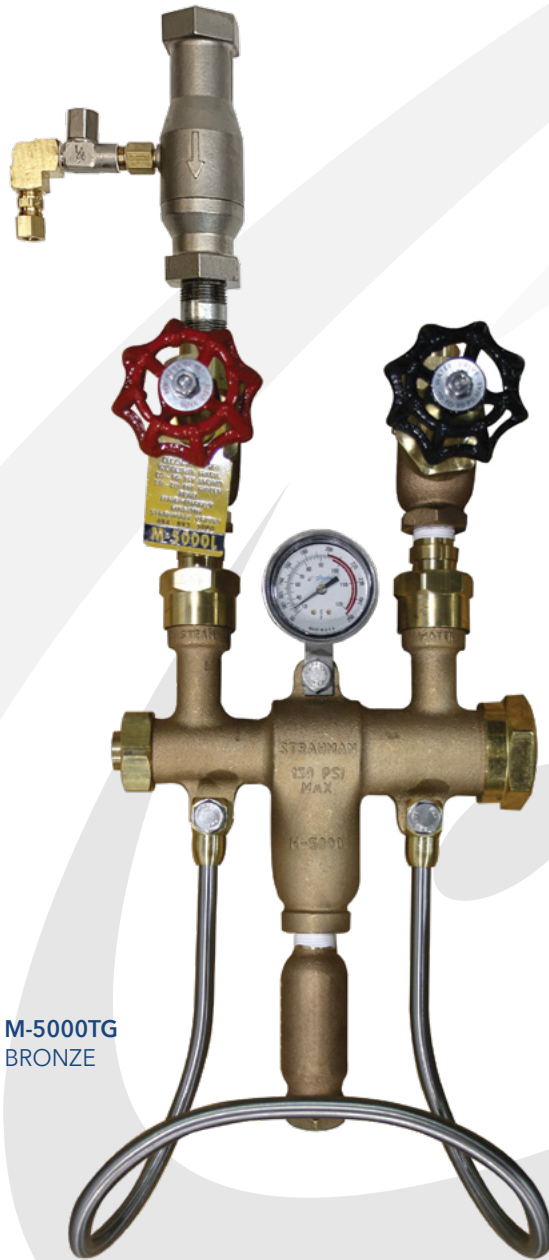


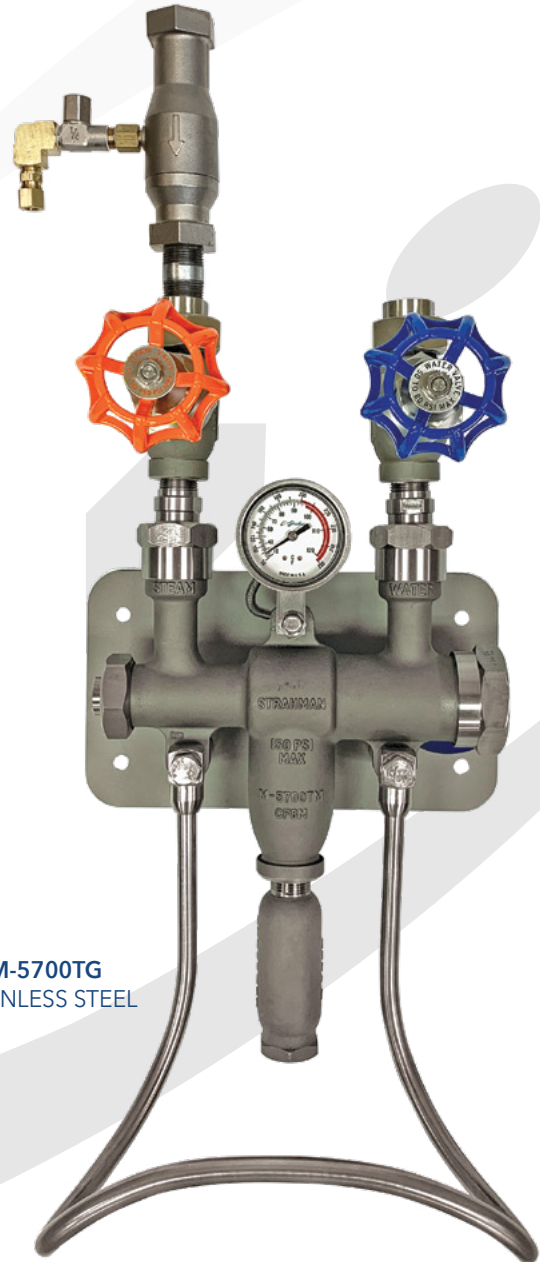


M-5000TG & M-5700TG

STEAM & COLD WATER MIXING UNIT
INSTALLATIONS, OPERATIONS & MAINTENANCE



M-5000TG
BRONZE



M-5700TG
STAINLESS STEEL



MAINTENANCE OF MODEL

M-5000TG/5700TG

STEAM AND COLD WATER MIXING UNIT

M-5000TGTG, M-5700TGTG SERIES FOR STEAM AND COLD WATER

These units produce hot water instantly from a steady supply of steam and cold water. All mixing units-hose stations in the M-5000TGTG/M-5700TGTG series are equipped with a dial-type gauge that indicates the wash water's exact temperature. Users can easily regulate the temperature by turning the unit's steam and cold-water valves.

