Copeland Scroll™ compressors for R410A refrigerant

Copeland Scroll compressors are perfectly suitable for split systems, rooftops, packaged units and chiller applications. These compressors offer an advantage of fewer moving parts with scroll sets wearing in. Both axial and radial compliance allows the scroll compressor to be more tolerant of liquid refrigerant and debris thus enhancing reliability. Furthermore, Emerson's well established expertise in multiple compressors provides a unique advantage and an assured benefit for the manufacturing of large capacity systems (air cooled and water cooled chillers).

The broad range of products goes from ZP14 (1.2HP) to ZP725 (60HP) in single compressor applications and to 180 HP in Tandem/Trio applications.

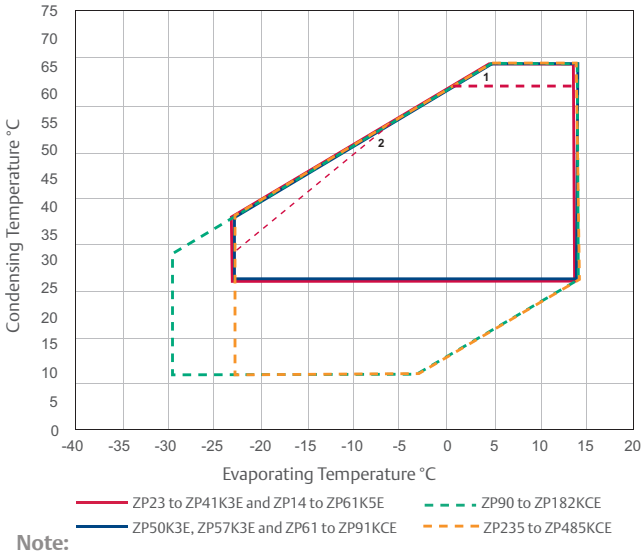
Features and benefits

- Copeland qualified tandem and trio configurations for superior seasonal efficiency
- Copeland Scroll axial and radial compliance for superior reliability and efficiency
- Low Total Equivalent Warming Impact
- Wide scroll line-up in R410A
- Low sound and vibration level
- Low oil circulation rate
- Extended 5K suction superheat operating envelope suitable for heat pump applications - contact Application Engineering for more information

Maximum allowable pressure (PS)

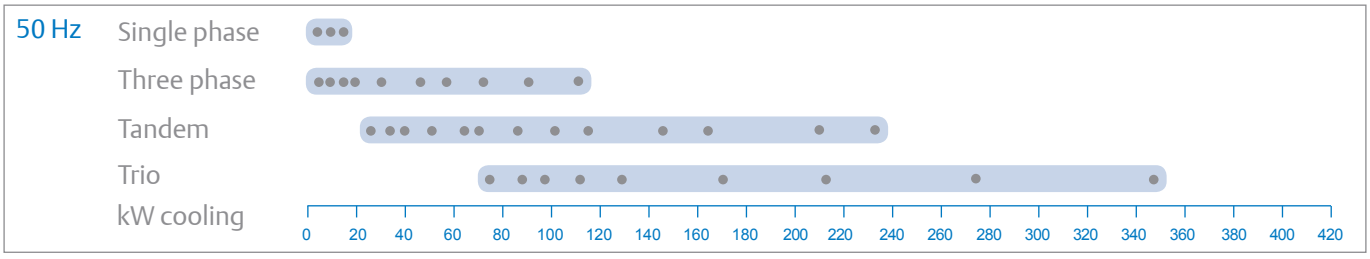
- ZP14 to ZP91: Low Side PS 28 bar(g) / High Side PS 43 bar(g)
- ZP90 to ZP725: Low Side PS 29.5 bar(g) / High Side PS 45 bar(g)

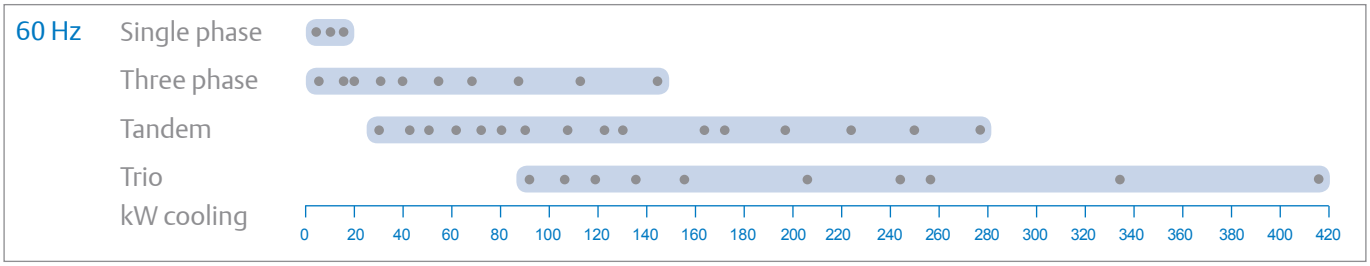
Operating envelopes



Note:
Dashed red line 1 indicates 63°C condensing limit For ZP51 to ZP61K5E - PFV
Dashed red line 2 indicates the limit of operation with constant return gas temperature of 35°C

Compressor line-up







Technical overview

220-240V ; 50Hz , 1 Phase

Model		Nominal HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (cc/ Rev.)	Oil quantity (l)	Net weight (kg)	LRA (A)	Sound power (dBA)
			(W)	(Btu/h)									
ZP20KSE	PFZ	1.7	4,800	16,300	1,750	8.1	2.73	9.3	19.3	0.74	21.7	52	66
ZJ22KHE	PFZ	2.0	5,400	18,400	2,000	8.4	2.99	10.2	20.7	0.77	20.0	53	66
ZP23K3E	PFZ	1.9	5,700	19,400	2,050	9.5	2.78	9.5	23.2	1.12	28.6	61	65
ZP24KSE	PFZ	2.0	5,750	19,600	2,000	9.3	2.87	9.8	22.8	0.74	21.9	60	66
ZP25KSE	PFZ	2.1	5,950	20,300	2,110	9.8	2.81	9.6	23.9	0.74	22.0	60	66
ZJ25KHE	PFZ	2.1	6,007	20,500	2,010	9.5	2.99	10.2	23.3	0.77	20.0	60	66
ZP26K3E	PFZ	2.2	6,050	20,700	2,300	11.0	2.64	9.0	25.2	1.12	28.9	74	65
ZJ27KHE	PFZ	2.5	6,563	22,400	2,180	10.3	3.01	10.3	25.8	0.77	20.0	60	66
ZP29KSE	PFZ	2.4	6,900	23,500	2,400	11.0	2.87	9.8	27.5	0.74	22.8	67	66
ZP31KSE	PFZ	2.6	7,350	25,100	2,550	11.8	2.89	9.9	29.5	0.74	22.8	67	66
ZP31KHE	PFZ	2.6	7,350	25,100	2,500	11.9	2.93	10.0	0.0	0.86	22.5	67	66
ZP32K3E	PFJ	2.7	7,550	25,700	2,860	13.2	2.64	9.0	30.7	1.24	31.3	82	67
ZP36KSE	PFZ	3.0	8,800	30,000	2,940	14.1	2.99	10.2	34.4	1.24	29.4	98	68
ZP36KHE	PFZ	3	8800	30000	2940	14	2.99	10.2	34.4	1.24	32.4	98	68
ZJ36KHE	PFZ	3.0	8,800	30,000	2,910	13.9	3.05	10.4	34.6	1.24	30.4	102	68
ZP39KSE	PFZ	3.3	9,200	31,400	3,140	14.5	2.93	10.0	36.9	1.24	33.1	98	68
ZP39KHE	PFZ	3.3	9,210	31,400	3,140	14.5	2.93	10.0	41.8	1.24	33.1	98	68
ZP41K3E	PFZ	3.4	9,850	33,600	3,510	17.2	2.80	9.6	39.3	1.24	29.5	114	67
ZP41K3E	PFZ	3.4	9,850	33,600	3,510	17	2.8	9.6	39.3	1.24	29.5	114	67
ZP42KSE	PFZ	3.5	10,200	34,800	3,480	16.7	2.93	10.0	39.8	1.24	33.1	128	68
ZP44KHE	PFZ	3.8	10,760	36,700	3,620	16.8	2.99	10.2	42.0	1.24	32.7	119	71
ZP50K3E	PFZ PFJ	4.2	12,500	42,600	4,100	19.5	3.05	10.4	48.2	1.66	44.0	136	62
ZP51KSE	PFZ	4.3	12,150	41,500	4,050	19.8	3.00	10.3	48.2	1.24	34.4	126	68
ZP54KSE	PFZ	4.5	13,050	44,500	4,320	20.9	3.02	10.3	51.1	1.24	34.4	116	70
ZP57K3E	PFJ	4.8	13,950	47,600	4,700	24.0	2.96	10.1	54.3	1.66	41.7	153	72
ZP61KCE	PFZ	5.1	14,800	50,500	4,950	23.3	2.99	10.2	58.1	1.77	40.3	147	72
ZP67KCE	PFZ	5.6	16,100	55,000	5,450	25.7	2.96	10.1	63.0	1.77	39.9	155	72

