

TECHNOCHECK

WAFER STYLE CHECK VALVES
METAL HINGE DESIGN

COST EFFICIENT, RELIABLE CHECK VALVES



TECHNICAL DATA

STYLE 5050	ANSI 125# CAST IRON
STYLE 5051	ANSI 150# CARBON STEEL
STYLE 5051-316	ANSI 150# STAINLESS STEEL
STYLE 5053	ANSI 300# CARBON STEEL
STYLE 5053-316	ANSI 300# STAINLESS STEEL
STYLE 5056	ANSI 600# CARBON STEEL
STYLE 5056-316	ANSI 600# STAINLESS STEEL

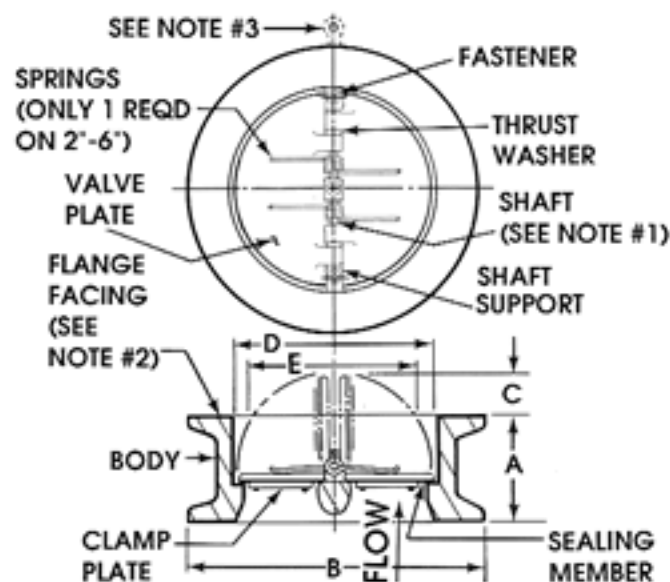
TECHNOLOGICALLY ADVANCED DESIGN WITH FIELD REPLACEABLE SEALS, ELIMINATION OF LEAKAGE TO ATMOSPHERE, AND LOW PRESSURE LOSS

STANDARD MODELS AND MATERIALS

Style	ANSI Class	Body and Valve Plates	Seals	Trim* and Springs
5050	125	Cast Iron + Bronze	EPDM	316 Stainless
5051	150	Carbon Steel	BUNA-N	316 Stainless
5051-316	150	316 Stainless Steel	BUNA-N	316 Stainless
5053	300	Carbon Steel	BUNA-N	316 Stainless
5053-316	300	316 Stainless Steel	BUNA-N	316 Stainless
5056	600	Carbon Steel	BUNA-N	316 Stainless
5056-316	600	316 Stainless Steel	BUNA-N	316 Stainless

Note: + Style 5050 is Standard with Cast Iron Body and Bronze Valve Plates. Consult factory for other materials of construction

*Trim items include: Shaft, Shaft Supports, Clamp Plates and Fasteners. Teflon Thrust Washers are Standard.



- Note:
1. Shaft must be in vertical position for horizontal flow application.
 2. Plain face (non serrated) for style 5050 only. Raised faces (serrated) for all other carbon and stainless steel sizes.
 3. Lifting lug feature optional on 6"-30" sizes.

SEALING MEMBER DATA

Materials	Temperature Range*	Specification
• Buna-N	-60 to 225° F	ASTM D2000-BG
• EPDM	-40 to 300° F	ASTM D2000-DA
• Viton	-20 to 400° F	ASTM D2000-HK
• Teflon	-20 to 450° F	TFE Fluorocarbon Resin
• Silicone	-90 to 500° F	ASTM D2000-GE
• FDA Approved White Neoprene	-40 to 225° F	ASTM 2000-BE
• Metal to Metal	-400 to 1000° F	ASTM A351-316

* This temperature is for general guidance and may vary with application and body/internal material selections.

- Consult factory for materials not shown

- Stainless Steel thrust washers are standard with metal to metal sealing option.

GENERAL DIMENSIONS

All Dimensions In Inches

Valve Size	ANSI Class	A	B	C	D	E ^①
2"	125	2 1/8	4 1/8	-	2 1/8	-
	150	2 3/8	4 1/8	-	2 1/4	-
	300	2 3/8	4 3/8	-	2 1/4	-
	600	2 3/8	4 3/8	-	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	-
	300	2 5/8	5 1/8	-	2 3/4	-
	600	2 5/8	5 1/8	-	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	-
	300	2 7/8	5 7/8	-	3 3/16	-
	600	2 7/8	5 7/8	-	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
	300	2 7/8	7 1/8	3/4	4 3/16	3 1/2
	600	3 1/8	7 5/8	5/8	4 3/16	3 1/4
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
	300	3 3/8	8 1/2	13/16	5 3/16	4
	600	4 1/8	9 1/2	3/8	5 3/16	3
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
	300	3 7/8	9 7/8	1 3/8	6 3/16	5 1/2
	600	5 3/8	10 1/2	1/8	6 3/16	2 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
	300	5	12 1/8	1 3/4	8 1/2	7 1/4
	600	6 1/2	12 5/8	1	8 1/2	6
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
	300	5 3/4	14 1/4	2 1/2	10 1/2	9 1/4
	600	8 3/8	15 3/4	1 1/4	10 1/2	7 1/4
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
	300	7 1/8	16 5/8	2 3/4	12 1/2	10 1/2
	600	9	18	1 7/8	12 1/2	9 1/2
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	8 1/4	30 1/8	27

Note: ① Minimum bore diameter of companion flanges.

