Burckhardt Compression

Standard high-pressure compressors

Compact package for demanding applications



Compressors for a Lifetime

Burckhardt Compression

Global technology leader in the reciprocating compressor world

Burckhardt Compression is one of the worldwide market leaders in the field of reciprocating compressors and the only manufacturer that covers a complete range of reciprocating compressor technologies. Its customized compressor systems are used in the upstream oil & gas, gas transport and storage, refinery, chemical, petrochemical and industrial gas sectors.

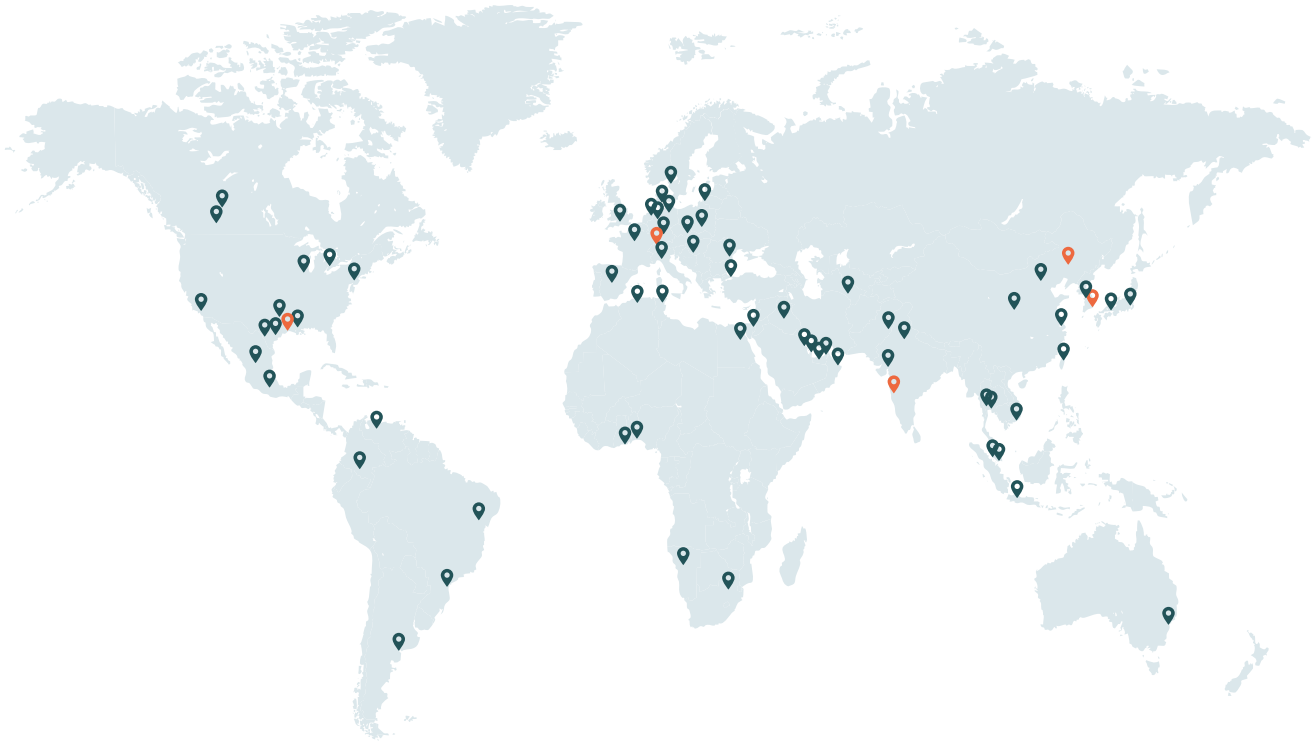
Burckhardt Compression's leading technology, high-quality compressor components and the full range of services help customers to minimize life cycle costs of their reciprocating compressor systems around the world. Since 1844 its highly skilled workforce has crafted superior solutions and set the benchmark in the gas compression industry.

Worldwide presence

- Worldwide 24/7 service network
- Whenever you need support, you get it

In-house expertise

With hundreds of references, Burckhardt Compression has continuously improved the technology and components of Standard-high pressure compressors. Thanks to in-house engineering and manufacturing the high quality equipment and components guarantee longest MTBO (mean time between overhaul).



