

3-WAY TWO PRESSURE HYDRAULIC

DURBIN INDUSTRIAL VALVE



Features:

Valve Type: Spool

Function: 2 pressure/ 3-way directional

Action: Normally Closed

Actuation: Pneumatic

Pilot Range: 35-40 psi (2.4-2.8 bar)

Sizes: 1"-1-1/2" (DN 25 to DN 50)

Pressure Ratings: Up to 4000 psi (276 bar)

Temperature Ratings: -20°F to 160°F (-26°C to 71°C)

Connection Style: Threaded (NPT/BSPT)

Seat Type: Hard Seat

Leakage Rate: ANSI/FCI 70-2 class VI

Cv: Maximum of 3.6

Media: Hydraulic media/water

Overview: The Durbin two pressure hydraulic valve is used for press operations where a low pressure fluid and a high pressure fluid are utilized in a press/ram application. The valve is designed with an integrated low pressure check valve.

Materials of Construction: The Durbin 3-Way Two Pressure series is constructed of ASME pressure vessel stainless steel grade 300 series. The seat sleeve and stem components are machined from precipitation-hardenable material, giving this valve exceptional sealing ability over the life of the product. This tough and durable material can withstand the devastating effects caused by high velocity media flow through the flow channels.

Application: In many press operations, a low pressure fluid is used to close the ram. As the ram approaches the end of the travel, a higher pressure is required for the actual "press" process. Once the high pressure fluid is initiated the integrated low pressure check valve protects the low pressure line. High pressure inlet may be actuated by means of an automated kick in such as the Durbin D344-2000 series or a high pressure two way valve such as the Durbin D4800 series. See page 6-7 for more information.



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TWO PRESSURE TECHNICAL DATA

NOMINAL VALVE SIZE	MODEL NUMBER	CV		
		INLET TO RAM	RAM TO DRAIN	LOW PRESSURE TO RAM
1"	D014-4002	22.0	14.0	11.0
1-1/2"	D014-6002	24.5	29.5	23.2

NOMINAL VALVE SIZE	MODEL NUMBER	PORT SIZE (NPTF)			
		HIGH- PORESSURE INLET	LOW- PRESSURE INLET	CYLINDER / RAM PORT	DRAIN PORT
1"	D014-4002	1-1/4"	1"	1-1/2"	1-1/2"
1-1/2"	D014-6002	1-1/4"	1-1/2"	2"	2"

