

Vantage FHD

Center Mount Low Velocity Evaporators



Top Advantages

- High efficiency
- Low noise
- Versatility and compliance
- Wide refrigerant compatibility
- Flexible model range
- Reinforced Safeshell casing

Refrigerant	Max working pressure
HFC*	24 bar / 348 psi
CO ₂	85 bar / 1,232 psi
Brine	10 bar / 145 psi
A2L	24 bar / 348 psi

* Fluid group 2 according to EN 378





Wide refrigerant compatibility

The Vantage FHD range is certified for use with multiple refrigerants, including HFCs, HFOs, CO₂, and brine, making it a versatile solution for modern refrigeration requirements. Specifically designed to meet the demands of CO₂ systems, the FHD family is available with a maximum design pressure of 60 bar, with an option for 85 bar/1,232 psi, ensuring compatibility with both standard and high-pressure applications.

Reinforced Safeshell casing

The Vantage FHD evaporator features a casing made of reinforced **Safeshell**, a highly resistant synthetic material known for its durability and ease of maintenance. Its smooth, non-porous surface makes it easy to clean and sanitize, ensuring optimal hygiene and compliance with industry standards. This makes the FHD particularly suitable for applications where cleanliness and long-term reliability are paramount.

High-efficiency heat exchanger technology

The evaporators feature LUVE's proprietary **TURBOCOIL** heat exchanger, which incorporates TURBOFIN aluminum fins and small-diameter copper tubes with internal helical grooving. This design achieves the highest heat transfer coefficient, reduces frost buildup, and ensures maximum efficiency.

Low noise, and gentle air distribution

The Vantage FHD Center Mount Low Velocity Evaporator is equipped with advanced 2-speed EC fan motors, available in both 115V and 230V single-phase power options. This ensures superior energy efficiency, low noise levels, and optimized airflow design, making it ideal for environments where quiet operation and gentle air distribution are essential.

Customization and control options

The Vantage FHD evaporator can be configured to meet specific operational requirements with features such as electronic expansion valves (EEVs), solenoid valves, and the option to include the KE2 Therm OEM control board for enhanced system monitoring and control.

Flexible model range

Available in configurations ranging from single-fan to four-fan models, the Vantage FHD range caters to a variety of cooling capacities. Its design ensures ease of installation and maintenance.

AWEF Rating (DOE)

LUVE evaporators meet and surpass the stringent AWEF (Annual Walk-In Energy Factor) standards set by the Department of Energy.

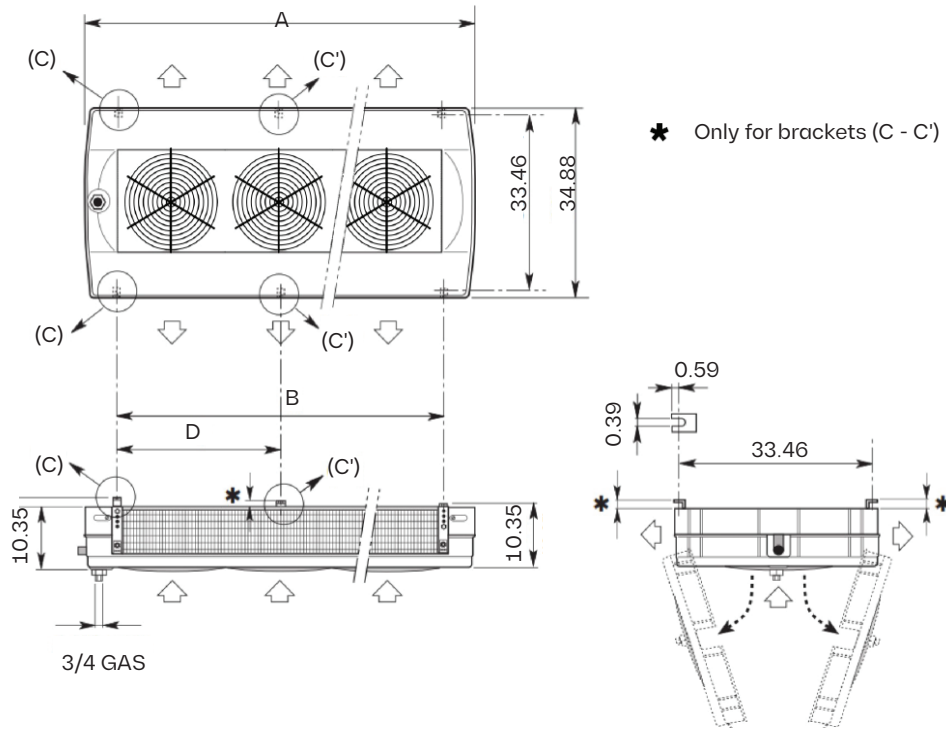
Medium temperature	FPI	R404A	R-448A/R449A
FHD 711 N 3	8	9	9
FHD 712 N 3	8	9	9
FHD 721 N 3	8	9	9
FHD 722 N 3	8	9	9
FHD 732 N 3	8	9	9
FHD 742 N 3	8	9	9
FHD 811 N 4	6	9	9
FHD 812 N 4	6	9	9
FHD 821 N 4	6	9	9
FHD 822 N 4	6	9	9
FHD 832 N 4	6	9	9
FHD 842 N 4	6	9	9
FHD 911 N 7	3	9	9
FHD 912 N 7	3	9	9
FHD 921 N 7	3	9	9
FHD 922 N 7	3	9	9
FHD 932 N 7	3	9	9
FHD 942 N 7	3	9	9

