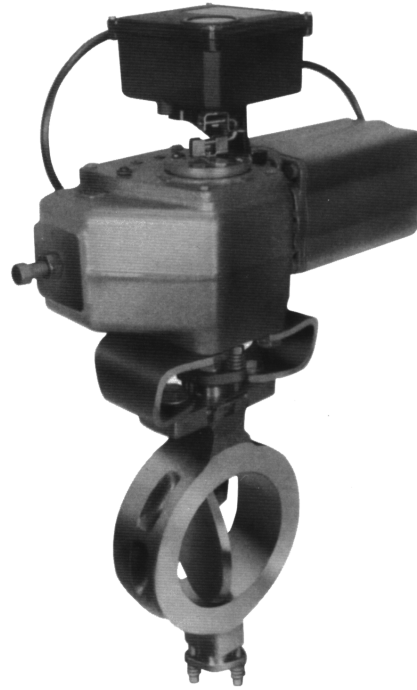


SERIES B2 ANSI CLASS 150/300 HEAVY-DUTY HIGH-CYCLE BUTTERFLY CONTROL VALVES, 6"–14"

Series B2 ultra heavy-duty butterfly valves are designed to handle high-cycle control services such as switching on continuous digesters and liquor and steam circulation on batch digesters. On digester-switching service, the valves must cycle every 90 seconds or 350,000 times a year while handling hot liquor, scale buildup, and sawdust at high flow rates. Because it was designed for services where other valves have failed, Series B2 control valves include many features as standard that would be extra or even unavailable on other valves.



FEATURES

High Cycle Life

- Heavy-duty *Stellite*® shaft bearings resist damage from entrained solids insuring hundreds of thousands of cycles per year.

Reliable Stem Sealing

- Live-loaded shaft seals are self adjusting to insure tight sealing and longer life.

Durability

- Rugged 316 stainless steel construction for high-pressure, high-temperature applications.

Low Cost of Ownership

- Simple design requires minimum maintenance. Shafts with dual PTFE packings impart balanced forces on the disc for reliable high-cycle service.
- Packing can be adjusted without removing the actuator.

Handles High Differential Pressure

- Over-sized 316 stainless steel shaft combined with double-pinned disc easily handles high differential pressure.

ANSI Class 150 or 300 Rating

- Versatile B2 wafer design butterfly valves fit between ANSI Class 150 or Class 300 flanges.

VALVE BODY RATINGS

These are maximum pressure ratings of the **valve body only** in accordance with ANSI B16.34. Test pressures are for hydrostatic test with the disc open. The maximum differential pressures listed on page 3 determine the practical pressure limitations according to the actual service conditions.

Body Ratings – bar / psi	
Temp °C /°F	316 Stainless Steel Class 300
–29 to 38 / –20 to 100	50 / 720
93 / 200	43 / 620
149 / 300	39 / 560
204 / 400	36 / 515
260 / 500	33 / 480
316 / 600	31 / 450
371 / 700	30 / 430
427 / 800	29 / 415
482 / 900	27 / 395
538 / 1000	25 / 365
Test Pressure	1100 psi

FLOW DATA

The table below provides flow coefficients for Series B2 valves. The Cv values represent the flow of water at 60°F (16°C) in U.S. gallons per minute at a pressure drop of 1 psi, and are based on actual testing in accordance with ANSI/ISA S75.02-1988.

