


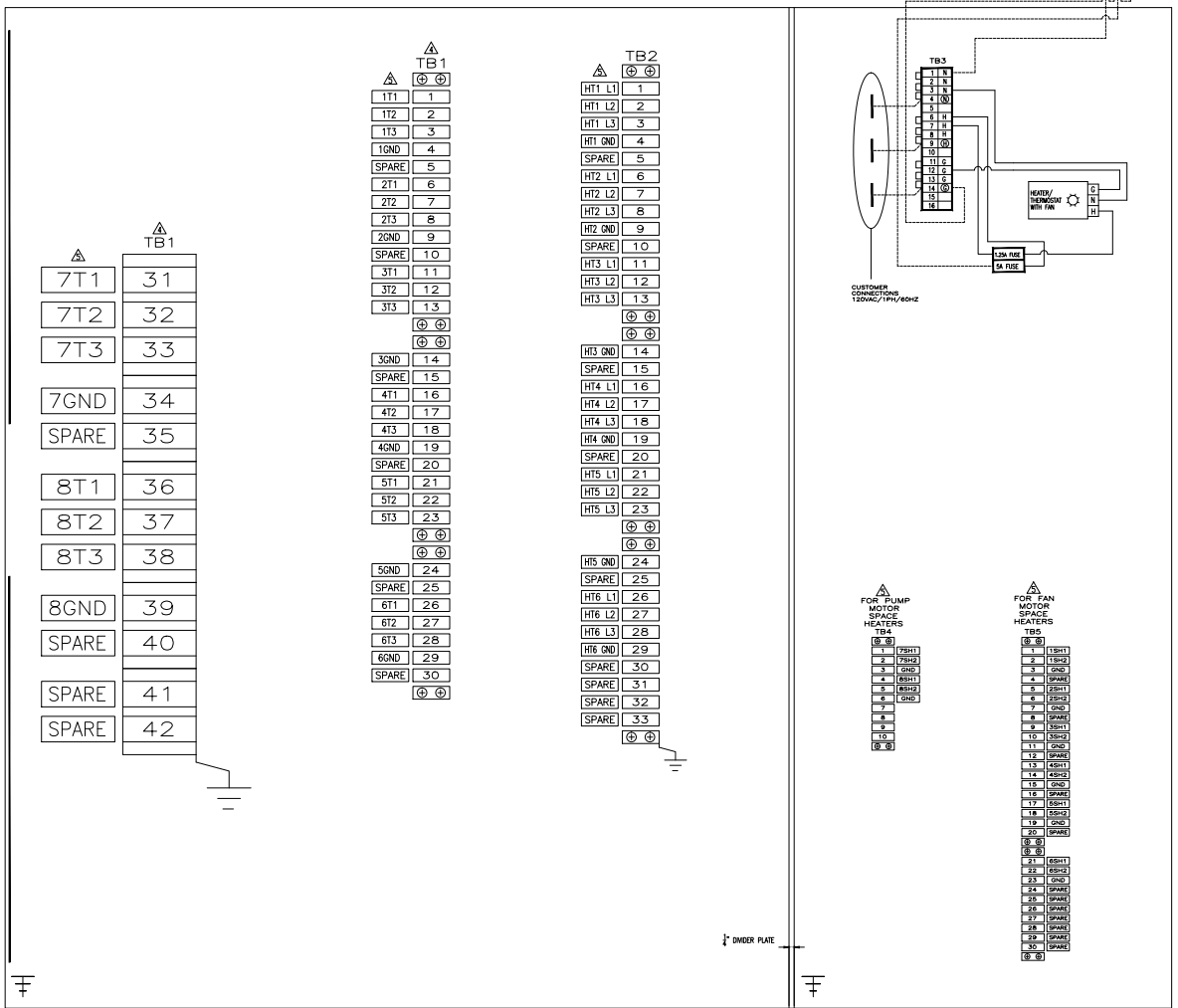
D	PHYSICAL	1) ESTIMATED DRY WEIGHT PER EXCHANGER BAY: 82,800 LBS.[29,625 Kg] 2) ESTIMATED LIQUID CAPACITY: 2480 GALLONS [9,387 LITERS] TOTAL 3) ESTIMATED FLOODED WEIGHT PER EXCHANGER BAY: 90,840 LBS.[41,205 Kg] 4) MATERIALS PROVIDED: TUBE BUNDLE HEADER BOXES: SA-240, 304 SS TUBES: SA-249, TP304 SS FINS: ALLOY 1100 ALUMINUM FLANGES: SA-182, F304 SS 5) UNIT ANCHORS - (64), 1 "[25] DIAMETER - ARE TO BE SUPPLIED BY PURCHASER. REFER TO SHEET 3. THE DESIGN OF THE ANCHOR BOLTS AND THE DEPTH OF FOOTINGS ARE DEPENDENT ON LOCAL CODES AND SOIL CONDITIONS. 6) ALL FLANGE BOLT HOLES TO STRADDLE NATURAL CENTERLINES
	DESIGN	1) TUBE BUNDLES ARE TO BE STAMPED PER ASME CODE, SECTION VIII, DIV 1, WITH NATIONAL BOARD REGISTRATION 2) TUBE BUNDLE DESIGN DATA: DESIGN PRESSURE = 150 PSIG DESIGN TEMPERATURE = 200° F TEST PRESSURE = 195 PSIG
C	TESTING	1) FAN BLADES ARE TO BE MOMENT BALANCED AND FAN HUBS DYNAMICALLY BALANCED WITH CERTIFICATES SUPPLIED 2) COMPLETED COOLER IS TO HAVE AIR FLOW CONFIRMED PER ECODYNE HEAT EXCHANGER PROCEDURE. 3) COMPLETED COOLER IS TO BE SOUND LEVEL TESTED PER ECODYNE HEAT EXCHANGER PROCEDURE. MAXIMUM SOUND LEVEL NOT TO EXCEED 85 dBA (SPL) AT 3 FEET FROM SIDE OF UNIT. 4) COMPLETED COOLER IS TO BE VIBRATION TESTED PER ECODYNE HEAT EXCHANGER PROCEDURE. 5) TUBE BUNDLES ARE TO BE HYDROSTATICALLY TESTED FOR A MINIMUM OF ONE HOUR PER ECODYNE HEAT EXCHANGER PROCEDURE. 6) IMPACT TESTING WILL CONSIST OF ONE (1) TEST PER HEAT LOT OF THE FOLLOWING COLUMNS BASE PLATES LIFT LUGS LATERAL STABILITY BRACES MINIMUM ACCEPTABLE IMPACT VALUES SHALL BE 5 JOULES AT -40°F.
