

# OIL-FREE TURBO COMPRESSORS DYNAMIC

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oil-free



# TURBO COMPRESSORS DYNAMIC

Volume flow: 25 - 330 m<sup>3</sup>/min

The ALMiG's DYNAMIC powered by FS-Elliott series of turbo compressors series combines decades of experience and enthusiasm for compressed air technology to provide exceptionally reliable, energy-efficient and cost-effective systems.

The DYNAMIC turbo compressors are easy to install, operate and maintain.

The ALMiG compressors are certified in accordance with ISO 8573-1 Class 0 and provide 100% oil-free compressed air.

ALMiG's DYNAMIC powered by FS-Elliott series of compressors are suitable for a wide range of applications and include two-stage and three-stage units ranging from 185 kW to 2240 kW with a final compression pressure of up to 10.5 bar (effective pressure).

## Energy-efficient

Advanced aerodynamic design and control system to minimise energy consumption

## Oil-free

Officially certified in accordance with ISO 8573-1 Class 0, the system provides 100% oil-free compressed air

## Quick & easy maintenance

Optimised design with wear-free compression principle means low maintenance requirements and least downtime

## German manufacturing and local service

German system manufacturing and technical service available around the clock, 365 days a year

### Application

100% oil-free compressed air for industrial use (pharmaceutical, food, chemical, etc.)

### Power output

185 kW – 2240 kW

### Volume flow

25 – 330 m<sup>3</sup>/min

### Operating pressure

3.5 – 10.5 bar (g)

