

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 many configurations, Parker can satisfy most hydraulic system applications. Parker's in-line style check valves are available in a variety of sizes, pressure ratings, flow capacities and crack pressures.

H1, HM1 and PV Series Pressure / Vacuum Relief Valves are used to create and maintain a positive pressure in hydraulic tanks and reservoirs. These pressurized reservoir valves provide the following benefits:

- Prevents pump cavitation by assuring a positive supply of oil at the pump inlet
- Minimizes the tank breathing of outside, moist, contaminated air
- Filters all incoming air

As oil is drawn from the reservoir and pumped to the circuit, a vacuum is created in the reservoir. The vacuum relief valve opens to allow filtered air to enter. As oil is pumped back into the reservoir, air pressure builds. Additionally, as the oil heats, the pressure inside the reservoir increases. When the pressure exceeds the relief valve setting, the excess pressure is vented to atmosphere. Normally, the pressure will fluctuate between zero and the pressure relief setting without opening either valve. This can significantly reduce the breathing of outside air and minimize the chance for moisture and contamination to enter.

TH Series Thermal Bypass Valves ensure efficient equipment operation at any temperature. These valves are ideally suited for hydrostatic drive circuits which require fast warm-up, controlled fluid temperatures and low return line back pressure. When installed in a return line of a hydraulic circuit that utilizes an oil cooler, this valve will modulate fluid temperature by either shifting return line flow through the cooler, or bypassing directly to the reservoir. An integral pressure relief function automatically releases excess pressure to the reservoir if the cooler becomes restricted and the inlet pressure becomes excessive.

Valves



IntroductionE-2

Check Valves

Features, Selection Guide & General
Technical InformationE-4

CV Series.....E-9 – E-11

Ordering InformationE-11

DC SeriesE-12 – E-13

Ordering InformationE-13

DT SeriesE-5 – E-8

Ordering InformationE-8

2600 Series (Swing Type)E-14

Ordering InformationE-14

Pressure/Vacuum Relief Valves

H1 & HM1 SeriesE-15

Ordering InformationE-15

PV Series.....E-16

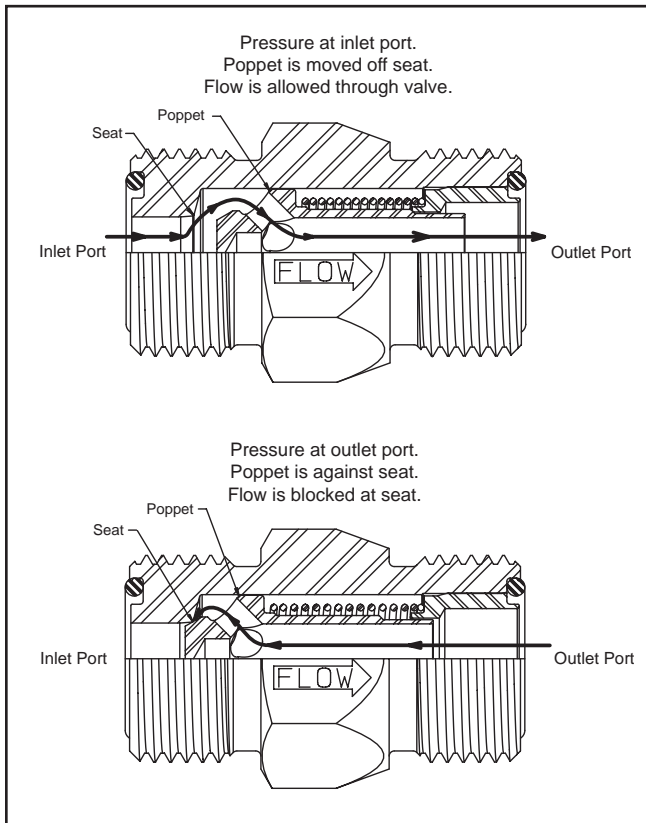
Ordering InformationE-16

Thermal Bypass Valves

TH Series.....E-17

Ordering InformationE-18

Check Valves



Selection Guide

	Body Size	Material	Rated Pressure	Crack Pressure Range
CV Series	1/4 - 1"	Steel	3000 PSI	5-130 PSI
DT Series	1/4 - 1 1/4"	Steel	5000 PSI	5-200 PSI
DC Series	1/4 - 2"	Steel	up to 5000 PSI	5-100 PSI

Features

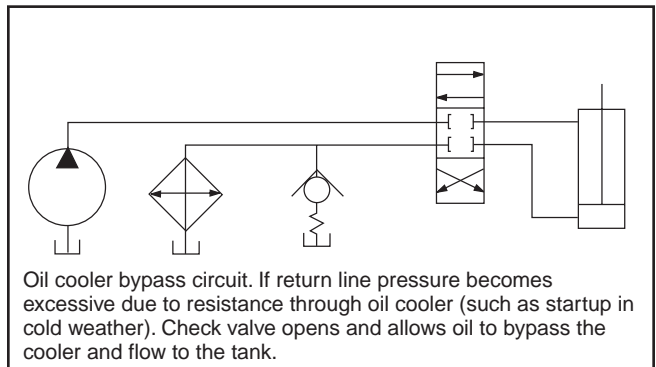
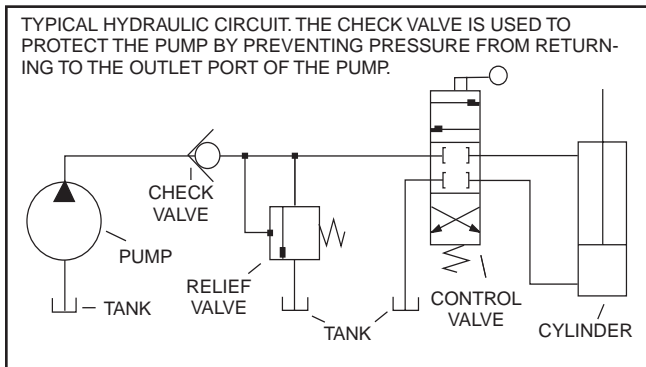
Parker's Check Valves employ several unique features that insure years of trouble-free operation. Specific features for each series of check valves are listed within this section.

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.

Applications



The graphic symbol for a check-valve is:

Check Valves

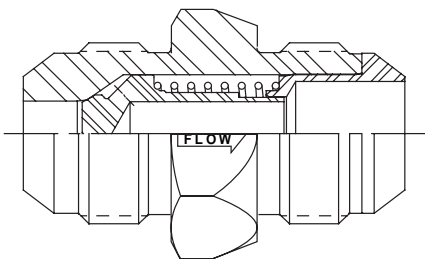
Parker DT Series Check Valves Offer the Features of a Compact Body Size, and 5000 PSI Maximum Operating Pressure

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 1/4" 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.