B	PREPARATION AND FINISH	1) COATINGS: a. STRUCTURAL STEEL: HOT-DIP GALVANIZED PER ASTM A-123. b. TUBE BUNDLE HEADERS: STAINLESS STEEL - BARE, NO COATING c. MANUFACTURED PRE-PAINTED ITEMS: TOP COAT USING TWO-PACK EPOXY d. PIPING: EXTERIOR STAINLESS STEEL - BARE, NO COATING; e. EXPANSION TANK: EXTERIOR SURFACES TO BE SANDBLASTED PER SSPC-SP10. PRIME USING INORGANIC ZINC PRIMER; TOP COAT USING TWO-PACK EPOXY. FINISH COLOR TO BE GRAY. THICKNESS TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INTERIOR SURFACES ARE TO BE SANDBLASTED PER SSPC-SP6. OIL MIST AND CAP ENDS. 2) SHOULDER PLUGS AND GASKETS TO BE INSTALLED AND TIGHTENED PER ECODYNE HX PROCEDURE WITH THE SHOULDER PLUGS COATED USING THE APPROPRIATE ANTI-SEIZE THREAD LUBRICANT. 3) FAN SHAFT BEARINGS INCLUDE 304SS FLEXIBLE, BRAIDED LUBE LINES FOR REMOTE LUBRICATION. 4) HEAT EXCHANGER BAYS TO BE SHIPPED FACTORY ASSEMBLED; ITEMS SHIPPED LOOSE WILL BE MATCH MARKED FOR FIELD ASSEMBLY.
A	SHIPPING AND HANDLING	1) PURCHASER TO LIFT HEAT EXCHANGER BAYS FROM HEAT EXCHANGER TUBE BUNDLE LIFTING LUGS USING A SPREADER BEAM PERPENDICULAR TO THE LENGTH OF THE BAY TO MAINTAIN A VERTICAL LIFT. REMOVE LUG RETAINING BOLTS PRIOR TO LIFTING. DO NOT LIFT FROM A SINGLE POINT DIRECTLY ABOVE THE UNIT. LIFTING WEIGHT OF BAYS - WITHOUT LOWER COLUMNS, KNEE BRACES, EXPANSION TANK AND INTERCONNECTING PIPING IS 55,100 LBS [24,993 Kg] PER BAY. 2) PRIOR TO START-UP, VERIFY FAN ROTATION IS NOT OBSTRUCTED AND DIRECTION OF ROTATION MATCHES ARROWS ON FAN RINGS. 