Overview

The entire range of solutions
Integral Gear Technology is the forward-looking expertise that makes our turbocompressors first-in-class. It’s a market-leading innovation and the result of decades of development.

A uniquely versatile and cost-efficient solution, this technology allows for multi-staging, enabling up to eight stages to be included on one gearbox.

And that’s not all. We also offer a complete range of multi-stage expander/compressor/generator solutions. Moreover, our compressor design supports API specifications.

Compact design, efficient operation
Our centrifugal compressors feature a very compact design. This greatly reduces your on-site footprint, especially in marine and offshore settings.

By providing a range of customization possibilities, we can also focus on your precise needs. Our options include diverse impeller designs and variable diffusers, to name just a few.

Energy efficiency - with a focus on power optimization - is a key area we emphasize. The goal: ensure an optimum process for you.

Driving Centrifugal Compressor Technology

Over the past century, Atlas Copco has built close relationships with customers around the globe. In doing so, we have pursued one goal: providing our customers with sustainable productivity, regardless of process, application or market. Integral Gear Technology – the know-how that drives our centrifugal compressors – is what allows us to consistently achieve this goal.
Integral Gear Technology offers you:

- Customization options that improve your process
- Shorter installation and commissioning times
- Maximum compressor efficiency
- Maximum reliability
- Power savings
- Compact and lean design

Our Compressor Range

<table>
<thead>
<tr>
<th>Pressure Ratio</th>
<th>Effective Inlet Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 kg/kmol</td>
<td>0 - 58,000 cfm</td>
</tr>
<tr>
<td>28 kg/kmol</td>
<td>60,000 - 117,000 cfm</td>
</tr>
<tr>
<td>44 kg/kmol</td>
<td>176,000 - 235,000 cfm</td>
</tr>
</tbody>
</table>

Effective Inlet Volume:

- 0 - 200,000 m³/h
- 200,000 - 300,000 m³/h
- 300,000 - 400,000 m³/h
- 400,000 - 500,000 m³/h

Effective Inlet Volume (cfm):

- 0 - 58,000 cfm
- 58,000 - 117,000 cfm
- 117,000 - 176,000 cfm
- 176,000 - 235,000 cfm

CH₄: 16 kg/kmol
Air/N₂: 28 kg/kmol
CO₂: 44 kg/kmol
Oil and Gas Business

Designed using a wealth of experience, our turbocompressors support each link in the hydrocarbon value chain. Most of all, they’re built to ensure your process remains productive over the long term.
“At Atlas Copco, we’re committed to promoting reliability and innovation within the Oil and Gas industry.”
Your Application

Air Separation

Air separation technology may have originated over a century ago, but it remains a key growth market in many of today’s global industries. That’s precisely where Atlas Copco air compressors can be found – providing a whole host of air separation solutions.

When it comes to air separation, we offer a range of customer-centric products, including Main Air, Booster Air/ N₂, and oxygen compressors, as well as our expansion turbine options.

Atlas Copco Gas and Process machines serve air separation applications in numerous sectors, such as the steel, chemical/petrochemical, electronics, Gas to Liquid (GTL) / Syngas / CO, and microprocessor industries.

Thanks to our wide range of options, we can customize the air separation compressor you choose to meet your precise needs.
“Our turbocompressors for air separation applications provide you with smooth operations. And even better: they run around the clock.”

