

Check Valves

Multiple Hydraulic System Applications

Parker Check Valves are unidirectional flow control devices used primarily in hydraulic systems to eliminate potential damage caused by fluid back pressure. Offered in nearly 5,000 configurations (5 series), Parker can satisfy almost any hydraulic system application.

Parker's five series of Check Valves include standard in-line style, cartridge style, and split-flange mounting units. They are available in a variety of sizes, pressure ratings, flow capacities and crack pressures.

Note: To obtain further information and to order Check Valve products found in this section of the catalog please contact:

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Quick Coupling Division/ Lincoln Plant
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Lincoln, NE 68501-1247
Phone: (402) 489-6536
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Check Valves



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Check Valves

	Body Size	Material				Rated Pressure	Crack Pressure
		Br	SS	S	P		
CF Series	1" - 2"			●		3000 PSI	5-80
CV Series	1/4 - 1"			●		3000 PSI	5-130
DC Series	1/4 - 2"			●		Up to 5000 PSI	5-100
DT Series	3/8 - 1 1/4"			●		5000 PSI	5-200
DK Series	3/8 - 1/2"			●		3000 PSI	5-100

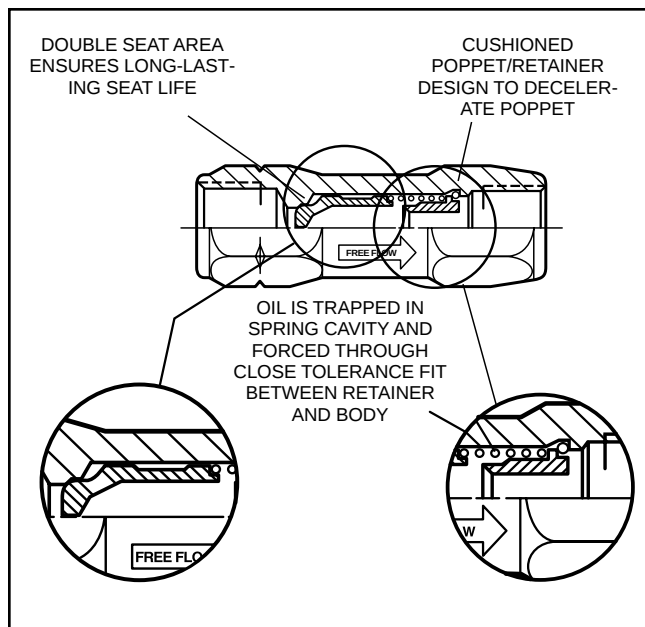
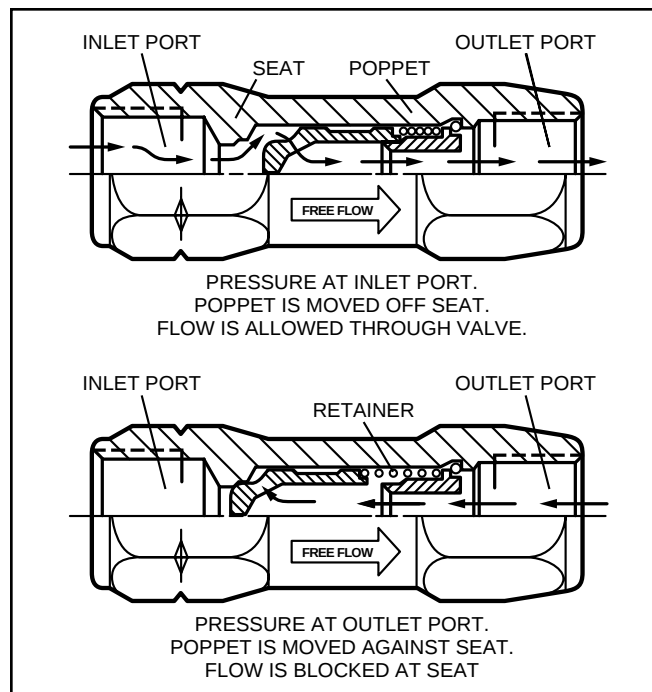
Check Valves

Features

Parker's Check Valves employ several unique features that insure years of trouble-free operation. The double seat, guided poppet, oil retention groove in the poppet, and the

poppet-guide cushion combine to offer the finest check valves available. The double seat and cushioned poppet are exclusive to Parker.

The graphic symbol for a check-valve is: 



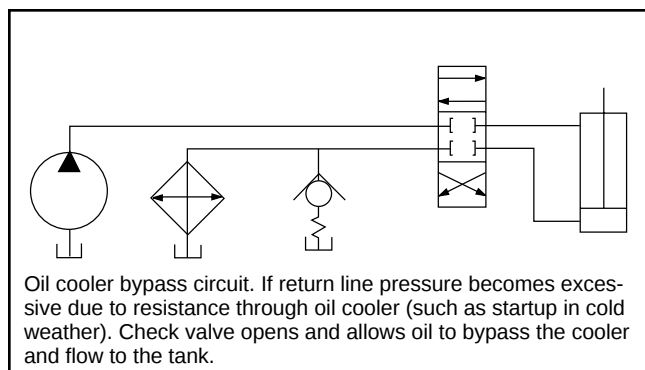
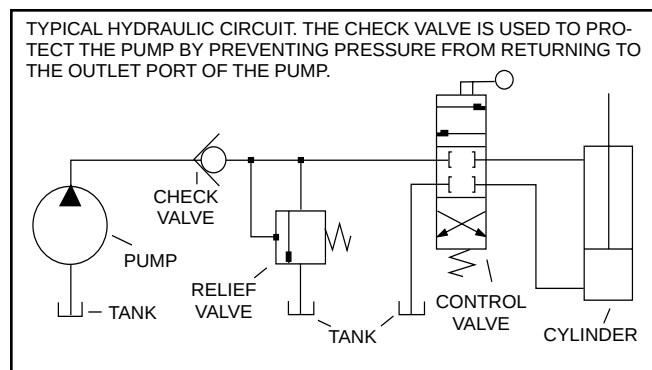
An arrow on the check valve indicates the free flow direction.

Crack Pressure

Crack pressure refers to the amount of fluid pressure in the free flow direction required to move the poppet off the seat. The normal crack pressure setting is 5 PSI; however, other crack pressures are available to allow the check valve to

perform special circuit functions, or operate under unique conditions.

Check valves are not field repairable or adjustable. Crack pressure settings are made at the factory only.



Check Valves

Parker DT Series Check Valves Offer the Features of a Compact Body Size, and 5000 PSI Maximum Operating Pressure.

