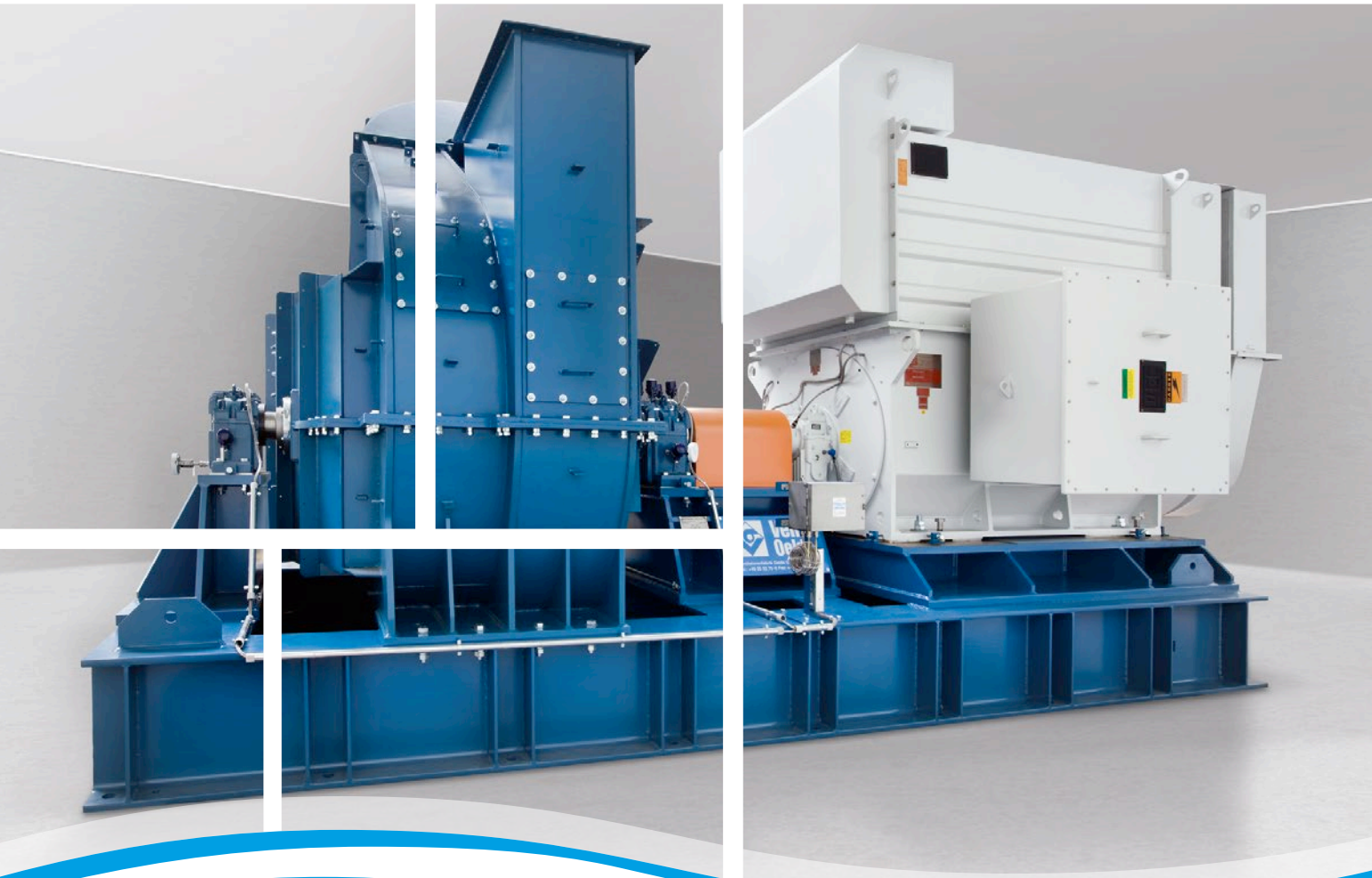


# Centrifugal fans for the chemical industry



# We make air work for you

Air is our medium. Our research and development, planning and consulting, manufacturing and service are all centred around innovative air technology.

With their industry-specific know-how, our experienced and committed team of around 250 employees can meet any of our customers' individual needs. We always focus on the aspects that make economic sense.

Venti Oelde fans and systems are used in almost all industries worldwide: in the cement and steel industry as well as in chemical and refinery plants and power stations, in wood processing as well as in the printing and paper industry and in recycling plants.

Our comprehensive services build and foster trust for long-term, successful partnerships. Our worldwide field offices and representatives ensure qualified support and short travel distances to our business partners.

