Copeland ZX outdoor refrigeration units with scroll compressors

Copeland compact outdoor refrigeration units are for medium-temperature and low-temperature applications.

With this range of outdoor refrigeration units, Copeland offers a solution for refrigeration applications with space and noise constraints which responds to the increasing demand for energy-efficient refrigeration solutions units.

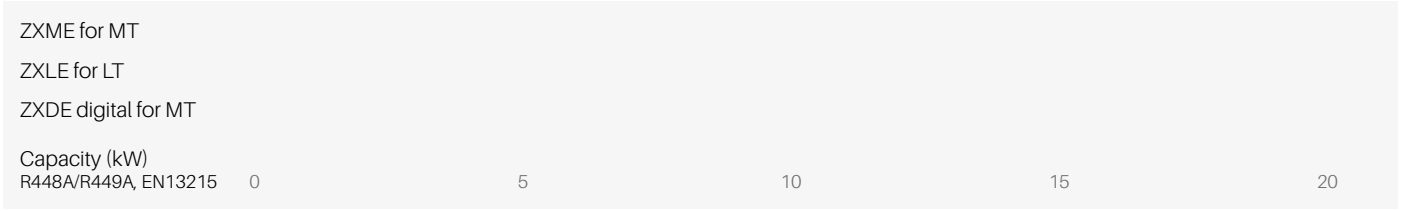
Copeland ZX outdoor refrigeration units feature the most complete and unique equipment. Their advanced electronic controller enables precise parameter control and displays the system status. Vapor injection and liquid injection technology significantly increase system efficiency and operation map. Electronic protection functions, oil separator and suction accumulator guarantee optimum system safety.

Lowest life cycle costs and comprehensive safety features make Copeland ZX a cost efficient and reliable choice for:
- Convenience stores
- Cold rooms
- Fast food stores, bars and restaurants
- Beverage coolers



Copeland ZX outdoor refrigeration units with scroll compressors

Copeland ZX line-up



Features and benefits

- Standard equipment: Copeland scroll compressor, crankcase heater, electronic controller, fan(s) with speed control, liquid receiver, safety switches, filter drier and sight glass, oil separator and suction accumulator (LT models only)
- Copeland ZX digital models allow for 10% to 100% continuous capacity modulation
- Diagnostic capabilities protect the unit from over-current, phase loss and phase imbalance
- LED display shows real time system status
- Precise electronic suction pressure control
- Energy and operation cost saving due to excellent energy efficiency
- Noise attenuation due to low speed fan motors with sickle blades, fan speed control and sound jacket
- High capacity vapor injection technology for LT models
- Space saving due to compact dimensions
- Easy and quick installation
- Multiple refrigerant approvals incl. R407A/F, R448A/R449A, R404A, R134a, R450A and R513A

Maximum allowable pressures (PS)

- Low Side PS 22.5 bar (g)
- High Side PS 28.8 bar (g)

Technical overview

Model	Displacement (m^3/h)	Receiver Capacity (l)	Number of fans	Total Fan Motor Power (W)	Suction Line Diameter (inch)	Liquid Line Diameter (inch)	Width/Depth/ Height (mm)	Net Weight (kg)	Motor Version/ Code		Maximum Operating Current (A)		Locked Rotor Current (A)		Sound Pressure
									1 Ph*	3 Ph**	1 Ph*	3 Ph**	1 Ph*	3 Ph**	@10m - d(BA)***
Medium Temperature Models															
ZXME-020E	5.9	4.1	1	116	3/4	1/2	446/1035/840	76	PFJ	TFD	13	5	58	26	39
ZXME-025E	6.8	4.1	1	116	3/4	1/2	446/1035/840	79	PFJ	TFD	12	5	61	38	40
ZXME-030E	8.6	4.1	1	116	3/4	1/2	446/1035/840	79	PFJ	TFD	16	7	82	40	40
ZXME-040E	11.4	4.1	1	116	3/4	1/2	446/1035/840	91	PFJ	TFD	24	10	114	49	40
ZXME-050E	17.1	5.9	2	246	7/8	1/2	447/1035/1244	108		TFD		13		66	41
ZXME-060E	18.8	5.9	2	246	7/8	1/2	447/1035/1244	112		TFD		13		74	41
ZXME-075E	11.9	5.9	2	246	7/8	1/2	447/1035/1244	118		TFD		14		101	42
Digital Medium Temperature Models															
ZXDE-030E	8.3	4.1	1	116	3/4	1/2	446/1035/840	79		TFD		7		40	40
ZXDE-040E	11.4	5.9	2	246	7/8	1/2	447/1035/1244	104		TFD		8		48	40
ZXDE-050E	14.4	5.9	2	246	7/8	1/2	447/1035/1244	108		TFD		11		64	41
ZXDE-060E	17.1	5.9	2	246	7/8	1/2	447/1035/1244	112		TFD		11		74	41
ZXDE-075E	18.8	5.9	2	246	7/8	1/2	447/1035/1244	118		TFD		14		100	42
Low Temperature Models															
ZXLE-020E	6.1	4.1	1	116	3/4	1/2	446/1035/840	79	PFJ	TFD	14	6	57	39	39
ZXLE-025E	7.1	4.1	1	116	3/4	1/2	446/1035/840	79	PFJ		16		74		39
ZXLE-030E	8.0	4.1	1	116	3/4	1/2	446/1035/840	81	PFJ	TFD	18	7	82	36	40
ZXLE-040E	12.7	4.1	1	116	7/8	1/2	446/1035/840	93		TFD		9		52	40
ZXLE-050E	14.4	5.9	2	246	7/8	1/2	447/1035/1244	106		TFD		12		52	41
ZXLE-060E	17.1	5.9	2	246	7/8	1/2	447/1035/1244	116		TFD		14		74	41
ZXLE-075E	18.8	5.9	2	246	7/8	1/2	447/1035/1244	121		TFD		15		101	41

