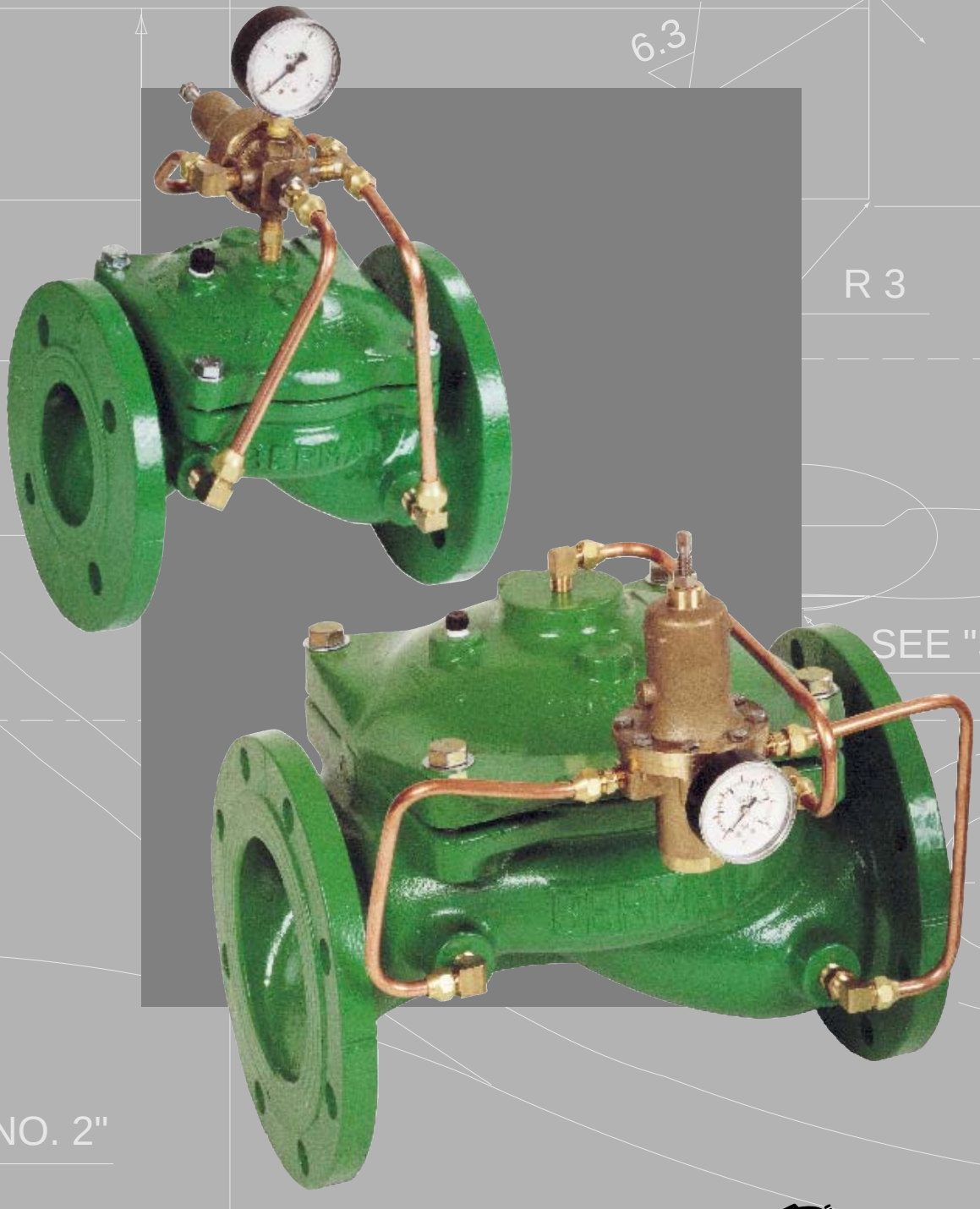
RAM® 400 Series

Hydraulic Control Valves



CONTROL VALVES BERMAD

i n d e x

company profile

SEE DETAIL C

BERMAD was founded in 1965. Registered as a limited partnership, it is owned by Kibbutz Evron (75%) and Kibbutz Saar (25%).

MAIN PRODUCT LINES

Hydraulic Control Valves, Automatic Metering Valves/Hydrometers, Air Valves, Plastic Control Valves, Solenoid Valves.

MAIN APPLICATIONS

Agricultural Irrigation, Industry, Municipal Waterworks, High-Rise Buildings Water Supply Systems, Air Conditioning, Fire Protection Systems, Petroleum Industry.

company profile

MARKETING/SERVICE

The marketing department serves the international and local markets, giving its clients prompt and accurate service, technical support and supply of goods to all parts of the world.

QUALITY CONTROL DEPARTMENT

The quality assurance facilities at the BERMAD plant are ISO 9002 certified, and are under periodic inspection by the Standards Institution of Israel.

RESEARCH AND DEVELOPMENT

The R&D department is continuously innovating, as well as improving existing products. A significant share of the company's revenues is reserved for this purpose. The design and documentation of products and projects are carried out utilizing the most up to date CAD/CAM software.

PLASTICS DEPARTMENT

The Plastics Department has the most updated injection molding machines with more than 150 automatic molds, which enable the production of high quality products.

TOOLING AND LATHING

Machining is carried out at BERMAD using computerized equipment, which includes CNC lathes, Machining Centers and other equipment.

PAINTING & COATING DEPARTMENT

The Painting Department utilizes the most modern Fusion Coating equipment and methods for painting and enamel coating of BERMAD products, for better finishing and high erosion and corrosion resistance.

EXPORT

Comprises 80% of the sales. Among countries exported to are: USA, Great Britain, Norway, Italy, Spain, Brazil, Chile, Argentina, Mexico, Australia, Taiwan, Japan and South Africa.

APPROVALS AND LISTINGS

UL LISTED

FM APPROVED

The Standards Institution of Israel

ILTA SUPPLIER

RAM 400 Series

Product Description

The leading edge in control valve design. Combines simple and reliable construction with superior performance while, at the same time, being virtually free of the typical limitations associated with this type of product.

The valve has been designed for the control of all kinds of irrigation, waterworks and industrial systems.

Cover

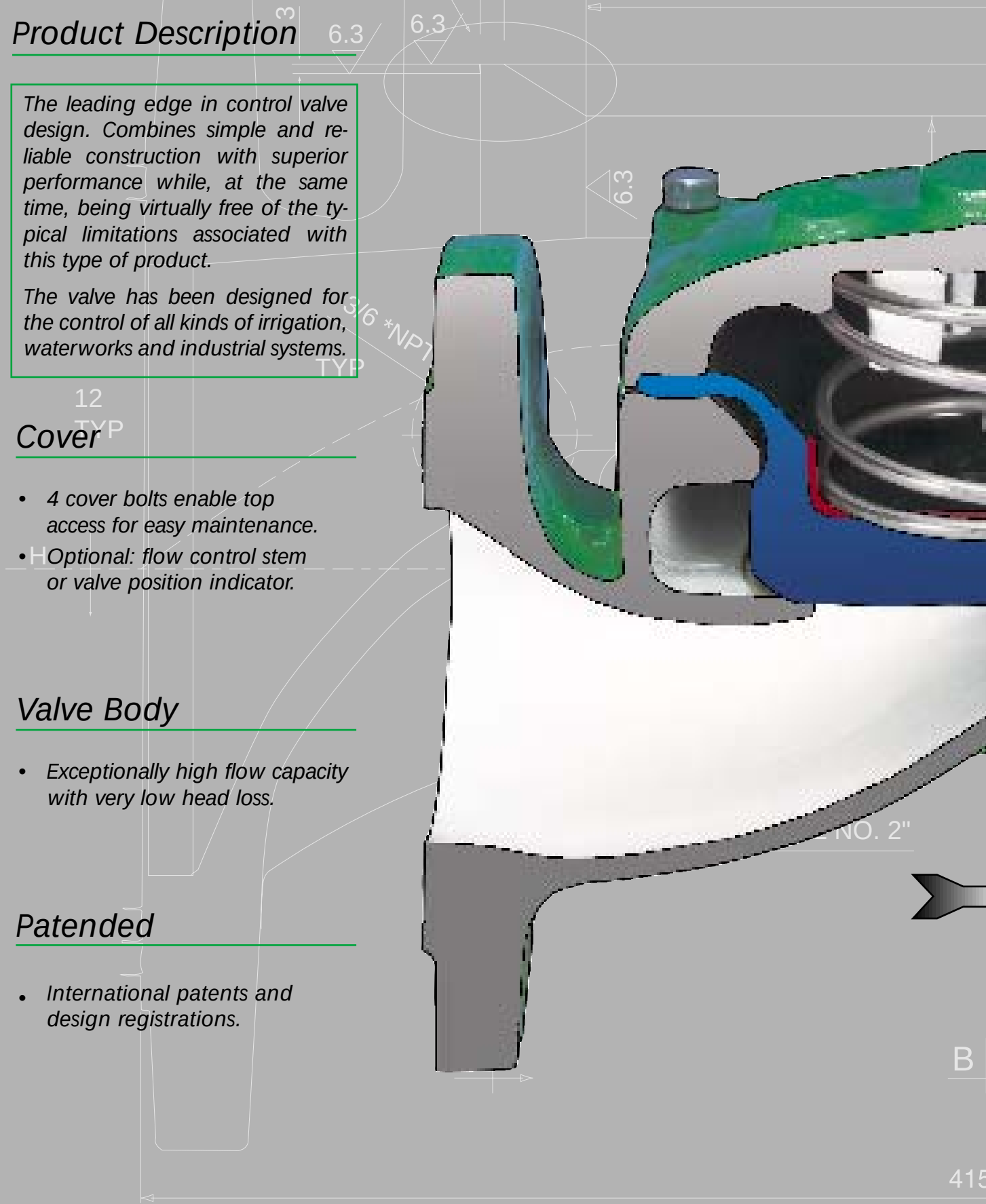
- *4 cover bolts enable top access for easy maintenance.*
- *Optional: flow control stem or valve position indicator.*

Valve Body

- *Exceptionally high flow capacity with very low head loss.*

Patended

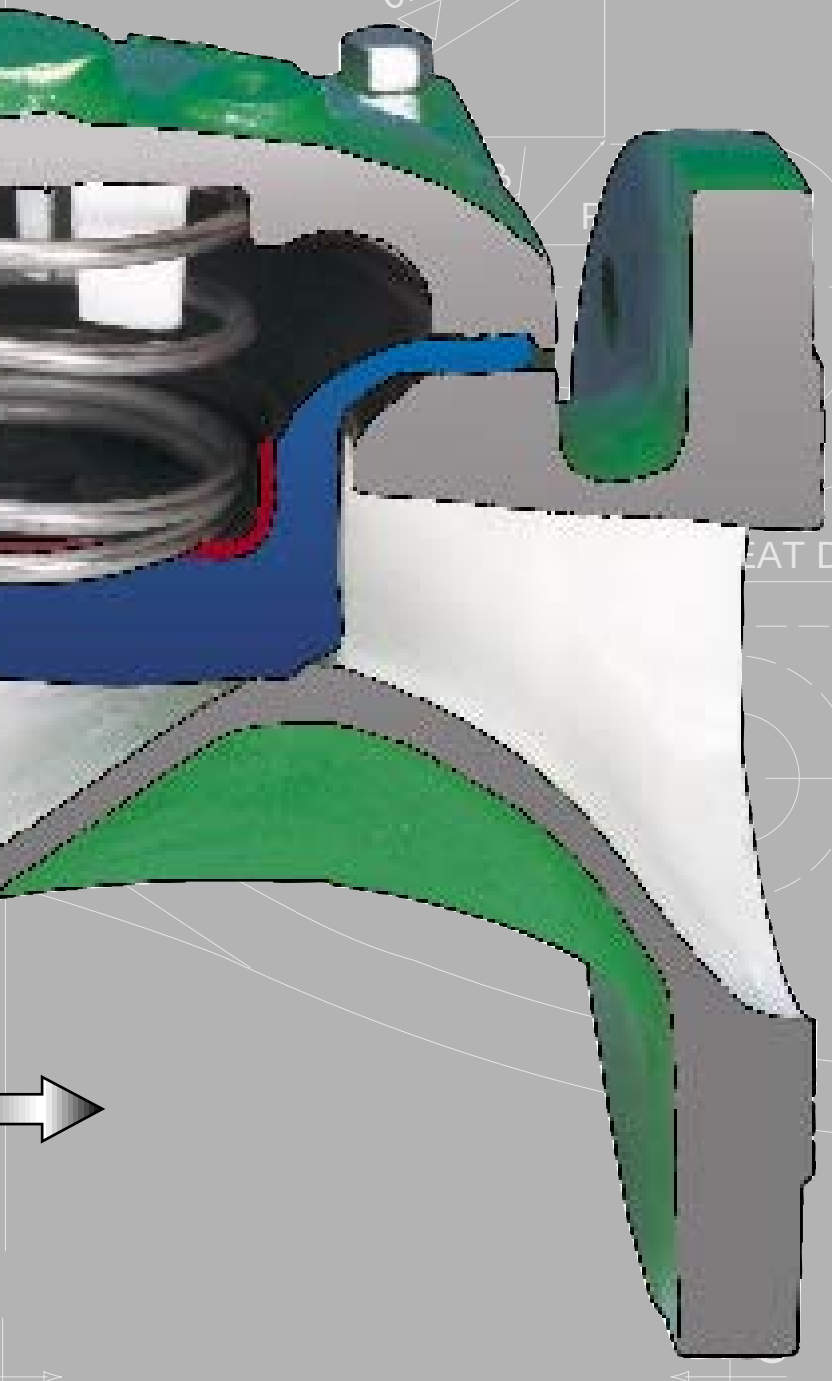
- *International patents and design registrations.*



& Special Features

RAM 400 Series

Diaphragm Special features



- One single type for all service conditions: On/Off and pressure regulating.
- No need for special reinforcement or for different types of diaphragms and springs to meet different operating conditions.
- Valve opens and closes drip tight on very low pressure supply.
- Perfectly balanced diaphragm with no distortion caused by uneven hydraulic forces on shut-off or during regulation.
- Progressive dynamic guidance, resulting in exceptionally stable action.
- Exceptionally stable action during shut-off and pressure regulation. Absolutely no pressure surges or chattering.

technical specifications

Globe pattern

RAM 400 Series

Technical data

Valve Pattern: *Globe*

Sizes: *3/4", 1", 1 1/2", 2", 2 1/2", 3"R, 3", 4", 6", 8", 10",12" & 16"R*

End Connections:

– *Female threaded NPT/BSP*
3/4", 1", 1 1/2", 2", 2 1/2", 3"R & 3"

– *Grooved (Victaulic):*
2", 3", 4" & 6"

– *Flanged: ISO PN16, ANSI 125, BST-D*
2", 2 1/2", 3"R, 3", 4", 6", 8", 10", 12" & 16"R

Operating Pressure Range:
0.5-16 bar (7-230 psi)

Temperature Range:
Water up to 80°C (175°F)

Materials:

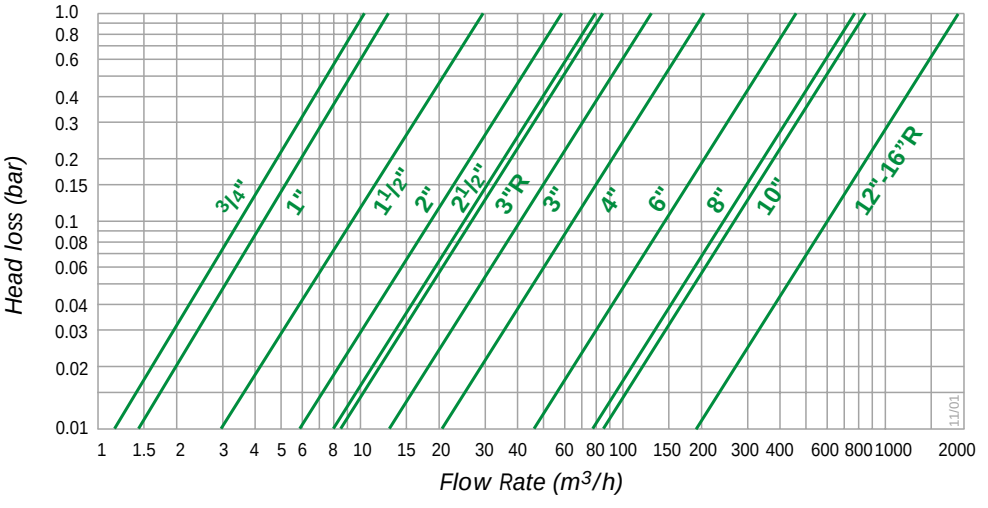
– *Body and Cover:*
3/4", 1", 1 1/2" Brass only
2"-16"R Cast Iron, Polyester coated

– *Diaphragm: Nylon-fabric Reinforced Natural Rubber; Options: NBR, EPDM*

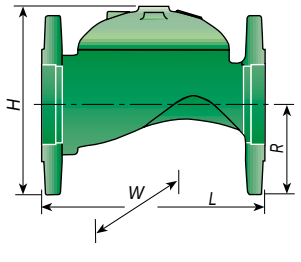
– *Spring: Stainless steel*

(Other materials and coatings available on request).

Flow Chart



Dimensions and Weights



	Threaded							Grooved (Victaulic)				Flanged									
Size	3/4"	1"	1 1/2"	2"	2 1/2"	3R"	3"	2"	3"	4"	6"	2"	2 1/2"	3R"	3"	4"	6"	8"	10"	12"	16"R
L (mm)	112	112	150	180	210	210	255	205	250	320	415	205	205	210	250	320	415	500	605	724	742
H (mm)	67.5	67.5	83	111	133	140	160	106	156	190	404	155	178	187	210	242	345	430	460	635	695
Hf* (mm)	–	–	–	205	226	228	260	200	255	300	609	245	260	270	310	328	550	660	690	930	971
W (mm)	72	72	90	120	129	129	175	120	175	200	306	155	178	200	200	223	306	365	405	580	600
R (mm)	20	20	27.5	38	46	55	55	32	46	60	85	78	89	100	100	112	140	170	202	240	300
Weight (kg)	0.95	0.95	1.5	4.0	5.7	5.8	13.0	5.0	10.6	16.2	49.0	9.0	10.5	12.1	19.0	28.0	68.0	125.0	140.0	290.0	377.0

**Hf = Height with optional flow stem (at open position)*

CONTROL VALVES BERMAD

Angle pattern

RAM 400 Series

Technical data

Valve Pattern: *Angle*

Sizes: *2", 2 1/2", 3" & 4"*

End Connections:

– *Female threaded NPT/BSP 2", 2 1/2" & 3"*
– *Grooved (Victaulic): 3" & 4"*
– *Flanged: ISO PN 16, ANSI 125, BST-D 2", 3" & 4"*

Operating Pressure Range:
0.5-16 bar (7-230 psi)

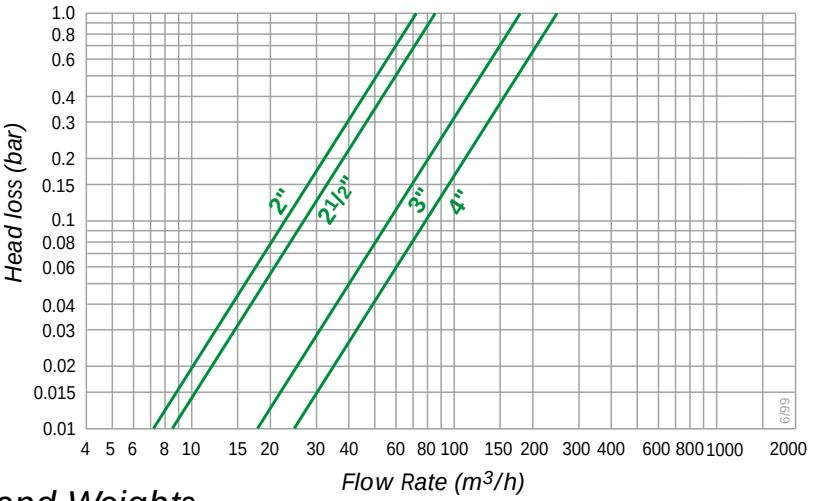
Temperature Range:
Water up to 80°C (175°F)

Materials:

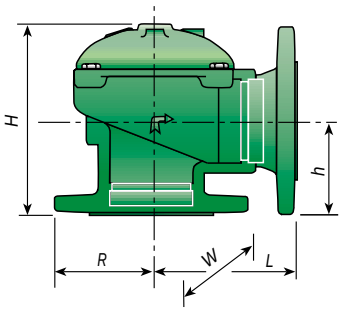
– *Body and cover: Cast Iron, Polyester-coated*
– *Diaphragm: Nylon-fabric Reinforced Natural Rubber; Options: NBR, EPDM*
– *Spring: Stainless steel*

(Other materials and coatings available on request).

Flow Chart



Dimensions and Weights

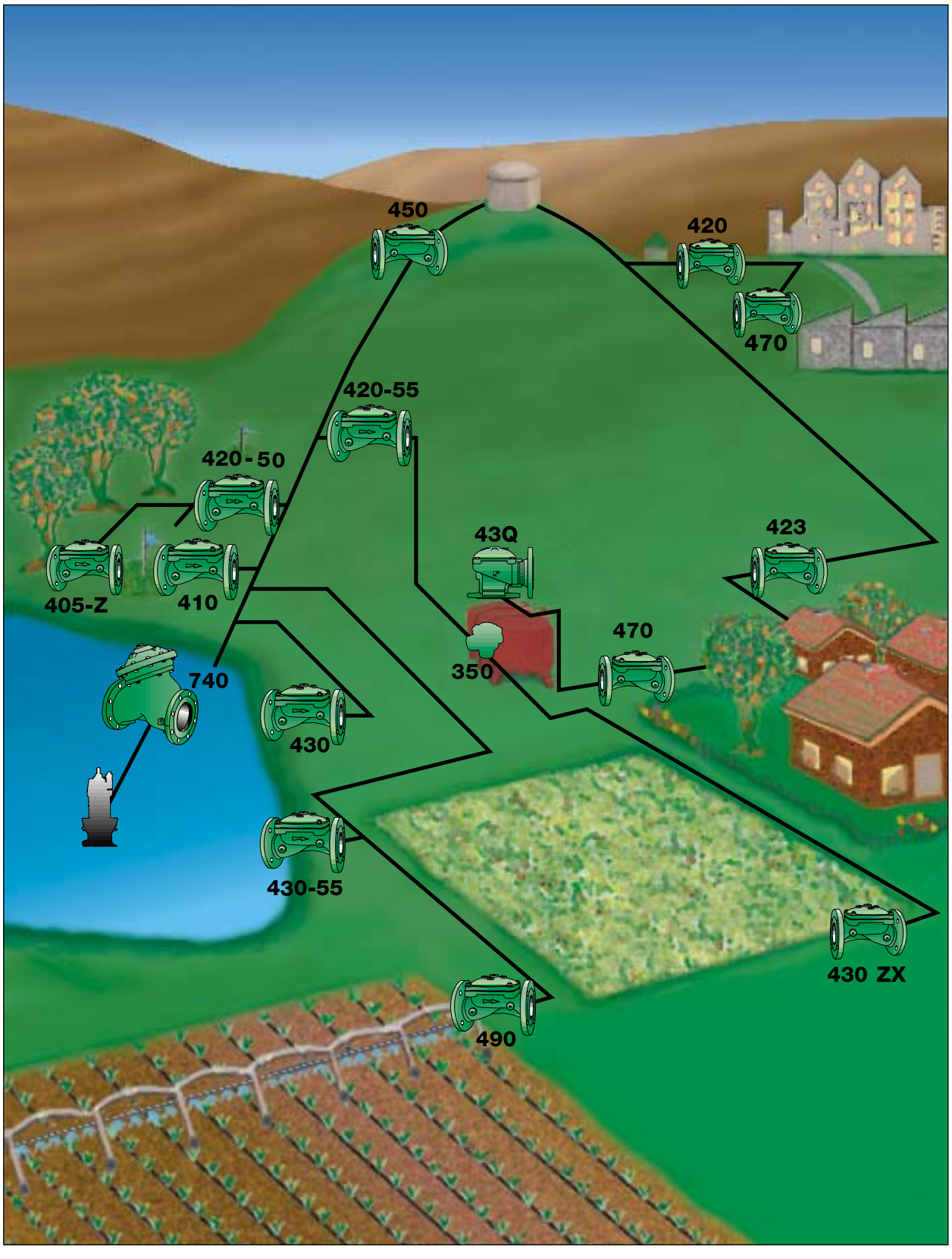


	Threaded			Grooved (Victaulic)		Flanged		
Size	2"	2 1/2"	3"	3"	4"	2"	3"	4"
L (mm)	70	110	110	120	160	121	153	160
H (mm)	119	182	184	194	223	157	200	223
Hf* (mm)	211	275	336	346	309	249	278	309
W (mm)	118	131	170	170	204	155	200	223
h (mm)	61	93	80	90	112	83	101	112
R (mm)	38	65	55	45	58	78	100	112
Weight (kg)	4.4	5.8	11.0	10.0	16.0	9.0	17.0	26.0

*Hf = Height with optional flow stem (at open position)

General view

RAM 400 Series



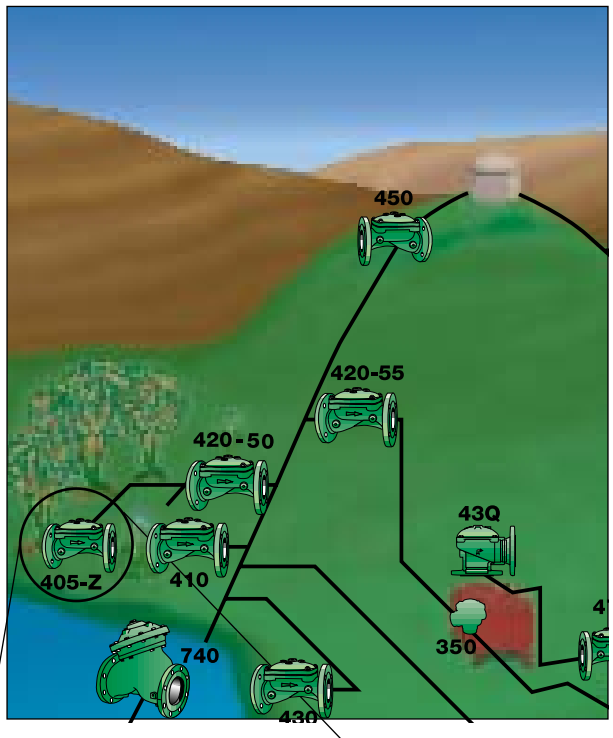
M o d e l 4 0 5 - Z

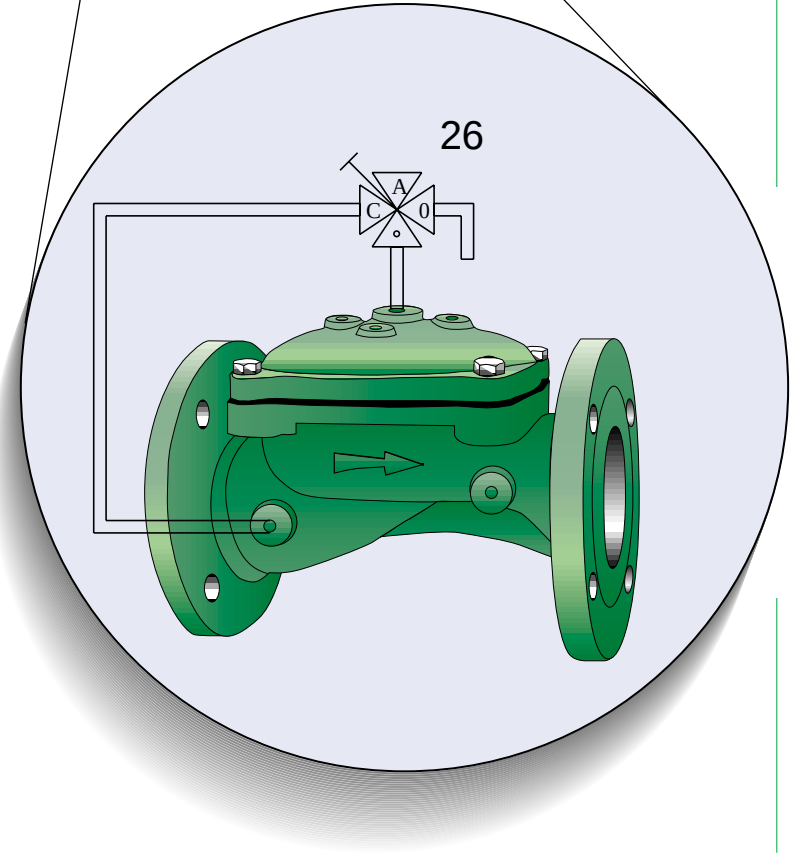
Hydraulic Diaphragm Control Valve

RAM 400 Series

Description

Model 405-Z Hydraulic Control Valve is designed to open and close drip-tight in response to an hydraulic remote command/or local command. Standard valve is supplied with a 4-way ball valve that selects positions between open, close, or auto.