**Air Separation Applications**

<table>
<thead>
<tr>
<th>Application</th>
<th>No. of stages</th>
<th>Discharge Pressure bar (PSI)</th>
<th>Effective Inlet Flow m³/h (cfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air compressor</td>
<td>2 - 6</td>
<td>35 (507)</td>
<td>3,500 - 400,000 (2,100 - 235,000)</td>
</tr>
<tr>
<td>Booster Air</td>
<td>1 - 6</td>
<td>80 (1,160)</td>
<td>2,500 - 80,000 (1,500 - 47,000)</td>
</tr>
<tr>
<td>Booster N₂</td>
<td>1 - 6</td>
<td>80 (1,160)</td>
<td>2,500 - 80,000 (1,500 - 47,000)</td>
</tr>
<tr>
<td>Recycle N₂ + Feed</td>
<td>2 - 4 + 2 (6 stages)</td>
<td>80 (1,160)</td>
<td>2,500 - 80,000 (1,500 - 47,000)</td>
</tr>
<tr>
<td>Oxygen</td>
<td>1 - 5</td>
<td>32 (464)</td>
<td>3,000 - 16,000 (1,800 - 9,000)</td>
</tr>
<tr>
<td>Main Air +</td>
<td>3 + 3</td>
<td>8 (116)</td>
<td>30,000 - 250,000 (18,000 - 147,000)</td>
</tr>
<tr>
<td>Booster Combined</td>
<td>4 + 2</td>
<td>80 (1,160)</td>
<td>3,000 - 60,000 (1,800 - 35,000)</td>
</tr>
</tbody>
</table>

*Atlas Copco builds air compressors up to 400,000 m³/h.*

*The steel industry is a main market for air separation applications.*

*A three-stage H-Series air compressor.*
Your Application

Our solutions for C/PC are found around the globe.
Chemical / Petrochemical

Chemical/Petrochemical is a key downstream segment. This is where added value is generated as hydrocarbons are processed and refined. Thanks to our extensive experience, we’re a reliable, trusted partner in this crucial sector.

The Chemical/Petrochemical segment is one of the most complex industries. Given its demanding processes, reliability and safety are all important.

Those are only two of the concerns we focus on as we supply centrifugal gas and air compressor solutions to a broad range of Chemical/Petrochemical processes – everything from traditional applications, such as ethylene and propylene manufacturing, to the production of aromatics and inorganics, to refinery operations.

Plant Air: A Vital Driver

As in other sectors, a reliable supply of air to plant equipment is vital if Chemical/Petrochemical players are to operate successfully.

Their equipment must work well, first and foremost. In addition, it must comply with any and all industrial standards, like those of the American Petroleum Institute (API).

That’s a demanding range of challenges. And we’re proud to help our customers meet them – by providing proven, sustainable solutions.

“"We supply sustainable turbocompressor solutions for the complex Chemical/Petrochemical market.""
Power Industry and Power Generation

Energy market players are constantly striving for new solutions that minimize environmental impact. Conversely, they want to maximize productivity while generating a reliable supply of energy. Atlas Copco Gas and Process can meet those market needs and others, thanks to our extensive experience and recognized know-how.

Power Generation

The market for natural-gas driven applications within the Power Generation industry is growing rapidly all over the world.

Regardless of location, an efficient delivery of gas to the plant’s main turbine is instrumental if productivity is to be maintained in this process.

Our centrifugal gas compressors are a reliable solution for meeting this challenge, and can be easily maintained, with minimum downtime. Our customers rely on them for a number of applications, including fuel gas boosting.

In addition, every plant has different pressure and flow needs. Identifying the right compressor and components for each customer is therefore a task of critical importance. Needless to say, it’s a process we focus on in detail.

Power Industry

Centrifugal air compressors can also help coal-fired power plants to reduce their environmental impact. By deploying them in flue gas desulfurization and soot-blowing operations, customers can decrease their carbon footprint without sacrificing plant efficiency.

Power Generation and Power Industry Applications

- Fuel Gas Boosting
- Flue Gas Desulfurization
- Sootblowing Air
- Plant and Process Air
- Atomizing Air Compressors for Gas Turbines


Driving natural gas power plants.
Atlas Copco compressors: Making the power industry turn.
Your Application

**Your Application**

Atlas Copco turbocompressors are employed in Carbon Capture Storage (CCS), a new and promising technology. Integrated into different processes (such as Oxyfuel), CCS allows CO$_2$ to be captured directly at the source instead of being released into the atmosphere.

The CO$_2$ is then transported to a predetermined location – either underground or underwater – where it is safely stored.

**Further Markets**

Customers in other markets often have highly specific demands, and meeting them requires even greater dedication – not to mention an eye for innovation and the drive to get the job done. Long known as a “can-do” company, we’re always up to the task.

