Submittal #26 32 13-008.A
26 32 13 - Engine Generators

Hazen and Sawyer
5775 Peachtree Dunwoody Road, Suite D-520
Atlanta, Georgia 30342
Phone: (404) 459-6363

Project: 32457-011 - WJ Hooper WPP Generator - SDC
70 Oakdale Drive
Stockbridge, Georgia 30281

Distribution Summary

Distributed on 10/4/2021 by Griffin Ghesquiere **()**

To: Eddie McCallum **(Hazen and Sawyer - Atlanta)**, Jeff Winston **(Clayton County Water Authority)** , Jordan Tinnell **(Crowder Construction Company)**, Tyler Chow **(Hazen and Sawyer - Atlanta)** , Griffin Ghesquiere **(Hazen and Sawyer - Atlanta)**

Message: Engineer's review of the Contractor's submittals shall in no way relieve the Contractor of any of his responsibilities under the Contract. An acceptance of a submittal shall be interpreted to mean that the Engineer has no specific objections to the submitted material, subject to conformance with the Contract Drawings and Specifications. Engineer's review is confined to general arrangement and compliance with the Contract Drawings and Specifications only, and will not be for the purpose of checking dimensions, weights, clearances, fittings, tolerances, interferences, coordination of trades, etc.

Additional Attachments: 26 32 13-008.A Engine Generator Enclosure Final O&M.pdf

NAME	RESPONSE	ATTACHMENTS	COMMENT
Tyler Chow **(Hazen and Sawyer - Atlanta)**	Furnish as Submitted		

Engine Generator Enclosure Final O&M Manual

SPEC SECTION:	26 32 13 - Engine Generators	**CREATED BY:**	
		DATE CREATED:	09/20/2021
ISSUE DATE:	09/20/2021	**REVISION:**	A
RESPONSIBLE CONTRACTOR:	Crowder Construction Company	**RECEIVED FROM:**	Jordan Tinnell
RECEIVED DATE:	09/16/2021	**SUBMIT BY:**	09/30/2021
FINAL DUE DATE:	10/07/2021	**LOCATION:**	
TYPE:		**COST CODE:**	
BALL IN COURT:			

DISTRIBUTION:
Jeff Winston **(Clayton County Water Authority)** , Jordan Tinnell **(Crowder Construction Company)** , Eddie McCallum **(Hazen and Sawyer - Atlanta)** , Griffin Ghesquiere **(Hazen and Sawyer - Atlanta)** , Tyler Chow **(Hazen and Sawyer - Atlanta)**

DESCRIPTION:

ATTACHMENTS:
26 32 13-008.A Engine Generator Enclosure Final O&M.pdf

BY **DATE** **COPIES TO**

CROWDER CONSTRUCTION COMPANY
1080 Holcomb Bridge Road
Building 200, Suite 180
Roswell, GA 30076
Phone (770) 761-5578
Fax (770) 761-5971

LETTER OF TRANSMITTAL

To: Hazen & Sawyer
5775 Peachtree Dunwoody Road
Suite 2-520
Atlanta, GA 300342

Attn: Tyler Chow, P.E.

Ph: 404-459-6363
Cell: 626-780-7164

Date: 09/16/2021

Job No.:
Hazen: 32457-011
Crowder: 40781

Project:
W.J. Hooper WPP Standby Power Generator

Location:
Stockbridge, GA

Submittal No:
26 32 13-008-A

Specification Section:
26 32 13

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via _____ the following items:

☑ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of Letter ☐ Change order ☑ Other: Product Data

COPIES	NO.	DESCRIPTION
1		Engine Generator Enclosure Final Operation & Maintenance Manual - Electronic

THESE ARE TRANSMITTED as checked below:

☑ For approval ☐ Resubmit _____ copies for approval ☐ For your use

☐ Submit _____ copies for distribution ☐ As requested ☐ Returned for corrections

☐ Return _____ corrected prints ☐ For Information Only ☐ Other:

☐ FOR BIDS DUE _____,

TRANSMITTED BY: Jordan Tinnell DATE: 09/16/2021

W.J. Hooper WPP Standby Generator

70 Oakdale Drive, Stockbridge, GA 30281

Owner: Clayton County Water Authority
Engineer: Hazen & Sawyer
Submittal Prepared by: Crowder Construction Company

Contractor:	Subcontractor:	Supplier:
Crowder Construction Company 1080 Holcomb Bridge Rd Bldg 200, Ste 180 Roswell, GA 30076	N/A	Cummins Inc. 5125 Highway 85 Atlanta, GA 30349

Submittal No:	26 32 13-008-A
Submittal Name:	Engine Generator Final Operation & Maintenance Manual
Product Manufacturer:	Fidelity Manufacturing
Ref. Specification No:	26 32 13
Ref. Specification Title:	Engine Generators
Drawing Reference:	N/A
Submittal Date:	09/16/2021

Crowder Construction Submittal Review:

For approval…….. ☐
Approved…… ☑
Approved as Noted…..…… ☐
Revise and Resubmit…….. ☐
For Information Only…… ☐

Crowder Construction has reviewed, checked, and approved this submittal for compliance with Contract Documents.

Approval by Crowder Construction Company does not relieve suppliers or subcontractors of responsibility to comply with requirements of plans and specification and/or other contract document under and for which this information is submitted. Nor does our approval establish compliance with the design concept of the project.

By: Jordan Tinnell

Date: 09/16/2021

Crowder Comments:

Hard copies and digital copies will be provided with approval of this Final O&M Manual to the Owner.

AC & DC POWER TECHNOLOGIES, LLC

5195 Southridge Parkway, Suite 120
College Park, GA 30349
Phone: 404-361-3788 Fax: 404-361-3791

SUBMITTAL DATA

PROJECT INFORMATION:			
AC & DC Power Submittal #:	26 32 13-008.A	Date:	9-16-2021
CUSTOMER:	Crowder Construction	Revision:	0
CONTRACT MANAGER:	Jordan Tinnell		
STREET ADDRESS:	N/A		
PHONE/ CELL NUMBER:	470-512-4249		
PROJECT:	WJ Hooper		
ITEM:	32457-006 WJ Hooper Genset Enclosure	Subcontract:	40781/10001

COVER PAGE

Item	ATTACHMENTS	QTY	SPEC SECTION
1	WJ Hooper Genset Enclosure FINAL O&M, Fidelity	1	263213

NOTES TO REVIEWER:

Check	ENGINEERING COMMENTS
	For Reference Only
	Revise as noted and resubmit
	Rejected
	Released for manufacture with exceptions as noted
	Released for manufacturing with no exceptions

Sales and Service

Owners Manual
POWER GENERATION ENCLOSURE

PROJECT NAME: W. J. Hooper Water Plant - O-98979

CUSTOMER: AC & DC Power Technologies

REVISION: 0

Sales and Service

PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION

WO# 47907

Limited Product Warranty

Fidelity Manufacturing (“Company") warrants that all products which it manufactures ("Products") will be free from defects in workmanship and materials, under normal use and service for a period as defined on the quote. The Warranty period begins at the date the order has been completed and ready for collection. The Company’s Warranty does not apply or extend to: consumable items, normal wear and tear, customer modification of Products, designs or specifications supplied by the buyer, or damage or defect caused by accident, abuse, misuse, acts of God, acts of terrorism or by improper installation or use. Equipment, accessories and other parts and components not manufactured by the Company are not covered by this Limited Product Warranty and are warranted to the extent (if any) of the original manufacturer’s warranty to the Company. In no event shall other manufacturer’s warranty create any more extensive warranty obligation of the Company to the buyer than the Company’s warranty covering Products manufactured by the Company. Failure to test Product, as defined by Company, will result in a waiver of any form of Warranty.

The foregoing is in lieu of all other warranties, oral or written, express or implied. There are no expressed warranties other than those contained in this limited product warranty and to the extent permitted by law, there are no implied warranties including but not limited to any implied warranty of fitness for a particular purpose. The provisions of this limited product warranty as to duration, warranty adjustment and limitation of liability, shall be the same for implied warranties (if any) and express warranties.

Buyer must notify Fidelity Manufacturing, by written notice, within ten (10) days of the discovery of any defect. Such notification must include the model and serial number of the Company’s Product and a detailed report of the alleged defect(s) including photos if possible. The Company, at its option, may repair or replace, but not install, FOB the Company’s Ocala, Florida facilities, any part or parts of the Product, that is within the warranty period. Any modifications or repairs made by the Company will not extend the warranty period set forth herein.

The Company will not reimburse expenses incurred by the buyer or the buyers end customer related to removing, replacing, installing, reinstalling, repairing or returning the equipment or any part or parts without advanced written approval. Under no circumstances will the Company be responsible for any cost or expense in connection with repairs made by anyone other than the Company unless such repairs have been authorized in advance by the Company in writing.

This Limited Product Warranty sets forth buyer’s exclusive remedy and full extent of the Company’s liability for breach of implied (if any) and express warranties or for breach of contract, product defect, negligence or any other cause or reason in connection with the sale or use of the equipment. The company shall not be liable for any indirect or consequential damages for loss, damage or expense directly or indirectly arising from the sale or use of the equipment or from any other cause whether based on warranty (express or implied) contract or tort. The Company’s liability is limited to the price paid for the Product.

If repair, replacement, or field service are provided at the buyer’s request, and the Company determines that there is no defect within the provisions of this Limited Product Warranty, the buyer shall pay for any and all expenses associated with such repair, replacement or field service.

1900 NE 25th Ave Ocala, FL 34470
PH 352.414.4700 FX: 352.414.4642 www.fidelitymfg.com

General Enclosure Overview

A weatherproof type enclosure is designed to house the genet and accessories in compliance with the National Electrical Code (NEC), and the National Fire Protection Association (NFPA) with regard to clearances around electrical equipment. Our enclosure conform to the following construction and design criteria.

- ü Standard design per ASCE7 as referenced by IBC and State/Local code requirements
- ü Wind Load
- ü Roof load as specified
- ü Enclosure and Tank anchoring system
- ü Designed to meet Seismic requirements as specified by region.
- ü Rain test rating 4" per hour
- ü Approved Florida DBPR Modular Building Manufacturer

hdzN ² ŜI·úKŜNLJN22₮Σ [ŜØŜf L ϑ LL ŜyŎf2ădzNŜ ǿI·ffă úèLJλÔI·ffè Ŏ2yãλăú 2₮ I· ǿŜfŘŜŘ нé ălj dz I·NŜ I·fdzYˇλyδzYˇ údzōŜ ₮NI·YˇŜΣ мcé 2yˇ center. Our [ŜØŜf LLL ϑ L± ŜyŎf2ădzNŜ ǿI·ffă Ŏ2yãλăú 2₮ I· ǿŜfŘŜŘ пé È нé I·fdzYˇλyδzYˇ údzōŜ ₮NI·YˇŜΣ мcé 2yˇÔŜyúŜN¢
All of our enclosures includes tie-down provisions for securely attaching the entire structure to the concrete base or fuel tank as specified.
9ÈúŜNλ2N ǿI·ff ălλyˇλă YˇI·ŘŜ 2₮ л¢ллплé ! fdzYˇλyδzYˇ олло-H14 sheeting with baked enamel pre-painted finish. Available λyˇ ¢лулé úKλÔl ălλyˇǿKŜyˇNŜIjdzŜăúŜŘ ú2 YˇŜŜű λYˇLJI·ÔŭNI·úλyΞă ¢ ¢KŜ ! fdzYˇλyδzYˇ ălλyˇλă I·ŘKŜNŜŘ dzúλfûÎλyΞ o a Commercial Vehicle Tape.
¢KŜ N22₮ λă ₮NI·YˇŜŘ ǿλúK н λyÔK ălj dz I·NŜ ǿŜfŘŜŘ I·fdzYˇλyδzYˇ údzōλyΞ 2yˇмcé ÔŜyűŜNăφ w22₮ LJI·yŜfă I·NŜ ₮I·ōNλÔI·ted of .090 Aluminum 3003-H14 sheeting and mechanically fastened to the entire perimeter. The perimeter is sealed with weather-proof caulking to prevent water intrusion. The roof is peaked to prevent water pooling and facilitate water run-off. External drains utilizing factory generator shut off valves are provided for radiator fluid and engine oil. Additional valves can be provided where access to factory valves is inhibited.
Our walk-λyˇŜyŎf2ădzNŜă I·NŜ ădzLJLJfûŜŘ ǿλúK I· YˇλyλYˇdzYˇ ŎfŜI·NI·yÔŜ 2₮ нпé ₮2N ǿI·fl ǿI·è space between the generator ₮NI·YˇŜ I·yŘ λyűŜNλ2N ăλŘŜ ǿI·ffă¢ ! YˇλyλYˇdzYˇ ǿI·fl ǿI·è ŎfŜI·NI·yÔŜ 2₮ océ λă LJN2ØλŘŜŘ ōŜúǿŜŜyˇúKŜ ΞŜyŜNI·ú2N ŜyŘ ₮NI·YˇŜ and the interior rear wall of the enclosure. The radiator front face is sealed with a .090 aluminum transition and a heat resistant composite material to prevent leakage of radiator air discharge and minimize vibration.
Our standard enclosure exterior color is White unless otherwise specified. Many colors are available as an option. We provide four single personnel or 2 sets of double access doors on most reach-in designs, two single doors are provided on walk-in. Where required we provide a single door located in front of the generator main circuit breaker, as specified, to meet NEC code clearance requirements.
The circuit breaker access door provides free open access to the breaker as required for proper operation and maintenance. Doors are manufactured of the same materials as enclosure and contain a full perimeter automotive gasket to form a weather tight seal. Door hinges are full length stainless steel piano hinge type and attached with stainless steel hardware. Door handles are corrosion resistant and provide for a lockable, secure entry point into the enclosure.
All doors are designed to use a 3-point latching mechanism with interior safety release . Panic bar hardware is available as an option. Drip edge is applied above each entry door. Fidelity Manufacturing provides all necessary hardware to internally or externally mount the exhaust silencer as specified.
The silencer mounting points are designed to transfer the weight of the silencer to the side walls of the enclosure. This design prevents any weight of the silencer from bearing on the engine. Silencer mounting hardware maintain the weatherproof integrity of the enclosure system. An aluminum rain collar and rain dress is provided by the enclosure manufacturer.

Weather Enclosure Air Flow Characteristics

Air entering the enclosure flows through fixed aluminum louvers, sized in accordance generator manufacturers specifications, while preventing water intrusion into the enclosure. The Radiator discharge air flows be through aluminum blow- open style louvers.

Intake and exhaust openings are covered with bird-screen to prevent the entrance of birds or rodents.

Sound Attenuated Enclosures Air Flow Characteristics

Air entering the enclosure passes through an intake plenum, sized in accordance generator manufacturers specifications, while preventing water intrusion into the enclosure. The radiator discharge air is discharged upward through a sound attenuated plenum. Intake and exhaust openings are covered with bird-screen to prevent the entrance of birds or rodents.

rodents.

Level 1 Sound Attenuated Enclosure up to 15 dba Reduction @ 7 Meters

Our Level 1 Sound Attenuated Enclosure is designed and built to the design standards of the Weather Enclosures with the following addition(s)

- ü ¢KŜ ăλŘŜă I·yŘ ŜyŘ ø I·ffă 2₮ ΰKŜ ŜyŎf2ădzℕŜ Ô2yΰI·λy˘нε ΰKλŎ˥ ă2dzyŘ I·úΰŜyΰzI·úλy∃ Y˘I·ΰŜℕλI·f λy˘ΰKŜ ø I·ffă I·yŘ intake discharge plenums.
- ü All sound attenuation materials are covered with perforated aluminum sheeting, except the discharge plenum, which is covered with the same exterior skin.
- ü A Internal or External mounted Silencer maybe added, sized in accordance with the Silencer Manufacturers recommendations to meet the sound requirements of the project.

Level 2 Sound Attenuated Enclosure up to 25 dba Reduction @ 7 Meters

Our Level 2 Sound Attenuated Enclosure is designed and built design standards of the Level 1 Enclosures with the following Addition(s)

- ü The interior ceiling is lined with 2" think sound attenuating material.
- ü Interior ceiling insulation is covered with aluminum perforated sheeting.
- ü A Internal or External mounted Silencer maybe added, sized in accordance with the Silencer Manufacturers recommendations to meet the sound requirements of the project.

Level 3 Sound Attenuated Enclosure up to 30 dba Reduction @ 7 Meters

Our Level 3 Sound Attenuated Enclosure is designed and built design standards of the Level 2 Enclosures with the following Addition(s)

- ü The interior ceiling is lined with 2 layers of 2" think Non-Fiberglass Hydrophobic Industrial Noise Absorption Material
- ü A Internal or External mounted Silencer(s) maybe added, sized in accordance with the Silencer Manufacturers recommendations to meet the sound requirements of the project.
- ü Internal and External Plenums insulated with layers of 2" think Non-Fiberglass Hydrophobic Industrial Noise Absorption Materials.
- ü Internal and External Plenums are covered in perforated Aluminum Sheeting.
- ü The Intake Plenum is designed to accept sound attenuation baffles as required.
- ü The Exhaust Plenum is designed to accept sound attenuation baffles as required.

Level 4 Sound Attenuated Enclosure up to 35 dba Reduction @ 7 Meters

Level 4 Sound Attenuated Enclosure is designed and built design standards of the Level 3 Enclosures with the following Addition(s)

- ü A layer of sound isolation sheeting material is added to all the internal walls and ceilings.
- ü The Intake Plenum with non-fiberglass noise absorbing sound attenuation baffles as required.
- ü The Exhaust Plenum is with non-fiberglass noise absorbing sound attenuation baffles as required.
- ü Acoustic Caulking added at all joints of the internal structure.

Sound Attenuated Enclosure beyond 35dba Reduction @ 7 Meters

Sound Attenuated Enclosure beyond level 4 are designed and built design standards of the Level 4 Enclosures with additions as needed, these may include but not limited to:

- ü Specialty sound absorbing materials in multi-composites
- ü Sound attenuating intake louvers in the intake
- ü Sound absorbing materials in the sub-base tank or frame
- ü Sound and temperature blankets on the exhausts systems
- ü Sound attenuating pillars throughout the enclosure system

ENCLOSURE OPTIONS

We offer various options in our package and with the ever increasing changes in our industry we continue to add new features and options to meet the demands of each project.

- ü FEPI ς Full electrical package consisting of a 100 amp load center Two convenience receptacles, incandescent lights per IESNA recommended illumination levels (2 watts/ sq. ft.)
- ü FEPF ς Full electrical package consisting of a 100 amp load center Two convenience receptacles, fluorescent lights per IESNA recommended illumination levels (2 watts/ sq. ft.)
- ü 60LC ς 60 Amp load center with two 20 amp breakers
- ü 100LC ς 100 Amp load center with four 20 amp breakers (Standard Siemens panels available in 100A, 125A and 150A. Higher amperage panels available)
- ü CR ς /2yØŜyʌŜyŎŜ ℕŜŌŜLJúIꞏŏfŜ ǿʌűK ʔdzyŎúʌ2yˉō2È ω C[t ς Four fluoreăŌŜyű fƛƎKűă ǿʌűK ăǿʌűŌK ω L[t ς Four incandescent lights with switch
- ü DCLς Two DC lights with a one hour timer
- ü IBC ς Install customer supplied battery charger
- ü BR ς .Iꞏűű$ℕè ℕIꞏŎ] ω L{I ς Install space heater with thermostat
- ü IEF ς Exhaust fan with thermostat
- ü IES ς Emergency stop button
- ü Customer specified breaker panels with breakers
- ü Load Bank and installation
- ü Ancillary wiring and components as specified

Fidelity Manufacturing UL142 Sub-Base Fuel Tank Specifications

1. Provide a UL142 aboveground steel tank for flammable and combustible liquids. Tank will be constructed for a sub-base fuel storage tank, double walled, and of "Sealed Secondary" construction. Tank shall meet Underwriters Laboratories UL142 standards.
2. The inner and outer tank shall be fully tested to 3 PSI as instructed in the UL standard performance test methods.
3. The primary containment tank is contained within a steel secondary containment shell forming an interstitial (annular) space, which is capable of being monitored for leakage into the space from either the interior or exterior walls.
4. The inner and outer tanks shall be constructed from 10-gauge minimum carbon steel. Inner tank to have cross baffles with reinforced side walls that incorporate externally mounted lifting eyes.
5. The outer sides of the tank shall be formed and reinforced with steel gussets welded for additional support.
6. There shall be a minimum of 4-point, full length welded lifting eyes on each side positioned to ensure a level lift. The lifting eyes shall be rated to lift the total weight of the tank, enclosure, and generator installed less fuel.
7. The tank shall incorporate a 1" slope to one end for water drainage while keeping the side rails flat for the generator and enclosure mounting. For tanks that are wider than the generator frame, the tank is not to be sloped in order to provide an even mounting surface for generator set and the enclosure.
8. The tank shall include mounting provisions utilizing a steel ¾" x 12" x 12" tapped mounting plate under each mounting point or a minimum of 3" steel channel rated for the total weight of the generator with internal supports if not mounting to the formed side channels of the tank.
9. The tank shall have either an end wall stub-up, side stub up or a center through hole stub-up to allow for the electrical conduit to run into the generator enclosure for field connections to the circuit breaker.
10. Each tank shall have normal and emergency openings for venting. These vent openings shall be in addition to the fill, withdrawal, and liquid level gauge openings, and shall terminate vertically above the top of the tank. They shall be sized in accordance with the UL-142 specifications.
11. The tank exterior surface is to be prime coated with DM19147 Poly-Iothane HS Supreme White Primer (2-5 mils dry film). Finish coat to be coated of Spectracron 390-UV Series 2K Exterior Acrylic Polyurethane semi-gloss black, textured surface (1.5-2.5 mils dry film).
12. Tank shall be equipped with a direct reading fuel level gauge, pad lockable manual fill cap, low fuel switch set to alarm at 25% fuel capacity, rupture basin alarm switch, supply and return drop tubes, normal vent, and appropriately sized emergency vents for primary tank and basin.
13. Warranty shall be for a period of no less than 3 years.

Stairs & Platforms

Customized Stair Systems, Platforms, and Walkways
Fidelity Manufacturing customizes high-quality stairs, platforms, and walkway solutions to meet all your equipment access and serviceability needs. Customers rely on us for everything from simple single-step or multi-step approaches to complete multi-generator wraparound walkways and access ladders.

Our walkway solutions are built in compliance with OSHA 1910.24 and International Building Code (IBC). Features include all aluminum 6063-T6 tube frame construction decked with 1" molded fiberglass grating in high-visibility yellow. Through this premium product design, you get an extremely strong, anti-slip surface with chemical resistance to fuels and petroleum products.

The decking is supported by a 1 ½" x 3" frame utilizing 2" square tube supports at spacing intervals as dictated by the design dimensions and loading requirements. Handrails and balance of framework are constructed of 1 ½" square tube. All platforms also incorporate a thick aluminum toe-kick plate around the outer perimeter.

Trust us to take the right steps to complete your stair, walkway, or platform project.

Benefits & Features
- Lightweight systems
- Durable aluminum construction
- Fire retardant
- Corrosion resistant
- Impact resistance
- Anti-slip surfaces
- All welded modular system
- Ease of installation

Product Specs
- All aluminum 6063-T6 tube frame
- Decked with 1" molded fiberglass grating
- Supported by 1 ½" x 3" frame
- 2" square tube supports
- 5" tall .090" thick aluminum toe-kick plate
- Holes in bottom rail for anchorage
- High-visibility yellow surface

Additional Options & Add-Ons

- Grit tops
- Adjustable levelers
- Cantilever designs
- ADA compliant designs

Fidelity's stairs, platforms, and walkway solutions are built in compliance with OSHA and IBC. Contact our team to customize a solution that is right for your project.

Fidelity Manufacturing, 1900 NE 25th Ave, Ocala, Florida 34470
Phone 352-414-4700 | www.fidelitymfg.com

MANUFACTURER'S RECOMMENDATIONS

FOR INSPECTION AND MAINTENANCE OF FUEL TANKS

Activity Description	Monthly	Semi-Annually	Annually
Visual inspection - Inspect entire perimeter of tank for signs of leakage on ground. Inspect tank lid for accumulation of corrosive liquids or materials. Check for signs of rust or paint peeling.	X		
Scheduled Inspection – Check all vents for damage or pests. Check leak detection alarm. Inspect interstitial space for signs of fuel or water accumulation*		X	
Fuel Inspection – Check fuel for quality or water accumulation in bottom of inner tank through approved moisture detection chemicals / processes. Replace fuel if required.			X

*Care should be taken in removal of any drain plug that may release any accumulated fuel or contaminated water onto ground. Interstitial inspection shall be performed from the top initially through shining light or dipstick method if possible. Any storage tank that is leaking shall be emptied of liquid and/or repaired in a manner acceptable to the authority having jurisdiction. Upon repair, tank shall be inspected and pressure tested in accordance with NFPA 30 Section 21.5 or in a manner acceptable to the authority having jurisdiction.

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
1/4/2021	47907-10	CSS-ATLANTA	923-000	SWITCH, 3-WAY, IVORY 120VAC/1PH/15A, (10 PER BOX) Bin: A-11-A	2.00
1/4/2021	47907-10	CSS-ATLANTA	922-004	OUTLET, DUPLEX, GFI, GFCI, W/LED, IVORY 120VAC/1PH/20A Bin: A-11-A	1.00
1/4/2021	47907-10	CSS-ATLANTA	922-004	OUTLET, DUPLEX, GFI, GFCI, W/LED, IVORY 120VAC/1PH/20A Bin: A-11-A	1.00
1/4/2021	47907-10	CSS-ATLANTA	922-001	OUTLET, SINGLE, 6-30R 250VAC/1PH/30A Bin: A-8-D	1.00
1/4/2021	47907-10	CSS-ATLANTA	921-014	COVER, STEEL, SWITCH/GFCI, GFI OUTLET,2 GANG, 4" SQ Bin: A-7-C	2.00
1/4/2021	47907-10	CSS-ATLANTA	917-012	CONNECTOR, SEALTITE FLEXIBLE CONDUIT, ELBOW-90, 2" Bin: A-10-B	1.00
1/4/2021	47907-10	CSS-ATLANTA	900-010	BREAKER, BOLT-IN, 1 POLE, 20A, 120/240VAC, 10KA SIEMENS Bin: A-8-I	4.00
1/4/2021	47907-10	CSS-ATLANTA	900-001	BREAKER, BOLT-IN, 2 POLE, 30A, 120/240VAC, 10KA SIEMENS Bin: A-8-I	3.00
1/4/2021	47907-10	CSS-ATLANTA	510-004	1/2" NPT DRAIN, ENCLOSURE, DOUBLE Bin: F-3-D	1.00
1/4/2021	47907-10	CSS-ATLANTA	508-007	LOCKING HATCH, 11" X 15", POLAR WHITE (MAKE ROUGH OPENING 8-5/8" X 12-5/8") Bin: F-3-B	1.00
1/4/2021	47907-10	CSS-ATLANTA	303-027	FITTING, CAMLOCK, FUEL CAP, 4", ALUMINUM Bin: F-5-D	1.00
1/4/2021	47907-10	CSS-ATLANTA	PANEL BOARD QUOTE	PANEL P1--PANELBOARD P1 1 SECTION P1C18V1125ATST, System Voltage: 208Y/120 3Ï 4W Wye AC, IR @ 10,000 AIC, Top Feed, Surface Mount, Bus Rating: 250A, Bus Material: Aluminum, Plating: Tin, NEMA 1 INDOOR. - 1 - INTERIOR W/ 125A /3P-3VA41-SEAB MAIN BREAKER 1 - 20A /2P-BL 1 - 60A /2P-BL 4 - 20A /1P-BL 1 - SPD Bin: YARD	1.00
1/4/2021	47907-10	CSS-ATLANTA	988-001	CONTACT BLOCK, N.O., STACKABLE Bin: A-8-G	1.00
1/4/2021	47907-10	CSS-ATLANTA	988-001	CONTACT BLOCK, N.O., STACKABLE Bin: A-8-G	1.00
1/4/2021	47907-10	CSS-ATLANTA	988-000	CONTACT BLOCK, N.C., STACKABLE Bin: A-8-G	2.00
1/4/2021	47907-10	CSS-ATLANTA	950-029	LIGHT, LED, FIXTURE, VAPOR PROOF, 90 DEGREE GLOBE/GUARD, JAR, 120VAC, 14WATT 4000K, 931 LUMENS Bin: A-7-E	3.00
1/4/2021	47907-10	CSS-ATLANTA	950-023	LIGHT, LED, BULB, 24VDC, 10WATT, 4000K, 950 LUMENS, STANDARD A19 SCREW IN BULB Bin: A-7-E	4.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
1/4/2021	47907-10	CSS-ATLANTA	950-000	LIGHT, FIXTURE, VAPOR PROOF, GLOBE/GUARD, JAR Bin: A-7-F	4.00
1/4/2021	47907-10	CSS-ATLANTA	942-000	HOLDER, FUSE, ATO (ICC LIGHT PACKAGE) Bin: B-4-E	1.00
1/4/2021	47907-10	CSS-ATLANTA	941-000	FUSE, AUTO, 10A, RED Bin: B-4-E	1.00
1/4/2021	47907-10	CSS-ATLANTA	926-000	PHOTO CONTROL, THREADED, 120V RATING Bin: A-11-B	1.00
1/4/2021	47907-10	CSS-ATLANTA	923-003	SWITCH, 20 AMP, ON-OFF-ON, 120/277 VOLT Bin: A-11-A	1.00
1/13/2021	47907-05	CSS-ATLANTA	3RD PARTY	3RD PARTY	1.00
1/15/2021	47907-10	CSS-ATLANTA	911-050	CONDUIT, EMT, 3/4", COMPRESSION COUPLING, RAINTIGHT	10.00
1/15/2021	47907-10	CSS-ATLANTA	917-011	CONNECTOR, SEALTITE FLEXIBLE CONDUIT, STRAIGHT, 2"	1.00
1/15/2021	47907-10	CSS-ATLANTA	911-049	CONDUIT, EMT, 1/2", COMPRESSION COUPLING, RAINTIGHT	25.00
1/15/2021	47907-10	CSS-ATLANTA	980-017	*TRANSFORMER, 45KVA, 480VAC 3PH, 208Y/120VAC SECONDARY, COPPER WINDINGS	1.00
1/19/2021	47907-10	CSS-ATLANTA	911-053	CONDUIT, EMT, 3/4", COMPRESSION CONNECTOR, RAINTIGHT	20.00
1/19/2021	47907-10	CSS-ATLANTA	940-014	DISCONNECT, FUSED, S-A HF363R 100A, 3P, 600V, 3W, FUSED HD TYPE 3R	1.00
1/19/2021	47907-10	CSS-ATLANTA	CLND-3/0-12-134	ILSCO LUG CLND-3/0-12-134	2.00
1/20/2021	47907-10	CSS-ATLANTA	911-052	CONDUIT, EMT, 1/2", COMPRESSION CONNECTOR, RAINTIGHT	50.00
1/20/2021	47907-10	CSS-ATLANTA	930-101	WIRE, CABLE, 3/0, 15KV MEDIUM VOLTAGE, MV-105 133%	40.00
1/20/2021	47907-10	CSS-ATLANTA	944-501	TERMINATION KIT, MEDIUM VOLTAGE WIRE #2 - 3/0 AWG, 15KV	1.00
1/20/2021	47907-10	CSS-ATLANTA	970-035	*PANEL BOARD, WEATHERPROOF BOX & COVER, 32INCH, NEMA 3R/12, SIEMENS	1.00
1/20/2021	47907-10	CSS-ATLANTA	HEIMBACH	PNEUMERCATOR QUOTE# 8366	1.00
1/22/2021	47907-10	CSS-ATLANTA	941-003	FUSE, 600VAC, 90AMP	3.00
1/25/2021	47907-11	CSS-ATLANTA	502-024	RH TRIM - CRASHBAR HARDWARE "IN-HOUSE KEYING CHARGE - KEYED ALIKE"	2.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
1/25/2021	47907-11	CSS-ATLANTA	502-023	LH TRIM - CRASHBAR HARDWARE "IN-HOUSE KEYING CHARGE - KEYED ALIKE"	2.00
1/25/2021	47907-11	CSS-ATLANTA	502-000	DOORS, CRASHBAR EXIT DEVICE, 3', RIGHT OR LEFT DOOR HARDWARE	4.00
1/25/2021	47907-11	CSS-ATLANTA	502-001	DOORS, CYLINDER, CRASHBAR, RIGHT OR LEFT DOOR HARDWARE	4.00
1/28/2021	47907-10	CSS-ATLANTA	986-004	E-STOP, PUSH BUTTON, NEMA 4X & 12 NON METALIC SURFACE MOUNT	2.00
1/29/2021	47907-10	CSS-ATLANTA	FD15MC	FD15MC | Spring Wound Countdown Timer, Decorator Style, 125-277 VAC, 50/60 Hz,SPST, 15 Minute Max, Without Hold, Ivory	1.00
2/1/2021	47907-11	CSS-ATLANTA	599-001	'ZEE', BIRDSCREEN (FORMED) *FID-FBZ* Bin: ALUM FAB	3.00
2/1/2021	47907-11	CSS-ATLANTA	505-003	TRIM-LOK, 3/8" BULB X 250', EPDM, BLACK, 1/8" EDGE, 250FT BOX Bin: F-2-A	118.00
2/1/2021	47907-11	CSS-ATLANTA	506-015	INSULATION, 2" THK., 48" X 72",8lb, ONE SIDE BLACK FACED SONIC FIBER, QF4X6X2BFHD (QUIETFIBER) (35 SHEETS PER SKID) Bin: INSO	3,960.00
2/1/2021	47907-11	CSS-ATLANTA	599-002	PAN, PLENUM DRAIN *FID-FPD* Bin: ALUM FAB	2.00
2/1/2021	47907-11	CSS-ATLANTA	505-000	TAPE, DOUBLE SIDED, 1", ENCLOSURE SKIN, 3MVHB (108' ROLLS) Bin: E-3-D	29.00
2/1/2021	47907-11	CSS-ATLANTA	800-017	DECAL - "ENCLOSURE LIFT ONLY" Bin: D-1-G	4.00
2/1/2021	47907-11	CSS-ATLANTA	800-033	PLATE - MANUFACTURED BY, ALUMINUM 1 1/2" X 4" ADHESIVE BACKED Bin: D-1-G	1.00
2/1/2021	47907-11	CSS-ATLANTA	800-046	DECAL - CUMMINS POWER GENERATION (42"x 12") BLACK Bin: FILE CABINET	2.00
2/1/2021	47907-11	CSS-ATLANTA	599-003	ANGLE, WATERFALL *FID-FWA* Bin: ALUM FAB	1.00
2/1/2021	47907-11	CSS-ATLANTA	504-006	DOORS, CASE, SLIDE BOLT Bin: F-2-B	4.00
2/1/2021	47907-11	CSS-ATLANTA	800-068	DECAL - UL 2200 LISTED, "ENGINE GENERATOR ENCLOSURE", PLANT #1 Bin: D-1-C	1.00
2/1/2021	47907-11	CSS-ATLANTA	502-027	DOORS, LOCK ROD, DOOR HARDWARE Bin: F-2-B	4.00
2/1/2021	47907-11	CSS-ATLANTA	502-019	DOORS, LATCH, PADDLE, CENTER CASE DOOR HARDWARE Bin: F-2-B	2.00
2/1/2021	47907-11	CSS-ATLANTA	502-008	DOORS, HANDLE, SPOON, (CENTER CASE - HANDLE ONLY) DOOR HARDWARE Bin: F-2-C	2.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
2/1/2021	47907-11	CSS-ATLANTA	501-001	DOORS, BRACKET, GAS SHOCK, 2" DOOR FOR 4" FRAME DOOR HARDWARE Bin: F-2-D	6.00
2/1/2021	47907-11	CSS-ATLANTA	501-000	DOORS, BRACKET, GAS SHOCK DOOR HARDWARE Bin: F-2-D	6.00
2/1/2021	47907-11	CSS-ATLANTA	500-008	DOORS, HOLD, RUBBER, BLACK, DOOR HARDWARE Bin: F-2-B	1.00
2/1/2021	47907-11	CSS-ATLANTA	500-007	DOORS, SHOCK, GAS, 5-1/2" STROKE, W/BALL STUDS - 30LBS, (MUST BUY 25-99) Bin: F-2-B	6.00
2/1/2021	47907-11	CSS-ATLANTA	003-007	PLUG, SQUARE FINISHING, 2" SMOOTH PK (1,000) Bin: B-3-A	28.00
2/1/2021	47907-11	CSS-ATLANTA	504-005	DOORS, SLIDE BOLT Bin: F-2-B	4.00
2/1/2021	47907-11	CSS-ATLANTA	WSFL12Z- 10TF-12TF-2-20090110	Flex Thermal Wrap w/ Spring Ties	2.00
2/1/2021	47907-11	CSS-ATLANTA	WSELX- 18PF-18PS-180X0240	Elbow Thermal Wrap w/ Spring Ties	1.00
2/1/2021	47907-11	CSS-ATLANTA	WS-TFL-10	10" Tube ANSI Flange Thermal Wrap w/ Springs	2.00
2/1/2021	47907-11	CSS-ATLANTA	WS-PFL-18	18" Pipe ANSI Flange Thermal Wrap w/ Springs	1.00
2/1/2021	47907-11	CSS-ATLANTA	WS-PFL-12	12" Pipe ANSI Flange Thermal Wrap w/ Springs	2.00
2/1/2021	47907-11	CSS-ATLANTA	WS-OSCBE2XD12PF18PF-2ABP3EVZ	Super Critical Grade Oval Thermal Wrap w/ Spring Ties	1.00
2/1/2021	47907-11	CSS-ATLANTA	RC-1800-3	18" 304 Stainless Steel Raincap	1.00
2/1/2021	47907-11	CSS-ATLANTA	FL12Z-10TF2-12TF1-2-20090110	Custom Flex Assembly, 10" Floating Tube Flange Inlet, 12" Tube Flange Outlet, 24.25" Overall Length, 12" Diameter, Carbon Steel	2.00
2/1/2021	47907-11	CSS-ATLANTA	ELX-18PF1-18PS-180X0340-3	Custom, 304 Stainless Steel, 90Á Elbow, 18" Pipe Flange Inlet, 18" Pipe Stub Outlet, 18" x 34" Leg Lengths	1.00
2/1/2021	47907-11	CSS-ATLANTA	BNFFG-18	Flange Gasket Set	1.00
2/1/2021	47907-11	CSS-ATLANTA	BNFFG-12	12" ANSI Flange Bolt, Nut, and Full Face Gasket Set	2.00
2/1/2021	47907-11	CSS-ATLANTA	BNFFG-10	10" ANSI Flange Nut, Bolt, and Full Face Gasket Set	2.00
2/1/2021	47907-11	CSS-ATLANTA	OSCBE2TXD12PF18PF- 2-2ABP3EVZ	O-Series, Super Critical Grade, Dual Inlet, Carbon Steel Oval Silencer, 12" Pipe Flange Bottom Dual Inlet, 18" Pipe Flange End Outlet, Top Lugs	1.00
2/3/2021	47907-11	CSS-ATLANTA	503-006	DOORS, HINGE, PIANO, SS, 3" X 6', 1/8" PIN DOOR HARDWARE Bin: F-9-B	7.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
2/3/2021	47907-11	CSS-ATLANTA	510-027	ENCLOSURE, 7K LIFTING EYE KIT Bin: METAL FAB	4.00
2/4/2021	47907-11	CSS-ATLANTA	510-002	SHIELD, PLENUM DRAIN Bin: F-4-C	2.00
2/9/2021	47907-10	CSS-ATLANTA	FD15MC	FD15MC | Spring Wound Countdown Timer, Decorator Style, 125-277 VAC, 50/60 Hz,SPST, 15 Minute Max, Without Hold, Ivory	1.00
2/11/2021	47907-10	CSS-ATLANTA	986-007	E-STOP, PUSH BUTTON, CLEAR PLASTIC COVER FOR PILLA	2.00
2/11/2021	47907-10	CSS-ATLANTA	76025K15	Charger for Large-Cell Batteries for 6V/12V Battery	1.00
2/11/2021	47907-10	CSS-ATLANTA	7066K23	Breather Vent Snap-in, for 2 Trade Size Knockout	1.00
2/11/2021	47907-10	CSS-ATLANTA	7448K19	Sealed Large-Cell Battery for Continuous Use Lead Acid, Quick-Disconnect Tab, 12V, 3.4 Amp-Hrs. Capacity	2.00
2/11/2021	47907-10	CSS-ATLANTA	7561K44	Steel Indoor Enclosure with Hinged Cover, 16" x 12" x 6", Gray	1.00
2/12/2021	47907-11	CSS-ATLANTA	CD-101	LOUVER, MOTORIZED DAMPER (MOTOR IN AIRSTREAM), MARKAIR # CD-101, 132"W X 102"H	1.00
2/12/2021	47907-11	CSS-ATLANTA	CB-601	LOUVER, GRAVITY DAMPER, MARKAIR # CB-601, 104"W X 100"H	1.00
2/12/2021	47907-11	CSS-ATLANTA	551-053	LOUVER, DAMPER (BLOW-OPEN) MODEL CB-600 16"W X 16"H	1.00
2/15/2021	47907-10	CSS-ATLANTA	950-030	LIGHT, LED, VAPORTITE, 48'', 5000K	4.00
2/15/2021	47907-10	CSS-ATLANTA	509-000	HEATER, FORCED-AIR, 5KW WITH THERMOSTAT	1.00
2/15/2021	47907-10	CSS-ATLANTA	509-022	THERMOSTAT, WALL MOUNT, LINE VOLTAGE MECHANICAL THERMOSTAT FOR HEATING OR COOLING, SPDT SWITCH, 120 TO 277 VAC	1.00
2/15/2021	47907-10	CSS-ATLANTA	507-000	FAN EXHAUST, 16 INCH, INCLUDES THERMOSTAT	1.00
2/15/2021	47907-10	CSS-ATLANTA	303-026	FITTING, CAMLOCK, ADAPTER, 4'' COUPLING SIZE, 4'' FEMALE NPT	1.00
2/17/2021	47907-03	CSS-ATLANTA	007-018	PAINT, TOUCH-UP, "FIDELITY'' BLACK 12OZ SPRAY CAN Bin: S-2-A	1.00
2/17/2021	47907-03	CSS-ATLANTA	051-004	BOX, DOUBLE WALL, 12"X 12"X 12" 275LB Bin: F-10-3	1.00
2/17/2021	47907-03	CSS-ATLANTA	302-025	E-VENT, 8" FLANGED, 370 SERIES, 8 OZ PRESSURE, ALUM, WITHOUT SCREEN Bin: F-8-D	1.00
2/17/2021	47907-14	CSS-ATLANTA	800-030	DECAL - ''UL LISTED'', SECONDARY CONTAINMENT BASE TANK Bin: D-1-B	1.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
2/17/2021	47907-14	CSS-ATLANTA	304-014-R	GAUGE, 33-1/2" DEPTH RANGE, LIQUID LEVEL, SPIRAL, 1-1/2" MNPT Bin: E-2-D	1.00
2/17/2021	47907-14	CSS-ATLANTA	302-031	BASE GASKET, 8", ADAPTER, FLANGE, 370 SERIES E-VENT Bin: D-2-C	1.00
2/17/2021	47907-14	CSS-ATLANTA	302-025	E-VENT, 8" FLANGED, 370 SERIES, 8 OZ PRESSURE, ALUM, WITHOUT SCREEN Bin: F-8-D	1.00
2/17/2021	47907-14	CSS-ATLANTA	899-000	DECAL KIT, TANK Bin: F-1-A	1.00
2/17/2021	47907-14	CSS-ATLANTA	301-014	CONTAINER, SPILL, 7.5 GALLON, 4" NPT OUTLET, ALUMINUM MILL FINISH - FIDELITY SPILL/FILL - FDEP (File #EQ-778) Bin: F-10-4	1.00
2/17/2021	47907-14	CSS-ATLANTA	300-346	SWITCH, LOW FUEL, L1:29" NC RED, 30" OAL ADJUSTABLE, 2" NPT, 1062 BUNA FLOAT, 50 WATT, W/20' CABLE, FLORIDA APPROVAL EQ-817 Bin: F-10-1	1.00
2/17/2021	47907-14	CSS-ATLANTA	300-069	SWITCH, HIGH FUEL, ADJUSTABLE, 2" NPT, 1062 BUNA FLOAT, 50 WATT, W/20' CABLE, 5.6" OAL FLORIDA APPROVAL EQ-817 L1: 4.60" NO RED Bin: A-10-I	1.00
2/17/2021	47907-14	CSS-ATLANTA	213-055	FITTING, GALVANIZED, PIPE NIPPLE, 2" X 24" Bin: F-10-2	1.00
2/17/2021	47907-14	CSS-ATLANTA	302-008	VENT, 2", MUSHROOM WITH 8 MESH SCREEN Bin: F-9-C	1.00
2/17/2021	47907-15	CSS-ATLANTA	218-002	FITTING, BLACK IRON, WELD-ON FLANGE, 1-1/2" Bin: F-6-C	1.00
2/17/2021	47907-15	CSS-ATLANTA	218-005	FITTING, BLACK IRON, WELD-ON FLANGE, 2" Bin: F-6-D	10.00
2/17/2021	47907-15	CSS-ATLANTA	218-006	FITTING, BLACK IRON, WELD-ON FLANGE, 4" Bin: F-7-B	2.00
2/17/2021	47907-15	CSS-ATLANTA	302-028	ADAPTER, 8" ANSI FLANGE, 370 SERIES E-VENT, 4" HEIGHT X 1/4" MILD STEEL, PAINTED Bin: B-2-B	2.00
2/17/2021	47907-15	CSS-ATLANTA	407-006	LUG, LIFTING MINI SERIES MAX LOAD 4850 LBS (USED FOR LIFTING INNER TANK INTO OUTER) Bin: F-6-B	4.00
2/17/2021	47907-17	CSS-ATLANTA	399-003	VACUUM GAUGE ASSEMBLY Bin: F-7-D	1.00
2/17/2021	47907-17	CSS-ATLANTA	302-038	COVER, 8" BLIND FLANGE, ANSI, 7GA STEEL PLATE Bin: D-2-C	1.00
2/17/2021	47907-17	CSS-ATLANTA	218-000	FITTING, BLACK IRON, WELD-ON FLANGE, 1/2" Bin: F-6-B	1.00
2/17/2021	47907-17	CSS-ATLANTA	215-005	FITTING, BLACK IRON, PIPE PLUG, 2" Bin: E-3-C	1.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
2/17/2021	47907-17	CSS-ATLANTA	302-031	BASE GASKET, 8", ADAPTER, FLANGE, 370 SERIES E-VENT Bin: D-2-C	1.00
2/17/2021	47907-10	CSS-ATLANTA	900-001	BREAKER, BOLT-IN, 2 POLE, 30A, 120/240VAC, 10KA SIEMENS Bin: A-8-I	1.00
2/17/2021	47907-10	CSS-ATLANTA	926-000	PHOTO CONTROL, THREADED, 120V RATING Bin: A-11-B	1.00
2/17/2021	47907-10	CSS-ATLANTA	923-000	SWITCH, 3-WAY, IVORY 120VAC/1PH/15A, (10 PER BOX) Bin: A-11-A	2.00
2/17/2021	47907-10	CSS-ATLANTA	922-004	OUTLET, DUPLEX, GFI, GFCI, W/LED, IVORY 120VAC/1PH/20A Bin: A-11-A	2.00
2/17/2021	47907-10	CSS-ATLANTA	900-010	BREAKER, BOLT-IN, 1 POLE, 20A, 120/240VAC, 10KA SIEMENS Bin: A-8-I	4.00
2/17/2021	47907-10	CSS-ATLANTA	900-001	BREAKER, BOLT-IN, 2 POLE, 30A, 120/240VAC, 10KA SIEMENS Bin: A-8-I	1.00
2/17/2021	47907-10	CSS-ATLANTA	900-001	BREAKER, BOLT-IN, 2 POLE, 30A, 120/240VAC, 10KA SIEMENS Bin: A-8-I	1.00
2/17/2021	47907-10	CSS-ATLANTA	950-029	LIGHT, LED, FIXTURE, VAPOR PROOF, 90 DEGREE GLOBE/GUARD, JAR, 120VAC, 14WATT 4000K, 931 LUMENS Bin: A-7-E	3.00
2/17/2021	47907-10	CSS-ATLANTA	922-001	OUTLET, SINGLE, 6-30R 250VAC/1PH/30A Bin: A-8-D	1.00
2/17/2021	47907-10	CSS-ATLANTA	950-000	LIGHT, FIXTURE, VAPOR PROOF, GLOBE/GUARD, JAR Bin: A-7-F	1.00
2/17/2021	47907-10	CSS-ATLANTA	950-000	LIGHT, FIXTURE, VAPOR PROOF, GLOBE/GUARD, JAR Bin: A-7-F	3.00
2/17/2021	47907-10	CSS-ATLANTA	942-000	HOLDER, FUSE, ATO (ICC LIGHT PACKAGE) Bin: B-4-E	1.00
2/17/2021	47907-10	CSS-ATLANTA	941-000	FUSE, AUTO, 10A, RED Bin: B-4-E	1.00
2/17/2021	47907-10	CSS-ATLANTA	950-023	LIGHT, LED, BULB, 24VDC, 10WATT, 4000K, 950 LUMENS, STANDARD A19 SCREW IN BULB Bin: A-7-E	4.00
2/17/2021	47907-10	CSS-ATLANTA	988-001	CONTACT BLOCK, N.O., STACKABLE Bin: A-8-G	2.00
2/17/2021	47907-10	CSS-ATLANTA	988-000	CONTACT BLOCK, N.C., STACKABLE Bin: A-8-G	2.00
2/17/2021	47907-10	CSS-ATLANTA	708-056	CAP, THIMBLE, EXHAUST, 16ò-18ò, FITS 29-1/2" SQUARE OPENING, .040ò ALUM Bin: UPSTAIRS	1.00
2/17/2021	47907-10	CSS-ATLANTA	920-041	BOX, ALUM, OUTLET BOX, SINGLE GANG, WP, (4) 1/2" THREADED HOLES	12.00
2/17/2021	47907-10	CSS-ATLANTA	921-018	COVER, ALUM, FLAT, 1 GANG, 2-3/4" X 4-1/2"	8.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
2/18/2021	47907-14	CSS-ATLANTA	305-018	VALVE, OPV, MORRISON, 4" FNPT FOR THREADING INTO A 4" SPILL BUCKET, HAS 2" MALE CAM CONNECTOR. 9095X-2200. USE FOR STANDARD UL142 SETUP. EQ-858 Bin: F-2-A	1.00
2/18/2021	47907-10	CSS-ATLANTA	76025K15	Charger for Large-Cell Batteries for 6V/12V Battery	1.00
2/18/2021	47907-10	CSS-ATLANTA	917-012	CONNECTOR, SEALTITE FLEXIBLE CONDUIT, ELBOW-90, 2"	1.00
2/18/2021	47907-11	CSS-ATLANTA	708-038-A	SHIELD, EXHAUST, INTERNAL, 18", 304 SS Bin: YARD	1.00
2/19/2021	47907-11	CSS-ATLANTA	ALMKT-ENCKIT-2X4	COMPLETE PACKAGED ALUMINUM KIT ONLY 2" X 4" CONSTRUCTION ENCLOSURE	1.00
2/23/2021	47907-10	CSS-ATLANTA	920-013	BOX, ALUM, ROUND BOX, WP, (5) 1/2" HOLES, STANDARD DEPTH Bin: A-8-A	4.00
2/23/2021	47907-10	CSS-ATLANTA	921-028	COVER, BLANK, ROUND, WEATHER PROOF, ALUM Bin: A-8-A	4.00
2/23/2021	47907-10	CSS-ATLANTA	920-011	BOX, ALUM, OUTLET BOX, 2 GANG, WP, (5) 1/2" HOLES STANDARD DEPTH Bin: A-8-A	3.00
2/23/2021	47907-10	CSS-ATLANTA	950-029	LIGHT, LED, FIXTURE, VAPOR PROOF, 90 DEGREE GLOBE/GUARD, JAR, 120VAC, 14WATT 4000K, 931 LUMENS Bin: A-7-E	2.00
2/23/2021	47907-16	CSS-ATLANTA	276-029	STEEL, SHEET, 72" X 240" X 1/4" Bin: METAL FAB	10.00
2/26/2021	47907-10	CSS-ATLANTA	950-023	LIGHT, LED, BULB, 24VDC, 10WATT, 4000K, 950 LUMENS, STANDARD A19 SCREW IN BULB Bin: A-7-E	4.00
3/1/2021	47907-16	CSS-ATLANTA	ISOPAD KIT	TAMPA BAY STEEL QUOTE	1.00
3/2/2021	47907-10	CSS-ATLANTA	923-003	SWITCH, 20 AMP, ON-OFF-ON, 120/277 VOLT	1.00
3/4/2021	47907-10	CSS-ATLANTA	900-010	BREAKER, BOLT-IN, 1 POLE, 20A, 120/240VAC, 10KA SIEMENS Bin: A-8-I	1.00
3/5/2021	47907-14	CSS-ATLANTA	TK-UL142-8V	UL142 SEALED SECONDARY DOUBLE WALL SUB-BASE FUEL TANK WITH 8310 USABLE GALLONS AT 90% CAPACITY. TO PROVIDE 48 HRS RUNTIME BASED ON A CUMMINS 2500 WITH CONSUMPTION OF 173.1 GPH BASED ON GENSET OPERATING AT 100% LOAD. DIMENSIONS 460"L X 144"W X 36"H EQUIPPED WITH 2 36.5" X 20.5" THROUGH HOLE STUB UP AREA. WEIGHT IS ESTIMATED TO BE 11,000 LBS. - STRUCTURAL TANK WITH TANK TOP MOUNTING PROVISIONS. - PROVISIONS MADE FOR CUSTOMER SUPPLIED ISOLATORS. - STANDARD LOW FUEL LEVEL SWITCH SET TO ALARM AT 25% FUEL CAPACITY. - STANDARD LEAK DETECTION/RUPTURE BASIN SWITCH. - FUEL FILL AND VENTS TO BE LOCATED EXTERNAL TO ENCLOSURE AT DISCHARGE END. - 4 SPARE 2" PORTS. - 8434 ACTUAL GALLON CAPACITY.	1.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
3/5/2021	47907-15	CSS-ATLANTA	STLKT-TK-UL142	COMPLETE PACKAGED STEEL KIT ONLY UL142 DOUBLE WALL TANKS	1.00
3/5/2021	47907-15	CSS-ATLANTA	TK-OPT-SHIPUNDERVAC-114-274SQF	INSTALLATION OF PLUGS REQUIRED AND 1 VACUUM GAUGE TO PULL INTERSTITIAL AREA TO MAX VACUUM. DOCUMENTATION OF VACUUM READINGS PRIOR TO SHIPMENT. PACKAGE SECONDARY VENT AND SECONDARY TANK ACCESSORIES TO SHIP LOOSE WITH TANK. TANK TO REMAIN UNDER VACUUM UNTIL REACHING JOBSITE. END USER RESPONSIBLE FOR INSTALLATION OF ACCESSORIES.	1.00
3/8/2021	47907-05	CSS-ATLANTA	3RD PARTY	3RD PARTY	1.00
3/9/2021	47907-10	CSS-ATLANTA	GENERATOR	47907 CUMMINS 2500DQKAN - CUMMINS SALES AND SERVICE 210887143	1.00
3/9/2021	47907-10	CSS-ATLANTA	NGR SYSTEM	NGR upstairs	1.00
3/9/2021	47907-10	CSS-ATLANTA	CUST-ISOLATER	ISOLATER "CUSTOMER SUPPLIED"	18.00
3/9/2021	47907-10	CSS-ATLANTA	FLEETGAURD FILTER	fleet gaurd filter	1.00
3/9/2021	47907-03	CSS-ATLANTA	2 PC BREAKER SKIRT	breaker skirt	1.00
3/15/2021	47907-10	CSS-ATLANTA	920-011	BOX, ALUM, OUTLET BOX, 2 GANG, WP, (5) 1/2" HOLES STANDARD DEPTH	6.00
3/15/2021	47907-19	CSS-ATLANTA	499-103	STAIR EXTRUSION SUPPORT, 1.5" x 1.38, 24' Bin: ALUM FAB	22.00
3/15/2021	47907-19	CSS-ATLANTA	499-103	STAIR EXTRUSION SUPPORT, 1.5" x 1.38, 24' Bin: ALUM FAB	115.00
3/15/2021	47907-19	CSS-ATLANTA	499-102	TOE KICK, STAIRS, 8" x 144" Bin: ALUM FAB	8.00
3/16/2021	47907-14	CSS-ATLANTA	302-011	VENT, WHISTLER, 2"	1.00
3/17/2021	47907-18	CSS-ATLANTA	003-000	PLUG, SQUARE FINISHING, 1-1/2" SMOOTH PK200 Bin: B-3-A	32.00
3/17/2021	47907-18	CSS-ATLANTA	420-001	GRATING, MOLDED FIBERGLASS, 1-1/2" SQ X 1" THK, 48" X 144" PANELS WITH GRIT SURFACE, YELLOW Bin: INSO	193.00
3/17/2021	47907-18	CSS-ATLANTA	800-033	PLATE - MANUFACTURED BY, ALUMINUM 1 1/2" X 4" ADHESIVE BACKED Bin: D-1-G	2.00
3/23/2021	47907-13	CSS-ATLANTA	ENCKIT-2X4	****DO NOT THIS USE IN A QUOTE**** KIT, ENCLOSURE, 2" X 4" CONSTRUCTION ENCLOSURE DIMENSIONS: _____"L X _____"W X _____"T APPROX WEIGHT _____LBS	1.00
3/30/2021	47907-10	CSS-ATLANTA	PAINT-STEEL-8V	COMPLETION OF PAINT PREP, PAINT AND DETAIL ON STEEL PRODUCTS.	1.00