INSTALLATION INSTRUCTIONS

Strahman Mixing Units are designed for wall mounting and are provided with necessary hexagonal spacers tapped for 3/8" bolts. They can be mounted on any type of wall by means of toggle bolts, expansion bolts or other conventional method—the only requirement being that from 5/8" to 1" of full thread be left projecting from the wall.

(See **Figure 1**)

1. Using the template provided on page 5, layout and install mounting studs in wall.
2. Slide Wall plate (Part 11) over stud and run on hex spacers (Part 10) and pull up snug.
3. Insert short cap screw (Part 2) through center mounting lug of unit and attach to corresponding spacer on wall, also through temperature gauge holder on M5000 unit.
4. Complete assembly by inserting the two long cap screws through hose rack connector (Part 4), lock washer (Part 3) and through mounting lugs on unit. Pull up all cap screws tight and the unit is ready for necessary pipe 3/4" NPT.

It is important that the lock washer (Part 3) is placed in the proper place as this insures rigidity of installation.

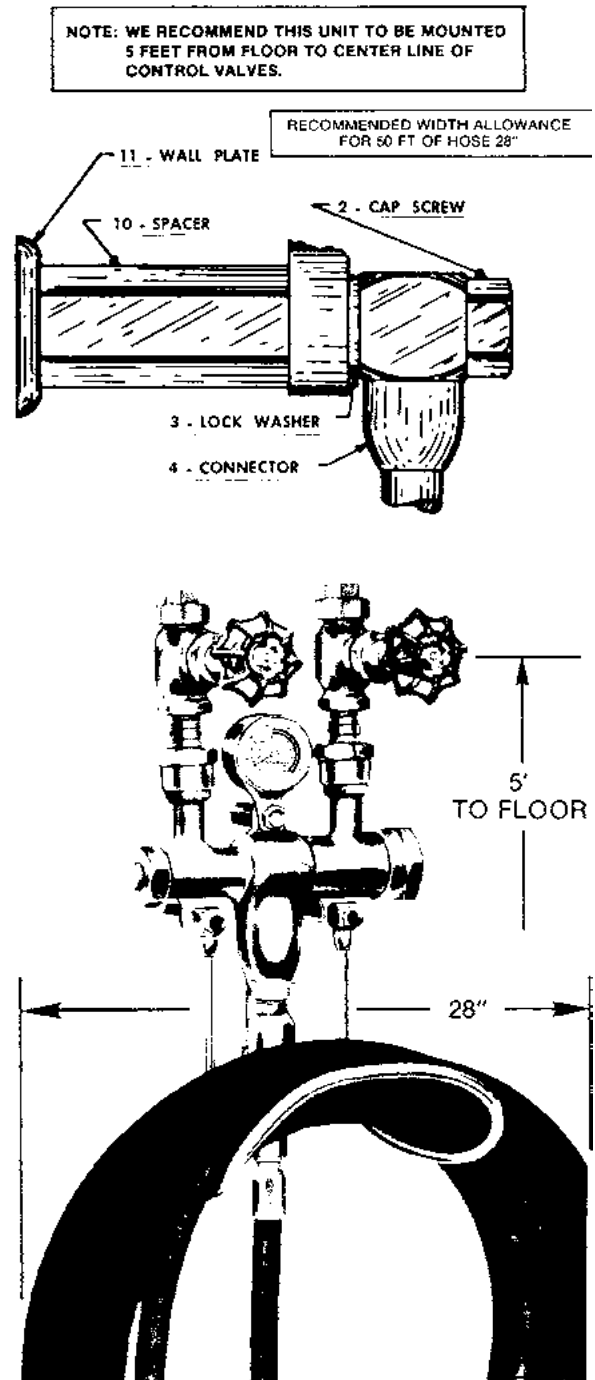


Figure 1: M-5000TG/M-5700TG Installation.

OPERATING INSTRUCTIONS

Follow your company safety precautions during mixing unit operation.

To turn on the M-5000TGTG/M-5700TGTG, follow the steps listed below:

1. Strahman recommends steam traps are installed and functioning properly.
2. Turn on the cold water valve, located on the right side of the unit, counter clockwise. (see Fig. 2)
3. Squeeze spray nozzle until you get full water flow.
4. Slowly turn on the steam valve, located on the left side of the unit, counter clockwise until you reach the desired water temperature outlet.
5. If the unit will be idled for a long period of time the unit, along with the hose, should be drained. This will help avoid a build-up of deposits. The hose should be stored on the hose rack when not in use.

See **Table 1** for easy control valves identification.

NOTE: If you do not get the desired water temperature outlet, turn the water valve handle clockwise until you reach the desire temperature.

To turn M-5000TGTG/M-5700TGTG off, follow the steps listed below:

1. Shut off the steam valve completely.
2. Shut off the water valve completely.
3. Relieve any pressure in the unit by opening the spray nozzle.

CAUTION: If internal pressure is not relieved when shutting the unit off, steam will come out at the spray nozzle when first open. Shut M-5000TGTG/M-5700TGTG down when unit is not being used.