Low temperature	FPI	R404A	R-448A/R449A
FHD 811 E 4	6	4.15	4.15
FHD 812 E 4	6	4.15	4.15
FHD 821 E 4	6	4.15	4.15
FHD 822 E 4	6	4.15	4.15
FHD 832 E 4	6	4.15	4.15
FHD 842 E 4	6	4.15	4.15
FHD 911 E 7	3	4.15	4.15
FHD 912 E 7	3	4.15	4.15
FHD 921 E 7	3	4.15	4.15
FHD 922 E 7	3	4.15	4.15
FHD 932 E 7	3	4.15	4.15
FHD 942 E 7	3	4.15	4.15

Versatility and compliance

Designed for a broad range of applications, the Vantage FHD series is **UL listed, NSF compliant, and AWEF certified**, meeting the highest standards for safety, sanitation, and energy efficiency in North America. It is available in air defrost and electric defrost models, offering flexibility to suit various operational needs.

Dimensions



Model	711-3	712-3	721-3	722-3	732-3	742-3
	811-4	812-4	821-4	822-4	832-4	842-4
No. fans	1	1	2	2	3	4
A [in]	34.87	34.87	56.80	56.80	78.67	100.50
B [in]	23.50	23.50	45.33	45.33	67.17	89.00
D [in]	-	-	-	-	-	44.50
(C) [in]	0.50	0.50	1.00	1.00	1.42	1.42
(C') [in]	-	-	-	-	-	0.71

Options

- Coil protection: pre-coated aluminium fins
- Electric defrost in coil
- Electric defrost in drain tray (unwired)
- Threaded connections for brine units
- Mounted EEV, TXV and solenoid valve
- KE2 evaporator control

Standard configuration

- Hinged drain tray. Removable casing for cleaning.
- High-efficiency small-diameter copper tubes with internal helical grooving.
- High-efficiency louvered aluminum fins.
- Standard fin spacing FPI 8, 6, 3.
- 1 to 4 fans fitted with dual speed EC fan motors. Fan diameter \varnothing 13 7/8. 1100/870 rpm.
- Each heat exchanger is leak tested with dry air and finally supplied with a dry air pre-charge.

Electrical heaters

Model	Coil Heaters	240V - 1ph - 60Hz	
	[W]	MCA defrost	MOPD defrost
FHD 811 E 4	1,800	1.00	15
FHD 812 E 4	1,800	1.00	15
FHD 821 E 4	3,200	1.70	15
FHD 822 E 4	3,200	1.70	15
FHD 832 E 4	4,700	2.40	15
FHD 842 E 4	5,800	3.20	15

Cooling capacities

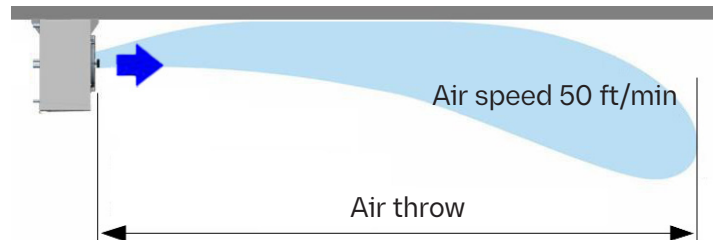
Cooling capacities as given in tables are nominal capacities for wet conditions in compliance with the EN328:2014 regulation.

