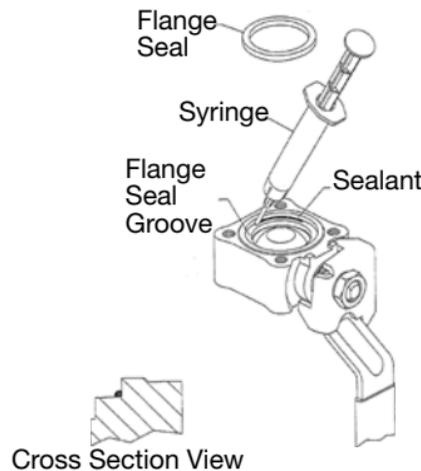
Follow steps 8-14 one side at a time.

8. A60T & S60P: Place support ring into center body. On the 65, 67 and 68 series, the chamfer side should be positioned toward the ball. Be sure they rest flat in the body.



62, 63 65 67 68

- NOTE: For S62P, S63P, S65P, S67P, S68P, T67M, and T68M, skip to step 11.**
9. Open the MS-LT-RTV103 sealant package and attach the syringe tip to the syringe.
  10. Using the syringe, lay a bead of sealant in the corner of the flange seal groove area. Refer to the drawing below. Approximate bead size is 1/16" diameter for all series. Sealant should be no larger than 1/3 the height of the groove and no more than 1/3 the width of the groove.



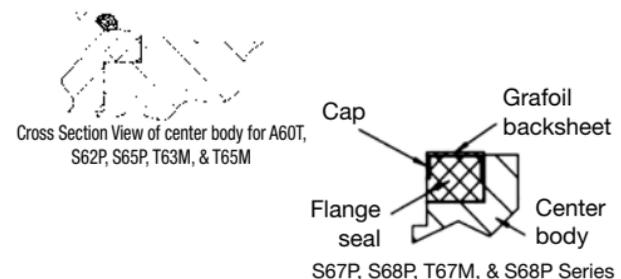
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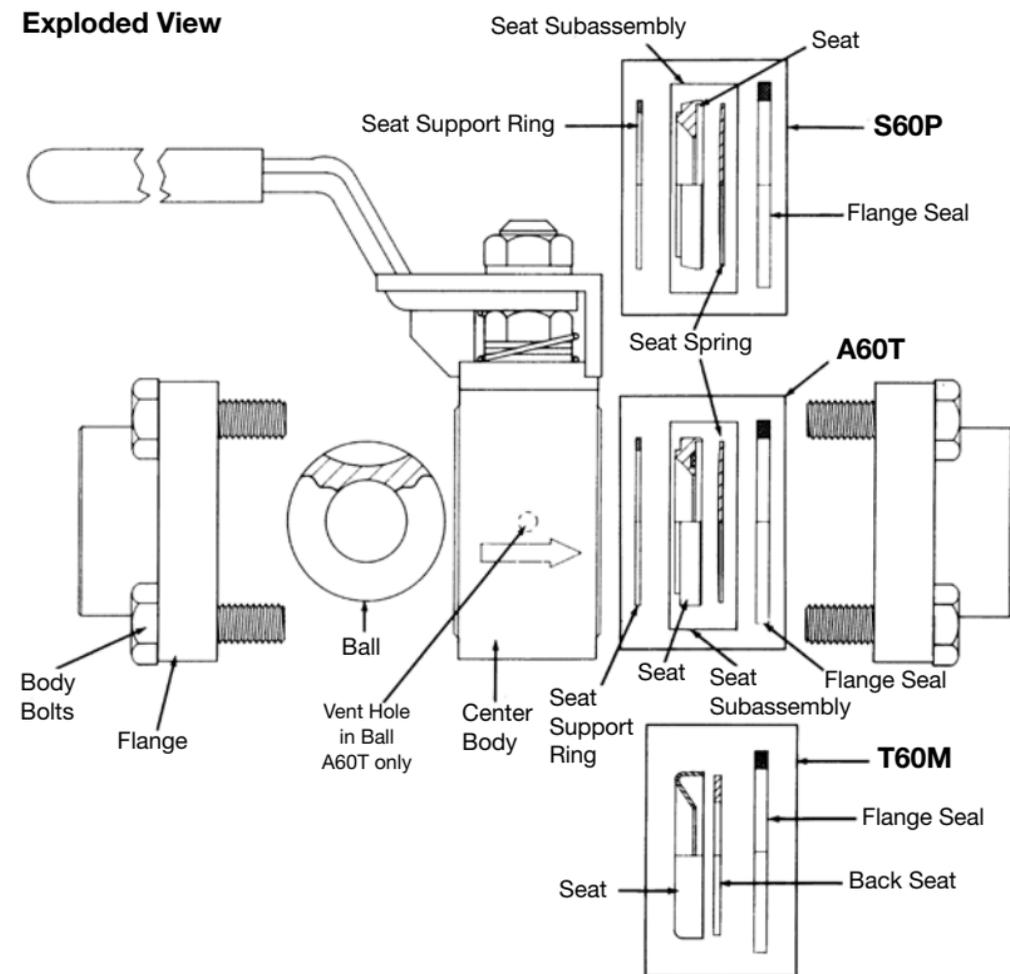
11. For S62P, S63P, S65P, S67P, S68P, T67M, and T68M, apply a thin even coat of MS-LT-WL7 lubricant to the entire flange seal.
12. Carefully and evenly, place and press the flange seal into the centerbody cavity. The S67P, S68P, T67M, and T68M series flange seals have a thin stainless steel cap with a thin grafoil laminate that must face away from the ball.
13. Evenly spread any extruded sealant/lubricant around the internal diameter of the flange seal.
14. Lubricate the seat subassembly face with the appropriate lubricant below.

