

Wash Down Equipment

January 2017

Hose Stations and Mixing Units



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 *Strahman*[®]



Strahman Valves, Inc. Corporate Profile

Headquartered in Bethlehem, Pennsylvania, USA, Strahman Valves is a worldwide leader in the manufacture of high-quality: Wash Down Equipment, custom Industrial Valve products and Pre-Rinse Equipment. Since its inception in 1921, the Company has earned a reputation for products that provide superior performance, innovative solutions to complex problems and long-lasting reliability. Strahman has become the standard for numerous industries including the chemical, petrochemical, polymer, biotechnology, pharmaceutical, food processing, food serving, beverage, dairy and mining, as well as the pulp and paper industry.

With facilities in the United States, France and Germany, coupled with an extensive network of distributors and agents on every continent, Strahman is well positioned to serve the needs of its customers throughout the world. Our trained agents and distributors provide local service and support to customers worldwide whenever required. With ISO 9001 certification at our production facilities, Strahman Valves has the capability to design, manufacture, assemble and test a wide variety of high quality sophisticated valves and wash down equipment.

Wash Down Equipment

Strahman's entry into the wash down equipment market began with its involvement with the Dairy Industry. Recognizing a need for a high-performing unit that could distribute hot water for facility clean up, Strahman engineers developed the first steam and cold water mixing unit. This led to the development of mixing units that distribute hot and cold water as well as thermostatically controlled mixing units. Having gained a reputation in this area, Strahman then focused its efforts to develop a complete line of industrial spray nozzles and hoses. Today, Strahman's Wash Down Equipment has become the standard in virtually every industry requiring precise temperature control, long-lasting and trouble-free wash down systems.

Strahman's current product line includes single line hose bibs, mixing units for hot and cold water, steam and cold water, stainless steel cabinets, pre-rinse spray nozzles, a wide array of industrial spray nozzles, industrial hoses, FDA approved hoses, hose racks, hose reels, stainless steel jacketed transfer hoses and fittings, PTFE lined hoses, and special application hoses.

Industrial Valves

Strahman pioneered the free-flowing, non-clogging piston tank bottom valve and established itself as a worldwide leader of sampling valves and sampling systems. Today, we offer a full range of both cast and fabricated valves ranging from -330°F/-200°C to over 1,500°F/815°C and pressures ranging from vacuum to 9,000 psi/630 bar. Materials of construction include carbon steel, stainless steel (316, 316L, 316 Ti, 304, 304L, 2205 (Duplex), 347, Alloy 20), Hastelloy B, Hastelloy C, Monel, Inconel, Titanium and Zirconium. Strahman technology includes metal to metal seals as well as seatless sealing technologies.

Other valve products include Spray Rinse Valves for reactors, Piston and Disc Diverter Valves, Rotating, Sliding, Spreading and Non-spreading Line Blinds, Cartridge Ball Valves, Rising and Lowering Disc Valves, Metal Seated Butterfly Valves, Disc and Piston In-Line Valves and Pipe Valve assemblies.

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WARRANTY and RETURN POLICY

Introduction

Strahman began providing the dairy and food processing industries with durable, reliable mixing units and hose stations more than eight decades ago. Today, this sturdy equipment can be found in manufacturing plants and processing industries around the world including food, beverage, pharmaceutical, biotechnology and others where fast and effective cleanup is required.

As a single unit, Strahman’s mixing unit-hose stations produce wash water from the following sources:

- ♦ Instant hot water from steam and cold water (M-5000/M-5700 Series)
- ♦ Blended hot and cold water (M-159/M-750 Series)
- ♦ Hot or cold water (M-156N/M-756/M-358 Series)

Standard Strahman mixing units are constructed from bronze with internal parts of stainless steel. Most models are also available made entirely of stainless steel. Stainless steel mixing units and hose stations will not discolor, are easy to clean, and are ideal for use in special water applications, including those using ionized or purified water.

Strahman makes mixing units in four practical types to meet your particular needs:

- ♦ Wall-mounted
- ♦ Recessed
- ♦ Pedestal
- ♦ Cabinet

Most Strahman mixing units-hose stations come with a temperature-indicating gauge as an option. Temperature-indicating units include an accurate dial-type gauge that displays, in both Celcius and Fahrenheit, the wash water’s exact temperature; users can easily adjust the temperature by turning the unit’s valves.

All Strahman mixing units are available with:

- ♦ Stainless steel hose rack
- ♦ 50 feet of high pressure water hose; any length longer than 50 feet, please notify your customer service representative at Strahman.
- ♦ Automatic water saver spray nozzle

All Strahman units are exceptionally durable, economical, require little maintenance and mount easily anywhere steam and/or water lines are available.

- ♦ Maximum recommended operating temperature for Strahman mixing units-hose stations, and all Strahman products: 200°F/93°C
- ♦ Maximum working pressure: 150 psi

Several hose lengths, hose types and nozzle options are available. Most mixing units are available with globe or angle valves. Consult your Strahman sales representative for details.

Note: Also available with ball valves.

IMPORTANT PRODUCT INFORMATION

READ BEFORE PURCHASING STRAHMAN WASH DOWN PRODUCTS

Steam and Cold Water Mixing Units

It is recommended that a strainer and steam trap be used in conjunction with all of our steam mixing units.

Foreign deposits in supply lines can affect ball check durability.

Proper steam and water treatment is recommended to ensure proper performance and durability.

Strahman steam mixing units are designed to be operated with a spray nozzle and 5/8" ID hose at the outlet connection.

HARD PIPING OF THE OUTLET IS NOT RECOMMENDED.

Under no circumstance should a steam mixing unit be modified, **ESPECIALLY TO OVER-RIDE SAFETY FEATURES.**

Injury of malfunction may result from such actions.

Units should be shut off when not being used for extended periods of time (overnight or longer).

Do not open supply valves until unit, hose, and nozzle installation is completed.

Hot and Cold Water Mixing Units

Foreign deposits in supply lines can affect ball check durability.

Hot and cold water supply pressures should be within 20 psi.

Units should be shut off when not being used for extended periods of time.

Strahman Hoses

Do not overtighten hose connection: 50 ft-lbs maximum. Do not use a pipe wrench to tighten any fittings or nuts.

Hoses should be inspected on a regular basis.

When removing protective wrap, be sure not to cut the outer cover of the hose.

Be sure to wear proper personal protection and attire when operating any wash down equipment.

M-5000TG Bronze Wall-Mounted Series M-5700TG Stainless Steel Wall-Mounted Series

This unit produces hot water instantly from a steady supply of steam and cold water. All mixing units-hose stations in the **M-5000TG/M-5700TG 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. As an added safety measure, these units shut off their steam source automatically if the cold water supply falls below 50 psi for any reason. This prevents hazardous steam from exiting the unit and causing steam burns.

Our Temperature Indicating (TG) models (**M-5000TG** and **M-5700TG**) are equipped with a dial-type gauge that accurately indicates the wash water's temperature. They also feature a specially designed blending chamber to thoroughly blend steam and cold water.

Please review the chart below before purchasing an M-5000TG/M-5700TG unit.

MODEL NUMBER	REQUIRED STEAM PRESSURE*	REQUIRED WATER PRESSURE*	GPM
M-5000 L**	80-95 lbs.	50-80 lbs.	5-7
M-5000 M	96-130 lbs.	50-80 lbs.	4½-6
M-5000 H	131-150 lbs.	50-80 lbs.	4½-6

*Steam pressure required at installation site to ensure proper operation of mixing unit.

**Standard unit supplied.

Wall-Mounted Series for Steam and Cold Water

Strahman's wall-mounted, temperature-indicating, instant hot water mixing unit is designed to mount one inch away from the walls for easy cleanup. Units come complete with spacers, complete mounting instructions and ⅜" studs for easy mounting.

Specifications

- ♦ Maximum water temperature: 200°F/93°C
- ♦ Maximum working pressure: 150 psi steam

Caution: If overheating of water should occur due to restrictions in lines or pressure fluctuations, make adjustment to steam valve to lower temperature.

REFER TO PAGE 1 FOR IMPORTANT ADDITIONAL INFORMATION.

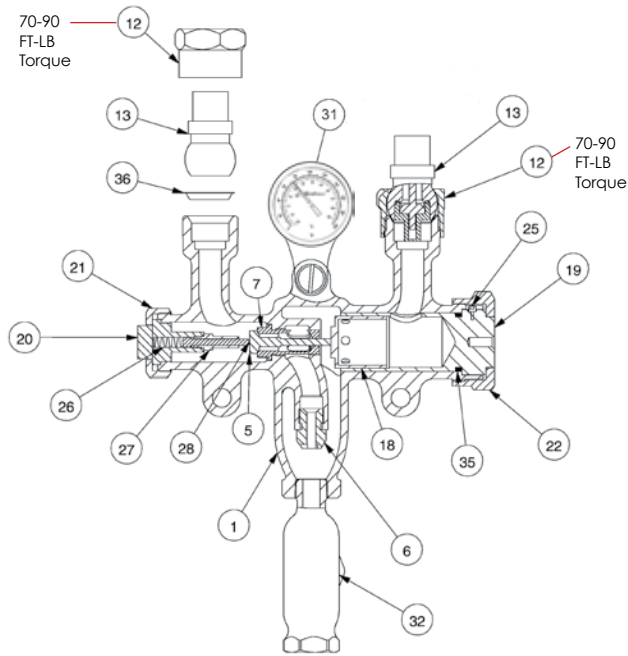


Shown: Bronze **M-5000TG**; shown with premium hose assembly and **M-70 Series** nozzle.



Shown: Stainless steel **M-5700TG**; shown with premium hose assembly and **S-70 Series** nozzle.

M-5000TG and M-5700TG Wall-Mounted Series Parts Listing



PART NO.	PART	PARTS	
		M-5700 MATERIAL	M-5000 MATERIAL
1	BODY (includes parts 6 and 7)	SST 316	BRONZE
2	HOSE RACK CAP SCREW (not shown)	SST 304	STAINLESS STEEL
3	HOSE RACK LOCK WASHER (not shown)	SST 410	STAINLESS STEEL
4	HOSE RACK CONNECTOR (not shown)	SST 303	BRASS
5	STEAM POPPET (L, M, H)	SST 303	STAINLESS STEEL
6	STEAM JET	SST 416	STAINLESS STEEL
7	POPPET SEAT	SST 304	BRONZE
8	HOSE RACK (not shown)	SST 302	STAINLESS STEEL
10	SPACER (not shown)	SST 416	STAINLESS STEEL
11	WALL PLATE (not shown)	SST 304	BRASS
12	BALL CHECK UNION NUT	SST 304	BRASS
13 [†]	BALL CHECK VALVES (includes part 36)	SST 303	BRASS/STAINLESS STEEL ALUMINUM SILICONE BRONZE
18	WATER CHAMBER	SST 303	STAINLESS STEEL
19	WATER CHAMBER HOUSING (includes part 35)	SST 304	BRASS
20	POPPET GUIDE	SST 304	BRASS
21	POPPET GUIDE NUT	SST 303	BRASS
22	BODY NUT	SST 303	BRONZE
25	SET SCREW	SST 304	STAINLESS STEEL
26	POPPET SPRING	SST 302	STAINLESS STEEL
27	GUIDE EXTENSION	SST 416	STAINLESS STEEL
28	PUSHER	SST 303	STAINLESS STEEL
31 ^{**}	TEMP GAUGE	PLATED BRASS	CHROME
32	BLENDING CHAMBER	SST	Bronze (269)
35	"O" SEALING RING FOR WATER CHAMBER HOUSING	EPMD	E5 15-80-2Q75
36	BALL CHECK GASKET	COPPER, PTFE COATED	COPPER

"I've used Strahman equipment for the past 21 years. Strahman stands by their equipment, providing customer service and technical assistance we can count on."

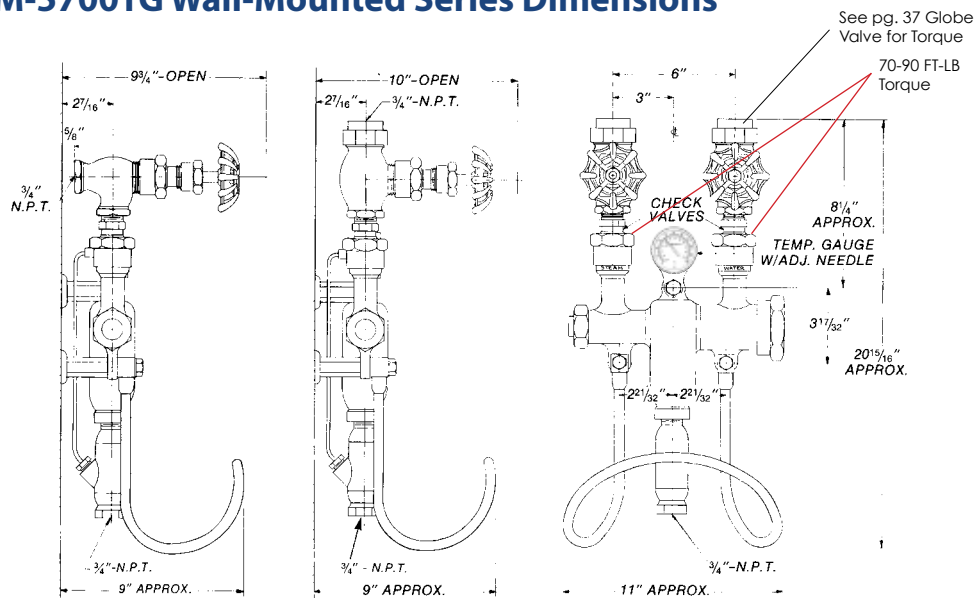
Mike, Associate Director
Pharmaceutical Industry

[†]Sold as a complete unit.

^{**}Temperature gauge: 40-120°C/100-250°F.