* 1ph: 230V/ 50Hz
** 3 Ph: 380-420V/ 50Hz
*** @ 10m: sound pressure level at 10m distance from the compressor, free field condition

Capacity data

Ambient Temperature: 32°C															
R407A	Cooling Capacity (kW)							R407A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
ZXME-020E					3.48	4.13	5.60	ZXME-020E					1.67	1.68	1.73
ZXME-025E				2.78	4.02	4.78	6.67	ZXME-025E				1.52	1.66	1.74	1.93
ZXME-030E					4.92	5.93	8.30	ZXME-030E					2.27	2.38	2.57
ZXME-040E					6.26	7.51	10.30	ZXME-040E					3.24	3.39	3.77
ZXME-050E					8.65	10.35	14.40	ZXME-050E					3.73	3.90	4.26
ZXME-060E					9.75	11.75	16.35	ZXME-060E					4.33	4.53	4.99
ZXME-075E					11.25	13.55	18.85	ZXME-075E					4.85	5.07	5.59
Low Temperature Models															
ZXLE-020E		1.39	1.82	2.87	4.16	4.90	6.53	ZXLE-020E		1.41	1.48	1.62	1.76	1.84	1.99
ZXLE-025E**		1.63	2.13	3.36	4.91	5.79	7.77	ZXLE-025E**		1.63	1.73	1.89	2.03	2.10	2.24
ZXLE-030E		1.98	2.51	3.81	5.51	6.52	8.88	ZXLE-030E		1.82	1.93	2.11	2.28	2.36	2.55
ZXLE-040E		3.04	3.83	5.67	7.87	9.08		ZXLE-040E		2.76	2.97	3.43	3.95	4.25	
ZXLE-050E		3.50	4.42	6.63	9.37	10.90	14.35	ZXLE-050E		3.08	3.27	3.69	4.15	4.41	5.01
ZXLE-060E		4.16	5.18	7.64	10.70	12.45	16.40	ZXLE-060E		4.01	4.29	4.87	5.54	5.93	6.88
ZXLE-075E		4.68	5.86	8.75	12.45	14.65	19.75	ZXLE-075E		4.18	4.43	4.92	5.46	5.77	6.52
Digital Medium Temperature Models															
ZXDE-030E					5.08	5.98	7.95	ZXDE-030E					2.13	2.23	2.41
ZXDE-040E				4.72	7.28	8.84	12.50	ZXDE-040E				2.70	2.84	2.93	3.13
ZXDE-050E				5.83	8.65	10.35	14.40	ZXDE-050E				3.47	3.73	3.90	4.26
ZXDE-060E				6.38	9.75	11.75	16.35	ZXDE-060E				4.03	4.33	4.53	4.99
ZXDE-075E				7.35	11.25	13.55	18.85	ZXDE-075E				4.51	4.85	5.07	5.59

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
** Single Phase Only
Preliminary Data