208-230V ; 60Hz , 1 Phase

Model		Nominal HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (cc/ Rev.)	Oil quantity (l)	Net weight (kg)	LRA (A)	Sound power (dBA)
			(W)	(Btu/h)									
ZP14K5E	PFV	1.2	4300	14650	1580	7	2.73	9.3	14.3	0.74	22.5	46.0	55.0
ZP16K5E	PFV	1.3	4550	15500	1660	7.3	2.73	9.3	15.1	0.74	21.5	48.0	55.0
ZJ17KHE	PFB	1.7	4922.4	16800	1647	7.4	2.9886	10.2	16.1	0.8	20.0	67	66
ZP20K5E	PFV	1.7	5850	20000	204	9.1	2.87	9.8	19.3	0.74	21.5	58.3	55.0
ZJ22KHE	PFB	2	6446	22000	2141	9.4	3.01	10.3	20.7	0.8	20.0	82	66
ZJ25KHE	PFB	2.1	7325	25000	2378	10.9	3.08	10.5	23.3	0.8	20.0	82	66
ZP25K5E	PFV	2.1	7400	25200	2520	11.1	2.93	10	23.9	0.74	22.0	73.0	55.0

Note:
All values as per AHRI standards: Evaporating temp. : 7.2°C , Condensing temp. : 54.4°C , Subcooling : 8.3K , Superheat : 11.1K , Ambient temp. : 35°C

208-230V ; 60Hz , 1 Phase (continuation)

Model	Nominal HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (cc/ Rev.)	Oil quantity (l)	Net weight (kg)	LRA (A)	Sound power (dBA)
		(W)	(Btu/h)									
ZJ27KHE PFB	2.25	7911	27000	2569	11.6	3.08	10.5	25.8	0.8	20.0	80	66
ZP29K5E PFV	2.4	8500	29000	2870	12.7	2.96	10.1	27.5	0.74	22.5	77.0	57
ZP31K5E PFV	2.6	9100	31100	3070	13.5	2.96	10.1	29.5	0.74	22.5	79.0	57
ZP31KHE PFB	2.6	9112.3	31100	3078	13.5	2.96	10.1	29.6	0.9	22.5	77	68
ZP32K3E PFJ	2.7	7550	25700	2860	13.2	2.64	9	30.7	1.2	31.3	82	67
ZP34K5E PFV	2.8	10100	34500	3380	15.6	2.99	10.2	32.8	1.24	32.3	112	57
ZP34KHE PFB	2.8	10109	34500	3370	15.6	3	10.2	32.9	1.2	32.3	112	68
ZP35KHE PFB	2.8	10109	34500	3320	15.3	3.05	10.4	32.8	1.2	34.8	112	68
ZJ36KHE PFB	3	10548	36000	3392	15.2	3.11	10.6	42.1	1.2	30.4	112	68
ZP36K5E PFV	3.0	10550	36000	3540	16.4	2.99	10.2	34.4	1.24	32.3	112	57
ZP39K5E PFV	3.3	11450	39000	3790	17.5	3.02	10.3	36.9	1.24	32.8	109	57
ZJ39KHE* PFB	3.3	11427	39000	3190	14.2	3.11	10.6	36.9	1.24	30.4	112	68
ZP42K5E PFV	3.5	12300	42000	4,070	18.4	3.02	10.3	39.8	1.24	33.1	117	68
ZJ42KHE* PFB	3.5	12310	42000	3990	15.6	3.14	10.7	39.8	1.24	30.4	112	68
ZJ44KHE* PFB	3.7	13200	45100	4160	18.6	3.2	10.8	42.0	1.24	30.4	128	68
ZP44K5E PFV	3.7	13000	44,400	4270	19.3	3.05	10.4	42	1.24	33.5	135	68
ZP49K5E PFV	4.1	14500	49400	4690	21.2	3.09	10.6	46.4	1.24	34.4	134	68
ZP49KHE PFB	4.1	14560	49700	4730	21.3	3.08	10.5	46.5	1.2	34.3	134	68
ZP51K5E PFV	4.3	14950	51,000	4860	21.8	3.08	10.5	48.2	1.24	34.4	134	68
ZJ51KHE PFB	4	14100	51000	4570	21.6	3.16	10.8	48.3	1.2	30.3	138	68
ZP57K5E PFV	4.8	16700	57,000	5460	25.5	3.05	10.4	53.5	1.24	34.3	178	68
ZP61K5E PFV	5.1	18000	61,500	5860	27.2	3.08	10.5	57.2	1.24	35	178	68

380-420V ; 50Hz , 3 Phase

Model	Nominal HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (cc/ Rev.)	Oil quantity (l)	Net weight (kg)	LRA (A)	Sound power (dBA)
		(W)	(Btu/h)									
ZP24K5E TFD	2.0	5,700	19,400	2,020	3.6	2.81	9.6	22.8	0.74	21.3	28.0	55.0
ZP26K3E TFD	2.2	6,200	21,100	2,270	4.1	2.73	9.3	25.2	1.12	27.2	32.0	54.0
ZP29K5E TFD	2.4	6,800	23,200	2,420	4.4	2.81	9.6	27.5	0.74	21.8	38.0	55.0
ZP29KSE TFM	2.4	7,000	23,900	2,380	4.3	2.93	10.0	27.5	0.74	22.3	38.0	55.0
ZP31KSE TFM	2.6	7,350	25,000	2,580	4.6	2.84	9.7	29.5	0.74	22.3	38.0	55.0
ZP32K3E TFD	2.7	7,400	25,200	2,680	4.7	2.75	9.4	30.7	1.24	28.1	35.0	56.0
ZP34K5E TFD	2.8	8,200	28,000	2,830	5.2	2.90	9.9	32.8	1.24	28.9	46.0	57.0
ZP36K5E TFD	3.0	8,600	29,300	2,940	5.4	2.93	10.0	34.4	1.24	29.2	46.0	57.0
ZJ36KHE TFM	3	8790	30000	2854	5.3	3.08	10.5	34.6	1.24	30.4	55	71
ZP38K3E TFD	3.2	9,050	30,800	3,120	5.5	2.90	9.9	36.1	1.24	29.9	48.0	59.0
ZP39KHE TFM	3.2	9523	32500	3125	5.3	3.05	10.4	37.0	1.24	30.4	43	68
ZP41K3E TFD	3.4	9,800	33,500	3,380	6.0	2.90	9.9	39.3	1.24	29.5	48.0	56.0
ZJ42KHE TFM	3.5	10255	35000	3297	5.9	3.11	10.6	39.9	1.24	30.4	55	71
ZP44K5E TFD	3.7	10,700	36,500	3,540	6.1	3.02	10.3	42.0	1.24	30.9	52.0	57.0
ZP49K5E TFD	4.1	11,950	40,700	3,870	6.5	3.09	10.6	46.4	1.24	33	51.5	68
ZP49KHE TFM	4.1	11950	40700	3870	6.5	3.10	10.6	46.4	1.24	33.0	51.5	68
ZP50K3E TFD	4.2	12,400	42,300	4,100	7.3	3.02	10.3	48.2	1.9	39.5	64	58
ZJ51KHE TFM	4	12452.5	42500	3971	7.5	3.14	10.7	47.2	1.24	29.9	72	71
ZP51KSE TFM	4.3	12,150	41,500	4,040	7.0	3.02	10.3	48.2	1.24	33.0	51.5	57.0
ZP51KHE TFM	4.3	12050	41200	4000	7.0	3.01	10.3	48.2	1.24	32.4	51.5	68
ZJ54KHE TFM	4.5	13185	45000	4245	7.9	3.11	10.6	50.0	1.24	30.4	72	71
ZP57KHE TFM	4.7	12050	47000	4390	7.5	2.74	10.7	53.4	1.24	34.3	51.5	71
ZP61KCE TFD	5.1	14,650	50,000	4,750	8.3	3.11	10.6	58.1	1.66	40.3	64.0	60.0
ZP67KCE TFD	5.6	16,100	55,000	5,200	9.1	3.11	10.6	63.0	1.77	39.9	74.0	61.0
ZP72KCE TFD	6.0	17,100	58,500	5,700	9.8	3.02	10.3	67.1	1.77	39.9	75.0	61.0
ZP76KCE TFD	6.3	18,400	62,700	5,850	11.0	3.14	10.7	70.8	1.77	39.5	100.0	61.0
ZP83KCE TFD	6.9	19,900	68,000	6,400	11.7	3.11	10.6	77.2	1.77	39.5	101.0	61.0
ZP90KCE TFD	7.5	21,800	74,500	6,950	12.3	3.14	10.7	84.2	2.51	57.6	95.0	61.0
*ZP91KCE TFD	7.6	21,700	74,000	6,790	12.4	3.19	10.9	84.6	1.77	40.8	101.0	61.0
ZP103KCE TFD	8.6	25,200	86,000	7,800	14.4	3.22	11.0	96.4	3.25	61.2	111.0	63.0

Note:
[Δ]Preliminary data

380-420V ; 50Hz , 3 Phase (continuation)

