

VtekTM

Controls

SERIES VRG

Rotary Globe Control Valve



Design Specifications

- **Full Port Sizes :** 1" – 4"
- **Body Materials:** CF8M / WCB / CF3M / Duplex
- **Seats:** Metal Seated
- **Adjustable Packing Flange** (Inverted) Allows In-line stem packing adjustments
- **ISO 5211 Direct Mount**
- **ANSI 150 - 600**
- **Blow-Out Proof Stem / Trunnion Design**
- **High Cv Flow Coefficient**
- **Wafer End**
- **General & Industrial Applications**

Standards

- **Compliance Standard:**
Standard ISA S75.04 Face to Face.
ASME B16.34 Design
- **Quality Assurance:** ISO 9001, 5209
- **Inspection and Test:** API 598
- **TA-Luft,** ISO-15848
- **Class Shut Off:**
Class IV - Metal Seat

Features:

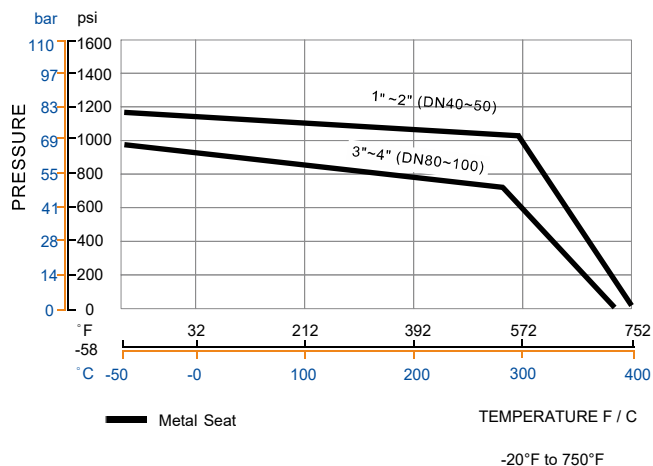
- "Saddle" Type Plug allows for Higher Cv flow coefficients with a two stem design.
- The flangeless body rating is designed for ANSI 150 through ANSI Class 600.
- Heavy-duty guide lugs assure quick, positive alignment during installation.
- Current Sizes available: 1 in. through 4 in. (25 mm through 100 mm), in the Direct Mount series. Flanged and larger sizes are available through 12" (300 mm) ANSI 150 through 600 Class.
- Separable bonnet design for ease of maintenance.
- Straight through flow pattern provides greater flow capacities.
- Standard integral extension bonnet allows for a wide range of fluid temperature applications (-320°F to 750°F), (-196°C to 400°C).
- The unique self-aligning eccentric rotating plug provides tight shutoff and low dynamic forces.
- A large variety of reduced-trim options are available in all sizes.
- 90 Degree Rotation allows for great flow capacity.
- External Packing Gland allows for packing adjustments.
- Blow Out Proof Stem
- Design for use with Vtek Controls VRD Diaphragm Actuator. VR Series & VEW/X Electric actuators can be used for tight spaces.



Data:

Pressure Vs. Temperature Chart

Metal Seated



Torque (Metal Seat)

DN	Inch-Lb	Nm
1	25	100
1-1/2"	40	150
2"	50	215
3"	80	275
4"	100	300

Break Away Torque 30% safety factor included. Standard valves are assembled with silicon-free based lubricant.

