



Hyper compressor components for every brand

Maximizing your plant availability

Compressors for a Lifetime

Engineering
excellence



You can trust our components - engineered for extreme pressures

Hyper compressors operate under extremely high pressures, requiring every component to withstand demanding conditions. As an OEM, we leverage decades of expertise to deliver high-quality components for any hyper compressor brand.

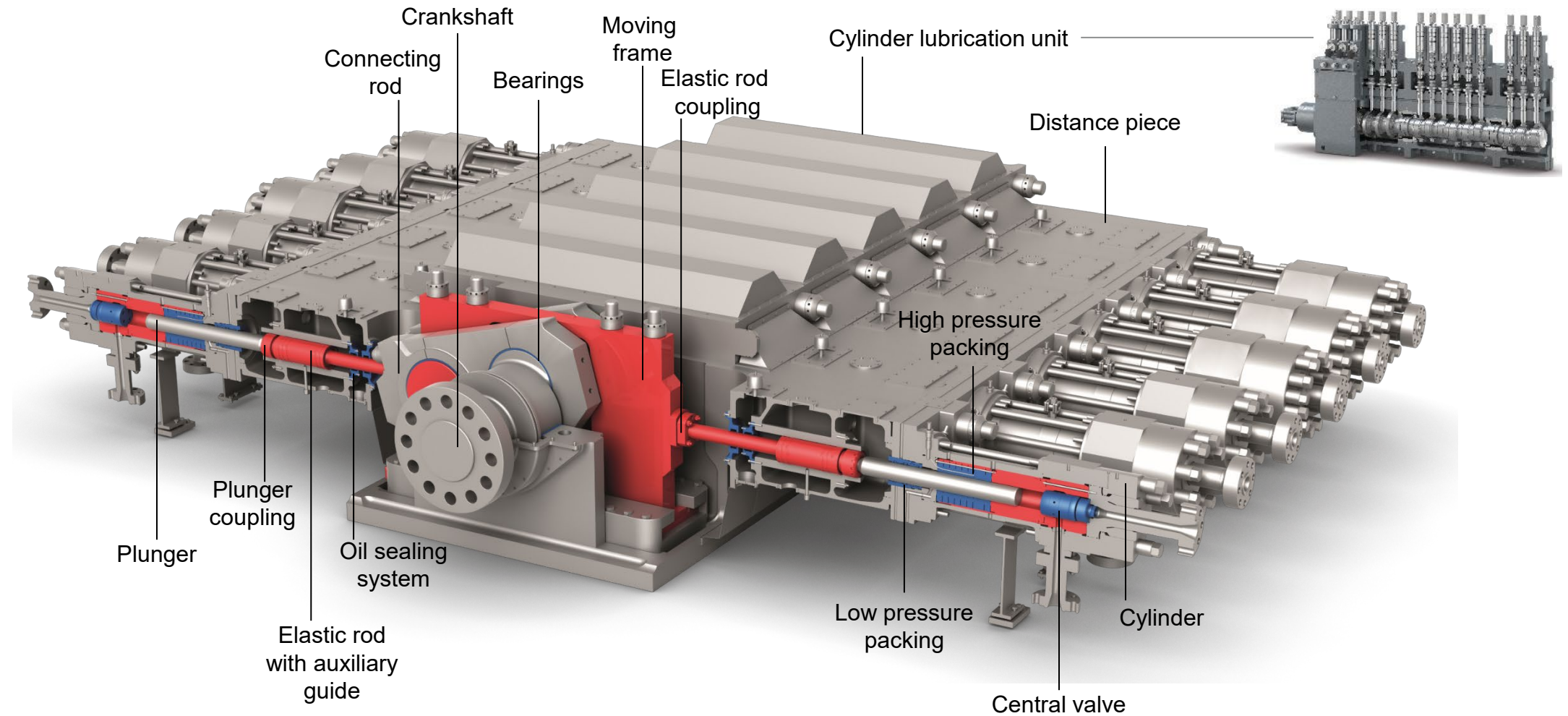
Our compressor components are engineered to

- deliver outstanding performance
- ensure process flexibility
- enhance product quality
- and provide the highest level of reliability.

