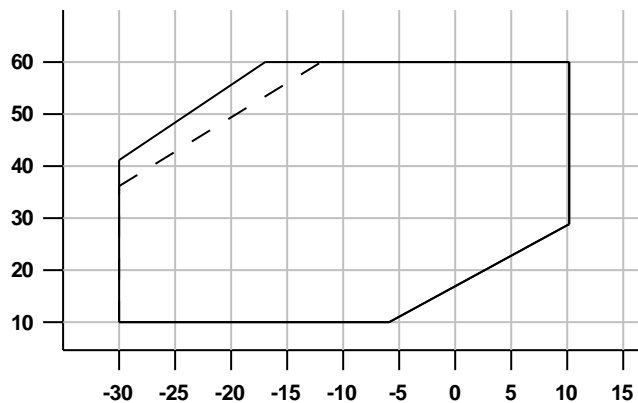


50Hz

ZB76KCE-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	11.70	14.55	18.00	22.20	27.10					
20	10.85	13.45	16.60	20.40	24.70	29.90	35.70			
30	9.65	12.10	15.00	18.35	22.20	26.70	31.80	37.70	40.30	44.40
35	8.92	11.30	14.05	17.20	20.80	25.00	29.80	35.30	37.70	41.50
40		10.40	13.00	16.00	19.40	23.30	27.70	32.80	35.00	38.50
45			11.90	14.70	17.85	21.40	25.50	30.20	32.20	35.50
50				13.25	16.20	19.55	23.30	27.50	29.40	32.30
55				11.75	14.45	17.50	20.90	24.80	26.50	29.20
60					12.60	15.35	18.45	21.90	23.50	25.90
	Power Input kW									
	-30	-25	-20	-15	-10	-5	0	5	7	10
10	3.65	3.76	3.87	3.97	4.07					
20	4.50	4.62	4.72	4.82	4.92	5.02	5.12			
30	5.58	5.69	5.79	5.89	5.97	6.06	6.14	6.23	6.27	6.33
35	6.23	6.34	6.44	6.53	6.61	6.68	6.76	6.84	6.87	6.92
40		7.09	7.18	7.26	7.33	7.39	7.46	7.52	7.55	7.59
45			8.02	8.09	8.15	8.20	8.25	8.30	8.32	8.36
50				9.03	9.08	9.12	9.16	9.19	9.21	9.23
55				10.10	10.15	10.15	10.20	10.20	10.20	10.20
60					11.35	11.35	11.35	11.35	11.35	11.35
	Current 400V, A									
	-30	-25	-20	-15	-10	-5	0	5	7	10
10	10.35	10.44	10.52	10.59	10.67					
20	11.06	11.17	11.27	11.36	11.45	11.55	11.65			
30	12.10	12.22	12.33	12.43	12.53	12.62	12.71	12.81	12.85	12.92
35	12.81	12.93	13.04	13.14	13.23	13.32	13.40	13.49	13.53	13.59
40		13.79	13.90	13.99	14.08	14.16	14.23	14.31	14.34	14.39
45			14.93	15.02	15.09	15.16	15.23	15.29	15.31	15.35
50				16.24	16.30	16.35	16.40	16.45	16.46	16.49
55				17.67	17.72	17.76	17.79	17.81	17.82	17.83
60					19.38	19.39	19.40	19.40	19.40	19.40
	Mass Flow g/s									
	-30	-25	-20	-15	-10	-5	0	5	7	10
10	65.90	82.00	102.00	126.50	156.00					
20	66.40	83.00	103.00	127.00	155.00	189.00	229.00			
30	65.20	82.50	102.50	126.00	154.00	187.00	226.00	271.00	292.00	325.00
35	63.70	81.00	101.50	125.00	153.00	186.00	224.00	269.00	289.00	322.00
40		79.50	100.00	123.50	151.00	184.00	222.00	267.00	287.00	319.00
45			97.50	121.50	149.50	182.00	219.00	264.00	284.00	316.00
50				118.50	146.50	179.00	216.00	261.00	281.00	313.00
55				114.50	143.00	175.00	213.00	258.00	278.00	311.00
60					138.50	172.00	210.00	255.00	276.00	309.00