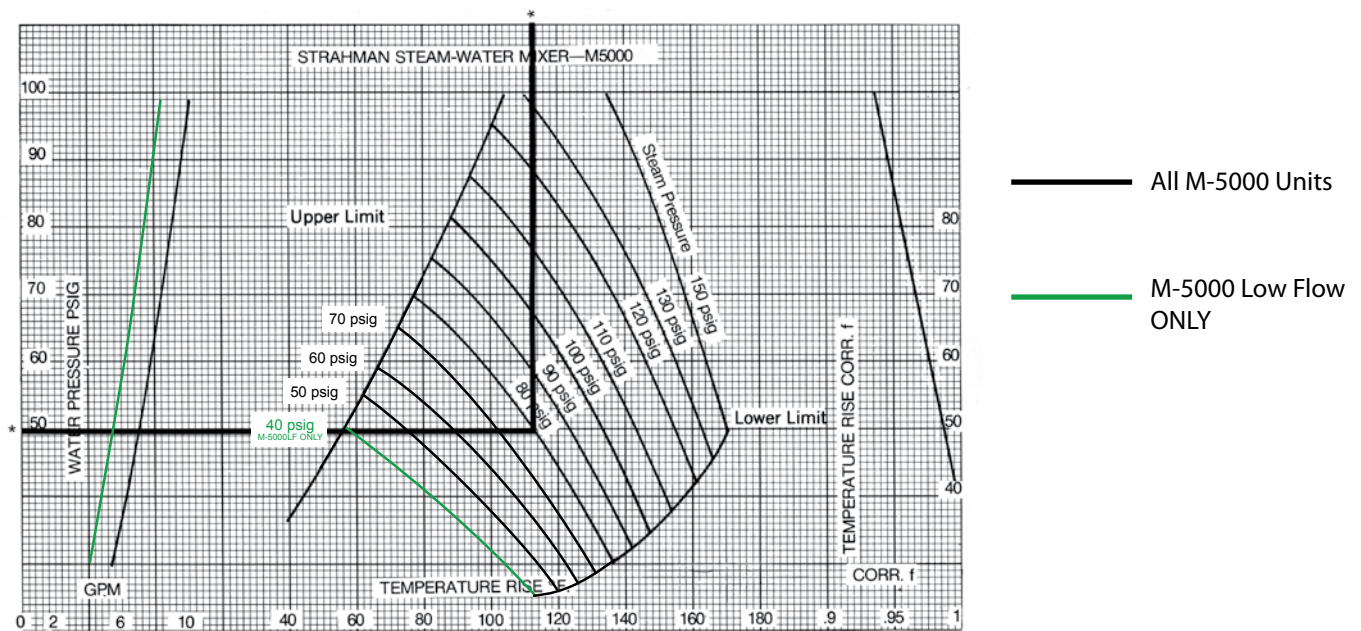
Steam and Cold Water Mixing Units

M-5000TG and M-5700TG Wall-Mounted Series Dimensions



Note: Front view shown with globe valves.

M-5000TG and M-5700TG Wall-Mounted Series Flow Chart



***Minimum pressures shown in heavy black line.**

HOW TO READ CHART: To get GPM flow from the unit, use (water pressure PSIG) indication above. From 50 PSIG water go to first curve and move to bottom of the chart which shows GPM. This would indicate that the flow would be 7 GPM.

To get the temperature of water through the unit, 50 PSIG water pressure and move to 80 PSIG steam pressure where lines intersect, move to bottom of chart (temperature rise F).

To read the temperature rise correction chart, use the inlet water temperature (50), move to bottom of chart and compute (.98). Multiply this times the temperature rise F as shown above.

Note: To ensure proper M-5000 performance, we recommend that a standard Strahman Hose Assembly and spray nozzle be used.

To ensure proper M-5000 Low Flow performance, we recommend that a standard Strahman Hose Assembly and **low-flow spray nozzle** be used.

NEW! M-5000TG Bronze Wall-Mounted LOW FLOW Series

It may look like a standard M-5000TG mixing unit, but its anything but standard!

Benefit from up to 20% savings in water, sewage and energy costs!

Get the same superior product quality and highly effective performance, along with the significant utility savings.

This unit produces hot water instantly from a steady supply of steam and cold water. All mixing units-hose stations in the **M-5000TG Low Flow 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. As an added safety measure, these units shut off their steam source automatically if the cold water supply falls below 20 psi for any reason. This prevents hazardous steam from exiting the unit and causing steam burns.

Our Temperature Indicating (TG) models (**M-5000TG Low Flow**) is equipped with a dial-type gauge that accurately indicates the wash water's temperature. They also feature a specially designed blending chamber to thoroughly blend steam and cold water.



Shown: Bronze M-5000TG Low flow

Strahman cannot guarantee the performance or maximum savings of this product unless it is purchased with a Strahman A-X Premium Wrapped or Extruded Hose Assembly and Strahman M-70 Low Flow or HP-150 Low Flow Series Spray Nozzle.

Please review the chart below before purchasing an M-5000TG Low Flow unit.

REQUIRED STEAM MODEL NUMBER	REQUIRED STEAM PRESSURE*	REQUIRED WATER PRESSURE*	GPM
M-5000 Low Flow	40-150 lbs.	40-80 lbs.	3¼-6

The M-5000 Low Flow unit is available in bronze.

Wall-Mounted Series for Steam and Cold Water

Strahman's wall-mounted, temperature-indicating, instant hot water mixing unit is designed to mount one inch away from the walls for easy cleanup. Units come complete with spacers, complete mounting instructions and ¾" studs for easy mounting.

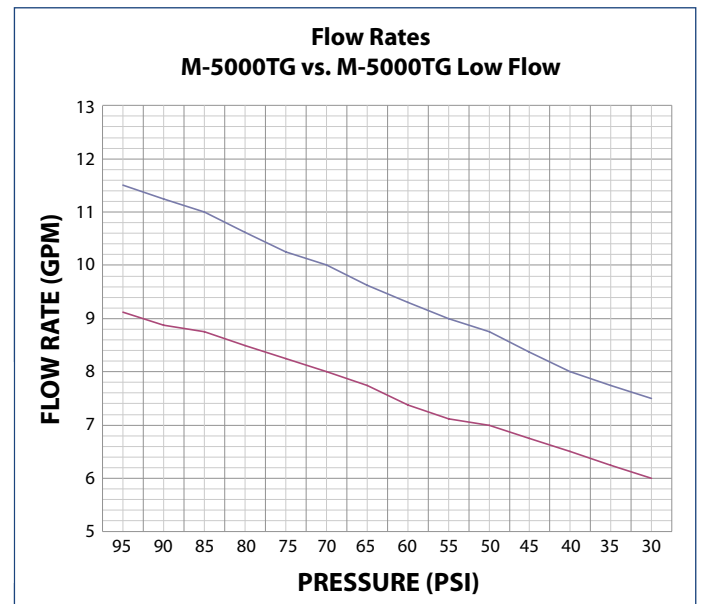
Specifications

- ♦ Maximum water temperature: 200°F/93°C
- ♦ Maximum working pressure: 150 psi steam

Caution: If overheating of water should occur due to restrictions in lines or pressure fluctuations, make adjustment to steam valve to lower temperature.

Please see page 4 for the M-5000 Flow Chart.

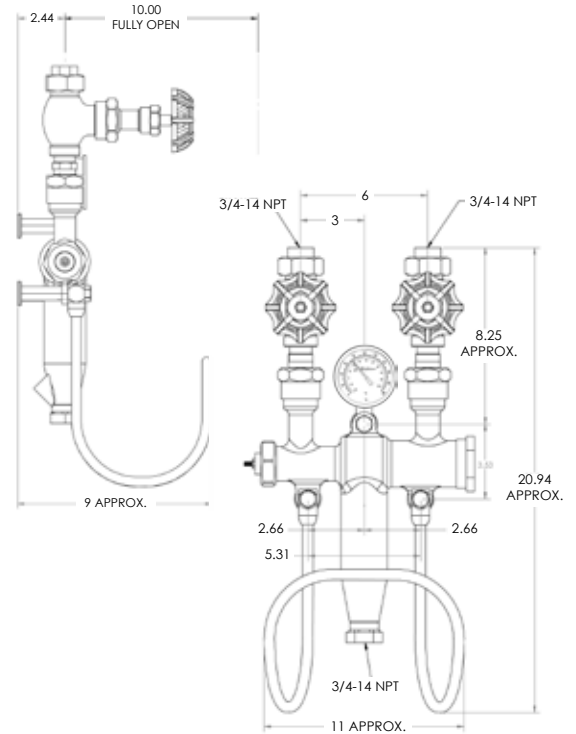
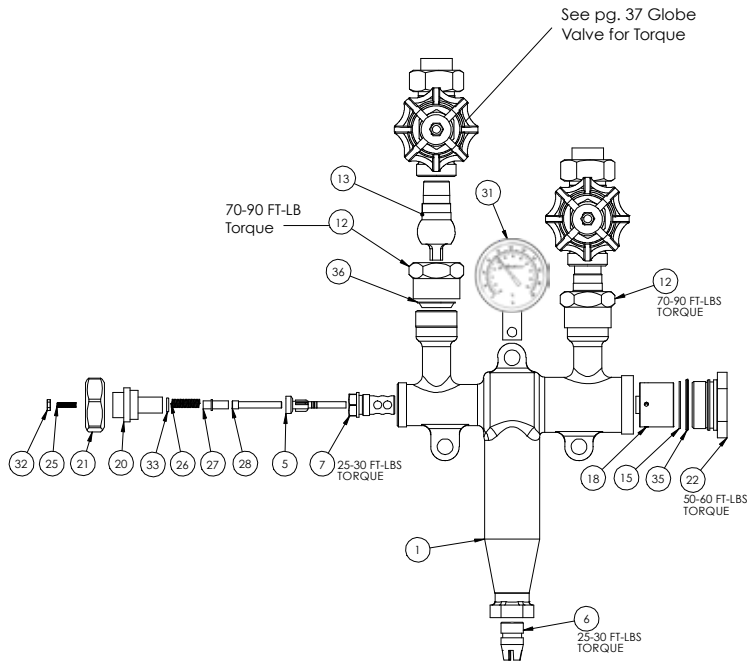
REFER TO PAGE 1 FOR IMPORTANT ADDITIONAL INFORMATION.



— M-5000TG
— M-5000TG Low Flow

Flow ratings are for mixing units without nozzles.

NEW! M-5000TG Wall-Mounted LOW FLOW Series Parts Listing



PARTS					
PART NO.	PART	M-5000 Low Flow MATERIAL	PART NO.	PART	M-5000 Low Flow MATERIAL
1	BODY with integral water chamber housing and blending section (includes parts 6 and 7)	BRONZE	18	WATER CHAMBER	STAINLESS STEEL
2	HOSE RACK CAP SCREW (not shown)	STAINLESS STEEL	20	POPPET GUIDE	BRASS
3	HOSE RACK LOCK WASHER (not shown)	STAINLESS STEEL	21	POPPET GUIDE NUT	BRASS
4	HOSE RACK CONNECTOR (not shown)	BRASS	22	BODY NUT	BRONZE
5	STEAM POPPET	STAINLESS STEEL	25	POPPET STOP	STAINLESS STEEL
6	STEAM JET	STAINLESS STEEL	26	GUIDE HOUSING	STAINLESS STEEL
7	POPPET SEAT	BRONZE	27	GUIDE EXTENSION	STAINLESS STEEL
8	HOSE RACK (not shown)	STAINLESS STEEL	28	PUSHER	STAINLESS STEEL
10	SPACER (not shown)	STAINLESS STEEL	31**	TEMP GAUGE	STAINLESS STEEL
11	WALL PLATE (not shown)	BRASS	32	JAM NUT	STAINLESS STEEL
12	BALL CHECK UNION NUT	BRASS	33	O-RING POPPET STOP	EPDM
13†	BALL CHECK VALVES (includes part 36)	BRASS/STAINLESS STEEL ALUMINUM SILICONE BRONZE	35	LOW FLOW O-RING	EPDM
15	RETAINING RING	STAINLESS STEEL	36	BALL CHECK GASKET	COPPER

†Sold as a complete unit.

**Temperature gauge: 40-120°C/100-250°F.

M-5000TS Thermostatically Controlled Mixing Unit

The **Model M-5000TS** lets you combine steam and cold water to produce hot water efficiently — without the safety concerns normally associated with steam use. Allowing for a maximum water temperature of 200°F, the automatic unit includes an easy-to-use temperature gauge that senses even slight variations to monitor water temperature accurately. The **M-5000TS** unit's thermostatically designed safety shut-off valve prevents the unit from overheating, and the thermostat is hydraulically formed, liquid-filled bellows.

Specifications

- ♦ **Maximum water temperature:** 200°F/93°C
- ♦ **Minimum discharge water temperature:** 100°F/38°C
- ♦ **Maximum working pressure:** 150 psi steam,
80 psi cold water
- ♦ **Minimum working pressure:** 80 psi steam,
50 psi cold water
- ♦ Thermostatically designed safety shut-off prevents unit from overheating
- ♦ Unit automatically compensates for water pressure fluctuations to maintain desired water temperature
- ♦ Thermostat is hydraulically formed, liquid-filled bellows
- ♦ Removable parts for easy cleanup and inspection
- ♦ Unit is easily installed
- ♦ All bronze body with bronze, brass and stainless steel internal parts.



