

Diaphragm Operated Two-way Double Port, Full Open Valve – Series 455, Ductile Body

Bulletin SSIN051 Issue/Rev. 0.1 (1/19)

INVALCO's **Series 455 Valve** can be used in any low to moderate pressure application that requires discharge of large amounts of fluid quickly. This could be large treaters, separators, free water knockouts, etc.

Features

- **Ductile iron body** – Meets most application requirements
- **Soft plug** – Assures tight shutoff
- **Double port construction** – Assures maximum discharge rates
- **NACE adaptable (RNCE available)** – Can be modified for use in sour service

Specifications

Body Material

Ductile Iron A-395

Body Cover

Ductile Iron A-395

End Connections

2", 3", 4" and 6" 150# Flanges

Diaphragm Operator

- Steel - see chart for topworks size
- Nylon reinforced Buna N
- Maximum recommended operating pressure 70 psi
- Maximum containment pressure 100 psi

Packing

Non-Lubricated Buna N

Maximum Working Pressure

275 psi @ -20°F to +150°F
150 psi @ +250°F

Temperature Limits

-20°F to 250°F



Stem Material

303 stainless steel

Seat Material

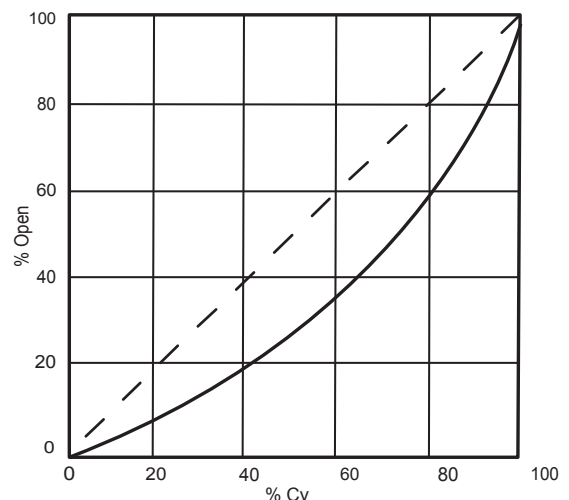
304 stainless steel seat/cage

Plug*

Replaceable Buna-N

Note: * = See valve trim section for optional trim.

Trim Characteristics



Ordering Information

Globe Body

Size	Model Number	Topworks Size	Cv	Cg	Part Number	Weight (lbs)
2"	DFG-201-455	20	44.0	1450	80003636	44
3"	DFG-301-455	50	81.6	2690	80003637	90
4"	DFG-401-455	50	89.8	2780	80003638	111
6"	DFG-601-455	80	540.0	16,700	80003639	218

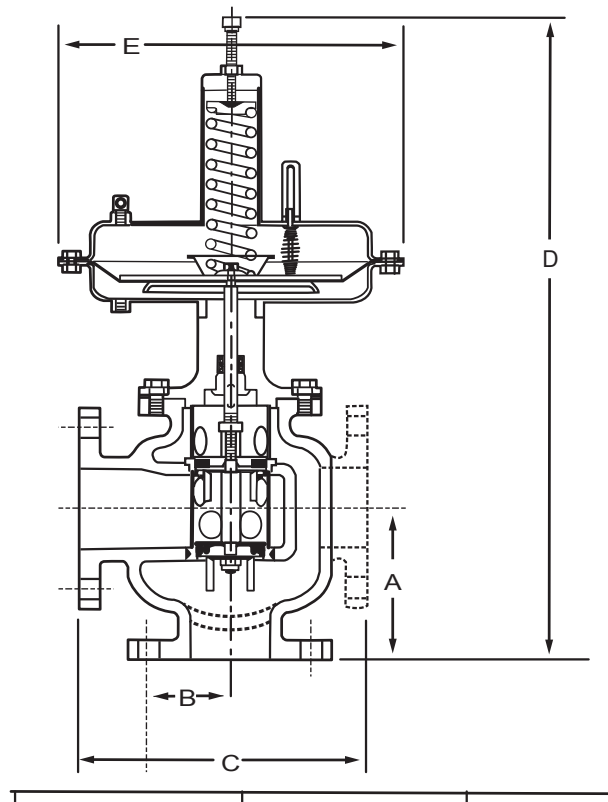
Angle Body

Size	Model Number	Topworks Size	Cv	Cg	Part Number	Weight (lbs)
2"	DFA-201-455	20	44.0	1450	80003631	42
3"	DFA-301-455	50	81.6	2690	80003632	88
4"	DFA-401-455	50	89.8	2780	80003633	109
6"	DFA-601-455	80	550.0	17,050	80003634	218

