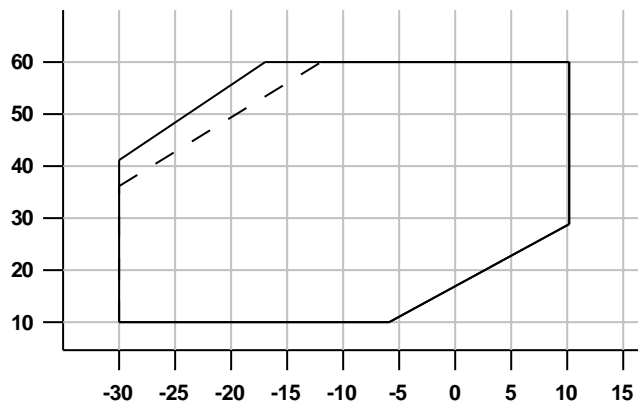


50Hz

ZB58KCE-TFD

R404A



Minimum evaporating temp. with:  
 ——— 10K Suction Superheat  
 - - - 20°C Suction Gas Return

Suction Return Temperature 20.0°C

Evaporating Temperature °C

Liquid subcooling 0.0K

Cond °C	Capacity kW									
	-30	-25	-20	-15	-10	-5	0	5	7	10
10	9.10	11.20	13.75	16.70	20.20					
20	8.04	10.15	12.60	15.40	18.60	22.30	26.60			
30	6.70	8.82	11.15	13.75	16.70	20.10	23.90	28.30	30.20	33.20
35	5.91	8.03	10.30	12.85	15.65	18.85	22.40	26.50	28.30	31.20
40		7.16	9.41	11.85	14.50	17.50	20.90	24.70	26.40	29.00
45			8.41	10.75	13.30	16.10	19.25	22.80	24.40	26.80
50				9.57	12.00	14.60	17.55	20.80	22.20	24.50
55				8.31	10.60	13.05	15.75	18.75	20.00	22.10
60					9.09	11.35	13.85	16.55	17.75	19.60
	Power Input kW									
	-30	-25	-20	-15	-10	-5	0	5	7	10
10	2.85	2.91	2.97	3.02	3.07					
20	3.52	3.58	3.63	3.69	3.74	3.79	3.84			
30	4.40	4.45	4.49	4.53	4.57	4.61	4.66	4.70	4.71	4.74
35	4.95	4.98	5.01	5.05	5.08	5.11	5.14	5.17	5.19	5.21
40		5.60	5.62	5.64	5.65	5.67	5.69	5.72	5.72	5.74
45			6.31	6.31	6.31	6.32	6.32	6.33	6.33	6.34
50				7.08	7.07	7.05	7.04	7.03	7.02	7.02
55				7.96	7.92	7.88	7.85	7.82	7.81	7.79
60					8.89	8.83	8.77	8.72	8.70	8.67
	Current 400V, A									
	-30	-25	-20	-15	-10	-5	0	5	7	10
10	8.86	8.90	8.94	8.97	9.01					
20	9.38	9.43	9.48	9.52	9.57	9.61	9.65			
30	10.14	10.18	10.22	10.26	10.30	10.34	10.38	10.42	10.43	10.46
35	10.65	10.69	10.72	10.75	10.78	10.81	10.84	10.87	10.89	10.91
40		11.30	11.32	11.34	11.36	11.38	11.40	11.42	11.43	11.44
45			12.06	12.06	12.06	12.06	12.07	12.07	12.07	12.08
50				12.92	12.90	12.88	12.87	12.85	12.85	12.84
55				13.94	13.90	13.86	13.82	13.78	13.77	13.75
60					15.08	15.01	14.94	14.88	14.85	14.81
	Mass Flow g/s									
	-30	-25	-20	-15	-10	-5	0	5	7	10
10	51.20	63.40	78.00	95.50	116.00					
20	49.30	62.50	78.00	96.00	116.50	141.50	170.00			
30	45.30	59.90	76.00	94.50	116.00	140.50	170.00	203.00	218.00	243.00
35	42.20	57.60	74.50	93.50	115.00	140.00	169.00	202.00	217.00	242.00
40		54.60	72.20	91.50	113.50	138.50	167.00	201.00	216.00	241.00
45			69.10	89.00	111.00	136.50	165.00	199.00	215.00	239.00
50				85.50	108.50	134.00	163.00	197.00	213.00	238.00
55				81.00	104.50	130.50	160.00	195.00	210.00	236.00
60					100.00	126.50	157.00	193.00	209.00	235.00

**Copeland Scroll - Compressor - Refrigeration - Standard**
**COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Displacement @ 50 Hz, cu.m/h	22.1
Length/Width, mm	264/284
Height, mm	478
Net Weight, kg	57.2
Rotalock Suction, inch	1 3/4
Rotalock Discharge, inch	1 1/4
Oil Quantity, l	2.7
Base mounting (hole dia), mm	190 x 190 (8.5)
Sound Pressure @ 1m, dBA	65
Sound Power, dBA	76
Sound Power with Sound Shell, dBA	66
PED Category	2
High Side PS, bar(g)	32
Low Side PS, bar(g)	22.6
Low Side TS Max., °C	50
Low Side TS Min., °C	-35
Internal Free Volume, l	10.5

