

# Copeland Scroll YP Compressors Designed for R32

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

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In support of system manufacturers striving to align with the EcoDesign directive and navigate the F-Gas phasedown, Copeland introduces a comprehensive range of fixed-speed scroll compressors optimized for the refrigerant R32, designed for capacities up to 120 kW. This refrigerant, boasting a GWP of 675, has a longstanding history as the primary component of R410A and is widely accessible.

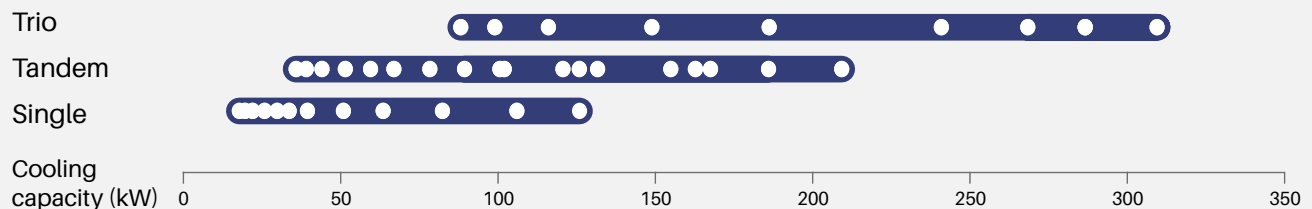
Employing advanced Copeland technologies, the new YP scroll compressors extend their applicability with R32 to match equivalent Copeland scroll compressors using R410A, all without the need for liquid injection or economizer. A specialized scroll set effectively mitigates the discharge temperature arising from the high heat of compression associated with the R32 refrigerant.

For seamless integration, optimal interchangeability, and minimal system redesign, YP compressors maintain similar overall dimensions as their R410A counterparts. They are versatile, suitable for use in both cooling-only systems and reversible systems with capacities reaching up to 700 kW.

This compressor range harnesses the benefits of a low GWP refrigerant, offering an extensive range of applications coupled with Copeland's years of scroll manufacturing expertise. The enhanced efficiency of YP scrolls is evident in system performances at both full and part load, reflecting a commitment to sustainable and high-performing HVAC solutions.



## *R32 YP Fixed Speed Scroll Compressor Line-Up*



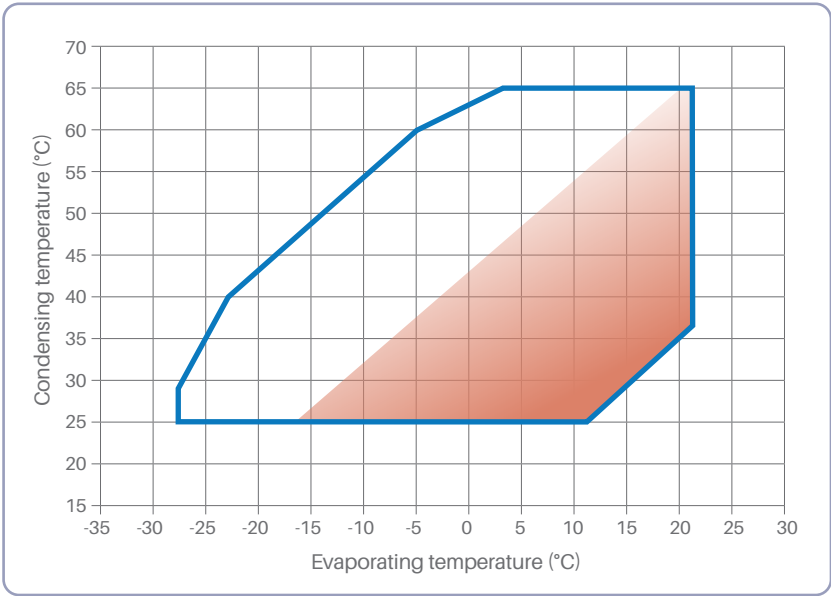
## R32 Features

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

## Copeland YP Series 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

Model	Nominal HP	Ca- pacity	Input Power	Cur- rent	COP	Displace- ment	Oil	LRA	Nominal Voltage	Frequency	Phase	Length/ Width/ Height	Suction	Discharge	Motor Version Code	Maximum Operating Current (A)	Locked Rotor Current (A)
		kW	kW	(A)		(cc/ Rev.)	(L)	(A)	(V)	(Hz)		(mm)	(mm)	(mm)	3Ph**	3Ph**	3Ph**
YP83K1T-TFD	7.0	19.9	6.2	10.8	3.2	71.0	1.8	83.4	380-420	50	3	258/253/446	22	19	TFD	14	83.4
YP91K1T-TFD	7.5	22.5	6.9	12.1	3.2	80.1	1.8	92.0	380-420	50	3	263/253/446	22	19	TFD	15.6	92
YP104K1T-TFD	8.5	25.6	7.9	14.4	3.2	90.9	2.5	128.0	380-420	50	3	269/256/559	28	22	TFD	17.8	128
YP122K1T-TFD	10.0	29.9	9.1	16.9	3.3	104.9	2.5	139.0	380-420	50	3	269/246/559	28	22	TFD	20.8	139
YP137K1T-TFD	11.5	32.8	10.3	17.9	3.2	120.8	3.6	147.0	380-420	50	3	279/246/551	35	22	TFD	23.9	147
YP154K1T-TFD	13.0	38.3	11.8	20.1	3.2	135.9	3.6	141.0	380-420	50	3	279/339/551	35	22	TFD	25.8	141
YP182K1T-TFD	15.0	44.9	13.7	24.7	3.3	158.8	3.6	186.0	380-420	50	3	279/339/551	35	22	TFD	31	186
YP232K1T-TND	19.0	57.4	17.2	29.7	3.4	189.4	4.4	240.8	380-420	50	3	330/402/691	41	29	TFD	34.6	240.8
YP292K1T-TED	24.0	71.7	21.5	37.1	3.3	236.6	4.4	287.5	380-420	50	3	330/402/691	41	29	TND	45	287.5
YP385K1T-TED	32.0	93.2	28.1	46.0	3.3	328.5	6.3	342.5	380-420	50	3	391/447/715	41	35	TND	80.9	342
YP485K1T-TED	40.0	144.5	43.3	60.7	3.3	417.8	6.3	536.0	460	60	3	394/447/746	41	35	TND	111	536
YP650K1T-TWD	55.5	160.3	47.4	82.8	3.4	540.0	5.8	657.6	380-420	50	3	397/447/789	54	35	TND	142.8	657.6

Based on ARI Conditions

### REGISTERED HEAD OFFICE

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