

PRCV11

ECCENTRIC ROTARY PLUG VALVE



DESCRIPTION:

Pennant Eccentric Rotary Plug Valve is a high-performance rotary valve designed for a wide range of industrial applications including high pressure and low-pressure steam, clean liquids, fine particle slurry media, sandy media and corrosive liquids gasses and erosive and abrasive slurries. This valve has an eccentric plug that can rotate up to 60° to fit on the self-centering seat to achieve a perfect Class-V tight shut-off over extended service life. These valves can be easily installed between a wide variety of flange types.

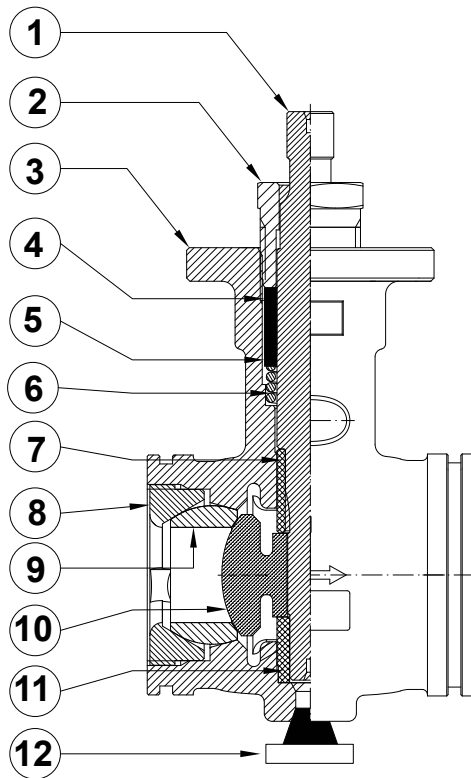
FEATURES :

- This valve can be used for a wide range of applications which promotes standardization and helps in minimizing stock. Additionally, the straight flow design helps in reducing the cost per Cv than the conventional type of control valve
- Available in wafer, separable flanged and integral flanged body style.
- Eccentric positioning of the plug allows itself to break free from the seat of the valve with a small rotation of the shaft. Due to this the life of the seat ring increases and the shut-off capability is enhanced.
- Self-aligning seat design of plug ensures proper locking of the plug onto the seat thus enabling Class V shut-off.

- Wide selection of body and trim materials are available for providing compatibility with highly corrosive fluid media.
- This valve can be offered in full trim and reduced trim for all body sizes. This can be achieved by replacing only the valve seat.
- Range-ability of Pennant Rotary Control Valve is 100:1, which allows accurate throttling for a wide range of flows.
- The fundamental characteristic of Pennant Rotary Control Valve is linear, but can also be modified to equal percentage type of flow by using a simple cam adjustment.
- This valve is designed for bidirectional flow. Normal flow to open direction is normally used for clean, liquids, gasses and steam applications. Flow to close is recommended for erosive and abrasive slurry applications.
- Stellite trims provide longer operational life and erosion resistance at higher temperatures. Stellite trims are available for all valve sizes.

INDUSTRIAL APPLICATIONS :

- | | |
|-----------------------|--------------------|
| 1. Mining | 5. Food & Beverage |
| 2. Petroleum Refining | 6. HVAC |
| 3. Power | 7. Chemical |
| 4. Ethanol | |



SR NO	PART NAME
1	Valve Stem
2	Gland Packing Nut
3	Body
4	Gland Packing
5	Backup Ring
6	Compression Spring
7	Upper Guide Bush
8	Seat Ring
9	Seat Retainer Ring
10	Plug
11	Lower Guide Bush
12	Drain Plug

TECHNICAL SPECIFICATIONS :

SIZES :

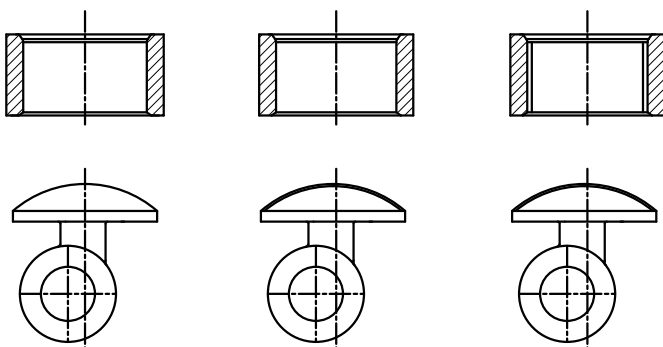
DN 25, 40, 50, 80, 100

On Request : DN 150, 200, 250, 300

END CONNECTION :

