

EPIC

UNIT COOLERS BY CENTURY REFRIGERATION



 **CENTURY**
REFRIGERATION
DIVISION RAE CORPORATION

Standard Features/Applications

Standard Features

- Hinged, lift off fan panels for quick service and cleaning of the coil.
- Hinged, lift off end panels
- Quick connect fan wiring
- Full unit width hinged drain pan

Air Defrost

- For medium-sized cooler applications above +35°F
- 52 models available from 23,920 to 201,770 BTUH at a 10° TD
- Fin spacing at 4, 5, 6, or 8 per inch
- Insulated Drain Pan

Electric Defrost

- For medium-sized cooler/freezer applications down to a -40°F evaporator temperature
- 60 models available from 14,900 to 167,610 BTUH at a 10° TD.
- Fin spacing at 4, 5, or 6 per inch
- Heated and insulated drain pan and adjustable defrost termination/fan delay is standard

Hot Gas Defrost

- For medium-sized cooler/freezer applications down to a -40°F evaporator temperature
- 60 models available 14,900 to 167,610 BTUH at a 10° TD.
- Fin spacing at 4, 5, or 6 per inch
- Auxiliary side connection on the distributor, one (1) check valve for TXV bypass (shipped loose) and adjustable defrost termination/fan delay are standard. Electric drain pan heater standard (optional hot gas loop in pan).
- Heated (with electric heaters) and insulated drain pan, sideport connection on the distributor, one (1) check valve for TXV bypass (shipped loose) and adjustable defrost termination/fan delay are standard
- Hot gas defrost drain pans would not be hinged

For Use In:

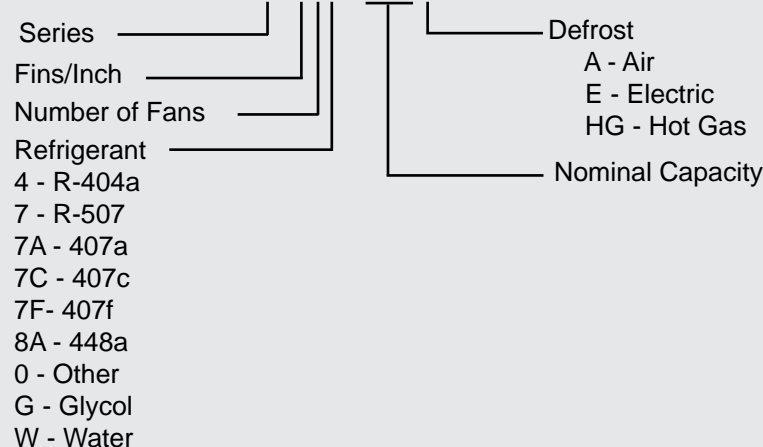
- Medium/large-sized walk-in coolers and freezers
- Distribution facilities
- Dock arrangements
- Storage facilities
- And many other applications.

Available Options

- Opposite hand connections
- Units circuited for water or glycol solutions
- Mounted non-fused fan motor disconnect switch standard with auxiliary contact for liquid solenoid
- Mounted non-fused heater disconnect switch
- Mounted or shipped loose TXV
- Mounted or shipped loose electronic expansion valves with or without controllers
- Various fin materials, coatings and casing arrangements available for corrosive atmosphere applications
- Stainless steel hardware, fasteners, and/or housings
- Room thermostat, mechanical or electronic (shipped loose)
- Factory reheat mounted (contact your Century Representative for details)
- Lower operating temperatures available (contact your Century Representative for details)

Nomenclature

MODEL KEY



WHEN ORDERING PLEASE SPECIFY:

- Complete Model Number
- Refrigerant
- Room Temperature
- Saturated Suction Temperature
- Liquid Temperature
- Electrical Characteristic
 - Motors (Voltage/Phase)
 - Heaters (Voltage/Phase)
 - Control Voltage
- Accessories

Construction

Cabinet

Cabinets are made of heavy-gauge, rust-proof smooth finish aluminum housing. All hardware is corrosion resistant.

Coil

Coils are copper tube, full-collared die-formed aluminum plate fin and tube sheets. Tubes are mechanically expanded for maximum heat transfer. Coils are leak tested at 350 PSIG under water. Solder distributors have removable nozzles. Each nozzle is sized for the specified refrigerant and temperature range. Optional expansion valve is located within the cabinet.

Fans

Fans are 20" low sound, profiled sickle-shaped blades mounted inside a full bell mouth housing with diffuser for increased volume flow rate and air throw.

