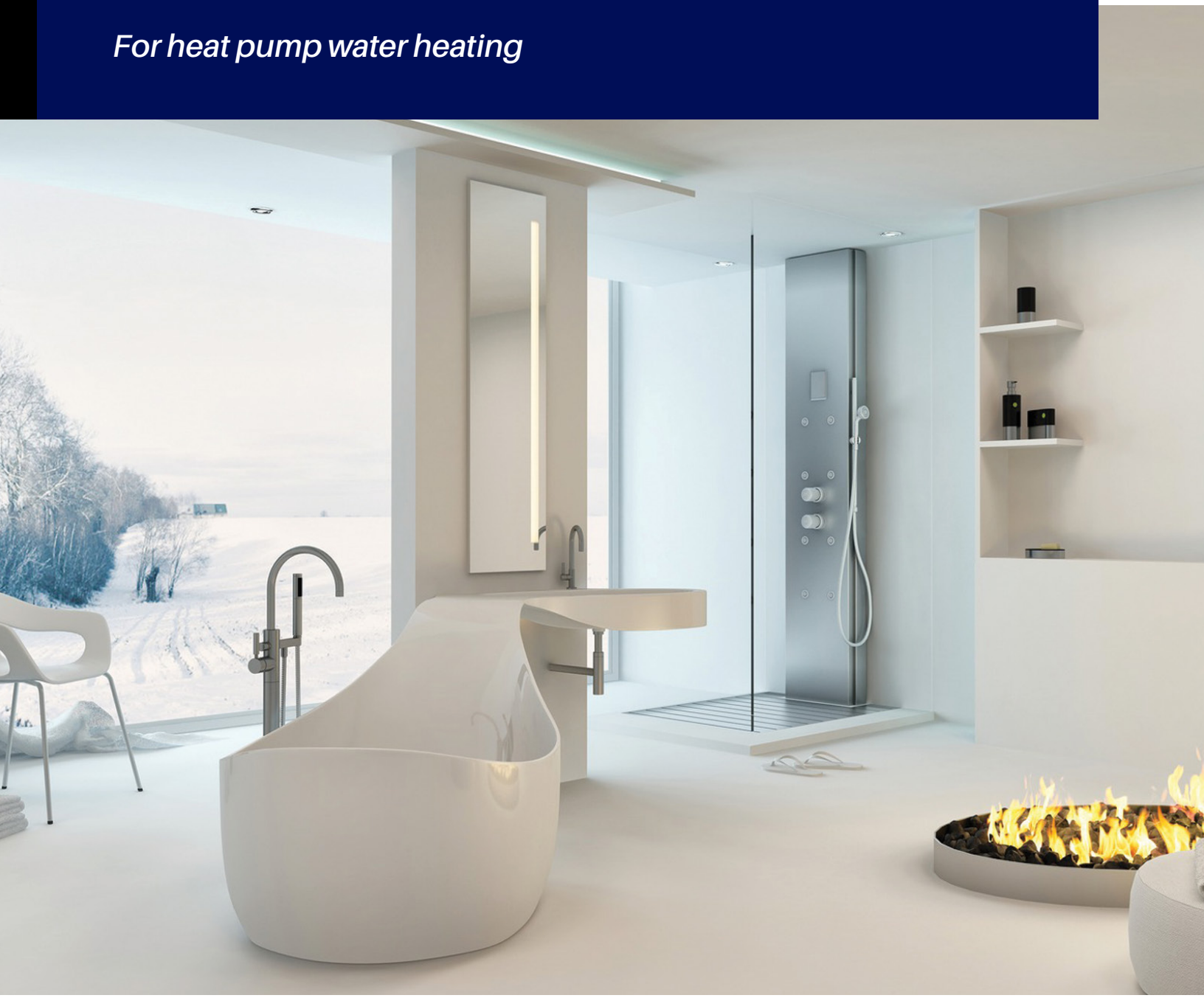
Copeland scroll ZW compressor

For heat pump water heating



COPELAND

Over 10 years of heat pump technology and expertise

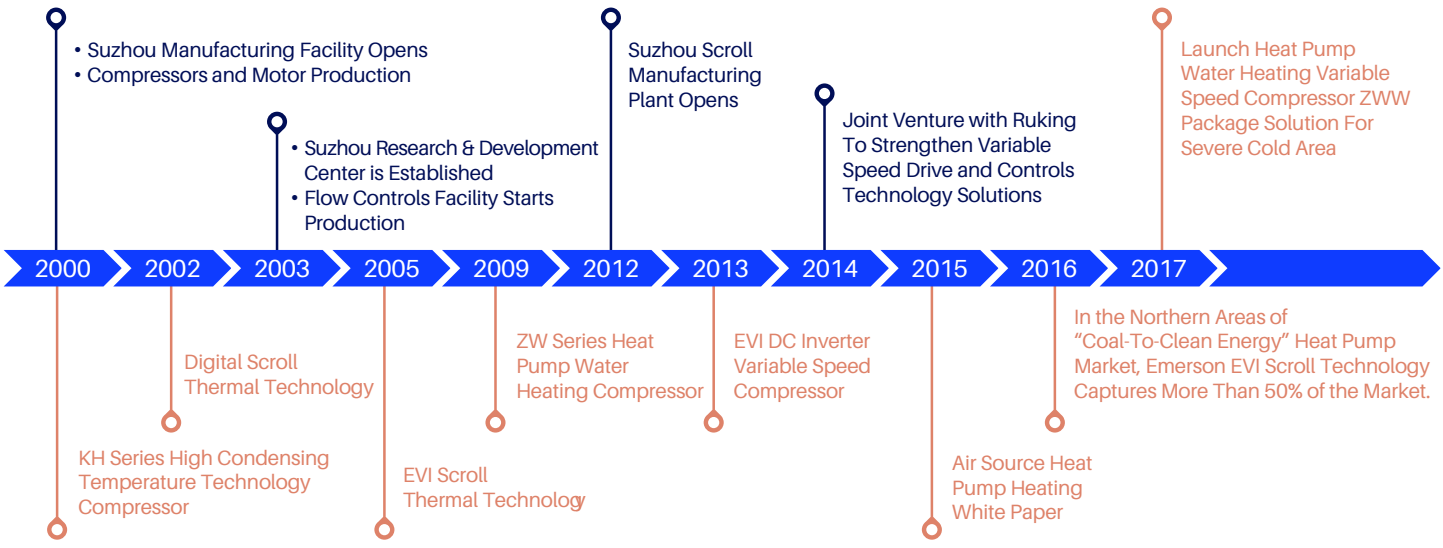


TABLE OF CONTENTS

Copeland Scroll ZW for heat pump water heating

Compared to conventional electric heaters or fuel boilers, Copeland Scroll ZW compressors have a higher energy efficiency ratio, and are widely used for sanitary water heating, residential heating, drying, electroplating and other industrial fields. Backed with experience of over 100 million scroll compressors produced, Copeland is recognized as an industry leader with unmatched reliability and efficiency.

Copeland Scroll ZW compressors for heat pumps use Copeland EVI (Enhanced Vapor Injection) scroll heating technology and a host of new design features to create a strong core for any heat pump system. With Copeland's EVI scroll heating technology, heat range for heat pumps and water heating systems are reliably extended to -30°C ambient temperature. heating capacity and energy efficiency are increased by about 40% and 22% respectively. Copeland Scroll ZW compressors not only can produce quality sanitary heating for residential applications but also can produce 85°C of hot water for industrial applications.

Copeland Scroll ZW compressors are uniquely designed for scroll and axial compliance which in turn make ZW scroll compressors attain higher compression ratios and greater pressure difference. Compared with normal heat pump air conditioning compressors, it offers a wider range of operations. Equipped with a highly efficient and powerful motor, ZW compressor meets the demand for heat pump and water heating under extreme conditions. ZW compressors can also be installed in tandem to meet with larger capacity heating requirements while oil and gas balance ports ensure proper operation.

Heated swimming pool

Hot water

Space heating

The advantages of Copeland Scroll ZW

Performance	Normal air conditioning scroll	Normal heating scroll	Copeland scroll ZW EVI
Heating capacity	Benchmark	Over benchmark 10%	Over benchmark 40%
Minimum ambient temperature	0°C	0°C	-30°C
HCOP	Benchmark	Over benchmark 5%	Over benchmark 20%
Maximum water temperature	45°C	55°C	65°C

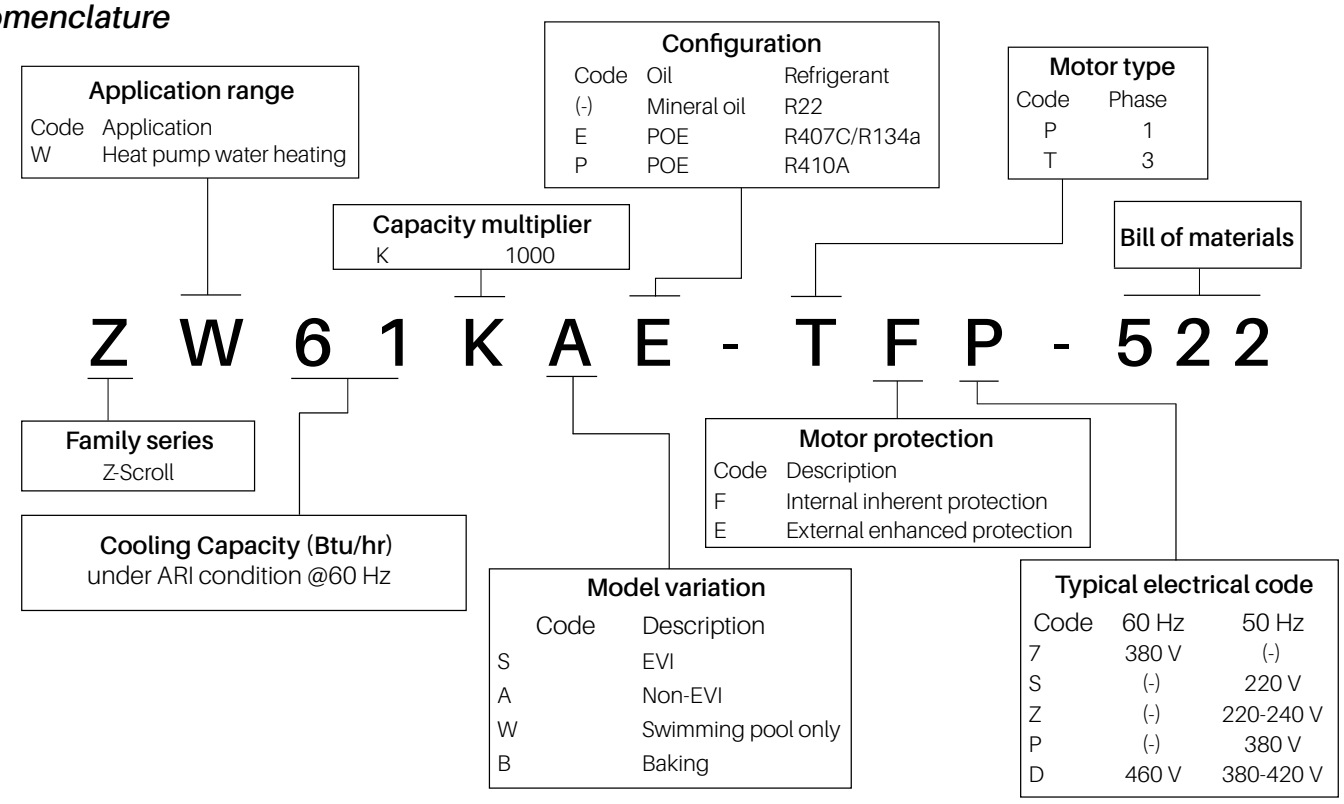
Bill of material (BOM)

Compressor model	BOM code	Suction/ Displacement brazing connection	EVI Brazing connection
ZW30KS(E)	582	✓	✓
ZW30KA(E)	582	✓	
ZW34KS(E)	582	✓	✓
ZW34KA(E)	582	✓	
ZW42KS(E)	522	✓	✓
ZW52KS(E)	522	✓	✓
ZW52KA(E)	522	✓	
ZW61KS(E)	522	✓	✓
ZW61KA(E)	522/52E	✓	
ZW61KBE	522	✓	
ZW68KS(E)	522	✓	✓
ZW72KA(E)	52E	✓	
ZW72KBE	522	✓	
ZW79KS(E)	522	✓	✓
ZW79KA(E)	522	✓	
ZW79KBE	522	✓	
ZW108KS(E)	522	✓	✓

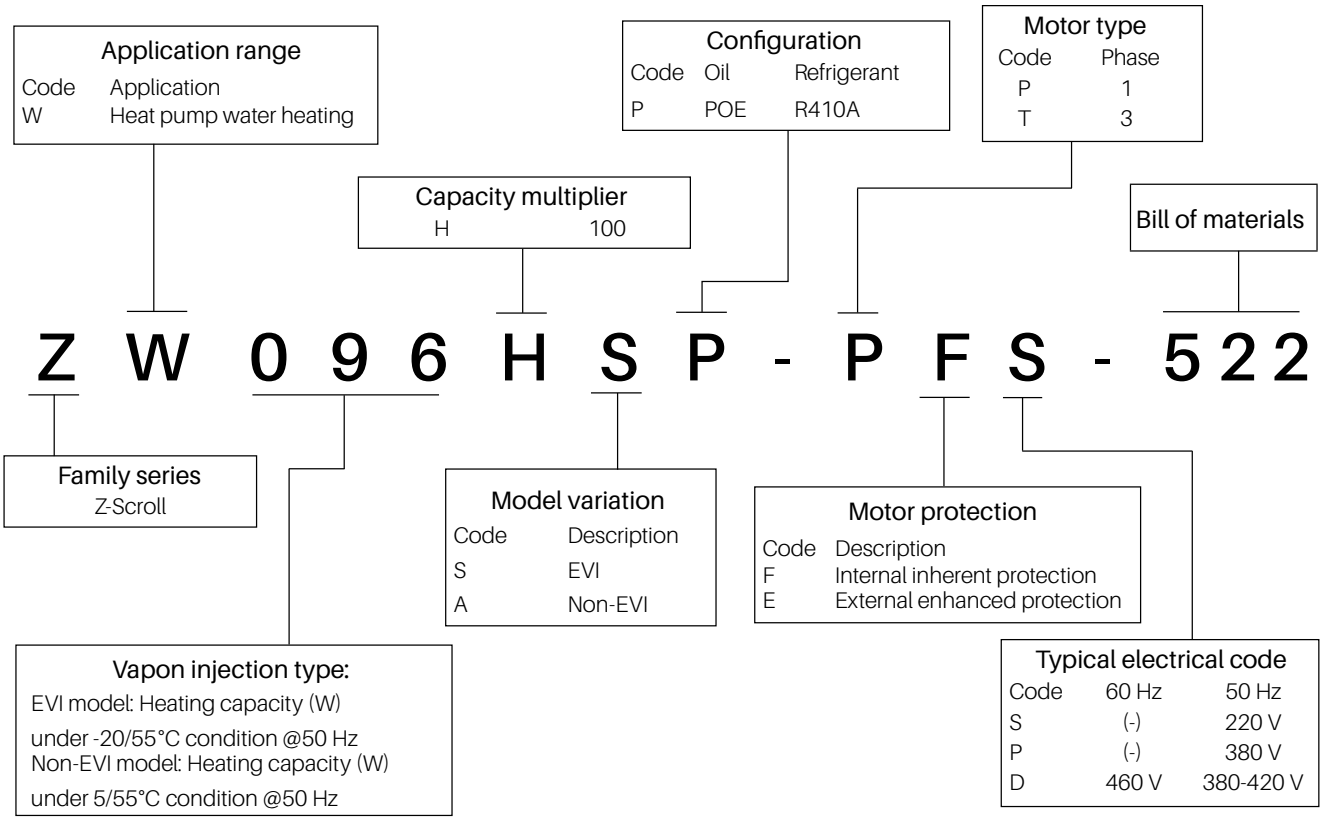
Compressor model	BOM code	Suction/ Displacement brazing connection	EVI Brazing connection
ZW108KA(E)	522	✓	
ZW124KS(E)	52E	✓	✓
ZW124KA(E)	52E	✓	
ZW125KS(E)	522	✓	✓
ZW125KA(E)	522	✓	
ZW125KBE	522	✓	
ZW150KS(E)	522	✓	✓
ZW150KA(E)	522	✓	
ZW150KBE	522	✓	
ZWD61KA(E)	532	✓	
ZWD61KBE	522	✓	
ZWD72KA(E)	53E	✓	
ZWD72KBE	532	✓	
ZWD81KA(E)	532	✓	
ZWD81KBE	532	✓	
ZW059HSP	582	✓	✓
ZW096HSP	522	✓	✓

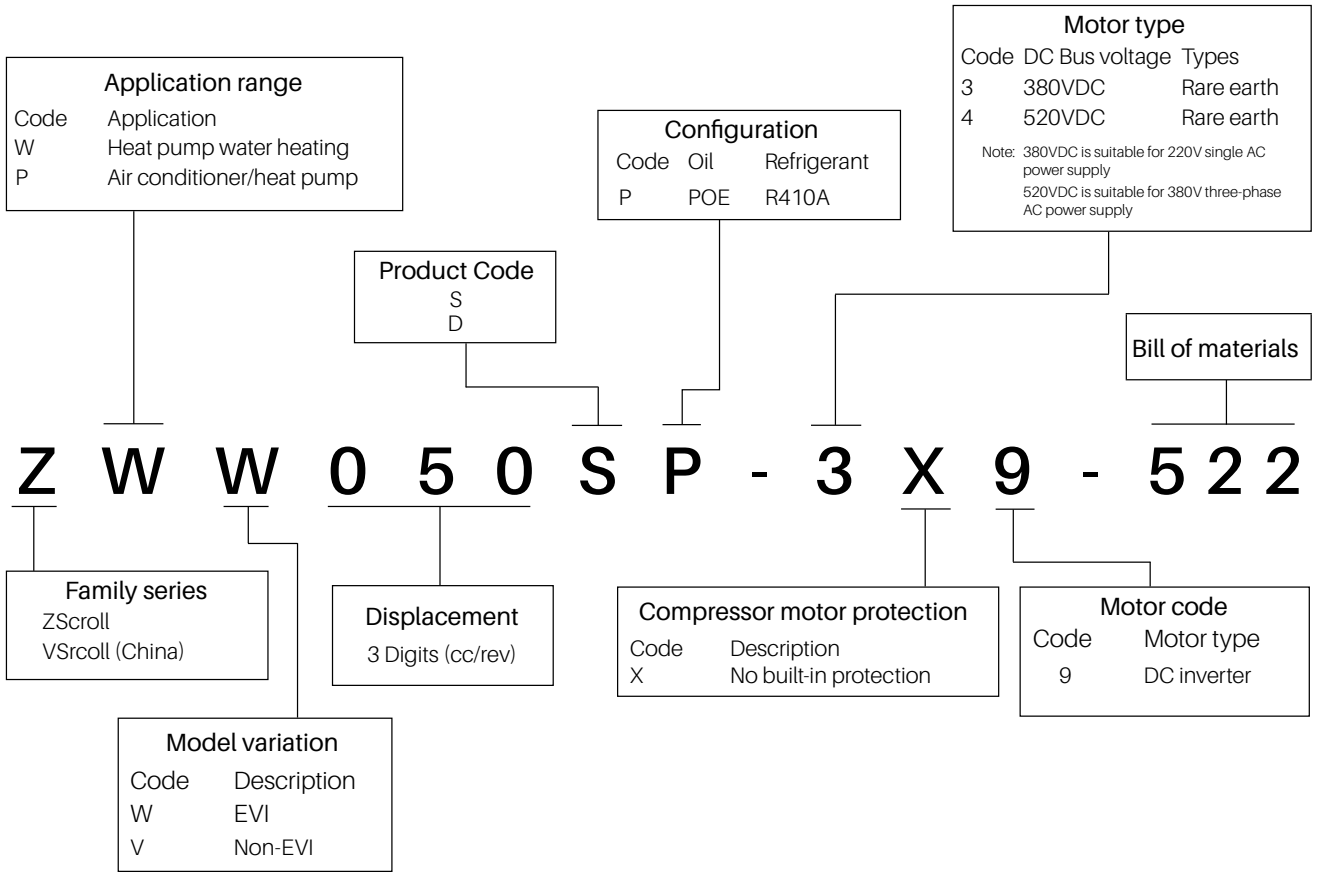
Compressor model	BOM code	Suction/ Displacement brazing connection	EVI Brazing connection
ZW102HSP	522	✓	✓
ZW126HSP	522	✓	✓
ZW166HAP	522	✓	
ZW188HAP	522	✓	
ZW258HSP	522	✓	✓
ZW286HSP	522	✓	✓
ZW430HSP	522	✓	✓
ZW520HSP	522	✓	✓
ZW28KWP	58E	✓	
ZW31KWP	522	✓	
ZW42KWP	522/52E	✓	
ZW51KWP	522	✓	
ZW54KWP	52E	✓	
ZW72KWP	52E	✓	
ZW83KWP	522	✓	
VPW038DE	571	✓	✓
ZWW050SP	522	✓	✓

