oshpd
Office of Statewide Health Planning and Development

Facilities Development Division *www.oshpd.ca.gov/fdd*
400 R Street. Suite 200, Sacramento, California 95811-6213 Phone (916) 440-8300 Fax (916) 654-2973

APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.

OSP – 0079 -10

Check whether application is: NEW [ ] RENEWAL [X]

1.0

Temtrol	George Halko
Manufacturer	*Manufacturer's Technical Representative*

106 N. Industrial Blvd, PO Box 409, Okarche OK 73762
Mailing Address

405-263-7286	ghalko@temtrol,com
Telephone	*E-mail Address*

2.0

ITF Series Air Handling Units	Custom Air Handling Units
Product Name	*Product 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 AHU shall be internally isolated and AHU 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 handling units using standard Temtrol 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.

3.0

The VMC Group	John P. Giuliano, PE
Applicant Company Name	*Contact Person*

113 Main St, Bloomingdale NJ, 07403
Mailing Address

973-838-1780	john.giuliano@thevmcgroup.com
Telephone	*E-mail Address*

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

	8/24/12
Signature of Applicant	*Date*
President	The VMC Group
Title	*Company Name*

Registered Design Professional Preparing the Report

4.0

The VMC Group
Company Name

Mr. Kai Yin Ho	SE4941
Contact Name	*California License Number*

113 Main Street, Bloomingdale NJ, 07403
Mailing Address

973-838-1780	silas.ho@thevmcgroup.com
Telephone	*E-mail Address*

California 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 Main Street, Bloomingdale NJ, 07403
Mailing Address

973-838-1780	silas.ho@thevmcgroup.com
Telephone	*E-mail Address*

Anchorage Pre-Approval

6.0

☐ *Anchorage is pre-approved under OPA-*
(Separate application for anchorage pre-approval is required)

☒ Anchorage is not Pre-approved

Certification Method

70. ☒ *Testing in accordance with:* ☒ *ICC-ES AC-156* ☐ *Other (Please Specify):*

☐ *Analysis*
☐ *Experience data*
☐ *Combination of Testing, Analysis, and/or Experience Data (Please Specify):*

Testing Laboratory (if applicable)

8.0

PEER, UC Berkeley	Wesley Neighbour
Company Name	*Contact Name*

1302 South 46th St., Richmond Ca 94804
Mailing Address

510-665-3409	wdn@berkeley.edu
Telephone	E-mail:

8.1 ***Testing Laboratory (if applicable)***

Trentec	Timothy Geers
Company Name	*Contact Name*
4600 East Tech Dr, Cincinnati, OH 45245	
Mailing Address	
513-528-7900	tgeers@curtisswright.com
Telephone	E-mail:

8.2 ***Testing Laboratory (if applicable)***

Clark Dynamics	JR Antenucci
Company Name	*Contact Name*
1801 Rt 51, Jefferson Hills, PA 15025	
Mailing Address	
412-387-1001	jrantenucci@clarkdynamics.com
Telephone	E-mail:

Approval Parameters

9.0

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 Matrix

Building period limits (if any) =N/A

Overall dimensions and weight (or range thereof) = See Attached Matrix

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:***

☒ *Test Report* ☒ *Drawings* ☒ *Manufacturer's Catalog*
☐ *Calculations* ☐ *Others (Please Specify):*

11.0 ***OSHPD Approval*** *(For Office Use Only)*

8/31/12	**December 31, 2016**
Signature & Date	*Approval Expiration Date*
M. R. Karim, SHFR	S_{DS} (g) = **1.93** z/h = **1.0**
Name & Title	*Special Seismic Certification Valid Up to*

Condition of Approval (if any):

Temtrol

Custom Air Handling Units
Tested Components Summary

THE VMC GROUP
The Power of Together™

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)

Component Summary:

Item	Dimensions				Lowest Natural Frequency		
	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

UUT #1

Temtrol

Custom Air Handling Units
Tested Components Summary

THE VMC GROUP
The Power of Together™

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

Cabinet Construction Summary:

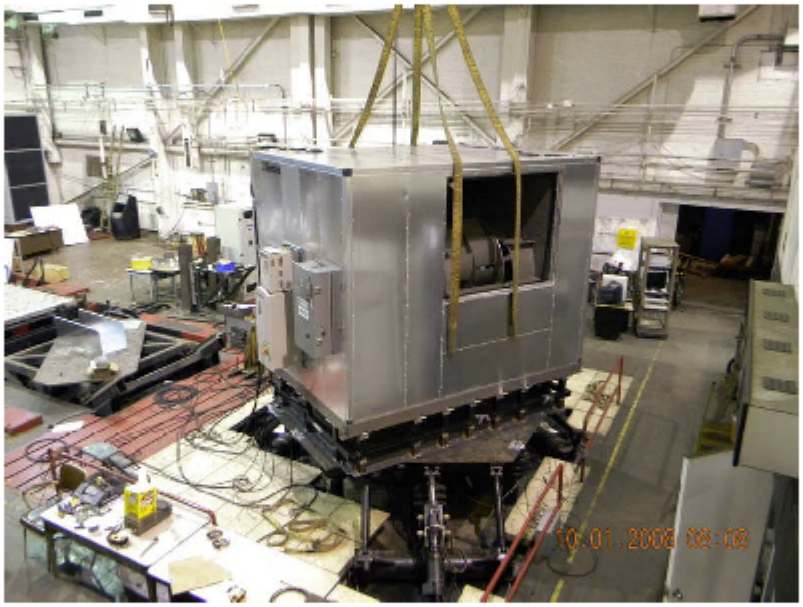
Standard, Mechanical Frame; Galvanized Panels, Galv. & SS Liners, 7" base floor

Wall Removal Summary:

Three walls on unit (End Section)

Component Summary:

Item	Dimensions				Lowest Natural Frequency		
	Length (in)	Width (in)	Height (in)	Weight (lb)	F-B (Hz)	S-S (Hz)	V (Hz)
Cabinet	96	129	103	6,242	33.7	9.1	N/A
Filter Rack - 96x124 (Flat filters)	124	12	96	737	17.4	N/A	N/A
VFD - E7N - Large (Yaskawa)	33	18	51	142	16.2	20.3	N/A
Temtrol Starter Panel - 50 HP	20	10	38	42	N/A	N/A	N/A
J-Box	6	6	3	5	N/A	N/A	N/A
Housed Fan - AF01-49" 50 hp	84	96	80	2815	3.4	3.8	N/A



UUT #2

Temtrol

Custom Air Handling Units
Tested Components Summary

THE VMC GROUP
The Power of Together™

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:

Item	Dimensions				Lowest Natural Frequency		
	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 #3

Temtrol

Custom Air Handling Units
Tested Components Summary

THE VMC GROUP
The Power of Together™

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)

Component Summary:

Item	Dimensions				Lowest Natural Frequency		
	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 #4

Temtrol

Custom Air Handling Units
Tested Components Summary

THE VMC GROUP
The Power of Together™

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

Cabinet Construction Summary:

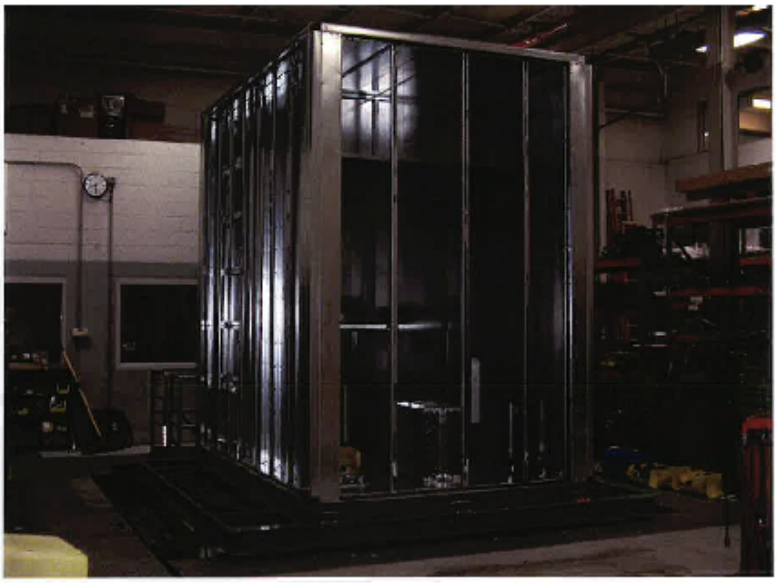
Standard, Mechanical Frame; Galvanized Panels, Galv. & SS Liners, 7" base floor

Wall Removal Summary: (Cumulative)

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

Component Summary:

Item	Dimensions				Lowest Natural Frequency		
	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 #5

Temtrol

Custom Air Handling Units
Tested Components Summary

THE VMC GROUP
The Power of Together™

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}

Component Summary:

Item	Dimensions				Lowest Natural Frequency		
	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 #6

Temtrol

Custom Air Handling Units
Tested Components Summary

THE VMC GROUP
The Power of Together™

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

Cabinet Constructioon Summary:

Standard, SS Mechanical Frame; Aluminum Panel, 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

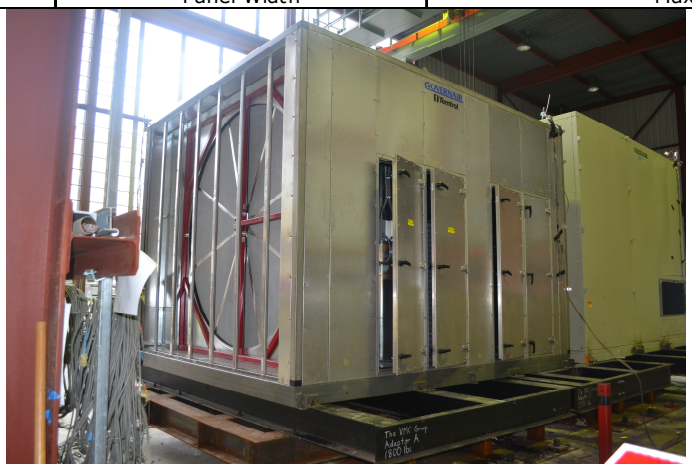
Component Summary:

Item	Dimensions				Manufacturer	Description
	Length (in)	Width (in)	Height (in)	Weight (lb)		
Cabinet	158	136	114	4,614	Temtrol (Governair)	ITF
Control Damper w/Actuator	8	24	12	45	Temtrol (Governair) / 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	Temtrol (Governair)	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 of Cabinet (Hz)	X	Y	Z
	6.6	5.4	8.1

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

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



UUT 7

Temtrol

THE VMC GROUP
The Power of Together™

Custom Air Handling Units
Tested Components Summary

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

Component Summary:

Item	Dimensions				Manufacturer	Description
	Length (in)	Width (in)	Height (in)	Weight (lb)		
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	12.3125	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 of Cabinet (Hz)	X	Y	Z
	6.4	6.7	8.2

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

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

UUT 8

THE VMC GROUP
The Power of Together™

Certified Product Subcomponent Tables:

Fan Component **Table 1**

Housed Fan	HP	1	3	5	7 1/2	10	20	30	40	50	60	75	100	Test Unit	Manufacturer
	Weight	43	43	55	108	172	324	525	640	662	1036	1047	1302		
Size	10	X	X	X	X	X	X	X	X	X	X	X	X	4	Temtrol - Governair
Weight	92														
Size	12	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	126														
Size	13	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	143														
Size	15	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	170														
Size	16	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	227														
Size	18	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	305														
Size	20	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	370														
Size	22	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	410														
Size	24	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	522														
Size	27	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	610														
Size	30	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	732														
Size	33	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	897														
Size	36	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	1080														
Size	40	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	1330														
Size	44	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	1610														
Size	49	X	X	X	X	X	X	X	X	X	X	X	X	2	
Weight	2356														
Size	54	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	2930														

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

THE VMC GROUP
The Power of Together™

Certified Product Subcomponent Tables:

Fan Component — Table 2

Plenum Fan	HP	1	3	5	7 1/2	10	20	30	40	50	60	75	100	Test Unit	Manufacturer
	Weight	43	43	55	108	172	324	525	640	662	1036	1047	1302		
Size	10	X	X	X	X	X	X	X	X	X	X	X	X	5	Temtrol - Governair
Weight	72														
Size	12	X	X	X	X	X	X	X	X	X	X	X	X	1 & 4	
Weight	87														
Size	13	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	89														
Size	15	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	104														
Size	16	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	107														
Size	18	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	145														
Size	20	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	173														
Size	22	X	X	X	X	X	X	X	X	X	X	X	X	6	
Weight	195														
Size	24	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	218														
Size	27	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	295														
Size	30	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	373														
Size	33	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	405														
Size	36	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	482														
Size	40	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	773														
Size	44	X	X	X	X	X	X	X	X	X	X	X	X	3	
Weight	960														
Size	49	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	1059														
Size	54	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	1293														

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

Fan Component — Table 3

Fanwall	HP	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	Test Unit	Mfr
	Weight	45	54	58		85				105					154					170						
Size	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		Temtrol - Governair
Weight	170																									
Size	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5	
Weight	225																									
Size	14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	240																									
Size	16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	
Weight	285																									
Size	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	310																									
Size	20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Weight	390																									
Size	22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6	
Weight	410																									

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	

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

Scroll Compressors — Table 5

Model	Tons	Unit Dimensions W	H	L	Weight	UUT	Manufacturer
ZP Series (Small)	5	18	32	18	84	4	Copeland
ZP Series (Large)	40	22	29.5	41.4	350	8	
…	…	…	…	…	…		
ZP Series (Large)	30	32	36	26	390	6	

Motor - 208V, 230V, 460V Tested

Model ZP54K3E Shake Tested
Model ZPT470KCE-TWD-251 Tested
Model ZP385KCE Shake Tested

THE VMC GROUP
The Power of Together™

Certified Product Subcomponent Tables:

Coil Component — Table 6

* Fin Height	Fin Length 12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126	216"- Max. Fin Length	Test Unit	Mfr
12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			Temtrol / Governair
15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		5	
21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		3**	
48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			

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
6. Coil Casing = Galvanized or Stainless Steel
   Type CW, HW, NFS & DX are OSHPD approved.

