

TECHNO™ Dual Plate, Metal Hinged, Wafer Style Check Valves ASME Class 125 and 150



TECHNO™

DUAL PLATED, METAL HINGED CHECK VALVES

DESIGN FEATURES

- **BODY**

TECHNO'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
- No leakage to atmosphere is insured due to TECHNO's standard design which eliminates through holes and pipe plugs in the body
- Maximum flow area minimizes pressure loss
- Minimizes installation space and time.

- **VALVE PLATES**

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

- **CLAMP PLATES**

Offer additional strength to valve plates and allow seals to be easily changed.

- **SEALS**

Specially designed flat, full contact seals maintain positive shut-off at low working pressures. Unlike most other valves, these seals are easily replaced in the field.

- **SPRINGS**

Torsion springs assist valve plate closure preventing flow reversal. Consistent valve response insures against slamming and water hammer.

- **SHAFT**

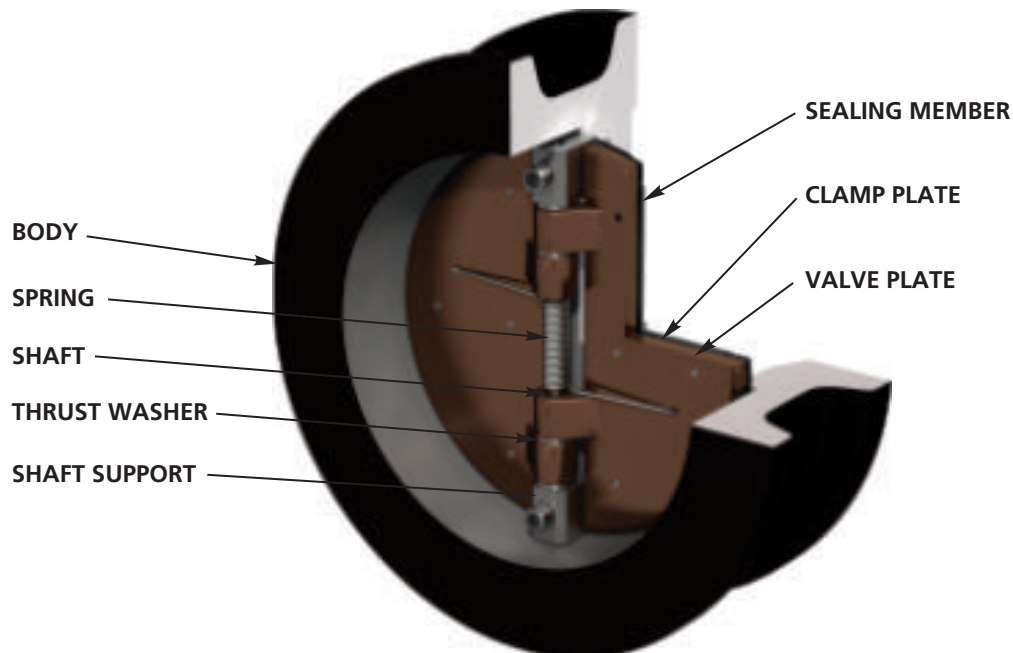
Heavy duty corrosion-resistant construction.

- **SHAFT SUPPORTS**

Act as stops to prevent over travel of valve plates. Corrosion resistant with large shaft bearing surfaces. Easily removable for internal assembly, maintenance or change.

- **THRUST WASHERS**

Reduces friction and wear of valve plate hinges.



DUAL PLATED, METAL HINGED CHECK VALVES

STANDARD MODELS AND MATERIALS OF CONSTRUCTION

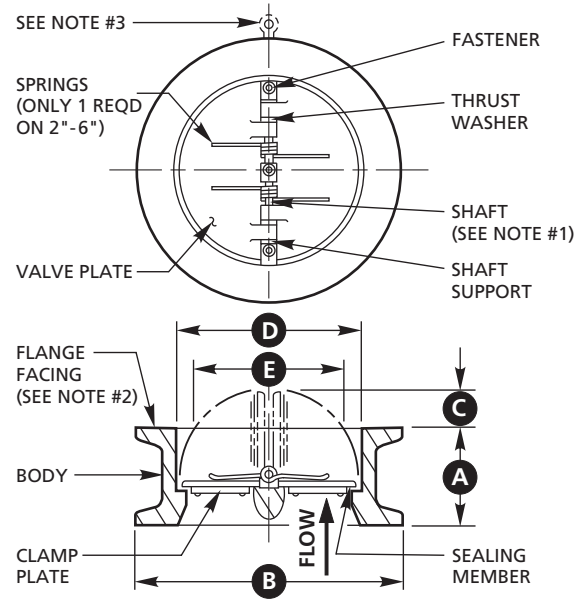
STYLE	BODY	VALVE PLATES	SEALS	SPRINGS	TRIM*	ASME CLASS
5050	Cast Iron	Bronze	EPDM	316 Stainless Steel	316 Stainless Steel	125
5051	Carbon Steel	Carbon Steel**	Buna-N	316 Stainless Steel	316 Stainless Steel	150
5051-316	316 Stainless Steel	316 Stainless Steel	Buna-N	316 Stainless Steel	316 Stainless Steel	150

* Trim items include: Shaft, Shaft Supports, Clamp Plates and Fasteners. Teflon or Stainless Steel Thrust Washers are standard.
 ** 316 Stainless Steel Standard on 2 in. - 6 in.