**Carbon Capture Storage (CCS)**

Atlas Copco turbocompressors are employed in Carbon Capture Storage (CCS), a new and promising technology. Integrated into different processes (such as Oxyfuel), CCS allows CO$_2$ to be captured directly at the source instead of being released into the atmosphere.

The CO$_2$ is then transported to a predetermined location – either underground or underwater – where it is safely stored.
Mechanical Vapor Compression

Mechanical vapor compression is another process where our turbocompressors have proven highly effective. In this application, compressors are used to compact the vapor generated by a “mother liquid,” raising both the vapor’s pressure and temperature.

Deployed as a source of heat, the compressed vapor then aids in the evaporation of the mother liquid. Two sectors that make use of this technology are the Seawater Desalination and Pulp and Paper industries.

The Atlas Copco turbocompressors used in this complex, energy-efficient process are just one more example of our efforts to promote innovative, forward-looking technologies.

“Atlas Copco has long been known for meeting each customer’s highly specific demands.”
The Extra Edge for Your Process: Integral Gear Technology

Based on decades of process-oriented and engineering know-how, Integral Gear Technology is an innovative approach that is well-suited to each customer’s equipment requirements.

Developed in constant interaction with our customers, Integral Gear Technology provides long-term answers to today’s application challenges. Even better, it does so in one compact, customizable package.

To give just one example: the rotor is an integral part of the gear box, meaning the impeller is mounted on the high-speed pinion.

This enables that each impeller runs optimally at its specific speed.

That’s not all: our compressors with Integral Gear Technology meet standards API 617, chapter 3 and API 672. They also meet other relevant quality standards, such as AGMA Q13 and ISO 1328, Grade 4.

More and more customers around the world are choosing Integral Gear Technology – testimony to the effectiveness of this productivity-boosting approach.

Our Integral Gear Technology offers you:

- Improved efficiency
- Compact design
- Multi-speed capability for optimal speed in each stage
- Easy inspection and maintenance
- Combined service operation

How it works: An inside look at the Integral Gear concept.
Integral Gear technology: a concept that boosts your productivity.
Technical Features

Finding the right balance for your machine: High-speed balancing.
"Integral Gear Technology provides answers to today’s application challenges in one compact, customizable package."

**Inside the technology**

Atlas Copco integral speed-increasing gears are driven by high-quality helical gearing with precise mesh geometry.

**This ensures:**
- Reliable performance
- Smooth operation
- High mechanical efficiency

The technology’s design offers a number of key advantages. First, its multiple speed capability allows each stage to run at an optimum pace, resulting in the highest possible efficiencies.

In addition, thrust collars or axial bearings in the pinion gear ensure a high level of efficiency. This decreases losses, while it increases mechanical rotor stability and reliability.

Tilting-pad bearings are used on the high-speed shaft, while sleeve bearings are used on the low-speed shaft.

Moreover, the systems bearings are split horizontally as well, also facilitating inspection and maintenance.

Divided horizontally, the gearbox design also facilitates easy inspection and maintenance of gears, bearings and seals, without the need to disconnect the system’s piping.

Finally, to ensure optimum efficiency, sensing probes can be mounted on the pinions to monitor shaft vibration. In addition, sensors are installed in the bearings to track temperature changes.
Driving Your Process: Our Impellers

Atlas Copco Gas and Process employs superior design features in its impellers. They are at the heart of an aerodynamic stage design that drives your process.
Our turbocompressors feature an aerodynamic stage design which the impeller is a key part of. This design is based on decades of experience and on-going development.

Having built thousands of compressor stages, we know what to expect. The result: impellers that meet your exact flow and pressure requirements.

In addition, Atlas Copco Gas and Process has years of experience creating compressors that can be used with corrosive and challenging gases.

Unsurprisingly, our extensive experience and technological know-how have also produced something else: many satisfied customers.

Our impellers:
- Provide optimum efficiency and reliability
- Have a strong track record for use with corrosive and challenging gases
- Are individually designed for your process requirements
- Are performance tested
- Cover a broad range of use
Inside the technology

When selecting impellers, we use software that calculates the design optimally reflecting your process.

