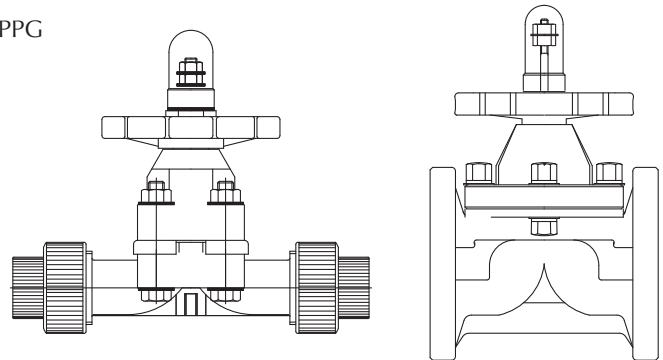


# VG Series

## Diaphragm Valves

- Material - Body:** PVC, CPVC (Corzan™) PP or PVDF  
**Material - Bonnett:** PVC, CPVC (Corzan™) PP, PVDF, or PPG  
**Size:** 1/2" - 8"  
 \*20mm - 63mm  
**Pressure Rating:** 150 PSI  
**\*Seal:** EPDM, Viton, or PTFE  
**Diaphragm:** EPDM, Viton, PTFE/EPDM, or PTFE/PVDF/EPDM  
**Connections:** Socket  
 Metric Spigot  
 ANSI 150 lb. Flanged



**ISO 9002 CERTIFIED**

\*True Union Style Only

## Engineering Guide Specification

### Materials of Construction:

- PVC:** Class 12454B per ASTM D1784  
**CPVC:** Class 12454B per ASTM D1784  
**PP:** Class PP 110B76383 per ASTM D4101  
**PVDF:** Type 1 per ASTM D3222

**Guide Specification:** Diaphragm valves shall be weir pattern body molded from the material indicated. Diaphragms shall be as indicated. \*(PTFE diaphragm shall be two piece assembly consisting of solid PTFE diaphragm with a reinforced EPDM backing cushion.) Threaded stud shall be 304SS.

Bonnets for PP and PVDF shall be glass filled PP or additional strength at elevated temperatures. An adjustable travel stop shall be incorporated as part of the position indicator. All external metal hardware shall be 304SS as manufactured by SIMTECH.

## Special Features

- Clear polycarbonate position indicator
- Easy to operate large diameter handwheel
- Actuation Available - Pneumatic or Electric
- Light weight, corrosion resistant
- Adjustable travel stop prevents overtightening
- \*\*All Hardware (Bolts/Nuts) are 304SS
- \*\*316SS, and Alloy 20 Hardware Optional

## Flow Rate in Gallons Per Minute

ND	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8
C <sub>v</sub>	4.4	7.2	10.1	31.0	48.5	90.68	117	187	389	700

*C<sub>v</sub> is the number of gallons per minute of water at a temperature of 68°F that will flow through a valve with a 1 psi pressure differential at a specified travel.*

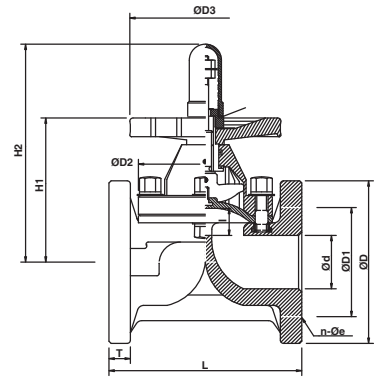
## Pressure/Temperature Graph: Working PSI/Fahrenheit