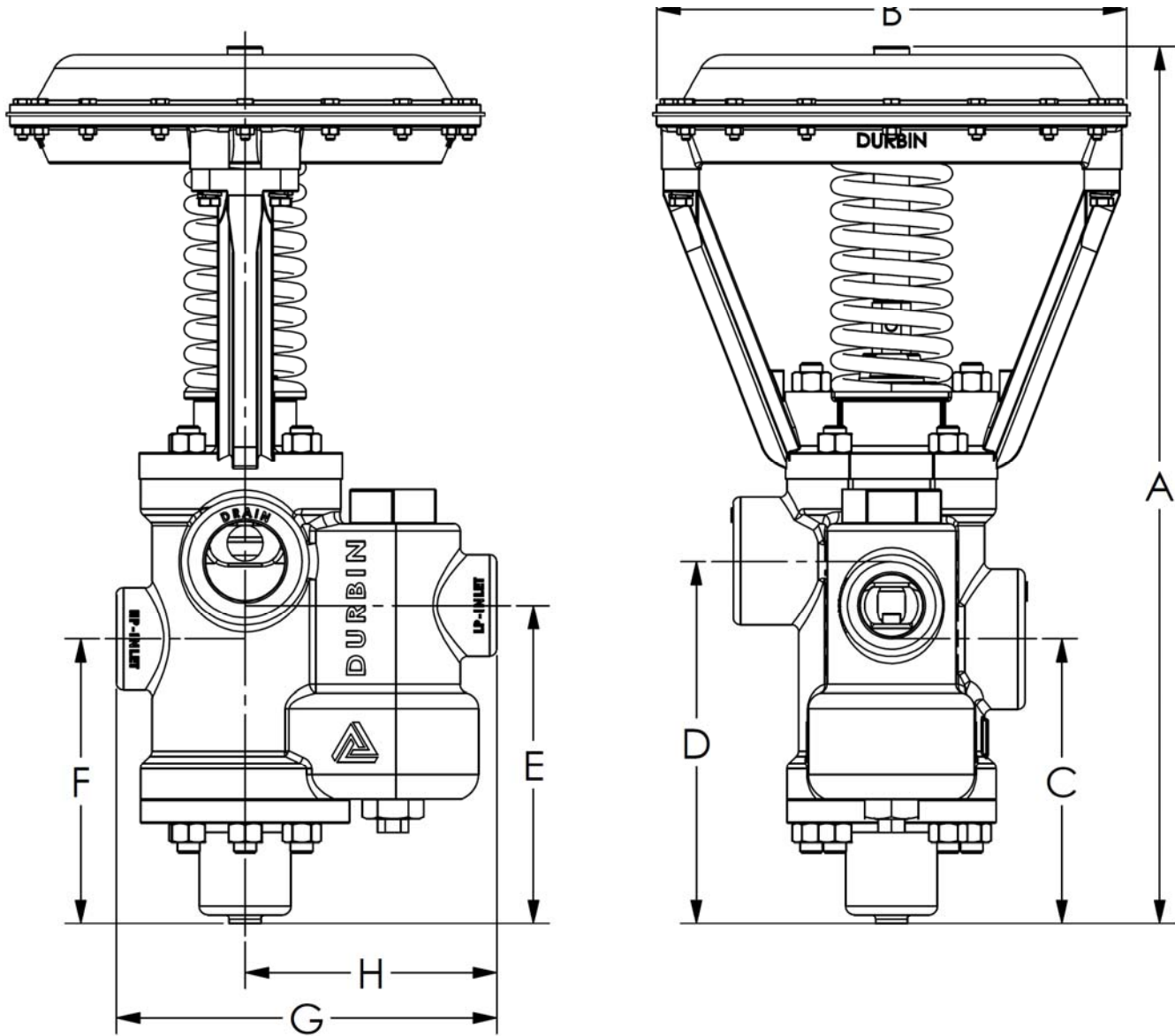
PSI	APPROXIMATE VELOCITY (FT/SEC)	D014-4002 1" NPTF	D014-6002 1-1/2" NPTF
		GMP FLOW	
100	17.0	41.4	94.0
200	24.6	59.8	136.0
300	30.5	74.2	169.0
400	34.8	84.5	193.0
500	38.8	94.2	215.0
600	42.5	103.2	236.0
700	46.3	112.5	256.0
800	49.2	119.7	272.0
900	51.3	124.5	284.0
1000	53.2	129.2	295.0



3-WAY TWO PRESSURE HYDRAULIC

DURBIN INDUSTRIAL VALVE

DURBIN TWO PRESSURE VALVE DIMENSIONS



DURBIN HYDRAULIC VALVE DIMENSIONS									
VALVE SIZE	UNITS	A	B	C	D	E	F	G	H
1"	IN	18.82	11.72	5.82	7.69	6.44	5.82	8.99	5.9
	mm	478.0	298.0	148.0	195.0	164.0	148.0	228.0	150.0
1-1/2"	IN	24.67	13.20	8.00	10.19	8.94	8.00	10.67	7.06
	mm	627.0	335.0	203.0	259.0	227.0	203.0	271.0	179.0

