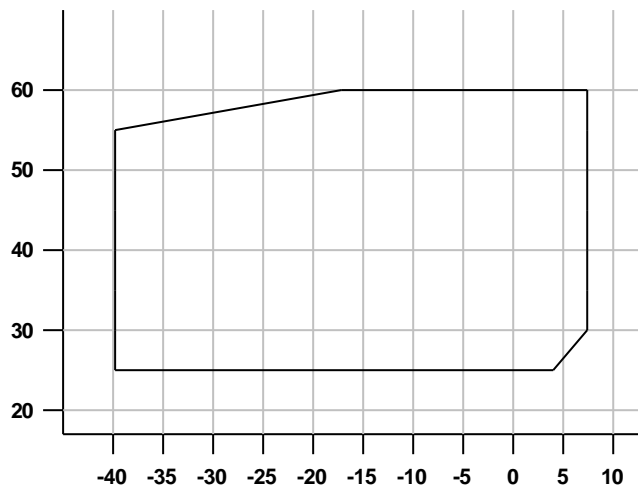


50Hz

ZF33K4E-TWD

R134a



Minimum evaporating temp. with:
 ——— 25°C Suction Gas Return + Liquid Injection

Suction Superheat 10,0K

Evaporating Temperature °C

Liquid subcooling 0,0K

Cond °C	Capacity kW										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
25	2,93	3,94	5,18	6,65	8,37	10,35	12,60	15,10	17,90		
30	2,81	3,77	4,95	6,37	8,05	9,98	12,20	14,65	17,45	20,50	21,80
35	2,66	3,56	4,68	6,04	7,66	9,55	11,70	14,15	16,85	19,90	21,20
40	2,50	3,32	4,38	5,67	7,23	9,05	11,15	13,55	16,25	19,20	20,50
45	2,34	3,08	4,06	5,28	6,76	8,51	10,55	12,90	15,50	18,45	19,70
50	2,18	2,83	3,72	4,86	6,26	7,94	9,90	12,15	14,75	17,65	18,85
55	2,03	2,59	3,39	4,44	5,75	7,34	9,21	11,40	13,90	16,75	17,95
60						6,72	8,51	10,60	13,05	15,80	17,00
	Power Input kW										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
25	2,69	2,86	3,02	3,18	3,33	3,49	3,64	3,80	3,95		
30	2,94	3,11	3,27	3,44	3,62	3,79	3,97	4,15	4,33	4,52	4,60
35	3,16	3,33	3,51	3,69	3,87	4,07	4,26	4,47	4,68	4,91	5,00
40	3,37	3,55	3,73	3,92	4,12	4,34	4,56	4,79	5,03	5,28	5,39
45	3,60	3,78	3,97	4,17	4,39	4,62	4,86	5,12	5,39	5,67	5,79
50	3,86	4,05	4,25	4,46	4,69	4,94	5,20	5,48	5,78	6,10	6,23
55	4,18	4,37	4,57	4,80	5,04	5,31	5,59	5,90	6,23	6,58	6,72
60						5,75	6,06	6,39	6,74	7,13	7,29
	Current 400V, A										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
25	10,16	10,26	10,36	10,47	10,57	10,67	10,76	10,85	10,92		
30	10,30	10,41	10,53	10,66	10,79	10,92	11,05	11,18	11,30	11,41	11,45
35	10,43	10,55	10,68	10,82	10,98	11,14	11,31	11,48	11,65	11,82	11,88
40	10,56	10,68	10,83	10,99	11,17	11,36	11,56	11,78	11,99	12,22	12,31
45	10,73	10,85	11,00	11,18	11,38	11,60	11,84	12,09	12,36	12,63	12,75
50	10,95	11,07	11,23	11,43	11,65	11,90	12,17	12,46	12,77	13,10	13,23
55	11,25	11,38	11,55	11,75	11,99	12,26	12,57	12,90	13,25	13,63	13,78
60						12,73	13,07	13,43	13,83	14,25	14,43
	Mass Flow g/s										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
25	20,10	26,40	33,90	42,60	52,50	63,60	76,00	89,00	103,50		
30	20,20	26,50	34,00	42,80	52,90	64,20	77,00	90,50	105,50	121,50	128,50
35	20,30	26,60	33,90	42,70	52,90	64,40	77,50	91,50	107,00	123,50	130,50
40	20,20	26,10	33,50	42,30	52,60	64,30	77,50	92,00	108,00	125,00	132,50
45	20,10	25,70	32,90	41,70	52,10	64,00	77,50	92,00	108,50	126,50	134,00
50	20,00	25,30	32,30	41,00	51,30	63,30	77,00	92,00	109,00	127,50	135,50
55	20,20	24,90	31,50	40,10	50,40	62,40	76,50	92,00	109,50	128,50	136,50
60						61,40	75,50	91,50	109,50	129,00	137,50

