



# KQ **New Generation "D"** Condensing Units

## PRODUCT DATA & SPECIFICATIONS

Bulletin K40-KQD-PDS-3  
Part # 1110230

	<b>PRODUCT SUPPORT</b>	<i>scan:</i> 
	web: <a href="http://www.k-rp.com/kq">www.k-rp.com/kq</a>	
	email: <a href="mailto:smcu@k-rp.com">smcu@k-rp.com</a>	
	call: 1-844-893-3222 x521	

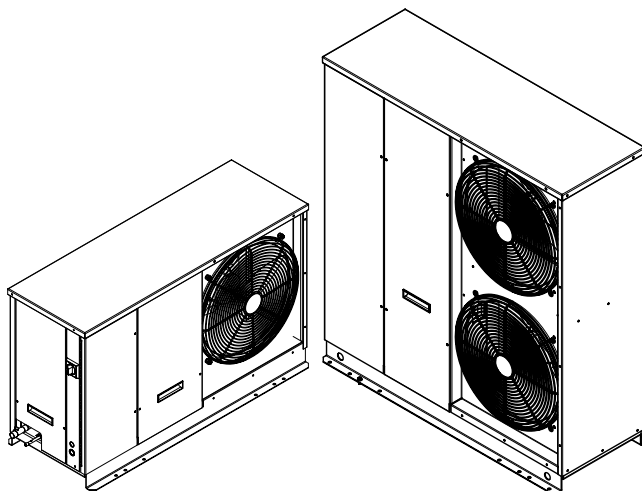
**60**  
Hz

**Outdoor Air-Cooled  
Condensing Units**

1/2 to 6 HP -  
High, Medium and Low  
Temperature Refrigeration



**INCLUDES MODELS FOR DOE & NRCAN  
AWEF-COMPLIANT APPLICATIONS**



**QUIETUNIT**  
REFRIGERATION DUTY CONDENSING UNITS



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**KQZ A 025 H 8 - H T4 D - A**

**Model Series**

KQZ = Quiet Scroll Compressor  
 KQH = Quiet Hermetic Compressor (006H8 model only)

**Compressor Manufacturer**

A = Copeland  
 D = Digital Scroll Copeland

**Nominal HP**

006 - 060 = 1/2 - 6 HP

**Application Range**

H = High and Med Temp  
 L = Low Temp

**Refrigerant\***

8 = R407A, R407C, R448A, R449A, R404A, R507

**Pre-Selected Factory Mounted Option Packages**

A = Standard Features (see below)

**Design Generation**

D = Latest Catalog Series

**Voltage\***

S2 = 208/230-1-60

T3 = 208/230-3-60

T4 = 460-3-60

**Enclosure**

H = Outdoor

\* subject to compressor availability

## STANDARD FEATURES

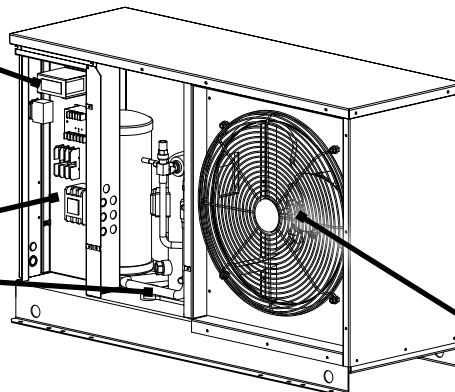
- Compatible with low GWP refrigerants
- Copeland scroll compressors (except on 006H8 model)
- Heavy duty weatherproof construction
- Painted cabinet
- High efficiency enhanced tube and fin condenser design
- Gold Coat™ fins (epoxy coating)
- High efficiency variable speed EC motor as head pressure control
- Sealed liquid line filter drier and sight glass
- Heated and insulated receiver
- Receiver with fusible plug and liquid shut-off valve
- Suction & discharge service valves
- Suction accumulator (low temperature models)
- Liquid injection (low temperature models)
- Discharge temp sensor (low temperature models)
- Crankcase heater
- Fixed high pressure control
- Dixell XC35CX condensing unit controller with Real Time Clock
- Unit leak tested and shipped with helium holding charge



**XC35CX CONTROLLER**

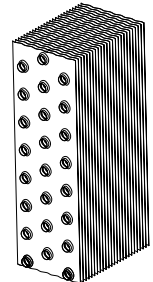


**GENEROUSLY SIZED CONTROL PANEL FOR EASY ACCESS AND AMPLE ROOM FOR SERVICEABILITY**



**GOLD COAT™ FINNS**

High corrosion resistance and heat exchange efficiency, epoxy aluminum foil.



**VARIABLE SPEED EC MOTORS**



## AVAILABLE OPTIONS

- Suction accumulator (optional on high and medium temp models)
- Sealed suction filter
- Flooded head pressure control (adjustable)
- Non-fused disconnect switch
- Sound insulated compressor compartment
- Wall mount kit
- Extended leg kit
- Wind guard
- Oil separator (2 fan models only)
- QuickVac evacuation and refrigerant recovery valves
- Over-sized receiver
- Electronic voltage / phase monitor
- Digital Scroll on certain models (consult factory)



# SELECTION CAPACITY DATA

# KQ - QUIET CONDENSING UNITS

## R407A High and Medium Temperature

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h Ambient Temperature					
			85°F	90°F	95°F	100°F	105°F	110°F
	°F	°C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)
KQZA007H8 Compressor Model ZB06KAE	40	4.4	10900	10600	10200	9890	9530	9180
	35	1.7	9880	9550	9230	8910	8600	8280
	30	-1.1	8870	8590	8300	8010	7730	7440
	25	-3.9	7940	7690	7430	7180	6920	6670
	20	-6.7	7080	6860	6640	6410	6180	5960
	15	-9.4	6310	6110	5910	5710	5510	5310
	10	-12.2	5610	5440	5260	5090	4910	4740
	5	-15.0	4990	4830	4690	4530	4380	4220
KQZA008H8 Compressor Model ZB07KAE	40	4.4	12800	12400	12000	11600	11200	10900
	35	1.7	11700	11300	11000	10600	10300	9940
	30	-1.1	10600	10300	9990	9670	9350	9040
	25	-3.9	9610	9330	9030	8750	8460	8160
	20	-6.7	8660	8400	8130	7870	7590	7310
	15	-9.4	7760	7520	7270	7020	6760	6500
	10	-12.2	6910	6690	6460	6210	5970	5710
	5	-15.0	6130	5900	5680	5450	5200	4950
KQZA009H8 Compressor Model ZB08KAE	40	4.4	14400	14000	13600	13100	12700	12300
	35	1.7	13300	12900	12500	12100	11700	11300
	30	-1.1	12200	11900	11500	11100	10700	10400
	25	-3.9	11200	10800	10500	10200	9790	9440
	20	-6.7	10200	9850	9530	9210	8890	8560
	15	-9.4	9170	8890	8600	8310	8010	7720
	10	-12.2	8230	7960	7700	7430	7170	6890
	5	-15.0	7300	7060	6830	6580	6350	6110
KQZA010H8 Compressor Model ZS09KAE	40	4.4	16900	16300	15800	15200	14600	14100
	35	1.7	15300	14800	14300	13800	13300	12700
	30	-1.1	13800	13400	12900	12500	12000	11500
	25	-3.9	12500	12100	11700	11300	10900	10400
	20	-6.7	11300	11000	10600	10200	9830	9440
	15	-9.4	10200	9910	9570	9230	8880	8540
	10	-12.2	9240	8950	8640	8330	8020	7720
	5	-15.0	8330	8070	7790	7520	7240	6960
KQZA011H8 Compressor Model ZS11KAE	40	4.4	19900	19300	18600	18000	17300	16600
	35	1.7	18100	17500	16900	16300	15700	15100
	30	-1.1	16400	15800	15300	14800	14200	13600
	25	-3.9	14800	14400	13900	13400	12800	12300
	20	-6.7	13400	13000	12500	12100	11600	11200
	15	-9.4	12100	11700	11300	10900	10500	10100
	10	-12.2	11000	10600	10200	9870	9500	9130
	5	-15.0	9880	9560	9230	8900	8560	8240
KQZA015H8 Compressor Model ZS13KAE	40	4.4	22200	21500	20800	20000	19200	18500
	35	1.7	20200	19500	18800	18100	17400	16700
	30	-1.1	18300	17700	17100	16500	15800	15200
	25	-3.9	16600	16100	15500	14900	14400	13800
	20	-6.7	15100	14600	14000	13500	13000	12500
	15	-9.4	13600	13200	12700	12300	11800	11300
	10	-12.2	12300	11900	11500	11100	10700	10300
	5	-15.0	11100	10800	10400	10000	9640	9250
KQZA020H8 Compressor Model ZS15KAE	40	4.4	26800	25900	24900	24000	23100	22100
	35	1.7	24300	23500	22600	21800	20900	20100
	30	-1.1	22000	21300	20500	19700	19000	18200
	25	-3.9	19900	19200	18500	17800	17100	16400
	20	-6.7	17900	17300	16700	16000	15400	14800
	15	-9.4	16000	15500	15000	14400	13800	13300
	10	-12.2	14400	13900	13400	12900	12400	11900
	5	-15.0	12800	12400	11900	11500	11000	10500
KQZA025H8 Compressor Model ZS19KAE	40	4.4	30100	29100	28000	27000	25900	24800
	35	1.7	27300	26400	25500	24500	23500	22600
	30	-1.1	24800	24000	23100	22200	21400	20500
	25	-3.9	22600	21800	21000	20200	19400	18600
	20	-6.7	20500	19800	19000	18300	17600	16900
	15	-9.4	18500	17900	17300	16600	15900	15300
	10	-12.2	16800	16200	15600	15000	14400	13900
	5	-15.0	15100	14600	14100	13600	13100	12500

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h Ambient Temperature					
			85°F	90°F	95°F	100°F	105°F	110°F
	°F	°C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)
KQZA030H8 Compressor Model ZS21KAE	40	4.4	38200	36800	35500	34100	32800	--
	35	1.7	34700	33500	32300	31000	29800	28500
	30	-1.1	31600	30400	29300	28200	27100	25900
	25	-3.9	28700	27700	26600	25600	24600	23500
	20	-6.7	26000	25100	24200	23300	22300	21400
	15	-9.4	23600	22800	21900	21000	20300	19400
	10	-12.2	21400	20600	19900	19100	18400	17600
	5	-15.0	19300	18600	18000	17300	16600	16000
KQZA035H8 Compressor Model ZS26KAE	40	4.4	46000	44700	43300	41900	40500	39100
	35	1.7	41700	40500	39200	37900	36600	35300
	30	-1.1	37700	36600	35400	34200	33000	31800
	25	-3.9	34000	33000	31900	30800	29700	28500
	20	-6.7	30600	29600	28600	27600	26600	25500
	15	-9.4	27400	26600	25600	24700	23700	22700
	10	-12.2	24500	23700	22900	22000	21100	20200
	5	-15.0	21800	21100	20300	19500	18600	17700
KQZA040H8 Compressor Model ZS29KAE	40	4.4	50200	48600	46900	45200	43500	41800
	35	1.7	45600	44100	42600	41000	39400	37900
	30	-1.1	41300	40000	38600	37200	35700	34300
	25	-3.9	37400	36200	34900	33700	32400	31100
	20	-6.7	33900	32800	31600	30500	29300	28100
	15	-9.4	30700	29700	28600	27600	26500	25500
	10	-12.2	27700	26800	25900	24900	24000	23000
	5	-15.0	25000	24200	23300	22500	21600	20800
KQZA045H8 Compressor Model ZS33KAE	40	4.4	55400	53500	51600	49700	47700	45800
	35	1.7	50300	48600	46900	45100	43400	41600
	30	-1.1	45700	44200	42600	41000	39400	37700
	25	-3.9	41500	40100	38600	37200	35700	34300
	20	-6.7	37600	36300	35100	33700	32400	31100
	15	-9.4	34100	32900	31800	30600	29400	28200
	10	-12.2	30900	29800	28700	27700	26600	25600
	5	-15.0	27900	26900	26000	25000	24100	23100
KQZA050H8 Compressor Model ZB38KCE	40	4.4	65100	62800	60400	58000	55400	52800
	35	1.7	59300	57200	55000	52700	50400	48000
	30	-1.1	53800	51900	49800	47800	45700	43500
	25	-3.9	48600	46800	45000	43100	41200	39200
	20	-6.7	43800	42100	40400	38700	37000	35200
	15	-9.4	39200	37700	36200	34700	33100	31500
	10	-12.2	35000	33600	32200	30800	29400	28100
	5	-15.0	31000	29800	28600	27300	26100	24900
KQZA060H8 Compressor Model ZB45KCE	40	4.4	74300	71600	68900	66000	63100	60100
	35	1.7	67700	65200	62700	60000	57400	54600
	30	-1.1	61400	59100	56800	54400	52000	49400
	25	-3.9	55500	53400	51300	49100	46800	44600
	20	-6.7	49900	48000	46000	44100	42100	40000
	15	-9.4	44700	43000	41200	39400	37600	35700
	10	-12.2	39800	38300	36700	35100	33400	31800
	5	-15.0	35400	33900	32500	31000	29600	28200

† Available with Digital compressor (consult factory)  
Shaded Area Restriction: 20°F Max Superheat