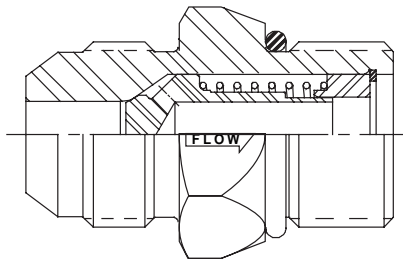
Features

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. Optional crack pressures available from 1 to 200 PSI.
8. Chromium-6 Free plated exterior finish.
9. Nitrile O-Ring included on MO and MS fittings.
10. Captive O-Ring Groove is standard on MS end fittings.



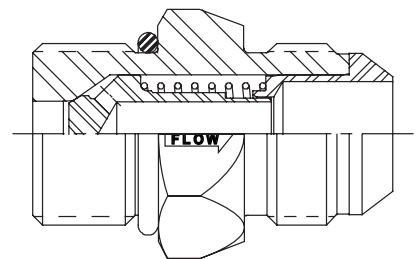
DT-MFMF

Male Flare 37° JIC Inlet to Male Flare 37° JIC Outlet



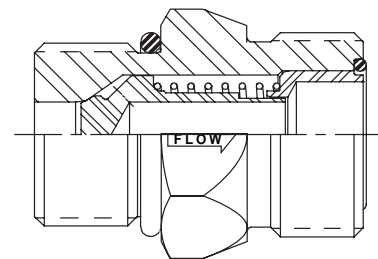
DT-MFMO

Male Flare 37° JIC Inlet to Male O-Ring Boss Outlet



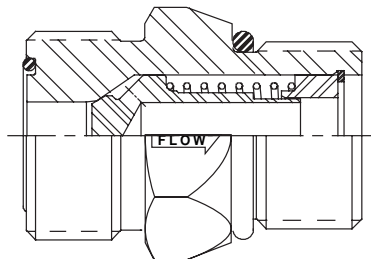
DT-MOMF

Male O-Ring Boss Inlet to Male Flare 37° JIC Outlet



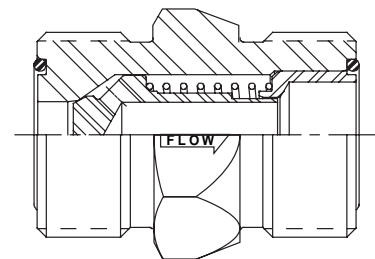
DT-MOMS

Male O-Ring Boss Inlet to Male Seal-Lok® Outlet



DT-MSMO

Male Seal-Lok® Inlet to Male O-Ring Boss Outlet



DT-MSMS

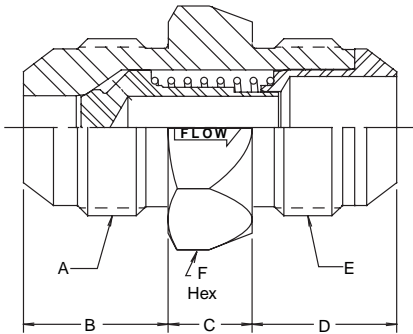
Male Seal-Lok® Inlet to Male Seal-Lok® Outlet

Check Valves

Specifications

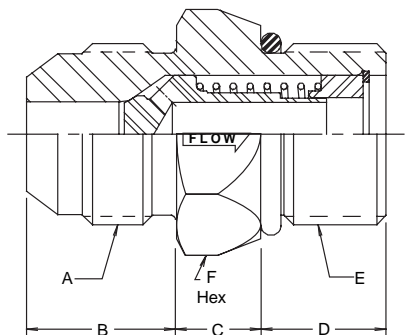
The DT Series check valves have a Maximum Operating Pressure of 5000 PSI. Standard crack pressures are 1, 5, and 65 PSI depending on the port size and configuration. Other crack pressures up to 200 PSI in 5 PSI increments are available upon request.

DT-MFMF Male Flare 37° JIC Inlet to Male Flare 37° JIC Outlet



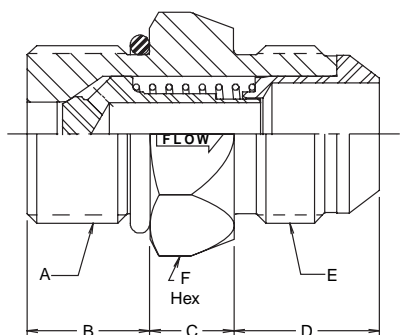
Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (in)				Outlet Port Thread	Hex Size (inch)	** Std Crack Pressures (PSI)
			A	B	C	D			
3/8	DT-370-MFMF-**	9/16-18 UNF	.56	.44	.56	9/16-18 UNF	.75	1, 5, 65	
1/2	DT-500-MFMF-**	3/4-16 UNF	.66	.50	.66	3/4-16 UNF	.88	5, 65	
5/8	DT-620-MFMF-**	7/8-14 UNF	.76	.50	.76	7/8-14 UNF	1.06	5	
3/4	DT-750-MFMF-**	1-1/16 - 12 UN	.86	.50	.86	1-1/16 - 12 UN	1.25	1, 5, 65	
1	DT-1000-MFMF-**	1-5/16 - 12 UN	.91	.62	.91	1-5/16 - 12 UN	1.50	5, 65	
1-1/4	DT-1250-MFMF-**	1-5/8 - 12 UN	.96	1.06	.96	1-5/8 - 12 UN	1.88	1, 5	

DT-MFMO Male Flare 37° JIC Inlet to Male O-Ring Boss Outlet



Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (in)				Outlet Port Thread	Hex Size (inch)	** Std Crack Pressures (PSI)
			A	B	C	D			
1/4	DT-250-MFMO-**	7/16-20 UNF	.55	.44	.43	7/16-20 UNF	.62	5	
3/8	DT-370-MFMO-**	9/16-18 UNF	.56	.44	.47	9/16-18 UNF	.75	1, 5, 65	
1/2	DT-500-MFMO-**	3/4-16 UNF	.66	.50	.55	3/4-16 UNF	.88	5, 65	
5/8	DT-620-MFMO-**	7/8-14 UNF	.76	.50	.63	7/8-14 UNF	1.06	5	
3/4	DT-750-MFMO-**	1-1/16 - 12 UN	.86	.50	.73	1-1/16 - 12 UN	1.25	1, 5, 65	
1	DT-1000-MFMO-**	1-5/16 - 12 UN	.91	.62	.73	1-5/16 - 12 UN	1.50	5, 65	
1-1/4	DT-1250-MFMO-**	1-5/8 - 12 UN	.96	1.06	.73	1-5/8 - 12 UN	1.88	1, 5	

