

REGISTRATION OF A PRESSURE FITTING DESIGN

10-Dec-20

ABSA
9410 20th Avenue NW
Edmonton, AB
T6N 0A4**Attention: Nathalie Dugo****File Number: 11822 [0 F]****Re: Manufacturer: Parker Hannifin Corporation**
Item: Check Valves
Catalog or Drawing: Per Scope of Registration & Catalog 4135-CV (April 2019)

TSASK Codes and Standards Compliance has registered the design listed above in accordance with The Boiler and Pressure Vessel Act and Regulations and CSA B51. The Canadian Registration Number (CRN) is:

OC21055.23 Expiry Date: November 5, 2030

Please note that every fitting shall be constructed in strict accordance with the registered design.

Fitting registrations are required to be resubmitted for validation after ten (10) years from the registration date in accordance with CSA B51, Clause 4.2.1.

Should you require anything further, please do not hesitate to contact the Codes and Standards Compliance Office at your convenience.

Yours truly,

Athan Syrgiannis, P.Eng.
Codes and Standards Compliance**Remarks:**

A valid quality control program must be maintained at the production facility for the fitting registration to remain valid until the expiry date.

Conditional upon compliance with the notes on the original ABSA registration.

Due to COVID-19 restrictions, this registration is conditional based on TSASK receiving a valid Statutory Declaration that has been witnessed and signed by a Commissioner of Oaths or a Notary Public at your earliest convenience.

STATUTORY DECLARATION
Registration of Fittings
Single or Multiple Fitting Designs within one Fitting Category

I, Craig Beckwith, Division General Manager
(name of applicant) (position title) (must be in a position of authority)
of Parker Hannifin Corporation - Instrumentation Products Division
(name of manufacturer)
located at 1005 A Cleaner Way, Huntsville, AL, 35805, USA
(plant address)

In this space, show facsimile of manufacturer's logo or trademark as it will appear on the fitting.

P

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (select only one)

- ☐ comply with the requirements of _____ which specifies the dimensions,
(title of recognized North American Standard)
materials of construction, pressure/temperature ratings and identification marking of the fittings, or
- ☒ are not covered by the provisions of a recognized North American standard and are therefore
manufactured to comply with MSS-SP-105 as supported by the
(title of code of construction or other applicable document)
attached data which identifies the dimensions, materials of construction, pressure/temperature ratings and the basis for such ratings, and the identification marking of the fittings.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified as described in the below Table as being suitable for the manufacturing of these fittings to the stated standard, regulation, code, guideline or other applicable document. The fittings covered by the declaration for which I seek registration are as provided in the Supplementary Sheet(s) attached.

Quality Program Verification and Manufacturing Sites

A copy of the Quality Certificate from each manufacturing site must be included

Item #	Product Description, Model or Series	Quality Program	Scope of Certification	Expiry Date	Verifying Organization	Location(s) Plant Name and address
1.	CB Series Check Valves (Size 3/8" only - CB6)	ISO 9001:2015	Design, Manufacture, and Service of Instrumentation Products, Pressure and Temperature Systems, Pneumatic Pumps, Power Supplies, and Anhydrous	April 7, 2021	DNV-GL	2625 AL Hwy 21 N, Jacksonville, AL 36265, USA

Tracking #: _____

			Ammonia/Propane Valves.			
2.						

In support of this application, the following information, calculations and/or test data are attached:

Scope of Registration and Catalog 4135-CV April 2019


(Signature of the Declarer)

10/28/20

(Date)

DECLARED before me at Huntsville in the Madison County of Alabama
(city) (province, territory, or state)

this _____ day of _____, 2020
(Month) (Year)

(print) _____
(a Commissioner of Oaths or Notary Public)

(sign) _____
(a Commissioner of Oaths or Notary Public)

(expiry date (mm/dd/yy))

Commissioner of Oaths / Notary Public in and for: _____
(province, territory, or state)

For ABSA Office Use Only:

NOTES: _____

To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard B51, Part 1, Clause 4.2, and is accepted for registration in Category _____

CRN: _____

Registered Date: _____

Expiry Date: _____

Signature: _____
(Signature of the Administrator/SCO)

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulations in the Pressure Equipment Discipline



Registration No. OC21055.23

File No. 11822

Registered

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Expiry Date: November 5, 2030

