

WHEATLEY Dual-Plate Wafer Check Valve

Space-saving design with a full bore for improved flow characteristics in backflow prevention applications

TECHNOLOGY



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DESIGN FEATURES

Body

Cameron's WHEATLEY® dual-plate valve's body design offers the following features:

- Compact wafer-style one-piece design
- Center post fully supports the internal assembly without external pins or plugs
- Standard design reduces a chance of leakage into the atmosphere, incorporating holes and pipe plugs throughout the body
- Maximum flow area reduces pressure loss
- Reduces installation space and time

Valve Plates

The dual-plate design produces maximum strength with minimum opening and closing time.

Clamp Plates

The clamp plates offer additional strength to valve plates and allow seals to be changed easily.

Seals

Specially designed flat, full contact seals maintain positive shutoff at low working pressures and are easily replaced in the field.

Springs

Torsion springs assist valve plate closure, preventing flow reversal, and consistent valve response ensures against slamming and water hammer.

Shaft

The shaft contains heavy-duty corrosion-resistant construction.

Shaft Supports

Shaft supports act as stops to prevent the valve plates from over-traveling. They are corrosion-resistant with large shaft bearing surfaces and remove easily for internal assembly, maintenance or change.

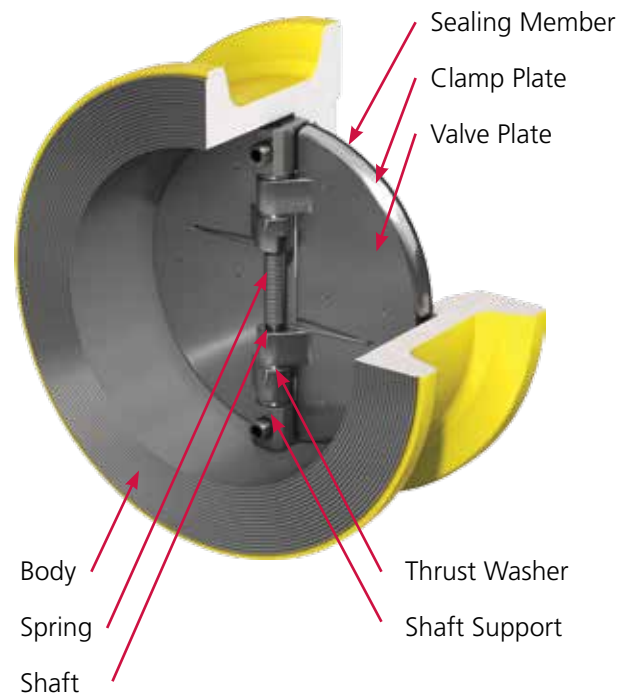
Thrust Washers

These reduce friction and wear of valve plate hinges.

DESIGN SPECIFICATIONS

Designed to meet the following:

- ASME B16.1
- ASME B16.34
- ASME B16.5
- ASME Section II and VIII
- API 594
- Conform to NACE MR0175/ISO 15156
- API 598

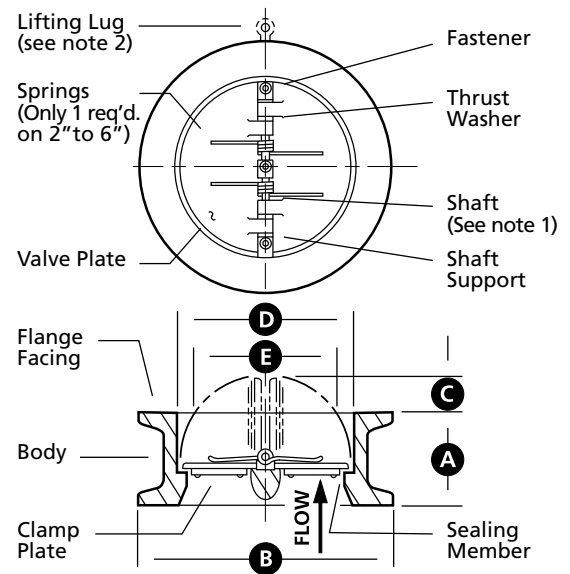


Note: Soft-seat seals are not available on Class 600 valves. Class 600 valves are only available with metal-to-metal sealing.

