

# Champion Valve Company

281-357-8887



*We Keep It Simple!*

[www.champvalve.com](http://www.champvalve.com)

[champion.valve@yahoo.com](mailto:champion.valve@yahoo.com)

# "Champion Valves are Manufactured in the USA"

**In 24 Hours to 15 Days after receipt of order!**

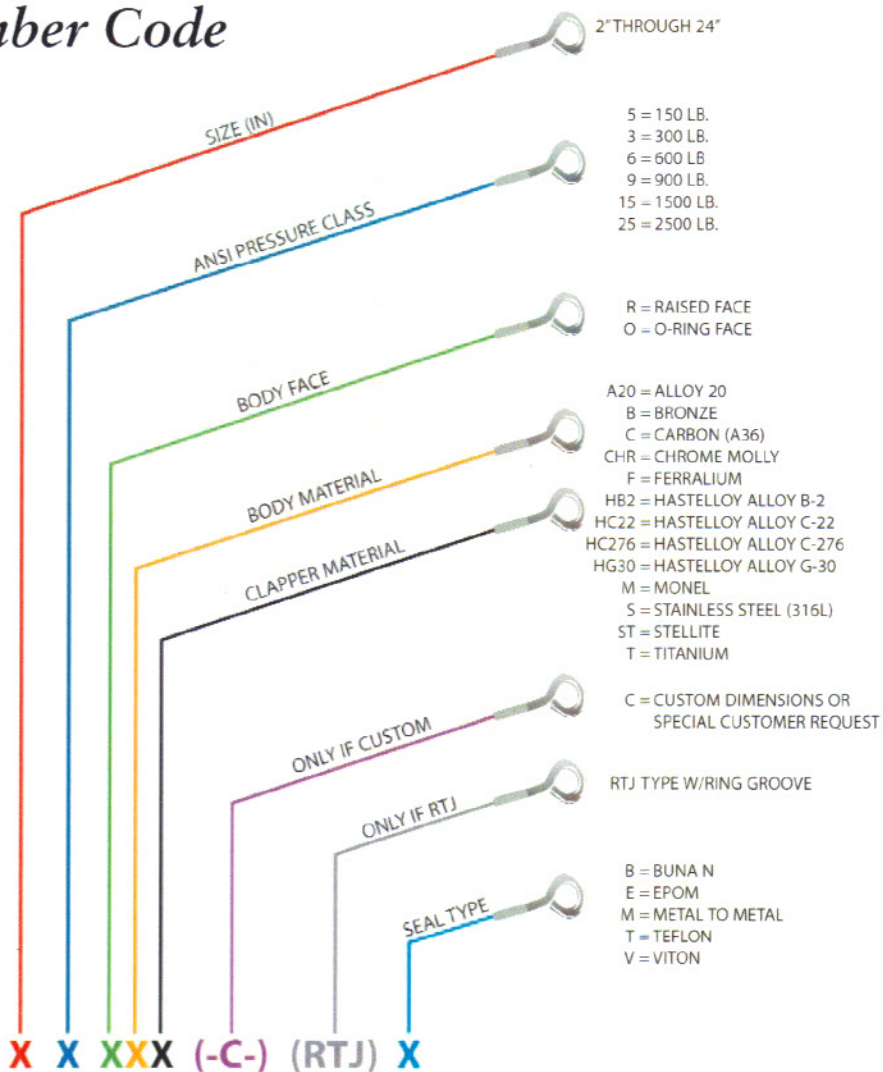
This is our standard delivery. Because we *ARE* the "Manufacturer" of the single clapper "CHAMPION REDUCED PORT WAFER CHECK VALVE".

We manufacture in Short and Long Pattern. We also manufacture the "CHAMPION VALVE" in custom face to face and in exotic metals in the same expeditious delivery as our standard delivery at no extra charge.

CHAMPION VALVES are manufactured to the API6D Standard.

