the pressure equipment safety authority

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

September 29, 2021

Attention: Peter Prange
PARKER HANNIFIN CANADA
160 CHISHOLM DRIVE
MILTON, ON L9T 3G9

The design submission, tracking number 2021-04746, originally received on September 07, 2021 was surveyed and accepted for registration as follows:

CRN : 0H12507.2 **Accepted on:** September 29, 2021

Reg Type: RENEWAL **Expiry Date:** September 29, 2031

Drawing No. : HPAHM-DWG-CRN Rev 4

Fitting type: AIR HEADER MANIFOLD

Design registered in the name of : PARKER HANNIFIN INSTRUMENTATION PRODUCTS

Description	MAWP	Design Temperature
As listed on drawing		

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

Scope of the registration is the CRN renewal and addition of the HP model with Threaded inlet/outlet & Socket Welded inlet/outlet connections.

Removable fittings are not included in this registration and they shall be registered with separate CRNs.

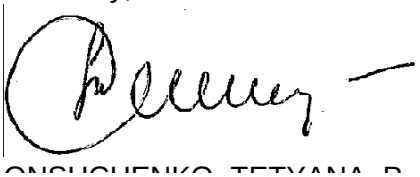
As indicated on AB-41 Statutory Declaration form and submitted documentation, the code of construction is SECTION VIII, DIV. 1.

- It is our understanding that the fitting(s), included as the scope of this submission, that is(are) subject to the Safety Codes Act shall comply with the requirements of the indicated Standard or Code of Construction on the AB-41 Statutory Declaration as supported by the attached data which identifies the dimensions, materials of construction, press./temp. ratings and the basis for such ratings, and the identification marking of the fittings.
- 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 3310 or fax (780) 437-7787 or e-mail Onshchenko@absa.ca.

Sincerely,



ONSHCHENKO, TETYANA, P. Eng.

Continued on the next page…

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September 29, 2021

UNSHCHENKO, TETYANA, P. Eng.
DOP Cert. No. D00010125

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

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

of Parker Hannifin Manufacturing Ltd-Instrumentation Products Division Europe (name of manufacturer)

located at Riverside Road, Barnstaple, Devon, EX31 1NP United Kingdom (plant address)

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 ASME Pressure Vessel Codes 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.	HPAHM* Air Distribution Manifolds	ISO 9001	Design manufacture of valves,manifolds, connectors,regulators & supporting ancillary equipment in corrsion resistant materials	06-March-2022	Bureau Veritas	Same as above
2.						

Tracking #: 2021-04746

In support of this application, the following information, calculations and/or test data are attached:
Existing CRN Submissions: 0H12507.2 [ADM] & 0C9622.51 [Ball Valves]
Drawing: HPAHM-DWG-CRN-REV.3
HPAHMS1016F01MSW8F8FBVO [Flanged 150#] HPAHMS616N8N8NBVO [THD]
Calculations: HPAHM-10-CRN-CALC REV.5

(Signature of the Declarer) 03/09/2021 (Date)

DECLARED before me at _____ (city) in the _____ of _____ (province, territory, or state)

this _____ day of _____ (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

2021-04746
ABSA
SAFETY CODES ACT - PROVINCE OF ALBERTA
ACCEPTED: 0H12507.2
See acceptance letter for conditions of registration.
Date: 2021-09-29 By:
TETYANA ONSHCHENKO, P. Eng.
DOP: D00010125

This stamp and signature have been affixed electronically to this registered design as required by Section 20(1) of the Pressure Equipment Safety Regulation, in accordance with the Electronic Transactions Act.

Tracking #:_____

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			
Air Distribution Manifolds HPAHM	Nominal Bore Pipe Flanged Inlet	A182 F316/316L, S31254, N04400,	NPS 2 BW, MNPT, FNPT, SW, flanged	-55°C	See Dwg HPAHM-10-DWG-CRN-03 DESIGN DATA TABLE MATERIAL SPECIFIC 316 LP Class 150# @ 40°C	See Dwg HPAHM-10-DWG-CRN-03 DESIGN DATA TABLE MATERIAL SPECIFIC 316 LP Class 150# @ 200°C	Flange Class 150# 300# Schedule 80	ASME VIII Div 1.	Cat 4190-DM
	Nominal Bore Pipe Threaded Inlet	A182 F316/316L, S31254, N04400,	NPS 2 BW, MNPT, FNPT, SW,	-55°C	See Dwg HPAHM-10-DWG-CRN-03 DESIGN DATA TABLE MATERIAL SPECIFIC 316 HP @ 40°C	See Dwg HPAHM-10-DWG-CRN-03 DESIGN DATA TABLE MATERIAL SPECIFIC 316 HP @ 200°C	N/A	ASME VIII Div 1.	
	Ball Valve	A479 UNS 31600/S31603, S31254, N04400,	FNPT, MNPT Compression fittings	-54°C	6000 Psig PTFE / PEEK Seat option	PTFE Seat: 150°C 900 Psig PEEK Seat: 200°C 6000 Psig	Up to 2500#	MMS SP99 ANSI/ASME B16.34	

