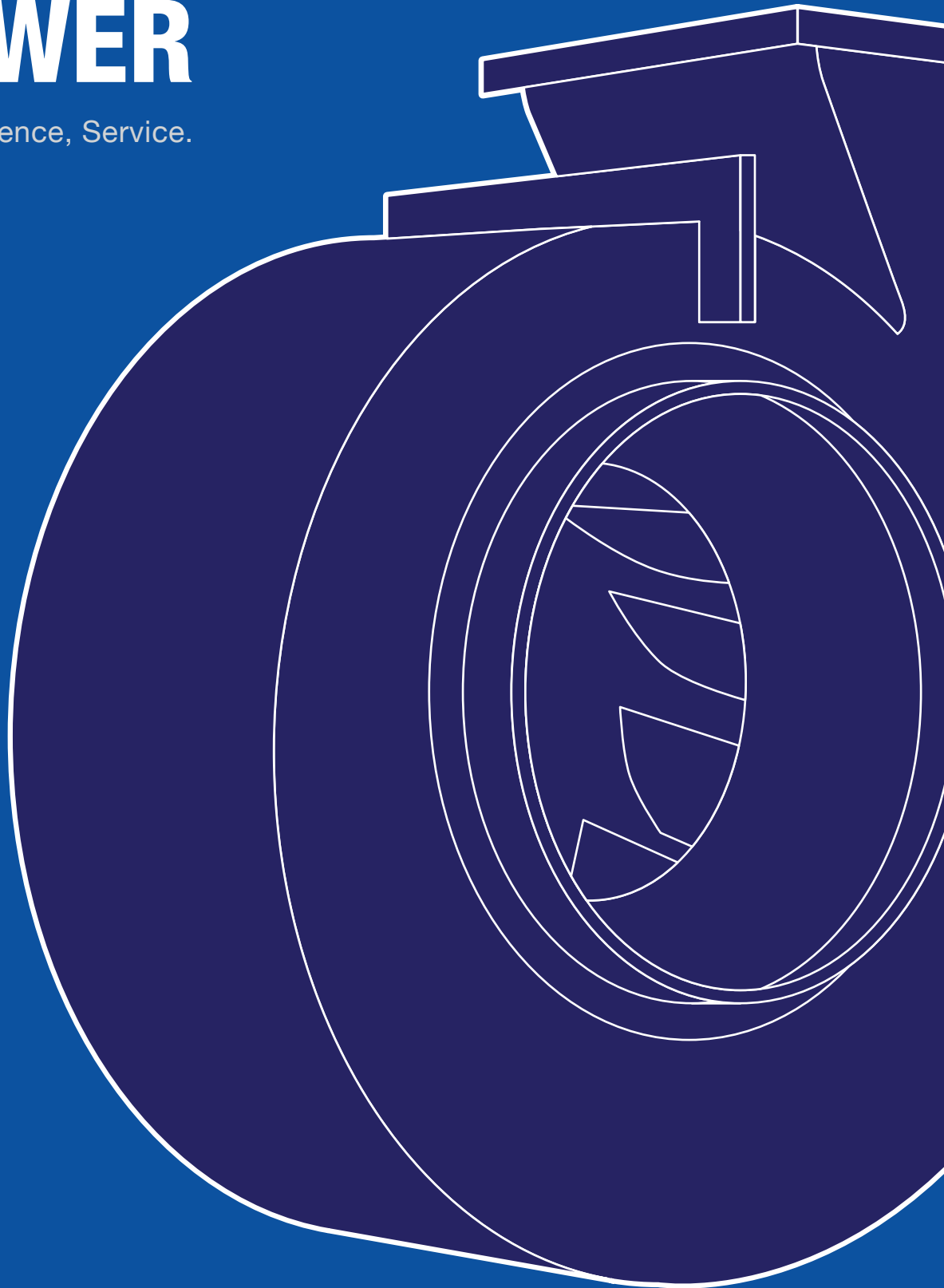