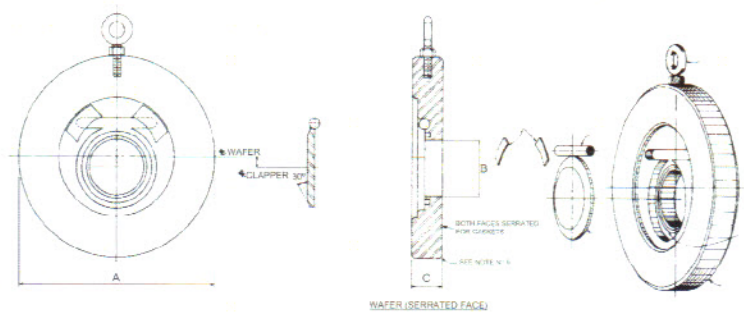
Standard CHAMPION VALVES are manufactured in A36 Carbon and NACE 316 Stainless Steel. MTR's or Certificate of compliance are available upon request on all CHAMPION VALVES.

## Part Number Code



MADE IN USA

# Champion Reduced Port Wafer Check Valve



Max Operating Pressure (PSI)	
ANSI Class 150	285
ANSI Class 300	740
ANSI Class 600	1480
ANSI Class 900	2220
ANSI Class 1500	3705

Size and Pressure Class	
ANSI Class 150	2"-12"
ANSI Class 300	2"-12"
ANSI Class 600	2"-12"
ANSI Class 900	2"-12"
ANSI Class 1500	2"-8"

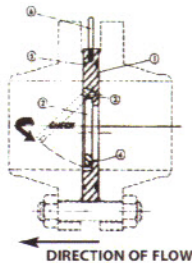
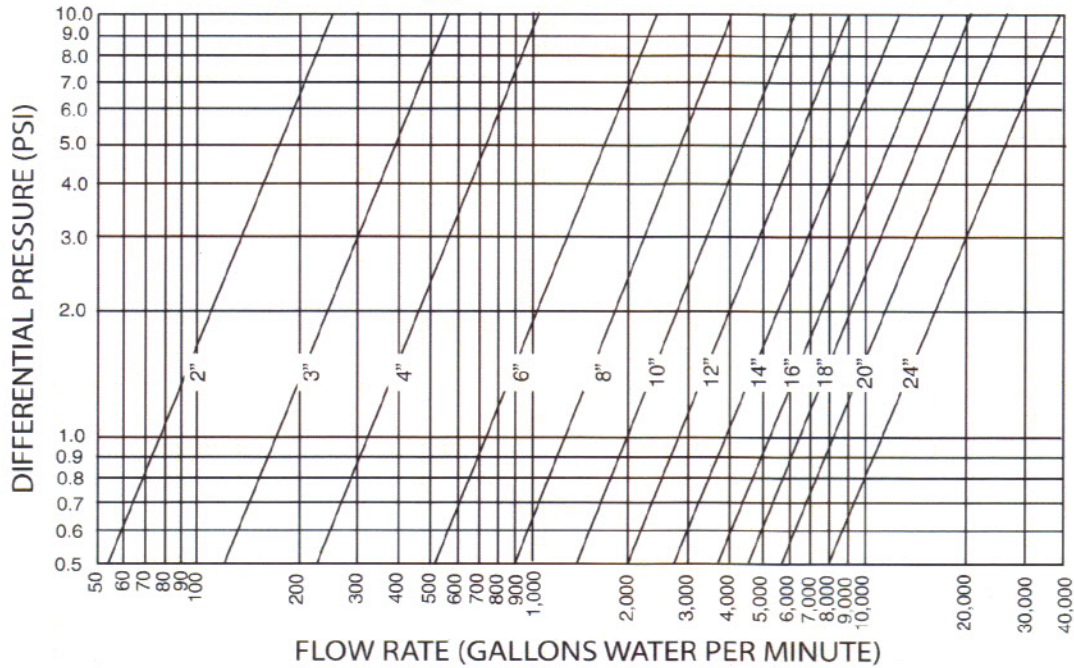