Nomenclature



Nomenclature





Sanitary heating

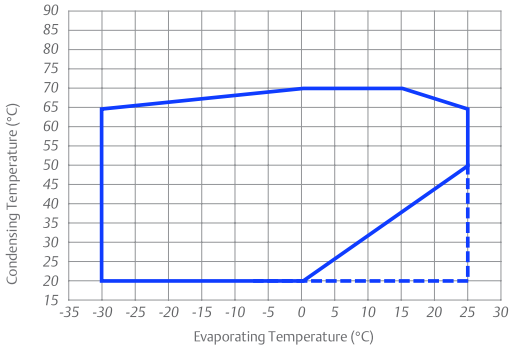
Compressor model

Refrigerant	Compressor model	Power supply	EVI	Rated heating capacity (kW)	Performance table	Specification
R22	ZW30KA-PFS-582	1Φ/220 V/50 Hz		9.0	P11	P27
	ZW30KS-PFS-582			10.1	P6	P26
	ZW34KA-PFS-582			10.1	P11	P27
	ZW34KS-PFS-582			11.6	P6	P26
	ZW52KA-PFS-522			15.8	P11	P27
	ZW34KA-TFP-582	3Φ/380 V/50 Hz		10.1	P12	P27
	ZW34KS-TFP-582			11.2	P7	P26
	ZW57KH-TFP-522			17.1	P14	P27
	ZW61KA-TFP-522			18.1	P12	P27
	ZW61KA-TFP-52E			18.1	P12	P27
	ZW61KH-TFP-522			18.2	P14	P27
	ZW61KS-TFP-522			20.3	P7	P26
	ZW72KA-TFP-52E			21.4	P12	P27
	ZW79KA-TFP-522			24.7	P12	P27
	ZW79KS-TFP-522			25.8	P7	P26
	ZW108KA-TFP-522			31.2	P12	P27
	ZW108KS-TFP-522			35.9	P7	P26
	ZW124KA-TFP-52E			37.2	P13	P27
	ZW124KS-TFP-52E			42.6	P8	P26
	ZW125KA-TFP-522			36.8	P13	P27
	ZW125KS-TFP-522			41.6	P8	P26
	ZW150KA-TFP-522			45.4	P13	P27
	ZW150KS-TFP-522			50.4	P8	P26
	ZW34KS-TF7-582	3Φ/380 V/60 Hz		13.5	P7	P26
	ZW61KA-TF7-542			21.9	P12	P27
	ZW108KS-TF7-522			43.1	P7	P26
R407C	ZW30KAE-PFS-582	1Φ/220 V/50 Hz		8.8	P15	P28
	ZW34KAE-PFS-582			9.3	P15	P28
	ZW52KAE-PFS-522			15.3	P15	P28
	ZW34KAE-TFP-582	3Φ/380 V/50 Hz		9.8	P16	P28
	ZW34KSE-TFP-582			10.8	P9	P26
	ZW61KAE-TFP-522			17.7	P16	P28
	ZW61KAE-TFP-52E			17.7	P16	P28
	ZW61KSE-TFP-522			19.6	P9	P26
	ZW72KAE-TFP-52E			21.2	P16	P28
	ZW79KAE-TFP-522			24.8	P16	P28
	ZW79KSE-TFP-522			26.1	P9	P26
	ZW108KAE-TFP-522			30.9	P16	P28
	ZW108KSE-TFP-522			35.6	P9	P26
	ZW124KAE-TFP-52E			36	P17	P28
	ZW124KSE-TFP-52E			41.76	P10	P26
	ZW125KAE-TFP-522			35.6	P17	P28
	ZW125KSE-TFP-522			40.9	P10	P26
	ZW150KAE-TFP-522			44.2	P17	P28
	ZW34KSE-TF7-582	3Φ/380 V/60 Hz		13	P9	P30
	ZW61KAE-TF7-542			21.2	P16	P30
	ZW61KSE-TF7-542			23.8	P9	P30
	ZW108KSE-TF7-522			42.8	P9	P30
R410A	ZW28KWP-PFZ-58E	1Φ/220-240 V/50 Hz		8.7	P18	P28
	ZW31KWP-PFZ-522			9.3	P18	P28
	ZW42KWP-PFZ-522			12.8	P18	P28
	ZW51KWP-PFZ-522			15.2	P19	P28
	ZW42KWP-TFD-52E	3Φ/380-420 V/50 Hz or 3Φ/460 V/60 Hz		12.7	P20/P25	P28/P30
	ZW54KWP-TFD-52E			16.1	P20/P25	P28/P30
	ZW72KWP-TFD-52E			21.4	P20/P25	P28/P30
	ZW83KWP-TFD-522			24.7	P21/P25	P28/P30
	ZW102HSP-TFP-522	3Φ/380 V/50 Hz		18.9	P22	P29
	ZW166HAP-TFP-522			16.6	P21	P29
	ZW188HAP-TEP-522			18.4	P21	P29
	ZW430HSP-TE7-522	3/380V/60Hz		81.5		P30

Operating envelopes

ZW30KS, ZW34KS(E)-TFP,
ZW61KS(E), ZW79KS(E), ZW124KS(E),
ZW125KS(E), ZW150KS

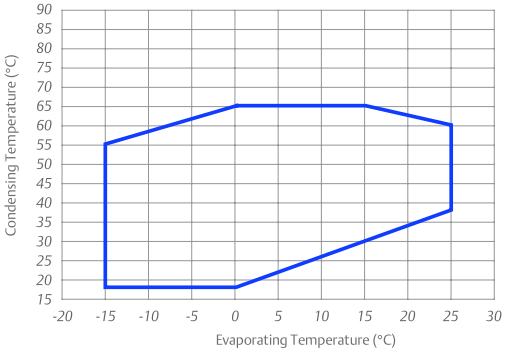
R22/R407C



Superheat 5K
Maximum discharge temperature with EVI: 115 °
Transition only

ZW166HAP, ZW188HAP

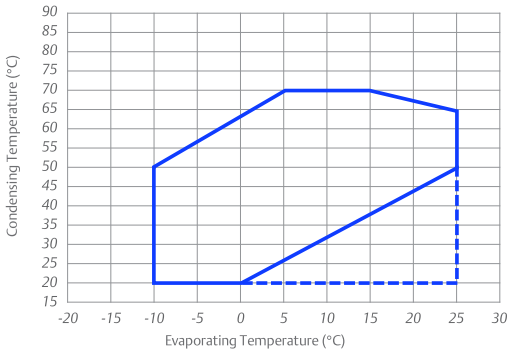
R410A



Superheat 5K

ZW30KA(E), ZW34KA(E), ZW52KA(E), ZW61KA(E),
ZW72KA(E), ZW79KA(E), ZW108KA(E), ZW124KA(E),
ZW125KA(E), ZW150KA(E), ZW57KH, ZW61KH

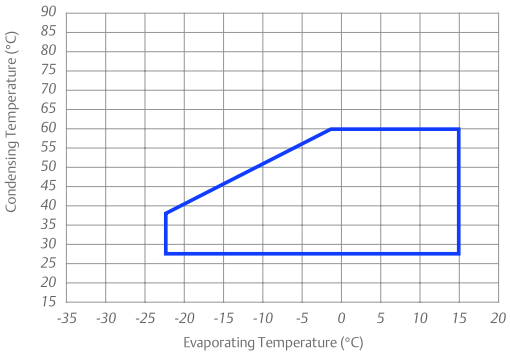
R22/R407C



Superheat 5K
Transition only

ZW28KWP, ZW31KWP, ZW42KWP, ZW51KWP,
ZW54KWP, ZW72KWP, ZW83KWP

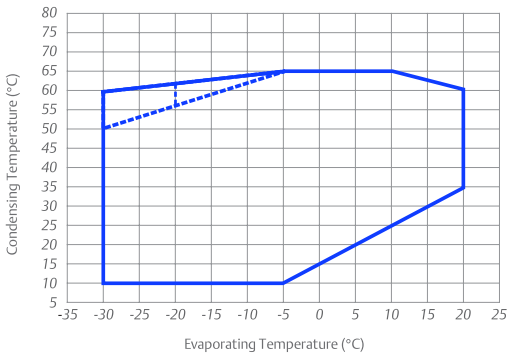
R410A



Superheat 5K

ZW102HSP, ZW430HSP-TF7

R410A



Superheat 5K
In wet injection area, the running time is limited to <2000 hours when evaporating temperature is lower than -20 °C.

220V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW30KS	Q	65	4.62	5.20	5.85	6.57	7.36	8.25	9.22	10.30	11.48	12.78
		55	4.28	4.85	5.49	6.22	7.04	7.96	8.99	10.12	11.38	12.68
		45	4.07	4.63	5.29	6.04	6.90	7.86	8.95	10.16	11.50	12.98
		35	3.89	4.47	5.14	5.93	6.83	7.65	9.01	10.30	11.73	
		25	3.66	4.25	4.96	5.79	6.74	7.83	9.07			
	P	65	2.86	2.94	3.00	3.06	3.10	3.14	3.15	3.16	3.14	3.11
		55	2.37	2.41	2.44	2.47	2.50	2.52	2.53	2.53	2.51	2.48
		45	1.99	2.00	2.01	2.03	2.04	2.05	2.05	2.05	2.04	2.02
		35	1.68	1.67	1.66	1.67	1.68	1.68	1.69	1.70	1.70	
		25	1.39	1.37	1.36	1.36	1.36	1.38	1.40			
ZW34KS	Q	65				7.44	8.34	9.33	10.43			
		55	4.77	5.52	6.31	7.16	8.09	9.12	10.27	11.57	13.02	
		45	4.56	5.29	6.08	6.94	7.89	8.95	10.14	11.49	13.00	
		35	4.48	5.18	5.96	6.81	7.77	8.85	10.07	11.46	13.02	
		25	4.56	5.23	5.98	6.82	7.78	8.87	10.11			
	P	65				3.74	3.83	3.87	3.86			
		55	2.43	2.64	2.78	2.88	2.93	2.96	2.97	2.96	2.96	
		45	2.00	2.10	2.16	2.19	2.21	2.21	2.22	2.24	2.28	
		35	1.80	1.79	1.76	1.72	1.69	1.67	1.67	1.70	1.77	
		25	1.88	1.75	1.61	1.50	1.40	1.35	1.33			

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Single phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW34KS	Q	65	4.92	5.64	6.42	7.26	8.16	9.14	10.20	11.35	12.60	13.96
		55	4.70	5.39	6.15	6.97	7.88	8.88	9.98	11.18	12.50	13.94
		45	4.84	5.15	5.90	6.74	7.68	8.72	9.87	11.14	12.55	14.09
		35	4.25	4.92	5.68	6.55	7.53	8.63	9.86	11.23	12.73	
		25	3.98	4.67	5.47	6.39	7.43	8.61	9.94			
	P	65	3.44	3.50	3.56	3.60	3.63	3.65	3.66	3.66	3.65	3.62
		55	2.66	2.71	2.75	2.78	2.80	2.81	2.82	2.82	2.81	2.79
		45	2.04	2.08	2.10	2.13	2.14	2.15	2.16	2.17	2.16	2.16
		35	1.56	1.58	1.60	1.62	1.64	1.65	1.66	1.67	1.68	
		25	1.18	1.20	1.21	1.23	1.25	1.27	1.29			
ZW61KS	Q	65	9.95	10.86	11.91	13.13	14.54	16.17	18.04	20.18	22.61	25.35
		55	8.85	9.91	11.12	12.51	14.09	15.90	17.95	20.28	22.90	25.84
		45	8.15	9.34	10.68	12.20	13.92	15.87	18.08	20.56	23.34	26.45
		35	7.74	9.01	10.45	12.07	13.91	15.97	18.29	20.90	23.81	
		25	7.46	8.80	10.30	12.00	12.90	16.05	18.46			
	P	65	5.79	5.82	5.88	5.95	6.03	6.10	6.17	6.22	6.23	6.21
		55	4.47	4.50	4.56	4.64	4.73	4.82	4.89	4.95	4.98	4.98
		45	3.51	3.54	3.59	3.67	3.76	3.86	3.94	4.01	4.05	4.05
		35	2.80	2.82	2.87	2.95	3.04	3.13	3.22	3.29	3.33	
		25	2.24	2.26	2.30	2.37	2.45	2.54	2.62			
ZW79KS	Q	65	12.11	13.64	15.25	16.98	18.87	20.97	23.32	25.97	28.95	32.31
		55	10.23	12.06	13.95	15.94	18.08	20.41	22.97	25.81	28.97	32.49
		45	9.24	11.26	13.32	15.48	17.75	20.21	22.87	25.80	29.03	32.60
		35	8.77	10.88	13.01	15.21	17.53	20.00	22.66	25.57	28.76	
		25	8.47	10.56	12.66	14.80	17.04	19.42	21.98			
	P	65	7.51	7.41	7.38	7.42	7.51	7.64	7.81	7.99	8.18	8.37
		55	5.86	5.80	5.82	5.88	6.00	6.14	6.31	6.48	6.65	6.81
		45	4.62	4.61	4.66	4.76	4.89	5.05	5.21	5.38	5.53	5.66
		35	8.77	10.88	13.01	15.21	17.53	20.00	22.66	25.57	28.76	
		25	2.77	2.86	2.99	3.15	3.33	3.50	3.67			
ZW108KS	Q	65		15.86	18.87	21.99	25.26	28.67	32.22	35.92	39.76	43.76
		55		15.42	18.66	21.82	25.28	28.64	32.20	35.88	39.66	43.55
		45		15.83	19.20	22.65	26.15	29.72	33.36	37.07	40.85	44.71
		35		16.23	19.90	27.31	27.31	31.05	34.83	38.64	42.48	
		25		15.75	19.77	27.76	27.76	31.74	35.72			
	P	65		9.83	10.02	10.32	10.32	10.40	10.43	10.39	10.39	10.10
		55		7.81	7.97	8.21	8.21	8.28	8.31	8.29	8.21	8.06
		45		6.33	6.45	6.64	6.64	6.71	6.74	6.73	6.68	6.56
		35		5.19	5.27	5.42	5.42	5.48	5.52	5.52	5.49	
		25		4.20	4.24	4.35	4.35	4.40	4.45			

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW124KS	Q	65	17.86	19.98	22.53	25.52	28.92	32.74	36.95	41.55	46.54	51.90
		55	17.20	19.58	22.38	25.57	29.15	33.11	37.45	42.15	47.20	52.59
		45	17.06	19.63	22.58	25.90	29.59	33.62	38.01	42.72	47.76	53.12
		35	15.64	18.32	21.35	24.73	28.44	32.48	36.83	41.49	46.44	
		25	15.13	17.85	20.89	22.25	26.91	29.87	32.12	36.64		
	P	65	11.10	11.49	11.83	12.13	12.39	12.62	12.82	13.01	13.18	13.36
		55	8.86	9.22	9.54	9.81	10.05	10.26	10.46	10.64	10.82	11.00
		45	7.38	7.69	7.96	8.19	8.40	8.59	8.76	8.93	9.09	9.27
		35	6.13	6.38	6.59	6.77	6.93	7.07	7.21	7.34	7.48	
		25	5.59	5.76	5.90	6.02	6.11	6.20	6.29	6.37		
ZW125KS	Q	65	18.02	19.96	22.4	25.31	28.67	32.45	36.63	41.18	46.07	51.27
		55	16.9	19.15	21.86	25.02	28.6	32.57	36.91	41.58	46.58	51.86
		45	16.35	18.73	21.56	24.8	28.44	32.43	36.77	41.42	46.35	51.55
		35	15.95	18.32	21.1	24.26	27.79	31.65	35.82	40.27	44.98	
		25	15.32	17.5	20.07	22.99	26.25	29.81	33.65	37.75		
	P	65	10.74	10.87	11.04	11.24	11.46	11.7	11.95	12.21	12.46	12.71
		55	7.89	8.23	8.58	8.93	9.27	9.6	9.91	10.19	10.45	10.66
		45	6.14	6.6	7.03	7.44	7.81	8.14	8.42	8.65	8.81	8.91
		35	5.12	5.61	6.04	6.42	6.73	6.97	7.13	7.21	7.20	
		25	4.47	4.9	5.24	5.5	5.66	5.72	5.67	5.51		
ZW150KS	Q	65	19.42	23.37	27.31	31.35	35.59	40.11	45.00	50.38	56.32	62.93
		55	20.21	23.80	27.47	31.32	35.45	39.93	44.88	50.38	56.53	63.42
		45	20.04	23.41	26.94	30.73	34.87	39.45	44.58	50.33	56.82	64.13
		35	19.47	22.75	26.27	30.12	34.41	39.22	44.64	50.79	57.74	
		25	19.03	22.35	25.99	30.04	34.60	39.76	45.62	52.28		
	P	65	11.54	12.20	12.81	13.36	13.87	14.35	14.80	15.23	15.65	16.05
		55	9.62	10.15	10.64	11.09	11.53	11.94	12.34	12.74	13.14	13.55
		45	8.10	8.52	8.93	9.31	9.69	10.07	10.45	10.84	11.25	11.68
		35	6.81	7.15	7.49	7.83	8.18	8.54	8.92	9.33	9.78	
		25	5.56	5.85	6.15	6.47	6.81	7.18	7.59	8.04		

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW34KSE	Q	65	5.14	5.56	6.11	6.79	7.59	8.51	9.55	10.71	11.97	13.34
		55	4.39	4.89	5.54	6.32	7.25	8.31	9.49	10.81	12.25	13.83
		45	3.90	4.46	5.17	6.04	7.06	8.23	9.54	10.99	12.58	14.31
		35	3.64	4.23	4.98	5.91	6.99	8.24	9.65	11.21	12.92	
		25	3.58	4.16	4.93	5.88	7.01	8.31	9.79			
	P	65	3.40	3.48	3.53	3.58	3.61	3.63	3.65	3.67	3.70	3.72
		55	2.52	2.60	2.65	2.70	2.73	2.75	2.78	2.80	2.88	2.86
		45	1.93	1.99	2.05	2.08	2.11	2.13	2.15	2.17	2.19	2.22
		35	1.53	1.58	1.62	1.65	1.67	1.68	1.69	1.70	1.71	
		25	1.24	1.28	1.29	1.31	1.31	1.31	1.30			
ZW61KSE	Q	65	9.05	9.90	10.93	12.14	13.56	15.20	17.07	19.20	21.59	24.27
		55	7.70	8.79	10.05	11.51	13.17	15.05	17.17	19.55	22.19	25.11
		45	6.87	8.14	9.58	11.20	13.04	15.10	17.39	19.94	22.76	25.86
		35	6.50	7.87	9.41	11.14	13.08	15.24	17.64	20.29	23.21	
		25	6.50	7.90	9.47	11.24	13.21	15.41	17.84			
	P	65	5.66	5.56	5.54	5.60	5.71	5.84	5.99	6.13	6.25	6.24
		55	4.24	4.19	4.23	4.31	4.44	4.58	4.73	4.85	4.95	4.98
		45	3.26	3.26	3.32	3.42	3.55	3.69	3.80	3.89	3.93	3.90
		35	2.59	2.60	2.67	2.77	2.88	2.99	3.07	3.02	3.08	
		25	2.08	2.10	2.16	2.23	2.31	2.37	2.39			
ZW79KSE	Q	65	11.53	13.02	14.64	16.43	18.41	20.63	23.10	25.86	28.94	32.38
		55	9.32	11.20	13.20	15.36	17.69	20.23	23.01	26.05	29.39	33.06
		45	8.15	10.27	12.51	14.88	17.41	20.11	23.03	26.19	29.62	33.36
		35	7.72	9.94	12.26	14.70	17.26	19.97	22.87	25.99	29.35	
		25	7.73	9.92	12.18	14.52	16.95	19.51	22.23			
	P	65	7.66	7.39	7.27	7.30	7.43	7.64	7.92	8.24	8.58	8.91
		55	5.80	5.65	5.63	5.72	5.88	6.11	6.37	6.64	6.89	7.11
		45	4.49	4.44	4.49	4.63	4.81	5.03	5.25	5.46	5.61	5.70
		35	8.48	10.50	12.65	14.94	17.38	19.94	22.60	25.25	27.80	
		25	2.68	2.78	2.93	3.11	3.28	3.42	3.51			
ZW108KSE	Q	65		16.37	18.58	21.24	24.33	27.81	31.69	35.94	40.54	45.48
		55		15.37	17.88	20.76	23.99	27.56	31.45	35.64	40.12	44.86
		45		13.82	16.70	19.87	23.33	27.05	31.03	35.24	39.67	44.29
		35		12.69	15.99	19.53	23.29	27.25	31.38	35.68	40.13	
		25		16.73	16.73	20.71	24.84	29.10	33.46			
	P	65		11.36	11.36	11.08	10.87	10.73	10.66	10.66	10.72	10.86
		55		8.10	8.10	8.15	8.20	8.25	8.29	8.34	8.38	8.42
		45		6.34	6.34	6.64	6.87	7.02	7.11	7.12	7.06	6.93
		35		5.35	5.35	5.83	6.16	6.34	6.39	6.29	6.05	
		25		4.43	5.00	5.00	5.35	5.49	5.42			

