



ES-LINE CONDENSING UNITS

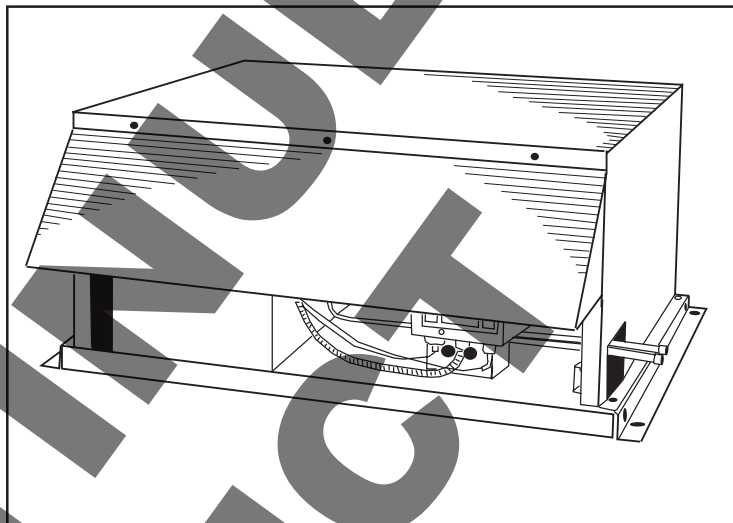
PRODUCT DATA & SPECIFICATIONS

INDOOR & OUTDOOR
AIR COOLED SEMI-HERMETIC
CONDENSING UNITS

1/2 TO 2 HP

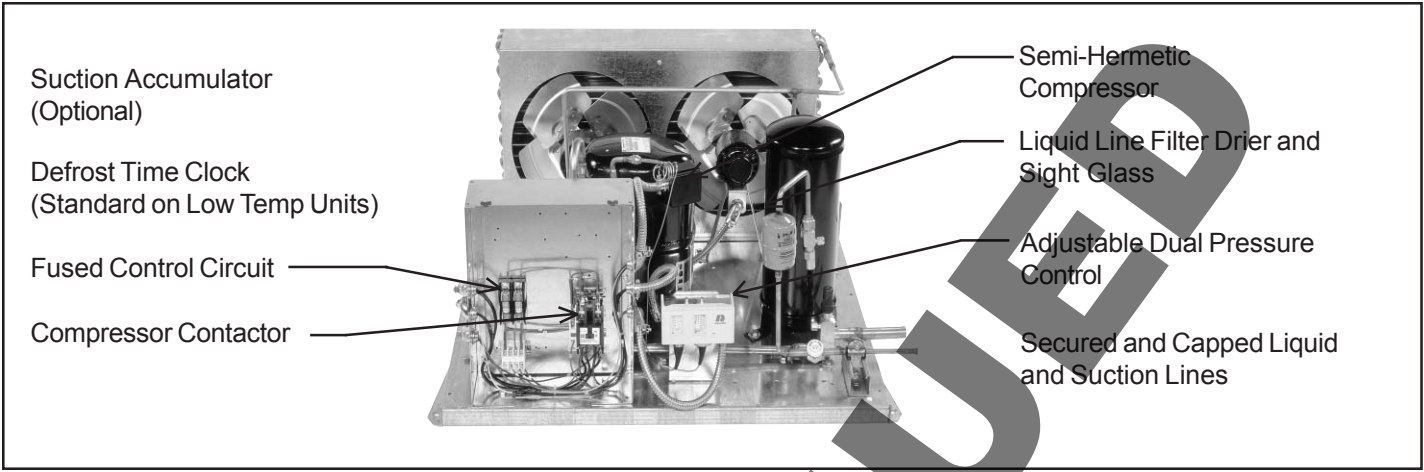
Bulletin T40-ES-PDS-12

1064621



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FEATURES

FEATURES AND OPTIONS

Indoor Unit

Standard Features Include:

- Weatherproof electrical control box with compressor contactor and fused control circuit
- Solid mounted, accessible semi-hermetic compressor
- Copper tubing secured with Hydra-Zorb / Cush-A-Clump
- Receiver with fusible plug and liquid shut off valve
- Adjustable dual high / low pressure control
- Suction service valve
- Sealed liquid line filter drier and sight glass (Standard on R404A units)

