

**UPC-CV-455**

**UPC-CV-457**

# CAST STEEL CONTROL VALVE

## Design Features

- Industrial automation control system to complete the regulation
- Simple to control, rapid response, and intrinsic safety.
- An Exclusive variety of Trim design.
- Easy to adjust opening and closing speed of the control valve for reliable control even when changes in pressure/temperature are sudden and extreme.
- A wide selection of actuators to meet the most system requirement.
- The structure is simple, and it is easy to maintain
- High flow capacity and range ability.
- Proven on-site performance
- Excellent performance in liquid and gas application.
- Optional: PTFE- Soft seat sealing with O-Ring and metal to metal seat.
- Multiple material options to choose.
- Top entry for ease of inspection and maintenance.

## Applications

- Liquid
- Steam
- Gas

Test Certificate in Form III\_C as per IBR is Furnished with every supply

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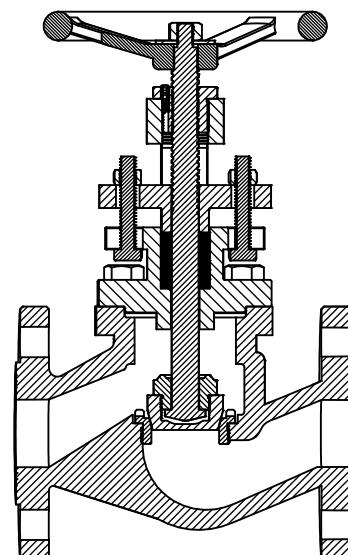
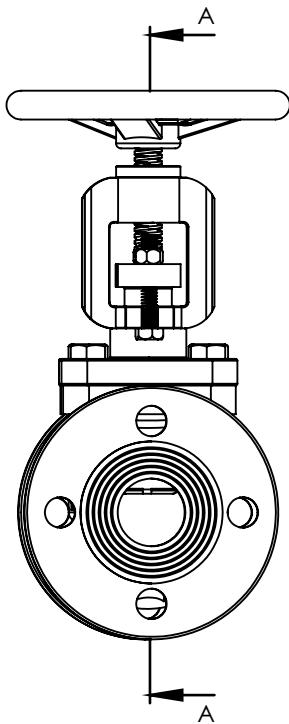
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# PRESSURE REDUCING VALVE

## Technical Details

<b>Size Range</b>	<b>25mm to 150mm</b>
<b>Pressure Rating</b>	<b>150# to 600# / BS 10 Table H</b>
<b>Body M.O.C.</b>	<b>Carbon Steel / Alloy Steel/</b> <b>Stainless Steel</b>
<b>Trims</b>	<b>Cf8/ CF8M</b> <b>SS304/ SS316</b>
<b>Outlet Pressure</b>	<b>up to 8 kg/cm<sup>2</sup></b>
<b>End Details</b>	<b>Flange End / Butt Welded</b> <b>Raised face/ Flat face</b>
<b>Flow Characteristic</b>	<b>1. Equal percentage</b> <b>2. Quick opening</b> <b>3. Linear</b>

