

Facilities Development Division www.o 400 R Street. Suite 200, Sacramento, California 95811-6213

www.oshpd.ca.gov/fdd 11-6213 Phone (916) 440-8300 Fax (916) 654-2973

APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

	For Office Use Only						
	APPLICATION NO.	Check whe	ther application is: NEW	RENEWAL X			
	OSP - 0080-10						
	Governair		Jeff Fo	orman			
1.0	Manufacturer		Manufacturer's Tech	nical Representative			
	4841 Nor	th Sewell, (Oklahoma City OK 73118				
		Maili	ng Address				
	405-525-6546		jforman@go	vernair,com			
	Telephone		E-mail A				
2.0	ITF Series Custom Air Conditioni	ng Units	Custom Air Conditioning Units				
	Product Name		Produc	t Type			
	Product size limits are shown in the attachments. Casing construction consists of 16 ga. galv. steel panels fastened to a unitized interior steel frame from outside with mechanical fasteners. Fans within the ACU shall be internally isolated and ACU shall be rigid mounted to the floor without external isolators.						
	Product model No (List all unique product identification numbers and/or serial numbers)						
	General Description: These units are custom sized air conditioning units using standard Governair mechanical frame construction methods. Internal components include plenum fans, housed fans, Fanwall Technology®, condenser fans, coils, dampers, filters, louvers, sound attenuators, air blenders, air to air exchangers, humidifier grids, motor disconnect, electrical starter panel, electrical control panel, VFD's, motor OL panel, compressors, UV lights, indirect gas heaters, internal fan isolation bases and Fanwall back draft dampers. All changes incorporated into the test units and those required to address anomalies observed during tests shall be incorporated into the certified unit.						
	The VMC Group		John P. Giuliano, PE				
3.0	Applicant Company Name		Contact Person				
	113 Main St, Bloomingdale NJ, 07403						
	Mailing Address						
	973-838-1780		john.giuliano@thevmcgroup.com				
	Telephone		E-mail Address				
	eby agree to reimburse the Office o s incurred by the department for rev		Health Planning and Deve	elopment for the actual			
	Jel P. Stal		8/24	4/12			
	Signature of Applicant		Da	nte			
	President		The VM	C Group			
	Title			ny Name			



	Regi	istered Design Professional Prepari	ng the Report						
4.0		The VMC Group							
			Company Name						
		Mr. Kai Yin Ho		SE4941					
		Contact Name	Ctreet Discretised to NJ 074	California License Number					
-		113 Mair	Street, Bloomingdale NJ, 074	:03					
		973-838-1780	Mailing Address	as.ho@thevmcgroup.com					
-		Telephone		E-mail Address					
1	Calif	fornia Licensed Structural Engineer	Review and Acceptance of	the Report					
5.0		· ·	The VMC Group	,					
•			Company Name						
		Mr. Kai Yin Ho		SE4941					
•		Contact Name		California License Number					
_		113 Mair	Street, Bloomingdale NJ, 074	.03					
			Mailing Address						
		973-838-1780	sil	as.ho@thevmcgroup.com					
		Telephone		E-mail Address					
	Anci	horage Pre-Approval							
6.6		A mala was in the amount of condens C	2004						
	Ш	Anchorage is pre-approved under OPA-							
		(Separate application for anchorage	e pre-approval is required)						
	\boxtimes	Analogo va is not Due consult							
		Anchorage is not Pre-approved							
	0 1								
70		ification Method	_	_					
70.	\boxtimes	Testing in accordance with:	☑ ICC-ES AC-156	☐ Other (Please Specify):					
•		Analysis							
	П	Experience data							
	$\overline{\Box}$	Combination of Testing, Analysis, a	nd/or Evnerience Data (Please	Specify):					
	Ш	Combination of Testing, Analysis, a	nd/or Experience Data (Flease	s Specify).					
•									
	Test	ing Laboratory (if applicable)							
3.0		PEER, UC Berkeley		Wesley Neighbour					
-		Company Name		Contact Name					
		1302 So	uth 46 th St., Richmond Ca 948	04					
-		1302 30	,	<u> </u>					
		E40 00E 0400	Mailing Address						
		510-665-3409		wdn@berkeley.edu					
		Telephone		E-mail:					



	Testing Laboratory (if applicable)					
8.1	Trentec	Timothy Geers				
	Company Name	Contact Name				
	4600 East Tech Dr, Cincinnati, OH 45245					
	Mai	ling Address				
	513-528-7900	tgeers@curtisswright.com				
	Telephone	E-mail:				
	Testing Laboratory (if applicable)					
8.2						
8.2	Clark Dynamics	JR Antenucci				
8.2	Clark Dynamics Company Name	JR Antenucci Contact Name				
8.2	Company Name					
8.2	Company Name 1801 Rt 51, Jef	Contact Name				
8.2	Company Name 1801 Rt 51, Jef	Contact Name ferson Hills, PA 15025				



Name & Title

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	Assessed Bassassators	CIL FORMUL
9.0	Approval Parameters	
3.0	Design in accordance with ASCE 7-05 Chapter 13: Yes No	
	Design Basis of Equipment or Components $(F_p/W_p) = 4.35$	
	S_{DS} (Spectral response acceleration at short period) =1.93 g a_p (In-structure equipment or component amplification factor) =2.5	
	R_p (Equipment or component response modification factor) =2.0	
	I_p (Importance factor) = 1.5	
	z/h (Height factor ratio)= 1.0	
	Equipment or Component fundamental period(s) = See Attached Matrices	
	Building period limits (if any) =N/A	
	Overall dimensions and weight (or range thereof) = See Attached Matrices	
	Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: Yes	No
	Design Basis of Equipment or Components (V/W) =	
	S_{DS} (Spectral response acceleration at short period) =	
	S ₁ (Spectral response acceleration at 1 second period) =	
	R (Response modification coefficient)=1.0	
	Ω_0 (System overstrength factor) =1.0	
	C_d (Deflection amplification factor) =1.0	
	I_p (Importance factor) =1.5	
	Height to Center of Gravity above base =	
	Equipment or Component fundamental period(s) = Sec	
	Overall dimensions and weight (or range thereof) =	
	Tank(s) designed in accordance with ASME BPVC, 2007: Yes No	
10.0	List of attachments supporting the special seismic certification of equipment or components:	
•		
	☐ Calculations ☐ Others (Please Specify):	
11.0	OSHPD Approval (For Office Use Only)	16
	Signature & Date 8/31/2012 December 31, 20' Approval Expiration Date	
	M. R. Karim, SHFR $S_{DS}(g) = 1.93$ $z/h = 1.0$	

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Condition of Approval (if any):

Special Seismic Certification Valid Up to





UUT #1 - End Section Module - 96L x 129W x 105H

Cabinet Construction Summary:

Standard, Mechanical Frame; Galvanized Panels, Galv. & SS Liners, 7" base floor

Wall Removal Summary:

Three walls on unit (End Section)

Somponent Summary.									
		Dime	nsions	Lowest Natural Frequency					
Item	Length (in)	Width (in)	Height (in)	Weight (lb)	F-B (Hz)	S-S (Hz)	V (Hz)		
Cabinet	96	129	103	7,200	12.5	23.7	24.5		
Sound Attenuator	112	36	84	500	12.8	N/A	N/A		
Movable Blade Damper/Actuator	122	16	36	175	N/A	N/A	N/A		
Temtrol Motor Overload Panel	24	10	24	27	N/A	N/A	N/A		
Fanwall Array - 3x3 w/16" 5 hp fans	33	92	123	3795	12.2	22	25		
Yaskawa VFD - E7B (Large)	48	20	57	375	15.7	15.9	N/A		
	<u> </u>	<u>-</u>			<u>-</u>	<u>-</u>			







UUT #2 - End Section Module - 96L x 129W x 105H

Cabinet Construction Summary:

Standard, Mechanical Frame; Galvanized Panels, Galv. & SS Liners, 7" base floor

Wall Removal Summary:

Three walls on unit (End Section)

ural cy V
-
(Hz)
N/A
_







UUT #3 - End Section Module - 96L x 129W x 105H

Cabinet Construction Summary:

Standard, Welded Frame (Test not used for verification of unit construction)

Wall Removal Summary:

Three walls on unit (End Section)

Component Summary.									
		Dime	Lowest Natural Frequency						
Item	Length (in)	Width (in)	Height (in)	Weight (lb)	F-B (Hz)	S-S (Hz)	V (Hz)		
Cabinet	98	131	98	6,253	11.4	8.0	33.2		
Heat Transfer Coil - With middle supports - 45x120	120	12	45	1860	N/A	N/A	N/A		
Movable Blade Damper/Actuator 126x48	126	48	8	280	N/A	N/A	N/A		
Plenum Fan - PF02-44" 50 hp	54	110	72	1900	3.1	4.6	N/A		
Filter Rack - 84x108	108	6	84	210	11.4	N/A	N/A		
VFD - E7B - Medium (Yaskawa)	22	14	9	75	13.3	17.1	N/A		
Control Panel	48	41	16	160	N/A	N/A	N/A		







UUT #4 - "Small" Unit - 96L x 96W x 96H

Cabinet Construction Summary:

Standard, Mechanical Frame; Galvanized Panels, Galv. & SS Liners, 7" base floor

Wall Removal Summary:

No walls removed (Entire unit shaken)

		Lowest Natural Frequency					
Item	Length (in)	Width (in)	Height (in)	Weight (lb)	F-B (Hz)	S-S (Hz)	V (Hz)
Cabinet	96	96	96	3,975	12.0	17.8	N/A
Movable Blade Damper/Actuator	18	18	7	25	N/A	N/A	N/A
Housed Fan - AF-10" 1 hp	30	30	28	175	3.6	6.8	3.9
Plenum Fan - PF-12" 5 hp	28	28	31	225	2.8	3.9	4.9
VFD - V1000 - Large (Yaskawa)	6	6	13	17	N/A	N/A	N/A
Scroll Compressor - Small (Copeland)	18	18	32	84	N/A	N/A	N/A
Gas Heater (Heatco)	42	66	42	237	N/A	N/A	N/A
Cabinet Door					14.2	15.9	N/A