OPTIONAL FEATURES (FACTORY MOUNTED)

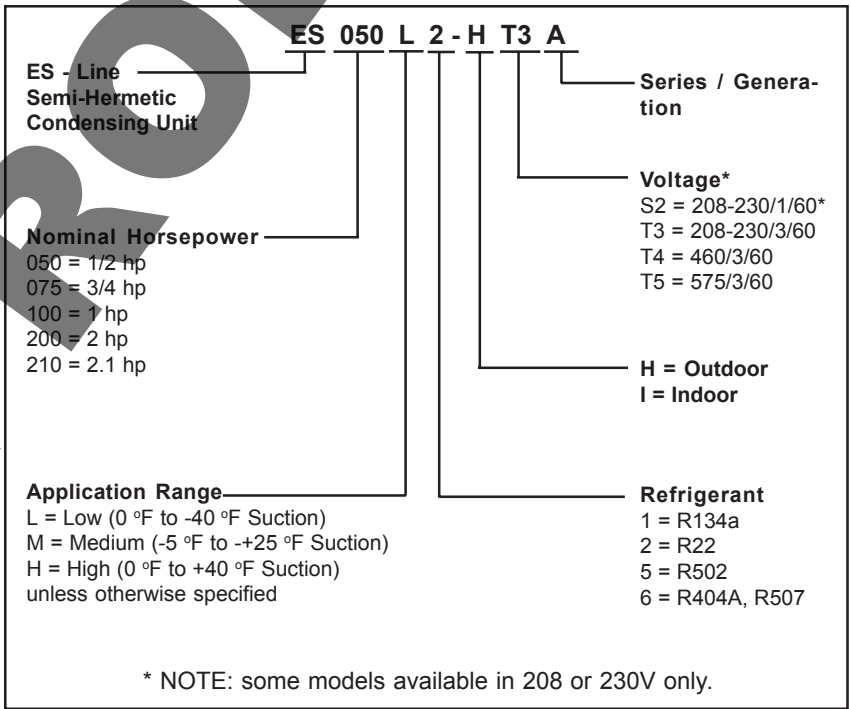
- Spring mounted compressor with suction and discharge vibration eliminator
- Suction accumulator
- Sealed suction filter with vibration eliminator
- Heated and insulated receiver
- Sealed liquid line filter drier and sight glass
- Liquid line solenoid valve with 230 volt coil (shipped loose)
- Ball valve (shipped loose)
- Flex hose on all controls
- Compressor circuit braker
- Compressor time delay relay
- Pump down toggle switch
- Time clock
- Defrost contactor with fuse block
- Evaporator fan contactor with fuse block
- Adjustable pressure or ambient fan cycling control on 2 fan models only
- Fuse disconnect
- Phase / voltage monitor

Outdoor Unit

All Standard Features of Indoor Unit, Plus:

- Outdoor weather-resistant housing with removable hood
- Flooded head pressure control (non adjustable)
- Crankcase heater

NOMENCLATURE



OTHER OPTIONS AVAILABLE AT YOUR REQUEST - CONSULT FACTORY

60Hz PERFORMANCE CAPACITY

Application Data Calculated at 65 °F. Return Gas, 0 °F. Liquid Subcooling

R22 - HIGH/MEDIUM TEMPERATURE - CAPACITY (BTU/HR)

