

ATTACHMENT A:
AHU-51 ACCEPTED SUBMITTAL



PROJECT

MU-CP221933 PCT

EQ	68695
Equipment tag(s)	AHU-51
Location	
Sales office	Fenton, MO
Sales person	Jeff Bendle

Original submittal date

Revision 1

Current version date 3-8-24

Prepared by Justin Rongey

Submittal approval dates are the basis for determining manufacturing lead times. Manufacturing will not begin and shipping dates will not be issued until approved, stamped submittal drawings are received. Performance, openings and dimensions may vary from contract documents. Return of approved drawings constitutes acceptance of these variances.

Unit Revision Log

Date	Description
2/29/2024	Original
3-8-24	Added Note to Motor Cut Sheet and updated Electrical drawing are now (2) 3-way light switches.

Clarifications and Exceptions

UV ballasts and lamps are not rated for washdown. Remove the lamps and cover the ballasts to protect against water intrusion. Allow adequate time to dry before installing UV lamps.

NOT INCLUDED

All items listed below are not included unless specifically listed as included in proposal.

IBC seismic certification. Equipment construction not in compliance with IBC seismic.

OSHPD seismic certification. Equipment construction not in compliance with OSHPD seismic certification.

IBC wind load certification. Equipment construction not in compliance with IBC wind load certification.

NOA Hurricane certification. Equipment construction not in compliance with NOA Hurricane certification.

Condensate drain "P" traps. All drains will be stubbed through unit for exterior field provided traps.

Expenses associated with customer witness of factory testing is the responsibility of the local Trane sales office.

Onsite services including: rigging, hoisting, assembly, assembly assistance, assembly supervision, testing, air balancing, start-up electrical connections at section splits.

Unit controls including, damper operators, sensors, transformers, and control wiring.

Factory programming of a factory mounted unit controller, including factory and field/customer-provided unit controllers.

Piping, valves, control valves or accessories. All necessary pipe insulation must be furnished, and field installed by others.

VFDs, Starters, disconnects, or motor wiring.

VFD harmonic filter (line reactors, etc.) and installation labor to meet harmonic distortion performance criteria.

Roof curbs. All outdoor units are equipped with base suitable for roof curb mounting.

Storage or protection of equipment while in storage.

Sales tax, special permits, or duties.

Notes

Specifications and other job materials reviewed by Trane Custom Support does not transfer liability of missed or excluded items from the responsible local sales office. Interpretations and exceptions taken from the aforementioned documents are the final responsibility of the Trane sales office and customer. Trane Custom Support does not agree to any liquidated damages, right to refusal clauses, or FOB jobsite restrictions unless first reviewed and agreed upon by the Trane legal department. Due to variability of local codes, it is the responsibility of the sales office to verify compliance and identify specific requirements. Any correction necessary after shipment to satisfy local authorities shall be at the expense of others.

Manufacturing ship cycle lead time is contingent upon Trane's acceptance of approved submittals and approved credit, followed by a release for fabrication. Ship cycles are established after fabrication release. Cycles may extend due to unit complexity. For projects with critical schedules or multiple units, contact the factory in advance to develop a detailed shipment timeline.

Field supplied factory installed items must be delivered to the factory by the committed delivery date. Items not delivered by the committed delivery date must be field installed by others at the jobsite.

All sales of equipment are strictly in accordance with Trane's standard Terms and Conditions and are offered with Trane's standard warranty. Please contact Trane's Contract or Warranty Administration group for special consideration beyond the standard terms.

Price quoted below is valid if equipment order is released for production on or prior to the "Release For Production Deadline" for "Ship Quarter Requested". Price quoted includes escalation based on ship quarter requested and announced price increases not yet implemented in systems. Price subject to change if equipment scope is altered.

"Release For Production Deadline" is based on current estimated production cycles and lengths and does not guarantee shipment in requested shipment quarter. Reference the Trane Commercial Systems Product Ship Cycle Information "Green Sheets".

Production cycles are subject to change without notice. Production cycles are estimated based on current availability of common components and production capacity. An official estimated ship date (ESD) will be provided after equipment is released to production. Cycle length is an average time between approved release for production and ESD.

On Flex-Fit units, Trane Factory doesn't provide any conduit or wiring to the field. This must be provided by others.



MU-CP221933 PCT

EQ 68695
Date 3/1/2024
Rev. 0

Primary Construction: (AHU-51)

Indoor casing
Painted AHU - No
Designed for roof curb - No
Casing performance - Deflection L/250 @ 10 inches of static pressure
Seismic - No
Wind Certified - No
Hurricane / NOA rated - No

Base construction

steel beam C8 x 11.5
Top floor - 3/16 alum treadplate
Bottom liner - galvanized steel solid 20 ga
Insulation - Injected foam, R-Value = R20
Floor seams - Continuously welded
Waterdam - Yes
Opening grating material - N/A

Casing Panel construction

Perimeter Panel

Exterior – galvanized steel solid 20 ga
Interior – 304 SS solid 20 ga
Panel thickness – 2 inch
Insulation - Injected foam, R-Value = R13.3

Roof Panels

Exterior – galvanized steel solid 20 ga
Interior – 304 SS solid 20 ga
Panel thickness – 2 inch
Insulation - Injected foam, R-Value = R13.3

C-panels

Material - 304 SS solid 16 ga
Panel thickness - 2 inch

Coil(s) with drain pan rack - Yes

Coil(s) without drain pan rack - Yes

Motor removal rail - Yes

Structural I-beam installed in the fan section to facilitate motor removal.
Motor hoisting mechanism not included.
Beam trolley mechanism is not included.

Mechanical Construction Notes

Drain Pans

- 16 ga. stainless steel, double-sloped insulated drain pans with 1-1/2in stainless steel MPT drain. All traps furnished and installed in field by others.
- Intermediate pans drain to the bottom pan via dual 1" PVC downspouts.

Safing (component blankoffs)

- Cooling and Heating coil safing is 304 stainless steel
All components not mentioned will be safed with 304 stainless steel.

Washdown construction

- All interior seams are caulked.
Z-strip provided to protect wall to base joint.
1.5" diameter floor drain provided in every section.
- Unit provided with construction suitable for interior washdown utilizing a pressure washer.
CAUTION: Electrical components (e.g. control devices) are not suitable for washdown and should be covered/protected during washdown procedure. Spraying high pressure water directly at interior seams covered with sealant may compromise the sealant.

Doors

- Door thickness and materials of construction to match AHU casing.
- Allegis K2
- 12"x12"/8"x8" Thermal pane
Thermal pane windows for thermal break doors
- Continuous stainless steel piano Hinge



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- Test ports
- Some units are shipped in sections. Sections to be assembled at the jobsite. See IOM shipped with unit for details.
Unit requires full perimeter support. Units shipped in multiple sections require additional support at each of the shipping split locations.
Installation co-ordination and AHU mounting details need to be made available to AHU manufacturer for review to ensure no interference issues occur at the jobsite. Installation contractor is responsible for providing these details to the AHU manufacturer. Contractor to work with local Trane office and AHU manufacturer.
- Cooling coil racks are stainless steel
Heating coil racks stainless steel
Coils are removed through removable access plugs.
- Structural I-beam installed in the fan section to facilitate motor removal.
Motor hoisting mechanism not included.
Beam trolley mechanism is not included
- Heating and cooling coil supply and return connections, plus the vent and drain, will be extended to the outside of the unit for connection by others.
- Pipe penetrations are sealed with Rubber grommets, or if space restraints exist, sheet metal collars rings.
Pipe extension material is Sch. 40 blk pipe
Vent and drain material is Sch. 40 blk pipe
All pipe insulation is by other.
- UV light bulbs
Section split sheet metal trim, caps, screws, and sealant.
Equipment IOMs
- AHU
- Fans are balanced at the fan manufacturer's facility. Vibration level to meet BV-3 balance levels.
- Unit will be tested to confirm a maximum leakage rate of 0.5% @ 10"wc. Positive pressure for positive sections, negative for negative sections.
- Deflection test performed to confirm a maximum deflection of L/250 @ 10"wc where L is defined as the panel height. Deflection will be measured at the mid-point of the worst-case wall panel for each test. Positive pressure for positive test, negative for negative test.

Electrical Construction Notes

ETL

- Unit is ETL Listed.

Multiple points of power

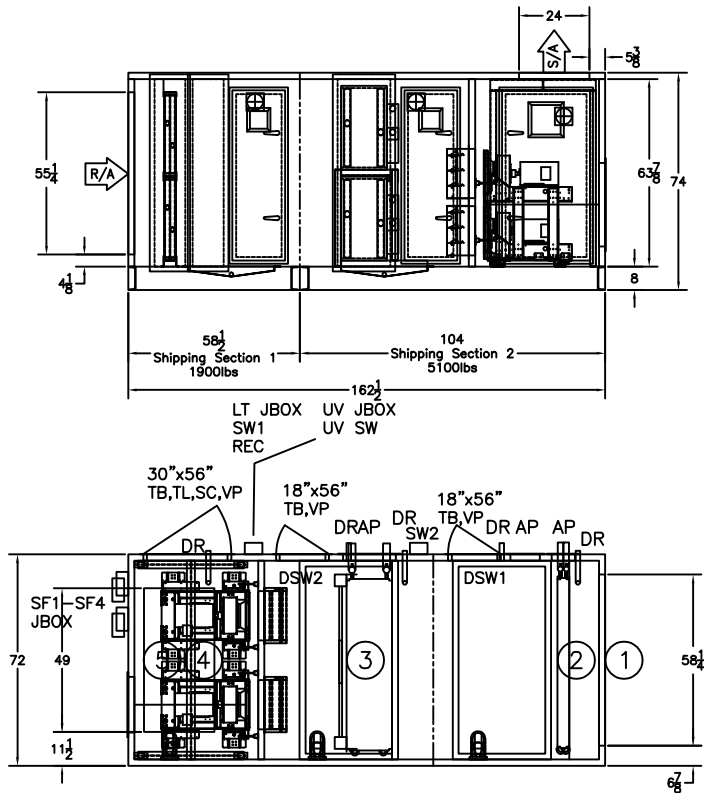
- Wash down / hose down inside of unit. Standard N1 enclosure & boxes outside of unit (indoor unit).
Motors are wired to an external junction box - 1/motor (SF1-SF4).
Lights & Receptacle wired to external junction box.
UV Lights wired to external junction box.
See Electrical dwg for details and power drop requirements.

Conduit, fittings, connectors

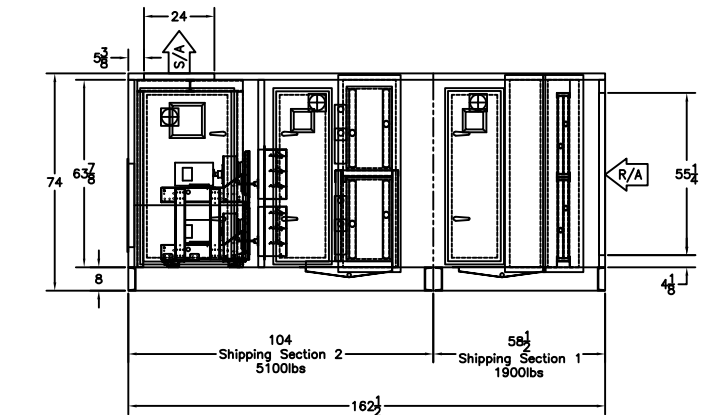
- EMT Conduit, Zinc Die-cast Compression Connector, and Flexible metal Conduit (FMC) are standard conduits.
Power wiring splices are connected with a power distribution block mounted in an enclosure located on the ceiling/sidewall of the unit.
Unit is wash down / hose down inside. Use water tight connectors and JBoxes inside of unit as needed. Electrical putty ends of FMC and create a drip leg to keep water out of ends of connections.

#	REVISIONS	DATE:	BY:

Left Side View



Right Side View



EQUIPMENT LIST

- (1) Return Opening—end 55.25"x58.25"
- (2) Heating Coil QTY (2) 27"x58"x1—row
- (3) Cooling Coil QTY (2) 27"x58"x8—row w/ UV Lighting
- (4) Supply Fan Array 2x2 TDDP 12.25" CL2/5HP ea w/ Backdraft Dampers
- (5) Supply Discharge opening—top 24"x49"

- TB – Thermal Break
- TL – Tool Locking
- VP – Viewport
- AP – Access Panel
- DR – Drain Pan Connection
- FD – Floor Drain
- SC – Safety Catch
- LS – Light Switch
- JB – Junction Box

DRAWN BY:	Name
DATE:	3/5/2024
SCALE:	To Scale
APPROVED BY:	

K:\JUSTIN RONGEY\MU-CP221933 PCT AHU\DRAWINGS\68695-AHU-1

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES

TYPE: Indoor	UNIT CASING: 2 Inch / 20 ga	PROJECT: MU – CP221933 PCT AHU	
MOUNTING: Pad	INSUL/LINER: 2 Inch / 20 ga	DESCRIPTION: 10,000 CFM	SALES ORDER#: SO#
BASE: 8 Inch	DOORS:(See Drawing)		UNIT TAG: AHU-51
FLOOR: 3/16" Aluminum Tread	LIGHTING: Yes	SALES OFFICE: Trane –	DWG#:
INSUL/LINER: 3/16" Aluminum	ISOLATION: Spring		SHIP WT.: 7000 lbs



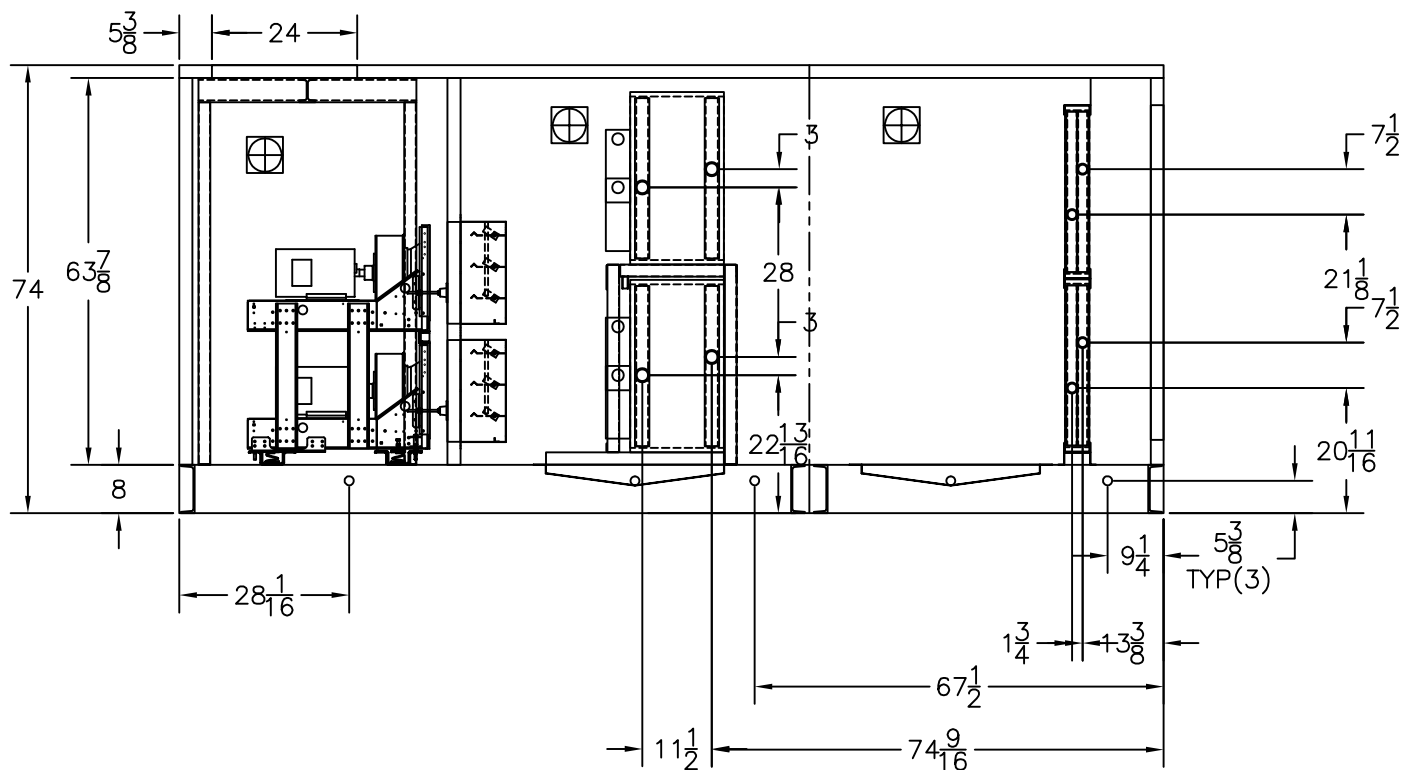
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1	03/08/2024		

Piping dimensions shown are ± 2 .

UV ballasts and lamps are not rated for washdown. Remove the lamps and cover the ballasts to protect against water intrusion. Allow adequate time to dry before installing UV lamps.