Codes & Standards Compliance Office

As Noted


Table 1 Scope of Fitting Designs**

Item #	Primary Pressure Bearing / Retaining Component	Material of Construction	Port Connections and Size Range	MDMT	Rated Pressure		Pressure Class(es) / Schedule(s)	Design Code(s) of Construction	Reference Catalogue (pages) or Drawing(s)
					At Ambient Temperature	At Maximum Temperature			
CB6 Series	Body	ASTM A276, Type 316	Refer to Catalogue	N/A	Refer to Scope of Registration	Refer to Scope of Registration	Refer to Scope of Registration	MSS-SP-105	4135-CV (6-8)
	Cap	ASTM A276, Type 316	Refer to Catalogue	N/A	Refer to Scope of Registration	Refer to Scope of Registration	Refer to Scope of Registration	MSS-SP-105	4135-CV (6-8)

Table 2 Additional Scope Information

List/Attach Additional Detail and References (Product Configurations, Options, Illustrations, etc.)
Example:
Series X Options
See attached scope of registration and catalog pages

** For additional alternatives of Table 1, refer to Form AB-41a, Guide for Completing Form AB-41



Technical Safety Authority of Saskatchewan

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Codes & Standards Compliance Office

Registration Scope

Parker Hannifin
Instrumentation Products Division

Catalog 4135-CV, April 2019, Pages 6-8
CB Series Check Valves

Based on the following summary, we seek registration for the following scope.

Series/Model	Size	Shell Pressure Rating, CWP	Body Material	Cap material
CB6	3/8"	3000 psi	ASTM A 276, Type 316	ASTM A 276, Type 316

Summary

Table 1: Summary Table for the CB6 Series Check Valves

Main Pressure Bearing Component	Main Pressure Bearing Material (Standard)	Port Connections and Sizes	Maximum Rated Pressure (Shell Pressure Rating)	Design Code of Construction
Body	ASTM A276, Type 316	Refer to End Connection in Table 2 below	3,000 psi CWP	MSS-SP-105

Table 2 below shows the valve part number description from the catalog for the CB Series Check valves. For this valve the valve bodies are available only in one material (ASTM A276 Type 316). The application is for the 3/8" size, designated as 6 in the part number. The minimum wall thickness for all valves in this line is at the undercut of the thread on the valve body.

Table 2: Dimensions and End Connections

CB Series Filter Check Valve					
Basic Part Number	End Connections	Dimensions		Optional	
	Inlet & Outlet Port 1 & Port 2	A	B Hex	Crack Pressure	Seal 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	2.88		120 psi	
8Z8M-CB6L-1-PC-SS	1/2" CPI™ x 3/8" Male NPT				



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CB Series Check Valve

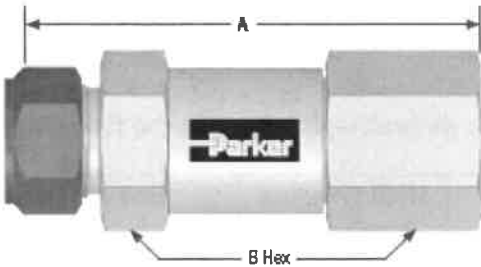
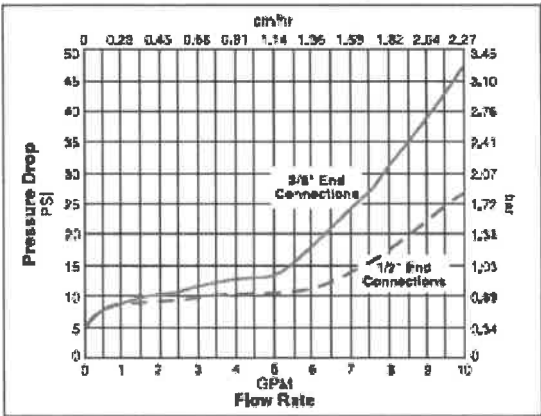


Exhibit 1: Pressure and Temperature Curve and Specifications

CB6 Check Valve

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



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

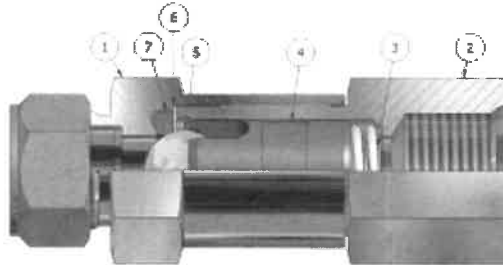
Parkerfill is a PTFE copolymer reinforced with carbon and graphite.
Parker Carbon is a PTFE copolymer reinforced with carbon

The Cold Working Pressure (CWP) is established by burst testing in accordance with MSS SP-105.

