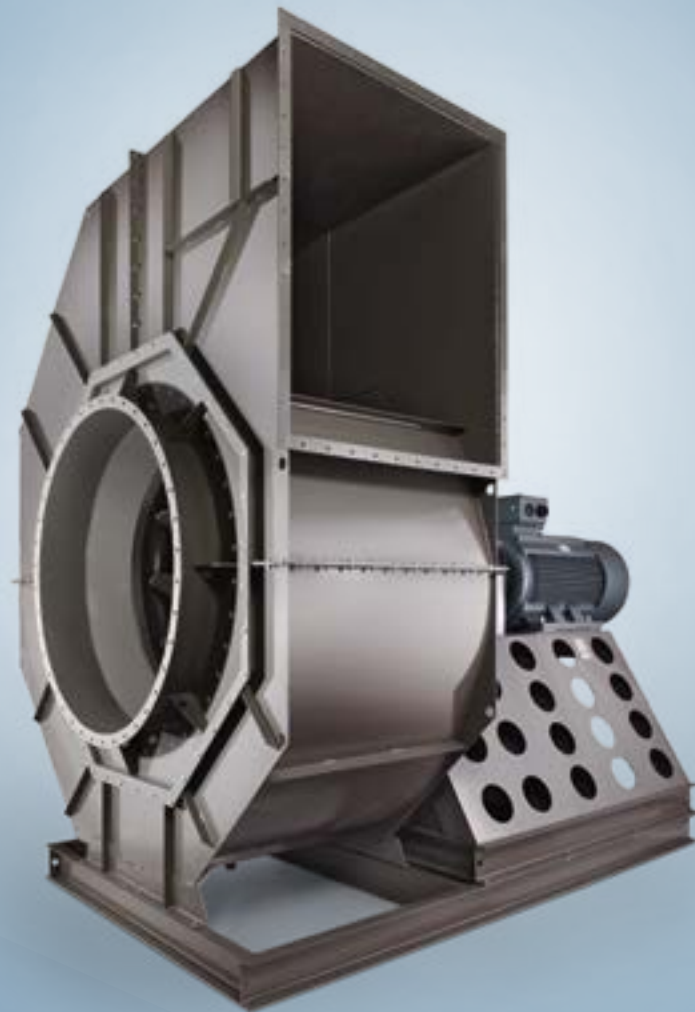


Radial fans
Product portfolio



BerlinerLuft. Technik
Partner in the field of various systems
in ventilation, air conditioning and welding technology

Energy saving Efficient Complex

FROM PRODUCT TO SYSTEM

As a leading manufacturer, operating in 13 locations around the world and offering a wide range of products, BerlinerLuft. has knowledge of ventilation, air-conditioning and welding technology. High-quality products, refined technology, production facilities with large production plants with high capacities, qualified personnel and many years of experience make BerlinerLuft. a reliable partner in the field of comprehensive solutions in the ventilation and air conditioning industry. BerlinerLuft. combines these competences in particular for industrial customers in all areas of application, including surface treatment techniques, processing procedures, environmental protection.

FROM SYSTEM TO EFFICIENCY

The range of our fans shows the involvement of BerlinerLuft. in the field of ventilation industry. Decades of experience in design and production, qualified constructors and technicians and effective modern production guarantee long-lasting and efficient industrial fans that meet the highest safety and profitability requirements.

Our centrifugal fans with a high efficiency factor pump up to 350.000 m³/h of air. 17 different rotor designs, with different aerodynamic properties and blade geometry, guarantee optimal circulation of every medium.

Taking into consideration our clients' satisfaction, we combine professional knowledge with experience and innovation, to create energy-efficient and valuable solutions.



FROM QUALITY TO CONTINUITY

Our high performance high quality centrifugal fans, designed with the fulfillment of special requirements, are used in a wide variety of industrial processes and work environments. The robust design allows them to be used in both chemically and physically loaded environments as well as in high temperatures. Tailored to the needs, they work reliably in the process of humidification, drying, filtering and air conditioning as well as within transport of gases, fibrous substances and sawdust.

