ZX Indoor Refrigeration Units

The plug & play solution for indoor applications

EMERSON

The ideal solution for small retail and food service applications

The Copeland™ ZX indoor range is the ideal solution for urban installations with space and noise constraints and also suits applications in areas with extreme weather conditions.

Simplifying refrigeration system integration

For years, Copeland refrigeration units have brought innovation to refrigeration by providing solutions for quick and easy installation. Regular communication between Emerson and its customers has resulted in the latest indoor refrigeration unit design, taking this concept one step further. The adoption of the popular ZX condensing unit design to the needs of urban applications exactly meets customer needs.

Operation in urban environments or extreme weather conditions

Food retailers in urban environments can face several challenges when installing refrigeration units. Rooftop installation is not always possible, and installing the units on the outside walls causes noise emissions, which is an issue in residential neighborhoods.

In hot climate countries with high ambient temperatures, the refrigeration unit cannot perform at the ideal capacity, or the unit runs out of the application envelope. In cold climates the units are also exposed to snow, ice and salt. These extreme weather conditions can lead to system shutdown or even system failure, resulting in food quality loss, reduced lifetime and high operating costs.

By installing the refrigeration unit indoors, a consistent ambient temperature is provided, allowing the unit to perform at the highest level of efficiency, and operation outside the application envelope is no longer an issue.

Simple installation

The units are prepared for standard air ducts, resulting in easy installation and lower installation costs because they do not require:

- remote condenser
- additional E-box
- additional wiring and tubing

One refrigeration unit - multiple refrigerants at best efficiency

All Copeland ZX indoor refrigeration units are suitable for multiple refrigerants. Depending on the application models are qualified for R134a, R404A, R407A, R407F, R448A, R449A, R450A and R513A. This allows for reduced number of models, simplifies logistics and increases flexibility.

Urban environment integration through noise attenuation

A significant noise attenuation is guaranteed through:

- The integration of high pressure fans and the adaption to standard ducts allows for applications with maximum sound attenuation.
- The intelligent fan speed control can be adjusted to match perfectly to the application requirements and reduces the sound level.

Energy savings

- Digital capacity modulation from 10% to 100% provides exactly the refrigeration demand needed and allows for precise setting of evaporation temperatures
- Enhanced condenser coil and fan combination with automatic adjustment of condensing temperature to ambient conditions
- Vapor injection technology on low temperature models further improves the operational efficiency
- ZX refrigeration units meet the efficiency requirements of the Ecodesign Directive (2009/125/EC).

High reliability through diagnostic protection capabilities

The unique system controller displays the operating status in real time. It allows for precise adjustment of all relevant parameters for optimized operation. The controller features Modbus communication and easy customization with a Hotkey. Furthermore, it provides unique protection against the following:

- Over-current
- Phase imbalance
- Phase loss
- Incorrect phase rotation

Galvanized panels and a coated condenser provide high level weather protection.

Reduced life cycle cost

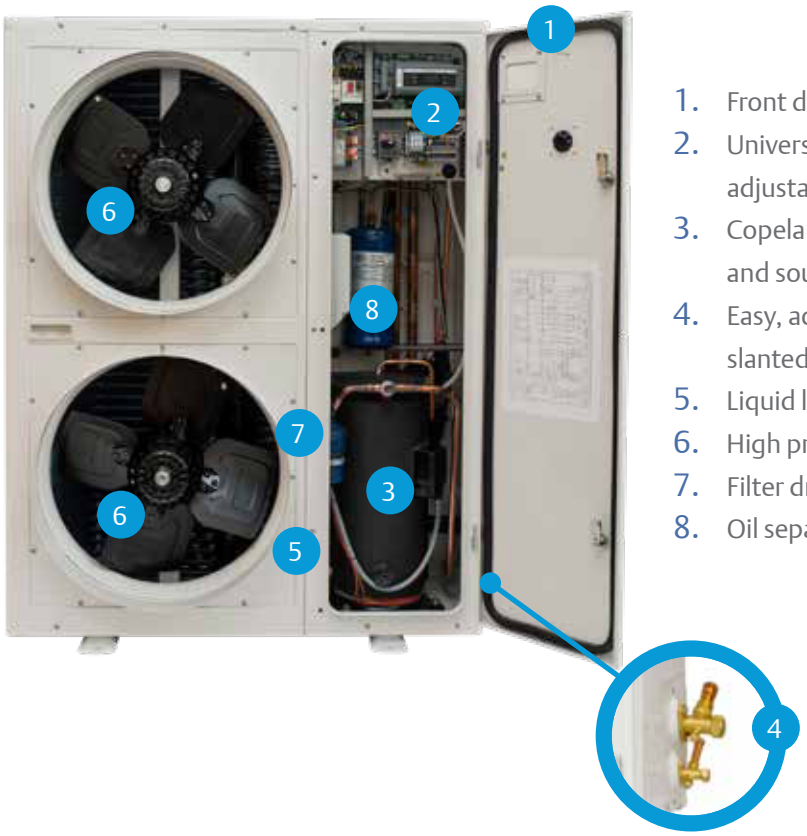
With very short installation time, superior efficiency and high reliability Copeland ZX condensing unit helps customers to reduce “total life cycle costs” to a minimum.

The Copeland series of indoor refrigeration units are specifically designed to cater for a wide range of refrigeration applications covering medium and low evaporating temperatures.

