

## 3535 Back Pressure Valve, Low Pressure, Single Seat

### Application

WellMark's Back Pressure Valve can be used in any installation where upstream pressure is required to be kept at a preset range. It may also be used as: a pressure relief valve, a custody transfer dump valve to hold a certain back pressure, or as a separator back pressure valve on the gas or liquid side. Upstream pressure is applied to the bottom of the diaphragm through connecting tubing. Spring tension above the diaphragm opposes this pressure, and when the pressure exceeds the pressure setting on the spring, the plug is raised off the seat. By varying the spring tension, the pressure setting can be varied.

The typical application for these valves is to hold back pressure on separators, treaters, Lact units, etc.

### Features

- Simple Design
- Self-Contained: There are no pilots or small orifices to plug or freeze.
- Easy Access: All internal parts can be removed without taking valve out of line.
- Optional Seat: Integral or Removable
- Available in 1" and 2" Size
- Pressed Steel Topworks
- Threaded body, Ductile Iron
- Flanged Body, Steel

### Specifications

Size ..... 1" & 2" Threaded, 2" Grooved, 2" Flanged

Working Pressure ..... Dictated by Spring Range

Spring Range ..... From 0 to 150 psi

Temperature ..... -50°F to +250°F Standard  
(other materials available)

Size Topworks ..... #10 or #20

(C<sub>v</sub>) Flow Coefficient ..... 1" = 11    2" = 25

### Material

Body ..... 1" & 2" Threaded Ductile Iron  
2" Flanged WCB

Topworks ..... #20 Press Steel, #10 Steel WCB

Diaphragm ..... Nylon Reinforced Nitrile

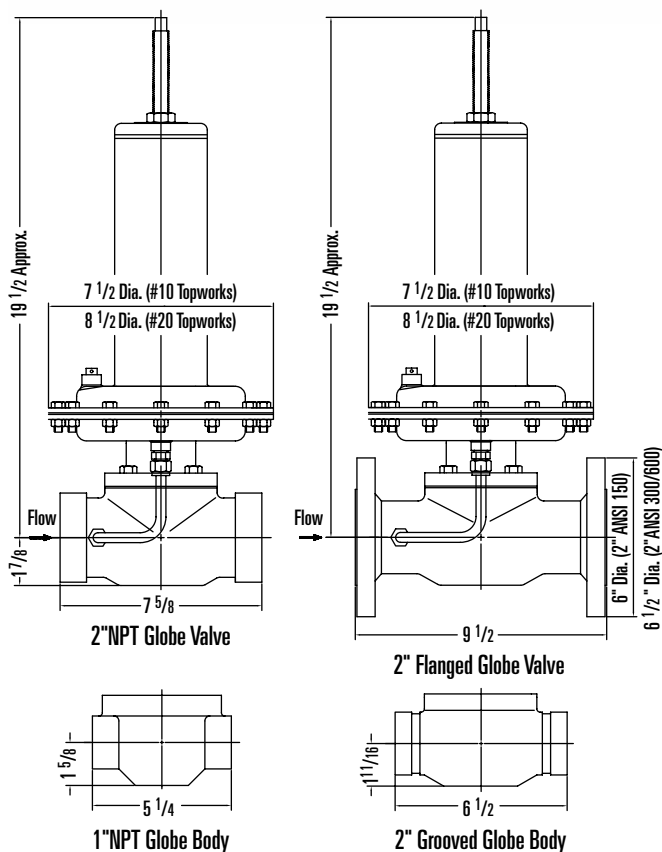
Stem ..... 316 SS

Packing ..... Cotton Reinforced Nitrile

Trim ..... 303 SS Molded Buna-N



### Dimensional Data



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## Parts List Series 3535 w/#20 Topworks