FROM SYSTEM TO PROCESS

BerlinerLuft. manufactures high-performance industrial fans with the support of our internal and external quality management system as well as on the basis of current standards and directives (DIN EN ISO 9001:2008).

As a specialist in the field of welding technology, we provide our clients with the appropriate system components along with a duct system from dampers in industrial execution to solutions in the field of noise suppression systems and special welded constructions. The advantage for our customers is saving on additional connections and optimization of the whole system creation process.

Fans

High efficiency centrifugal fans in many construction variants with an optimal degree of efficiency. Perfectly matched to different applications.

Fans for high pressure uses

Fans for medium–high pressure uses

Fans for low pressure uses

Fans with a rotor without housing

Radial fans

Our energy-saving centrifugal fans are used wherever a high degree of efficiency and large air flows are required. We create solutions that take into account the needs of the client and can be applied in many areas.

Our centrifugal fans are freely adjustable in terms of material, construction and drive.

VARIANT OPTIONS

Single-sided centrifugal fans with backward curved blades in a spiral casing and without casing. Welded housing.

The range of products includes a large variety of rotor geometries that guarantees optimal industrial use in terms of efficiency and strength. This is just how we created 17 different designs of rotors with different properties.

Centrifugal fans

with direct drive

with a flexible coupling

with belt drive

Fans without housing

for wall mounting

for implementation into the device

1 | Fan model with housing

2 | Fan model without housing



Material

High quality material for various applications

Steel in accordance with DIN EN 10025 is used as the base material

Fans intended for work at a temperature of 200 °C to 350 °C are made of high-strength heat resistant steel

For temperatures exceeding 350 °C stainless steel or heat-resistant steel is used

At customer's request, some product groups are also available in aluminum or stainless steel construction

ANTICORROSION PROTECTION AND COATING

Corrosion protection is provided by a powder coating on a phosphate base or by using a special surface protection technique, e.g. hot dip galvanizing

Special coating for special corrosion protection

On request, it is possible to apply paint with increased heat resistance and protection against the influence of an aggressive environment

The use of high quality polymer like PFA, ECTFE, ETFE, PTFE, FEP, PEEK

PROTECTION FROM

adhesion

stratification of pollutants

dirt

corrosion

acids and lyes



- 1, 2 | Halar coating process
- 3, 4 | Anti-adhesive properties by PTFE painting
- 5 | so-called the „lotus” effect



Pressed medium and types of drives

STANDARD CONSTRUCTION

in the case of mechanically pure, non-aggressive gases with a dust content up to $0,5 \text{ g/m}^3$ (dry, non-adhesive) in the temperature range $-20 \text{ }^\circ\text{C}$ to $85 \text{ }^\circ\text{C}$. Other variants for non-standard use at the customer's request. The selection, construction, material and additional elements depend on the application of the fan. The design of each fan takes into account the specific application and detailed process parameters data provided by the customer.

SPECIAL CONSTRUCTION

in the case of moist, aggressive and dust-laden gases up to 500 g/m^3 (abrasive or adhesive), transport of fibrous substances, e.g. sawdust, contaminated media. Temperature range from $-50 \text{ }^\circ\text{C}$ to $890 \text{ }^\circ\text{C}$.

DIRECT DRIVE

using asynchronous motors (rotor mounted directly on the motor shaft). Depending on the requirements, drives with an elongated motor shaft are also available.

BELT DRIVE

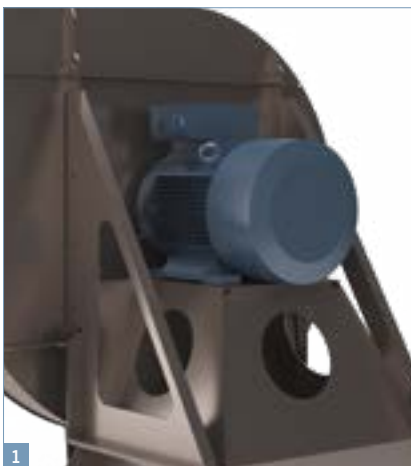
within a standardized pulley, belt and standardized asynchronous motors with the option of setting the desired number of turns to the rated operating point of the installation.

