CT-1011-H2

Highly compact, high-speed, electrically driven radial turbo compressor with gas bearing for the circulation and compression of a mixture of nitrogen, hydrogen and water (vapor).

- 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 frequency converter CC-230-3500

Specifications turbo compressor	
Maximum pressure ratio	1.16
Maximum mass flow	31 g/s
Maximum isentropic overall efficiency[1]	65 %
Maximum speed	180,000 rpm
Maximum compressor input power	950 W
Weight	< 15 kg
Dimensions (L x W x H)	303 x 154 x 193 mm (11.9 x 6.1 x 7.6 inch)

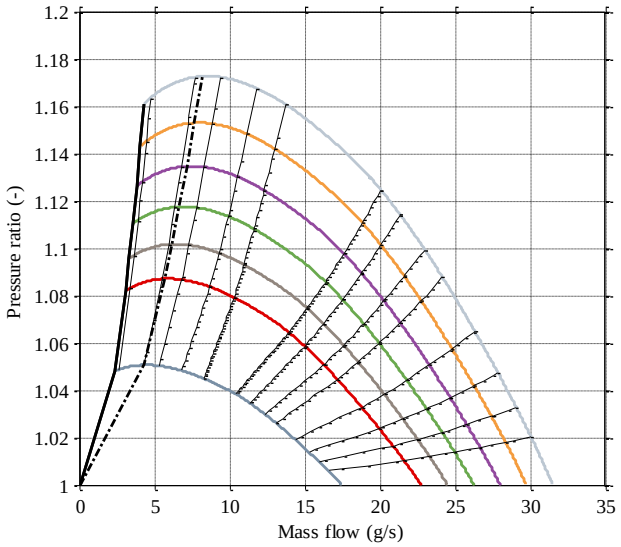
Cooling	
Coolant	50%/50% water glycol mixture
Coolant temperature	75 °C
In-/Outlet connector typed	G 3/8

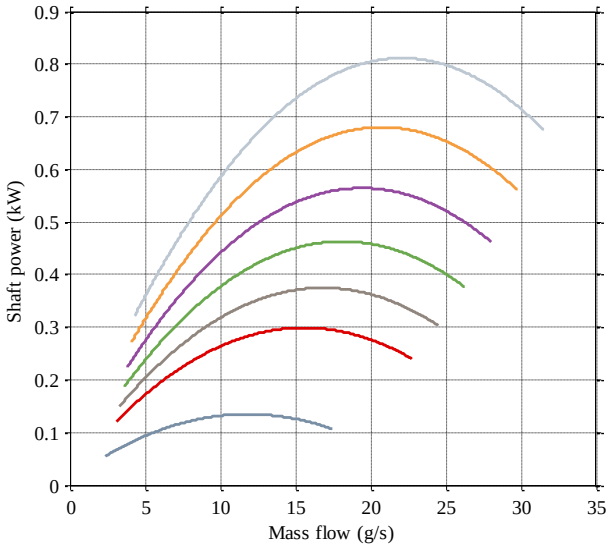
Electrical interface	
Connection type	Motor cable with inline circular connector
Connector type	Hummel M23 TWILOCK cable connector

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

Compressor map:

Pressure ratio versus mass flow	Compressor shaft power versus mass flow

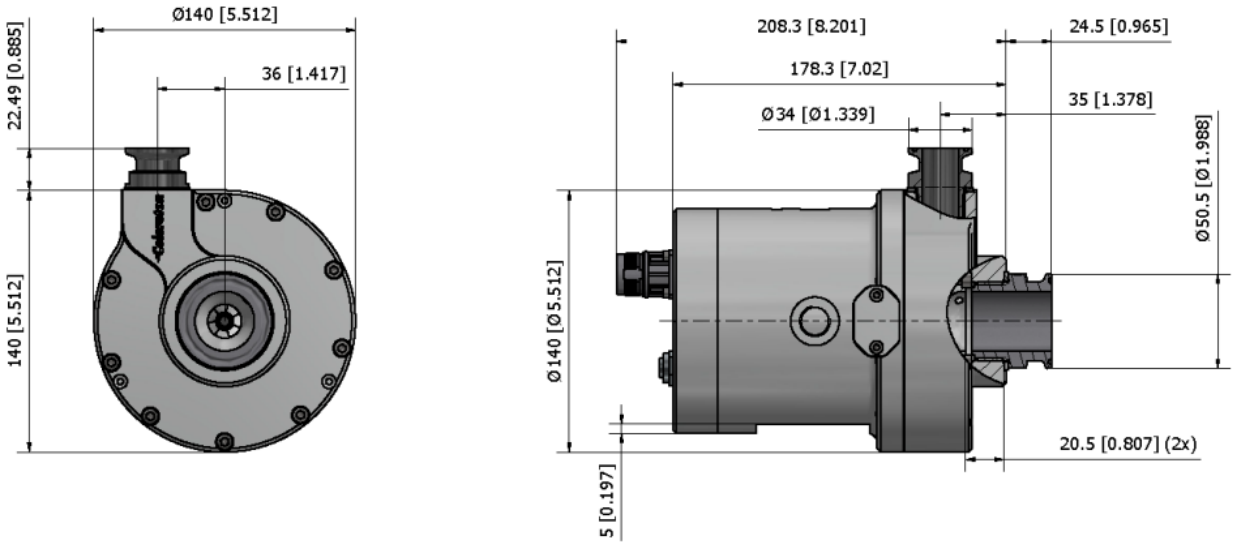




Order codes: CT-1011-H2

Ordering information	Article number
CT-1011-H2	Contact Celeroton
CT-1011-H2 with CC-230-3500	Contact Celeroton

Drawing in mm [inch]



i	The specifications and compressor maps in this document refer to a mixture of 55 mol-% Hydrogen, 31 mol-% Nitrogen and 14 mol-% water (vapor) at the inlet of the compressor: temperature: $T = 75\ °C$, absolute pressure: $p_{in} = 2.25\ bara$.
i	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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