3) FOR SHIPMENT, TUBE BUNDLES ARE SEALED WITH METAL BOLT-ON COVERS AND RUBBER GASKETS AND CHARGED WITH 3-5 PSIG DRY NITROGEN CHARGE PER ECODYNE HEAT EXCHANGER PROCEDURE. 4) ITEMS SHIPPED FOR FIELD INSTALLATION INCLUDE: TWO (2) HEAT EXCHANGER BAYS, LOWER COLUMNS, KNEE BRACES, PUMP SKID WITH PUMPS AND MOTORS, PIPING TO CONNECT BAYS AND PUMP SKID, EXPANSION TANK, TWO (2) THERMOMETERS, THREE (3) PRESSURE GAUGES, BY-PASS VALVE ASSEMBLY, THREE (3) AUTO. AIR VENTS, THREE (3) RTD'S, FOUR (4) 8" BUTTERFLY VALVES, EXPANSION TANK PIPING, LIQUID LEVEL SUB-ASSEMBLY, CONDUIT AND WIRING BETWEEN TERMINAL BOXES #3 AND #4 AND TERMINAL BOX #1 LOCATED ON PUMP SKID, LOWER PANELS, LOUVER SUPPORT PANELS, DOORS, CLOSURE BETWEEN BAYS, LOWER SIDE LOUVERS, ACTUATORS, WALKWAY BRACKETS, WALKWAYS, WALKWAY HANDRAILS. CAGED LADDERS, AND ALL REQUIRED HARDWARE. 5) PUMP SKID TO BE INSTALLED BEFORE HEAT EXCHANGER. USE SPREADER BEAM WITH CHAINS TO VERTICALLY LIFT AT LIFTING LUGS.
	NOTES	1) UNIT TO BE INSTALLED IN AREA FREE OF AIR FLOW OBSTRUCTIONS. AREA UNDERNEATH THE HEAT EXCHANGER, AS WELL AS AROUND THE PERIMETER ARE TO BE KEPT CLEAR. DO NOT INSTALL ADDITIONAL EQUIPMENT IN THESE AREAS WHICH WOULD IMPEDE AIR FLOW. RECOMMENDED LOCATION OF HEAT EXCHANGER IS A MINIMUM OF ONE FAN DIAMETER FROM THE NEAREST BUILDING.