DRIVE WITH THE FLEXIBLE CLUTCH

and an intermediate shaft, applicable in large and heavy rotors at high mass forces or in the case of medium whose temperature exceeds $100 \text{ }^\circ\text{C}$.

At the customer's request, all types of drives can be equipped with a frequency converter enabling smooth speed control and thus work with optimal energy consumption.

- 1 | Direct drive
- 2 | Drive with clutch
- 3 | Belt drive



Construction

When designing rotors and other fan elements from BerlinerLuft, the FEM method (Finite Elemente Methode) is used. This way, individual requirements regarding the device parameters and optimization of the structure in terms of quality and material thickness can be taken into consideration at the design stage.

STANDARDS AND DIRECTIVES

Special requirements are also fulfilled. Non-sparking construction are made based on the European Union Directive ATEX 100a. Explosion-proof fans comply with DIN EN 14986 standard and meet the requirements of the ATEX directive 2014/34/EU.

At customer's request, we also offer strength measurements in accordance with DIN 24163 with a proper documentation.



Strength calculations of rotors using the FEM method

Efficiency

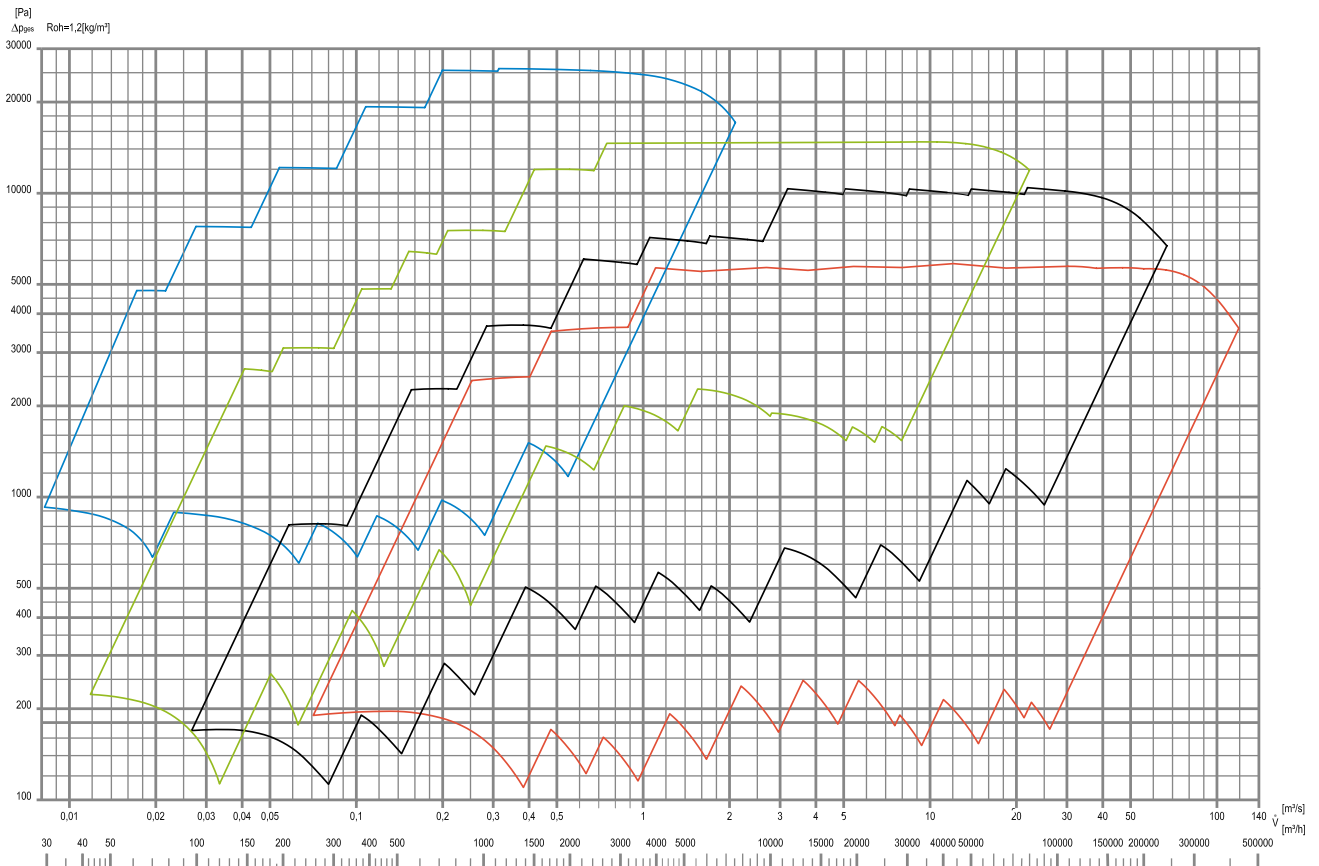
The range of fans with rotors without housing covers the range of air flow up to 200.000 m³/h in the pressure range up to 3.000 Pa.