2021-04746

Tracking #:_____

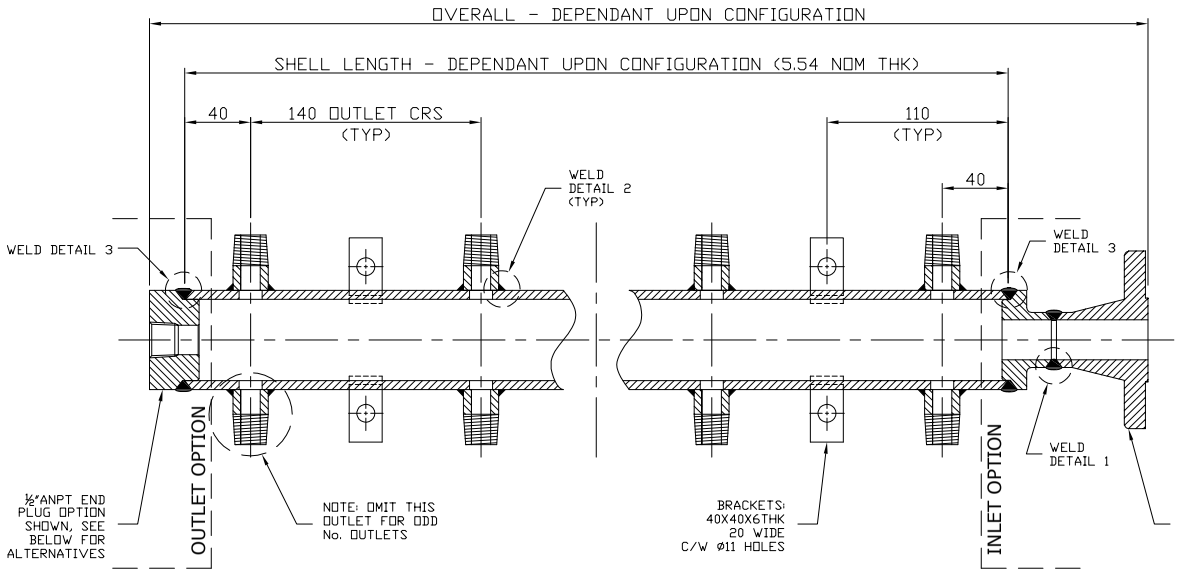
Table 2 Additional Scope Information

List/Attach Additional Detail and References (Product Configurations, Options, Illustrations, etc.)
Example: Series X Options
Flanged Inlet Style [LP Class 150#] - See Following Drawings: HPAHMS1016F01MSW8F8FBVO - MSW Male Socket Weld Distribuiton Outlets HPAHMS616F1508N8NBVO - Thread Nipple Body connection Distribuiton Outlets Threaded Inlet Style - See Following Drawings: HPAHMS616N8N8NBVO - Threaded Nipple Body connection Distribution Outlets

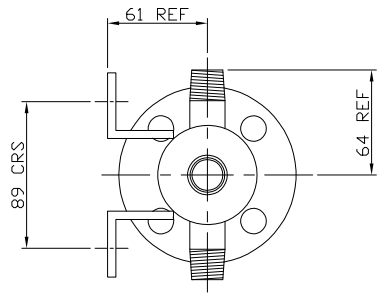
** For additional alternatives of Table 1, refer to Form AB-41a, Guide for Completing Form AB-41

2021-04746

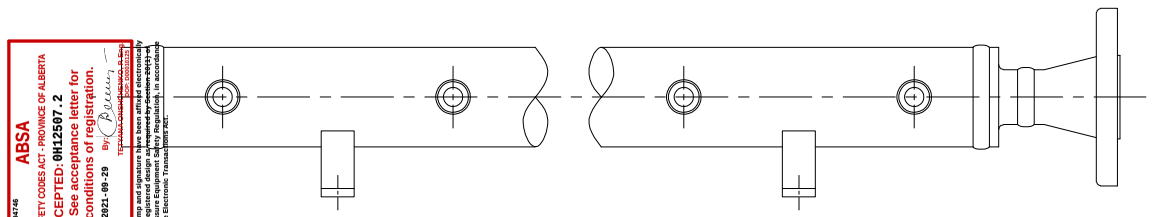
Tracking #:_____



DIAGRAMATIC SECTIONAL PLAN VIEW



END VIEW

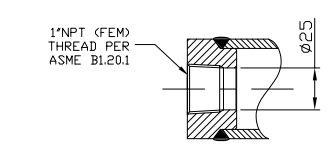


DIAGRAMATIC SIDE ELEVATION VIEW

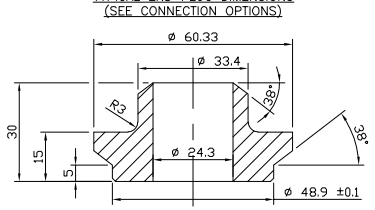
1/2"ANPT END PLUG OUTLET OPTION (15N)