DT-MOMF Male O-Ring Boss Inlet to Male Flare 37° JIC Outlet

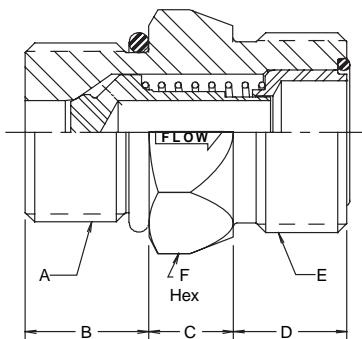


Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (in)				Outlet Port Thread	Hex Size (inch)	** Std Crack Pressures (PSI)
			A	B	C	D			
1/4	DT-250-MOMF-**	7/16-20 UNF	.43	.44	.55	7/16-20 UNF	.62	5	
3/8	DT-370-MOMF-**	9/16-18 UNF	.47	.44	.56	9/16-18 UNF	.75	1, 5, 65	
1/2	DT-500-MOMF-**	3/4-16 UNF	.55	.50	.66	3/4-16 UNF	.88	5, 65	
5/8	DT-620-MOMF-**	7/8-14 UNF	.63	.50	.76	7/8-14 UNF	1.06	5	
3/4	DT-750-MOMF-**	1-1/16 - 12 UN	.73	.50	.86	1-1/16 - 12 UN	1.25	1, 5, 65	
1	DT-1000-MOMF-**	1-5/16 - 12 UN	.73	.62	.91	1-5/16 - 12 UN	1.50	5, 65	
1-1/4	DT-1250-MOMF-**	1-5/8 - 12 UN	.73	1.06	.96	1-5/8 - 12 UN	1.88	1, 5	

E Valves

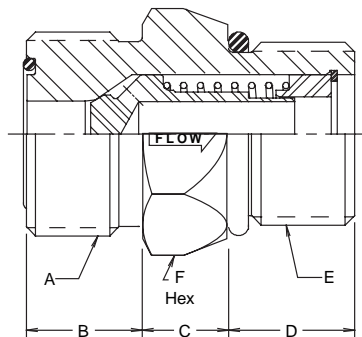
Check Valves

DT-MOMS Male O-Ring Boss Inlet to Male Seal-Lok® Outlet



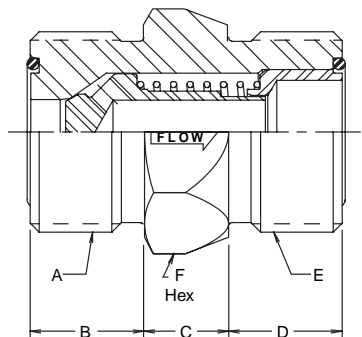
Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (in)				Outlet Port Thread	Hex Size (inch)	** Std Crack Pressures (PSI)
			A	B	C	D			
1/4	DT-250-MOMS-**	7/16-20 UNF	.43	.45	.39		9/16-18 UNF	.62	5
3/8	DT-370-MOMS-**	9/16-18 UNF	.47	.44	.44		11/16-16 UN	.75	1, 5, 65
1/2	DT-500-MOMS-**	3/4-16 UNF	.55	.50	.51		13/16-16 UN	.88	5, 65
5/8	DT-620-MOMS-**	7/8-14 UNF	.63	.50	.62		1-14 UNS	1.06	5
3/4	DT-750-MOMS-**	1-1/16 - 12 UN	.73	.50	.68		1-3/16 - 12 UN	1.25	1, 5, 65
1	DT-1000-MOMS-**	1-5/16 - 12 UN	.73	.62	.70		1-7/16 - 12 UN	1.50	5, 65
1-1/4	DT-1250-MOMS-**	1-5/8 - 12 UN	.73	1.06	.70		1-11/16 - 12 UN	1.88	1, 5

DT-MSMO Male Seal-Lok® Inlet to Male O-Ring Boss Outlet



Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (in)				Outlet Port Thread	Hex Size (inch)	** Std Crack Pressures (PSI)
			A	B	C	D			
3/8	DT-370-MSMO-**	11/16-16 UN	.44	.44	.47		9/16-18 UNF	.75	1, 5, 65
1/2	DT-500-MSMO-**	13/16-16 UN	.51	.50	.55		3/4-16 UNF	.88	5, 65
5/8	DT-620-MSMO-**	1-14 UNS	.62	.49	.63		7/8-14 UNF	1.06	5
3/4	DT-750-MSMO-**	1-3/16 - 12 UN	.68	.50	.73		1-1/16 - 12 UN	1.25	1, 5, 65
1	DT-1000-MSMO-**	1-7/16 - 12 UN	.70	.62	.73		1-5/16 - 12 UN	1.50	5, 65
1-1/4	DT-1250-MSMO-**	1-11/16 - 12 UN	.70	1.06	.73		1-5/8 - 12 UN	1.88	1, 5

DT-MSMS Male Seal-Lok® Inlet to Male Seal-Lok® Outlet



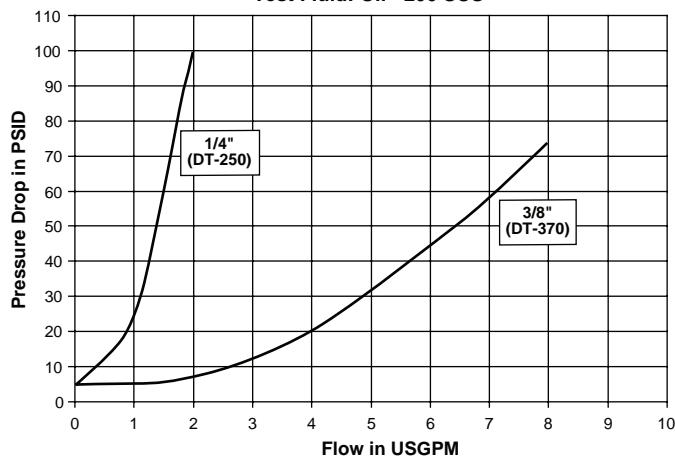
Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (in)				Outlet Port Thread	Hex Size (inch)	** Std Crack Pressures (PSI)
			A	B	C	D			
3/8	DT-370-MSMS-**	11/16-16 UN	.44	.44	.44		11/16-16 UN	.75	1, 5, 65
1/2	DT-500-MSMS-**	13/16-16 UN	.51	.50	.51		13/16-16 UN	.88	5, 65
5/8	DT-620-MSMS-**	1-14 UNS	.62	.50	.62		1-14 UNS	1.06	5
3/4	DT-750-MSMS-**	1-3/16 - 12 UN	.68	.50	.68		1-3/16 - 12 UN	1.25	1, 5, 65
1	DT-1000-MSMS-**	1-7/16 - 12 UN	.70	.62	.70		1-7/16 - 12 UN	1.50	5, 65
1-1/4	DT-1250-MSMS-**	1-11/16 - 12 UN	.70	1.06	.70		1-11/16 - 12 UN	1.88	1, 5