Due to the varying sizes of rotors in the housing in the diameter range from 250 mm to 2.500 mm, it is possible to achieve an air flow rate of up to 350.000 m³/h and a pressure of 25.000 Pa.

SCOPES OF WORKING PARAMETERS OF ROTORS IN CENTRIFUGAL FANS

The graph concerning single-sided suction fans RE 21–RE 77

- RE 21 NW 250–1250 — high pressure
- RE 3.. NW 250–1400 — medium–high pressure
- RE 5.. NW 250–2000 — high–medium pressure
- RE 7 NW 250–2500 — low–medium pressure



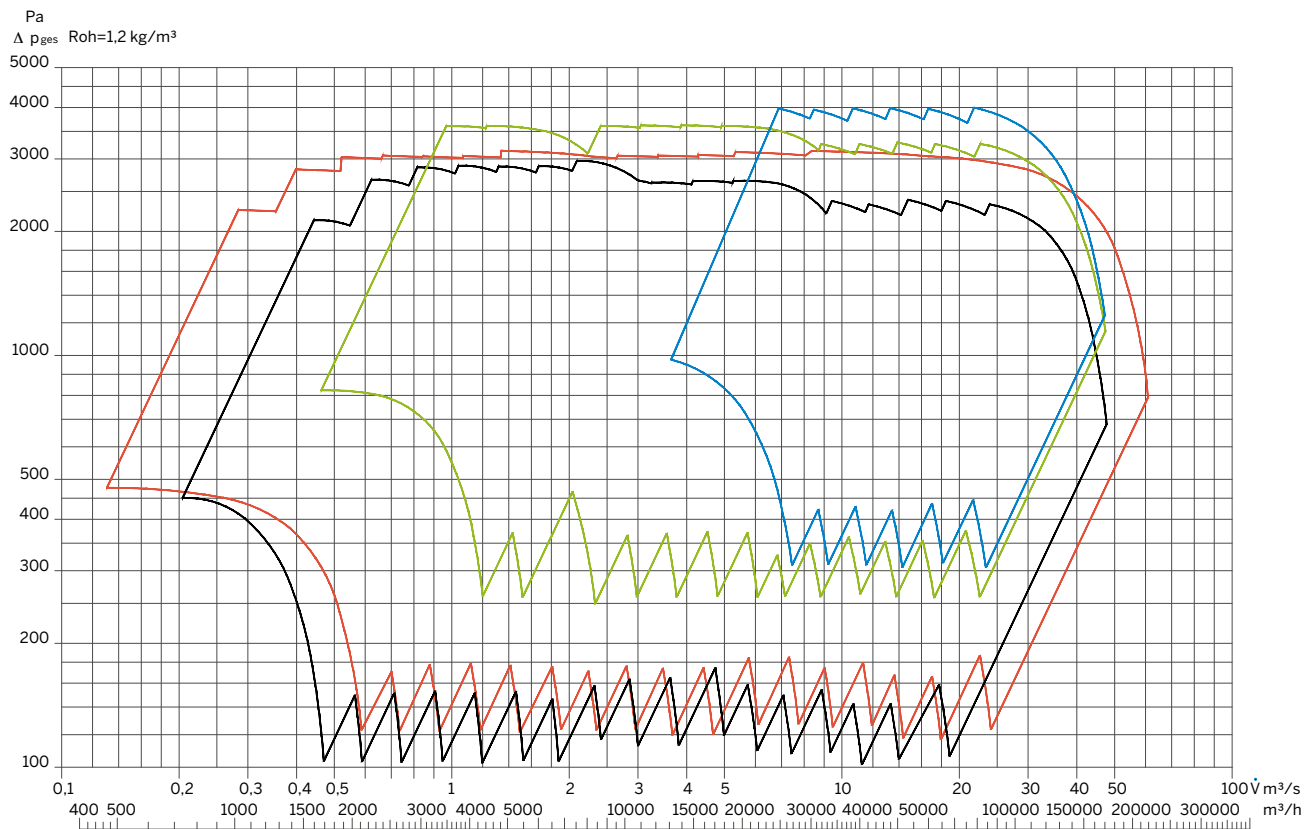
Density = 1,2 kg/m³, temperature = 20 °C

