



the pressure equipment safety authority

9410 - 20 Ave N.W.  
Edmonton, Alberta, Canada T6N 0A4  
Tel: (780) 437-9100 / Fax: (780) 437-7787

November 24, 2017

**Attention:** Susan Turner  
PARKER HANNIFIN INSTRUMENTATION CANADA  
4635 DURHAM ROAD S  
GRIMSBY, ON L3M 4G4

**Email:** sturner1@parker.com

<NOCOVER>

<TOFAXNUM:1-905-945-2203>

<TONAME:Susan Turner>

The design submission, tracking number 2017-05551, originally received on September 01, 2017 was surveyed and accepted for registration as follows:

**CRN :** 0H11767.2

**Accepted on:** November 24, 2017

**Reg Type:** NEW DESIGN

**Expiry Date:** November 24, 2027

**Drawing No. :** CATALOG 4190-FP-ACC As Noted

**Fitting type:** FLANGE CONNECTORS WITH CPI/ALOK TUBE FITTINGS

Design registered in the name of : PARKER HANNIFIN IPDE

**Description**

**MAWP**

**Design Temperature**

rating per tables

**The registration is conditional on your compliance with the following notes:**

*This acceptance letter of December 21 th 2017 supersedes the original acceptance letter issued on November 24, 2017 , we have revised the category of the fittings to comply with CSA B51.*

*CRN covers only Flange Connectors assemblies with CPI/Alok fittings CRN 0A06793.52*

*As indicated on AB-41 Statutory Declaration form and submitted documentation, the code of construction are ASME B31.3 and B16.5.*

*This registration is valid only for fittings fabricated at the location(s) covered by the QC certificate attached to the accepted AB-41 Statutory Declaration form.*

*This registration is valid only until the indicated expiry date and only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date. Should the approval of the quality management system lapse before the expiry date indicated above, this registration shall become void.*

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

If you have any question don't hesitate to contact me by phone at (780) 433-0281 ext 3330 or fax (780) 437-7787 or e-mail grynchuk@absa.ca.

Sincerely,

GRYNCHUK, MILLA, P. Eng.  
DOP Cert. No. D00005217

2017-05551

Page 1 of 1

**STATUTORY DECLARATION  
Registration of Fittings**

I, Marcus Ashford, Engineering Manager  
(name of applicant) (position title) (must be in a position of authority)  
of Parker Hannifin IPDE



(name of manufacturer)  
located at Riverside Road, Barnstaple, Devon, UK EX31 1NP with additional manufacturing at  
265 Alabama Highway 21 North, Jacksonville Alabama, USA  
(plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (check 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 ASME B31.3 and ASME B16.5 as supported by the attached  
(title of code of construction or other applicable document)  
data which identifies the dimensions, materials of construction, pressure/temperature ratings and the basis for such ratings, and the marking of the fittings for identification.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified by the following authority, DNV MANAGEMENT SYSTEMS as being suitable for the manufacture of these fittings to the stated standard. The fittings covered by this declaration, for which I seek registration, are  
CATALOG 4190-FP-ACC - Flange Connectors

(brief description of fittings)

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

See attached drawing, FCB CRN Report. N.B. : CRN 0A6793.5 also exists with respect to a portion of this design.

DECLARED before me at Bedford in the County of Essex on  
(city) (province or state)

this 25th day of October, 2017  
(Month) (Year)

(print) Marcus Ashford  
(a Commissioner of Oaths or Notary Public)

(sign) [Signature]  
(a Commissioner of Oaths or Notary Public)

[Signature]  
(signature of applicant)

**For ABSA Office Use Only:**

NOTES: 0A11787-2 Open

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

Registration Number: 0A11787-2

[Signature]  
(Signature of the Administrator/SCO)

Date Registered: NOV 24 2017

Expiry Date: 2017 November 24

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.