Usage Summary

Fidelity Manufacturing

Job Number contains '47907'
Vendor not equal to 'KLOECKNER'
Product Code not equal to 'ALUMINV'

Post Date	Job Num	Customer	Part Number	Description	Quantity Posted
3/30/2021	47907-18	CSS-ATLANTA	ALMKT-STAIRS42"WX200"L	COMPLETE PACKAGED ALUMINUM KIT ONLY FOR A SINGLE SET STAIRS 42" W X 200"L HEIGHT IS JOB SPECIFIC	2.00
4/1/2021	47907-10	CSS-ATLANTA	980-017	*TRANSFORMER, 45KVA, 480VAC 3PH, 208Y/120VAC SECONDARY, COPPER WINDINGS	1.00
4/9/2021	47907-10	CSS-ATLANTA	24C446	Two-Hole Lug Compression Connector, Straight Barrel, Cable Size 3/0, Standard	4.00
4/9/2021	47907-20	CSS-ATLANTA	24C446	Two-Hole Lug Compression Connector, Straight Barrel, Cable Size 3/0, Standard	4.00
4/13/2021	47907-10	CSS-ATLANTA	HOSE KIT	HOSE KIT	1.00

SPECIAL INSTRUCTIONS:

1	ENCLOSURE WIND-LOAD RATED AT 120 MPH
2	INSTALL CUMMINS DECALS ON ENCLOSURE
3	ENCLOSURE DOORS TO HAVE KEY LOCKABLE PANIC HARDWARE (CRASH BARS)
4	INSTALL CUSTOMER PROVIDED NEUTRAL GROUNDING RESISTOR, INCLUDES WIRING OF NGR TO THE GENERATOR NEUTRAL CONNECTION AND THE GROUND CONNECTION. CONNECTION OF CONDENSATION HEATER INCLUDED IF REQUIRED
5	MOTORIZED INTAKE DAMPER AND GRAVITY EXHAUST DAMPER
6	TWO DC LED LIGHTS WITH 15 MINUTE TIMER SWITCH, BATTERIES AND CHARGERS
7	ELECTRICAL PKG - 125 AMP MAIN 3Ǿ PANEL BOARD, FOUR 4' LED LIGHTS, TWO 20A GFCI OUTLETS, AND TWO 3-WAY SWITCHES. ALSO INCLUDES GENERATOR ACCESSORY CONNECTIONS FOR JACKET WATER HEATER, BATTERY CHARGER, AND ALTERNATOR HEATER. PANEL BOARD TO HAVE SURGE PROTECTION DEVICE. NEMA 3R,12 ENCLOSURE
8	EXHAUST SILENCER AND FLEX TO BE WRAPPED IN INSULATION BLANKETS
9	TWO EMERGENCY STOP BUTTONS (SURFACE-MOUNTED ON ENCLOSURE EXTERIOR, PUSH-BUTTON, NEMA 4X & 12 NON-METALLIC)
10	EXHAUST FAN AND THERMOSTAT INSTALLED IN ENCLOSURE
11	5KW SPACE HEATER WITH THERMOSTAT INSTALLED IN ENCLOSURE
12	THREE EXTERIOR LED PHOTOCELL LIGHTS WITH "ON-OFF-ON" SWITCH WIRED TO PANEL BOARD
13	PROVIDE AND INSTALL 45 KVA 3Ǿ TRANSFORMER WITH COPPER WINDINGS AND A 90 AMP NEMA 3R FUSED DISCONNECT SWITCH.
14	EXTERNAL RADIATOR FILL LOCKING HATCH INSTALLED ON ENCLOSURE ROOF (11" X 15", POLAR WHITE)
15	INSTALL CUSTOMER PROVIDED ISOLATORS (P/N A046D218, QTY 18)
16	7-1/2 GALLON FILL/SPILL BUCKET W/ PAD LOCKABLE LID
17	HIGH FUEL SWITCH SET @ 90%
18	OVERFILL PREVENTION VALVE (2" CAMLOK CONNECTOR) INSTALLED IN FILL/SPILL BUCKET SET @ 95%
19	MECHANICAL VENT WHISTLE SET FOR AUDIBLE ALARM AT 90% FULL. INCLUDES POSITIVE FILL TYPE FILL CONNECTOR ON FUEL TANK
20	TMS-3000 PNEUMERCATOR TANK GAUGING SYSTEM W/ EPA-COMPLIANT IN-TANK AND SECONDARY CONTAINMENT LEAK DETECTION
21	PNEUMERCATOR 6 CHANNEL ANALOG OUTPUT CARD FOR TMS-3000 TANK MANAGEMENT SYSTEM CONSOLE, ENABLES 4-20 MA OUTPUT
22	PNEUMERCATOR 4 CONTACT RELAY BOARD FOR TMS-3000 TANK MANAGEMENT SYSTEM CONSOLE
23	INSTALLATION OF PLUGS REQUIRED AND ONE VACUUM GAUGE TO PULL INTERSTITIAL AREA TO MAX VACUUM. DOCUMENTATION OF VACUUM READINGS PRIOR TO SHIPMENT. PACKAGE SECONDARY VENT AND SECONDARY TANK ACCESSORIES TO SHIP LOOSE WITH TANK. TANK TO REMAIN UNDER VACUUM UNTIL REACHING JOBSITE. END USER RESPONSIBLE FOR INSTALLATION OF ACCESSORIES
24	TWO SETS OF ALUMINUM STAIRS AND PLATFORMS WITH MOLDED FIBERGLASS DECKING. STAIRS TO MEET IBC REQUIREMENTS, AND MEET LIVE LOAD OF 150 PSF PER CUSTOMER REQUEST
25	STAMPED PE DRAWINGS AND CALCULATIONS FOR WIND/SEISMIC CERTIFICATION FOR ENCLOSURE DESIGN TO BE SUPPLIED BY A STATE OF GEORGIA PROFESSIONAL ENGINEER. WIND/SEISMIC QUALIFICATION CERTIFICATE CERTIFYING THAT ENCLOSURE PACKAGE WILL WITHSTAND THE EFFECTS OF WIND AND EARTHQUAKE LOADING DETERMINED ACCORDING TO ASCE/SEI 7, INCLUDING: -WIND LOAD -ENCLOSURE TO TANK, TANK TO PAD, GENERATOR TO TANK, AND STAIR/ PLATFORM TO PAD ANCHORING -ROOF LOAD SHALL BE EQUAL TO OR GREATER THAN 53 LBS PSF -VERIFICATION OF MEMBER STRESSES -VERIFICATION OF WELDING -ADDITIONAL ACCESSORIES AND COMPONENTS (WEIGHING AT LEAST 20 LBS) ATTACHED TO TANK OR ENCLOSURE
26	THREE YEAR WARRANTY

DRAWINGS PREPARED FOR:
CUMMINS SALES & SVC
W.J. HOOPER WPP
8400 USEABLE / 9590 ACTUAL GALLON UL#142 SEALED SECONDARY TANK
w/ 30 dBA REDUCTION ENCLOSURE
WO# 47907
4/9/2021

FIDELITY MANUFACTURING
Forward Thinking Solutions

1900 NE 25TH AVE, OCALA, FL 34470
PHONE (352) 414-4700 FAX (352) 414-4642

TANK NOTES:

1. ALL FITTINGS TO BE CARBON STEEL WELD FLANGES (UNLESS OTHERWISE NOTED)
2. EXTERIOR FINISH: "BLACK"
3. INNER TANK DIMENSIONS: 476.5"L x 137.875"W x 35.242"H
4. APPROXIMATE USEABLE TANK CAPACITY: 8400 GALLONS @ 90 %
5. ACTUAL TANK VOLUME (100%): 9590 GALLONS
6. APPROXIMATE TANK WEIGHT: 25000 LBS

NOTES:

1. GENERATOR, ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX
   DIMENSIONS: 279.3"L x 103.8"W x 125.4"H
   WEIGHT:53000 LBS
   DRAWING # : A054H274
2. TOTAL AIRFLOW REQUIRED: 100379 CFM
3. SOUND ATTENUATION LEVEL: 30 dB(A) REDUCTION AT 23 FEET
4. INSULATION: 4" MINERAL WOOL
5. LINING: MILL-FINISH PERFORATED ALUMINUM
6. ENCLOSURE WALLS: 4" ALUMINUM TUBE WELDED FRAME
7. ENCLOSURE ROOF: 2" ALUMINUM TUBE WELDED FRAME
8. ENCLOSURE DIMENSIONS: 596"L x 144"W x 158"H
9. ENCLOSURE WEIGHT (APPROX.): 17500 LBS
10. ENCLOSURE COLOR: WHITE
11. ENCLOSURE SHALL BE PROVIDED w / 4-POINT LIFTING LUGS
12. TOTAL PACKAGE WEIGHT:95,500 LBS

PLEASE NOTE THAT THE FOLLOWING ITEMS WILL SHIP LOOSE AND REQUIRE ON-SITE ASSEMBLY BY OTHERS	
1	ENCLOSURE
2	EXHAUST STACK AND RAIN CAP
3	EXTERIOR LIGHT FIXTURES
4	GENERATOR
5	FUEL TANK
6	TWO SETS OF ALUMINUM STAIRS AND PLATFORMS WITH MOLDED FIBERGLASS DECKING
7	SECONDARY VENT AND SECONDARY TANK ACCESSORIES

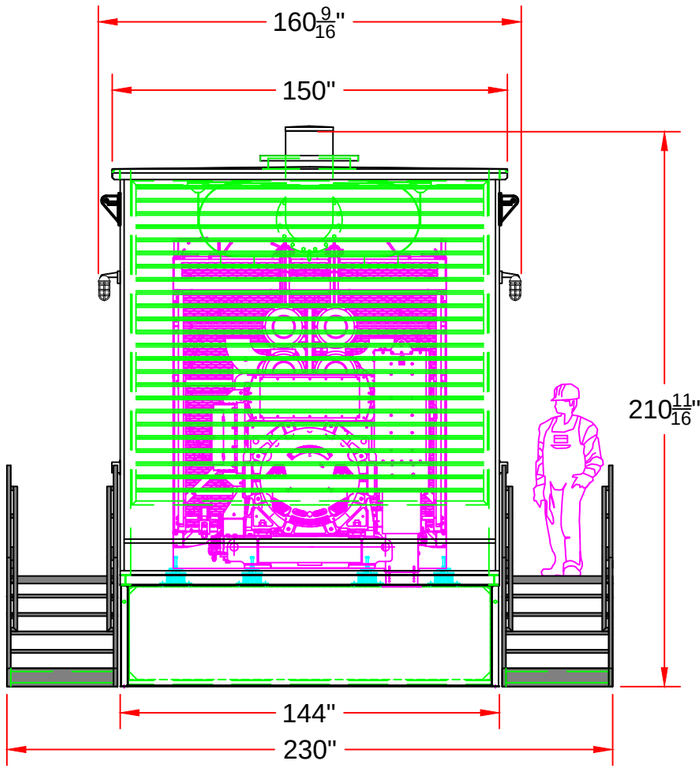
REVISIONS:

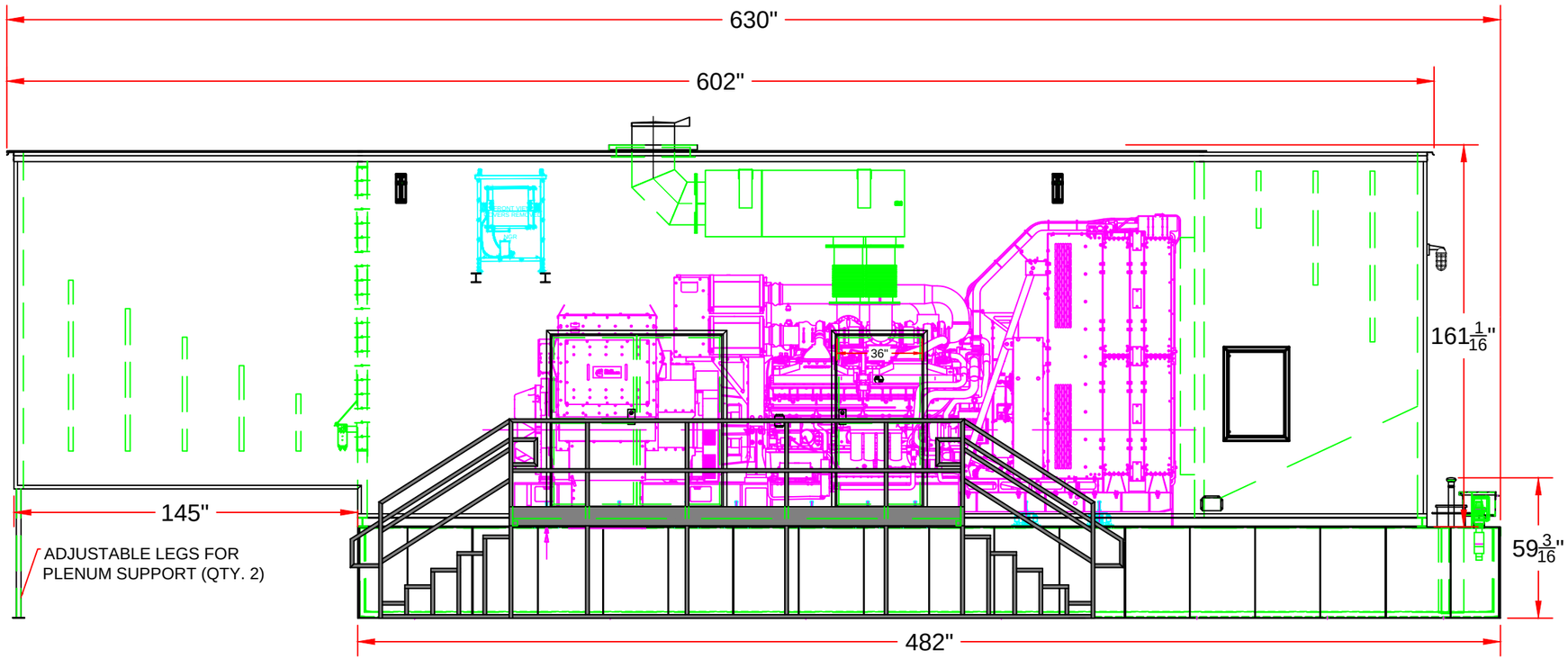
REVISION LEVEL	REVISION DESCRIPTION	SHEET OF CHANGE(S)	ENGINEER	DATE
00	INITIAL RELEASE (QUOTE # 77804REV3)		BK	8/18/2020
01	UPDATED EXHAUST PARTS LIST		SDH	9/17/2020
02	ADDED GEORGIA PE STAMP NOTE, UPDATED STAIR ANCHOR BOLTS TO SS316 (QU# 77804REV4)		BK	9/18/2020
03	REVISED STAIRS TO MEET IBC REQUIREMENTS		JAL	10/6/2020
04	REVISED TO LEVEL 3 ENCLOSURE; ADDED SOUND BAFFLING		JAL	10/20/2020
05	ADDED PAINT CHOICE, VERIFIED SILENCER; REVISED STAIRS; ADDED SURGE PROTECTION TO PANEL BOARD; ADDED LOCATION OF BATTERIES AND BATTERY CHARGER		JAL	11/20/2020
06	UPDATED BATTERY LIGHTS		SDH	12/7/2020
07	REVISED LIFTING EYES		JAL	12/29/2020
08	ADDED NGR MOUNTING, DC LIGHT DIAGRAM AND BATTERY BOX		SDH	12/30/2020
09	ADDED TANK AND STAIR ANCHOR HOLE LOCATIONS		JAL	1/6/2021
010	ADDED PE STAMP TO FIDELITY PROJECT SCOPE		JAL	2/3/2021
011	REVISED ELECTRICAL		JEG	2/24/2021
012	REVISED STAIRS FOR LIVE LOAD OF 150 PSF		JAL	3/10/2021

Sheet List Table

Sheet Number	Sheet Title
1	COVER SHEET
2	ASSEMBLY
3	SA LVL 3 ENCLOSURE
4	ELECTRICAL PLAN
5	UL 142 SEALED SECONDARY TANK
6	STAIRS
7	SUGGESTED PAD LAYOUT
8	ANCHOR DETAIL
9	DC LIGHTS

DRAWING ACCEPTED FOR PRODUCTION	
SIGNATURE	
PRINT NAME-TITLE	DATE / /





ENCL. WEIGHT	TANK WEIGHT	GEN. WEIGHT	TOTAL WEIGHT
17,500 LBS.	25,000 LBS.	53,000 LBS.	*95,500 LBS.*

UL #142
File No.
MH27650

CUSTOMER:
CUMMINS SALES & SVC

ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX

DESCRIPTION ASSEMBLY

THIRD-ANGLE PROJECTION

FIDELITY MANUFACTURING, LLC. CLAIMS PROPRIETARY RIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED FOR SALES INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT PERMISSION FROM FIDELITY MANUFACTURING, LLC. TO THE USER. FIDELITY MANUFACTURING, LLC. IS NOT RESPONSIBLE FOR ERRORS DUE TO INSUFFICIENT TECHNICAL SPECS, GENSET DRAWINGS, OR OTHER PROVIDED INFORMATION.

REVISION

USEABLE GALLONS / dBA REDUCTION

8400 AT 90% / 30

W.J. HOOPER WPP

DRW. BK
CHK.
APP.
DATE 4/9/2021

WO# 47907

SCALE:

SHEET 2 OF 9

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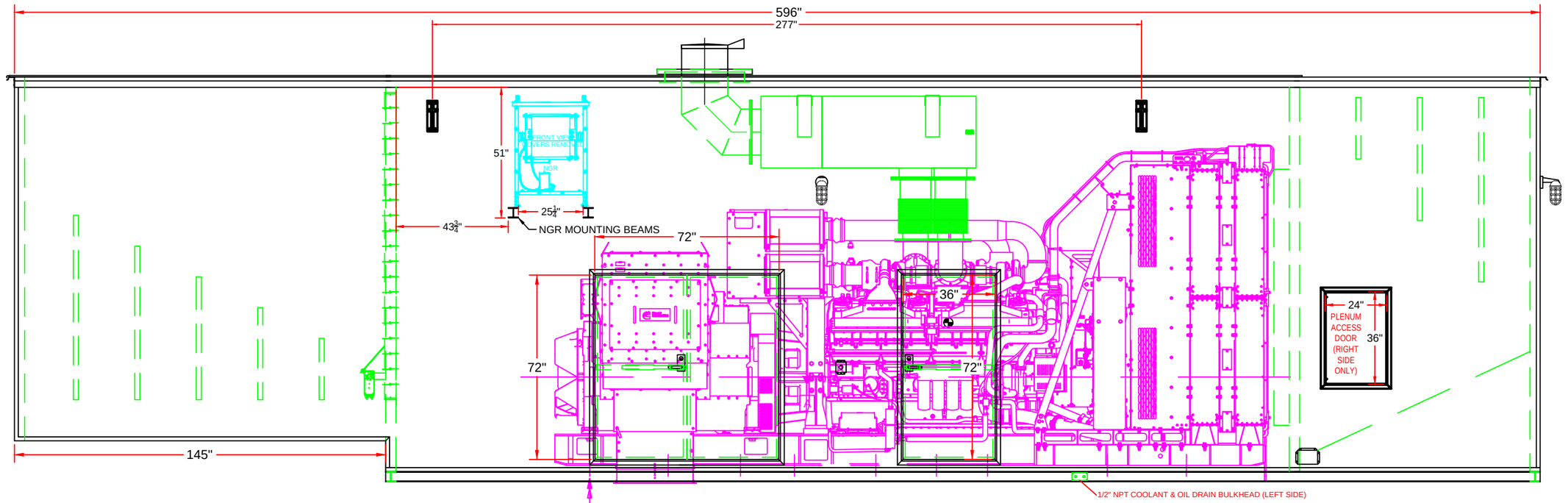

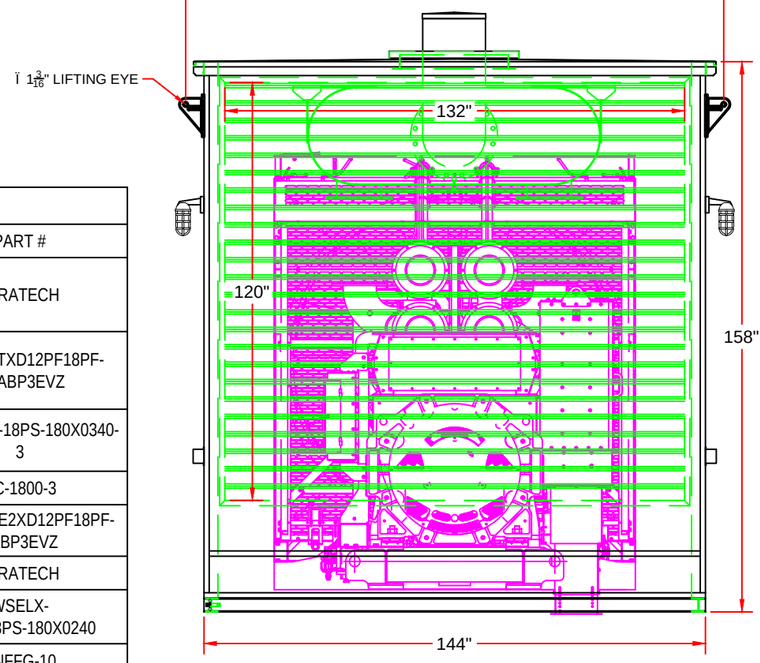

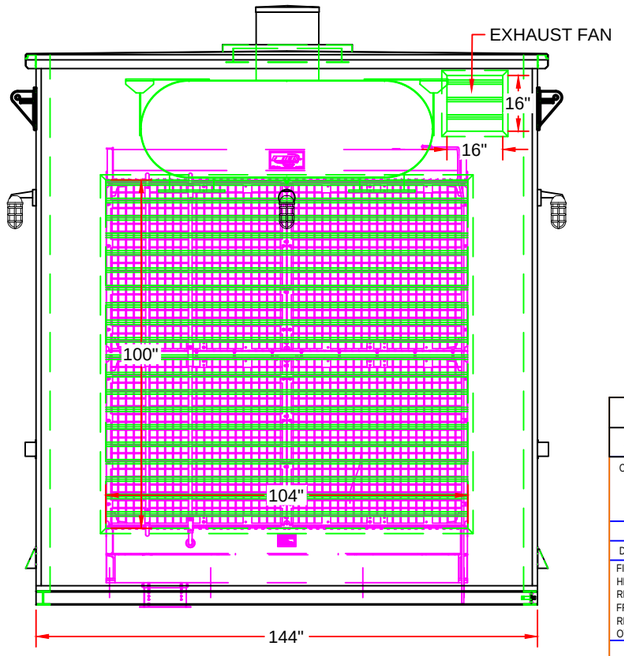

DAMPER LIST		
QTY.	DIMENSIONS	PART #
1	104"W X 100"H	CB-601
1	132"W X 120"H	CD-101 (MOTOR IN AIRSTREAM)
1	16"W X 16"H	CB-600

EXHAUST LIST		
QTY.	PART	PART #
2	Custom Flex Assembly, 10" Tube Flange Inlet, 12" Tube Flange Outlet, 24.25" Overall Length, 12" Diameter, Carbon Steel	MIRATECH
1	O-Series, Super Critical Grade, Dual Inlet, Carbon Steel Oval Silencer, 12" Pipe Flange Bottom Dual Inlet, 18" Pipe Flange End Outlet, Top Lugs	OSCBE2TXD12PF18PF-2-2ABP3EVZ
1	Custom, 304 Stainless Steel, 90Á Elbow, 18" Pipe Flange Inlet, 18" Pipe Stub Outlet, 18" x 34" Leg Lengths	ELX-18PF1-18PS-180X0340-3
1	18" 304 Stainless Steel Raincap	RC-1800-3
1	Super Critical Grade Oval Thermal Wrap w/ Spring Ties	WS-OSCBE2XD12PF18PF-2ABP3EVZ
2	Flex Thermal Wrap w/ Spring Ties	MIRATECH
1	Elbow Thermal Wrap w/ Spring Ties	WSELX-18PS-18PS-180X0240
2	Flange Gasket Set	BNFFG-10
2	Flange Gasket Set	BNFFG-12
1	Flange Gasket Set	BNFFG-18
2	Thermal Wraps	WS-TFL-10
2	Thermal Wraps	WS-PFL-12
1	Thermal Wraps	WS-PFL-18

NOTE: DRAIN BULKHEAD FOR REFERENCE ONLY. ACTUAL LOCATION TO BE DETERMINED BY TECHNICIAN.

