

A Proven Performer Recognized for Economical Installation



Manistowic Public Library
Manistowic, Wisconsin
ARCHITECT
Engberg Anderson Design Partnership, Milwaukee, Wisconsin
GLAZING CONTRACTOR
Sheboygan Glass Company, Inc., Sheboygan, Wisconsin
PHOTOGRAPHY
© Bob Freund

Taking center stage in Kawneer's lineup, the EnCORE™ Framing System is a two-piece face-and-gutter system that offers thermal economy, a structural silicone glazed (SSG) option and numerous design choices. Engineered for easy installation and lower costs, features include the unique QuickSeal™ self-sealing system, a broad selection of system depths and a 1-3/4" (44.5 mm) minimal sightline. The EnCORE™ Framing System readily adapts to remodel projects and new construction, whether traditional or modern architecture.

ECONOMY

EnCORE™ is a QuickSeal™ dry-glazed self-sealing framing system and is the first to eliminate joint sealant at horizontal joints, making it more cost effective. The vertical gasket runs through, and when "pinched" by the head, sill and intermediate horizontals, a watertight seal is created, eliminating the need for sealant.

By using the same extrusions for horizontal and vertical mullions, metal utilization is maximized. In addition, the tongue on the extrusions eliminates the need for a secondary, continuous water deflector, thus economizing on installation costs and time.

EnCORE™ Framing System also requires no setting block chair at intermediate horizontals. And at the sill, the system utilizes a simple setting block chair that fits snugly within the glazing pocket and requires no fastening. The system accepts standard 1" (25.4 mm) or 1/4" (6.4 mm) infills and can also be adapted to accept other infills in 1/8" (3.2 mm) increments.

The top-loaded glazing gaskets are the same as those used in the Kawneer flagship Trifab™ Framing Systems, which helps reduce field labor and minimize inventory requirements.

Providing single-source responsibility, Kawneer entrances, windows, curtain walls and slope glazing are compatible with the EnCORE™ Framing System.

PERFORMANCE

A specially engineered thermal clip eliminates metal-to-metal contact by snapping onto the mullion. The cover then snaps onto the clip for true thermal integrity. In addition, the clip has an extended leg on one side, which acts as a "w" block and prevents shifting of glass due to climate changes and building movement.

Engineered to meet or exceed certified performance requirements for air and water infiltration, the EnCORE™ Framing System has been fully tested according to ASTM E283 and ASTM E331. Thermal testing was completed in accordance with AAMA 1503.

The EnCORE™ Framing System also offers architects and building owners the ability to determine project-specific U-factors by referring to thermal tables in our architectural manual. Unique to Kawneer, these tables enable U-factor calculations for each project by utilizing the total glass percentage and the project's center of glass (COG) U-factor.

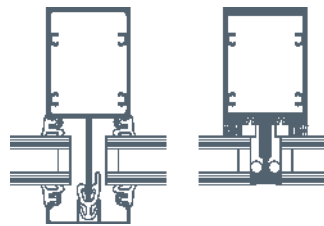
AESTHETICS

For additional freedom of expression, the EnCORE™ Framing System offers front or center glazing options. An SSG option is also available. And to provide greater design flexibility, the face-and-gutter system offers system depths of 3-9/16" (90.5 mm), 4-1/2" (114.3 mm) or 6" (152.4 mm) front glazed and 4-1/2" (114.3 mm) center glazed.

The 1-3/4" (44.5 mm) minimal sightline provides consistent design aesthetics, while a 1-1/4" (31.75 mm) perimeter sightline is also available. Since the exterior face and interior mullions are separate pieces, two-color design considerations are easily realized.



**Customer Service Center, Blue Cross and Blue Shield of Louisiana
Baton Rouge, Louisiana**
ARCHITECT
Architectural Group of Baton Rouge, Baton Rouge, Louisiana
GLAZING CONTRACTOR
Louisiana Glass Company, Baton Rouge, Louisiana
PHOTOGRAPHY
© Gordon Schenk



Another key feature of the EnCORE™ Framing System's separate components is that they are easily adapted to curved applications. The framing is available in three fabrication methods: screw spline, shear block or Type B, which is a combination of both.

FOR THE FINISHING TOUCH

Permanodic™ anodized finishes are available in Class I and Class II in seven different color choices.

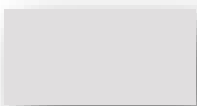
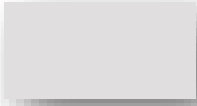





Painted finishes, including fluoropolymer, that meet or exceed AAMA 2605 are offered in many standard choices and an unlimited number of specially designed colors.

Solvent-free powder coatings add the green element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.

Kawneer Anodize finishes

Kawneer gives you a wide variety of anodized finishes with attractive alternatives. The benefit of a durable, anodized finish is married to the beauty of some very dynamic and exciting colors.

At the start of every design, there's a choice of how you want to finish. Contact your Kawneer sales rep for the information on these and other finishes available from Kawneer.

	KAWNEER FINISH NO.	COLOR	ALUMINUM ASSOCIATION SPECIFICATION	OTHER COMMENTS
	#14	CLEAR	AA-M10C21A41 / AA-M45C22A41	Architectural Class I (.7 mils minimum)
	#17	CLEAR	AA-M10C21A31	Architectural Class II (.4 mils minimum)
	#18	CHAMPAGNE	AA-M10C21A44	Architectural Class I (.7 mils minimum)
	#26	LIGHT BRONZE	AA-M10C21A44	Architectural Class I (.7 mils minimum)
	#28	MEDIUM BRONZE	AA-M10C21A44	Architectural Class I (.7 mils minimum)
	#40	DARK BRONZE	AA-M10C21A44 / AA-M45C22A44	Architectural Class I (.7 mils minimum)
	#29	BLACK	AA-M10C21A44	Architectural Class I (.7 mils minimum)

Fixed - Historic Wide - 3 1/4"

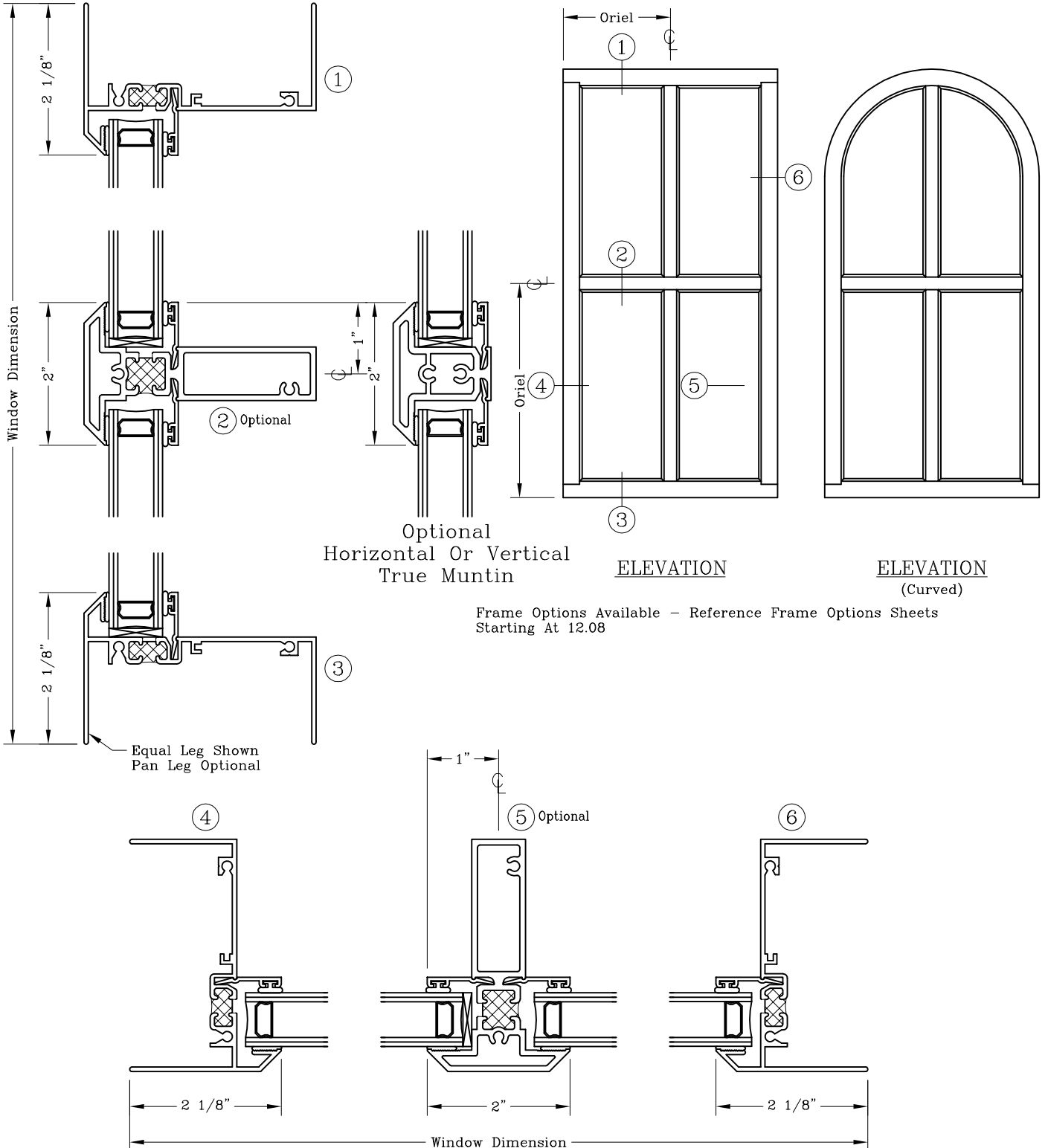


Series: 1200

Manufacturing Code: 1202

Drawing 1/2 Scale - For Custom Size Drawing Contact Graham

Note: Sealant Not Shown On Details. Consult Technical Services At Factory For Sealing Procedures.





AWNING

Contact Us | Company Information | Get a Quote

Search ...

CALL FOR A QUOTE: 800-272-2187

Commercial • Residential • Fabric Structures • Retractable • Locations • Metal Work •

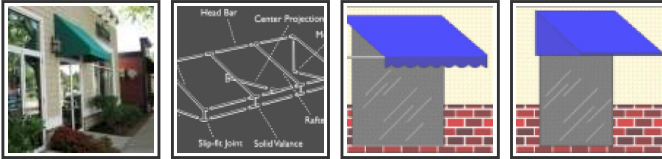
Gallery



SHED AWNINGS

Shed style awnings, or traditional style awnings, are one of the most popular choices for residential homeowners. The simple, traditional design has a sloped surface that 'sheds' water away from doors or windows, protecting them from rain and snow, while providing cooling and energy saving shade for windows and doors without obstructing too much of the view from the inside. The versatile design of a shed style awning and works well on many different architectural styles, creating a classy and handsome addition to your home.

Categories: awnings, commercial, fabric awnings & canopies, featured, shed awnings



GET A QUOTE BY PHONE OR EMAIL

▶ GET A QUOTE

Related products



ARCHED METAL CANOPY



ELONGATED DOME AWNINGS



CONVEX AWNINGS



INTERIOR AWNINGS



WEATHER PROTECTION ENCLOSURE



A Century of Service

For nearly a century, BH Awning & Tent continues to strive in supporting a relationship for life with each and every customer.



No Hassle Warranties

We are proud of our work firmly standing behind everything that we do offering "No Hassle Warranties."



Top Quality Materials

BH Awning uses only the best products and materials. From the finest canvas and vinyl fabrics to the sturdiest of brackets, arms, rafters, and roller tubes.



The Extra Mile is Where We Start

Whatever your request, however complicated or tough you feel the job is, please talk with us. You will quickly find that we always say "yes", thriving on the challenge!

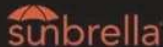
▶ READ MORE RECOMMENDATIONS

BH Awning and You

We strive in supporting a relationship for life with each and every customer.

Whether your application is of a traditional or more modern basis, BH Awning will help you design the perfect awning, canopy, or other structure for your home or business with the highest quality products, finest workmanship, and service that is second to none. No job is too big or too small. Give us a call, or better yet, stop see us. We have nearly a hundred years of experience that provides the foundation to serve. At the same time, you will quickly find out that we treat every custom your are our first and only one.

We Only Work with the Best



AWNING

SERVING THE MIDWEST SINCE 1922

A century in business says something special about a company. B.H. Awning has been around the longest in the market and is still working the hardest in providing premium products, supreme workmanship, and dedicated service all at the most competitive pricing. Our customers are the most important part of our existence. Call us today, let us know how we can serve your awning and tent needs.

[LEARN MORE](#)

PRODUCTS

- Awnings
- Banners
- Canopies
- Fabric
- Flags
- Graphics
- Window Products
- Sewn Products
- Tents
- Outdoor Curtains
- Motorized
- Miscellaneous

PRODUCT INFORMATION

- Product Warranties
- Benefits of Awnings & Canopies
- Frequently Asked Questions
- Awning Styles
- Awning Graphics
- Design Loads for Awnings & Canopies
- Fabric Cleaning Instructions
- Technical Information – Awning Frames
- Technical Information – Fabric



COMPANY

INFORMATION

- About BH Awning
- Production Partners
- Recommendations
- The Extra Mile
- Contact Us
- Get A Quote
- Policies

CONTACT

INFORMATION

P: 800-272-2187 or 269-925-2187
 F: 888-272-2197
 E: sales@bhawning.com



Copyright BH Awning and Tent. All rights reserved.

EVERKOTE 300

REACTIVE INORGANIC MINERAL PAINTS & STAINS

DESCRIPTION:

EverKote 300 mineral coatings are waterborne inorganic paints and stains based on reactive potassium silicate binders. Potassium silicate masonry paints have been in use for over a century to provide extremely durable, breathable color coatings on all types of mineral-based substrates, including stone, masonry, concrete and cement plaster (stucco).

Two standard grades of are available:

GRADE	DESCRIPTION
PENETRAL	Low-Viscosity, Opaque or Semi-Transparent Stains
PATINAR	Medium Viscosity, Opaque Coatings

EverKote 300 coatings are stabilized, reactive formulations which form chemical bonds within the substrate to provide long term durability.

HOW DO *EverKote 300* POTASSIUM SILICATE COATINGS WORK?

EverKote 300's potassium silicate binder is produced by fusing potassium carbonate with silica at high temperature. The result is a soluble silicate, which can be dissolved in water to produce a liquid "waterglass".

Although soluble silicates can be air dried to form a film, maximum water resistance, bond strength and long-term durability depend on chemical reactions with the substrate or added catalysts. Substrates with which silicates can react include:

- Calcium salts, typically found in portland cement, lime and calcareous natural stones such as limestone and marble
- Silica, typically present in siliceous sandstones, silica sand, mortars, stucco, concrete and glass
- Ceramics, including brick and terra cotta
- Iron, aluminum and other metals

When *EverKote 300* is applied to suitable substrates, it penetrates and reacts to form a hard, insoluble silicate.



PHOTO: *EverKote 300* was applied to this Historic Landmark building as part of the building's restoration program.

When applied to materials containing portland cement, the silicate reacts with incompletely hydrated cement particles, converting unreacted calcium hydroxide [$\text{Ca}(\text{OH})_2$ or hydrated lime] to hard calcium silicate hydrates.

APPEARANCE:

EverKote 300 is available in nearly 900 standard colors. Custom color-matching is also available. Product dries to a flat (matte) finish.

PROPERTIES

- Exceptionally Breathable
- Moisture and Immersion Resistant
- Does not contribute to growth of mold, algae or mildew
- Improves resistance to certain chemicals
- Durable and UV-Resistant; Does not yellow or peel
- Heat Resistant

APPLICATION

Always pre-test a small, inconspicuous area for color, adhesion and compatibility prior to large scale application. Allow up to 7

PROPERTY	RESULTS	COMMENTS
Direct Tensile Bond Strength	>410 psi @ 48 hrs. cure	No adhesive failure; 100% cohesive failure in substrate
Flexural Bond Strength	>1440 psi @13 days cure	No adhesive failure; 100% cohesive failure in substrate
Water Vapor Transmission, ASTM E96	>99%	Results expressed as percentage versus uncoated control
Accelerated Weathering, ASTM G53	1000 hrs., no cracking, peeling, yellowing, swelling or checking	Stable

days' cure before judging final color. Previous treatments, water repellents, chemical cleaning agents, and substrate composition can affect mineral coating reaction rates and appearance. Mineral coatings are natural materials and some color variation or shading is normal. Colors may lighten somewhat with aging.

EverKote 300 may be applied in one or two coats. The first coat may be thinned with up to 10% demineralized or distilled water, followed by one undiluted **EverKote 300** top coat. On rough or porous substrates, topcoats may also be diluted to maintain the target coverage rate of 200 sq.ft./gallon. **Do not over-apply.**

Surface Preparation

Surfaces to be treated must be clean, dry and free of dirt, dust, form oil, efflorescence, previous coatings (other than existing cement or silicate mineral coatings) and other materials which may hinder penetration and/or reaction with the substrate. Previous cementitious and silicate mineral coatings must be spot tested for compatibility in an inconspicuous area prior to large scale application. Highly porous substrates may require consolidation prior to coating.

CAUTION: Protect glass and other surfaces not intended to be coated by covering completely with polyethylene, sealing the edges continuously with heavy moisture resistant tape. Unprotected glass and other surfaces may be etched or "frosted" by contact with silicate coatings. This is a chemical reaction, which cannot be reversed by cleaning.

New Concrete, Stucco and Mortar must be allowed to cure for a minimum of 7 days prior to mineral coating application. For maximum effectiveness, surfaces must be sufficiently dry to allow the mineral binder to penetrate porous substrates.

Allow extended drying time as required under cool, damp conditions.

Factors Affecting Penetration Depth

While penetration depth may not be critical for many architectural applications, greater penetration has a significant effect on strength and durability of applications on cement-based substrates, porous stone and traffic surfaces. Penetration is influenced by substrate pore structure and permeability, moisture content and surface preparation.

Application:

Mix product thoroughly before use as contents may settle upon standing. Re-mix periodically during use to maintain consistent color and saturation.

Apply **EverKote 300** by brush, roller or airless spray. Apply as a continuous film and do not attempt to overbuild the wet film to fill surface imperfections.

Allow first coat to dry for a minimum of 6 hours before top coat application of **EverKote 300**.

Protection & Curing: Protect coated surfaces from rain or other water exposure for at least 24 hours after application. Full cure requires at least 7 days, and colors may change in hue or intensity during this period. Do not expose treated surfaces to acid cleaners, hot water or steam cleaning.

COVERAGE:

Coverage rates vary based on surface texture and porosity. Adjust viscosity or application methods as required to maintain nominal coverage rate of 200 sq.ft./gal. per coat.