# MANAGEMENT SYSTEM CERTIFICATE

Certificate No:  
209347-2016-AQE-GBR-UKAS

Initial certification date:  
01 April 2010

Valid:  
15 November 2016 - 15 November 2019 ✓

This is to certify that the management system of

**Parker Hannifin Manufacturing Ltd**  
**Instrumentation Products Division Europe**  
Riverside Road, Pottington Business Park, Barnstaple, EX31 1NP, United Kingdom

has been found to conform to the Management System standards:

**ISO 14001:2015/ ISO 9001:2015**

This certificate is valid for the following scope:

**Design, development, manufacture, test and supply of valves, manifolds, connectors and systems, in high performance materials, including ancillary equipment, for the interconnection of process instrumentation and associated apparatus.**

Place and date:  
London, 10 November 2016



0013

For the issuing office:  
**DNV GL Business Assurance UK Limited**  
Palace House, 3 Cathedral Street, London,  
SE1 9DE, United Kingdom

*R. Redmond*

**Richard Redmond**  
Management Representative

# MANAGEMENT SYSTEM CERTIFICATE

Certificate No.:  
51495-2009-AQ-USA-RvA

Initial certification date:  
07 April, 2009

Valid:  
07 April, 2015 – 07 April, 2018 ✓

This is to certify that the management system of

## **Parker Hannifin Corporation Instrumentation Products Division**

1005 A Cleaner Way, Huntsville, AL 35805 USA  
and the sites as mentioned in the Appendix accompanying this Certificate

has been found to conform to Quality management system standard:  
**ISO 9001:2008**

This certificate is valid for the following Scope:

**Design and Manufacture of Instrumentation Products. Design,  
Manufacture and Service of Pressure and Temperature Systems,  
Components and Pneumatic Pumps**

0411767.8

Place and date:  
Katy, TX, 14 January, 2015



The RvA is a signatory to the IAF MLA

For the issuing office:  
**DNV GL - Business Assurance**  
1400 Ravello Drive  
Katy, TX 77449

*John C. Stefan*  
**John C. Stefan**  
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV GL Business Assurance B.V., Zwolsseweg 1, 2994 JB, Barendrecht, The Netherlands, +31 10 2922689  
www.dnvglcert.com

Certificate No.: 51495-2009-AQ-USA-RvA  
Place and date: Katy, TX, 14 January, 2015

## Appendix to Certificate

### Parker Hannifin Corporation Instrumentation Products Division

Locations included in the certification are as follows:

Site Name	Site Address	Site Scope
Parker Hannifin Corporation Instrumentation Products Division	1005 A Cleaner Way, Huntsville, AL 35805 USA	Top Management, Design, Order Entry, Planning, Marketing, Outside Sales, Receiving, Shipping, Operations, Stores, HR, Support functions
Parker Hannifin Corporation Instrumentation Products Division	301 Wagner Drive, Boaz, AL 35957 USA	Procurement, Receiving, Shipping, Stores, QA, Operations
Parker Hannifin Corporation Instrumentation Products Division	2651 AL Hwy 21 North, Jacksonville, AL 36265 USA	Order Entry, Procurement, Operations, Design, Receiving, Shipping, Stores
Parker Hannifin Corporation Instrumentation Products Division	8325 & 8355 Hessinger Drive, Erie, PA 16509 USA	Quote, Engineering, Order Entry, Planning, Scheduling, Machining, Assembly, Testing, Service, Purchasing, Receiving, Shipping

0H11767-2

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV GL Business Assurance B.V., Zwolsseweg 1, 2994 EB, Barendrecht, The Netherlands. +31 (0) 2622688  
www.dnvglcert.com




**Flange Dimension Reference from Standards**  
**ASME B16.5 2009**

Class	Table	Page Title	Page Number
2500	II-22	Templates for Drilling Class 2500 Pipe Flanges	191
1500	II-19	Templates for Drilling Class 1500 Pipe Flanges	187
900	II-17	Templates for Drilling Class 900 Pipe Flanges	184
600	II-15	Templates for Drilling Class 600 Pipe Flanges	181
300	II-10	Templates for Drilling Class 300 Pipe Flanges	170
150	II-7	Templates for Drilling Class 150 Pipe Flanges	161

Class	Table	Page Title	Page Number
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900	II-17	Templates for Drilling Class 900 Pipe Flanges	184
600	II-15	Templates for Drilling Class 600 Pipe Flanges	181
300	II-10	Templates for Drilling Class 300 Pipe Flanges	170
150	II-7	Templates for Drilling Class 150 Pipe Flanges	161

Class	Table	Page Title	Page Number
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600	II-15	Templates for Drilling Class 600 Pipe Flanges	181
300	II-10	Templates for Drilling Class 300 Pipe Flanges	170
150	II-7	Templates for Drilling Class 150 Pipe Flanges	161