UUT #5 - "Medium" Unit - 96L x 144W x 144H

Cabinet Construction Summary:

Standard, Mechanical Frame; Galvanized Panels, Galv. & SS Liners, 7" base floor

Wall Removal Summary: (Cumulative)

(1) No Walls removed; (2) One back panel removed {Double-wide unit}; (3) End Panel removed {DW Unit - End section}

		Dime	Lowest Natural Frequency				
Item	Length (in)	Width (in)	Height (in)	Weight (lb)	F-B (Hz)	S-S (Hz)	V (Hz)
Cabinet	96	144	144	5,890	4.1	9.0	25.0
Humidifiers	8	24	24	38	N/A	N/A	N/A
HEPA Filter Frame	26	10	26	25	N/A	N/A	N/A
Fixed Blade Louvers (Horz.)	24	24	8	15	N/A	N/A	N/A
Plenum Fan - PF-10" 1 hp	20	14	15	137	N/A	N/A	N/A
Fanwall Fan - 12" 1 hp (unit / retrofit)	26	22	26	175	4.3	9.1	N/A
Condenser Fan - Large	36	36	18	145	N/A	N/A	N/A
VFD ACH550 (ABB)	15	21	38	135	N/A	N/A	N/A
Control Panel	24	6	22	60	2.8	N/A	27.7
Heat Transfer Coil - Small - No Intermediate Support	24	8	18	37	N/A	N/A	N/A







UUT #6 - "Large" Unit - 144L x 144W x 144H

Cabinet Construction Summary:

Standard, Mechanical Frame; Galvanized Panels, Galv. & SS Liners, 7" base floor

Wall Removal Summary: (Cumulative)

(1) No Walls removed; (2) Two end panels removed {Middle section}; (3) Back panel removed {DW Unit - Mid section}

	ipononi c	Lowest Natural Frequency					
Item	Length (in)	Width (in)	Height (in)	Weight (lb)	F-B (Hz)	S-S (Hz)	V (Hz)
Cabinet	144	144	144	7,435	5.0	6.7	16.6
Fan Wall Fan - 22" 12 hp (unit / retrofit)	30	40	40	410	N/A	N/A	N/A
Plenum Fan - PF-22" 10 hp	31	26	26	310	N/A	N/A	N/A
Air to Air Exchanger (Innergytech)	24	24	24	177	N/A	N/A	N/A
Condenser Fan - 24"	30	30	12	130	N/A	N/A	N/A
Fixed Blade Blenders (Blender Products)	24	6	24	75	N/A	N/A	N/A
Fixed Blade Louvers (Vert.)	24	8	24	70	N/A	N/A	N/A
Filter Rack	24	2	24	3	N/A	N/A	N/A
VFD - ACS320 (ABB)	12	9	54	37	9.0	4.1	15.0
Scroll Compressor (Copeland)	26	32	36	84	N/A	N/A	N/A
Control Panel	24	6	22	40	N/A	4.1	27.4
Cabinet Door					9.1	4.3	N/A







UUT #7 Air Handler Unit - 158L x 130W x 114H

Cabinet Constructioon Summary:

Standard, SS Mechanical Frame; Aluminum Panels, Aluminum Liners, 7" base floor

Wall Removal Summary:

(1) One wall removed and connected to UUT #8; (2) Two walls (inlet & outlet) removed and stand alone; (3) Three walls removed and stand alone

component summary.											
Item	Dimensions				Manufacturer	Description					
item	Length (in)	Width (in)	Height (in)	Weight (lb)	Manufacturer	Description					
Cabinet	158	136	114	4,614	Governair (Temtrol)	ITF					
Control Damper w/Actuator	8	24	12	45	Governair (Temtrol) / Siemens	Damper / Actuator					
Smoke Damper w/ Actuator	5	120	48	160	Ruskin / Honeywell	SD-60 Series / Actuator					
Control Damper w/ Actuator	5	24	12	45	Ruskin / none	CD-60 Series / Actuator					
Ruskin EAMS	12	24	12	22	Ruskin	Air Measuring Station					
Ruskin AML Louver	3	12	24	40	Ruskin	Air Measuring Louver					
Ruskin EME Louver	3	48	96	330	Ruskin	Stationay Louver					
Refrigerant Heatpipe	13.4	125.5	57.1	1630	Innergy Tech	Migrating Refrigerant Coil					
Large HeatWheel	16	103	103	1122	Innergy Tech	96" Dia					
Small Heatcraft Refrigerant Coil	5.5	24	25	53	Heatcraft	3 row, 6fpi					
Large Heatcraft Refrigerant Coil	7	96	36	132	Heatcraft	2 row, 6fpi					
Electric Heater	6.5	15	17.75	25	Markel	Unit Heater					
Humidifier	6.5	27	39	90	Dri-Steam	UltraSorb					
Humidifier	9.8	22	28	80	Nortec	UltraSorb					
Ventilation Fan	23	18	23	31	Dayton	20" Direct Drive					
Control Panel	10	16	42	120	Governair (Temtrol)	Component list to follow					
Airflow Station-Small	4	4	15	10	Paragon	Air Mearuring Station					
Airflow Station-Larger	4	4	34.5	18	Paragon	Air Mearuring Station					
Airflow Station-Small	4	4	15	10	Air Monitor Corp.	Air Mearuring Station					
Airflow Station-Larger	4	4	34.5	18	Air Monitor Corp.	Air Mearuring Station					

Lowest Natural Frequency	Χ	Υ	Z
of Cabinet (Hz)	6.6	5.4	8.1

^{*} denotes component was pressurized with nitrogen charge during test. Unit passed pre and post shake functioanlity tests.

	Outer	14 ga Aluminum
Cabinet Wall Constuction	Inner	18 ga Aluminum
Cabinet Wall Constaction	Insulation	Fiberglass / Foam
	Panel Width	May Width 24"







UUT #8 Evaporator Condenser Module - 158L x 136W x 128H

Cabinet Constructioon Summary:

Standard, Mechanical Frame; Steel Panel, Galv. & SS Liners, 7" base floor

Wall Removal Summary:

(1) No walls removed and connected to UUT #7; (2) No walls removed and stand alone

Thomas		Dime	nsions		Manufachunan	Description
Item	Length (in)	Width (in)	Height (in)	Weight (lb)	Manufacturer	Description
Cabinet	158	136	114	10,500	Governair/Mammoth	ITF/WF
Condenser Fans	107.75	49.5	18.25	900	Governair/Ziehl	36" Dia, 3 HP Motor
Compressors	41.39	21.76	29.46	350	Emerson	Emerson Compressors
Small Evap Condenser Coil *	128.25	45.875	20	800	Governair	Finless Tube Bundle
Condenser Pump *	28.75	14.5	12	550	ITT B & G	3hp Pump
Plate Heat Exchanger *	11	9.5	20.625	100	SWEP / Flat Plate	Plate Heat Exchanger
Small HeatWheel	15	58	58	500	Innergy Tech	48" Dia
Receiver *	35	7	7.125	30	Refrigeration Research	Liquid Receiver
Small COAX Heat Exchanger *	13.875	12.313	5.0625	20	Packless	Double Wound Helix 3 Tons
Large COAX Heat Exchanger *	18	17.5	7.375	65	Packless	Double Wound Helix 7-1/2 Tons
Spray Tree	97.75	39	6.75	60	Governair	PVC Pipe

Lowest Natural Frequency	Χ	Υ	Z
of Cabinet (Hz)	6.4	6.7	8.2

^{*} denotes component was pressurized with nitrogen charge during test. Unit passed pre and post shake functioanlity tests.

	Outer	16ga Steel (Cabinet) / 20ga Steel (Cabinet)
Cabinet Wall Constuction	Inner	20ga Galv (Cabinet) / 20ga 304 SS (Condenser)
Cabinet Wall Constuction	Insulation	Fiberglass / Foam
	Panel Width	Max 24"





Table 1 **Fan Component**

Housed	HP	1	3	5	7 1/2	10	20	30	40	50	60	75	100	Test	
Fan	Weight	43	43	55	108	172	324	525	640	662	1036	1047	1302	Unit	Manufacturer
Size Weight	10	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	4	
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	х	Х	Х	Х	Х	Х	Х	Х		ernair
Size Weight		Х	Х	Х	Х	х	Х	Х	Х	Х	Х	Х	Х		- Gov
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		Temtrol - Governair
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		•
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	2	
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		

Includes Optional Internal Seismic Isolation Base Motor - Baldor - Dual Voltage 208/230V & 460V (UUT2 & UUT4) Wheel Construction - steel

Housing Construction - steel



Fan Component Table 2

	mpon													I abi	
Plenum	HP	1	3	5	7 1/2	10	20	30	40	50	60	75	100	Test Unit	Manufacturer
Fan Size	Weight		43	55	108	172	324	525	640	662	1036	1047	1302		
Weight		Х	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	X	5	
Size		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	1 & 4	
Weight		^	^	^	^	^	^	^	^	^			^	144	
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight	16	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight	18	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size			<u> </u>	<u> </u>							<u> </u>	l			
Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	6	ernair
Size Weight		Х	Х	Х	Х	Х	Х	х	х	Х	Х	Х	Х		Temtrol - Governair
Size Weight		Х	Х	Х	Х	Х	Х	Х	х	Х	Х	Х	Х		Femtro
Size Weight	30	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		_
Size			l	<u> </u>							l	<u> </u>			
Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	х	Х	Х	Х	х	Х	Х	Х	Х		
Size Weight		Х	Х	Х	Х	Х	Х	Х	х	Х	Х	Х	Х		
Size Weight	44	Х	Х	Х	Х	Х	Х	Х	х	Х	Х	Х	Х	3	
Size Weight	49	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Size			l			—					l	l		${oxdot}$	
Weight		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		

