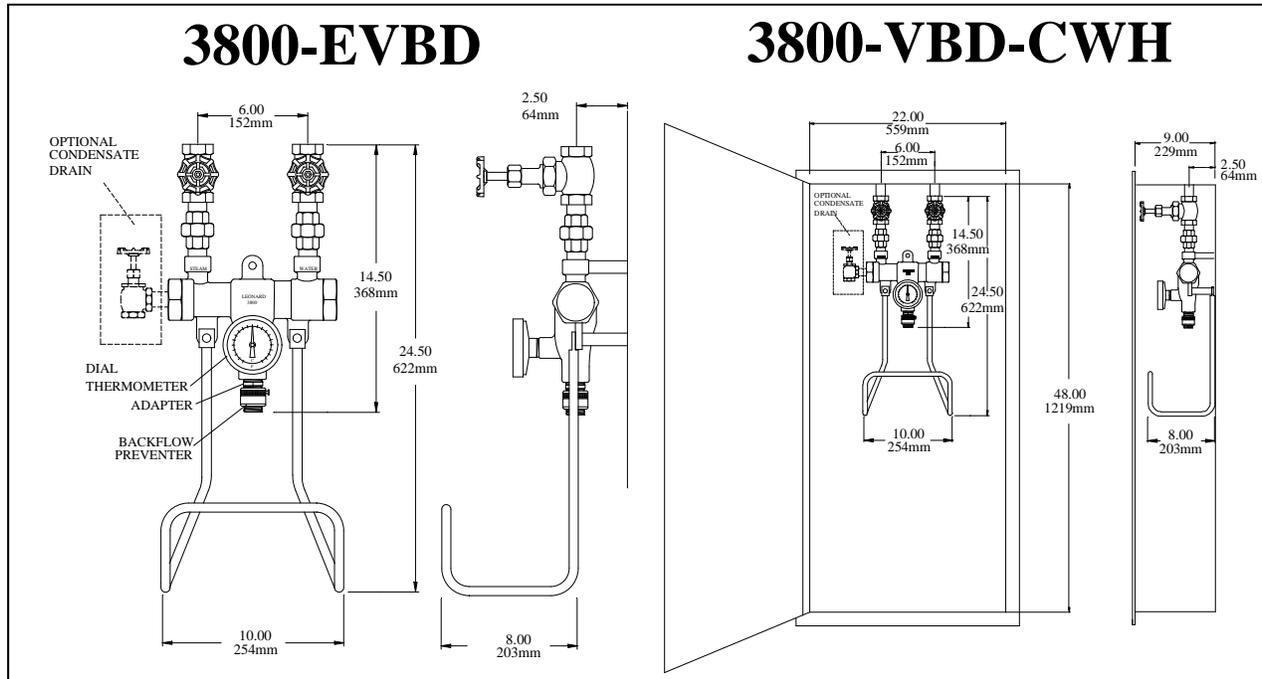


# INSTALLATION ADJUSTMENT SERVICE STEAM AND WATER BLENDER MODEL 3800



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.Ca.gov](http://www.P65Warnings.Ca.gov)



## INSTALLATION/OPERATION

1. Valve should be installed at a location where it can easily be cleaned, adjusted or repaired.
2. The inlets are clearly marked on the valve body casting. Connect the Steam into the inlet marked "STEAM" and water into the inlet marked "WATER."
3. Use pipe cement sparingly. Supply pipes should be flushed before the valve is connected. Flush outlet pipe and valve as soon as it is connected.
4. To operate, First open the right hand WATER (BLUE) stop and check valve, Then open the left hand STEAM (RED) stop and check valve.

Maximum recommended operating pressure: 80 PSI (5.5 BAR) steam and water.

Maximum recommended operating temperature of 200°F (93°C). NOTE: This maximum temperature is for valve only, see hose specification for rating temperature.

Provide a steam trap prior to the blender to eliminate water hammer.

When used for high temperature washdown (140°F to 180°F, 60° to 82°C) operators should wear protective gloves, boots and clothing, and they should be given safety instructions in the proper use of high temperature hot water.