Unit Shipped with mineral oil

COND. UNIT MODEL	SAT. SUCTION TEMP. °F	80°F Amb.	90°F Amb.	95°F Amb.	100°F Amb.	105°F Amb.
ES050H2 Compressor Model HAG-0050	40	6580	6083	5834	5586	5338
	30	5446	5028	4819	4611	4403
	25	4920	4539	4349	4159	3969
	20	4428	4081	3908	3735	3563
	10	3557	3271	3128	2985	2385
	0	2862	2624	2506	2387	2270
ES050M2 Compressor Model HAJ-0050	25	5450	5009	4789	4569	4349
	20	4886	4485	4285	4085	3886
	10	3839	3549	3385	3321	3048
	0	3062	2791	2665	2521	2387
	-5	2737	2489	2365	2243	2120
ES075H2 Compressor Model KAN-0075	40	9173	8543	8229	7914	7600
	30	7691	7155	6888	6585	6321
	25	6970	6480	6236	5992	5748
	20	6293	5846	5623	5400	5178
	10	5062	4693	4510	4326	4143
	0	4093	3786	3633	3480	3339
ES075M2 Compressor Model KAE-0075	25	7970	7286	6973	6660	6348
	20	7171	6596	6308	6053	5765
	10	5872	5384	5141	4899	4656
	0	4782	4370	4165	3960	3740
	-5	4351	3998	3764	3575	3386
ES100H2 Compressor Model KAR-0100	40	13858	12893	12411	11929	11448
	30	11486	10672	10266	9860	9455
	25	10386	9642	9270	8900	8530
	20	9355	8676	8337	7999	7661
	10	7528	6964	6682	6402	6122
	0	6069	5597	5362	5127	4893
ES100M2 Compressor Model KAM-0100	30	12899	12054	11632	11210	10789
	25	11662	10890	10505	10120	9735
	20	10503	9798	9447	9096	8746
	10	8446	7862	7571	7280	6990
	0	6801	6314	6071	5829	5588
ES150H2 Compressor Model KAG-0150	40	17290	16212	15674	15136	14599
	30	14294	13386	12934	12481	12030
	25	12908	12079	11666	11253	10840
	20	11612	10856	10478	10102	9726
	10	9321	8693	8380	8067	7756
	0	7435	6970	6709	6448	6188
ES200H2 Compressor Model ERA-0200	40	24544	22595	21622	20649	19678
	30	19892	18296	17499	16702	15907
	25	17707	16274	15558	14843	14129
	20	15591	14380	13739	13100	12461
	10	11680	10692	10198	9692	9175
	0	8182	7452	7089	6727	6366
ES200M2 Compressor Model KAK-0200	40	23569	22097	21361	20629	19893
	30	19561	18317	17696	17076	16457
	25	17697	16558	15990	15423	14856
	20	15946	14906	14386	13868	13351
	10	12837	11960	11538	11107	10677
	0	10347	9621	9259	8898	8539

60Hz PERFORMANCE CAPACITY

Application Data Calculated at 65 °F. Return Gas, 0 °F. Liquid Subcooling

R22 - LOW TEMPERATURE - CAPACITY (BTU/HR)

Unit Shipped with mineral oil

COND. UNIT MODEL	SAT. SUCTION TEMP. °F	80°F Amb.	90°F Amb.	95°F Amb.	100°F Amb.	105°F Amb.
ES050L2 Compressor Model KANB-0050	0	3999	3586	3386	3202	3003
	-10	3039	2707	2535	2355	2191
	-15	2618	2296	2144	1982	1821
	-20	2243	1936	1784	1631	1479
	-30	1593	1310	1169	1028	887
	-40	1126	851	714	576	435
ES075L2 Compressor Model KAMB-0075	0	6018	5493	5246	5026	4779
	-10	4757	4335	4105	3837	3705
	-15	4179	3771	3594	3400	3207
	-20	3643	3280	3100	2920	2740
	-30	2713	2395	2236	2077	1919
	-40	2005	1713	1567	1421	1274
ES100L2 Compressor Model KAJB-0100	0	8094	7416	7045	6713	6404
	-10	6340	5791	5480	5214	4927
	-15	5591	5054	4787	4520	4254
	-20	4873	4374	4125	3877	3630
	-30	3641	3203	2985	2767	2549
	-40	2715	2317	2118	1919	1720
ES200L2 Compressor Model EAD-0200	0	13848	12597	11917	11352	1073
	-10	10813	9698	9105	8588	8035
	-15	9382	8343	7856	7335	6815
	-20	8095	7153	6664	6176	5688
	-30	5866	5015	4590	4166	3741
	-40	4056	3334	2973	2610	2244
ES210L2 Compressor Model EAV-0210	0	16216	14877	14241	13606	12972
	-10	12553	11446	10894	10344	9796
	-15	10916	9855	9379	8869	8360
	-20	9394	8478	8004	7531	7058
	-30	6949	6129	5719	5309	4900
	-40	5182	4971	4115	3769	3394

