

# Product Catalog

Safety & Control | Energy Efficiency | Water Conservation



*Explore the family of Watts*

# ***The strength of Watts***



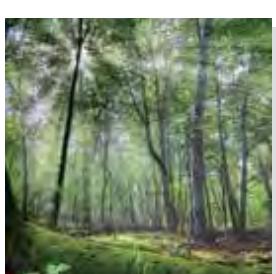
**Heating**



**Cooling**



**Sanitary**



**Ecoenergies**

## **“A tradition of quality and reliability, technology for the future”**

The history of WATTS, dated back to 1874 in the United States, was always distinguished for its important and continuous contribute to the technological development of the market through the research and development of valves and related products that became a milestone in water and HVAC installations.

Our product range promotes the comfort and safety of people and the quality, conservation and control of water used in commercial, residential, industrial and municipal applications.

WATTS does not limit to design products technologically advanced with premium quality.

WATTS implement a wide program of research and development, strictly integrated to market demand analysis and world development policies.

This results in our research centers continuous effort to develop more efficient products and integrated solutions oriented to energy saving.

WATTS has been chosen to supply the technological leading companies operating in the market as OEM (Original Equipment Manufacturer) and as ODM (Original Design Manufacturer).

WATTS, a synergic partner for the Water and HVAC application development since 1874.

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# Explore the family of Watts



Designs, manufactures, and sells an extensive line of flow control, water safety, water filtration & treatment, drainage, and PEX plumbing products.

The Watts family of companies provides you a single source for solutions used to safely convey, conserve, and manage water.

Making us your single source for plumbing-related solutions will streamline your operations, save you money, and reduce the variety of repair parts needed for maintenance.

Our solutions can be packaged and/or integrated for a better overall value and to provide a trusted single point of contact to reduce your overhead.

[Watts.com](http://Watts.com)



*A WATTS Brand*

AERCO® offers commercial condensing boilers and water heaters that simplify infrastructure, reduce project costs and minimize lifecycle expenses for a variety of markets including value-driven schools, hospitals, hospitality and others seeking long-lasting, reliable, high-efficiency equipment.

[AERCO.com](http://AERCO.com)



*A WATTS Brand*

Apex® Valves (AV) is a New Zealand company specializing in the design and manufacture of Control Valves for low and high pressure hot water and filtration systems.

[ApexValves.co.nz](http://ApexValves.co.nz)



*A WATTS Brand*

A leading provider of quality stainless steel drainage products and systems including floor drains, shower drains, pipe, channels, and accessories.

[BLUCHERpipe.com](http://BLUCHERpipe.com)



*A WATTS Brand*

A leading manufacturer of safe, high-quality gas connectors and appliance safety products.

[Dormont.com](http://Dormont.com)





A leader in instrumentation and measurement devices for compliance, process control, wastewater, ballast water, and water quality.

[HFscientific.com](http://HFscientific.com)



A WATTS Brand

Leading provider of higher capacity, ASME-code, storage water heaters for engineer specified installations. Tanks are uniquely fabricated from duplex stainless steel.

[PVI.com](http://PVI.com)



A WATTS Brand

A leading manufacturer of pipeline strainers, check valves, butterfly valves, suction diffusers, line blinds, and other specialty products for industrial applications.

[MuellerSteam.com](http://MuellerSteam.com)



A WATTS Brand

SunTouch® is the premier radiant floor heating technology brand in North America.

[SunTouch.com](http://SunTouch.com)



A WATTS Brand

A leading manufacturer of acid waste, high purity, double containment, and polypropylene piping systems as well as neutralization tanks & monitoring equipment, floor drains, and sinks.

[OrionFittings.com](http://OrionFittings.com)



A WATTS Brand

Offers water tempering and temperature control solutions for the commercial and industrial temperature control markets.

[PowersControls.com](http://PowersControls.com)



A WATTS Brand

Offers complete control solutions for radiant floor and baseboard heating systems, multi-stage boiler plants, and automatic snow melting systems.

[tekmarControls.com](http://tekmarControls.com)



A WATTS Brand

A leading manufacturer of high quality, quarter-turn and multi-turn electric actuators to automate all types of valves for all kind of fluids.

[Valpes.com](http://Valpes.com)



# Where Our Products Are Installed



Disneyland  
Shanghai, China



W Hotel  
Xi'an, China



Changxing Electronic  
Plant, Hefei, China



Chow Tai Fook  
Financial Center,  
Tianjin China



Bosch Plant  
Changzhou, China



SAIC Automobile Plant  
Zhengzhou, China



St. John's Hotel  
Gangwon, Korea



JW Marriot  
Seoul, Korea



Marina Bay Financial  
Center, Singapore



Sky Bay Hotel  
Gangwon, Korea



Courtyard Marriot  
Seoul, Korea



Masteri Thao Dien,  
Vietnam

# Where Our Products Are Installed



**Burj Khalifa**  
Dubai, UAE



**Habtoor City**  
Dubai, UAE



**Oman Convention Center**  
Oman, UAE



**Atlantis Palm Jumeirah**  
Dubai, UAE



**City Walk**  
Dubai, UAE



**King Abdullah Financial District**  
Saudi Arabia



**Muscat International**  
Airport Muscat, Oman



**Galleria Mall**  
Bahrain



**Doha Festival City**  
Qatar



**Aramco Housing**



**AL Masah Hotel New**  
Capital Cairo, Egypt



**Qatar Metro**

# Residential Offerings

## Kitchen

- Undersink Thermostatic Mixing Valves
- Reverse Osmosis Water Filtration Systems
- Electric Tile Warming
- SmartSense Excess Flow Valve & Thermal Shutoff



**Dormont WATTS**



## Living Room

- Control Panel / Thermostat
- Radiant Underfloor Heating

**tekmar**



## Driveway / Sidewalk

- Snow Melt Hydronic Systems
- Electronic Temperature Controls
- Manifolds
- Quick Connect Fittings
- Hydrocontrol Panels
- PEX Tubing



**WATTS**  
**tekmar**



**SunTouch**



## Water Quality (Point of Entry)

- Whole House Filtration Systems
- Anti-Scale Systems
- Water Softeners
- SmartStream UV Disinfection Systems

**WATTS**



## Water Quality (Point of Use)

- Backflow Preventers
- Pressure Reducers





### Bathroom

**BLÜCHER** **WATTS**  
**POWERS** **SunTouch**

- Tempering Valves
- Electric Tile Warming
- Stainless Steel Shower Drains
- Hot Water on Demand Recirculation

### Laundry Room

- Anti-Scale Systems
- Gas Ball Valves & Connectors
- SmartSense Excess Flow Valve & Thermal Shutoff
- IntelliFlow Automatic Washing Machine Shutoff Valves

**Dormont** **WATTS**

### Boiler / Furnace Room

- T&P Relief Valves
- Tempering Valves
- Pressure Reducing Valves
- Expansion Tanks
- Temperature & Pressure Gauges
- Air Separators

**WATTS**



### Irrigation

- Backflow Preventers
- Pressure Reducing Valves
- Flow Control Valves

**WATTS** **FEBCO**

# Hospitality Offerings

## Guestroom

- Anti-Scald Shower & Lavatory Valves
- Stainless Steel Shower Drains
- Underfloor Heating Systems



**SunTouch**  
**POWERS** **BLÜCHER**

## Public Restroom Safety

- Thermostatic Mixing Valves
- Floor Drains
- Closet & Lavatory Carriers

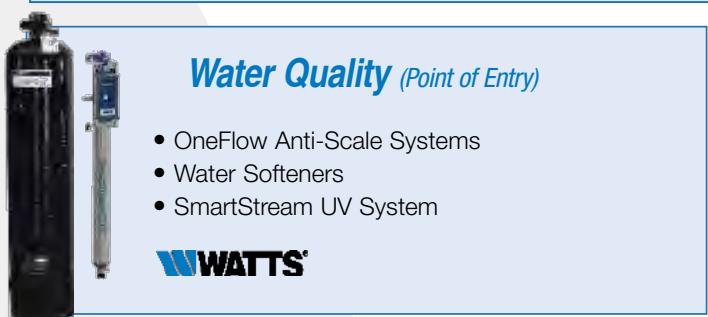


**WATTS** **BLÜCHER** **POWERS**



## Water Quality (Point of Entry)

- OneFlow Anti-Scale Systems
- Water Softeners
- SmartStream UV System



**WATTS**

## Driveway / Sidewalk

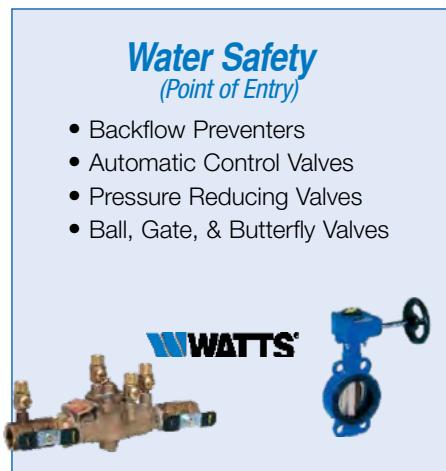
- Electronic Temperature Controls
- Snow Melt Hydronic Systems
- Manifolds



**ORION**  
**WATTS** **tekmar**

## Water Safety (Point of Entry)

- Backflow Preventers
- Automatic Control Valves
- Pressure Reducing Valves
- Ball, Gate, & Butterfly Valves



**WATTS**

## Drainage / Rain Water

- Cast Iron and Stainless
- Rain Water Harvesting
- Roofs, Parking Garage



**BLÜCHER**  
**WATTS**



## Water Harvesting

Drains & Pipe

Drains, Bathrooms, Kitchens

**WATTS**  
**ORION**



## Irrigation

- Backflow Preventers
- Pressure Regulating Valves
- Isolation Valves

**FEBCO**



## Hydronic system

- Balancing Valve
- Differential pressure valve
- PICV



## Fire Protection Systems

- Cross Connection Systems
- Automatic Control Valves
- Isolation Valves



## Commercial Kitchens

- Gas Connectors
- Point of Use Filtration Systems
- Stainless Steel Drains
- Backflow Preventers

**WATTS** **Dormont** **BLÜCHER**



## Boiler / Mechanical Room



**POWERS**



**PVI**

**AERCO**

- Hot Water Heaters / Boilers
- Digital Thermostatic Mixing Stations
- Boiler & Pump Controls

**tekmar**



# Boilers & Water Heaters



**A**ERCO International, Inc. is a recognized leader in delivering high-efficiency, cost-effective commercial heat, hot water, and energy recovery solutions across a variety of markets including education, entertainment, lodging, government, navy, office buildings, healthcare, industrial and multifamily housing. Founded in 1949, AERCO originated tankless water heating, introduced the first modulating and condensing gas-fired unit for the commercial market, and helped pioneer the high-efficiency boiler category. AERCO's system design approach provides customer-specific solutions that deliver superior building performance at a lower operating cost while assuring uptime reliability.



## Benchmark Standard Boilers

### High Efficiency, Gas-fired Boilers

Benchmark boilers have been considered the gold standard in hydronic heating for more than 20 years and have set the bar for high efficiency. They continue to deliver significant return on investment to thousands of customers including increased energy savings, reliable heat, and lower installation and operational costs — all in a space-saving, compact footprint that fits through a standard 32" doorway.

- Durable 439 stainless steel fire tube heat exchanger
- Low operating, maintenance and installation costs
- Easy serviceability
- Low NOx emissions 20 ppm or less at all firing rates
- Capable of variable primary flow installations
- Venting versatility with AL29-4C or Polypropylene
- Available in 750, 1000, 1500, 2000, 2500, 3000, 5000, 6000 MBH



## Benchmark Platinum Boilers

### Gas-Fired, Fully Modulating, Space Heating System

AERCO'S most advanced boiler yet includes all the capabilities of the standard Benchmark series but features additional innovative technologies that further optimize the system's performance and maximize efficiencies up to an additional 9%.

- A powerful bundle of AERtrim (AERCO's patented O<sub>2</sub> Trim technology), Dual Returns (enables design flexibility and maximum efficiency), and onAER Remote Monitoring (pro-active health-of-system performance monitoring)
- High efficiency – up to 99%
- Durable 439 stainless steel fire tube heat exchanger
- Low NOx and CO emissions 20 ppm or less at all firing rates
- Small footprint
- Capable of variable primary flow installations
- Venting versatility with AL29-4C or Polypropylene
- Available in 750, 1000, 1500, 2000, 2500, 3000, 5000, 6000 MBH

Available in 120/208-230/460/575 voltages at 60Hz

Contact AERCO for information on local compliance and voltage compatibility.



## Innovation Water Heaters

### Tankless Domestic Hot Water System

The compact Innovation is a highly efficient tankless water heater that delivers reliable, instantaneous hot water on demand. With a reliable, scale-resistant heat exchanger and a compact footprint, the Innovation provides energy savings and lower operating costs.

- Up to 99% efficiency
- Small footprint and high installation flexibility
- Scale-resistant stainless steel helical fire tube heat exchanger
- Onboard multi-unit sequencing controls
- 1/3 standby losses compared to conventional tank type heaters
- Building Automation System Integration available
- Designed and manufactured in USA
- Available in 600, 800, 1060, 1350 MBH



## SmartPlate Water Heaters

### Fully Packaged Tankless DHW to be used with Combination Space Heating Systems

SmartPlate water heaters were specifically engineered to complement today's condensing boilers in low temperature applications to promote system-wide energy efficiency. Easily installed in any combination space heating/domestic hot water system, SmartPlate water heaters maintain accurate temperature control under diversified loads without the need for storage tanks.

- $\pm 4^{\circ}\text{F}$  temperature control
- Compact footprint  $<10\text{ft}^2$
- Fully modulating variable primary input
- Packaged w/ controller and 3-way electronic valve
- Field adjustable for 2- or 3-way application
- Low lead compliant; conforms to NSF-372
- Supports BAS Integration
- All stainless steel, copper or copper alloy wetted (potable water side) surfaces
- Available in five sizes each 500 to 4500 MBH, in single and double wall options



## B+II WaterWizard Water Heaters

### Steam-To-Water Tankless DHW System

Performing with 90%-99% thermal efficiency, the unique 2-pass helical coil heat exchanger design of these single wall heaters is self-descaling and produces sub-cooled condensate ( $<160^{\circ}\text{F}$ ) to preserve condensate return pump life. All units are compatible with low or high steam pressures and do not require a storage tank, trap or associated maintenance.

- Accurate temperature control  $\pm 4^{\circ}\text{F}$
- Choice of electronic or pneumatic controls
- Compact footprint  $<4\text{ft}^2$
- Automatic self-descaling and condensate subcooling
- Fully modulating variable steam input
- No trap or storage tanks required
- Low surface temperature
- All copper, copper alloy or stainless steel wetted surfaces
- Available in 13 sizes ranging from 500 to 11000 MBH



Contact AERCO for information on local compliance and voltage compatibility.

## PVI® High Efficiency Water Heaters

PVI specializes in medium to large ASME water heaters fabricated from AquaPLEX® duplex stainless steel for commercial and institutional installations such as schools, hotels, hospitals, dormitories, apartments, correctional facilities, and military barracks. PVI heaters can be configured for any common energy source including natural or LP gas, oil, boiler water, solar, steam, electricity and waste heat. Water heaters range from instantaneous (on demand water heating) to storage type heaters with pressure vessels from 150 to 4500 gallons. Many products are “engineered-to-order” to exactly match the requirements of the application. Storage tanks manufactured from AquaPLEX duplex stainless steel are naturally corrosion resistant and require no linings or anode rods.



### Conquest®

#### Condensing Water Heater

Conquest® water heaters are long-lasting, highly reliable, and save owners thousands of dollars in costly system replacements and lost revenue. Return on Investment can be achieved in as little as three years because these AquaPLEX water heaters survive in areas where water conditions frequently destroy other conventional glass-lined condensing heaters.

##### Unique Features:

- Up to 96% thermal efficiency at a 21°C to 60°C temperature rise
- Part load efficiency up to 99% with modulating models
- Seamless modulation reduces cycling and improves efficiency up to 99% during low load conditions
- 5-Year tank and heat exchanger corrosion warranty
- Available with 199/250/300 MBH (58 to 88kW) in a 378 liter tank; 399/500/600/700/800 (117 to 234kW) MBH in a 490 liter tank



### Power VTX®

#### Condensing Water Heater

The Power VTX water heater combines an advanced fuel saving design with an extended product life. It is a condensing, highly efficient storage water heater featuring a submerged combustion chamber, enhanced fire tubes and a storage tank fabricated entirely from AquaPLEX.

##### Unique Features:

- Up to 95.8% thermal efficiency at a 21°C to 60°C temperature rise
- Seamless pulse width modulation reduces cycling and improves efficiency up to 99% during low load conditions
- 5-Year tank and heat exchanger corrosion warranty
- Available with 500/750/1000 MBH (146 to 293kW) in an 850 liter tank



**TURBOPOWER® 96****Condensing Large Storage Water Heater**

TURBOPOWER 96 is a fire tube, condensing storage water heater featuring a two-pass submerged heat exchanger and a supplemental economizer. This design results in four passes of combustion gases through the water. The primary heat exchanger bolts to the tank and is completely removable; providing unequalled field accessibility and maintainability of both the exchanger and tank.

## Unique Features:

- 96% thermal efficiency at a 21°C to 60°C temperature rise
- 5-Year tank warranty
- Available with 500/750/1000/1300/1600 MBH (146 to 469kW) in tanks from 950 to 5680 liters

**Durawatt®****Electric Water Heater**

Durawatt is a heavy-duty, medium to large capacity electric water heater.

Flange-mounted heating elements are sheathed in Incoloy and are rated at either 9 or 18kW with multiple elements inserted in the tank for higher recovery requirements.

## Unique Features:

- > 98% efficient
- Can be combined with solar, waste heat, steam or boiler water
- Incoloy or electro-polished Heating elements in 20, 40 or 80 watt density
- Manway access standard on all tank sizes
- 5-Year tank warranty
- Available in 18 to 235kW input; 450 to 3400 liters storage

**Dual Energy Heaters**

FlexFuel® water heaters combine two energy sources in a single tank. Gas, oil, electricity, steam, boiler water, solar, or waste heat from condensers, heat pump loops, and condensate can be combined. Heaters are agency listed as dual energy heaters. Energy sources can operate independently (one at a time by manual switch over) or simultaneously, depending on the application.

## Unique Features:

- Efficiency is dependent upon the energy sources used. In all cases, FlexFuel meets ASHRAE 90.1-2010
- Heaters qualify for LEED certification and may qualify for additional points because of the unique manner in which FlexFuel heaters can save energy



## Commercial Hot Water Storage Tanks

Standard tanks are available for sidearm or supplemental storage for traditional water heating systems. Specially designed tanks are also available for connection to high-temperature solar heating systems. These solar tanks include additional fittings for extra temperature sensors and connection to solar circulation loops or plate heat exchangers. The AquaPLEX construction of the solar tanks allows storage of water up to 93°C to maximize the energy captured by the solar panels and to accelerate the return on investment in the systems. Includes a 5-year warranty.

### Storage Capacities:

- Vertical orientation: 570 - 660 - 815 - 950 - 1135 - 1500 - 1900 - 2270 - 2840 - 3400 - 3785 - 4730 - 5680 - 6625 - 7570 - 9460 - 11,350 - 13,250 and 15,140 liters
- Horizontal orientation: 950 - 1135 - 1500 - 1900 - 2270 - 2840 - 3400 - 3785 - 4730 - 5680 - 6625 - 7570 - 9460 - 11,350 - 13,250 and 15,140 liters



## Cobrex®

### Steam Storage

Cobrex storage steam water heaters utilize a double-wall, copper-tube, counter-flow heat exchanger to provide moderate to large amounts of domestic hot water from steam. The heat exchanger is external to the tank and provides exceptionally little floor space to remove the exchanger, if necessary.

### Unique Features:

- 100% Copper and brass, double-wall, shell-and-tube
- Heat exchanger with single-pass, counter flow design
- Redundant dual heat exchangers available
- No steam control valve required at  $\leq 103$  kPa steam
- 5-Year tank warranty
- Available in six standard sizes delivering from 4540 to 27,250 liter/h of water at a 40°C temperature rise with 103 kPa steam
- Storage tanks range from 570 to 3785 liters



## EZ Plate®

### Boiler Water Storage

EZ Plate storage water heaters utilize a double-wall, brazed plate heat exchanger to provide moderate to large amounts of domestic hot water from boiler water. Plate exchangers are ideal for use with condensing boiler water systems because they allow the production of hot domestic water from relatively cold boiler water.

### Unique Features:

- No boiler water control valve is required with boiler water temperatures up to 162°C
- Low boiler water return temperature optimizes condensing boiler operation
- Domestic side storage reduces boiler cycles
- 5-Year tank warranty
- Available in ten standard sizes from 2270 to 27,250 liter/h of water at a 40°C temperature rise



**Series BD1156F****Bronze Dial Set Feed Water Pressure Regulators**

Series BD1156F feed water pressure regulators are designed to fill the boiler and system piping with water and to maintain water pressure in the system at all times. These valves also provide make up water to the system in the event of system leaks. Series BD1156F features a high capacity performance as well as a unique push-button fast fill engagement with auto-stop that prevents over-pressurizing the system.

Size: 1/2" (15mm)

- Choice of inlet connections (threaded, union solder, or union threaded)
- Push button fast fill with auto-stop
- Tight seating check valve
- Dial indicator eliminates need for pressure gauge
- Dial setting visible from top/side
- Same lay length as Watts 1156F
- High capacity
- Stainless steel strainer to protect the valve disc from fouling



BD1156

**Series BD911****Combination Bronze Dial Set Fill Valve and Backflow Preventer**

Series BD911 combination fill valve and backflow preventer consists of a Model 9D backflow preventer and Model BD1156F feed water pressure regulator in one pre-assembled unit. This valve is a high capacity valve designed for use on boiler feed lines to provide make-up water to the boiler and prevent backflow when supply pressure fails below system pressure and incorporates a unique push-button fast fill engagement with auto-stop that prevents over-pressurization.

Size: 1/2" (15mm)

- Pre-assembled for ease of installation
- Push button fast fill with auto-stop to prevent system over-pressurization
- Dial indicator eliminates need for pressure gauge
- Same lay length as Watts 911
- High capacity fill valve for quick system filling and purging



BD911

**Series CSM-61****Flow Measurement Valves**

Series CSM-61 Flow Measurement Valves are designed for application on low or medium flow rate HVAC units. Their compact size allows for easy installation and use in crowded piping compartments. The CSM-61's ball-type design, extended throttling range, and large indicator plate, make for highly accurate flow measurement, even in very low flow ranges. Its positive memory feature is easy to see, access, and operate, facilitating system balancing and flow measurement. These valves are also bi-directional, so there is no chance of installing the valve in the incorrect flow direction.

Series CSM-61 valves provide positive shutoff, eliminating the need for a separate service valve. The solder style CSM's may be installed without disassembly, saving costly installation time. The valves are provided with blowout proof stems. Use, misuse, corrosion, or wear will not allow the stem to blow out, releasing pressurized hot or chilled water.

Size: 1/2" – 3" (15 – 80mm)

- Accurate flow measurement
- Bi-directional flow
- Positive shutoff
- Available with threaded and solder end connections
- Integral drain port

**Series CSM-81-F****Flow Measurement Valves**

Series CSM-81-F Flow Measurement Valves are designed for application on medium to high volume flow rate HVAC units. The CSM-81-F's lubricated plug design, extended throttling range and large indicator plate provide accurate flow measurement and long service life.

CSM-81-F's unique cylindrical plug design provides full flow with minimal pressure drops and low operating torque. Large wrench flats on the external plug surface make setting or closing the valve simple.

Series CSM-81-F valves feature easily accessible checked metering ports with drip caps to facilitate system balancing and flow measurement. These valves also provide positive shutoff, eliminating the need for a separate service valve.

Size: 2 1/2" – 8" (65 – 200mm)

- Accurate flow measurement
- Flanged end connections
- Positive shutoff
- Checked metering ports
- Low torque
- Face to face dimensions to ANSI B16.10



CSM-81-F

**Series TDV****Triple Duty Valves**

Series TDV Triple Duty Valves are designed for use on single, double, and vertical in-line pump applications. They combine the functions of a positive hand-tight shutoff valve, check valve, and flow control valve into one versatile package, and eliminate the need to utilize three separate valves on the pump system. By using the series TDV, fewer components and fewer connections are required. Therefore, installation time is reduced, less space is needed, and the potential for leaks is reduced: creating significant cost savings.

The TDV is designed for easy field serviceability with bonnet O-rings that can be replaced under pressure by backseating the valve, and seats that can be changed without the use of special tools.

Size: 2 1/2" – 12" (65 – 300mm)

- Reduced field installation and material cost
- Eliminates requirement of three valves on pump discharge
- Soft seat to ensure tight shutoff
- Spring closure design, non-slam silent check valve feature
- Grooved end connections with optional flange adaptors



Angle Pattern

Straight Pattern

## Series SRV-AG

### Balancing Valves

Precise adjustment of the flow rate through Y-valve. Indication of the actual flow value on the integrated flow meter with rotatable indicator scale. The sight glass of the flow indicator is not installed directly in the medium flow and is therefore protected against soiling. No diagrams and measurement computers necessary. No correction factors for water/glycol mixtures required. Any installation position. Short installation length.