Refrigerant	Application	Temperature	Relative Humidity	Room Temperature	Operating conditions			
					Saturated suction temperature	Superheating	Liquid temperature	DT1
			%	°F	°F	°F	°F	°F
CO ₂	Direct expansion DX	Medium	85	35	25	6.5	70	10
		Low	95	-10	-20	6.5	40	10

Refrigerant	Application	Temperature	Relative Humidity	Room Temperature	Operating conditions			
					Saturated suction temperature	Superheating	Liquid temperature	DT1
			%	°F	°F	°F	°F	°F
Freon (R404A, R448A)	Direct expansion DX	Medium	85	35	25	6.5	90	10
		Low	95	-10	-20	6.5	50	10

Air throw

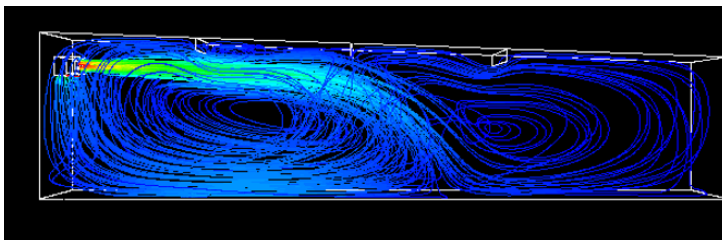
The values given in the tables are for ceiling mounted coolers at t=70 °F, an unrestrained air flow in the cold room and a minimal air speed of 50 ft/min at the given air throw distance. The height and air circulation of the room may influence the air throw.



Sound pressure dB(A)

Sound pressure are sound pressure levels in dB(A) in free field conditions at 33 ft distance.

Values may deviate depending on situations at site.



Code description

FHD	*	711	N	4	*	*
1	2	3	4	5	6	7

- 1 Center mount evaporators
- 2 Refrigerant system
(blank=HFC, W=brine, in case of CO₂ see pos. 6)
- 3 Model type
- 4 Defrost system (N=air defrost, E=electric defrost)
- 5 Fin spacing (3=FPI 8, 4=FPI 6, 7=FPI 3)
- 6 Application (DX CO₂=direct expansion for CO₂)
- 7 Circuits code - only for brine units



Medium Temperature

FPI 8										Total Fan motor AMPS Single phase 50/60Hz		
Model	Capacity @25 °F S.T. [BTU/h]						FAN DATA			200-240 V / 60Hz Dual Speed* EC FAN MOTOR		
	CO ₂		R404A		R448A R449A		No. fans	CFM (m ³ /h) High Speed	CFM (m ³ /h) Low Speed	[A]	MCA	MOPD
	10 °F TD	15 °F TD	10 °F TD	15 °F TD	10 °F TD	15 °F TD						
FHD 711 N 3	7,550	11,300	7,150	10,750	8,900	13,350	1	1,060 (1,800)	830 (1,400)	0.73	1.00	15
FHD 712 N 3	10,550	15,850	10,050	15,100	12,500	18,750	1	1,060 (1,800)	830 (1,400)	0.73	1.00	15
FHD 721 N 3	15,100	22,650	14,350	21,550	17,900	26,850	2	2,120 (3,600)	1,650 (2,800)	1.46	1.70	15
FHD 722 N 3	21,200	31,800	20,200	30,300	25,100	37,650	2	2,120 (3,600)	1,650 (2,800)	1.46	1.70	15
FHD 732 N 3	31,350	47,000	29,850	44,800	37,150	55,750	3	3,180 (5,400)	2,480 (4,200)	2.19	2.40	15
FHD 742 N 3	39,000	58,500	37,150	55,750	46,250	69,400	4	4,240 (7,200)	3,240 (5,500)	2.92	3.20	15