Body	PVC		CPVC				PP				PVDF			
	All Types		All Types				All Types				PTFE			
Temp	30° F to 105° F	106° F to 140° F	30° F to 105° F	106° F to 140° F	141° F to 175° F	176° F to 195° F	-5° F to 105° F	106° F to 140° F	141° F to 175° F	176° F to 195° F	-40° F to 140° F	141° F to 175° F	176° F to 210° F	211° F to 250° F
1/2" Through 3/4"	150psi	100psi	150psi	115psi	85psi	40psi	150psi	115psi	85psi	70psi	150psi	120psi	95psi	70psi
1"	150psi	100psi	150psi	115psi	85psi	40psi	150psi	115psi	85psi	70psi	150psi	120psi	95psi	70psi
1 1/2" Through 4"	150psi	100psi	150psi	115psi	85psi	40psi	150psi	115psi	85psi	70psi	150psi	120psi	95psi	70psi
Diaphragm	EPDM / VITON		EPDM / VITON				EPDM / VITON				EPDM / VITON			
6"	115psi	70psi	115psi	90psi	55psi	55psi	115psi	90psi	55psi	55psi	115psi	95psi	75psi	55psi
8"	75psi	60psi	75psi	55psi	50psi	50psi	75psi	55psi	50psi	50psi	75psi	55psi	50psi	50psi
Diaphragm	PTFE		PTFE				PTFE				PTFE			
6"	70psi	55psi	70psi	60psi	40psi	40psi	70psi	60psi	40psi	40psi	70psi	60psi	50psi	40psi
8"	60psi	45psi	60psi	45psi	45psi	45psi	60psi	45psi	45psi	45psi	60psi	45psi	45psi	45psi

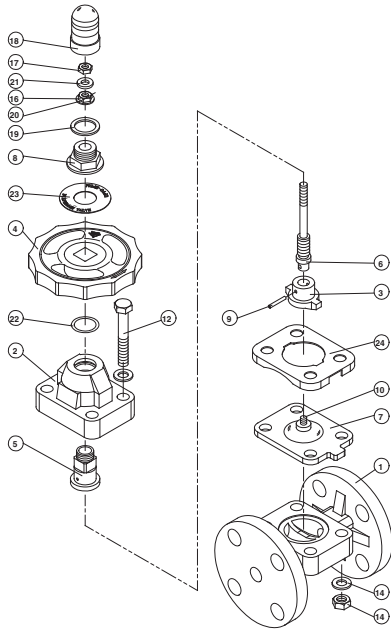
# VG Series

## Dimensional Data - Flanged

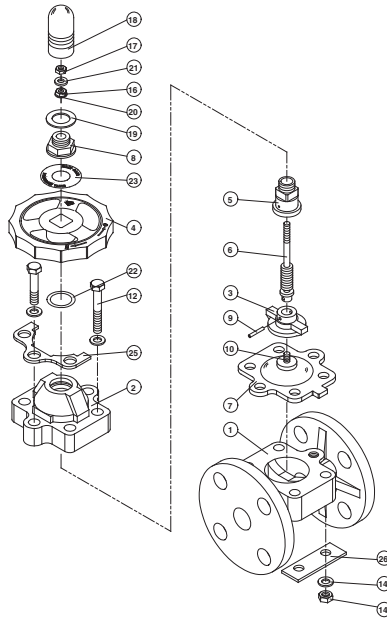
Nom. Size									PVC & CPVC	PP & PVDF
	l	d	L	D	D1	D3	H1	H2	T	T
1/2"	0.394	0.512	4.252	3.504	2.402	3.740	3.346	4.961	0.472	0.512
3/4"	0.472	0.709	5.906	3.858	2.756	3.740	3.701	5.394	0.591	0.591
1"	0.591	0.984	5.906	4.252	3.110	4.331	3.858	5.669	0.669	0.709
1 1/2"	0.866	1.614	6.929	5.000	3.858	5.906	5.118	8.661	0.709	0.787
2"	1.220	2.047	7.953	5.984	4.764	5.906	5.827	8.858	0.669	0.709
2 1/2"	1.535	2.638	9.843	7.008	5.512	8.268	7.441	10.630	0.787	0.827
3"	1.890	3.071	10.394	7.520	5.984	8.268	9.843	13.504	0.787	0.827
4"	2.362	3.937	12.953	9.016	7.520	9.843	10.827	15.079	0.866	0.945
6"	2.756	5.827	18.898	11.457	9.488	16.142	13.150	18.740	0.945	1.063
8"	3.740	7.795	22.441	13.504	11.732	15.945	17.717	24.685	1.181	1.102