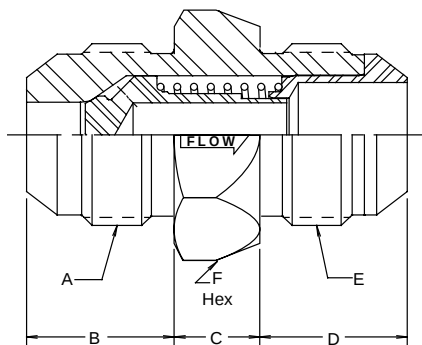
The DT Series check valves utilize the dependable, internal design features found in Parker check valves, but with the added benefit and convenience of compact design. Sizes are available from 3/8" to 1-1/4" with six different Fitting Styles.

The DT Series expands Parker's high quality product line of versatile and efficient check valves.



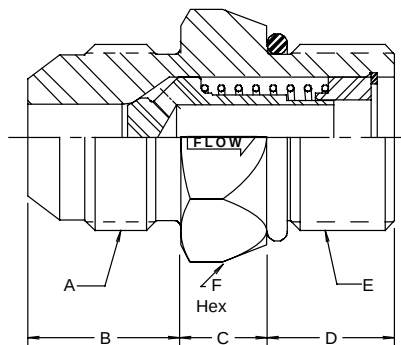
Features:

1. Compact Design. Easy to plumb into tight circuits.
2. All steel construction. No internal gaskets or seals to wear out.
3. One-piece body eliminates threads and seals that may be potential leakage points.
4. Smooth flow stream. Poppet spring is isolated from flow stream.
5. Heat treated poppet to resist damage from shocks and surges.
6. Variety of end fittings.
7. Crack pressure from 5-200 PSI.
8. Zinc Chromate Exterior Finish.
9. Buna-N (Nitrile) O-Ring included on MO and MS fittings.
10. Captive O-Ring groove is standard on MS end fittings,



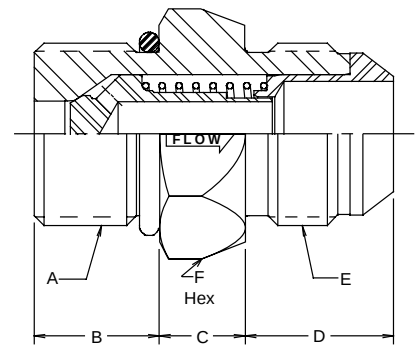
DT-MFMF

Male Flare Inlet to Male Flare Outlet



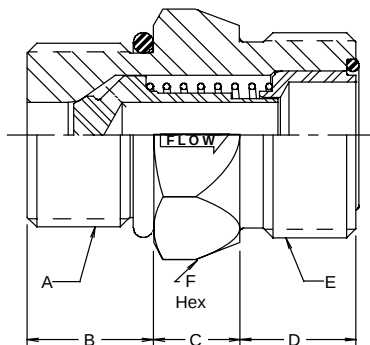
DT-MFMO

Male Flare Inlet to Male O-Ring Boss Outlet



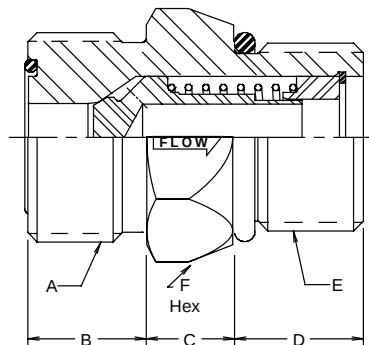
DT-MOMF

Male O-Ring Boss Inlet to Male Flare Outlet



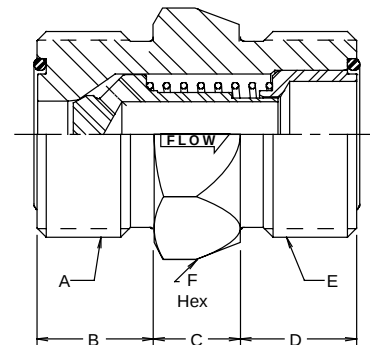
DT-MOMS

Male O-Ring Boss Inlet to Male Face Seal Outlet



DT-MSMO

Male Face Seal Inlet to Male O-Ring Boss Outlet



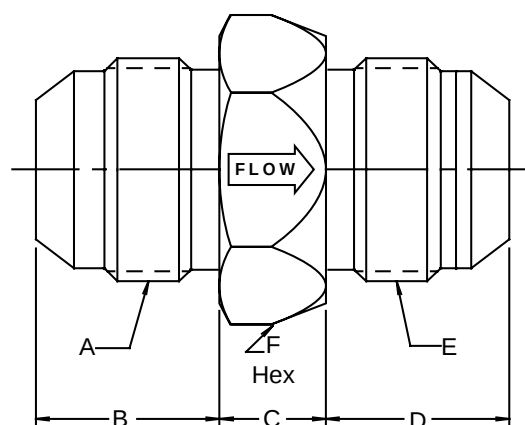
DT-MSMS

Male Face Seal Inlet to Male Face Seal Outlet

Check Valves

Specifications

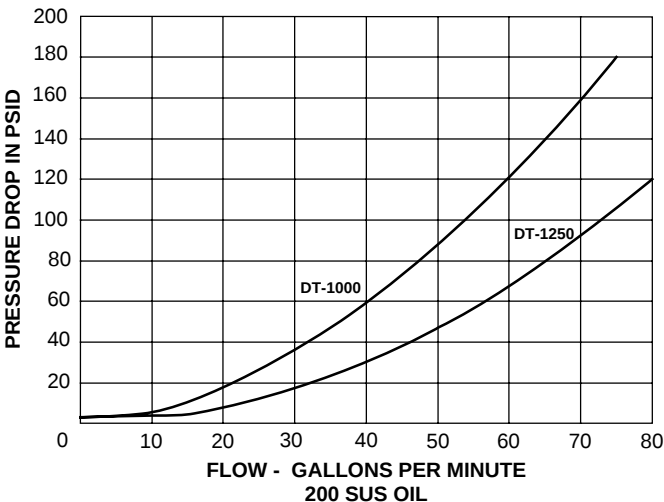
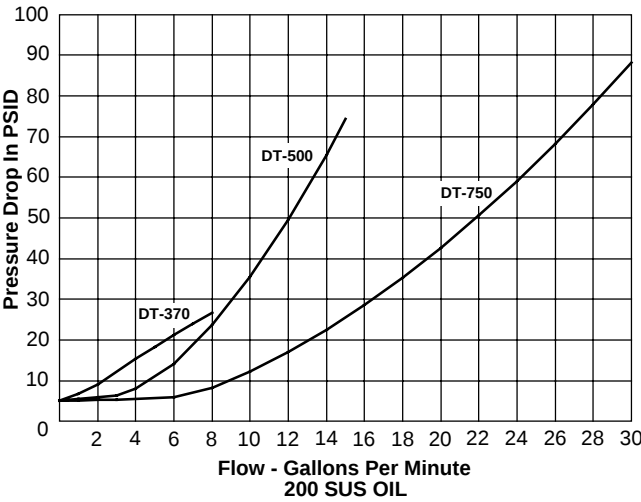
The DT Series check valves have a Maximum Operating Pressure of 5000 PSI. Standard Crack Pressure is 5 PSI. Optional Crack Pressures up to 200 PSI in 5 PSI increments.