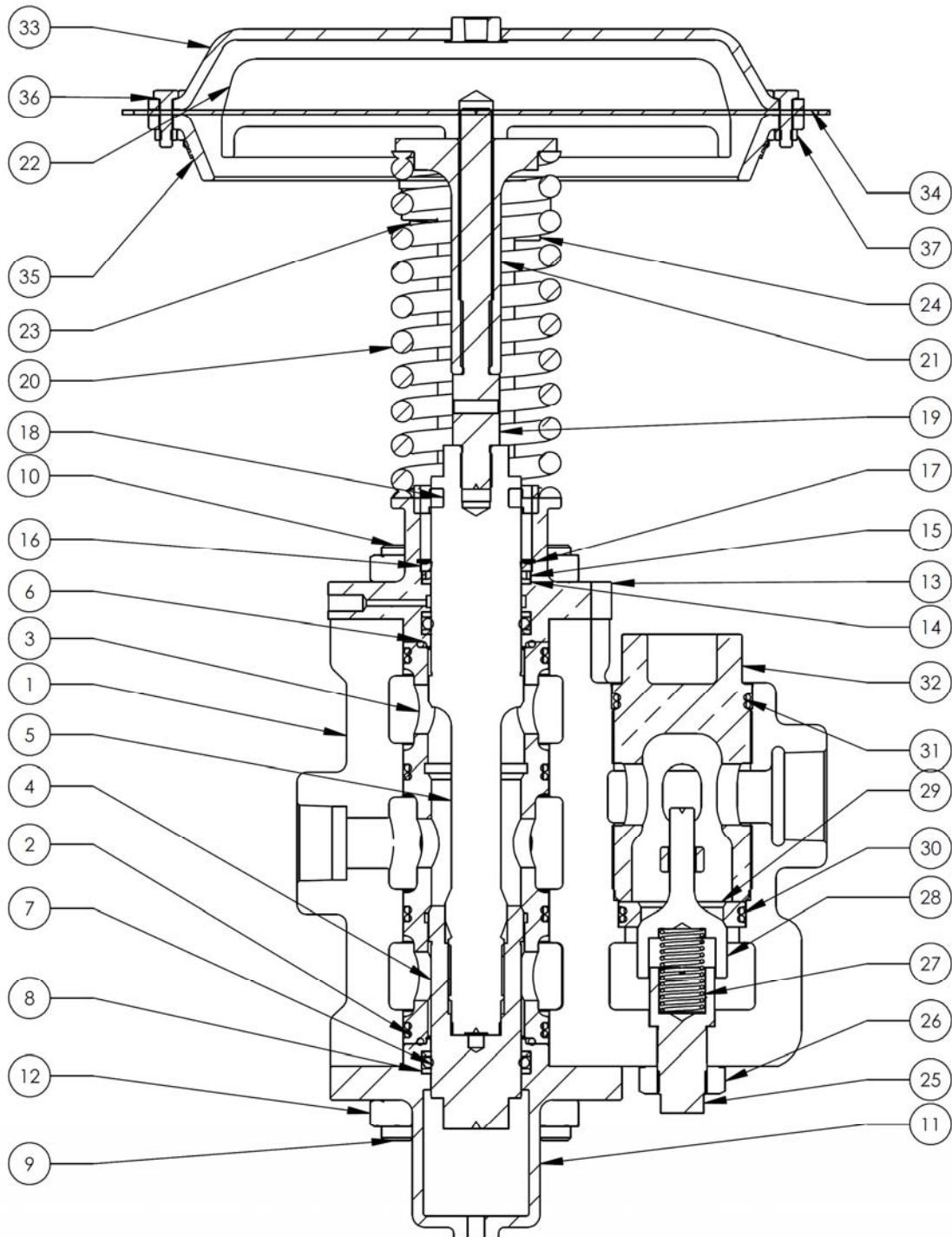
Please contact us for more information at Phone: 330.724.9968 Email: valve@durbinvalve.com Website: www.durbinvalve.com