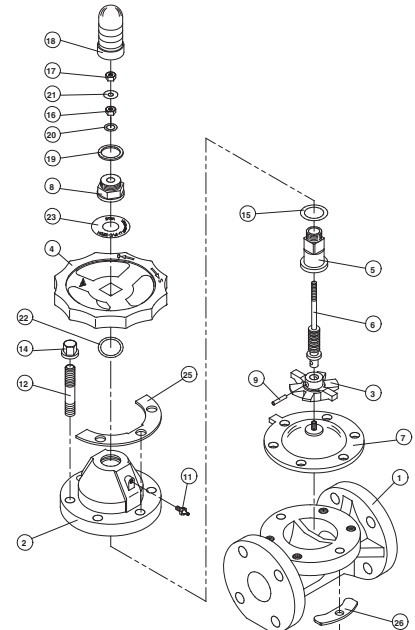
## Parts Listing



1/2" & 3/4"



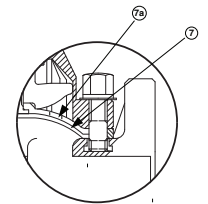
1"



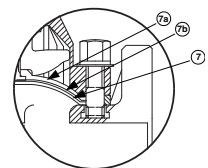
1 1/2" x 8"

Number	Part	Material	Q,TY
1	Body	PVC, CPVC, PP, PVDF	1
2	Bonnet	PVC, CPVC, PP, PVDF	1
3	Compressor	FC, STAINLESS STEEL - 304	1
4	Hand Wheel	PP	1
5	Sleeve	C3602	1
6	Stem	C3602	1
7	Diaphragm	EPDM, FPM, PTFE	1
7a*	Cushion	EPDM	1
7b*	PVDF Gas Barrier	PVDF	1
8	Cap	PVC, CPVC, PP, PVDF	1
9	Compressor Pin	STAINLESS STEEL - 304	1
10	Inserted Metal	STAINLESS STEEL - 304	1
11	Grease Nipple	C3604 (65-200)	1
12	Bolt & Washer	STAINLESS STEEL - 304	1 Set

Number	Part	Material	Q,TY
13	Inserted Nut	STAINLESS STEEL - 304	1 Set
14	Nut & Washer	STAINLESS STEEL - 304	1 Set
15	Thrust Bearing	Standard (100-200)	1
16	Stopper	STAINLESS STEEL - 304	1
17	Set Nut	STAINLESS STEEL - 304	1
18	Gague Cover	CLEAR POLYCARBONATE	1
19	Sheet Gasket	EPDM, FPM, PTFE	1
20	Sheet Ring	STAINLESS STEEL - 304	1
21	Spring Washer	STAINLESS STEEL - 304	1
22	O-Ring	NBR	1
23	Name Plate	PVC	1
24	Pressure Plate	STAINLESS STEEL - 304	1
25	Top Pressure Plate	STAINLESS STEEL - 304	1
26	Bottom Pressure Plate	STAINLESS STEEL - 304	1



Teflon Diaphragm



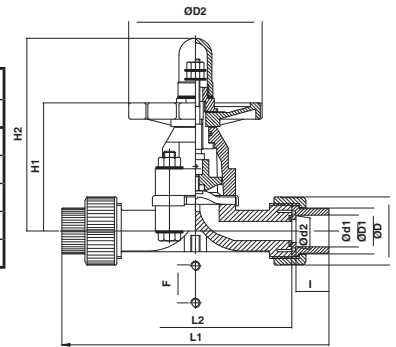
Teflon Diaphragm  
With PVDF Gas Barrier