EQUIPMENT LIST

- (1) Return Plenum
55.25"x58.25"
- (2) Heating Coil
27"x58"x1-row
- (3) Cooling Coil
27"x58"x8-row w/ UV Lighting
- (4) Supply Fan Array 2x2
TDDP 12.25" CL2/5HP
ea w/ Backdraft Dampers
- (5) Plenum Fan Discharge
24"x49"



TB - Thermal Break
 TL - Tool Locking
 VP - Viewport
 AP - Access Panel
 DR - Drain Pan Connection
 FD - Floor Drain
 SC - Safety Catch
 LS - Light Switch
 GFCI - Receptacle
 JB - Junction Box
 DS - Disconnect Switch

DRAWN BY: Name

DATE: 2/29/2024

SCALE: To Scale

APPROVED BY:

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OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES

TYPE: Indoor	UNIT CASING: 2 Inch / 20 ga	PROJECT:	
MOUNTING: Pad	INSUL/LINER: 2 Inch / 20 ga	MU - CP221933 PCT AHU	
BASE: 8 Inch	DOORS: (See Drawing)	DESCRIPTION:	SALES ORDER#: SO#
FLOOR: 3/16" Aluminum Tread	LIGHTING: Yes	10,000 CFM	UNIT TAG: AHU-51
INSUL/LINER: 3/16" Aluminum	ISOLATION: Spring	SALES OFFICE:	DWG#:
		Trane -	SHIP WT.: 7000 lbs

TRANETM
 TECHNOLOGIES

Heating section - Position: 1

Coil Construction		Coil Performance	
Model	Hot water - 5W	Capacity	
Rows	1	Total	272.93 MBh
Tube Diameter	5/8" tube (15.875 mm)	Air	
Tube Matl/Wall Thickness	.024" (0.610mm) copper	Flow	10000 cfm
Fin Spacing	80 Per Foot	Entering Dry Bulb	45.00 F
Fin Material	Aluminum	Leaving Dry Bulb	70.17 F
Fin Thickness	0.01"	Pressure Drop	0.060 in H2O
Fin Type	Prima flo E .01"	Face Velocity	460 ft/min
Face Area	21.75 sq ft	Fluid	
Coil (top/single) H x L	27" (686 mm) x 58" (1473 mm)	Flow	13.64 gpm
Coil (middle/bottom) H x L	27" (686 mm) x 58" (1473 mm)	Entering	180.00 F
Casing	Stainless	Leaving	140.00 F
Coil Connection Material Type	Black steel	Pressure Drop	0.19 ft fluid
Rigging Weight	123.1 lb	Tube Velocity	0.86 ft/s
Installed Weight	155.8 lb	Reynolds Number	10325.04
Coil Section Options		Type	Water
Drain Connection / Material	None	Fouling Factor	0.00025 hr-sq ft-deg F/Btu
Floor drain	Yes	Volume	3.93 gal
Independently Removable Coils	YES	AHRI 410 Classification	
		AHRI 410 Classification	NOT Certified by AHRI
		Data Generation Date	2/20/2024
		Trane Select Assist update number	2290

Note: Coil is NOT certified by AHRI. Coil is within the scope of AHRI Standard 410.

Access - Position: 2

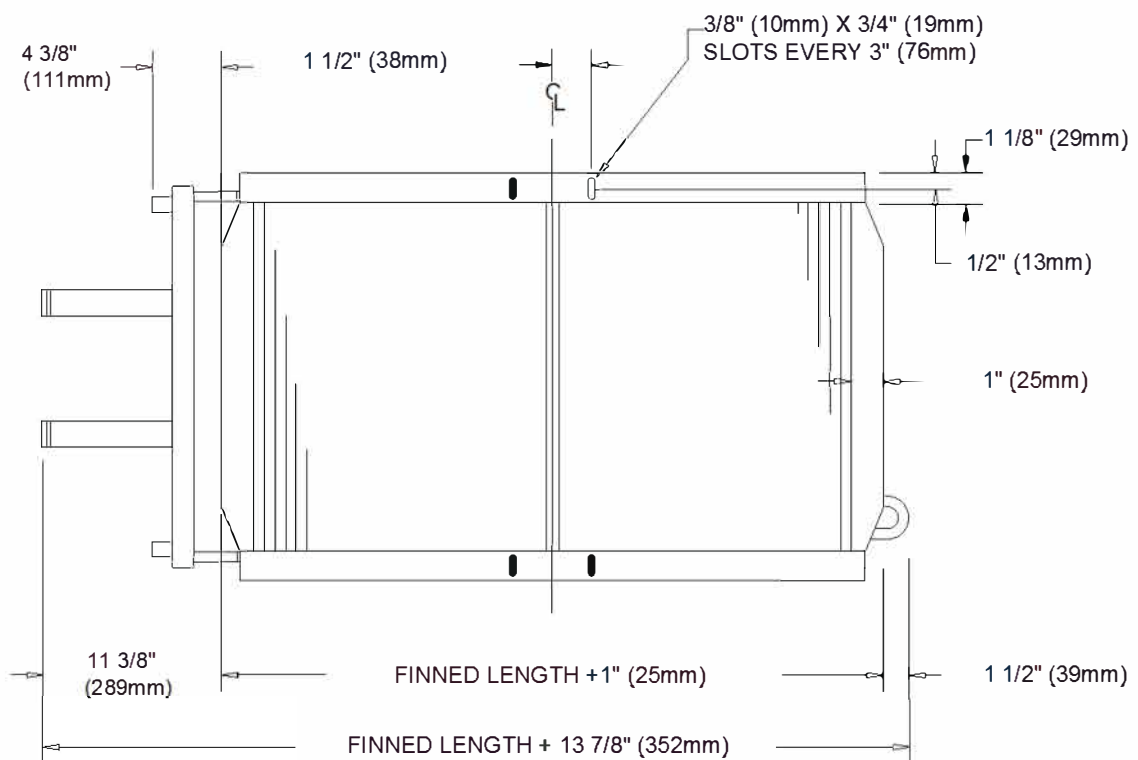
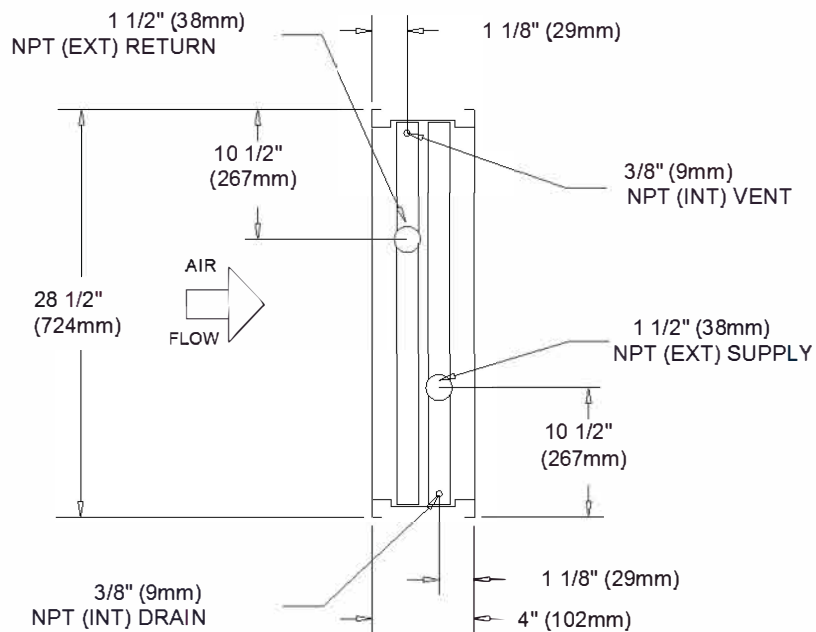
Options	
Drain Connection/Material	LH Stainless
Floor drain	No

Access - Position: 3

Options								
Drain Connection/Material				LH Stainless				
Marine Light				Marine light				
Floor drain				No				
Doors								
	Position	Size	Swing	Construction	Secured Access	Hinge Location	Clear pane Window	Test Port
Door 1	Left	18" door opening x 56.000 in	Outward	Thermal break door	None	Left	8x8 window	Test port



27" 5W 1 ROW - Left



Cooling section - Position: 4

Coil Construction		Coil Performance	
Model	Chilled water - W	Capacity	
Rows	8	Total	488.74 MBh
Tube Diameter	5/8" tube (15.875 mm)	Sensible	265.75 MBh
Tube Matl/Wall Thickness	.024" (0.610mm) copper	Air	
Fin Spacing	98 Per Foot	Flow	10000 cfm
Fin Material	Aluminum	Entering Dry Bulb	79.00 F
Fin Thickness	0.01"	Entering Wet Bulb	70.00 F
Fin Type	Prima flo H .01"	Leaving Dry Bulb	55.00 F
Face Area	21.75 sq ft	Leaving Wet Bulb	54.86 F
Coil (top/single) H x L	27" (686 mm) x 58" (1473 mm)	Pressure Drop	0.768 in H2O
Coil (middle/bottom) H x L	27" (686 mm) x 58" (1473 mm)	Face Velocity	460 ft/min
Casing	Stainless	Fluid	
Coil Connection Material Type	Black steel	Flow	81.19 gpm
Rigging Weight	711.4 lb	Entering	46.00 F
Installed Weight	911.5 lb	Leaving	58.00 F
Coil Section Options		Pressure Drop	3.92 ft fluid
Drain Connection / Material	LH Stainless	Tube Velocity	2.56 ft/s
Floor drain	No	Reynolds Number	9496.42
Independently Removable Coils	YES	Type	Water
		Fouling Factor	0.00000 hr-sq ft-deg F/Btu
		Volume	23.93 gal
		AHRI 410 Classification	
		AHRI 410 Classification	NOT Certified by AHRI
		Data Generation Date	2/20/2024
		Trane Select Assist update number	2290

Note: Coil is NOT certified by AHRI. Coil is within the scope of AHRI Standard 410.

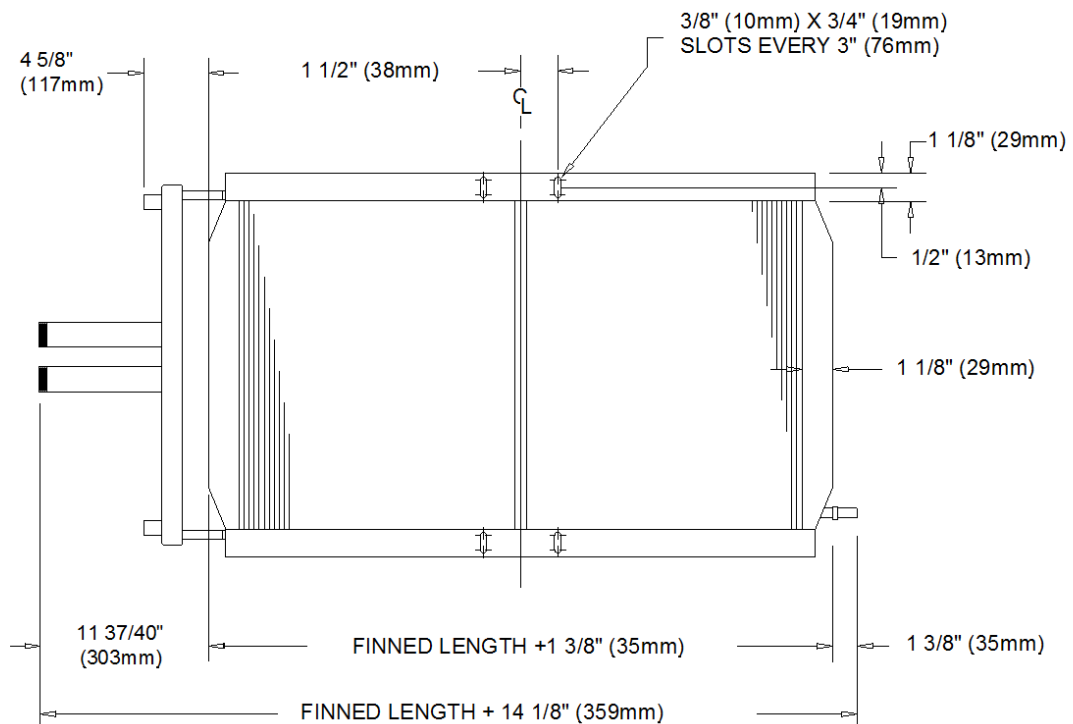
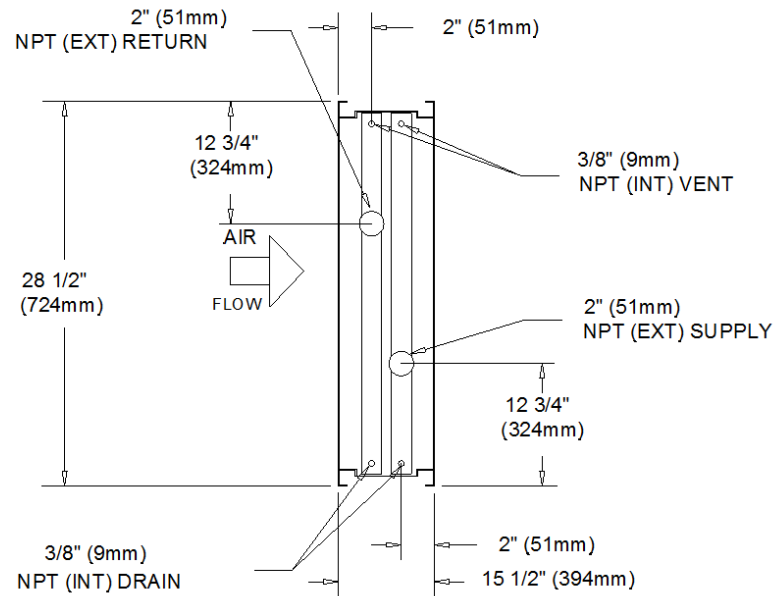
Access - Position: 5

Options								
Drain Connection/Material				None				
Marine Light				Marine light				
Floor drain				Yes				
Doors								
	Position	Size	Swing	Construction	Secured Access	Hinge Location	Clear pane Window	Test Port
Door 1	Left	18" door opening x 56.000 in	Outward	Thermal break door	None	Left	8x8 window	Test port



Tag: W-8-row-27-left

27" W 8 ROW
LEFT HAND



Supply fan section - Position: 6

Fan Data				Motor Data				
Wheel Diameter/Type/Class	12.25 DDP CL3 Plenum SWSI Class 3			Power / Fan	5 HP			
				Voltage	460/3			
Fan Set	Trane DDP 2X2 100%			Speed	3600			
Number of Fans	4			Class	Premium Efficient TEFC			
Drive Location	Drive right hand			Efficiency	89.03 %			
Blades	Higher eff.-some bands lower, more spike			Part Load Efficiency	85.11 %			
Fan Performance				Shaft Grounding Ring	Yes			
Airflow				Fan Section Options				
10000 cfm				Backdraft Damper	Backdraft damper			
Total Static Pressure				Insulation	No			
6.728 in H2O				Motor Conduit	Motor wiring conduit			
Total Brake Power				Plenum Fan Protective Enclosure	No			
15.890 hp				Inlet Screen	No			
Operating Speed				Marine Light	Marine light			
4283 rpm				Inlet Screen	No			
Unit Static Efficiency				Motor Removal Rail	Yes			
66.75 %				Coplanar Separation	No			
Redundancy				Floor drain	Yes			
91.79 %								
Fan Design Temp								
70.00 F								
Motor Interface Options								
Selection Type								
External junction box								
Voltage								
460/3								
Motor Wire In Circuit								
Motor wiring conduit								
VFD Frequency								
72.00 Hz								
Fan Discharge Options								
Face	Type	Airflow	Face Velocity	Opening Dimensions	Pressure Drop	Exhaust Hood	Damper Torque Requirement	
Top	First plenum fan discharge	10000 cfm	1224 ft/min	24.000 in x 49.000 in	0.000 in H2O	N/A	57 lbf.in	
Doors								
	Position	Size	Swing	Construction	Secured Access	Hinge Location	Clear pane Window	Test Port
Door 1	Left	30" door opening x 56.000 in	Outward	Thermal break door	Tool locking	Right	12x12 window	Test port

Pressure Drop in (in w.g.)

Supply fan	
Coil	0.06
Coil	0.77
Fan	0.10
Internal Static Pressure	0.93
External Static Pressure	5.80
Total Static Pressure	6.73

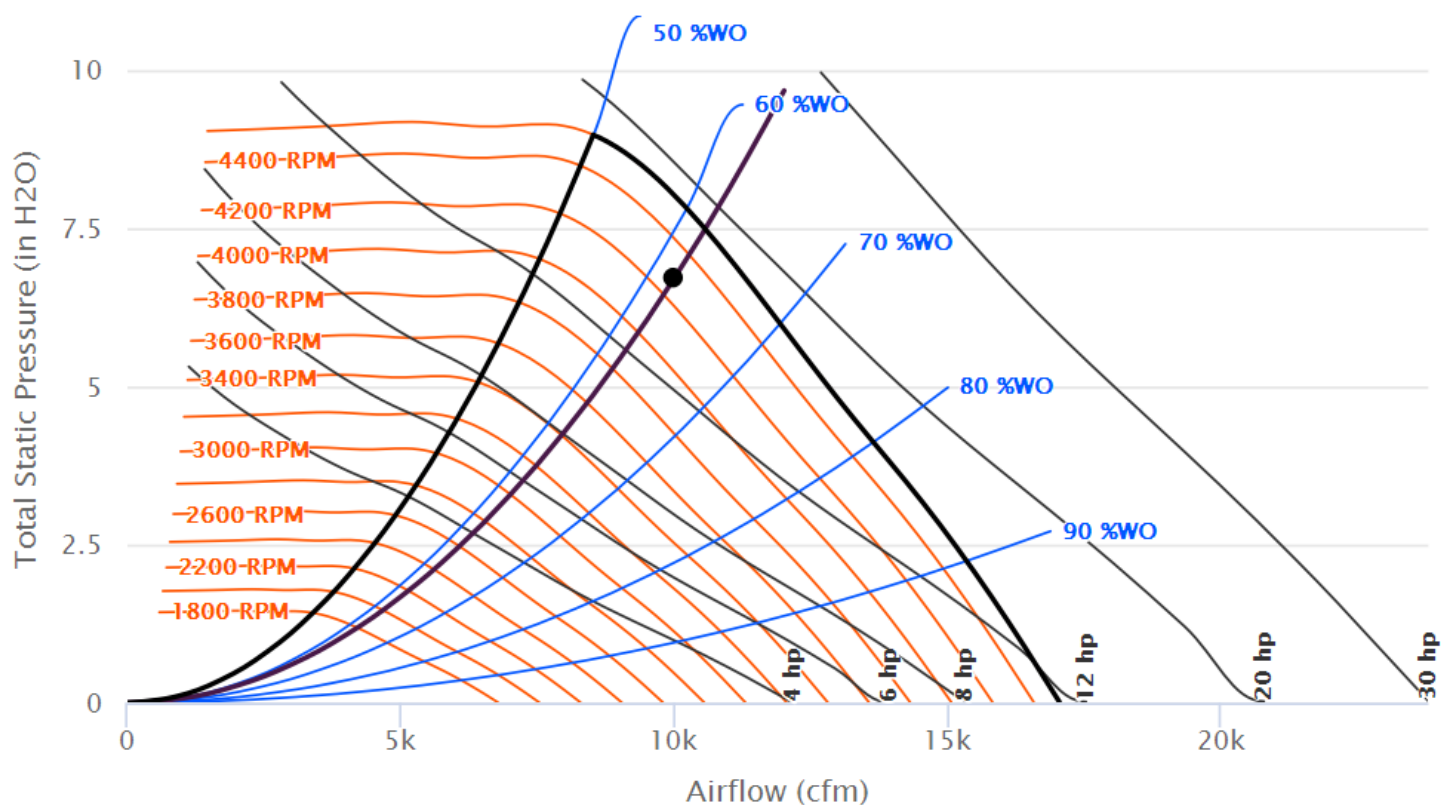
AHU-51 Calculated Sound Power								
Band Ctr Freq	63	125	250	500	1000	2000	4000	8000
Discharge	83	84	84	96	86	87	89	80
RA Inlet	90	85	90	96	81	87	87	72
Casing	93	86	84	88	81	73	66	55

