

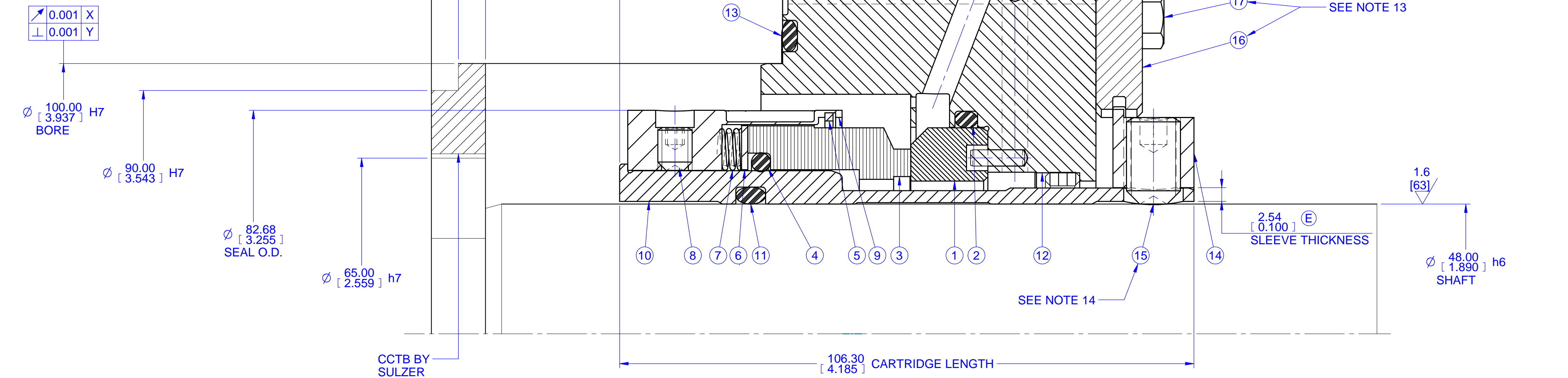
DRAWING STATUS

☐ INFORMATION ONLY

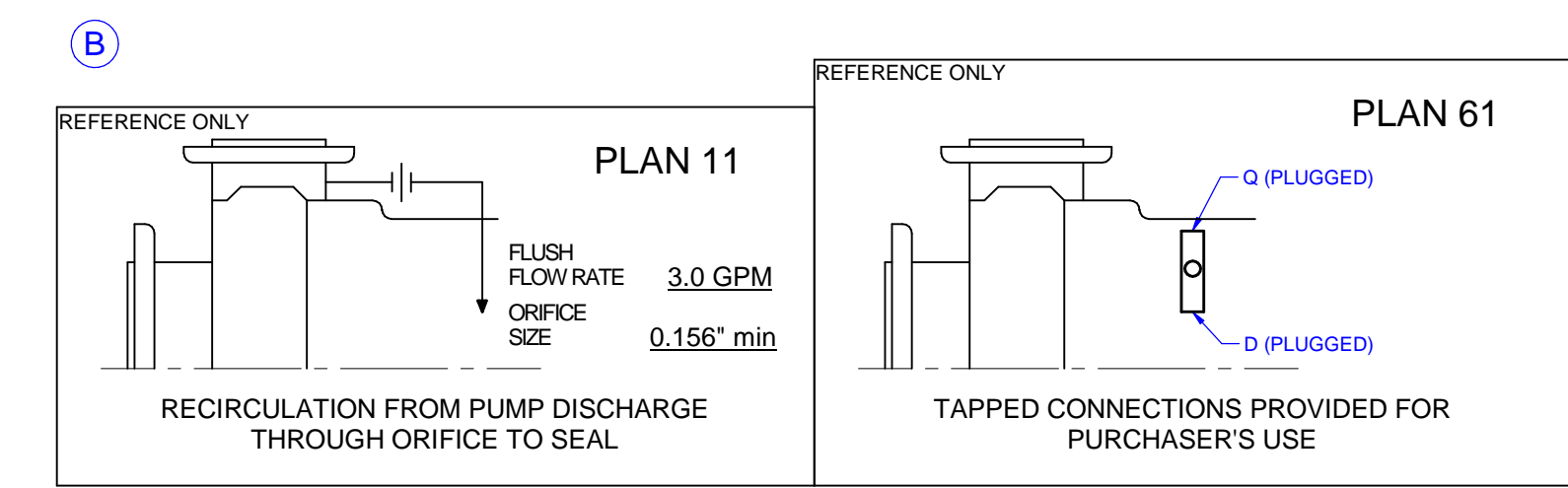
☐ FOR TECHNICAL CLARIFICATION
THERE ARE PENDING TECHNICAL CLARIFICATIONS BY THE SALES AREA

☐ FOR CUSTOMER APPROVAL
TO MEET DELIVERY PROMISE ONE APPROVED COPY MUST BE RETURNED WITHIN TWO WEEKS AFTER DATE OF PRINT.