Motor - Baldor - 208V, 230V, 460V Wheel Construction - Aluminum or steel Housing Construction - Aluminum or steel

Fan Component Table 3

Fanwall	HP eight	1 45	1.5 54	2	2.5 58	3	3.5	4 5	4.5	5	5.5	6 105	6.5	7	7.5	8	8.5 154	9	9.5	10	10.5	11 170	11.5	12	Test Unit	Mfr	
Size 10 Weight 170		Х	X	Х	Х	х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х			
Size 12 Weight 225		Х	Х	Х	Х	х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	5		
Size 14 Weight 240		Х	Х	Х	Х	х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х	х	Х	Х		/ernair	
Size 16 Weight 285	\exists	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	1	ol - Gov	
Size 18 Weight 310	\exists	Х	Х	Х	Х	х	Х	Х	Х	Х	Х	Х	Х	х	х	Х	Х	Х	Х	Х	х	х	Х	Х		Temtro	
Size 20 Weight 390	\exists	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х			
Size 22 Weight 410		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	6		

Fanwall - Small, Medium, And Large FWT Cubes Tested With FBD Fanwall Backdraft (FBD) Included (Test Units 5 & 6)

Fanwall Retrofit Cubes Approved Motor - Baldor - 208V, 230V, 460V

Tested

Wheel Construction - Aluminum Housing Construction - Aluminum

Condenser Fans -Air Cooled Table 4

Size	Weight (Lb)	Test Unit	Manufacturer
24"	130	6	Governair
30"	145	5	Governali
_			

Compressor Voltage - 208V, 230V, 460V Tested

Model Tons Unit Dimensions Weight UUT Manufactur ZP Series (Small) 5 18 32 18 84 4 ZP Series (Large) 40 22 29 5 414 350 8							Table 5
Model	Tono		Unit	Dimens	sions		Manufacturar
Model	10115	W	Н	L	Weight	UUT	Manuacturei
ZP Series (Small)	5	18	32	18	84	4	
ZP Series (Large)	40	22	29.5	41.4	350	8	Copeland
							Copelariu
7P Series (Large)	30	32	36	26	300	6	

Model ZP54K3E Shake Tested Model ZPT470KCE-TWD-251 Tested

Model ZP385KCE Shake Tested

Motor - 208V, 230V, 460V Tested



Coil Component Table 6

											F	n Length	1										Test	Mfr
		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126		Unit	IVIII
	12	Х	Х	Χ	X	Х	Χ	Х	Х	Х	Х	X	Х	Χ	Х	Х	Х	Х	Х	Χ	Х			
	15	Х	X	Х	X	Х	Χ	Х	Х	Χ	Х	X	Χ	Х	Х	Х	Χ	Χ	Χ	Х	Χ			1 1
	18	Х	Х	Χ	X	X	Χ	Χ	Χ	Х	Х	X	Х	Χ	Х	Х	Х	Χ	Х	Χ	Х		5	1 1
	21	Х	X	Х	X	Х	Χ	Х	Х	Χ	Х	X	Χ	Х	Х	Х	Χ	Χ	Χ	Х	Χ	ngth		.⊨
	24	Х	X	Х	X	Х	Χ	Х	Х	Χ	Х	X	Χ	Х	Х	Х	Χ	Χ	Χ	Х	Χ	Lei		Па
Height	27	Х	X	Х	X	Х	Χ	Х	Х	Χ	Х	X	Χ	Х	Х	Х	Χ	Χ	Χ	Х	Χ	.⊑		Š
<u>ē</u>	30	Х	X	Х	X	Х	Χ	Х	Х	Χ	Х	X	Χ	Х	Х	Х	Χ	Χ	Χ	Х	Χ	×.		တိ
.⊑	33	Х	X	Х	X	Х	Χ	Х	Х	Χ	Х	X	Χ	Х	Х	Х	Χ	Χ	Χ	Х	Χ	Ma		<u> </u>
*	36	Х	Х	X	X	Х	Х	Х	Х	Х	Х	Х	Х	X	X	Х	Х	Х	Х	Х	Х	- 21		mtrc
	39	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	16		Φ.
	42	Х	Х	Χ	Х	Х	Χ	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Х	Х	Х	Χ	Х	2		⊢
	45	Х	X	Х	X	Х	Χ	Х	Х	Χ	Х	X	Χ	Х	Х	Х	Χ	Χ	Χ	Х	Χ		3**	1 1
	48	Х	Х	Χ	Х	Х	Χ	Χ	Χ	Х	Х	X	Х	Χ	Х	Х	Х	Χ	Х	Χ	Х			1 1
	51	Х	Х	Χ	Х	Χ	Χ	Χ	Χ	Х	X	Х	Х	Χ	Χ	Х	Х	Χ	Х	Χ	Х			ш

OSHPD Approved coils:

Single Coil Size Minimum FH = 12" (+1.5" increments), Max FL = 216" (1" increments)

Multi-stacked coils available (2,3 or 4) coils high (No coil rack required)

Coil Variables:

- 1. Tube Wall = .017, .020, .025, .035, .049
- 2. Fin Material = Alum , Copper
- 3. Fin Thickness = .006, .008, .010
- 4. Fin Spacing (FPI) = 4, 6, 7, 8, 9, 10, 11, 12, 13, 14
- 5. Rows = 1, 2, 3, 4, 6, 8, 10, 12
- Coil Casing = Galvanized or Stainless Steel
 Type CW, HW, NFS & DX are OSHPD approved.

DX E

Eva	aporat	or Coi	il - H	leatc	raft											Table	6A	
								Fin L	ength								Test	Mfr
		6		24		48	48.1		96	96.1		144	144.01		192		Unit	IVIII
	6	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х	Х	Х	Х	Х			
	9	X	X	X	Χ	Х	Х	Χ	Χ	Χ	Х	Χ	Х	X	X	ے ا		
	12	Х	X	X	Х	X	X	Χ	Χ	Х	Х	Х	Х	X	X) Ju		
	15	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Χ	Χ	Х	Χ	Х	Length		
,	18	X	X	X	Χ	Х	Х	Χ	Χ	Χ	Х	Χ	X	X	X	.⊑		#
	21	X	X	X	Χ	Х	Х	Χ	Χ	Χ	Х	Χ	X	X	X	L U		HeatCraft
	24	X	X	X	Χ	Х	Х	Χ	Χ	Χ	Х	Χ	X	X	X	Max		eat
	25	X	X	X	Χ	Х	Х	Χ	Χ	Χ	Х	Χ	X	X	X		7	Ĭ
	27	Х	X	X	Х	X	X	Χ	Χ	Х	Х	Х	Х	X	X	192"-		
	30	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Χ	Χ	Х	Χ	Х			
	33	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Χ	Χ	Х	Χ	Х			
	36	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Χ	Χ	Х	Χ	Х		7	
			0 Tube	Sheets	3	ĺ	1 Tu	ıbe Sh	eets	27	Tube She	eets	4 Tub	e She	ets			

OSHPD Approved coils:

Single Coil Size Minimum FH = 6" (+1.5" increments), Max FL = 192" (1" increments)

Multi-stacked coils available (2,3 or 4) coils high (No coil rack required) Includes E Series and C Series Coils

Coil Variables:

* Fin Height

- 1. Tube Wall = 2. Tube Dia =
- 3. Fin Material = 4. Fin Thickness =
- 5. Fin Spacing (FPI) =
- 6. Rows =
- 7. Coil Casing =

0.	013"	0.0	16"	0.0	20"	0.0	25"	0.	030"	0.03
0.	375"	0.	5"							
Α	lum	Cop	oper			_				
0.	006"	0.00	075"	0.00)95"	1				
4	6	7	8	9	10	11	12	13	14	1 3

10

SS (Opt) SS Tested on DX Condenser Coil Tested:

0.049"

3 row , 6 fins, 25" x 24", cooper fins, Galv casing, TD .5", TW .016", FT .0075" 3 row , 6 fins, 36" x 96", Alum fins, Galv casing, TD .375", TW .016", FT .0075"



Gas Heat - Indirect Table 7

Input	Weight (Lb)	Manufacturer (HMA Series)	Test Unit
200 MBH	120		
400 MBH	237	Heatco	4
600 MBH	378		

VFD Table 9

Model	Weight Lb.	UUT	Manufacturer
E7N-Large	142	2	Yaskawa
E7B-Large	375	1	Yaskawa
E7B-Medium	75	3	Yaskawa
V1000-Large	17	4	Yaskawa
ACH550-Large	135	5	ABB
ACS320-Small	37	6	ABB

Starter Panel Table 10

Height	Width	Weight (Lb.)	UUT	Manufacturer
22 1/2	10	14		
26	10.5	21		
42	16	38		Temtrol / Governair
38	20	42	2	
56	24	47		

Gasketed NEMA 3R/12 Enclosure Non-Automatic Circuit Breaker Switch With Flange Mounted Disconnect Handle Type 4X "Hand-Off-Auto" Switch. Magnetic NEMA Size Starter With 3 Phase Overload Panel N.O. And N.C. Aux. Contacts Dual Element Motor Fusing 120 Volt Control Transformer With Primary And Secondary Fusing Control Terminal Strip Ground Lugs Stranded Copper, THHN Wiring