3 Northwest Drive, Plainville, CT 06062

Phone: (860) 747-2220 or (800) 697-8055

E-mail: edison@edisoncoatings.com

Fax: (860) 747-2280 or (800) 697-8044

Internet: www.edisoncoatings.com

Edison Coatings products are for commercial use only. In case of defect in manufacture or packaging, materials will be replaced at no cost. No other warranty, except for such replacement, express or implied, is in effect. Any implied warranty of merchantability or fitness for a particular purpose is expressly disclaimed. Although information and advice supplied in this publication are believed to be reliable, they do not represent performance specifications and no obligation or liability is assumed for advice given or results obtained. Product formulations and performance characteristics are subject to change without notice. Other conditions and limitations may be imposed at



TECHNICAL DATA SHEET

Project Name Catalog #
 Comments Date

Eco-RLM Line - 10" & 12" Angle Shade

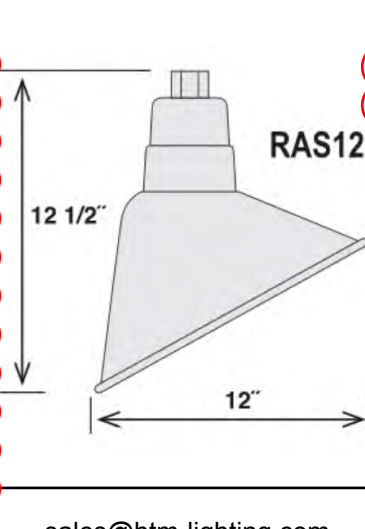
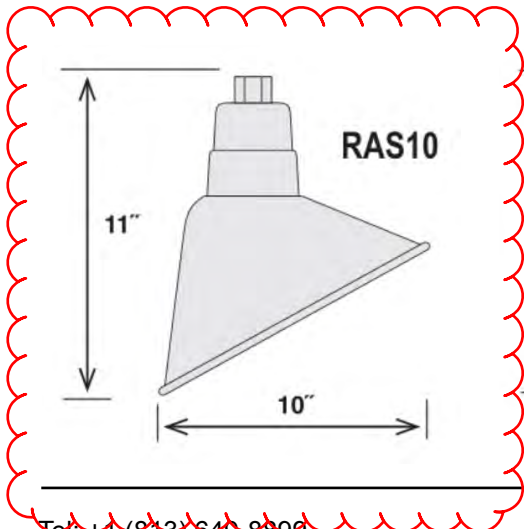
Features

- UL Listed for Wet Locations
- Every Gooseneck Arm comes with round mounting plate to fit onto standard round junction box
- 100" Wire Length Included With Every Shades
- Up to 200W Incandescent or LED Compatible



Specifications

Base Type	Medium (E26)
Bulb Type	LED / Incandescent
Voltage	120 Volts
Max Wattage	200W A21
Material	Cold Rolled Steel, and Die Cast Zinc Shade w/ Glass and Guard Options



Finishes Available:

Architectural Bronze	ABR
Black Porcelain	BP
Galvanized	GA
Satin Black	SB
Satin Green	SG
Satin Red	SR
White	WH
White Porcelain	WP
Sea Foam Porcelain	SFP

Tel: +1 (813) 649-8899
 Fax: +1 (813) 425-9007

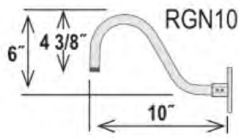
sales@htm-lighting.com
 Rev: V0916

HTM Lighting Solutions
 6420 Benjamin Road,
 Tampa, FL 33634

Project Name Catalog #
 Comments Date

Eco-RLM Line - 10" & 12" Angle Shade

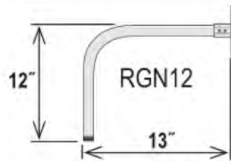
Gooseneck Arms



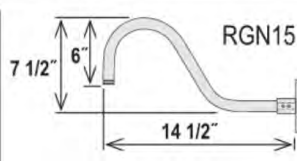
RGN10-ABR	ID: 3/4"	L:10"
RGN10-GA	ID: 3/4"	L:10"
RGN10-SB	ID: 3/4"	L:10"
RGN10-SG	ID: 3/4"	L:10"
RGN10-SR	ID: 3/4"	L:10"
RGN10-WH	ID: 3/4"	L:10"



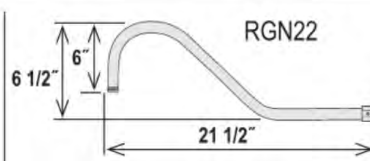
Back Plate included with goose neck



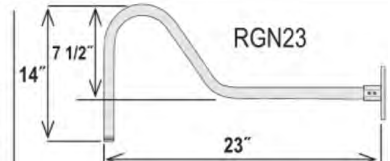
RGN12-ABR	ID: 3/4"	L:13"
RGN12-GA	ID: 3/4"	L:13"
RGN12-SB	ID: 3/4"	L:13"
RGN12-SG	ID: 3/4"	L:13"
RGN12-SR	ID: 3/4"	L:13"
RGN12-WH	ID: 3/4"	L:13"



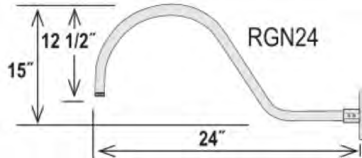
RGN15-ABR	ID: 3/4"	L:14 1/2"
RGN15-GA	ID: 3/4"	L:14 1/2"
RGN15-SB	ID: 3/4"	L:14 1/2"
RGN15-SG	ID: 3/4"	L:14 1/2"
RGN15-SR	ID: 3/4"	L:14 1/2"
RGN15-WH	ID: 3/4"	L:14 1/2"



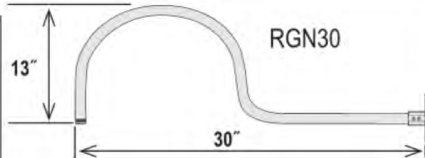
RGN22-ABR	ID: 3/4"	L:21 1/2"
RGN22-GA	ID: 3/4"	L:21 1/2"
RGN22-SB	ID: 3/4"	L:21 1/2"
RGN22-SG	ID: 3/4"	L:21 1/2"
RGN22-SR	ID: 3/4"	L:21 1/2"
RGN22-WH	ID: 3/4"	L:21 1/2"



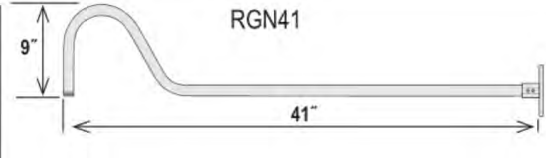
RGN23-ABR	ID: 3/4"	L:23"
RGN23-GA	ID: 3/4"	L:23"
RGN23-SB	ID: 3/4"	L:23"
RGN23-SG	ID: 3/4"	L:23"
RGN23-SR	ID: 3/4"	L:23"
RGN23-WH	ID: 3/4"	L:23"



RGN24-ABR	ID: 3/4"	L:24"
RGN24-GA	ID: 3/4"	L:24"
RGN24-SB	ID: 3/4"	L:24"
RGN24-SG	ID: 3/4"	L:24"
RGN24-SR	ID: 3/4"	L:24"
RGN24-WH	ID: 3/4"	L:24"

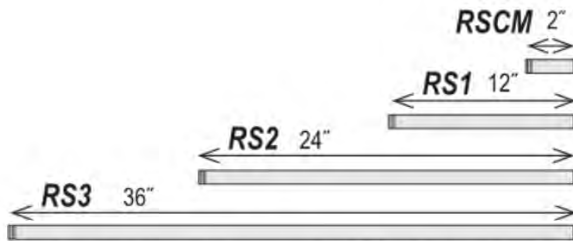


RGN30-ABR	ID: 3/4"	L:30"
RGN30-GA	ID: 3/4"	L:30"
RGN30-SB	ID: 3/4"	L:30"
RGN30-SG	ID: 3/4"	L:30"
RGN30-SR	ID: 3/4"	L:30"
RGN30-WH	ID: 3/4"	L:30"

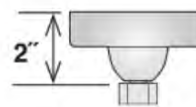
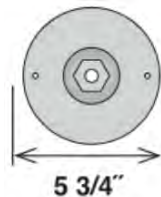


RGN41-ABR	ID: 3/4"	L:41"
RGN41-GA	ID: 3/4"	L:41"
RGN41-SB	ID: 3/4"	L:41"
RGN41-SG	ID: 3/4"	L:41"
RGN41-SR	ID: 3/4"	L:41"
RGN41-WH	ID: 3/4"	L:41"

Stems & Canopy Kits



RSCM-ABR	ID: 3/4"	L:2"
RSCM-GA	ID: 3/4"	L:2"
RSCM-SB	ID: 3/4"	L:2"
RSCM-SG	ID: 3/4"	L:2"
RSCM-SR	ID: 3/4"	L:2"
RSCM-WH	ID: 3/4"	L:2"
RS2-ABR	ID: 3/4"	L:24"
RS2-GA	ID: 3/4"	L:24"
RS2-SB	ID: 3/4"	L:24"
RS2-SG	ID: 3/4"	L:24"
RS2-SR	ID: 3/4"	L:24"
RS2-WH	ID: 3/4"	L:24"



RSCK

RSCK-ABR	W: 5 3/4"
RSCK-GA	W: 5 3/4"
RSCK-SB	W: 5 3/4"
RSCK-SG	W: 5 3/4"
RSCK-SR	W: 5 3/4"
RSCK-WH	W: 5 3/4"

Canopy Kits will Swivel up to 25°



TECHNICAL DATA SHEET

Project Name Catalog #
 Comments Date

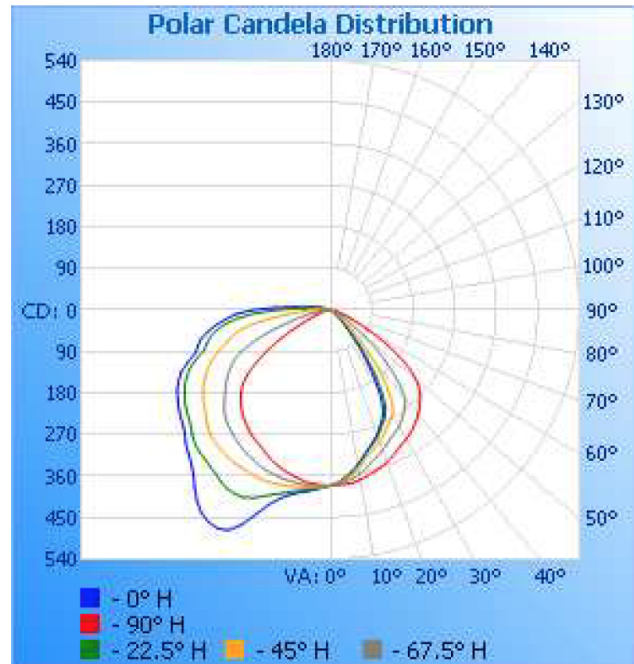
Eco-RLM Line - RAS10 Angle Shade

Photometric and Electrical Measurements - Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
RAS10-WH							
M242867-1	UP	120.0	1384	166.1	1.000	1170	7.044

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
RAS10-WH					
0	380	380	380	380	380
5	365	366	368	373	379
10	341	343	350	361	373
15	313	316	325	342	364
20	291	294	307	325	353
25	264	270	285	307	338
30	221	238	267	294	326
35	144	165	226	276	312
40	78	96	156	252	296
45	38	46	89	194	275
50	20	25	44	125	248
55	8	12	24	67	195
60	0	2	12	36	125
65	0	0	3	20	67
70	0	0	0	10	36
75	0	0	0	2	21
80	0	0	0	0	11
85	0	0	0	0	2
90	0	0	0	0	0





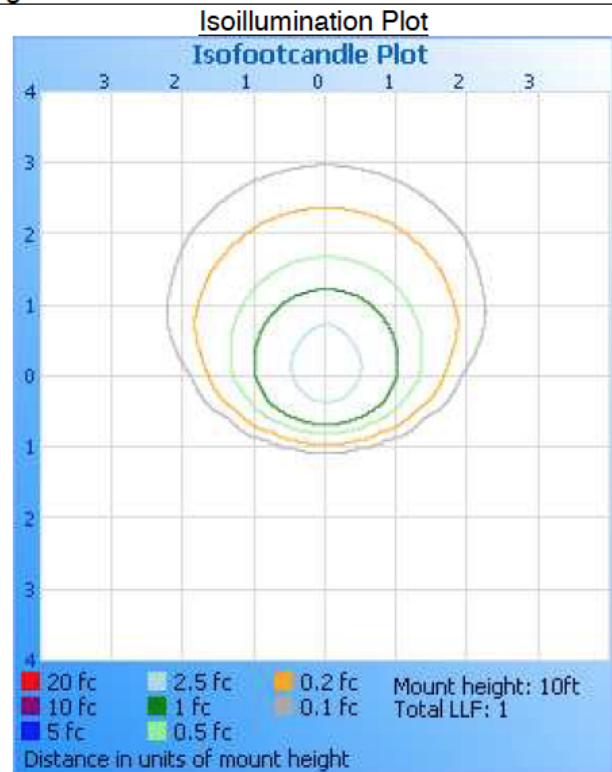
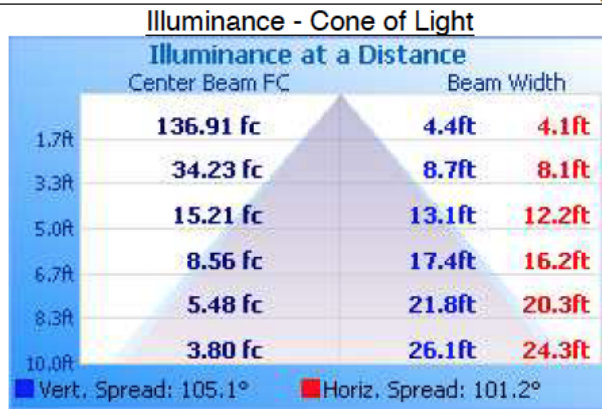
TECHNICAL DATA SHEET

Project Name Catalog #
 Comments Date

Eco-RLM Line - RAS10 Angle Shade

Illumination Plots

Model No.: RAS10-WH
 Mounting Height: 10 ft.



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
RAS10-WH		
0-30	300.2	25.7
0-40	493.3	42.2
0-60	849.2	72.6
60-90	296.9	25.4
0-90	1146	98.0
90-180	23.5	2.0
0-180	1170	100.0



TECHNICAL DATA SHEET

Project Name Catalog #
 Comments Date

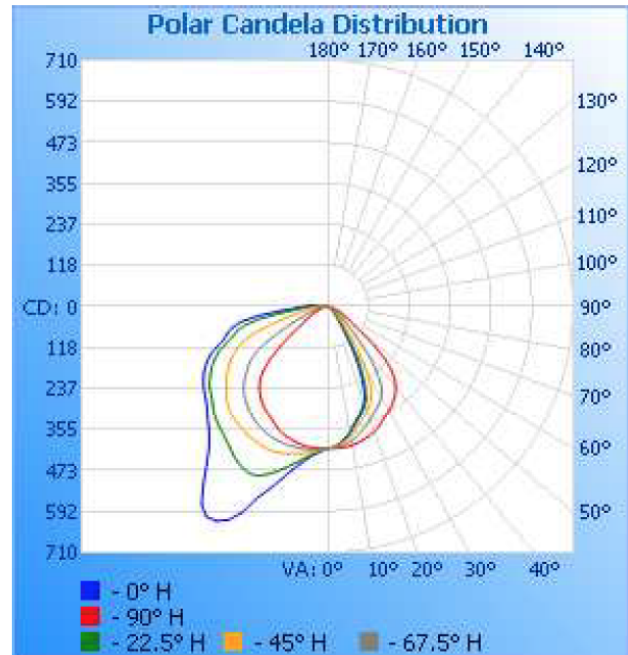
Eco-RLM Line - RAS12 Angle Shade

Photometric and Electrical Measurements - Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
RAS12-WH							
M242869-2	UP	120.0	1388	166.8	1.000	1123	6.733

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
RAS12-WH					
0	410	410	410	410	410
5	397	398	400	404	410
10	369	372	381	394	407
15	333	338	351	373	398
20	304	311	327	351	387
25	241	260	297	329	368
30	151	174	238	309	351
35	78	91	152	266	332
40	48	55	81	188	307
45	30	35	51	105	263
50	16	20	33	63	178
55	7	10	20	42	96
60	0	2	10	28	61
65	0	0	3	16	42
70	0	0	0	8	27
75	0	0	0	1	16
80	0	0	0	0	8
85	0	0	0	0	1
90	0	0	0	0	0





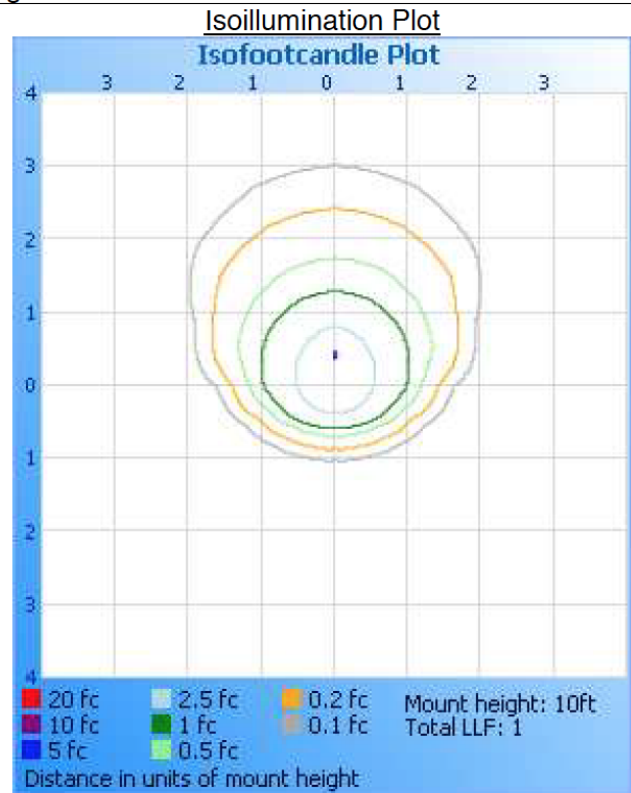
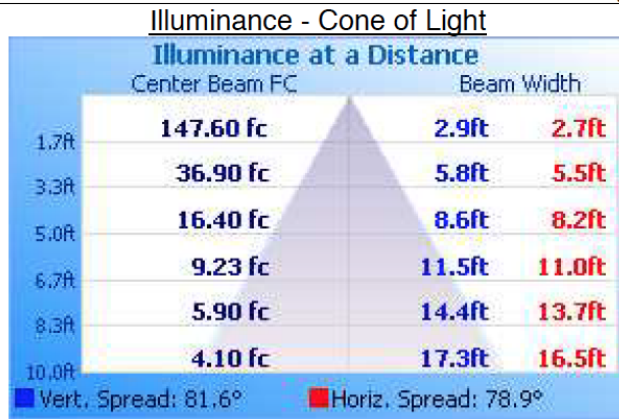
TECHNICAL DATA SHEET

Project Name Catalog #
 Comments Date

Eco-RLM Line - RAS12 Angle Shade

Illumination Plots

Model No.: RAS12-WH
 Mounting Height: 10 ft.



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens RAS12-WH	% Luminaire
0-30	330.3	29.4
0-40	526.1	46.8
0-60	871.4	77.6
60-90	238.6	21.2
0-90	1110	98.8
90-180	12.9	1.2
0-180	1123	100.0

Auto-Doors



GT1175

Automatic Sliding Doors

Where ELEGANCE meets DURABILITY



Product Features and Benefits

- Heavy-duty anodized roller track for **long-lasting durability**
- Integral flush-glazed framing **enhances the entrance appearance**
- Large urethane door rollers for **smooth and long-lasting operation**
- Belt drive and brushless motor system ensure **silent and reliable operation**
- Approved Class 1 Vertical Laminar Flow for **clean rooms and critical applications**
- Superior double-mohair thermal brush provides **maximum isolation from outside elements**
- Equipped with sensor systems that comply with ANSI A156.10 and **promotes reduced liability and increased safety**



GT1175

The NABCO GT1175 sets the standard for smooth operation and quiet, whisper-like performance. While elegant by design, the GT1175 is engineered to withstand challenging environment and weather conditions. NABCO's microprocessor control provides reliable door operation, important usage counts, and diagnostic features for quick trouble-shooting and reduced maintenance costs. Offering a prompt return on your investment with one of the lowest lifetime costs of ownership, the ultra-quiet, high-performance GT1175 is the right solution for every automatic sliding door entrance.

The GT1175 Slider Operator



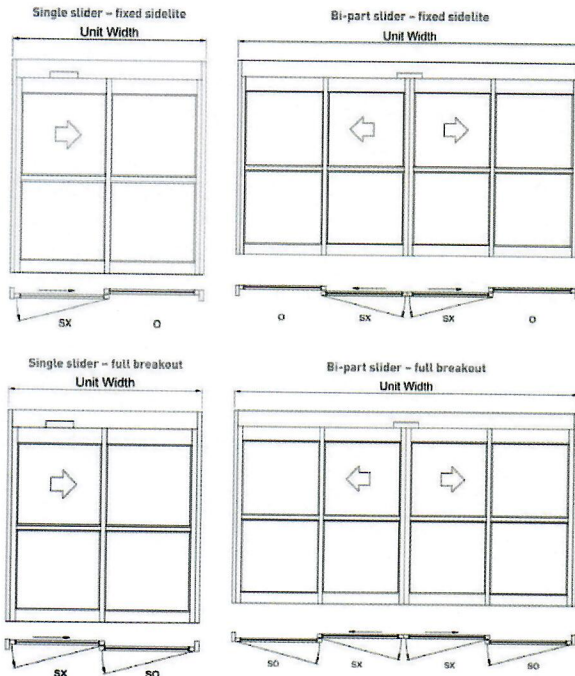
Header cover is pre-wired for sensor installation and uses extra-thick aluminum extrusions to minimize deflection.



