



CUSTOM AIR PRODUCTS & SERVICES, INC.

35 Southbelt Industrial Drive • Houston, Texas 77047
(713) 460-9009 • Fax (713) 460-9499
www.customairproducts.com

HERC

2018 RENTAL FLEET

17F-0862

(10) 50 TON INDUSTRIAL AHU
GALVANIZED SKID & CAGE

-

-

460V/3PH/60HZ

GENERAL PURPOSE

8/7/2018

INSTALLATION & OPERATION MANUAL

BOOK ASSEMBLED BY: JONATHAN O'MALLEY

DATE: 8/7/2018

**Table
Of
Contents
17F-0862**

JOB SCOPE	1
FAN & MOTOR SUBMITTAL	2
COIL SUBMITTAL	3
ELECTRICAL DRAWINGS	4
MECHANICAL DRAWINGS	5
BOM	6



CUSTOM AIR PRODUCTS & SERVICES, INC.

35 Southbelt Industrial Drive • Houston, Texas 77047

(713) 460-9009 • Fax (713) 460-9499

www.customairproducts.com

SECTION

01

JOB SCOPE



Quote No:	DW17-11-08-20
Quote Date:	11-08-2017
Project Type:	(6) 50 Ton Industrial Air Handling Unit
Drawing Delivery:	2 weeks after receipt of order
Equipment Delivery:	12-14 weeks After Receipt of Approved Drawings (ARAD)
Freight Terms:	FOB HERC
Payment Terms:	<i>Net 45</i> <i>*100% upon completion</i>

Item	Qty	Description
1.	6	<p>CAPS Model # PAHH-50TC-0NN0NN-5E5-P2-VG2CEUP Unit shall consist of the following components:</p> <ul style="list-style-type: none"> The certified skid shall be fabricated from 3/16" thick, 6" X 4" rectangular steel tube. The skid size is length and width plus piping headers so that no part of the unit is outside of the rack. The fork truck lifting slots are 4" X 10" X 3/16" and made of the same material and are incorporated into the design on 48" centers apart. The skid components are continuously welded at all joints. All tubing ends are capped and continuously welded. The skid incorporates 4" X 4" tie-down holes in each corner of the tubing and is welded solid. All unit serial numbers and weight tags shall be cutout on a steel plate and attached to the skid at diagonal corner locations. Center of gravity will be clearly marked on the upper and lower portion of the skid / frame assembly. The lifting frame material shall be 3" X 3" square steel tubing. This frame is designed for certified overhead lifting and stacking of the units. All tubing ends are capped and continuously welded. The tubing is cut and fit to the height, width, and length of the unit. All corners have a 45 degree, 3/8" steel plate gusset. The top of the frame has a 3/8" steel plate superman gusset welded to the horizontal tubing and incorporates a 1½ inch hole that aligns with the drag eye to secure stacking of units. The entire certified skid and lifting / stacking frame shall be provided with a hot dipped galvanized coating for increased corrosion protection. The exterior skin of the unit shall be formed from 16 gauge galvanealed steel. The double wall interior liner shall be formed from 20 gauge galvanized steel. The units shall be insulated with 1" Thermax foam board insulation.

Item	Qty	Description
		<ul style="list-style-type: none"> • Unit doors to be double-wall construction using 16 gauge, galvanealed steel on the outer wall and 20 gauge, galvanized steel on the inner wall. All corners shall be continuously welded. • The hardware shall be non-corrosive material to include: TEK-screws, door hinges, and positive acting door latches • The drain pan shall be formed and continuously welded using T-304 stainless steel. The coil hat sections shall be formed and welded using T-304 stainless steel and designed to allow for easy coil removal. All coil drain lines and pee traps shall be fitted from 1 ½" stainless steel fittings. Drain connection is provided. • Filters shall be mounted in a 2" track installed on the inlet airside of the unit. The filters shall be slip in, 2" - 30% pleats. Blank-offs shall be sealed and caulked. • Each unit shall have (2) discharge collars, sized 19.75" round and are welded to the exterior wall. Each collar shall have a damper fabricated from ½" stainless steel rod welded to a 14 stainless steel damper. A seven (7)-position steel quadrant is welded in place for CFM adjustment. Each duct collar will be provided with friction type duct clamps. • Each unit shall have (4) return collars, sized 19.75" round and are welded to the exterior wall. Each collar shall have a damper fabricated from ½" stainless steel rod welded to a 14 gauge stainless steel damper. A seven (7)-position steel quadrant is welded in place for CFM adjustment. Each duct collar will be provided with friction type duct clamps. • The fan shall be an ACF Class II, Arrangement 3, belt-drive, plenum fan. The fan wheel shall be aluminum and the shaft shall be all steel. The fan bearings are warranted under original manufacturer's warranty. The drive shall be a belt system rated for a 1.3 service factor. • The fan motor shall be T.E.F.C. 460/3/60 and rated for VFD operation. • All coils shall be provided to meet the scheduled performance. All coil performance shall be certified in accordance with ARI Standard 410. All coils shall be tested at 315 psig air pressure. • All coils shall have 5/8" OD seamless copper tubes mechanically expanded into fins to ensure high thermal performance with lower total flow and pumping requirements. Minimum tube wall thickness shall be 0.020 inches. • Aluminum plate fins with belled collars are standard. • Aluminum-finned coils shall be supplied with die formed casing and tube sheets of mill galvanized steel. • The evaporator coil shall have corrosion resistant coating "EnergyGuard" applied the exterior surfaces. The evaporator coil shall have a low water level drain vale installed with exterior access for winterization purposes.

Item	Qty	Description																									
		<ul style="list-style-type: none"> The coil connections shall have flanged butterfly isolation valves and 4" Dixon brass quick connects. Provided chilled water temperature and pressure taps at coil connections The evaporator coil piping header shall have a tubing connected to the vent and drain for draining and venting air. The electrical controls shall include a NEMA 4 disconnect box equipped with a circuit breaker, magnetic starter, pilot lights for phase incorrect and power, and a unit OFF/AUTO two position switch. Provide and install VFD for variable airflow operation using a potentiometer. 4/0 cam-lock terminals will be provided for power hookup. The unit shall be manufactured in accordance with NEC codes, ETL requirements and labeled with the appropriate 3rd party NRTL as requested. All painting of these components to be Herc specified color. CAPS will provide and install the Herc decal package as per provided layout drawing by Herc. Unit to be tested and verified for proper operation at Custom Air Products & Services prior to shipment. Herc Representatives will also have full access to schedules and production progress as units are being manufactured. 																									
		<table border="1"> <thead> <tr> <th>AHU</th> <th>CFM</th> <th>TSP</th> <th>MOTOR HP</th> </tr> </thead> <tbody> <tr> <td>AHU-1</td> <td>6,250</td> <td>5.00</td> <td>10</td> </tr> </tbody> </table>	AHU	CFM	TSP	MOTOR HP	AHU-1	6,250	5.00	10																	
AHU	CFM	TSP	MOTOR HP																								
AHU-1	6,250	5.00	10																								
		<table border="1"> <thead> <tr> <th colspan="5">COOLING COIL</th> </tr> <tr> <th>AHU</th> <th>FPM</th> <th>EAT: DB / WB</th> <th>LAT: DB / WB</th> <th>MBH TOTAL</th> </tr> </thead> <tbody> <tr> <td>AHU-1</td> <td>446</td> <td>95.0 / 80.0</td> <td>53.1 / 53.0</td> <td>605.8</td> </tr> <tr> <th>MBH SENSIBLE</th> <th>ROW(S) / FPI</th> <th>EWT</th> <th>LWT</th> <th>GPM</th> </tr> <tr> <td>286.4</td> <td>8 / 10</td> <td>45</td> <td>55.1</td> <td>119.6</td> </tr> </tbody> </table>	COOLING COIL					AHU	FPM	EAT: DB / WB	LAT: DB / WB	MBH TOTAL	AHU-1	446	95.0 / 80.0	53.1 / 53.0	605.8	MBH SENSIBLE	ROW(S) / FPI	EWT	LWT	GPM	286.4	8 / 10	45	55.1	119.6
COOLING COIL																											
AHU	FPM	EAT: DB / WB	LAT: DB / WB	MBH TOTAL																							
AHU-1	446	95.0 / 80.0	53.1 / 53.0	605.8																							
MBH SENSIBLE	ROW(S) / FPI	EWT	LWT	GPM																							
286.4	8 / 10	45	55.1	119.6																							
		<ul style="list-style-type: none"> Unit Dimensions: 83" L x 107 ¼" W x 57 ½" H Unit Weight: 3,200 LBS 																									



CUSTOM AIR PRODUCTS & SERVICES, INC.

35 Southbelt Industrial Drive • Houston, Texas 77047

(713) 460-9009 • Fax (713) 460-9499

www.customairproducts.com

SECTION

02

FAN & MOTOR SELECTION

Performance	
Quantity	1
Volume (CFM)	6,250
External SP (in. wg)	6.5
Total SP (in. wg)	6.5
Operating Power (hp)	9.74
Start-Up Power (hp)	9.74
Fan RPM	2735
Max Fan RPM	2,964
Oper. Frequency (Hz)	60
Elevation (ft)	105
Start-up Temp.(F)	70
Operating Temp.(F)	70

Fan Configuration	
Size	18
Class	II
Arrangement	3
Rotation	CW
Orientation	Horizontal

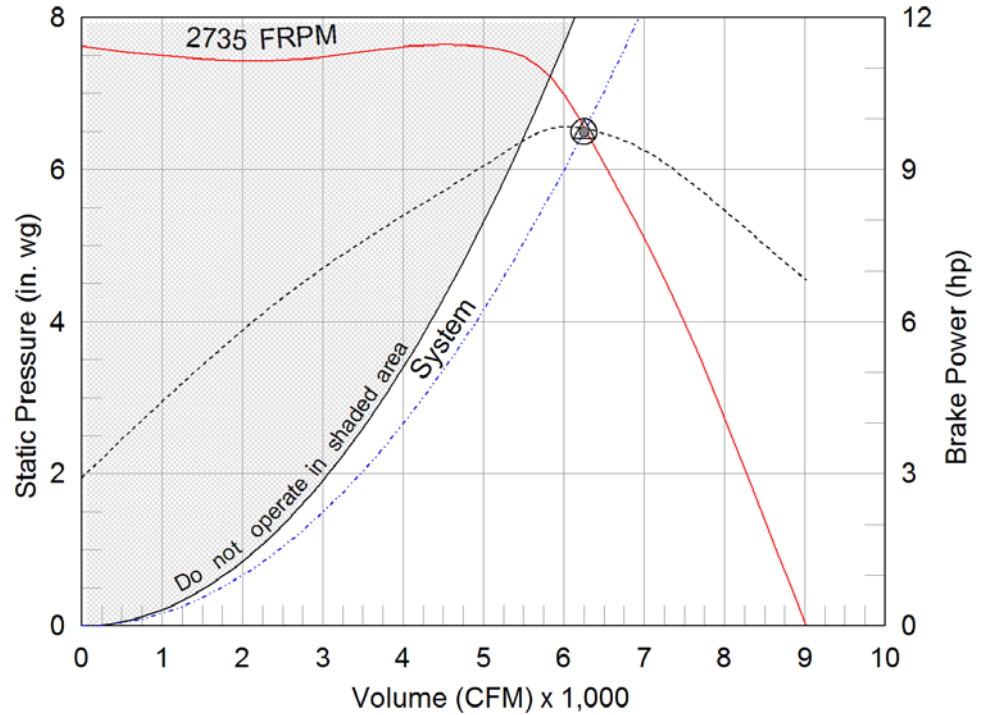
Equipment Weights	
Fan (LMD)(lb)	163
Motor/Drive (lb)	15
Accessories (lb)	382