3-WAY TWO PRESSURE HYDRAULIC

DURBIN INDUSTRIAL VALVE

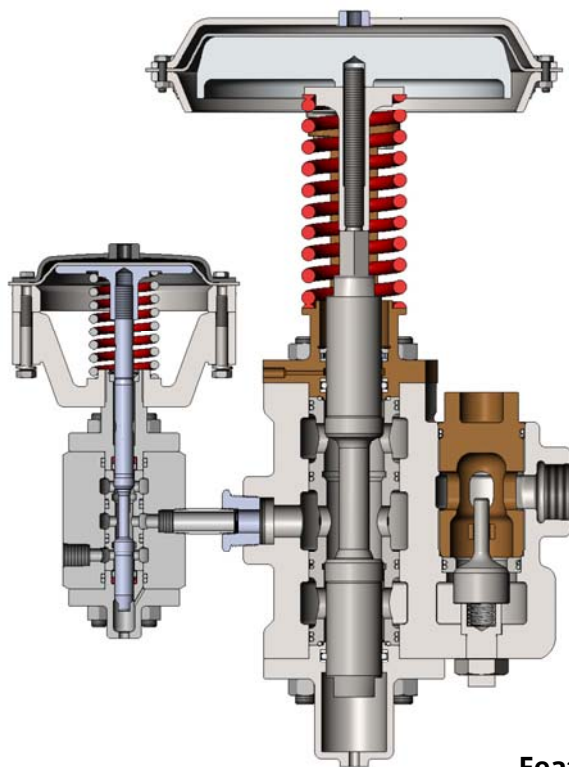
DURBIN TWO PRESSURE PARTS DIAGRAM



DURBIN TWO PRESSURE PARTS LIST

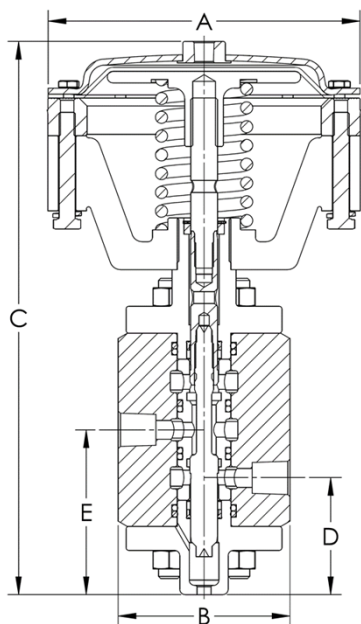
ITEM	VALVE NUMBER	D014-4002	D014-6002
	SIZE	1" 3W HYD 2 PRESSURE 4000 PSI	1-1/2" 3W HYD 2 PRESSURE 4000 PSI
ITEM	DESCRIPTION	PART #	PART #
1	BODY	C093-060D	C093-084D
2	ORING	H137-24	H137-55
3	SEAT SLEEVE	D013-008D	D013-009D
4	LOWER STEM	D113-020D	D113-031D
5	UPPER STEM	D143-035D	D143-047D
6	ORING	H136-43	H137-36
7	ORING	H136-17	H239-22
8	BACK UP WASHER	X	H143-31
9	STUD YOKE-BOTTOM CAP	D153-057D	D153-057D
10	YOKE STUD	X	D153-076D
11	BOTTOM CAP	C213-071D	C213-087D
12	HEX NUT	C573-016D	C2573-016D
13	YOKE	D283-082D	D283-103D
14	WIPER RING	X	H092-22
15	SPACER	X	D043-098D
16	SCRAPER RING	H092-14	H092-23
17	RETAINING RING	H090-49	H090-52
18	SPRING WASHER	D083-027D	X
19	STEM EXTENSION SCREW	D133-016D	D133-020D
20	DIAPHRAGM SPRING	D293-048D	D293-057D
21	SPRING RETAINING NUT	C633-026D	C633-030D
22	PISTON	C783-104D	C783-113D
23	LOCK WASHER	H175-21	H175-21
24	YOKE BOLT	H096-50	H096-50
25	CHECK GUIDE STUD	D203-002D	D203-005D
26	CHECK GUIDE STUD NUT	C573-025D	C573-029D
27	CHECK SPRING	D293-011Y	D293-023Y
28	CHECK SEAT	C833-013D	C833-015D
29	CHECK SEAT RING	C963-130D2	C963-098D
30	ORING	H136-51	H137-44
31	ORING	H137-14	H137-51
32	SEAT RETAINER	C863-013D	C873-011D
33	LID/COVER	D293-036D	C293-042D
34	DIAPHRAGM	C333-031D	C333-037D
35	RING	C893-031D	C893-037D
36	LID BOLT	H096-11	H096-11
37	LID NUT	H060-03	H060-03
	TOP ASSEMBLY	C392-009D	C392-010D
	REPAIR KIT	C182-046D	C182-047D