ALL DIMENSIONS IN mm UNLESS OTHERWISE SPECIFIED					
<b>DRAWING TITLE :</b>					
FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS					
<b>DO NOT SCALE</b>	<b>IF IN DOUBT ASK</b>	<b>WWW.PARKER.COM/PPD</b>			
<b>ID No.</b>	<b>Version No.</b>				
ECO-0811763	ECO-0811763				
Issue Date	Issue Date				
ZAHRA NAJJI	22/09/2011				
DESCRIPTION OF REV / REVISION / NAME					
CHECKED & APPROVED BY Approved Signing Electronic Design ECO DESIGNER		<b>FCB CRN REPORT</b>			
					
<b>ENGINEERING</b>		<b>SUPCESS.</b>			

			ENGINEERING : SUCCESS
FCB CRN REPORT			

Material - 316 Stainless Steel SA182

1/4" CWP (PSI) @					
Flange Rating			A-LOK Rating		
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F
2500	6000	2915	10300	7931	6000
1500	3600	1750	10300	7931	3600
900	2160	1050	10300	7931	2160
600	1440	700	10300	7931	1440
300	720	350	10300	7931	720
150	275	20	10300	7931	275

1/2" CWP (PSI) @					
Flange Rating			A-LOK Rating		
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F
2500	6000	2915	6700	5159	6000
1500	3600	1750	6700	5159	3600
900	2160	1050	6700	5159	2160
600	1440	700	6700	5159	1440
300	720	350	6700	5159	720
150	275	20	6700	5159	275

3/4" CWP (PSI) @					
Flange Rating			A-LOK Rating		
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F
2500	6000	2915	10300	7931	6000
1500	3600	1750	10300	7931	3600
900	2160	1050	10300	7931	2160
600	1440	700	10300	7931	1440
300	720	350	10300	7931	720
150	275	20	10300	7931	275

X = Products no to be submitted  
Minimum Design Metal Temperature: - 325 °F

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ALL DIMENSIONS IN mm WITH IMPERIAL EQUIVALENTS IN PARENTHESES

DRAWING TITLE: FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS

DO NOT SCALE IF IN DOUBT ASK WWW.PARKER.COM/PO

DESIGNED & APPROVED BY: [Signature] ENGINEER: [Signature] ELECTRIC: [Signature] ECHO WORKFLOW

UNLESS STATED 3RD ANGLE PROJECTION

ENGINEERING SUCCESS

FCB CRN REPORT

OH11767.2



Material - Alloy 400 SB564 N04400

1/4" CWP (PSI) @				3/8" CWP (PSI) @			
Flange Rating		A-LOK Rating		Flange Rating		A-LOK Rating	
Class	100°F Max Temp (700°F)	100°F	Max Temp (700°F)	100°F	Max Temp (700°F)	100°F	Max Temp (700°F)
2500	5000	3960	9800	4214	5000	3960	6100
1500	3000	2375	9800	4214	3000	2375	6100
900	1800	1435	9800	4214	1800	1435	6100
600	1200	950	9800	4214	1200	950	6100
300	600	475	9800	4214	600	475	6100
150	230	110	9800	4214	230	110	6100

1/2" CWP (PSI) @				3/4" CWP (PSI) @			
Flange Rating		A-LOK Rating		Flange Rating		A-LOK Rating	
Class	100°F Max Temp (700°F)	100°F	Max Temp (700°F)	100°F	Max Temp (700°F)	100°F	Max Temp (700°F)
2500	5000	3960	6200	2666	5000	3960	5400
1500	3000	2375	6200	2666	3000	2375	5400
900	1800	1435	6200	2666	1800	1435	5400
600	1200	950	6200	2666	1200	950	5400
300	600	475	6200	2666	600	475	5400
150	230	110	6200	2666	230	110	5400

1" CWP (PSI) @			
Flange Rating		A-LOK Rating	
Class	100°F Max Temp (700°F)	100°F	Max Temp (700°F)
2500	5000	3960	4300
1500	3000	2375	4300
900	1800	1435	4300
600	1200	950	4300
300	600	475	4300
150	230	110	4300

X = Product's no. to be submitted

\*\*\* = Max working temperature rated in standard class is 900° F. Ref. ASME B16.34 1996

