

PROFESSIONAL CONTROL VALVES

High-quality and reliable valves



PRESIDENT'S MESSAGE

Since the establishment, we, PROVAL Valve, as a company specializing in manufacturing various control valves used in the industries such as petroleum, steel, and power generation for their process control, have supplied a huge number of high-quality and reliable valves thanks to the technology we have gained.

We will continue exerting our utmost effort to manufacture quality product to cope with the needs of the customers through the research and development based on the technology we have.

Thank you.





PROVAL LINEAR MOTION CONTROL VALVE



1. CAGE TYPE GLOBE

1" through 24" (25 though 600mm)

ANSI 150# - 4500# / JIS 10K ~ 63K

FLANGE END
SOCKET WELDING
BUTT WELDING
THREADED

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- M - SERIES
- C - SERIES

Trims:

- balanced cage-guided trim
- Low-noise, anti-cavitation trim (Variable Resistance Trim), single and multiple cages are available

Inherent Characteristic:

- linear, equal percentage, quick change, modified curve

- More flow capacity for initial investment. Streamlined flow passages provide greater capacities than most globe bodies of the same line size. Balanced valve plug construction permits use of smaller, lower-cost actuators. Also, trim inventory costs are cut because dimensional standardization permits use of most standard proval valve cage trim parts.
- High-pressure and temperature capability with class IV shut off. RTFE piston ring and high-seals permits. This shut off up to 230°C.

2. SINGLE TYPE GLOBE

1" through 12" (25 though 300mm)

ANSI 150# - 2500# / JIS 10K ~ 63K

FLANGE END
SOCKET WELDING
BUTT WELDING
THREADED

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- M - SERIES
- C - SERIES

Trims:

- single seat plug top guided
- Low-noise, anti-cavitation trim (Variable Resistance Trim), single and double cages are available

Inherent Characteristic:

- linear, equal percentage, quick change, modified curve

- Reliability - The screwed-in seat ring on a tapered seating to minimize fluid leakage and erosion at the back of the seat ring.
- Valve plug stability - Two rugged and widely spaced packing box guide bushings stabilize and guide the valve plug at all point in its travel range to minimize vibration, mechanical noise, and trim wear.
- Application flexibility - The design of proval valve accepts a full range of equal percentage, linear, and quick opening valve plugs designed to handle a wide range of flow requirements. Restricted-capacity trim can be easily replaced with full-capacity trim. Hardened trim materials are available to increase trim life and improve performance.

3. MICRO PORT GLOBE

1/2" though 1"

ANSI 150# - 2500# / JIS 10K ~ 63K

FLANGE END
SOCKET WELDING
LUGGED
THREADED
WAFFER

Body Materials:

- carbon steel
- stainless steel
- Ductile Iron

Actuators

- M - SERIES
- C - SERIES

Trims:

- full stellite needle plug
- multistep trim available

Inherent Characteristic:

- linear, equal percentage, modified curve, hyperbolic curve

- Proval Micro trim is a compact globe style valve specifically for microflow control. The Micor trim includes an adjustable Cv feature between 100 percent and 40 percent that can meet applications requiring finer control. It is available with bellows seal and anti-cavitation trim options.



4. 3-WAY GLOBE DIVERTING, MIXING TYPE

1" through 12" (25 through 300mm)

ANSI 150# - 900# / JIS 10K ~ 40K

FLANGE END
SOCKET WELDING
BUTT WELDING

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- M - SERIES
- C - SERIES

Trims:

- cage-guided trim
- Low-noise, anti-cavitation trim

Inherent Characteristic:

- linear, equal percentage, quick change, modified curve

- The design of proval 3-way control globe valves are generally used either to mix flowing medium or to divert on medium into two outlet flows, and are often used when fluid temperature is to be adjusted through heat exchangers.
- Mixing-type valves also can be used for diverting service when both the nominal size pressure differential is small.
- However, the mixing type is more suitable when the nominal size is larger than "4" and the pressure differential is also considerable. Standard 3-Way valve combine diaphragm actuator with multi-spring.

