

# Copeland Scroll™ YP Compressors, Designed for R32

## Low GWP Scroll Compressors for Commercial Cooling and Reversible Applications

To help system manufacturers provide HVAC systems that are in line with the EcoDesign directive and with the F-Gas phasedown, Emerson has developed a full range of fixed speed scroll compressors with a capacity up to 120 kW, optimized for the refrigerant R32. This refrigerant with a GWP of 675 has been used for many years as main ingredient of R410A and is widely available.

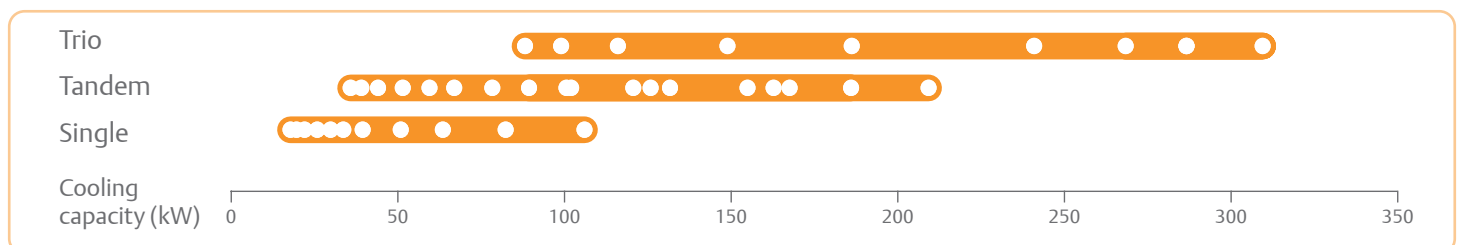
Thanks to advanced Emerson technologies, the new YP scroll compressors reach the same field of application with R32 as equivalent Copeland Scroll compressors with R410A. This is achieved without liquid injection or economizer. A dedicated scroll set minimizes the discharge temperature caused by the high heat of compression of the R32 refrigerant.

For maximal ease of use, best interchangeability and minimal system redesign, YP compressors have the similar overall dimensions as the equivalent R410A models, and can be used for cooling-only systems, as well as for reversible systems up to 700kW.

This range benefits from the advantages of a low GWP refrigerant with an extensive range of application combined with Emerson scroll compressor know-how. The enhanced efficiency of YP scrolls reflects in system performances at both full and part load.



## R32 YP Fixed Speed Scroll Compressor Line-Up



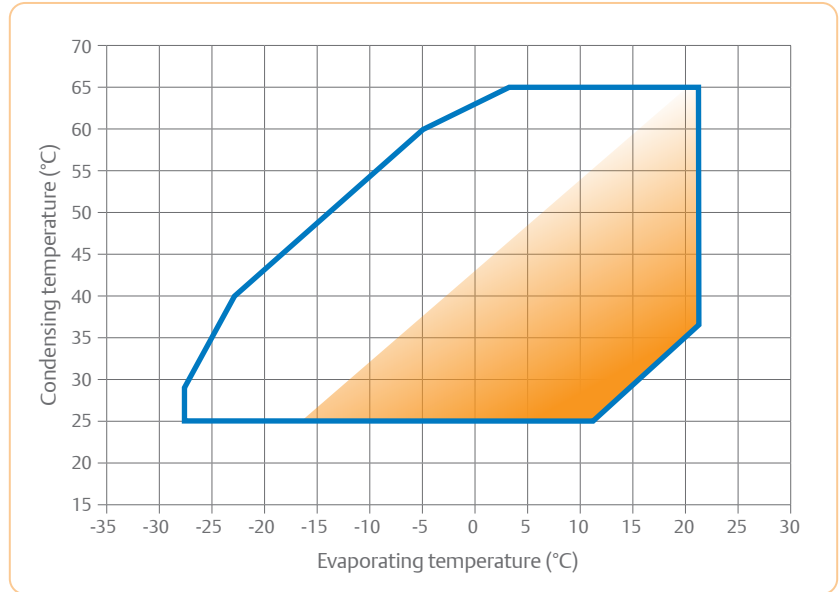
## R32 Features

- Low GWP alternative to R410A
- Widely available refrigerant
- Good heat transfer properties
- More efficient than R410A
- Mildly flammable refrigerant, classified A2L

## YP Copeland Scroll™ Product Features

- Designed for R32
- Wide operating envelope
- Low leak discharge check valve
- High part load efficiency thanks to a variable compression ratio valve
- IP 54 terminal box
- Leak free hermetic design
- Tandem and trio capabilities
- Axial and radial compliance
- Emerson integrated solution ready

## YP Operating Envelope



- 5K superheat
- Active variable compression ratio valve - higher efficiency

## Technical Overview

Models	Nominal hp - TonR*	Capacity (kW)	EER	Stub Suction (inch)	Stub Discharge (inch)	Oil Quantity (l)	Length/Width/Height (mm)	PED Category	Net Weight (kg)	Motor Version/Code	Maximum Operating Current (A)	Locked Rotor Current (A)
										3 Ph**	3 Ph**	3 Ph**
YP83K1T	7	18.8	3.2	7/8	1/2	1.8	263/258/446	2	40	TFD	15.0	101
YP91K1T	8	20.4	3.2	7/8	3/4	1.8	263/258/446	2	41	TFD	16.2	101
YP104K1T	9	23.0	3.2	1 1/8	7/8	2.5	268/246/559	2	49	TFD	18.2	128
YP122K1T	10	26.8	3.2	1 1/8	7/8	2.5	268/246/559	2	49	TFD	21.6	139
YP137K1T	11	30.9	3.2	1 3/8	7/8	3.3	339/279/551	3	62	TFD	23.9	118
YP154K1T	13	34.7	3.2	1 3/8	7/8	3.3	339/279/551	3	65	TFD	31.0	140
YP182K1T	15	40.6	3.2	1 3/8	7/8	3.3	339/279/551	3	66	TFD	34.0	174
YP232K1T	20	52.1	3.3	1 5/8	1 1/8	4.4	402/330/691	3	90	TND	38.2	241
YP292K1T	25	65.1	3.3	1 5/8	1 1/8	4.4	402/330/691	3	90	TND	48.6	288
YP385K1T	32	84.1	3.3	1 5/8	1 3/8	6.3	458/409/715	3	177	TND	65.4	310
YP485K1T	40	108.0	3.3	1 5/8	1 3/8	6.3	458/409/746	3	190	TND	82.6	498

Conditions EN12900 R32: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

\* Ton of refrigeration at 60Hz

\*\* 3 Ph: 380-420V/ 50Hz

Preliminary data

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