ENCL. WEIGHT	TANK WEIGHT	GEN. WEIGHT	TOTAL WEIGHT
17,500 LBS.	25,000 LBS.	53,000 LBS.	*95,500 LBS.*

CUSTOMER:
CUMMINS SALES & SVC

ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX

DESCRIPTION SA LVL 3 ENCLOSURE

THIRD-ANGLE PROJECTION

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REVISION

dBA REDUCTION

30

W.J. HOOPER WPP

WO # 47907

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PHONE (352) 414-4700 FAX (352) 414-4642

DRW.	BK
CHK.	
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DATE	4/9/2021
SCALE:	
SHEET	3 OF 9

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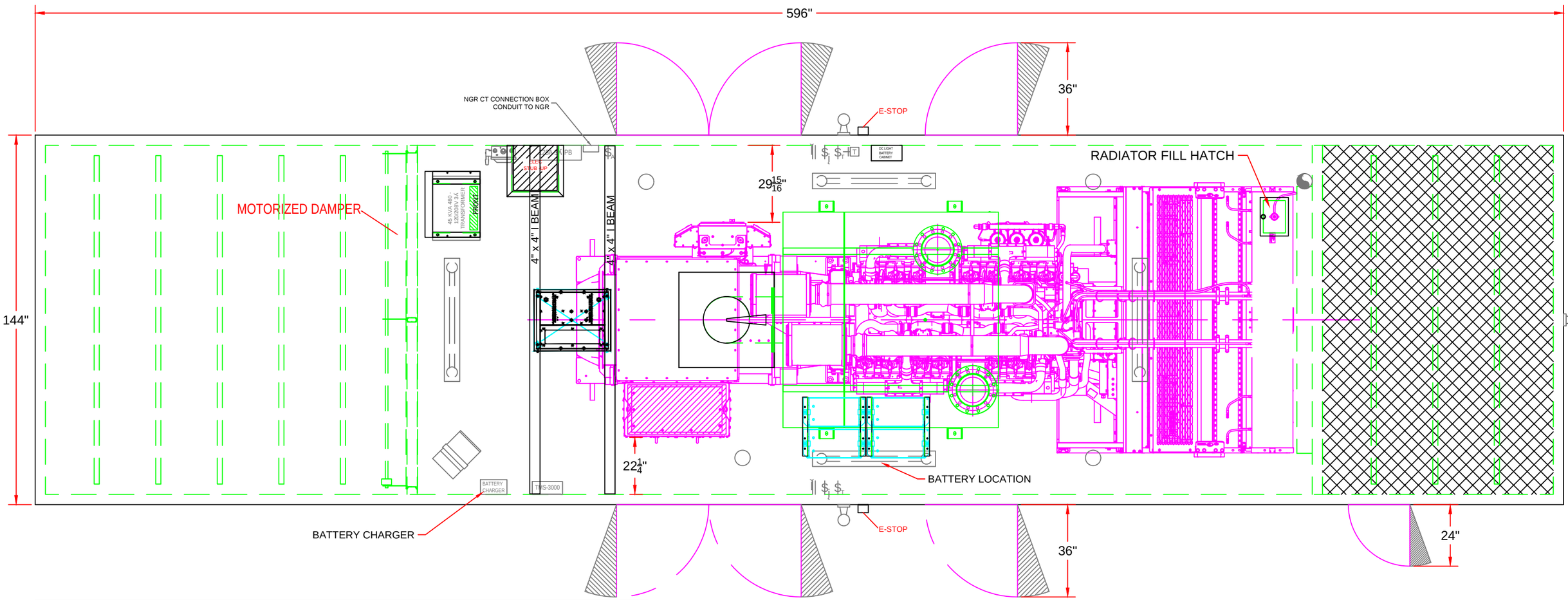

PANEL DESIGNATION	LP-G1	AIC RATING	10,000		
VOLTAGE AND PHASE	208/120VAC 3PHASE	ENCLOSURE	NEMA 1		
PANEL BUS SIZE	250A	MANUFACTURER	SIEMENS		
MAIN TYPE	MAIN BREAKER				
MAIN AMPS	125				

CKT #	CB TRIP	LOAD AMPS	FEED	LOAD IN AMPS A PH	LOAD IN AMPS B PH	LOAD IN AMPS C PH	FEED	LOAD AMPS	CB TRIP	CKT #
1	20	10	GFCI RECEPTACLES	28			JACKET WATER HEATER	18	30	2
3	20	2	INTERIOR LIGHTS		20			18		4
5	20	6	BATTERY CHARGER			24	JACKET WATER HEATER	18	30	6
7	20	6	ALTERNATOR HEATER	24				18		8
9		6			29.3		5 KW SPACE HEATER	23.3	30	10
11	20	6	EXHAUST FAN/ MOTORIZED DAMPER			29.3		23.3		12
13	20	3	DC CHARGER	5			TMS-3000 PANEL	2	20	14
15	20	3	EXTERIOR LIGHTS		3					16
17	20	3				3				18
			PHASE AMPS TOTAL	57	52.3	56.3				
			PANEL AMPS MAX PHASE		57					
			MINIMUM PANEL SIZE AT 80% LOADING =		71.25 AMPS					

- 4 FT LED LIGHT FIXTURE
- GROUND FAULT INTERRUPTED DUPLEX OUTLET
- 3-WAY SWITCH
- DC LED LIGHT
- TIMED SWITCH
- EXHAUST FAN - VENTED TO OUTSIDE
- THERMOSTAT
- 5KW CEILING MOUNT HEATER WITH THERMOSTAT (208V)
- EXTERIOR LED PHOTOCELL JAR LIGHT
- TMS-3000 PNEUMERCATOR PANEL
- ON-OFF-PHOTOCELL SWITCH

NOTE:
-ELECTRICAL BOXES TO BE WEATHERPROOF
-ELECTRICAL CONDUIT TO BE EMT WITH WATER TIGHT COMPRESSION FITTINGS

ENCL. WEIGHT	TANK WEIGHT	GEN. WEIGHT	TOTAL WEIGHT
17,500 LBS.	25,000 LBS.	53,000 LBS.	*95,500 LBS.*

CUSTOMER:
CUMMINS SALES & SVC

ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX

THIRD-ANGLE PROJECTION

DESCRIPTION ELECTRICAL PLAN

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REVISION

NOTE: THE LIGHTING FIXTURES SHOWN ARE REPRESENTATIVE OF QUANTITY ONLY. ACTUAL LOCATION WILL BE DETERMINED AT TIME OF INSTALLATION FOR MAXIMUM ILLUMINATION OF THE ENCLOSURE.

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PHONE (352) 414-4700 FAX (352) 414-4642

W.J. HOOPER WPP

DRW. BK	WO# 47907
CHK.	
APP.	
DATE 4/9/2021	SCALE:

SHEET 4 OF 9

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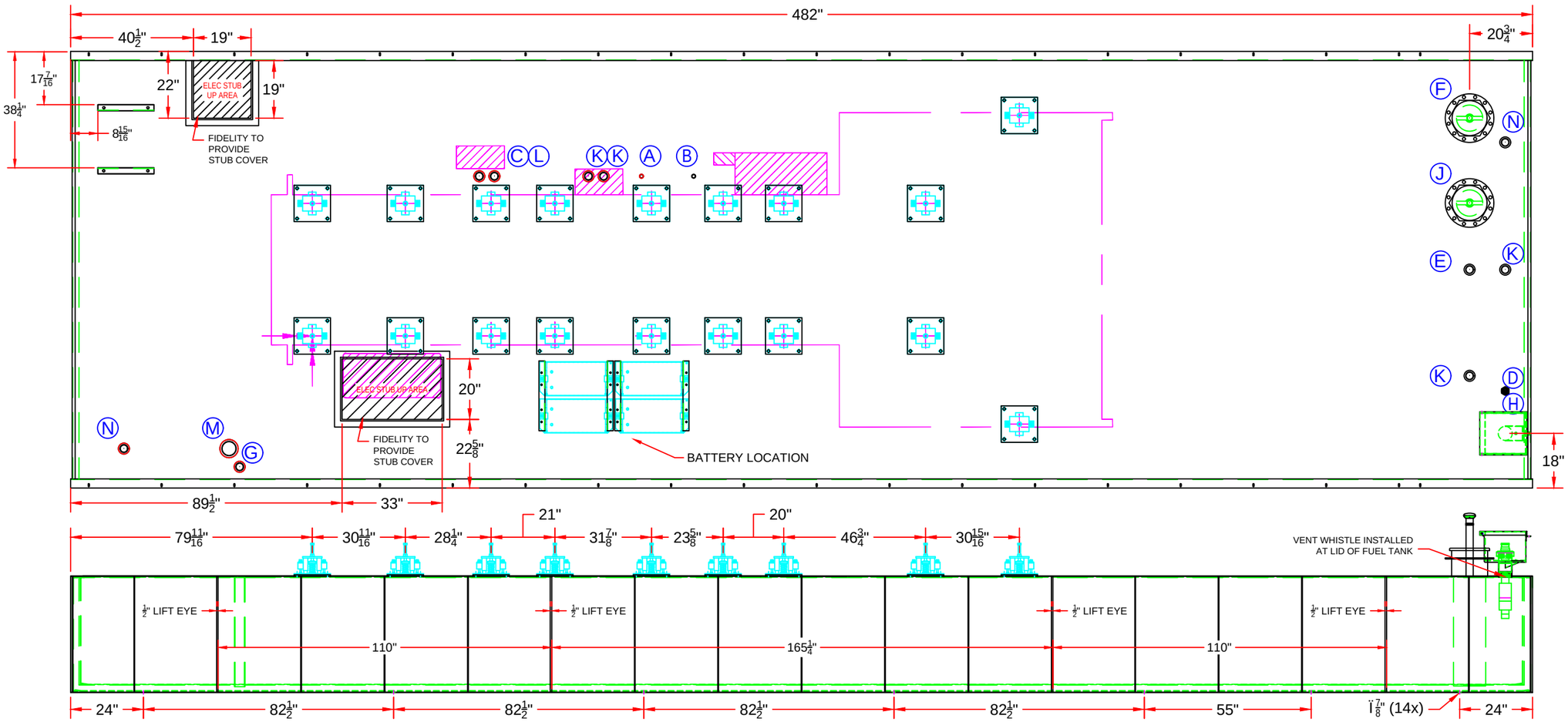
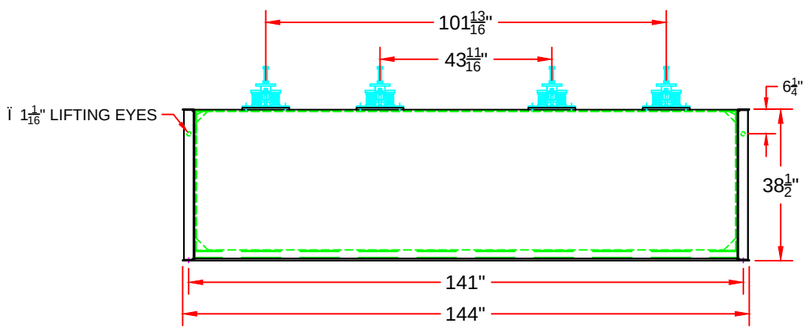


FITTING	DESCRIPTION	LENGTH
A	1" NPT FUEL SUPPLY DROP TUBE	36-1/2"
B	1" NPT FUEL RETURN DROP TUBE	36-1/2"
C	2" NPT LOW FUEL SWITCH AT 25%	26-1/4"
D	1-1/2" NPT FUEL GAUGE	33-1/2"
E	2" NPT NORMAL VENT WITH VENT WHISTLE	
F	8" ANSI FLANGE EMERGENCY VENT (PRIMARY)	
G	2" NPT OUTER CONTAINMENT PORT FOR TOP-MOUNT BASIN DRAIN AND SWITCH (PNEUMERCATOR P/N LS600-LDXX), CONNECTED TO TMS-3000	
H	4" NPT 7-1/2 GALLON FILL SPILL BUCKET W/ OVERFILL PREVENTION VALVE SET AT 95%	
J	8" ANSI FLANGE EMERGENCY VENT (SECONDARY)	
K	2" NPT SPARE FITTINGS (QTY 4)	
L	2" NPT HIGH FUEL SWITCH AT 90%	3-1/2"
M	4" NPT LEVEL GAUGING PROBE (PNEUMERCATOR P/N MP450S), CONNECTED TO TMS-3000	
N	2" NPT SPARE FITTING (FOR CUSTOMER CONNECTION OF FUEL POLISHER), QTY 2	



*LIFTING EYES FOR LIFTING EMPTY FUEL TANK ONLY

ENCL. WEIGHT	TANK WEIGHT	GEN. WEIGHT	TOTAL WEIGHT
17,500 LBS.	25,000 LBS.	53,000 LBS.	*95,500 LBS.*

UL #142 File No. MH27650

CUSTOMER:
CUMMINS SALES & SVC

ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX

DESCRIPTION UL 142 SEALED SECONDARY TANK

THIRD-ANGLE PROJECTION

FIDELITY MANUFACTURING, LLC. CLAIMS PROPRIETARY RIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED FOR SALES INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT PERMISSION FROM FIDELITY MANUFACTURING, LLC. TO THE USER. FIDELITY MANUFACTURING, LLC. IS NOT RESPONSIBLE FOR ERRORS DUE TO INSUFFICIENT TECHNICAL SPECS, GENSET DRAWINGS, OR OTHER PROVIDED INFORMATION.

REVISION

USEABLE GALLONS / ACTUAL GALLONS

8400 AT 90% / 9590

W.J. HOOPER WPP

WO# 47907

1900 NE 25TH AVE, OCALA, FL 34470
PHONE (352) 414-4700 FAX (352) 414-4642

DRW. BK
CHK.
APP.
DATE 4/9/2021
SCALE:
SHEET 5 OF 9

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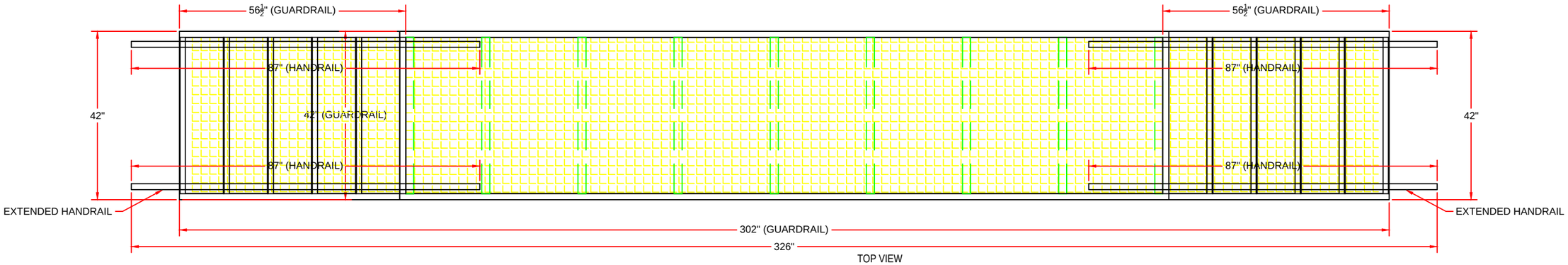
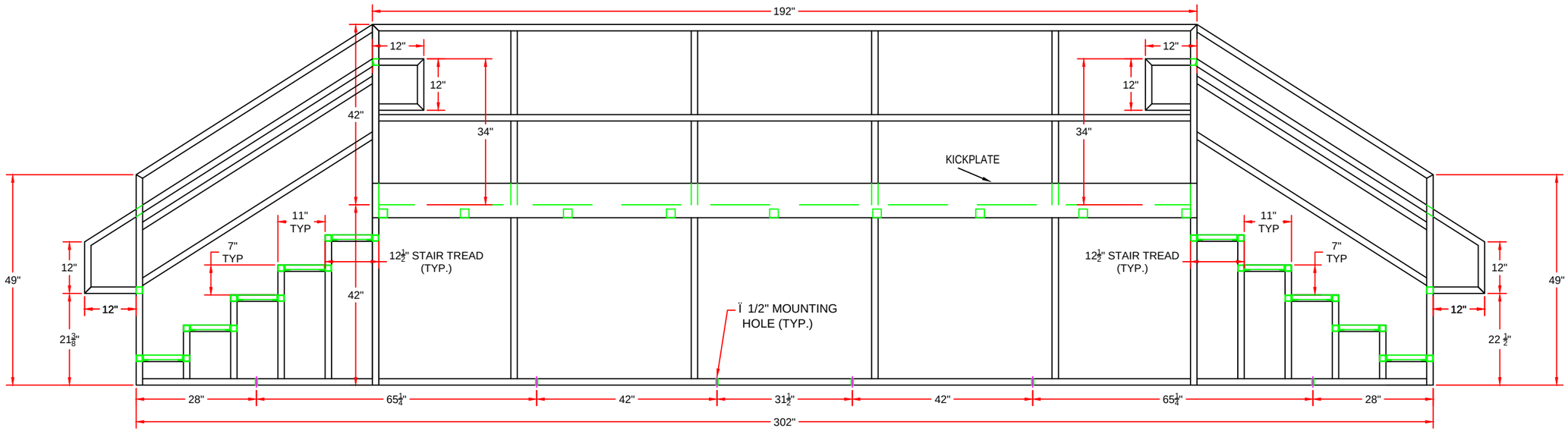
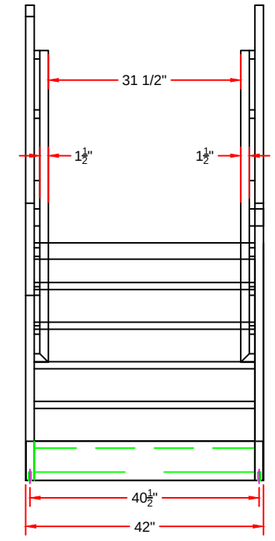


TOP VIEW



SIDE VIEW



END TYPICAL VIEW

ENCL. WEIGHT	TANK WEIGHT	GEN. WEIGHT	TOTAL WEIGHT
17,500 LBS.	25,000 LBS.	53,000 LBS.	*95,500 LBS.*

CUSTOMER:
CUMMINS SALES & SVC

ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX

THIRD-ANGLE PROJECTION

DESCRIPTION: STAIRS

FIDELITY MANUFACTURING, LLC. CLAIMS PROPRIETARY RIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED FOR SALES INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT PERMISSION FROM FIDELITY MANUFACTURING, LLC. TO THE USER. FIDELITY MANUFACTURING, LLC. IS NOT RESPONSIBLE FOR ERRORS DUE TO INSUFFICIENT TECHNICAL SPECS, GENSET DRAWINGS, OR OTHER PROVIDED INFORMATION.

REVISION

STAIR AND PLATFORM WEIGHT

1100 LBS

QUANTITY 2 (1 LEFT / 1 RIGHT)
EACH STAIR SET WEIGHS 550 LBS
PLATFORM LIVE LOAD: 150 PSF

27

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WO# 47907

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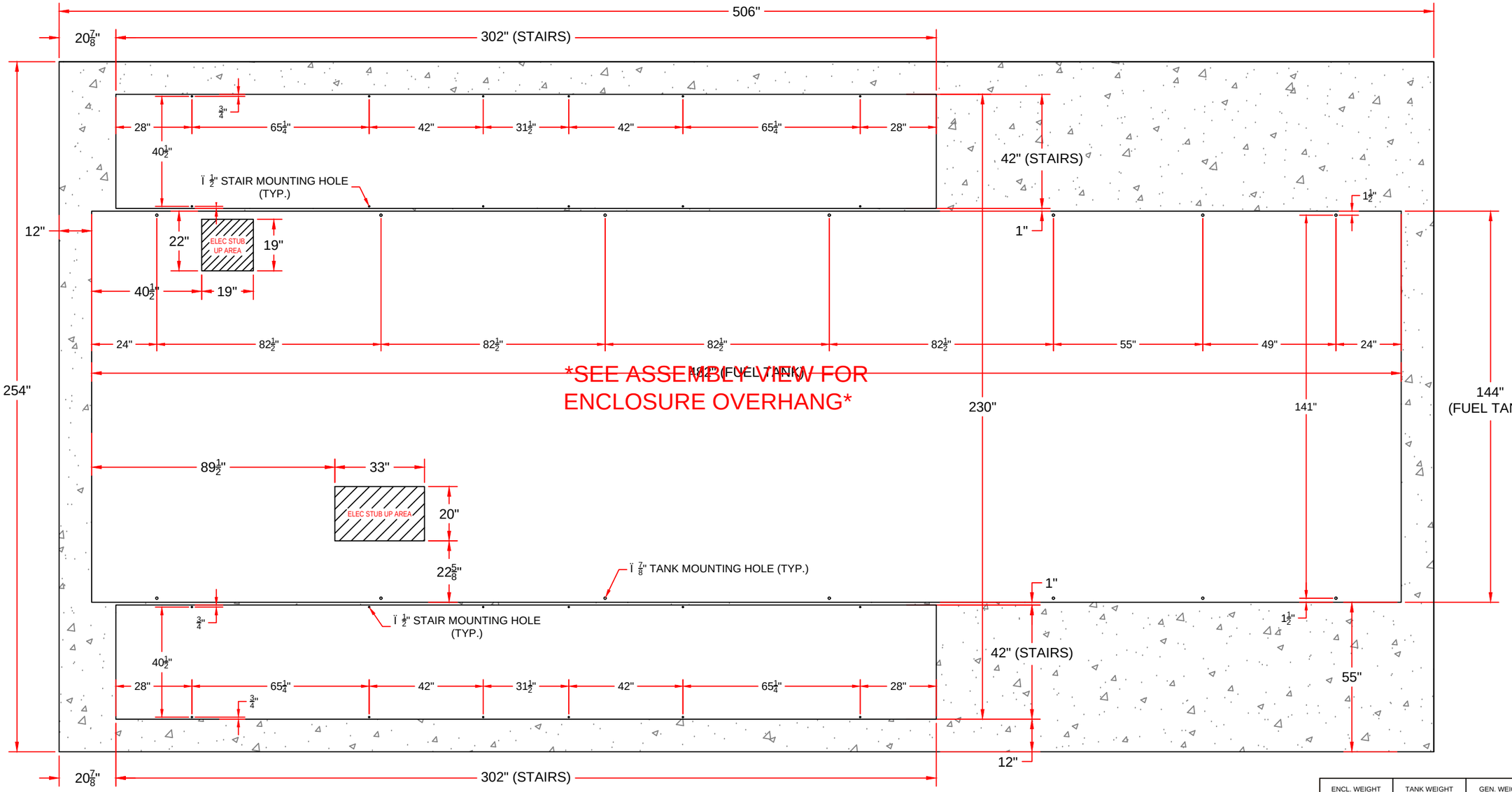
CHK.	
APP.	
DATE	4/9/2021
SCALE:	
SHEET	6 OF 9

created using AutoCAD



ENCL. WEIGHT	TANK WEIGHT	GEN. WEIGHT	TOTAL WEIGHT
17,500 LBS.	25,000 LBS.	53,000 LBS.	*95,500 LBS.*

CUSTOMER:
CUMMINS SALES & SVC

ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX

DESCRIPTION SUGGESTED PAD LAYOUT

THIRD-ANGLE PROJECTION

FIDELITY MANUFACTURING, LLC. CLAIMS PROPRIETARY RIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED FOR SALES INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT PERMISSION FROM FIDELITY MANUFACTURING, LLC. TO THE USER. FIDELITY MANUFACTURING, LLC. IS NOT RESPONSIBLE FOR ERRORS DUE TO INSUFFICIENT TECHNICAL SPECS, GENSET DRAWINGS, OR OTHER PROVIDED INFORMATION.

REVISION

SUGGESTED PAD LAYOUT DRAWING IS FOR STUB-UP LOCATION REFERENCE ONLY. TO OBTAIN FULL FUEL CAPACITY PAD SHOULD BE SLOPED NO MORE THAN 1/4". ACTUAL PAD DESIGN IS TO BE ACCORDING TO PLANS, SPECS, & APPLICABLE JURISDICTIONAL AUTHORITIES.

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PHONE (352) 414-4700 FAX (352) 414-4642

W.J. HOOPER WPP

WO# 47907

DRW.	BK	SCALE:	SHEET 7 OF 9
CHK.			
APP.			
DATE	4/9/2021		

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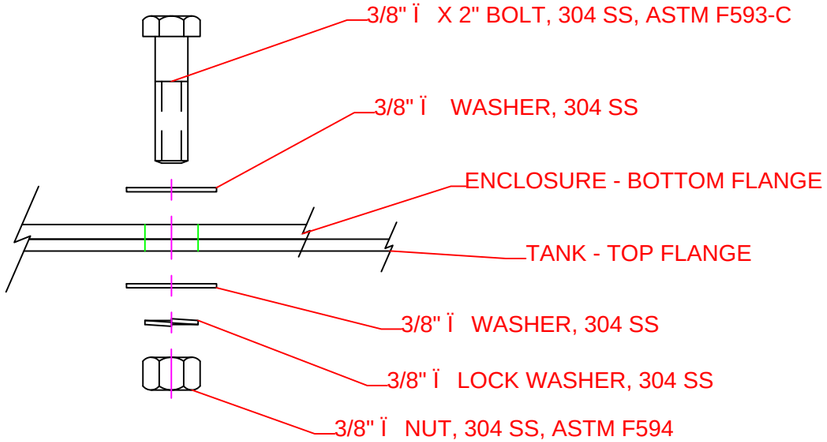
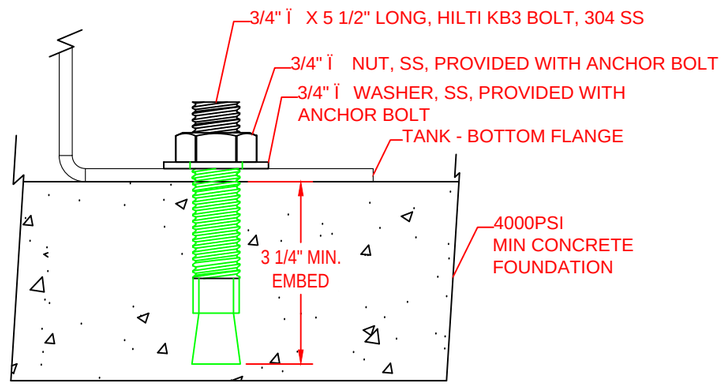
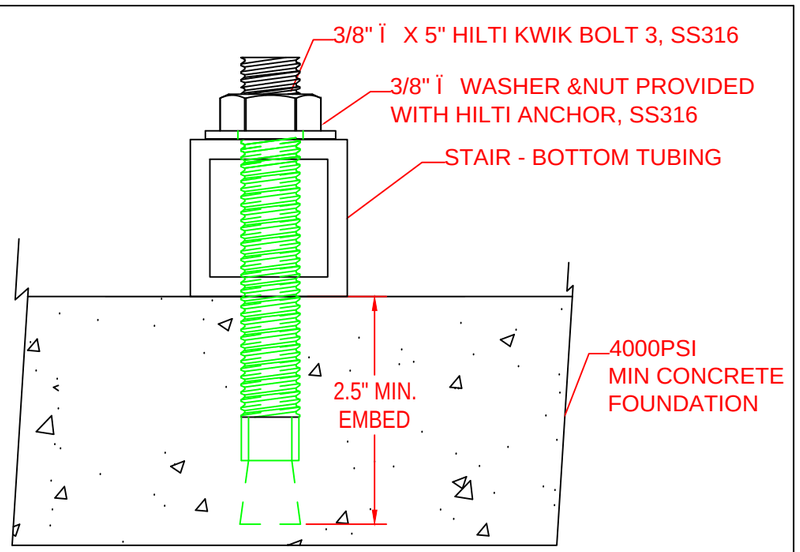


ENCLOSURE TO TANK	BOLT DETAIL



TANK TO CONCRETE FOUNDATION	BOLT DETAIL



STAIR TO CONCRETE FOUNDATION	BOLT DETAIL

ENCL. WEIGHT	TANK WEIGHT	GEN. WEIGHT	TOTAL WEIGHT
17,500 LBS.	25,000 LBS.	53,000 LBS.	*95,500 LBS.*

CUSTOMER: CUMMINS SALES & SVC

ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX

DESCRIPTION ANCHOR DETAIL

THIRD-ANGLE PROJECTION

FIDELITY MANUFACTURING, LLC. CLAIMS PROPRIETARY RIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED FOR SALES INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT PERMISSION FROM FIDELITY MANUFACTURING, LLC. TO THE USER. FIDELITY MANUFACTURING, LLC. IS NOT RESPONSIBLE FOR ERRORS DUE TO INSUFFICIENT TECHNICAL SPECS, GENSET DRAWINGS, OR OTHER PROVIDED INFORMATION.

REVISION

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PHONE (352) 414-4700 FAX (352) 414-4642

W.J. HOOPER WPP

WO# 47907

DRW.	BK
CHK.	
APP.	
DATE	4/9/2021

SCALE: SHEET 8 OF 9

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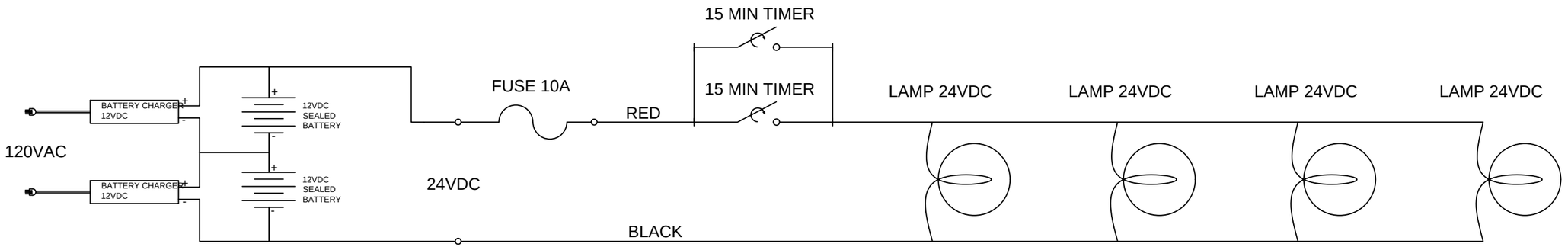

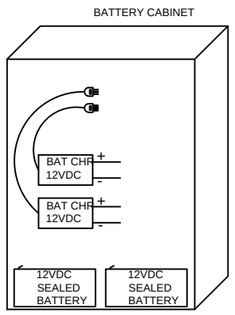

ENCL. WEIGHT	TANK WEIGHT	GEN. WEIGHT	TOTAL WEIGHT
17,500 LBS.	25,000 LBS.	53,000 LBS.	*95,500 LBS.*

CUSTOMER:

CUMMINS SALES & SVC

ONAN 2500 DKQAN HIGH VOLTAGE RH TERMINAL BOX

DESCRIPTION DC LIGHTS

THIRD-ANGLE PROJECTION

FIDELITY MANUFACTURING, LLC. CLAIMS PROPRIETARY RIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED FOR SALES INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT PERMISSION FROM FIDELITY MANUFACTURING, LLC. TO THE USER. FIDELITY MANUFACTURING, LLC. IS NOT RESPONSIBLE FOR ERRORS DUE TO INSUFFICIENT TECHNICAL SPECS, GENSET DRAWINGS, OR OTHER PROVIDED INFORMATION.

REVISION

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PHONE (352) 414-4700 FAX (352) 414-4642

W.J. HOOPER WPP

DRW. BK

CHK.

APP.

DATE 4/9/2021

WO# 47907

SCALE:

SHEET 9 OF 9

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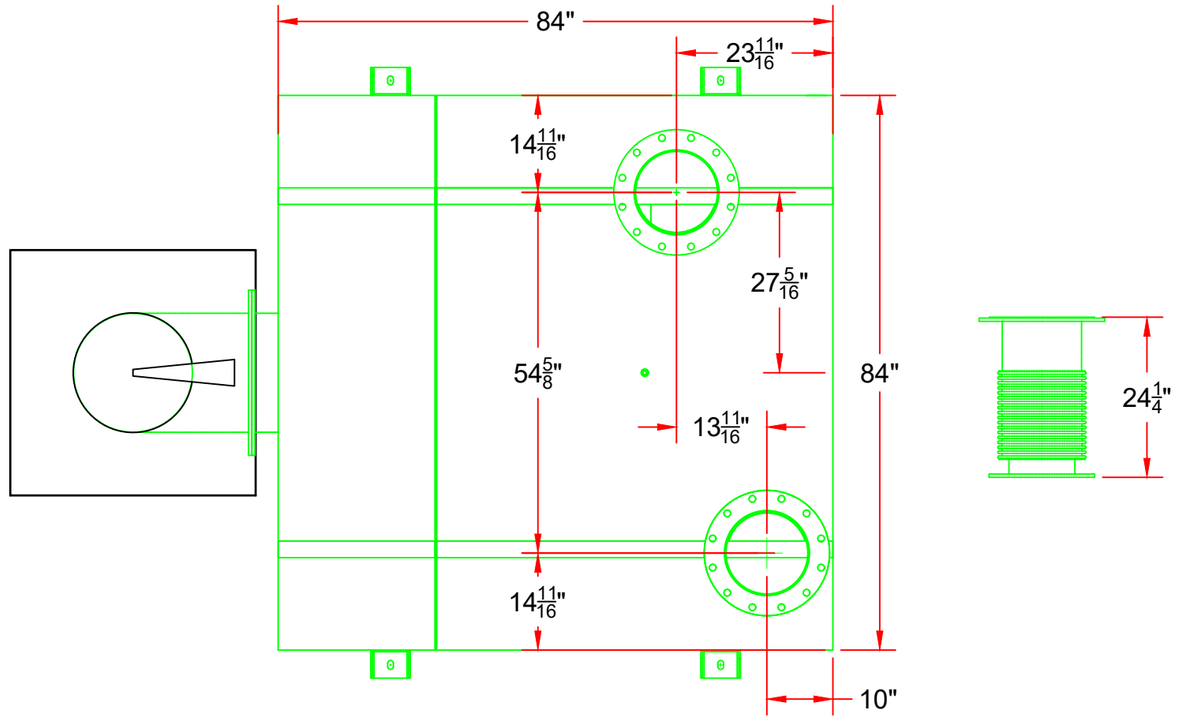
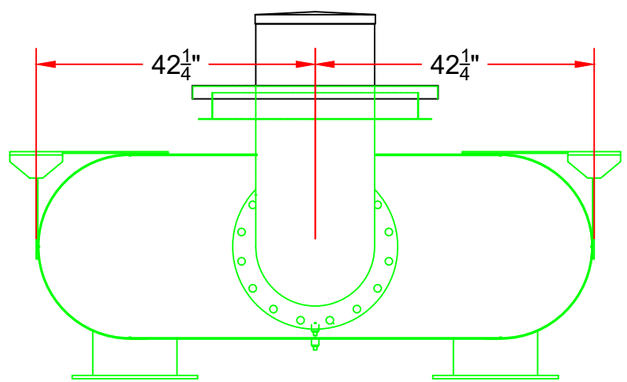
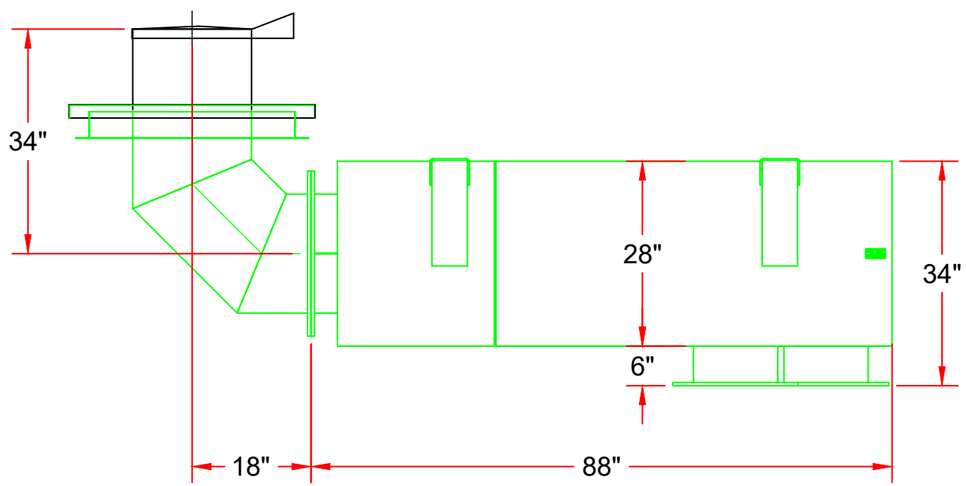
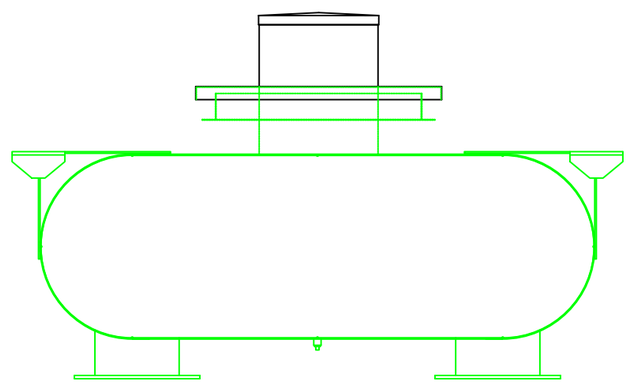
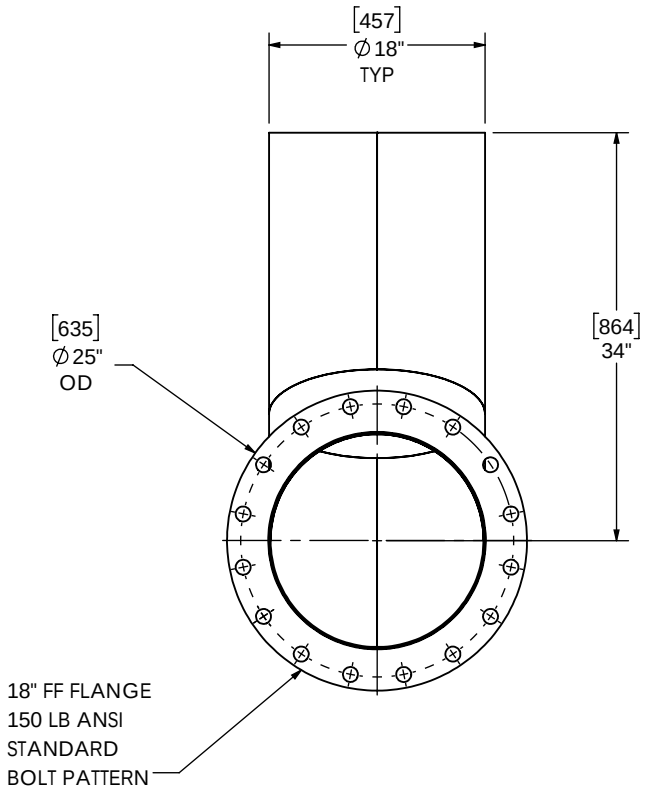
EXHAUST LIST		
QTY.	PART	PART #
2	Custom Flex Assembly, 10" Tube Flange Inlet, 12" Tube Flange Outlet, 24.25" Overall Length, 12" Diameter, Carbon Steel	MIRATECH
1	O-Series, Super Critical Grade, Dual Inlet, Carbon Steel Oval Silencer, 12" Pipe Flange Bottom Dual Inlet, 18" Pipe Flange End Outlet, Top Lugs	OSCBE2TXD12PF18PF-2-2ABP3EVZ
1	Custom, 304 Stainless Steel, 90° Elbow, 18" Pipe Flange Inlet, 18" Pipe Stub Outlet, 18" x 34" Leg Lengths	ELX-18PF1-18PS-180X0340-3
1	18" 304 Stainless Steel Raincap	RC-1800-3
1	Super Critical Grade Oval Thermal Wrap w/ Spring Ties	WS-OSCBE2XD12PF18PF-2ABP3EVZ
2	Flex Thermal Wrap w/ Spring Ties	MIRATECH
1	Elbow Thermal Wrap w/ Spring Ties	WSELX-18PS-18PS-180X0240
2	Flange Gasket Set	BNFFG-10
2	Flange Gasket Set	BNFFG-12
1	Flange Gasket Set	BNFFG-18
2	Thermal Wraps	WS-TFL-10
2	Thermal Wraps	WS-PFL-12
1	Thermal Wraps	WS-PFL-18

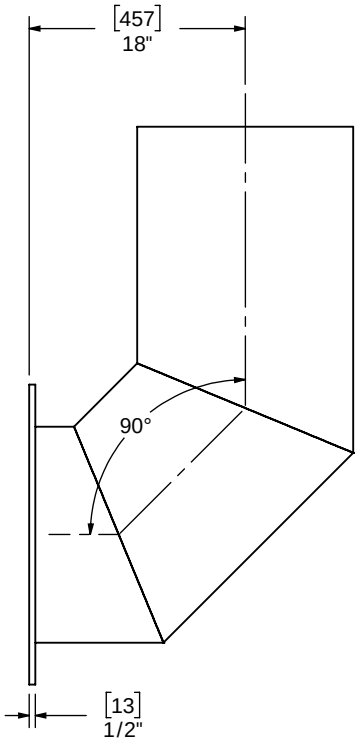


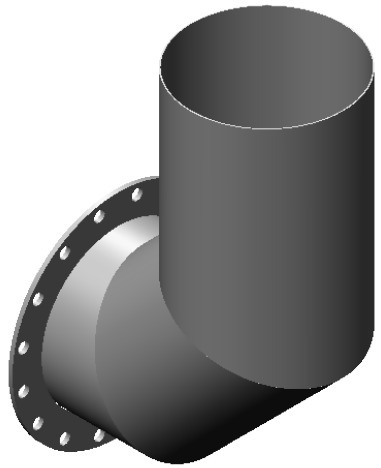












NOTES:

- DO NOT USE EQUIPMENT TO SUPPORT OTHER PARTS OF THE EXHAUST SYSTEM WITHOUT PROPER REINFORCEMENT

MATERIAL CONSTRUCTION:

- 304 SS

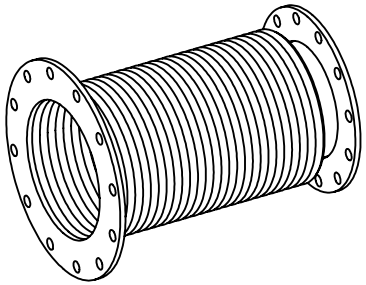
PAINT:

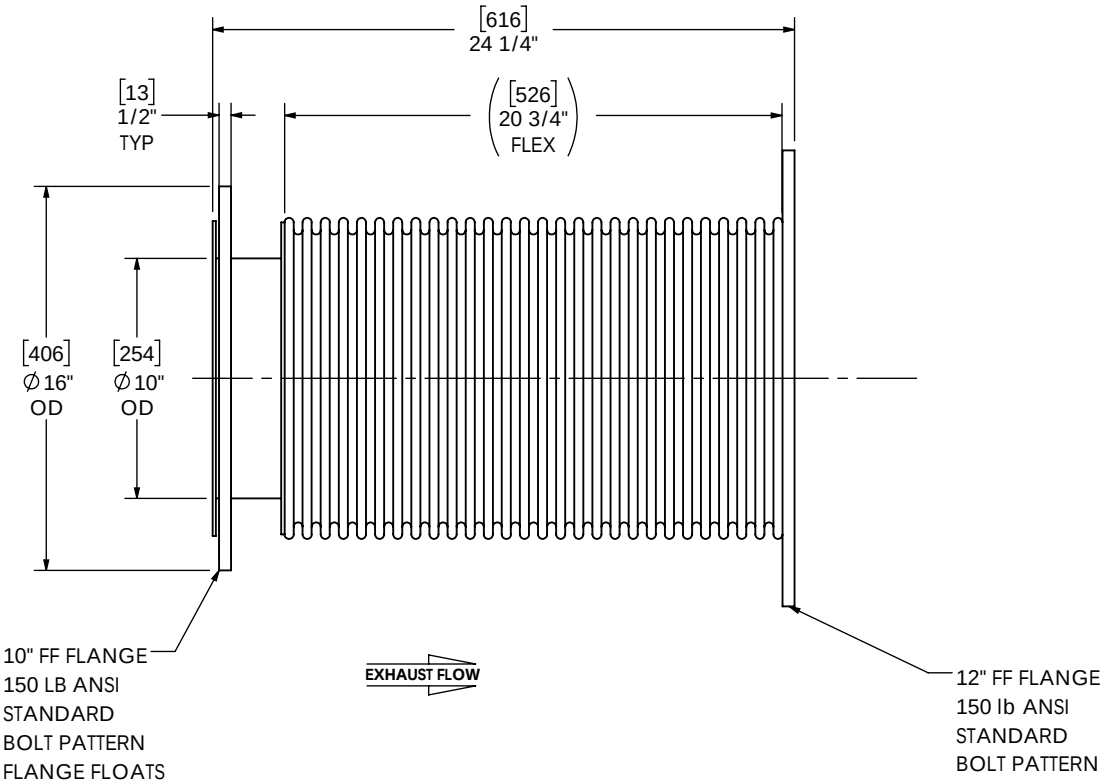
- NONE

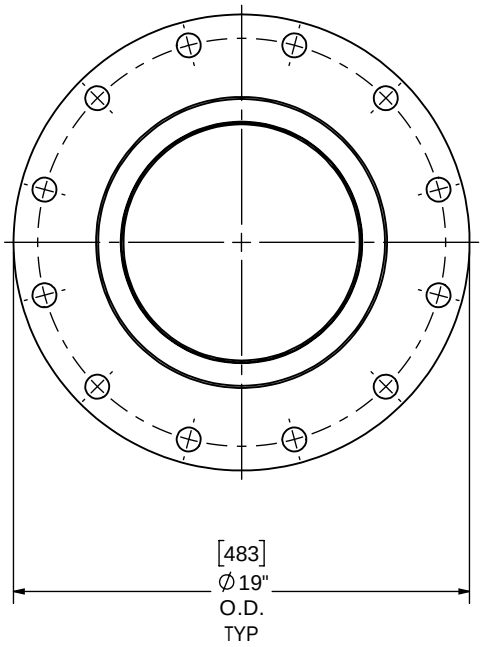
(**MIRATECH COATING SYSTEM 4**)

PROJECT NAME	**PROPRIETARY AND CONFIDENTIAL**	DIMENSIONS ARE APPROXIMATE IN INCHES UNLESS OTHERWISE SPECIFIED	MIRATECH / em PRODUCTS
PROPOSAL NUMBER	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MIRATECH GROUP, LLC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF MIRATECH GROUP, LLC IS PROHIBITED.	DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED ANGLES MACH: ±2° BEND: ±3° INCHES: ±1/8 MILLIMETERS: ±3	**ELX-18PF1-18PS-180X0340-3** **Sales Drawing**
SALES ORDER NO.		DO NOT SCALE DRAWING	
CUSTOMER P.O.		DRAWN JFH — DATE 09/17/2020	DRAWING ELX-18PF1-18PS-180X0340-3 SD — REV 0
		REVIEWED BY CAC — DATE 09/17/2020	SIZE A — SCALE 1:16 — WEIGHT: 127 lb — SHEET 1 OF 1

REV	DATE	BY	COMMENTS	SHEET NO.
1	11/17/2020	JFH	UPDATED/REVISED OVERALL LENGTH TO 24 3/4", UPDATE/CORRECT FLANGE NOTES.	1
2	11/20/2020	JFH	OVERALL LENGTH TO 24 1/4"	1







NOTES:

- DO NOT USE EQUIPMENT TO SUPPORT OTHER PARTS OF THE EXHAUST SYSTEM WITHOUT PROPER REINFORCEMENT

MATERIAL CONSTRUCTION:

- CARBON STEEL/321 STAINLESS STEEL

PAINT:

- HIGH TEMPERATURE BLACK (MIRATECH COATING SYSTEM 5) CARBON STEEL PARTS ONLY

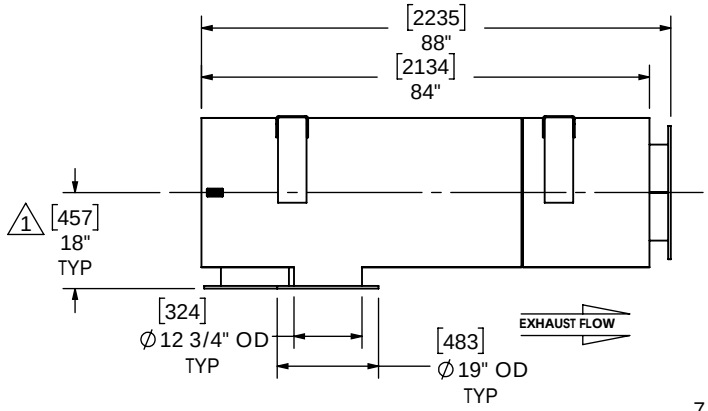
PROJECT NAME	**PROPRIETARY AND CONFIDENTIAL**	DIMENSIONS ARE APPROXIMATE IN INCHES UNLESS OTHERWISE SPECIFIED
PROPOSAL NUMBER	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MIRATECH GROUP, LLC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF MIRATECH GROUP, LLC IS PROHIBITED.	DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED ANGLES MACH: ±2° BEND: ±3° INCHES: ±1/8 MILLIMETERS: ±3
SALES ORDER NO.		DO NOT SCALE DRAWING
CUSTOMER P.O.		DRAWN JCO — DATE 09/28/2020 REVIEWED BY CAC — DATE 09/28/2020

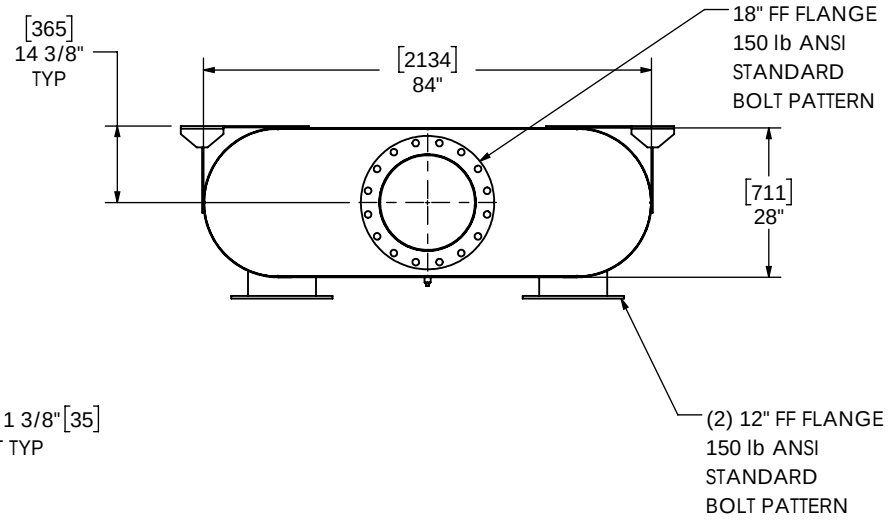
MIRATECH — em PRODUCTS®

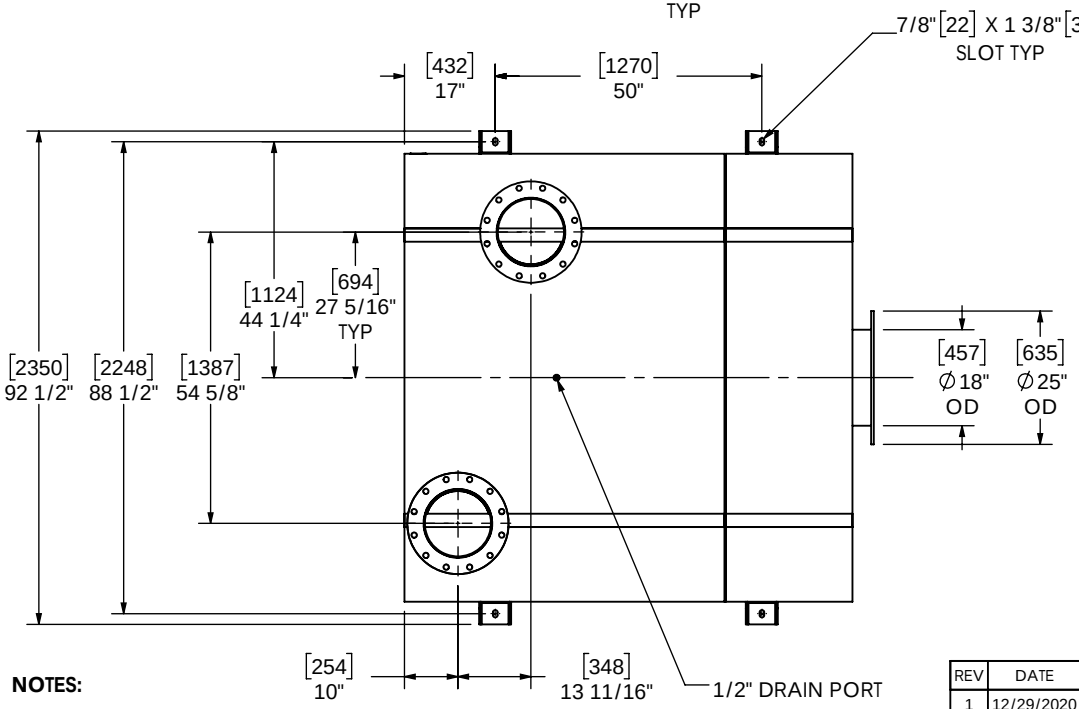
FL12Z-10TF2-12TF1-2-20090110
Sales Drawing

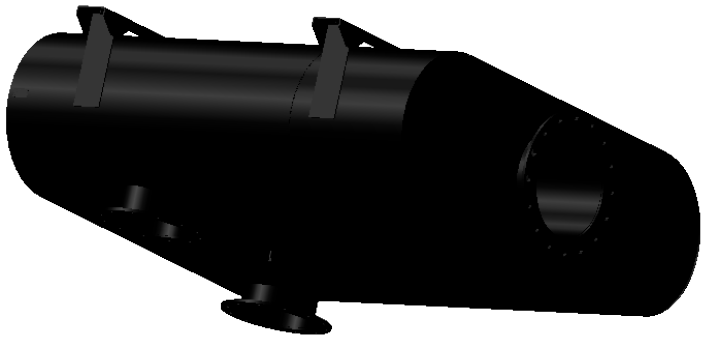
DRAWING	REV
FL12Z-10TF2-12TF1-2-20090110 SD	2

SIZE	SCALE	WEIGHT	SHEET
A	SCALE 1:8	WEIGHT: 59 lb	SHEET 1 OF 1









NOTES:

- DO NOT USE EQUIPMENT TO SUPPORT OTHER PARTS OF THE EXHAUST SYSTEM WITHOUT PROPER REINFORCEMENT

MATERIAL CONSTRUCTION:

- CARBON STEEL

PAINT:

- HIGH TEMPERATURE BLACK (MIRATECH COATING SYSTEM 5)

REV	DATE	BY	COMMENTS	SHEET NO.
1	12/29/2020	JCO	INLET STICK OUT WAS 20"	-

PROJECT NAME

PROPOSAL NUMBER

SALES ORDER NO.

CUSTOMER P.O.

PROPRIETARY AND CONFIDENTIAL

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DIMENSIONS ARE APPROXIMATE IN INCHES UNLESS OTHERWISE SPECIFIED

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED
ANGLES
MACH: ±2°
BEND: ±3°
INCHES: ±1/8
MILLIMETERS: ±3

DO NOT SCALE DRAWING

DRAWN	JFH	11/11/2020
REVIEWED BY	CAC	11/11/2020

MIRATECH

em PRODUCTS

OSCBE2TX-D12PF18PF-2-2ABP3EVZ
Sales Drawing

DRAWING		REV
OSCBE2TX-D12PF18PF-2-2ABP3EVZ SD		1
SIZE A	SCALE 1:36	WEIGHT: 1747 lb	SHEET 1 OF 1

(ENGINEERS)

SUBMITTAL DATA

2-1/4" Aluminum Backdraft Damper (2400 FPM)

Application and Design

The CB-601 is a vertical or horizontal mounted backdraft damper that is designed to allow airflow and prevent reverse airflow.

Ratings

Pressure: 2.5" w.g.

Velocity: 2400 FPM

Temperature: 180° F

Standard Construction

Frame: .060" Thick Extruded Aluminum

Blades: .032" Thick Formed Aluminum

Blade Seal: EPDM Rubber

Linkage: 1/2" x 1/8" Aluminum Bar (in airstream)

Axles: Zinc Plated Steel

Bushings: Nylon

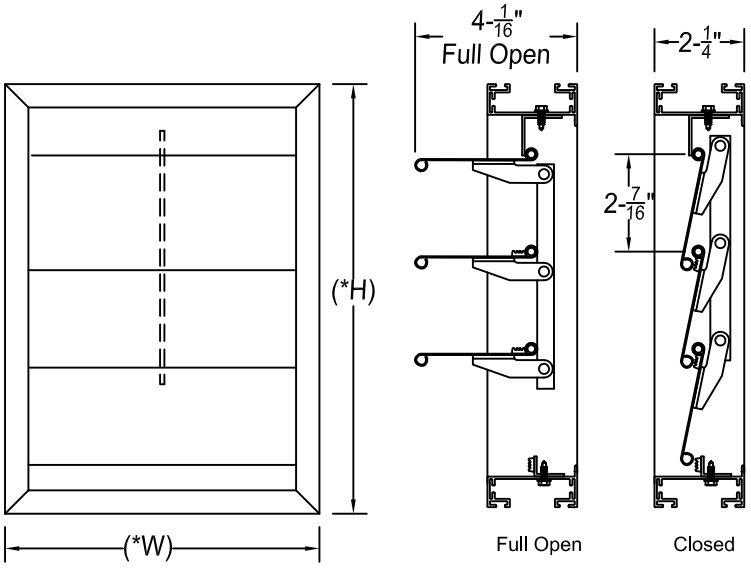
Size Limitations

Minimum size: 6"w x 6"h

***Maximum single section size:** 48"w x 48"h

*Arrangements C & F max. single section size- 48"w x 24"h

Note: For discharge applications dampers should be placed a distance of at least 2/3 of the fan diameter away from the fan.



* W & H dimensions are approximately 1/4" undersized.

Multiple Sections

☐ Exposed mullions

☐ Aluminum sub-frame

Finishes

☐ Polyester Powder Coat (Consult Factory)

Options and Accessories

☐ Flanged Frame 1 3"

☐ Upstream ☐ Downstream

☐ 1" ☐ 1-1/2" (Default) ☐ 2" ⊏

☐ Counterbalance

☐ Weights

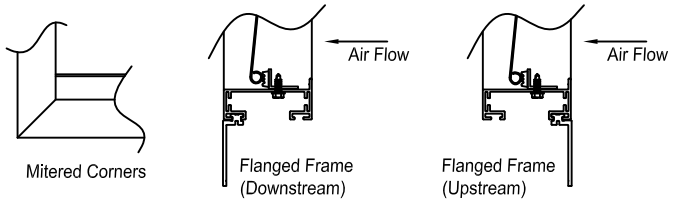
☐ Assist to Open (Default) ☐ Assist to Close

☐ Springs

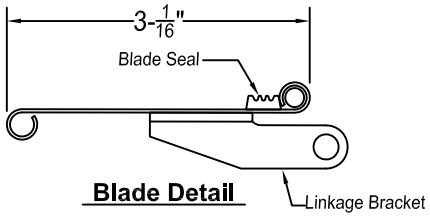
☐ Assist to Open (Default) ☐ Assist to Close

☐ Set Limit Open Position Bracket

☐ Motor Driven



Frame Detail



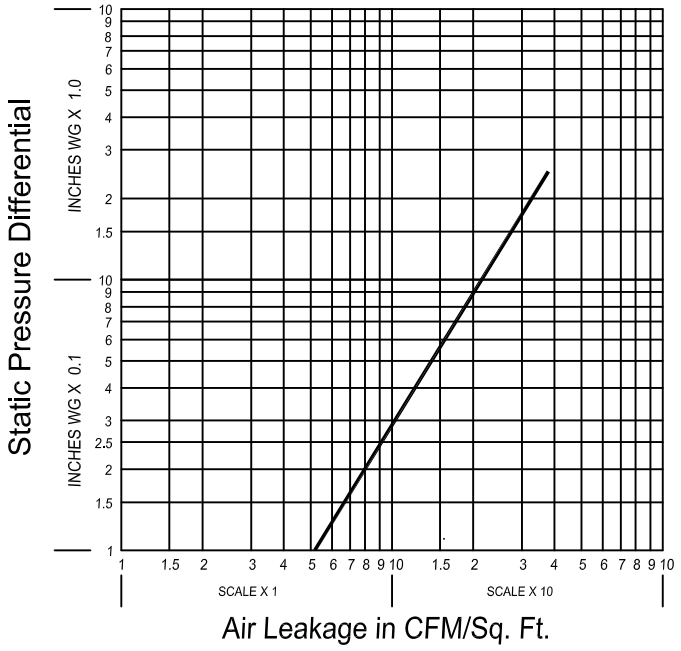
Blade Detail

Quantity	Tag	SIZE		Optional Counter-Weights or Springs	Airflow Arrangement	Other Options
		"W" Width	"H" Height			

Due to continuing research, United Enertech reserves the right to change specifications without notice.

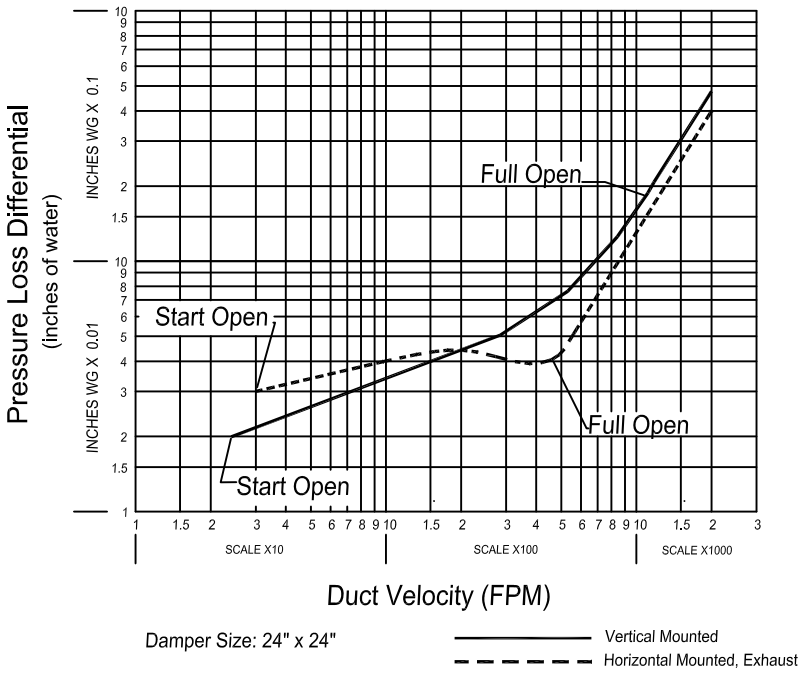
Job Name:	☐ MODEL CB-601 (2400 FPM)		
Location:	DRAWN BY: SRB	DATE: 4-28-10	REV. DATE: 9-7-12
Architect:	REV. NO. 4	APPROVED BY:	DWG. NO.: F-3
Engineer:			
Contractor:			

Leakage



Damper Size: 24" x 24"

Pressure Drop



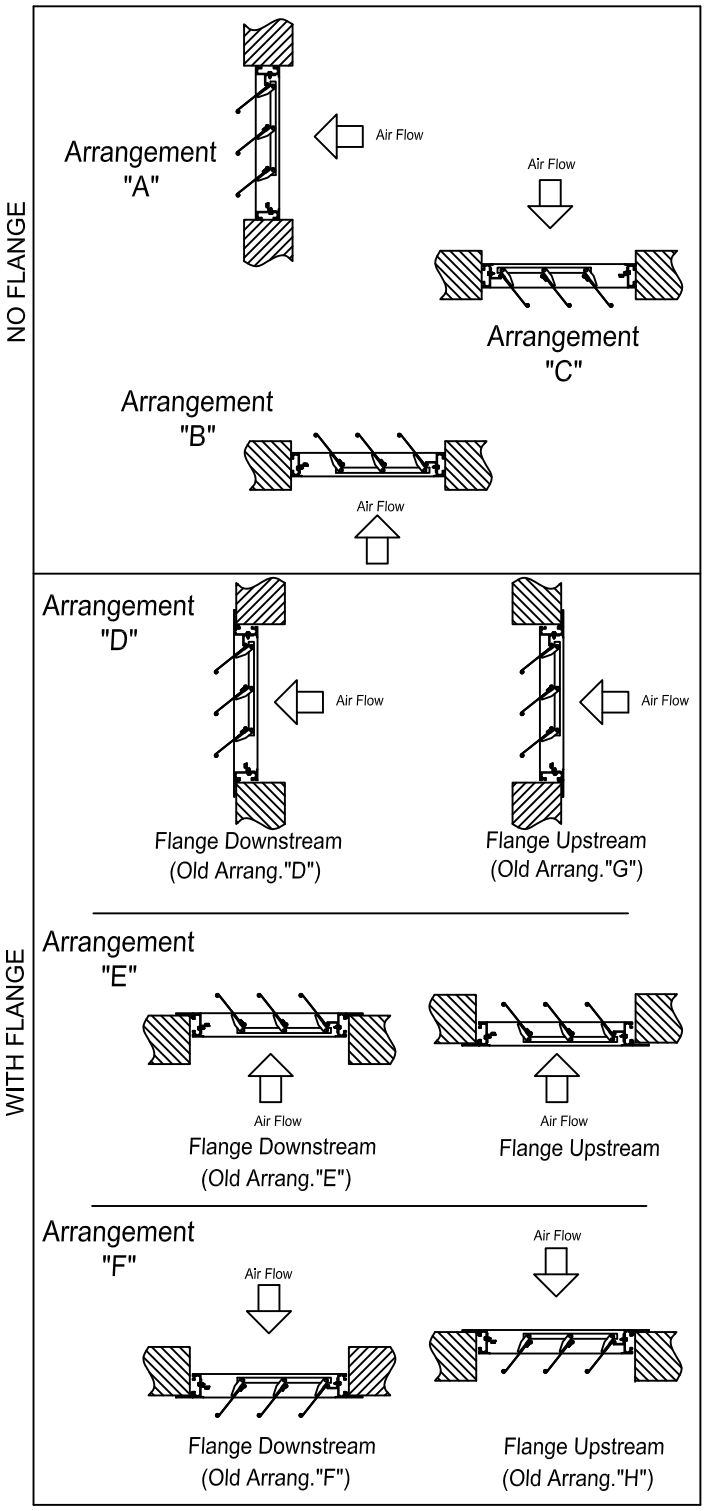
Damper Size: 24" x 24"

Vertical Mounted

Horizontal Mounted, Exhaust

CB-601 AIR FLOW ARRANGEMENTS

Counterweights or springs used in airstream
(assist to open)



Air Velocity in feet per minute through Face Area
Tested per AMCA Std. 500-D, ductwork upstream and downstream.

⊛ Set at least resistant to open

(ENGINEERS)

SUBMITTAL DATA

Aluminum Backdraft Damper (2800 FPM)

Application and Design

The CB-600 is a vertical or horizontal mounted backdraft damper that is designed to allow airflow and prevent reverse airflow.

Ratings

Pressure: 3" w.g.

Velocity: 2800 FPM

Temperature: 200° F

Standard Construction

Frame: .060" Thick Extruded Aluminum

Blades: .045" Thick Extruded Aluminum

Blade Seal: Vinyl

Linkage: 0.625" x 0.125" Aluminum Bar (in airstream)

Size Limitations

Minimum size: 6"w x 6"h

***Maximum single section size:** 48"w x 48"h

Multiple Sections

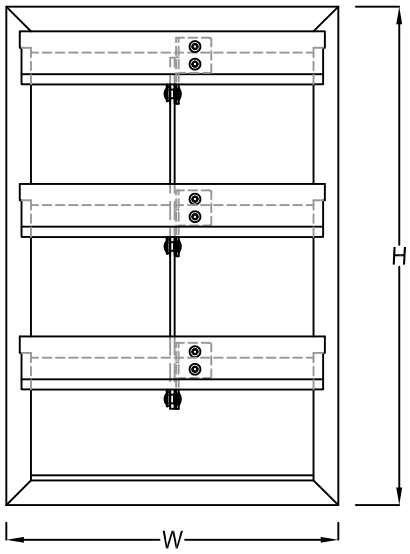
- ☐ Exposed mullions
- ☐ Aluminum sub-frame

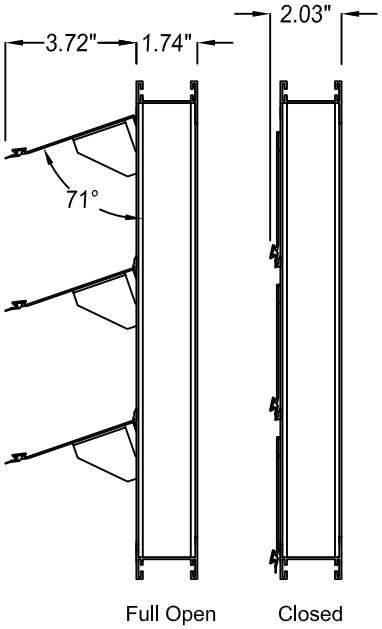
Finishes

- ☐ Polyester Powder Coat (Consult Factory)

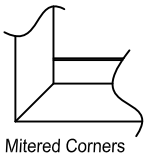
Options and Accessories

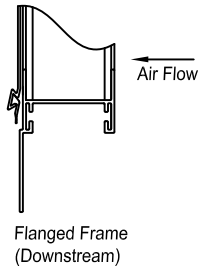
- ☐ 1-1/2" Flanged Frame
  - ☐ Upstream ☐ Downstream
- ☐ Counterbalance
  - ☐ Weights
    - ☐ Assist to Open (Default) ☐ Assist to Close
  - ☐ Springs
    - ☐ Assist to Open (Default) ☐ Assist to Close
- ☐ Set Limit Open Position Bracket
- ☐ Motor Driven



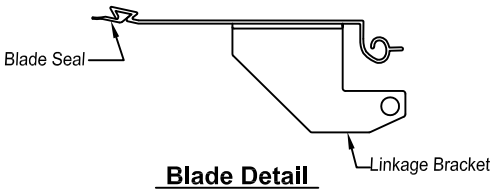


* W & H dimensions are approximately 1/4" undersized.





Frame Detail



Blade Detail

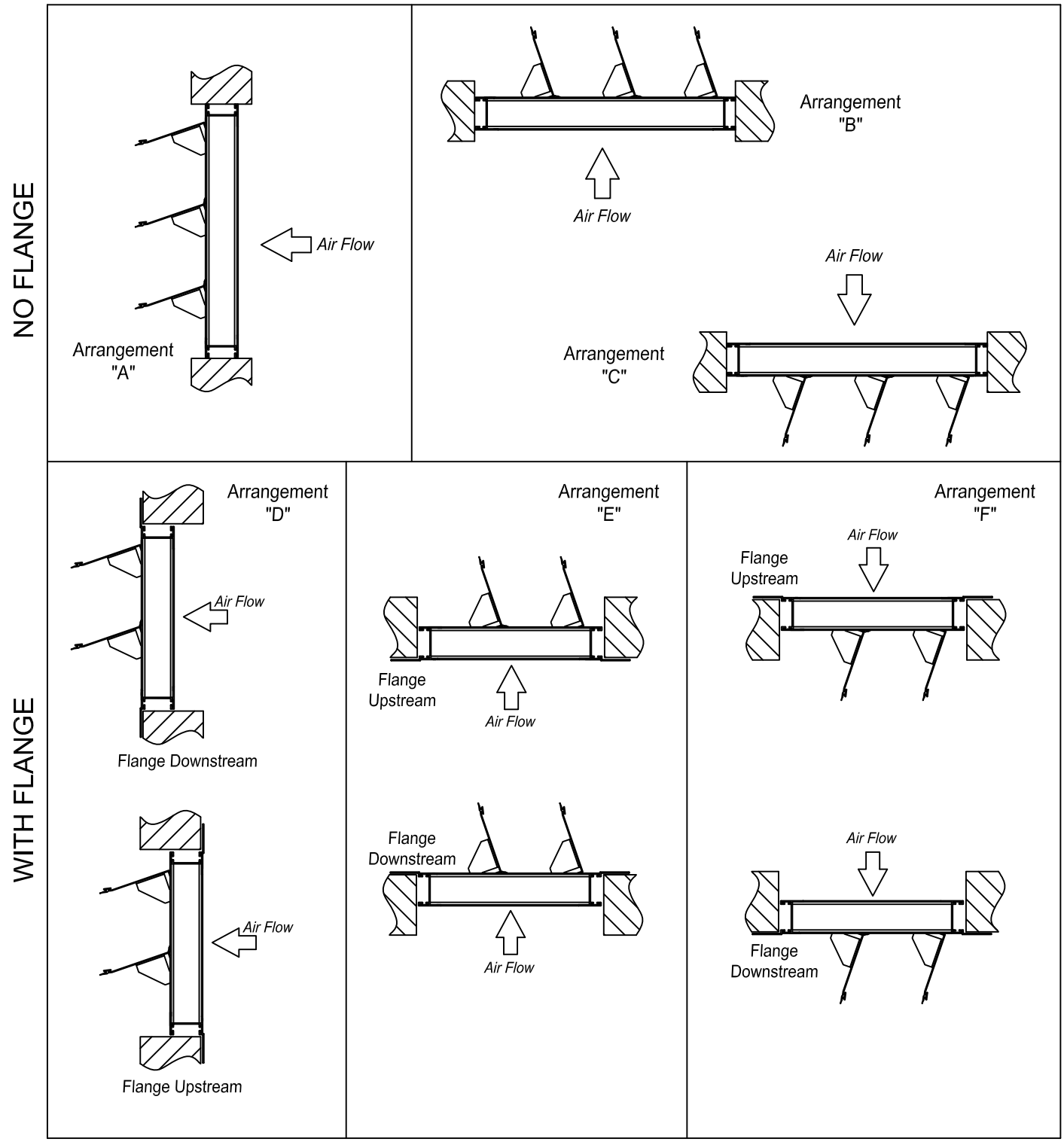
Quantity	Tag	SIZE		Optional Counter-Weights or Springs	Airflow Arrangement	Other Options
		"W" Width	"H" Height			

Due to continuing research, United Enertech reserves the right to change specifications without notice.

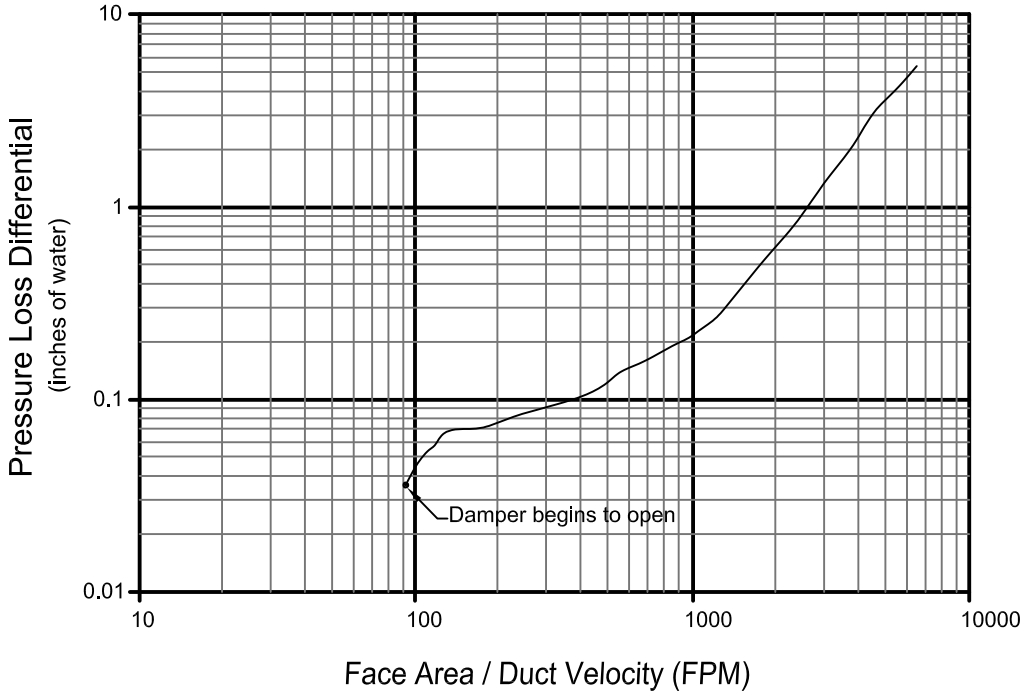
Job Name:	☐ **MODEL CB-600 (2800 FPM)**		
Location:	DRAWN BY: CLJ	DATE: 4-29-10	REV. DATE: 6-9-16
Architect:	REV. NO. 7	APPROVED BY: MD	DWG. NO.: **F-1**
Engineer:			
Contractor:			

CB-600 Airflow Arrangements

Counterweights or springs used in airstream

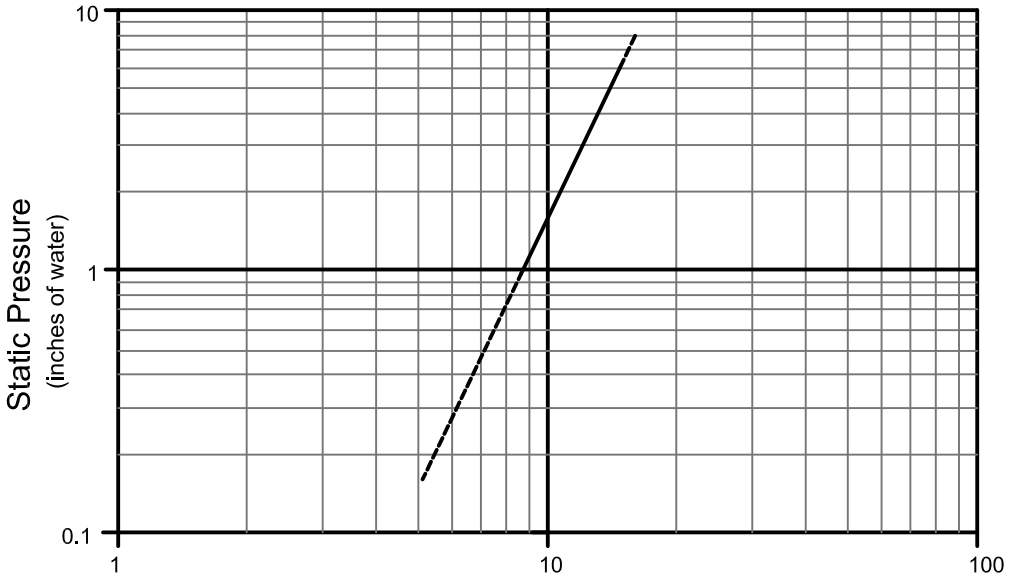


Pressure Drop



Tested per AMCA 500-D, Fig. 5.2
Damper size: 24" x 24"
Arrangements A & D

Leakage



Tested per AMCA 500-D, Fig. 5.2 & 6.6
Damper size: 24" x 24"

United Enertech

(ENGINEERS)

SUBMITTAL DATA

CONTROL DAMPERS

Standard Blade

OPPOSED BLADE - PARALLEL BLADE DAMPER

Suggested Specifications:

Furnish and install at location shown on drawing or in accordance with schedules dampers meeting the following specifications: Rectangular damper shall have .125 airfoil extruded aluminum blades and .081 extruded aluminum frame. Damper to have thrust bushings and meet the low pressure drop equal to United Enertech MODEL CD-100 or CD-101.

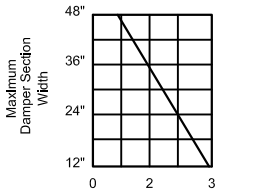
Pressure - up to 3" w.g. - See pressure limit table

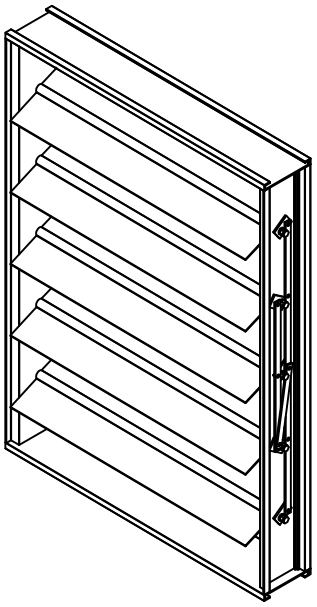
FPM Table

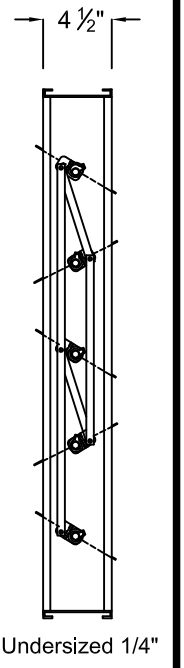
12" wide	- 2600 FPM
24"	- 2200
36"	- 2000
48"	- 1700
52"	- 1600

Jackshafting provided over 52" wide

Pressure Limitations







Undersized 1/4"

Standard Construction:

Frame: .081 Extruded Aluminum

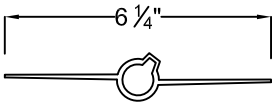
Blade: .125 Extruded Aluminum

Bearing: Bronze Oilite

Linkage: *Concealed in frame

Axles: 1/2"Ø Cast Zinc with thrust bushings

Control Shaft: 1/2" x 6" long outboard support bearing supplied with all single section dampers for field mounted actuators. Factory-installed jackshaft supplied with all multi-section dampers.



Blade Detail

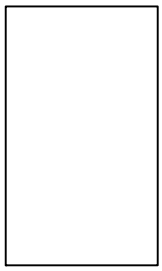
Minimum Size: 5"w x 4"h
8" and under single blade

Maximum Size: 52"w x 72"h (single section)
Multi-section: unlimited

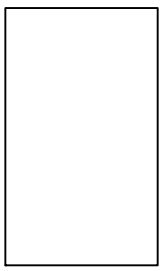
*Over 36" wide or 48" high, blade linkage will be modified.

Options:

- ☐ .125 Extruded Aluminum Frame (box frame)
- ☐ 1-1/2" .125 Extruded Aluminum Flanged Frame
- ☐ Blade Seals PVC (175°F)
- ☐ Blade Seals Silicone (400°F & #304 Stainless Steel Bushing)
- ☐ Compression Jamb Seals (stainless steel)
- ☐ Header Plates (End Flange)
- ☐ Hand Quadrant
- ☐ Factory Installed Pneumatic or Electric Actuators (see cat. sheet H-1)
- ☐ Stand Off Bracket, 2"
- ☐ Position Switch
- ☐ Face and By-pass Damper
- ☐ Chain Operator
- ☐ Heresite coated (air dry)
- ☐ Epoxy coated (powder coated @ 415°)
- ☐ Weather Shield Enclosure for Actuator
- ☐ Explosion-proof Enclosure for Actuator



size tested: 36"w x 36"h
12"w x 12"h



size tested: 36"w x 36"h
12"w x 12"h

Job Name:	☐ MODEL CD-100 (Opposed)
Location:	☐ MODEL CD-101 (Parallel)
Architect:	
Engineer:	
Contractor:	

DRAWN BY:	DATE:	REV. DATE:
CLJ	11-20-01	9-24-10
REV. NO.	APPROVED BY:	DWG. NO.:
37	BGT	**A-1**

Model CD-100, CD-101 Damper Performance Data

LEAKAGE PERFORMANCE

Leakage - $L/s/m^2$ ($FT^3/min/ft^2$)

Damper Width X Height	1 in. w.g. Class	4 in. w.g. Class	8 in. wg Class
12" x 12"	3.6 (Class 1A)	7.6 (Class 1A)	10.3 (Class 1A)
36" x 36"	0.5 (Class 1A)	5.6 (Class 1A)	20.8 (Class 1A)

Note: At 1" w.g. 12"x12" damper leaks 3.6 cfm per square foot.
Note: At 1" w.g. 36"x36" damper leaks 0.5 cfm per square foot.

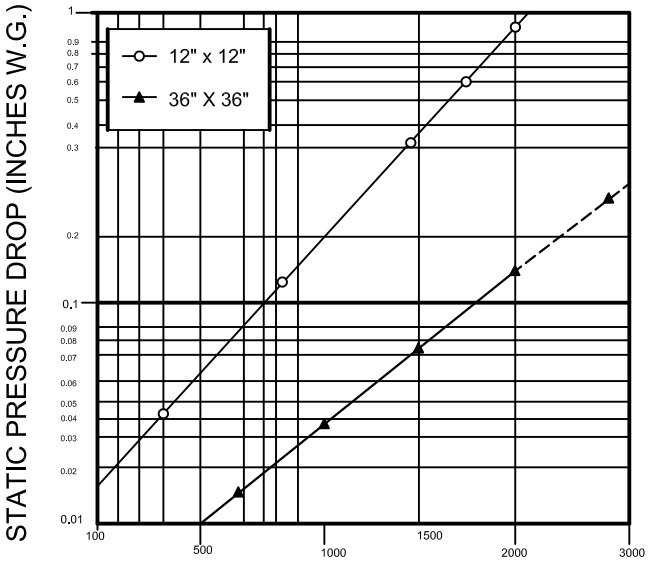
United Enertech certifies that the CD-100-I, CD-101-I is licensed to bear the Certaire Certified Air Ratings Seal. The ratings shown are based on tests made in accordance with AMCA standard 500.

