400 Series "RAM" – Brass Body

HYDRAULIC DIAPHRAGM CONTROL VALVES

Bermad Control Valve, Model 405
Designed for public gardening and industrial applications.
These brass body valves may be installed in any system for protection against breakage or vandalism.

Bermad Control Valve, Model 405
It is a simple and reliable valve, lightweight and of easy maintenance. Constructed of 4 parts only.

Bermad Control Valve, Model 405
Characterized by its soft opening and closing which prevent pressure surges along the line, even under high differential pressure. The valve is equipped with a special diaphragm (patented) which is supported along its entire circumference.

Bermad Control Valve, Model 405
May be electrically operated by a solenoid mounted directly on the valve, or by a hydraulic command from a remote solenoid manifold.

Most Common Models:
405-Z Hydraulic with a manual selector
410-Z Electrical with a manual selector

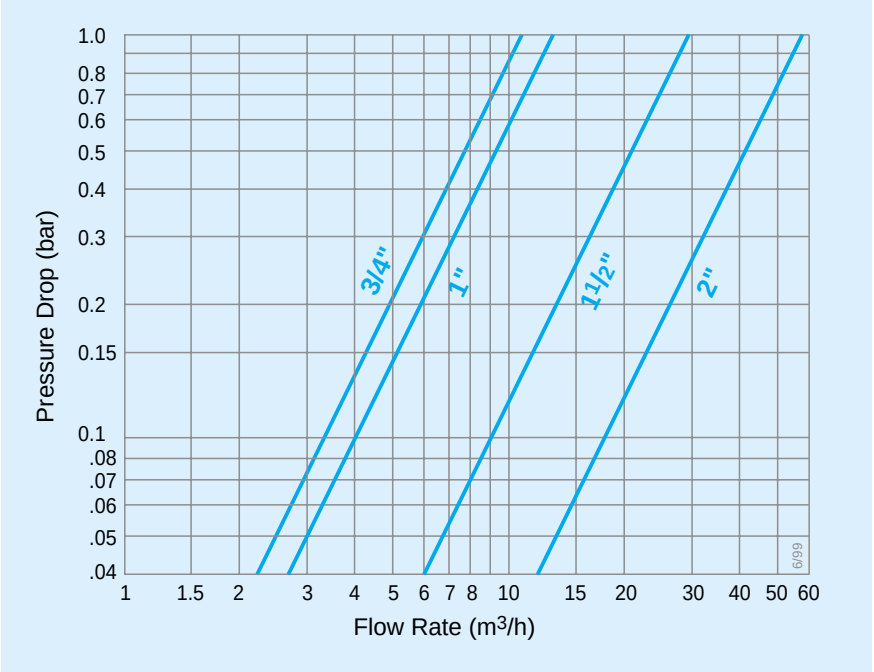


TECHNICAL DATA

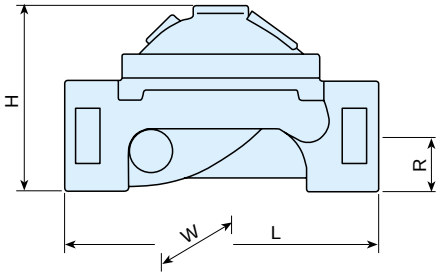
Specifications

- **Valve Pattern:** Globe
- **Sizes:** 3/4", 1", 1 1/2" & 2"
- **End Connections:**
  Threaded Female BSP, NPT
- **Pressure Rating:**
  ISO PN 10
  ANSI: Class 125
- **Operating Pressure Range:**
  0.5-10 bar (7-150 psi)
- **Temperature Range:**
  (water) up to 80°C

