

Product Catalog Air Rotation Unit (ARU)



Indoor Unit

PKG-PRC025B-EN





Introduction

Trane Air Rotation Units (ARU)

Trane air rotation units are the ideal solution for heating and cooling large open spaces. Air rotation units are the perfect product for conditioning warehouses, fulfillment centers, and manufacturing facilities. Air rotation units eliminate stratification, eliminate roof penetrations for duct work, reduce building

structural steel, lower maintenance and energy costs, and provide complete temperature control.

Additional Air Rotation Benefits

- · Less structural support on roof
- Units maintained at floor level: coils and filters
- Limited unit static = Lower fan BHP
- Even temperatures in space for valuable product
- Eliminates maintenance and installation associated with ductwork
- Available in four cabinet sizes: A, B, C, D

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Features and Benefits

Standard Features

- Indoor Units
- 4,000 to 108,000 CFM Range
- Chilled Water or DX Cooling
- Indirect Fired Gas Heat
- Direct Drive Propeller Fans
- Two Inch Foam Panel Construction
- Aluminum Tubular Framing
- Sloped Drain Pans to ensure complete condensate removal for IAQ
- Single Point Power
- · Fully integrated, Factory-installed, and Commissioned controls
- Trane Variable Frequency Drive
- Hinged Access Doors

Other Benefits

- Outdoor Units
- Outside Air Conditioned Through the ARU
- Economizer Operation
- Additional Heating Options
- Custom Filtration for IAQ
- Custom Unit Heights
- Airfoil Supply Air Diffusers
- Stainless Steel Sloped Drain Pan
- DDC Controls
- Painted Exterior Custom Colors



Application Considerations

ARU Sizing Guide

This guide provides a framework for sizing and designing around Air Rotation Units (ARUs) to optimize performance in large open spaces, such as warehouses or distribution centers. The goal is to ensure uniform air distribution, eliminate stratification, and maintain consistent temperatures.

Air Changes per Hour (ACH)

Sizing begins with determining air changes per hour. Proper air movement eliminates stratification, resulting in a temperature differential (ΔT) of 1–2°F for every 10 feet of vertical height.

For example:

At an ARU height of 30 feet, the ΔT from the discharge height to floor level will range between 3°F and 6°F.



Figure 1. Temperature controls at equipment heights

Key Height Considerations

- **Building or Rack Height:** ARU height and discharge height are based on building or distribution rack dimensions. The airflow should ideally reach:
- Within 6 inches of the bar joist.
- 3 feet above the top of distribution racks.
- **Custom Heights:** ARU heights can be manufactured to suit specific applications. Refer to the product catalog for standard dimensions.

Calculating ARU CFM and Air Changes

Example:

- Warehouse dimensions: 600 ft (W) x 300 ft (L) x 30 ft (H)
- Volume: 600 X 300 X 30 = 5,400,000 cubic feet
- Air Changes per Hour: 1.5 ACH
- Air Changes CFM Required:

5,400,000ft3 × 1.5 ACH \div 60 minutes / hour = 135,000CFM 5,400,000 \, \text{ft}^3 \times 1.5 \, \text {ACH} \div 60 \, \text{minutes/hour} = 135,000 \, \text{CFM}5,400,000ft3×1.5ACH \div 60minutes/hour= 135,000CFM

ARU Placement and Air Throw

- **Configurations**: ARUs can distribute air in 1 to 4 directions, depending on the layout.
- Central Location: Ideal for maximizing coverage, reducing the number of units.
- Cooling Throw: Up to 220 feet in all directions.
- Heating Throw: Up to 320 feet in all directions.
- Outdoor Installations: A 3-sided supply air diffuser plenum ensures proper throw.

Figure 2. Optimized airflow coverage



Note: Overall unit locations and throw are job-specific

Note: Outdoor units are a standard option. For outdoor units, a 3-sided supply air diffuser plenum is provided with the unit to maintain the above outlined throw.

