345 Carlingview Drive
Toronto, Ontario
CANADA M9W 6N9
Tel.: 416.734.3300
Fax.: 416.231.1626
Toll Free: 1.877.682.8772
www.tssa.org

September13, 2018

PETER PRANGE
PARKER HANNIFIN CANADA INC
4635 DURHAM RD S;P.O. BOX 158
GRIMSBY ON L3M 4G4
CA

Service Request Type.: BPV-National CSA
Service Request No.: 2323086
Your Reference No.: ADDENDUM TO CRN 0B15184.5 TO INCLUDE ALL MATERIALS LISTED
Registered to.: PARKER HANNIFIN INSTRUMENTATION PRODUCTS

Dear PETER PRANGE,

Please find enclosed the original response from QC,SK, registered under the CRN No.: CSA-0B15184.56ADD1.

As all jurisdictional fees are handled by the Technical Standards and Safety Authority (TSSA), you do not pay any jurisdictions directly.

Should you have any questions or require further assistance, I will be happy to assist you.
For general enquiries, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Tanya Francis
Administrative Assistant_ BPV Engineering
Tel. :   416-734-3423
Fax : 416-231-6183
Email :tfrancis@tssa.org

REGISTERED
CRN: CSA-0B15184.56A001
Registration Process administered by CSA Group per CSA B51

Technical Safety Authority of Saskatchewan

2202 2nd Ave.
Regina, SK S4R 1K3
PH: (306)798-7112 Toll Free: (866)530-8599
FAX: (306)787-9273 Toll Free: (866)760-9255
Email: boilerpermits@tsask.ca
Website: www.tsask.ca

Statutory Declaration (Registration of Fittings)

TSK-1008

I. Declaration Information

I, Marcus Ashford ,

Site Engineering Manager
(company title, e.g. vice president, plant manager, chief engineer)
(must be in a position of authority in the manufacturing plant where the fitting is produced)

of: Parker Hannifin IPDE
(name of manufacturer)

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

Parker

located at: Riverside Road (Plant Address – Apt/Street) Barnstaple, Devon UK (City,Prov) EX32 1NP (Postal Code)

do solemnly declare that the fittings listed hereinunder, which are subject to the ***Saskatchewan Boiler and Pressure Vessel Safety Act*** (check one)

○ Comply with the requirements of ____________ (title of recognized North American Standard) which specifies the dimensions, 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 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 manufacturer of these fittings is controlled by a quality control program which has been verified by the following authority, ISO 9001:2015 as being suitable for the manufacturer of these fittings to the stated standard. The fittings covered by this declaration, for which I seek registration, are Catalog 4190 FP-ACC

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

FCB report, note CRN 0A6793.5 exists in respect to a portion of this design

II. Declaration

DECLARED before me at [illegible] In the County of Devon UK

this 26th day of February , 2018

MAURICE CHAZK
(print name)

(Signature)

(Signature of Commissioner of Oaths) Notary Public

III. Office Use Only

To the best of my knowledge and belief, the application meets the requirements of the ***Boiler and Pressure Vessel Safety Act*** and CSA B51, Clause 4.2, and is accepted for registration in Category

CSA-0B15184.56A0D1
(Registration Number)

July · 09 · 2018
(Date Registered – MM DD YYYY)
(For the Administrator / Chief Inspector)

May · 22 · 2022
(Expiry Date – MM DD YYYY)

A.BANWATT

*Note: See the attachment for the scope of the registration.

CSA Group

REGISTERED CSA Group

CRN: CSA-0B15184.56 ADD1

Registration Process administered by CSA Group per CSA B51

Régie du bâtiment Québec

Statutory Declaration Registration of Fittings

(a) Design Qualification

I[1] Marcus Ashford, Site Engineering Manager

(Position eg, president, plant manager, chief eng.)

Of Parker Hannifin IPDE

(name of company)

Located at Riverside Road, Barnstaple, Devon, UK EX32 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 Boilers & Pressure Vessels Act:

☐ comply with all the requirements of the ANSI/ASME codes as to their dimensions, material, identification & service for which are required:

Or

☒ are not covered by the provisions of the ANSI/ASME codes, and are therefore constructed to comply with ASME B31.3 and ASME B16.5 code and standard, and are designed to the best current engineering practice, as shown by the supporting test data.