### Cooling

Water-cooled

### Drive

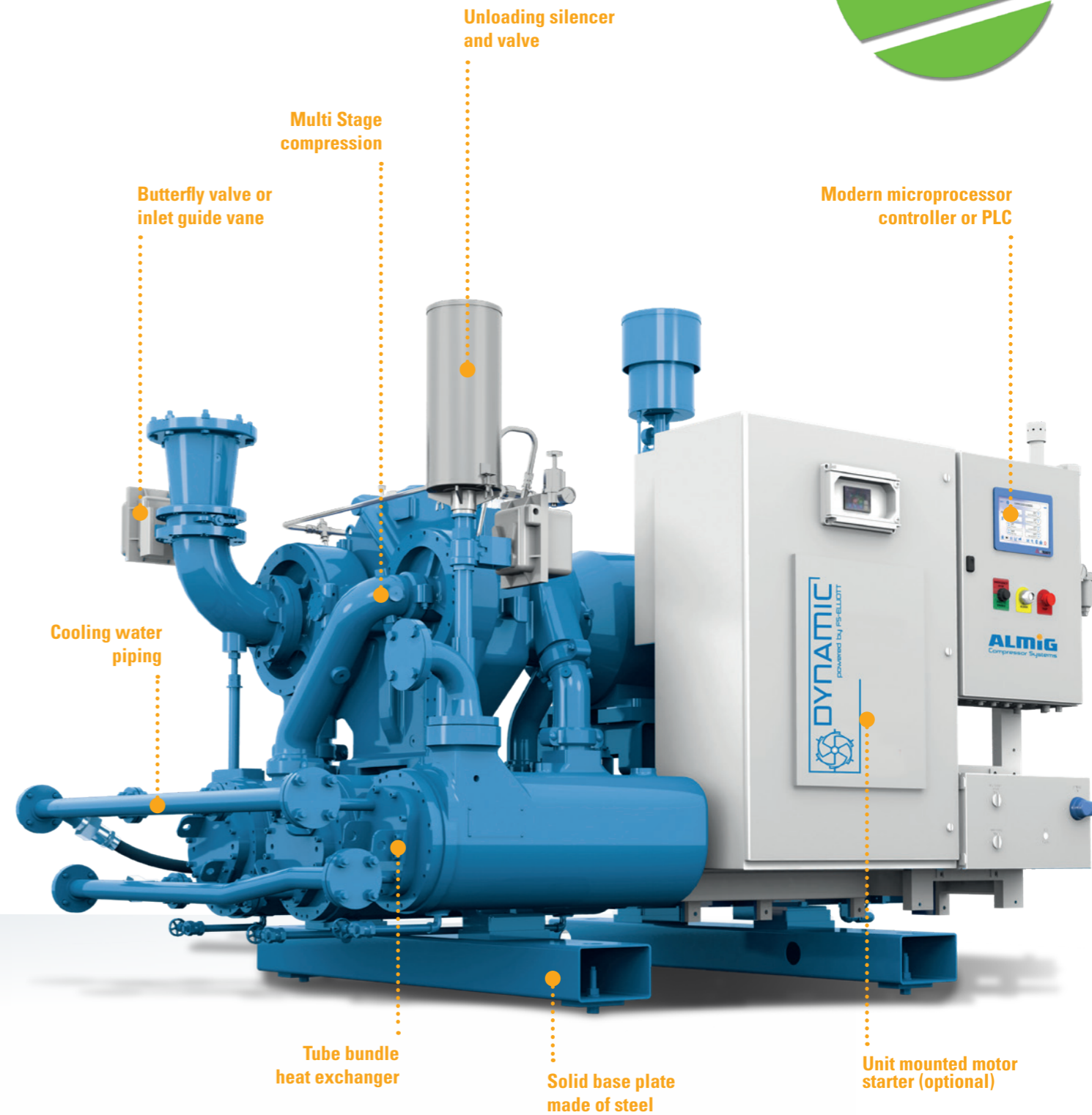
Gear

### Motor

Highly efficient asynchronous motor



- + Oil-free compressed air in accordance with ISO 8573-1 Class 0
- + State of the art microprocessor or PLC based control systems
- + Wear-free impellers and bearings
- + Compact design made in Germany
- + Easy maintenance & low Life-cycle-costs



# FEATURES

Thanks to years of development and operational experience, the ALMiG turbo compressors in the DYNAMIC series are exceptionally reliable, energy-efficient and cost-effective.

## Features and advantages

- One of the most efficient compressors on the market
- Oil-free compressed air
- 2-stage or 3-stage turbo compressor
- Above-average service life
- Low maintenance costs
- Highest efficiency superior multi-pad, hydrodynamic bearings
- Constantly high and consistent performance
- Wear-free impellers
- On-site maintenance possible via horizontally split gear casing

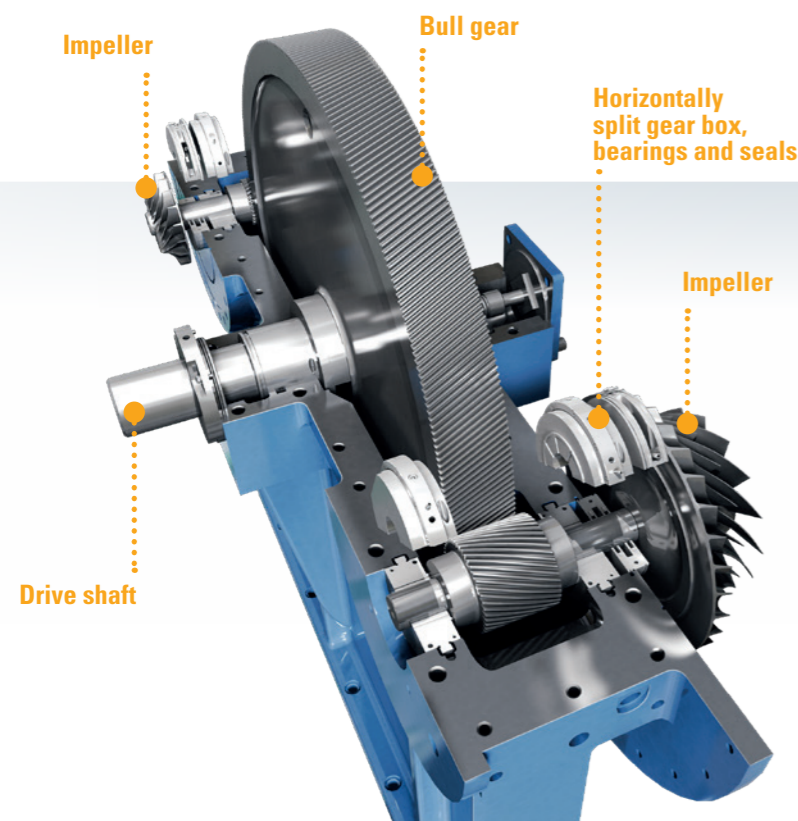
## Standard equipment

- Manufactured at ALMiG in Germany
- Modern microprocessor controller
- Cooling water connection
- Aftercooler

