

FULL SPECIFICATION REPORT

COPELAND

Date : 4-Mar-2026 2:47:42 PM

Model No: ZB21KQE-TFD-523

Serial No: *****

Refrigerant: R-404A

Frequency (Hz): 60

Voltage: 460

Application: Medium Temperature

Phase: 3

Status: Asia Only

Product Type: Scroll

BOM Status: --

Job Name: --

Job Location: --

Mechanical

Overall Dimensions (in)	9.5L x 9.5W x 15.2H
Mounting Dimensions (in)	7.5L x 7.5W
Suction Size (in)/Type	1 1/4 Rotalock
Discharge Size (in)/Type	1 Rotalock
Oil	POE (Polyol Ester Oil)
Service Oil Type	POE (Polyol Ester Oil)
Oil Charge (oz)	42
Oil Recharge (oz)	38
Net Weight (lb)	60
Internal Free Volume (in ³)	183
Displacement (in ³ /rev)	3.02
Displacement (in ³ /hr)	367
Electrical Connection	--
Sight Glass	--
Bore (in)	--
Stroke (in)	--
Mounting Parts	--
Crankcase Heater	--
Schrader Valve	--
Tandem Ready	--
Module Voltage	--
No. of Cylinders	--

Electrical

LRA High (Amps)	39.0
RLA (MCC/1.4) (Amps)	7.4
RLA (MCC/1.56) (Amps)	6.6
MCC (Amps)	10.3
RPM	3,500
UL File No.	SA2337-19950228
UL File Date	28 Feb 1995
Box IP	21

