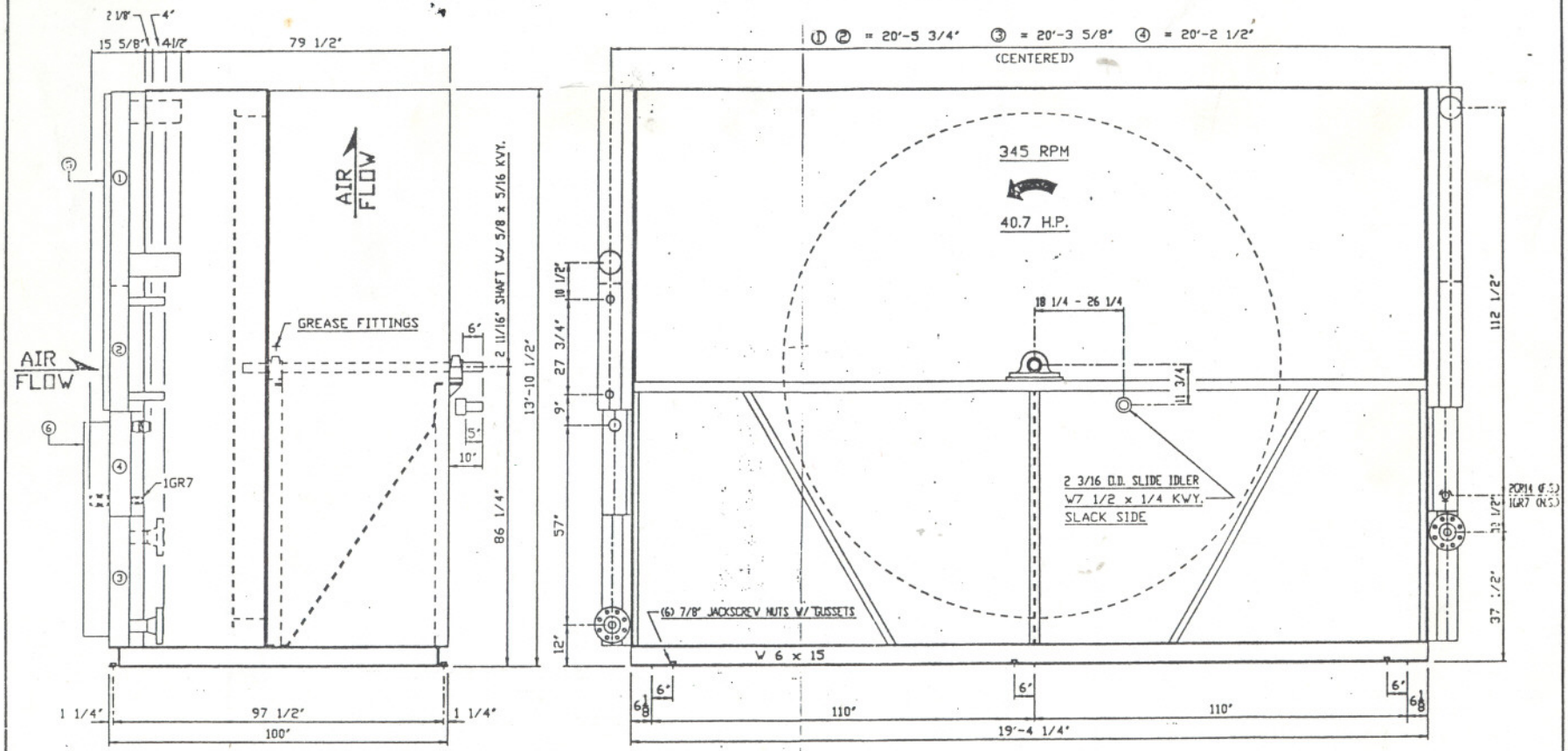


① EJV (37 GAL.)	COMBINED
D.P. 150 P.S.I. @ 300/50° F.	
NOZZLES 6" - PIPE STUB	
② AV (23 GAL.)	
D.P. 150 P.S.I. @ 300/50° F.	
NOZZLES 2" - PIPE STUB	
③ IC (ASME STAMP)	
D.P. 2500 P.S.I. @ 350/50° F.	
NOZZLES 3" - 1500 RTJ	
④ AC (ASME STAMP)	
D.P. 6000 P.S.I. @ 350/50° F.	
NOZZLES 2GR14 (COMP. ASSY.)	
NOZZLES 1GR7 (COMP. ASSY.)	