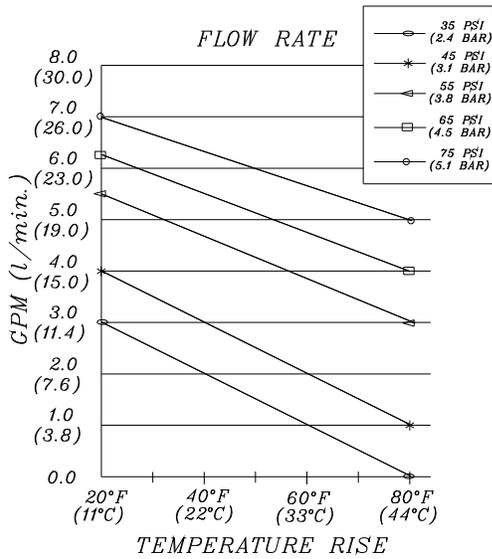
**REMEMBER! THIS IS A CONTROL SYSTEM WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS (SEE MAINTENANCE GUIDE AND RECORD MGR-1000).**

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# ADJUSTMENT AND SERVICE

Leonard Type Steam and Water Blenders are simple in design and may be easily cleaned, adjusted and repaired. If the installation is accessible, servicing may be completed without disconnecting the valve.

**NOTE:** Steam and Water Blenders with the automatic safety shutoff mechanism must be regularly maintained to provide best performance **and to ensure proper operation.** Frequency of cleaning depends on quality of local water conditions and usage. (See Maintenance Guide and Record MGR-1000).



		TEMPERATURE RISE								
PSI BAR	20°F 11°C	30°F 16°C	40°F 22°C	50°F 27°C	60°F 33°C	70°F 38°C	80°F 44°C			
35 2.4	3.0 11.4	2.5 9.5	2.5 9.5	2.0 7.6	2.0 7.6	1.0 3.8	0.0 0.0	GPM l/min		
45 3.1	4.0 15.0	4.0 15.0	3.5 13.0	3.5 13.0	3.0 11.4	2.5 9.5	1.0 3.8	GPM l/min		
55 3.8	5.5 21.0	5.0 19.0	4.5 17.0	4.0 15.0	4.0 15.0	3.5 13.0	3.0 11.4	GPM l/min		
65 4.5	6.0 23.0	6.0 23.0	5.5 21.0	5.0 19.0	4.5 17.0	4.5 17.0	4.0 15.0	GPM l/min		
75 5.1	7.0 26.0	6.5 25.0	6.0 23.0	5.5 21.0	5.5 21.0	5.0 19.0	5.0 19.0	GPM l/min		

FLOW RATE (GPM)  
(WITH 25 FT HOSE AND N2 NOZZLE ON OUTLET)

## TROUBLESHOOTING INSTRUCTIONS

<b>PACKINGS &amp; GASKETS</b>	<ol style="list-style-type: none"> <li>Leak at shutoff stem</li> <li>Leak between body and end cap</li> </ol>	<b>PARTS REQUIRED:</b> <ol style="list-style-type: none"> <li>M20-6E</li> <li>3908 or packings &amp; gasket KIT 1/3800</li> </ol>
<b>CONTROL ASSEMBLY</b>	<ol style="list-style-type: none"> <li>Valve delivers either all steam or all water, after cleaning</li> </ol>	<ol style="list-style-type: none"> <li>3825 or KIT R/3800</li> </ol>
<b>CHECKSTOPS</b>	<ol style="list-style-type: none"> <li>Steam/water bypass into water/steam line.</li> <li>Supplies cannot be shut off completely</li> </ol>	2 each: 011 30-65-N

**SEE PAGE 4 FOR COMPLETE PARTS BREAKDOWN, PARTS KITS**

**REMEMBER! THIS IS A CONTROL DEVICE WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS. (SEE MAINTENANCE GUIDE AND RECORD, MGR-1000).**

# STEAM BLENDER MAINTENANCE INSTRUCTIONS

## Dismantling, Diagram A

1. Shut off steam and cold water
2. Allow steam blender valve to cool down.
3. Remove both end caps and gaskets
4. Remove pusher with a 1 1/16" socket wrench
5. Insert a screwdriver or equivalent into the left hand side of the blender and push the control assembly out of the right hand side