Fan Details

Unit Size	12UF	Operating Brake Power	15.890 hp
Motor Frequency	72.00 Hz	Altitude	0.00 ft
Operating Airflow	10,000 cfm	Design Temp.	70.00 F
Operating Static Pressure	6.728 in H2O	Efficiency	66.75 %
Operating RPM	4,283 rpm		

AHU-51 - Supply

Trane DDP 12in. 100% Width Class 3 2x2 Plenum Fan Array 9 blades AMCA.; 100% Width

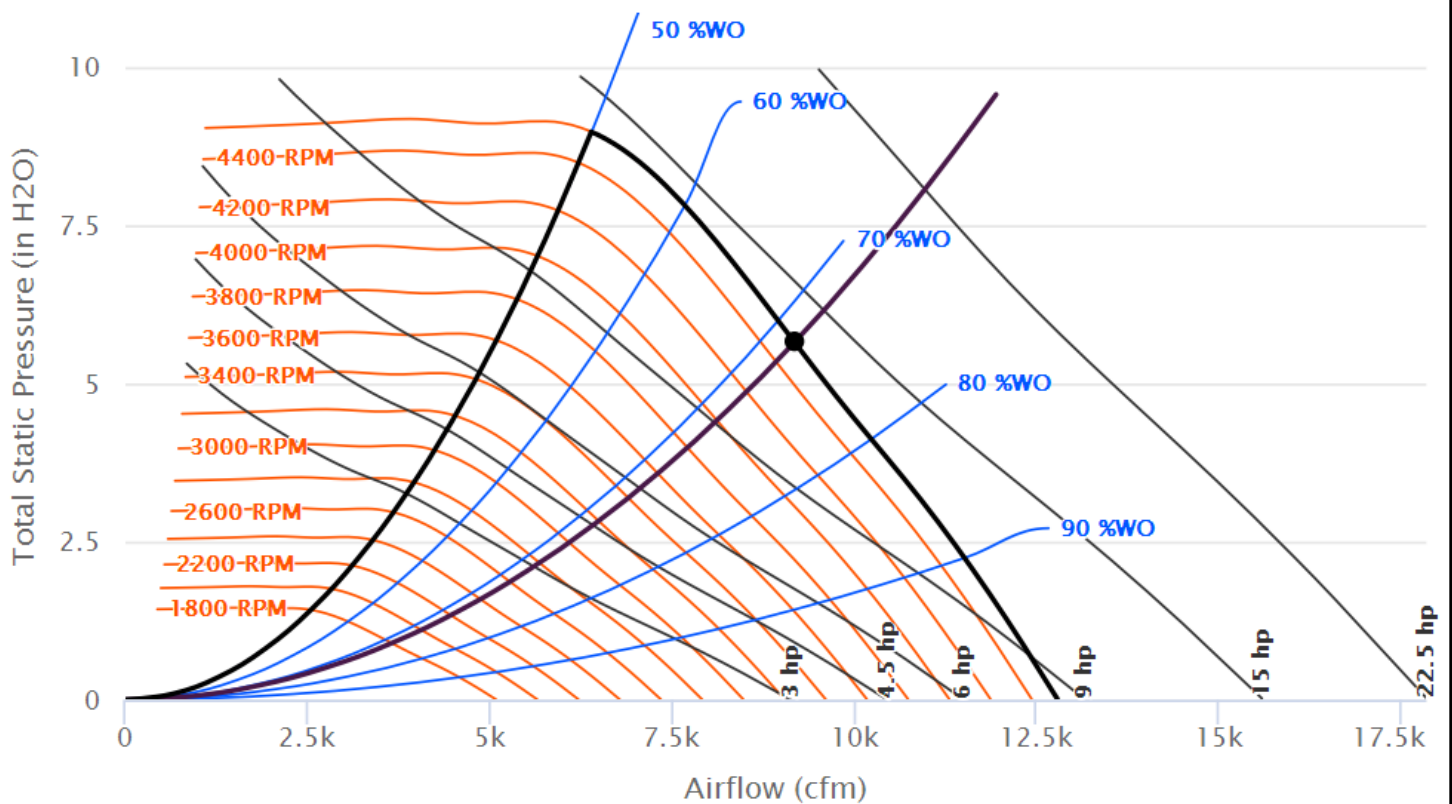


Fan Details

Unit Size	12UF	Operating Brake Power	13.245 hp
Motor Frequency	76.00 Hz	Altitude	0.00 ft
Operating Airflow	9,179 cfm	Design Temp.	70.00 F
Operating Static Pressure	5.668 in H2O	Efficiency	61.92 %
Operating RPM	4,525 rpm	Redundancy	91.79 %

AHU-51 – Supply – One Fan Down

Trane DDP 12in. 100% Width Class 3 2x2 Plenum Fan Array 9 blades AMCA.; 100% Width

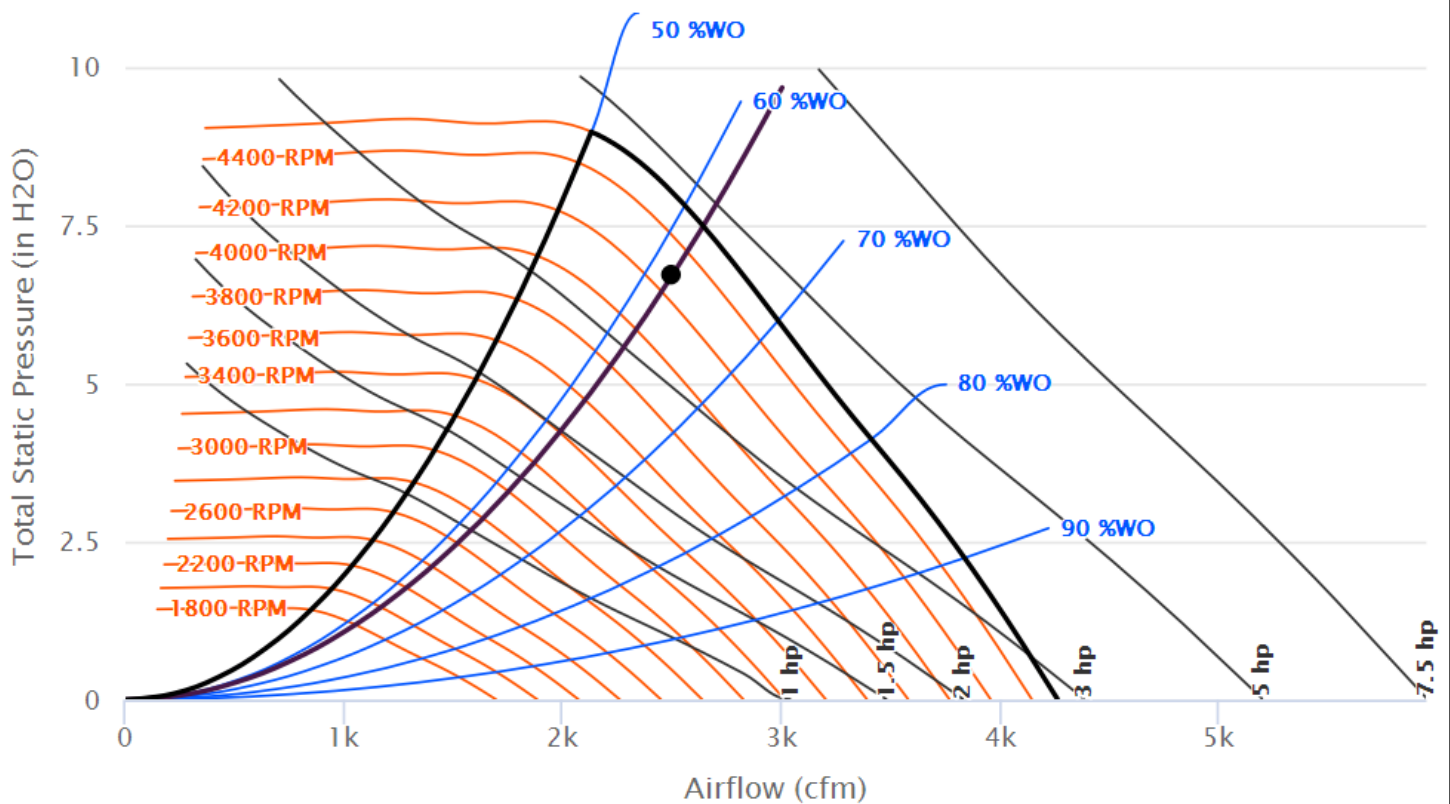


Fan Details

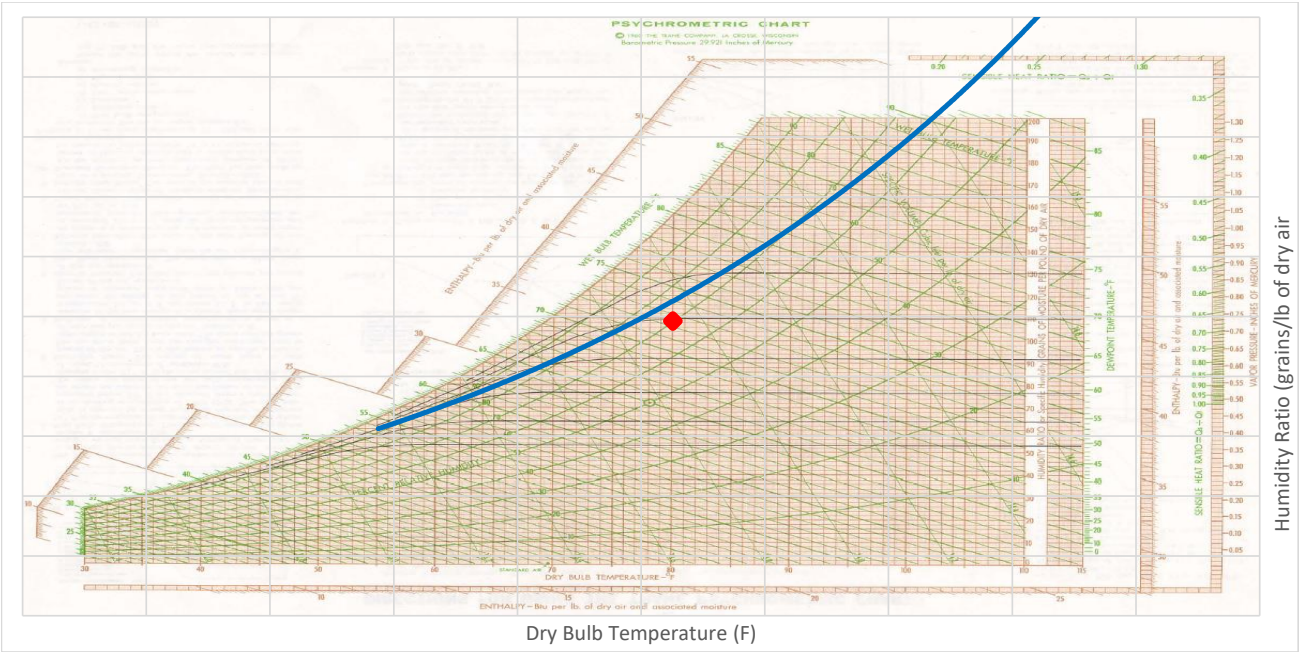
Unit Size	12UF	Operating Brake Power	3.972 hp
Motor Frequency	72.00 Hz	Altitude	0.00 ft
Operating Airflow	2,500 cfm	Design Temp.	70.00 F
Operating Static Pressure	6.728 in H2O	Efficiency	66.75 %
Operating RPM	4,283 rpm		

AHU-51 – Supply – Single Fan

Trane DDP 12in. 100% Width Class 3 2x2 Plenum Fan Array 9 blades AMCA.; 100% Width



Casing Thermal Performance Predictor



Input				
Dry Bulb (F)	Wet Bulb (F)	Elevation (ft)	Suply Temp (F)	Unit Type
80	72.45	0	50	Performance TCFS/TCPA

**Conditions above the curve can cause condensation on the unit exterior. The delta between the curve and each condition, as well as the length of time the condition is sustained, will impact the degree of condensation. Additional factors, such as field modifications to units, can also impact the degree of condensation.

Casing thermal performance is for double-wall solid panels. Air Handler casings designed with double-wall perforated panels only do not provide a thermal break. To achieve the thermal performance modeled with perforated liners, a perforated panel with fiberglass should be provided on the unit interior in addition to a thermally-broken, double-wall solid panel.



Customer information packet

EM3613T-G

5HP, 3470RPM, 3PH, 60HZ, 184T, 3630M, TEFC, F1

Class - None

Division - Not Applicable

Class H insulation is an upgrade from class F with a max temperature rating of 180F vs 155F.

"

1. **Inverter Duty vs Inverter Ready.** The quoted motors are both Inverter Duty and Inverter Ready. The motors can be operated Direct On Line or with a VFD. They carry the highest level of insulation (Class H) to ensure the longevity of the motor when operated with a VFD.
2. **NEMA Design Code A vs B.** The Industry standard for NEMA design was B at one point in time. With the introduction of VFDs, Energy Regulations, and other technology, most motors are now NEMA Design A. I will also note that the NEMA Design letter is a concern for motor connected DOL. Motors connected with a VFD can configure to run at their preferred NEMA Design Code."

Specifications

Enclosure	TEFC
Frame	184T
Frame Material	Steel
Frequency	60.00 Hz
Motor Letter Type	Three Phase
Output @ Frequency	5.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 V @ 60 HZ
XP Class and Group	None
XP Division	Not Applicable
Agency Approvals	CSA EEV NEMA PREMIUM UR CSA
Ambient Temperature	40 °C
Auxillary Box	No Auxillary Box
Auxillary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	11.600 A @ 230.0 V 5.800 A @ 460.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	88.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater

Part detail

Revision	B
Type	AC
Mech. spec.	36M524
Base	
Status	PRD/A
Elec. spec.	36WGQ043
Layout	36LYM524
Eff. date	02-02-2024
CD Diagram	CD0005
Poles	02
Leads	9#16
Proprietary	False
Created date	12-15-2020

High Voltage Full Load Amps	5.8 a
Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	L
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Quantity/Wire Size	9 @ 16 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3630M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	16.54 IN
Power Factor	91
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.125 IN
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3470 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

NP3441LUA									
CAT.NO.	EM3613T-G								
SPEC	36M524Q043G1								
HP	5								
VOLTS	230/460								
AMPS	11.6/5.8								
RPM	3470								
FRAME	184T		HZ	60		PH	3		
SF	1.15	CODE	L	DES	A	CLASS	H		
NEMA NOM. EFF	88.5	PF	91						
RATING	40C AMB-CONT								
CC	010A		USABLE AT 208V				N/A		
ENCL	TEFC	SER							
DE	6206		ODE	6205					
VPWM INVERTER READY									
CT6-60H(10:1)VT3-60H(20:1									
	50HZ 5HP 190/380V 14.2/7.1A						SF1.0		

AC Induction Motor Performance Data

Record # 85858

Preliminary Data Sheet

Winding: 36WGQ043-RXXX			Type: 3630M		Enclosure: TEFC		
Nameplate Data			460 V, 60 Hz: High Voltage Connection				
Rated Output (HP)		5	Full Load Torque		7.57 LB-FT		
Volts		230/460	Start Configuration		direct on line		
Full Load Amps		11.6/5.8	Breakdown Torque		35.2 LB-FT		
R.P.M.		3470	Pull-up Torque		25.1 LB-FT		
Hz	60	Phase	3	Locked-rotor Torque		28.6 LB-FT	
NEMA Design Code		A	KVA Code	L	Starting Current		58.9 A
Service Factor (S.F.)		1.15		No-load Current		1.75 A	
NEMA Nom. Eff.		88.5	Power Factor	91	Line-line Res. @ 25°C		2.57 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		76°C	
S.F. Amps		13.4/6.7		Temp. Rise @ S.F. Load		102°C	
				Locked-rotor Power Factor		65.7	
				Rotor inertia		0.134 lb-ft²	

Load Characteristics 460 V, 60 Hz, 5 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	62	81	88	92	93	94	93
Efficiency	85.6	89.6	89.7	88.7	87.1	85.1	87.8
Speed	3570	3540	3505	3469	3430	3385	3436
Line amperes	2.26	3.25	4.48	5.81	7.28	8.92	6.68