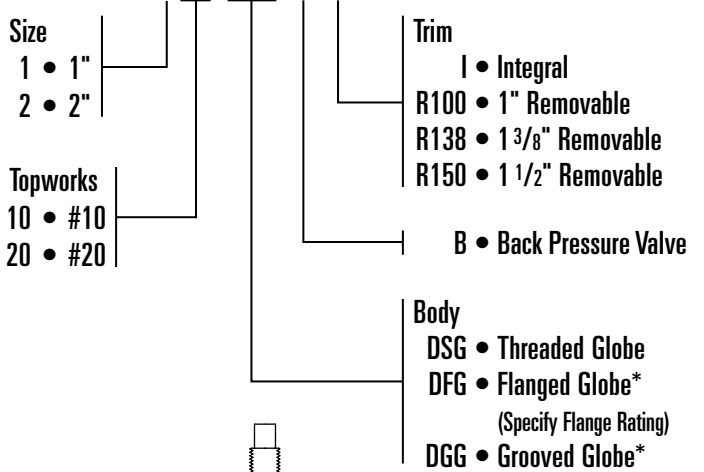
Item	Description	Qty.	Part No.
1	BODY, 1" NPT, DUCTILE IRON	1	05011-8397
	BODY, 2" NPT, DUCTILE IRON	1	05011-8256
	BODY, 2" GROOVED, DUCTILE IRON	1	05011-8207
	BODY, 2" ANSI 150RF, STEEL WCB	1	06500-3345
2*	PLUG, 1" VALVES, 303SS MOLDED BUNA-N	1	05011-1251
	PLUG, 2" VALVES, 303SS MOLDED BUNA-N	1	05010-4561
3*	GASKET, MOLDED BUNA-N	1	05011-0816
4	DIA. SUPPORT, ASTM A-108GR.1018	1	05010-4363
5	WASHER, 304 STAINLESS STL.	1	05010-4116
6	STEM, ASTM A-276 TY.316	1	05010-4587
7	FLEX-LOC NUT, STAINLESS STEEL	1	05000-1817
8	CAP SCREW, ASTM A-307 GR.B	4	05000-1858
9	O-RING, BUNA-N	1	05000-0066
10	FLAT HD. SCREW, STAINLESS STEEL	4	05000-1759
11	LOWER CASE, ASTM A-569	1	06500-0572
12	GASKET, MOLDED BUNA-N	1	05010-3662
13	BREATHER, HPE	1	05011-1640
14	UPPER CASE, ASTM A-569	1	06500-1059
15*	THREAD SEAL, STEEL/BUNA-N	1	06000-0395
16*	PACKING, FLAT, COTTON REIN. NITRILE	1	06000-0528
17	PACKING ADJ., ASTM B-16	1	05010-3639
18	SPACER, DELRIN	1	05010-4322
19*	PACKING, COTTON REIN. NITRILE	3	06000-0387
20	LOCK WASHER, STEEL	1	06000-0403
21	NY-LOC NUT, ASTM A-307 GR.B	1	05000-2997
22	DIAPH. PLATE, ASTM A-569	2	05010-1922
23*	DIAPHRAGM 0-30#, NYLON RENF. NITRILE	1	06000-0056
	DIAPH. 30-100#, NYLON RENF. NITRILE	1	06000-0064
24	UPPER GUIDE, ASTM A-108GR.1213	1	05010-1906
	UPPER GUIDE 50-100#, ASTM A-108GR.1213	1	05010-5071
25	LOWER GUIDE, ASTM A-366	1	05010-1914
	LOWER GUIDE 50-100#, ASTM A-366	1	05010-5089
26	SPRING 0-30#, ASTM A-401	1	05010-1344
	SPRING 10-80#, ASTM A-401	1	05010-6293
27	ADJ. SCREW, ASTM A-307 GR.B	1	05010-7820
28	JAM NUT, ASTM A-307 GR.B	1	05000-2070
29	SPRING, ASTM A-401, INNER	1	05010-5055
30	CAP SCREW, ASTM A-307 GR.B	12	05000-1742
31	HEX NUT, ASTM A-307 GR.B	12	05000-1726
32	ELBOW, CONN., BRASS	1	06000-0445
33	CONNECTOR, BRASS	1	06000-0429
34	TUBING, COPPER	1	06000-0437
35	STEM GUIDE, DELRIN	1	05010-4231

\*Recommended Spare Part

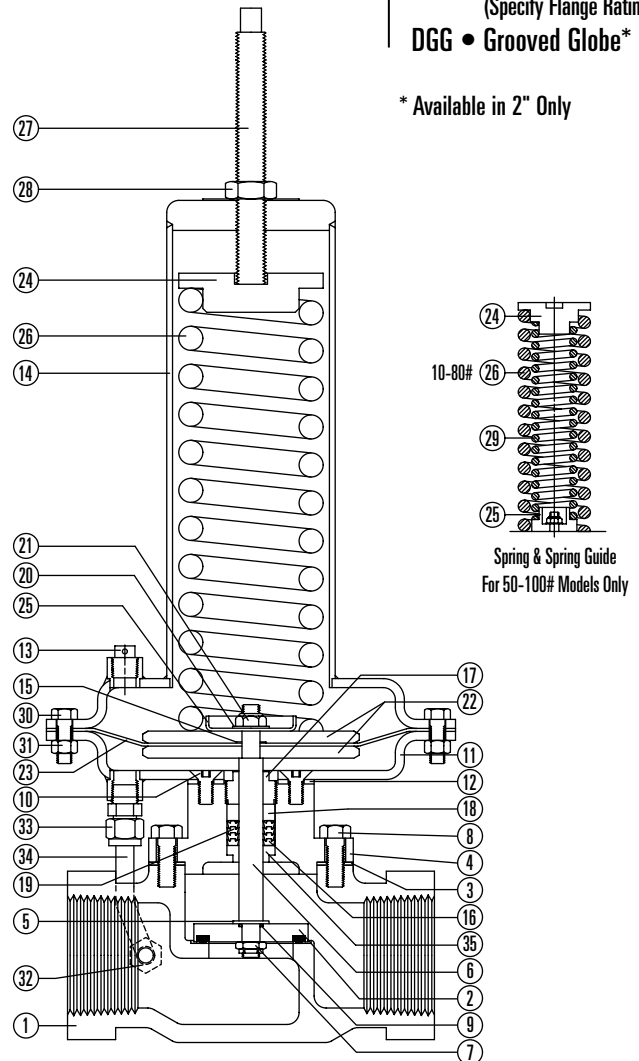
## Determining the Model Number

Example given: Standard Model 220-DSG-B-I—Series 3535, 2" Threaded Globe Body, #20 Topworks, Integral Seated Back Pressure Valve.

### MODEL 220-DSG-B-I



\* Available in 2" Only



## Model and Part No.

Size	Model No.	Ends Connection	Spring Range	C <sub>v</sub>	Wt.	Part No.	
1"	120-DSG-B-I	1" NPT	0-30 lbs	11	32#	03027-0003	
	120-DSG-B-I		10-80 lbs			03027-0011	
2"	220-DSG-B-I	2" NPT	0-30 lbs	25	38#	03001-0086	
	220-DSG-B-I		10-80 lbs			03001-0094	
	220-DSG-B-I		50-100 lbs			03001-0177	
	220-DGG-B-I		0-30 lbs			03001-0037	
	220-DGG-B-I	2" GROOVED	10-80 lbs	25	35#	03001-0052	
	220-DGG-B-I		50-100 lbs			03001-0011	
	220-DFG-B-I		0-30 lbs			03001-0144	
	220-DFG-B-I		10-80 lbs			03001-0151	
	220-DFG-B-I		2" ANSI 150 RF			50-100 lbs	03001-0193
	220-DFG-B-I					50-100 lbs	03001-0193

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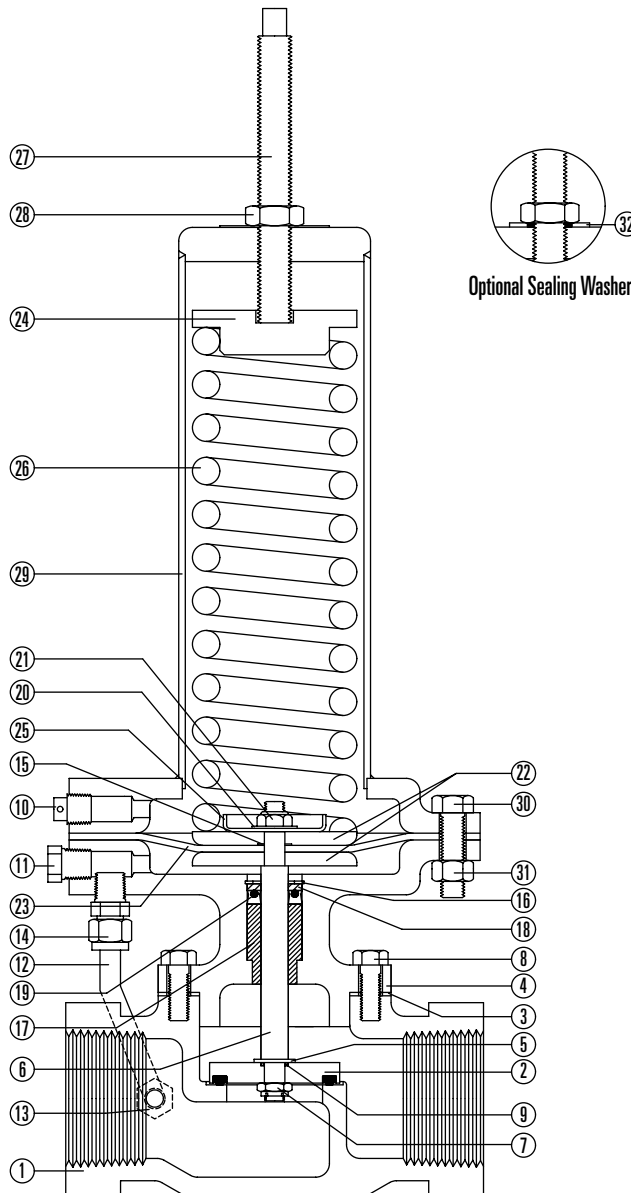
## Parts List Series 3535 w/#10 Topworks

Item	Description	Qty.	Part No.
1	BODY, 1" NPT ANGLE, DUCTILE IRON	1	05011-8397
	BODY, 2" NPT, DUCTILE IRON	1	05011-8256
	BODY, 2" GROOVED, DUCTILE IRON	1	05010-4678
	BODY, 2" ANSI 150RF, STEEL WCB	1	06500-3345
	BODY, 2" ANSI 300RF, STEEL WCB	1	06500-3352
	BODY, 2" ANSI 600RF, STEEL WCB	1	06500-3360
2*	PLUG, 1" VALVES, 303SS MOLDED BUNA-N	1	05011-1251
	PLUG, 2" VALVES, 303SS MOLDED BUNA-N	1	05010-4561
3*	GASKET, MOLDED BUNA-N	1	05011-0816
4	DIA. SUPPORT, STEEL WCB	1	05010-8596
	DIA. SUPPORT, ANSI 300/600 FLG.	1	05011-8298
5	WASHER, 304 STAINLESS STL.	1	05010-4116
6	STEM, ASTM A-276 TY.316	1	05010-9222
7	FLEX-LOC NUT, STAINLESS STEEL	1	05000-1817
8	CAP SCREW, ASTM A-307 GR.B	4**	05000-1874
9*	O-RING, BUNA-N	1	05000-0066
10	BREATHER, HPE	1	05011-1640
11	PIPE PLUG, STEEL	1	06000-0478
12	TUBING, COPPER	1	06000-0437
13	ELBOW CONN., BRASS	1	06000-0445
14	CONNECTOR, BRASS	1	06000-0429
15*	THREAD SEAL, STEEL/BUNA-N	1	06000-0395
16	TRU-ARC RING, STAINLESS STEEL	1	06000-0452
17	STEM GUIDE, DELRIN	1	05010-8638
18	SPACER, DELRIN	1	05010-8646
19*	POLYPAK, MOLYTHANE	1	06000-0353
20	LOCK WASHER, STEEL	1	06000-0403
21	NY-LOC NUT, ASTM A-307 GR.B	1	05000-2997
22	DIAPH. PLATE, ASTM A-569	2	05010-8786
23*	DIAPHRAGM, NYLON RENF. NITRILE	1	05010-8612
24	UPPER GUIDE, ASTM A-108GR.1213	1	05010-1906
25	LOWER GUIDE, ASTM A-366	1	05010-1914
26	SPRING 0-60#, ASTM A-401	1	05010-1344
	SPRING 20-150#, ASTM A-401	1	05010-6293
27	ADJ. SCREW, ASTM A-307 GR.B	1	05010-7820
28	JAM NUT, ASTM A-307 GR.B	1	05000-2070
29	UPPER CASE, ASTM A-216 GR.WCB	1	06500-0986
30	CAP SCREW, ASTM A-307 GR.B	8	05000-1890
31	HEX NUT, ASTM A-307 GR.B	8	05000-2104
32	SEAL WASHER, STEEL PLATED	1	06000-0460