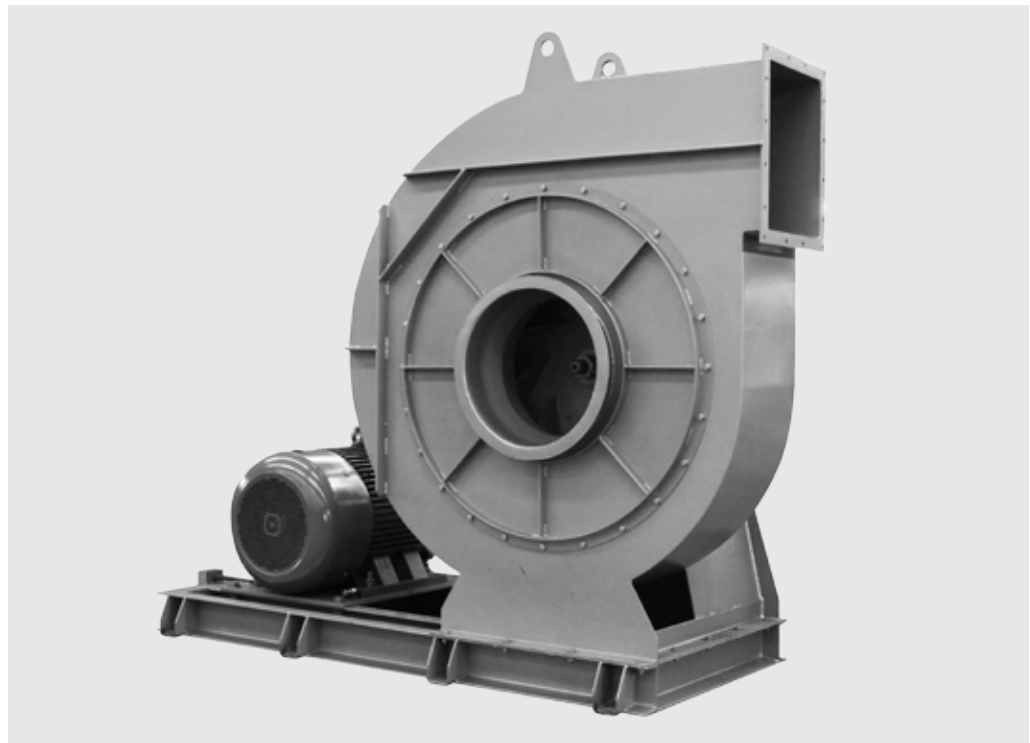