For detailed capacity data please refer to Copeland Select software

Capacity data

Ambient Temperature: 32°C															
R407F	Cooling Capacity (kW)							R407F	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
ZXME-020E					3.37	4.05	5.68	ZXME-020E					1.62	1.65	1.74
ZXME-025E				2.91	4.20	4.99	6.95	ZXME-025E				1.60	1.75	1.84	2.05
ZXME-030E					4.92	5.93	8.29	ZXME-030E					2.27	2.38	2.57
ZXME-040E					6.52*	7.95	10.85	ZXME-040E					3.33*	3.54	3.99
ZXME-050E				5.68*	8.64	10.35	14.40	ZXME-050E				3.46*	3.73	3.90	4.26
ZXME-060E				6.17*	9.74	11.75	16.35	ZXME-060E				4.01*	4.33	4.53	4.99
ZXME-075E				7.14*	11.20	13.55	18.85	ZXME-075E				4.49*	4.85	5.07	5.59
Low Temperature Models															
ZXLE-020E		1.46	1.91	3.01	4.36	5.12	6.81	ZXLE-020E		1.48	1.56	1.71	1.88	1.96	2.14
ZXLE-025E**		1.71	2.23	3.52	5.14	6.06	8.11	ZXLE-025E**		1.72	1.83	2.01	2.16	2.24	2.40
ZXLE-030E		2.08	2.64	4.00	5.76	6.81	9.26	ZXLE-030E		1.93	2.04	2.24	2.43	2.53	2.74
ZXLE-040E		3.19	4.00	5.92	8.17	9.40		ZXLE-040E		2.93	3.16	3.67	4.26	4.59	
ZXLE-050E		3.67	4.63	6.94	9.77	11.35	14.90	ZXLE-050E		3.25	3.47	3.92	4.43	4.72	5.39
ZXLE-060E		4.35	5.42	7.97	11.15	12.95		ZXLE-060E		4.24	4.55	5.19	5.94	6.38	
ZXLE-075E		4.91	6.14	9.16	13.00	15.30	20.50	ZXLE-075E		4.41	4.68	5.22	5.82	6.17	7.00
Digital Medium Temperature Models															
ZXDE-030E					4.94	5.97	8.29	ZXDE-030E					2.27	2.37	2.58
ZXDE-040E				4.67	7.20	8.75	12.40	ZXDE-040E				2.77	2.92	3.01	3.22
ZXDE-050E				5.65	8.64	10.45	14.55	ZXDE-050E				3.65	3.93	4.11	4.51
ZXDE-060E				5.85	8.96	10.85	15.10	ZXDE-060E				3.94	4.22	4.40	4.82
ZXDE-075E				6.65	10.20	12.30	17.20	ZXDE-075E				4.29	4.59	4.78	5.24

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
* Conditions: EN13215: Suction Superheat 10K
** Single Phase Only
Preliminary Data

For detailed capacity data please refer to Copeland Select software

Capacity data

Ambient Temperature: 32°C															
R448A/ R449A	Cooling Capacity (kW) Evaporating Temperature (°C)							R448A/ R449A	Power Input (kW) Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
ZXME-020E				2.22	3.42	4.14	5.82	ZXME-020E				1.56	1.58	1.62	1.75
ZXME-025E				2.61	3.83	4.61	6.66	ZXME-025E				1.50	1.64	1.71	1.92
ZXME-030E				3.36	5.05	6.06	8.42	ZXME-030E				2.12	2.28	2.37	2.58
ZXME-040E				4.34	6.58	7.82	10.70	ZXME-040E				3.02	3.29	3.45	3.86
ZXME-050E				5.75	8.77	10.50	14.60	ZXME-050E				3.58	3.79	3.92	4.27
ZXME-060E				6.62	10.05	12.00	16.65	ZXME-060E				4.12	4.41	4.58	5.03
ZXME-075E				7.60	11.55	13.85	19.15	ZXME-075E				4.74	5.07	5.27	5.79
Low Temperature Models															
ZXLE-020E		1.45	1.91	3.05	4.46	5.27	7.08	ZXLE-020E		1.38	1.48	1.64	1.77	1.82	1.91
ZXLE-025E**		1.71	2.25	3.59	5.26	6.23	8.38	ZXLE-025E**		1.60	1.72	1.90	2.02	2.07	2.16
ZXLE-030E		2.06	2.59	3.93	5.71	6.80	9.37	ZXLE-030E		1.74	1.85	2.02	2.17	2.23	2.37
ZXLE-040E		3.16	3.97	5.92	8.31	9.66		ZXLE-040E		2.61	2.85	3.30	3.72	3.93	
ZXLE-050E		3.62	4.57	6.89	9.81	11.50	15.20	ZXLE-050E		2.94	3.18	3.61	4.00	4.18	4.56
ZXLE-060E		4.56	5.69	8.43	11.90	13.85		ZXLE-060E		3.70	4.04	4.70	5.33	5.64	
ZXLE-075E		5.11	6.40	9.61	13.75	16.20	21.90	ZXLE-075E		3.85	4.18	4.77	5.31	5.59	6.16
Digital Medium Temperature Models															
ZXDE-030E				3.43	5.13	6.14	8.47	ZXDE-030E				1.90	2.21	2.38	2.79
ZXDE-040E				4.75	7.21	8.69	12.25	ZXDE-040E				2.48	2.72	2.82	3.07
ZXDE-050E				5.83	8.65	10.35	14.40	ZXDE-050E				3.22	3.67	3.91	4.43
ZXDE-060E				6.82	10.10	12.00	16.60	ZXDE-060E				3.88	4.46	4.78	5.47
ZXDE-075E				7.70	11.40	13.60	18.80	ZXDE-075E				4.22	4.83	5.14	5.83