★ Ready for any brand



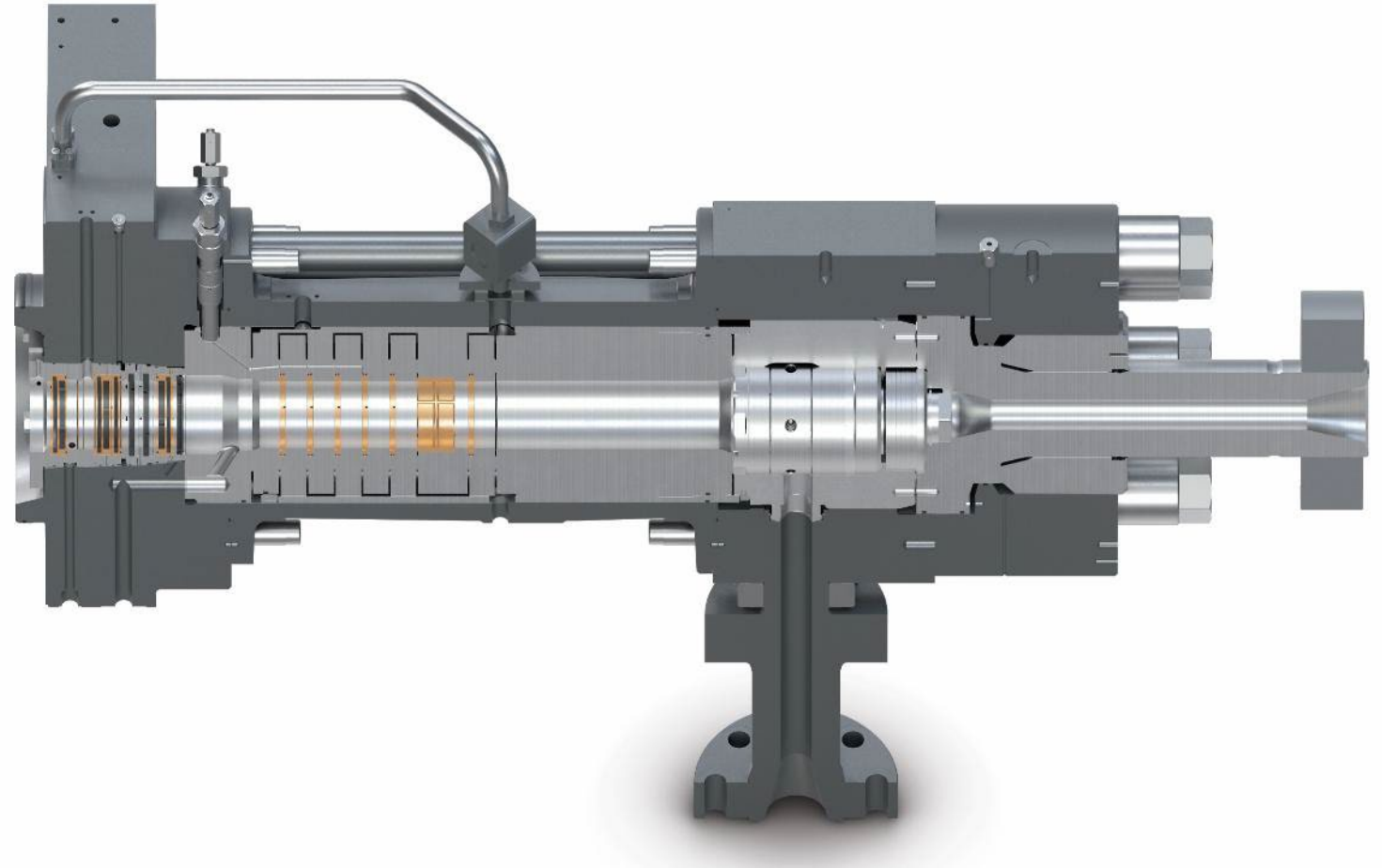
Hyper compressor - overview of components



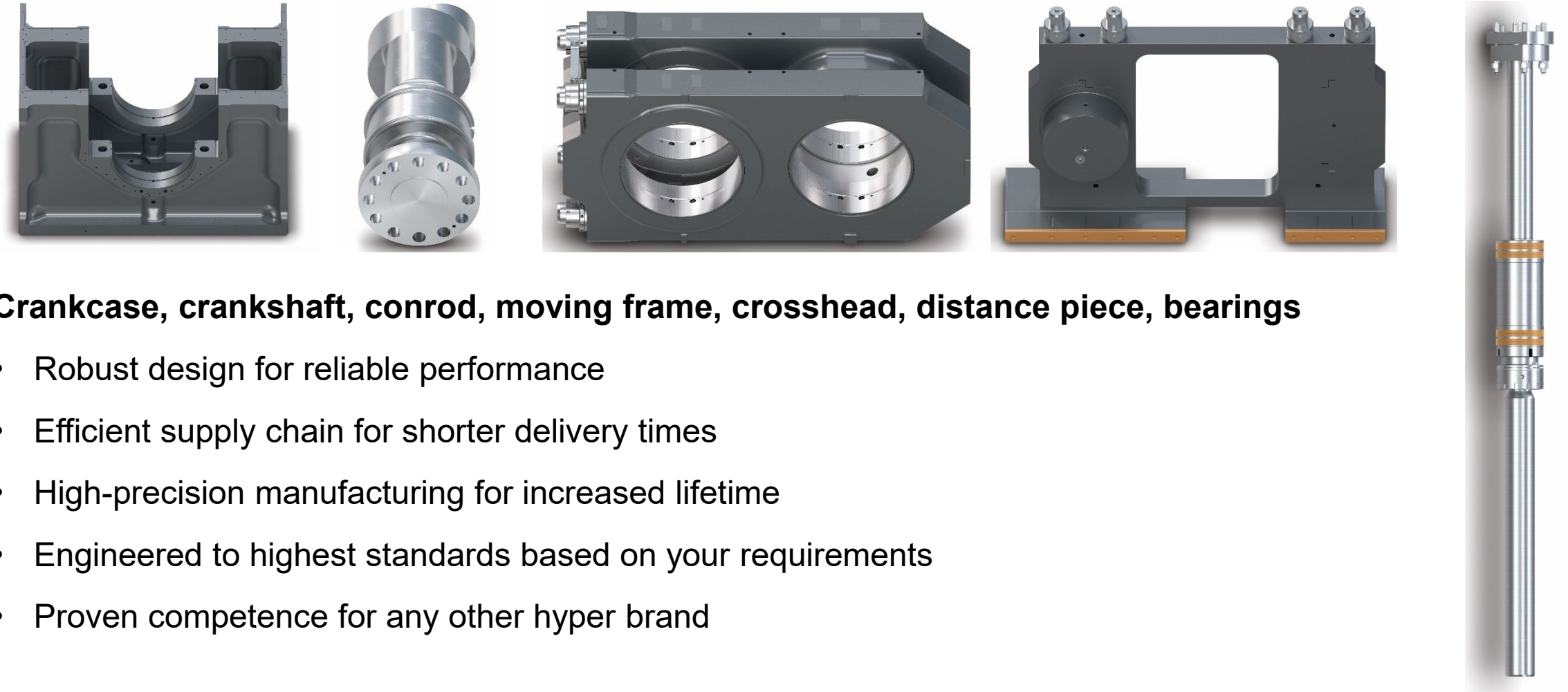
Best-in-class components to support every stage of your compressor's lifecycle