TYPICAL END PLUG DIMENSIONS (SEE CONNECTION OPTIONS)

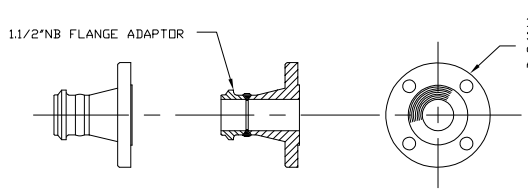
1"NB 150# S80 RFWN FLANGE C/W FLANGE ADAPTOR INLET OPTION (F25)



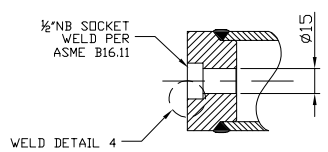
1"ANPT END PLUG INLET/OUTLET OPTION (25N)



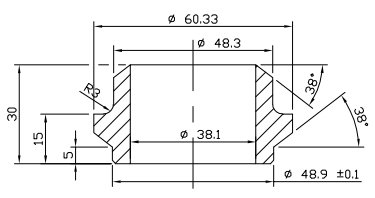
1"NB FLANGE ADAPTOR DETAIL PARKER PART No. AHEP32SCH8016SCH80



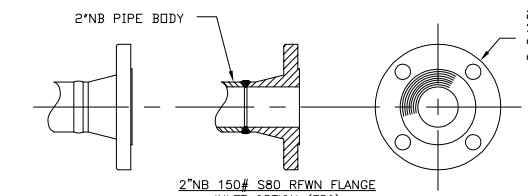
1.1/2"NB 150# S80 RFWN FLANGE C/W FLANGE ADAPTOR INLET OPTION (F40)



1/2"NB SOCKET-WELD END PLUG OUTLET OPTION (SKT)



1.1/2"NB FLANGE ADAPTOR DETAIL PARKER PART No. AHEP32SCH8020SCH80



2"NB 150# S80 RFWN FLANGE INLET OPTION (F50)

AIR HEADER DESIGNATOR:	OUTLET NUMBER:	MATERIAL:	INLET:	OUTLET:	SIDE CONNS:	DESIGNATOR OF CRN REQUIREMENT
AH	E.G. 6-WAY = 6W 4W, 5W, 6W, 8W, 10W, 12W, 14W, 16W, 18W, 20W ETC. *S = SINGLE SIDED	316 = SS.316 316L =SS.316L 254 = S31254 MON = MONEL	F25 = 1"NB 150# S80 RFWN F40 = 1.5"NB 150# S80 RFWN F50 = 2"NB 150# S80 RFWN 25N = 1"ANPT *RTJ = SUFFIX FOR RTJ OPT.	15N = 1/2"ANPT 25N = 1"ANPT SKT = SKT WLD	ANPT = 1/2"(M)ANPT NIPPLES HP = HI-PRO BALL VALVES (DIRECT WELDED TYPE)	

AH - 8W - 316 - F40 - 15N - ANPT - CRN

PART NUMBER NOMENCLATURE AND ORDERING INFORMATION (EXAMPLE SHOWN)

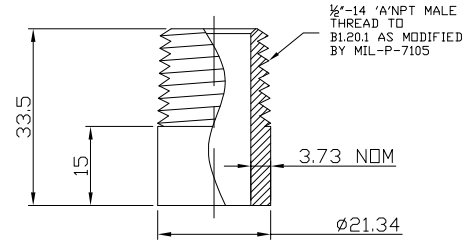
DRAWING NO: HPAHM-DWG-CRN REV-4

PARKER HANNIFIN PLC
INSTRUMENTATION PRODUCTS DIVISION EUROPE
BARNSTAPLE, DEVON, ENGLAND, EX31 1NP
TEL: 01271 313131 FAX: 01271 373636

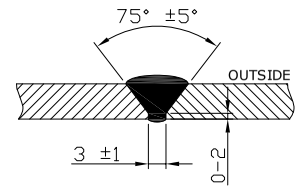
SERIAL NO	CPE*****	TAG NO	
DESCRIPTION	*-WAY AIR HEADER	*.*	LITRES
DESIGN PRESSURE	** Bar G	MAX WP	** Bar G
TEMPERATURE	-55°C MIN	TO	+**°C MAX
TEST PRESSURE	** BarG	DATE	--/--/----

MATERIAL: STAINLESS STEEL 316
OUTLET SIZE: 1/2" 'A'NPT(M)
MANUFACTURED BY:
CPE PRESSURE VESSELS LTD, UK, B79 7TA
CRN ********

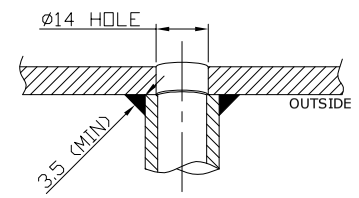
NAMEPLATE DETAIL: SHOWING EXAMPLE DATA
95mm x 65mm METALLISED PLASTIC STICKER