DURBIN TWO PRESSURE APPLICATION



NOMINAL VALVE SIZE	STYLE	DESCRIPTION		CV		
				PSI	BAR	PORT 1 TO PORT 2
1/2"	2W NC	4000#	MODEL	D4821		3.3
			PRESSURE RATING	4000	276	
		6000#	MODEL	D6821		2.65
			PRESSURE RATING	6000	414	
	2W NO	4000#	MODEL	D4820		3.3
			PRESSURE RATING	4000	276	
		6000#	MODEL	D6820		2.65
			PRESSURE RATING	6000	414	
	3W	4000#	MODEL	D4621		3.3
			PRESSURE RATING	4000	276	
		6000#	MODEL	D6621		2.8
			PRESSURE RATING	6000	414	
3/4"	2W NC	4000#	MODEL	D4831		3.55
			PRESSURE RATING	4000	276	
		6000#	MODEL	D6831		2.7
			PRESSURE RATING	6000	414	
	2W NO	4000#	MODEL	D4830		3.55
			PRESSURE RATING	4000	276	
		6000#	MODEL	D6830		2.7
			PRESSURE RATING	6000	414	
	3W	4000#	MODEL	D4631		3.6
			PRESSURE RATING	4000	276	
		6000#	MODEL	D6631		2.8
			PRESSURE RATING	6000	414	

**HIGH PRESSURE ACTUATION
USING PNEUMATIC 2-WAY N/C
DEPICTED WITH DURBIN D4821**



Features:

Valve Type: Spool

Function: 2-way/3-way

Action: Normally Closed/Normally Open

Actuation: Pneumatic

Pilot Range: 35-40 psi (2.4-2.8 bar)

Sizes: 1/2"-3/4" (DN 15 to DN 20)

Pressure Ratings: Up to 6000 psi (414 bar)

Temperature Ratings: -20°F to 160°F
(-26°C to 71°C)

Connection Style: Threaded (NPT/BSPT)