Cylinder

- Proven expertise in managing high-pressure applications
- Deep material know-how to ensure optimal performance
- Well-established supply chain with long-standing partnerships
- Comprehensive in-house testing capabilities, including high-pressure testing
- Proven competence for any other hyper brand



Best-in-class components to support every stage of your compressor's lifecycle



Crankcase, crankshaft, conrod, moving frame, crosshead, distance piece, bearings

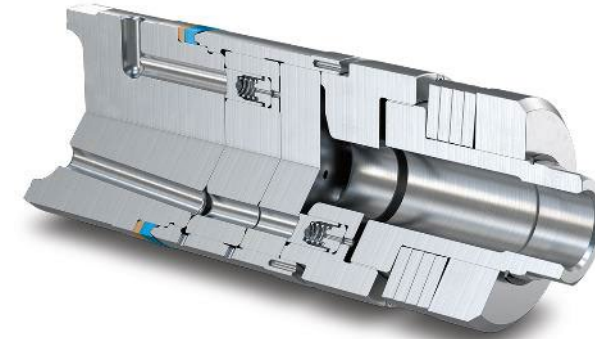
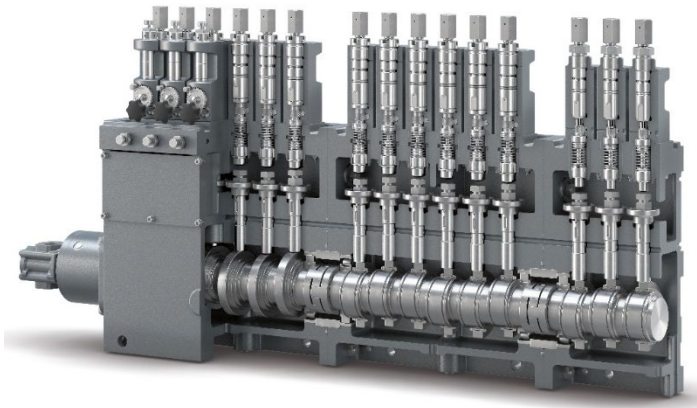
- Robust design for reliable performance
- Efficient supply chain for shorter delivery times
- High-precision manufacturing for increased lifetime
- Engineered to highest standards based on your requirements
- Proven competence for any other hyper brand

Best-in-class components to support every stage of your compressor's lifecycle

Cylinder lubrication pump

Precise lubrication to reduce friction.

- Engineered in house
- Modular for no. of injection points
- Lubrication consulting and oil-flow calculations
- Designed for any ambient

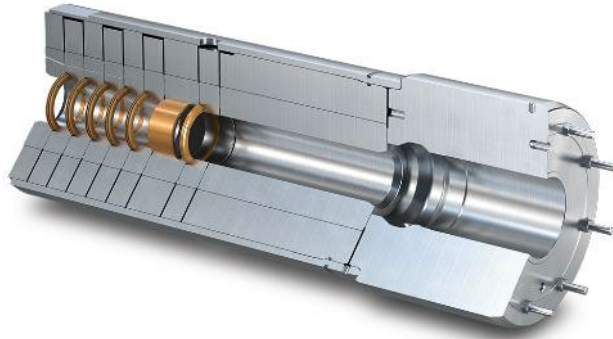


Central valve

Absolut precision for maximum operational safety.

- Reliable operation at highest pressure levels
- Multi and single poppet design
- Long lifetime
- Adaptable to any other brand

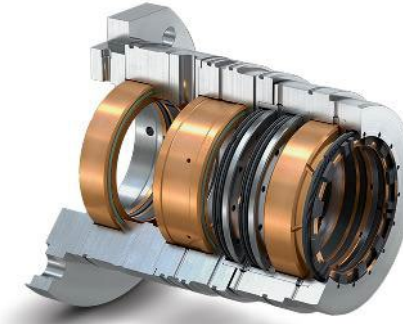
Best-in-class components to support every stage of your compressor's lifecycle



High-pressure sealing system

Decades of experience for perfect solutions.