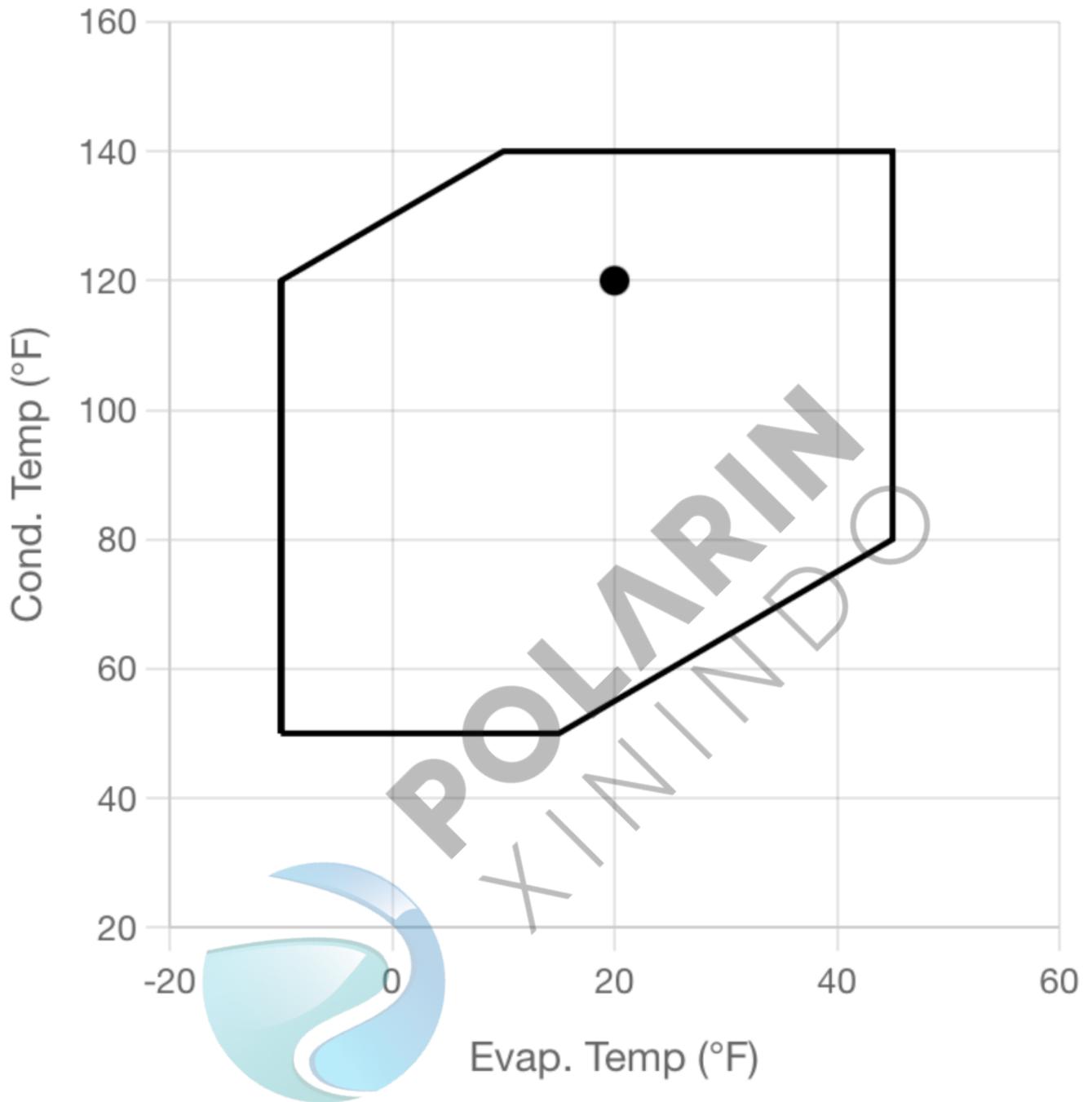
Winding Resistance

Part Number	071-0572-02
Resistance	
T1-T2 T2-T3 T3-T1 (Ω)	4.834.834.83

Performance

	#1	#2
Capacity (Btu/hr)	22,100	31,800
Evaporator Temp. ($^{\circ}$ F)	20	45
Condensing Temp. ($^{\circ}$ F)	120	130
Return Gas Temp. ($^{\circ}$ F)	65	65
Subcooling (F)	0	0
Power (W)	3,260	3,670
EER (Btu/Wh)	6.78	8.66
Current (Amps)	4.9	5.4
Full Performance (PDF)	Full Performance	

Operating Envelope



Service Parts

Crankcase Heater

Item No	Item Description	Item Comments	Quantity
998-7026-00	HEATER JUNCTION BOX KIT	--	1
918-0043-00	HEATER-CRANKCASE	240V 70W WRAP AROUND	1
918-0043-07	HEATER-CRANKCASE	120V 70W WRAP AROUND	1

Mounting Assembly

Item No	Item Description	Item Comments	Quantity
527-0116-00	SPACER-MOUNTING ASSM	--	1

Sight Glass

Item No	Item Description	Item Comments	Quantity
998-0010-02	SIGHT GLASS KIT	--	1

Service Valve

Item No	Item Description	Item Comments	Quantity
998-0510-98	VLV KIT 1/2"SWT/1-14UNC	DISCHARGE ROTALOCK	1
998-0510-38	VLV KIT 3/4"SWT/1 1/4-12UNC	SUCTION	1

Others

Item No	Item Description	Item Comments	Quantity
998-0034-07	ADAP KIT 1 1/4 RL / 3/4"SWT	ROTALOCK TO SWEAT ADAPTER KIT SUCTION	1
998-0034-01	ADAP KIT 3/4"SWT / 1 1/4 RL	SWEAT TO ROTALOCK ADAPTER KIT SUCTION	1
998-0034-18	ADAPTER 1-14 TO 1/2 ID	ROTALOCK TO SWEAT ADAPTER KIT DISCHARGE	1
998-0034-15	SERV ADAPTOR KIT 1/2 STUB	SWEAT TO ROTALOCK ADAPTER KIT DISCHARGE	1

Rating Conditions

65 °F Return Gas
 0 F Subcooling
 95 °F Ambient Air Over

60 Hz Operation

**MEDIUM
 TEMPERATURE**

ZB21KQE-TFD

HFC-404A
 COPELAND SCROLL®
 TFD 460-3-60

Condensing Temperature °F
 (Sat. Dew Pt. Pressure, psig) **Evaporating Temperature °F (Sat. Dew Pt. Pressure, psig)**