Exhibit 2: Diagram of the Components and the Materials of Construction

Materials of Construction

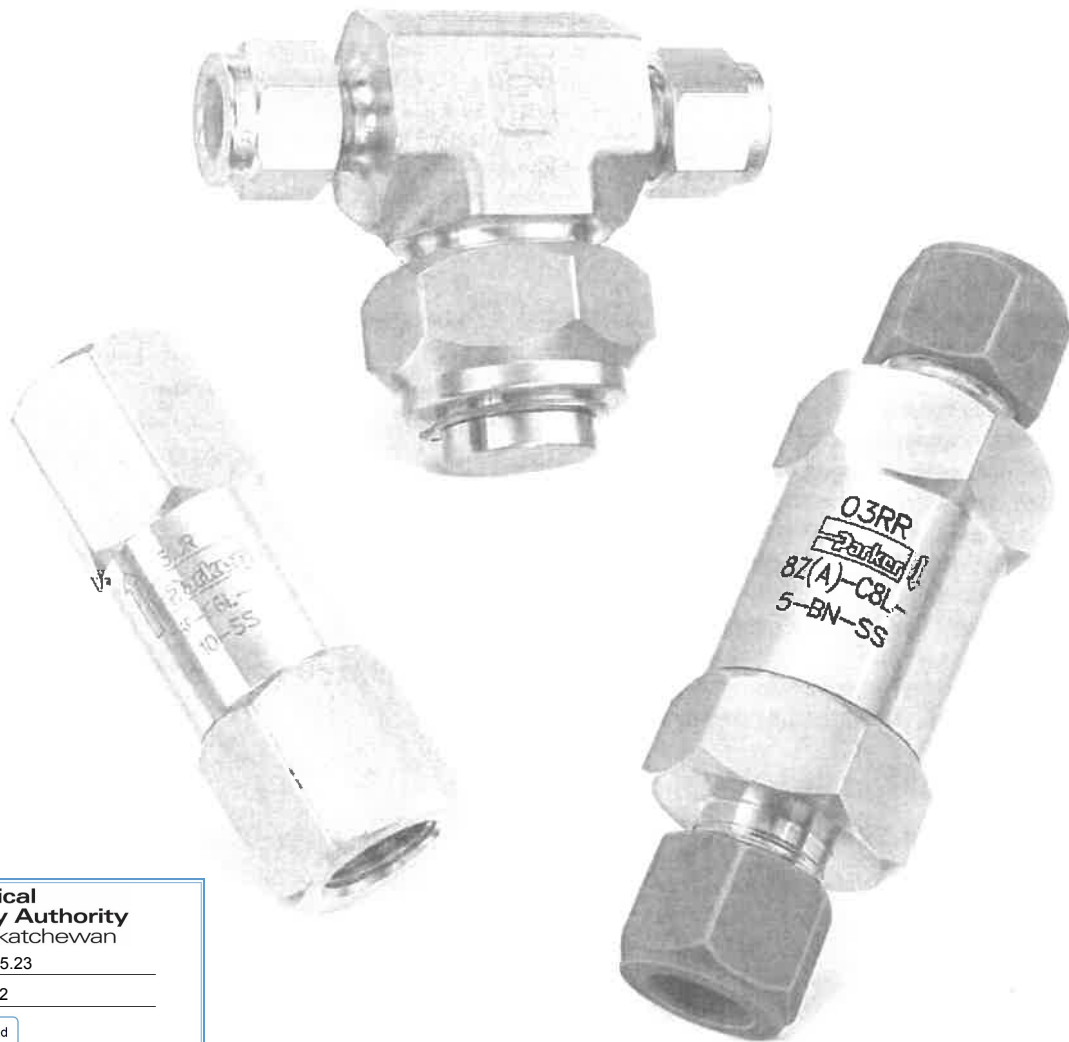
CB Series Check Valve



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

Quality System

Parker Hannifin Instrumentation Products Division's quality management system complies with the requirements of ISO 9001:2015. A copy of the current DNV-GL certificate is included in this submission.