See Below Unit Layout. This outline is based on (2) ARUs located in the center of the space. Located in the center of the space, only (2) ARUs are needed. Based on standard catalog sizes, a typical ARU in the center of the space is located at the end of a distribution rack and does not exceed into the aisles or forklift paths.





600'W

300'W

Example – Exterior Wall ARU Location (or outdoors)

See Below Unit Layout. This outline would require (4) ARUs based on units located on the exterior walls. Compared to the center of the space locations, additional ARUs are needed for proper airflow coverage / throw.



Figure 4. Example — exterior wall ARU location (or outdoor)

300'W

Cooling Sizing

For warehousing or distribution center applications, DX cooling is the standard. Typically, each ARU is paired with a condensing unit, such as Trane RAUK.

Rules of Thumb:

- Warehousing: 500–600 CFM per ton
- Manufacturing: 400 CFM per ton

Example — Exterior Wall Layout):

- Total Space CFM: 135,000
- **CFM per ARU**: 135,000 / 4 = 33,750 CFM / Unit
- Cooling Capacity: 33,750 / 500 CFM Per Ton = 70 Tons / ARU

Example — Heating based on (4) Units – Exterior Wall ARU Location:

Heating MBH: MBH = CFM x 1.08 x Delta T

Total Space CFM = 135,000

(4) Total ARUs = 33,750 CFM Per (1) Unit

33,750 CFM x 1.08 x 30F Delta T = 1,093 MBH

For ARU heating capacity and catalog sizes – reference ARU catalog

ARU Sizing: Minimum Outside Air (OA)

For minimum outside air requirements, Trane complys with ASHRAE Standard 62.1. ASHRAE Standard 62.1 fore warehousing requires 10 CFM per person + 0.6 CFM per Square Feet. See below Table for reference.

Figure 5. Minimum ventilation rates in breathing zone

	People	Outdoor	Area O	utdoor		Defa	ult Values		
Occupancy Category	Air	Rate P	Air I R	Rate a	Notes	Occupant Density (see Note 4)	Combine Air Rate	ed Outdoor (see Note 5)	Air Class
	cfm/ person	L/s- person	cfm/ft ²	L/s·m ²		#/1000 ft ² or #/100 m ²	cfm/ person	L/s-person	
Freezer and refrigerated spaces (<50°F)	10	5	0	0	Е	0	0	0	2
General manufacturing (excludes heavy industrial and processes using chemicals)	10	5.0	0.18	0.9		7	36	18	3
Pharmacy (prep. area)	5	2.5	0.18	0.9		10	23	11.5	2
Photo studios	5	2.5	0.12	0.6		10	17	8.5	1
Shipping/receiving	10	5	0.12	0.6	в	2	70	35	2
Sorting, packing, light assembly	7.5	3.8	0.12	0.6		7	25	12.5	2
Telephone closets	_	_	0.00	0.0		_			1
Transportation waiting	7.5	3.8	0.06	0.3	H	100	8	4.1	1
Warehouses	10	5	0.06	0.3	в	_			2
Public Assembly Spaces									
Auditorium seating area	5	2.5	0.06	0.3	н	150	5	2.7	1
Places of religious worship	5	2.5	0.06	0.3	н	120	6	2.8	1
Courtrooms	5	2.5	0.06	0.3	н	70	6	2.9	1
Legislative chambers	5	2.5	0.06	0.3	Н	50	6	3.1	1
Libraries	5	2.5	0.12	0.6		10	17	8.5	1
Lobbies	5	2.5	0.06	0.3	H	150	5	2.7	1
Museums (children's)	7.5	3.8	0.12	0.6		40	11	5.3	1
Museums/galleries	7.5	3.8	0.06	0.3	H	40	9	4.6	1
Residential									
Dwelling unit	5	2.5	0.06	0.3	F,G <u>.H</u>	F			1
Common corridors	_		0.06	0.3	Н				1

(This table is not valid in isolation; it must be used in conjunction with the accompanying notes.)

GENERAL NOTES FOR TABLE 6.2.2.1

1 Related requirements: The rates in this table are based on all other applicable requirements of this standard being met.

