

SUBMITTAL



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**70SWR Waste Water Control Valve
Globe Style**

ROSS TECHNOLOGY PARK
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SUBMITTAL NOTES

PROJECT:

Ross Model 70SWR – Wastewater Pressure Relief Valve

Size: _____ inch / mm

Every Ross Valve shall be hydrostatically tested for body integrity and tight seating at the factory prior to shipment. Field operating conditions are simulated, and the controls are adjusted for proper operation. In order to design and test each valve under operating conditions similar to those in the field, please complete / confirm the following:

- Inlet (supply) pressure _____ psi
- Initial factory setting _____ psi (typically 15-20% above normal inlet pressure)
- Valve relieves to [] Atmosphere / Drain [] Pump Suction at _____ psi

The Ross **Globe** Body Style Valve can be installed in any position. In order to properly design the valve and orient the controls, please confirm the physical layout of the installation. (** Designates standard valve orientation.)

Valve inlet : [] Vertical ** or [] Horizontal

Valve outlet : [] Horizontal Left ** or [] Horizontal Right
 or [] Vertical Up or [] Vertical Down

The valve shall be furnished with:

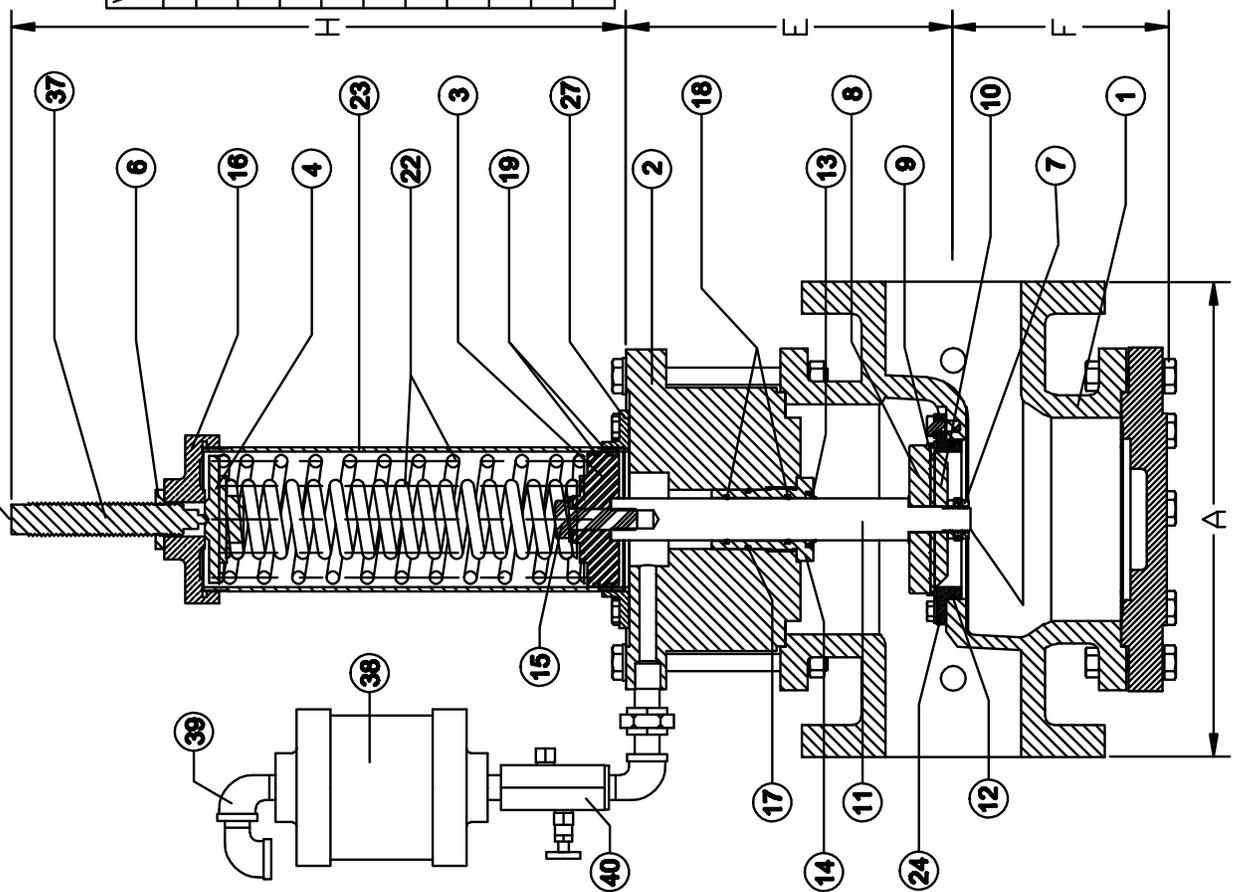
- ANSI B16.1 Class 250 cast iron body & cap, with: [] Class 125 flanges [] Class 250 flanges
- Stainless Steel items shall include (Series 300):
 - Stem Nut (part #7)
 - Seat Disc (part #8)
 - Seat Support (part #10)
 - Stem (part #11)
 - Seat Ring (part #24) with Bolts & Nuts
- Speed Control Valve with Quick Opening / Controlled Closing (part #40)
- Red brass pipe fittings and rigid control piping
- Tapped ports with gauge cocks on inlet & outlet (gauges by others)
- Operation & Maintenance Manual (shipped with the valve).