Motors

Motors are permanently lubricated for reduced maintenance time and costs and suitable for low temperature applications. Motors are heavy duty with high efficiency. Motors are suitable for single-point group fusing. High speed motors are 1480 RPM. Low speed motors are 1090 RPM. Variable speed and EC motors are available. Contact Century Refrigeration for more information on these options.

Refrigerants

Coils are designed for use with many refrigerants. Contact the factory if the refrigerant application is different than those indicated in the nomenclature table.

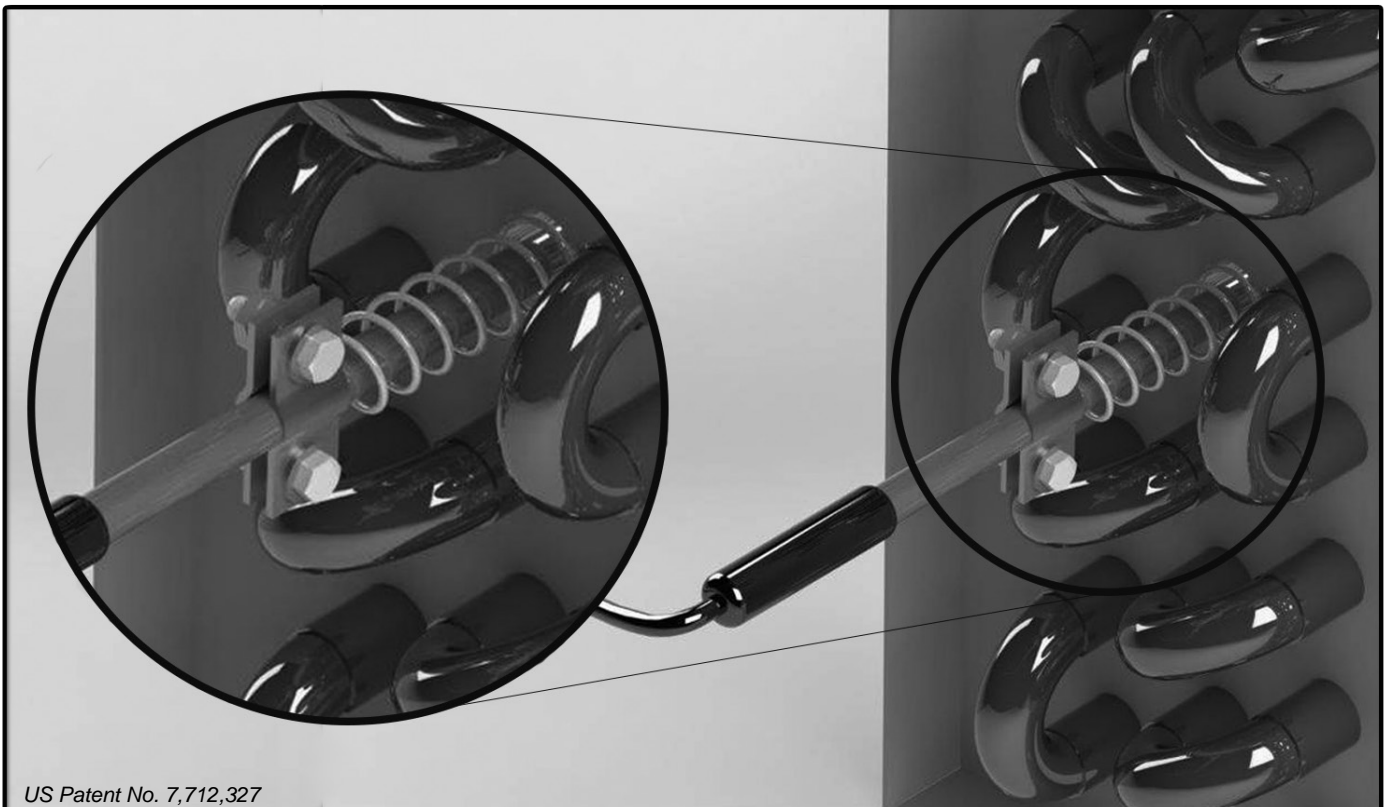
Defrost

Electric Defrost models include pre-wired terminal blocks and low-watt density heaters that are housed internal to the coil for a rapid and efficient defrost. Lower coil heaters and drain pan heaters help provide fast and reliable condensate drainage. Standard operating control includes an adjustable defrost termination with fan delay.

Hot Gas Defrost models include an auxiliary side port connection on the distributor, insulated drain pan, and a check valve shipped loose. An adjustable defrost termination/fan delay switch is also provided with this option for temperature termination of the defrost period.

Mounting

Century offers ceiling mounted units. Contact factory for rack or floor mounting for each model.