- Accurate flow balancing with the multi-turn inclined seat valve
- Continuous indication of the actual flow rate
- No need for measuring computers or charts
- MemoStop function for pre-setting and locking of the set volume flow
- Works in any position
- No correction charts required for glycol additives
- Wide range of accessories



SRV-AG

## Series CSM-91-F

Series CSM-91 Flow Measurement Valves monitor system flow in medium to high flow rate HVAC units providing a highly accurate flow measurement. It consists of a ductile iron body construction, pressure differential readout ports on both sides of the valve, two interchangeable brass metering ports and drain ports on both sides of the valve, two check valves with gasketed caps, bronze valve stem and plug disc, multi-turn adjustment handwheel, tamper-proof brass memory stop, positive shutoff, and grooved end connections with optional flange adapter. Series CSM-91 is ideal in water units such as pump packages and cooling towers.

- Multi-turn adjustment
- Interchangeable metering and drain ports on both sides of valve
- Positive shutoff
- Tamper-proof memory stop
- Micrometer type handwheel adjustment - visually readable from distance
- Field convertible for straight or angle pattern
- Grooved end connections with optional flange adaptors



CSM-91F

## Series W-STBV-25T

### Static Balancing Valve

The Series W-STBV Static Balancing Valve is designed for flow balancing in cooling, heating or process water systems. Its measuring points enable convenient system troubleshooting.

The Series W-STBV Static Balancing Valves can be applied in different places in a water system. When the system is under static hydraulic disorder, through manually setting the opening rate of the valves, the system's undesired resistance distribution can be changed into the desired one. This ensures that the actual flow value of every bypass or terminal matches its design value.

Size: 1/2" - 2" (15-50mm)

- Accurate flow control
- Numerical indicator of opening rate on the handwheel
- Lockable set position
- Shut-off function achieved by handwheel
- Self-sealing measuring points to protect against leakage
- Variable orifice
- Nonrising - stem
- Working pressure -PN 25
- Bronze body



W-STBV-25T

**Series W-STBV-16Q****Static Balancing Valve**

The Series W-STBV Static Balancing Valve is designed for flow balancing in cooling, heating or process water systems. Its measuring points enable convenient system troubleshooting.

The Series W-STBV Static Balancing Valves can be applied in different places in a water system. When the system is under static hydraulic disorder, through manually setting the opening rate of the valves, the system's undesired resistance distribution can be changed into the desired one. This ensures that the actual flow value of every bypass or terminal matches its design value.

Size: 2½"- 20" (65-500mm)

- Accurate flow control
- Numerical indicator of opening rate on the handwheel
- Lockable set position
- Shut-off function achieved by handwheel
- Using balanced valve core, easy to adjust
- Self-sealing measuring points to protect against leakage
- Non-Rising stem ,Variable Orifice
- Working pressure -PN 16
- Ductile Iron body



W-STBV-16Q

**Series W-DP15-25T****Dynamic Flow Balancing Valve**

Series W-DP15 Dynamic Flow Balancing Valve is designed for air-conditioning or heating system to keep the flow less than or equal to design value. It is generally used in constant flow systems.

- Dynamic Balancing: constant flow is achieved through the valve cartridge's auto-adjustment of the opening rate when  $\Delta P$  of the system fluctuates
- Precision calibrated valve plug keeps the flow deviation no greater than  $\pm 5\%$
- The flow rate is factory preset multiple  $\Delta P$  ranges available for each size
- No on-site commissioning is needed, saving time and labor costs
- No need of re-balancing after system changes



W-DP15-25T

**Series W-DP71-25Q****Dynamic Flow Balancing Valve**

Series W-DP71 dynamic flow balancing valve is designed for air-conditioning or heating system to keep the flow less than or equal to design value. It is generally used in constant flow systems.

- Dynamic Balancing: constant flow is achieved through the valve plug's auto-adjustment of the opening rate when  $\Delta P$  fluctuates in the system
- Precision calibrated valve plug keeps the flow deviation no greater than  $\pm 5\%$
- The flow rate is factory preset multiple  $\Delta P$  ranges available for each size
- No on-site commissioning is needed, saving time and labor costs
- No need of re-balancing after system changes



W-DP71-25Q

**Series W-DPBV-16/25T****Differential Pressure Balancing Valve**

Series W-DPBV Differential Pressure Balancing Valve is designed to keep constant differential pressure across the supply pipes and return pipes, control valve or terminal unit in air conditioning or heating system. It avoids hydraulic disturbances resulting from variations in system differential pressure.

- Self-acting differential pressure control, no external power needed
- On-site setting of differential pressure
- Wide controllable range of differential pressure
- Hand wheel equipped with differential pressure indicator
- Able to be shut off by hand wheel
- Self-sealing measuring points to protect against leakage
- Equipped with measuring points and air vent
- Equipped with three-way measuring connector



W-DPBV-16/25T

**Series W-DPBV-16/25Q****Differential Pressure Balancing Valve**

Series W-DPBV Differential Pressure Balancing Valve is designed to keep constant differential pressure the supply pipes and return pipes, control valve or terminal unit in air-conditioning or heating system. It avoids hydraulic disturbances resulting from variations in system differential pressure.

- Self-acting differential pressure control, no external power needed
- On-site setting of differential pressure
- Wide controllable range of differential pressure
- Hand wheel equipped with differential pressure indicator
- Able to be shut off by hexagon wrench
- Self-sealing measuring points to protect against leakage
- Equipped with air vent
- Equipped with ball valve in impulse tube to prevent blocking



W-DPBV-16/25Q

**Series W-DP915-16T****Electric Dynamic Balancing Two-way Valve**

The Series W-DP915 electric dynamic balancing two-way valve is designed for FCU or heating system. Through opening or closing the valve, the room temperature is regulated. Moreover, the valve can effectively help the system to avoid dynamic hydraulic disturbances and keep the flow rate stable, so as to achieve more accurate temperature control.

- On/Off control according to control signals
- Dynamic flow balancing to eliminate mutual disturbance of terminal equipment
- Higher system control precision than that of a traditional variable flow system
- Factory presetting of flow rate
- No on-site commissioning needed



W-DP915-16T

**Series W-912-16P****Electrical Two-way Control Valve**

Series W-912 Electric Two-way Control Valves are used with Series W-A11 actuators. They are extensively applied to HVAC water systems, boiler systems, heat exchange systems or AHU steam systems to regulate the flow rates of fluids in these systems.

- Equal percentage control characteristic achieves high control precision.
- Electronic presetting function facilitates on-site commissioning.
- Automatic fault detection and alarm functions.
- Overload protection function for the power supply.



W-912-16P

**Series W-942-16/25Q (DN15-DN500)****Electrical Two-way Control Valve**

Series W-942-16/25Q Electrical Two-way Control Valves are used with Series W-A11 actuators. They are extensively applied to HVAC water systems, boiler systems, heat exchange systems or AHU steam systems to regulate the flow rates of fluids in these systems.

- Equal percentage control characteristic achieves high control precision
- Electronic presetting function facilitates on-site commissioning
- Automatic fault detection and alarm functions
- Overload protection function for the power supply
- V-shaped (cone) sealing ring and spring self-compensation structure result in higher abrasion resistance and longer service life



W-942-16/25Q

**Series W-913-16P****Electrical Three-way Control Valve**

Series W-913-16P Electrical Two-way Control Valves are used with Series W-A11 actuators. They are extensively applied to HVAC water systems, boiler systems, heat exchange systems or AHU steam systems to regulate the flow rates of fluids in these systems.

- Equal percentage control characteristic achieves high control precision
- Electronic presetting function facilitates on-site commissioning
- Automatic fault detection and alarm functions
- Overload protection function for the power supply



W-913-16P

**Series W-943-16/25Q****Electrical Three-way Control Valve**

Series W-943-16/25Q Electrical Two-way Control Valves are used with Series W-A11 actuators. They are extensively applied to HVAC water systems, boiler systems, heat exchange systems or AHU steam systems to regulate the flow rates of fluids in these systems.

- Equal percentage control characteristic achieves high control precision
- Electronic presetting function facilitates on-site commissioning
- Automatic fault detection and alarm functions
- Overload protection function for the power supply
- V-shaped (cone) sealing ring and spring self-compensation structure result in higher abrasion resistance and longer service life



W-943-16/25Q

**Series 1378TRV****Thermostat Adaptable Valve**

Nickel-plated thermostat adaptable valve. Straight body. Connection for copper or plastic pipe, size 1/2" M. Cylinder tailpiece with sealed O-ring. ABS handwheel with movable stem. Compatible with thermostatic actuators series 148A, electronic thermostatic actuator BT-TH02-RF, and electrothermic actuators series 22CX, 26LC.

- Nickel-plated thermostat adaptable valve
- Angle body. Connection for copper or plastic pipe, size 1/2" M
- Cylinder tailpiece with sealed O-ring
- ABS handwheel with movable stem
- Compatible with thermostatic actuators series 148A, electronic thermostatic actuator BT-TH02-RF, and electrothermic actuators series 22CX, 26LC



1378TRV

**Series TVE****Nickel-Plated Thermostatic Valve (Angular)**

- Nickel-plated thermostatic valve
- Angle body, with presetting
- Connection with female thread
- Suitable for the 148, electronic thermostatic actuator BT-TH02-RF, and electrothermic actuators series 22CX, 26LC
- Valve adjustment: Heimeier M30 x 1,5



TVE

**Series 120B****4-Way Nickel-Plated Valve**

Series 120B 4-way thermostat adaptable valves are used as shut-off and control devices for radiators in two-pipe heating systems. The valves come in the configurations with 1/2" – 3/4" connection to the heat emitter and are provided with a probe for separating the delivery flow from the return flow in the radiator.

Connection of the valves to the heat emitter is through an O-ring sealed straight tailpiece and final washer with the aid of a hex wrench.

- Connection to heat emitter ND 1/2" – 3/4"
- Connection to copper or plastic pipe ND 1/2" – 1/2" S
- Plug stroke presetting device
- Conforms with UNI 7942/79 standard



120B



**Series W-DPA912-16T (DN25-50)****Series W-DPA912-25T (DN25-50)****Pressure Independent Control Valve**

The Series W-DPA912 pressure independent control valve is designed for terminal equipment in AHU, PAU or MAU system to regulate the flow through the valve as well as to keep a constant differential pressure at both ends of the valve. It avoids flow fluctuation caused by the opening or closing of other equipment in the system so as to keep the system stable, efficient and energy-saving.

- Equal Percentage Flow Characteristic to provide a linear energy output;
- Constant differential pressure achieved;
- Self-balancing valve core realizes easy shutoff;
- V-ring sealing and self-compensating spring result in higher abrasion resistance and longer service life;
- Electronic preset of maximum flow facilitates on-site commissioning;
- Overload protection for power supply;
- Stroke auto-detection;
- Manual lever for convenient on-siting commissioning and troubleshooting.

<b>Nominal Diameter:</b>	DN25~DN50
<b>Maximum Pressure:</b>	PN16、PN25
<b>Working Temperature:</b>	-10~120°C
<b>Fluid Medium:</b>	Water / Ethylene Glycol / Propylene Glyco
<b>Connection Standard:</b>	ISO7/1
<b>Flow Deviation:</b>	±5%
<b>Working P:</b>	35-350KPa
<b>Protection Grade:</b>	IP54
<b>Control Characteristic:</b>	Equal Percentage

**Series W-PICV-16Q (DN65-DN150)****Series W-PICV-25Q (DN65-DN150)****Pressure Independent Control Valve**

The Series W-PICV pressure independent control valve is designed for terminal equipment in AHU, PAU or MAU system to regulate the flow through the valve as well as to keep a constant differential pressure at both ends of the valve. It avoids flow fluctuation caused by the opening or closing of other equipment in the system so as to keep the system stable, efficient and energy-saving.

- Equal percentage flow characteristic;
- Constant differential pressure is achieved;
- Self-balancing valve core realizes easy shutoff;
- V-ring sealing and self-compensating spring result in higher abrasion resistance and longer service life;
- Electronic preset of maximum flow facilitates on-site commissioning;
- Fault auto-detection and alarm function;
- Overload protection for power supply, Stroke auto-detection;
- Manual lever for convenient on-siting commissioning and troubleshooting;
- Spring is cut off from the water, longer service life.

<b>Nominal Diameter:</b>	DN65~DN150
<b>Maximum Pressure:</b>	PN16、PN25
<b>Working Temperature:</b>	-10~130°C
<b>Fluid Medium:</b>	Water / Ethylene Glycol
<b>Connection Standard:</b>	ISO7005
<b>Flow Deviation:</b>	±5%
<b>Working P:</b>	30-400KPa
<b>Protection Grade:</b>	IP54
<b>Control Characteristic:</b>	Equal Percentage



PICV DN65-150

**Series W-PICV-16Q (DN200-DN250)****Series W-PICV-25Q (DN200-DN250)****Pressure Independent Control Valve**

The Series W-PICV pressure independent control valve is designed for terminal equipment in AHU, PAU or MAU system to regulate the flow through the valve as well as to keep a constant differential pressure at both ends of the valve. It avoids flow fluctuation caused by the opening or closing of other equipment in the system so as to keep the system stable, efficient and energy-saving.

- Equal percentage flow characteristic;
- Constant differential pressure is achieved;
- Self-balancing valve core realizes easy shutoff;
- V-ring sealing and self-compensating spring result in higher abrasion resistance and longer service life;
- Electronic preset of maximum flow facilitates on-site commissioning;
- Fault auto-detection and alarm function;
- Overload protection for power supply, Stroke auto-detection;
- Manual lever for convenient on-siting commissioning and troubleshooting;

<b>Nominal Diameter:</b>	DN200~DN250
<b>Maximum Pressure:</b>	PN16、PN25
<b>Working Temperature:</b>	-10~120°C
<b>Fluid Medium:</b>	Water / Ethylene Glycol / Propylene Glyco
<b>Connection Standard:</b>	ISO7005
<b>Flow Deviation:</b>	±5%
<b>Working P:</b>	35-400KPa
<b>Protection Grade:</b>	IP54
<b>Control Characteristic:</b>	Equal Percentage



PICV DN200-250

## Bourdon Type

### Series M1-ABS-40

#### Bourdon Tube Pressure Gauges

For general industry, gases and liquids not viscous, not aggressive and not crystallising.  
Dry plastic case DN40 bottom entry.

- Case: Black plastic
- Window: Clear plastic
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 12 mm flats
- Pressure element: Bourdon tube Cu-alloy, soft soldered  $\leq$  60 bar C-type,  $>$  60 bar helical type Sn-Ag soldered
- Movement: Cu-alloy



M1-ABS-40

### Series MG1-ABS 63

#### Bourdon Tube Pressure Gauges

For pneumatic industry, gases and liquids not viscous, not aggressive and not crystallizing. Glycerine filled plastic case DN63 bottom entry.

- Case: ABS black with blow-out device
- Window: PMMA, ultra-sonic welded
- Dial: White plastic
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 14 mm flats
- Pressure element: Bourdon tube cu-alloy, soft soldered  $\leq$  60 bar C-type,  $>$  60 bar helical type Sn-Ag soldered
- Movement: Cu-alloy
- Liquid filling: Glycerine 99.5%



MG1-ABS 63

### Series MG1-INOX 100

#### Glycerine filled Pressure Gauges

For general industry, gases and liquids not viscous, not aggressive and not crystallising.  
Plastic case DN 100 bottom entry.

- Case: SS304
- Window: Clear plastic
- Dial: White Aluminium
- Pointer: Black plastic
- Pressure connection: Cu-alloy, 12 mm flats
- Pressure element: Bourdon tube Cu-alloy, soft soldered  $\leq$  60 bar C-type,  $>$  60 bar helical type
- Movement: Cu-alloy
- Available in 50mm and 63mm dial



MG1-INOX 100

## Series MP1-63

### Capsule Pressure Gauges

For general industry, gases and liquids not viscous, not aggressive and not crystallizing. DN63 bottom entry.

- Case: Chrome plated steel
- Window: Clear plastic
- Dial: Aluminum white
- Pointer: Aluminum black
- Pressure connection: Copper alloy, 14 mm flats, 18 mm for DN80, 21 mm for DN100
- Pressure element: Capsule copper alloy, O-ring Perbunan
- Movement: Copper alloy
- Zero point adjustment



MP1-63

## Stainless Steel Case Heavy Duty

## Series MD1-100

### Stainless Steel Case Heavy Duty Gauges

For highly stressed environmental conditions. Dry – Glycerine filled DN100 bottom entry.

- Case + roll on bezel: Stainless steel AISI 304 with bayonet clutch
- Window: Glass 3 mm thick, plastic for liquid filled
- Dial: White aluminium
- Pointer: Black anodized aluminium; zero adjustment
- Pressure connection: Copper alloy
- Pressure element: Copper alloy with pond soldering for range  $\leq$  40 bar; AISI 316L st. st. with silver soldering for range  $>$  40 bar
- Movement: Copper alloy
- Liquid filling: Glycerine 90%



MD1-100

## All Stainless Steel

## Series MX1-63

### All Stainless Steel Gauges

For special industrial applications, chemical, food and shipbuilding industries.

- Case: Stainless steel with pressure relief device AISI 304 with adjustment hole
- Window: Safety glass
- Dial: White aluminium, black scale and graduation
- Pointer: Aluminium, black
- Pressure connection: Stainless steel AISI 316L
- Pressure element: Bourdon tube stainless steel AISI 316L  $\leq$  60 bar circle  $>$  60 bar helical
- Movement: Stainless steel



MX1-63

## High Accuracy Test Gauges

**Series MC1-150****High Accuracy Test Gauges**

- Case and ring: Stainless steel AISI 304 with bayonet clutch; nitrile rubber NBR safety plug
- Window: Glass 3 mm thick
- Window gasket: Nitrile rubber NBR
- Dial: White aluminium, black scale and graduation with anti-parallax mirror ring
- Pointer: Adjustable in black anodized aluminium knife execution
- Pressure connection: AISI 316L; thread G1/2B A UNI ISO 228/1
- Pressure element: From 60 to 400 mbar: phosphorous bronze bellow – only for gaseous fluids from 0,6 to 1000 bar: CuBe seamless tube from 0,6 to 1000 bar: Class 0,5: AISI 316L st. st. seamless tube
- Movement: High precision clockwork alloy, pinion and bolt of the sector mounted on bushes in semi precious stone



MC1-150

**Series 2131****Two-Way Brass Valve For Fan-Coils**

Compatible with actuators series 22C, 22CX, 26LC and EMUJC

- ON/OFF operation with actuators series 22CX
- Max. operating temperature: 100°C. Disc stroke: 2.5 mm
- Nominal pressure: 16 bar



2131

**Series 3131****Three-Way Brass Valve For Fan-Coils**

Compatible with actuators series 22C, 22CX, 26LC and EMUJC

- ON/OFF operation with actuators series 22CX
- Max. operating temperature: 100°C. Disc stroke: 2.5 mm
- Nominal pressure: 16 bar



3131

**Series 4131****Three-Way Brass Valve For Fan-Coils with 4 Connection**

Compatible with actuators series 22C, 22CX, 26LC and EMUJC

- ON/OFF operation with actuators series 22CX
- Max. operating temperature: 100°C. Disc stroke: 2.5 mm
- Nominal pressure: 16 bar



4131

**Series LFTWH****Tankless Water Heater Valves**

Series LFTWH tankless water heater valves are designed to simplify the installation, maintenance and operation of tankless water heaters. The LFTWH features Lead Free\* construction to comply with Lead Free\* installation requirements.

Sizes:  $\frac{3}{4}$ " and 1" (20 and 25mm)

- Lead Free\* copper silicon alloy body
- Full-port, quarter-turn ball valve with color-coded tee handle and union
- Quarter-turn purge and drain valve with hose connection and tethered brass cap
- Optional  $\frac{3}{4}$ " pressure relief valve 150psi (10.3 bar)
- Optional integral spring check valve in cold water valves
- Hot and cold valves certified to NSF/ANSI 61
- Staggered connection points for ease of installation and access
- Valves are suitable for most tankless installations
- No additional adapters required
- 600 WOG rated
- FPT unions for connection to water heater (all models)
- FPT unions for connection to water lines (UT models)
- Quick-Connect end connections to water lines (QT models)
- FPT connection to water lines (FT models)
- Sweat connection to water lines (FS models)
- FPT/sweat unions for connection to water lines (UTS models)



LFTWH



\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

**Series MV****Automatic Air Vent Valve MINIVENT**

Series MV automatic and/or manual devices are used for discharging air from heating and air-conditioning systems.

- Automatic air vent valve with unscrewable cover for inspection
- Body and cover of brass CW617N
- Corrosion-resistant polyethylene float
- Max. pressure: 12 bar. Max. temperature: 115°C
- Also suitable for water containing additive (glycol up to 30%)



MV

**Series MVR**  
**MINIVENT**

Automatic air vent valve like the MV but complete with automatic shut-off valve RIA.

- Max. pressure: 12 bar. Max. temperature: 115°C
- Also suitable for water containing additive (glycol up to 30%)



MVR

**Series MKV**  
**MICROVENT**

Automatic vertical air vent valve.

- Body and cover of brass CW617N.
- Sealed with O-ring.
- Max. pressure: 10 bar. Max. temperature: 110°C
- Also suitable for water containing additive (glycol up to 30%)



MKV

**Series MVD**  
**DUOVENT Air Vent Valve**

Series MVD automatic and/or manual devices are used for discharging air from heating and air-conditioning systems.

- Automatic air vent valve with unscrewable cover for inspection
- Body and cover of brass CW617N
- Corrosion-resistant polyethylene float
- Max. pressure: 8 bar. Max. temperature: 115°C
- Also suitable for water containing additive (glycol up to 30%)



MVD



**Series 2161C****FLOATVENT**

Automatic vertical air vent valve. Sealed with O-ring.

Designed for installation on head connections of flush manifolds.

- Brass CW617N body
- Max. pressure: 10 bar
- Max. temperature: 110°C



2161C

**Series FV-4M1****Automatic Air Vent Valve for Water Distribution Systems**

Series FV-4M1 Automatic Air Vent Valves provide automatic air venting for hot or cold water distribution systems. These vents purge air that may be in the water system.

- Body and cover are brass construction
- Air vent with silicone rubber seal
- Impurities do not usually affect function as maximum float line of water is always lower than the valve seal
- Float is high temperature resistant polyethylene
- Suitable for use with glycol systems
- Can be disassembled for inspection and cleaning
- Max. operating pressure: 10 bar
- Temperature Range: 33°F -240°F (5°C -116°C)



FV-4M1

**Series MV-SOL****Automatic Air Vent Valve for Solar Systems**

Automatic air vent valve for solar systems with unscrewable cover for inspection.

MINIVENT SOL Series.

- Body and cover of brass CW617N, 1265-99
- Polyethylene float
- Seal between reservoir and cover with O-ring
- Connection ND 3/8" – 1/2" DIN – ISO 228/1
- Stainless steel (AISI 304) vacuum breaker (only for ND 3/8")
- Max. operating pressure: 12 bar
- Max. operating temperature: 160°C



MV-SOL



## Series PLT

### Potable Water Expansion Tanks

Series PLT Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system, the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series PLT expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve.

They are pre-pressurized steel tanks with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks



PLT

## Series DETA

### ASME — Pressurized Expansion Tanks for Potable Hot Water

Watts Model DETA Tanks are ASME fixed bladder type precharged expansion tanks for commercial and industrial fresh potable hot water applications. They are designed to accept the expanded volume of hot water keeping the system pressure below the relief valve setting. The water is contained in a butyl bladder.

- ASME Section VIII Construction
- Fixed Butyl Bladder (FDA approved)
- Stainless Steel System Connection
- Precharged to 40 psi (Field Adjustable)
- Shell: Carbon steel
- System Connection: Stainless steel
- Bladder: Butyl (FDA approved)
- Prime painted exterior
- Maximum Design Pressure:
- DETA 5 through DETA 210: 150 psi (10 bar)
- Precharged to 40 psi (275 kPa)
- Maximum Design Temperature: 240°F (115°C)



DETA



ETA

## Series ETA

### ASME— Pressurized Expansion Tanks for Heating and Cooling Systems

Watts Model ETA Tanks are ASME fixed bladder type precharged expansion tanks. They are designed to absorb the expansion forces and control the pressure in heating & cooling systems. The water is contained in the heavy duty bladder preventing tank corrosion and waterlogging problems.