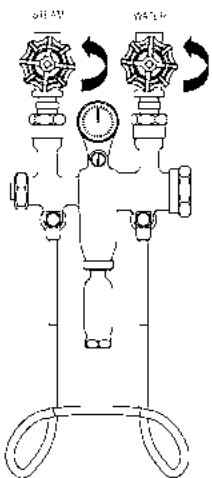


Figure 2: Turn control valves counter clockwise to turn M-5000TGTG/M-5700TGTG on.

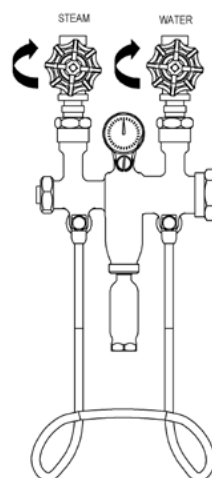


Figure 3: Turn Off control valves clockwise to turn M-5000TGTG/M-

5700TGTG.

If unit is not shut down the steam will boil the water in the unit and cause steam to come from nozzle when first turned on.

	COLOR	
	STEAM	WATER
M-5000TG	RED	BLACK
M-5700TG	ORANGE	BLUE

Table 1: Control Valves Color Identification

For more information, please contact your Strahman representative.

MAINTENANCE INSTRUCTIONS

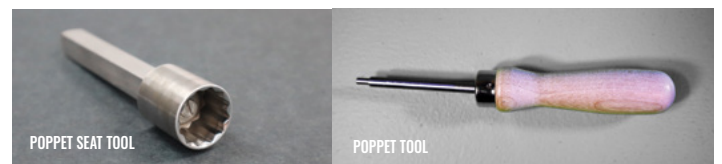
The Strahman Instant Hot Water Maker must be maintained properly in order to get the best results. The steam passing through the unit is controlled by a steam poppet (Part 5), which should be replaced as soon as it becomes worn. This can easily be done by following the steps below.

1. First close the control valves and allow the unit to cool.
2. Then remove the poppet guide nut (Part 21) on the left side of the unit.
3. Remove the poppet guide assembly (Parts 20, 26, 27, and 28). The assembly should easily slide out of the unit with little effort.
4. The poppet can now be removed using the poppet tool. To remove poppet (Part 5), insert poppet tool in the hole at the end of the poppet and lift tool while retracting. [Assemble in reverse order.]
5. Note the number of rings and replace with a poppet from the kit which has the same number of rings.
6. The new poppet can now be installed using the same tool, guide assembly, and guide nut being careful not to overtighten (see TORQUE values in Fig. 5).
7. The unit is now ready for use.



In extremely severe cases it may be necessary to replace the poppet seat, (7). This can be done with the poppet and guide assembly removed as in the previous steps.

1. Use the Poppet seat tool.
2. Insert tool and turn counter clock-wise to loosen and remove the poppet seat.
3. Reinstall the poppet seat by turning the seat tool in clock-wise until snug.



PARTS			
PART NO.	PART	M-5000 ORDER NO. (MATERIAL)	M-5700 ORDER NO. (MATERIAL)
1	BODY (INCLUDES PARTS 6 AND 7)	M500BODYCKIT (ASTM CA836)	M708BDF (SST316, ASTM A314)
2	HOSE RACK CAP SCREW (NOT SHOWN) (SET OF 6)	HH00501302000Z (SST304, ASTM A276)	HH00501302000Z (SST304, ASTM A276)
3	HOSE RACK LOCK WASHER (NOT SHOWN) (SET OF 6)	WAT0050 (SST410)	WAT0050 (SST410)
5*	STEAM POPPET (L) STEAM POPPET (M) STEAM POPPET (H)	MU500POPTCOMPLETE000 MU500POPTCOMPLETE001 MU500POPTCOMPLETE002 (SST303, ASTM A743)	MU500POPCOMPLETE000 MU500POPTCOMPLETE001 MU500POPTCOMPLETE002 (SST303, ASTM A743)
6	STEAM JET	SJET (SST416, ASTM A582)	SJET (SST416, ASTM A582)
7	POPPET SEAT	PSEATBR (BRASS ASTM C46400)	PSEATSS (SST303, ASTM A582)
8	HOSE RACK (NOT SHOWN) WITH FITTINGS	HRCOMLETE0000 (SST304, ASTM A276)	HRCOMLETE0000 (SST304, ASTM A276)
10	HEX SPACER (NOT SHOWN)	MUSPAC (SST416, ASTM A582)	MUSPAC (SST416, ASTM A582)
11	WALL PLATE (NOT SHOWN) (OPTIONAL)	MUWPLTBR (BRASS B16, CA360)	THIS IS STANDARD ON THIS UNIT (SST304, ASTM A240)
12	BALL CHECK UNION NUT	BCNUTBR (BRASS ASTM B16 C36000)	BCNUTSS (SST304, ASTM A276)
13	BALL CHECK VALVES (INCLUDES PART 36) COMPLETE	BCBRG (BRASS ASTM B16, C36000, SST303, ASTM A582)	BCSSG (SST304, ASTM A276, SST303, ASTM A582)
18	WATER CHAMBER	WCHM5000 (SST303, ASTM A582)	WCHM5000 (SST303, ASTM A582)
19	WATER CHAMBER HOUSING (INCLUDES PART 35)	WCHHOUSASSYBR (BRASS B16, C36000)	WCHHOUSASSYSS (SST304, ASTM A276)
20	POPPET GUIDE	M5000PGUIBR (BRASS ASTM B16, C36000, SST303, ASTM A582, EPDM "O" RING)	M570PGUI (SST304, ASTM A276, EPDM "O" RING)
21	POPPET GUIDE NUT	M500PNUTBR (BRASS B283, CA37700)	M570PNUT (SST303, ASTM A582)
22	BODY NUT	M500BNUTBR (BRASS B283, CA37700)	M570BNUT (SST316, ASTM A276)
25	SOCKET HEAD SET SCREW (SET OF 6)	SHN83200310Z (SST304, ASTM A276)	SHN83200310Z (SST304, ASTM A276)
26	POPPET SPRING (SET OF 6)	SPRGM5000 (SST302, ASTM A240)	SPRGM5000 (SST302, ASTM A240)
27	GUIDE EXTENSION	M500PGEX (SST416, ASTM A 582)	M500PGEX (SST416, ASTM A 582)
28	PUSHER	M500PPSH (SST303, ASTM A582)	M500PPSH (SST303, ASTM A582)
31**	TEMP GAUGE	TGGF02 (BRASS B283, CA37700)	TGGF02 (BRASS B283, CA37700)
32	BLENDING CHAMBER	BLCHMFB (BRASS, BRONZE B62, CH83600)	BLCHMFSS (SST303, ASTM A351)
35	"O" SEALING RING FOR WATER CHAMBER HOUSING	ORNG222HB (EPDM)	ORNG222HB (EPDM)
36	BALL CHECK GASKET	BCGAC (COPPER)	BCGA (COPPER, PTFE)