US Patent No. 7,712,327

Defrost elements are installed in the open tube locations within the evaporator coil. The radiant heat is trapped by the cabinet, accelerating defrost. The heater elements are held in place with a spring and bracket to keep the element from creeping during defrost.

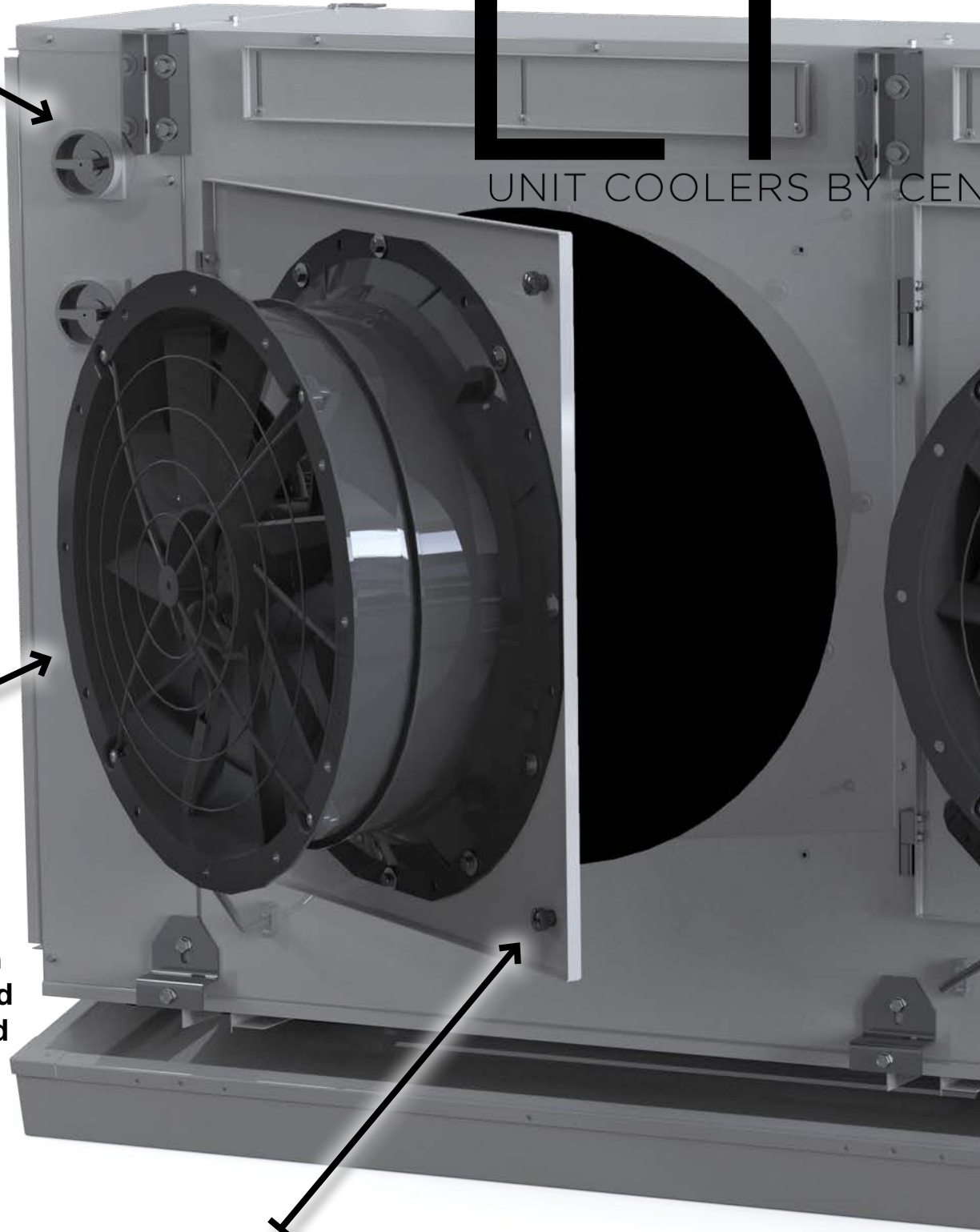
EPD

UNIT COOLERS BY CEN

Optional
Mounted
Non-Fused
Disconnects

Fan assemblies
are 20" diameter,
low sound, profiled
blades mounted
inside a full bell
mouth housing with
diffuser for increased
volume flow rate and
air throw.