1. Wafer Type – Suitable for flanges #150, #300, #600 for Sizes DN25 to DN200
2. Separable flanged #150, #300 for Sizes DN25 to DN150
3. Integral flanged #150, #300, #600 for Sizes DN25 to DN300

TRIM OPTIONS :



Without Stellite
No stellite on seat ring or plug

Partial Stellite
Partial stellite on seat ring and plug seating surfaces.

Full Stellite
Full stellite on seat ring bore, seat ring and plug seating surfaces.

BODY MATERIAL :

ASTM A216 Gr. WCB

ON SPECIAL REQUEST :

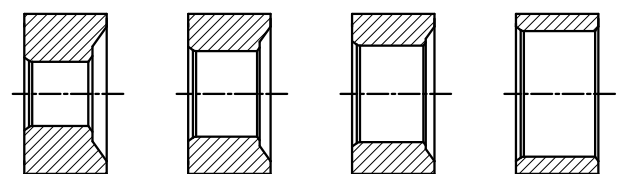
ASTM A351 Gr.CF8

ASTM A351 Gr.CF8M

PACKING :

PTFE soft seat upto 220°C

TRIM SIZES :

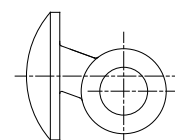


REDUCED SEAT AREA
20% CAPACITY

REDUCED SEAT AREA
40% CAPACITY

REDUCED SEAT AREA
60% CAPACITY

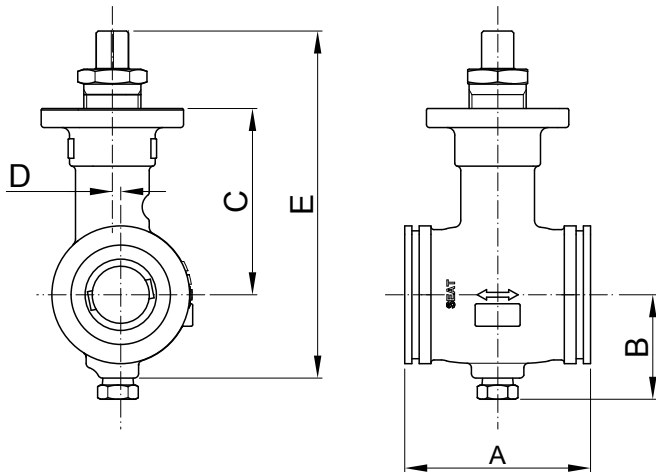
FULL SEAT AREA
100% CAPACITY



COMMON PLUG
FOR ALL TRIM SIZES

DIMENSIONS :

Nominal in mm



SIZE	A	B	C	D	E
DN25	102	65	113	4	228
DN40	114	74	130	6.4	252
DN50	124	74	124	5.6	9.76
DN80	165	90	147	7.9	12.32
DN100	194	100	178	11.2	13.90

FLOW COEFFICIENTS (C_v) LINEAR CHARACTERISTICS :

A) STANDARD FLOW (FLOW FOR OPEN)