Misc Fan Data	
Outlet Velocity (ft/min)	2,461
Static Efficiency (%)	68
Tip Speed (ft/min)	13,069
Corner Weight A (lb)	47
Corner Weight B (lb)	121
Corner Weight C (lb)	59
Corner Weight D (lb)	151

Motor and Drives	
Motor Supplier	Greenheck
Size (hp)	10
RPM	3600
Enclosure	TEFC
Voltage	460
Cycle	60
Phase	3
Frame Size	184T
Max Frame Size	184
Location	Right Side
Pulley Type	Constant
Drive Loss (%)	3.6

Model: 18-APH-3-II-100
Plenum Fan

Operating Performance



- △ Operating Bhp point
- Operating point at Total SP
- Operating point at External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve



Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	85	85	87	93	85	84	81	76	93	81	34
Outlet	87	90	90	95	92	90	85	80	97	86	45

LwA - A weighted sound power level, based on ANSI S1.4

dBA - A weighted sound pressure level, based on 11.5 dB attenuation per octave band at 5 ft- dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft

Model: 18-APH-3-II-100

Plenum Fan

Standard Construction Features:

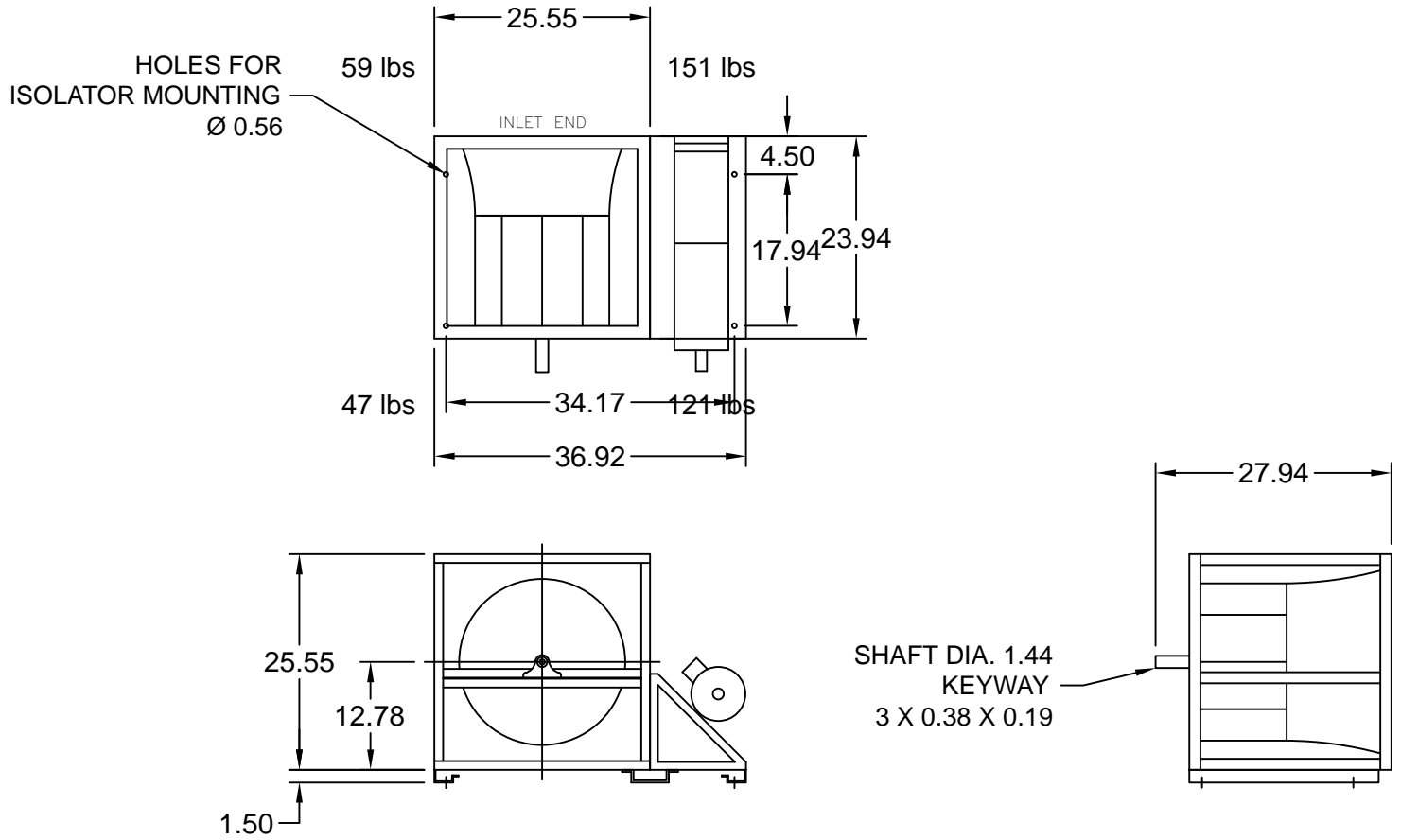
HOUSING: Heavy gauge, welded steel mounting frame with die formed flanges - Inlet panel is heavy gauge steel with die formed flanges with welded corners - Steel components are phosphatized and coated - Corrosion resistant fasteners BEARINGS, SHAFT, AND WHEEL: Heavy duty, concentric locking, self-aligning ball or roller pillow block bearings - Polished, solid steel shafts - Welded, aluminum centrifugal wheel - 12 bladed construction- Airfoil blade profile

Selected Options & Accessories:

NEMA Premium Efficient Motor - meets NEMA Table 12-12
Motor VFD Rated without Shaft Grounding Protection
Motor with Minimum 40 Degree C Ambient Temperature
Motor with Class B Insulation
Fan Class - II
Motor Position - RightSide
Bearings - L(10) Life of 80,000 Hours, L(50) avg. life 400,000 Hours
Coating - Permatecor, Concrete Gray-RAL 7023, Fan and Attached Accessories, Mill Finish on Aluminum Wheel
Nylon Extended Lube Lines - Factory Mounted
Fan Orientation - Horizontal
Protective Cage - Totally Enclosed, coated w/Safety yellow finish
Factory Vibration Test, 0.15 in/sec, peak, filter-in as measured at the fan RPM
Motor Slide Base
10HP TEFC 460/60/3 3600RPM (T1600048)
HORIZONTAL ARR. 3 MOUNT MOTOR RIGHT SIDE (C1600036)
Unit Warranty: 1 Yr (Standard)

Model: 18-APH-3-II-100

Plenum Fan



Notes: All dimensions shown are in units of in.
Drawings are not to scale. Drawings are of standard unit and do not include dimensions for accessories or design modifications.



CUSTOM AIR PRODUCTS & SERVICES, INC.

35 Southbelt Industrial Drive • Houston, Texas 77047

(713) 460-9009 • Fax (713) 460-9499

www.customairproducts.com

SECTION

03

COIL SELECTION

Customer: Date: 4/26/2013
 Contact: From:
 Telephone: Company:
 Cell: Return Tel:
 Fax: Return Fax:
 Job:
 Quote #:

Construction

Item: 50 Ton AHU
 Coils Per Bank: 1
 Allow Opp. End: No
 Tube OD IN: 5/8
 Coil Duty: Cool-Standard
 Fins Per Inch: Optimize
 Rows: Optimize
 Fin Surface: Optimize ABC
 Fin Height (IN): 36.00
 Finned Length (IN): 56.00
 Tubing Mat. (IN): 0.020 Copper
 TurboSpirals: No
 Fin Mat. (IN): 0.0075 Aluminum
 Conn Qty/Size (IN): 1 / 3.00
 Circuiting: Optimize

Air Side

Air Flow (Sft^3/min) 6,250
 Altitude FT: .00
 Ent. Air DB/WB °F: 95.00 / 80.00
 Lvg. Air DB/WB °F: .00 / .00
 Total / Sensible MBH: 600.0 / .00
 Max Air PD "H2O: .00

Fluid Side

Fluid Type: Water
 Ent. Fluid : 45.00
 Lvg. Fluid : 55.00
 Fluid Flow gal/min: .00
 Max FPD FT H2O: 15.00

O U T P U T D A T A			O P T I O N S	
Model Number:		5WS1008B	Casing Material:	Galvanized
Air Velocity:	(Sft/min)	446.4	Casing Type:	Flanged
Total Capacity:	MBH	605.8	Hand:	Right
Sens. Capacity:	MBH	286.4	Connection Material:	Carbon Steel
Lvg. Air DB:	°F	53.09	Connection Type:	MPT
Lvg. Air WB:	°F	52.96	Vent/Drain:	.50 FPT on Side
Standard APD	"H2O	.77	Label Kit:	No
Lvg. Fluid:	°F	55.10	Coating: None	
Fluid Flow:	gal/min	119.6	Mounting Holes:	No
Fluid PD:	FT H2O	14.22	Drain Headers:	No
Fluid Vel.:	ft/s	5.32	Boxed Headers:	No
Conn Size:	IN	(1) 3.000		
Internal Volume:	in^3	3,939		
Weight (Dry):	lbm	356.4		
Weight (w/Fluid):	lbm	505.9		
Notes:		AL		

Notes:

A) ARI Certified And Rated In Accordance With ARI 410.

L) Coil rating valid for Heatcraft coils only.



CUSTOM AIR PRODUCTS & SERVICES, INC.