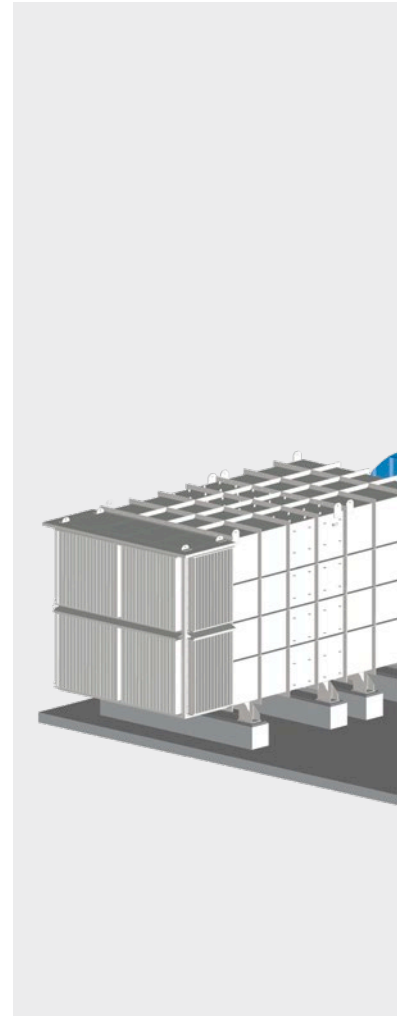
Venti Oelde is certified according to these relevant international quality guidelines:

- DIN EN ISO 9001:2015
- European product and operating directives for explosion protection in accordance with ATEX
- European standards for the welding of pressure equipment and steel construction

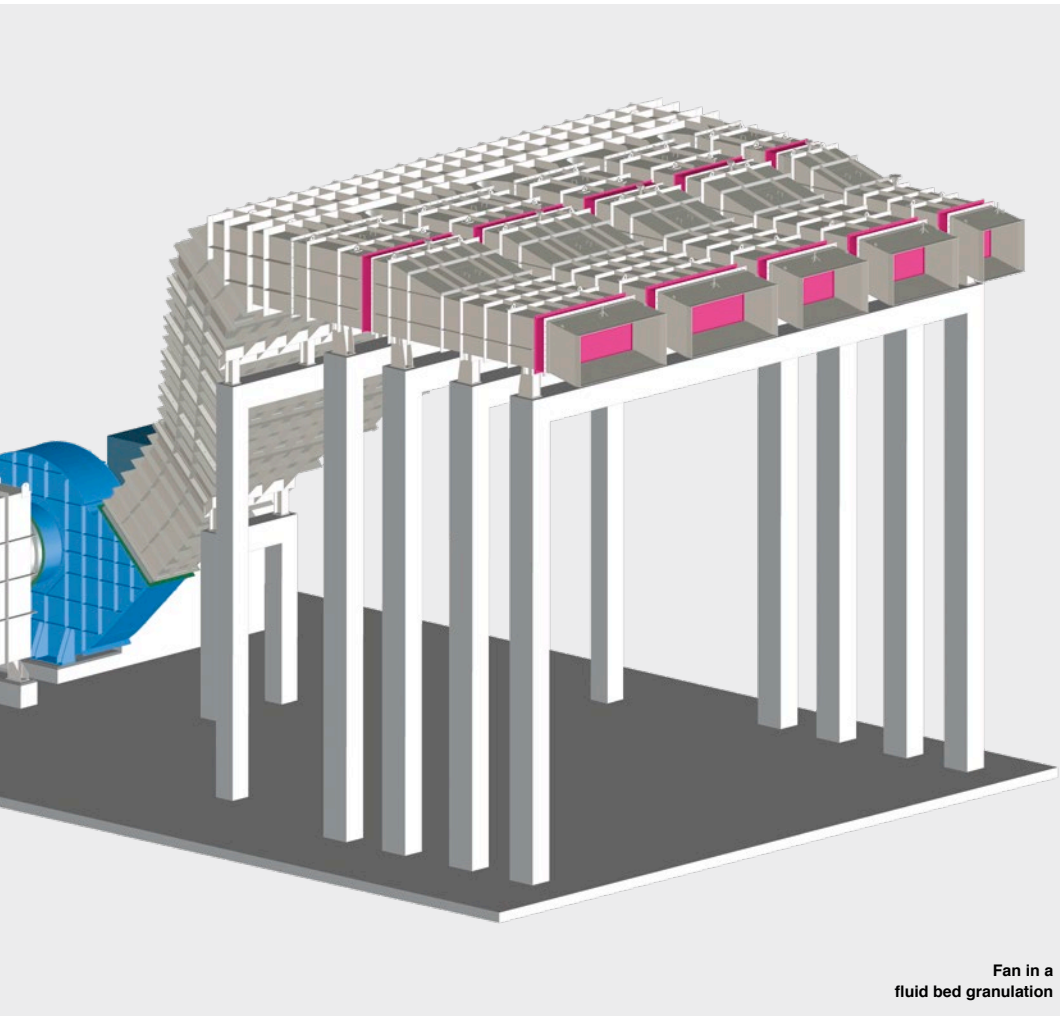
Our specialist staff are also trained in safety, health protection and environmental protection and have been independently audited in accordance with the Safety Certificate Contractors (SCC) occupational health and safety management system as per Doc. 018.

Venti Oelde has decades of experience in the chemical industry and is familiar with the ins and outs of process engineering.

Benefit from our technical expertise and recognised quality. Services range from planning and engineering through to sales, installation and commissioning to maintenance and after-sales services. We use computational fluid dynamics (CFD) for the engineering of air handling processes.