- ASME Section VIII Construction
- Heavy Duty Butyl Bladder
- Precharged to 12 psi (Field Adjustable) Shell: Carbon steel
- Bladder: Heavy duty butyl, Prime painted exterior
- Maximum Design Pressure:
- ETA 15 through ETA 60: 150 psi (10 bars) ETA 80 through ETA 240: 125 psi (8.5 bars)
- Precharged to 12 psi (83 kPa) Maximum Design Temperature: 240°F (115°C)

## Backflow Applications

TYPE & PURPOSE	DESCRIPTION	INSTALLED AT	EXAMPLES OF INSTALLATION
<b>REDUCED PRESSURE ZONE ASSEMBLIES</b>  For health hazard cross-connections and continuous pressure applications.	Two independent check valves with intermediate relief valve. Supplied with shutoff valves and ball type test cocks.	All cross-connections subject to backpressure or backsiphonage where there is a potential health hazard.	Main supply lines Commercial boilers Hospital equipment Laboratory equipment Waste digesters Car washes
<b>REDUCED PRESSURE DETECTOR ASSEMBLIES</b>  For health hazard cross-connections and continuous pressure applications.	RPZ backflow preventers with a water meter and RPZ in the bypass line.	Fire protection system supply main. Detects leaks and unauthorized use of water.	Fire sprinkler lines where additives or foaming agents are used.
<b>DOUBLE CHECK VALVE ASSEMBLIES</b>  For non-health hazard cross-connections and continuous pressure applications.	Two independent check valves. Checks are replaceable for repair & testing.	All cross-connections subject to backpressure or backsiphonage where there is a non-health hazard.	Main supply lines Food cookers Tanks and vats Lawn sprinklers Fire sprinkler lines Commercial pools
<b>DOUBLE CHECK DETECTOR ASSEMBLIES</b>  For non-health hazard cross-connections and continuous pressure applications.	Double check valve backflow preventers with water meter and double check in the bypass line.	Fire protection system supply main. Detects leaks and unauthorized use of water.	Fire sprinkler lines
<b>DUAL CHECK VALVE BACKFLOW PREVENTERS</b>  For non-health hazard cross-connections and continuous pressure applications.	Two independent check valves. Checks are replaceable for repair and testing.	Cross-connection where there is a non-health hazard.	Residential supply lines (at the meter) Residential fire sprinkler systems Post-mix beverage machines, tea and coffee machines
<b>SPECIALTY BACKFLOW PREVENTERS with INTERMEDIATE ATMOSPHERIC VENT</b>  For non-health hazard cross-connections in small pipe sizes. Continuous pressure applications.	Two independent check valves with intermediate vacuum breaker and relief vent.	Cross-connection subject to backpressure or backsiphonage where there is non-health hazard. Continuous pressure.	Boilers (small) Dairy equipment
		Pressure outlet to prevent backflow of carbon dioxide gas and carbonated water into the water supply system to beverage machines.	Post-mix carbonated beverage machine, tea and coffee machines, ice machines
<b>ATMOSPHERIC VACUUM BREAKERS</b>  For health hazard cross-connections not subject to continuous pressure – 6" above flood rim.	Single float and disc with atmospheric port.	Cross-connection not subject to backpressure or continuous pressure. Install at least 6" above fixture rim. Protection against back siphonage only.	Process tanks Dishwashers Soap dispensers Washing machines Lawn sprinklers
<b>PRESSURE VACUUM BREAKERS</b>  For health hazard cross-connections. Continuous pressure applications – 12" above flood rim.	Spring-loaded float and disc with independent check. Supplied with shutoff valves and ball type test cocks.	Valve is designed for installation in a continuous pressure system 12" above the overflow level of the system being supplied. Protection against backsiphonage only.	Laboratory equipment Cooling towers Commercial laundry machines Swimming pools Chemical planting tanks Lawn sprinklers
<b>ANTI-SIPHON, SPILL-RESISTANT VACUUM BREAKERS</b>  For health hazard cross-connections. Continuous pressure applications. Factory installed 1" above flood rim. Field installed 6" above flood rim.	Spill-resistant vacuum breaker with modular check and float assembly of thermoplastic. Housing bronze body.	Indoor point of use cross-connections.	Chemical dispenser Commercial dishwasher Sterilizers
<b>HOSE CONNECTION VACUUM BREAKERS</b>  For residential and industrial hose supply outlets not subject to continuous pressure.	Single check with atmospheric vacuum breaker vent.	Install directly on hose bibbs, service sinks and wall hydrants. Not for continuous pressure.	Hose bibbs Service sinks Hydrants

Designed to protect potable water supplies from contamination resulting from the unwanted reverse flow of water in a plumbing system, Watts backflow preventers are the trusted solution.

## Why Watts?

- Most options and configurations to meet your application needs
- Designed for easy maintenance and serviceability in the field
- Industry leading space, weight, and flow characteristics
- Products certified by leading third party plumbing organizations
- Readily available repair kits and parts
- Established reputation for quality and performance



## Series LF007

### Reduced Pressure Principle Backflow Preventers

Sizes: 1/2" – 3" (15 – 80mm)

- For non-health hazard applications
- Ease of maintenance — only one cover and top entry
- Fused epoxy coated cast iron body — 2½" – 3" (65 – 80mm)



LF007QT-S

## Series LF009

### Reduced Pressure Principle Backflow Preventers

Sizes: 1/4" – 3" (8 – 80mm)

- Single access cover and modular check construction for ease of maintenance
- Internal relief valve for reduced installation clearances
- Large body passages provide low pressure drop
- Health hazard applications
- Continuous pressure
- Sizes 1/2" – 2" available with press end connections



LF009QT

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

## SilverEagle® Series

*Lightest, most compact, and flexible backflow preventers on the market*

- 70% Lighter than traditional designs
- Space-saving design, small enclosure footprint
- Manufactured from 304 stainless steel
- Highly configurable shutoffs including gate and butterfly valves

- Grooved connections for ease of installation and pipe alignment
- Patented link-check assemblies for easy serviceability
- Replaceable check disc rubber

### Series 757

#### Double Check Valve Backflow Preventers

Sizes: 2½" – 10" (65 – 250mm)

- For non-health hazard applications
- Lead Free\* 304 stainless steel body
- Approved for horizontal, vertical, or "N" pattern installations
- Continuous pressure



757, 757N

### Series LF757DCDA, LF757NDCDA

#### Double Check Detector Backflow Preventers

Sizes: 2½" to 10" (65 to 250mm)

- For non-health hazard applications
- Lead Free\* 304 stainless steel body
- Approved for horizontal, vertical, or "N" pattern installations
- Continuous pressure
- Designed for fire line sprinkler systems when it is necessary to monitor unauthorized use of water



LF757DCDA

### Series 957, 957N, 957Z

#### Reduced Pressure Principle Backflow Preventers

Sizes: 2½" to 10" (65 to 250mm)

- For health hazard applications
- Lead Free\* 304 stainless steel body
- Approved for horizontal, "N" pattern, or "Z" pattern installations
- Bottom-mounted cast stainless steel relief valve
- Continuous pressure



957, 957N, 957Z

### Series LF957RPDA, LF957NRPDA, LF957ZRPDA

#### Reduced Pressure Detector Backflow Preventers

Sizes: 2½" to 10" (65 to 250mm)

- For health hazard applications
- Lead Free\* 304 stainless steel body
- Approved for horizontal, "N" pattern, or "Z" pattern installations
- Bottom-mounted cast stainless steel relief valve
- Continuous pressure
- Designed for fire line sprinkler systems when it is necessary to monitor unauthorized use of water



957RPDA

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

**Series 774/994****Short lay length ideally suited for retrofit installations**

- Single top access cover with two-bolt grooved style coupling for ease of maintenance
- No N or Z patterns (inline only)
- NRS/OSY gate valve option
- Torsion spring check valve for low head loss
- Stainless steel body half the weight of competitive designs, reducing installation and shipping costs
- Stainless steel provides long-term corrosion protection and maximum strength
- May be installed in horizontal or vertical “flow up” position
- Paintable body

**Series 774****Double Check Valve Backflow Preventers**

Sizes: 2½" – 12" (65 – 300mm)

- Thermoplastic and stainless steel check valves for trouble-free operation
- Non-health hazard applications
- Continuous pressure

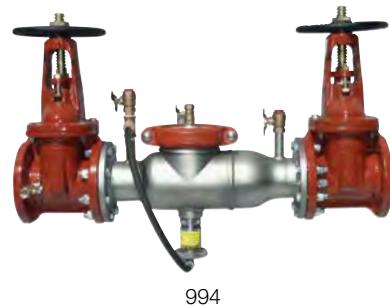
**Series 774DCDA****Double Check Detector Backflow Preventers**

Sizes: 2½" – 12" (65 – 300mm)

- Designed for fire line sprinkler systems when it is necessary to monitor unauthorized use of water
- Non-health hazard applications
- Continuous pressure

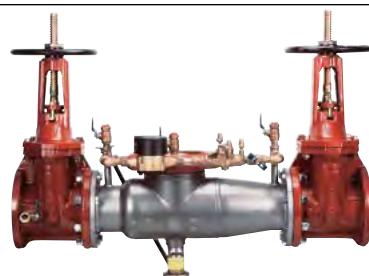
**Series 994****Reduced Pressure Principle Backflow Preventers**

- Bottom-mounted relief valve reduces clearance requirements when installed against an outside wall
- Stainless steel relief valve features a balanced rolling diaphragm to eliminate sliding seals and provide low maintenance costs
- Health hazard applications
- Continuous pressure

**Series 994RPDA****Reduced Pressure Detector Backflow Preventers**

Sizes: 2½" – 12" (65 – 300mm)

- Designed for fire line sprinkler systems when it is necessary to monitor unauthorized use of water
- Health hazard applications
- Continuous pressure



## Series 709/909

## Proven best in class performance

- Epoxy-coated cast iron construction
- Stainless steel check construction
- Separate check access

- Poppet control stem-guided check, optimized for continuous use applications
- Flanged end connections

## Series LF709

## Double Check Valve Backflow Preventers

Sizes: 2½" – 10" (65 – 250mm)

- Lead Free\*
- Replaceable stainless steel seats
- Captured spring assemblies for safety
- Maximum flow at low pressure drop
- No special tools required for servicing
- Approved for vertical flow up installation
- Non-health hazard applications
- Continuous pressure



LF709

## Series 709DCDA

## Double Check Detector Backflow Preventers

Sizes: 3" – 10" (80 – 250mm)

- Body construction fused epoxy coated cast iron
- Maximum flow at low pressure drop
- Design simplicity to ease maintenance
- Furnished with 5/8" x 3/4" bronze meter
- Non-health hazard applications
- Continuous pressure



709DCDA

## Series LF909

## Reduced Pressure Principle Backflow Preventers

Sizes: 2½" – 10" (65 – 250mm)

- Lead Free\*
- Replaceable seats
- Stainless steel internal parts
- Captured spring check assemblies
- Air-in/water-out relief valve for maximum capacity during emergency conditions
- Health hazard applications
- Continuous pressure



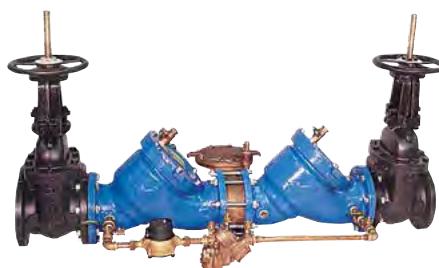
LF909

## Series 909RPDA

## Reduced Pressure Detector Backflow Preventers

Sizes: 2½" – 10" (65 – 250mm)

- Body construction fused epoxy coated cast iron
- Replaceable bronze seats
- Maximum flow at low pressure drop
- Compact, for economy combined with performance
- Design simplicity to ease maintenance
- Furnished with 5/8" x 3/4" (16 x 19mm) meter
- Continuous pressure



909RPDA

**Series 007DCDA****Double Check Detector Backflow Preventers**

Sizes: 2½" – 3" (65 – 80mm)

- Fused epoxy coated cast iron unibody
- Replaceable seats
- Maximum flow at low pressure drop
- Compact design for ease of installation
- Furnished with bronze 5/8" x 3/4" meter
- Non-health hazard applications
- Continuous pressure
- Designed for fire line sprinkler systems when it is necessary to monitor unauthorized use of water



007DCDA

**Series 007M1DCDA****Double Check Detector Backflow Preventer**

Size: 2" (50mm)

- For residential fire sprinklers
- Compact design for ease of installation
- No special tools required for servicing auxiliary bypass
- Compact bypass design: remains with main valve assembly profile
- Inline serviceable 1/2" backflow assembly
- Detects potential underground water leaks
- Detects unauthorized water usage
- Non-health hazard applications
- Continuous pressure



007M1DCDA

**Series LF909****Reduced Pressure Principle Backflow Preventers****LF909** Sizes: 3/4" 1" (20mm, 22mm)**LF909M1** Sizes: 1 1/4", 1 1/2", 2" (32mm, 40mm, 50mm)

- Dual cover check access
- Independent relief valve section
- Y pattern
- Air-in/water-out relief valve
- Lead Free\*
- Modular design
- Replaceable seats
- Compact for installation ease
- Horizontal or vertical (up or down) installation
- No special tools required for servicing
- OSY and BFG options (UL/FM approved)
- Health hazard applications
- Continuous pressure



LF909QT

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

**Series LF800M4QT****Pressure Vacuum Breakers**Sizes:  $\frac{1}{2}$ " – 2" (15 – 50mm)

- Replaceable plastic seat
- Lead Free\*
- Easy maintenance of internal parts
- Acetal bonnet acts as "freeze plug" to prevent body damage
- O-ring bonnet seal for less possibility of fouling
- Standardly equipped with tee handle quarter turn ball valve shutoffs  $\frac{1}{2}$ " – 1". The  $1\frac{1}{4}$ " – 2" feature lever handles



LF800M4QT



800M4QT

**Series 800M4QT****For Use in Non-Potable Applications****GoldenEagle® Series***Designed to provide trouble-free operation and ease of serviceability.*

- Separate access, top entry check valve design for ease of maintenance
- Reversible seat disc rubber, extends check valve life
- Chloramine resistant elastomers
- Replaceable push-in check valve seats and seat discs eliminates threads from water way
- Compact design
- Innovative plastic seat guide
- Top mounted test cocks for ease in testing and reduced installation clearances

**Series LF719****Double Check Valve Backflow Preventers**Sizes:  $\frac{1}{2}$ " to 2" (15 to 50mm)

- For non-health hazard applications
- Lead Free\*
- Continuous pressure



LF719

**Series LF919****Reduced Pressure Principle Backflow Preventers**Sizes:  $\frac{1}{2}$ " to 2" (15 to 50mm)

- For health hazard applications
- Lead Free\*
- EZ twist relief valve cover-quarter turn locking joint captures the spring load during repair to facilitate disassembly
- Continuous pressure



LF919QT

**Series LF8****Hose Connection Vacuum Breakers**Sizes:  $\frac{3}{4}$ " (20mm)

- Brass body (all models except 8P)
- Stainless steel working parts for longevity
- Durable rubber diaphragm and disc for consistent positive seating
- Series 8 for non-potable applications

**Series 188A , LF288A, LF289 and LFN388****Anti-Siphon Vacuum Breakers**Sizes:  $\frac{1}{4}$ " – 3" (6 – 80mm)

- Spring loaded vent for continuous pressure use
- Patented design
- Spill-resistant diaphragm design for indoor use
- Modular cartridge for ease of service
- Lightweight disc assembly prevents spilling under all rates of flow

**Series LF7****Dual Check Valves**Sizes:  $\frac{3}{8}$ ",  $\frac{1}{4}$ " (10, 32mm)

- Can be installed vertically or horizontally
- Available with combination of inlet/outlet sizes, types or thread and end connection including retrofit compression fittings and hose connections
- For non-health hazard applications

**Series LF7R****Dual Check Valves**Sizes:  $\frac{1}{2}$ " – 1" (15 – 25mm)

- Designed for residential water system containment, such as drinking water supply service lines
- Continuous pressure
- For non-health hazard applications



**Series LFN9****Dual Check Vacuum Breakers**Sizes:  $\frac{1}{4}$ " –  $\frac{3}{8}$ " (6 – 10mm)

- Exclusive "Non-removable" design eliminates the need for break-away set screw
- Center-guided check valves for repeatable seating
- In-line field testable – no special gauges required
- Durable brass body with stainless steel checks for corrosion resistance



LFN9

**Series 9BD****Backflow Preventer for Vending Machine Water Supply Lines**Sizes:  $\frac{1}{4}$ " –  $\frac{3}{8}$ " (6 – 10mm)

- Available in Flare or NPTM end connections
- Stainless steel body and parts
- Instant check valve response
- Triple check protection of the water supply



9BD

**Series LFN9-CD****Dual Check Vacuum Breakers**Sizes:  $\frac{3}{4}$ " (20mm)

- Exclusive "Non-removable" design eliminates the need for break-away set screw
- Center-guided check valves for repeatable seating
- In-line field testable – no special gauges required
- Manually drainable for freeze protection
- Durable brass body with stainless steel checks for corrosion resistance
- Streamlined design for low pressure drop
- Can be installed vertically or horizontally
- Positive backsiphonage protection



LFN9-CD

**Series 9D****Dual Check Valve with Intermediate Atmospheric Vent**Sizes:  $\frac{1}{2}$ " M3 (15mm),  $\frac{3}{4}$ " M2 (20mm)

- True line-sized construction allows the check modules to open further allowing dirt and debris to pass more freely reducing check fouling
- Stainless steel internal parts
- Maximum flow at low pressure drop
- Furnished with union connections to facilitate removal and replacement for maintenance
- Can be installed vertically or horizontally



9DM2

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

**W**ater Pressure Reducing Valves (WPRVs) control water pressure in residential and commercial applications. They are designed to reduce incoming water pressure to a sensible level to protect plumbing system components.

### Why Watts?

- Durability in design with high-grade Lead Free\* material suited for even the most challenging application
- High performance and exceptional flow characteristics
- Breadth & depth of offerings means you get the right product for the right application, all from a single vendor
- Industry leader for more than 140 years, with the largest installed base



### Series LF25AUB

#### Standard Capacity Pressure Reducing Valves

Sizes 1/2" – 2" (15 – 50mm)

- Industry-trusted design with proven track record for longevity, reliability, and flow performance
- Lead free copper silicon alloy with stainless steel strainer and high-temperature diaphragm to ensure success in any installation
- Available in options such as high or low-pressure settings, gauge ports, etc.
- End connection options such as PEX, CPVC, and Quick-Connect
- NSF 61-G approved for potable-water applications and compliant with ASSE 1003 standards



LF25AUB

### Series LFN55B

#### Standard Capacity Pressure Reducing Valves

Sizes 1/2" – 2" (15 – 50mm)

- Durable brass spring cage
- Integral strainer
- Ideal for new residential construction
- Designed and assembled in the USA



LFN55B

### Series LFN45B

#### Standard Capacity Pressure Reducing Valves

Sizes 1/2" – 2" (15 – 50mm)

- Compact design and engineered resin-caged PRV design
- EZ set option available for the 3/4" & 1" sizes
- Sealed spring cage supports both indoor and outdoor installations and flexibility in orientation of install
- Available with threaded, solder, PEX, CPVC, or Quick-Connect end connections
- NSF 61-G approved for potable-water applications and compliant with ASSE 1003 standards



LFN45B

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

**Series LFU5B****Standard Capacity Pressure Reducing Valves**Sizes  $\frac{1}{2}$ " – 2" (15 – 50mm)

- Heavy, rugged design suited for high-flow performance and easy serviceability for potable-water applications
- Corrosion-resistant, cast iron spring cage
- Available in a range of end connection and pressure setting options
- NSF 61-G approved for potable-water applications and compliant with ASSE 1003 standards



LFU5B

**Series LF223****High-Capacity Pressure Reducing Valves**Sizes  $\frac{1}{2}$ " – 2" (15 – 50mm)

- Heavy construction with enlarged diaphragm, spring cage, and seat support for exceptional performance
- Suited for demanding applications requiring high flow capacity – max pressure – 300psi
- Available in options such as strainer, bypass, flanged ends, high-pressure or low-pressure settings
- NSF 61-G approved for potable-water applications and compliant with ASSE 1003 standards



LF223

**Series LF26A and LF263A****Specialty Pressure Reducing Valves**Sizes  $\frac{1}{8}$ " –  $\frac{1}{2}$ " (3 – 15mm)

- Compact design with aluminum spring cage ideal for OEM and small-flow applications
- Over-sized openings geared towards dispenser equipment – max pressure – 300psi
- Flexible options and configurations (i.e. gauge connection, pressure ratings, etc.)
- LF263A is a 3-way port model
- SS263AP constructed of all stainless steel
- NSF 61-G approved for potable-water applications



LF26A

**Series LFX65B****Standard Capacity Pressure Reducing Valves**Sizes  $\frac{1}{2}$ " – 2" (15 – 50mm)

- Cartridge Style valve enables quick and easy installation or service in-line.
- Greater flow performance with lower fall off pressure for consistent operation
- Seat design reduces flow noise
- 100% balanced valve, unique to Watts, provides reliable flow performance
- Bypass feature in Cartridge Assembly controls thermal expansion pressure.
- Standard construction includes sealed spring cage and corrosion resistant adjusting and cage screws for accessible outdoor or pit installations
- High performance thermoplastic integral seat cartridge
- NSF



LFX65B

### Series 152A

#### Process Steam Pressure Regulators

Series 152A Process Steam Pressure Regulators are designed to offer highly sensitive response to reduced pressure changes and maintain fullest possible volume without appreciable reduced pressure drop.

Sizes 1/2" to 2" (15 – 50mm)

- Iron body construction
- Serviceable in line
- Standard sensitivity adjuster



152A

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### Series 152SS

#### Stainless Steel Process Steam Pressure Regulators

This design offers highly sensitive response to reduced pressure changes and maintains fullest possible volume without appreciable reduced pressure drop.

Sizes 1/2", 3/4", and 1" (15, 20 and 25mm)

- Versatile design in stainless steel
- Serviceable in line
- Standard sensitivity adjuster steel



152SS

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### Series LFN223F

#### Flanged Super Capacity Water Pressure Reducing Valves

Series LFN223F and LFN223FS Super Capacity Water Pressure Reducing Valves are designed to reduce incoming water pressure to a sensible level to protect plumbing system components and reduce water consumption. This series is suitable for water supply pressures up to 175psi (12.1 bar) and may be adjusted from 25 – 75psi (172 – 517 kPa).

Sizes 3" (80mm)

- Enlarged diaphragm, spring cage and seat orifice for super capacity performance
- Iron body construction
- Stainless steel piston
- Series LFN223FS furnished with separate strainer
- Sealed spring cage on all models for accessible outdoor or pit installations



LFN223F

**Series DRV****Standard Capacity Pressure Reducing Valves**

Sizes 1/2" – 2" (15 – 50mm)

- Brass CW617N body and cap.
- Stainless steel strainer.
- Plastic valve seat.
- Interchangeable filter-regulator unit.
- Max. inlet pressure: 25 bar.
- Adjustable downstream pressure: 1.5 - 6 bar. Can be used for water, air and neutral gases up to 30°C.
- Available with gauge- Model DRVM



DRV



DRVM

**Series DRVN****Standard Capacity Pressure Reducing Valves**

Sizes 1/2" – 2" (15 – 50mm)

- Brass CW617N body.
- Stainless steel strainer.
- Plastic valve seat.
- Max. inlet pressure: 25 bar.
- Adjustable downstream pressure: 1.5 - 6 bar. Can be used for water, air and neutral gases up to 30°C.
- Outlet pressure adjusting knob and external graduated scale.
- Available with gauge- Model DRVMN



DRVN



DRVMN

**Series DRVD****Flanged Pressure Reducing Valves**

Sizes 2" – 8" (50 – 200mm)

- Body: ductile cast iron covered epoxy varnish (inside & outside).
- Shutter: Brass OT 58
- Brace washer: NBR (Nitrile)
- Ring: Bronze
- Max. temperature: 40°C
- Min. working pressure (PMA) :- PN 16 : 16 bar- PN 25 : 25 bar



DRVD

Watts now offers a comprehensive line of valves with press connections for light commercial and residential applications. They can be used to create a strong, consistent, reliable, watertight seal for both new construction and renovation projects as an alternative to a solder joint.

The technology provides a way to:

- Join copper tubing to brass and bronze valves more efficiently than with soldering
- Save on time and labor costs (compared with soldering)
- Avoid soldering issues, such as fire, smoke and fire watches (often required when soldering is performed)



**Pressure Reducing Valves**



**Ball Valves**



**Backflow Preventers**



**Mixing Valves**



**Hydronic Valves**





**A**utomatic Control Valves (ACVs) are designed to modulate and control pressure, level, pump, and flow of water.

### Why Watts?

- Our fusion-bonded, epoxy-coated ductile iron valves offer long life and minimal maintenance.
- Available in Stainless Steel construction for aggressive and corrosive applications.
- Our Ames brand provides a range of products designed to reduce high inlet water pressure to a lower inlet pressure for use in fire protection sprinkler systems.
- Our irrigation ACVs are used in applications such as parks, school and university grounds, and highway landscaping, as well as at amusement parks and zoos.

### Commercial Market

#### 970 Series – Float Control

AMES Float Valves are available for either On-Off or Modulating service. On-Off type are controlled by a Float Pilot that is equipped with adjustable low and high level stop collars to allow for calculated level draw-down. Modulating type maintain a constant water level proportional with tank draw. Float Pilots may be valve or remote mounted, and level control operation can be reversed for special applications. Additional combinations include Pressure Sustaining and Solenoid (On-Off) Features.



LFM114

#### Series LFM 127-1

##### Altitude Control

The Watts Altitude Control valve is designed to control the water level in tanks or elevated storage reservoirs.

- Monitors tank head pressure through a field-installed sensing line that opens for tank fill and closes at the desired level
- Valves equipped with separate adjustable opening and closing speed controls
- Multiple variations available, including one-way flow with delayed opening feature, one-way flow with pressure-sustaining feature, and two-way flow designs



LFM127-1

#### Series M115F

##### Pressure Reducing Control

The Watts Pressure Reducing Valves meet all requirements for UL listed fire protection service. Automatically reduces a higher inlet pressure to an adjustable lower outlet pressure regardless of changing flow rate or varying inlet pressure.