FPI 6										Total Fan motor AMPS Single phase 50/60Hz		
Model	Capacity @25 °F S.T. [BTU/h]						FAN DATA			200-240 V / 60Hz Dual Speed* EC FAN MOTOR		
	CO ₂		R404A		R448A R449A		No. fans	CFM (m ³ /h) High Speed	CFM (m ³ /h) Low Speed	[A]	MCA	MOPD
	10 °F TD	15 °F TD	10 °F TD	15 °F TD	10 °F TD	15 °F TD						
FHD 811 N 4	6,150	9,250	5,850	8,800	7,250	10,900	1	1,120 (1,900)	890 (1,500)	0.73	1.00	15
FHD 812 N 4	9,000	13,500	8,550	12,850	10,650	16,000	1	1,120 (1,900)	890 (1,500)	0.73	1.00	15
FHD 821 N 4	12,250	18,400	11,650	17,500	14,500	21,750	2	2,240 (3,800)	1,710 (2,900)	1.46	1.70	15
FHD 822 N 4	17,950	26,950	17,100	25,650	21,250	31,900	2	2,240 (3,800)	1,710 (2,900)	1.46	1.70	15
FHD 832 N 4	27,100	40,600	25,800	38,700	32,100	48,150	3	3,360 (5,700)	2,590 (4,400)	2.19	2.40	15
FHD 842 N 4	34,800	52,200	33,150	49,750	41,200	61,800	4	4,480 (7,600)	3,480 (5,900)	2.92	3.20	15

FPI 3										Total Fan motor AMPS Single phase 50/60Hz		
Model	Capacity @25 °F S.T. [BTU/h]						FAN DATA			200-240 V / 60Hz Dual Speed* EC FAN MOTOR		
	CO ₂		R404A		R448A R449A		No. fans	CFM (m ³ /h) High Speed	CFM (m ³ /h) Low Speed	[A]	MCA	MOPD
	10 °F TD	15 °F TD	10 °F TD	15 °F TD	10 °F TD	15 °F TD						
FHD 911 N 7	4,400	6,600	4,150	6,250	5,150	7,750	1	1,170 (1,980)	890 (1,500)	0.73	1.00	15
FHD 912 N 7	6,850	10,250	6,500	9,750	8,100	12,150	1	1,170 (1,980)	890 (1,500)	0.73	1.00	15
FHD 921 N 7	8,750	13,100	8,300	12,450	10,300	15,450	2	2,340 (3,970)	1,710 (2,900)	1.46	1.70	15
FHD 922 N 7	13,500	20,250	12,850	19,300	16,000	24,000	2	2,340 (3,970)	1,710 (2,900)	1.46	1.70	15
FHD 932 N 7	20,800	31,200	19,800	29,700	24,650	37,000	3	3,510 (5,960)	2,590 (4,400)	2.19	2.40	15
FHD 942 N 7	27,400	41,100	26,100	39,150	32,450	48,700	4	4,680 (7,950)	3,480 (5,900)	2.92	3.20	15

*Dual Speed EC FAN Motor: 1,100 / 870 rpm

Low Temperature

FPI 6										Total Fan motor AMPS Single phase 50/60Hz		
Model	Capacity @ -20 °F S.T. [BTU/h]						FAN DATA			230-240 V / 60Hz EC FAN MOTOR		
	CO ₂		R404A		R448A R449A		No. fans	CFM (m ³ /h) High Speed	CFM (m ³ /h) Low Speed	[A]	MCA (fan/ defrost)	MOPD (fan/ defrost)
	10 °F TD	15 °F TD	10 °F TD	15 °F TD	10 °F TD	15 °F TD						
FHD 811 E 4	5,000	7,550	4,750	7,150	6,050	9,100	1	1,060 (1,800)	830 (1,400)	0.73	1.00	15
FHD 812 E 4	7,300	11,000	6,950	10,450	8,900	13,350	1	1,060 (1,800)	830 (1,400)	0.73	1.00	15
FHD 821 E 4	10,000	14,950	9,500	14,250	12,100	18,150	2	2,120 (3,600)	1,650 (2,800)	1.46	1.70	15
FHD 822 E 4	14,600	21,900	13,900	20,850	17,750	26,650	2	2,120 (3,600)	1,650 (2,800)	1.46	1.70	15
FHD 832 E 4	22,050	33,050	21,000	31,500	26,800	40,200	3	3,180 (5,400)	2,480 (4,200)	2.19	2.40	15
FHD 842 E 4	28,300	42,450	26,950	40,450	34,400	51,600	4	4,240 (7,200)	3,240 (5,500)	2.92	3.20	15