- Redura® technology
- For highest operational safety and longest MTBF
- Cartridge system allows for fast exchange
- Optimized tribology for reduced wear ratio
- Material selection for LDPE and EVA application



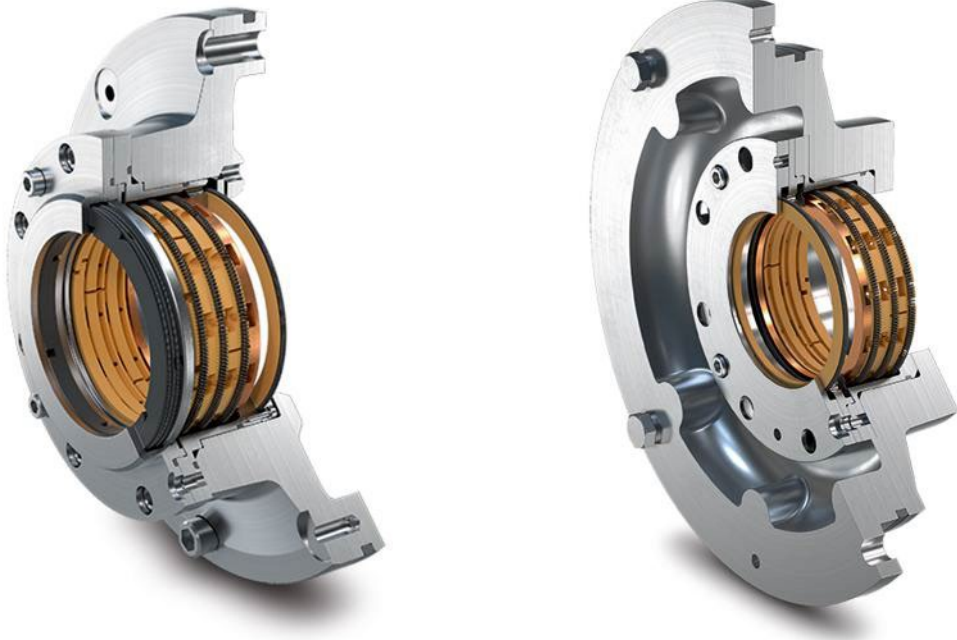
Low-pressure sealing system

Engineered for best performance.

- Redura® technology
- Provides additional operational safety
- Individually optimized combination of ring types
- Optimal oil removal and lowest surface pressure for increased lifetime of rings and plunger

Best-in-class components to support every stage of your compressor's lifecycle

Dual oil sealing system for minimal leakage



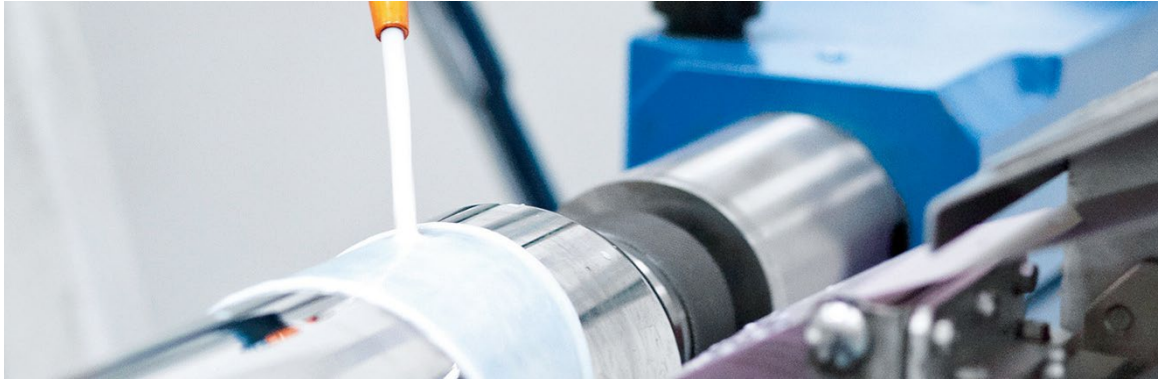
Crank gear side

Distance piece side

Redura® technology for highest sealing efficiency.

- Separate seals on crank-gear and distance-piece side
- Three main elements on crank-gear side remove all but a fine film of oil and any oil mist
- Elements on distance-piece side prevent ethylene carry-over into crankcase

Services for components to maximize reliability and availability



Repair/reconditioning services

- Repair of damaged parts
- Reconditioning of worn parts
- Reverse engineer components
- High quality
- Service fit into your short turnaround time



Upgrade/modernization services

- Requirement/situation analysis
- Meeting industry standards
- Compliance with latest regulations
- Applying advances in material technology

Our services expand to all brands delivered with care and to highest quality standards

With our extensive expertise in designing and manufacturing reciprocating compressor systems, we can repair any brand or model. Our innovative solutions breathe new life into your aging equipment. By re-engineering parts to precise dimensions and upgrading with new materials, we rejuvenate your entire compressor.

