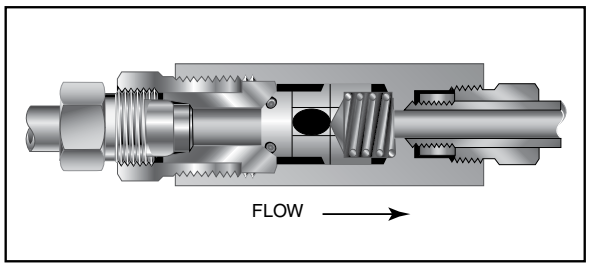
High Pressure Check Valves

Pressures to 60,000 psi (4137 bar)

O-Ring Check Valves



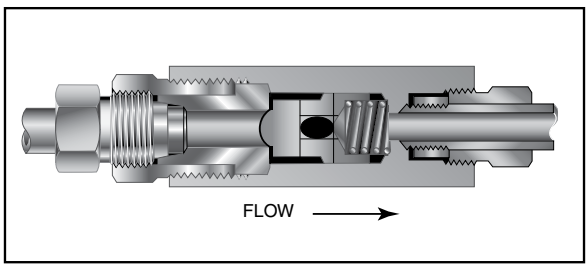
Minimum operating temperature for standard o-ring check valves 0°F (-17.8°C).
For low temperature option to -423°F (-252°C) add suffix LTTO (Low temperature spring & PTFE o-ring).

Provides unidirectional flow and tight shut-off for liquids and gas with high reliability. When differential drops below cracking pressure*, valve shuts off. **(Not for use as relief valve.)**

Materials: 316 Stainless Steel: body, cover, poppet, cover gland. 300 Series Stainless Steel: spring. Standard O-ring: Viton, for operation to 400° F (204°C). Buna-N or PTFE available for 250°F (121°C) or 400°F (204°C) respectively; specify when ordering.

***Cracking Pressure:** 20 psi (1.38 bar) ±30%. Springs for higher cracking pressures (up to 100 psi (6.89 bar) available on special order for O-ring style check valves only.

Ball Check Valves



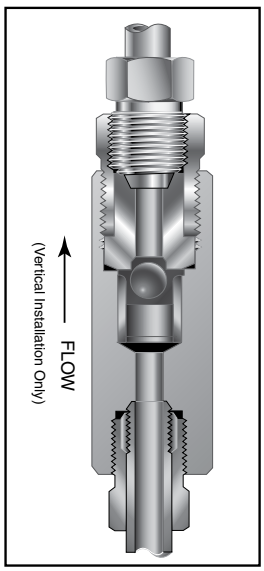
Minimum operating temperature for standard ball check valves -110°F (-79°C).
For low temperature option to -423°F (-252°C) add suffix LT (Low temperature spring).

Prevents reverse flow where **leak-tight shut-off is not mandatory**. When differential drops below cracking pressure, valve closes. With all-metal components, valve can be used up to 1200°F (649°C). See Technical Information section for connection temperature limitations. **(Not for use as a relief valve.)**

Ball and poppet are an integral design to assure positive, in-line seating without "chatter". Poppet is designed essentially for axial flow with minimum pressure drop.

Materials: 316 Stainless Steel: body, cover, ball poppet, cover gland. 300 Series Stainless Steel: spring.

Ball Type Excess Flow Valves



Protects pressure gauges and pressure instrumentation from surges in flow or sudden venting in the event of line failure.

Materials: 316 Stainless Steel: body, cover, sleeve, cover gland. 300 Series Stainless Steel: ball.

Vertical Installation: Since this type of check valve employs a non-spring loaded ball, valve MUST be installed in VERTICAL position with arrow on valve body pointing UP. (cover gland up).

Resetting Valve: Equalize the pressure across the ball. The ball will drop and reset automatically.

CAUTION: *While testing has shown O-Rings to provide satisfactory service life, both cyclic and shelf life may vary widely with differing service conditions, properties of reactants, pressure and temperature cycling and age of the O-ring. FREQUENT INSPECTIONS SHOULD BE MADE to detect any deterioration, and O-rings replaced as required.*