# CENTRIFUGAL BLOWER

Quality, Experience, Service.





To support the needs of air handling units for industries, **Darmawan** produces among others several lines of centrifugal blowers and axial fans.



Our fans are produced with the license from Witt&Sohn Germany. WITT&SOHN have grown over the past 60 years to become one of the world's leading names in industrial fan technology and associated noise and vibration control. Their well proven expertise in axial and centrifugal fan manufacture has today made them a market leader in many specialised, high performance sectors.

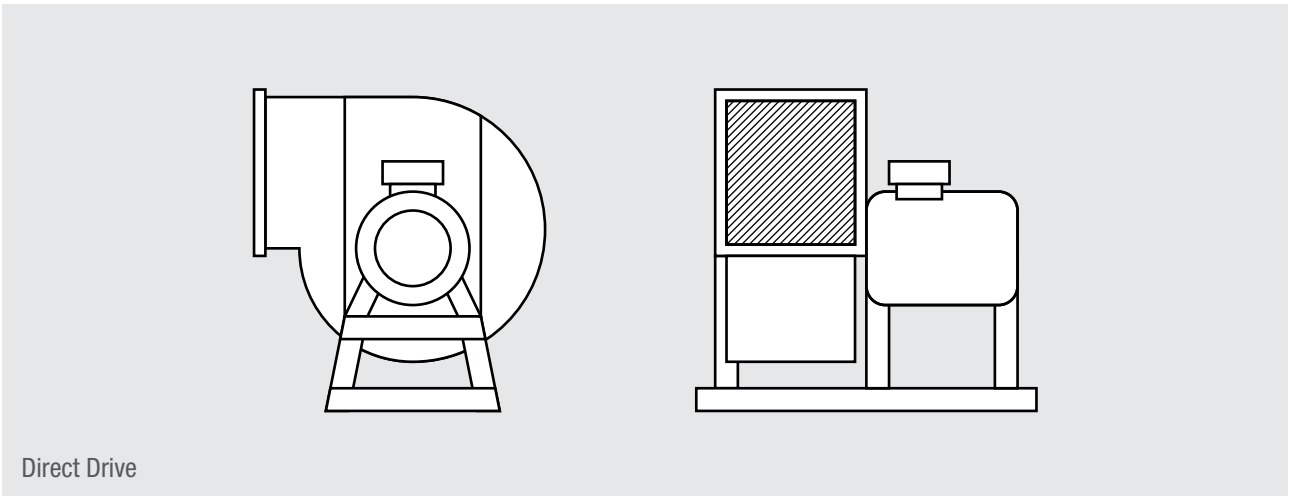
All fans go through rigorous testing to assure quality. As with other Darmawan products, all fans come with quality and service guarantee that make us the number one choice in industrial products.

The following is a description of our standart centrifugal fan.

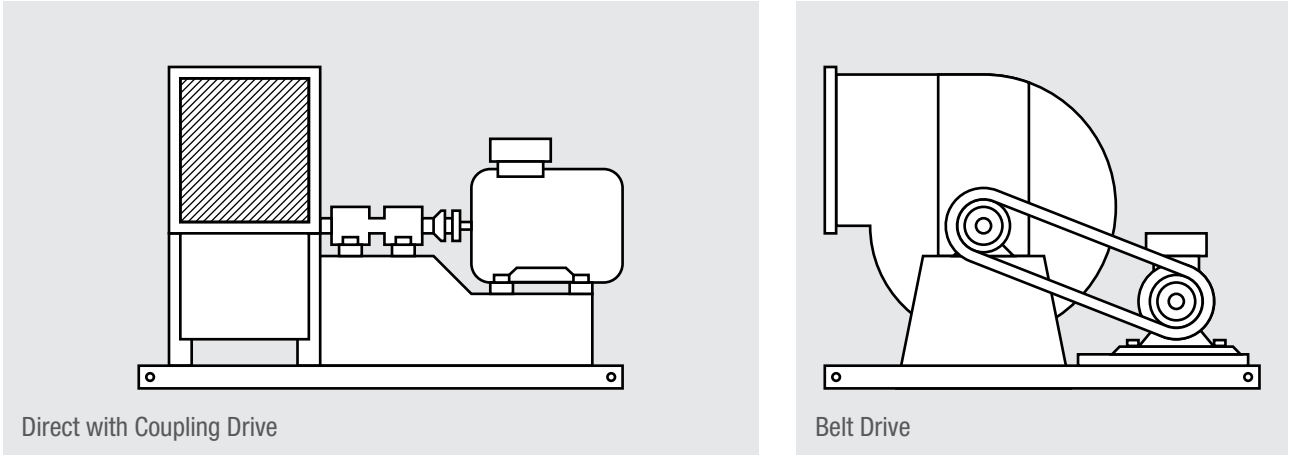
Inlet size	63 up to 2500mm
Casing thickness	1,5 up to 20mm
Motor frame size	63 up to 450

### DRIVE TYPE

Direct drive, direct with coupling drive and belt drive are available for any rotation. Virtually all possible working points with a volume flow rate from 100 m<sup>3</sup>/h up to 300,000 m<sup>3</sup>/h and pressure increases from 100 Pa up to 30,000 Pa can be offered with the highest efficiency.



