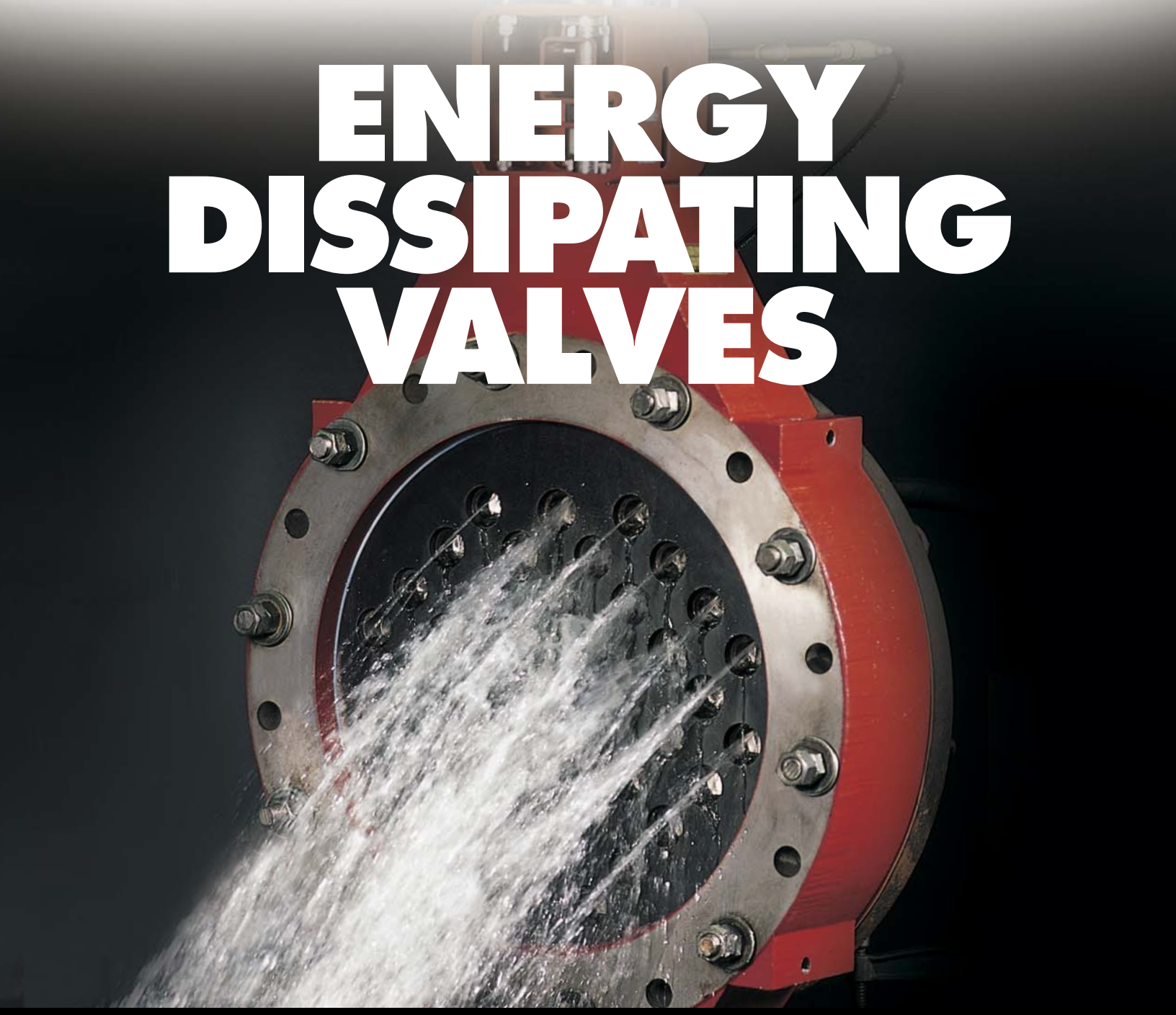
ROSS 1879 VALVE

ENERGY DISSIPATING VALVES



MODEL MOV
SAFELY REDUCES PRESSURE
IN EXTREME CONDITIONS

ROSS 1879 VALVE P.O.BOX 595 TROY NY 12180 518.274.0961 WWW.ROSSVALVE.COM

Keep your head under control with MOV.