STANDARD MODELS AND MATERIALS

Part Description	Quantity per Valve		Style 5050	Styles 5051, 5053	Styles 5051-316, 5053-316
	2"-6"	8"-30"	ANSI 125#	5056	5056-316
Body	1	1	Cast Iron	Carbon Steel	316 Stainless Steel
Valve Plate	2	2	Bronze	Carbon Steel	316 Stainless Steel
Sealing Member	2	2	EPDM	BUNA-N	BUNA-N
Clamp Plate	2	2	316 Stainless Steel		
Shaft Support	2	3	316 Stainless Steel		
Shaft	1	2	316 Stainless Steel		
Thrust Washer	4	4	Teflon or 316 Stainless Steel		
Spring	1	2	316 Stainless Steel		
Fastener	2	3	316 Stainless Steel		

- Consult factory for materials, sizes and pressure ratings not shown.
- Stainless Steel thrust washers are standard with metal sealing option.

MATERIAL SPECIFICATIONS

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 - ASTM A276-316 For shaft and shaft supports ● 316 Stainless Steel - ASTM A240-316 For clamp plates ● 316 Stainless Steel - ASTM A193 For 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

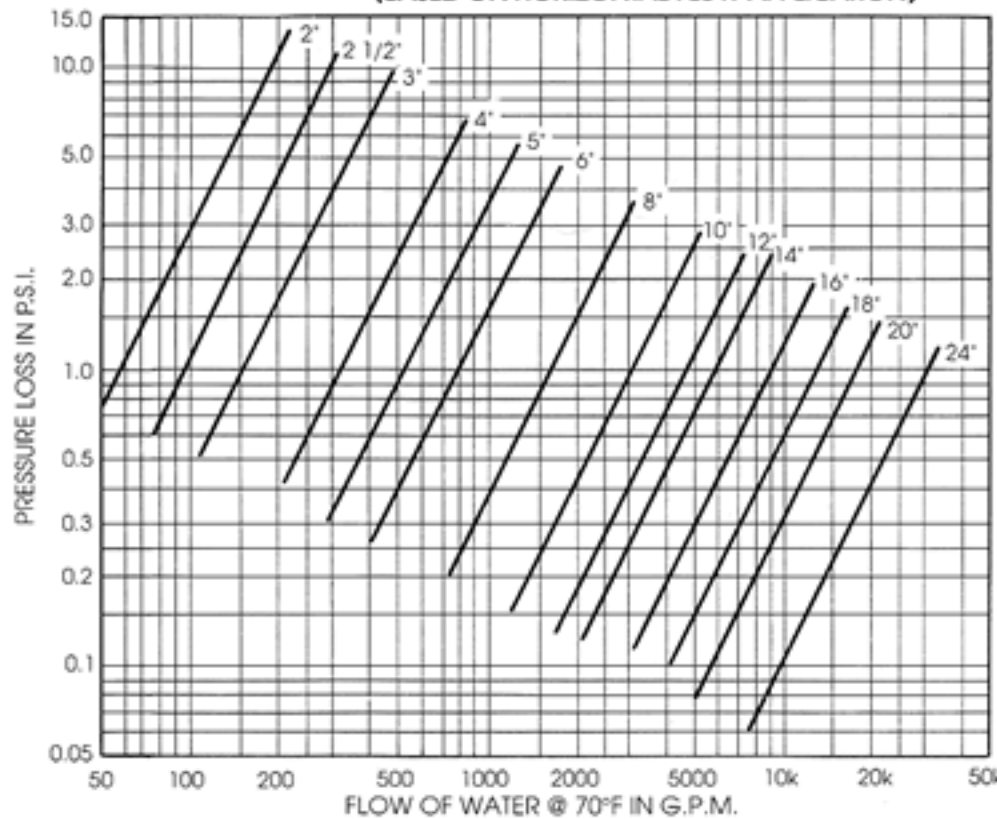
ANSI PRESSURE - TEMPERATURE RATING

Maximum Non-Shock Pressure - PSI

Temp ° F	Class 125			Temp ° F	Class 150		Class 300		Class 600	
	Cast Iron				Carbon Steel	316 Stainless	Carbon Steel	316 Stainless	Carbon Steel	316 Stainless
	2"-12"	14"-24"	30"							
150°	200	150	150	100°	285	275	740	720	1480	1440
200°	190	135	115	200°	260	240	675	620	1350	1240
225°	180	130	100	300°	230	215	655	560	1315	1120
250°	175	125	85	400°	200	195	635	515	1270	1030
275°	170	120	65	500°	170	170	600	480	1200	955
300°	165	110	50	600°	140	140	550	450	1095	905
325°	155	105	-	700°	110	110	535	430	1065	865
350°	150	100	-	800°	80	80	410	415	825	830
400°	140	-	-	900°	50	50	170	395	345	790
450°	125	-	-	1000°	20	20	50	365	105	725
Hydrostatic Test-PSI	350	265	265	Hydrostatic Test-PSI	450	425	1125	1100	2225	2175

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

PRESSURE DROP CHART FOR WATER SERVICE (BASED ON HORIZONTAL FLOW APPLICATION)



**FLOW VS. PRESSURE LOSS
FOR TECHNO'S METAL HINGE CHECK VALVES**

FLOW COEFFICIENTS

Valve Size	"CV" *
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

*CV = The number of U.S. gallons/minute that will result in 1 psi pressure loss across the valve at temp of 60°F

INDUSTRY STANDARDS

Techno's new 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
- Materials per ASTM and/or ASME
- API 594 except face to face dimensions of 2 1/2"-12" 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.

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 in horizontal and vertical up flow. Consult factory for vertical down flow application.
- VALVES ARE NOT recommended on discharge of reciprocating compressors and pumps.



**VALVES ARE
MANUFACTURED
IN U.S.A.**

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TECHNO REPRESENTATIVE

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