DX Evaporator Coil - Heatcraft — Table 6A

* Fin Height	Fin Length 6	…	24	…	48	48.1	…	96	96.1	…	144	144.01	…	192	192"- Max. Fin Length	Test Unit	Mfr
6	X	X	X	X	X	X	X	X	X	X	X	X	X	X			HeatCraft
9	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
12	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
15	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
21	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
24	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
25	X	X	X	X	X	X	X	X	X	X	X	X	X	X		7	
27	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
30	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
33	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
36	X	X	X	X	X	X	X	X	X	X	X	X	X	X		7	
	0 Tube Sheets					1 Tube Sheets			2 Tube Sheets			4 Tube Sheets					

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:

1. Tube Wall =	0.013"	0.016"	0.020"	0.025"	0.030"	0.035"	0.049"				
2. Tube Dia =	0.375"	0.5"									
3. Fin Material =	Alum	Copper									
4. Fin Thickness =	0.006"	0.0075"	0.0095"								
5. Fin Spacing (FPI) =	4	6	7	8	9	10	11	12	13	14	
6. Rows =	1	2	3	4	6	8	10	12			
7. Coil Casing =	Galv (Std.)	SS (Opt)									

SS Tested on DX Condenser Coil

Tested:
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"

THE VMC GROUP
The Power of Together™

Certified Product Subcomponent Tables:

Gas Heat - Indirect — Table 7

Input	Weight (Lb)	Manufacturer (HMA Series)	Test Unit
200 MBH	120	Heatco	
400 MBH	237		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		Temtrol / Governair
26	10.5	21		
42	16	38		
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

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

- Manual Starter Protector (MSP) With Auxillary Contacts
- Power Block
- 120/24VAC Transformer
- Starters
- Contactors
- Circuit Breakers
- Alerton / ALC / •• Siemens DDC Controls
- 120/24VAC Relays/Bases
- Timers
- Hand/Off/Auto Switches
- Indicator Lights
- Phase Monitor
- Current Switches and Current Transducer
- In-Panel Disconnect
- Ground Lugs
- Stranded Copper Wiring (THHN, THW, MTW)

• 208/230/460VAC
•• Display Module Touch Screen
• Display Module Keypad
• NEMA 1 Or 3R Enclosure
• Fuses
• Digital Scroll Controller
•• Current Transducer

Motor Overload Panel — Table 11

Height	Width	Weight (Lb.)	UUT	Manufacturer
12	12	7		Temtrol / Govemair
12	16	10	5	
16	20	17		
20	16	19		
20	20	24		
20	24	25		
24	20	25		
24	24	27	1	
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

THE VMC GROUP
The Power of Together™

Certified Product Subcomponent Tables:

Damper Component

Table 12

* Height	Width 6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126	132	138	144	Test Unit	Mfr
6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		Temtrol/Governair
12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	
42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	
54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
60	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

* Single Damper Size (60" x 144")

Damper Component (Ruskin)

Table 12A

* Height	Width 8	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126	132	138	144	Test Unit	Mfr
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		Temtrol/Governair
12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	7	
30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	7	
54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
60	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

* 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

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

Tubes in Face Single Stack	Length Std Increments 24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	Test Unit	Mfr
5																					Innergy Tech
10																					
15																					
20																					
25									X										X	7	
30																					
32																					
	Single module									Side by Side modules											

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

THE VMC GROUP
The Power of Together™

Certified Product Subcomponent Tables:

Heatwheel Component — Table 14

Dia	Height	Width	Weight (Lb.)	UUT	Manufacturer
48	58	58	720	8	Innergy Tech
54	64	64	790		
62	72	72	910		
70	80	80	1080		
78	87	87	1230		
88	95	95	1400		
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 Unit	Manufacturer
		W	H	D	Weight		
5100 Series	3.3 - 5.0	15	17.8	6.5	25	7	Markel

Tested - 208V & 460V

Coax Heat Exchanger — Table 16

Model	Capacity	Unit Dimensions				Test Unit	Manufacturer
	Tons	W	H	L	Weight		
COAX-2201-J	2	10.6	4	13			Packless
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			
COCX-2201-J	2	10.6	4	13			
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 Exchanger — Table 17

Model	Unit Dimensions				Test Unit	Manufacturer
	W	H	L	Weight		
Flat Plate	10	21	8	100	8	SWEP

THE VMC GROUP
The Power of Together™

Certified Product Subcomponent Tables:

DDC Sensors — Table 18

Sensor Type	Test 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 Dimensions				Test Unit	Manufacturer
	Tons	W	H	L	Weight		
SCE-ECM1-11-110-4-S-N-E	110	136	128	158	10,500	8	Governair / Mammoth

Condenser Fans — Table 19A

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

Motor - 208V, 230V, 460V Tested

Condenser Pumps — Table 19B

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

Motor - 460V Tested

Condenser Coil — Table 19C

* Coil Width	Coil Length 92	Coil Length 129	Test Unit	Mfr
6	X	X		Governair / Mammoth
9	X	X		
12	X	X		
15	X	X		
18	X	X		
21	X	X		
24	X	X		
25	X	X	8	
27	X	X		
30	X	X		
33	X	X		
36	X	X	8	
39	X	X		
42	X	X		
45	X	X		
48	X	X		
	3 tube sheets			

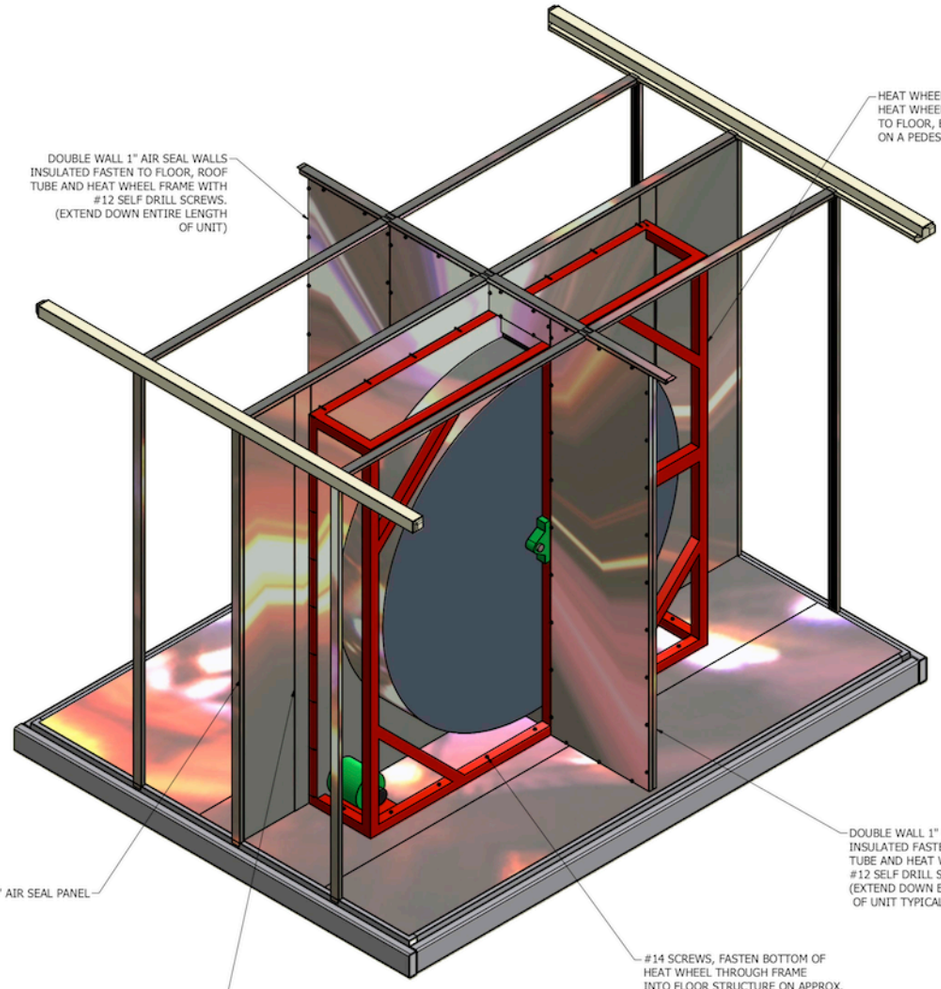
(Coil In Horizontal Configuration)

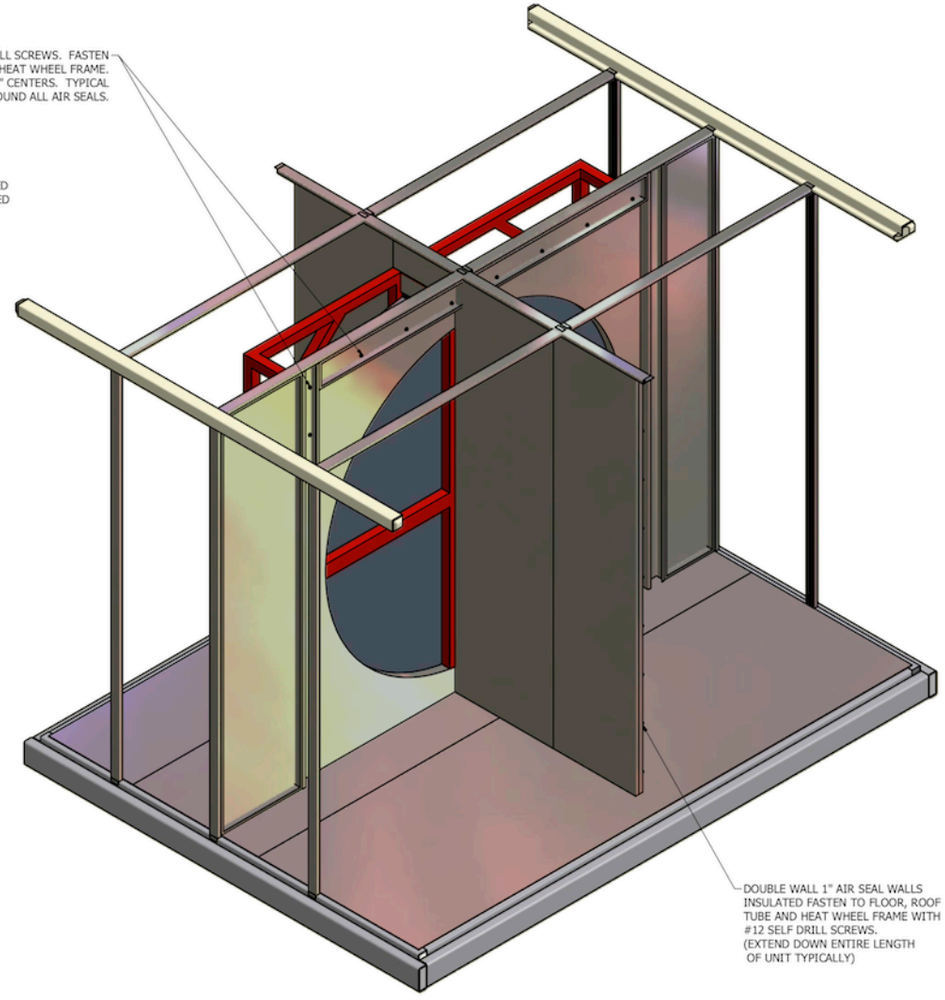
Coil Variables:
1. Tube Wall = 0.025"
2. Tube Dia = 0.5"
3. Fin Material = N/A
4. Fin Thickness = N/A
5. Fin Spacing (FPI) = N/A
6. Rows =