E Valves

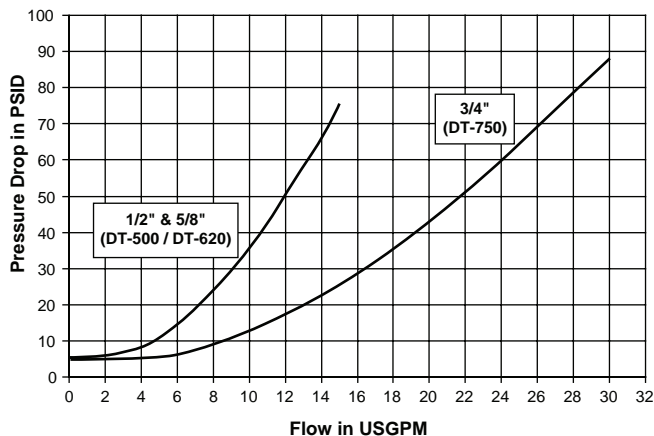
Check Valves

Flow Data

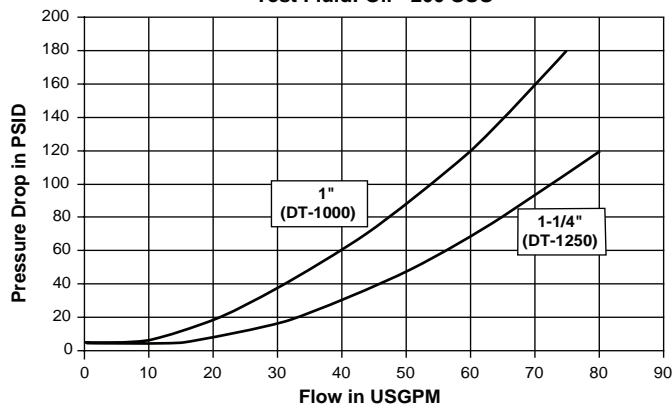
DT Series (1/4" & 3/8")
Test Fluid: Oil - 200 SUS



DT Series (1/2", 5/8" & 3/4")
Test Fluid: Oil - 200 SUS



DT Series (1" & 1-1/4")
Test Fluid: Oil - 200 SUS



Ordering Information

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

CRACK PRESSURE

1 - 1 PSI

5 - 5 PSI

65 - 65 PSI

Other Crack Pressures up to 200 PSI in 5 PSI increments are available. Contact the Division for price and delivery on non-standard crack pressures

SERIES

SIZE

FITTING STYLE

250 - 1/4"

370 - 3/8"

500 - 1/2"

620 - 5/8"

750 - 3/4"

1000 - 1"

1250 - 1-1/4"

MFMF - Male Flare Inlet to Male Flare Outlet

MFMO - Male Flare Inlet to Male O-Ring Boss Outlet

MOMF - Male O-Ring Boss Inlet to Male Flare Outlet

MOMS - Male O-Ring Boss Inlet to Male Face Seal Outlet

MSMO - Male Face Seal Inlet to Male O-Ring Boss Outlet

MSMS - Male Face Seal Inlet to Male Face Seal Outlet



E Valves

Check Valves

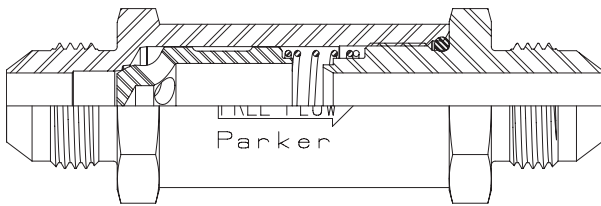
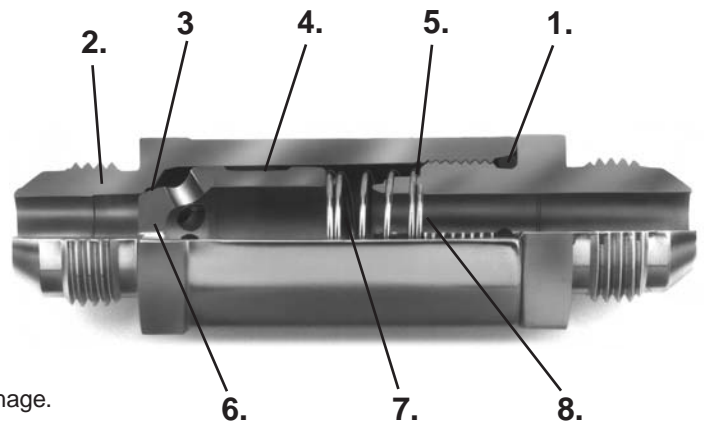
CV Series Check Valves Offer Low Pressure Drop and High Flow

Parker's CV Series check valves are a rugged built and versatile product designed to protect hydraulic systems from fluid back pressure. The CV Series compliments the DT Series by adding the feature of modular design. The larger body results in less pressure drop and increased performance. The CV Series are in-line unidirectional valves, available in sizes 1/4" to 1", with a pressure rating of up to 3000 PSI, and flow capacities to 100 GPM. Standard spring crack pressures are 5 and 65 PSI. Other crack pressures available upon request.



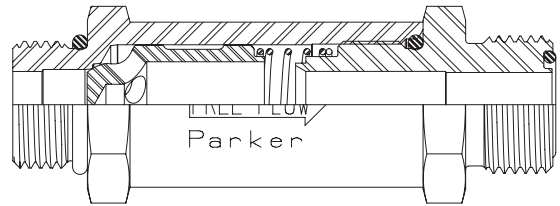
Features

1. Nitrile O-ring is standard in the body assembly. Note port O-rings are included on the MO and MS ports.
2. All-steel construction
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. Optional crack pressures available upon request.



CV-MFMF

Male Flare 37° JIC Inlet to Male Flare 37° JIC Outlet



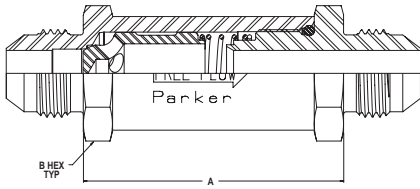
CV-MOMS

Male O-Ring Boss Inlet to Male Seal-Lok® Outlet

CV Series

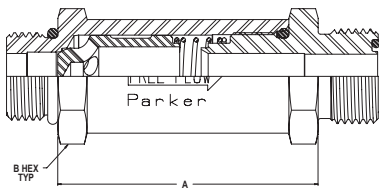
Check Valves

CV-MFMF Male Flare 37° JIC Inlet to Male Flare 37° JIC Outlet



Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (inch)		Outlet Port Thread	** Std Crack Pressures (PSI)	Max Operating Pressure (PSI)
			A	B Hex			
1/4	CV-250-MFMF-**	7/16-20 UNF	1.53	.68	7/16-20 UNF	5, 65	3000
3/8	CV-370-MFMF-**	9/16-18 UNF	1.75	.81	9/16-18 UNF	5, 65	3000
1/2	CV-500-MFMF-**	3/4-16 UNF	2.22	1.00	3/4-16 UNF	5, 65	3000
5/8	CV-620-MFMF-**	7/8-14 UNF	2.41	1.12	7/8-14 UNF	5, 65	3000
3/4	CV-750-MFMF-**	1-1/16-12 UN	2.75	1.38	1-1/16-12 UN	5, 65	3000
1	CV-1000-MFMF-**	1-5/16-12 UN	3.31	1.62	1-5/16-12 UN	5, 65	3000

