# STVM® Washdown Station

A ThermOmegaTech® product

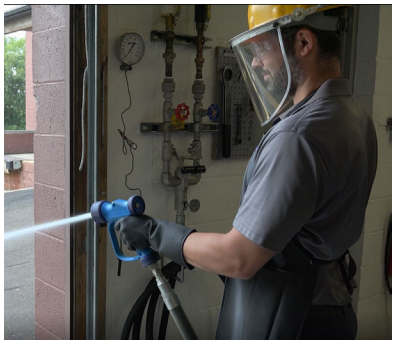



**ThermOmegaTech® provides the ultimate industrial cleaning and washdown equipment for production facilities that require a high-temperature washdown of processing machinery to prevent contamination.**

**Industries include food processing, dairy and pharmaceutical production facilities, chemical and petrochemical plants, breweries and wineries.**

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# Safety First



The STVM® Washdown Station has been designed to put the safety of your operators first, thanks to its innovative technology.

The system utilizes a thermal element located in the downstream leg of the mixing valve. The thermal element is designed to throttle steam flow should the temperature set point be exceeded and will completely shut down at 15°F (8.3°C) above the set-point or if cold water flow is interrupted. The thermal element will not re-open until cold water flow is restored.

# Built to Last

Conventional washdown stations, utilizing old spool and diaphragm technology that rely on multiple moving parts are prone to premature failure due to mineral deposits and scaling. The necessary regular maintenance of these units to keep them running safely is very time consuming and costly.

The rugged STVM® Washdown Station is unique in that it has only one moving part, a thermal actuator within the mixing valve cartridge.

The patented mixing design ensures long uninterrupted use even if there is high mineral content in the water. As the opposing vortices of steam and water enter the mixing valve, a scouring action occurs that minimizes the buildup of minerals and scale.

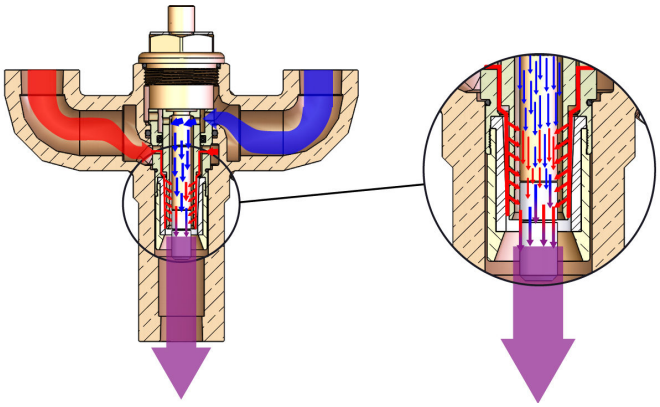


**STVM® Cartridge**

# How it Works

ThermOmegaTech®'s STVM® Washdown Station incorporates unique Venturi mixing technology to deliver water at the required temperature quickly, quietly and on demand. Cold water enters the upper chamber of the mixing valve, while incoming steam enters the lower chamber. Mixing occurs as the two vortices collide, thoroughly mixing and heating the water through a Venturi diffuser with minimal noise and vibration.

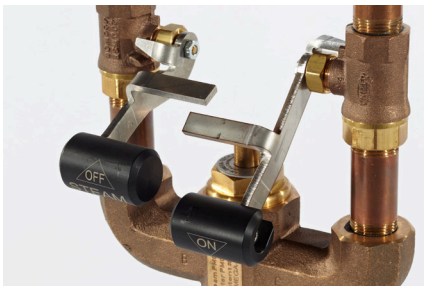
An additional benefit of this design is what you don't hear: the banging, popping and crackling noises associated with cavitation that are prevalent in ordinary mixing stations. This smooth quiet operation increases safety and reduces stress on the operator.



**Venturi mixing diagram**

# Washdown Highlights

- Safe operation: auto shut-off of steam if cold water flow is interrupted.
- Mixing valve cartridge designed for ease of maintenance.
- In-line field serviceable mixing valve: cartridge element can be easily replaced in minutes.
- Provided with heavy duty globe valves and interlocked ball valves that prevent steam only operation.
- Check valves, stainless steel thermometer, globe valves and stainless steel hose rack standard with all units.
- Designed to fit in place of most other industrial hose stations.
- Optional welded Stainless Steel Station available offering superior strength and leak-free sealing for the most demanding applications.
- Stainless Steel Stations conform with EU Pressure Equipment Directive 2014/68/EU.




**Interlocking handles for safer operation**

# Features

Wide steam and water operating pressure ranges

Unique mixing design with only one moving part

Thermal actuator controls steam supply

Valve cartridge is very easy to remove

6.5" (165.1 mm) center line to center line pipe dimension. Optional 1/4" offsets available to adapt to existing 6.0" center line piping.

# Benefits

Continues to operate when conventional units stop working. Easy to size - one size fits all pressure ranges.

Mixes steam and hot water efficiently and quietly. Resistant to the effects of mineral buildup and scaling.

Throttles steam supply when temperature set-point is exceeded. Shuts down steam supply if water supply fails.

Quick and easy to clean requiring no special tools. Interchangeable cartridges converts easily between 185°F (85°C) and 150°F (65°C) set-points.

Readily adapts to existing pipe configurations. Eliminates cost of removing and reinstalling mounts.