Burckhardt Compression Manufacturing/Assembly

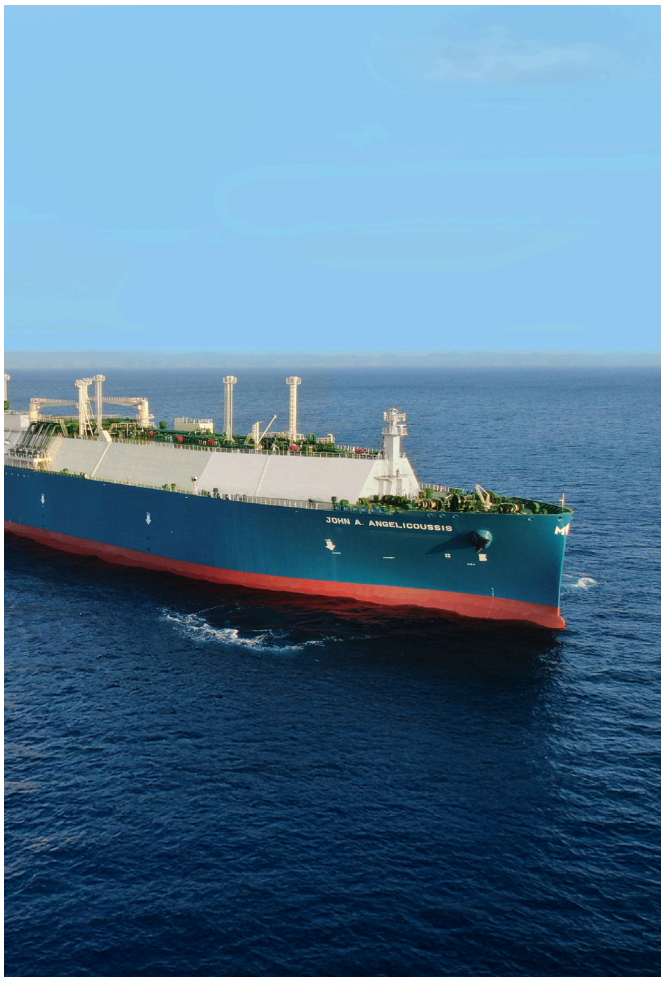
Burckhardt Compression Subsidiaries, Associates and Service Centers

