CT-14-1000

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

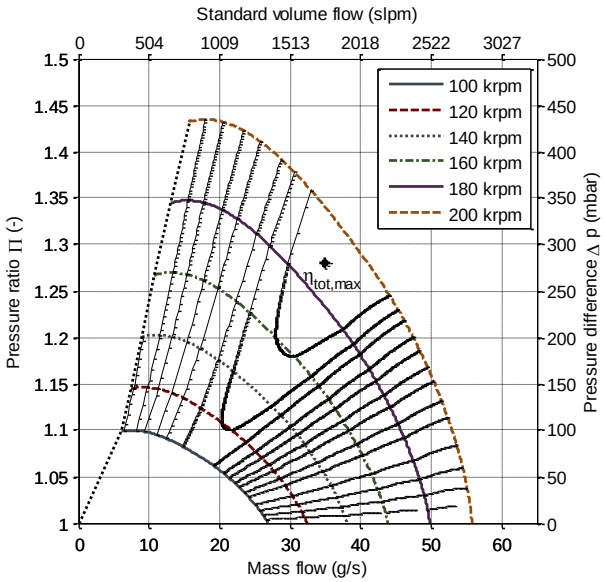
- Lowest ratio of volume and weight versus pressure and mass flow due to highest speeds
- Aerodynamic and electromagnetic optimization for highest total efficiency
- High-speed ball bearings with permanent lubrication
- Compatible to converter CC-230-3500 or CC-100-1000
- Integrated temperature measurement for overload

Specifications turbo compressor

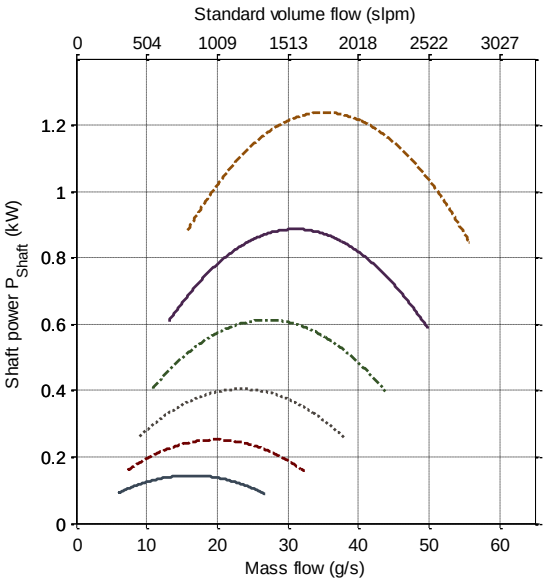
Maximum pressure ratio	1.43
Maximum mass flow	55 g/s
Maximum overall efficiency η_{tot} [1]	66%
Rated power	1,000 W
Rated speed	200,000 rpm
Weight	700 g

Compressor maps: overpressure operation

Pressure ratio versus mass flow



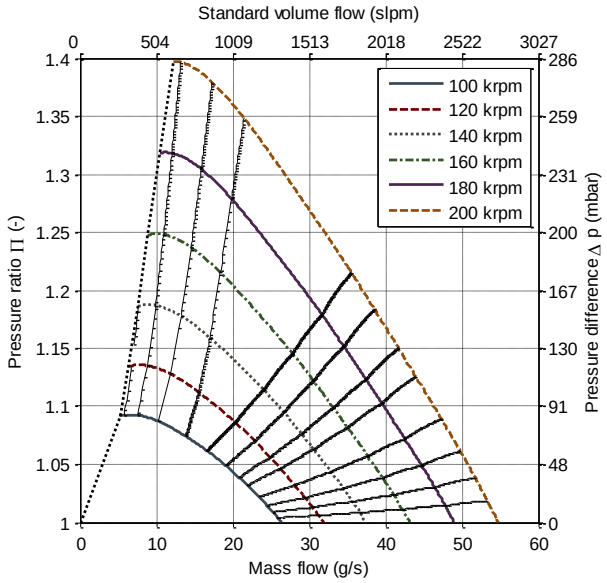
compressor input power versus mass flow



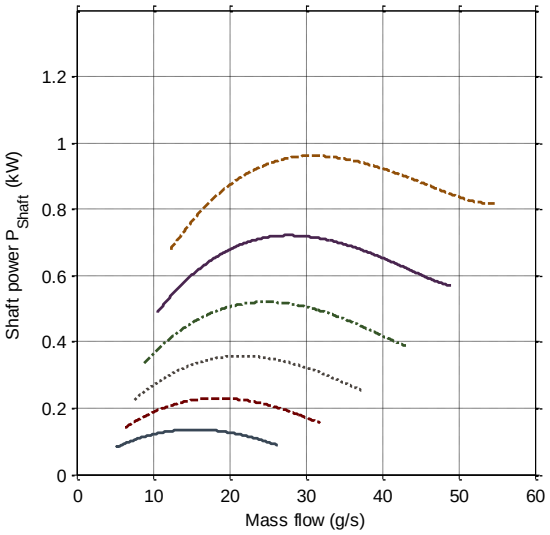
[1] Isentropic overall efficiency including aerodynamic, motor and bearing efficiency