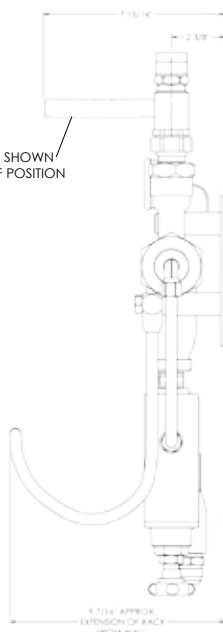
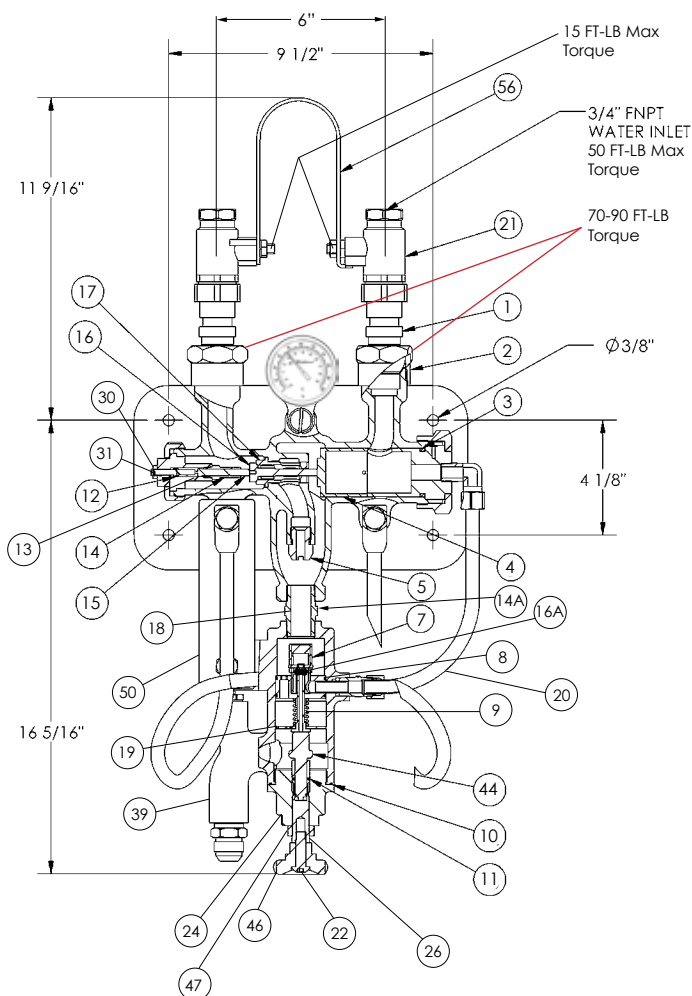
Shown: Bronze *M-5000TS*; shown with premium hose assembly and *M-70 Series* nozzle

Caution: If overheating of water should occur due to restrictions in lines or pressure fluctuations, make adjustment to steam valve to lower temperature.

Please see page 4 for the M-5000TS Flow Chart.

REFER TO PAGE 1 FOR IMPORTANT ADDITIONAL INFORMATION.

M-5000TS Thermostatically Controlled Mixing Unit Dimensions and Parts Listing



PARTS			
PART NO.	PART	MATERIAL	QUANTITY
1	BALL CHECK VALVE ASSY.	BRASS/SST	2
2	BALL CHECK GASKET	COPPER	2
3	O-RING WATER CHAMBER HOUSING	EPDM	1
4	WATER CHAMBER	SST	1
5	STEAM JET	SST	1
7*	ACTUATOR SLEEVE	SST	1
8	O-RING BLENDING CHAMBER	EPDM	1
9*	SPRING	SST	2
10*	O-RING THERMOSTAT HOUSING	EPDM	1
11*	O-RING STEAM ADJUSTER	EPDM	1
12	O-RING POPPET STOP	EPDM	1
13	POPPET SPRING	SST	1
14	GUIDE EXTENSION	SST	1
14A	3/4" HEX NIPPLE	BRASS	1
15	PUSHER	SST	1
16	POPPET	SST	1
16A*	ACTUATOR PIN	SST	1
17	SEAT	SST	1
18	STEAM INJECTOR	SST	1
19*	DIFFUSER SCREEN	SST	1
	POPPET SEAT TOOL	SST	1
	POPPET TOOL	SST	1
20	TUBE ASSEMBLY	COPPER	1
21	BALL VALVE	BRONZE/SST	2
22*	HANDLE SCREW	STEEL	1
24	THERMOSTAT HOUSING	BRASS	1
26*	THERMOSTAT ADJUSTER	SST	1
30	JAM NUT	SST	1
31	POPPET STOP	SST	1
39	TS BODY	BRONZE	1
44*	THERMOSTAT	BRASS	1
46*	CONTROL KNOB	PLASTIC	1
47*	CONTROL KNOB LOCK NUT	SST	1
50	SUPPORT PLATE	SST	1
56	UNILEVER	SST	1
	*M-5000TS Service Kit Includes parts 7, 9, 10, 11, 16A, 18, 19, 22, 26, 44, 46, 47 PARTS NOT SOLD SEPARATELY		

MP-88 Mounting Plate shown in drawing is **not standard** with the M-5000TS unit. The MP-88 must be ordered separately.

M-144TG Safety Unit

The **M-144 Safety Unit**, newly redesigned with the latest innovations, blends steam and cold water in any desired proportion; features a safety steam shut-off which prohibits passing live steam. User adjustable with a factory-set maximum temperature, this unit is equipped with dial-type gauge that indicates the exact wash temperature in both Celsius and Fahrenheit. For maximum efficiency, it is recommended that a Strahman hose assembly (with shut-off nozzle) be used in conjunction with this unit. Hard piping from the unit discharge, or use with an open-ended hose, is not recommended.

Our Temperature Indicating (TG) models (**M-144TG**) are equipped with a dial-type gauge that accurately indicates the wash water's temperature. They also feature a specially designed blending chamber to thoroughly blend steam and cold water.

Specifications

- ♦ Minimum working pressure 20 psi/1.4 bar steam
- ♦ Maximum design pressure: 150 psi/10.3 bar steam
- ♦ Maximum operating pressure: 80 psi/5.5 bar steam
80 psi/5.5 bar water
- ♦ Factory-set maximum temperature of: 200°F/93°C
- ♦ Safety steam shut-off
- ♦ For proper operation, water pressure should not exceed steam pressure
- ♦ It is recommended steam pressure should not exceed water pressure by more than 20 psi

The new safety unit is backed with more than 90 years of Wash Down Equipment manufacturing expertise.

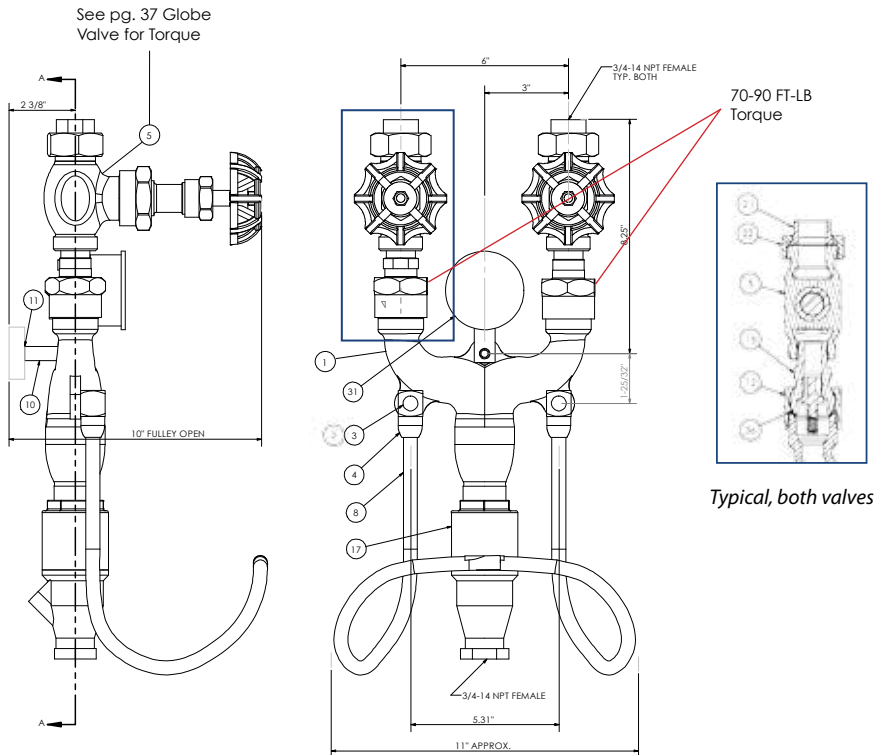


Shown: Bronze M-144TG with globe valves; shown with premium hose assembly and M-70 Series nozzle

REFER TO PAGE 1 FOR IMPORTANT ADDITIONAL INFORMATION.

Steam and Cold Water Mixing Units

M-144TG Safety Unit Parts Listing

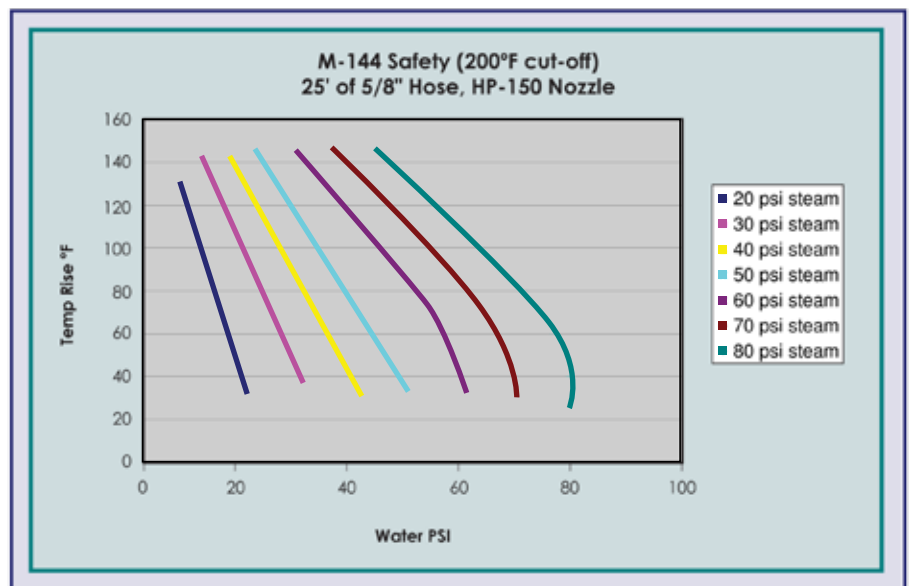


PARTS		
PART NO.	DESCRIPTION	MATERIAL
1	MAIN BODY	BRONZE
2	HOSE RACK CAP SCREW	SST
3	HOSE RACK LOCK WASHER	SST
4	HOSE RACK CONNECTOR	BRASS
5	GLOBE VALVE	BRONZE
8	HOSE RACK ASSEMBLY	SST
10	SPACER	SST
11	WALL PLATE	BRASS
12	BALL CHECK UNION NUT	BRASS
13	BALL CHECK VALVE	BRASS/SST
17	THERMOSTAT HOUSING	BRONZE
21	UNION TAIL PIECE	BRONZE
22	INLET UNION NUT	BRONZE
31	TEMPERATURE GAUGE	CHROME
36	BALL CHECK GASKET	COPPER

M-144TG Performance

M-144 Safety (200°F cut-off), 25' of 5/8" Hose, HP-150 Nozzle		
PSI STEAM	PSI WATER	OUTPUT GPM
20	20 to 30	3.25 to 4.25
30	20 to 35	4.00 to 5.25
40	20 to 45	4.00 to 6.25
50	25 to 50	4.00 to 6.25
60	30 to 65	5.00 to 7.00
70	40 to 75	5.50 to 7.50
80	45 to 80	6.00 to 8.00

*Water and steam pressures must both be within 20 psi of each other for optimal performance.



M-159 and M-159TG Bronze Mixing Units-Hose Stations M-750 and M-750TG Stainless Steel Mixing Units-Hose Stations

Strahman's mixing units-hose stations for hot and cold water are designed to thoroughly mix hot and cold water in any desired proportion. They are available in both standard bronze models (**M-159**) and models made completely of stainless steel (**M-750**).

Our Temperature Indicating (**TG**) models (**M-159TG** and **M-750TG**) are equipped with a dial-type gauge that accurately indicates the wash water's temperature. They also feature a specially designed blending chamber to thoroughly blend hot and cold water.

*Also available: Standard M-159 and M-750 without temperature gauge.
Units available with ball valves.*

Wall-Mounted Series for Hot and Cold Water

Wall-mounted unit is designed to mount one inch away from the walls.



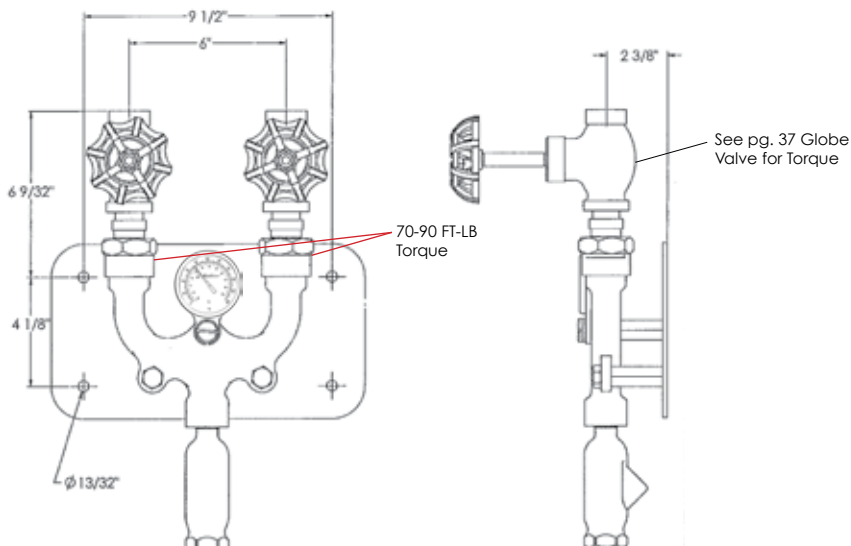
Shown: Bronze **M-159TG** with globe valves;
shown with premium hose assembly and **M-70 Series** nozzle

Specifications

- ♦ **Maximum water temperature:** 200°F/93°C
- ♦ **Maximum working pressure:** 150 psi
- ♦ Operable on normal city water pressure (see flow chart, page 10)

NOTE: Intended for cold and hot water use only.