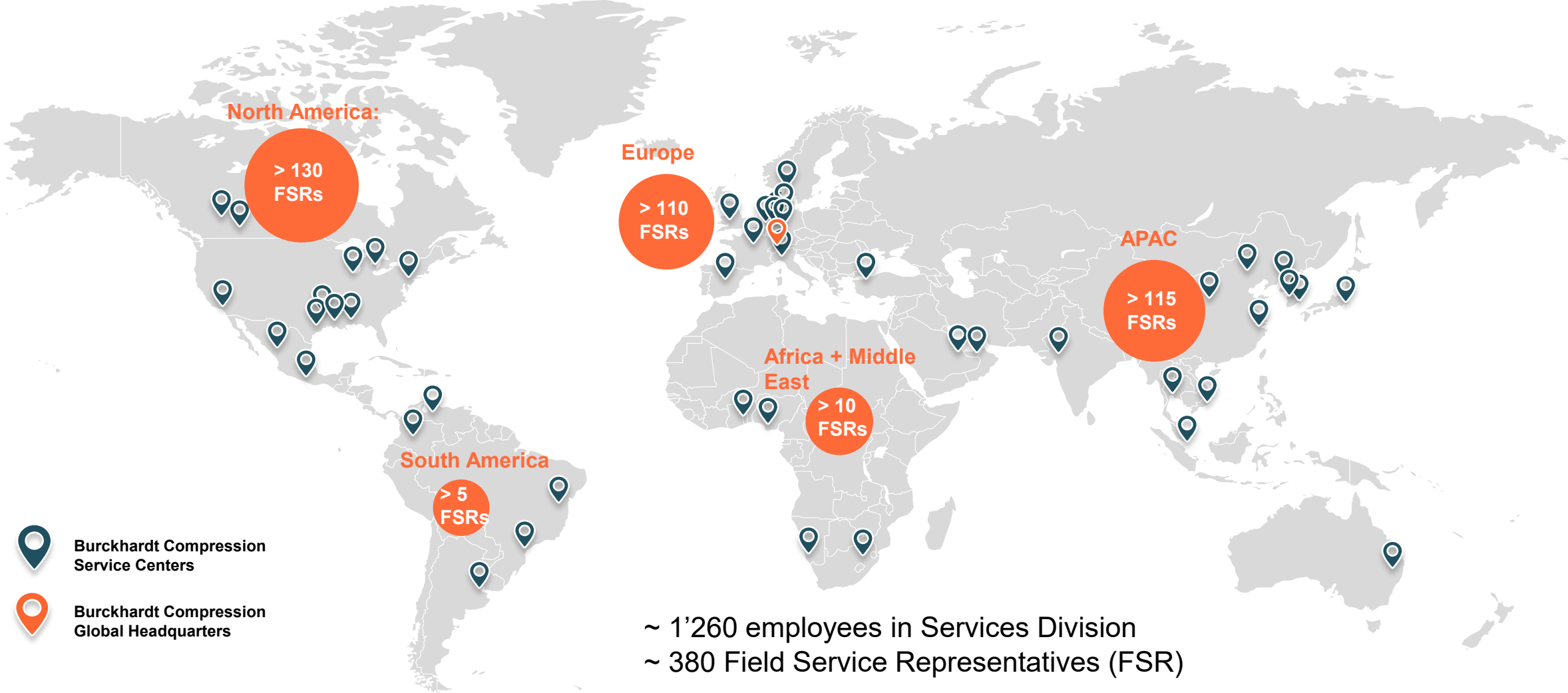


Crankcase of Nuovo Pignone hyper compressor



Repaired crankcase at Burckhardt Compression workshop

We are dedicated to ensuring highest repair quality from our service centers worldwide with experts in all makes and brands



Aging compressors exhibit predictable failure patterns, and we provide support even for obsolete brands

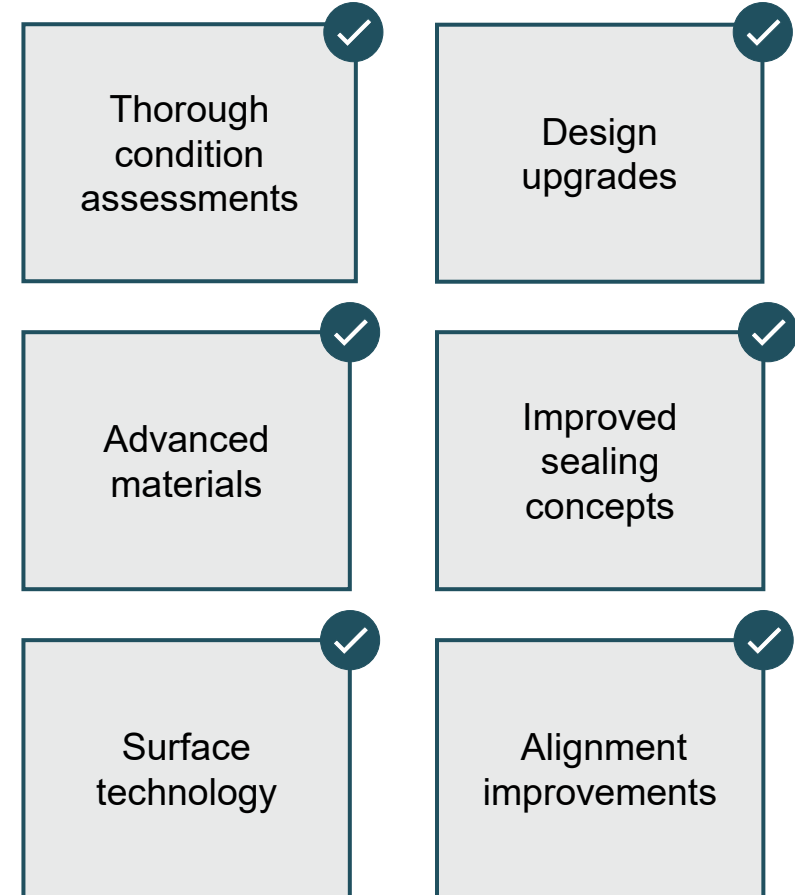
Common problems in aging machinery

- Excessive wear on cylinders, packings, sealings, etc.
- Fatigue failures or cracking
- Corrosion and leakage
- Oil contamination

Typical root causes

- Operation near or beyond design pressure limits
- Insufficient OEM support or legacy designs
- Inadequate material selection for the specific gas
- Misalignment or installation tolerances

Sustainable solutions combine



Maximize the success of your planned shutdown with our turnaround services

We deliver turnarounds for compressors on time and to budget.