(b) Quality control of Manufacture

I further declare the manufacture of these fittings is controlled by a quality control program which complies with the requirements of ISO 9001:2015, and has been verified by the following authority or authorized agency DNV Management Systems

The fittings[2] covered by this declaration, for which I seek registration, are Catalog 4190-FP-ACC
FCB report NB CRN 0A6793.5 exists in respect to a portion of this design

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

Declared before me at Barnstaple ~~Devon UK~~.

In the of County of Devon UK

The 26th Day of Feb AD ~~19~~ 2018.

A ~~(commissioner for oaths)~~ Notary Public

Signature of Declarer[3]

For Official Use Only

The application is accepted for registration in Category ______ in accordance with the Boilers and Pressure Vessels Act and CSA Standard B51.

This registration must be revalidated after ten (10) years from the date of acceptance.

Registered Number CRN CSA-0B15184.56ADD1

For the Chief Inspector A. BANWATT

Date July · 09 · 2018

CSA Group

---

[1] *Three completed copied of Statutory Declaration form together with three copies of Catalogs, drawings of Bulletins illustrating above fittings shall be submitted.*

[2] *All fittings are required to be registered in the name of the Manufacturer.*

[3] *This form shall be completed and signed by the president of highest official in the manufacturing plan where the fitting is produced.*

*Note: See the attachment for the scope of the registration.

CSA

TECHNICAL STANDARDS & SAFETY AUTHORITY
TSSA

345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel.: 416.734.3300
Fax: 416.231.1626
Toll Free: 1.877.682.8772

www.tssa.org

June 07, 2018

PETER PRANGE
PARKER HANNIFIN CANADA INC
4635 DURHAM RD S P.O. BOX 158
GRIMSBY ON L3M 4G4
CA

Service Request Type: BPV-Fitting Registration
Service Request No.: **2259636**
Your Reference No.: ADDENDUM TO CRN 0B15184.5 TO INCLUDE ALL MATERIALS LISTED
Registered to: PARKER HANNIFIN INSTRUMENTATION PRODUCTS

Dear PETER PRANGE,

Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission has been reviewed and registered as follows:

CRN No.:	**0B15184.5ADD1**
Main Design No.:	ADD1 The addition of optional material SB462-N10276 (Alloy C276), SB564-N08825 (Incolloy 825) & SA182 F44 (6Mo Stainless Steel)
Expiry Date:	22-Mar-2022

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

NOTE: The subject CRN includes only flanges with adapter extension. The Parker A-LOK Compression fitting has separate CRN 0A6793.5R3 which is valid until January 9, 2022.

The stamped copy of the approved registration and the invoice are mailed separately. Should you have any questions or require further assistance, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

CSA Group 1 OF 6

ATTACHMENT TO
C.R.N. CSA-0B15184.56ADD1
Signed:
178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

Yours truly,

Mark Valcic P. Eng.
Engineer Specialist BPV
Tel.: 416-734-3494
Fax: 416-231-1626
Email: mvalcic@tssa.org

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)
2500	6250	3030	5500	3300	6250	3030	8900	5340
1500	3750	1820	5500	3300	3750	1820	8900	5340
900	2250	1090	5500	3300	2250	1090	8900	5340
600	1500	725	5500	3300	1500	725	8900	5340
300	750	365	5500	3300	750	365	8900	5340
150	290	20	5500	3300	290	20	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	Max Temp (1000°F)	100°F	Max Temp (1000°F)
2500	6250	3030	6900	4140	6250	3030	2800	1680
1500	3750	1820	6900	4140	3750	1820	2800	1680
900	2250	1090	6900	4140	2250	1090	2800	1680
600	1500	725	6900	4140	1500	725	2800	1680
300	750	365	6900	4140	750	365	2800	1680
150	290	20	6900	4140	290	20	2800	1680

Minimum Design Metal Temperature: - 20 °F

CSA Group 2 OF 6

X = Products no to be submitted

ATTACHMENT TO

C.R.N. CSA-0B15184.5ADD1

Signed:

178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

THIS IS PART OF
CRN 0B15184.5A001
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

June 7/18

ALL DIMENSIONS IN mm WITH IMPERIAL EQUIVALENTS IN PARENTHESIS

DRAWING TITLE :

FLANGE TO COMPRESSION CONNECTOR
FLANGE HUB WALL THICKNESS CALCULATIONS

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

REV No. D	Version No. .v1
ECO NO. ECO-0235578	ECO DATE 23/02/2018
DRAWN BY James Nelson	DRAWN DATE 23/02/2018
DESCRIPTION OF REV / VERSION CHANGE	

UNLESS STATED
3rd ANGLE
PROJECTION

CHECKED & APPROVED BY: Approvals Using Electronic 'ENOVIA' ECO WORKFLOW

Parker

ENGINEERING YOUR SUCCESS.