Control list

400-G	*RAM 400-Globe*
26	*4-way Cock Valve*

M o d e l 4 1 0

Electric Remote Diaphragm Control Valve

RAM 400 Series

Description

Model 410 Electrical Remote Control Valve is designed to open and close drip-tight in response to an electrical signal.

- *The valve opens and closes in response to an electrical signal. Used in automatic industrial and irrigation systems.*

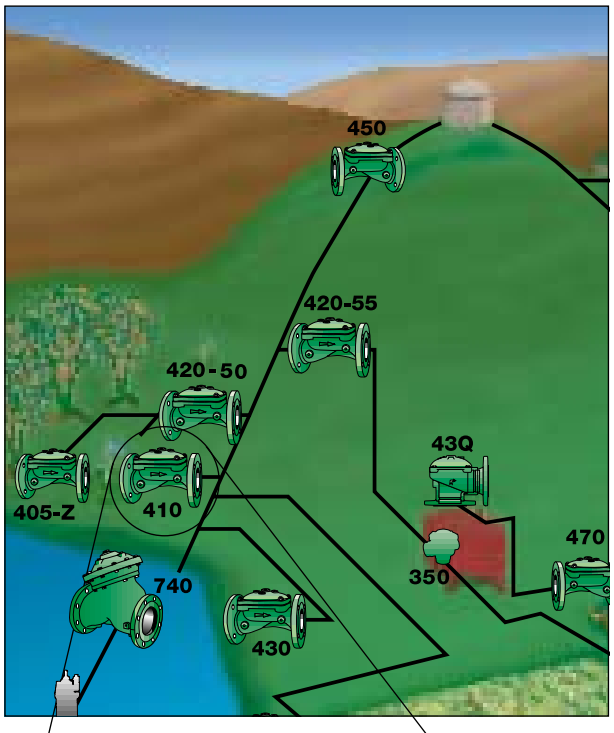
Note: The standard model is normally closed (N.C.) [energized to open]. The normally open (N.O.) model is also available on request.

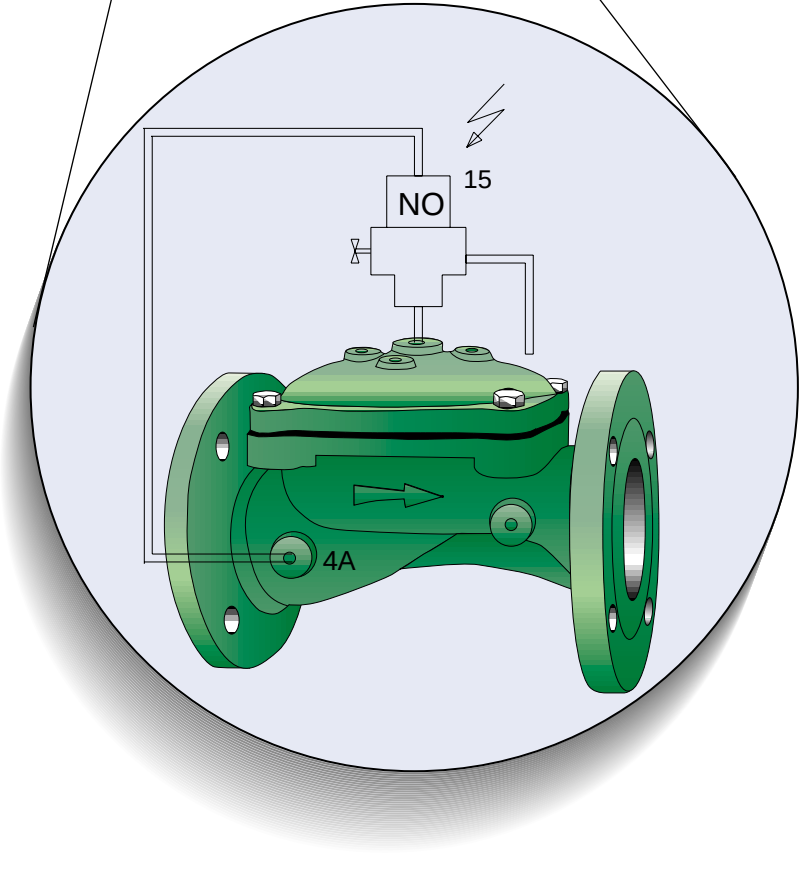
OPTIONAL

Electric Remote Control Valve

* *(with BERMAD Solenoid to suite valve sizes 2" up to 4").*

* *Sizes 6" to 10" is supplied with ASCO solenoid.*





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
15	*3-way, N.O.Sol.Pilot valve*

CONTROL VALVES BERMAD

M o d e l 4 2 0

Pressure-Reducing Valve *(with 2W PC-20-A pilot)*

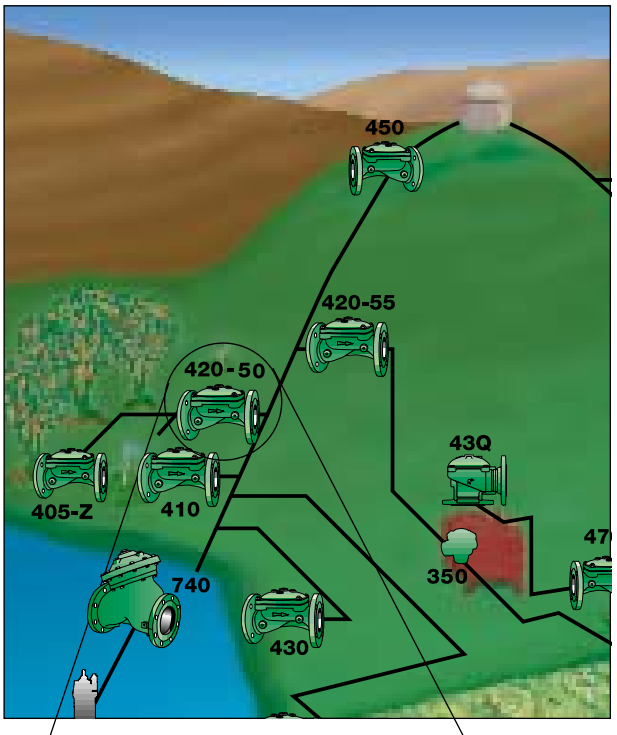
RAM 400 Series

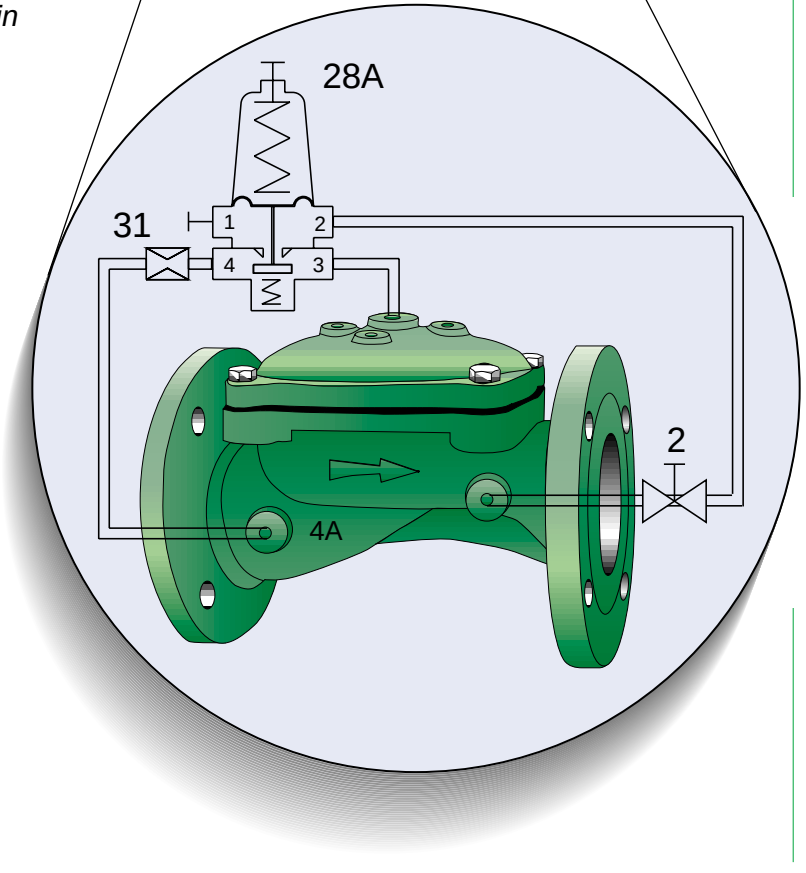
Description

Model 420 Pressure Reducing Valve is an automatic control valve designed to reduce a higher inlet pressure to a lower constant outlet pressure, regardless of fluctuating flow rates and/or varying inlet pressure. It is a pilot-controlled, hydrauli--cally operated diaphragm-type globe or angle 405 valve.

The pressure-regulating pilot senses down-stream pressure and modulates open or close, causing the main valve to throttle, thus maintaining constant de-livery pressure. The pressure-regulating pilot has an adjusting screw to preset the desired pressure,

When down-stream pressure falls below the pilot setting, the pilot and main valve modulate open to increase pressure and maintain pilot setting. When down-stream pressure rises above the pilot setting, the pilot and main valve throttle close to decrease pressure and maintain pilot setting.





Control list

400-G	*RAM 400-Globe*
28A	*2-way Pressure-Reducing, Pilot Valve,*
4A	*In line, Self Flushing Filter*
31	*Control Orifice*
2	*Cock Valve*

M o d e l 4 2 0

Pressure-Reducing Valve *(with #2 2W pilot valve)*

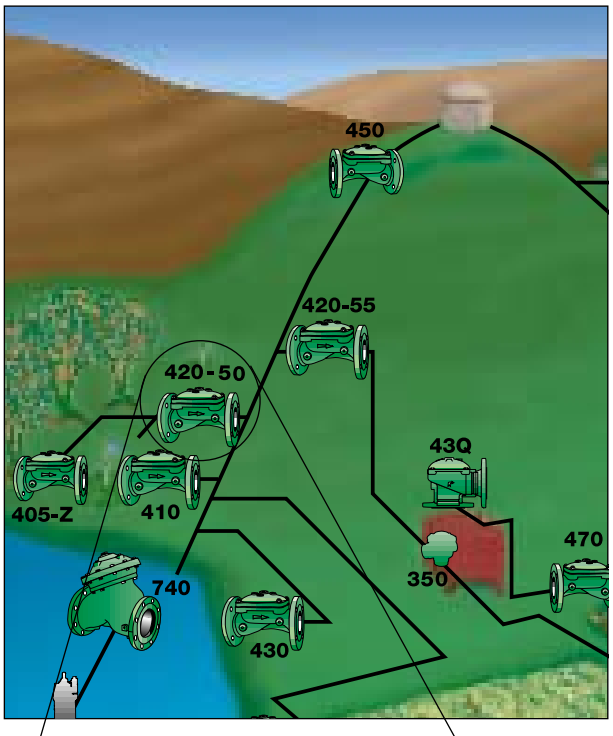
RAM 400 Series

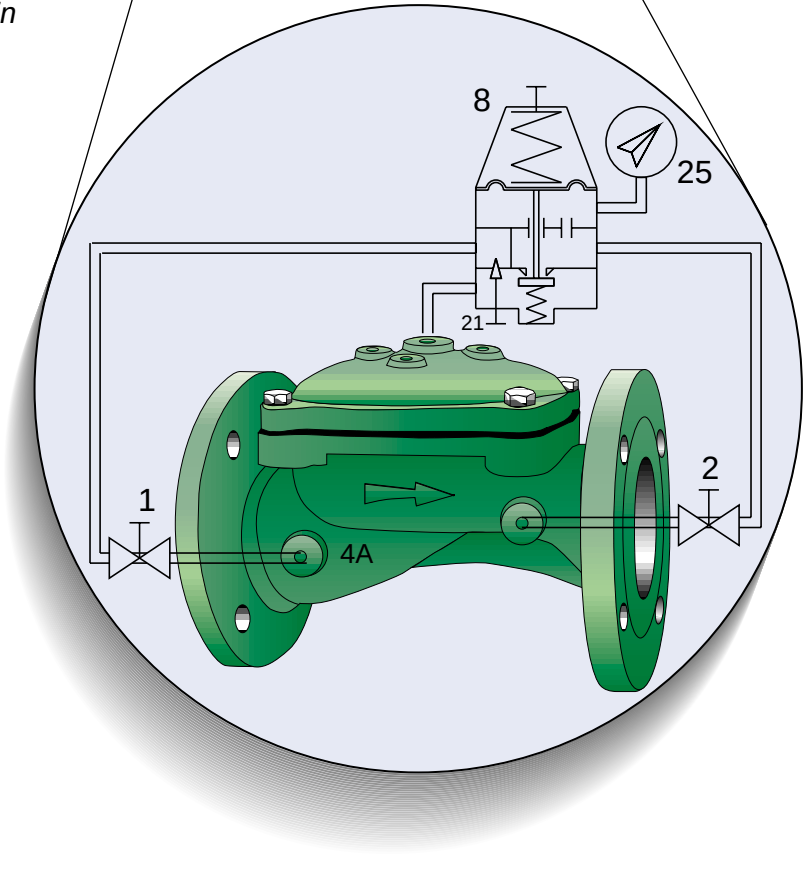
Description

Model 420 Pressure-Reducing Valve is an automatic control valve designed to reduce a higher inlet pressure to a lower constant outlet pressure, regardless of fluctuating flow rates and/or varying inlet pressure. It is a pilot controlled, hydrauli-- cally operated diaphragm-type globe or angle 405 valve.

The pressure-regulating pilot senses down-stream pressure and modulates open or closed, causing the main valve to throttle, thus maintaining constant delivery pressure. The pressure-regulating pilot has an adjusting screw to preset the desired pressure,

When down-stream pressure falls below the pilot setting, the pilot and main valve modulate open to increase pressure and maintain pilot setting. When down-stream pressure rises above the pilot setting, the pilot and main valve throttle closed to decrease pressure and maintain pilot setting.





