

# Industrial Unit Coolers

*The Right Choice for Large Cooling Applications*

## 3 New Platforms

- 1 Warehouse platform
- 2 Center Mount platforms



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

- HL Warehouse
  - 10 to 50 Ton capacities
  - Extended air throw capability
    - 150 to 300 Ft
    - Alternate air discharge arrangements (45° and 90°)
  - Applications
    - Long or tall freezers and coolers
    - Blast freezers and coolers.



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

- HD Dual Flow
  - 10 to 50 Ton capacities
  - Configurable for special application requirement
    - Low velocity
    - High humidity
  - Applications
    - Storage coolers
      - Low height
      - Gentle air required
    - Processing rooms



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

- HR Between the Rails
  - 3 to 45 Ton capacities
  - Special width to fit between carcass rails
  - Full unit drain pan for added drip protection
  - Applications
    - Processing Rooms



Shown with optional air deflector



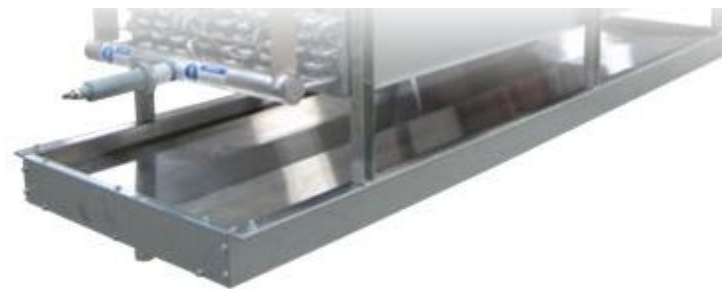
# Industrial Unit Coolers

*The Right Choice for Large Cooling Applications*

## ■ Increased Unit Reliability



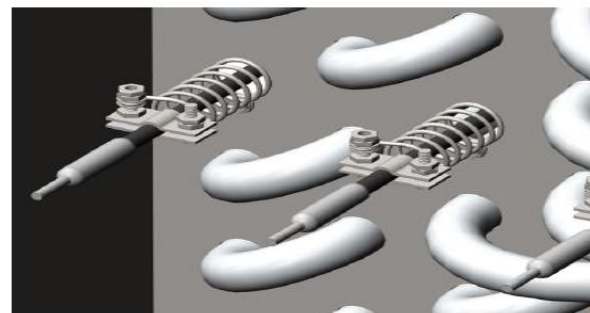
**Totally Enclosed Fan Motors**



**Double Wall Triple Pitched Drain Pans**



**Heavy Gauge Galvanized Cabinets**

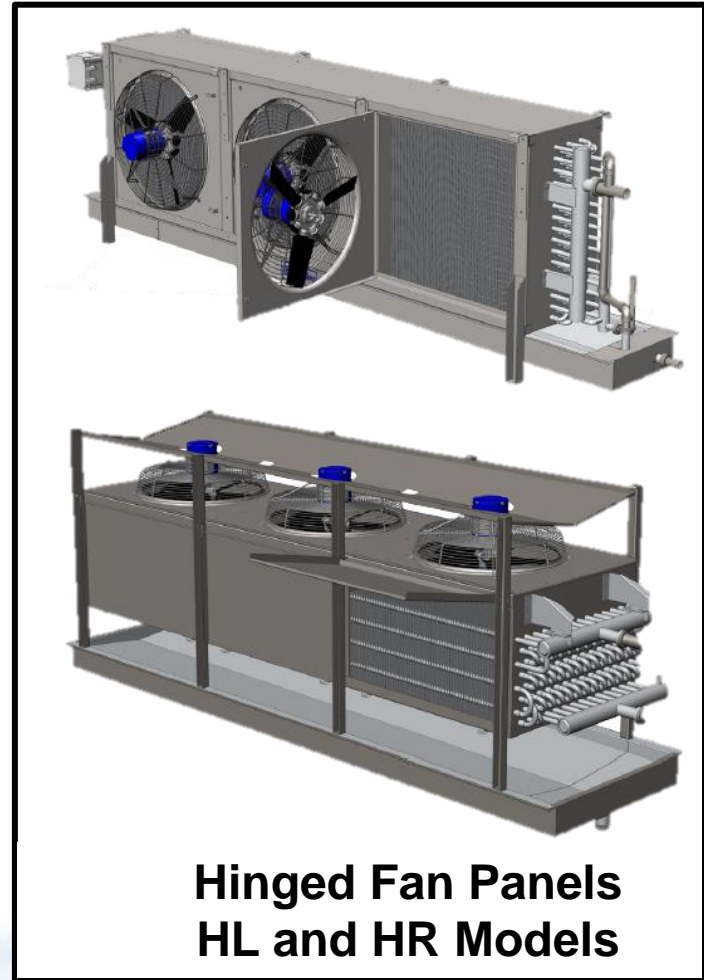


**Self Centering Electric Defrost Heaters**

# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

- Improved Unit Serviceability
  - Hinged fan panels
    - HL and HR Models
  - Hinged end covers
  - Optional accessories for additional serviceability
    - Examples:
      - Clean in place system (HR)
      - Hinged drain pans



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

- Reduced Total Cost of Ownership
  - Installation Savings
    - Reduce number of units needed
      - Majority of units feature larger capacity
      - HL units have increased air throw capability
    - Piping, wiring and rigging cost savings



**Std. Center Mount  
1/2 to 3 Tons**



**HD Center Mount  
10 to 50 Tons**



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