SELECTION CAPACITY DATA

KQ - QUIET CONDENSING UNITS

**R448A R449A High and Medium Temperature**

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h						Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h					
	Ambient Temperature		85°F	90°F	95°F	100°F	105°F	110°F		Ambient Temperature		85°F	90°F	95°F	100°F	105°F	110°F
	° F	° C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)		° F	° C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)
KQHA006H8 Compressor Model RST45C2E	40	4.4	--	--	--	--	--	--	KQZA025H8 Compressor Model ZS19KAE	40	4.4	29000	28000	26900	25700	24400	23000
	35	1.7	--	--	--	--	--	--		35	1.7	26100	25200	24200	23100	22000	20600
	30	-1.1	7790	7520	7240	6950	6660	6350		30	-1.1	23500	22700	21900	20900	19800	18600
	25	-3.9	7030	6770	6520	6250	5980	5700		25	-3.9	21200	20500	19700	18900	17900	16800
	20	-6.7	6320	6080	5840	5600	5340	5090		20	-6.7	19200	18600	17900	17100	16200	15200
	15	-9.4	5650	5430	5200	4980	4750	4520		15	-9.4	17400	16800	16200	15500	14700	13800
	10	-12.2	5020	4820	4620	4410	4210	4000		10	-12.2	15700	15300	14700	14100	13400	12600
	5	-15.0	4440	4250	4070	3880	3700	3510		5	-15.0	14200	13800	13400	12800	12200	11400
0	-17.8	3900	3730	3560	3390	3220	3060	0	-17.8	12800	12500	12100	11600	11000	10400		
KQZA007H8 Compressor Model ZB06KAE	40	4.4	10900	10500	10200	9850	9500	9150	KQZA030H8 Compressor Model ZS21KAE	40	4.4	38800	37400	36100	34700	33200	31700
	35	1.7	9920	9600	9290	8970	8650	8330		35	1.7	35500	34300	33000	31700	30300	28900
	30	-1.1	9010	8720	8430	8140	7840	7550		30	-1.1	32400	31300	30100	28900	27600	26200
	25	-3.9	8150	7890	7620	7360	7080	6820		25	-3.9	29500	28400	27300	26200	25000	23700
	20	-6.7	7350	7100	6870	6610	6370	6120		20	-6.7	26700	25800	24700	23600	22500	21300
	15	-9.4	6590	6370	6160	5940	5700	5480		15	-9.4	24200	23200	22300	21300	20200	19100
	10	-12.2	5890	5700	5500	5300	5090	4880		10	-12.2	21700	20900	20000	19000	18000	16900
	5	-15.0	5250	5080	4900	4710	4530	4320		5	-15.0	19400	18600	17800	16900	15900	14900
0	-17.8	4660	4510	4350	4180	4010	3830	0	-17.8	17300	16500	15700	14900	13900	12900		
KQZA008H8 Compressor Model ZB07KAE	40	4.4	13000	12500	12100	11700	11200	10800	KQZA035H8 Compressor Model ZS26KAE	40	4.4	45500	44100	42500	40800	38900	36800
	35	1.7	11800	11400	11000	10600	10200	9850		35	1.7	41200	39900	38400	36800	35000	32900
	30	-1.1	10700	10300	10000	9640	9290	8940		30	-1.1	37200	36000	34600	33100	31300	29400
	25	-3.9	9660	9340	9020	8710	8400	8080		25	-3.9	33600	32400	31100	29700	28000	26200
	20	-6.7	8680	8410	8120	7840	7560	7280		20	-6.7	30200	29100	27900	26500	25000	23200
	15	-9.4	7780	7530	7280	7030	6770	6530		15	-9.4	27100	26100	25000	23700	22200	20600
	10	-12.2	6940	6720	6500	6280	6050	5830		10	-12.2	24300	23400	22300	21100	19800	18200
	5	-15.0	6180	5980	5790	5590	5380	5190		5	-15.0	21700	20900	19900	18800	17500	16100
0	-17.8	5490	5310	5130	4960	4780	4610	0	-17.8	19300	18600	17800	16800	15600	14200		
KQZA009H8 Compressor Model ZB08KAE	40	4.4	15200	14700	14100	13600	13000	12500	KQZA040H8 Compressor Model ZS29KAE	40	4.4	51900	50300	48600	46800	45000	43100
	35	1.7	13800	13300	12800	12400	11900	11400		35	1.7	47400	45900	44300	42700	41000	39200
	30	-1.1	12500	12100	11600	11200	10800	10400		30	-1.1	43100	41700	40300	38800	37200	35600
	25	-3.9	11300	10900	10500	10100	9770	9390		25	-3.9	39200	37900	36500	35100	33700	32100
	20	-6.7	10100	9810	9480	9140	8810	8480		20	-6.7	35400	34200	33000	31700	30300	28900
	15	-9.4	9070	8790	8490	8200	7910	7620		15	-9.4	31900	30800	29700	28500	27200	25800
	10	-12.2	8100	7840	7590	7340	7080	6830		10	-12.2	28700	27700	26600	25400	24200	22900
	5	-15.0	7220	7000	6770	6550	6330	6110		5	-15.0	25600	24700	23600	22600	21400	20200
0	-17.8	6420	6220	6030	5830	5640	5440	0	-17.8	22800	21900	20900	19900	18800	17600		
KQZA010H8 Compressor Model ZS09KAE	40	4.4	16100	15700	15300	14800	14200	13500	KQZA045H8 Compressor Model ZS33KAE	40	4.4	56100	54300	52400	50400	48400	46400
	35	1.7	14500	14200	13800	13300	12700	12100		35	1.7	51300	49600	47900	46100	44200	42300
	30	-1.1	13100	12700	12400	11900	11500	10900		30	-1.1	46800	45200	43600	42000	40200	38400
	25	-3.9	11800	11500	11100	10700	10300	9770		25	-3.9	42500	41100	39600	38100	36400	34700
	20	-6.7	10600	10300	10000	9660	9260	8790		20	-6.7	38600	37200	35800	34400	32900	31300
	15	-9.4	9480	9240	8990	8690	8330	7910		15	-9.4	34800	33600	32300	31000	29500	28000
	10	-12.2	8480	8290	8070	7810	7500	7120		10	-12.2	31300	30200	29000	27700	26300	24900
	5	-15.0	7590	7420	7240	7030	6760	6440		5	-15.0	28000	27000	25800	24600	23300	22000
0	-17.8	6760	6640	6500	6330	6120	5840	0	-17.8	25000	24000	22900	21700	20500	19200		
KQZA011H8 Compressor Model ZS11KAE	40	4.4	19200	18700	18100	17500	16700	15900	KQZA050H8 Compressor Model ZB38KCE	40	4.4	63000	60800	58500	56200	53900	--
	35	1.7	17300	16800	16300	15700	15100	14300		35	1.7	57400	55400	53300	51200	49100	47000
	30	-1.1	15600	15200	14700	14200	13500	12800		30	-1.1	52200	50300	48400	46500	44600	42700
	25	-3.9	14000	13600	13200	12700	12200	11500		25	-3.9	47400	45600	43900	42100	40400	38600
	20	-6.7	12600	12300	11900	11500	11000	10400		20	-6.7	42800	41200	39600	38000	36400	34900
	15	-9.4	11300	11000	10700	10300	9870	9330		15	-9.4	38600	37100	35700	34200	32700	31300
	10	-12.2	10100	9880	9610	9300	8900	8430		10	-12.2	34700	33300	31900	30600	29200	27800
	5	-15.0	9050	8860	8640	8370	8050	7620		5	-15.0	30900	29600	28400	27100	25800	24500
0	-17.8	8090	7930	7760	7550	7270	6920	0	-17.8	27400	26200	25000	23800	22600	21400		
KQZA015H8 Compressor Model ZS13KAE	40	4.4	21700	21100	20400	19600	18700	17700	KQZA060H8 Compressor Model ZB45KCE	40	4.4	74100	71400	68700	65900	63200	--
	35	1.7	19600	19000	18400	17700	16900	15900		35	1.7	67600	65100	62600	60100	57600	--
	30	-1.1	17600	17200	16600	16000	15200	14400		30	-1.1	61500	59200	56900	54700	52400	50100
	25	-3.9	15900	15400	15000	14400	13700	12900		25	-3.9	55800	53700	51600	49500	47500	45400
	20	-6.7	14300	13900	13500	13000	12400	11700		20	-6.7	50500	48600	46700	44700	42800	40900
	15	-9.4	12800	12500	12100	11700	11200	10500		15	-9.4	45500	43700	42000	40200	38500	36700
	10	-12.2	11500	11200	10900	10500	10100	9530		10	-12.2	40800	39200	37600	35900	34300	32700
	5	-15.0	10300	10100	9840	9520	9140	8640		5	-15.0	36400	34900	33400	31800	30300	28900
0	-17.8	9210	9040	8840	8600	8280	7870	0	-17.8	32200	30800	29400	27900	26500	25100		
KQZA020H8 Compressor Model ZS15KAE	40	4.4	25700	25000	24100	23100	22000	20700	† Available with Digital compressor (consult factory) Shaded Area Restriction: 20°F Max Superheat								
	35	1.7	23200	22500	21800	20900	19800	18600									
	30	-1.1	20900	20300	19600	18800	17900	16800									
	25	-3.9	18900	18300	17700	17000	16100	15100									
	20	-6.7	17000	16500	16000	15300	14500	13600									
	15	-9.4	15300	14900	14400	13800	13100	12300									
	10	-12.2	13700	13400	13000	12500	11900	11200									
	5	-15.0	12300	12000	11700	11300	10800	10200									
0	-17.8	11000	10800	10500	10200	9790	9260										

SELECTION CAPACITY DATA

KQ - QUIET CONDENSING UNITS

**R407C High and Medium Temperature**

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h						Ambient Temperature			
			85°F	90°F	95°F	100°F	105°F	110°F	100°F	110°F		
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	(37.8°C)	(43.3°C)		
°F	°C											
KQZA009H8  Compressor Model ZB08KAE	40	4.4	14200	13700	13200	12700	12200	11700				
	35	1.7	12800	12400	11900	11500	11000	10600				
	30	-1.1	11500	11100	10700	10400	10000	9640				
	25	-3.9	10400	10000	9690	9350	9030	8710				
	20	-6.7	9300	8990	8700	8420	8140	7870				
	15	-9.4	8310	8050	7790	7550	7310	7080				
	10	-12.2	7400	7180	6950	6740	6540	6350				
	5	-15.0	6570	6370	6180	6000	5830	5660				
	0	-17.8	5810	5630	5470	5310	5150	5010				
KQZA010H8  Compressor Model ZS09KAE	40	4.4	16000	15600	15100	14700	14200	13800				
	35	1.7	14600	14200	13800	13400	13000	12600				
	30	-1.1	13200	12900	12500	12200	11800	11500				
	25	-3.9	11900	11600	11300	11000	10700	10400				
	20	-6.7	10700	10500	10200	9890	9600	9310				
	15	-9.4	9570	9330	9080	8830	8560	8280				
	10	-12.2	8480	8270	8050	7800	7560	7290				
	5	-15.0	7440	7250	7040	6820	6580	6330				
	0	-17.8	6460	6280	6070	5860	5630	5370				
KQZA011H8  Compressor Model ZS11KAE	40	4.4	19000	18400	17900	17400	16900	16300				
	35	1.7	17300	16800	16300	15900	15400	14900				
	30	-1.1	15700	15300	14800	14400	14000	13600				
	25	-3.9	14200	13800	13400	13000	12700	12300				
	20	-6.7	12700	12400	12100	11700	11400	11000				
	15	-9.4	11400	11100	10800	10500	10100	9810				
	10	-12.2	10100	9810	9540	9250	8950	8630				
	5	-15.0	8840	8600	8350	8080	7790	7480				
	0	-17.8	7660	7440	7210	6940	6670	6360				
KQZA015H8  Compressor Model ZS13KAE	40	4.4	21200	20600	20000	19500	18900	18300				
	35	1.7	19400	18800	18300	17800	17200	16700				
	30	-1.1	17600	17100	16700	16200	15700	15200				
	25	-3.9	15900	15500	15100	14700	14200	13800				
	20	-6.7	14300	14000	13600	13200	12800	12400				
	15	-9.4	12800	12500	12100	11800	11400	11000				
	10	-12.2	11400	11100	10800	10400	10100	9700				
	5	-15.0	10000	9720	9420	9110	8770	8410				
	0	-17.8	8670	8420	8130	7820	7490	7130				
KQZA020H8  Compressor Model ZS15KAE	40	4.4	25300	24600	23900	23100	22400	21700				
	35	1.7	23100	22500	21800	21200	20500	19900				
	30	-1.1	21000	20400	19900	19300	18700	18100				
	25	-3.9	19000	18500	18000	17500	16900	16400				
	20	-6.7	17100	16700	16200	15700	15200	14700				
	15	-9.4	15300	14900	14500	14000	13600	13100				
	10	-12.2	13600	13200	12800	12400	12000	11500				
	5	-15.0	11900	11600	11200	10800	10400	10000				
	0	-17.8	10400	10000	9690	9320	8910	8490				
KQZA025H8  Compressor Model ZS19KAE	40	4.4	28300	27500	26700	25900	25100	24200				
	35	1.7	25800	25100	24400	23700	22900	22200				
	30	-1.1	23500	22900	22200	21600	20900	20200				
	25	-3.9	21300	20700	20100	19500	18900	18300				
	20	-6.7	19200	18700	18100	17600	17000	16500				
	15	-9.4	17200	16700	16200	15700	15200	14700				
	10	-12.2	15200	14800	14400	13900	13400	12900				
	5	-15.0	13400	13000	12600	12100	11700	11200				
	0	-17.8	11600	11200	10900	10400	9950	9440				
KQZA030H8  Compressor Model ZS21KAE	40	4.4	37400	36300	35200	34100	33100	32000				
	35	1.7	34200	33200	32200	31300	30300	29300				
	30	-1.1	31100	30300	29400	28500	27600	26700				
	25	-3.9	28200	27400	26700	25900	25000	24200				
	20	-6.7	25400	24700	24000	23300	22500	21800				
	15	-9.4	22800	22200	21500	20800	20100	19400				
	10	-12.2	20200	19700	19000	18400	17700	17000				
	5	-15.0	17800	17200	16700	16100	15400	14700				
	0	-17.8	15400	14900	14400	13800	13100	12500				
KQZA035H8  Compressor Model ZS26KAE	40	4.4	43700	42500	41300	40100	38900	37700				
	35	1.7	39800	38700	37700	36600	35500	34400				
	30	-1.1	36100	35200	34200	33300	32300	31300				
	25	-3.9	32600	31800	31000	30100	29200	28300				
	20	-6.7	29400	28600	27800	27100	26300	25400				
	15	-9.4	26200	25600	24900	24200	23400	22600				
	10	-12.2	23200	22600	22000	21400	20700	19900				
	5	-15.0	20400	19900	19300	18700	18000	17300				
	0	-17.8	17700	17200	16600	16000	15400	14700				

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h						Ambient Temperature			
			85°F	90°F	95°F	100°F	105°F	110°F	100°F	110°F		
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	(37.8°C)	(43.3°C)		
°F	°C											
KQZA040H8  Compressor Model ZS29KAE	40	4.4	48700	47300	46000	44600	43300	41900				
	35	1.7	44400	43200	42000	40700	39500	38300				
	30	-1.1	40300	39200	38100	37100	36000	34900				
	25	-3.9	36400	35500	34500	33500	32600	31500				
	20	-6.7	32700	31900	31100	30200	29300	28300				
	15	-9.4	29300	28500	27800	26900	26100	25200				
	10	-12.2	25900	25300	24600	23800	23000	22200				
	5	-15.0	22800	22200	21500	20800	20100	19200				
	0	-17.8	19800	19200	18600	17900	17100	16300				
KQZA045H8  Compressor Model ZS33KAE	40	4.4	52700	51300	49800	48300	46800	45300				
	35	1.7	48200	46800	45500	44200	42800	41400				
	30	-1.1	43800	42600	41400	40200	39000	37700				
	25	-3.9	39700	38600	37500	36400	35300	34200				
	20	-6.7	35700	34800	33800	32800	31800	30700				
	15	-9.4	32000	31100	30200	29300	28400	27400				
	10	-12.2	28400	27600	26800	25900	25000	24100				
	5	-15.0	24900	24200	23500	22700	21800	20900				
	0	-17.8	21600	21000	20200	19500	18600	17700				
KQZA050H8  Compressor Model ZB38KCE	40	4.4	60600	58800	57000	55100	53200	51200				
	35	1.7	55100	53400	51700	50000	48200	46400				
	30	-1.1	49900	48400	46800	45200	43600	41900				
	25	-3.9	45000	43600	42200	40700	39300	37800				
	20	-6.7	40500	39200	37900	36600	35300	34000				
	15	-9.4	36300	35200	34000	32900	31700	30600				
	10	-12.2	32500	31500	30500	29500	28500	27600				
	5	-15.0	--	--	--	--	--	--				
	0	-17.8	--	--	--	--	--	--				
KQZA060H8  Compressor Model ZB45KCE	40	4.4	72800	70400	67900	65400	62800	60100				
	35	1.7	66100	63900	61600	59200	56800	54300				
	30	-1.1	59800	57700	55600	53400	51200	49000				
	25	-3.9	53900	52000	50000	48000	46000	44000				
	20	-6.7	48300	46600	44800	43000	41200	39400				
	15	-9.4	43200	41600	40000	38400	36800	35300				
	10	-12.2	38400	37000	35600	34200	32800	31500				
	5	-15.0	--	--	--	--	--	--				
	0	-17.8	--	--	--	--	--	--				