Related requirements: The rates in this table are based on all other applicable requirements of this standard being met.
 Environmental Tobacco Smake: This table applies to ETS-free areas. Refer to Section 5.17 for requirements for buildings containing ETS areas and ETS-free areas.
 Air density: Volumetric airflow rates are based on an air density of 0.075 lb_{da}/m³ (1.2 kg_{da}/m³), which corresponds to dry air at a barometric pressure of 1 atm (101.3 kPa) and an air temperature of 70^oF (21^oC). Rates may be adjusted for actual density but such adjustment is not required for compliance with this standard.
 Default compand fearing: The default occupant density shall be used when a catual occupant density.
 Befault combined sutdoor air rate (per person): This rate is based on the default occupant density.

6 Unlisted occupancies: If the occupancy category for a proposed space or zone is not listed, the requirements for the listed occupancy category that is most similar in terms of occupant density, activities, and building construction shall be used.

ITEM-SPECIFIC NOTES FOR TABLE 6.2.2.1

A For high-school and college libraries, use values shown for Public Assembly Spaces-Libraries.

A real magnetation and conget immeters, use classes above the relation contention opposed - Laborator.
 B Rate may not be sufficient when stored materials include those having potentially harmfal emissions.
 C Rate does not allow for humidity control. Additional ventilation or dehumidification may be required to remove mointure. "Deck area" refers to the area surrounding the pool that would be expected to be writed during normal pool use, i.e., when the pool is occupied. Deck area that is not expected to be writed shall be designated as a space type (for example, "spectator of the area surrounding the pool is occupied. Deck area that is not expected to be writed shall be designated as a space type (for example, "spectator of the area surrounding the pool is occupied. Deck area that is not expected to be writed shall be designated as a space type (for example, "spectator of the area surrounding the pool is occupied. Deck area that is not expected to be writed shall be designated as a space type (for example, "spectator of the area surrounding the pool is occupied.

D Rate does not include special exhaust for stage effects, e.g., dry ice vapors, smoke

For the term of t

II Ventilation air for this occupancy category shall be permitted to be reduced to zero when the space is in occupied-standby mode.

Example:

- Warehouse Area: 200,000 sq. ft.
- Occupancy: 50 people
- **OA Calculation**: 10 x 50 + 0.6 x 200,000 = 500 + 12,000 = 12,500 CFM of Outside Air (OA)

Standard ARUs include an outside air duct connection with a backdraft damper. Installation involves connecting ductwork to the flanged duct connection.

ARU Sizing: Economizers

Local code takes precedent of when economizers are to be used. ASHRAE 6.5.1 indicates when an economizer is NOT required. ASHRAE 6.5.1 takes into the account, the efficiency rating of the condensing unit.

Figure 6. Economizer exemptions

Each cooling system shall include either an air economizer or fluid economizer meeting the requirements of Sections 6.5.1.1 through 6.5.1.5.

Exceptions to 6.5.1

Economizers are not required for the following systems:

- 1. Individual fan-cooling units with a supply capacity less than the minimum listed in Table 6.5.1-1.
- 2. Chilled-water cooling *systems* without a fan or that use induced airflow, where the total capacity of these *systems* is less than 1,000,000 Btu/h in Climate Zones 0, 1B, and 2 through 4; less than 1,400,000 Btu/h in Climate Zones 5 through 8; or any size in Climate Zone 1A.
- 3. Systems that include nonparticulate air treatment as required by Section 6.2.1 in Standard 62.1.
- 4. In hospitals and ambulatory surgery centers, where more than 75% of the air designed to be supplied by the *system* is to *spaces* that are required to be humidified above 35°F dew-point temperature to comply with applicable codes or accreditation standards; in all other *buildings*, where more than 25% of the air designed to be supplied by the *system* is to *spaces* that are designed to be humidified above 35°F dew-point temperature to satisfy *process* needs. This exception does not apply to *computer rooms*.
- 5. *Systems* that include a condenser heat recovery *system* with a minimum capacity as defined in Section 6.5.6.2.2.
- 6. *Systems* that serve *residential spaces* where the *system* capacity is less than five times the requirement listed in Table 6.5.1-1.
- Systems that serve spaces whose sensible cooling load at design conditions, excluding transmission and *infiltration* loads, is less than or equal to transmission and *infiltration* losses at an outdoor temperature of 60°F.
- 8. Systems expected to operate fewer than 20 hours per week.
- 9. Where the use of *outdoor air* for cooling will affect supermarket open refrigerated casework *systems*.
- 10. For comfort cooling where the cooling *efficiency* meets or exceeds the *efficiency* improvement requirements in Table 6.5.1-2.
- 11. Systems primarily serving computer rooms where
 - a. the total design cooling load of all *computer rooms* in the *building* is less than 3,000,000 Btu/h and the *building* in which they are located is not served by a centralized chilled water plant;