Valve Type	Fire Series A60T	Steam Series S60P	Thermal Series T60M
Lubricant	MS-LT-1	MS-LT-WL8-1	MS-LT-WL13

- 15a. A60T & S60P: Place the seat subassembly into the center body (seat spring away from ball). Be sure seats are replaced in their original position.



## Exploded View



15b. T60M series: Place the seat into the center body, rounded/lubricated side positioned toward the ball. Center the back seat onto the seat, proceed to step 16.

**NOTE: For S62P, S63P, S65P, S67P, S68P, T67M, and T68M, skip to step 17.**

16. Lay another bead of sealant on top of the flange seal. (Using the same bead size mentioned in step 10).

17. Position the flange over the seat area in the center body. Lubricate the first (4) four threads of the body bolts with MS-LT-NNS-1 lubricant provided. Tighten body bolts finger tight.  
REPEAT STEPS 8 to 17 FOR SIDE TWO

18. Refer to the appropriate torque chart below and torque the body bolts, according to the valve series, in the alphabetical (crisscross) sequence shown in the torque sequence diagram to the value listed in the 1st column of the appropriate chart. Repeat this procedure for the 2nd, 3rd, 4th, 5th, and where applicable, 6th and 7th torques.

REPEAT STEP 18 FOR THE OPPOSITE SIDE OF VALVE

**CAUTION: WASH HANDS AFTER HANDLING SEALS AND SEALANT.**

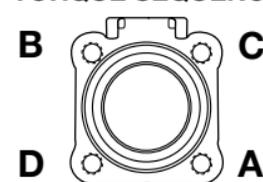
**TORQUE CHART  
(T60M & S62P, S65P, S67P, and S68P)**

Valve Series	Torque Value in.-lbs (N-m)				
	1st	2nd	3rd	4th	5th
62*	5 (0.57)	10 (1.1)	20 (2.3)	40 (4.5)	40 (4.5)
63	10 (1.1)	20 (2.3)	40 (4.5)	100 (11.3)	100 (11.3)
65	25 (2.8)	50 (5.7)	100 (11.3)	300 (33.9)	300 (33.9)
67	35 (4.0)	75 (8.5)	150 (17.0)	400 (45.2)	400 (45.2)
68	40 (4.5)	100 (11.3)	200 (22.6)	600 (67.8)	600 (67.8)

\*Available in Steam Series (S60P) Only.

