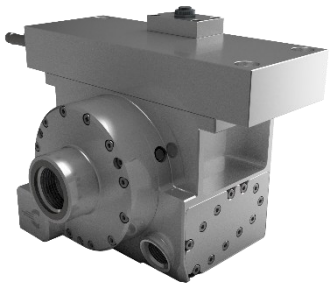
# CT-1012-O2

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

- 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 | 1.26 |
| Maximum mass flow | 22 g/s |
| Maximum isentropic overall efficiency[1] | 55 % |
| Maximum speed | 180,000 rpm |
| Maximum compressor input power | 460 W |
| Weight | 8 kg |
| Dimensions (L x W x H) | 182 x 277 x 175.2 mm (7.17 x 10.9 x 6.9 inch) |

| Cooling | |
|---|---|
| Coolant | 50 %/50 % water glycol mixture |
| Coolant temperature | 30 °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

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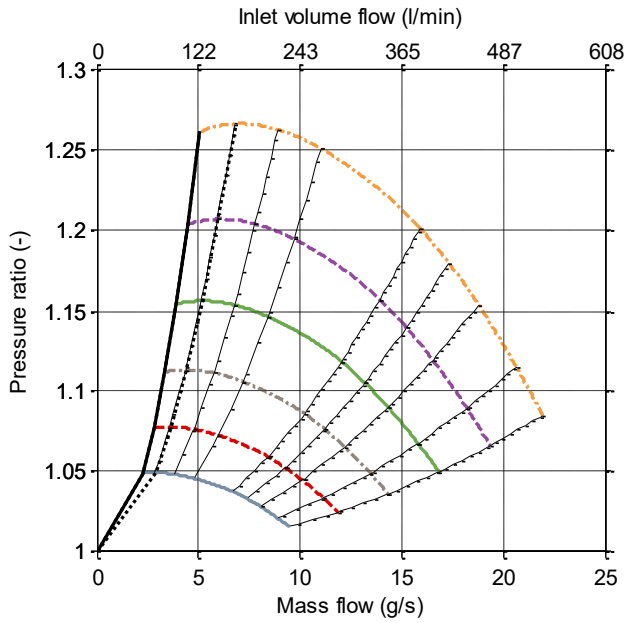
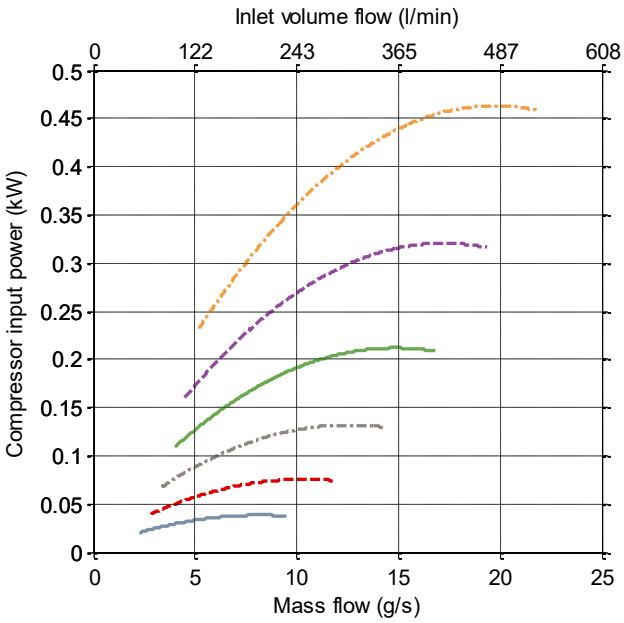
## Compressor map

| Pressure ratio versus mass flow | Compressor input power versus mass flow |
|---|---|




**Order codes: CT-1012-O2**

| Ordering information | Article number |
|---|---|
| CT-1012-O2 | Contact Celeroton |
| CT-1012-O2 with CC-230-3500 | Contact Celeroton |

