

CT-17-700.GB

Highly compact, high-speed, electrically driven radial turbo compressor with gas bearing for the circulation and compression of various gases and refrigerants.

- High-speed gas bearings for oil-free operation
- Lowest ratio of volume and weight versus pressure and mass flow due to highest speeds
- Aerodynamic and electromagnetic optimization for highest total efficiency
- Integrated temperature measurement for overload protection
- Compatible to converter CC-120-1000 or CC-230-3500

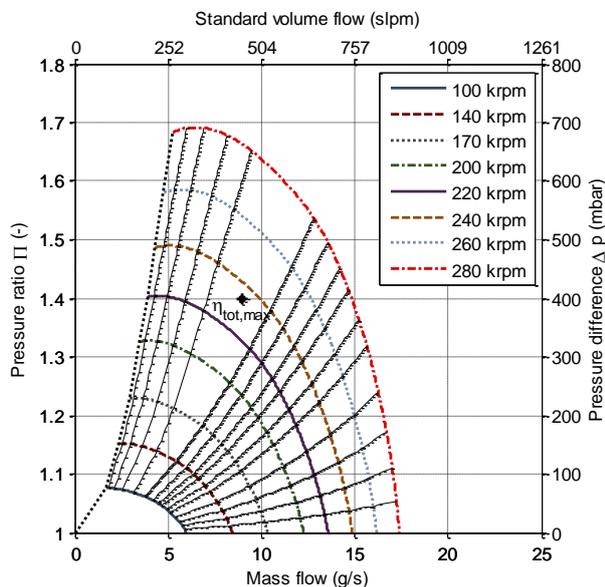


Specifications turbo compressor

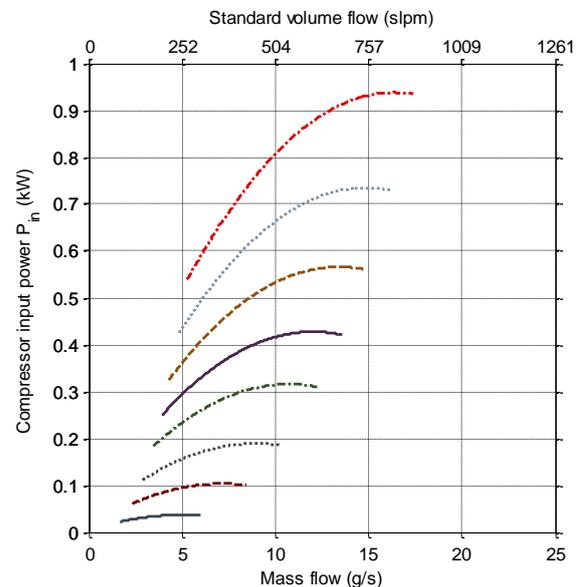
Maximum pressure ratio	1.65
Maximum mass flow	17 g/s
Isentropic overall efficiency ¹	58%
Maximum speed	280,000 rpm
Maximum electric motor power demand	700 W
Weight	1.5 kg

Compressor maps: overpressure operation

Pressure ratio versus mass flow



Compressor input power versus mass flow

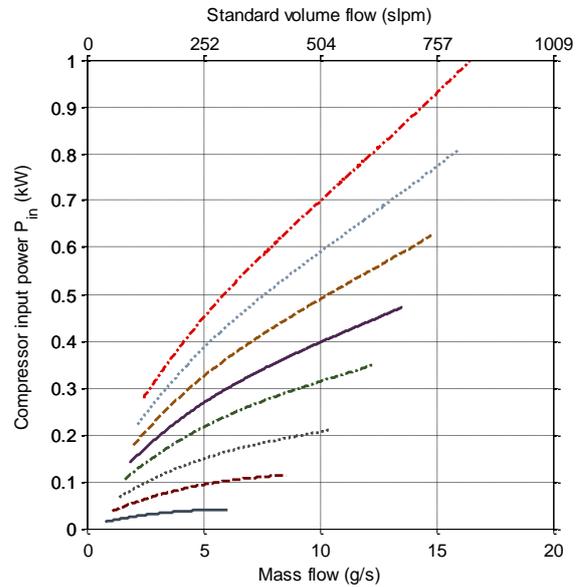
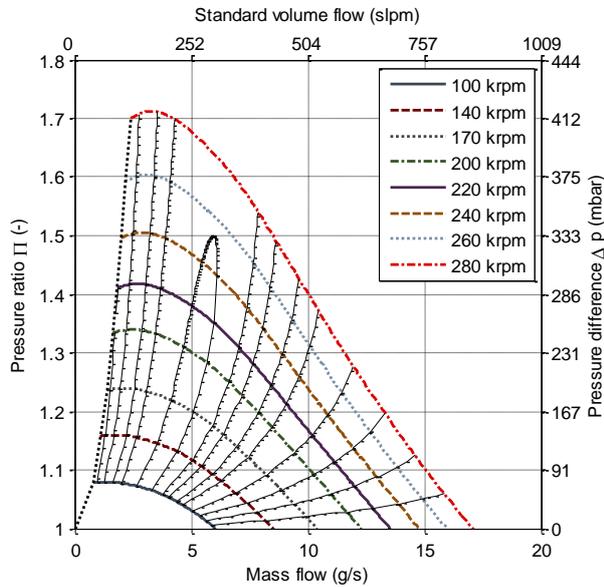