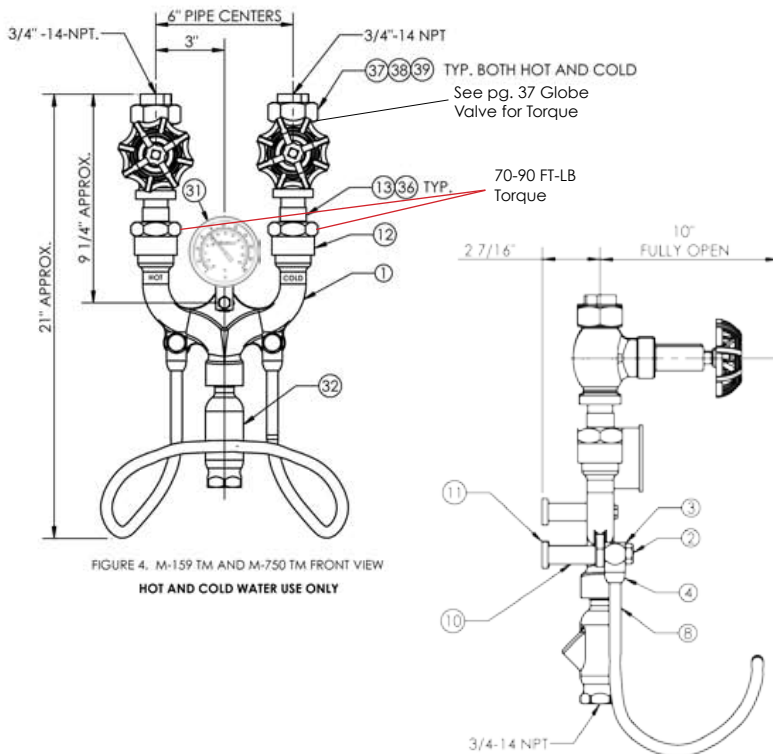
REFER TO PAGE 1 FOR IMPORTANT ADDITIONAL INFORMATION.



Shown: Stainless steel **M-750TG** with globe valves;
shown with premium hose assembly and **S-70 Series** nozzle

Hot and Cold Water Mixing Units

M-159TG and M-750TG Mixing Units-Hose Stations Parts Listing

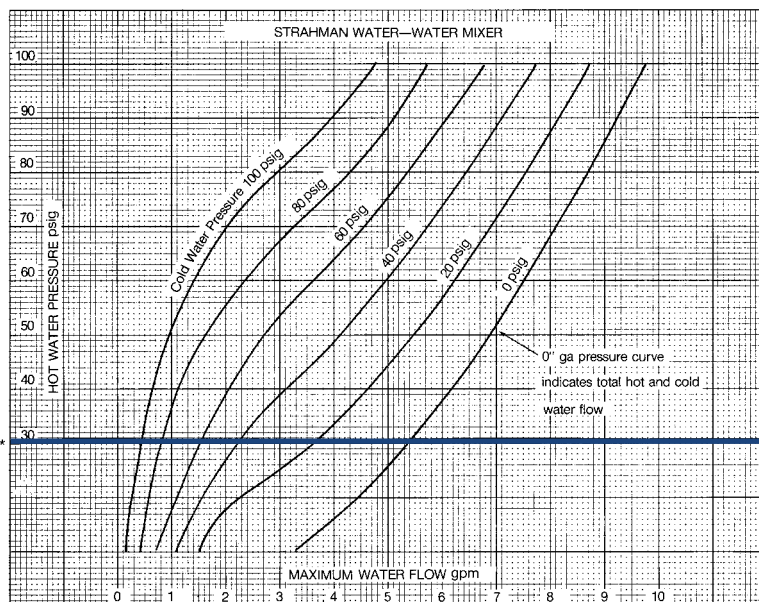


PARTS	
PART NO.	PART
1	BODY
2	CAP SCREW
3	LOCK WASHER
4	HOSE RACK CONNECTOR
8	HOSE RACK
10	SPACER
11	WALL PLATE
12	UNION NUT
13	CHECK VALVE
31	TEMPERATURE GAUGE
32	BLENDING CHAMBER
36	CHECK VALVE GASKET
37	INLET UNION NUT
38	UNION TAIL PIECE
39	UNION GASKET (for M-159TG)
39	SPRIALWOUND GASKET (for M-750TG)

Order by name and number.

*Sold as a complete unit.

M-159TG and M-750TG Mixing Units-Hose Stations Flow Chart



*Minimum pressure shown in blue.

Example: Available Pressure 50 PSIG, 60 PSIG

At 50 PSIG, use "0" PSIG curve to get 7 GPM total flow.
At 60 PSIG, use "0" PSIG curve to get 7.5 GPM total flow.

To get hot water GPM flow through unit:

- | | | | | |
|----------------------|---|---------------------|---|--------------------|
| 1. 50 PSIG hot water | → | 3.5 GPM hot water | → | 7 GPM total flow |
| 50 PSIG cold water | | 3.5 GPM cold water | | |
| 2. 50 PSIG hot water | → | 2.75 GPM hot water | → | 7 GPM total flow |
| 60 PSIG cold water | | 4.25 GPM cold water | | |
| 3. 60 PSIG hot water | → | 4.5 GPM hot water | → | 7.5 GPM total flow |
| 50 PSIG cold water | | 3.0 GPM cold water | | |

Instructions for Computing Above:

To get the GPM flow from the unit, use the hot water pressure PSIG indication shown above. From 50 PSIG hot water, go to the "0" PSIG curve and move to the bottom of the chart, which shows maximum water flow GPM. This would indicate a flow of 7 GPM.

To get the GPM of hot water being used through the unit, go to 50 PSIG hot water pressure and move to 50 PSIG cold water pressure. Drop to maximum water flow GPM. This would indicate 3.5 hot water GPM, 3.5 cold water GPM for a total of 7 GPM. Keep in mind, if you increase the cold water pressure, you decrease the hot water GPMs.

M-200TS Thermostatically Controlled Mixing Unit

The **Model M-200TS** features rugged construction and superb quality for superior thermostatic control. The unit's accurate and solid, liquid-filled thermostat allows you to set the exact output water temperature desired — from 80°F to 160°F. With its durable body construction (bronze), the **M-200TS** valve features replaceable components that resist corrosion. Both the piston and liner are made of stainless steel material for long-lasting reliability. The unit also includes an integral shut-off valve. Backed by a one-year warranty. This unit is available in bronze or chrome-plated/stainless steel.

Specifications

- ◆ Maximum water temperature 160°F/71°C
- ◆ Minimum pressure required 10 psi hot, 10 psi cold
Balanced pressure
- ◆ Maximum working pressure 125 psi
- ◆ Maintains temperature to +/-3°F
- ◆ ½" low flow unit 5-7 gpm
- ◆ ¾" high flow unit 10-12 gpm
- ◆ Single lever On/Off operation
- ◆ Precise temperature control from
80°F/27°C to 160°F/71°C
- ◆ Adjustable temperature limit stop
for maximum safety
- ◆ Replaceable components facilitate servicing
- ◆ Senses and compensates for temperature or pressure
fluctuations (up to a 50% drop in inlet supply pressure)

Thermostat

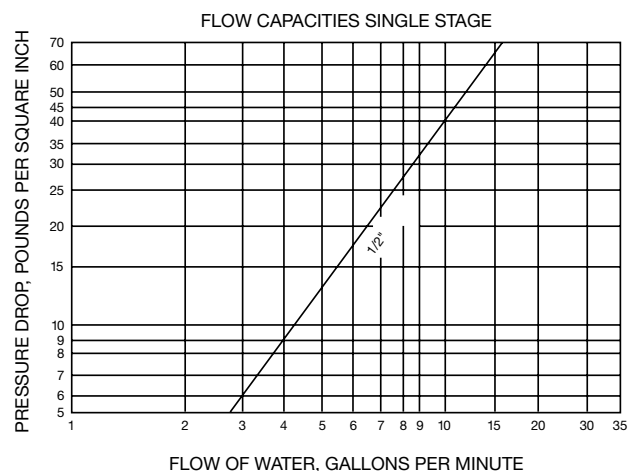
- ◆ Senses slight pressure fluctuations
- ◆ Is hydraulically formed, liquid-filled bellows
- ◆ Is linear in its expansion and exerts the highest possible operating force directly to the valve piston
- ◆ Must have a minimum of 15°F differential between hot and cold inlet and outlet set temperature

NOTE: Supply hot water must not exceed 180°F.

NOTE: Intended for cold and hot water use only.

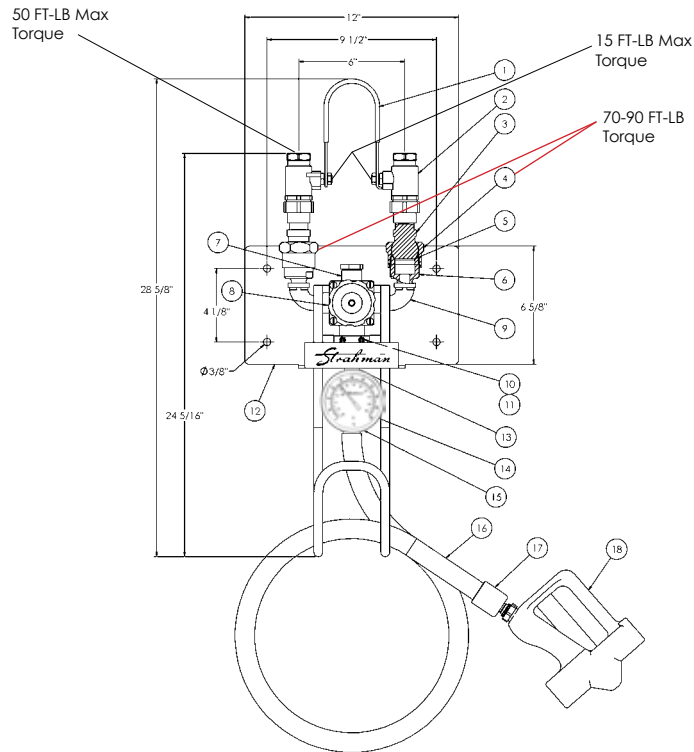


Shown (top left): M-200TS in bronze; shown with premium hose assembly and M-70 Series nozzle. Unit also available in chrome-plated/stainless steel.



REFER TO PAGE 1 FOR IMPORTANT ADDITIONAL INFORMATION.

M-200TS Thermostatically Controlled Mixing Unit Parts Listing



PARTS			
PART NO.	PART	MATERIAL	QUANTITY
1	UNILEVER	SST	1
2	BALL VALVE	SST	2
3	CHECK VALVE	CHROME-PLATED BRASS w/ SST INTERIOR	2
4	UNION NUT	CHROME-PLATED BRASS	2
5	GASKET	COPPER	2
6	CHECK VALVE ADAPTER	CHROME-PLATED BRASS	2
7	MIXING VALVE	CHROME-PLATED BRONZE w/ SST INTERIOR	1
8	CONTROL KNOB	NYLON	1
9	STREET ELBOW	SST	2
10	U-BOLT	SST	1
11	#10 NUT	SST	2
12	MOUNTING PLATE	SST	1
13	NIPPLE	CHROME-PLATED BRASS OR SST	1
14	TEMPERATURE GAUGE	SST	1
15	TEE	CHROME-PLATED BRASS OR SST	1
16*	HOSE ASSEMBLY "Y"	CHROME-PLATED FITTINGS	1
17	SWIVEL-PRO ADAPTER	STAINLESS STEEL	1
18	HYDRO-PRO 150° NOZZLE	SST/BRASS/NYLON	1

Note: Drawing shown with optional "ergonomic package" *Hydro-Pro 150° spray nozzle* and *Swivel-Pro adapter* on lightweight extruded hose.

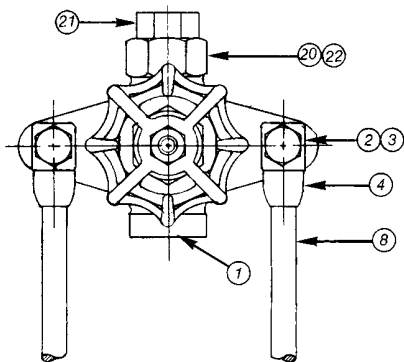
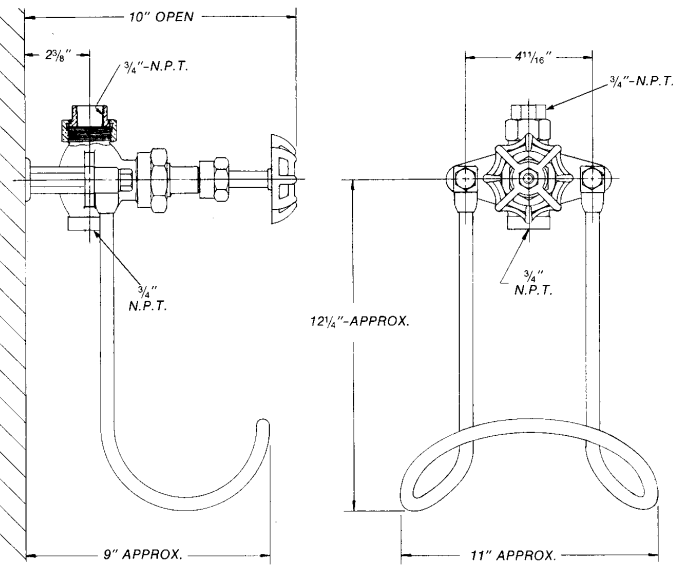
M-756 Stainless Steel Wall-Mounted Hose Station
M-156N Bronze Wall-Mounted Hose Station

These hot or cold water hose stations are designed for use wherever hose service is required. The compact units include a single control valve, stainless steel hose rack and mounting attachments. Wall-mounted unit is designed to mount one inch away from the wall.

Specifications

- ♦ Maximum recommended operating temperature: 200°F/93°C
- ♦ Maximum working pressure: 150 psi

NOTE: Intended for cold or hot water use only.



See pg. 37 Globe Valve for Torque



Shown above: M-756 with MP-88 mounting plate; shown with Strahman premium hose assembly and S-70 Series nozzle.
Shown below: M-156N; shown with Strahman premium hose assembly and M-70 Series nozzle, available with MP-88 mounting plate.

PARTS	
PART NO.	PART
1	BODY
2	CAP SCREW
3	LOCK WASHER (Not shown)
4	CONNECTOR
6	SLEEVE ANCHOR (Not shown)
8	HOSE RACK
10	SPACER (Not shown)
11	MP-88 MOUNTING PLATE (Not shown)
20	UNION GASKET
21	UNION TAIL PIECE
22	INLET UNION NUT

For parts 20, 21, and 22 see page 34. Order by name and number.