In high velocity and high pressure drop applications, you want a valve that works. The Ross model MOV (Multiple Orifice Valve) is your answer. Elegant in design, the MOV effectively controls flow and pressure in demanding valve applications. If you encounter high pressure drops, high velocities, pressure surging, cavitation, or other demanding conditions, insist on the best valve for the application - Ross MOV.

The effectiveness of the MOV's operation is derived from its simple dual-plate design. A large number of strategically placed engineered orifices evenly distribute the flow stream over the entire face of the upstream valve plate. Based upon the desired flow rate, the flow media is divided into multiple jets, creating the desired throttling effect. Orifices align for higher flow rates. Flow area restricts for lower flow rates. Control of the valve and its flow is determined by the linear plate and its relative position to the fixed plate. As the valve works, the uniform jet configuration suppresses vibration, pressure fluctuations, cavitation, and noise.

Manual, hydraulic, and electronic actuators are available to operate the MOV. Combinations of these actuator types are also available for specific applications.

The design of the Ross MOV also provides other advantages. Its cavitation inception figures are more desirable than conventional valves. Tapered holes, counter bored holes, and exotic material of construction are utilized to assure that cavitation does not create a hazard within the valve. For severe cavitation applications, special plates and additional enhancement features are available to optimize the valve's performance.

Space saving features typical of a butterfly valve, versatility of control actuators typical of a ball valve, and operating features of a conventional control valve make the MOV the valve of choice.

So get control. Ask about the Ross model MOV. It's the answer to controlling your high-pressure applications.

PROUDLY MADE IN USA

Highlights of Ross Model MOV

- Peace of mind for the operator of high-velocity and high-pressure drop situations.
- Available as manual, hydraulic and electrically operated control valves.
- High-velocity dissipation design with one fixed and one linear moving perforated plate.
- Flexible mounting design compatible with horizontal or vertical pipe installations.
- Unique bearing design of the linear plate allows bi-directional operation and eliminates any possibility of misalignment.
- Field-replaceable seals for easy maintenance and operational efficiency.
- Configured to open, close, or hold position during a power failure.
- Dielectric links protecting all parts and assuring easy maintenance.
- Ross industry-first taper ring adjustment device to regulate desired low flow leakage rate (Note: the MOV is not recommended for bubble tight shut off applications).
- Same rugged construction as all Ross valves, with design to testing done in-house.
- Capable of high capacity flow applications with total orifice area in excess of 30% of the pipeline flow area.

Potential Installations

The Ross Model MOV can be controlled by a combination of manual, hydraulic or electrical actuation packages. It is suitable for a range of applications, including:

- Industrial flow
- Cooling and mixing systems
- Water supply and distribution systems
- Headworks of water treatment plants
- Flow relief for pump and turbine units
- Water intake or discharge of dams
- Laboratory test rigs
- Replacing damaged throttling butterfly valves
- Replacing damaged throttled ball valves

CONSTRUCTION

ROSS MODEL MOV ENERGY DISSIPATING VALVE

Designed for severe-control situations, with a uniquely simple design that effectively controls your flow.

SIZES

4" – 90" (100mm – 2250mm).

DESIGN

Rough operating conditions demand a rugged valve. With essentially one moving part and heavy duty construction throughout, the Ross MOV is designed for accuracy, performance, and long life.

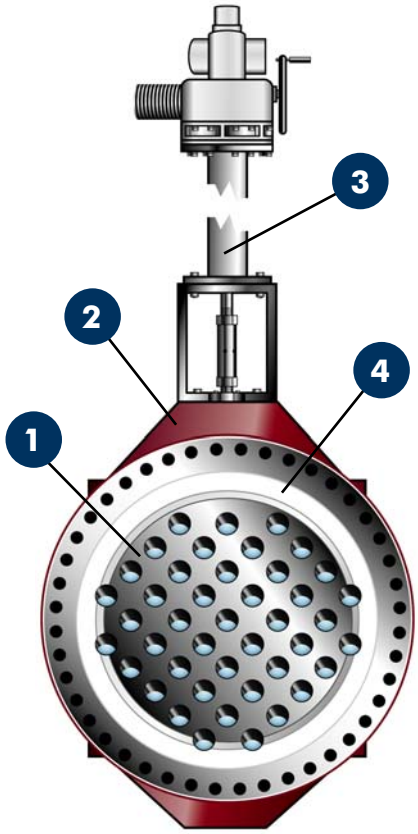
KEY FEATURES

1 Two hardened stainless steel plates with custom designed orifices direct water to center of downstream pipe, safely dissipating energy.