60Hz PERFORMANCE CAPACITY

Application Data Calculated at 65 °F. Return Gas, 0 °F. Liquid Subcooling

R502 - LOW TEMPERATURE - CAPACITY (BTU/HR)

Unit Shipped with mineral oil

COND. UNIT MODEL	SAT. SUCTION TEMP. °F	80°F Amb.	90°F Amb.	95°F Amb.	100°F Amb.	105°F Amb.
ES050L5 Compressor Model KAN-0050	-5	3972	3589	3399	3211	3023
	-10	3534	3173	2994	2817	2635
	-15	3117	2784	2616	2444	2276
	-20	2743	2425	2263	2104	1946
	-30	2082	1769	1657	1518	1382
	-40	1569	1327	1206	1086	966
ES075L5 Compressor Model KAM-0075	-5	5615	5047	4765	4486	4152
	-10	5019	4496	4237	3944	3663
	-15	4446	3958	3701	3443	3197
	-20	3914	3438	3211	2985	2768
	-30	2977	2570	2377	2184	1991
	-40	2218	1875	1710	1549	1381
ES100L5 Compressor Model KAJ-0100	-5	7968	7155	6784	6394	6008
	-10	7064	6373	6020	5671	5296
	-15	6249	5593	5292	4953	4632
	-20	5471	4891	4585	4292	4001
	-30	4121	3611	3361	3112	2864
	-40	3078	2620	2399	2170	1941
ES150L5 Compressor Model KAL-0150	-10	9801	8791	8292	7797	7266
	-15	8661	7697	7254	6757	6284
	-20	7616	6739	6276	5832	5390
	-30	5838	5053	4669	4285	3891
	-40	4492	3840	3515	3199	2873
ES200L5 Compressor Model EAV-0200	-5	14647	13448	12855	12243	11644
	-10	13282	12127	11533	10955	10379
	-15	11976	10865	10283	9724	9166
	-20	10740	9640	9096	8554	8014
	-30	8505	7452	6939	6428	5918
	-40	6587	5589	5105	4633	4146

60Hz PERFORMANCE CAPACITY

Application Data Calculated at 65 °F. Return Gas, 0 °F. Liquid Subcooling

R404A, R507 - LOW TEMPERATURE - CAPACITY (BTU/HR)

Unit Shipped with polyolester oil

COND. UNIT MODEL	SAT. SUCTION TEMP. °F	80°F Amb.	90°F Amb.	95°F Amb.	100°F Amb.	105°F Amb.
ES050L6 Compressor Model KANB-005E	0	4350	3820	3550	3400	3100
	-10	3280	2920	2740	2580	2350
	-15	2820	2460	2280	2150	2020
	-20	2460	2100	1960	1870	1670
	-30	1700	1420	1300	1200	1070
	-40	1170	920	820	730	620
ES075L6 Compressor Model KAMB-007E	0	6180	5640	5320	5000	4680
	-10	4840	4360	4120	3820	3580
	-15	4270	3840	3550	3310	3100
	-20	3740	3280	3050	2870	2650
	-30	2780	2400	2240	2040	1850
	-40	1960	1640	1480	1330	1180
ES100L6 Compressor Model KAJB-010E	0	8800	7990	7620	7240	6800
	-10	6950	6320	5930	5680	5270
	-15	6120	5500	5250	4840	4550
	-20	5400	4830	4610	4320	4010
	-30	4080	3620	3380	3130	2920
	-40	2970	2560	2380	2210	2020
ES150L6 Compressor Model KALB-015E	0	12570	11500	10900	10042	9860
	-10	10170	9230	8800	8400	7900
	-15	9000	8150	7800	7350	6940
	-20	7920	7240	6800	6450	6060
	-30	5980	5420	5120	4830	4540
	-40	4440	3990	3760	3510	3290
ES200L6 Compressor Model EADB-021E	0	15680	13790	12930	12065	11375
	-10	12271	10879	9998	9248	8620
	-15	10914	9372	8774	8071	7374
	-20	9421	8191	7532	6879	6233
	-30	7118	5985	5426	4871	4321
	-40	5236	4310	3851	3439	2984
ES210L6 Compressor Model EAVB-021E	0	16880	15250	14600	13650	12840
	-10	13300	12000	11270	10760	10140
	-15	11620	10560	9960	9450	8910
	-20	10180	9220	8680	8200	7670
	-30	7650	6850	6400	6020	5010
	-40	5900	5030	4580	4180	3580

60Hz PERFORMANCE CAPACITY

Application Data Calculated at 65 °F. Return Gas, 0 °F. Liquid Subcooling

R404A, R507 - MEDIUM TEMPERATURE - CAPACITY (BTU/HR)

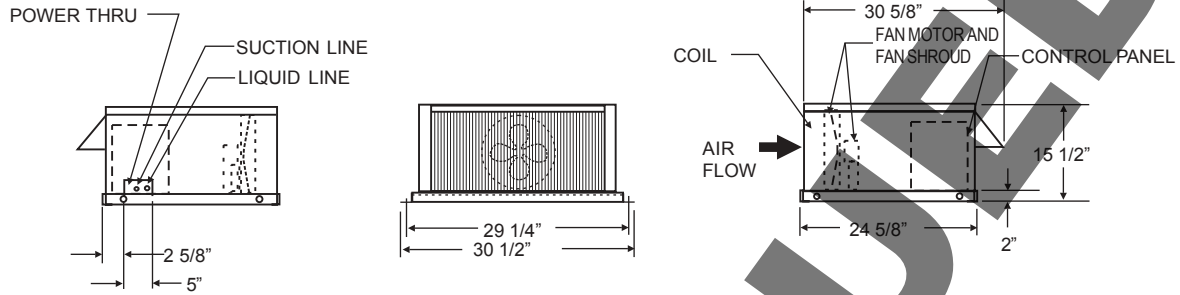
Unit Shipped with polyolester oil

COND. UNIT MODEL	SAT. SUCTION TEMP. °F	80°F Amb.	90°F Amb.	95°F Amb.	100°F Amb.	105°F Amb.
ES100M6 Compressor Model KARB-010E	+25	10899	9849	9299	8779	8259
	+20	9899	8949	8499	7999	7400
	+10	7899	7049	6598	6198	5798
	0	6095	5445	5094	4743	4392
	-5	5294	4744	4493	4193	3891
ES200M6 Compressor Model KAKB-020E	+25	18199	16399	15499	14599	13699
	+20	16099	14499	13699	12899	12000
	+10	12749	11499	10898	10248	9598
	0	10095	9095	8594	8093	7592
	-5	8644	7694	7193	6742	6291
ES210M6 Compressor Model ERCA-021E	+25	23250	20750	19500	18305	17100
	+20	20750	18550	17400	16250	15100
	+10	16450	14550	13600	12700	11800
	0	12750	11200	10500	9750	9000
	-5	11000	9650	9000	8350	7700