FITTING COMBINATION	DIMENSIONS	Valve Sizes				
		370	500	750	1000	1250
MFMF	"A"	.562-18UNF-2A	.750-16UNF-2A	1.062-12UN-2A	1.312-12UN-2A	1.625-12UN-2A
	"B"	.56	.66	.86	.91	.96
	"C"	.44	.50	.50	.62	1.06
	"D"	.56	.66	.86	.91	.96
	"E"	.562-18UNF-2A	.750-16UNF-2A	1.062-12UN-2A	1.312-12UN-2A	1.625-12UN-2A
	"F" HEX	.75	.88	1.25	1.50	1.88
MFMO	"A"	.562-18UNF-2A	.750-16UNF-2A	1.062-12UN-2A	1.312-12UN-2A	1.625-12UN-2A
	"B"	.56	.66	.86	.91	.96
	"C"	.44	.50	.50	.62	1.06
	"D"	.47	.55	.73	.73	.73
	"E"	.562-18UNF-2A	.750-16UNF-2A	1.062-12UN-2A	1.312-12UN-2A	1.625-12UN-2A
	"F" HEX	.75	.88	1.25	1.50	1.88
MOMF	"A"	.562-18UNF-2A	.750-16UNF-2A	1.062-12UN-2A	1.312-12UN-2A	1.625-12UN-2A
	"B"	.47	.55	.73	.73	.73
	"C"	.44	.50	.50	.62	1.06
	"D"	.56	.66	.86	.91	.96
	"E"	.562-18UNF-2A	.750-16UNF-2A	1.062-12UN-2A	1.312-12UN-2A	1.625-12UN-2A
	"F" HEX	.75	.88	1.25	1.50	1.88
MOMS	"A"	.562-18UNF-2A	.750-16UNF-2A	1.062-12UN-2A	1.312-12UN-2A	1.625-12UN-2A
	"B"	.47	.55	.73	.73	.73
	"C"	.44	.50	.50	.62	1.06
	"D"	.44	.50	.67	.69	.69
	"E"	.688-16UN-2A	.812-16UN-2A	1.188-12UN-2A	1.438-12UN-2A	1.688-12UN-2A
	"F" HEX	.75	.88	1.25	1.50	1.88
MSMO	"A"	.688-16UN-2A	.812-16UN-2A	1.188-12UN-2A	1.438-12UN-2A	1.688-12UN-2A
	"B"	.44	.50	.67	.69	.69
	"C"	.44	.50	.50	.62	1.06
	"D"	.47	.55	.73	.73	.73
	"E"	.562-18UNF-2A	.750-16UNF-2A	1.062-12UN-2A	1.312-12UN-2A	1.625-12UN-2A
	"F" HEX	.75	.88	1.25	1.50	1.88
MSMS	"A"	.688-16UN-2A	.812-16UN-2A	1.188-12UN-2A	1.438-12UN-2A	1.688-12UN-2A
	"B"	.44	.50	.67	.69	.69
	"C"	.44	.50	.50	.62	1.06
	"D"	.44	.50	.67	.69	.69
	"E"	.688-16UN-2A	.812-16UN-2A	1.188-12UN-2A	1.438-12UN-2A	1.688-12UN-2A
	"F" HEX	.75	.88	1.25	1.50	1.88

Check Valves

Flow Data



Check Valves

Ordering Information

DT Series

DT - * * * - * * * * - * *

Series

Size

Fitting Style

Standard Crack Pressure is 5 PSI.
Other Crack Pressures up to 200 PSI in 5 PSI increments. Example: 5 = 5 PSI, 10 = 10 PSI

SERIES	SIZE	FITTING STYLE
370	3/8"	MFMF - Male Flare Inlet to Male Flare Outlet
500	1/2"	MFMO - Male Flare Inlet to Male O-Ring Boss Outlet
750	3/4"	MOMF - Male O-Ring Boss Inlet to Male Flare Outlet
1000	1"	MOMS - Male O-Ring Boss Inlet to Male Face Seal Outlet
1250	1-1/4"	MSMO - Male Face Seal Inlet to Male O-Ring Boss Outlet
		MSMS - Male Face Seal Inlet to Male Face Seal Outlet

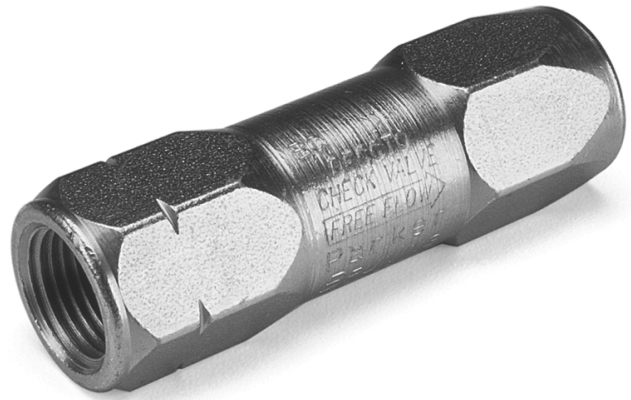
Check Valves

DC Series Check Valves are Rugged, Cost-competitive

The DC Series offers basic, workhorse check valves—ruggedly built, readily available and reasonably priced.

They are in-line valves, available in sizes 1/4" to 2", with a pressure rating range of up to 5000 psi, flow capacities to 300 GPM, and a variety of crack pressures.