Note: Oil reservoir MUST be mounted vertically and filled with Mobil EAL 224H or equal (oil supplied by others).

The valve will be constructed with materials and options stated on this notes page & cut view drawing & quote only, any changes or adders will be reviewed by Ross Valve Mfg. Co., Inc. with possible additional charges to quoted valve pricing. All information following the cut view drawing is for general information. Any special submittal requirements will be an additional charge to purchaser. The Ross Valve Mfg. Co., Inc. reserves the right to modify valve construction which will result in equal or superior performance to existing designs. These modifications may be made at any time and at the sole discretion of the manufacturer.

NOTE: OIL RESERVOIR MUST BE MOUNTED VERTICALLY

APPROXIMATELY (1) FULL TURN EQUALS PSI.



VALVE SIZE (IN)	ANSI B16.1 CLASS	SHIPPING WEIGHT (LBS)	DIMENSIONS (INCHES)			
			A	E	F	H
2	125	245	14	10	7	15-5/8
2.5	125	245	14	10	7	15-5/8
3	125	245	14	10	7	15-5/8
4	125	245	14	10	7	15-5/8
6	125	360	17 3/4	12 1/4	9	31
8	125	650	24	17 1/4	12 1/2	31
10	125	800	24 7/8	19	14 1/4	32
12	125	1260	30	20	15 1/2	32
14	125	1260	34 1/4	23	18	25 1/2
16	125	1260	37 7/8	27	21 1/2	28
20	125	1260	42 1/2	24 1/2	24	23

PART	DESCRIPTION	QTY	MATERIAL
1	VALVE SHELL	1	CAST IRON
2	TOP CAP	1	CAST IRON
3	PISTONRING WASHER	1	BRONZE
4	SPRING WASHER	1	CAST IRON
6	LOCK NUT	1	BRONZE
7	STEM NUT	1	STAINLESS STEEL
8	SEAT O-RING	1	STAINLESS STEEL
9	SEAT PACKING	1	POLYURETHANE
10	SEAT SUPPORT	1	STAINLESS STEEL
11	STEM	1	STAINLESS STEEL
12	1/4" RING	1	BRUNN
13	WIPER RING	1	NITRILE/BRONZE
14	STEM BUSHING	1	BRONZE
15	BOLT & WASHER	1	STAINLESS STEEL
16	TOP CYLINDER CAP	1	BRONZE
17	1/4" RING	1	BRUNN
18	1/4" RING	2	BRUNN
19	1/4" RING	2	BRUNN
22	SPRING CHAMBER	1	STEEL
24	SEAT RING	1	BRASS
27	CYLINDER BORE	1	STAINLESS STEEL
27	ADJUSTING SCREW	1	BRONZE
28	OIL RESERVOIR*	1	BRONZE
28	VENT	1	BRONZE
40	CLOSING SPEED CONTROL	1	BRONZE
	MAIN BUSHING GASKETS	2	COMPOSITION
	COVER GASKET	1	COMPOSITION
	STEM GASKET	1	COMPOSITION
	STEM/STATION GASKET	1	COMPOSITION
	BOLTS & NUTS (STEM BUSHING)	VARY	STEEL
	BOLTS & NUTS (STEM BUSHING)	VARY	BRONZE