TAG: 90-807

AIR-X-CHANGERS
CERTIFIED FOR JOB 902476
BY DWS DATE 12/05/90
CUSTOMER DRESSER-RAND
P.O. NO. 3-2839-807

⑤ CORE GUARD (WATER)

⑥ MANUAL SHUTTER (GAS)

ESTM. DRY WEIGHT 20000#

RELEASED
FABRICATION OF THIS ORDER HAS BEGUN

REV	DATE	MISC.	APPR

NEXT ASSY	AIR-X-CHANGERS
	TULSA, OKLAHOMA
REF DWGS	MODEL 144 VI
BY JD	CHKD B. WT. #
DATE 11-27-90	APPD DATE
SCALE 1 = 22	DWG # REV
JOB 902476	99185-C

S.M. 88827-C

AIR-X-CHANGERS

PARTS LIST

(PARTS LIST SHEET 1 OF 1)

JOB NUMBER: 902476 P.O. NUMBER: 3-2839-807

CUSTOMER: DRESSER-RAND

ORDER COVERS: ONE MODEL 144VI AIR-X-CHANGER(S)

FINISH: HOT DIP GALVANIZED

CHANGE NO.	BY	DATE	NATURE OF CHANGE

P.O.	QUAN	DESCRIPTION OF COMPONENTS
_____	3	SECTION(S) IN ACCORDANCE WITH SPECIFICATION SHEET DATED: 12/03/90
_____	1	144VI STRUCTURE(S): WITH JACKSCREW NUTS AND GUSSETS
_____	1	SET(S) SHUTTERS: MANUAL OVER GAS
_____	_____	SET(S) TURNING VANES: _____
_____*	1	FAN(S) 144 "DIA. 6 BLADES LEFT HAND CHECO MAKE 24.7ANGLE@ TIP
		2-11/16"BORE WITH 5/8 "X 5/16 "KEYWAY. ADJ. PITCH, SERIES 12F24 **
_____*	1	FAN SHAFT(S) 2.687 "DIA.X 75 "LONG W/ 5/8 "SQ. KEYS EACH END
		KEYWAY LENGTH 6" WITH 5" LG KEYS, WITH SNAP RINGS ON FAN END
_____*	2	2-11/16"FAN BEARING(S) LINK-BELT P343
_____*	_____	_____"FAN BEARING(S) _____
_____*	2	2-3/16 "IDLER BEARING(S) LINK-BELT P335
_____*	1	IDLER SHAFT(S) 2.187 "DIA.X 19 "LONG WITH 1/2"SQ.KEY
		4-1/2 " LONG ONE END.
_____*	_____	IDLER PIVOT SHAFT(S) _____"DIA.X _____" LONG, CRS, WITH ONE HOLE
		DRILLED FOR 1/4" COTTER PIN 1/4" FROM THE END.
_____	1	SET(S) ADJ. DODGE BLK. TYPE IDLER FRAME PARTS; PULLROD LENGTH ___", MINIMUM
		THREAD LENGTH _____".
_____	_____	VIBRATION SWITCHES _____MAKE _____MODEL
_____*	_____	V-BELTS _____TYPE _____"CENTER DIST. _____HP EA. MATCHED SETS OF _____
_____	_____	SHEAVE SET(S)
		_____GROOVES FAN SHEAVE: _____"OD _____"BORE _____X _____KEYWAY
		_____PITCH MOTOR SHEAVE: _____"OD _____"BORE _____X _____KEYWAY
_____*	_____	MOTOR(S) _____MAKE ____HP _____RPM ____PHASE ____CYCLE
		_____VOLTS _____ENCL. VARIABLE TORQUE, SINGLE WINDING
		_____SHAFT, _____MOUNTING, _____FRAME SIZE _____SLIDEBASE
_____	_____	AIR MOTOR(S) _____MAKE _____MODEL. AIR REGULATOR _____
		POSITIONER _____
_____	_____	TEMP CONTROLLER(S) _____MAKE _____MODEL. LENGTH OF TUBING
		_____TEMP. RANGE _____F.,REGULATOR _____
_____	_____	AIR MOTOR(S) _____MAKE, _____MODEL, AIR REGULATOR _____
		POSITIONER _____
_____	_____	TEMP CONTROLLER(S) _____MAKE _____MODEL. LENGTH OF TUBING
		_____TEMP. RANGE _____F.,REGULATOR _____
_____*	_____	CPLG. DODGE _____MAKE _____MODEL _____"BORE _____X _____KEYWAY
		_____"BORE _____X _____KEYWAY
_____*	_____	CPLG. DODGE _____MAKE _____MODEL _____"BORE _____X _____KEYWAY
		_____"BORE _____X _____KEYWAY
_____*	_____	GEAR(S) _____MAKE _____MODEL _____RATIO _____AGMA HP.
		INPUT SHAFT: _____HAND ROTATION _____"DIA ____"X _____"KEYWAY
		OUTPUT SHAFT: _____HAND ROTATION _____"DIA ____"X _____"KEYWAY
		* RECOMMENDED SPARE PARTS
		** REVERSE BORE