35 Southbelt Industrial Drive • Houston, Texas 77047

(713) 460-9009 • Fax (713) 460-9499

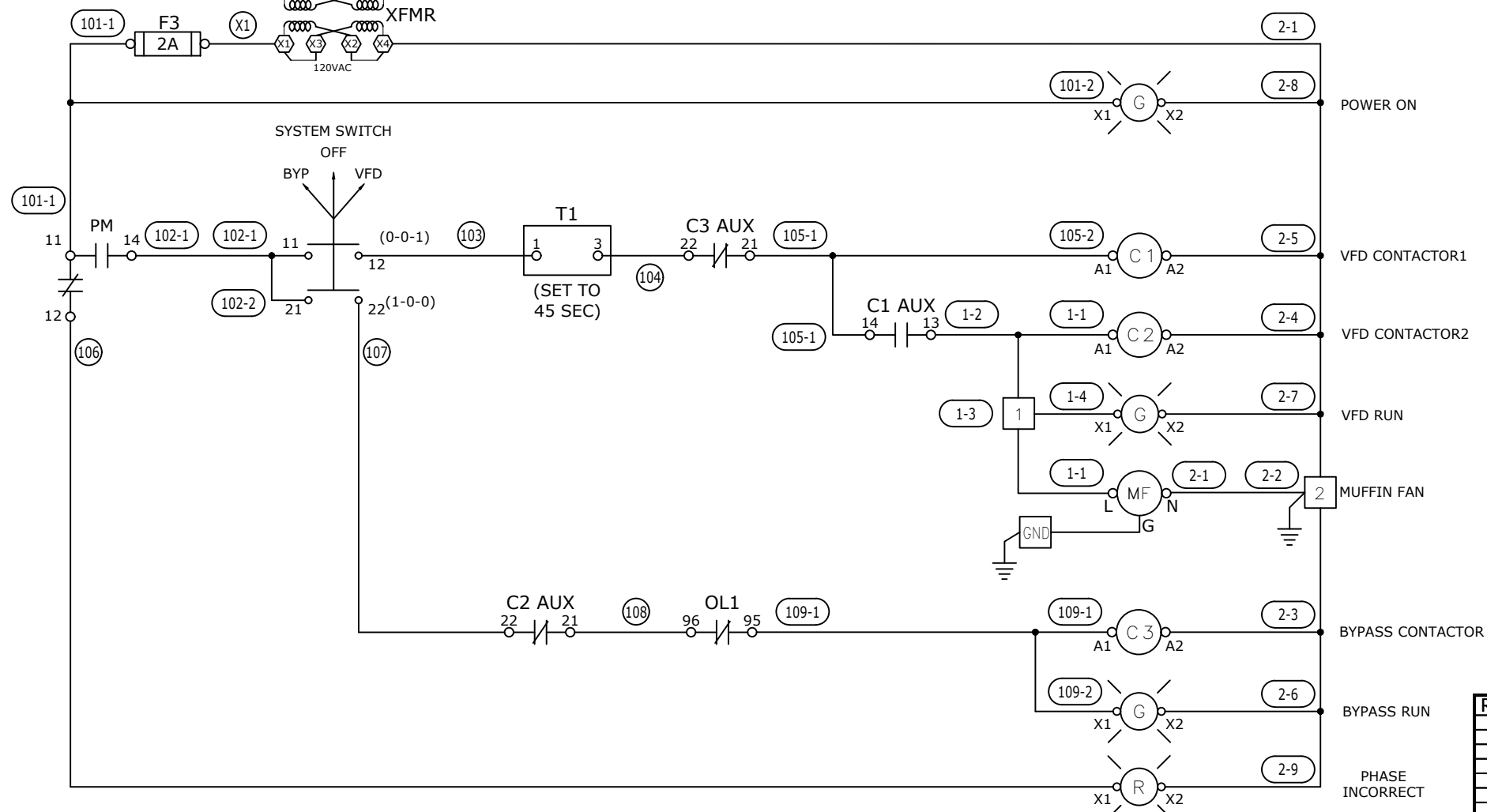
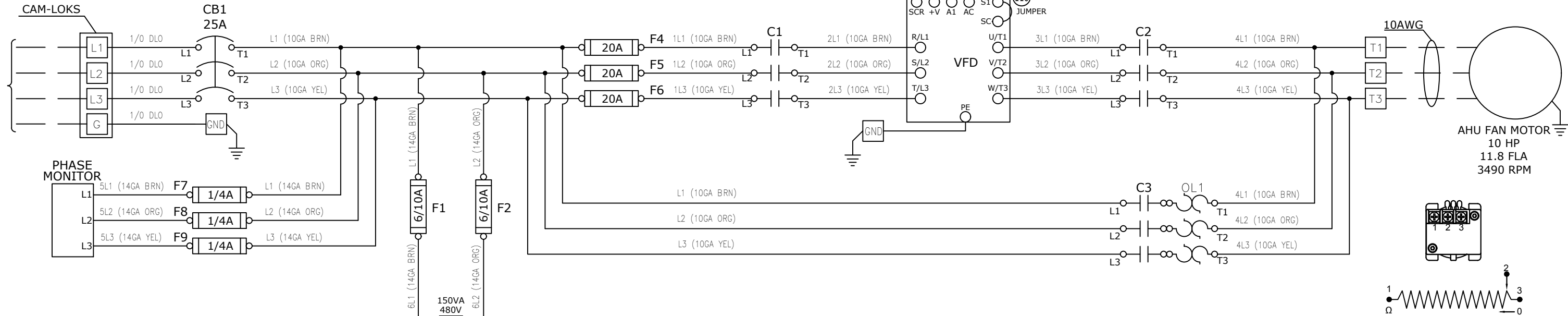
www.customairproducts.com

SECTION

04

ELECTRICAL DRAWINGS

460/3/60
19 MCA
25 MOCP



LEGEND

C1	- VFD CONTACTOR
C2	- VFD CONTACTOR 2
C3	- BYPASS CONTACTOR
CB	- CIRCUIT BREAKER
FU	- FUSE
MF	- MUFFIN FAN
OL	- OVERLOAD
PM	- PHASE MONITOR
T1	- TIMER
XFMR	- CONTROL CIRCUIT TRANSFORMER
VFD	- VARIABLE FREQUENCY DRIVE

WIRING NOTES

208/120VAC	480/277VAC	24VDC
PHASE A - BLACK	PHASE A - BROWN	POSITIVE - RED
PHASE B - RED	PHASE B - ORANGE	NEGATIVE - GRAY
PHASE C - BLUE	PHASE C - YELLOW	
NEUTRAL - WHITE	NEUTRAL - GRAY	24VAC
GROUND - GREEN	GROUND - GREEN	PHASE A - RED
		NEUTRAL - BROWN

INTRINSICALLY SAFE WIRING 18AWG LIGHT BLUE AND MUST BE SEPARATED FROM OTHER WIRING BY MINIMUM OF 2". IF CABLE USED IT MUST BE SHIELDED.

IF VAC WIRING GAUGE NOT SPECIFIED USE 18 AWG
IF VDC WIRING GAUGE NOT SPECIFIED USE 18 AWG

REV#	DATE	DESIGNER	DESCRIPTION
0	12/12/2017	TRUNG TRAN	ISSUE FOR CONSTRUCTION
1	04/27/2018	TRUNG TRAN	AS BUILT



35 SOUTHBELT INDUSTRIAL DR., HOUSTON, TX. 77047
PHONE: (713) 460-9009 FAX: (713) 460-9499
TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM NUMBER F-14008

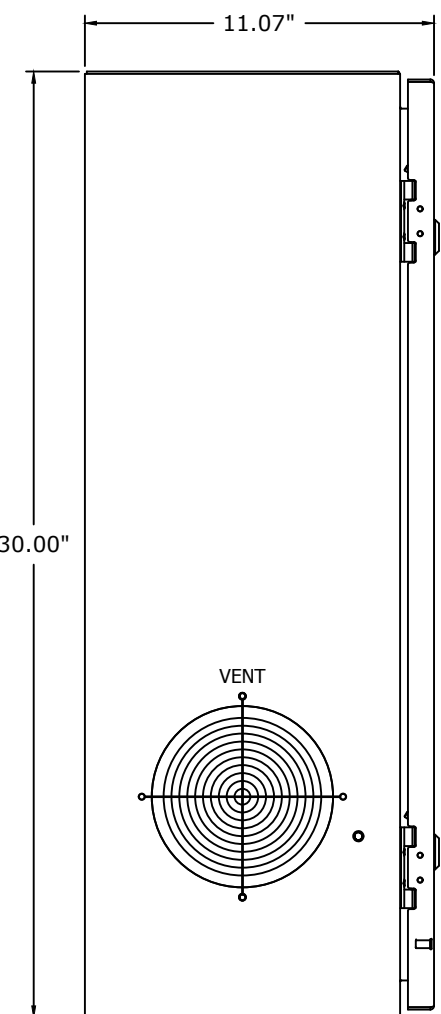
THIS DRAWING AND THE INFORMATION HEREIN CONTAINED ARE THE PROPERTY OF CUSTOM AIR PRODUCTS, WHICH HAS FURNISHED THEM IN CONFIDENCE UPON THE UNDERSTANDING AND CONDITION THAT ALL PERSONS, FIRMS OR CORPORATIONS RECEIVING SUCH DRAWINGS AND INFORMATION SHALL BY THE ACT OF RECEIVING THEM BE DEEMED TO HAVE AGREED: TO MAKE NO COPY, DUPLICATION, DISCLOSURE OR USE WHATSOEVER OF ALL OR ANY PART THEREOF EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY CUSTOM AIR PRODUCTS: NOT TO GIVE, LEND OR OTHERWISE DISPOSE OF THIS DRAWING: AND TO RETURN THIS DRAWING PROMPTLY UPON REQUEST.

CERTIFIED AS-BUILT

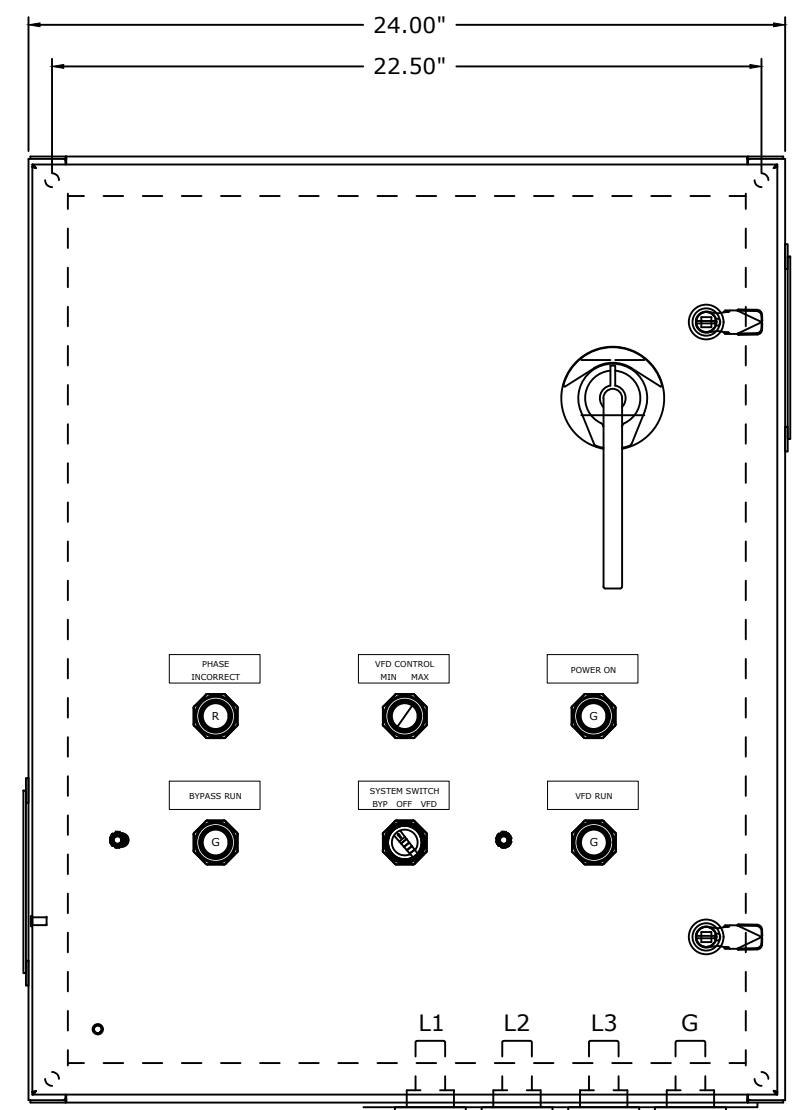
CHECKER: _____ DATE: _____
APPROVER: _____ DATE: _____

CAPS NO.:	DRAWING:	DRAWN BY:	DATE:
17F-0862	AE1	TRUNG TRAN	12/12/2017
CUST. PO#:	SHEET:	CHECKED BY:	DATE:
	1 OF 5	DAVID NGUYEN	04/27/2018
SIZE:	REV:	APPROVED BY:	DATE:
B	1	LARRY NOVAK	04/27/2018

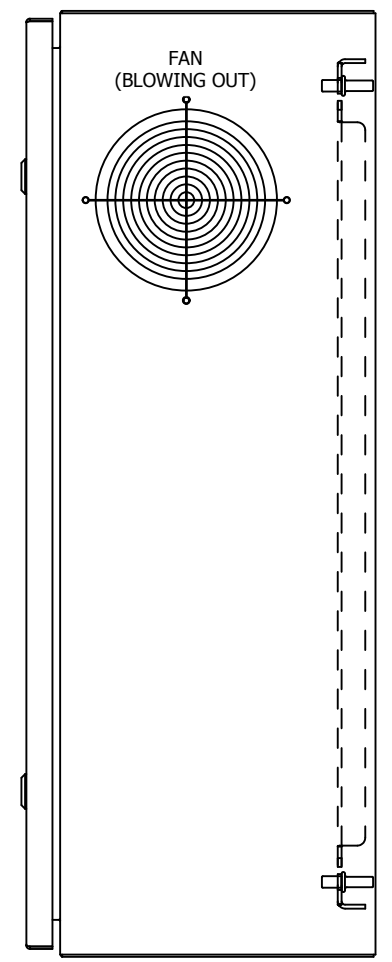
CUSTOMER:	HERC RENTALS
50 TON CHILLED WATER AIR HANDLING UNIT GALV SKID, GALV CAGE, COATED HOUSING DUCTED RETURN, 460V/3PH/60HZ, NEMA4 CONSTRUCTION ELECTRICAL DESIGN POWER & CONTROL WIRING	



