



Check Valves, Filters and Relief Valves

Catalog 4135-CV

April 2019

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Introduction

Parker CB and CBF Series Check Valves are designed for accurate uni-directional flow control of liquids and gases. The unique floating ball is designed for applications in power generation, chemical processing, oil & gas production, and other demanding critical service areas. The CB/CBF Series are specifically targeted to minimize check valve maintenance repair and replacement on dual fuel gas turbines. Specific issues addressed in the design include, but are not limited to seat leakage, coking, repair and maintenance. All of these issues directly affect turbine efficiency and operating costs. The advanced seat materials of the CB/CBF Series Check Valves are particularly well suited for higher temperature applications requiring high integrity leak rates and re-sealing capabilities.

Features

- ▶ Rugged and reliable floating ball design optimizes sealing characteristics in demanding turbine applications
- ▶ Hard PTFE coated ball cage resists poppet “stick” commonly experienced with fuel oil coking.
- ▶ Fully field serviceable with Parker rebuild kits. Replace seats in minutes without special tools.
- ▶ Advanced reinforced PTFE copolymer seat materials designed by Parker for demanding applications such as air purge and fuel oil.
- ▶ Integral “last chance” filter option for seat and nozzle protection.
- ▶ To even further reduce turbine downtime during repairs, utilize Parker’s metal flexible hoses.

Specifications

Shell Pressure Rating:

..... 3000 psi CWP

Standard Crack Pressures:

..... 1, 5, 10, 15, 50, 100, 120

Seat Materials, Back Pressure and Temperature Ratings:

Parkerfill..... 1000 psi @ 100°F

..... 300 psi @ 450°F

Parker Carbon 2500 psi @ 100°F

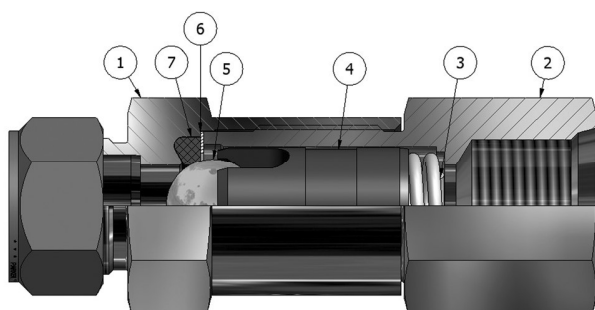
..... 1250 psi @ 450°F

Parkerfill is a PTFE copolymer reinforced with carbon and graphite.

Parker Carbon is a PTFE copolymer reinforced with carbon.

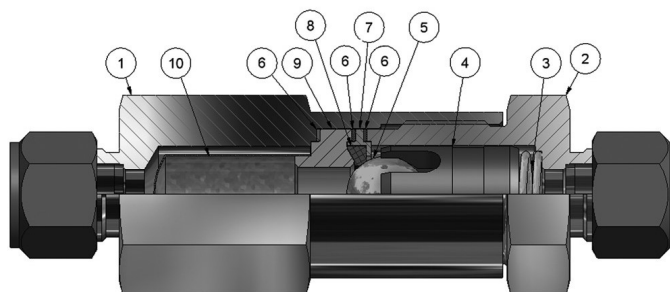
Materials of Construction

CB Series Check Valve



Item #	Part	Stainless Valve
1	Body	ASTM A276, Type 316
2	Cap	ASTM A276, Type 316
3	Crack Spring	316 Stainless Steel
4	Ball Cage	ASTM A276, Type 316
5	Ball	440C Stainless Steel
6	Body Washer	316 SS PTFE Coated
7	Seat	Parkerfill, Parker Carbon