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW124KSE	Q	65	16.57	18.44	20.99	24.17	27.91	32.14	36.81	41.85	47.19	52.78
		55	15.39	17.49	20.27	23.66	27.59	32.00	36.84	42.02	47.49	53.19
		45	14.49	16.77	19.70	23.22	27.28	31.80	36.72	41.98	47.51	53.26
		35	13.99	16.36	19.37	22.96	27.07	31.62	36.56	41.83	47.35	
		25	13.97	16.37	19.39	22.97	27.06	31.57	36.46	41.66		
	P	65	10.06	10.66	11.17	11.62	12.01	12.36	12.68	12.99	13.30	13.63
		55	7.87	8.40	8.86	9.24	9.56	9.84	10.09	10.33	10.57	10.82
		45	6.56	7.04	7.44	7.76	8.03	8.24	8.43	8.60	8.76	8.94
		35	5.48	5.91	6.26	6.53	6.74	6.89	7.02	7.12	7.22	
		25	4.95	5.34	5.64	5.86	6.02	6.12	6.19	6.23		
ZW125KSE	Q	65	16.76	18.89	21.46	24.47	27.9	31.78	36.09	40.84	46.03	51.66
		55	15.98	18.25	20.95	24.09	27.65	31.64	36.07	40.93	46.22	51.96
		45	14.84	17.25	20.08	23.34	27.02	31.14	35.68	40.65	46.05	51.89
		35	13.80	16.35	19.31	22.70	26.51	30.74	35.39	40.47	45.98	
		25	13.34	16.02	19.12	22.63	26.56	30.91	35.68	40.87		
	P	65	9.93	10.34	10.74	11.12	11.48	11.82	12.14	12.43	12.69	12.91
		55	7.96	8.30	8.64	8.96	9.26	9.54	9.80	10.04	10.25	10.43
		45	6.52	6.80	7.07	7.33	7.58	7.81	8.01	8.20	8.36	8.50
		35	5.37	5.59	5.8	6.00	6.18	6.36	6.52	6.65	6.77	
		25	4.25	4.41	4.55	4.7	4.83	4.95	5.06	5.15		

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

220V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW30KA	Q	65				8.76	9.98	11.42
		55		6.49	7.76	9.03	10.37	11.87
		45	5.77	6.9	8.06	9.33	10.77	12.48
		35	6.05	7.1	8.29	9.68	11.37	
		25	6.16	7.28	8.63			
	P	65				2.83	2.92	2.97
		55		2.07	2.23	2.31	2.36	2.38
		45	1.67	1.78	1.84	1.88	1.92	1.99
		35	1.42	1.46	1.49	1.55	1.66	
		25	1.13	1.16	1.23			
ZW34KA	Q	65				9.36	10.81	12.42
		55		7.37	8.71	10.08	11.56	13.22
		45	6.64	7.95	9.26	10.64	12.16	13.91
		35	7.08	8.35	9.65	11.06	12.65	
		25	7.34	8.59	9.91			
	P	65				3.14	3.17	3.21
		55		2.64	2.64	2.64	2.66	2.68
		45	2.22	2.2	2.2	2.21	2.22	2.24
		35	1.8	1.81	1.82	1.85	1.89	
		25	1.43	1.48	1.53			
ZW52KA	Q	65				15.41	17.64	20.08
		55		11.87	13.59	15.77	18.28	21.00
		45	10.41	11.79	13.77	16.21	18.98	21.96
		35	10.50	12.12	14.33	17.00	20.00	
		25	11.28	13.11	15.53			
	P	65				5.06	5.04	5.02
		55		4.18	4.24	4.23	4.19	4.16
		45	3.44	3.58	3.62	3.58	3.52	3.47
		35	2.94	3.05	3.06	3.00	2.90	
		25	2.39	2.46	2.43			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Single phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW34KA	Q	65				9.77	11.06	12.58
		55		7.75	8.81	10.10	11.59	13.28
		50	6.82	7.77	8.94	10.31	11.87	13.62
		45	8.79	7.84	9.10	10.55	12.14	13.91
		35	6.89	8.09	9.44	10.94	12.58	
		25	1.10	8.35	9.72			
	P	65				3.22	3.43	3.28
		55		2.52	2.54	2.59	2.64	2.68
		50	2.23	2.26	2.30	2.35	2.40	2.45
		45	2.00	2.04	2.09	2.14	2.19	2.23
		35	1.65	1.69	1.38	1.78	1.81	
		25	1.34	1.37	1.39			
ZW61KA	Q	65				17.53	19.86	22.61
		55		13.90	15.83	18.14	20.84	23.88
		50	12.22	13.95	16.06	18.53	21.35	24.49
		45	12.18	14.09	13.35	19.02	21.84	25.03
		35	12.38	14.54	16.98	19.69	22.64	
		25	12.76	15.01	17.48			
	P	65				5.66	5.75	5.81
		55		4.39	4.50	4.60	4.68	4.74
		50	3.85	3.97	4.07	4.16	4.24	4.30
		45	3.50	3.59	3.69	3.77	3.85	3.92
		35	2.88	2.95	3.02	3.10	3.19	
		25	2.33	2.38	2.45			
ZW72KA	Q	65				20.82	23.68	26.82
		55		16.09	18.63	21.43	24.60	28.24
		45	14.10	16.51	19.25	22.24	26.18	30.57
		35	14.42	17.10	20.32	24.15	28.72	
		25	14.95	18.17	22.11			
	P	65				6.63	6.61	6.62
		55		5.23	5.22	5.23	5.25	5.30
		45	4.12	4.14	4.16	4.19	4.23	4.30
		35	3.28	3.31	3.33	3.36	3.39	
		25	2.58	2.58	2.58			
ZW79KA	Q	65				23.92	26.45	29.3
		55		19.91	22.13	24.66	27.52	30.76
		45	18.14	20.29	22.76	25.59	28.81	32.46
		35	18.50	20.87	23.62	26.78	30.38	
		25	19.10	21.72	24.77			
	P	65				7.65	7.64	7.64
		55		6.15	6.17	6.20	6.24	6.28
		45	5.02	5.06	5.11	5.18	5.26	5.36
		35	4.20	4.26	4.34	4.44	4.57	
		25	3.53	3.60	3.72			
ZW108KA	Q	65				30.82	35.05	39.82
		55		24.20	27.81	31.91	36.56	41.80
		50	21.14	24.46	28.24	32.52	37.36	42.83
		45	21.32	24.77	28.69	33.15	38.20	43.89
		35	21.74	25.44	29.66	34.47	39.90	
		25	22.21	26.15	30.66			
	P	65				9.59	9.57	9.58
		55		7.58	7.58	7.60	7.65	7.74
		50	6.72	6.74	6.77	6.82	6.90	7.02
		45	5.99	6.03	6.08	6.14	6.25	6.40
		35	4.80	4.86	4.93	5.03	5.17	
		25	3.82	3.88	3.96			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW124KA	Q	65				36.43	41.59	46.96
		55		28.14	32.29	37.18	42.70	48.75
		45	25.31	28.86	33.58	39.36	44.11	50.74
		35	25.92	29.57	34.73	39.30	45.17	
		25	27.95	30.59	35.08	40.30		
	P	65				11.27	11.50	11.75
		55		9.05	9.31	9.54	9.78	10.05
		45	7.38	7.70	7.96	8.21	8.46	8.74
		35	6.22	6.54	6.81	7.06	7.82	
		25	5.03	5.35	5.83	6.29		
ZW125KA	Q	65				35.24	40.20	45.75
		55		27.77	32.05	36.83	42.18	48.16
		45	24.74	28.80	33.34	38.42	44.09	50.41
		35	25.57	29.80	34.53	39.83	45.74	
		25	26.25	30.57	35.41	40.84		
	P	65				10.67	10.97	11.27
		55		8.43	8.75	9.03	9.31	9.63
		45	6.85	7.15	7.42	7.69	8.01	8.39
		35	5.82	6.08	6.35	6.66	7.06	
		25	4.95	5.22	5.54	5.95		
ZW150KA	Q	65				43.35	49.53	56.44
		55		34.41	39.63	45.45	51.94	59.19
		45	30.43	35.39	40.90	47.05	53.90	61.52
		35	31.17	36.44	42.30	48.81	56.06	
		25	32.61	38.23	44.47	51.40		
	P	65				13.26	13.71	14.25
		55		10.64	10.99	11.35	11.77	12.33
		45	8.71	9.08	9.41	9.79	10.25	10.88
		35	7.40	7.78	8.17	8.61	9.18	
		25	6.32	6.79	7.28	7.86		

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW57KH	Q	65				16.53	18.76	21.29
		55		12.97	14.92	17.11	19.59	22.40
		45	11.39	13.28	15.40	17.80	20.51	23.59
		35	11.68	13.70	15.98	18.57	21.50	
		25	12.07	14.20	16.63			
	P	65				5.3	5.31	5.34
		55		4.19	4.21	4.23	4.26	4.31
		45	3.33	3.36	3.39	3.42	3.47	3.54
		35	2.69	2.72	2.75	2.8	2.86	
		25	2.17	2.2	2.23			
ZW61KH	Q	65				17.65	20.07	22.81
		55		13.73	15.84	18.23	20.92	23.93
		45	12.03	14.07	16.38	18.98	21.87	25.09
		35	12.36	14.54	16.99	19.73	22.77	
		25	12.72	14.98	17.51			
	P	65				5.65	5.65	5.70
		55		4.48	4.47	4.48	4.53	4.62
		45	3.56	3.56	3.58	3.62	3.70	3.81
		35	2.87	2.89	2.92	2.97	3.05	
		25	2.34	2.36	2.38			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

220V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW30KAE	Q	65				8.37	9.70	11.06
		55		6.32	7.54	8.75	10.04	11.47
		45	5.60	6.69	7.80	9.02	10.39	12.03
		35	5.85	6.86	8.00	9.33	10.95	
		25	5.95	7.01	8.31			
	P	65				2.84	2.95	3.00
		55		2.10	2.25	2.34	2.38	2.40
		45	1.69	1.80	1.86	1.89	1.94	2.01
		35	1.44	1.47	1.51	1.56	1.67	
		25	1.14	1.17	1.25			
ZW34KAE	Q	65				8.42	9.87	11.49
		55		6.99	8.04	9.26	10.69	12.38
		45	7.22	7.87	8.75	9.91	11.38	13.20
		35	8.00	8.44	9.22	10.37	11.93	
		25	8.42	8.72	9.44			
	P	65				3.10	3.15	3.18
		55		2.58	2.60	2.61	2.61	2.60
		45	2.28	2.25	2.21	2.17	2.15	2.13
		35	1.99	1.91	1.84	1.79	1.77	
		25	1.67	1.57	1.50			
ZW52KAE	Q	65				14.76	17.01	19.60
		55		11.31	13.12	15.30	17.85	20.76
		45	9.83	11.44	13.46	15.89	18.73	21.96
		35	10.03	11.82	14.05	16.73	19.84	
		25	10.67	12.63	15.07			
	P	65				5.18	5.19	5.18
		55		4.14	4.19	4.20	4.20	4.19
		45	3.35	3.41	3.43	3.44	3.44	3.45
		35	2.78	2.81	2.83	2.84	2.87	
		25	2.27	2.30	2.33			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Single phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW34KAE	Q	65				9.50	10.74	12.20
		55		7.54	8.56	9.79	11.21	12.83
		50	6.63	7.54	8.66	9.98	11.47	13.14
		45	6.59	7.60	8.80	10.18	11.72	13.41
		35	6.67	7.81	9.11	10.55	12.11	
		25	6.85	8.05	9.35			
	P	65				3.22	3.27	3.30
		55		2.50	2.56	2.61	2.65	2.69
		50	2.92	2.26	2.31	2.36	2.40	2.44
		45	1.99	2.04	2.09	2.14	2.18	2.22
		35	1.63	1.67	1.72	1.76	1.81	
		25	1.32	1.36	1.39			
ZW61KAE	Q	65				17.11	18.35	21.99
		55		13.57	15.47	17.65	20.24	23.16
		50	11.92	13.59	15.62	18.00	20.71	23.72
		45	11.87	13.71	15.88	18.37	21.16	24.22
		35	12.03	14.10	16.45	19.05	21.89	
		25	12.37	14.53	16.91			
	P	65				5.72	5.81	5.87
		55		4.43	4.55	4.65	4.73	4.79
		50	3.88	4.01	4.11	4.20	4.28	4.34
		45	3.53	3.63	3.72	3.81	3.88	3.96
		35	2.91	2.98	3.05	3.14	3.23	
		25	2.35	2.41	2.48			
ZW72KAE	Q	65				20.26	23.37	27.00
		55		15.72	18.24	21.19	24.63	28.63
		45	13.78	16.14	18.92	22.17	25.95	30.33
		35	14.14	16.73	19.77	23.32	27.45	
		25	14.77	17.60	20.91			
	P	65				6.95	6.92	6.88
		55		5.41	5.42	5.42	5.41	5.39
		45	4.20	4.23	4.25	4.26	4.26	4.24
		35	3.31	3.34	3.36	3.37	3.36	
		25	2.63	2.65	2.65			
ZW79KAE	Q	65				23.34	26.88	30.78
		55		18.38	21.41	24.82	28.66	32.97
		45	16.22	19.09	22.40	26.19	30.54	35.48
		35	16.81	20.05	23.83	28.23	33.29	
		25	18.20	22.01	26.49			
	P	65				8.19	8.21	8.26
		55		6.40	6.44	6.49	6.56	6.68
		45	5.13	5.17	5.22	5.30	5.41	5.58
		35	4.17	4.20	4.25	4.34	4.48	
		25	3.21	3.21	3.25			
ZW108KAE	Q	65				29.60	33.91	38.93
		55		23.17	26.75	30.89	35.73	41.42
		50	20.22	23.50	27.24	31.61	36.75	42.81
		45	20.45	23.85	27.78	32.40	37.86	44.31
		35	20.98	24.68	29.05	34.25	40.41	
		25	21.69	25.78	30.68			
	P	65				9.59	9.58	9.60
		55		7.58	7.58	7.60	7.64	7.73
		50	6.73	6.75	6.77	6.80	6.86	6.99
		45	6.01	6.03	6.06	6.11	6.20	6.36
		35	4.85	4.88	4.92	5.00	5.14	
		25	3.97	4.00	4.06			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW124KAE	Q	65				34.29	39.58	45.48
		55		26.39	30.98	36.14	41.95	48.49
		45	23.22	27.47	32.32	37.86	44.16	51.31
		35	24.41	28.77	33.86	39.75	46.52	
		25	26.15	30.61	35.91	42.13		
	P	65				11.50	11.73	11.93
		55		8.89	9.12	9.37	9.64	9.94
		45	7.16	7.27	7.45	7.70	8.03	8.45
		35	6.07	6.09	6.22	6.48	6.88	
		25	5.37	5.30	5.40	5.69		
ZW125KAE	Q	65				33.45	38.72	44.74
		55		25.99	30.43	35.56	41.41	48.02
		45	23.09	27.25	32.08	37.61	43.86	50.87
		35	24.15	28.51	33.54	39.26	45.72	
		25	25.05	29.41	34.45	40.19		
	P	65				10.58	11.06	11.46
		55		8.16	8.59	8.97	9.32	9.65
		45	6.74	7.00	7.26	7.53	7.83	8.19
		35	5.74	5.86	6.03	6.29	6.66	
		25	4.72	4.78	4.97	5.31		
ZW150KAE	Q	65				42.48	48.67	55.29
		55		32.12	37.97	44.39	51.40	59.01
		45	28.43	33.53	39.35	45.91	53.22	61.31
		35	31.75	36.14	41.42	47.62	54.73	
		25	37.36	40.54	44.78	50.10		
	P	65				13.21	13.77	14.33
		55		10.11	10.62	11.13	11.65	12.18
		45	8.21	8.64	9.09	9.56	10.05	10.58
		35	6.78	7.16	7.57	8.02	8.52	
		25	4.86	5.20	5.60	6.05		

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

220-240V

Model		Condensing temperature ˚C	Evaporating temperature ˚C								
			-23	-20	-15	-10	-5	0	5	10	15
ZW28KWP	Q	60						7.58	8.46	9.47	10.63
		55					6.91	7.73	8.68	9.77	11.02
		50				6.18	6.94	7.82	8.84	10.01	11.36
		45			5.46	6.14	6.95	7.88	8.97	10.22	11.66
		40		4.79	5.40	6.12	6.96	7.96	9.11	10.44	11.96
		35	4.43	4.75	5.38	6.13	7.02	8.07	9.28	10.68	12.29
		30	4.47	4.80	5.44	6.22	7.15	8.25	9.52	10.99	12.68
		27	4.54	4.87	5.53	6.33	7.28	8.40	9.71	11.23	12.96
	P	60						2.70	2.66	2.62	2.57
		55					2.46	2.42	2.38	2.34	2.28
		50				2.22	2.19	2.15	2.11	2.06	2.00
		45			1.99	1.96	1.93	1.89	1.85	1.80	1.74
		40		1.77	1.74	1.72	1.68	1.65	1.60	1.55	1.49
		35	1.56	1.55	1.52	1.50	1.47	1.43	1.38	1.33	1.26
		30	1.37	1.36	1.34	1.31	1.28	1.24	1.20	1.14	1.07
		27	1.27	1.26	1.24	1.22	1.19	1.15	1.10	1.04	0.97
ZW31KWP	Q	60						7.87	9.04	10.30	11.68
		55					6.98	8.09	9.31	10.65	12.10
		50				6.10	7.15	8.30	9.58	10.98	12.52
		45			5.26	6.23	7.31	8.51	9.84	11.31	12.93
		40		4.50	5.37	6.36	7.47	8.72	10.11	11.65	13.36
		35	4.14	4.61	5.50	6.51	7.65	8.95	10.39	12.01	13.80
		30	4.27	4.74	5.64	6.67	7.85	9.20	10.71	12.39	14.27
		27	4.36	4.83	5.74	6.79	7.99	9.36	10.91	12.64	14.57
	P	60						3.11	3.02	2.95	2.90
		55					2.76	2.68	2.61	2.56	2.54
		50				2.45	2.39	2.33	2.28	2.25	2.23
		45			2.17	2.13	2.08	2.04	2.00	1.98	1.98
		40		1.92	1.89	1.87	1.83	1.80	1.77	1.75	1.75
		35	1.67	1.68	1.67	1.65	1.62	1.59	1.57	1.55	1.55
		30	1.47	1.48	1.48	1.46	1.44	1.41	1.38	1.36	1.35
		27	1.37	1.38	1.38	1.36	1.34	1.31	1.27	1.25	1.23
ZW42KWP	Q	60						10.60	12.40	14.20	15.00
		55					9.70	10.80	12.80	14.70	15.60
		50				8.50	9.85	11.05	13.20	15.20	16.10
		45			7.35	8.60	10.00	11.30	13.55	15.70	16.60
		40		6.30	7.40	8.70	10.20	11.60	13.95	16.20	17.10
		35	5.70	6.30	7.45	8.85	10.40	11.85	14.30	16.60	17.60
		30	5.70	6.35	7.55	8.95	10.55	12.00	14.45	16.80	17.80
		27	5.80	6.45	7.65	9.10	10.75	12.25	14.75	17.10	18.20
	P	60						4.17	4.08	4.02	4.01
		55					3.69	3.63	3.55	3.51	3.50
		50				3.29	3.23	3.18	3.12	3.09	3.08
		45			2.94	2.90	2.86	2.82	2.76	2.73	2.73
		40		2.61	2.60	2.58	2.54	2.50	2.46	2.43	2.43
		35	2.30	2.31	2.32	2.29	2.26	2.23	2.18	2.16	2.15
		30	2.13	2.15	2.16	2.14	2.10	2.07	2.03	2.00	2.00
		27	1.87	1.89	1.90	1.88	1.85	1.82	1.77	1.74	1.73