## Options

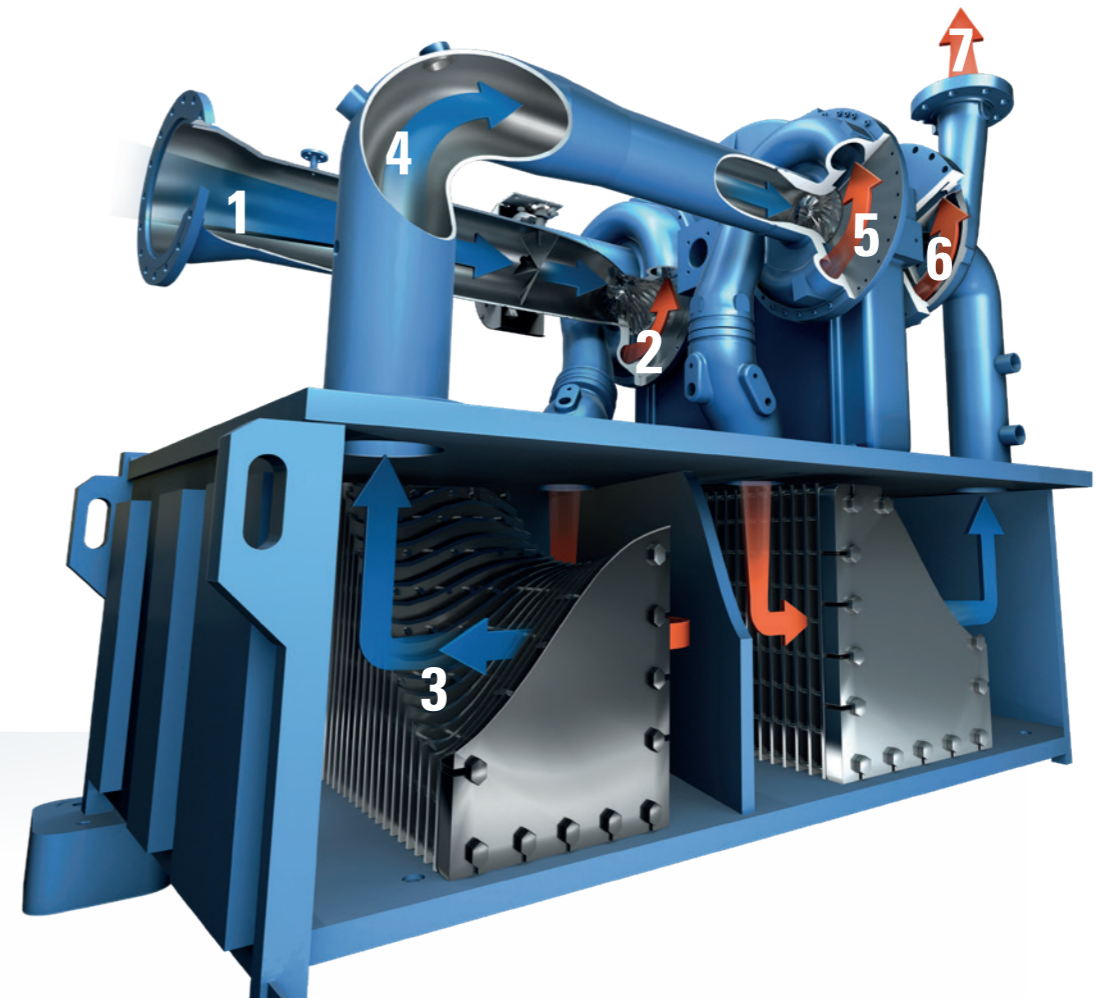
- Sound enclosure
- Automatic condensate drain
- Filter monitoring
- Bus systems available (Ethernet/Modbus)
- PLC control system

Turnkey compressor stations and special systems are available on request.