## Dimensional Data

Description	Class	Size (In)						
		2"	3"	4"	6"	8"	10"	12"
Weight LBS.	150	3	5	6	12	24	32	62
	300	3	6	7	15	29	60	103
	600	4	6	8	20	33	110	150
	900	4	7	12	24	57	131	234
	1500	4	9	19	49	74	-	-
A	150	4 <sup>1</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	6 <sup>7</sup> / <sub>8</sub>	8 <sup>3</sup> / <sub>4</sub>	11	13 <sup>3</sup> / <sub>8</sub>	16 <sup>1</sup> / <sub>8</sub>
	300	4 <sup>3</sup> / <sub>8</sub>	5 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>	9 <sup>7</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>8</sub>	14 <sup>1</sup> / <sub>4</sub>	16 <sup>5</sup> / <sub>8</sub>
	600	4 <sup>3</sup> / <sub>8</sub>	5 <sup>7</sup> / <sub>8</sub>	7 <sup>5</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>	12 <sup>5</sup> / <sub>8</sub>	15 <sup>3</sup> / <sub>4</sub>	18
	900	5 <sup>5</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>8</sub>	11 <sup>1</sup> / <sub>8</sub>	14 <sup>1</sup> / <sub>8</sub>	17 <sup>1</sup> / <sub>8</sub>	19 <sup>5</sup> / <sub>8</sub>
	1500	5 <sup>5</sup> / <sub>8</sub>	6 <sup>7</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>8</sub>	13 <sup>7</sup> / <sub>8</sub>	17 <sup>1</sup> / <sub>8</sub>	20 <sup>1</sup> / <sub>2</sub>
B	150	1 <sup>1</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>8</sub>	5 <sup>15</sup> / <sub>16</sub>	7 <sup>3</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>2</sub>
	300	1 <sup>1</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>8</sub>	5 <sup>15</sup> / <sub>16</sub>	7 <sup>3</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>2</sub>
	600	1	1 <sup>3</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>8</sub>	4	5	6 <sup>7</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>2</sub>
	900	1	1 <sup>3</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>8</sub>	4	5	6 <sup>7</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>2</sub>
	1500	1	1 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	4 <sup>3</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>2</sub>
C	150	<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>
	300	<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	1	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	2
	600	<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>8</sub>
	900	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>8</sub>	<sup>7</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>
	1500	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>



P.O. Box 333 Cypress, TX 77410. Tel: 281.357.8887 Fax: 281.357.8998  
 E-Mail: [champion.valve@yahoo.com](mailto:champion.valve@yahoo.com) ~\*~ Website: [www.champvalve.com](http://www.champvalve.com)



FLOW COEFFICIENTS (C<sub>v</sub>)  
 FULL OPEN VALVES

VALVE SIZE	C <sub>v</sub>
2	82
3	185
4	330
6	740
8	1310
10	2050
12	2950
14	4020
16	5250
18	6650
20	8200
24	11800

The equations listed below are the basis for the above nomogram. The nomogram is a method for solving the equations below quickly and simply when the service fluid is water.

LIQUID (INCOMPRESSIBLE FLOW)

$$C_v = Q \sqrt{\frac{G}{\Delta P}} \quad Q = C_v \sqrt{\frac{\Delta P}{G}} \quad \Delta P = \left[ \frac{Q}{C_v} \right]^2 G$$

GAS (COMPRESSIBLE FLOW)

$$C_v = \frac{Q}{963} \sqrt{\frac{GT}{P_1^2 - P_2^2}} \quad Q = C_v 963 \sqrt{\frac{P_1^2 - P_2^2}{GT}}$$

WHERE:

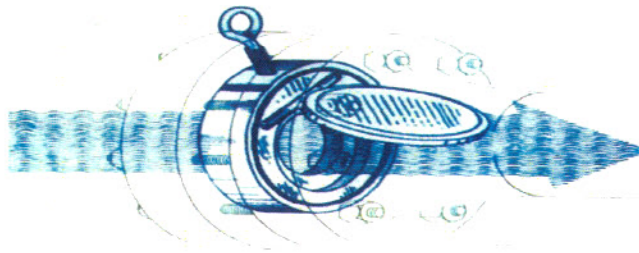
- Q = FLOW LIQUIDS-GPM  
GASES-SCFH
- C<sub>v</sub> = Flow Coefficient
- P<sub>1</sub> = Inlet Pressure (PSIA)
- P<sub>2</sub> = Outlet Pressure (PSIA)
- ΔP = Pressure Drop (P<sub>1</sub> - P<sub>2</sub>)
- T = Absolute Temperature (°F + 460)
- G = Specific Gravity (Water = 1)

# CHAMPION LONG PATTERN WAFER CHECK VALVES

P.O. Box 333 Cypress, TX 77410 \* Phone: 281-357-8887 Fax: 281-357-8998  
Web-site: [www.champvalve.com](http://www.champvalve.com) \* E-mail: [champion.valve@yahoo.com](mailto:champion.valve@yahoo.com)



## CHAMPION



### LONG PATTERN REDUCED PORT WAFER CHECK VALVES 2" AND UP

# CHAMPION LONG PATTERN WAFER CHECK VALVES

P.O. Box 333 Cypress, TX 77410 \* Phone: 281-357-8887 Fax: 281-357-8998  
Web-site: www.champvalve.com \* E-mail: champion.valve@yahoo.com

**Champion Reduced Port Wafer Check Valves are perfect for:**

- Limited space applications where a full-bodied check will not fit.
- Designed to fit between mating flanges.
- Champion Valves are Condensed, Lightweight, Less expensive
- Cost efficient and easier to install.