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

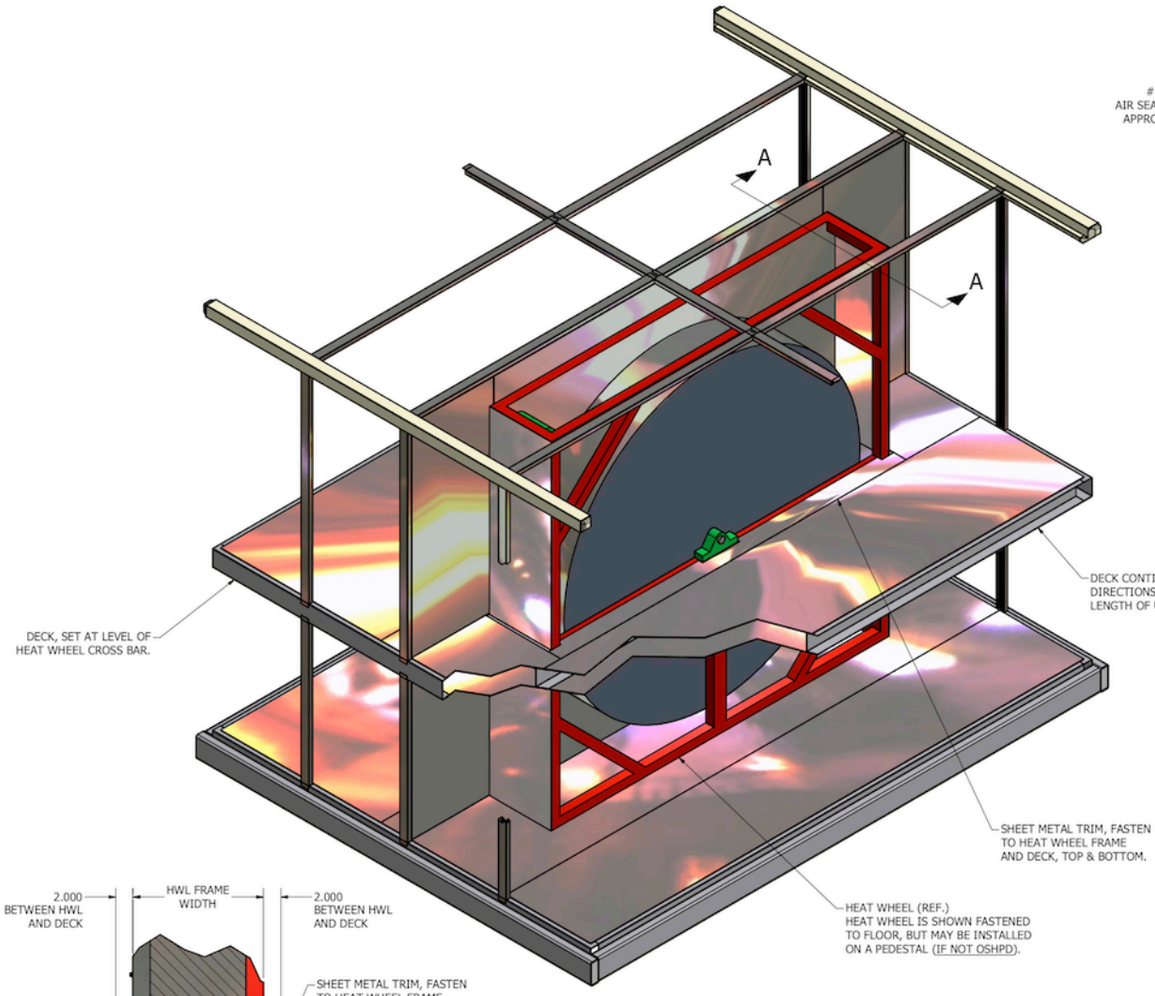


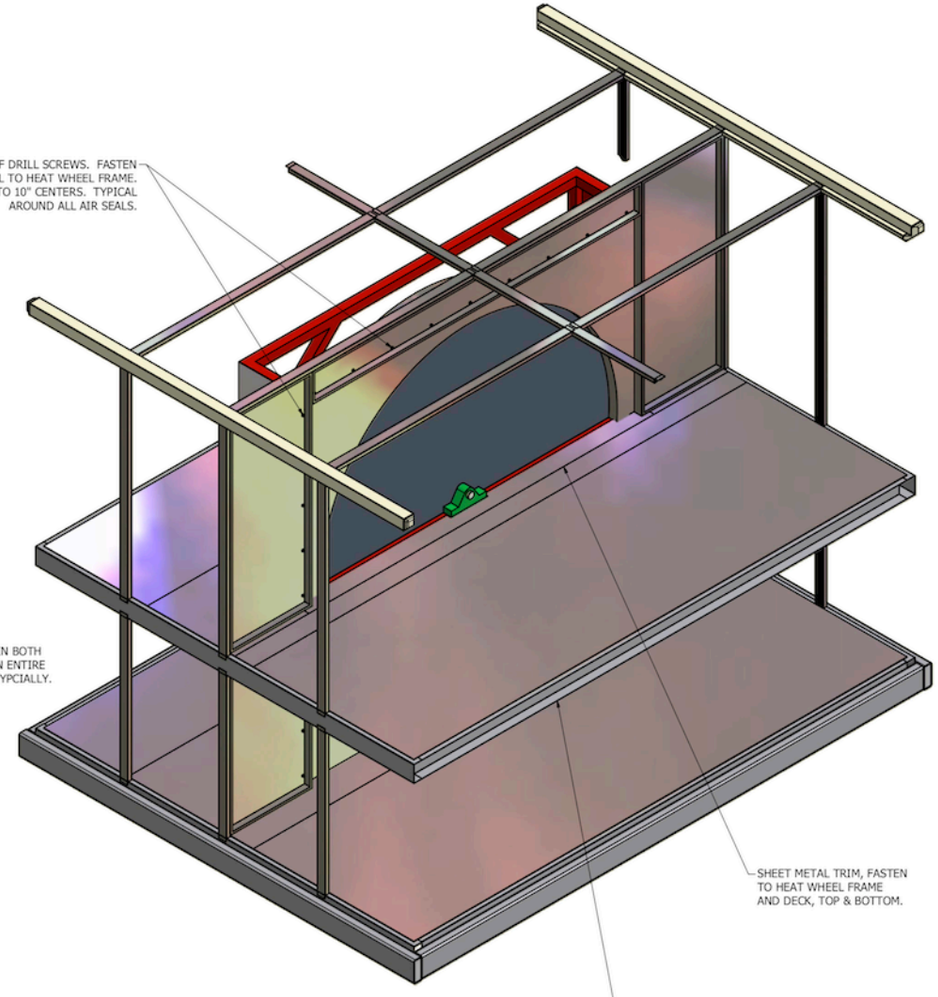


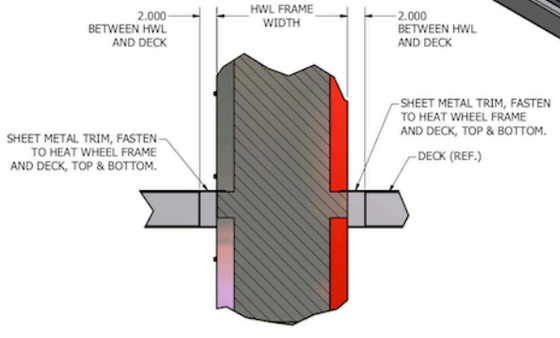
NOTES:
EXTERIOR WALLS AND LINERS NOT SHOWN FOR CLARITY.

SIDE-BY-SIDE CONFIGURATION

STANDARD MANUFACTURING DRAWING			GOVERNAIR
THIS DRAWING AND THE INFORMATION IT CONTAINS IS THE PROPERTY OF GOVERNAIR CORPORATION AND IS NOT TO BE REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF GOVERNAIR CORPORATION			4841 N. Sewell, OKC, OK 73118 (405) 525-6546
TOLERANCES	BY LM	TITLE	HEAT WHEEL INSTALLATION
XXX ±0.060	DATE 1/5/2012		
.XX ±0.093			
.X ±0.125	REV A	DWG NO. M1048-71	SHT 1 OF 2
ANG 1°			



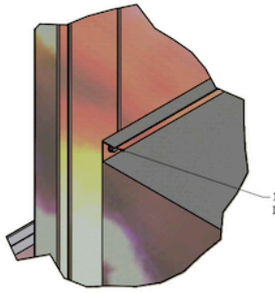




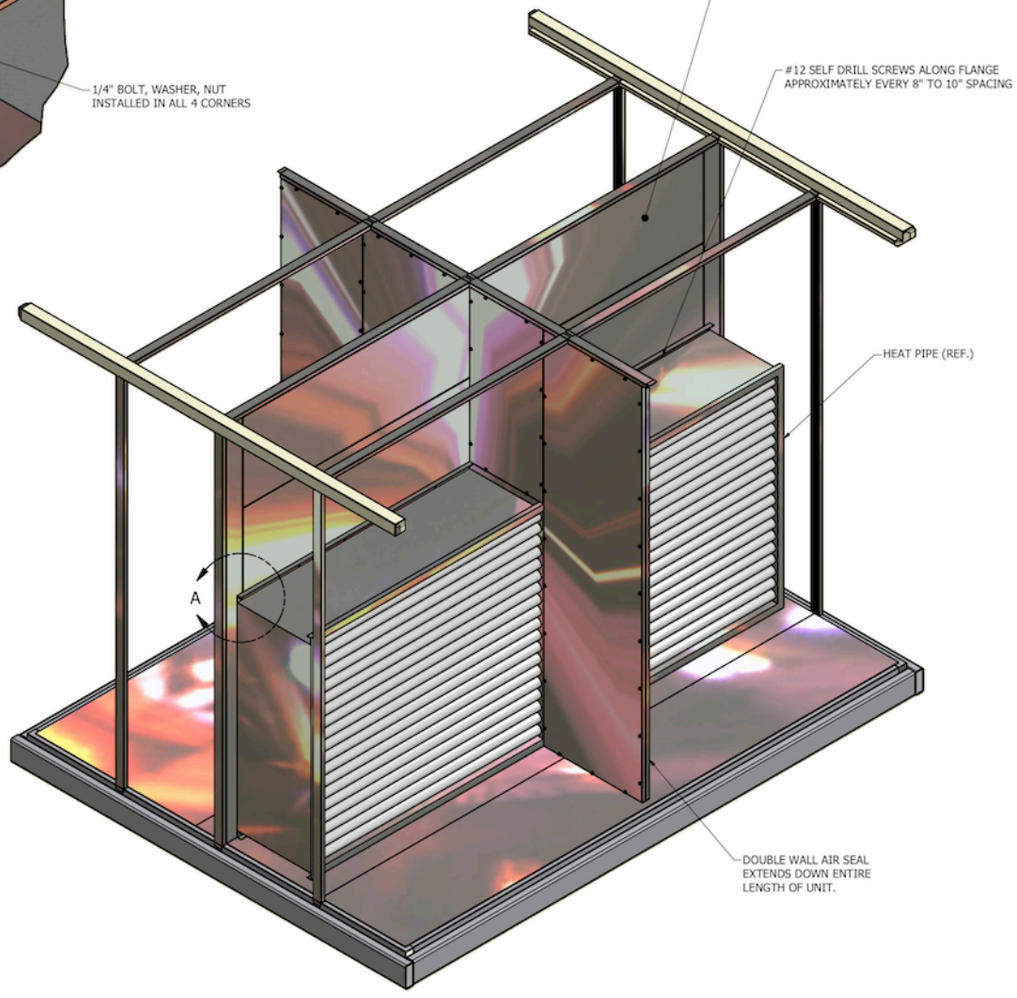
SECTION A-A

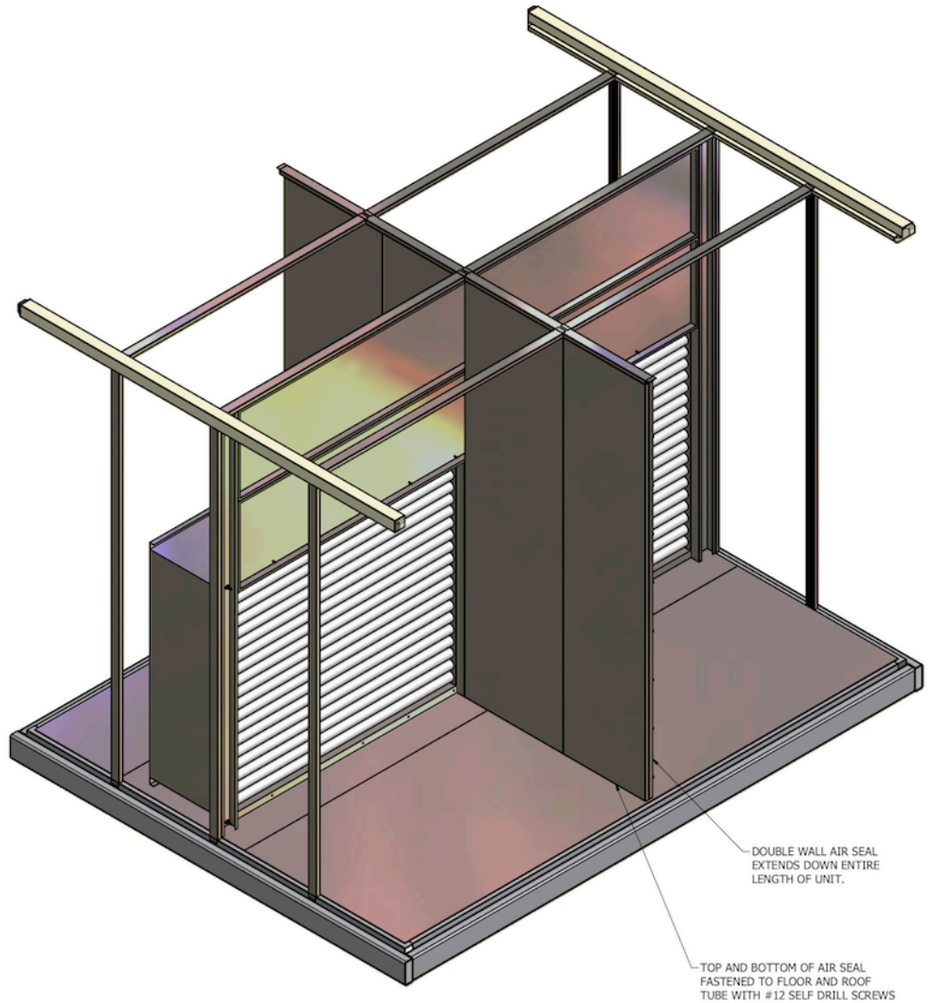
OVER-AND-UNDER CONFIGURATION

STANDARD MANUFACTURING DRAWING		GOVERNAIR	
THIS DRAWING AND THE INFORMATION IT CONTAINS IS THE PROPERTY OF GOVERNAIR CORPORATION AND IS NOT TO BE REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF GOVERNAIR CORPORATION		4841 N. Sewell, OKC, OK 73118 (405) 525-6546	
TOLERANCES	BY LM	TITLE	HEAT WHEEL INSTALLATION
XXX ±0.060	DATE 1/5/2012		
.XX ±0.093			
.X ±0.125	REV A	DWG NO. M1048-71	SHT 2 OF 2
ANG 1°			



DETAIL A

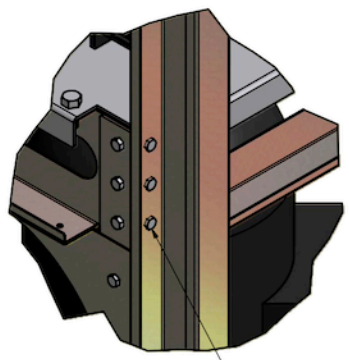




NOTES:
EXTERIOR WALLS AND LINERS NOT SHOWN FOR CLARITY.

HEAT PIPE SHOWN IS TYPICAL CONFIGURATION. CONTACT ENGINEERING IF ACTUAL HEAT PIPE IS DIFFERENT TYPE OF CONFIGURATION THEN THAT SHOWN.

STANDARD MANUFACTURING DRAWING	GOVERNAIR
THIS DRAWING AND THE INFORMATION IT CONTAINS IS THE PROPERTY OF GOVERNAIR CORPORATION AND IS NOT TO BE REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF GOVERNAIR CORPORATION	4841 N. Sewell, OKC, OK 73118 (405) 525-6546
TOLERANCES XXX ±0.060 .XX ±0.093 .X ±0.125 ANG 1°	BY LM DATE 1/4/2012 REV A
TITLE: HEAT PIPE INSTALLATION	
DWG NO: M148-70	SHT 1 OF 1



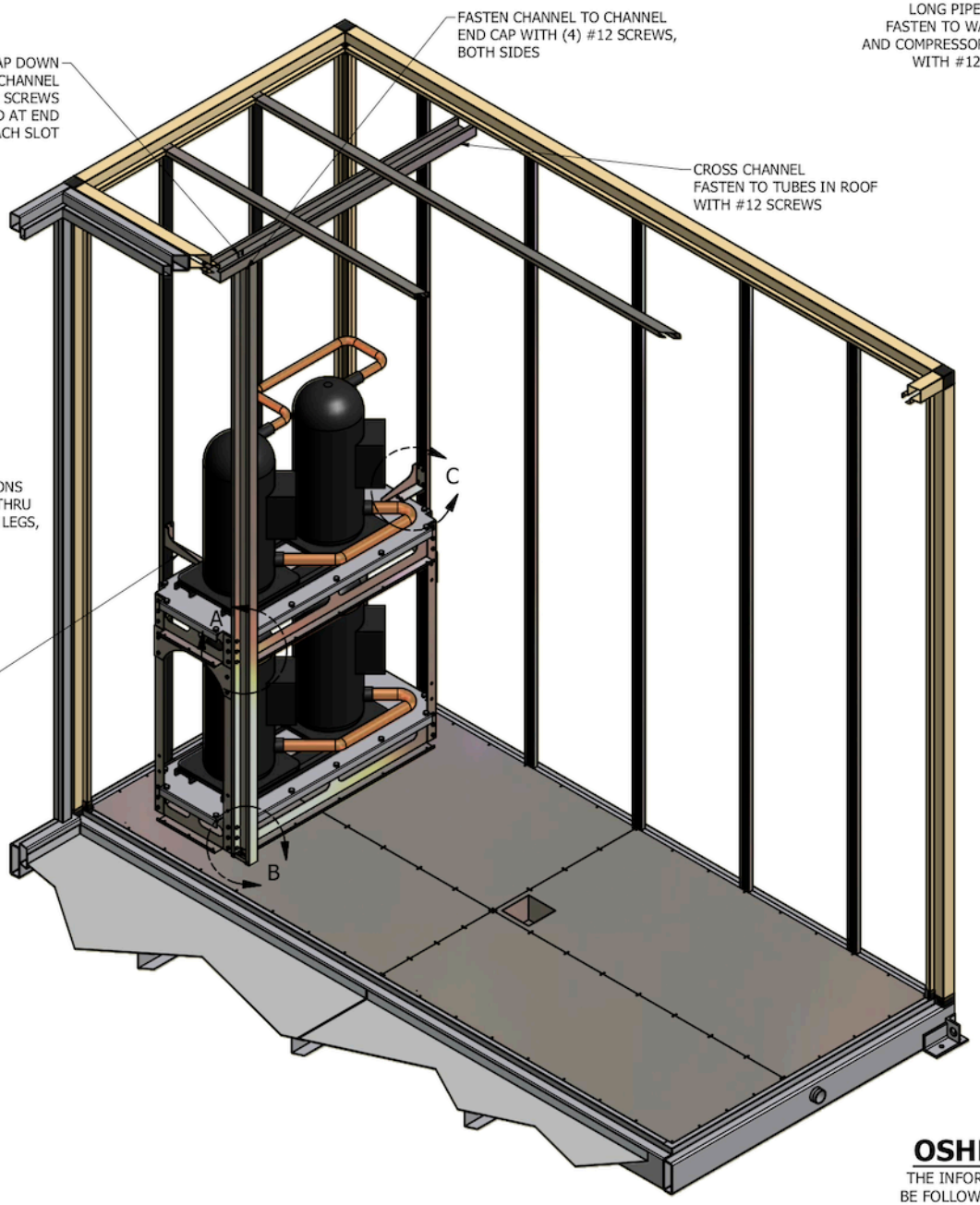
DRILL HOLES IN CHANNEL THAT MATCH BOLT LOCATIONS ON RACK. INSTALL BOLTS THRU CHANNEL HOLES AND RACK LEGS, TIGHTEN ALL NUTS.

