

# Multi-Purpose Valves

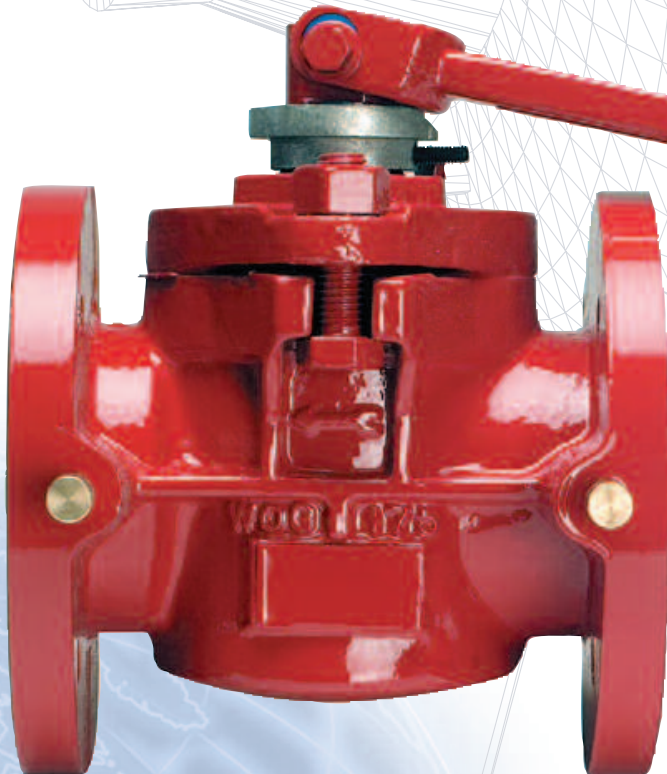
- Combination valve replaces the features of a check valve, balancing valve and a shut off valve
- Available in 2"–12" sizes
- Cast iron body with ANSI flanged connections
- Working pressure is 175 psig @ 250°F



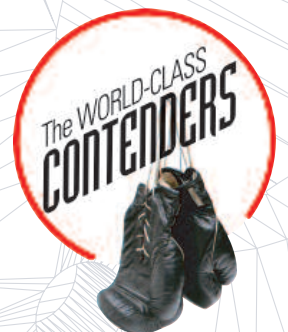
A Subsidiary of The Gorman-Rupp Company  
Post Office 790 • Toccoa, Georgia 30577 U.S.A.  
[www.pattersonpumps.com](http://www.pattersonpumps.com)

The Patterson Pump Triple Service Valve is a multipurpose valve designed for the hydronic and industrial markets. The TSV eliminates the need for a separate check and balancing valve in the piping design. The Ductile Iron Body allows the valve to be used in higher pressure applications with each valve tested to 400 PSI. This allows the valves to be matched up with the Class 150 steel flanges that are rated to 275 PSI. The rubber O ring seal offers bubble tight sealing on both the check and shutoff features of the TSV valve.

The Brass metering schraders on the flanges allows for the balancing feature to be used by setting the memory stop and flow indicator ring on the top of the plug. The compact design of the plug valve offers installation convenience combined with lighter handling weight when installed in all mechanical rooms. The design of the TSV allows for both vertical and horizontal installations of this valve. Handles are included with each valve.



Mfg. by American HVAC for Patterson Pump Co.



# Suction Diffusers



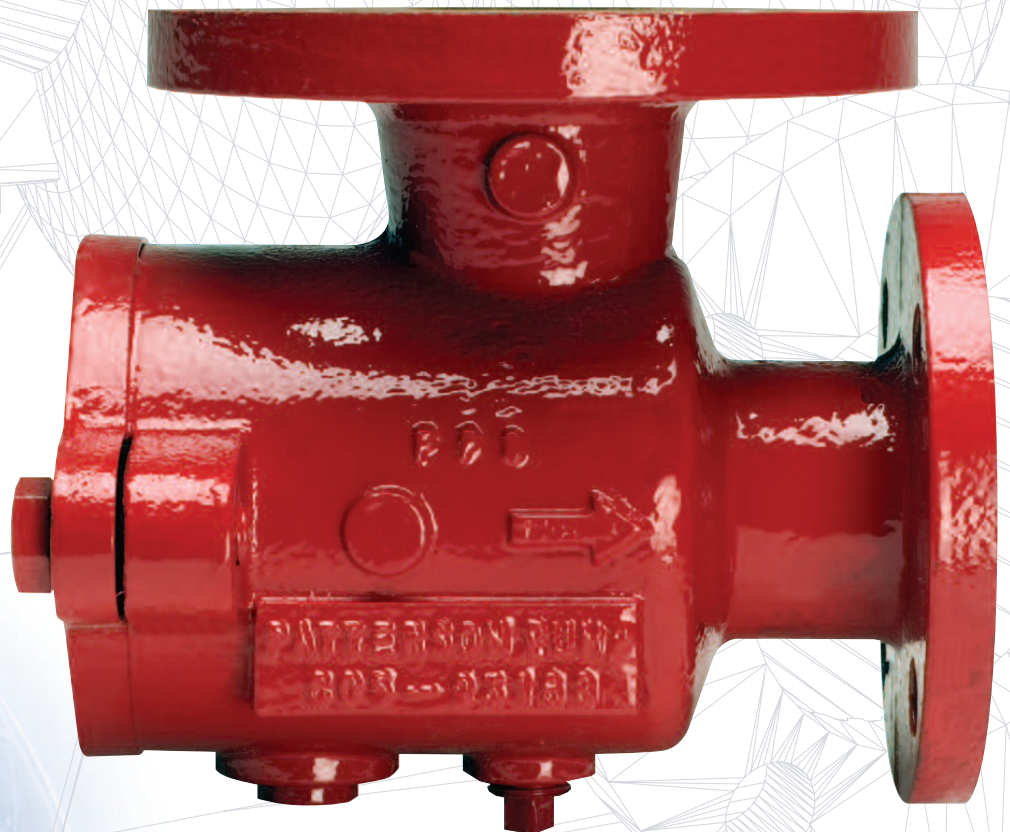
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## Benefits