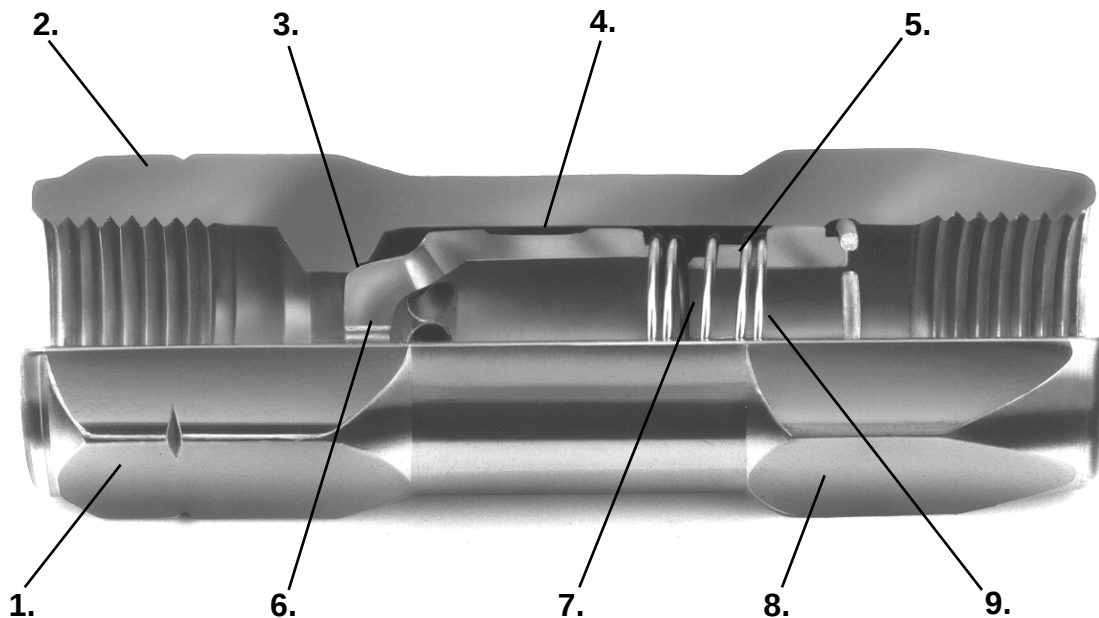
These check valves are specified by design engineers for use in hydraulic systems and on hydraulic equipment worldwide.



Features:

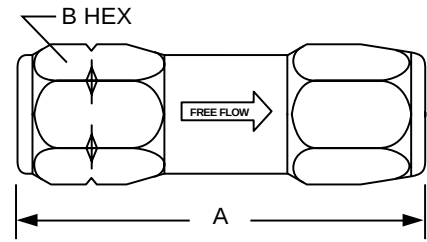
1. All-steel construction—no internal seals or gaskets to wear out.
2. One-piece body eliminates threads and seals that may be potential failure or leakage points.
3. Valve seats resist damage from shocks, surges and contamination.
4. Poppet has an oil retention groove that lubricates the bore and eliminates galling.
5. Poppet spring is isolated from the liquid flow stream, minimizing turbulence.
6. Poppet is heat treated to help prevent damage from shocks, surges and galling.
7. Close tolerance fit between poppet and poppet retainer creates a cushion that protects valve from surge shock damage.
8. Check valve body is shaped like an arrow to indicate flow direction.
9. Available in a wide variety of crack pressures.

Note: DC Series valves are also available with O-ring boss ports in sizes from 1/4" to 1".



Check Valves

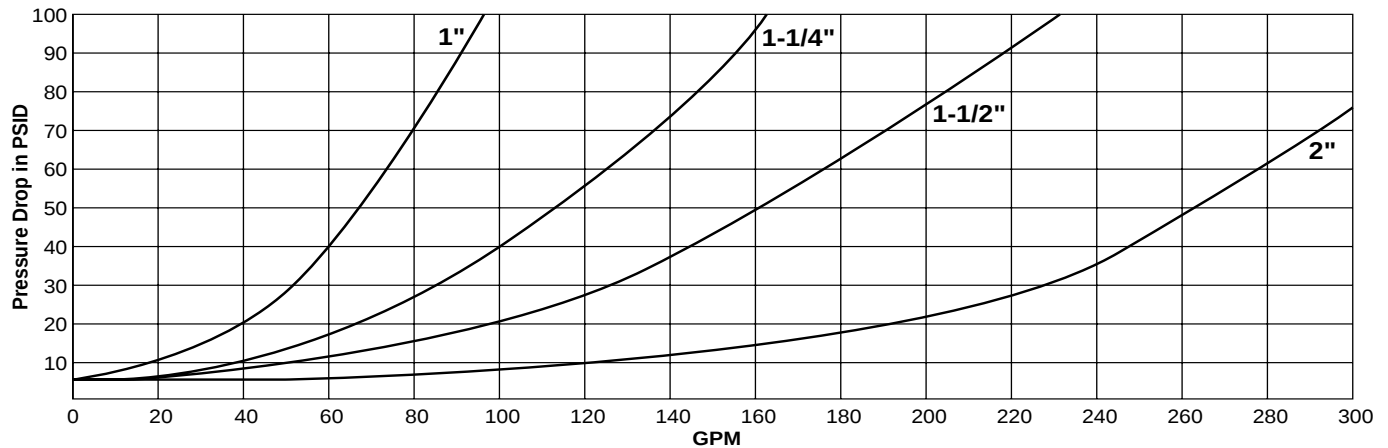
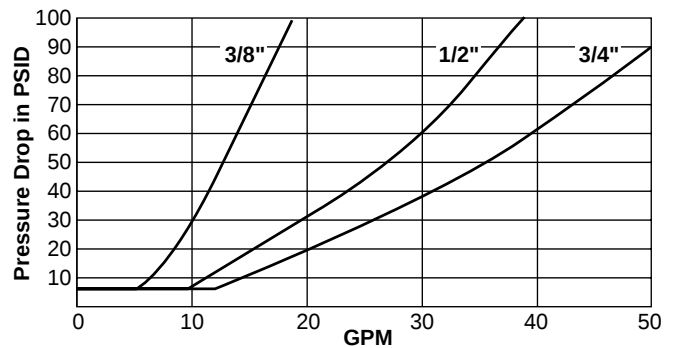
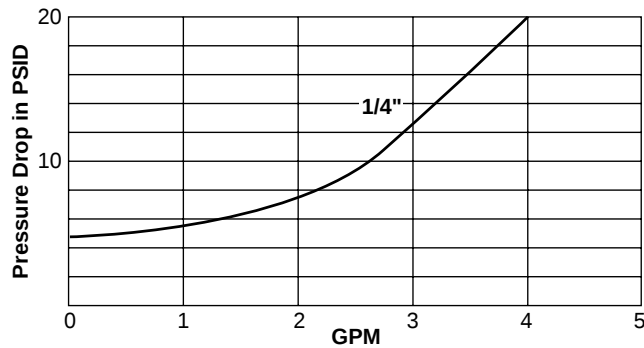
Specifications