* USING OIL - RESERVOIR TO BE FILLED BY OTHERS WITH MOBIL EAL 224H OR EQUAL

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DRAWING 2-20-705WR_CB_BP_subinitial DATE 09-05-12_rjb
 GLOBE BODY 2" - 20" NO SCALE FIGURE

MODEL 705WR-GLOBE STYLE
 DIRECT ACTING WASTEWATER BACK PRESSURE
 SUSTAINING VALVE WITH OIL DAMPENING CLOSURE

THIS PRINT CONTAINS CONFIDENTIAL INFORMATION WHICH IS THE PROPERTY OF ROSS VALVE BY ACCEPTING THIS INFORMATION THE BUYER AGREES THAT IT WILL NOT BE USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT IS LOANED. NOTE: The Ross Valve Mfg. Co., Inc., reserves the right to modify valve construction which will result in equal or superior performance to existing designs. These modifications may be made at any time and at the sole discretion of the manufacturer.

CONSTRUCTION

ROSS 70SWR SERIES

SIZES

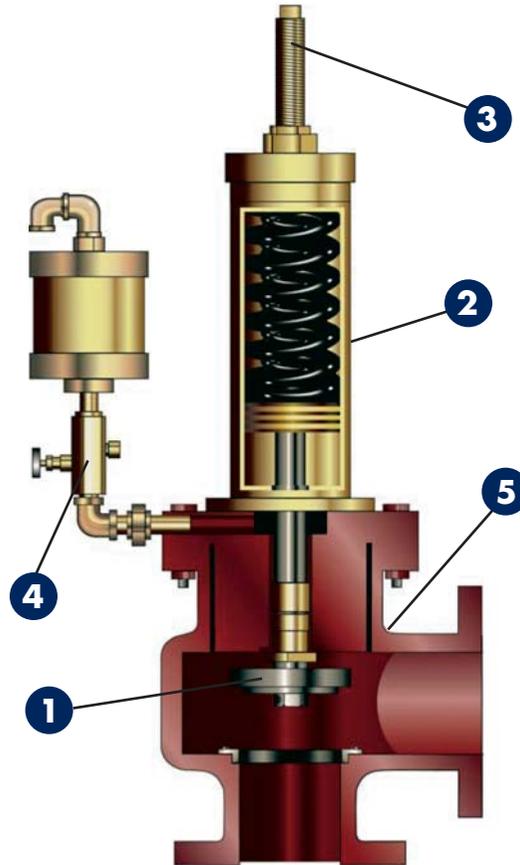
2" – 48" (50mm – 1200mm).

DESIGN

Based off our proven piston design, and modified for use with untreated water, the Ross line of wastewater valves is designed for accuracy, performance, and long life.

KEY FEATURES

- 1 Stainless steel seat assembly and seat ring resist wear.
- 2 Fully Enclosed Springs for safety.
- 3 Single Adjusting Screw for accurate alignment and precise operation.
- 4 Cushioned Closing Device prevents slamming.
- 5 Angle (90°) and globe (inline) style bodies available (epoxy-coated cast iron).



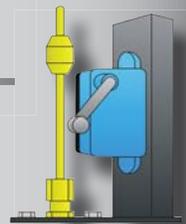
Model 70SWR
Wastewater Relief Valve
(Angle Body Shown)

ADDITIONAL FEATURES & BENEFITS

- Rugged piston style construction provides dependable operation and peace of mind.
- Every internal part is replaceable through the top cap, without removing the valve from the line.
- Compact design suitable for new applications or retrofits. Custom dimensions also available.
- Valve-mounted gauge cock for operational and testing purposes.
- Internal and external NSF-approved epoxy coating.
- All engineering, manufacturing, and testing done in-house.