Flow Chart

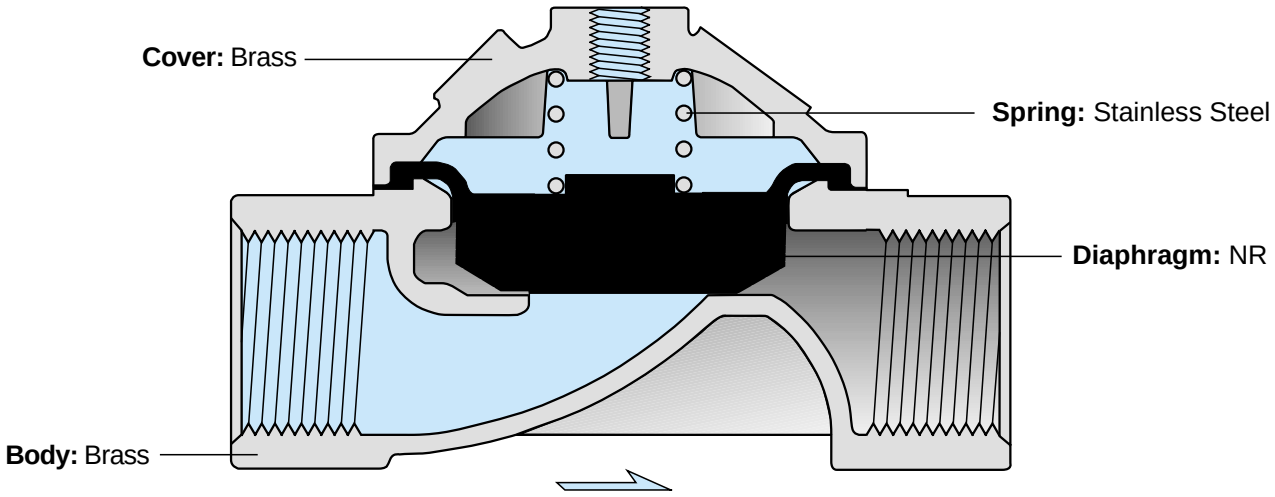


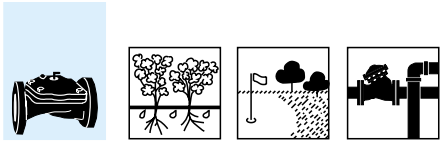
Dimensions and Weights



Size (mm)	3/4"	1"	1 1/2"	2"
L	112	112	150	180
H	67.5	67.5	83	110
R	20	20	27.5	38
W	72	72	90	120
Weight (kg)	0.950	0.950	1.5	4.0

VALVE ASSEMBLY AND MATERIALS





CONTROL VALVES BERMAD

400 Series "RAM"

HYDRAULIC DIAPHRAGM CONTROL VALVES

Internationally Patented and Designed Registered

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 other single-chambered valves. The valves have been designed for the control of all kinds of irrigation, waterworks and industrial systems.

FEATURES

Diaphragm

- One single type for all service conditions: On/Off and pressure regulating.
- Exceptionally stable action during shutoff and pressure regulation. Absolutely no pressure surges.
- Valve opens with low pressure supply.
- Perfectly balanced diaphragm with no distortion caused by uneven hydraulic forces on shutoff or during regulation.
- No need for special reinforcement nor for different types of diaphragms and springs to meet different operating conditions.

Valve body

- Exceptionally high flow capacity with very low head loss.

Cover

- Connected to the valve body by 4 bolts only (12”: 8 bolts).
- Enables easy access and easy maintenance.
- Optional: flow control stem or valve position indicator.