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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

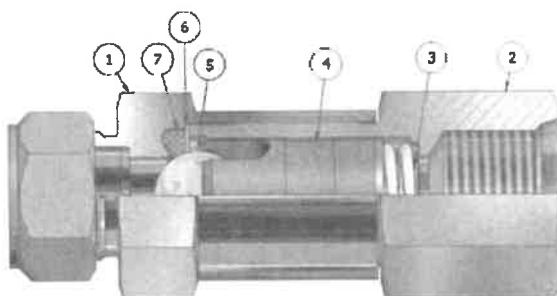
Parker Carbon 2500 psi @ 100°F

..... 1250 psi @ 450°F

Parkerfill is a PTFE copolymer reinforced with carbon and graphite.
Parker Carbon is a PTFE copolymer reinforced with carbon.

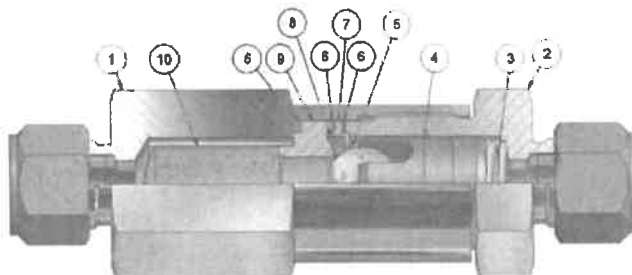
Materials of Construction

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



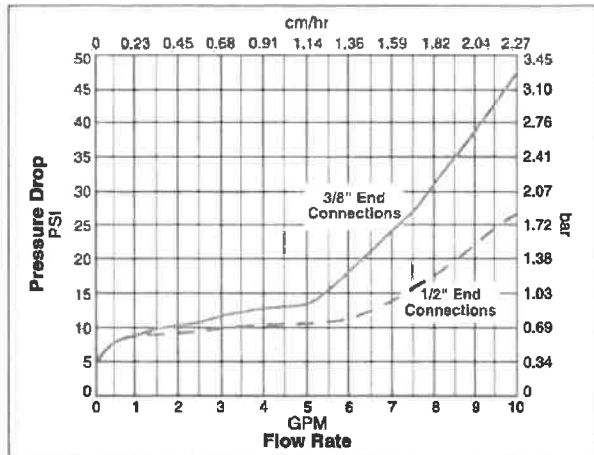
Item #	Part	Stainless Valve
1	Cap	ASTM A276, Type 316
2	Body	ASTM A276, Type 316
3	Crack Spring	316 Stainless Steel
4	Ball Cage	ASTM A276, Type 316 Hard PTFE Coated
5	Ball	440C SS
6	Body Seal	Grafoil®
7	Seat Retainer	316 Stainless Steel
8	Seat	Parkerfill, Parker Carbon
9	Filter Base	316 Stainless Steel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