☒ FINAL
MANUFACTURING PROCESS HAS BEEN STARTED ANY REQUESTED CHANGE WILL AFFECT PRICE AND/OR DELIVERY PROMISE
DATE OF PRINT: DECEMBER / 16 / 2022



MAX. ALLOWABLE DYNAMIC PRESSURE: 515 PSIG
MAX. ALLOWABLE STATIC PRESSURE: 800 PSIG
MDMT: 32°F
MAX. ALLOWABLE TEMPERATURE: 400 °F



- ADDITIONAL NOTES:
13. SPACER (ITEM # 16) IS ONLY FOR THE PURPOSE OF PROPERLY LOCATING SEAL. AFTER GLAND PLATE, BEARING, SHAFT, & SEAL ARE LOCKED IN PLACE, TIGHTEN ALL SET SCREWS IN DRIVE COLLAR. PRIOR TO UNIT STARTUP, ROTATE SPACERS CLEAR OF ROTATING PARTS AND LOCK IN PLACE WITH CAP SCREWS (ITEM # 17) PROVIDED.

14. TO AVOID MOVEMENT OF THE SLEEVE IN RELATION TO THE SHAFT, SPOTFACE THE SHAFT UNDER TWO SET SCREWS (ITEM #15). (MIN. 2X 180° C.C.) "WHEN APPLICABLE"

15. GLAND PLATE MUST BE IN CONTACT WITH HOUSING. DO NOT OVERSTRESS.

THE FOLLOWING NOTES ARE IMPORTANT AND MUST BE OBSERVED FOR CORRECT SEAL INSTALLATION AND OPERATION

1. REMOVE ALL SHARP EDGES ON SHAFT & / OR SLEEVE BEFORE INSTALLATION OF SEAL.

2. ALL SURFACES OF SHAFTS, SLEEVES OR PUMP CASES IN CONTACT WITH O-RINGS OR PACKINGS MUST BE MACHINED TO 63 RA FINISH OR BETTER.

3. LUBRICATE SHAFT/SLEEVE & SEAL WEDGE RING/O-RING/BELLOW TO ASSIST INSTALLATION OF SEAL WITH LUBE OIL.

4. FOR NON-CARTRIDGE SEALS, LUBRICATE MATING RING(SEAT), SEALING MEMBER, AND HOUSING TO ASSIST INSTALLATION.

5. PROCESS FLUID MUST BE CIRCULATED AROUND PRIMARY RING (SEAL)/THROUGH MATING RING (SEAT) (AT NOT LESS THAN 3 GPM) IN ORDER TO REMOVE HEAT GENERATED, OR SEAL FAILURE MAY OCCUR. D

6. WHEN SHAFT IS SLEEVED THROUGH STUFFING BOX, SLEEVE MUST BE LIQUID TIGHT THROUGH BORE.

7. SHAFT OR SLEEVE MUST BE CORROSION RESISTANT MATERIAL WITH A HARDNESS OF 125 BRINELL MINIMUM & BE MACHINED TO DIMENSIONS & TOLERANCES STATED.

8. END OF SEAL CHAMBER & AXIS OF SHAFT MUST BE AT 90° TO EACH OTHER WITHIN 0.002" F.I.M.

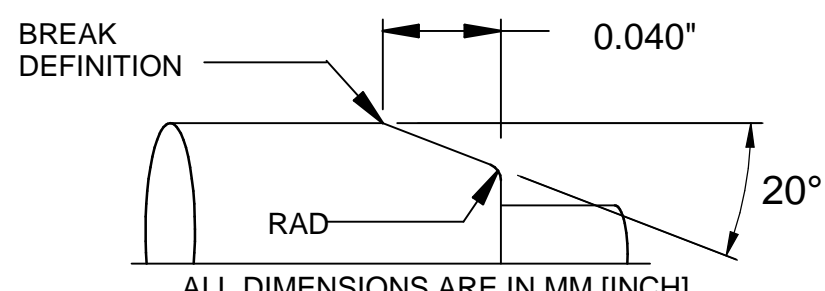
9. PRESSURE IN SEAL CHAMBER MUST BE 30% GREATER THAN VAPOUR PRESSURE AS MINIMUM.