Model		Nominal HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (cc/ Rev.)	Oil quantity (l)	Net weight (kg)	LRA (A)	Sound power (dBA)
			(W)	(Btu/h)									
*ZP104KCE	TFD	8.7	25,400	86,800	7,790	14.3	3.27	11.2	96.4	2.51	48.0	128.0	63.0
ZP120KCE	TFD	10.0	29,300	100,000	9,110	16.6	3.22	11.0	113.6	3.25	61.2	118.0	63.0
*ZP122KCE	TFD	10.2	29,600	101,000	9,060	16.6	3.27	11.2	112.3	2.51	48.8	139.0	63.0
ZP137KCE	TFD	11.4	32,500	111,000	10,200	18.3	3.19	10.9	127.2	3.25	62.1	118.0	66.0
ZP144KCE	TFD	12.0	35,500	120,000	10,800	19.1	3.30	11.2	134.6	3.25	60.8	144	75
ZP154KCE	TFD TWD	12.8	37,000	127,000	11,600	20.8	3.22	11.0	142.9	3.25	64.9	140.0	65.0 66.0
ZP182KCE	TFD TWD	15.2	44,000	150,000	13,500	26.3 25.7	3.25	11.1	167.2	3.25	66.2	174.0 173.0	66.0 68.0
ZP385KCE	TWD	32.1	92,500	316,000	28,500	48.1	3.25	11.1	349.4	6.30	176.9	310.0	74.0
ZP485KCE	TWD	40.4	117,000	400,000	36,100	60.3	3.25	11.1	444.5	6.30	200.0	408.0	78.0
^ZP725KCE	FED	60.0	180,000	615,000	54,800	93.5	3.29	11.2	550.0	6.30	250.0	567.0	79.0

460V / 200-230V / 380V / 208-230V ; 60Hz , 3 Phase

Model		Nominal HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (cc/ Rev.)	Oil quantity (l)	Net weight (kg)	LRA (A)	Sound power (dBA)
			(W)	(Btu/h)									
ZP20K3E	TFD	1.7	6,000	20,400	2,210	3.2	2.71	9.3	18.9	1.12	25.9	22.4	68
	TF5		5,900	20,200	2,220	6.6	2.67	9.1				55	
ZP24K5E	TFD	2.0	7,050	24,000	2,420	3.7	2.9	9.9	22.8	0.74	21.3	28	69
	TF5					7.3					21.2	58	
ZP26K5E	TFD	2.2	7,550	25,700	2,650	4	2.84	9.7	25.2	1.12	27.2	31	68
	TF5		7,450	25,500	2,630	8						63	
ZP31K5E	TFD	2.6	9,150	31,200	3,060	4.6	2.99	10.2	29.5	0.74	22	38	69
	TF5					9.1					21.8	73	
ZP32K3E	TFD	2.7	8,950	30,500	3,110	4.7	2.87	9.8	30.7	1.24	28.1	35	70
	TF5		9,300	31,800	3,250	9.4		9.8				77	
ZJ34KHE*	TF7	2.8	9,903	33800	3170	5.8	3.02	10.3	31.5	1.24	30.4	65	71
ZP36K5E	TFD	3	10,550	36,000	3,490	5.5	3.02	10.3	34.4	1.24	29.2	44	71
	TF5	3	10,550	36,000	3,490	10.8	3.0	10.8	34.4	1.24	28.9	88	71
	TF7	3.0	10,500	36,800	3,381	6.3	3.11	10.6	34.6	1.24	30.4	65	71
ZP39K5E	TF7	3.3	11,450	39,000	3,750	6.4	3.05	10.4	36.9	1.24	30.4	51.8	71
	TF7	3.3	11,430	39,000	3,750	6.75	3.05	10.4	37.0	1.24	30.4	51.8	71
ZP41K3E	TFD	3.4	11,950	40,700	3,950	6	3.02	10.3	39.3	1.24	29.5	46	70
	TF5		12,050	41,200	4,000	12						91	
ZP42K5E	TFD	3.5	12,300	41,900	4,060	5.5	3.02	10.3	39.8	1.24	30.4	41	71
	TF5		12,350	42,200	4,020	11.3	3.08	10.5				83.1	
ZJ42KHE*	TF7	3.5	12,306	42,000	3,890	7.3	3.05	10.4	39.8	1.24	30.4	65	71
ZP44K5E	TFD	3.7	13,050	44,500	4,220	6.2	3.09	10.6	42	1.24	30.9	55	71
	TF5		13,050	44,500	4,220	12.2		10.6			30.9	98	
	TF7		13,150	44,900	4,250	7.6		10.6			30.6	64	
ZJ44KHE	TF7	3.7	13,160	44,900	4,160	8	3.19	10.9	42.1	1.24	30.4	78	71
ZP49K5E	TFD	4.1	14,650	50,000	4,650	6.5	3.15	10.8	46.4	1.24	33	52	71
	TF5		14,550	49,700	4,650	13.4	3.14	10.7			33	110	
	TF7		14,350	48,900	4,500	8.3	3.20	10.9			30.4	78	
ZP51K5E	TFD	4.3	15,100	51,500	4,810	6.8	3.14	10.7	48.2	1.24	32.4	52	71
	TF5			51,500		13.8	3.14	10.7			32.5	110	
	TF7			51,600		8.3	3.15	10.8			32.9	66	
ZJ51KHE	TF7	4.0	15,090	51,500	4,680	8.5	3.24	11.0	47.2	1.24	30.4	78	71
ZP54K5E	TFD	4.5	15,900	54,300	5,070	7.2	3.14	10.7	51.1	1.24	32.4	52	71
	TF5		15,900	54,300	5,070	14.4	3.14	10.7			32.5	110	
	TF7		15,600	53,400	5,100	8.8	3.08	10.5			33	65.6	
ZJ54KHE	TF7	4.5	15,800	54,000	4,950	9.2	3.19	10.9	50.0	1.24	29.9	78	71
ZP57K5E	TF7	4.8	16,900	57,500	5,320	9.2	3.17	10.8	53.5	1.24	34.3	83	71
ZP61K5E	TF7	5.1	18,000	61,500	5,700	9.7	3.17	10.8	57.2	1.24	35	83	71
ZP61KCE	TFD	5.1	18,000	61,500	5,700	8.3	3.17	10.8	58.1	1.66	40.3	62	74
	TF5					16.8						123	
	TF7					10.5						78	

Note:
All values as per AHRI standards: Evaporating temp. : 7.2°C, Condensing temp. : 54.4°C , Subcooling : 8.3K, Superheat : 11.1K, Ambient temp. : 35°C
* New improved models

460V / 200-230V / 380V / 208-230V ; 60Hz , 3 Phase (continuation)

Model		Nominal HP	Capacity (W)	Capacity (Btu/h)	Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (cc/ Rev.)	Oil quantity (l)	Net weight (kg)	LRA (A)	Sound power (dBA)
ZP67KCE	TF7	5.6	19,800	67,500	6,260	11	3.17	10.8	63	1.66	44	88	75
ZP72KCE	TFD	6	21,100	72,000	6,750	9.7	3.14	10.7	67.1	1.77	39.9	75	75
	TF5		21,100	72,000	6,750	20.1	3.14	10.7			39.9	164	75
	TF7		20,800	71,000	6,850	11.5	3.05	10.4			40.9	73	74
ZP76KCE	TFD	6.3	22,600	77,000	7,060	11.1	3.19	10.9	70.8	1.77	39.5	100	75
	TF5					20.8						164	
	TF7					12.4						94.3	
ZP83KCE	TFD	7	24,300	83,000	7,650	11.8	3.17	10.8	77.2	1.77	39.5	100	75
	TF5		24,300	83,000	7,650	22					39.5	164	
	TF7		24,200	82,500	7,600	13					39.9	94.3	
ZP90KCE	TFD	7.5	26,500	90,500	8,370	13	3.17	10.8	84.2	2.51	57.6	95	77
	TF5				8,350	26.3					57.6	195	
	TF7				8,350	15.4					58.1	123	
ZP91KCE	TFD	7.5	26,500	90,500	8,230	12.6	3.22	11	84.6	1.77	40.8	100	75
	TF5					24.8						191	
	TF7					15.2						123	
ZP103KCE	TFD	8.5	31,000	105,000	9,550	14.3	3.22	11	96.4	3.25	61.2	114	77
	TF5		31,000	105,000		28.6	3.22	11			60.8	225	
	TF7		30,500	104,000		17.8	3.19	10.9			59.9	140	
ZP104KCE	TFD	8.5	31,000	106,000	9,380	14.4	3.31	11.3	96.4	2.51	48	130	77
	TF5					27.2						239	
	TF7					16						135	
ZP120KCE	TFD	10	36,000	123,000	11,100	16.4	3.25	11.1	113.6	3.25	61.2	125	79
	TF5					32.8					61.2	239	
	TF7					20.4					59.9	145	
ZP122KCE	TFD	10	36,500	124,000	11,000	16.9	3.31	11.3	112.3	2.51	48.8	140	77
	TF5					30.9						240	
	TF7					18.7						151.6	
ZP137KCE	TFD	11.5	39,500	135,000	12,300	18	3.22	11	127.2	3.25	62.1	125	80
	TF5		40,000	137,000	12,400	38	3.22	11			62.6	245	
	TF7		40,000	137,000	12,700	22.6	3.17	10.8			62.6	145	
ZP144KCE	TFD	12	43,000	144,000	13,000	19	3.30	11.2	134.6	3.25	60.8	137	80
ZP154KCE	TF5	13	45,500	155,000	14,000	21	3.25	11.1	142.9	3.25	64.9	150	80
	TF7					24.4						138	
	TWD					21						150	
ZP154KCE	TW5	13	45,500	155,000	14,000	42.8	3.25	11.1	142.9	3.25	66.2	300	80
	TW7					24.4					64.9	139	
ZP182KCE	TFD	15	53,500	183,000	16,300	26.3	3.28	11.2	167.2	3.25	66.2	179	80
	TWD					26.3						173	
ZP182KCE	TW5	15	53,500	183,000	16,300	52	3.28	11.2	167.2	3.25	66.2	340	82
	TW7					31.7						196	
ZP236KCE*	TE5	19.7	69170	236000	21300	64.3	3.25	11.1	217.1	4.5	127.1	538	87
	TE7	19.8	69760	238000	21500	37	3.25					290	
	TED	19.8	69760	238000	21500	30.7	3.25					229	
ZP296KCE*	TE5	24.8	87340	298000	26900	77	3.25	11.1	267.3	4.5	132.7	605	90
	TE7					46.3						380	
	TED					38.25						320	
ZP385KCE*	TWD	32	113,000	385,000	34,700	49.9	3.25	11.1	349.4	6.3	176.9	310	89
	TWC					99.8						599	
	TW7					60.4						358	
	TW5					99.8						599	
	TE5					99.8						599	
ZP385KCE*	TE7	32.1	112840	385000	34700	60.4	3.25	11.1	349.4	6.3	176.9	358	89
	TEC					99.8						599	
	TED					49.9						310	
ZP485KCE*	TE7	40.4	142150	485,000	43,600	75.65	3.25	11.1	444.4	6.3	190.1	564	93
	TED					62.4						408	
ZP725KCE*	FED	60	216,000	739,000	67,800	96	3.19	10.9	550	6.3	250	567	94