Direct Drive

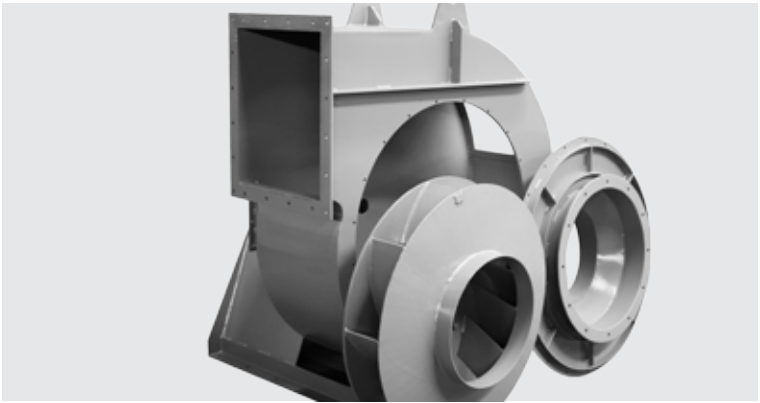


Direct with Coupling Drive

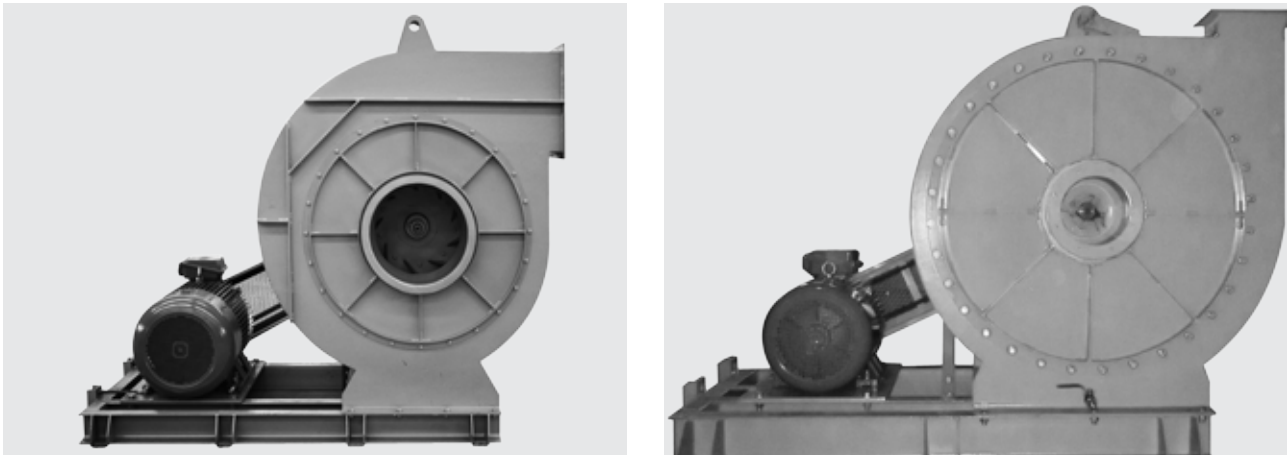
Belt Drive

### Materials

Mild steel, Stainless Steel and various speciality steels are used as standart, although more unusual materials such as abrasion resistant alloys are increasingly being specified.



TYPES OF CENTRIFUGAL BLOWER



Low Pressure Centrifugal Fans Type RNN

Backward inclined blades respectively and shaped inlet cones have high efficiencies, good noise performance and a very stable fan curve. The power consumption only increases slowly with increasing volume flow rates.