Control list

400-G	*RAM 400-Globe*
8	*2/way Pressure-Reducing, Pilot Valve 2-way*
4A	*Self Flushing Filter*
1	*Cock Valve*
2	*Cock Valve*
25	*Pressure Gauge*
21	*Needle valve*

M o d e l 4 2 0 - 5 0

Pressure-Reducing w. Hydraulic Remote Control

RAM 400 Series

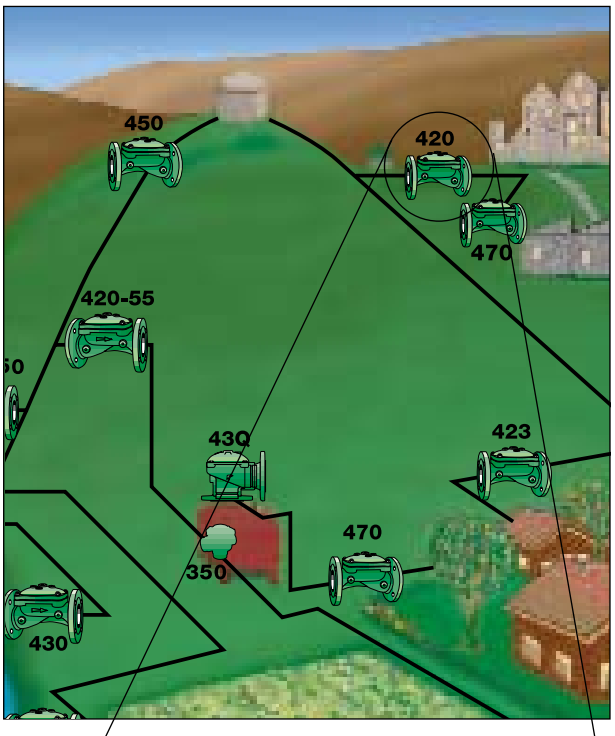
Description

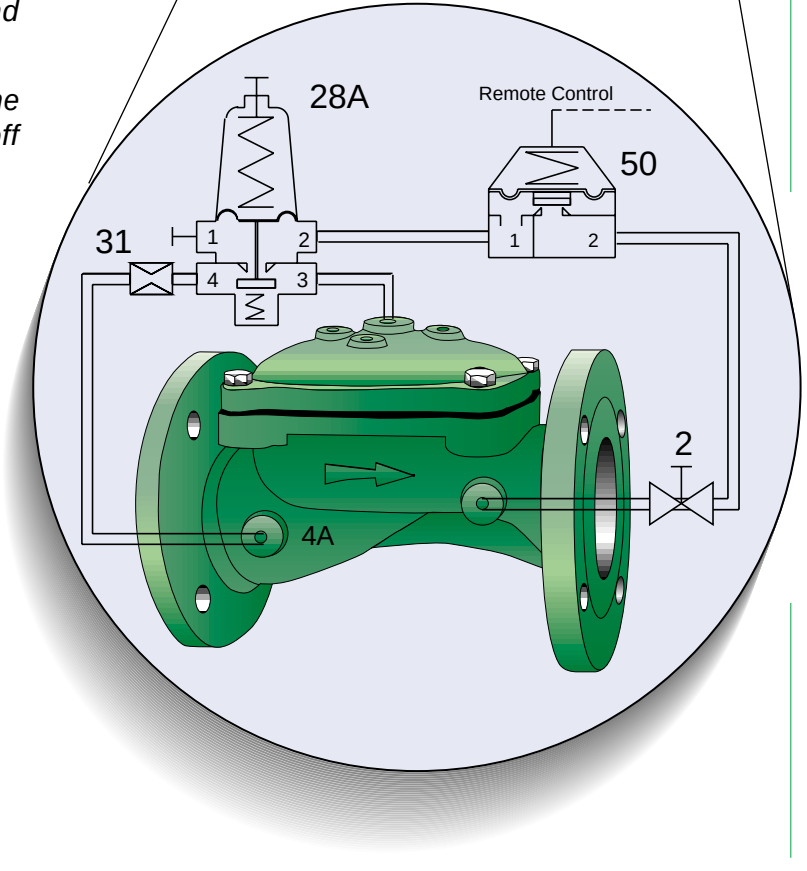
Model 420-50 Pressure-Reducing Valve is an automatic control valve designed to reduce a higher inlet pressure to a lower constant outlet pressure regardless of fluctuating flow rates and/or varying inlet pressure. It is a pilot-controlled, hydraulically operated-rated diaphragm-type globe or angle 405 valve.

The pressure-regulating pilot senses down-stream pressure and modulates open or close, causing the main valve to throttle, thus maintaining constant delivery pressure. The pressure-regulating pilot has an adjusting screw to preset the desired pressure. When down-stream pressure falls below the pilot setting, the pilot and main valve modulate open to increase pressure and maintain pilot setting.

When down-stream pressure rises above the pilot setting, the pilot and main valve throttle close to decrease pressure and maintain pilot setting.

A mini hydraulic valve is installed at the control loop to enable remote shut-off by an irrigation controller.





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
2	*Cock Valve*
28A	*2-way Pressure Reducing Pilot Valve*
50	*Hyd. Remote Control Valve*
20	*2-way Hyd. Pilot Valve*
31	*Control Orifice*

RAM 400 Series

Model 420-55-ZX

Pressure-Reducing w. Electric Shut-off Control & Manual Control Selector *(with 3W pilot valve PC-X-A)*

Description

Model 420-55 Pressure-Reducing Valve is an automatic control valve designed to reduce a higher inlet pressure to a lower constant outlet pressure regardless of fluctuating flow rates and/or varying inlet pressure. It is a pilot-controlled, operated diaphragm-type globe or angle 405 valve.

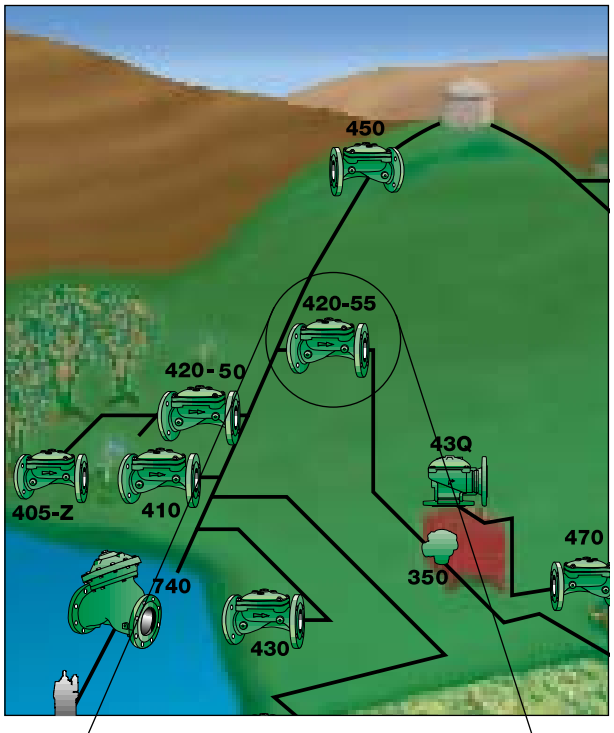
The pressure-regulating pilot senses down-stream pressure and modulates open or closed, causing the main valve to throttle, thus maintaining constant delivery pressure. The pressure-regulating pilot has an adjusting screw to preset the desired pressure,

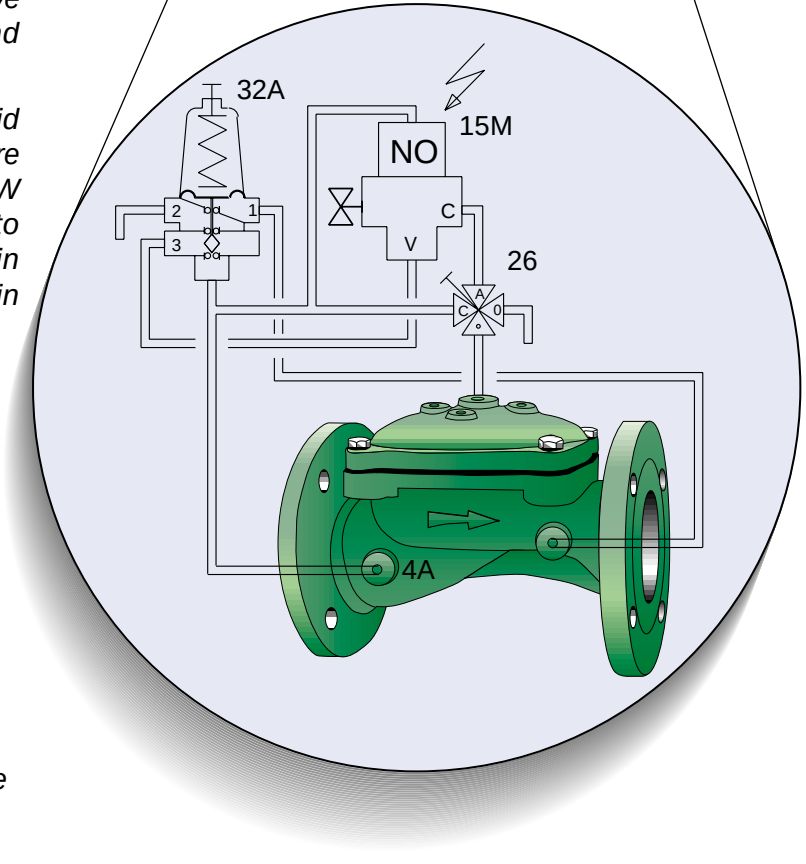
When down-stream pressure falls below the pilot setting, the pilot and main valve modulate open to increase pressure and maintain pilot setting.

When down-stream pressure rises above the pilot setting, the pilot and main valve throttle closed to decrease pressure and maintain pilot setting.

Electrical remote control via a solenoid valve intercepts normal pressure regulation for on/off control. The 3W pilot regulation enables the valve to open fully when pressure in the main system falls below set point. Available in two types:

Standard:	*N.C. (normally closed) energized to open*
Optional:	*N.O. (normally open) energized to close.*





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
26	*4-way Cock Valve*
15M	*3-way N.O. Sol. w. Manual Override*
32A	*3-way Positioning Pilot Valve*

M o d e l 4 2 3

Pressure-Reducing & Pressure-Sustaining Control Valve

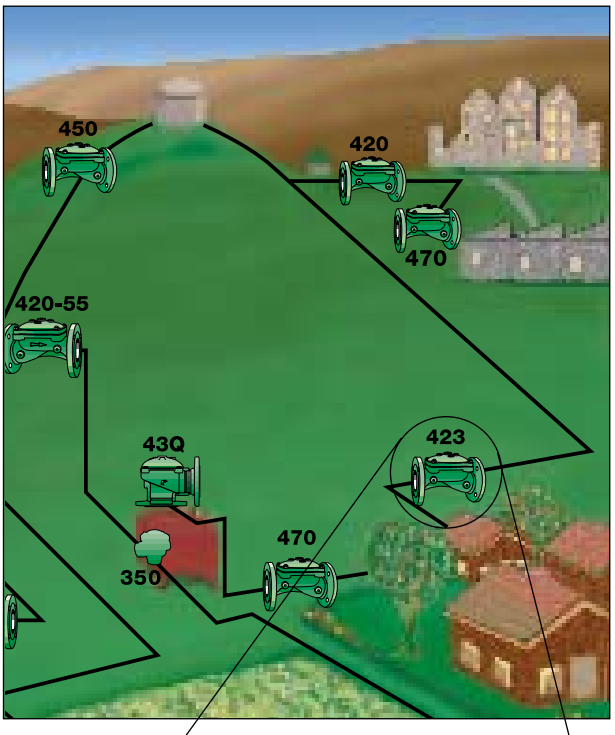
RAM 400 Series

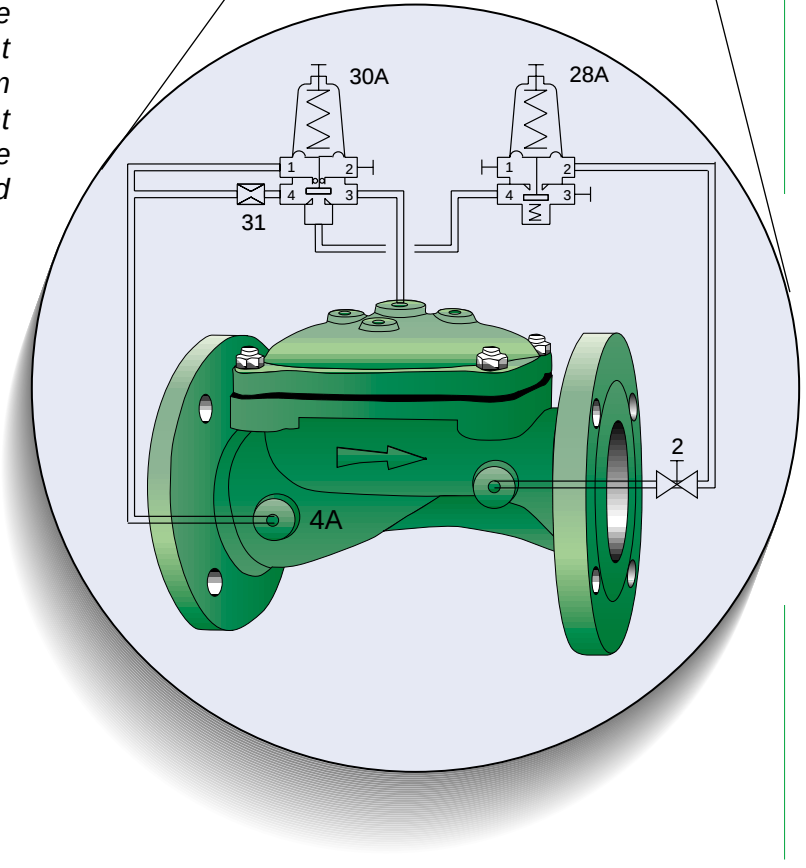
Description

Model 423 Pressure-Reducing & Pressure-Sustaining Valve is an automatic control valve designed to maintain constant preset minimum up-stream pressure, and to maintain a constant reduced system pressure regardless of changing system demand.

It is a pilot-controlled, hydraulically operated diaphragm type globe or angle 405 valve. The pressure-regulating pilot senses up-stream pressure and modulates open or closed, causing the main valve to throttle.

The pressure-regulating pilot has an adjusting screw to preset the desired pressure. When up-stream pressure rises above the sustaining pilot setting, the pilot and the main valve modulate to open to relieve main line pressure and maintain pilot setting pressure. When up-stream pressure falls below the pilot setting, pilot and main valve throttle closed to maintain the preset pilot setting pressure. When down-stream pressure rises above the reducing pilot setting, the pilot and main valve throttle closed to decrease pressure and maintain pilot setting.