Shaded Area Restriction: 20°F Max Superheat

# SELECTION CAPACITY DATA

# KQ - QUIET CONDENSING UNITS

## R404A R507 Low Temperature

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h						Ambient Temperature	
			85°F	90°F	95°F	100°F	105°F	110°F		
	°F	°C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)		
KQZA008L8  Compressor Model ZF03KAE	0	-17.8	5780	5570	5340	5130	4910	4680		
	-5	-20.6	5140	4950	4750	4560	4370	4170		
	-10	-23.3	4560	4400	4230	4060	3890	3710		
	-15	-26.1	4050	3910	3760	3610	3470	3320		
	-20	-28.9	3600	3470	3350	3220	3090	2970		
	-25	-31.7	3190	3090	2980	2880	2760	2660		
	-30	-34.4	2850	2750	2660	2570	2480	2390		
	-35	-37.2	2540	2470	2390	2310	2230	2150		
	-40	-40.0	2270	2200	2140	2080	2010	1950		
KQZA010L8  Compressor Model ZF04KAE	0	-17.8	7780	7490	7190	6900	6610	6300		
	-5	-20.6	6940	6670	6410	6140	5880	5610		
	-10	-23.3	6160	5930	5690	5450	5210	4970		
	-15	-26.1	5450	5230	5030	4810	4600	4400		
	-20	-28.9	4800	4620	4440	4250	4060	3880		
	-25	-31.7	4220	4070	3910	3740	3580	3420		
	-30	-34.4	3720	3590	3450	3300	3160	3020		
	-35	-37.2	3280	3170	3060	2940	2820	2690		
	-40	-40.0	2930	2840	2730	2630	2540	2430		
KQZA015L8  Compressor Model ZF05KAE	0	-17.8	9140	8800	8470	8120	7780	7440		
	-5	-20.6	8220	7930	7620	7300	7000	6680		
	-10	-23.3	7360	7090	6810	6540	6250	5980		
	-15	-26.1	6560	6310	6070	5820	5570	5310		
	-20	-28.9	5810	5600	5390	5160	4940	4710		
	-25	-31.7	5130	4950	4750	4560	4370	4160		
	-30	-34.4	4520	4360	4190	4020	3850	3660		
	-35	-37.2	3980	3840	3690	3540	3390	3230		
	-40	-40.0	3500	3380	3250	3120	2990	2860		
KQZA020L8  Compressor Model ZF07KAE	0	-17.8	13500	12900	12400	11800	11200	10600		
	-5	-20.6	12200	11700	11200	10700	10200	9650		
	-10	-23.3	11000	10500	10100	9660	9200	8730		
	-15	-26.1	9870	9500	9100	8700	8290	7880		
	-20	-28.9	8840	8510	8160	7810	7460	7090		
	-25	-31.7	7880	7590	7280	6980	6660	6340		
	-30	-34.4	6970	6710	6450	6170	5900	5620		
	-35	-37.2	6090	5870	5630	5390	5150	4910		
	-40	-40.0	5240	5030	4820	4610	4400	4180		
KQZA025L8  Compressor Model ZF08K4E	0	-17.8	15700	15100	14500	13800	13200	12500		
	-5	-20.6	14300	13700	13200	12600	12000	11400		
	-10	-23.3	12900	12500	12000	11500	10900	10400		
	-15	-26.1	11700	11300	10800	10400	9880	9390		
	-20	-28.9	10500	10100	9740	9330	8910	8480		
	-25	-31.7	9390	9070	8730	8370	8000	7600		
	-30	-34.4	8370	8090	7780	7470	7130	6780		
	-35	-37.2	7440	7170	6910	6620	6320	6010		
	-40	-40.0	6560	6320	6080	5820	5550	5270		
KQZA030L8  Compressor Model ZF09K4E	0	-17.8	17200	16500	15800	15100	14400	13700		
	-5	-20.6	15700	15100	14400	13800	13200	12500		
	-10	-23.3	14200	13700	13100	12600	12000	11400		
	-15	-26.1	12900	12400	11900	11400	10900	10400		
	-20	-28.9	11600	11200	10800	10300	9850	9380		
	-25	-31.7	10400	10000	9660	9270	8870	8460		
	-30	-34.4	9280	8970	8630	8290	7940	7570		
	-35	-37.2	8230	7960	7660	7360	7050	6720		
	-40	-40.0	7240	7000	6740	6480	6190	5910		
KQZA035L8  Compressor Model ZF11K4E	0	-17.8	20600	19700	18900	18000	17000	16100		
	-5	-20.6	18800	18100	17300	16500	15600	14700		
	-10	-23.3	17100	16500	15800	15000	14300	13500		
	-15	-26.1	15600	15000	14300	13700	13000	12300		
	-20	-28.9	14000	13500	13000	12400	11800	11200		
	-25	-31.7	12600	12200	11700	11200	10600	10100		
	-30	-34.4	11300	10900	10500	10000	9560	9070		
	-35	-37.2	10000	9670	9310	8930	8520	8100		
	-40	-40.0	8840	8550	8220	7890	7540	7160		

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h						Ambient Temperature	
			85°F	90°F	95°F	100°F	105°F	110°F		
	°F	°C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)		
KQZA045L8  Compressor Model ZF13K4E	0	-17.8	25500	24500	23500	22500	21400	20400		
	-5	-20.6	23100	22200	21300	20400	19500	18500		
	-10	-23.3	20800	20000	19200	18400	17600	16700		
	-15	-26.1	18700	18000	17300	16500	15800	15100		
	-20	-28.9	16700	16100	15400	14800	14100	13500		
	-25	-31.7	14900	14300	13700	13100	12600	12000		
	-30	-34.4	13200	12600	12100	11600	11100	10600		
	-35	-37.2	11600	11100	10600	10200	9760	9360		
	-40	-40.0	10200	9720	9290	8890	8520	8180		
KQZA055L8  Compressor Model ZF15K4E	0	-17.8	30900	29700	28400	27200	25800	24500		
	-5	-20.6	28100	27000	25900	24700	23600	22300		
	-10	-23.3	25500	24500	23500	22500	21400	20300		
	-15	-26.1	23000	22100	21200	20300	19400	18400		
	-20	-28.9	20700	19900	19100	18300	17500	16600		
	-25	-31.7	18500	17800	17200	16500	15700	15000		
	-30	-34.4	16500	15900	15300	14700	14100	13400		
	-35	-37.2	14600	14100	13600	13100	12500	11900		
	-40	-40.0	12900	12500	12000	11600	11100	10600		
KQZA060L8  Compressor Model ZF18K4E	0	-17.8	35600	34200	32800	31400	29900	28400		
	-5	-20.6	32500	31200	30000	28700	27400	26100		
	-10	-23.3	29500	28400	27300	26200	25000	23800		
	-15	-26.1	26700	25700	24800	23800	22800	21700		
	-20	-28.9	24100	23200	22400	21500	20600	19700		
	-25	-31.7	21600	20900	20200	19400	18600	17800		
	-30	-34.4	19300	18700	18000	17400	16700	16000		
	-35	-37.2	17100	16600	16000	15500	14900	14300		
	-40	-40.0	15000	14600	14100	13600	13100	12600		

# SELECTION CAPACITY DATA

# KQ - QUIET CONDENSING UNITS

## R407A Low Temperature

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KQZA010L8  Compressor Model ZF04KAE	0	-17.8	7020	6780	6550	6300	6070	5820
	-5	-20.6	6180	5980	5770	5550	5340	5130
	-10	-23.3	5420	5240	5060	4880	4690	4500
	-15	-26.1	4740	4590	4430	4270	4110	3940
	-20	-28.9	4130	4000	3860	3720	3580	3450
	-25	-31.7	3610	3490	3370	3250	3140	3020
	-30	-34.4	3150	3050	2950	2860	2750	2650
	-35	-37.2	2760	2690	2610	2530	2440	2350
	-40	-40.0	2460	2400	2330	2270	2190	2130
KQZA015L8  Compressor Model ZF05KAE	0	-17.8	8250	7980	7700	7430	7150	6870
	-5	-20.6	7290	7050	6810	6560	6300	6060
	-10	-23.3	6410	6200	5980	5760	5530	5310
	-15	-26.1	5610	5410	5220	5030	4840	4640
	-20	-28.9	4880	4720	4550	4390	4220	4040
	-25	-31.7	4240	4100	3960	3820	3670	3530
	-30	-34.4	3670	3560	3450	3320	3200	3080
	-35	-37.2	3200	3100	3010	2910	2800	2710
	-40	-40.0	2800	2720	2640	2570	2490	2410
KQZA020L8  Compressor Model ZF07KAE	0	-17.8	12500	12100	11700	11200	10800	10300
	-5	-20.6	11200	10800	10400	10000	9630	9200
	-10	-23.3	9930	9620	9290	8950	8580	8210
	-15	-26.1	8820	8550	8260	7960	7640	7310
	-20	-28.9	7810	7580	7320	7060	6780	6480
	-25	-31.7	6880	6680	6460	6230	5990	5720
	-30	-34.4	6020	5850	5660	5460	5240	5010
	-35	-37.2	5230	5070	4910	4730	4540	4320
	-40	-40.0	4460	4330	4180	4020	3840	3650
KQZA025L8  Compressor Model ZF08K4E	0	-17.8	14200	13700	13200	12700	12200	11700
	-5	-20.6	12700	12300	11900	11400	11000	10500
	-10	-23.3	11300	11000	10600	10200	9800	9380
	-15	-26.1	10000	9740	9410	9060	8710	8340
	-20	-28.9	8880	8600	8310	8010	7690	7370
	-25	-31.7	7800	7550	7300	7040	6760	6470
	-30	-34.4	6820	6600	6380	6140	5910	5650
	-35	-37.2	5930	5740	5540	5340	5130	4900
	-40	-40.0	5130	4960	4780	4600	4420	4230
KQZA030L8  Compressor Model ZF09K4E	0	-17.8	15500	15000	14500	14100	13600	13100
	-5	-20.6	14100	13700	13200	12800	12400	12000
	-10	-23.3	12700	12300	11900	11600	11200	10800
	-15	-26.1	11200	10900	10600	10300	9970	9660
	-20	-28.9	9890	9610	9330	9050	8780	8520
	-25	-31.7	8630	8390	8140	7900	7660	7440
	-30	-34.4	7530	7310	7080	6870	6660	6450
	-35	-37.2	6610	6400	6200	6000	5810	5630
	-40	-40.0	5920	5710	5520	5330	5150	4980
KQZA035L8  Compressor Model ZF11K4E	0	-17.8	19100	18500	17800	17200	16500	15900
	-5	-20.6	17400	16800	16300	15700	15100	14600
	-10	-23.3	15600	15100	14600	14200	13700	13200
	-15	-26.1	13800	13400	13000	12600	12200	11800
	-20	-28.9	12200	11800	11400	11100	10700	10400
	-25	-31.7	10600	10300	9980	9670	9370	9070
	-30	-34.4	9240	8970	8690	8410	8140	7890
	-35	-37.2	8100	7850	7600	7350	7120	6890
	-40	-40.0	7250	7010	6770	6550	6330	6130

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KQZA045L8  Compressor Model ZF13K4E	0	-17.8	24200	23500	22700	22000	21300	20600
	-5	-20.6	21600	21000	20300	19600	19000	18300
	-10	-23.3	19200	18600	18000	17400	16800	16200
	-15	-26.1	16900	16300	15800	15200	14700	14200
	-20	-28.9	14700	14200	13700	13200	12800	12400
	-25	-31.7	12800	12300	11900	11500	11100	10700
	-30	-34.4	11100	10700	10300	9940	9620	9350
	-35	-37.2	9690	9340	9000	8700	8440	8250
	-40	-40.0	8610	8300	8010	7770	7590	7470
KQZA055L8  Compressor Model ZF15K4E	0	-17.8	28800	27900	27000	26100	25200	24300
	-5	-20.6	25900	25100	24200	23400	22600	21700
	-10	-23.3	23100	22300	21600	20800	20100	19300
	-15	-26.1	20400	19800	19100	18400	17700	17000
	-20	-28.9	17900	17400	16800	16200	15600	15000
	-25	-31.7	15700	15200	14700	14200	13600	13100
	-30	-34.4	13800	13400	12900	12400	12000	11600
	-35	-37.2	12200	11800	11400	11100	10700	10300
	-40	-40.0	11000	10700	10300	10000	9730	9450
KQZA060L8  Compressor Model ZF18K4E	0	-17.8	33400	32400	31400	30400	29400	28300
	-5	-20.6	29900	29000	28100	27200	26200	25200
	-10	-23.3	26600	25800	25000	24100	23200	22300
	-15	-26.1	23500	22800	22100	21300	20500	19600
	-20	-28.9	20700	20100	19400	18700	18000	17200
	-25	-31.7	18300	17700	17100	16500	15800	15100
	-30	-34.4	16100	15600	15100	14500	13900	13300
	-35	-37.2	14300	13800	13400	12900	12400	11800
	-40	-40.0	12800	12500	12100	11600	11200	10700