**LESS WEIGHT ~LESS COST~LESS DELAY~MADE IN THE USA !!!**

## Product Features:

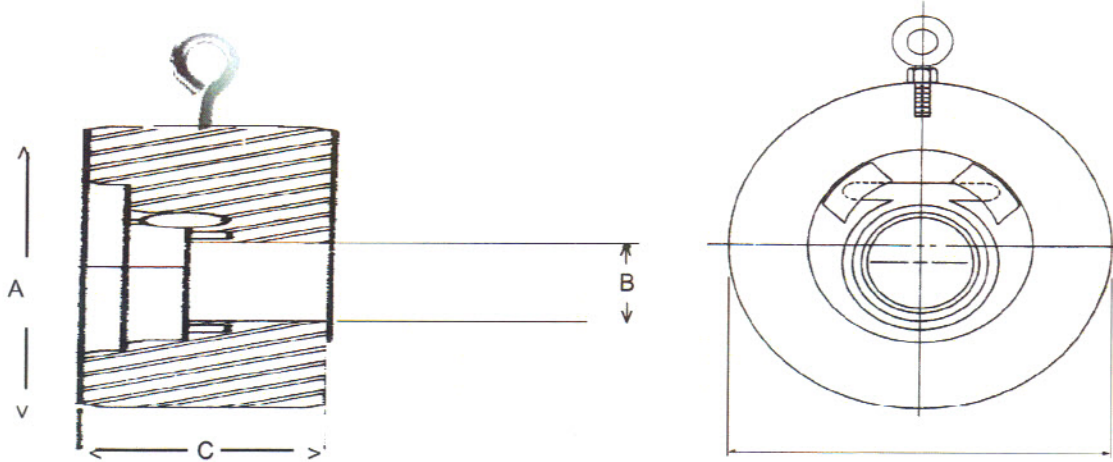
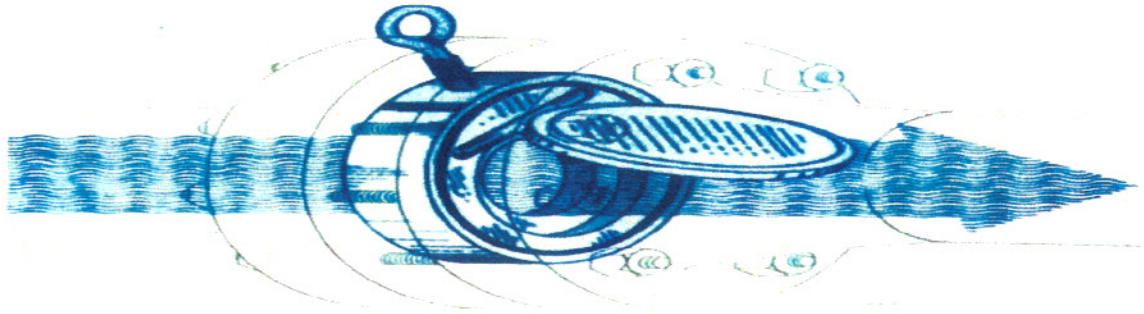
- Manufactured in accordance with API6D
- All materials comply with NACE standards
- Welded clapper design
- Integral Seat
- RTJ or raised face flange surfaces available.
- All styles have spring capability if requested
- Sizes 2" and up
- Working pressures ANSI 150 through ANSI 1500
- Most Deliveries within 5-15 days ARO