RELATED DRAWINGS

14496-001 Sht 1 GENERAL ARRANGEMENT
 14496-001 Sht 2 ANCHOR BOLT PLAN
 14496-1DPD P & ID DRAWING

UNLESS OTHERWISE SPECIFIED: TOLERANCES: FRACTIONAL ± 1/16				 Houston, Texas (713) 675-3511 HEAT EXCHANGERS 2 #15W-54L-3113 INDUCED DRAFT PRODUCT INFORMATION SHEET	
THIS PRINT INCLUDING ALL INFORMATION THEREON IS THE PROPERTY OF ECODYNE HEAT EXCHANGERS AND IS LOANED IN CONFIDENCE. SUBJECT TO THE RETURN UPON REQUEST, AND WITH THE UNDERSTANDING THAT NO COPIES OF THIS PRINT, OR OF THE INFORMATION CONTAINED, SHALL BE MADE WITHOUT THE PROPER WRITTEN CONSENT OF ECODYNE HEAT EXCHANGERS. ALL RIGHTS TO DESIGN AND INVENTION ARE RESERVED.					
REV	DATE	BY	DESCRIPTION	CHKD	APPROVED
	10/28/14	GAH	PRELIMINARY RELEASE		
				PART NO:	14496-001-Sht3
				SIZE: C	SCALE: 1:1
				REV: 0	

MPR10GH001



INSTRUMENTATION LIST		
TAG NO.	TERMINAL NO.	COMPONENT
MPR10GH001	1SH1-2	FAN MOTOR SPACE HEATER #1
MPR10GH002	2SH1-2	FAN MOTOR SPACE HEATER #2
MPR10GH003	3SH1-2	FAN MOTOR SPACE HEATER #3
MPR10GH004	4SH1-2	FAN MOTOR SPACE HEATER #4
MPR10GH005	5SH1-2	FAN MOTOR SPACE HEATER #5
MPR10GH006	6SH1-2	FAN MOTOR SPACE HEATER #6
MPR21P001	7SH1-2	PUMP MOTOR SPACE HEATER #1
MPR22P001	8SH1-2	PUMP MOTOR SPACE HEATER #2
MPR10GH001	1T1-3	MOTOR LEADS FAN #1
MPR10GH002	2T1-3	MOTOR LEADS FAN #2
MPR10GH003	3T1-3	MOTOR LEADS FAN #3
MPR10GH004	4T1-3	MOTOR LEADS FAN #4
MPR10GH005	5T1-3	MOTOR LEADS FAN #5
MPR10GH006	6T1-3	MOTOR LEADS FAN #6
MPR10GH001	HT1 L1-3	LEADS FOR HEATER NO.1
MPR10GH002	HT2 L1-3	LEADS FOR HEATER NO.2
MPR10GH003	HT3 L1-3	LEADS FOR HEATER NO.3
MPR10GH004	HT4 L1-3	LEADS FOR HEATER NO.4
MPR10GH005	HT5 L1-3	LEADS FOR HEATER NO.5
MPR10GH006	HT6 L1-3	LEADS FOR HEATER NO.6
MPR21P001	7T1-3	MOTOR LEADS PUMP #1
MPR22P001	8T1-3	MOTOR LEADS PUMP #2

RELATED DRAWINGS
 14496-001 SH 1 GENERAL ARRANGEMENT
 14496-001 SH 2 ANCHOR BOLT PLAN
 14496-001 SH 3 PRODUCT INFORMATION SHEET
 14496-10PD P & ID DRAWING