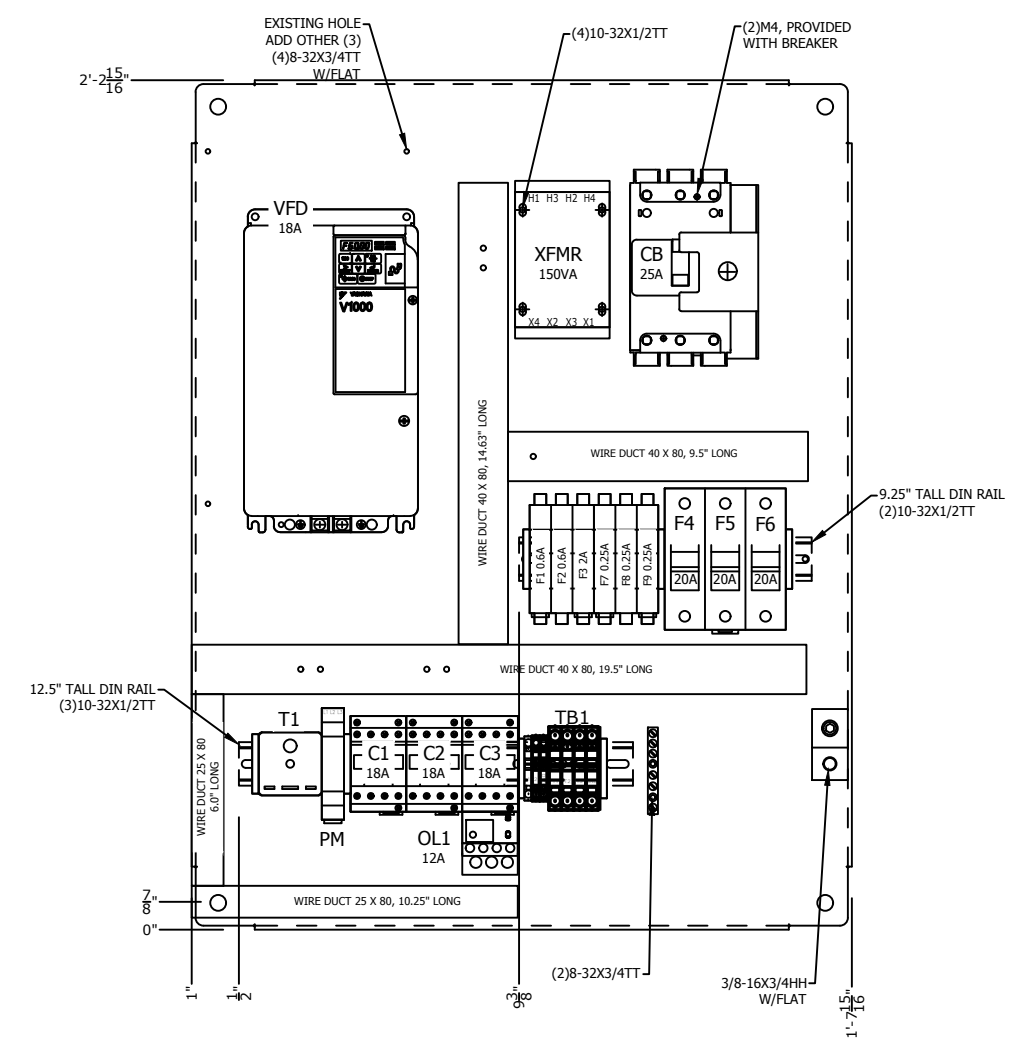
L.H. SIDE VIEW



FRONT VIEW



R.H. SIDE VIEW

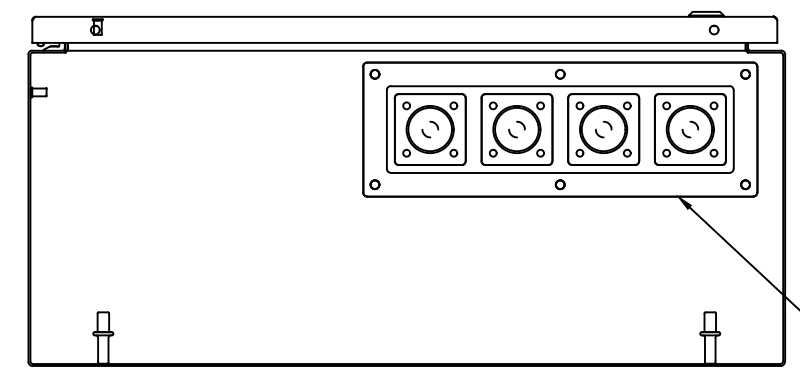


MOUNTING PLATE

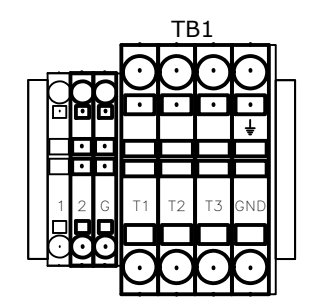
LEGEND

C1	- VFD CONTACTOR
C2	- VFD CONTACTOR 2
C3	- BYPASS CONTACTOR
CB	- CIRCUIT BREAKER
FU	- FUSE
MF	- MUFFIN FAN
OL	- OVERLOAD
PM	- PHASE MONITOR
T1	- TIMER
XFMR	- CONTROL CIRCUIT TRANSFORMER
VFD	- VARIABLE FREQUENCY DRIVE

- NOTES:
- EACH DEVICE TO HAVE (2) LABELS. ONE ON DEVICE, ONE ON PANEL BEHIND DEVICE.
 - ALL DIN RAIL AND WIRE DUCT MOUNTED WITH 10-32X1/2 TT



BOTTOM VIEW



NC-EMC012-P005



THIS DRAWING AND THE INFORMATION HEREIN CONTAINED ARE THE PROPERTY OF CUSTOM AIR PRODUCTS, WHICH HAS FURNISHED THEM IN CONFIDENCE UPON THE UNDERSTANDING AND CONDITION THAT ALL PERSONS, FIRMS OR CORPORATIONS RECEIVING SUCH DRAWINGS AND INFORMATION SHALL BY THE ACT OF RECEIVING THEM BE DEEMED TO HAVE AGREED: TO MAKE NO COPY, DUPLICATION, DISCLOSURE OR USE WHATSOEVER OF ALL OR ANY PART THEREOF EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY CUSTOM AIR PRODUCTS: NOT TO GIVE, LEND OR OTHERWISE DISPOSE OF THIS DRAWING; AND TO RETURN THIS DRAWING PROMPTLY UPON REQUEST.

CERTIFIED AS-BUILT

CHECKER: _____ DATE: _____

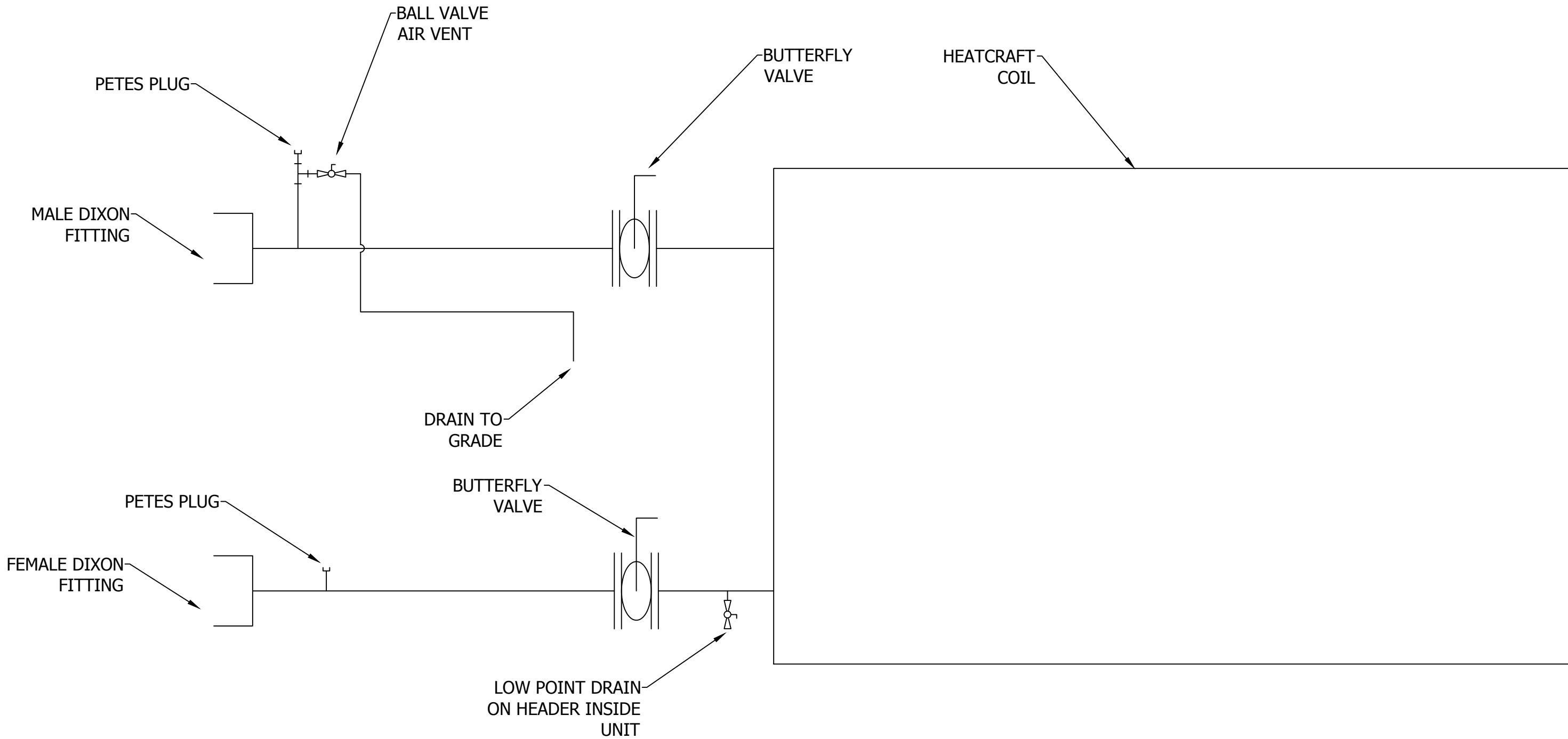
APPROVER: _____ DATE: _____

CAPS NO.:	17F-0862	DRAWING:	AE2	DRAWN BY:	TRUNG TRAN	DATE:	12/12/2017
CUST. PO#:		SHEET:	2 OF 5	CHECKED BY:	DAVID NGUYEN	DATE:	04/27/2018
SIZE:	B	REV:	1	APPROVED BY:	LARRY NOVAK	DATE:	04/27/2018

REV#	DATE	DESIGNER	DESCRIPTION
0	12/12/2017	TRUNG TRAN	ISSUE FOR CONSTRUCTION
1	04/27/2018	TRUNG TRAN	AS BUILT

CUSTOMER: **HERC RENTALS**

**50 TON CHILLED WATER AIR HANDLING UNIT
GALV SKID, GALV CAGE, COATED HOUSING
DUCTED RETURN, 460V/3PH/60HZ, NEMA4 CONSTRUCTION
ELECTRICAL DESIGN
CONTROL PANEL LAYOUT**



REV#	DATE	DESIGNER	DESCRIPTION
0	12/12/2017	TRUNG TRAN	ISSUE FOR CONSTRUCTION
1	04/27/2018	TRUNG TRAN	AS BUILT



35 SOUTHBELT INDUSTRIAL DR., HOUSTON, TX. 77047
 PHONE: (713) 460-9009 FAX: (713) 460-9499
 TEXAS BOARD OF PROFESSIONAL ENGINEERS
 FIRM NUMBER P-14008

THIS DRAWING AND THE INFORMATION HEREIN CONTAINED ARE THE PROPERTY OF CUSTOM AIR PRODUCTS, WHICH HAS FURNISHED THEM IN CONFIDENCE UPON THE UNDERSTANDING AND CONDITION THAT ALL PERSONS, FIRMS OR CORPORATIONS RECEIVING SUCH DRAWINGS AND INFORMATION SHALL BY THE ACT OF RECEIVING THEM BE DEEMED TO HAVE AGREED: TO MAKE NO COPY, DUPLICATION, DISCLOSURE OR USE WHATSOEVER OF ALL OR ANY PART THEREOF EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY CUSTOM AIR PRODUCTS: NOT TO GIVE, LEND OR OTHERWISE DISPOSE OF THIS DRAWING; AND TO RETURN THIS DRAWING PROMPTLY UPON REQUEST.

