

**PDC Reduced Port Series 15
Butterfly Valve
3" thru 14" for
125/150 lb. Flanging***



General Description:

The PDC "Reduced Port" series butterfly valve is available in sizes from 3" thru 14" in a combination of materials and optional features suitable for most mid-range differential pressures and service conditions.

Features:

- Inboard bushings of graphited bronze for long life, non-freezing, low torque characteristics.
- Close tolerance machining for minimal leakage and dependable flow characteristics.
- Adjustable packing-Graphited TEFLON ® Braid. Valves can be repacked without removal from line.
- Rugged mounting pads drilled and tapped for ease of installing actuating equipment and accessories.
- Flatted, keywayed or hexed ends on shafts are available to facilitate factory or field mounting of all types of actuating equipment.
- Lightweight, solid ring, wafer design for ease of installation. Four holes to insure proper alignment without transfer of pipe stresses to the valve body.

Standard Materials and Seat Construction:

Body:	Cast Iron
Disc:	Cast Iron
Shaft:	416 Stainless Steel
Seat:	Swing-thru
Bushing:	Graphited Bronze
Packing:	Graphited Teflon Braid
Packing Nut:	Brass

Optional Materials and Seat Construction:

Body:	Hi-Temp Iron, Carbon Steel, 316 Stainless Steel, 304 Stainless Steel
Disc:	Hi-Temp Iron, Carbon Steel, 316 Stainless Steel, 304 Stainless Steel
Shaft:	316 Stainless Steel, 304 Stainless Steel, Incoloy, Monel
Seat:	Angle (3"-4"), Metal Step (3"-14"), Tadpole Step (8"-14")
Bushing:	316 Stainless Steel, 304 Stainless Steel, Glass Filled Teflon, Metcar, Macor
Packing:	Hi-Temp Braid, Pure Teflon Braid, Teflon V-Ring
Packing Nut:	316 Stainless Steel

Temperature:

To 450°F with standard materials. To 900°F with optional materials. (Consult Factory)

PDC Valve Coatings:

Consult Factory

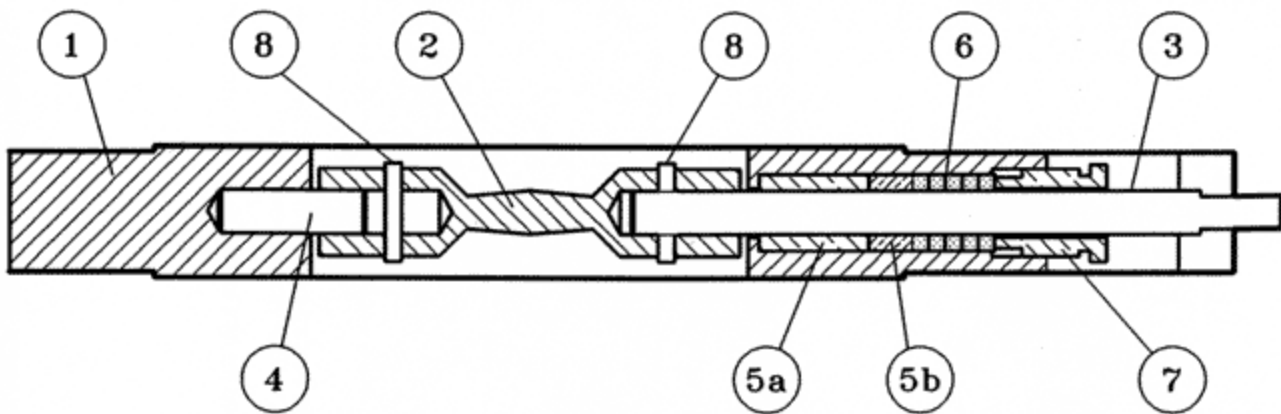
*Also Available in RPM Drilling in Most Sizes: Consult Factory

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**Cross-section Data
3" Through 14" Valve size**

Item	Description	Qty.
1	Body	1
2	Disc	1
3	Power Shaft	1
4	Idle Shaft	1
5a	Bushing	1
5b	Bushing Extension	1
6	Braided Packing	5
7	Adjustable Packing Nut	1
8	Shaft Retaining Pin	2



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***Torque, Lb-In, Required for
PDC Swing Thru Butterfly Valves
with Disc in Closed Position for
Temperatures up to 450° Fahrenheit**

*Below torques only apply to normal clean service conditions.

VALVE SIZE	PRESSURE DROP ACROSS DISC IN CLOSED POSITION, PSI																
	0.5	1	5	10	15	20	25	30	40	50	60	70	80	90	100	125	150
3 x 2.5	50	51	53	55	58	60	63	65	70	75	80	85	90	95	100	113	125
4 x 3	50	51	54	57	61	64	68	71	78	85	92	99	106	113	120	138	155
5 x 4	51	52	59	67	76	84	93	101	118	135	152	169	186	203	220	263	-
6 x 5	51	53	63	75	88	100	113	125	150	175	200	225	250	275	300	-	-
8 x 6	52	54	69	88	107	126	145	164	202	240	278	316	354	-	-	-	-
10 x 8	124	128	158	195	233	270	308	345	420	495	570	645	720	795	-	-	-