Hinged Fan Panel with
Lift Off Capability





CENTURY REFRIGERATION

Flush Mount
Unit Design

Hinged End
Panels with Lift
Off Capability

Hinged Drain Pan

Quick Connect Power
Plugs on Fan Motors

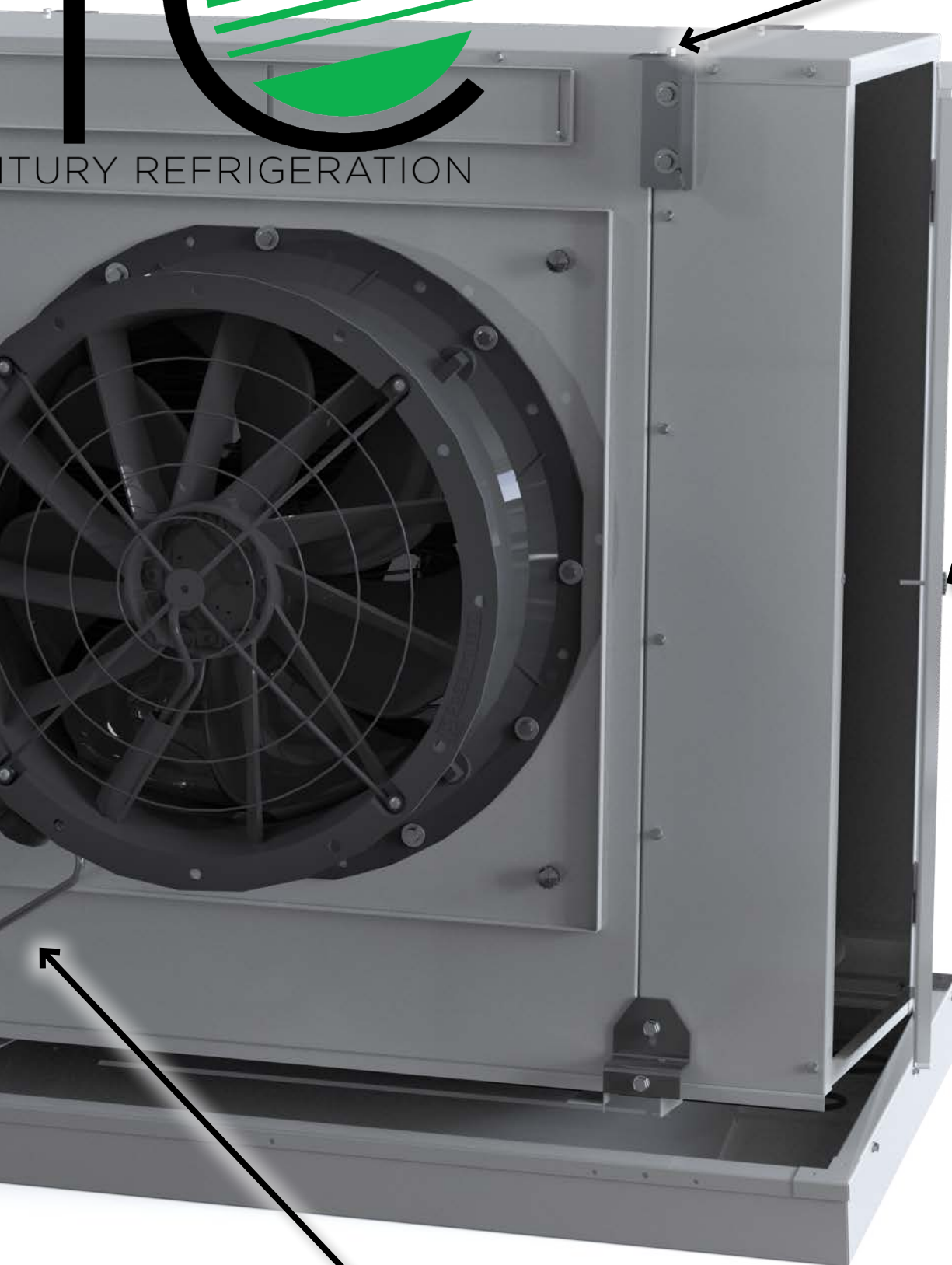


Table 1: Capacity Data

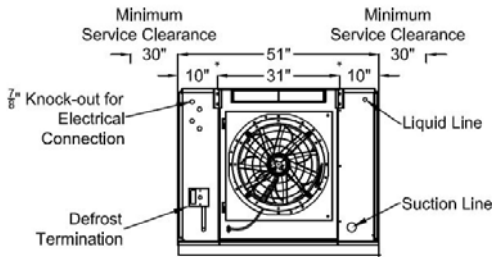
Model	Performance					Fan Data				Defrost		Specifications																								
	Series Model	Capacity BTU/HR (-20F)	CFM	FV	Sound pressure dB(A) 10'	Fan Qty.	Air Throw (ft)	HP	230/3 Amps	460/3 Amps	230/3 Amps	460/3 Amps	Hot gas Conn. (in.)	Suction Conn. (in.)	Liquid Conn. (in.)	Shipping Weight (lbs.)	Operating weight (lbs.)	Ref Charge (lbs.)																		
Ultra Low Sound																			E 410-180	18,000	4,346	535	49.7	1	150	0.375	2.3	1.3	12.9	7.4	1.125	1.125	0.5	265	248	13
																			E 410-240	24,000	4,078	502	50.3	1	150	0.375	2.3	1.3	18.9	9.5	1.125	1.125	0.5	307	296	19
																			E 420-359	35,900	8,692	535	52.7	2	150	0.375	4.6	2.5	25.0	14.1	1.375	1.375	0.5	523	488	25
																			E 420-481	48,100	8,156	502	53.3	2	150	0.375	4.6	2.5	37.5	18.8	1.625	1.625	0.5	603	580	37
																			E 430-539	53,900	13,039	535	54.5	3	150	0.375	6.9	3.8	37.1	20.8	1.625	1.625	0.625	759	705	36
																			E 430-721	72,100	12,234	502	55.0	3	150	0.375	6.9	3.8	53.8	26.9	1.625	1.625	0.625	876	841	55
																			E 440-719	71,900	17,385	535	55.7	4	150	0.375	9.2	5.0	47.5	26.7	1.625	1.625	0.625	994	922	48
																			E 440-962	96,200	16,312	502	56.3	4	150	0.375	9.2	5.0	68.8	34.4	2.125	2.125	0.875	1150	1102	72
																			E 510-198	19,800	4,228	520	50.0	1	150	0.375	2.3	1.3	12.9	7.4	1.125	1.125	0.5	272	255	13
																			E 510-255	25,500	3,950	486	50.4	1	150	0.375	2.3	1.3	18.9	9.5	1.125	1.125	0.5	317	306	19
																			E 520-397	39,700	8,457	520	53.0	2	150	0.375	4.6	2.5	25.0	14.1	1.375	1.375	0.5	536	501	25
																			E 520-510	51,000	7,901	486	53.4	2	150	0.375	4.6	2.5	37.5	18.8	1.625	1.625	0.5	623	600	37
																			E 530-595	59,500	12,685	520	54.7	3	150	0.375	6.9	3.8	37.1	20.8	1.625	1.625	0.625	778	724	36
																			E 530-764	76,400	11,851	486	55.1	3	150	0.375	6.9	3.8	53.8	26.9	1.625	1.625	0.625	906	871	55
																			E 540-793	79,300	16,914	520	56.0	4	150	0.375	9.2	5.0	47.5	26.7	1.625	1.625	0.875	1021	949	48
																			E 540-1019	101,900	15,802	486	56.4	4	150	0.375	9.2	5.0	68.8	34.4	2.125	2.125	0.875	1189	1141	72
																			E 610-213	21,300	4,122	507	50.2	1	150	0.375	2.3	1.3	12.9	7.4	1.125	1.125	0.5	280	263	13
																			E 610-269	26,900	3,841	473	50.3	1	150	0.375	2.3	1.3	18.9	9.5	1.125	1.125	0.5	328	317	19
																			E 620-426	42,600	8,244	507	53.2	2	150	0.375	4.6	2.5	25.0	14.1	1.375	1.375	0.5	549	514	25
																			E 620-539	53,900	7,683	473	53.3	2	150	0.375	4.6	2.5	37.5	18.8	1.625	1.625	0.625	643	620	37