*SOLD AS A COMPLETE UNIT

*SEE STEP 5 IN THE MAINTENANCE INSTRUCTIONS ON PREVIOUS PAGE

**TEMPERATURE GAUGE: 100-250°F (40-120°C)

NOTE: If leakage occurs at the poppet guide assembly, immediately turn off both control valves. Relieve any pressure in the unit by opening the spray nozzle. Allow the unit to cool down before removing the poppet guide nut. Remove poppet guide nut and poppet guide assembly (See Figure 4). Clean the area where the poppet guide seats in the M-5000TG body. Clean the seating area of the poppet guide and apply pipe dope. Reinstall the poppet guide assembly and poppet guide nut. Torque the poppet guide nut to 70 ft-lbs. Do not exceed 90 ft-lbs.

Follow this procedure whenever the poppet guide assembly is removed.

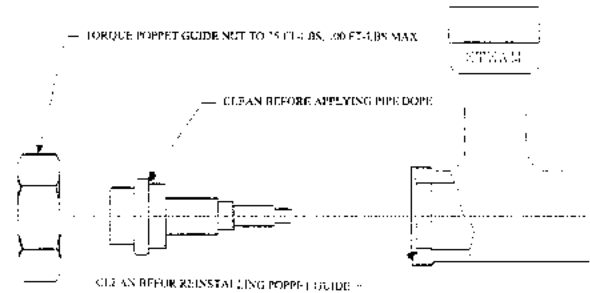


Figure 4: M-5000TG/M-5700TG poppet guide seat assembly.

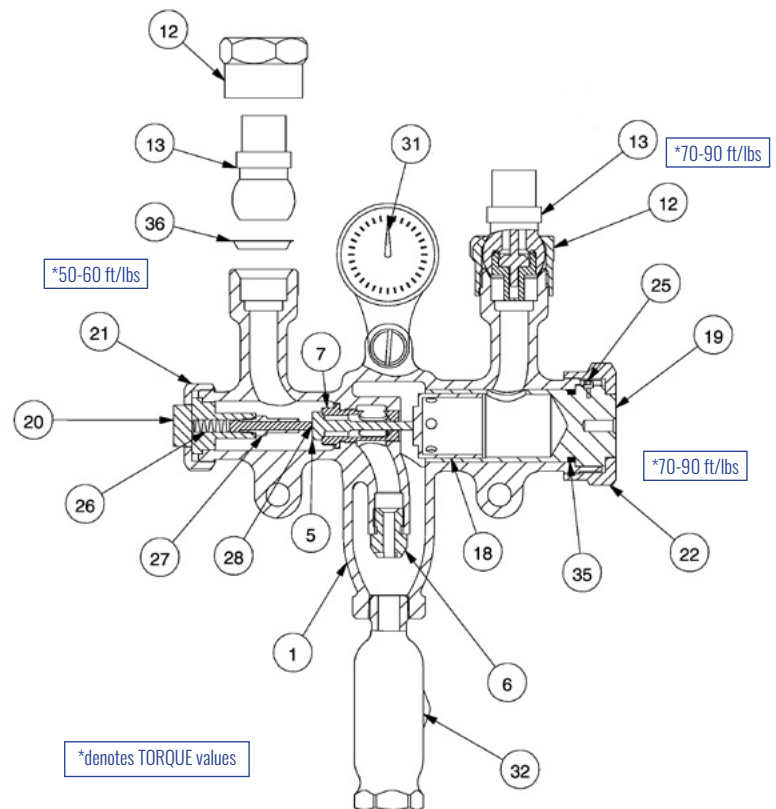


Figure 5: M-5000TG/M-5700TG parts assembly.

