

**SPECIFICATIONS**

File: EQUIPMENT MANUAL - Section 200  
Replaces: 200.108-SPC1 (FEB 2018)  
Dist: 1, 1a, 1b, 1c, 4, 4b, 4c

# RTF

## Rooftop Freezer Systems - Insulated Penthouses



- Capacities ranging from 7 TR to 72 TR.
- Coil Fin spacing between 3.2 fpi to 6.3 fpi.
- Penthouse Units with 1 Fan to 5 Fans.
- Individual Fan Motors up to 10 hp.

### THE RTF PENTHOUSE INCLUDES:

- Wall panels are 4" (R-28) or 5½" (R-38.5) polyurethane foam insulated to a 2.6 lb density. Wall and ceiling panels are attached with exterior access cam locks. Interior and exterior joints are sealed using NSF approved gaskets.
- Exterior painted, stucco-embossed steel panel.
- Sloped ceiling panels match the perimeter walls
- RTF enclosure roof seams are coated with Acu-Shield, an elastomeric energy smart roof coating:
  - Solar Reflectance: 0.89 - 0.91
  - Thermal Emittance: 0.89 - 0.87
- Large service doors with heated seals.
- OSHA guards at fan inlet.
- Fan motor service rail.
- Interior maintenance lighting with switch and 120V service outlet. Field power is required next to each access door.
- Refrigerant and drain lines extend through the insulated enclosure.
- Insulated drain pan.

### THE EVAPORATOR SYSTEM INCLUDES:

- Air, Electric, or Hot Gas Defrost Coil designs.
- Coils constructed of stainless steel tube and aluminum fins or all hot dip galvanized steel.
- Premium efficient VFD suitable motors for 230-460/3/60 with low temperature grease as required. Motors are TEFC, 1160 or 1750 rpm.
- Direct-drive cast aluminum, nonoverloading axial propeller fans.

**OPTIONAL ACCESSORIES:**

**COIL SERVICE ACCESS PANELS** provide easy access to either end of the fin coil and drain pan. The removable panels are constructed of the same material as the rest of the enclosure.

**HOT GAS PAN COIL** is manufactured from stainless steel bare tubing. The tubes are spaced with close centers and lay exposed inside the inner pan for maximum heat transfer. Interconnecting hot gas piping between the evaporator and the pan coil is not included.

**COOLING COIL** for Direct Expansion Halocarbon, Chilled Water or Brine applications, Copper tube coils with copper or aluminum fins are available. CO<sub>2</sub> coil designs are also available.

**INSULATED ROOF CURBS** are designed to provide a level mounting surface for the rooftop unit on sloped roof applications. The curb is constructed with a customized slope beginning with an 18" minimum height. Curbs are fabricated from 11 gauge and 18 gauge galvanized steel and are stitch welded together. Stainless steel material with fully welded interior seams is also available.

Insulation is closed-cell urethane. The curb thickness matches the RTF enclosure. The roof curbs are shipped fully assembled from the point of manufacture.

**DISCHARGE PLENUM** is constructed from mill galvanized steel with optimum number of round outlets to provide even air distribution, and is furnished with transition ducting from base unit to plenum. Some field assembly is required.

**ELECTRICAL PANELS:**

RTF fan motors are typically provided less any power wiring by the factory. When the factory power wiring is optionally upgraded, the panels supplied are UL-Listed NEMA 3R or NEMA 4 weather resistant enclosures and mounted on the exterior of the penthouse.

The factory wiring is then run with thin wall electrical and Sealtite® flexible conduit and available in the following options:

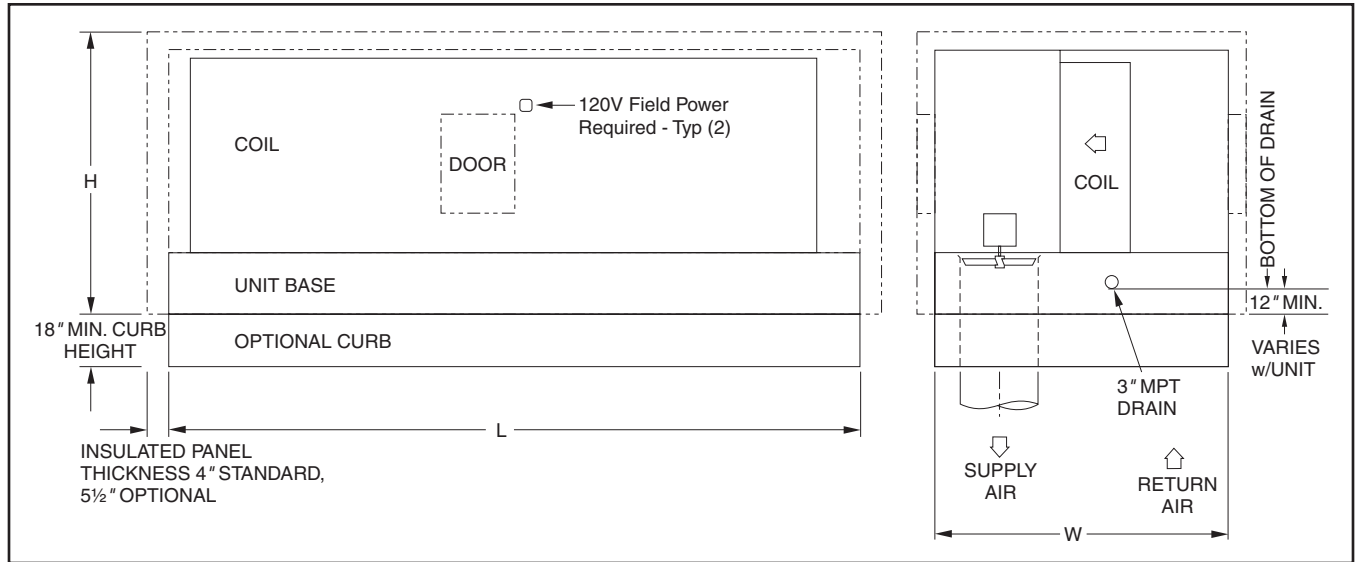
**Default:** Fan motors are not factory wired