Hot or Cold Water Wall-Mounted Units

M-358 Bronze Series M-758 Stainless Steel Series

Designed for use where concealed piping and attractive appearance are required, these hose stations product hot or cold water. The compact unit includes a single control valve, stainless steel hose rack and mounting attachment.

Available in Recessed and Pedestal Series.

Specifications

- ♦ Maximum recommended operating temperature: 200°F/93°C
- ♦ Maximum working pressure: 150 psi

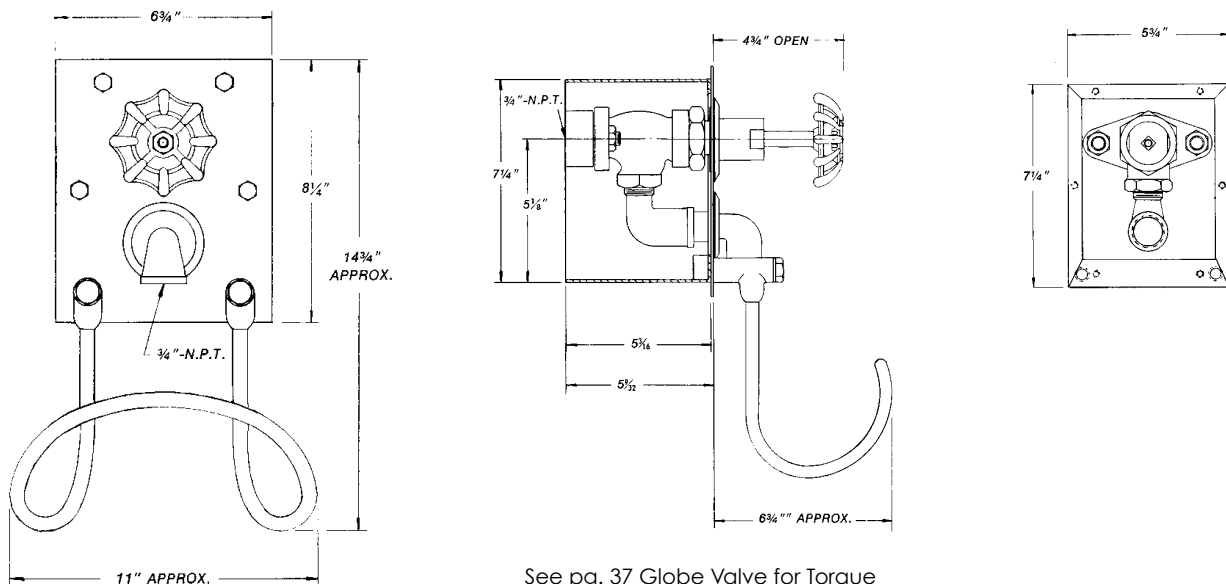
NOTE: When ordering, specify angle valve (back entry) or globe valve (top entry).

NOTE: Intended for cold **or** hot water use only; not suitable for steam service.



Shown above: M-758 recessed; shown with Strahman premium hose assembly and S-70 Series nozzle.
Available: Bronze M-358; both also available as a pedestal series.

M-358/M-758 Recessed Series Dimensions



M-120 Wall-Mounted Hose Station

The **M-120 Wall-Mounted Hose Station** is made of stainless steel and comes with (2) ½” stainless steel wall mounting bolts and zinc plated steel anchors for strength and durability.

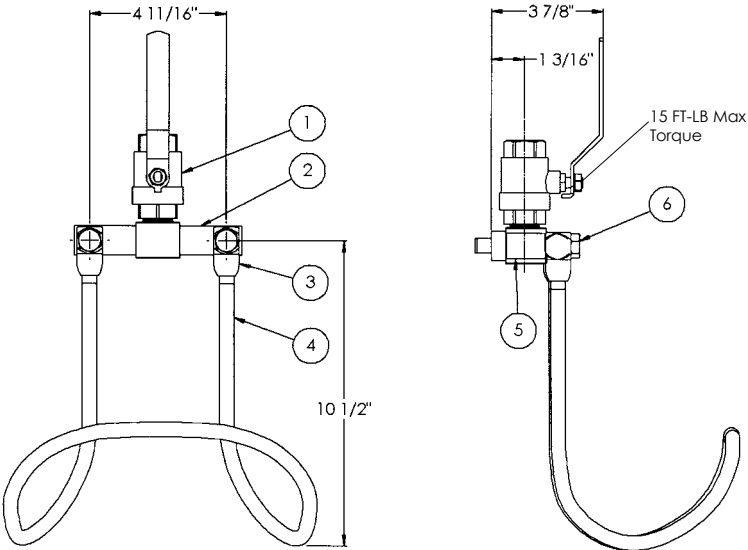
Specifications

- ♦ Maximum operating temperature 200°F/93°C
- ♦ Ball valve and bracket are rated at a maximum working pressure 1,000 psi
- ♦ With Strahman Hose Assembly and Nozzle, maximum working pressure 150 psi
- ♦ ¾” full port 316 stainless steel ball valve, PTFE packing
- ♦ Stainless steel hose rack for 50 feet of hose
- ♦ ½” Stainless steel wall mounting bolts
- ♦ Stainless steel ¼ turn On/Off valve for ease of operation
- ♦ Zinc plated steel anchors

NOTE: Intended for cold **or** hot water use only; not suitable for steam service.



Shown: M-120 Wall Mounted Hose Station; shown with premium hose assembly and S-Series nozzle.



PARTS		
PART NO.	PART	MATERIAL
1	BALL VALVE	316 SST
2	BRACKET	304L SST
3	HOSE RACK CONNECTOR	303 SST
4	HOSE RACK	302 SST
5	HOSE RACK SPACER	303 SST
6	½” BOLT	18-8 SST

CEC-1000 Series

Strahman's **CEC-1000** stainless steel cabinets keep mixing units and hoses out of the way and free from dust. Any standard Strahman wall-mounted mixing unit-hose station can be installed in this spacious cabinet, which is designed with flush hinges to allow the unit's large double doors to swing open at 180°, making it easy to access and clean the enclosed unit.

When ordering, specify angle valves (back entry) or globe valves (top entry).

Specifications

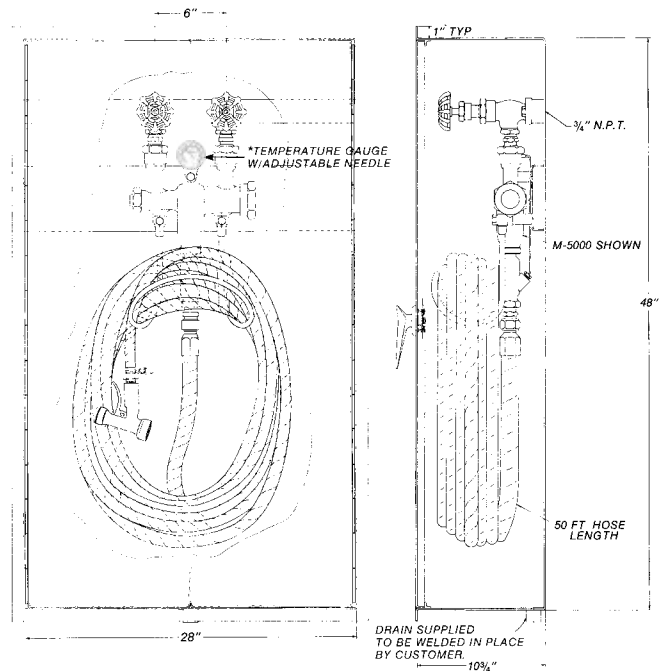
- ♦ **Maximum working pressure:** 150 psi
- ♦ **Maximum working temperature:** 200°F/93°C
- ♦ CEC-1000 Series available for:
M-5000TG/M-5700TG/M-5000TG Low Flow
M-159TG/M-750TG
M-156N/M-756
M-144TG

NOTE: Individual unit specifications for cabinet mounting are available upon request.

NOTE: To ensure proper performance, we recommend that a standard Strahman Hose Assembly be used with these products.



Shown: M-750TG unit with hose assembly and nozzle.



Shown: M-5000TG unit with Hose Assembly and nozzle enclosed in cabinet above.

Note: Custom enclosures available for surface mounting and/or inclusion of auxiliary equipment.

"We buy the Strahman nozzles because in essence there is no competition. There is no product on the market that matches the quality and durability of Strahman."

Glen, General Manager
Sweetener Manufacturer

Recessed Series

Strahman's recessed mixing units are designed to conceal mixing unit piping in a stainless steel box for recessed wall mounting. All exposed parts are stainless steel. These units are ideal for new construction or other places where concealed piping and good looks are desirable.

Specifications

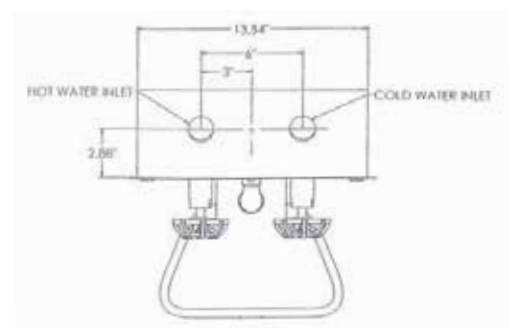
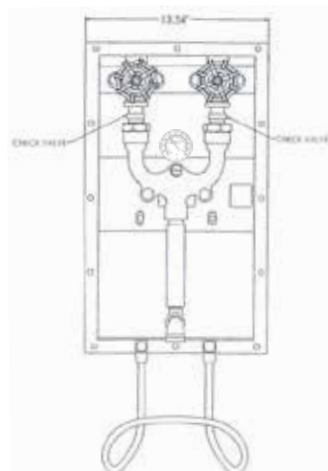
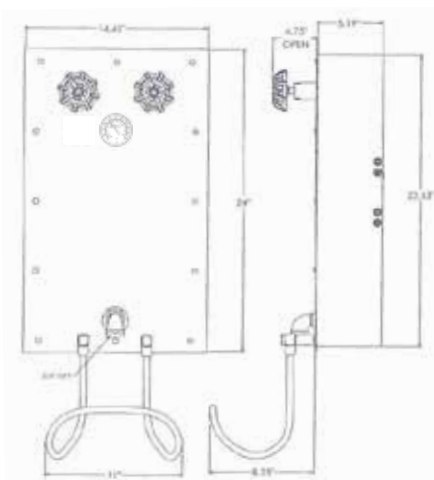
- ♦ **Maximum recommended operating temperature** 200°F/93°C
- ♦ **Maximum working pressure** 150 psi
- ♦ Recessed Series available for:
M-5000TG/5700TG/M5000TG Low Flow,
M-159/750/159TG/750TG

NOTE: When ordering, specify angle valves (back entry) or globe valves (top entry).



Shown: Recessed Series with M-5000TG unit; shown with premium hose assembly and S-70 Series nozzle

Recessed Series Dimensions



Shown: Recessed Series with M-159TG unit

M-200TS Recessed Wall Box

The Thermostatically Controlled Hot and Cold Water Mixing Unit features high quality and rugged construction. The unit's accurate, solid, liquid-filled thermostat allows you to set the exact output of water temperature desired from cold to 160°F. Featuring durable bronze body construction with replaceable corrosion-resistant components, the **M-200TS** valve maximizes cleaning effectiveness for any application. Both the piston and liner are made of stainless steel for long-lasting reliability.

Specifications

- ♦ Integral one button shut-off: Pull on and push off
- ♦ Precise temperature control from cold to 110°F to 160°F in this instance (There is a 50° difference from maximum temperature to cool water.)
- ♦ Adjustable temperature limit stop for operator safety
- ♦ Replaceable components facilitate service
- ♦ Optional compressed air outlet

NOTE: 1-year warranty



Shown: Recessed Series with M-200TS unit; shown with premium hose assembly and S-70 Series nozzle

"The Strahman equipment really holds up. The products do not have to be replaced often, which helps with our budgeting. The customer service is great too. Mainly, the equipment holds up. It's strong...you install it and forget it. For plant engineers that's great because you don't have to worry about purchasing new equipment each year."

Ron, Director of Safety, Dairy

Multiple Series with Airline

Strahman's air equipped wall plate adds a new element for customers in need of a compressed air hookup near their mixing unit. The finished stainless steel plate allows for easy mounting and maintenance of both the mixing unit and compressed air valve.

Pedestal Series

Strahman's pedestal-type mixing-units can be mounted anywhere floor piping is available. The pedestal tube, head and cover are ruggedly constructed of stainless steel, while the mixing unit is stainless steel, making it ideal where efficiency and good looks are desired.

Specifications

- ♦ Maximum water temperature: 200°F/93°C
- ♦ Maximum working pressure: 150 psi steam

Multiple and Pedestal Series Available:

*Standard Mixing Units Available
in Bronze and Stainless Steel*

- | | |
|---------------------|------------|
| ♦ M-5000TG | ♦ M-750TG |
| ♦ M-5000TG Low Flow | ♦ M-156N |
| ♦ M-5700TG | ♦ M-756 |
| ♦ M-159 | ♦ M-144TG |
| ♦ M-159TG | ♦ M-5000TS |
| ♦ M-750 | |

Please contact Customer Service for product details.



Shown: Multiple Series *M-750* with ball valves; shown with premium hose assembly and *S-70 Series* nozzle.



Shown: Pedestal Series *M-750TG* with globe valves; shown with premium hose assembly and *HP-150* nozzle.

M-70 Bronze Series Spray Nozzle M-70 Low Flow Bronze Series Spray Nozzle S-70 Series Stainless Steel Spray Nozzle

Many of our customers have said Strahman spray nozzles are the best on the market. That is because at Strahman, we combine modern and innovative engineering with premium quality parts to build hose nozzles strong enough to withstand even the most rugged applications.

All of Strahman's spray nozzles are available in black, white or red.

This rubber-coated, precision-made nozzle enables the operator to achieve any type of stream of water — from a soft spray to a strong, straight stream — simply by pressing the lever. This convenient control of the wash assures better cleaning with a lot less effort.