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
2	*Cock Valve*
30A	*2-way Pressure-Sustaining Pilot*
28A	*2-way Pressure-Reducing Pilot Valve*
31	*Control Orifice*

M o d e l 4 3 0

Pressure-Sustaining Valve *(with 2W PC-30-A Pilot Valve)*

RAM 400 Series

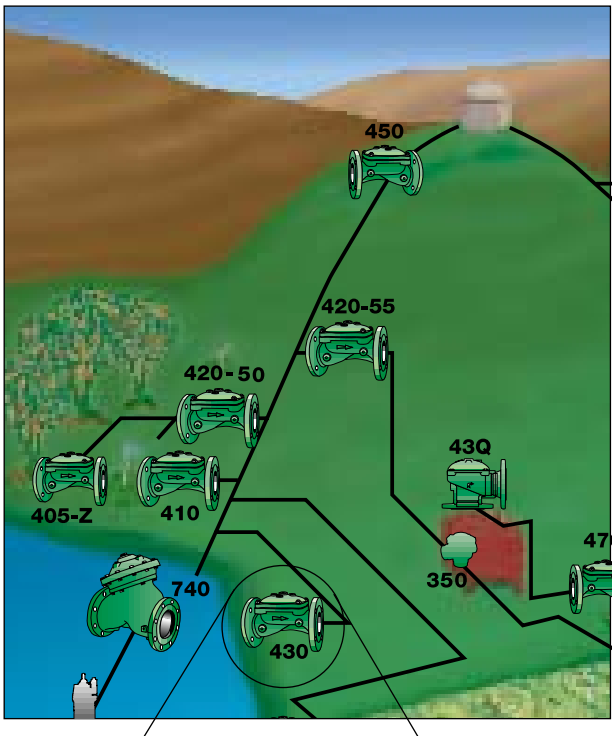
Description

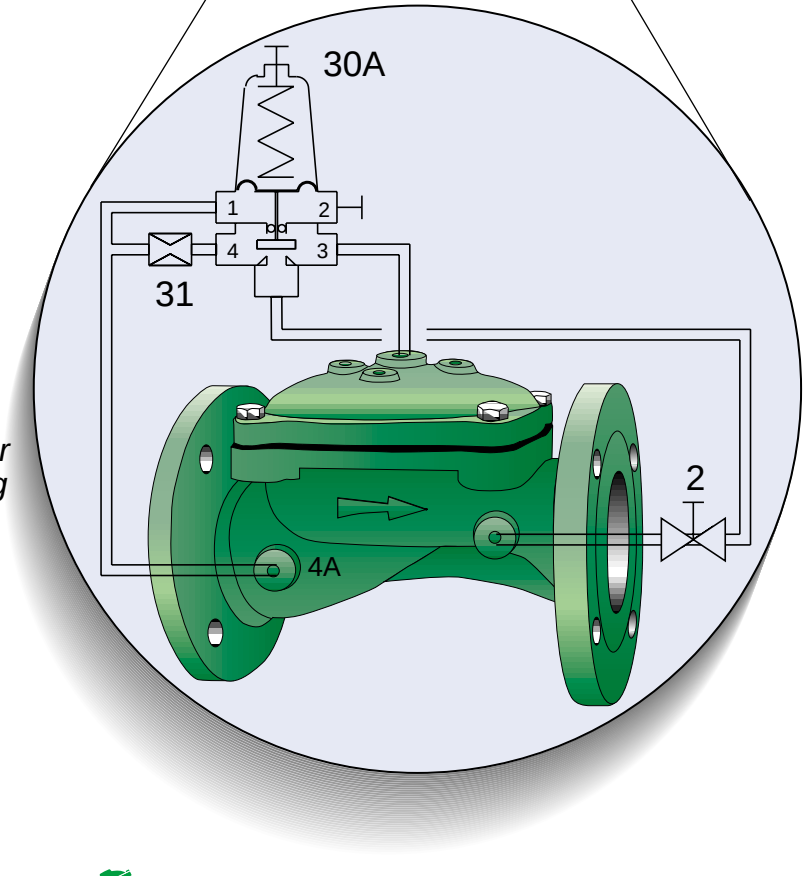
Model 430 Pressure-Sustaining valve is an automatic control valve designed to relieve excess pressure or sustain a minimum up-stream back-pressure. It is a pilot-controlled, hydraulically operated diaphragm-type globe or angle 405 valve.

The pressure-regulating pilot senses up-stream pressure and modulates open or close, causing the main valve to throttle. The pressure-regulating pilot has an adjusting screw to preset the desired pressure. When up-stream pressure rises above the pilot setting, the pilot and the main valve modulate to open to relieve main line pressure and maintain pilot setting pressure.

When up-stream pressure falls below the pilot setting, pilot and main valve throttle closed to maintain the preset pilot setting pressure.

- *Sizes 2"-4".*
- *Pressure setting range: 0.5 to 12 bar.*





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
30A	*2-way Pressure-Sustaining Relief Pilot Valve*
31	*Control Orifice*
2	*Cock Valve*

M o d e l 4 3 0

Pressure-Sustaining Control Valve *(with 2W #3 Pilot Valve)*

RAM 400 Series

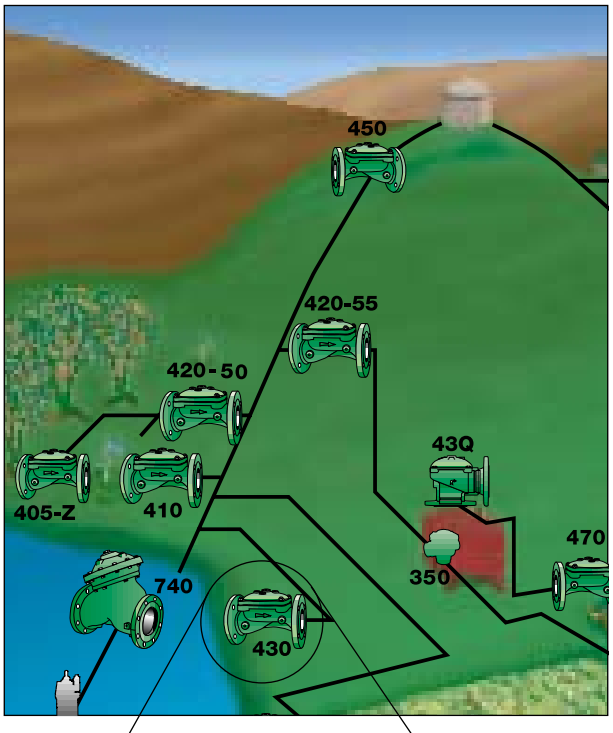
Description

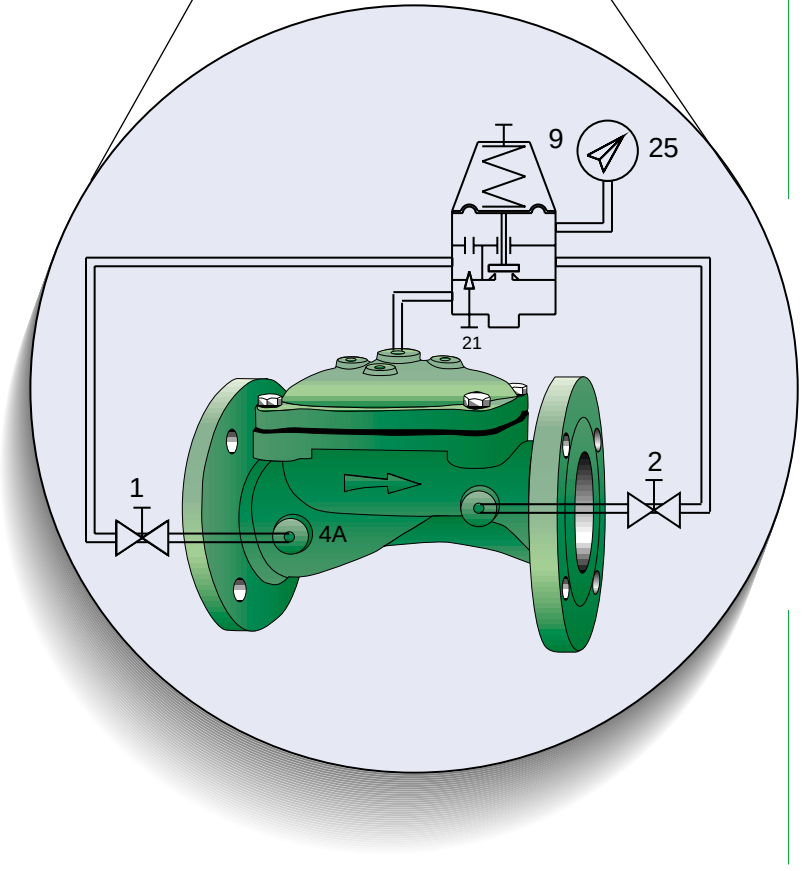
Model 430 Pressure-Sustaining valve is an automatic control valve designed to relieve excess pressure or sustain a minimum up-stream back-pressure. It is a pilot-controlled, hydraulically operated diaphragm-type globe or angle 405 valve.

The pressure-regulating pilot senses up-stream pressure and modulates open or closed, causing the main valve to throttle. The pressure-regulating pilot has an adjusting screw to preset the desired pressure. When up-stream pressure rises above the pilot setting, the pilot and the main valve modulate to open to relieve main line pressure and maintain pilot setting pressure.

When up-stream pressure falls below the pilot setting, pilot and main valve throttle closed to maintain the preset pilot setting pressure.

- *Sizes 6”-10”.*
- *Pressure setting range: 0.5 to 16 bar.*





Control list

400-G	*RAM 400-Globe*
9	*2-way Pressure-Sustaining/ Relief Pilot Valve #3*
21	*Needle Valve*
4A	*In-Line Self Flushing Filter*
1	*Cock Valve*
2	*Cock Valve*
25	*Pressure Gauge*

RAM 400 Series

M o d e l 4 3 0 - Z X

Pressure-Sustaining Control Valve

(with 3W PC-X-A Pilot)

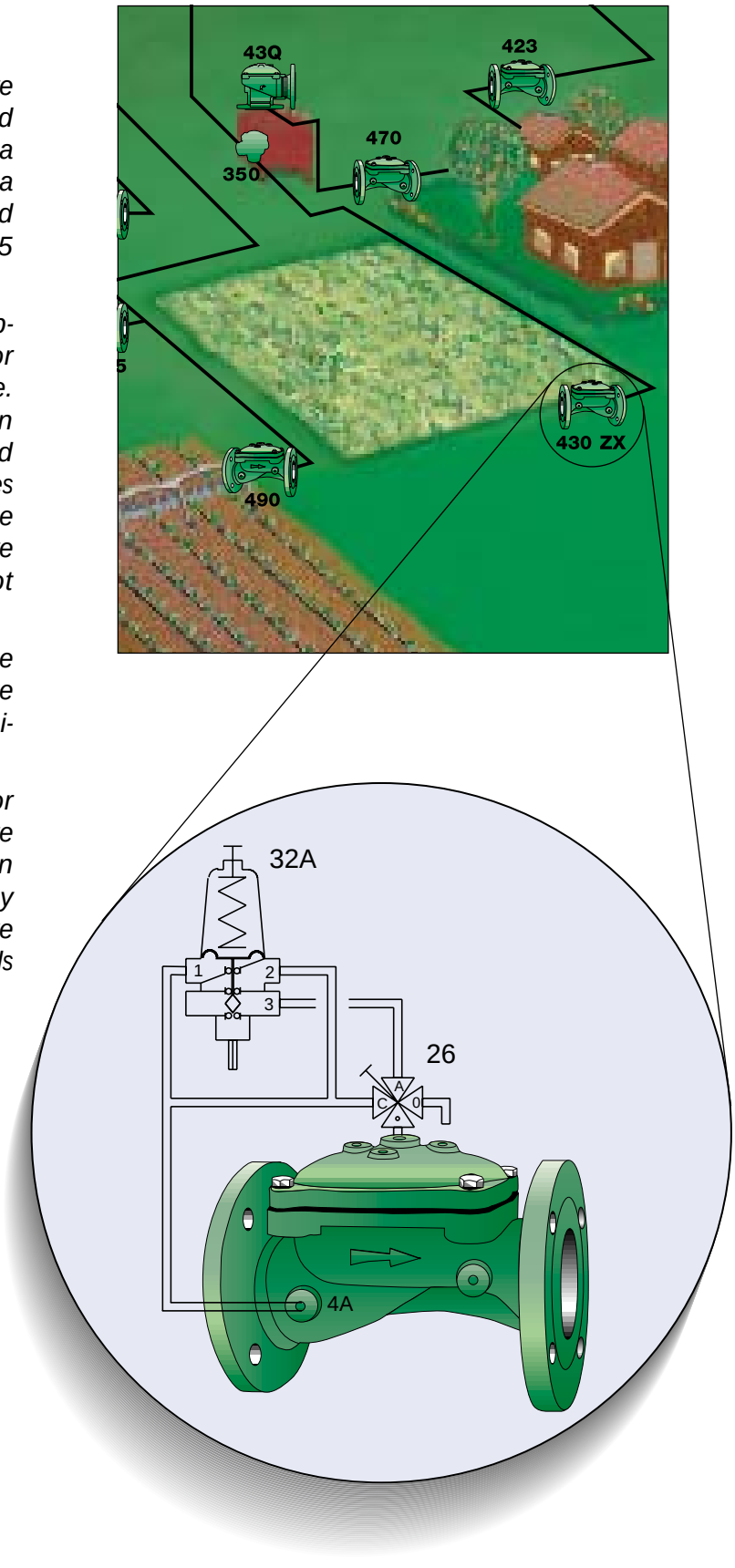
Description

Model 430-zx Pressure-Sustaining valve is an automatic control valve designed to relieve excess pressure or sustain a minimum up-stream back-pressure. It is a pilot-controlled, hydraulically operated diaphragm-type globe or angle 405 valve.

The pressure-regulating pilot senses up-stream pressure and modulates open or close, causing the main valve to throttle. The pressure-regulating pilot has an adjusting screw to preset the desired pressure. When up-stream pressure rises above the pilot setting, the pilot and the main valve modulate to open to relieve main line pressure and maintain pilot setting pressure.

When up-stream pressure falls below the pilot setting, pilot and main valve throttle close to maintain the preset pilot setting pressure.

Model 430-zx is specifically designed for sustaining pressure in low pressure zones. The 3w pilot can be fully open most of the time without causing any extra head loss to the system. The valve is activated only when pressure falls below the set point.



Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
32A	*3-way Positioning Pilot Valve*
26	*4-way Cock Valve*

CONTROL VALVES BERMAD

M o d e l 4 3 0 – 5 5 - Z X

Pressure-Sustaining Valve w. Electric Control

RAM 400 Series

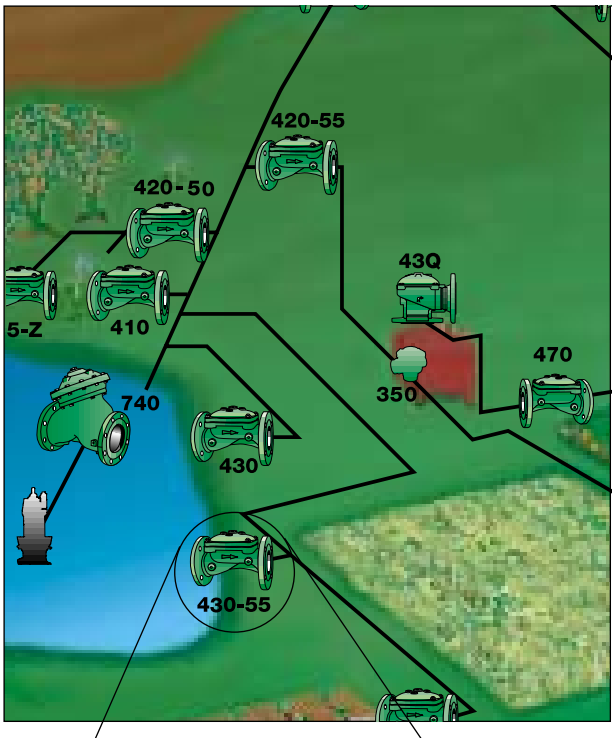
Description

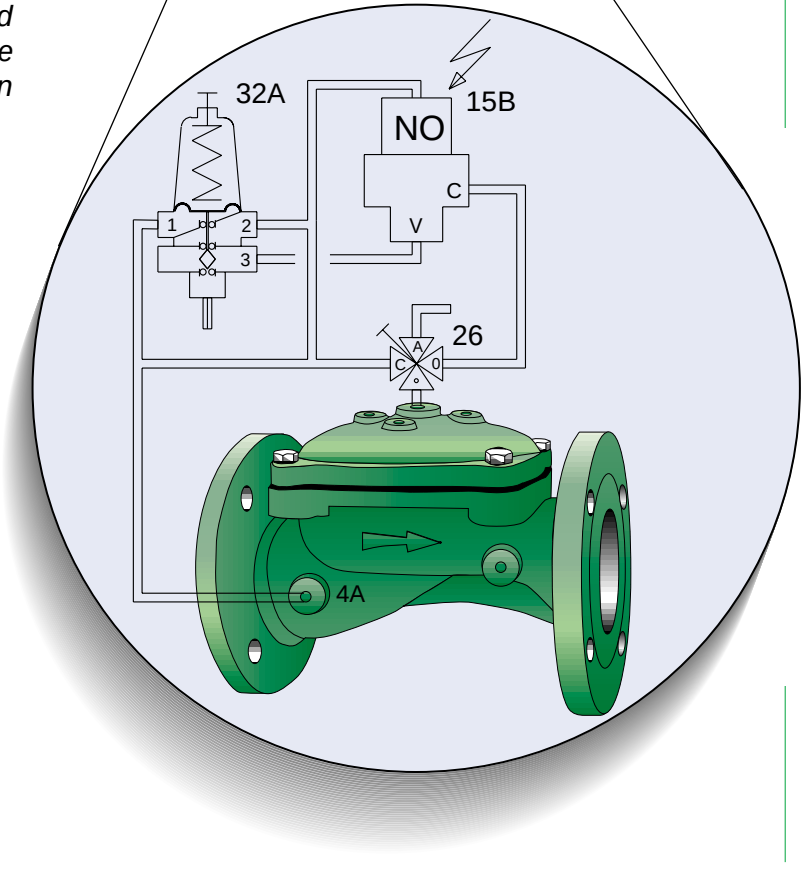
Model 430-55 Pressure-Sustaining Valve is an automatic control valve designed to relieve excess pressure or sustain a minimum up-stream back-pressure. It is a pilot-controlled, hydraulically operated diaphragm-type globe or angle 405 valve. The pressure-regulating pilot senses up-stream pressure and modulates open or close, causing the main valve to throttle.

The pressure-regulating pilot has an adjusting screw to preset the desired pressure. When up-stream pressure rises above the pilot setting, the pilot and the main valve modulate to open to relieve main line pressure and maintain pilot setting pressure. When up-stream pressure falls below the pilot setting, pilot and main valve throttle closed to maintain the preset pilot setting pressure.

Electrical remote control via a solenoid valve intercepts normal pressure regulation for on/off control. Available in two types:

Standard:	*N.C. (normally closed) energized to open*
Optional:	*N.O. (normally open) energized to close.*





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
26	*4-way Cock Valve*
32A	*3-way Positioning Pilot Valve*
15B	*3-Way N.O.BERMAD Sol. Pilot Valve*

RAM 400 Series

M o d e l 4 3 Q

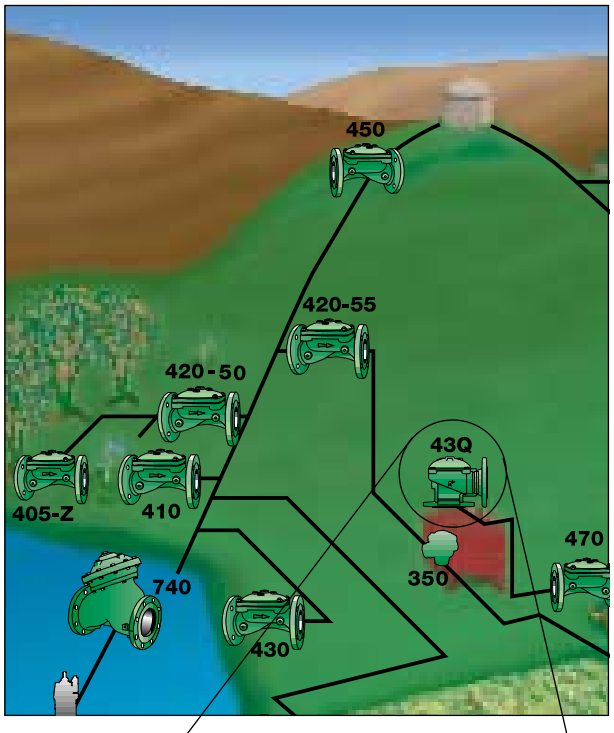
Pressure Relief Valve (Quick Action Type)

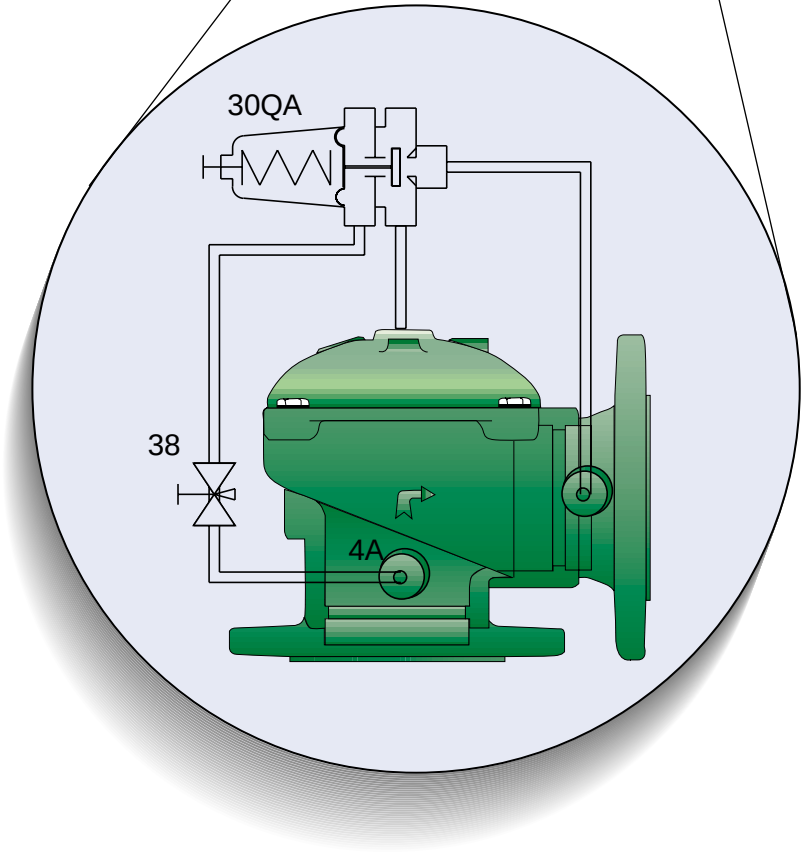
Description

Model 43Q Quick Pressure Relief Valve is an automatic control valve specially designed to provide a solution to the typical problems associated with springload relief valves when constant drifting of relief adjustment occurs.

The valve comprises: accurate relief pressure setting that remains constant, opening to full capacity on minimum pressure rise in the pipe line; regulated rate of closure providing smooth closure without causing pressure surges.

- *Used in sizes 2”-4”.*
- *Pressure setting up to 12 bars.*





Control list

400-A	*RAM 400-Angle*
4A	*In line, Self Flushing Filter*
30QA	*Quick Pressure, Relief Pilot metal)*
38	*Cock Valve, w/ vent*

M o d e l 4 5 0 - 6 0

Reservoir Float Control Valve (Modulating Type)

RAM 400 Series

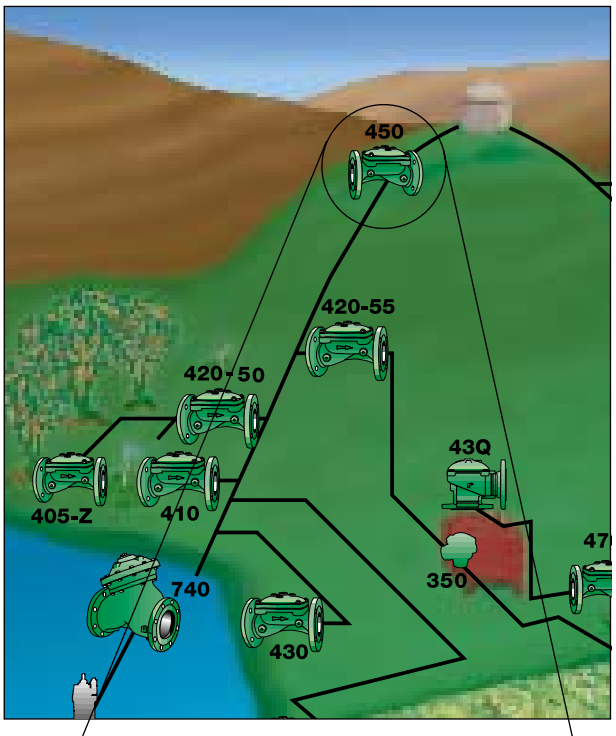
Description

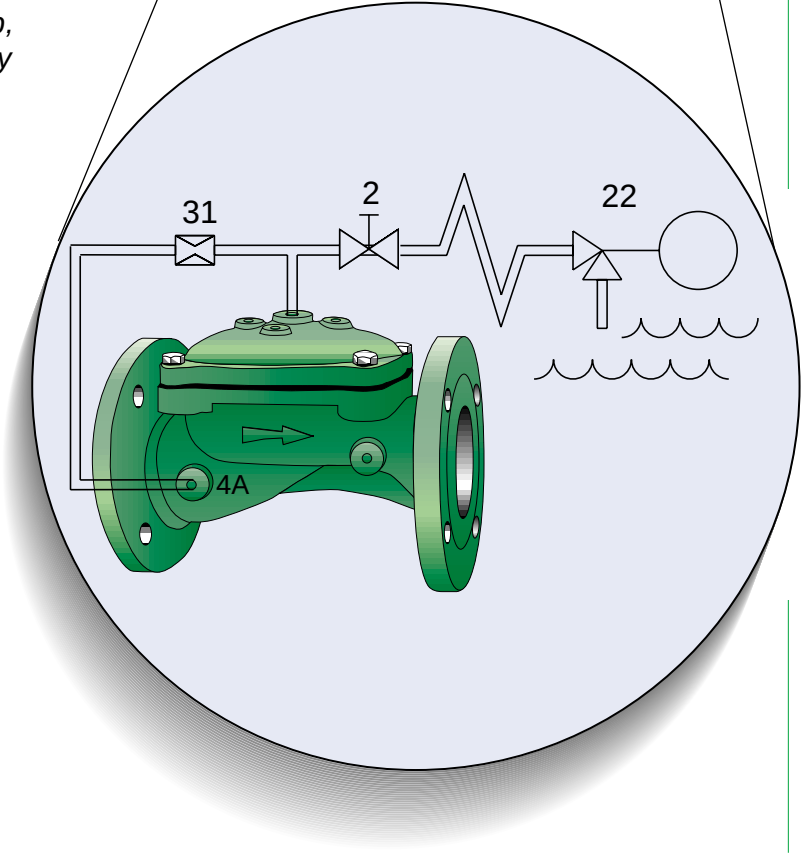
Model 450-60 Reservoir Valve is an automatic control valve designed to fill reservoirs or tanks and to shut off when the water reaches a predetermined level. The valve opening will modulate, adjusting the fill rate to a discharge flow while maintaining a constant upper level in the reservoir.

An upper control chamber, operating on a two way control principle, has varying pressure produced by pilot modulation and opens in conjunction with an upstream restriction needle valve.

If the water rises to a predetermined level, float action will tend to close the pilot valve, and the main valve modulates to close. When water level drops below set point, the float will drop, following the water level, releasing water pressure from the control chamber to open the main valve.

Since the control loop is a 2-way loop, the valve will modulate constantly trying to keep the tank level stable.