# SELECTION CAPACITY DATA

# KQ - QUIET CONDENSING UNITS

## R448A R449A Low Temperature

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KQZA010L8 Compressor Model ZF04KAE	0	-17.8	7220	7000	6760	6530	6290	6050
	-5	-20.6	6410	6210	6000	5790	5590	5370
	-10	-23.3	5650	5480	5300	5110	4930	4740
	-15	-26.1	4960	4820	4650	4500	4340	4180
	-20	-28.9	4350	4220	4090	3950	3810	3670
	-25	-31.7	3800	3690	3570	3460	3340	3220
	-30	-34.4	3320	3220	3120	3030	2930	2840
	-35	-37.2	2910	2820	2750	2660	2590	2500
-40	-40.0	2570	2500	2440	2360	2300	2240	
KQZA015L8 Compressor Model ZF05KAE	0	-17.8	8490	8220	7940	7660	7380	7100
	-5	-20.6	7540	7310	7060	6820	6570	6320
	-10	-23.3	6680	6470	6260	6030	5820	5600
	-15	-26.1	5890	5690	5510	5320	5130	4930
	-20	-28.9	5160	5000	4840	4670	4490	4330
	-25	-31.7	4490	4370	4220	4080	3940	3790
	-30	-34.4	3920	3800	3680	3550	3430	3310
	-35	-37.2	3400	3310	3200	3100	3000	2890
-40	-40.0	2960	2880	2790	2710	2620	2540	
KQZA020L8 Compressor Model ZF07KAE	0	-17.8	12600	12200	11700	11300	10900	10500
	-5	-20.6	11200	10800	10500	10100	9720	9340
	-10	-23.3	9980	9660	9340	9020	8690	8360
	-15	-26.1	8890	8610	8340	8060	7770	7480
	-20	-28.9	7910	7670	7430	7180	6930	6690
	-25	-31.7	7010	6810	6600	6390	6180	5970
	-30	-34.4	6180	6010	5830	5650	5470	5290
	-35	-37.2	5400	5250	5100	4940	4790	4630
-40	-40.0	4650	4520	4390	4250	4110	3970	
KQZA025L8 Compressor Model ZF08K4E	0	-17.8	14800	14300	13900	13400	12900	12400
	-5	-20.6	13200	12900	12500	12000	11600	11200
	-10	-23.3	11800	11500	11100	10800	10400	10000
	-15	-26.1	10500	10200	9920	9610	9280	8930
	-20	-28.9	9330	9070	8810	8530	8240	7940
	-25	-31.7	8240	8010	7780	7530	7290	7020
	-30	-34.4	7250	7050	6840	6620	6400	6170
	-35	-37.2	6360	6170	5980	5790	5600	5390
-40	-40.0	5540	5370	5200	5030	4850	4680	
KQZA030L8 Compressor Model ZF09K4E	0	-17.8	16200	15700	15200	14800	14300	13700
	-5	-20.6	14600	14100	13700	13300	12800	12400
	-10	-23.3	13000	12700	12300	11900	11500	11100
	-15	-26.1	11600	11300	11000	10600	10300	9960
	-20	-28.9	10300	10000	9770	9480	9180	8890
	-25	-31.7	9150	8900	8660	8400	8150	7900
	-30	-34.4	8060	7840	7630	7420	7200	6980
	-35	-37.2	7060	6880	6690	6510	6310	6120
-40	-40.0	6160	5990	5820	5660	5500	5330	
KQZA035L8 Compressor Model ZF11K4E	0	-17.8	19900	19300	18700	18000	17400	16700
	-5	-20.6	17900	17400	16800	16200	15600	15000
	-10	-23.3	16000	15500	15000	14500	14000	13500
	-15	-26.1	14300	13900	13400	13000	12500	12000
	-20	-28.9	12700	12300	12000	11600	11200	10800
	-25	-31.7	11200	10900	10600	10300	9920	9570
	-30	-34.4	9900	9640	9360	9070	8780	8470
	-35	-37.2	8690	8460	8230	7990	7740	7470
-40	-40.0	7600	7400	7200	7000	6770	6560	

Model KQ	Saturated Suction Temp.		Selection Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KQZA045L8 Compressor Model ZF13K4E	0	-17.8	24600	23700	22700	21800	20800	19700
	-5	-20.6	22000	21200	20300	19400	18500	17600
	-10	-23.3	19500	18800	18100	17300	16500	15700
	-15	-26.1	17300	16600	16000	15300	14700	14000
	-20	-28.9	15200	14700	14100	13600	13000	12500
	-25	-31.7	13300	12900	12400	12000	11500	11100
	-30	-34.4	11600	11300	10900	10600	10300	9970
	-35	-37.2	10100	9850	9600	9380	9190	9030
-40	-40.0	8800	8620	8470	8380	8310	8290	
KQZA055L8 Compressor Model ZF15K4E	0	-17.8	29600	28500	27300	26200	24900	23700
	-5	-20.6	26500	25600	24600	23500	22400	21300
	-10	-23.3	23700	22900	22000	21100	20100	19200
	-15	-26.1	21100	20400	19600	18800	18000	17200
	-20	-28.9	18700	18100	17400	16800	16100	15400
	-25	-31.7	16500	16000	15400	14900	14300	13800
	-30	-34.4	14500	14100	13600	13200	12800	12400
	-35	-37.2	12700	12400	12100	11700	11400	11100
-40	-40.0	11200	10900	10700	10500	10300	10100	
KQZA060L8 Compressor Model ZF18K4E	0	-17.8	34900	33700	32300	31000	29600	28200
	-5	-20.6	31400	30300	29100	28000	26800	25500
	-10	-23.3	28100	27200	26200	25200	24100	23100
	-15	-26.1	25100	24300	23400	22600	21700	20800
	-20	-28.9	22300	21600	20900	20200	19500	18800
	-25	-31.7	19700	19200	18600	18000	17500	16900
	-30	-34.4	17400	16900	16500	16100	15700	15300
	-35	-37.2	15200	14900	14600	14300	14100	13900
-40	-40.0	13300	13100	12900	12800	12700	12600	

## High and Medium Temperature Models

Model KQ	Compressor Model No.	Power Supply	Compressor		Condenser Fan Motor			Unit		
			RLA	LRA	Quantity	Watts	FLA	MCA	MOP	
KQHA006H8-H	S2D	RST45C2E-CFV	208-230/1/60	4.9	30	1	165	1.7	7.8	15
	T3D	ZB06KAE-PFV	208-230/1/60	6.0	36	1	165	1.7	9.2	15
KQZA007H8-H	S2D	ZB06KAE-TF5	208-230/3/60	4.8	37.8	1	165	1.7	7.7	15
	T3D	ZB07KAE-PFV	208-230/1/60	6.3	48	1	165	1.7	9.6	15
KQZA008H8-H	S2D	ZB07KAE-TF5	208-230/3/60	5.2	37.8	1	165	1.7	8.2	15
	T3D	ZB08KAE-PFV	208-230/1/60	8.0	47.2	1	165	1.7	11.7	15
KQZA009H8-H	S2D	ZB08KAE-TF5	208-230/3/60	5.3	37.8	1	165	1.7	8.3	15
	T3D	ZS09KAE-PFV	208-230/1/60	10.0	41	1	165	1.7	14.2	20
KQZA010H8-H	S2D	ZS09KAE-TF5	208-230/3/60	8.0	55.4	1	165	1.7	11.7	15
	T3D	ZS09KAE-TFD	460/3/60	3.8	28	1	165	0.9	5.7	15
KQZA011H8-H	S2D	ZS11KAE-PFV	208-230/1/60	12.6	55	1	165	1.7	17.5	30
	T3D	ZS11KAE-TF5	208-230/3/60	10.4	58	1	165	1.7	14.7	25
KQZA015H8-H	S2D	ZS11KAE-TFD	460/3/60	4.3	28	1	165	0.9	6.3	15
	T3D	ZS13KAE-PFV	208-230/1/60	12.0	56	1	165	1.7	16.7	25
KQZA020H8-H	S2D	ZS13KAE-TF5	208-230/3/60	9.7	58	1	165	1.7	13.8	20
	T3D	ZS13KAE-TFD	460/3/60	4.8	29	1	165	0.9	6.9	15
KQZA025H8-H	S2D	ZS15KAE-PFV	208-230/1/60	15.7	68	1	165	1.7	21.3	35
	T3D	ZS15KAE-TF5	208-230/3/60	10.6	58	1	165	1.7	15.0	25
KQZA030H8-H	S2D	ZS15KAE-TFD	460/3/60	5.4	29	1	165	0.9	7.7	15
	T3D	ZS19KAE-PFV	208-230/1/60	18.0	75	1	165	1.7	24.2	40
KQZA035H8-H	S2D	ZS19KAE-TF5	208-230/3/60	13.7	73	1	165	1.7	18.8	30
	T3D	ZS19KAE-TFD	460/3/60	6.5	38	1	165	0.9	9.0	15
KQZA040H8-H	S2D	ZS21KAE-PFV	208-230/1/60	23.2	112	1	165	1.7	30.7	50
	T3D	ZS21KAE-TF5	208-230/3/60	15.2	93	1	165	1.7	20.7	35
KQZA045H8-H	S2D	ZS21KAE-TFD	460/3/60	6.9	48	1	165	0.9	9.5	15
	T3D	ZS26KAE-PFV	208-230/1/60	23.6	104	2	330	3.4	32.9	50
KQZA050H8-H	S2D	ZS26KAE-TF5	208-230/3/60	15.5	93	2	330	3.4	22.8	35
	T3D	ZS26KAE-TFD	460/3/60	6.9	48	2	330	1.8	10.4	15
KQZA060H8-H	S2D	ZS29KAE-PFV	208-230/1/60	26.1	137	2	330	3.4	36.0	60
	T3D	ZS29KAE-TF5	208-230/3/60	20.5	114	2	330	3.4	29.0	45
KQZA070H8-H	S2D	ZS29KAE-TFD	460/3/60	9.4	58	2	330	1.8	13.6	20
	T3D	ZS33KAE-PFV	208-230/1/60	28.2	146	2	330	3.4	38.7	60
KQZA080H8-H	S2D	ZS33KAE-TF5	208-230/3/60	22.3	114	2	330	3.4	31.3	50
	T3D	ZS33KAE-TFD	460/3/60	10.0	52	2	330	1.8	14.3	20
KQZA090H8-H	S2D	ZB38KCE-PFV	208-230/1/60	27.9	175	2	330	3.4	38.3	60
	T3D	ZB38KCE-TF5	208-230/3/60	22.1	115	2	330	3.4	31.0	50
KQZA100H8-H	S2D	ZB38KCE-TFD	460/3/60	9.6	63	2	330	1.8	13.8	20
	T3D	ZB45KCE-PFV	208-230/3/60	22.5	156	2	330	3.4	31.5	50
KQZA110H8-H	S2D	ZB45KCE-TF5	208-230/3/60	10.1	75	2	330	1.8	14.4	20
	T3D	ZB45KCE-TFD	460/3/60	10.1	75	2	330	1.8	14.4	20

Above listed RLA value is based on UL rating method and may differ from published compressor RLA data.

## Low Temperature Models

Model KQ	Compressor Model No.	Power Supply	Compressor		Condenser Fan Motor			Unit		
			RLA	LRA	Quantity	Watts	FLA	MCA	MOP	
KQZA008L8-H	S2D	ZF03KAE-PFV	208-230/1/60	6.1	42.3	1	165	1.7	9.3	15
	T3D	ZF03KAE-TF5	208-230/3/60	4.1	31.7	1	165	1.7	6.8	15
	T4D	ZF03KAE-TFD	460/3/60	2.5	19.6	1	165	0.9	4.0	15
KQZA010L8-H	S2D	ZF04KAE-PFV	208-230/1/60	7.4	40.3	1	165	1.7	11.0	15
	T3D	ZF04KAE-TF5	208-230/3/60	6.6	55.4	1	165	1.7	10.0	15
	T4D	ZF04KAE-TFD	460/3/60	3.4	28	1	165	0.9	5.2	15
KQZA015L8-H	S2D	ZF05KAE-PFV	208-230/1/60	8.7	55	1	165	1.7	12.6	20
	T3D	ZF05KAE-TF5	208-230/3/60	7.4	58	1	165	1.7	11.0	15
	T4D	ZF05KAE-TFD	460/3/60	3.2	28	1	165	0.9	4.9	15
KQZA020L8-H	S2D	ZF07KAE-PFV	208-230/1/60	13.9	75	1	165	1.7	19.1	30
	T3D	ZF07KAE-TF5	208-230/3/60	8.6	58	1	165	1.7	12.5	20
	T4D	ZF07KAE-TFD	460/3/60	4.0	28	1	165	0.9	5.9	15
KQZA025L8-H	S2D	ZF08K4E-PFV	208-230/1/60	16.4	73	1	165	1.7	22.2	35
	T3D	ZF08K4E-TF5	208-230/3/60	9.6	63	1	165	1.7	13.7	20
	T4D	ZF08K4E-TFD	460/3/60	5.0	31	1	165	0.9	7.2	15
KQZA030L8-H	S2D	ZF09K4E-PFV	208-230/1/60	15.4	88	1	165	1.7	21.0	35
	T3D	ZF09K4E-TF5	208-230/3/60	9.9	77	1	165	1.7	14.1	20
	T4D	ZF09K4E-TFD	460/3/60	5.0	39	1	165	0.9	7.2	15
KQZA035L8-H	S2D	ZF11K4E-PFV	208-230/1/60	18.9	109	1	165	1.7	25.3	40
	T3D	ZF11K4E-TF5	208-230/3/60	12.7	88	1	165	1.7	17.6	30
	T4D	ZF11K4E-TFD	460/3/60	6.4	44	1	165	0.9	8.9	15
KQZA045L8-H	S2D	ZF13K4E-PFV	208-230/1/60	25.0	129	2	330	3.4	34.7	50
	T3D	ZF13K4E-TF5	208-230/3/60	13.8	99	2	330	3.4	20.7	30
	T4D	ZF13K4E-TFD	460/3/60	7.1	49.5	2	330	1.8	10.7	15
KQZA055L8-H	S2D	ZF15K4E-PFV	208-230/1/60	27.9	169	2	330	3.4	38.3	60
	T3D	ZF15K4E-TF5	208-230/3/60	18.9	123	2	330	3.4	27.0	45
	T4D	ZF15K4E-TFD	460/3/60	8.9	62	2	330	1.8	12.9	20
KQZA060L8-H	T3D	ZF18K4E-TF5	208-230/3/60	21.8	156	2	330	3.4	30.7	50
	T4D	ZF18K4E-TFD	460/3/60	9.3	75	2	330	1.8	13.4	20

Above listed RLA value is based on UL rating method and may differ from published compressor RLA data.

**Annual Walk-In Energy Factor Ratings - High and Medium Temperature Models**

If a numerical value is listed in the table below, the following statement applies to that corresponding model: "This refrigeration system is designed and certified for use in walk-in cooler applications."

Model KQ	Power Supply	Outdoor Models				
		R404A R507	R407A	R448A R449A	R407C	
KQHA006H8-H	S2D	208-230/1/60	7.6	-	7.6	-
KQZA007H8-H	S2D	208-230/1/60	7.6	7.6	7.6	-
	T3D	208-230/3/60	7.6	7.6	7.6	-
KQZA008H8-H	S2D	208-230/1/60	7.6	7.6	7.6	-
	T3D	208-230/3/60	7.6	7.6	7.6	-
KQZA009H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
KQZA010H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA011H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA015H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA020H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA025H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA030H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA035H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA040H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA045H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA050H8-H	S2D	208-230/1/60	7.6	7.6	7.6	7.6
	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6
KQZA060H8-H	T3D	208-230/3/60	7.6	7.6	7.6	7.6
	T4D	460/3/60	7.6	7.6	7.6	7.6

- = Non-compliant model

**Annual Walk-In Energy Factor Ratings - Low Temperature Models**

If a numerical value is listed in the table below, the following statement applies to that corresponding model: "This refrigeration system is designed and certified for use in walk-in freezer applications."