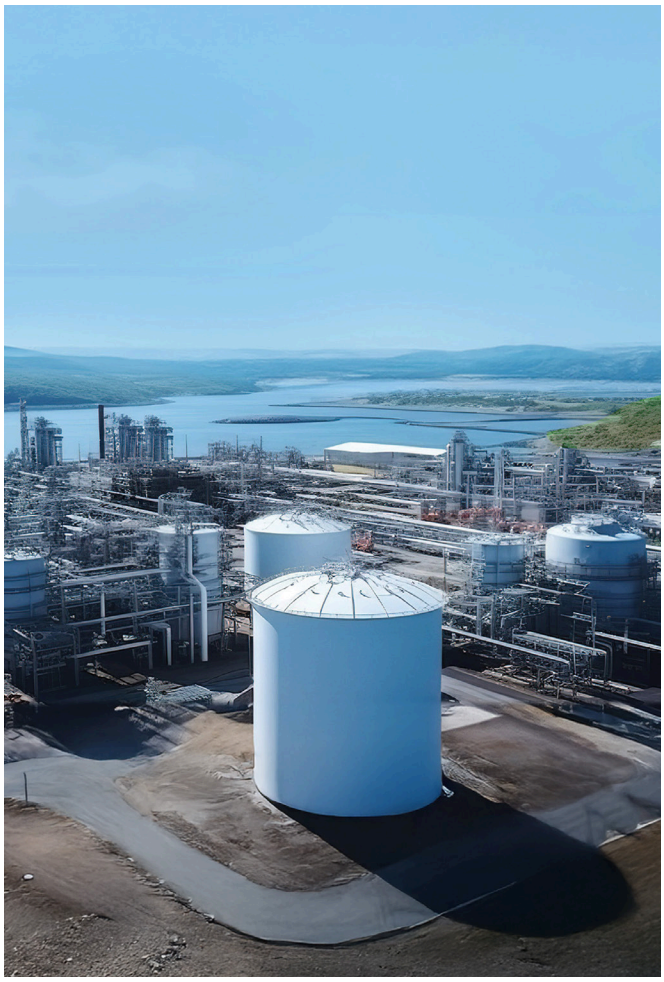
Gas transport & storage

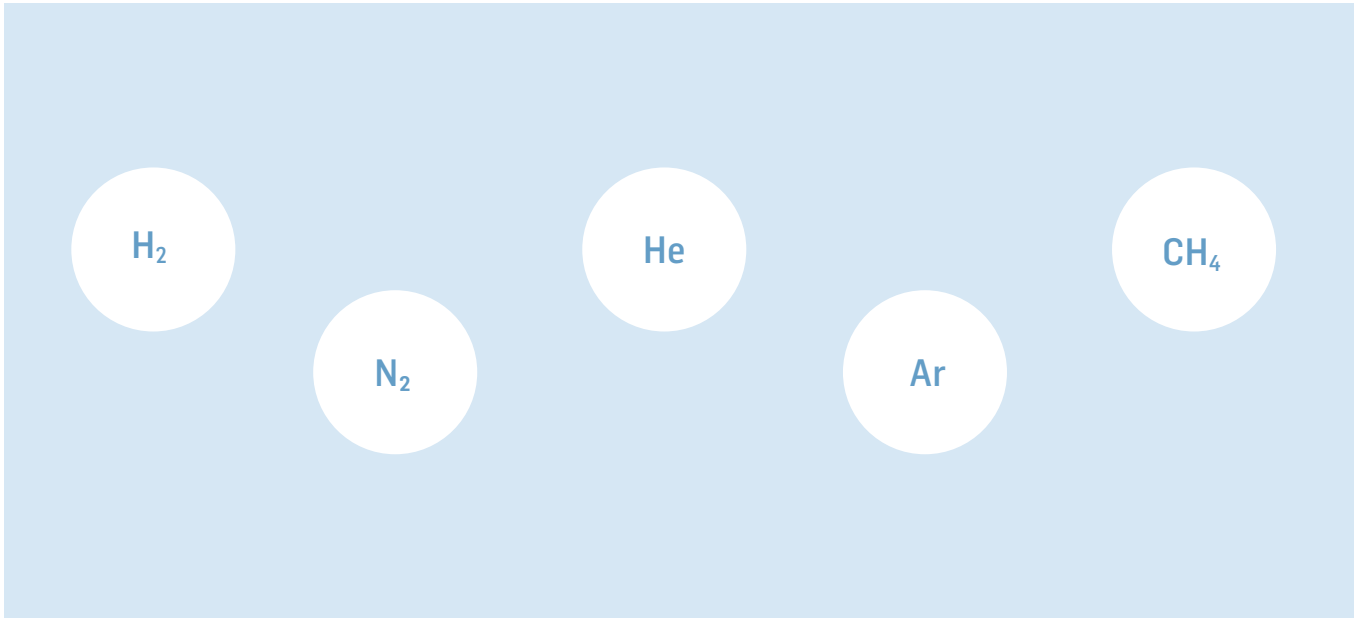
- BOG handling
- Fuel gas injection (dual fuel engines)
- Biogas processing
- NGV/CNG refuelling stations
- Seismic research

Industrial gases

- Air compression and separation
- Bottling plants for industry gases
- Hydrogen
- Nitrogen
- Helium recovery systems
- Argon
- Natural gas
- Electrolysis plants







Hundreds of installations

In a wide range of applications



CU compressor meeting high safety standards in a hydrogen bottling plant

Standard high-pressure compressor

Compact package for demanding applications

Standard high-pressure compressors from Burckhardt Compression guarantee highest operational efficiency. Thanks to leading technology and in-house manufactured components, our customers can put their full trust in our highly reliable compressor systems.

The variety of gases handled by our Standard high-pressure compressor, which includes critical and extremely light gases, makes it a powerful and unique solution.

No gas loss for safe and economic operation
- No gas loss to the atmosphere, gas-tight even for very light gases