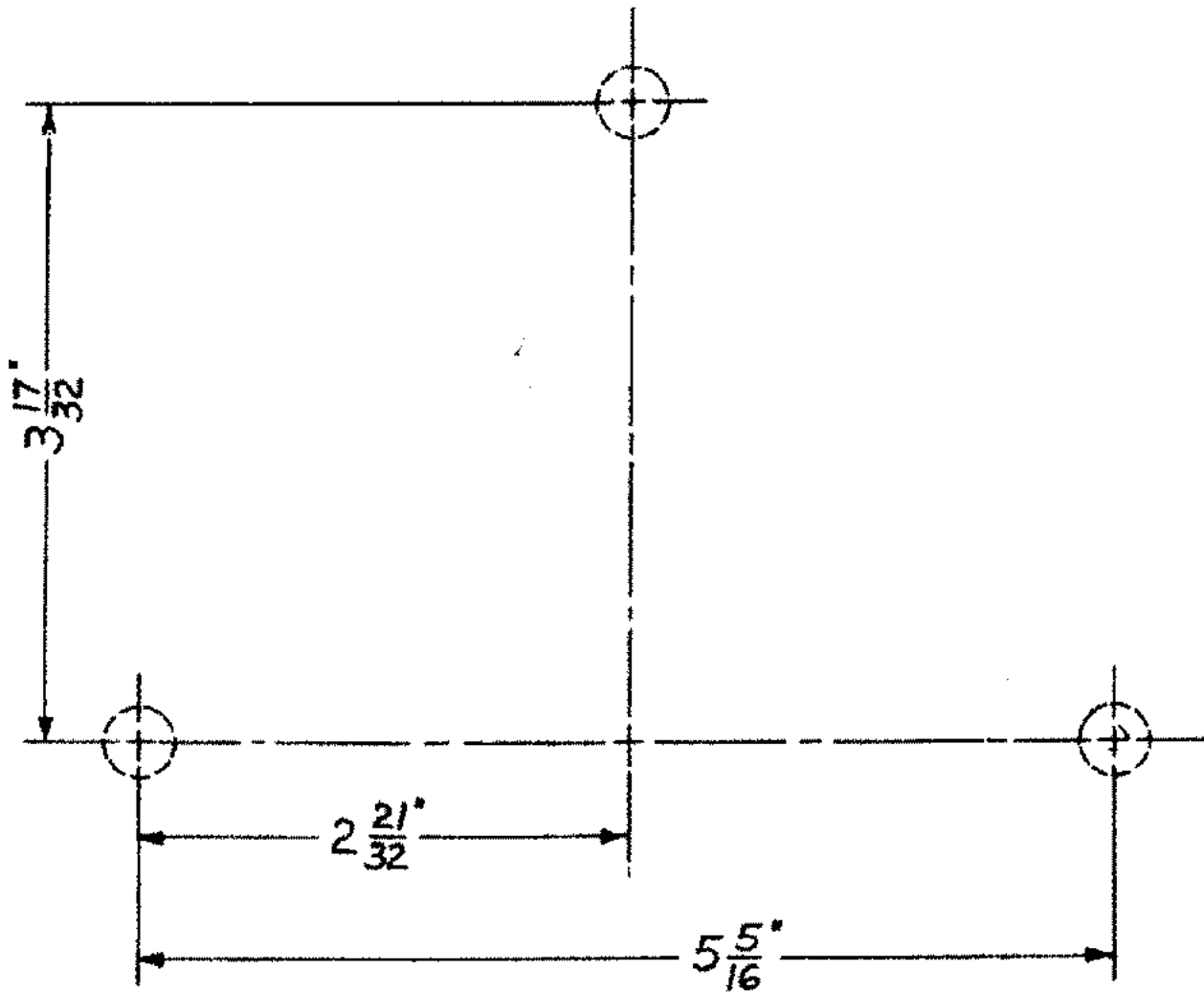
MAINTENANCE OF MODEL

M-5000TG/5700TG

STEAM AND COLD WATER MIXING UNIT

TEMPLATE FOR MOUNTING M-5000 STRAHMAN INSTANT HOT WATER MAKER

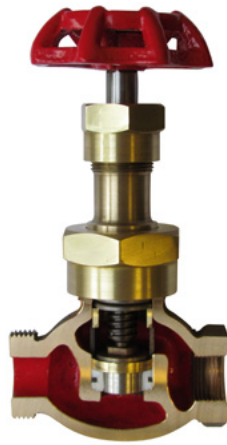
THREE 3/8" STUDS N.C. - STUDS MUST STICK OUT 5/8" TO 1" FROM WALL.