air-x-changer

post office box 1804 • tulsa, oklahoma 74101 • phone 918/226-1850 • fax 918/266-1322

JOB No. 902476
Date 12/3/90
Page 1 of 1

Purchaser DRESSER-RAND
Ref. No. P.O. 3-2839-807 Destination PETROBRAS
1 Model 144V1-106-20 Air-x-changer

		PERFORMANCE				
1	Service	EJW	AW	IC	AC	
2	Flow	439GPM	80GPM	6.77MMSCFD	7.31MMSCFD	
3	Fluid	50%GLY	50%GLY	.74SPGR	.74SPGR	
4	Temperature in, °F	180.0	157.0	276.5	283.1	
5	Temperature out, °F	165.0	130.0	130.0	147.5	
6	Pressure, PSI			1871PSIA	5065PSIA	
7	Pressure Drop, PSI	6.1	4.5	16.9	19.7	
8	Heat Load, BTU/HR	3061000	989100	1618799	1701059	
9	True MTD	48.1	28.9	61.5	78.5	
10	Overall Rate	179.2	151.7	118.5	120.8	
11	Fouling Factor	.0005	.0005	.0020	.0020	
12	Tube Surface, Sq. Ft.	355	229	229	181	
13	Total Surface, Sq. Ft.	5652	3648	3648	2877	
14	Sections, No. of	COMBINED	COMBINED	1	1	
15	Connected	SINGLY	SINGLY	SINGLY	SINGLY	
16	No. Passes	1	2	3	3	
17	Design Temp. °F	300/ 50	300/ 50	350/ 50	350/ 50	
18	Design Press. PSIG	150	150	2500	6000	
19	Test Press. PSIG	225	225	3750	9000	
20	Nozzles	6-STUB	2-STUB	3-1500RTJ	2GR14 *	
21	Tubes, OD x BWG	5/8X16	5/8X16	5/8X14	5/8X12**	
22	Material	SA214 STEEL	SA214 STEEL	SA214 STEEL	SA210-A1 STEEL	
23	No./Section, Length	110,20	71,20	*** 71,20	56,20	
24	No. Rows	3	3	3	3	
25	FLANGES	SA105SCH 40	SA105SCH 40	SA105SCH160	ERROR	
26	Fins, Type	WHEEL	WHEEL	WHEEL	WHEEL	
27	Material	AL	AL	AL	AL	
28						
29						
30	Headers, Type	BOX	BOX	BOX	BOX	
31	Material	STEEL	STEEL	STEEL	STEEL	
32	Counterflow				YES	
33	Corrosion Allowance					
34	Grvd Tube Sheet			YES	YES	
35	Plugs, Type	TAPER	TAPER	SHOULDER	SHOULDER	
36	Material	STEEL	STEEL	STEEL	STEEL	
37	Retarders					
38	Accelerators					
39	ASME Code Stamp			YES	YES	
40	Total SCFM 206007	Temp. In °F. 104		Temp. Out °F 136.5	Elev.	Ø

MECHANICAL EQUIPMENT • STRUCTURES

41 No. Fans 1 HP/Fan 40.7 RPM 345 Dia. 144 No. Blades 6 Material ALUMINUM Make CHECO12F24
42 Drive V-BELT BY OTHERS
43
44 Draft Type FORCED No. of Bays Overall Width Length Height
45 Guards Assembly PACKAGED
46
47 Est. Shipping Weight 19174 LBS
48 Accessories * ALSO FURNISH ONE (1) 1" GR7 COMPLETE ASSY. IN AC.
49 ** .110 MIN. WALL
50 *** USE SA179 @ IC FOR TUBE AVAILABILITY PURPOSES