Dimensions – Inches (mm)

Model	A	B	C	D	E
DFA-201	4.3" (108)	4.0" (101)	----	22.4" (567)	8.4" (214)
DFG-201	4.4" (85)	----	8.0" (203)	21.8" (551)	8.4" (214)
DFA-301	4.6" (142)	5.5" (139)	----	25.0" (633)	12.5" (317)
DFG-301	----	----	11.0" (279)	23.9" (605)	12.5" (317)
DFA-401	4.4" (163)	7.3" (184)	----	25.9" (655)	12.5" (317)
DFG-401	----	----	12.8" (323)	23.9" (605)	12.5" (317)
DFA-601	4.8" (198)	8.3" (209)	----	31.0" (785)	14.8" (374)
DFG-601	----	----	14.5" (367)	30.8" (779)	14.8" (374)

Dimensions – Inches to the nearest tenth (millimeters to the nearest whole mm), each independently dimensioned from engineering drawings.

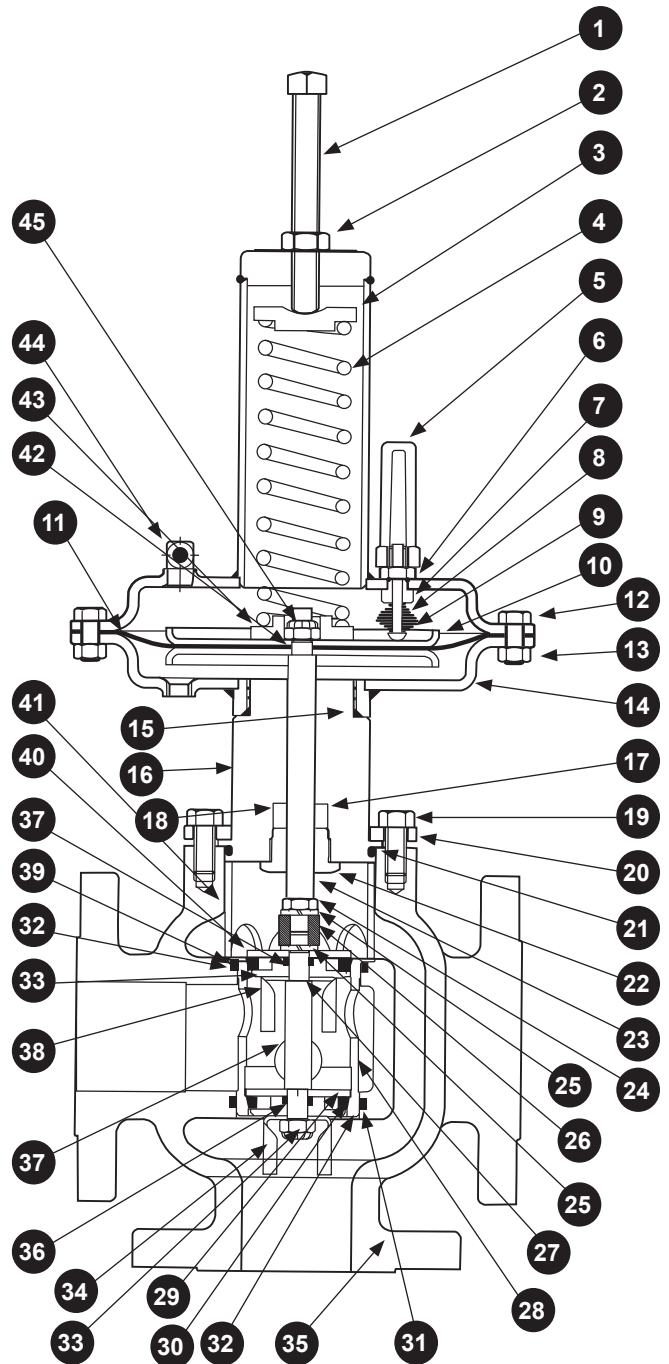


Notes:

1. Cv and Cg values are for fully open inner valve
3. Part numbers applicable only when valve desired is exactly as described above
4. To order specify Model Number, Part Number, Trim Description
5. See attached parts list