GENERAL DIMENSIONS

ASME Classes 150/300/600

Size in. (mm)	ASME Class	A	B	C	D	E
2 (50)	150	2-3/8 (60)	4-1/8 (105)	-	2-1/4 (57)	-
	300	2-3/8 (60)	4-3/8 (111)	-	2-1/4 (57)	-
	600	2-3/8 (60)	4-3/8 (111)	-	2-1/4 (57)	-
3 (80)	150	2-7/8 (73)	5-3/8 (137)	-	3-3/16 (81)	-
	300	2-7/8 (73)	5-7/8 (149)	-	3-3/16 (81)	-
	600	2-7/8 (73)	5-7/8 (149)	-	3-3/16 (81)	-
4 (100)	150	2-7/8 (73)	6-7/8 (175)	1/2 (12.7)	4-3/16 (106)	2-7/8 (73)
	300	2-7/8 (73)	7-1/8 (181)	3/4 (19)	4-3/16 (106)	3-1/2 (89)
	600	3-1/8 (79)	7-5/8 (194)	5/8 (16)	4-3/16 (106)	3-1/4 (83)
6 (150)	150	3-7/8 (98)	8-3/4 (222)	1 (25.4)	6-3/16 (157)	4-3/4 (121)
	300	3-7/8 (98)	9-7/8 (251)	1-3/8 (35)	6-3/16 (157)	5-1/2 (140)
	600	5-3/8 (137)	10-1/2 (267)	1/8 (3.2)	6-3/16 (157)	2-3/4 (70)
8 (200)	150	5 (127)	11 (279)	1-1/2 (38)	8-5/16 (211)	6-5/8 (168)
	300	5 (127)	12-1/8 (308)	1-3/4 (44)	8-1/2 (216)	7-1/4 (184)
	600	6-1/2 (165)	12-5/8 (321)	1 (25.4)	8-1/2 (216)	6 (152)
10 (250)	150	5-3/4 (146)	13-3/8 (340)	2-3/8 (60)	10-3/16 (259)	8-3/4 (222)
	300	5-3/4 (146)	14-1/4 (362)	2-1/2 (64)	10-1/2 (267)	9-1/4 (235)
	600	8-3/8 (213)	15-3/4 (400)	1-1/4 (32)	10-1/2 (267)	7-1/4 (184)
12 (300)	150	7-1/8 (181)	16-1/4 (410)	2-1/2 (64)	12-3/16 (310)	10 (254)
	300	7-1/8 (181)	16-5/8 (422)	2-3/4 (70)	12-1/2 (318)	10-1/2 (267)
	600	9 (229)	18 (457)	1-7/8 (48)	12-1/2 (318)	9-1/2 (241)



NOTE 1: The shaft must be in a vertical position for horizontal flow application.

NOTE 2: The lifting lug feature is optional on 6" to 12" (150 mm to 300 mm) sizes.