Figure 7. Condensing unit efficiency requirements

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure ^a
	≥65,000 Btu/h and <135,000 Btu/h	<i>Electric</i> <i>resistance</i> (or none)		12.1 EER 12.3 IEER	AHRI 340/360
		All other		11.9 EER 12.1 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	<i>Electric</i> <i>resistance</i> (or none)		12.0 EER 12.2 IEER	
		All other		11.8 EER 12.0 IEER	
	≥240,000 Btu/h and <760,000 Btu/h	<i>Electric</i> <i>resistance</i> (or none)		11.9 <i>EER</i> 12.1 <i>IEER</i>	
		All other		11.7 EER 11.9 IEER	
	≥760,000 Btu/h	<i>Electric</i> <i>resistance</i> (or none)		11.7 EER 11.9 IEER	
		All other		11.5 EER 11.7 IEER	
Condensing units, air cooled	≥135,000 Btu/h			10.5 EER 11.8 IEER	AHRI 365
Condensing units, water cooled	≥135,000 Btu/h			13.5 <i>EER</i> 14.0 <i>IEER</i>	AHRI 365
Condensing units, evaporatively cooled	≥135,000 Btu/h			13.5 EER 14.0 IEER	AHRI 365

Table 6.8.1-1	Electrically Operated Unitary Air Conditioners and	Condensing Units-	Minimum Efficiency
	Requirements [I-P]		

a. Section 12 contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.

b. Single-phase, air-cooled air conditioners <65,000 Btu/h are regulated by the U.S. Department of Energy Code of Federal Regulations 10 CFR 430. SEER values for single-phase products are set by the U.S. Department of Energy.</p>

Informative Note: See Informative Appendix F for the U.S. Department of Energy minimum efficiency requirements of single-phase air conditioners.

Based on the EER/IEER of the Trane RAUK Condensing Unit, unless local code requires an economizer, the below table indicates that an economizer would NOT be needed with the ARU.

120T RAUK:	
EER @ AHRI (Condenser Only)	11.1 EER
IEER	15.9 EER
100T RAUK:	
EER @ AHRI (Condenser Only)	10.9 EER
IEER	15.7 EER
80T RAUK:	
EER @ AHRI (Condenser Only)	10.6 EER
IEER	16.3 EER
60T RAUK:	
EER @ AHRI (Condenser Only)	10.5 EER
IEER	15.4 EER

Figure 8. Trane condensing unit efficiency ratings

ARU Configuration and Economizer

When ARUs are selected with an economizer, the ARU configuration uses an A-coil design. This design would have Return Air on the front of the unit and Outside Air on the back of the unit. The ARU is provided with dampers and acutators to allow for mixed air to be brought into the unit and then conditioned through the A-coil as necessary. Below is an outline and configuration of the ARU with A-coil.



