



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

[www.tssa.org](http://www.tssa.org)

March 23, 2022

ALBERTA BOILERS SAFETY ASSOCIATION  
9410 20 AVE NW  
EDMONTON AB T6N 0A4

**Workorder Type:** Registration - Fitting(Conventional)

**Workorder No:** 8054863

**Your Reference No.:** PORTAL#2021-S1410 - 2021-04746 -CRN#0H12507.2 - AIR HEADER MANIFOLD

**Registered to:** PARKER HANNIFIN INSTRUMENTATION PRODUCTS

Dear NATHALIE DUGO,

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

CRN : 0H12507.25

Main Design No.: HPAHM-DWG-CRN REV 04

Expiry Date: Sep 29, 2031

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

Note: 1. Design registration completed under interprovincial agreement with jurisdictional check only  
2. Removable fittings (Ball Valve) listed on the scope document are not part of this registration and shall be registered with separate CRNs  
3. Design Code of Construction is ASME SEC VIII DIV 1. Therefore, materials shall conform to ASME SEC II PART 'D' requirements

The stamped copy of the approved registration and the invoice are mailed separately (There will be no hard copies for electronic submissions). 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](mailto: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.

Yours truly,

Shreyas Madhuranath M.Eng, P.Eng



Engineer, BPV  
Tel. : +1 416-734-3212  
Email : smadhuranath@tssa.org

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

I, Marcus Ashford, Engineering Manager  
(name of applicant) (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 corrosion resistant materials	06-March-2022	Bureau Veritas	Same as above
2.						

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



03/09/2021

(Signature of the Declarer)

(Date)

DECLARED before me at \_\_\_\_\_ in the \_\_\_\_\_ of \_\_\_\_\_  
(city) (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 H.

CRN: \_\_\_\_\_

Registered Date: \_\_\_\_\_

Expiry Date: **Sep 29, 2031**

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

Technical  
Standards  
and Safety  
Authority

Boilers and  
Pressure Vessels  
Safety Program

**REGISTERED**

C.R.N.: 0H12507.25

Signed: 

Date: **March 16, 2022.**

**\*Please see additional notes on design registration letter**

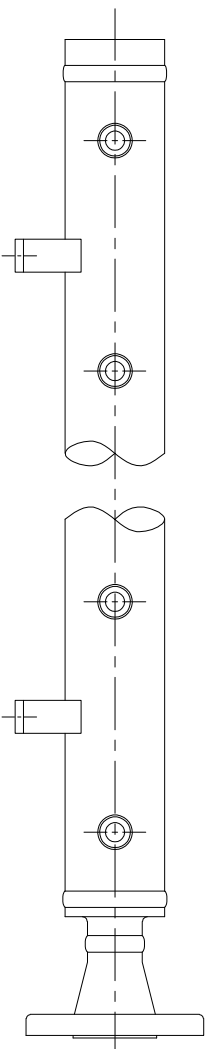
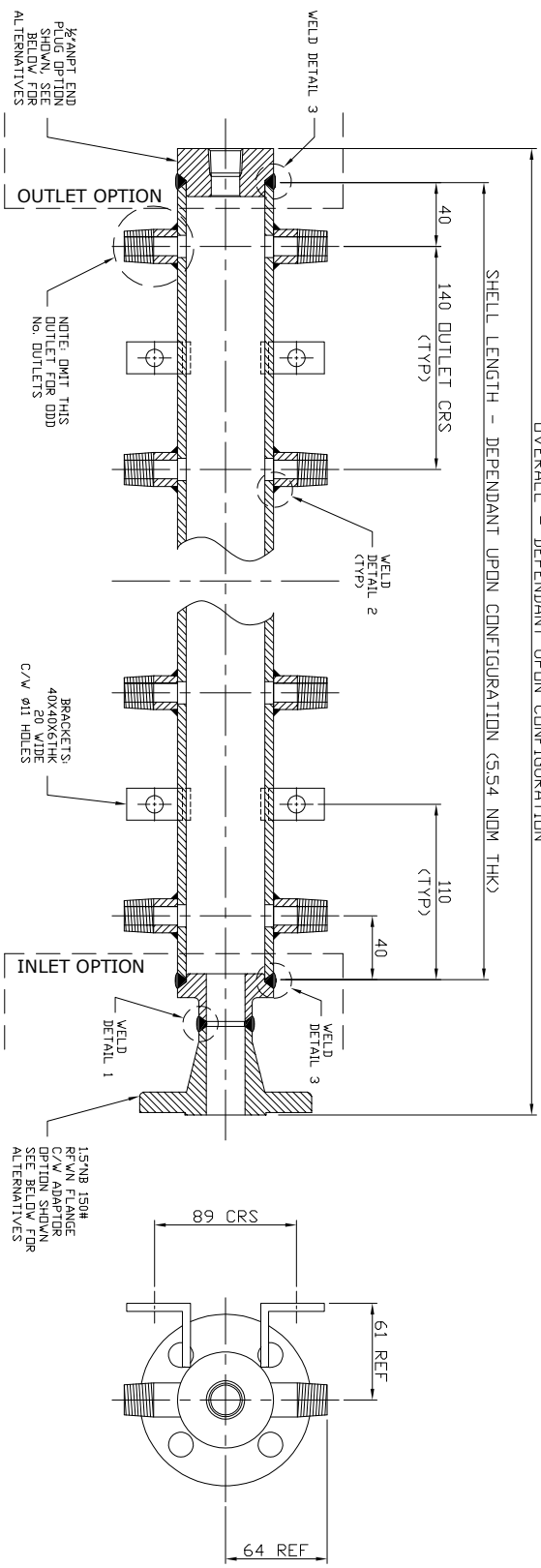
**Table 1\*\* Scope of Fitting Designs**