Efficiency

SCOPES OF WORKING PARAMETERS OF TYPE FREE-RUNNING WHEEL WITHOUT HOUSING

The graph concerning free-running wheel fans REU 729
-REU 737

REU 729/2,2	900÷1600	—
REU 729/2,5	355÷1600	—
REU 729/3	250÷1600	—
REU 737/3	250÷1600	—



Density = 1.2 kg/m³, temperature = 20 °C

RE 2 | RE 3 type for high pressure | high–medium pressure

RE 2 FAN FOR HIGH PRESSURE

designed for pressures from 1.000 to 25.000 Pa

Diameter of the rotor

from 355 to 1.250 mm

SCOPE OF APPLICATION

for the transport of clean air free of dust, at industrial gas extracts

RE 3 FAN FOR MEDIUM HIGH PRESSURE

designed for pressures from 500 to 20.000 Pa

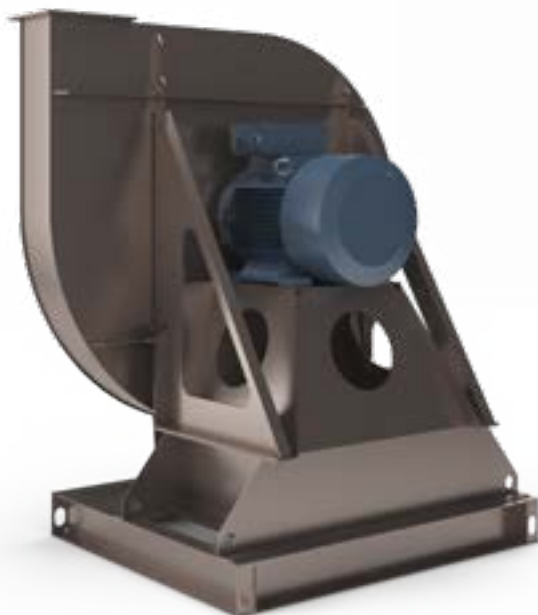
Diameter of the rotor

from 200 to 2.000 mm

Relatively constant stream also when the pressure changes

SCOPE OF APPLICATION

for the transport of clean air free of dust, at industrial gas extracts.