FCB CRN REPORT

Material - Alloy 825 SB564 N08825

	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 (800°F)**	**100°F**	**Max Temp (1000°F)**	**100°F**	**Max Temp (800°F)**
2500	6250	3030	11000	8030	6250	3030	7600	5548
1500	3750	1820	11000	8030	3750	1820	7600	5548
900	2250	1090	11000	8030	2250	1090	7600	5548
600	1500	725	11000	8030	1500	725	7600	5548
300	750	365	11000	8030	750	365	7600	5548
150	290	20	11000	8030	290	20	7600	5548

	1/2" CWP (PSI) @			
	Flange Rating		A-LOK Rating	
Class	**100°F**	**Max Temp (1000°F)**	**100°F**	**Max Temp (800°F)**
2500	6250	3030	5900	4307
1500	3750	1820	5900	4307
900	2250	1090	5900	4307
600	1500	725	5900	4307
300	750	365	5900	4307
150	290	20	5900	4307

CSA Group 3 of 6

ATTACHMENT TO

C.R.N. CSA-0B15184.5ADD1

Signed:

178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

Minimum Design Metal Temperature: - 20 °F

X = Products no to be submitted

THIS IS PART OF
CRN 0B15184.5ADD1
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program
Jun 7/18

ALL DIMENSIONS IN mm WITH IMPERIAL EQUIVALENTS IN PARENTHESIS

DRAWING TITLE :

FLANGE TO COMPRESSION CONNECTOR
FLANGE HUB WALL THICKNESS CALCULATIONS

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

REV No D	Version No v1
ECO NO ECO-0235578	ECO DATE 23/02/2018
DRAWN BY James Nelson	DRAWN DATE 23/02/2018
DESCRIPTION OF REV / VERSION CHANGE	

UNLESS STATED
3rd ANGLE
PROJECTION

CHECKED & APPROVED BY: Approvals Using Electronic 'ENOVIA' ECO WORKFLOW

Parker

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FCB CRN REPORT

Material - 6Mo Stainless Steel SA182 F44

	1/4" CWP (PSI) @				3/8" CWP (PSI) @			
	Flange Rating		A-LOK Rating		Flange Rating		A-LOK Rating	
Class	100°F	Max Temp (752°F)	100°F	Max Temp (700°F)	100°F	Max Temp (752°F)	100°F	Max Temp (700°F)
2500	6250	4422	6300	5292	6250	4422	8000	6720
1500	3750	2655	6300	5292	3750	2655	8000	6720
900	2250	1592	6300	5292	2250	1592	8000	6720
600	1500	1063	6300	5292	1500	1063	8000	6720
300	750	529	6300	5292	750	529	8000	6720
150	290	94	6300	5292	290	94	8000	6720

	1/2" CWP (PSI) @				3/4" CWP (PSI) @			
	Flange Rating		A-LOK Rating		Flange Rating		A-LOK Rating	
Class	100°F	Max Temp (752°F)	100°F	Max Temp (700°F)	100°F	Max Temp (752°F)	100°F	Max Temp (700°F)
2500	6250	4422	6200	5208	X	X	5200	4368
1500	3750	2655	6200	5208	3750	2655	5200	4368
900	2250	1592	6200	5208	2250	1592	5200	4368
600	1500	1063	6200	5208	1500	1063	5200	4368
300	750	529	6200	5208	750	529	5200	4368
150	290	94	6200	5208	290	94	5200	4368

	1" CWP (PSI) @			
	Flange Rating		A-LOK Rating	
Class	100°F	Max Temp (752°F)	100°F	Max Temp (700°F)
2500	X	X	X	X
1500	3750	2655	4400	3696
900	2250	1592	4400	3696
600	1500	1063	4400	3696
300	750	529	4400	3696
150	290	94	4400	3696

CSA Group 4 OF 6

X = Products no to be submitted

ATTACHED TO: Minimum Design Metal Temperature: - 20 °F

C.R.N. CSA 0B15184.56ADD1

Signed: [illegible]

178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

THIS IS PART OF
CRN 0B15184.5ADD1
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program
June 7/18