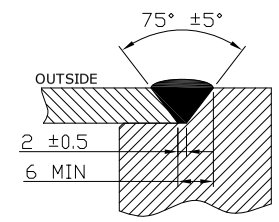
DETAIL: 1/2" ANPT OUTLET NIPPLE
FROM 1/2"NB SCH80 SMLS PIPE



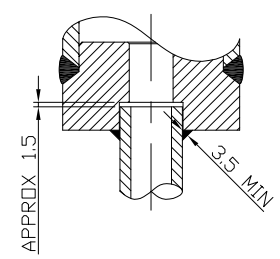
WELD DETAIL 1: BUTT WELD SEAMS
FOR WPS SEE ROUTE CARD(S)



WELD DETAIL 2: OUTLET NIPPLES/VALVES
(UW-16.2(L)) FOR WPS SEE ROUTE CARD(S)



WELD DETAIL 3: END PLUG/ADAPTOR TO SHELL
(UW-13.2(d)) FOR WPS SEE ROUTE CARD(S)



WELD DETAIL 4: SOCKET WELD CONNECTIONS
FOR WPS SEE ROUTE CARD(S)

DESIGN DATA - GENERAL

DESIGN CODE	ASME VIII DIVISION 1
EDITION	2010
ADDENDA	2011a
CODE STAMP	NOT CODE STAMPED
DIRECTIVE	N/A
OTHER SPECIFICATIONS	CRN REQUIRED
PRESSURE CYCLES	NONE SPECIFIED
NOZZLE LOADINGS	NONE SPECIFIED
OTHER LOADINGS	NONE SPECIFIED
RADIOGRAPHY (CIRC SEAMS)	NONE JOINT EFF. 0.60
RADIOGRAPHY (LONG SEAMS)	NONE JOINT EFF. 0.85 (SMLS PIPE)
PT/MT (DPI/MPI)	5% PER BATCH (CUSTOMER REQUEST)
ULTRASONIC (UT)	NONE
OTHER NDE	100% VISUAL ONLY
INSPECTION	CPE ONLY
IMPACT TESTING	EXEMPT - SEE CALCULATIONS
TO CONTAIN	NON-HAZARDOUS GASES
EXTERNAL FINISH	BEAD BLAST TO UNIFORM FINISH
INTERNAL FINISH	AS MANUFACTURED - CLEAN & DRY
MDMT	-55°C
CORROSION ALLOWANCE	0mm
PWHT	NONE

DESIGN DATA - MATERIAL SPECIFIC

DESIGN TEMP.:		40°C	65°C	80°C	100°C	125°C	150°C	200°C	250°C	300°C	325°C	350°C
MAWP (BAR G)	316 LP (150#)	19.0	17.8	17.0	16.2	15.5	14.8	13.7	12.1	10.2	9.3	8.4
	316 HP	192.0	178.0	172.0	164.0	155.0	148.0	138.0	129.0	122.0	119.0	117.0
	316L LP (150#)	15.9	14.8	14.1	13.3	12.7	12.0	11.2	10.5	10.0	9.3	8.4
	316L HP	160.0	147.0	139.0	129.0	127.0	121.0	113.0	105.0	100.0	99.0	97.0
	S31254 LP (150#)	20.0	19.0	18.4	17.7	16.8	15.8	13.8	12.1	10.2	9.3	8.4
	S31254 HP	257.0	243.0	235.0	225.0	214.0	204.0	190.0	179.0	174.0	171.0	168.0
	N04400 LP (150#)	15.9	15.0	14.4	13.8	13.4	12.9	12.5	12.1	10.2	9.3	8.4
	N04400 HP	162.0	151.0	146.0	140.0	135.0	133.0	131.0	129.0	126.0	126.0	126.0

TEST PRESSURE (BarG)	LP	HP
316	25	250
316L	22	209
S31254	27	335
N04400	21	213

MATERIAL DATA

ITEM \ MATERIAL TYPE	SS316	SS316L	S31254	N04400
SHELL	SA-312 TP316	SA-312 F316L	SA-312 S31254	SB-165 N04400
END PLUGS	SA-182 F316	SA-182 F316L	SA-182 F44	SB-164 N04400
FLANGE ADAPTORS	SA-182 F316	SA-182 F316L	SA-182 F44	SB-164 N04400
FLANGES	SA-182 F316	SA-182 F316L	SA-182 F44	SB-164 N04400
THREADED NIPPLES	SA-312 TP316	SA-312 TP316L	SA-312 S31254	SB-165 N04400
HI-PRO BALL VALVES	SS316	SS316L	S31254	N04400
MOUNTING BRACKETS	SS316	SS316L	S31254	N04400

NOZZLE SCHEDULE

NOZZLE	DUTY	NOM BORE	RATING	TYPE	SCHEDULE
-	-	-	-	-	-

NOZZLE SCHEDULE DEPENDANT UPON AIR-HEADER CONFIGURATION - SEE DETAILS AND PURCHASE ORDER(S)

CUSTOMER:	PARKER HANNIFIN PLC
SERIAL NUMBER(S):	SEE ROUTE CARD(S)
PED RISK CATEGORY:	N/A
EC UNIT VERIFICATION MODULE:	N/A
MANUFACTURER	CPE PRESSURE VESSELS LTD