DETAIL A

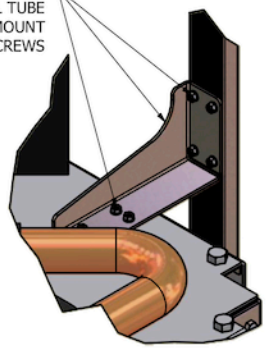
FASTEN END CAP DOWN TO CROSS CHANNEL WITH (4) #12 SCREWS LOCATED AT END OF EACH SLOT

FASTEN CHANNEL TO CHANNEL END CAP WITH (4) #12 SCREWS, BOTH SIDES

CROSS CHANNEL FASTEN TO TUBES IN ROOF WITH #12 SCREWS



LONG PIPE HANGER FASTEN TO WALL TUBE AND COMPRESSOR MOUNT WITH #12 SCREWS

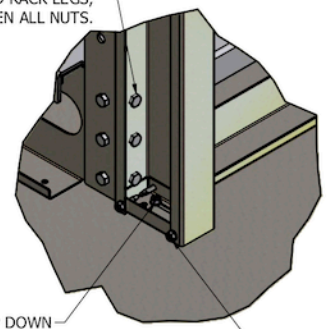


DETAIL C

LONG PIPE HANGER FASTEN TO WALL TUBE AND COMPRESSOR MOUNT WITH #12 SCREWS

NOTE:
WALL AND ROOF PANELS NOT SHOWN FOR CLARITY.

DRILL HOLES IN CHANNEL THAT MATCH BOLT LOCATIONS ON RACK. INSTALL BOLTS THRU CHANNEL HOLES AND RACK LEGS, TIGHTEN ALL NUTS.



FASTEN END CAP DOWN TO FLOOR WITH (4) #12 SCREWS LOCATED AT END OF EACH SLOT

FASTEN CHANNEL TO CHANNEL END CAP WITH (4) #12 SCREWS, BOTH SIDES

DETAIL B

OSHPD REQUIREMENTS

THE INFORMATION SHOWN IN THIS DRAWING MUST BE FOLLOWED FOR ALL STACKED COMPRESSOR RACKS THAT ARE INSTALLED IN A OSHPD REQUIRED JOB.

NOTE:
STIFFENING CHANNELS AND PIPE HANGERS (AS SHOWN) ARE ONLY REQUIRED FOR OSHPD CERTIFIED JOBS.

STANDARD MANUFACTURING DRAWING

THIS DRAWING AND THE INFORMATION IT CONTAINS IS THE PROPERTY OF GOVERNAIR CORPORATION AND IS NOT TO BE REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF GOVERNAIR CORPORATION

TOLERANCES	
.XXX	±0.060
.XX	±0.093
.X	±0.125
ANG	1°

BY: LM
DATE: 1/5/2012
REV: A

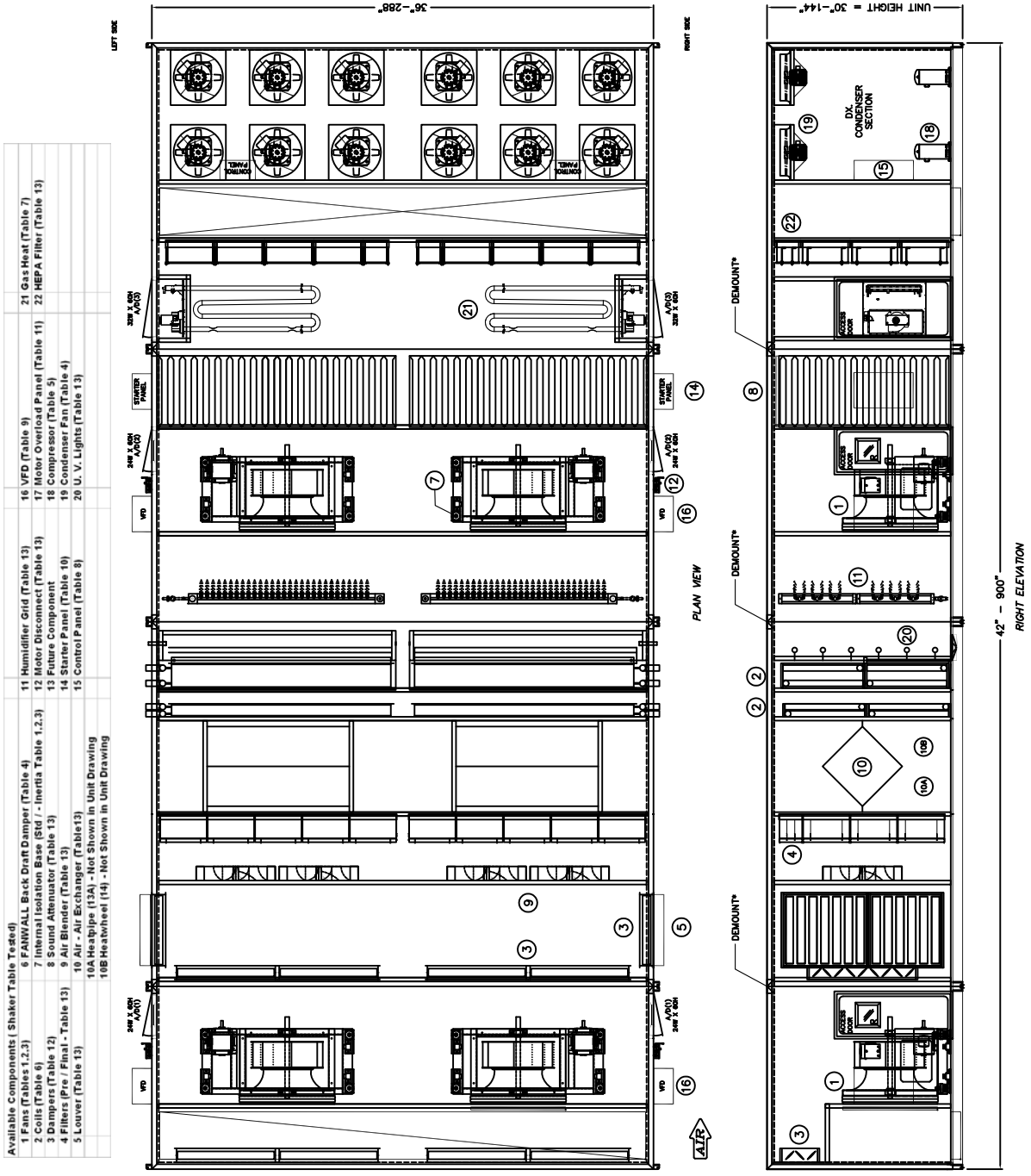
GOVERNAIR

4841 N. Sewell, OKC, OK 73118 (405) 525-6546

TITLE: STACKED COMPRESSOR RACK INSTALLATION - OSHPD REQUIRED

DWG NO. M1048-72

SHT 1 OF 1



Available Components (Shaker Table Tested)				
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)	
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)	
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)	
	10A Heatpipe (13A) - Not Shown in Unit Drawing			
	10B Heatwheel (14) - Not Shown in Unit Drawing			

NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION - 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION - .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENSERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

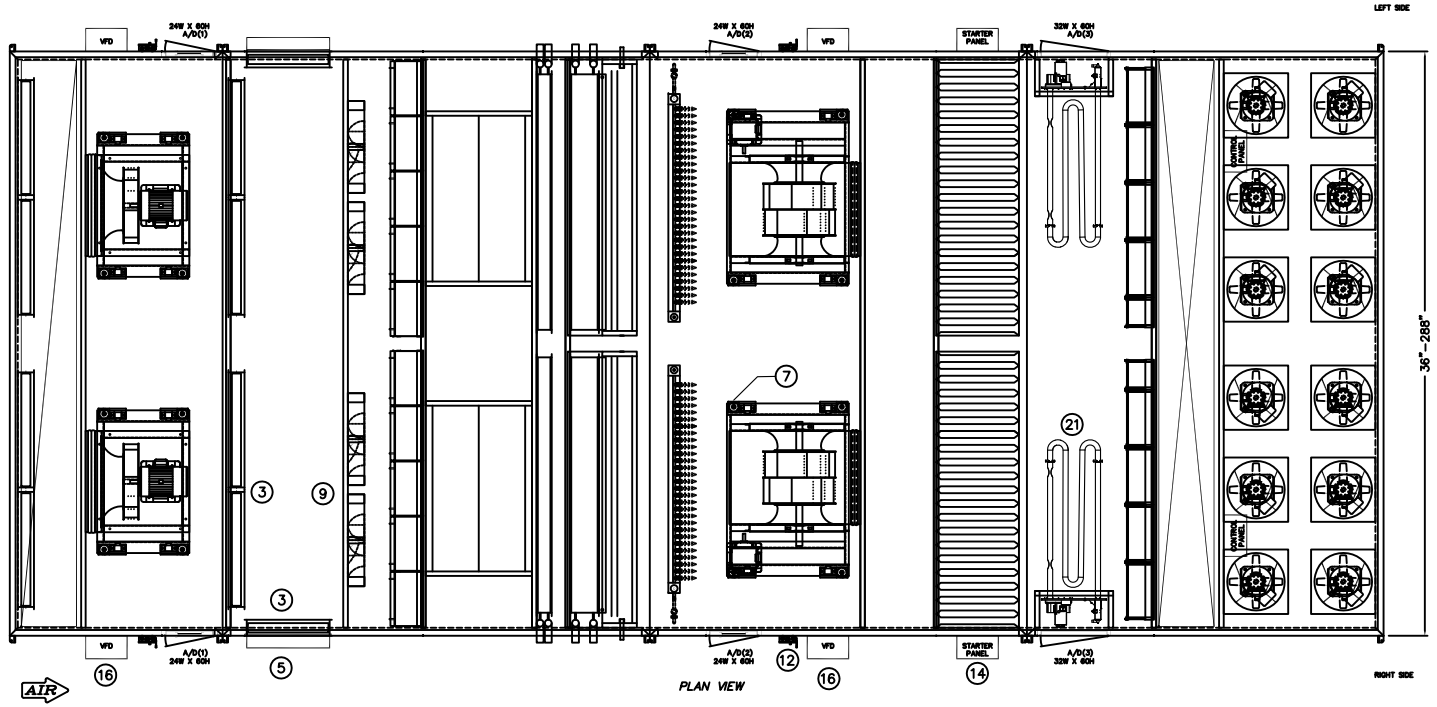
GOVERNAIR CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Job Name: OSHPD DOUBLE WIDE-PF W/DEMOUNTS					Model No: ITF
Rep. Contact			Unit Type: I/O	[DWGTYPE]	Unit Tag: OSHPD-10 / J17607
	Engineer:	Drawing Date: 02-03-12	Rep. Firm: TEMTROL, INC.	Approx. Weight:	# of Pieces:	Unit Serial No: T003247-010-00

GOVERNAIR EQUIPMENT CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

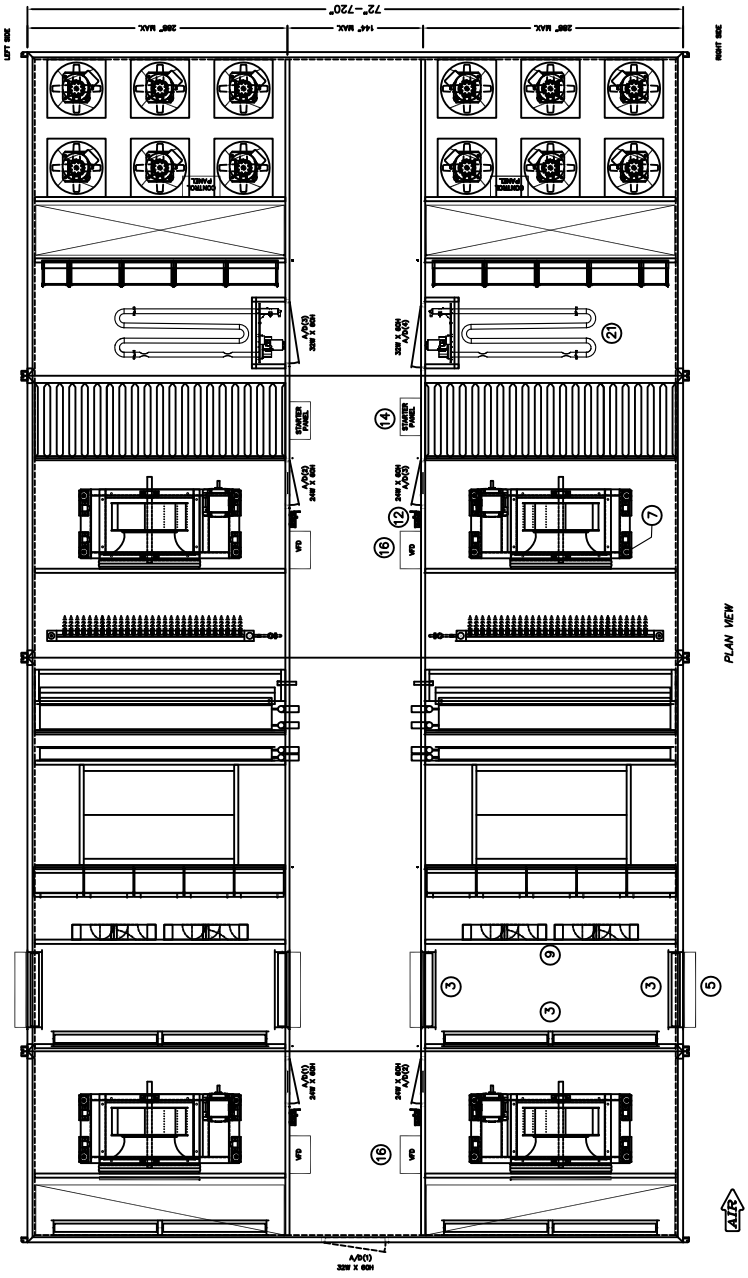
Engineer:	
Drawing Date:	2-06-12
Rep. Firm:	TEMTROL, INC.
Rep. Contact	
Unit Type:	I/O
Approx. Weight:	
[DWGTYPE]	
# of Pieces:	
Job Name:	OSHPD DOUBLE WIDE-HF W/DEMOUNTS
Model No:	ITF
Unit Tag:	OSHPD-12 / J17609
Unit Serial No:	T003247-012-00

