

# CenTraVac™ Chillers CVHH & CDHH



With Next-Generation Refrigerant, R-1233zd



## Simplex Chiller (Single Circuit)

900 to 2000 tons (3150 to 7000 kW) – 60 Hz  
850 to 2000 tons (3000 to 7000 kW) – 50 Hz

**Model CVHH**



## Duplex™ Chiller (Dual Circuit)

1800 to 4000 tons (6300 to 14000 kW) – 60 Hz  
1500 to 4000 tons (5300 to 14000 kW) – 50 Hz

**Model CDHH**

With this product line expansion, we leverage not only a new refrigerant, but also the design advantages of the traditional CenTraVac chiller to deliver the efficiency and reliability that make Trane the global leader in centrifugal chillers.

### CenTraVac Chiller Design Advantages

Our focus on reliability, efficiency and system versatility is enabled by our fundamental design choices.

The **direct drive** compressor delivers reliability through simplicity of design and fewer moving parts, while enabling industry-leading efficiencies and the lowest sound and vibration levels. The **semi-hermetic** motor operates in a cool and clean environment, extending the life of the chiller and eliminating the heat that would otherwise impact the mechanical room. The **multi-stage** compressor provides stable and reliable operation across a wider range of operating conditions, and the **low pressure** design enables a near-zero refrigerant leak rate.

For larger cooling capacities, the CDHH model extends the proven CenTraVac design to more than 4000 tons. Duplex CenTraVac chillers utilize a series counterflow design with two independent refrigerant circuits that leverage thermodynamic staging to deliver unmatched efficiency. The Duplex design reduces energy consumption by 13 percent compared to a single compressor unit; and – when paired in a series configuration – increases the energy savings to 19 percent.

### Next-Generation Refrigerant

Trane has always taken a balanced approach to selecting refrigerants, considering factors such as safety, sustainability, efficiency, sound, reliability and overall lifecycle impact. With the selection of low pressure R-1233zd, Trane continues this commitment as the industry transitions from HCFCs and HFCs to next-generation, low-GWP refrigerants. Classified as an “A1” refrigerant per ASHRAE Standard 34, R-1233zd has a GWP of 1 and is one of the few non-flammable olefin options available today.

The CVHH and CDHH models maintain the CenTraVac chiller’s best-in-class efficiencies. Additionally, a 35 percent capacity gain with R-1233zd enables performance enhancements for our CenTraVac portfolio, delivering an expanded capacity range and an efficiency shift to better serve larger, district cooling applications, plus heat recovery capabilities up to 140°F (60°C).

### Energy-Saving Options

The CenTraVac chiller offers energy-saving options like integrated full or partial heat recovery, heat pump capabilities, thermal storage down to 18°F (-7.8°C) and integrated free cooling. These options are good for the environment and can often pay for themselves through reduced water consumption, reduced heating and ancillary power consumption and lower total operating costs.

## Low Voltage (<600V) Options

Unit- and remote-mounted wye delta or solid state starters, or unit-mounted Adaptive Frequency™ drives.

## Medium Voltage (2.3-6.6kV or 10-13.8kV) Options

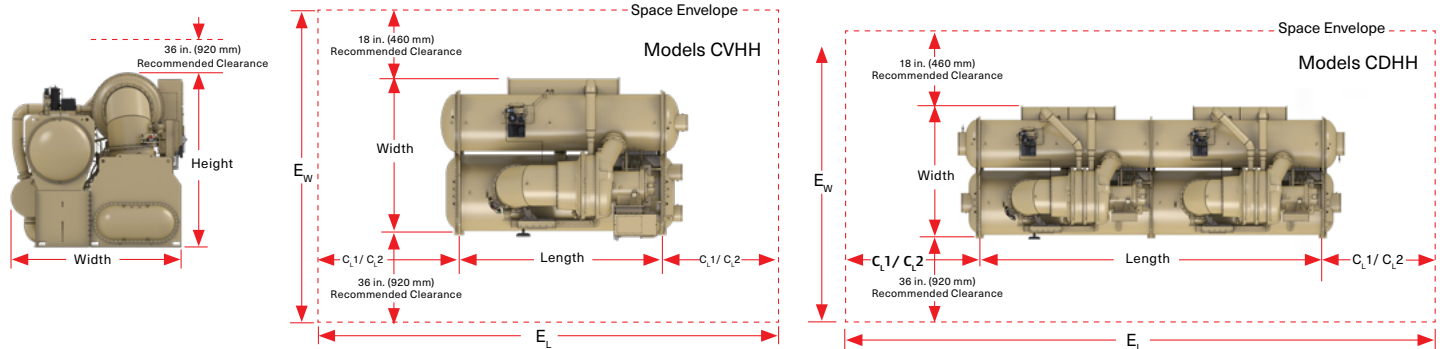
Unit- and remote-mounted across-the-line, primary reactor or auto transformer starters, or remote-mounted Adaptive Frequency drives.

## Tracer AdaptiView™ Controls

Trane Adaptive Control™ strategies respond to a variety of conditions to maintain efficient chiller plant operation using patented control algorithms to maximize performance in variable primary flow systems. The open protocol design works with any building automation system without the need for gateways (BACnet®, Modbus RTU and LonTalk®).