Up close: Microspline.

Thanks to the unique flow coefficients of each impeller group, our turbocompressors can meet a range of diverse requirements.

Key benefits:
- Our impellers are available in open or closed configuration
- All geometries are tested by R&D
- Impellers are mounted on the pinion shaft using hirth serration or microspline
- Their design ensures easy assembly and high reliability

“We’ve built thousands and thousands of compressors – experience that results in superior impeller design.”

It’s all in the details: hirth serration.

An aerodynamic impeller calculation in CFD.

A closed impeller.
Each impeller is custom-designed for your needs.
Controlling Your Capacity: Our IGV and DGV Options

Our turbocompressors are designed to be an integral part of your process and your plant as a whole. To maximize their effectiveness, they can be equipped with different capacity control options, which can adapt to changing process conditions such as discharge pressure and volume.

Our control options include Inlet Guide Vanes (IGV), Diffuser Guide Vanes (DGV) and combined IGV and DGV configurations, as well as a speed control capability (bypass control).

The bottom line: Our capacity control options ensure your process is as flexible and efficient as possible.
Inside the technology

Our adjustable IGVs offer a wide operating range and excellent partial load performance.

In addition, our variable DGVs ensure an excellent control range in both single and multi-stage applications.

Finally, our speed control is just the feature you need when volume turndown at a lower pressure ratio is required.

Atlas Copco Gas and Process capacity control options offer you:

- Optimum control range
- Maximum efficiency in all parts of your operation
- Vast range of regulation capabilities and excellent partial performance
- DGVs capable of large turndown
- Combined configuration to ensure maximum control flexibility

DGV Control

Speed Control
Shielding Your Process: Our Seal Options

Our Gas and Process turbocompressors are equipped with state-of-the-art shaft seals – to ensure your process remains a closed, efficient system.

Shaft seals minimize or eliminate the leakage of gas, while preventing air intrusion into the compressor case.

Because every application requires a different solution, Atlas Copco Gas and Process offers a wide variety of seals. Our customers rely on them in any number of challenging settings, such as those that involve corrosive, toxic and flammable gases.

With multiple options available, finding the right solution is the key. Drawing on decades of know-how and engineering expertise, our experts will be glad to help you identify the seal that meets your precise needs.

Our seal gas systems comply with API 614/617.

Inside the technology

Our dry gas seals can be applied in single, tandem or double-acting configurations. Dynamic dry gas seals, for example, offer an alternative to oil-lubricated seals for minimum leakage applications.

In addition, shaft seals such as floating carbon ring seals or precision-engineered labyrinth seals are ideal for minimum leakage situations. They can also be combined with two to five chambers to allow the injection of buffer gas.

For example, when leakage into the atmosphere is permissible, labyrinth seals are an effective choice, with the number of labyrinths and clearances determined by the customer’s application.
What Atlas Copco Gas and Process offers you:
All of our seals provide one universal advantage: maximum efficiency.

Other benefits include:
- Superior reliability
- Optimized shaft seal selection and configuration
- Minimized process gas leakage
- Minimized seal gas consumption
Packaging According to API
Atlas Copco is a proven player for building in accordance with API specifications. That also relates to packaging requirements our customers have. Shown here is a centrifugal gas compressor for a complex and demanding CO application in China. The coolers are fitted into the base frame.

Full-Package Arrangement  Semi-Package Arrangement  Free Arrangement
Our Packaging Options

Markets are becoming increasingly globalized and dynamic, something that directly impacts our customers. To respond optimally to their needs, we offer flexible options when delivering centrifugal compressors for air or gas compressors, as well as highly specified packaging solutions in line with API.

**Full-Packaging**
Dating back to the early days of the turbocompressor, full-packaging is the most compact approach, and means that the entire machine – from the core unit to the coolers and piping – is assembled and shipped to the customer.

This option is best suited for machines with a flow volume of up to 52,000 m³/h and when quick installation and operations are needed.