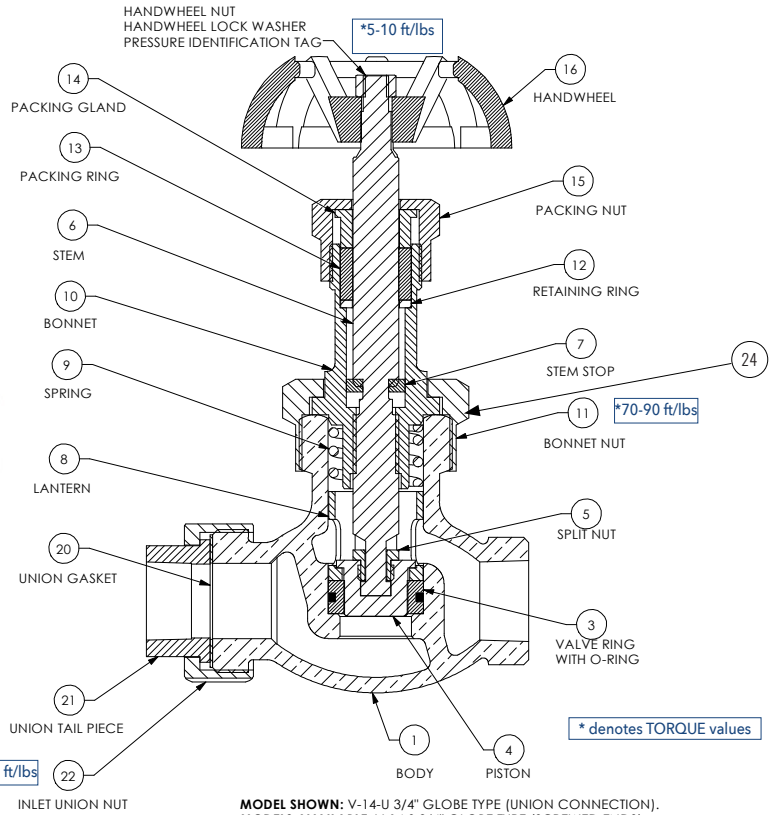
NOTE: THESE UNITS HAVE SPACERS (10) AND LOCK WASHERS (3) ATTACHED. SPACER MUST BE DETACHED FOR MOUNTING. SPECIAL CARE IS ADVISED FOR THE CENTER SPACER WHICH HOLDS THE TEMPERATURE GAUGE IN PLACE.

GLOBE VALVE

PARTS FOR BRONZE UNIT		
ITEM	PART	PRODUCT CODE
1	BODY GLOBE SCREWED ENDS	GVBDFCPS
1	BODY GLOBE UNION TYPE	GVEBDFB
3	VALVE RING WITH O-RING Elas./ PTFE	GVRING
4	PISTON (includes Item 5) 316 SST	GVPISTSPLITASSY
5	SPLIT NUT (LEFT HAND THREAD) 316 SST	GVSPPLITNUT
6	STEM (includes Item 7) 416 SST	MUSTEMKIT
7	STEM STOP (set of 6) 304 SST	GVSSSTP
8	LANTERN Brass	GVLANTBR
9	SPRING (set of 6) 302 SST	SPRG8027S
10	BONNET ASSEMBLY Bronze	GVBNS
11	BONNET NUT Brass	GVBNNUTB
12	RETAINING RING (set of 6) 302 SST	GVRRING
13	PACKING RING (3 pc. Virgin PTFE)	GVPACKCHEV
14	PACKING GLAND	GVGLBR
15	PACKING NUT Brass	GVPNUTBR
16	BLACK HAND WHEEL Cast Iron	GVHWFBLACK
16	RED HAND WHEEL Cast Iron	GVHWFWR
17	HAND WHEEL NUT (set of 6) 303 SST	GVLNUTSS
20	UNION GASKET (set of 6) Virgin PTFE	GVGA
21	UNION TAIL PIECE Brass	GVUTAILBR
22	INLET UNION NUT Brass	GVUNUTBR
23	ANGLE RECESSED GASKET Garlock	RECGA
PARTS FOR STAINLESS STEEL UNIT		
1	BODY GLOBE UNION TYPE 316 SST	GVBDFFSS
1	BODY GLOBE ANGLE TYPE 316 SST	AVBDFSS
8	LANTERN 304 SST	GVLANTSS
10	BONNET ASSEMBLY 303 SST	GVBNS
11	BONNET NUT 303 SST	GVBNNUTS
14	PACKING GLAND 303 SST	GVGLSS
15	PACKING NUT 303 SST	GVPNUTSS
16	BLUE HAND WHEEL Cast Iron	GVHWFBLUE
16	ORANGE HAND WHEEL Cast Iron	GVHWFOW
20	UNION GASKET SPIRAL WOUND (set of 6) SST	GAS-W015001000063MA
21	UNION TAIL PIECE 303 SST	GVUTAILSS
22	INLET UNION NUT 303 SST	GVUNUTSS
24	GLOBE VALVE GASKET Bonn/ Body SST	GVBNGA
OPTIONAL TOOLS		
-	VALVE PULLER	GVPULLER
-	VALVE SEATER	GVSEATER



Spring to be installed in back of piston
Large I.D. facing up



MODEL SHOWN: V-14-U 3/4" GLOBE TYPE (UNION CONNECTION).
 MODELS AVAILABLE: V-14-S 3/4" GLOBE TYPE (SCREWED ENDS).
 V-18 3/4" ANGLE TYPE (SCREWED ENDS).
 SST MODELS: V-65-SU, V-65-SS AND V-18-SS