Quick-disconnect power supply Low-voltage transformer Microprocessor control Brushless motor/gearbox Thick weatherstrip Microfiber-reinforced belt

Note: Color (Finish) to be selected by Trader Joe's

PRODUCT INFORMATION	
Header dimensions - standard	6 1/2"W (165.1) x 7 1/2"H (190.5)
Standard finish	Clear and dark bronze anodized
Optional finishes	Painted, clad, special anodized
Mounting	Concealed and surface-applied
Threshold	Surface-applied, recessed, none
Configurations	Single, bi-part / full breakout, fixed sidelite
Transom	Optional
TECHNICAL INFORMATION	
Operator drive	Electro-mechanical
Drive system	Belt drive
Motor type	1/4 HP [peak] brushless
Primary circuit protection	Breaker
Controller	Microprocessor
Breakout	System disabled when panels break out
Operating voltage	120 VAC - 5 AMP
Auxiliary power output	12 VDC
Maximum door panel weight	600 lbs.
Switch modes	On/off, 1-way, 2-way, hold-open, night
Opening and closing speed	Adjustable
Reduced opening function	Standard
Obstacle detection	Available in both directions
Hold-open time	Adjustable (0-67 seconds)
CODE COMPLIANCE / APPROVALS	
Code compliance	ANSI A156.10
Approvals	UL, ULC and CSFM



NABCO Service and Specifications

Along with the NABCO factory branches, NABCO has the largest independently owned network of automatic door distributors in North America. Their friendly, qualified installers and technicians always strive to exceed your expectations from install to after-sales service. NABCO's factory branches and independent distributors provide AAADM-certified technicians to ensure your doors meet all ANSI A156.10 standards.

SELECTION GUIDE			
DOOR TYPE	FRAME WIDTH	DOOR OPENING	BREAKOUT OPENING
Single FSL	7' (1930) - 9' (2743)	36" (914) - 48" (1219)	39" (990) - 51" (1295)
Single FBO			76" (1930) - 100" (2794)
Bi-part FSL	10' (3048) - 18' (5486)	48" (1219) - 96" (2438)	54" (1371) - 102" (2590)
Bi-part FBO			104" (2642) - 200" (5080)



Distributed by:



STOREFRONT REPAIR, INC.
 17032 PALMDALE ST, UNIT #A, HUNTINGTON BEACH, CA
 PH: 714-842-1337 | FAX: 714-842-8817
 CONTRACTOR'S LICENSE # 634748

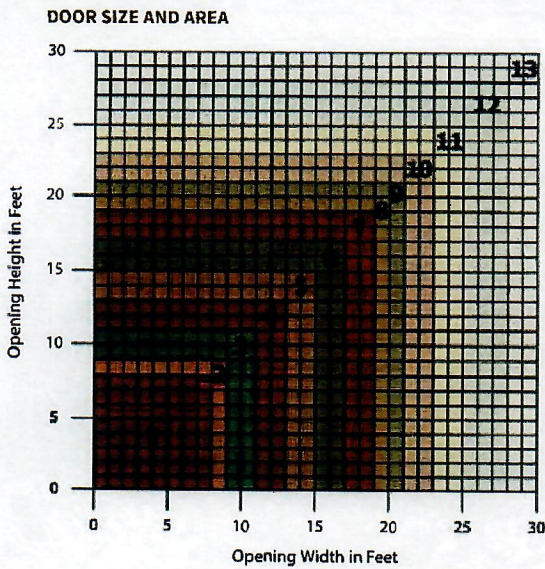
INSULATED ROLLING DOOR

THERMISER

Model ESD20

Roll-up (Overhead) Doors

MEASURE THE WIDTH AND HEIGHT OF THE OPENING



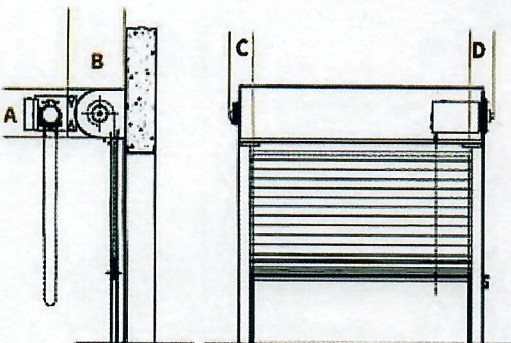
COMPONENT DIMENSIONS

Reference the zone number to view component dimensions for motorized doors.

Dimensions in Inches

1	18	20	5	9
2	18	20	5	9
3	20	22	7	11
4	20	22	7	11
5	21	23	7	11
6	21	23	7	11
7	21	23	7	11
8	24	26	7	11
9	25	27	7	11
10	26	28	7	11
11	27	29	7	11
12	29	31	7	11
13	31	33	7	11

Zone A B C D



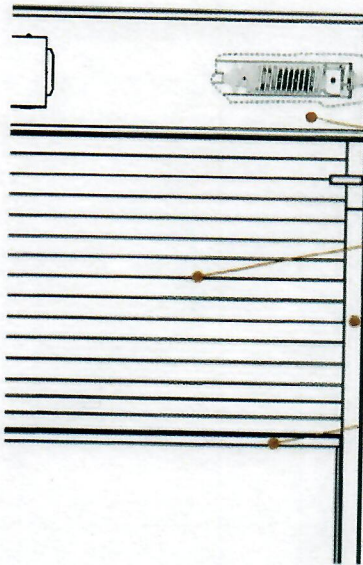
The dimensions featured on this sheet are provided as a guide. Please visit our website at www.cooksondoor.com/drawings to generate drawings on demand with exact dimensions.

DYNAMIC DOCK & DOOR, INC.
 P.O. Box 372
 EAST LONGMEADOW, MA 01028-0372
 (800) 573-3625
 Fax (413) 736-8599 • www.dynamic-dock-door.com

COOKSON
Preferred door solutions™

INSULATED ROLLING DOOR THERMISER Model ESD20

STANDARD COMPONENT MATERIALS AND FINISHES



BRACKETS - Steel with powder coating to match curtain. Bolt to guide assembly and support counter-balance shaft and curtain.

COUNTER-BALANCE SHAFT - Steel. Supports curtain and contains torsion springs for assisting operation.

HOOD - Galvanized steel with GalvaNex™ polyester enamel finish to match curtain. Encloses the curtain and provides weather resistance at the head of the door.

CURTAIN - Galvanized steel with GalvaNex™ polyester enamel finish in Gray, Tan, White or Brown. Flame Spread Index of 0 and a Smoke Developed Index of 10 as tested per ASTM E84. The slat has an R-value of 8.0 as calculated using the ASHRAE Handbook of Fundamentals.

GUIDES - Structural steel with powder coating to match curtain. Angle assemblies bolt to the wall and support the weight of the door.

BOTTOM BAR - If width is less than 24'5", extruded aluminum supplied in mill finish. If width is greater than 24'5", steel supplied with powder coating to match curtain.

OPERATION AND STRUCTURAL REQUIREMENTS

Hand chain, hand crank and a variety of motor options are available.

All of our rolling products are supported by the guides. There is no additional support required unless hood supports are mandated by a larger opening width.

OPTIONAL MATERIALS AND FINISHES

- ▶ Aluminum in mill, clear and color anodized
- ▶ Stainless steel - 300 series in #4 finish
- ▶ SpectraShield® Powder Coating in more than 180 colors

Brackets, Guides and Bottom Bar

- ▶ Hot-dip galvanizing on steel components
- ▶ Zinc-enriched, corrosion-resistant powder coating in Gray



CUSTOM-DESIGNED SOLUTIONS

Contact our experienced Architectural Design Support Team for help in customizing our products to fit your specific application. Call 800.294.4358 ext. 1280 • ads@cooksondoor.com

DYNAMIC DOCK & DOOR, INC.
P.O. Box 372
EAST LONGMEADOW, MA 01028-0372
(800) 573-3625
Fax (413) 736-8599 • www.dynamic-dock-door.com

COOKSON Preferred door solutions.



THE PEGGS COMPANY, INC.

*Designers & Manufacturers of
Retail Solutions for over 50 years*

Standard Cart Corrals

Parking lot cart corrals for collecting carts. Corrals help to save on labor by consolidating shopping carts into specific locations in the parking lot. Available in single wide (holds one row of carts), double wide, or triple wide. Custom signage or sizing available. Roll-stop tie bar helps keep carts from rolling backwards out of the corral. Corrals snap together (no tools or parts needed to assemble). Corrals can be anchored into place.

Sold with a generic 18" x 24" sign.

Custom signage available.

Dimensions:

- Single Wide: OCC1132-09
Outside Dimensions: 112" long x 35" wide x 83" tall
- Double Wide: OCC2164-09
Outside Dimensions: 112" long x 68" wide x 83" tall
- Triple Wide: OCC3196-09
Outside Dimensions: 112" long x 100" wide x 83" tall





Submittal

- AW-121022 MINI
- AW-161010 SMALL
- AW-201412 MEDIUM
- AW-343424 MEGA



VAULT® Specification:

The "AW" VAULT® model is a 20-year insured, warranted, all-aluminum, multi-penetrant pathway to the roof, with air¹ & wind² rating, and is a 3-pc. powder-coated heavy gage aluminum engineered assembly. The "AW" VAULT® is configured with a vandal-resistant lid, middle housing, and flanged curb designed to be used with our exclusive Silx14 aluminum & stainless steel exit seals. Our exit seals are designed to accommodate appropriate size pipes, cables, duct work, or other desired penetrants.

¹All "AW" Vaults® are 3rd-party tested to comply with 2015 ICC Energy Code C402, section ASTM E2178-11
²ASTM E2357-11

Project Information

Trader Joe's may elect, in its sole discretion, to change the make and model of the fixtures and equipment purchased for the Premises from the ones listed herein.

JOB
Name Trader Joe's
Location
ARCHITECT
Name
Location
CONTRACTOR
Name
Location
REP NAME
Fiskio, Inc. 800-288-6816
DATE





Roof Penetration Housings, LLC

12423 Blanco Rd #120, San Antonio, Texas 78216

OPTIONS

EXIT SEALS

- 5000 SERIES ¼" OD - 1.90" OD
- 6000 SERIES 2-1/8" OD- 3-1/8" OD
- 7000 SERIES 3½" OD - 4½" OD
- 16000 SERIES LARGE CUSTOM OD OVER 4"
- DUCT WORK - VARIOUS

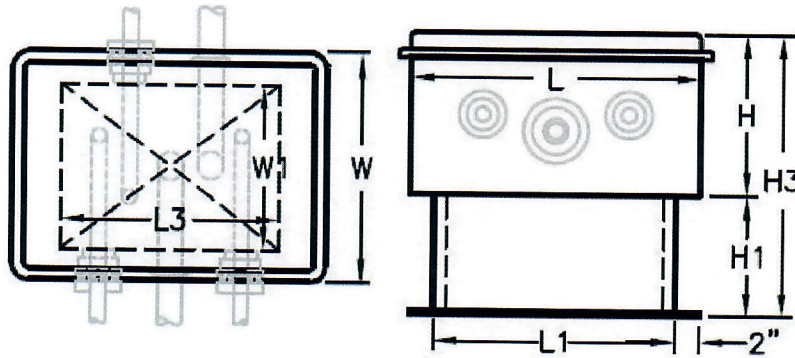
EXTERNAL SUPPORTS

- EDS - ELECTRIC DISCONNECT SUPPORT
- SDS - SATELLITE DISH SUPPORT

INTERNAL SUPPORTS

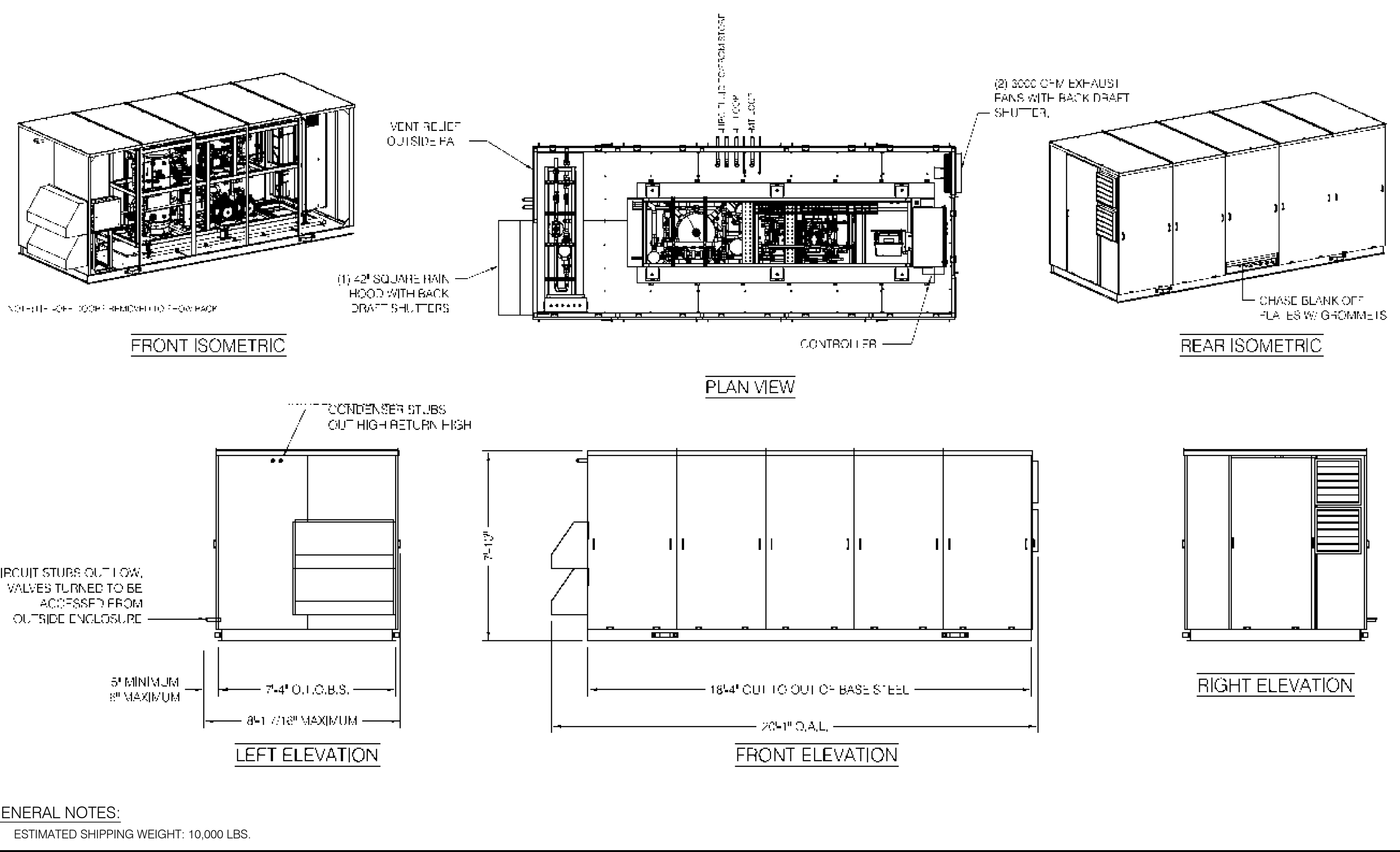
- CABLE GUIDE

EXIT SEAL CAPACITIES (5000 SERIES)			
AW-121022	6 EACH	AW-201412	16 EACH
AW-161010	8 EACH	AW-343424	24-36 EACH



MODELS	H	H1	H3	L	L1	L3	W	W1
AW-121022	23"	14"	38"	12"	10"	7½"	13"	5¼"
AW-161010	12"	14"	27"	16"	14½"	12"	12¾"	5½"
AW-201412	13¾"	14"	28¾"	21½"	19½"	16½"	14½"	10"
AW-343424	25"	14"	40"	34"	32"	29"	34"	29"

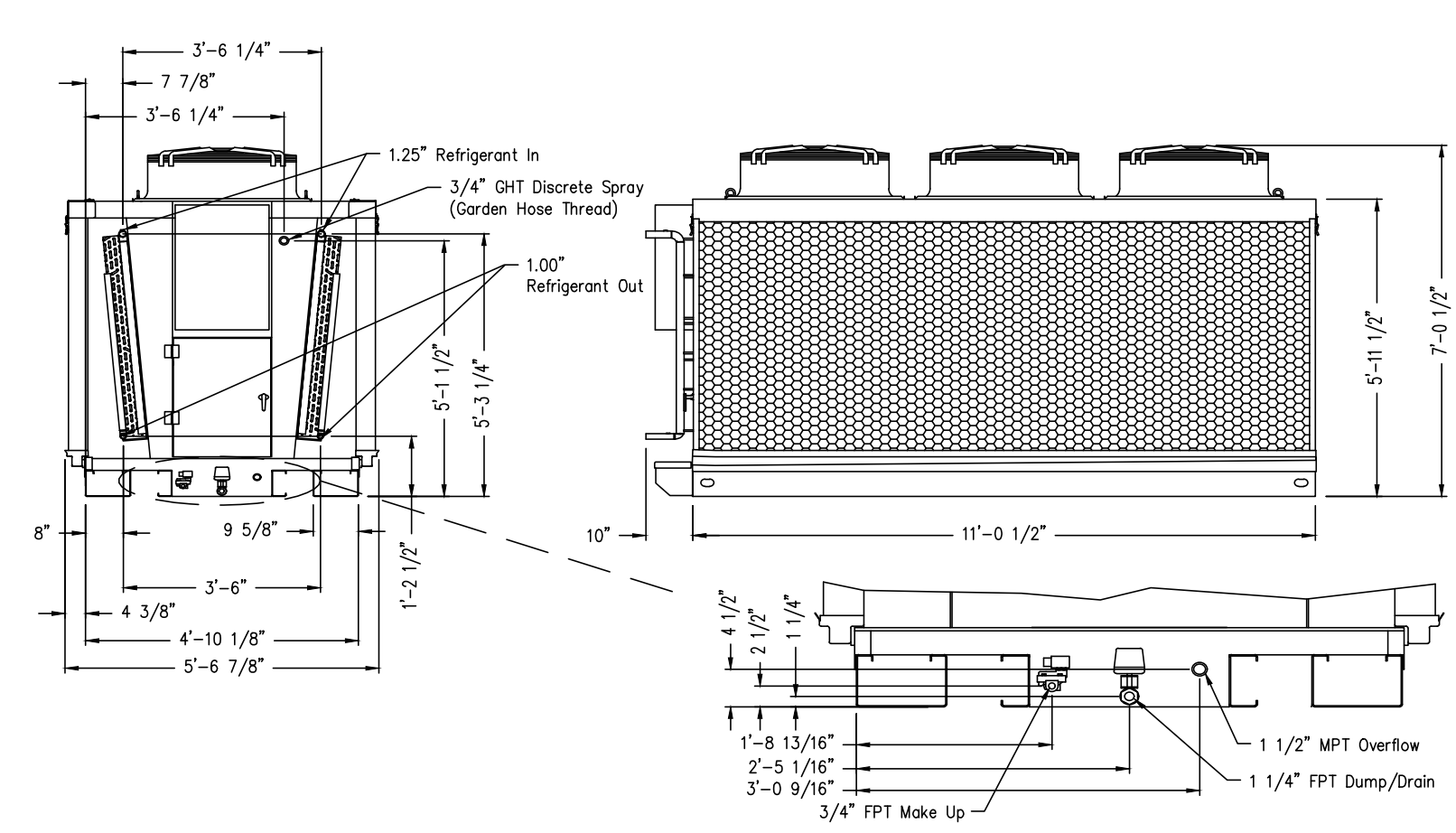
Dimensions may vary slightly.



GENERAL NOTES:
1. ESTIMATED SHIPPING WEIGHT: 10,000 LBS.