# EcoWise™

CenTraVac chillers are part of the Trane Technologies EcoWise™ portfolio of products designed to lower environmental impact through high efficiency operation and the use of a next-generation, low global warming potential (GWP) refrigerant.



## CenTraVac™ chiller Models CVHH and CDHH

60 Hz	Model	Comp Size	Shell Configuration EVAP/COND	Space Envelope		Tube Pull Clearance				Base Unit Dimensions							
				Length (E <sub>L</sub> )		Terminal Box Only (E <sub>W</sub> )		C <sub>L1</sub>		C <sub>L2</sub>		Length		Height		Width	
				in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
60 Hz	Standard CVHH	900/1000/1200	100M/100M	373.0	9474	176.0	4470	166	4216	47	1194	160.0	4064	121.2	3078	122.0	3099
			100L/100L	413.5	10503	176.0	4470	186	4731	47	1194	180.3	4578	121.2	3078	122.0	3099
			130M/130M	373.0	9474	178.0	4521	166	4216	47	1194	160.0	4064	127.9	3248	124.0	3150
			160M/200M	373.0	9474	180.1	4575	166	4216	47	1194	160.0	4064	135.4	3439	126.1	3203
			200L/220L	413.5	10503	185.2	4704	186	4731	47	1194	180.3	4578	137.7	3498	131.2	3332
			220L/220L	413.5	10503	192.1	4878	186	4731	47	1194	180.3	4578	141.6	3597	138.1	3507
	Heat Recovery CVHH	900/1000/1200	100M/10HM	373.0	9474	191.8	4872	166	4216	47	1194	160.0	4064	121.2	3078	137.8	3500
			130M/13HM	373.0	9474	194.0	4928	166	4216	47	1194	160.0	4064	127.9	3248	140.0	3556
			160M/20HM	373.0	9474	200.7	5097	166	4216	47	1194	160.0	4064	135.4	3439	146.7	3725
			200L/20HL	413.5	10503	200.3	5177	186	4731	47	1194	180.3	4578	137.7	3498	149.8	3805
			220L/22HL	413.5	10503	222.0	5639	186	4731	47	1194	180.3	4578	141.6	3597	168.0	4267
			220L/220L	413.5	10503	192.1	4878	186	4731	47	1194	180.3	4578	141.6	3597	138.1	3507
Duplex CDHH	2000/2600	400M/440M	698.0	17729	185.2	4704	318	8077	68	1727	312.0	7925	137.7	3498	131.2	3332	
		440M/440M	706.0	17932	192.1	4878	318	8077	76	1930	312.0	7925	141.6	3597	138.1	3507	
		440X/440X	802.0	20371	192.1	4878	366	9296	76	1930	360.0	9144	141.6	3597	138.1	3507	
50 Hz	Standard CVHH	950/1050	100M/100M	373.0	9474	176.0	4470	166	4216	47	1194	160.0	4064	121.2	3078	122.0	3099
			100L/100L	413.5	10503	176.0	4470	186	4731	47	1194	180.3	4578	121.2	3078	122.0	3099
			130M/130M	373.0	9474	178.1	4524	166	4216	47	1194	160.0	4064	127.9	3248	124.1	3152
			160M/200M	373.0	9474	180.1	4575	166	4216	47	1194	160.0	4064	135.4	3439	126.1	3203
			200L/220L	413.5	10503	185.2	4704	186	4731	47	1194	180.3	4578	137.7	3498	131.2	3332
			220L/220L	413.5	10503	192.1	4878	186	4731	47	1194	180.3	4578	141.6	3597	138.1	3507
	Heat Recovery CVHH	950/1050	100M/10HM	373.0	9474	191.8	4872	166	4216	47	1194	160.0	4064	121.2	3078	137.8	3500
			130M/13HM	373.0	9474	194.0	4928	166	4216	47	1194	160.0	4064	127.9	3248	140.0	3556
			160M/20HM	373.0	9474	200.7	5097	166	4216	47	1194	160.0	4064	135.4	3439	146.7	3725
			200L/20HL	413.5	10503	203.8	5177	186	4731	47	1194	180.3	4578	137.7	3498	149.8	3805
			220L/22HL	413.5	10503	225.5	5728	186	4731	47	1194	180.3	4578	141.6	3597	171.5	4356
			220L/220L	413.5	10503	192.1	4878	186	4731	47	1194	180.3	4578	141.6	3597	138.1	3507
Duplex CDHH	1750/2250	400M/440M	698.0	17729	185.2	4704	318	8077	68	1727	312.0	7925	137.7	3498	131.2	3332	
		440M/440M	706.0	17932	192.1	4878	318	8077	76	1930	312.0	7925	141.6	3597	138.1	3507	
		440X/440X	802.0	20371	192.1	4878	366	9296	76	1930	360.0	9144	141.6	3597	138.1	3507	

Dimensions do not include waterboxes, hinges, starters or other unit-mounted options that may affect unit size. Contact your Trane representative for more information.

1. C<sub>L1</sub> can be at either end of the machine and is required for tube pull clearance. 2. C<sub>L2</sub> is always at the opposite end of the machine from C<sub>L1</sub> and is required for service clearance.



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