10. FOR NON-CARTRIDGE SEALS, PRIOR TO COMPLETING SEAL INSTALLATION, WIPE LAPPED SURFACES OF MATING RING (SEAT) & PRIMARY RING (SEAL FACE) PERFECTLY CLEAN.

11. VENT GAS ENTRAPMENT BEFORE STARTUP.

12. ALL SHOULDERS OVER WHICH SEAL MUST PASS WHEN FITTING, TO BE PREPARED AS DIAGRAM BELOW.

BREAK DEFINITION



ITEM	DRAWING No.	MAT' L	DESCRIPTION	MATERIAL	QT Y	SPARES
1	TAB-2033-0539	1903	MATING RING, SQ	SILICON CARBIDE	1	X
2	0000234	9549	O RING	FLUOROELASTOMER	1	X
3	C48-2375-001	8270	PRIMARY RING	CARBON	1	X
4	0000229	9549	O RING	FLUOROELASTOMER	1	X
5	A9-2375-066	0550	SNAP RING	316 SS	1	
6	A9-2375-014	0550	DISC	316 SS	1	
7	2035	0690	SPRING	ALLOY C-276	12	X
8	11252005000	0550	SET SCREW CUP POINT	316 SS	3	X
9	A9-2375-023	0550	RETAINER	316 SS	1	
10	H-2375-6606	0654	SLEEVE	316 SS*	1	
11	0000226	9549	O RING	FLUOROELASTOMER	1	X
12	H-2125-6532	7794	GLAND PLATE	316 SS / CARBON*	1	X
13	0000243	9549	O RING	FLUOROELASTOMER	1	X
14	TAB-3370-0603	0550	DRIVE COLLAR	316 SS	1	
15	61101500016	0236	SET SCREW CUP POINT	ALLOY STEEL	6	X
16	H-0000-5249	0550	SPACER, ECCENTRIC	316 SS	4	X
17	72061000020	0550	CAP SCREW HEX. HEAD	316 SS	4	X
18	TAB-1081-0127	0550	PLUG	316 SS	2	

*MATERIAL WITH CMTR & PMI

SERVICE: CARB DIESEL BLENDING PUMP

PURCHASER: AIR PRODUCTS MANUFACTURING LLC.

P.O. NO.: SM00001022

JOB/PROJECT: WORLD ENERGY RENEWABLES PROJECT

END USER: WORLD ENERGY PARAMOUNT

INSTALLATION: PARAMOUNT, CA

PUMP TAG NO.: 18-P-1823 A/B

SULZER ORDER NO.: 1004888730010 D

SULZER SERIAL NO.: 656617 / 656618

SEAL ASS'Y NO.

IN : A48-2375-001

OUT:

ASSEMBLY

SEAL HEAD

SPARES KIT

DESCRIPTION

BILL OF MATERIALS NUMBER

ITEMS

NUMBER

EQUIPMENT REFERENCE

SEAL DATA

OEM: SULZER

EQUIPMENT TYPE: OTHER

MODEL, FRAME / SIZE: OHH, 1.5X3X8-1

SERIAL / DRAWING No. 656617 / 656618

API PLAN: 11/61

API CODE: 21A-FFN-048-11/61

INSTRUCTION MANUAL REF.

MATERIAL CODE: X P147 1 X D81 H 316/HC

CUSTOMER INFORMATION

SERVICE DATA

CUSTOMER: AIR PRODUCTS MANUFACTURING LLC.

P.O. NUMBER: SM00001022

END USER: WORLD ENERGY PARAMOUNT

LOCATION: PARAMOUNT, CA

PLANT: 18-P-1823 A/B

FLUID: CARB DIESEL

BARRIER FLUID: N/A

CHAMBER PRESSURE: 37.65 NORM / 58.85 MAX PSIG

SUCTION PRESSURE: -1.2 NORM / 20 MAX PSIG

DISCHARGE PRESSURE: 74.8 PSIG

REFERENCE DATA

OV015902 / OV4911 P10 & P20 /// 2-204500890 REV G

PROCESS TEMPERATURE: 110 NORM / 160 MAX °F D

SHAFT SPEED: 3520 RPM

SPECIFIC GRAVITY: 0.79

VAPOR PRESSURE: 0.01 PSIA

VISCOSITY: 2.7 CP

IPROJECT: 490162-MX01EN

DE / NDE DRG NO:

SEAL SIZE: Ø2.375"

SEAL TYPE: 1648 SINGLE CARTRIDGE

SCALE 2.5:1

DATE 04/11/22

DRAWN NCV

CHECKED LJM

APPROVED JRMB

DESIGN AUTH. MX01EN

john crane

DRAWING No. GA-276950-1

ISSUE E