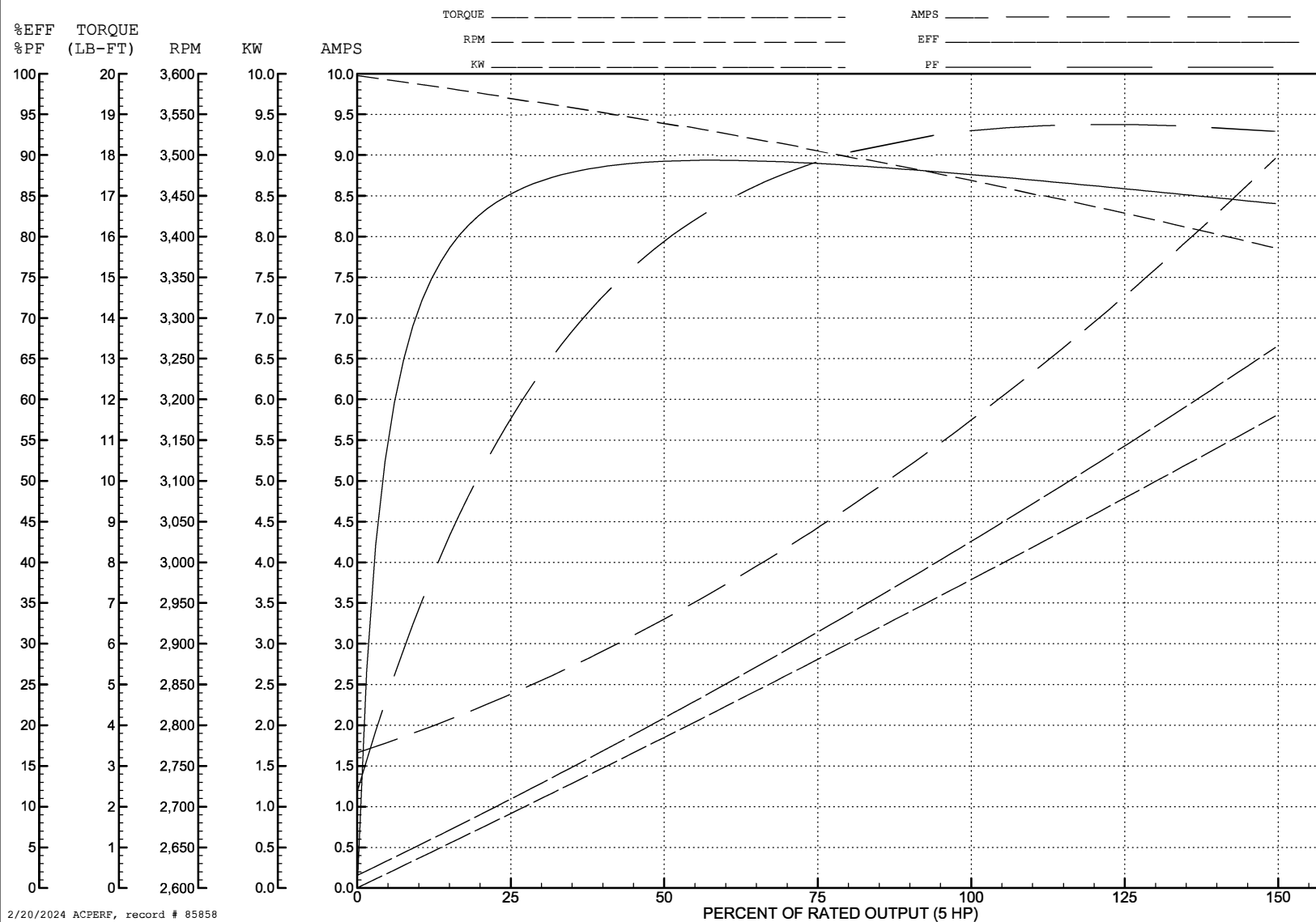
ABB Motors and Mechanical Inc.

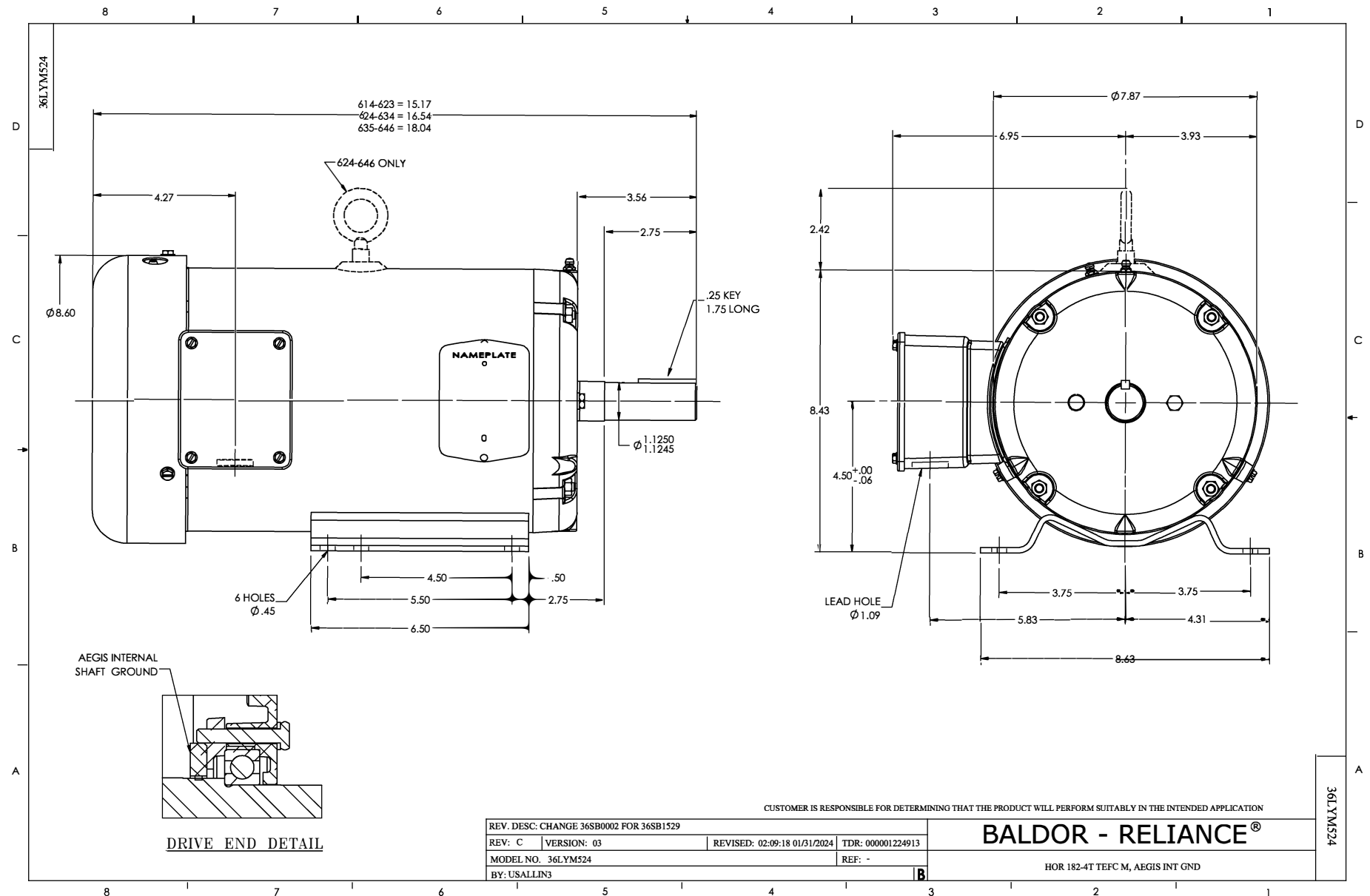
WINDING # 36WGQ043

Typical performance - not guaranteed values.

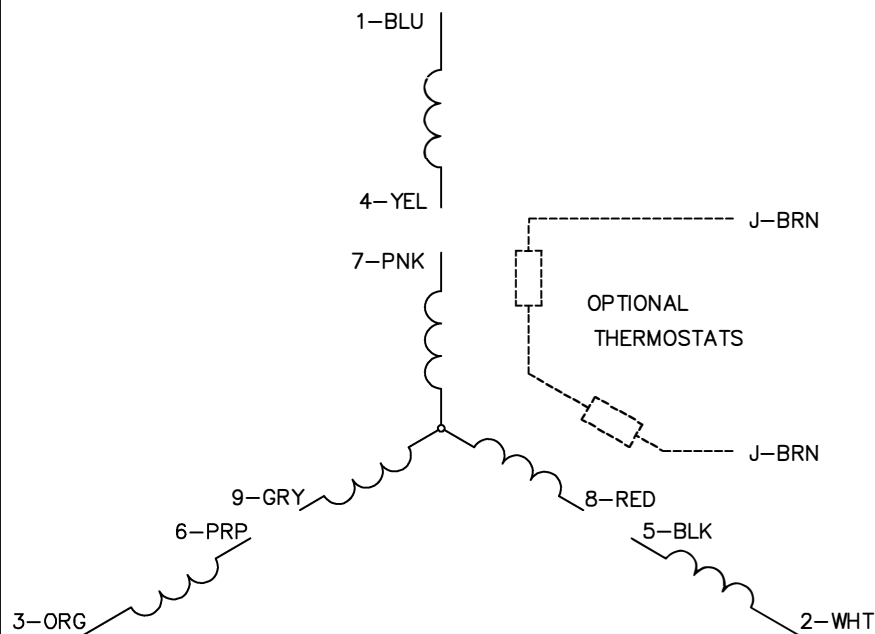
5 HP 3 PH 60 HZ 3470 RPM 460 V 3630M

TORQUES (LB-FT): PO=35.2 PU=25.1 LR=28.6 LRA=58.9

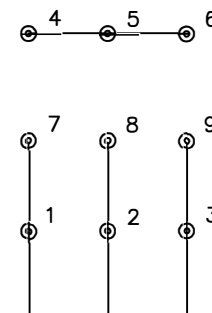




CD0005

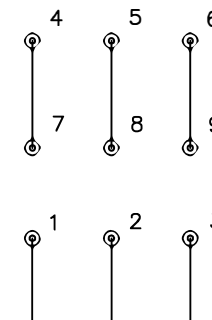


LOW VOLTAGE
(2Y)



LINE

HIGH VOLTAGE
(1Y)



LINE

NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: E

BY: JLP

REVISED: 01/19/99 10:15

TDR: 0171435

900000

FILE: AAA00005140

MDL: -

MTL: -

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005



UV-C BALLAST ASSEMBLY

BENEFITS

- Meets all “fixture” specifications
- Installs quickly and easily most anywhere
- Easy to specify, source, and purchase
- Destroys coil/drain pan microbial growth and proliferation
- Maintains new AHU capacity and efficiency
- Restores aged AHU capacity and efficiency
- Ends expensive coil/drain pan cleanings
- Improves indoor environmental quality
- Lowest cost of ownership
- UL, CUL Listed
- 5-year power supply
- 1-year lamp warranties

Peer-reviewed, published research shows that UV-C not only disinfects surfaces and airstreams but it also deteriorates organic materials and debris. Organic matter degradation by UV-C is widely established in thousands of field studies in government and commercial, industrial and institutional facilities in the US, and in a study commissioned by ASHRAE (RP1509).

UV-C systems are installed in HVAC systems to keep cooling coils, drain pans, and other internal surfaces free of contaminants and microbial activity that increase coil pressure drop, reduce airflow and coil heat transfer efficiency, and that propagate infectious or allergenic agents into the airstream that lead to higher absenteeism and lower productivity.

The UV-C Ballast Assembly is among the most affordable, effective, efficient, and reliable products in the industry. Materials of construction include galvanized steel, polycarbonate, and Teflon® for sustainability in all environments. Power supplies are specifically designed for the high output (HO) lamps used. The lamps are high-efficiency, low-waste content products that surpass today’s environmental standards.

Application

The Ballast Assembly meets all ASHRAE-supported, and industry product specifications, and is suitable for most any HVAC application. They are factory or field mounted for fast, simple, and reliable installs that can address virtually any coil height and width necessary to achieve any specified irradiance. They can be installed in supply, return, or exhaust plenums and ducts, to disinfect airstreams and surfaces to prevent microbial proliferation and transfer, and to eliminate the buildup of organic debris.

Lamp lengths include 20”, 33” and 61” and 120–277Vac input voltages allow application most anywhere. Lamps do not produce ozone. It is recommended that interlock safety switches be utilized on access door/panels to prevent accidental exposure to UV-C light. UV-C susceptible materials should be protected from direct exposure to UV-C energy.

CONSTRUCTION

FIXTURES - are factory-assembled and tested. They consist of a housing, power source, LampHolder, quick connect plug, and lamp.

CONSTRUCTION - is designed to withstand HVAC environments and is UL/C-UL (ABQK) Listed.

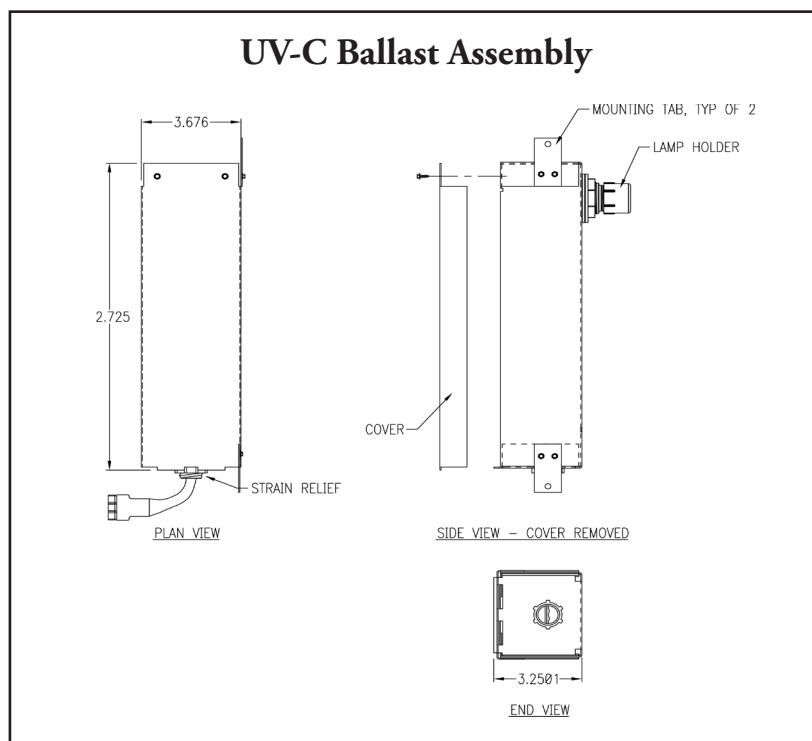
HOUSING - is constructed of heavy-gauge, galvanized steel, and is equipped with mounting tabs for ease of installation. Fixtures can be mounted anywhere in an HVAC system or as shown on plans.

POWER SUPPLY - is CSA, CE and UL Listed as variable input (120-277 Vac) type. It auto-matches to lamp lengths of 20" to 61" to maximize their individual performance.

LAMPHOLDER™ - is UL Listed and constructed of carbon-black polycarbonate. It uses the LampClamp™ feature to compress the lamp and socket together to form a "no separation" barrier against moisture.

LAMPS - are very high output, Teflon™ coated T5 diameter, four-pin, single ended types that produce broadband UV-C of 253.7 nm. Each lamp produces the specified output at any airflow velocity and temperature of 1–70°C. Lamps have a minimum useful lamp life of 9,000 hours when used continuously, with no more than a 20% output loss, depending on operating conditions. Lamps do not produce measureable ozone.

TESTING - Fixtures have been independently tested to verify UV output and for conformance to UL/CUL (ABQK) standards.



ORDERING INFORMATION

P/N	Description	Electrical
FIXTURE		
BOX02509	UV-C Ballast Assembly	120–277 Vac, 50–60 Hz
LAMPS		
LIT01169	61" Single Ended High Output UV-C Lamp - Teflon Coated	
LIT01168	33" Single Ended High Output UV-C Lamp - Teflon Coated	
LIT01167	20" Single Ended High Output UV-C Lamp - Teflon Coated	
ACCESSORIES		
HL.D00580	Dual LampHolder™	

FOR MORE INFORMATION, CONTACT: (877) 884-4822

Klima·flexTM

VENTILATION SYSTEMS



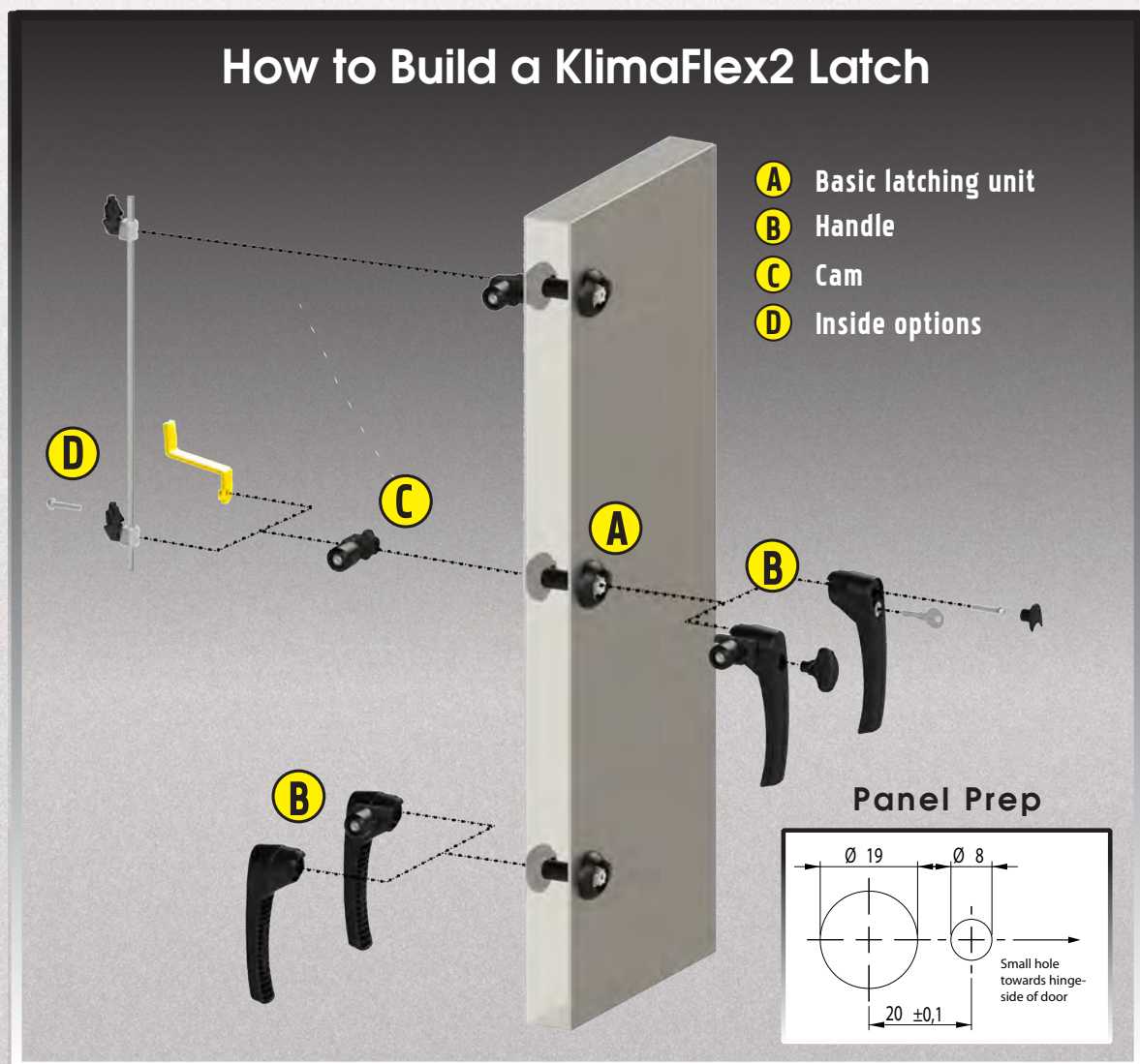
FAVE



ALLEGIS

A CUSTOMER DRIVEN COMPANY

Klima-flex²



Out-Swing Door

- A** Choose a latching unit corresponding to the thickness of the door
- B** Choose an out-swing handle
- C** Add a roller cam
- D** If needed, choose inside options: rod link, safety catch, safety handle, inside handle

In-Swing Door

- A** Choose a latching unit corresponding to the thickness of the door
- B** + **C** Choose an in-swing handle with roller cam
- D** If you need an inside security handle, mount a 2651-205400 handle on the inside of the door



Klima-flex 2

Handles

There are a variety of handle combinations depending upon your application. Choose between key locking, tool operated, or non-locking. Designed for ease of installation in the factory or the field, the handles are mounted with a single screw.