**COMPRESSOR ELECTRICAL DATA (380/420V - 3~ - 50Hz)**

Maximum Operating Current, A	15.4
Locked Rotor Current, A	95
Winding Resistance, ohm	1.8
Default Enclosure Class	IP 21 (IEC 34)

**ACCESSORIES INCLUDED**

Discharge Temperature Protection	Internal Thermistor
Mounting Grommets	Standard

**ACCESSORIES OPTIONAL**

Crankcase Heater	90W External
Enclosure Class	IP66 With Molded Plug
Mounting Grommets	Hard Mounts for Paralleling
Sound Attenuation	Sound Shell (10dBA)
Rotalock valves	suction and discharge

**MOTOR OPTIONS**

<b>Power Supply</b>	<b>Nominal Voltage</b>	<b>Motor Code</b>	<b>Start Connection</b>	<b>DOL Connection</b>	<b>Amps Factor</b>
380-420 V/3~/50H	400	TFD		Y	1.00
200-220 V/3~/50H	200	TF5		Y	2.09
200-230 V/3~/60H	230	TF5		Y	2.09
575 V/3~/60Hz	575	TFE		Y	0.80
380 V/3~/60Hz	380	TF7		Y	1.26
460 V/3~/60Hz	460	TFD		Y	1.04

Model: ZB58KCE-TFD

Refrigerant: R404A

S.I.

Suction Return Temperature 20.0°C

Liquid subcooling 0.0K

50Hz

	Evaporating Temperature °C									
	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
	Capacity kW									
10.0	9.10	11.20	13.75	16.70	20.20					
15.0	8.60	10.70	13.20	16.05	19.45	23.30				
20.0	8.04	10.15	12.60	15.40	18.60	22.30	26.60			
25.0	7.41	9.52	11.90	14.60	17.70	21.20	25.30	29.90		
30.0	6.70	8.82	11.15	13.75	16.70	20.10	23.90	28.30	30.20	33.20
35.0	5.91	8.03	10.30	12.85	15.65	18.85	22.40	26.50	28.30	31.20
40.0		7.16	9.41	11.85	14.50	17.50	20.90	24.70	26.40	29.00
45.0			8.41	10.75	13.30	16.10	19.25	22.80	24.40	26.80
50.0				9.57	12.00	14.60	17.55	20.80	22.20	24.50
55.0				8.31	10.60	13.05	15.75	18.75	20.00	22.10
60.0					9.09	11.35	13.85	16.55	17.75	19.60

	Power Input kW									
	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	2.85	2.91	2.97	3.02	3.07					
15.0	3.17	3.23	3.28	3.34	3.39	3.44				
20.0	3.52	3.58	3.63	3.69	3.74	3.79	3.84			
25.0	3.93	3.98	4.03	4.08	4.13	4.18	4.23	4.27		
30.0	4.40	4.45	4.49	4.53	4.57	4.61	4.66	4.70	4.71	4.74
35.0	4.95	4.98	5.01	5.05	5.08	5.11	5.14	5.17	5.19	5.21
40.0		5.60	5.62	5.64	5.65	5.67	5.69	5.72	5.72	5.74
45.0			6.31	6.31	6.31	6.32	6.32	6.33	6.33	6.34
50.0				7.08	7.07	7.05	7.04	7.03	7.02	7.02
55.0				7.96	7.92	7.88	7.85	7.82	7.81	7.79
60.0					8.89	8.83	8.77	8.72	8.70	8.67

	COP									
	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	3.19	3.85	4.62	5.53	6.57					
15.0	2.72	3.32	4.02	4.81	5.73	6.78				
20.0	2.28	2.84	3.46	4.17	4.97	5.89	6.92			
25.0	1.88	2.39	2.95	3.58	4.28	5.08	5.98	7.00		
30.0	1.52	1.98	2.48	3.04	3.65	4.35	5.13	6.02	6.40	7.01
35.0	1.19	1.61	2.06	2.54	3.08	3.69	4.36	5.13	5.46	5.99
40.0		1.28	1.67	2.10	2.57	3.09	3.67	4.32	4.61	5.06
45.0			1.33	1.70	2.11	2.55	3.05	3.60	3.85	4.23
50.0				1.35	1.70	2.07	2.49	2.96	3.17	3.49
55.0				1.04	1.34	1.65	2.00	2.40	2.57	2.84
60.0					1.02	1.29	1.58	1.90	2.04	2.26