- Reduced Total Cost of Ownership
  - Energy Saving
    - Premium efficient fan motors
    - High efficiency airfoil fan blades
    - Coil insert heaters for efficient electric defrost
    - Hot gas defrost models available





# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

- Custom built unit coolers
  - Multiple Refrigerant Types
    - R404a, R407a, R407c, R407f, R448a and R449a models
    - CO2
    - Brines (Water, Ethylene and Propylene Glycols)
  - Multiple Voltages
    - 230/3/60, 460/3/60 and 575/3/60 models
    - 50 Hz models also available
  - Multiple Fin Spacing Available
    - High temperature available as 6 or 4 FPI
    - Medium and low temperature available as 4 or 3 FPI



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

### ■ Standard Features

- Mill Finished G90 Galvanized Steel Cabinet
- 5/8" Dia. aluminum finned/copper tube coil
- Premium efficient totally enclosed motors
- Composite polymer non overloading airfoil fan blades
- Double wall insulated triple pitched drain pan
- Hinged fan panels (HL and HR units)
- Hinged end covers
- Air, Electric and Hot Gas Defrost
- Hot gas units available with hot gas or electric pans
- Self-centering electric defrost heater elements



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

### ■ Options

- Copper Finned Coils
- Aluminum Finned/Stainless Steel Tubes Coils
- 304 SS casing
- 304 SS drain pan
  - Optional with galvanized casing
  - Standard with SS casing
- Wash down duty motors
- Aluminum airfoil fan blade
- Mounted expansion valves (thermal or electric)
  - Electric comes with controller



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

### ■ Options

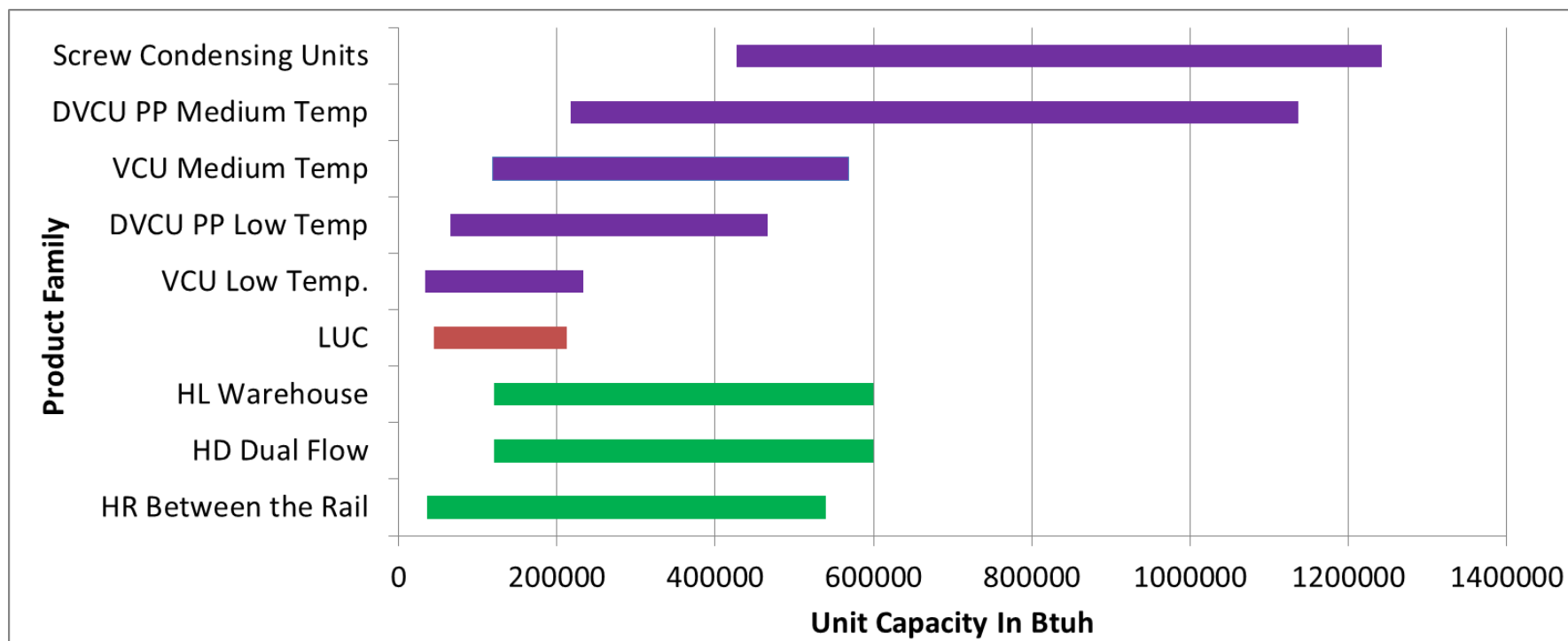
- Mounted and wired disconnect packages
  - Individual or common
- Full coverage drain pan (HL units)
- Hinged drain pans (HL and HR units)
- Hinged fan guard panel (HD units)
- Long air throw collars (HL units)
- 45° and 90° air outlet configurations (HL units)
- Floor mounting legs (HL units)
- Single refrigerant connections (HD units)
- Clean-in-place system (HR units)
- Air Deflector (HR units)