Figure 9. ARU A-coil configuration with outside air



Model Number Description

Digit 1, 2, 3 — Unit Model

ARU = Air Rotation Unit

Digit 4, 5 — Design Sequence

AA

Digit 6 — Base Size

 $A = 5 \times 5$ $B = 9 \times 7$ $C = 13 \times 7$ $D = 17 \times 7$ Z = Custom

Digit 7, 8, 9 — KCFM

Digit 10 — Mode

C = Cooling H = Heating B = Both

Digit 11, 12, 13, 14 — Mbh

Digit 15 — Indoor/Outdoor

I = Indoor O = Outdoor

Digit 16 — Voltage

A = 208 V/230 V B = 460 V C = 575 V

Digit 17 — Coil Type

1 = CW 2 = DX

Digit 18, 19, 20 — Tonnage

Digit 21 — Fan Size

1 = 36-in. 2 = 54-in. C = Custom

Digit 22 — Fan Quantity

Digit 23 — Controls Options

0 = None 1 = Stand Alone 2 = DDC

Digit 24 — Dampers

0 = None 1 = Econo Split 2 = Full Eco 3 = OA

Digit 25 — Grilles

S = Stamped A = Airfoil D = Ducted

Digit 26 — Discharge Module

0 = No 1 = Yes

Digit 27 — Paint

0 = No 1 = Yes

Digit 28 — Drain Pan

G = Galvanized S = Stainless

Digit 29 — Filter Type

A = 2-in. MERV 8 B = 2-in. MERV 13 C = Custom

Digit 30 - Grill Config

Digit 31 — Unit Height

A = 17 ft. Cooling only B = 25 ft. C = Custom

Digit 32, 33, 34, 35, 36, 37, 38, 39

Reserved for future expansion

Digit 40

0 = NA S = Design Special



Performance Data

Table 1.	Heating	and	cooling	cabinet	(A)
----------	---------	-----	---------	---------	-----

Cooling Performance			
Cooling Type	CW or DX		
Tonnage Range (Tons)	See Factory		
Number of Coils	See Factory		
Fan Performance			
Fan Type	See Factory		
CFM Range	See Factory		
Number of Fans	See Factory		
Number of VFDs	See Factory		
Fan Horse Power Range (per fan)	See Factory		
Fan Diameter (per fan)	See Factory		
Heating Performance			
Heater Type	Indirect		
Number of Heaters (minimum/maximum)	1 to 2		
Gas Type	LP or NG		
Turndown (minimum/maximum)	2:1/4:1		
Heating Input (minimum/maximum)	200 / 200		
Filters			
Type Furnished	MERV 8		
Filter Dimensions	25-in. W x 16-in. H x 2-in. D		
Electrical (Based on Heating and Cooling Unit)			
MCA (minimum/maximum) 460V	See Factory		
MOP (minimum/maximum) 460V	See Factory		
MCA (minimum/maximum) 208V	See Factory		
MOP (minimum/maximum) 208V	See Factory		

Cooling Performance			
Cooling Type	CW or DX		
Tonnage Range (Tons)	80 to 160		
Number of Coils	2		
Fan Performance			
Fan Type	Direct Drive Prop		
CFM Range	25,000 to 54,000		
Number of Fans	1		
Number of VFDs	1		
Fan Horse Power Range (per fan)	20 to 30 HP		
Fan Diameter (per fan)	36-in. or 54-in.		
Heating Performance			
Heater Type	Indirect		
Number of Heaters (minimum/maximum)	2 to 3		
Gas Type	LP or NG		
Turndown (minimum/maximum)	4:1 to 15:1		
Heating Input (minimum/maximum)	1200 / 1800		
Filters			
Type Furnished	MERV 8		
Filter Dimensions	25-in. W x 16-in. H x 2-in. D		
Electrical (Based on Heating and Cooling Unit)			
MCA (minimum/maximum) 460V	39 / 57		
MOP (minimum/maximum) 460V	60 / 90		
MCA (minimum/maximum) 208V	82 / 125		
MOP (minimum/maximum) 208V	125 / 200		

Table 2. Heating and cooling cabinet (B)