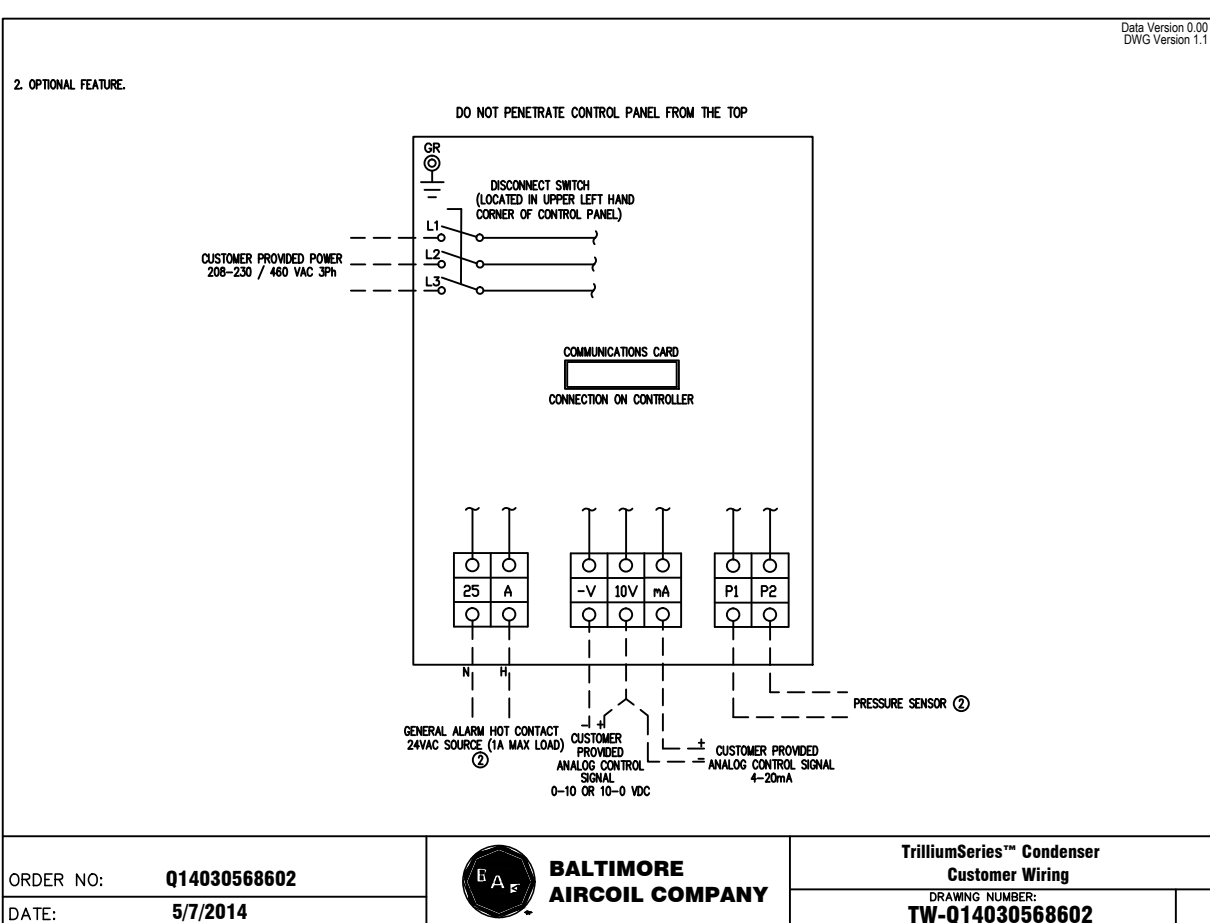
HILL PHOENIX ADVANSOR RACK OUTLINE

NOT TO SCALE
1
R5.0



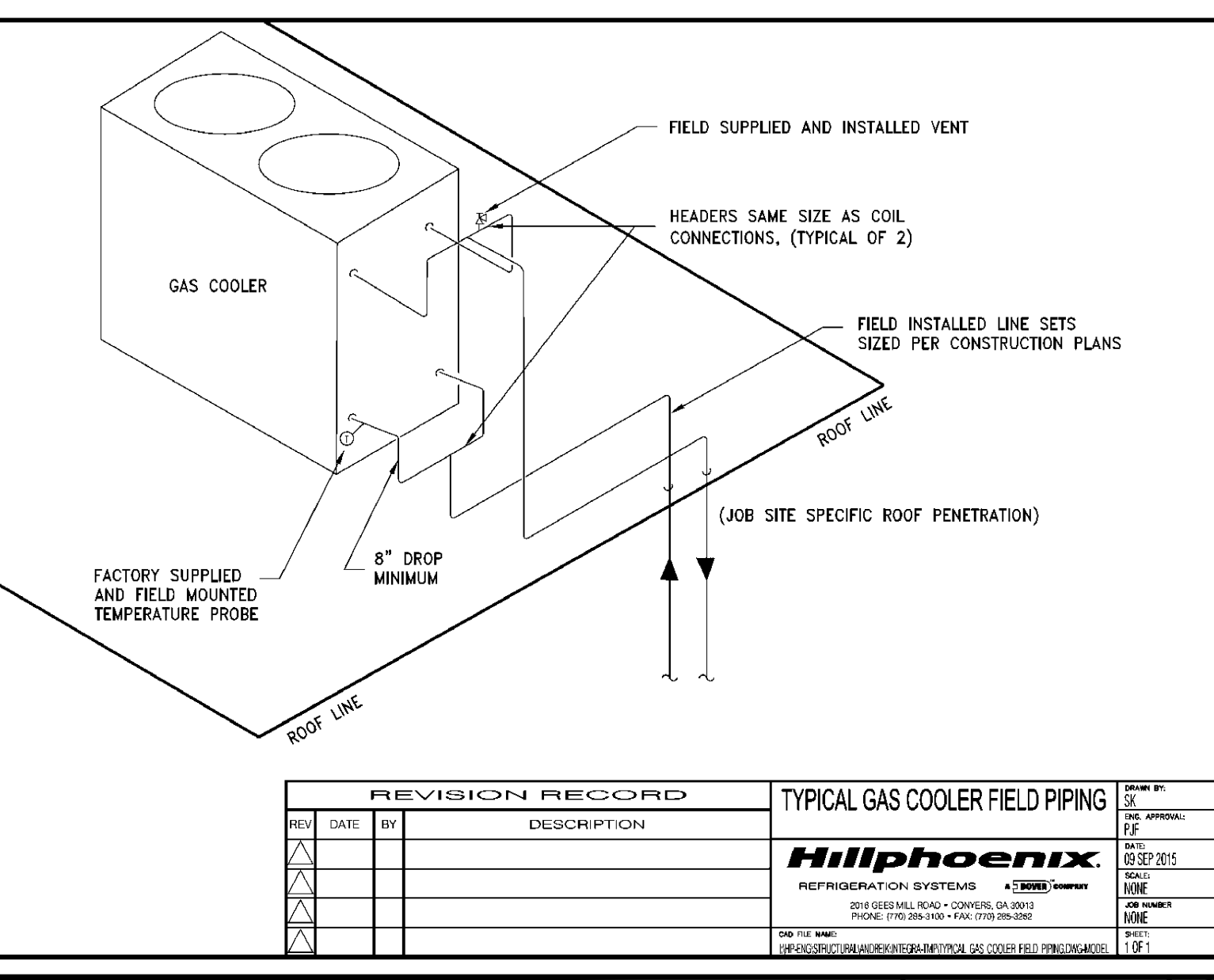
BAC TRILLIUM SERIES CONDENSER
BAC MODEL: TSDC

NOT TO SCALE
3
R5.0



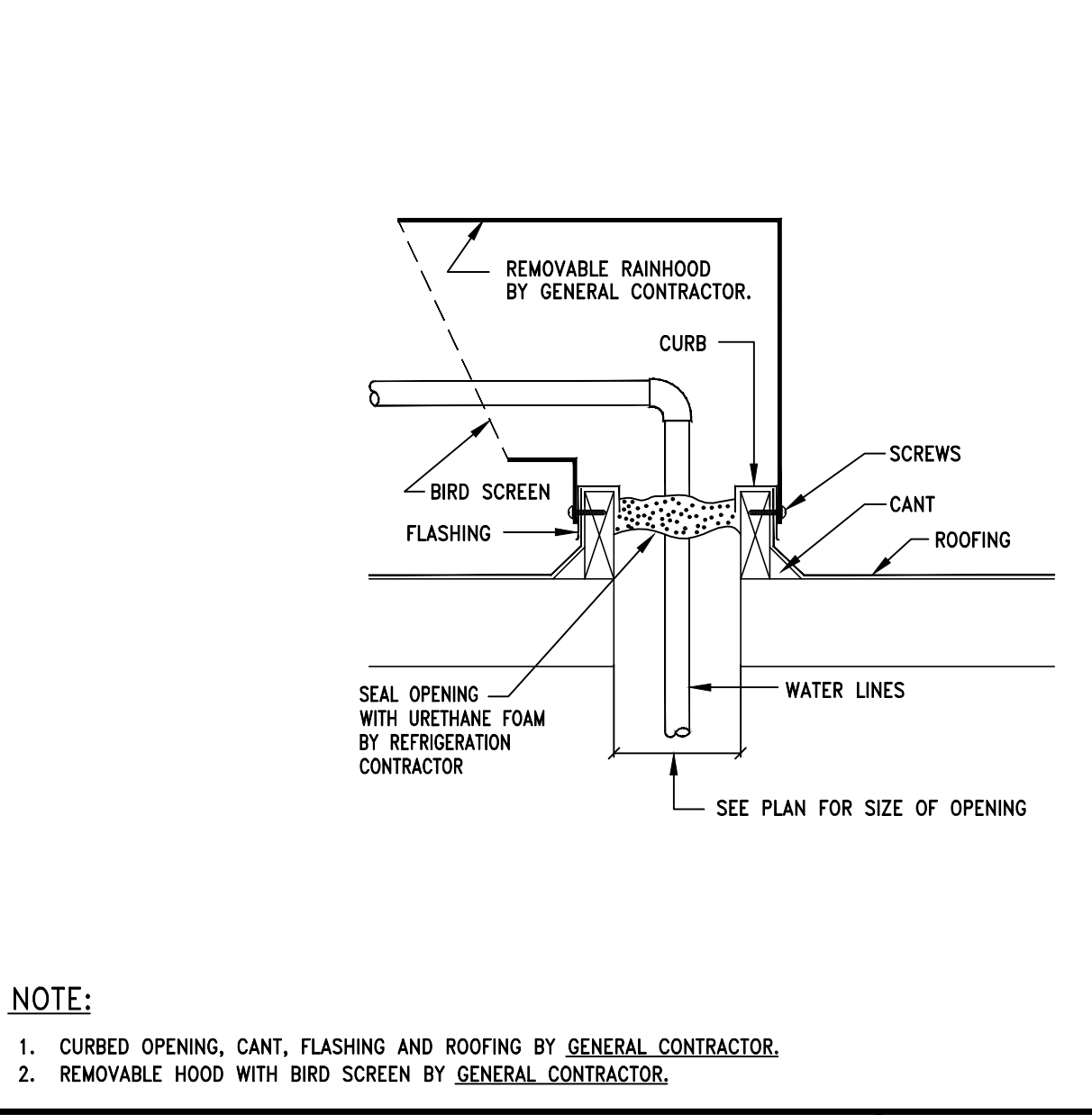
TRILLIUM SERIES CO2 GAS COOLER DETAILS

NOT TO SCALE
5
R5.0



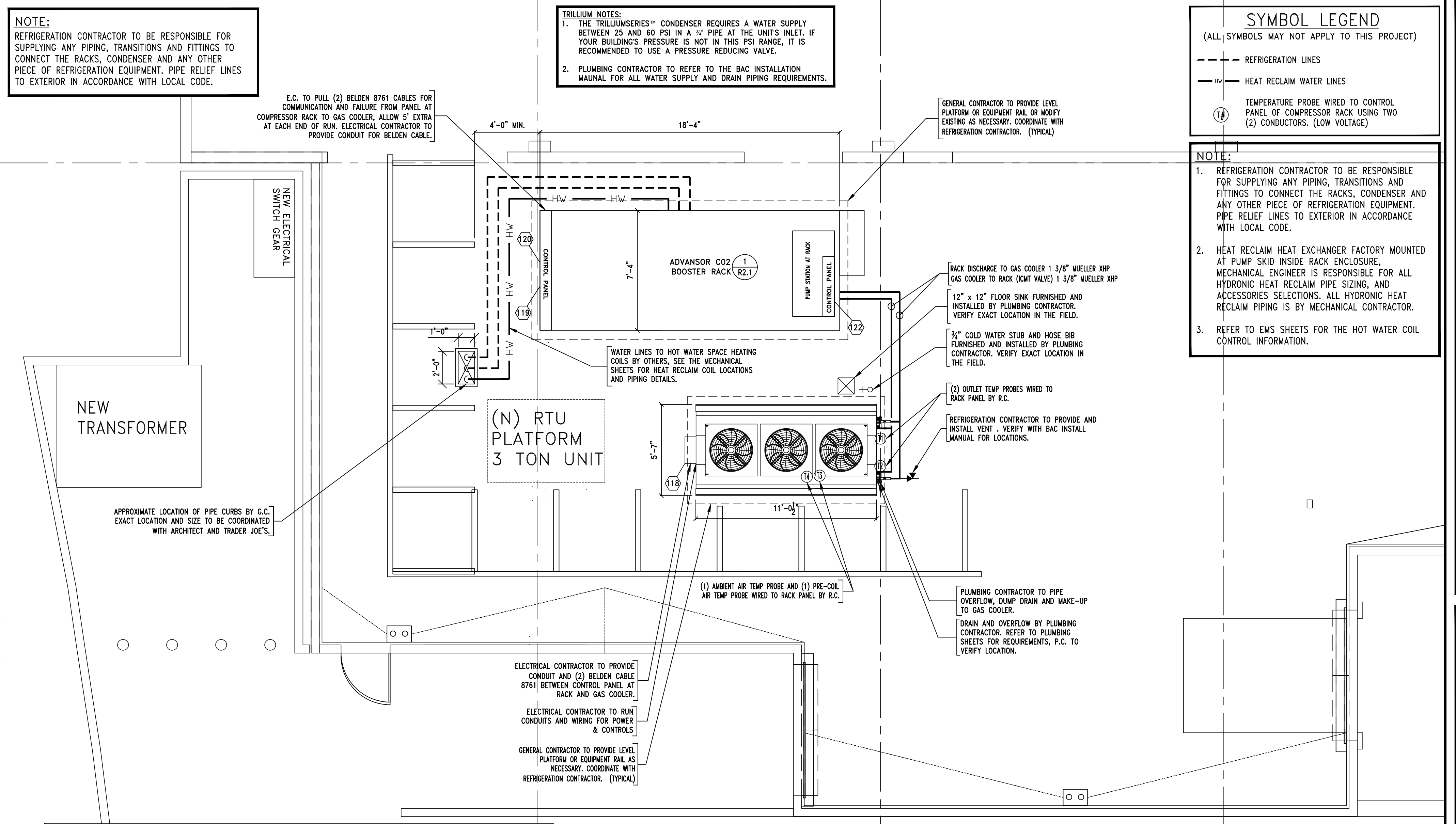
GAS COOLER TO RECEIVER
TYPICAL REFRIGERATION PIPING

NOT TO SCALE
4
R5.0



RAINHOOD DETAIL

NOT TO SCALE
4
R5.0



PIPING JOINING:

CONDENSER LINES: TIG WELDED, 3 PASS BY CERTIFIED WELDER IN ACCORDANCE WITH LOCAL CODE. CARBON STEEL PER ASTM A106 OR ANSI/ASME B36.10 OR STAINLESS STEEL PER ASTM A312 OR ANSI/ASME B36.19 BUTT WELDED OR SOCKET WELD CONNECTION ARE ACCEPTABLE. ALL STEEL PIPING TO/FROM THE GAS COOLER TO BE PAINTED USING PPG SPECTRACON 390-UV 2K HS EXTERIOR ACRYLIC POLYURETHANE.

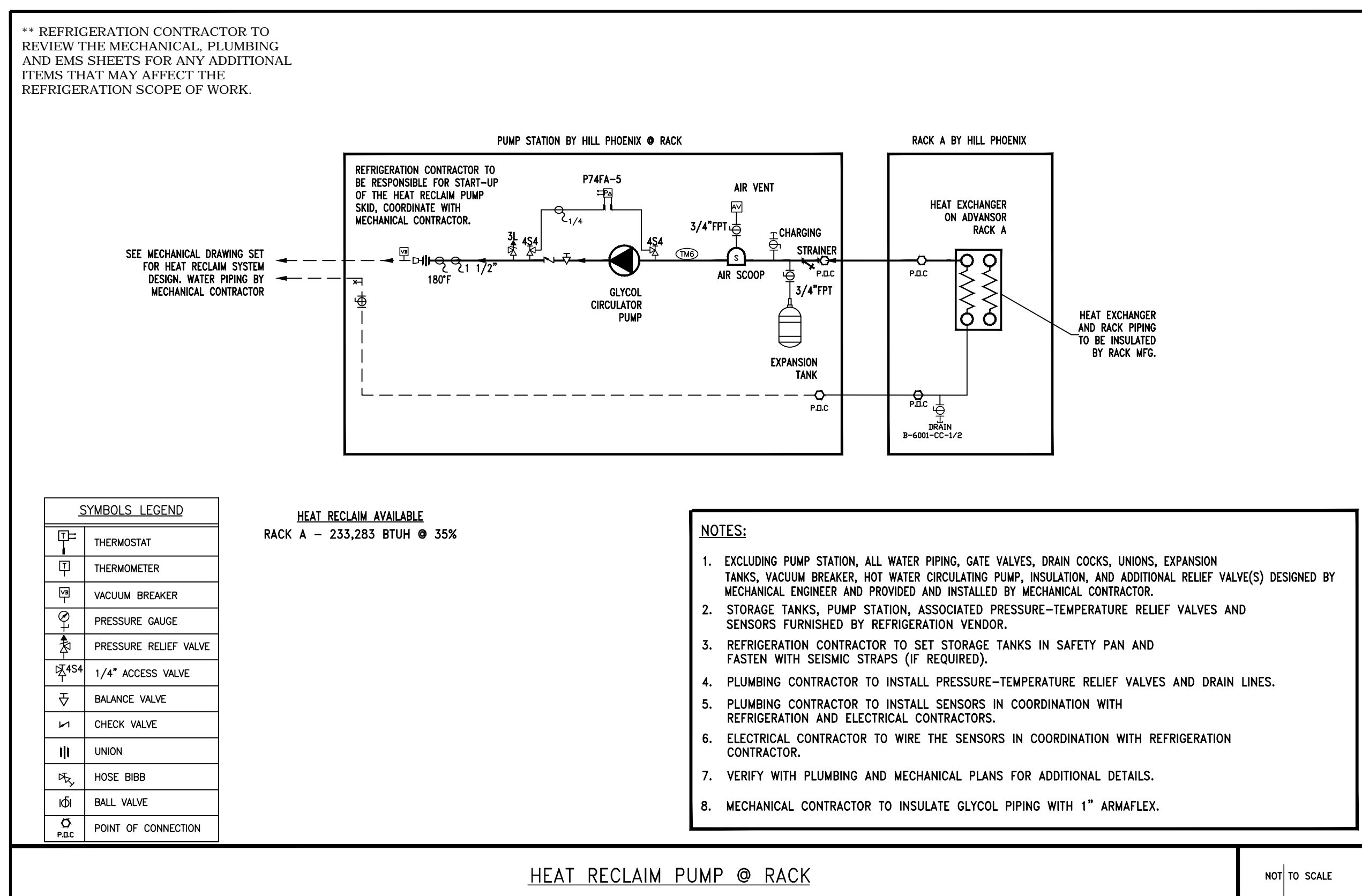
OPTIONAL: INSTALLING CONTRACTOR MAY USE MUELLER XHP OR WIELAND K65 HIGH PRESSURE COPPER FOR THE DISCHARGE AND DRAIN LINE FROM THE RACK TO THE CONDENSER. STANDARD BRAZING METHODS TO BE USED (15% SILVER SOLDER ON JOINING COPPER TO COPPER AND 45% SILVER SOLDER ON JOINING COPPER TO STEEL).

NOTE: REFRIGERATION CONTRACTOR TO SUPPLY AND INSTALL COPPER TO STEEL TRANSITION FITTINGS IN THE EVENT STEEL PIPING IS BEING USED FOR INSTALLATION OF THE HIGH SIDE PIPING.