# Specifications

### Technical Data

| | |
|---|---|
| Maximum Steam Pressure | 150 PSIG (10.3 BAR) |
| Maximum Water Pressure | 150 PSIG (10.3 BAR) |
| Water Output Temperature (min) | Ambient |
| Water Output Temperature (max) | 150°F (66°C) |
| | 185°F (85°C) |
| Approx. weight (w/o hose & nozzle) | 19 lbs. (8.6 Kg) |

***Steam pressure must be 10 PSI (0.69 BAR) greater than water pressure**

### Hose Assemblies

| Color | Black | White Creamery |
|---|---|---|
| Tube | EPDM | EPDM |
| Reinforcement | Wire, 1 braid | High tensile cord |
| Cover | EPDM/pin pricked | EPDM |
| Fitting material | Zinc Plated Brass | Stainless Steel |
| Working pressure | 200 PSIG (13.8 BAR) | 225 PSIG (15 BAR) |
| Max. steam pressure | 200 PSIG (13.8 BAR) | 90 PSIG (6 BAR) |
| Temperature limit | 388°F (197.8°C) | 330°F (165.5°C) |
| Nominal I.D. | 3/4" (19mm) | 3/4" (19mm) |
| Standard lengths | 25ft., 50ft., & 75ft. (7.6m, 15.3m, & 22.9m) | 25ft., 50ft., & 75ft. (7.6m, 15.3m, & 22.9m) |

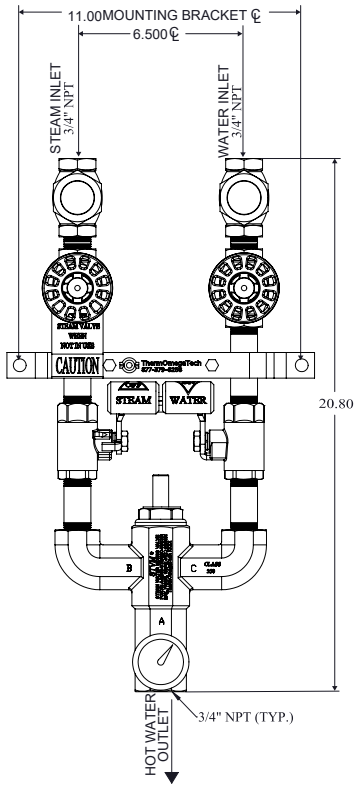
### Sizes and pipe connections

| | |
|---|---|
| Mixing Station | ¾" (19mm) NPT inlets and outlet |
| Hose | ½" (12.7mm) MNPT swivel x ¾" (19mm) MNPT swivel |
| Nozzle | ½" (12.7mm) NPT (female) |

# Parts Information

### Materials Supplied with Standard System

| | |
|---|---|
| Mixing valve cartridge | Stainless Steel or Brass |
| Mixing valve body | Stainless Steel or Bronze |
| Globe valves | Stainless Steel or Bronze |
| Check valves | Stainless Steel or Bronze |
| Temperature gauge | Stainless Steel/Plexi-glass |
| Mounting bracket | Stainless Steel |
| Pipe fittings | Stainless Steel or Brass/Bronze |
| Hose rack | Stainless Steel |




# Ordering

### Common Parts Ordering Information*

| Standard Assemblies | Part Numbers |
|---|---|
| ¾" (19mm) TOT (150°F (66°C)) Stainless Steel Washdown Station | 377-111100-150 |
| ¾" (19mm) TOT (185°F (85°C)) Stainless Steel Washdown Station | 377-111100-185 |
| ¾" (19mm) TOT (150°F (66C)) Brass/Bronze Washdown Station | 377-111000-150 |
| ¾" (19mm) TOT (185°F (85°C)) Brass/Bronze Washdown Station | 377-111000-185 |
| ¾" (19mm) TOT (150°F (66°C)) Welded Stainless Steel Washdown Station w/ Threaded Inlet | 377-111170-150 |
| ¾" (19mm) TOT (185°F (85°C)) Welded Stainless Steel Washdown Station w/ Threaded Inlet | 377-111170-185 |
| ¾" (19mm) TOT (150°F (66°C)) Welded Stainless Steel Washdown Station w/ Welded Inlet | 377-111180-150 |
| ¾" (19mm) TOT (185°F (85°C)) Welded Stainless Steel Washdown Station w/ Welded Inlet | 377-111180-185 |

### Accessories

| | |
|---|---|
| 25ft (7.6m) Black Steam Rated Hose Assembly | 940-000000-025 |
| 50ft (15.3m) Black Steam Rated Hose Assembly | 940-000000-050 |
| 75ft (22.9m) Black Steam Rated Hose Assembly | 940-000000-075 |
| 25ft (7.6m) White Steam Rated Creamery Hose Assembly | 940-110030-025 |
| 50ft (15.3m) White Steam Rated Creamery Hose Assembly | 940-110030-050 |
| 75ft (22.9m) White Steam Rated Creamery Hose Assembly | 940-110030-075 |
| Washdown Gun - Brass Internals | 941-410110-000 |
| Washdown Gun - Stainless Steel Internals | 941-510100-000 |

### Spare Parts

| | |
|---|---|
| Valve cartridge assembly (150°F (66°C)) Brass/Bronze | 374-010000-150 |
| Valve cartridge assembly (185°F (85°C)) Brass/Bronze | 374-010000-185 |
| Valve cartridge assembly (150°F (66°C)) Stainless Steel | 374-012000-150 |
| Valve cartridge assembly (185°F (85°C)) Stainless Steel | 374-012000-185 |

***For additional hose assemblies, nozzles and spare parts, consult factory.**