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.	
	<del>Ball Valve</del>	<del>A479 UNS 31600/S31603, S31254, N04400,</del>	<del>FNPT, MNPT Compression fittings</del>	<del>-54°C</del>	<del>6000 Psig PTFE / PEEK Seat option</del>	<del>PTFE Seat: 150°C 900 Psig PEEK Seat: 200°C 6000 Psig</del>	<del>Up to 2500#</del>	<del>MMS SP99 ANSI/ASME B16.34</del>	

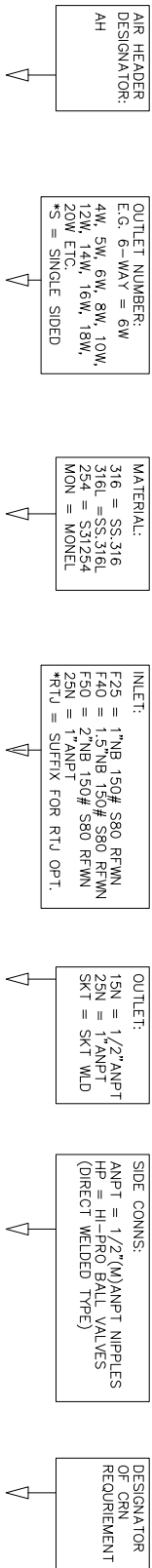
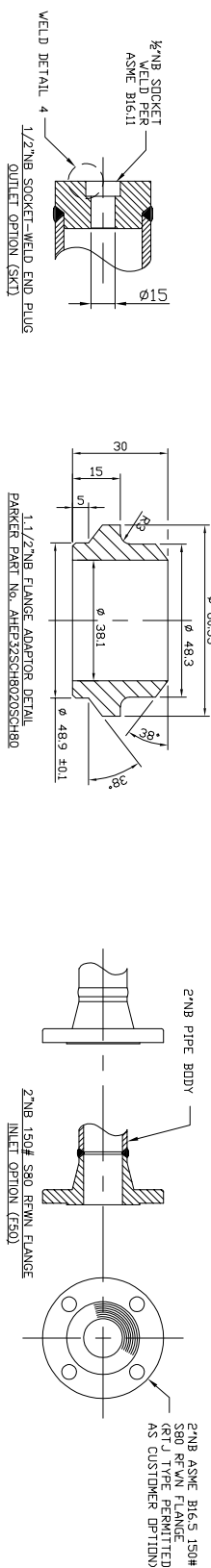
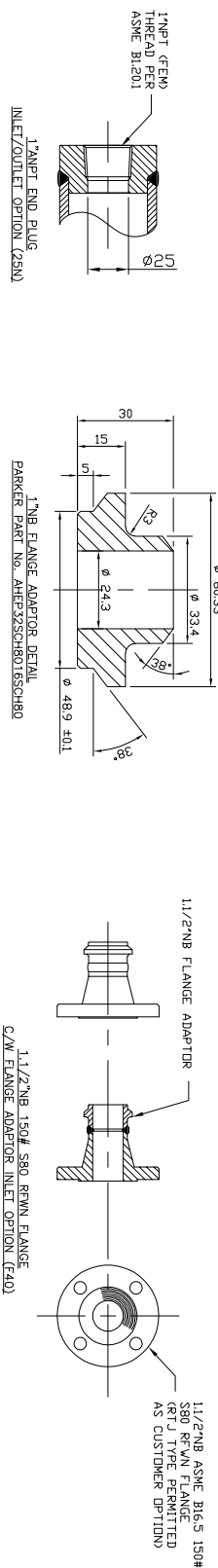
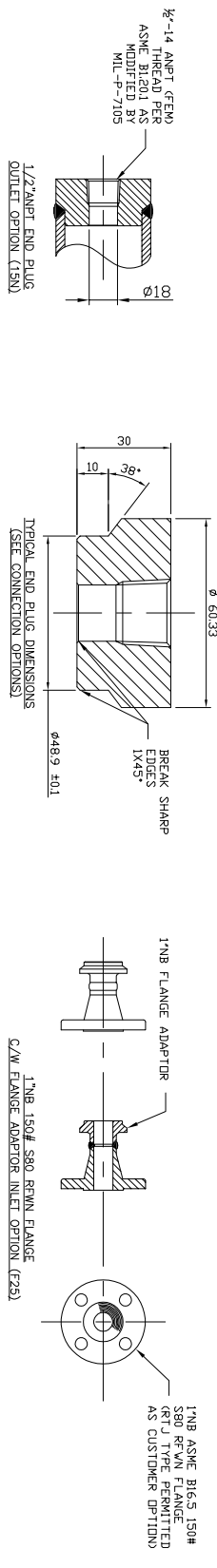
**Table 2 Additional Scope Information**