Flow Curve & Cv Chart

		% Rotation										
Size inches (mm)	Orifice	10	20	30	40	50	60	70	80	90	100	
1 (25)	.20	0.4	0.8	1.1	1.4	1.7	2.0	2.3	2.5	2.7	3	
	.40	0.5	0.9	1.4	2.0	2.7	3.5	4.2	4.8	5.2	5.8	
	.60	0.6	1.3	2.2	3.1	4.2	5.3	6.4	7.2	7.9	8.5	
	Full Area	0.9	2.1	3.7	5.7	7.8	9.6	11.1	12.4	13.3	15	
1½ (40)	.40	1.1	2.1	3.3	4.7	6.5	8.4	9.9	11.2	12.3	17	
	.60	1.4	3.2	5.1	7.4	10	12	15	17	18	26	
	Full Area	2.0	5.0	8.6	13	19	22	26	29	33	42	
	.40	1.6	3.2	5.0	7.2	9.8	12.6	15.0	17.0	18.7	30	
2 (50)	.60	2.1	4.8	7.7	11.2	15.1	19.1	22.7	25.8	28.2	43	
	Full Area	3.1	7.5	13.3	20.5	28	34.2	39.8	44.2	47.5	72	
	.40	4.9	9.4	14.1	20.0	26.5	33.5	39.8	45.4	50.2	62	
	.60	5.7	12.1	19.6	27.6	37.5	47.9	58.4	68.0	75.9	117	
3 (80)	Full Area	8.8	17.7	29.8	44.5	60.7	78.3	96.2	113	127	204	
	.40	8.4	16.1	24.0	34.1	45.1	57.1	67.8	77.4	85.6	111	
	.60	9.7	20.7	33.4	47.0	63.8	81.6	99.4	116	129	200	
	Full Area	15.0	30.2	50.8	75.8	104	133	164	193	216	274	

Inherent Flow characteristic is Equal Percent. FL .78 Xt .62

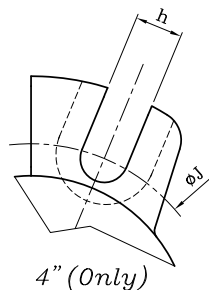
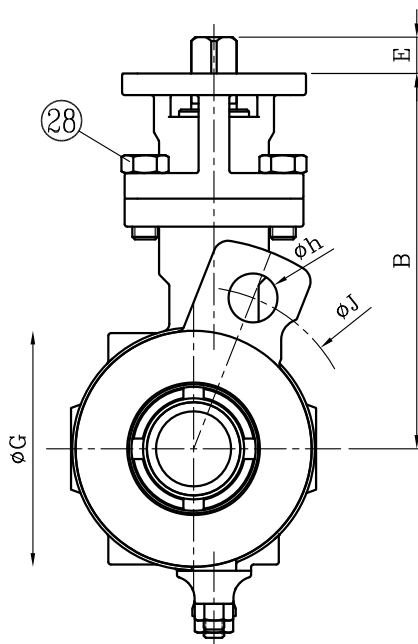
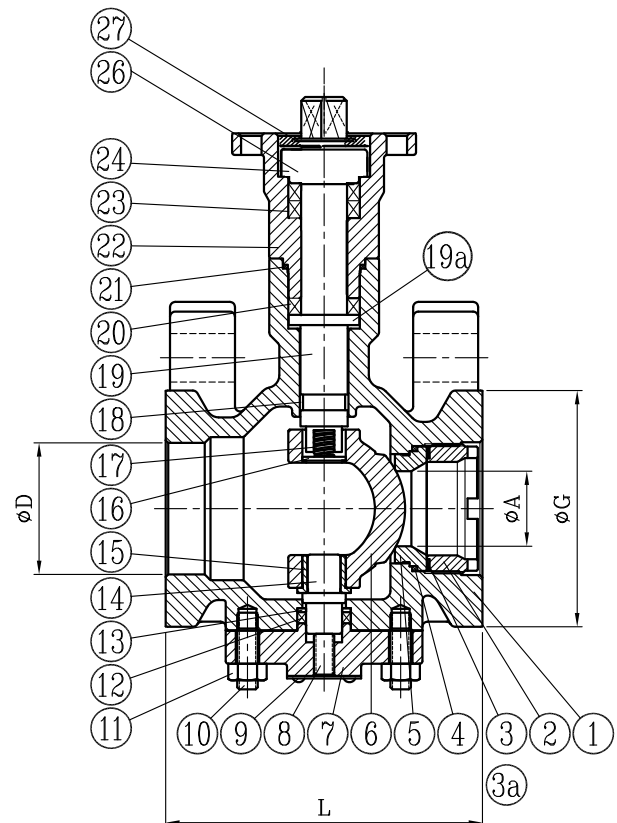
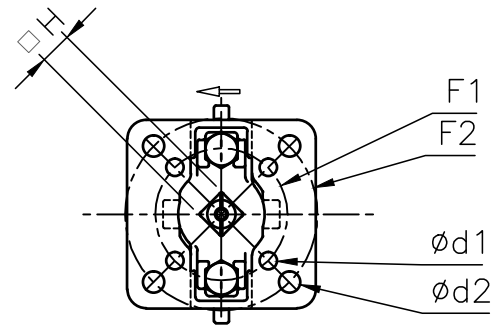
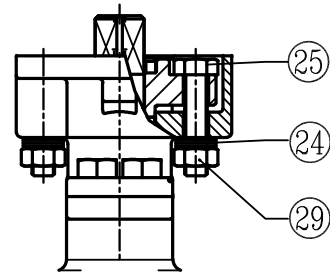
Materials & Dimensions 150-600 (1-1/2" to 4"):