TOLERANCES (U.O.S.)	
DIMENSIONS 0-500mm	± 3mm
DIMENSIONS 501-1000mm	± 5mm
DIMENSIONS 1001-5000mm	± 10mm
DIMENSIONS 5000-10000mm	± 20mm
DIMENSIONS >10000mm	± 25mm
ANGULAR DIMENSIONS	± 2°
OUT OF ROUND (CYLINDERS)	1% NOM DIA
MACHINED DIMS	AS SPECIFIED

DRAWN BY : P.O. CHECKED BY : -

REV	DATE	DESCRIPTION	ISS
4	24/09/21	TEST PRESSURES ADDED	P.O.
3	25/08/21	PRESSURE/TEMP RATINGS ADDED	P.O.
2	23/04/14	MDMT CHANGE	M.B.
1	08/06/12	HI-PRO BALL VALVE ADDED, RTJ FLANGE OPTION, PARKER BRANDING	P.O.
0	15/05/12	ORIGINAL ISSUE	P.O.

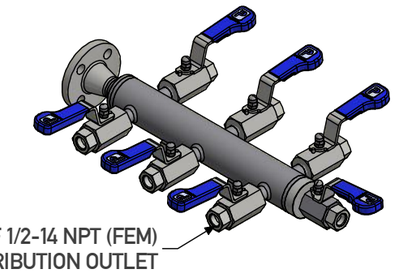
AIR HEADER MANIFOLD ASSEMBLY

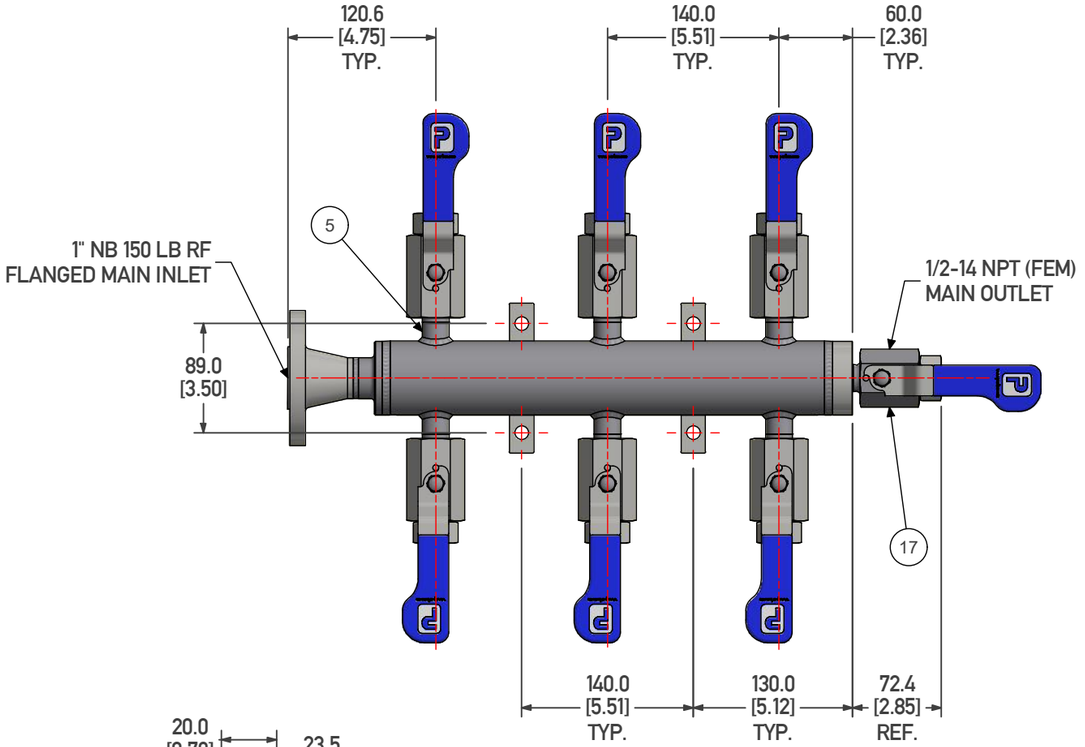
DO NOT SCALE
ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED
IF IN DOUBT - ASK!