OPTIONAL MATERIALS SELECTION

SPRING DATA	
MATERIALS	TEMPERATURE RANGE**
• INCONEL	750°F
• INCONEL X	1000°F
SEAL DATA	
MATERIALS	TEMPERATURE RANGE++
• Buna-N	-60°F TO 225°F
• EPDM	-40°F TO 300°F
• Viton	-20°F TO 400°F
• Teflon	-20°F TO 450°F
• Silicone	-90°F TO 500°F
• FDA Approved White Neoprene	-40°F TO 225°F
• Metal-to-Metal +	-400°F TO 1000°F

++ This temperature is for general guidance.
 The figures may vary with application and body/internal materials.
 + 316 Stainless Steel Thrust Washers are Standard with Metal-to-Metal Seal Option.



NOTE 1: Shaft must be in vertical position for horizontal flow application.
 NOTE 2: Plain face (non serrated) for style 5050 only. Raised faces for all other carbon and stainless steel sizes.
 NOTE 3: Lifting lug feature optional on 6" - 36" sizes.

GENERAL DIMENSIONS (All Dimensions in inches)

VALVE SIZE in.	ASME CLASS	A	B	C	D	E [†]
2	125	2 1/8	4 1/8	-	2 1/8	-
	150	2 3/8	4 1/8	-	2 1/4	-
2 1/2	125	2 1/8	4 7/8	1/8	2 5/8	1 3/8
	150	2 5/8	4 7/8	-	2 3/4	-
3	125	2 1/4	5 3/8	3/8	3 1/8	2 1/8
	150	2 7/8	5 3/8	-	3 3/16	-
4	125	2 1/2	6 7/8	7/8	4 1/8	3 1/2
	150	2 7/8	6 7/8	1/2	4 3/16	2 7/8
5	125	2 3/4	7 3/4	1 1/4	5 1/8	4 1/2
	150	3 3/8	7 3/4	5/8	5 3/16	3 1/2
6	125	3	8 3/4	1 7/8	6 1/8	5 3/4
	150	3 7/8	8 3/4	1	6 3/16	4 3/4
8	125	3 3/4	11	2 3/4	8 1/4	7 7/8
	150	5	11	1 1/2	8 5/16	6 5/8
10	125	4 1/4	13 3/8	3 7/8	10 1/8	9 7/8
	150	5 3/4	13 3/8	2 3/8	10 3/16	8 3/4

VALVE SIZE in.	ASME CLASS	A	B	C	D	E [†]
12	125	5 5/8	16 1/8	4	12 1/8	11 1/2
	150	7 1/8	16 1/8	2 1/2	12 3/16	10
14	125	7 1/4	17 3/4	3 1/2	14 1/8	12 1/2
	150	7 1/4	17 3/4	3	14 1/8	12
16	125	7 1/2	20 1/4	4 3/4	16 1/8	15
	150	7 1/2	20 1/4	4 1/8	16 1/8	14 3/8
18	125	8	21 5/8	5 5/8	18 1/8	16 7/8
	150	8	21 5/8	5	18 1/8	16 1/4
20	125	8 3/8	23 7/8	6 1/2	20 1/8	18 13/16
	150	8 5/8	23 7/8	5 1/2	20 1/8	18 1/8
24	125	8 3/4	28 1/4	8 1/4	24 1/8	22 5/8
	150	8 3/4	28 1/4	8	24 1/8	22 5/8
30	125	12	34 3/4	10 1/4	30 1/8	28 5/8
	150	12	34 3/4	9 1/4	30 1/8	27
36	125	14 1/2	41 1/4	12 1/2	36 9/16	34
	150	14 1/2	41 1/4	11	36 1/8	33

[†] Minimum bore diameter of companion flanges.

DUAL PLATED, METAL HINGED CHECK VALVES

BODY MATERIALS	VALVE PLATE MATERIALS
<ul style="list-style-type: none"> Cast Iron - ASTM A126 Grade B Carbon Steel - ASTM A216 Grade WCB 316 Stainless Steel - ASTM A351 Grade CF8M 	<ul style="list-style-type: none"> Bronze - ASTM B62 Alloy C836 Carbon Steel - ASTM A216 Grade WCB 316 Stainless Steel - ASTM A351 Grade CF8M
TRIM MATERIALS	SPRING MATERIALS
<ul style="list-style-type: none"> 316 Stainless Steel - For shaft, shaft supports, clamp plates, and all threaded fasteners 	<ul style="list-style-type: none"> 316 Stainless Steel - ASTM A313. Standard in all valves. Max temp. 500°F Inconel - ASTM B166. Optional for temperatures to 750°F Inconel X - ASTM B166. Optional for temperatures above 750°F