Compressor maps: vacuum operation

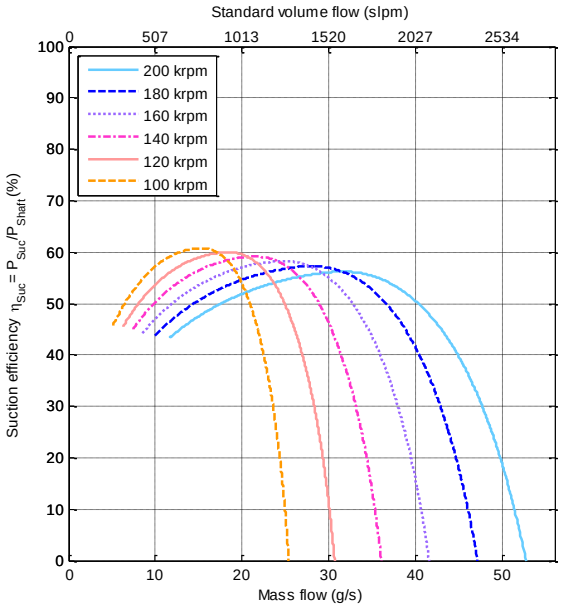
Pressure ratio versus mass flow



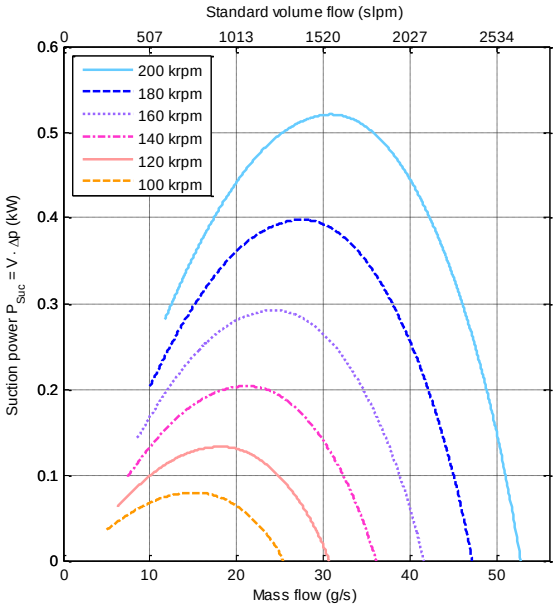
compressor input power versus mass flow



Suction efficiency versus mass flow



Suction power versus mass flow



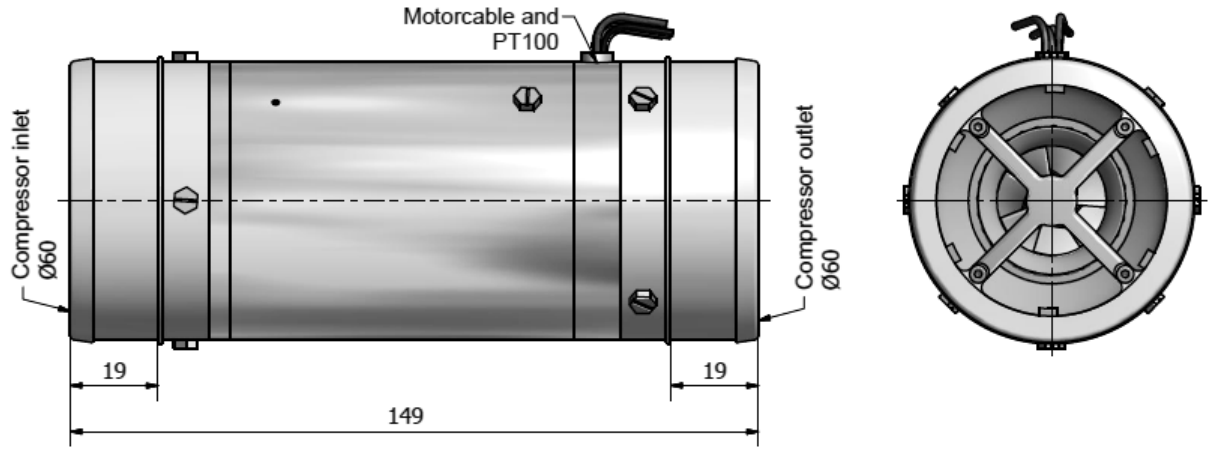
Order codes: CT-14-1000.Bxx.Wxx

Bearing options Gxx	
B00	Standard ball bearing
B01	Vacuum ball bearing
B99	Custom specific ball bearing (inlet conditions and/or gas, etc.)

Winding options Wxx	
W01	Standard winding for converter CC-230-3500
W02	Winding for converter CC-100-1000 (limited performance)

Ordering information	Article number
CT-14-1000.B00.W01	4010003
CT-14-1000.B00.W02	4010004
CT-14-1000.B01.W01	4010005
CT-14-1000.B01.W02	4010006
CT-14-1000.B00.W01 with CC-230-3500 (110/230 VAC)	4040024
CT-14-1000.B01.W01 with CC-230-3500 (110/230 VAC)	4040026
CT-14-1000.B00.W02 with CC-100-1000(24 - 100 VDC)	4040027
CT-14-1000.B01.W02 with CC-100-1000 (24 - 100 VDC)	4040028

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

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.

Celeroton AG | Industriestrasse 22 | 8604 Volketswil | Switzerland
T: +41 44 250 52 20 | F: +41 44 250 52 29 | info@celeroton.com