The **Automatic Water Saver Spray Nozzle** automatically shuts off the moment the lever is released, thereby eliminating all waste of water. *By purchasing an M-70 Low Flow, you will benefit from reduced water consumption rates and still get the same modern and innovative engineering principals and premium quality parts found in all of our products.*

Specifications

- ◆ **Maximum working pressure:** 150 psi (10 BAR)
- ◆ **Maximum recommended operating temperature:** 200°F/93°C
- ◆ M-70 Series and Low Flow: all bronze construction
S-70 Series: stainless steel construction
- ◆ Available: Black (M-70, M-70FL, S-70)
White (M-75, M-75LF, S-75)
Red (M-77, M-77LF, S-77)
- ◆ Long handle design grip for whole hand placement
- ◆ Replaceable (heavy duty) rubber cover
- ◆ Stainless steel seat design prevents nozzle seat leakage
- ◆ Instant water shut-off when trigger is released
- ◆ Optional ½", ⅝", ¾" I.D. hose barb, or ¾" GHT swivel or non swivel adapter with locking ring; bronze or stainless steel

NOTE: Intended for water use only;
not suitable for steam service

NOTE: 1-year limited warranty



Shown: Red M-70 (black cover),
M-75 (white cover),
M-77 Low Flow (red cover)

M-70 FLOW TEST		
	STANDARD	LOW FLOW
PSI	FLOW (gpm)	
20	3 ¼	2 ¼
30	4 ¼	2 ¾
40	5 ⅛	3 ¼
50	5 ⅞	3 ¾
60	6 ¾	4 ⅛
70	7 ½	4 ½
80	7 ¾	4 ⅞
90	8 ¼	5
100	9	5 ⅞

Mini M-70 Bronze Series Spray Nozzle

NEW! Mini S-70 Stainless Steel Series

Strahman, the industry leader, adds the **Mini M-70** to its family of nozzles. The **Mini M-70** weighs only 1.8 lbs. and provides the same high quality as Strahman's premium heavy-duty M-70.

Offered only in bronze construction until now, the Mini S-70 Series Spray Nozzle is now available in all stainless steel construction!

Specifications

- ◆ **Maximum working pressure:** 150 psi (10 BAR)
- ◆ **Maximum recommended operating temperature:** 200°F/93°C
- ◆ **Flow rates:** 2.5-7 gpm at 50-80 psi
- ◆ Long handle design grip for whole hand placement
- ◆ Weighs only 1.8 lbs
- ◆ Rev-o-cap Renewable Cartridge unit design for greater longevity
- ◆ Replaceable (heavy duty) rubber cover available in black and white
- ◆ Stainless steel seat design prevents nozzle seat leakage
- ◆ Bronze or stainless steel construction
- ◆ Instant water shut-off when trigger is released
- ◆ Includes ½", ⅝", ¾" I.D. hose barb, or ¾" GHT swivel adapter with locking ring

NOTE: Intended for water use only;
not suitable for steam service



Shown Above: White bronze *Mini Series Nozzle* with ¾" GHT swivel adapter

Shown Below: Black stainless steel *Mini Series Nozzle* with ¾" GHT swivel adapter

S-80 Series Solid Stream Spray Nozzle S-80 Series Stainless Steel Solid Stream Spray Nozzle

This heavy duty, Strahman **Solid Stream Nozzle** releases a solid stream of water only, and it is perfect for applications where fast, efficient cleanup is necessary, but with minimum moisture. The **S-80 Series** nozzle washes away solids while keeping surrounding areas dry.

F-90 Series Soft Spray Nozzle S-90 Series Stainless Steel Soft Spray Nozzle

Strahman's **Soft Spray Only Nozzle** releases a soft spray that won't damage breakable products. It shuts off automatically when the nozzle's lever arm is released to help eliminate all waste of water.

Specifications

- ♦ **Maximum working pressure:** 150 psi (10 BAR)
- ♦ **Maximum recommended operating temperature:** 200°F/93°C
- ♦ Available: Black (S-90, F-90, S-80),
White (S-95, F-95, S-85)
Red (S-97, F-97, S-87)

NOTE: Intended for water use only;
not suitable for steam service



Shown: Black *S-80 Series* nozzle,
White *F-95 Series* nozzle, and Red *F-97 Series* nozzle

E-76 Series Extension Nozzle

S-76 Series Stainless Steel Extension Nozzle

The **Strahman Extension Nozzle** was designed specifically for use in the meat-packing industry. It includes a standard, water-saving spray nozzle with a three-foot standard stainless steel extension shaft for washing down meat, and for use in other hard-to-reach applications. (Special length extension shafts are available upon request.) Government-approved and industry-tested, the Extension Nozzle includes interchangeable heads — one is for adjusting the water stream from a steady stream to a fine spray; the other is a chisel head which gives off a fan spray.

The extension's curved head directs spray water in a downward direction, perfect for washing away grease and grime that might drop onto meat from overhead rafters. (Straight extensions are also available.)

Specifications

- ♦ Maximum working pressure: 150 psi (10 BAR)
- ♦ Maximum recommended operating temperature: 200°F/93°C
- ♦ Available: black, white and red

NOTE: Intended for water use only; not suitable for steam service



"The Strahman Spray Nozzles simply do not wear out. It's just an excellent product. They are simply the best on the market. I'm looking forward to trying the new Hydro-Pro Spray Nozzle."

Ron, Superintendent
Bakery Industry

Shown: Black E-76 with extension, Red E-76 with extension, White E-76 with extension
Available: Stainless steel S-76 in black, white and red

Hydro-Pro 150® Spray Nozzle Hydro-Pro 150® Low Flow Spray Nozzle

The Strahman **Hydro-Pro 150®** is constructed with a stainless steel housing for strength and durability, yet this solid, water saver spray nozzle weighs less than two pounds, and is ergonomically designed to reduce user fatigue. In addition to being extremely lightweight, the **Hydro-Pro 150®** features a patented, locking trigger mechanism that allows users to lock in a desired spray pattern without having to maintain pressure on the trigger. It also reduces misdirected spraying. Equipped with a waterproof nylon cover that resists cracks and abrasions, this rugged nozzle lasts for a long time and stays cool even when using water as hot as 200°F. It is the most advanced spray nozzle around, and it is only from Strahman!

*Along with these features, when you purchase a **Hydro-Pro 150 Low Flow Spray Nozzle**, you will quickly see a **reduction in water consumption and the savings that are sure to go along with it!***

Specifications

- ♦ **Maximum working pressure:** 150 psi (10 BAR)
- ♦ **Maximum recommended operating temperature:** 200°F/93°C
- ♦ Standard and Low Flow available: black, white and red
- ♦ Available with or without swivel adapter

NOTE: Intended for water use only; not suitable for steam service



Shown: White *Hydro-Pro 150*
Shown Below: Black *Hydro-Pro Low Flow*
and Red *Hydro-Pro 150*



"The Hydro-Pro is comfortable to hold, with no discernible heat transfer to workers' hands. And, the new nozzles have been dropped, scraped and banged during test use, yet continue to work perfectly."

Michael, Production Manager
Soft Drink Bottling Plant

HYDRO-PRO-150 FLOW TEST		
	STANDARD	LOW FLOW
PSI	FLOW (gpm)	
20	3 ¼	2 ¼
30	4 ¼	2 ¾
40	5 ⅛	3 ¼
50	5 ⅞	3 ¾
60	6 ¾	4 ⅛
70	7 ½	4 ½
80	7 ¾	4 ⅞
90	8 ¼	5
100	9	5 ⅞

Hydro-Pro 150® QC Spray Nozzle

The **Hydro-Pro 150QC®** spray nozzle is specially designed to accept any of the Quick Connect attachments with a simple ¼ turn to connect and disconnect for safe and convenient cleaning! Same great performance as the original **Hydro-Pro 150** Spray Nozzle.

Specifications

- ♦ **Maximum recommended operating pressure:** 200°F/93°C
- ♦ **Maximum working pressure:** 150 psi
- ♦ **Flow rates:** 5-7 gpm (50-80 psi);
10 gpm maximum
at 150 psi
- ♦ Available: black, white or red cover
- ♦ Available with or without swivel adapter

NOTE: Intended for water use only.
Not suitable for steam service.

Features

- ♦ Plastic 16 oz. bottle or 2 gallon container for safe, convenient, targeted applications of soaps and disinfectants
- ♦ 6," 24" and 36" stainless steel extension wand for concentrated directional spray
- ♦ Stainless steel deflector tip on container attachments ensures spray direction
- ♦ Operating temperature, pressure and flow rates are the same as the original Hydro-Pro spray nozzle

Quick Connect Accessories

- ♦ 2 gallon soap reservoir bottle
- ♦ 6" extension wand with 16 oz. bottle
- ♦ 6" extension wand with interchangeable heads (adjustable and chisel type)
- ♦ 24" extension wand, straight flow only
- ♦ 36" extension wand with interchangeable heads (adjustable and chisel type)



Shown: Red *Hydro-Pro 150* with extension



Shown: 2 gallon container attachment



Shown Above: Black *Hydro-Pro 150* with 6" extension wand with interchangeable adjustable and chisel type head
Shown Below: Black *Hydro-Pro 150* with 16 oz. bottle

BRAND NEW HydroSwivel® Sweeper

NEW HydroSwivel® Sweeper

Strahman's new HydroSwivel® Sweeper is a multi-functioning cleaning tool for cleaning virtually any surface! It features all stainless steel and acetal polymer construction, interchangeable tips with varying flow rates, a high-impact thermally protective cover, and comes with a bronze Mini M-70 spray nozzle. Just a few of the sweeper's applications include pharmaceutical, food processing, dairy, meat processing, supermarkets, and restaurants.

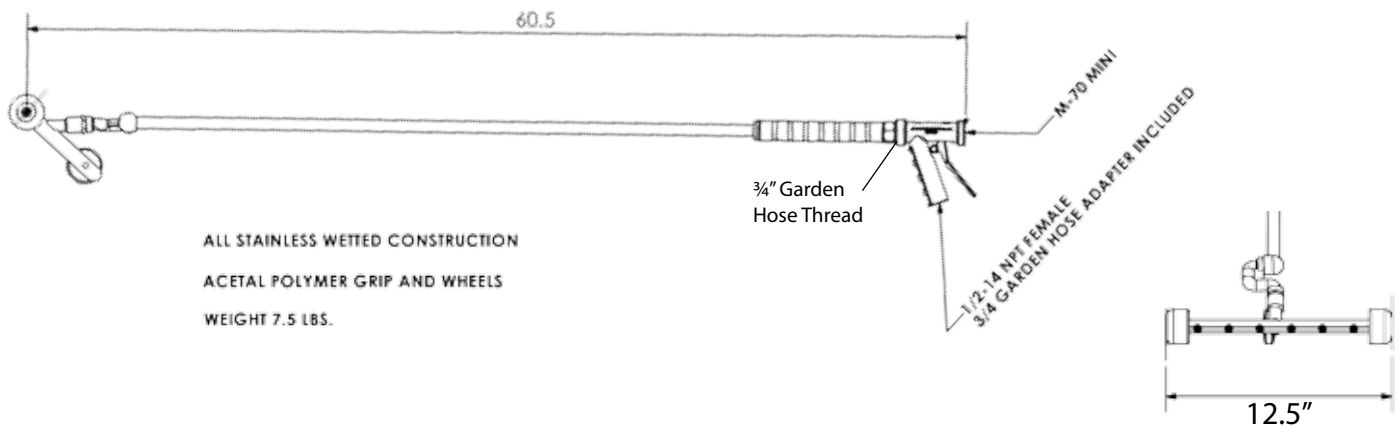
Strahman's HydroSwivel® Sweeper comes with six spray tips, which are all interchangeable for a range of flow rates, and it features a fully articulated patent pending HydroSwivel® joint which provides excellent maneuverability in and under hard-to-reach places. The sweeper uses high-velocity water at normal domestic supply pressures to effectively clean most surfaces with minimal impact. Clean all of your floor surfaces, even those under hard to reach places, with a spray pattern directed to the floor for deep cleaning of grout without over-spray to walls and without the damaging effects of other hi-pressure systems.

Specifications

- ♦ Standard flow rates: 5.9 GPM at 60 psi
Interchangeable tips ranging from 2.5 GPM to 10 GPM at 60 psi
- ♦ All stainless steel construction with solid, non-marring acetal polymer wheels for chemical resistance
- ♦ HydroSwivel® Sweeper comes with Strahman's bronze Mini M-70 spray nozzle, which can be removed and also used as a stand-alone spray nozzle for other applications
- ♦ Features a fully articulated, patent pending HydroSwivel® joint which provides excellent maneuverability; spray manifold rotates a full 360°
- ♦ Supplied with both 1/2-14 NPT Female and 3/4" Garden Hose supply connections



Shown: HydroSwivel® Sweeper, 6 tips, with black Mini M-70 spray nozzle



Kwik Clean 3® Nozzle - EPA 2005 Compliant

Strahman's new Kwik Clean 3® tri-spray nozzle has the best performance, best construction, best warranty, best lifetime value, best user-satisfaction and best environmental-friendliness in the world. And, each of its three tips is ultra-low-flow, using less than 1 GPM (3.78 LPM).

- **Best Performance:** Cleanability: Strahman = **15.55 seconds**; other manufacturers can take over 20 seconds.
- **Best Construction:** Only Strahman uses **all stainless steel** for its operating parts; others use only a small part of stainless, then substitute with plastic and chrome-plated brass.
- **Best Warranty:** Strahman - **2 years**; others - 1 year.
- **Best Lifetime Value:** Don't be fooled by simple low flow. A 0.64 gpm (2.42Lpm) nozzle that takes 35% longer to clean wastes time. And, time is money. With 35% savings in hot water use, benefit from **water, sewer and energy savings** of up to **\$1,000 per year**.
- **Best User-Satisfaction:** In a recent U.S. EPA field trial, Kwik Clean 3® was the only ultra-low-flow (<1 gpm/3.78 Lpm) nozzle to receive the highest user-satisfaction score of 3 out of 3 (1 = not satisfied, 3 = completely satisfied).
- **Best Environmental-Friendliness:** Annually, each Kwik Clean 3® can save up to 87,000 gallons of water; 87,000 gallons of sewage; 44,000,000 btu's and 15,000 pounds of CO₂ emissions.
- **Best Flexibility:** All three <1 gpm (3.78 Lpm) tips are easily removeable and cleanable. Dozens of tips and flow rates are available on demand.
- Fits all competitive handles.