Model KQ	Power Supply	Outdoor Models			
		R404A R507	R407A	R448A R449A	
KQZA008L8-H	S2D	208-230/1/60	2.89	-	-
	T3D	208-230/3/60	2.89	-	-
	T4D	460/3/60	2.89	-	-
KQZA010L8-H	S2D	208-230/1/60	2.94	2.93	2.93
	T3D	208-230/3/60	2.94	2.93	2.93
	T4D	460/3/60	2.94	2.93	2.93
KQZA015L8-H	S2D	208-230/1/60	2.99	2.97	2.98
	T3D	208-230/3/60	2.99	2.97	2.98
	T4D	460/3/60	2.99	2.97	2.98
KQZA020L8-H	S2D	208-230/1/60	3.12	3.11	3.11
	T3D	208-230/3/60	3.12	3.11	3.11
	T4D	460/3/60	3.12	3.11	3.11
KQZA025L8-H	S2D	208-230/1/60	3.15	3.13	3.14
	T3D	208-230/3/60	3.15	3.13	3.14
	T4D	460/3/60	3.15	3.13	3.14
KQZA030L8-H	S2D	208-230/1/60	3.15	3.15	3.15
	T3D	208-230/3/60	3.15	3.15	3.15
	T4D	460/3/60	3.15	3.15	3.15
KQZA035L8-H	S2D	208-230/1/60	3.15	3.15	3.15
	T3D	208-230/3/60	3.15	3.15	3.15
	T4D	460/3/60	3.15	3.15	3.15
KQZA045L8-H	S2D	208-230/1/60	3.15	3.15	3.15
	T3D	208-230/3/60	3.15	3.15	3.15
	T4D	460/3/60	3.15	3.15	3.15
KQZA055L8-H	S2D	208-230/1/60	3.15	3.15	3.15
	T3D	208-230/3/60	3.15	3.15	3.15
	T4D	460/3/60	3.15	3.15	3.15
KQZA060L8-H	T3D	208-230/3/60	3.15	3.15	3.15
	T4D	460/3/60	3.15	3.15	3.15

- = Non-compliant model

**SOUND DATA**

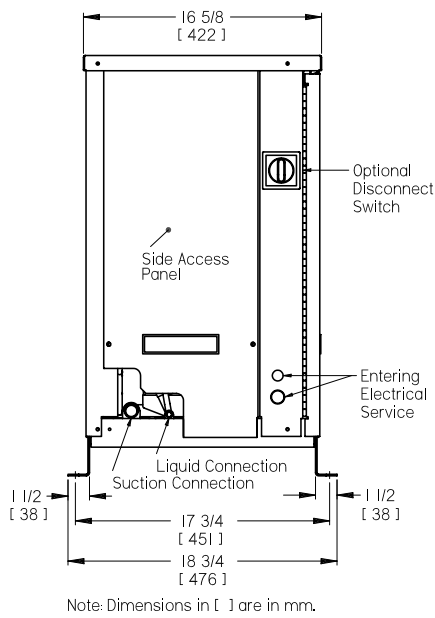
**High and Medium Temp. Models**

Model KQ	dBA @ 10 ft.	
	with Sound Insulated Compressor Compartment	without Sound Insulated Compressor Compartment
KQHA006H8	55	58
KQZA007H8	55	58
KQZA008H8	55	58
KQZA009H8	55	58
KQZA010H8	55	58
KQZA011H8	56	59
KQZA015H8	56	59
KQZA020H8	56	59
KQZA025H8	56	59
KQZA030H8	58	61
KQZA035H8	58	61
KQZA040H8	58	61
KQZA045H8	58	61
KQZA050H8	59	62
KQZA060H8	59	62

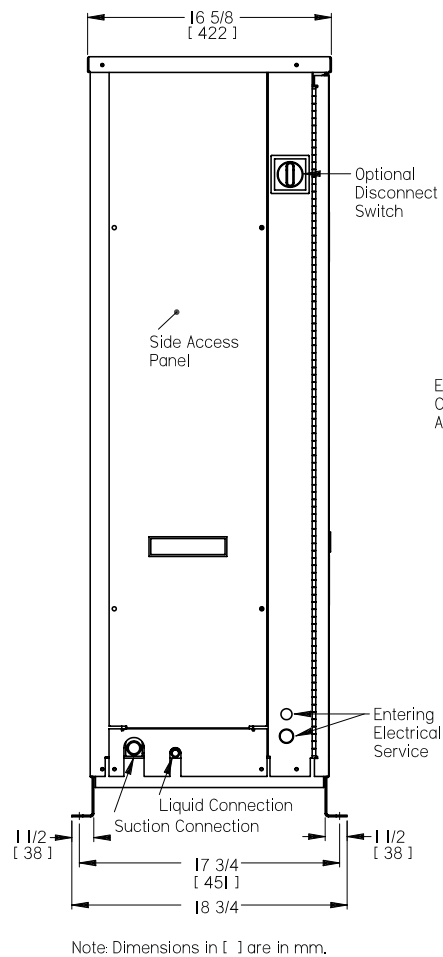
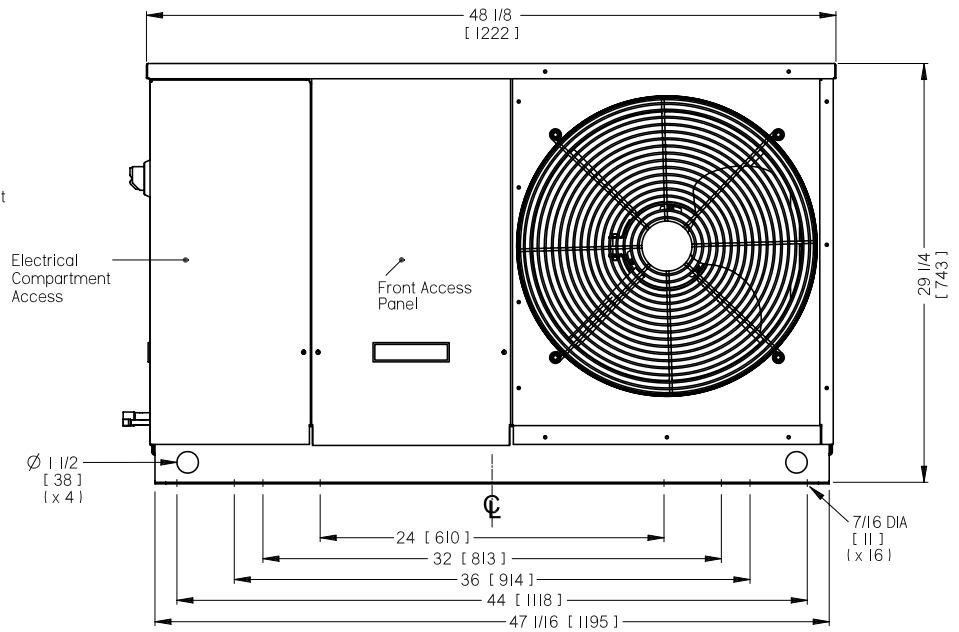
**Low Temperature Models**

Model KQ	dBA @ 10 ft.	
	with Sound Insulated Compressor Compartment	without Sound Insulated Compressor Compartment
KQZA008L8	53	56
KQZA010L8	53	56
KQZA015L8	53	56
KQZA020L8	53	56
KQZA025L8	54	57
KQZA030L8	55	58
KQZA035L8	55	58
KQZA045L8	59	61
KQZA055L8	59	61
KQZA060L8	59	61

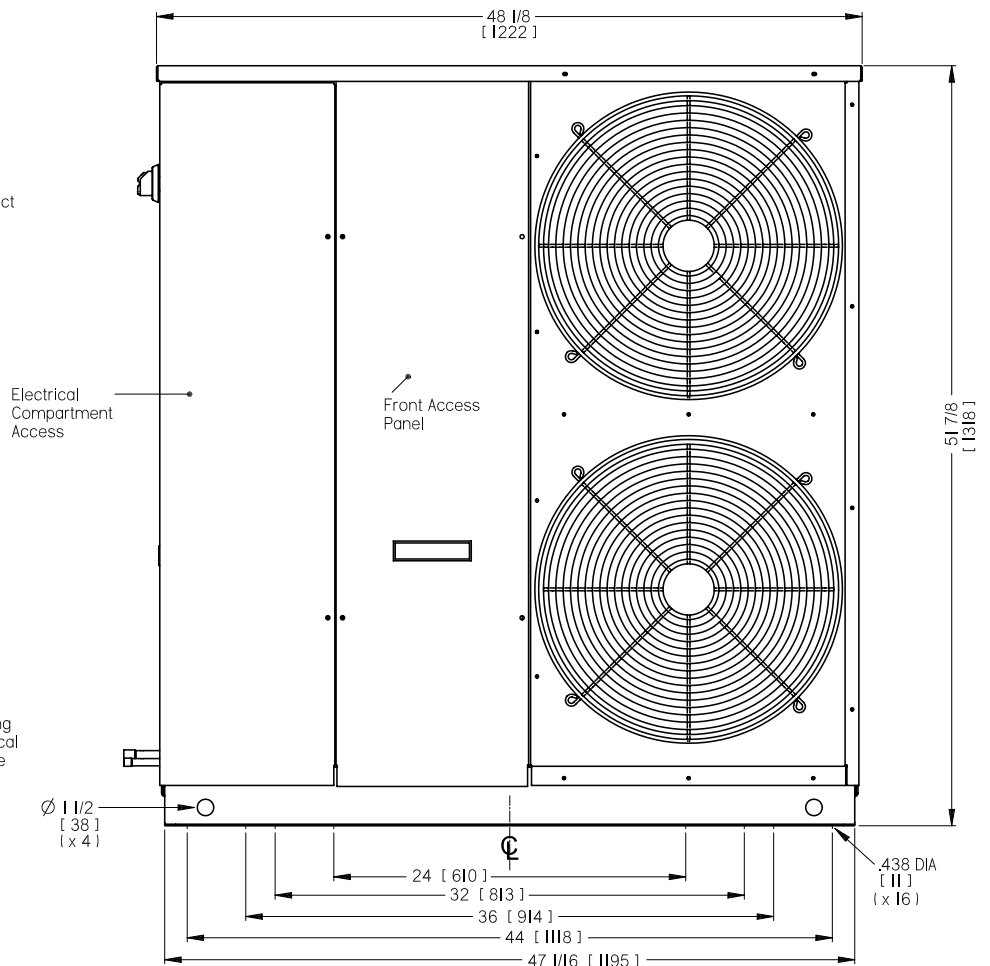
- Data is typical of "free field" conditions. Factors such as reflecting wall, background noise and installation may have significant influence on data
- Testing performed according to AHRI Standard 270
- For more accurate ratings refer to AHRI Standard 275 for correction factors due to reflecting planes
- Data is for 100% fan speed. Further sound reductions of approx. 4-6 dBA can be expected at ambients below 70°F



Note: Dimensions in [ ] are in mm.



Note: Dimensions in [ ] are in mm.



## DIMENSIONAL DATA

## KQ - QUIET CONDENSING UNITS

### High and Medium Temperature Models

Model KQ	Width		Depth		Height	
	Inches	mm	Inches	mm	Inches	mm
KQHA006H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA007H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA008H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA009H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA010H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA011H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA015H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA020H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA025H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA030H8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA035H8	48 1/8	1222	18 3/4	476	51 7/8	1318
KQZA040H8	48 1/8	1222	18 3/4	476	51 7/8	1318
KQZA045H8	48 1/8	1222	18 3/4	476	51 7/8	1318
KQZA050H8	48 1/8	1222	18 3/4	476	51 7/8	1318
KQZA060H8	48 1/8	1222	18 3/4	476	51 7/8	1318

### Low Temperature Models

Model KQ	Width		Depth		Height	
	Inches	mm	Inches	mm	Inches	mm
KQZA008L8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA010L8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA015L8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA020L8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA025L8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA030L8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA035L8	48 1/8	1222	18 3/4	476	29 1/4	743
KQZA045L8	48 1/8	1222	18 3/4	476	51 7/8	1318
KQZA055L8	48 1/8	1222	18 3/4	476	51 7/8	1318
KQZA060L8	48 1/8	1222	18 3/4	476	51 7/8	1318

## SPECIFICATIONS

### High and Medium Temperature Models

Model KQ	Unit Connections				R404A Receiver Capacity 90% Full *		Approx. Shipping Weight	
	Suction (OD)		Liquid (OD)		Lbs.	kg	Lbs.	kg
	Inches	mm	Inches	mm				
KQHA006H8	1/2	13	3/8	10	11.0	5.0	250	114
KQZA007H8	5/8	16	3/8	10	11.0	5.0	260	118
KQZA008H8	5/8	16	3/8	10	11.0	5.0	260	118
KQZA009H8	5/8	16	3/8	10	11.0	5.0	260	118
KQZA010H8	5/8	16	3/8	10	11.0	5.0	265	120
KQZA011H8	5/8	16	3/8	10	11.0	5.0	265	120
KQZA015H8	7/8	22	3/8	10	14.0	6.4	275	125
KQZA020H8	7/8	22	3/8	10	14.0	6.4	275	125
KQZA025H8	7/8	22	1/2	13	14.0	6.4	275	125
KQZA030H8	7/8	22	1/2	13	14.0	6.4	285	130
KQZA035H8	7/8	22	1/2	13	21.5	9.8	480	218
KQZA040H8	7/8	22	1/2	13	21.5	9.8	480	218
KQZA045H8	7/8	22	1/2	13	21.5	9.8	515	234
KQZA050H8	1 1/8	29	1/2	13	21.5	9.8	515	234
KQZA060H8	1 1/8	29	1/2	13	21.5	9.8	520	236