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

Flow Curves

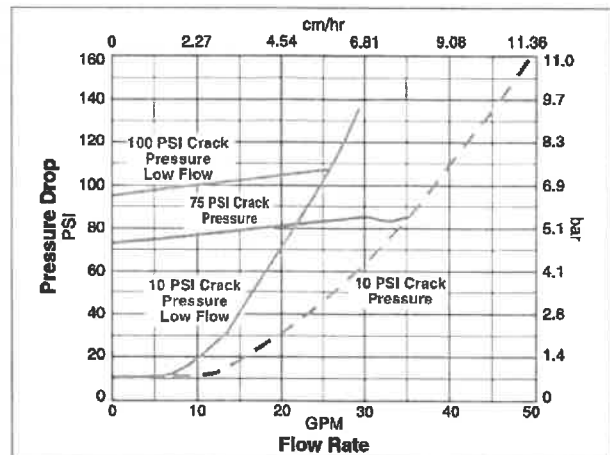
CB6 Check Valve

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



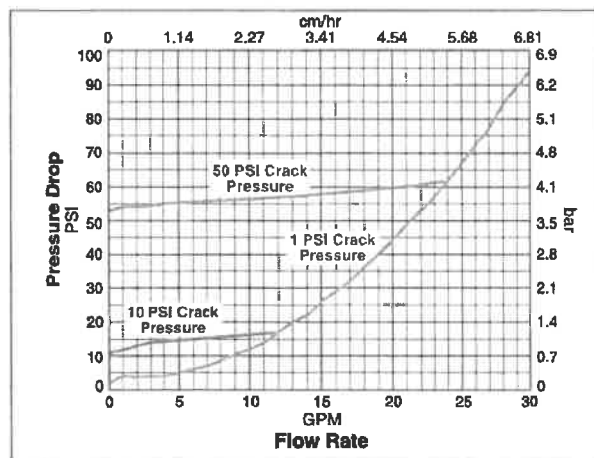
CB12 Check Valve

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



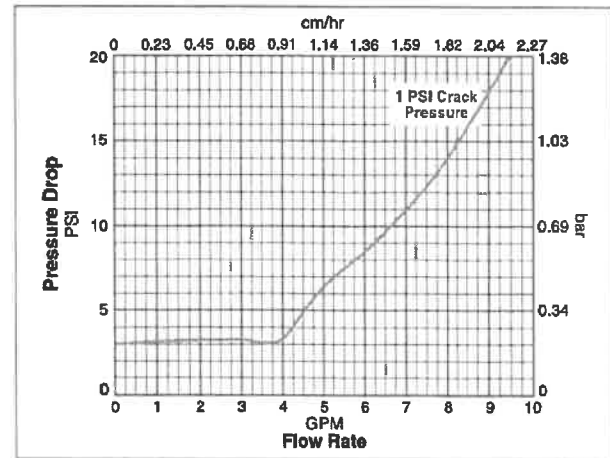
CB8 Check Valve

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



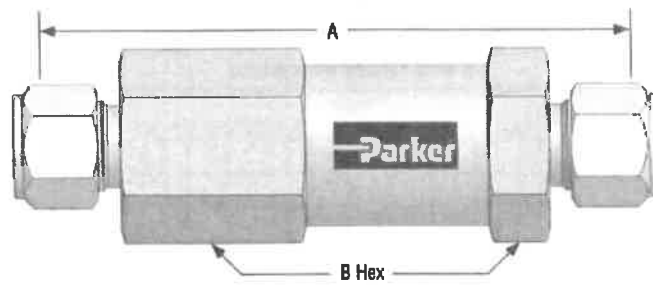
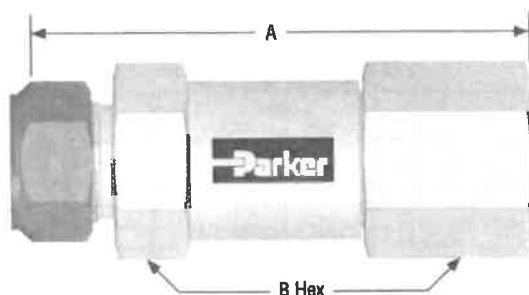
Dimensions

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

CB Series Check Valve

CBF Series Filter Check Valve

CB
CBF



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 10 psi 25 psi 50 psi 75 psi 100 psi 120 psi	PF Parkerfill
6Z-CB6L-1-PC-SS	3/8" CPI™				
6A6M-CB6L-1-PC-SS	3/8" A-LOK® x 3/8" Male NPT	2.88			
6Z6M-CB6L-1-PC-SS	3/8" CPI™ x 3/8" Male NPT				
8A-CB6L-1-PC-SS	1/2" A-LOK®	2.78			
8Z-CB6L-1-PC-SS	1/2" CPI™				
8A8M-CB6L-1-PC-SS	1/2" A-LOK® x 3/8" Male NPT	2.98			
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			
10A-CB8L-1-PC-SS	5/8" A-LOK®	3.56	1.375		
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 10 psi 25 psi 50 psi 75 psi 100 psi 120 psi	PF Parkerfill
8Z-CBF8L-1-PC-SS-380	1/2" CPI™				
8A8G5-CBF8L-1-PC-SS-380	1/2" A-LOK® x 1/2" Female SA	4.70			
8Z8G5-CBF8L-1-PC-SS-380	1/2" CPI™ x 1/2" Female SA				
10A-CBF8L-1-PC-SS-380	5/8" A-LOK®	4.75			
10Z-CBF8L-1-PC-SS-380	5/8" CPI™				
12A-CBF8L-1-PC-SS-380	3/4" A-LOK®	4.75			
12Z-CB8FL-1-PC-SS-380	3/4" CPI™				