2 Rugged construction throughout with heavy-duty shafts, bearing guides and seals

3 Available automated or manual controls

4 Narrow profile "space saving" design



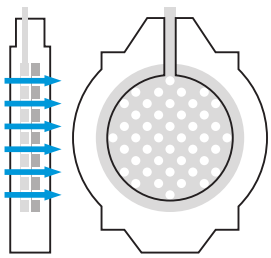
ADDITIONAL FEATURES & BENEFITS

- Multiple heavy duty bearing guides along the axis of movement.
- Anti-cavitation enhancing orifices incorporated into the fixed downstream plate.
- Jet enhancing upstream plate orifices for severe service conditions.
- Capable of controlling transient and reverse flow conditions.
- Hydraulic anti-lift flow design (typical of butterfly valves).
- Field-replaceable stem packings for low friction operation and efficient maintenance.
- Rugged construction with hardened thick plates, heavy duty shafts and seals.
- Compact size and lay length.
- Small actuation packages available.
- Full control packages available.

OPERATION

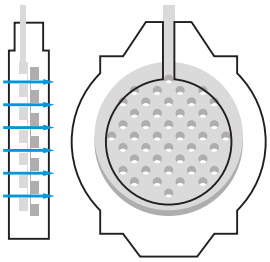
The Ross Model MOV is based on bi-directional operating principles and contains one fixed (downstream) valve plate, and one linearly moving (upstream) valve plate. Both plates have matching orifices at a large number of engineered locations. These orifices divide the flow into jets that dissipate energy in a short linear distance. Operation is typically smooth enough to allow placement of monitoring equipment within close proximity of the valve.

FULL OPEN



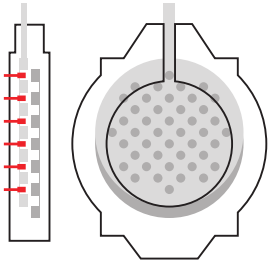
Orifices in plates are completely alligned

50% OPEN



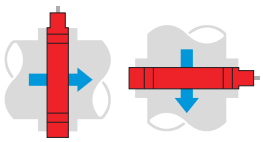
Orifices in plates are partially alligned

CLOSED



Orifices in linear plate are blocked by fixed plate

Taper Ring allows for fine adjustment of spacing between plates to control leak rate