E 630-640	64,000	12,366	507	55.0	3	150	0.375	6.9	3.8	37.1	20.8	1.625	1.625	0.625	798	744	36																			
E 630-808	80,800	11,525	473	55.1	3	150	0.375	6.9	3.8	53.8	26.9	2.125	2.125	0.875	936	901	55																			
E 640-853	85,300	16,489	507	56.2	4	150	0.375	9.2	5.0	47.5	26.7	2.125	2.125	0.875	1046	974	48																			
E 640-1078	107,800	15,367	473	56.3	4	150	0.375	9.2	5.0	68.8	34.4	2.125	2.125	0.875	1228	1180	72																			
E 810-235	23,500	3,941	485	50.4	1	150	0.375	2.3	1.3	12.9	7.4	0.625	0.625	0.5	293	276	13																			
E 810-280	28,000	3,659	450	49.8	1	150	0.375	2.3	1.3	18.9	9.5	0.625	0.625	0.5	349	338	19																			
E 820-470	47,000	7,882	485	53.4	2	150	0.375	4.6	2.5	25.0	14.1	0.875	0.875	0.5	576	541	25																			
E 820-559	55,900	7,318	450	52.8	2	150	0.375	4.6	2.5	37.5	18.8	0.875	0.875	0.5	682	659	37																			
E 830-705	70,500	11,824	485	55.1	3	150	0.375	6.9	3.8	37.1	20.8	0.875	0.875	0.625	837	783	36																			
E 830-838	83,800	10,978	450	54.5	3	150	0.375	6.9	3.8	53.8	26.9	1.125	1.125	0.625	994	959	55																			
E 840-940	94,000	15,765	485	56.4	4	150	0.375	9.2	5.0	47.5	26.7	1.125	1.125	0.875	1098	1026	48																			
E 840-1118	111,800	14,637	450	55.8	4	150	0.375	9.2	5.0	68.8	34.4	1.125	1.125	0.875	1305	1257	72																			
Low Sound																			E 410-201	20,100	5,767	710	56.5	1	200	0.75	2.3	1.3	12.9	7.4	1.125	1.125	0.5	265	248	13
																			E 410-277	27,700	5,469	673	56.5	1	200	0.75	2.3	1.3	18.9	9.5	1.125	1.125	0.5	307	296	19
																			E 420-403	40,300	11,534	710	59.5	2	200	0.75	4.6	2.5	25.0	14.1	1.375	1.375	0.5	523	488	25
																			E 420-555	55,500	10,938	673	59.5	2	200	0.75	4.6	2.5	37.5	18.8	1.625	1.625	0.5	603	580	37
																			E 430-604	60,400	17,301	710	61.3	3	200	0.75	6.9	3.8	37.1	20.8	1.625	1.625	0.625	759	705	36
																			E 430-832	83,200	16,407	673	61.3	3	200	0.75	6.9	3.8	53.8	26.9	1.625	1.625	0.625	876	841	55
																			E 440-806	80,600	23,068	710	62.5	4	200	0.75	9.2	5.0	47.5	26.7	1.625	1.625	0.625	994	922	48
																			E 440-1109	110,900	21,876	673	62.5	4	200	0.75	9.2	5.0	68.8	34.4	2.125	2.125	0.875	1150	1102	72
																			E 510-225	22,500	5,658	696	56.5	1	200	0.75	2.3	1.3	12.9	7.4	1.125	1.125	0.5	272	255	13
																			E 510-302	30,200	5,338	657	56.5	1	200	0.75	2.3	1.3	18.9	9.5	1.125	1.125	0.5	317	306	19
																			E 520-449	44,900	11,316	696	59.5	2	200	0.75	4.6	2.5	25.0	14.1	1.375	1.375	0.5	536	501	25
																			E 520-605	60,500	10,676	657	59.5	2	200	0.75	4.6	2.5	37.5	18.8	1.625	1.625	0.5	623	600	37
																			E 530-674	67,400	16,975	696	61.3	3	200	0.75	6.9	3.8	37.1	20.8	1.625	1.625	0.625	778	724	36
																			E 530-907	90,700	16,015	657	61.3	3	200	0.75	6.9	3.8	53.8	26.9	1.625	1.625	0.625	906	871	55