CV-MOMS Male O-Ring Boss Inlet to Male Seal-Lok® Outlet

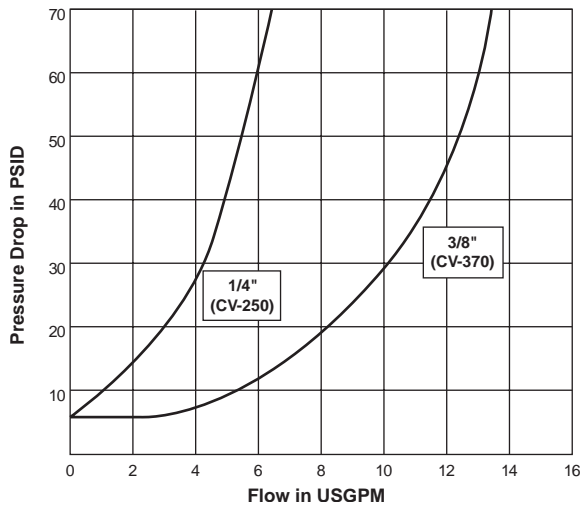


Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (inch)		Outlet Port Thread	** Std Crack Pressures (PSI)	Max Operating Pressure (PSI)
			A	B Hex			
1/4	CV-250-MOMS-**	7/16-20 UNF	1.53	.68	9/16-18 UNF	5, 65	3000
3/8	CV-370-MOMS-**	9/16-18 UNF	1.75	.81	11/16-16 UN	5, 65	3000
1/2	CV-500-MOMS-**	3/4-16 UNF	2.22	1.00	13/16-16 UN	5, 65	3000
5/8	CV-620-MOMS-**	7/8-14 UNF	2.41	1.12	1-14 UNS	5, 65	3000
3/4	CV-750-MOMS-**	1-1/16-12 UN	2.75	1.38	1-3/16-12 UN	5, 65	3000
1	CV-1000-MOMS-**	1-5/16-12 UN	3.31	1.62	1-7/16-12 UN	5, 65	3000

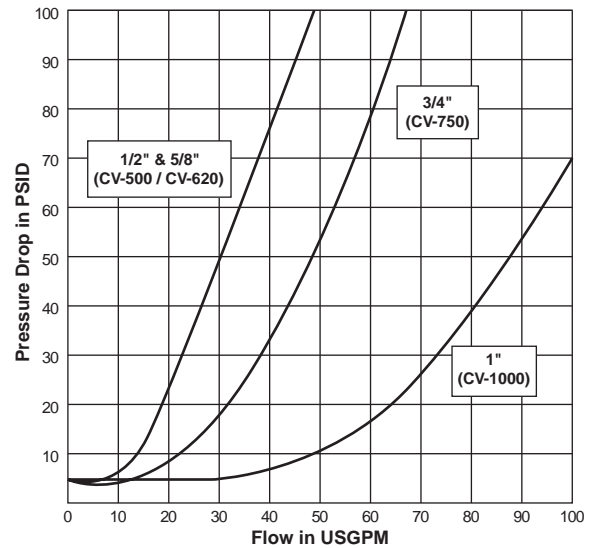
Check Valves

Flow Data

CV Series (1/4" & 3/8")
Test Fluid: Oil - 200 SUS



CV Series (1/2", 5/8", 3/4" & 1")
Test Fluid: Oil - 200 SUS



Ordering Information

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

CRACK PRESSURE

5 - 5 PSI

65 - 65 PSI

Other Crack Pressures up to 200 PSI in 5 PSI increments are available. Contact the Division for price and delivery on non-standard crack pressures

SERIES	SIZE	FITTING STYLE
250	1/4"	MFMF - Male Flare Inlet to Male Flare Outlet
370	3/8"	MOMS - Male O-Ring Boss Inlet to Male Seal-Lok® Outlet
500	1/2"	
620	5/8"	
750	3/4"	
1000	1"	

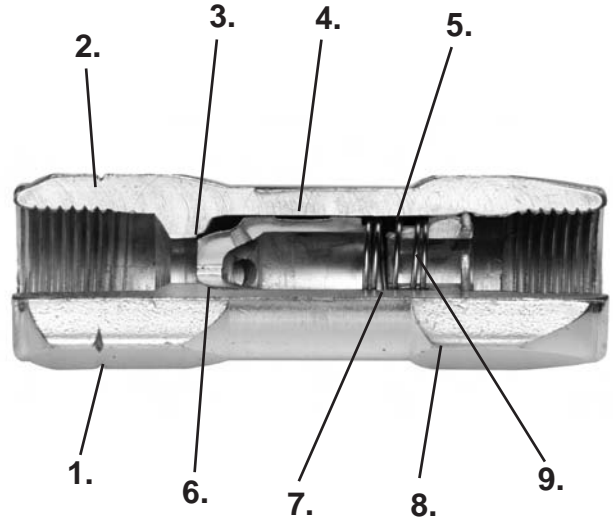
Check Valves

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 up to 5000 psi, and flow capacities to 300 GPM.

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 variety of standard and non-standard crack pressures.