As with all Ross Valves, the 70SWR series valves are highly customizable. Some of the common options include:

- **Pressure setting indicator** — illustrates initial setting as well as a calibrated pressure scale.
- **Limit switch assembly** — provides an electrical contact indicating valve opening and/or closing.
- **Electronic solenoid control** — to override hydraulic controls
- **Power fail override options** — forces the valve to go to a certain position in the event of a power failure
- **Relay style control panel** — for conventional pump control
- **Model MC2001P panel** — PLC-based electronic pump control panel with message center display.
- **Model MC2000S panel** — PLC-based electronic surge control panel with message center display.
- **Special dimensions** — flanges and laying lengths can be customized for an exact fit
- **Special materials** — available as needed



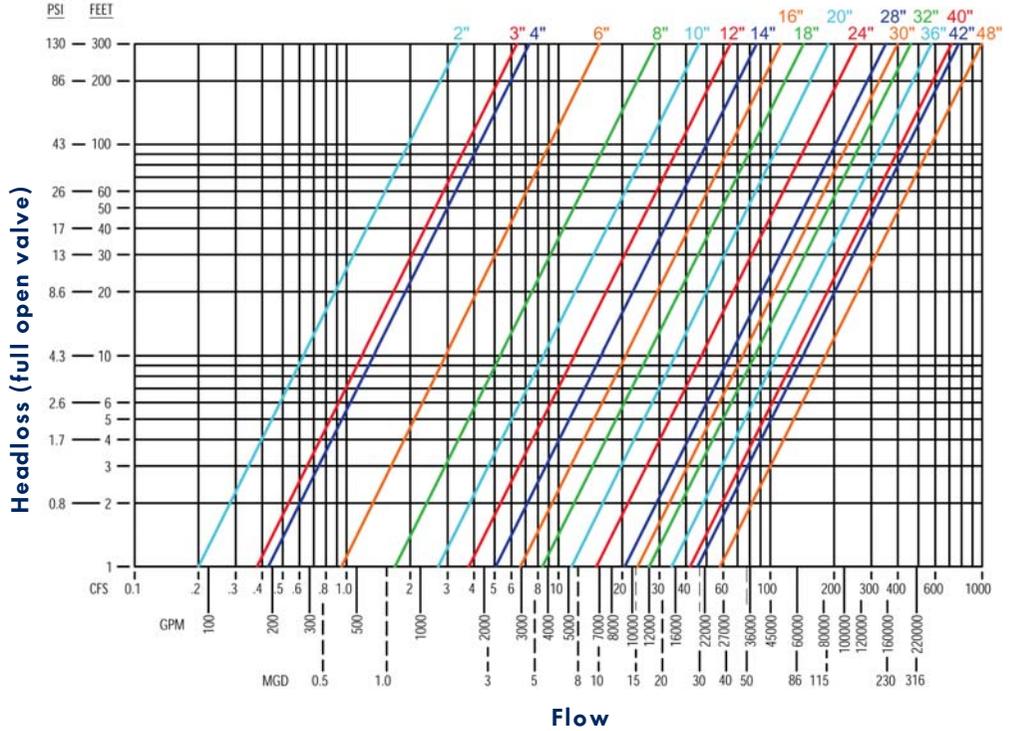
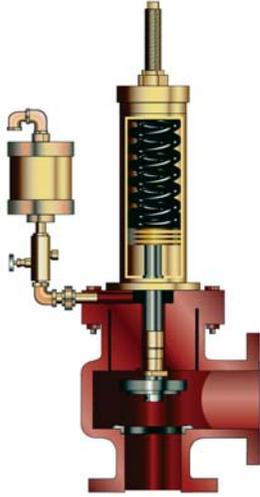
HEADLOSS GUIDE