Seat Type: Hard Seat

Leakage Rate: ANSI/FCI 70-2 class VI

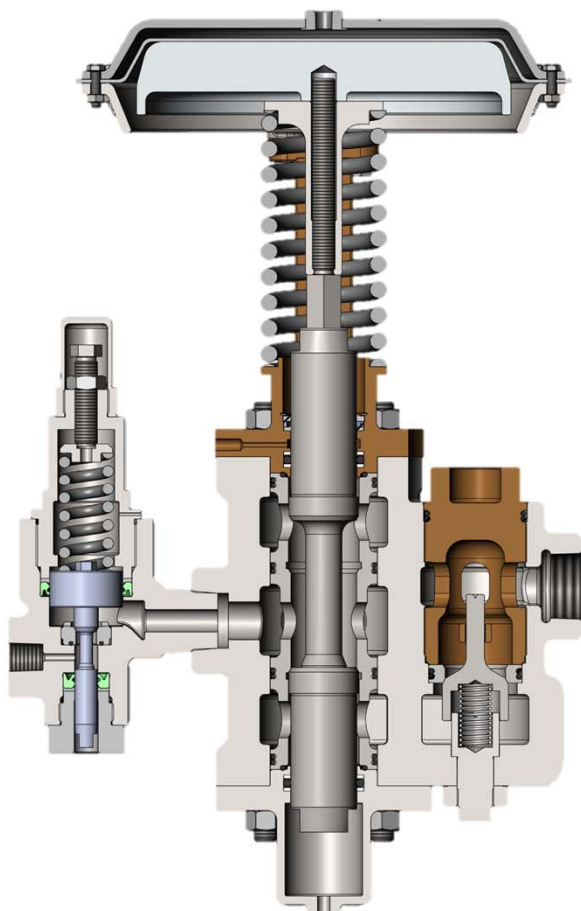
Cv: Maximum of 3.6

Media: Raw Water, Oil, Water and Soluble Oil

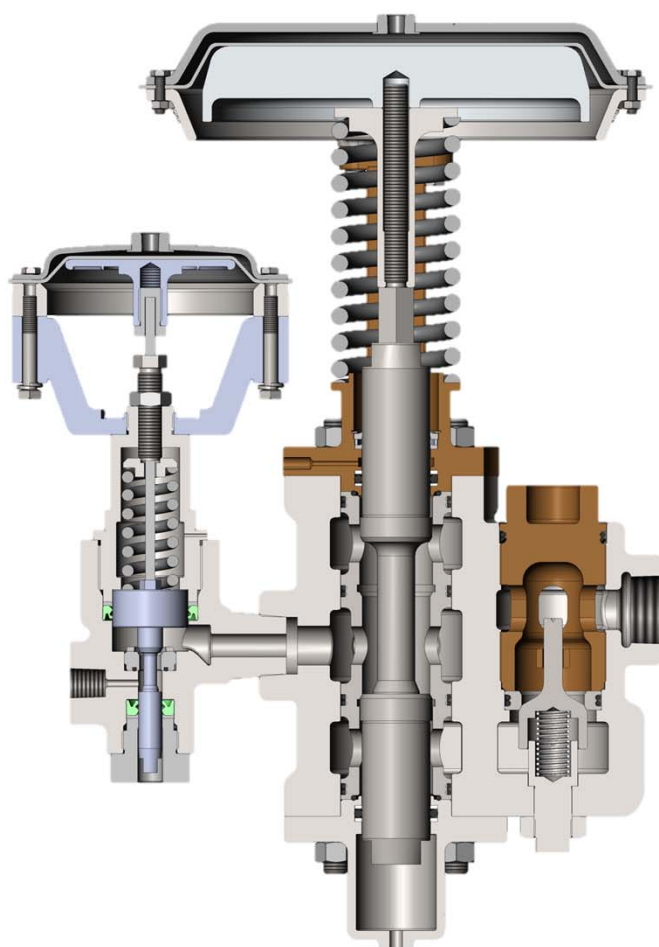


DURBIN HYDRAULIC VALVE DIMENSIONS						
VALVE SIZE	UNITS	A	B	C	D	E
1/2"-3/4"	IN	7.26	4.00	12.89	2.73	3.84
	mm	184.0	102.0	327.0	69.0	98.0

