CT-25-10000-Ar.GB

Highly compact, lightweight and electrically driven radial turbo compressor with gas bearing for the circulation of Argon.

- Ideal for inert gas recirculation in additive manufacturing
- High-speed gas bearings for oil and contamination free operation
- Aerodynamic and electromagnetic optimization for highest total efficiency
- Lowest ratio of volume and weight versus pressure and mass flow due to highest speeds
- Supplied with inverter CC-550-7500

Specifications turbo compressor	
Maximum pressure ratio	2.14
Maximum mass flow at standard conditions	111 g/s (4060 l/min)
Maximum isentropic overall efficiency[1]	64%
Maximum speed	130,000 rpm
Acceleration time[3]	<1.8 s
Maximum compressor input power demand	7 kW
Maximum inlet pressure	10 bara
Weight	8.8 kg (incl. cable)
Dimensions (L x W x H)	303 x 154 x 193 mm

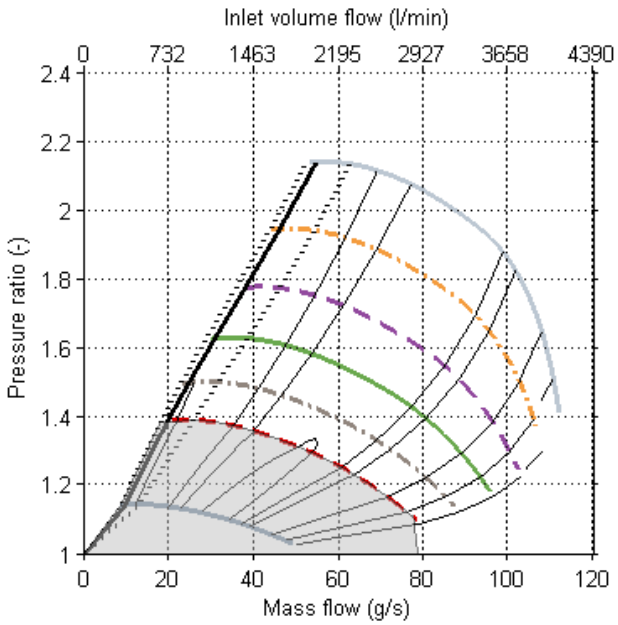
Cooling	
Liquid	50%/50% water glycol mixture
Coolant temperature	20 – 60 °C
In-/Outlet connector type	According to SAE J1231 430192
Tube ID	10 mm

[1] Isentropic overall efficiency including aerodynamic, motor and bearing efficiency