The handles have a built in, adjustable roller cam that reduces friction during the latching operation. The cam is normally placed on the right side of the handle, but can be moved to the left side. Contact Allegis for KlimaFlex-2 handles with the roller cam pre-mounted on the left side.

Tool-Operated

Key-Locking

Non-Locking

Pad-Lockable



KLIMAFLEX™ 2 SYSTEM - INSIDE AND OUTSIDE HANDLES

P/N	Description	Latching type	P/N	Description	Latching type
2651-205000	In-swing	Non-locking	2651-205400	Out-swing	Non-locking
2651-205105	In-swing	Square 8	2651-205505	Out-swing	Square 8
2651-205114	In-swing	Triangle 7	2651-205514	Out-swing	Triangle 7
2651-205134	In-swing	Recessed hexagon 8 (5/16")	2651-205534	Out-swing	Recessed hexagon 8 (5/16")
2651-205281	In-swing	Keyed: IL1333	2651-205681	Out-swing	Keyed: IL1333
			2651-205700	Out-swing	Padlockable



MATERIAL:

Handle: Glass reinforced nylon (PA6 GF30)
Roller cam: Steel, Glass reinforced nylon (PA6 GF30)

* Contact ALLEGIS for more information about adding your logo to the handle plug and/or custom colored handles.



ALLEGIS
A CUSTOMER DRIVEN COMPANY

Toll Free **1-866-378-7550**
www.ALLEGISCORP.com

Klima-flex 2

Latching Mechanisms

The KlimaFlex-2 latching technology allows for quick and easy mounting on double skinned doors. When the mounting screws (T-30 torx bit required) are turned,

the expanding spacers are engaged and affix themselves to the skins from the inside of the door.

The latch housing is designed so that parts can be attached to either side of the latching unit. A handle can be installed on the inside or outside, and rod links or a safety catch can be added without any changes to the latching unit. Handles can also be replaced or added later without altering the integrity of the latching unit.

MATERIAL:

Escutcheons: Glass reinforced nylon (PA6 GF30)

Shaft: Zinc, die cast

Expanding spacers: Glass reinforced nylon (PA6 GF30)

O-Ring: Rubber

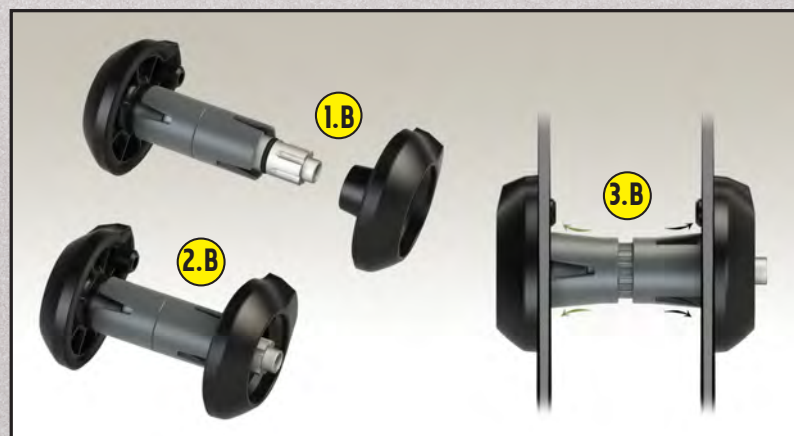


KLIMAFLEX™ 2 - LATCH HOUSING

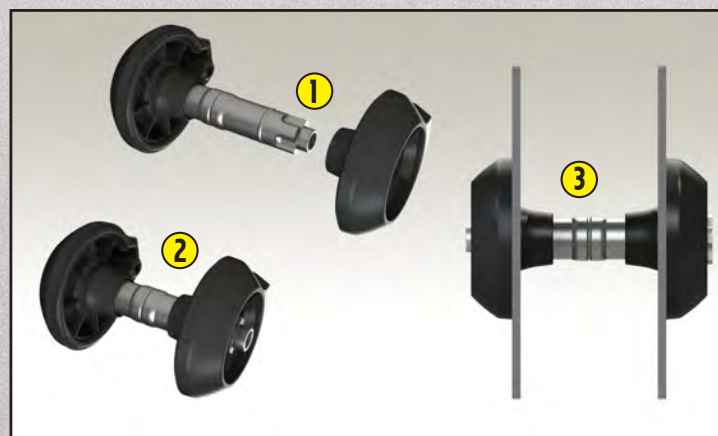
P/N with Cone	P/N without Cone	Door Thickness
2651-101025	2651-111025	25 mm (1 inch)
2651-101030	2651-111030	30 mm (1.2 inches)
2651-101035	2651-111035	35 mm (1.4 inches)
2651-101043	2651-111043	43 mm (1.7 inches)
2651-101045	2651-111045	45 mm (1.77 inches)
2651-101050	2651-111050	50 mm (2 inches)
2651-101060	2651-111060	60 mm (2.4 inches)
2651-101065	2651-111065	65 mm (2.55 inches)
2651-101070	2651-111070	70 mm (2.75 inches)
2651-101075	2651-111075	75 mm (3 inches)
2651-101095	2651-111095	95 mm (3.7 inches)
2651-101100	2651-111100	100mm (4inches)

* Each latch will accommodate +/- 2.5mm from the normal thickness listed.

- ① Mounted with a click; holds in place
- ② Screw from one side
- ③.B When mounting, the expanding spacers will flex outward, creating a stable system without deforming the door skins



Mounting with cone



Mounting without cone



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www.ALLEGISCORP.com

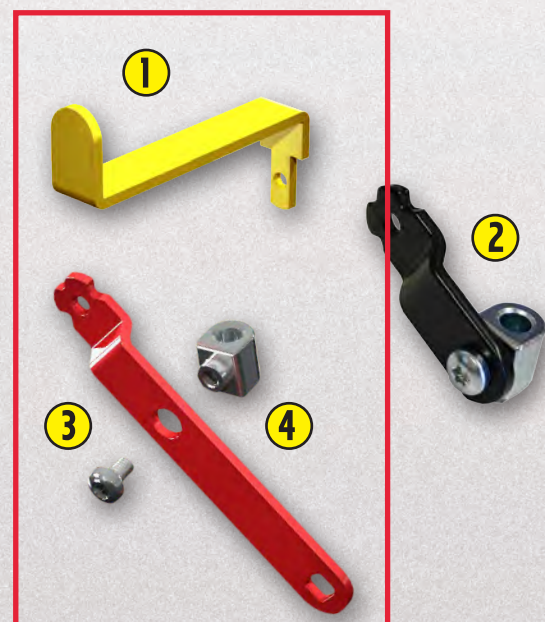
Klima-flex 2

Cams, Linkages & Accessories

In the KlimaFlex-2 System you can combine different parts to achieve the latching system required. Choose from the list below.

KLIMAFLEX™ 2 - INSIDE LATCHING OPTIONS

P/N	Description	Image
2651-901025	Safety catch for a 1" door	1
2651-901050	Safety catch for a 2" door	1
2651-901075	Safety catch for a 3" door	1
2651-901100	Safety catch for a 4" door	1
2651-902001	Rod link allows interlinking latch points w/o the use of inside safety handle	2
2651-904000	Inside security handle w/o rod link	3
2651-903001	Security handle w/ rod link	3 + 4
2651-903002	Rod link only; for inside handle	4



MATERIAL:

Safety catch, Rod link, Inside security handle, and Inside security handle with rod link: Steel, zinc plated

Roller Cam

The KlimaFlex-2 roller cam is designed to fit into either side of the K2 latching units. It is easy to adjust with a torx-bit. The roller cam reduces the friction during the latching operation. Set it so that the door closes smoothly and is kept securely closed.

MATERIAL:

Roller cam: Glass reinforced nylon (PA6 GF30)

Housing: Zinc die-cast

Bracket: Plated steel



KLIMAFLEX™ 2 - ROLLER CAM

P/N	Ø of Roller
8-325-243	25 mm



Advantages, Features and Benefits of the KlimaFlex Series of HVAC Hardware

All KlimaFlex Latches

- Full thermal break between inside and outside of door
- Non-locking, tool-locking, padlocking, and key locking handles available
- Latches are “non-handed” and oriented so that handle can rest in the horizontal or vertical position
- Fitted with adjustable, plastic tapered roller cams for smooth compression of door without marking or gasket damage
- Simple, two hole panel preparation
- Latches can be configured for multipoint latching, inside release, and with a safety catch
- Latch can be secured without handle installed, so that HVAC unit can be transported and installed without the fear of handles breaking or the unit exceeding width restrictions
- Custom logos available

Specific to K2 Latch

- Replaceable without destroying the door
- The Klimaflex-2 latch does not depend upon compression of the door for mounting. So “oil canning” of the door, which leads to leaks, does not occur
- Pour in place gasket eliminates loose gaskets and ensures positive sealing every time
- Installation is accomplished with just one tool (Torx T-30)

Additional Products to meet your HVAC needs

- Hinges: Adjustable, lift-off, elevated axis point to eliminate gasket pinching
- View Ports: UV resistant, sealed, easy to install
- Door Seals: extruded, clip-on, or adhesive style
- Custom products available through the Allegis Engineering Group

CLIMATE



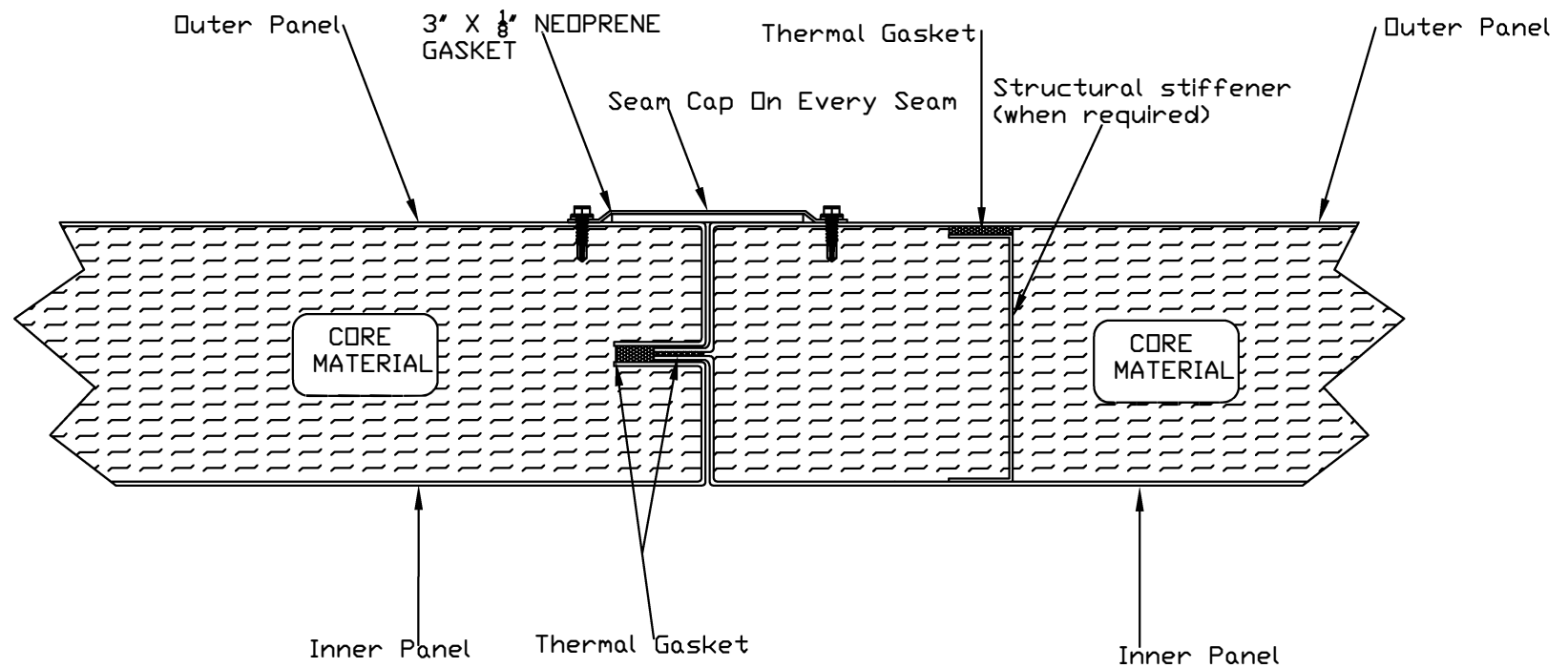
ALLEGIS
A CUSTOMER DRIVEN COMPANY

Allegis Corporation
8001 Central Avenue N.E.
Minneapolis, MN 55432



Toll Free 1-866-378-7550
www.allegiscorp.com

WALL TO WALL & ROOF TO ROOF



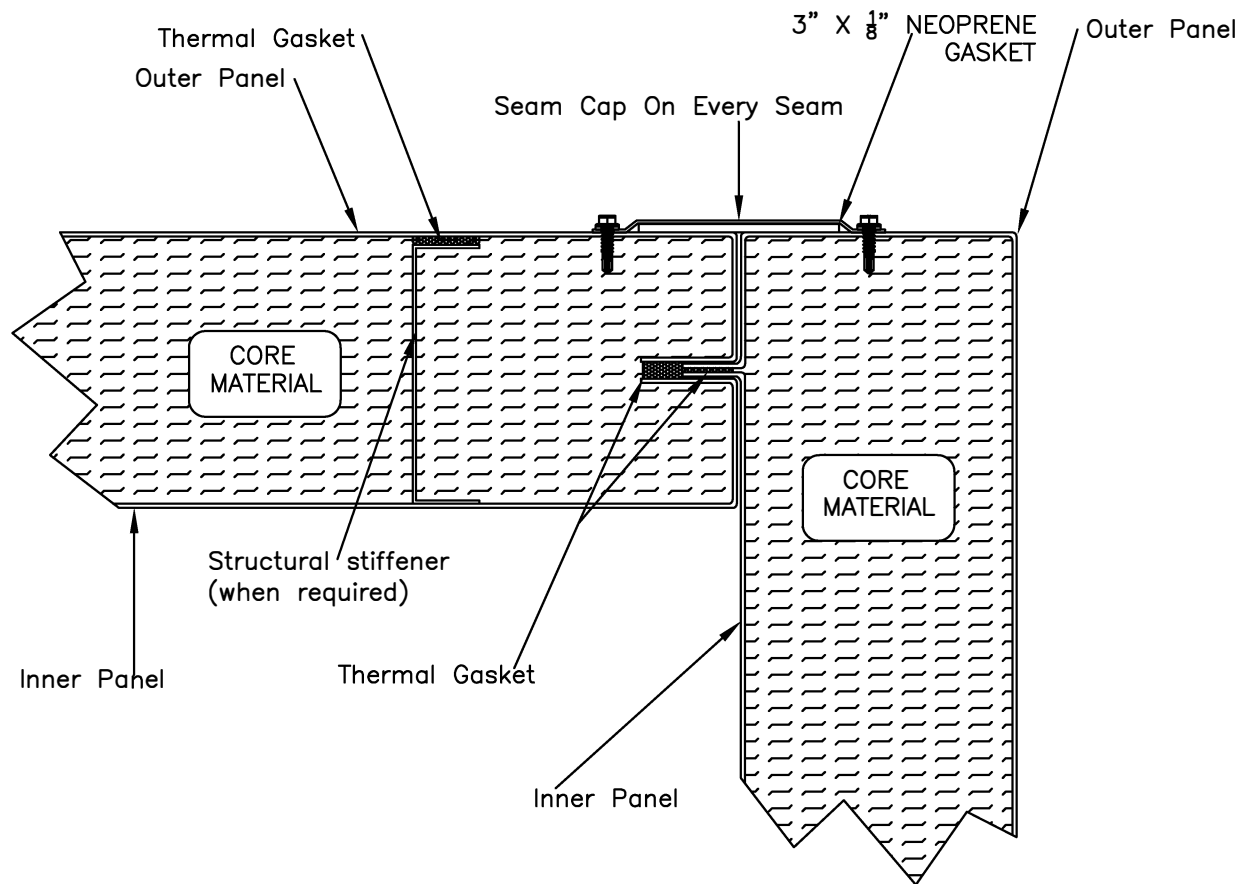
TYPICAL CORE MATERIAL OPTIONS
2"-4" FOAM

PLAN VIEW

WALL OR ROOF CASING DETAIL

Dwg. Name:	26.dwg
Rev. Date:	3/8/2011
Drawn by:	