PART NUMBER	NOMINAL SIZE	THREAD SIZE	A	B	NET WEIGHT	MAXIMUM OPERATING PRESSURE	CRACK PRESSURE RANGE
DC-250-*	1/4"	1/4-18 NPSF	2.44	0.81	.10 KG	5000 PSI	5-85 PSI
DC-250-FOFO-*	1/4"	.438-20 UNF	2.44	0.81	.10 KG	5000 PSI	5-85 PSI
DC-370-*	3/8"	3/8-18 NPSF	2.75	0.88	.13 KG	3000 PSI	5-100 PSI
DC-370-FOFO-*	3/8"	.562-18 UNF	2.75	0.88	.13 KG	3000 PSI	5-100 PSI
DC-500-*	1/2"	1/2-14 NPSF	3.50	1.06	.28 KG	3000 PSI	5-90 PSI
DC-500-FOFO-*	1/2"	.750-16 UNF	3.50	1.06	.28 KG	3000 PSI	5-90 PSI
DC-750-*	3/4"	3/4-14 NPSF	3.88	1.37	.45 KG	3000 PSI	5-90 PSI
DC-750-FOFO-*	3/4"	1.062-12 UN	3.88	1.37	.45 KG	3000 PSI	5-90 PSI
DC-1000-*	1"	1-11.5 NPSF	4.88	1.62	.68 KG	3000 PSI	5-80 PSI
DC-1000-FOFO-*	1"	1.312-12 UN	4.88	1.62	.68 KG	3000 PSI	5-80 PSI
DC-1250-*	1-1/4"	1-1/4 11.5 NPTF	5.94	2.00	1.4 KG	3000 PSI	5-80 PSI
DC-1500-*	1-1/2"	1-1/2 11.5 NPTF	6.37	2.38	2.4 KG	3000 PSI	5-65 PSI
DC-2000-*	2"	2-11.5 NPTF	7.00	2.88	3.7 KG	3000 PSI	5-65 PSI

*Designate crack pressure in 5 psi increments. (Not to exceed maximum crack pressure range.)

Flow Data



D C - * * * - * * * * - * *

Standard Crack Pressure is 5 PSI.
 Designate in 5 PSI increments.
 Not to exceed Crack Pressure Range
 for designated size.
 Example: 5 = 5 PSI, 10 = 10 PSI.

SERIES	SIZE	FITTING STYLE
	250 - 1/4"	"Blank" - Female Pipe Inlet to Female Pipe Outlet
	370 - 3/8"	FOFO - Female O-Ring Boss Inlet to Female O-Ring Boss Outlet
	500 - 1/2"	
	750 - 3/4"	
	1000 - 1"	
	1250 - 1-1/4"	
	1500 - 1-1/2"	
	2000 - 2"	

Check Valves

CV Series check valves offer port thread options for special plumbing requirements

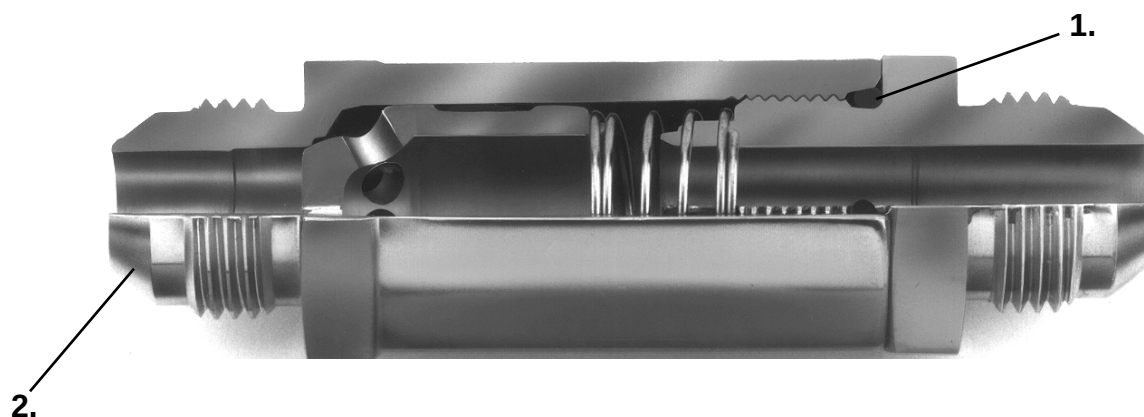
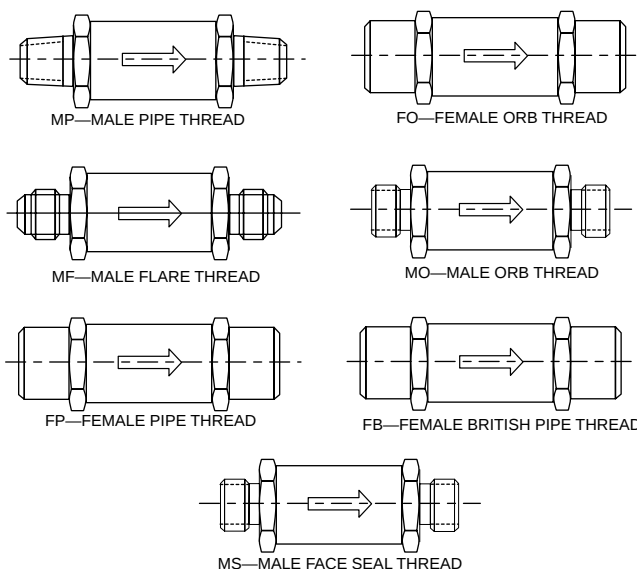
CV Series check valves incorporate the same dependable internal design features as the DC Series, with this addition: CV Series valves offer a wide variety of port thread options to adapt them to special plumbing needs. Port styles can be mixed-or-matched for outstanding versatility.

These check valves are outstanding examples of the valve-maker's art.