**Optional Upgrade:** Motors wired to a non-fused disconnect

**Optional Upgrade:** Motors wired to an ATL starter

**Optional Upgrade:** Motors wired to a single VFD

**BASE UNIT/CURB ELEVATIONS**



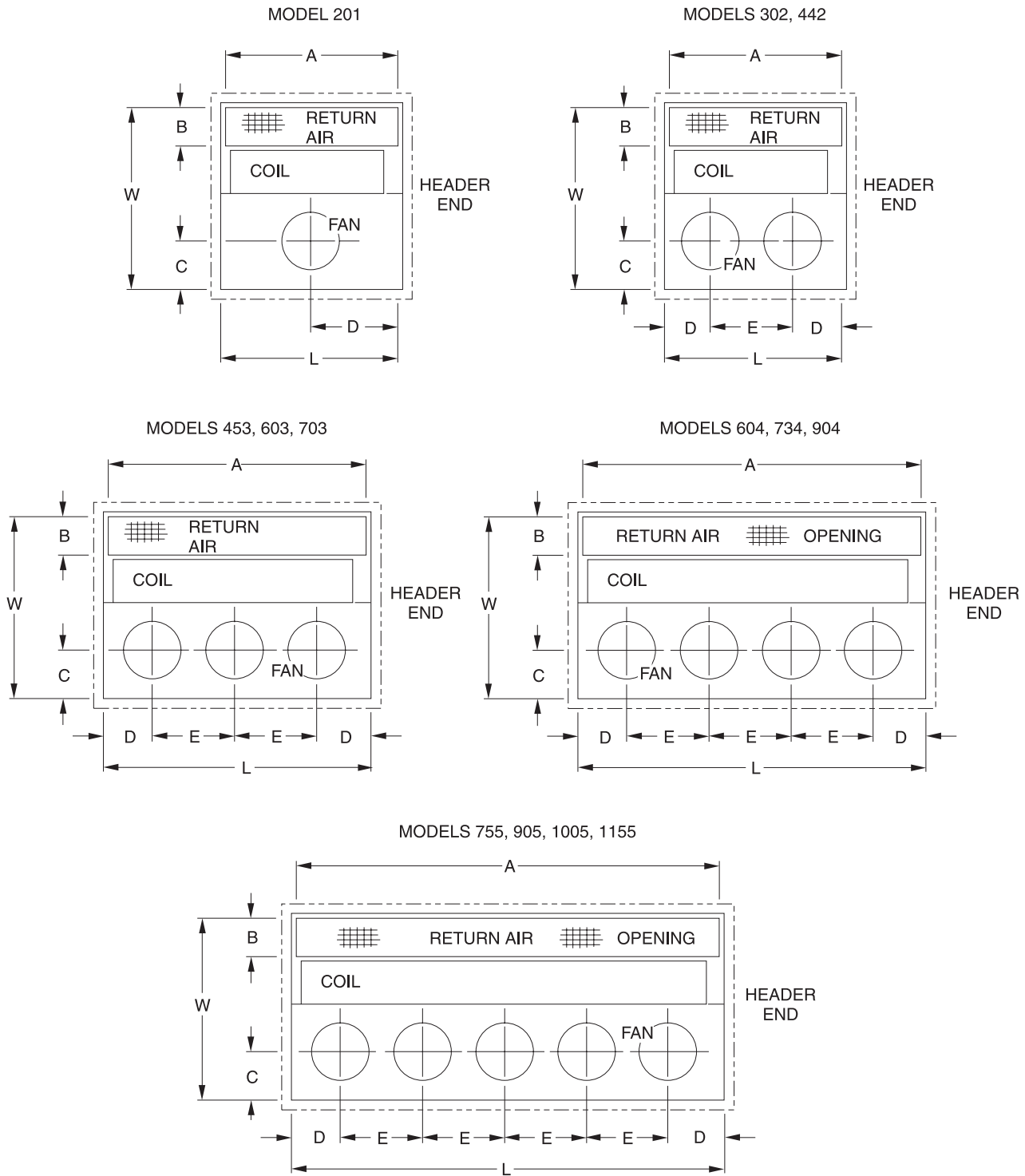
*Phantom lines represent the insulated penthouse enclosure and approximate locations of two access doors located opposite each other.*

MODEL NO.	BASIC UNIT			RETURN AIR SIDE		SUPPLY AIR SIDE		
	L	W	H	A	B	C	D	E
201	88	89-1/2	82-3/4	84	18-1/2	21-1/2	44	N/A
302	144		90-3/4	140	22-1/2		42-1/2	59
442		89-1/2	82-3/4	164	18-1/2		36	48
453	168	97-3/4	212	28-1/2				
603		99-1/2		105-3/4				
703	89-1/2	82-3/4	212	18-1/2				
604	216	93-1/2	92-3/4	212	22-1/2		25-1/2	
734		99-1/2	105-3/4	212	28-1/2			
904		93-1/2	87-3/4	239	22-1/2			
755	243	99-1/2	95-3/4	245-1/2	28-1/2		28-3/4	
905			100-3/4					
1005	249-1/2	99-1/2	110-1/4	245-1/2	28-1/2	28-3/4		
1155			110-1/4					