WALL TO WALL – CORNER



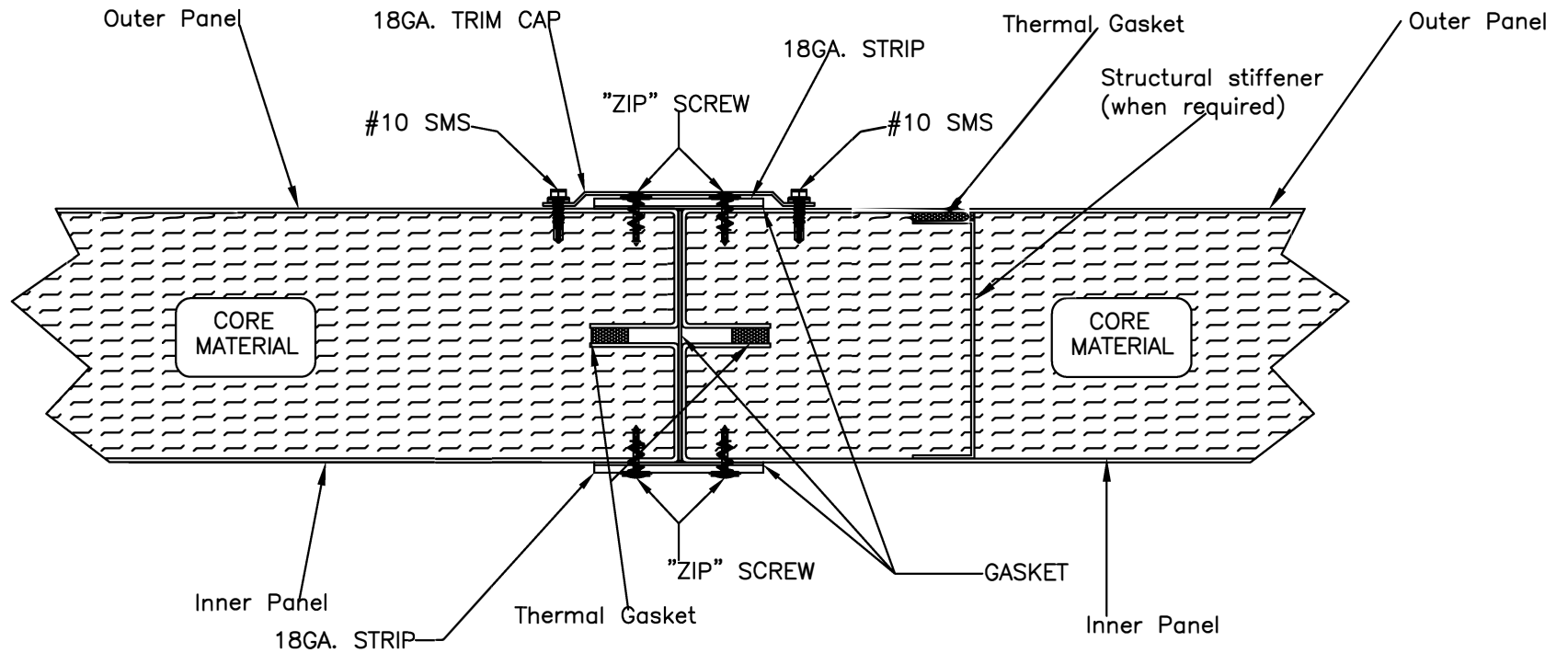
TYPICAL CORE MATERIAL OPTIONS
2"–4" FOAM

PLAN VIEW

WALL TO WALL CORNER CASING DETAIL

Dwg. Name:	28.dwg
Rev. Date:	3/9/2011
Drawn by:	

WALL TO WALL - SHIPPING SPLIT

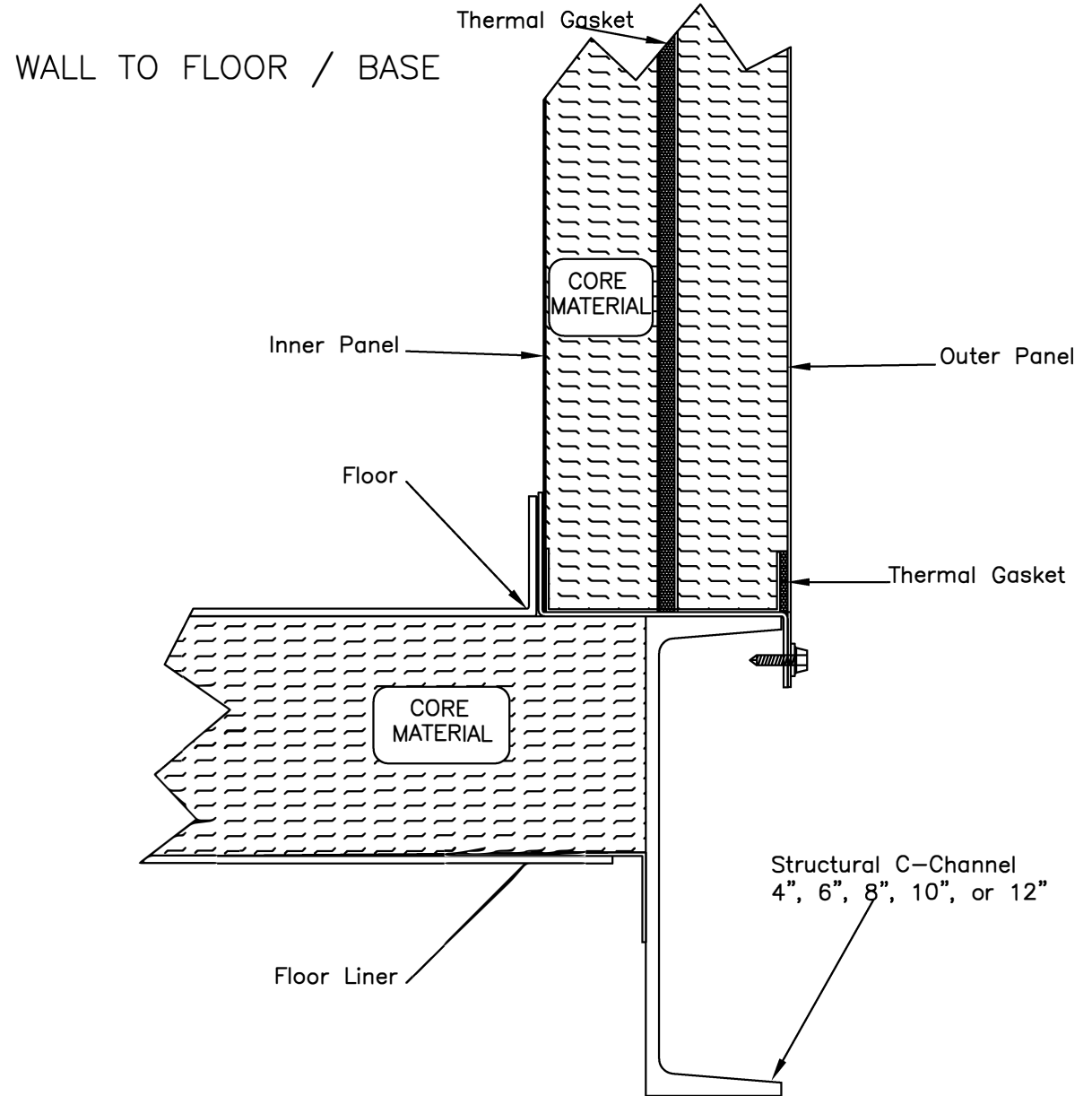


TYPICAL CORE MATERIAL OPTIONS
2"-4" FOAM

PLAN VIEW

WALL TO WALL CASING DETAIL

Dwg. Name:	27.dwg
Rev. Date:	3/9/2011
Drawn by:	



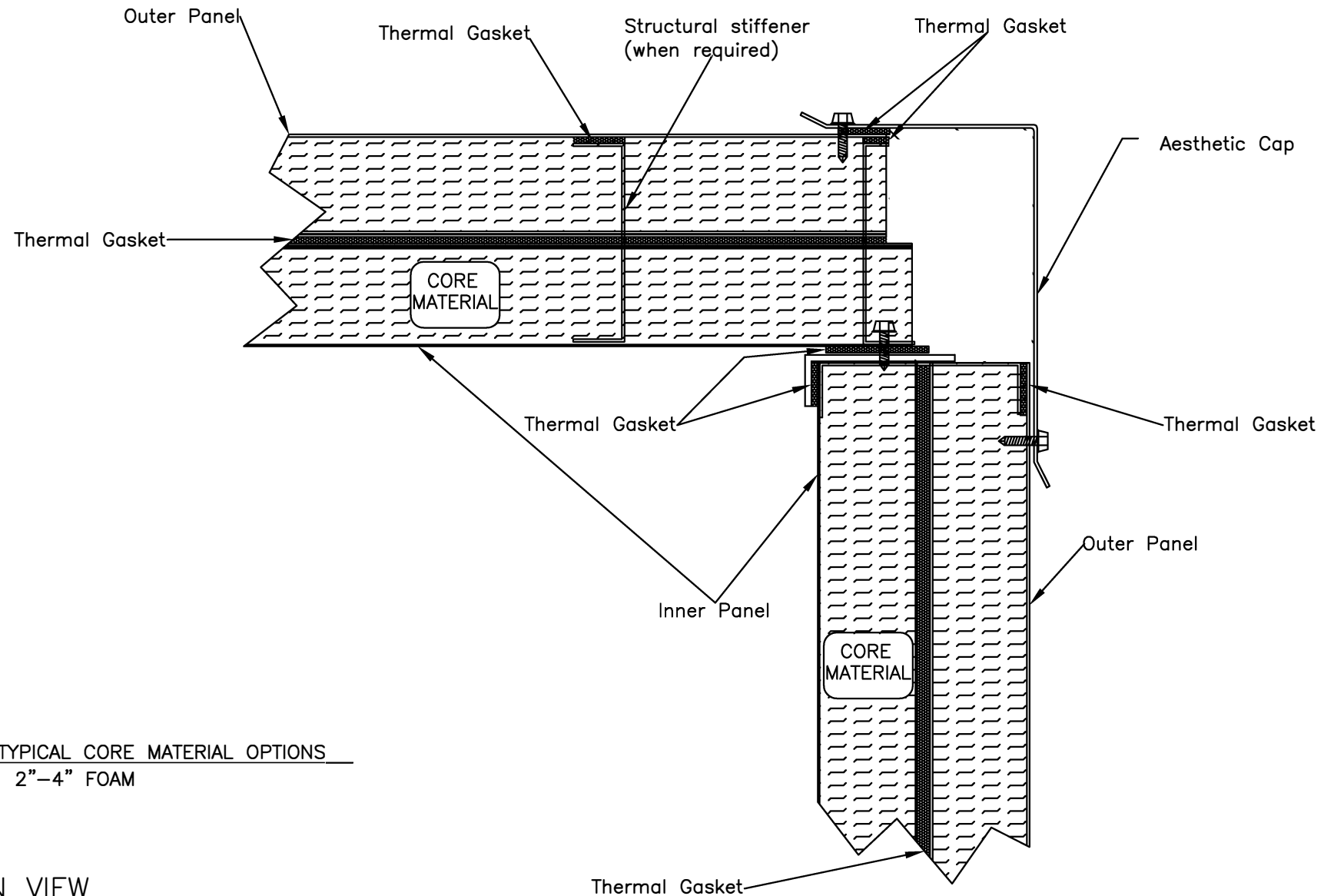
TYPICAL CORE MATERIAL OPTIONS
2"-4" FOAM

PLAN VIEW

WALL TO FLOOR / BASE DETAIL

Dwg. Name:	30.DWG
Rev. Date:	3/9/2011
Drawn by:	

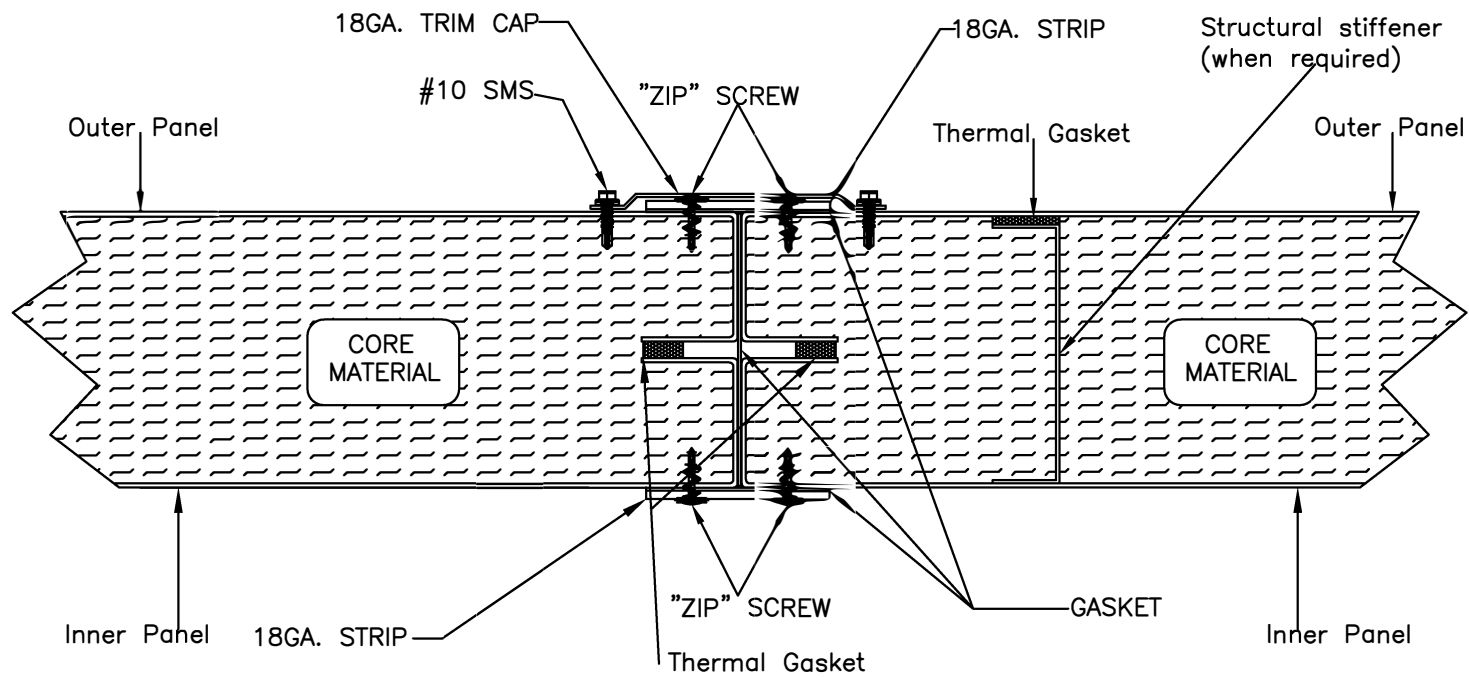
WALL TO INDOOR ROOF



WALL TO ROOF DETAIL

Dwg. Name:	29a.dwg
Rev. Date:	3/9/2011
Drawn by:	

INDOOR ROOF TO ROOF – SHIPPING SPLIT



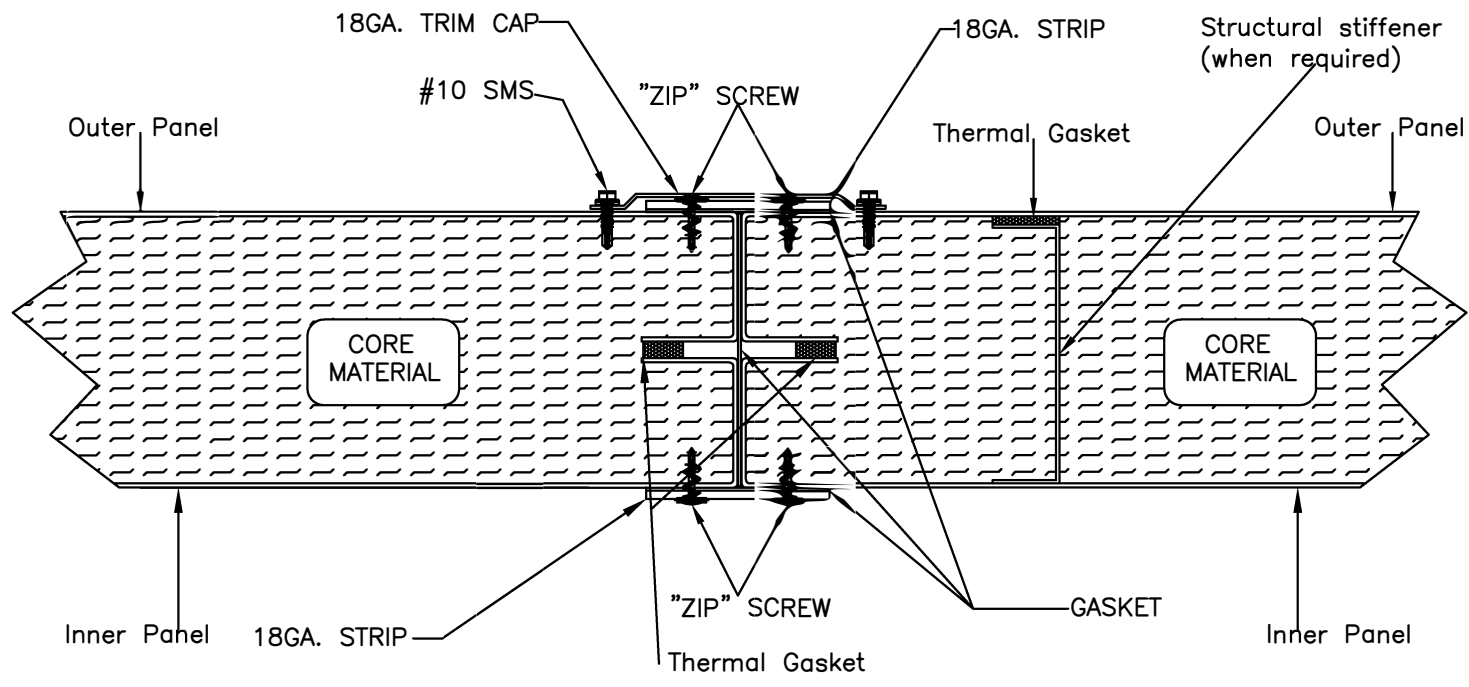
TYPICAL CORE MATERIAL OPTIONS
2"-4" FOAM