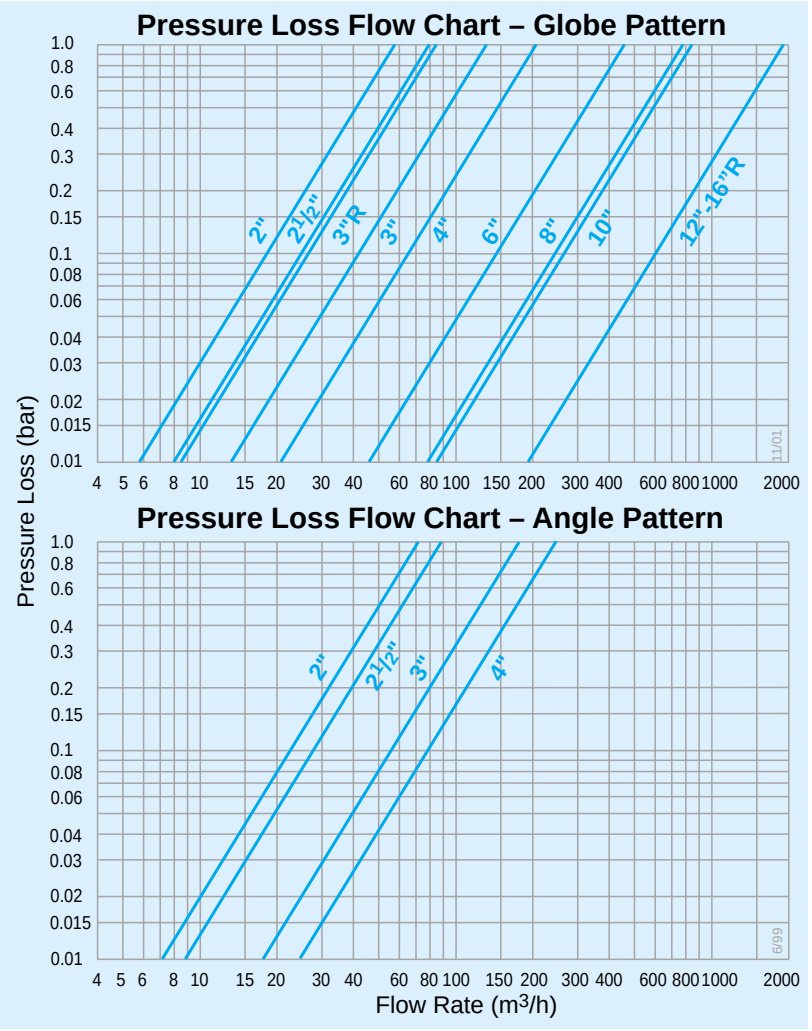




TECHNICAL DATA

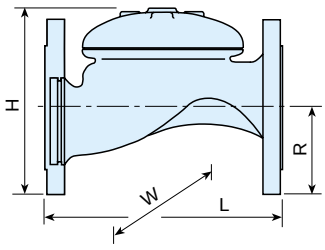
Specifications

- **Valve Pattern:** globe & angle
- **Sizes:**
  Globe: 2", 2½", 3"R, 3", 4", 6", 8", 10", 12" & 16"R
  Angle: 2", 2½", 3" & 4"
- **End Connections:**
  – **Female threaded** BSP, NPT
  Globe - 2", 2½", 3"R & 3"
  Angle - 2", 2½" & 3"
  – **Grooved (Victaulic):**
  Globe - 2", 3", 4" & 6"
  Angle - 3" & 4"
  – **Flanged:** ISO PN 16, ANSI 125, BST-D,
  Globe: 2", 2½", 3"R, 3", 4", 6", 8", 10", 12" & 16"R
  Angle: 2", 3" & 4"
- **Operating Pressure Range:**
  0.5-16 bar (7-230 psi)
- **Temperature Range:**
  Water up to 80°C (180°F)
- **Materials:**
  Body and cover: Cast Iron, Polyester or Epoxy-coated
  Diaphragm: Nylon-fabric, Reinforced Natural Rubber. Options: Nitrile; Buna-N; EPDM
  Diaphragm retainer: Stainless steel
  Spring: Stainless steel
  (Other materials and coatings available on request).



