

CT-NG-Series

CT-NG-2000.GB

Highly compact, high-speed, electrically driven radial turbo compressor with gas bearing for the circulation and compression of Helium (other noble, inert gases or refrigerants on request).

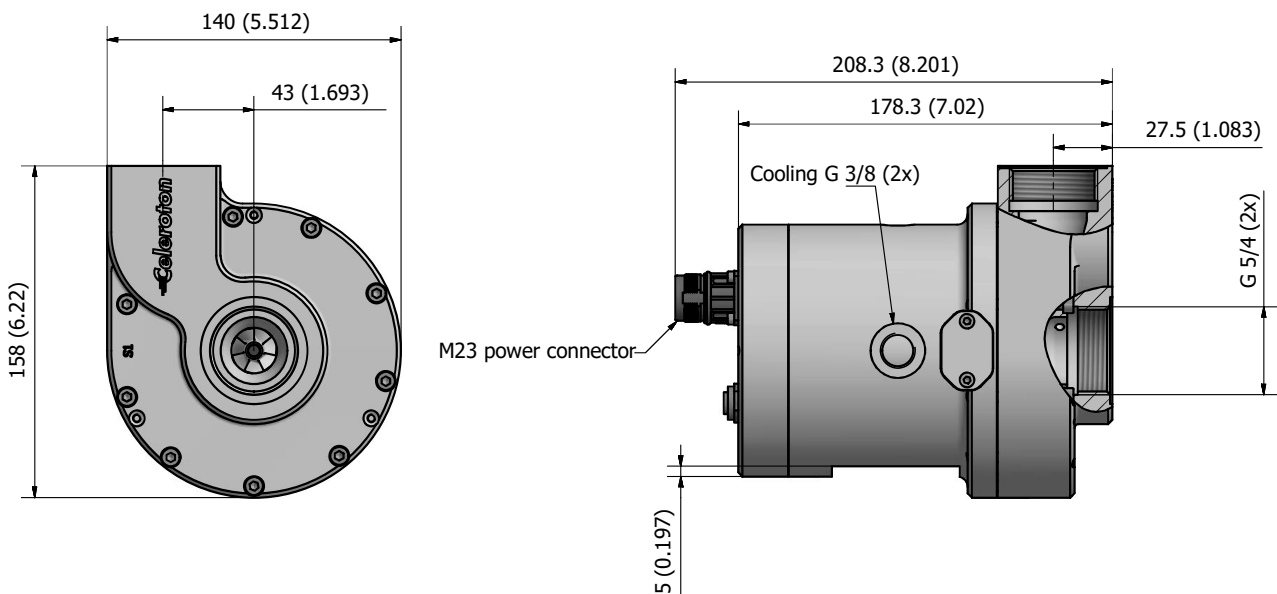
- High-speed gas bearings for oil free and contamination free operation
- Lowest ratio of volume and weight versus pressure and mass flow due to highest speeds
- Aerodynamic and electromagnetic optimization for highest total efficiency
- Compatible to converter CC-230-3500
- Integrated temperature measurement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



Specifications turbo compressor (Inlet conditions: Helium, 1.013 bar abs., 20°C)

Model	CT-NG-2000.GB
Maximum pressure ratio	1.17
Maximum mass flow	18.5 g/s
Maximum isentropic efficiency η_{is}^1	>65 %
Maximum speed	240,000 rpm
Maximum shaft power demand	2 kW
Weight (excl. cable)	6.7 kg
Cooling	Liquid cooling (water/glycol, 20-30 °C, >4 l/min)

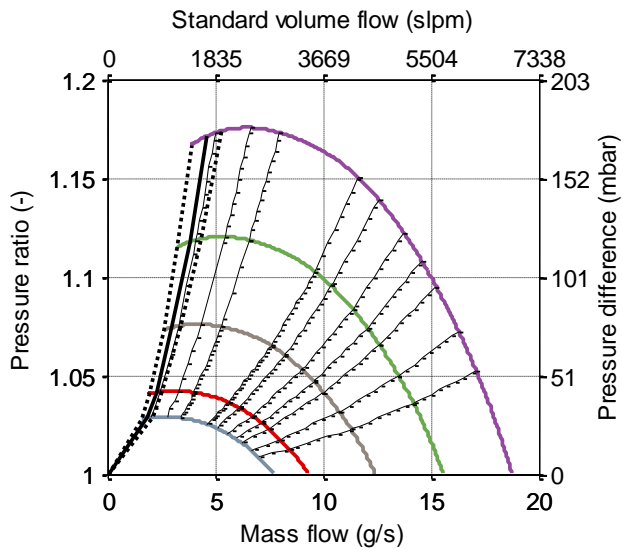
Drawing in mm (inch)



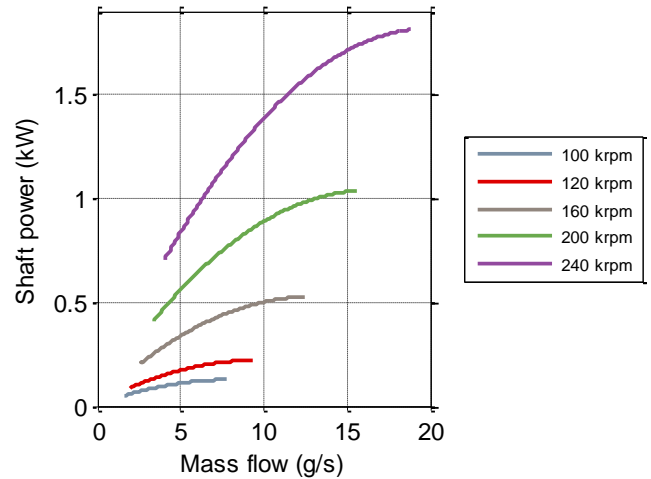
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Compressor map: overpressure operation

Pressure ratio versus mass flow



Compressor input power versus mass flow



The specifications and compressor maps in this document for overpressure operation refer to helium at the inlet of the compressor: temperature: $T = 293.15 \text{ K} = 20^\circ\text{C}$, absolute pressure: $p_{in} = 1.013 \text{ bar abs}$.



Depending on custom specific operation conditions such as process gas, different inlet pressure and temperature, 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.

Order codes: CT-NG-2000.GB.NGxx.

Process gas option NGxx	
NG01	Helium at $T = 293.15\text{ K} = 20^\circ\text{C}$ and $p_{in} = 1.013\text{ bar abs.}$
NG99	Custom specific inlet conditions.

¹ $\eta_{tot} = \eta_{is} * \eta_m$: isentropic overall efficiency,
 η_{is} : isentropic compressor efficiency,
 η_m : motor efficiency

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