## Materials of Construction:

ITEM	STANDARD	OPTIONAL
BODY	A-36 CARBON	ALLOY-20, FERRALIUM, HASTELLOY ALLOY B-2, C-22, C-276, G-30, MONEL, 316 STAINLESS STEEL, TITANIUM, SUPER DUPLEX, BRONZE
CLAPPER	SOLID NACE 316 STAINLESS STEEL	ALLOY-20, FERRALIUM, HASTELLOY ALLOY B-2, C-22, C-276, G-30, MONEL, 316 STAINLESS STEEL, TITANIUM, SUPER DUPLEX, BRONZE
BODY SEAT	SAME AS BODY MATERIAL	
SEALS	VITON	<ul style="list-style-type: none"> <li>• AFLAS</li> <li>• BUNA</li> <li>• CHEMREZ</li> <li>• EPDM</li> <li>• HNBR</li> <li>• METAL</li> <li>• SILICON</li> <li>• TEFLON</li> <li>• VITON</li> <li>• KALREZ</li> </ul>
CUSTOM SPRINGS	NONSPRING STYLE	304 STAINLESS

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	Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8	Column9
		Dim	2"	3"	4"	6"	8"	10"	12"
ANSI 150	A	4-1/8"	5-3/8"	6-7/8"	8-3/4"	11"	13-3/8"	16-1/8"	
	B	1-1/8"	1-3/4"	2-5/8"	4-5/8"	5-15/16"	7-3/4"	9-1/2"	
	C	2-3/8"	2-7/8"	2-7/8"	3-7/8"	5"	5-3/4"	7-1/8"	
ANSI 300	A	4-3/8"	5-7/8"	7-1/8"	9-7/8"	12-1/8"	14-1/4"	16-5/8"	
	B	1-1/8"	1-3/4"	2-5/8"	4-5/8"	5-15/16"	7-3/4"	9-1/2"	
	C	2-3/8"	2-7/8"	2-7/8"	3-7/8"	5"	5-3/4"	7-1/8"	
ANSI 600	A	4-3/8"	5-7/8"	7-5/8"	10-1/2"	12-5/8"	15-3/4"	18"	
	B	1"	1-3/4"	2-5/8"	4"	5"	6-7/8"	8-1/2"	
	C	2-3/8"	2-7/8"	3-1/8"	5-3/8"	6-1/2"	8-3/8"	9"	
ANSI 900	A	5-5/8"	6-5/8"	8-1/8"	11-1/8"	14-1/8"	17-1/8"	19-5/8"	
	B	1"	1-3/4"	2-3/8"	4"	5"	6-7/8"	8-1/2"	
	C	2-3/4"	3-1/4"	4"	6-1/4"	8-1/8"	9-1/2"	11-1/2"	
ANSI 1500	A	5-5/8"	6-7/8"	8-1/4"	11-1/8"	13-7/8"	17-1/8"	20-1/2"	
	B	1"	1-3/4"	2-1/4"	3-3/4"	4-3/4"	6-3/4"	8-1/2"	
	C	2-3/4"	3-1/4"	4"	6-1/4"	8-1/8"	9-3/4"	12"	

\* Consult factory for sizes 14" and up

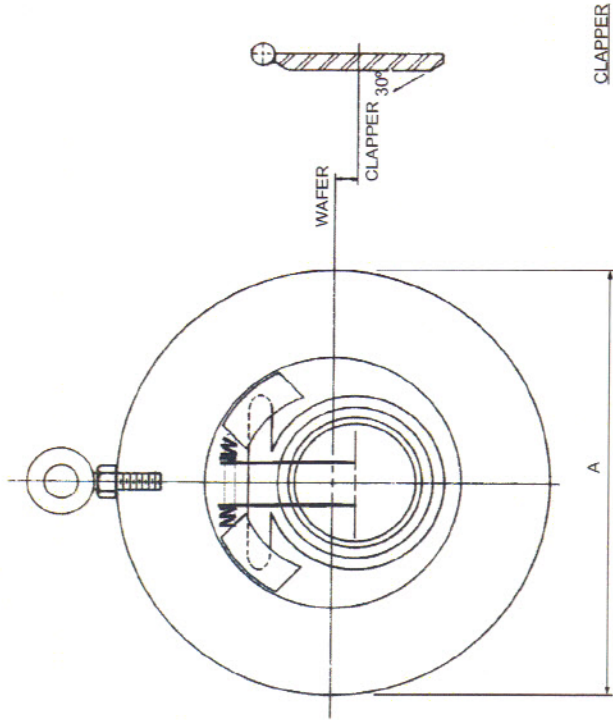


# CHAMPION LONG PATTERN WAFER CHECK VALVES

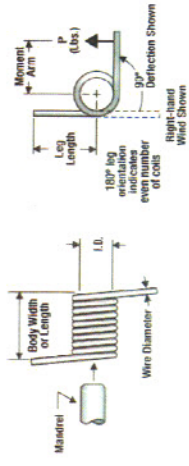
ORDERING INFORMATION FOR LONG PATTERN WAFER CHECKS  
 NACE W/ A36 CARBON BODY, 316 STAINLESS CLAPPER & PIN VITON SEAT