Model: ZB58KCE-TFD

Refrigerant: R404A

	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
	Current 400V, A									
10.0	8.86	8.90	8.94	8.97	9.01					
15.0	9.10	9.15	9.19	9.24	9.28	9.32				
20.0	9.38	9.43	9.48	9.52	9.57	9.61	9.65			
25.0	9.72	9.77	9.81	9.86	9.90	9.95	9.99	10.03		
30.0	10.14	10.18	10.22	10.26	10.30	10.34	10.38	10.42	10.43	10.46
35.0	10.65	10.69	10.72	10.75	10.78	10.81	10.84	10.87	10.89	10.91
40.0		11.30	11.32	11.34	11.36	11.38	11.40	11.42	11.43	11.44
45.0			12.06	12.06	12.06	12.06	12.07	12.07	12.07	12.08
50.0				12.92	12.90	12.88	12.87	12.85	12.85	12.84
55.0				13.94	13.90	13.86	13.82	13.78	13.77	13.75
60.0					15.08	15.01	14.94	14.88	14.85	14.81

	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
	Mass Flow g/s									
10.0	51.20	63.40	78.00	95.50	116.00					
15.0	50.40	63.10	78.00	95.50	116.50	141.00				
20.0	49.30	62.50	78.00	96.00	116.50	141.50	170.00			
25.0	47.60	61.50	77.50	95.50	116.50	141.00	170.00	204.00		
30.0	45.30	59.90	76.00	94.50	116.00	140.50	170.00	203.00	218.00	243.00
35.0	42.20	57.60	74.50	93.50	115.00	140.00	169.00	202.00	217.00	242.00
40.0		54.60	72.20	91.50	113.50	138.50	167.00	201.00	216.00	241.00
45.0			69.10	89.00	111.00	136.50	165.00	199.00	215.00	239.00
50.0				85.50	108.50	134.00	163.00	197.00	213.00	238.00
55.0				81.00	104.50	130.50	160.00	195.00	210.00	236.00
60.0					100.00	126.50	157.00	193.00	209.00	235.00

	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
	Heat Rejection kW									
10.0	11.80	14.00	16.55	19.60	23.10					
15.0	11.60	13.80	16.30	19.25	22.70	26.60				
20.0	11.40	13.55	16.05	18.90	22.20	25.90	30.20			
25.0	11.15	13.30	15.75	18.50	21.60	25.20	29.30	34.00		
30.0	10.90	13.05	15.40	18.05	21.10	24.50	28.30	32.70	34.60	37.70
35.0	10.60	12.75	15.10	17.65	20.50	23.70	27.30	31.40	33.20	36.10
40.0		12.50	14.75	17.20	19.90	22.90	26.30	30.10	31.80	34.50
45.0			14.40	16.75	19.30	22.10	25.30	28.80	30.40	32.80
50.0				16.30	18.70	21.30	24.20	27.50	28.90	31.20
55.0				15.85	18.10	20.50	23.20	26.20	27.50	29.50
60.0					17.55	19.75	22.20	24.80	26.00	27.90

# Copeland Selection Software

REFRIGERANT R404A

## Operating Conditions:

Evaporating Temperature: -10.0°C  
 Condensing Temperature: 45.0°C  
 Liquid subcooling: 0.0K  
 Suction Return Temperature: 20.0°C

**Required Capacity: 20.0 kW**  
 Compressor Selected: ZB58KCE-TFD

### **PERFORMANCE AT SPECIFIED OPERATING POINT** **ZB58KCE-TFD Data at 50 Hz**

Capacity kW	13.30
Power Input kW	6.31
COP	2.11
Current 400V, A	12.06
Mass Flow g/s	111.00
Heat Rejection kW	19.30

### **COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Length/Width, mm 264/284	Height, mm 478
Net Weight, kg 57.2	Rotalock Suction, inch 1 3/4
Oil Quantity, l 2.7	Sound Power, dBA 76
PED Category 2	High Side PS, bar(g) 32
Low Side PS, bar(g) 22.6	Low Side TS Max., °C 50
Low Side TS Min., °C -35	Internal Free Volume, l 10.5
Displacement @ 50 Hz, cu.m/h 22.1	
Rotalock Discharge, inch 1 1/4	
Base mounting (hole dia), mm 190 x 190 (8.5)	
Sound Pressure @ 1m, dBA 65	
Sound Power with Sound Shell, dBA 66	

### **COMPRESSOR ELECTRICAL DATA (380/420V - 3~ - 50Hz)**

Locked Rotor Current, A 95	Winding Resistance, ohm 1.8
Maximum Operating Current, A 15.4	
Default Enclosure Class IP 21 (IEC 34)	

### **ACCESSORIES INCLUDED**

Discharge Temperature Protection	Internal Thermistor
Mounting Grommets	Standard

## ***ACCESSORIES OPTIONAL***

Crankcase Heater

Enclosure Class

Mounting Grommets

Sound Attenuation

Rotalock valves

90W External

IP66 With Molded Plug

Hard Mounts for Paralleling

Sound Shell (10dBA)

suction and discharge