- Take the opportunity to analyze, evaluate and optimize your compressor system
- Comprehensive scope of work with planning report and clear scheduling
- All manpower, tools, components, and documentation can be prepared well in advance
- We manage trusted subcontractors to ensure seamless interfaces and clear responsibilities
- Benefit from precision machining of critical parts both on-site and in our workshops

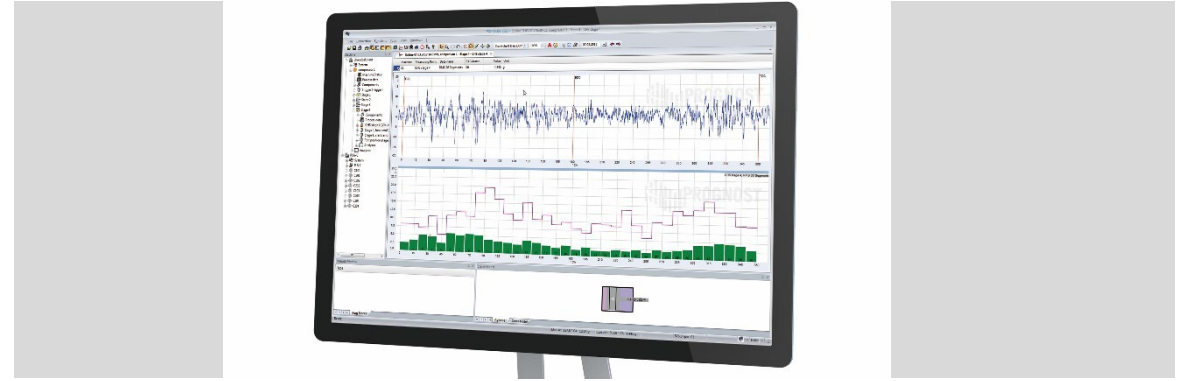


Analyze, evaluate and optimize your compressor system



Eliminating bad actors


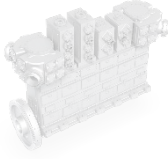
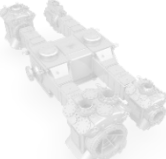
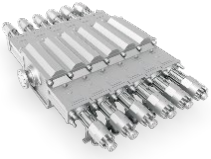

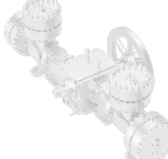







- BC ACTIVATE compressor assessment
- Bad actor identification
- Evaluation of energy savings potential
- Evaluation of gas emission reduction potential
- For a single asset or your entire fleet



Condition monitoring solutions

- Enhanced availability
- Early failure detection
- Detailed root cause analysis
- Predictive intelligence
- Sentry bearing temperature measuring

Range of digital solutions suitable for all technologies

	Vertical compressor	Vertical balanced low speed compressor	Process gas compressor	Hyper compressor	Marine high-pressure compressor	Diaphragm compressor	Gearboxes, bearings	Turbo
								
 UP! Insight	✓		✓		✓	✓		
 UP! Detect	✓		✓		✓	✓		
 PROGNOST®-NT	✓	✓	✓	✓			✓ ¹	✓
 PROGNOST®-SILver	✓	✓	✓	✓				✓
 myFleet	✓	✓	✓	✓	✓	✓	✓	✓

PROGNOST[®]-NT

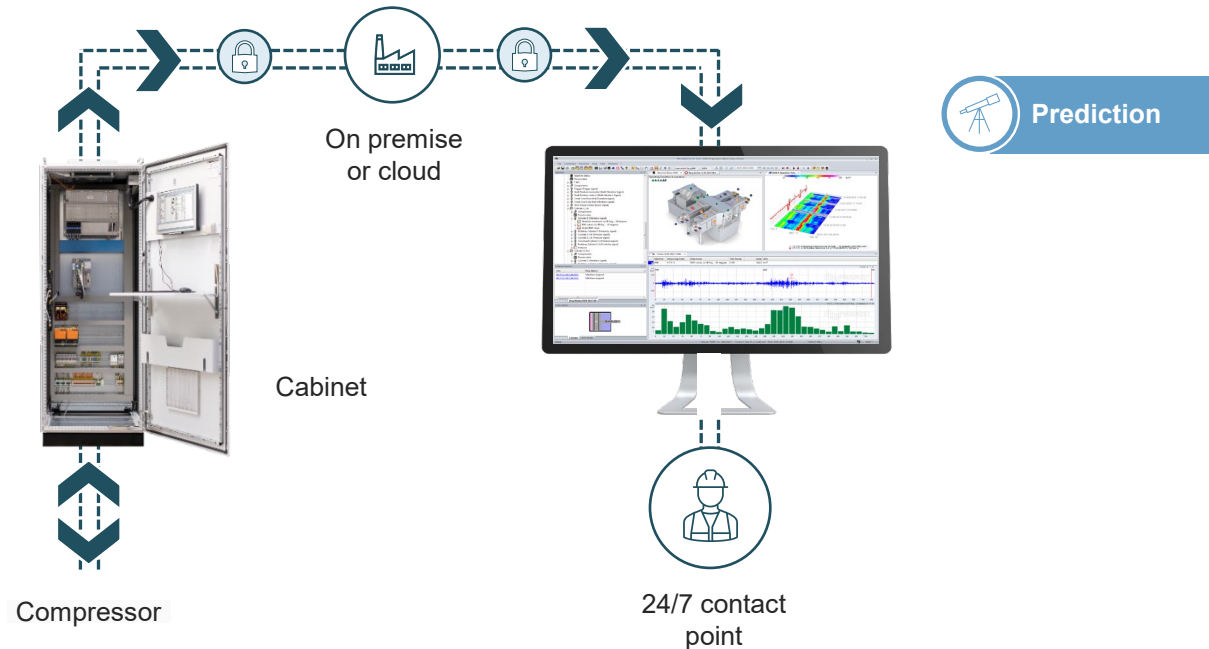
Early detection of component failures based on 360° condition monitoring