*Dimensions in inches.*

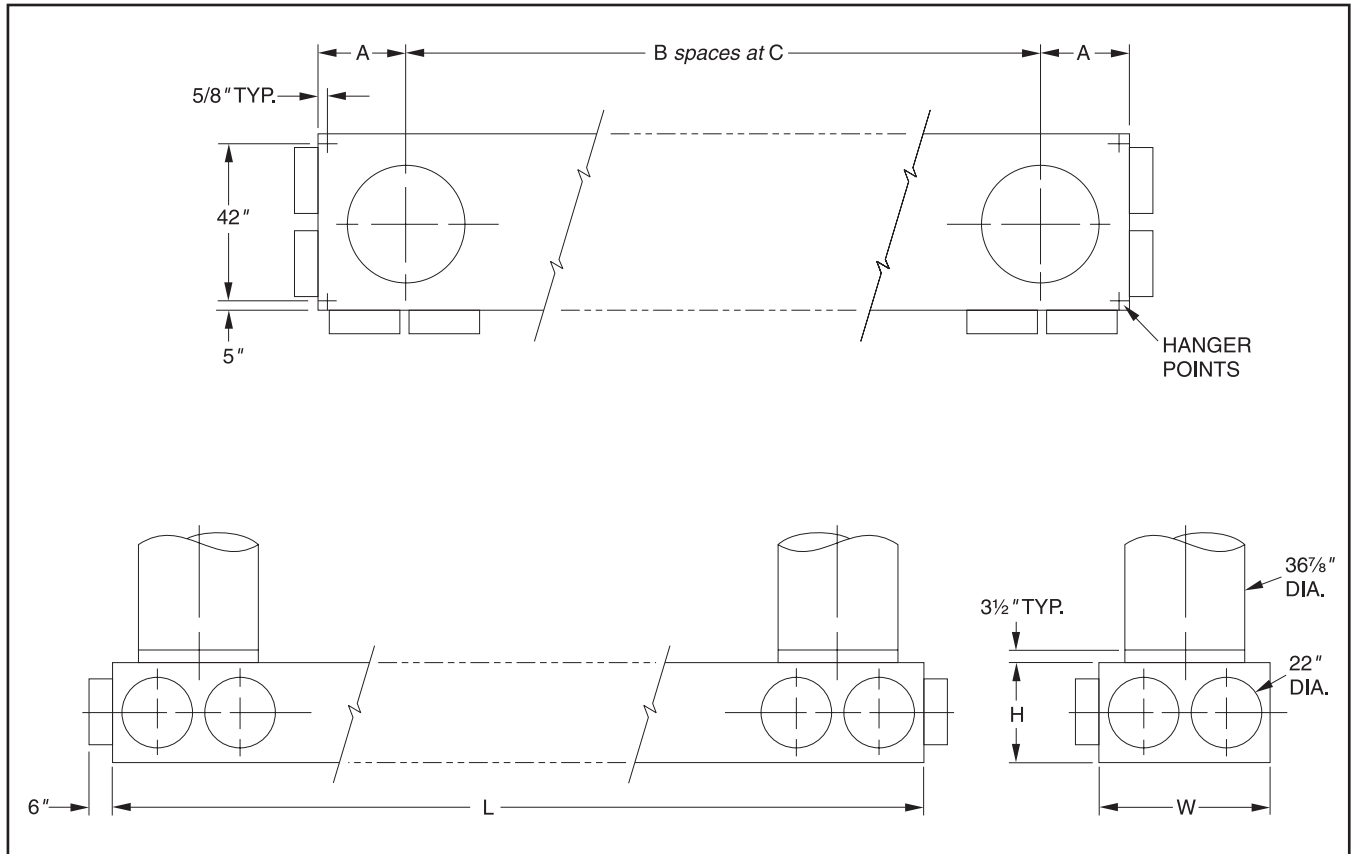
### BASE UNIT/CURB PLAN VIEWS

*Phantom lines represent the insulated penthouse enclosure.*



See table on previous page.

**DISCHARGE PLENUM**



MODEL NUMBER	NUMBER OF FANS	L	W	H	A	B	C	NUMBER OF OUTLETS
201	1	52	52	29 <sup>3</sup> / <sub>4</sub>	26	NA	NA	3
302 442	2	104	52	29 <sup>3</sup> / <sub>4</sub>	22 <sup>1</sup> / <sub>2</sub>	1	59	8
453 603 703	3	141	52	29 <sup>3</sup> / <sub>4</sub>	22 <sup>1</sup> / <sub>2</sub>	2	48	9
604 734 904	4	189	52	29 <sup>3</sup> / <sub>4</sub>	22 <sup>1</sup> / <sub>2</sub>	3	48	11
755 905 1005 1155	5	237	52	29-3/4	22-1/2	4	48	13

**NOTE:** Plenums ship separately as a single piece. Fan discharge duct ships loose as two pieces per fan: a plenum duct transition and a single piece of galvanized flat stock from which to create the circular duct. Field assembly is required. Stainless Steel Plenums are available.