NOTES:
 1. PUMP SKID TERMINAL BOX #1 (MPR10GH001) CONNECTIONS

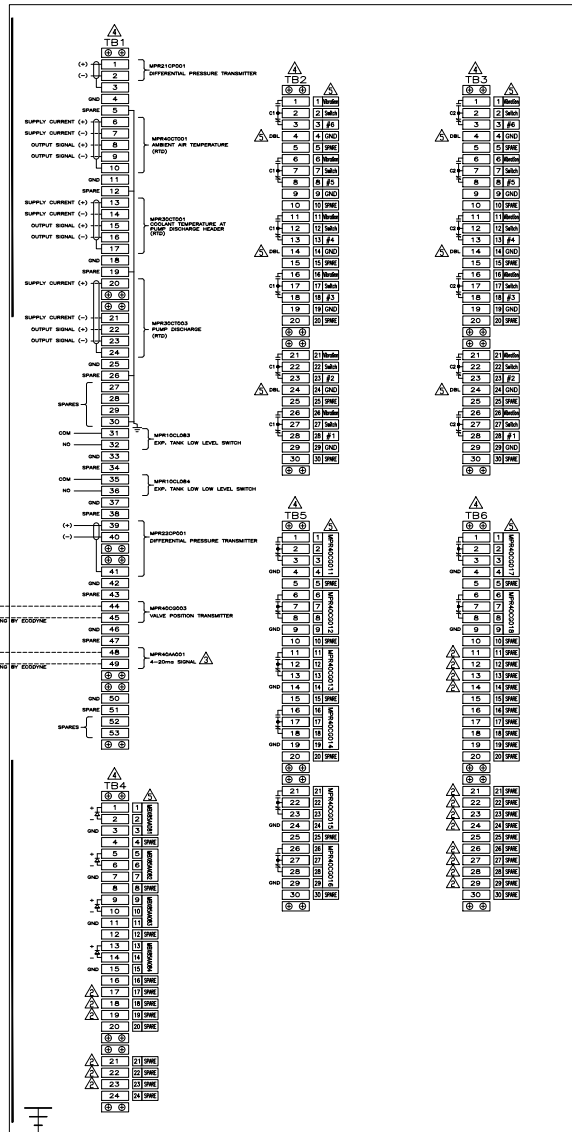
UNLESS OTHERWISE SPECIFIED, TOLERANCES: FRACTIONAL = 1/16	3	EGS/13	AG	REVISED CONNECTIONS & LABELS AS SHOWN, ADDED NOTE 2		
	4	EGS/15	AG	REVISED TO SHOW AS BUILT		
	5	EGS/15	AG	REVISED PER CUSTOMER COMMENTS		
	6	DSB/15	AT	ADDED AMP ON TB2		
	7	111/15	AG	ADDED TERMINAL BOX 2 TO SH 3 TO CLARIFY CONNECTIONS		
	8	105/14	MSH	ORIGINAL RELEASE		
	9	DSB	SP	DESIGNER		

APPROVED

ECODYNE Houston, Texas
 HEAT EXCHANGERS 713 675-3511

TERMINAL BOX WIRING CONNECTIONS
 PART NO: 14496-111M-SHT1
 SIZE: D | SCALE: N.T.S. | REV: 3

MPR10GH002



TERMINAL BOX #2

TAG NO.	COMPONENT
MPR210001	SOLENOID #1
MPR210002	SOLENOID #2
MPR210003	SOLENOID #3
MPR210004	SOLENOID #4
MPR40001	PROXIMITY SWITCH #1
MPR40002	PROXIMITY SWITCH #2
MPR40003	PROXIMITY SWITCH #3
MPR40004	PROXIMITY SWITCH #4
MPR40005	PROXIMITY SWITCH #5
MPR40006	PROXIMITY SWITCH #6
MPR40007	PROXIMITY SWITCH #7
MPR40008	PROXIMITY SWITCH #8

RELATED DRAWINGS
 14496-001 SH. 1 GENERAL ARRANGEMENT
 14496-001 SH. 2 ANCHOR BOLT PLAN
 14496-001 SH. 3 PRODUCT INFORMATION SHEET
 14496-10P P & ID DRAWING

- NOTES:
 1. PUMP SKID TERMINAL BOX #2 (MPR10GH002) CONNECTIONS
 2. GND = SINGLE GROUND UNLESS OTHERWISE NOTED.

NO.	DATE	BY	DESCRIPTION
3	05/14/13	AG	REVISED CONNECTIONS & LABELS AS SHOWN. ADDED NOTE 2.
4	02/04/14	AG	REVISED TO SHOW AS BUILT.
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ECODYNE Houston, Texas
 713.675.3511
 HEAT EXCHANGERS
 TERMINAL BOX #2
 PART NO. 14496-111M-SHT2
 SIZE: D | SCALE: N.T.S. | REV: 3