Inlet diameter	180 – 2.000 mm
Impeller diameter	224 – 2.500 mm
Pressure range	100 – 3.000 Pa
Volume flow rate range	100 – 300.000 m³/h

Low Pressure Fans Type LRZ

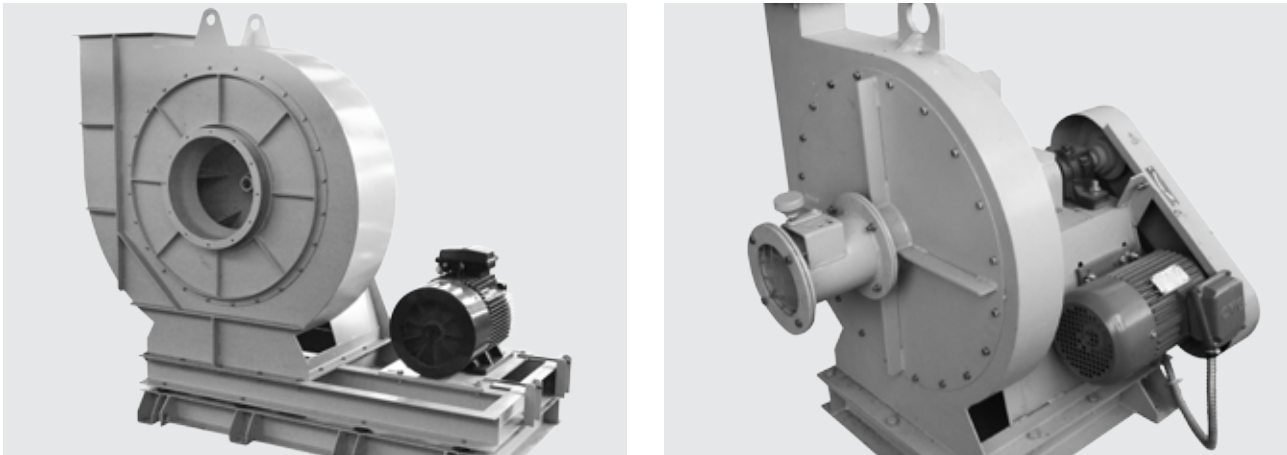
The LRZ fills the gap between the RNN types and the medium pressure fans PRZ/MRZ. For dusty air fan we offer the impeller LQZ. The LRZ range is very suitable for use in fuel burners since it can be throttled virtually across the full volume flow rate range.

Inlet diameter	180 – 1.400 mm
Impeller diameter	280 – 2.240 mm
Pressure range	800 – 8.000 Pa
Volume flow rate range	100 – 200.000 m³/h

Type PRZ

This is a classical medium pressure fan which achieves efficiencies of up to 85%. In this range the impeller PQZ can be used for material transport.

Inlet diameter	125 – 1.400 mm
Impeller diameter	250 – 3.000 mm
Pressure range	1.600 – 10.000 Pa
Volume flow rate range	1.000 – 250.000 m³/h



Type MRZ

For somewhat higher pressures in the medium pressure range the type MRZ are available. In addition a dust impeller is offered with the designation MQZ.

Inlet diameter	90 – 560 mm
Impeller diameter	280 – 1.800 mm
Pressure range	2.000 – 15.000 Pa
Volume flow rate range	500 – 100.000 m³/h

Type HRZ

The high pressure fan HRZ with 10 backward inclined shaped blades achieves an efficiency of up to 81%. Also for the HRZ family we offer a dust impeller designated HQZ.