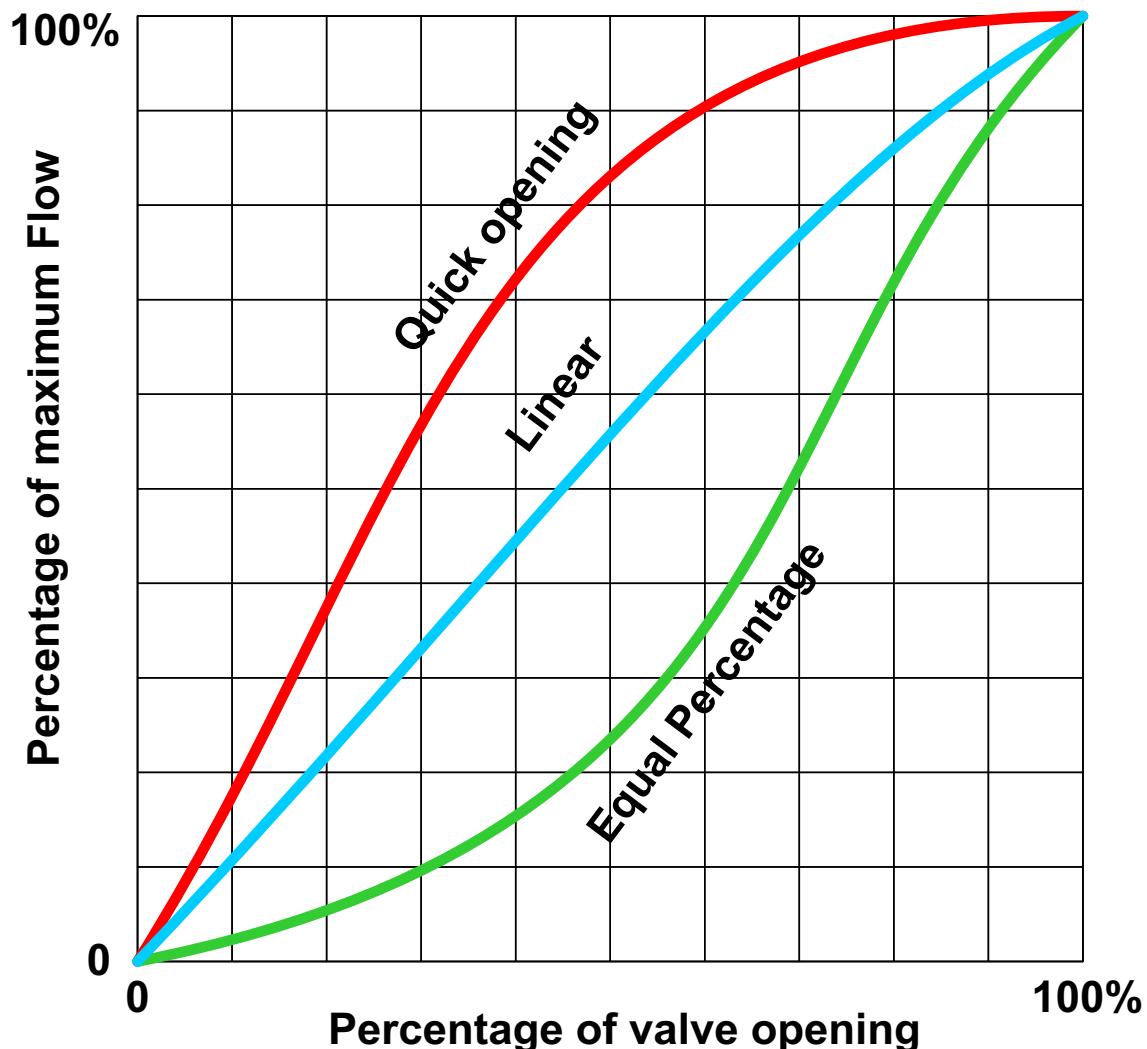


A valve's "characteristic" is the relationship between the flow through the valve relative to its degree of closure. The valve characteristic is a feature of the design of either the valve itself, or the valve and actuator combination. Typical valve control characteristics are described as on/off (quick acting), linear and equal percentage.

## Characterized Valve Plugs

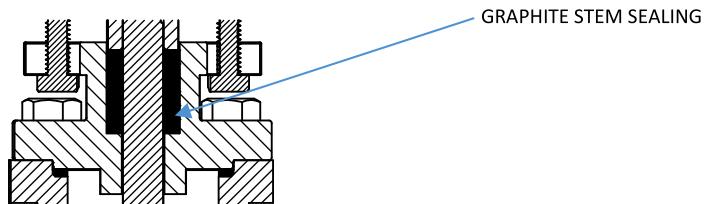
The valve plug, the movable part of globe-style control valve assembly, provides a variable restriction to fluid flow. Valve plug styles are each designed to:

- Provide a specific flow characteristic.
- Permit a specified manner of guiding or alignment with the seat ring.
- Have a particular shutoff or damage-resistance capability.