CBF Series Filter Check Valve



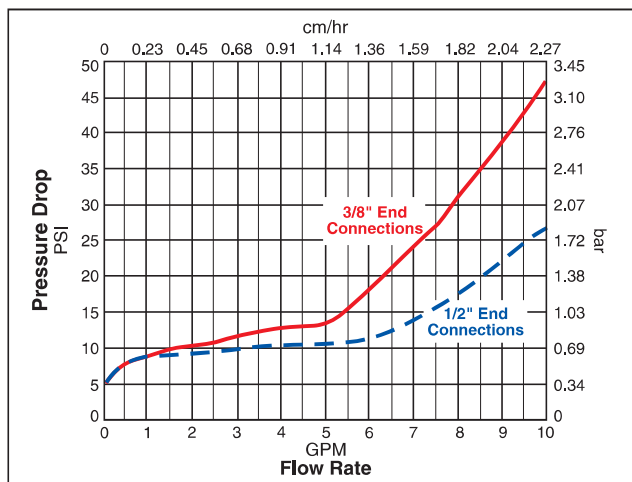
Item #	Part	Stainless Valve
1	Cap	ASTM A276, Type 316
2	Body	ASTM A276, Type 316
3	Crack Spring	316 Stainless Steel
4	Ball Cage	ASTM A276, Type 316 Hard PTFE Coated
5	Ball	440C SS
6	Body Seal	Grafoil®
7	Seat Retainer	316 Stainless Steel
8	Seat	Parkerfill, Parker Carbon
9	Filter Base	316 Stainless Steel
10	Filter Element	Perforated 316 SS Sheet

Grafoil® is a registered trademark of GrafTech International Holdings, Inc.

Flow Curves

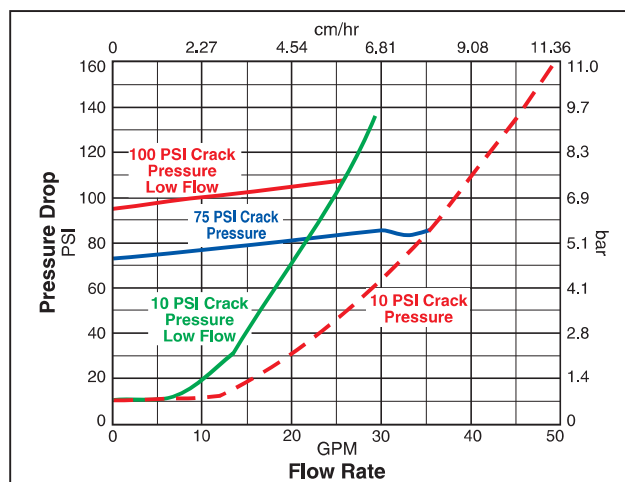
CB6 Check Valve

Flow Rate vs. Pressure Drop
CB-Series Check Valve – Size CB6
5 PSI Crack Pressure



CB12 Check Valve

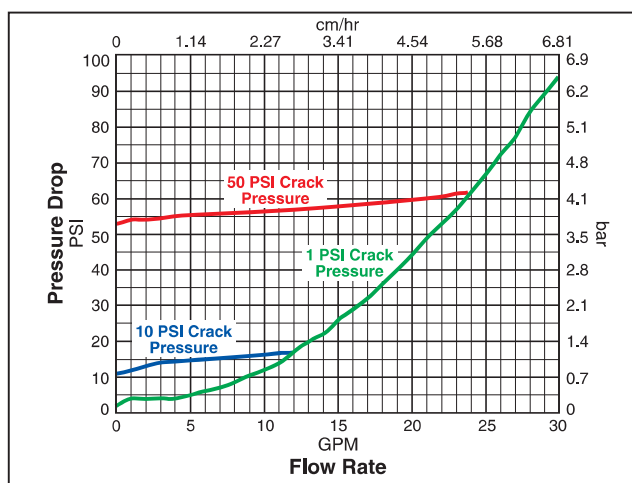
Flow Rate vs. Pressure Drop
CB-Series Check Valve – Size CB12
3/4" End Connections



CB
CBF

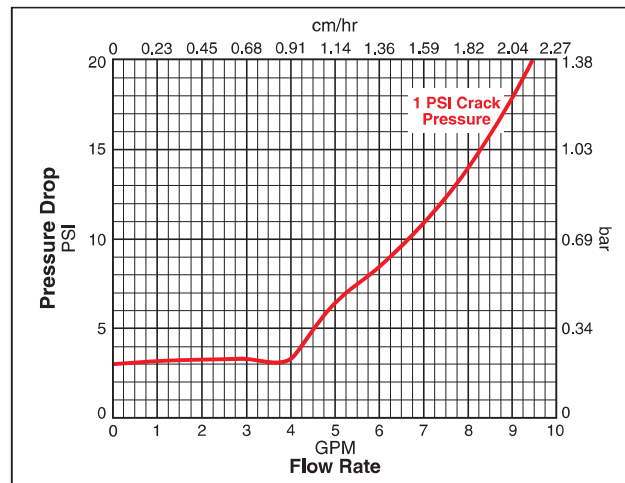
CB8 Check Valve

Flow Rate vs. Pressure Drop
CB-Series Check Valve – Size CB8
1/2" End Connections