Strahman's Vari-Spray® is the low-flow pre-rinse spray nozzle with the world's best flexibility and truly superior cleaning performance. Benefits of Strahman's new Vari-Spray® pre-rinse spray nozzle:

- **Infinite choice of spray patterns** (from a hollow cone to a powerful solid jet stream) instantly available at the squeeze of the trigger.
- **Eliminates the need for a separate handle** (yes, we turned the handle into a nozzle).
- **Vari-Spray® standard flow rate: 1.25 gpm (4.7 L) at 60 psi (4.1 BAR).**
- **Low-flow** consuming 12% less water, sewage and energy than the industry standard.
- **All stainless steel operating parts** versus the industry standard plastic and chrome-plated brass.
- **2 year warranty** versus the industry standard of 1 year.
- Buy one Vari-Spray® for every three or four competitor's nozzles in any 5 year period.
- **Save about \$450 per year** in water, sewer and energy costs versus the industry standard 1.42 gpm (5.4 L) nozzle.



Please contact Strahman Valves, Inc. for more information about our full pre-rinse product line which includes pre-rinse spray nozzles, handle, super-reinforced pre-rinse hose, Pivot-Pro, hose reels and accessories.

Strahman Hose Assemblies

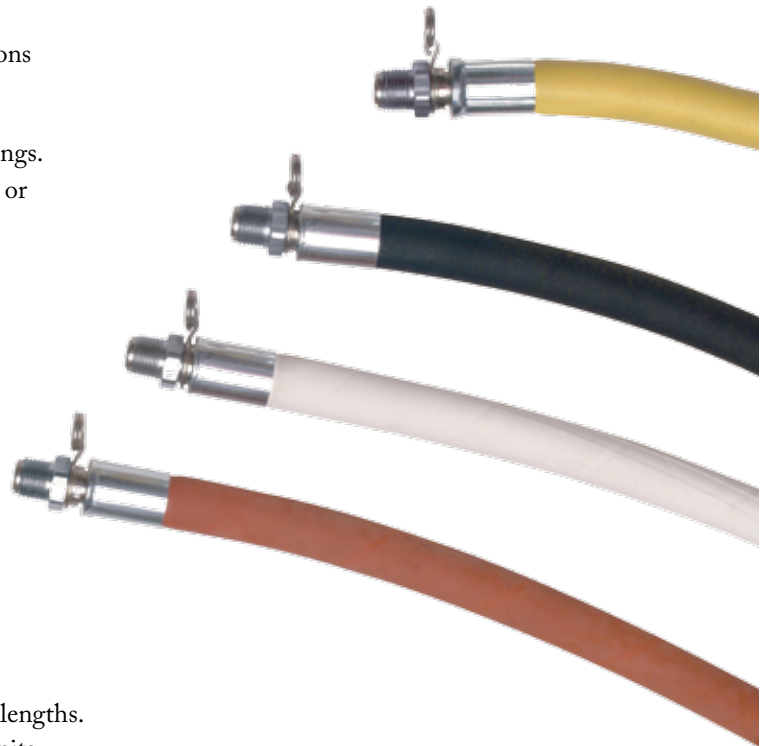
Strahman has been supplying industrial strength hoses since 1921. We combine years of solid craftsmanship and innovative new solutions to offer hoses that are safe, reliable, durable, and easy to maintain.

All Strahman hoses are assembled with bronze or stainless steel fittings. Some hoses include stainless steel internal spring assemblies on one or both ends for added durability and extended hose life.

Shown (top to bottom):

- ◆ 5/8" I.D. / 1 1/8" O.D. Extruded yellow hose with FDA approved internal tube.
Also available in black and white.
- ◆ 5/8" I.D. / 1 1/8" O.D. Premium Wrapped black hose with FDA internal tube.
- ◆ 5/8" I.D. / 1 1/8" O.D. Premium Wrapped white hose with FDA internal tube — food grade hose.
- ◆ 5/8" I.D. / 1 1/8" O.D. Premium Wrapped red hose with FDA approved internal tube.

NOTE: Strahman hoses come standard in 25, 50, 75, and 100 foot lengths. Standard length 50 foot hose supplied for use on mixing units-hose stations. Check with factory if longer length is required.



STRAHMAN HOSE ASSEMBLIES			
HOSE I.D. / O.D. DESCRIPTION	COLORS AVAILABLE	TEMPERATURE RATING	USE/RATING CODE
5/8" I.D. / 1 1/8" O.D. EXTRUDED	BLACK, YELLOW, WHITE	-20 to 200°F	A
5/8" I.D. / 1 1/8" O.D. PREMIUM WRAPPED	RED, WHITE, BLACK	-20 to 200°F	B

Note: When used with mixing-unit hose stations, the maximum pressure rating will be 150 psi.

Note: Do not excessively tighten hose end nut during installation.

USE/RATING CODES:

A: USE - Excellent abrasion resistance, oil, fat and chemical resistance.
B: USE - Oil, fat and chemical resistance.

RATING - General purpose hose for food, water and air with FDA approved tube.
RATING - General purpose hose for food, water and air with FDA approved tube.

REFER TO PAGE 1 FOR IMPORTANT ADDITIONAL INFORMATION.

For Use With Mixing Unit-Hose Stations and Hose Reels — Premium Wrapped Hose Assembly and Extruded Hose Assembly

Premium Wrapped Hose Assembly R and RS

Masterfully crafted with precisely woven super-strength cord, Strahman's **premium wrapped** water hose is engineered to provide extreme flexibility and strength, while remaining lightweight. In fact, it is the easiest handling hose made. The hose is covered with Neoprene, making it resistant to lactic acid and oil, and its unique braided construction resists kinks and contributes to the hose's ability, making it as flexible as rope and practically indestructible.

Available in red, white and black.

5/8" I.D. High pressure, Neoprene premium wrapped, Homoflex hot water hose. 5/8" hose adapter on hose with ball stop. Standard lengths: 25, 50, 75 and 100 feet.



Shown: Standard *S* Hose Assembly with stainless steel fittings; shown with *S-Series* nozzle.

Extruded Hose Assembly — A Lower Cost Hose for a Variety of Applications

Strahman's Extruded "Yellow" Hose costs less than our standard braided hoses, making it an economical solution for applications that don't require premium wrapped construction. The Extruded Hose is flexible, lightweight and easy to handle, yet it offers the same heavy-duty quality you expect from Strahman. This versatile, bright "yellow," 5/8" I.D. hose expertly resists oil, abrasives, and fatty and lactic acids, and it is designed to handle a wide range of temperatures and work pressures.

Available in yellow, black and white.

5/8" I.D. Extruded high pressure hot water hose with 3/4" male NPT fitting on unit end and swivel adapter on the other end. Standard lengths: 25, 50, 75 and 100 feet.



Shown: Extruded Hose Assembly with bronze fittings

Specifications

- ♦ Maximum working pressure: 150 psi
- ♦ Maximum working temperature: 200°F/93°C
- ♦ Available **premium** in red, black and white
- ♦ Available **extruded** in yellow, black and white

Ergonomic Hose Assembly

Ergonomic Extruded Hose Assembly

This flexible, lightweight $\frac{5}{8}$ " **extruded** high pressure hot water hose is made to fit Strahman's mixing units-hose stations (M-5000, M-159, M-156N, M-358, M-2000TS, M-5000TS).

$\frac{5}{8}$ " I.D. Extruded high pressure hot water hose with $\frac{3}{4}$ " male NPT fitting on unit end and Swivel-Pro adapter on the other end. Standard lengths: 25, 50, 75 and 100 feet.

Heavy Duty Water Hose Assemblies for Garden Hose Connection

"E" and "ES" (All Stainless Steel) Hose Assemblies

This high pressure, black, Homoflex, $\frac{5}{8}$ " I.D. hot water hose (with $\frac{3}{4}$ " female garden hose coupling on one end) is appropriate for any general hot- or cold-water wash down operation where a hose and spray nozzle are necessary. It is intended for use with hot and cold water only, and is not appropriate for use in steam service. This hose assembly is available in black, white or red hose. Other lengths are available.

Assembly "E" and "ES" — For general washdown with hot or cold water where a hose and spray nozzle are required. Standard lengths: 25, 50, 75 and 100 feet — for hot and/or cold water use only.

$\frac{5}{8}$ " I.D. High pressure Neoprene premium wrapped Homoflex black hot water hose with $\frac{3}{4}$ " female garden hose coupling on one end with Swivel Connector on the nozzle end. Option: Internal spring assembly (nozzle end).

HR-100 Wall-Mounted Hose Rack

A good looking and practical hose rack that helps to keep hoses neatly coiled and in place. It is designed for those places where hose service is required and yet does not call for a Strahman Mixing Unit. They can be easily installed on any conventional masonry wall (brick, tile, cement or cinder block) with expanding metal anchors, supplied with the unit. Model **HR-100** is designed to hold **maximum 50 feet of hose** and come with complete mounting instructions. Made entirely of Stainless Steel — except Loxin Shields. Supplied with conventional type fittings.

Optional: HR-100L designed to hold up to a maximum of 100 feet of hose.



Shown: Ergonomic Hose Package with Hydro-Pro 150 nozzle and Swivel Pro.



Shown: HR-100 Wall-Mounted Hose Rack; shown with premium hose assembly and S-70 Series nozzle.

Strahman Standard Hose Reel

Strahman's spring rewind hose reels, in stainless steel or carbon steel models, make winding and rewinding our heavy-duty water hose quick and efficient, and provide tiny hose storage and protection. Our reels are equipped with a heavy-duty internal spring motor for effortless winding and rewinding. A sturdy ratchet assembly locks the reel when the desired length of hose has been pulled out; a gentle tug on the hose will unlock the reel and trigger the spring motor to retract the hose. Each hose includes a ball stop to prevent damage to the hose reel rollers and our spray nozzle.

These convenient and sturdy hose reels can be installed on the floor, wall or ceiling, and come equipped either with or without our premium wrapped or extruded hose assemblies (with stainless steel or bronze fittings and nozzles). This hose assembly includes our $\frac{5}{8}$ " I.D. hose, in black, red, white or yellow with our water saver spray nozzle. Ceiling mount might require a special heavy-duty spring; please contact Strahman for information on ceiling mounted hose reels.



Shown: Standard Carbon Steel Hose Reel
Available: Stainless Steel Hose Reel

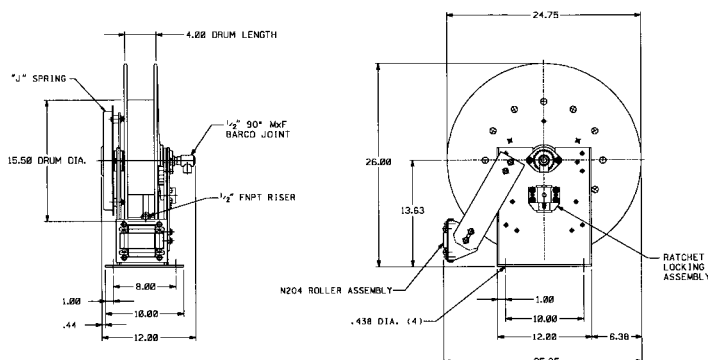
Specifications

- Standard holds up to 50 ft. of "R" or "RS" Carbon Steel/Stainless Steel ($\frac{5}{8}$ " I.D.) hose
- Hose reel also available to hold up to 100 ft. of "R" or "RS" Carbon Steel/Stainless Steel ($\frac{5}{8}$ " I.D.) hose

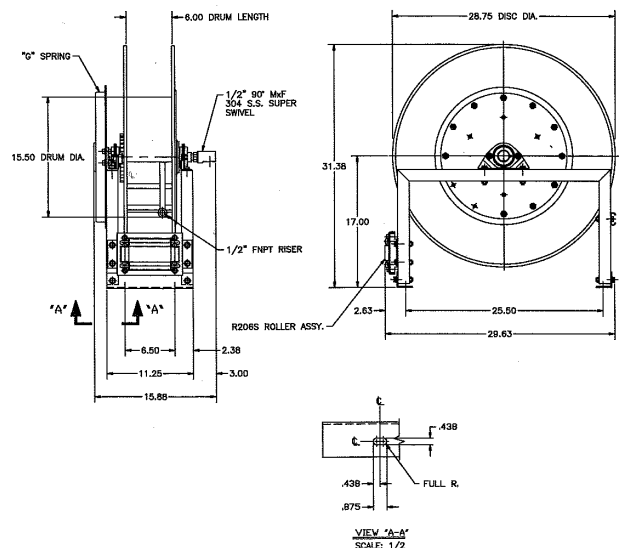
These reels are available for use with the following Strahman units:

M-156N, M-159/M-159TG, M-358, M-750/M-750TG, M-756, M-5000TG, M-5700TG, M-144TG, M-5000TS

NOTE: The Strahman spring rewind hose reel is now available for use with the M-5000 or M-5700 mixing unit series. Contact factory for details.



Standard hose reel to be used with our $\frac{5}{8}$ " I.D. hose assembly "R" or "RS" only, maximum length 50 ft.



Shown above, larger hose reel to be used with our $\frac{5}{8}$ " I.D. hose assembly "R" or "RS" only, maximum length 100 ft.