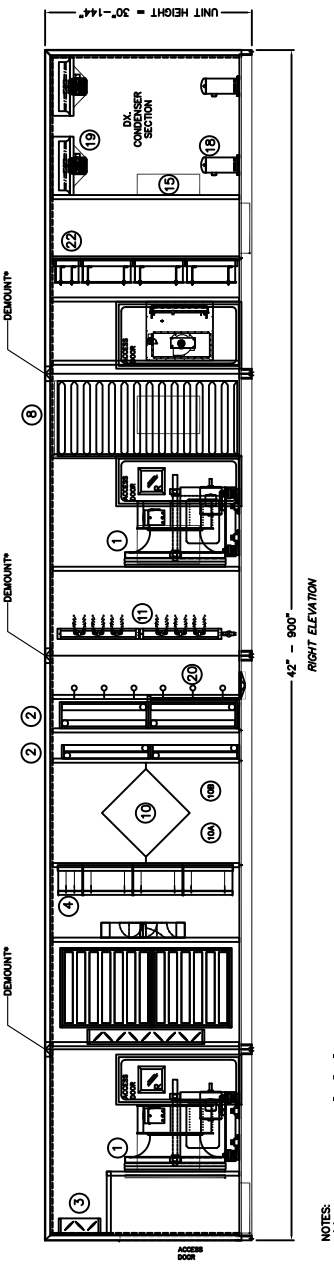
Available Components (Shaker Table Tested)					
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)	
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)	
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)		
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)		
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)		
	10A Heatpipe (13A) - Not Shown in Unit Drawing				
	10B Heatwheel (14) - Not Shown in Unit Drawing				



NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION – 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION – .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENSERS
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

Available Components (Shaker Table Tested)					
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)	
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)	
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)		
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)		
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)		
	10A Heatpipe (13A) - Not Shown in Unit Drawing				
	10B Heatwheel (14) - Not Shown in Unit Drawing				

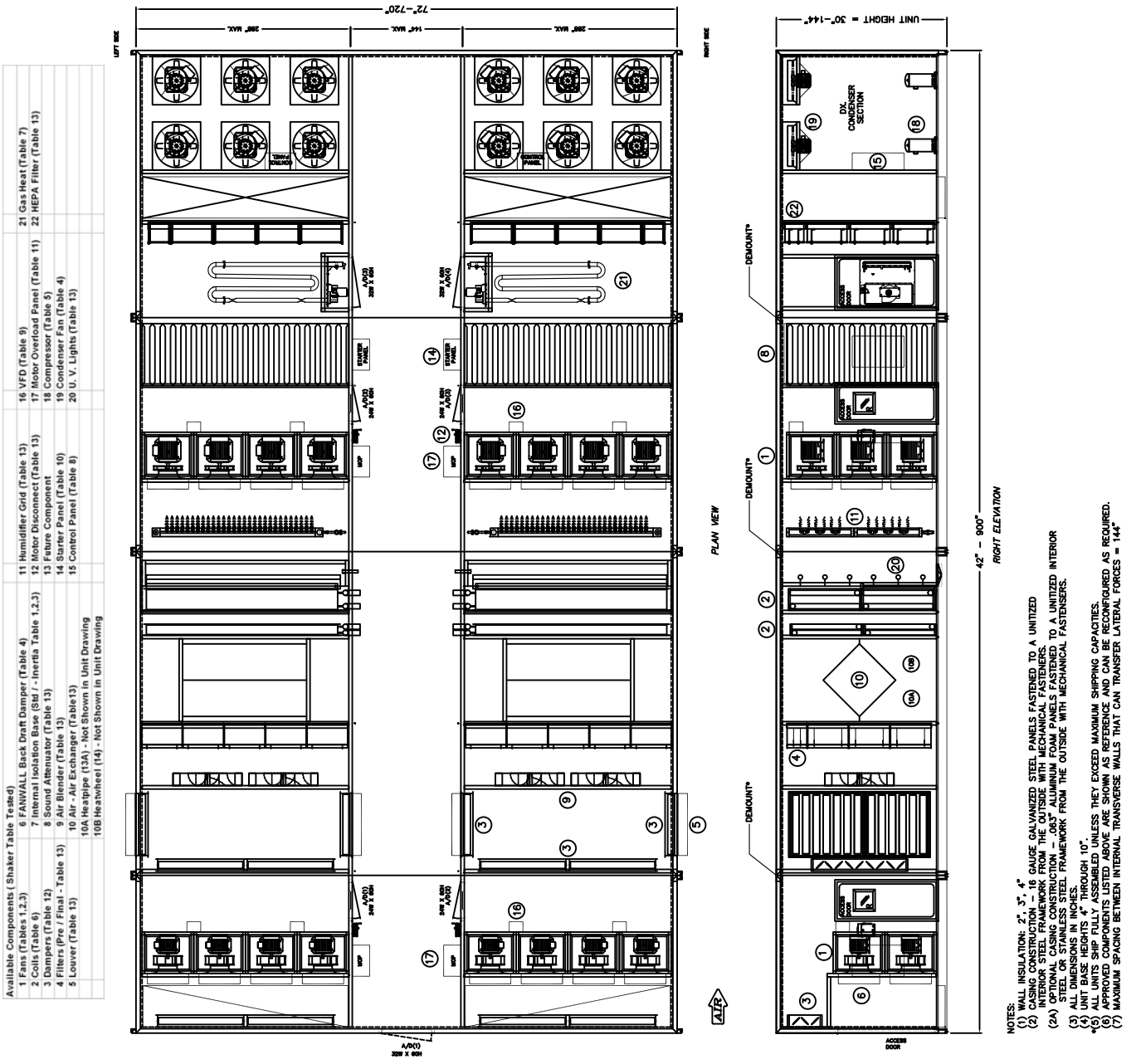




NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION - 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION - .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

GOVERNAIR CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Job Name: OSHPD DOUBLE WIDE–PF W/ CENTER VESTIBULE W/DEMOUNTS				Model No: ITF	
Rep. Contact		Unit Type: I/O	[DWGTYPE]	Unit Tag: OSHPD–16 / J17613	
	Engineer:	Drawing Date: 2–03–11	Rep. Firm: TEMTROL, INC.	Approx. Weight:	# of Pieces:
					Unit Serial No: T003247–016–00

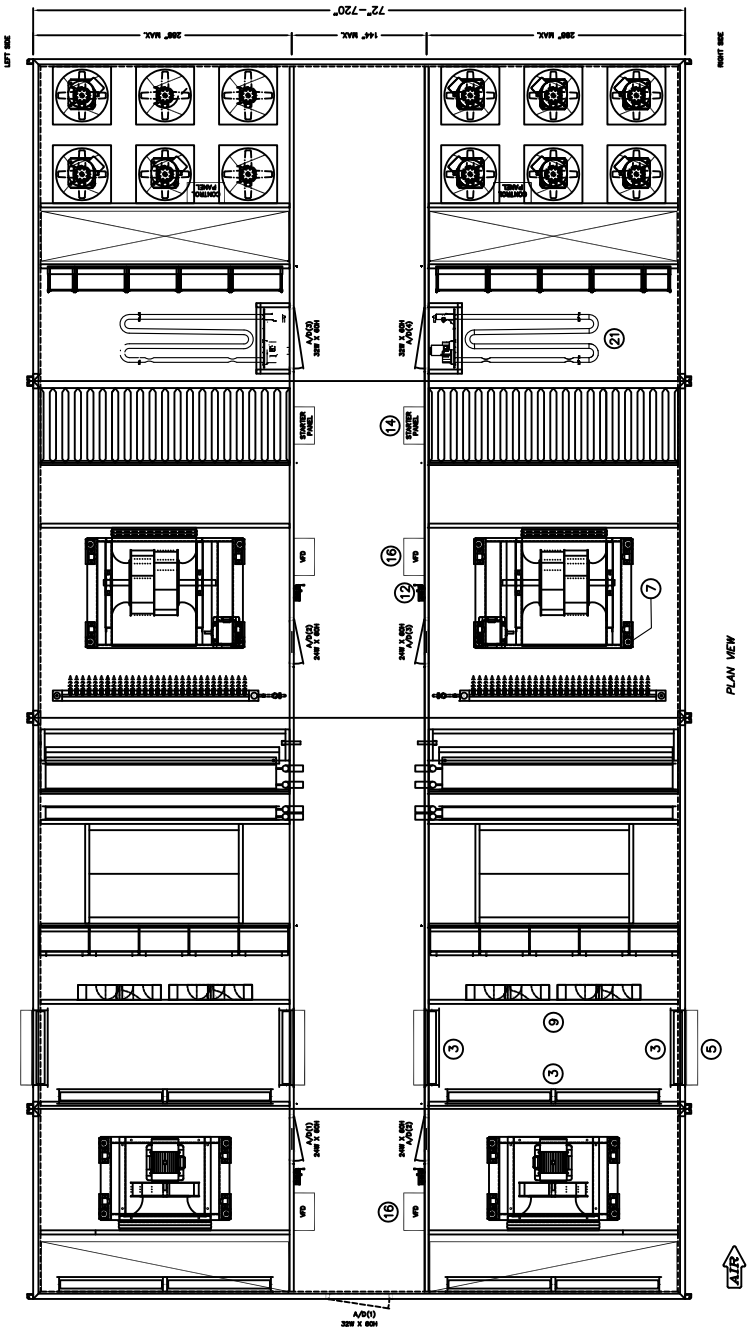


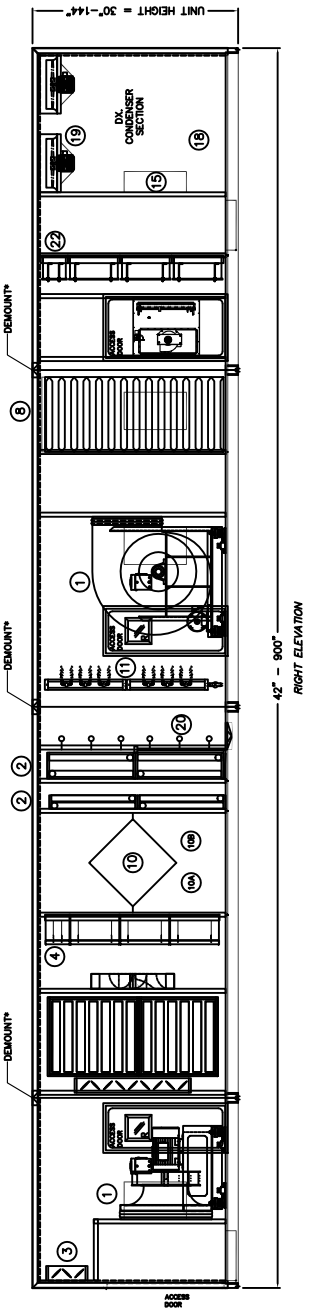
Available Components (Shaker Table Tested)					
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)	
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)	
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)		
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)		
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)		
	10A Heatpipe (13A) - Not Shown in Unit Drawing				
	10B Heatwheel (14) - Not Shown in Unit Drawing				

NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION – 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION – .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) ALL APPROVED COMBINATIONS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

GOVERNAIR CORPORATION		Job Name: OSHPD DOUBLE WIDE–FWT W/ CENTER VESTIBULE W/DEMOUNTS			Model No: ITF
4841 N. SEWELL * OKLAHOMA CITY, OK 73118 Ph 405.525.6546 * Fax 405.528.4724		Rep. Contact	Unit Type: I/O	[DWGTYPE]	Unit Tag: OSHPD–17 / J17642
	Engineer:	Drawing Date: 02–03–12	Rep. Firm: TEMTROL, INC.	Approx. Weight:	# of Pieces:	Unit Serial No: T003247–017–00

Available Components (Shaker Table Tested)					
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)		21 Gas Heat (Table 7)
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)		22 HEPA Filter (Table 13)
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)		
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)		
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)		
	10A Heatpipe (13A) - Not Shown in Unit Drawing				
	10B Heatwheel (14) - Not Shown in Unit Drawing				





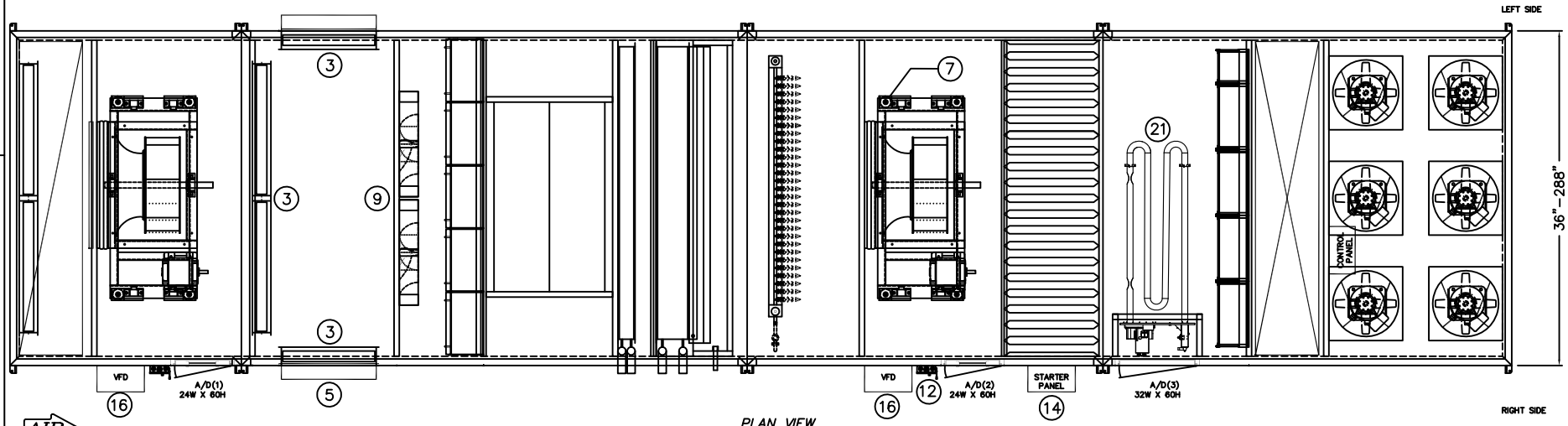
NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION - 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION - .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