- Establish correct flow regimen for efficient pump suction conditions
- Simplify system design by combining the functions of the suction entrance pipe, long radius elbow, Y-strainer and startup strainer
- Inlet flange designed to allow a butterfly valve to fully open into the body of the suction diffuser
- Body is designed to use bolts—no threaded studs required
- Corrugated stainless steel permanent strainer allows for maximum surface area

## Features

- Available in full and reducing sizes, 2"–12"
- Standard with magnetic plug available
- Fine mesh brass start up strainer
- Support foot
- Rated to 175 psi, 250°F





# Superior Quality, Fast Delivery

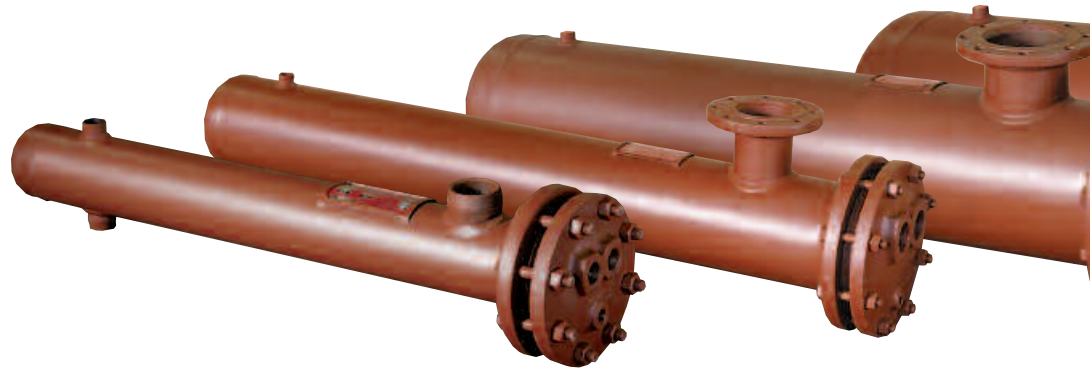
**T**hrush Company, Inc. manufactures specially designed shell and tube heat exchangers engineered to meet many applications including heating or cooling liquids for process systems, heat recovery, and comfort systems using steam or liquids. They are manufactured in both straight and "U" tube designs and are available with many variations in material, pressure, temperature, and special features to meet specific application requirements.



To ensure safety and optimal performance, all Thrush heat exchangers are constructed under an approved quality control program according to and registered with the National Board of Boiler and Pressure Vessel Inspectors. Additionally, each unit is manufactured, tested, and "U" stamped to ASME Code requirements under Section VIII Division 1, and a Manufacturer's Data Report for Pressure Vessels Form No. U-1 is provided with every unit.

Let Thrush Co., Inc. provide you with superior product quality, responsive customer service and on-time delivery today.

## Thrush Shell & Tube Heat Exchangers



### "U" Bend ASME Code Construction

#### Standard Features

#### Type

- Steam to Water (2 or 4 Pass)
- Water to Water (2 or 4 Pass)

#### Sizes

- 4" to 26" diameter
- 2' to 10' length

#### Materials (Tubeside)

- Heads 4" to 20" cast iron, 22" to 26" fabricated steel
- Tube sheets 4" to 26" carbon steel
- Tubing 3/4" copper .035 wall thickness
- Steel baffles

#### Materials (Shellside)

- Carbon steel pipe with ANSI flanges

#### Operating Pressures (Tubeside)

- 150 psig working pressure 4" to 12" diameter with cast iron head
- 125 psig working pressure 10" to 12" diameter with 2 pass 4" NPT cast iron head
- 125 psig working pressure 14" to 20" diameter with cast iron head
- 150 psig working pressure 20" to 26" diameter with fabricated steel head

#### Operating Temperature (Tubeside)

- 375°F maximum operating temperature 4" to 26" cast iron or fabricated heads

#### Operating Pressures (Shellside)

- 150 psig working pressure carbon steel construction (All sizes)

#### Operating Temperature (Shellside)

- 375°F maximum operating temperature carbon steel construction (All sizes)

### Thrush Code for "U" Bend Heat Exchangers All Dimensions in Inches