Extracting Valve Ring

1. Remove Bonnet (11) and Stem Assembly (6) by opening valve to wide open position and removing Bonnet Nut (11) and working assembly free of body.
2. Insert Pulling Tool into ring pocket making sure that puller housing is located evenly on neck of valve body. Slotted cap 'A' should rest on Lantern (8) as shown in Fig. 1. Rotate until pin 'B' can be pressed into slot and hold while knurled nut 'C' counter clockwise until refusal.
3. With an adjustable wrench, turn hex nut 'D' in a clockwise direction until internal parts are fully extracted, as shown in Fig. 2.
4. Spin hex nut all the way back on so that withdrawn parts can be fully extended from puller housing, then turn knurled nut 'C' clockwise which will release parts from puller.

To Insert New Valve Ring

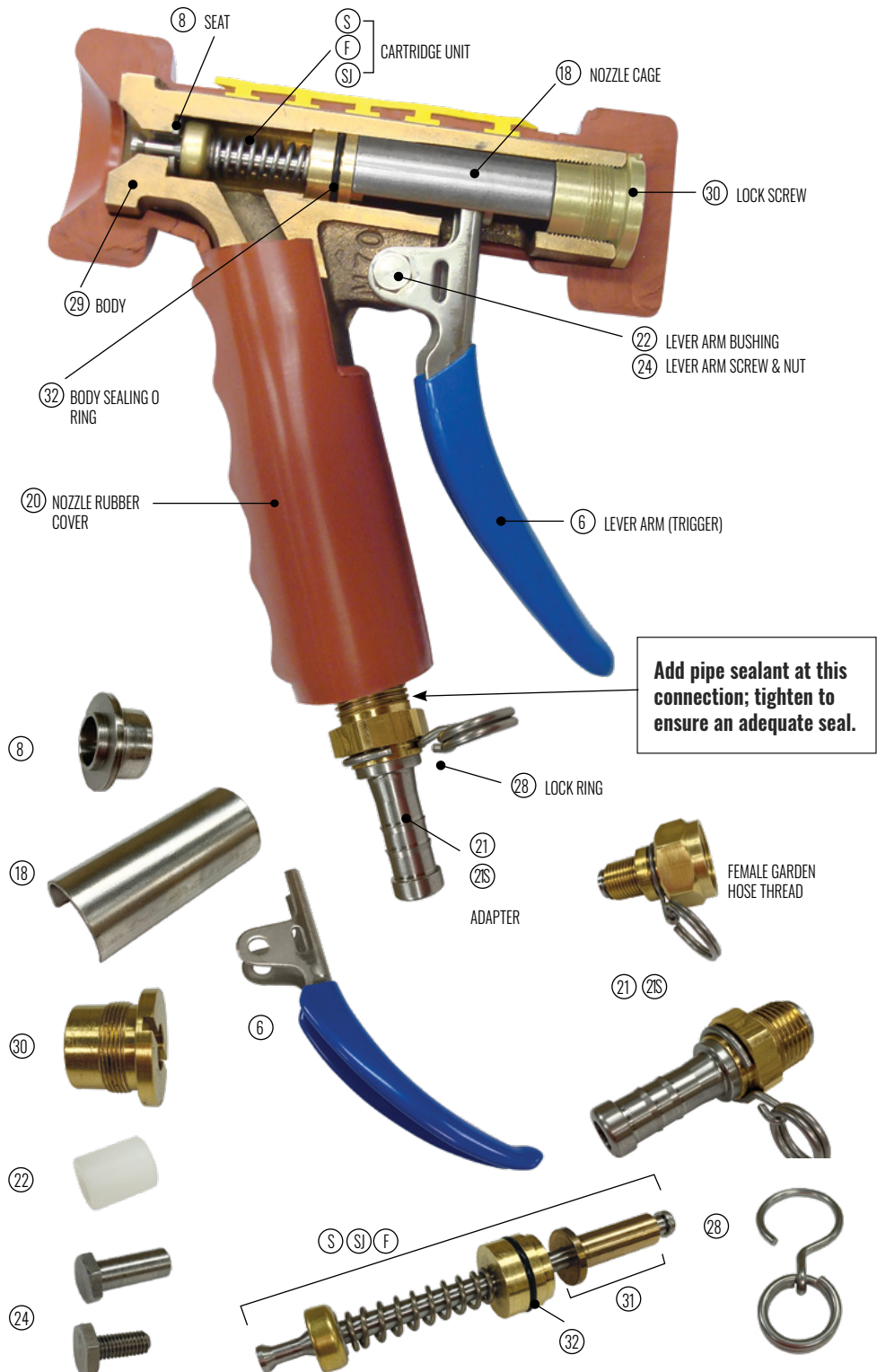
1. Place Valve Ring (3), including O-ring, on Ring Seater tool as shown in Fig. 3 and drive into valve body as far as it will go keeping Ring Seater as straight as possible.
2. Drop Lantern (8) into body with large I.D. and wider band facing up making sure Lantern (8) sits evenly on ring.
3. Before installing Bonnet Assembly (10) into body, fully retract stem making sure spring is located between back of Piston (4) and Bonnet (10). Install into body. Tighten down Bonnet Nut (11) until refusal.