NOTE: *For optional material see Needle Valve Options section.*

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High Pressure Check Valves

Catalog Number	Fits Connection Type	Pressure Rating psi (bar)*	Orifice inches (mm)	Rated C_V	Dimensions - inches (mm)				
					A	B	C	D Typical	Hex
O-Ring Check Valves									
CKO4400	F250C	60,000 **(4136.79)**	0.094 **(2.39)**	0.15	3.38 **(85.85)**	2.50 **(63.50)**	0.50 **(12.70)**	0.63 **(16.00)**	1.18 **(29.97)**
CKO6600	F375C	60,000 **(4136.79)**	0.125 **(3.18)**	0.28	3.75 **(95.25)**	2.62 **(66.55)**	0.53 **(13.46)**	0.75 **(19.05)**	1.18 **(29.97)**
CKO9900	F562C	60,000 **(4136.79)**	0.187 **(4.75)**	0.63	4.62 **(117.35)**	3.38 **(85.85)**	0.81 **(20.57)**	1.12 **(28.45)**	1.50 **(38.10)**
40CKO9900	F562C40	40,000 **(2757.85)**	0.250 **(6.35)**	0.78	4.64 **(117.86)**	3.38 **(85.73)**	0.72 **(18.29)**	1.19 **(30.23)**	1.50 **(38.10)**
43CKO16	F1000C43	43,000 **(2964.70)**	0.438 **(11.13)**	4.3	6.54 **(166.11)**	5.63 **(143.00)**	.72 **(18.29)**	1.38 **(35.05)**	1.88† **(47.76)**
Ball Check Valves									
CB4401	F250C	60,000 **(4136.79)**	0.094 **(2.39)**	0.15	3.38 **(85.85)**	2.50 **(63.50)**	0.50 **(12.70)**	0.63 **(16.00)**	1.18 **(29.97)**
100CB4401+	F312C150	100,000 **(6894.65)**	0.0094 **(2.39)**	0.11	4.61 **(117.09)**	3.50 **(88.9)**	0.52 **(13.21)**	1.75† **(44.50)**	.75 **(19.05)**
100CB5501+	F312C150	100,000 **(6894.65)**	0.0094 **(2.39)**	0.11	4.61 **(117.09)**	3.50 **(88.9)**	.52 **(13.21)**	1.75† **(44.50)**	.75 **(19.05)**
CB6601	F375C	60,000 **(4136.79)**	0.125 **(3.18)**	0.28	3.75 **(95.25)**	2.62 **(66.55)**	0.53 **(13.46)**	0.75 **(19.05)**	1.18 **(29.97)**
100CB6601+	F312C150	100,000 **(6894.65)**	0.0094 **(2.39)**	0.11	4.61 **(117.09)**	3.50 **(88.9)**	.52 **(13.21)**	1.75† **(44.50)**	.75 **(19.05)**
CB9901	F562C	60,000 **(4136.79)**	0.187 **(4.75)**	0.63	4.62 **(117.35)**	3.38 **(85.85)**	0.81 **(20.57)**	1.12 **(28.45)**	1.50 **(38.10)**
43CB16	F1000C43	43,000 **(2964.70)**	0.438 **(11.13)**	4.3	6.54 **(166.11)**	5.63 **(143.00)**	.72 **(18.29)**	1.38 **(35.05)**	1.88† **(47.76)**
Ball Type Excess Flow Valves									
CK4402	F250C	60,000 **(4136.79)**	0.094 **(2.39)**		3.38 **(85.85)**	2.50 **(63.50)**	0.50 **(12.70)**	0.63 **(16.00)**	1.18 **(29.97)**
CK6602	F375C	60,000 **(4136.79)**	0.125 **(3.18)**		3.75 **(95.25)**	2.62 **(66.55)**	0.53 **(13.46)**	0.75 **(19.05)**	1.18 **(29.97)**
CK9902	F562C	60,000 **(4136.79)**	0.187 **(4.75)**		4.62 **(117.35)**	3.38 **(85.85)**	0.81 **(20.57)**	1.12 **(28.45)**	1.50 **(38.10)**

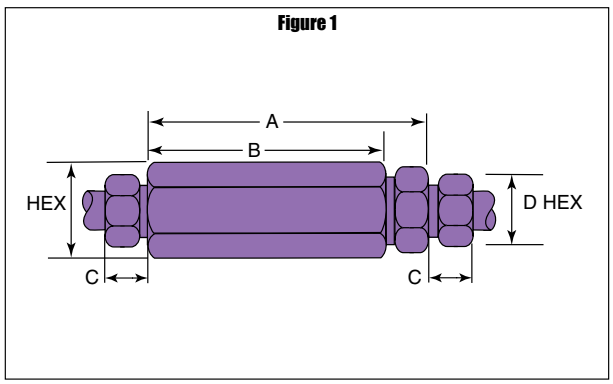
+Body material is 15-5PH

*Maximum pressure rating is based on the lowest rating of any component.
Actual working pressure may be determined by tubing pressure rating, if lower.

† Distance across flats

All dimensions for reference only and subject to change.
For prompt service, Parker Autoclave Engineers stocks select products. Consult your local representative.

Figure 1



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