**Semi-Packaging**
This option is suitable for heavier machines (approx. 80 tons, flow volumes up to 120,000 m³/h) that cannot feasibly be transported as one unit. Select components such as the motor or foundation are produced and installed separately, instead.

**Free Arrangement**
A modern variation of semi-packaging, our free arrangement option takes advantage of the possibilities for sourcing components locally, thus reducing transport costs and times.

This option has developed as turbocompressors have grown in size. Often sourced locally, the components are delivered separately and installed as one unit on site.

Thanks to our systematic planning procedures and global infrastructure, this approach is ideal for customers operating larger compressors who need a customized solution.

“Thanks to our extensive know-how and innovative planning, we can offer each customer a fully customized packaging solution.”
Committed to Sustainable Quality

By producing consistently high-quality products, Atlas Copco Gas and Process has established itself as an industry frontrunner. Our commitment to excellent has also earned us an outstanding reputation – and loyal customers around the globe.

Your Partner From Start to Finish – and Beyond

Our focus on quality means that all of our equipment is designed and constructed for a minimum service life of 20 years and at least three years of uninterrupted operation.

Since we’re active in numerous markets, we also adhere to a range of standards, including ISO, ASME, DIN and CENELEC.

This includes national and regional standards (such as those used in Australia, Russia and Japan), as well as the Marine Standard.

Finally, all our global facilities are subject to quality assurance programs that are certified to the ISO 9001 standard and registered by Lloyds Register Quality Assurance, Ltd.

Our quality promise to you:

- A lifelong service responsibility guarantee for your machine
- Adherence to the applicable standards
- Global quality management according to ISO 9001
- Compliance with marine-relevant specifications (where required)
- Support of electric standards (where required)
- Documentation in your own language
- Compliance with ISO14001 and OHSAS 18001
It’s all about precision.
Our Turbomachinery Production Worldwide

Proven Engineering Expertise

Extensive process know-how, automated workflows, integrated quality protocols – those are just some of the engineering resources we draw on to provide our customers with first-in-class products.

Our tools for boosting your productivity

<table>
<thead>
<tr>
<th>Aerodynamic</th>
<th>Mechanical</th>
<th>Package Engineering</th>
</tr>
</thead>
</table>
| • OEM* software (e.g., COSEL)  
• CFD (Ansys)  
• Experimental measurements  
• Gas programs: HYSYS, FRG, GPA | • OEM* software  
• SR3 – rotor dynamic  
• Madyn – rotor dynamic & bearing  
• DRESP – torsional analysis  
• ANSYS – FEM  
• RICOR  
• Gearbox: ST-Plus, FVA-workbench, FEM | • 3D-CAD Autodesk Inventor  
• 3D – CAD Pro-E  
• 3D – CAD Medusa/MPDS  
• HYSYS process simulation  
• OEM* software for cooler, valves, components ect. |

*Original manufacturer equipment

Different proponents for aero design and selection of compressor and turbine components

Quality Benchmarks

The Atlas Copco Gas and Process engineering department has set standards in the areas of aerodynamics, rotor design, controlling technology, lubrication systems, pressure vessels, instrumentation and piping.

In addition to product excellence, the result has been our position as industry leader and a roster of satisfied customers.
Talking about your machine: Constant interaction helps develop our engineering competence.
From Cologne to upstate New York to China, when manufacturing our products we focus on one goal: helping our customers stay productive over the long term. With our many years of experience in markets around the world, we have the in-house knowledge to make it happen.
Inside our production facilities

Working with the appropriate tools and processes, we use our extensive engineering know-how to create innovative, first-in-class products. Our skill set, moreover, is something we continue to invest in.

Among other benefits, we offer you:

- Local packaging, and local sourcing for peripheral components
- In-house packaging of key components ensures premier quality and delivery times

Key components in our engineering toolkit:

- State-of-the art production machinery (including milling, balancing and spinning equipment)
- Modern production infrastructure that’s fit for the global stage – and your process needs
- Constant product performance review
- Strict quality assurance

Inside the multi-skill machine:
The milling process.
For example, as a standard quality assurance measure, we perform mechanical test runs on your machine, with performance testing carried out when required.

