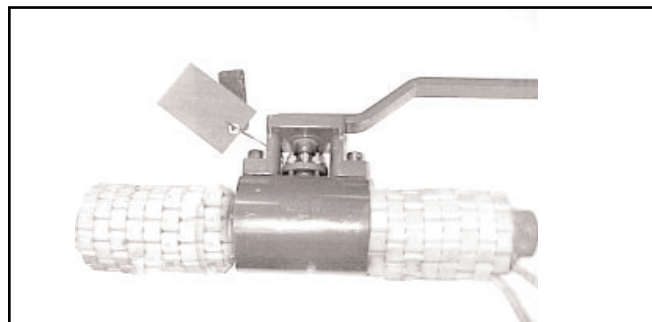
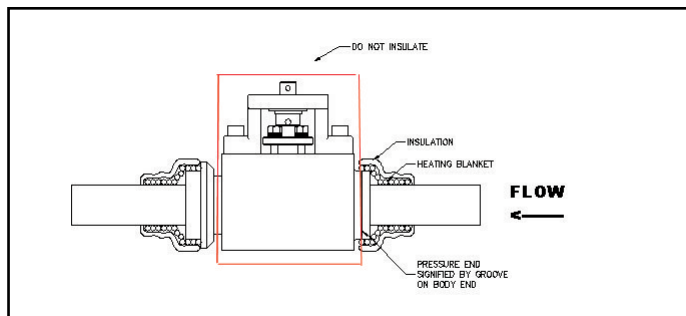


Procedures to install, stress-relieve the welds, and maintain a Mogas RSVP Ball Valve

OBJECTIVES: Install the valve properly
 Stress-relieve the welds according to ASME B31.1
 Prevent heat damage to ball and seat assembly
 Maintain the valve for optimum operation

EXTREMELY IMPORTANT:
DO NOT LET THE MAIN BODY OF THE VALVE GET HOTTER THAN 1100° F / 593°C.



Install heat blankets as shown. No gaps. No overlaps. Heat blankets cover weld areas only -- but do NOT cover any part of the main body.

INSTALLATION

1. Remove plastic protective covers which have been placed on valve ends at the factory.
2. While looking in the bore, open and close the valve. Verify that the ball position matches the handle position or actuator indicator. Factory-set stops may be changed if needed in accordance with actuator information.
3. Install with the end marked "**Pressure End**" (also indicated by a small machined groove) facing upstream. Before welding, **make sure the valve is open** to prevent damage to the ball surface and to remove any weld splatter. Always attach the welding ground strap to the end you are welding. Postweld heat temperatures are shown in Table 1.

MAINTENANCE

1. Valves remaining open or closed for a long time should be operated at least once a year.
2. Keep manual actuators fully lubricated with extreme-pressure and/or high-temperature grease. Lubricate hydraulic or pneumatic actuators according to manufacturer instructions.
3. After the first exposure to elevated temperature, re-torque the valve's packing gland. Check packing gland nuts periodically, and re-torque if necessary. Table 2 shows the proper torque required.

Table 1 PWHT Requirements per ASME B31.1 and B31.3

Material	P No.	Group	Preheat	Holding Temp	Holding time based on Nominal Thickness	
					Up to 2 inches	Over 2 inches
A-105 (1)	1	1, 2, 3	200°F	1100 - 1200°F	1 hour/inch 15 minutes minimum	2 hours plus 15 minutes for each additional inch over 2 inches
F22 (2)	5A	1	300°F	1300 - 1400°F		
F91	5B	1, 2	-----	1300 - 1400°F		

General Notes: (1) PWHT is not mandatory provided the nominal thickness is 3/4" or less and the minimum preheat temperature is applied when the nominal material thickness of either of the base metals exceeds 1 inch.
 (2) PWHT is not mandatory provided the NPS is 4 or less, nominal material thickness is 1/2 inch or less, a specified carbon content of the material to be welded is 0.15% or less, and the minimum preheat temperature is maintained during welding.

4. After installation, open and close the valve to ensure smooth operation.

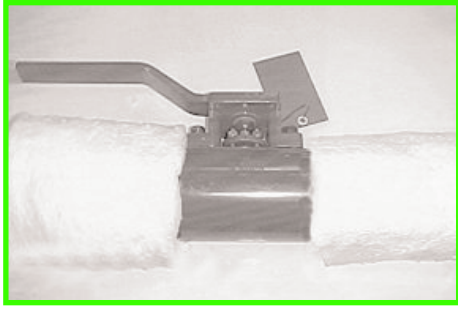
Table 2 Recommended Packing Gland Stud Torque (ft. lbs.)

Valve Type	1500#	3100#	4500#
0.63 bore	8	12	15
1.0 bore	10	12	---
1.125 bore	---	---	30
1.3 bore	13	13	---

4. Mogas Ball Valves do not need lubrication. Injection or improper use of a lubricant may void your warranty.



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 Houston, TX 77039 Phone: 281-449-0291
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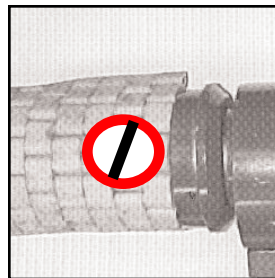
The valve body must always remain below 1100°F/593°C. This will be achieved by proper use and placement of heat blankets. Higher temperature of the body may void your warranty.

Install heating blankets covered by proper insulation as shown. Cover the weld areas but not the valve body. This will allow the best and most effective stress relieving in accordance with ASME B31.1 without damaging the ball and seat assembly.

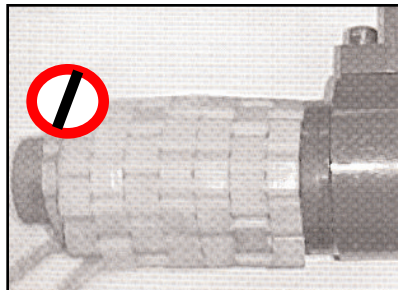
Note: If using a “snake,” make sure both ends of the valve are heated uniformly. An uninsulated loop in the middle will prevent proper heating. There are 4 solutions:

- (1) Insulate the loop.
- (2) Use two separate snakes, one for each end.
- (3) Treat each end separately.
- (4) Don't use snakes! Best results will be obtained with snug-fitting blankets properly placed and insulated.

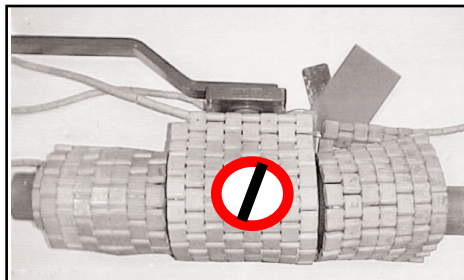
HERE'S HOW NOT TO DO IT



Heating blanket does not cover over the weld area, and not enough heat will be applied to the weld to allow proper stress relief. Insufficient relief may result in damage, delay, and increased costs.



When a single heating blanket is too long and is “tucked in” at the end, heating elements next to the pipe can easily be damaged by heat from the elements on top of them



This “neat looking” use of three heating blankets is *definitely **NOT** how to do it!*

Heat should never be applied to the valve body. And the valve must remain uninsulated.

MOGAS
INDUSTRIES, INC.