GOVERNAIR CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

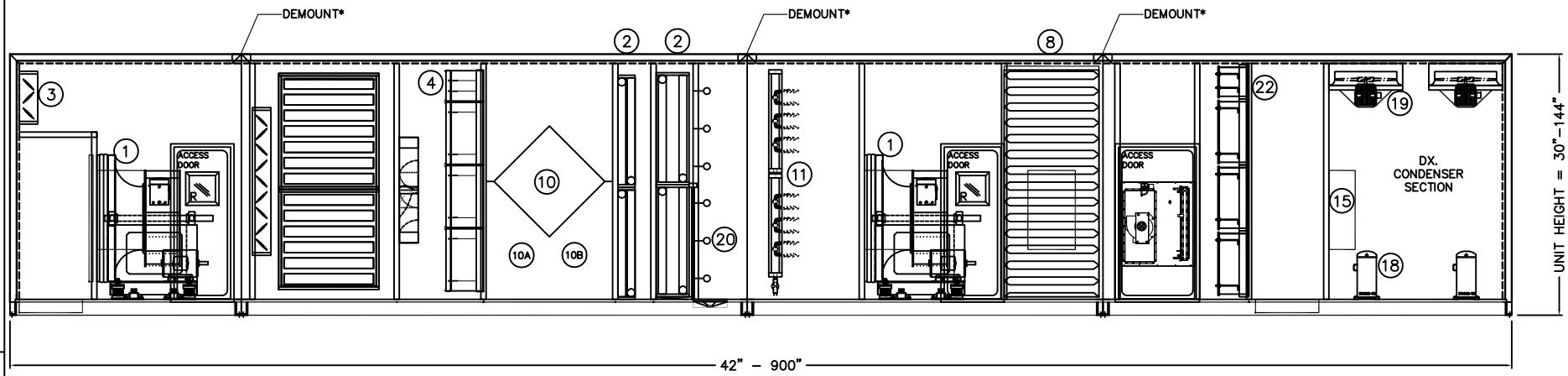
Job Name:			Model No:
OSHPD DOUBLE WIDE-HF W/ CENTER VESTIBULE W/DEMOUNTS			ITF
Rep. Contact	Unit Type: I/O	[DWGTYPE]	Unit Tag: OSHPD-18 / J17643
Engineer:	Drawing Date: 02-03-12	Rep. Firm: TEMTROL, INC.	Approx. Weight:	# of Pieces:	Unit Serial No: T003247-018-00

GOVERNAIR CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Available Components (Shaker Table Tested)							
1	Fans (Tables 1,2,3)	6	FANWALL Back Draft Damper (Table 4)	11	Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)
2	Coils (Table 6)	7	Internal Isolation Base (Std / - Inertia Table 1,2,3)	12	Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)
3	Dampers (Table 12)	8	Sound Attenuator (Table 13)	13	Future Component	18 Compressor (Table 5)	
4	Filters (Pre / Final - Table 13)	9	Air Blender (Table 13)	14	Starter Panel (Table 10)	19 Condenser Fan (Table 4)	
5	Louver (Table 13)	10	Air - Air Exchanger (Table13)	15	Control Panel (Table 8)	20 U. V. Lights (Table 13)	
		10A	Heatpipe (13A) - Not Shown in Unit Drawing				
		10B	Heatwheel (14) - Not Shown in Unit Drawing				



PLAN VIEW



RIGHT ELEVATION

NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION – 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION – .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENSERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

Job Name: OSHPD SINGLE WIDE-PF W/DEMOUNTS
Model No: ITF
Rep. Contact:
Unit Type: I/O
[DWGTYPE]
Rep. Firm: TEMTROL, INC.
Approx. Weight:
# of Pieces:
Unit Tag: OSHPD-19 / J17664
Engineer:
Drawing Date: 02-03-12
Unit Serial No: T003247-019-00

GOVERNAIR CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Engineer:

Drawing Date: 02-03-12

Job Name: OSHPD SINGLE WIDE-FWT W/DEMOUNTS

Rep. Contact

Rep. Firm: TEMTROL, INC.

Unit Type: I/O

Approx. Weight:

[DWGTYPE]

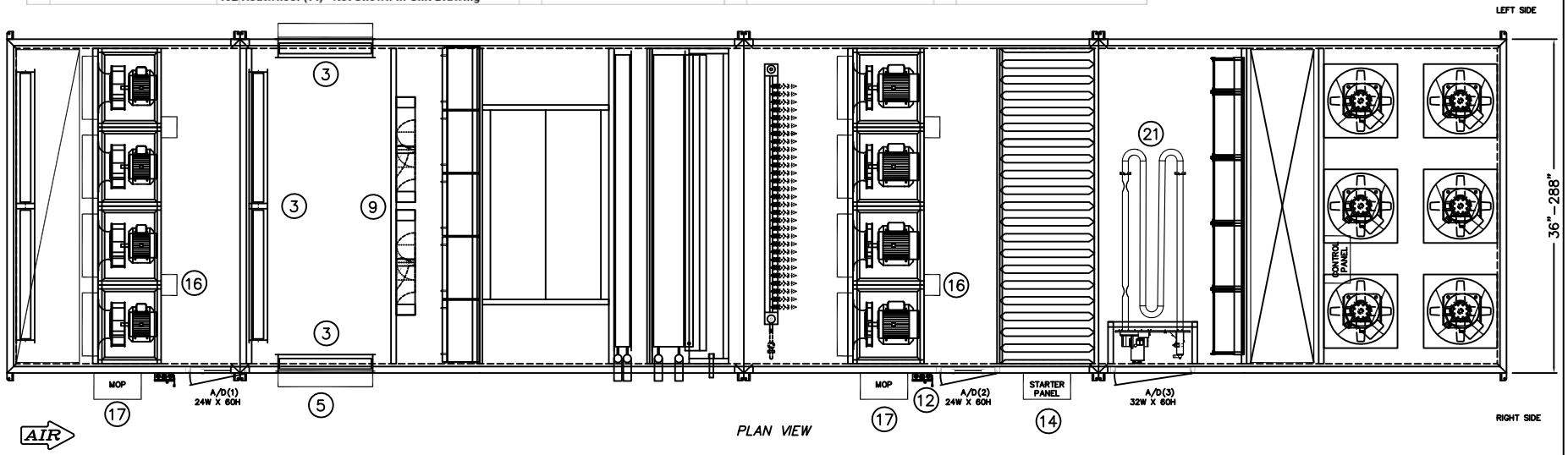
# of Pieces:

Model No: ITF

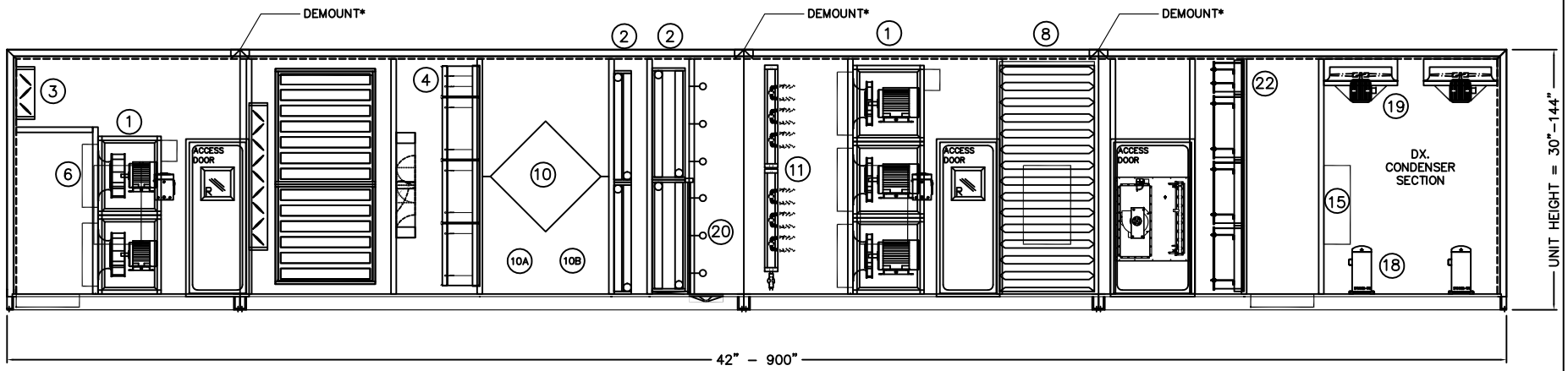
Unit Tag: OSHPD-20 / J17665

Unit Serial No: T003247-020-00

Available Components (Shaker Table Tested)				
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)	
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)	
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)	
	10A Heatpipe (13A) - Not Shown in Unit Drawing			
	10B Heatwheel (14) - Not Shown in Unit Drawing			



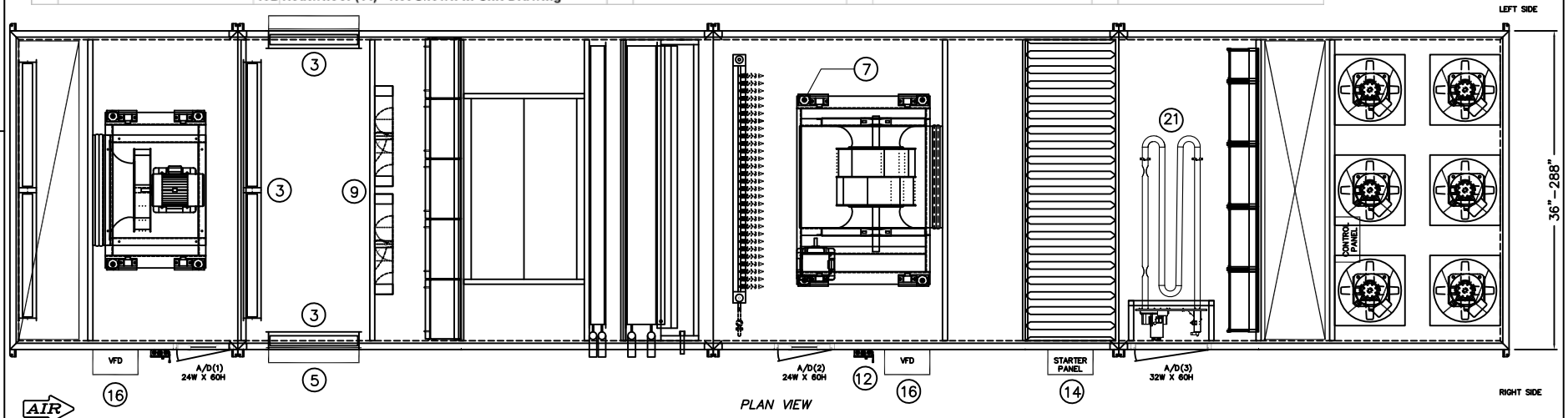
PLAN VIEW



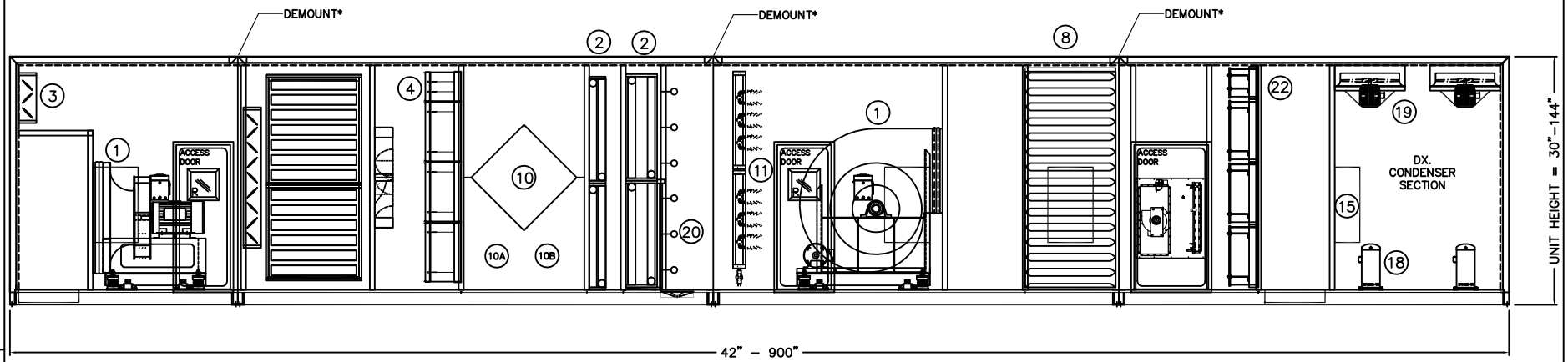
RIGHT ELEVATION

NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION – 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION – .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENSERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

Available Components (Shaker Table Tested)							
1	Fans (Tables 1,2,3)	6	FANWALL Back Draft Damper (Table 4)	11	Humidifier Grid (Table 13)	16	VFD (Table 9)	21	Gas Heat (Table 7)
2	Coils (Table 6)	7	Internal Isolation Base (Std / - Inertia Table 1,2,3)	12	Motor Disconnect (Table 13)	17	Motor Overload Panel (Table 11)	22	HEPA Filter (Table 13)
3	Dampers (Table 12)	8	Sound Attenuator (Table 13)	13	Future Component	18	Compressor (Table 5)		
4	Filters (Pre / Final - Table 13)	9	Air Blender (Table 13)	14	Starter Panel (Table 10)	19	Condenser Fan (Table 4)		
5	Louver (Table 13)	10	Air - Air Exchanger (Table13)	15	Control Panel (Table 8)	20	U. V. Lights (Table 13)		
		10A	Heatpipe (13A) - Not Shown in Unit Drawing						
		10B	Heatwheel (14) - Not Shown in Unit Drawing						



PLAN VIEW



RIGHT ELEVATION

NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION – 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION – .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENSERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

GOVERNAIR EQUIPMENT CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Engineer:

Drawing Date: 02-03-12

Job Name: OSHPD SINGLE WIDE-HF W/DEMOUNTS

Rep. Contact

Rep. Firm: TEMTROL, INC.

