

 **CIRCLE SEAL CONTROLS, INC.**  
A division of CIRCOR International, Inc.

## 2300 SERIES CHECK VALVES

### 0 to 10,000 PSIG

#### Features

- Designed For High Pressure Service
- Resilient O-ring
- Single-Piece Design

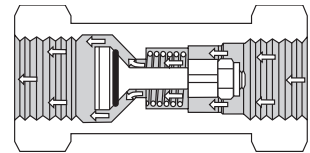
#### Benefits

- Less Susceptible to Contamination Damage
- Zero Leakage at Normal Back Pressure
- Automatic Compensation for Wear
- Cushioned, Quiet Closing

#### Technical Data

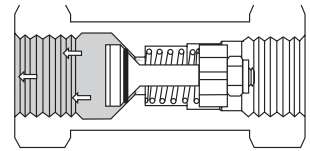
Body Materials:	• Aluminum, Brass, 303 Stainless Steel, or 17-4PH Stainless Steel
O-ring Materials:	• Buna N, Ethylene Propylene, Neoprene, Teflon® and Viton®
Operating Pressure:	<ul style="list-style-type: none"> <li>• Aluminum – 0 to 5,000 PSIG (345 BAR) (For Temp. under 250° F)</li> <li>• Brass – 0 to 5,000 PSIG (345 BAR)</li> <li>• 303 S.S. – 0 to 7,500 PSIG (517 BAR)</li> <li>• 17-4PH S.S. – 0 to 10,000 PSIG (690 BAR)</li> </ul>
Proof Pressure:	<ul style="list-style-type: none"> <li>• Aluminum – 7,500 PSIG (517 BAR)</li> <li>• Brass – 7,500 PSIG (517 BAR)</li> <li>• 303 S.S. – 11,250 PSIG (776 BAR)</li> <li>• 17-4PH S.S. – 15,000 PSIG (1034 BAR)</li> </ul>
Rated Burst Pressure:	<ul style="list-style-type: none"> <li>• Aluminum – 12,500 PSIG (862 BAR)</li> <li>• Brass – 12,500 PSIG (862 BAR)</li> <li>• 303 S.S. – 18,750 PSIG (1293 BAR)</li> <li>• 17-4PH S.S. – 25,000 PSIG (1724 BAR)</li> </ul>
Temperature Range:	<ul style="list-style-type: none"> <li>• -100° F to +400° F (-74° C to +204° C) Based on o-ring material, see "How to Order"</li> </ul>
Connection Size:	• 1/8 inch to 1 inch

#### How It Works



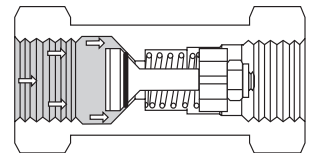
##### OPEN

Flow passes smoothly over poppet head with minimum turbulence.



##### CLOSING

O-ring automatically establishes line of contact with conical seat to cushion closing and insure perfect sealing.



##### CLOSED

O-ring only seals. Full pressure is carried by metal-to-metal seat. Increasing pressure increases sealing efficiency.

NOTE: Proper filtration is recommended to prevent damage to sealing surfaces.

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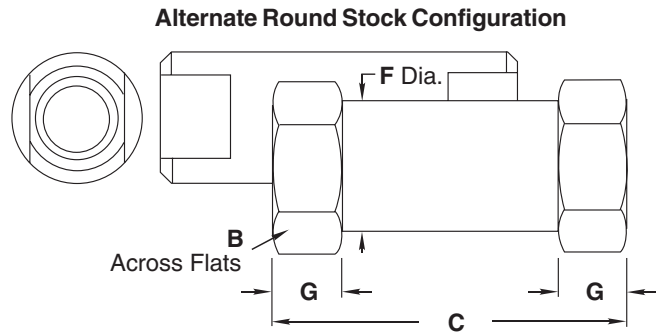
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## End Connection & Dimensions (inches)