VALVE SIZE	ANSI CLASS	WORKING PRESSURE	PART NO. RAISED FACE W / VITON SEAT	PART NO. RAISED FACE RTJ W / VITON SEAT	PART NO. RAISED FACE W / SS SPRING & VITON SEAT
	150	285	25RCS-LP-V	25RCS-LP-RTJ-V	25RCS-LP-SPR-V
	300	740	23RCS-LP-V	23RCS-LP-RTJ-V	23RCS-LP-SPR-V
2"	600	1480	26RCS-LP-V	26RCS-LP-RTJ-V	26RCS-LP-SPR-V
	900	2220	29RCS-LP-V	29RCS-LP-RTJ-V	29RCS-LP-SPR-V
	1500	3705	215RCS-LP-V	215RCS-LP-RTJ-V	215RCS-LP-SPR-V
	150	285	35RCS-LP-V	35RCS-LP-RTJ-V	35RCS-LP-SPR-V
	300	740	33RCS-LP-V	33RCS-LP-RTJ-V	33RCS-LP-SPR-V
3"	600	1480	36RCS-LP-V	36RCS-LP-RTJ-V	36RCS-LP-SPR-V
	900	2220	39RCS-LP-V	39RCS-LP-RTJ-V	39RCS-LP-SPR-V
	1500	3705	315RCS-LP-V	315RCS-LP-RTJ-V	315RCS-LP-SPR-V
	150	285	45RCS-LP-V	45RCS-LP-RTJ-V	45RCS-LP-SPR-V
	300	740	43RCS-LP-V	43RCS-LP-RTJ-V	43RCS-LP-SPR-V
4"	600	1480	46RCS-LP-V	46RCS-LP-RTJ-V	46RCS-LP-SPR-V
	900	2220	49RCS-LP-V	49RCS-LP-RTJ-V	49RCS-LP-SPR-V
	1500	3705	415RCS-LP-V	415RCS-LP-RTJ-V	415RCS-LP-SPR-V
	150	285	65RCS-LP-V	65RCS-LP-RTJ-V	65RCS-LP-SPR-V
	300	740	63RCS-LP-V	63RCS-LP-RTJ-V	63RCS-LP-SPR-V
6"	600	1480	66RCS-LP-V	66RCS-LP-RTJ-V	66RCS-LP-SPR-V
	900	2220	69RCS-LP-V	69RCS-LP-RTJ-V	69RCS-LP-SPR-V
	1500	3705	615RCS-LP-V	615RCS-LP-RTJ-V	615RCS-LP-SPR-V
	150	285	85RCS-LP-V	85RCS-LP-RTJ-V	85RCS-LP-SPR-V
	300	740	83RCS-LP-V	83RCS-LP-RTJ-V	83RCS-LP-SPR-V
8"	600	1480	86RCS-LP-V	86RCS-LP-RTJ-V	86RCS-LP-SPR-V
	900	2220	89RCS-LP-V	89RCS-LP-RTJ-V	89RCS-LP-SPR-V
	1500	3705	815RCS-LP-V	815RCS-LP-RTJ-V	815RCS-LP-SPR-V
	150	285	105RCS-LP-V	105RCS-LP-RTJ-V	105RCS-LP-SPR-V
	300	740	103RCS-LP-V	103RCS-LP-RTJ-V	103RCS-LP-SPR-V
10"	600	1480	106RCS-LP-V	106RCS-LP-RTJ-V	106RCS-LP-SPR-V
	900	2220	109RCS-LP-V	109RCS-LP-RTJ-V	109RCS-LP-SPR-V
	1500	3705	1015RCS-LP-V	1015RCS-LP-RTJ-V	1015RCS-LP-SPR-V
	150	285	125RCS-LP-V	125RCS-LP-RTJ-V	125RCS-LP-SPR-V
	300	740	123RCS-LP-V	123RCS-LP-RTJ-V	123RCS-LP-SPR-V
12"	600	1480	126RCS-LP-V	126RCS-LP-RTJ-V	126RCS-LP-SPR-V
	900	2220	129RCS-LP-V	129RCS-LP-RTJ-V	129RCS-LP-SPR-V
	1500	3705	1215RCS-LP-V	1215RCS-LP-RTJ-V	1215RCS-LP-SPR-V