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Single phase

220-240V

Model		Condensing temperature ˚C	Evaporating temperature ˚C								
			-23	-20	-15	-10	-5	0	5	10	15
ZW51KWP	Q	60						12.60	14.80	16.90	17.80
		55					11.50	12.85	15.20	17.40	18.40
		50				10.15	11.75	13.15	15.60	18.00	19.10
		45			8.80	10.30	11.95	13.50	16.10	18.60	19.70
		40		7.55	8.90	10.45	12.20	13.80	16.50	19.20	20.40
		35	6.90	7.65	9.05	10.65	12.50	14.15	17.00	19.80	21.00
		30	6.95	7.70	9.15	10.75	12.65	14.35	17.30	20.20	21.40
		27	7.05	7.80	9.30	10.95	12.95	14.70	17.80	20.80	22.10
	P	60						4.75	4.67	4.61	4.59
		55					4.23	4.18	4.12	4.08	4.07
		50				3.78	3.73	3.70	3.65	3.63	3.62
		45			3.37	3.34	3.30	3.28	3.25	3.23	3.23
		40		3.00	2.99	2.96	2.94	2.92	2.90	2.89	2.89
		35	2.67	2.67	2.66	2.64	2.62	2.60	2.58	2.58	2.58
		30	2.49	2.49	2.48	2.47	2.45	2.43	2.41	2.41	2.40
		27	2.23	2.23	2.22	2.21	2.19	2.17	2.15	2.13	2.13

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Single phase

380-420V

Model		Condensing temperature ˚C	Evaporating temperature ˚C								
			-23	-20	-15	-10	-5	0	5	10	15
ZW42KWP	Q	60						10.90	12.44	14.11	15.98
		55					9.67	11.12	12.71	14.48	16.48
		50				8.45	9.81	11.30	12.97	14.86	17.01
		45			7.26	8.53	9.92	11.48	13.26	15.28	17.60
		40		6.14	7.31	8.59	10.04	11.70	13.60	15.78	18.30
		35	5.53	6.18	7.35	8.68	10.20	11.97	14.02	16.40	19.14
		30	5.57	6.22	7.42	8.81	10.44	12.35	14.57	17.16	20.14
		27	5.60	6.26	7.49	8.94	10.64	12.64	14.97	17.69	20.84
	P	60						4.10	3.98	3.88	3.77
		55					3.66	3.56	3.47	3.38	3.29
		50				3.27	3.18	3.10	3.03	2.96	2.88
		45			2.93	2.85	2.78	2.72	2.66	2.59	2.53
		40		2.63	2.55	2.49	2.44	2.39	2.34	2.28	2.23
		35	2.33	2.29	2.24	2.19	2.14	2.10	2.06	2.01	1.96
		30	2.04	2.01	1.96	1.93	1.89	1.86	1.82	1.77	1.72
		27	1.88	1.86	1.82	1.79	1.75	1.72	1.68	1.64	1.59
ZW54KWP	Q	60						13.62	15.63	17.95	20.62
		55					12.02	13.90	16.06	18.56	21.41
		50				10.47	12.22	14.23	16.54	19.19	22.21
		45			8.99	10.61	12.47	14.59	17.03	19.81	22.99
		40		7.59	9.09	10.79	12.74	14.96	17.50	20.41	23.72
		35	6.84	7.68	9.23	10.99	13.00	15.31	17.94	20.95	24.38
		30	6.94	7.79	9.37	11.17	13.24	15.61	18.32	21.42	24.95
		27	7.00	7.86	9.45	11.27	13.35	15.76	18.51	21.65	25.23
	P	60						5.07	4.99	4.92	4.88
		55					4.49	4.42	4.37	4.32	4.29
		50				3.97	3.92	3.87	3.83	3.80	3.78
		45			3.50	3.46	3.42	3.39	3.36	3.34	3.33
		40		3.07	3.05	3.03	3.00	2.97	2.95	2.94	2.93
		35	2.69	2.69	2.67	2.66	2.63	2.61	2.59	2.57	2.56
		30	2.36	2.36	2.35	2.33	2.31	2.28	2.25	2.23	2.22
		27	2.18	2.18	2.17	2.15	2.13	2.10	2.06	2.04	2.01
ZW72KWP	Q	60						18.37	20.85	23.69	26.92
		55					16.46	18.77	21.42	24.44	27.88
		50				14.60	16.75	19.21	22.02	25.22	28.86
		45			12.83	14.81	17.08	19.67	22.64	26.02	29.84
		40		11.17	12.97	15.30	17.42	20.15	23.27	26.82	30.84
		35	10.25	11.26	13.13	15.30	17.79	20.65	23.92	27.63	31.83
		30	10.34	11.37	13.32	15.57	18.16	21.15	24.56	28.44	32.82
		27	10.39	11.45	13.43	15.73	18.39	21.45	24.94	28.92	33.40
	P	60						6.48	6.48	6.48	6.46
		55					5.73	5.75	5.75	5.75	5.74
		50				5.08	5.09	5.10	5.11	5.11	5.11
		45			4.50	4.52	4.53	4.54	4.55	4.55	4.56
		40		4.00	4.01	4.02	4.03	4.05	4.06	4.07	4.09
		35	3.56	3.57	3.57	3.58	3.59	3.61	3.63	3.65	3.68
		30	3.18	3.18	3.18	3.19	3.21	3.23	3.26	3.29	3.34
		27	2.96	2.96	2.97	2.98	2.99	3.02	3.05	3.10	3.15

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380-420V

Model		Condensing temperature ˚C	Evaporating temperature ˚C								
			-23	-20	-15	-10	-5	0	5	10	15
ZW83KWP	Q	60						21.12	24.10	27.55	31.54
		55					18.82	21.55	24.72	28.38	32.58
		50				16.62	19.14	22.05	25.39	29.24	33.65
		45			14.54	16.87	19.53	22.59	26.10	30.12	34.72
		40		12.57	14.73	17.18	19.97	23.16	26.82	31.00	35.76
		35	11.49	12.72	14.97	17.52	20.42	23.74	27.53	31.85	36.77
		30	11.64	12.91	15.24	17.87	20.87	24.29	28.20	32.65	37.71
		27	11.75	13.04	15.40	18.08	21.13	24.61	28.58	33.10	38.23
	P	60						7.35	7.33	7.33	7.35
		55					6.50	6.50	6.50	6.52	6.56
		50				5.74	5.75	5.76	5.78	5.82	5.88
		45			5.06	5.08	5.09	5.11	5.15	5.20	5.28
		40		4.44	4.47	4.49	4.51	4.55	4.60	4.66	4.76
		35	3.90	3.92	3.95	3.98	4.01	4.05	4.11	4.19	4.30
		30	3.43	3.45	3.48	3.52	3.55	3.60	3.67	3.77	3.89
		27	3.18	3.20	3.23	3.26	3.30	3.36	3.43	3.53	3.67

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C								
			-15	-10	-5	0	5	10	15	20	25
ZW166HAP	Q	65				14.01	15.78	17.82	20.17		
		60			12.50	14.25	16.21	18.40	20.90	23.80	27.18
		55	9.20	10.94	12.68	14.57	16.64	18.97	21.65	24.77	28.41
		50	9.30	11.09	12.92	14.88	17.05	19.52	22.38	25.72	29.63
		45	9.54	11.31	13.17	15.18	17.45	20.06	23.10	26.66	30.82
		40	9.78	11.53	13.41	15.48	17.85	20.60	23.81	27.58	31.99
		35	10.02	11.75	13.65	15.78	18.24	21.12	24.51	28.49	32.64
		30	10.26	11.98	13.88	16.07	18.62	21.64	24.81		
	P	65				5.40	5.36	5.39	5.51		
		60			4.71	4.73	4.78	4.79	4.78	4.74	4.69
		55	3.84	4.09	4.15	4.21	4.24	4.25	4.23	4.19	4.13
		50	3.51	3.62	3.70	3.75	3.77	3.77	3.74	3.70	3.64
		45	3.15	3.25	3.31	3.35	3.37	3.36	3.33	3.29	3.23
		40	2.85	2.94	3.00	3.03	3.04	3.02	2.99	2.95	2.89
		35	2.63	2.71	2.76	2.78	2.79	2.77	2.74	2.70	3.26
		30	2.49	2.56	2.60	2.62	2.63	2.61	2.76		
*ZW188HAP	Q	65				15.32	17.36	19.70	22.36		
		60			13.74	15.66	17.85	20.35	23.19	26.38	29.97
		55	10.68	12.24	14.03	16.08	18.42	21.07	24.07	27.44	31.22
		50	10.81	12.47	14.38	16.55	19.03	21.83	24.99	28.53	32.48
		45	10.99	12.75	14.77	17.06	19.67	22.61	25.92	29.62	33.74
		40	11.21	13.06	15.17	17.58	20.31	23.38	26.83	30.69	34.97
		35	11.42	13.35	15.56	18.06	20.90	24.09	27.68	15.34	17.49
		30	11.63	13.64	15.94	18.54	21.49	24.81	28.52		
	P	65				6.07	6.17	6.24	6.27		
		60			5.34	5.43	5.50	5.55	5.56	5.52	5.42
		55	4.67	4.72	4.78	4.84	4.90	4.93	4.93	4.89	4.79
		50	4.21	4.24	4.28	4.32	4.36	4.39	4.38	4.34	4.25
		45	3.79	3.80	3.83	3.87	3.90	3.92	3.92	3.88	3.80
		40	3.41	3.41	3.43	3.47	3.50	3.53	3.54	3.51	3.44
		35	3.09	3.08	3.11	3.15	3.19	3.24	3.26	1.75	1.72
		30	2.76	2.76	2.78	2.83	2.89	2.94	2.99		

Note: Superheat 11K, Subcooling 8.3K

* Preliminary data

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15	20
ZW102HSP	Q	65						15.63	17.15	18.88	20.80		
		60	10.40	10.93	11.71	12.73	13.97	15.42	17.07	18.91	20.92	23.09	25.40
		50	8.88	9.73	10.81	12.08	13.55	15.20	17.01	18.97	21.07	23.29	25.63
		40	8.01	9.07	10.32	11.73	13.31	15.02	16.87	18.83	20.90	23.06	25.29
		30	7.57	8.72	10.02	11.45	13.01	14.67	16.43	18.27	20.19	22.16	
	P	65						6.03	5.92	5.90	5.98		
		60	6.75	6.25	5.86	5.57	5.38	5.28	5.27	5.35	5.50	5.73	6.02
		50	4.68	4.42	4.24	4.14	4.12	4.18	4.31	4.50	4.75	5.05	5.40
		40	3.37	3.25	3.20	3.21	3.29	3.41	3.59	3.81	4.07	4.36	4.68
		30	2.57	2.52	2.51	2.55	2.63	2.74	2.89	3.05	3.24	3.44	

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW34KS	Q	65	7.36	7.42	7.88	8.68	9.74	11.01	12.41	13.88	15.34	16.72
		55	6.22	6.46	7.08	8.01	9.18	10.52	11.97	13.46	14.92	16.28
		45	5.72	6.12	6.86	7.89	9.14	10.53	12.00	13.48	14.91	16.22
		35	5.39	5.9	6.74	7.84	9.13	10.54	12.00	13.45	14.82	
		25	4.72	5.33	6.23	7.37	8.67	10.07	11.49			
	P	65	3.93	3.82	3.78	3.81	3.89	4.00	4.12	4.24	4.35	4.42
		55	3.23	3.13	3.09	3.11	3.16	3.23	3.30	3.37	3.40	3.39
		45	2.63	2.54	2.52	2.53	2.57	2.61	2.65	2.66	2.64	2.55
		35	2.09	2.04	2.04	2.06	2.09	2.13	2.14	2.12	2.04	
		25	1.61	1.60	1.63	1.68	1.72	1.75	1.75			
ZW108KS	Q	65		20.94	23.88	27.10	30.60	34.42	38.54	43.00	47.81	54.04
		55		18.34	22.05	25.91	29.93	34.14	38.54	43.14	47.96	54.06
		45		19.40	23.62	27.86	32.15	36.49	40.91	45.40	49.98	55.63
		35		21.03	25.50	29.87	34.16	38.39	42.55	46.67	50.77	
		25		20.12	24.58	28.83	32.87	36.71	40.38			
	P	65		10.76	11.44	11.96	12.31	12.52	12.59	12.54	12.38	12.05
		55		9.06	9.51	9.83	10.03	10.13	10.12	10.03	9.86	9.58
		45		7.70	7.97	8.14	8.22	8.24	8.20	8.11	7.98	7.80
		35		6.48	6.59	6.65	6.67	6.66	6.62	6.58	6.53	
		25		5.17	5.19	5.18	5.18	5.17	5.18			

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW34KSE	Q	65	7.29	7.28	7.51	8.12	9.05	10.24	11.61	13.12	14.70	16.27
		55	5.69	5.83	6.37	7.26	8.43	9.83	11.39	13.04	14.73	16.38
		45	4.80	5.20	5.97	7.06	8.40	9.92	11.58	13.29	15.01	16.66
		35	4.37	4.94	5.86	7.07	8.49	10.06	11.73	13.43	15.09	
		25	3.93	4.61	5.60	6.83	8.25	9.80	11.40			
	P	65	3.96	3.80	3.72	3.71	3.74	3.81	3.89	3.98	4.05	4.10
		55	3.12	3.03	3.01	3.04	3.10	3.18	3.27	3.34	3.38	3.38
		45	2.44	2.41	2.42	2.47	2.54	2.61	2.66	2.69	2.68	2.61
		35	2.02	2.01	2.04	2.08	2.12	2.16	2.16	2.13	2.04	
		25	1.84	1.83	1.84	1.85	1.85	1.86	1.81			
ZW61KSE	Q	65	11.03	12.07	13.32	14.80	16.52	18.52	20.81	23.40	26.32	29.59
		55	9.38	10.71	12.26	14.03	16.05	18.35	20.93	23.83	27.05	30.61
		45	8.38	9.92	11.67	13.66	15.89	18.40	12.20	24.30	27.74	31.52
		35	7.93	9.59	11.47	13.58	15.94	18.58	21.50	24.73	28.30	
		25	7.93	9.63	11.55	13.70	16.10	18.78	21.74			
	P	65	6.91	6.79	6.78	6.84	6.97	7.14	7.32	7.50	7.64	7.73
		55	5.19	5.13	5.17	5.28	5.43	5.61	5.78	5.94	6.04	6.08
		45	3.99	3.99	4.06	4.18	4.34	4.50	4.65	4.76	4.81	4.78
		35	3.17	3.19	3.28	3.40	3.53	3.66	3.76	3.80	3.77	
		25	2.55	2.58	2.65	2.74	2.84	2.91	2.93			
ZW108KSE	Q	65		19.96	23.13	26.23	29.44	32.94	36.90	41.52	46.96	53.40
		55		17.75	21.32	28.89	28.64	32.75	37.41	42.78	49.05	56.41
		45		18.34	21.86	25.46	29.31	33.59	38.49	44.18	50.84	58.65
		35		19.32	22.35	25.53	29.04	33.05	37.74	43.31	49.91	
		25		18.30	20.40	22.71	25.43	28.72	32.78			
	P	65		12.27	12.35	12.41	12.47	12.53	12.60	12.69	12.79	12.93
		55		9.61	9.70	9.79	9.88	9.97	10.07	10.19	10.33	10.50
		45		7.86	7.90	7.94	7.98	8.03	8.10	8.18	8.29	8.44
		35		6.62	6.55	6.47	6.40	6.34	6.29	6.27	6.28	
		25		5.50	5.24	4.97	4.72	4.48	4.26			

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature °C	Evaporating temperature °C					
			-10	-5	0	5	10	15
ZW61KA	Q	65				20.70	23.86	27.72
		55		16.09	18.92	21.86	25.06	28.63
		45	14.40	16.98	19.71	22.74	26.18	30.16
		35	14.96	17.48	20.33	23.64	27.53	
		25	15.25	17.93	21.11			
	P	65				6.96	7.11	7.12
		55		5.28	5.55	5.69	5.75	5.77
		45	4.22	4.40	4.52	4.61	4.69	4.82
		35	3.51	3.57	3.66	3.79	4.02	
		25	2.83	2.89	3.04			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380V

Model		Condensing temperature °C	Evaporating temperature °C					
			-10	-5	0	5	10	15
ZW61KAE	Q	65				20.55	23.24	26.42
		55		16.30	18.52	21.20	24.30	27.82
		45	14.24	16.44	19.05	22.04	25.39	29.08
		35	14.42	16.92	19.74	22.88	26.30	
		25	14.91	17.53	20.40			
	P	65				6.88	6.99	7.06
		55		5.33	5.47	5.58	5.67	5.75
		45	4.22	4.34	4.45	4.55	4.65	4.74
		35	3.47	3.56	3.65	3.76	3.89	
		25	2.89	2.97	3.08			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

460V

Model		Condensing temperature ˚C	Evaporating temperature ˚C								
			-23	-20	-15	-10	-5	0	5	10	15
ZW42KWP	Q	60						13.27	15.14	17.19	19.44
		55					11.77	13.54	15.49	17.65	20.07
		50				10.29	11.96	13.79	15.84	18.14	20.73
		45			8.88	10.43	12.13	14.05	16.21	18.67	21.46
		40		7.58	8.98	10.54	12.31	14.33	16.63	19.26	22.27
		35	6.90	7.66	9.06	10.67	12.51	14.65	17.11	19.94	23.18
		30	6.97	7.72	9.15	10.81	12.76	15.03	17.67	20.71	24.21
		27	7.00	7.76	9.21	10.92	12.93	15.30	18.05	21.24	24.90
	P	60						4.90	4.77	4.65	4.52
		55					4.39	4.28	4.17	4.07	3.96
		50				3.94	3.83	3.74	3.65	3.57	3.48
		45			3.53	3.44	3.36	3.29	3.21	3.14	3.07
		40		3.18	3.09	3.02	2.96	2.90	2.84	2.78	2.72
		35	2.84	2.79	2.72	2.66	2.61	2.57	2.52	2.48	2.42
		30	2.49	2.45	2.40	2.35	2.32	2.28	2.25	2.21	2.16
		27	2.31	2.27	2.23	2.19	2.16	2.13	2.10	2.07	2.03
ZW54KWP	Q	60						16.95	19.28	21.93	24.94
		55					15.17	17.33	19.78	22.58	25.79
		50				13.43	15.44	17.70	20.29	23.25	26.67
		45			11.76	13.61	15.70	18.08	20.82	23.97	27.61
		40		10.17	11.88	13.80	15.98	18.49	21.40	24.76	28.64
		35	9.30	10.26	12.02	14.01	16.30	18.97	22.06	25.64	29.78
		30	9.40	10.38	12.19	14.27	16.70	19.52	22.82	26.64	31.06
		27	9.47	10.46	12.31	14.46	16.98	19.91	23.33	27.31	31.90
	P	60						5.93	5.84	5.77	5.73
		55					5.29	5.21	5.15	5.10	5.08
		50				4.72	4.65	4.60	4.55	4.53	4.52
		45			4.20	4.15	4.11	4.07	4.04	4.02	4.02
		40		3.73	3.71	3.68	3.64	3.62	3.60	3.58	3.58
		35	3.03	3.30	3.29	3.27	3.25	3.22	3.20	3.18	3.17
		30	2.66	2.94	2.93	2.92	2.89	2.87	2.84	2.81	2.79
		27	2.46	2.74	2.74	2.72	2.70	2.67	2.63	2.60	2.56
ZW72KWP	Q	60						22.67	25.64	29.03	32.92
		55					20.38	23.15	26.30	29.91	34.04
		50				18.14	20.72	23.64	26.98	30.81	35.20
		45			15.99	18.38	21.08	24.15	27.68	31.74	36.39
		40		13.95	16.16	18.64	21.46	24.69	28.41	32.70	37.61
		35	12.83	14.08	16.34	18.91	21.86	25.26	29.18	33.69	38.87
		30	12.96	14.23	16.55	19.22	22.30	25.86	29.98	34.73	40.18
		27	13.05	14.33	16.69	19.42	22.57	26.24	30.48	35.37	40.99
	P	60						7.62	7.64	7.66	7.66
		55					6.78	6.82	6.84	6.86	6.87
		50				6.04	6.08	6.11	6.13	6.16	6.18
		45			5.37	5.42	5.46	5.48	5.51	5.54	5.58
		40		4.76	4.82	4.86	4.89	4.92	4.95	5.00	5.06
		35	4.24	4.28	4.32	4.36	4.38	4.41	4.46	4.52	4.61
		30	3.81	3.83	3.87	3.89	3.92	3.96	4.02	4.10	4.22
		27	3.56	3.58	3.61	3.63	3.66	3.71	3.78	3.88	4.02
ZW83KWP	Q	60						26.00	29.39	33.32	37.87
		55					23.41	26.52	30.13	34.30	39.09
		50				20.94	23.81	27.12	30.93	35.31	40.33
		45			18.60	21.25	24.28	27.77	31.76	36.34	41.57
		40		16.38	18.84	21.62	24.80	28.44	32.60	37.36	42.79
		35	15.16	16.57	19.13	22.03	25.34	29.11	33.43	38.35	43.95
		30	15.36	16.81	19.46	22.45	25.87	29.77	34.22	39.28	45.04
		27	15.49	16.96	19.66	22.71	26.18	30.14	34.66	39.81	45.65
	P	60						8.68	8.67	8.67	8.69
		55					7.76	7.75	7.76	7.78	7.82
		50				6.92	6.93	6.94	6.96	7.00	7.07
		45			6.17	6.19	6.21	6.23	6.27	6.33	6.42
		40		5.50	5.52	5.55	5.58	5.61	5.66	5.74	5.85
		35	4.90	4.92	4.95	4.98	5.02	5.06	5.13	5.22	5.34
		30	4.39	4.41	4.45	4.48	4.52	4.58	4.65	4.76	4.89
		27	4.11	4.13	4.17	4.20	4.25	4.31	4.39	4.50	4.64