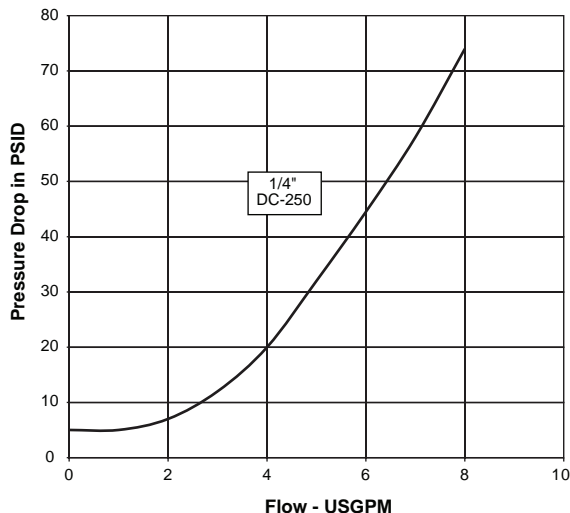
Part Numbers

Valve Size (inch)	Part Number	Inlet Port Thread	Dimensions (inch)		Outlet Port Thread	** Std Crack Pressures (PSI)	Max Operating Pressure (PSI)
			A	B Hex			
1/4"	DC-250-**	1/4 - 18 NPSF	2.44	0.81	1/4 - 18 NPSF	1, 5, 65	5000
1/4"	DC-250-FOFO-**	.438 - 20 UNF	2.44	0.81	.438 - 20 UNF	1, 5	5000
3/8"	DC-370-**	3/8 - 18 NPSF	2.75	0.88	3/8 - 18 NPSF	1, 5, 65	3000
3/8"	DC-370-FOFO-**	.562 - 18 UNF	2.75	0.88	.562 - 18 UNF	5	3000
1/2"	DC-500-**	1/2 - 14 NPSF	3.5	1.06	1/2 - 14 NPSF	1, 5, 65	3000
1/2"	DC-500-FOFO-**	.750 - 16 UNF	3.5	1.06	.750 - 16 UNF	5, 65	3000
3/4"	DC-750-**	3/4 - 14 NPSF	3.88	1.37	3/4 - 14 NPSF	1, 5, 65	3000
3/4"	DC-750-FOFO-**	1.062 - 12 UN	3.88	1.37	1.062 - 12 UN	5, 65	3000
1"	DC-1000-**	1 - 11.5 NPSF	4.88	1.62	1 - 11.5 NPSF	5, 65	3000
1"	DC-1000-FOFO-**	1.312 - 12 UN	4.88	1.62	1.312 - 12 UN	5, 65	3000
1-1/4"	DC-1250-**	1-1/4 - 11.5 NPTF	5.94	2.00	1-1/4 - 11.5 NPTF	5, 65	3000
1-1/4"	DC-1250-FOFO-**	1.625 - 12 UN	5.94	2.00	1.625 - 12 UN	5, 65	3000
1-1/2"	DC-1500-**	1-1/2 - 11.5 NPTF	6.37	2.38	1-1/2 - 11.5 NPTF	5, 65	3000
1-1/2"	DC-1500-FOFO-**	1.875 - 12 UN	6.37	2.38	1.875 - 12 UN	5, 65	3000
2"	DC-2000-**	2 - 11.5 NPTF	7.00	3.00	2 - 11.5 NPTF	5, 65	3000
2"	DC-2000-FOFO-**	2.500 - 12 UN	7.00	3.00	2.500 - 12 UN	65	3000

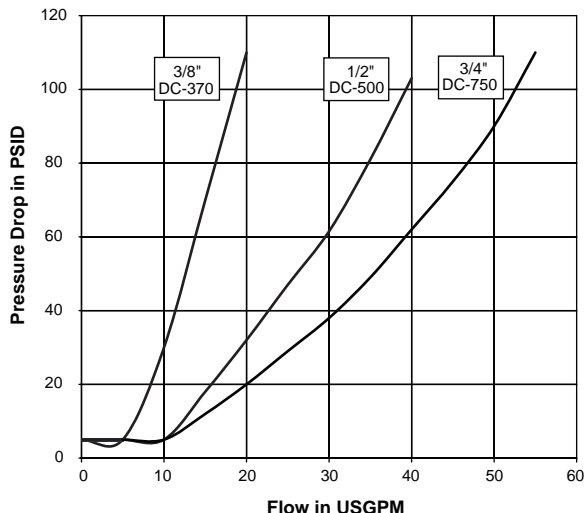
Check Valves

Flow Data

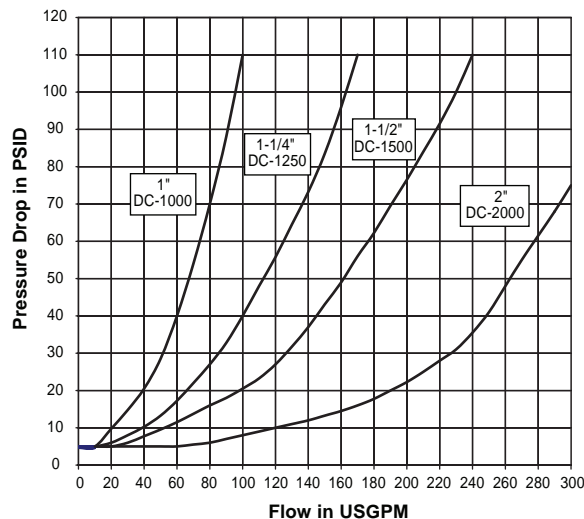
DC Series (1/4")
Test Fluid: Oil - 200 SUS



DC Series (3/8", 1/2" & 3/4")
Test Fluid: Oil - 200 SUS

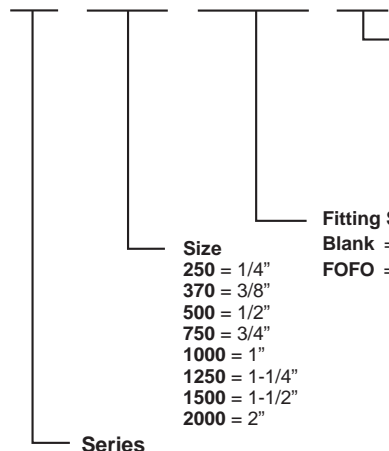


DC Series (1", 1-1/4", 1-1/2" & 2")
Test Fluid: Oil - 200 SUS



Ordering Information

DC - *** - **** - **



Crack Pressure:

- 1 = 1 PSI
 - 5 = 5 PSI
 - 65 = 65 PSI
- Other crack pressures up to 100 PSI (in 5 PSI increments) are available. Contact the Division for price and delivery on non-standard crack pressures.

Fitting Style:

- Blank = Female pipe inlet to Female pipe outlet
- FOFO = Female O-ring Boss inlet to Female O-ring Boss outlet

- Size
- 250 = 1/4"
 - 370 = 3/8"
 - 500 = 1/2"
 - 750 = 3/4"
 - 1000 = 1"
 - 1250 = 1-1/4"
 - 1500 = 1-1/2"
 - 2000 = 2"

Series



Check Valves

Low Pressure and Lightweight

Constructed of lightweight aluminum, the 2600 Series Swing Check Valve has a spring-loaded, trapdoor style valve. The valve opens when system pressure approaches 1/2 psi to permit full flow with low pressure drop. As system pressure is relieved, the valve closes, retaining fluids upstream.

Parker's 2600 Series are in-line check valves designed especially for diesel and gasoline engine fuel lines. They are also used for externally mounted oil filters, and coolers, as well as transmission fluid lubrication lines. With a maximum of 1/2 psi cracking pressure, these Swing Check Valves are useful in most low pressure air, liquid, or gas systems.

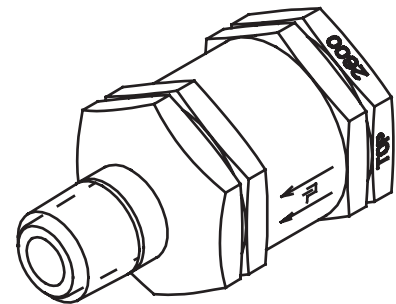
Features

1. Lightweight, corrosion-resistant aluminum construction.
2. Available with 1/4" or 3/8" NPTF ports.
3. Standard Nitrile or Fluorocarbon seals.
4. 1/2 PSI maximum crack pressure.
5. Trapdoor style valve permits full flow with low pressure drop.