To ensure nothing is left to chance, our tests fully comply with all of the relevant standards, including DIN, ISO, VDI 2045, ASME, PTC10 and API 617/672.

In testing the machines we sell, we also work closely with our customers in order to achieve our final goal: delivering the best product possible.

Ultimately, it’s about making sure you have the quality, efficiency and sustainability you need to carry out your processes.
A bird’s eye view of the test bed.
Our Turbomachinery Production Worldwide

Reaching Our Customers Worldwide

From California to Cologne to China:
Our production facilities for turbocompressors and expansion turbines span the globe.

Application Center and Manufacturing Plant
Atlas Copco Mafi-Trench
Location: Santa Maria (CA)
Core Competence: Turbo-expanders for hydrocarbon applications and geothermal.

Application Center and Manufacturing Plant USA
Atlas Copco Comptec
Location: Voorheesville (NY)
Core Competence: Centrifugal compressors for air separation and various hydrocarbon applications, including power generation.
Application Center and Manufacturing Plant Far East
Location: Shanghai (China)
Core Competence: Packaging of turbocompressor and expander products.

Application Center and Manufacturing Plant Europe
Location: Cologne (Germany)
Core Competence: Centrifugal compressors and turboexpanders for all applications.

Application Center and Packaging Facility India
Location: Pune (India)
Core Competence: Packaging for centrifugal compressors, primarily for air separation applications.
Building to API Specifications

At Atlas Copco Gas and Process, we offer customers a unique combination of technical know-how and manufacturing expertise. That means our experts can help you choose the right components for your process, before we build them to meet current international industry standards.

**Customizing to your requirements**

Depending on your process, we can customize your equipment to match the rigorous standards set out by the **American Petroleum Institute (API)**.

This applies to gears, lube oil supply, rotor dynamic options, bearings, coupling and casing.

For example, we build compressors to meet API 617, Chapter 3 (gas) and API 672 (air) requirements, including oil systems that reflect API 614.

In fact, our know-how helps set industry standards. After all, Atlas Copco Gas and Process engineers participated in the development of API 617, 7th edition, as well as API 672, 4th Edition.
At Atlas Copco, we build our integrally geared compressors according to recognized industry standards, including API 617, Chapter 3.

At Atlas Copco Gas and Process and API

- We are a member of API and actively participate in standards development
- We focus on and are committed to serving the Gas and Process industry
- We have extensive experience meeting API standards
- We are proud to be a leading supplier of custom-built solutions
- Our track record includes 100-plus integrally geared units built according to API 617, Chapter 3

Centrifugal gas compressor built according to API specifications.
Features of Our Turbocompressor Products

This overview provides you with an in-depth look into our turbocompressor products – and how they differ technically.

<table>
<thead>
<tr>
<th></th>
<th>H</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suction Pressure (max.)</td>
<td>1.4 bar</td>
<td>70 bar</td>
</tr>
<tr>
<td>Discharge Pressure (max.)</td>
<td>30 bar</td>
<td>70 bar</td>
</tr>
<tr>
<td>Suction Temperature</td>
<td>-40 to 50°C</td>
<td>-40 to +200°C</td>
</tr>
<tr>
<td>Effective inlet flow range</td>
<td>3,500 – 42,500 (85,000*) m³/h</td>
<td>250 – 110,000 m³/h</td>
</tr>
<tr>
<td>Maximum No. of stages</td>
<td>1 – 4</td>
<td>1</td>
</tr>
<tr>
<td>Gases handled</td>
<td>Air, Nitrogen</td>
<td>all gases</td>
</tr>
<tr>
<td>Imeller Types</td>
<td>open</td>
<td>open</td>
</tr>
<tr>
<td>Shaft / Impeller Connection</td>
<td>Microspline</td>
<td>Microspline</td>
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<tr>
<td>Seals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labyrinth</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Carbon ring</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Dry gas seal</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Capacity / Pressure Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable inlet guide vanes (IGV)</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Variable diffuser guide vanes (DGV)</td>
<td>●*</td>
<td>●</td>
</tr>
<tr>
<td>Variable speed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inlet throttle</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>API</td>
<td>672</td>
<td>672 / 617</td>
</tr>
<tr>
<td>Axial thrust compensation</td>
<td>high speed axial bearings</td>
<td>high speed axial bearings</td>
</tr>
<tr>
<td>Oil System</td>
<td>manufactures standard or API 614</td>
<td>manufactures standard or API 614</td>
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<tr>
<td>Coupling</td>
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<td>dry</td>
</tr>
<tr>
<td>Test Code</td>
<td>VDI2045/ASME PTC10</td>
<td>VDI2045/ASME PTC10</td>
</tr>
</tbody>
</table>