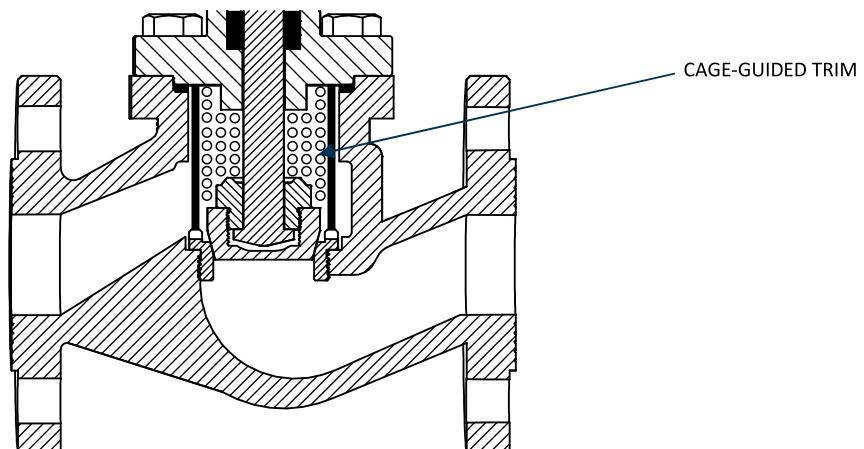
## performance PTFE, Graphite stem sealing

The plug stem is sealed by the gland packing. The PTFE gland packing offer great temeprature resistance up to +200°C as the PTFE V-rings dispersion ensures a low friction finish and prevents leakage.



## Characterization of Cage-Guided Valve Bodies

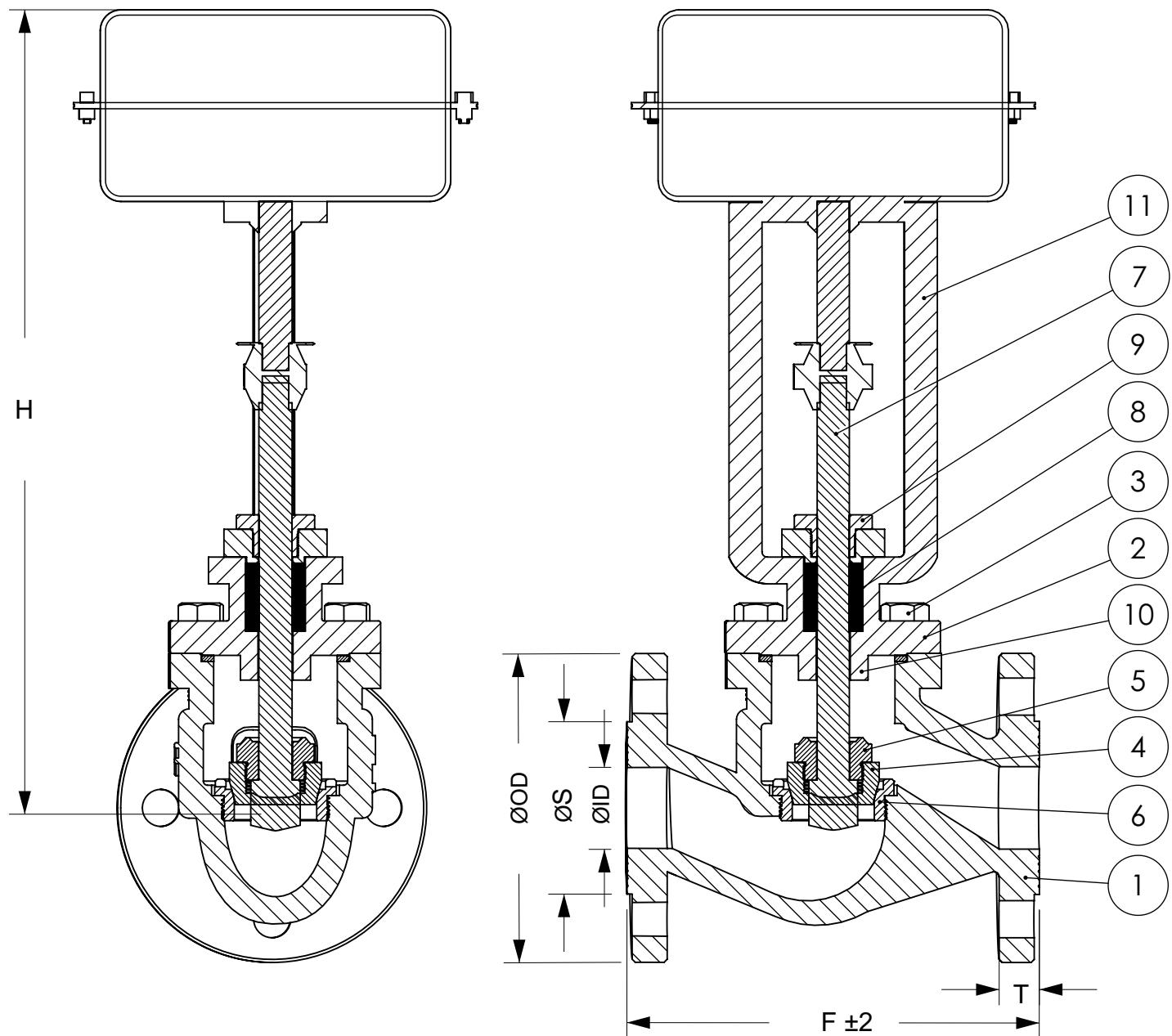
Cage type valve structure prevents the demolition of the air bubble far from the metal surface by controlling the area and extent of fluid cavitation, reduces the damage to trim form cavitation effectively, achieves the throttle, the proliferation, and the inflation fluid goal designs enough layer to maintain the low speed of flow to realize the pressure gradually to reduce, thus reduces the noise and the pressure, prevents the cavitation effectively, reduces the influence of the flash vaporization to the trim grew the trim service life.