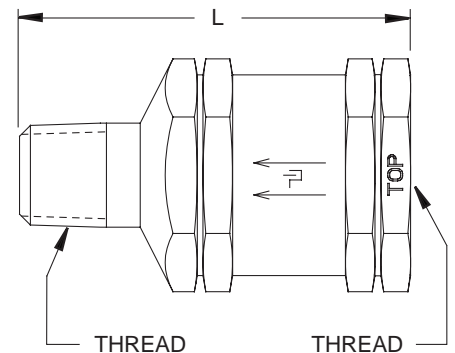
Specifications

Crack Pressure	1/2 PSI Max
Weight	0.08 lbs
Temperature Range	Nitrile: -40° F to 200°F (-40° C to 93° C) Fluorocarbon: -40° F to 400°F (-40° C to 204° C)
Static Burst Pressure	2600 PSI (179 bar)
Max Leakage	5 cc / 24 hours at 28" head



Part Numbers

Part Number	Thread	Seal Material	Dimensions	
			Hex inch	L inch (mm)
2600	1/4 - 18NPTF	Nitrile	1-1/16	2.06 (52)
2676	1/4 - 18NPTF	Fluorocarbon	1-1/16	2.06 (52)
2650	3/8 - 18NPTF	Nitrile	1-1/16	2.12 (54)
2625	3/8 - 18NPTF	Fluorocarbon	1-1/16	2.12 (54)



Pressure/Vacuum Relief Valves

H1 Series Pressure/Vacuum Relief Valves are used to maintain positive pressure in hydraulic reservoirs. The compact size, reusable bronze filter and high flow characteristics make this valve a popular choice. The **HM1 Series** offers the same features and characteristics as the H1 series with the option of manual over ride. This feature allows the operator to relieve the reservoir pressure before opening the tank for refilling, inspection or servicing.

Features

1. Easy to remove, cleanable bronze filter.
2. High flow characteristics.
3. Compact size.
4. Available with male pipe or male ORB threads.
5. Wide variety of pressure relief settings.
6. HM1 series has a manual pressure relief button.



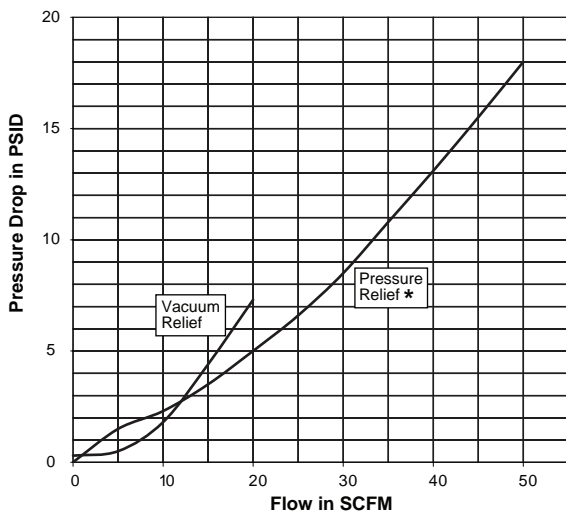
Note: HM1 Series not shown

Specifications

	H1 Series	HM1 Series
Filter Rating	10 micron, nominal	
Pressure Relief Setting	5 PSI through 50 PSI (in 5 PSI increments)	
Vacuum Relief Setting	0.3 PSI	
Weight	1.0 lbs	1.1 lbs

Flow Data

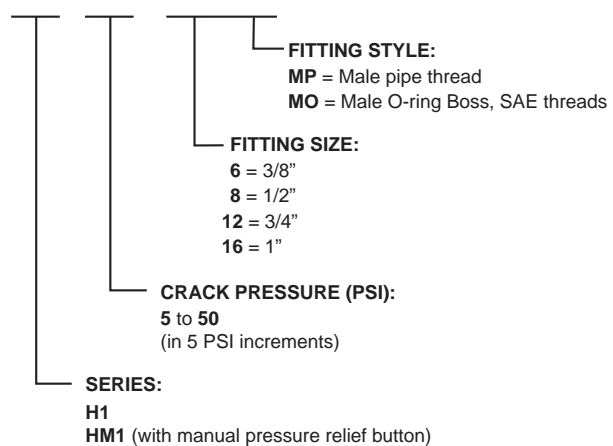
H1 and HM1 Pressure-Vacuum Relief Valve



* Pressure drop is pressure relief valve crack pressure until pressure drop curve increases above pressure relief crack pressure.

Ordering Information

H * - * * - * * * *



E Valves

Pressure/Vacuum Relief Valves

PV Series is an economical Pressure/Vacuum Relief Valve used to maintain positive pressure in hydraulic reservoirs. The large filter area makes this valve an ideal choice for use in heavily contaminated environments. The optional bayonet type mount allows the valve to be installed in the tank filler port, eliminating the need for an extra port. In this configuration, the valve also serves as a filler cap.



Features

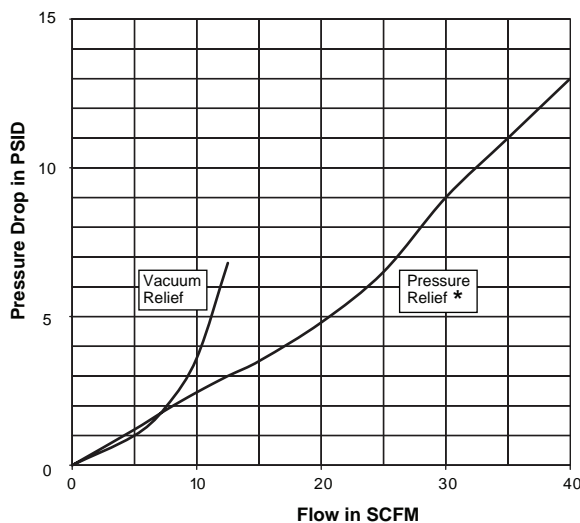
1. Disposable spin-on automotive type, field replaceable filter (240 sq inches).
2. Several pressure relief settings.
3. Economic design.
4. Optional bayonet style allows mounting in filler port with valve also functioning as filler cap.