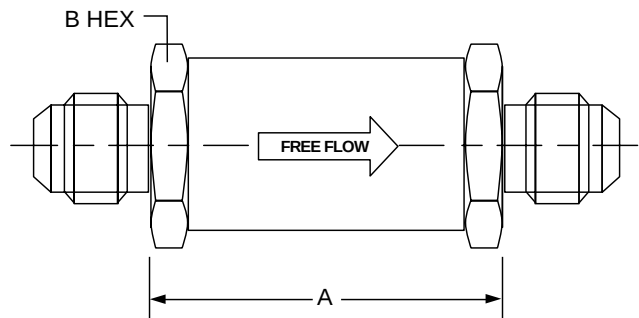
Features:

1. Buna-N (Nitrile) O-ring is standard, and is included on MO and MS fittings.
2. Available with variety of thread design options.
3. All-steel construction
4. Valve seats resist damage from shocks, surges and contamination.
5. Poppet has an oil retention groove that lubricates the bore and eliminates galling.
6. Poppet spring is isolated from the liquid flow stream, minimizing turbulence.
7. Poppet is heat treated to help prevent damage from shocks, surges and galling.
8. Close tolerance fit between poppet and poppet retainer creates a cushion that protects valve from surge shock damage.
9. Available in a wide variety of crack pressures.



Check Valves

Specifications

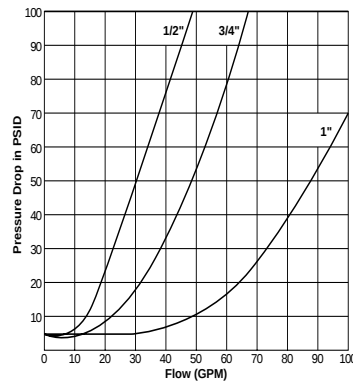
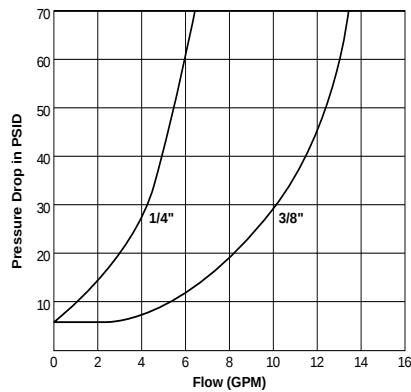


PART NUMBER	NOMINAL SIZE	A	B	MP THREAD SIZE	MF THREAD SIZE	FP THREAD SIZE	FO THREAD SIZE
CV-250-****-*	1/4"	1.53	.68	.250-18 NPTF	.438-20 UNF	.250-18 NPSF	.438-20 UNF
CV-370-****-*	3/8"	1.75	.81	.375-18 NPTF	.562-18 UNF	.375-18 NPSF	.562-18 UNF
CV-500-****-*	1/2"	2.22	1.00	.500-14 NPTF	.750-16 UNF	.500-14 NPSF	.750-16 UNF
CV-750-****-*	3/4"	2.75	1.38	.750-14 NPTF	1.062-12 UN	.750-14 NPSF	1.062-12 UN
CV-1000-****-*	1"	3.31	1.62	1-11.5 NPTF	1.312-12 UN	1-11.5 NPSF	1.312-12 UN

NOMINAL SIZE	MO THREAD SIZE	FB THREAD SIZE	MS THREAD SIZE	NET WEIGHT	MAXIMUM OPERATING PRESSURE	CRACK PRESSURE RANGE
1/4"	.438-20 UNF	G 1/4 BSPF	.562-18 UNF	12 KG	3000 PSI	5-110 PSI
3/8"	.562-18 UNF	G 3/8 BSPF	.688-16 UN	19 KG	3000 PSI	5-100 PSI
1/2"	.750-16 UNF	G 1/2 BSPF	.812-16 UN	35 KG	3000 PSI	5-130 PSI
3/4"	1.062-12 UN	G 3/4 BSPF	1.188-12 UN	59 KG	3000 PSI	5-80 PSI
1"	1.312-12 UN	G 1 BSPF	1.438-12 UN	96 KG	3000 PSI	5-50 PSI

****Designate fitting style (FOFO, MOMS, FPMP, etc.). Note: Fitting configurations can be either the same (FOFO) or mixed (FOFP) to suit various plumbing requirements.
-*Designate crack pressure in 5 PSI increments. (Not to exceed max. crack press. range.)

Flow Data



Check Valves

Ordering Information
CV Series

C V - * * * - * * * * - * *

SERIES	SIZE	FITTING STYLE
250 - 1/4"	MPMP -	Male Pipe Inlet to Male Pipe Outlet
370 - 3/8"	FOFO -	Female O-Ring Boss Inlet to Female O-Ring Boss Outlet
500 - 1/2"	MFMP -	Male Flare Inlet to Male Flare Outlet
750 - 3/4"	MOMO -	Male O-Ring Boss Inlet to Male O-Ring Boss Outlet
1000 - 1"	FPFP -	Female Pipe Inlet to Female Pipe Outlet
	FBFB -	Female British Pipe Inlet to Female British Pipe Outlet
	MSMS -	Male Face Seal Inlet to Male Face Seal Outlet

Standard Crack Pressure is 5 PSI.
Designate in 5 PSI increments.
Not to exceed Crack Pressure Range
for designated size.
Example: 5 = 5 PSI, 10 = 10 PSI.

Check Valves

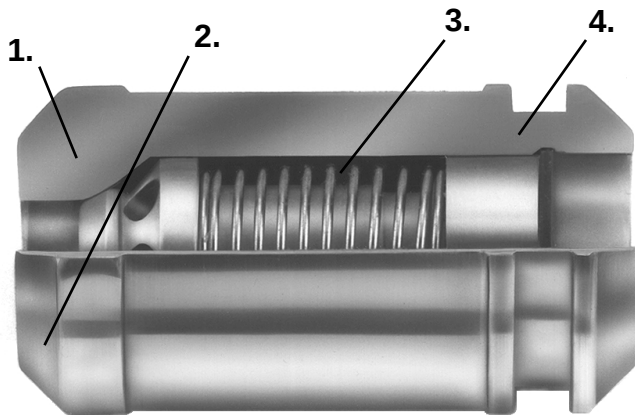
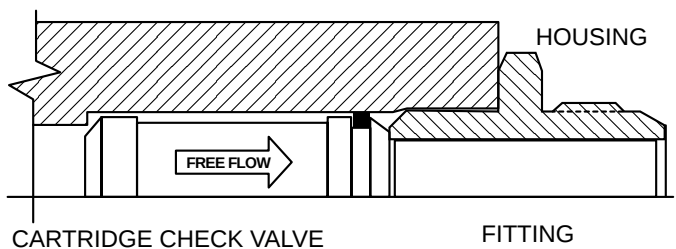
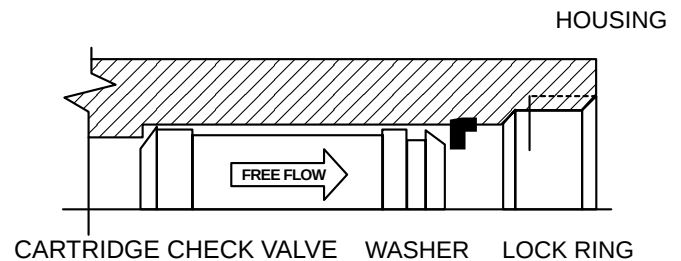
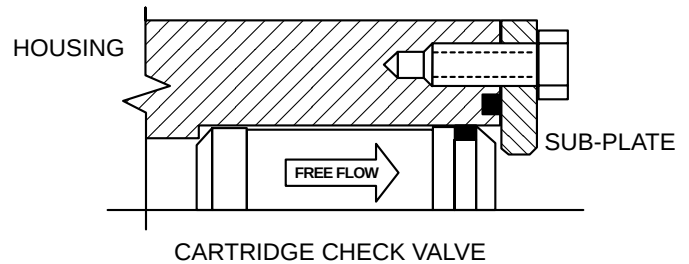
DK Series Check Valves are Built for Integral Circuits, Offer Easy Installation and Removal.