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)

P = Input power (kW) Three phase

ZW KS

ZW Series			ZW30KS	ZW34KS	ZW34KS	ZW61KS	ZW79KS	ZW108KS	ZW124KS	ZW125KS	ZW150KS
Nominal power		HP	2.5	3	3	5	7	9	10	10	13
Motor type			PFS		TFP						
Displacement		m^3/hr	7.1	8.0	8.0	14.4	18.8	24.9	29.2	29.1	35.3
Refrigerant			R22								
Heating capacity		kW	10.1	11.6	11.2	20.3	25.8	35.9	42.62	41.6	50.4
Input power		kW	2.5	3.0	2.8	5.0	6.5	8.3	10.59	10.2	12.7
Current		A	11.5	13.7	5.0	8.5	11.9	16.1	21.42	18.6	24.8
Mass flow		g/s	43.5	47.8	48.2	88.2	110.6	154.0	174.8	173.5	210.4
Locked rotor amps		A	58.4	72.5	31.6	59.0	90.5	133.0	155	133.0	157
Rated load current		A	13.6	13.9	6.4	10.1	12.1	19.3	20.4	20.1	25.6
Max continuous current		A	19.0	19.4	8.9	14.2	17.0	27.0	28.6	28.1	35.8
Max operating current		A	17.2	17.7	7.0	11.8	13.6	20.5	26.8	27.2	31.5
Oil charge	Initial	L									
	Replacement refill	L									
Net weight		kg	22	22	22	30	41	60	62	60	65

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW KSE

ZW Series			ZW34KSE	ZW61KSE	ZW79KSE	ZW108KSE	ZW124KSE	ZW125KSE
Nominal power		HP	3	5	7	9	10	10
Motor type			TFP					
Displacement		m^3/hr	8.0	14.4	18.8	24.9	29.2	29.1
Refrigerant			R407C					
Heating capacity		kW	10.8	19.6	26.1	35.6	41.76	40.9
Input power		kW	2.8	4.9	6.6	8.3	10.41	10.0
Current		A	5.0	8.4	12.3	16.6	21.17	18.5
Mass flow		g/s	43.8	81.6	121.4	146.8	167.9	166.3
Locked rotor amps		A	31.6	59.0	90.5	133.0	155	133.0
Rated load current		A	6.6	10.2	14.6	20.6	21.3	21.0
Max continuous current		A	9.3	14.3	20.5	28.8	29.8	29.4
Max operating current		A	7.1	12.6	14.6	21.0	28.13	25.2
Oil charge	Initial	L	0.74	1.57	1.77	3.25	3.25	3.25
	Replacement refill	L	0.62	1.45	1.66	3.14	3.2	3.14
Net weight		kg	22	30	39	60	62	60

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW KA

ZW Series			ZW34KA	ZW61KA	ZW72KA	ZW79KA	ZW108KA	ZW124KA	ZW125KA	ZW150KA
Nominal power		HP	3	5	6	7	9	10	10	13
Motor type			TFP							
Displacement		m^3/hr	8.0	14.4	17.1	18.8	24.9	29.2	29.1	35.3
Refrigerant			R22							
Heating capacity		kW	10.1	18.1	21.4	24.7	31.2	37.21	36.8	45.41
Input power		kW	2.6	4.6	5.2	6.2	7.6	9.55	9.0	11.3
Current		A	4.5	8.2	9.1	11.5	13.7	20.2	17.1	23
Mass flow		g/s	48.0	87.1	103.0	118.4	154.0	176.2	177.0	218
Locked rotor amps		A	31.6	59.0	67.0	100.0	100.0	155	133.0	157
Rated load current		A	6.4	10.1	10.0	12.1	17.3	20.8	20.1	25.7
Max continuous current		A	8.9	14.2	14.0	17.0	24.2	29.1	28.2	36
Max operating current		A	7.0	11.8	12.1	16.0	16.8	24.18	27.2	28.5
Oil charge	Initial	L	0.74	1.57	1.77	1.89	3.25	3.25	3.25	3.37
	Replacement refill	L	0.62	1.45	1.66	1.77	3.14	3.2	3.14	3.25
Net weight		kg	22	30	39	41	60	62	60	65

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW KA

ZW Series			ZW30KA	ZW34KA	ZW52KA
Nominal power		HP	2.5	3	4.5
Motor type			PFS		
Displacement		m^3/hr	7.1	8.0	12.2
Refrigerant			R22		
Heating capacity		kW	9.0	10.1	15.8
Input power		kW	2.3	2.6	4.2
Current		A	10.7	12.2	22.9
Mass flow		g/s	43.0	46.0	74.0
Locked rotor amps		A	58.4	72.5	136.0
Rated load current		A	13.6	12.6	26.4
Max continuous current		A	19.0	17.7	36.9
Max operating current		A	17.2	16.7	28.2
Oil charge	Initial	L	0.74	0.74	1.57
	Replacement refill	L	0.62	0.62	1.45
Net weight		kg	22	22	30

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW KH

ZW Series			ZW57KH	ZW61KH
Nominal power		HP	5	5
Motor type			TFP	
Displacement		m^3/hr	13.4	14.4
Refrigerant			R22	
Heating capacity		kW	17.1	18.2
Input power		kW	4.2	4.5
Current		A	7.4	7.9
Mass flow		g/s	81.9	87.4
Locked rotor amps		A	64.0	67.0
Rated load current		A	9.0	10.1
Max continuous current		A	12.6	14.2
Max operating current		A	9.6	10.5
Oil charge	Initial	L	1.95	1.77
	Replacement refill	L	1.83	1.66
Net weight		kg	39	40

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW KAE

ZW Series			ZW30KAE	ZW34KAE	ZW52KAE	ZW34KAE	ZW61KAE	ZW72KAE	ZW79KAE	ZW108KAE	ZW124KAE	ZW125KAE	ZW150KAE
Nominal power		HP	2.5	3	4.5	3	5	6	7	9	10	10	13
Motor type			PFS			TFP							
Displacement		m^3/hr	7.1	8.0	12.2	8.0	14.4	17.1	18.8	24.9	29.2	29.1	35.3
Refrigerant			R407C										
Heating capacity		kW	8.8	9.3	15.3	9.8	17.7	21.2	24.8	30.9	36.02	35.6	44.24
Input power		kW	2.3	2.6	4.2	2.6	4.7	5.4	6.5	7.6	9.35	9.0	11.1
Current		A	10.8	11.9	22.6	4.5	8.1	9.5	12.0	13.9	20.1	17.2	22.6
Mass flow		g/s	44.0	41.7	70.0	44.0	89.0	99.1	115.7	147.0	168.9	168.0	206.6
Locked rotor amps		A	58.4	72.5	136.0	31.6	59.0	67.0	100.0	100.0	155	133.0	157
Rated load current		A	15.3	13.1	27.1	6.6	10.2	10.0	12.1	17.3	21.6	21.3	26.4
Max continuous current		A	21.4	18.3	38.0	9.3	14.3	14.0	17.0	24.2	30.2	29.8	37
Max operating current		A	17.7	17.0	29.3	7.1	12.6	12.1	15.0	16.8	24.63	25.2	28.5
Oil charge	Initial	L	0.74	0.74	1.57	0.74	1.57	1.77	1.89	3.25	3.25	3.25	3.37
	Replacement refill	L	0.62	0.62	1.45	0.62	1.45	1.66	1.77	3.14	3.2	3.14	3.25
Net weight		kg	22	22	30	22	30	39	41	60	62	60	65

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW KWP

ZW Series			ZW28KWP	ZW31KWP	ZW42KWP	ZW51KWP	ZW42KWP	ZW54KWP	ZW72KWP	ZW83KWP
Nominal power		HP	2.5	3	3.5	4.5	3.5	4.5	6	7
Motor type			PFZ				TFD			
Displacement		m^3/hr	4.6	5.1	6.9	8.4	6.9	8.9	11.7	13.4
Refrigerant			R410A							
Heating capacity		kW	8.7	9.3	12.8	15.2	12.7	16.1	21.4	24.7
Input power		kW	2.4	2.6	3.6	4.1	3.5	4.4	5.8	6.5
Current		A	11.0	12.1	17.0	20.2	5.7	7.1	9.9	11.8
Mass flow		g/s	55.6	59.6	58.8	97.3	58.4	75.1	137.2	158.3
Locked rotor amps		A	53.0	67.0	128.0	126.0	43.0	51.5	75.0	101.0
Rated load current		A	11.4	15.0	21.7	22.5	6.8	8.6	12.5	13.6
Max continuous current		A	16.0	21.0	30.4	31.5	9.5	12.1	17.5	19.0
Max operating current		A	13.7	17.1	26.0	28.0	8.0	10.3	16.0	15.0
Oil charge	Initial	L	0.77	0.74	1.24	1.24	1.24	1.24	1.77	1.77
	Replacement refill	L	0.65	0.62	1.12	1.12	1.12	1.12	1.66	1.66
Net weight		kg	20	23	33	34	33	33	40	40

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW HSP, ZW HAP

ZW Series			ZW102HSP	ZW166HAP	*ZW188HAP
Nominal power		HP	4.5	4.5	5
Motor type			TFP		
Displacement		m^3/hr	8.9	8.9	10.1
Refrigerant			R410A		
Heating capacity		kW	18.9	16.6	18.4
Input power		kW	4.9	4.2	4.9
Current		A	8.2	7.6	8.7
Mass flow		g/s	76.0	78.7	89.6
Locked rotor amps		A	70.0	62.0	74
Rated load current		A	9.0	8.1	11.1
Max continuous current		A	12.6	11.3	14.8
Max operating current		A	11.0	9.7	11.9
Oil charge	Initial	L	1.56	1.56	1.89
	Replacement refill	L	1.44	1.44	1.77
Net weight		kg	33	32	40.3

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K
*Preliminary data

ZW KS(E), ZW KA(E)

ZW Series			ZW34KS	ZW34KSE	ZW61KSE	ZW108KS	ZW108KSE	ZW61KA	ZW61KAE
Nominal power		HP	3	3	5	9	9	5	5
Motor type			TF7						
Displacement		m³/hr	9.7	9.7	17.3	20.6	30.0	30.0	17.3
Refrigerant			R22	R407C	R407C	R22	R407C	R22	R407C
Heating capacity		kW	13.5	13.0	23.8	20.4	43.1	42.8	21.2
Input power		kW	3.4	3.3	5.9	4.8	10.0	10.2	5.6
Current		A	6.0	6.0	10.1	8.8	18.5	18.7	8.1
Mass flow		g/s	58.0	53.0	100.0	92.6	185.0	180.0	99.0
Locked rotor amps		A	50.0	50.0	65.6	94.3	147.0	147.0	65.6
Rated load current		A	6.4	6.6	12.4	12.5	23.2	24.3	12.4
Max continuous current		A	8.9	9.3	17.3	17.5	32.5	34.0	17.3
Max operating current		A	7.0	7.1	14.4	12.7	24.5	24.9	14.4
Oil charge	Initial	L	0.74	0.74	1.57	1.89	3.25	3.25	1.57
	Replacement refill	L	0.62	0.62	1.45	1.77	3.14	3.14	1.45
Net weight		kg	22	22	30	40	62	62	30

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW HSP, ZW KWP

ZW Series			*ZW430HSP	ZW42KWP	ZW54KWP	ZW72KWP	ZW83KWP
Nominal power		HP	20	3.5	4.5	6	7
Motor type			TE7	TFD			
Displacement		m³/hr	44.15	8.4	10.7	14.1	16.2
Refrigerant				R410A			
Heating capacity		kW	81.51	15.5	19.8	26.3	30.1
Input power		kW	21.12	4.2	5.2	6.8	7.8
Current		A	33.2	5.6	7.3	9.8	11.8
Mass flow		g/s	396.2	71.6	93.2	168.4	193.0
Locked rotor amps		A	255.5	41.0	52.0	75.0	100.0
Rated load current		A	44.29	6.9	8.6	12.5	13.6
Max continuous current		A	62.0	9.7	12.1	17.5	19.0
Max operating current		A	42.2	8.0	10.3	16.0	15.0
Oil charge	Initial	L	4.44	1.24	1.24	1.77	1.77
	Replacement refill	L	4.2	1.12	1.12	1.66	1.66
Net weight		kg	91.6	33	33	40	40

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

*Preliminary data

Residential heating

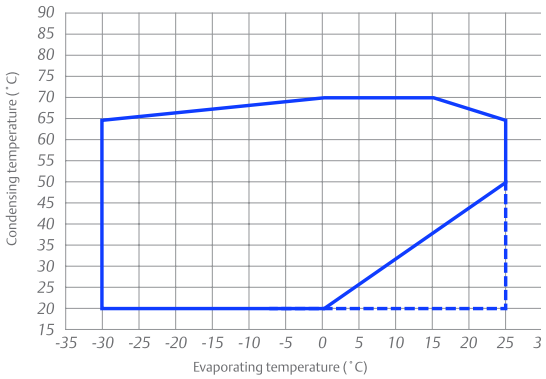
Compressor model

Refrigerant	Compressor model	Power supply	EVI	Rated heating capacity (kW)	Performance table	Specification
R22	ZW30KS-PFS-582	1Φ/220 V/50 Hz		10.1	P33	P37
	ZW34KS-PFS-582			11.6	P33	P37
	ZW42KS-PFS-522			14.7	P33	P37
	ZW52KA-PFS-522			15.8	P35	P37
	ZW52KS-PFS-522			17.8	P33	P37
	ZW68KS-PFS-522			23.4	P33	P37
R407C	ZW30KSE-PFS-582			9.8	P34	P37
	ZW34KSE-PFS-582			11.8	P34	P37
	ZW42KSE-PFS-522			14.3	P34	P37
	ZW52KAE-PFS-522			15.3	P35	P37
	ZW52KSE-PFS-522			17.3	P34	P37
	ZW68KSE-PFS-522			22.9	P34	P37
R410A	ZW059HSP-PFS-582			11.1	P36	P39
	ZW096HSP-PFS-522			18.3	P36	P39
	ZW126HSP-PFS-522			23.5	P36	P39
	ZWW050SP-3X9-522			30.0	-	P39
	VPW038DE-3X9-571			20.0	-	P39
	ZWW050SP-4X9-522	3Φ/380 V/50 Hz		30.0	-	P39
	VPW038DE-4X9-571			20.0	-	P39

Operating envelopes

ZW30KS(E), ZW42KS(E)
ZW52KS(E), ZW68KS(E)

R22/R407C

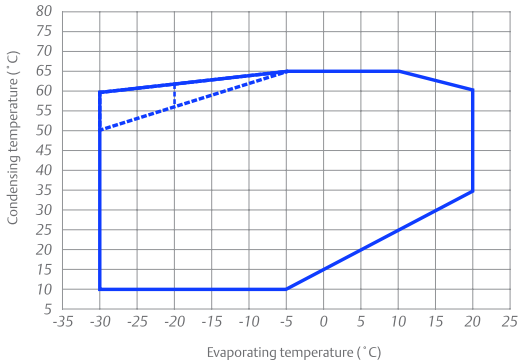


11K Superheat Max Discharge Temperature with EVI: 115°C

Transition only

ZW059HSP, ZW096HSP,
ZW126HSP

R410A

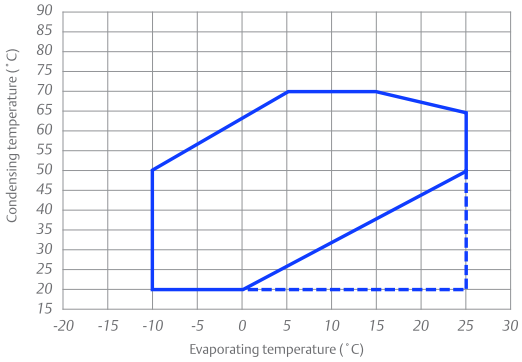


11K Superheat

In wet injection area, the running time is limited to <2000 hours when evaporating temperature is lower than -20 °C.

