

# Gas Charging or Vacuuming

Category: Refrigeration

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The copper tube assembly shown is a service charging valve on the liquid line of a small hermetic refrigeration unit. This single access point can be used for deep vacuum and for refrigerant charging, depending on the connected equipment. Understanding when the technician is vacuuming and when charging is critical for reliability.

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## BASIC TN1900 Refrigerator Compressor

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The BASIC TN1900 represents a medium-displacement hermetic reciprocating compressor engineered for low back pressure refrigeration applications. This Syrian-manufactured unit operates on R134a refrigerant with 220-240V 50/60Hz power supply, delivering 200-250W cooling capacity at -30°C to -10°C evaporating temperatures with RSIR motor technology

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## HITACHI FL20S88NAA Compressor

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The HITACHI FL20S88NAA 0.75 HP hermetic scroll compressor delivers 256W cooling capacity at 50Hz, utilizing HFC-134a refrigerant for household refrigerator-freezer applications. This LBP-classified unit operates reliably at 220-240V with RSIR starting method, integrated into Sharp's SJ-PT73R-HS3 model offering 662-liter gross capacity with Hybrid Cooling System and Plasmacluster technology.

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## **Embraco EM2Z 80HL.C compressor requires approximately 150 ml Oil**

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The Embraco EM2Z 80HL.C is a robust hermetic reciprocating compressor engineered for refrigeration efficiency. Featuring a 1/4 HP motor and optimized for R134a refrigerant, this Brazilian-made unit delivers reliable Low Back Pressure (LBP) performance. This guide details its 150ml oil charge, electrical specs, and competitive advantages for technicians.

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## **Scroll Compressor Internal Components Explained**

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When technicians open a scroll compressor casing, the real engineering lives in internal mechanisms invisible at first glance: the floating seal preventing vacuum damage, the motor protector monitoring temperature and amperage, the pressure relief valve, the discharge check valve preventing reverse rotation, and the optimized bearing system. Understanding these core components transforms your diagnostic confidence.

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## **Donper K400CZ1 R134a compressor**

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The Donper K400CZ1 is a hermetic reciprocating compressor designed for commercial refrigerators and chest freezers operating with refrigerant R134a on 220-240V 50Hz single-phase power. It offers roughly 1/2 hp class performance with about 400 W cooling capacity, making it suitable for medium-size display cabinets and storage equipment in supermarkets and restaurants.

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## **Danfoss Compressor HP Chart - TFS, FR, SC Model Reference**

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When a refrigerator or freezer arrives with a worn nameplate, identifying the compressor becomes difficult. The Danfoss and Secop model codes—such as TFS 4 AT, FR 8.5A, or SC 18B—tell you exactly what you’re dealing with. This chart breaks down those codes into horsepower, watt consumption, and amp ratings for fast diagnosis.

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## **Copeland ZR61KCE-TF7-522**

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The data plate on the Copeland ZR61KCE-TF7-522 compressor matches the official Copeland Scroll specifications for R407C air-conditioning duty and includes the Copeland authenticity label linking to [copeland.com/v](http://copeland.com/v), a key anti-counterfeit feature. When purchased through an authorized distributor, these details strongly indicate that the unit installed in your system is genuine.

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## **Tecumseh Commercial Refrigeration Compressors**

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Tecumseh commercial compressors range from 1/9 HP (230 W) to 3 HP (4,000 W), delivering refrigeration capacities from 278 W to 6,973 W across R404A, R134a, and legacy refrigerants. This complete technical guide provides exact horsepower, input wattage, evaporating ranges, and application types for all ten major models used in supermarkets, walk-ins, and retail coolers.

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## **Champion of HBP: Copeland KCJ513HAG-S424H**

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The Copeland KCJ513HAG-S424H is a powerhouse 1.2 HP compressor designed for high-demand cooling. Built for R134a applications like large water coolers and AC units, it delivers 12,300 Btu/h reliability. This guide covers its CSCR electrical setup, 38cc displacement, and how it compares to Tecumseh alternatives.