Electrical	Control	Panel	Table	8
------------	---------	-------	-------	---

	Manufacturer	UUT	Weight (Lb.)	Width	Height
1	•	5	60	18	24
			100	30	30
ir	Temtrol / Governai		150	36	46
ı	•	3	300	64	80
1	• •	7	150	16	42
ı	••	7	90	24	36

Manual Starter Protector (MSP) With Auxillary Contacts • 208/230/460VAC
Power Block • Display Module Touch Screen
120/24VAC Transformer
Starters • NEMA 1 Or 3R Enclosure

Fuses

Digital Scroll Controller

• • Current Transducer

- Contactors
- Circuit Breakers
- Alerton / ALC / •• Siemens DDC Controls
- 120/24VAC Relays/Bases
- Hand/Off/Auto Switches
- Indicator Lights
- Phase Monitor
- Current Switches and Current Transducer
- In-Panel Disconnect
- Ground Lugs Stranded Copper Wiring (THHN, THW, MTW)

Motor Overload Panel Table 11

OVC	IIOac	i i aiic	•	IUD
Height	Width	Weight (Lb.)	UUT	Manufactur er
12	12	7		
12	16	10	5	.⊑
16	20	17		na
20	16	19		Temtrol / Governair
20	20	24		Ô
20	24	25		<u></u>
24	20	25		tro
24	24	27	1	eπ
24	30	35		_
30	30	39		

- 208/320/460 Volt
- MOP Includes Manual Starter Protector (MSP)
 With Auxiliary Contacts, Starter Monitoring Terminals
 Power Terminals And Power Block
- NEMA 4 Enclosure



Damper Component Table 12

		Width													Test Unit	Mfr											
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126	132	138	144	rest Unit	IVIII
	6	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	Х		
	12	Х	Х	Х	X	Х	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		_
	18	X	X	X	Χ	Х	Χ	X	Χ	Χ	Χ	X	X	Х	X	X	X	Х	Χ	Χ	Х	Х	Х	Х	Х	4	air
=	24	X	X	X	Χ	Х	Χ	X	Χ	Χ	Χ	X	X	Х	X	X	X	Х	Χ	Χ	Х	Х	Х	Х	Х		/en
eigh	30	X	X	X	Χ	Х	Χ	X	Χ	Χ	Χ	X	X	Х	X	X	X	Х	Χ	Χ	Х	Х	Х	Х	Х		30
Ϋ́	36	X	X	X	Χ	Х	Χ	X	Χ	Χ	Χ	X	X	Х	X	X	X	Х	Χ	Χ	X	Х	Х	Х	Х	1	0//0
*	42	X	X	Х	Χ	Х	Χ	X	Χ	Χ	Χ	X	X	Х	X	X	X	Х	Χ	Χ	Х	Х	Х	Х	Х		ntr
	48	X	X	Х	X	X	Х	X	Χ	X	X	X	X	Х	X	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	3	Ter
	54	Х	Х	Х	X	Х	Χ	Х	Χ	Х	Х	Х	Х	Х	Χ	Х	X	Х	Х	Χ	Х	Х	Х	Х	Х		
	60	Х	Х	Х	X	Х	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		

^{*} Single Damper Size (60" x 144")

Damper Component (Ruskin) Table 12A

													Width													Test Unit	Mfr
		8	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126	132	138	144	rest offic	IVIII
	8	Х	Х	Х	Х	Х	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х	Х	Х		
	12	Х	Х	Х	X	Х	Х	Х	Χ	X	X	X	X	Х	Х	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Χ		
	18	Х	Х	Х	X	Х	Х	Х	Χ	X	X	X	X	Х	Х	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Χ		ja ja
±	24	Х	Х	Х	X	Х	Χ	Χ	Х	X	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Χ	Х	Х	7	/en
leight	30	Х	Х	Х	X	Х	Х	Х	Χ	X	X	X	X	Х	Х	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Χ		9
Ψ̈́	36	Х	Х	Х	X	Х	Х	Х	Χ	X	X	X	X	Х	Х	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Χ		ĕ
*	42	Х	Х	Х	X	Х	Χ	Χ	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Χ	Х	Х		ŧ
	48	Х	Х	Х	X	Х	Χ	Χ	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Χ	Х	Х	7	Ē
	54	Х	Х	Х	X	Х	Χ	Χ	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Χ	Х	Х	Χ	Х	Х		<u> </u>
	60	Х	X	Х	Х	Х	Х	Х	Χ	Х	Х	X	X	X	X	X	Х	Х	Χ	Х	Х	Х	Х	Х	Χ		

^{*} Single Damper Size (60" x 60") Includes CD-60 and SD-60 Model Dampers Includes 120V and 24V Actuators

Other Components Covered By This OSP

Table 13

		I able 13
Description	Test Unit	Manufacturer
Fixed Blade Horizontal Louver	5	Temtrol / Governair
Fixed Blade Vertical Louver	6	Temtrol / Governair
Fixed Blade Vertical Louver	7	Ruskin
Fixed Blade Vertical Louver w/ Air Monitor	7	Ruskin
Sound Attenuator	1	Temtrol / Governair
Air To Air Exchanger	6	Innergy Tech
Filter Rack - Type 8 - 120" x 132"	2	Temtrol / Governair
Fixed Blade Blenders	6	Blender Products
Filter Frames - HEPA	5	Temtrol / Governair
Filter Frames - Type 8 Holding	6	Temtrol / Governair
Humidifier Grids	5	Vapac
Humidifier Grids	7	Nortec
Humidifier Grids	7	Dri-Steam
Reciever - Size Depends on unit capacity	8	Refrigeration Research

Heatpipe Component Table 13A

										Length	Std Incr	ements									Test	Mfr
		24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	Unit	IVIII
	5																					
ace	10																					당
Sta	15																					e H
·= ω	20																					gy
യ ഇ	25									Χ										Χ	7	Jei
du Fis	30																					르
	32																					
	,				Single	modu	е						-	Side hy	/ Side	module	S					

OSHPD Approved coils:

Single Coil Module: 25 Tubes In Face only

Side-by-Side Module permitted.
Single-stacked coils available only (No coil rack required)

Coil Variables:

- 1. Fin Material = Alum only
- 2. Fin Spacing (FPI) = 11 only
- 3. Rows = 6 only
 4. Coil Casing = Stainless Steel



Heatwheel Component

Table 14

Dia	Height	Width	Weight (Lb.)	UUT	Manufacturer
48	58	58	720	8	
54	64	64	790		_
62	72	72	910		Tech
70	80	80	1080		
78	87	87	1230		Innergy
88	95	95	1400		<u>u</u>
96	103	103	1560	7	_
108	115	115	1800		

Other Components Covered By This OSP Table 15

Description	Test Unit	Manufacturer	Power
UV Light	5	Lumalier	120V
Motor Disconnect	2	Temtrol / Governair	208-460V
Air Monitor Station	7	Ruskin	24V
Air Monitor Station	7	Paragon	24V
Air Monitor Station	7	Ebtron	24V
UV Light	7	UV Resources	120V
Hot Gas Bypass Valve and Controller IB-6	7 & 8	Sporlan	24V

Electric Heater "208/230V , 460V"

Table 15A

Model	KW Rating	Unit Dimensions				Test	Manufacturer
Model	KW Kating	W	Н	D	Weight	Unit	Manufacturer
5100 Series	3.3 - 5.0	15	17.8	6.5	25	7	Markel

Tested - 208V & 460V

Coax Heat Exchan		Table 16					
Model	Capacity	Unit Dimensions				Test Unit	Manufacturer
	Tons	W	Н	L	Weight		
COAX-2201-J	2	10.6	4	13			
COAX-2251-J	2.5	10.4	5.1	12.5			
COAX-2301-J	3	12.3	5	14	20	8	
COAX-2351-J	3.5	12.4	6.1	14.3			
COAX-2401-J	4	14.1	5	16.3			
COAX-2501-J	5	15.4	6	17			
COAX-2601-J	6	15.25	7.25	17.8			
COAX-2751-J	7.5	17.5	7.4	18			Packless
COCX-2201-J	2	10.6	4	13			Fackless
COCX-2251-J	2.5	10.4	5.1	12.5			
COCX-2301-J	3	12.3	5	14			
COCX-2351-J	3.5	12.4	6.1	14.3			
COCX-2401-J	4	14.1	5	16.3			
COCX-2501-J	5	15.4	6	17			
COCX-2601-J	6	15.25	7.25	17.8			
COCX-2751-J	7.5	17.5	7.5	18	65	8	

Outer Shell: Steel Inner Tube: Copper, Cupro-Nickel

Plate Heat Exch		Table 17				
Model			: Dimer		Test Unit	Manufacturer
	W	Н	L	Weight		
Flat Plate	10	21	8	100	8	SWFP



DDC Sensors

Table 18

	Test 1	
Sensor Type	Unit	Power
 Outside Tempeature and Humidity 	7	1
Duct Temperature Sensor	7	N/A
 Smoke Dectector with sampling tube 	7	1 or 2
 Smoke Dectector - Ionization 	7	1 or 2
Differential Pressure Transmitter	7	1
Differential Pressure Switch	7	N/A
 Differential Pessure Switch with Reset 	7	1
 Thermister Type 2 - 10K - Duct 	7	N/A
 Thermister Type 2 - 10K Averaging 	7	N/A
Remote Bulb Thermister - 30 to 120	7	N/A
Low Limit Thermister with reset	7	1
Air Probe	7	1
Air Probe Swith	7	1

Active Components use by DDC controllers in TABLE 8 throughout the air tunnel to measure and record data.