	-10.0 (24)	0.0 (33)	10.0 (43)	15.0 (49)	20.0 (55)	25.0 (62)	30.0 (69)	35.0 (77)	45.0 (94)
140.0									
C			13,700	15,300	17,000	18,900	20,900	23,000	27,800
P			4,160	4,160	4,160	4,160	4,160	4,160	4,140
A			6.0	6.0	6.0	6.0	6.0	6.0	5.9
M			351	395	444	497	555	620	771
E			3.3	3.7	4.1	4.5	5.0	5.5	6.7
%			49.6	52.2	54.7	57.1	59.4	61.5	65.2
130.0		12,700	15,900	17,700	19,700	21,700	24,000	26,400	31,800
P		3,680	3,690	3,690	3,690	3,690	3,690	3,680	3,670
A		5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
M		286	363	406	454	507	565	628	775
E		3.5	4.3	4.8	5.3	5.9	6.5	7.2	8.7
%		48.9	54.3	56.7	59.0	61.1	63.1	64.8	67.5
120.0	11,400	14,500	18,000	20,000	22,100	24,500	27,000	29,600	35,600
P	3,240	3,250	3,260	3,260	3,270	3,270	3,260	3,260	3,250
A	4.8	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
M	231	295	372	416	464	517	574	637	782
E	3.5	4.4	5.5	6.1	6.8	7.5	8.3	9.1	11.0
%	48.0	53.6	58.7	61.0	63.0	64.8	66.4	67.7	69.3
110.0	12,700	16,100	20,000	22,200	24,500	27,100	29,800	32,700	39,200
P	2,850	2,870	2,880	2,880	2,890	2,890	2,890	2,880	2,870
A	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.4
M	238	303	380	424	472	525	583	646	790
E	4.5	5.6	6.9	7.7	8.5	9.4	10.3	11.4	13.7
%	52.5	58.0	62.7	64.7	66.5	67.9	69.0	69.8	70.0
100.0	14,000	17,600	21,900	24,300	26,800	29,600	32,600	35,800	42,800
P	2,510	2,530	2,540	2,550	2,550	2,550	2,550	2,550	2,530
A	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
M	243	308	386	431	480	533	591	654	798
E	5.6	7.0	8.6	9.5	10.5	11.6	12.8	14.0	16.9
%	56.7	61.9	66.1	67.8	69.1	70.0	70.5	70.6	69.2
80.0	16,300	20,500	25,400	28,200	31,200	34,400	37,900	41,600	49,800
P	1,950	1,970	1,980	1,990	1,990	1,990	1,990	1,990	1,970
A	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
M	249	316	396	441	491	545	604	668	812
E	8.3	10.4	12.8	14.2	15.7	17.3	19.0	20.9	25.3
%	63.4	67.5	70.0	70.5	70.5	69.8	68.5	66.5	60.0
70.0	17,300	21,800	27,100	30,100	33,300	36,800	40,500	44,400	
P	1,720	1,740	1,750	1,760	1,760	1,760	1,760	1,750	
A	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
M	252	319	400	446	496	550	609	674	
E	10.1	12.5	15.5	17.1	18.9	20.9	23.0	25.4	
%	65.6	68.7	69.7	69.4	68.3	66.5	63.9	60.4	
50.0	19,400	24,400	30,400	33,800					
P	1,340	1,360	1,370	1,370					
A	3.0	3.0	3.0	3.0					
M	256	324	407	454					
E	14.5	18.0	22.3	24.7					
%	66.3	66.1	62.8	59.7					

C: Capacity (Btu/hr), P: Power (W), A: Current (Amps), M: Mass Flow (lb/hr), E: EER (Btu/Wh), %: Isentropic Efficiency (%)

Nominal Performance Values (±5%) based on 72 hours run-in. Subject to change without notice. Current @ 460 V