ZW52KA(E)

R22/R407C

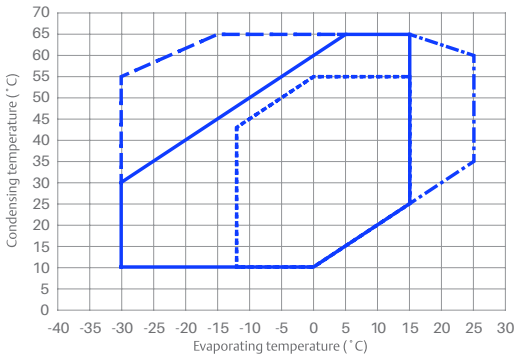


11K Superheat

Transition only

VPW038DE

R410A



2400-7200RPMEVI ON/OFF

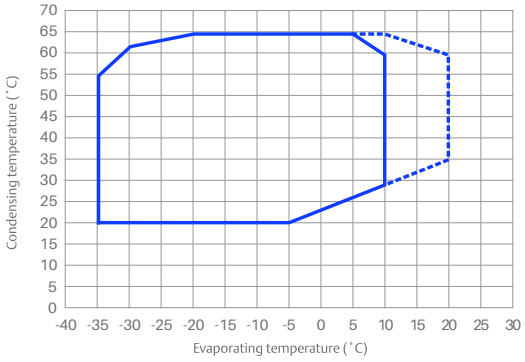
2400-5400RPMEVI ON/OFF

2400-7200RPMEVI ON

900RPMEVI OFF

ZWW050SP

R410A



1800-4800RPMEVI ON

2400-4800RPMEVI OFF

220V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW30KS	Q	65	4.62	5.20	5.85	6.57	7.36	8.25	9.22	10.30	11.48	12.78
		55	4.28	4.85	5.49	6.22	7.04	7.96	8.99	10.12	11.38	12.68
		45	4.07	4.63	5.29	6.04	6.90	7.86	8.95	10.16	11.50	12.98
		35	3.89	4.47	5.14	5.93	6.83	7.65	9.01	10.30	11.73	
		25	3.66	4.25	4.96	5.79	6.74	7.83	9.07			
	P	65	2.86	2.94	3.00	3.06	3.10	3.14	3.15	3.16	3.14	3.11
		55	2.37	2.41	2.44	2.47	2.50	2.52	2.53	2.53	2.51	2.48
		45	1.99	2.00	2.01	2.03	2.04	2.05	2.05	2.05	2.04	2.02
		35	1.68	1.67	1.66	1.67	1.68	1.68	1.69	1.70	1.70	
		25	1.39	1.37	1.36	1.36	1.36	1.38	1.40			
ZW34KS	Q	65				7.44	8.34	9.33	10.43			
		55	4.77	5.52	6.31	7.16	8.09	9.12	10.27	11.57	13.02	
		45	4.56	5.29	6.08	6.94	7.89	8.95	10.14	11.49	13.00	
		35	4.48	5.18	5.96	6.81	7.77	8.85	10.07	11.46	13.02	
		25	4.56	5.23	5.98	6.82	7.78	8.87	10.11			
	P	65				3.74	3.83	3.87	3.86			
		55	2.43	2.64	2.78	2.88	2.93	2.96	2.97	2.96	2.96	
		45	2.00	2.10	2.16	2.19	2.21	2.21	2.22	2.24	2.28	
		35	1.80	1.79	1.76	1.72	1.69	1.67	1.67	1.70	1.77	
		25	1.88	1.75	1.61	1.50	1.40	1.35	1.33			
ZW42KS	Q	65	6.56	7.47	8.42	9.44	10.55	11.78	13.15	14.69	16.43	18.39
		55	6.12	7.07	8.08	9.15	10.32	11.62	13.06	14.68	16.49	18.54
		45	5.59	6.62	7.69	8.85	10.11	11.49	13.03	14.75	16.67	18.82
		35	4.85	5.97	7.15	8.41	9.78	11.28	12.94	14.78	16.83	
		25	3.77	5.01	6.32	7.71	9.21	10.85	12.65			
	P	65	4.70	4.61	4.55	4.51	4.50	4.50	4.51	4.52	4.53	4.54
		55	3.48	3.49	3.52	3.56	3.60	3.65	3.68	3.71	3.72	3.71
		45	2.71	2.80	2.89	2.98	3.06	3.13	3.17	3.19	3.18	3.13
		35	2.09	2.24	2.38	2.50	2.60	2.67	2.70	2.69	2.63	
		25	1.37	1.56	1.72	1.85	1.95	1.99	1.99			
ZW52KS	Q	65	7.93	9.03	10.18	11.41	12.75	14.24	15.90	17.77	19.87	22.24
		55	7.40	8.55	9.76	11.06	12.48	14.05	15.80	17.76	19.95	22.42
		45	6.76	8.00	9.30	10.70	12.22	13.90	15.76	17.84	20.17	22.77
		35	5.86	7.22	8.64	10.17	11.82	13.64	15.65	17.88	20.36	
		25	4.56	6.06	7.64	9.32	11.14	13.12	15.31			
	P	65	5.69	5.67	5.64	5.61	5.58	5.55	5.52	5.49	5.47	5.46
		55	4.26	4.34	4.41	4.46	4.49	4.50	4.50	4.49	4.47	4.44
		45	3.28	3.45	3.59	3.70	3.77	3.81	3.82	3.81	3.77	3.70
		35	2.48	2.73	2.92	3.06	3.16	3.21	3.22	3.18	3.10	
		25	1.60	1.90	2.12	2.29	2.39	2.43	2.41			
ZW68KS	Q	65	8.98	10.64	12.42	14.32	16.35	18.52	20.83	23.29	25.90	28.66
		55	8.65	10.32	12.13	14.08	16.19	18.44	20.86	23.43	26.18	29.11
		45	8.27	9.95	11.79	13.79	15.96	18.29	20.80	23.50	26.38	29.46
		35	7.98	9.67	11.53	13.57	15.79	18.20	20.81	23.62	23.63	
		25	7.91	9.59	11.47	13.55	15.82	18.31	21.00			
	P	65	6.20	6.70	7.05	7.27	7.39	7.41	7.37	7.28	7.16	7.04
		55	4.87	5.27	5.55	5.72	5.81	5.84	5.82	5.78	5.74	5.71
		45	3.89	4.20	4.41	4.54	4.62	4.66	4.68	4.70	4.74	4.83
		35	3.19	3.43	3.58	3.69	3.76	3.82	3.88	3.98	4.12	
		25	2.73	2.90	3.01	3.10	3.18	3.27	3.39			

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Single phase

220V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW30KSE	Q	65	4.32	4.95	5.58	6.24	6.96	7.77	8.70	9.77	11.06	12.54
		55	3.91	4.56	5.23	5.93	6.71	7.60	8.62	9.80	11.18	12.79
		45	3.62	4.29	4.98	5.73	6.56	7.51	8.61	9.89	11.83	13.11
		35	3.42	4.10	4.81	5.60	6.48	7.50	8.67	10.04	11.63	
		25	3.28	3.97	4.70	5.52	6.44	7.52	8.76			
	P	65	2.85	2.97	3.05	3.11	3.15	3.17	3.18	3.19	3.19	3.20
		55	2.35	2.42	2.47	2.50	2.51	2.52	2.52	2.51	2.51	2.52
		45	1.93	1.97	2.00	2.01	2.01	2.00	1.99	1.99	1.99	2.01
		35	1.59	1.61	1.62	1.62	1.61	1.60	1.60	1.60	1.61	
		25	1.32	1.33	1.33	1.32	1.31	1.31	1.31			
ZW34KSE	Q	65				7.06	7.85	8.73	9.73			
		55	5.17	5.90	6.66	7.47	8.37	9.37	10.49	11.76	13.20	
		45	4.79	5.57	6.39	7.28	8.25	9.34	10.57	11.95	13.52	
		35	4.31	5.11	5.97	6.91	7.94	9.10	10.41	11.89	13.56	
		25	4.16	4.97	5.84	6.81	7.88	9.09	10.46			
	P	65				3.37	3.36	3.35	3.35			
		55	2.96	3.02	3.05	3.06	3.07	3.07	3.07	3.07	3.08	
		45	2.34	2.41	2.45	2.48	2.50	2.50	2.51	2.51	2.53	
		35	1.57	1.66	1.72	1.76	1.78	1.80	1.81	1.81	1.83	
		25	0.81	0.91	0.99	1.04	1.07	1.09	1.10			
ZW42KSE	Q	65	6.58	7.35	8.18	9.09	10.12	11.29	12.63	14.18	15.96	18.01
		55	5.33	6.37	7.44	8.58	9.80	11.15	12.66	14.34	16.24	18.38
		45	4.72	5.95	7.19	8.47	9.81	11.26	12.84	14.58	16.51	18.66
		35	4.42	5.76	7.08	8.42	9.80	11.27	12.84	14.55	16.44	
		25	4.08	5.44	6.76	8.08	9.43	10.83	12.31			
	P	65	4.7	4.67	4.65	4.64	4.63	4.63	4.62	4.62	4.61	4.59
		55	3.65	3.64	3.63	3.63	3.64	3.65	3.66	3.66	3.66	3.65
		45	2.92	2.91	2.91	2.92	2.93	2.94	2.95	2.96	2.97	2.96
		35	2.40	2.39	2.38	2.39	2.39	2.40	2.41	2.41	2.41	
		25	1.98	1.96	1.94	1.93	1.93	1.92	1.91			
ZW52KSE	Q	65	7.96	8.89	9.89	10.99	12.23	13.65	15.27	17.15	19.30	21.78
		55	6.44	7.70	9.00	10.37	11.86	13.49	15.31	17.34	19.64	22.22
		45	5.71	7.20	8.69	10.24	11.87	13.62	15.53	17.63	19.97	22.57
		35	5.35	6.96	8.56	10.18	11.86	13.63	15.53	17.60	19.88	
		25	4.94	6.58	8.18	9.77	11.40	13.09	14.89			
	P	65	5.69	5.65	5.63	5.61	5.61	5.60	5.60	5.59	5.58	5.55
		55	4.42	4.40	4.39	4.40	4.41	4.42	4.43	4.44	4.43	4.42
		45	3.54	3.52	3.52	3.53	3.55	3.56	3.58	3.59	3.59	3.58
		35	2.91	2.89	2.88	2.89	2.90	2.91	2.92	2.92	2.92	
		25	2.40	2.37	2.35	2.34	2.33	2.33	2.32			
ZW68KSE	Q	65	9.00	10.47	12.06	13.79	15.68	17.74	20.00	22.47	25.16	28.07
		55	7.53	9.29	11.18	13.20	15.37	17.70	20.21	22.90	25.77	28.85
		45	6.99	8.95	11.01	13.19	15.49	17.93	20.50	23.23	26.13	29.21
		35	7.28	9.32	11.41	13.58	15.83	18.19	20.66	23.26	26.01	
		25	8.56	10.41	12.28	14.20	16.19	18.27	20.44			
	P	65	6.19	6.78	7.20	7.47	7.60	7.62	7.56	7.43	7.28	7.11
		55	5.11	5.49	5.72	5.84	5.87	5.84	5.78	5.71	5.65	5.63
		45	4.20	4.37	4.44	4.45	4.42	4.38	4.36	4.36	4.43	4.57
		35	3.66	3.64	3.58	3.52	3.46	3.44	3.47	3.57	3.77	
		25	3.95	3.63	3.39	3.23	3.14	3.15	3.26			

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Single phase

220V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW52KA	Q	65				15.41	17.64	20.08
		55		11.87	13.59	15.77	18.28	21.00
		45	10.41	11.79	13.77	16.21	18.98	21.96
		35	10.50	12.12	14.33	17.00	20.00	
		25	11.28	13.11	15.53			
	P	65				5.06	5.04	5.02
		55		4.18	4.24	4.23	4.19	4.16
		45	3.44	3.58	3.62	3.58	3.52	3.47
		35	2.94	3.05	3.06	3.00	2.90	
		25	2.39	2.46	2.43			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Single phase

220V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW52KAE	Q	65				14.76	17.01	19.60
		55		11.31	13.12	15.30	17.85	20.76
		45	9.83	11.44	13.46	15.89	18.73	21.96
		35	10.03	11.82	14.05	16.73	19.84	
		25	10.67	12.63	15.07			
	P	65				5.18	5.19	5.18
		55		4.14	4.19	4.20	4.20	4.19
		45	3.35	3.41	3.43	3.44	3.44	3.45
		35	2.78	2.81	2.83	2.84	2.87	
		25	2.27	2.30	2.33			

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Single phase

220V

Model		Condensing temperature ˚C	Evaporating temperature ˚C										
			-30	-25	-20	-15	-10	-5	0	5	10	15	20
ZW059HSP	Q	65						5.35	5.94	7.06	8.77		
		55	7.29	6.78	6.43	6.31	6.48	7.01	7.97	9.42	11.43	14.06	17.39
		45	5.53	5.86	6.30	6.90	7.73	8.86	10.35	12.28	14.70	17.69	21.31
		35	3.92	4.84	5.81	6.87	8.11	9.58	11.35	13.50	16.08	19.16	22.81
		25	3.46	4.72	5.96	7.23	8.62	10.17	11.97	14.08	16.56	19.48	
	P	65						3.99	3.96	3.96	3.97		
		55	3.83	3.74	3.66	3.59	3.53	3.48	3.45	3.44	3.44	3.47	3.51
		45	2.90	2.85	2.81	2.77	2.73	2.69	2.66	2.63	2.61	2.61	2.61
		35	2.21	2.21	2.20	2.19	2.17	2.14	2.11	2.08	2.04	2.01	1.98
		25	1.70	1.75	1.78	1.80	1.80	1.79	1.76	1.72	1.67	1.61	
ZW096HSP	Q	65						15.30	16.83	18.51	20.34		
		55	9.06	10.01	11.06	12.24	13.56	15.01	16.60	18.35	20.27	22.34	24.60
		45	8.25	9.26	10.39	11.66	13.06	14.62	16.33	18.20	20.24	22.47	24.87
		35	7.70	8.75	9.93	11.25	12.73	14.37	16.17	18.14	20.30	22.64	25.18
		25	7.27	8.34	9.55	10.91	12.44	14.13	16.00	18.05	20.29	22.73	
	P	65						6.39	6.41	6.40	6.37		
		55	5.32	5.41	5.50	5.57	5.63	5.67	5.68	5.67	5.63	5.55	5.44
		45	4.21	4.30	4.37	4.43	4.47	4.50	4.50	4.48	4.42	4.33	4.20
		35	3.41	3.48	3.53	3.58	3.61	3.62	3.60	3.56	3.49	3.39	3.25
		25	2.80	2.85	2.89	2.92	2.93	2.92	2.88	2.82	2.73	2.61	
ZW126HSP	Q	65						19.18	21.17	23.39	25.87		
		55	11.41	12.62	13.96	15.45	17.12	18.99	21.09	23.42	26.02	28.90	32.09
		45	10.45	11.78	13.25	14.89	16.71	18.75	21.02	23.53	26.33	29.41	32.82
		35	9.82	11.21	12.76	14.49	16.41	18.56	20.94	23.59	26.52	29.76	33.32
		25	9.37	10.78	12.35	14.11	16.08	18.28	20.72	23.45	26.46	29.79	
	P	65						7.98	8.00	7.98	7.94		
		55	6.51	6.69	6.84	6.95	7.03	7.08	7.09	7.07	7.02	6.95	6.84
		45	5.21	5.34	5.44	5.52	5.57	5.59	5.60	5.57	5.53	5.47	5.39
		35	4.20	4.28	4.35	4.40	4.44	4.45	4.45	4.44	4.41	4.38	4.33
		25	3.39	3.44	3.49	3.52	3.55	3.56	3.57	3.58	3.58	3.57	

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Single phase

ZW KS, ZW KA

ZW Series			ZW30KS	ZW34KS	ZW42KS	ZW52KS	ZW68KS	ZW52KA
Nominal power		HP	2.5	3	3.5	4.5	6	4.5
Motor type			PFS					
Displacement		m^3/hr	7.1	8.0	10.0	12.2	16.2	12.2
Refrigerant			R22					
Heating capacity		kW	10.1	11.6	14.7	17.8	23.4	15.8
Input power		kW	2.5	3.0	3.7	4.5	5.8	4.2
Current		A	11.5	13.7	21.5	24.3	28.9	22.9
Mass flow		g/s	43.5	47.8	60.1	14.6	97.8	74.0
Locked rotor amps		A	58.4	72.5	136.0	136.0	175.0	136.0
Rated load current		A	13.6	13.9	24.3	25.0	33.2	26.4
Max continuous current		A	19.0	19.4	34.0	35.0	46.5	36.9
Max operating current		A	17.2	17.7	28.0	30.8	43.0	28.2
Oil charge	Initial	L	0.74	0.74	1.57	1.57	1.89	1.57
	Replacement refill	L	0.62	0.62	1.45	1.45	1.77	1.45
Net weight		kg	22	22	30	30	44	30

Conditions: ET 5˚C, CT 55˚C, Superheat 11K Subcooling 8.3K

ZW KSE, ZW KAE

ZW Series			ZW30KSE	ZW34KSE	ZW42KSE	ZW52KSE	ZW68KSE	ZW52KAE
Nominal power		HP	2.5	3	3.5	4.5	6	4.5
Motor type			PFS					
Displacement		m^3/hr	7.1	8.0	10.0	12.2	16.2	12.2
Refrigerant			R407C					
Heating capacity		kW	9.8	11.8	14.3	17.3	22.9	15.5
Input power		kW	2.5	3.1	3.7	4.4	5.7	4.2
Current		A	11.5	14.1	21.1	23.8	28.3	22.6
Mass flow		g/s	41.0	54.8	57.5	71.3	93.5	70.0
Locked rotor amps		A	58.4	72.5	136.0	136.0	175.0	136.0
Rated load current		A	15.3	14.1	29.1	25.0	33.2	27.1
Max continuous current		A	21.4	19.8	40.8	35.0	46.5	38.0
Max operating current		A	17.7	18.3	28.0	32.0	43.0	29.3
Oil charge	Initial	L	0.74	0.74	1.57	1.57	1.89	1.57
	Replacement refill	L	0.62	0.62	1.45	1.45	1.77	1.45
Net weight		kg	22	22	30	30	44	30

ZW HSP

ZW Series			ZW059HSP	ZW096HSP	ZW126HSP
Nominal power		HP	3	5	6
Motor type			PFS		
Displacement		m^3/hr	5.1	8.3	11.0
Refrigerant			R407C		
Heating capacity		kW	11.1	18.3	23.5
Input power		kW	3.00	4.92	6.26
Current		A	14.1	25.5	32.0
Mass flow		g/s	42.8	71.2	93.6
Locked rotor amps		A	72.5	140.0	175.0
Rated load current		A	17.1	28.6	34.3
Max continuous current		A	24.0	40.1	48.0
Max operating current		A	18	32	40
Oil charge	Initial	L	0.74	1.57	1.89
	Replacement refill	L	0.62	1.45	1.77
Net weight		kg	22	35	44

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

Variable speed series

Variable speed series		VPW038DE	ZWW050SP	VPW038DE	ZWW050SP
Nominal power	HP	5	6	5	6
Motor type		3X9		4X9	
Inverter input rating	V	220		380	
Displacement	cc/Rev	38.3	47.7	38.3	47.7
Refrigerants		R410A			
EVI		√			
Speed range	RPM	900-7,200	1,800-4,800	900-7,200	1,800-4,800
Heating capacity @75 Hz	kW	14.4	21.3	14.4	21.3
Input power @75 Hz	kW	4.38	6.23	4.38	6.23
Current @75 Hz	A	14	13	14	13
COP @75 Hz	kW/ kW	3.3	3.4	3.3	3.4
Noise @75 Hz	dBA	75	77	75	77
Oil charge	ml	1,183	1,597	1,183	1,597
Net weight	kg	20.8	26.5	20.8	26.5

Conditions: ET -7° C, CT 50 ° C, Superheat 11K, Subcooling 8.3K

District heating

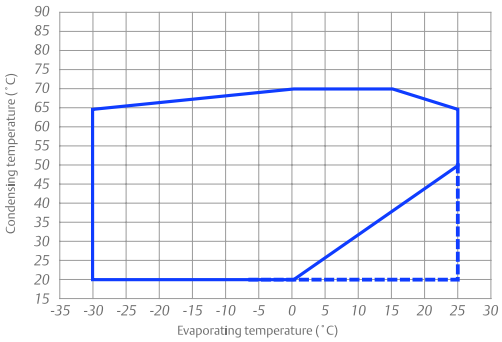
Compressor model

Refrigerant	Compressor model	Power supply	EVI	Rated heating capacity (kW)	Performance table	Specification
R22	ZW61KS-TFP-522	3Φ/380 V/50 Hz	√	20.3	P40	P44
	ZW79KS-TFP-522		√	25.8	P40	P44
	ZW108KS-TFP-522		√	35.9	P40	P44
	ZW124KS-TFP-52E		√	42.6	P41	P44
	ZW125KS-TFP-522		√	41.6	P41	P44
	ZW150KS-TFP-522		√	50.4	P41	P44
R407C	ZW150KSE-TFP-522		√	49.8	P42	P44
R410A	ZW258HSP-TFP-522		√	47.5	P43	P44
	ZW286HSP-TFP-522		√	52.2	P43	P44
	ZW430HSP-TEP-522		√	67.9	-	P44
	ZW520HSP-TEP-522		√	95.8	P43	P44

Operating envelopes

ZW61KS, ZW79KS,ZW124KS,ZW125KS, ZW150KS(E)

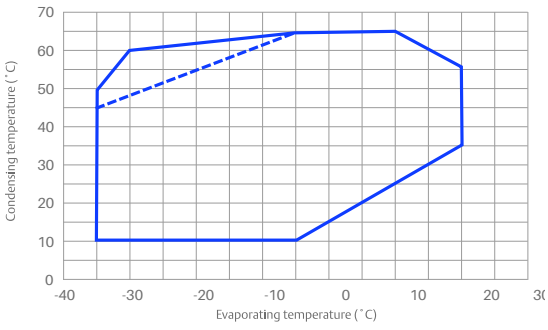
R22/R407C



Superheat 5K
Discharge temperature with EVI: 115° C
---- Transition only

ZW258HSP, ZW286HSP

R410A



11K Superheat
---- Wet injection, Evaporating temperature below -25°C and running time less than 2000 hrs.