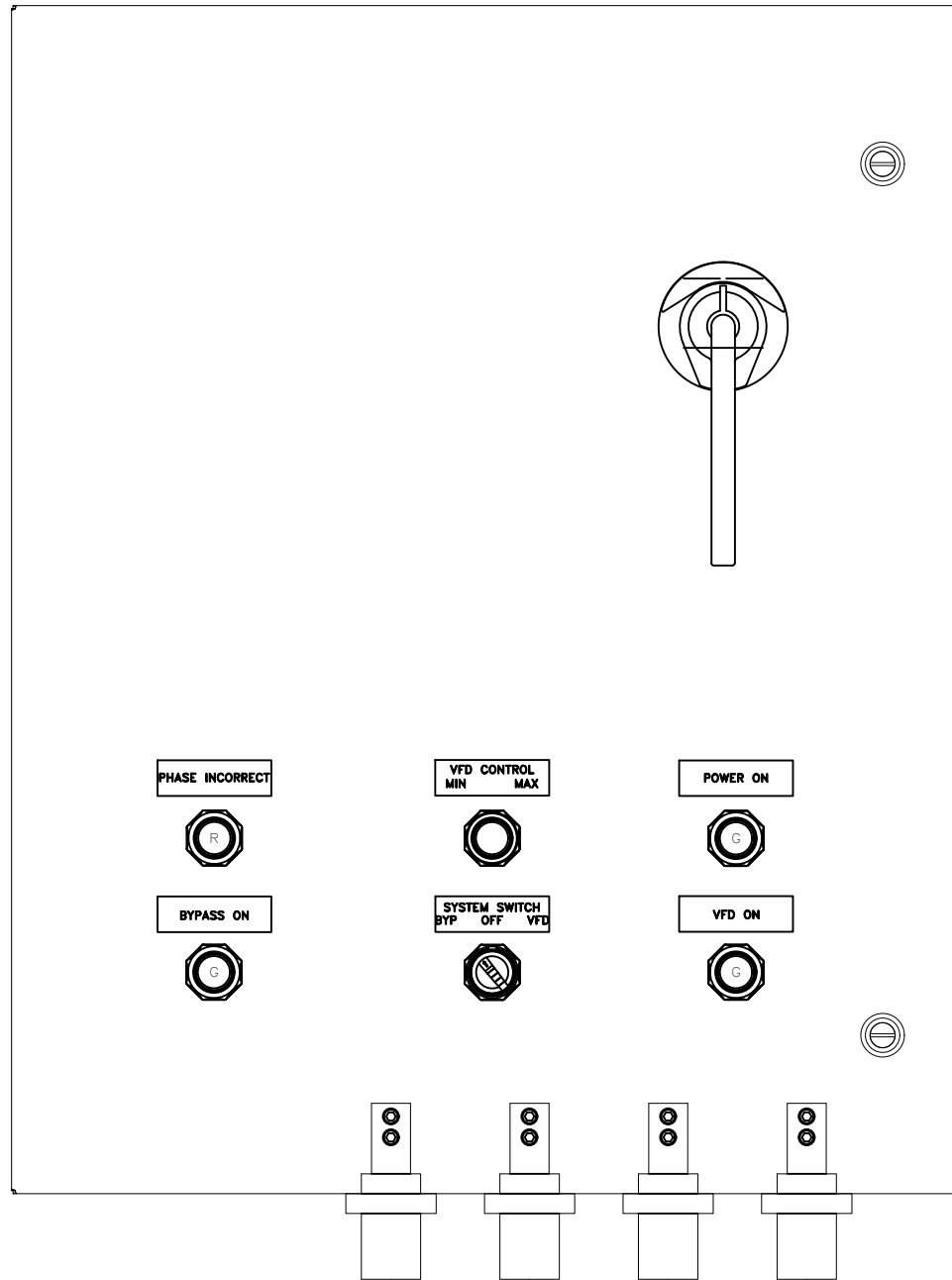
CERTIFIED AS-BUILT

CHECKER: _____ DATE: _____
 APPROVER: _____ DATE: _____

CAPS NO.:	DRAWING:	DRAWN BY:	DATE:
17F-0862	AE3	TRUNG TRAN	12/12/2017
CUST. PO#:	SHEET:	CHECKED BY:	DATE:
	3 OF 5	DAVID NGUYEN	04/27/2018
SIZE:	REV:	APPROVED BY:	DATE:
B	1	LARRY NOVAK	04/27/2018

CUSTOMER:	HERC RENTALS
50 TON CHILLED WATER AIR HANDLING UNIT GALV SKID, GALV CAGE, COATED HOUSING DUCTED RETURN, 460V/3PH/60HZ, NEMA4 CONSTRUCTION ELECTRICAL DESIGN P&ID	

SEQUENCE OF OPERATION



The system is placed into initial operation as follows:

- Turn System Switch to "OFF"
- Turn Circuit Breaker "ON"
 - If the "Phase Incorrect" light is on, turn off the circuit breaker; reverse two (2) phases of incoming power for proper phase sequencing then check the incoming power source to be sure the unit has a good power source - 460V/3P/60HZ
 - If the "Power On" light is on and the "Phase Incorrect" light is off, the unit is ready for operation
- Turn System Switch to position that you desire
 - 1- Bypass: The evaporator fan will bypass the VFD and runs at full speed. The "Bypass Run" light will turn on
 - 2- VFD: "VFD run" light will turn on. The evaporator fan will be controlled by the VFD. Use the POT switch to adjust evaporator fan speed.
- Only use System Switch to turn off the unit

NOTE: UNIT DOES NOT HAVE A THERMOSTAT

REV#	DATE	DESIGNER	DESCRIPTION
0	12/12/2017	TRUNG TRAN	ISSUE FOR CONSTRUCTION
1	04/27/2018	TRUNG TRAN	AS BUILT



35 SOUTHBELT INDUSTRIAL DR., HOUSTON, TX. 77047
 PHONE: (713) 460-9009 FAX: (713) 460-9499
 TEXAS BOARD OF PROFESSIONAL ENGINEERS
 FIRM NUMBER P-14008

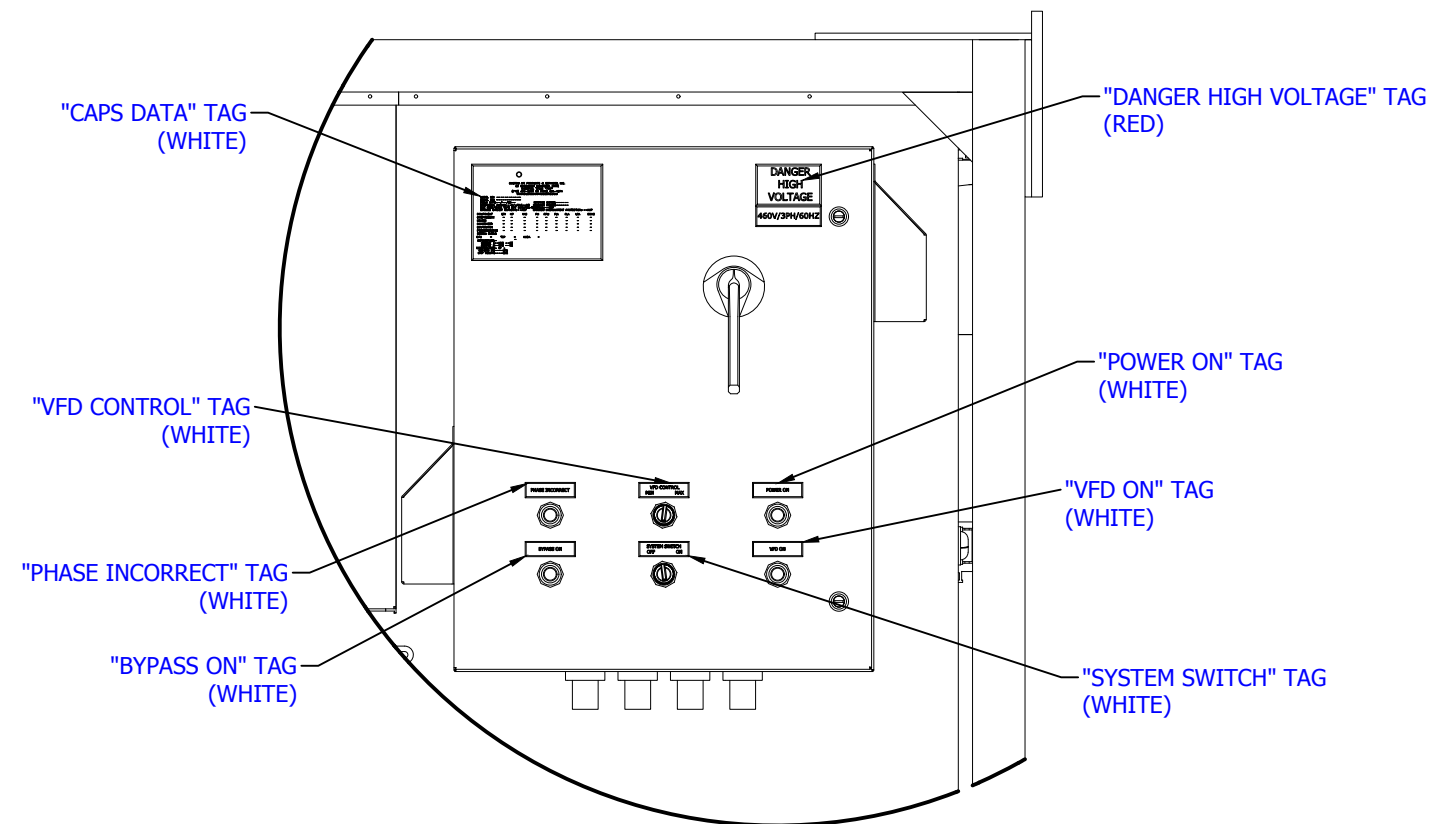
THIS DRAWING AND THE INFORMATION HEREIN CONTAINED ARE THE PROPERTY OF CUSTOM AIR PRODUCTS, WHICH HAS FURNISHED THEM IN CONFIDENCE UPON THE UNDERSTANDING AND CONDITION THAT ALL PERSONS, FIRMS OR CORPORATIONS RECEIVING SUCH DRAWINGS AND INFORMATION SHALL BY THE ACT OF RECEIVING THEM BE DEEMED TO HAVE AGREED: TO MAKE NO COPY, DUPLICATION, DISCLOSURE OR USE WHATSOEVER OF ALL OR ANY PART THEREOF EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY CUSTOM AIR PRODUCTS; NOT TO GIVE, LEND OR OTHERWISE DISPOSE OF THIS DRAWING; AND TO RETURN THIS DRAWING PROMPTLY UPON REQUEST.