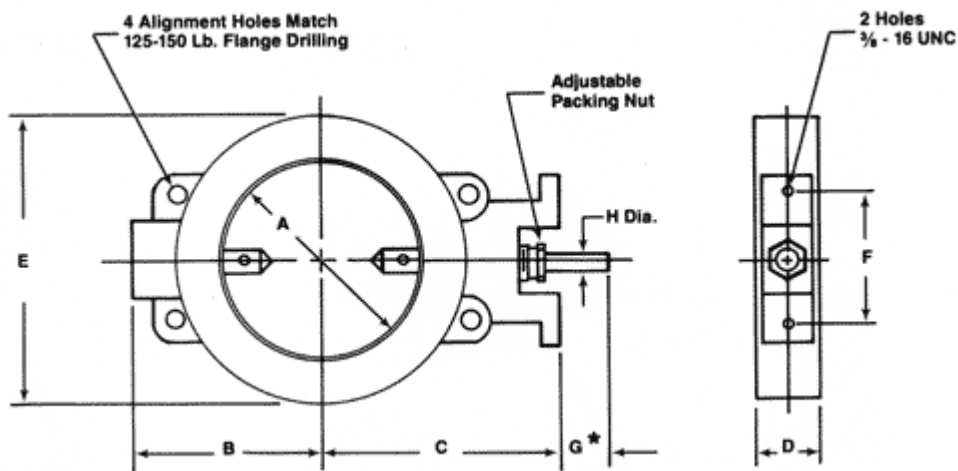
VALVE SIZE	PRESSURE DROP ACROSS DISC IN CLOSED POSITION, PSI																
	0.5	1	3	5	8	10	13	15	20	25	30	35	40	45	50	60	70
12 x 10	129	137	171	205	256	290	341	375	460	545	630	715	800	885	970	1,140	1,310
14 x 12	132	143	189	235	304	350	419	465	580	695	810	925	1,040	1,155	1,270	-	-

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**Typical Dimensions:
3" thru 14"**



Size	A	B	C	D	E	F	H	Max. Δ P	Approx. Wt. (LB.)
3" x 2-1/2"	2-1/2	4-3/8	5-7/8	1-1/2	5-1/4	4-1/4	1/2	150	12
4" x 3"	3	4-7/8	6-3/8	1-1/2	6-1/4	4-1/4	1/2	150	15
5" x 4"	4	5-3/8	6-7/8	1-1/2	7-3/8	4-1/4	1/2	125	20
6" x 5"	5	5-7/8	7-3/8	1-1/2	8-1/2	4-1/4	1/2	100	27
8" x 6"	6	7-3/4	9-5/8	1-7/8	10-3/4	5-1/8	3/4	80	60
10" x 8"	8	8-3/4	10-5/8	1-7/8	13	5-1/8	3/4	90	65
12" x 10"	10	9-1/2	11-5/8	1-7/8	15-1/4	5-1/8	3/4	70	80
14" x 12"	12	10-1/2	12-1/8	1-7/8	16-3/8	5-1/8	3/4	50	86

* "G" Length and configuration of the shaft end will vary to accommodate specific actuators. Refer to the accessory section for typical flatted, keywayed, and hexed end configurations available.

MAX. ΔP is based on 0° disc position, using standard materials of construction at a maximum temperature of 450° Fahrenheit.

Consult factory for MAX. ΔP for elevated temperatures.

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Cv Values for PDC Swing Thru Butterfly Valves

By definition, Cv is the flow coefficient of a control device or flow restriction. Cv is defined as the number of US gallons of 60°F water per minute which will flow through the given restriction with a one pound per square inch pressure drop.

Cv Values

(Flow in GPM of 60°F water at 1 psi pressure drop Specific Gravity=1)

Valves Size	Disc Angles, Degrees								
	10	20	30	40	50	60	70	80	90
3" x 2.5"	4	8	20	34	56	84	126	178	194
4" x 3"	6	14	30	51	85	132	202	279	370
5" x 4"	13	28	54	98	159	257	391	550	747
6" x 5"	21	43	88	158	265	429	636	913	1,272
8" x 6"	30	63	126	228	382	632	955	1,370	1,999
10" x 8"	53	111	225	406	680	1,125	1,698	2,591	3,853
12" x 10"	83	174	351	635	1,063	1,759	2,655	4,052	6,361
14" x 12"	120	252	506	914	1,531	2,533	3,826	5,835	9,164

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How To Order

*Material Option Followed By an Asterisk, May Not be Routinely Carried in Inventory, and May Result in Longer Deliveries Than Normal.

Use the following table to determine your part number:

Example: to code a Reduced Port 8" x 6" swing thru butterfly valve with 316 stainless steel body, 316 stainless steel disc, 316 stainless steel shaft, glass filled Teflon bushing, pure Teflon braid packing, 316 stainless steel nut, and cataloged flatted shaft would be as follows:

15-0080-1-3-3-2-4-3-2-CF

When "other" materials are selected, be sure to completely describe on purchase order.

Please provide the following information:

- **Flow Media**
- **Operating Temperature F°**
- **No. of [open/close] cycles/day**
- **Line Pressure (PSIG) = _____.**
- **Delta P = _____.**