CBF8 Filter Check Valve

Flow Rate vs. Pressure Drop
CB-Series Check Valve – Size CBF8
1/2" End Connections – 380 Micron Filter



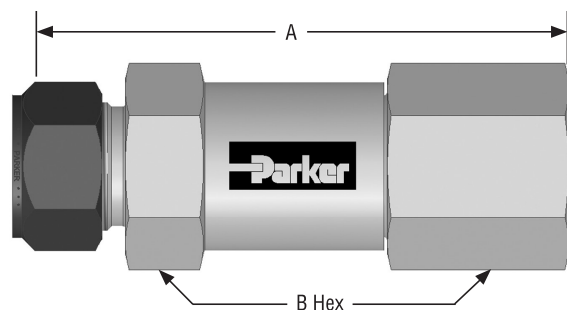
CB and CBF Series Check Valves

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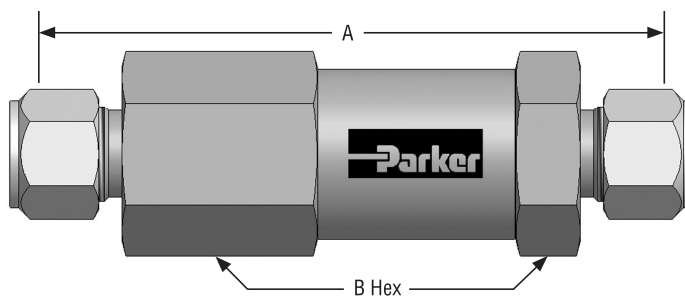
Dimensions

Dimensions in inches (millimeters) are for reference only, subject to change.

CB Series Check Valve



CBF Series Filter Check Valve



CB Series Filter Check Valve

Basic Part Number	End Connections	Dimensions		Optional	
	Inlet & Outlet Port 1 & Port 2	A	B Hex	Crack Pressure	Seat Material
6A-CB6L-1-PC-SS	3/8" A-LOK®	2.72	1.00	5 psi	PF Parkerfill
6Z-CB6L-1-PC-SS	3/8" CPI™			10 psi	
6A6M-CB6L-1-PC-SS	3/8" A-LOK® x 3/8" Male NPT	2.88		25 psi	
6Z6M-CB6L-1-PC-SS	3/8" CPI™ x 3/8" Male NPT			50 psi	
8A-CB6L-1-PC-SS	1/2" A-LOK®	2.78		75 psi	
8Z-CB6L-1-PC-SS	1/2" CPI™			100 psi	
8A8M-CB6L-1-PC-SS	1/2" A-LOK® x 3/8" Male NPT	2.98		120 psi	
8Z8M-CB6L-1-PC-SS	1/2" CPI™ x 3/8" Male NPT				
8A-CB8L-1-PC-SS	1/2" A-LOK®	3.30	1.25		
8Z-CB8L-1-PC-SS	1/2" CPI™				
8A8G5-CB8L-1-PC-SS	1/2" A-LOK® x 1/2" Female SAE	3.44			
8Z8G5-CB8L-1-PC-SS	1/2" CPI™ x 1/2" Female SAE				
8X8G5-CB8L-1-PC-SS	1/2" Male JIC 37° Flare x 1/2" Female SAE	3.48	1.375		
10A-CB8L-1-PC-SS	5/8" A-LOK®	3.56			
10Z-CB8L-1-PC-SS	5/8" CPI™				
12A-CB12L-1-PC-SS	3/4" A-LOK®	3.56			
12Z-CB12L-1-PC-SS	3/4" CPI™				
12A12G5-CB12L-1-PC-SS	3/4" A-LOK® x 3/4" Female SAE	3.84			
12Z12G5-CB12L-1-PC-SS	3/4" CPI™ x 3/4" Female SAE				
12X12G5-CB12L-1-PC-SS	3/4" Male JIC 37° Flare x 3/4" Female SAE	4.12			