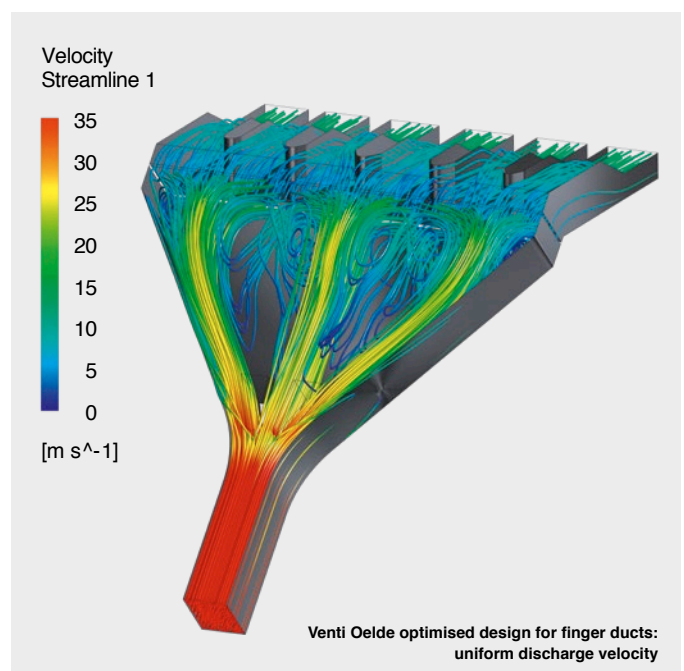
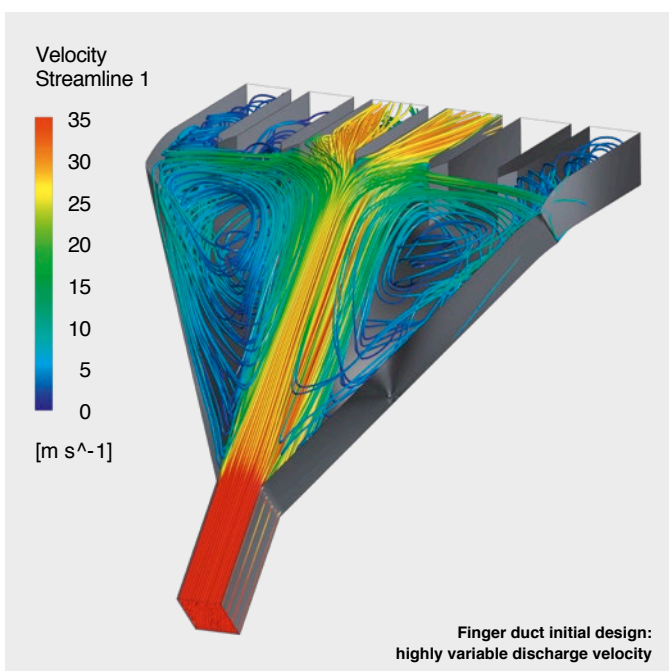
Fresh air fans  
in a refinery



Fan in a  
fluid bed granulation

Venti Oelde special fans are custom-made with the best possible efficiency and maximum up-time.

Venti Oelde designs and manufactures large and special fans as well as components and systems. Venti Oelde tests, delivers and commissions on a turnkey basis. Venti Oelde also carries out remote diagnostics, if required, and measures, maintains and repairs systems. If required, we also repair and optimise third-party products and make them fit for growing demands.



# Industrial centrifugal fans made by Venti - high-quality industry solutions

## Process gas fans from Venti Oelde are:

- reliable
- robust
- low-noise
- durable
- economical
- low-maintenance
- designed for continuous operation
- explosion-proof or rubber coated if required
- resistant to aggressive media

## Areas of application:

- Fertiliser: urea, ammonium nitrate, calcium ammonium nitrate
- Syngas: methanol, hydrogen, ammonia
- Refineries: oil-, coal- and residue-gasification
- Pharmaceutical engineering
- Desulphurisation (Sulphur recovery)