PLAN VIEW

WALL OR ROOF CASING DETAIL

Dwg. Name:	36.dwg
Rev. Date:	3/9/2011
Drawn by:	

INDOOR ROOF TO ROOF – SHIPPING SPLIT



TYPICAL CORE MATERIAL OPTIONS
2"-4" FOAM

PLAN VIEW

WALL OR ROOF CASING DETAIL

Dwg. Name:	36.dwg
Rev. Date:	3/9/2011
Drawn by:	



APPROVED BY: _____

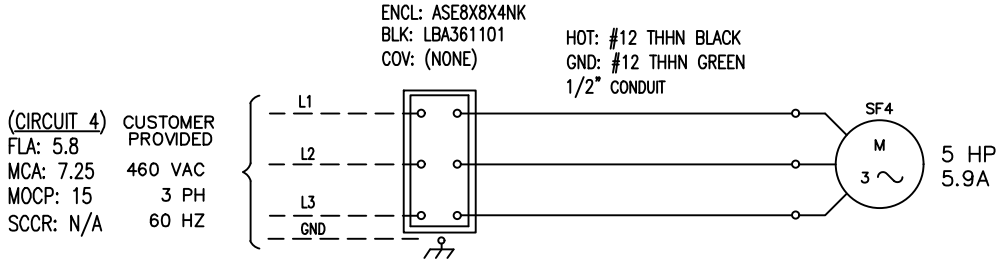
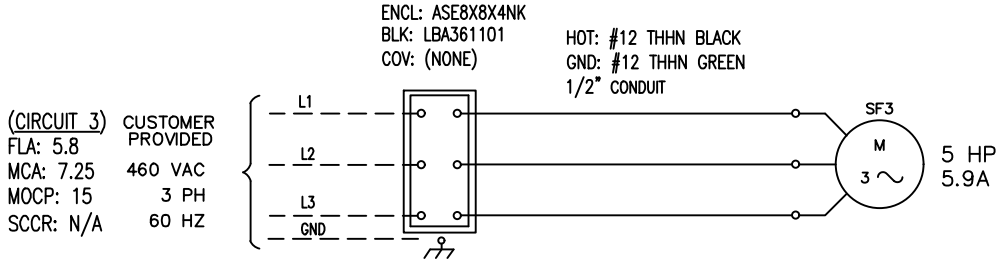
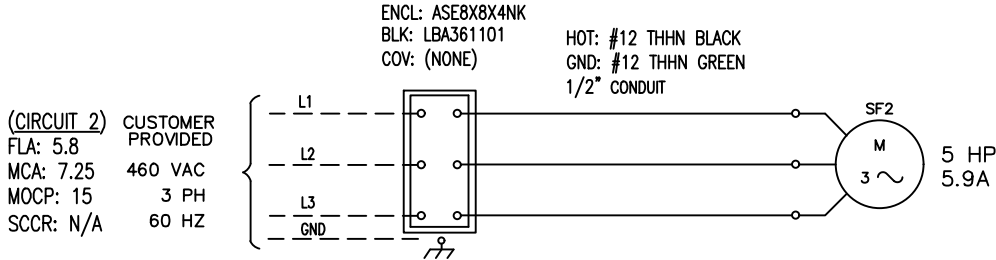
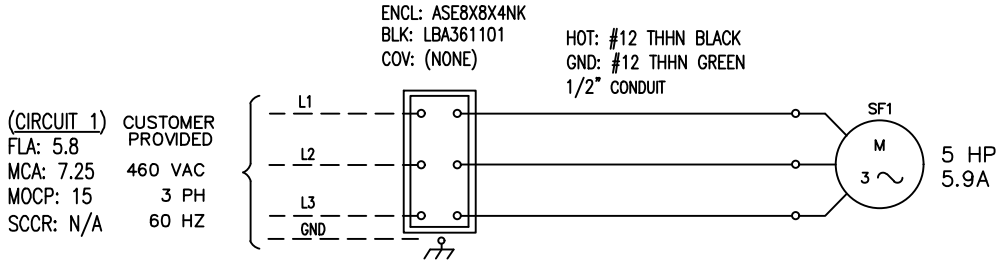
TRANETM
TECHNOLOGIES

EQ Number: **68695**

Job Description: **MU - CP221933 PCT AHU**

Units: **AHU-51**

ELECTRICAL DRAWING AND DATA SUBMITTAL



NOTES:
* TRANE FACTORY WIRED FAN MOTORS TO JBOXES.
* INDOOR UNIT. JBOXES ARE N1 RATED ENCLOSURES.
(* CONTROLS, SENSORS AND FINAL MOTOR INTERFACE BY TRANE FIELD OFFICE / CONTRACTOR.)

* FINAL CIRCUITS AND POWER DROPS WILL DEPEND ON WHAT IS DRIVING EACH CIRCUIT, VFD / MOTOR STARTER,TO BE FINALIZED AND CALCULATED BY TRANE FIELD OFFICE / CONTRACTOR.

	REPLACES	AUTOCAD	68695-ELEC-AHU-51	REV A
	REVISION DATE	TRANE CUSTOM		
	DRAWN BY AM	THIS DRAWING IS PROPRIETARY AND SHALL NOT BE COPIED OR ITS CONTENTS DISCLOSED TO OUTSIDE PARTIES WITHOUT THE WRITTEN CONSENT OF TRANE CUSTOM	MU-DP221933 PCT AHU TAG: AHU-51 ELECTRICAL DIAGRAM	
	DATE 02/29/2024	SIMILAR TO	SHEET 1 OF 2	

LEGEND		
DEVICE DESIGNATION	DESCRIPTION	MODEL NUMBER / MFG. / VENDOR
SF1-4	MOTOR, 460V, 3PH, 60Hz, PREMIUM-E, 5 HP	SEE MOTOR SCHEDULE
MOTOR JBOX (4)	MOTOR JBOX / POWER BLOCK / BLOCK COVER	ASE8X8X4NK / LBA361101 / (NONE)

- NOTES:
- UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C(77°F) AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
 - SOLID LINES INDICATE FACTORY WIRING. DASHED LINES INDICATE FIELD WIRING. PHANTOM LINES INDICATE OPTIONAL FEATURES.
 - CONDUIT TO BE EMT AND FMC, 1/2" MINIMUM

⚠ WARNING

HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE. FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.

⚠ AVERTISSEMENT

TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE, PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUTS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.

⚠ ADVERTENCIA

¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

CAUTION

USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

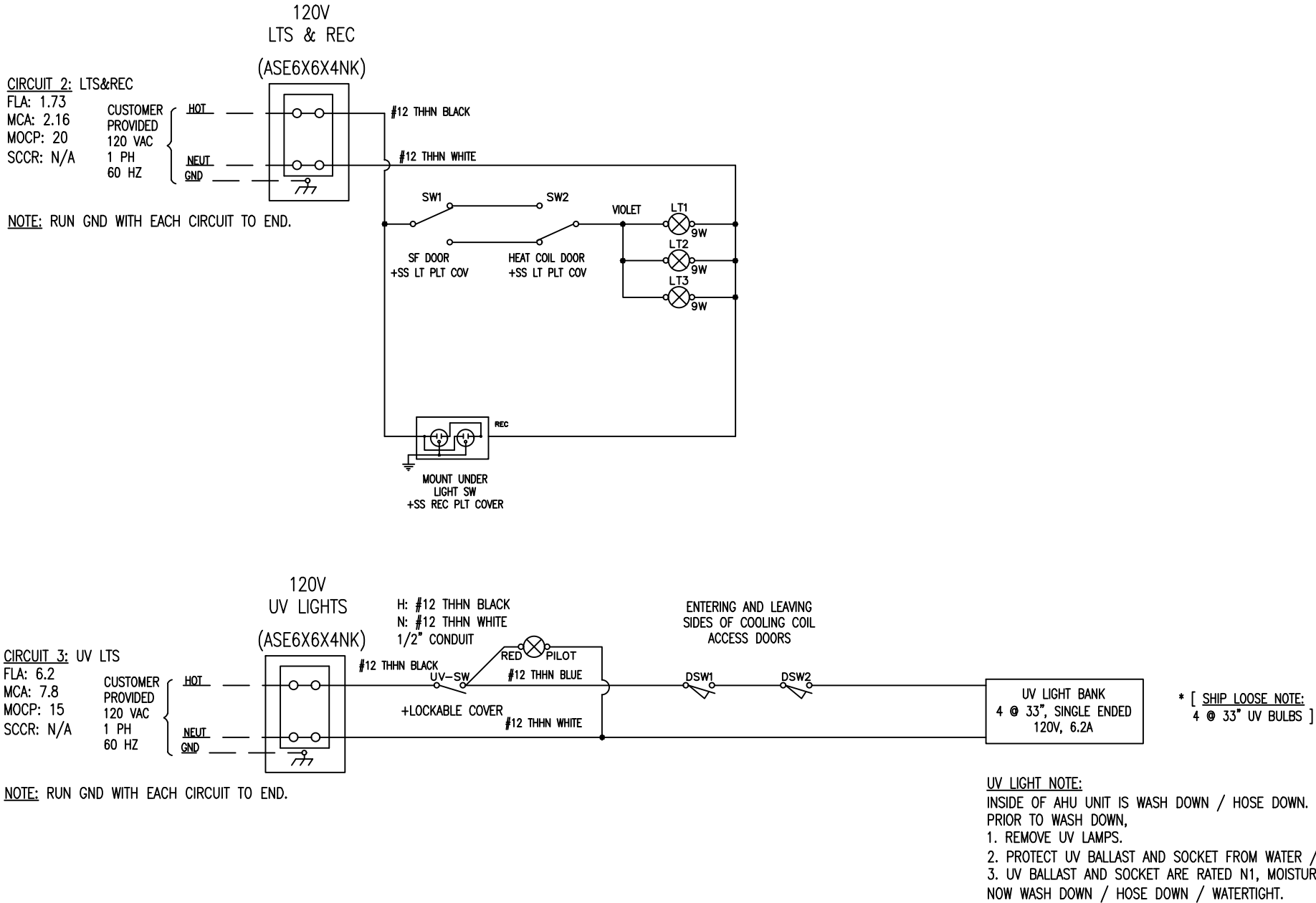
ATTENTION

N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'ÉQUIPEMENT.

PRECAUCIÓN

¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

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REPLACES		AUTOCAD	68695-ELEC-AHU-51	REV B
A	TRANE CUSTOM THIS DRAWING IS PROPRIETARY AND SHALL NOT BE COPIED OR ITS CONTENTS DISCLOSED TO OUTSIDE PARTIES WITHOUT THE WRITTEN CONSENT OF TRANE CUSTOM		MU-DP221933 PCT AHU TAG: AHU-51 ELECTRICAL DIAGRAM SHEET 2 OF 2	
REVISION DATE				
03/05/2024				
DRAWN BY				
AM	SIMILAR TO			
DATE				
02/29/2024				

LEGEND		
DEVICE DESIGNATION	DESCRIPTION	MODEL NUMBER / MFGR. / VENDOR
TERM JBOX (2)	TERMINAL JBOX, ASE6X6X4NK / TERMINALS	X19090644010
LT SW1, SW2	INDUSTRIAL LIGHT SWITCH, 15A, 3 WAY	X13460313010
LT SW PLT CV (2)	STAINLESS STEEL LIGHT SWITCH PLATE COVER	84001-40
LT1-3	RAB VAPORPROOF INCANDESCENT/FLUORESCENT FIXTURE	VX100DG
LED BULB (3)	GREEN CREATIVE INDUSTRIAL LED BULB, 9W = 60W	(36549) 9A19DIM/830/R
REC	P&S 20A WEATHER-RESISTANT GFCI RECEPTACLE	X19200728010
REC SS PLT COV	STAINLESS STEEL RECEPTACLE PLATE COVER	84401-40
(TERM JBOX)	TERMINAL JBOX, ASE6X6X4NK / TERMINALS	X19090644010
UV LT SW	RED PILOT LIGHT SWITCH, 20A	X13460282020
UV SW COV/LOCK	STAINLESS STEEL SW PLATE / LOCKABLE COVER	PSS7801P / PSSSS1
DSW1, DSW2 (2)	UV DOOR SWITCH, ROLLER WHEEL ARM	XCKJ10541H7
UV LIGHT	UV LIGHT BANK, 120V, 6.2A (4 BALLAST, 1.54A EACH)	SEE MECHANICAL SUBMITTAL

- NOTES:
- UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C(77°F) AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURED.
 - SOLID LINES INDICATE FACTORY WIRING. DASHED LINES INDICATE FIELD WIRING. PHANTOM LINES INDICATE OPTIONAL FEATURES.
 - CONDUIT TO BE EMT & FMC, 1/2" MINIMUM.

⚠ WARNING HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE. FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.	⚠ AVERTISSEMENT TENSION DANGEREUSE! COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE, PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUTS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.	⚠ ADVERTENCIA ¡VOLTAJE PELIGROSO! DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.
CAUTION USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.	ATTENTION N'UTILISER QUE DES CONDUCTEURS EN CUIVRE! LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS. L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'ÉQUIPEMENT.	PRECAUCIÓN ¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE! LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES. SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

Screw Cover Type I Pull Boxes



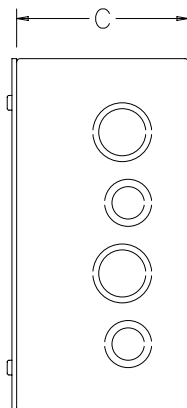
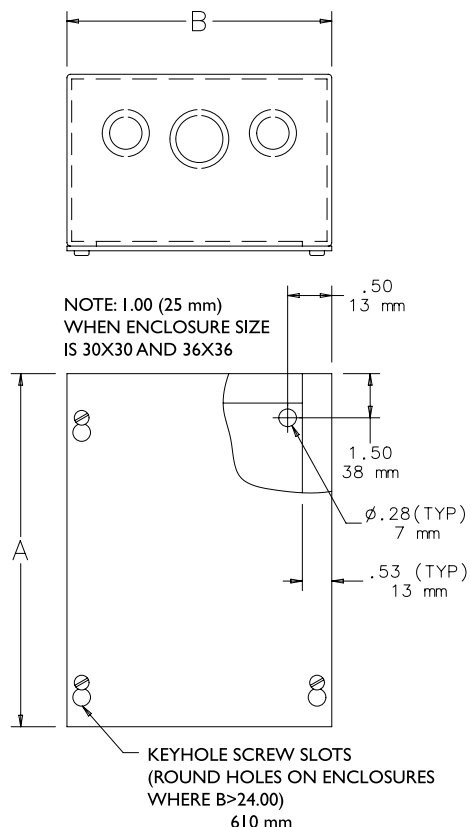
Terminal JBoxes
N1, painted steel
no knockouts

Application

Designed for use as a junction box and pull box in commercial and general industrial applications. Flush covers and door frames must be ordered separately for flush installations.

Features

- Unique keyhole screw slots in the cover permit removal of the cover without extracting the screws
- Available with or without knockouts. Various sizes of easily removable concentric knockouts on all four sides of standard boxes with knockouts.



- Optional flush-mounted door frame available
- Optional flush covers are designed to mount on enclosures for flush installations

Construction

- 16, 14, or 12 gauge steel or galvanized steel
- Flat, removable covers fastened with plated steel screws
- Provision for grounding
- Mounting holes on back of box

Finish

ANSI 61 gray polyester powder paint finish inside and out. Unless otherwise specified, all custom pull boxes are finished with ANSI 61 gray polyester powder paint.

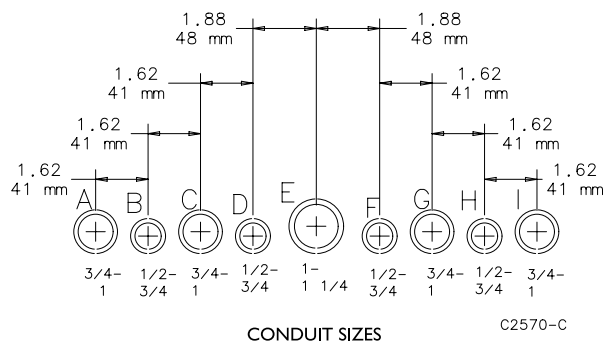
Industry Standards

UL 50, File No. E27525, Type I
NEMA/EEMAC Type I
cUL CSA C22.2 No. 40, File No. E27525, Type I
IEC 60529, IP30

Accessories

See also *Accessories chapter*.