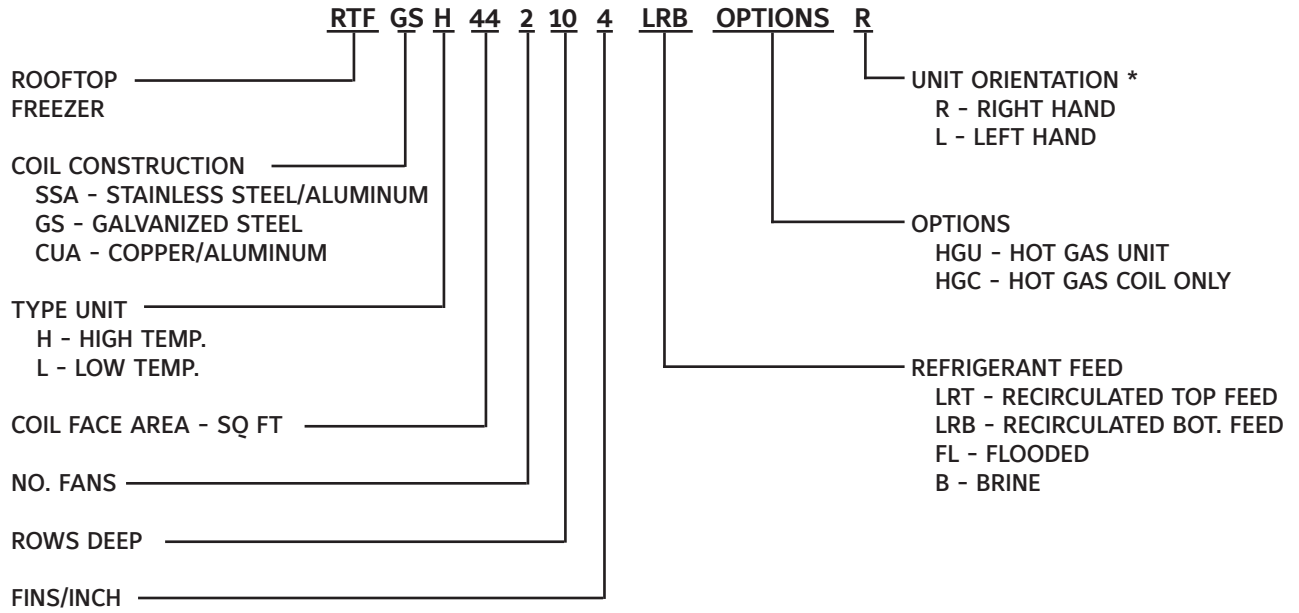
See the RTF IOM for more details.

**WEIGHTS**

MODEL NUMBER	NUMBER of ROWS	BASIC UNIT & STAINLESS / ALUMINUM COIL WEIGHT <sup>(1)(2)</sup>	PENTHOUSE		INSULATED CURB	PLENUM
			4" WALLS	5½" WALLS		
201	8	2515	1848	1957	1000	208
	10	2693				
	12	2869				
302	8	3211	2337	2476	1439	456
	10	3459				
	12	3709				
442	8	3715	2598	2755	1478	456
	10	4077				
	12	4439				
453	8	4243	2777	2945	1636	679
	10	4619				
	12	5005				
603	8	4813	3233	3441	1749	679
	10	5305				
	12	5801				
703	8	5171	3340	3534	1749	679
	10	5743				
	12	6325				
604	8	5367	3315	3517	1960	861
	10	5867				
	12	6377				
734	8	5884	3590	3810	2013	861
	10	6492				
	12	7104				
904	8	6544	3966	4217	2092	861
	10	7288				
	12	8026				
755	8	6333	3797	4031	2198	1020
	10	6945				
	12	7561				
905	8	6854	4104	4358	2286	1020
	10	7588				
	12	8316				
1005	8	7560	4328	4597	2414	1020
	10	8382				
	12	9212				
1155	8	8096	4614	4903	2414	1020
	10	9046				
	12	10012				

1. Coil weights reflect 4 fins per inch. Weight in pounds.  
2. Basic unit weights with SS/Aluminum coil is dry shipping weight.

**MODEL NUMBER KEY**



\* When facing the connections on the outside of the enclosure. Fans on the left = LH unit. Fans on the right = RH unit.

**March 2018 Form Revisions**

p.2 – Updated electrical panel section text; optional items

**Form 200.108-SPC1 (2018-03)**  
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