DK Series check valves are designed for use in integral circuits where the valve is installed in the housing of another component. Because the valve is easily installed and removed, circuit troubleshooting is greatly simplified.

Design engineers recommend the DK Series for use with integral circuits because they are dependable and efficient.

Features:

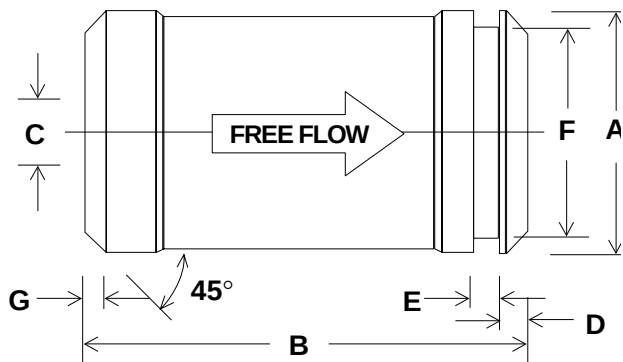
1. All steel construction with a zinc plated exterior—no internal seals or gaskets to wear out.
2. “Drop-in” design eliminates threaded connections.
3. One-piece body eliminates threads and seals that may be potential failure or leakage points.
4. Valve seats resist damage from shocks, surges and contamination.
5. Poppet spring is isolated from the liquid flow stream, minimizing turbulence.
6. Poppet is heat treated to help prevent damage from shocks, surges and galling.
7. Close tolerance fit between poppet and poppet retainer creates a cushion that protects valve from surge shock damage.
8. Available in a wide variety of crack pressures.



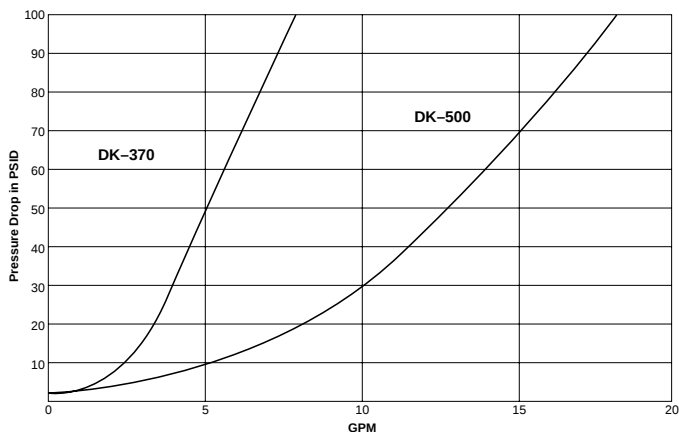
Check Valves

DK Series

Specifications



Flow Data



PART NUMBER	NOMINAL SIZE	A DIA.	B	C DIA.	D	E	F DIA.	G	O-RING SIZE	NET WEIGHT	OPERATING PRESSURE	CRACK PRESSURE RANGE
DK-370	3/8"	.655	1.225	.19	.13	.11	.543	.09	015	.03 KG	3,000 PSI	5-85 PSI
		.650	1.215				.538					
DK-500	1/2"	.811	1.500	.30	.13	.11	.699	.09	017	.07 KG	3,000 PSI	5-100 PSI
		.806	1.490				.695					

Check Valves

Ordering Information

DK Series

DK - * * * - * *

	Standard Crack Pressure is 5 PSI. Designate in 5 PSI increments. Not to exceed Crack Pressure Range for designated size. Example: 5 = 5 PSI, 10 = 10 PSI.
SERIES	SIZE
370	3/8"
500	1/2"

Check Valves

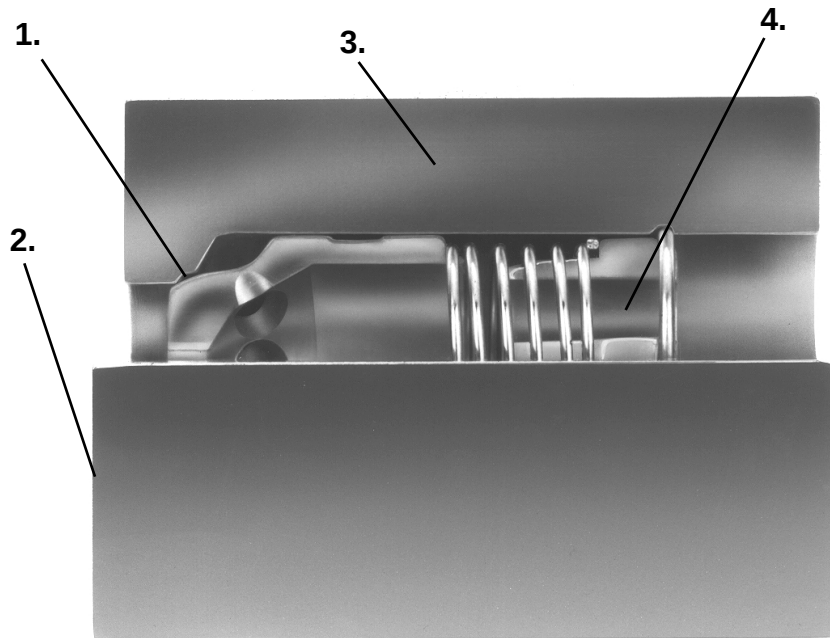
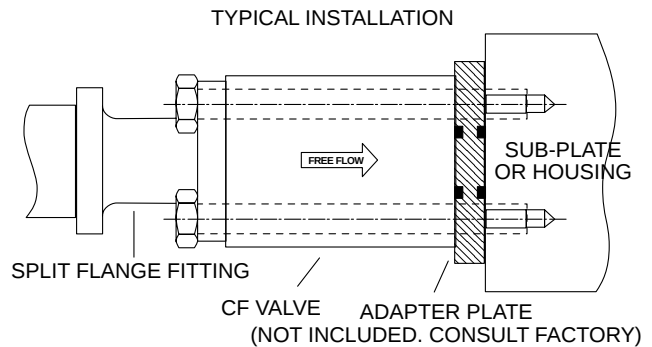
CF Series Check Valves are Designed for SAE Split Flange Mount