Note: When installing new spring, Split Nut (5), Piston (4) must be disassembled from Stem (6). Install new spring over stem against Bonnet (10). Reassemble Split Nut (5) and Piston (4). Hold spring against Bonnet (10).
 Precautions: Make sure ring pocket is free of scale, rust or other obstruction before replacing valve ring. Make sure parts are replaced in same order as removed. Base ring no longer necessary (older valves only).

WATER-SAVER SPRAY NOZZLE

ASSEMBLY INSTRUCTIONS FOR M-70, S-70, E-76, S-76, S-80, F-90 & S-90 SERIES

PARTS LIST		
ITEM	DESCRIPTION	PART NUMBER
8	SEAT, SS 303	WSSEAT
18	NOZZLE CAGE, SS 304	WSCASS
30	LOCK SCREW, BR C3600	LSCRBR
30	LOCK SCREW, SS 303	LSCRSS
22	LEVER ARM BUSHING NYLON	LARMBU
24	LEVER ARM SCREW, SS 303	WLSSCR
24	LEVER ARM NUT, SS 303	WLSNUT
6	LEVER ARM - BLUE (BL); YELLOW (Y); ORANGE (O)	
29	BODY, BRASS C83600	
29	BODY, STAINLESS STEEL 304	
20	NOZZLE RUBBER COVER - BLACK (B); RED (R); WHITE (W)	
ADAPTER PARTS		
21S	3/4" FGHT SWIVEL HOSE	G075BR
21S	1/2" BARB SWIVEL ADAPT.	SWADAP0500BR
21S	3/8" BARB SWIVEL ADAPT.	SWIVADAP0063BR
21S	3/4" BARB SWIVEL ADAPT.	SWIVADAP0075BR
21	3/4" FGHT RIDGID ADAPT.	WSADAPTERCOMPLETE0003
21	1/2" BARB RIDGID ADAPT.	BARB0050BR
21	3/8" BARB RIDGID ADAPT.	BARB0063BR
21	3/4" BARB RIDGID ADAPT.	BARB0075BR
28	LOCK RING, SS302	WLSLRNG
REPLACEABLE CARTRIDGE UNIT		
M70	REPLACEABLE CARTRIDGE	M70CARTBR
M SJ	REPLACEABLE CARTRIDGE	WSS76CART0000 WSS-80CART0001
F SF	REPLACEABLE CARTRIDGE	WSF90CART0000 WSS90CART0000
31	STEM GUIDE (INSTALLED WITH CARTRIDGE)	
32	BODY SEALING O RING (INSTALLED W/CARTR.)	



INSTRUCTION FOR SERVICING SPRAY NOZZLE:

The entire working parts of the Strahman Water-Saver Spray Nozzle are contained in a Single Cartridge Unit.

CAUTION—NOT FOR USE ON STEAM HOSE.

HOW TO REPLACE CARTRIDGE:

1. Remove the **Rubber Cover (20)** by slipping it off the back of the nozzle and pulling it over the front using a round tool: not a sharp tool, which can cut cover.
2. Remove the **Lever Arm Screw & Nut (24)** and the **Lever Arm (6)**.
3. Unscrew **Lock Screw (30)** and extract the **Cartridge** from back end of nozzle with **Cage (18)**.
4. Be sure when replacing **Cage (18)** to place cut-away part of **Cage** facing downward, so **Lever Arm (6)** can be inserted.
5. To insert new cartridge, reverse order beginning with 4-1 above and then proceed to 6.
6. Be sure **Lever Arm (6)** is placed ahead of **Stem Guide (31)** on cartridge unit.
7. To replace **Rubber Cover (20)** wipe body with detergent, insert nozzle end first then handle into cover. Use a round ended tool approx. 3/8" in diameter to stretch cover over back. Do not use sharp tool. Sharp tools can cut cover.

THE STRAHMAN FAMILY OF PRODUCTS INCLUDE:



WASH DOWN EQUIPMENT

Strahman offers a full line of mixing units, hose stations, hoses, nozzles, and wash down accessories designed for industrial use for a wide variety of industry including food & beverage processing, meat & poultry, agriculture, pharmaceutical, research laboratories, chemical, wineries, breweries, and more.

AUTOMATED VALVES & THERMAL SHUT-OFF VALVES

Strahman automated valve packages with floating ball valves and resilient seated butterfly valves come complete with electric or pneumatic actuators for a wide array of industrial applications. Additionally, a full suite of API 607 fire safe valve products are offered as actuated units or to be used in conjunction with our FM approved thermal shut-off assemblies. Resettable Emergency Block Valves (R-EBV) are also available for the oil & gas and chemical industries.


VALVES & LINE BLINDS


Strahman's portfolio includes: sampling valves, drain valves, gate valves, diverter and piston-type valves, ball valves, and line blinds for the control of fluid and gases in the pipeline system. Strahman also provides custom solutions for industry where products manufactured in batch and continuous process require consistent high quality and safety. Strahman serves a wide variety of industries and process applications including oil refinery, pulp and paper, and chemical.




CONTACT US

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PRECISION AND PERFORMANCE