RE 5 type for high–medium pressure

Diameter of the rotor

from 250 to 2.000 mm

3 types of rotor

with backward curved blades

Air transport for straight blades

Used for the transport of contaminated gases with a dust content up to 3 g/m³ or as an open rotor for material transport

SCOPE OF APPLICATION

RNV (Thermal flue gas cleaning installation)

Environmental protection technique

Refrigeration industry

Power plants



RE 71, RE 72, RE 77 types for low pressure

Diameter of the rotor

from 250 to 2.500 mm

4 types of rotor

with backward curved blades

SCOPE OF APPLICATION

RNV (Thermal flue gas cleaning installation)

Environmental protection technique

Dryers

Installation technique

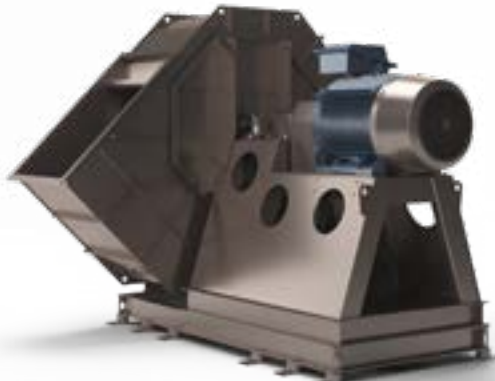
Clean rooms

Application for large air streams

1 | RE 71-1250 fan

2 | RE 71-1600 fan

1



2



RET 75 type transport fan

Designed for speeds from 30 to 76 m/s

With direct or belt drive

Swing-out construction for optimal maintenance

Diameter of the rotor

from 200 to 1.250 mm

SCOPE OF APPLICATION

Fans for the transport of fibrous substances such as for example: wood or metal chips, fibers



REU type free-running wheel

As fans for mounting in industrial dryers

The range of the air stream

500 to 200.000 m³/h

Pressure range

500 to 3.800 Pa

VARIANTS WITH AND WITHOUT ISOLATION

Sliding (built-in)

Pull-Out

Swing-Out

For mounting in the device

Custom solutions for high temperatures

SCOPE OF APPLICATION

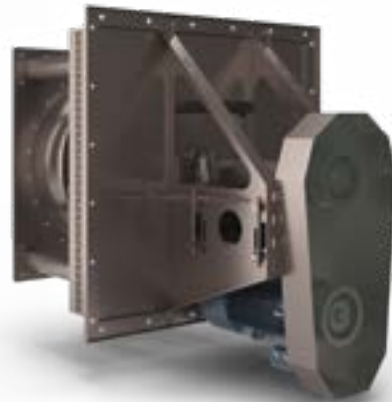
Dryers

Ventilation devices

Explosion proof devices ATEX

- 1 | REU WET model (for wall mounting with insulation)
- 2 | REU WAP model (for mounting in a Pull-Out wall)

1



2



Areas of application

INDUSTRY REVIEW

High-performance BerlinerLuft. fans in individual solutions are used all over the world in the most diverse industries:

Automotive industry

Fans for air supply and exhaust equipment, Paint shops

Fans resistant to pressure shock

Mining industry / Power plants

ATEX

Food / pharmaceutical industry

Stainless steel fans with the highest processing quality

Environmental protection technique

Stainless steel fans in waste treatment and recycling plants, fans in thermal exhaust gas treatment installations

Production of industrial furnaces

Fans for transporting hot gases made of special steels

Dust extraction technology / Filtration technique

Fans appropriately adapted to the specific conditions of the facility and project



INDUSTRY REVIEW

Agriculture

Fans for drying cereals, loose materials

Shipbuilding

Fans for air conditioning of the ship

Paper industry

Process air fans for drying

Silo technology, loose materials

Fans for dust extraction installations



IMPRESSUM

Catalog of Fans

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Data on the scope of delivery, appearance, performance and dimensions correspond to the knowledge at the time of print release.

We reserve the possibility of technical changes.

The General Sales Conditions are applicable, they can be found on our website www.berlinerluft.pl

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