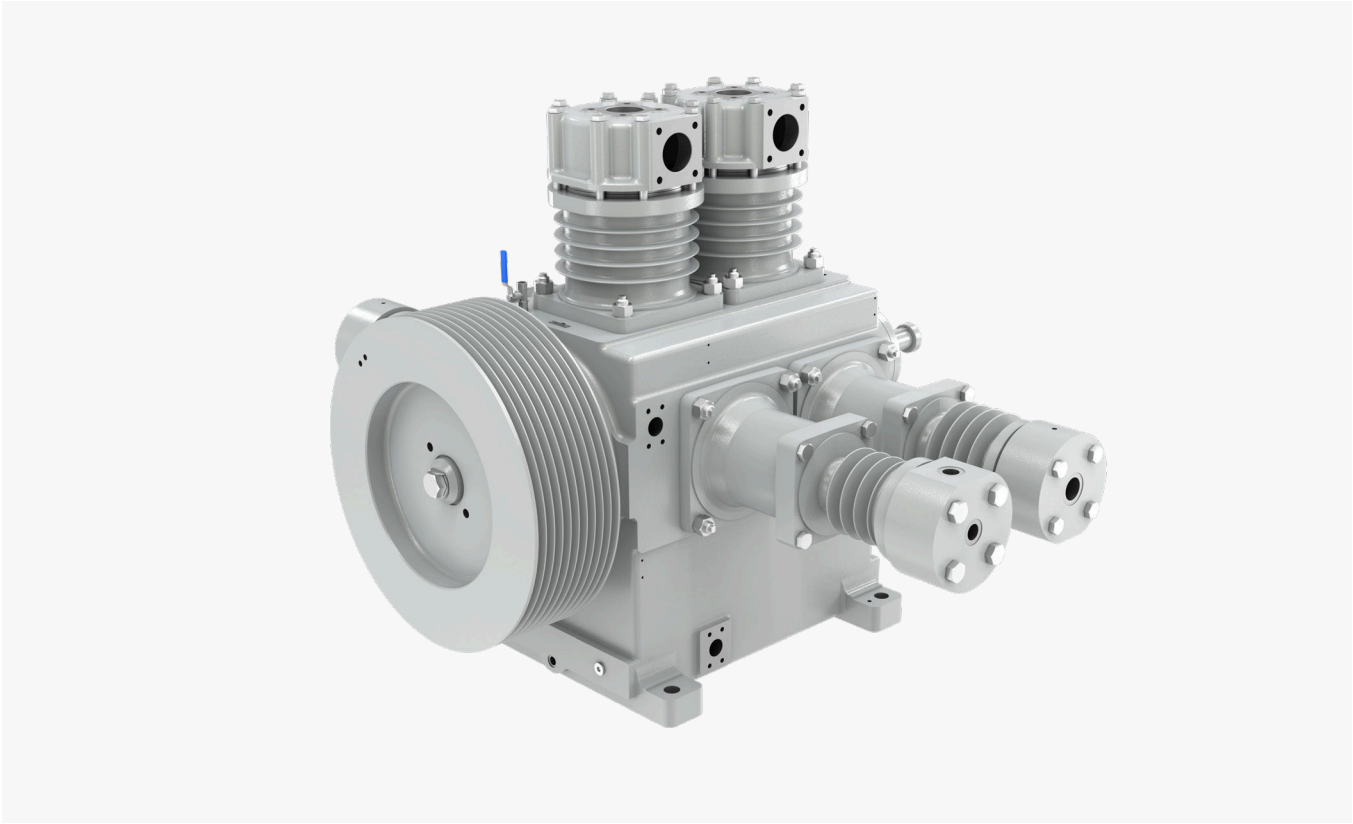
Higher efficiency
- Low pressure ratio per stage
- Compression up to six stages for high pressure

In-house component manufacturing
- High quality of components, developed and manufactured in-house, ensures longest MTBO and highest availability

Manifold benefits
- Trunk piston design for low spare part consumption
- Selection of materials, technology
- Handling of critical gases, many installations
- Reliable self-standing, small footprint

Certifications

Standard high-pressure compressors can be supplied with the following certifications:
- MD, PED, ATEX and CE
- KHK for Japanese market
- Gost and RTN
- Marine standard (DNV/GL, LR or equivalent)
- Others