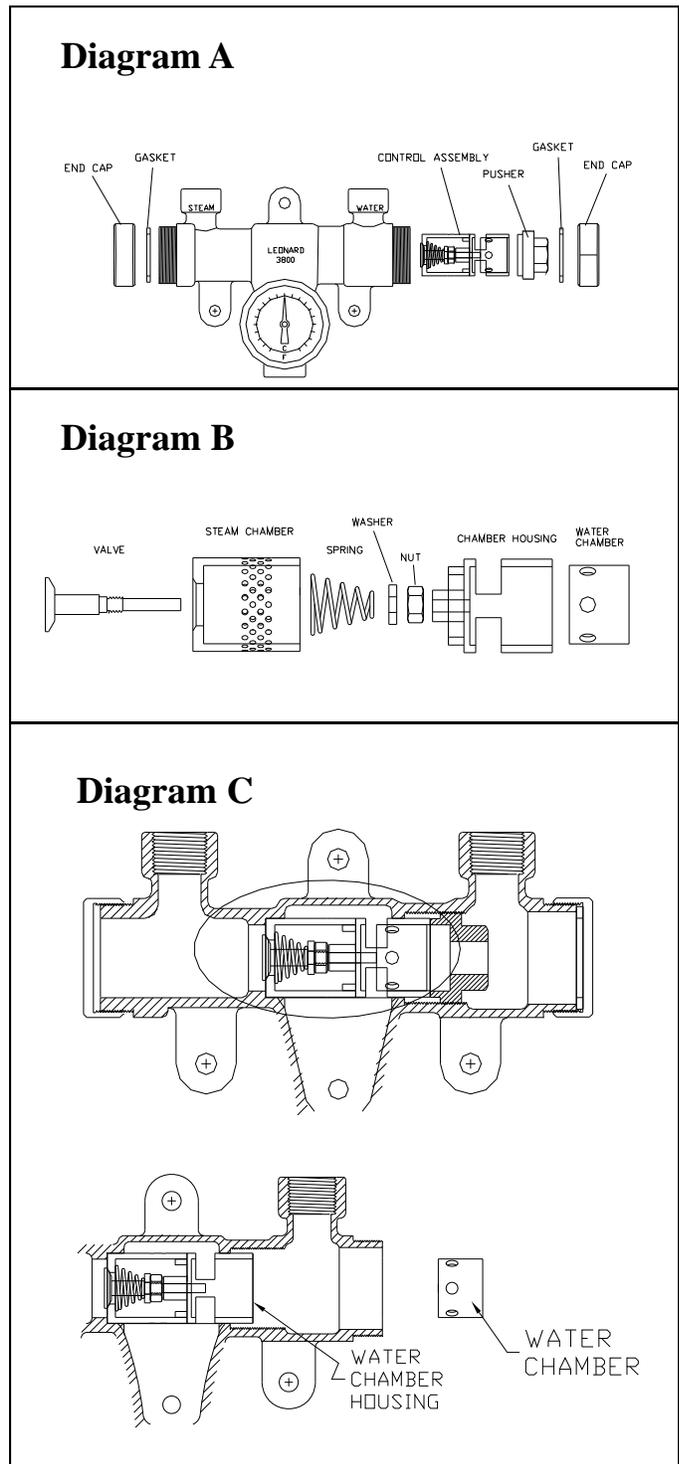
## Inspection, Diagram B

1. Remove and inspect the water chamber for cuts/scratches on its outside surface
2. Remove and inspect the water chamber housing for cuts/scratches on its inside surface
3. Insure that the water chamber can slide freely within its housing
4. Inspect the spring within the steam chamber and insure that the nut and washer are tight
5. Inspect the valve and steam chamber for cuts/scratches. Particular attention should be given to the area where the valve seats on the steam chamber

## Assembly, Diagram C

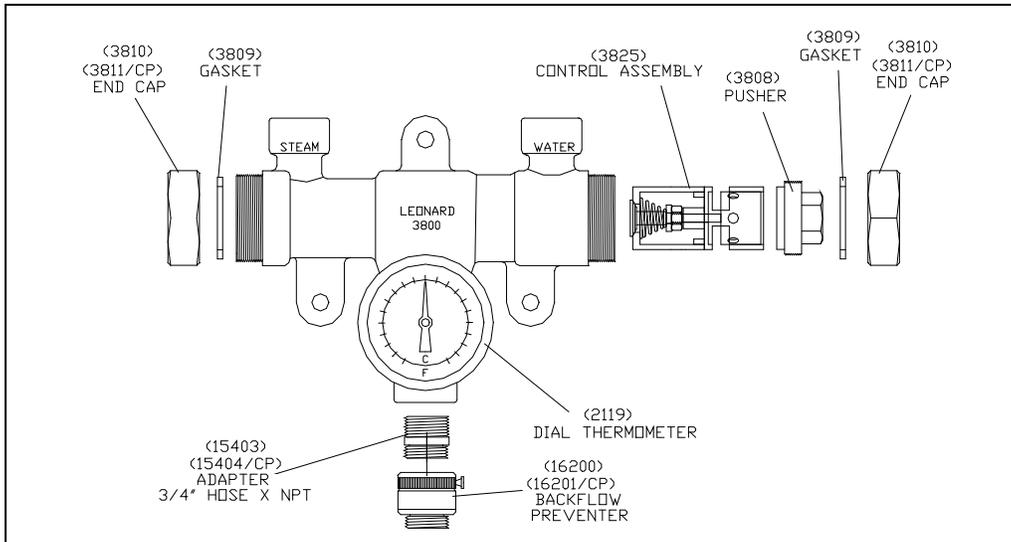
1. Assemble water chamber housing to steam chamber without the water chamber
2. Slide the assembly into the blender body
3. Insure that the assembly is straight and seated within the body
4. Slide the water chamber into the chamber housing, closed end first
5. Install the pusher, end caps and gaskets, and tighten securely