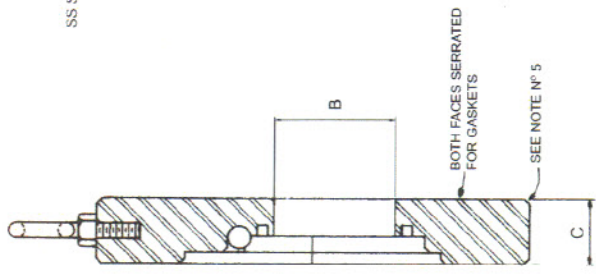




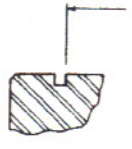
302 STAINLESS STEEL TORSION SPRINGS ARE ATTACHED ON SPRING PIN ABOVE CLAPPER. CLAPPER, PIN ASSY AND SPRING ASSY IS DROPPED INTO SEPARATE MILL SLOT OF VALVE BODY. BOTH ARE WELDED IN PLACE BY SS TABS.



**"CHAMPION" CUSTOM Reduced Port Long & Short Patten "Spring Style" Wafer Check Valves**



WAFER (SERRATED FACE)



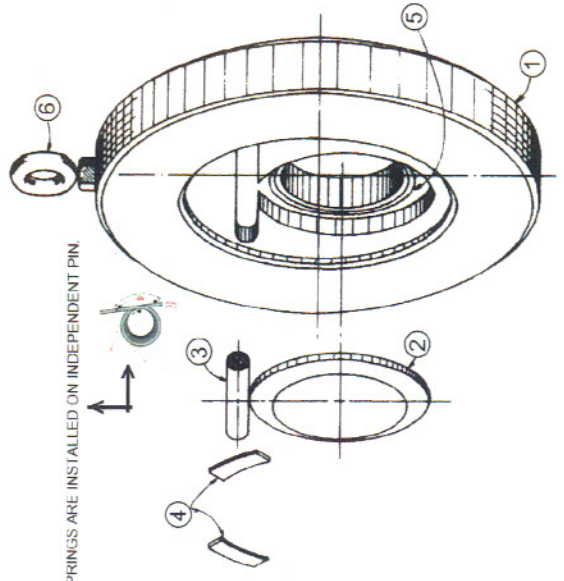
"O" RING FLANGE FACE  
"R" DIM. IS "O" RING SIZE.  
"O" RING FACE DIMS. FURNISHED ON REQUEST



R.T.J. FLANGE FACE  
AVAILABLE FOR 900 LB.  
"B" DIM. INCREASED 1/2"