Cooling Performance			
Cooling Type	CW or DX		
Tonnage Range (Tons)	160 to 240		
Number of Coils	2		
Fan Performance			
Fan Type	Direct Drive Prop		
CFM Range	55,000 to 86,000		
Number of Fans	2		
Number of VFDs	2		
Fan Horse Power Range (per fan)	20 to 25 HP		
Fan Diameter (per fan)	36-in. or 54-in.		
Heating Performance			
Heater Type	Indirect		
Number of Heaters (minimum/maximum)	4 to 5		
Gas Type	LP or NG		
Turndown (minimum/maximum)	20:1 to 25:1		
Heating Input (minimum/maximum)	2400 / 3000		
Filters			
Type Furnished	MERV 8		
Filter Dimensions	25-in. W x 16-in. H x 2-in. D		
Electrical (Based on Heating and Cooling Unit)			
MCA (minimum/maximum) 460V	76 / 96		
MOP (minimum/maximum) 460V	90 / 110		
MCA (minimum/maximum) 208V	164 / 212		
MOP (minimum/maximum) 208V	200 / 250		

Table 3.	Heating	and	cooling	cabinet	(C)
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Cooling Performance			
Cooling Type	CW or DX		
Tonnage Range (Tons)	240 to 300		
Number of Coils	2		
Fan Performance			
Fan Type	Direct Drive Prop		
CFM Range	87,000 to 108,000		
Number of Fans	2		
Number of VFDs	2		
Fan Horse Power Range (per fan)	25 to 30 HP		
Fan Diameter (per fan)	36-in. or 54-in.		
Heating Performance			
Heater Type	Indirect		
Number of Heaters (minimum/maximum)	6		
Gas Type	LP or NG		
Turndown (minimum/maximum)	20:1 to 30:1		
Heating Input (minimum/maximum)	3600		
Filters			
Type Furnished	MERV 8		
Filter Dimensions	25-in. W x 16-in. H x 2-in. D		
Electrical (Based on Heating and Cooling Unit)			
MCA (minimum/maximum) 460V	96 / 111		
MOP (minimum/maximum) 460V	110 / 125		
MCA (minimum/maximum) 208V	212 / 245		
MOP (minimum/maximum) 208V	250 / 300		

Table 4. Heating and cooling cabinet (D)



Dimensions

Heating and Cooling Cabinet (B)

Figure 10. Indoor heat and cool







WEIGHT: 6043.41 LBS









Figure 11. Indoor cooling



16'-11<u>5</u>"



FILTERS





WEIGHT: 3888.19 LBS

Note: Standard dimensions shown. Spacer modules available for extended unit heights with 2, 6, and 10 feet options.

DOOR



Heating and Cooling Cabinet (C)





 $167\frac{3}{8}$

Figure 13. Indoor cooling

16'-11<u>5</u>"

ELEC.









Note: Standard dimensions shown. Spacer modules available for extended unit heights with 2, 6, and 10 feet options



Heating and Cooling Cabinet (D)



Figure 15. Indoor cool



Note: Standard dimensions shown. Spacer modules available for extended unit heights with 2, 6, and 10 feet options.



Table 5. ARU heating and cooling weights (based on catalog drawing)

Model Number	Total Unit Weights - Cooling Only	Total Unit Weight (Ibs) - Heating and Cooling
ARU A	See Factory	See Factory
ARU B	4,889	6,044
ARU C	6,630	10,273
ARU D	8,800	13,420



Mechanical Specifications

General

ARU Construction Section Includes:

- Cabinet
 - Access Doors
 - Structural Base
- Propeller Fans
 - Motors
 - VFD
- Chilled Water Coils
- DX Coils
- Gas Heaters
- Dampers
- Filters
- Air Distribution Grilles
- Controls

Cabinet

- Unit structure is constructed of an extruded aluminum tubular framing system.
- Structural panel construction consists of a 2-inch thick insulating foam core with R-14 insulation
 value surrounded on both sides by water resistant stabilizers sandwiched between aluminum sheets
 with an exterior painted finish.