AMCA STANDARDS

Pressure / Class	Leakage, $ft^3/min/ft^2$			
	Required Rating		Extended Ranges (optional)	
	0.25 kPa (1")	1.0 kPa (4")	2.0 kPa (8")	3.0 kPa (12")
1A	15.2 (3)	40.6 (8)	55.9 (11)	71.1 (14)
1	20.3 (3)	40.6 (8)	55.9 (11)	71.1 (14)
2	50.8 (10)	102 (20)	142 (28)	178 (35)
3	203 (40)	406 (80)	569 (112)	711 (140)

Leakage Classification per AMCA publication 511-99

PRESSURE DROP



Based on STANDARD AIR- .075 lb. per cubic foot.

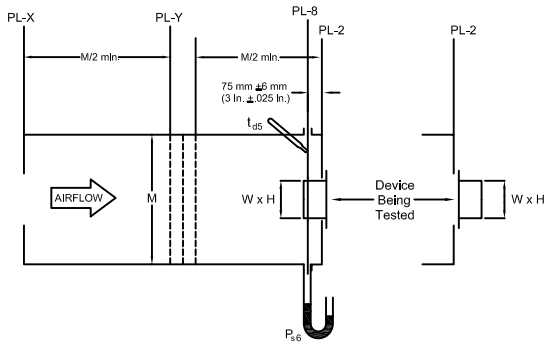


Figure 5.5- Test Device Setup with Inlet Chamber

12" x 12" (305mm x 305mm)

Face Velocity ft/min (m/s)	Pressure drop w.g. (PA)	CFM
407 (2.0)	.040 (1.24)	407
820 (4.1)	.150 (4.97)	820
1234 (6.3)	.340 (12.42)	1234
1641 (8.3)	.610 (22.35)	1641
2057 (10.4)	.950 (34.77)	2057

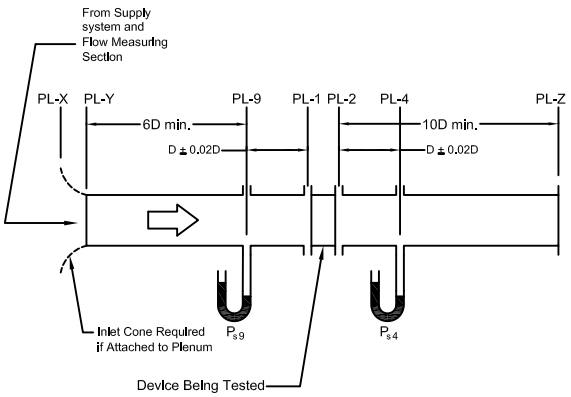


Figure 5.3- Test Device Setup with Inlet and Outlet Ducts

36" x 36" (914mm x 914mm)

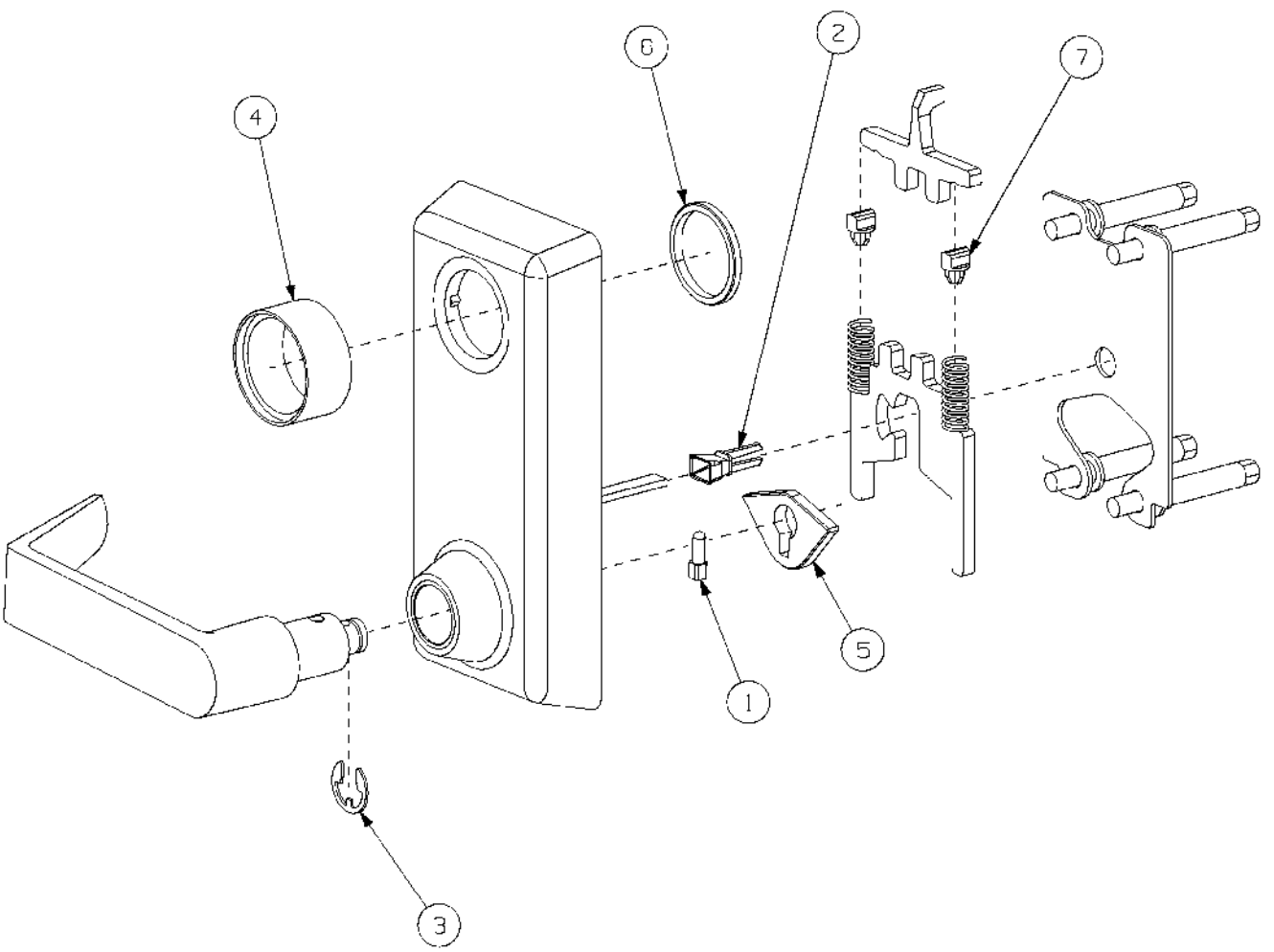
Face Velocity ft/min (m/s)	Pressure drop w.g. (PA)	CFM
392 (1.99)	.005 (1.24)	3528
789 (4.01)	.02 (4.97)	7100
1208 (6.14)	.05 (12.42)	10,877
1598 (8.12)	.09 (22.35)	14,382
2006 (10.19)	.14 (34.77)	18,061

(152mm)

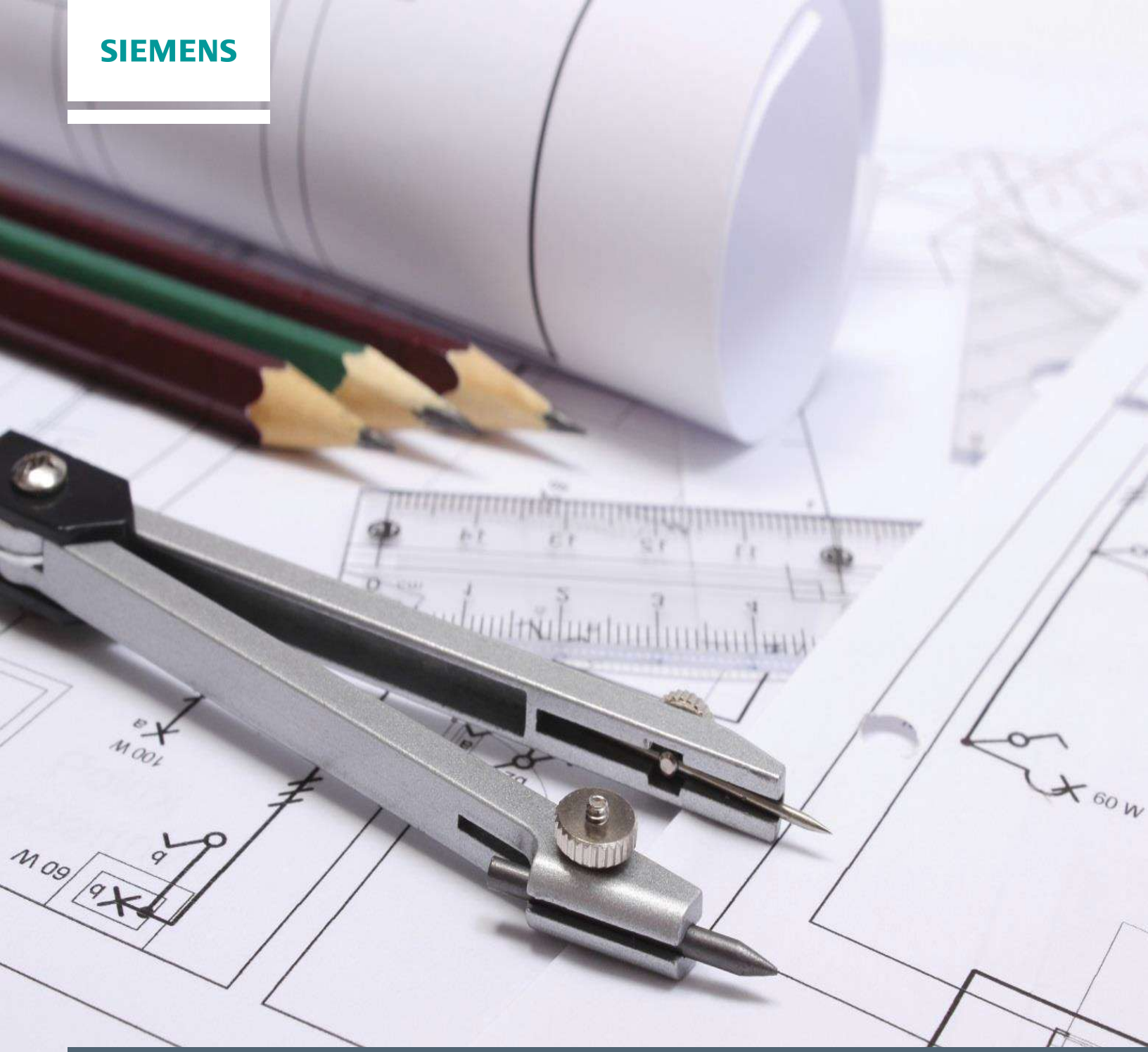
230L TRIM

ITEM NO.	QTY	PART NO.	DESCRIPTION	FINISH
1	1	050148	230L Shearpin Replacement Kit (Pack of 10)	
2	1	050156	Tailpiece Guide Lead Kit (Pack of 10)	
3	1	964334	Retaining Ring	
4	1	971249	230L Cylinder Collar	
5	1	971257	230L Lever Cam	
6	1	971258	230L Cylinder Locknut	
7	2	971497	230L Locking Plunger	

X DESIGNATES FINISHED ITEMS AND FINISH MUST BE SPECIFIED WHEN ORDERING



SIEMENS



Siemens Submittal Package

FIDELITY 47907

Date : 9/29/2020

SIEMENS

TRANSMITTAL LETTER

Date: 9/29/2020

To: ANIXTER INC
1602 NE 6TH AVE
OCALA, FL, 34470-3643
US

Job Name: FIDELITY
Quote Name: FIDELITY 47907
Quote Number: henddx20c_11161600_31_00_M00
Distributor: ANIXTER INC

Drawings are for: Approval ☑ Record ☐

Please find enclosed 1 Copy of the below listed materials for the above referenced job.

Contents:	
Dry Type Transformers	Panelboards
Safety Switches	

Approval Drawings:

Upon the return of 1 Copy of “Approved “ or “No Exceptions Noted” drawings with release, it will be considered fact that the material as shown meets the requirements of the plans and specifications. For drawings returned indicating “Approved as Noted” or “Exceptions as Noted”, the cost of any additional equipment not included in the original quotation will be reflected in the total invoice price. Any changes other than those shown on these returned drawings will not be considered the responsibility of Siemens. It must be noted that these drawings and descriptive literature incorporate Siemens’ interpretation of the plans and specifications and are subject to corrections of errors. The above material is on “Hold for Release” status and will not be released until the receipt of signed submittals having one of the above notations with formal release. These drawings along with release should be returned as soon as possible so as not to cause any delays in shipping and/or escalation that might be incurred due to these delays.

Record Drawings:

These drawings reflect the products manufactured by Siemens for this job.

Submitted By:

Phone:
E Mail:
Fax:

Proposal

To: ANIXTER INC
1602 NE 6TH AVE
OCALA, FL 34470-3643
USA

From:

USA

Attention:

Tel. No.:

Job Name: FIDELITY
Quote Name: FIDELITY 47907
Quote #: henddx20c_11161600_31_00_M00
Bid Date: 09/29/2020

Siemens Industry, Inc. (Company) agrees to sell to Purchaser and Purchaser agrees to purchase from the Company the goods described below. Written quotations are valid for 30 calendar days from price approval date unless otherwise stated in the quotation. Quotations are subject to change by Siemens Industry, Inc. at any time upon written notice to Purchaser. Quoted Lead times refer to the manufacturing cycles, in working days, at time of quotations and are subject to change.

Quote Notes:

Line #:	Qty	Description
20000	1	EG1--PANELBOARD P1 1 - SECTION P1C18V1125ABST, System Voltage: 208Y/120 3Ø 4W Wye AC, IR @ 10,000 AIC, Bottom Feed, Surface Mount, Bus Rating: 250A, Bus Material: Aluminum, Plating: Tin, NEMA 3R OUTDOOR. 1 - 20A /2P-BL 3 - 30A /2P-BL 1 - 20A /1P-BLF2-GFCI 5 - 20A /1P-BL 4 - 1P-BL - PROV 1 - INTERIOR W/ 125A /3P-3VA41-SEAB MAIN BREAKER
21000	1	100A/480V/3P/F/N3R--HF363NR Heavy Duty (600 V max), Fusible, Number of Poles:3, Voltage AC Max:600V, Voltage DC Max:250, Max Ampere Rating:100A, Type 3R, Fuse Class- Standard Mounting:CLASS H, K, Fuse Class - Move Load Base:CLASS J, Fuse Class- Need Mounting Kit:CLASS R, T. 1 - HF363NR
1000	1	T1--3F3YXXXD16 -45KVA SERIES J Standard Dry Type, 3 Phase, 45 KVA, 480 Primary Voltage, 208Y/120 Secondary Voltage, Transformer Core: Aluminum-Wound, 6 - 2.5% (2 FCAN 4 FCBN) Taps, 150C, Ventilated, Drip Shield Kit: Provided With Transformer, Seismic Rated: SEISMIC REQUIRES FLOOR MOUNT. Catalog No.: A6X30105130

Global Notes:

Important Update:

As a result of the global Covid-19 Virus outbreak, temporary delays in delivery, labor or services from Siemens and its sub-suppliers or subcontractors may occur. Among other factors, Siemens' delivery is subject to the correct and punctual supply from sub-suppliers or subcontractors, and Siemens reserves the right to make partial deliveries or modify its labor or services. While Siemens shall make every commercially reasonable effort to meet the delivery or service or completion date mentioned above, such date is subject to change

Cancellation Schedule:

In the event that Buyer cancels the purchase order, or portions of the purchase order in writing, the following charges, as a percentage of the total purchase order price for the order, or application portions thereof, will apply:

After receipt of order or before approval drawings are completed	15%
After approval drawing completion, but before release to manufacturing	30%
Before start of fabrication, but after major component purchase	60%
After start of fabrication, but before start of assembly	80%
After assembly has started	100%

Price Policy:	Standard quote is valid for 30 days from price approval date.
Payment:	Per Siemens distributor's terms.
Shipping:	Shipment of goods will be made after receipt of all the following at Company's production facility: (a) Purchase Order / Electronic PO, (b) Technical Information, and if required (c) Drawing Approval.
Freight:	Freight allowed on all orders over $1,000 and shipped within the contiguous United States, provided Seller selects the Route Option: BESTRT -Best Route.
Delivery:	FOB Shipping Point, unless stated otherwise.
Small Order Handling:	Purchase orders below $400 will incur a $25 Small Order Handling (SOH) Fee.
Warranty:	Warranty shall be in effect for a period of (1) year from initial operation of the goods but not more than eighteen (18) months from Siemens, shipment of the goods, unless stated otherwise.
Other:	This proposal is subject to credit approval and US government regulation. It is also based on the Company's interpretation of the plans and specifications and is subject to correction for errors in such plans or specifications. This document and any other documents specifically referred to as being a part hereof constitute the entire agreement on the subject matter and it shall not be modified except in writing signed by both parties. THIS PROPOSAL IS BASED UPON SIEMENS STANDARD TERMS AND CONDITIONS OF SALE ATTACHED HERETO AND INCLUDED HEREIN. Company hereby objects to any additional or different terms set forth in Purchaser's request for proposal, specifications, purchase order, or any other document of Purchaser. Acceptance of additional or different terms must be specifically assented to in writing by Company. Federal Projects (This applies to Federal and Federally Funded Projects only): Siemens represents that it is providing "commercial items" and services for sale within the definition of FAR 2.101. In keeping with its commercial market participation, Siemens is categorically exempt from any Cost & Pricing Data requirements. Siemens utilizes a commercial accounting system under International Financial Reporting Standards (IFRS); and is technically unable to comply with Federal Cost Accounting Standards & Certification and any FAR 31 requirements. Siemens Industry, Inc. is a Foreign Owned, Controlled, or Influenced ("FOCI") firm, under the definition contained in the National Industrial Security Program Operational Manual ("NISPOM") and cannot obtain a security clearance, or perform work requiring its compliance with the FAR 52.204-2 "Security Requirements." Siemens does not anticipate receiving or having any access to any USG Controlled Unclassified Information (CUI) or Covered Defense Information (CDI) in the performance of this contract. However, in the event that any CUI/CDI will be required

by Siemens in the performance of this contract, contractor/customer agrees to formally notify Siemens of its intent to transmit or provide CUI/CDI prior to the transmittal of any such information. In that event, Siemens will provide a plan in order to compliantly address the requirements of FAR 52.204-21, DFARS 252.204-7008, 252.204-009 and/or 252.204-7012. Siemens shall not be held responsible for determining, or providing, its compliance with any federal requirements including, but not limited to any Buy America/Buy American requirements, unless the contractor/customer has provided the SPECIFIC federal flow-down provisions to Siemens, and received Siemens affirmation of compliance with the same prior to issuance of any Purchase Order or Contract.

SIEMENS STANDARD TERMS AND CONDITIONS OF SALE FOR PRODUCTS

Version1.1/Restricted **Date: 07/01/2016**

1. APPLICABLE TERMS. This Agreement governs the sale of equipment, components, parts, and materials provided by Siemens ("Products"). Any applicable addenda, these terms, Siemens proposal, price quote, purchase order, or acknowledgement issued by Siemens form the parties' final agreement ("Agreement"). In the event of a conflict between these documents, precedence shall apply in accordance with the order listed in the previous sentence. Siemens' proposal, offer or acceptance is conditioned on Buyer's acceptance of this Agreement. Any additional or conflicting terms in Buyer's request for proposal, specifications, purchase order or any other written or oral communication are not binding on Siemens unless separately signed by Siemens. Siemens' failure to object to Buyer's additional or conflicting terms does not operate as a waiver of any terms contained in this Agreement.

2. PRICING & PAYMENT. Prices and payment terms are: (i) as stated in Siemens' proposal, or if none are stated; (ii) Siemens' standard prices in effect when Siemens receives Buyer's purchase order; or if neither (i) or (ii) apply, then Siemens' standard prices in effect when the Products ship.

(a) *Payment*. Unless stated in Siemens' proposal, all payments are due net thirty (30) days from the invoice date in United States Dollars.

(b) *Credit Approval.* All orders are subject to credit approval by Siemens. Siemens may modify, suspend or withdraw the credit amount or payment terms at any time. If there is doubt as to Buyer's financial condition, Siemens may withhold manufacturing or shipment, require cash payments, or require other satisfactory security. Siemens may recover shipped Products from the carrier pending such assurances.

(c) *Installment Shipment.* Where Products are delivered in shipments or only part of a shipment fails to comply with this Agreement, the Buyer may only reject the non-compliant portion. Buyer will separately pay for each shipment. If Siemens holds or stores Products for Buyer, it shall do so at Buyer's sole risk and expense.

(d) *Taxes, Shipping, Packing, Handling.* Unless stated in writing by Siemens, Siemens' prices exclude charges for freight, unloading, storage, insurance, taxes, excises, fees, duties or other government charges related to the Products. Buyer will pay these amounts or reimburse Siemens. If Buyer claims a tax or other exemption or direct payment permit, Buyer will provide a valid exemption certificate or permit and indemnify, defend and hold Siemens harmless from any taxes, costs and penalties arising from same. Siemens' prices include the costs of its standard domestic packing only. Any packing deviation, including U.S. Government sealed packing, will be charged to Buyer. Increases, changes (including in application), adjustments or surcharges which may be incurred are for Buyer's account.

(e) *Late Payments.* Late payments shall bear interest at an annual percentage rate of twelve percent (12%) or the highest rate allowed by law, whichever is lower.

(f) *Disputed Invoice.* If Buyer disputes all or any portion of an invoice, it must first deliver written notice to Siemens of the disputed amount and the basis for the dispute within twenty-one (21) days of receiving the invoice. Failure of Buyer to timely notify Siemens of any dispute constitutes a waiver of Buyer's claim. If Buyer only disputes a portion of the invoice, Buyer must pay the undisputed portion in accordance with Article 2(a). Upon resolution of the dispute, Buyer must pay the invoice or the remainder of the invoice, plus any accrued interest on the late payment.

(g) *Suspension/Termination Right.* Siemens may suspend work if an undisputed invoice is more than thirty (30) days past due. Siemens may terminate this Agreement if an undisputed invoice is more than sixty (60) days past due. Unless prohibited by law, Siemens may also terminate this Agreement immediately in the event of a material adverse change in Buyer's financial condition including, but not limited to, bankruptcy, insolvency, liquidation or similar financial condition.

3. DELIVERY; TITLE; RISK OF LOSS. Products will be delivered F.O.B. Siemens point of shipment with title and risk of loss or damage passing to Buyer at that point. Buyer is responsible for all transportation, insurance and related expenses. The related expenses shall include any taxes, duties or documentation fees. Siemens may make partial shipments. Any shipping, delivery and installation dates are estimated dates only. Siemens is not liable for any loss or expense incurred by Buyer or Buyer's customers if Siemens fails to meet its delivery schedule.

4. DEFERMENT AND CANCELLATION. Buyer has no right to defer shipment but may cancel this Agreement on thirty (30) days written notice if Siemens has not already performed. If Buyer cancels this Agreement, it shall pay all cancellation charges including, without limitation: (i) the full price for any finished Product; (ii) for partially completed product, the portion of the price determined to be due by Siemens based on its percentage of completion of the Product; (iii) reasonable overhead and profit; and (iv) any payments due subcontractors and/or suppliers for any materials, components or products ordered which cannot be cancelled, refunded, or redirected for other beneficial use.

5. TRANSPORTATION AND STORAGE. (a) When Products are ready for shipment, Siemens will: (i) inform Buyer, and Buyer will then promptly give shipping instructions to Siemens; (ii) determine the method of transportation and shipment routing; and (iii) ship the

Products with freight prepaid by normal transportation. If Buyer fails to provide timely shipping instructions, Siemens will ship the Products by normal transportation means to Buyer or to a storage location selected by Siemens. Buyer will pay or reimburse any excess transportation charges for special or expedited transportation.

(b) If Products are placed into storage, delivery occurs and risk of loss transfers to Buyer when the Products are placed on the carrier for shipment to the storage location. If the Products are to be stored in the facility where manufactured, delivery occurs and risk of loss transfers to Buyer when placed in the storage location.

Buyer will pay all Siemens' storage expenses, including but not limited to, preparation for and placement into storage, handling, freight, storage, inspection, preservation, maintenance, taxes and insurance, upon receipt of an invoice(s) from Siemens. When conditions permit and upon payment to Siemens of all amounts due, Buyer must arrange, at its expense, to remove the Products from storage. Buyer bears the risk of loss, damage or destruction to Products in storage.

6. FORCE MAJEURE / DELAYS. If Siemens' performance is delayed by any cause beyond its reasonable control (regardless of whether the cause was foreseeable), including without limitation acts of God, strikes, labor shortage or disturbance, fire, accident, war or civil disturbance, delays of carriers, cyber-attacks, terrorist attacks, failure of normal sources of supply, or acts or inaction of government, Siemens' time of performance will be extended by a period equal to the length of the delay plus any consequences of the delay. Siemens will notify Buyer within a reasonable time after becoming aware of any such delay.

7. BUYER'S REQUIREMENTS. Siemens' performance is contingent upon Buyer timely fulfilling all of its obligations under this Agreement. These obligations include the Buyer supplying all documents and approvals needed for Siemens to perform, including but not limited to technical information and data, drawing and document approvals, and necessary commercial documentation. Siemens may request a change order for an equitable adjustment in prices and times for performance, as well as for any additional costs or any delay resulting from the failure of Buyer or Buyer's contractors, successors or assigns to meet these obligations.

8. INDEMNITY. Siemens and Buyer (each as an "Indemnitor") shall indemnify the other ("Indemnitee") from and against all third party claims alleging bodily injury, death or damage to a third party's tangible property, but only to the extent caused by the Indemnitor's negligent acts or omissions. If the injury or damage is caused by the parties' joint or contributory negligence, the loss and/or expenses shall be borne by each party in proportion to its degree of fault. No part of the Product(s) or Buyer's site is considered third party property.

Indemnitee shall provide the Indemnitor with prompt written notice of any third party claims covered by this Article. Indemnitor has the unrestricted right to select and hire counsel and the exclusive right to conduct the legal defense and/or settle the claim on the Indemnitee's behalf. The Indemnitee shall not make any admission(s) which might be prejudicial to the Indemnitor and shall not enter into a settlement without the express permission of the Indemnitor.

9. WARRANTIES. (a) Warranties. Siemens warrants that: (i) each Product is free from defects in material and workmanship; (ii) each Product materially conforms to Siemens' specifications that are attached to, or expressly incorporated into this Agreement; and (iii) at the time of delivery, Siemens has title to each Product free and clear of liens and encumbrances (collectively, the "Warranties"). The Warranties do not apply to software furnished by Siemens. The sole and exclusive warranties for any software are set forth in the applicable Software License/Warranty Addendum.

(b) Conditions to the Warranties. The Warranties are conditioned on: (i) no repairs, modifications or alterations being made to the Product other than by Siemens or its authorized representatives; (ii) Buyer handling, using, storing, installing, operating and maintaining the Product in compliance with any parameters or instructions in any specifications attached to, or incorporated into this Agreement; (iii) compliance with all generally accepted industry standards; (iv) Buyer discontinuing use of the Product after it has, or should have had, knowledge of any defect; (v) Buyer providing prompt written notice of any warranty claims within the warranty period described below; (vi) at Siemens' discretion, Buyer either removing and shipping the Product or non-conforming part thereof to Siemens, at Buyer's expense, or granting Siemens reasonable access to the Products to assess the warranty claims; (vii) Product not having been subjected to accident (including force majeure), alteration, abuse or misuse; and (viii) Buyer not being in default of any payment obligation.

(c) Exclusions from Warranty Coverage. The Warranties do not apply to any equipment not provided by Siemens under this Agreement.

Any Product that is described as being experimental, developmental, prototype, or pilot is specifically excluded from the Warranties and is provided to Buyer "as is" with no warranties of any kind. Normal wear and tear is excluded, including any expendable items that comprise part of the Product (such as fuses, light bulbs and lamps). Siemens does not warrant or guarantee that any Product will be secure from cyber threats, hacking or similar malicious activity. Products that are networked, connected to the internet, or otherwise connected to computers or other devices must be appropriately protected by Buyer and/or end user against unauthorized access.

(d) Warranty Period. Buyer must provide written notice of any claims for breach of Warranties by the earlier of twelve (12) months from initial operation of the Product or eighteen (18) months from shipment. Additionally, absent written notice within the warranty period, any use or possession of the Product after expiration of the warranty period is conclusive evidence that the Warranties have been satisfied.

(e) Remedies. Buyer's sole and exclusive remedies for breach of the Warranties are limited, at Siemens' discretion, to repair or replacement of the Product, or its non-conforming parts, within a reasonable time period, or refund of all or part of the purchase price. The warranty on

repaired or replaced parts is limited to the remainder of the original warranty period. Unless Siemens agrees otherwise in writing, Buyer will be responsible for any costs associated with: (i) gaining access to the Product; (ii) removal, disassembly, replacement, installation, or reinstallation of any equipment, materials or structures to permit Siemens to perform its warranty obligations; (iii) transportation to and from the Siemens factory or repair facility; and (iv) damage to equipment components or parts resulting in whole or in part from non-compliance by the Buyer with Article 9(b) or from their deteriorated condition. All exchanged Products replaced under this Warranty will become the property of Siemens.

(f) Transferability. The Warranties are only transferable during the warranty period and only to the Product's initial end-user.

(g) THE WARRANTIES IN THIS ARTICLE 9 ARE SIEMENS' SOLE AND EXCLUSIVE WARRANTIES AND ARE SUBJECT TO THE LIMITS OF LIABILITY IN ARTICLE 10 BELOW. SIEMENS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, COURSE OF DEALING AND USAGE OF TRADE.

10. LIMITATION OF LIABILITY. NOTWITHSTANDING ANYTHING IN THIS AGREEMENT TO THE CONTRARY, SIEMENS IS NOT LIABLE, WHETHER BASED IN CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, INDEMNITY OR ANY OTHER LEGAL OR EQUITABLE THEORY, FOR: LOSS OF USE, REVENUE, SAVINGS, PROFIT, INTEREST, GOODWILL OR OPPORTUNITY, COSTS OF CAPITAL, COSTS OF REPLACEMENT OR SUBSTITUTE USE OR PERFORMANCE, LOSS OF INFORMATION AND DATA, LOSS OF POWER, VOLTAGE IRREGULARITIES OR FREQUENCY FLUCTUATION, CLAIMS ARISING FROM BUYER'S THIRD PARTY CONTRACTS, OR FOR ANY TYPE OF INDIRECT, SPECIAL, LIQUIDATED, PUNITIVE, EXEMPLARY, COLLATERAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR ANY OTHER LOSS OR COST OF A SIMILAR TYPE.

SIEMENS' MAXIMUM LIABILITY UNDER THIS AGREEMENT IS THE ACTUAL PURCHASE PRICE RECEIVED BY SIEMENS FOR THE PRODUCT THAT GAVE RISE TO THE CLAIM.

BUYER AGREES THAT THE EXCLUSIONS AND LIMITATIONS IN THIS ARTICLE 10 WILL PREVAIL OVER ANY CONFLICTING TERMS AND CONDITIONS IN THIS AGREEMENT AND MUST BE GIVEN FULL FORCE AND EFFECT, WHETHER OR NOT ANY OR ALL SUCH REMEDIES ARE DETERMINED TO HAVE FAILED OF THEIR ESSENTIAL PURPOSE. THESE LIMITATIONS OF LIABILITY ARE EFFECTIVE EVEN IF SIEMENS HAS BEEN ADVISED BY BUYER OF THE POSSIBILITY OF SUCH DAMAGES. THE WAIVERS AND DISCLAIMERS OF LIABILITY, RELEASES FROM LIABILITY AND LIMITATIONS ON LIABILITY EXPRESSED IN THIS ARTICLE 10 EXTEND TO SIEMENS' AFFILIATES, PARTNERS, PRINCIPALS, SHAREHOLDERS, DIRECTORS, OFFICERS, EMPLOYEES, SUPPLIERS, AGENTS, AND SUCCESSORS AND ASSIGNS.

11. PATENT AND COPYRIGHT INFRINGEMENT. Siemens will, at its option and expense, defend or settle any suit or proceeding brought against Buyer based on an allegation that any Product or use thereof for its intended purpose constitutes an infringement of any Patent Cooperation Treaty country member's patent or misappropriation of a third party's trade secret or copyright in the country where the Product is delivered by Siemens. Buyer will promptly give Siemens written notice of the suit or proceeding and the authority, information, and assistance needed to defend the claims. Siemens shall have the full and exclusive authority to defend and settle such claim(s) and will pay the damages and costs awarded in any suit or proceeding so defended. Buyer shall not make any admission(s) which might be prejudicial to Siemens and shall not enter into a settlement without Siemens' consent. Siemens is not responsible for any settlement made without its prior written consent. If the Product, or any part thereof, as a result of any suit or proceeding so defended is held to constitute infringement or its use by Buyer is enjoined, Siemens will, at its option and expense, either: (i) procure for Buyer the right to continue using said Product; (ii) replace it with substantially equivalent non-infringing Product; or (iii) modify the Product so it is non-infringing.

Siemens will have no duty or obligation under this Article 11 if the Product is: (i) supplied according to Buyer's design or instructions and compliance therewith has caused Siemens to deviate from its normal course of performance; (ii) modified by Buyer or its contractors after delivery; or (iii) combined by Buyer or its contractors with devices, methods, systems or processes not furnished hereunder and by reason of said design, instruction, modification, or combination a suit is brought against Buyer. In addition, if by reason of such design, instruction, modification or combination, a suit or proceeding is brought against Siemens, Buyer must protect Siemens in the same manner and to the same extent that Siemens has agreed to protect Buyer under this Article 11.

THIS ARTICLE 11 IS AN EXCLUSIVE STATEMENT OF SIEMENS' DUTIES AND BUYER'S REMEDIES RELATING TO PATENTS, TRADE SECRETS AND COPYRIGHTS, AND DIRECT OR CONTRIBUTORY INFRINGEMENT THEREOF.

12. CONFIDENTIALITY. (a) Both during and after the term of this Agreement, the parties will treat as confidential all information obtained from the disclosing party and all information compiled or generated by the disclosing party under this Agreement for the receiving party, including but not limited to business information, manufacturing information, technical data, drawings, flow charts, program listings, software code, and other software, plans and projections. Neither party may disclose or refer to the work to be performed under this Agreement in any manner that identifies the other party without advance written permission. However, Siemens has the right to share confidential information with its affiliates and subcontractors, provided those recipients are subject to the same confidentiality obligations set forth herein.

(b) Nothing in this Agreement requires a party to treat as confidential any information which: (i) is or becomes generally known to the public, without the fault of the receiving party; (ii) is disclosed to the receiving party, without obligation of confidentiality, by a third party having the

right to make such disclosure; (iii) was previously known to the receiving party, without obligation of confidentiality, which fact can be demonstrated by means of documents which are in the possession of the receiving party upon the date of this Agreement; (iv) was independently developed by receiving party or its representatives, as evidenced by written records, without the use of discloser's confidential information; or (v) is required to be disclosed by law, except to the extent eligible for special treatment under an appropriate protective order, provided that the party required to disclose by law will promptly advise the originating party of any requirement to make such disclosure to allow the originating party the opportunity to obtain a protective order and assist the originating party in so doing.

(c) It is Siemens' policy not to unlawfully or improperly receive or use confidential information, including trade secrets, belonging to others. This policy precludes Siemens from obtaining, directly or indirectly from any employee, contractor, or other individual rendering services to Siemens confidential information of a prior employer, client or any other person which such employee, contractor, or individual is under an obligation not to disclose. Buyer agrees to abide by this policy.

13. COMPLIANCE WITH LAWS. The parties agree to comply with all applicable laws and regulations, including but not limited to those relating to the manufacture, purchase, resale, exportation, transfer, assignment or use of the Products.

14. CHANGES IN WORK. No change will be made to the scope of work unless Buyer and Siemens agree in writing to the change and any resulting price, schedule or other contractual modifications. If any change to any law, rule, regulation, order, code, standard or requirement impacts Siemens' obligations or performance under this Agreement, Siemens may request a change order for an equitable adjustment in the price and time of performance.

15. NON-WAIVER. Any waiver by a party of strict compliance with this Agreement must be in writing, and any failure by the parties to require strict compliance in one instance will not waive its right to insist on strict compliance thereafter.

16. MODIFICATION OF TERMS. This Agreement may only be modified by a written instrument signed by authorized representatives of both parties.

17. ASSIGNMENT. Neither party may assign all or part of this Agreement, or any rights or obligations under this Agreement, without the prior written consent of the other; but either party may assign its rights and obligations, without recourse or consent, to any parent, wholly owned subsidiary, or affiliate or affiliate's successor organization (whether as a result of reorganization, restructuring or sale of substantially all of a party's assets). However, Buyer shall not assign this Agreement to: a competitor of Siemens; an entity in litigation with Siemens; or an entity lacking the financial capability to satisfy Buyer's obligations. Any assignee expressly assumes the performance of any obligation assigned. Siemens may grant a security interest in this Agreement and/or assign proceeds of this Agreement without Buyer's consent.

18. APPLICABLE LAW AND JURISDICTION. This Agreement is governed by and construed in accordance with the laws of the State of Delaware, without regard to its conflict of laws principles. The application of the United Nations Convention on Contracts for the International Sale of Goods is excluded. BOTH SIEMENS AND BUYER KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVE ALL RIGHTS TO A JURY TRIAL IN ANY ACTION OR PROCEEDING RELATED IN ANY WAY TO THIS AGREEMENT. Each party agrees that claims and disputes arising out of this Agreement must be decided exclusively in a federal or state court of competent jurisdiction located in a state in which either Buyer or Siemens maintains its principal place of business. Each party submits to the personal jurisdiction of such courts for the purpose of litigating any claims or disputes.

19. SEVERABILITY. If any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions will not in any way be affected or impaired. A court may modify the invalid, illegal or unenforceable provision to reflect, as closely as possible, the parties' original intent.

20. EXPORT / IMPORT COMPLIANCE. Buyer acknowledges that Siemens is required to comply with applicable export / import laws and regulations relating to the sale, export, import, transfer, assignment, disposal and use of the Products, including any export / import license requirements. Buyer agrees that Products will not at any time directly or indirectly be used, exported, imported, sold, transferred, assigned or otherwise disposed of in a manner which will result in non-compliance with any export / import laws and regulations. Siemens' continuing performance hereunder is conditioned on compliance with such export / import laws and regulations at all times.

21. PRODUCT RETURNS. Prior to the return of any Product to Siemens, Buyer must identify the Product or portion thereof and obtain written authorization and shipping instructions from Siemens. Siemens has the right, in its sole discretion, to permit or reject any such return. Siemens' authorization to return any Product to Siemens does not relieve Buyer of its obligation to pay for such Product. Upon receipt, inspection, and acceptance of the Product by Siemens, Siemens will issue a credit memo to Buyer, less applicable re-stocking fees. Siemens reserves the right to reject any hazardous material.

22. NUCLEAR. Unless expressly authorized in writing by Siemens, the Products must not be used in or in connection with a nuclear facility or application. If Buyer uses any Product in connection with any nuclear facility or activity, it does so at its own risk and Buyer will indemnify, defend and hold Siemens harmless, and waives and will require its insurers to waive all right of recovery against Siemens for any damage, loss, destruction, injury or death resulting from a "nuclear incident," as defined in the Atomic Energy Act of 1954, as amended, whether or not due to Siemens' negligence. Siemens' consent to Buyer's use of the Product in connection with any nuclear facility or application will be subject to additional terms and conditions that Siemens deems necessary to protect its interests.

23. SURVIVAL. The articles titled “Patent and Copyright Infringement,” “Limitation of Liability,” “Confidentiality,” “Delivery; Title; Risk of Loss,” “Export / Import Compliance,” and “Nuclear” survive termination, expiration or cancellation of this Agreement.

