CIRCLE SEAL CONTROLS, INC.

2200 Series

0 to 800 psig Check Valves

Features

- Medium flow
- Single piece design
- Resilient o-ring

Benefits

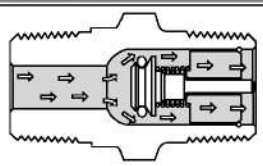
- Maintenance free
- Dependable
- Economical

Technical Data

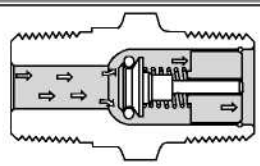
Body Construction Materials	Brass, 316 stainless steel
O-ring Materials	Buna N, ethylene propylene, neoprene, silicone, or Viton®
Operating Pressure	0 to 800 psig (55 bar)
Proof Pressure	1,200 psig (83 bar)
Cracking Pressure	1 to 3 psig (0.07 to 0.21 bar)
Temperature Range	–70° F to +450° F (–57° C to +232° C) *Based on o-ring & body material, see "How to Order"*
Connection Sizes	⅛" to 1"

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

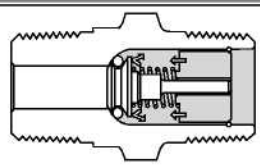
How it Works



Open
Flow passes smoothly over poppet head with minimum turbulence and through the fluted guide without restriction.



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



Closed
O-ring only seals. Full pressure is carried by metal-to-metal seat.

check valves

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Uxbridge,
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ISO9001 & RS01000

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VALVES, SWITCHES, INSTRUMENTATION
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TEMPERATURE APPLICATIONS

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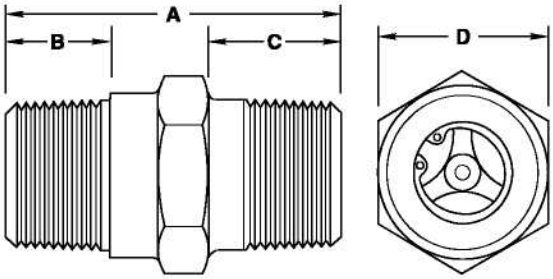
2200 Series

Dimensions, Pressure Drop & Flow Rates



2200 Series Dimensions (inches), Male Pipe

		A		B & C		D	
Model Number	Size	–MM	–SS	–MM	–SS	–MM	–SS
–1MM / –1SS	⅛″	1.30	1.32	0.39	0.40	0.50	0.50
–2MM / –2SS	¼″	1.59	1.70	0.54	0.60	0.63	0.63
–3MM / –3SS	⅜″	1.59	1.73	0.54	0.61	0.75	0.75
–4MM / –4SS	½″	2.13	2.20	0.78	0.81	0.88	0.88
–6MM / –6SS	¾″	2.15	2.33	0.78	0.86	1.13	1.13
–8MM / –8SS	1″	2.57	2.68	0.97	1.02	1.38	1.38

Maximum Allowable Pressure Drop

		2249 & 2262 Series		2224, 2232, 2233 & 2259 Series	
Model Number	Size	Air	Oil	Air	Oil
–1MM / –1SS	⅛″	10 psid	15 psid	5 psid	10 psid
–2MM / –2SS	¼″	10 psid	15 psid	5 psid	10 psid
–3MM / –3SS	⅜″	10 psid	15 psid	5 psid	10 psid
–4MM / –4SS	½″	10 psid	15 psid	5 psid	10 psid
–6MM / –6SS	¾″	10 psid	15 psid	5 psid	10 psid
–8MM / –8SS	1″	10 psid	15 psid	5 psid	10 psid

Flow Rates

Valve size	–1MM	–2MM	–3MM	–4MM	–6MM	–8MM
Cv (nominal)	0.26	0.74	1.1	2.1	4.7	6.6

How to Order

22 59 B – 2 MM – 1

O-RING MATERIAL, TEMPERATURE & STANDARD CRACKING RANGE

- **49** Buna N, –65° F to +250° F, 4.0 psig
- **59** Buna N, –65° F to +275° F, 2.0 psig
- **62** EPR, –65° F to +300° F, 4.0 psig
- **33** Neoprene, –40° F to +300° F, 4.0 psig
- **24** Silicone, –70° F to +450° F, 2.0 psig
- **32** Viton®, –20° F to +400° F, 2.0 psig
- **20** Teflon®, –100° F to +400° F, 4.0 psig

BODY MATERIAL

- **B** Brass†
- **T1** 316 stainless steel

CRACKING PRESSURE

Call out dash number if not standard

- **1** 1 psig

CONNECTIONS—INLET/OUTLET

- **M** Male pipe, NPT
- **S** Male British taper pipe

VALVE SIZE

- **1** ⅛″
- **2** ¼″
- **3** ⅜″
- **4** ½″
- **6** ¾″
- **8** 1″

† *For PED applications, brass bodies are limited to a maximum temperature of +100° F (+38° C).*

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

Leakage

2249, 2262 Series	zero @ 3 psig to 800 psig
2259, 2232, 2233 & 2224 Series	zero @ 1 psig to 800 psig
2220 Series	10cc/min maximum from zero to 75 psig; zero from 75 psig to 800 psig

Cracking Pressure

Minimum cracking pressure available: 0.1 psig

Maximum cracking pressure available: 7.0 psig

Note: Cracking pressure is defined as pressure at which flow is 5cc/min, except the 2220 Series, for which flow is approximately 0.02 cfm. For standard cracking pressures and less (example: 2259–2MM–.3), the tolerance is +0%, –100%. For cracking pressure greater than standard (example: 2259B–2MM–5), the tolerance is ±20%.

For Your Safety

It is solely the 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.

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