NOTE: ALL STEEL/STAINLESS STEEL PIPING IS TO BE CLEANED THOROUGHLY INSIDE TO REMOVE ALL RUST, SCALE, OIL AND OTHER DETRIMENTAL CONTAMINANTS TO THE REFRIGERATION SYSTEM. IF SAND BLASTING IS THE METHOD USED TO CLEAN THE PIPE BE SURE ALL SAND IS REMOVED FROM THE PIPING PRIOR TO INSTALLATION

PARTIAL ROOF PLAN

SCALE: 1/4" = 1'-0"



SYMBOLS LEGEND

⊖	THERMOSTAT
⊕	THERMIST
⊖	VACUUM BREAKER
⊖	PRESSURE GAUGE
⊖	PRESSURE RELIEF VALVE
⊖	1/4" ACCESS VALVE
⊖	BLIND VALVE
⊖	CHECK VALVE
⊖	UNION
⊖	HOSE BIBB
⊖	BALL VALVE
⊖	POINT OF CONNECTION

NOTES:

- EXCLUDING PUMP STATION, ALL WATER PIPING, GATE VALVES, DRAIN COCKS, UNIONS, EXPANSION TANKS, VACUUM BREAKER, HOT WATER CIRCULATING PUMP, INSULATION, AND ADDITIONAL RELIEF VALVE(S) DESIGNED BY MECHANICAL ENGINEER AND PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
- STORAGE TANKS, PUMP STATION, ASSOCIATED PRESSURE-TEMPERATURE RELIEF VALVES AND SENSORS FURNISHED BY REFRIGERATION VENDOR.
- REFRIGERATION CONTRACTOR TO SET STORAGE TANKS IN SAFETY PAN AND FASTEN WITH SEISMIC STRAPS (IF REQUIRED).
- PLUMBING CONTRACTOR TO INSTALL PRESSURE-TEMPERATURE RELIEF VALVES AND DRAIN LINES.
- PLUMBING CONTRACTOR TO INSTALL SENSORS IN COORDINATION WITH REFRIGERATION AND ELECTRICAL CONTRACTORS.
- ELECTRICAL CONTRACTOR TO WIRE THE SENSORS IN COORDINATION WITH REFRIGERATION CONTRACTOR.
- VERIFY WITH PLUMBING AND MECHANICAL PLANS FOR ADDITIONAL DETAILS.

HEAT RECLAIM PUMP @ RACK

NOT TO SCALE

FOR REFERENCE ONLY

HEAT RECLAIM PUMP AT COMPRESSOR RACK DETAIL

NOT TO SCALE
4
R5.0

SYMBOL LEGEND

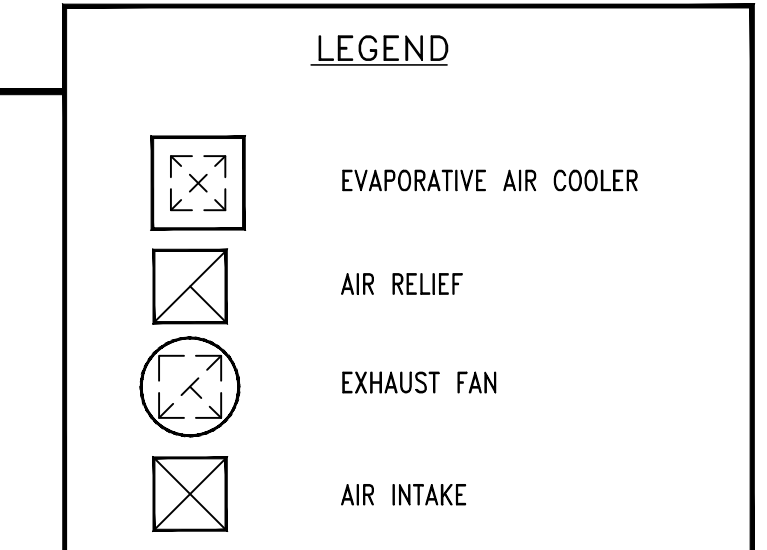
- REFRIGERATION LINES
- HEAT RECLAIM WATER LINES
- TEMPERATURE PROBE WIRED TO CONTROL PANEL OF COMPRESSOR RACK USING TWO (2) CONDUCTORS. (LOW VOLTAGE)

NOTE:

- REFRIGERATION CONTRACTOR TO BE RESPONSIBLE FOR SUPPLYING ANY PIPING, TRANSITIONS AND FITTINGS TO CONNECT THE RACKS, CONDENSER AND ANY OTHER PIECE OF REFRIGERATION EQUIPMENT. PIPE RELIEF LINES TO EXTERIOR IN ACCORDANCE WITH LOCAL CODE.
- HEAT RECLAIM HEAT EXCHANGER FACTORY MOUNTED AT PUMP SKID INSIDE RACK ENCLOSURE. MECHANICAL ENGINEER IS RESPONSIBLE FOR ALL HYDRONIC HEAT RECLAIM PIPE SIZING, AND ACCESSORIES SELECTIONS. ALL HYDRONIC HEAT RECLAIM PIPING IS BY MECHANICAL CONTRACTOR.
- REFER TO EMS SHEETS FOR THE HOT WATER COIL CONTROL INFORMATION.

NOTES:

- VERIFY EXACT LOCATION OF THE UNIT WITH THE ARCHITECTURAL DRAWING.
- GENERAL CONTRACTOR TO PROVIDE THE STRUCTURES TO SUPPORT THE CONDENSERS.
- THE PLATFORM UNDER EQUIPMENT MUST BE LEVEL. ALLOW 1" (MIN) SPACE AROUND EQUIPMENT FOR THE PLATFORM.
- INSTALLING CONTRACTOR SHALL ANCHOR ALL ROOF MOUNTED EQUIPMENT. BOLT OR WELD TO STEEL FRAME OR LAG BOLT TO EQUIPMENT CURBS.
- WHEN USING AIR-COOLED CONDENSER WITH SPLITTING AND CONTROL, SO THAT VALVES AND CONDENSER FANS WILL OPERATE IN UNISON.



GENERAL NOTES:

- GENERAL CONTRACTOR TO FURNISH AND INSTALL:
 - CUTTING AND PATCHING OF ALL OPENINGS ON ROOF, IN CEILING AND WALL.
 - CURBED OPENINGS, BURGLAR BARS, COUNTER FLASHING, AND ROOF JACKS.
 - PLATFORM AND STRUCTURAL SUPPORT FOR EQUIPMENT MOUNTING.
- PLUMBING CONTRACTOR TO FURNISH AND INSTALL:
 - FLOOR SINK WHEN REQUIRED.
 - WATER PIPING AND FINAL CONNECTIONS, INCLUDING CITY WATER, HOT WATER AND DRAIN.
- ELECTRICAL CONTRACTOR TO:
 - FURNISH, INSTALL, AND CONNECT ALL ELECTRICAL EQUIPMENTS AND CONTROLS, INCLUDING BREAKERS, STARTERS, CONTACTORS, RELAYS, DISCONNECTS, SWITCHES, FUSES, TRANSFORMERS, ETC. AS REQUIRED IN ACCORDANCE WITH WIRING DIAGRAMS AND LOCAL CODES.
 - INSTALL AND CONNECT ALL ACCESSORIES (E.G. THERMOSTAT, SOLENOID VALVES, TIME CLOCKS, DAMPER MOTORS, ETC.) FURNISHED BY OTHERS.
- PROVIDE 120 VOLT RECEPTACLE WITHIN 25' OF ALL ROOF MOUNTED EQUIPMENT PER UNIFORM MECHANICAL CODE SECTION 509.
- EXACT LOCATION OF ALL ROOF MOUNTED EQUIPMENT TO BE DETERMINED BY ARCHITECT WITH APPROVAL OF OWNER'S REPRESENTATIVE AND REFRIGERATION CONTRACTOR. ANY NOISE ABSORBING STRUCTURES, IF NEEDED, SHALL BE PROVIDED BY OTHERS AT NO COST TO HILL PHOENIX OR REFRIGERATION CONTRACTOR.
- DO NOT RUN OVERHEAD LINES (REFRIGERATION, ELECTRICAL OR PLUMBING) ACROSS FRESH AIR INTAKE OR CURB OPENING FOR EQUIPMENT ACCESS TO MACHINE ROOM.

NOTE TO CONTRACTORS:
IT IS THE RESPONSIBILITY OF EACH CONTRACTOR TO OBTAIN AND USE THE LATEST PLANS. HILL PHOENIX WILL NOT BE RESPONSIBLE FOR ANY CONSTRUCTION WORK PERFORMED WITH OBSOLETE PLANS.

DATE:	APRIL 30, 2018
APPROVED BY:	TIM STODOLKA
DESIGNED BY:	ALAN PEREZ
CHECKED BY:	ALAN PEREZ
SCALE:	AS SHOWN
DATE:	04/30/18

Hill Phoenix
A JACOBS COMPANY
14350 Chertoke Place, Chino, CA 91710
Phone: (909) 270-2111

PROFESSIONAL ENGINEER
ERIC K. JAY
No. 1432708
Exp. 12/31/24
MECHANICAL
STATE OF CALIFORNIA
08/28/18

MECHANICAL EQUIPMENT PLAN
SHEET NO.: R5.0
SCALE: 1/4" = 1'-0"



LENNOX ENERGENCE COMMERCIAL ROOFTOP UNITS

The quietest, lightest and most efficient rooftop units in their class.

At Lennox, we're committed to building innovative products that can help save energy costs and reduce operating expenses. Our family of Energence rooftop units, including Energence Ultra-High-Efficiency and Energence High-Efficiency models, achieve industry-leading efficiencies.

The Energence Ultra-High-Efficiency rooftop line features efficiency ratings up to 23.5 SEER, 15 EER and 22 IEER—the highest on the market today.*

*When comparing a 22 IEER unit to a 13.5 IEER unit.



LENNOX ENERGENCE® ULTRA-HIGH-EFFICIENCY ROOFTOP UNITS



Energence® Ultra-High-Efficiency delivers ultra innovation and performance on all counts.

Energence® Ultra-High-Efficiency rooftop units deliver industry-leading advantages for 3- to 25-ton applications. They offer the industry's highest efficiency ratings, lower sound levels and a reduced weight that simplifies specification and installation. But that's just the beginning.

NEXT-GENERATION BLOWER

- Our direct-drive, variable-speed blower, standard on 3- to 6-ton models, eliminates the need to replace belts when servicing the unit.
- MSAV® (Multi-Stage Air Volume) supply fan technology, standard on Energence Ultra-High-Efficiency models, uses up to seven different airflow settings to automatically adjust operating speed, optimizing efficiency and performance.
- Optional DirectPlus™ blower system is a high-efficiency motor with a direct-mounted impeller that provides exceptional performance and low energy consumption.
- The slide-out blower assembly combines components, making service and installation easier. Available for 7.5- to 12.5-ton models.

ULTRA-ADVANCED COMPRESSOR

- Energence Ultra-High-Efficiency 3- to 6-ton models feature fully modulating, inverter-driven, variable-speed compressor technology that delivers more even comfort.
- A patent-pending, Advanced Cooling System™ configuration is designed to deliver significant year round savings for 7.5- to 25 ton models.
 - Scroll compressors use the full area of the coils, rather than parts, to better match cooling capacity to demand.
 - The compressor compartment is isolated, allowing easier access and servicing.

ULTRA-HIGH-EFFICIENCY TECHNOLOGIES	3- TO 6-TON UNITS	7.5 TO 12.5-TON UNITS	15- TO 25-TON UNITS
CONTROL SYSTEM			
Prodigy® 2.0 Unit Controller	✓	✓	✓
COMPRESSOR			
Variable-speed compressor and inverter	✓		
Advanced Cooling System™ – one set of tandem compressors		✓	
Advanced Cooling System – two sets of tandem compressors			✓
INDOOR BLOWER			
Variable speed, direct drive blower	✓		
MSAV® belt-drive blower		✓	✓
DirectPlus™ variable speed, direct drive blower		✓	
OUTDOOR FAN			
Variable-speed outdoor fan	✓	✓	✓
HEATING			
Four-stage gas burner	✓		✓

HVAC Units

LENNOX® VRF AT A GLANCE

Advantages to every customer and every project.



INVERTER TECHNOLOGY

Adjusts compressor speed based on heating and cooling demand for reduced energy use.



IMPROVED HEAT TRANSFER

With hydrophilic fins and rifled copper tubing.



ADVANCED DEFROST CYCLE

A shorter defrost cycle preserves warmth and comfort in cooler weather. Heat recovery systems are capable of providing continuous heating during the defrost cycle.



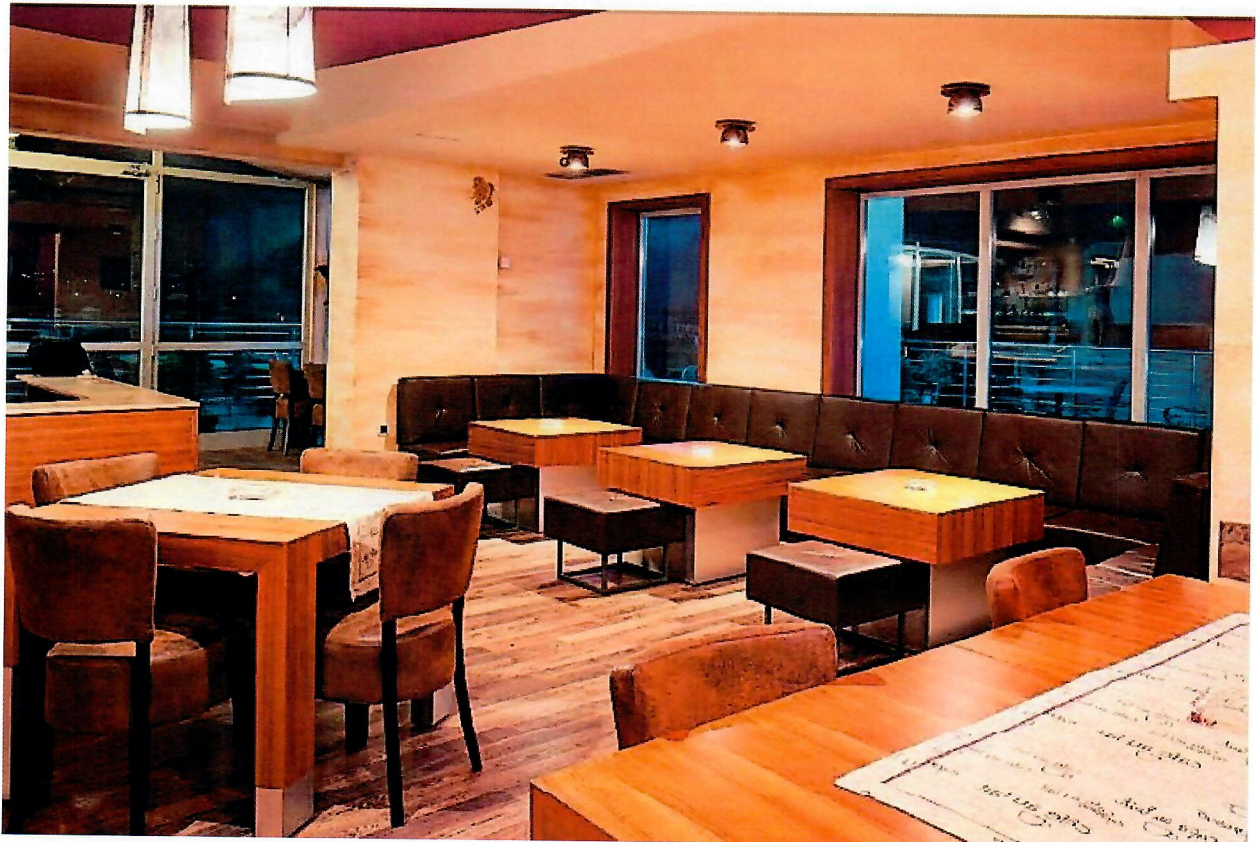
DC FAN MOTORS

Provide greater efficiency and energy savings over standard AC motors.



SIMPLIFIED WIRING SCHEME

Daisy-chained, low-voltage-control wiring simplifies installation and reduces time and labor costs.



OUTDOOR UNITS

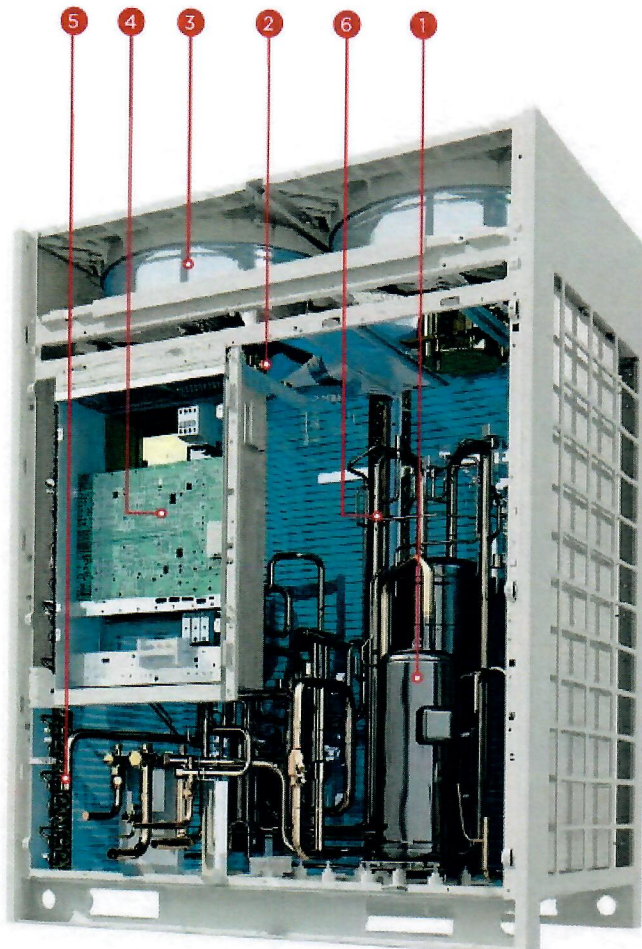
Smart design features are found throughout each outdoor unit, designed to save energy, increase convenience and extend equipment life.

FLEXIBLE SYSTEM LAYOUT

Outdoor units can connect with up to 3,280 ft. (1000m) of piping to accommodate even the largest structures and projects.

ENERGY-SMART NIGHT MODE

Outdoor units can be set to run at reduced speeds at night for even greater efficiency and reduced noise levels.



1 DC INVERTER COMPRESSORS

Lennox® VRF utilizes only inverter-driven compressors to maximize efficiency and system longevity. A 2 Hz frequency step allows the system to operate at the required capacity with greater precision, for fine-tuned comfort and greater energy savings.

2 DC FAN MOTORS

Highly efficient DC fan motors power condensing unit fans, with 18 different speeds for precise airflow control and greater efficiency than standard AC motors.

3 ASYMMETRIC FAN BLADE DESIGN

A specially engineered fan blade design optimizes airflow while reducing noise. Lennox VRF also utilizes dissimilar fan blades to eliminate in-phase "pulsing" and minimize sound levels.

4 HINGED ELECTRICAL BOX

Allows quick and easy access to piping and valves for faster service and troubleshooting.

5 ADVANCED DEFROST CYCLE

Heat recovery systems in the Lennox VRF line use a split-coil defrost cycle that allows the system to provide heat even when defrosting. Heat pump systems use an accelerated complete-coil defrost that can last as little as four minutes.

6 RIFLED COPPER TUBING

Works with hydrophilic fins for greater heat transfer, efficiency and performance.