FLANGE FACE ALTERNATES

SS SPRINGS ARE INSTALLED ON INDEPENDENT PIN



ITEM N°	PART
1	WAFER
2	CLAPPER
3	HINGE PIN
4	PIN RETAINER
5	SEAL ("O" RING)
6	EYE BOLT 3/8" HEX. NUT

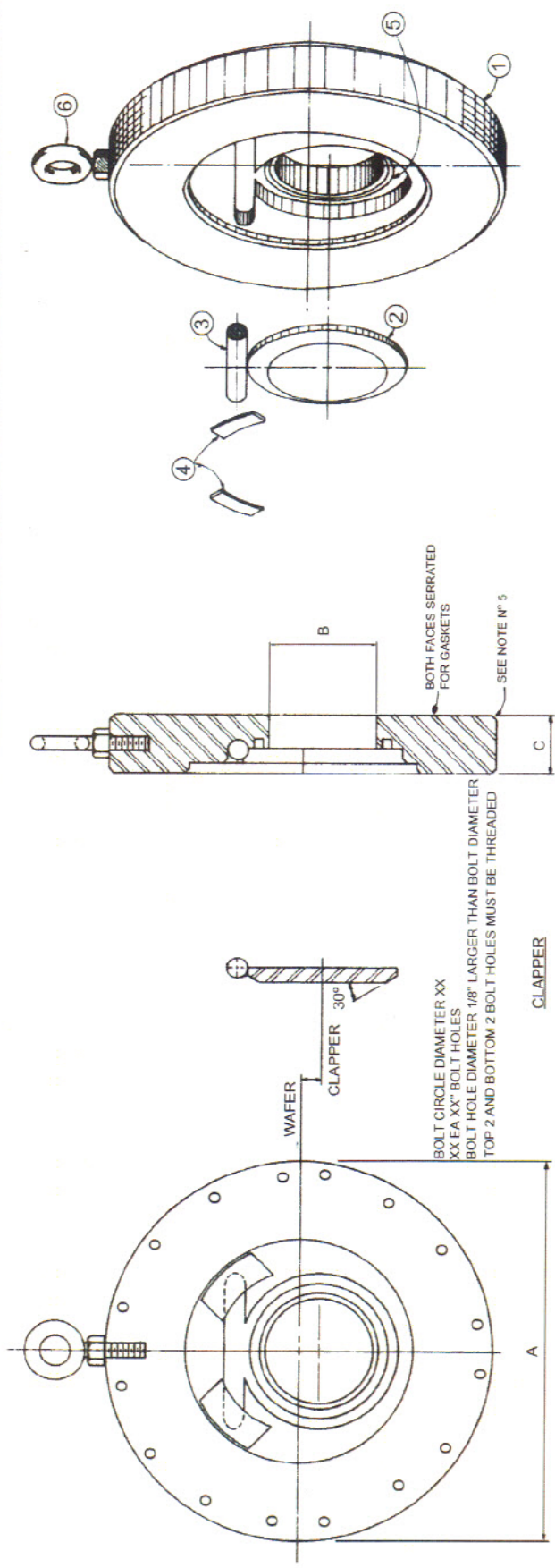
NOTES

1. VITON O RING INSERT IN WAFER IS STANDARD. TEFLON OR BUNA N NITRAL O RING OR METAL TO METAL CAN BE FURNISHED.
2. INSERT CAN BE PLACED ON CLAPPER UPON REQUEST
3. STAINLESS TRIM FURNISHED IF SPECIFIED.
4. O RING DIMENSIONS ARE I.D.
5. FACE FINISHED RAISED UNLESS A FLAT DIMENSION IS REQUESTED.
6. ALL CORNERS HAVE 1/16" CHAMFER.



P.O. Box 333  
CYPRESS, TX 77410

WAFER CHECK VALVE  
SPRING STYLE FOR LONG  
AND SHORT PATTERN VALVES



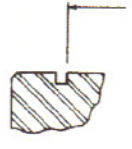
WAFER (SERRATED FACE)

ITEM N°	PART
1	WAFER
2	CLAPPER
3	HINGE PIN
4	PIN RETAINER
5	SEAL ("O" RING)
6	EYE BOLT 3/4" HEX. NUT

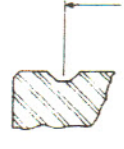
**NOTES**

1. VITON O RING INSERT IN WAFER IS STANDARD. TEFLON OR BUNA N NITRAL O RING OR METAL TO METAL CAN BE FURNISHED.
2. INSERT CAN BE PLACED ON CLAPPER UPON REQUEST
3. STAINLESS TRIM FURNISHED IF SPECIFIED.
4. O RING DIMENSIONS ARE I.D.
5. FACE FINISHED RAISED UNLESS A FLAT DIMENSION IS REQUESTED.
6. ALL CORNERS HAVE 1/16" CHAMFER.

"O" RING FLANGE FACE  
 "R" DIM. IS "O" RING SIZE.  
 "O" RING FACE DIMS.  
 FURNISHED ON REQUEST



R.T.J. FLANGE FACE  
 AVAILABLE FOR 900 LB.  
 "B" DIM. INCREASED 1/2"



**FLANGE FACE ALTERNATES**

**"CHAMPION" CUSTOM Reduced Port  
 Long & Short Patten  
 "Lug Style"  
 Wafer Check Valves**



P.O. Box 333  
 CYPRESS, TX 77410

WAFER CHECK VALVE  
 LUG STYLE FOR LONG  
 AND SHORT PATTERN VALVES

**Contact Factory for Valve Dimensions**