5. 3-WAY GLOBE BALANCED CAGE TYPE

2" through 12" (50 through 300mm)

ANSI 150# - 1500# / JIS 10K ~ 40K

FLANGE END
SOCKET WELDING
BUTT WELDING

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- M - SERIES
- C - SERIES

Trims:

- cage-guided trim
- Low-noise, anti-cavitation trim balance disc with high pressure condition (~230°C)

Inherent Characteristic:

- linear, equal percentage, quick change, modified curve

- The design of proval 3-way Balanced control globe valves are generally used high pressure condition either to mix flowing medium or to divert on medium into two outlet flows, and are often used when fluid temperature is to be adjusted through heat exchangers.
- Standard 3-Way valve combine diaphragm actuator with multi-spring.

6. BELLOWS SEAL GLOBE

1" through 12" (25 through 300mm)

ANSI 150# - 900# / JIS 10K ~ 40K

FLANGE END
SOCKET WELDING
BUTT WELDING
THREADED

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- M - SERIES
- C - SERIES

Trims:

- single seat plug top guided
- balanced cage-guided trim
- Low-noise, anti-cavitation trim (Variable Resistance Trim), single and multiple cages are available

Inherent Characteristic:

- linear, equal percentage, quick change, modified curve

- Wated material, employee safety, environmental concerns all good reasons for today's plant operator to be concerned about fugitive emissions from hazardous process.
- To stop packing leakage from control valves. Using a formed metal bellows design with minimal welded joint.
- Zero-Leakage stem & Seal
- Available with SUS316 or SUS316L bellows.
- No bellows tension
 - Bellows is in a relaxed state at valve's closed position
- No bellows erosion / fluid impingement
 - Bellows is out of flow stream
- No special packing requirements
- Multiple temperature applications
 - Temperature range : -160°C ~ 350°C



7. CRYOGENIC GLOBE

1" through 12" (25 though 300mm)

ANSI 150# - 900# / JIS 10K ~ 40K

FLANGE END
SOCKET WELDING
BUTT WELDING

Body Materials:

- stainless steel
- chrome-moly

Actuators

- M - SERIES
- C - SERIES

Trims:

- single seat plug top guided
- balanced cage-guided trim
- Low-noise, anti-cavitation trim (Variable Resistance Trim), single and multiple cages are available

Inherent Characteristic:

- linear, equal percentage, quick change, modified curve

- Body has in-line ports with stub and flange for JIS/ANSI Standard
- Butt welding, Socket welding flange available
- Trim is manufactured of two touches.
 - Soft (PCTFE) + Metal (SUS316) - CLASS VI
 - Replacement soft seat element. - CLASS VI

8. FORGED STEEL GLOBE

1" through 2" (25 though 50mm)

ANSI 150# - 4500# / JIS 10K ~63K

FLANGE END
SOCKET WELDING
BUTT WELDING

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- M - SERIES
- C - SERIES

Trims:

- single seat plug cage guided
- Low-noise, anti-cavitation trim (Variable Resistance Trim), single and multiple cages are available

Inherent Characteristic:

- linear, equal percentage, quick change, modified curve

- More flow capacity for initial investment. Streamlined flow passages provide greater capacities than most forged bodies of the same line size. Also, trim inventory costs are cut because dimensional standardization permits use of most standard proval valve cage trim parts, and be easily quick changed.
- High-pressure and temperature capability with class IV shut off.

9. SEVERE SERVICE GLOBE

2" through 12" (50 though 300mm)

ANSI 150# - 4500# / JIS 10K ~63K

FLANGE END
SOCKET WELDING
BUTT WELDING
LUGGED

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- M - SERIES
- C - SERIES

Trims:

- Disc stack (multi turn path)

Inherent Characteristic:

- linear, modified curve

- Reduced fluid velocities: Design ensures lower fluid velocities for longer trim life
- Disc stack design
 - Particles pass easily through the disc stack
 - Expanded inlet passages keep large contaminants from damaging the trim
 - Inspection is easy
 - Stack disassembles for cleaning or maintenance
- Variety of materials: Disc stack can be made from a variety of materials as required by service conditions.
- Unique staged pressure reduction design: Gaseous and hydrodynamic noise effectively reduced, cavitation eliminated, pressure drops reduced in steps.