- 1- Component powered by 24V 2- Component powered by 120V

Control singal to input of controller is either 0 to 10V, 4mA to 20mA or resistant value

Evap Condenser Modules

Table 19

Model #	Nominal Cooling Capacity		Unit	Dimen	sions	Test Unit	Manufacturer
	Tons	W	Η	L	Weight		
SCE-ECM1-11-110-4-S-N-E	110	136	128	158	10,500	8	Governair / Mammoth

Condenser Fans		Table 19A
	Test	

Size	Weight (Lb)	Test Unit	Manufacturer	
36"	420	8	Governair	

Motor - 208V, 230V, 460V Tested

Condenser Pumi	ns T	able	19
Condense Fulli	və i	anic	10

-				
ſ	Size	Weight (Lb)	Test Unit	Manufacturer
ſ	3 hp	125	8	ITT Bell & Gosset

Motor - 460V Tested

Condenser Coil Table 19C

Conde	Iabi	6 130			
		Coil L	Test	Mfr	
		92	129	Unit	IVIII
	6	X	Х		
	9	Х	X		
	12	X	Х		
	15	Х	Х		
	18	Х	X		£
	21	Х	X		ш
븅	24	Х	X		am
Š	25	Х	Х	8	Σ
* Coil Width	27	X	Х		Governair / Mammoth
· ·	30	Х	X		in in
	33	Х	X		ove.
	36	Х	Х	8	Ŏ
	39	Х	X		
	42	Х	Х		
	45	X	Х		
	48	Х	Х		
		3 tube	sheets		

(Coil In Horizontal Configuration)

Coil Variables:

1. Tube Wall = 2. Tube Dia =

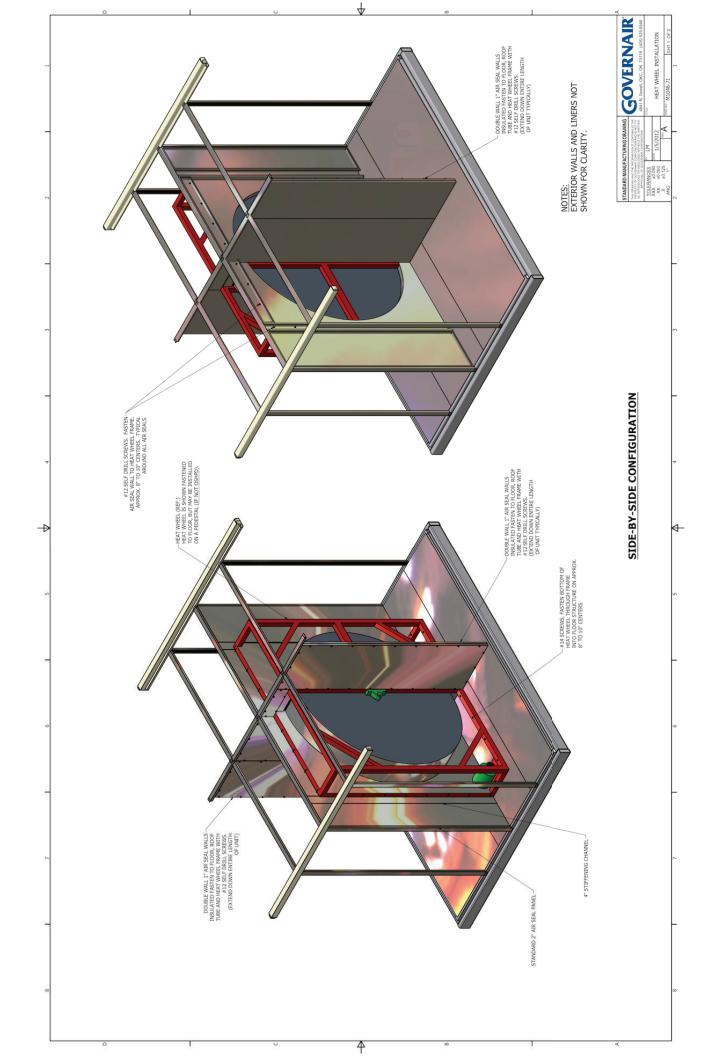
3. Fin Material = N/A 4. Fin Thickness = N/A