### Low Temperature Models

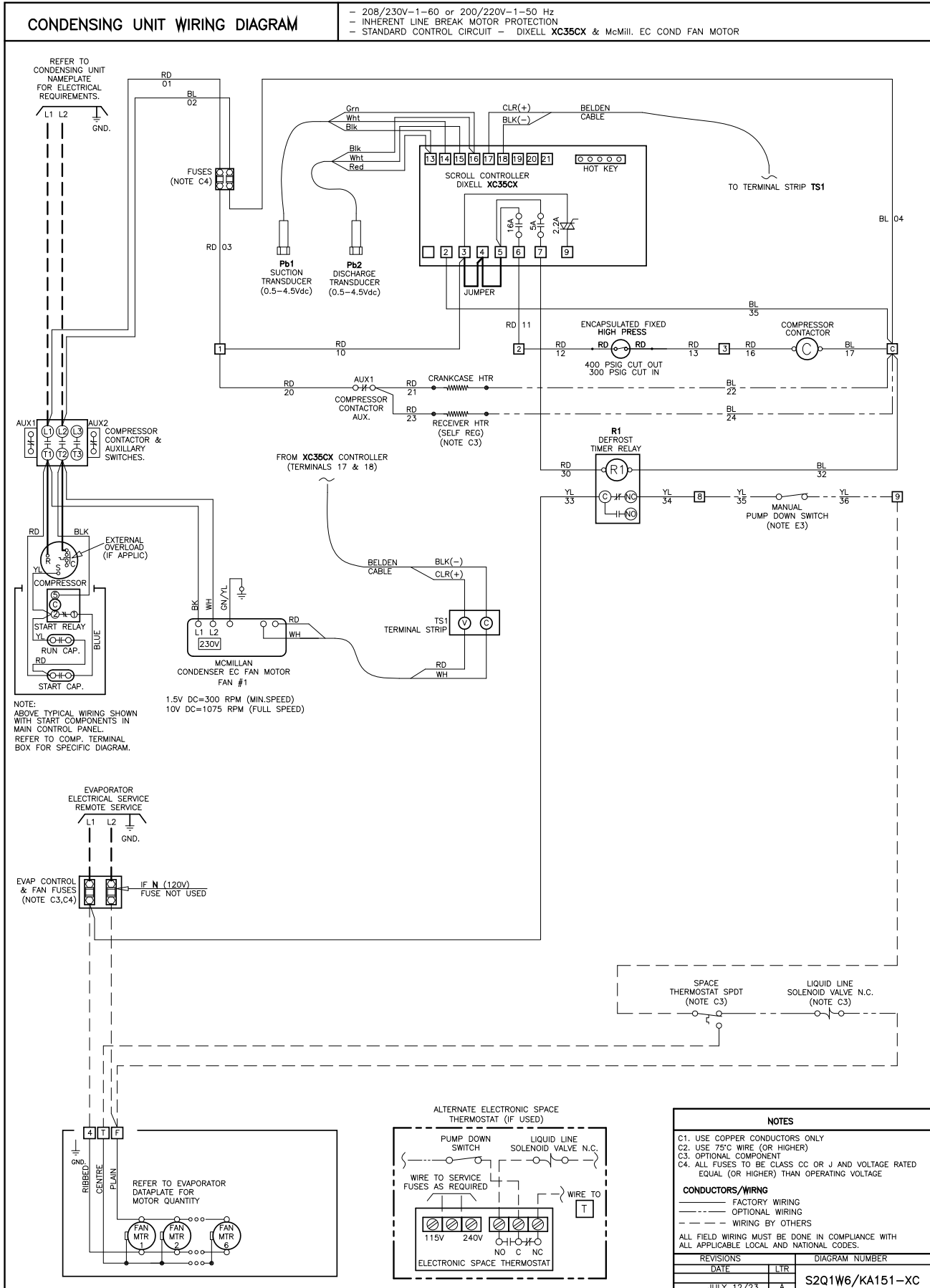
Model KQ	Unit Connections				R404A Receiver Capacity 90% Full *		Approx. Shipping Weight	
	Suction (OD)		Liquid (OD)		Lbs.	kg	Lbs.	kg
	Inches	mm	Inches	mm				
KQZA008L8	5/8	16	3/8	10	11.0	5.0	280	127
KQZA010L8	5/8	16	3/8	10	11.0	5.0	280	127
KQZA015L8	5/8	16	3/8	10	11.0	5.0	280	127
KQZA020L8	7/8	22	3/8	10	11.0	5.0	280	127
KQZA025L8	7/8	22	3/8	10	14.0	6.4	290	132
KQZA030L8	7/8	22	3/8	10	14.0	6.4	290	132
KQZA035L8	7/8	22	1/2	13	14.0	6.4	290	132
KQZA045L8	7/8	22	1/2	13	21.5	9.8	490	223
KQZA055L8	1 1/8	29	1/2	13	21.5	9.8	500	227
KQZA060L8	1 1/8	29	1/2	13	21.5	9.8	510	232

**\* NOTE ON ALTERNATE REFRIGERANTS:**

\* PUBLISHED RECEIVER CAPACITY IS BASED ON **R404A** ON MODELS USING "8" AS REFRIGERANT CODE.  
FOR ALTERNATE REFRIGERANTS, MULTIPLY **R404A** VALUE BY THE APPROPRIATE VALUE BELOW:

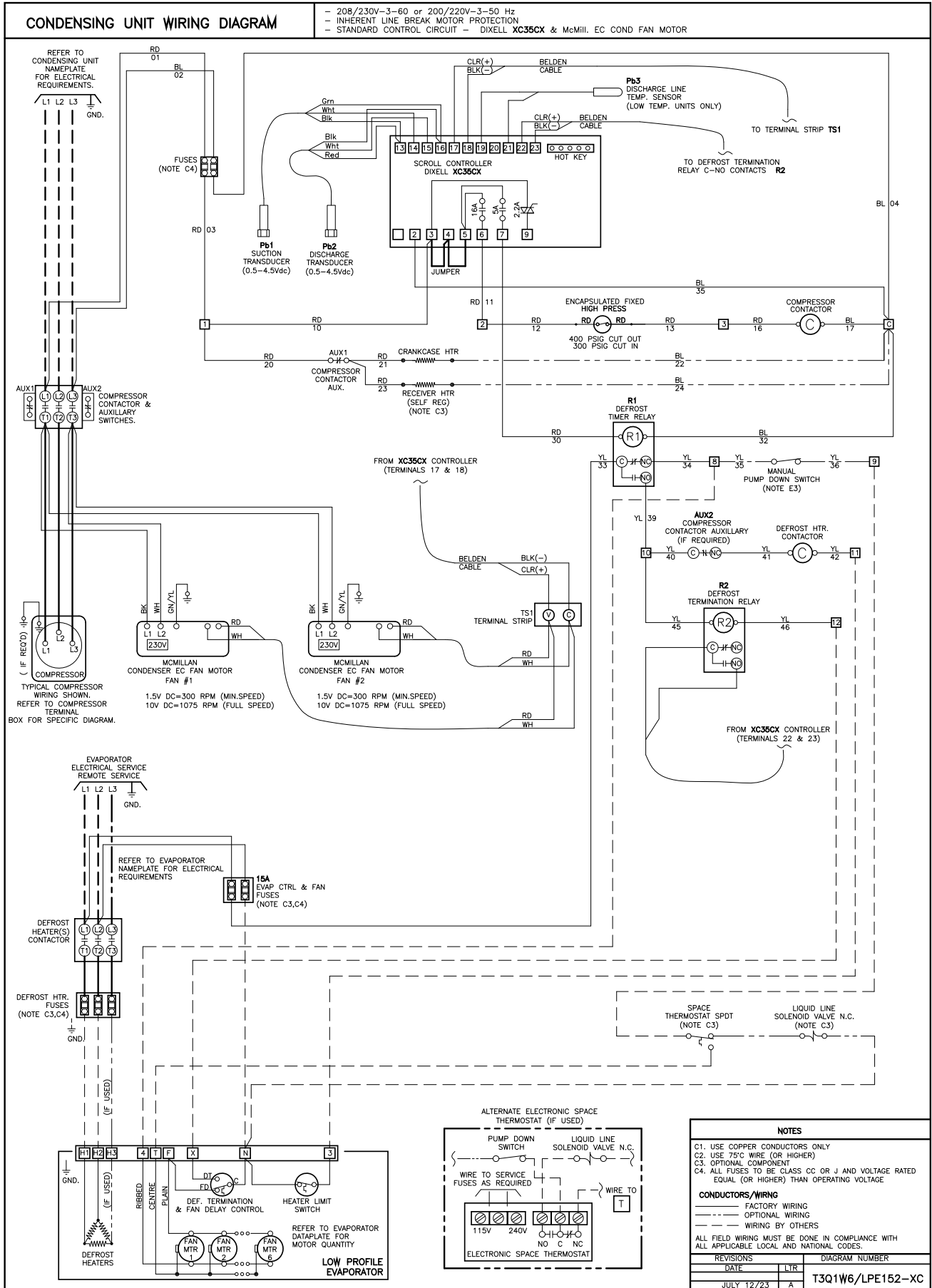
<b>R407A</b>	<b>R407C</b>	<b>R448A</b>	<b>R449A</b>	<b>R507</b>	<b>R22</b>
1.10	1.10	1.05	1.05	1.00	1.15

208-230/1/60 Models with (115V or 230V) Air Defrost Evaporator

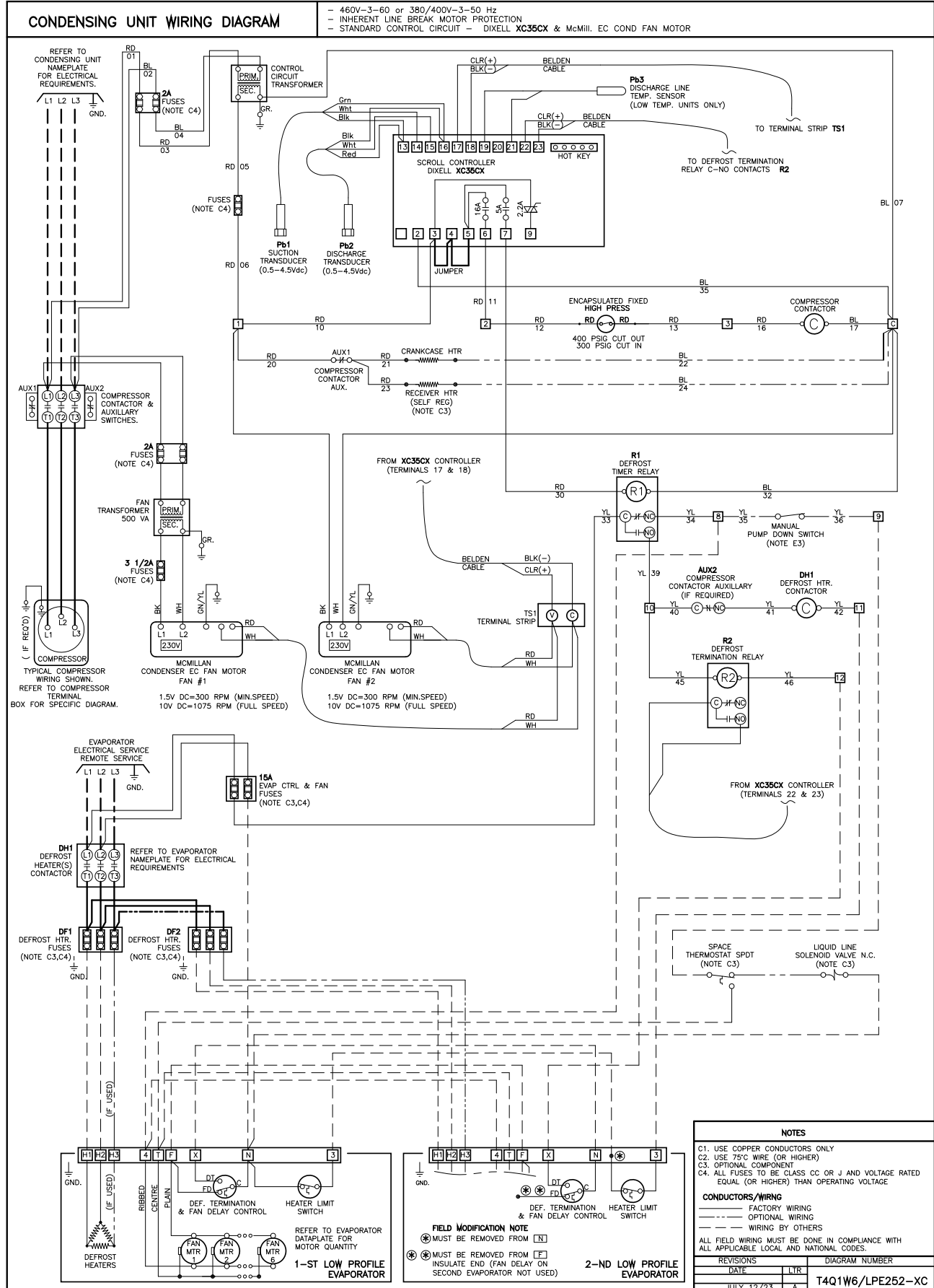




208-230/3/60 Models with Electrical Defrost Evaporator



460/3/60 Models with Electrical Defrost Evaporator



## CONTROLLER FUNCTIONS

XC35CX controller regulates and manages condensing unit functions:

- Drive ON/OFF (fixed capacity) compressors
- Drive ON/OFF (fixed speed) condenser fans
- Drive variable speed condenser fans (0-10V control)
- Provide relay output to run defrost events (\*)
- Generates alarm codes for running conditions outside of specified range
- Provide programming options for condensing unit lock-out (Repetitive Alarm codes conditions)
- Provide display options for running parameters and alarm codes
- Provide means for communicating operating parameters and alarming conditions for remote monitoring systems

XC35CX replaces the following components:

- Low Pressure control
- Discharge Thermostat
- Compressor Time Delay
- Pressure/Temperature switch for staggering Fixed Speed Condenser Fans
- System 450 or P352 controllers for variable speed condenser fans
- Defrost Time Clock (\*)

## CONTROLLER & COMPONENTS

- XC35CX Controller
- Pressure Transducers (Ratiometric 0-5VDC)
- Temperature Sensors (NTC86k, NTC10k, PT1000)
- Monitoring Adapter Tool (RS485 output converter)



## CONTROLLER INPUTS, PRESSURE AND TEMPERATURE SENSORS

**Pb1** Suction pressure transducer (ratiometric transducer 0-5V), Terminals #13, #14 and #16

**Pb2** Condensing pressure transducer (ratiometric transducer 0-5V), Terminals #13, #15 and #16

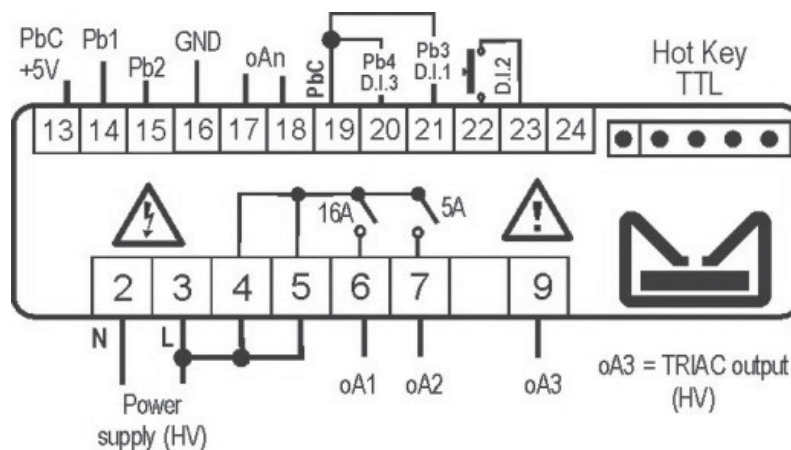
**Pb3** Discharge temperature sensor, Terminals #19 and #21 (Low temp units only (L8))

