400 series RAM valve

RAM valve
The 400 series diaphragm actuated hydraulically operated valve is at the leading edge of control valve design. It 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. These automatic water control valves are designed for vertical or horizontal installation and are available in diameter sizes of 2" - 16" in a wide range of materials and end connections.

The design of the valve body includes a full bore seat with unobstructed flow path, free of any in-line ribs, supporting cage, or shafts. The unique hydro-dynamic globe design provides high flow capabilities with minimum head loss. The cover is removable via four fastening bolts for quick in-line inspection and service. The internal design of the 400 series valve is based on innovative technology using advanced rubber-based materials to achieve a solid, one piece elastomeric assembly including a flexible fabric reinforced diaphragm, vulcanized with a rugged radial seal disk. The diaphragm is carefully balanced and peripherally supported to avoid distortion and to protect the elastomer, resulting in long-life and controlled actuation even under harsh conditions.

Properties:
- High flow
- Exceptional pressure control stability
- Prevents water hammer
- Opens at low inlet pressure
- Maintenance-friendly

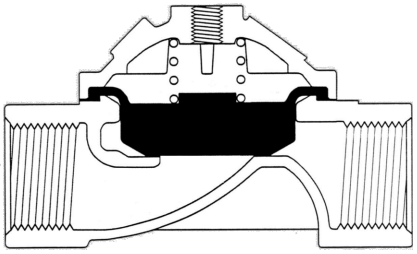
Applications:
- Irrigation systems
- Industrial
- Automation
- Recirculation systems
- Pressure control
- Pressure relief valve
- Level control
- Fire protection (UL-listed, FM-approved)

Options:
- Flowstem
- Various solenoids
- N.O. version-electrically closing
- Combination of functions
- Valve position indicator

RAM valve
Technical data

Specifications brass series:

- Sizes (straight): ¾", 1", 1½" and 2"
- Working pressure: 0,5 – 10 bar
- Max. temperature: 80 °C
- Connection: BSP female thread
- Pressure class: ISO PN10



Materials:

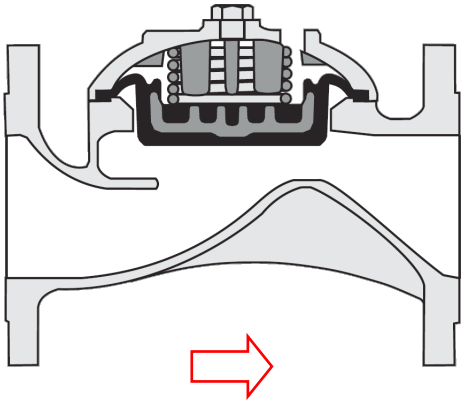
- Body and cover: brass
- Spring: stainless steel
- Diaphragm: NR, nylon-reinforced
- Seals: NBR

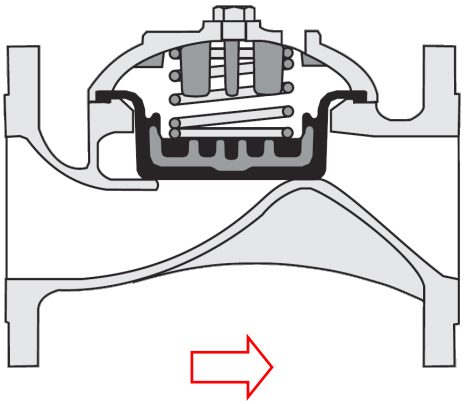
Specifications cast iron series:

- Sizes (straight): 1½", 2", 2½", 3", 4" - 16"
- Sizes (angled): 2", 3" and 4"
- Working pressure: 0,5 – 16 bar
- Max. temperature: 60 °C
- Connection: BSP female thread / flange
- Pressure class: ISO PN16

Materials:

- Body and cover: cast iron with epoxy coating (Option: stainless steel and other high-performance metals)
- Spring: stainless steel
- Diaphragm: NR, nylon-reinforced; Options Nitril, Buna N, EPDM





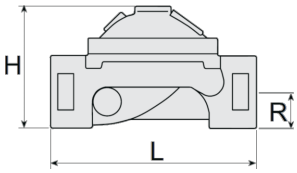
RAM valve
Technical data

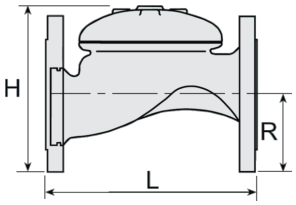
400 globe		1½"	2"	2"	2½"	2½"	3"R	3"R	3"	3"	4"	6"	8"	10"	12"	14"	16"
Connection [1]		thr.	thr.	fl.	thr.	fl.	thr.	fl.	thr.	fl.	fl.	fl.	fl.	fl.	fl.	fl.	fl.
L	mm	153	180	205	210	205	210	210	255	250	320	415	500	605	724	742	742
H	mm	87	111	155	133	178	140	187	160	210	242	345	430	460	635	655	965
R	mm	29	38	78	46	89	55	100	55	100	112	140	170	202	240	260	300
Width	mm	97	120	155	129	178	129	200	175	200	223	306	365	405	580	587	600
Weight	kg	2	4	9	5,7	10,5	5,8	12,1	13	19	28	68	125	144	290	358	377
CCDV [2]	ltr	0,06	0,11	0,11	0,18	0,18	0,18	0,18	0,29	0,29	0,67	1,97	3,86	3,86	13,8	13,8	13,8
KV [3]	m³/h	29	57	57	78	78	78	78	136	136	204	458	781	829	1932	1932	1932

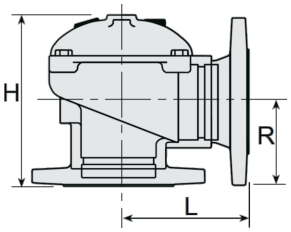
400 brass globe		¾"	1"	1½"	2"
Connection [1]		thr.	thr.	thr.	thr.
L	mm	112	112	150	180
H	mm	67,5	67,5	83	110
R	mm	20	20	27,5	38
Width	mm	72	72	90	120
Weight	kg	0,95	0,95	1,5	4
CCDV [2]	ltr	0,03	-	-	0,11
KV [3]	m³/h	12	13	29	57

400 angled		2"	2"	3"	3"	4"
Connection [1]		thr.	fl.	dr	fl.	fl.
L	mm	70	121	110	153	160
H	mm	119	157	184	200	223
R	mm	38	83	55	100	112
Width	mm	118	155	170	200	223
Weight	kg	4,4	9	11	17	26
CCDV [2]	ltr	0,11	0,11	0,29	0,29	0,67
KV [3]	m³/h	71	71	152	152	225

1: thr.: thread fl.: flange
2: Control Chamber Displacement Volume
3: KV value: valve flow coefficient (flow in m³/h at 1 bar pressure differential)







Flow diagram for completely open valves: