

# Copeland™ Digital Discus™ Conversion Kits

For use in parallel refrigeration rack  
retrofit applications

## Achieving new efficiencies with digital modulation with Copeland 3D, 4D and 6D digital Discus compressors

The use of a digital compressor as the lead compressor in a fixed capacity refrigeration rack is becoming a preferred method for supermarkets seeking to meet varying refrigeration loads. With the ability to modulate capacity, digital compressors offer many benefits:

1. **Reduced compressor cycling** – this reduces contactor wear and tear due to the infrequent cycling. It also saves energy from reduced in-rush, start-up currents and persistent consumption from running at full capacity.
2. **Improved temperature control** – digital modulation is capable of temperature control within +/-1°F to minimize food loss while maintaining the highest quality of perishable items.
3. **Tighter suction pressure control** – operating suction pressure ranges are significantly reduced, moving from double-digit suction pressures (psig) to single-digit levels.

Copeland 3D, 4D and 6D digital Discus compressors can help reduce carbon footprint, compressor cycling, suction pressure variability, temperature variability and coolant temperature variability.



## Emerson's Copeland digital Discus conversion kit for 3D compressors

We make it even easier to upgrade to a Copeland 3D digital Discus semi-hermetic compressor from competitive compressor models with our conversion kit 998-0902-00, which includes a suction adapter, compressor mounting, and accessory components.

The major components of the kits are a base mounting adapter, suction adapter, and wiring harnesses.

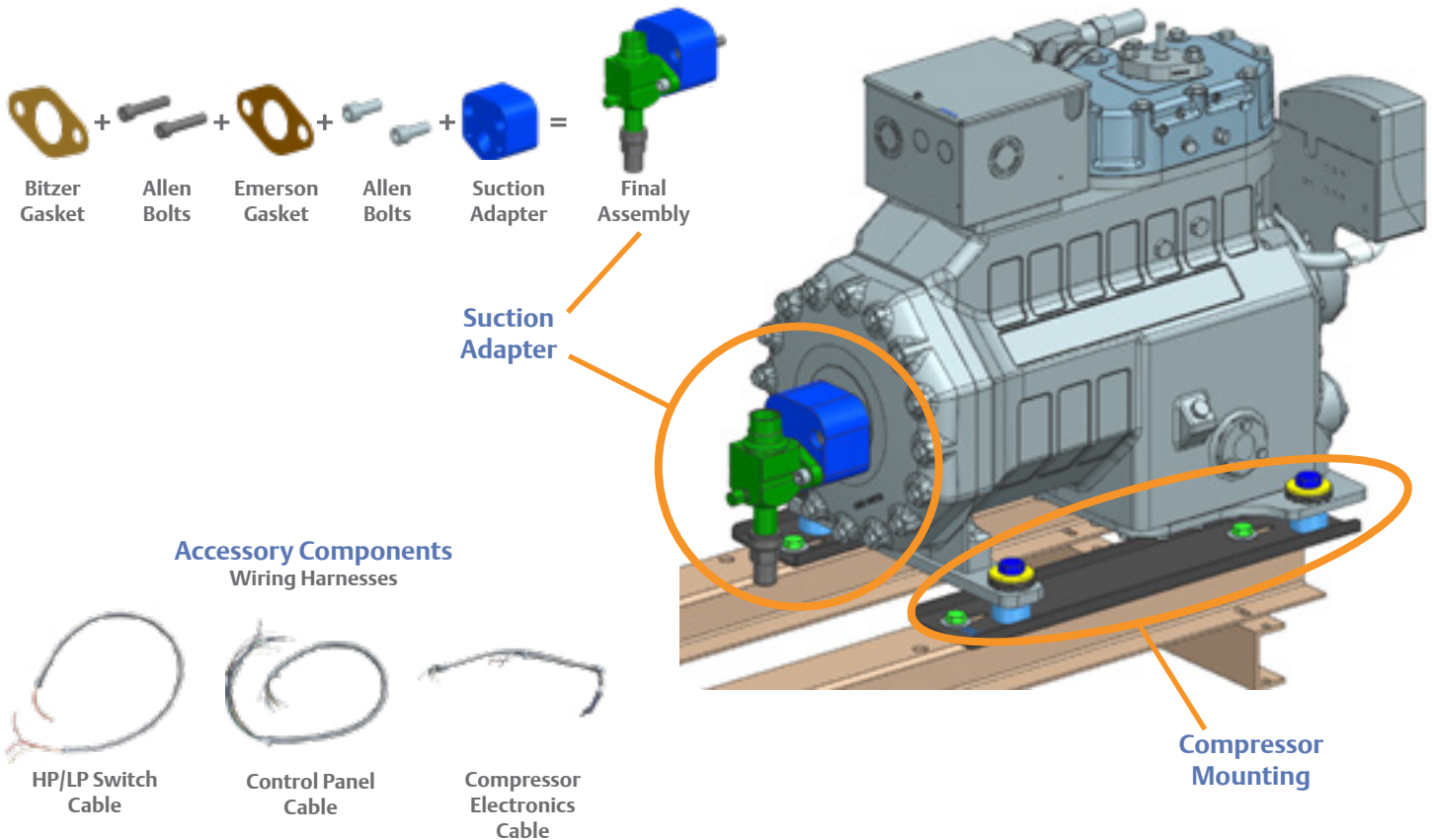
The base mounting adapter aligns the Copeland digital Discus compressor in the rack precisely with the existing tubing connections.

The suction adapter allows for quick isolation of the old compressor while the rack is in operation, using existing service shutoff valves. This helps save time in reclaiming refrigerant and evacuation.

There are three wiring harnesses in the kit. The high pressure/low pressure switch cable assembly connects the pressure switch to the compressor control. The control panel cable assembly connects the compressor to the rack control panel. The Copeland compressor electronics technology (formerly CoreSense™) cable assembly connects the compressor terminal box to the electronics module, with a cable to power the digital solenoid and discharge temperature probe.

Compressor Conversion Cross Reference Table

BITZER	EMERSON	
	Low-temp	Medium-temp
Compressor	Replacement Compressor	
4VES-6Y	-	3DADF28KE or 3DBDF33KE
4VES-7Y	3DADF28KE or 3DBDF33KE	3DADR10ME or 3DBDR12ME
4VES-10Y		
4TES-8Y	-	3DBDF33KE or 3DFDF40KE
4TES-9Y	3DBDF33KE or 3DFDF40KE	3DBDR12ME or 3DFDR15ME
4TES-12Y		
4PES-10Y	-	3DSDF46KE
4PES-12Y	3DSDF46KE	-



For detailed installation instructions, refer to *3D Digital Compressor Retrofit Instructions*, form number 2021ECT-37.

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