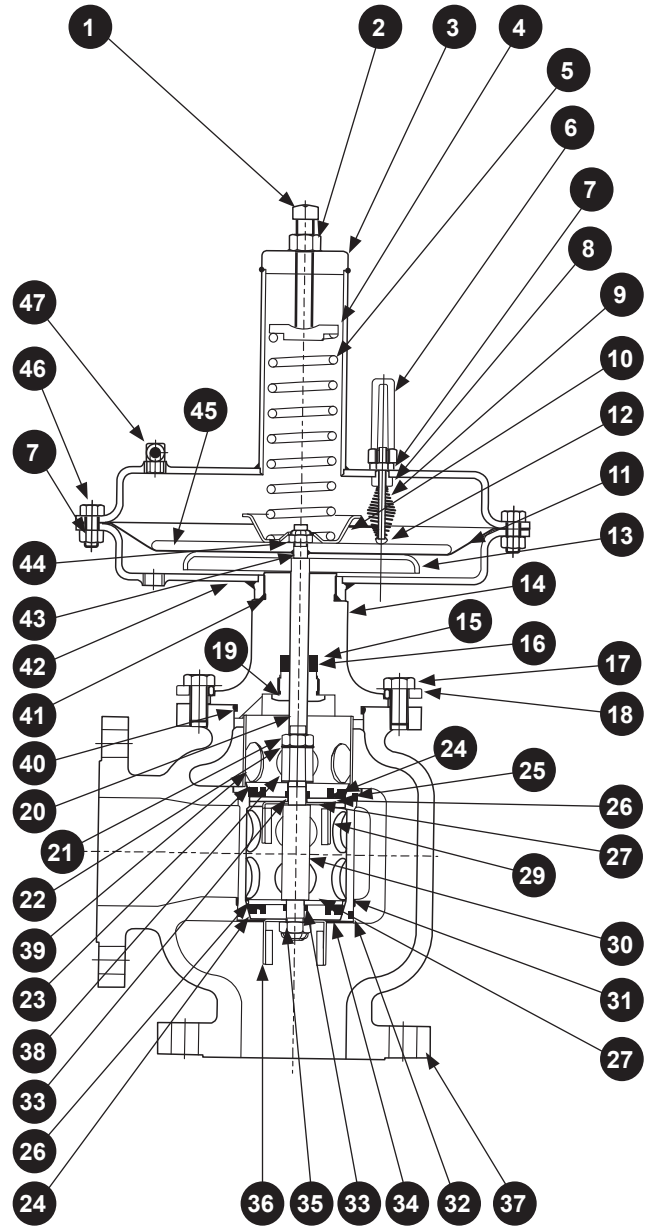
Parts – 2" 455 Valve

Item	Description	Qty.	Part No.
1	Screw 1/2-13x4 Shop	1	65015571
2	Nut 1/2-13 Hex Jam	1	65008551
3	Upper Spring Rest	1	45001858
4	Spring, 180#	1	45002044
5	Travel Indicator Sightglass	1	45004223
6	Nut 3/8-16 Hex	1	65001966
7	Bushing	1	45003129
8	Spring	1	45003415
9	Travel Indicator	1	45003470
10	Diaphragm Plate	2	45003466
11	Diaphragm	1	45003465
12	Screw 5/16" x 3/4" HHCS	12	65002073
13	Nut 5/16 Hex	12	65002100
14	Lower Diaphragm Case	1	48004018
15	O-Ring BUN-225-90	1	67101299
16	Body Cover	1	45015533
17	Packing Ring Flat 1/2" x 1"	1	45001948
18	Packing Ring Regular 1/2" x 1"	3	45001947
19	Screw 3/8" x 7/8" HHCS	4	65003440
20	Clamp Ring	1	45003128
21	O-Ring BUN-230-90	1	67101540
22	Packing Nut	1	45001939
23	Upper Stem	1	45010519
24	Nut 3/8-24 Hex	1	65002513
25	Washer 3/8" Tooth Lock	2	65004401
26	Connector Stem	1	45010518
27	Shim .010 THK	3	45011336
28	Seat Cage	1	45016100
29	Washer Lower	1	45002433
30	Lower Seal	1	45002424
31	O-Ring BUN-228-90	2	67101530
32	Washer Seal	2	45002436
33	Nut 3/8 Flexloc	1	65003075
34	Lower Guide	1	45002435
35	Body 2" 150# Angle	AR	45012015
	Body 2" 150# Globe	AR	45012099
36	O-Ring, BUN-110-90	2	67101632
37	Lower Stem	1	45002429
38	Upper Guide	1	45002434
39	Upper Seal	1	45002423
40	Upper Washer	1	45002432
41	Cage Spacer	1	45002431
42	O-Ring BUN-011-90	1	67101725
43	Lower Spring Rest	1	45001859
44	1/4" Bleeder Filter	1	45002612
45	Nut 3/8-24 Flexloc	1	65001401
46	Upper Diaphragm Case	1	48004019