Order Codes: option

| Ordering information | Article number |
|---|---|
| CT-1012-O2 drainage piping | Contact Celeroton |

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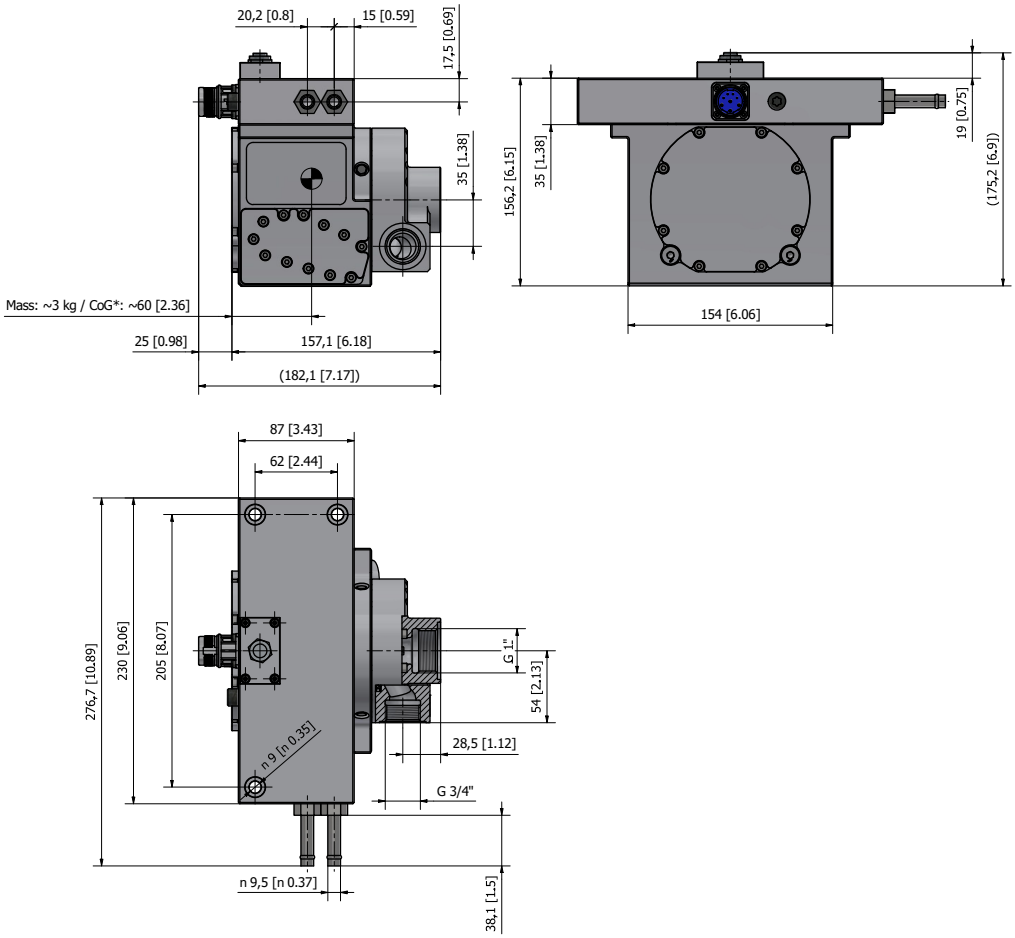
## Drawing in mm [inch]