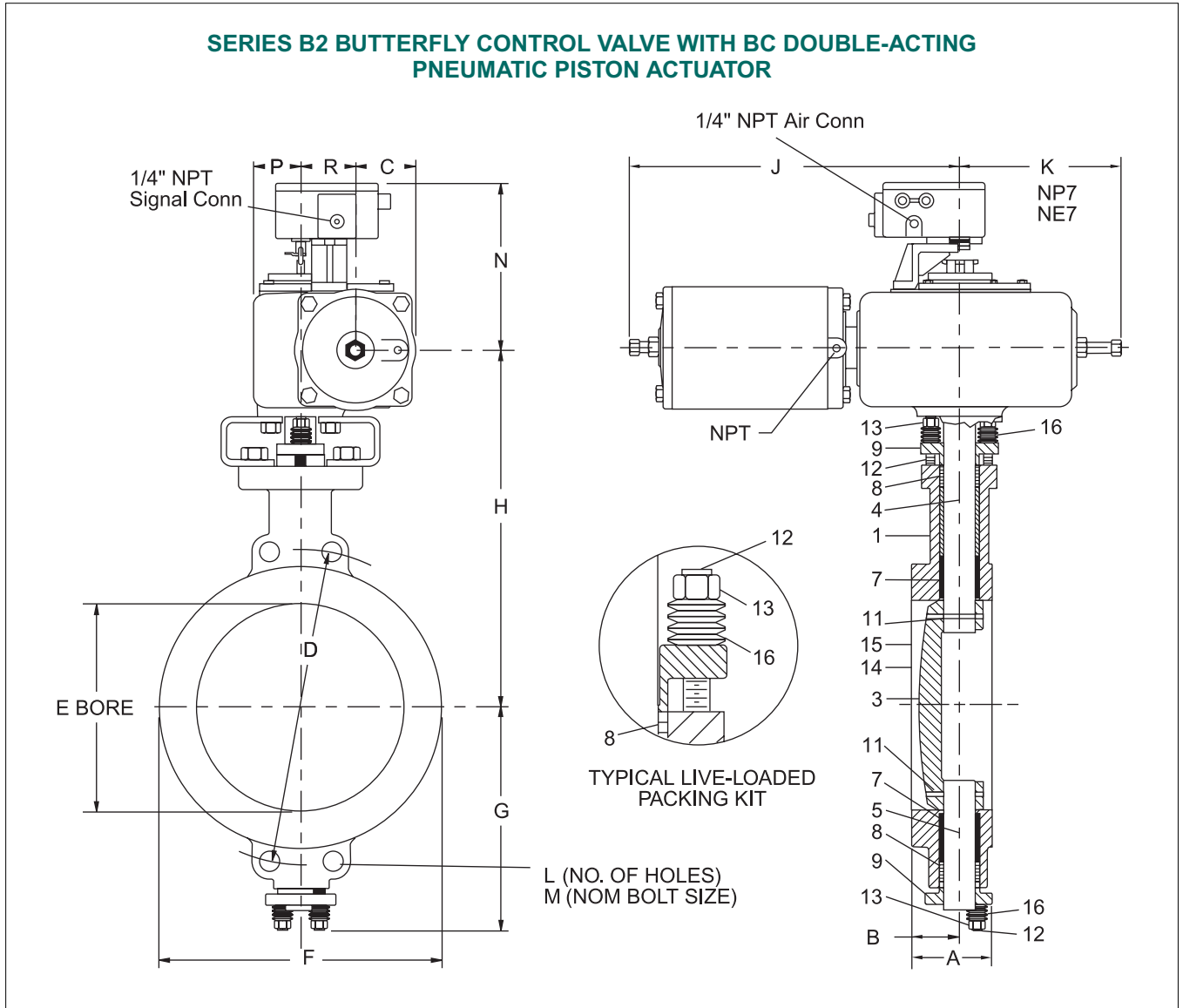
Valve Size mm /in	Percent Open									
	10	20	30	40	50	60	70	80	90	100
150 / 6	15	52	90	150	290	460	750	1070	1370	1520
200 / 8	25	90	160	270	520	810	1330	1910	2430	2700
250 / 10	40	150	250	420	820	1270	2080	2980	3800	4220
300 / 12	55	210	360	600	1180	1830	2990	4290	5480	6080
350 / 14	80	290	480	820	1610	2490	4070	5840	7450	8270