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

### ■ Condensing Unit vs. Unit Cooler Capacities



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

### ■ Model Nomenclature

#### Nomenclature

HL	3	C	16	144	6	4	0100	F	A
Model Series	# of Fans	Coil Materials	Tubes High	Finned Length	Rows Deep	Fin Spacing	Motor HP	Fluid	Defrost
HL = Warehouse		C = CU/AL					0075 = .75	F = R404A, R407A, R407C, R407F	A = Air
HR = Between the Rails		D = CU/CU					0100 = 1	C = CO2	E = Electric
HD = Dual Flow		3 = STL/AL					0150 = 1.5	B = Brine	G = Hot Gas Coil w/ E Pan
							0200 = 2		H = Hot Gas Coil w/ H Pan
							0300 = 3		
							0500 = 5		
							0750 = 7.5		



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

- Custom built evaporator product line
  - Priced per project
  
- Unit Lead Times
  - 8 to 9 weeks ex factory
    - **After drawing approval**
    - **Coil order over \$500K, consult factory**



# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

### ■ Sample Quote Data Sheet

Date: 02/21/2016  
 Customer:  
 Project: Sales Brochure Development  
 Designed By: Mark Dutton  
 Room  
 Coil Tag: hr rev. 0  
 Quantity: 1



Model: HR5CT-18-252-64.0C-0100L-FDX-EE-SD

#### Performance Data

Capacity	15.3 TR (DT1)	Refrigerant	R404A
Air Flow	34943 CFM	Evaporation Temp	-30.0 °F
Face velocity	564 FPM	System Type	Direct Expansion
Air On Temp (RH)	-20.0 °F (85%)	Refrigerant Massflow	3817.2 LBM/HR
Air Off Temp (RH)	-23.9 °F (94%)	Frost Layer	0.0 mm
Sensible Heat Ratio	0.97	Inside Fouling Factor	0.0 FT² R/BTUH
Moisture Removal	6 LBM/HR	Outside Fouling Factor	0.0 FT² R/BTUH
Elevation	0 FT		

#### Construction Data

Coil Material (tubes/fins)	Copper/Aluminum	Defrost, Coil	Electric
Fin Spacing	4.0 FPI	Defrost, Pan	Electric
Rows Deep	6	Hot Gas Piping	N/A
Casing Material	Galvanized Steel	Reheat Section	No
Inlet Connection (x2)		Surface Area	5701 FT²
Outlet Connection (x2)	3/ Cu C12200 Stub	Internal Volume	4.9 FT³
Fan Discharge	Standard	Dry/Operating Weight[1]	2775/3656 LB
Flow Orientation	Draw Through	Drain Connection Size	2 IN