CERTIFIED AS-BUILT

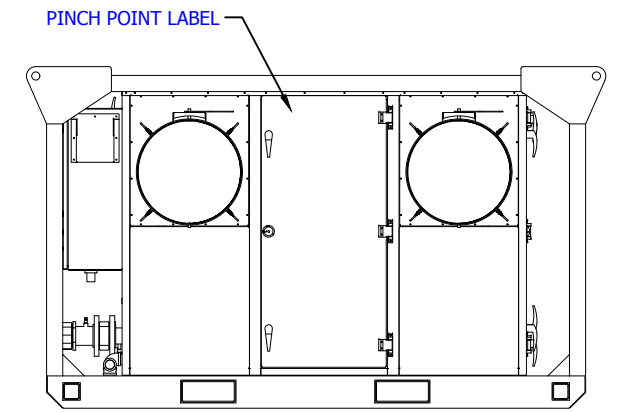
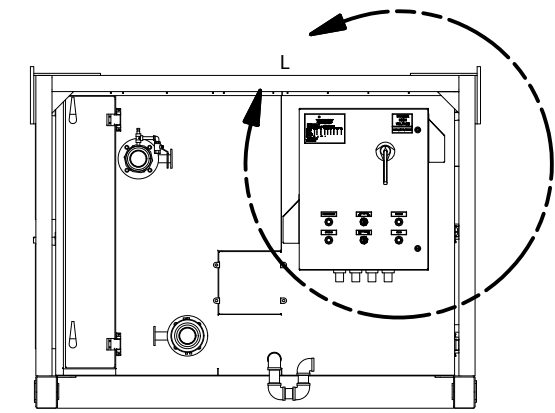
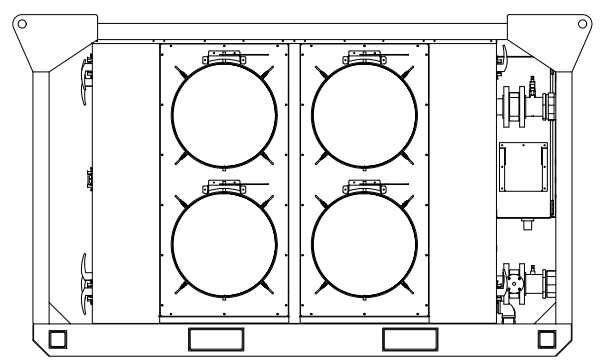
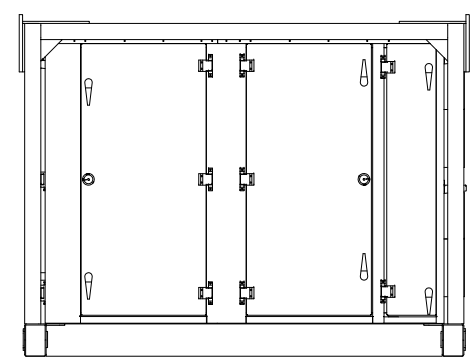
CHECKER: _____ DATE: _____
 APPROVER: _____ DATE: _____

CAPS NO.:	DRAWING:	DRAWN BY:	DATE:
17F-0862	AE4	TRUNG TRAN	12/12/2017
CUST. PO#:	SHEET:	CHECKED BY:	DATE:
	4 OF 5	DAVID NGUYEN	04/27/2018
SIZE:	REV:	APPROVED BY:	DATE:
B	1	LARRY NOVAK	04/27/2018

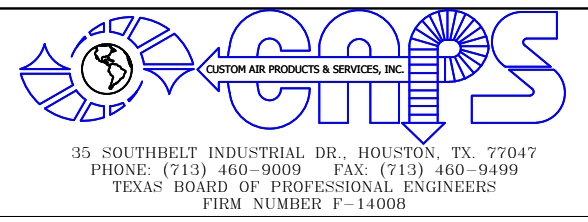
CUSTOMER:	HERC RENTALS
50 TON CHILLED WATER AIR HANDLING UNIT GALV SKID, GALV CAGE, COATED HOUSING DUCTED RETURN, 460V/3PH/60HZ, NEMA4 CONSTRUCTION ELECTRICAL DESIGN SEQUENCE OF OPERATION	



DETAIL L
NTS



REV#	DATE	DESIGNER	DESCRIPTION
0	12/12/2017	TRUNG TRAN	ISSUE FOR CONSTRUCTION
1	04/27/2018	TRUNG TRAN	AS BUILT



THIS DRAWING AND THE INFORMATION HEREIN CONTAINED ARE THE PROPERTY OF CUSTOM AIR PRODUCTS, WHICH HAS FURNISHED THEM IN CONFIDENCE UPON THE UNDERSTANDING AND CONDITION THAT ALL PERSONS, FIRMS OR CORPORATIONS RECEIVING SUCH DRAWINGS AND INFORMATION SHALL BY THE ACT OF RECEIVING THEM BE DEEMED TO HAVE AGREED: TO MAKE NO COPY, DUPLICATION, DISCLOSURE OR USE WHATSOEVER OF ALL OR ANY PART THEREOF EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY CUSTOM AIR PRODUCTS; NOT TO GIVE, LEND OR OTHERWISE DISPOSE OF THIS DRAWING; AND TO RETURN THIS DRAWING PROMPTLY UPON REQUEST.

CERTIFIED AS-BUILT

CHECKER: _____ DATE: _____
APPROVER: _____ DATE: _____

CAPS NO.: 17F-0862	DRAWING: AE5	DRAWN BY: TRUNG TRAN	DATE: 12/12/2017
CUST. PO#:	SHEET: 5 OF 5	CHECKED BY: DAVID NGUYEN	DATE: 04/27/2018
SIZE: B	REV: 1	APPROVED BY: LARRY NOVAK	DATE: 04/27/2018

CUSTOMER: **HERC RENTALS**

**50 TON CHILLED WATER AIR HANDLING UNIT
GALV SKID, GALV CAGE, COATED HOUSING
DUCTED RETURN, 460V/3PH/60HZ, NEMA4 CONSTRUCTION
ELECTRICAL DESIGN
TAG LAYOUT**



CUSTOM AIR PRODUCTS & SERVICES, INC.

35 Southbelt Industrial Drive • Houston, Texas 77047

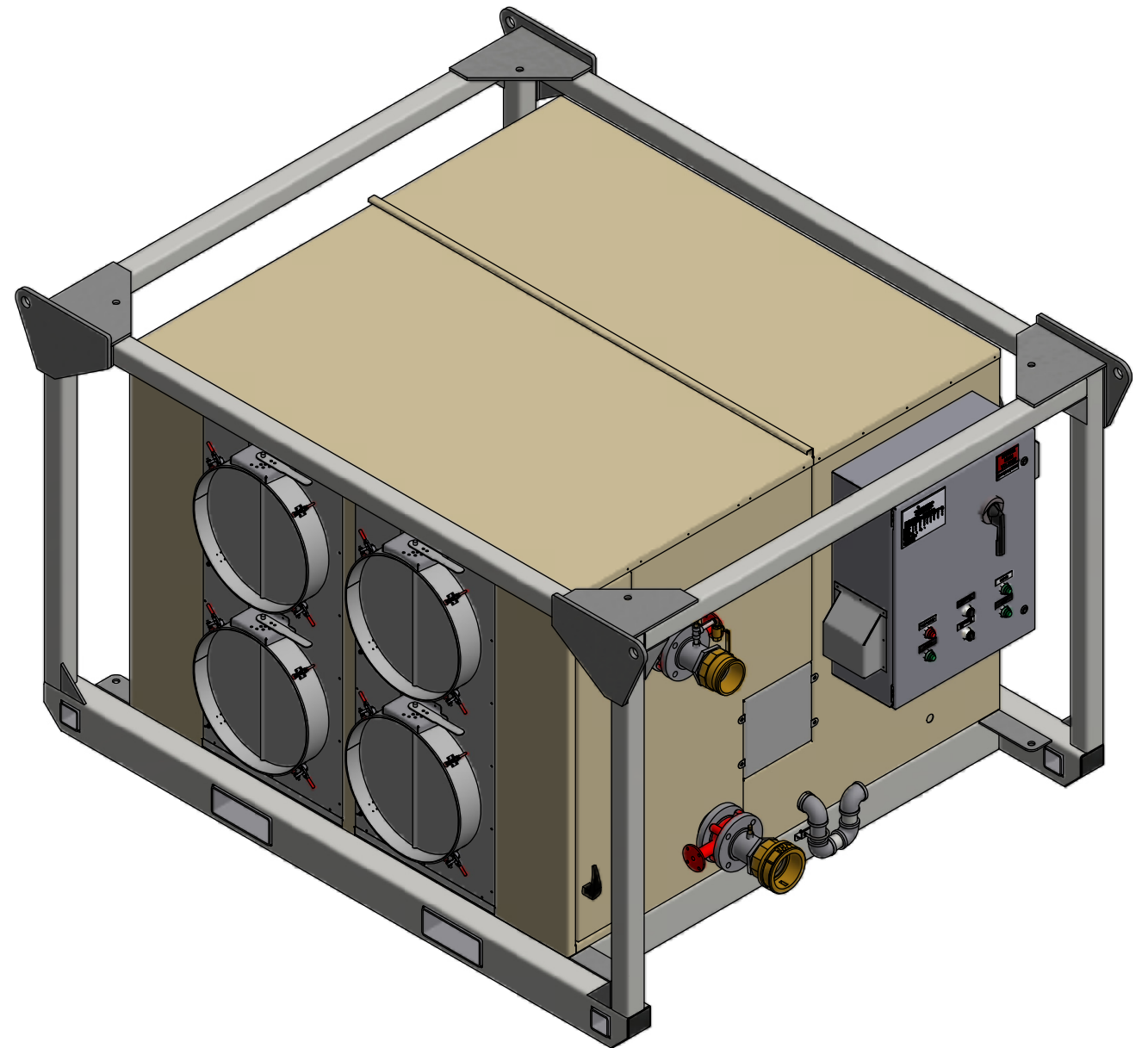
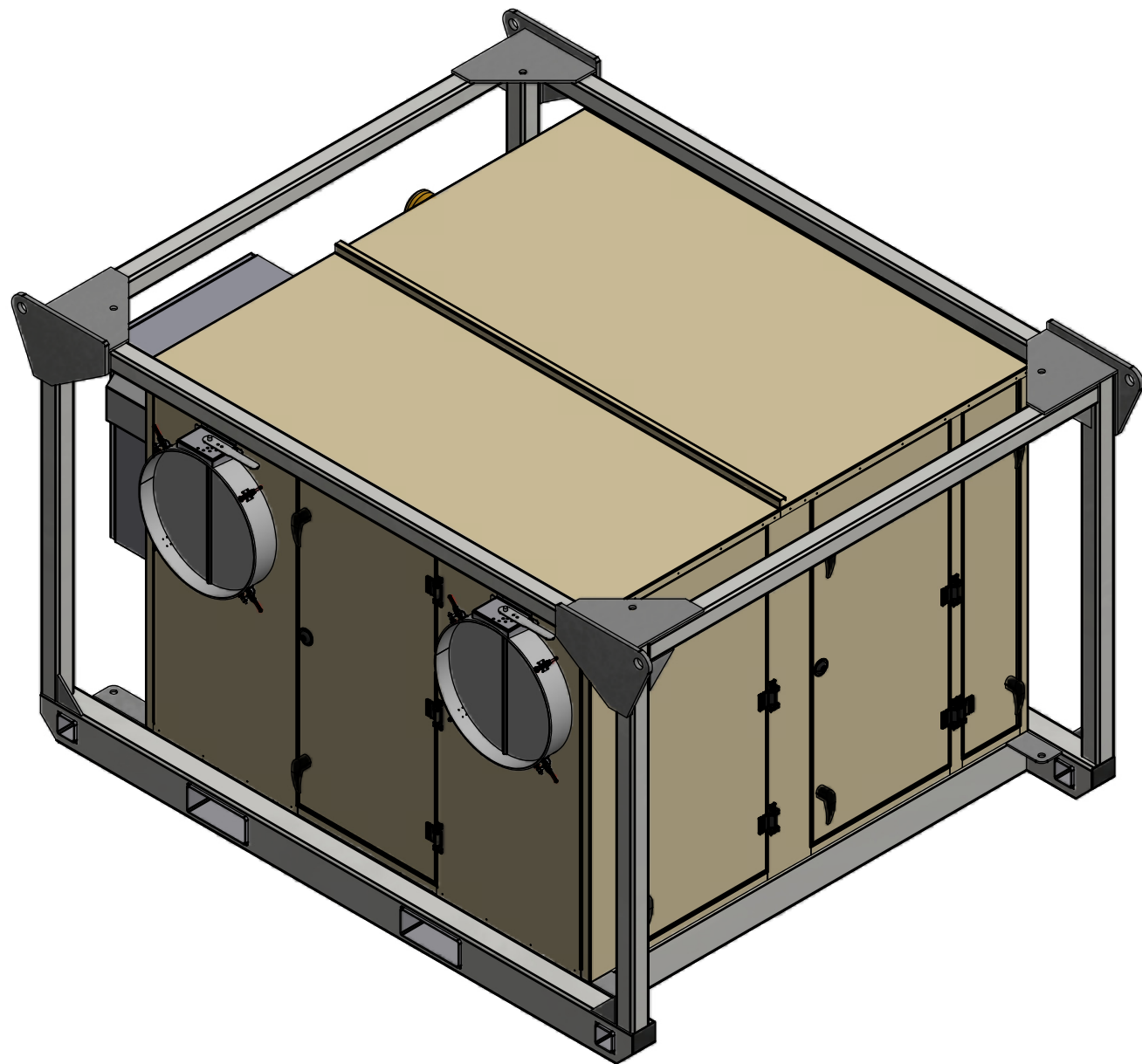
(713) 460-9009 • Fax (713) 460-9499