Copeland Scroll - Compressor - Refrigeration - LT Liquid Injection
COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, cu.m/h	28.8
Length/Width, mm	368/319
Height, mm	532
Net Weight, kg	93
Gross Weight, kg	100
Rotalock Suction, inch	1 3/4
Rotalock Discharge, inch	1 1/4
Oil Quantity, l	4.14
Base mounting (hole dia), mm	220 x 220 (8.5)
Sound Pressure @ 1m (LT), dBA	72
Sound Power (LT), dBA	83
Sound Power with Sound Shell (LT), dBA	73
PED Category	2
Internal Free Volume, l	19.8
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

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

Maximum Operating Current, A	22.3
Locked Rotor Current, A	127
Winding Resistance, ohm	1.02
Default Enclosure Class	IP 54 (IEC 34)

ACCESSORIES INCLUDED

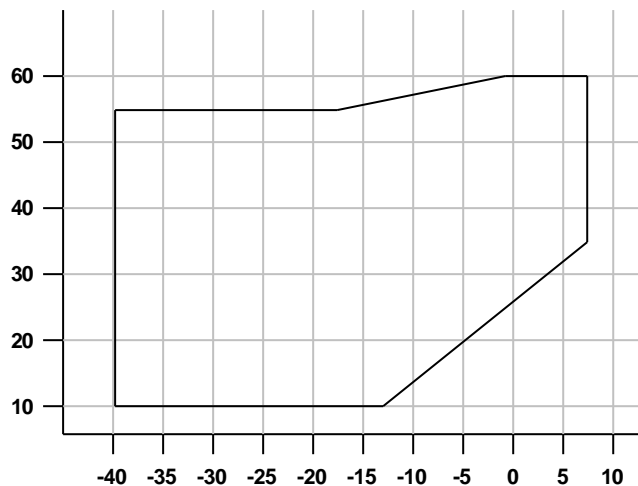
Discharge Temperature Protection	Internal Thermistor
Mounting Grommets	Standard

ACCESSORIES OPTIONAL

Crankcase Heater	70 W External
Liquid Injection	Capillary Tube
Mounting Grommets	Hard Mounts for Paralleling
Oil Control System	ALCO Trax-Oil OM3
Sound Attenuation	Sound Shell (10 dBA)
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	TWD		Y	1,00
200 V/3~/50Hz	200	TWC		Y	2,09
220-240 V/3~/50H	230	TWR		Y	1,73
380 V/3~/60Hz	380	TW7		Y	1,26
208-230 V/3~/60H	230	TWC		Y	2,09
575 V/3~/60Hz	575	TWE		Y	0,80
460 V/3~/60Hz	460	TWD		Y	1,00



Minimum evaporating temp. with:
 ——— 25°C Suction Gas Return + Liquid Injection

Suction Return Temperature 20,0°C **Evaporating Temperature °C** Liquid subcooling 0,0K