#### Fan Motor/Electrical Data

Motor(s)	5 @ 1 HP ea.	Fan Diameter	26 IN
Power Supply	460/60/3	Fan Material	Composite
Full Load Amps (per motor)	2.1 Amps	Fan Efficiency	70.18%
Motor Input Power	3.96 (kW)	Sound Pressure[2] @ 10 FT	76 dB(A)
Motor Speed	1200 RPM	Air Throw @ 100 FPM	N/A
External Static	0 in H <sub>2</sub> O		
Electric Defrost Amperage	80.73 Amps	Electric Defrost Wattage	57.18 kW

#### Options

Return Band End Cover, Header End Cover, Unit Wiring: Individual Terminal Strip in Common Enclosure

#### Notes

[1] Operating weight assumes flooded refrigerant charge and completely frosted coil.

[2] Sound Pressure is calculated based on 1/8 spherical field environment.

[\*] Lead times may increase due to electric defrost heater rods.





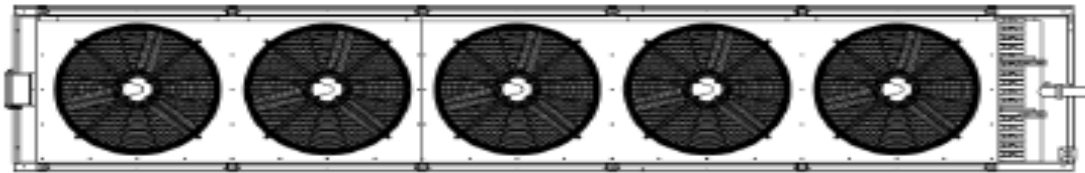
# Industrial Unit Coolers

## *The Right Choice for Large Cooling Applications*

### ■ Sample Quote Submittal Drawing

**NOTES:**

1. DRAWING IS FOR VISUAL REPRESENTATION ONLY. ACTUAL DETAILS AND UNIT DIMENSIONS MAY VARY DEPENDING ON OPTIONS.
2. DIMENSIONS SHOWN DO NOT INCLUDE CRATING.
3. AIRFLOW DIRECTION IS VERTICAL IN REFERENCE TO END VIEW.
4. OPERATING WEIGHT ASSUMES FLOODED REFRIGERANT CHARGE AND COMPLETELY FROSTED COIL.

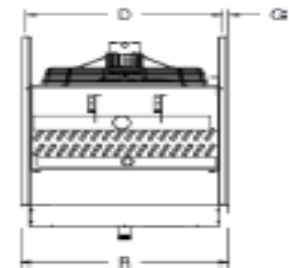
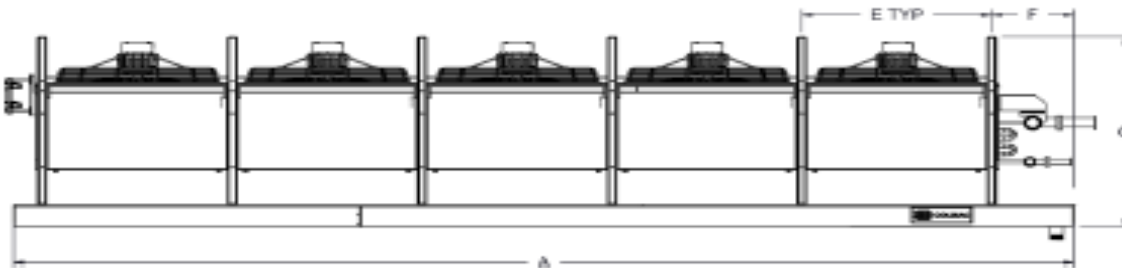


**UNIT DIMENSIONS:**


- A = 288.6 ± 2 IN
- B = 40.1 ± 3 IN
- C = 51.6 ± 2 IN
- D = 38.1 ± 0.5 IN
- E = 50.4 ± 0.25 IN
- F = 20.9 ± 1 IN
- G = 1 ± 0.25 IN

**UNIT WEIGHTS[4]:**

- DRY = 2775 LB
- OPERATING = 3656 LB



SCALE: NO SCALE  
THIRD ANGLE PROJECTION



Stone Mountain, GA 30087

Date: 02/21/2016  
Designed By: Mark Dutton  
Version: MISv2.17.17

Model: HR5CT-18-252-64.0C-0100L-FDX-EE-SD  
Customer:  
Project: Sales Brochure Development  
Room:  
Coil Tag: hr  
Rev: 0

# QUESTIONS?