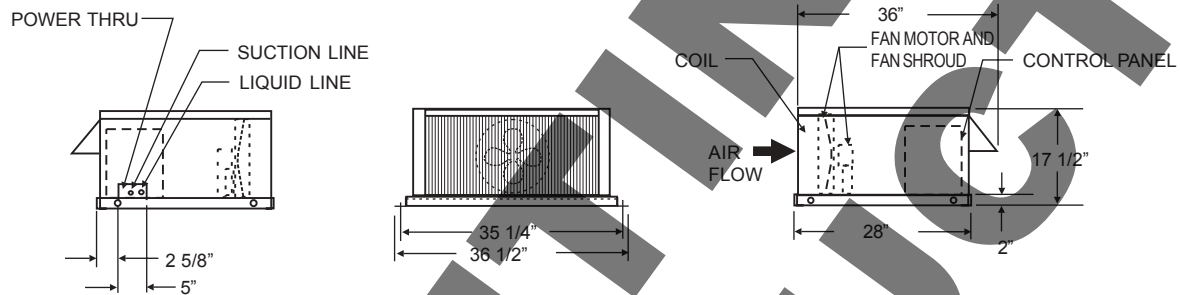
DISCONTINUED PRODUCT

ES - LINE DIMENSIONAL DATA

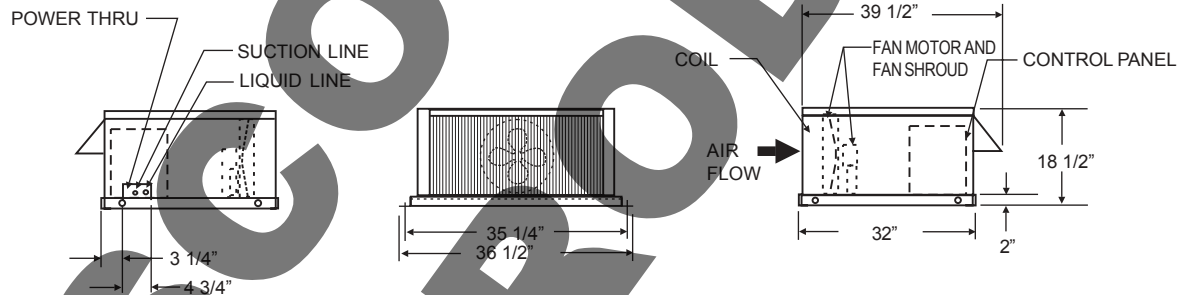
1/2 AND 3/4 HP



1 HP



1 1/2 AND 2 HP



ES - LINE SPECIFICATIONS

MODEL	COMPRESSOR	CONNECTIONS		RECEIVER CAPACITY 90% FULL (LBS)	SHIPPING Wt. (LBS)
		LIQUID (ID)	SUCTION (ID)		
ES050H2 - HS2,HT3	HAG - 0050	3/8	1/2	6	215
ES050M2 - HS2,HT3	HAJ - 0050	3/8	1/2	6	215
ES075H2 - HS2,HT3	KAN - 0075	3/8	5/8	6	240
ES075M2 - HS2,HT3	KAE - 0075	3/8	5/8	6	240
ES100H2 - HS2,HT3,HT4	KAR - 0100	3/8	5/8	9	290
ES100M2 - HS2,HT3,HT4	KAM - 0100	3/8	5/8	9	290
ES150H2 - HS2,HT3,HT4	KAG - 0150	1/2	7/8	15	320
ES200H2 - HS2,HT3,HT4	ERA - 0200	1/2	7/8	15	390
ES200M2 - HS2,HT3,HT4	KAK - 0200	1/2	7/8	15	328
ES050L2 - HS2	KANB - 0050	3/8	1/2	6	225
ES075L2 - HS2, HT3	KAMB - 0075	3/8	5/8	6	290
ES100L2 - HS2,HT3	KAJB - 0100	3/8	5/8	6	328
ES200L2 - HS2,HT3	EAD - 0200	1/2	7/8	15	390
ES210L2 - HS2,HT3,HT4	EAV - 0210	1/2	7/8	15	390
ES050L5 - HS2,HT3	KAN - 0050	3/8	1/2	6	225
ES075L5 - HS2,HT3	KAM - 0075	3/8	5/8	6	235
ES100L5 - HS2,HT3	KAJ - 0100	3/8	5/8	9	290
ES150L5 - HS2,HT3,HT4	KAL - 0150	1/2	7/8	15	315
ES200L5 - HS2,HT3,HT4	EAV - 0200	1/2	7/8	15	385
ES100M6 - HS2,HT3,HT4	KARB - 010E	3/8	5/8	9	290
ES200M6 - HS2,HT3	KAKB - 020E	1/2	7/8	15	385
ES210M6 - HT3,HT4	ERCA - 021E	1/2	7/8	15	390
ES050L6 - HS2,HT3	KANB - 005E	3/8	1/2	6	225
ES075L6 - HS2,HT3	KAMB - 007E	3/8	5/8	9	235
ES100L6 - HS2,HT3,HT4	KAJB - 010E	3/8	5/8	9	290
ES150L6 - HS2,HT3,HT4	KALB - 015E	1/2	7/8	15	315
ES200L6 - HS2,HT3,HT4	EADB - 021E	1/2	7/8	15	385
ES210L6 - HS2,HT3,HT4	EAVB - 021E	1/2	7/8	15	390