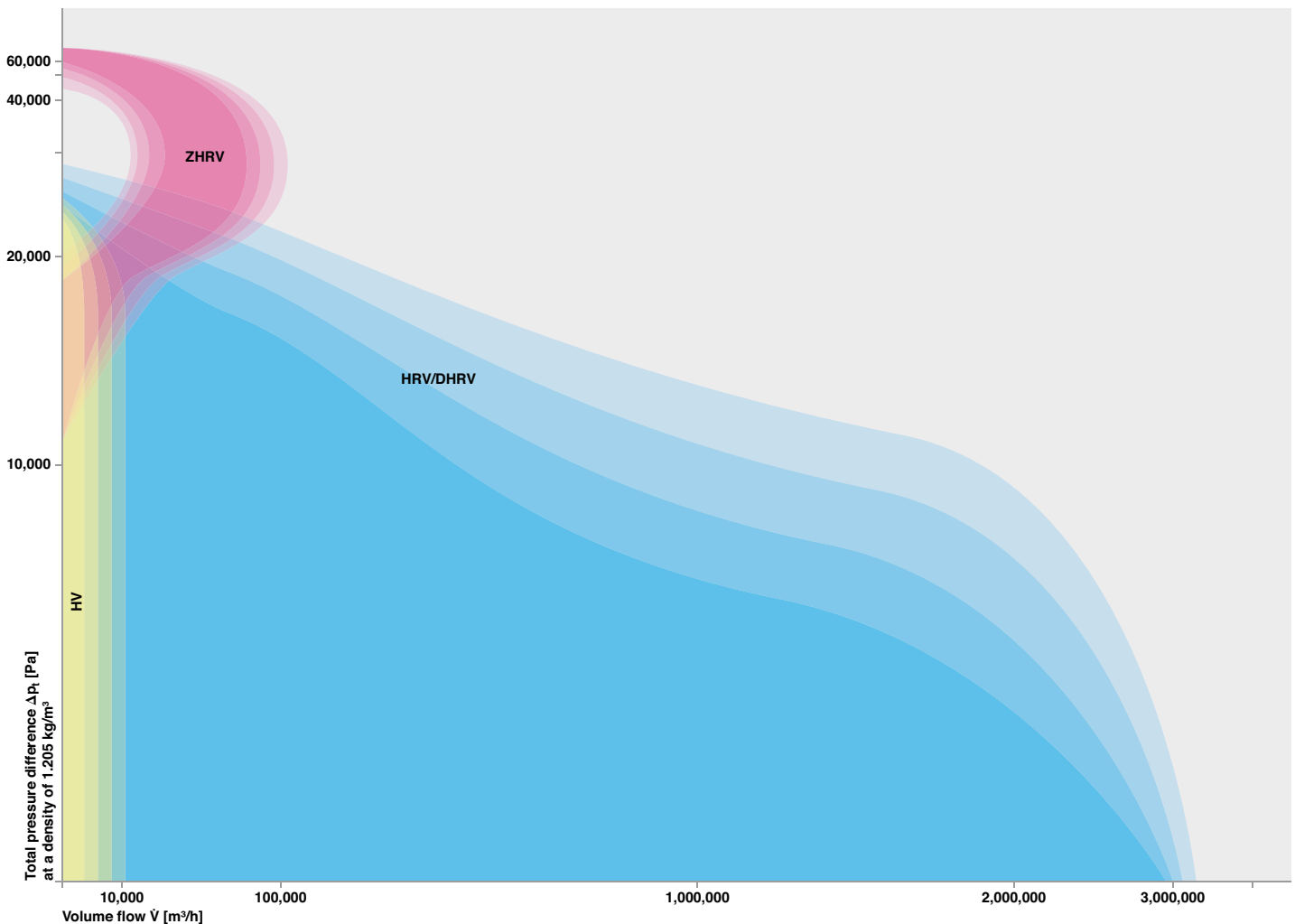
## Our references Fans for:

- Urea plants up to 3,850 t/d
- Ammonia plants up to 3,670 t/d
- Methanol plants up to 5,000 t/d
- Crude oil distillation in refineries
- Fuel desulphurisation in refineries

## Performance ranges Fans:

All fans are precisely designed to meet the needs of the customer:

- Volume flow: up to 2.5 million Bm<sup>3</sup>/h
- Two-stage: Pressure difference up to 550 mbar
- Dual drive: up to 8 MW
- Gas temperature range: up to 500 °C



Exhaust fan behind wet scrubber  
for urea plant

High pressure fan for  
offshore applications



Fan behind scrubber in a  
calcium ammonium nitrate plant

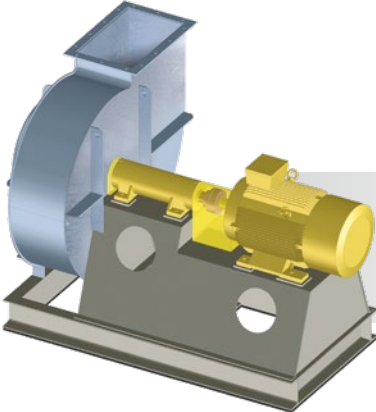
**Our products are supplied  
in accordance with follow-  
ing standards, amongst  
others:**

- API 560: Fired Heaters for General Refinery Service
- API 611: General-purpose Steam Turbines for Petroleum, Chemical, and Gas Industry Services
- API 673: Centrifugal fans for Petroleum, Chemical and Gas Industry Services
- API 686: Recommended Practices for Machinery Installation and Installation Design
- API 614: Lubrication, Shaft-sealing and Oil-control Systems and Auxiliaries referencing ASME Section VIII, Division 1: Rules for Construction of Pressure Vessels and ASME Section IX Boiler and Pressure Vessel Code: Welding and Brazing
- API 670: Machinery Protection Systems
- API 671: Special-purpose Couplings for Petroleum, Chemical and Gas Industry Services
- Customer specifications

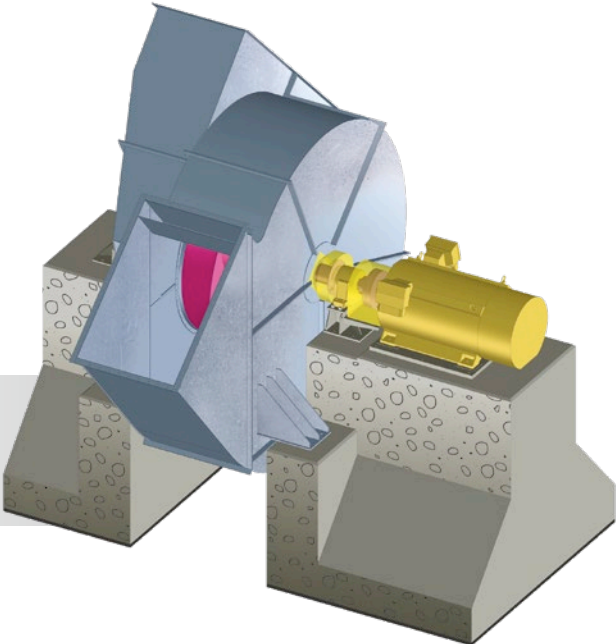
**Products manufactured  
using high-quality materials  
such as:**