- DN32-DN200
- CL150/CL300
- UL Listed
- Flanged Version, Grooved Version
- Angle Body Optional



M 115 F

## Commercial Market

**Series M116FM****Pressure Relief/Sustaining Control**

The Watts Relief Valve meets all requirements for UL listed, FM Approved fire protection service. Automatically maintains a constant pressure in the fire protection system by relieving excess pressure.

- DN32-DN200
- CL150/CL300
- Flanged Version
- UL Listed, FM Approved
- Angle Body Optional



M116FM

**Series W-M115****Pressure Reducing Control**

Watts ACV Pressure Reducing Valves reduce high inlet pressure to constant, lower, outlet pressure across a broad range of flow.

- Valves can be installed in parallel or series configurations for extended flow range or staged pressure reduction
- Field-adjustable downstream pressure set point
- Common feature combinations include pressure reducing with hydraulic check, solenoid (on-off), downstream surge protection, or upstream pressure sustaining
- DN32-DN300
- PN16/CL150/CL300
- Range 10-125 PSI, 20-175PSI, 30-300PSI



W-M115

**Series W-M116****Pressure Relief/Sustaining Control**

Watts ACV Pressure Relief/Sustaining Valves open when inlet pressure is above the set point, and throttle when pressure is below the field-adjustable set point.

- Valves maintain desired settings with close pressure tolerances
- DN32-DN300
- PN16/CL150/CL300
- Range 20-200 PSI

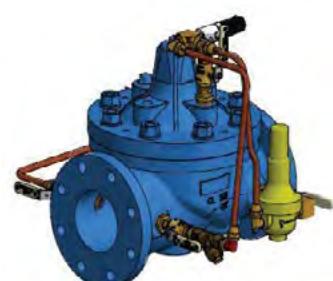


W-M116

**Series 513 Series W-M115-74****Pressure Relief/Sustaining Control**

The WATTS ACV Pressure Reducing Control Valve with Low Flow By-Pass is designed to automatically reduce a fluctuating higher upstream pressure to a constant lower downstream pressure regardless of varying flow rates. Flow requirements below the normal range of the main line Pressure Reducing Control Valve are handled by a separate, valve mounted, direct acting, Low Flow By-Pass Pressure Reducing Valve.

- DN32-DN300
- PN16/CL150/CL300
- Pilot System Reduce control: 30-300 PSI
- Low Flow ByPass range: 20-175 PSI



W-M115-74

## Waterworks Market

**Series W-M110-10****Modulating Float Control Valve**

The WATTS ACV Modulating Float Control Valve is designed to maintain a constant liquid level in a tank or reservoir. It throttles open on a lowering liquid level and throttles closed upon a rising liquid level.

- Modulating-type valves maintain constant water level proportional with tank draw
- DN32-DN300
- PN16/CL150/CL300
- Minimum Differential Pressure- 5PSI



W-M110-10

**Series W-M110-14****ON/OFF Float Control Valve**

The WATTS ACV On-Off Float Control Valve is designed to open fully or close drip-tight as commanded by the Float Control Pilot. The Float Pilot may be either valve or remote mounted.

- on/off Float Control
- DN32-DN300
- PN16/CL150/CL300
- Level Control Height - 465mm

**Series W-M113-12,W-M113-6****Solenoid ON/OFF Float Control Valve**

The WATTS ACV Solenoid Control Valve is designed to open fully or close drip-tight as commanded by a 3-Way Solenoid Pilot. The solenoid may be activated by a pressure switch, level probe, or any other electrical on-off device.

- on/off Float Control
- DN32-DN300
- PN16/CL150/CL300
- Standard Voltage AC220 (Optional AC240V 60 HZ,AC24V 60 HZ,AC120V 60 HZ.)
- Normally Closed/open



## Waterworks Market

### Series 910

#### Pressure Reducing Control

Ames Fire & Waterworks ACV Pressure Reducing Valves reduce high inlet pressure to constant, lower, outlet pressure across a broad range of flow.

- Valves can be installed in parallel or series configurations for extended flow range or staged pressure reduction
- Field-adjustable downstream pressure set point
- Common feature combinations include pressure reducing with hydraulic check, solenoid (on-off), downstream surge protection, or upstream pressure sustaining



LF910

### Series 920

#### Pressure Relief/Sustaining Control

Ames Fire & Waterworks ACV Pressure Relief/Sustaining Valves open when inlet pressure is above the set point, and throttle when pressure is below the field-adjustable set point.

- Valves maintain desired settings with close pressure tolerances
- UL approved fire versions available
- Multiple set pressures
- Differential relief version available



LF920

### Series 940

#### Non-Surge Check Valves

Ames Fire & Waterworks ACV Non-Surge Check Valves are equipped with separate adjustable opening and closing speed controls to avoid pipeline surges.

- Valves close drip-tight upon flow reversal
- Can be equipped with limit switches or a position indicator
- Common feature applications include low-head and variable frequency drive pumping systems



LF118

### Series 960

#### Altitude Control

Ames Fire & Waterworks Altitude Control valve is designed to control the water level in tanks or elevated storage reservoirs.

- Monitors tank head pressure through a field-installed sensing line that opens for tank fill and closes at the desired level
- Valves equipped with separate adjustable opening and closing speed controls
- Multiple variations available, including one-way flow with delayed opening feature, one-way flow with pressure-sustaining feature, and two-way flow designs



LF960

### Series 980

#### Pump Control

Ames Fire & Waterworks ACV Pump Control Valves are used to minimize surges commonly associated with the starting and stopping of pumps.

- Adjustable opening and closing speed controls
- Limit switch for electrical interface
- Hydraulic or mechanical check feature
- Can be configured with backpressure, rate-of-flow, or pressure reducing feature



LF980

## Fire Protection

**Series 910****Pressure Reducing UL Approved Control**

Ames Fire & Waterworks ACV Pressure Reducing Valves reduce high inlet pressure to constant, lower, outlet pressure across a broad range of flow.

- Valves can be installed in parallel or series configurations for extended flow range or staged pressure reduction
- Field-adjustable downstream pressure set point
- UL approved (1½" to 8") for fire applications



910GF/AF

**Series 920****Pressure Relief Control**

Ames Fire & Waterworks ACV Pressure Relief Valves open when inlet pressure is above the set point, and throttle when pressure is below the field-adjustable set point.

- Valves maintain desired settings with close pressure tolerances
- UL/FM approved fire versions available
- Multiple set pressures
- Differential relief version available



920GF/AF

**Series 900DF-A/900DF-B****Deluge Valve**

Ames Fire & Waterworks ACV deluge valve opens on demand to provide water flow to fire protection sprinkler systems. Can be pneumatically or electronically actuated.

- UL approved (3" – 10")
- Electronic, hydraulic, pneumatic or manual operation



900DF-B (Globe)

**Series 116-1FM****Pump Suction Control**

Prevents pump inlet pressure from dropping below preset minimum.

- FM approved (4" – 8")



M116-1FM

## Irrigation

**Series 800****Irrigation Automatic Control Valves**

- Sizes 1¼" through 6"
- Line serviceable
- Compact assembly
- Full range of options
- Anti-corrosive pilot systems
- Proven pilots, functions & design
- Top & bottom guided stem for better control
- Stainless steel braided flexible tubing is available
- Non-edge seat design eliminates wire drawn on low flows



813BG

Thermostatic mixing valves (TMVs) blend hot water with cold water to provide consistent, safe outlet temperatures.

## Why Watts?

- Reliable products for safe, accurate control of water temperature from point-of-source to point-of-use
- Products tested and listed to relevant ASSE standards (1017, 1069 & 1070)
- Extensive distribution network ensures product availability
- Provided by a stable, industry leader with more than 140 years in the business



## IntelliStation®

### Digital Mixing System

- Controls water temperatures in commercial and institutional facilities
- Allows remote monitoring and control to provide hot water for domestic applications, consistently and on demand
- Provides digital temperature regulation to ASSE 1017 within +/-2°F, even during low and zero demand periods
- Is field configurable without the use of a laptop or special software



**Series 1070, P1070, G1070 and GP1070****LavSafe® Thermostatic Faucets**Sizes:  $\frac{3}{8}$ " (10mm)

- Eliminates installation of under-the-counter thermostatic valve
- Watts' Advanced Thermal Actuator quickly compensates for pressure and temperature fluctuations
- Mixes hot and cold water to deliver tempered water within specified range
- Heavy duty Lead Free\* brass body for durability and to comply with Lead Free installation requirements
- Copper supplies feature integrated check valves
- Self-contained cartridge installs in a minute to simplify repairs
- Virtually shuts off hot water flow in the event of cold water failure
- ASSE 1070, IAPMO cUPC, NSF-ANSI 61 Section 9 Annex G, WaterSense RT, and Handicapped Accessible approved

**Series LFUSG****Under Sink Guardian®****Thermostatic Mixing Valves**Sizes:  $\frac{3}{8}$ " (10mm)

- Lead Free\* brass body construction
- Installs easily between the stop valves and faucet
- Includes tamper-resistant locking nut to prevent accidental mis-adjustment
- Built-in check valves prevent migration of hot water to cold and cold water to hot water piping
- Provided with cap for three-port application
- Integral strainer with 40 mesh stainless steel screens to filter out debris
- ASSE 1070, cUPC approved



LFUSG-B-M2

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

### Series LFMMV

#### Thermostatic Mixing Valves

Sizes:  $\frac{1}{2}$ " – 1" (15 – 25mm)

- Solid wax hydraulic principle thermostat ensures dependable mixing of hot and cold water
- Thermostat controls both hot and cold water
- Solder, threaded, PEX or CPVC, Quick-Connect end connection models available
- Adjustment cap with locking feature
- ASSE 1017, 1069, 1070 listed
- IAPMO cUPC listed
- Integral filter washers and check valves



### Series LF1170 and LFL1170

#### Thermostatic Mixing Valves

Sizes:  $\frac{1}{2}$ " – 1" (15 – 25mm)

- Solid wax hydraulic principle thermostat ensures dependable mixing of hot and cold water
- Thermostat controls both hot and cold water
- Models available with solder, thread, PEX, Quick-Connect or CPVC end connections
- Integral filter washers and check valves
- Adjustment cap with locking feature
- CSA B125 Certified
- ASSE 1017 listed and IAPMO UPC



### Series LFN 170

#### Master Tempering Valves for Hot Water Distribution

Sizes:  $\frac{3}{4}$ " – 2" (20 – 50mm)

- Lead Free\* brass body construction
- ASSE 1017 and IAPMO CUPC Listed
- LFN170-M3 uses paraffin-based thermostat to sense and adjust outlet temperature
- Dirt and lime resistant poppet and seat design
- Virtual shutoff if supply pressure fails
- Vandal-resistant locking mechanism to secure temperature setting
- With check stop feature-Model LFN170-CSUT



**Series Aquamix 61 C****Thermostatic Mixing Valve**

Sizes: 1/2" – 1" (15 – 25mm)

- Thermostatic mixing valve with 4 set positions
- Brass Body-Chrome plated inside and outside
- SS Spring
- Range: 32°C - 50°C
- Max Differential Pressure- 2 Bar
- Female connection



61C

**Series Aquamix 62 C****Thermostatic Mixing Valves**

Sizes: 1/2" – 1" (15 – 25mm)

- Thermostatic mixing valve with 4 set positions
- Brass Body-Chrome plated inside and outside
- SS Spring
- Range: 42°C - 60°C
- Max Differential Pressure- 2 Bar
- Female connection



62C

**Series T70****Thermostatic Mixing Valves**

Sizes: 2 1/2" – 4" (65 – 100mm)

- Cast iron Body- parts made of brass and bronze
- Range: 10°C - 50°C, 30°C - 70°C
- Flanged connection
- PN16



T70



1/2" Galvanized Steel

Dielectric Union

1/2" Copper

## Dielectric Unions

Dielectric Unions are used in commercial and residential applications to prevent accelerated corrosion and deterioration in the piping system due to galvanic and stray current. They are installed between pipes made from dissimilar metals and feature a female iron pipe thread to solder connection.

### Series W-LFDEU

#### Dielectric Unions

Sizes: 2" – 8" (50 – 200mm)

Watts Dielectric unions are used in commercial and residential applications to prevent accelerated corrosion and deterioration in the piping system due to galvanic and stray current

#### Options:

- Male iron pipe thread to female brass pipe thread
- Female iron pipe thread to male brass pipe thread
- Male steel to Brass solder
- Female steel thread to brass solder
- Female steel thread to female brass thread
- Threading BSPT & NPT Options
- Designed and manufactured to the highest quality standards
- Factory certified to withstand a minimum of 600Volts on a dry line with no flashover
- Rated to 82°C and PN20



W-LFDEU-SF XBF



W-LFDEU-SMXBSLD



W-LFDEU SF XBSLD



W-LFDEU-SMXBF



### Pressure Relief Valves

These valves are in water heater and hot water storage tank applications to provide automatic temperature and pressure protection to hot water supply tanks and hot water heaters.

#### **Series 1L, 1XL, 10L and 100XL**

#### **Temperature and Pressure Relief Valves**

A.S.M.E Rated\*, CSA Listed. Self-closing T&P Relief Valves for Water Heaters up to 105,000 BTU/Hr.

The combined 2 in 1 T&P relief valve provides the least expensive and proven means for protection against both excessive temperature and pressure emergency conditions.

Provides fully automatic temperature and pressure relief protection for hot water storage tanks and heaters up to 105,000 BTU/HR.

Size: 1L, 1XL Size 1/2" (15mm)  
10L, 100XL Size 3/4" (20mm)

- A.S.M.E. Rated\*, CSA Listed
- Features a unique thermostat with special thermo-bonded coating
- 1L & 1XL – Bronze body, 10L & 100XL – Brass body
- Stainless steel spring
- Thermostat is accurate and proven
- Exclusively designed by Watts



\* Series 1L and 1XL Valves are not A.S.M.E. Listed or Rated.

### Series 40, 140, 240 & 340

#### Automatic Re-seating T&P Relief Valves

The combined 2-in-1 Temperature & Pressure Relief Valve provides the least expensive and proven means for protection against both excessive temperature and pressure emergency conditions.

Fully automatic temperature and pressure relief protection for domestic hot water supply tanks and heaters based on the latest ANSI Z21.22 Listing requirements for temperature discharge capacity.

Sizes 1", 1 1/4", 1 1/2" and 2" (25, 32, 40 and 50mm).

- Bronze body construction
- Non-mechanical seat-to-disc alignment
- Thermostat is accurate and proven. Exclusively designed and manufactured by Watts
- Tamper-resistant bonnet screws
- Series 40 and 140 feature a unique thermostat with a special thermo-bonded coating
- Series 140 sizes 1" (25mm) and above are standardly furnished with stainless steel thermostat tube
- Series N240, 340 and 342 are furnished with stainless steel thermostat



Series 40L and 40XL



Series 140XL



Series N240X



Series 340

### Series 174A, 374, 740

#### ASME Water Pressure Relief Valves for Pressure Protection of Hot Water Heating Boilers

Series 174A Bronze body safety relief valves for pressure protection only of all types of hot water heating boiler equipment. Pressure range 30 to 150psi (2.1 – 10 bar) with corresponding high ratings from 650,000 to 14,370,000 BTU/hr. Female inlet and outlet connections. Sizes 3/4" – 2" (20 – 50mm).

Series 374A Iron body with forged brass inlet, 550,000 BTU/hr rating. 3/4" (20mm) only.

Series 740 Iron body with expanded outlets for hot water space heating boilers.

Pressure range 30 to 75psi (2 to 5 bar) with corresponding high ratings from 925,000 to 10,700,000 BTU/hr.

Sizes: 3/4" – 2" (20 – 50mm)

- Seat located above drain; water can't be trapped and sediment can't foul seat.
- Non-mechanical seat-to-disc alignment will not stick or freeze.
- Water seal of high temperature resisting material isolates spring working parts from water during relief.



Series 174A



Series 740

**Series 3L, 53L****Poppet Type Pressure Relief Valves for Protection Against Excessive Pressure**

Series 3L and 53L are used for protection against excessive pressure on domestic storage tanks or tankless water heaters. Similar in construction to Watts Model 10L, the Model 3L has no temperature relieving element. Model 53L has the basic design as Model 3L except it is furnished in  $\frac{1}{2}$ " (15mm) size and does not comply with A.S.M.E. requirements. Pressure range is 75-150psi (5.2-10.3 bar). Series 3L and 53L come in standard settings of 75, 100, 125 and 150psi (5.2, 6.9, 8.6 and 10.3 bar). These Pressure Relief Valves are popularly used in conjunction with the Model 210 gas shutoff valve on gas water heaters to shut off gas to heater if water heater temperature exceeds 210°F (99°C).

Sizes: 3L:  $\frac{3}{4}$ " (20mm) 53L:  $\frac{1}{2}$ " (15mm)

- Furnished with test levers
- Relieves excessive pressure on storage tanks
- Relieves excessive pressure on tankless water heaters
- Compatible with Model 210 gas shutoff valves

**Model N36-M1****Vacuum Relief Valves**

For automatic venting of a closed system to atmosphere when a vacuum is created. The Watts N36-M1 Vacuum Relief Valve permits air to enter and prevent vacuum conditions that could siphon the water from the system, resulting in collapse of a tank or water heater or equipment burnout.

Sizes:  $\frac{1}{2}$ " –  $\frac{3}{4}$ " (15 and 20mm) Male NPT

- Low profile
- All brass body
- Protective cap
- Suitable for low pressure steam and water service
- Tested and rated to ANSI Z21.22
- CSA certified



N36-M1

**Series 30****Well System Relief Valve**

Series 30 Pressure Relief Valves for wells are used to protect against excessive pressures in well systems. These relief valves are not diaphragm actuated and are used for pressure-relief service only. The standard pressure setting is 75psi (5.2 bar). Optional settings of 100, 125, and 150psi (6.9, 8.6, and 10.3 bar) are also available.

Sizes:  $\frac{1}{2}$ " (15mm)

- Rugged bronze body
- NPT threaded male inlet connection
- NPT threaded female (drain) outlet connection
- Stainless steel spring
- Test lever available (Model 30L, N30L, 30L-Z1)



Model 30

**Series 530C****Calibrated Pressure Relief Valves**

Series 530C Calibrated Pressure Relief Valves are spring operated brass valves designed for use only as protection from the build up of excessive pressure in systems containing water, oil or air. These valves are ideally suited for bypass thermal expansion relief.

Sizes:  $\frac{1}{2}$ " or  $\frac{3}{4}$ " (15 or 20mm)

- Calibrated adjustment feature for setting valve to relief pressure required
- Adjustable range 50 – 175psi (3.4 – 12.1 bar)
- All brass construction
- All stainless steel spring
- Buna-N disc on machined body seat
- Inlet (bottom), male NPT threaded
- Outlet (side), female NPT threaded



Model 530C

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.



Watts offers a full line of top-quality ball valves for commercial and residential applications. Customizable options include handle kits and stainless steel ball and stem options to suit the requirements of different installations.

### Why Watts?

- Choice of materials, including brass, stainless steel, and materials for specialty applications
- Multiple end connections—solder, threaded, press, PEX, and Quick-Connect
- Handle kits available on select models—lever, extended, tee, and memory stop
- Full port, standard port, gas, electric actuated, 2-piece ball valves to suit various applications

## Ball Valves

### Series LFB6800, LFB6801

#### 3-Piece, Full Port, Lead Free Ball Valves

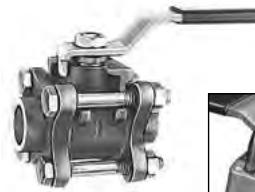
These ball valves feature an in-line maintenance design that offer serviceability of all operating parts without disturbing the rigid pipeline system. The LFB6800, LFB6801's full port orifice ensures maximum flow capacity, while Durafill® seats, stainless steel ball and stem provide maximum safety and highest operating pressure and temperature limits.

Sizes: 1/4" – 2" (8 – 50mm)

- Lead Free\* brass body
- 3-piece, lift-out design
- Carbon/glass reinforced PTFE Durafill® valve seats
- Stainless steel ball and stem
- Blow-out proof, pressure retaining stem
- Standard actuator mounting pads



LFB6800



LFB6801\*\*



Exclusive Latch-Lok Handle  
(option LL)

### Series LFB6080G2, LFB6081G2

#### 2-Piece, Full Port, Lead Free\* Bronze Ball Valves

These ball valves are used in commercial and industrial applications for a full range of liquids and gasses. They feature a blowout-proof pressure full-port orifice which ensures minimal pressure drop. Model LFB6080G2 has threaded NPT end connections and Model LFB6081G2 has solder end connections. Pressure rating for 1/4" – 2": 600psi WOG (non-shock) 150psi WSP.

Sizes: 1/4" – 2" (8 – 50mm)

- Lead Free\*, forged bronze body and adapter
- Stainless steel ball & stem option
- Minimal pressure drop due to large ports
- Blowout-proof, pressure-retaining stem
- Adjustable stem packing gland



LFB6081G2



LFB6080G2

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

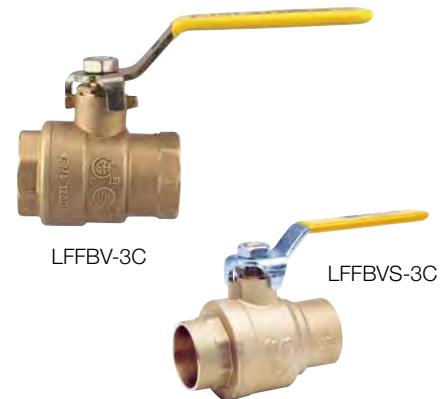
## Ball Valves

**Series LFFBV-3C, LFFBVS-3C****2-Piece, Full Port, Lead Free\* Brass Ball Valves**

Standard material FBV-3C and FBVS-3C are available for non-potable applications.

Sizes: 1/4" – 4" (8 – 100mm)

- Lead Free\* forged copper silicon alloy body and adapter
- Certified to NSF/ANSI standard 61/8
- CSA approved threaded valves only 1/4" – 3" (15 – 80mm)
- Fluorocarbon elastomer stem O-ring prevents stem leaks
- Adjustable stem packing gland
- PTFE stem packing seal, thrust washer, and seats
- Bottom-loaded blowout-proof stem
- Machined chrome-plated Lead Free\* brass ball

**Series LFFBV-3C-QC****2 Piece, Full-Port, Lead Free\* Ball Valves with Watts Quick-Connect Technology**

These ball valves are ideal for use in residential and commercial potable water applications.

Sizes: 1/2" – 1" (15 – 25mm)

- Lead Free\* copper silicon alloy body
- Watts integral Quick-Connect inlet and outlet connections
- Can be used with copper, CPVC, PEX and PB pipe
- Comes with pipe stiffeners for use with PEX
- Virgin PTFE stem packing seal, thrust washer, and seats
- No thread sealants, solders, or glues needed
- Bottom-loaded blowout-proof stem

**Series X3777****3 Piece, Full-Port**

These ball valves are ideal for use in Industrial Application.

Sizes: 1/4" – 4" (8 – 100mm)

- Stainless steel body
- 3-piece ball valve
- Handle can be locked in open or closed position.
- Industry, high pressure, high temperature.
- Female/female connection

**Series X2777****2 Piece, Full-Port**

These ball valves are ideal for use in Industrial Application.

Sizes: 1/4" – 3" (8 – 80mm)

- Stainless steel body
- 3-piece ball valve
- Handle can be locked in open or closed position.
- Industry, high pressure, high temperature.
- Female/female connection



## Ball Valves

**Series LFFBV-3-Press-M1 and LFFBV-3-Press-XLC**

**2-Piece, Full Port, Lead Free\* Brass Ball Valves with Integral Press Fitting End Connection**

**Designed for use in ProPress® Piping Systems**

Sizes: 1/2" – 4" (15 – 100mm)

- Lead Free\* brass body
- Press connection rated to 250psi CWP up to 210°F (13.4 bar to 99°C)
- Bottom-loaded, blowout-proof stem with stem O-ring seal



LFFBV-3-Press-M1



LFFBV-3-Press XL-C 2 1/2" - 4"

**Series LFFBV-PEX**

**2-Piece, Full Port, Lead Free\* Brass Ball Valves with PEX Ends**

These ball valves with PEX ends are designed for use in PEX piping systems and have a Lead Free\* brass body. They feature Lead Free\* brass PEX end tailpieces designed for easy crimping into a PEX piping system.

Sizes: 1/2" – 1" (15 – 25mm)

- 2-piece, full port design
- Forged Lead Free\* brass body
- Valve rated to 400 WOG
- Crimp connection rated to 160psi at 73°F (23°C)



LFFBV-PEX

**Series LFFBV-4, LFFBVS-4**

**2-Piece, Full Port, Lead Free\* Brass Ball Valves**

These ball valves are suitable for a full range of liquids and gases in residential and commercial applications. They are rated to 600psi WOG/150psi WSP 1/4"-2" (8–50mm) and 400psi WOG/125psi WSP 2 1/2"-3" (65–80mm).