ALL DIMENSIONS IN mm WITH IMPERIAL EQUIVALENTS IN PARENTHESIS

DRAWING TITLE:

FLANGE TO COMPRESSION CONNECTOR
FLANGE HUB WALL THICKNESS CALCULATIONS

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

REV No	Version No	UNLESS STATED
D	.v1	3rd ANGLE PROJECTION
ECO NO.: ECO-0235578	ECO DATE: 23/02/2018	
DRAWN BY: James Nelson	DRAWN DATE: 23/02/2018	
DESCRIPTION OF REV / VERSION CHANGE		

CHECKED & APPROVED BY: Approvals Using Electronic ENOVIA ECO WORKFLOW

Parker
ENGINEERING YOUR SUCCESS.

FCB CRN REPORT

Technical Standards and Safety Authority

Alberta
Boilers and Pressure Vessels Safety Program
MUNICIPAL AFFAIRS

REGISTERED

C.R.N.: 0B15184.5
Signed: Charley Dong
Date: MAR. 22/12

CRN NOTE: ① SEE ATTACHED "PART OF CRN" FOR THE SCOPE.
② ABSA'S CRN, 0B11767.2 IS REFERENCED.

AB-41 2005-(

CXZ
CSA
MAR. 21/12

CSA Group
5 OF 6
ATTACHMENT TO
C.R.N.: CSA-0B15184.5ADD1
Signed:
178 Rexdale Boulevard, Toronto, ON Canada M9W

ABSA
the pressure equipment safety authority

STATUTORY DECLARATION
Registration of Fittings

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

Parker

I, Kevin Ballard,

Core Engineering Manager
(company title, e.g. vice president, plant manager, chief engineer) (must be in a position of authority)

of Parker Hannifin, IPDE
(name of manufacturer)

located at Riverside Road, Barnstaple, Devon, EX31 1NP
(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 ________ (title of recognized North American Standard) which specifies the dimensions, 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 as supported by the attached 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 Mangement 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 Flanged Connectors

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

Flanged to Compression Connector Flange Hub Wall Thickness Calculations

Flanged Products Catlogue 4190-FP-ACC page 4

DECLARED before me at Barnstaple in the County of Devon

this 9th day of December (Month), 2011 (Year)

(print) Kevin Ballard

(sign) Kevin T. Orl

(A ~~Commissioner for Oaths~~) Notary Public

K Ballard
(Signature of Applicant)

For Office Use Only

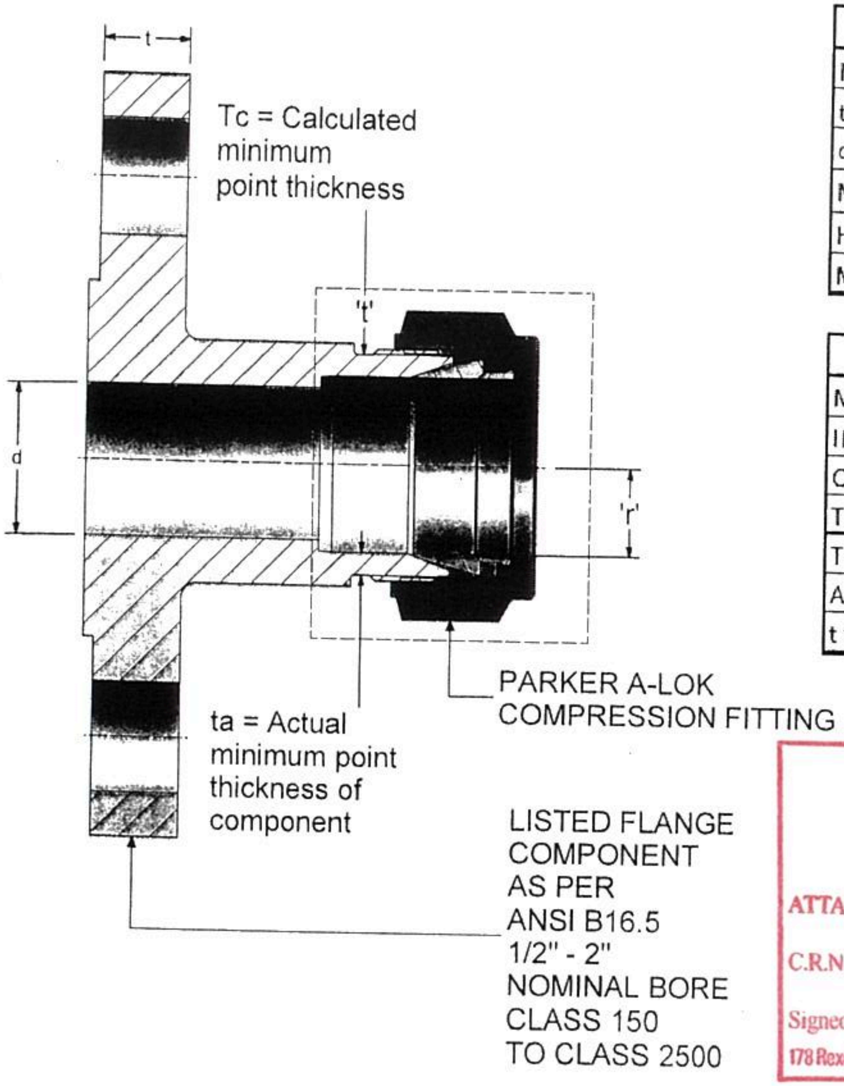
To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard B51, Clause 4.2, and is accepted for registration in Category B