																			E 540-898	89,800	22,633	696	62.5	4	200	0.75	9.2	5.0	47.5	26.7	1.625	1.625	0.875	1021	949	48
																			E 540-1209	120,900	21,353	657	62.5	4	200	0.75	9.2	5.0	68.8	34.4	2.125	2.125	0.875	1189	1141	72
																			E 610-241	24,100	5,556	684	56.5	1	200	0.75	2.3	1.3	12.9	7.4	1.125	1.125	0.5	280	263	13
																			E 610-320	32,000	5,220	643	56.5	1	200	0.75	2.3	1.3	18.9	9.5	1.125	1.125	0.5	328	317	19
																			E 620-483	48,300	11,112	684	59.5	2	200	0.75	4.6	2.5	25.0	14.1	1.375	1.375	0.5	549	514	25
																			E 620-640	64,000	10,440	643	59.5	2	200	0.75	4.6	2.5	37.5	18.8	1.625	1.625	0.625	643	620	37
E 630-724	72,400	16,668	684	61.3	3	200	0.75	6.9	3.8	37.1	20.8	1.625	1.625	0.625	798	744	36																			
E 630-960	96,000	15,661	643	61.3	3	200	0.75	6.9	3.8	53.8	26.9	2.125	2.125	0.875	936	901	55																			
E 640-965	96,500	22,224	684	62.5	4	200	0.75	9.2	5.0	47.5	26.7	2.125	2.125	0.875	1046	974	48																			
E 640-1280	128,000	20,881	643	62.5	4	200	0.75	9.2	5.0	68.8	34.4	2.125	2.125	0.875	1228	1180	72																			
E 810-335	33,500	5,012	617	56.6	1	200	0.75	2.3	1.3	18.9	9.5	0.625	0.625	0.5	349	338	19																			
E 820-671	67,100	10,024	617	59.6	2	200	0.75	4.6	2.5	37.5	18.8	0.875	0.875	0.5	682	659	37																			
E 830-1006	100,600	15,036	617	61.3	3	200	0.75	6.9	3.8	53.8	26.9	1.125	1.125	0.625	994	959	55																			
E 840-1341	134,100	20,048	617	62.6	4	200	0.75	9.2	5.0	68.8	34.4	1.125	1.125	0.875	1305	1257	72																			
Optimized Fan Option																			E 420-526	52,600	12,283	504	59.6	2	200	0.75	4.6	2.5	37.1	20.8	1.625	1.625	0.625	632	578	36
																			E 420-711	71,100	11,926	489	59.5	2	200	0.75	4.6	2.5	53.8	26.9	1.625	1.625	0.625	750	715	55
																			E 430-732	73,200	18,170	559	61.3	3	200	0.75	6.9	3.8	47.5	26.7	1.625	1.625	0.625	867	795	48
																			E 430-999	99,900	17,521	539	61.3	3	200	0.75	6.9	3.8	68.8	34.4	2.125	2.125	0.875	1024	976	72
																			E 520-584	58,400	12,136	498	59.6	2	200	0.75	4.6	2.5	37.1	20.8	1.625	1.625	0.625	652	598	36
																			E 520-759	75,900	11,709	480	59.5	2	200	0.75	4.6	2.5	53.8	26.9	1.625	1.625	0.625	779	744	55
																			E 530-813	81,300	17,913	551	61.3	3	200	0.75	6.9	3.8	47.5	26.7	1.625	1.625	0.875	894	822	48
																			E 530-1070	107,000	17,164	528	61.3	3	200	0.75	6.9	3.8	68.8	34.4	2.125	2.125	0.875	1062	1014	72
																			E 620-630	63,000	11,988	492	59.5	2	200	0.75	4.6	2.5	37.1	20.8	1.625	1.625	0.625	671	617	36
																			E 620-807	80,700	11,500	472	59.5	2	200	0.75	4.6	2.5	53.8	26.9	2.125	2.125	0.875	809	774	55
																			E 630-880	88,000	17,659	543	61.3	3	200	0.75	6.9	3.8	47.5	26.7	2.125	2.125	0.875	919	847	48
																			E 630-1138	113,800	16,827	518	61.3	3	200	0.75	6.9	3.8	68.8	34.4	2.125	2.125</				