www.customairproducts.com

SECTION

05

MECHANICAL DRAWINGS



THIS DRAWING AND THE INFORMATION HEREIN CONTAINED ARE THE PROPERTY OF CUSTOM AIR PRODUCTS, WHICH HAS FURNISHED THEM IN CONFIDENCE UPON THE UNDERSTANDING AND CONDITION THAT ALL PERSONS, FIRMS OR CORPORATIONS RECEIVING SUCH DRAWINGS AND INFORMATION SHALL BY THE ACT OF RECEIVING THEM BE DEEMED TO HAVE AGREED: TO MAKE NO COPY, DUPLICATION, DISCLOSURE OR USE WHATSOEVER OF ALL OR ANY PART THEREOF EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY CUSTOM AIR PRODUCTS: NOT TO GIVE, LEND OR OTHERWISE DISPOSE OF THIS DRAWING; AND TO RETURN THIS DRAWING PROMPTLY UPON REQUEST.

CERTIFIED AS BUILT

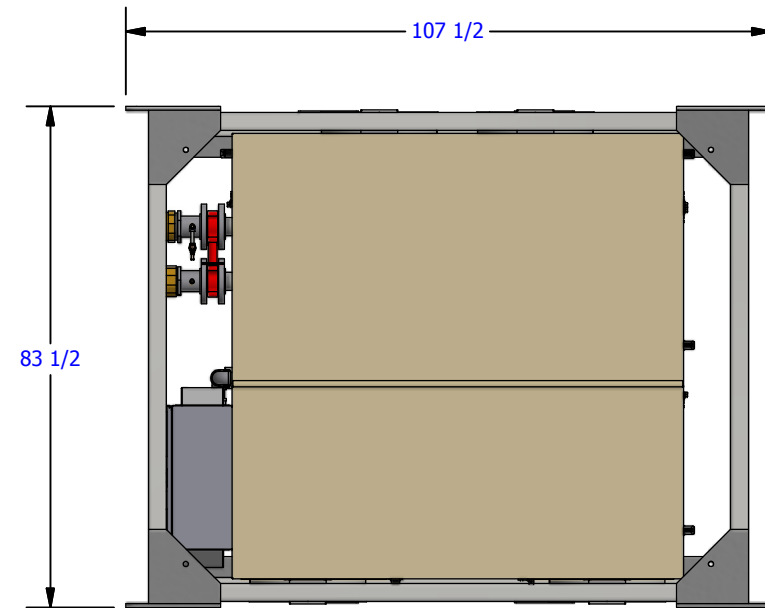
CHECKER: _____ DATE: _____

APPROVER: _____ DATE: _____

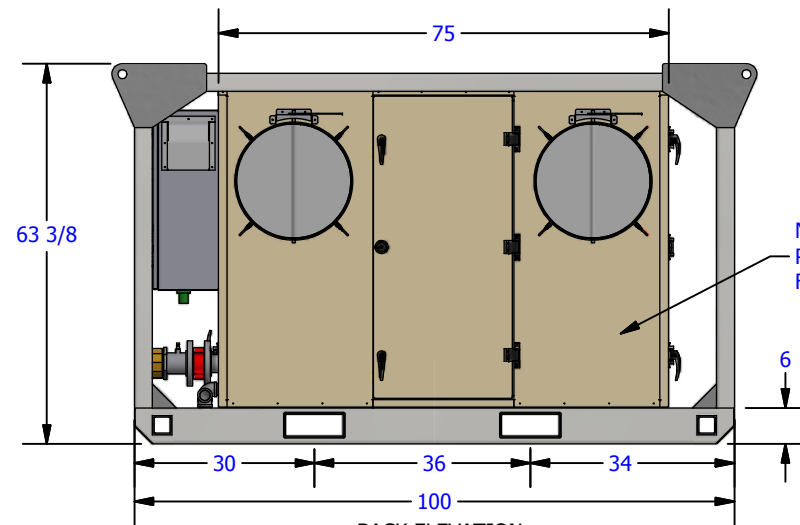
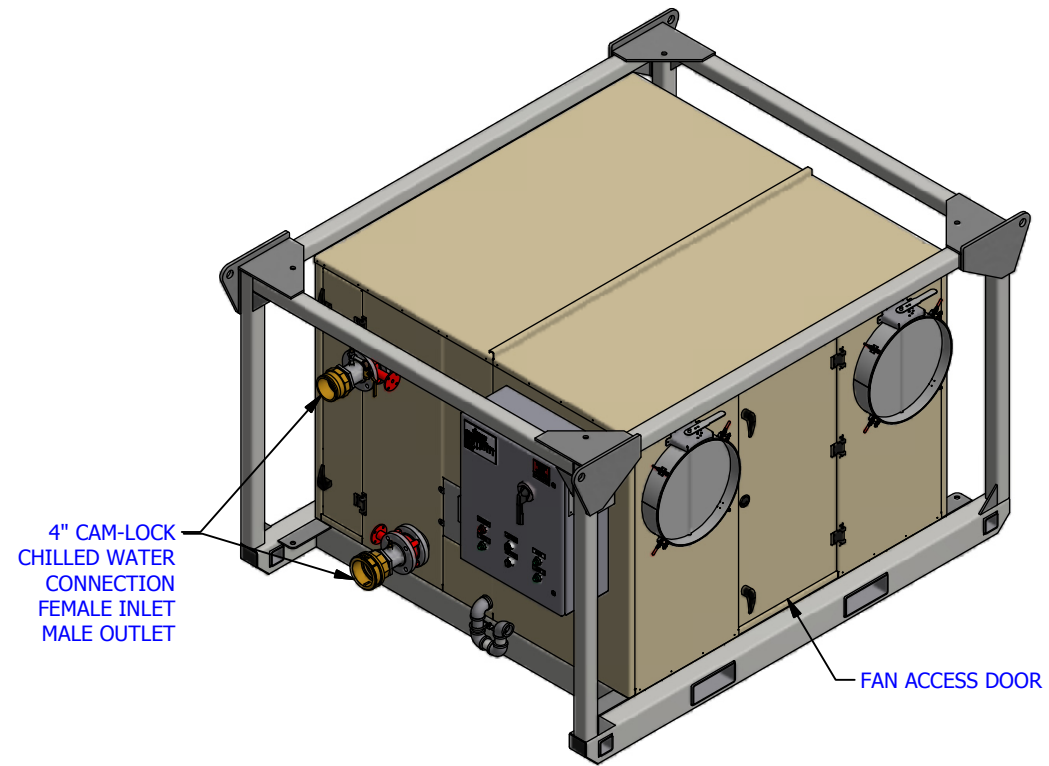
CAPS NO.:	DRAWING:	DESIGNER:	DATE:	CUSTOMER:
	50T-AHU-000	TIEN NGUYEN	4/21/2011	50 TON SKID MOUNTED & CAGED AHU 460V/3PH/60HZ GENERAL PURPOSE CONSTRUCTION MECHANICAL DESIGN
CUST. PO#:	SHEET:	CHECKER:	DATE:	
	1 OF 19			
SIZE:	REV:	APPROVER:	DATE:	
B	13			

NOTES:

1. UNIT WEIGHT TO BE TAG ALL FOUR (4) SIDES TO THE SKID. (PER CUSTOMER)
2. CENTER GRAVITY SYMBOL LOCATE FOUR (4) SIDES TO THE SKID. (PER CUSTOMER)



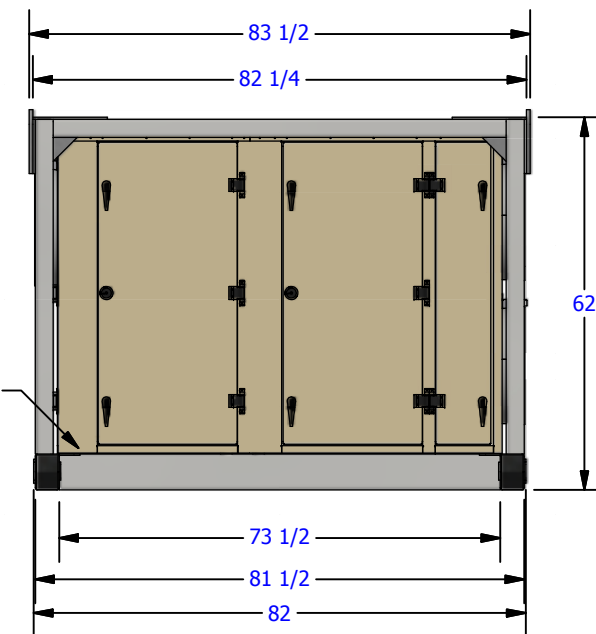
PLAN VIEW
SCALE 1 / 32



BACK ELEVATION
SCALE 1 / 32

NO WELDING ON THIS PANEL.
PANEL MUST BE REMOVEABLE
FOR FAN REPLACEMENT.

NO DRESSING ANGLE
AROUND PERIMETER
OF UNIT



LEFT ELEVATION
SCALE 1 / 32

UNIT WEIGHT: 3,200 LBS.