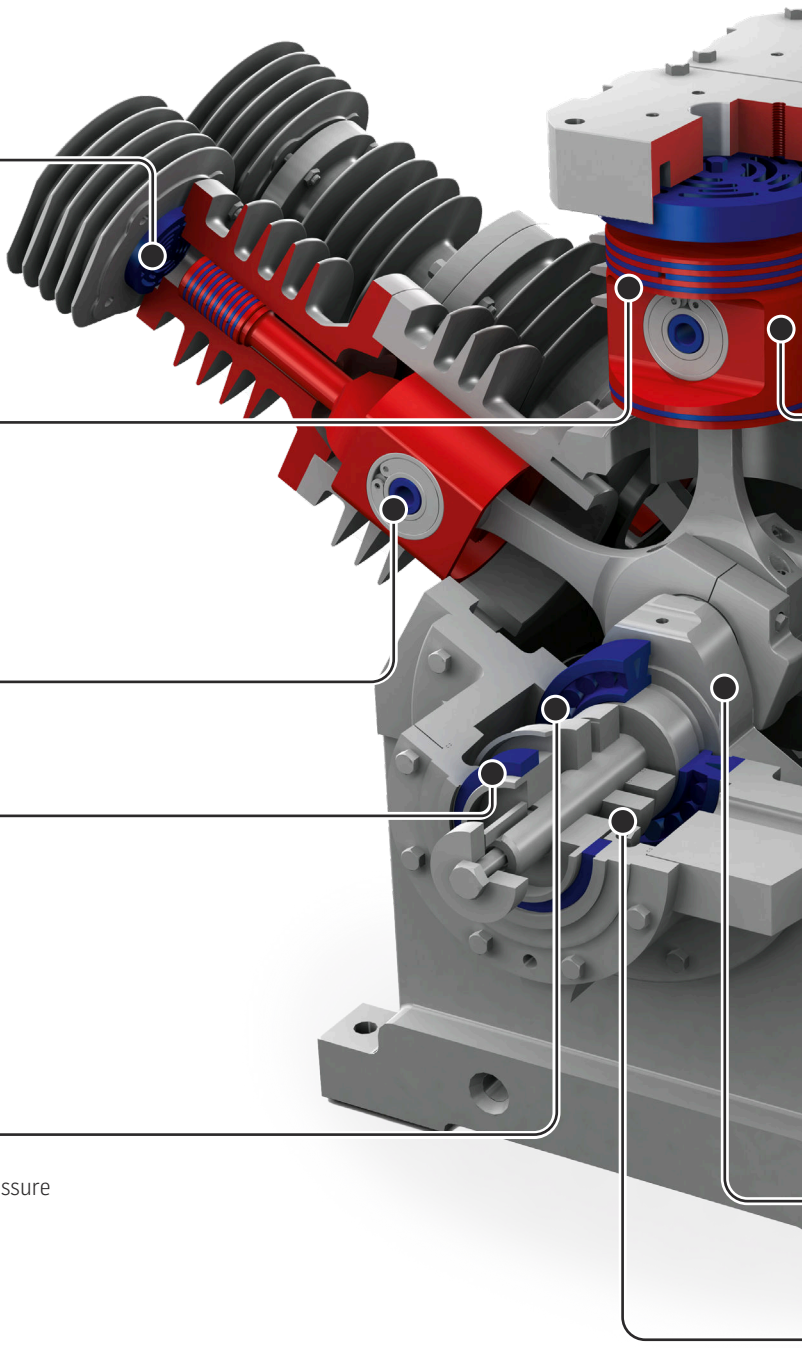


Design features

Dependable compressor for demanding applications

Key compressor components

For best performance and longest lifetime



Concentric valves

- Combined suction and discharge
- Compact in size
- Easy to assemble and dismantle
- Metallic /non-metallic internals

Piston rings

- Specially designed for high pressure
- Metallic for optimum cylinder lubrication and to limit the oil content in discharge gas
- Non-metallic for special cases

Small end bearings

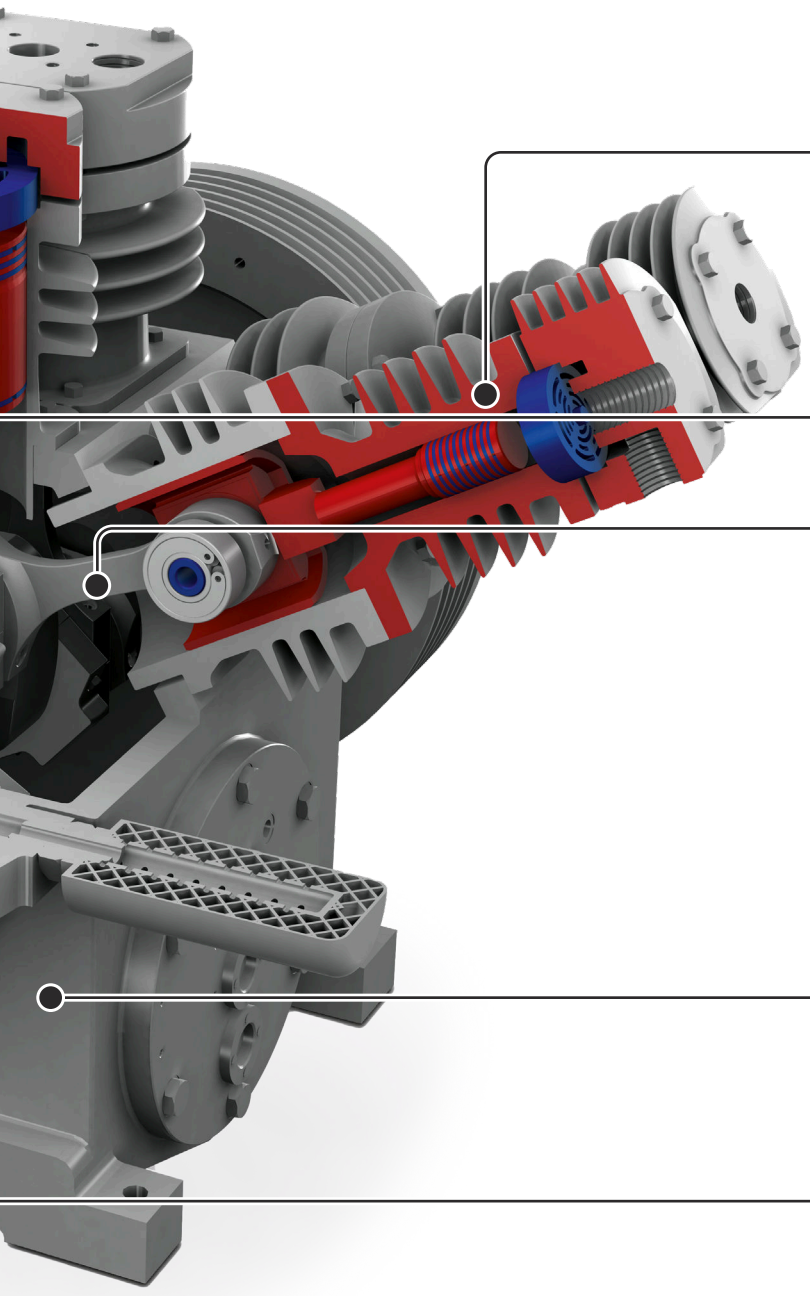
- Cylindrical roller bearings/sleeve bearings with high reliability