PURCHASER's ACCEPTANCE
The foregoing is hereby accepted.
_____
(Name of Purchaser)
By
_____
Title
_____
Date
_____

Siemens Industry, Inc.
By
_____

Siemens Industry, Inc.
SIEMENS STANDARD TERMS AND CONDITIONS OF SALE FOR PRODUCTS
July 1, 2016 (Version1.1/Restricted)

Project Name: FIDELITY 47907
Quote #: henddx20c_11161600_31_00_M00

CONTENTS: TYZ:PANELBOARD PANELBOARD P1

Drawings are for: Approval ☑ Record ☐

Engineer:
Contractor:
Distributor: ANIXTER INC
Date:

Submitted By:
Tel. No.:
Fax No.:

DESIGNATION(S): EG1

PANELBOARD NOTES

SECTION	:1 OF 1
PANEL TYPE	:P1
CATALOG NUMBER	:P1C18V1125ABST
ENCLOSURE	:3R Outdoor
SYSTEM VOLTAGE	:208Y/120 3Ø 4W Wye AC
IR RATING	:10 K AIC
MAIN BUS	:125 A
BUS MATERIAL	:Tin Plated Aluminum
FEED	:Bottom
MOUNTING	:Surface
SE LABEL	:No
SERIES RATED	:No
CONDUIT AREA	:N/A

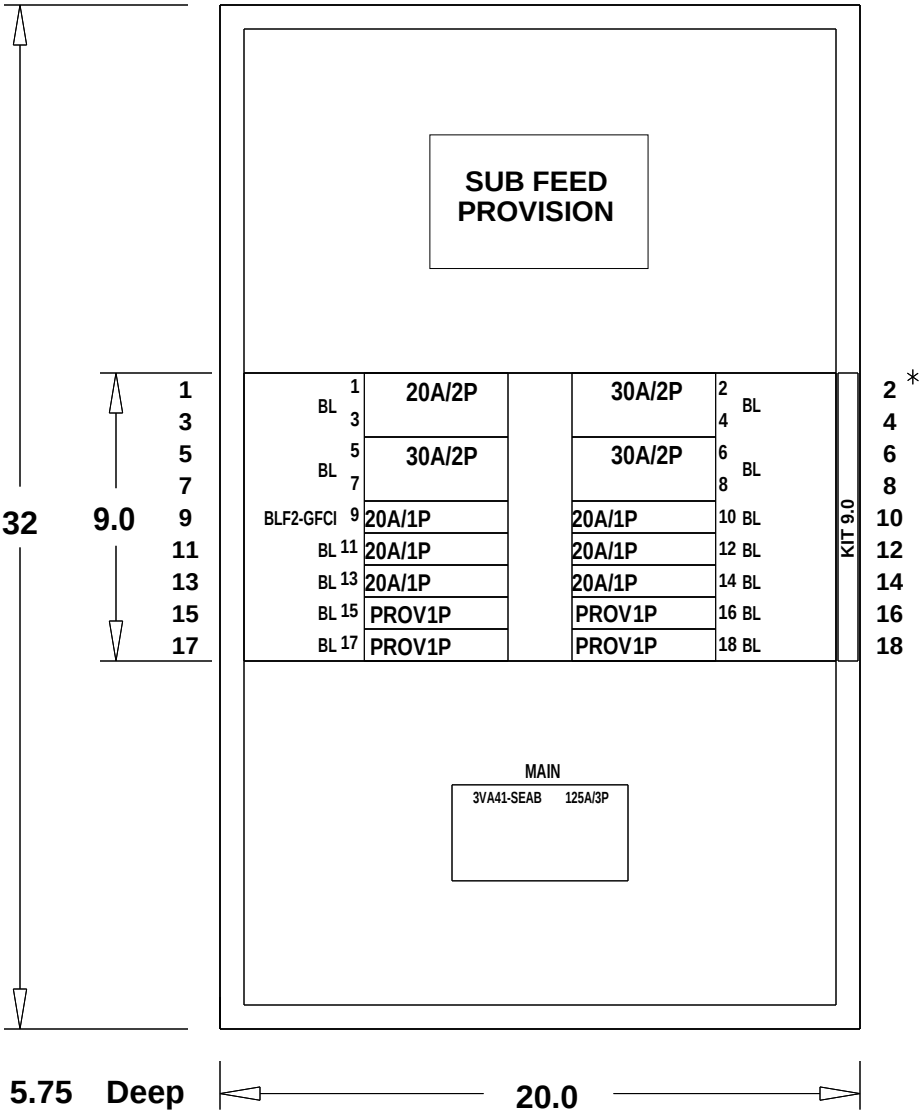
*INDICATES POSITIONING NUMBERS TO HELP WITH THE MANUAL PLACEMENT OF BREAKERS ON THE MECHANICAL VIEW

PANELBOARD COMPONENTS

Main :
1 - 125A /3P-3VA41-SEAB MAIN BREAKER
1-(1)#14-3/0 AL
1-RP1 Main Space Mounted Kit - 3VA41 Main
1-3VA Mechanical (1)#14-3/0 AL Lug

Branches :
1 - 20A /2P-BL
3 - 30A /2P-BL
1 - 20A /1P-BLF2-GFCI
5 - 20A /1P-BL
4 - 1P-BL - PROV

Options :
1-Subfeed/Feedthru Provision
1-Card Holder-Std Plastic Sleeve
1-No Front
1-Certification - UL
1-Std Al/Cu Gnd Connector



NO.	REVISIONS	DRAWN BY	DATE
1	0	henddx20c	9-29-2020

JOB: **FIDELITY**

P.O.: -	CUST.: ANIXTER INC		
CONTR: -	CONSLT: -		
TIE: -	BY: henddx20c	ENG. LOC.: -	DESIGNATION: EG1
S.O.: -	DATE: 9-29-2020		

Siemens Industry, Inc.
Norcross, Georgia

DWG. NO.: henddx20c_11161600_31_00_M00-20000-1
APP. | MFG. LOC.: -
APP. | DWG. FILE
SHEET 1 OF 5
REV.: 1

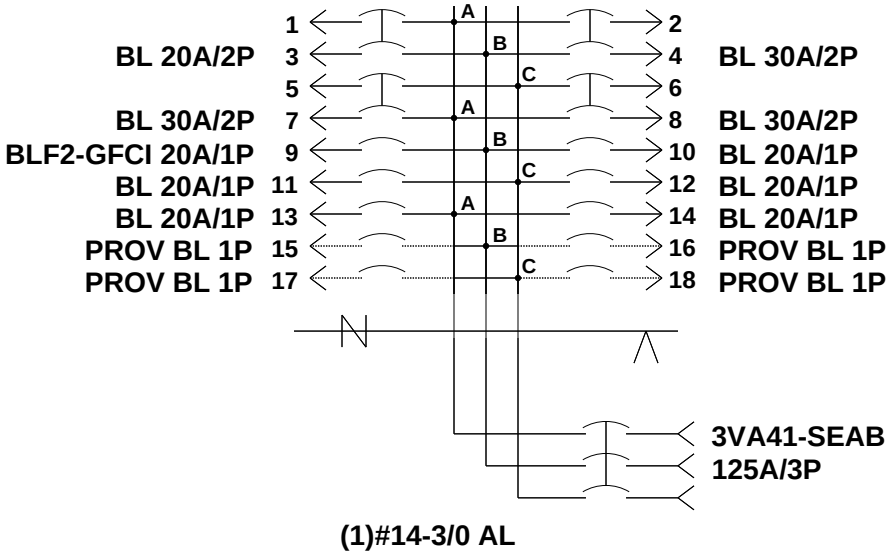
PANELBOARD NOTES

SECTION	:1 OF 1
PANEL TYPE	:P1
CATALOG NUMBER	:P1C18V1125ABST
ENCLOSURE	:3R Outdoor
SYSTEM VOLTAGE	:208Y/120 3Ø 4W Wye AC
IR RATING	:10 K AIC
MAIN BUS	:125 A
BUS MATERIAL	:Tin Plated Aluminum
FEED	:Bottom
MOUNTING	:Surface
SE LABEL	:No
SERIES RATED	:No
CONDUIT AREA	:N/A

*INDICATES POSITIONING NUMBERS TO HELP WITH THE MANUAL PLACEMENT OF BREAKERS ON THE MECHANICAL VIEW

ABBREVIATIONS

'PROV' PROVISION FOR FUTURE DEVICE



(1)#14-3/0 AL

JOB: FIDELITY			
P.O.: -	CUST.: ANIXTER INC		
CONTR: -	CONSLT: -		
TIE: -	BY: henddx20c	ENG. LOC.: -	DESIGNATION: EG1
S.O.: -	DATE: 9-29-2020		
Siemens Industry, Inc. Norcross, Georgia	DWG. NO.: henddx20c_11161600_31_00_M00-20000-2		
	APP.:	MFG. LOC.: -	SHEET 2 OF 5
	APP.:	DWG. FILE:	REV.: 1

CIRCUIT SCHEDULE

CIRCUIT NUMBER	UNIQUE ID NO.	TRIP AMPS (A)	POLES	DEVICE TYPE	INTERRUPT RATING (AIC)	METER ACC	CT RATING	LOAD LUG SIZE PER PHASE	CIRCUIT IDENTIFICATION
1/3	7	20	2	BL	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
5/7	9	30	2	BL	10,000	N/A	N/A	(1)#14-#6 CU / #12-#6 AL	-
9	11	20	1	BLF2-GFCI	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
11	13	20	1	BL	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
13	15	20	1	BL	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
15	17	20	1	B-PROV	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
17	19	20	1	B-PROV	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
2/4	8	30	2	BL	10,000	N/A	N/A	(1)#14-#6 CU / #12-#6 AL	-
6/8	10	30	2	BL	10,000	N/A	N/A	(1)#14-#6 CU / #12-#6 AL	-
10	12	20	1	BL	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
12	14	20	1	BL	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
14	16	20	1	BL	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
16	18	20	1	B-PROV	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-
18	20	20	1	B-PROV	10,000	N/A	N/A	(1)#14-#10 CU / #12-#10 AL	-

JOB
FIDELITY

P.O. -	CUST. ANIXTER INC		
CONTR -	CONSLT -		
TIE -	BY henddx20c	ENG. LOC. -	DESIGNATION EG1
S.O. -	DATE 9-29-2020		
Siemens Industry, Inc. Norcross, Georgia	DWG. NO. henddx20c_11161600_31_00_M00-20000-3		
	APP.	MFG. LOC. -	SHEET 3 OF 5
	APP.	DWG. FILE	REV. 1

JOB: FIDELITY			
P.O.: -	CUST.: ANIXTER INC		
CONTR: -	CONSLT: -		
TIE: -	BY: henddx20c	ENG. LOC.: -	DESIGNATION: EG1
S.O.: -	DATE: 9-29-2020		
Siemens Industry, Inc. Norcross, Georgia	DWG. NO.: henddx20c_11161600_31_00_M00-20000-4		
	APP.:	MFG. LOC.: -	SHEET 4 OF 5
	APP.:	DWG. FILE	REV.: 1

APPLICATION ENGINEERING REPORT

UNIQUE ID NUMBER	DESCRIPTION	APPLICATION DESCRIPTION

JOB: FIDELITY			
P.O.: -	CUST.: ANIXTER INC		
CONTR: -	CONSLT: -		
TIE: -	BY: henddx20c	ENG. LOC.: -	DESIGNATION: EG1
S.O.: -	DATE: 9-29-2020		
Siemens Industry, Inc. Norcross, Georgia	DWG. NO.: henddx20c_11161600_31_00_M00-20000-5		
	APP.:	MFG. LOC.: -	SHEET 5 OF 5
	APP.:	DWG. FILE	REV.: 1

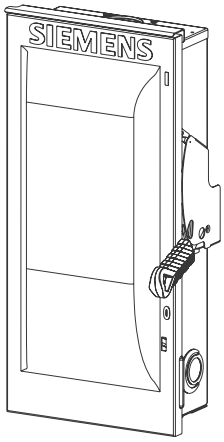
Project Name: FIDELITY 47907
Quote #: henddx20c_11161600_31_00_M00

CONTENTS: HF363NR HDSS FUS 3P4W 600V 100A N3R

Drawings are for: Approval ☑ Record ☐

Engineer:
Contractor:
Distributor: ANIXTER INC
Date:

Submitted By:
Tel. No.:
Fax No.:



Heavy Duty Safety Switch

Type VBII, 100 Amp and Oversized 60A, Type 3R (Outdoor)

Standards and Ratings
- UL Listed under file #E4776
- Meets UL98 for switches and UL 50 for enclosures
- Meets NEMA Standard KS-1 for enclosed switches
- Meets NEC wire bending space requirements
- Rated 10,000 AIC with Class H fuses or 200,000 AIC with Class R, T and J fuses
- Rated 10,000 AIC at 600Vdc with Class R or J fuses
- I^2t rated (Amps^2 x Seconds = 500,000)
- 12X overload current rating exceeds 10X industry standard
- Suitable for use as service entrance equipment

Features
- Quick-make and break switching action
- Double break visible blade design
- Highly visible ON/OFF indication
- Rugged installer friendly enclosure design
- Modular design allows quick and easy replacement of parts
- Front removable lugs which can easily be converted to copper body or compression type lugs
- Defeatable dual cover interlock

General Information

Catalog Number	Amps	Volts	Description	Shipping Weight (lbs.)
HF362RL	60	600	3 Pole, 3 Wire, Fusible	25
HNF362RL	60	600	3 Pole, 3 Wire, Non-Fusible	24
HF223NR [1]	100	240	2 Pole, 3 Wire, Fusible	24
HF323NR	100	240	3 Pole, 4 Wire, Fusible	26
HF263R	100	600	2 Pole, 2 Wire, Fusible	27
HF363R	100	600	3 Pole, 3 Wire, Fusible	25
HF363NR	100	600	3 Pole, 4 Wire, Fusible	26
HNF263R	100	600	2 Pole, 2 Wire, Non-Fusible	25
HNF363R	100	600	3 Pole, 3 Wire, Non-Fusible	24

Horsepower Ratings [2 3] - 240 Volts

Catalog Number	1 Phase, 240V AC		3 Phase, 240V AC		250V DC
	Std	Max	Std	Max	
HF223NR	7½	15	15	30	20
HF323NR	7½	15	15	30	20

Horsepower Ratings [2 3 4] - 600 Volts

Catalog Number	3 Phase, 480V AC		3 Phase, 600V AC		600V DC
	Std	Max	Std	Max	
HF362RL	15	30	15	50	30 [5]
HNF362RL	—	50	—	60	30 [5]
HF263R	—	— [6]	—	— [6]	50
HF363R	25	60	30	75	30 [5]
HF363NR	25	60	30	75	30 [5]
HNF263R	—	— [6]	—	— [6]	50
HNF363R [7]	—	75	—	100	30 [5]

Mechanical Lug Wire Ranges (60/75°C, Cu/Al)

Description	Wire Range
Line, Load Neutral	#12-1/0 (Al) AWG or #14-1/0 (Cu) AWG
Ground	#14-4 AWG

1 These switches are UL Listed for application on grounded B phase systems.
2 Dual horsepower ratings: Std - applies when non-time delay fuses are installed. Max applies when time-delay fuses are installed.
3 Horsepower ratings listed also apply to Design E motors with no derating.
4 100A switches also rated 20HP at 250V DC.
5 600V DC & 600V DC HP ratings require 2 poles to be connected in series.
6 100A switches also rated 30HP at 480V and 40HP at 600V, 1 phase.
7 100A switches also rated 40HP on 3phase, 240V AC systems.

Product Specification Sheet HD100.3

Answers for industry.

SIEMENS

Product Specification Sheet #HD100.3 (page 2 of 2)

Accessories

Catalog Number	Description
HA161234	One Normally Open and Closed Auxiliary Switches
HA261234	Two Normally Open and Closed Auxiliary Switches
HA361234	Low Voltage Auxiliary Switch
HG61234	Equipment Ground Lug Kit
HG261234	Isolated Equipment Ground Lug Kit
HP63	100A Fuse Puller (3 per kit) (HF223NR, HF323NR, HF263R, HF363R, HF363NR)
HN623	Neutral Kit
HR62	For 60A HF362RL
HR63	100A Class R Fuse Clip Kit (3 fuse clips per kit) (HF223NR, HF323NR, HF263R, HF363R, HF363NR)
HT23	100A 240 Volts Class T Fuse Clip Kit (1-Pole per kit) (HF223NR, HF323NR)
HT63	100A 600 Volt Class T Fuse Clip Kit (1-Pole per kit) (HF263R, HF363R, HF363NR)
HLC63 [1]	Copper Lug Kit (9 lugs per kit)
HCL623	Compression Lug Neutral Barrier Kit
HS125	1.25" Type "HS" Outdoor Hub
HS150	1.50" Type "HS" Outdoor Hub
HS200	2.00" Type "HS" Outdoor Hub

Replacement Parts

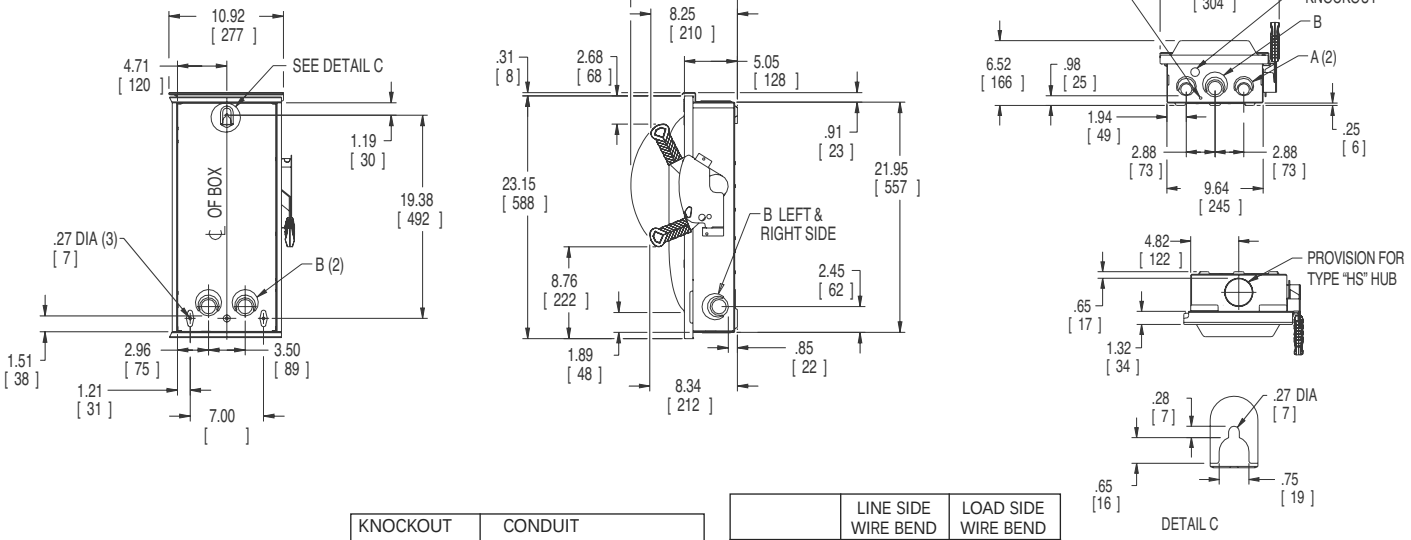
Catalog Number	Description
HFB63	Fusible Line Side Replacement Base (HF223NR, HF323NR, HF263R, HF363R, HF363NR)
HBB63	Fusible Load Side Replacement Base (HF223NR, HF323NR, HF263R, HF363R, HF363NR)
HNB623	Non-Fusible Replacement Base (HNF362RL, HNF263R, HNF363R)
HH6123	Replacement Handle/Handle Guard
HL63	Replacement Lugs (3 lugs per kit)
HM6123	Replacement Mechanism
[2]	Replacement Door

1 Will mount on the line side only on HF362RL.
2 Place "Door" at the end of the switch catalog number.
3 If compression lugs are used for the neutral, order compression lug neutral barrier kit HCL623.
4 Compression lugs can be ground ted on the line side only on HF362RL

Compression Lugs [3] [4]

Wire Size	Burndy		Thomas-Betts		Ilsco	
	CU Only	CU/AL	CU Only	CU/AL	CU Only	CU/AL
#6	YA6C-L BOX YA6C	YA6CA1	54105 54905BE	61107 60107	CRB-6 CRB-6L	ACL-6
#4	YA4C-L BOX YA4C	YA4CA1	54106 54906BE	61112 60112	CRB-4 CRB-4L	ACL-4
#2	YA2C-L2 BOX YA2C	YA2CA5	54107	61116	CRB-2 CRB-2L	ACL-2
#1	YA1C-L2 YA1C		54108 54947BE	61122	CRB-1-14 CRA-1L	
1/0				61130		

Dimension Drawing



KNOCKOUT CODE	CONDUIT SIZE			
A (Tangential)	.75	1.00	1.25	1.50
B (Tangential)	1.00	1.25	1.50	2.00

	LINE SIDE WIRE BEND	LOAD SIDE WIRE BEND
240V Fused	6.07 (154)	8.10 (205)
600V Fused	6.07 (154)	6.10 (155)
Non-Fused	6.07 (154)	11.46 (291)

Dimensions shown in inches and millimeters ( ).
Dimension shown accurate to ± 1/8 inch.

Enclosure: Galvanized Steel
.054 Thick (17 Gauge)
Finish: ANSI Grey #61 Paint

Siemens Industry, Inc.
Building Technologies Division
5400 Triangle Parkway
Norcross, GA 30092
1-800-964-4114

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www.usa.siemens.com/switches

Project Name: FIDELITY 47907
Quote #: henddx20c_11161600_31_00_M00

CONTENTS: A6X30105130 3F3YXXXD16 -45KVA SERIES J

Drawings are for: Approval ☑ Record ☐

Engineer:
Contractor:
Distributor: ANIXTER INC
Date:

Submitted By:
Tel. No.:
Fax No.:

Aluminum K1 3-Phase Delta Primary Series J

DOE 2016 3-Phase Dry Type Ventilated Transformer

Standard Temp Rise – 150° C

Reference Siemens Series below:

3BxxyyyD16

3CxxyyyD16

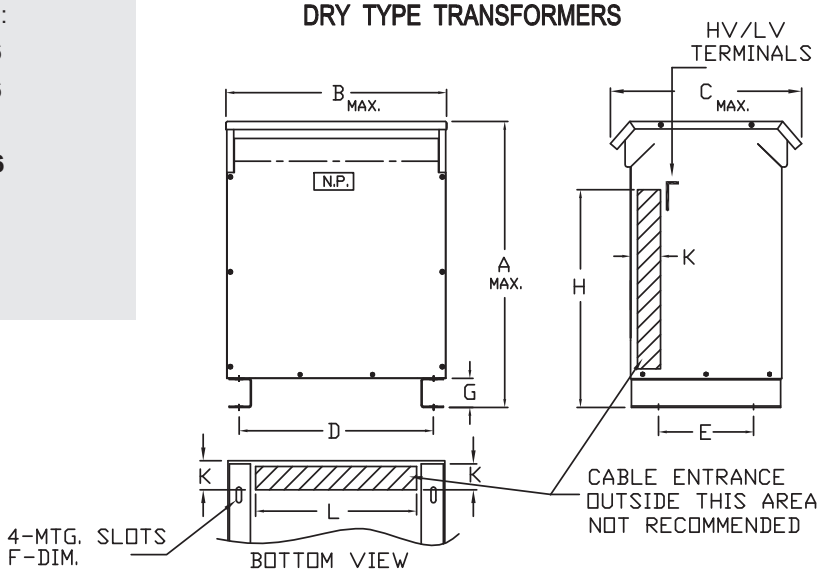
3FxxyyyD16

3GxxyyyD16

plus others

SIEMENS

DRY TYPE TRANSFORMERS



Reference Wiring Diagram Number Below:	
T208B	T208D
T208F	T208G
T208I	T208J
T208K	T208L
T240B	T240D
T240E	T240F
T240H	T240I
T480E	T480G
T480J	T480K
T480M	T480N
T480P	T600G
T600I	plus others

TEMP RISE	K-FACTOR	WINDINGS	EFFICIENCY
150	K-1	ALUMINUM	DOE-2016

DIMENSIONS IN (E)=INCHES & (M)=CENTIMETERS

KVA	NET WT. LBS.	A		B		C		D		E		F		G		H		K		L	
		E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M
15	215	22.0	55.9	19.0	48.3	21.0	53.3	16.8	41.6	12.0	30.5	.56x1.13	1.42x2.87	3.0	7.6	12.0	30.5	3.0	7.6	13.0	33.0
30	330	25.0	63.5	22.0	55.9	22.0	55.9	17.4	44.1	13.0	33.0	.56x1.13	1.42x2.87	3.0	7.6	13.0	33.0	3.0	7.6	15.0	38.1
45	415	28.0	71.1	25.0	63.5	23.5	59.7	20.8	52.7	14.5	36.8	.56x1.13	1.42x2.87	3.0	7.6	16.0	40.6	3.0	7.6	17.0	43.2
75	585	32.0	81.3	27.0	68.6	26.0	66.0	23.5	59.7	16.0	40.6	.56x1.13	1.42x2.87	3.0	7.6	18.0	45.7	3.0	7.6	20.0	50.8
112.5	795	38.0	96.5	29.0	73.7	29.0	73.7	25.5	64.8	18.0	45.7	.56x1.13	1.42x2.87	3.0	7.6	20.0	45.8	3.0	7.6	22.0	55.9
150	1035	42.0	107	33.0	83.8	32.5	82.6	29.5	74.9	21.0	53.3	.56x1.13	1.42x2.87	3.0	7.6	23.0	58.4	4.0	10.2	25.5	64.8
225	1430	46.0	117	35.0	88.9	37.0	94.0	31.5	80.0	25.0	63.5	.56x1.13	1.42x2.87	3.0	7.6	32.0	81.3	5.0	12.7	27.5	69.9
300	1755	52.0	132	35.0	88.9	37.0	94.0	31.5	80.0	25.0	63.5	.56x1.13	1.42x2.87	3.0	7.6	32.0	81.3	5.0	12.7	27.5	69.9
500	2760	60.0	154	48.0	122	43.5	110.5	42.0	107	27.0	68.6	.56x1.13	1.42x2.87	4.0	10.2	36.0	91.4	5.0	12.7	34.0	86.4
750	4150	72.0	183	52.0	132	44.0	112	34.0	86.4	42.0	107	.56x1.13	1.42x2.87	4.0	10.2	50.0	112	5.0	12.7	32.0	81.3
1000	6000	81.0	206	66.0	168	61.0	155	63.0	160	38.5	97.8	.56x1.13	1.42x2.87	5.0	12.7	60.0	152	6.0	15.2	48.0	122

NOTES:

1. ALL UNITS ARE UL LISTED AND ARE DESIGNED IN ACCORDANCE WITH ANSI C89.2 AMD NEMA ST-20 STANDARDS.
2. THESE TRANSFORMERS UTILIZE A UL RECOGNIZED 220°C INSULATION SYSTEM.
3. TRANSFORMERS ARE DRY TYPE, CLASS AA, VENTILATED ENCLOSURE FOR INDOOR OR OUTDOOR USE.
4. FOR LIFTING OTHER THAN WITH FORK TRUCK, REMOVE TOP COVER AND USE CORE CLAMPS.
5. PAINT COLOR IS ANSI #61 GRAY.
6. FULL WIDTH COPPER ELECTROSTATIC SHIELD (OPTIONAL).
7. 6" REQUIRED CLEARENCE FROM THE WALLS.
8. HV/LV TERMINALS ARE TOP FRONT TERMINATED.
9. NET. WEIGHTS ARE APPROXIMATE.
10. MEETS DOE-2016 EFFICIENCY 10 CFR PART 431

Siemens Industry, Inc.

GENERAL PURPOSE TRANSFORMERS
THREE-PHASE, 600 VOLTS CLASS, 60 HZ.

J201 REV. A

Quick Reference for J Series Transformers

Aluminium D16 Drawings and Wiring Diagrams

AL	3 Phase Primary/ Secondary	Primary	Secondary	Reference Wiring diagram (Tap = diagram #)
AL	3B1	208	240D/120	Y=T208K, M=T208L
AL	3B3	208	208Y/120	Y=T208B, M=T208F, N=T208I
AL	3B5	208	480Y/277	Y=T208D, M=T208G, N=T208J
AL	3C3	240	208Y/120	Y=T240B, M=T240F, N=T240I
AL	3C5	240	480Y/277	Y=T240D, M=T240E, N=T240H
AL	3F1	480	240D/120	Y=T480G, T=T480N
AL	3F3	480	208Y/120	Y=T480E, T=T480M
AL	3F5	480	480Y/277	Y=T480J, T=T480P
AL	3F6	480	380Y/219	T=T480K
AL	3G3	600	208Y/120	T=T600G
AL	3G5	600	480Y/277	T=T600I

Alluminium Reference Code / Table Drawing

K-factor	Temp Rise degrees C		
Std = K1 K4 K13 K20	150 (Std.)	115	80
K1	J201	J202	J203
K4	J209	J210	J211
K13	J212	J213	J228
K20	J214	J215	J230

Copper D16 Drawings and Wiring Diagrams

CU	3 Phase Primary/ Secondary	Primary	Secondary	Reference Wiring diagram (Tap = diagram #)
CU	3B1	208	240D/120	Y=T208K, M=T208L
CU	3B3	208	208Y/120	Y=T208B, M=T208F, N=T208I
CU	3B5	208	480Y/277	Y=T208D, M=T208G, N=T208J
CU	3C3	240	208Y/120	Y=T240B, M=T240F, N=T240I
CU	3C5	240	480Y/277	Y=T240D, M=T240E, N=T240H
CU	3F1	480	240D/120	Y=T480G, T=T480N
CU	3F3	480	208Y/120	Y=T480E, T=T480M
CU	3F5	480	480Y/277	Y=T480J, T=T480P
CU	3F6	480	380Y/219	T=T480K
CU	3G3	600	208Y/120	T=T600G
CU	3G5	600	480Y/277	T=T600I

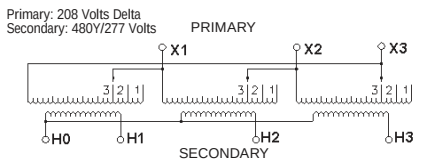
Copper Reference Code / Table Drawing

K-factor	Temp Rise degrees C		
Std = K1 K4 K13 K20	150 (Std.)	115	80
K1	J216	J217	J218
K4	J221	J222	J223
K13	J224	J225	J229
K20	J226	J227	J231

Wiring Diagrams

T208A Wiring Diagram & Connections*

Wiring Diagram

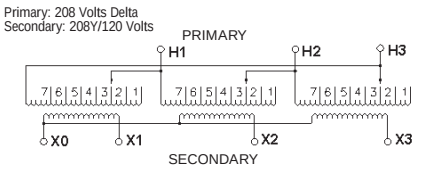


Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
208	1	X1, X2, X3
198	2	X1, X2, X3
187	3	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
480		H1, H2, H3
277 1 Phase		Between H0 and H1 or H2 or H3

T208B Wiring Diagram & Connections*

Wiring Diagram

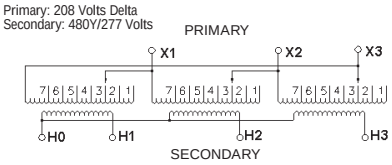


Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
218	1	H1, H2, H3
213	2	H1, H2, H3
208	3	H1, H2, H3
203	4	H1, H2, H3
198	5	H1, H2, H3
192	6	H1, H2, H3
187	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T208D Wiring Diagram & Connections*

Wiring Diagram

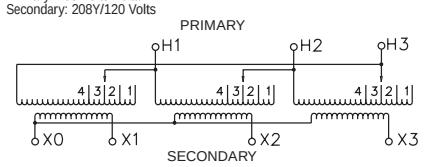


Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
218	1	X1, X2, X3
213	2	X1, X2, X3
208	3	X1, X2, X3
203	4	X1, X2, X3
198	5	X1, X2, X3
192	6	X1, X2, X3
187	7	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
480		H1, H2, H3
277 1 Phase		Between H0 and H1 or H2 or H3

T208F Wiring Diagram & Connections*

Wiring Diagram

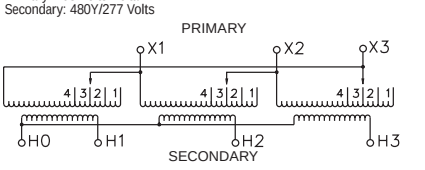


Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
218	1	H1, H2, H3
208	2	H1, H2, H3
198	3	H1, H2, H3
187	4	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T208G Wiring Diagram & Connections*

Wiring Diagram

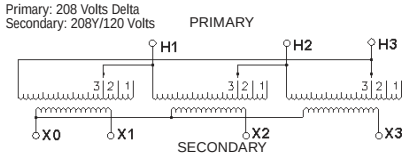


Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
218	1	X1, X2, X3
208	2	X1, X2, X3
198	3	X1, X2, X3
187	4	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
480		H1, H2, H3
277 1 Phase		Between H0 and H1 or H2 or H3

T208H Wiring Diagram & Connections*

Wiring Diagram

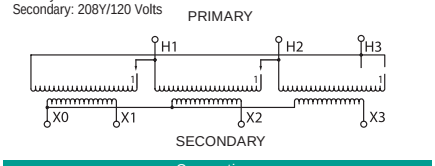


Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
208	1	H1, H2, H3
198	2	H1, H2, H3
187	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T208I Wiring Diagram & Connections*

Wiring Diagram

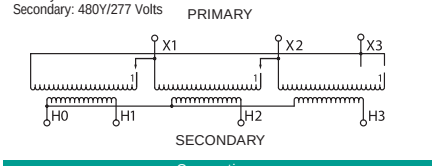


Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
208	1	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T208J Wiring Diagram & Connections*

Wiring Diagram

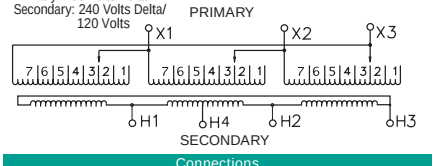


Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
208	1	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
480		H1, H2, H3
277 1 Phase		Between H0 and H1 or H2 or H3

T208K Wiring Diagram & Connections*

Wiring Diagram



Connections

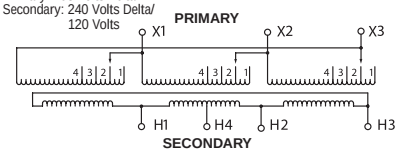
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
218	1	X1, X2, X3
213	2	X1, X2, X3
208	3	X1, X2, X3
203	4	X1, X2, X3
198	5	X1, X2, X3
192	6	X1, X2, X3
187	7	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
240		H1, H2, H3
120 1 Phase		H1 and H4 or H2 and H4

Wiring Diagrams

T208L Wiring Diagram & Connections*

Wiring Diagram

Primary: 208 Volts Delta
Secondary: 240 Volts Delta/ 120 Volts



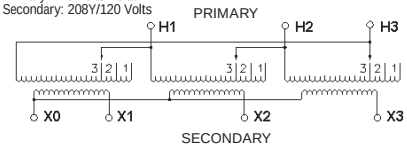
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
218	1	H1, H2, H3
208	2	H1, H2, H3
198	3	H1, H2, H3
187	4	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
240		H1, H2, H3
120 1 Phase		H1 and H4 or H2 and H4

T240A Wiring Diagram & Connections*

Wiring Diagram

Primary: 240 Volts Delta
Secondary: 208Y/120 Volts



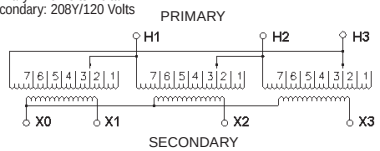
Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
240	1	H1, H2, H3
228	2	H1, H2, H3
216	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 phase		Between X0 and X1 or X2 or X3

T240B Wiring Diagram & Connections*

Wiring Diagram

Primary: 240 Volts Delta
Secondary: 208Y/120 Volts



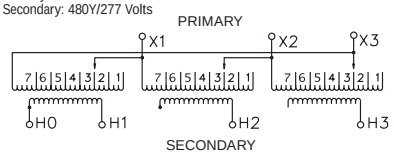
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
252	1	H1, H2, H3
246	2	H1, H2, H3
240	3	H1, H2, H3
234	4	H1, H2, H3
228	5	H1, H2, H3
222	6	H1, H2, H3
216	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T240D Wiring Diagram & Connections*

Wiring Diagram

Primary: 240 Volts Delta
Secondary: 480Y/277 Volts



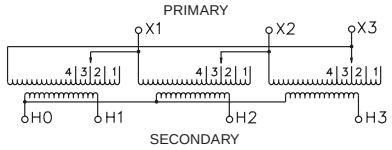
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
252	1	X1, X2, X3
246	2	X1, X2, X3
240	3	X1, X2, X3
234	4	X1, X2, X3
228	5	X1, X2, X3
222	6	X1, X2, X3
216	7	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
480		H1, H2, H3
277 1 Phase		Between H0 and H1 or H2 or H3

T240E Wiring Diagram & Connections*

Wiring Diagram

Primary: 240 Volts Delta
Secondary: 480Y/277 Volts



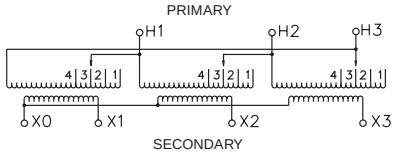
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
252	1	X1, X2, X3
240	2	X1, X2, X3
228	3	X1, X2, X3
216	4	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
480		H1, H2, H3
277 1 Phase		Between H0 and H1 or H2, or H3

T240F Wiring Diagram & Connections*

Wiring Diagram

Primary: 240 Volts Delta
Secondary: 208Y/120 Volts



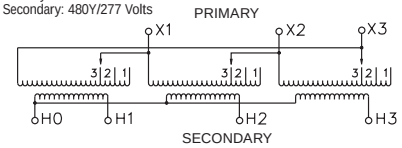
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
252	1	H1, H2, H3
240	2	H1, H2, H3
228	3	H1, H2, H3
216	4	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2, or X3

T240G Wiring Diagram & Connections*

Wiring Diagram

Primary: 240 Volts Delta
Secondary: 480Y/277 Volts



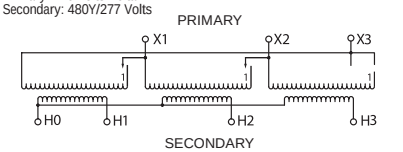
Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
240	1	X1, X2, X3
228	2	X1, X2, X3
216	3	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
480		H1, H2, H3
277 1 phase		Between X0 and H1 or H2 or H3

T240H Wiring Diagram & Connections*

Wiring Diagram

Primary: 240 Volts Delta
Secondary: 480Y/277 Volts



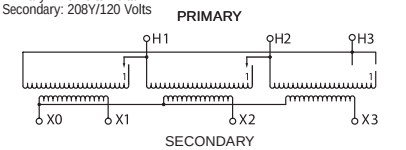
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
240	1	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
480		H1, H2, H3
277 1 Phase		Between H0 and H1 or H2 or H3

T240I Wiring Diagram & Connections*

Wiring Diagram

Primary: 240 Volts Delta
Secondary: 208Y/120 Volts



Connections

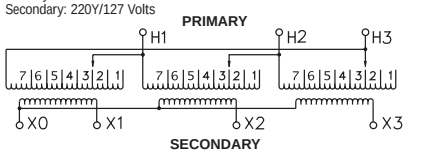
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
240	1	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

Wiring Diagrams

T460A Wiring Diagram & Connections*

Wiring Diagram

Primary: 460 Volts Delta
Secondary: 220Y/127 Volts



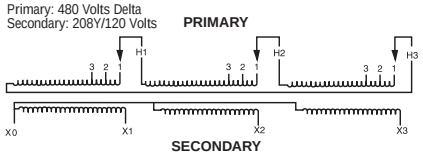
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
483	1	H1, H2, H3
472	2	H1, H2, H3
460	3	H1, H2, H3
448	4	H1, H2, H3
437	5	H1, H2, H3
425	6	H1, H2, H3
414	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
220		X1, X2, X3
127 1 Phase		Between X0 and X1 or X2 or X3

T480A Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 208Y/120 Volts



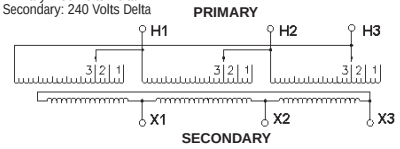
Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
480	1	H1, H2, H3
456	2	H1, H2, H3
432	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 phase		Between X0 and X1 or X2 or X3

T480B Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 240 Volts Delta



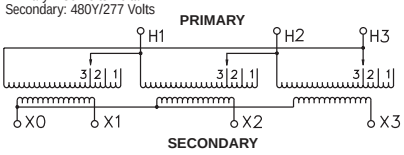
Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
480	1	H1, H2, H3
456	2	H1, H2, H3
432	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
240		X1, X2, X3

T480C Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 480Y/277 Volts



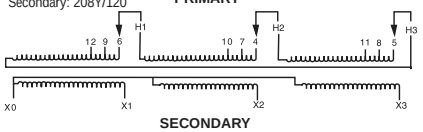
Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
480	1	H1, H2, H3
456	2	H1, H2, H3
432	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3
277 1 phase		Between X0 and X1 or X2 or X3

T480D Wiring Diagram & Connections*

Wiring Diagram

Primary: 480
Secondary: 208Y/120



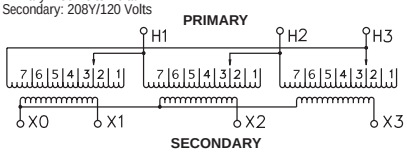
Connections

Primary Volts	Interconnect	Supply Lines Connect To
480	H1 & 6 H2 & 4 H3 & 5	H1, H2, H3
456	H1 & 9 H2 & 7 H3 & 8	H1, H2, H3
432	H1 & 12 H2 & 10 H3 & 11	H1, H2, H3
Sec. Volts		**Load Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T480E Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 208Y/120 Volts



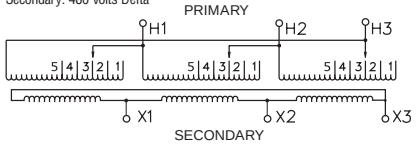
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
444	6	H1, H2, H3
432	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T480F Wiring Diagram & Connections

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 480 Volts Delta



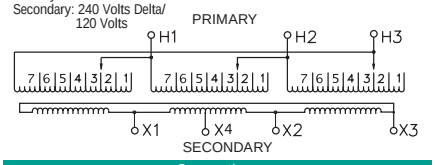
Connections

Primary Volts	On Each Coil Jumper Between Taps	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3

T480G Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 240 Volts Delta/ 120 Volts



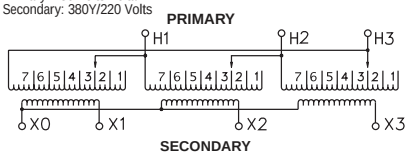
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
444	6	H1, H2, H3
432	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
240		X1, X2, X3
120 1 Phase		X1 and X4 or X2 and X4

T480I Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 380Y/220 Volts



Connections

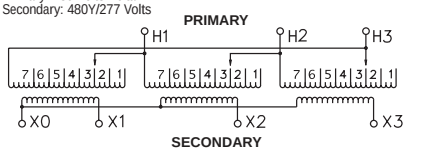
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
444	6	H1, H2, H3
432	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
380		X1, X2, X3
220 1 Phase		Between X0 and X1 or X2 or X3