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

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



DIAGRAMATIC SIDE ELEVATION VIEW



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

PART NUMBER NOMENCLATURE AND ORDERING INFORMATION (EXAMPLE SHOWN)


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

FIRST ANGLE  
PROJECTION

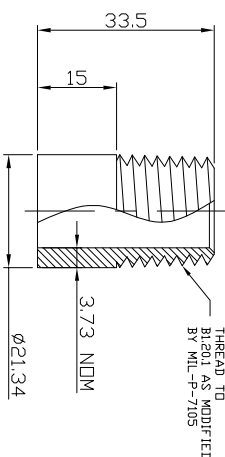
**2arker**

PARKER HANNIHIN PLC  
INSTRUMENTATION PRODUCTION DIVISION  
RIVERSIDE ROAD, POTTINGTON BUSINESS PARK,  
DEVON, EX3 1NP, UK; TEL: +44(0)1271 313131

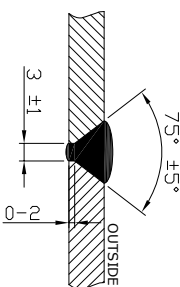
① this drawing is the property of CCE Pressure Vessels LTD in whom the copyright is vested and must be returned upon request. The drawing and the information contained therein may not, without prior written authority, be communicated or lent to any third party or copied and shall be used only for the purpose for which it is submitted

		<b>PARKER HANNIN PLASTICS DIVISION</b> 1000 PARKER DRIVE WINSTON-SALEM, N.C. 27157 TEL. 01-721 73131 FAX. 01-721 73666	
		SERIAL NO _____ CRE# _____ TAG NO _____	
DESCRIPTION	*** WAY IN HEADER	*** JURETS	
DESIGN PRESSURE	** Bg B	MAX Wg	** Bg B
TEMPERATURE	-55°C MIN		
TEST PRESSURE	** BgC	DATE	
MATERIAL: STAINLESS STEEL 316 OUTLET SIZE: 1/2" ANPT(M) MANUFACTURED BY: _____			
CR# _____			
CR# _____			