*for single-stage H
“Atlas Copco’s product range provides precisely the right solution for your process needs.”

<table>
<thead>
<tr>
<th>TP</th>
<th>GT</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
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<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td>70 bar</td>
<td>80 bar</td>
<td>40 bar</td>
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<tr>
<td>70 bar</td>
<td>200 bar</td>
<td>40 bar</td>
</tr>
<tr>
<td>-40 to +200°C</td>
<td>-200 to +200°C</td>
<td>-40 to +150°C</td>
</tr>
<tr>
<td>250 – 20,000 m³/h</td>
<td>250 – 400,000 m³/h</td>
<td>15,000 – 50,000 m³/h</td>
</tr>
<tr>
<td>2 – 5</td>
<td>1 – 8</td>
<td>1</td>
</tr>
<tr>
<td>all gases</td>
<td>all gases</td>
<td>Polyethylene, Polypropylene</td>
</tr>
<tr>
<td>open</td>
<td>open / closed</td>
<td>open</td>
</tr>
<tr>
<td>Microspline</td>
<td>Hirth Serration</td>
<td>Hirth Serration</td>
</tr>
<tr>
<td>high speed axial bearings</td>
<td>high speed axial bearings or thrust collar</td>
<td>high speed axial bearings</td>
</tr>
<tr>
<td>manufactures standard or API 614</td>
<td>manufactures standard or API 614</td>
<td>API 614</td>
</tr>
<tr>
<td>dry</td>
<td>dry</td>
<td>dry</td>
</tr>
<tr>
<td>VDI2045/ASME PTC10</td>
<td>VDI2045/ASME PTC10</td>
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Our Products for Your Market

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<td>Oxygen Compression</td>
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<td>Electronics</td>
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<td>GTL / Syngas / CO</td>
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<td>N₂ Recycle-Feed</td>
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<td><strong>Hydrocarbon</strong></td>
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<td>Inorganics – Downstream</td>
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<td>Refineries – Downstream</td>
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<td>Gas to Liquid – Downstream</td>
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<td>Power Generation – Downstream</td>
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<td>Gas to Liquid</td>
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<td>Wastewater Treatment</td>
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<td>Pharmaceutical Food</td>
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<td>Plant &amp; Industrial Air</td>
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Main Air Compressor
This turbocompressor feeds an oxygen plant inside a Chinese steel mill.

Type: Three-stage GT153
Inlet pressure: 0.99 bar(a)
Outlet pressure: 6.4 bar(a)
Inlet temperature: 30 °C
Flow: 380,000 m³/h

Booster Air Compressor / N₂ Recycle Compressor
This combined service machine is at the heart of a steel and iron mill.

Type: Six-stage combined service GT040
Inlet pressure: 5.6 bar(a)
Outlet pressure: 62 bar(a)
Inlet temperature: 22 °C
Flow: 8,800 m³/h

Recycled Feed Main Air / Booster Air Compressor
This MAC-BAC compressor supplies dry nitrogen.

Type: Four-stage combined service GT050 / GT032
Inlet pressure: 5.3 bar(a)
Outlet pressure: 29.1 bar(a)
Inlet temperature: 24 °C
Flow: 20,000 m³/h

Air Compressor for Membrane N₂ Generation
This machine is used in an LNG Regasification application.