**VWMB
WALL MOUNT**

FLEXIBLE INSTALLATION

Refrigerant piping can be routed to the left, right or rear

AUTO-SWING LOUVER

Automatically redirects air based on mode selected

QUIET OPERATION

Noise levels as low as 29 dB



**V22A
COMPACT 360°
CASSETTE**

360° AIR OUTLET

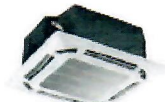
Provides uniform temperature distribution

COMPACT CASING

Fits directly into a lay-in ceiling grid, while reducing installation space requirements above the ceiling

**INTEGRAL
CONDENSATE PUMP**

Removes moisture quickly and conveniently



**V33B
360° CASSETTE**

360° AIR OUTLET

Provides uniform temperature distribution

**OUTSIDE AIR
CONNECTION**

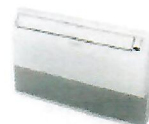
Allows ventilation air to be induced directly into the unit

**INTEGRAL
CONDENSATE PUMP**

Removes moisture quickly and conveniently

DC MOTOR

Available in a DC motor configuration for maximum energy efficiency



**VCFA
CEILING AND
FLOOR MOUNT**

FLEXIBLE INSTALLATION

Installs either vertically or horizontally

**VERTICAL AND
HORIZONTAL
AUTO SWING**

Ensures better airflow distribution

COMPACT INSTALLATION

Less than 8.5" (216mm) in height



**VHIA
HIGH-STATIC
DUCTED**

HIGH STATIC PRESSURE

Industry-leading static pressure up to 1.13"

LOW PROFILE HEIGHT

For space-saving applications

**OPTIONAL
CONDENSATE PUMP**

Removes moisture quickly and conveniently



**VMDB
MEDIUM-STATIC
DUCTED**

**COMPACT
INSTALLATION**

A height of only 8.25" (210mm) makes this unit ideal when space above the ceiling is limited

**INTEGRAL
CONDENSATE PUMP**

Removes moisture quickly and conveniently

DC MOTOR

Available in a DC motor configuration with increased static pressure capabilities



**VYCA
VERTICAL AIR
HANDLING UNIT**

ECM MOTOR

For maximum energy efficiency

MULTI-POSITION

Install vertically or in horizontal-right or horizontal-left orientations for maximum flexibility

OPTIONAL ELECTRIC HEAT

Up to 20kW



PACKAGED GAS ELECTRIC

LGH

Energence® Rooftop Units

60 HZ

PRODUCT SPECIFICATIONS

Bulletin No. 210555
November 2016
Supersedes June 2016



SMARTWIRE™ SYSTEM

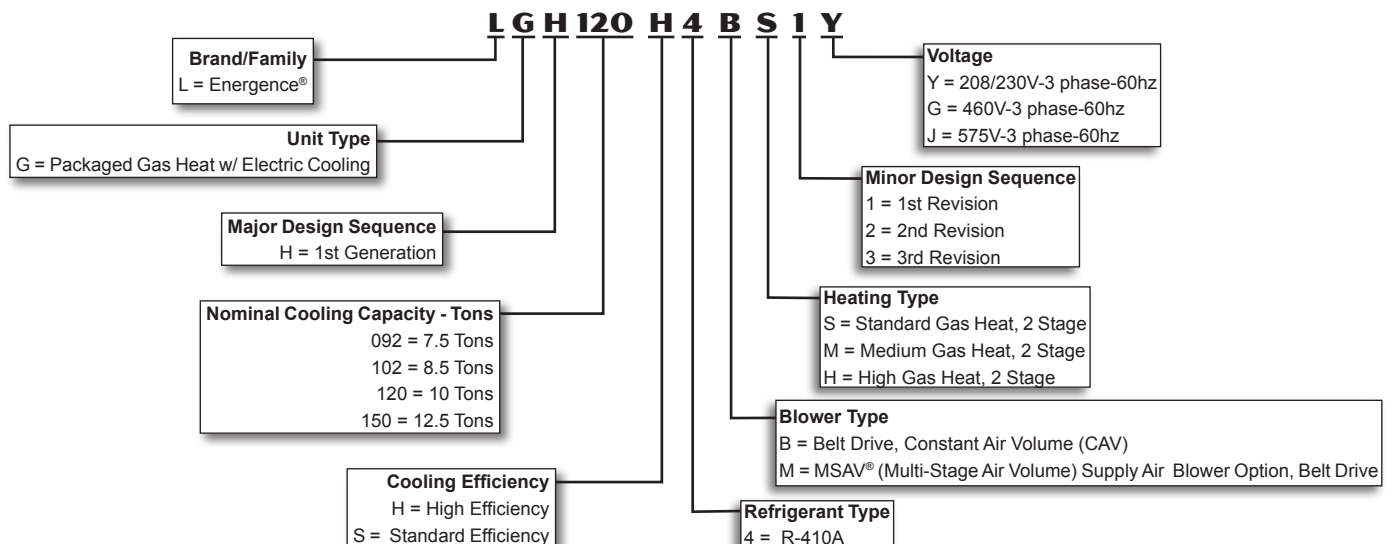


ASHRAE 90.1 COMPLIANT

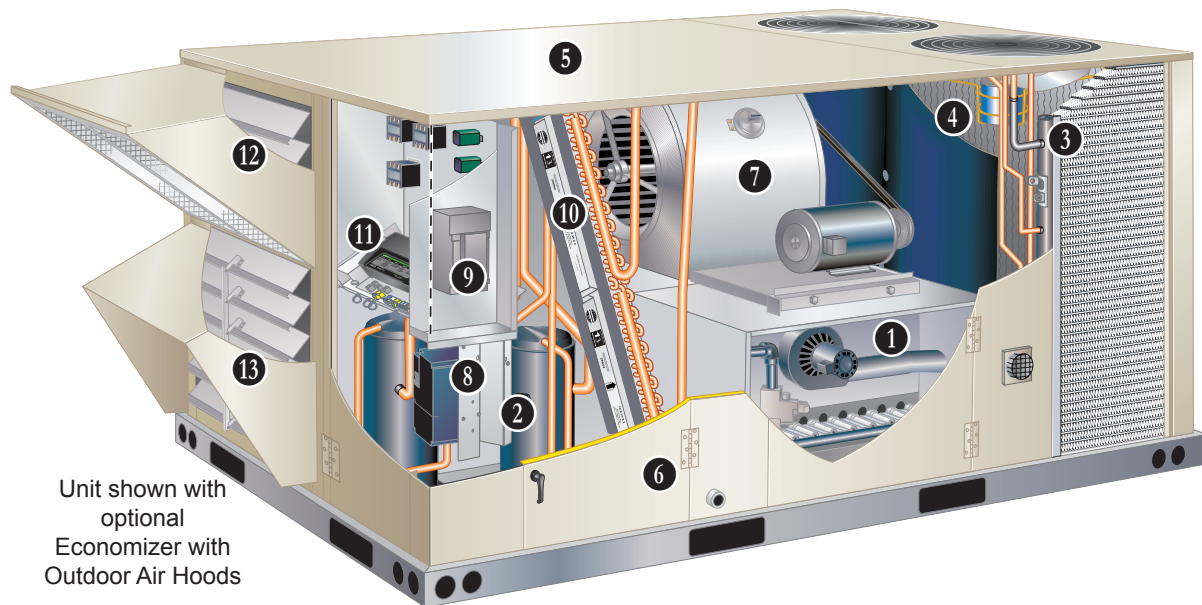


7.5 to 12.5 Tons
Net Cooling Capacity – 90,000 to 136,000 Btuh
Gas Input Heat Capacity – 130,000 to 240,000 Btuh

MODEL NUMBER IDENTIFICATION



FEATURES AND BENEFITS



Unit shown with optional Economizer with Outdoor Air Hoods

Lennox' EnergySense® packaged rooftop unit product line was created to save energy with intelligence by offering some of the highest energy efficiency ratings available with a powerful, easy to use unit controller. This makes EnergySense® rooftop units perfect for business owners looking for an HVAC product with the lowest total cost of ownership. EnergySense® rooftop units feature:

- **Hinged Access Panels** - Provide quick access to components and protect panels and roof from damage during servicing.
- **Isolated Compressor Compartment** - Allows performance check during normal compressor operation without disrupting airflow.
- **Corrosion-Resistant Removable, Reversible Drain Pan** - Provides application flexibility, durability and improved serviceability.
- **Thermostatic Expansion Valves (High Efficiency Models)** - Provide peak cooling performance across the entire application range.
- **Scroll Compressors** - Standard on all units for reliable, long-term operation.
- **Lennox' Environ™ Coil System** - Smaller, lighter condenser coil.
- **Humiditrol® Dehumidification System** - Patented system allows for independent control of temperature and humidity, providing enhanced comfort control.
- **Constant Air Volume (CAV) or MSAV® (Multi-Stage Air Volume) Supply Air Blower Option** - Allows constant or multi-staged air delivery.
- **Auto-Tensioner for Blower Belt** - Factory option ensures blower is delivering the proper airflow for comfort, while maximizing efficiency and belt life.
- **MERV 13 Filters** - Available as factory or field option, provide an enhanced level of indoor air quality, and can help the building qualify for additional LEED credits.
- **Foil-Faced Insulation** - Insulation on all internal surfaces that have contact with airflow helps minimize airborne fibers and improve IAQ.
- **Common Components** - Many maintenance items are standard throughout the entire product line, reducing the need to carry different parts to the job or maintain in inventory.

Prodigy® Control System

Standard on every EnergySense® rooftop unit, the Prodigy® 2.0 unit controller is the center of the Prodigy® Control System. The intuitive user interface makes setup, troubleshooting and service easier than ever. Each unit tracks the runtime of every major component and records the date and time when service or maintenance is performed.



SmartWire™ System

The SmartWire™ system simplifies field sensor or thermostat installation through advanced connectors that are keyed and color-coded to help prevent miswiring. Not only is the wire coloring scheme standardized across all models, each connection is intuitively labeled to make troubleshooting and servicing quick and easy.

FEATURES AND BENEFITS

CONTENTS

Blower Data . . . . .	.31
Dimensions - Accessories . . . . .	.42
Dimensions - Unit . . . . .	.41
Electrical Data . . . . .	.35
Features And Benefits	2
High Altitude Derate . . . . .	.24
Humiditrol® Dehumidification System Ratings . . . . .	.29
Model Number Identification	1
Optional Conventional Temperature Control Systems . . . . .	.38
Options / Accessories . . . . .	.18
Outdoor Sound Data . . . . .	.37
Prodigy® Control System	8
Ratings . . . . .	.25
Sequence Of Operation - MSAV® (Multi-Stage Air Volume) Models . . . . .	.12
Specifications . . . . .	.22
Specifications - Gas Heat . . . . .	.24
Sunsource® Commercial Energy System . . . . .	.15
Unit Clearances . . . . .	.37
Weight Data . . . . .	.40

APPROVALS

AHRI Certified to AHRI Standard 340/360-2007.

ETL listed.

Efficiency ratings are certified by CSA.

Components are bonded for grounding to meet safety standards for servicing required by UL, ULC and National and Canadian Electrical Codes.

All models are ASHRAE 90.1-2010 compliant.

MSAV® models meet California Code of Regulations, Title 24 requirements for staged airflow.

ISO 9001 Registered Manufacturing Quality System.

ENERGY STAR® certified units are designed to use less energy, help save money on utility bills, and help protect the environment.

The ENERGY STAR® Partner of the Year Award signifies that Lennox has made outstanding contributions to design energy efficient units that will lower energy bills, while meeting industry standards for comfort and indoor air quality. Lennox was the first HVAC manufacturer to win this award and has been a four-time recipient since 2003.

WARRANTY

Limited ten years aluminized heat exchanger, limited fifteen years optional stainless steel heat exchanger.

Limited five years on compressors.

Limited three years on the Lennox' Environ™ Coil System.

Limited three years on Prodigy® 2.0 unit controller.

Limited five years on Optional High Performance Economizers.

Limited one year all other covered components.

HEATING SYSTEM

- 1 Aluminized steel inshot burners, direct spark ignition, electronic flame sensor, combustion air inducer, redundant automatic dual stage gas valve with manual shut-off.

Heat Exchanger

Tubular construction, aluminized steel, life cycle tested.

Optional Stainless Steel Heat Exchanger is required if mixed air temperature is below 45°F.

Electronic Pilot Ignition

Electronic spark igniter provides positive direct ignition of burners on each operating cycle. The system permits main gas valve to stay open only when the burners are proven to be lit. Should a loss of flame occur, the gas valve closes, shutting off the gas to the burners. Ignition module has LED to indicate status and aid in troubleshooting.

Watchguard circuit on module automatically resets ignition controls after one hour of continuous thermostat demand after unit lockout, eliminating nuisance service calls.

Ignition control is factory installed in the gas heating compartment.

Limit Controls

Factory installed, redundant limit controls with fixed temperature setting. Heat limit controls protect heat exchanger and other components from overheating.

Safety Switches

Flame roll-out switch, flame sensor and combustion air inducer proving switch protect system operation.

Required Selections

Gas Input Choice - Order one:

Standard Gas Heat, 2 Stage (84,500/130,000 Btuh)

Medium Gas Heat, 2 Stage (117,000/180,000 Btuh)

High Gas Heat, 2 Stage (156,000/240,000 Btuh)

FEATURES AND BENEFITS

HEATING SYSTEM (continued)

Options/Accessories

Factory Installed

Stainless Steel Heat Exchanger

Required if mixed air temperature is below 45°F.

Factory or Field Installed

Bottom Gas Piping Kit

Allows bottom gas entry.

Field installed only, may be factory ordered to ship with unit.

Low Temperature Vestibule Heater

Electric heater automatically controls minimum temperature in gas burner compartment when temperature is below -40°F. CSA certified to allow operation of unit down to -60°F.

Field Installed

Combustion Air Intake Extensions

Recommended for use with existing flue extension kits in areas where high snow areas can block intake air.

LPG/Propane Kits

Conversion kit to field change over units from Natural Gas to LPG/Propane.

Vertical Vent Extension Kit

Use to exhaust flue gases vertically above unit. Required when unit vent is too close to fresh air intakes per building codes. The vent kit also prevents ice formation on intake louvers.

Kit contains vent transition, vent tee, drain cap and installation hardware.

NOTE - Straight vent pipes (4-in. B-Vent) and caps are not furnished and must be field supplied. Refer to kit instructions for additional information.

COOLING SYSTEM

Designed to maximize sensible and latent cooling performance at design conditions.

System can operate from 0°F to 125°F without any additional controls.

R-410A Refrigerant

Non-chlorine based, ozone friendly, R-410A.



2 Scroll Compressors

Scroll compressors on all models for high performance, reliability and quiet operation.

Resiliently mounted on rubber grommets for quiet operation.

Compressor Crankcase Heaters

Protects against refrigerant migration that can occur during low ambient operation.

Thermal Expansion Valves (High Efficiency Models)

Assures optimal performance throughout the application range. Removable element head.

Refrigerant Metering Orifice (Standard Efficiency Models)

Accurately meters refrigerant in system.

Refrigerant control is accomplished by exact sizing of refrigerant metering orifice.

Filter/Driers

High capacity filter/drier protects the system from dirt and moisture.

High Pressure Switches

Protects the compressors from overload conditions such as dirty condenser coils, blocked refrigerant flow, or loss of outdoor fan operation.

Low Pressure Switches

Protects the compressors from low pressure conditions such as low refrigerant charge, or low/no airflow.

Freezestats

Protects the evaporator coil from damaging ice build-up due to conditions such as low/no airflow, or low refrigerant charge.

3 Lennox' Environ™ Coil System

Condenser coil features lightweight, all aluminum brazed fin construction.

Constructed of three components:

a flat extrusion tube, fins in-between the flat extrusion tube and two refrigerant manifolds.

Environ™ Coil System Features:

- Improved heat transfer performance due to high primary surface area (flat tubes) versus secondary surface (fins).
- Smaller internal volume (reduced refrigerant charge).
- High durability (all aluminum construction).
- Fewer brazed joints.
- Compact design (reduces unit weight).
- Easy maintenance/cleaning.

Face-split design.

Mounting brackets with rubber inserts secure coil to unit providing vibration dampening and corrosion protection.

Evaporator Coil

Copper tube construction, enhanced rippled-edge aluminum fins, flared shoulder tubing connections, silver soldered construction for improved heat transfer.

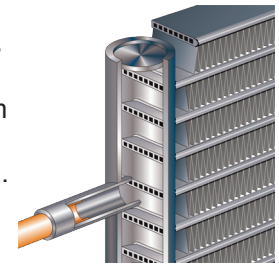
Cross row circuiting with rifled copper tubing optimizes both sensible and latent cooling capacity.

Condensate Drain Pan

Plastic pan, sloped to meet drainage requirements per ASHRAE 62.1.

Side or bottom drain connections.

Reversible to allow connection at back of unit.



FEATURES AND BENEFITS

4 Outdoor Coil Fan Motors

Thermal overload protected, totally enclosed, permanently lubricated ball bearings, shaft up, wire basket mount.

Outdoor Coil Fans

PVC coated fan guard furnished.

Required Selections

Cooling Capacity

Specify nominal cooling capacity of the unit

Options/Accessories

Factory Installed

Conventional Fin/Tube Condenser Coil (replaces Environ™ Coil System)

Copper tube construction, enhanced rippled-edge aluminum fins, flared shoulder tubing connections, silver soldered construction.

NOTE - Required if Humiditrol® Dehumidification System is ordered.

Service Valves

Fully serviceable brass valves installed in discharge & liquid lines.

Not available for units equipped with Environ™ Coil System or Humiditrol® Dehumidification option.

Factory or Field Installed

Condensate Drain Trap

Available in copper or PVC.

Field installed only, may be factory ordered to ship with unit.

Drain Pan Overflow Switch

Monitors condensate level in drain pan, shuts down unit if drain becomes clogged.

CABINET

5 Construction

Heavy-gauge steel panels and full perimeter heavy-gauge galvanized steel base rail provides structural integrity for transportation, handling, and installation.

Base rails have rigging holes.

Three sides of the base rail have forklift slots.

Raised edges around duct and power entry openings in the bottom of the unit provide additional protection against water entering the building.

Airflow Choice

Units are shipped in downflow (vertical) configuration, can be field converted to horizontal airflow with optional Horizontal Discharge Kit.

Duct Flanges

Provided for horizontal duct attachment.

Power/Gas Entry

Electrical and gas lines can be brought through the unit base or through horizontal access knock-outs

Exterior Panels

Constructed of heavy-gauge, galvanized steel with a two-layer enamel paint finish.

Insulation

All panels adjacent to conditioned air are fully insulated with non-hygroscopic fiberglass insulation.

Unit base is fully insulated. The insulation also serves as an air seal to the roof curb, eliminating the need to add a seal during installation.

6 Hinged Access Panels

Hinged tool-less access panels are provided for the filter section, blower/heating section and compressor/controls section.

All hinged panels have seals and quarter-turn latching handles to provide a tight air and water seal.

Required Selections

Airflow Configuration

Specify downflow or horizontal.

Options/Accessories

Factory or Field Installed

Return Air Adaptor Plate

For same size LC/LG/LH and TC/TG/TH unit replacement.

Installs on return air opening in unit to match return air opening on existing roof curbs. Also see Accessory Air Resistance table.

Factory Installed

Corrosion Protection

A completely flexible immersed coating with an electrodeposited dry film process. (AST ElectroFin E-Coat) Meets Mil Spec MIL-P-53084, ASTM B117 Standard Method Salt Spray Testing.

Indoor Corrosion Protection:

- Coated coil
- Coated reheat coil (Humiditrol®)
- Painted blower housing
- Painted base

Outdoor Corrosion Protection:

- Coated coil
- Painted base

Field Installed

Combination Coil/Hail Guards

Heavy gauge steel frame painted to match cabinet with expanded metal mesh to protect the outdoor coil from damage.

Horizontal Discharge Kit

Consists of duct covers to block off downflow supply and return air openings for horizontal applications.

Also includes return air duct flanges for end return air when economizer is used in horizontal applications.

NOTE - When configuring unit for horizontal application with economizer, a separate Horizontal Barometric Relief Damper with Hood must be ordered separately for installation in the return air duct.

FEATURES AND BENEFITS

BLOWER

A wide selection of supply air blower options are available to meet a variety of airflow requirements.

7 Motor

Overload protected, equipped with ball bearings. Belt drive motors are offered on all models and are available in several different sizes to maximize air performance.

Motor Efficiency

All blower motors 5 hp and above meet minimum energy efficiency standards in accordance with the Energy Independence and Security Act (EISA) of 2007.

Supply Air Blower

Forward curved blades, double inlet, blower wheel is statically and dynamically balanced. Equipped with ball bearings and adjustable pulley (allows speed change).

Blower assembly slides out of unit for servicing.

Required Selections

Select Constant Air Volume (CAV) or MSAV® (Multi-Stage Air Volume) Supply Air Blower Option

On Constant Air Volume (CAV) models, the supply air blower will provide a constant volume of air.

On MSAV® (Multi-Stage Air Volume) supply air blower option models the supply air blower will stage the amount of airflow according to compressor stages, heating demand, ventilation demand or smoke alarm.

NOTE - Units with the MSAV® supply air blower option have the same face split indoor coils as units with the CAV supply air blower option. Part load airflow in cooling mode on MSAV® units should not be set below 220 cfm/nominal full load ton to reduce the risk of evaporator coil freeze-up.

- 8** Utilizes a Variable Frequency Drive (VFD) to stage the supply air blower airflow. The VFD alters the frequency and voltage of the power supply to the blower to control blower speed.

The amount of airflow for each stage can be set according to a parameter in the Prodigy® 2.0 unit controller. Unit is shipped from the factory with preset airflow.

The MSAV® supply air blower option can be ordered with or without an Electronic Bypass Control. If equipped with the bypass control the MSAV® features manual (default) or automatic electronic bypass control of the VFD. In case of a VFD malfunction, a VFD alarm is generated by the Prodigy® 2.0 unit controller. The VFD can be manually bypassed to continue unit operation at full blower speed. Or the unit controller can be set to automatically switch to full blower speed if a VFD alarm is generated.