\* Used for PTFE Diaphragm

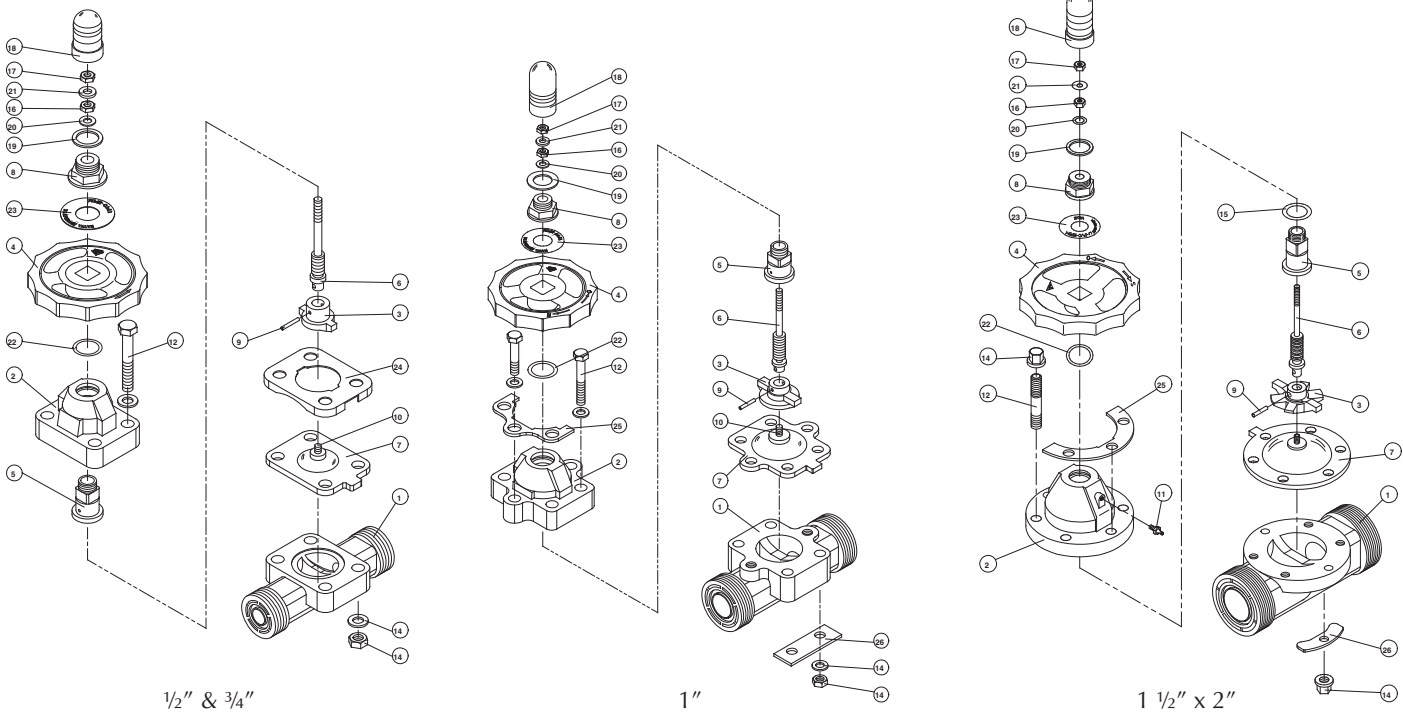
# VG Series

## Dimensional Data - True Union

Nom. Size	PVC & CPVC			PP & PVDF														
	I	d	d2	I	d	d2	d3	L	L1	L2	D	D1	D2	H1	H2	I1	S	F
1/2"	0.874	0.848	0.836	0.630	0.799	0.791	0.787	4.882	7.087	5.118	1.811	1.220	3.740	3.386	5.039	0.630	0.433	0.984
3/4"	1.000	1.058	1.046	0.748	0.996	0.988	0.984	5.669	8.150	5.906	2.165	1.457	3.740	3.740	5.433	0.748	0.433	0.984
1"	1.125	1.325	1.310	0.866	1.272	1.264	1.260	6.063	8.819	6.299	2.598	1.732	4.331	3.858	5.669	0.866	0.433	0.984
1 1/2"	1.375	1.912	1.894	1.220	1.980	1.972	1.969	7.638	6.929	7.874	3.819	2.520	5.906	5.906	8.661	1.220	0.591	1.772
2"	1.500	2.387	2.369	1.496	2.492	2.484	2.480	8.819	12.480	9.055	4.724	2.992	5.906	5.827	8.858	1.339	0.591	1.772