FIRST ANGLE PROJECTION

PARKER HANNIFIN PLC
INSTRUMENTATION PRODUCTION DIVISION
RIVERSIDE ROAD, POTTINGTON BUSINESS PARK, BARNSTAPLE, DEVON, EX31 1NP, UK; TEL: +44(0)1271 313131

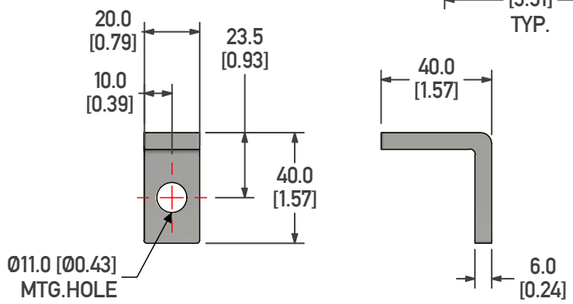
DATE	SCALE	DRAWING No
24/09/21	--:--	HPAHM-DWG-CRN

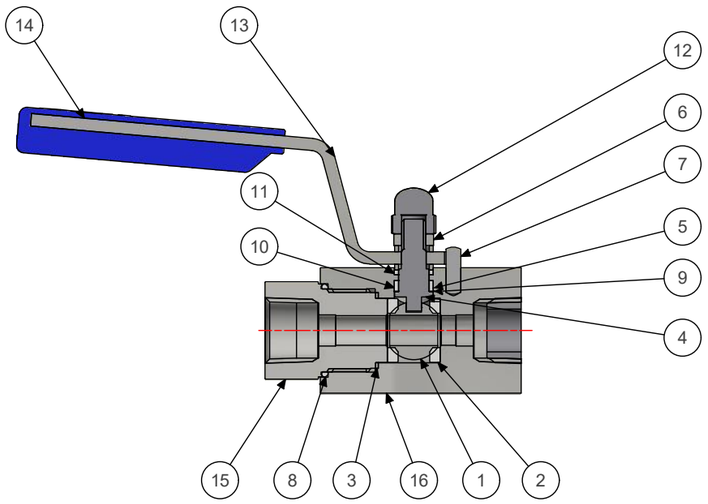


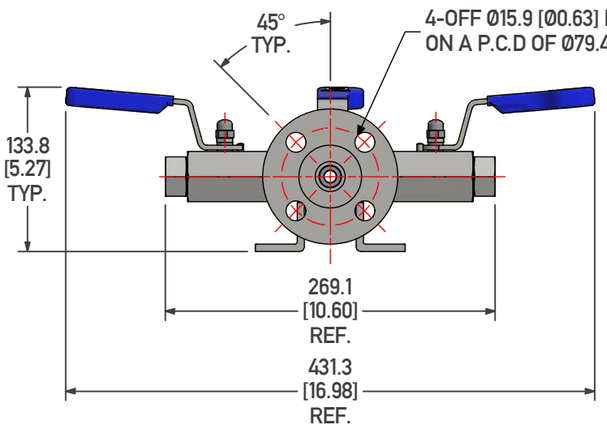


PART LIST			
ITEM NO.	QTY.	DESCRIPTION	MATERIAL
1	7	BALL	STAINLESS STEEL, 316
2	14	SEAT	PTFE
3	7	JOINT SEAL	STAINLESS STEEL,316
4	7	STEM	STAINLESS STEEL,316
5	14	THRUST BUSH	STAINLESS STEEL,316
6	7	NUT	STAINLESS STEEL,316
7	7	SPIRAL PIN	STAINLESS STEEL,316
8	7	ENVIRONMENTAL SEAL	PTFE
9	7	THRUST SEAL	GLASS REINFORCED PTFE
10	7	PACKING	PTFE
11	7	UPPER PACKING	PTFE
12	7	DOME NUT	STAINLESS STEEL,316
13	7	HANDLE	STAINLESS STEEL,316
14	7	HANDLE GRIP	PLASTIC LDPE BLUE
15	7	BALL VALVE END CONNECTOR	STAINLESS STEEL,316
16	6	BALL VALVE BODY	STAINLESS STEEL,316
17	1	BALL VALVE BODY (MALE)	STAINLESS STEEL,316

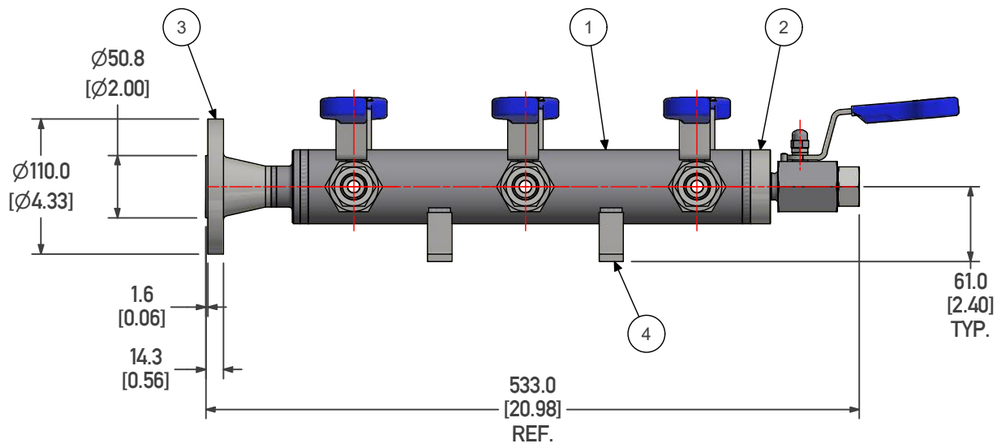
HI-PRO AIR HEADER DISTRIBUTION MANIFOLD
6 WAY DISTRIBUTION
MAIN INLET: 1" NB 150 LB RF FLANGED
MAIN OUTLET: 1/2-14 NPT (FEM)
HI-PRO BALL VALVE (10mm Bore)
DISTRIBUTION OUTLETS: 6-OFF 1/2-14 NPT (FEM)
HI-PRO BALL VALVE (10mm Bore)
BODY CONSTRUCTED FROM 2" NB SCH 80 PIPE, WELDED CONSTRUCTION
MASS: 11.8 kg Approx.