PERCENT TRAVEL FOR (60°) ROTATION											
Valve Size	Trim size	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
DN25	Full Port	1.4	3	4.2	5.9	7.9	9.2	11	12	13	14
	60% reduced	0.75	1.6	2.7	3.5	4.9	5.6	6.4	7.5	7.9	8.4
	40% reduced	0.5	1.2	1.8	2.4	3.3	3.7	4.4	4.9	5.5	5.6
	20% reduced	0.25	0.53	0.85	1.2	1.6	1.8	2.1	2.5	2.6	2.8
DN40	Full Port	3	6.3	9.7	14	18	22	24	29	30	32
	60% reduced	2.8	5.7	9	11	12	13	15	17	18	20
	40% reduced	1.4	2.5	4	5.5	7.5	8.6	10	11	12	13
	20% reduced	0.6	1.2	2	2.9	3.7	4.4	4.9	5.9	6.1	6.5
DN50	Full Port	4.6	9.7	16	22	30	34	39	45	48	51
	60% reduced	2.8	5.7	9	14	18	20	23	26	28	30
	40% reduced	1.9	3.9	6	8.5	11	13	15	18	19	20
	20% reduced	0.9	1.9	3	4.3	5.9	6.6	7.6	8.8	9.4	10
DN80	Full Port	15	29	46	63	87	99	114	132	140	150
	60% reduced	8.2	17	27	38	51	60	68	79	85	90
	40% reduced	5.5	11	18	25	35	40	46	53	56	60
	20% reduced	2.6	5.9	9	13	17	20	23	26	28	30
DN100	Full Port	22	47	74	104	141	163	187	217	232	247
	60% reduced	13	28	45	63	84	98	112	130	138	148
	40% reduced	8.8	19	29	41	56	65	75	86	92	98
	20% reduced	4.5	9.4	15	21	28	32	38	43	46	49
DN150	Full Port	47	99	156	218	296	343	395	458	489	520
	60% reduced	28	59	89	125	170	206	225	275	294	312
	40% reduced	19	40	59	83	113	137	150	183	196	208
	20% reduced	9.5	20	30	42	57	69	75	92	98	104
DN200	Full Port	79	165	261	364	496	574	662	766	819	870
	60% reduced	49	99	156	219	297	345	396	459	491	522
	40% reduced	31	66	104	146	198	230	264	306	327	348
	20% reduced	15	33	51	73	99	114	132	153	164	174

B) REVERSE FLOW (FLOW FOR CLOSING)

Percent Travel for (60°) Rotation											
Valve Size	Trim Size	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1	Full Port	1.5	3	4.6	6.4	8.6	9.9	11	13	14	15
	60% reduced	0.9	1.8	2.76	3.84	5.1	5.9	6.8	7.9	8.5	9
	40% reduced	0.6	1.2	1.84	2.56	3.5	4	4.6	5.4	5.6	6
	20% reduced	0.3	0.6	0.92	1.28	1.7	2	2.3	2.6	2.8	3
1.5	Full Port	3	6.4	10	13	18	22	26	30	32	34
	60% reduced	1.8	3.8	6.3	7.8	10.8	14	16	19	20	21
	40% reduced	1.2	2.5	4.2	5.2	7.2	9.2	11	12	13	14
	20% reduced	0.6	1.2	2.1	2.6	3.6	4.6	5.3	6.2	6.6	7
2	Full Port	5	11	17	23	31	35	42	48	52	55
	60% reduced	2.8	5.7	10	13	17	21	24	29	30	33
	40% reduced	1.9	3.8	6.8	8.4	11	14	16	19	20	22
	20% reduced	1	1.9	3.4	4.2	5.7	7	8	9	10	11
3	Full Port	14	30	47	65	88	102	118	136	146	155
	60% reduced	8.4	18	28	39	53	61	71	81	87	93
	40% reduced	5.6	12	19	26	35	41	47	54	58	62
	20% reduced	2.8	5.9	9.3	13	15	21	24	27	29	31
4	Full Port	24	51	80	112	152	176	202	234	250	266
	60% reduced	14.1	30	48	67	90	95	121	140	149	159
	40% reduced	9.4	20	32	45	60	63	80	93	99	106
	20% reduced	4.8	10	16	22	30	32	40	46	50	53
6	Full Port	43	91	144	202	270	316	364	422	451	480
	60% reduced	26	55	86	120	162	189	219	254	270	288
	40% reduced	17	37	58	80	108	126	146	169	180	192
	20% reduced	8.6	18	29	40	54	63	73	85	90	96
8	Full Port	72	152	240	336	452	530	608	703	752	800
	60% reduced	43	90	144	201	271	318	365	421	450	480
	40% reduced	29	60	96	134	180	212	243	281	300	320
	20% reduced	14	30	48	67	90	106	122	140	150	160