Minimum Design Metal Temperature: - 325 °F

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ALL DIMENSIONS IN INCH WITH IMPERIAL EQUIVALENTS IN PARENTHESES

DRAWING TITLE: FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS

DO NOT SCALE IF IN DOUBT ASK WWW.PARKER.COM/PRO

ECO-0217763 11/08/2017 22/08/2017

UNLESS STATED 3RD ANGLE PROJECTION

ENGINEERING SUCCESS

FCB CRN REPORT



Material - Alloy 625 SB564 N06625

1/4" CWP (PSI) @					
Flange Rating			3/8" CWP (PSI) @		
A-LOK Rating			A-LOK Rating		
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F
2500	6250	3030	6800	4964	6250
1500	3750	1820	6800	4964	3750
900	2250	1090	6800	4964	2250
600	1500	725	6800	4964	1500
300	750	365	6800	4964	750
150	290	20	6800	4964	290

1/2" CWP (PSI) @					
Flange Rating			3/4" CWP (PSI) @		
A-LOK Rating			A-LOK Rating		
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F
2500	6250	3030	6800	4964	6250
1500	3750	1820	6800	4964	3750
900	2250	1090	6800	4964	2250
600	1500	725	6800	4964	1500
300	750	365	6800	4964	750
150	290	20	6800	4964	290

Minimum Design Metal Temperature: - 20 °F

X = Products no to be submitted

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DRAWING TITLE: FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS

DO NOT SCALE IF IN DOUBT ASK WWW.PARKER.COM/PSD

REV. NO. 1

ECO. NO. ECO-0211763

ECO. DATE 11/08/2017

DESIGNED BY ZAHRA NAJJI

DESIGN DATE 22/08/2011

DESCRIPTION OF REV / VERSION CHG. REF.

CHECKED & APPROVED BY: APPROVED USING EXHIBIT: EXHIBIT A, ECO WORKFLOW

UNLESS STATED PRODUCTION

ENGINEERING SUCCESS

FCB CRN REPORT

Parker

Material - Alloy C276 SB462 N10276

1/4" CWP (PSI) @						3/8" CWP (PSI) @					
Flange Rating				A-LOK Rating		Flange Rating				A-LOK Rating	
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	
2500	6250	3030	5500	3300	6250	3030	8900	5340	8900	5340	
1500	3750	1820	5500	3300	3750	1820	8900	5340	8900	5340	
900	2250	1090	5500	3300	2250	1090	8900	5340	8900	5340	
600	1500	725	5500	3300	1500	725	8900	5340	8900	5340	
300	750	365	5500	3300	750	365	8900	5340	8900	5340	
150	290	20	5500	3300	290	20	8900	5340	8900	5340	

1/2" CWP (PSI) @						5/8" CWP (PSI) @					
Flange Rating			A-LOK Rating			Flange Rating			A-LOK Rating		
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)
2500	6250	3030	6900	4140	6250	3030	2800	1680	6250	3030	1680
1500	3750	1820	6900	4140	3750	1820	2800	1680	3750	1820	1680
900	2250	1090	6900	4140	2250	1090	2800	1680	2250	1090	1680
600	1500	725	6900	4140	1500	725	2800	1680	1500	725	1680
300	750	365	6900	4140	750	365	2800	1680	750	365	1680
150	290	20	6900	4140	290	20	2800	1680	290	20	1680

Minimum Design Metal Temperature: - 20 °F

X = Products no to be submitted

PAGE 5 OF 5

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DRAWING TITLE: FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS

DO NOT SCALE IF IN DOUBT ASK WWW.PARKER.COM/PO

DESIGNED BY: EDO-021763 11/08/2017 22/08/2017

CHECKED BY: EDO-021763 11/08/2017 22/08/2017

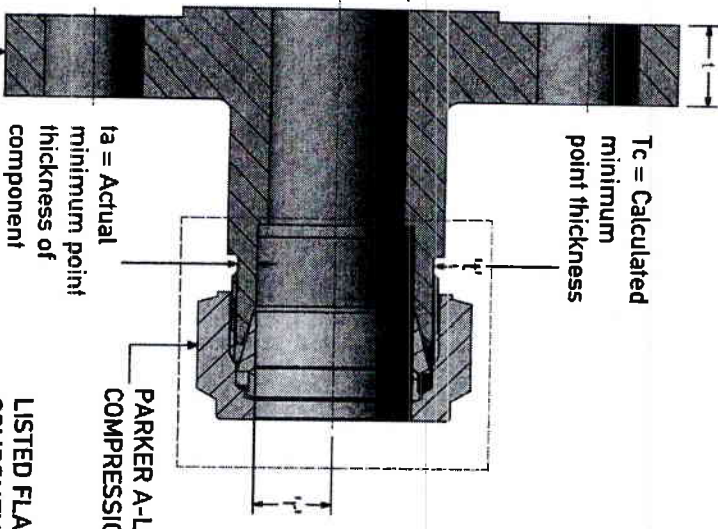
UNLESS STATED 3rd ANGLE PROJECTION

ENGINEERING SUCCESS

FCB CRN REPORT



Tc = Calculated  
minimum  
point thickness



PARKER A-LOK  
COMPRESSION FITTING

LISTED FLANGE  
COMPONENT  
AS PER  
ANSI B16.5  
1/2" - 2"  
NOMINAL BORE  
CLASS 150  
TO CLASS 2500

1" Flange Spec	
Material:	A182 F316
t = 1.125" / hub thickness = 1.32"	
d = 1"	
MAWP = 3600psi @ 100°F, 1750psi @ 1000°F	
Hydrotest = 7059psi	
MDMT = -325°F	

1" A-LOK Spec	
Material:	A182 F316
ID = 1.4515" ± 0.005"	
OD = 1.730" ± 0.005"	
Thread Engagement = 0.2238"	
Thread size = 1 1/2" 20UN	
A-LOK CRN = 0A6793.5	
t = 0.23" / r = 0.504"	

FLANGE RATING:  
REF B16.5 CLASS 1500 IN BOM  
NOTE:  
A-LOK RATING IN ACCORDANCE  
WITH CRN 0A6793.5

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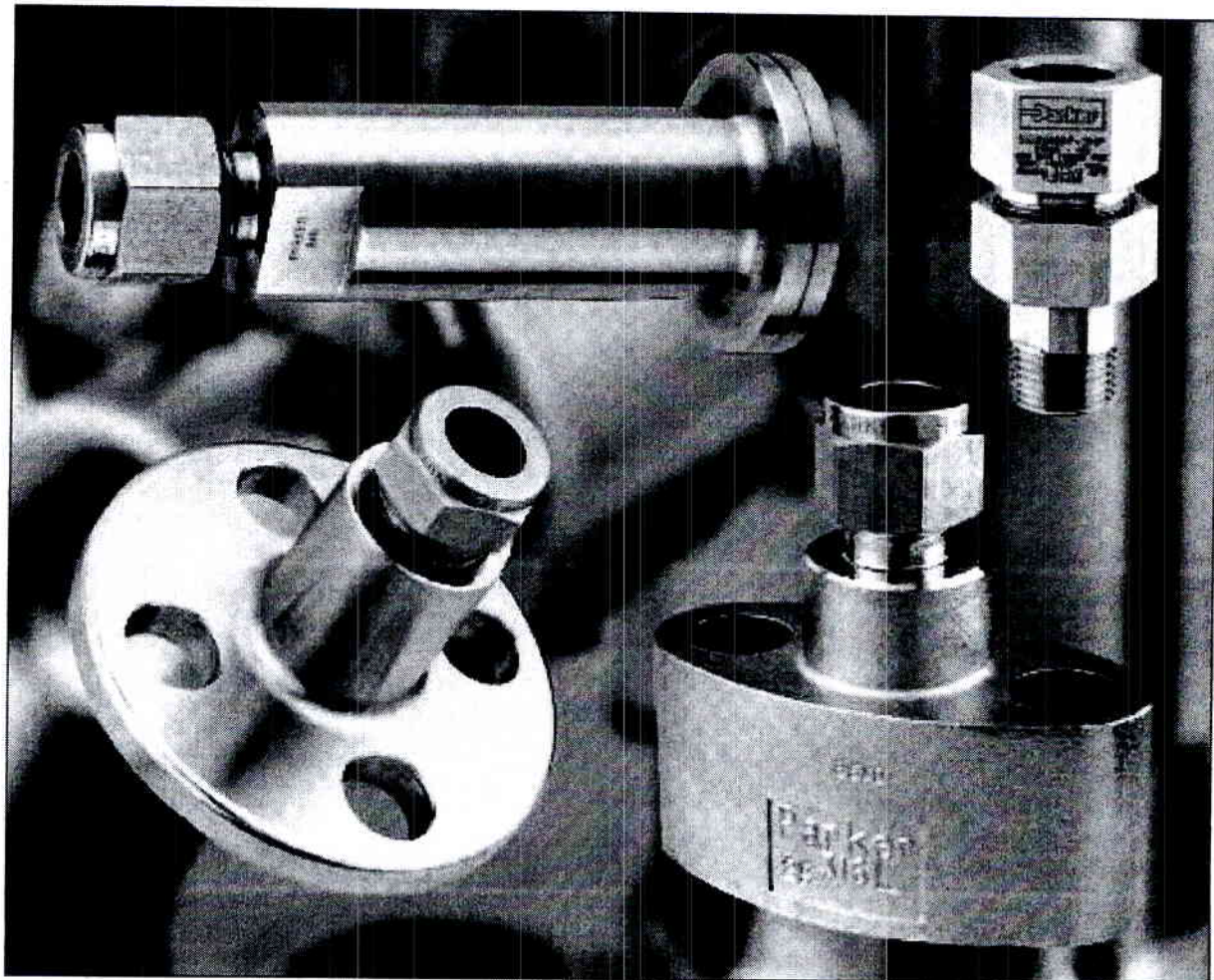
ALL DIMENSIONS IN INCHES WITH IMPERIAL EQUIVALENTS IN PARENTHESES DRAWING TITLE: FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS	<p>SAFETY CODES ACT - PROVINCE OF ALBERTA REGISTRATION OF FITTINGS REGISTRATION NO. 0A11787.0 REG. NO. OR CAT. NO. 1190-FP-416 DATE OF REGISTRATION NOV 24 2017 INITIALS MILA GRYNO PAGE 1 OF 5</p> <p>DO NOT SCALE IF IN DOUBT ASK WWW.PARKER.COM/ID</p> <p>UNLESS STATED 3RD ANGLE PROJECTION</p> <p>ENGINEERING SUCCESS</p> <p>FCB CRN REPORT</p>
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# Manifold Accessories

