

Date: _____
 Job Name: _____
 Contractor: _____



STVG Series

Submittal Data

Specifications		
Connection	300# Grooved	
Maximum Working Pressure	235 psi / 16 Bar (PN 16)	
Operating Temperature Rating	-14 F to 250° F (-10° C to 120° C)	
Materials of Construction	Body	Ductile Iron
	Stem	Stainless Steel (AISI 420)
	Seat Seal	EPDM Perox
	Handwheel	1 1/2" to 6", Polyamide Plastic With 30% Glass Fiber; 8" to 12", Ductile Iron

Dimensions							
Size in (DN)	Connection	Dimension in / (mm) L	Dimension in / (mm) H	Diameter in / (mm) D	Handwheel Diameter in / (mm) d	Weight lbs (kg)	Handwheel Turns
2 1/2" (DN 65)	Groove	11.42 (290)	8.5 (216)	2.875 (73)	3.35 (85)	23.8 (10.8)	8
3" (DN 80)	Groove	12.2 (310)	8.86 (225)	3.500 (88.9)	3.35 (85)	33 (15)	8
4" (DN 100)	Groove	13.78 (350)	13.19 (335)	4.500 (114.3)	6.18 (157)	60.3 (27.4)	8
5" (DN 125)	Groove	15.75 (400)	14.57 (370)	5.563 (141.3)	6.18 (157)	103.8 (47.2)	10
6" (DN 150)	Groove	18.9 (480)	15.98 (406)	6.625 (168.3)	6.18 (157)	143.2 (65.1)	10
8" (DN 200)	Groove	23.62 (600)	30.04 (763)	8.625 (219.1)	15.75 (400)	363 (165)	12
10" (DN 250)	Groove	28.74 (730)	35.12 (892)	10.750 (273)	15.75 (400)	506 (230)	12
12" (DN 300)	Groove	33.46 (850)	37.24 (946)	12.750 (323.9)	15.75 (400)	638 (290)	14

Product Features

Accurate and precise flow measurement

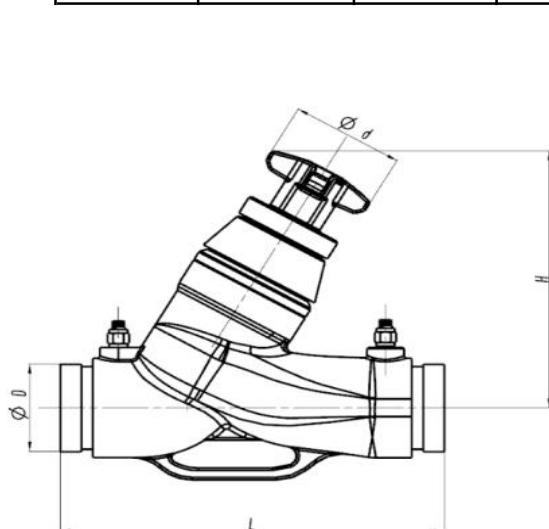
Accurate and precise flow balancing

Positive Shut-off

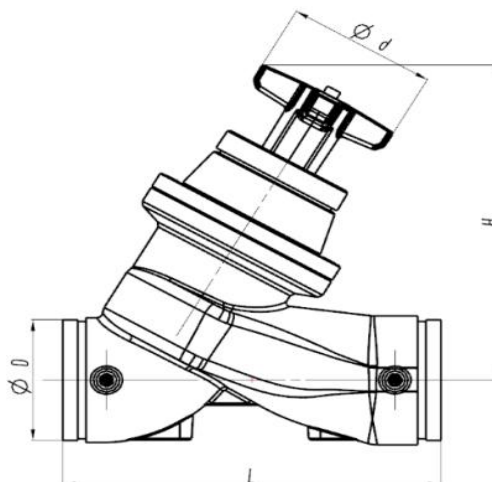
"Y" Pattern, Globe style design

Multi-turn, 360° handwheel

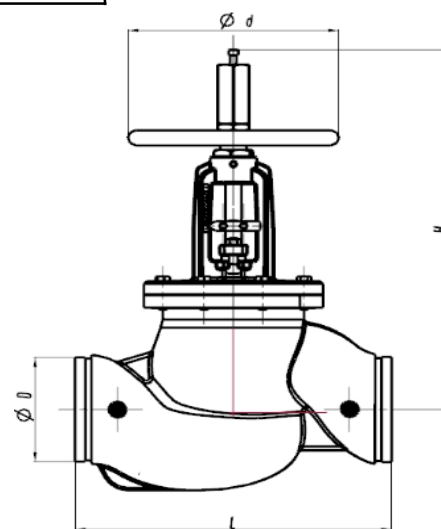
Built in memory stop



2-1/2" to 4" (DN 40 to 100)