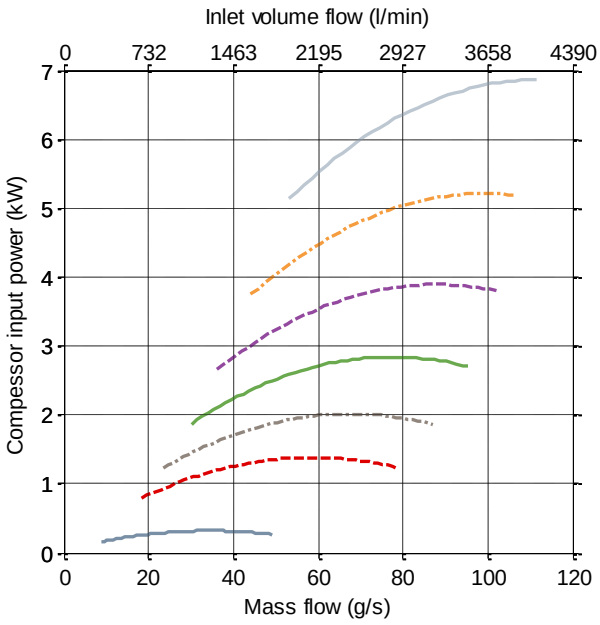
[3] 20 to 80% of maximum speed

Compressor map: overpressure operation in Argon

Pressure ratio versus mass flow



Compressor input power versus mass flow

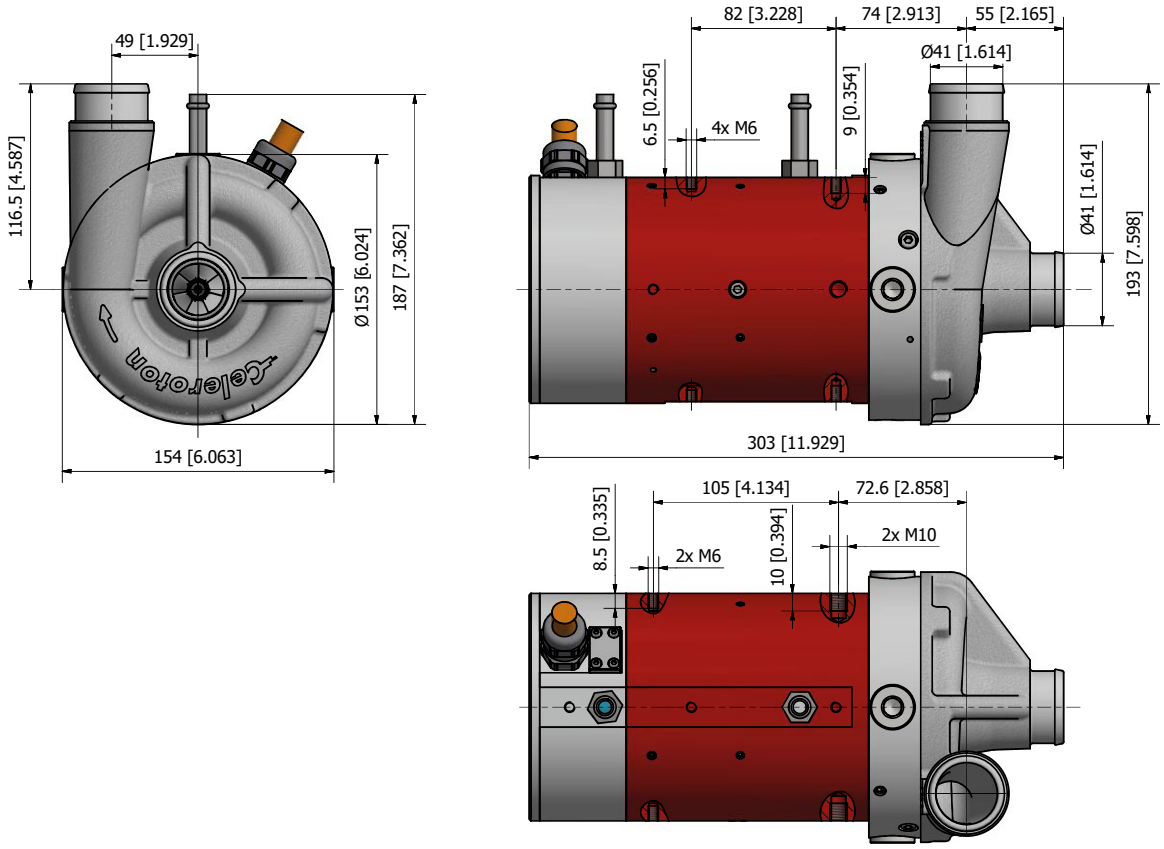


Order codes: CT-25-10000-Ar.GBxx

Bearing	Inlet pressure range [bara]	Max speed [krpm]
GB01 CT-25 Standard	1 – 1.5	130 (blue line in compressor map)
GB01 CT-25 Standard	1.5 – 2	80 (red dashed line in compressor map)
GB99 Adapted Bearing 1	1 – 4	80 (red dashed line in compressor map)
GB99 Adapted Bearing 2	3 – 10	80 (red dashed line in compressor map)

Ordering information	Article number
CT-25-10000-Ar.GBxx	Contact Celeroton

Drawing in mm [inch]



The specifications and compressor maps in this document refer to argon at the inlet of the compressor: temperature: $T = 20°C$, absolute pressure: $p_{in} = 1\ bara$.
Pressure dependent maximum speed for different bearing options given in table above. Please note that different absolute pressure shift compressor map horizontally.

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.

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