- Carbon steel
- Stainless steel
- Duplex steel
- Super duplex steel
- High alloy steel

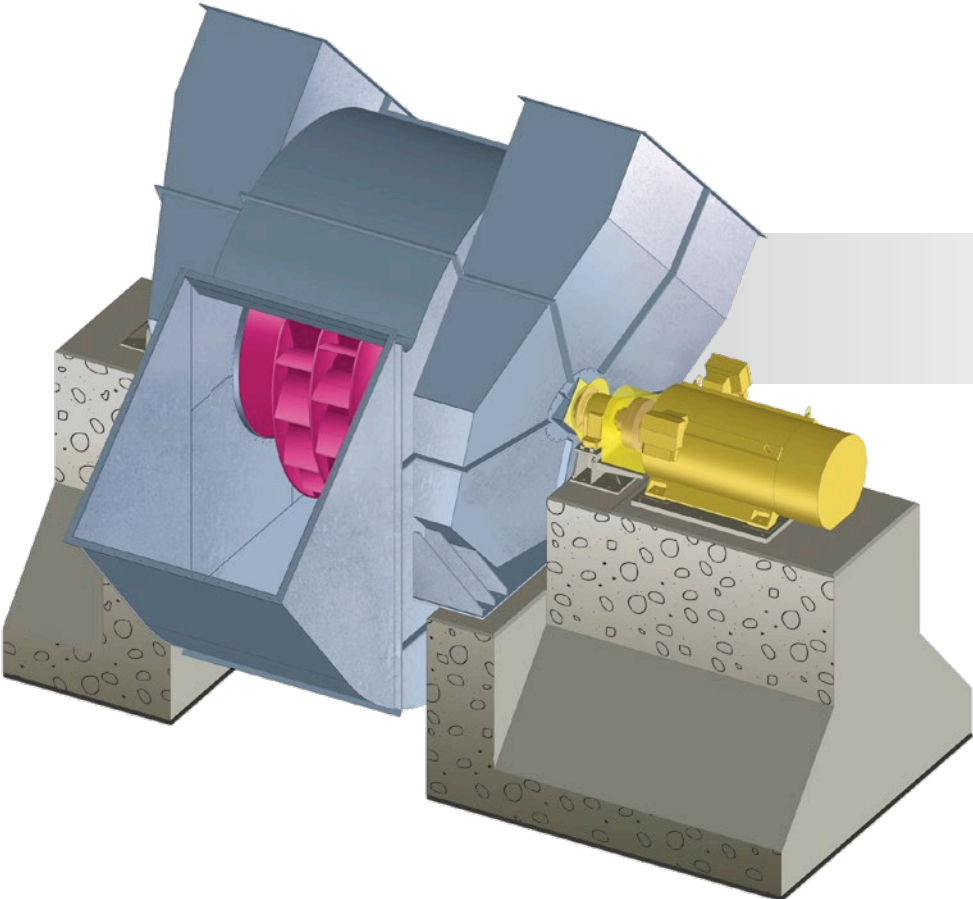
# Arrangements - equipped for every need