Sizes: 1/4" – 3" (8 – 80mm)

- Metal-to-metal adapter body seal to eliminate adapter leaks after soldering
- Fluorocarbon elastomer stem O-ring prevents stem leaks
- Adjustable stem packing gland provides longer service life
- Bottom-loaded blowout-proof stem
- PTFE stem packing seal and seats



LFFBV-4



LFFBVS-4

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

### Ball Valves

#### Series LFFBV

#### 2-Piece, Full Port, Lead Free\* Ball Valves

The LFFBV full port design ensures maximum flow capacity and minimal pressure drop.

Sizes: 1/2" - 2" (15 – 50mm)

- Suitable for a full range of liquids and gases
- Bottom-loaded blowout-proof stem
- Virgin PTFE stem packing seal, thrust washer and seat
- Vinyl insulator on heavy duty zinc- plated carbon steel handles
- Fast quarter-turn open or close operation
- Excellent for throttling and balancing application of non-abrasive fluids where
- minimum flow is 20% to 100% of valve capacity
- 1/2"-1- T handle
- 1 1/4"-2"- Lever Operated
- NSF



15mm~25mm



32mm~50mm

#### Series LFB6780, LFB6781

#### 2-Piece, Full Port, Lead Free\* Diverter Ball Valves

These ball valves are designed to divert liquids and gases in commercial and industrial applications. PTFE seats and stainless steel ball provide lasting service.

Sizes: 1/4" – 2" (8 – 50mm)

- Suitable for a full range of liquids and gases.
- Minimal pressure drop due to full size ports
- Blowout-proof pressure retaining stem
- Pressure rated at 400psi (28 bars) WOG non-shock @ 100°F (38°C); 125psi (8.6 bars) WSP
- Vinyl insulator on heavy duty, zinc-plated carbon steel handles



#### Series LFB6000 and LFB6001

#### 2-Piece, Standard Port, Bronze Ball Valves

These ball valves feature a blowout-proof pressure-retaining stem. The LFB6000 and LFB6001 standard port orifice ensures minimal pressure drop, while Durafill® and Uniseal® seats and chrome-plated brass ball provide lasting service for a wide range of liquids and gases.

Standard material B6000 and B6001 models are also available for non-potable applications.

Sizes: 2" – 4" (50 – 100mm)

- Lead Free\* models are available
- Durafill® (carbon/glass filled PTFE) seats and 2" – 4" (50 – 100mm)
- Chrome-plated brass ball is wiped clean during each operation of the valve



LFB6000



LFB6001

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

## Ball Valves

**Series LFB6400****2-Piece, Standard Port, Lead Free\* Ball Valves**

Sizes: 1/4" – 4" (8 – 100mm)

- Latch-Lok handle available (suffix LL)
- Durafill® (carbon/glass-filled PTFE) seats are standard for longer lasting seats in high or low temperature applications
- Stainless steel ball is wiped clean during each operation of the valve
- Blowout-proof pressure-retaining stem

**Series C-FBV-1****2-Piece, Full Port, Carbon Steel Ball Valves**

These ball valves are suitable for a full range of liquids and gases. The C-FBV-1's full port orifice ensures maximum flow capacity, while reinforced PTFE seats, PTFE stem packing, thrust washer, and body seal provide maximum safety and high operating pressure/temperature limits.

Sizes: 1/4" – 3" (8 – 80mm)

- Full port design
- Adjustable stem packing
- Bottom-loaded, blowout-proof stem
- Drilled and tapped mounting pads



C-FBV-1

**Series S-FBV-1****2-Piece, Full Port, Stainless Steel Ball Valves**

The S-FBV-1's full port orifice ensures maximum flow capacity, while reinforced PTFE seats, PTFE stem packing, thrust washer, and body seal provide maximum safety and high operating pressure/temperature limits.

Sizes: 1/4" – 3" (8 – 80mm)

- Adjustable stem packing
- Bottom-loaded, blowout-proof stem
- Drilled and tapped mounting pads
- Standard Latch-Lok handle to lock in open or close position



S-FBV-1

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

### Ball Valves

#### Series GBV

##### 2-Piece, Brass Gas Ball Valves

These ball valves are used in residential applications for manufactured natural gas and LP gas on in-house and indoor piping systems.

Sizes:  $\frac{3}{8}$ " – 1" (10 – 25mm)

- 2-piece body
- Brass ball and stem
- PTFE seats and packing
- Brass end piece and plug
- Zinc alloy handle



GBV



GBV-FL

#### Series GBV-1

##### 1-Piece, Brass Gas Ball Valves

These ball valves are used in residential applications for manufactured natural gas and LP gas on in-house and indoor piping systems.

Sizes:  $\frac{1}{2}$ " –  $\frac{3}{4}$ " (15 – 20mm)

- Patented blowout-proof stem design
- 1-piece body
- Brass ball and stem
- PTFE seats
- Brass retainer and cap
- Rubber O-ring
- Aluminum handle



GBV-1

#### Series LFBRVM1

##### Combination Ball Valve and Relief Valve

This Combination Ball Valve and Relief Valve is an easy to install two-in-one device designed to provide both a means to shut off the water supply to the water heater and to provide protection against excess water pressure caused by thermal expansion. It features Lead Free\* construction to comply with Lead Free\* installation requirements.

Sizes:  $\frac{3}{4}$ " (20mm)

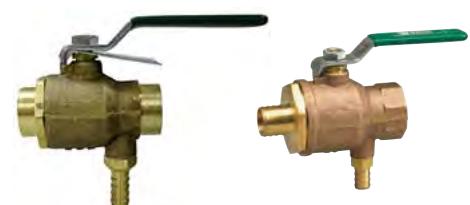
- Easy Installation – Installs in any position
- Low profile design
- Full port ball valve with virgin PTFE seats
- Blowout-proof stem



LFBRVPM1  
PEX x PEX x  
Compression



LFBRVTM1  
THD x THD x  
Compression



LFBRVM1  
S x S x BARB



LFBRVM1PxTxP  
PEX x THD x PEX

### Models

INLET	OUTLET	RELIEF OUTLET	RELIEF PRESSURE
Sweat	Sweat	PEX	80
Sweat	Sweat	Compression	125
Sweat	Sweat	Barb	125
Thread	Thread	Compression	80 or 125
Thread	Thread	Barb	125
PEX	PEX	Compression	125
PEX	PEX	PEX	125
PEX	PEX	Barb	125

## Ball Valves

**Series RPVM1****Residential Purge, Drain, and Balancing Valves**

These valves provide a unique and low-cost solution for start-up purging, balancing, and draining of hydronic heating loops. Using a rugged, dual-ball valve design, the small and compact RPVM1 facilitates high-volume purging, accurate balancing, tight shutoff, and hose connection for draining and purging.

Sizes:  $\frac{3}{4}$ " –  $1\frac{1}{4}$ " (20 – 32mm)

- One-piece construction – no extra assembly required
- $\frac{1}{2}$ " Ball valve purge port
- Positive shutoff dual-ball valve design – tight seal on balance port maximizes purging
- Cast purge port handle



RPVM1-S

**Series IPF-M1****Isolation Pump Flanges for Circulator Pumps**

These flanges are designed to isolate circulator pumps to facilitate circulator pump replacement or repairs. Series IPF-M1 is suitable for non-potable applications.

Sizes:  $\frac{3}{4}$ " – 2" (15 – 50mm)

- Brass body and flange
- Virgin PTFE seats
- Bottom-loaded, blowout-proof stem
- Adjustable packing gland for longer service life
- O-ring stem seal prevents stem leaks
- Dual Buna-N stem O-rings
- Vinyl insulator on plated steel handle
- Quarter-turn open or close operation



IPF-S-M1



IPF-T-M1

**Series IPF****Isolation Pump Flanges for Circulator Pumps**

These flanges are designed to isolate circulator pumps to facilitate circulator pump replacement or repair. Series IPF is suitable for non-potable applications.

Sizes:  $\frac{3}{4}$ " – 2" (20 – 50mm)

- Brass body and flange
- Adjustable virgin PTFE packing
- Buna-N stem O-ring seal
- Supplied with lever handle
- Optional T-handle included
- Virgin PTFE seats
- Bottom-loaded, blowout-proof stem



IPF-S-M1



IPF-T-M1

## Butterfly Valves

**Series BF-03-M2 Full Lug and BF-04-M2 Wafer****Butterfly Valves**

Series BF butterfly valves are designed and manufactured for use with ANSI 125 or 150 Class flanges and comply with API 609 and MSS-SP 67 standards to meet the stringent requirements of HVAC, irrigation, OEM, commercial, Institutional, and industrial applications.

Sizes: 2" – 24" (50 – 600mm) in wafer or lug body design.

- 200psi (13.8 bar) pressure rating for 2" – 12" (50 – 300mm)\*\* and 150psi (10.3 bar) pressure rating 14" – 24" (350 – 600mm)
- Standard ductile iron body; options: aluminum bronze and 316 stainless steel discs and 416 stainless steel or 316 stainless steel shaft
- Phenolic-backed seat (2" – 12", 50-300mm) or aluminum-backed seat (14" – 24", 350-600mm) that prevents the seat from collapsing or dislodging



## Butterfly Valves

**Series W-W111****Butterfly Valves**

Series W-W1111 butterfly valves are designed and manufactured to meet the stringent requirements of plumbing, HVAC, Irrigation, commercial and industrial application.

Sizes: 2" – 24" (50 – 60mm)

- Wafer Style
- DI Body, CI Body
- SS316 Disc, DI Disc, Al Bronze Disc
- EPDM Seats
- SS Stem
- Gear operated above 150mm
- Electrically Actuated Option too (On/Off & Modulating)



W-W1111-EK & ET  
(Electrically Actuated)



W-W1111-G



W-W1111-L

## Butterfly Valves

**Series W-W111****Butterfly Valves**

Series W-W1111 butterfly valves are designed and manufactured to meet the stringent requirements of plumbing, HVAC, Irrigation, commercial and industrial application.

Sizes: 2" – 24" (50 – 60mm)

- Wafer Style
- DI Body, CI Body
- SS316 Disc, DI Disc, AI Bronze Disc
- EPDM Seato
- SS Stem
- Gear operated above 150mm
- Electrically Actuated Option too (On/Off & Modulating)



W-W1911-L



W-W1911-EK & ET  
(Electrically Actuated)



W-W1911-G

## Butterfly Valves

### Series SYLAX

#### Butterfly Valves

Series Sylax butterfly valves are designed and manufactured to meet the stringent requirements of Industrial application and Water distribution networks.

Sizes: 2" – 14" (50 – 350mm)

- Cast Iron, Ductile Iron body
- Ductile iron disc (Polyamide coated or epoxy coated), Al Bronze, SS316
- Ductile iron hand lever, Polyamide hand lever
- EPDM & Nitrile rubber
- FM option
- Higher size option available upto DN 1200



SYLAX

## Gate Valves

**Series 405-NRS-RW****Non-Rising Stem, Resilient Wedge, Flanged Gate Valves**

Series 405-NRS-RW Non-Rising Stem Resilient Wedge Gate Valves are available in sizes 2"-12" (50-300mm) flanged by flanged and 2½"-10" (65-250mm) flanged by grooved configurations. The valve body is epoxy coated internally and externally. The valve is operated by a Handwheel or an operating nut and valve key. The resilient wedge disc design offers both positive seating and resistance against high differential pressure. The Series 405-NRS-RW is best suited for service in either the fully open or closed position but is suitable for use as a throttling valve. This series is recommended for irrigation, potable water, water distribution service, feed lines and sewage disposal facilities.

Size: 2" – 12" (50 – 300mm) – Epoxy Coated

- ASTM A126 Class B Iron (Flanged x Flanged)
- ASTM A536 65-45-12 Ductile Iron (Flanged x Groove)
- Full port flow, low head loss
- Epoxy coated, internal and external
- Vulcanized encapsulated resilient wedge
- In-line serviceable
- Boss-tapped and plugged



405-NRS-RW

**Series 408-OSYRW****Outside Stem and Yoke, Resilient Wedge, Flanged Gate Valves**

Series 408-OSYRW Outside Stem and Yoke Resilient Wedge Flanged Gate Valves are fusion bonded powder coated cast iron and operated by a handwheel. The resilient wedge disc design offers positive seating and resistance against high differential pressure. Series 408-OSYRW is best suited for service in either the fully open or closed position. It is also suitable for use as a throttling valve. This series is recommended for fire main shutoff and distribution service. The 408-OSYRW features Lead Free\* construction to comply with Lead Free\* installation requirements.

Size: 2½" – 12" (65 – 300mm) – Epoxy Coated

- ASTM A126 Class B Cast Iron
- Full port flow, low head loss
- Fusion bonded coating, internal and external
- Encapsulated resilient wedge
- Easy in-line service
- Replaceable disc
- Boss tapped and plugged
- MSS-SP-70 conformance



408-OSYRW

**Series LFWGV****Lead Free\* Brass Gate Valves**

Series LFWGV Lead Free\* Brass Gate Valves are used for general service in water, oil, or compressed gas applications.

Size: ½" – 1"

- Threaded bonnet
- Non-rising stem
- Lead Free\* brass body
- ½" – 1" threaded IPS end connections



LFWGV

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

## Gate Valves

**Series W-WB131****Full Flow Bronze gate valve**

The Watts Gate valves are designed for isolation services and is used in building services and water treatment application etc.

Size:  $\frac{1}{2}$ " – 2" (15 – 50mm)

- Threaded Bonnet
- Solid Wedge Disc
- Non Rising stem
- Bronze Body
- WRAS Certified
- NPT & BSPT option



W-WB131

**Series W-WB132****Full Flow Bronze gate valve**

The Watts Gate valves are designed for isolation services and is used in building services and water treatment application etc.

Size:  $\frac{1}{2}$ " – 2" (15 – 50mm)

- Threaded Bonnet
- Solid Wedge Disc
- Rising stem
- Bronze Body
- NSF Certified
- NPT & BSPT option



W-WB132

## Gate Valves

**Series W-Z45H****Metal Seated Gate valve**

The Watts Gate valves are designed for isolation services and is used in HVAC, Irrigation, Commercial and Industrial applications.

Size: 2" – 24" (50 – 600mm)

- Ductile iron Body and Bonnet.
- Bronze and SS Seat.
- Bronze and SS Wedge trim
- Non Rising Stem.
- Ductile Iron Handwheel
- PN16, ANSI 125 option and PN25 (Up to DN300).



W-Z45H

**Series W-Z41H****Metal Seated Gate valve**

The Watts Gate valves are designed for isolation services and is used in HVAC, Irrigation, Commercial and Industrial applications.

Size: 2" – 24" (50 – 600mm)

- Ductile iron Body and Bonnet.
- Bronze and SS Seat.
- Bronze and SS Wedge trim
- OS&Y Stem.
- Ductile Iron Handwheel
- PN16, ANSI 125 option and PN25 (Up to DN300).



W-Z41H

## Globe Valves

**Series W-J41T-16Z****Cast iron Globe Valve**

The Watts W-J41T-16Z globe valve are deigned to regulate the flow in a pipeline.it is used in plumbing, HVAC, Irrigation, Commercial and industrial applications.

Size: 2" – 12" (50 – 300mm)

- Simple Structure
- Metal Seated
- Replaceable Packing.
- Cast Iron body.
- Bronze Seat.
- PN16 Rated.



W-J41T-16Z

**Series W-B251-25T****Brass Globe Valve**

The Watts W-B251 Globe valve are deigned to regulate the flow in a pipeline.it is used building services ,water treatment etc.

Size: 1/2" – 2" (15 – 50mm)

- Simple Structure
- Metal Seated
- Rising Stem
- Brass Body
- PN25.



W-B251-25T

## Check Valves

**Series 601, 601S****Bronze Silent Check Valves**

Series 601, 601S Bronze Silent Check Valves efficiently perform all of the functions of a swing check or vertical lift check valve and at the same time operate silently to prevent the effects of water hammer.

Size: 1/4" – 1" (8-25mm)

- Viton® disc
- Integral brass seat
- Install in horizontal or vertical position (consult factory for proper use in vertical installations)
- Low pressure drop equivalent to a swing check
- Silent operation



601



601S

**Series SS07F****Stainless Steel Single Detector Check Valves**

Series SS07F Stainless Steel Single Detector Check Valves are designed to detect any leakage or unauthorized use of water from fire sprinkler systems. During times of minimal water flow, the valve clapper remains closed so that the water flows through a bypass meter (optional). When fire flow is required, the increased demand will open the clapper to allow full flow.

Size: 4" – 10" (100 – 250mm)

- Lightest weight in the industry – reduces shipping and handling costs
- Non-corrosive stainless steel construction – eliminates pin holes and voids associated with epoxy coated valves
- Can be installed in horizontal/vertical positions
- Optional meter bypass assembly (specify GPM or CFM). Required to detect leakage or theft of water
- Optional sized bypass tappings available



SS07F 4", 6"



SS07F 8", 10"

**Series ICV-125-2-2-T****Cast Iron Wafer Check Valves**

Series ICV-125-2-2-T Cast Iron Wafer Check Valves are designed for HVAC and general service applications. They are lighter, more compact, utilize half the number of studs for installation and in some sizes offer more flow capacity than conventional swing check valves. The two spring-loaded plates close when the flow decreases, without the necessity of reverse flow. The ICV-125-2-2-T features Lead Free\* construction to comply with Lead Free\* installation requirements.

Size: 2" – 12" (50-300mm)

- Lightweight & compact design
- Aluminum bronze disc plates
- EPDM seat bonded to body for leak tight sealing
- Silent check valve
- Complies with API 594



ICV-125-2-2-T

## Check Valves

**Series W-H44T-16Z****Cast Iron Swing Check Valve**

The watts W-H44T-16Z swing check valve is designed for HVAC, irrigation, commercial and industrial application. They are used to prevent the backflow.

Size: 2" – 12" (50 – 300mm)

- Simple Structure
- Low Head loss.
- Cast Iron Body.
- BS5153
- Cast Iron Disc.
- ANSI Option also available



W-H44T-16Z

**Series W-H44T-16Q****Ductile Iron Swing Check Valve**

The watts W-H44T-16Q swing check valve is designed for HVAC, irrigation, commercial and industrial application. They are used to prevent the backflow.

Size: 1/2" – 2" (15 – 50mm)

- Simple Structure
- Low Head loss.
- Ductile Iron Body.
- Ductile Iron Disc
- EN12334.
- Cast Iron Disc.
- ANSI Option also available.



W-H44T-16Q

**Series W-BSCV****Bronze Swing Check Valve**

The Watts W-BSCV Check Valve are used to prevent the backflow and are designed for HVAC and general service application.

Size: 1/2" – 2" (15 – 50mm)

- Simple Structure.
- Low head loss.
- Bronze Body and Disc
- BSPT & NPT Connection
- NSF Certified.



W-BSCV

## Check Valves

**Series W-H77X-16Z****Wafer Double Door Check Valve**

The Watts W-H77X-16Z Door Check valve is designed for HVAC and general applications. They are lighte more compact and utilize less space.

It can be installed in both horizontal and vertical pipes.

Size: 2" – 24" (50 – 600mm)

- Light weight and compact design
- Cast iron Body.
- EPDM Seat
- SS304 Disc
- EN1092-2
- PN16 Working pressure.



W-H77X-16Z

**Series W-H44X-16Q****Slowly Closing Swing Check Valve**

The Watts W-H44X-16Q Swing check valve is designed for chilled water, Potable water and other water treatment applications. Suitable for mounting in horizontal and vertical positions.

Size: 2" – 12" (50 – 300mm)

- Simple Structure
- Low head loss
- Slow Shut down.
- Ductile iron body.
- Ductile iron Disc.
- PN16 rated, PN25 optional.



W-H44X-16Q

## Flow Switch

**Series FS-200-W and FS-204-W****Flow Switch**

Series FS-200-W Flow Switches provides accurate monitoring of liquid flow in pipelines servicing water systems, heating systems, air conditioning, and processing installations for industrial and commercial applications. The flow switches are designed to act as an automatic control or safety devices for liquid flow. The single-pole, double-throw switch can be wired to start or stop a motor when a flow or no flow condition exists or to activate an alarm when flow is inadequate. The switch then turns off the alarm when adequate flow is restored.

- EPDM Seal for Superior Performance over Mechanical Bellows
- Universal Design – Replaces Flow Switches by McDonnell Miller, Penn, Taco, Potter and others
- Single Pole Double Throw Switch for Operating Signal Devices, Motors, Alarms, Metering Devices and Heating Units
- Four Heavy Duty Stainless Steel Paddles
- Two  $\frac{7}{8}$ " Electrical Knock-Outs for  $\frac{1}{2}$ " Conduit
- For Use on 1" to 6" Diameter Pipe
- 1" NPT Pipe Connection



FS-200-W

## **Series ST375, ST500, ST750, ST1000, ST1250, ST1500 and ST2000**

### **Heavy Duty Mechanical Float Valves (with Threaded or Non-Threaded Outlets)**

Series ST375, ST500, ST750, ST1000, ST1250, ST1500 and ST2000 Heavy Duty Mechanical Float Valves are used in commercial, industrial, and agricultural applications for controlling high capacity water flow. This series is ideal for use in air conditioning, refrigeration, and irrigation systems. These connectors can be tank wall-mounted.

Size:  $\frac{3}{8}$ " to 2" (10 to 50mm)

- Pipe-threaded for pipe connections and straight-pipe threaded for locknut
- Machined flange for support against tank wall
- All bronze bodies
- Serrated arms for quick easy adjustment of water level
- High tensile manganese bronze long and short arms
- No jam single lever action
- Replaceable seals



ST500

### **Series ST375**

#### **Standard Duty Float Valve**

$\frac{3}{8}$ " through 1" Bronze body with MNPT threaded inlet and outlet,  $1\frac{1}{4}$ " through 2" Bronze body with female NPT inlet-open outlet. Cotter pin pivot arm assembly. Replaceable plungers.

- Maximum Pressure - 125psi
- Maximum Temperature 180°F



ST375

The noise from banging pipes is caused by shocks of high speed water flowing in a piping system when a fixture is suddenly closed. Sudden stoppage of the water flowing at a given pressure and velocity causes a surge or spike of pressure called water hammer. Dishwashers,

clothes washers, and fast-closing positive shutoff valves contribute to creating water shock, which is annoying, as well as damaging to pipes and appliances. Watts Water Hammer Arrestors incorporate a permanent pre-charged sealed air chamber to absorb the shock.

## Series LF15M2

### Water Hammer Arrestors

Series LF15M2 incorporates a pre-charged, permanent sealed air chamber to absorb water hammer shock. The sealed chamber prevents the loss of air to the water and ensures long and trouble-free life.

Size: 1/2" – 1" (15-25mm)

- NPT solid hex brass adapter or solder end connection for easy installation
- Approved for installation with no access panel required
- May be installed in new or existing plumbing systems with a standard pipe tee vertically, horizontally or at any angle
- PDI Listed (PDI WH201)
- Maintenance free – piston is the only moving part
- Air pre-load is 60psi (4.2 bar)
- Factory air charged and permanently sealed



LF15M2

## Series SS

### Stainless Steel Water Hammer Arrester

The Watts SS Series water hammer arrester provide economical and effective protection from the destructive and annoying problem of water pressure shock.

Size: 1/2" – 1" (15-25mm)

- Designed upto 340PSI except SS-AA
- -100-300 Deg F
- Bellows Type
- Bellows-SS304
- PDI and ASSE Listed.



SS

## Series 22CX

### Electrothermic Actuator

Compact design with on/off action, compatible with thermostat adaptable radiator valves series TRV, 102M, 120B, valve for fan-coils series and regulation valves of Watts manifolds series HKV.

Available in NO (normally open) and NC (normally closed) versions. 2-wire or 4-wire electrical cable (with auxiliary micro switch)

Cap made of flame retardant plastic. Cable 1m. Valve adaption: M30 x 1.5 chrome-plated brass threaded ring nut.



22CX

## Series EMUJC

### Electronic Modulating Actuator

The Series EMUJC actuator is a modulating electromechanical actuator supplied with 24V by means of a three-point control or 0-10V (0-5V and 5-10V) control signal. Its distinguishing features are its compact size, which enables it to be installed in small spaces (fan coils, etc...), and its ease of assembly in that no hydraulic operations (system drainage) are required to couple the servo controls with the valve bodies. It also has an LED that signals its operating status.

- Control signal 0-10V (0-5V e 5-10V)
- Nominal stroke: 2,5 mm
- Stroke control at increase in torque
- 24VAC power supply voltage
- Direct assembly by means of a threaded ring nut (M30x1.5)
- Pre-cabled



EMUJC



## Series ER

### Electric Actuator

Electric actuators in compact design with IP66 protection and UL94V0 flammability class housing with modular position indicator and secured manual override.

- Duty rating S4 – 50% (IEC34 standard)
- Different possible rotation angles
- From 20 to 100Nm
- Operating time: from 9 to 20s
- On/Off or 3 modulating points control
- Standardized ISO5211 connection
- Actuator based on a direct current technology monitored by electronic card
- Multi-volt 100-240V 50/60Hz (100-350 DC) or 15V to 30V AC 50/60 Hz (12 to 48V DC)



ER

## Series VR/VS

### Compact Electric Actuators

From 25Nm to 300Nm

- F07-F10 plate with star 17/22mm
- Manual override by hand wheel
- Compact design with IP68 protection
- Integrated anti-condensation self-regulated heater
- Electronic torque limiter
- Failure mode reporting relay
- RS485 connection to enable remote control
- Modular position indicator (VR) or spherical (VS)
- Secured manual override
- 3-point modulating or On-Off control
- Version available: Aluminium cover, ATEX, CSA, and Marine.
- Options: Modulating, bluetooth and/or failsafe security



VS

Strainers are designed to strain foreign matter, including dirt, rust, and other damaging matter, from pipelines to economically protect pumps, meters, valves, and similar mechanical equipment.