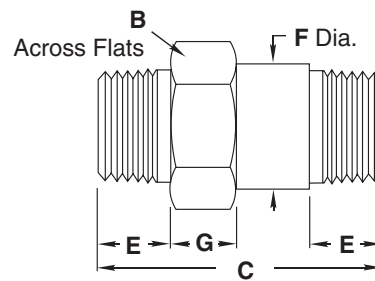
### PP - FEMALE / FEMALE PIPE

Dash No.	Pipe Size	B. Hex.	C	F	G
1PP	1/8"	.625	1.50	.59	.31
2PP	1/4"	.813	2.00	.77	.41
3PP	3/8"	1.000	2.35	.95	.50
4PP	1/2"	1.250	2.89	1.19	.56
6PP	3/4"	1.500	3.30	1.43	.69



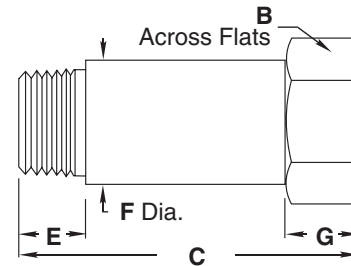
### MM - MALE / MALE PIPE

Dash No.	Pipe Size	B. Hex.	C	E	F Dia.	G
2MM	1/4"	.625	1.82	.60	.59	.31
3MM	3/8"	.813	2.21	.61	.77	.41
4MM	1/2"	1.000	2.75	.79	.95	.50
6MM	3/4"	1.250	3.03	.80	1.19	.56
8MM	1"	1.500	3.67	.99	1.43	.69



### MP - MALE / FEMALE PIPE

Dash No.	Pipe Size	B. Hex.	C	E	F Dia.	G
1MP	1/8"	.625	1.46	.40	.59	.31
2MP	1/4"	.813	1.67	.60	.77	.41
3MP	3/8"	1.000	2.07	.61	.95	.50
4MP	1/2"	1.250	2.56	.79	1.19	.56
6MP	3/4"	1.500	2.88	.80	1.43	.69

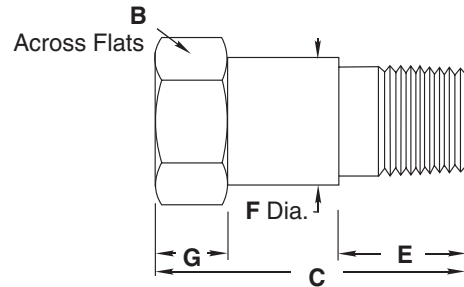


# 2300 SERIES CHECK VALVES

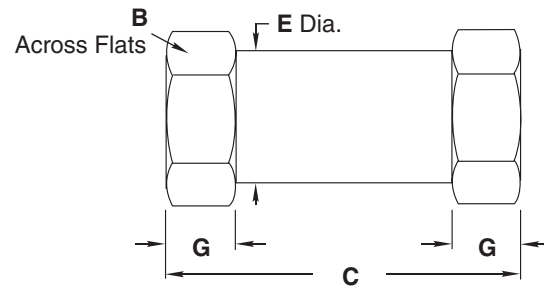
0 to 10,000 PSIG

End Connection & Dimensions (inches) (continued)

PM - FEMALE / MALE PIPE						
Dash No.	Pipe Size	B Hex.	C	E	F Dia.	G
2PM	1/4"	.813	1.93	.60	.77	.41
3PM	3/8"	1.000	2.26	.61	.95	.50
4PM	1/2"	1.250	2.89	.79	1.19	.56



BB - FEMALE / FEMALE TUBE					
Dash No.	Pipe Size	B Hex.	C	E Dia.	G
4BB	1/4"	.688	2.00	.66	.24
6BB	3/8"	.813	2.40	.77	.41
8BB	1/2"	1.250	3.34	1.19	.56
10BB	5/8"	1.250	3.53	1.19	.56
12BB	3/4"	1.500	4.15	1.43	.69