Key features

- On-premise monitoring system offering real-time diagnostics & analytics (275 analysis specialized for recip compressors).
- Expert system for advanced, predictive & prescriptive maintenance of reciprocating compressors

Benefits

- Accurate, intelligent and powerful machinery analysis based on 30 years of experience
- Predict component failure at the earliest possible stage
- Notification example: **“Based on the current condition we estimate the remaining useful lifetime of the component x to be n days.”**



How can I extend the meantime between maintenance?

Predicting component failures allows for data-driven decisions, increased operating hours, and better spare parts management.

How to operate my compressor at lowest costs?

Regular data analyses and reporting by our technical experts to optimize compressor efficiency.

How to operate more sustainable?

Action recommendations for optimizing compressor operation using flow measurements.

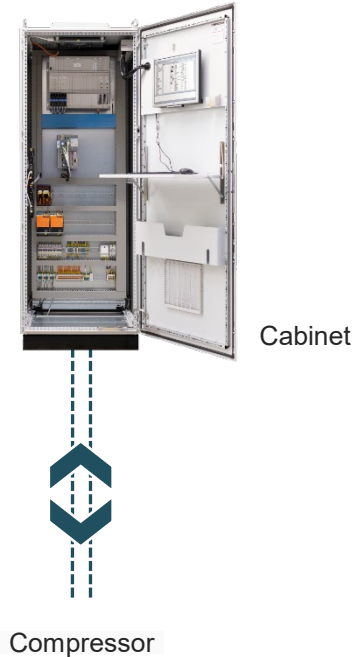
PROGNOST®-SILver – Full safety of personnel in case of compressor failure with emergency shutdown

Key features

- SIL3-certified machine protection system
- Contextual analysis of machine parameters with emergency shutdown based on protection limits
- Data center for detailed root cause analysis after emergency shutdown

Customer benefits

- Protect personnel, the environment and safeguard valuable assets
- Minimize the impact of serious failures
- Notification example: *“Your machine is in a critical condition - emergency shutdown”*



Protection

How can I ensure safe operations?

How to prevent major damages?

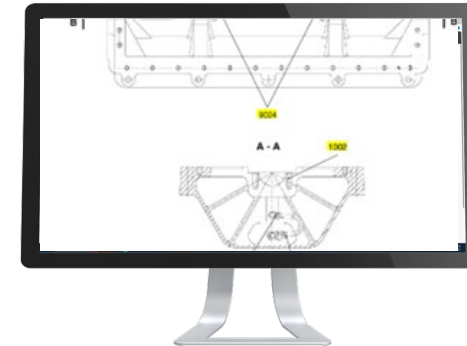
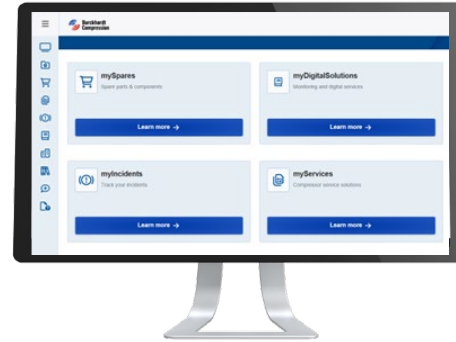
How to protect my equipment and plant?

Compressor shutdowns immediately based on extremely early and reliable signals and plausibility checks.

Customer portal myFleet – your digital gateway for full transparency and data management

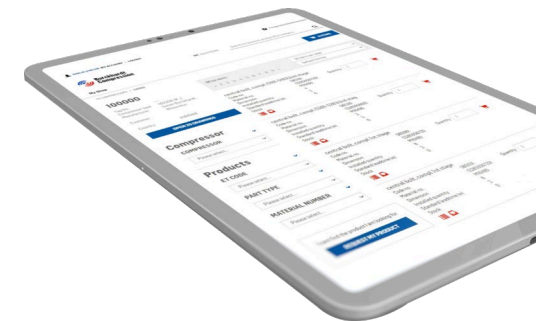
Key features

- Asset detail view
- Spare parts order management
- Service and incident history overview
- Monitoring data access
- Document storage and drawings



Customer benefits

- Instantly access information to boost service efficiency and speed
- Shared asset data allows customized service overview
- Get to the root of problems faster thanks to seamless collaboration increasing efficiency
- With transparent data, take proactive steps to improve your asset reliability and processes
- Find and order the service and parts you need quickly



How to access information I need, anywhere, anytime?