Specifications

	PV Series	PV - Bayonet style
Filter Rating	10 micron, nominal (240 sq inches)	
Pressure Relief Setting	5 PSI through 30 PSI (in 5 PSI increments)	5 and 10 PSI
Vacuum Relief Setting	0.3 PSI	
Weight	1.0 lb	
Mounting	Male ORB, SAE threads Male pipe threads	Bayonet style with tank receptacle, gaskets & screws (optional strainer basket)
Replacement Filter Part Number	7312-009	

Flow Data

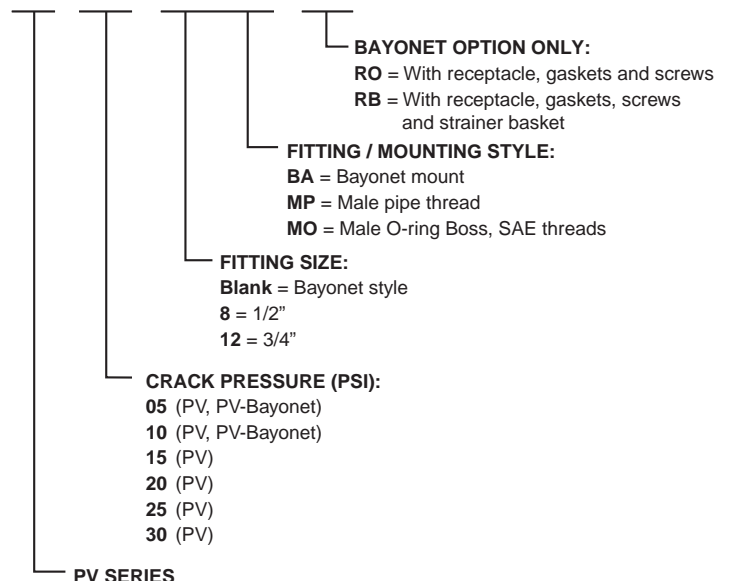
PV Pressure-Vacuum Relief Valve



* Pressure drop is pressure relief valve crack pressure until pressure drop curve increases above pressure relief crack pressure.

Ordering Information

P V - * * - * * * * - * *



E Valves

Thermal Bypass Valves

Maintain Optimum Fluid Temperature

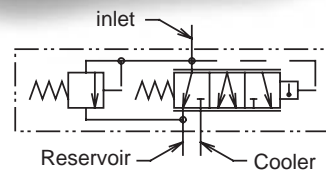
Parker's thermal bypass valve will modulate fluid temperature by shifting return line flow through the cooler, or bypassing it directly to the reservoir.

Additionally, an integral pressure relief function automatically releases excess pressure to the reservoir if the cooler becomes restricted, and the inlet pressure becomes excessive. Relief crack pressure settings range from 5 to 85 PSI.

These lightweight, aluminum valves are ideal for hydrostatic drive circuits requiring fast warm-up, controlled fluid temperatures, and low return line back pressure.

Features

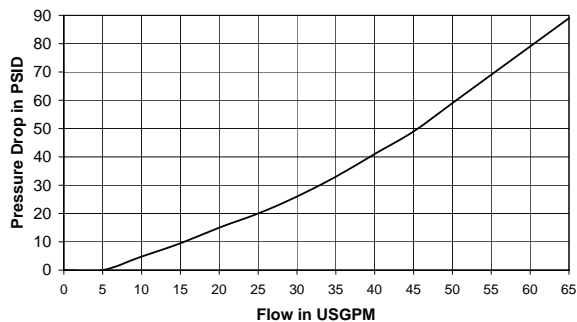
1. Lightweight, corrosion-resistant aluminum housing.
2. Available in five shift temperatures.
3. Integral relief valve to dump excessive inlet pressures to the reservoir.
4. 250 PSI maximum operating pressure.
5. Up to 60 GPM flow rates.



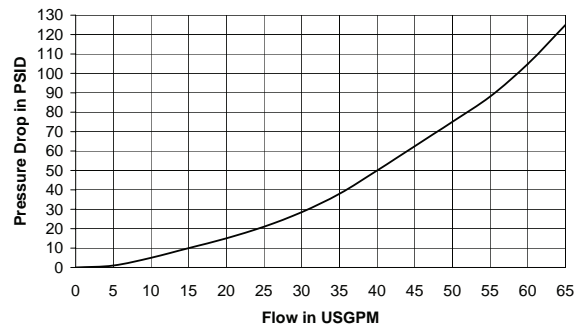
Flow Data

Pressure Drop (Mobil DTE 26 oil)

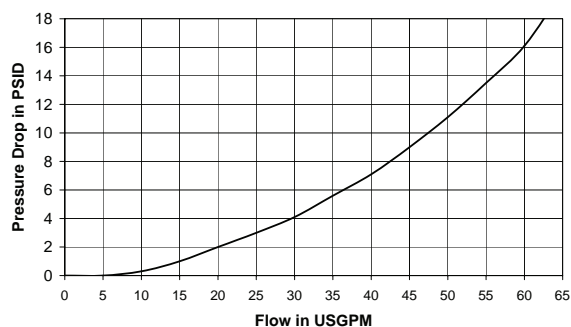
Inlet Port thru Tank Port
@ 100°F (300 SUS)



Inlet Port over Integral Relief Valve
@ 170°F (78 SUS Oil)



Inlet Port thru Cooler Port
@ 145°F (110 SUS Oil)

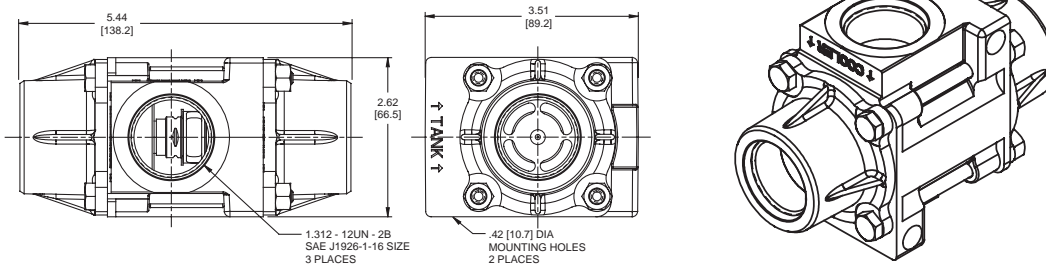


Thermal Bypass Valves

Specifications

Size	1 inch
Weight	2.00 lbs
Std Shift Temperatures	100° F (38° C), 120° F (49° C), 140° F (60° C), 160° F (71° C), 180° F (82° C)
Full Shift Temperature (cooler port open)	Shift Temperature plus 25° F (14° C)
Relief Valve Setting	Up to 85 PSI (6 bar) in 5 PSI increments
Proof Pressure	300 PSI (21 bar)
Minimum Burst Pressure	Up to full shift temperature: 325 PSI (22 bar) Above full shift temperature: 600 PSI (41 bar)
Operating Temperature	Min: -30° F (-34° C) Max: Shift temperature plus 75° F (24° C)
Max Flow Rate	60 GPM (227 l/m)

Dimensions



Ordering Information

TH-1000-16FO--****

VALVE SERIES:
Thermal Bypass

CRACK PRESSURE/TEMPERATURE CODE:
(see table)

VALVE SIZE:
1000 = 1 inch

PORT SIZE & STYLE:
16FO = 1 inch SAE O-Ring Boss (1.312 -12UN-2B thread)

Shift Temperature	Crack Pressure PSI																
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85
100° F (38° C)	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
120° F (49° C)	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
140° F (60° C)	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
160° F (71° C)	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
180° F (82° C)	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97

E Valves