**TEST THE UNIT FOR PROPER OPERATION AND CHECK THE AUTO SHUTOFF SAFETY FEATURE!**

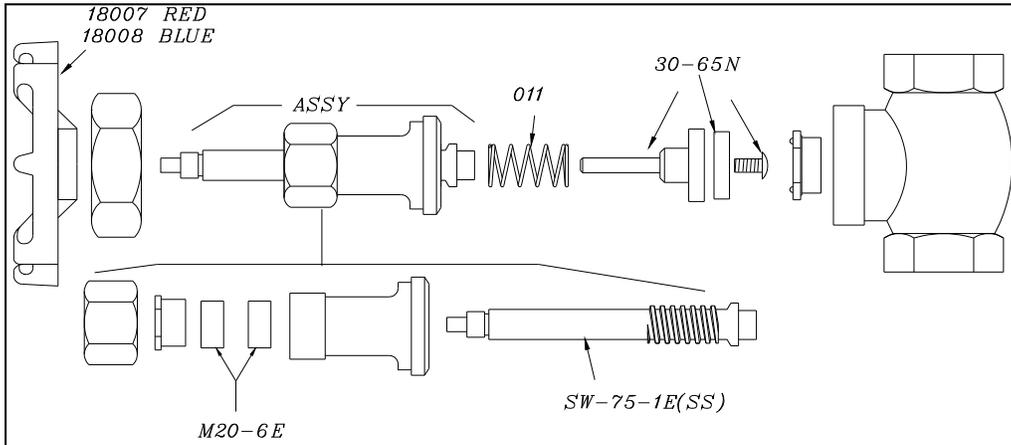


**REMEMBER! THIS IS A CONTROL SYSTEM WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS (SEE MAINTENANCE GUIDE AND RECORD MGR-1000).**

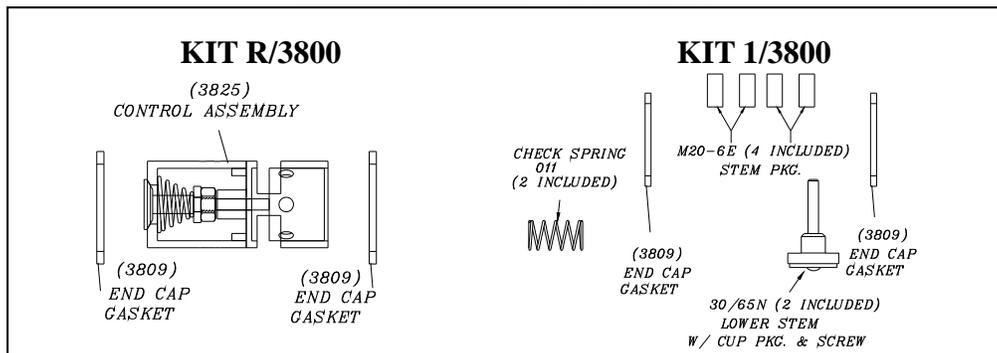
# STEAM BLENDER 3800 PARTS



## STOP & CHECK VALVE PARTS



## REPAIR KITS



### LIMITED WARRANTY

Leonard Valve Company warrants the original purchaser that products manufactured by them (not by others) will be free from defects in materials and workmanship under normal conditions of use, when properly installed and maintained in accordance with Leonard Valve Company's instructions, for a period of one year from date of shipment. During this period the Leonard Valve Company will at its option repair or replace any product, or part thereof, which shall be returned, freight prepaid, to the Leonard factory and determined by Leonard to be defective in materials or workmanship. There are no warranties, express or implied, which extend beyond the description contained herein. There are no implied warranties of merchantability or of fitness for a particular purpose. In no event will Leonard be liable for labor or incidental or consequential damages. Any alterations or improper installation or use of the product will void this limited warranty.