HOW TO ORDER

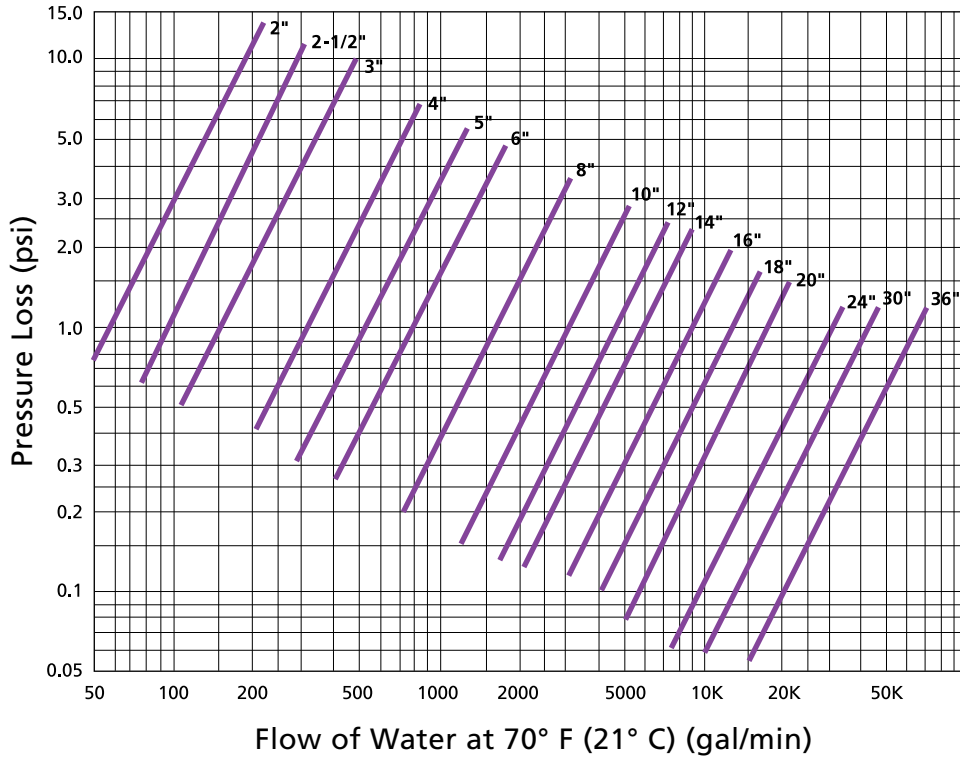
680	-	02	5	150	-	121
Model		Size	End Connections	Pressure Class		Body and Trim
680 – Dual-Plate Wafer Check Valve		02 = 2" (50 mm)	4 – RTJ	027/029 – ASME 150		121 = Carbon Steel Body, 316 Internals, Buna Seal, NACE, Inconel X-750 Spring
		03 = 3" (80 mm)	5 – Raised Face	072/075 – ASME 300		122 = Carbon Steel Body, 316 Internals, FKM Seal, NACE, Inconel X-750 Spring
		04 = 4" (100 mm)		144/150 – ASME 600		180 = Carbon Steel Body, 316 Internals, Metal-to-Metal Seal, NACE, Inconel X-750 Spring
		06 = 6" (150 mm)				321 = Stainless Steel Body, 316 Internals, Buna Seal, NACE, Inconel X-750 Spring
		08 = 8" (200 mm)				322 = Stainless Steel Body, 316 Internals, FKM Seal, NACE, Inconel X-750 Spring
		10 = 10" (250 mm)				380 = Stainless Steel Body, 316 Internals, Metal-to-Metal Seal, NACE, Inconel X-750 Spring
		12 = 12" (300 mm)				

Note: Soft-seat seals are not available on Class 600 valves. Class 600 valves are only available with metal-to-metal sealing.

Example

680-025029-180 = Dual-Plate Wafer Check Valve, 2" (50 mm), Raised-Face End Connections, ASME 150 (PN 20), Carbon Steel Body, 316 Internals, Metal-to-Metal, NACE MR0175/ISO 15156, Inconel X-750 Spring

Pressure Drop Charts for Water Service (Based on Horizontal Flow Application)



Flow Coefficients

Valve Size in.	(mm)	C _v *
2	(50)	58
2-1/2	(65)	92
3	(80)	160
4	(100)	320
5	(125)	525
6	(150)	800
8	(200)	1700
10	(250)	3000
12	(300)	4700
14	(350)	5950
16	(400)	9000
18	(450)	13,500
20	(500)	18,000
24	(600)	32,000
30	(750)	45,000
36	(900)	69,000

* C_v = the number of US gal/min that will result in 1 psi pressure loss across the valve at temperature of 60° F (16° C).

Installation Information

The valve must be installed with the shaft in a vertical position for horizontal flow applications. The valve body is marked with a flow direction arrow and "TOP" to assist with proper positioning.

The WHEATLEY torsion spring design allows valve plates to open and close with minimum pressures.

Valves are not recommended on discharge of reciprocating compressors and pumps.

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Learn more about WHEATLEY check valves:

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HSE Policy Statement

At Cameron, we are committed ethically, financially and personally to a working environment where no one gets hurt and nothing gets harmed.