Unit Type: I/O

Approx. Weight:

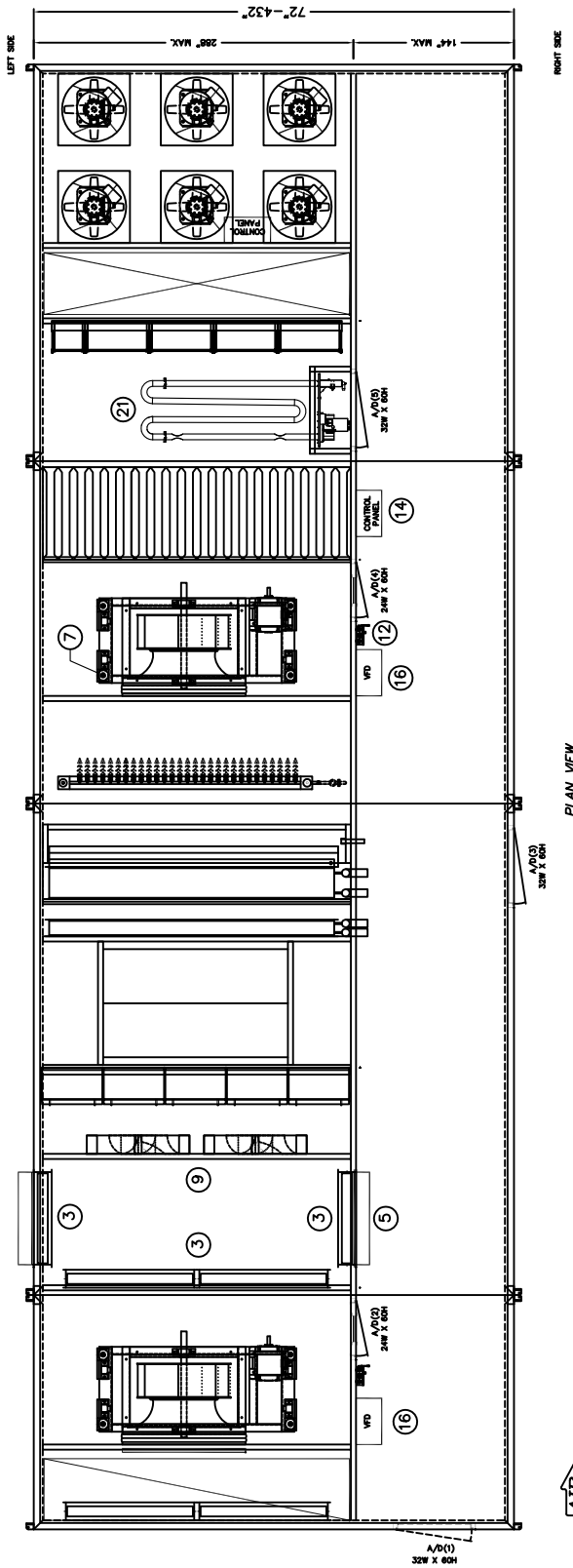
[DWGTYPE]

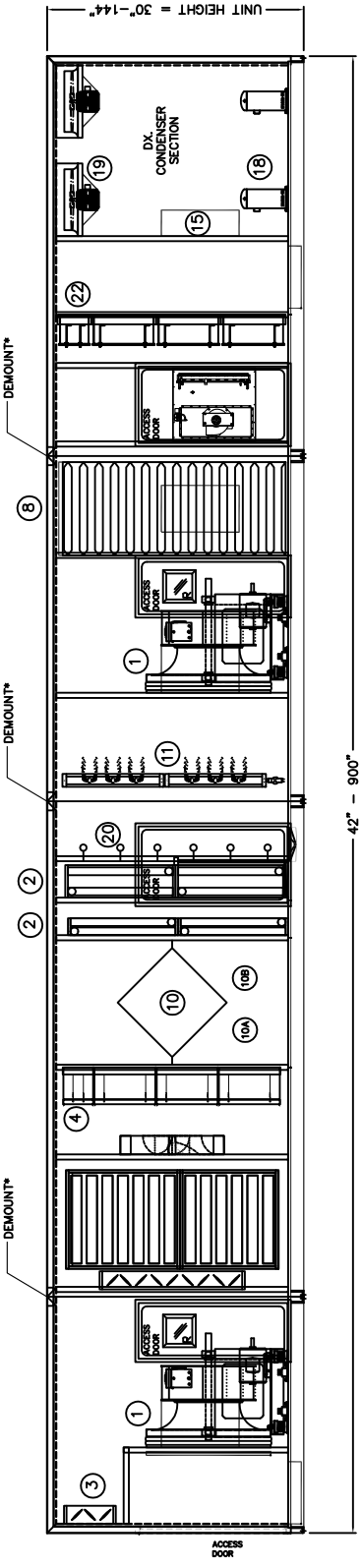
# of Pieces:

Model No: ITF

Unit Tag: OSHPD-21 / J17666

Unit Serial No: T003247-021-00





Available Components (Shaker Table Tested)					
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)	
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)	
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)		
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)		
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)		
	10A Heatpipe (13A) - Not Shown in Unit Drawing				
	10B Heatwheel (14) - Not Shown in Unit Drawing				

NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION – 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION – .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

GOVERNAIR CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Job Name:			Model No:
OSHPD SINGLE WIDE–PF W/SIDE VESTIBULE/PIPE CHASE & DEMOUNTS			ITF
Rep. Contact	Unit Type: I/O	[DWGTYPE]	Unit Tag: OSHPD–27 / J17667
Engineer:	Drawing Date: 02–03–12	Rep. Firm: TEMTROL, INC.	Approx. Weight:	# of Pieces:	Unit Serial No: T003247–022–00

GOVERNAIR CORPORATION

4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Engineer:

Drawing Date: 02-03-12

Job Name: OSHPD SINGLE WIDE-FWT W/SIDE VESTIBULE/ PIPE CHASE & DEMOUNTS

Rep. Contact

Rep. Firm: TEMTROL, INC.

Unit Type: I/O

[DWGTYPE]

Approx. Weight:

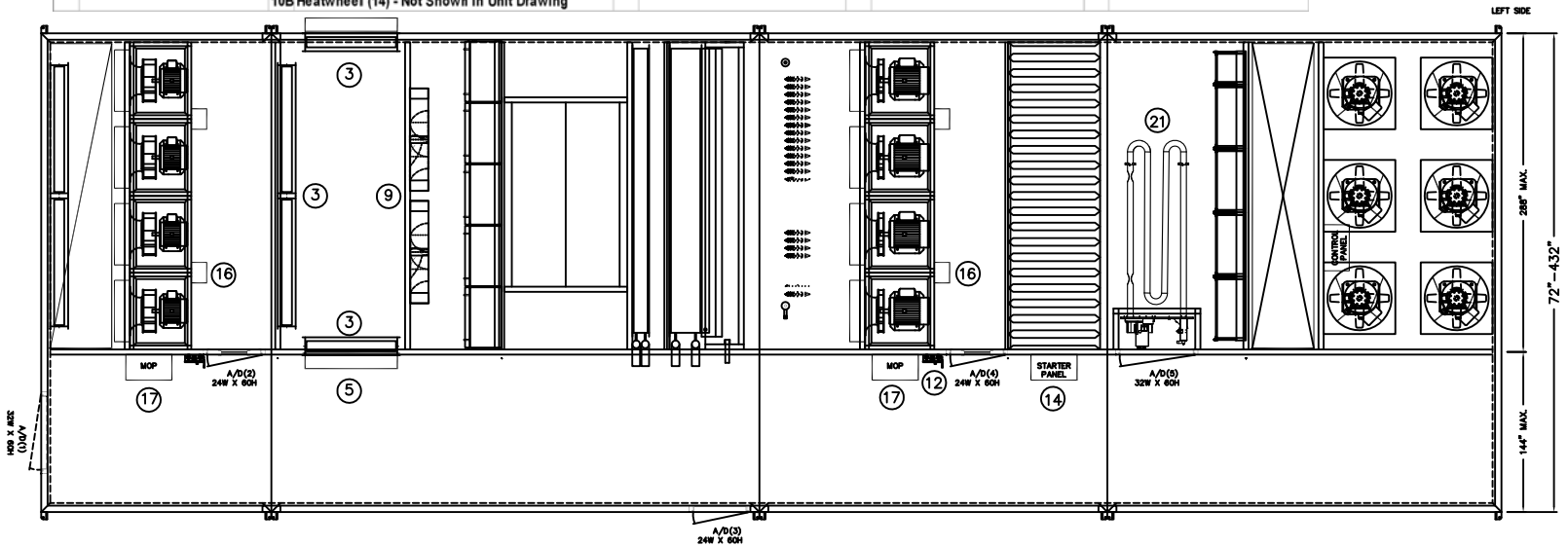
# of Pieces:

Model No: ITF

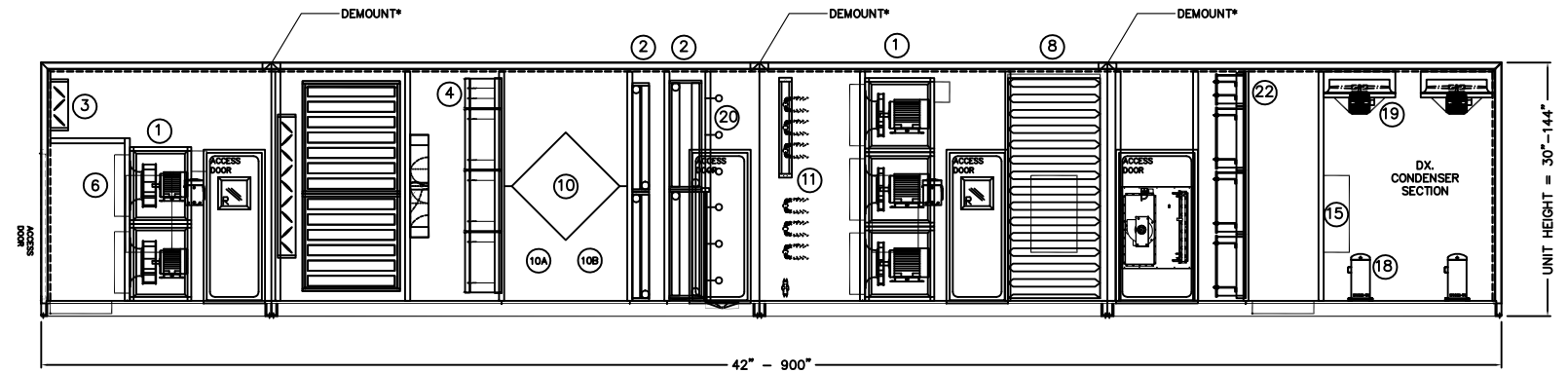
Unit Tag: OSHPD-28 / J17668

Unit Serial No: T003247-023-00

Available Components (Shaker Table Tested)				
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)	
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)	
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)	
	10A Heatpipe (13A) - Not Shown in Unit Drawing			
	10B Heatwheel (14) - Not Shown in Unit Drawing			



PLAN VIEW



RIGHT ELEVATION

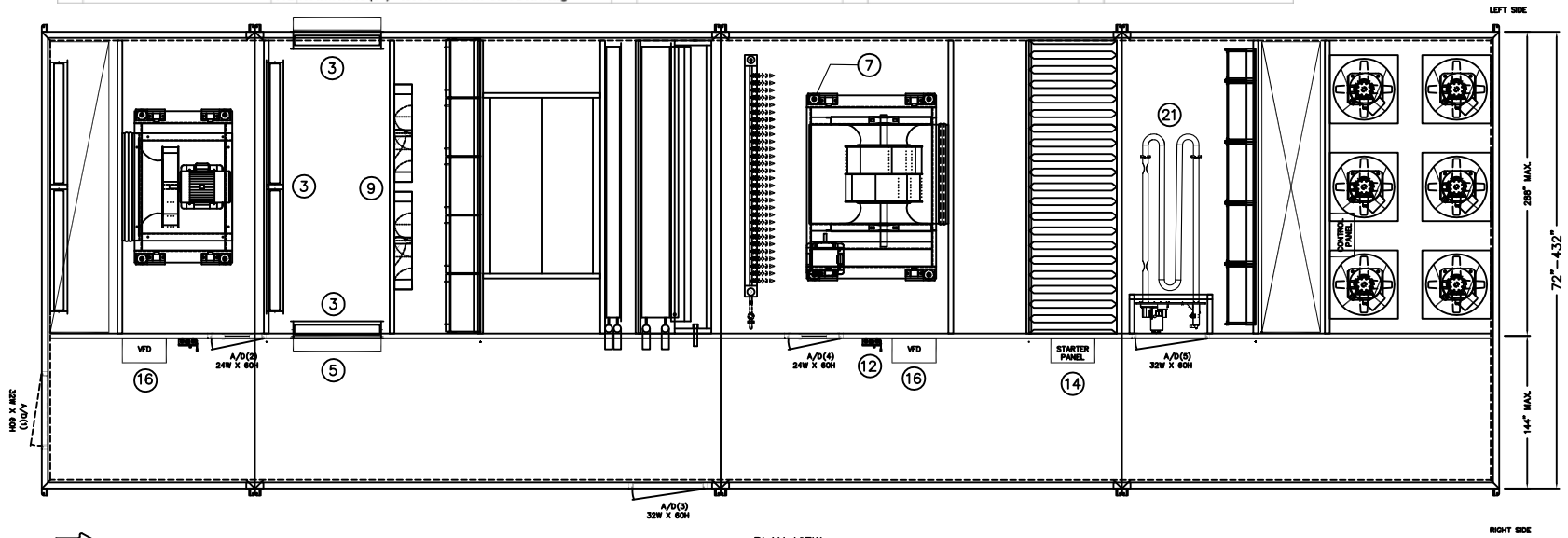
NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION - 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION - .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENSERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

GOVERNAIR EQUIPMENT CORPORATION

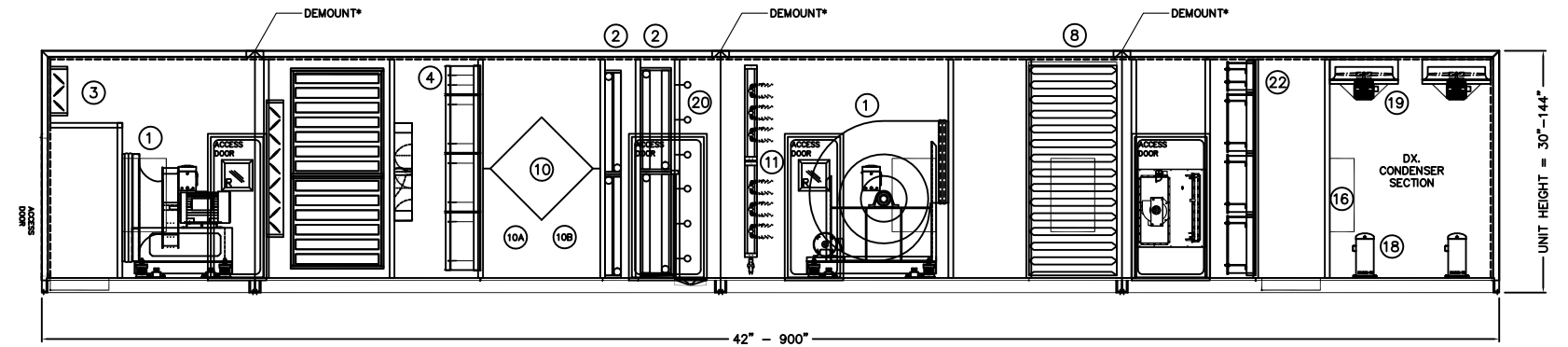
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Engineer:	
Drawing Date:	02-03-12
Rep. Firm:	TEMTROL, INC.
Rep. Contact	
Job Name:	OSHPD SINGLE WIDE-HF W/SIDE VESTIBULE/PIPE CHASE & DEMOUNTS
Unit Type:	I/O
Approx. Weight:	
[DWGTYPE]	
# of Pieces:	
Unit Tag:	OSHPD-29 / J17669
Unit Serial No:	T003247-024-00
Model No:	ITF