5" & 6" (DN 125 to 150)



8" to 12" (DN 200 to 300)

Flow coefficient values (Cv's) at various handwheel settings								
Handwheel Setting	2 1/2" DN 65	3" DN 80	4" DN 100	5" DN 125	6" DN 150	8" DN 200	10" DN 250	12" DN 300
1.00	8	17	24	81	52	126	250	298
1.25	10	20	27	97	56	162	303	346
1.50	12	22	29	113	59	198	354	452
1.75	15	25	32	129	62	233	399	448
2.00	19	27	35	143	66	274	444	499
2.25	24	30	38	158	70	316	480	553
2.50	30	33	31	171	74	360	513	618
2.75	36	36	48	184	78	401	543	682
3.00	42	40	55	197	81	437	574	750
3.25	47	45	64	209	84	466	605	819
3.50	53	51	73	223	87	488	635	887
3.75	57	58	84	235	92	508	668	946
4.00	62	64	95	247	99	528	697	995
4.25	66	71	106	259	111	547	722	1,025
4.50	70	77	116	271	124	569	745	1,045
4.75	74	84	127	282	138	589	764	1,064
5.00	77	90	137	294	150	610	780	1,091
5.25	80	97	147	305	158	631	792	1,131
5.50	82	104	157	317	164	650	802	1,183
5.75	84	110	167	327	169	667	810	1,231
6.00	85	115	177	338	175	682	817	1,273
6.25	87	121	188	347	183	692	825	1,303
6.50	88	125	197	355	194	700	833	1,320
6.75	89	128	206	362	211	707	839	1,332
7.00	89	131	213	368	233	716	846	1,343
7.25	90	133	219	374	261	727	852	1,356
7.50	91	134	223	379	292	740	858	1,371
7.75	92	135	226	384	323	754	864	1,384
8.00	93	136	229	390	349	767	872	1,395
8.25				396	369	780	881	1,400
8.50				403	382	791	892	1,404
8.75				410	394	799	901	1,412
9.00				415	408	802	908	1,430
9.25				418	424	801	912	1,457
9.50				419	444	798	915	1,491
9.75				419	466	795	917	1,526
10.00				419	489	796	922	1,554
10.25						803	929	1,567
10.50						813	939	1,570
10.75						824	949	1,568
11.00						834	960	1,565
11.25						840	969	1,565
11.50						842	976	1,567
11.75						843	983	1,571
12.00						843	989	1,575
12.25								1,578
12.50								1,581
12.75								1,584
13.00								1,588
13.25								1,592
13.50								1,598
13.75								1,605
14.00								1,611

Valve is fully open

Valve Selection Guide			
Valve Size		Nominal Range of Flow	
Nominal Dimensions			
Inches	mm	GPM	(l/h)
2 1/2	DN 65	39 - 87	(10k - 25k)
3	DN 80	87 - 125	(25k - 31k)
4	DN 100	125 - 213	(31k - 50k)
5	DN 125	213 - 300	(50k - 76k)
6	DN 150	300 - 450	(76k - 108k)
8	DN 200	450 - 760	(108k - 190k)
10	DN 250	760 - 920	(190k - 340k)
12	DN 300	920 - 1500	(340k - 377k)

Correction For Liquids

Applies to liquids other than water. Correct the measured flow (q) by the density (Y) according to this formula

Sizing a Balancing Valve

When the differential pressure and design flow are known, use this formula to calculate Cv value.

$$\text{Actual Flow} = \frac{q_{CBI}}{\sqrt{Y}}$$

$$C_v = 1.52 \frac{q}{\sqrt{\Delta p}}$$

q in GPM, Δp in Ft. of H₂O

$$C_v = \frac{q}{\sqrt{\Delta p}}$$

q in GPM, √p in PSI

INSTALLATION RECOMMENDATIONS

GROOVED END VALVE CONNECTIONS

Grease the pipe ends, valve ends and rubber gasket lips with grease, graphite paste or similar grease. Slip the rubber gasket over the pipe end of each joint. Slide the gasket past the grooves. Position the grooved end valve between the pipe ends and slide the gaskets back into the central spanned position.

All products have a flow direction arrow. Make sure that it is pointing in the direction of the flow. Apply grease on the outside of the gasket. Install housing clamps over the gasket – insert bolts and nuts.

Tighten nuts evenly, using socket or other wrench. Tighten so that housing clamps come together evenly. The connection is complete when housing clamps meet metal to metal, further tightening of bolts is not necessary.

Pre-assemble large diameter multi-segment housing clamps loosely and install them as half-housings. Take up evenly from top to bottom on alternate bolts.