Cond °C	Capacity kW										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
10	6,18	7,82	9,84	12,25	15,00	18,15					
20	5,74	7,34	9,29	11,60	14,30	17,30	20,70	24,50			
30	5,23	6,74	8,60	10,80	13,35	16,20	19,45	23,00	27,00		
35	4,99	6,45	8,24	10,35	12,80	15,60	18,75	22,20	26,10	30,20	32,00
40	4,77	6,16	7,89	9,93	12,30	15,00	18,05	21,40	25,10	29,10	30,80
45	4,59	5,91	7,56	9,51	11,80	14,40	17,30	20,50	24,10	28,00	29,60
50	4,46	5,71	7,26	9,12	11,30	13,75	16,55	19,65	23,10	26,80	28,40
55	4,40	5,56	7,02	8,78	10,85	13,20	15,85	18,80	22,10	25,70	27,20
60									21,10	24,50	26,00
	Power Input kW										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
10	3,35	3,58	3,81	4,05	4,29	4,54					
20	3,92	4,15	4,39	4,63	4,89	5,16	5,45	5,76			
30	4,62	4,85	5,10	5,36	5,63	5,92	6,24	6,59	6,97		
35	5,02	5,26	5,51	5,77	6,06	6,36	6,70	7,06	7,46	7,89	8,08
40	5,45	5,69	5,95	6,22	6,52	6,84	7,19	7,57	7,99	8,45	8,65
45	5,91	6,16	6,43	6,71	7,02	7,35	7,72	8,12	8,56	9,05	9,25
50	6,42	6,67	6,94	7,24	7,56	7,91	8,29	8,71	9,18	9,68	9,90
55	6,95	7,21	7,50	7,80	8,14	8,50	8,90	9,35	9,83	10,35	10,60
60									10,55	11,10	11,35
	Current 400V, A										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
10	10,61	10,80	10,97	11,12	11,28	11,44					
20	11,00	11,21	11,41	11,62	11,84	12,08	12,34	12,65			
30	11,58	11,80	12,04	12,29	12,56	12,86	13,21	13,60	14,05		
35	11,96	12,19	12,43	12,70	12,99	13,32	13,70	14,14	14,63	15,20	15,45
40	12,41	12,64	12,89	13,16	13,48	13,84	14,25	14,72	15,26	15,88	16,15
45	12,93	13,15	13,41	13,70	14,03	14,41	14,85	15,36	15,94	16,61	16,90
50	13,52	13,74	14,00	14,30	14,64	15,05	15,52	16,06	16,68	17,39	17,70
55	14,20	14,41	14,67	14,97	15,33	15,75	16,24	16,82	17,48	18,23	18,56
60									18,34	19,14	19,48
	Mass Flow g/s										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
10	28,80	36,50	46,10	57,40	70,70	86,00					
20	28,40	36,30	46,10	57,80	71,30	87,00	104,50	124,00			
30	27,60	35,60	45,50	57,30	71,10	87,00	104,50	125,00	147,00		
35	27,20	35,20	45,10	57,00	70,80	86,50	104,50	124,50	147,50	172,00	183,00
40	26,90	34,90	44,80	56,60	70,40	86,50	104,50	124,50	147,50	172,00	183,00
45	27,00	34,80	44,60	56,40	70,20	86,00	104,00	124,50	147,00	173,00	184,00
50	27,30	35,00	44,70	56,40	70,10	86,00	104,00	124,50	147,00	173,00	184,00
55	28,20	35,70	45,20	56,70	70,30	86,00	104,00	124,50	147,50	173,00	184,00
60									148,00	174,00	185,00

Copeland Scroll - Compressor - Refrigeration - LT Liquid Injection
COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, cu.m/h	28.8
Length/Width, mm	368/319
Height, mm	532
Net Weight, kg	93
Gross Weight, kg	100
Rotalock Suction, inch	1 3/4
Rotalock Discharge, inch	1 1/4
Oil Quantity, l	4.14
Base mounting (hole dia), mm	220 x 220 (8.5)
Sound Pressure @ 1m (LT), dBA	72
Sound Power (LT), dBA	83
Sound Power with Sound Shell (LT), dBA	73
PED Category	2
Internal Free Volume, l	19.8
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