PROVAL ROTARY MOTION CONTROL VALVE



1. ECCENTRIC PLUG

1" through 20" (25 through 500mm)

ANSI 150# - 600# / JIS 10K ~ 30K

FLANGE END
WAFER

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- DB - SERIES
- CB - SERIES
- B - SERIES
- R - SERIES

Trims:

- soft seat, metal seat, alloy tic, etc

Inherent Characteristic:

- quick change, modified curve

- Large Capacity
- Large Rangeability
- Excellent shut-off performance
- Compact & Lightweight
- Dirty and gummy service

2. CHARACTERIZED SEGMENTED BALL

1" through 12" (25 through 300mm)

ANSI 150# - 600# / JIS 10K ~ 30K

FLANGE END
WAFER

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- DB - SERIES
- CB - SERIES
- B - SERIES
- R - SERIES

Trims:

- soft seat, metal seat

Inherent Characteristic:

- equal percentage, quick change, modified curve, hyperbolic curve

segmented ball valve which features a patented contoured segmented V-notch ball. The V-notch ball produces an equal-percentage flow characteristic allowing for wide rangeability and a broad control range. The segmented ball also provides a non-restrictive flow path through the valve allowing for high capacity flows. The Vee-Ball valve features a variety of seals to allow for excellent shutoff and shearing between the ball and seal upon closure. The splined drive shaft of the Vee-Ball combines with a variety of power and manual actuators to provide reliable, high-performance throttling or on-off operation for many different applications.

3. CONCENTRIC BUTTERFLY

2" though 48" (50 through 1200mm)

ANSI 150# / JIS 10K

FLANGE END
WAFER
LUGGED END

Body Materials:

- carbon steel
- stainless steel
- Ductile Iron

Actuators

- B - SERIES
- R - SERIES

Trims:

- rubber seat, teflon lined

Inherent Characteristic:

- modified linear

- Compact Size & Light weight
- Long service life & lower cost
- Simple installation & maintenance
- Pneumatic control operation
- Perfect cut off
- Versatile function
- Wide application



4. HIGH PERFORMANCE BUTTERFLY

2" though 48" (50 through 1200mm)

ANSI 150# - 300# / JIS 10K ~ 20K

FLANGE END
BUTT WELDING
WAFER

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- DB - SERIES
- CB - SERIES
- B - SERIES
- R - SERIES

Trims:

- soft seat, metal seat

Inherent Characteristic:

- modified linear

- Self-sealing mechanism ensures a tight shut-off
- Double eccentric disc ensures longer service life, low seating torque and leak-tight shut-off
- Compact, lightweight, and cost-effective
- Eccentric disc

5. TRIPPLE OFF-SET BUTTERFLY

2" though 48" (50 through 1200mm)

ANSI 150# - 600# / JIS 10K ~ 30K

FLANGE END
BUTT WELDING
WAFER

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuators

- DB - SERIES
- CB - SERIES
- B - SERIES
- R - SERIES

Trims:

- soft seat, metal seat, laminate seat

Inherent Characteristic:

- modified linear

The design of proval 3-way Balanced control globe valves are generally used high pressure condition either to mix flowing medium or to divert on medium into two outlet flows, and are often used when fluid temperature is to be adjusted through heat exchangers. Standard 3-Way valve combine diaphragm actuator with multi-spring.

6. CRYOGENIC BUTTERFLY

1" through 40" (25 through 1000mm)

ANSI 150# - 300# / JIS 10K ~ 20K

FLANGE END
BUTT WELDING
WAFER

Body Materials:

- stainless steel

Actuators

- DB - SERIES
- CB - SERIES
- B - SERIES
- R - SERIES

Trims:

- soft seat, metal seat, laminate seat

Inherent Characteristic:

- modified linear

- Operating Temperature : -196°C ~ 260°C
- Seat tightness in accordance with BS rate A,API-598 ISO rate A at ambient temperature, and BS 6364 at cryogenic temperature.
- Maintenance free stem packing design, requiring no adjustments.
- Available de-greased and specially cleaned to customer standards for clean gas service.



7. 2,3-WAY FLOATING TYPE BALL

7. 2,3-WAY FLOATING TYPE BALL VALVE

ANSI 150# - 900# / JIS 10K ~ 40K

FLANGE END
SOCKET WELDING
BUTT WELDING

Body Materials:

- Carbon steel
- stainless steel

Actuators

- B - SERIES
- R - SERIES

Trims:

- Soft Seat, Metal Seat

Inherent Characteristic:

- quick change

We uses only high-quality materials inspected & tested to International Standards and utlizes advanced manufacturing technology with special emphasis on safety, quality, and long service life of our products, to ensure that our clients receive the “best in class” products available from us at a competitive price and delivered on time

- Both direction
- Dynamic self-adjusting center line
- Low torque for easier operation
- High capacity
- No leakage

