

# **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.**

## Safety First

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

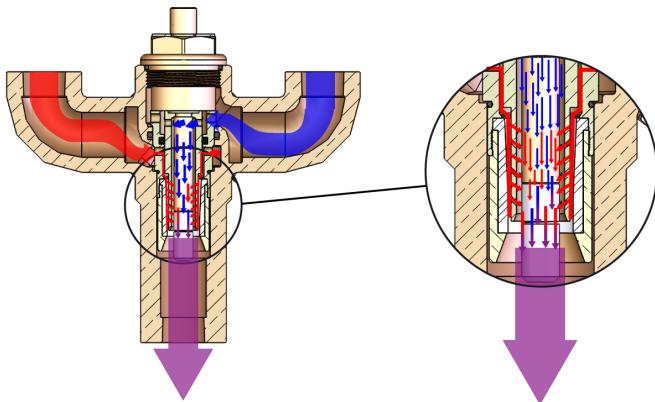
The system utilizes a thermal element located in the downstream leg of the mixing valve. The thermal element is designed to throttle steam flow should the temperature set point be exceeded and will completely shut down at 15°F (8.3°C) above the set-point or if cold water flow is interrupted. The thermal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



## 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

## 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

## 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.

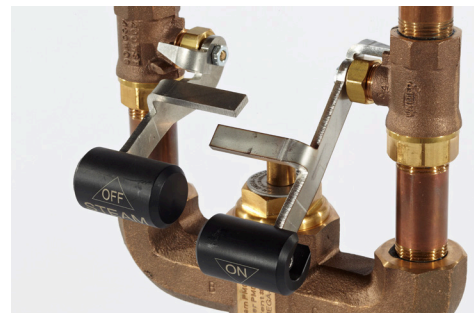
The patented mixing design ensures long uninterrupted use even if there is high mineral content in the water. As the opposing vortices of steam and water enter the mixing valve, a scouring action occurs that minimizes the buildup of minerals and scale.



STVM® Cartridge

## 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 making the washdown station work like new again
- 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
- Stainless Steel Stations conform with EU Pressure Equipment Directive 2014/68/EU.



Interlocking handles for safer operation

## 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 (65.6°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	3/4" (19mm) NPT inlets and outlet
Hose	1/2" (12.7mm) MNPT swivel x 3/4" (19mm) MNPT swivel
Nozzle	1/2" (12.7mm) NPT (female)

# Ordering

## Common Parts Ordering Information\*

### Standard Assemblies

3/4" (19mm) TOT (150°F (65.6°C)) Stainless Steel Washdown Station	377-111100-150
3/4" (19mm) TOT (185°F (85°C)) Stainless Steel Washdown Station	377-111100-185
3/4" (19mm) TOT (150°F (65.6°C)) Brass/Bronze Washdown Station	377-111000-150
3/4" (19mm) TOT (185°F (85°C)) Brass/Bronze Washdown Station	377-111000-185

### 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

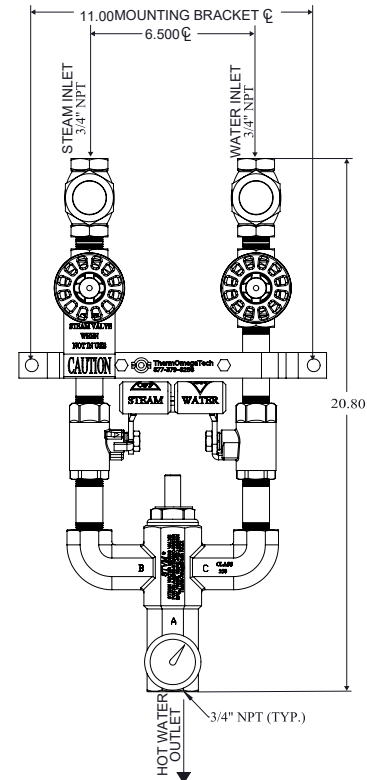
Valve cartridge assembly (150°F (65.5°C)) Brass/Bronze	374-010000-150
Valve cartridge assembly (185°F (85°C)) Brass/Bronze	374-010000-185
Valve cartridge assembly (150°F (65.5°C)) Stainless Steel	374-012000-150
Valve cartridge assembly (185°F (85°C)) Stainless Steel	374-012000-185

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

# 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



## Part Numbers