Type: Three-stage H16000
Inlet pressure: 0.993 bar(a)
Outlet pressure: 13.9 bar(a)
Inlet temperature: 42 °C
Flow: 19,000 m³/h
Booster Air Compressor
This is a two-stage H-Series compressor.
**Type:** Two-stage H26000  
**Inlet pressure:** 6 bara(a)  
**Outlet pressure:** 26 bara(a)  
**Inlet temperature:** 30 °C  
**Flow:** 6,600 m³/h

Centrifugal Gas Compressor for Power Generation
Close-up of one of our Fuel Gas Boosters.
**Type:** SC-Series  
**Inlet pressure:** 27 bara(a)  
**Outlet pressure:** 42 bara(a)  
**Inlet temperature:** 12 °C  
**Flow:** 2,900 m³/h

Centrifugal Gas Compressor for Power Generation
This Fuel Gas Booster is used inside a Russian natural gas driven power plant.
**Type:** Six-stage GT050  
**Inlet pressure:** 5.7 bara(a)  
**Outlet pressure:** 48.3 bara(a)  
**Inlet temperature:** 13 °C  
**Flow:** 14,300 m³/h

Centrifugal Gas Compressor for Power Generation
This Fuel Gas Booster is used in a Combined Cycle power plant.
**Type:** One-stage GT026  
**Inlet pressure:** 23.5 bara(a)  
**Outlet pressure:** 35 bara(a)  
**Inlet temperature:** 15 °C  
**Flow:** 3,700 m³/h
Hydrocarbon Business

Centrifugal Gas Compressor for Petrochem
This compressor is deployed in a Methanol application.
Type: Four-stage GT026
Inlet pressure: 6.40 bar(a)
Outlet pressure: 38.90 bar(a)
Inlet temperature: 38 °C
Flow: 2,500 m³/h

Centrifugal Gas Compressor for Ethylene
This compressor used inside a Polyethylene plant.
Type: Four-stage GT021
Inlet pressure: 18.5 bar(a)
Outlet pressure: 74.5 bar(a)
Inlet temperature: 33 °C
Flow: 2,200 m³/h

Centrifugal Gas Compressor for Coal Gasification
This five-stage machine is used in a CO application in China.
Type: Five-stage GT070
Inlet pressure: 1.1 bar(a)
Outlet pressure: 83.4 bar(a)
Inlet temperature: 12 °C
Flow: 43,000 m³/h

Compander for Chemical
The Compander is deployed in a Belgian Hydrogen Peroxide to Propylene Oxide (HPPO) plant.
Type: Three-stage GT056/ETI300NS
Inlet pressure: 1.1 bar(a)
Outlet pressure: 8.7 bar(a)
Inlet temperature: 20 °C
Flow: 37,500 m³/h
**Centrifugal Gas Compressor for Carbonmonoxide**

This compressor for a Chinese petrochemical plant had to meet complex requirements.

- **Type:** Five-stage GT032
- **Inlet pressure:** 1.8 bar(a)
- **Outlet pressure:** 37.9 bar(a)
- **Inlet temperature:** 27 °C
- **Flow:** 30,000 m³/h

**Centrifugal Gas Compressor for Petrochem**

This compressor handles carbonmonoxide.

- **Type:** Six-stage GT040
- **Inlet pressure:** 2.2 bar(a)
- **Outlet pressure:** 31.5 bar(a)
- **Inlet temperature:** 34.7 °C
- **Flow:** 18,000 m³/h

**Centrifugal Compressor for Mining**

This is a custom-made compressor for the Mining industry.

- **Type:** Five-stage GT026
- **Inlet pressure:** 1.05 bar(a)
- **Outlet pressure:** 31 bar(a)
- **Inlet temperature:** 40 °C
- **Flow:** 7,400 m³/h

**Centrifugal Gas Compressor for Carbondioxide**

This compressor for CO₂ is used in a Gas Pipeline application in the Netherlands.

- **Type:** Four-stage GT032
- **Inlet pressure:** 1.06 bar(a)
- **Outlet pressure:** 31 bar(a)
- **Inlet temperature:** 31 °C
- **Flow:** 10,800 m³/h
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