Access Doors

The unit access doors are constructed of the same insulating panels as the rest of the unit and are designed to match the construction of the unit. Access doors are hinged and swing out for proper access. A secondary safety door will be installed if immediate danger is present past the access door. The safety door shall require tools to bypass.

Structural Bases

The unit base frame is constructed from structural steel c-channel around the entire perimeter of the unit and is provided with intermediate structural steel members, channel, and angle iron as required to support all internal components. All tubing, channel, lift lugs, and angle joints are metal inert gas welded.

Propeller Fans

- Direct drive propeller fans for increased efficiency.
- Aluminum anti-sparking blades.
- Dynamic balancing as an assembly.

Motors

Direct drive propeller fans are provided with high efficiency totally enclosed, fan-cooled (TEFC) electric motors.

Variable Frequency Drives (VFDs)

Propeller fans are equipped with Trane VFDs. Integral disconnect and primary fusing. Variable frequency drives and are tested in the factory for reliable startup.

Chilled Water Coils

- Chilled water coils are of the aluminum plate ripple fin 0.006-inch extended surface rated in accordance with AHRI 410 for water, steam, or ethylene/propylene glycol water mixture. The tubes are 5/8-inch and have a minimum 0.017-inch wall thickness or 1/2-inch tube 0.016 wall thickness. Seamless copper expanded into the fin collars to provide a permanent mechanical bond. Coil headers shall be non-ferrous seamless copper, and provided with brass or copper pipe connections. Each coil is provided with capped vent and drain connections. All coils are fully drainable with no trapped tubes.
- Coil casings are G90 galvanized steel with formed 1-1/2-inch flanges on all sides of the coil.
- · All coils are leak tested under water at 350 psig and rated for 250 psig working pressures.
- Coil supply and return piping connections extending through the cabinet wall is sealed by rubber grommets with caulking on the exterior of the casing.

DX Coils

- The tubes are 1/2-inch tube with 0.016 wall thickness. Coil casings are G90 galvanized steel with formed 1-1/2-inch flanges on all sides of the coil with the tube sheets having pressed or extruded tube holes. The coil casing is reinforced so that the maximum unsupported length is 44-inch. The reinforcements are of the same material as the casing.
- All coils are safety listed with 750 psig rating.
- Coil supply and return piping connections extending through the cabinet wall are sealed by rubber grommets with caulking on the exterior of the casing. Coils shipped with dry nitrogen holding charge to prevent moisture intrusion and verify leak free arrival.

Indirect Fired Gas Heaters (In-shot Burners)

- Indirect fired heaters will have 80% minimum thermal efficiency and incorporate listed Gas-fired components. The duct furnace models are listed by Intertek Testing Services (ITS/ETL) for operation on natural or propane gas to the current edition of ANSI Z83.8 Standard for Gas-Fired Duct Furnaces. Duct furnaces are for installation on the positive pressure side of the circulating air blower only.
- The duct furnace module employs an aluminized steel cabinet with 1-inch thick thermal insulation for exterior cabinets, stainless steel tubular heat exchanger assembly, and a combustion blower to provide positive venting of flue gas.
- Air pressure switches to prove air supply for combustion before operation of the gas valve. Patented in-shot gas burners with integral carryovers and direct spark ignition of the gas burners with remote flame sensor to prove carryover across all burners.
- Duct furnace modules are listed for application downstream of refrigeration and cooling systems and provides means for removal of condensate that occurs in the tubes during cooling operation. Heat exchanger tubes (integral formed dimpled restrictors; formed turbulators) provides for an unobstructed drainage path and a positive pitch to promote condensate drainage. Drainage is configured so that burners and burner surfaces are not exposed to condensate.

Dampers

- Standard dampers are opposed blade actuated spring return galvanized frames.
- Low leakage up to 5-inch differential pressure.
- Velocity up to 3000 fpm.
- -40°F to 250°F operating range.
- Stainless jam seals.
- · TPE blade seals.







Trane - by Trane Technologies (NYSE: TT), a global innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.

Trane has a policy of continuous product and product data improvements and reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.