Available Components (Shaker Table Tested)				
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)	
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)	
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)	
	10A Heatpipe (13A) - Not Shown in Unit Drawing			
	10B Heatwheel (14) - Not Shown in Unit Drawing			

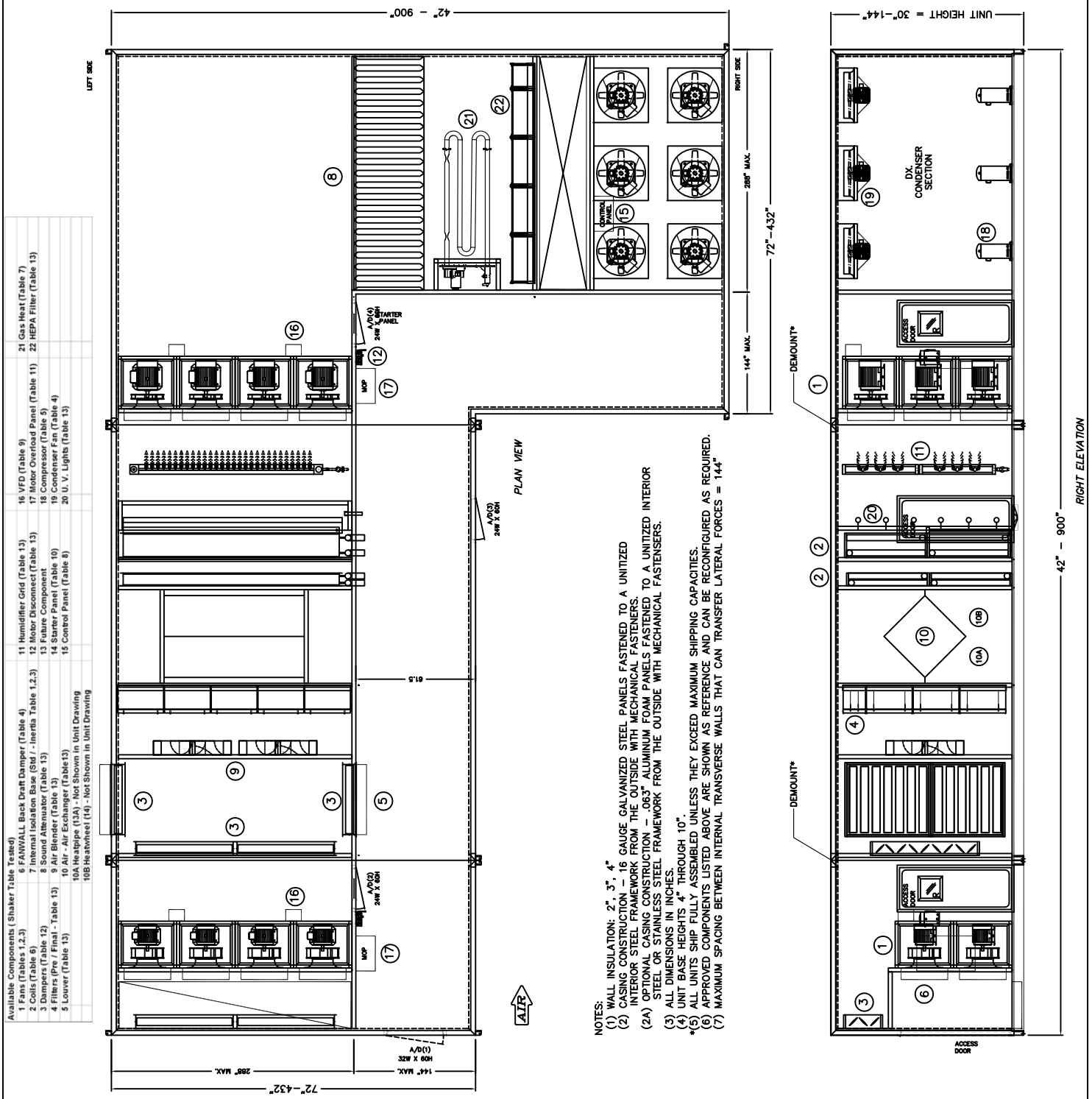


PLAN VIEW



RIGHT ELEVATION

NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION – 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION – .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENSERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

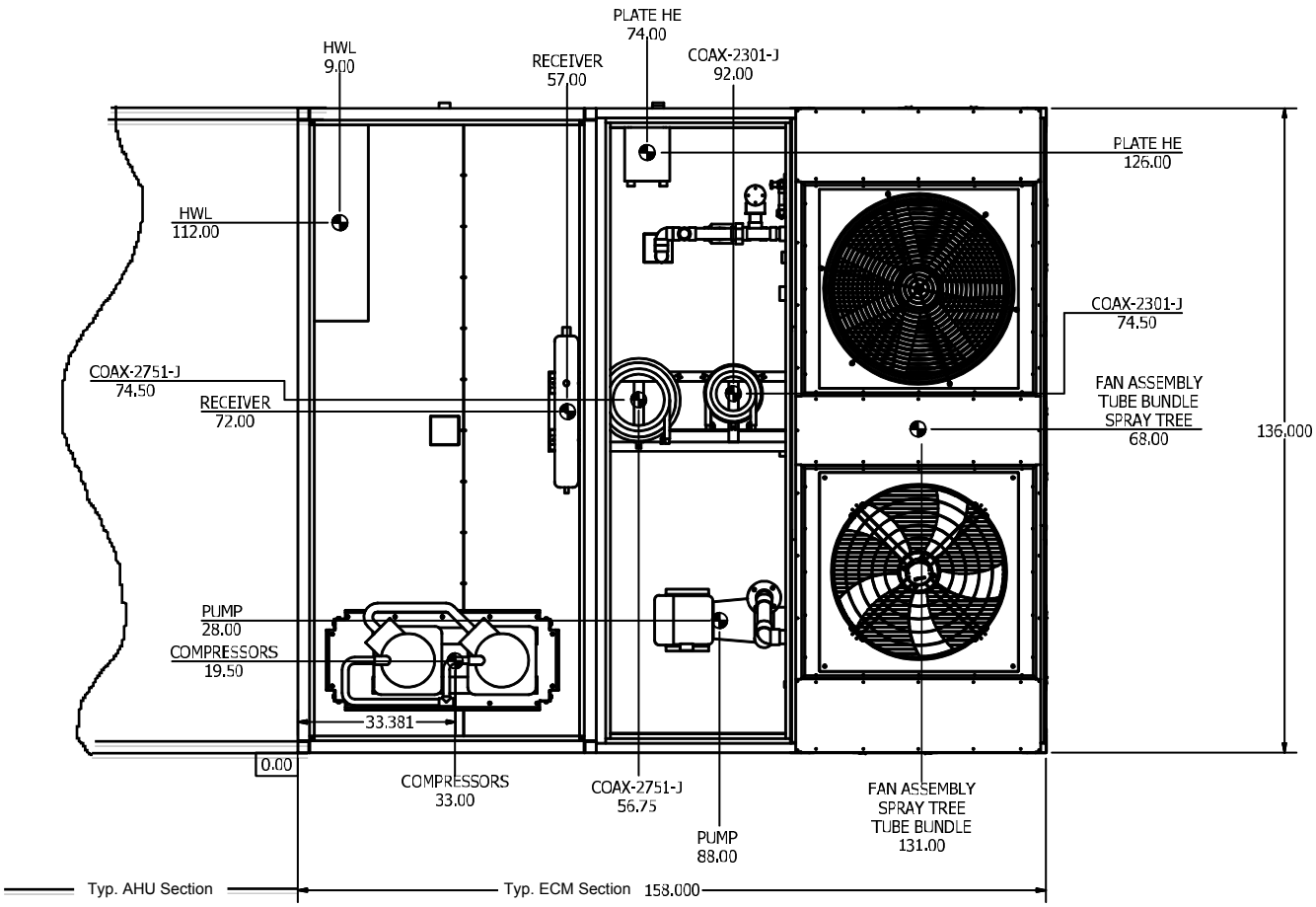


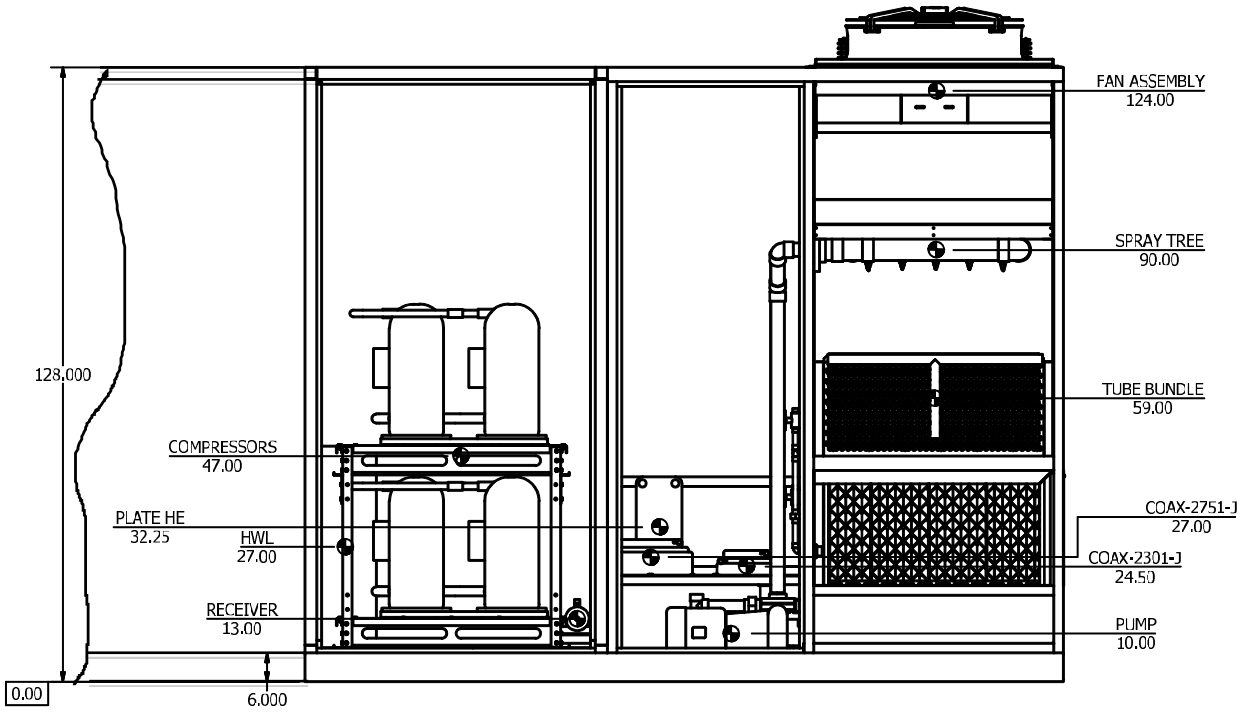
Available Components (Shaker Table Tested)					
1 Fans (Tables 1,2,3)	6 FANWALL Back Draft Damper (Table 4)	11 Humidifier Grid (Table 13)	16 VFD (Table 9)	21 Gas Heat (Table 7)	
2 Coils (Table 6)	7 Internal Isolation Base (Std / - Inertia Table 1,2,3)	12 Motor Disconnect (Table 13)	17 Motor Overload Panel (Table 11)	22 HEPA Filter (Table 13)	
3 Dampers (Table 12)	8 Sound Attenuator (Table 13)	13 Future Component	18 Compressor (Table 5)		
4 Filters (Pre / Final - Table 13)	9 Air Blender (Table 13)	14 Starter Panel (Table 10)	19 Condenser Fan (Table 4)		
5 Louver (Table 13)	10 Air - Air Exchanger (Table13)	15 Control Panel (Table 8)	20 U. V. Lights (Table 13)		
	10A Heatpipe (13A) - Not Shown in Unit Drawing				
	10B Heatwheel (14) - Not Shown in Unit Drawing				

NOTES:
(1) WALL INSULATION: 2", 3", 4"
(2) CASING CONSTRUCTION – 16 GAUGE GALVANIZED STEEL PANELS FASTENED TO A UNITIZED INTERIOR STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENERS.
(2A) OPTIONAL CASING CONSTRUCTION – .063" ALUMINUM FOAM PANELS FASTENED TO A UNITIZED INTERIOR STEEL OR STAINLESS STEEL FRAMEWORK FROM THE OUTSIDE WITH MECHANICAL FASTENSERS.
(3) ALL DIMENSIONS IN INCHES.
(4) UNIT BASE HEIGHTS 4" THROUGH 10".
*(5) ALL UNITS SHIP FULLY ASSEMBLED UNLESS THEY EXCEED MAXIMUM SHIPPING CAPACITIES.
(6) APPROVED COMPONENTS LISTED ABOVE ARE SHOWN AS REFERENCE AND CAN BE RECONFIGURED AS REQUIRED.
(7) MAXIMUM SPACING BETWEEN INTERNAL TRANSVERSE WALLS THAT CAN TRANSFER LATERAL FORCES = 144"

GOVERNAIR CORPORATION
4841 N. SEWELL * OKLAHOMA CITY, OK 73118
Ph 405.525.6546 * Fax 405.528.4724

Job Name: OSHPD L SHAPED SINGLE WIDE–FWT W/SIDE VESTIBULE & DEMOUNTS				Model No: ITF	
Rep. Contact		Unit Type: I/O	[DWGTYPE]	Unit Tag: OSHPD–30 / J17670	
	Engineer:	Drawing Date: 02–03–12	Rep. Firm: TEMTROL, INC.	Approx. Weight:	# of Pieces:
				Unit Serial No: T003247–025–00	





WEIGHTS:

COMPRESSORS:	350 lbs	COAX-2301-J:	20 lbs
PLATE H.E.:	100 lbs	COAX-2751-J:	65 lbs
HWL:	500 lbs	TUBE BUNDLE:	800 lbs
RECEIVER:	30 lbs	SPRAY TREE:	60 lbs
PUMP:	550 lbs	FAN ASSEMBLY:	900 lbs

ESTIMATED OVERALL DRY WEIGHT: 10,500 lbs

STANDARD MANUFACTURING DRAWING

THIS DRAWING AND THE INFORMATION IT CONTAINS IS THE PROPERTY OF GOVERNAIR CORPORATION AND IS NOT TO BE REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF GOVERNAIR CORPORATION

GOVERNAIR

4841 N. Sewell, OKC, OK 73118 (405) 525-6546

TOLERANCES	
.XXX	±0.060
.XX	±0.093
.X	±0.125
ANG	1°

BY: LM
DATE: 10/3/2011
REV: A

TITLE: OSHPD
Evaporator Condenser Section, ECM-1

DWG NO: P123801-001-00

SHT 1 OF 1