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

Maximum Operating Current, A	22.3
Locked Rotor Current, A	127
Winding Resistance, ohm	1.02
Default Enclosure Class	IP 54 (IEC 34)

ACCESSORIES INCLUDED

Discharge Temperature Protection	Internal Thermistor
Mounting Grommets	Standard

ACCESSORIES OPTIONAL

Crankcase Heater	70 W External
Liquid Injection	Capillary Tube
Mounting Grommets	Hard Mounts for Paralleling
Oil Control System	ALCO Trax-Oil OM3
Sound Attenuation	Sound Shell (10 dBA)
Rotalock valves	suction and discharge

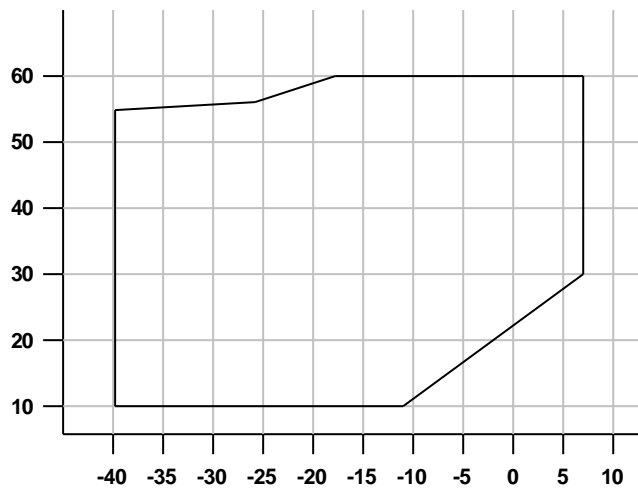
MOTOR OPTIONS

Power Supply	Nominal Voltage	Motor Code	Start Connection	DOL Connection	Amps Factor
380-420 V/3~/50H	400	TWD		Y	1,00
200 V/3~/50Hz	200	TWC		Y	2,09
220-240 V/3~/50H	230	TWR		Y	1,73
380 V/3~/60Hz	380	TW7		Y	1,26
208-230 V/3~/60H	230	TWC		Y	2,09
575 V/3~/60Hz	575	TWE		Y	0,80
460 V/3~/60Hz	460	TWD		Y	1,00