ASME PRESSURE - TEMPERATURE RATING

Maximum Non-Shock Pressure - psi

Temp °F	Class 125			Temp °F	Class 150	
	Cast Iron				Carbon Steel	316 Stainless
	2" - 12"	14" - 24"	30" - 36"			
150°F	200	150	150	100°F	285	275
200°F	190	135	115	200°F	260	240
225°F	180	130	100	300°F	230	215
250°F	175	125	85	400°F	200	195
275°F	170	120	65	500°F	170	170
300°F	165	110	50	600°F	140	140
325°F	155	105	-	700°F	110	110
350°F	150	100	-	800°F	80	80
400°F	140	-	-	900°F	50	50
450°F	125	-	-	1000°F	20	20
Hydrostatic Test - psi	350	265	265	Hydrostatic Test - psi	450	425

CAUTION: Maximum valve temperature rating is often limited by seal and spring materials.

INDUSTRY STANDARDS

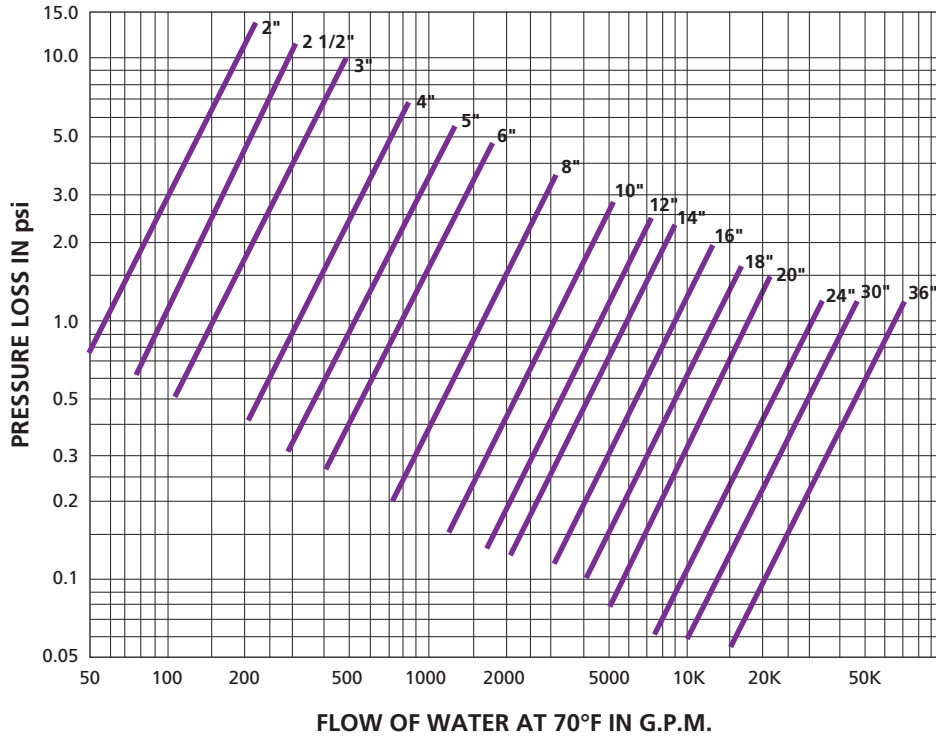
The TECHNO™ Metal Hinged Dual Plate Wafer Check Valves are designed, rated and manufactured in accordance with the following Industry Standards:

- ANSI B16.1, ANSI B16.34 and ANSI B16.5
- ASME Sections II and VIII
- API 594 except face to face dimensions of 2 1/2 inch to 12 inch Cast Iron Valve (Style 5050)

If required by your job needs, TECHNO can provide the requisite documentation to verify our valves meet the stringent design and material criteria set forth in the above standards. Also, we can perform and document the Hydrostatic and Leak Tests required by API 598, MSS-SP-61 or other such guides.

DUAL PLATED, METAL HINGED CHECK VALVES

PRESSURE DROP CHARTS FOR WATER SERVICE (Based on Horizontal Flow Application)



FLOW COEFFICIENTS

Valve Size	C _v *
2"	58
2 1/2"	92
3"	160
4"	320
5"	525
6"	800
8"	1700
10"	3000
12"	4700
14"	5950
16"	9000
18"	13,500
20"	18,000
24"	32,000
30"	45,000
36"	69,000

NOTE: Recommended maximum flow rates may be reduced due to maximum velocity ratings. Consult Technical Data section for details.
*C_v = the number of U.S. gallons/minute that will result in 1 psi pressure loss across the valve at temp of 60°F.

INSTALLATION INFORMATION

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

TECHNO's Torsion Spring Design allows Valve Plates to Open and Close with minimum pressures. VALVES ARE NOT recommended on discharge of reciprocating compressors and pumps.

CERTIFICATIONS



TRADEMARK INFORMATION

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VITON	E.I. DuPont De Nemours & Company

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