Note:
[Δ] Preliminary data
* IP rating 54

Copeland Scroll™ Ultratech compressors for R410A refrigerant

A greater level of comfort



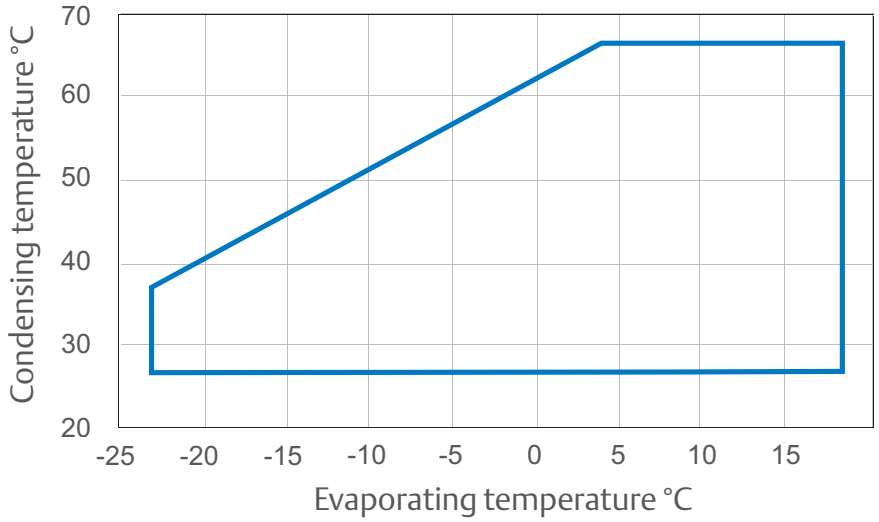
The next generation Copeland Scroll UltraTech compressor provides superior comfort with a revolutionary two-step capacity design. At part-load capacity, systems with Copeland Scroll UltraTech compressors run longer, to reduce humidity and allow precise temperature control by modulating capacity. This eliminates uneven cooling peaks and valleys and allows for steady cooling comfort.

Features and benefits

With the Copeland Scroll UltraTech compressor, two internal bypass ports enable the system to run at 67 percent part-load capacity, for enhanced efficiency and humidity control. This new, innovative design uses an internal pressure differential to actuate the modulation assembly significantly reducing the power required to modulate the valve. It also minimizes the expansion volume created during full-load operation which ultimately improves full-load performance by 1.5-5.5 percent. As a result, the next generation Copeland Scroll UltraTech compressor offers contractors a solution that not only provides better performance, but also provides a more reliable product due to the inherently simpler design.

- Enhanced humidity and temperature control with up to 5.5 percent increase in efficiency
- Two stages of capacity modulated by pressure differential that instantly shifts between full-load and part-load capacity
- Optimized for comfort and energy savings
- Significant reduction in VA load
- Improved sound

Operating envelope (ZPS49K5E-TFD (HFC-410A))



Technical overview

220-240V ; 50Hz ,1Phase

Model	Nominal power HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (in.^3/Rev)	Displacement (cc/ Rev.)	Oil charge (oz.)	Oil quantity (l)	Net weight (lbs.)	Net weight (kg)	LRA (A)	Sound power (dBA)
		(W)	(Btu/h)												
ZPS20K5E PFJ	1.7	4900	16400	1690	7.75	2.9	9.7	1.21	19.83	25	0.74	47.3	21.45	52.0	66
ZPS26K5E PFJ	2.2	6300	21200	2130	9.80	3.0	9.95	1.53	25.07	25	0.74	47.3	21.45	60.0	66
ZPS30K5E PFJ	2.5	7300	24900	2520	11.45	2.9	9.85	1.78	29.17	25	0.74	49.6	22.50	67.0	72
ZPS40K5E PFJ	3.3	10000	33800	3240	15.05	3.1	10.45	2.39	39.17	42	1.24	72.9	33.07	99.6	72
ZPS51K5E PFJ	4.3	12500	42600	4100	19.50	3.0	10.4	2.96	48.51	42	1.24	76.5	34.70	126.0	75

208-230V / 265V ; 60Hz ,1Phase

Model	Nominal power HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (in.^3/Rev)	Displacement (cc/ Rev.)	Oil charge (oz.)	Oil quantity (l)	Net weight (lbs.)	Net weight (kg)	LRA (A)	Sound power (dBA)
		(W)	(Btu/h)												
ZPS20K5E PFV	1.7	6000	20200	2040	9.00	2.9	9.9	1.21	19.83	25	0.74	47.3	21.45	58.3	66
ZPS21K5E PFV	1.8	6800	23100	2150	9.45	3.2	9.95	1.26	20.65	25	0.74	47.3	21.45	58.3	66
ZPS26K5E PFV	2.2	7800	26400	2580	11.35	3.0	10.2	1.53	25.07	25	0.74	47.3	21.45	73.0	66
ZPS30K5E PFV	2.5	9000	30600	2980	13.30	3.0	10.3	1.78	29.17	25	0.74	49.6	22.50	83.0	70
ZPS31K5E PFV	2.6	9300	31500	3060	13.60	3.0	10.3	1.84	30.15	25	0.74	49.6	22.50	83.0	68
ZPS35K5E PFV	2.9	10800	36800	3500	15.50	3.1	10.5	2.14	35.07	42	1.24	72.9	33.07	96.0	72
ZPS40K5E PFV	3.3	12100	41200	3980	18.75	3.0	10.35	2.39	39.17	42	1.24	72.9	33.07	104.0	70
ZPS49K5E PFV	4.1	14400	49100	4590	21.15	3.1	10.7	2.82	46.21	42	1.24	76.5	34.70	152.9	70
ZPS51K5E PFV	4.3	15300	52000	4860	22.15	3.1	10.7	2.96	48.51	42	1.24	76.5	34.70	152.9	70
ZPS60K5E PFV	5	17900	60900	5740	27.40	3.1	10.6	3.39	55.55	42	1.24	77.1	34.97	179.2	72
ZPS20K5E PFJ	1.7	6000	20400	2020	7.80	3.0	10.05	1.21	19.83	25	0.74	47.3	21.45	54.0	66
ZPS26K5E PFJ	2.2	7800	26500	2580	9.90	3.0	10.25	1.53	25.07	25	0.74	47.3	21.45	60.0	70
ZPS30K5E PFJ	2.5	9100	30900	2990	11.40	3.0	10.3	1.78	29.17	25	0.74	49.6	22.50	72.0	72
ZPS40K5E PFJ	3.3	12100	41200	3900	14.95	3.1	10.56	2.39	39.17	42	1.24	72.9	33.07	109.7	72
ZPS51K5E PFJ	4.3	15300	51900	4900	18.40	3.1	10.6	2.96	48.51	42	1.24	76.5	34.70	130.0	74