Parts – 3" and 4" 455 Valves

Item	N	Description	Qty.	Part No.
1		Screw 1/2-13x3 SQHSS	1	65000525
2		Nut 1/2-13 Hex Jam	1	65008551
3		Upper Diaphragm Case	1	48004020
4		Upper Spring Rest	1	45001858
5	*	Spring	1	45008406
6		Sightglass	1	45004223
7		Nut 3/8-16 Hex	17	65001966
8		Bushing	1	45003129
9		Spring	1	45004315
10		Travel Shop	1	45002343
11	*	Diaphragm	1	45003460
12		Travel Indicator	1	45004277
13		Lower Diaphragm Plate	1	45001789
14		Body Cover	1	45015639
15	*	Packing Ring Flat 1/2" x 1"	1	45001948
16	*	Packing Ring Regular 1/2" x 1"	3	45001947
17		Screw 1/2-13x1 HHCS	4	65002852
18		Clamp Ring	1	45003413
19		Packing Nut	1	45001939
20		Upper Stem	1	45010520
21		Nut 1/2-20 Hex Jam	1	65005386
22	@	Washer 1/2 Tooth Lock	2	65005389
23	@	Upper Plug	1	45003390
24	@	Seal	2	45003359
25	@	O-Ring BUN-234-90	1	67101736
26	@	Plug Cap	2	45003392
27	@*	Shim .005 THK	AR	45012496
		Shim .010 THK	AR	45016285
29	@	Upper Stem Guide	1	45003384
30	@	Lower Stem	1	45003385
31	@	Seat Cage	1	45016102
32	@	O-Ring BUN-233-90	1	67102331
33	@	O-Ring BUN-112-90	2	67101408
34	@	Lower Plug	1	45003395
35	@	Nut 1/2-20 Flexloc	1	65003402
36	@	Lower Stem Guide	1	45003386
37		Body 3" 150# Angle	AR	45012016
		Body 4" 150# Angle	AR	45012017
		Body 3" 150# Globe	AR	45012100
		Body 4" 150# Globe	AR	45012101
38	@	Connector Stem	1	45010521
39	@	Cage Spacer	1	45003389
40		O-Ring BUN-237-90	1	67102334
41	@	O-Ring BUN-225-90	1	67101299
42		Lower Diaphragm Case	1	48003459
43		O-Ring BUN-011-90	1	67101725
44		Nut 3/8-24 Flexloc	1	65001401
45		Upper Diaphragm Plate	1	45002776
46		Screw 3/8-16x7/8 HHCS	16	65003440
47		1/4" Bleeder Filter	1	45002612
51		Plug 1/4" NPT	AR	45002595