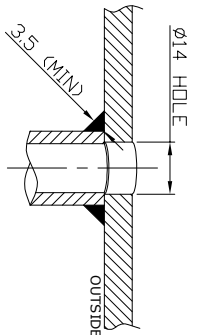
NAMEPLATE DETAIL: SHOWING EXAMPLE DATA  
95mm x 65mm METALLISED PLASTIC STICKER



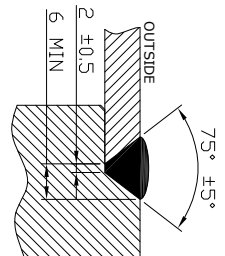
DETAIL: 1/2" ANPT OUTLET NIPPLE  
FROM 1/2"NB SCH80 SMLS PIPE



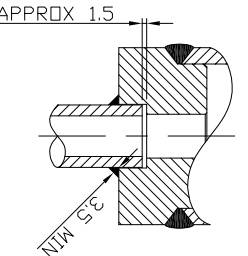
WELD DETAIL 1: BUTT WELD SEAMS  
FOR WPS SEE ROUTE CARD(S)



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	2010a
CODE STAMP	NOT CODE STAMPED
DIRECTIVE	N/A
OTHER SPECIFICATIONS	CNR REQUIRED
PRESSURE CYCLES	NONE SPECIFIED
NOZZLE LOADINGS	NONE SPECIFIED
OTHER LOADINGS	NONE SPECIFIED
RADIOGRAPHY (JIRC SEAMS)	NONE JOINT EFF. 0.60
RADIOGRAPHY (LONG SEAMS)	NONE JOINT EFF. 0.85 (SMLS PIPE)
PT/MT (DPI/MP)	5% PER BATCH (CUSTOMER REQUEST)
ULTRASONIC (UT)	NONE
OTHER NOTE	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
WHT	NONE

## DESIGN DATA – MATERIAL SPECIFIC

DESIGN TEMP.: 316 LP (150#)	40C	65C	80C	100C	125C	150C	200C	250C	300C	325C	350C
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 LP (150#)	19.20	17.80	17.20	16.40	15.50	14.80	13.60	12.00	12.20	11.70	11.00
316 LP (150#)	15.9	14.8	14.1	13.3	12.7	12.0	11.2	10.5	10.0	9.3	8.4
316 LP (150#)	16.00	14.70	13.90	12.90	12.70	12.10	11.30	10.50	10.00	9.30	8.40
316 LP (150#)	20.0	19.0	18.4	17.5	16.8	15.8	13.8	12.1	10.2	9.3	8.4
S31224 LP (150#)	25.70	24.30	23.50	22.50	21.40	20.4	18.0	15.0	12.0	11.0	10.0
S31224 LP (150#)	25.70	24.30	23.50	22.50	21.40	20.40	18.00	15.00	12.00	11.00	10.00
316 LP (150#)	16.20	15.10	14.60	13.8	13.50	13.30	13.1	12.9	12.60	12.60	12.60
316 LP (150#)	15.9	15.0	14.4	13.8	13.4	13.2	13.1	13.0	12.9	12.8	12.6
316 LP (150#)	16.20	15.10	14.60	13.8	13.50	13.30	13.1	12.9	12.60	12.60	12.60

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

## NOZZLE SCHEDULE

I	NOZZLE
I	DUTY
I	NOM BORE
I	RATING
I	TYPE
I	SCHEDULE

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

CUSTOMER:	PARKER HANFIN PLC	TELEPHONE (UK):	0 1474 750000
SERIAL NUMBER(S):	SEE ROUTE CARD(S)	1 Spm	1 Spm
PER RISK CATEGORY:	N/A	2 Spm	2 Spm
EC UNIT VERIFICATION MODULE:	N/A	DIMENSIONS 500-1500mm	DIMENSIONS 50-100mm
MANUFACTURER	CPE PRESSURE VESSELS LTD	DIMENSIONS 100-100mm	DIMENSIONS 10-100mm
		1 Spm	1 Spm
		2 Spm	2 Spm
		3 Spm	3 Spm
		4 Spm	4 Spm
		5 Spm	5 Spm
		6 Spm	6 Spm
		7 Spm	7 Spm
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DRAWN BY : P.O. CHECKED BY : —

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.
REV	DATE	DESCRIPTION	ISS

# AIR HEADER MANIFOLD ASSEMBLY

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