380-420V / 200/220V ; 50Hz , 3Phase

Model	Nominal power HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (in.^3/Rev)	Displacement (cc/ Rev.)	Oil charge (oz.)	Oil quantity (l)	Net weight (lbs.)	Net weight (kg)	LRA (A)	Sound power (dBA)
		(W)	(Btu/h)												
ZPS20K5E TFD	1.7	4800	16150	1735	3.10	2.8	9.3	1.21	19.83	25	0.74	47.3	21.45	27.0	66
ZPS20K5E TF5	1.7	4800	16150	1735	6.00	2.8	9.3	1.21	19.83	25	0.74	47.3	21.45	57.0	66
ZPS26K5E TFD	2.2	6200	21000	2160	3.80	2.9	9.7	1.53	25.07	25	0.74	47.3	21.45	28.0	66
ZPS26K5E TF5	2.2	6200	21100	2150	7.45	2.9	9.8	1.53	25.07	25	0.74	47.3	21.45	59.0	66
ZPS30K5E TFD	2.5	7300	24700	2490	4.50	2.9	9.9	1.78	29.17	25	0.74	49.6	22.50	38.0	72
ZPS30K5E TF5	2.5	7300	24900	2520	8.70	2.9	9.9	1.78	29.17	25	0.74	49.6	22.50	73.0	70
ZPS35K5E TFD	2.9	8800	30000	2940	4.80	3.0	10.2	2.14	35.07	42	1.24	63.8	28.94	46.0	72

Technical overview

380-420V / 200/220V ; 50Hz , 3Phase (continuation)

Model	Nominal power HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (in.^3/Rev)	Displacement (cc/ Rev.)	Oil charge (oz.)	Oil quantity (l)	Net weight (lbs.)	Net weight (kg)	LRA (A)	Sound power (dBA)
		(W)	(Btu/h)												
ZPS35K5E TF5	2.9	8900	30100	2940	10.85	3.0	10.2	2.14	35.07	42	1.24	63.8	28.94	95.0	72
ZPS40K5E TFD	3.3	9900	33600	3290	5.55	3.0	10.2	2.39	39.17	42	1.24	67	30.39	43.0	70
ZPS40K5E TF5	3.3	9900	33600	3220	10.55	3.1	10.45	2.39	39.17	42	1.24	67	30.39	80.7	72
ZPS49K5E TFD	4.1	12000	40700	3770	6.35	3.2	10.8	2.82	46.21	42	1.24	72.8	33.02	51.5	71
ZPS49K5E TF5	4.1	12000	40700	3770	13.20	3.2	10.8	2.82	46.21	42	1.24	72.8	33.02	110.0	71
ZPS51K5E TFD	4.3	12600	42700	4020	6.80	3.1	10.6	2.96	48.51	42	1.24	71.5	32.43	51.5	71
ZPS51K5E TF5	4.3	12600	42900	3970	13.50	3.2	10.8	2.96	48.51	42	1.24	71.5	32.43	110.0	71
ZPS60K5E TFD	5	14700	50100	4680	7.75	3.1	10.7	3.39	55.55	42	1.24	75.6	34.29	67.1	71
ZPS60K5E TF5	5	14700	50100	4680	15.45	3.1	10.7	3.39	55.55	42	1.24	75.6	34.29	146.0	71

460V / 200V/230V ; 60Hz , 3Phase

Model	Nominal power HP	Capacity		Input power (W)	Current (A)	COP (W/W)	EER (Btu/Wh)	Displacement (in.^3/Rev)	Displacement (cc/ Rev.)	Oil charge (oz.)	Oil quantity (l)	Net weight (lbs.)	Net weight (kg)	LRA (A)	Sound power (dBA)
		(W)	(Btu/h)												
ZPS20K5E TFD	1.7	6000	20200	2070	3.10	2.9	9.75	1.21	19.83	25	0.74	47.3	21.45	28.0	66
ZPS20K5E TF5	1.7	6000	20200	2060	6.10	2.9	9.8	1.21	19.83	25	0.74	47.3	21.45	55.4	68
ZPS26K5E TFD	2.2	7700	26100	2580	3.85	3.0	10.15	1.53	25.07	25	0.74	47.3	21.45	28.0	70
ZPS26K5E TF5	2.2	7700	26100	2540	7.45	3.0	10.3	1.53	25.07	25	0.74	47.3	21.45	58.0	66
ZPS30K5E TFD	2.5	9000	30600	2980	4.50	3.0	10.25	1.78	29.17	25	0.74	49.6	22.50	38.0	72
ZPS30K5E TF5	2.5	9000	30600	3000	8.90	3.0	10.2	1.78	29.17	25	0.74	49.6	22.50	73.0	70
ZPS35K5E TFD	2.9	10800	36800	3560	5.45	3.0	10.3	2.14	35.07	42	1.24	63.8	28.94	44.0	72
ZPS35K5E TF5	2.9	10900	36900	3500	10.75	3.1	10.55	2.14	35.07	42	1.24	63.8	28.94	88.0	72
ZPS40K5E TFD	3.3	12100	41200	3900	5.50	3.1	10.55	2.39	39.17	42	1.24	67	30.39	41.0	72
ZPS40K5E TF5	3.3	12100	41200	3920	11.00	3.1	10.55	2.39	39.17	42	1.24	67	30.39	83.1	72
ZPS49K5E TFD	4.1	14500	49300	4530	6.40	3.2	10.9	2.82	46.21	42	1.24	72.8	33.02	52.0	70
ZPS49K5E TF5	4.1	14500	49300	4530	13.35	3.2	10.9	2.82	46.21	42	1.24	72.8	33.02	110.0	72
ZPS51K5E TFD	4.3	15300	52100	4790	6.75	3.2	10.9	2.96	48.51	42	1.24	71.5	32.43	52.0	72
ZPS51K5E TF5	4.3	15300	52100	4790	13.85	3.2	10.9	2.96	48.51	42	1.24	71.5	32.43	110.0	72
ZPS60K5E TFD	5	17900	60900	5690	8.05	3.1	10.7	3.39	55.55	42	1.24	75.6	34.29	66.1	72
ZPS60K5E TF5	5	17900	61000	5660	16.05	3.2	10.8	3.39	55.55	42	1.24	75.6	34.29	136.0	72

Copeland Scroll™ multiples

Step modulation

One form of stepped modulation technology applied in some air conditioning applications is an approach that utilizes multiple compressors connected with a manifold, commonly referred to as tandems. Similar to other modulation approaches, tandems offer improved part-load efficiencies, including Integrated Energy Efficiency Ratio (IEER) and Integrated Part Load Value (IPLV), while maximizing full-load efficiency. A user also has the option to 'tandemize' other modulating compressors with a fixed capacity scroll compressor. This combination offers a very simple solution to deliver continuous capacity modulation while providing exceptional part-load efficiencies, such as Integrated Part Load Value (IPLV).

When Emerson first pioneered the use of scroll technology in compressors, it changed the industry forever. Since then, Copeland Scroll technology remains at the forefront for HVACR applications. With the broadest product line in the industry, Copeland Scroll compressors range from 1-40 HP for single compressor configurations and 3-180 HP in tandem and trio configurations. This includes 51 uneven and 69 even tandem compressor combinations.



Advantages of stepped modulation

- Efficiency: High system efficiency at both full load and part-load
- Installation costs: Least expensive form of modulation
- Reliability: Comparable to fixed compressor systems
- Flexibility: Wide and smooth system lineup with a limited number of compressor models
- Oil management: No extra oil management hardware needed
- Electromagnetic interference issues: None
- Stepped capacity modulation for precision load matching which enables OEMs to boost system part load efficiency levels to meet new energy standards and aggressive DOE challenges

Example

System capacity can be modulated by using multiple refrigeration circuits or by using multiple compressors in single-circuit systems. In a four circuit system, commonly used in packaged rooftops, individual compressors can be turned on and off to achieve a specific output. Six to eight compressors per unit can be used, which means, depending on the even or uneven combination, up to 12 capacity steps available to match the load by cycling the compressors on and off.