DURBIN TWO PRESSURE APPLICATION

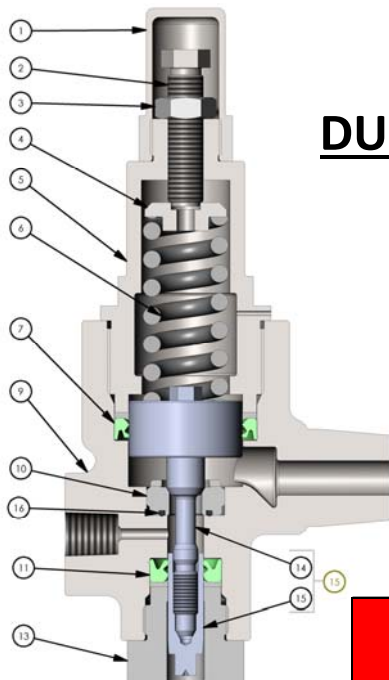


**HIGH PRESSURE ACTUATION
USING AUTOMATIC KICK-IN
DEPICTED WITH DURBIN D344-2001**

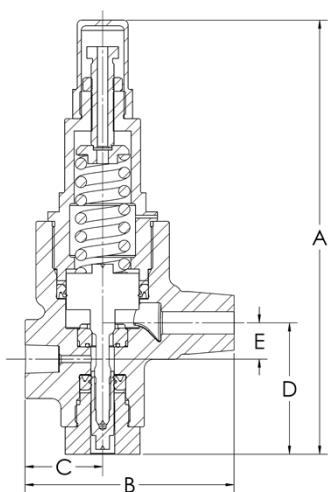


**HIGH PRESSURE ACTUATION
USING AUTOMATIC KICK-IN
W/ DIAPHRAGM ACTUATOR
DEPICTED WITH DURBIN D344-2002**

AUTOMATIC HIGH-PRESSURE INLET "KICK-IN" VALVE		AUTOMATIC HIGH-PRESSURE INLET "KICK-IN" W / DIAPHRAGM VALVE	
MODEL NO.	LOW PRESSURE RANGE	MODEL NO.	LOW PRESSURE RANGE
D344-2001	75-150 PSI (5.2 to 10.3 BAR)	D344-2002	75-150 PSI (5.2 to 10.3 BAR)
D344-2003	125-350 PSI (8.6 to 24.1 BAR)	D344-2004	125-350 PSI (8.6 to 24.1 BAR)
D344-2008	500-1000 PSI (34.5 to 69.0 BAR)	D344-2009	500-1000 PSI (34.5 to 69.0 BAR)

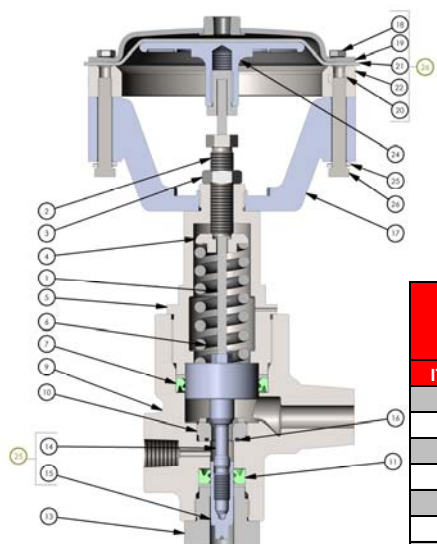


DURBIN AUTOMATIC “KICK-IN” VALVES



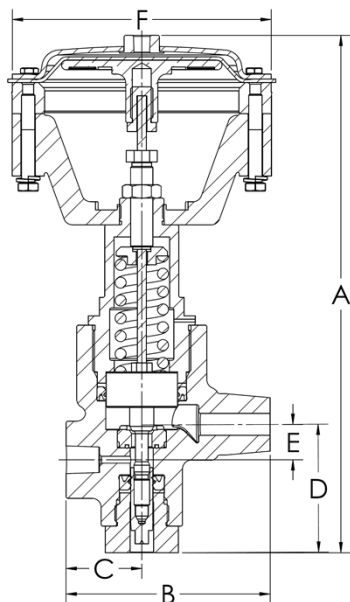
	VALVE NUMBER	D344-2001	D344-2003	D344-2008
	RANGE (psi)	75 to 150 psi	125 to 350 psi	500 to 1000 psi
	RANGE (bar)	5.2 to 10.3 bar	8.6 to 24.1 bar	34.5 to 69.0 bar
ITEM	DESCRIPTION	PART #	PART #	PART #
1	CAP	C213-267D	C213-267D	C213-267D
2	ADJUSTING SCREW	C913-116D	C913-116D	C913-116D
3	ADJUSTING SCREW NUT	H060-22	H060-22	H060-22
4	SPRING CUP	C883-101D	C883-004D	C883-002D
5	BONNET	C113-119D	C113-119D	C113-154D
6	SPRING	D293-165D	D293-020D	D293-044D
7	PACKER, LARGE END	C683-034DS	C683-034DS	C683-034DS
8	BODY	C093-008D	C093-008D	C093-008D
9	SEAT RING	C963-036D	C963-036D	C963-036D
10	PACKER, SMALL END	C683-008DS	C683-008DS	C683-008DS
11	RETAINER, SMALL END PACKER	C213-065D	C213-065D	C213-065D
12	STEM	C332-072D	C332-072D	C332-072D
13	NUT	D033-017D	D033-017D	D033-017D
14	ORING	H135-25	H135-25	H135-25
15	STEM ASSEMBLY	C332-018D	C332-018D	C332-018D

