

LUI / LUO

Condensing Units



Standard Construction

Cabinet: The rugged cabinet is constructed of heavy gauge, mill galvanized steel. Easily removable top and personnel screen are provided for convenient component access. Compressors are mounted low in the cabinet for ease of service.

Condensers: Coils are seamless copper tube with die-stamped aluminum plate fins, galvanized steel frames and tube sheets. Coils are computer selected for refrigeration applications to provide optimum heat transfer at a minimum T.D. All high temperature units are catalog rated to operate efficiently at 115°F ambient and 25°F SST. All low temperature units are catalog rated to operate efficiently at 105°F ambient and -25°F SST.

Condenser fan motors are industrial duty 1140 RPM, ball bearing, weather resistant with inherent electrical protection. Condenser fan blades are aluminum.

Coils are mounted vertically with fans arranged for draw through, horizontal discharge air flow. Each fan assembly is equipped with a sturdy corrosion-resistant steel basket guard.

Liquid Receiver: U.L. listed and ASME stamped receivers are selected to provide system pumpdown capacity considering normal evaporator and nominal 50 ft. equivalent line length. Each receiver is equipped with inlet and outlet service valves, gauge port, and pressure relief device. Oversize receivers are included with, or without, optional low ambient condenser flooding valves.

Compressors: U.L. listed, hermetic, energy efficient, Scroll compressors are applied throughout the line. Each compressor is equipped with suction and discharge service valves with gauge ports, inherent overload protection, oil level sight glass* and crankcase heater.

Controls: All condensing units are wired to operate on a one-time pumpdown cycle. Run/pumpdown switch is provided as standard.

All electrical control components are enclosed within a heavy-gauge weatherproof, hinged panel to provide maximum weather protection and enhance service analysis.

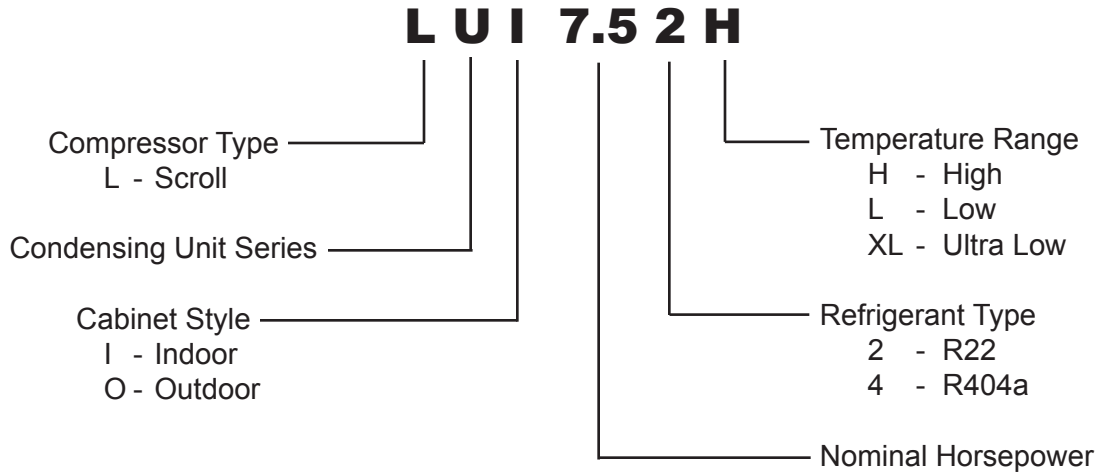
All units have individually numbered control conductors; adjustable, refrigeration grade, separate high and low pressure switches (high-manual reset); and an individually numbered terminal strip for field connections. Conductors and fusing are selected per N.E.C. standards. A generously-sized enclosure is provided with adequate space to accommodate a complete defrost control system, either factory mounted and wired or field provided. Notably all Century control components are selected to be readily available through refrigeration wholesalers throughout the country. O.E.M. type controls are avoided to enhance serviceability.

* High temperature models are not equipped with an oil level sight glass.

Standard Features

- Dependable Hi-Efficiency Scroll Compressor
- Direct Drive Condenser Fans
- Liquid Receiver with Relief Valve
- Receiver Inlet and Outlet Valves
- Refrigerant Charging Valve
- High Pressure Safety
- Low Pressure Operating Control
- Crankcase Heater
- Corrosion Resistant Fan Guard
- Compressor Contactor
- Compressor Overload Protection
- Fan Motor Overload Protection
- Removable Access Panels
- NEMA 3R Weatherproof Electrical Panel
- Prewired Controls
- Hinged Control Panel Access
- Compressor Service Valves
- Low Profile
- Run/Pumpdown Switch
- Liquid Injection Kit (on XL models only)

Nomenclature



Application

Century's "LUI" and "LUO" Series outdoor air cooled condensing units are specifically designed for commercial and industrial refrigeration duty cooling applications. They come completely pre-piped and wired with low profile and horizontal air discharge. They also utilize a unique vertical condenser and coil design and high volume condenser fans to maximize unit performance. The "LUO" Series condensing unit is suitable for mounting at ground level or rooftop, and the "LUI" Series is suitable for indoor mounting.

Available Options

- B-20 Flood Control
- Sight Glass
- Liquid Line Drier (sealed)
- Liquid Line Drier (replacement core)
- Liquid Line Solenoid
- Suction Filter (sealed)
- Suction Accumulator
- Time Clock
- Fused Defrost Contactor (1 per unit)
- Control Circuit Transformer
- Single Phase Unit w/Capacitor through 5HP
- Fused Evaporator Fan Contactor (1 per unit)
- Disconnect

When Ordering Please Specify:

- Complete Model Number
- Room Temperature
- Saturated Suction Temperature
- Electrical Characteristics
Unit Voltage & Control Voltage
- Accessories

We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacement for equipment previously sold or shipped.

PHYSICAL DATA

R22 - High Temp.		Unit Model Numbers				
		LUI/LUO 2.02H	LUI/LUO 2.52H	LUI/LUO 3.02H	LUI/LUO 3.52H	LUI/LUO 4.02H
Compressor Model Number		ZR24K3	ZR30K3	ZR34K3	ZR42K3	ZR48K3
Compressor Motor Protection		INHERENT				
Unit MCA	230 V 1ø	19	20.8	24.4	27.5	29.7
	208/230 V 3ø	15	15	15.6	18.7	21.8
	460 V 3ø	15	15	15	15	15
Compressor RLA / LRA	230 V 1ø	13.6 / 61	15.0 / 73	17.9 / 88	20.4 / 109	22.1 / 137
	208/230 V 3ø	8.6 / 55	10.7 / 63	11.4 / 77	13.9 / 88	16.4 / 91
	460 V 3ø	4.3 / 27	5.0 / 31	5.7 / 39	7.2 / 44	7.9 / 50
Number of Condenser Fan Motors		1	1	1	1	1
Size of Motor / Size of Blade		.25 HP - 20"	.25 HP - 20"	.25 HP - 20"	.25 HP - 20"	.25 HP - 20"
Condenser Fan Motor Amps Each	230 V 1ø	2	2	2	2	2
	208/230 V 3ø	1.3	1.3	1.3	1.3	1.3
	460 V 3ø	.65	.65	.65	.65	.65
Receiver Size		6" x 28"	6" x 28"	6" x 28"	6" x 28"	6" x 28"
Receiver Capacity 80% Full**		23 lbs.	23 lbs.	23 lbs.	23 lbs.	23 lbs.
Unit Operating Charge (approx.)	Standard*	14.4 lbs.	15.3 lbs.	17.3 lbs.	17.8 lbs.	19.7 lbs.
	w/Flood Control*	19.1 lbs.	20 lbs.	24.4 lbs.	24.9 lbs.	29.2 lbs.
Compressor Suction Connection - ODS		7/8"	7/8"	7/8"	7/8"	7/8"
Liquid Line Connection - ODS		1/2"	1/2"	1/2"	1/2"	1/2"
Unit Shipping Weight (approx.) - LUI/LUO		458 lbs. / 470 lbs.	458 lbs. / 470 lbs.	458 lbs. / 470 lbs.	458 lbs. / 470 lbs.	592 lbs. / 610 lbs.

* Based on 50 equivalent feet of horizontal refrigerant line piping at 25° SST and 95° ambient.

** Based on 80% full at 90°F ambient.

NOTE: The minimum MCA published is 15 amps.

CAPACITY DATA

Ambient Temp. °F	Suction Temp. °F	Unit Model Numbers									
		LUI/LUO 2.02H		LUI/LUO 2.52H		LUI/LUO 3.02H		LUI/LUO 3.52H		LUI/LUO 4.02H	
		Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹
85°	0°	9,645	2.11	12,594	2.38	14,790	2.55	17,028	3.14	20,865	3.58
	10°	12,728	2.07	15,962	2.39	18,357	2.57	21,849	3.17	26,235	3.58
	20°	16,145	2.08	19,794	2.45	22,518	2.63	27,240	3.24	32,383	3.65
	25°	17,983	2.10	21,897	2.49	24,838	2.67	30,157	3.30	35,734	3.73
	30°	19,911	2.13	24,109	2.54	27,307	2.71	33,227	3.37	39,257	3.82
	45°	26,203	2.27	21,442	2.78	35,547	2.92	43,295	3.65	42,997	4.19
95°	0°	8,697	2.43	11,693	2.69	13,950	2.84	15,600	3.53	19,243	4.10
	10°	11,707	2.38	14,896	2.70	17,325	2.87	20,263	3.55	24,364	4.08
	20°	15,019	2.37	18,568	2.74	21,279	2.92	25,463	3.63	30,221	4.14
	25°	16,796	2.39	20,560	2.79	23,472	2.97	28,274	3.69	33,408	4.20
	30°	18,655	2.41	22,666	2.84	25,814	3.02	31,226	3.75	36,778	4.28
	45°	24,695	2.54	29,618	3.06	33,642	3.23	40,849	4.05	40,298	4.66
105°	0°	—	—	—	—	—	—	—	—	—	—
	10°	—	—	—	—	—	—	—	—	—	—
	20°	13,785	2.69	17,261	3.06	19,999	3.23	23,558	4.04	27,948	4.66
	25°	15,498	2.70	19,161	3.10	22,067	3.28	26,257	4.09	30,956	4.71
	30°	17,284	2.71	21,152	3.16	24,276	3.33	29,061	4.17	34,321	4.79
	45°	23,043	2.84	27,697	3.39	31,649	3.56	38,209	4.48	44,569	5.15

¹ KW is for unit.

— Consult factory.

PHYSICAL DATA

R22 - High Temp.		Unit Model Numbers				
		LUI/LUO 4.52H	LUI/LUO 5.02H	LUI/LUO 6.02H	LUI/LUO 7.52H	LUI/LUO 9.02H
Compressor Model Number		ZR54K3	ZR61K3	ZR72KC	ZR90K3	ZR11M3
Compressor Motor Protection		INHERENT				
Unit MCA	230 V 1Ø	37	42.2	—	—	—
	208/230 V 3Ø	25.5	25.5	28.0	36.1	45.0
	460 V 3Ø	15	15	15	18.9	22.9
Compressor RLA / LRA	230 V 1Ø	28 / 148	32.1 / 148	—	—	—
	208/230 V 3Ø	19.3 / 123	19.3 / 137	20.7 / 156	27.2 / 189	34.3 / 232
	460 V 3Ø	7.5 / 49.5	9.1 / 62	10.0 / 75	14.3 / 99	17.5 / 125
Number of Condenser Fan Motors		1	1	1	1	1
Size of Motor / Size of Blade		.25 HP - 20"	.25 HP - 20"	.50 HP - 24"	.50 HP - 24"	.50 HP - 24"
Condenser Fan Motor Amps Each	230 V 1Ø	2	2	—	—	—
	208/230 V 3Ø	1.3	1.3	2.1	2.1	2.1
	460 V 3Ø	.65	.65	1	1	1
Receiver Size		6" x 36"	6" x 36"	8" x 36"	8" x 36"	8" x 36"
Receiver Capacity 80% Full**		30 lbs.	30 lbs.	54.4 lbs.	54.4 lbs.	54.4 lbs.
Unit Operating Charge (approx.)	Standard*	29.3 lbs.	29.5 lbs.	32.4 lbs.	34.8 lbs.	38.3 lbs.
	w/Flood Control*	37.7 lbs.	43.7 lbs.	46.6 lbs.	49 lbs.	57.3 lbs.
Compressor Suction Connection - ODS		1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
Liquid Line Connection - ODS		5/8"	5/8"	5/8"	5/8"	5/8"
Unit Shipping Weight (approx.) - LUI/LUO		592 lbs. / 610 lbs.	592 lbs. / 610 lbs.	592 lbs. / 610 lbs.	702 lbs. / 720 lbs.	702 lbs. / 720 lbs.

* Based on 50 equivalent feet of horizontal refrigerant line piping at 25° SST and 95° ambient.

** Based on 80% full at 90°F ambient.

NOTE: The minimum MCA published is 15 amps.

CAPACITY DATA

Ambient Temp. °F	Suction Temp. °F	Unit Model Numbers									
		LUI/LUO 4.52H		LUI/LUO 5.02H		LUI/LUO 6.02H		LUI/LUO 7.52H		LUI/LUO 9.02H	
		Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹
85°	0°	21,135	4.06	24,736	4.32	30,956	5.20	38,013	6.68	45,384	7.98
	10°	27,473	4.03	32,091	4.33	38,729	5.27	47,586	6.82	56,755	8.17
	20°	34,575	4.08	40,176	4.41	47,540	5.44	58,523	7.05	69,764	8.45
	25°	38,384	4.14	44,543	4.48	52,370	5.55	64,497	7.19	76,841	8.64
	30°	42,382	4.22	49,085	4.57	57,414	5.70	70,774	7.36	84,268	8.86
	45°	55,443	4.61	63,833	4.99	74,174	6.29	91,525	8.03	108,751	9.70
95°	0°	19,261	4.69	22,561	4.92	28,739	5.84	35,787	7.40	42,675	8.86
	10°	25,401	4.62	29,731	4.91	36,262	5.89	44,876	7.55	53,518	9.04
	20°	32,219	4.65	37,570	4.98	44,764	6.04	55,276	7.78	65,839	9.34
	25°	35,894	4.70	41,755	5.05	49,383	6.16	60,946	7.93	72,545	9.53
	30°	39,716	4.78	46,118	5.14	54,223	6.31	66,891	8.11	79,566	9.76
	45°	52,119	5.15	60,179	5.57	70,202	6.92	86,467	8.83	102,675	10.21
105°	0°	—	—	—	—	—	—	—	—	—	—
	10°	—	—	—	—	—	—	—	—	—	—
	20°	29,671	5.27	34,666	5.59	41,769	6.70	51,829	8.55	61,673	10.27
	25°	33,150	5.31	38,688	5.66	46,190	6.81	57,169	8.71	67,975	10.47
	30°	36,811	5.39	42,827	5.76	50,810	6.96	62,755	8.90	74,610	10.70
	45°	48,551	5.74	56,157	6.19	65,991	7.59	81,120	9.65	96,185	11.65

¹ KW is for unit.

— Consult factory.

PHYSICAL DATA

R404a - Low Temp.			Unit Model Numbers				
			LUI/LUO 3.04		LUI/LUO 3.54		LUI/LUO 4.04
Compressor Model Number			ZF09K4E		ZF11K4E		ZF13K4E
Compressor Motor Protection			INHERENT				
Unit MCA	230 V	1ø	22.5		27.9		35.5
	208/230 V	3ø	15.2		18.3		20.1
	460 V	3ø	15		15		15
Compressor RLA / LRA	230 V	1ø	16.4 / 88		20.7 / 109		26.8 / 129
	208/230 V	3ø	11.1 / 77		13.6 / 88		15.0 / 99
	460 V	3ø	5.7 / 39		7.1 / 44		8.2 / 49.5
Number of Condenser Fan Motors			1		1		1
Size of Motor / Size of Blade			.25 HP - 20"		.25 HP - 20"		.25 HP - 20"
Condenser Fan Motor Amps Each	230 V	1ø	2		2		2
	208/230 V	3ø	1.3		1.3		1.3
	460 V	3ø	.65		.65		.65
Receiver Size			6" x 28"		6" x 28"		6" x 28"
Receiver Capacity 80% Full**			20.7 lbs.		20.7 lbs.		20.7 lbs.
Unit Operating Charge (approx.)	Standard*		13 lbs.		13.8 lbs.		14.5 lbs.
	w/Flood Control*		17.2 lbs.		18 lbs.		18.8 lbs.
Compressor Suction Connection - ODS			7/8"		1 1/8"		1 1/8"
Liquid Line Connection - ODS			1/2"		1/2"		1/2"
Unit Shipping Weight (approx.) - LUI/LUO			458 lbs. / 470 lbs.		458 lbs. / 470 lbs.		592 lbs. / 610 lbs.

* Based on 50 equivalent feet of horizontal refrigerant line piping at 25° SST and 95° ambient.

** Based on 80% full at 90°F ambient.

CAPACITY DATA

Ambient Temp. °F	Temp Range	Suction Temp. °F	Unit Model Numbers					
			LUI/LUO 3.04		LUI/LUO 3.54		LUI/LUO 4.04	
			Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹
85°	L	0°	15,971	2.69	19,638	3.47	22,745	3.99
		-10°	13,230	2.49	16,373	3.19	18,865	3.67
		-20°	10,788	2.32	13,438	2.96	15,376	3.41
	XL	-25°	9,677	2.26	12,106	2.86	13,789	3.29
		-30°	8,646	2.20	10,861	2.77	12,347	3.19
		-40°	6,828	2.12	8,663	2.61	9,830	3.03
95°	L	0°	14,689	2.90	17,849	3.74	20,369	4.30
		-10°	12,199	2.70	14,933	3.45	17,010	3.98
		-20°	9,968	2.54	12,195	3.22	13,984	3.72
	XL	-25°	8,954	2.48	11,090	3.12	12,630	3.60
		-30°	8,011	2.43	9,981	3.02	11,369	3.51
		-40°	6,349	2.36	8,005	2.87	9,238	3.36
105°	L	0°	13,293	3.11	15,915	4.01	17,843	4.61
		-10°	11,072	2.92	13,375	3.72	15,038	4.29
		-20°	9,072	2.77	11,061	3.48	12,507	4.03
	XL	-25°	8,171	2.71	10,016	3.38	11,371	3.93
		-30°	7,324	2.67	9,033	3.29	10,341	3.83
		-40°	5,825	2.61	7,301	3.13	8,631	3.68

¹ KW is for unit.

PHYSICAL DATA

R404a - Low Temp.			Unit Model Numbers			
			LUI/LUO 5.04	LUI/LUO 6.04	LUI/LUO 7.54	LUI/LUO 10.04
Compressor Model Number			ZF15K4E	ZF18K4E	ZF24K4E	ZF33K4E
Compressor Motor Protection			INHERENT			
Unit MCA	230 V	1ø	41.8	—	—	—
	208/230 V	3ø	28.1	31.2	39.6	56.6
	460 V	3ø	15	15	20.7	27.4
Compressor RLA / LRA	230 V	1ø	31.8 / 169	—	—	—
	208/230 V	3ø	21.4 / 123	23.9 / 156	30 / 189	43.6 / 278
	460 V	3ø	9.6 / 62	10.4 / 70	15.7 / 94	21.1 / 127
Number of Condenser Fan Motors			1	1	1	1
Size of Motor / Size of Blade			.25 HP - 20"	.25 HP - 20"	.50 HP - 24"	.50 HP - 24"
Condenser Fan Motor Amps Each	230 V	1ø	2	2	2	2
	208/230 V	3ø	1.3	1.3	2.1	2.1
	460 V	3ø	.65	.65	1	1
Receiver Size			6" x 28"	6" x 28"	6" x 28"	6" x 36"
Receiver Capacity 80% Full**			20.7 lbs.	20.7 lbs.	20.7 lbs.	27.0 lbs.
Unit Operating Charge (approx.)	Standard*		15.6 lbs.	17.7 lbs.	25.8 lbs.	26.5 lbs.
	w/Flood Control*		22.0 lbs.	26.3 lbs.	33.3 lbs.	39.3 lbs.
Compressor Suction Connection - ODS			1 1/8"	1 1/8"	1 1/8"	1 3/8"
Liquid Line Connection - ODS			1/2"	1/2"	1/2"	5/8"
Unit Shipping Weight (approx.) - LUI/LUO			592 lbs. / 610 lbs.	592 lbs. / 610 lbs.	702 lbs. / 720 lbs.	702 lbs. / 720 lbs.

* Based on 50 equivalent feet of horizontal refrigerant line piping at 25° SST and 95° ambient.

** Based on 80% full at 90°F ambient.

CAPACITY DATA

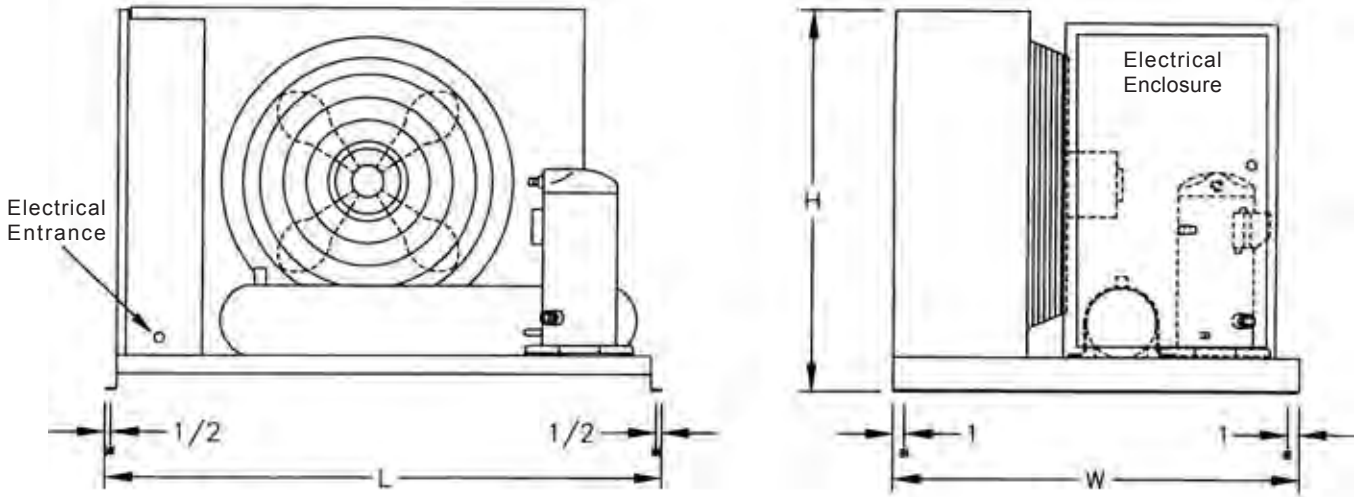
Ambient Temp. °F	Temp Range	Suction Temp. °F	Unit Model Numbers							
			LUI/LUO 5.04		LUI/LUO 6.04		LUI/LUO 7.54		LUI/LUO 10.04	
			Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹	Capacity	KW ¹
85°	L	0°	27,759	4.73	34,116	5.60	40,449	7.73	57,109	10.68
		-10°	23,212	4.33	28,321	5.12	33,625	7.08	47,482	9.69
		-20°	19,061	3.99	23,098	4.72	27,454	6.55	38,625	8.86
	XL	-25°	17,160	3.85	20,726	4.55	24,671	6.31	34,543	8.50
		-30°	15,401	3.72	18,538	4.39	22,072	6.09	30,711	8.16
		-40°	12,247	3.49	14,656	4.12	17,505	5.71	23,815	7.58
95°	L	0°	25,150	5.07	31,199	6.01	36,988	8.22	51,583	11.38
		-10°	21,111	4.67	26,001	5.52	30,875	7.52	43,205	10.35
		-20°	17,417	4.32	21,334	5.11	25,329	6.95	35,349	9.49
	XL	-25°	15,725	4.18	19,204	4.93	22,822	6.69	31,691	9.12
		-30°	14,145	4.04	17,228	4.77	20,491	6.45	28,278	8.78
		-40°	11,341	3.81	13,749	4.50	16,367	6.03	22,094	8.18
105°	L	0°	22,326	5.43	28,031	6.43	33,238	8.73	45,761	12.08
		-10°	18,857	5.01	23,529	5.93	27,891	7.98	38,522	11.03
		-20°	15,650	4.66	19,410	5.51	23,050	7.35	31,745	10.14
	XL	-25°	14,183	4.50	17,546	5.33	20,839	7.07	28,578	9.75
		-30°	12,796	4.37	15,815	5.16	18,782	6.81	25,589	9.40
		-40°	10,362	4.12	12,773	4.88	15,143	6.35	20,199	8.78

¹ KW is for unit.

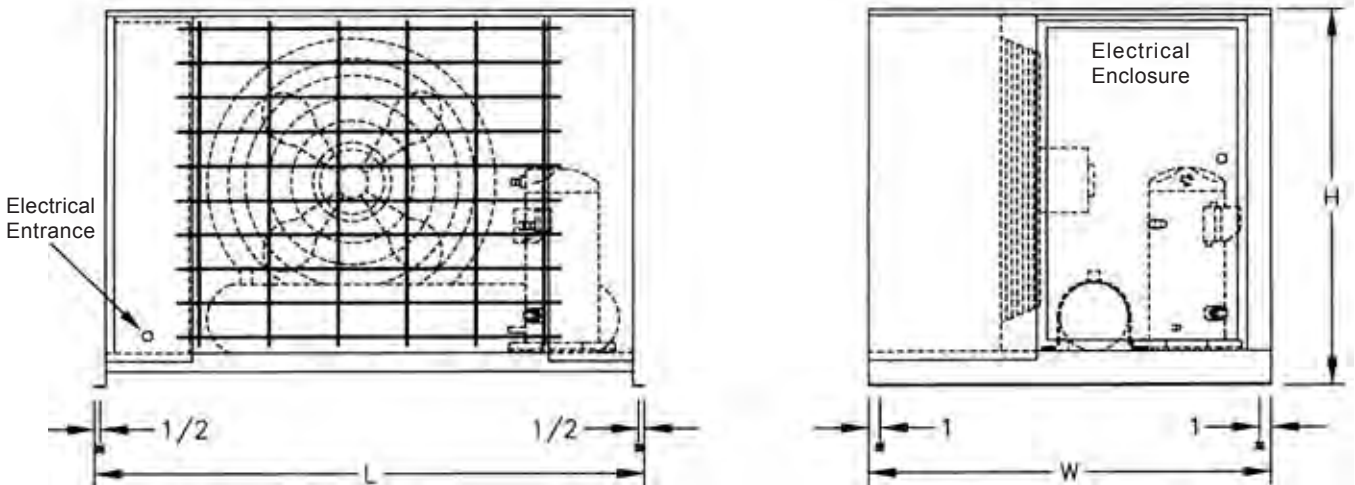
— Consult factory.

DIMENSIONAL DATA

INDOOR UNIT



OUTDOOR UNIT



Hi Temp Unit Model Numbers	L	W	H
LUI/LUO 2.02H	38"	35"	33 1/8"
LUI/LUO 2.52H	38"	35"	33 1/8"
LUI/LUO 3.02H	38"	35"	33 1/8"
LUI/LUO 3.52H	38"	35"	33 1/8"
LUI/LUO 4.02H	48"	35"	33 1/8"
LUI/LUO 4.52H	48"	35"	33 1/8"
LUI/LUO 5.02H	48"	35"	33 1/8"
LUI/LUO 6.02H	48"	35"	33 1/8"
LUI/LUO 7.52H	48"	35"	33 1/8"
LUI/LUO 9.02H	48"	35"	33 1/8"

Lo Temp Unit Model Numbers	L	W	H
LUI/LUO 3.04	38"	35"	33 1/8"
LUI/LUO 3.54	38"	35"	33 1/8"
LUI/LUO 4.04	38"	35"	33 1/8"
LUI/LUO 5.04	38"	35"	33 1/8"
LUI/LUO 6.04	48"	35"	33 1/8"
LUI/LUO 7.54	48"	35"	33 1/8"
LUI/LUO 10.04	48"	35"	33 1/8"