FPI 3										Total Fan motor AMPS Single phase 50/60Hz		
Model	Capacity @ -20 °F S.T. [BTU/h]						FAN DATA			230-240 V / 60Hz EC FAN MOTOR		
	CO ₂		R404A		R448A R449A		No. fans	CFM (m ³ /h) High Speed	CFM (m ³ /h) Low Speed	[A]	MCA (fan/ defrost)	MOPD (fan/ defrost)
	10 °F TD	15 °F TD	10 °F TD	15 °F TD	10 °F TD	15 °F TD						
FHD 911 E 7	3,600	5,350	3,400	5,100	4,300	6,450	1	1,060 (1,800)	830 (1,400)	0.73	1.00	15
FHD 912 E 7	5,600	8,350	5,300	7,950	6,750	10,150	1	1,060 (1,800)	830 (1,400)	0.73	1.00	15
FHD 921 E 7	7,100	10,650	6,750	10,150	8,600	12,900	2	2,120 (3,600)	1,650 (2,800)	1.46	1.70	15
FHD 922 E 7	11,000	16,500	10,450	15,700	13,400	20,100	2	2,120 (3,600)	1,650 (2,800)	1.46	1.70	15
FHD 932 E 7	16,900	25,350	16,100	24,150	20,600	30,900	3	3,180 (5,400)	2,480 (4,200)	2.19	2.40	15
FHD 942 E 7	22,250	33,400	21,200	31,800	27,100	40,650	4	4,240 (7,200)	3,240 (5,500)	2.92	3.20	15

*Dual Speed EC FAN Motor: 1,100 / 870 rpm



A comprehensive spare parts list is available to ensure seamless maintenance and prolonged operational efficiency of our commercial evaporators.

Part Description	Code
2 Speed EC Fan And Motor Assembly (115/230 Volt)	32009133
Fan Guard (All Models)	31041075
Defrost Heater; 900 Watt / 240 Volt (1 Fan Models)	31041052
Defrost Heater; 1600 Watt / 240 Volt (2 Fan Models)	31013005
Defrost Heater; 2350 Watt / 240 Volt (3 Fan Models)	31041053
Defrost Heater; 2900 Watt / 240 Volt (4 Fan Models)	31041054
Drain Pan Assembly w/ Drain Fitting (1 Fan Models)	CF
Drain Pan Assembly w/ Drain Fitting (2 Fan Models)	CF
Drain Pan Assembly w/ Drain Fitting (3 Fan Models)	CF
Drain Pan Assembly w/ Drain Fitting (4 Fan Models)	CF
Drain Pan Fitting; 2 Piece, 3/4" MPT (Includes Gasket)	31097930
Side Access Panel (Refrigerant Conn End)	30168389
Side Access Panel (Electrical Conn End)	30168388
Defrost Termination / Fan Delay Control	31022207
Heater Safety / Hi Limit Switch	31022206

CF = Contact Factory

LUVE reserves the right to make changes and / or modifications to our equipment in order to improve the performance or appearance of our products at any time without notice and without any obligation to previous production units.
All technical characteristics are stated in the current, published product catalogue.

LUVE in brief

LUVE is an international company consisting of 20 manufacturing facilities in 9 different countries (Italy, China, Finland, India, Poland, Czech Republic, Sweden, Russia and the USA) with a network of more than 30 sales offices in Europe, Asia, the Middle East and the USA.

LUVE is one of the three major manufacturers in the world and second largest in Europe in the air heat exchanger segment. Since 1986 LUVE has been designing and manufacturing its products based on cutting-edge technologies in the field of industrial and commercial refrigeration and industrial air conditioning.

The LUVE American dream!

With a focus on energy efficiency, advanced technology, and reliable performance, LUVE unit coolers deliver outstanding value for commercial refrigeration applications in the North American market.

In 2018, LUVE entered the North American market by purchasing the local manufacturer Zyklus Heat transfer Inc. Jacksonville, TX.

In 2020, a new state-of-the-art facility was built in the same area and has been operational since 2021.

LUVE has recently completed a major factory expansion in Jacksonville, TX, strengthening its local presence and ability to serve the North American market. Today, LUVE US offers more than 290,000 sqft of manufacturing space, dedicated to the production of one of the widest air heat exchanger product portfolios in the industry. This extensive range is suitable for most refrigeration applications in North America, ensuring the right solution for a broad variety of projects.

LUVE US, inc (Jacksonville, Tx)

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