Table 2: Capacity Multiplier

	4 & 5 FPI							8 FPI		
	6 FPI									
SST	-40	-30	-20	-10	0	10	20	25	35	45
Multiplier	0.83	0.93	1.00	1.06	1.11	1.16	1.22	1.25	1.33	1.44

Face velocity must be below 625 to perform at these conditions

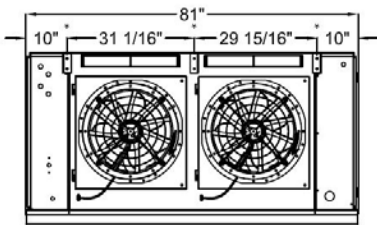
One Fan Models



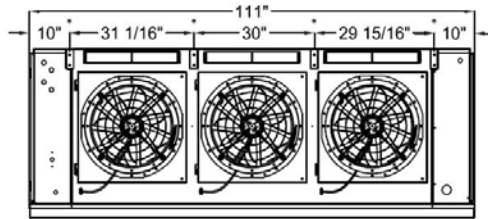
Installation Notes

- Locate unit inlet air side and unit ends a minimum of 34" from walls for best results.
- Support piping adequately.
- Condensate drain pans MUST be individually trapped.
- Suction line "P" traps required at each unit.
- Condensate drain lines MUST be adequately heat traced in rooms below freezing.
- Locate liquid line solenoid close to TXV.
- Use externally equalized TXV or an electronic expansion valve.