Where can I check the status of my orders?

Where can I manage my service requests?

One platform to access all your data, such as monitoring dashboards, spare parts details, order history and status. Available anywhere, anytime.

Components and services for any brand – a perfect fit



Integrated solutions



Maximized reliability & availability



Highest safety



True partnership is one of our core values



At Burckhardt Compression, we deeply value our partnerships. We are committed to standing by your side for as long as you need us, ensuring that your Hyper compressors operate safely and reliably through continuous innovation and development. Our primary focus is on collaborating with you to shape the future of compressor services together.

Success Story: New Hyper Compressor central valves

Petrochemical Industry
Romania
(non-Burckhardt)

The challenges

- Simplify installation of central valves on non-Burckhardt compressor
- Material analysis to propose improvements
- Improve lifetime and reduce downtime of compressor

The solution

- High performance material selected
- Manufacturing, quality assurance and installation of the new central valves
- Utilization of manufacturing processes to achieve superior durability and resistance

The benefits

- Increased reliability and lower life-cycle costs
- Successful operation after installation
- Delivery to full customer satisfaction

Superior durability of central valve achieved through special manufacturing processes



«Burckhardt Compression are experts in hyper technology, their solution is a perfect fit.»

Our customer

Success Story: HP Packings running over 26'000 hours

Petrochemical Industry
Saudi Arabia
(Burckhardt Compression)

The challenges

- Minimum plant shutdowns
- Longer lifetime of the high-pressure key equipment
- Longer operating hours for the Hyper compressor under harsh conditions

The solution

- Burckhardt HyproPack™ cartridge system for fast exchange and service
- Persisto® material for sealing elements
- Redura® high-pressure sealing system design

The benefits

- Longer meantime between overhaul
- Outstanding system availability
- Tailor-made technical support according to customer requirements

Hyper Compressor K8



«IPC would definitely strongly recommend
Burckhardt compressors.»

Patrick Benavides, General Manager Polymer, Sipchem, Saudi Arabia

Success Story: Successful plant turnaround project

Petrochemical Industry
Portugal
(Burckhardt Compression)

The challenges

- Very tight, fixed time window
- Oil cross-contamination issues
- Complex logistics and communication issues typically associated with LDPE plant turnaround projects

The solution

- New oil wiper rings with improved design
- Immediate set-up of manpower and local project management
- Pre-defined maintenance schedule with scope and objectives

The benefits

- Zero safety incidents
- 24h-shift supervisors ensured competent and timely project execution
- All services performed as scheduled

Hyper Compressor F6



«The work carried out by Burckhardt
Compression was very good.»

André Afonso, Reliability Engineer, Repsol Polímeros

Success Story: On-site machining of crankcase

Petrochemical Industry
Spain
(Burckhardt Compression)

The challenges

- Perform maintenance within 28 days
- Hard fretting damaged surfaces of crankcase and distance piece
- On-site machining needed

The solution

- Overhaul with two Burckhardt supervisors on double shift
- Crankcase machining done on site
- Machining of distance piece done in local workshop

The benefits

- Significant reduction of movement and vibrations
- Minimized oil leakage, extended lifetime of plunger
- Packing and elastic rod

Machining of F8 Hyper crankcase surfaces
done within four days



«Compressor operation is much more
stable and static.»

Alberto Munarriz, Mechanical Maintenance Manager, TDE,
Spain

Success Story: Doubled lifetime after modernization

Petrochemical Industry
Hungary
(non-Burckhardt)

The challenges

- Hyper compressor operating under very challenging conditions
- High leakage and frequent unscheduled plant shutdowns caused by failing components of non-Burckhardt hyper compressor

The solution

- Reverse engineering of valve unit and plunger
- On-site condition assessment incl. high-pressure components to define scope
- Training of team in the modern facility in Switzerland

The benefits

- Detailed assessment report
- Over 50% reduction in maintenance and operating cost
- Increased safety level of MOL's trained maintenance team

Cylinder disassembly



«Burckhardt Compression really provided a comprehensive solution of great value to US.»

MOL Petrochemicals

Success Story: Major compressor overhaul of LDPE line

Petrochemical Industry
Scandinavia
(Burckhardt Compression)

The challenges

- Over 45-year-old compressors in LDPE line
- Perform all maintenance activities within six weeks
- No suitable workshop for crankcase machining available near by the site
- Changing temperature conditions

The solution

- Professional and detailed planning
- Reverse engineering on third-party compressor parts
- Team of 13 field service representatives working in two shifts

The benefits

- Zero safety incidents
- One single point of contact
- On-time execution

Installation, leveling & measurement of both crankcases were done in separate tent.



«Our crew worked hand in hand with the entire Burckhardt Compression team.»

Chemical company in Scandinavia

Thank you!

Name, Surname

Function

name.surname@burckhardtcompression.com

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Burckhardt Compression

Compressors for a Lifetime