CBF Series Filter Check Valve

Basic Part Number	End Connections	Dimensions		Optional	
	Inlet Port	A	B Hex	Crack Pressure	Seat Material
8A-CBF8L-1-PC-SS-380	1/2" A-LOK®	4.50	1.375	5 psi	PF Parkerfill
8Z-CBF8L-1-PC-SS-380	1/2" CPI™			10 psi	
8A8G5-CBF8L-1-PC-SS-380	1/2" A-LOK® x 1/2" Female SA	4.70		25 psi	
8Z8G5-CBF8L-1-PC-SS-380	1/2" CPI™ x 1/2" Female SA			50 psi	
10A-CBF8L-1-PC-SS-380	5/8" A-LOK®	4.75		75 psi	
10Z-CBF8L-1-PC-SS-380	5/8" CPI™			100 psi	
12A-CBF8L-1-PC-SS-380	3/4" A-LOK®	4.75		120 psi	
12Z-CBF8L-1-PC-SS-380	3/4" CPI™				



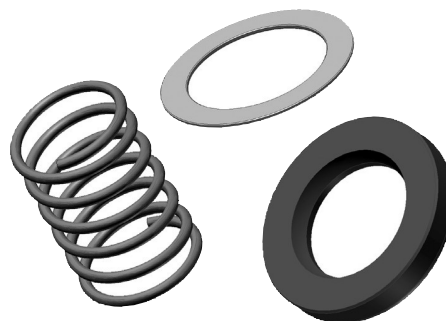
CB and CBF Series Check Valves

Repair Kits — CB Series Check Valves

Kits include seat, body gasket and crack spring. To order, fill in the designators from the chart below.

Kit	Size	Crack Pressure	Seat Material
KIT	CB6 CB8 CB12	1 psi	PF Parkerfill
		5 psi	PC Parker Carbon
		10 psi	
		15 psi	
		50 psi	
		100 psi	
		120 psi	

Example kit part number: **KIT-CB12-120-PF**



CB
CBF

Repair Kits — CBF Series Filter Check Valves

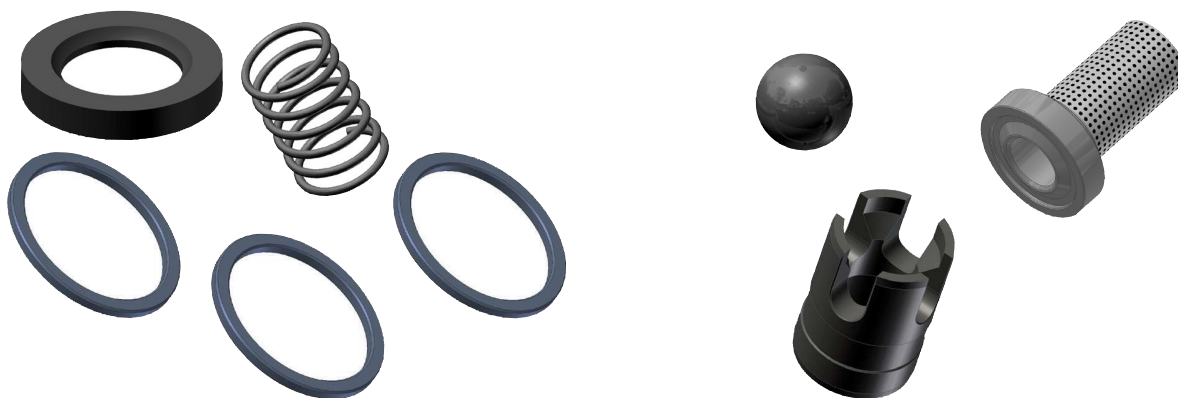
Seal kits (KITS) include seat, body gasket and crack spring. Valve kits (KITV) include seat, body gaskets, crack spring and ball. Optional parts for valve kits include ball cage and filter. To order, fill in the designators from the chart below.

Kit	Size	Crack Pressure	Seat Material	Valve Kit Options	Filter Rating
KITS KITV	CBF8	1 psi	PF Parkerfill	Blank None	75 Microns
		5 psi	PC Parker Carbon	1 Ball Cage	200 Microns
		10 psi		2 Filter	380 Microns
		25 psi		3 Ball Cage & Filter	500 Microns
		50 psi			(Include with filter option)
		75 psi			
		100 psi			
		120 psi			

Examples:

Seal kit part number: **KITS-CBF8-10-PF**

Valve kit part number: **KITV-CBF8-10-3-200** (with Ball Cage and 200 micron filter option)



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