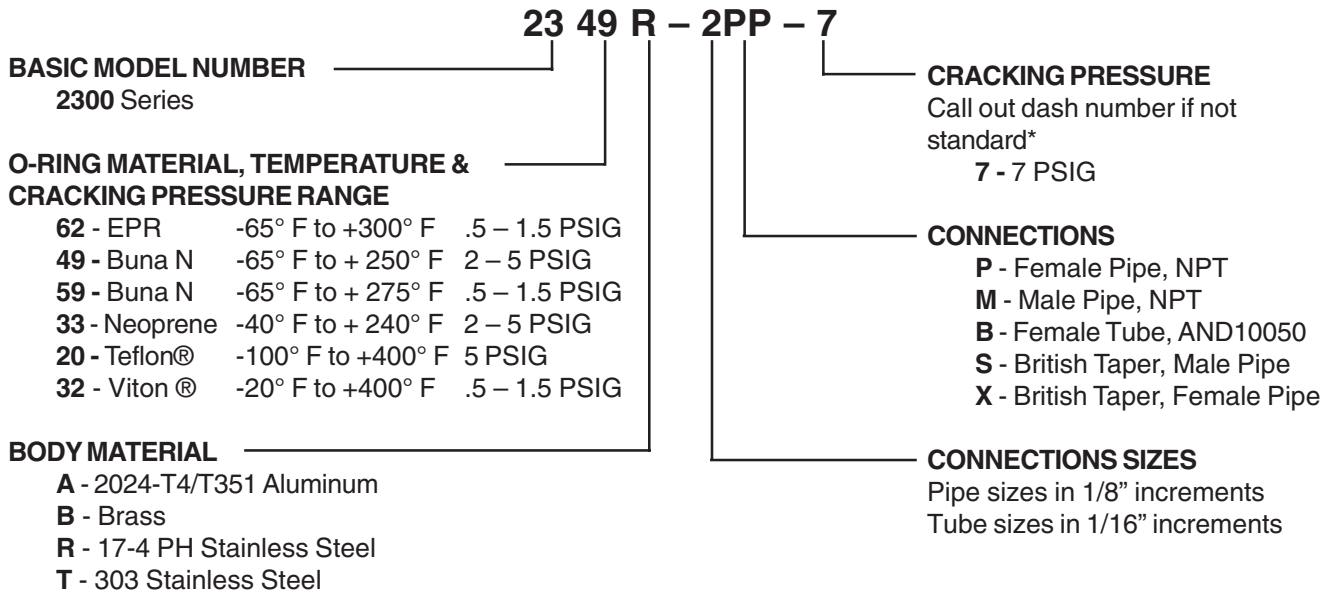


Flow Rates						
Valve Size	Tube	4BB	6BB	—	8BB; 10BB	12BB
	Pipe	1PP	2PP	3PP	4PP	6PP
<b>C<sub>v</sub> (maximum)</b>		.31	.76	1.78	2.82	5.11

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## How to Order



### LEAKAGE

2362, 2332, 2359	zero @ 1 psi to proof
2333, 2349	zero @ 3 psi to proof
2320	zero @ 75 psi to proof

\* Standard based on seal material.

\*For cracking pressures less than standard, consult factory for leakage rates.

*Viton® is a registered trademark of DuPont Dow Elastomers. Teflon® is a registered trademark of the DuPont Company.*

Please consult Circle Seal Controls or your local distributor for information on special connections, lubricant, operating pressures and temperature ranges.

### NOTES:

Vacuum service may require special lubricants.

AND10050 connection not normally recommended for 10,000 psi service unless special fitting seals are used.

## Special Cracking Pressures

Valves with special springs can be furnished to order.

- Minimum Cracking Pressure Available – 0.5 psi
- Maximum Cracking Pressure Available – 30 psi

When ordering a cracking pressure less than the maximum indicated for a specific o-ring, indicate the exact maximum cracking pressure in the part number (i.e. 2349R-2PP-3). If higher cracking pressure than the maximum shown is desired, cracking pressure tolerance is ±20%.

### **For Your Safety**

*It is the sole responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation and maintenance of these products. Material compatibility product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.*