## CONTROLLER OUTPUTS

**oA1** Relay Output (16A), Terminal #3 and #6

**oA2** Relay Output (5A), Terminals #3 and #7 (\*)

**oAn** Analogue Output, Terminals #17 & #18 (EC Fan speed control input)



**(\*) Controllers with firmware 3.8 and higher only**

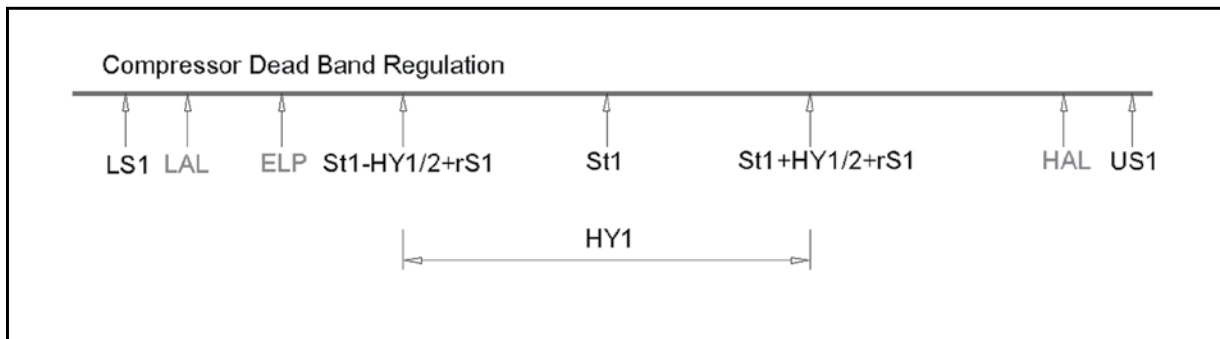
## FIXED COMPRESSOR REGULATION (Controlling parameters: Configuration Setpoint and alarms)

### Basic Setup Parameters and Settings "P1" programming level System Modes

Parameter	Description	Low	Med	Prog. Level
St1	SETPOINT 1 for compressor regulation (suction line)	7	27	Pr1
HY1	Regulation band for SETPOINT 1	14	20	Pr1
2on	Minimum delay between two compressor start-ups (min)	0		Pr1
2oF	Delay between compressor switch-off and start-up (min)	2		Pr1

### Advanced Setup Parameters and Settings "P2" programming level

Parameter	Description	Low	Med	Prog. Level
oA1	Digital output AUX1 configuration (Relay 16A)	CP1		Pr2
CPb	Compressor regulation probe (suction pressure transducer)	P1		Pr2
rtY	Type of regulation: dead band	db		Pr2
rS1	Offset for HY1, used to move the regulation band above and below the setpoint St1	0		Pr2
LS1	Minimum value for SETPOINT 1	-13		Pr2
US1	Maximum value for SETPOINT 1	135		Pr2
Con	Compressor ON in case of probe error (min)	5		Pr2
CoF	Compressor OFF in case of probe error (min)	5		Pr2
dnF	Minimum time for any compressor activation (min)	0	0.3	Pr2
dLP	DLT probe selection (Low temp units only)	P3		Pr2
dLt	Discharge line temperature for compressor (°F) (Low temp units only)	230		Pr2
dth	Differential for compressor restart after a dLt alarm (°F)	30		Pr2
dLd	DLT alarm activation delay (sec)	60		Pr2
dCt	Cooling time for compressor after DLT alarm (min)	3		Pr2
dLn	Number of DLT alarms in dLi hours before lock out	4		Pr2
dLi	Time interval (in hours) in which to check dLn number of DLT alarms	0		Pr2
LAL	Lower limit for pressure alarm on suction line (psi)	-13	8	Pr2
HAL	Higher limit for pressure alarm on suction line (psi)	130	130	Pr2
ELP	Electronic pressure control threshold (Low pressure alarm on suction line) (psi)	-2	10	Pr2
PEn	Max number of pressure control activations (ELP) before signaling an alarm	5	5	Pr2
PEi	Interval of time to count the actuations of the pressure control (ELP) before lock out	10	10	Pr2



- Compressor is activated when Suction pressure (Pb1) is higher than  $St1 + HY1/2 + rS1$
- Compressor is inactivated when Suction pressure (Pb1) is lower than  $St1 - HY1/2 + rS1$
- If Suction pressure is lower than **LAL** then **LA** alarm code generated (auto reset)
- If Suction pressure is higher than **HAL** then **HA** alarm code generated (auto reset)
- If Suction pressure is lower than **ELP** then **ELP** alarm code generated (auto reset)
- If **ELP** occurs **PEn** times within **PEi** then **ELL** (Electronic pressure switch lockout) alarm code generated (manual reset required)
- If Discharge Temperature (Pb3) is higher than **dLt** then **dLt** alarm code generated (auto reset)
- If **dLt** occurs **dLn** times within **dLi** then alarm code generated (manual reset required)

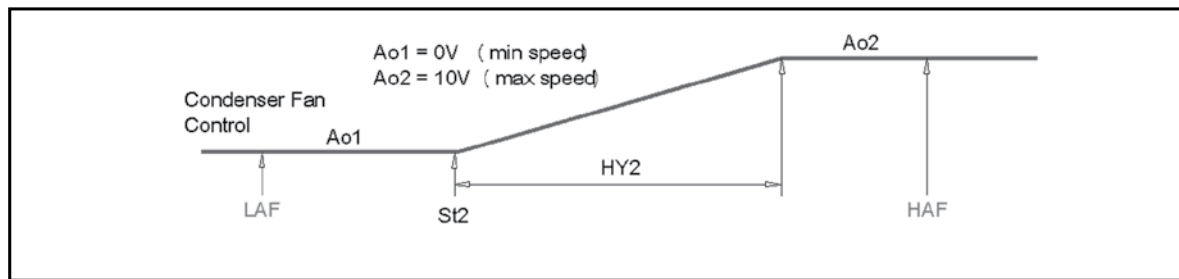
## CONDENSER FAN REGULATION (Controlling parameters: configuration setpoint and alarms)

### Basic Setup Parameters and settings "P1" programming level

Parameter	Description	Setting	Prog. Level
<b>St2</b>	Set point 2 (for CONDENSER FAN)	175	Pr1
<b>HY2</b>	Hysteresis for set point 2	15	Pr1








### Advanced Setup Parameters and settings "P2" programming level


Parameter	Description	Setting	Prog. Level
<b>oAn</b>	Analogue output configuration (PWM or 0-10V)	EFn	Pr2
<b>FPb</b>	Fan probe	P2	Pr2
<b>LS2</b>	Minimum value for SETPOINT 2	125	Pr2
<b>US2</b>	Maximum value for SETPOINT 2	205	Pr2
<b>LAF</b>	Lower limit for pressure alarm on discharge line (psi)	100	Pr2
<b>HAF</b>	Higher limit pressure alarm on discharge line (psi)	410	Pr2
<b>HFC</b>	Compressor stop in case of alarm HAF	no	Pr2
<b>dHF</b>	Delay before stopping the compressor in case of an alarm due to high pressure	30	Pr2
<b>PnF</b>	Max number HAF alarms before lock out	5	Pr2
<b>PIF</b>	Interval of time to count the actuations HAF alarms before lock out (min)	60	Pr2



- Fan activated when Condensing pressure (Pb2) is higher than St2
- Fan runs at maximum speed when Condensing pressure (Pb2) is higher than St2 +HY2
- Fan runs at reduced speed proportional to Condensing pressure (Pb2) between St2 and St2 + HY2
- If Condensing pressure is lower than **LAF** then **L2** alarm code is generated (auto reset)
- If Condensing pressure is higher than **HAF** then **H2** alarm code is generated (auto reset)
- If **HAF** occurs **PnF** times within **PIF** then **HLL** (High pressure lockout alarm) alarm code is generated (manual reset required)

## REAL TIME CLOCK SETTING:







1. Press and Hold  until "HUr" is displayed.
2. Press **SET**. Value for "HUr" will show in display.
3. Adjust with  or  to set hour.
4. Press **SET**. Parameter "Min" will show in display.
5. Press **SET** again. Value for "Min" will show in the display.
6. Adjust with  or  to set minutes.
7. Press **SET**. Parameter "dAY" will show in display.
8. Press **SET** again. Value for "dAY" will show in display.
9. Adjust with  or  to set day of the week.
10. Press **SET**. Parameter "Hd1" will show in the display

EXIT: Press both **SET** + , or wait for 30 sec.

## DEFROST AND PUMPDOWN DURATION SETTINGS:

- **Pdt = Pumpdown duration. Default setting 2 min**  
If after defrost initiation (Relay oA2 activation), compressor continues to work beyond "Pdt" time then alarm code "ALP" will be generated. Compressor will be stopped and defrost will continue until "otd" time elapses or input i2F is activated.
- **otd = Defrost duration. Default setting 40 minutes.**

### SETTING "Pdt" OR "otd"

1. Press **SET** and  for 3 sec
2. Scroll with  or  until "Pdt" or "otd" is displayed.
3. Press **SET**. Value for "Pdt" or "otd" will show in display (default values: 2 min / 40 min)
4. Change the value for "Pdt" or "otd" with  or  until desired value is displayed
5. Press **SET** again. New value for "Pdt" or "otd" will be stored and saved.
6. Press both **SET** and  or wait 30 seconds to EXIT









**(\*) Controllers with firmware 3.8 and higher only**

## REAL TIME CLOCK AND DEFROST FUNCTIONS (Controlling parameters: Configuration Setpoint, alarms and defrost schedule)



Parameter	Description	Low	Medium	Prog. Level
<b>Std</b>	Set point for Pump-down	7	27	Pr2
<b>HYd</b>	Hysteresis for Pump-down	14	20	Pr2
<b>Pdt</b>	Pump down duration	2		Pr1
<b>otd</b>	Off time defrost duration	40		Pr1
<b>oA2</b>	Digital output AUX2 configuration (Relay 5A)	PdU		Pr2
<b>i2F</b>	Digital input 2 function	PdE		Pr2
<b>i2P</b>	Digital input 2 polarity	CL		Pr2
<b>dF1</b>	1st Defrost Cycle starting time	nu		Pr1
<b>dF2</b>	2nd Defrost Cycle starting time	nu		Pr1
<b>dF3</b>	3rd Defrost Cycle starting time	nu		Pr1
<b>dF4</b>	4th Defrost Cycle starting time	nu		Pr1
<b>dF5</b>	5th Defrost Cycle starting time	nu		Pr1
<b>dF6</b>	6th Defrost Cycle starting time	nu		Pr1
<b>dF7</b>	7th Defrost Cycle starting time	nu		Pr1
<b>dF8</b>	8th Defrost Cycle starting time	nu		Pr1

## DEFROST SCHEDULE CONFIGURATION (\*)

- By default no defrost events are scheduled
- It is possible to program up to 8 Defrost events (setup parameters dF1 through dF8)
- To initiate Defrost events setup dF1 through dF8 parameters as shown below
- Setup as many defrost events as required (up to 8 events)
- Adjustment resolution for Defrost events is 10 min
- Any Dfx parameter with any value different than "nu" will initiate defrost at the time defined by Dfx value
- Set to "nu" all Dfx parameters that are not required to initiate any Defrost cycle (default setting)
- Example for Dfx settings to initiate four defrost cycles starting at 12:00 PM, 18:00 PM, 00:00 AM and 06: 00 AM  
 Set Df1 --> 12:00  
 Set Df2 --> 18:00  
 Set Df3 --> 00:00  
 Set Df4 --> 06:00  
 Set Df5 through Df8 --> "nu"
- Defrost Cycle by default is programed for 40 min. ("otd" parameter)
- If new duration for defrost cycle is required change parameter "otd" accordingly
- Electrical Defrost termination is either by time ("otd" parameter) or by temperature with digital input provided by Defrost termination thermostat (see typical wiring diagrams for electrical defrost systems)
- Parameters i2F (Digital input function) and i2P (Digital input polarity) are preset to complete digital input termination of Defrost Cycle (see default settings for Defrost configuration parameters table)

1. Press and Hold  until "HUr" is displayed.
  2. Press  multiple times until parameter "dF1" shows in display.
  3. Press **SET**. Value for "dF1" will show in display.
  4. Adjust with  or  to set first defrost event. (in 10 min. increments)
  5. Press **SET** again. Parameter "dF2" will show in display.
  6. Adjust with  or  to set second defrost event. (in 10 min. increments)
  7. Press **SET** again. Parameter "dF3" will show in display.
  8. Adjust with  or  to set third defrost event. (in 10 min. increments)
- Continue with the same procedure to set all required defrost events.  
 To inactivate "x" Defrost event, set parameter "dFx" to "nu" value.

## MANUAL INITIATION / TERMINATION OF THE DEFROST CYCLE

1. Press and Hold  when system is in refrigeration to start defrost.
2. Press and Hold  when system is in defrost to start refrigeration.