ROSS 70SWR SERIES

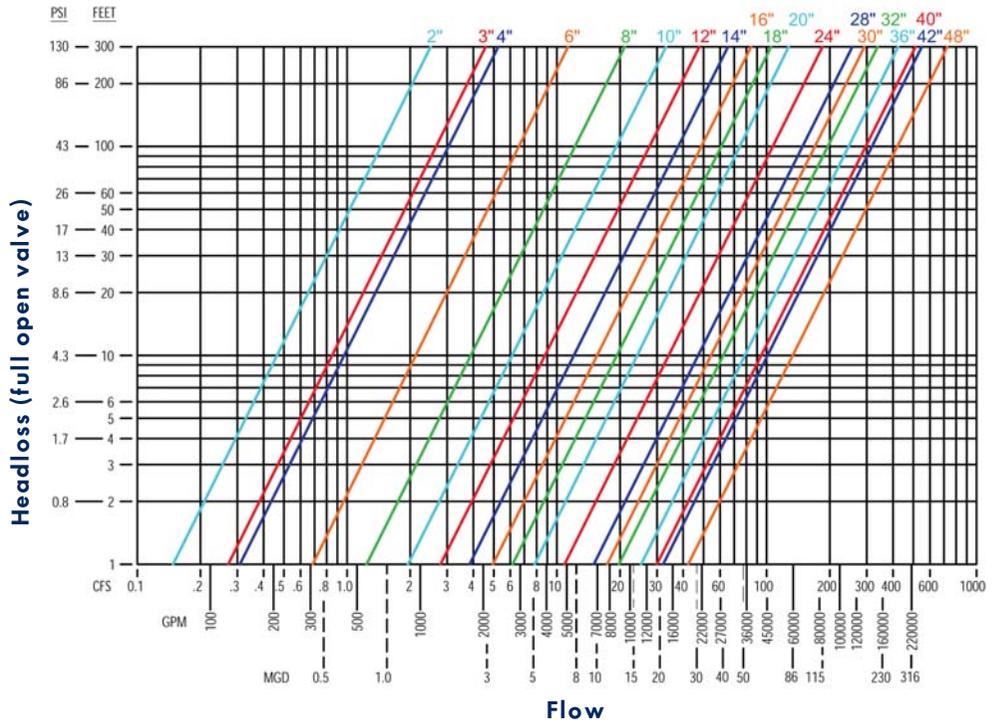
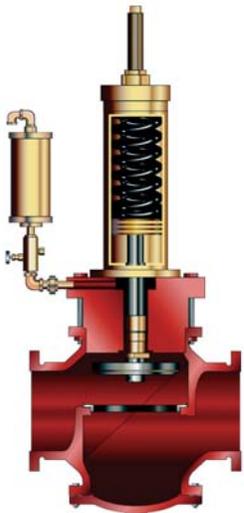
INSTRUCTIONS

- 1 Locate the desired headloss along the vertical axis, for the appropriate type valve.
- 2 Follow the line horizontally until the desired flow is reached (according to the horizontal axis).
- 3 Follow the line vertically down to the nearest angled line to determine the appropriate valve size.

ANGLE STYLE



GLOBE STYLE



Important note: For valves that use a direct acting design and a spring force (Models 70SWR, 70SWR-E, and 70SWR-BP), the flow through the valve is somewhat dependent on the line pressure. When the line pressure rises to the set point (as dictated by the spring force), the valve will start to open. If the flow through the valve is sufficient to satisfy the pressure requirement, the valve may not open further. However, if the pressure continues to increase, the stem will compress the spring further and the valve will open more to allow more flow. This additional flow may occur at a pressure higher than the set point.

TECHNICAL DATA continued

SHELF LIFE 24 months at recommended storage temperature.
FLASH POINT - SETA Part A: 82°F (28°C) Part B: 80°F (27°C)
HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product. **Keep out of the reach of children.**

APPLICATION

COVERAGE RATES*

	Primer			Intermediate / Topcoat		
	Dry Mills (Microns)	Wet Mills (Microns)	Sq Ft/Gal (m ² /Gal)	Dry Mills (Microns)	Wet Mills (Microns)	Sq Ft/Gal (m ² /Gal)
Suggested (1)	4.0 (100)	6.0 (150)	273 (25.4)	5.0 (125)	7.5 (190)	218 (20.3)
Minimum	3.0 (75)	4.5 (115)	364 (33.9)	4.0 (100)	6.0 (150)	273 (25.4)
Maximum	5.0 (125)	7.5 (190)	218 (20.3)	6.0 (150)	9.0 (230)	182 (17.0)

(1) Note: Roller or brush application requires two or more coats to obtain recommended film thickness. Series N140F can be spray applied to an optional high-build film thickness range of 6.0 to 8.0 dry mils (150 to 205 dry microns) or 8.5 to 11.5 wet mils (215 to 290 wet microns). Allow for overspray and surface irregularities. Film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.