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW61KS	Q	65	9.95	10.86	11.91	13.13	14.54	16.17	18.04	20.18	22.61	25.35
		55	8.85	9.91	11.12	12.51	14.09	15.90	17.95	20.28	22.90	25.84
		45	8.15	9.34	10.68	12.20	13.92	15.87	18.08	20.56	23.34	26.45
		35	7.74	9.01	10.45	12.07	13.91	15.97	18.29	20.90	23.81	
		25	7.46	8.80	10.30	12.00	12.90	16.05	18.46			
	P	65	5.79	5.82	5.88	5.95	6.03	6.10	6.17	6.22	6.23	6.21
		55	4.47	4.50	4.56	4.64	4.73	4.82	4.89	4.95	4.98	4.98
		45	3.51	3.54	3.59	3.67	3.76	3.86	3.94	4.01	4.05	4.05
		35	2.80	2.82	2.87	2.95	3.04	3.13	3.22	3.29	3.33	
		25	2.24	2.26	2.30	2.37	2.45	2.54	2.62			
ZW79KS	Q	65	12.11	13.64	15.25	16.98	18.87	20.97	23.32	25.97	28.95	32.31
		55	10.23	12.06	13.95	15.94	18.08	20.41	22.97	25.81	28.97	32.49
		45	9.24	11.26	13.32	15.48	17.75	20.21	22.87	25.80	29.03	32.60
		35	8.77	10.88	13.01	15.21	17.53	20.00	22.66	25.57	28.76	
		25	8.47	10.56	12.66	14.80	17.04	19.42	21.98			
	P	65	7.51	7.41	7.38	7.42	7.51	7.64	7.81	7.99	8.18	8.37
		55	5.86	5.80	5.82	5.88	6.00	6.14	6.31	6.48	6.65	6.81
		45	4.62	4.61	4.66	4.76	4.89	5.05	5.21	5.38	5.53	5.66
		35	8.77	10.88	13.01	15.21	17.53	20.00	22.66	25.57	28.76	
		25	2.77	2.86	2.99	3.15	3.33	3.50	3.67			
ZW108KS	Q	65		15.86	18.87	21.99	25.26	28.67	32.22	35.92	39.76	43.76
		55		15.42	18.66	21.82	25.28	28.64	32.20	35.88	39.66	43.55
		45		15.83	19.20	22.65	26.15	29.72	33.36	37.07	40.85	44.71
		35		16.23	19.90	27.31	27.31	31.05	34.83	38.64	42.48	
		25		15.75	19.77	27.76	27.76	31.74	35.72			
	P	65		9.83	10.02	10.32	10.32	10.40	10.43	10.39	10.39	10.10
		55		7.81	7.97	8.21	8.21	8.28	8.31	8.29	8.21	8.06
		45		6.33	6.45	6.64	6.64	6.71	6.74	6.73	6.68	6.56
		35		5.19	5.27	5.42	5.42	5.48	5.52	5.52	5.49	
		25		4.20	4.24	4.35	4.35	4.40	4.45			

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW124KS	Q	65	17.86	19.98	22.53	25.52	28.92	32.74	36.95	41.55	46.54	51.90
		55	17.20	19.58	22.38	25.57	29.15	33.11	37.45	42.15	47.20	52.59
		45	17.06	19.63	22.58	25.90	29.59	33.62	38.01	42.72	47.76	53.12
		35	15.64	18.32	21.35	24.73	28.44	32.48	36.83	41.49	46.44	
		25	15.13	17.85	20.89	22.25	26.91	29.87	32.12	36.64		
	P	65	11.10	11.49	11.83	12.13	12.39	12.62	12.82	13.01	13.18	13.36
		55	8.86	9.22	9.54	9.81	10.05	10.26	10.46	10.64	10.82	11.00
		45	7.38	7.69	7.96	8.19	8.40	8.59	8.76	8.93	9.09	9.27
		35	6.13	6.38	6.59	6.77	6.93	7.07	7.21	7.34	7.48	
		25	5.59	5.76	5.90	6.02	6.11	6.20	6.29	6.37		
ZW125KS	Q	65	18.02	19.96	22.40	25.31	28.67	32.45	36.63	41.18	46.07	51.27
		55	16.90	19.15	21.86	25.02	28.60	32.57	36.91	41.58	46.58	51.86
		45	16.35	18.73	21.56	24.80	28.44	32.43	36.77	41.42	46.35	51.55
		35	15.95	18.32	21.10	24.26	27.79	31.65	35.82	40.27	44.98	
		25	15.32	17.50	20.07	22.99	26.25	29.81	33.65	37.75		
	P	65	10.74	10.87	11.04	11.24	11.46	11.7	11.95	12.21	12.46	12.71
		55	7.89	8.23	8.58	8.93	9.27	9.60	9.91	10.19	10.45	10.66
		45	6.14	6.60	7.03	7.44	7.81	8.14	8.42	8.65	8.81	8.91
		35	5.12	5.61	6.04	6.42	6.73	6.97	7.13	7.21	7.20	
		25	4.47	4.90	5.24	5.50	5.66	5.72	5.67	5.51		
ZW150KS	Q	65	19.42	23.37	27.31	31.35	35.59	40.11	45.00	50.38	56.32	62.93
		55	20.21	23.80	27.47	31.32	35.45	39.93	44.88	50.38	56.53	63.42
		45	20.04	23.41	26.94	30.73	34.87	39.45	44.58	50.33	56.82	64.13
		35	19.47	22.75	26.27	30.12	34.41	39.22	44.64	50.79	57.74	
		25	19.03	22.35	25.99	30.04	34.6	39.76	45.62	52.28		
	P	65	11.54	12.2	12.81	13.36	13.87	14.35	14.8	15.23	15.65	16.05
		55	9.62	10.15	10.64	11.09	11.53	11.94	12.34	12.74	13.14	13.55
		45	8.10	8.52	8.93	9.31	9.69	10.07	10.45	10.84	11.25	11.68
		35	6.81	7.15	7.49	7.83	8.18	8.54	8.92	9.33	9.78	
		25	5.56	5.85	6.15	6.47	6.81	7.18	7.59	8.04		

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-30	-25	-20	-15	-10	-5	0	5	10	15
ZW150KSE	Q	65	16.31	20.07	24.08	28.39	33.02	38.03	43.46	49.35	55.75	62.69
		55	17.89	21.20	24.86	28.89	33.36	38.28	43.73	49.72	56.31	63.54
		45	17.90	20.94	24.42	28.37	32.84	37.87	43.51	49.78	56.75	64.45
		35	17.14	20.09	23.58	27.63	32.28	37.60	43.60	50.35	57.88	
		25	16.40	19.46	23.13	27.45	32.48	38.26	44.82	52.21		
	P	65	11.01	11.72	12.39	13.01	13.61	14.16	14.69	15.19	15.67	16.13
		55	9.04	9.64	10.21	10.74	11.24	11.72	12.17	12.60	13.02	13.42
		45	7.64	8.14	8.61	9.05	9.47	9.88	10.26	10.64	11.01	11.37
		35	6.46	6.86	7.25	7.62	7.97	8.31	8.64	8.97	9.30	
		25	5.17	5.49	5.80	6.10	6.40	6.68	6.97	7.26		

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C											
			-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
ZW258HSP	Q	65							38.20	42.21	46.76	51.93		
		55		22.07	24.64	27.41	30.45	33.84	37.65	41.95	46.82	52.32	58.54	65.54
		45	17.21	19.86	22.68	25.74	29.12	32.89	37.12	41.89	47.26	53.31	60.11	67.74
		35	16.25	18.94	21.85	25.05	28.60	32.59	37.08	42.14	47.85	54.29	61.51	69.61
		25	16.42	19.00	21.83	25.00	28.56	32.60	37.18	42.38	48.27	54.92	62.41	
	P	65							15.08	15.20	15.35	15.44		
		55		14.79	13.75	13.16	12.91	12.92	13.10	13.34	13.57	13.68	13.58	13.19
		45	12.02	10.17	9.75	9.66	9.82	10.12	10.48	10.80	10.99	10.96	10.61	9.86
		35	9.97	7.70	7.66	7.84	8.15	8.51	8.81	8.97	8.88	8.47	7.64	6.29
		25	7.99	6.38	6.47	6.68	6.91	7.08	7.09	6.84	6.25	6.22	6.66	
ZW286HSP	Q	65							42.27	47.4	53.06	59.03		
		55		30.49	30.01	31.16	33.68	37.33	41.87	47.06	52.65	58.41	64.08	69.43
		45	19.886	25.01	26.06	28.45	31.94	36.28	41.24	46.56	52.00	57.33	62.30	66.67
		35	18.232	20.90	23.48	27.12	31.58	36.61	41.98	47.43	52.73	57.63	61.89	65.27
		25	17.309	19.55	23.66	28.54	33.97	39.69	45.46	51.04	56.19	60.67	64.22	
	P	65							17.05	16.98	17.03	17.17		
		55		17.47	16.51	15.82	15.35	15.08	14.97	14.97	15.06	15.19	15.34	15.46
		45	10.744	12.60	12.13	11.85	11.73	11.71	11.78	11.89	12.01	12.09	12.11	12.03
		35	8.328	9.23	9.20	9.28	9.43	9.62	9.81	9.97	10.06	10.05	9.89	9.55
		25	7.333	7.26	7.61	7.99	8.36	8.70	8.97	9.13	9.13	8.96	8.57	
*ZW520HSP	Q	65							72.09	80.54	90.35	101.75		
		55		41.65	47.07	52.75	58.90	65.78	73.60	82.60	93.00	105.05	118.97	134.99
		45	34.87	40.64	46.54	52.80	59.64	67.31	76.03	86.04	97.56	110.82	126.06	143.51
		35	32.63	38.66	44.93	51.66	59.09	67.44	76.95	87.84	100.36	114.73	131.18	149.95
		25	28.63	34.82	41.34	48.43	56.32	65.25	75.43	87.11	100.52	115.88	133.43	
	P	65							29.92	29.90	29.95	30.11		
		55		25.97	26.10	26.15	26.15	26.12	26.11	26.13	26.23	26.43	26.76	27.25
		45	19.82	20.17	20.41	20.56	20.66	20.73	20.82	20.94	21.13	21.42	21.85	22.44
		35	15.55	16.02	16.37	16.64	16.85	17.04	17.24	17.47	17.77	18.17	18.70	19.39
		25	11.24	11.84	12.32	12.72	13.06	13.37	13.69	14.05	14.47	14.99	15.64	

Note: Superheat 11K, Subcooling 8.3K

EVI Controls: DLT<115°C, Economizer superheat 6K

DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

*Preliminary data

Q = Heating capacity (kW)

P = Input power (kW) Three phase

ZW KS

ZW Series			ZW61KS	ZW79KS	ZW108KS	ZW124KS	ZW125KS	ZW150KS
Nominal power		HP	5	7	9	10	10	13
Motor type			TFP					
Displacement		m^3/hr	14.4	18.8	24.9	29.2	29.1	35.3
Refrigerant			R22					
Heating capacity		kW	20.3	25.8	35.9	42.62	41.6	50.4
Input power		kW	5.0	6.5	8.3	10.59	10.2	12.7
Current		A	8.5	11.9	16.1	21.42	18.6	24.8
Mass flow		g/s	88.2	110.6	154	174.08	173.5	210.4
Locked rotor amps		A	59.0	90.5	133.0	155.0	133.0	157.0
Rated load current		A	10.1	12.1	19.3	20.4	20.1	25.6
Max continuous current		A	14.2	17.0	27.0	28.6	28.1	35.8
Max operating current		A	11.8	13.6	20.5	26.8	27.2	31.5
Oil charge	Initial	L	1.57	1.89	3.25	3.25	3.25	3.37
	Replacement refill	L	1.45	1.77	3.14	3.2	3.14	3.25
Net weight		kg	30	41	60	62	60	65

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW KSE

ZW Series			ZW150KSE
Nominal power		HP	13
Motor type			TFP
Displacement		m^3/hr	35.3
Refrigerant			R407C
Heating capacity		kW	49.8
Input power		kW	12.6
Current		A	24.5
Mass flow		g/s	204
Locked rotor amps		A	157
Rated load current		A	26.6
Max continuous current		A	37.3
Max operating current		A	31.4
Oil charge	Initial	L	3.37
	Replacement refill	L	3.25
Net weight		kg	65

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW HSP

ZW Series			ZW258HSP	ZW286HSP	*ZW430HSP	*ZW520HSP
Nominal power		HP	11	13	20	25
Motor type			TFP		TEP	
Displacement		m^3/hr	21.6	24.9	36.58	45.73
Refrigerant			R410A			
Heating capacity		kW	47.4	52.2	67.94	95.76
Input power		kW	12.0	13.4	17.61	24.05
Current		A	24.8	25.5	33.8	42.7
Mass flow		g/s	188.1	218.0	330.1	415.6
Locked rotor amps		A	156	174.0	255.5	273.8
Rated load current		A	21.1	27.7	44.29	46.10
Max continuous current		A	29.5	38.8	62.0	64.5
Max operating current		A	30.6	33.0	42.2	52.7
Oil charge	Initial	L	3.3	3.37	4.44	4.44
	Replacement refill	L	3.2	3.25	4.2	4.2
Net weight		kg	65	65	91.6	91.6

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

*Preliminary data

Industrial heating

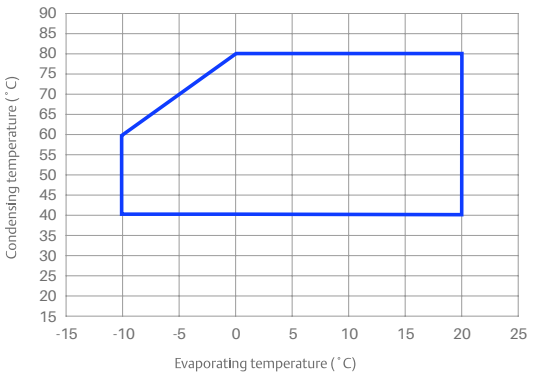
Compressor model

Refrigerant	Compressor model	Power supply	EVI	Rated heating capacity (kW)	Performance table	Specification
R134a	ZWD61KAE-TFD-532	3Φ/380-420 V/50 Hz, 3Φ/460 V/60 Hz		12.2	P47	P51
	ZWD72KAE-TFD-532			14.7	P47	P51
	ZWD81KAE-TFD-532			16.1	P47	P51
	ZWD61KBE-TFP-532	3Φ/380 V/50 Hz		13.0	P48	P52
	ZWD72KBE-TFP-532			15.5	P48	P52
	ZWD81KBE-TFP-532			16.6	P48	P52
	ZW61KBE-TFP-522			13.0	P49	P52
	ZW72KBE-TFP-522			15.5	P49	P52
	ZW79KBE-TFP-522			16.6	P49	P52
	ZW125KBE-TFP-522			29.1	P50	P52
	ZW150KBE-TFP-522			35.3	P50	P52
	ZW79KAE-TFP-522			16.1	P46	P51
	ZW79KSE-TFP-522		√	17.4	P46	P51
	ZW72KSE-TF7-522	3Φ/380 V/60 Hz	√	20.4	P51	P52

Operating envelopes

ZW79KAE, ZW79KSE, ZWD61KAE, ZWD72KAE, ZWD81KAE

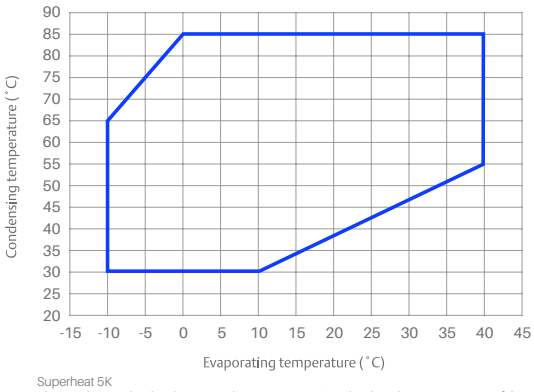
R134a



Superheat 5K

ZW61KBE, ZW72KBE, ZW79KBE, ZW125KBE, ZW150KBE, ZWD61KBE, ZWD72KBE, ZWD81KBE

R134a



Superheat 5K
This product under development. Please contact a Copeland applications engineer if the evaporating temperature of the application range is higher than 25˚C.

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C						
			-10	-5	0	5	10	15	20
ZW79KSE	Q	80			15.17	16.78	18.65	20.83	23.35
		75			15.06	16.80	18.83	21.18	23.89
		70		13.41	15.02	16.89	19.07	21.59	24.49
		65		13.32	15.03	17.03	19.36	22.05	25.14
		60	11.72	13.27	15.09	17.22	19.69	22.54	25.82
		55	11.62	13.26	15.18	17.42	20.04	23.05	26.51
		50	11.54	13.25	15.27	17.64	20.39	23.57	27.20
		45	11.46	13.25	15.37	17.85	20.74	24.07	27.88
		40	11.38	13.24	15.45	18.04	21.06	24.55	28.53
	P	80			6.39	6.53	6.70	6.88	7.07
		75			5.81	5.97	6.15	6.33	6.51
		70		5.18	5.33	5.50	5.67	5.84	5.99
		65		4.77	4.93	5.08	5.23	5.38	5.50
		60	4.27	4.41	4.56	4.69	4.81	4.91	4.98
		55	3.96	4.08	4.19	4.29	4.37	4.41	4.43
		50	3.65	3.74	3.81	3.86	3.87	3.85	3.79
		45	3.31	3.35	3.37	3.36	3.30	3.20	3.05
		40	2.91	2.90	2.85	2.76	2.62	2.43	2.17

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C						
			-10	-5	0	5	10	15	20
ZW79KAE	Q	80			12.58	14.40	16.52	18.97	21.75
		75			12.72	14.67	16.95	19.55	22.50
		70		11.12	12.91	14.99	17.40	20.15	23.25
		65		11.24	13.14	15.35	17.88	20.77	24.01
		60	9.72	11.41	13.41	15.72	18.38	21.39	24.76
		55	9.84	11.61	13.70	16.11	18.88	22.00	25.50
		50	9.99	11.83	14.00	16.51	19.37	22.60	26.21
		45	10.16	12.07	14.31	16.90	19.84	23.17	26.89
		40	10.35	12.31	14.62	17.27	20.29	23.70	27.51
	P	80			5.83	6.03	6.24	6.45	6.65
		75			5.33	5.54	5.75	5.96	6.15
		70		4.69	4.88	5.09	5.31	5.51	5.68
		65		4.28	4.48	4.69	4.89	5.08	5.23
		60	3.75	3.92	4.12	4.32	4.51	4.68	4.81
		55	3.44	3.61	3.80	3.98	4.16	4.30	4.39
		50	3.17	3.34	3.51	3.68	3.82	3.93	3.99
		45	2.95	3.10	3.25	3.40	3.51	3.59	3.60
		40	2.77	2.90	3.03	3.14	3.22	3.25	3.22

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380-420V

Model		Condensing temperature ˚C	Evaporating temperature ˚C						
			-10	-5	0	5	10	15	20
ZWD61KAE	Q	80			8.55	9.07	11.83	13.84	15.15
		75			9.06	10.56	12.27	14.24	16.49
		70		8.29	9.87	11.44	13.25	15.33	17.71
		65		8.65	10.08	11.72	13.60	15.76	18.24
		60	7.15	8.03	10.24	11.96	13.94	16.20	18.78
		55	7.43	8.83	10.42	12.24	14.32	16.70	19.41
		50	7.47	8.97	10.67	12.60	14.81	17.32	20.18
		45	7.61	9.22	11.04	13.11	15.46	18.13	21.14
		40	7.90	9.65	11.61	13.83	16.34	19.17	22.37
	P	80			4.47	4.62	4.81	5.02	5.21
		75			4.21	4.35	4.53	4.76	5.01
		70		3.65	3.76	3.88	4.02	4.16	4.30
		65		3.34	3.45	3.56	3.68	3.79	3.89
		60	2.62	2.29	3.12	3.24	3.35	3.44	3.50
		55	2.54	2.69	2.84	2.97	3.07	3.15	3.21
		50	2.27	2.46	2.64	2.79	2.89	2.95	3.01
		45	2.10	2.35	2.57	2.74	2.85	2.91	2.96
		40	2.10	2.41	2.66	2.86	2.99	3.05	3.08
ZWD72KAE	Q	80			11.94	13.71	15.71	18.01	20.65
		75			12.07	13.81	15.95	18.26	21.08
		70		10.33	12.15	13.98	16.06	18.46	21.24
		65		10.69	12.34	14.23	16.40	18.92	21.85
		60	9.38	11.02	12.51	14.48	16.76	19.41	22.50
		55	9.37	10.91	12.68	14.74	17.14	19.95	23.21
		50	9.41	11.01	12.86	15.03	17.57	20.54	23.99
		45	9.46	11.12	13.07	15.36	18.05	21.20	24.86
		40	9.51	11.26	13.31	15.74	18.60	21.94	25.83
	P	80			5.55	5.57	5.59	5.60	5.62
		75			5.26	5.28	5.30	5.32	5.35
		70		5.01	5.02	5.03	5.04	5.05	5.07
		65		4.53	4.54	4.54	4.55	4.56	4.59
		60	4.17	4.31	4.10	4.11	4.12	4.14	4.18
		55	3.69	3.70	3.71	3.72	3.74	3.77	3.83
		50	3.32	3.33	3.34	3.36	3.40	3.45	3.54
		45	2.97	2.99	3.01	3.04	3.10	3.18	3.29
		40	2.63	2.66	2.70	2.75	2.83	2.94	3.08
ZWD81KAE	Q	80			12.58	14.40	16.52	18.97	21.75
		75			12.71	14.67	16.95	19.55	22.50
		70		11.12	12.90	14.99	17.40	20.15	23.25
		65		11.24	13.14	15.35	17.88	20.77	24.01
		60	9.72	11.41	13.41	15.72	18.38	21.39	24.76
		55	9.84	11.61	13.70	16.11	18.88	22.00	25.50
		50	9.99	11.83	14.00	16.51	19.37	22.60	26.21
		45	10.16	12.07	14.31	16.90	19.84	23.17	26.89
		40	10.35	12.31	14.62	17.27	20.29	23.70	27.51
	P	80			5.83	6.03	6.24	6.45	6.65
		75			5.33	5.54	5.75	5.96	6.15
		70		4.69	4.88	5.09	5.31	5.51	5.68
		65		4.28	4.48	4.69	4.89	5.08	5.23
		60	3.75	3.92	4.12	4.32	4.51	4.68	4.81
		55	3.44	3.61	3.79	3.98	4.15	4.30	4.39
		50	3.17	3.33	3.51	3.68	3.82	3.93	3.99
		45	2.95	3.10	3.25	3.40	3.51	3.59	3.60
		40	2.77	2.90	3.03	3.14	3.22	3.25	3.22