¹ Isentropic overall efficiency including aerodynamic, motor and bearing efficiency

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Compressor maps: vacuum operation

Pressure ratio versus mass flow Compressor input power versus mass flow



Order codes: CT-17-700.GBxx.Wxx

Bearing options GBxx

- GB01 Air bearing at ISO 8778 inlet conditions
- GB99 Custom specific gas bearing (inlet conditions and/or gas etc.)

Winding options Wxx

- W01 Standard winding

Ordering information Article number

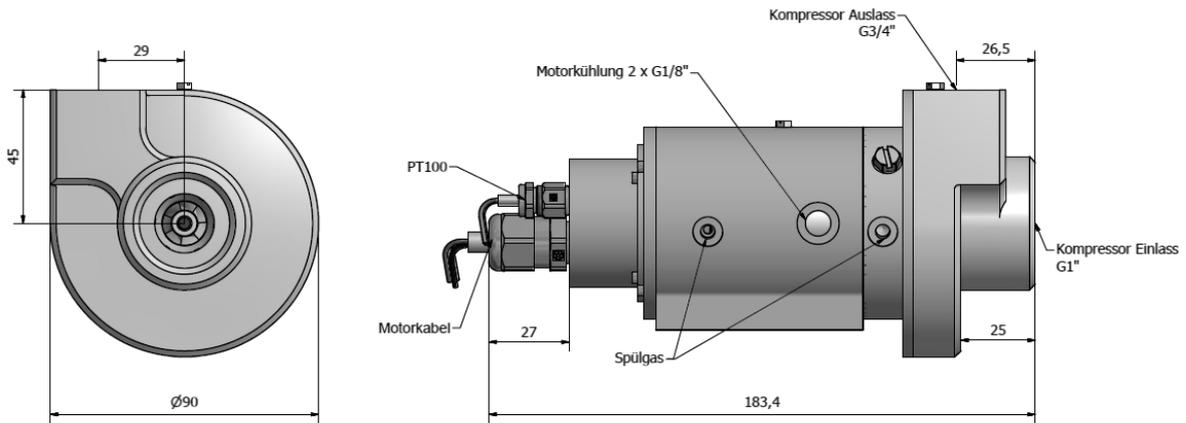
CT-17-700.GB01.W01 with CC-120-1000 (40 – 120 VDC)	4040001
CT-17-700.GB01.W01 with CC-230-3500 (230/110 VAC)	4040002

Accessories

- Damper set for mounting in mobile application

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Drawing (in mm)



The specifications and compressor maps in this document for



- an overpressure operation refers to air (ISO 8778) at the inlet of the compressor with: temperature: $T = 20^{\circ}\text{C}$, absolute pressure: $p_{in} = 1 \text{ bar}$.
- a vacuum operation refers to air (ISO 8778) at the inlet of the compressor with: temperature: $T = 20^{\circ}\text{C}$, and a compressor absolute outlet pressure: $p_{in} = 1 \text{ bar}$.



Depending on custom specific operation conditions such as e.g. gas inlet pressure and temperature, humidity, cooling conditions, the operation in environmental conditions with vibrations and/or depending on the combination of the compressor and the corresponding Celeroton converter, the compressor maps shown in this document may be different or may have additional limitations.

For technical details and further information, please refer to the user manual or contact Celeroton directly.