Technical overview

Tandems

R410A

Model with voltage variations	Compressor combination	45°/130° 60Hz		Mechanical				Connection size		Cap. steps	Cap. (HP)
		Capacity (Btu/h)	EER (Btu/h)	L (in)	W (in)	H (in)	Net Wt. (lbs)	Suct. dia. (in)	Disch. dia. (in)		
ZPT32K5E-PFV	ZP16K5E + ZP16K5E	30,800	9.3	24	11.1	17.3	110	0.875	0.75	2	3
ZPT40K5E-PFV	ZP20KCE + ZP20KCE	39,800	9.8	24	11.1	17.3	110	0.875	0.75	2	3
ZPU47K5E-PFV	ZP16K5E + ZP31K5E	46,900	9.6	24.2	11.1	17.3	114	0.875	0.75	3	4
ZPT50K5E-PFV	ZP25KCE + ZP25KCE	50,200	9.9	24	11.1	17.3	112	0.875	0.75	2	4
ZPU56K5E-TFD	ZP25K5E + ZP31K5E	55,600	9.9	24	11.1	17.3	110	0.875	0.75	3	5
ZPU58K5E-TF5/TFD/TFE	ZP24K5E + ZP34K5E	59,000	10.3	24.4	11.6	18.4	116	1.125	0.75	3	5
ZPU62K5E-TF5/TFD/TFE	ZP24K5E + ZP38K5E	61,800	10.4	24.4	11.6	18.4	120	1.125	0.75	3	5
ZPU76K5E-TF5/TFD/TFE	ZP34K5E + ZP42K5E	77,300	10.4	24.3	11.4	18.4	136	1.125	0.75	3	6
ZPU78K5E-TF5/TFD/TFE	ZP34K5E + ZP44K5E	80,400	10.6	24.3	11.4	18.4	136	1.125	0.75	3	7
ZPU85K5E-TF5/TFD/TFE	ZP34K5E + ZP51K5E	86,900	10.6	24.3	11.4	18.4	136	1.125	0.75	3	7
ZPT88K5E-PFV	ZP44KCE + ZP44KCE	88,300	10.4	24.3	11.4	18.4	148	1.125	0.75	2	7
ZPU87K5E-TF5/TFD/TFE	ZP36K5E + ZP51K5E	88,600	10.6	24.3	11.4	18.4	136	1.125	0.75	3	7
ZPT88K5E-TF5/TFD/TFE	ZP44KCE + ZP44KCE	88,600	10.6	24.3	11.4	18.4	136	1.125	0.75	2	7
ZPU88K5E-TF5/TFD/TFE	ZP34K5E + ZP54K5E	89,900	10.6	24.3	11.4	18.4	136	1.125	0.75	3	7
ZPU95K5E-TF5/TFD/TFE	ZP34K5E + ZP61K5E	97,200	10.6	24.3	11.6	18.5	142	1.125	0.75	3	8
ZPT98K5E-PFV	ZP49K5E + ZP49K5E	98,400	10.5	24.3	11.4	18.4	136	1.125	0.75	2	8
ZPT98K5E-TF5/TFD/TFE	ZP49K5E + ZP49K5E	98,800	10.6	24.3	11.4	18.4	136	1.125	0.75	2	8
ZPU100K5E-TF5/TFD/TFE	ZP39K5E + ZP61K5E	100,500	10.6	24.3	11.6	18.5	145	1.125	0.75	3	8
ZPT100K3E-TF5/TFD/TFE	ZP50K3E + ZP50K3E	101,000	10.3	24.7	11.7	18.8	217	1.125	0.75	2	8
ZPT108K3E-TF5/TF7/TFD/TFE	ZP54K3E + ZP54K3E	107,000	10.2	24.7	11.7	18.8	217	1.125	0.75	2	9
ZPT108K5E-PFV	ZP54K5E + ZP54K5E	108,000	10.5	24.3	11.4	18.4	136	1.125	0.75	2	9
ZPT108K5E-TF5/TFD/TFE/PFV	ZP54K5E + ZP54K5E	108,000	10.6	24.3	11.4	18.4	136	1.125	0.75	2	9
ZPT114K3E-PFV	ZP57K3E + ZP57K3E	113,000	10	24.7	11.7	18.8	217	1.125	0.75	2	9
ZPT114K5E-PFV	ZP57K5E + ZP57K5E	113,500	10.2	24.3	11.4	18.4	150	1.125	0.75	2	9
ZPT114K3E-TF5/TF7/TFD/TFE	ZP57K3E + ZP57K3E	114,000	10.4	24.3	11.4	18.4	217	1.125	0.75	2	10
ZPT114K5E-TF5/TFD/TFE	ZP57K5E + ZP57K5E	114,000	10.8	24.3	11.4	18.4	150	1.125	0.75	2	10
ZPT122KCE-TF5/TF7/TFD/TFE	ZP61KCE + ZP61KCE	121,000	10.6	24.3	11.4	18.4	217	1.125	0.75	2	10
ZPU122KCE-TF5/TFD/TFE	ZP50KCE + ZP72KCE	122,000	10.4	24.7	11.7	18.8	217	1.125	0.75	3	10
ZPT122K5E-PFV	ZP61K5E + ZP61K5E	122,000	10.4	24.3	11.4	18.4	160	1.125	0.75	2	10
ZPT122K5E-TF5/TFD/TFE	ZP61K5E + ZP61K5E	122,000	10.8	24.7	11.7	18.8	160	1.125	0.75	2	10
ZPT134KCE-TF5/TF7/TFD/TFE	ZP67KCE + ZP67KCE	133,000	10.6	24.6	11.6	17.9	205	1.125	0.75	2	11
ZPT144KCE-TF5/TF7/TFD/TFE	ZP72KCE + ZP72KCE	141,000	10.4	24.6	11.6	17.9	205	1.125	0.75	2	12
ZPU152KCE-TF5/TF7/TFD/TFE	ZP61KCE + ZP91KCE	149,000	10.6	24.7	11.7	18.8	190	1.125	0.75	3	12
ZPT152KCE-TF5/TF7/TFD/TFE	ZP76KCE + ZP76KCE	152,500	10.8	24.7	11.7	18.8	186	1.125	0.75	2	13
ZPT166KCE-TF5/TF7/TFD/TFE	ZP83KCE + ZP83KCE	164,000	10.7	24.7	11.7	18.8	187	1.125	0.75	2	14
ZPU174KCE-TF5/TF7/TFD/TFE	ZP83KCE + ZP91KCE	168,500	10.4	24.7	11.7	18.8	190	1.125	0.75	3	14
ZPT182KCE-TF5/TF7/TFD/TFE	ZP91KCE + ZP91KCE	179,500	10.9	24.7	12.1	19	190	1.125	1.125	2	15
ZPT180KCE-TF5/TF7/TFD/TFE	ZP90KCE + ZP90KCE	181,000	10.8	25	12.3	19.5	270	1.625	1.375	2	15
ZPT206KCE-TF5/TF7/TFD/TFE	ZP103KCE + ZP103KCE	210,000	10.9	25	12.3	22.7	282	1.625	1.375	2	18
ZPU210KCE-TF5/TF7/TFD/TFE	ZP90KCE + ZP120KCE	213,000	10.9	29.4	17.1	22.7	271	1.625	1.375	3	18

Technical overview

Tandems (continued)