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**TORQUE SEQUENCE**



**TORQUE CHARTS (A60T & S63P)**

**Stainless Steel Valve Body with B8M Body Bolts:**

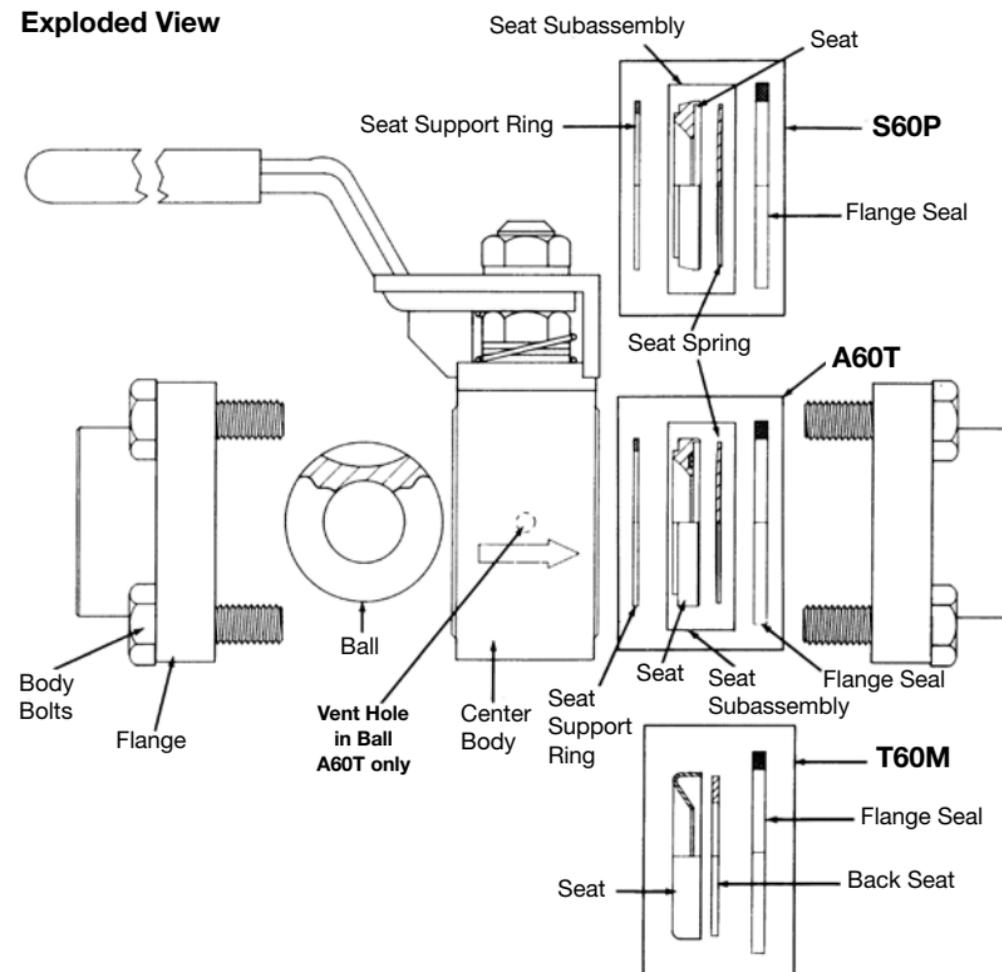
Valve Series	Torque Value in.-lbs (N-m)						
	1st	2nd	3rd	4th	5th	6th	7th
63	10 (1.1)	20 (2.3)	40 (4.5)	100 (11.3)	150 (17.0)	150 (17.0)	—
65	25 (2.8)	50 (5.7)	100 (11.3)	200 (22.6)	300 (33.9)	400 (45.2)	400 (45.2)
67	35 (4.0)	75 (8.5)	150 (17.0)	300 (33.9)	400 (45.2)	500 (56.5)	500 (56.5)
68	40 (4.5)	100 (11.3)	200 (22.6)	500 (56.5)	600 (67.8)	700 (79.1)	700 (79.1)

**Carbon Steel Valve Body with Carbon Steel Body Bolts:**

Valve Series	Torque Value in.-lbs (N-m)						
	1st	2nd	3rd	4th	5th	6th	7th
63	10 (1.1)	20 (2.3)	40 (4.5)	80 (9.0)	125 (14.1)	125 (14.1)	—
65	25 (2.8)	50 (5.7)	100 (11.3)	200 (22.6)	300 (33.9)	400 (45.2)	400 (45.2)
67	35 (4.0)	75 (8.5)	150 (17.0)	300 (33.9)	375 (42.4)	450 (50.9)	450 (50.9)
68	40 (4.5)	100 (11.3)	200 (22.6)	500 (56.5)	600 (67.8)	700 (79.1)	700 (79.1)

Note: The 62 series is not available in either the Fire or Thermal Series.

**Exploded View**



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