50Hz

ZF33K4E-TWD

R404A Dew Point



Minimum evaporating temp. with:
 ——— 25°C Suction Gas Return + Liquid Injection

Suction Return Temperature 20,0°C

Evaporating Temperature °C

Liquid subcooling 0,0K

Cond °C	Capacity kW										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
10	7,71	9,70	12,10	15,00	18,45	22,40					
20	7,13	8,98	11,20	13,85	16,95	20,60	24,80	29,60			
30	6,41	8,10	10,10	12,45	15,20	18,45	22,20	26,40	31,30	36,90	39,30
35	6,00	7,61	9,50	11,70	14,30	17,30	20,80	24,80	29,30	34,60	36,80
40	5,57	7,09	8,85	10,90	13,30	16,10	19,30	23,00	27,30	32,10	34,30
45	5,13	6,55	8,18	10,05	12,25	14,80	17,80	21,20	25,20	29,70	31,60
50	4,67	5,99	7,48	9,20	11,20	13,55	16,25	19,35	23,00	27,10	29,00
55	4,21	5,41	6,76	8,30	10,10	12,20	14,65	17,45	20,70	24,50	26,20
60						10,80	13,00	15,50	18,45	21,90	23,40
	Power Input kW										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
10	3,47	3,66	3,86	4,08	4,32	4,58					
20	4,02	4,26	4,50	4,75	5,01	5,28	5,57	5,88			
30	4,68	4,98	5,27	5,56	5,85	6,14	6,44	6,75	7,08	7,43	7,57
35	5,06	5,39	5,71	6,02	6,33	6,63	6,94	7,26	7,59	7,93	8,07
40	5,47	5,83	6,18	6,52	6,85	7,17	7,50	7,82	8,15	8,49	8,63
45	5,91	6,31	6,70	7,06	7,42	7,76	8,10	8,43	8,77	9,11	9,24
50	6,39	6,83	7,25	7,65	8,03	8,39	8,75	9,09	9,44	9,78	9,92
55	6,90	7,39	7,85	8,28	8,69	9,08	9,45	9,81	10,15	10,50	10,65
60						9,81	10,20	10,60	10,95	11,30	11,45
	Current 400V, A										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
10	10,31	10,46	10,65	10,87	11,13	11,41					
20	10,76	10,98	11,22	11,48	11,77	12,08	12,41	12,76			
30	11,37	11,66	11,97	12,30	12,64	12,99	13,36	13,73	14,12	14,51	14,67
35	11,74	12,08	12,43	12,80	13,17	13,55	13,94	14,34	14,74	15,14	15,30
40	12,16	12,55	12,95	13,36	13,77	14,18	14,60	15,02	15,44	15,87	16,03
45	12,64	13,09	13,53	13,99	14,44	14,89	15,35	15,80	16,24	16,68	16,86
50	13,18	13,68	14,19	14,69	15,19	15,68	16,18	16,66	17,14	17,60	17,79
55	13,78	14,34	14,91	15,47	16,02	16,56	17,10	17,62	18,13	18,63	18,82
60						17,53	18,11	18,68	19,23	19,76	19,97
	Mass Flow g/s										
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
10	42,90	54,10	67,90	84,50	104,00	127,50					
20	43,20	54,60	68,40	85,00	104,50	127,50	155,00	187,00			
30	42,80	54,30	68,00	84,50	103,50	126,50	153,00	185,00	221,00	264,00	283,00
35	42,30	53,90	67,50	83,50	102,50	125,50	152,00	183,00	220,00	262,00	281,00
40	41,70	53,30	66,80	83,00	101,50	124,00	150,00	181,00	217,00	260,00	279,00
45	41,00	52,60	66,00	81,50	100,50	122,00	148,00	179,00	215,00	258,00	277,00
50	40,20	51,70	65,00	80,50	98,50	120,50	146,00	176,00	213,00	256,00	275,00
55	39,40	50,90	64,00	79,00	97,00	118,50	143,50	174,00	210,00	254,00	273,00
60						116,50	142,00	172,00	209,00	253,00	273,00

Copeland Scroll - Compressor - Refrigeration - LT Liquid Injection
COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, cu.m/h	28.8
Length/Width, mm	368/319
Height, mm	532
Net Weight, kg	93
Gross Weight, kg	100
Rotalock Suction, inch	1 3/4
Rotalock Discharge, inch	1 1/4
Oil Quantity, l	4.14
Base mounting (hole dia), mm	220 x 220 (8.5)
Sound Pressure @ 1m (LT), dBA	72
Sound Power (LT), dBA	83
Sound Power with Sound Shell (LT), dBA	73
PED Category	2
Internal Free Volume, l	19.8
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

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

Maximum Operating Current, A	22.3
Locked Rotor Current, A	127
Winding Resistance, ohm	1.02
Default Enclosure Class	IP 54 (IEC 34)

ACCESSORIES INCLUDED

Discharge Temperature Protection	Internal Thermistor
Mounting Grommets	Standard

ACCESSORIES OPTIONAL

Crankcase Heater	70 W External
Liquid Injection	Capillary Tube
Mounting Grommets	Hard Mounts for Paralleling
Oil Control System	ALCO Trax-Oil OM3
Sound Attenuation	Sound Shell (10 dBA)
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	TWD		Y	1,00
200 V/3~/50Hz	200	TWC		Y	2,09
220-240 V/3~/50H	230	TWR		Y	1,73
380 V/3~/60Hz	380	TW7		Y	1,26
208-230 V/3~/60H	230	TWC		Y	2,09
575 V/3~/60Hz	575	TWE		Y	0,80
460 V/3~/60Hz	460	TWD		Y	1,00