### NOTES:

- Parameters "Std" and "Hyd" are set with the same values as "St1" and "HY1".
- It is recommended to re-adjust accordingly if "St1" and "HY1" are modified.
- Parameter "Pdt" is set to 2 min.
- If after this time has elapsed and compressor has not stopped then compressor is forced, OFF and "ALP" label will be displayed. (Pressing any button on the keypad will erase "ALP")

**(\*) Controllers with firmware 3.8 and higher only**

## PROBE CONFIGURATIONS

Parameter	Description	Setting	Prog. Level
<b>Suction Probe (Pb1), Suction Pressure Transducer</b>			
<b>P1P</b>	Suction pressure probe P1 presence	Y	Pr2
<b>P1C</b>	Suction pressure transducer configuration	0-5	Pr2
<b>P1i</b>	Start of scaling for Suction pressure transducer (psi)	-15	Pr2
<b>P1E</b>	End of scaling for Suction pressure transducer (psi)	135	Pr2
<b>P1F</b>	Suction pressure transducer calibration (psi)	0	Pr2
<b>P1d</b>	Suction pressure transducer reading error delayed (min)	15	Pr2
<b>Condensing Probe (Pb2), Condensing Pressure Transducer</b>			
<b>P2P</b>	Condensing pressure probe P2 presence	Y	Pr2
<b>P2C</b>	Condensing pressure transducer configuration	0-5	Pr2
<b>P2i</b>	Start of scaling for Condensing pressure transducer (psi)	0	Pr2
<b>P2E</b>	End of scaling for Condensing pressure transducer (psi)	507	Pr2
<b>P2F</b>	Condensing pressure transducer calibration (psi)	0	Pr2
<b>P2d</b>	Probe P2 reading error delayed (if P2C=0-5) (min)	0	Pr2
<b>Discharge Temperature Probe (Pb3), Discharge Temperature Sensor</b>			
<b>P3P</b>	Discharge temperature P3 sensor presence	n *	Pr2
<b>P3C</b>	Probe P3 configuration	ntC	Pr2
<b>P3F</b>	Probe P3 calibration (°F)	0	Pr2
<b>dEr</b>	Delay before activating probe error (sec)	0	Pr2
<b>PnF</b>	Max number HAF alarms before lock out	5	Pr2
<b>PiF</b>	Interval of time to count the actuations HAF alarms before lock out	60	Pr2

\* n - when probe is not active Y - when probe is active (low temp models only)



USER INTERFACE: Display, Icon description



LED	STATUS	MEANING
°C	ON	Unit of measurement for temperature is Celsius degrees
°F	ON	Unit of measurement for temperature is Fahrenheit degrees
bar	ON	Unit of measurement for pressure is Bar
PSI	ON	Unit of measurement for pressure is PSI
1	ON	Relay output oA1 enabled
	BLINKING	Delay in relay output oA1 activation
2	ON	Relay output oA2 enabled
	BLINKING	Delay in relay output oA2 activation
3	ON	Relay output oA3 enabled
	BLINKING	Delay in relay output oA3 activation
🔌	ON	Analogue output active
🔑	ON	(SER) Service menu
	BLINKING	(SER) Outputs in service mode
🔊	ON	(ALR) Alarm active
📖!	ON	(MEM) At least an alarm present into memory
	BLINKING	(MEM) A new alarm is occurred and need to be checked
🕒	ON	Real Time Clock Menu(*)

USER INTERFACE: Keyboard, Navigation modes

SET	<p><b>Standard visualization:</b> Used to see and modify the SETPOINT values. In programming mode, it is used to modify a parameter or confirm an operation</p> <p><b>ALARM menu:</b> Keep it pressed for 3 sec in order to reset an alarm</p>
▲	<p><b>(UP) Programming mode:</b> Used to browse the parameter list</p> <p><b>With inserted HOT-KEY:</b> start the parameter UPLOAD function (from HOT-KEY to internal memory)</p> <p><b>INFO menu:</b> Used to browse the INFO menu</p>
▼	<p><b>(DOWN) Programming mode:</b> Used to browse the parameter list</p> <p><b>With inserted HOT-KEY:</b> start the parameter DOWNLOAD function (from internal memory to the HOT-KEY)</p> <p><b>INFO menu:</b> Used to browse the INFO menu</p>
🔄	<p><b>Manual load restart:</b> If parameter r1F=rSt, press this button to restart the loads and previously stopped due to safety alarm</p> <p><b>ON-OFF:</b> If parameter r2F=onF, keep this button pressed for 3 sec to switch ON and OFF the instrument</p>
🔧	<p><b>SERVICE / CLOCK (*):</b> to enter CLOCK (*) and SERVICE menu</p>
📖!	<p><b>STORED ALARMS:</b> Gives access to the stored alarms (MEM)</p>
▲ + ▼	To lock and unlock the keyboard
SET + ▼	To enter the programming parameter menu
SET + ▲	To exit from INFO and ALARM menu and from programming parameter menu

(\*) Controllers with firmware 3.8 and higher only

## SET POINTS VISUALIZATION, MODIFICATION

### Visualization:

1. Press and release the SET button
2. SUCTION: the display will show the label St1 (Suction Pressure)
3. Press the SET button again to show the value of St1
4. CONDENSING: press the SET button once again
5. The display shows label St2 (Condensing Pressure)
6. Press the SET button again to show the value of St2

EXIT: Press both SET + UP or wait for 30 sec

### Modification:

1. Press the SET button for 3 sec
2. The display will show St1
3. Press the SET button again to show the value of St1 (Suction Pressure)
4. Change the value of St1 by pressing the UP or DOWN
5. Press the SET button to save the set value in memory and move to St2
6. The display will show St2 (Condensing Pressure)
7. Press the SET button again to show the value of St2
8. Change the value of St2 by pressing the UP or DOWN

EXIT: Press both SET + UP or wait for 30 sec

### Parameter Programming: Accessing Programing menu level, Parameter modification:

1. Keep both SET+DOWN buttons pressed for 3 sec
2. The display will show the name of the first parameter in the Pr1 level menu
3. Keep both SET+DOWN buttons pressed for 7 sec (if required to enter Pr2 level)
4. The display will show the label Pr2
5. Select the parameter to modify by using UP or DOWN buttons
6. Press the SET key to access to the stored value
7. Change the value of the parameter using the UP and DOWN buttons
8. Press the SET button to store the new value and move to the next parameter

EXIT: Press both SET + UP or wait for 30 sec

### Programming controller with HOT-KEY

1. Turn off the device
2. Insert HOT-KEY into the 5-pin port paying attention to the polarity and then turn the device on again
3. The list of parameters present in the HOT-KEY memory will be automatically downloaded into the device memory. The word "doL" will appear during this operation. At the end of this operation the display will blink the "End" label
4. After 10 sec the device will restart automatically
5. Remove the HOT-KEY


NOTE: the "Err" message on the display indicates that the operation is not successful (transfer error). In this case, turn off and then on again the device in order to restart the operation or remove the HOT-KEY to abort the operation.

## ALARM MENU: Alarm Codes, Alarm Logs, Alarm Reset

### Alarm Codes

Code	Description
HA	High pressure alarm on the suction line
LA	Low pressure alarm on the suction line
H2	High pressure alarm on the discharge line
HLL	High pressure lockout alarm
L2	Low pressure alarm on the discharge line
dLt	High Discharge temperature alarm
dLL	Lockout due to DLT alarm
ELP	Electronic pressure switch (warning)
ELL	Electronic pressure switch (lockout)
HP	High pressure alarm from external sensor (warning)
LP	Low pressure alarm from external sensor (warning)
HPL	High pressure alarm from external sensor (lockout)
ALP (*)	Pump down time longer than programmed (*)

### Alarm Visualization

1. Press the alarm archive (MEM) button 
2. Scroll with UP or DOWN button up to label AL0 (first alarm event memorized)
3. Press SET button to enter the event submenu
4. The encoding label relative to the logged event (Alarm Code) will be displayed
5. Press SET button again to display the duration of the alarm event recorded
6. Press the SET button to move to the next alarm event

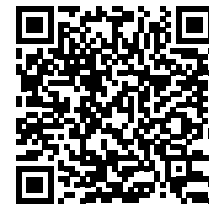
### Alarm Reset

1. Enter the ALARM menu
2. To reset the alarm list, keep the SET button pressed for 5 sec until the message "CLr" blinks on the display
3. To reset the only event displayed, keep the ALR button pressed for 3 sec until the message "rSA" blinks on the display

NOTE: the current alarms will not reset

## MORE INFORMATION AND FUNCTIONALITIES

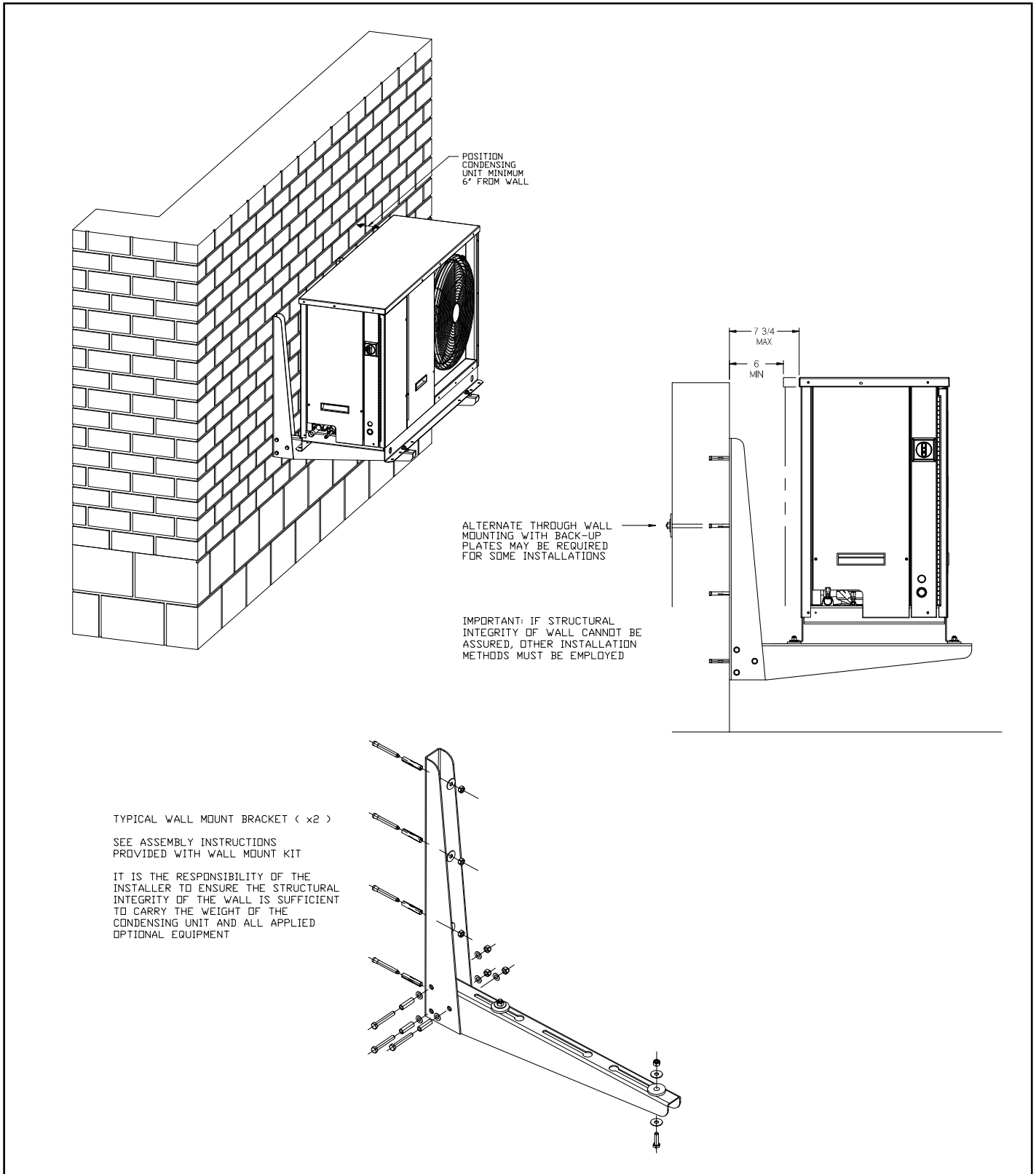
For more controller functions and information please refer to controller instruction manual, available at <https://climate.emerson.com/documents/xc15cx-xc35cx-en-gb-3723474.pdf> or scan this QR code:



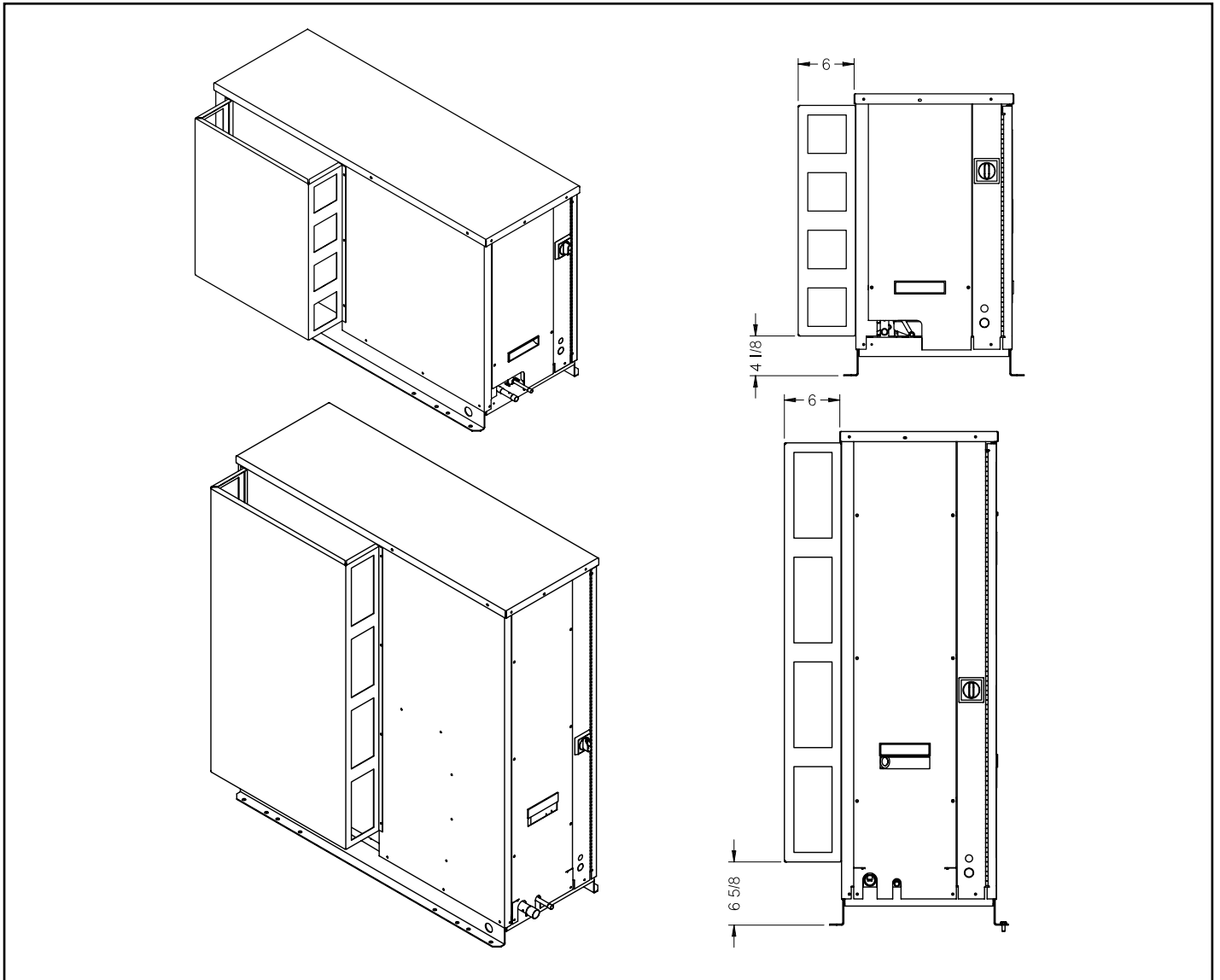
**CONTROLLER  
INSTRUCTION  
MANUAL**

**(\*) Controllers with firmware 3.8 and higher only**

Wall Mount - Instructions



Wind Guard - Dimensions



System	
Model Number	Date of Start-Up
Serial Number	Service Contractor
Refrigerant	Phone
Electrical Supply	E-mail



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