Hi-Sanitary Stainless Steel Hose Reel

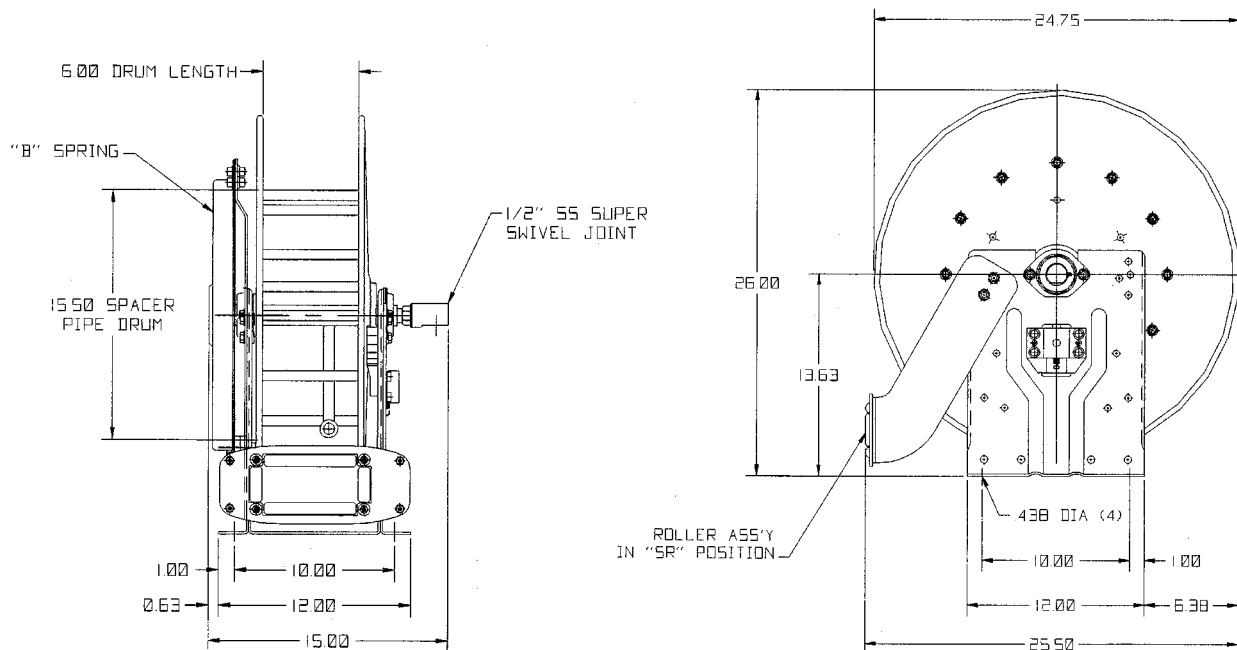
Our Hi-Sanitary Stainless Steel Spring Rewind Hose Reel is perfect for sanitary or harsh environments. The reel's polished, bare finish helps reduce the risk of contamination from chipped paint, providing the best surface for even the most stringent sanitary requirements. Offered to you by Strahman, the Hi-Sanitary Stainless Steel Hose Reel delivers the quality and durability you depend on for all your wash down applications.

Key Benefits

- ◆ Open construction allows for easy wash down and hand/brush scrubbing to minimize trapped food material
- ◆ Mounting plate with opening for easy cleaning and drying
- ◆ Automatic spring rewind assembly for safe, quick and easy rewind of hose
- ◆ All 304 stainless steel construction resists rust and corrosion
- ◆ Easily installed on floor and wall only
- ◆ 12-15 lbs. of force are required to unravel hose



Shown: Hi-Sanitary Hose Reel



Hose reel to be used with our 5/8" I.D. hose assembly "R" only, maximum length 50 ft.

The Swivel-Pro™ Standard with “Ergonomic Hose Package”

Swivel-Pro™, our latest swivel adapter, features an exclusive ergonomic design. The swivel adapter increases nozzle control to allow circular, horizontal and vertical nozzle movements — while maximizing your comfort and safety. When you package our exclusive **Swivel-Pro™** with our sturdy yet lightweight **Hydro-Pro 150® Spray Nozzle**, Strahman is able to offer its “Ergonomic Hose Package” which is perfect for industrial plant applications where ergonomic concerns exist.

Specifications

- ♦ **Maximum working pressure** 150 psi
- ♦ **Maximum working temperature** 200°F/93°C
- ♦ All stainless steel construction for strength and durability
- ♦ Allows circular, horizontal and vertical movements of nozzle without repositioning heavy hose for ergonomic value
- ♦ Supplied with vinyl boot for heat transfer protection in black or white
- ♦ **Available:** ½”, ⅝”, ¾” I.D. hose barb, garden hose thread and retro-fit
- ♦ **Available:** Standard (½” NPT) or Mini (⅜” NPT)
- ♦ **Available:** Sanitary/Hygienic Clamp on nozzle end

NOTE: 1-year limited warranty



Shown: Swivel-Pro adapter with Hydro-Pro 150 nozzle and Ergonomic Hose Package.

Hose Accessories and Adapters

Numerous, easy-to-install hose accessories and adapters are available to keep your Strahman hoses and nozzles operating properly. Stainless steel hose accessories and adapters are also available upon request.

Nozzle End

Internal stainless steel spring assembly (nozzle end) includes bronze stainless steel Swivel Hose Adapter for use on Hose Assemblies A. Also available in all stainless steel for Hose Assembly S (not shown).

Unit End

Internal stainless steel spring assembly (unit end) includes a bronze $\frac{3}{4}$ " male NPT adapter for use on Hose Assembly A and S (not shown).

#21 Regular Adapters (Non-Swivel, not pictured) and #21S Swivel Adapters (Brass/Stainless Steel, pictured below)

$\frac{1}{2}$ " I.D. hose barb on one end
and $\frac{1}{2}$ " male NPT on the other end



$\frac{3}{4}$ " I.D. hose barb on one end
and $\frac{1}{2}$ " male NPT on the other end



$\frac{5}{8}$ " I.D. hose barb on one end
and $\frac{1}{2}$ " male NPT on the other end



$\frac{3}{4}$ " female garden hose thread on one end
and $\frac{1}{2}$ " male NPT on the other end



#S21 Regular Adapters (Non-Swivel, not pictured) and #S21S Swivel Adapters (All Stainless Steel, pictured below)

$\frac{1}{2}$ " I.D. hose barb on one end
and $\frac{1}{2}$ " male NPT on the other end



$\frac{3}{4}$ " I.D. hose barb on one end
and $\frac{1}{2}$ " male NPT on the other end



$\frac{5}{8}$ " I.D. hose barb on one end
and $\frac{1}{2}$ " male NPT on the other end



$\frac{3}{4}$ " female garden hose thread on one end
and $\frac{1}{2}$ " male NPT on the other end



Miscellaneous (for $\frac{5}{8}$ " ID hose)

Available in Bronze and Stainless Steel

#8 Exploded



#8 A



#8 B



#8 D

8 A - Hose Shank
8 B - Adapter Nut
8 D - Adapter ($\frac{3}{4}$ " NPT Male)

Valves

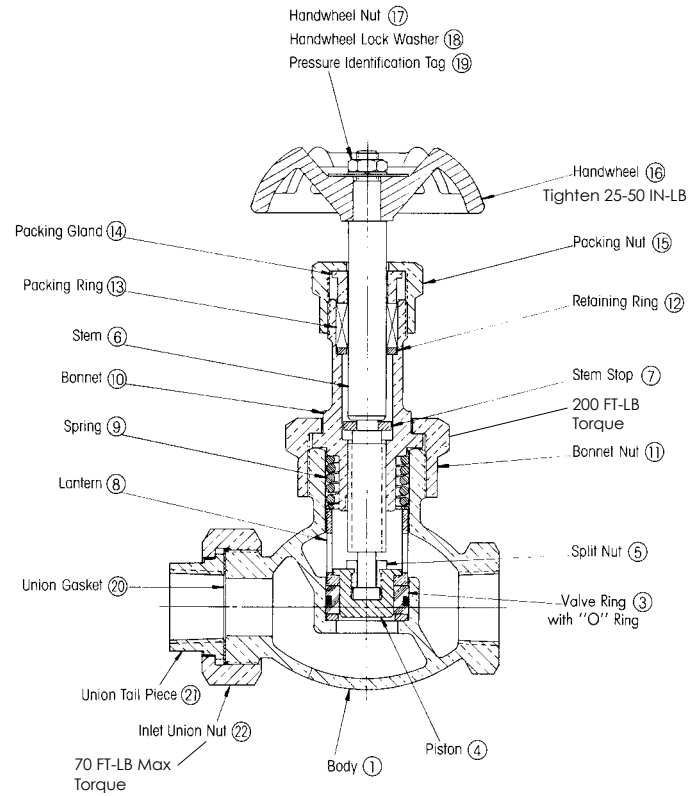
Soft Seal Piston Valve — 3/4" Standard Bronze and Stainless Steel Models

Strahman's **Soft Seal Piston Valve** features PTFE to make turning and tightening practically effortless. A stainless steel or bronze piston enters a soft PTFE coated ring to form a super tight seal without the need for laborious turning. This unique closure principle prevents foreign materials from interfering with the seal and positively prevents leaks.

Specifications

- ♦ **Maximum recommended operating temperature:** 370°F/188°C
- ♦ **Maximum working pressure:** 150 psi
- ♦ 3/4" valve for use with Strahman's mixing unit-hose stations
- ♦ Made with bronze and all stainless steel working parts
- ♦ Also available made completely of stainless steel (V-65/V-18 Series)

3/4" Soft Seal Piston Valve



Model Shown: V-14-U 3/4" Globe Type (Union Connection)

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

Standard Ball Valve

Specifications

- ♦ Easy to maintain and replace
- ♦ Flow rates adjustable from low to high
- ♦ Less wrist fatigue in turning valves to On/Off position
- ♦ Also available in stainless steel.

NOTE: Not available for steam service



WARRANTY

ONE-YEAR LIMITED WARRANTY

STRAHMAN products are warranted to the original purchaser to be free of defects in material and workmanship as specifically stated in product literature or, lacking that, for 12 months after date of purchase.

STRAHMAN will, at its sole election, repair, replace or make appropriate adjustment where STRAHMAN inspection discloses any such defects occurring in normal usage within the warranty period. STRAHMAN is not responsible for removal or installation costs. Improper use, modification, alteration, wrongful application or repair will void the warranty. This warranty excludes normal wear attributable to the particular application in which the product is used. Shipping, freight, insurance and other transportation charges to return products to Strahman, and the return of repaired or replaced products to the purchaser, are the responsibility of the purchaser.

To obtain warranty service contact STRAHMAN at 1-484-893-5080 or at strahman@strahman.com This e-mail address is being protected from spambots. You need JavaScript enabled to view it .

IMPLIED WARRANTIES INCLUDING THAT OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. STRAHMAN AND/OR SELLER DISCLAIMS ANY LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

This is STRAHMAN's exclusive written warranty.

RETURN POLICY

For any goods to be returned to Strahman Valves Inc. by a customer, a RMA (Return Material Authorization) number must be obtained by the customer from our Customer Service department prior to shipping material back to Strahman Valves Inc. An RMA number will be issued within 2 working days of receipt of your request to return goods by our Customer Service department. Any merchandise returned to Strahman Valves Inc. without a RMA number referenced will be returned to customer at customer expense. No RMA will be issued for discrepancies by the customer reported later than 10 days of receipt of goods. After this period, Strahman Valves Inc. reserves the right to impose a restocking fee. All returns must be received at the Strahman Valves Inc. facility no later than 30 days from the issuance of the RMA number. If received after 30 days from the issuance of the RMA number, the return will be refused and return to the customer at customer's expense.

All returned goods should be sent back insured and packaged to prevent damage to the goods in transit. The cost of the return, unless due to an error by Strahman Valves Inc., is the responsibility of the customer. Do not send any returned goods to Strahman Valves Inc. freight collect, because it will be refused and not processed accordingly.

RMA numbers will be issued for Warranty and Repair returns, Wrong Product Ordered returns, Shipping Errors by Strahman Valves Inc. returns, Damage Product returns and any other authorized returns by our Customer Service department. Strahman Valves Inc. is not responsible for any discrepancies not reported to our Customer Service department within 10 days of receipt of goods. If the product is a custom made item, it is not returnable and no RMA will be issued.

All Warranty and Return items must not only include the RMA number assigned by our customer service department, but must also include the Material Safety Data Sheet (MSDS) with the goods returned.

All Wrong Product Ordered returns will be subject to our restocking fee (see below). For Shipping Errors by Strahman Valves Inc. returns, Strahman Valves Inc. will pay for all return shipping fees.

Strahman Valves Inc. reserves the right to inspect all returned product for condition and wear and abuse, and if the material is not in the condition it was originally sent out to the customer, the customer will bear the cost of repair. The cost charged back to the customer will be at the discretion and approval of management.

If product is damaged in shipping to our customer, our customer must file a claim with our carrier (Fedex or UPS). DO NOT SEND the damaged good back to Strahman Valves Inc. without first contacting our Customer Service department. Please follow these simple steps when preparing to return material to Strahman Valves Inc.:

1. Please obtain a RMA number from our Customer Service department.
2. Please include packing slip with the following information:
 - Customer Sales Order Number
 - Customer name, address, telephone number and email address
 - A description for the reason for the return
 - The RMA number assigned by our Customer Service Department
 - Returned product to Strahman Valves Inc. must be received at the Strahman facility no later than 30 days after receipt of RMA number.
3. The package returned with the product must clearly show the RMA number on the outside of the package. Authorized returns require the RMA number to be printed in tall red lettering on two different sides of the package.
4. The item returned must also be tagged with the assigned RMA number sent to our customer by our Customer Service department.

PLEASE NOTE THAT FAILURE TO FOLLOW THE ABOVE RULES WILL RESULT IN A DELAY OF PROPERLY PROCESSING YOUR RETURN. Also note that no RMA will be issue for USED PRODUCTS unless it is to be sent in for repair. No RMA will be issued for new product kept for more than 30 days after shipment. Restocking Fee Schedule:

- Under 30 days, 30% of price of all returned items subject to approval.
- 31-60 days, 35% of price of all returned items subject to approval.

The Strahman Family of Products Includes:

Wash Down Equipment

Strahman offers a full line of mixing units, hose stations, hoses, nozzles, and wash down accessories. Our wash down line is designed for industrial use and is used in a wide variety of industries including food, beverage, pharmaceutical, chemical and other applications.

Pre-Rinse Equipment for Commercial Kitchens

Strahman offers pre-rinse spray nozzles, handles, hoses, hose reels and Pivot Pro swivel connectors. Designed for use in restaurants, hotels, supermarkets, and all commercial kitchens, food serving and food preparation applications.

Sampling Valves

Strahman has a full line of sampling valves that produce live samples without exception. Our sampling valves' unique design prevents failure caused by sediment or clogging.

Drain Valves

Strahman Drain Valves are designed to prevent clogging. They are ideal for use in liquid and gas service or with slurries, polymers, and high viscosity fluids that tend to solidify at room temperature.

Automated Valves and Fire Safe Products

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.



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