Seals

- Pressure-tight and pressure-relieved
- Oil seal for low suction pressure application
- Mechanical seal for high suction pressure application
- Available in two versions
- No gas loss

Main bearings

- Specially designed journal type for H_2 application with high suction pressure
- Angular contact double roller bearings for other applications



In-house designed and manufactured main parts

For highest reliability

Cylinder

- Single acting
- Specially coated for longer ring life
- No liner required
- Air-cooled or water-cooled

Piston

- Wide range of sizes

Connecting rod

- High strength material

Rugged design

For highest durability

Crankcase

- Robust and compact design
- Suitable for elevated suction pressure

Crankshaft

- Dynamically balanced

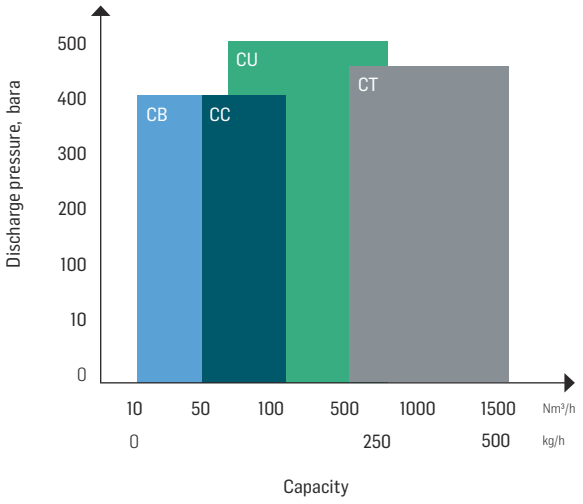
Lubrication pump

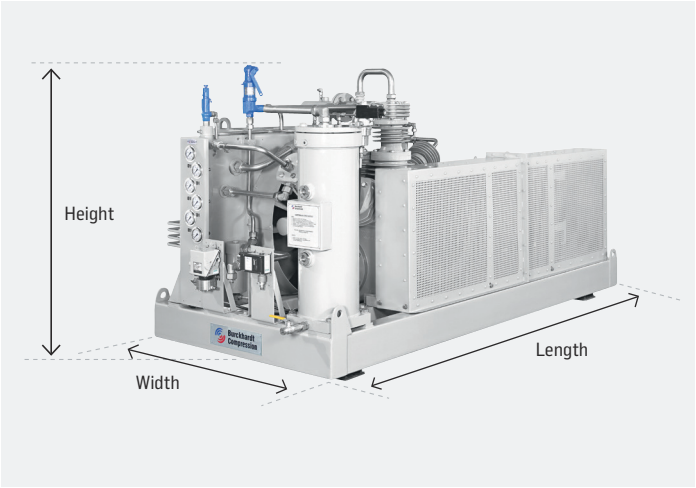
- Highly reliable
- Lobe type
- Crankshaft-driven