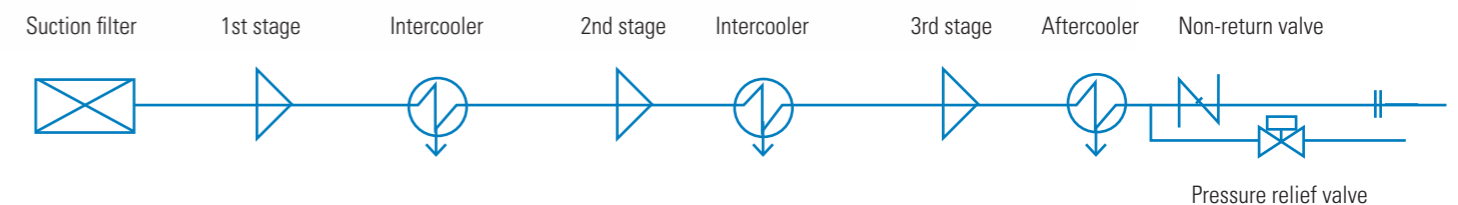


# OIL-FREE COMPRESSION PROCESS

1. The ambient air passes through the inlet guide vane (IGV) into the first compressor stage
2. The first-stage impeller accelerates the air and a radial diffuser converts the air velocity into pressure
3. The air, which is now hot, passes into the first intercooler
4. The cooled air then flows into the second-stage inlet piping
5. The compression process is repeated as the air passes through the second stage impeller diffuser and scroll casing and then into the second intercooler
6. After the intercooler, the air reaches the third and last compressor stage
7. The compressed air passes through the aftercooler and then enters the air system



## Air flow diagram





# REASONS TO BUY ALMIG DYNAMIC SERIES

- 1** Maximum efficiency due to customized impeller design and multi stage compression
- 6** Manufacturing at ALMiG in Germany allows us to respond flexibly to customer requirements with a fully CE compliant package
- 2** ISO 8573-1, 100% oil-free air to maintain product quality and reduce your risk of process contamination
- 7** Modern control and bus systems for networking + Industry 4.0 with web-based communication, connectivity and intelligent control
- 3** Solid and reliable design of the DYNAMIC series leads to less moving parts and extrem low vibration
- 8** Demand-oriented control technology for lowest energy costs with a superior turn-down range and constant pressure
- 4** Lowest cost of ownership due to minimal maintenance requirements and an extremely efficient compression process
- 9** ALMiG has been offering products with the "Made in Germany" quality seal since 1923. Together with FS Elliott we have over 6000 centrifugal compressors installed and running
- 5** Our service organisation offers on-site service around the clock, worldwide. Individual service packages can offer up to 5 years premium warranty
- 10** Customer or TÜV inspection possible on site at ALMiG or at the final destination at the customer site

# THE DYNAMIC SERIES



**DYNAMIC P700+**  
 FAD: 170–330 m<sup>3</sup>/min  
 Power: 930–2240 kW  
 Pressure: 3.5–10.5 bar(g)



**DYNAMIC P600+**  
 FAD: 110–180 m<sup>3</sup>/min  
 Power: 520–1120 kW  
 Pressure: 3.5–10.5 bar(g)



**DYNAMIC P500+**  
 FAD: 70–130 m<sup>3</sup>/min  
 Power: 450–750 kW  
 Pressure: 3.5–10.5 bar(g)



**DYNAMIC P400+**  
 FAD: 45–100 m<sup>3</sup>/min  
 Power: 260–520 kW  
 Pressure: 3.5–10.5 bar(g)

**DYNAMIC P300+**  
 FAD: 25–60 m<sup>3</sup>/min  
 Power: 185–335 kW  
 Pressure: 3.5–10.5 bar(g)