AIR HEADER FOOT



ITEM	QTY.	DESCRIPTION	MATERIAL
1	1	6-WAY PIPE AIR HEADER	316 ST.STL.
2	1	AIR HEADER END PLATE	316 ST.STL.
3	1	WELD NECK FLANGE	316L ST.STL.
4	2	AIR HEADER FOOT	316 ST.STL.
5	6	MALE WELD STUB	316L ST.STL.

ALL DIMENSIONS IN mm WITH IMPERIAL EQUIVALENTS IN PARENTHESIS

DRAWING TITLE :
HI-PRO AIR HEADER DISTRIBUTION MANIFOLD
6 WAY DISTRIBUTION
1" NB 150 LB RF FLANGED MAIN INLET
1/2-14 NPT (FEM) MAIN OUTLET
6-OFF 1/2-14 NPT (FEM) DISTRIBUTION OUTLET
275 PSI RANGE
CUSTOMER ASSEMBLY DRAWING

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

REV No. :	Version No. :
–	2
ECO NO. :	ECO DATE:
ECO-0273060	03/01/2019
DRAWN BY:	DRAWN DATE:
TECHM	23/11/2020

UNLESS STATED 3rd ANGLE PROJECTION

DESCRIPTION OF REV / VERSION CHANGE
1. Updated with latest template and air header foot
2. Updated with BOM

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

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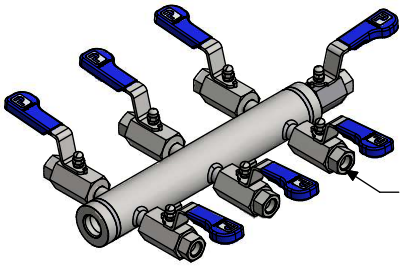
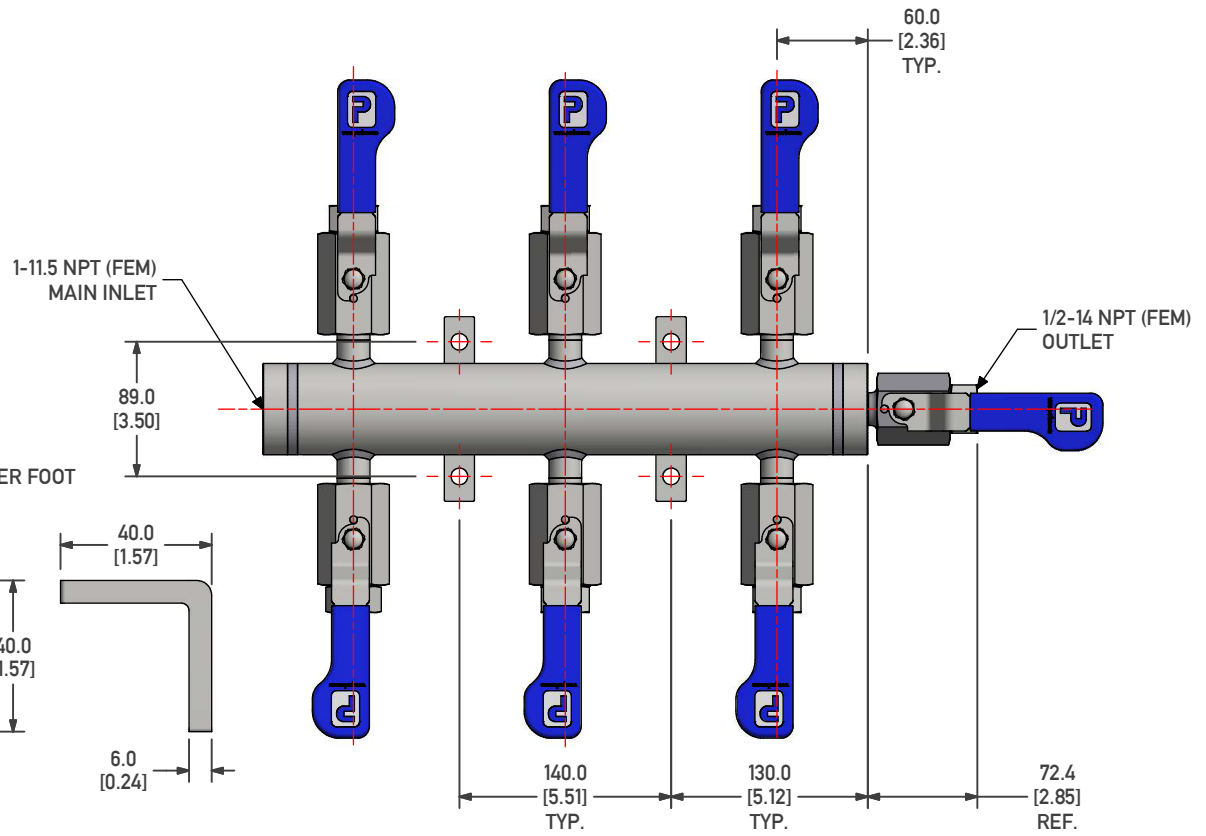
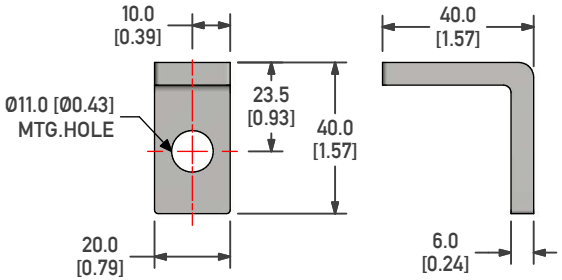
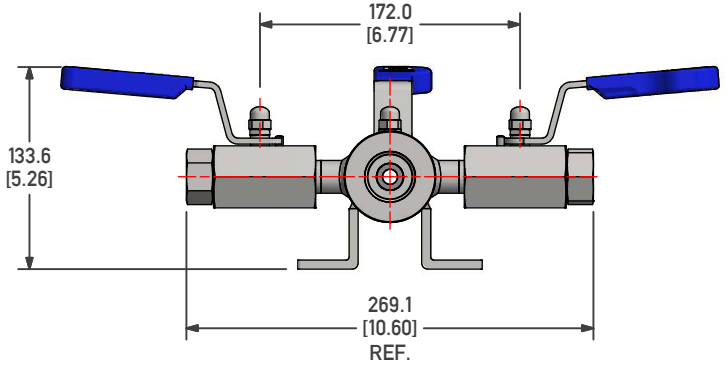