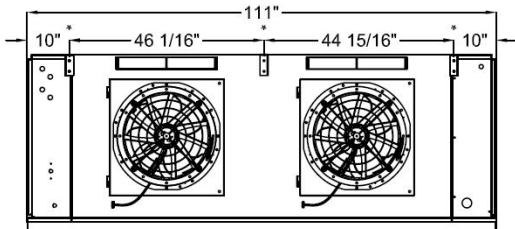
Two Fan Models (Short)



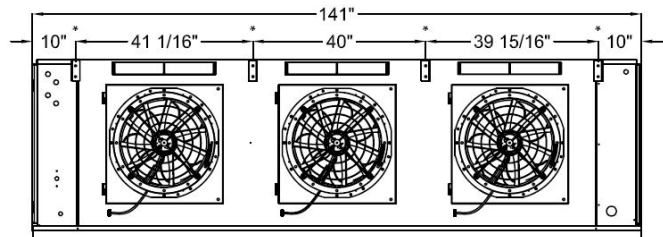
Three Fan Models (Short)



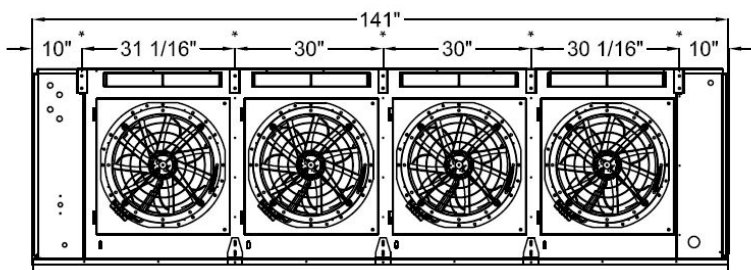
Two Fan Models (Optimized)



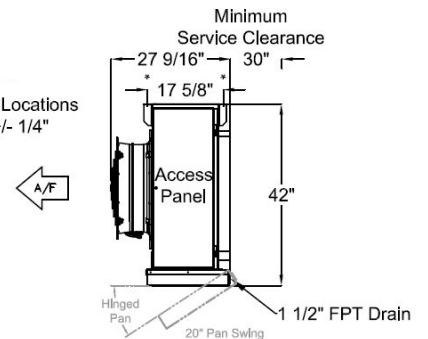
Three Fan Models (Optimized)



Four Fan Models



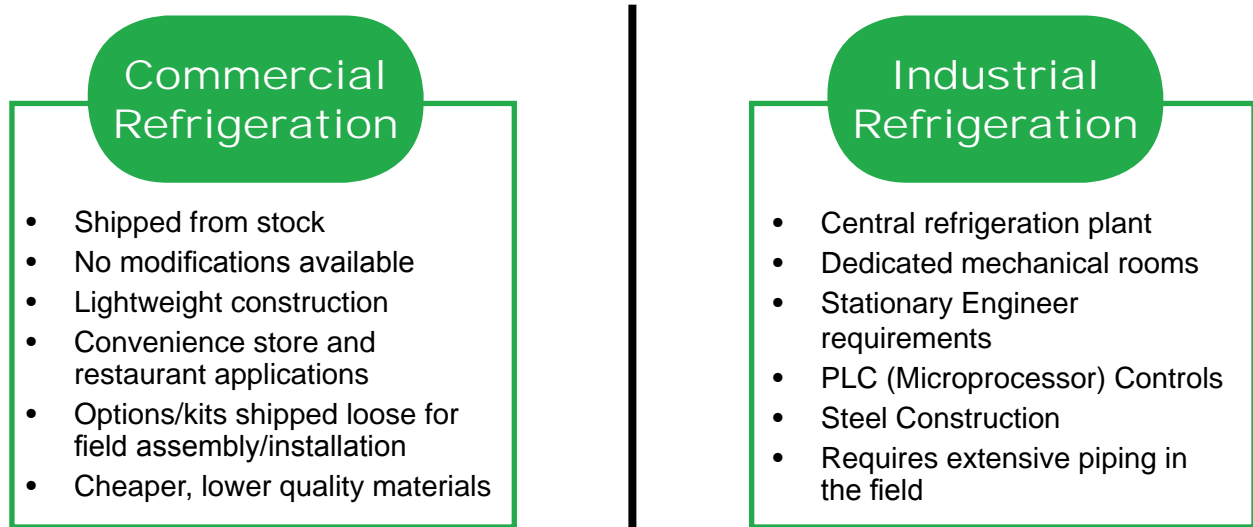
*5/8" Mounting Hole Locations
All Dimensions +/- 1/4"



What is Comdustrial™ Refrigeration?

The Perfect Balance Between Commercial and Industrial Systems

The current refrigeration market...



*now
presenting...*

Comdustrial™ Refrigeration

Comdustrial™ Refrigeration Systems are the ideal balance of the commercial and industrial refrigeration markets.

- Industrial quality equipment in Commercial capacity ranges
- Built-to-order refrigeration systems with exceptional lead times
- Professionally represented by systems oriented Sales Representatives
- Systems based approach to your application
- Project specific submittal packages and drawings
- Quality materials for long-term equipment life

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www.century-refrigeration.com