\*Recommended Spare Part  
 \*\*8 Req'd For ANSI 300/600 Flanged Valves

## Model and Part No.

Size	Model No.	Ends Connection	Spring Range	C <sub>v</sub>	Wt.	Part No.
1"	110-DSG-B-I	1" NPT	0-60 lbs	11	40#	03031-0007
	110-DSG-B-I		20-150 lbs			03031-0015
2"	210-DSG-B-I	2" NPT	0-60 lbs	25	44#	03032-0030
	210-DSG-B-I		20-150 lbs			03032-0048
	210-DGG-B-I	2" GROOVED	0-60 lbs	25	41#	03032-0063
	210-DGG-B-I		20-150 lbs			03032-0071
	210-DFG-B-I	2" ANSI 150 RF	0-60 lbs	25	60#	03032-0121
	210-DFG-B-I		20-150 lbs			03032-0139
	210-DFG-B-I	2" ANSI 300 RF	0-60 lbs	25	64#	03032-0154
	210-DFG-B-I		20-150 lbs			03032-0162
	210-DFG-B-I	2" ANSI 600 RF	0-60 lbs	25	68#	03032-0188
	210-DFG-B-I		20-150 lbs			03032-0196



# 3535 Back Pressure Valve, Low Pressure, Single Seat

## Parts List Series 3535 w/Removable Seat & #10 Topworks

Item	Description	Qty.	Part No.
1	BODY, 2" ANSI 150RF, STEEL WCB	1	06500-3204
	BODY, 2" ANSI 300RF, STEEL WCB	1	06500-3212
	BODY, 2" ANSI 600RF, STEEL WCB	1	06500-3220
2	CAP SCREW, ASTM A-307 GR.B	4**	05000-1874
3	DIA. SUPPORT ANSI 150 FLG., WCB	1	05010-8596
	DIA. SUPPORT ANSI 300/600, WCB	1	05011-8298
4*	O-RING, BUNA-N	1	05000-0371
5	WASHER, 304 STAINLESS STL.	1	05010-4116
6	STEM, ASTM A-276 TY.316	1	05012-3181
7	FLEX-LOC NUT, STAINLESS STEEL	1	05000-1817
8*	PLUG, 303SS MOLDED BUNA-N	1	05012-1458
9*	O-RING, BUNA-N	1	05000-0066
10	BREATHER, HPE	1	05011-1640
11	PIPE PLUG, STEEL	1	06000-0478
12	TUBING, COPPER	1	06000-0437
13	ELBOW CONN., BRASS	1	06000-0445
14	CONNECTOR, BRASS	1	06000-0429
15*	THREAD SEAL, STEEL/BUNA-N	1	06000-0395
16	TRU-ARC RING, STAINLESS STEEL	1	06000-0452
17	STEM GUIDE, DELRIN	1	05010-8638
18	SPACER, DELRIN	1	05010-8646
19*	POLYPAK, MOLYTHANE	1	06000-0353
20	LOCK WASHER, STEEL	1	06000-0403
21	NY-LOC NUT, ASTM A-307 GR.B	1	05000-2997
22	DIAPH. PLATE, ASTM A-569	2	05010-8786
23*	DIAPHRAGM, NYLON RENF. NITRILE	1	05010-8612
24	UPPER GUIDE, ASTM A-108GR.1213	1	05010-1906
25	LOWER GUIDE, ASTM A-366	1	05010-1914
26	SPRING 0-60#, ASTM A-401	1	05010-1344
	SPRING 20-150#, ASTM A-401	1	05010-6293
27	ADJ. SCREW, ASTM A-307 GR.B	1	05010-7820
28	JAM NUT, ASTM A-307 GR.B	1	05000-2070
29	UPPER CASE, ASTM A-216 GR.WCB	1	06500-0986
30	CAP SCREW, ASTM A-307 GR.B	8	05000-1890
31	HEX NUT, ASTM A-307 GR.B	8	05000-2104
32	SEAT, ASTM A-582 TY.303	1	05011-1657
33*	O-RING, BUNA-N	1	05000-0322
34	SEAL WASHER, STEEL PLATED	1	06000-0460

\*Recommended Spare Part

\*\*8 Req'd For ANSI 300/600 Flanged Valves

### Model and Part No.

Size/ANSI	Model No.	Spring Range	C <sub>v</sub>	Wt.	Part No.
2"-150	210-DFG-B-R138	0-60 lbs	25	61#	03032-0287
	210-DFG-B-R138	20-150 lbs			03032-0295
2"-300	210-DFG-B-R138	0-60 lbs	25	65#	03032-0303
	210-DFG-B-R138	20-150 lbs			03032-0220
2"-600	210-DFG-B-R138	0-60 lbs	25	69#	03032-0311
	210-DFG-B-R138	20-150 lbs			03032-0329