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
2	*Cock Valve*
31	*Control Orifice*
22	*2-way Float Pilot Valve #60*

Model 450-66

Two-Level Reservoir Control Valve (On-Off type)

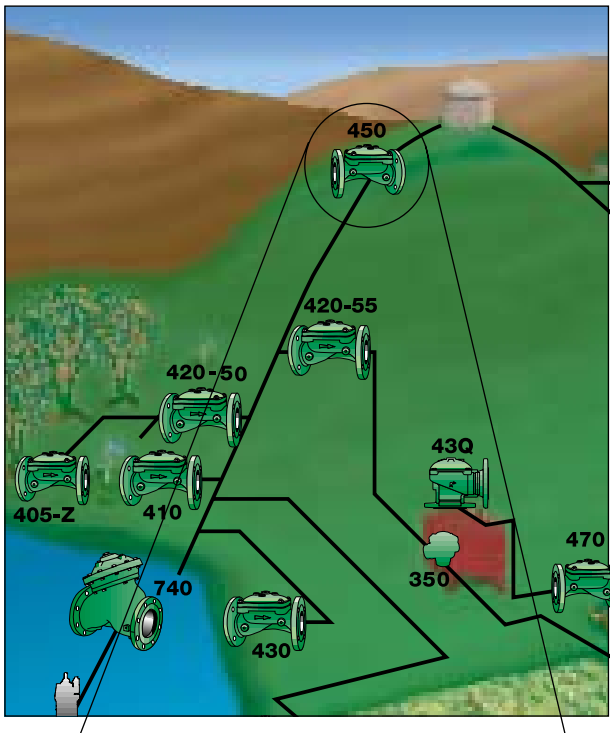
RAM 400 Series

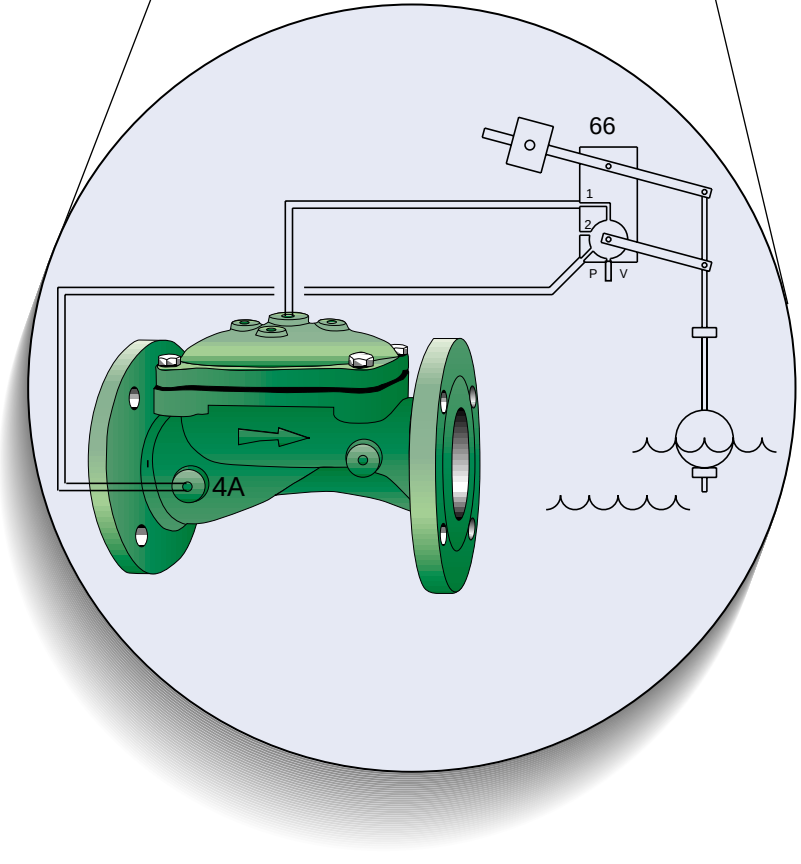
Description

Model 450-66 Two-Level Reservoir Control Valve is an automatic control valve designed for two-level control of the water level in reservoirs and tanks. Full valve opening reduces head loss to a minimum, prevents abrasion and reduces cavitation damage.

The valve can be operated via an independent external pressure source when line pressure is very low, or when the water/liquid is very dirty or highly corrosive. When water level rises to the set point, the float mechanism will be lifted by the water and it will reach the set point limit, change position of the pilot valve, and valve will close.

When water level falls, the float will follow the water level. It will change position only when it reaches the lower level limit. The pilot then changes position and valve will open.





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
66	*4-way Two Level Float Pilot Valve*

M o d e l 4 5 0 - 6 7

Modulating Type, Vertical Float Mechanism

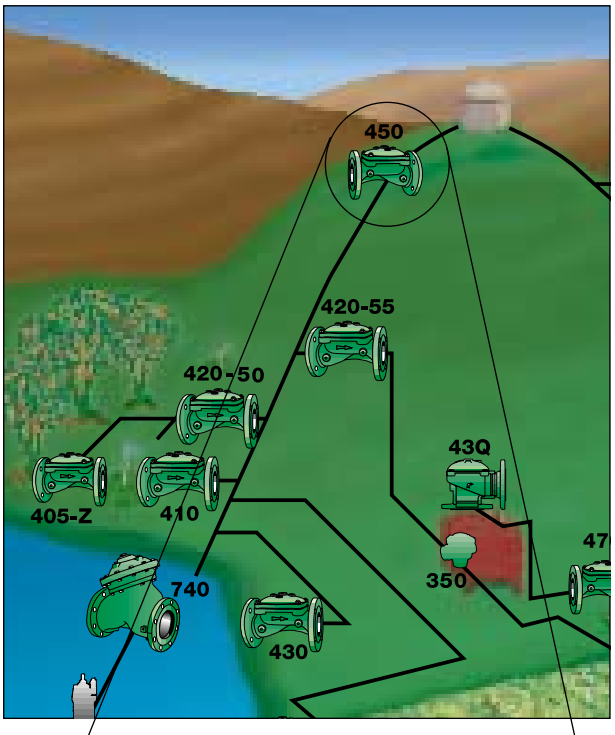
RAM 400 Series

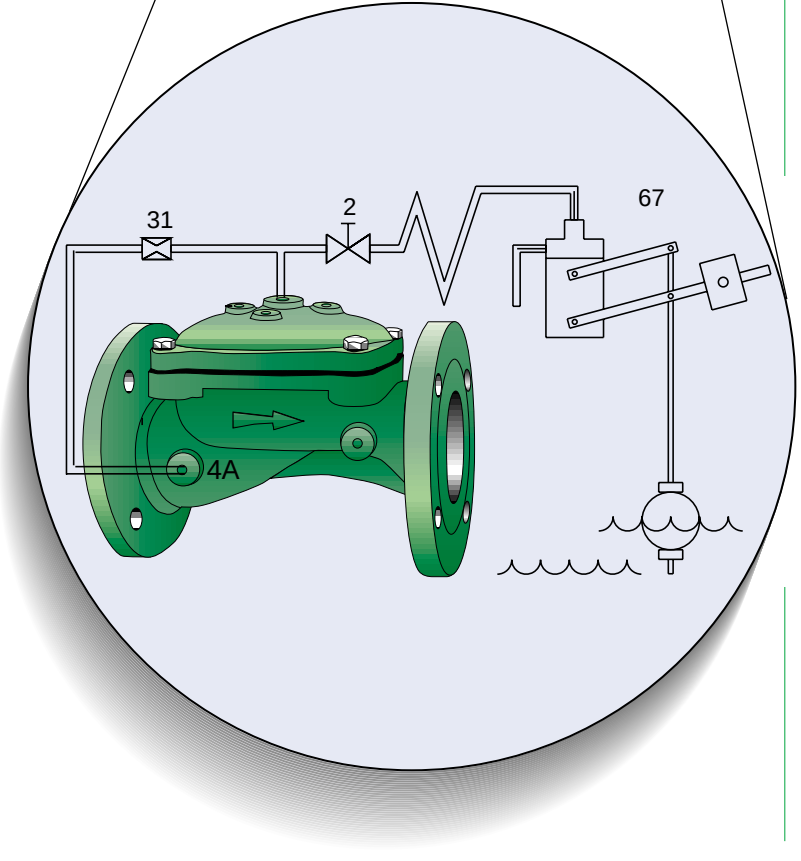
Description

Model 450-67 Modulating Float valve is an automatic control valve designed to maintain a constant level in a reservoir or storage tank by controlling the supply flow into the reservoir/storage tank or (in special applications) the demand flow (discharge) from the reservoir or storage tank.

The float pilot is a 2-way pilot driven by the float mechanism and the water level.

When water level falls the float will react by dropping with the water level, and the main valve opens to supply the used volume back into the tank.





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
67	*2-way Float Pilot Valve, Vertical*
2	*Cock Valve*
31	*Control Orifice*

M o d e l 4 7 0 – U

Flow Control Valve Orifice Plate Type *(2-way control)*

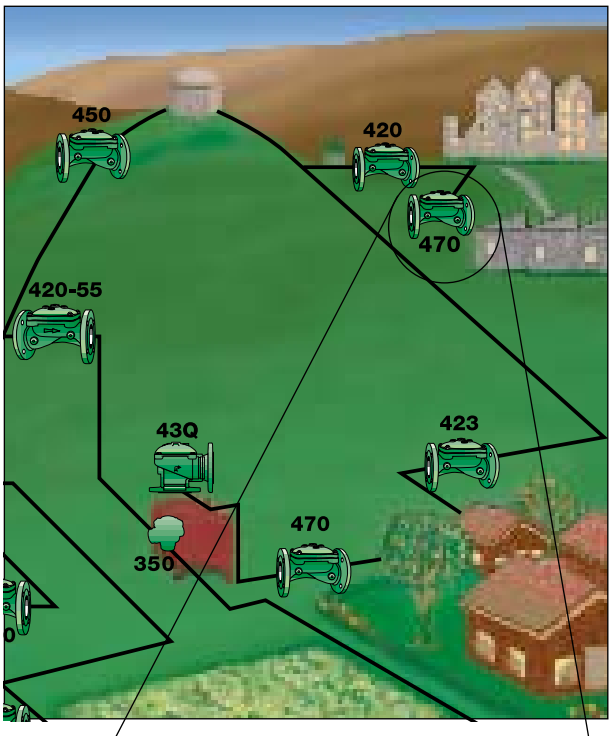
RAM 400 Series

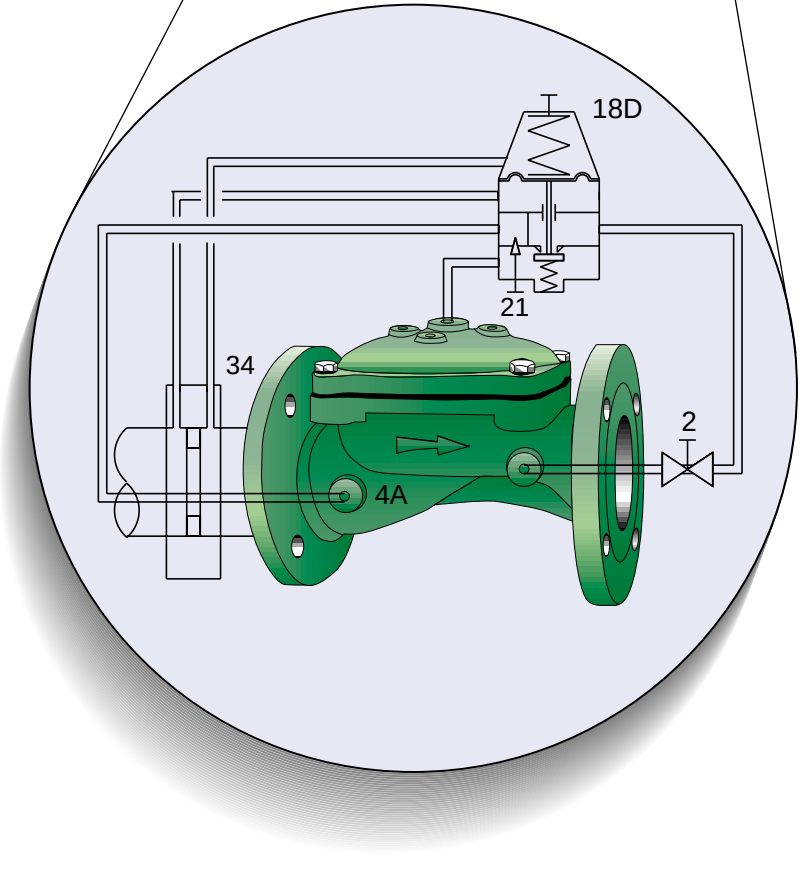
Description

Model 470-U-2W Flow Rate Valve is an automatic control valve designed to maintain a constant preset flow rate, regardless of changing system pressure and demand. A valve pressure differential powers the diaphragm to operate the valve.

The valve operates on a two-way control principle. If flow rate exceeds the pilot setting, the increased orifice differential pressure will signal the pilot to command the main valve to throttle.

- *Valve is used in sizes 6-10”*





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
18D	*Differential Pressure-Reducing Pilot Valve #2D*
34	*Orifice Plate*
2	*Cock Valve*
21	*Needle Valve (Integral)*

M o d e l 4 7 0 - X U

Flow Control Valve Orifice Plate Type *(3-Way Control)*

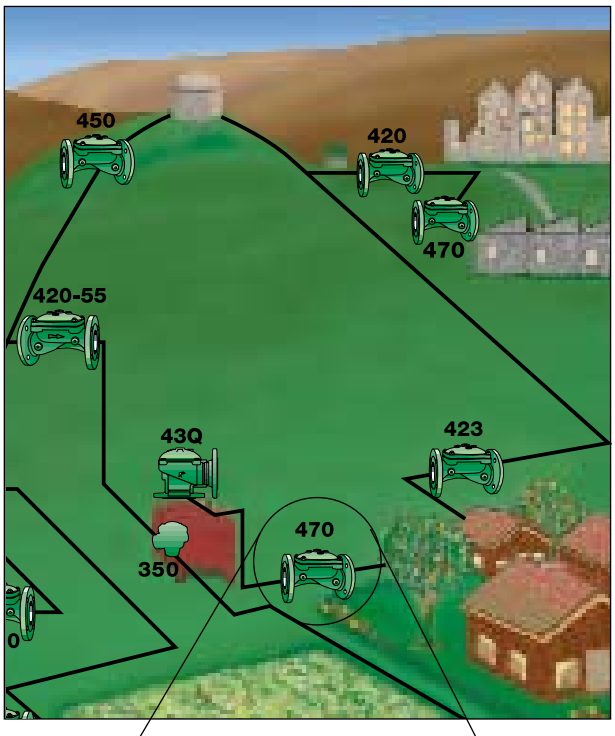
RAM 400 Series

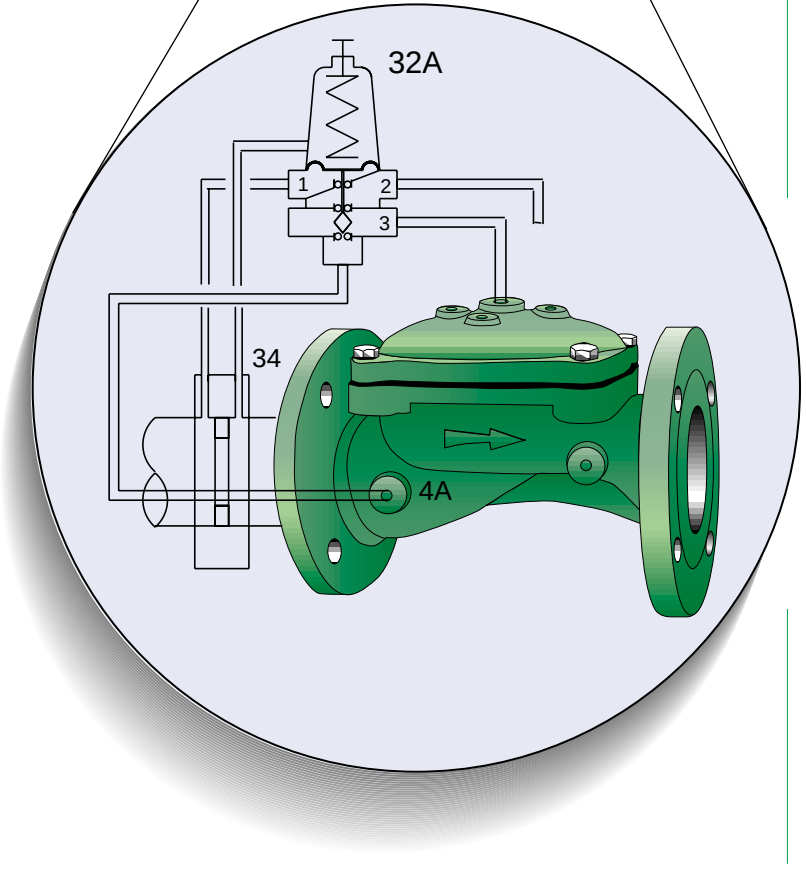
Description

Model 470-XU Flow Rate valve is an automatic control valve, designed to maintain a constant preset backflushing flow at gravel filter systems.