Wiring Diagrams

T480J Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 480Y/277 Volts



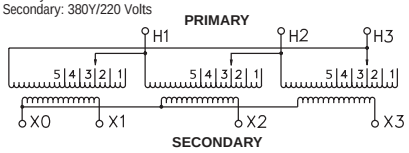
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
444	6	H1, H2, H3
432	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3
277 1 Phase		Between X0 and X1 or X2 or X3

T480K Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 380Y/220 Volts



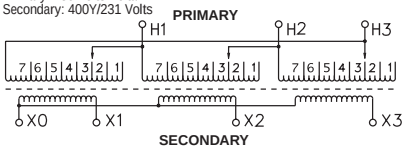
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
380		X1, X2, X3
220 1 Phase		Between X0 and X1 or X2 or X3

Group T480L Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 400Y/231 Volts



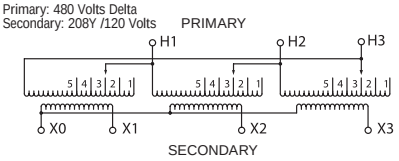
Connections

Primary Volts	On Each Coil Jumper Between Taps	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
444	6	H1, H2, H3
432	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
400		X1, X2, X3
231 1 Phase		Between X0 and X1 or X2 or X3

T480M Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 208Y /120 Volts



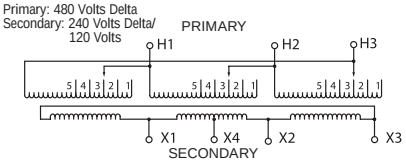
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T480N Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 240 Volts Delta/ 120 Volts



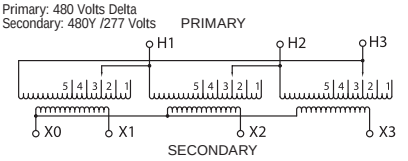
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
240		X1, X2, X3
120 1 Phase		X1 and X4 or X2 and X4

T480P Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 480Y /277 Volts



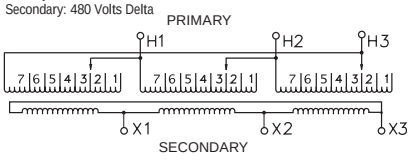
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3
277 1 Phase		Between X0 and X1 or X2 or X3

T480Q Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 480 Volts Delta



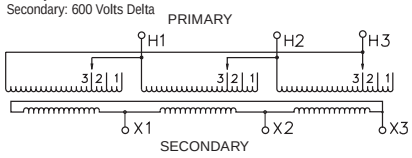
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
444	6	H1, H2, H3
432	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3

T480R Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 600 Volts Delta



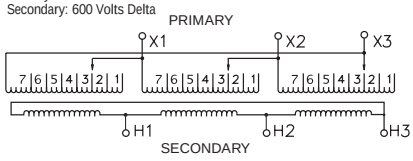
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
480	1	H1, H2, H3
456	2	H1, H2, H3
432	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
600		X1, X2, X3

T480T Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 600 Volts Delta



Connections

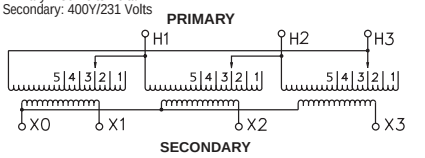
Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	X1, X2, X3
492	2	X1, X2, X3
480	3	X1, X2, X3
468	4	X1, X2, X3
456	5	X1, X2, X3
444	6	X1, X2, X3
432	7	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
600		H1, H2, H3

Wiring Diagrams

T480U Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 400Y/231 Volts



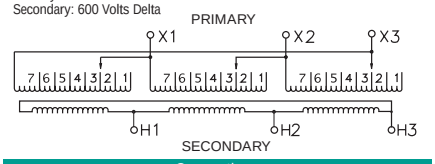
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
400		X1, X2, X3
231 1 Phase		Between X0 and X1 or X2 or X3

T480V Wiring Diagram & Connections*

Wiring Diagram

Primary: 480 Volts Delta
Secondary: 600 Volts Delta



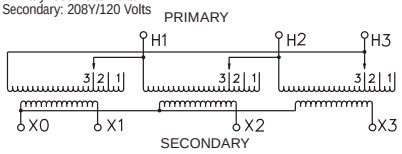
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	X1, X2, X3
492	2	X1, X2, X3
480	3	X1, X2, X3
468	4	X1, X2, X3
456	5	X1, X2, X3
Sec. Volts		**Secondary Lines Connect To**
600		H1, H2, H3

T600A Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts Delta
Secondary: 208Y/120 Volts



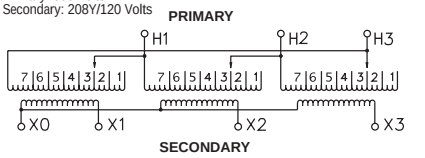
Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
600	1	H1, H2, H3
570	2	H1, H2, H3
540	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 phase		Between X0 and X1 or X2 or X3

T600B Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts
Secondary: 208Y/120 Volts



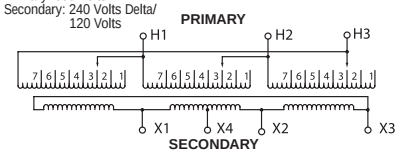
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
555	6	H1, H2, H3
540	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T600D Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts
Secondary: 240 Volts Delta/ 120 Volts



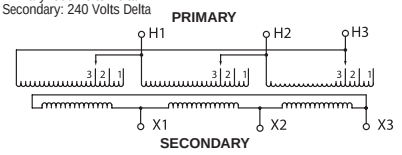
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
555	6	H1, H2, H3
540	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
240		X1, X2, X3
120 1 Phase		X1 and X4 or X2 and X4

T600E Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts Delta
Secondary: 240 Volts Delta



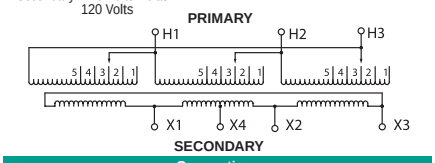
Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
600	1	H1, H2, H3
570	2	H1, H2, H3
540	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
240		X1, X2, X3

T600F Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts
Secondary: 240 Volts Delta/ 120 Volts



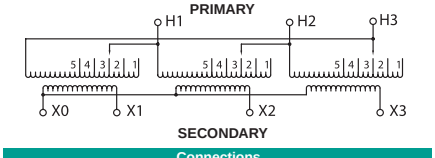
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
240		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T600G Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts
Secondary: 208Y/120 Volts



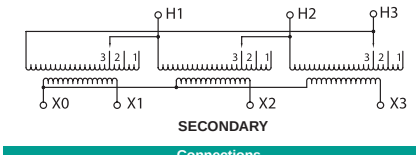
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 Phase		Between X0 and X1 or X2 or X3

T600H Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts Delta
Secondary: 480Y/277 Volts



Connections

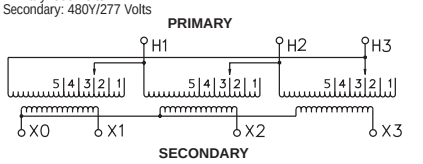
Primary Volts	Jumper Taps to	Primary Lines Connect To
600	1	H1, H2, H3
570	2	H1, H2, H3
540	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3
277 1 Phase		Between X0 and X1 or X2 or X3

Wiring Diagrams

T600I Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts
Secondary: 480Y/277 Volts



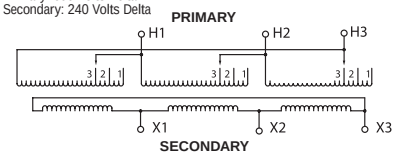
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3
277 1 Phase		Between X0 and X1 or X2 or X3

T600J Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts Delta
Secondary: 240 Volts Delta



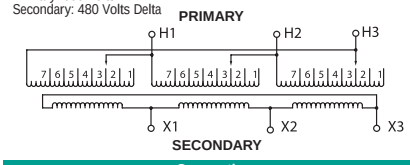
Connections

Primary Volts	Jumper Taps To	Primary Lines Connect To
600	1	H1, H2, H3
570	2	H1, H2, H3
540	3	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3

T600K Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts
Secondary: 480 Volts Delta



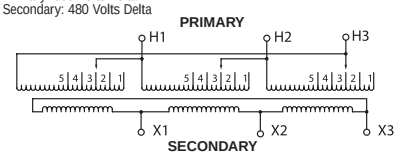
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
555	6	H1, H2, H3
540	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3

T600L Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts Delta
Secondary: 480 Volts Delta



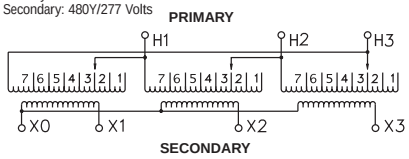
Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3

T600M Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts
Secondary: 480Y/277 Volts



Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
555	6	H1, H2, H3
540	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
480		X1, X2, X3
277 1 Phase		Between X0 and X1 or X2 or X3

SIEMENS

3F3Y045D16 - Three-Phase Ventilated-USA-DOE

PRODUCT DETAILS			
KVA:	45.00	**Enclosure:**	NEMA 3R Ventilated
UPC#:	804766146282	**Phase:**	Three-Phase
Line Voltage	480V-Delta	**Load Voltage**	208Y/120V
E/S Shielded:	No	**Windings:**	Aluminum
Temp. rise:	150°	**Hertz:**	60 Hz
Taps:	2 - 2.5% FCAN; 4 - 2.5% FCBN	**Approvals:**	UL, cUL, DOE
		Wall Bracket:	TWB75J

WEIGHT AND DIMENSIONS			
Height(A):	28.00"	**Width(B):**	25.00"
Depth(C):	23.50"	**Shipping Weight:**	415 lbs

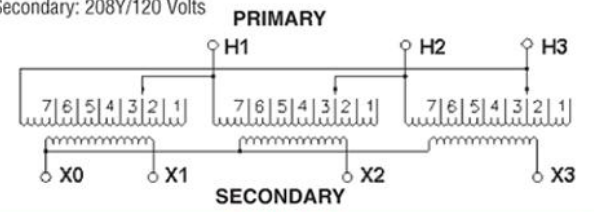
ADDITIONAL INFORMATION
How to Buy: Contact Siemens Distributor, Siemens Sales Rep or Configure in COMPAS Configuration Tool

Wiring Diagram

T480E Wiring Diagram & Connections

Wiring Diagram

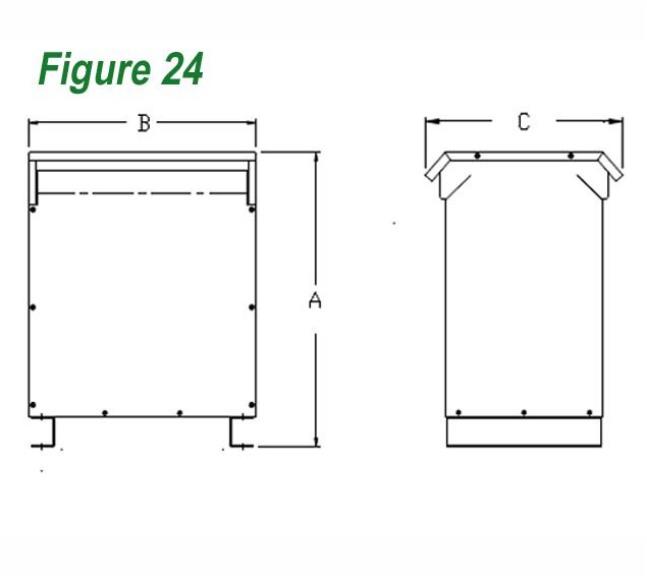
Primary: 480 Volts Delta
Secondary: 208Y/120 Volts



Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
444	6	H1, H2, H3
432	7	H1, H2, H3
Sec. Volts		**Secondary Lines Connect To**
208		X1, X2, X3
120 1 phase		Between X0 and X1 or X2 or X3

Dimensional Drawing



10/01/2020 4:23:57 PM

QR23B125 | US2:QR23B125

SIEMENS LOW VOLTAGE MOLDED CASE CIRCUIT BREAKER WITH THERMAL - MAGNETIC TRIP. QR FRAME STANDARD 40C BREAKER. 125A 3-POLE (10KA AT 240V). SPECIAL FEATURES: NO LUGS INSTALLED.

List Price	Show prices
Customer Price	Show prices
Additional Services	For this product we can offer Services like Spare Part Delivery/Repair/Exchange. You have currently no rights to enter the Service Web Shop for that. For further information & to order this service, please contact your local Spares&Repair Partner

Image similar

Product

Article Number (Market Facing Number)	QR23B125 | US2:QR23B125
Product Description	SIEMENS LOW VOLTAGE MOLDED CASE CIRCUIT BREAKER WITH THERMAL - MAGNETIC TRIP. QR FRAME STANDARD 40C BREAKER. 125A 3-POLE (10KA AT 240V). SPECIAL FEATURES: NO LUGS INSTALLED.
Product family	Ordering Data Overview
Product Lifecycle (PLM)	PM300:Active Product

Price data

Price Group	ND5
List Price	Show prices
Customer Price	Show prices
Metal Factor	None

Delivery information

Export Control Regulations	AL : N / ECCN : EAR99
Standard lead time ex-works	2 Day/Days
Net Weight (lb)	4.519 lb
Product Dimensions (W x L x H)	Not available
Packaging Dimension	4.331 x 7.087 x 3.937
Package size unit of measure	in
Quantity Unit	1 Piece
Packaging Quantity	1

Additional Product Information

EAN	Not available
UPC	804766136634
Commodity Code	8536200020
LKZ_FDB/ CatalogID	LV10.1
Product Group	5200
Group Code	P320
Country of origin	Mexico
Compliance with the substance restrictions according to RoHS directive	not available
Returnable	No
WEEE (2012/19/EU) Take-Back Obligation	No
REACH Art. 33 Duty to inform according to the current list of candidates	

Classifications

	Version	Classification
eClass	6	27-37-04-09
eClass	7.1	27-37-04-09
eClass	8	27-37-04-09
eClass	9	27-37-04-09
eClass	9.1	27-37-04-09
ETIM	5	EC000228
ETIM	6	EC000228
ETIM	7	EC000228
UNSPSC	15	39-12-16-01

10/01/2020 4:06:23 PM

B120 | US2:B120

BREAKER 20A 1P 120V 10K BLSIEMENS

List Price	Show prices
Customer Price	Show prices
Additional Services	For this product we can offer Services like Spare Part Delivery/Repair/Exchange. You have currently no rights to enter the Service Web Shop for that. For further information & to order this service, please contact your local Spares&Repair Partner

Product

Article Number (Market Facing Number)	B120 | US2:B120
Product Description	BREAKER 20A 1P 120V 10K BLSIEMENS
Product family	Ordering Data Overview
Product Lifecycle (PLM)	PM300:Active Product

Price data

Price Group	NL9
List Price	Show prices
Customer Price	Show prices
Metal Factor	None

Delivery information

Export Control Regulations	AL : N / ECCN : EAR99
Standard lead time ex-works	2 Day/Days
Net Weight (lb)	0.309 lb
Product Dimensions (W x L x H)	Not available
Packaging Dimension	4.331 x 12.598 x 3.543
Package size unit of measure	in
Quantity Unit	1 Piece
Packaging Quantity	1

Additional Product Information

EAN	Not available
UPC	783643263420
Commodity Code	8536200020
LKZ_FDB/ CatalogID	LV10.1
Product Group	5201
Group Code	P320
Country of origin	Mexico
Compliance with the substance restrictions according to RoHS directive	not available
Returnable	Yes
WEEE (2012/19/EU) Take-Back Obligation	No
REACH Art. 33 Duty to inform according to the current list of candidates	

Classifications

	Version	Classification
IDEA	4	4813
UNSPSC	15	39-12-16-01

10/01/2020 4:07:47 PM

B220 | US2:B220

BREAKER 20A 2P 120/240V 10K BL10 KAIC SIEMENS

List Price	Show prices
Customer Price	Show prices
Additional Services	For this product we can offer Services like Spare Part Delivery/Repair/Exchange. You have currently no rights to enter the Service Web Shop for that. For further information & to order this service, please contact your local Spares&Repair Partner

Product

Article Number (Market Facing Number)	B220 | US2:B220
Product Description	BREAKER 20A 2P 120/240V 10K BL10 KAIC SIEMENS
Product family	Ordering Data Overview
Product Lifecycle (PLM)	PM300:Active Product

Price data

Price Group	NL9
List Price	Show prices
Customer Price	Show prices
Metal Factor	None

Delivery information

Export Control Regulations	AL : N / ECCN : EAR99
Standard lead time ex-works	2 Day/Days
Net Weight (lb)	0.639 lb
Product Dimensions (W x L x H)	Not available
Packaging Dimension	4.331 x 12.598 x 3.543
Package size unit of measure	in
Quantity Unit	1 Piece
Packaging Quantity	1

Additional Product Information

EAN	Not available
UPC	783643263536
Commodity Code	8536200020
LKZ_FDB/ CatalogID	LV10.1
Product Group	5201
Group Code	P320
Country of origin	Mexico
Compliance with the substance restrictions according to RoHS directive	not available
Returnable	Yes
WEEE (2012/19/EU) Take-Back Obligation	No
REACH Art. 33 Duty to inform according to the current list of candidates	

Classifications

	Version	Classification
IDEA	4	4813
UNSPSC	15	39-12-16-01

10/01/2020 4:02:14 PM

B230 | US2:B230

Siemens Low Voltage Molded Case Circuit Breakers Panelboard Mounting 240V Circuit Breakers - Type BL, 2-Pole, 120/240VAC are Circuit Protection Molded Case Circuit Breakers. Type: BL Application: Electrical Distribution Standard: UL 489 Voltage Rating: 120/240V Amperage Rating: 30A Trip Range: Thermal Magnetic Interrupt Rating: 10 AIC Number Of Poles: 2P

List Price	Show prices
Customer Price	Show prices
Additional Services	For this product we can offer Services like Spare Part Delivery/Repair/Exchange. You have currently no rights to enter the Service Web Shop for that. For further information & to order this service, please contact your local Spares&Repair Partner

Product

Article Number (Market Facing Number)	B230 | US2:B230
Product Description	Siemens Low Voltage Molded Case Circuit Breakers Panelboard Mounting 240V Circuit Breakers - Type BL, 2-Pole, 120/240VAC are Circuit Protection Molded Case Circuit Breakers. Type: BL Application: Electrical Distribution Standard: UL 489 Voltage Rating: 120/240V Amperage Rating: 30A Trip Range: Thermal Magnetic Interrupt Rating: 10 AIC Number Of Poles: 2P
Product family	Ordering Data Overview
Product Lifecycle (PLM)	PM300:Active Product

Price data

Price Group	NL9
List Price	Show prices
Customer Price	Show prices
Metal Factor	None

Delivery information

Export Control Regulations	AL : N / ECCN : EAR99
Standard lead time ex-works	2 Day/Days
Net Weight (lb)	0.639 lb
Product Dimensions (W x L x H)	Not available
Packaging Dimension	4.331 x 12.598 x 3.543
Package size unit of measure	in
Quantity Unit	1 Piece
Packaging Quantity	1

Additional Product Information

EAN	Not available
UPC	783643263550
Commodity Code	8536200020
LKZ_FDB/ CatalogID	LV10.1
Product Group	5201
Group Code	P320
Country of origin	Mexico
Compliance with the substance restrictions according to RoHS directive	not available
Returnable	Yes
WEEE (2012/19/EU) Take-Back Obligation	No
REACH Art. 33 Duty to inform according to the current list of candidates	

Classifications

	Version	Classification
IDEA	4	4813
UNSPSC	15	39-12-16-01

TR-R & TRS-R Time-delay/Class RK5

The industry's most popular fuse for motor circuit protection

With advanced material technology added to the existing product, the Tri-Onic® TR and TRS current-limiting time-delay fuses are engineered for overcurrent protection of motors and transformers, service entrance equipment, feeder and branch circuits. Tri-Onic fuse's proven time-delay characteristic safely handles harmless starting currents and inrush currents associated with today's motors and transformers. Now available with optional SmartSpot® blown fuse indication technology.

Features/Benefits:

- Optional solid state SmartSpot blown fuse indicator
- Time-delay for motor start-ups and transformer inrush currents without nuisance opening
- Current-limiting for low peak let-thru current
- Rejection-style design prevents replacement errors (when used with recommended fuse blocks)
- Easy-to-read label for quick brand recognition and replacement
- Metal-embossed date and catalog number for traceability and lasting identification
- Fiberglass body provides dimensional stability in harsh industrial settings
- High-grade silica filler ensures fast arc quenching and high current limitation

Highlights:

- Time-delay
- Current-limiting
- AC & DC rated

Applications:

- Motor circuits
- Mains
- Feeders
- Branch circuits
- Transformers
- Service entrance equipment
- General-purpose equipment

Ratings:

TR-R

Volts : 250VAC
: 250VDC (.1-2.8A; 35-400A)
: 160VDC (3-30A; 450-600A)
Amps : 1/10 to 600A
IR : 200kA I.R. AC / 20kA I.R. DC

TRS-R

Volts : 600VAC
: 600VDC (.1-12A; 70-600A)
: 300VDC (15-60A)
Amps : 1/10 to 600A
IR : 200kA I.R. AC / 20kA I.R. DC

Approvals:

- UL listed to standard 248-12 File E2137
- CSA certified to standard C22.2 no. 248.12
- DC listed to UL standard 248 TRS only

TR-R & TRS-R Time-delay/Class RK5

Catalog Numbers (amps)

250V			600V		
TR1/10R*	TR3-1/2R*	TR50R	TRS1/10R*	TRS3-1/2R*	TRS50R
TR15/100R*	TR4R*	TR60R	TRS15/100R*	TRS4R*	TRS60R
TR2/10R*	TR4-1/2R*	TR70R	TRS2/10R*	TRS4-1/2R*	TRS70R
TR3/10R*	TR5R*	TR75R*	TRS3/10R*	TRS5R*	TRS75R*
TR4/10R*	TR5-6/10R*	TR80R	TRS4/10R*	TRS5-6/10R*	TRS80R
TR1/2R*	TR6R*	TRS90R	TRS1/2R*	TRS6R*	TRS90R
TR6/10R*	TR6-1/4R*	TR100R	TRS6/10R*	TRS6-1/4R*	TRS100R
TR8/10R*	TR7R*	TR110R	TRS8/10R*	TRS7R*	TRS110R
TR1R*	TR8R	TR125R	TRS1R*	TRS8R	TRS125R
TR1-1/8R*	TR9R	TR150R	TRS1-1/8R*	TRS9R	TRS150R
TR1-1/4R*	TR10R	TR175R	TRS1-1/4R*	TRS10R	TRS175R
TR1-4/10R*	TR12R	TR200R	TRS1-4/10R*	TRS12R	TRS200R
TR1-6/10R*	TR15R	TR225R	TRS1-6/10R*	TRS15R	TRS225R
TR1-8/10R*	TR17-1/2R	TR250R	TRS1-8/10R*	TRS17-1/2R	TRS250R
TR2R*	TR20R	TR300R	TRS2R*	TRS20R	TRS300R
TR2-1/4R*	TR25R	TR350R	TRS2-1/4R*	TRS25R	TRS350R
TR2-1/2R*	TR30R	TR400R	TRS2-1/2R*	TRS30R	TRS400R
TR2-8/10R*	TR35R	TR450R	TRS2-8/10R*	TRS35R	TRS450R
TR3R*	TR40R	TR500R	TRS3R*	TRS40R	TRS500R
TR3-2/10R*	TR45R	TR600R	TRS3-2/10R*	TRS45R	TRS600R

Note: Optional blown fuse visual indication available. To order, place "ID" at the end of the catalog number. Example: #TRS30RID
** Not available with optional blow fuse indicator.*
Tin plated end caps are available on Non-ID fuses less than 60A. Example Part # TRP30R, TRSP30R

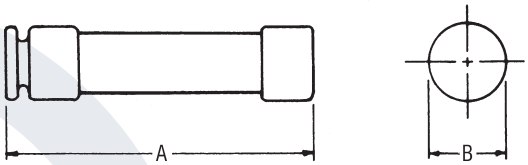
Recommended Fuse Blocks With Box Connectors For Tri-Onic® Class RK5 Fuses

Fuse Ampere Rating	Catalog Number 250V 1-Pole	250V 3 -Pole	600V 1-Pole	600V 3-Pole
0-30	20306R	20308R	60306R	60308R
31-60	20606R	20608R	60606R	60608R
61-100	21036R	21038R	61036R	61038R
101-200	22001R	22003R	62001R	62003R
201-400	24001R	24003R	64001R	64003R
401-600	2631R	2633R	6631R	6633R

A variety of pole configurations and termination provisions are available. Refer to Section H for details.

Dimensions

Ampere Rating	A In.	A mm	B In.	B mm	C In.	C mm	D In.	D mm	E In.	E mm
250V-TR Fuses										
0-30	2	51	9/16	14	-	-	-	-	-	-
31-60	3	76	13/16	21	-	-	-	-	-	-
61-100	5-7/8	149	1-1/16	27	1/8	3	3/4	19	1	25
101-200	7-1/8	181	1-9/16	40	3/16	5	1-1/8	28	1-3/8	35
201-400	8-5/8	219	2-1/16	53	1/4	6	1-5/8	41	1-7/8	48
401-600	10-3/8	264	2-9/16	66	1/4	6	2	51	2-1/4	57
600V-TRS Fuses										
0-30	5	127	13/16	21	-	-	-	-	-	-
31-60	5-1/2	139	1-1/16	27	-	-	-	-	-	-
61-100	7-7/8	200	1-5/16	34	1/8	3	3/4	19	1	25
101-200	9-5/8	244	1-13/16	46	3/16	5	1-1/8	28	1-3/8	35
201-400	11-5/8	295	2-9/16	66	1/4	6	1-5/8	41	1-7/8	48
401-600	13-3/8	340	3-1/8	80	1/4	6	2	51	2-1/4	57



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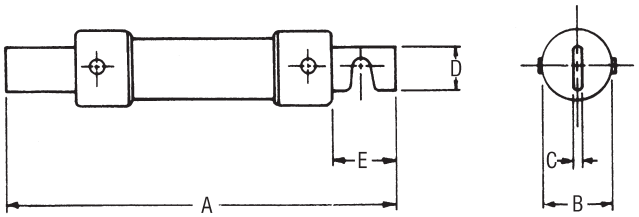


61-600A

• UL Listed • HACR Rated

Arc-Fault Circuit Interrupters (AFCI)

AFCI's detect arcing faults (an unintentional arcing condition in a circuit) that standard circuit breakers are unable to detect. The device is intended to mitigate the effects of arcing faults by functioning to de-energize the circuit when an arc-fault is detected.

Combination Type AFCI

Detects all three possible types of arc fault: line-to-ground, line-to-neutral, and series.

Breaker Type	Ampere Rating	10,000 A IR Catalog Number	22,000 A IR Catalog Number	65,000 A IR Catalog Number
BAF2/BAFH2/HBAF2 1-Pole 120V AC	15	BA115AFC□	BA115AFCH	BA115AFCHH
	20	BA120AFC□	BA120AFCH	BA120AFCHH
BAF/BAFH 2-Pole 120/240V AC	15	B215AFC□	B215AFCH	—
	20	B220AFC□	B220AFCH	—

1-Pole Combination Type AFCI

2-Pole Combination Type AFCI

Branch-Feeder AFCI

Detects line-to-ground and line-to neutral arcs.

BAF2/BAFH2/HBAF2 1-Pole 120V AC	15	**BA115AF**□	**BA115AFH■**□	**BA115AFHH■**
	20	**BA120AF**□	**BA120AFH■**□	**BA120AFHH■**

1-Pole Branch Feeder AFCI

NEW Dual Function AFCI/GFCI

The Dual Function Circuit Breaker combines Combination Type AFCI and GFCI, protecting against both Arc Faults and (5mA) Ground Faults. The device includes the Self Test feature, making it the first in class in electrical safety for homeowners.

BFGA2/BFGAH2/ HBFGA2 1-Pole 120V AC	15	**B115DF**	**B115DFH■**	**B115DFHH■**
	20	**B120DF**	**B120DFH■**	**B120DFHH■**

1-Pole Dual Function AFCI/GFC

Ground-Fault Circuit Interrupters (GFCI)

Provides Class A (5mA) ground fault protection. Intended for personnel protection. De-energizes the circuit for all ungrounded conductors of the circuit.

Breaker Type	Amp Rating	10k A IR Cat. No.	22k A IR Cat. No.	65k A IR Cat. No.
BLF/ BLHF 1-Pole 120V AC Bolt-On	15	BF115A□	BF115AH□	BF115AHH
	20	BF120A□	BF120AH□	BF120AHH
	25	BF125A	BF125AH	—
	30	BF130A	BF130AH	BF130AHH
BLF/ BLHF 2-Pole 120/240V AC Bolt-On	15	**BF215A**	**BF215AH**	—
	20	**BF220A**	**BF220AH**	—
	30	**BF230A**	**BF230AH**	—
	40	**BF240A**	**BF240AH**	—
	50	**BF250A**	**BF250AH**	—
	60	**BF260A**	**BF260AH**	—

1-Pole Equipment Protection

Ground Fault Equipment Protection (30mA)

Provides protection of equipment from damaging line-to-ground faults currents. De-energizes the circuit for all ungrounded conductors of the circuit.

Breaker Type	Amp Rating	10k A IR Cat. No.	22k A IR Cat. No.
BLE/ BLEH 1-Pole, 120V AC Bolt-On	15	**BE115**□	**BE115H■**□
	20	**BE120**□	**BE120H■**□
	30	**BE130**	**BE130H■**
BLE/ BLEH 2-Pole 120/240V AC Bolt-On	15	**BE215**	**BE215H■**
	20	**BE220**	**BE220H■**
	30	**BE230**	**BE230H■**
	40	**BE240**	**BE240H■**
	50	**BE250**	**BE250H■**
	60	**BE260**	**BE260H■**

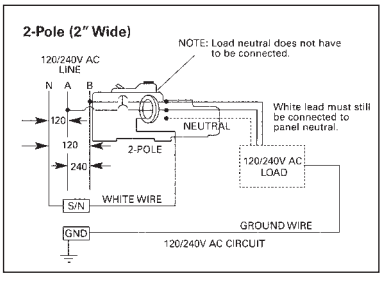
2-Pole Equipment Protection

QAF2/QPF/QE Accessories

Description	Catalog Number
Padlocking Device 1-Pole	**ECPLD1**
Padlocking Device 2-Pole	**ECPLD2**
Handle Block	**ECBX231M**

■ Built to order. Allow 8 -10 weeks for delivery.
□ UL Listed as SWD (Switching Duty) Rated, suitable for 120V AC Fluorescent Lighting.

Wiring Diagrams



Molded Case Circuit Breakers

Panelboard Mounting with INSTA-WIRE

Selection

1-Pole Bolt-On (120V AC)

Continuous Current Rating @ 40° C	Type BL	Type BLH	Type HBL
	10,000A IR	22,000A IR	65,000A IR
	Catalogue Number	Catalogue Number	Catalogue Number
15	B115	B115H	B115HH
20	B12	B120H	B120HH
25	B125	B125H	B125HH■
30	B130	B130H	B130HH
35	B135	B135H■	B135HH■
40	B140	B140H	B140HH
45	B145■	B145H■	B145HH■
50	B150	B150H	B150HH■
60	B160	B160H■	B160HH■
70	B170	B170H■	B170HH■

2-Pole Bolt-On (Common-Trip 120/240V AC)

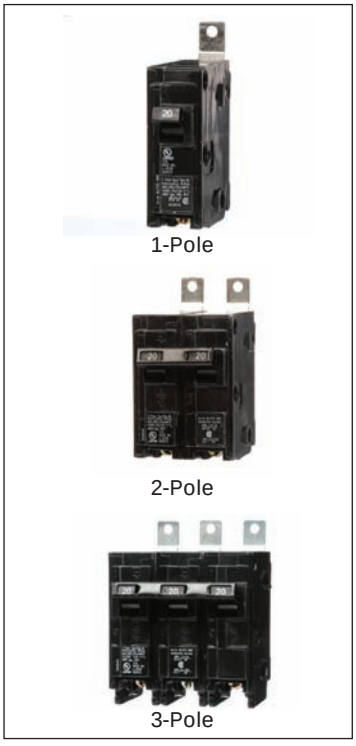
15	B215	B215H	B215HH
20	B220	B220H	B220HH
25	B225	B225H■	B225HH■
30	B230	B230H	B230HH
35	B235	B235H■	B235HH■
40	B240	B240H	B240HH
45	B245	B245H■	B245HH■
50	B250	B250H	B250HH
60	B260	B260H	B260HH
70	B270	B270H■	B270HH■
80	B280	B280H■	B280HH■
90	B290	B290H■	B290HH■
100	B2100	B2100H	B2100HH
110	B2110■	B2110H■	B2110HH■
125	B2125	B2125H	B2125HH■

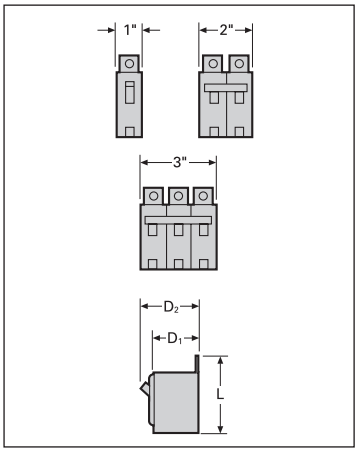
2-Pole Bolt-On (Common-Trip 240V AC)

15	B215R	—	—
20	B220R	—	—
30	B230R	—	—
40	B240R■	—	—
50	B250R	—	—

3-Pole Bolt-On (Common-Trip 240V AC)

15	B315	B315H	B315HH
20	B320	B320H	B320HH
25	B325	B325H	B325HH■
30	B330	B330H	B330HH
35	B335	B335H■	B335HH■
40	B340	B340H	B340HH
45	B345	B345H■	B345HH■
50	B350	B350H	B350HH
60	B360	B360H	B360HH
70	B370	B370H	B370HH
80	B380	B380H■	B380HH
90	B390	B390H■	B390HH
100	B3100	B3100H	B3100HH





Breaker Type	Amperes	Dimensions L	D1	D2
BL, BLH	15–50	3 3/16	2 3/8	3
BL, BLH	55–125	3 3/4	2 3/8	3
HBL	15–125	3 3/4	2 3/8	3

BL/BLH/HBL Internal Accessories

Description	Catalog Number	Field/Factory Installed
120VAC Shunt Trip	add suffix...00S01■	Factory
24VAC Shunt Trip	add suffix...00S07■	Factory
120V Auxiliary Switch	add suffix...01■	Factory

For external accessories, please refer to page 5-83 - 5-89

■ Built to order. Allow 2-3 weeks for delivery

UL Listed for use with 60/75° wire through 40 amps, CSA Certified / UL Listed for use with 75° wire only for 50 amps and above, HACR rated. 120V AC Fluorescent Lighting.

1A and 1B contacts.

UL Listed for use on 3-phase grounded "B" systems —10,000 for this application.

UL Listed for frequent switching applications (SWD).

Shipped 12 per sleeve.

Shipped 6 per sleeve.

Shipped 4 per sleeve.

UL Listed 5KA IR.

10 Amp breaker does not have INSTA-WIRE.

For 3 Phase Applications.

UL Listed for reverse feed."

CSA Certified for frequent switching applications (SWD)

BQD 100A Frame Panelboard Mounting Circuit Breakers

Selection/Dimensions

BQD □

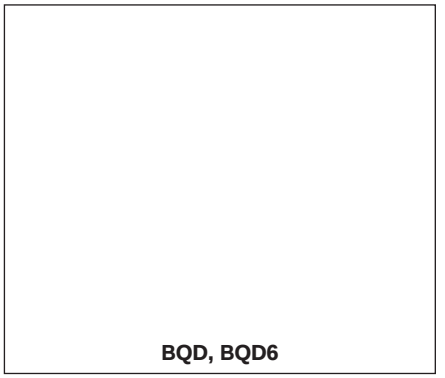
Continuous Current Rating @ 40°C	1-Pole 277V AC–125V DC Catalog Number	2-Pole□ 480Y/277V AC– 125/250V DC Catalog Number	3-Pole□ 480Y/277V AC Catalog Number
15	BQD115□□	BQD215□	BQD315□
20	BQD120□□	BQD220□	BQD320□
25	BQD125□	BQD225□	BQD325□
30	BQD130□	BQD230□	BQD330□
35	BQD135□	BQD235□	BQD335□
40	BQD140□	BQD240□	BQD340□
45	BQD145□■	BQD245□	BQD345□
50	BQD150□	BQD250□	BQD350□
60	BQD160	BQD260	BQD360
70	BQD170■	BQD270	BQD370
80	BQD180■	BQD280	BQD380
90	BQD190■	BQD290	BQD390
100	BQD1100■	BQD2100	BQD3100

BQD6 CSA Certified

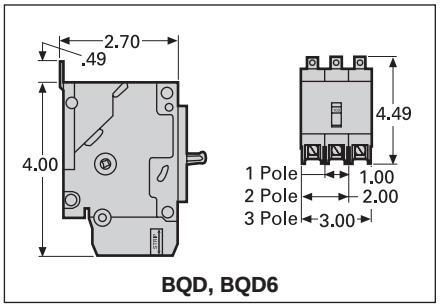
Continuous Current Rating @ 40°C	1-Pole 347V AC Catalog Number	2-Pole□ 600/347V AC Catalog Number	3-Pole□ 600/347V AC Catalog Number
15	BQD6115□	BQD6215	BQD6315
20	BQD6120□	BQD6220	BQD6320
25	BQD6125■	BQD6225■	BQD6325■
30	BQD6130	BQD6230	BQD6330
35	BQD6135■	BQD6235■	BQD6335■
40	BQD6140■	BQD6240■	BQD6340
45	BQD6145■	BQD6245■	BQD6345■
50	BQD6150■	BQD6250■	BQD6350
60	BQD6160■	BQD6260■	BQD6360
70	BQD6170■	BQD6270■	BQD6370

Interrupting Ratings

Breaker Type	Number of Poles	RMS Symmetrical Amperes (KA)							
		Volts AC						Volts DC	
		120	240	277	480/277	347	600/347	125	125/250
BQD (CSA/UL)	1	65	—	14	—	—	—	14	—
	2	—	65	—	14	—	—	—	14
	3	—	65	—	14	—	—	—	—
BQD6 (CSA)	1	65	—	—	—	10	—	14	—
	2	—	65	—	—	—	10	—	14
	3	—	65	—	—	—	10	—	—



BQD, BQD6



BQD, BQD6

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.) (ea.)
1	1/12/48	.6
2	1/6/24	1.2
3	1/4/16	2.0

Lugs For 60/75°C Wire

BQD – Load End Only	
15–40	#14–#6 AWG Cu #12–#6 AWG Al
45–100	#8–#1 AWG Cu #6–#1/0 AWG Al

For inches / millimeters conversion, see Technical section.

■ Built to order. Allow 2–3 weeks for delivery.

□ UL Rated SWD rated for switching fluorescent lighting.
□ HID rated at 277V AC.
□ Not suitable for 3-phase delta 480V applications.
□ HACR rated.
□ HID rated at 480Y/277V AC.