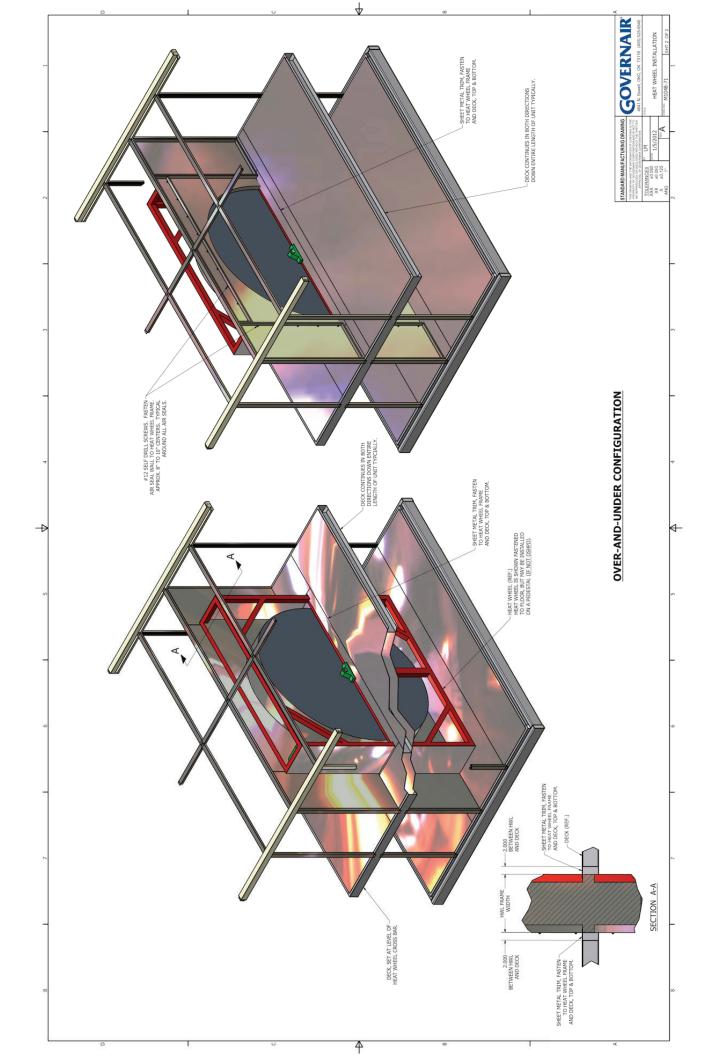
5. Fin Spacing (FPI) = N/A

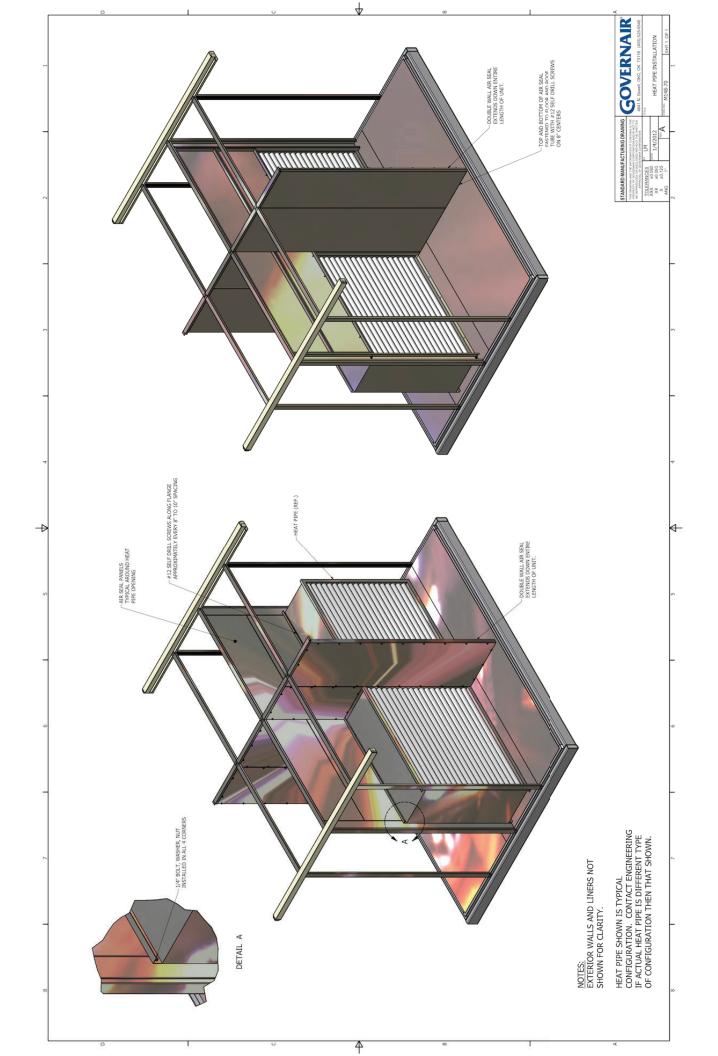
6. Rows =

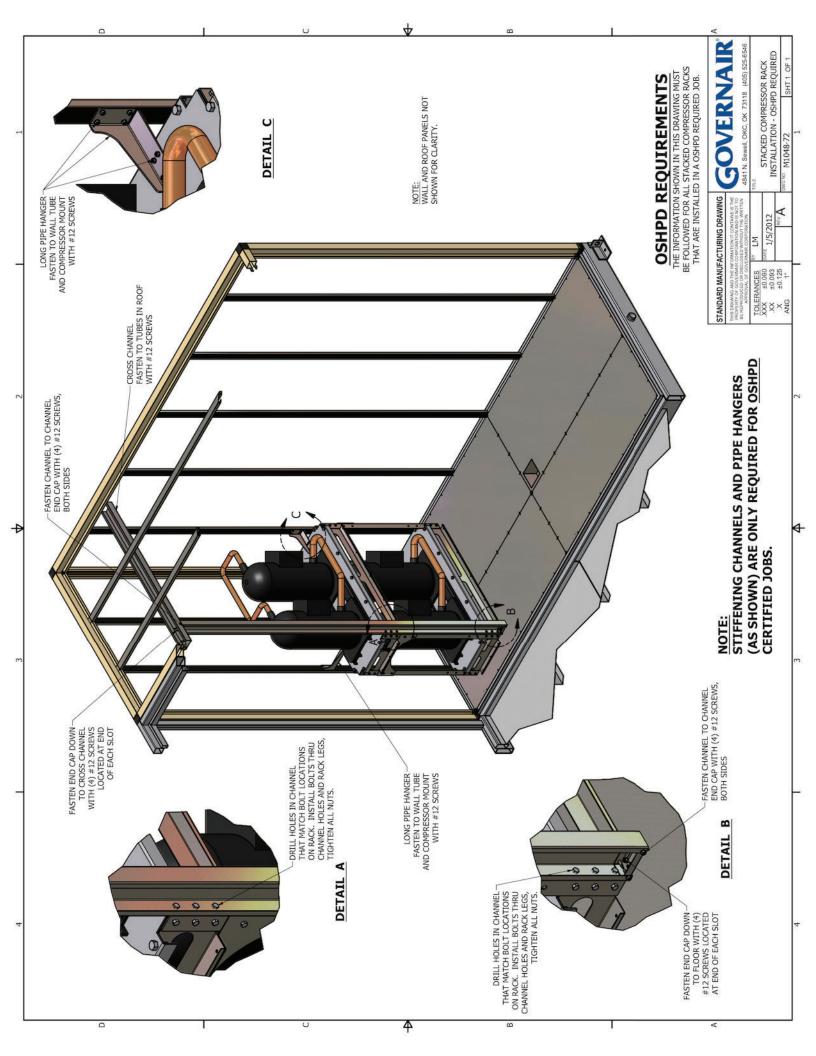
6 7 8 9 10 11 12 13 14 15 16 Coil Height varies between 6" and 36", depending on number of rows

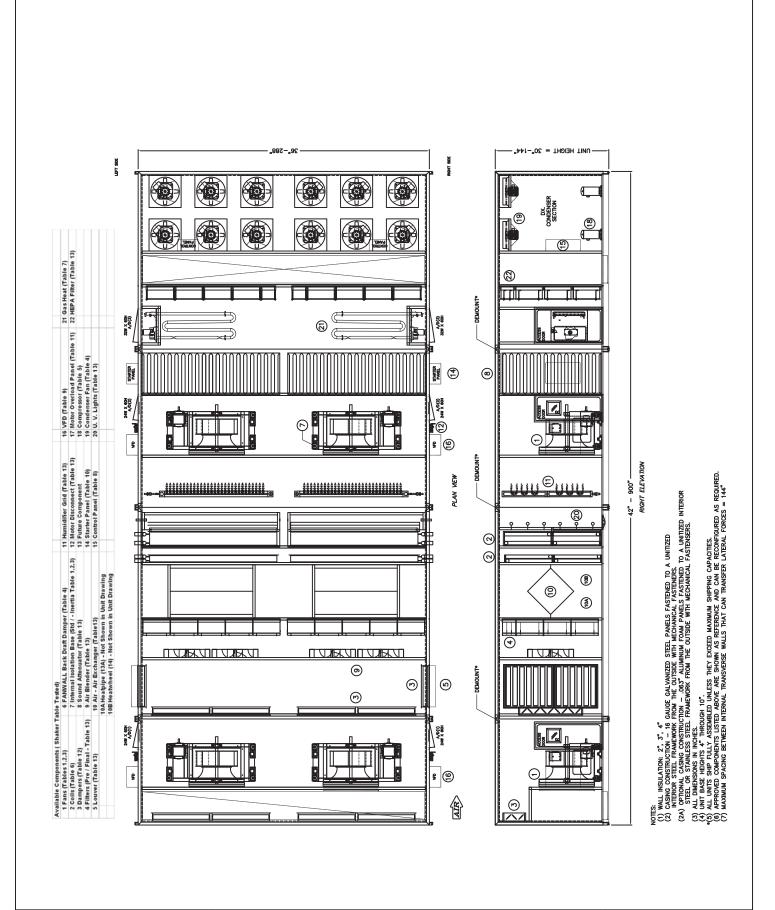
- 7. Coil Casing = Stainless Steel (Standard)
- 8. Coil Construction = Brazed



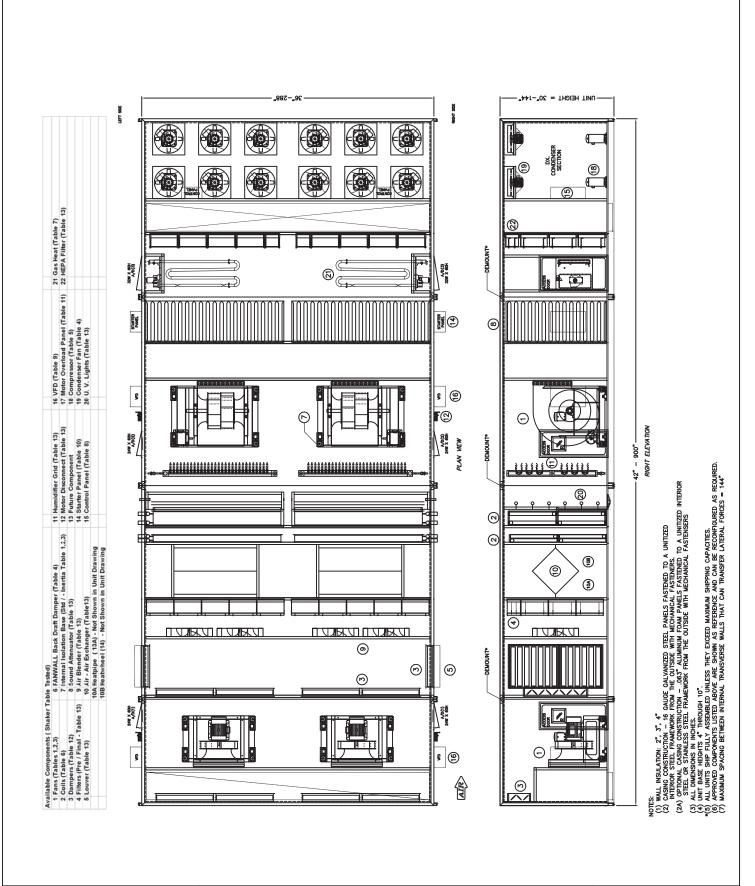




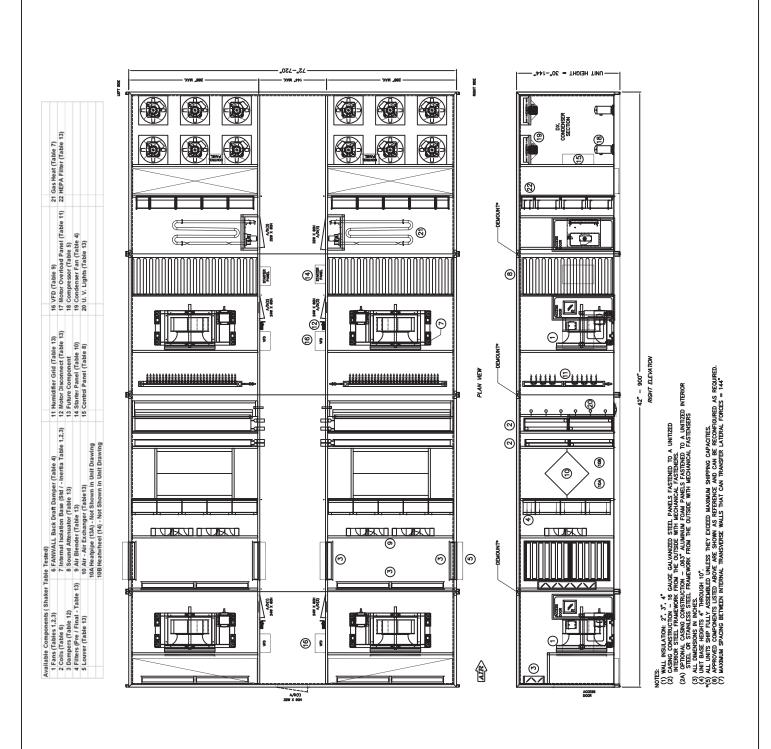




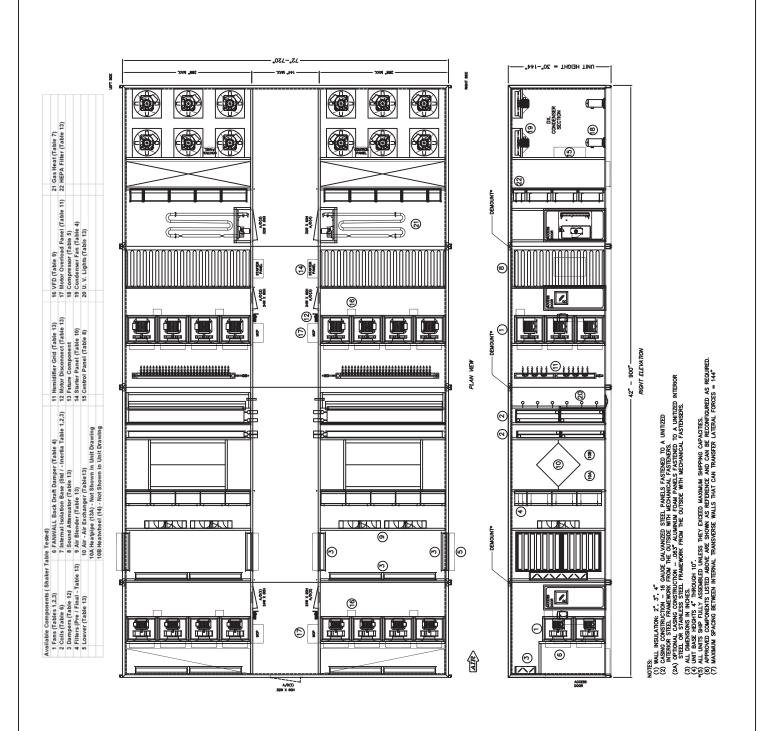
<u>GOVERNAIR</u>			Job Name: OSHPD DOUBLE WIDE-PF W/DEMOUNTS					Model No: / <i>TF</i>
4841 N. SEWELL * OKLAHOMA CITY, OK 73118 Ph 405.525.6546 * Fax 405.528.4724			Rep. Contact			Unit Type:	[DWGTYPE]	Unit Tag: OSHPD-10 / J17607
	Engineer:	Drawing Date: 02-03-12	Rep. Firm:	TEMTROL,		Approx. Weight:	# of Pieces:	Unit Serial No: 7003247-010-00