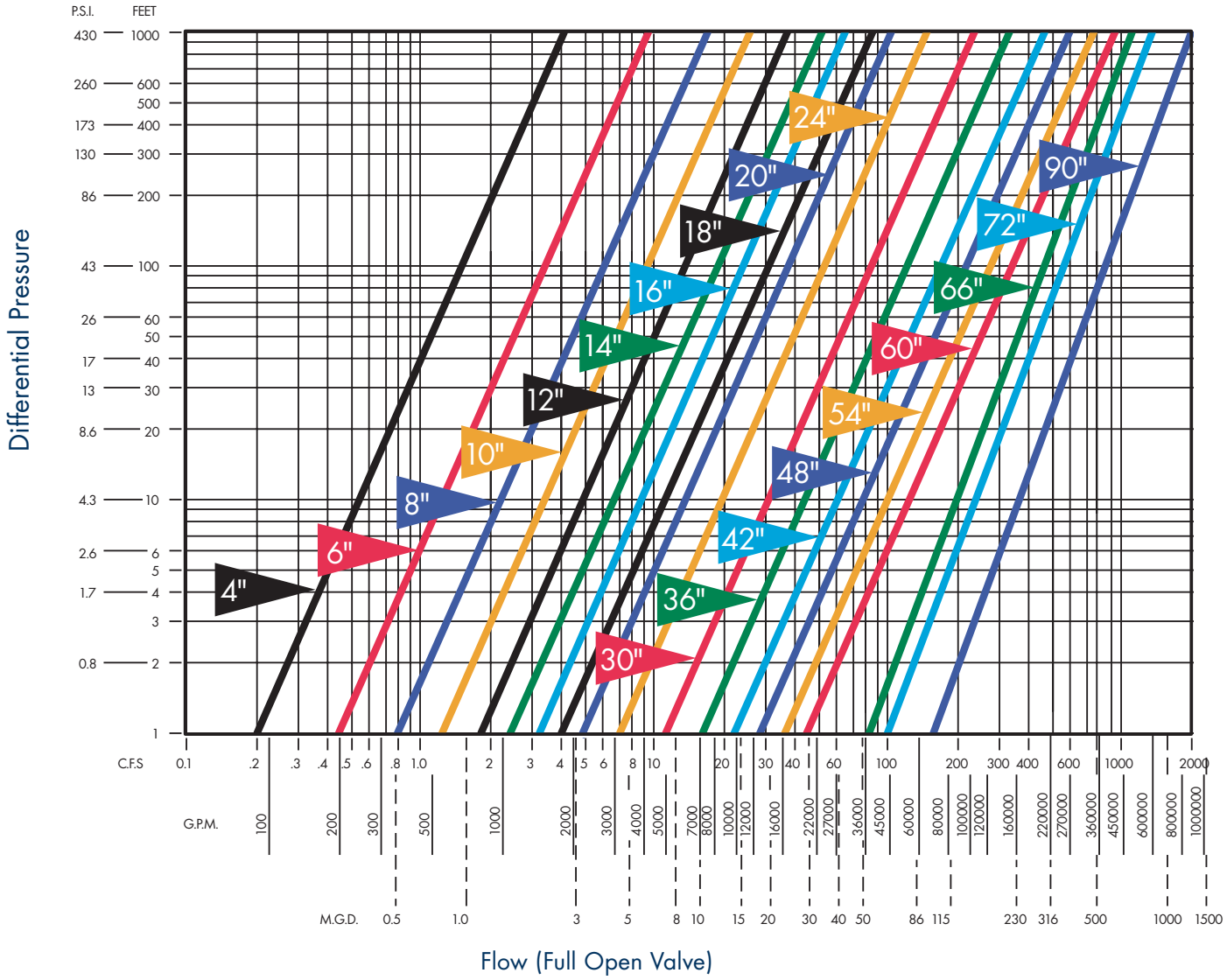


Suitable for both Horizontal and Vertical Installations

Note: Renderings shown are for reference only and are subject to change at any time. Engineering drawings are provided during the submittal process.

SIZING GUIDE

MODEL MOV



Flow (Full Open Valve)

INSTRUCTIONS

1. Locate the anticipated differential pressure along the vertical axis.
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.

Note: Use this chart as a guideline only. The exact hole pattern and design will be custom engineered for each application, depending on pressure and flow requirements.

Available in sizes up to 90". 48" valve being manufactured in house by Ross Valve, shown above.

There's nothing like a Ross Valve.

When George Ross founded our company in 1879, he made a product designed to last. He also created a company built on enduring values: integrity of design and engineering, quality of materials, craftsmanship in manufacturing, a high level of customer service, and flexible business systems that have evolved with technology and the times.

Now, much more than a century later, Ross automatic control valves are legendary throughout the world. Over the years, they have played a pivotal part in construction projects both large and small, serving systems as diverse in size and operating conditions as New York City, Los Angeles, Quito, and Madrid.

Ross offers a complete line of standard valves including electric, pump control, pressure reducing, flow control, altitude, back pressure sustaining, relief, surge control, electronic control valves, and float valves, as well as a complete line of strainers and diaphragm-style valves. Complementing these product lines are high energy dissipation anti-cavitation valves – our "WaterTamer." Rounding out our product line is a full line of valves for wastewater. Of course, we also have a variety of customized valves and valve features that can be engineered to suit any application, as well as pre-packaged valve vaults for turn-key installation.

Accurate. Ruggedly constructed. Versatile. Reliable. And backed by dedicated technical support and uncompromised field service. No wonder customers around the world always seem to say:

There's nothing like a Ross Valve.

Ross Valves are known for their exceptional quality. And no wonder, because we control the process in-house from start to finish. After designing the components, molds are made. We then start with the finest raw materials. All metals are poured in our own New York based foundries. All parts are machined to specs. Then each valve is meticulously assembled, pilot valves and controls are set, and the valve is "wet" tested under the designed operating conditions. When you receive your new Ross Valve, you can count on its ability to perform from start to finish.

ROSS 1879 VALVE

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REGISTERED ISO 9001:2000 QUALITY SYSTEM

All Ross Valves meet or exceed all current AWWA standards for construction and pressure ratings.

MOV 6-07 5M

PROUDLY MADE IN USA