A WATTS Brand

## Y-Strainers

### Series 351M, 352M

#### Cast Bronze Screwed, Solder, and Sil-Braze Ends Y Strainers

Used to strain foreign matter from pipelines and provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment.

Size: 1/4" – 4" (8 – 100mm)

- Machined seats in both body and cap align and lock the screen in place to stop sediment bypass
- 352-1/2 conforms to Military specifications
- 352-1/2 conforms to the latest revision of BuShip Drawing 80064-810-841499
- All sizes of 352-1/2 are furnished grooved less rings



351M Screwed ends (shown)  
352M Screwed ends

### Series 764, 765M, 766M, 767

#### Cast Carbon & Alloy Steel Flanged Ends Y Strainers

Used to strain foreign matter from pipelines and provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment.

Size: 1/2" – 12" (15 – 300mm)

- Machined seats in both body and cap align and lock the screen in place to stop sediment bypass
- Machined seats facilitate alignment and accurate reseating after servicing



Models: 764, 765M,  
766M, 767

### Series 764-SS, 765M-SS, 766M-SS, 767-SS

#### Cast Stainless Steel Flanged End Y Strainers

Used to strain foreign matter from pipelines and provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment.

Well suited for long service in high pressure and temperature applications.

Size: 1/2" – 12" (15 – 300mm)

- Machined seats in both body and cap align and lock the screen in place to stop sediment bypass
- Machined seats facilitate alignment and accurate reseating after servicing



Models 764-SS, 765M-SS,  
766M-SS, 767-SS

## Y-Strainers

**Series 752****Cast Iron Flanged End Y Type Strainers**

Used to strain foreign matter from pipe lines and provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment

Size: 1½" – 24" (40 – 600mm)

- Mueller "Breech-Lok Strainers"
- Furnished as standard in sizes 8" and larger
  - A one quarter-turn securely locks the screen in its seat
  - Allows for easy bolting of the cover flange
- Tapered seats in both the body and cover flange retain screen and prevent particle bypass



752

**Series 758G****LOCXEND® Y Strainers**

The LOCXEND® Y Strainer is designed for installation in grooved end piping systems.

Used to strain foreign matter from pipe lines and provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment

Size: 2" – 12" (50 – 300mm)

- Mueller "BREECH-LOK STRAINERS"
  - Furnished as standard in sizes 8" and larger
  - A one-quarter turn securely locks the screen in its seat
  - Allows for easy bolting of the cover flange
- Tapered seats in both the body and cover flange retain screen and prevent particle bypass



758G

**Series 911U****UL Listed Cast Iron Flanged End Y Strainers for Firelines**

Strainers provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment by straining foreign matter from the connected piping system.

Size: 2½" – 12" (60 – 300mm)

- Extra large capacity baskets equal very low pressure drop and long intervals between cleaning and servicing, essential in this service
- NPT tapped blow-off connections are available on request



911U

## Basket Strainers

**Series 125F-CI\*****Cast Iron or Cast Bronze Flanged End Basket****Type Strainers**

Strainers provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment by straining foreign matter from the connected piping system. The size of the perforation or mesh in the basket screen will determine the smallest particles captured.

Size:  $\frac{3}{4}$ " – 18" (10 – 450mm)

- Designed for large capacity straining and ease of maintenance
- Cover is secured with quick-opening knobs to minimize service time
- O-ring seals on both the cover and baskets can usually be reused after service, no need to clean gasket residue and replace costly gaskets
- Machined basket seat eliminates particle bypass



125F

**Series 125-SS****Stainless Steel Screwed Ends Simplex Basket Strainer**

Strainers provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment by straining foreign matter from the connected piping system. The size of the perforation or mesh in the basket screen will determine the smallest particles captured.

Size:  $\frac{3}{8}$ " – 3" (10 – 80mm)

- Designed for large capacity straining and ease of maintenance
- Cover is secured with quick-opening knobs to minimize service time
- O-ring seals on both the cover and baskets can usually be re-used after service, no need to clean gasket residue and replace costly gaskets
- Machined basket seat eliminates particle bypass



125-SS

**Series Model 125****Cast Iron Screwed End Simplex Basket Strainers**

Strainers provide economical protection for costly pumps, meters, valves, and other similar mechanical equipment by straining foreign matter from the connected piping system. The size of the perforation or mesh in the basket screen will determine the smallest particles captured.

Size:  $\frac{3}{8}$ " – 3" (10 – 80mm)

- Designed for large capacity straining and ease of maintenance
- Cover is secured with quick-opening knobs to minimize service time
- O-ring seals on both the cover and baskets can usually be re-used after service, no need to clean gasket residue and replace costly gaskets
- Machined basket seat eliminates particle bypass



125

## Y-Strainers

**Series W-YG11-25TQ****Bronze Strainer**

The Watts W-YG11-25TQ Strainer is designed to remove the impurities in the medium to protect the equipment for normal use. It is generally used in chilled water, potable water and other water treatment application.

Size: 1/2" – 1" (15 – 50mm)

- Low pressure drop.
- Simple Structure.
- Bronze Body.
- SS 304 Screen.
- PN25 rated.
- BSPT & NPT Options.



W-YG11-25TQ

**Series W-W4112****Ductile Iron Strainer**

The Watts W-W4112 Strainer is designed to remove the impurities in the medium to protect the equipment for normal use. It is generally used in Plumbing, HVAC, Irrigation, Commercial and industrial applications.

Sizes: 2"-24" (50-600mm)

- Low pressure drop.
- Simple Structure.
- Large impurity holding capacity
- Ductile Iron Body.
- SS 304 Screen.
- EN1563 .
- PN16 rated. Class 125 options



W-W4112

## Expansion Joints

### Series W-ZKB

#### Flanged Expansion Joint

The Watts W-ZKB Expansion joint can absorb the expansions, contractions ,Oscillation and Vibration,diminishes water hammering, reduces noise and prevent electric current from spreading.

Size: 1" – 24" (25 – 600mm)

- Single Bellow
- Flanged Type.
- Galvanised Carbon Steel Flange.
- EPDM and NBR rubber.
- PN16 rated.



W-ZKB

### Series W-ZKT

#### Series W-ZKT

The Watts W-ZKT Expansion joint can absorb the expansions, contractions ,Oscillation and Vibration,diminishes water hammering, reduces noise and prevent electric current from spreading.

Sizes: 3/4" – 3" (20-80mm)

- Double Bellow Union type.
- Threaded Type.
- Galvanised Ductile Iron Union nut.
- EPDM and NBR rubber.
- PN16 Working pressure.



W-ZKT



**A**pex Valves is a New Zealand company specializing in the design and manufacture of control valves for low and high pressure hot water and filtration systems. ANKA designs and manufactures a unique range of polythene pipe fittings, used predominantly in irrigation and agricultural applications.



### Hose Nozzles

Our hose nozzles are strong and robust, with a quick action on/off movement to a fully adjustable spray pattern. They provide very high flow rates to ensure a fast wash-down time. Applications include dairy parlor wash-down, plant equipment wash, yard wash-down, firefighting, horticulture and marine. Made in New Zealand using glass fiber reinforced nylon Anka hose nozzles offer high impact resistance.

- Uniquely designed outer ring for protection against high impact and excessive wear
- Quick action on/off for complete control
- Fully adjustable, wide spray pattern to a full bore flow



### Pipe Fittings

Our pipe fittings have a unique patented design that connects to a large range of pipes and hoses due to the tapered design of the nut. Manufactured from high grade glass fiber reinforced nylon, these fittings are strong and lightweight. The fittings suit hose, pumping, irrigation, marine, hydroponics, plumbing, agriculture, landscaping, and industrial applications.

- Non-corrosive, made up high quality materials approved for use with potable water
- Fittings are re-usable and can be fitted without the use of tools
- In most situations these fittings can be put on cold



### Hose Tails

Our hose tails have been designed to meet hose manufacturers' standards. With their unique barb design, they are the most hose-friendly products available on the market and can be used with a wide range of hoses.

Types available:

- Rolled barb
- Long tail
- BSPT threads



AHT Series



## Swivels

Our swivels are made in New Zealand from high grade glass fiber reinforced nylon and are designed to allow a hose or pipe to turn 360 degrees without kinking or twisting.

- Full bore flow
- Maximum pressure of 700psi (500 kPa)
- Non-corrosive
- Quality materials



AS Series

## Check Valves

Our check valves are made in New Zealand from high grade glass fiber reinforced nylon. Spring-loaded non-return check valves allow fluid to flow in one direction only, ideal for many applications, including; pumping, marine, irrigation, domestic, agricultural, and industrial.

- Spring Loaded ideal for installation at any angle
- Non-corrosive, made using high quality materials
- Can be taken apart for servicing



ACV Series

## Quick-Lock Couplings

Our quick-lock couplings are made in New Zealand from high grade glass reinforced nylon. These quick-action couplings are designed to be put together and taken apart in one easy twist action. Because the seal ring end is a consistent size, each coupling is interchangeable, allowing a wide range of configurations.

Quick-lock couplings are used in farming, irrigation, fire protection, and industry applications.



QLCM 40

## Foot Valves

Our Foot Valves are made in New Zealand from high grade glass fiber reinforced nylon they are spring loaded, can be installed at any angle, and come with a removable filter screen. Foot valves are used at the suction end of pump lines to prevent loss of water. These foot valves are manufactured with a combination thread that allows not only connection to BSP thread but also NPT thread. Applications include pumping, irrigation, and agriculture.

- Filter screen to avoid the intake of large debris
- Can be taken apart for servicing



AFV 50

## Pipe Unions

Our pipe unions are made in New Zealand from the high grade glass reinforced nylon and are designed so they can be used in place of traditional metal fittings, with the advantage of being non-corrosive.

These pipe unions use a combination thread that allows not only connection to BSP thread but also NPT thread.

- Can be taken apart for servicing
- Maximum pressure of 1600 kPa (230 psi).



### BigBoy® Differential Tank/Reservoir Valve

The BigBoy valve is designed to handle high flow rates of up to 1500L/min on high pressure, with adjustable water levels that increase pump life and save electricity. The BigBoy valve allows for a single level or variable minimum and maximum water levels in pump-fed large storage tanks and reservoirs and in water mains and gravity-fed large storage tanks and reservoirs. For rainwater harvesting applications, it works as a backup water supply control valve, in the event that demand exceeds rainfall.

- Full on, full off
- Enormous flow rate 1500 L/min at 1200 kPa
- Extremely high volume water inlet control device.
- Soft closing, no water hammer
- Long tail, no tank fittings (thin walled tanks)



### PumpBuddy®

The PumpBuddy valve is an outlet control device that allows variable minimum and maximum water level settings within a water tank when filling from a pump. For rainwater harvesting applications, it works as a backup water supply control valve, in the event demand exceeds rainfall.

- Adjustable water levels save electricity & increase pump life
- Full on, full off
- No float switches, no power required (pump requires pressure switch)
- Fewer parts mean fewer problems
- Long tail available, no tank fittings



### XtraFlo Armless Diaphragm Trough Valve

The XtraFlo compact armless diaphragm valve has full-flow high volume fill with a water level differential between opening and closing reducing pump motor overload and electricity. The valve is livestock damage proof. For large troughs, this compact, armless diaphragm valve provides full-flow high volume fill and has a 25mm water level differential between opening and closing, which allows full-flow operation meaning the pump runs unrestricted until the trough is full.

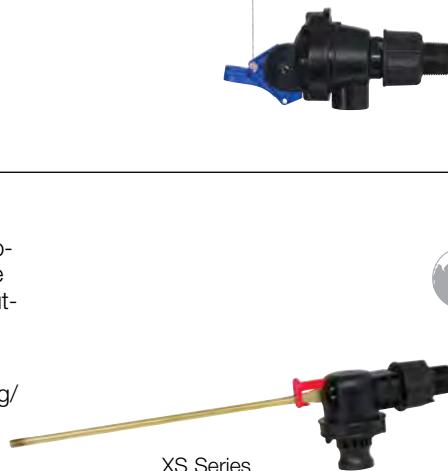
- Backflow prevention top entry version available
- Armless – Less damage from stock (excluding top entry version)
- Full on, full off
- Bottom, side or top mount
- Long tail and top entry version available
- UV stabilized and corrosion resistant



### Xcess Fast-fill Trough Valve

Xcess valve unique cam-lock compatible outlet allows for convenient ancillary water supply. The valve can be serviced by hand while in place without the need of any tools. The Xcess valve is designed for fast filling of large troughs. A unique camlock-compatible outlet allows for convenient water supply for many jobs around the farm.

- Highest flow rate of any 25mm sleeve valve on the market for fast filling of high demand troughs (500 L/min at 1200 kPa) around the farm, including break feeding/strip grazing
- Valve comes with a shut-off pin to stop flow to allow for fitting of camlock or cleaning of trough
- Plunger can be removed within seconds without removing arm.



## UltraFlo Sleeve Trough Valve

UltraFlo valve is high volume, can be serviced in place without tools, economy valve without the extra features of the Xcess valve.

- Ultra high flow rate
- Made from UV stabilized material
- Plunger removable without removing brass arm
- Accommodates high demand from stock
- Easy servicing



## 220P Medium Trough Valve

220P Valve is an economy acetyl, plunger activated valve for medium sized troughs. Barbed outlet to fit silencer tube for cistern applications and comes with removable seat for lower pressures. The 222P is a plastic high/low valve ideally suited to troughs with confined inlet compartments. For connection to a hose or silencer tube, it has a barbed outlet.

- Working pressure:
 

Low	0 – 500 kPa (0 – 70psi)
High	0 – 1400 kPa (0 – 200psi)
- Supplied with high pressure seat fitted (up to 1400 kPa (200psi) working pressure)



220P



## RainAid® Rainwater Retention Tank Valve

RainAid valve is designed to be connected to a municipal water supply on a rainwater retention tank. It will provide a backup supply of water in the event of demand exceeding rain supply.

- The Rainaid valve is fully adjustable allowing application in a wide range of reservoirs and tanks
- Under normal conditions, rain water will fill the tank. If the rainwater level dropsbelow a pre-set level, the RainAid valve will open to maintain the water level using main's water
- The RainAid valve when set correctly prevents backflow



RA 20



## Visi-Ball® Water Level Indicator

The Visi-Ball water level indicator is suitable for all tanks. Visi-Ball is a highly visible water level indicator for large water storage tanks and reservoirs. Utilizing an innovative uni-ball joint that will suit any tank installation regardless of roof pitch.

- Easily adjusted using the patented Uni-Ball joint
- High wind resistance and visible from long distances
- Spare extensions/tubes available (1 meter)



VSB





Water Treatment Systems are used to make water safe for human consumption, as well as to treat it for use in medical, pharmacological, chemical, and other processes.

### Why Watts?

- Experienced technical support and timely service provided to ease installation and facilitate product use
- Products engineered to simplify installation
- More than 50 years of water treatment and conditioning experience
- Complete system solutions from a single source

## Types of Water Treatment

### Point-of-Entry

Watts has a full range of solutions for complete water filtration, softening, scale prevention, UV disinfection, and conditioning for homes and businesses.



### Point-of-Use

Full suite of treatment solutions dedicated to a single tap or appliance water line. Choose from filtration, reverse osmosis, UV disinfection, and scale prevention systems designed for ease of installation and maintenance.



### Anti-Scale Systems

Calcium creates scale in pipes, on appliances and other plumbing surfaces which can lead to higher heating and energy costs and expensive repairs. Anti-Scale systems transform dissolved hardness minerals into harmless, inactive microscopic crystal particles which are so small they are easily rinsed away by the water flow.

- Improve appliance efficiency
- Prevent scale from forming while reducing existing build-up on pipes and fixtures
- Do not require salt, chemicals, or electricity
- Are environmentally friendly solutions, with no regeneration cycle to flush down the drain



Untreated Pipe



Treated Pipe

### Commercial

Our expertise and capabilities cover the entire process for assembling a commercial water treatment solution, from design, engineering, and specification through manufacturing, skid mounting, preplumbing, and delivery. We design, manufacture, and assemble water treatment solutions for a wide range of industries, including Agricultural & Irrigation, Chemical & Industrial Processing, Food & Beverage, General Potable Water Hospitals, Medical & Laboratory Facilities, and Hotels & Resorts.



## Under-Counter Filtration Systems

**Series PWDWLCV2****Under Counter Water Filtration System**

The 2-Stage LCV drinking water system produces high-quality, fresh water on demand by reducing unwanted tastes and odors from your incoming water supply. This system was designed for the home, RV and marine applications, where space is at a premium and quality water is essential.

- 2-Stages of Filtration
  - Stage-1: Sediment filter removes particulates down to 5 micron
  - Stage-2: 1-Micron Carbon Block Filter reduces lead, cysts and VOCs (Cysts include: cryptosporidium, toxo-plasma, giardia, and entamoeba)
- Elegant chrome long-reach faucet included
- Space saving design installs under sink or in limited spaces
- Works in low-pressure applications
- Installs in minutes
- Advanced design using unique technology and high-quality components to ensure years of continuous trouble-free operation



PWDWRVWG2



Replacement Filters Kits Available

**Model PWDWUFKC3****Kwik-Change™ Ultra Filtration Membrane Water Filtration System**

- 10" W x 15" H x 4" D
- Long reach faucet for easy filling of containers
- Kwik-Change™ cartridges are the fastest changeable cartridges on the market (30-second filter changeout process)
- 1/4-Pivot filter head makes for ease of accessibility and filter change, reduces tube connections for greater reliability, and cuts leak potential
- Space saving design installs under sink or in limited space areas
- No storage tank needed



Replacement Filters Kits Available

PWDWUFKC3

**Model PWROKC4****Kwik-Change™ Reverse Osmosis (RO) Systems**

The Kwik-Change Reverse Osmosis (RO) System produces up to 60 gallons per day of high-quality water that exceeds the quality of most bottled waters.

- Kwik-Change cartridges are the fastest changeable cartridges on the market
- 1/4-turn Pivot filter makes for ease of accessibility and filter change, reduces the amount of tube connections for greater reliability and less potential leaks
- Proprietary cartridges connect to (and disconnect from) the unit by a simple 1/4 turn
- Space saving design installs under sink or in limited space
- Adapt-A-Valve™ easily connects to 3/8" compression or 1/2" NPT connections
- Automatic shutoff – No need to shutoff incoming supply when changing filters
- Top mount designer faucet installs top side and provides a 3/8" high-flow water delivery system
- Air Gap faucet meets local plumbing codes
- 3-Gallon water storage holding tank
- Additional faucet finishes available



PWROKC4



Replacement Filters Kits Available



OneFlow® anti-scale systems are designed to protect complete plumbing systems or individual components from the negative effects of water hardness or "hard" scale. The OneFlow media use template-assisted crystallization (TAC) technology to attract hardness minerals and convert them into harmless "soft" scale particles that do not stick to pipes and components. Each bead is covered with imperfections called templates that attract these minerals and combine them to form micro-crystals that then break off and travel freely through the plumbing system.

OneFlow technology requires virtually NO maintenance, NO backwashing, NO salt and NO electricity. It is not a water softener and does not add chemicals or remove any minerals.

## OneFlow® Anti-Scale Systems

### Model OFTWH-R for Residential Tankless Water Heaters

Tankless water heaters are prone to scale formation. OneFlow Model OFTWH-R is designed to ensure scale-free tankless heater operation in a home or small business.

- Chemical-free scale prevention and protection – converts hardness minerals to harmless, inactive microscopic crystals
- Virtually maintenance free – no salt bags or other chemicals to constantly add or maintain
- No control valve, no electricity, and no wastewater
- Improves efficiency of all water heating devices and downstream plumbing components
- Simple sizing & installation – standard 3/4" connections



OFTWH-R

### Series OFRES

#### Whole House OneFlow Residential Anti-Scale Systems

OneFlow Residential Anti-Scale Systems provide a home with protection from internal hardness related scale formation on plumbing surfaces. Water-using appliances and plumbing fixtures also enjoy a longer lifespan because hardness scale build up on internal parts no longer occurs. OneFlow Residential systems should be installed at the point-of-entry to a home to treat both the hot and the cold water.

- No salt bags or other chemicals to constantly add
- Improves efficiency of all water using appliances – both hot and cold
- Simple sizing & installation
- Excellent system for towns or communities where water softeners are banned or restricted
- Does not remove minerals or add sodium to the water supply
- Can be installed as a pre-treatment to reverse osmosis (OneFlow should be the last stage in treatment unless a point-of-use system is being used downstream.)



OFRES

### Chlorine, Taste, Odor, and Sediment Reduction

#### **Series PWFGAC**

#### **Whole House Carbon System**

Our PWFGAC Series activated carbon filters are designed for residential and light commercial applications up to 14 gallons per minute. Watts activated carbon filters are highly popular because they correct a wide range of water quality issues by removing chlorine, taste, odors, organic chemicals, and sediment.

- Great tasting water from every tap in your house
- No bad tastes
- No foul odors
- Crystal clear water for drinking, bathing, and cooking
- User-friendly equipment
- Low maintenance due to automatic operation



PWFGAC

#### **Series PWFMZ**

#### **Residential Backwashing Filter Systems**

Watts filtration systems for sediment removal use our high performance Micro Z™ filter media to provide increased loading capacities and higher service flow rates. Micro Z's unique external surface offers increased porosity to out perform sand filters. A Micro Z filter bed holds 2.8 times the amount of solids a sand bed holds, reducing backwash requirements by almost three times.

- High service flow rates
- Superior filtration performance
- Reliable equipment designed for long-term service
- Reduces water consumption because the need to backwash is less
- High solids loading
- 3-5 Micron particle size removal
- Single media filter bed



PWFMZ

### Iron Reduction Systems

#### **Series PWBWIRON**

#### **Whole House Iron, Hydrogen Sulfide, and Manganese Reduction Systems**

PWBWIRON systems are a unique, chemical free approach to reducing red staining iron, rotten egg smelling hydrogen sulfide, and black staining manganese in your water. These systems use air to charge the water with oxygen. Together the oxygen and contaminants are introduced onto the surface of our catalytic filtration media. The media uses the oxygen to oxidize the contaminants and then traps the impurities.

- No chemicals needed for regeneration
- High flow rates with smaller system space requirements than competing models
- No bad tastes, odors, or staining caused by iron, hydrogen sulfide, or manganese
- Crystal clear water for drinking, bathing, and cooking
- User-friendly equipment
- Low maintenance due to automatic operation



PWBWIRON

## Acidic Water Neutralizing Systems

### Series PWFCAL

#### Whole House Acidic Water Neutralizing Systems

Series PWFCAL acid neutralizing system are designed for residential applications with intermittent flow rates up to 21 gallons per minute. They stop the corrosion of metal components and fixtures within a plumbing system by neutralizing the acidic nature of supply water that has a pH of less than 7. Periodic backwashing of the media bed cleans it of captured impurities.

- Increases the pH of acidic water
- Eliminates the corrosion of plumbing and fixtures caused by low pH water
- No more “green stain” copper deposits in tubs, toilets, and sinks
- Better tasting pH balanced water
- User-friendly equipment
- 10" Diameter tanks and larger have a dome hole access port on the top for checking and adding media
- Low maintenance due to automatic operation



PWFCAL

## Water Softeners

### Series PWSR

#### Water Softeners

These water softeners are complete whole house water treatment systems designed for residential and light commercial use applications ranging from 30,000 to 90,000 grains of hardness removal capacity at flow rates up to 23 gallons per minute.

- State-of-the-art computer programming to increase efficiency, save salt and water
- Use downflow regeneration
- Demand regeneration for highest efficiency
- Resistant enclosures
- Full flow bypass valve included



PWSR

### Series PWSRTA

#### Twin Alternating Water Softeners

Series PWSRTA water softeners are designed for residential and light commercial applications ranging from 30,000 to 60,000 grains of hardness removal capacity at flow rates up to 21 gallons per minute. These water softeners with control valves offer twin-alternating meter initiated operation, resulting in 24/7 soft water capability.

- State-of-the-art computer programming to increase efficiency and save salt and water
- Demand regeneration for highest efficiency
- Brine tanks with grid plate for maximum brine storage
- Full flow bypass valve included



PWSRTA

## Series PWR2511

### Commercial Reverse Osmosis Systems

Watts Pure Water Series PWR2511 reverse osmosis (RO) systems are commercial grade high-pressure RO units for the reduction of total dissolved solids from water. They are designed to supply reverse osmosis quality water with production rates ranging from 150 to 1,200 gallons per day. The standard units are designed for wall mounting. Where floor mounting is preferred, the optional floor mounting kit Model No. PWR2864 can be specified.

- 304 Stainless steel wall mounted support frame
- Fiberglass reinforced plastic 300 psi high-pressure membrane housings
- Pressure gauges for pre-filter inlet/outlet and membrane feed pressure
- Low feed water pressure safety switch
- Microprocessor-based controller with delayed auto restart after low pressure shut down
- Tank level and pretreatment interlock inputs
- High-pressure/high-rejection membranes with 95% minimum average salt rejection



Series PWR2511

## Series PWR4021

### Commercial Reverse Osmosis Systems

Watts Pure Water Series PWR4021 reverse osmosis (RO) systems are commercial grade high-pressure RO units for the reduction of total dissolved solids from water. They are designed to supply reverse osmosis quality water with production rates ranging from 3,600 to 10,800 gallons per day (40,878 lpd). These units are designed for floor mount installations.