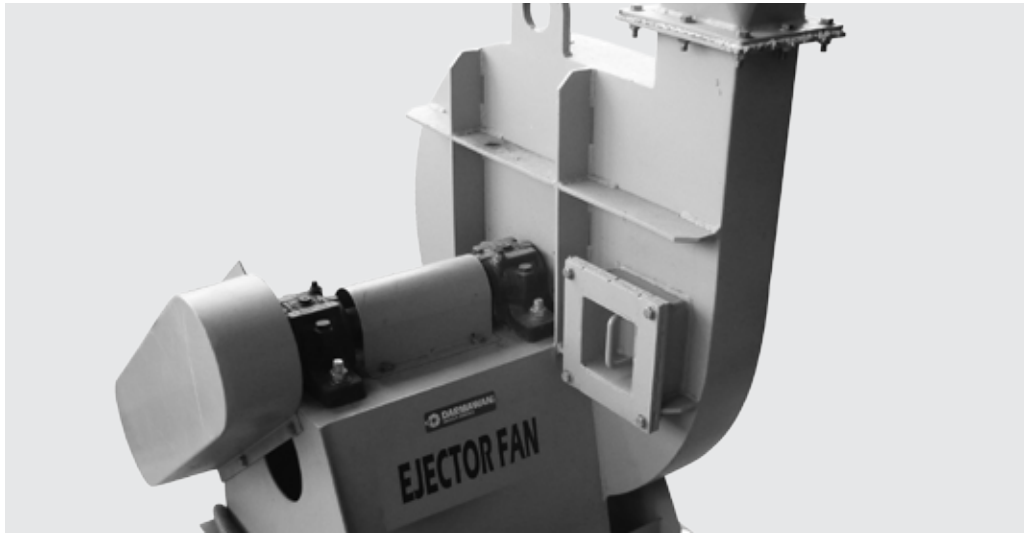
Inlet diameter	63 – 400 mm
Impeller diameter	280 – 1.800 mm
Pressure range	2.500 – 25.000 Pa
Volume flow rate range	500 – 50.000 m³/h

Type SRZ

For ultra high pressures and small volume flow rates we have developed the type plus the dust impeller SQZ.

Inlet diameter	63 – 355 mm
Impeller diameter	400 – 2.240 mm
Pressure range	5.000 – 30.000 Pa
Volume flow rate range	100 – 50.000 m³/h

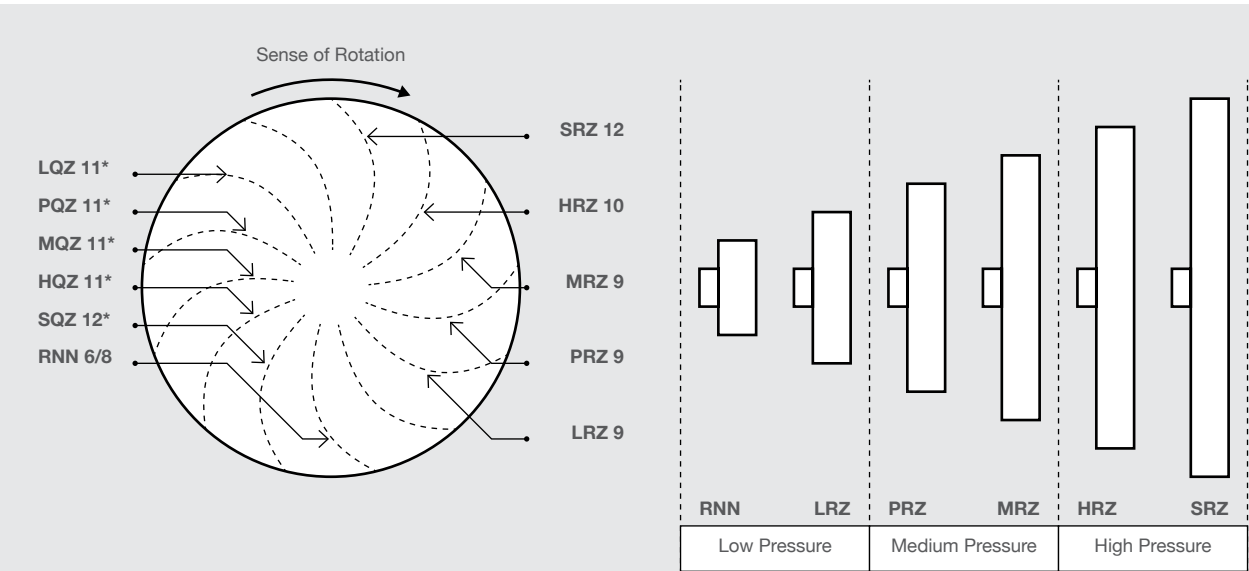
IMPELLER TYPES



Medium and High Pressure Fans

A completely new range of medium to high pressure fans with family designations of LRZ, PRZ, MRZ, HRZ and SRZ has been developed. They make it possible for us to reach every working point from low to high pressure without any gaps and uniformly high efficiencies.