PARTS LIST AND BODY MATERIALS

Part Number	Part Name	Material
1	Body	ASTM A351 Type CF8M (316 Stainless Steel)
3	Disc	ASTM A351 Type CF8M (316 Stainless Steel)
4	Shaft	316 Stainless Steel
5	Lower Shaft	316 Stainless Steel
7	Shaft Bearing	Stellite®
8	Shaft Seal	Braided PTFE
9	Compression Ring/Plate	316 Stainless Steel
11	Disc Pin	316 Stainless Steel
12	Stud	ASTM A193 Gr B8M
13	Nut	ASTM A194 Gr 8M
14	Nameplate	Stainless Steel
15	Drive Screw	Nickel Plated Steel
16	Disc Spring	Washers 17-7PH Stainless Steel

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DIMENSIONS



SERIES B2A ANSI CLASS 150 AND B2B ANSI CLASS 300 VALVES

Valve Size DN / in.	Shaft Dia. mm	Actuator Size	Maximum Differential Pressure bar / psi	Approximate Dimensions - mm / inches																	Weight with Actuator kg /lb	
				A	B	C	D		E	F	G	H	J	K	L	M		N	P	R		NPT
							150	300								150	300					
150 / 6	25	B1CU9/_B	25 / 360	71 / 2.8	39 / 1.5	56 / 2.2	—	—	154 / 6.1	219 / 8.6	196 / 7.7	285 / 11.4	315 / 12.4	140 / 5.5	—	—	—	218 / 8.6	50 / 1.9	43 / 1.7	1/4	31 / 68
200 / 8	35	B1CU11/_B	25 / 290	89 / 3.5	51 / 2.0	68 / 2.7	11.75	13.00	197 / 7.8	276 / 10.9	246 / 9.7	374 / 15.7	375 / 14.8	165 / 6.5	4	7/8*	1**	227 / 8.9	50 / 1.9	51 / 2.0	3/8	56 / 123
250 / 10	35	B1CU13/_B	25 / 290	114 / 4.5	74 / 2.9	87 / 3.4	14.25	15.25	248 / 9.8	327 / 12.9	281 / 11.1	432 / 17.9	445 / 17.5	190 / 7.5	4	1**	1-8	238 / 9.4	66 / 2.6	65 / 2.6	3/8	96 / 211
300 / 12	45	B1CU17/_B	25 / 232	114 / 4.5	67 / 2.7	108 / 4.3	17.00	17.75	299 / 11.8	403 / 15.9	320 / 12.6	508 / 20.0	545 / 21.5	225 / 8.9	4	1*	1-1/8-8	255 / 10.0	70 / 2.8	78 / 3.1	1/2	121 / 266
350 / 14	60	B1CU20/_B	20 / 232	127 / 5.0	64 / 2.5	107 / 4.2	18.75	20.25	346 / 13.6	413 / 16.3	361 / 14.2	546 / 21.5	575 / 22.6	265 / 10.4	4	1-1/8*	1-1/8-8	286 / 11.3	83 / 3.3	97 / 3.8	1/2	180 / 397

* Through Slots

** Through Holes

HOW TO ORDER SERIES B2 CONTROL VALVES

To specify a B2 control valve, make a selection from each category below. These codes create a complete valve model number.

B2	B	06	A	A	B	D		BC9		NE7
1	2	3	4	5	6	7	-	1	-	1

Example: The model code above is for a 6" ANSI class 300 wafer design valve with keyed shaft and 316 stainless steel body, disc, shaft and pins, *Stellite* bearings, BC9 double-acting actuator, NE7 electro-pneumatic positioner.

1	Valve Type
B2	Wafer

2	Pressure Rating
A	ANSI Class 150
B	ANSI Class 300

3	Valve Size
06	150 mm / 6 in.
08	200 mm / 8 in.
10	250 mm / 10 in.
12	300 mm / 12 in.
14	350 mm / 14 in.

4	Body Material
A	ASTM A351 Gr. CF8M 316 Stainless Steel

5	Trim Material
A	316 Stainless Steel Disc and Shaft

6	Bearings
B	Stellite®

7	Packing
D	PTFE

8	Actuator
*	Double-Acting Cylinder Actuator

* Enter model number from page 3

9	Positioner
NE7	Electro-Pneumatic Positioner
NP7	Pneumatic Positioner

Subject to change without prior notice.

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