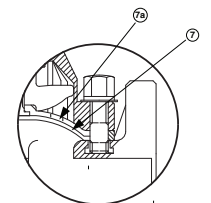


## Parts Listing

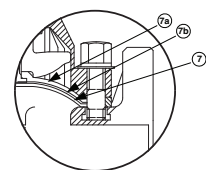


Number	Part	Material	Q,TY
1	Body	PVC, CPVC, PP, PVDF	1
2	Bonnet	PVC, CPVC, PP, PVDF	1
3	Compressor	FC, STAINLESS STEEL - 304	1
4	Hand Wheel	PP	1
5	Sleeve	C3602	1
6	Stem	C3602	1
7	Diaphragm	EPDM, FPM, PTFE	1
7a*	Cushion	EPDM	1
7b*	PVDF Gas Barrier	PVDF	1
8	Cap	PVC, CPVC, PP, PVDF	1
9	Compressor Pin	STAINLESS STEEL - 304	1
10	Inserted Metal	STAINLESS STEEL - 304	1
11	Grease Nipple	C3604 (65-200)	1
12	Bolt & Washer	STAINLESS STEEL - 304	1 Set

Number	Part	Material	Q,TY
13	Inserted Nut	STAINLESS STEEL - 304	1 Set
14	Nut & Washer	STAINLESS STEEL - 304	1 Set
15	Thrust Bearing	Standard (100-200)	1
16	Stopper	STAINLESS STEEL - 304	1
17	Set Nut	STAINLESS STEEL - 304	1
18	Gague Cover	CLEAR POLYCARBONATE	1
19	Sheet Gasket	EPDM, FPM, PTFE	1
20	Sheet Ring	STAINLESS STEEL - 304	1
21	Spring Washer	STAINLESS STEEL - 304	1
22	O-Ring	NBR	1
23	Name Plate	PVC	1
24	Pressure Plate	STAINLESS STEEL - 304	1
25	Top Pressure Plate	STAINLESS STEEL - 304	1
26	Bottom Pressure Plate	STAINLESS STEEL - 304	1



Teflon Diaphragm



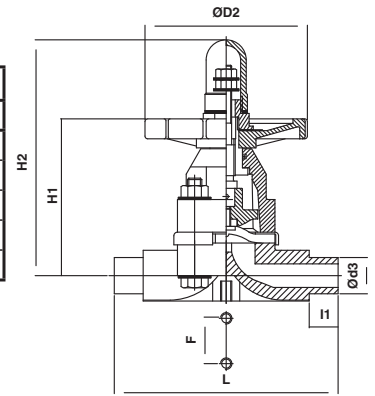
Teflon Diaphragm With PVDF Gas Barrier

\* Used for PTFE Diaphragm

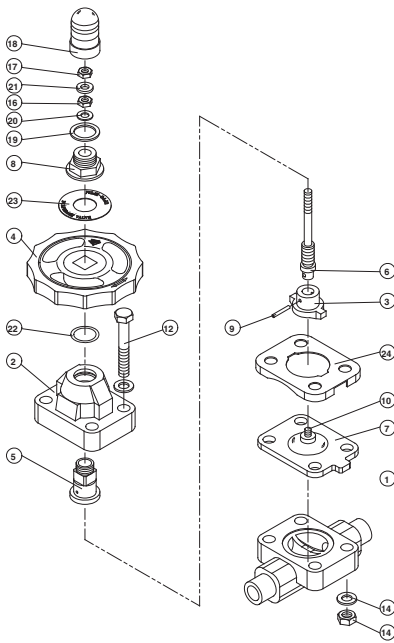
# VG Series

## Dimensional Data - Spigot

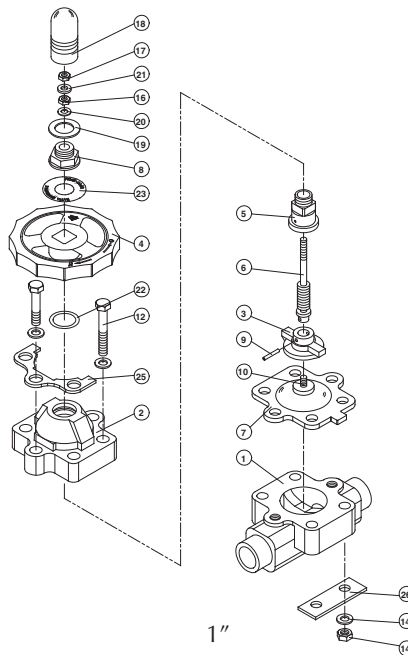
Nom.															
Size	I	d	d2	d3	L	L1	L2	D	D1	D2	H1	H2	I2	S	F
1/2"	0.630	0.799	0.791	0.787	4.882	7.087	5.118	1.811	1.220	3.740	3.386	5.039	0.571	0.433	0.984
3/4"	0.748	0.996	0.988	0.984	5.669	8.150	5.906	2.165	1.457	3.740	3.740	5.433	0.630	0.433	0.984
1"	0.866	1.272	1.264	1.260	6.063	8.819	6.299	2.598	1.732	4.331	3.858	5.669	0.709	0.433	0.984
1 1/2"	1.220	1.980	1.972	1.969	7.638	6.929	7.874	3.819	2.520	5.906	5.906	8.661	0.925	0.591	1.772
2"	1.496	2.492	2.484	2.480	8.819	12.480	9.055	4.724	2.992	5.906	5.827	8.858	1.083	0.591	1.772