Note: Superheat 11K, Subcooling 8.3K

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-10	-5	0	5	10	15	20	25	30	35	40
*ZWD61KBE	Q	85			9.16	10.68	12.33	14.15	16.20	18.52	21.16	24.16	27.58
		80			9.40	10.95	12.66	14.57	16.73	19.20	22.01	25.21	28.86
		75			9.67	11.27	13.04	15.05	17.35	19.97	22.96	26.38	30.27
		70		8.49	9.97	11.62	13.48	15.60	18.03	20.82	24.01	27.66	31.81
		65	7.31	8.74	10.26	11.98	13.95	16.20	18.79	21.77	25.18	29.07	33.49
		60	7.59	8.99	10.56	12.35	14.42	16.80	19.55	22.71	26.34	30.48	35.18
		50	7.87	9.35	11.06	13.05	15.37	18.06	21.18	24.77	28.88		
		40	7.85	9.46	11.36	13.59	16.21	19.27	22.81				
	P	85			4.86	5.05	5.24	5.43	5.63	5.83	6.03	6.23	6.44
		80			4.52	4.70	4.87	5.05	5.23	5.41	5.60	5.78	5.98
		75			4.20	4.37	4.53	4.70	4.86	5.03	5.19	5.36	5.54
		70		3.74	3.90	4.06	4.21	4.36	4.51	4.66	4.82	4.97	5.13
		65	3.35	3.49	3.64	3.78	3.93	4.07	4.20	4.34	4.48	4.62	4.76
		60	3.09	3.23	3.38	3.51	3.64	3.77	3.89	4.02	4.14	4.27	4.39
		50	2.67	2.80	2.93	3.05	3.16	3.27	3.37	3.47	3.57		
		40	2.33	2.45	2.56	2.67	2.76	2.85	2.94				
*ZWD72KBE	Q	85			10.90	12.71	14.68	16.85	19.29	22.05	25.19	28.77	32.83
		80			11.19	13.04	15.07	17.34	19.92	22.85	26.20	30.01	34.36
		75			11.52	13.41	15.53	17.92	20.65	23.77	27.33	31.41	36.04
		70		10.10	11.87	13.83	16.04	18.57	21.46	24.78	28.59	32.93	37.86
		65	8.59	10.40	12.22	14.27	16.60	19.28	22.37	25.91	29.97	34.61	39.87
		60	9.04	10.70	12.57	14.70	17.16	20.00	23.27	27.04	31.36	36.29	41.88
		50	9.37	11.13	13.17	15.53	18.29	21.50	25.22	29.49	34.39		
		40	9.35	11.26	13.52	16.18	19.30	22.94	27.16				
	P	85			5.96	6.20	6.44	6.67	6.91	7.15	7.40	7.65	7.92
		80			5.55	5.77	5.99	6.20	6.42	6.65	6.87	7.10	7.34
		75			5.16	5.36	5.56	5.77	5.97	6.17	6.38	6.59	6.80
		70		4.60	4.79	4.98	5.17	5.36	5.54	5.73	5.91	6.11	6.30
		65	4.10	4.29	4.47	4.65	4.82	4.99	5.16	5.33	5.50	5.67	5.85
		60	3.79	3.97	4.15	4.31	4.47	4.63	4.78	4.93	5.09	5.24	5.40
		50	3.28	3.44	3.60	3.74	3.88	4.01	4.14	4.26	4.38		
		40	2.86	3.01	3.15	3.27	3.39	3.50	3.60				
*ZWD81KBE	Q	85			11.68	13.62	15.73	18.06	20.67	23.63	27.00	30.83	35.19
		80			11.99	13.97	16.15	18.59	21.35	24.49	28.08	32.17	36.82
		75			12.34	14.37	16.64	19.21	22.13	25.47	29.29	33.66	38.62
		70		10.83	12.72	14.82	17.19	19.90	23.00	26.56	30.63	35.29	40.58
		65	9.20	11.15	13.09	15.29	17.79	20.67	23.97	27.77	32.12	37.09	42.73
		60	9.69	11.47	13.47	15.76	18.39	21.43	24.94	28.98	33.61	38.89	44.88
		50	10.05	11.93	14.11	16.65	19.61	23.04	27.02	31.61	36.85		
		40	10.02	12.07	14.49	17.34	20.69	24.59	29.10				
	P	85			6.14	6.38	6.62	6.87	7.11	7.36	7.62	7.88	8.15
		80			5.71	5.93	6.16	6.39	6.61	6.84	7.07	7.31	7.55
		75			5.31	5.52	5.73	5.93	6.14	6.35	6.56	6.78	7.00
		70		4.73	4.93	5.13	5.32	5.51	5.70	5.89	6.09	6.28	6.48
		65	4.22	4.41	4.60	4.78	4.96	5.14	5.31	5.49	5.66	5.84	6.02
		60	3.90	4.09	4.27	4.44	4.60	4.76	4.92	5.08	5.23	5.39	5.55
		50	3.38	3.54	3.70	3.85	3.99	4.13	4.26	4.38	4.51		
		40	2.94	3.10	3.24	3.37	3.49	3.60	3.71				

Note: Superheat 5K, Subcooling 10K

*Preliminary data

Q = Heating capacity (kW)

P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-10	-5	0	5	10	15	20	25	30	35	40
*ZW61KBE	Q	85			9.16	10.68	12.33	14.15	16.20	18.52	21.16	24.16	27.58
		80			9.40	10.95	12.66	14.57	16.73	19.20	22.01	25.21	28.86
		75			9.67	11.27	13.04	15.05	17.35	19.97	22.96	26.38	30.27
		70		8.49	9.97	11.62	13.48	15.60	18.03	20.82	24.01	27.66	31.81
		65	7.31	8.74	10.26	11.98	13.95	16.20	18.79	21.77	25.18	29.07	33.49
		60	7.59	8.99	10.56	12.35	14.42	16.80	19.55	22.71	26.34	30.48	35.18
		50	7.87	9.35	11.06	13.05	15.37	18.06	21.18	24.77	28.88		
		40	7.85	9.46	11.36	13.59	16.21	19.27	22.81				
	P	85			4.86	5.05	5.24	5.43	5.63	5.83	6.03	6.23	6.44
		80			4.52	4.70	4.87	5.05	5.23	5.41	5.60	5.78	5.98
		75			4.20	4.37	4.53	4.70	4.86	5.03	5.19	5.36	5.54
		70		3.74	3.90	4.06	4.21	4.36	4.51	4.66	4.82	4.97	5.13
		65	3.35	3.49	3.64	3.78	3.93	4.07	4.20	4.34	4.48	4.62	4.76
		60	3.09	3.23	3.38	3.51	3.64	3.77	3.89	4.02	4.14	4.27	4.39
		50	2.67	2.80	2.93	3.05	3.16	3.27	3.37	3.47	3.57		
		40	2.33	2.45	2.56	2.67	2.76	2.85	2.94				
*ZW72KBE	Q	85			10.90	12.71	14.68	16.85	19.29	22.05	25.19	28.77	32.83
		80			11.19	13.04	15.07	17.34	19.92	22.85	26.20	30.01	34.36
		75			11.52	13.41	15.53	17.92	20.65	23.77	27.33	31.41	36.04
		70		10.10	11.87	13.83	16.04	18.57	21.46	24.78	28.59	32.93	37.86
		65	8.59	10.40	12.22	14.27	16.60	19.28	22.37	25.91	29.97	34.61	39.87
		60	9.04	10.70	12.57	14.70	17.16	20.00	23.27	27.04	31.36	36.29	41.88
		50	9.37	11.13	13.17	15.53	18.29	21.50	25.22	29.49	34.39		
		40	9.35	11.26	13.52	16.18	19.30	22.94	27.16				
	P	85			5.96	6.20	6.44	6.67	6.91	7.15	7.40	7.65	7.92
		80			5.55	5.77	5.99	6.20	6.42	6.65	6.87	7.10	7.34
		75			5.16	5.36	5.56	5.77	5.97	6.17	6.38	6.59	6.80
		70		4.60	4.79	4.98	5.17	5.36	5.54	5.73	5.91	6.11	6.30
		65	4.10	4.29	4.47	4.65	4.82	4.99	5.16	5.33	5.50	5.67	5.85
		60	3.79	3.97	4.15	4.31	4.47	4.63	4.78	4.93	5.09	5.24	5.40
		50	3.28	3.44	3.60	3.74	3.88	4.01	4.14	4.26	4.38		
		40	2.86	3.01	3.15	3.27	3.39	3.50	3.60				
*ZW79KBE	Q	85			11.68	13.62	15.73	18.06	20.67	23.63	27.00	30.83	35.19
		80			11.99	13.97	16.15	18.59	21.35	24.49	28.08	32.17	36.82
		75			12.34	14.37	16.64	19.21	22.13	25.47	29.29	33.66	38.62
		70		10.83	12.72	14.82	17.19	19.90	23.00	26.56	30.63	35.29	40.58
		65	9.20	11.15	13.09	15.29	17.79	20.67	23.97	27.77	32.12	37.09	42.73
		60	9.69	11.47	13.47	15.76	18.39	21.43	24.94	28.98	33.61	38.89	44.88
		50	10.05	11.93	14.11	16.65	19.61	23.04	27.02	31.61	36.85		
		40	10.02	12.07	14.49	17.34	20.69	24.59	29.10				
	P	85			6.14	6.38	6.62	6.87	7.11	7.36	7.62	7.88	8.15
		80			5.71	5.93	6.16	6.39	6.61	6.84	7.07	7.31	7.55
		75			5.31	5.52	5.73	5.93	6.14	6.35	6.56	6.78	7.00
		70		4.73	4.93	5.13	5.32	5.51	5.70	5.89	6.09	6.28	6.48
		65	4.22	4.41	4.60	4.78	4.96	5.14	5.31	5.49	5.66	5.84	6.02
		60	3.90	4.09	4.27	4.44	4.60	4.76	4.92	5.08	5.23	5.39	5.55
		50	3.38	3.54	3.70	3.85	3.99	4.13	4.26	4.38	4.51		
		40	2.94	3.10	3.24	3.37	3.49	3.60	3.71				

Note: Superheat 5K, Subcooling 10K
*Preliminary data

Q = Heating capacity (kW)
P = Input power (kW) Three phase

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C									
			-10	-5	0	5	10	15	20	25	30	35	40
*ZW125KBE	Q	85			18.17	21.19	24.46	28.08	32.15	36.75	41.98	47.94	54.72
		80			18.65	21.73	25.11	28.91	33.20	38.09	43.66	50.02	57.26
		75			19.19	22.35	25.88	29.87	34.42	39.61	45.56	52.34	60.06
		70		16.84	19.78	23.05	26.74	30.95	35.77	41.31	47.64	54.88	63.11
		65	14.31	17.34	20.36	23.78	27.67	32.14	37.28	43.19	49.95	57.68	66.45
		60	15.07	17.84	20.95	24.51	28.60	33.33	38.79	45.07	52.27	60.48	69.79
		50	15.62	18.55	21.94	25.89	30.49	35.84	42.03	49.15	57.31		
		40	15.58	18.77	22.53	26.97	32.17	38.24	45.26				
	P	85			9.14	9.50	9.87	10.23	10.60	10.97	11.35	11.73	12.13
		80			8.50	8.84	9.18	9.51	9.85	10.19	10.54	10.89	11.25
		75			7.90	8.22	8.53	8.84	9.15	9.46	9.78	10.10	10.43
		70		7.05	7.35	7.64	7.93	8.21	8.50	8.78	9.07	9.36	9.66
		65	6.29	6.57	6.85	7.12	7.39	7.65	7.91	8.17	8.43	8.69	8.96
		60	5.81	6.09	6.35	6.61	6.85	7.09	7.33	7.56	7.80	8.03	8.27
		50	5.03	5.28	5.51	5.74	5.95	6.15	6.34	6.53	6.72		
		40	4.38	4.61	4.82	5.02	5.20	5.37	5.53				
*ZW150KBE	Q	85			21.86	25.50	29.44	33.80	38.69	44.23	50.52	57.70	65.86
		80			22.44	26.15	30.22	34.79	39.95	45.83	52.55	60.20	68.91
		75			23.10	26.90	31.15	35.95	41.42	47.67	54.83	62.99	72.28
		70		20.26	23.80	27.73	32.18	37.25	43.05	49.71	57.34	66.04	75.95
		65	17.22	20.86	24.51	28.61	33.30	38.68	44.87	51.97	60.12	69.41	79.97
		60	18.14	21.46	25.21	29.49	34.42	40.11	46.68	54.24	62.90	72.78	83.99
		50	18.80	22.33	26.41	31.16	36.69	43.13	50.58	59.15	68.97		
		40	18.75	22.58	27.12	32.46	38.72	46.02	54.47				
	P	85			11.01	11.45	11.89	12.32	12.77	13.21	13.67	14.14	14.62
		80			10.24	10.65	11.05	11.46	11.87	12.28	12.69	13.12	13.56
		75			9.52	9.90	10.28	10.65	11.02	11.40	11.78	12.17	12.56
		70		8.49	8.85	9.21	9.55	9.89	10.24	10.58	10.92	11.27	11.63
		65	7.57	7.91	8.25	8.58	8.90	9.22	9.53	9.84	10.16	10.47	10.80
		60	7.00	7.34	7.66	7.96	8.26	8.55	8.83	9.11	9.39	9.68	9.96
		50	6.06	6.36	6.64	6.91	7.16	7.41	7.64	7.87	8.09		
		40	5.28	5.56	5.81	6.04	6.26	6.47	6.66				

Note: Superheat 5K, Subcooling 10K
*Preliminary data

Q = Heating capacity (kW)
P = Input power (kW) Three phase

R134A 60 HZ

ZW KSE HEATING CAPACITY

380V

Model		Condensing temperature ˚C	Evaporating temperature ˚C					
			-10	-5	0	5	10	15
ZW72KSE	Q	75			17.92	20.21	22.62	25.07
		70			17.82	20.23	22.78	25.40
		65		15.52	17.76	20.28	22.96	25.73
		60	13.46	15.40	17.72	20.34	23.15	26.05
		55	13.31	15.30	17.69	20.39	23.31	26.36
		50	13.17	15.20	17.65	20.43	23.46	26.63
		40	12.87	14.94	17.49	20.41	23.62	27.01
		30	12.45	14.53	17.14	20.16	23.51	
	P	75			6.76	7.01	7.22	7.40
		70			6.15	6.37	6.57	6.74
		65		5.37	5.59	5.79	5.97	6.15
		60	4.69	4.88	5.07	5.25	5.43	5.61
		55	4.28	4.43	4.59	4.76	4.94	5.13
		50	3.89	4.01	4.16	4.32	4.50	4.71
		40	3.19	3.27	3.39	3.55	3.76	4.02
		30	2.56	2.62	2.74	2.93	3.19	

Note: Superheat 11K, Subcooling 8.3K
EVI Controls: DLT<115°C, Economizer superheat 6K
DLT>115°C, Adjust the injection volume to control discharge temperature ≤115°C

Q = Heating capacity (kW)
P = Input power (kW) Three phase

R134A

SPECIFICATIONS 50 HZ

ZW(D) KSE KAE

ZW Series			ZW79KSE	ZW79KAE	ZWD61KAE	ZWD72KAE	ZWD81KAE
Nominal power		HP	7	7	5	6	7
Motor type			TFP		TFD		
Displacement		m^3/hr	18.8	18.8	14.4	17.1	18.8
Refrigerant			R134a				
Heating capacity		kW	17.4	16.1	12.2	14.7	16.1
Input power		kW	4.3	4.0	3.0	3.7	4.0
Current		A	10.8	8.8	6.0	9.0	8.8
Mass flow		g/s	83.7	83.5	63.7	75.8	83.5
Locked rotor amps		A	90.5	100	64.0	70.0	100.0
Rated load current		A	14.6	12.1	10.0	10.0	12.1
Max continuous current		A	20.5	17.0	14.0	14.0	17.0
Max operating current		A	14.6	15.0	11.0	12.5	12.1
Oil charge	Initial	L	1.89	1.89	1.89	1.89	1.89
	Replacement refill	L	1.77	1.77	1.77	1.77	1.77
Net weight		kg	41	41	38	40	41

Conditions: ET 5 °C, CT 55 °C, Superheat 11K Subcooling 8.3K

ZW KBE

ZW Series			*ZW61KBE	*ZW72KBE	*ZW79KBE	*ZW125KBE	*ZW150KBE
Nominal power		HP	5	6	7	10	12
Motor type			TFP				
Displacement		m^3/hr	14.4	17.1	18.8	29.1	35.3
Refrigerant			R134a				
Heating capacity		kW	13.0	15.5	16.6	25.9	31.2
Input power		kW	4.5	5.6	5.7	8.5	10.3
Current		A	9.4	11.5	11.8	17.4	21.2
Mass flow		g/s	72.3	84.3	98	153.3	184.7
Locked rotor amps		A	64	74	100	133	157
Rated load current		A	11.5	11.9	12.7	23.1	25.5
Max continuous current		A	15.3	15.8	17.0	30.8	34.03
Max operating current		A	12.8	12.5	15.3	22.17	30.03
Oil charge	Initial	L	1.89	1.89	1.89	3.25	3.37
	Replacement refill	L	1.77	1.77	1.77	3.14	3.25
Net weight		kg	38	40	41	59.9	64.9

Conditions: ET 10°C, CT 75°C, Superheat 5K, Subcooling 10K
*Preliminary data

ZW KBE

ZW Series			*ZWD61KBE	*ZWD72KBE	*ZWD81KBE
Nominal power		HP	5	6	7
Motor type			TFP		
Displacement		m^3/hr	14.4	17.1	18.8
Refrigerant			R134a		
Heating capacity		kW	13.0	15.5	16.6
Input power		kW	4.5	5.6	5.7
Current		A	9.4	11.5	11.8
Mass flow		g/s	72.3	84.3	98
Locked rotor amps		A	64	74	100
Rated load current		A	11.5	11.9	12.7
Max continuous current		A	15.3	15.8	17.0
Max operating current		A	12.8	12.5	15.3
Oil charge	Initial	L	1.89	1.89	1.89
	Replacement refill	L	1.77	1.77	1.77
Net weight		kg	38	40	41

Conditions: ET 10°C, CT 75°C, Superheat 5K, Subcooling 10K
*Preliminary data

ZW KS(E)

ZW Series			ZW72KSE
Nominal power		HP	6
Motor type			TF7
Displacement		m^3/hr	20.6
Refrigerant			R134a
Heating capacity		kW	20.4
Input power		kW	4.8
Current		A	8.8
Mass flow		g/s	92.6
Locked rotor amps		A	94.3
Rated load current		A	12.5
Max continuous current		A	17.5
Max operating current		A	12.7
Oil charge	Initial	L	1.89
	Replacement refill	L	1.77
Net weight		kg	40

Conditions: ET 5°C, CT 55°C, Superheat 11K, Subcooling 8.3K

General information

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Notes

Notes

About Copeland

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