ES - LINE 60 Hz ELECTRICAL SPECIFICATIONS

MODEL	POWER SUPPLY	COMPRESSOR		CONDENSER FANS			TOTAL AMPS	M.C.A.	M.O.P.
		RLA	LRA	QTY	HP @	FLA @			
ES050H2 - HS2	208-230/1/60	4.0	22	1	1/20	0.7	4.7	5.7	15
ES050H2 - HT3	208-230/3/60	2.4	13	1	1/20	0.7	3.1	3.7	15
ES050M2 - HS2	208-230/1/60	3.7	22	1	1/20	0.7	4.4	5.3	15
ES050M2 - HT3	208-230/3/60	2.2	13	1	1/20	0.7	2.9	3.5	15
ES075H2 - HS2	208-230/1/60	6.1	36	1	1/20	0.7	6.8	8.3	15
ES075H2 - HT3	208-230/3/60	3.5	20	1	1/20	0.7	4.2	5.1	15
ES075M2 - HS2	208-230/1/60	5.4	36	1	1/20	0.7	6.1	7.5	15
ES075M2 - HT3	208-230/3/60	3.4	20	1	1/20	0.7	4.1	5.0	15
ES100H2 - HS2	208-230/1/60	7.4	40	2	1/20	0.7	8.8	10.7	15
ES100H2 - HT3	208-230/3/60	4.3	27	2	1/20	0.7	5.7	6.8	15
ES100H2 - HT4	460/3/60	2.2	13.5	2	1/15	0.43	3.1	3.6	15
ES100M2 - HS2	208-230/1/60	7.5	40	2	1/20	0.7	8.9	10.8	15
ES100M2 - HT3	208-230/3/60	4.5	27	2	1/20	0.7	5.9	7.0	15
ES100M2 - HT4	460/3/60	2.2	13.5	2	1/15	0.43	3.1	3.6	15
ES150H2 - HS2	208-230/1/60	9.6	55	2	1/15	0.85	11.3	13.7	20
ES150H2 - HT3	208-230/3/60	5.5	36	2	1/15	0.85	7.2	8.6	15
ES150H2 - HT4	460/3/60	2.5	18	2	1/15	0.43	3.4	4.0	15
ES200H2 - HS2	230/1/60	10.4	58	2	1/15	0.85	12.1	14.7	25
ES200H2 - HT3	208-230/3/60	6.6	46	2	1/15	0.85	8.3	10.0	20
ES200H2 - HT4	460/3/60	3.5	23	2	1/15	0.43	4.4	5.2	15
ES200M2 - HS2	208-230/1/60	10.6	55	2	1/15	0.85	12.3	15.0	25
ES200M2 - HT3	208-230/3/60	6.8	50	2	1/15	0.85	8.5	10.2	15
ES200M2 - HT4	460/3/60	3.0	25	2	1/15	0.43	3.9	4.6	15
ES050L2 - HS2	208-230/1/60	3.6	24	1	1/20	0.7	4.3	5.2	15
ES075L2 - HS2	208-230/1/60	5.6	36	1	1/20	0.7	6.3	7.7	15
ES075L2 - HT3	208-230/3/60	3.2	20	1	1/20	0.7	3.9	4.7	15
ES100L2 - HS2	208-230/1/60	6.9	40	2	1/20	0.7	8.3	10.0	20
ES100L2 - HT3	208-230/3/60	4.5	27	2	1/20	0.7	5.9	7.0	15
ES200L2 - HS2	230/1/60	8.4	58	2	1/15	0.85	10.1	12.2	20
ES200L2 - HT3	208-230/3/60	6.8	46	2	1/15	0.85	8.5	10.2	20
ES210L2 - HS2	208-230/1/60	14.7	102	2	1/15	0.85	16.4	20.1	30
ES210L2 - HT3	208-230/3/60	7.4	50	2	1/15	0.85	9.1	11.0	20
ES210L2 - HT4	460/3/60	3.9	27	2	1/15	0.43	4.8	5.7	15