The valve operates on a 3-way control principle. It maintains preset flow rate regardless of changing system up-stream pressure. If flow rate exceeds the mini pilot setting, the increased orifice differential pressure will signal the mini pilot to order the valve to throttle.

- *Valve is used in sizes 2”-4”.*
- *Orifice is usually built in the main valve inlet side.*





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
32A	*3-way Positioning Pilot Valve Differential*
34	*Orifice Plate*

M o d e l 4 7 0 - J Z

Flow Control Paddle Type *(3-Way Control)*

RAM 400 Series

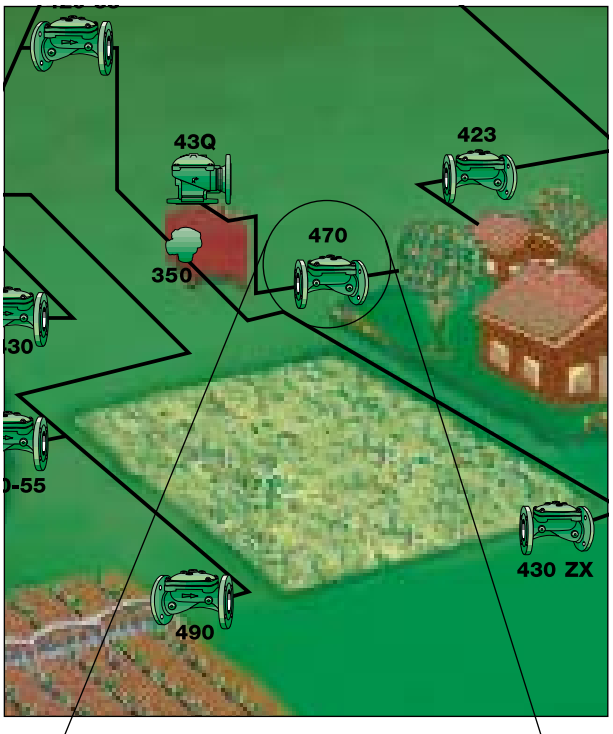
Description

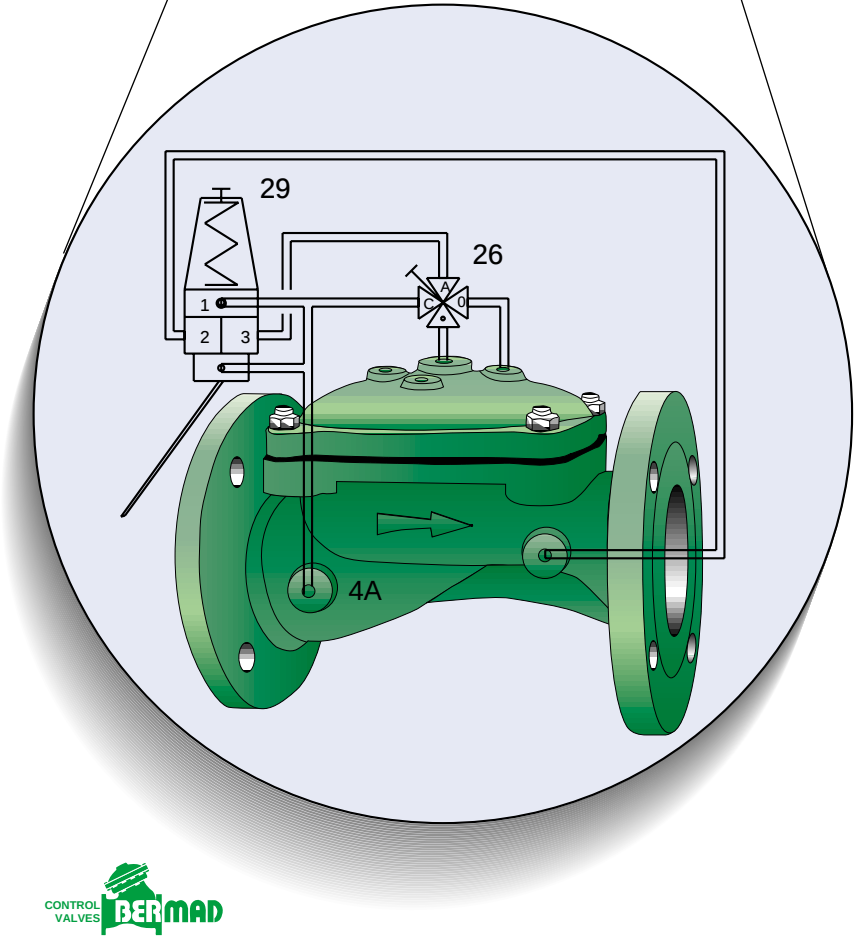
Model 470-JZ-3W Flow Rate Valve is an automatic control valve, designed to maintain a constant preset flow rate, regardless of changing system pressure and demand. A valve pressure differential powers the diaphragm to operate the valve.

The valve operates on a 3-way control principle. If flow rate exceeds the pilot setting, the increased flow will power the paddle in the stream line. Paddle movement will operate the pilot to command the main valve to throttle.

When flow decreases, the pilot valve and paddle will come to a halt and the pilot will signal the valve to open the flow rate setting.

A 3-way Ball Valve Selector is added to the valve, providing the valve with the option of closing or opening manually.





Control list

400-G	*RAM 400-Globe*
26	*4-way Cock Valve*
4A	*In Line, Self Washing Filter*
29	*Flow, Mini Pilot Valve, Paddle type*

CONTROL VALVES BERMAD

Anti Burst Control Valve

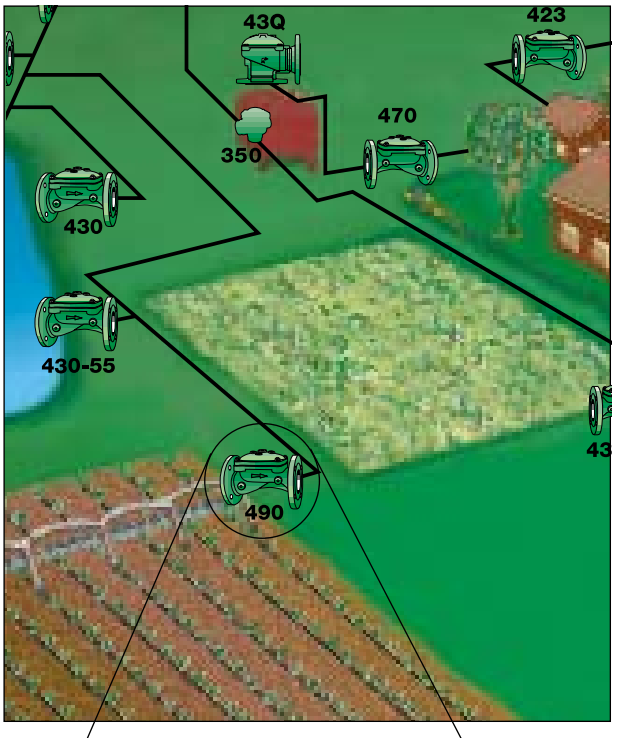
RAM 400 Series

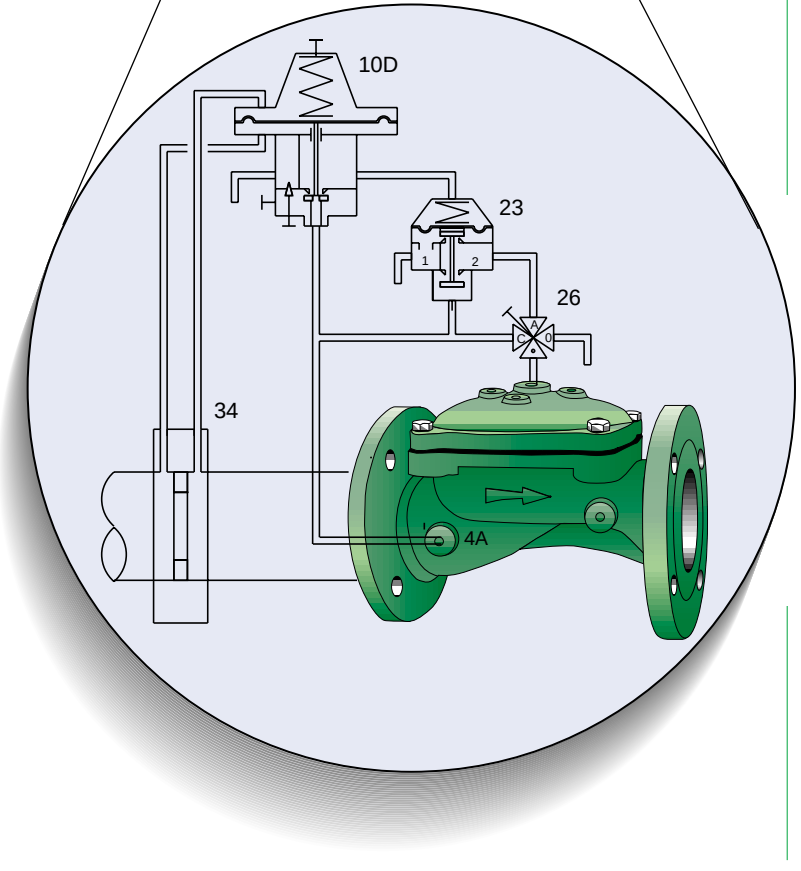
Description

Model 490-UZ Anti Burst (excessive flow) Control Valve, designed to automatically shut off water supply if the flow demand exceeds preset point. The valve operates on a 3-way control principle and installed with an upstream orifice device.

If flow rate exceeds the pilot setting (usually caused by burst pipe), the increased orifice differential pressure will signal the pilot to command the main valve to close and "lock". Reopening the valve requires manual resetting.

- *The valve is usually used as a safety device in long water lines.*





Control list

400-G	*RAM 400-Globe*
4A	*In line, Self Flushing Filter*
10D	*3-way Positioning Pilot Valve #X Differential*
34	*Orifice Plate*
23	*3-way Hyd. Remote Control Valve*
26	*4-way Cock Valve*

RAM 400 Series

PC-X-A
Multi-Purpose Pilot Valve

This 3-way Pressure-Sensing Pilot Valve has been designed to control hydraulically operated control valves. The PC-X-A Pilot Valve is characterized by exceptional control versatility: by changing control ports, the same Pilot Valve will convert a hydraulic valve into a pressure-reducing or pressure-sustaining/relief control valve.Using a PC-X-A Pilot Valve which vents to the atmosphere for pressure regulation has the advantage of fully opening the main valve when operating conditions call for minimum pressure loss. The PC-X-A Pilot Valve can also be used as a hydraulic relay remote signal from the operating pressure in the local valve, thus overcoming difficult topographic and hydraulic remote control conditions.

PC-20-A Pressure-Reducing Pilot Valve

This 2-way Pressure-Reducing Pilot Valve modulates the opening of the hydraulic control valve for reducing high supply pressure to a lower, constant down-stream pressure, regardless of changing operation conditions. The PC-20-A Pressure-Reducing Pilot Valve is typically employed in BERMAD's Pressure-Reducing control valves with 2-way modulating control loops.

PC-30-A Pressure-Sustaining/Relief Pilot Valve

This 2-way Pressure Relief Pilot Valve modulates the opening of the hydraulic control valve for relieving excessive pipeline pressure or for sustaining a constant, preset up-stream pressure, regardless of changing operation conditions. The PC-30-A Pressure Relief Pilot Valve is typically employed in BERMAD's pressure relief ("quick" type) and Pressure-Sustaining control valves with 2-way modulating control loops.

A c c e s s o r i e s

RAM 400 Series

Solenoid Pilot Valve (3-way type)

S-390-3 Pilot Valve consists of the above solenoid actuators mounted on pilot valve bodies with manual override. These solenoid Pilot Valves are designed for installation in the control loop of hydraulic control valves.

Solenoid Pilot Valve ASCO Type

For industrial or heavy-duty application, the ASCO solenoid is recommended.

In-line Control filter

For filtration of command system water. Self-cleaning by water flow in the pipe. Materials:

Body: plastic/brass
Screen: stainless steel
Sizes: 1/4", 3/8" NPT

Large Control Filter

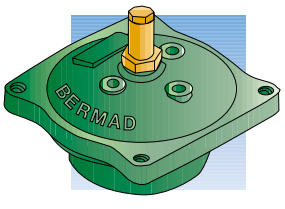
Can be added to any valve for high contamination of water supplied to the control loop

Three-Position Selector

This three-position selector with four ports has been designed for the selection of hydraulic control modes (open, closed or automatic control). It enables manual override for opening or closing the main control valve.

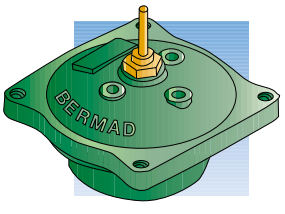
Valve Flow Stem

An additional feature that can be ordered with the valve. For limiting flow under normal operation, or manual closing under no pressure.



Valve Position Indicator

An additional feature that can be ordered with the valve. For visual inspection of valve operating position.



CONTROL VALVES BERMAD

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English

PC4XE01 - ver 10/01