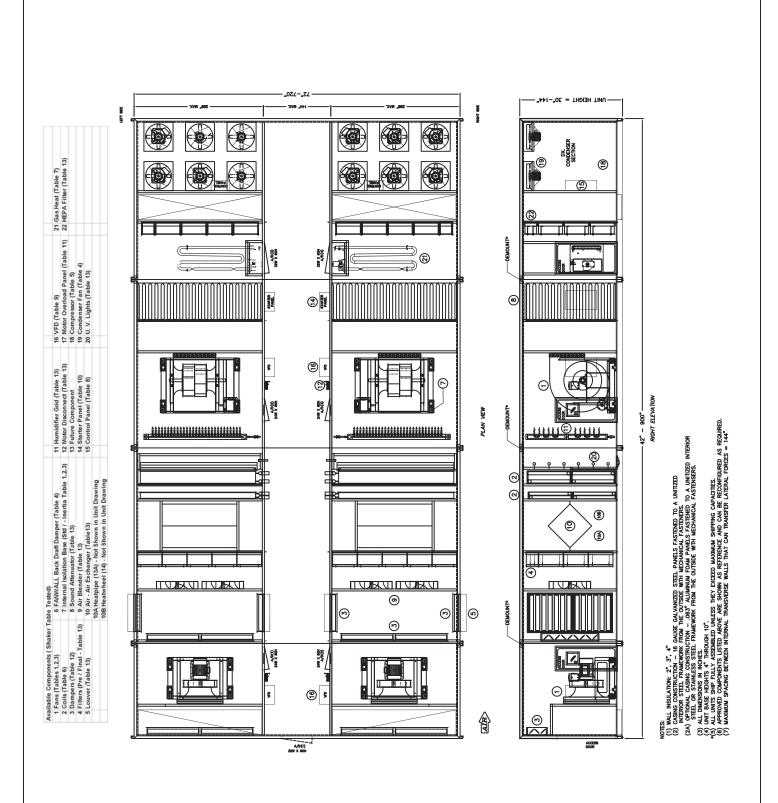
GOVERNAIR			Job Name: OSHPD DOUBLE WIDE—HF W/DEMOUNTS					Model No: / TF
4841 N. SEWELL * OKLAHOMA CITY, OK 73118 Ph 405.525.6546 * Fax 405.528.4724			Rep. Contact			Unit Type:	[DWGTYPE]	Unit Tag: OSHPD-12 / J17609
	Engineer:	Drawing Date: 2-06-12	Rep. Firm:	TEMTROL,		Approx. Weight:	# of Pieces:	Unit Serial No: 7003247-012-00



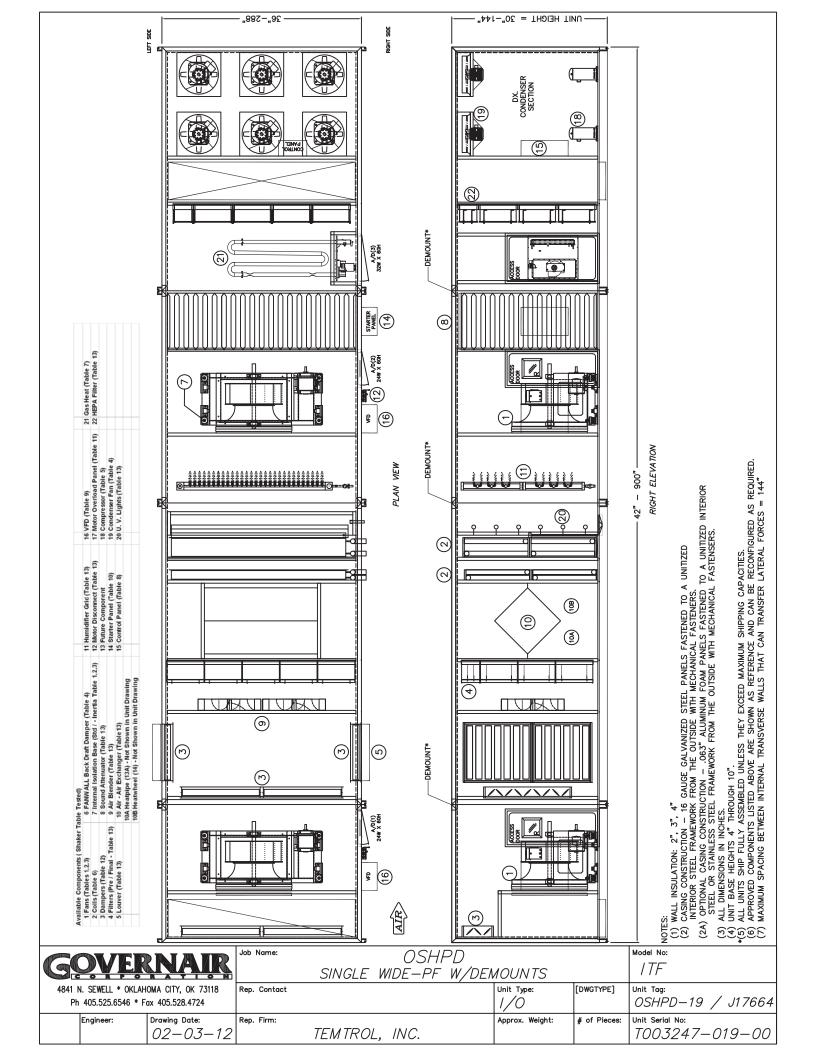
Model No: OSHPD Job Name: /ERA 1TF DOUBLE WIDE-PF W/ CENTER VESTIBULE W/DEMOUNTS Unit Type: 4841 N. SEWELL * OKLAHOMA CITY, OK 73118 Rep. Contact [DWGTYPE] Unit Tag: OSHPD-16 / J17613 Ph 405.525.6546 * Fax 405.528.4724 Unit Serial No: Engineer: Drawing Date: Rep. Firm: Approx. Weight: # of Pieces: 2-03-11 TEMTROL, INC. T003247-016-00

