

Copeland XPV & ZPV variable speed scroll compressor ranges for R410A with drive

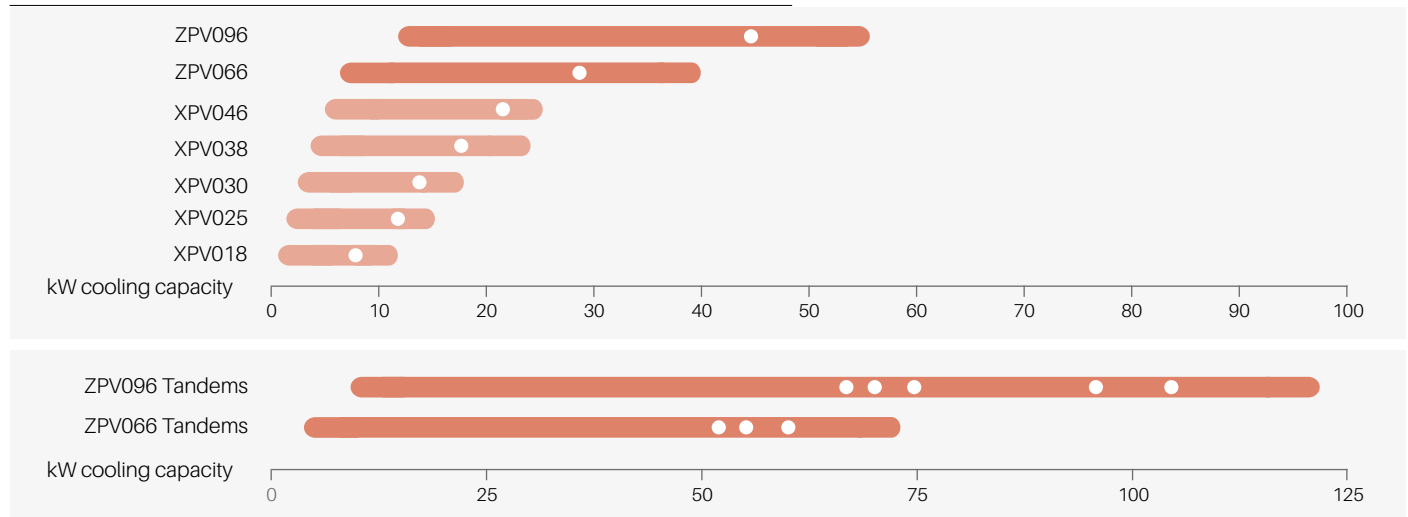
Copeland XPV and ZPV variable speed scroll compressors for R410A are designed to deliver maximum cooling and heating efficiency when you need it most. Equipped with the latest variable speed technology, they allow system manufacturers and building owners to achieve superior performance when designing reversible chillers, heat pumps, precision cooling systems or rooftops.

In addition to Copeland market-proven robustness, the new XPV and ZPV ranges with their qualified drive meet and exceed the level of reliability expected for these applications.

ZPV066
variable
speed scroll
compressor
and drive



XPV and ZPV variable speed scroll compressor line-up



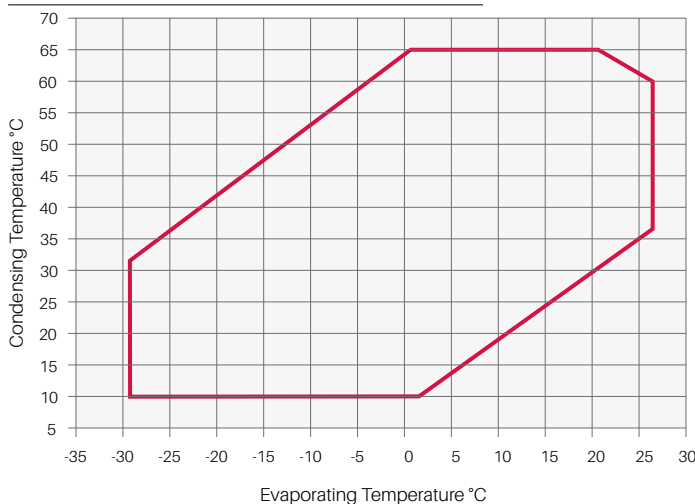
Features and benefits

- Highest part load efficiency in its class enabling significant energy savings and standards compliance
- Wide speed range for enhanced part load efficiency and dehumidification: 900 - 7,200 RPM (15-120Hz)
- Capability to be tandemized with fixed speed compressors for maximum flexibility in system design
- Both compressor and drive are Copeland approved for reduced design time, cost and speed to market
- BPM motor technology for highest efficiency
- Sound reduction technology for reversible chiller transition and defrost

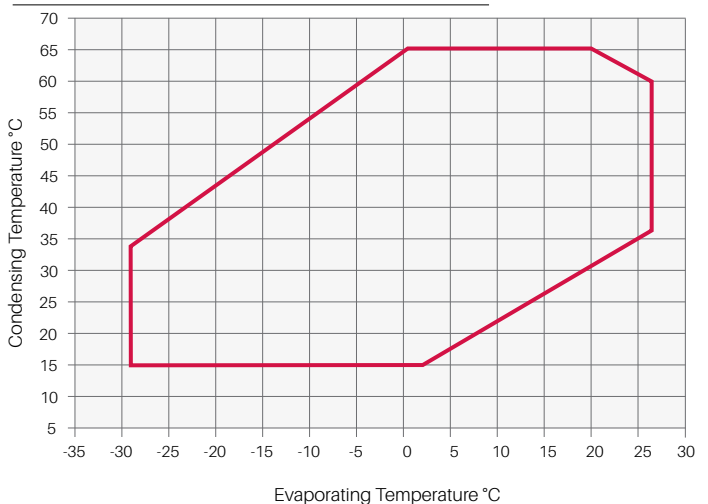
Maximum allowable pressure (PS)