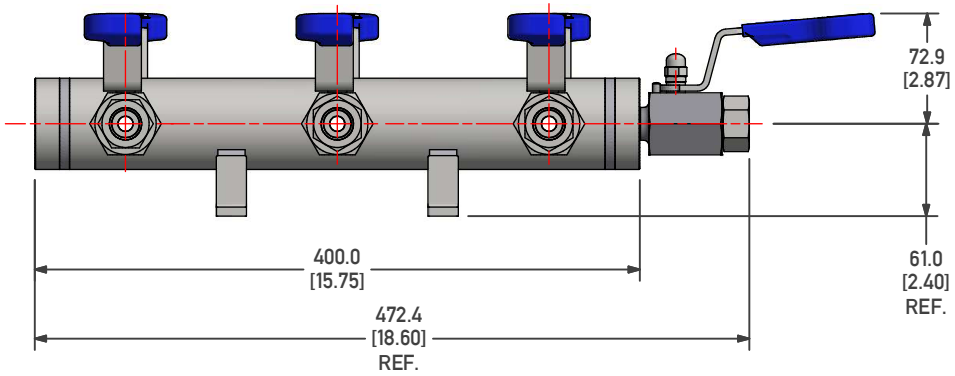
6-OFF 1/2-14 NPT (FEM)
DISTRIBUTION OUTLETS

HI-PRO AIR HEADER DISTRIBUTION MANIFOLD
6 WAY
MAIN INLET : 1-11.5 NPT (FEM)
MAIN OUTLET : 1/2-14 NPT (FEM) (10mm BORE HI PRO BALL VALVE)
DISTRIBUTION OUTLET : 6-OFF 1/2-14 NPT (FEM) (10mm BORE HI PRO BALL VALVE)
MATERIAL : 316/316L ST. STL.
PACKING MATERIAL : PTFE
SEAT MATERIAL : PTFE
SUPPLIED WITH MOUNTING FEET
BODY CONSTRUCTED FROM 2" NB Sch 80 Pipe
MASS : 10.8 kg Approx.
FOR OTHER MATERIALS OF CONSTRUCTION :
SEE 'HI-PRO MATERIAL SPEC'









ALL DIMENSIONS IN mm WITH IMPERIAL EQUIVALENTS IN PARENTHESIS

DRAWING TITLE :

HI-PRO AIR HEADER DISTRIBUTION MANIFOLD
6 WAY DISTRIBUTION
1-11.5 NPT (FEM) MAIN INLET
1/2-14 NPT (FEM) MAIN OUTLET
6-OFF 1/2-14 NPT (FEM) DISTRIBUTION OUTLET

CUSTOMER ASSEMBLY DRAWING

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

REV No.	Version No.
-	-
ECO NO. : ECO-0326035	ECO DATE: 03/04/2020
DRAWN BY: TECHM	DRAWN DATE: 03/04/2020

DESCRIPTION OF REV / VERSION CHANGE

UNLESS STATED 3rd ANGLE PROJECTION

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

Parker

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HPAHMS616N8N8NBV0