Performance range

A broad portfolio for all your applications

Performance range





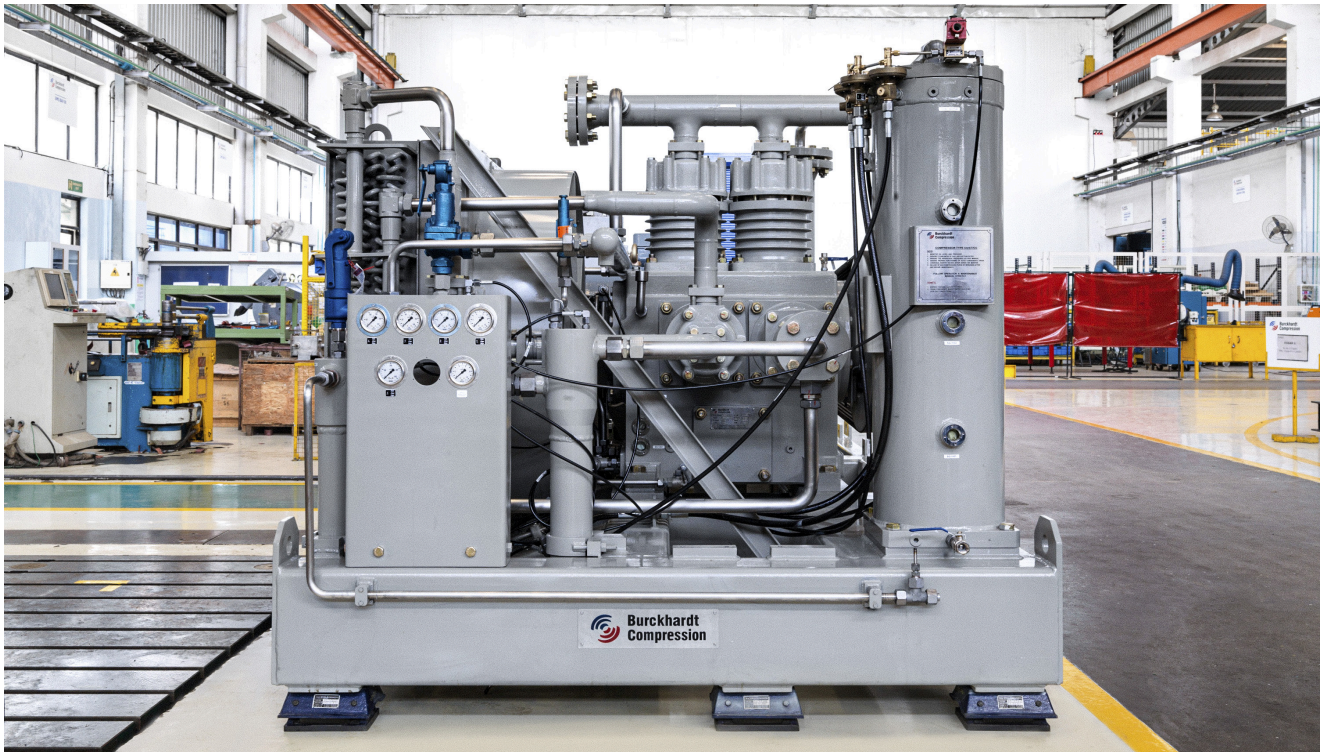
Technical data and dimensions

Type	Stroke mm	Max. speed rpm	Rated power kW	Width mm	Height mm	Length mm	Weight kg
Air-cooled							
CC	100	1'365	45	1'250	1'415	1'900	1'350
CU	100	1'230	110	1'200	1'430	2'600	1'800
CT	125	1'045	200	1'950	2'000	3'800	4'800
Water-cooled							
CB	80	1'500	18	800	800	1'700	500
CT	125	1'045	200	2'000	2'000	4'000	4'800

The above mentioned models are available from 2 to 6 stage compression, as per application suction parameters and according to compressor sizing