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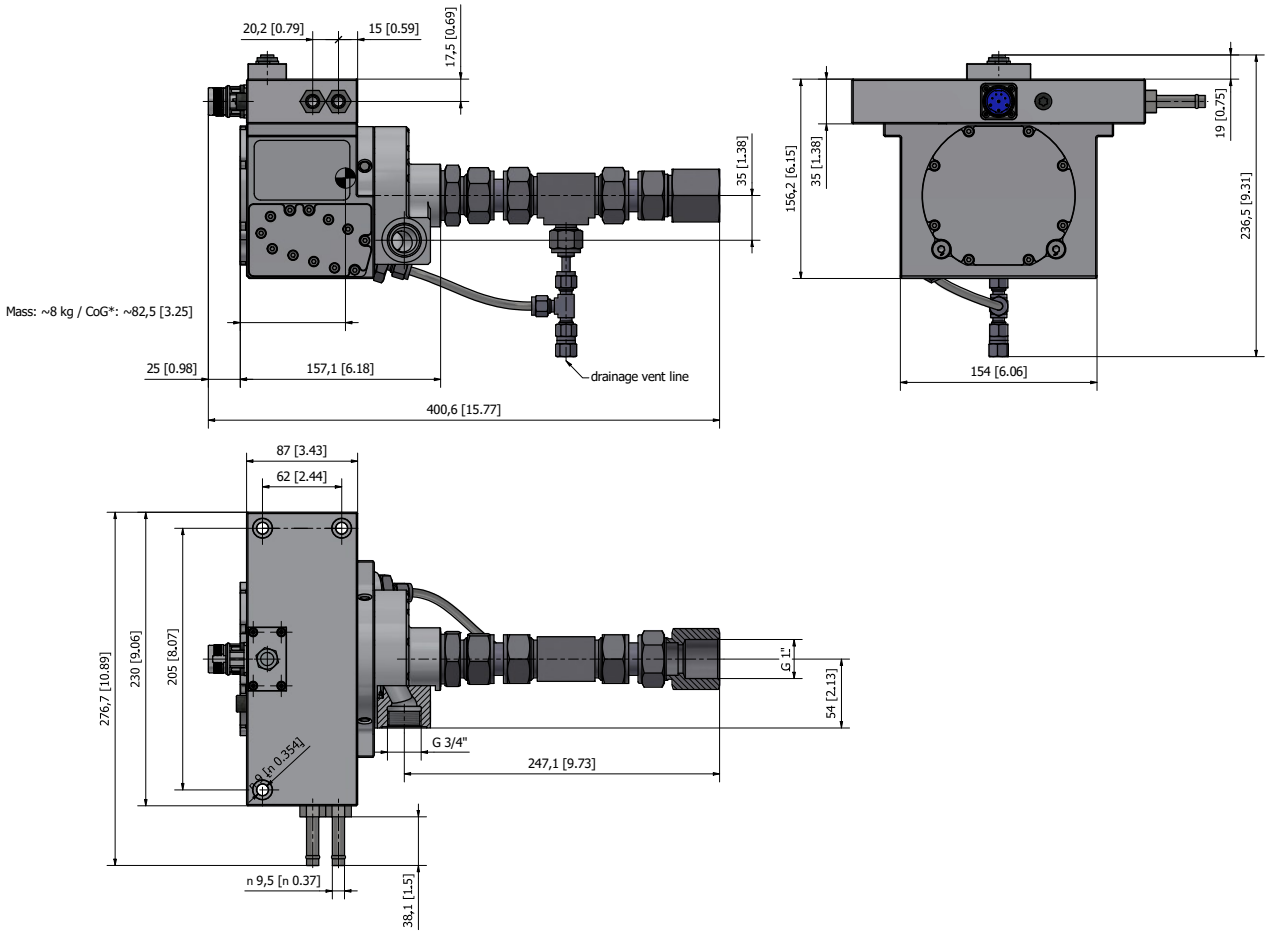
## Drawing with option drainage piping in mm [inch]




| | |
|---|---|
| *i* | The specifications and compressor maps in this document refer to a mixture of 50 mol-% oxygen and 50 mol-% nitrogen at the inlet of the compressor: temperature: $T = 20\ °C$, absolute pressure: $p_{in} = 2.0\ bara$. |
| *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.<br>For technical details and further information, please refer to the user manual or contact Celeroton directly. |

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