**Arrangement K**  
Drive through coupling,  
shown with base frame

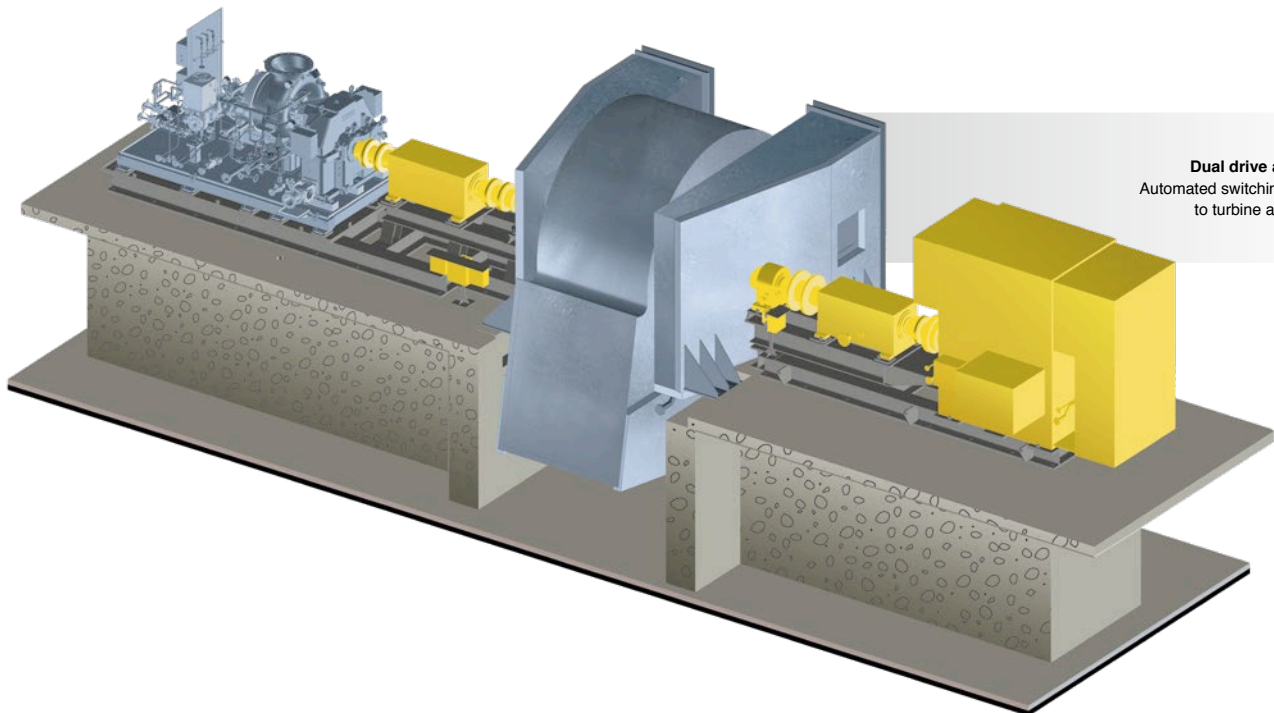
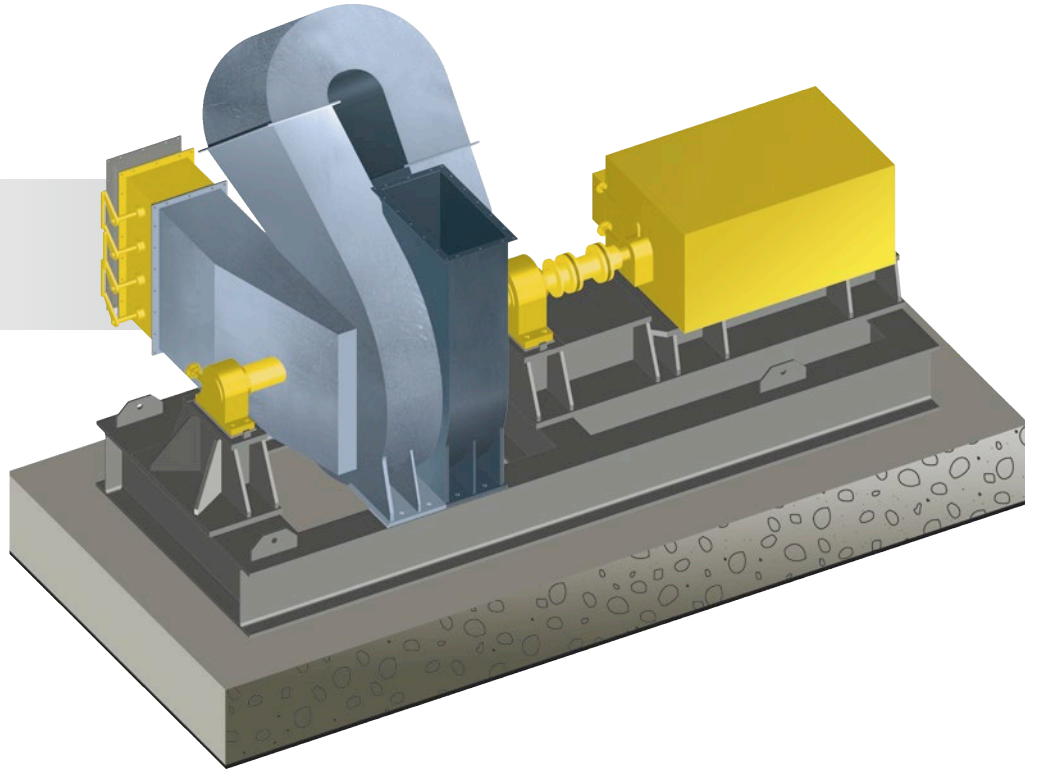