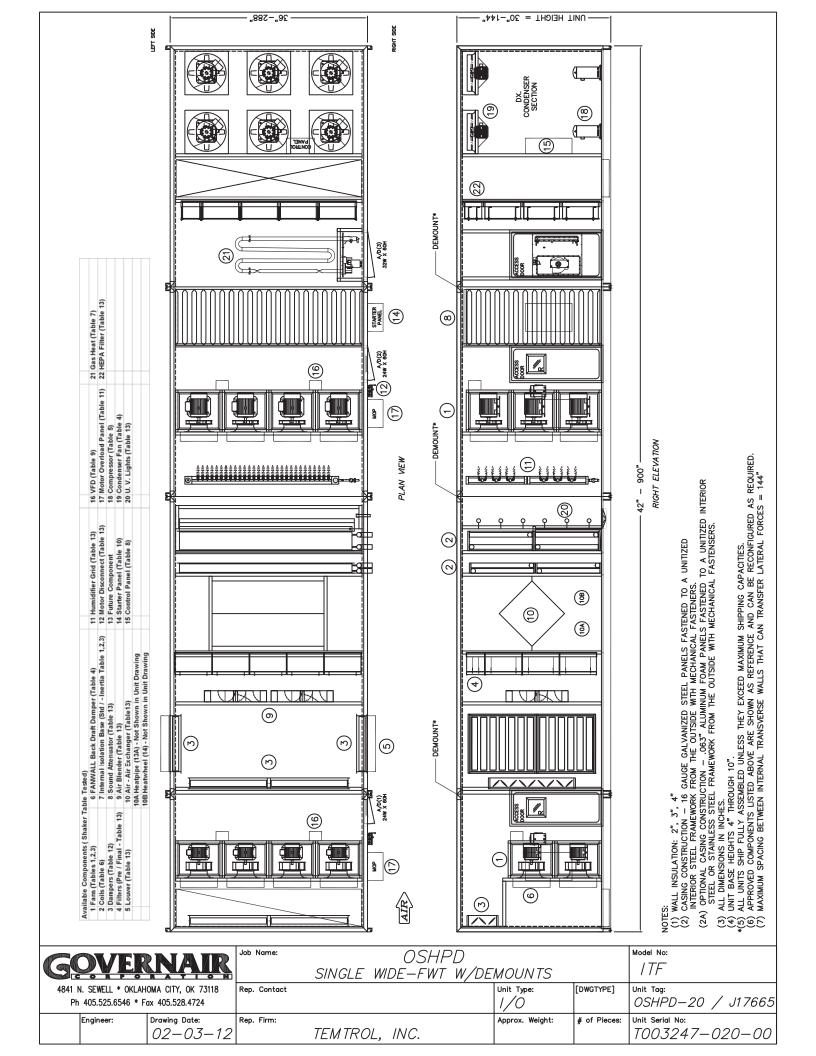


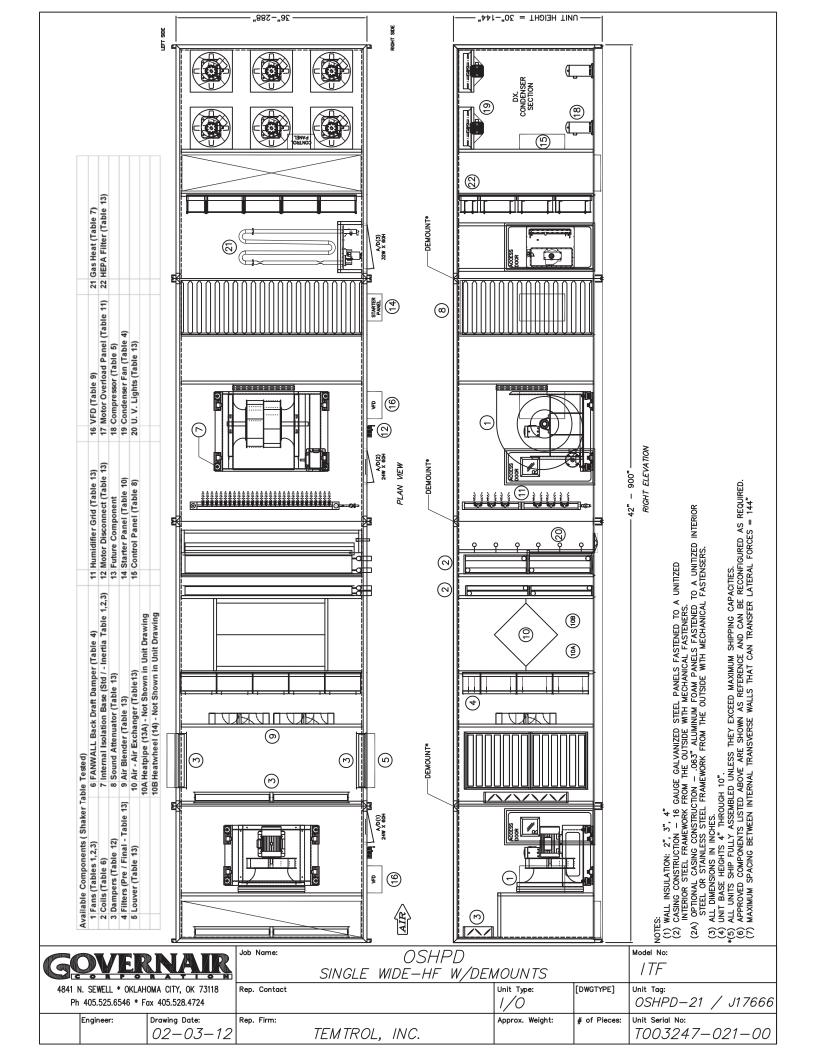
Ī	<u>GOVERNAIR</u>			Job Name: OSHPD					Model No:	
				DOUBLE	WIDE-FWT W,		ESTIBULE	W/DEI	MOUNTS	<i>1TF</i>
	4841 N. SEWELL * OKLAHOMA CITY, OK 73118			Rep. Contact			Unit Type	:	[DWGTYPE]	Unit Tag:
	Ph 405.525.6546 * Fax 405.528.4724						1/0			OSHPD-17 / J17642
Ī		Engineer:	Drawing Date:	Rep. Firm:			Approx. V	Veight:	# of Pieces:	Unit Serial No:
			02-03-12		TEMTROL,	INC.				<i>T003247-017-00</i>

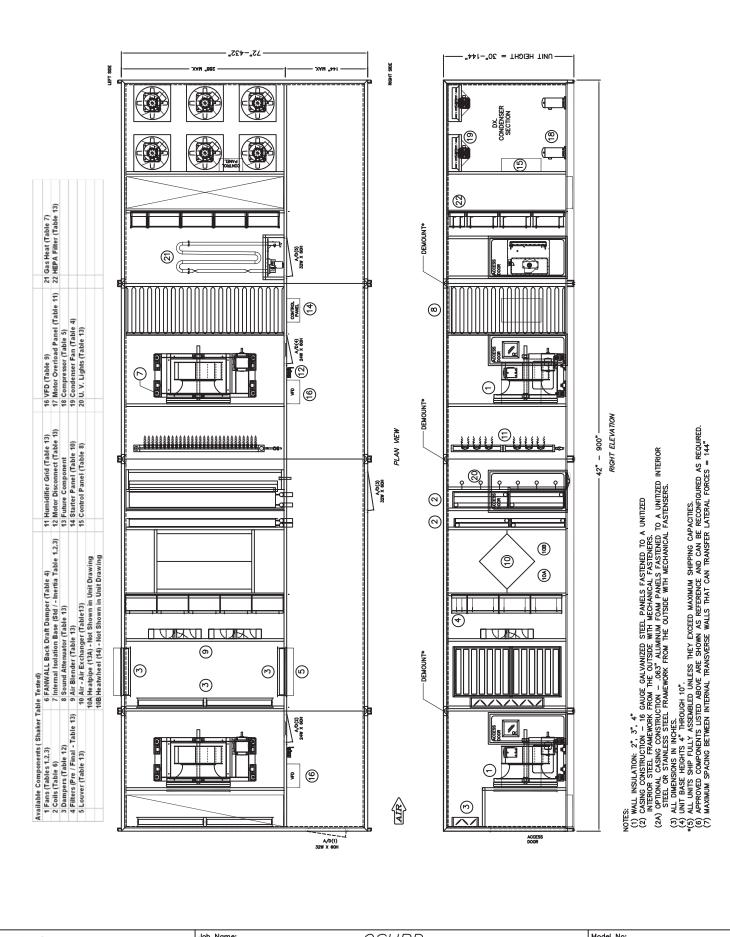


GOVERNAIR			Job Name: DOUBLE	OSHPD OUBLE WIDE—HF W/ CENTER VESTIBULE W/DEMOUNTS					Model No: / <i>TF</i>
	N. SEWELL * OKLAH 405.525.6546 * Fo		Rep. Contact				Unit Type:	[DWGTYPE]	Unit Tag: OSHPD-18 / J17643
	Engineer:	Drawing Date: 02-03-12	Rep. Firm:	TEMTROL,	INC.		Approx. Weight:	# of Pieces:	Unit Serial No: 7003247-018-00

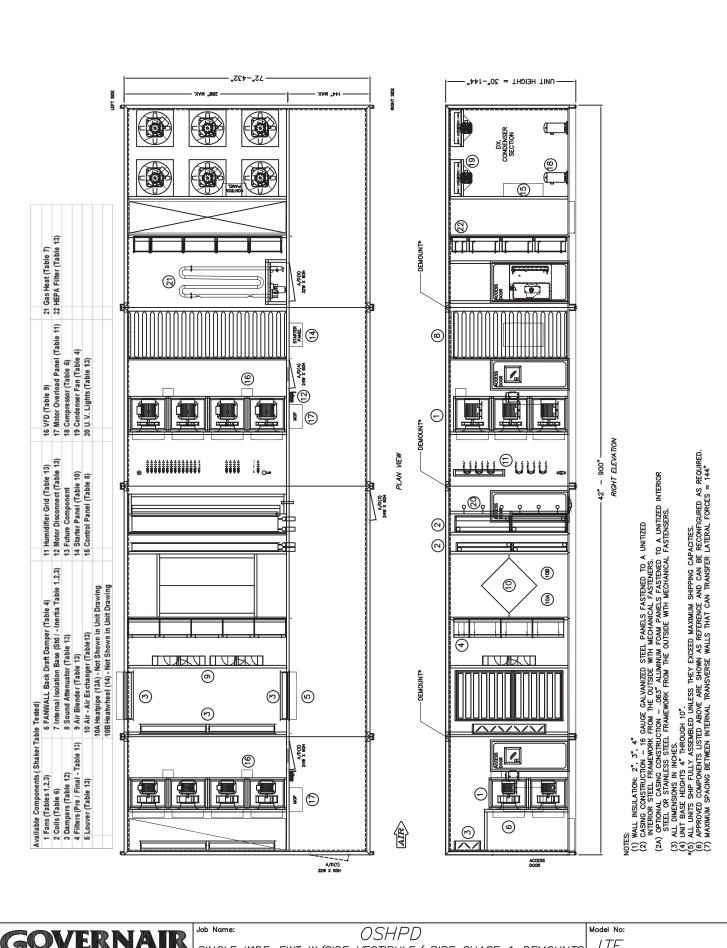








GOVERNAIR			Job Name: SINGLE WIDE-PF W/SID	Model No: / TF			
48		OKLAHOMA CITY, OK 73118 6 * Fax 405.528.4724	Rep. Contact		Unit Type:	[DWGTYPE]	Unit Tag: OSHPD-27 / J17667
	Engineer:	Drawing Date:	Rep. Firm:		Approx. Weight:	# of Pieces:	Unit Serial No:
		02-03-12	TEMTROL,	INC.			<i>T003247—022—00</i>



1TF SINGLE WIDE-FWT W/SIDE VESTIBULE/ PIPE CHASE & DEMOUNTS 4841 N. SEWELL * OKLAHOMA CITY, OK 73118 Rep. Contact Unit Type: [DWGTYPE] OSHPD-28 / J17668 /0 Ph 405.525.6546 * Fax 405.528.4724 Drawing Date: Unit Serial No: Engineer: Rep. Firm: Approx. Weight: # of Pieces: 02-03-12 T003247-023-00 TEMTROL, INC.