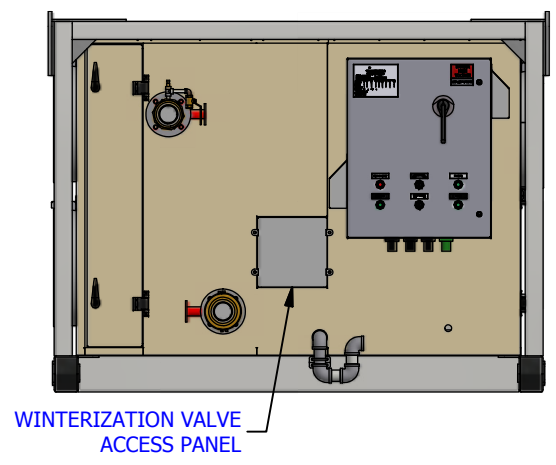
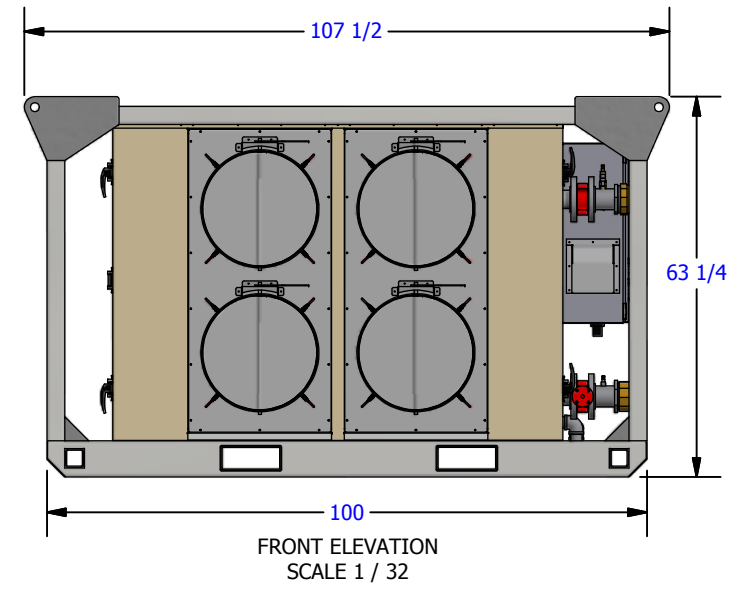
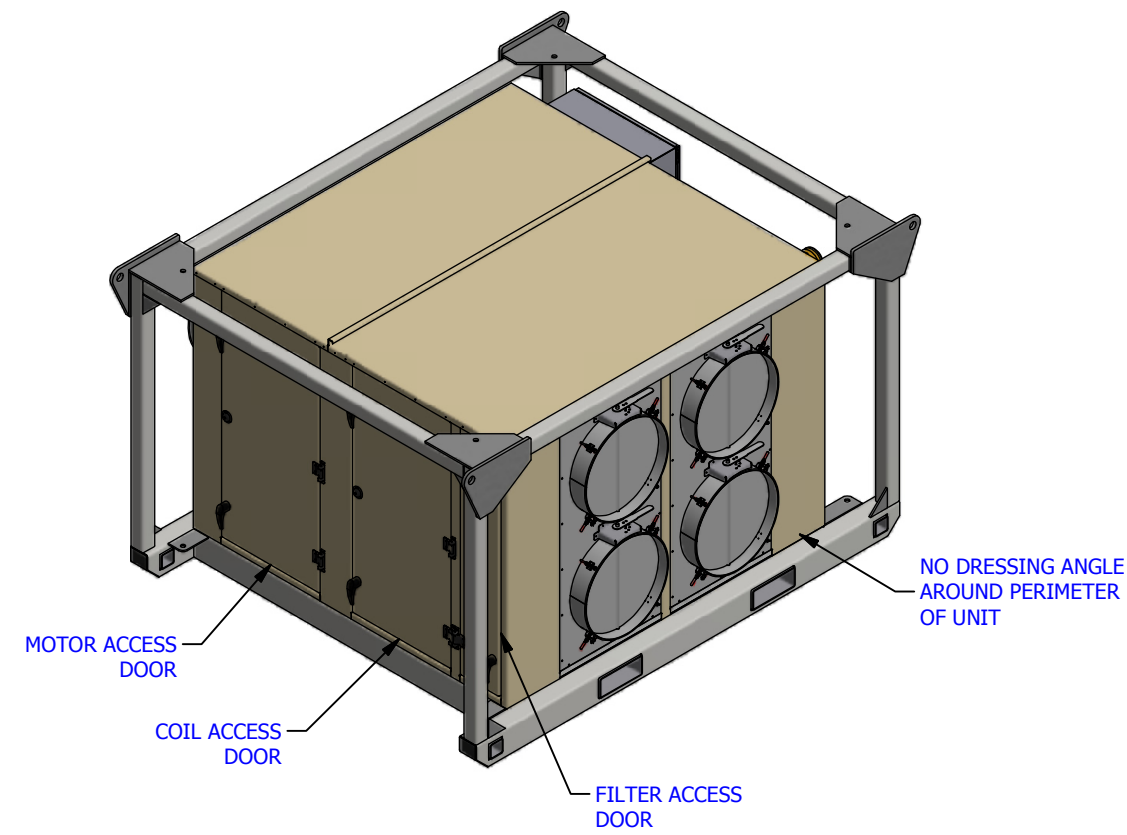
THIS DRAWING AND THE INFORMATION HEREIN CONTAINED ARE THE PROPERTY OF CUSTOM AIR PRODUCTS, WHICH HAS FURNISHED THEM IN CONFIDENCE UPON THE UNDERSTANDING AND CONDITION THAT ALL PERSONS, FIRMS OR CORPORATIONS RECEIVING SUCH DRAWINGS AND INFORMATION SHALL BY THE ACT OF RECEIVING THEM BE DEEMED TO HAVE AGREED: TO MAKE NO COPY, DUPLICATION, DISCLOSURE OR USE WHATSOEVER OF ALL OR ANY PART THEREOF EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY CUSTOM AIR PRODUCTS: NOT TO GIVE, LEND OR OTHERWISE DISPOSE OF THIS DRAWING; AND TO RETURN THIS DRAWING PROMPTLY UPON REQUEST.

CERTIFIED AS BUILT

CHECKER: _____ DATE: _____
APPROVER: _____ DATE: _____

CAPS NO.:	DRAWING:	DESIGNER:	DATE:	CUSTOMER:
	50T-AHU-000	TIEN NGUYEN	4/21/2011	
CUST. PO#:	SHEET:	CHECKER:	DATE:	
	2 OF 19			
SIZE:	REV:	APPROVER:	DATE:	
B	13			

50 TON SKID MOUNTED & CAGED AHU
460V/3PH/60HZ GENERAL PURPOSE CONSTRUCTION MECHANICAL DESIGN



THIS DRAWING AND THE INFORMATION HEREIN CONTAINED ARE THE PROPERTY OF CUSTOM AIR PRODUCTS, WHICH HAS FURNISHED THEM IN CONFIDENCE UPON THE UNDERSTANDING AND CONDITION THAT ALL PERSONS, FIRMS OR CORPORATIONS RECEIVING SUCH DRAWINGS AND INFORMATION SHALL BY THE ACT OF RECEIVING THEM BE DEEMED TO HAVE AGREED: TO MAKE NO COPY, DUPLICATION, DISCLOSURE OR USE WHATSOEVER OF ALL OR ANY PART THEREOF EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY CUSTOM AIR PRODUCTS: NOT TO GIVE, LEND OR OTHERWISE DISPOSE OF THIS DRAWING; AND TO RETURN THIS DRAWING PROMPTLY UPON REQUEST.

CERTIFIED AS BUILT

CHECKER: _____ DATE: _____

APPROVER: _____ DATE: _____

CAPS NO.:	DRAWING:	DESIGNER:	DATE:	CUSTOMER:
	50T-AHU-000	TIEN NGUYEN	4/21/2011	50 TON SKID MOUNTED & CAGED AHU 460V/3PH/60HZ GENERAL PURPOSE CONSTRUCTION MECHANICAL DESIGN
CUST. PO#:	SHEET:	CHECKER:	DATE:	
	3 OF 19			
SIZE:	REV:	APPROVER:	DATE:	
B	13			



CUSTOM AIR PRODUCTS & SERVICES, INC.

35 Southbelt Industrial Drive • Houston, Texas 77047

(713) 460-9009 • Fax (713) 460-9499

www.customairproducts.com

SECTION

06

SPARE PARTS LIST

SUGGESTED SPARE PARTS						
JOB #:	17F-0862		REVISION #:	0		
CUSTOMER	HERC					
PROJECT	2018 RENTAL FLEET					
ITEM #	DESIGNATION	BRAND	MODEL/PART #	DESCRIPTION	QTY	CAPS#
1	FAN	GREENHECK	18-APH-3-II-100	PLENUM FAN, 6,250 CFM @ 6.5" SP, 10 HP, 3600 RPM	1	
2	BUTTERFLY VALVE			3" BUTTERFLY VALVE	1	
3	BALL VALVE	PARKER		1/4" BALL VALVE, FEMALE-FEMALE	1	
4	VFD	YASKAWA	CIMR-VU4A0018FAA	10 HP FREQUENCY INVERTER 460-3-60	1	
5	POTENTIOMETER	C3 CONTROLS	POTO5k-TBW	5,000 OHM POTENTIOMETER, NEMA 4X	1	
6	FU1,2	MERSEN	ATQR6/10	6/10A TIME DELAY CLASS CC FUSE	1	
7	FU3	MERSEN	ATQR2	2A TIME DELAY CLASS CC FUSE	1	
8	FU4,5,6	MERSEN	AJT20	20A TIME DELAY CLASS J FUSES	1	
9	FU7,8,9	MERSEN	ATQR1/4	1/4A TIME DELAY CLASS CC FUSES	1	
10	FUSE HOLDER	MERSEN	US3J3	3 POLE ULTRASAFE FUSE HOLDER FOR J TYPE FUSES (VFD)	1	
11	FUSE HOLDER	WAGO	811-430	FUSE HOLDER, 3P, 30A, 600V, CLASS CC, CAGE CLAMP	1	
12	TIMER	ICM	ICM102	DELAY ON MAKE TIMER	1	
13	DIN RAIL MOUNT ADAPTER	LITTELFUSE	P1023-20	DIN RAIL MOUNT ADAPTER	1	
14	CAM-LOK	LEVITON	16R21-E	BLACK SINGLE POLE MALE RECEPTACLE 400AMP	1	
15	CAM-LOK	LEVITON	16R21-G	GREEN SINGLE POLE MALE RECEPTACLE 400AMP	1	
16	CAP	LEVITON	16P21-E	BLACK MALE PROTECTIVE CAP	1	
17	CAP	LEVITON	16P21-G	GREEN MALE PROTECTIVE CAP	1	
18	FAN	ORION	OA172AP-11-1TB	ENCLOSURE MUFFIN FAN	1	
19	FILTER	ORION	GRM172-45	ENCLOSURE FILTER	1	
20	GUARD	ORION	G172-10H	FAN GUARD	1	
21	GUARD	ORION	WMG1072M	WIRE MESH GUARD	1	
22	C1,2,3	SCHNEIDER ELECTRIC	LC1D18G7	10HP CONTACTOR 120VAC COIL	1	
23	CIRCUIT BREAKER	SCHNEIDER ELECTRIC	BDL36025	CIRCUIT BREAKER, 600V, 25A	1	
24	CONNECTORS	SCHNEIDER ELECTRIC	PDC6HD6	POWER DISTRIBUTION CONNECTORS (6) 14-6AWG KIT	1	
25	CONTACT	SCHNEIDER ELECTRIC	9001KA3	NC STANDARD CONTACT BLOCK	1	
26	CONTACT	SCHNEIDER ELECTRIC	9001KA2	NO STANDARD CONTACT BLOCK	1	
27	LIGHT	SCHNEIDER ELECTRIC	KP1G31	GREEN HEAVY DUTY PILOT LIGHT 120VAC	1	
28	LIGHT	SCHNEIDER ELECTRIC	KP1R31	RED HEAVY DUTY PILOT LIGHT 120VAC	1	
29	OVERLOAD	SCHNEIDER ELECTRIC	LRD21	OVERLOAD RELAY 12-18A	1	
30	SYSTEM SWITCH	SCHNEIDER ELECTRIC	9001KS42B	3 POSITION SELECTOR SWITCH	1	
31	TRANSFORMER	HPS	SP150MQMJ	CCT, 150VA, 240/480 X 120/240V	1	
32	PHASE MONITOR	SCHNEIDER ELECTRIC	RM17TU00	PHASE MONITOR	1	