R410A

Model with voltage variations	Compressor combination	45°/130° 60Hz		Mechanical				Connection size		Cap. steps	Cap. (HP)
		Capacity (Btu/h)	EER (Btu/h)	L (in)	W (in)	H (in)	Net Wt. (lbs)	Suct. dia. (in)	Disch. dia. (in)		
ZPU223KCE-TF5/TF7/TFD/TFE	ZP103KCE + ZP120KCE	225,000	10.9	29.4	17.1	22.7	286	1.625	1.375	3	19
ZPU240KCE-TF5/TF7/TFD/TFE	ZP103KCE + ZP137KCE	237,000	10.8	29.4	17.1	22.7	286	1.625	1.375	3	20
ZPT240KCE-TF5/TF7/TFD/TFE	ZP120KCE + ZP120KCE	246,000	11	25	12.3	22.7	289	1.625	1.375	2	21
ZPU257KCE-TF5/TF7/TFD/TFE	ZP120KCE + ZP137KCE	255,000	10.9	29.4	17.1	22.7	289	1.625	1.375	3	21
ZPU258KCE-TX5/TX7/TXD/TXE	ZP103KCE + ZP154KCE	258,000	10.9	25	12.3	23.5	278	1.625	1.375	3	22
ZPT274KCE-TF5/TF7/TFD/TFE	ZP137KCE + ZP137KCE	270,000	10.9	25	12.3	22.7	289	1.625	1.375	2	23
ZPU272KCE-TFD	ZP90KCE + ZP182KCE	273,000	11	25	12.3	23.5	271	1.625	1.375	3	23
ZPU272KCE-TX5/TX7/TXD/TXE	ZP90KCE + ZP182KCE	273,000	11	23.5	12.3	23.5	271	1.625	1.375	3	23
ZPU274KCE-TFD	ZP120KCE + ZP154KCE	273,000	10.9	25	12.3	23.5	278	1.625	1.375	3	23
ZPU274KCE-TX5/TX7/TXD/TXE	ZP120KCE + ZP154KCE	273,000	10.9	25	12.3	23.5	278	1.625	1.375	3	23
ZPU285KCE-TFD	ZP103KCE + ZP182KCE	286,000	11	25	12.3	23.5	278	1.625	1.375	3	24
ZPU285KCE-TX5/TX7/TXD/TXE	ZP103KCE + ZP182KCE	286,000	11	25	12.3	23.5	278	1.625	1.375	3	24
ZPU302KCE-TFD	ZP120KCE + ZP182KCE	301,000	11	25	12.3	23.5	281	1.625	1.375	3	25
ZPU302KCE-TX5/TX7/TXD/TXE	ZP120KCE + ZP182KCE	301,000	11	25	12.3	23.5	287	1.625	1.375	3	25
ZPT308KCE-TF7/TFD	ZP154KCE + ZP154KCE	307,000	10.9	25	12.3	23.5	286	1.625	1.375	2	26
ZPT308KCE-TW5/TW7/TWD/TWE	ZP154KCE + ZP154KCE	307,000	10.9	25	12.3	23.5	286	1.625	1.375	2	26
ZPU319KCE-TFD	ZP137KCE + ZP182KCE	314,000	11	25	12.3	23.5	281	1.625	1.375	3	26
ZPU319KCE-TX5/TX7/TXD/TXE	ZP137KCE + ZP182KCE	314,000	11	25	12.3	23.5	287	1.625	1.375	3	26
ZPU336KCE-TFD	ZP154KCE + ZP182KCE	335,000	11	25	12.3	23.5	289	1.625	1.375	3	28
ZPU336KCE-TW5/TW7/TWD/TWE	ZP154KCE + ZP182KCE	335,000	11	25	12.3	23.5	289	1.625	1.375	3	28
ZPT360KCE-TW7/TWC/TWD/TWE	ZP180KCE + ZP180KCE	360,000	11.2	37.2	20.3	24.6	473	2.125	1.375	2	30
ZPT364KCE-TW5/TW7/TWD/TWE	ZP182KCE + ZP182KCE	361,000	11.1	25	12.3	23.5	292	1.625	1.375	2	30
ZPU418KCE-TY5/TY7/TYD/TYE	ZP182KCE + ZP236KCE	417,000	11.1	36.6	22.5	28.4	488	2.125	1.375	3	35
ZPT472KCE-TE5/TE7/TED/TEE	ZP236KCE + ZP236KCE	471,000	10.9	39.5	20.9	28.4	606	2.625	1.375	2	39
ZPU532KCE-TE5/TE7/TED/TEE	ZP236KCE + ZP296KCE	528,000	10.6	39.5	20.7	28.4	618	2.625	1.375	3	44
ZPT570KCE-TW5/TW7/TWC/TWD/TWE	ZP285KCE + ZP285KCE	555,000	11.2	42.2	22.5	29.4	884	2.625	1.625	2	46
ZPU567KCE-TW7/TWC/TWD/TWE	ZP182KCE + ZP385KCE	565,000	11	34.3	21.2	29.3	536	2.125	1.375	3	47
ZPT592KCE-TE5/TE7/TED/TEE	ZP296KCE + ZP296KCE	582,000	10.6	39.5	20.9	28.4	631	2.625	1.375	2	49
ZPU681KCE-TE5/TE7/TED/TEE	ZP296KCE + ZP385KCE	680,000	10.9	41.6	14	29.4	727	2.625	1.625	3	57
ZPT770KCE-TE5/TE7/TED/TEE	ZP385KCE + ZP385KCE	759,000	10.9	40.9	21.9	29.4	826	2.625	1.625	2	63
ZPU870KCE-TED	ZP385KCE + ZP485KCE	856,000	10.7	40.6	22.3	30.6	878	2.625	1.625	3	71
ZPT970KCE-TED/TE7/TEE	ZP485KCE + ZP485KCE	947,000	10.9	40.9	21.9	30.6	932	2.625	1.625	2	79

Technical overview

Tandems

R407C

Model with voltage variations	Compressor combination	45°/130° 60Hz		Mechanical				Connection size		Cap. steps	Cap. (HP)
		Capacity (Btu/h)	EER (Btu/h)	L (in)	W (in)	H (in)	Net Wt. (lbs)	Suct. dia. (in)	Disch. dia. (in)		
ZRT96KCE-TF5/TFD	ZR48KCE + ZR48KCE	92,800	10.8	24.3	11.4	18	136	1.125	0.75	2	8
ZRT96K3E-PFV	ZR48K3E + ZR48K3E	93,000	10.6	24.3	11.4	18	136	1.125	0.75	2	8
ZRT96K3E-TF5/TFD/TFE	ZR48K3E + ZR48K3E	94,000	10.5	24.3	11.4	18	136	1.125	0.75	2	8
ZRT108K3E-TF5/TFD/TFE	ZR54K3E + ZR54K3E	101,000	10.4	24.7	11.7	18.8	200	1.125	0.75	2	8
ZRT122K3E-TF5/TFD/TFE/PFV	ZR61K3E + ZR61K3E	116,000	10.7	24.7	11.7	18.8	223	1.125	0.75	2	10
ZRT122KCE-TFD	ZR61KCE + ZR61KCE	116,000	10.9	24.7	11.7	18.8	223	1.125	0.75	2	10
ZRT136KCE-TF5/TFD/TFE	ZR68KCE + ZR68KCE	132,000	11.1	24.7	11.7	18.8	205	1.125	0.75	2	11
ZRT144KCE-TF5/TF7/TFD/TFE	ZR72KCE + ZR72KCE	137,000	10.7	24.7	11.7	18.8	205	1.125	0.75	2	11
ZRT162KCE-TF5/TF7/TFD	ZR81KCE + ZR81KCE	154,000	10.8	24.7	12.5	19	205	1.125	1.125	2	13
ZRT168KCE-TF5/TF7/TFD/TFE	ZR84KCE + ZR84KCE	161,500	11	25	12.3	19.5	270	1.625	1.375	2	13
ZRT188KCE-TF5/TF7/TFD/TFE	ZR94KCE + ZR94KCE	186,500	11.2	25	12.3	19.5	270	1.625	1.375	2	16
ZRT216KCE-TF5/TF7/TFD/TFE	ZR108KCE + ZR108KCE	209,000	11.3	25	12.3	22.7	283	1.625	1.375	2	17
ZRT250KCE-TF5/TF7/TFD/TFE	ZR125KCE + ZR125KCE	237,000	10.8	25	12.3	22.7	289	1.625	1.375	2	20
ZRT288KCE-TF5/TF7/TFD/TFE	ZR144KCE + ZR144KCE	272,000	11	25	12.3	22.7	289	1.625	1.375	2	23
ZRU285KCE-TX5/TX7/TXD/TXE	ZR125KCE + ZR160KCE	274,000	10.9	25	12.3	23.5	278	1.625	1.375	3	23
ZRU315KCE-TX5/TX7/TXD/TXE	ZR125KCE + ZR190KCE	300,000	10.8	25	12.3	23.5	281	1.625	1.375	3	25
ZRT320KCE-TF7/TFD	ZR160KCE + ZR160KCE	307,000	11	29.4	12.3	23.5	289	1.625	1.375	2	26
ZRT320KCE-TW5/TW7/TWD/TWE	ZR160KCE + ZR160KCE	307,000	11	29.4	12.3	23.5	289	1.625	1.375	2	26
ZRU334KCE-TX5/TX7/TXD/TXE	ZR144KCE + ZR190KCE	316,000	10.8	25	12.3	23.5	281	1.625	1.375	3	26
ZRU350KCE-TW5/TW7/TWD/TWE	ZR160KCE + ZR190KCE	327,000	10.5	25	12.3	23.5	292	1.625	1.375	3	27
ZRT380KCE-TFD	ZR190KCE + ZR190KCE	361,000	10.8	29.4	12.3	23.5	289	1.625	1.375	2	30
ZRT380KCE-TW5/TW7/TWD/TWE	ZR190KCE + ZR190KCE	361,000	10.8	29.4	12.3	23.5	289	1.625	1.375	2	30
ZRT500KCE-TW5/TW7/TWC/TWD/TWE	ZR250KCE + ZR250KCE	471,000	10.9	41.4	21.6	29.5	659	2.625	1.625	2	39
ZRT600KCE-TW5/TW7/TWC/TWD/TWE	ZR300KCE + ZR300KCE	580,000	11.3	42.2	23.1	29.4	864	3.125	1.625	2	48
ZRT760KCE-TW5/TW7/TWC/TWD/TWE	ZR380KCE + ZR380KCE	740,000	11.3	42.2	22.7	29.4	826	3.125	1.625	2	62