- Membrane Auto Flush
- Powder-coated carbon steel support frame
- Fiberglass reinforced plastic 300psi high-pressure membrane housings
- Pressure gauges for pre-filter inlet/outlet, membrane feed, and reject water pressure
- Low feed water pressure safety switch
- Digital microprocessor based controller with delayed auto restart after low-pressure shut down
- Permeate water conductivity meter with high-conductivity alarm output
- Tank level and pretreatment interlock inputs
- High-pressure/high-rejection membranes with 95% minimum average salt rejection
- Permeate, reject recycle, and reject water flow meters
- Adjustable reject and reject recycle valves
- Permeate check valve
- Automatic inlet solenoid valve
- 20" High flow pre-filter



Series PWR4021



Ultraviolet light is a water treatment disinfection technology that is highly effective in killing and inactivating many species of disease-causing micro-organisms. It is effective on bacteria and chlorine-resistant protozoa such as Giardia and Cryptosporidium and can also be effective against most viruses. UV disinfection is suitable for a number of residential and commercial applications such as:

- Agriculture: livestock, irrigation, dairy
- Domestic drinking water in residential use
- Domestic drinking water in municipal use
- Food and beverage industry
- Breweries, wineries
- Secondary treatment of municipal wastewater

## SmartStream® UV

### SmartStream A Series UV Systems

These systems provide UV disinfection in applications such wells, homes, water systems, aquaculture, food service, water coolers, and reverse osmosis systems.

- Two-piece quartz sleeve nut with grounding screw
- Lamp power wire strain relief
- Reconfigured inlet and power port arrangement
- 304 Highly polished stainless steel reactor chambers
- Electronically grounded UV chamber
- Audible and visual alarm to indicate lamp failure
- Simple sizing and installation



### SmartStream B, C, and D Series UV Systems

SmartStream B Series is a sophisticated controller that offers flow-switch activated lamp dimming, lamp out audible alarm, a multi-color LED system status indicator, glow cap lamp indicator, and lamp life time with 3-digit LED. C Series also includes an alarm output for solenoid valve, UV sensor input, and a 40-20 milliamp output for UV intensity when the UV sensor is used. D Series provides all the features of C Series and the display changes from a 3-digit LED to an intuitive graphic touch screen.

Applications include agriculture, aquaculture, breweries, bottling plants, dairies, cooling towers, electronics/semiconductors, hospitals, laboratories, pharmaceuticals, and potable drinking water.

- Through RFID, the controller identifies the lamp to ensure that correct replacement UV lamps are being used
- Also ensure that the lamp is energized properly by the controller
- Automatic lamp dimming reduces UV system power by up to 46%



## Housings

**Series FM12X3****Standard Multi-Cartridge Filter Housings**

Heavy-duty housings in stainless steel, rated for pressures to 150 psi and temperatures to 250°F. Filters accept DOE cartridges, with optional adapters for 222 and 226 elements available. Bolt-on tabs for 4 & 5 round housings available for skid mounting.

- All stainless steel for durability
- Convenient band clamp lid closure is standard for easy cartridge replacement
- Pipe fittings are readily accessible for easy installation
- Adjustable top plate accepts variable length cartridges for more options
- Two drains provided for clean and dirty fluids
- Legs and mounting tabs are available
- Knife edge seals are provided at both ends of all DOE cartridges for superior performance
- Rated for temperatures to 250°F (no plastic holding rods)
- Pressure rating to 150psi
- Housings for pressures to 300 psi are available
- Optional sanitary connections
- Models to accept DOE, 222 and cartridges with 226 end caps
- Protective poly-coat over stainless steel standard finish
- Electro-polishing is available



FM 12X3

**Series Big Bubba****Non-Metallic Filter Housings for High Flow**

Filter housings are made of rugged, glass-reinforced polypropylene so they will not chip, rust or dent. And because all wetted surfaces are non-metallic, they are ideal when chemical compatibility is an issue and for sea water applications. Cartridge options include melt-blown and pleated cartridges for sediment reduction and pleated activated carbon for chlorine taste and odor.

- Whole house filtration
- Commercial filtration
- Industrial filtration
- Pre-filtration for reverse osmosis equipment
- Community water systems
- Sea water applications due to their non-corrosive construction
- Replacement for bag filters more filter area
- Replacement for multiple cartridge filters for greater convenience
- Water for livestock and poultry



## Cartridges

**Melt Blown Cartridges****For Residential and Light Commercial Applications**

Melt Blown Cartridges reduce sediment, dirt, rust and particles. Food grade for use with beverages, food, and potable water. A wide range of lengths and micron ratings are available.

- Low cost
- Excellent chemical resistance
- Food grade for food and beverages
- No media migration
- High dirt holding capacity
- Wide range of lengths
- Five different micron ratings

**Carbon Block Filter Cartridges**

Coconut shell Carbon Block filter cartridges reduce chlorine taste, odor, and sediment. Their thick-wall carbon construction provides for superior performance.

- Superior chlorine reduction
- Low-pressure drop
- Will not channel
- 100% Coconut shell carbon
- FDA grade components and materials
- Solid block activated carbon for long life



## Cartridges

**Pleated Filter Cartridges****Greater surface area for longer life and reduced filtration costs.**

Watts Pleated filter cartridges outperform wound, spun, melt blown, resin bonded, and other "depth" type filter elements because of our high surface area.

Lower pressure drop is another significant advantage. Using pleated cartridges allows for increased flow rates and the use of smaller filter housings to reduce capital equipment costs. Further savings are provided because our 100% synthetic filter media is cleanable, 5 micron and up, to lower cartridge replacement costs. Pleated filter cartridges outperform other pleated elements because our high-performance filter media is systematically produced using 100% synthetic fibers, with no binders or additives to leave a residue, foam or contaminate. Our filter media is dramatically thicker than other products. For this reason, Pleated cartridges provide "depth" filtration for greater sediment removal, along with more surface area.



- Filter media is pleated for greater surface area
- Synthetic filter media is cellulose-free
- "Thicker" filter media has a greater capacity to capture and retain particles, compared to thin, more rigid media types, which have less void space for particle retention
- 0.35 Media use a multi-ply laminate for superior performance
- Long lengths have netting to hold pleats in place

## Media

**Series A8033****Filox™ High Performance Media**

Filox high performance media for iron, hydrogen sulfide, and manganese reduction. No oxidizing chemicals needed for regeneration. Filox out performs traditional media such as Birm® and Greensand. Highest flow rate of any standard iron removal media, 6 gpm/cu. ft service flow; 16–30 gpm/sq.ft backwash rate.

**Series Micro Z™****Superior Filtration Media**

Micro-Z granular filter media outperforms conventional multi-media materials due to its unique structure, allowing particulate to penetrate deeply into the filter bed to provide superior filtration at increased flow rates.

- Higher solids loading capability
- Superior filtration performance
- Reduced backwash frequency
- Removes finer particles
- Reduces pressure drop
- Provides higher flow rates
- Light weight
- Reduces shipping costs
- Easy to handle

**Filter Sand**

Sizes: 1/2 cu. ft., 50 lbs. per bag; 56 bags per pallet

## Models

A7002A Filter Sand 0.45-0.55 mm  
A7003A Filter Sand 0.6-0.8 mm  
A7004A Filter Sand 0.8-1.2 mm

**Anthracite Media**

Sizes: 52 lbs. per bag; 50 bags per pallet

## Models

A7050 Anthracite #1, Orange bag, 1 cu. ft.  
A7051 Anthracite #1.5, Blue bag, 1 cu. ft.  
A7052 Anthracite #2, Yellow bag, 2 cu. ft.

**Gravel Media**

Sizes: 1/2 cu. ft., 50 lbs. per bag; 56 bags per pallet

## Models

A7005A Gravel #20 1/8 in. x 1/16 in., red marking  
A7006A Gravel 1/4 in. x 1/8 in., orange marking  
A7007A Gravel 1/2 in. x 1/4 in., black marking

**A4000 Resin****Cation Resin**

Sizes: 52 lbs. per bag; 40 bags per pallet

## Models

A4000 Watts brand softening resin, 8% crosslink, Na form, 16 x 50 mesh



Specializing in water quality measurements for more than 30 years, HF scientific® is a leader in instrumentation for process control for parameters such as turbidity, chlorine, UV %Transmission, and streaming current. The company produces instrumentation, test kits, and chemical reagents used for monitoring water quality in a variety of applications, focusing on industrial and municipal water treatment.



## Series MicroTOL Online Turbidimeter

The MicroTOL Online Turbidimeter is specifically designed for measuring turbidity continuously in filtered water, raw water, waste water final effluent and industrial applications. The optional HF Online software allows graphical trending, alarms and filter analysis for multiple networked turbidimeters. The optional ultrasonic autoclean system automatically cleans the optical chamber for finished or raw water applications.

- Meets USEPA method 180.1 and ISO 7027 design and performance criteria
- Range of 0 – 10 NTU, 0 – 100 NTU or 0 – 1000 NTU (depending upon model)
- One-piece design eliminates the need to mount more than one module per turbidimeter
- Fast response time and inexpensive calibration due to low (30 ml) sample volume
- Modular design reduces overall costs
- Removeable sample cuvettes allow for easy cleaning and calibrating
- Optics are not in contact with the sample, which reduces the chance of false low readings
- Convenient reusable primary calibration standards



## Series MTOL+ Online Turbidimeter

### Additional MTOL+ features:

- Connect to your SCADA system for easy 24-7 monitoring (simultaneous 4-20 mA and Modbus outputs)
- Data logging and storage of 1 year's measurement and calibration data
- Variable user-selectable logging interval from 1 to 60 minutes
- Isolated 4-20 mA output standard
- USB software updates and data downloads



MTOL+

**Series Micro100****Laboratory Turbidimeter for Turbidity Testing**

The Micro100 features Auto Alert Calibration Prompt and the Quick Connection Lamp Module, which allow for simple calibration and low maintenance. The Micro100 is an ideal and affordable tool for research as well as routine analytical measurements.



- Auto ranging 0 – 1000 NTU
- Auto alert calibration prompt
- Simple calibration procedures
- RS-232 output
- Made in the USA

**Series Micro1000****Laboratory Turbidimeter for Turbidity Testing**

The Micro1000, like the Micro100, is designed to provide the accuracy demanded in today's laboratory, the Micro1000 Laboratory Ratio Turbidimeter is ready to meet the challenge. It provides the features of the Micro100, as well as a full-time ratio (color correction) mode.



- Extended auto ranging up to 10,000 NTU
- Auto alert calibration prompt
- Multiple measurement modes
- Built-in diagnostics
- ProCal calibration standards
- Made in the USA

**Series Micro TPW (White Light) / Micro TPI (Infrared)****Field Portable Turbidimeter**

Designed to provide the ease of portability needed in the field with rugged durability, the MicroTPI is a necessity for anyone monitoring turbidity on the go. The shock-resistant carrying case holds everything necessary for field operation while the instrument itself removes easily to go wherever it is needed.



- Auto ranging 0 – 1100 NTU
- Rugged portable carrying case
- Simple calibration procedures
- Waterproof
- Completely self-contained
- Long battery life
- ProCal calibration standards
- Made in the USA

## Series DRT-15CE

### Portable Turbidimeter for Turbidity Testing

Designed to provide the rugged portability needed in the field with the accuracy demanded in the laboratory, the EPA accepted DRT-15CE has become a “must have” for anyone monitoring turbidity on the go. The integral carrying case holds everything needed for field operation.

- Resolution of 0.01 NTU and an extended range to 1,000 NTU
- DRT-15CE is a perfect fit for both field and laboratory use
- Rugged portable carrying case
- Completely self contained
- Three user selectable ranges
- 20 hour rechargeable battery
- Made in the USA



## Series CLX

### Online Residue Chlorine Monitor

The CLX OnLine Residual Chlorine Monitor is designed specifically for drinking water, wastewater, industrial, and marine residual chlorine monitoring applications.

- Manufactured using microprocessor-based technology, it is the most reliable and cost efficient instrument for monitoring residual chlorine
- Colorimetric DPD chemistry technology provides a proven, stable and reliable reading using the most economical method available
- The monitor's small footprint and corrosion-resistant NEMA 4X (IP66) enclosure allow for simple installation in nearly any space



### **Chlorine Pocket Photometer**

The Chlorine Pocket Photometer gives you the accuracy expected from your laboratory, no matter where you happen to be. With the added HF scientific's New PPD-2 Powder Pop Dispenser the Chlorine Pocket Photometer is packaged in a self contained, rugged carrying case, and has everything needed for measuring Free or Total Chlorine.



- Free or Total chlorine
- Laboratory accuracy in the field
- Integrated packaging
- Auto shut off
- EPA approved method-chlorine photometer
- DPD dispenser
- Made in the USA

### **Chlorine Dioxide Pocket Photometer**

The Chlorine Dioxide Pocket Photometer gives you the accuracy expected from your laboratory, no matter where you happen to be. The Chlorine Dioxide Pocket Photometer is packaged in a self contained, rugged carrying case, and has everything needed for measuring residual Chlorine Dioxide.



- Laboratory accuracy in the field
- Integrated packaging
- Auto shut off
- EPA approved method-chlorine dioxide photometer
- DPD dispenser
- Made in the USA

### **Total Alkalinity Pocket Photometer**

The Total Alkalinity Pocket Photometer provides the accuracy laboratories expect. A reagent set that contains chemistry for a minimum of 100 tests, 4 disposable cuvettes, and a syringe for accurate sample volume delivery are included.



- Microprocessor technology together with rugged construction ensures accuracy and durability in the roughest environments
- Everything needed to conduct a test is included
- No need to change cuvette, path length, or range for full-scale measurements, simplifying operation
- Waterproof – IP-67 at 1m for 30 minutes
- Total Alkalinity by colorimetry from 0-500 mg/l as CaCO<sub>3</sub>

### **Series PPD-2 DPD Powder Pop® Dispenser**

#### **Chlorine Reagent Powder Pop Dispenser**

The HF scientific portable dispenser accurately delivers the correct volume of DPD reagent for free or total chlorine. It is supplied with enough DPD powder for 100 tests or in multi-packs providing 400 or 1,000 tests. To use, simply invert the dispenser over sample and press the button to dispense reagent. Powder dissolves quickly in sample, leaving no messy residue behind. It is available for 5ml and 10ml sample sizes with formulations for use with HF scientific and a variety of other manufacturer's test kits.



- Smaller, more convenient, and disposable
- Simple push button operation allows for precise dosing
- Patented design
- No spill dispensing into most round or square cuvettes
- Dispenser design prevents clogging
- Made in the USA

## Visual Test Kits

Visual Test Kits provide a quick, portable, and convenient way to measure some of the most common water quality test parameters anywhere at any time. Accurate chemistry, simple to read comparator cards with instruction, and expandable carrying case allows for testing on site without having to take water samples back to a chemistry laboratory.



## Series AccUVView LED

### Online UV Analyzer

The AccUVView LED Online UV Analyzer is specifically for drinking water disinfection monitoring. Engineered using leading edge microprocessor technology, the AccUVView LED is the most reliable and cost efficient instrument for monitoring the %Transmission and Absorbance of a UV disinfection system for drinking water.

Standard features include simple calibration procedures, a bubble rejection system, an Ultrasonic Autoclean System designed to reduce operator maintenance time, and selectable scaling of %Transmission or Absorbance.

- UVC LED light source
- Two measurement scales
- Standard communications include 4-20 mA with isolator or RS-485 with Modbus protocol
- Affordable
- Certified Standards
- Low Maintenance Fail Safe Design



## Series AccUVView Wastewater

### UV %Transmission Analyzer

The AccUVView Wastewater is manufactured using advanced technology, a NEMA 4X stainless steel enclosure, and revolutionary ultrasonic technology making it the most reliable, maintenance free, and cost efficient UV %T Analyzer for Wastewater. The Auto Clean Ultrasonic Cleaning System continuously cleans the optical chamber providing a maintenance free reliable measurement.

- Optical design
- Bellows Pump
- Certified traceable standards
- Backlight display
- Made in the USA





Radiant heating systems supply heat directly to the floor or wall or ceiling panels in a house. A hydronic radiant heating system can use a wide variety of energy sources to heat water, including standard gas- or oil-fired boilers, wood-fired boilers, solar water heaters, or a combination of these sources.

### Why Watts?

- Our hydronic tubing, easily installed in new construction and retrofitted into existing structures
- Premium Onix™, RadiantPEX+™, and RadiantPERT™ tubing that can be installed above or below subfloors in Staple-ups™, slabs, or thin slabs, or sandwiched between subfloors
- Safest electric floor warming system in the world, with controls GFCI protected and shielded power leads and heating elements fully grounded from one end to the other

### Tubing

#### Series ONIX Tubing

##### Professional Grade Radiant Tubing

Onix is an EPDM-based, aramid fiber reinforced tube with an aluminum oxygen barrier. Its unmatched flexibility and durability make Onix the best tubing for underfloor radiant, cold weather installations, and snow melt.



ONIX

- Proven in tens of thousands of installations across North America.
- Easy-to-install at any temperature, cutting installation times by as much as 50%.
- Onix does not expand or contract, and will never make any noise.
- Onix has excellent UV resistance.
- Onix is not damaged by kinking.

#### Series RadiantPERT

##### Polyethylene Raised Temperature Tubing with EVOH Oxygen Barrier

RadiantPERT polyethylene raised temperature (PE-RT) tubing is constructed with five layers of material, giving it significant strength. The core and outermost layer are PE-RT, and sandwiched in the middle is an integral ethylene vinyl alcohol (EVOH) oxygen barrier. The five-layer tubing is more flexible and easier to install than other piping materials used in hydronic radiant heating, cooling, snow melting, and distribution piping applications.



RadiantPERT

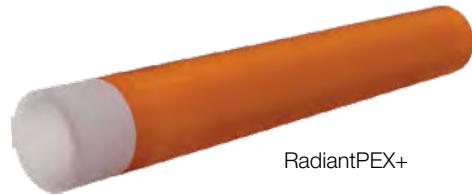
- Ratings up to 180°F (82°C) at 80 psi
- EVOH barrier limits oxygen diffusion through the walls of the tubing to less than 0.10/m3/day at 104°F (40°C) water temperature
- Uses a range of end connections to provide flexible choice

## Tubing

**Series RadiantPEX+™****Cross-linked Polyethylene Tubing with EVOH Barrier**

The cross-linked molecular structure of RadiantPEX+™ offers toughness, flexibility and lasting durability.

- Corrosion-resistant, virtually maintenance free
- Withstands temperatures from below freezing to 200°F (93.3°C)
- Combines the traditional advantages of plastic PEX tubing with an EVOH oxygen barrier
- Added extra-low-friction layer greatly reduces expansion noise



RadiantPEX+

**Series RadiantPex-AL™****Cross-linked Polyethylene Tubing with Aluminum Layer**

RadiantPEX-AL™ is composite tubing engineered for radiant floor heating.

- Proven, long lasting and maintenance-free
- Lightweight and durable
- Can be shaped to fit any jobsite
- Aluminum layer protects boiler systems against corrosion
- Superior temperature and pressure ratings



RadiantPEX-AL

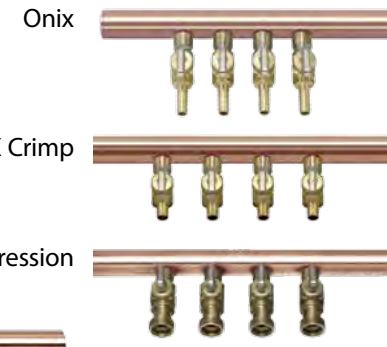
## Manifolds

### Copper Tubular Manifold Pairs

Custom Copper Tubular manifolds allow you to specify exactly what you want in a factory tested and warranted product. All Custom Tubular manifolds are supply and return pairs.

Several accessories can be installed on your Custom Tubular Manifolds

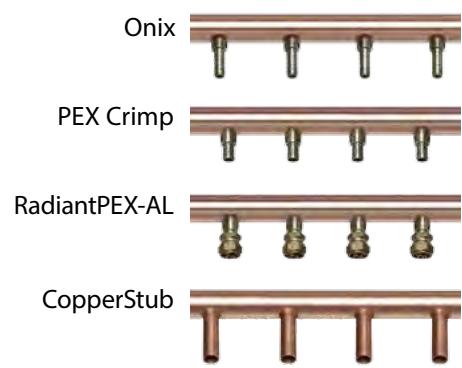
- Proven in tens of thousands of installations across North America
- Brass O-ring Unions
- Full-port Brass Trunk Isolation Ball Valves
- Vent-and-Purge Assemblies



### CustomCut™ Manifolds

CustomCut™ Manifolds are designed for flexibility at the wholesale and the installation level. They come in 4-ft.-long copper "sticks" to be cut to length in the field — cut off five branches for a 5-branch manifold, seven branches for a 7-branch manifold, and so on. You can stock just a few types and have everything you need.

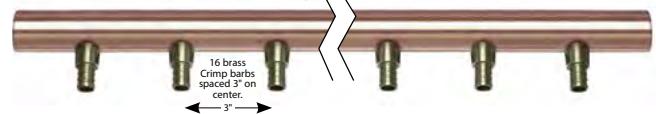
- Brass fittings: Onix, PEX, and RadiantPEX-AL Compression
- $\frac{1}{2}$ " and  $\frac{3}{4}$ " Copper Stubs, for attaching standard ball valves or female copper sweat fittings in the field
- $\frac{1}{2}$ " Brass Base Branches, for attaching Watts Radiant  $\frac{1}{2}$ " male sweat fittings or Mini Ball Valves in the field
- CustomCuts are made with branches spaced at 3" (16 circuits) or 4" (12 circuits) on center, depending on the type of manifold.
- They are available with and without Mini Ball Valves (MBVs). CustomCuts are sold as a single manifold, not in pairs.



Onix CustomCut Manifolds — 4 ft. long



PEX CustomCut Manifolds — 4 ft. long



### Stainless Steel Manifolds

Stainless Steel manifolds are made of heavy-walled stainless steel. Matching fittings and accessories are made of solid brass and are heavily plated with nickel to match the appearance of the manifold trunk. Standard features include flow balancing valves, circuit isolation valves, and flow meters. Manifolds are sold in pre-mounted pairs in 1" and hi flow sizes.

- Fast and easy to install
- Complete range (2-12 outlets)
- Flat sealing male thread 1" on both sides
- Compatible with various accessories and temperature control units from Watts
- Flow meters provide a small pressure loss
- Flow indication provides optional regulation and control flow
- Instant and easy circuit balancing



## SmartTrac™ Radiant Panel Solution

- Deliver quiet, even, comfortable heat
- Configure for any space
- Fast and easy installation
- 80% lighter than thin slab
- Works with any floor covering
- Designed for  $\frac{3}{8}$ " PEX/PERT tubing



## Valves and Fittings

### Series LFWPBVD

#### PEX ball valves

- $\frac{1}{2}$  in. to 1 in. Lead Free\* Full Port Ball Valves with Waste Drain
- WPBVD-08:  $\frac{1}{2}$  in. CF x  $\frac{1}{2}$  in. CF Lead Free\* with Waste Drain
- WPBVD-12:  $\frac{3}{4}$  in. CF x  $\frac{3}{4}$  in. CF Lead Free\* with Waste Drain



### Series LFWPBV

#### PEX ball valves

- $\frac{1}{2}$  in. to 1 in. Lead Free\* Full Port Ball Valves
- LFWPBV-08:  $\frac{1}{2}$  in. CF x  $\frac{1}{2}$  in. CF Lead Free\*
- LFWPBV-12:  $\frac{3}{4}$  in. CF x  $\frac{3}{4}$  in. CF Lead Free\*
- LFWPBV-16: 1 in. CF x 1 in. CF Lead Free\*



### Connection Fittings

- Expansion ASTM F1960
- Cinch
- Crimp
- SST20 Compression
- SelfTite
- TorqueTite
- SST20 Compression
- Compression



## Sensors and Controls

### Full Range of Sensors & Controls

Adding comfort, convenience and reliability



Radiant Thermostat 519



tekmar Wi-Fi Snow Melting Control 670



Snow Melting Control 654

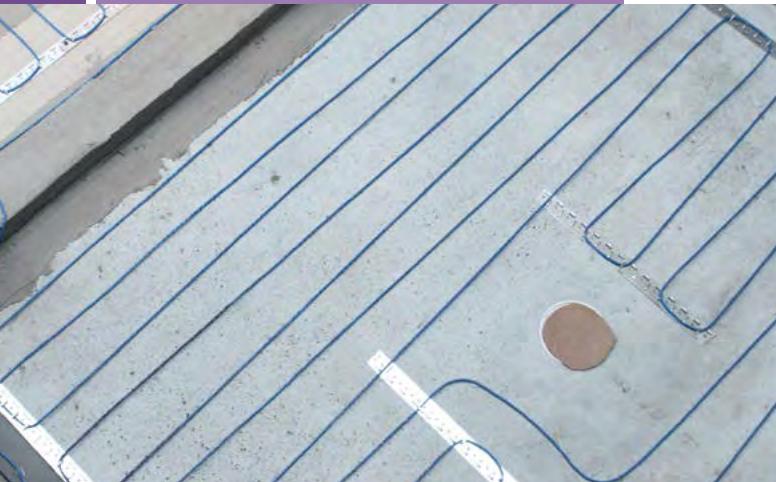


Snow Sensor 095



Snow/Ice Sensor 090

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.