MIXING

1. Start with equal amounts of both Parts A & B.
2. Using a power mixer, separately stir Parts A & B.
3. Add Part A to Part B under agitation, stir until thoroughly mixed.
4. Both components should be above 50°F (10°C) prior to mixing. For application to surfaces between 35°F to 50°F (2°C to 10°C), allow mixed material to stand thirty (30) minutes and restir before using. For optimum application properties, blended components should be above 40°F (4°C).

POT LIFE

4 hours at 35°F (2°C) 2 hours at 77°F (25°C) 1 hour at 100°F (38°C)

THINNING

Use No. 4 Thinner. For air spray, thin up to 10% or ¾ pint (380 mL) per gallon. For airless spray, roller or brush, thin up to 5% or ¼ pint (190 mL) per gallon. **Caution:** Series N140F NSF certification is based on thinning with No. 4 Thinner. Use of any other thinner voids ANSI/NSF Std. 61 certification.

SURFACE TEMPERATURE

Minimum 35°F (2°C) Maximum 135°F (57°C)
 The surface should be dry and at least 5°F (3°C) above the dew point. Coating won't cure below minimum surface temperature.

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss MBC or JGA	E	765 or 78	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	75-100 psi (5.2-6.9 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.019" (380-485 microns)	1800-3000 psi (124-207 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.
Note: Application over inorganic zinc-rich primers: Apply a wet mist coat and allow tiny bubbles to form. When bubbles disappear in 1 to 2 minutes, apply a full wet coat at specified mil thickness.
Roller: Roller application optional when environmental restrictions do not allow spraying. Use 3/8" or 1/2" (9.5 mm or 12.7 mm) synthetic nap covers.
Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.

CLEANUP

Flush and clean all equipment immediately after use with the recommended thinner or MEK.

*Values may vary with color.

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ROSS VALVE SUPPORT SERVICES

PROVIDES PERSONAL SERVICE IN EVERY PHASE OF DEVELOPMENT, INSTALLATION AND MAINTENANCE.

We are always available to provide answers to any questions. No sale is ever "final"

DEDICATED SUPPORT LINES

Sales engineers available Monday through Friday 7am to 5:00pm EST

Phone to help with any questions — (518) 274-0961

Fax machine – (518) 274-0210

After Hours Support – (518) 279-4373

E-Mail – sales@rossvalve.com



TRAINING

Factory Training — Ross Valve believes that our customers should know as much as possible about our products. That is why we periodically host Customer Training seminars at our Ross Technology Park in Troy, NY. Here, our customers learn the workings of the valves, how to correctly maintain them, and how they are manufactured.

In addition, Ross representatives are often in the field giving product seminars for your convenience.

FIELD SERVICE

When a repair, upgrade, or modification is required for an existing Ross Valve, Factory Authorized Ross Service Technicians offer the best service available, including:

Technical assistance for start-up or continuing training.

Fully inventoried service vehicles to allow replacement of necessary parts.

Confined Space/OSHA trained with latest equipment

On-site / hands-on training for your staff.

Ability to return older valves to "like-new" condition.

YEARLY CONTRACTS AVAILABLE

WARRANTY

All valves and materials are guaranteed free from defects for 1 year from the date shipped.

Ross Valves are economically rebuilt. Every internal part is replaceable through the top of the valve, without removing it from the line. All seals and internal packings are replaceable, which contributes to the valve's longevity.

Ross Valve stocks a wide variety of repair parts which can be received by the customer as early as the next day. In-house computer links track packages to ensure timely delivery.

Detailed historical record keeping gives us a full report of all maintenance or upgrades that have been made on each valve. This allows us to evaluate performance in the past and maximize performance in the future.



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Vaults for Water & Wastewater

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