Catalog 4190-FP-ACC  
May 2007



Manifolds

0411767

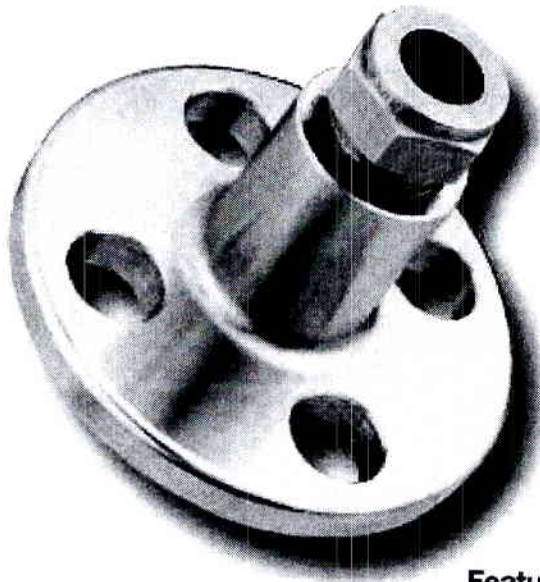
## Flanged Products

### Flange to compression connectors (FC)

#### Purpose

One piece integral connectors allow the user to switch from piping flange standards to instrument compression with minimum cost and added safety. This system eliminates the need for additional connections.

#### Series FC



#### Specification

- 1/2" to 2" N.B. flanges (15 to 50DN).
- 150 to 2500lb flange class.
- Flanges to ANSI B16.5. (others available on request)
- Standard or inverted A-LOK® arrangements 1/4" to 1" O.D. (3mm to 25mm O.D.).
- Standard or inverted CPI™ arrangements 1/4" to 1" O.D. (3mm to 25mm O.D.).
- Flange sealing:-
  - Raised face spiral finish.
  - Ring type joint.
- Standard stainless steel body (316).
- Other materials on application.

#### Features

- Full heat code traceability to EN10204-3.1
- Integrally machined body, no welding.
- Eliminates additional connections.
- P.T.F.E tape or liquid thread sealants not required.
- Variety of materials available.
- NACE MR 0175 / ISO 15156 compliance available on request.

#### Part number construction

	Product code	Material (refer to table page 155)	Connection A-LOK maximum size 1" / 25mm	Flange size	Face style	Class
Example 1	FC	B	8A	16	F	600
Example 2	FC	K	M12A	8	T	1500

For CPI™ change A to Z.

For A-LOK® size codes use the A-LOK® catalogue.

Example 1: FCB8A16F600 - Stainless steel, 1/2" O.D. A-LOK® tube connection, 1" pipe flange, raised face, class 600.

Example 2: FCKM12A8T1500 - 6Mo, 12mm O.D. A-LOK® tube connection to 1/2" pipe flange, ring type joint, class 1500.