CF Series check valves combine the internal design of the DC Series valves (see p. 4) with an envelope that conforms to SAE 4-bolt, 3000 PSI mounting dimensions (SAE J518, code 61.)

This series of check valves offers the same efficiency and dependability as the DC Series, and is consistent with the quality and precision attendant to all products in the Parker line.

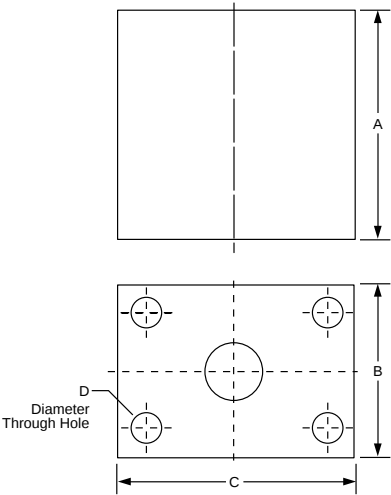
Features:

1. Poppet and seat are finished to minimize leakage.
2. Mounting conforms precisely to SAE 4-bolt, J518, code 61 split-flange fittings.
3. Valve housing is zinc plated steel construction—no internal seals or gaskets to wear out.
4. Oil-cushioned poppet/retainer design decelerates poppet.
5. One-piece body eliminates threads and seals that may be potential failure or leakage points.
6. Valve seats resist damage from shocks, surges and contamination.
7. Poppet has an oil retention groove that lubricates the bore and eliminates galling.
8. Poppet spring is isolated from the liquid flow stream, minimizing turbulence.
9. Poppet is heat treated to help prevent damage from shocks, surges and galling.
10. Close tolerance fit between poppet and poppet retainer creates a cushion that protects valve from surge shock damage.
11. Available in a wide variety of crack pressures.



Check Valves

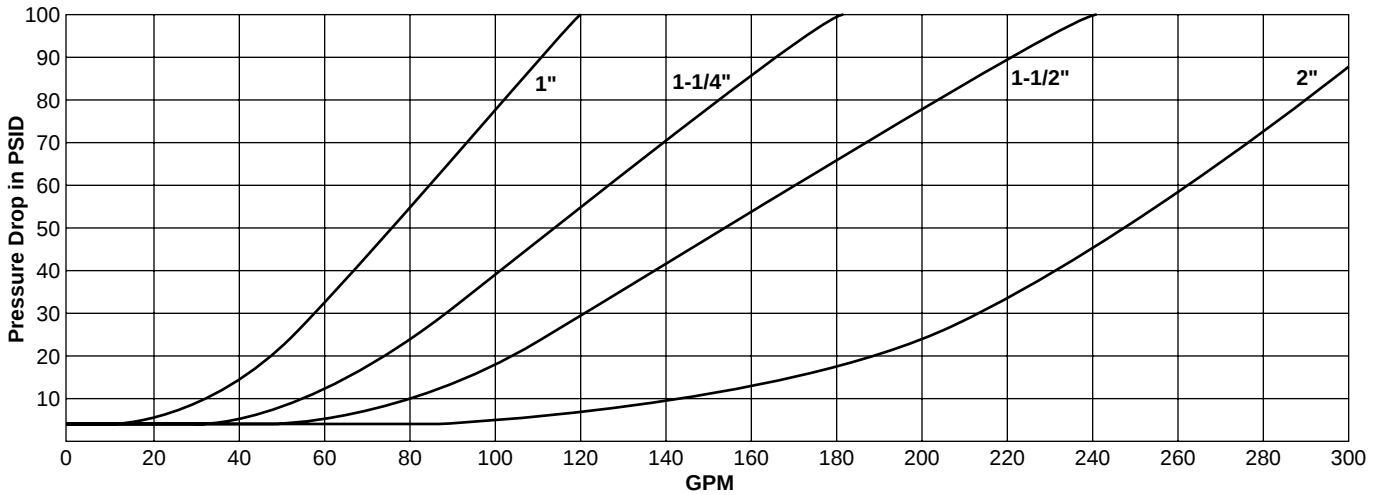
Specifications



Part Number	Nominal Size	A	B	C	D	Net Weight	Maximum Operating Pressure	Crack Pressure Range
CF-1000-*	1"	3.00	2.25	3.25	0.41	2.5 KG	3000 PSI	5-80 PSI
CF-1250-*	1-1/4"	3.00	2.25	3.25	0.47	2.3 KG	3000 PSI	5-80 PSI
CF-1500-*	1-1/2"	3.00	3.00	4.00	0.53	5.2KG	3000 PSI	5-65 PSI
CF-2000-*	2"	4.00	3.00	4.00	0.53	4.9 KG	3000 PSI	5-65 PSI

*Designate crack pressure in 5 PSI increments. (Not to exceed maximum crack pressure range.),

Flow Data



Check Valves

CF - * * * - * *

		Standard Crack Pressure is 5 PSI. Designate in 5 PSI increments. Not to exceed Crack Pressure Range for designated size. Example: 5 = 5 PSI, 10 = 10 PSI.
SERIES	SIZE	
	1000 - 1"	
	1250 - 1-1/4"	
	1500 - 1-1/2"	
	2000 - 2"	

Ordering Information

CF Series

Note

To obtain further information and to order Check Valve products found in this section of the catalog, please contact:

Parker Hannifin Corporation
Quick Coupling Division / Lincoln Plant
 13400 'O' Street
 Lincoln, NE 68501-1247
 Phone: (402) 489-6536
 FAX: (402) 489-7196