Registration Number: 0B15184.5

Date Registered: MAR 22, 2012

Charley Dong
(For the Administrator/Chief Inspector of ~~Alberta~~) ONT

Expiry Date: MAR. 22, 2022



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" ± 0.0055"
OD = 1.730" ± 0.005"
Thread Engagement = 0.2238"
Thread size = 1 1/2" 20UN
A-LOK CRN = OA6793.5
t = 0.23" / r = 0.504"

316 Stainless Steel / A182 F316
Table II-2-2.2 Pressure-Temperature
Ratings for Group 2.2 Materials
Page 126 / Class 150 to 2500

Monel 400 / B564 N04400
Table II-2-3.4 Pressure-Temperature
Ratings for Group 3.4 Materials
Page 139 / Class 150 to 2500

Alloy 625 / B564 N006625
Table II-2-3.8 Pressure-Temperature
Ratings for Group 3.8 Materials
Page 143 / Class 150 to 2500

CSA Group
6 of 6
ATTACHMENT TO
C.R.N. CSA-0B15184.5[illegible]
Signed:
178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

THIS IS PART OF
CRN 0B15184.5
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Division

FOR MATERIAL AND PROCESS SPECIFICATIONS REFER TO GENRIC PROCESS CONTROL SHEET
FOR PART MARKING DETAILS REFER TO PART MARKING SPECIFICATION

THIS DRAWING CONTAINS INFORMATION THAT IS CONFIDENTIAL AND PROPRIETY TO PARKER HANNIFIN PLC. THIS DRAWING IS FURNISHED ON THE UNDERSTANDING THAT THE DRAWING AND THE INFORMATION IT CONTAINS WILL NOT BE COPIED OR DISCLOSED TO OTHERS EXCEPT WITH THE WRITTEN CONSENT OF PARKER HANNIFIN. WILL NOT BE USED TO THE DETRIMENT OF PARKER HANNIFIN, AND WILL BE RETURNED UPON REQUEST BY PARKER HANNIFIN.

ISSUE NO.	1	DESCRIPTION OF REVISION New Release
E.C.N NO.	N/A	
DATE	12/04/2011	

DRAWN BY: ZN
DRAWN DATE: 22/06/2011
Approvals using electronic PDM WORKFLOW (QSP05/25)

ALL DIMENSIONS IN UNLESS OTHERWISE STATED
DRAWING TITLE:
FLANGE TO COMPRESSION CONNECTOR
FLANGE HUB WALL THICKNESS CALCULATIONS

REMOVE ALL SHARP EDGES AND BURRS

INCH	METRIC	ANGULAR
(.00") ± .015" (.000") ± .005"	(.0)mm ± .3mm (.00mm) ± 0.1mm	± 1/2° ± 30

UNLESS STATED 3rd ANGLE PROJECTION

GENERAL M/C FINISH 63min CLA/ 1.6mm RA
GEOMETRICAL TOL'S TO BS.308 PART 3.
ALL THREAD TOLERANCES ARE TO BE IN ACCORDANCE WITH PARKER IPD ESST01.

PART SIMILAR TO
DO NOT SCALE IF IN DOUBT ASK

Parker
Parker Hannifin Ltd
Instrumentation Products Division Europe
Riverside Road
Barnstaple
Devon
EX31 1NP
+44 (0)1271 313131

FCB CRN Report Revision 2