### SunTouch Warmwire® Cable

- Wire is easily secured with CableStrap™ or HeatMatrix™
- Wire spacing can be adjusted to match rooms with different heating needs.
- Approved for shower installation where permitted by the local authority having jurisdiction (AHJ)
- New improved wire allows for increased jobsite toughness and durability



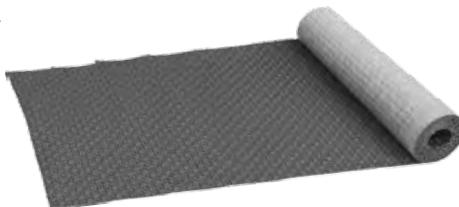
### CableStrap™

CableStrap makes it easy to install WarmWire at the desired spacing. Each 25-ft roll covers approximately 40 ft<sup>2</sup> to 50 ft<sup>2</sup> of heated floor area.



### WarmWire HeatMatrix™

WarmWire HeatMatrix uncoupling membranes provide the ultimate protection of tiles and underfloor radiant heating system from damage caused by moisture or water vapor and floor movement.



- Manufactured from a flexible material, HeatMatrix is an easy-to-install underlayment providing uncoupling properties for tile, water proofing for the subfloor, and a simple installation of heating wires.
- Less rollback memory to allow for faster, flatter setting during installations
- Multiple wire-spacing options for various heat outputs and flexibility during installation Compatibility with modified thinset

### SunStat® Command Thermostat

This all-in-one programmable thermostat includes a built-in relay to control 120 or 240 VAC floor heating systems and a GFCI to improve safety.

- Full-featured touch screen provides an easy, reliable way to control your floor heating system.
- User-intuitive 7-day schedule makes it simple to program your floor heating to suit your life style.



Watts provides a variety of options for controlling temperature in different environments.



## Series WFHT-BASIC

### Room Thermostat

Electronic room thermostat for radiant panel heating systems. Can be connected directly to electrothermal actuators Series 22CX, 26LC or through modules WFHC.

- Adjustment range 5 – 30°C
- Differential gap 0,5K
- Operating temperature 0 – 50°C
- Noiseless triac contact
- NTC temperature sensor
- Output 15/75 W
- LED indication
- Protection IP 30
- 24 VAC or 230 VAC power supply



WFHT-BASIC

## Series WFHT-PUBLIC

### Room Thermostat for Public Environments

Electronic room thermostat for radiant panel heating systems. Can be connected directly to electrothermal actuators series 22CX, 26LC or through modules WFHC.

- Adjustment range 5 – 30°C
- Differential gap 0,5K
- Operating temperature 0 – 50°C
- Noiseless triac contact
- NTC temperature sensor
- Output 15/75 W
- LED indication
- Internal switch for NC/NO-actuators
- 24 VAC or 230 VAC power supply

#### Mode Selection:

- Comfort, Reduced or Pilot wire (operation controlled by WFHC-Timer)
- Floor sensor with adjustable temperature limitation, 3m sensor cable



WFHT-PUBLIC

## Series WFHT-LCD with LCD

### Room Thermostat with LCD Display

Electronic room thermostat with LCD display for radiant panel heating systems. Can be connected directly to electrothermal actuators series 22CX, 26LC or through modules WFHC.

- Adjustment range 5 – 37°C
- Differential gap 0,5 K
- Operating temperature 0 – 50°C
- Noiseless triac contact
- NTC temperature sensor, output 15/75 W
- Compatible to both NC and NO-actuators
- Mode selection: Comfort, Reduced or Pilot wire (operation controlled by WFHC-Timer).

3 Control Modes:

- 1.via internal sensor
- 2.via external sensor (floor sensor)
- 3.via internal sensor and floor temperature limitation by external sensor (5 – 37°C)
- According to 2006/95/CE – 2004/108/CE



WFHT-LCD

## Series WFHC

### Connecting Box

Connecting box, base for 4 or 6 zones for connection of thermostats (e.g., WFHT-LCD, Milux, BT) with actuators (22CX, 26LC), pump relay (output 8 A), IP 20, modular design.

Features 24 VAC or 230VAC power. Extension module also available.



WFHC-4 Zone

WFHC-6 Zone

## Series BT-D02-RF

### Room Thermostat

Electronic room RF thermostat with LCD-display specially is designed to control different types of heating systems. Compatible with other WATTS Vision Smart Home products.

3 Control Modes:

- via internal sensor
- via external sensor (floor sensor)
- via internal sensor and floor temperature limitation by external sensor.

Technical Features

- Radio frequency 868 MHz
- Bidirectional communication
- Temperature setting range: 5 – 37°C
- Working mode: Comfort, Reduced, Antifreeze, Timer
- Display with back-light
- Special functions: keyboard lock function, open window function



BT-D02-RF

## Series BT-A02-RF

### Room Thermostat

This electronic analogical room radio thermostat 868 MHz specially is designed to control different types of heating systems. It is compatible with other WATTS® Vision® Smart Home products.

- Temperature setting range: 5 – 35°C, LED indication
- Bidirectional communication
- Proportional band
- Regulation on the integrated temperature sensor: NTC
- Option: possibility to regulate on external sensor (NTC 10K, 10013372)
- Class of protection: IP30



BT-A02-RF

## Series BT-DP02-RF

### Room RF Thermostat

Programmable electronic room RF thermostat with LCD-display specially designed to control different types of heating systems. Compatible with other WATTS Vision Smart Home products.

- Temperature setting range: 5 – 37°C
- Working mode: Comfort, Reduced, Auto, Antifreeze, Timer, Holiday
- 9 Preset and 4 customizable programs available

#### 3 Control Modes:

- via internal sensor
- via external sensor (floor sensor)
- via internal sensor and floor temperature limitation by external sensor.

#### Technical Features

- Radio frequency 868 MHz
- Bidirectional communication
- Display with back-light
- Special functions: keyboard lock function, open window function



BT-DP02-RF

## Series BT-CT02

### The Easiest Way to Create Comfort!

Smart Home Central Unit with a 4.3" Color Touch Screen, controls and monitoring for up to 50 zones, Wireless, 868 MHz, Wi-Fi optional

- Scalable and intuitive operation
- Free Apps (iOS, Android)
- Wi-Fi connection by one click
- Local and remote access via webpage
- Intuitive, plug and play
- Multi-device controls for a wide range of applications
- Daily time schedule
- Automatic synchronization with connected devices
- Multilanguage support
- Upgrades and updates by microSD Card (optional)

**WATTS® Vision®**



BT-CT02

**Series BT-TH02-RF****Electronic Thermostatic Actuator**

Digital programmable radio thermostatic head with LCD display. Applications: electronic thermostatic head as a stand-alone device or as a part of WATTS Vision System in connection with other WATTS Vision Smart Home (BT-02XX-RF) products.

- Setting temperature range: 5°C to 30°C by 0,5°C step
- Working modes: Comfort, Reduced, Antifreeze, Automatic, Timer
- 9 Factory and 4 customized weekly programs
- Power Supply 2 AA 1.5V Alkaline. Protection: class I, IP20



BT-TH02-RF

**Series BT-BT-PR02-RF****Radio Frequency Plug Receiver**

Radio frequency plug receiver, 868 MHz to control electrical panel radiators, actuators in combination with BT-xx02-RF room thermostats. As ON /OFF switch for lighting and electrical appliances.

- Timer function in combination with the Central Touch unit BT-CT02-RF
- Compatible with WATTS Vision Smart Home products



BT-BT-PR02-RF

**Series BT-WR02 HC RF****Wall Receiver**

The BT-WR02 HC RF receiver is a wall-mounted receiver specially designed to control hydraulic heating regulation or cooling regulation. It embeds a proportional regulation with a time cycle of 10mn. Hysteresis regulation is not supported.

- The heating relay is used to control a boiler in free contact or a valve or an electric radiator in live contact. (Available with all thermostats of the BT-x02 range.)
- The cooling relay is used to manage an actuator for a cold water circuit. (Not available with BT-A02 RF thermostats.)



BT-WR02RF



Dormont is the world's leading provider of flexible stainless steel connectors for Commercial Foodservice, Residential, and OEM.

Dormont offers a full range of solutions for all your gas connectivity applications, whether in the home or business—kitchen, bath, den or utility room. Discover our full line of time-tested, economical, and flexible Dormont options.



## **Stainless Steel Gas Connectors**

Durable, naturally corrosion-resistant 304 stainless steel gas connectors for indoor or outdoor stationary appliance applications.



SuprSafe

## **Coated Stainless Steel Gas Connectors**

SafetyShield® coating provides easy gas line identification and extra protection from chemical corrosion from accidental contact with household chemicals. Consistent coverage provides protection along the entire length of the connector.



SafetyShield®

## **Stainless Steel Gas Hearth Connectors with High-Temperature Black Coating**

Specifically engineered for high-temperature applications such as gas logs, fireplace inserts and free-standing fireplaces. Features a low-visibility coating that hides the connector from view.



LV Black Coated

## **Stainless Steel Gas Hearth Connectors With High-Temperature Black Coating for High BTU Applications**

Engineered for high-temperature, high BTU applications such as gas logs, fireplace inserts and free-standing fireplaces.

The special corrugation design eliminates the annoying whistle produced by some high BTU gas applications.



Whisper-flex

## High BTU Stainless Steel Gas Connectors

Available with hot-dipped, heavy-duty gray PVC coating, SafetyShield yellow coating or stainless steel for indoor and outdoor high BTU applications.

Gas Connector Kits are available for mobile home installations.



UltraFlow®



LP Gas Connector

## 15 PSIG Stainless Steel Gas Connectors

Designed for outdoor, above-ground use, this gas connector is a safe and easy alternative to typical copper polyethylene connectors for the connection of propane tanks. This connector is rated to 15 PSIG.



Portable Outdoor Gas Connector

## Portable Outdoor Gas Connector

Designed for Portable Outdoor Gas Appliances use, above ground, this gas connector is a safe and easy to install alternative to typical installations and allows the user to safely move gas appliances around their outdoor living space for convenience or storage



Dormont Blue Hose and Gas Product Accessories

## Commercial Foodservice Gas Connector and SnapFast Quick-Disconnect

Specifically engineered for commercial cooking equipment, the Dormont Safety System™ Blue Hose® features antimicrobial PVC coating and patented Stress Guard™ technology. The SnapFast quick-disconnect and restraining cable complete the gas connection and extend the service life of the gas connector.

## SmartSense™

### Excess Flow & Thermal Shutoff Valve

In the event of a complete downstream gas line rupture causing excess gas flow or in-home fire creating extreme elevated temperatures, the SmartSense automatically activates by greatly reducing or shutting off the gas flow to your home appliance.

- Provides 2 Levels of Protection against excessive gas leaks and fires
- Simple Installation
- Corrosion Resist steel construction
- CSA Certified
- Compatible with residential gas appliances



90-303M-V6-TS

We offer a full range of drainage systems and solutions made in different materials targeted to various applications.

## Why Watts?

- BLÜCHER® stainless steel drains and pipe are used in the food and beverage industry, as well as marine applications. They inhibit bacterial growth and can be cleaned quickly, with minimal water requirements.
- Orion® drains and pipe are used in laboratories and other settings for the safe disposal of harsh and corrosive chemicals.
- Delivering superior functionality for commercial, industrial, and residential applications, Watts specification drains include trench and roof drains. They are renowned for fast installation, saving contractors time and reducing project costs.



## Stainless Steel Drainage Systems



BLÜCHER stainless steel drains and pipe are used applications where system longevity and hygiene are critical such as in the food and beverage and marine applications. They inhibit bacterial growth and can be cleaned quickly and their light weight design saves on labor costs.

## HygienicPro® Channels

### Reduce Water Usage and Maximize Hygiene

HygienicPro BHG Series AISI Type 304 stainless steel pre-sloped channel (specify length) with smooth interior, 1% longitudinal slope and 160 degree cross fall, heavy duty frame and AISI CF-8 nonslip cast grating, and 4in. (110mm) drain outlet.

- Smooth construction for efficient flow and easy cleaning with minimal water
- No corners or inside cavities to harbor bacterial growth
- Resistant to a wide range of cleaning chemicals
- Unaffected by high-temperature cleaning or steam disinfection
- Durable – designed to last
- Resistant to heat, fire, and most chemicals



HygienicPro Channel

## HygienicPro Drains

### For Maximum Hygiene

HygienicPro Drains include light- to heavy-duty drains for all floor types. This product line is designed to meet the strictest sanitary and hygienic requirements, with:

- No burrs or sharp edges
- No corners or cavities inside the drain
- Hygienic backfilled frame edge
- Gratings available for any load class
- A sediment basket or sand bucket to catch debris



HygienicPro

### BLÜCHER Channel Type 671

Drainage channel for industrial and commercial applications, with outlet box in end or center, for concrete, tiled or resin floors without membrane, all in stainless steel

- Grate location width 150mm, length 1 – 6 metres
- Outlet: Ø160mm, vertical
- Wide range of gratings in different load classes available
- Can be connected to a "P" water trap or a removable water trap and a filter basket
- Stainless steel: AISI304/EN1.4301



### BLÜCHER Drain Domestic Square Type 160

Shower drain for bathrooms and toilets in residential and commercial applications, for concrete and tiled floors without membrane, all in stainless steel

- Frame: 145x145mm
- Outlet: Ø50, 75 or 160mm, vertical
- Comes with grating VIENNA. Wide range of design gratings available
- Can be connected to a "P" water trap or a removable water trap
- Stainless steel: AISI304/EN1.4301



### BLÜCHER WaterLine Type 178

Shower channel for bathrooms and toilets in residential and commercial applications, for concrete and tiled floors without membrane, all in stainless steel

- Frame: rectangular
- Outlet: Ø50mm, vertical
- Can be installed with outlet left or right and against wall(s) or away from walls
- Wide range of design gratings available
- Can be connected to a "P" water trap or a WaterLine trap with removable stand pipe
- Stainless steel: AISI304/EN1.4301



## Chemical Drainage & High Purity Process Systems



Orion high quality corrosive waste drainage and pure water piping products deliver years of exceptional service. With a full range of sizes, materials, and joining options for chemical piping systems the Orion product line has been proven in thousands of educational, medical, industrial, and research installations worldwide.

### No Hub and Plain End Acid Waste Jointing System

#### The Acid Waste Drainage System that reduces labor and simplifies installation

Our exclusive No-Hub coupling greatly simplifies installation by eliminating the need for expensive tools such as power packs and special tightening tools. One easy-to-use, inexpensive pipe grooving tool and standard tool box hand tools are all that are needed to produce tight, leak-free joints every time. Thus, significant savings can be realized by specifying and installing Orion Polypropylene or PVDF drainage systems assembled with a mechanical joining system.

- Fast and easy installation means lower labor cost
- All fittings and pipe pre-grooved at factory
- 10' Length standard (20' sections available)
- No heat or hot water required
- Easily assembled with ordinary hand tools
- Easy to clean out and maintain (made with maintenance people in mind)
- Reusable and easy to move and change
- Ideal when systems modifications are called for in remodeling projects. Mechanical Joint systems are adaptable for use with other materials, including PVDF.
- Stainless steel outer coupling
- No metal in joint
- Suitable for below ground applications
- Easy fabrication of complex sub-assemblies



### Acid Waste Floor Drains and Cleanouts

Orion's acid waste piping system has all the accessories necessary to offer a truly complete plumbing system, including finished floor cleanouts and floor drains.

Floor drains come in polypropylene and PVDF materials, and cleanouts are available with either a nickel bronze or brushed bronze cover.

When it's time to install a corrosion resistant drainage system, look to the company that can handle all your needs, from the sink to the final hook-up and everything in between.



## Rionfuse CF

### Joining System for Polypropylene and PVDF, Acid Waste Systems

Orion Rionfuse CF clamp free electrofusion joining system for polypropylene and PVDF provides unsurpassed ease of installation and joint strength for acid waste drainage piping.

The electrofusion coil is made of heavy gauge wire that is embedded right into the Rionfuse coupling. Each coupling is manufactured using state of-the-art robotic technology resulting in a system that is made to the highest possible standards. This system provides an industry leading joint strength. Above all, unlike our competition, the Rionfuse CF joint does not require clamping devices at any time during installation. Each wire terminal is protected with shrouds, which means couplings do not arrive damaged. The axial wire configuration and heavy gauge wire means strong durable coils that won't break.



- No Clamps required
- Fast and easy installation means lower cost
- Multiple jointing capabilities and both sides of couplings fuse at the same time, saving labor
- Positive joints are made in just a few minutes
- Uses same plain end fittings as our No-Hub system
- 10' Lengths standard (20' sections available)
- Easily assembled with Rionfuser® electrofusion machine
- Strongest joint in the industry
- Non-corrosive Polypropylene and PVDF provide excellent resistance to a wide variety of chemicals and acids
- "State of the art" joining system
- Joining machine tough and reliable, joint after joint
- Available in sizes of 1½" – 12"

## Socket Fusion

### Hermetically Sealed Drainage System

Socket fusion drainage systems using polypropylene or PVDF piping are durable, strong and tamper-proof. Heat fusion forms a complete hermetically sealed system which makes socket fusion systems ideal for severe usage applications.

Socket fusion type pipe and fittings are joined by heat fusing the polypropylene or polyvinylidene fluoride material with an Orion thermostatically controlled heat tool. In a semimolten state, pipe and fittings are easily joined to form a strong and permanent sealed joint. PVDF fittings and pipe are also available in the socket fusion joining system. However, because PVDF and PP are dissimilar materials they will not fuse together.



- Several models of economical heat fusing tools are readily available from Orion
- Completely sealed for strength and durability
- Forms true hermetically sealed joint
- All identical material, no electrolysis, no metal in joint
- Ideal for severe use applications
- Orion fusion systems meet ASTM D2657 standards in their entirety

## Specification Drains



Watts specification drainage line is engineered to deliver superior performance through innovative designs and improved functionality. Benefits include:

- Fast installation to save time and cut labor costs
- Solid construction to reduce jobsite delays
- Reliable, on-time delivery to meet project schedules
- Design and material compliance to satisfy specification and code requirements

## Floor Drains

### Series FD-100-A

#### Floor Drain with Round Strainer

Watts FD-100-A epoxy coated cast iron floor drain with anchor flange, reversible clamping collar with primary & secondary weepholes, adjustable round heel proof nickel bronze strainer, and no hub (standard) outlet.



FD-100-A

### Series FD-200-M

#### Floor Drain with Square Heavy Duty Strainer

Watts FD-200-M on-grade epoxy coated cast iron floor drain with anchor flange, weepholes, adjustable square nickel bronze strainer, and no hub (standard) outlet.



FD-200-M

### Series FD-300

#### Area Drain with 7" Adjustable Top

Watts FD-300 epoxy coated cast iron area drain with anchor flange, weepholes, 7" (178mm) diameter adjustable top with heel proof ductile iron grate, and no hub (standard) outlet.



FD-300

## Sanitary Floor Sinks

**Series FS-500****12" Square x 6" Deep Sanitary Floor Sink**

Watts FS-500 12"(305) square x 6"(152) deep PVC sanitary floor sink with secured grate, and socket outlet.



FS-500

**Series FS-730****12" Square x 6" Deep Sanitary Floor Sink**

Watts FS-730 12"(305) square x 6"(152) deep sanitary floor sink with white porcelain enamel coated interior, loose set porcelain enamel coated cast iron grate, aluminum dome bottom strainer, and no hub (standard) outlet.



FS-730

**Series FS-770****8" x 4" x 4" Deep Sanitary Floor Sink**

Watts RD-200 epoxy coated cast iron roof drain with flashing clamp with integral gravel stop, self-locking polyethylene dome (standard), and no hub (standard) outlet.



FS-770

## Dead Level Trench Drains



Watts Dead Level® Trench Drains incorporate a patented frame-anchored design that provides both structural stability and ease of installation. Self-aligning channels and anchors that tie directly to the structural frame enable straight, level installations with little risk of floating. The flanged channel connections create solid joints and ensure proper alignment. The Dead Level Trench Drains come in standard 4-ft. sections; 1-ft. straight and combination corner/tee sections provide flexibility, completely eliminating the need for cutting in the field.

### Series Dead Level D

#### Pre-Sloped Polypropylene Trench Drain System w/Ductile Iron Frame

Watts Dead Level D Pre-Sloped Trench Drain System with 6" (152mm) wide x 48"(1219mm) long (standard) ductile iron frame, UV stabilized talc-filled polypropylene channels with integral 4" (102mm) No Hub bottom outlet(s). System shall be frame-anchored, with (specify) grating to suit DIN Class (specify) load rating. System to include frame connectors, grate lockdowns, and construction covers. Installation to be performed in accordance with manufacturer's instructions and building code.



Dead Level D

### Series Dead Level DX

Watts Dead Level DX Pre-Sloped Trench Drain System with 12 in. (305mm) wide x 48 in. (1219mm) long (standard) ductile iron frame, UV stabilized talc-filled polypropylene channels with 6 in. (152mm) No Hub Bottom or End outlet(s). System shall be frame-anchored, with (specify) grating to suit DIN Class (specify) load rating. System to include frame connectors, grate lockdowns, and construction covers. Installation to be performed in accordance with manufacturer's instructions and building code.



Dead Level DX

### Series Dead Level P

Watts Dead Level P Pre-Sloped Trench Drain System with 6 in. (152mm) wide x 48 in. (1219mm) long (standard) UV stabilized glass-filled polypropylene frame, UV stabilized talc-filled polypropylene channels with integral 4 in. (102mm) No Hub bottom outlet(s). System shall be frame-anchored, with (specify) grating to suit DIN Class (specify) load rating. System to include frame connectors, grate lockdowns, and construction covers. Installation to be performed in accordance with manufacturer's instructions and building code.



Dead Level P

### Series Dead Level S

#### Deck Channel for Cast in Place Slabs

Watts Dead Level S Deck Channel system with 6"(152mm) wide x 48"(1219mm) long (standard) ductile iron frame, UV stabilized talc-filled polypropylene channels with integral 4" IPS threaded bottom outlet. System shall be frame-anchored, with (specify) grating to suit DIN Class (specify) load rating. System to include frame connectors, grate lockdowns, and construction covers. System can be specified in 1'(305mm) increments. Installation to be performed in accordance with manufacturer's instructions and recommendations.



Dead Level S

## Roof Drains

**Series RD-100-F****Roof Drain with Deck Flange/Adj. Extension**

Watts RD-100-F epoxy coated cast iron roof drain with flashing clamp with integral gravel stop, heavy gauge zinc plated steel deck flange with adjustable extension, self-locking polyethylene dome (standard), and no hub (standard) outlet.



RD-100-F

**Series RD-200****Small Area Roof Drain**

Watts RD-200 epoxy coated cast iron roof drain with flashing clamp with integral gravel stop, self-locking polyethylene dome (standard), and no hub (standard) outlet.



RD-200

**Series RD-700**

Watts RD-700 epoxy coated cast iron dual outlet roof drain/overflow combination with flashing clamp, integral gravel stop, 4 in. (102mm) high internal overflow standpipe, secured ductile iron dome, and no hub outlets.



RD-700-CT

**Green Roof Drains**

Watts offers a variety of drains designed specifically for use in green roof applications. Inquire with Watts or visit our website to learn more.



GRD-610

## Cleanouts

**Series CO-1200-R****Floor Cleanout with Heavy Duty Round Stainless Steel Top**

Watts CO-1200-R epoxy coated cast iron floor cleanout with 5" (127mm) round adjustable gasketed heavy duty stainless steel top, removable gas tight gasketed brass cleanout plug, and no hub (standard) outlet.



CO-1200-R

**Series CO-1200-S****Floor Cleanout with Heavy Duty Square Stainless Steel Top**

Watts CO-1200-S epoxy coated cast iron floor cleanout with 5"x5" (127mm x127mm) square adjustable gasketed heavy duty stainless steel top, removable gas tight gasketed brass cleanout plug, and no hub (standard) outlet.



CD-1200-S

## Grease Interceptors

Grease interceptors prevent greasy substances from entering plumbing systems, septic fields, and waste water treatment facilities, where they are difficult to process, and can create environmental problems. Commonly specified in restaurant

kitchens and food handling or processing areas, properly specified and maintained interceptors keep drainage systems free of problematic grease accumulations.

## Grease Interceptors

### Series GI-K

#### Large Capacity Grease Interceptor

Watts GI-K Series recessed or floor mounted epoxy coated steel grease interceptor with gasketed epoxy coated steel skid-proof cover secured with hex head center bolt(s), double wall deep seal trap, integral stainless steel flow control plate, and no hub (standard) connections.



GI-K

### Series WD-A

#### Semi-Automatic Draw-Off Grease Interceptor

Watts WD-A Series floor mounted epoxy coated steel semi-automatic draw-off grease interceptor with gasketed epoxy coated steel cover, hex head perimeter bolts, removable grease accumulating cover and baffle assembly, deep seal trap with cleanout, internal stainless steel flow control plate, flexible draw-off hose, outlet line shut-off valve, and IPS threaded connections.



WD-A

Notes:

Notes:



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