M.C.A. = Minimum Circuit Ampacity

M.O.P. = Maximum Overcurrent Protection

ES - LINE 60 Hz ELECTRICAL SPECIFICATIONS

MODEL	POWER SUPPLY	COMPRESSOR		CONDENSER FANS			TOTAL AMPS	M.C.A.	M.O.P.
		RLA	LRA	QTY	HP @	FLA @			
ES050L5 - HS2	208-230/1/60	3.6	24	1	1/20	0.7	4.3	5.2	15
ES050L5 - HT3	208-230/3/60	2.1	13	1	1/20	0.7	2.8	3.3	15
ES075L5 - HS2	208-230/1/60	5.6	36	1	1/20	0.7	6.3	7.7	15
ES075L5 - HT3	208-230/3/60	3.2	20	1	1/20	0.7	3.9	4.7	15
ES100L5 - HS2	208-230/1/60	6.9	40	2	1/20	0.7	8.3	10.0	15
ES100L5 - HT3	208-230/3/60	4.5	27	2	1/20	0.7	5.9	7.0	15
ES150L5 - HS2	208-230/1/60	9.9	55	2	1/15	0.85	11.6	14.1	20
ES150L5 - HT3	208-230/3/60	5.4	36	2	1/15	0.85	7.1	8.5	15
ES150L5 - HT4	460/3/60	2.9	18	2	1/15	0.43	3.8	4.5	15
ES200L5 - HS2	230/1/60	10.0	58	2	1/15	0.85	11.7	14.2	20
ES200L5 - HT3	208-230/3/60	6.6	46	2	1/15	0.85	8.3	10.0	15
ES200L5 - HT4	460/3/60	3.5	23	2	1/15	0.43	4.4	5.2	15
ES100M6 - HS2	208-230/1/60	7.4	40	2	1/20	0.7	8.8	10.7	15
ES100M6 - HT3	208-230/3/60	4.3	27	2	1/20	0.7	5.7	6.8	15
ES100M6 - HT4	460/3/60	2	15	2	1/8	0.43	2.9	3.4	15
ES200M6 - HS2	208-230/1/60	10.6	55	2	1/15	0.85	12.3	15.0	25
ES200M6 - HT3	208-230/3/60	6.8	50	2	1/15	0.85	8.5	10.2	15
ES210M6 - HT3	208-230/3/60	8.8	46	2	1/15	0.85	10.5	12.7	20
ES210M6 - HT4	460/3/60	3.5	23	2	1/8	0.43	4.4	5.2	15
ES050L6 - HS2	208-230/1/60	3.6	24	1	1/20	0.7	4.3	5.2	15
ES050L6 - HT3	208-230/3/60	2.2	13	1	1/20	0.7	2.9	3.5	15
ES075L6 - HS2	208-230/1/60	5.6	36	1	1/20	0.7	6.3	7.7	15
ES075L6 - HT3	208-230/3/60	3.2	20	1	1/20	0.7	3.9	4.7	15
ES100L6 - HS2	208-230/1/60	6.9	40	2	1/20	0.7	8.3	10.0	15
ES100L6 - HT3	208-230/3/60	4.6	27	2	1/20	0.7	6.0	7.2	15
ES100L6 - HT4	460/3/60	2.1	15	2	1/20	0.35	2.8	3.3	15
ES150L6 - HS2	208-230/1/60	9.9	55	2	1/15	0.85	11.6	14.1	20
ES150L6 - HT3	208-230/3/60	6.6	50	2	1/15	0.85	8.3	10.0	15
ES150L6 - HT4	460/3/60	3.4	25	2	1/15	0.43	4.3	5.1	15
ES200L6 - HS2	208-230/1/60	10.0	58	2	1/15	0.85	11.7	14.2	20
ES200L6 - HT3	208-230/3/60	6.8	48	2	1/15	0.85	8.5	10.2	15
ES200L6 - HT4	460/3/60	3.4	24	2	1/15	0.43	4.3	5.1	15
ES210L6 - HS2	208-230/1/60	14.7	102	2	1/15	0.85	16.4	20.1	30
ES210L6 - HT3	208-230/3/60	7.4	50	2	1/15	0.85	9.1	11.0	15
ES210L6 - HT4	460/3/60	3.9	27	2	1/15	0.43	4.8	5.7	15

M.C.A. = Minimum Circuit Ampacity
M.O.P. = Maximum Overcurrent Protection

DISCONTINUED PRODUCT



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Due to National Refrigeration's policy of continuous product improvement, we reserve the right to make changes without notice.