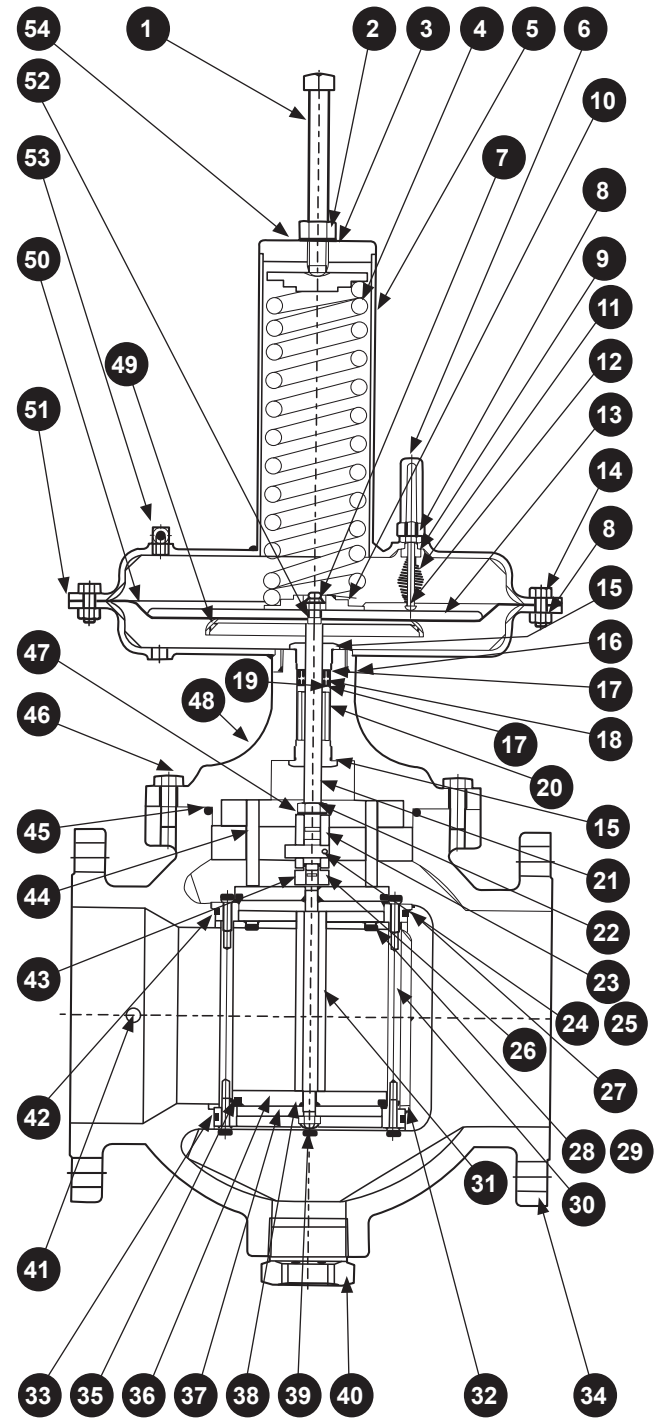


Parts Key:

* = Recommended spare parts.

@ = Included in Trim Set 83000113.

Parts – 6" 455 Valve				
Item	N	Description	Qty.	Part No.
1		Screw 5/8-11x5-1/2 SQHSS	1	65015572
2		Nut 5/8-11 Hex	1	65002136
3		Upper Spring Rest	1	45003991
4	*	Spring	1	45003941
5		Upper Diaphragm Case	1	48006312
6		Sightglass	1	45004223
7		Nut 3/8-24 Flexloc	1	65001401
8		Nut 3/8-16 Hex	21	65001966
9		Bushing	1	45001329
10		Lower Spring Rest	1	45003992
11		Spring	1	45004315
12		Travel Indicator	1	45004277
13		Upper Diaphragm Plate	1	45004506
14		Screw 3/8-16x7/8 HHCS	20	65003440
15		Packing Nut	2	45001939
16		O-Ring BUN-225-90	1	67101299
17	*	Packing Ring Reg 1/2"x1"	2	45001947
18	*	Packing Ring Flat 1/2" x 1"	2	45001948
19		Packing Follower	1	45001937
20		Packing Spacer	1	45001938
21		Upper Stem	1	45006446
22		Nut 1/2-20 Hex Jam	1	65005386
23		Stem Connector	1	45006447
24		Hinge Pin	1	45006265
25	*	Cotter Pin 1/8x1-1/2	1	79006347
26	@	Stem Adapter	1	45006273
27	@	O-Ring BUN-254-90	1	67106176
28	@	Screw 1/4-20x7/8 SHCS	12	54006180
29	@	Washer 1/4" Lock	8	65006386
30	@	Cage Pin	4	45006274
31	@	Lower Stem	1	45006272
32	@	Lower Seat	1	45006268
33	@	O-Ring BUN-253-90	1	67106465
34		Body 6" Angle	AR	45012564
		Body 6" Globe	AR	45014487
35	@	O-Ring VIT-346-75	2	67306345
36	@	Plug Body	2	45006270
37	@	Plug Cap	2	45006271
38	@	O-Ring 3/8" I.D. BUN-110-90	2	67101532
39	@	Nut 3/8-24 Flexloc	1	65003075
40		Plug 2" NPT (Globe body only)	AR	45011095
41		Plug 1/4" NPT (Globe only)	AR	45002595
42	@	Upper Seat	1	45006269
43	@	Washer 3/8" Tooth Lock	1	65004401
44	@	Upper Cage Pin	4	45006275
45	*	O-Ring BUN 437-90	1	67106179
46		Screw 1/2-13x1-1/4 HHCS	8	65000176
47	@	Washer 1/2" Tooth Lock	1	65005389
48		Body Cover	1	45012567
49		Lower Diaphragm Plate	1	45001789
50	*	Diaphragm	1	45004306
51		Lower Diaphragm Case	1	48001905
52	*	O-Ring BUN-011-90	1	67101725
53		1/4" Bleeder Filter	1	45002612



Parts Key:

* = Recommended spare parts.

@ = Included in Trim Set 83000113.

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

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TechnipFMC
FMC Technologies, Inc.
13460 Lockwood Road
Building S01
Houston, Texas 77044 USA
P:+1 281.591.4000

USA Operation
1602 Wagner Avenue
Erie, Pennsylvania 16510 USA
P:+1 814.898.5000

Germany Operation
Smith Meter GmbH
Regentstrasse 1
25474 Ellerbek, Germany
P:+49 4101.304.0