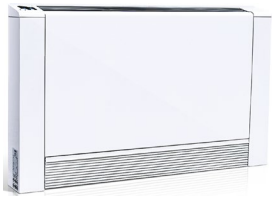
The World's Most Efficient Air-To-Water Heat Pumps

Supports: Radiant, Ductless Fan Coils, Ducted Air Handlers & Domestic Hot Water in Any Combo

Ultra-Efficient R32
CX50 Air-To-Water Heat Pump

3.5 Tons Cooling / 4.75 Tons Heating
IPLV Cooling 41,285 BTU EER 21.18
Heating 56,983 BTU COP 4.62 @W95/A47
Heating Seasonal Average COP 4.55 (SCOP)



R32 Ultra High Efficiency CX50 Heat Pump Chiller

Building on the success of the award-winning CX34, the CX50 has record-setting heating and cooling efficiency while using R32, the most eco-friendly refrigerant available.

The CX50 obtains its ultra high efficiency using our award-winning technologies in a new, larger system optimized for increased heating performance while still delivering extreme cooling efficiency. The CX50 uses a Mitsubishi DC Inverter compressor, a DC Inverter water pump (both are variable speed) controlled together with a DC inverter variable speed fan to achieve the best possible balance of performance, optimized water flow rate, compressor speed, and energy use.

The CX50 uses R32 for higher energy efficiency, with zero ozone depletion, and 67% lower global warming potential (GWP 675) than standard refrigerant R410a (GWP 2090). R32 allows higher capacity, uses less total refrigerant, and is less toxic than R410a with ATEL of 220,000 PPM.

Dynamic Humidity Control (DHC)

The Chiltrix Psychrologix ™ controller offers DHC (Dynamic Humidity Control) to maximize comfort and performance and allow the unit to operate well above its published ratings at times when humidity allows. The controller provides dynamic loop/coil temperature adjustment among other features.

The CX50 system capacity is fully dynamic and can operate between 27% and 100% of its rated capacity, as needed. This means the system is always the right size for changing conditions and avoids the on/off cycling of traditional systems.

UL 60335-2-40 / CSA 22.2 / SGS

Images are representative only

Heating, Cooling, Domestic Hot Water

Use any or all in the same application.

Radiant, Ductless Fan Coils, Ducted

Use any or all in the same application.

Save More w/ DC Inverter Fan Motors

All of the thin-line (5.1" thin) wall, floor and ceiling fan coil units use high efficiency and nearly silent DC Inverter fan motors, designed for 115v power. 220v 50 Hz standard FCUs are available for export customers.

Geothermal Performance

There is no Energy Star program for air-to-water heat pumps. However, the Chiltrix air-cooled chiller exceeds the Energy Star EER requirements for geothermal water-to-water systems.

Solar Ready

Perfect for solar PV operation with super low power draw and a 3 amp soft start that's easy on inverters and batteries. Also integrates directly with solar thermal hydronic heating & solar water heating systems.

Radiant, Boiler & Hydronic Integration

Can serve as low-cost primary heat when used with an existing boiler heating system. Perfect for radiant floor heating. Dramatically reduces heating costs for users of electric, propane or oil fired boiler systems.

Dynamic Heating Performance

The CX50 provides heating down to outdoor temperatures as low as -17 °F. We publish data to -4F. And the optional V18 variable backup heater can be directly integrated for precise dynamic control and the highest efficiency ever achieved by an electric hydronic backup heater.

Chiltrix CX50 Has Europe's Highest Efficiency Rating!
A+++ SCOP 4.55

A+++ TÜVRheinland®

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IPLV Cooling 41,285 BTU EER 21.18
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The CX50 is Stackable up to 3 units, up to 177,000 BTU Heating / 123,000 BTU Cooling.

Supports: Radiant, Ductless Fan Coils, Ducted Air Handlers & Domestic Hot Water: Any or All, in Any Combination.

CX50 R32 DC Dual Inverter Heat Pump Specifications			
Per AHRI 550/590	**Ambient / LWT (°F)**	**Capacity BTU / COP**	
Heating	47F / 95F	56,983	4.62
	32F / 95F	45,347	3.71
	17F / 95F	37,636	3.12
Cooling	IPLV EER (W 44F)	41,285	21.18
	EER (A 95F W44)	41,285	10.27
Compressor	Dual Inverter Rotary	Mitsubishi	
RLA / LRA / Min Circuit		17a / 24a / 30a	
Power		208-240V/50-60Hz	
Max.Water Temperature (F)		131F	
Operating Range (F)		-17F ~122F	
Refrigerant Circuit	Refrigerant	R32	
	DC Inverter Compressor	Dual Rotary	
	Heat Exchange	Cu/Al Anti-Corrosion	
	Refrigerant Weight	2.8 Kg./ 98.8 Oz.	
Water Circuit	Heat Exchanger	Stainless 316 BPHE	
	Water Connections	1.25" NPT	
	Water flow (Max)	13 GPM	
	Max / Suggested Pressure	90 PSI / 25 PSI	
Unit Dimensions WxHxD (mm)		1115*1280*425	
Package dimensions WxHxD (mm)		1170*1550*500	
Net weight (Lbs.)		312	
Gross weight (Lbs.)		335	
Noise level dB(A)		52	

Best of Breed Components

At Chiltrix we used every trick in the book and then some to deliver the highest energy efficiency possible. And we didn't stop there. The components we use to build our chillers are sourced from the world's top manufacturers and include heat exchangers from Sweden, German pumps, American valves, electronics from Japan, controls from USA, and a compressor from Mitsubishi.

No corner has been cut when it comes to making sure that the parts and materials used to manufacture the CX50 are the best available. Our chiller is designed for performance - to deliver the lowest kW usage per BTU of any chiller heat pump available, and to perform this task for a 20+ year service life.

Anti-Corrosion Technology to protect against salt air or air pollution is incorporated into all Chiltrix outdoor units. Includes special coil, hermetically sealed compressor and fan motor.

There is no other ATW heat pump like the CX50 available on the market at any price. Contact us to learn more about designing an air-to-water heat pump chiller system for your home, commercial location, or server room. We can also help you integrate our system with an existing system, retrofit replacement, integration with solar or to an existing boiler or hydronic heating system.

Flexible Indoor Options – Any Combo:

You can use up to 12 or more ductless fan coil units of any type including wall mount, ceiling, floor standing, etc. with a single Chiltrix air-to-water heat pump chiller. You can also use (AHU) ducted fan coil air handlers for a central (forced air) heating & air conditioning system, use it with a radiant floor or radiant panels, or with concealed ceiling fan coils, mini-ducts, or use any combination of these. Domestic water heating may be added to any of the above.

Go All-Electric w/ Chiltrix

All-electric is the only path to net-zero emissions / zero paid energy usage.

Radiant Cooling

Ask us about our new radiant cooling dew point control options. In many applications, a radiant heating system can also be used for cooling.

UL 60335-2-40 / UL 60335-1-40
CSA C22.2 / SGS

*Depending on compressor Hz and outdoor conditions

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All Specifications Subject To Change