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

Displacement @ 50 Hz, cu.m/h	29.1
Length/Width, mm	264/284
Height, mm	546
Net Weight, kg	61.2
Rotalock Suction, inch	1 3/4
Rotalock Discharge, inch	1 1/4
Oil Quantity, l	3.4
Base mounting (hole dia), mm	190 x 190 (8.5)
Sound Pressure @ 1m, dBA	66
Sound Power, dBA	77
Sound Power with Sound Shell, dBA	67
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	13.3

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

Maximum Operating Current, A	20.4
Locked Rotor Current, A	118
Winding Resistance, ohm	1.2
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

Power Supply	Nominal Voltage	Motor Code	Start Connection	DOL Connection	Amps Factor
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: ZB76KCE-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	11.70	14.55	18.00	22.20	27.10					
15.0	11.30	14.05	17.35	21.30	25.90	31.40				
20.0	10.85	13.45	16.60	20.40	24.70	29.90	35.70			
25.0	10.30	12.85	15.85	19.35	23.50	28.30	33.80	40.10		
30.0	9.65	12.10	15.00	18.35	22.20	26.70	31.80	37.70	40.30	44.40
35.0	8.92	11.30	14.05	17.20	20.80	25.00	29.80	35.30	37.70	41.50
40.0		10.40	13.00	16.00	19.40	23.30	27.70	32.80	35.00	38.50
45.0			11.90	14.70	17.85	21.40	25.50	30.20	32.20	35.50
50.0				13.25	16.20	19.55	23.30	27.50	29.40	32.30
55.0				11.75	14.45	17.50	20.90	24.80	26.50	29.20
60.0					12.60	15.35	18.45	21.90	23.50	25.90

	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	3.65	3.76	3.87	3.97	4.07					
15.0	4.05	4.17	4.27	4.37	4.47	4.58				
20.0	4.50	4.62	4.72	4.82	4.92	5.02	5.12			
25.0	5.01	5.12	5.23	5.32	5.42	5.51	5.60	5.70		
30.0	5.58	5.69	5.79	5.89	5.97	6.06	6.14	6.23	6.27	6.33
35.0	6.23	6.34	6.44	6.53	6.61	6.68	6.76	6.84	6.87	6.92
40.0		7.09	7.18	7.26	7.33	7.39	7.46	7.52	7.55	7.59
45.0			8.02	8.09	8.15	8.20	8.25	8.30	8.32	8.36
50.0				9.03	9.08	9.12	9.16	9.19	9.21	9.23
55.0				10.10	10.15	10.15	10.20	10.20	10.20	10.20
60.0					11.35	11.35	11.35	11.35	11.35	11.35

	COP									
	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	3.21	3.87	4.66	5.59	6.66					
15.0	2.79	3.37	4.06	4.86	5.80	6.85				
20.0	2.41	2.92	3.52	4.22	5.03	5.95	6.98			
25.0	2.06	2.50	3.03	3.64	4.34	5.14	6.04	7.04		
30.0	1.73	2.13	2.59	3.11	3.72	4.41	5.18	6.05	6.42	7.01
35.0	1.43	1.78	2.18	2.63	3.15	3.74	4.41	5.16	5.48	5.99
40.0		1.47	1.81	2.20	2.65	3.15	3.72	4.36	4.63	5.07
45.0			1.48	1.82	2.19	2.62	3.09	3.64	3.87	4.24
50.0				1.47	1.79	2.14	2.54	3.00	3.19	3.51
55.0				1.16	1.43	1.72	2.06	2.43	2.59	2.85
60.0					1.11	1.36	1.63	1.94	2.07	2.28