For external accessories, please refer to pages 5-83 - 5-89
For internal accessories, please refer to page 5-24

SIEMENS
Ingenuity for life

TPS3 02

Type 1 / 2 Surge Protection Device (SPD) for Revised P1 Lighting Panelboards

Features:

- Mounts internal to:
  - Revised P1 Lighting Panelboards
- Consult factory for field retrofit in Revised P1 Lighting Panelboards
- UL 1449-4 Type 2 SPD, UL 1283 Listed, CSA 22.2 No. 269.2
- Optional UL 1449 4th Edition Recognized Type 1, CSA 22.2 No. 269.1
- Type 1 / Type 2 SPD
- Large block, individually fused, thermally protected, 50 kA MOVs
- 20 kA I_n
- 200 kA SCCR (most models)
- Direct bus connected
- Can be wired to a circuit breaker (consult factory at time of order or see installation manual for retrofit)
- UL96A Lightning Protection Master Label compliant
- Designed, manufactured and tested consistent with:
  - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, C62.45-2002, C62.62-2010, C62.72-2016 & CSA C22.2 No. 269.1 and .2
  - 1992/2000 NEMA LS-1
  - NEC Article 285
  - IEC 61643, CE
- All UL required OCP & safety coordination included
  - Type 1 SPDs intended for Line or Load side of Main Disconnect
  - Type 2 SPDs intended for Load side of Main Disconnect
- 10 year warranty

- SPD Specifications
  - Surge Current Rating Per Phase

Per Phase	L-N	L-G	N-G
100 kA	50 kA	50 kA	50 kA
150 kA	100 kA	50 kA	50 kA
200 kA	100 kA	100 kA	100 kA
250 kA	150 kA	100 kA	100 kA
300 kA	150 kA	150 kA	150 kA

  - 100% monitoring (Every MOV is monitored, incl. N-G)
  - EMI/RFI filtering: Active tracking up to -50 db from 10 kHz to 100 MHz (Type 2 option only, includes UL 1283 Listing)
  - Repetitive impulse: 5,000 hits
  - < ½ nanosecond response time
  - Relative humidity range: 1-95% non-condensing
  - Operating frequency: 47-63 Hz
  - Operating temperature: -25°C (-15°F) to +60°C (140°F)

- Applications
  - Provides main service entrance or downstream protection for sensitive computer and electronic loads
  - Std. redundancy use: 100kA/phase
  - Inc. redundancy use: 200kA/phase
  - Max. redundancy use: 300kA/phase

- SPD Monitoring
  - LED indicators
  - Audible alarm with silence switch and test button
  - Dry contacts
  - Surge counter

Ordering Information

TPS3 **o** 02 **o o** X 2

Voltage Code

A = 120/240V, 1Ø, 3W (Fig 1)
B = 120/240V, 3Ø, 4W (Fig 3)
C = 120/208V, 3Ø, 4W (Fig 2)
D = 240V, 3Ø, 3W (Fig 4)
E = 277/480V, 3Ø, 4W (Fig 2)
F = 480V, 3Ø, 3W (Fig 4)
G = 600V, 3Ø, 3W (Fig 4)
K = 380/220V, 3Ø, 4W (Fig 2)
L = 600/347V, 3Ø, 4W (Fig 2)
S = 400/230V, 3Ø, 4W (Fig 2)

Surge Current (kA)

10 = 100 kA per phase
15 = 150 kA per phase
20 = 200 kA per phase
25 = 250 kA per phase
30 = 300 kA per phase

Option

2 = Type 2 SPD (Default) Includes UL 1283 EMI/RFI Filters
0 = Type 1 SPD (Contact factory)

X = Surge counter (Standard)

Example: TPS3C0220X2 = Type 2 SPD (Default) for a 208/120V panelboard with a surge current capacity of 200 kA per phase and a surge counter

Available Accessories: Ordered Separately

RMSIE - Remote monitor

UL 1449 Fourth Edition - Test Data
Voltage Protection Rating (VPR - 6 kV, 3 kA)

Voltage Code	Service Voltage	L-N	L-G	N-G	L-L	I_n	SCCR	MCOV
A	120/240V, 1Ø, 3W (Fig 1)	800	700	700	1200	20 kA	100 kA	150
B	120/240V, 3Ø, 4W (Fig 3)	800 /1200	700 /1200	700	1200/1800	20 kA	200 kA	150 / 320
C	120/208V, 3Ø, 4W (Fig 2)	800	700	700	1200	20 kA	200 kA	150
D	240V, 3Ø, 3W (Fig 4)	—	1200	—	1200	20 kA	200 kA	320
E	277/480V, 3Ø, 4W (Fig 2)	1200	1200	1200	2000	20 kA	200 kA	320
F	480V, 3Ø, 3W (Fig 4)	—	1800	—	1800	20 kA	200 kA	550
G	600V, 3Ø, 3W (Fig 4)	—	2500	—	2500	20 kA	200 kA	690
K	380/220V, 3Ø, 4W (Fig 2)	1200	1200	1200	2000	20 kA	200 kA	320
L	600/347V, 3Ø, 4W (Fig 2)	1500	1500	1500	2500	20 kA	200 kA	420
S	400/230V, 3Ø, 4W (Fig 2)	1200	1200	1200	2000	20 kA	200 kA	320

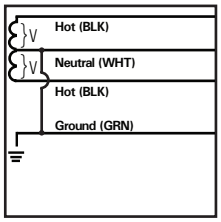


Figure 1
Split
2 Hots, 1 Neu, 1 Grnd

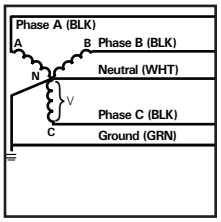


Figure 2
Wye
3 Hots, 1 Neu, 1 Grnd

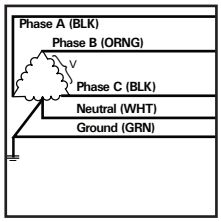


Figure 3
Hi-Leg Delta (B High)
3 Hots, (B High),
1 Neu, 1 Grnd

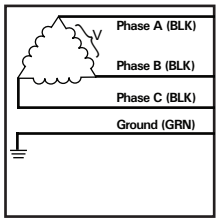


Figure 4
Delta & HRG Wye
3 Hots, 1 Grnd

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Notes:

Available 100 kA & 150 kA only

01.01.20 RevC #9385

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Small-Space Portable Electric Heater

208/240V AC, Heats Maximum 2540 cu. ft., 19100 Btu/Hour

In stock
3688K72

Voltage	208/240 Volts AC
Electrical Phase	Single
Maximum Cu. Feet Heated	2,540
Heat Output, Btu/hour.	19,100
Airflow	260 cfm
Watts	5,600
Amps	23.4
Overall	
Height	18"
Width	14"
Depth	12"

Carry these heaters to offices, workstations, and other small spaces.

Style C—Adjust the built-in thermostat from 35° to 85° F. Use the bracket as a stand or to mount to the wall or ceiling with the 5/16" mounting holes (fasteners not included). Heaters have a steel housing and a 6-ft. cord with a NEMA 6-30 plug. When operating at 208 volts AC, max. area heated and heat output are reduced by 25%. UL and C-UL listed.

NEMA 6-30
Plug

LEVITON
Building a Connected World

SmartLock*PRO*™ GFCI with Professional Grade Lockout Action

As a leading proponent of electrical safety, Leviton is continually working to improve product design and help ensure the proper installation and testing of GFCIs. That leadership role continues with the introduction of Leviton's new Smartlock*PRO*™ GFCI.

From a true dead-face design for line-load reversals to Leviton's unique patented professional grade lockout action as an end-of-life indication, the new Smartlock*PRO* GFCI sets the highest standard of people protection of any GFCI on the market today.

True Dead-Face Design with LED Indicator for Line-Load Reversals

If a Smartlock*PRO* GFCI is miswired during installation (line-load reversal), it cannot be reset, blocking delivery of power to its feed-through terminals and face. The GFCI is completely dead and the green LED will be ON to indicate a line-load reversal. Once the GFCI is wired properly and the unit can be reset, the LED acts as a power indicator that remains ON as long as the GFCI is operating correctly and providing power.

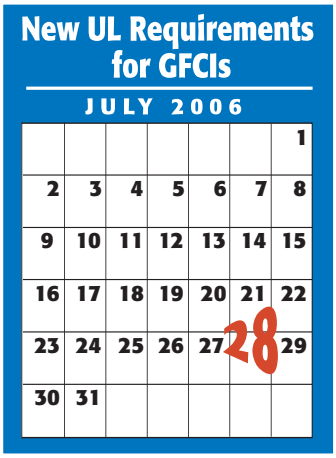
The SmartLock*PRO* End-of-Life Protection Advantage

The SmartLock*PRO* GFCI features Leviton's unique patented lockout action as an end-of-life indication. If a SmartLock*PRO* GFCI is damaged so that it cannot respond properly to a ground fault, Leviton's SmartLock*PRO* GFCI prevents reset.

SmartLockPRO Line-Load Reversal & End-of-Life Indicators

	LED Indication	Reset Status	Reason
During initial installation	ON	Will not reset	Line and load leads are reversed
	OFF	Press RESET and LED comes ON	GFCI is wired and operating correctly
During normal operation	ON	GFCI is reset	Power is ON
	OFF	GFCI is tripped	Power is OFF

New UL Requirements for GFCIs



Meets UL 2006 Requirements

SmartLock*PRO* and The New 2006 UL943 GFCI Safety Standards

Underwriter's Laboratories (UL) has issued new requirements on GFCI functionality effective July 28, 2006:

Line-Load Reversal Indication

If an old style GFCI is miswired with a line-load reversal, it is a potentially hazardous situation because the GFCI receptacle face will be live and unprotected even after the GFCI is tripped.

Current UL Standard:

- There must be a diagnostic indicator if a miswiring (line-load reversal) occurs during installation. However, the GFCI receptacle's face may still be live and unprotected.

New UL 2006 Standard:

- If a miswiring (line-load reversal) occurs during installation, the GFCI must not be capable of supplying power to either the GFCI's face or to feed-through terminals.

The SmartLockPRO Solution:

- SmartLock*PRO* provides a true dead-face design with an LED indicator for line-load reversals.

"End-of-Life" Indication

GFCIs reach the end of their service life when they no longer provide ground fault protection. As with any electronic device, a GFCI can be damaged by surges, other electrical disturbances, or environmental and physical abuse.

Current UL Standard:

- There are no requirements related to "end of life"

New UL 2006 Standard:

- GFCIs are required to provide a visual and/or audible indication OR be able to render themselves incapable of delivering power when they no longer offer ground fault protection based on a failure to pass their internal test.

The SmartLockPRO Solution:

- Though a standard GFCI CAN be reset even if it is not providing protection…the SmartLock*PRO*'s reset button will not engage if protection has been compromised. With SmartLock*PRO*'s unique patented professional grade end-of-life lock-out action you can avoid having a live, unprotected receptacle in the event that the GFCI can no longer provide protection. The robust design of SmartLock*PRO* GFCIs also greatly reduces the frequency of GFCI failures, contributing to a longer GFCI service life.

The Choice for 2006 UL End-of-Life Indication: Protection or No Protection?

Other GFCI manufacturers have taken the alternate route in the 2006 UL Standard by providing an indicator light for end-of-life indication. They allow the compromised GFCI to be reset, thereby permitting it to continue delivering unprotected power to the GFCI face and downstream receptacles. We disagree with this approach.

GFCIs are first and foremost proven safety devices. The National Electrical Code requires GFCIs to be installed in bathrooms, kitchens, workshops and other locations where water is present and there's a risk of ground fault shock hazard. Leviton believes that a GFCI should be replaced immediately if it no longer provides ground fault protection. There is absolutely no people protection when a compromised GFCI functions as a "live" standard receptacle.

That's why Leviton's SmartLock*PRO* GFCI performs a self-test every time it is reset. If it is not capable of responding to a ground fault, the reset is blocked. Leviton's SmartLock*PRO* approach locks out a compromised GFCI, thereby providing the safest and smartest solution to people protection.

General Testing Procedures

Non-Lockout Style GFCI	SmartLock*PRO* GFCI
Plug a lamp or radio into the GFCI receptacle.	Plug a lamp or radio into the GFCI receptacle.
Turn ON lamp or radio.	Turn ON lamp or radio.
Push the TEST button on the GFCI. If the GFCI is working properly, it will trip and power to the lamp or radio will be cut off. Push reset button to restore power.	Push the TEST button on the SmartLock*PRO* GFCI. The GFCI will trip and power to the lamp or radio will be cut off.
Your GFCI is working properly and should be retested every month.	
If power did not go off: If power did not go off when you pushed the TEST button, then the GFCI is not providing protection and should be replaced immediately. Standard GFCIs can still be reset and provide power even though they are not providing protection. **That's why we developed Smartlock*PRO*…**	You're GFCI is working properly if you can push the RESET button on the SmartLock*PRO* GFCI to restore power to the lamp or radio. **IMPORTANT:** The RESET button **will** not restore power if the GFCI is damaged and cannot respond to a ground fault.

Applications:

Residential - kitchen, bathrooms, garages, basements, and other wet locations around the home where the risk of electrical shock is higher

Outdoors - outdoor receptacles by pools, cabanas, patios, decks, and lanais

Hospitals and Healthcare Facilities - scrub rooms, lavatories, kitchenettes and other potentially wet locations throughout medical facilities

Educational Facilities - classrooms, restrooms, laboratories, dormitories and kitchens

Airports - public bathrooms, general use areas and maintenance areas

Restaurants, **Lodging and Retail Malls** - public bathrooms, general use areas and maintenance areas

Commercial Offices - bathrooms, basement areas, hallways and kitchen facilities

Public Areas - Wherever receptacles are required near wet or damp locations

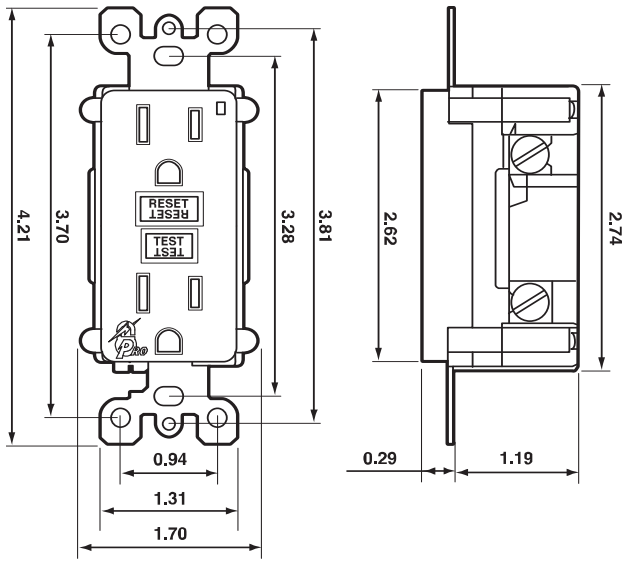
Features and Benefits:

Lockout Action

- Automatically tests the GFCI every time the RESET button is pushed in. The GFCI will not reset if the GFCI circuit is not functioning properly
- By blocking reset of the GFCI if protection has been compromised, SmartLock*PRO* reduces the possibility of end-users incorrectly assuming that a reset GFCI outlet is providing ground fault protection when it actually is not
- A line-load reversal diagnostic feature is provided which prevents the GFCI from being reset and stops power from being fed to the GFCI receptacle face or through to downstream devices. A green LED indicator on the GFCI's face also illuminates to alert the installer to a line-load wiring reversal
- The trip latching mechanism in SmartLock*PRO* GFCIs is a one-piece "T" design for efficient operation
- There are 4 sets of contacts for load terminals and face. SmartLock*PRO* GFCIs use a patented bifurcated bridge contact for efficient operation
- The SmartLock*PRO* GFCI with lockout action is designed and patented by Leviton

General

- Trip threshold meets or exceeds UL requirements for tripping time
- Improved immunity to high-frequency noise reduces nuisance tripping
- Impact-resistant thermoplastic cover and body
- Advanced electronics design provides superior resistance to electrical surges and over-voltages
- Expanded wiring options with nine back-wire holes (two for each line and load connection plus one for ground with an internal clamp)
- Silver alloy contacts
- Versions available with matching TEST and RESET buttons and traditional black and red models
- Compatible with all Decora® devices and wallplates; available in select Decora colors
- Hospital Grade and Blank Face Switch-Rated models available
- Packed with coordinating wallplate
- Backed by Leviton's Limited Two-Year Warranty



Agency Standards & Compliance:

- Meet or exceed all new UL requirements for July 28, 2006
- UL Standard 943 Class A (GFCI) and 498 (Receptacles)
- UL Listed (File # E-48380)
- CSA Certified (File #LR-57811
- NOM Certified (File #057)

Material Characteristics

Environmental: Flammability UL-94 V2 Rating
Operating Temperature: -35°C to 65°C

Ordering Information SmartLock*PRO*™ GFCI Receptacles
Hospital Grade — Back and Side Wired*

Description/Rating	Cat. No.	Color
LED Indicator Light 15A-125V @ Receptacle, 20A-125V Feed-Through	7599-HG 7599-HGI 7599-HGW 7599-HGG 7599-HGR 7599-HGA 7599-HGT	Brown Ivory White Gray Red Almond Lt. Almond
LED Indicator Light 20A-125V @ Receptacle, 20A-125V Feed-Through	7899-HG 7899-HGI 7899-HGW 7899-HGG 7899-HGR 7899-HGA 7899-HGT	Brown Ivory White Gray Red Almond Lt.Almond

Spec Grade — Back and Side Wired
Blank Face • Switch-Rated*

Description/Rating	Cat. No.	Color
LED Indicator Light 20A-125V Feed-Through, 1.5 HP @ 120V Switch Rating	7590-I 7590-W 7590-E 7590-A 7590-T	Ivory White Black Almond Lt. Almond

Spec Grade — Back and Side Wired
Combination Switch/SmartLock*PRO* GFCI Receptacle*

Description/Rating	Cat. No.	Color
LED Indicator Light 15A-125V @ Receptacle 20A-125V Feed-Through, 1000W, 8.3A, 1/4 HP @ 120V Switch Rating	7299-I 7299-W 7299-A	Ivory White Almond

Spec Grade — Back and Side Wired*

Description/Rating	Cat. No.	Color
LED Indicator Light 15A-125V @ Receptacle, 20A-125V Feed-Through	7599 7599-I 7599-W 7599-GY 7599-E 7599-A 7599-T	Brown Ivory White Gray Black Almond Lt. Almond
LED Indicator Light 20A-125V @ Receptacle, 20A-125V Feed-Through	7899 7899-I 7899-W 7899-GY 7899-E 7899-R 7899-A 7899-T	Brown Ivory White Gray Black Red Almond Lt. Almond

*** This product is covered by U.S. Patents Nos. 6,040,967; 6,246,558; 6,282,070; 6,381,112; 6,437,953; 6,864,766, as well as other U.S. and foreign patents pending.**

Leviton Manufacturing Co., Inc.
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Telephone: 1-800-323-8920 • FAX: 1-800-832-9538
Tech Line (8:30AM – 7:30PM Eastern Time Monday-Friday): 1-800-824-3005

Leviton Manufacturing of Canada, Ltd.
165 Hymus Boulevard, Pointe Claire, Quebec H9R 1E9
Telephone: 1-800-469-7890 • FAX: 1-800-563-1853

Leviton S. de R.L. de C.V.
Lago Tana 43 , Mexico DF, Mexico CP 11290
Telephone: (+52) 55-5082-1040 www.leviton.com.mx

Visit Leviton's website at www.leviton.com

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Color: Ivory

1453-2I

UPC Code: 07847717460

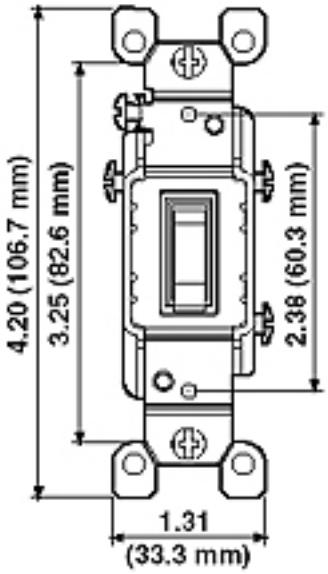
Country of Origin: Please Contact Customer Service

Description
15 Amp, 120 Volt, Toggle Framed 3-Way AC Quiet Switch, Residential Grade, Grounding, Quickwire Push-In & Side Wired, - Ivory

Product Features

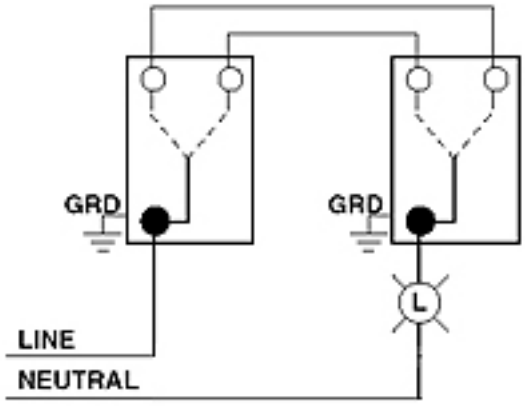
Grounding:	Grounding
Feature:	Framed
Amperage:	15 Amp
Voltage:	120 Volt
HP Rating:	1/2HP-120V
Max. Amperage:	12 Amp
Termination:	Quickwire Push-In & Side
Actuator Material:	Thermoplastic
Body Material:	Thermoplastic
Strap Material:	Steel
Color:	Ivory
Standards and Certifications:	UL/CSA
Warranty:	2 Year Limited

Dimensional Diagram



Wiring Diagram

3-Way to 3-Way



SPECIFICATION SUBMITTAL

JOB NAME:	CATALOG NUMBERS:	
JOB NUMBER:		

Leviton Manufacturing Co., Inc.
201 North Service Road, Melville, NY 11747
Telephone: 1-800-323-8920 · FAX: 1-800-832-9538 · Tech Line (8:30AM-7:30PM E.S.T. Monday-Friday): 1-800-824-3005

Leviton Manufacturing of Canada, Ltd.
165 Hymus Boulevard, Pointe Claire, Quebec H9R 1E9 · Telephone: 1-800-469-7890 · FAX: 1-800-824-3005 · www.leviton.com/canada

Leviton S. de R.L. de C.V.
Lago Tana 43, Mexico DF, Mexico CP 11290 · Tel.: (+52)55-5082-1040 · FAX: (+52)5386-1797 · www.leviton.com.mx

ISO 9001 REGISTERED Quality Manufacturer

Visit our Website at: www.leviton.com
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Leviton has a global presence.
If you would like to know where your local Leviton office is located please go to: www.leviton.com/international/contacts/

VX100DG/F13

JOB NAME: _____

DATE: _____

TYPE: _____

DESCRIPTION

Box mount, die cast aluminum with built-in junction box and sturdy mounting lugs. Medium base socket, 1/2" or 3/4" NPS hub size and a variety of globes.

SPECIFICATIONS

Globes:
Supplied with clear thermal shock resistant soda lime glass unless otherwise stated. Colored and white glass globes available. Unbreakable Permaglobes available in clear and in color.

UL Listing:
Suitable for wet locations. Suitable for use in dwellings. Suitable for use with 90° C supply wiring. Complies with UL Standard 1598. For non-hazardous locations where the lamp, socket and wiring require protection from rain, corrosive fumes, non-combustible dusts, moisture, non-explosive vapors and gases. For lamp base up installation only when outdoors.

Ballast Minimum Starting Temperature:
32

Colored Globe Maximum Watts:
100 watts

Die Cast Guard:
Supplied with one piece die cast guard with set screw

F13:
Compact Fluorescent 13W

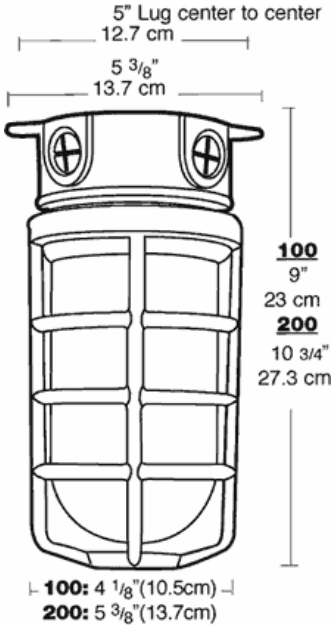
Maximum Watts:
150 watts

Patents:
RAB sensor and fixture designs are protected under U.S. and International Intellectual Property laws.

Color:
Natural

Weight:
3.3

DIMENSIONS



ORDERING INFORMATION

Compact Fluorescent
Lamp supplied with fixture

Total Watts	Lamp Type	Lamp Base	Ballast	Starting Amps/ Operating Amps 120V	208V	240V	277V	Input Watts	LAMP ANSI	Initial Lumens	Lamp Hours
13	13W Quad	GX23	NPF 120V	0.35				17		825	10000

Factory Installed Options
Add suffix to Catalog Number

Note: Specifications may change without notice

RAB Lighting, Inc. • 170 Ludlow Ave• Northvale, NJ 07647 • Tel: 888 RAB-1000 • Fax: 888 RAB-1232 • www.rabweb.com

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Bulb 10 Watt LED Soft Daylight E26 24V

Now with 270 degrees of light coverage, this bulb now gives better illumination when mounted sideways in a fixture. Using only 10 watts, this bulb puts out a staggering 950 lumens, making it a highly efficient option for replacing incandescent bulbs or even CFL bulbs. The amount of light you get for only 10 watts will surprise you! The copper/chrome standard edison screw base is corrosion resistant and suited for marine applications. Being 24vdc, this is an excellent lighting solution for 24V solar system or mariners with 24V systems on their boats. The Soft Daylight colour resembles that of an incandescent, which is great for people wanting to replace them! This light is fantastic for reading, for living rooms, dining rooms, and bedrooms. Not only does this LED light replace a 85 watt incandescent, it lasts up to 40 times longer as well!

Unlike some of our higher wattage LED bulbs in the past, the dimensions of this bulb are the same as standard sized incandescent bulbs making replacing such bulbs in fixtures very simple. These LED lights shouldn't be in a totally enclosed fixture. Don't forget, this LED will last 5 times longer than a CFL!

Voltage: 20 - 30 Volts DC
Watts: 10
Amps: 0.42
Lumens: 950
Colour Temperature: 4000 - 4500K
Dimensions(tip to tip): INCHES: 4 1/4" x 2 3/8" CM: 11cm x 6cm
For more information on our LED lights click here.

Project:

Location:

Product Type:

Contact/Phone:

Model #:

FD Series

Decorator Series

The FD Series Decorator Auto-Off Timers are designed to replace any standard wall switch - single or multi-gang. This series of energy-ef□cient mechanical timers do not require electricity to operate. In addition, they automatically limit the ON times for fans, lighting, motors, heaters, and other energy consuming loads.

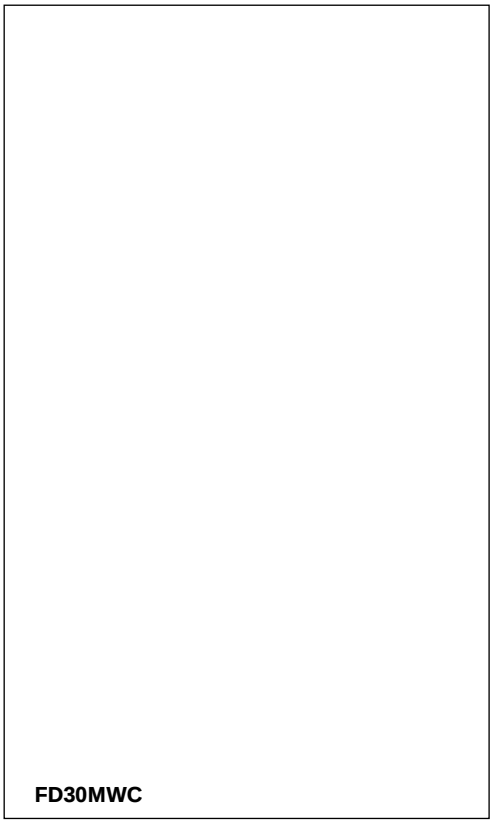
Features

- Fmjb dc_rspc cl_`jcq sqcp rm mtcppgbc rfc _srmk_rga qfsr+mdd dslargml
- Qsnnjgcb rgkc bg_j nj_rcq _pc bcqgelcb rm Ğr cgrfcp rmeejc &DD' mp bcamp_rmp qrwjc &DB' qugraf nj_rcq
- Qglejc mp ksjrg+e_le ugrf lm Ğcjb kmbgĞa_rgmlq pcosgpcb
- Rgkc q_tgle sn dpmlr rcpkgl_j amllcargml ugrf rccrcp+rwnc rcpkgl_jq
- Npcqq+ml ilm` bcqgel clqspcq osgai _lb c_qwglqr_jj_rgml
- ADJ Amkn_rg`jc

Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

Ratings

Pcqgqrgtc8	0. ?kn* /03 T?A* 3.-4. Fx /. ?kn* 03. T?A* 3.-4. Fx /. ?kn* 055 T?A* 3.-4. Fx
Rsleqrcl8	5 ?kn* /03 T?A
Kmrmp8	/ FN* /0. T?A* 3.-4. Fx 0 FN* 02. T?A* 3.-4. Fx
Mncp_rgle Rcknccp_rspc8	+2.ÀD rm /.2ÀD &+2.ÀA rm 2.ÀA'
Style:	A_l `c sqcb ugrf bcamp_rmp _lb rmeejc type switch plates
Bgkclqgmlq8	0,57 F v /,4 U v /,/7 B



FD30MWC

FD Series

White Models	Ivory Models	Almond Models	Time Cycle	Switch	Hold
FD5MW	**FD5M**	**-**	3 Kglsrcq	SPST	No
FD15MWC	**FD15MC**	**FD15MAC**	/3 Kglsrcq	SPST	No
FD15MHW	**FD15MH**	**-**	/3 Kglsrcq	SPST	Yes
FD30MWC	**FD30MC**	**FD30MAC**	1. Kglsrcq	SPST	No
FD30MHW	**FD30MH**	**-**	1. Kglsrcq	SPST	Yes
FD60MWC	**FD60MC**	**FD60MAC**	4. Kglsrcq	SPST	No
FD60MHW	**FD60MH**	**-**	4. Kglsrcq	SPST	Yes
FD2HW	**FD2H**	**-**	0 Fmspq	SPST	No
FD4HW	**FD4H**	**-**	2 Fmspq	SPST	No
FD6HW	**FD6H**	**-**	4 Fmspq	SPST	No
FD6HHW	**FD6HH**	**-**	4 Fmspq	SPST	Yes
FD12HWC	**FD12HC**	**-**	/0 Fmspq	SPST	No
FD12HHW	**FD12HH**	**-**	/0 Fmspq	SPST	Yes
FD32HW	**FD32H**	**-**	0 Fmspq	SPDT	No
FD34HW	**FD34H**	**-**	2 Fmspq	SPDT	No
-	**FD36H**	**-**	4 Fmspq	SPDT	No
-	**FD415M**	**-**	/3 Kglsrcq	DPST	No
FD430MW	**FD430M**	**-**	1. Kglsrcq	DPST	No
FD460MW	**FD460M**	**-**	4. Kglsrcq	DPST	No
FD46HW	**FD46H**	**-**	4 Fmspq	DPST	No

Specification

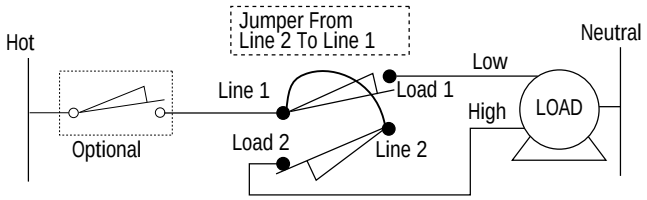
Rfc rgkc qugraf qf_jj `c md rfc _nnpmnpg_rc bgkclqgmlq _lb bcqgel rm npmtgbc bgpcar pcnj_ackclr md _ qr_lb_pb u_jj qugraf gl qglejc mp ksjrg+e_le 0Ö bccn hslargml `mvcq, Rfc rgkcp qf_jj glajsbc _ kmjbcb]]]]]]]]] &?jkmlb'&Gtmpw' &Ufgrc' ilm` _lb nj_rc ugrf _ qngp_j rgkc qa_jc rm npmtgbc c_qw qcjcargml md rfc rgkc qcrrgle, Rfc kmjbcb nj_rc &rgkc bg_j' _lb ilm` qf_jj `c rfc qr_lb_pb glbsqrpw _aacnrcb]]]]]]]]]]]]] &?jkmlb'&Gtmpw'&Ufgrc' _lb qf_jj npmtgbc dmp glqr_jj_rgml sqgle _ qr_lb_pb rmeejc mp qr_lb_pb bcamp_rmp u_jj qugraf nj_rc ugrfmsr kmbgĞa_rgmlq, Rfc ilm` qf_jj `c _ npcqq ml rwnc pcosgpgle lm qapcuq mp mrfcp f_pbu_pc rm qcaspc, Rfc rfpc_bcb fmjc dmp nj_rc kmslrgle qf_jj `c cvrpsbcb rm npmtgbc _ kglgksk md ,.63 rfpc_b cle_eckclr, Qugraf P_rgle &C_af Nmjc dmp BNQR Kmbcjq',

Rfc rgkcp qf_jj f_tc _ SJ jgqrcb p_rgle md8

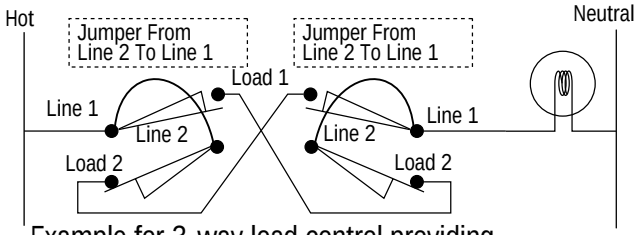
- ° / FN _r /03 T?A* 3.-4. Fx
- ° 0 FN _r 03. T?A* 3.-4. Fx
- ° 0. ?kn* /0. T?A* 3.-4. Fx
- ° /. ?kn* 03. T?A* 3.-4. Fx
- ° /. ?kn* 055 T?A* 3.-4. Fx
- ° 5 ?kn* /03 T?A

Rfc rgkcp Ğcjb ugpgle amllcargmlq qf_jj `c qcaspcb `w kc_lq md _ rccrcp+rwnc rcpkgl_j qapcu rm npmtgbc qcaspc amllcargmlq dmp _nnpmnpg_rc ugpc qgxcq, Rfc rgkcp qf_jj `c ]]]]]]]]]]]] &QNQR'&BNQR'&QNBR', Rfc rgkcp ]]]]]]]]]] &Qf_jj'&Qf_jj Lmr' f_tc _ Fmjb dc_rspc _lb qf_jj f_tc _ rgkc awajc md ]]]]]]]]]]]] &Qcc Rgkc Awajcq Jgqrcb', Rfc rgkcp qf_jj `c Glrcpk_rga kmbcj]]]]]]]]]]]]]] &Qcc Kmbcj Lsk `cpq Jgqrcb',

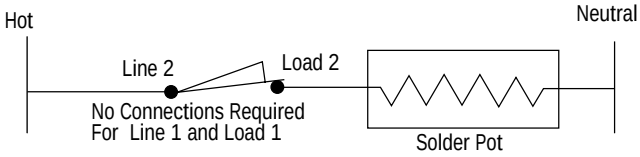
Diagrams



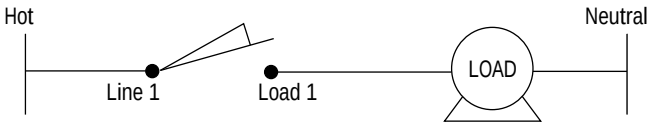
Example for timed selection of low or high speed motor with optional timer to limit operation time regardless of speed selected.



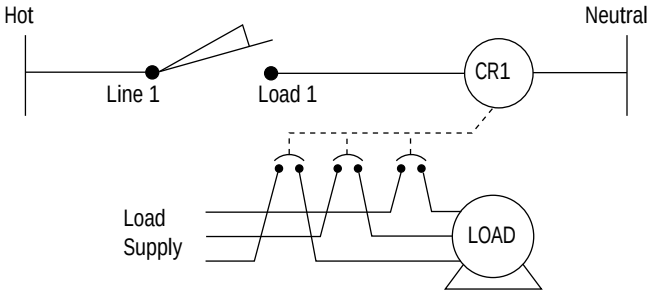
Example for 3-way load control providing timed override from more than one location.



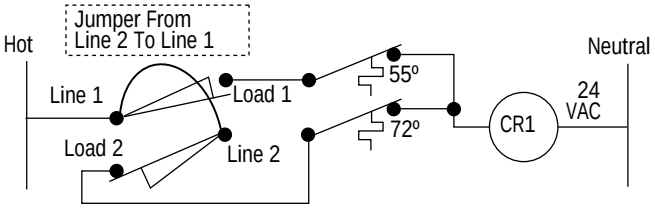
Example for reverse action control. The load is switched off when timer is operated for a limited time then switches back on.



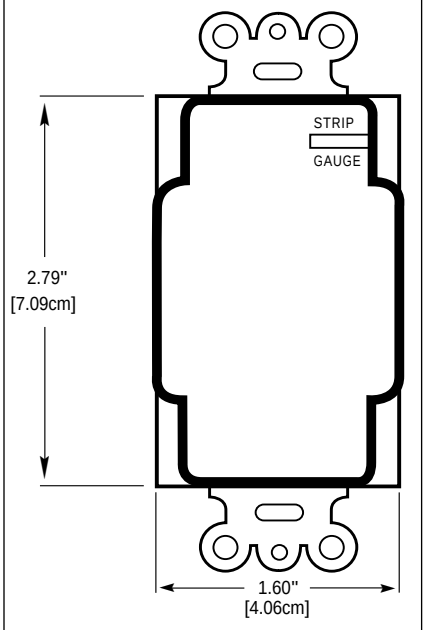
Example for SPST motor load control.

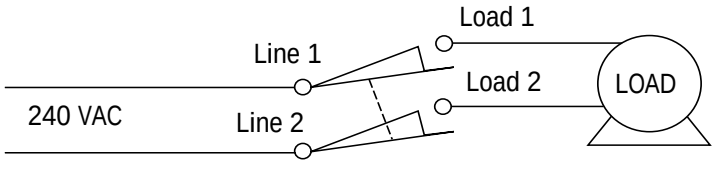


Example for SPST large motor load control using a 3-pole contactor or motor starter.

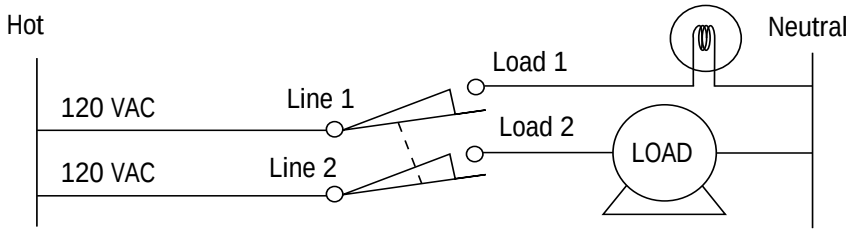


Example for control of low voltage set-back set-up thermostats using SPDT timer.





Example for breaking both sides of a 240 volt load using DPST contacts.

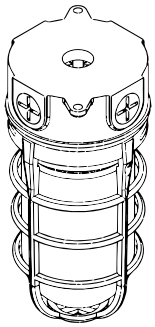


Example for controlling two loads simultaneously by using DPST contacts.

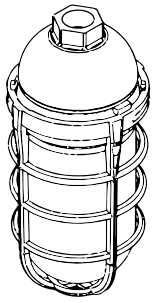
INSTALLATION INSTRUCTIONS
E-VT Series

Document:	LPN00271X0001A0_A	Date	2014-09-01
Created By:	TMT	DCR#	2014-321

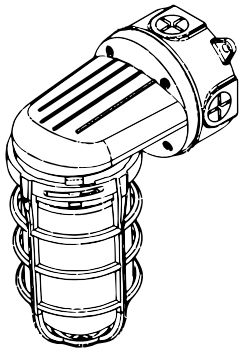
e-conolight®



Ceiling Mount



Pendant Mount



Wall Mount

MOUNTING TO CONDUIT PENDANT MOUNTING

1. Complete the wiring to the power source (refer to wiring instructions).
2. Thread the fixture onto the conduit.
3. Seal around the conduit using approved NEC procedures.
4. Flats are provided at the top of the fixture to tighten with a wrench.

CEILING/WALL MOUNTING

1. Pull leads to the box.
2. Complete the wiring to the power source (refer to wiring instructions).
3. Attach the ceiling/wall box to the mounting surface.

FIXTURE WIRING

1. Using customer supplied 90°C minimum rated wire connectors, make the following electrical connections in the mounting box or junction box:
    a. Connect the black fixture lead to the voltage supply lead
    b. Connect the white fixture lead to the neutral supply lead
    c. Connect the ground lead to the supply ground lead.

CAUTIONS

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. **DANGER**- Risk of shock- Disconnect power before installation. ***DANGER*** *– Risque de choc – Couper l'alimentation avant l'installation.*
2. This luminaire must be installed in accordance with the NEC or your local electrical code. If you are not familiar with these codes and requirements, consult a qualified electrician. *Ce produit doit être installé conformément à NEC ou votre code électrique local. Si vous n'êtes pas familier avec ces codes et ces exigences, veuillez contacter un électricien qualifié.*

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

LED Vapor Tight

XVML

FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for damp/wet locations such as outdoor venues, canopies and locker rooms. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** Click here for Acrylic and Polycarbonate Environmental Compatibility table for suitable uses.

CONSTRUCTION — Light gray, fully gasketed, polycarbonate housing with ten polycarbonate captive latches provides a watertight seal. The high-impact resistant housing and extruded silicone rubber gasket protects the internal components from the environment, including moisture and dirt. 3/8" wet location fitting provided on the 3500LM fixture and 1/2" wet location fitting provided on the 5000LM fixture on one end for use with liquid tight conduit. The housing dimensions vary based on the lumen package selected. See DIMENSIONS drawings on page 2 for details. Polycarbonate latches (included) deter tampering, by accommodating #6-32x3/8" tamper resistant fasteners (not provided). Grade 301 stainless steel latches (available separately) deter tampering, by accommodating #8-32x1/2" tamper resistant fasteners (not provided).

OPTICS — UV-stabilized, high-impact, frosted polycarbonate lens for uniform light output and high-impact resistance.

ELECTRICAL — High-e□ciency LEDs. 0-10V dimming standard for a dimming range of 100% to 10%. 3kV Ring, 2kV Combo level of surge protection is standard. Suitable for 50/60 Hz.

INSTALLATION — Mounting hardware for surface mounting to ceiling or wall (horizontally or vertically) included. Mounting hardware kit also includes hooks for suspended mount (chain not included). Optional 45° corner angle bracket mount and junction mount kit also available. Maximum of 15 units or 6A for through wiring connection or daisy chain type installation. Tool-less access for installation.

LISTINGS — UL/C-UL listed to US and Canadian Safety Standards. For use in wet locations under covered ceilings. For use in ambient temperatures from -4°F (-20°C) to 104°F (40°C). IP65 and IP66 rated when ceiling, suspended, wall or corner mounted. Junction Box mount rated IP65. This unit meets FCC Non-Consumer Class A (277v) and Consumer Class B (120V) limits.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may di□er as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

ORDERING INFORMATION

Catalog number	Lumens	Voltage	Color temperature	Standard carton quantity
XVML L48 3500LM MVOLT 40K 80CRI	3500LM	MVOLT (120-277)	4000K, 80CRI	1
XVML L48 3500LM MVOLT 50K 80CRI	3500LM	MVOLT (120-277)	5000K, 80CRI	1
XVML L48 5000LM MVOLT 40K 80CRI	5000LM	MVOLT (120-277)	4000K, 80CRI	1
XVML L48 5000LM MVOLT 50K 80CRI	5000LM	MVOLT (120-277)	5000K, 80CRI	1

Accessories: *Order as separate catalog number.*

XVML LATCH STSL	Stainless steel latch kit (Set of 10)[1]
XVMLJSB	Junction box mount[2]
XVMLANGBKT45	Angle mount bracket[3]

Notes

1 To deter tampering, stainless steel latches can accommodate #8-32x1/2" tamper resistant fasteners (not provided). Kit includes 10 latches.

2 IP65 rated. Not compatible with angle mount bracket. Required to be used in center of fixture with supplied brackets for additional mounting support.

3 For use with applications where ceiling meets wall at a 90° angle. See drawing on page 3 for more information.