**Single inlet centrifugal fan**  
Shown with raised  
concrete foundation



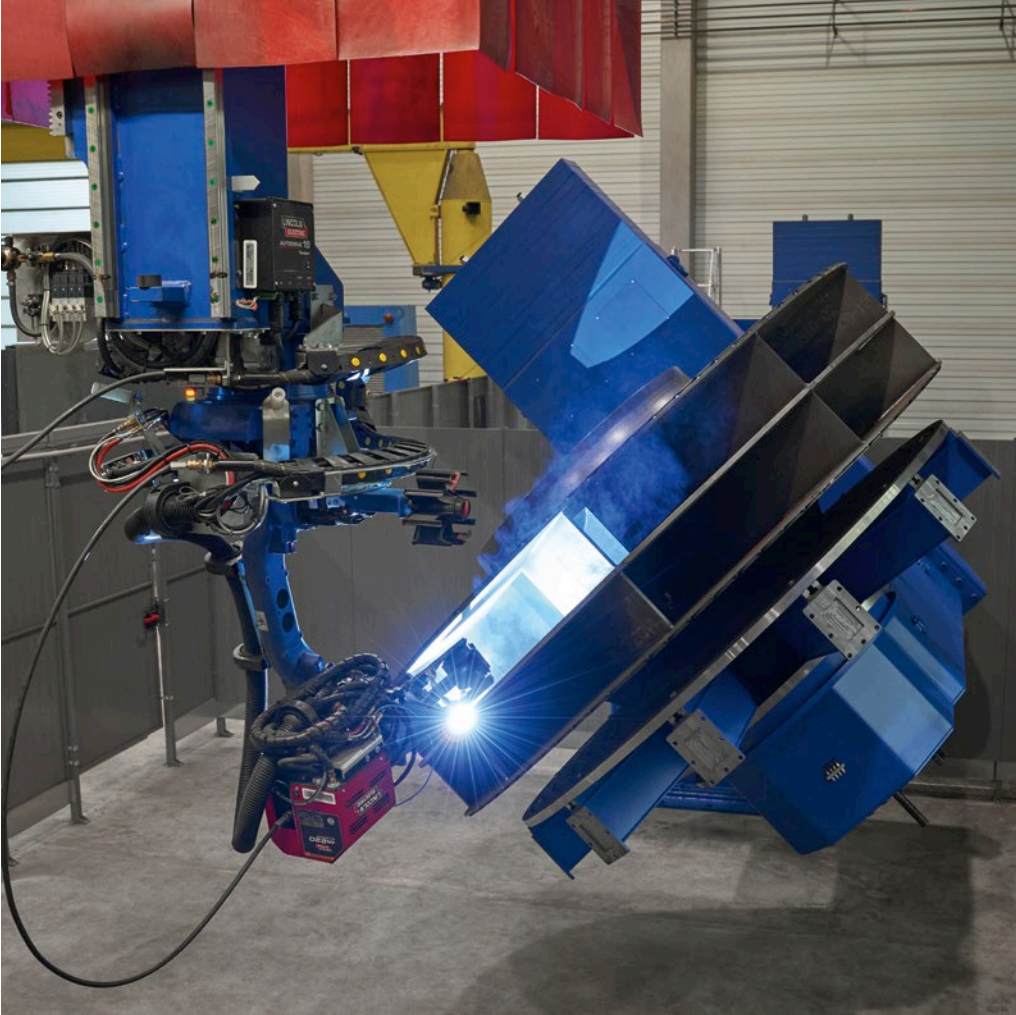
**Double inlet centrifugal fan**  
Shown with raised  
concrete foundation

**Arrangement ZHRV**  
Two-stage centrifugal fan,  
shown with base frame



**Dual drive arrangement**  
Automated switching from motor  
to turbine and vice versa

# Our machine tools - in excellent shape



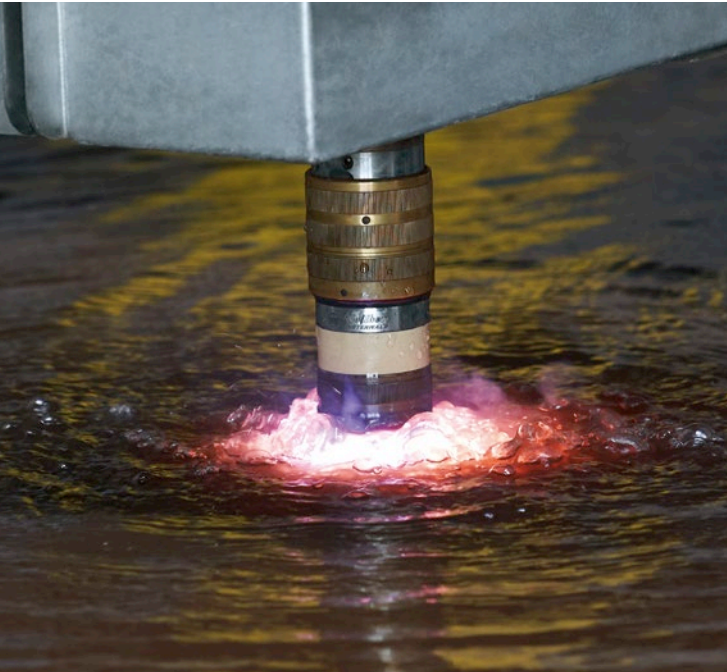
Welding robot welds external and internal weld seams with maximum precision and process reliability



A five-axis robot arm enables efficiency in multiple welding stations







Combined waterjet and plasma cutting machine cuts carbon steel and stainless steel sheets in 3000 x 6000 mm format up to a thickness of 200 mm



Performance test bench for centrifugal fans up to 1,000 kW at 400 V



Positioner for safe and ergonomic welding of impellers



Balancing bench for rotor assemblies up to 5,000 mm diameter



Stretch-forming machine

# Components - all the equipment from a single source

Together with the fan we also supply the desired equipment, e.g.:

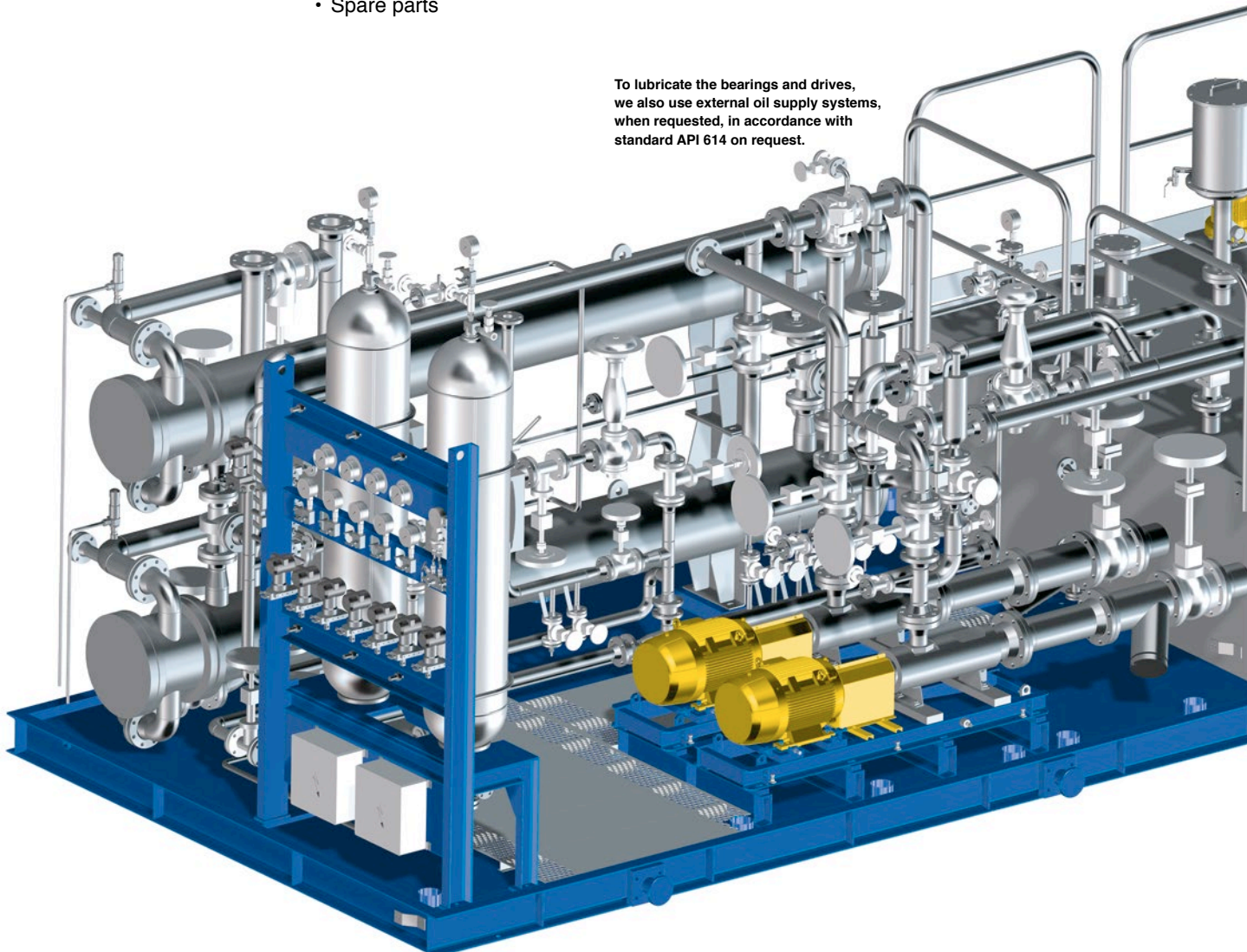
- Inlet vane control or control dampers with actuators
- Inlet boxes
- Expansion joints
- Silencers
- Duct and blow-off systems
- Oil supply systems
- Turbines
- Heat exchanger
- Motors
- Filter
- Vibration damper
- Complete sensor system for the Digital Control System (DCS) and Emergency Shutdown System (ESD)
- Spare parts

By ensuring that the components comply absolutely with the individual customer requirements, and that they also coordinate with one another, we achieve optimum performance with maximum plant availability.

Inlet vane control

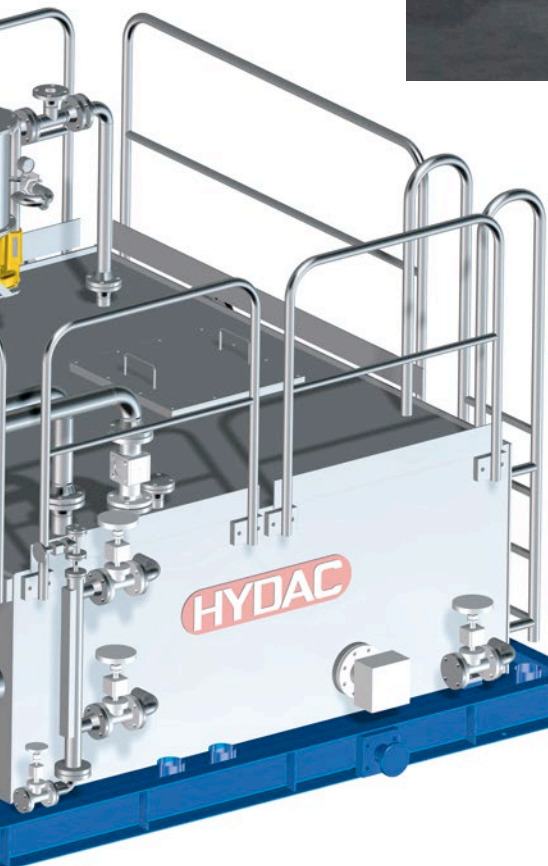


To lubricate the bearings and drives, we also use external oil supply systems, when requested, in accordance with standard API 614 on request.





Overrunning clutch for dual drive fans



Water injection to avoid/reduce the build-up of deposits



Coupling ARPEX ARN-6 with slip hub for limiting transient torques, which can be caused by switching over from drive A to drive B or restarting after mains interruption or mains changeover

- Industrial fans
- Dust collection and process air cleaning plants
- Exhaust air treatment plants
- Ventilating, heating and air conditioning plants
- Recycling and waste processing plants
- Surface technology



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