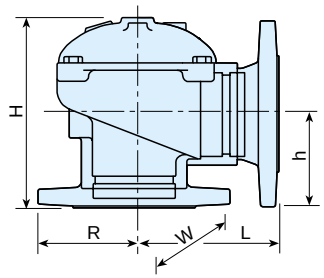
Dimensions and Weights

Globe Pattern



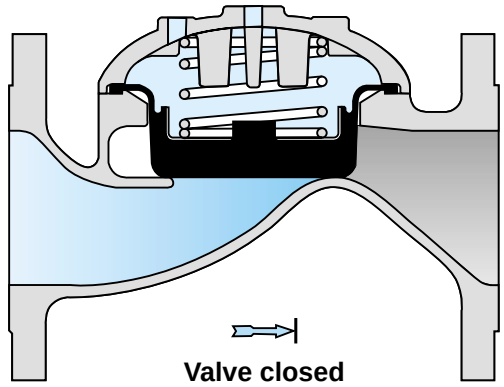
	Threaded				Grooved (Victaulic)				Flanged									
Size (mm)	**2"**	**2½"**	**3R"**	**3"**	**2"**	**3"**	**4"**	**6"**	**2"**	**2½"**	**3R"**	**3"**	**4"**	**6"**	**8"**	**10"**	**12"**	**16"R**
L	180	210	210	255	205	250	320	415	205	205	210	250	320	415	500	605	724	742
H	111	133	140	160	106	156	190	404	155	178	187	210	242	345	430	460	635	695
Hf*	205	226	228	260	200	255	300	609	245	260	270	310	328	550	660	690	930	976
W	120	129	129	175	120	175	200	306	155	178	200	200	223	306	365	405	580	600
R	38	46	55	55	32	46	60	85	78	89	100	100	112	140	170	202	240	300
Weight (kg)	4	5.7	5.8	13	5	10.6	16.2	49	9	10.5	12.1	19	28	68	125	140	290	377

Angle Pattern

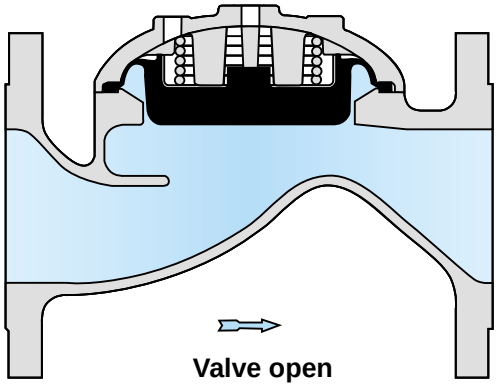


	Threaded			Grooved (Victaulic)		Flanged		
Size (mm)	**2"**	**2½"**	**3"**	**3"**	**4"**	**2"**	**3"**	**4"**
L	70	110	110	120	160	121	153	160
H	119	182	184	194	223	157	200	223
Hf*	211	275	336	346	309	249	278	309
W	118	131	170	170	204	155	200	223
h	61	93	80	90	112	83	101	112
R	38	65	55	45	58	78	100	112
Weight (kg)	4.4	5.8	11	10	16	9	17	26

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



Valve closed



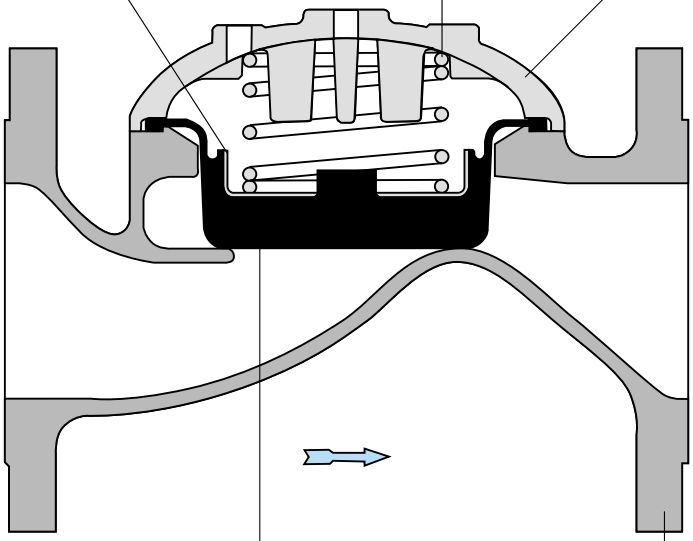
Valve open

VALVE ASSEMBLY

Diaphragm retainer
For perfect guidance.

Spring
One single type for all service conditions.

Cover
- Only 4 bolts (12": 8 bolts).
- Easy top access for maintenance.



Diaphragm
- On single type for all conditions: "On-Off" and pressure regulation.
- Progressive dynamic guidance, resulting in exceptionally stable action.
- No pressure surges. No chattering.

Valve body
(Registered design application).
Outstanding flow capacity.

Pilot Valves and Control Accessories:
refer to PC series, page 38