8. TRUNNION BALL

1” through 12” (25 through 300mm)

ANSI 150# - 1500# / JIS 10K ~ 63K

FLANGE END
SOCKET WELDING
BUTT WELDING

Body Materials:

- Carbon steel
- stainless steel

Actuators

- B - SERIES
- R - SERIES

Trims:

- soft seat, metal seat

Inherent Characteristic:

- quick change

Trunnion ball valve have a mechanical means of anchoring the ball at the top and the bottom, this design is the standard design applied on larger and higher pressure valves. Sealing is achieved by spring loaded piston type seats which shut off flow when line pressure acts on the upstream seat. Automatic relief of cavity overpressure is assured due to the trunnion design in case of self relieving seats

The ball is operated by a sealed spindle to which the operator is attached. Ball valves are intended to be used as on/off flow control devices and are not to be used to throttle fluid flow. The valves should always be either fully open or closed.





PNEUMATIC ACTUATOR



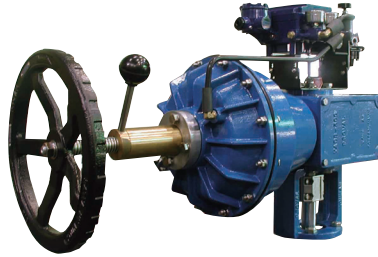
1. LINEAR ACTION

M-Series

Type : Single Acting Diaphragm Type
 Action : Reverse Action (RA)
 Direct Action (DA)

Pressure set range : 1.6 ~ 3.2 kgf/cm²G

Hysteresis : Less than 1% of Full Stroke
 Linearity : Less than 1%
 Air Consumption : 1.9ℓ ~ 58.7ℓ
 Out Force : 251kgf ~ 1609.1kgf



2. ROTARY TYPE

DB Series

Type : Single Acting Diaphragm Type
 Action : Reverse Action (RA)
 Direct Action (DA)

Pressure set range : 2.0 ~ 3.2 kgf/cm²G

Hysteresis : Less than 1% of Full Stroke
 Linearity : Less than 1%
 Air Consumption : 2.1ℓ ~ 58.7ℓ
 Out Force : 4.7kg.m ~ 105kg.m

CB-Series

Type : Cylinder Type
 Action : Reverse Action (RA)
 Direct Action (DA)
 Function : Spring Return Type

Pressure set range : 3 ~ 7 kgf/cm²G

Hysteresis : Less than 1% of Full Stroke
 Linearity : Less than 1%
 Air Consumption : 2.1ℓ ~ 58.7ℓ
 Out Force : 4.7kg.m ~ 105kg.m



C-Series

Type : Single Acting Diaphragm Type
 Action : Reverse Action (RA)
 Direct Action (DA)
 Function : Double Acting Type, Spring Return Type

Pressure set range : 2.5~ 7 kgf/cm²G

Hysteresis : Less than 1% of Full Stroke
 Linearity : Less than 1%
 Air Consumption : 2.0ℓ ~ 176.3ℓ
 Out Force : 402kgf ~ 4776kgf

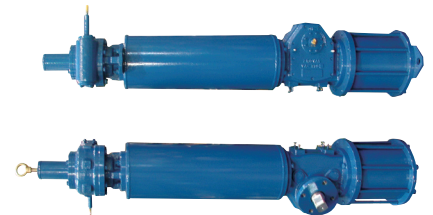


B-Series

Type : Scotch-yoke Type
 Action : Reverse Action (RA)
 Direct Action (DA)
 Function : Double Acting Type, Spring Return Type

Pressure set range : 3 ~ 5 kgf/cm²G

Hysteresis : Less than 1% of Full Stroke
 Linearity : Less than 1%
 Air Consumption : 0.51ℓ ~ 6.9ℓ
 Out Force : 3.5kg.m ~ 127.7kg.m



R-Series

Type : Scotch-yoke Type
 Action : Reverse Action (RA)
 Direct Action (DA)
 Function : Double Acting Type, Spring Return Type

Pressure set range : 3 ~ 7 kgf/cm²G

Hysteresis : Less than 1% of Full Stroke
 Linearity : Less than 1%
 Air Consumption : 2.9ℓ ~ 166.1ℓ
 Out Force : 78kg.m ~ 5200kg.m

We will continue exerting our utmost effort to manufacture quality product to cope with the needs of the customers through the research and development based on the technology we have.



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