- XPV018-025 and XPV046
Low Side PS 28 bar(g) / High Side PS 45 bar(g)
- XPV030-038
Low Side PS 29.5 bar(g) / High Side PS 43.3 bar(g)
- ZPV066 - 096
Low Side PS 29.5 bar(g) / High Side PS 45 bar(g)

ZPV operating envelope R410A*



XPV operating envelope R410A*



Note: * The operating envelope may vary depending on the compressor speed. Please refer to the Copeland Select software

Technical overview

Compressor											
Models	Cooling Capacity (kW)			EER*	Displacement (cm³)	Stub Suction (inch)	Stub Discharge (inch)	Oil Quantity (l)	Length/ Width/ Height (mm)	Net weight (kg)	Sound Pressure @ 1 m - dB(A)**
	Min	Max	Nominal								
XPV0182E	1.3	10.4	8.2	3.0	18.0	3/4	1/2	0.7	194/216/335	16	61
XPV0252E	1.8	14.5	11.1	3.0	25.0	3/4	1/2	0.7	194/216/335	16	66
XPV0303E	2.2	17.4	13.5	3.1	30.0	3/4	1/2	1.2	194/217/379	19	64
XPV0383E	2.7	22.5	17.5	3.1	38.0	3/4	1/2	1.2	194/217/379	20	64
XPV0462E	6.2	24.0	20.5	3.2	46.0	3/4	1/2	1.2	229/198/388	22	n.a.
ZPV0662E	8.5	39.0	29.1	3.1	63.0	1 1/8	7/8	2.5	273/262/559	40	72
ZPV0962E	13.0	58.1	43.5	3.1	96.0	1 1/8	7/8	2.5	273/262/559	44	75

Conditions EN12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K
*at Nominal Speed (5400 RPM)
** @ 1m: sound pressure level at 1m distance from the compressor, free field condition
Preliminary Data

Drive									
Models	Matched Compressor	Power Input (kW)	Amps (A)	Cooling	Net Weight (kg)	1ph 230V	3Ph 400V	Comm.	Depth/ Width/ Height (mm)*
		Max	Max						
ED3015AU	XPV018	3.8	15	Air / Liquid	2.8	✓		Modbus RTU and analog board for 0-10V	205/240/144
ED3020AU	XPV025	5.0	20		3.6	✓			205/250/180
ED3018BU	XPV025 / XPV030	5.0	18		4.4		✓		205/250/183
ED3022B	XPV038/ XPV046	8.0	22		5.2		✓		233/316/150
EV3150B	ZPV066	15.0	27	Air	7.4		✓		180/250/380
EV3185B	ZPV096	18.5	38		14.0		✓		180/250/380

*Standard voltage air-cooled version including fins

Capacity data

Condensing Temperature +50°C															
R410A		Cooling Capacity (kW)							R410A		Power Input (kW)				
		Evaporating Temperature (°C)									Evaporating Temperature (°C)				
Model		-15	-10	-5	0	+5	+10	+15	Model		-15	-10	+5	+10	+15
XPV0182E	Max	5.8	7.0	8.4	10.1	12.0	14.1	16.5	XPV0182E	Max	3.6	3.7	3.7	3.7	3.7
	Min	1.5	1.6	1.7	1.7	2.0	2.4	2.9		Min	1.0	1.0	0.8	0.8	0.8
XPV0252E	Max	7.2	8.8	10.8	13.2	15.8	18.8	22.2	XPV0252E	Max	4.8	4.9	5.2	5.2	5.2
	Min	2.2	2.4	2.4	2.4	2.9	3.4	4.1		Min	1.4	1.4	1.1	1.1	1.0
XPV0303E	Max	8.9	10.7	12.9	15.6	18.8	22.5	26.7	XPV0303E	Max	5.5	5.6	5.9	6.0	6.0
	Min	2.2	2.5	1.5	1.9	2.3	2.7	3.7		Min	1.8	1.6	1.0	1.0	1.0
XPV0383E	Max	11.3	13.6	16.4	19.8	23.8	28.5	33.8	XPV0383E	Max	7.0	7.1	7.5	7.5	7.6
	Min	2.8	3.2	1.9	2.4	2.9	3.4	4.6		Min	2.2	2.0	1.2	1.2	1.3
XPV0462E	Max	13.6	16.4	19.8	23.9	28.8	34.4	40.8	XPV0462E	Max	8.1	8.3	8.7	8.7	8.7
	Min	3.6	4.5	2.2	2.8	3.3	4.0	5.1		Min	2.7	2.6	1.4	1.4	1.4
ZPV0662E	Max	19.1	23.3	28.2	34.0	40.6	48.2	56.8	ZPV0662E	Max	13.2	13.5	14.3	14.5	14.7
	Min	6.2	4.9	6.0	7.1	8.3	9.8	11.5		Min	4.2	3.0	2.9	2.8	2.8
ZPV0962E	Max	28.0	34.3	41.7	50.4	60.4	71.8	84.6	ZPV0962E	Max	18.2	18.7	20.0	20.4	20.8
	Min	9.1	7.5	9.0	10.8	12.8	15.2	18.0		Min	5.7	4.1	4.1	4.1	4.0

Condition: Suction Superheat 5K, Subcooling 4K