

Bitzer 6G-30.2Y: The High-Performance 30 HP Semi-Hermetic

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Bitzer 6G-30.2Y: The High-Performance 30 HP Semi-Hermetic Compressor for Industrial Freezing

When it comes to heavy-duty industrial refrigeration and commercial freezing, reliability and displacement capacity are non-negotiable. The **Bitzer 6G-30.2Y** semi-hermetic reciprocating compressor stands out as a premier industry workhorse, delivering a robust **30 HP** capacity engineered specifically to handle demanding low-temperature applications.

Key Technical Specifications

Based on the official manufacturer nameplate data, this 6-cylinder compressor is optimized for maximum volumetric efficiency:

- **Model Type:** Bitzer 6G-30.2Y (6-Cylinder)
- **Displacement (Fördervol.:** * **126.8 m³/h** at 50 Hz (1450 l/min)
 - **152.9 m³/h** at 60 Hz (1750 l/min)
- **Electrical Characteristics:**
 - **Voltage (3-Phase):** 380-420V at 50 Hz / 440-480V at 60 Hz
 - **Maximum Operating Current (I_{max}):** 53 A
 - **Starting Current:** 135 A (Y) / 220 A (YY) Part-Winding Start
- **Pressure Limitations:** Low Pressure / High Pressure (ND/HD) max. 19 / 28 bar
- **Enclosure Protection:** IP54
- **Motor Protection Device:** Integrated INT60 Kriwan electronic module for thermal monitoring

Engineered for Low-Temperature Freezing

The “Y” suffix in the model identifier denotes compatibility with **Polyolester (POE) oil**, making this unit ideally suited for modern, environmentally friendly hydrofluorocarbon (HFC) refrigerants such as

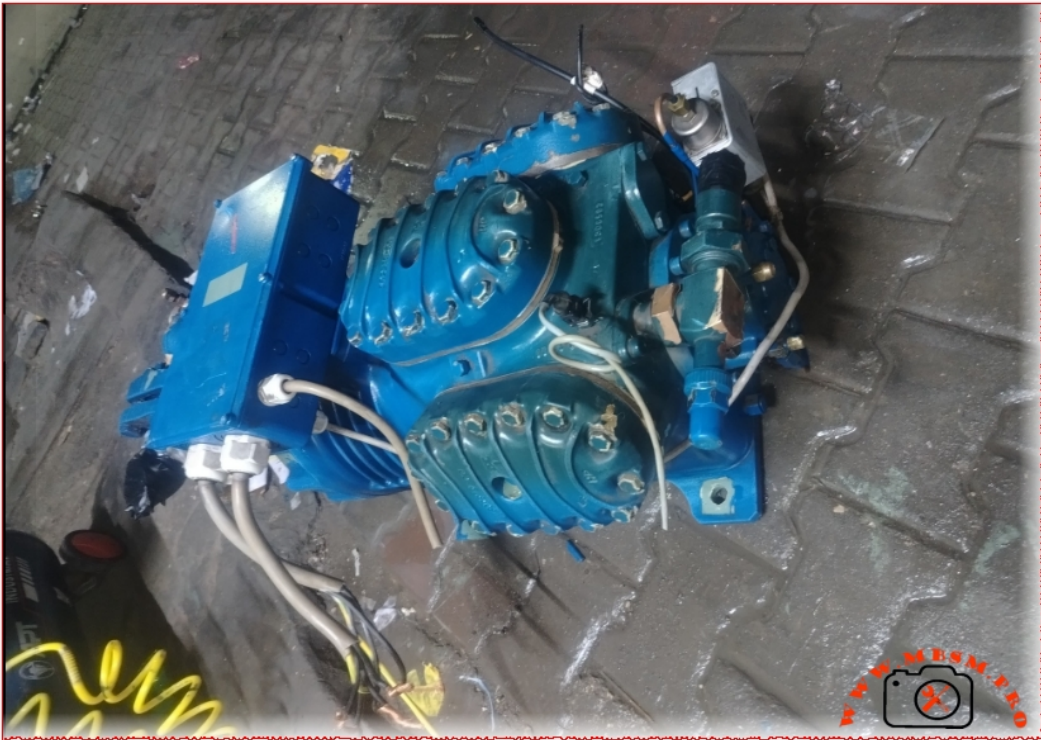
R404A, R507A, or R448A/R449A.

With a displacement of **126.8 m³/h** at standard 50 Hz grids, it moves massive volumes of refrigerant vapor smoothly. This high displacement rate ensures rapid pull-down times in walk-in blast freezers, cold storage warehouses, and industrial food processing lines. The 6-cylinder configuration offers internal dynamic balancing, minimizing vibration and mechanical wear compared to smaller, fewer-cylinder alternatives.

Advanced Protection and Control Wiring

The electrical terminal box features a robust 6-pin arrangement configured for **Part-Winding (Y/YY) starting**. This setup significantly reduces the high inrush starting current (dropping it from 220 A down to 135 A), preventing voltage dips in the local power grid during startup.

Additionally, the factory-installed **Kriwan INT60 motor protection module** connects directly to embedded PTC thermistors within the motor windings. If the internal temperature exceeds safe operating thresholds or experiences a phase failure, the control circuit cuts power instantly, protecting your high-value asset from catastrophic motor burnout.



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