DURBIN HIGH PRESSURE AUTOMATIC INLET DIMENSIONS						
VALVE	UNITS	A	B	C	D	E
D344-2001	IN	11.90	5.72	2.12	3.60	0.99
D344-2003						
D344-2008	mm	302.1	145.4	53.9	91.4	25.2



DURBIN AUTOMATIC “KICK-IN” VALVES WITH DIAPHRAGM ACTUATOR

	VALVE NUMBER	D344-2002	D344-2004	D344-2009
	RANGE (psi)	75 to 150 psi	125 to 350 psi	500 to 1000 psi
	RANGE (bar)	5.2 to 10.3 bar	8.6 to 24.1 bar	34.5 to 69.0 bar
ITEM	DESCRIPTION	PART#	PART #	PART #
1	STEM	D093-110D	D093-110D	D093-113D
2	ADJUSTING SCREW	C913-116D	C913-116D	C913-116D
3	ADJUSTING SCREW NUT	H060-22	H060-22	H060-22
4	SPRING CUP	C883-101D	C883-004D	C883-002D
5	BONNET	C113-119D	C113-119D	C113-154D
6	SPRING	D293-165D	D293-020D	D293-044D
7	PACKER, LARGE END	C683-034DS	C683-034DS	C683-034DS
8	BODY	C093-008D	C093-008D	C093-008D
9	SEAT RING	C963-036D	C963-036D	C963-036D
10	PACKER, SMALL END	C683-008DS	C683-008DS	C683-008DS
11	RETAINER, SMALL END PACKER	C213-065D	C213-065D	C213-065D
12	STEM	C332-072D	C332-072D	C332-072D
13	NUT	D033-017D	D033-017D	D033-017D
14	ORING	H135-25	H135-25	H135-25
15	YOKE	D283-020D-SS	D283-020D-SS	D283-020D-SS
16	HEX BOLT	H096-10	H096-10	H096-10
17	LID/COVER	C293-023DG	C293-023DG	C293-023DG
18	DIAPHRAGM	C333-017D	C333-017D	C333-017D
19	RING	C893-015D-SS	C893-015D-SS	C893-015D-SS
20	HEX NUT	H060-03	H060-03	H060-03
21	PISTON	C783-044D-IC	C783-044D-IC	C783-044D-IC
22	LOCK WASHER	H175-21	H175-21	H175-21
23	HEX BOLT	H096-55	H096-55	H096-55
24	STEM PISTON BUSHING	C113-018D	C113-018D	C113-018D
25	STEM ASSEMBLY	C332-018D	C332-018D	C332-018D
26	DIAPHRAGM TOP ASSEMBLY	C392-005D	C392-005D	C392-005D



DURBIN HIGH PRESSURE AUTOMATIC INLET DIAPHRAGM TOP DIMENSIONS							
VALVE	UNITS	A	B	C	D	E	F
D344-2002	IN	14.51	5.72	2.12	3.60	0.99	7.26
D344-2004	mm	368.6	145.4	53.9	91.4	25.2	184.4
D344-2009							