Model: ZB76KCE-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	10.35	10.44	10.52	10.59	10.67					
15.0	10.67	10.77	10.86	10.95	11.04	11.13				
20.0	11.06	11.17	11.27	11.36	11.45	11.55	11.65			
25.0	11.52	11.64	11.75	11.85	11.94	12.03	12.13	12.24		
30.0	12.10	12.22	12.33	12.43	12.53	12.62	12.71	12.81	12.85	12.92
35.0	12.81	12.93	13.04	13.14	13.23	13.32	13.40	13.49	13.53	13.59
40.0		13.79	13.90	13.99	14.08	14.16	14.23	14.31	14.34	14.39
45.0			14.93	15.02	15.09	15.16	15.23	15.29	15.31	15.35
50.0				16.24	16.30	16.35	16.40	16.45	16.46	16.49
55.0				17.67	17.72	17.76	17.79	17.81	17.82	17.83
60.0					19.38	19.39	19.40	19.40	19.40	19.40

	-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	65.90	82.00	102.00	126.50	156.00					
15.0	66.30	82.50	102.50	126.50	156.00	190.00				
20.0	66.40	83.00	103.00	127.00	155.00	189.00	229.00			
25.0	66.10	83.00	103.00	126.50	155.00	188.00	227.00	273.00		
30.0	65.20	82.50	102.50	126.00	154.00	187.00	226.00	271.00	292.00	325.00
35.0	63.70	81.00	101.50	125.00	153.00	186.00	224.00	269.00	289.00	322.00
40.0		79.50	100.00	123.50	151.00	184.00	222.00	267.00	287.00	319.00
45.0			97.50	121.50	149.50	182.00	219.00	264.00	284.00	316.00
50.0				118.50	146.50	179.00	216.00	261.00	281.00	313.00
55.0				114.50	143.00	175.00	213.00	258.00	278.00	311.00
60.0					138.50	172.00	210.00	255.00	276.00	309.00

	-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	15.20	18.10	21.70	25.90	30.90					
15.0	15.15	18.00	21.40	25.40	30.20	35.70				
20.0	15.10	17.85	21.10	24.90	29.40	34.60	40.60			
25.0	15.05	17.70	20.80	24.40	28.70	33.50	39.10	45.50		
30.0	14.95	17.50	20.50	23.90	27.90	32.40	37.70	43.60	46.20	50.40
35.0	14.85	17.35	20.20	23.40	27.10	31.40	36.20	41.80	44.20	48.00
40.0		17.15	19.85	22.90	26.40	30.30	34.80	39.90	42.10	45.70
45.0			19.50	22.40	25.60	29.20	33.40	38.10	40.10	43.40
50.0				21.80	24.80	28.20	32.00	36.30	38.10	41.10
55.0				21.30	24.10	27.20	30.60	34.50	36.20	38.90
60.0					23.40	26.10	29.20	32.70	34.20	36.60

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: ZB76KCE-TFD

PERFORMANCE AT SPECIFIED OPERATING POINT ZB76KCE-TFD Data at 50 Hz

Capacity kW	17.85
Power Input kW	8.15
COP	2.19
Current 400V, A	15.09
Mass Flow g/s	149.50
Heat Rejection kW	25.60

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Length/Width, mm 264/284	Height, mm 546
Net Weight, kg 61.2	Rotalock Suction, inch 1 3/4
Oil Quantity, l 3.4	Sound Power, dBA 77
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 13.3
Displacement @ 50 Hz, cu.m/h 29.1	
Rotalock Discharge, inch 1 1/4	
Base mounting (hole dia), mm 190 x 190 (8.5)	
Sound Pressure @ 1m, dBA 66	
Sound Power with Sound Shell, dBA 67	

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

Locked Rotor Current, A 118	Winding Resistance, ohm 1.2
Maximum Operating Current, A 20.4	
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