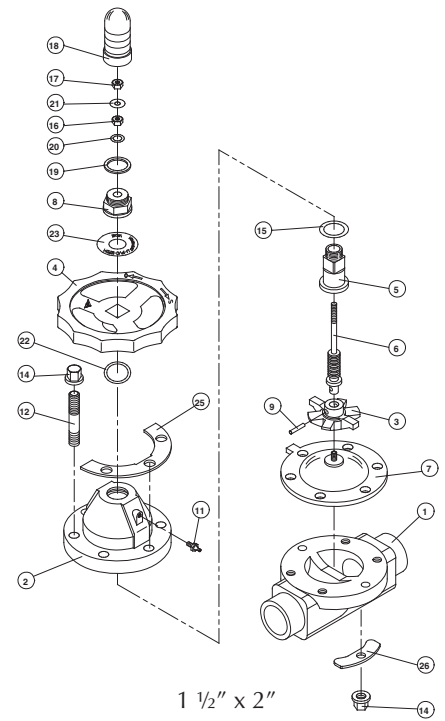
## Parts Listing



1/2" & 3/4"



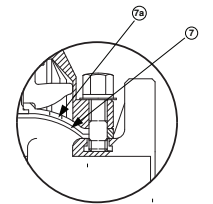
1"



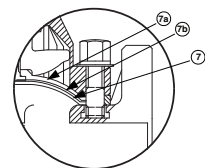
1 1/2" x 2"

Number	Part	Material	Q,TY
1	Body	PVC, CPVC, PP, PVDF	1
2	Bonnet	PVC, CPVC, PP, PVDF	1
3	Compressor	FC, STAINLESS STEEL - 304	1
4	Hand Wheel	PP	1
5	Sleeve	C3602	1
6	Stem	C3602	1
7	Diaphragm	EPDM, FPM, PTFE	1
7a*	Cushion	EPDM	1
7b*	PVDF Gas Barrier	PVDF	1
8	Cap	PVC, CPVC, PP, PVDF	1
9	Compressor Pin	STAINLESS STEEL - 304	1
10	Inserted Metal	STAINLESS STEEL - 304	1
11	Grease Nipple	C3604 (65-200)	1
12	Bolt & Washer	STAINLESS STEEL - 304	1 Set

Number	Part	Material	Q,TY
13	Inserted Nut	STAINLESS STEEL - 304	1 Set
14	Nut & Washer	STAINLESS STEEL - 304	1 Set
15	Thrust Bearing	Standard (100-200)	1
16	Stopper	STAINLESS STEEL - 304	1
17	Set Nut	STAINLESS STEEL - 304	1
18	Gague Cover	CLEAR POLYCARBONATE	1
19	Sheet Gasket	EPDM, FPM, PTFE	1
20	Sheet Ring	STAINLESS STEEL - 304	1
21	Spring Washer	STAINLESS STEEL - 304	1
22	O-Ring	NBR	1
23	Name Plate	PVC	1
24	Pressure Plate	STAINLESS STEEL - 304	1
25	Top Pressure Plate	STAINLESS STEEL - 304	1
26	Bottom Pressure Plate	STAINLESS STEEL - 304	1



Teflon Diaphragm



Teflon Diaphragm  
With PVDF Gas Barrier

\* Used for PTFE Diaphragm