Flush Covers
Flush-Mounted Door Frame
Grounding Device
Locking Window
Touch-Up Paint (ATPPY6I)



Knockout Pattern
(from outside of box)

Screw Cover Type I Pull Boxes

Standard Sizes Screw Cover Pull Boxes

Catalog Number	A x B x C in. (mm)	Style	Number of Cover Screws	Knockout Pattern along "A" Sides	Knockout Pattern along "B" Sides
ASE4X4X3	4.00 x 4.00 x 3.00 (102 x 102 x 76)	Painted with Knockouts	2	B-C	B-C
ASG4X4X3	4.00 x 4.00 x 3.00 (102 x 102 x 76)	Galvanized with Knockouts	2	B-C	B-C
ASE4X4X3NK	4.00 x 4.00 x 3.00 (102 x 102 x 76)	Painted without Knockouts	2	—	—
ASG4X4X3NK	4.00 x 4.00 x 3.00 (102 x 102 x 76)	Galvanized without Knockouts	2	—	—
ASE6X6X3	6.00 x 6.00 x 3.00 (152 x 152 x 76)	Painted with Knockouts	2	B-C-D	B-C-D
ASG6X6X3	6.00 x 6.00 x 3.00 (152 x 152 x 76)	Galvanized with Knockouts	2	B-C-D	B-C-D
ASE6X6X3NK	6.00 x 6.00 x 3.00 (152 x 152 x 76)	Painted without Knockouts	2	—	—
ASG6X6X3NK	6.00 x 6.00 x 3.00 (152 x 152 x 76)	Galvanized without Knockouts	2	—	—
ASE8X6X3	8.00 x 6.00 x 3.00 (203 x 152 x 76)	Painted with Knockouts	2	F-G-H-I	B-C-D
ASG8X6X3	8.00 x 6.00 x 3.00 (203 x 152 x 76)	Galvanized with Knockouts	2	F-G-H-I	B-C-D
ASE8X6X3NK	8.00 x 6.00 x 3.00 (203 x 152 x 76)	Painted without Knockouts	2	—	—
ASG8X6X3NK	8.00 x 6.00 x 3.00 (203 x 152 x 76)	Galvanized without Knockouts	2	—	—
ASE16X14X3	16.00 x 14.00 x 3.00 (406 x 356 x 76)	Painted with Knockouts	4	B-C-D-E-F-G-H	B-C-D-E-F-G-H
ASE16X14X3NK	16.00 x 14.00 x 3.00 (406 x 356 x 76)	Painted without Knockouts	4	—	—
ASE18X14X3	18.00 x 14.00 x 3.00 (457 x 356 x 76)	Painted with Knockouts	4	A-B-C-D-E-F-G-H-I	B-C-D-E-F-G-H
ASE20X14X3NK	20.00 x 14.00 x 3.00 (508 x 356 x 76)	Painted without Knockouts	4	—	—
ASE4X4X4	4.00 x 4.00 x 4.00 (102 x 102 x 102)	Painted with Knockouts	2	B-C	B-C
ASG4X4X4	4.00 x 4.00 x 4.00 (102 x 102 x 102)	Galvanized with Knockouts	2	B-C	B-C
ASE4X4X4NK	4.00 x 4.00 x 4.00 (102 x 102 x 102)	Painted without Knockouts	2	—	—
ASG4X4X4NK	4.00 x 4.00 x 4.00 (102 x 102 x 102)	Galvanized without Knockouts	2	—	—
ASE6X4X4	6.00 x 4.00 x 4.00 (152 x 102 x 102)	Painted with Knockouts	2	B-C-D	B-C
ASG6X4X4	6.00 x 4.00 x 4.00 (152 x 102 x 102)	Galvanized with Knockouts	2	B-C-D	B-C
ASE6X4X4NK	6.00 x 4.00 x 4.00 (152 x 102 x 102)	Painted without Knockouts	2	—	—
ASG6X4X4NK	6.00 x 4.00 x 4.00 (152 x 102 x 102)	Galvanized without Knockouts	2	—	—
ASE6X6X4	6.00 x 6.00 x 4.00 (152 x 152 x 102)	Painted with Knockouts	2	B-C-D	B-C-D
ASG6X6X4	6.00 x 6.00 x 4.00 (152 x 152 x 102)	Galvanized with Knockouts	2	B-C-D	B-C-D
ASE6X6X4NK	6.00 x 6.00 x 4.00 (152 x 152 x 102)	Painted without Knockouts	2	—	—
ASG6X6X4NK	6.00 x 6.00 x 4.00 (152 x 152 x 102)	Galvanized without Knockouts	2	—	—
ASE8X6X4	8.00 x 6.00 x 4.00 (203 x 152 x 102)	Painted with Knockouts	2	F-G-H-I	B-C-D
ASG8X6X4	8.00 x 6.00 x 4.00 (203 x 152 x 102)	Galvanized with Knockouts	2	F-G-H-I	B-C-D
ASE8X6X4NK	8.00 x 6.00 x 4.00 (203 x 152 x 102)	Painted without Knockouts	2	—	—
ASG8X6X4NK	8.00 x 6.00 x 4.00 (203 x 152 x 102)	Galvanized without Knockouts	2	—	—
ASE8X8X4	8.00 x 8.00 x 4.00 (203 x 203 x 102)	Painted with Knockouts	4	F-G-H-I	F-G-H-I
ASE8X8X4NK	8.00 x 8.00 x 4.00 (203 x 203 x 102)	Galvanized with Knockouts	4	F-G-H-I	F-G-H-I
ASE8X8X4NK	8.00 x 8.00 x 4.00 (203 x 203 x 102)	Painted without Knockouts	4	—	—
ASG8X8X4NK	8.00 x 8.00 x 4.00 (203 x 203 x 102)	Galvanized without Knockouts	4	—	—
ASE10X6X4NK	10.00 x 6.00 x 4.00 (254 x 152 x 102)	Painted without Knockouts	4	—	—
ASG10X6X4NK	10.00 x 6.00 x 4.00 (254 x 152 x 102)	Galvanized without Knockouts	4	—	—
ASE10X8X4	10.00 x 8.00 x 4.00 (254 x 203 x 102)	Painted with Knockouts	4	F-G-H-I	F-G-H-I
ASG10X8X4	10.00 x 8.00 x 4.00 (254 x 203 x 102)	Galvanized with Knockouts	4	F-G-H-I	F-G-H-I
ASE10X8X4NK	10.00 x 8.00 x 4.00 (254 x 203 x 102)	Painted without Knockouts	4	—	—
ASG10X8X4NK	10.00 x 8.00 x 4.00 (254 x 203 x 102)	Galvanized without Knockouts	4	—	—
ASE10X10X4	10.00 x 10.00 x 4.00 (254 x 254 x 102)	Painted with Knockouts	4	F-G-H-I	C-D-E-F-G
ASG10X10X4	10.00 x 10.00 x 4.00 (254 x 254 x 102)	Galvanized with Knockouts	4	F-G-H-I	C-D-E-F-G
ASE10X10X4NK	10.00 x 10.00 x 4.00 (254 x 254 x 102)	Painted without Knockouts	4	—	—
ASG10X10X4NK	10.00 x 10.00 x 4.00 (254 x 254 x 102)	Galvanized without Knockouts	4	—	—
ASE12X6X4NK	12.00 x 6.00 x 4.00 (305 x 152 x 102)	Painted without Knockouts	4	—	—
ASG12X6X4NK	12.00 x 6.00 x 4.00 (305 x 152 x 102)	Galvanized without Knockouts	4	—	—
ASE12X8X4	12.00 x 8.00 x 4.00 (305 x 203 x 102)	Painted with Knockouts	4	C-D-E-F-G	F-G-H-I
ASG12X8X4	12.00 x 8.00 x 4.00 (305 x 203 x 102)	Galvanized with Knockouts	4	C-D-E-F-G	F-G-H-I
ASE12X8X4NK	12.00 x 8.00 x 4.00 (305 x 203 x 102)	Painted without Knockouts	4	—	—
ASG12X8X4NK	12.00 x 8.00 x 4.00 (305 x 203 x 102)	Galvanized without Knockouts	4	—	—
ASE12X10X4	12.00 x 10.00 x 4.00 (305 x 254 x 102)	Painted with Knockouts	4	C-D-E-F-G	C-D-E-F-G
ASG12X10X4	12.00 x 10.00 x 4.00 (305 x 254 x 102)	Galvanized with Knockouts	4	C-D-E-F-G	C-D-E-F-G
ASE12X10X4NK	12.00 x 10.00 x 4.00 (305 x 254 x 102)	Painted without Knockouts	4	—	—
ASG12X10X4NK	12.00 x 10.00 x 4.00 (305 x 254 x 102)	Galvanized without Knockouts	4	—	—
ASE12X12X4	12.00 x 12.00 x 4.00 (305 x 305 x 102)	Painted with Knockouts	4	C-D-E-F-G	C-D-E-F-G
ASG12X12X4	12.00 x 12.00 x 4.00 (305 x 305 x 102)	Galvanized with Knockouts	4	C-D-E-F-G	C-D-E-F-G
ASE12X12X4NK	12.00 x 12.00 x 4.00 (305 x 305 x 102)	Painted without Knockouts	4	—	—
ASG12X12X4NK	12.00 x 12.00 x 4.00 (305 x 305 x 102)	Galvanized without Knockouts	4	—	—
ASE15X15X4NK	15.00 x 15.00 x 4.00 (381 x 381 x 102)	Painted without Knockouts	4	—	—
ASG15X15X4NK	15.00 x 15.00 x 4.00 (381 x 381 x 102)	Galvanized without Knockouts	4	—	—

Terminal Blocks

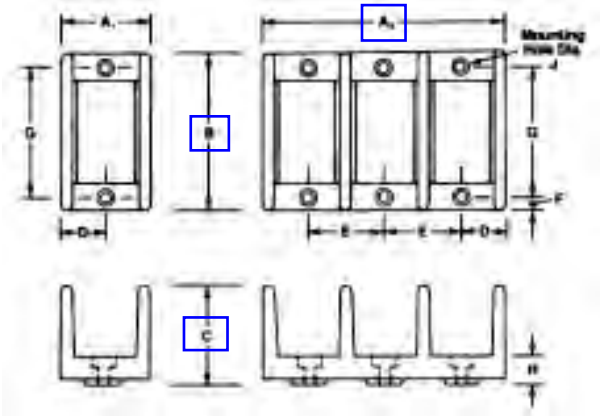
Power Distribution Blocks

Copper or Aluminum Wire

CLASS 9080	MINIATURE		STANDARD	
				
Maximum Voltage Rating	600	600	600	600
Service Class	B & C	B & C	B & C	B & C
Amperage Rating - CU Wire	115 amp.	115 amp.	175 amp.	175 amp.
Amperage Rating - AL Wire	90 amp.	90 amp.	135 amp.	135 amp.
Wire Range Lugs suitable for use with 75° C Conductors.	MAIN (1) #14-2 AWG BRANCH (1) #14-2 AWG	MAIN (1) #14-2 AWG BRANCH (4) #18-10 AWG	MAIN (1) #14-2/0 AWG BRANCH (1) #14-2/0 AWG	MAIN (1) #14-2/0 AWG BRANCH (4) #14-4 AWG
Tightening Torque	MAIN #3-#2 50 lbf-in (5.6 N-m) #6-#4 45 lbf-in (5.1 N-m) #8 40 lbf-in (4.5 N-m) #14-#10 35 lbf-in (4.0 N-m) BRANCH #3-#2 50 lbf-in (5.6 N-m) #6-#4 45 lbf-in (5.1 N-m) #8 40 lbf-in (4.5 N-m) #14-#10 35 lbf-in (4.0 N-m)	MAIN #3-#2 50 lbf-in (5.6 N-m) #6-#4 45 lbf-in (5.1 N-m) #8 40 lbf-in (4.5 N-m) #14-#10 35 lbf-in (4.0 N-m) BRANCH #18-#10 7 lbf-in (0.8 N-m)	MAIN #6-2/0 120 lbf-in (13.5 N-m) #8 40 lbf-in (4.5 N-m) #14-#10 35 lbf-in (4.0 N-m) BRANCH #6-2/0 120 lbf-in (13.5 N-m) #8 40 lbf-in (4.5 N-m) #14-#10 35 lbf-in (4.0 N-m)	MAIN #6-2/0 120 lbf-in (13.5 N-m) #8 40 lbf-in (4.5 N-m) #14-#10 35 lbf-in (4.0 N-m) BRANCH #14-#4 35 lbf-in (4.0 N-m)
Lug Material	Tin Plated High Conductive AL	Tin Plated High Conductive AL	Tin Plated High Conductive AL	Tin Plated High Conductive AL
Base Material	High Impact Thermoplastic	High Impact Thermoplastic	General Purpose Phenolic	General Purpose Phenolic
Temperature Rating	-40 to 257° F -40 to 125° C	-40 to 257° F -40 to 125° C	-40 to 302° F -40 to 150° C	-40 to 302° F -40 to 150° C
Listings	 File E60616 Guide XCFR2		 File LR70361	
Flammability Rating	UL94V-0	UL94V-0	UL94V-0	UL94V-0
ONE POLE BLOCKS				
Block Catalog Number	9080 LBA161101	9080 LBA161104	9080 LBA162101	9080 LBA162104
Block Dimensions (D)x(H)x(W)	1.62x2.29x0.76 in. 41.1x58.2x19.3 mm	1.62x2.29x0.76 in. 41.1x58.2x19.3 mm	1.78x2.88x1.13 in. 45.2x73.2x28.7 mm	1.78x2.88x1.13 in. 45.2x73.2x28.7 mm
TWO POLE BLOCKS				
Block Catalog Number	N/A	9080 LBA261104	9080 LBA262101	9080 LBA262104
Clear Plastic covers	N/A	N/A	9080 LB22	9080 LB22
Block Dimensions (D)x(H)x(W)	N/A	1.62x2.29x1.40 in. 41.1x58.2x35.6 mm	1.78x2.88x1.94 in. 45.2x73.2x49.3 mm	1.78x2.88x1.94 in. 45.2x73.2x49.3 mm
THREE POLE BLOCKS				
Block Catalog Number	9080 LBA361101	9080 LBA361104	9080 LBA362101	9080 LBA362104
Clear Plastic covers	N/A	N/A	9080 LB23	9080 LB23
Block Dimensions (D)x(H)x(W)	1.62x2.29x2.03 in. 41.1x58.2x51.6 mm	1.62x2.29x2.03 in. 41.1x58.2x51.6 mm	1.78x2.88x2.75 in. 45.2x73.2x69.9 mm	1.78x2.88x2.75 in. 45.2x73.2x69.9 mm

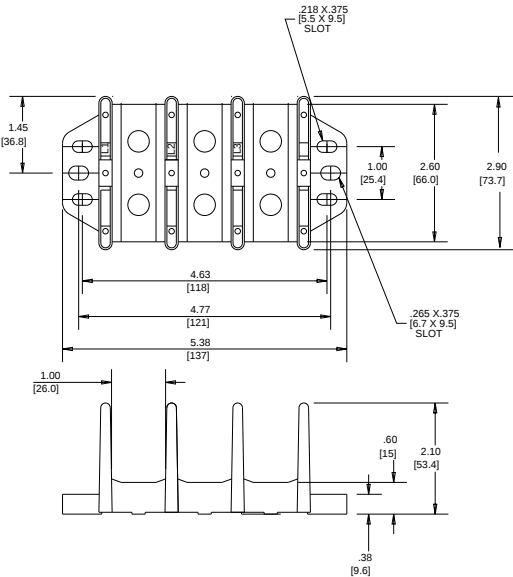


Terminal Blocks
Power Distribution Blocks
Dimensions

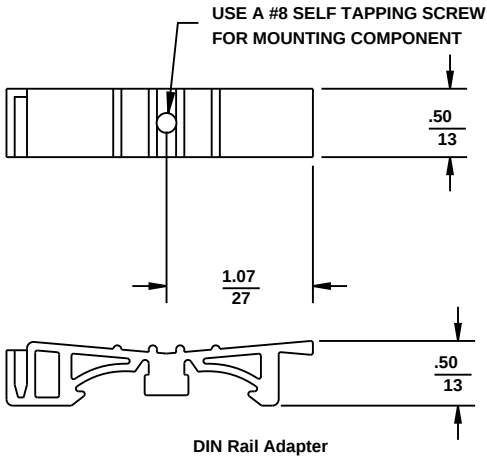


General Dimensions

1 Pole	2 Pole	3 Pole	A1	A2	A3	B	C	D	E	F	G	H	J
LBA161101 LBA161104	LBA261104	LBA161101 LBA361104	.76	1.40	2.03	2.29	1.62	.38	.64	.19	1.93	.32	.18
LBA162101 LBA162104 LBC162101	LBA262101 LBA262104	LBA362101 LBA362104 LBC362101	1.13	1.94	2.75	2.88	1.78	.56	.81	.31	2.25	.24	.205
LBA163101 LBA163104 LBA163106 LBA163206 LBC163101 LBC163106 LBC163206	LBA263101 LBA263104 LBA263106 LBA263206 LBC263106 LBC263206	LBA363101 LBA363104 LBA363106 LBA363206 LBC363101 LBC363106 LBC363206	1.94	3.47	5.00	4.00	2.61	.97	1.53	.31	3.38	.40	.203
LBA164101 LBA164108	LBA264108	LBA364101 LBA364108	2.28	4.16	6.04	4.75	2.92	1.14	1.88	.31	4.13	.51	.20
LBA165202 LBA1652021 LBA165106 LBA165112 LBA165212 LBC165208 LBC165212	LBA265202 LBA2652021 LBA265106 LBA265112 LBA265212	LBA365202 LBA3652021 LBA365106 LBA365112 LBA365212 LBC365208 LBC365212	3.17	5.88	8.54	5.50	3.12	1.58	2.69	.38	4.75	.50	.265



Dimensions for LBA362106



LIGHTING COMPONENTS																							
Light Fixture:																							
RAB - Die Cast Aluminum Marine-Type Std bulb Fixture, Clear Glass Globe, AL Guard, UL & CSA Listed, 120/277 VAC Rated																							
Selection																							
RAB Fixture - Die Cast																							
Bulbs:																							
Green Creative - A19 Style - UL Listed - 120VAC - 3000K for 9W, 11W - 5000K for 15W - 25,000 Hour Life for 9W,15W - 15,000 Hour Life for 13W																							
Selection																							
9W - 60W Equivalent		Industrial LED Bulb, 25k Hours																					
Light Switch: Industrial Grade, back and side wired 120/277 VAC, UL and CSA rated.			  																				
<table><thead><tr><th>#</th><th>Selection</th><th>Options</th></tr></thead><tbody><tr><td>1</td><td>15A - 3-Way</td><td>None</td></tr><tr><td>2</td><td>20A - Red Pilot Light</td><td>Lockout Wallplate</td></tr><tr><td>3</td><td>None</td><td>None</td></tr><tr><td>4</td><td>None</td><td>None</td></tr><tr><td>5</td><td>None</td><td>None</td></tr></tbody></table>					#	Selection	Options	1	15A - 3-Way	None	2	20A - Red Pilot Light	Lockout Wallplate	3	None	None	4	None	None	5	None	None	SS Lt Sw Plate Cover (For UV Lights)
#	Selection	Options																					
1	15A - 3-Way	None																					
2	20A - Red Pilot Light	Lockout Wallplate																					
3	None	None																					
4	None	None																					
5	None	None																					
UV Door Switch: Schneider Electric Limit Switch/Lever Arm Type C, Heavy Duty, 10A, 600V, UL Listed																							
Selection																							
2 - Included																							
GFCI Receptacle: Pass & Seymour Model 7899-W, commercial specification grade, duplex, weather resistant/outdoor grade with LED indicator. White. 20A-125V@Receptacle UL/CSA Listed																							
Selection		Options																					
20A		None																					
			SS GFCI Rec Plate Cover																				