Materials

NO.	NAME OF PARTS	MATERIALS
1	BODY	A351 Gr. CF8M
2	INSERT CAP	A351 Gr. CF8M
3	BELLEVILLE WASHER	INCONEL 750
* 3a	WAVY SPRING	17-7PH
4	BACK SEAL	GRAPHITE
5	METAL SEAT	SS 316
6	BALL SEGMENT	CF8M+HARD CHROME
7	TRUNNION CAP	A351 Gr. CF8M
8	ADJUST STUD	SS 304
9	TRUNNION CAP PLATE	SS 304
10	STUD	SS 304
11	NUT	SS 304
12	STEM PACKING	GRAPHITE
13	BOTTOM STEM GLAND	SS 316
14	BOTTOM STEM	17-4PH
15	BOTTOM BEARING	17-4PH+HARD CHROME
16	SPRING STOP PLATE	SS 316
17	SPRING	INCONEL 750
18	BEARING	17-4PH+HARD CHROME
* 19	STEM	17-4PH
19a	THRUST BACK	SS316+HARD CHROME
20	STEM PACKING	GRAPHITE
21	GASKET	GRAPHITE
22	BONNET	A351 Gr. CF8M
23	STEM PACKING	GRAPHITE
24	GLAND WASHER	SS 304
25	BELLEVILLE WASHER	17-7PH
26	PACKING CAP	SS 304
27	NUT STOP	SS 301
28	BONNET BOLT	SS 304
29	NUT	SS 304

* 3" & 4" use parts

1-1/2" to 4"



Dimensions (IN)

SIZE	B	D	E	F	G	H	d1	d2	L	J	h	B1	W	A (Seat Factor)		
														0.4	0.6	1.0
1 1/2	137	42	14	50	70	14	7.2	9.2	114	—	—	121	15.8	19.05	23	28.5
2	147	51.5	14	50	70	14	7.2	11.4	124	127	19	121	15.8	25.4	29.4	36.5
3	197	80.5	18	70	102	17	9.2	11.4	165	168	22	152	23.7	38.1	47.5	59
4	216	102	18	70	102	17	9.2	11.4	193.5	192	24	152	30.7	50.7	61.3	77.2

Contact Vtek Controls for 1" Dimensions

Vtek Controls reserves the right to change product designs and dimensional specifications without notice.

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Options:

Series VRG Valves

VRG Rotary Globe valves are used for controlling the flow. High turn-down ratio delivers a precise flow control while retaining the durability and tight shutoff characteristics of a linear globe control valve, excellent for regulating service. It is a compact and economical solution compared to traditional globe control valves.

Options:

316 SS and 316SS + Stellite Hard Face, & Full stellite 1" Sizes.

Ordering:

Series	Port	Body Material	Plug	Stem	End Connection	Size
VRG	FP= Full Area X6 - .60 Red. Port X4 - .40 Red. Port X2 - .20 Red. Port	S - Stainless Steel C - Carbon Steel L - 316L St. Steel F - Duplex St. St.	S - 316 SS L - 316 L D - Duplex St. St. 6 - Stellite No 6 9 -316 + STL HF	S - 316 SS P - 17-4PH D - Duplex St. St.	W6- ANSI 150-600	0100 - 1" 0150 - 1-1/2" 0200 - 2" 0300 - 3" 0400 - 4"
Seat	Packing	Body Seal	Operator	Options	Stem O-ring	
M - Metal 316 9 - Metal 316 + STF HF	P - PTFE G - GRAPHITE	P - PTFE C - CTFE T - TFM™-1600 G - GRAPHITE	Blank - Bare Stem G - Gear Operated	Blank - No Options	Blank - Viton	

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Please visit our Website for the latest information and updates.

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