## Standard of Material:

Material Standard			
Sr no.	Component	Material	Standard
1.	Body	Cast steel	ASTM A216 Gr. WCB
2.	Bonnet	Cast Steel	ASTM A216 Gr. WCB
3.	Bonnet Nut	Stainless Steel	AISI-410
4.	Disc	Stainless Steel	SS304/SS316
5.	Disc nut	Stainless Steel	SS304/SS316
6.	Seat ring	Stainless Steel	SS304/SS316/CF8/8M
7.	Stem	Stainless Steel	AISI-410/SS304/SS316
8.	Packing	Graphite	-----
9.	Gland nut	Stainless Steel	AISI-410
10.	Back seat	Stainless Steel	AISI-416
11.	Actuator	Mild Steel	-----

## Pressure Reducing Valve (UPC-CV-455 / UPC-CV-457)



## CLASS 150# (UPC-CV-455)

Dimension (in mm)						
Sr no.	ØID	ØS	ØOD	F	T	H
25	25	51	108	127	12.7	530
32	32	63.5	117.5	140	14.3	580
40	40	73	127	165	15.9	602
50	50	92	152.8	203	17.5	625
65	65	105	178	216	20.7	635
80	80	127	190.5	241	22.3	655
100	100	157	229	292	22.3	750
125	125	185.7	255	356	22.3	1040
150	150	215.9	279.5	406	23.9	1360
200	200	269.9	343	495	27.0	1410
250	250	323.8	405	622	28.6	1610
300	300	381	485	698	30.2	1650

## CLASS 300# (UPC-CV-457)

Dimension (in mm)						
Sr no.	ØID	ØS	ØOD	F	T	H
25	25	51	124	203	15.9	530
32	32	63.5	133.5	216	17.5	580
40	40	73	156	229	19.1	602
50	50	92	165	267	20.7	625
65	65	105	190	292	23.9	635
80	80	127	210	318	27	655
100	100	157	254	356	30.2	750
125	125	185.7	280	400	33.4	1040
150	150	215.9	318	444	35	1360
200	200	269.9	381	559	39.7	1410
250	250	323.8	445	622	46.1	1610
300	300	381	520	711	49.3	1650

## **$k_V$ Value For Pressure Reducing Valve (UPC-CV-455 / UPC-CV-457)**

Valve Size	Lift	Seat Diameter	Minimum Kv Values
			Linear & Equal Percentage
1"	20	8	0.95
		10	1.5
		12	2.4
		15	3.8
1", 1½"	21	20	5.9
1", 1½", 2"	21	25	9.5
1½", 2"	21	30	15
		36	23.5
2"	22	46	38
2½"	22	36	23.5
		46	38
		50	59.5
3"	31	46	38
3", 4"	31	50	59.5
		80	95
4"	32	100	152
6"	62	90	142.5
6", 8"	62	113	247
		143	361
8"	62	172	617
10"	105	143	361
10", 12"	105	172	617
		220	855

## **WARRANTY**

All Valves are warranted against any manufacturing defect for a period of 12 months from date of supply, provided the meter has not been misused, damaged, installed for services it is not recommended or the seal has been tampered with. The company shall be liable to furnish part/ parts there of or full valve as the company may deem fit.

## **UPC INSTRUMENTS PVT.LTD.**

**AN ISO 9001:2015, 14001-2015 CE & TÜV SÜD CERTIFIED COMPANY**

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