Typical applications for Copeland ZX include:

Convenience stores | Service stations | Cold rooms | Fast food stores, bars & restaurants

Features Copeland™ ZX



1. Front door with quick check window
2. Universal controller with status display and adjustable settings
3. Copeland scroll compressor with crankcase heater and sound jacket
4. Easy, accessible suction and liquid line connections – slanted for compact design
5. Liquid line isolating valve for drier replacement
6. High pressure fan with diffusor for 500 mm ducts
7. Filter drier and sight glass
8. Oil separator

Performance data for medium temperature models

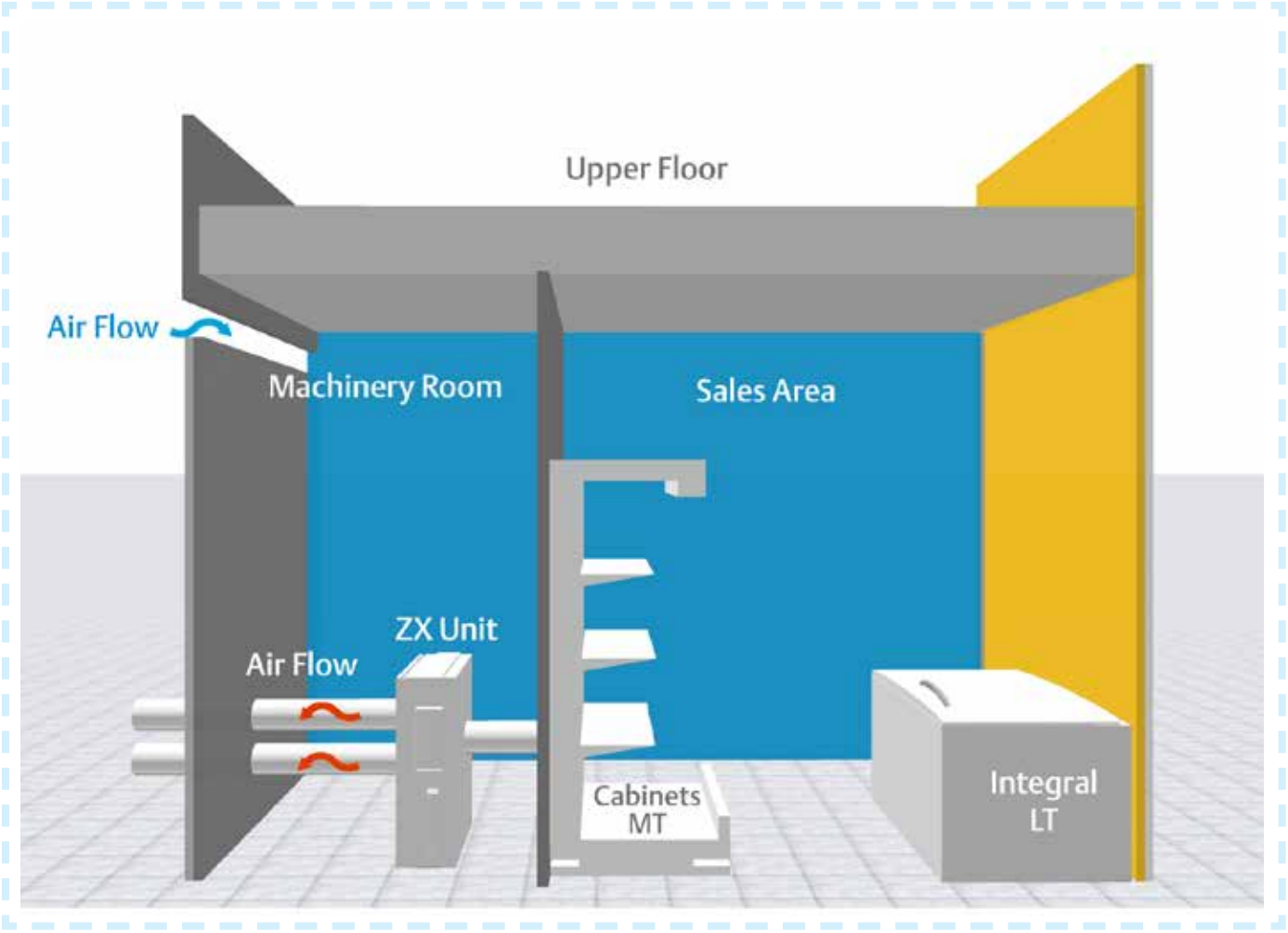
Medium Temperature Models	Capacity (kW*)							
	R134a	R404A	R407A	R407F	R448A	R449A	R450A	R513
ZXDI-040E-TFD-554	4.31	7.72	7.22	7.15	7.14	7.14	3.96	4.80
ZXDI-050E-TFD-554	5.26	9.42	8.69	8.70	8.68	8.68	4.88	5.91
ZXDI-060E-TFD-554	6.48	11.00	9.81	9.03	10.12	10.12	5.74	6.96
ZXDI-075E-TFD-554	7.35	12.5	11.42	10.33	11.56	11.56	6.47	7.86

Technical overview ZX Indoor

Model	Displacement (m^3/h)*	Max. Operating Current (A)	Number of Fans	Max Fan Power (Watts)	Connection Lines		Height (mm)	Width (mm)	Depth (mm)	Weight (kg)	Max Sound Power dB[A]**
					Suction	Liquid					
Medium Temperature 380-420V / 50Hz / 3~											
ZXDI-040E-TFD-554	11.4	7.7	2	750	⅞	½	1242	1029	424	138	86
ZXDI-050E-TFD-554	14.4	10.4	2	750	⅞	½	1242	1029	424	142	86
ZXDI-060E-TFD-554	17.1	11.6	2	750	⅞	½	1242	1029	424	146	86
ZXDI-075E-TFD-554	18.8	12.4	2	750	⅞	½	1242	1029	424	152	86

* EN 13215 Conditions, Te -10°C, Ta = 32°C, SGT 20°C
** Sound pressure depends on individual installation type

Schematic of ZX indoor unit installation in a convenience store



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