Technical overview

Trios

R410A

Model with voltage variations	Compressor combination	45°/130° 60Hz		Mechanical				Connection size		Cap. steps	Cap. (HP)
		Capacity (Btu/h)	EER (Btu/h)	L (in)	W (in)	H (in)	Net Wt. (lbs)	Suct. dia. (in)	Disch. dia. (in)		
ZPY309KCE-TF5/TF7/TFD/TFE	ZP103KCE + ZP103KCE + ZP103KCE	313,000	10.9	47.1	20.2	22.8	396	3.125	2.125	3	26
ZPY360KCE-TF5/TF7/TFD/TFE	ZP120KCE + ZP120KCE + ZP120KCE	362,000	10.9	47.1	20.2	22.8	405	3.125	2.125	3	30
ZPY411KCE-TF5/TF7/TFD/TFE	ZP137KCE + ZP137KCE + ZP137KCE	404,000	10.9	47.2	20.2	22.8	405	3.125	2.125	3	34
ZPY462KCE-TFD	ZP154KCE + ZP154KCE + ZP154KCE	463,000	11	47.1	20.2	23.5	429	3.125	2.125	3	39
ZPY462KCE-TW5/TW7/ TWD/TWE	ZP154KCE + ZP154KCE + ZP154KCE	463,000	11	47.2	20.2	23.5	429	3.125	2.125	3	39
ZPY546KCE-TFD	ZP182KCE + ZP182KCE + ZP182KCE	543,000	11	47.1	20.2	23.5	438	3.125	2.125	3	45
ZPY546KCE-TW5/TW7/ TWD/TWE	ZP182KCE + ZP182KCE + ZP182KCE	543,000	11	47.1	20.2	23.5	438	3.125	2.125	3	45
ZPY708KCE-TE5/TE7/TED/TEE	ZP236KCE + ZP236KCE + ZP236KCE	707,000	11	59.9	22	28.4	990	2.625	1.625	3	59
ZPY855KCE-TW5/TW7/TWC/ TWD/TWE	ZP285KCE + ZP285KCE + ZP285KCE	827,000	11.1	61.3	25.6	29.4	1,215	3.625	2.125	3	69
ZPY888KCE-TE5/TE7/TED/TEE	ZP296KCE + ZP296KCE + ZP296KCE	893,000	11	59.9	22.4	28.4	1,027	2.625	1.625	3	74
ZPY115MCE-TW5/TW7/TWC/ TWD/TWE	ZP385KCE + ZP385KCE + ZP385KCE	1,146,000	10.9	61.2	25.7	29.4	1,326	3.625	2.125	3	96
ZPY145MCE-TED	ZP485KCE + ZP485KCE + ZP485KCE	1,425,000	10.7	62.1	25	30.6	1,479	3.625	2.125	3	119

Trios

R407C

Model with voltage variations	Compressor combination	45°/130° 60Hz		Mechanical				Connection size		Cap. steps	Cap. (HP)
		Capacity (Btu/h)	EER (Btu/h)	L (in)	W (in)	H (in)	Net Wt. (lbs)	Suct. dia. (in)	Disch. dia. (in)		
ZRY324KCE-TF5/TF7/ TFD/TFE	ZR108KCE + ZR108KCE + ZR108KCE	317,000	11.4	47.1	20.2	22.8	396	3.125	2.125	3	26
ZRY375KCE-TF5/TF7/ TFD/TFE	ZR125KCE + ZR125KCE + ZR125KCE	373,000	11.4	47.1	20.2	22.8	405	3.125	2.125	3	31
ZRY432KCE-TF5/TF7/ TFD/TFE	ZR144KCE + ZR144KCE + ZR144KCE	425,000	11.4	47.1	20.2	22.8	405	3.125	2.125	3	35
ZRY480KCE-TFD	ZR160KCE + ZR160KCE + ZR160KCE	460,000	11	47.1	20.2	23.5	429	3.125	2.125	3	38
ZRY480KCE-TW5/TW7/ TWD/TWE	ZR160KCE + ZR160KCE + ZR160KCE	460,000	11	47.1	20.2	23.5	429	3.125	2.125	3	38
ZRY570KCE-TFD	ZR190KCE + ZR190KCE + ZR190KCE	541,000	10.8	47.1	20.2	23.5	438	3.125	2.125	3	45
ZRY570KCE-TW5/TW7/ TWD/TWE	ZR190KCE + ZR190KCE + ZR190KCE	541,000	10.8	47.1	20.2	23.5	438	3.125	2.125	3	45
ZRY750KCE-TW5/TW7/ TWC/TWD/TWE	ZR250KCE + ZR250KCE + ZR250KCE	715,000	11	61.5	24.7	29.5	999	3.125	2.125	3	60
ZRY900KCE-TW5/TW7/ TWC/TWD/TWE	ZR300KCE + ZR300KCE + ZR300KCE	872,000	11.2	61.2	25.8	29.4	1,293	3.625	2.125	3	73
ZRY930KCE-TWC/TWD	ZR310KCE + ZR310KCE + ZR310KCE	884,000	10.6	61.2	25.7	29.4	1,137	3.625	2.125	3	74
ZRY114MCE-TW5/TW7/ TWC/TWD/TWE	ZR380KCE + ZR380KCE + ZR380KCE	1,119,000	11.4	61.2	25.7	29.4	1,293	3.125	2.125	3	93

Technical overview

Digital tandems

R410A

Model with voltage variations	Compressor combination	45°/130° 60Hz		Mechanical				Connection size		Cap. steps	Cap. (HP)
		Capacity (Btu/h)	EER (Btu/h)	L (in)	W (in)	H (in)	Net Wt. (lbs)	Suct. dia. (in)	Disch. dia. (in)		
ZPDU58K5E-TF5/TFD/TFE	ZPD34K5E + ZP24K5E	59,300	10.4	24.4	11.6	20	116	1.125	0.75	Infinite	5
ZPDU76K5E-TF5/TFD/TFE	ZPD34K5E + ZP42K5E	78,500	10.8	24.3	11.6	20	136	1.125	0.75	Infinite	7
ZPDU85K5E-TF5/TFD/TFE	ZPD34K5E + ZP51K5E	86,100	10.5	24.3	11.6	20	136	1.125	0.75	Infinite	7
ZPDU10M5E-TF5/TFD/TFE	ZPD42K5E + ZP61K5E	103,000	10.1	24.3	11.6	20	155	1.125	0.75	Infinite	9
ZPDU12MCE-TF5/TFD/TFE	ZPD72KCE + ZP50K3E	121,000	10.2	24.7	11.6	20.6	218	1.125	0.75	Infinite	10
ZPDT12MCE-TF5/TFD/TFE	ZPD61KCE + ZP61KCE	123,500	10.4	24.6	11.6	20.5	204	1.125	0.75	Infinite	10
ZPDU13MCE-TFD	ZPD72KCE + ZP61KCE	130,000	10.3	24.6	11.6	20.5	205	0.75	1.125	Infinite	11
ZPDT14MCE-TF5/TF7/TFD/TFE	ZPD72KCE + ZP72KCE	143,000	10.1	24.6	11.6	20.5	205	1.125	0.75	Infinite	12
ZPDU15MCE-TF5/TFD/TF7/TFE	ZPD61KCE + ZP91KCE	149,500	10.6	24.7	12.1	19.7	190	1.125	0.75	Infinite	12
ZPDT16MCE-TFD/TFE	ZPD83KCE + ZP83KCE	162,000	10.6	24.6	11.6	20.5	205	1.125	0.75	Infinite	14
ZPDU17MCE-TF5/TFD/TF7/TFE	ZPD83KCE + ZP91KCE	171,000	10.4	24.7	21.1	19.7	190	1.125	0.75	Infinite	14
ZPDT18MCE-TF5/TF7/TFD/TFE	ZPD91KCE + ZP91KCE	179,000	10.9	24.7	12.1	20.6	190	1.125	1.125	Infinite	15
ZPDU21MCE-TF5/TF7/TFD/TFE	ZPD120KCE + ZP90KCE	208,000	10.8	29.4	17.1	22.7	271	1.625	1.375	Infinite	17
ZPDT21MCE-TF5/TF7/TFD/TFE	ZPD103KCE + ZP103KCE	209,000	11	29.4	15.9	22.7	289	1.625	1.375	Infinite	17
ZPDT24MCE-TF5/TF7/TFD/TFE	ZPD120KCE + ZP120KCE	246,000	11	29.4	15.9	22.7	289	1.625	1.375	Infinite	21
ZPDU26MCE-TXD/TX7/TXE	ZPD103KCE + ZP154KCE	258,000	10.9	29.4	17.1	23.5	278	1.625	1.375	Infinite	22
ZPDT27MCE-TF5/TF7/TFD/TFE	ZPD137KCE + ZP137KCE	270,000	11	29.4	15.9	22.7	289	1.625	1.375	Infinite	23
ZPDT31MCE-TW5/TW7/TWD/TWE	ZPD154KCE + ZP154KCE	309,000	11	29.4	17.3	23.5	286	1.625	1.375	Infinite	26
ZPDT36MCE-TW5/TW7/TWD/TWE	ZPD182KCE + ZP182KCE	364,000	11	29.4	17.3	23.5	292	1.625	1.375	Infinite	30

Digital tandems

R407C

Model with voltage variations	Compressor combination	45°/130° 60Hz		Mechanical				Connection size		Cap. steps	Cap. (HP)
		Capacity (Btu/h)	EER (Btu/h)	L (in)	W (in)	H (in)	Net Wt. (lbs)	Suct. dia. (in)	Disch. dia. (in)		
ZRDT96KCE-TF7/TFD	ZRD48KCE + ZR48KCE	89,500	10.2	24.3	11.2	19.9	138	1.125	0.75	Infinite	7
ZRDU13MCE-TF5/TF7/TFD	ZRD72KCE + ZR61KCE	125,000	10.6	24.7	11.7	20.5	185	1.125	0.75	Infinite	10
ZRDT14MCE-TF5/TF7/TFD	ZRD72KCE + ZR72KCE	136,000	10.7	24.7	11.7	20.5	183	1.125	0.75	Infinite	11
ZRDT16MCE-TF7/TFD	ZRD81KCE + ZR81KCE	162,000	10.4	24.7	12.5	20.5	192	1.125	0.75	Infinite	14