The VFD has an operational range of -40 to 125°F outdoor air ambient temperature.

Lower operating costs are obtained when the blower is operated on lower speeds.

Ordering Information

Specify motor horsepower and drive kit number when base unit is ordered.

Options/Accessories

Factory Installed

Blower Belt Auto-Tensioner

Provides proper tension to belt drive blower belt without the need for regular adjustments. Maintains airflow and proper performance.

ELECTRICAL

SmartWire™ System

Advanced wiring connectors are keyed and color-coded to prevent miswiring. Wire coloring scheme is standardized across all models. Each connection is intuitively labeled to make troubleshooting and servicing quick and easy.

Electrical Plugs

Positive connection electrical plugs are used to connect common accessories or maintenance parts for easy removal or installation.

Required Selections

Voltage Choice

Specify when ordering base unit.

Options/Accessories

Factory Installed

Circuit Breakers

HACR type. For overload and short circuit protection. Factory wired and mounted in the power entry panel. Current sensitive and temperature activated. Manual reset.

Phase/Voltage Detection (Optional for CAV Models Only)

Phase detection monitors power supply to assure phase is correct at unit start-up. If phase is incorrect, the unit will not start and an alarm code is reported to the unit controller. Protects unit from being started with incorrect phasing which could lead to issues such as compressors running backwards.

Voltage detection monitors power supply voltage to assure proper voltage. If voltage is not correct (over/under voltage conditions) the unit will not start and an alarm code is reported to the unit controller.

NOTE - Phase/voltage detection is furnished when the MSAV® (Multi-Stage Air Volume) option is ordered.

Factory or Field Installed

9 Disconnect Switch

Accessible from outside of unit, spring loaded weatherproof cover furnished.

GFI Service Outlets (2)

115V ground fault circuit interrupter (GFCI) type, non-powered, field-wired.

Field Installed

GFI Weatherproof Cover

Single-gang cover.

Heavy-duty UV-resistant polycarbonate case construction. Hinged base cover with gasket.

FEATURES AND BENEFITS

INDOOR AIR QUALITY

10 Air Filters

Disposable 2-inch filters furnished as standard.

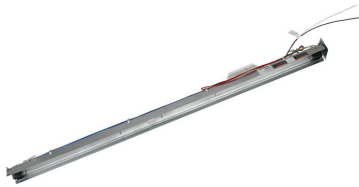
Options/Accessories

Factory or Field Installed

Healthy Climate® High Efficiency Air Filters

Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2-inch pleated filters.

Healthy Climate® UVC Germicidal Lamps



Germicidal lamps emit ultra-violet (UV-C) energy, which has been proven to be effective in reducing microbes such as viruses, bacteria, yeasts, and molds. This process either destroys the organism or controls its ability to reproduce.

UV-C energy greatly reduces the growth and proliferation of mold and other bioaerosols (bacteria and viruses) on illuminated surfaces (particularly coil and drain pan).

Lamps are field installed in the blower/evaporator coil section.

All necessary hardware for installation is included.

Lamps operate on 208/230V power supply. Step-down transformer must be field supplied when used with 460V and 575V rooftop units.

Magnetic safety interlock terminates power when access panels are removed.

Approved by ETL.

Field Installed

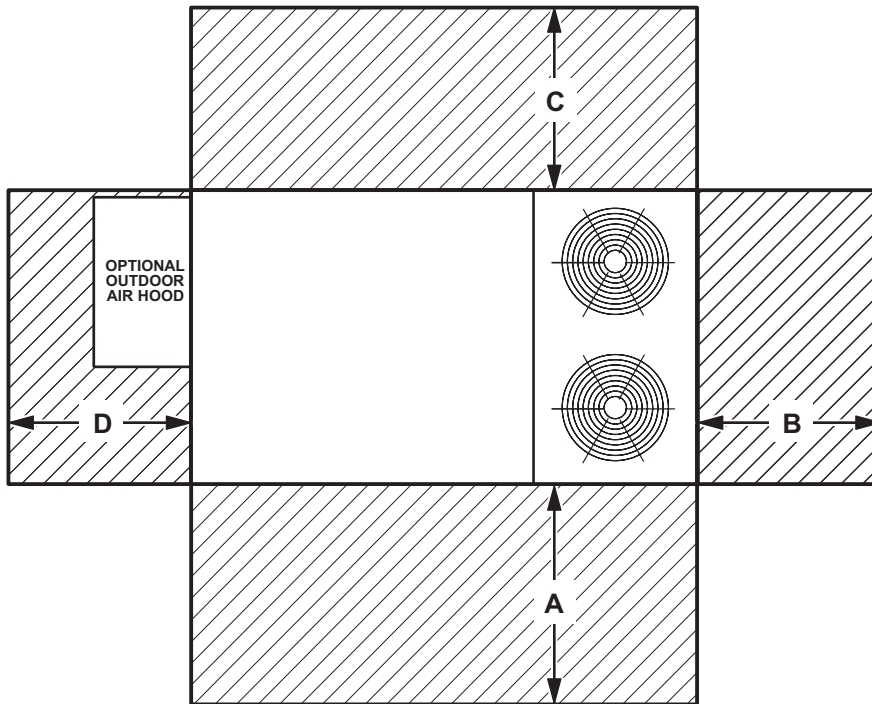
Replacement Filter Media Kit With Frame

Replaces existing pleated filter media. Includes washable metal mesh screen and metal frame with clip for holding replaceable non-pleated filter.

Indoor Air Quality (CO₂) Sensors

Monitors CO₂ levels, reports to the Prodigy® 2.0 unit controller which adjusts economizer dampers as needed.

UNIT CLEARANCES - INCHES (MM)



¹ Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	60	1524	36	914	36	934	60	1524	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

¹ Service Clearance - Required for removal of serviceable parts.

Clearance to Combustibles - Required clearance to combustible material.

Minimum Operation Clearance - Required clearance for proper unit operation.

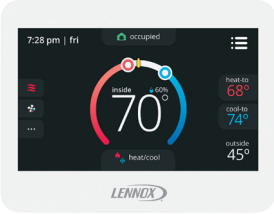
OUTDOOR SOUND DATA

Unit Model Number	Octave Band Linear Sound Power Levels dB, re 10 ⁻¹² Watts - Center Frequency - Hz							¹ Sound Rating Number (SRN) (dBA)
	125	250	500	1000	2000	4000	8000	
092, 102 and 120	76	79	84	83	79	73	66	88
150	77	80	85	84	79	74	66	88


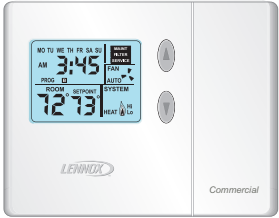
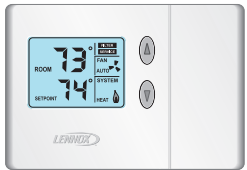
Note - The octave sound power data does not include tonal corrections.

¹ Sound Rating Number according to ARI Standard 270-95 or ARI Standard 370-2001 (includes pure tone penalty). "SRN" is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz).

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Item	Model No. (Description)	Catalog No.
COMFORTSENSE® 8500 COMMERCIAL 7-DAY PROGRAMMABLE THERMOSTAT - ZONING/NON-ZONING		
 <ul style="list-style-type: none"> • Multi-Stage, Universal Thermostat • Zoning and Non-Zoning Models with or without CO₂ Sensing • Intuitive Touchscreen Interface • Menu-driven Programming • Remote Indoor Temperature Sensing (up to nine averaging sensors) • Compressor Short-Cycle Protection • Relative Humidity Sensor • Occupancy Sensor • Outside Air Temperature Display • Scheduling - Two separate schedules for work days or non-work days • Four Time Periods Per Day (non-zoning models, standalone mode) • Scheduled Occupancy Control • Holiday Scheduling • Performance Reports (non-zoning models, standalone mode) • Reminders - Two Custom and Routine System Checkup (non-zoning models) • Dehumidification/Humiditrol® Control • Backlit Display • Wallplate Furnished 	C0STAT04FF1L (Zoning)	14X57
	C0STAT31FF1L (Zoning with Co ₂ Sensing)	14X58
	C0STAT03FF1L (Non-Zoning)	14X55
	C0STAT22FF1L (Non-Zoning with Co ₂ Sensing)	14X56
Optional Accessories		
¹ Remote non-adjustable wall mount 10k temperature sensor	C0SNZN01AE2	47W37
¹ Remote non-adjustable wall mount 11k temperature sensor	C0SNZN08AE1	94L61
Locking cover (clear)	C0MISC15AE1-	39P21
¹ Up to nine of the same type remote temperature sensors can be connected in parallel.		
Zonebus Network Cable (Purple) - Zoning Models		
Twisted pair 100% shielded communication cable, Red and Black 22 AWG, purple jacket, rated at 75°C, 300V, Plenum rated Insulation - Low smoke PVC, NEC, CMP	500 ft. box - C0MISC05AE1-	23W99
	1000 ft. box - C0MISC06AE1-	24W00
	2500 ft. roll - C0MISC07AE1-	24W01
Sysbus Network Cable (Yellow) - Non-Zoning Models		
Twisted pair 100% shielded communication cable, Red and Black 22 AWG, yellow jacket, rated at 75°C, 300V, Plenum rated Insulation - Low smoke PVC, NEC, CMP	500 ft. box - C0MISC00AE1-	27M19
	1000 ft. box - C0MISC04AE1-	94L63
	2500 ft. roll - C0MISC01AE1-	68M25

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Item	Model No.	Catalog No.
<p>COMFORTSENSE® 7500 COMMERCIAL 7-DAY PROGRAMMABLE THERMOSTAT</p>  <ul style="list-style-type: none"> • Four-Stage Heating / Two-Stage Cooling Universal Multi-Stage • Intuitive Touchscreen Interface • Remote Indoor Temperature Sensing with Averaging • Outside or Discharge Air Temperature Display • Full Seven-Day Programming • Four Time Periods Per Day • Occupancy Scheduling with Economizer Relay Control • Away Mode • Holiday Scheduling • Smooth Setback Recovery (SSR) • Performance Reports • Notifications/Reminders • Dehumidification/Humiditrol® Control for Split Systems and Rooftop Units • Economizer Relay Control • Backlit Display • Wallplate Furnished 	C0STAT06FF1L	13H15
<p>Optional Accessories</p> <p>¹ Remote non-adjustable wall mount 20k temperature sensor</p> <p>¹ Remote non-adjustable wall mount 10k temperature sensor</p> <p>Remote non-adjustable discharge air (duct mount) temperature sensor</p> <p>Outdoor temperature sensor</p> <p>Locking cover (clear)</p> <p>¹ Remote sensors can be applied in any of the following combinations: One Sensor - (1) 47W36 Two Sensors - (2) 47W37 Three Sensors - (2) 47W36 and (1) 47W37 Four Sensors - (4) 47W36 Five Sensors - (3) 47W36 and (2) 47W37</p>	C0SNZN01AE2- C0SNZN73AE1- C0SNDC00AE1- C0SNSR03AE1- C0MISC15AE1-	47W36 47W37 19L22 X2658 39P21
<p>COMFORTSENSE® 3000 COMMERCIAL 5-2 DAY PROGRAMMABLE THERMOSTAT</p>  <ul style="list-style-type: none"> • Two-Stage Heating / Two-Stage Cooling Conventional Systems • Intuitive Interface • 5-2 Day Programming • Program Hold • Remote Indoor Temperature Sensing • Smooth Setback Recovery (SSR) • Economizer Relay Control • Maintenance/Filter/Service Reminders • Backlit Display • Wallplate Furnished • Simple Up and Down Temperature Control. 	C0STAT05FF1L	11Y05
<p>Optional Accessories</p> <p>Remote non-adjustable wall mount 10k averaging temperature sensor</p> <p>Optional wall mounting plate</p>	C0SNZN73AE1- C0MISC17AE1-	47W37 X2659
<p>DIGITAL NON-PROGRAMMABLE THERMOSTAT</p>  <ul style="list-style-type: none"> • One-Stage Heating / Cooling Conventional Systems • Intuitive Interface • Automatic Changeover • Backlit Display • Simple Up and Down Temperature Control. 	C0STAT12AE1L	51M32
<p>Optional Accessories</p> <p>Outdoor temperature sensor</p> <p>Optional wall mounting plate</p>	C0SNSR04AE1- C0MISC17AE1-	X2658 X2659

WEIGHT DATA

Model Number	Outdoor Coil	Net		Shipping		Outdoor Coil	Net		Shipping	
		lbs.	kg	lbs.	kg		lbs.	kg	lbs.	kg
092 Base Unit	Environ™	1088	494	1173	532	Fin/Tube	1168	530	1253	568
092 Max. Unit	Environ™	1239	562	1324	601	Fin/Tube	1319	598	1404	637
102 Base Unit	Environ™	1095	497	1180	535	Fin/Tube	1175	533	1260	572
102 Max. Unit	Environ™	1246	565	1331	604	Fin/Tube	1326	601	1411	640
120 Base Unit	Environ™	1130	513	1215	551	Fin/Tube	1210	549	1295	587
120 Max. Unit	Environ™	1281	581	1366	620	Fin/Tube	1361	617	1446	656
150 Base Unit	Environ™	1170	531	1255	569	Fin/Tube	1250	567	1335	606
150 Max. Unit	Environ™	1321	599	1406	638	Fin/Tube	1401	635	1486	674

OPTIONS / ACCESSORIES

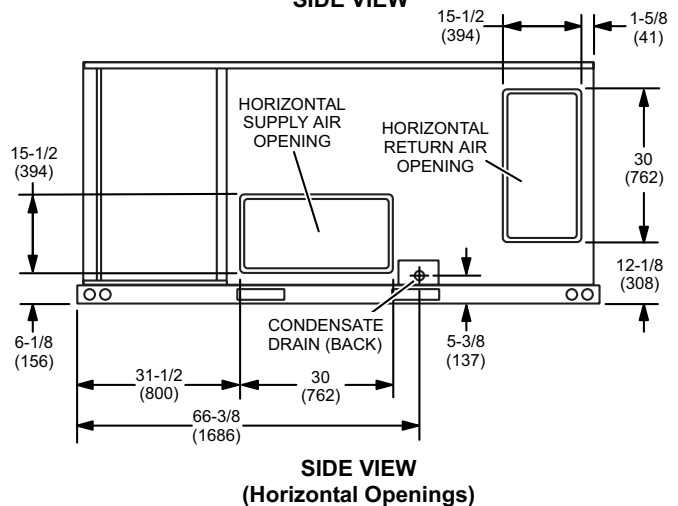
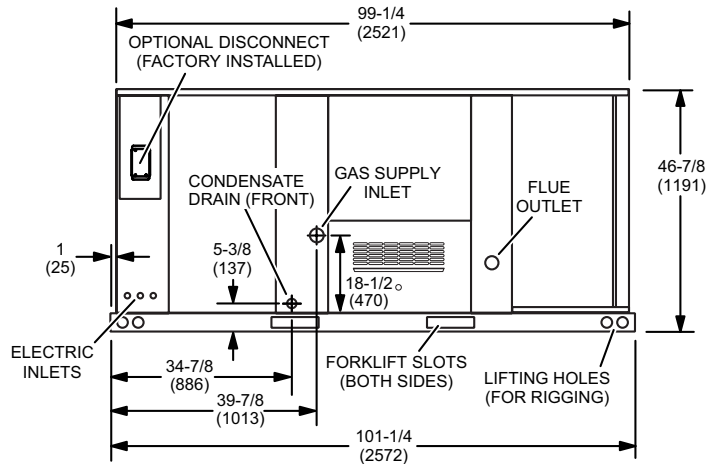
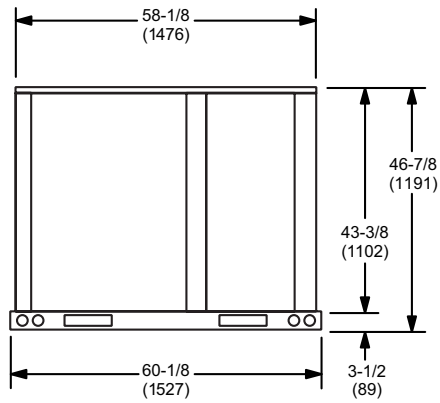
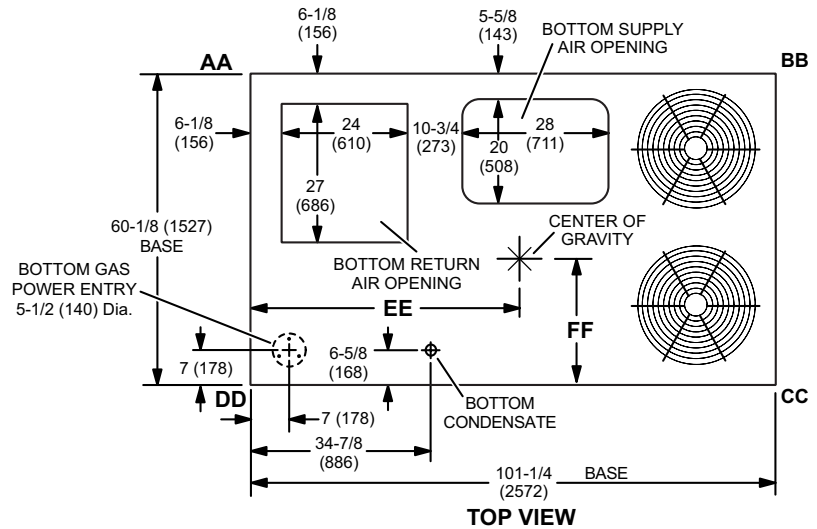
Model Number	Shipping Weight	
	lbs.	kg
CONVENTIONAL FIN/TUBE CONDENSER COIL		
Fin/Tube Condenser Coil	80	36
ECONOMIZER / OUTDOOR AIR / EXHAUST		
Economizer		
Economizer Dampers	60	27
Outdoor Air Hood (downflow)	23	10
Barometric Relief Dampers (downflow)	8	4
Barometric Relief Dampers (low profile horizontal)	20	9
Outdoor Air Dampers		
Outdoor Air Damper Section - Automatic	51	23
Outdoor Air Damper Section - Manual	39	18
Power Exhaust	31	14
GAS HEAT EXCHANGER (NET WEIGHT)		
Medium Heat (adder over standard heat)	9	5
High Heat (adder over standard heat)	32	15
HUMIDITROL® DEHUMIDIFICATION SYSTEM		
Humiditrol® Dehumification Option	20	9
MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER OPTION		
Variable Frequency Drive (VFD) and associated components	10	5
ROOF CURBS		
Hybrid Roof Curbs, Downflow		
8 in. height	60	27
14 in. height	85	39
18 in. height	100	45
24 in. height	125	57
Adjustable Pitch Curb, Downflow		
14 in. height	191	82
CEILING DIFFUSERS		
Step-Down		
RTD11-95S	118	54
RTD11-135S	135	61
RTD11-185S	168	76
Flush		
FD11-95S	118	54
FD11-135S	135	61
FD11-185S	168	76
Transitions		
C1DIFF30B-1	30	14
C1DIFF31B-1	32	15
C1DIFF32B-1	36	16
PACKAGING		
LTL Packaging (less than truck load)	105	48

DIMENSIONS - UNIT - INCHES (MM)

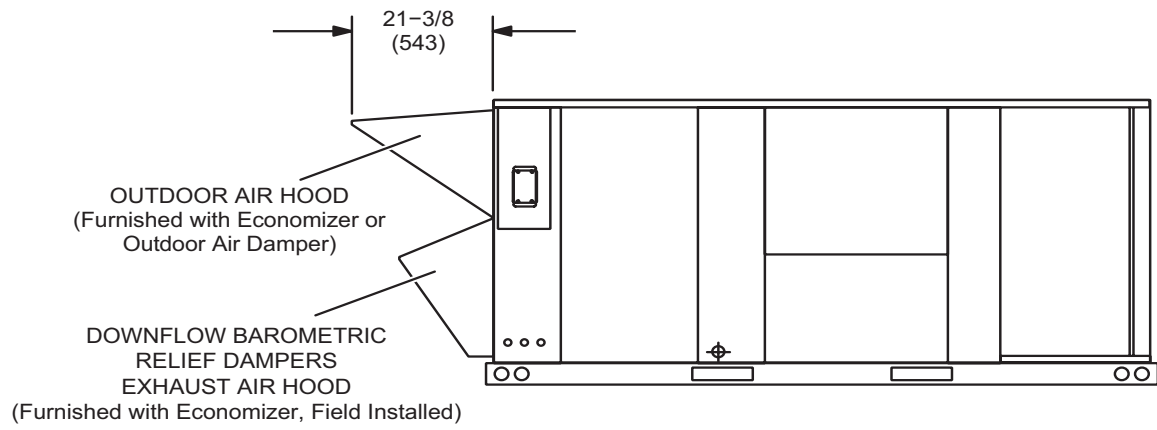
Model No.	CORNER WEIGHTS												CENTER OF GRAVITY											
	AA				BB				CC				DD				EE				FF			
	Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm	in.	mm	in.	mm
092	293	133	338	153	263	119	295	134	286	130	316	143	326	148	370	168	46.5	1181	45.5	1156	24.5	622	25.5	648
102	294	134	340	154	265	120	297	135	288	131	318	144	328	149	372	169	46.5	1181	45.5	1156	24.5	622	25.5	648
120	306	139	349	158	275	125	305	138	295	134	326	148	334	152	382	173	46.5	1181	45.5	1156	24.5	622	25.5	648
150	316	143	359	163	284	129	314	142	304	138	393	178	345	157	393	178	46.5	1181	45.5	1156	24.5	622	25.5	648

Base Unit - The unit with NO INTERNAL OPTIONS.

Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories external to unit or high static power exhaust.



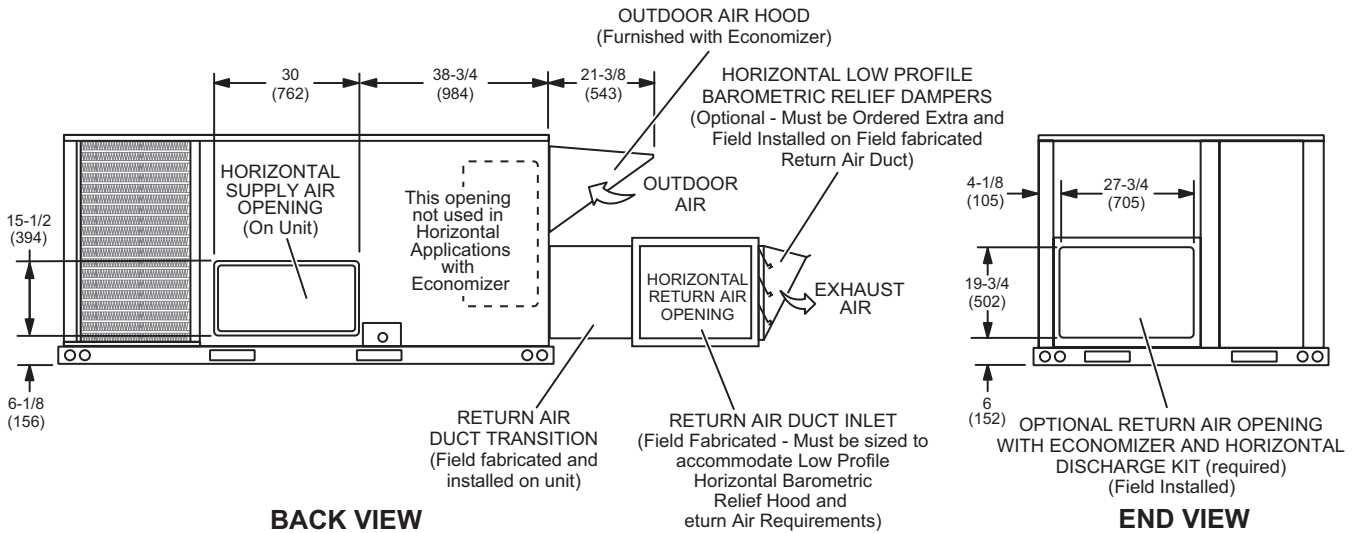
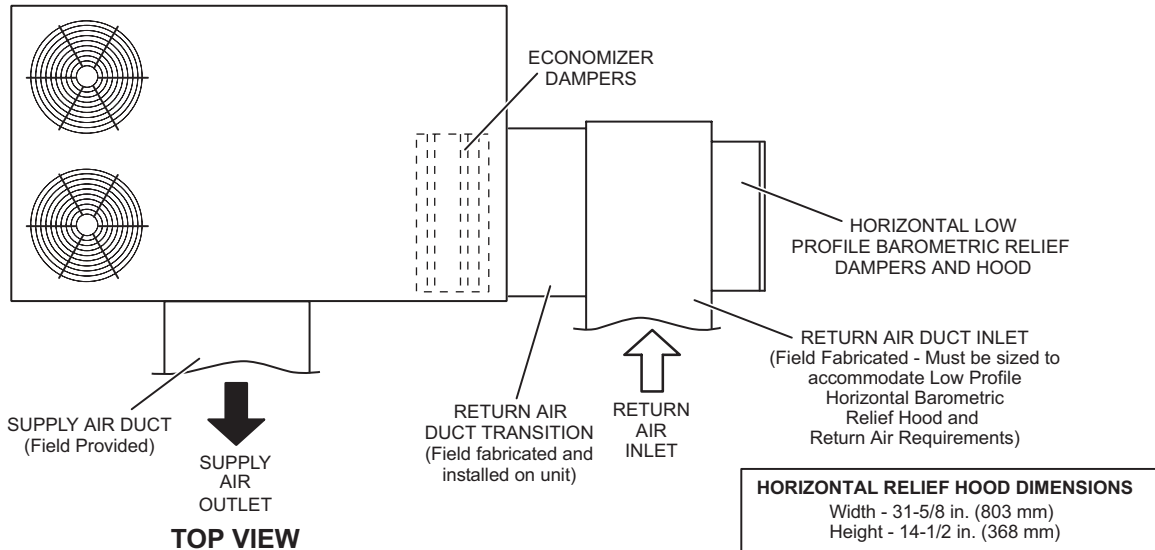
OUTDOOR AIR HOOD DETAIL



DIMENSIONS - ACCESSORIES - INCHES (MM)

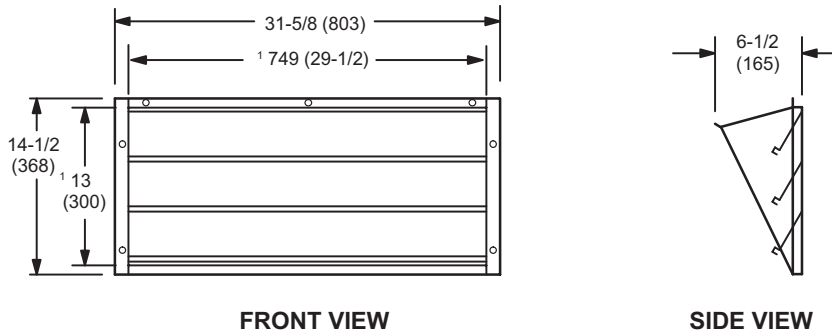
HORIZONTAL ECONOMIZER APPLICATION

(with Optional Low Profile Horizontal Barometric Relief Dampers and Horizontal Discharge Kit - Required)



NOTE - Return Air Duct and Transition must be supported.

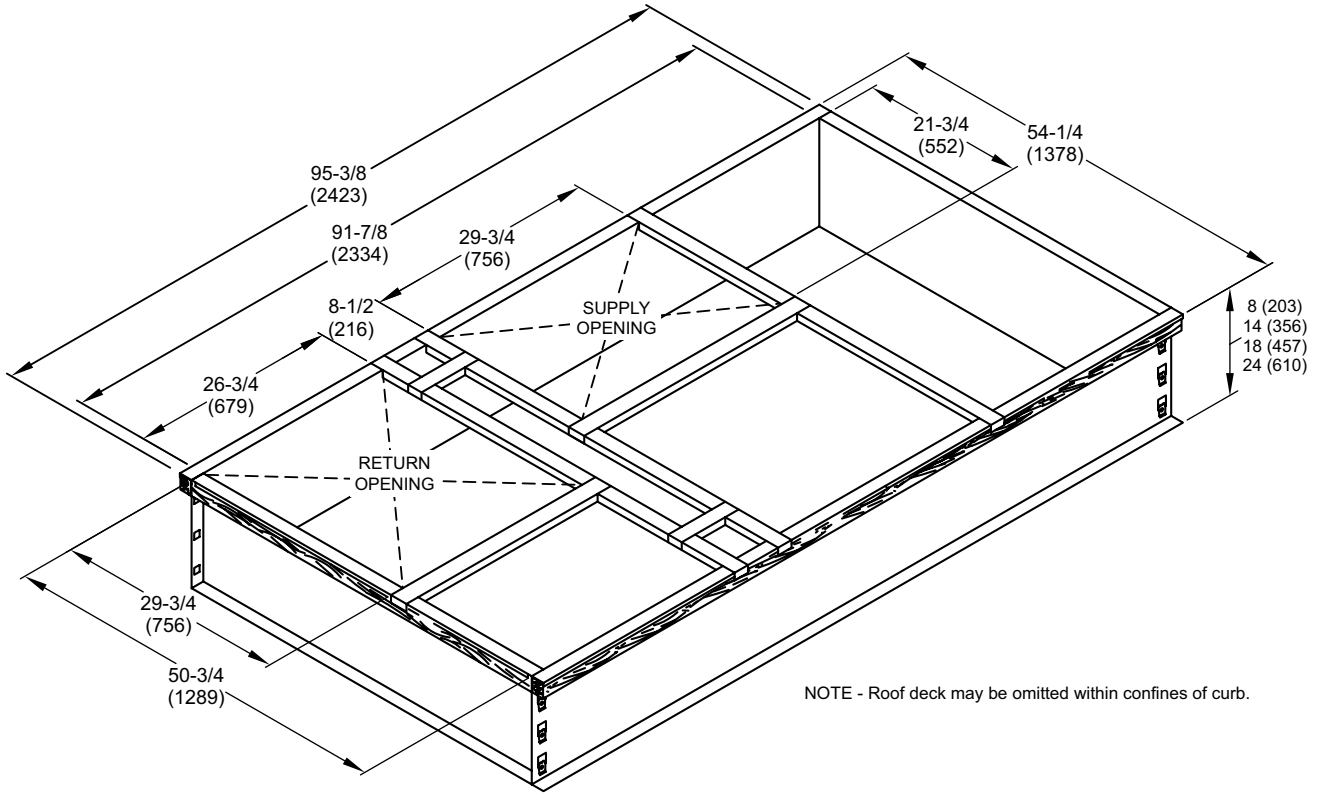
HORIZONTAL LOW PROFILE BAROMETRIC RELIEF DAMPERS
(Field installed in horizontal return air duct adjacent to unit)



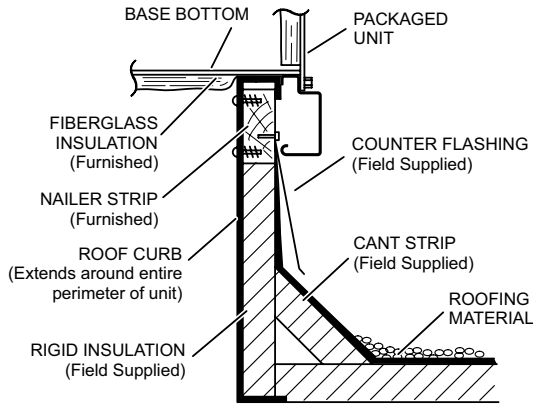
¹ NOTE - Opening size required in return air duct.

DIMENSIONS - ACCESSORIES - INCHES (MM)

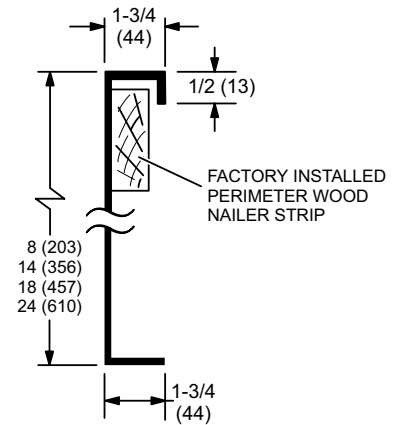
HYBRID ROOF CURBS - DOUBLE DUCT OPENING



TYPICAL FLASHING DETAIL FOR ROOF CURB



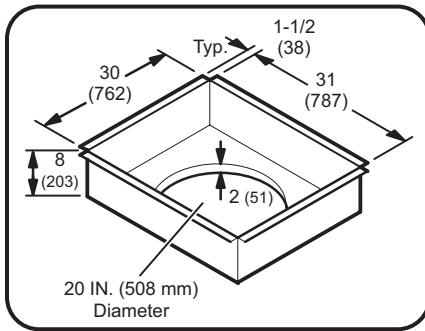
DETAIL ROOF CURB



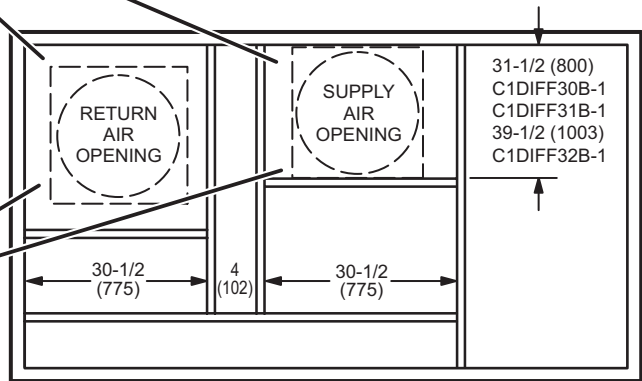
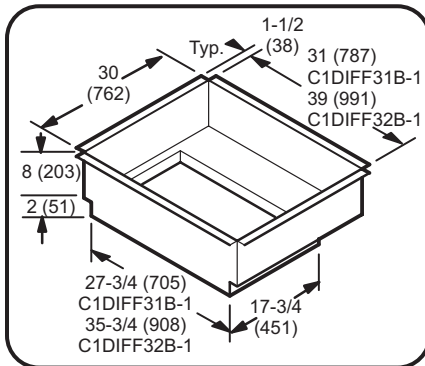
DIMENSIONS - ACCESSORIES - INCHES (MM)

ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS

C1DIFF30B-1 ROUND TRANSITIONS
(for 092 models)



C1DIFF31B-1 & C1DIFF32B-1 RECTANGULAR TRANSITIONS
(for 102 thru 150 models)

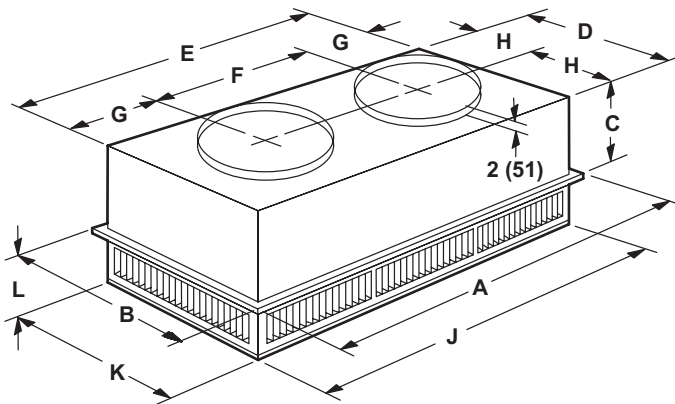


TOP VIEW

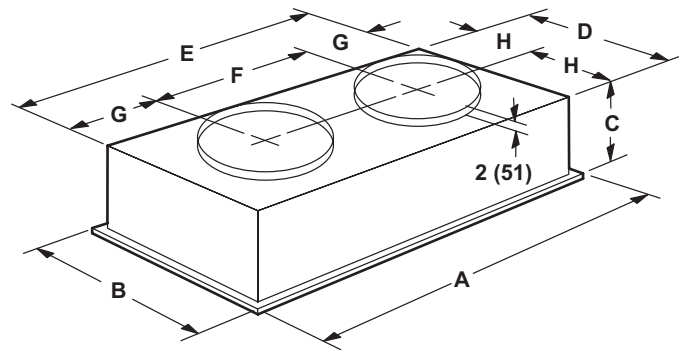
DIMENSIONS - ACCESSORIES - INCHES (MM)

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH CEILING DIFFUSER



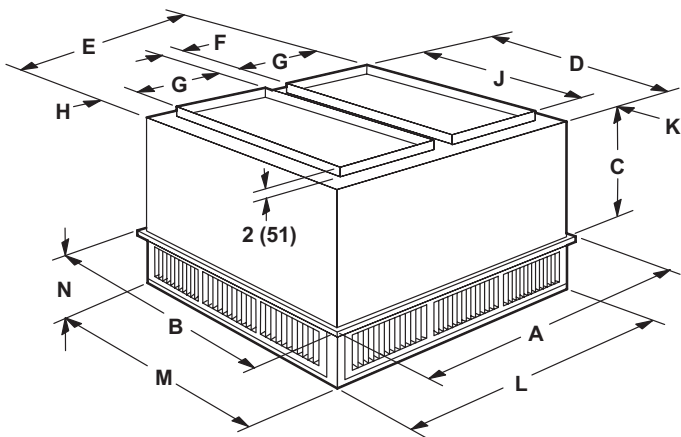
Model Number		RTD11-95S
A	in.	47-5/8
	mm	1159
B	in.	29-5/8
	mm	752
C	in.	14-3/8
	mm	365
D	in.	27-1/2
	mm	699
E	in.	45-1/2
	mm	1158
F	in.	22-1/2
	mm	572
G	in.	11-1/2
	mm	292
H	in.	13-3/4
	mm	349
J	in.	45-1/2
	mm	1156
K	in.	27-1/2
	mm	699
L	in.	8-1/8
	mm	206
Duct Size	in.	20 round
	mm	508 round

Model Number		FD11-95S
A	in.	47-5/8
	mm	1159
B	in.	29-5/8
	mm	752
C	in.	16-5/8
	mm	422
D	in.	27
	mm	686
E	in.	45
	mm	1143
F	in.	22-1/2
	mm	572
G	in.	11-1/4
	mm	286
H	in.	13-1/2
	mm	343
Duct Size	in.	20 round
	mm	508 round

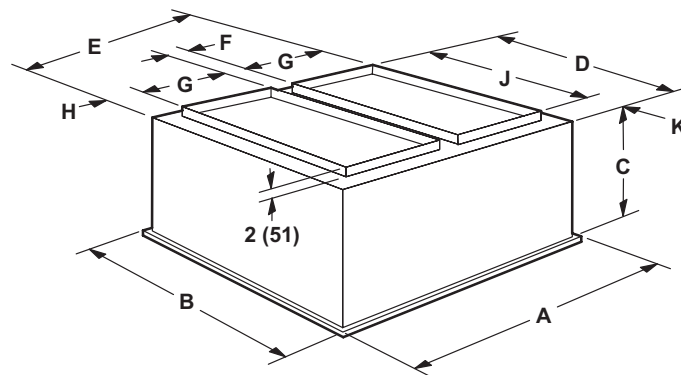
ACCESSORY DIMENSIONS - INCHES (MM)

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH CEILING DIFFUSER



Model Number		RTD11-135S	RTD11-185S
A	in.	47-5/8	47-5/8
	mm	1210	1210
B	in.	35-5/8	47-5/8
	mm	905	1210
C	in.	20-5/8	24-5/8
	mm	524	625
D	in.	33-1/2	45-1/2
	mm	851	1156
E	in.	45-1/2	45-1/2
	mm	1156	1156
F	in.	4-1/2	4-1/2
	mm	114	114
G	in.	18	18
	mm	457	457
H	in.	2-1/2	2-1/2
	mm	64	64
J	in.	28	36
	mm	711	914
K	in.	2-3/4	4-3/4
	mm	70	121
L	in.	45-1/2	45-1/2
	mm	1156	1156
M	in.	33-1/2	45-1/2
	mm	851	1156
N	in.	9-1/8	10-1/8
	mm	232	257
Duct Size	in.	18 x 28	18 x 36
	mm	457 x 711	457 x 914

Model Number		FD11-135S	FD11-185S
A	in.	47-5/8	47-5/8
	mm	1210	1210
B	in.	35-5/8	47-5/8
	mm	905	1210
C	in.	23-1/4	29-1/4
	mm	591	743
D	in.	33	45
	mm	838	1143
E	in.	45	45
	mm	1143	1143
F	in.	4-1/2	4-1/2
	mm	114	114
G	in.	18	18
	mm	457	457
H	in.	2-1/4	2-1/4
	mm	57	57
J	in.	28	36
	mm	711	914
K	in.	2-1/2	4-1/2
	mm	64	114
Duct Size	in.	18 x 28	18 x 36
	mm	457 x 711	457 x 914