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
** Single Phase Only
Preliminary Data

For detailed capacity data please refer to Copeland Select software

Capacity data

Ambient Temperature: 32°C															
R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
ZXME-020E				2.44	3.58	4.24	5.70	ZXME-020E				1.75	1.77	1.77	1.82
ZXME-025E				2.94	4.24	5.01	6.80	ZXME-025E				1.72	1.88	1.95	2.04
ZXME-030E				3.69	5.24	6.15	8.19	ZXME-030E				2.38	2.50	2.57	2.72
ZXME-040E				4.94	6.99	8.16	10.80	ZXME-040E				3.21	3.41	3.52	3.75
ZXME-050E				6.39	9.12	10.70	14.35	ZXME-050E				3.96	4.15	4.26	4.49
ZXME-060E				7.34	10.40	12.20	16.20	ZXME-060E				4.57	4.83	4.97	5.28
ZXME-075E				8.37	11.90	13.90	18.50	ZXME-075E				5.11	5.40	5.55	5.89
Low Temperature Models															
ZXLE-020E		1.79	2.30	3.51	4.93	5.71	7.33	ZXLE-020E		1.68	1.78	1.97	2.14	2.21	2.35
ZXLE-025E**		2.11	2.70	4.13	5.83	6.76	8.71	ZXLE-025E**		1.93	2.05	2.25	2.43	2.51	2.66
ZXLE-030E		2.55	3.13	4.53	6.30	7.34	9.73	ZXLE-030E		2.12	2.21	2.41	2.61	2.71	2.94
ZXLE-040E		3.96	4.86	6.95	9.40	10.75	13.50	ZXLE-040E		3.09	3.30	3.75	4.25	4.52	5.07
ZXLE-050E		4.50	5.51	7.92	10.75	12.30	15.60	ZXLE-050E		3.57	3.79	4.27	4.80	5.08	5.67
ZXLE-060E		5.65	6.85	9.60	12.85	14.60	18.45	ZXLE-060E		4.55	4.88	5.56	6.35	6.81	7.96
ZXLE-075E		6.35	7.75	11.05	15.05	17.35	22.50	ZXLE-075E		4.74	5.05	5.68	6.36	6.74	7.68
Digital Medium Temperature Models															
ZXDE-030E				3.67	5.27	6.19	8.21	ZXDE-030E				2.07	2.29	2.40	2.61
ZXDE-040E				5.29	7.58	8.94	12.15	ZXDE-040E				2.73	2.96	3.06	3.28
ZXDE-050E				6.36	9.03	10.60	14.10	ZXDE-050E				3.58	4.02	4.25	4.70
ZXDE-060E				7.42	10.45	12.20	16.05	ZXDE-060E				4.31	4.88	5.18	5.77
ZXDE-075E				8.39	11.80	13.80	18.25	ZXDE-075E				4.69	5.31	5.62	6.26

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
** Single Phase Only
Preliminary Data

For detailed capacity data please refer to Copeland Select software

Ambient Temperature: 32°C															
R134a	Cooling Capacity (kW)							R134a	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
ZXME-020E				1.42	2.25	2.77	4.04	ZXME-020E				0.97	1.01	1.03	1.10
ZXME-025E				1.71	2.65	3.23	4.65	ZXME-025E				1.01	1.12	1.17	1.27
ZXME-030E				2.06	3.24	3.99	5.81	ZXME-030E				1.33	1.39	1.43	1.53
ZXME-040E				2.78	4.36	5.35	7.76	ZXME-040E				1.74	1.83	1.89	2.04
ZXME-050E				3.38	5.49	6.77	9.87	ZXME-050E				2.15	2.29	2.36	2.51
ZXME-060E				4.20	6.51	8.03	11.70	ZXME-060E				2.51	2.65	2.74	2.95
ZXME-075E				4.76	7.46	9.13	13.15	ZXME-075E				3.06	3.19	3.31	3.57
Digital Medium Temperature Models															
ZXDE-030E				2.16	3.33	4.02	5.70	ZXDE-030E				1.27	1.43	1.51	1.70
ZXDE-040E					4.29	5.34	7.97	ZXDE-040E					1.82	1.86	1.95
ZXDE-050E					5.26	6.53	9.68	ZXDE-050E					2.31	2.38	2.53
ZXDE-060E					6.34	7.88	11.65	ZXDE-060E					2.72	2.81	3.03
ZXDE-075E					7.21	8.82	12.70	ZXDE-075E					2.96	3.04	3.26

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
** Single Phase Only
Preliminary Data

For detailed capacity data please refer to Copeland Select software