Compact package

Air-cooled or water-cooled

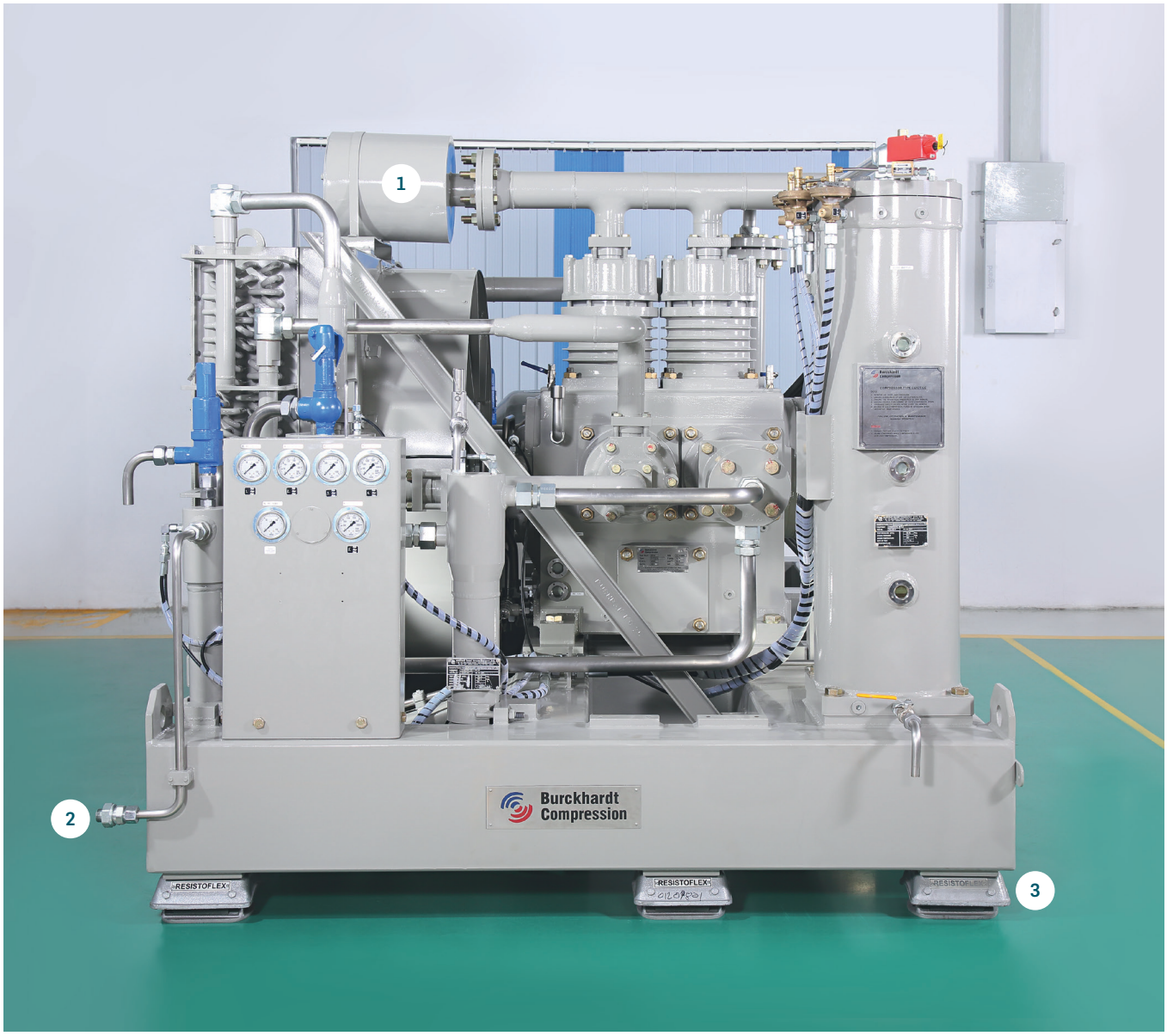


CT compressor package



CU compressor package

Ease of installation



CT compressor package ready to be connected

The compressors are supplied as skid-mounted, factory assembled packages. The compressor can be started just by connecting it to the inlet connection, outlet connection and power supply through a control panel.

Legends

1. Inlet connection
2. Outlet connection
3. Anti-vibration foot mounts

Complete solution package

Standard high-pressure compressors are standardized packages with a fixed configuration within four frames (CB, CC, CU and CT). With these four frames with standardized operating speeds and standardized scope of supply, we meet every customers' enquiries.

Unequaled service capabilities

For every reciprocating compressor

Requirements and situation analysis

- Process gas compressor condition change
- Damaged parts/failure
- Worn out parts
- Troublesome parts
- Improved design to replacement parts with excessive wear
- Precarious or unsafe operating condition
- Maintenance or spare parts logistic scheduling

Evaluation

- Root cause analysis/failure analysis
- Risk analysis
- Condition analysis
- Material analysis
- Feasibility studies
- FEA studies
- Non-destructive testing (NDT)
- Stock recommendations

Engineering

- On-site and/or in-house measurements of components
- Reverse engineering
- Retrofit
- Recalculation and dimensioning
- Engineering for repair procedures
- Material selection and sizing

Manufacturing

- Highest quality assurance
- In-house precision manufacturing of capital parts
- Fast track production upon request
- Reproduction (1:1 replacement incl. integration of latest quality standards)
- OEM guarantee

Field activities

- Extensive service network with our specialized field service engineers/ troubleshooters
- Dismantling/reassembly of parts
- Large parts stock
- Spare parts frame agreements
- Worldwide distribution and service center network
- Burckhardt e-shop™ spare parts identification and ordering system

Incorporating full documentation of required guidelines and standards (API 618/NACE etc.) incl. certification

Interaction with customer regarding specifications and scope of work

Burckhardt Compression

Services

The full range

- Burckhardt valve service
- Spare parts logistics
- Field service
- Technical support
- Revamps and upgrades
- Component repair
- Condition monitoring and diagnostics
- Training

Compressor components

Best performance and longest lifetime

- Compressor valves
- Redura® rings and packings
- Capacity control systems
- Capital parts
- Labyrinth piston compressor components
- Hyper/secondary compressor components

Your solution partner for the entire life cycle of compressor systems

- Design and engineering
- Bare compressors to turnkey solutions
- Service and components

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