Each family in turn consist of 5 to 6 impeller types. By using a modular system it has been possible to keep many of the key dimensions the same, allowing for some interchangeability. All fan casings and impellers are as a standard made in steel or aluminium. If needed we manufacture all fans in other materials as well.



Overview of impeller types

Casing sizes with equal inlet diameters

DIRECTION OF ROTATION

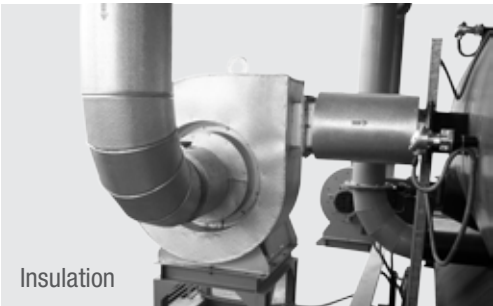
Outlet Position

According to EUROVENT 1/1 and ISO 13349, the direction of rotation and the outlet position are determined from the side opposite the inlet (i.e. normally viewed from the drive side).



ACCESSORIES

- Shaped inlet
- Damper
- Protection Grill
- Flexible connection
- Counter flange
- Silencer
- Engine Mounting
- Variable inlet vane
- Insulation
- Monitoring Instrument

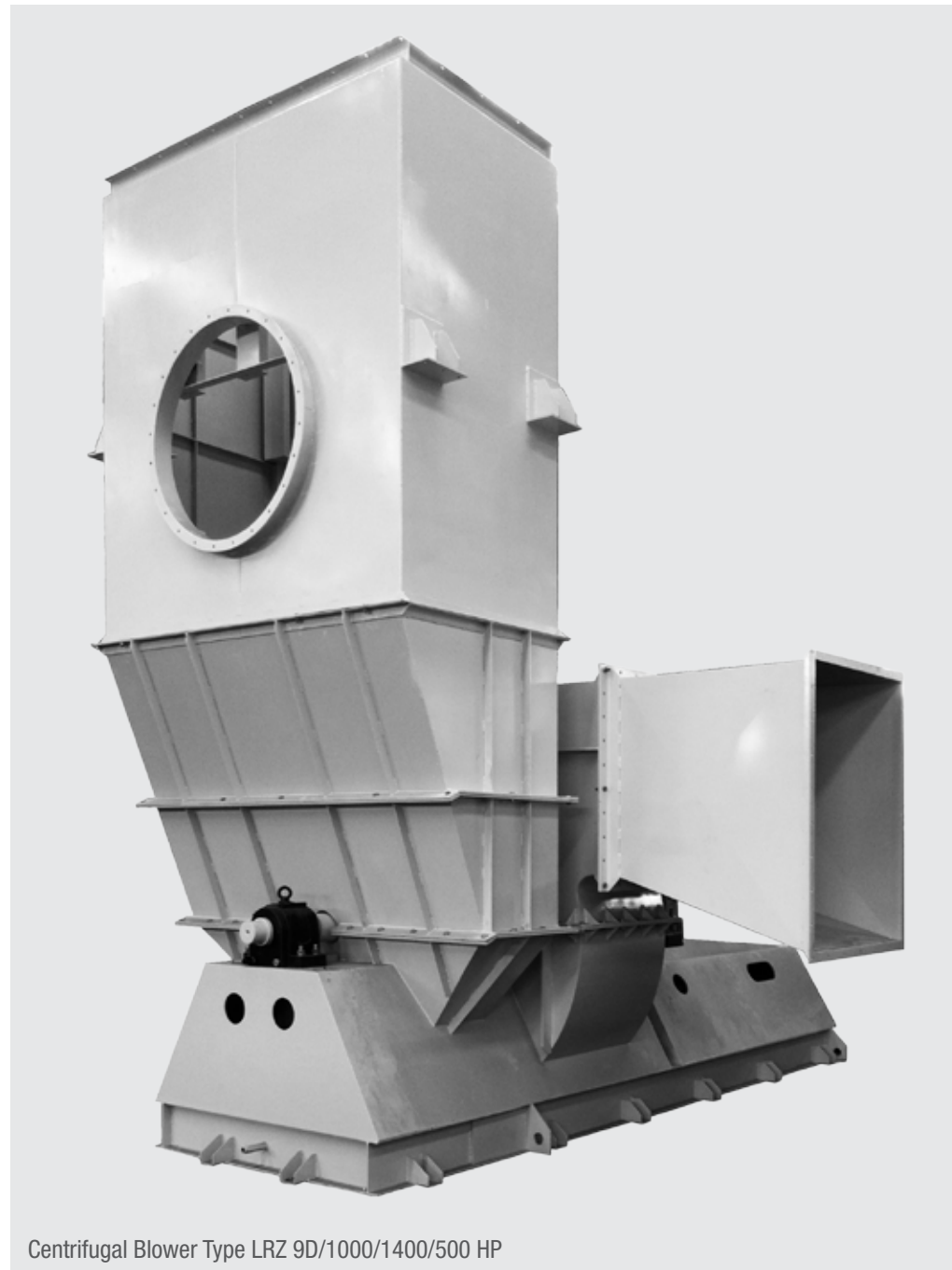




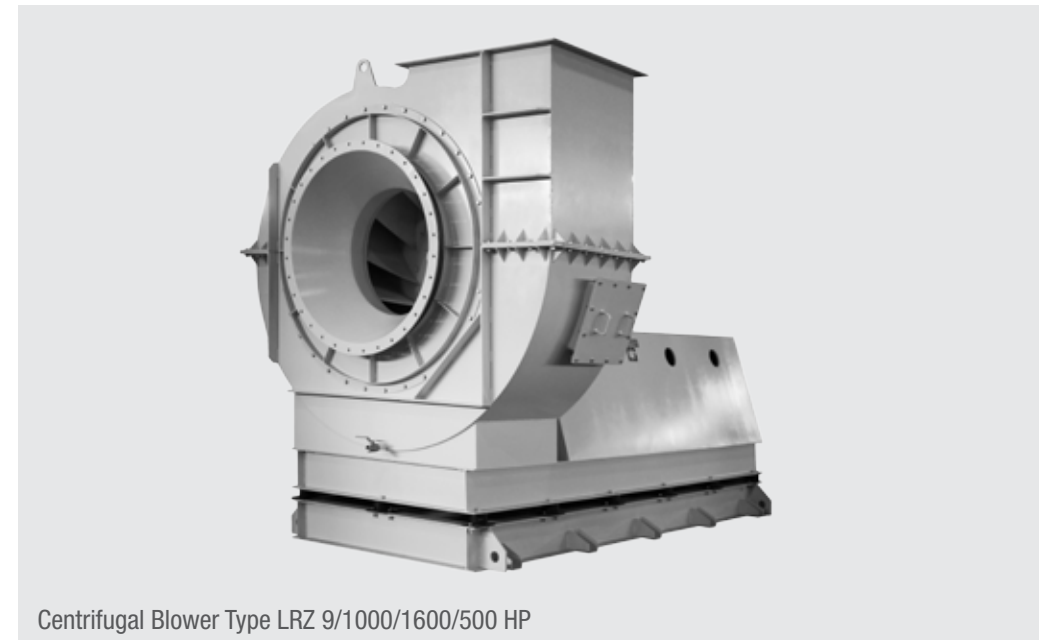


## CLIENTS

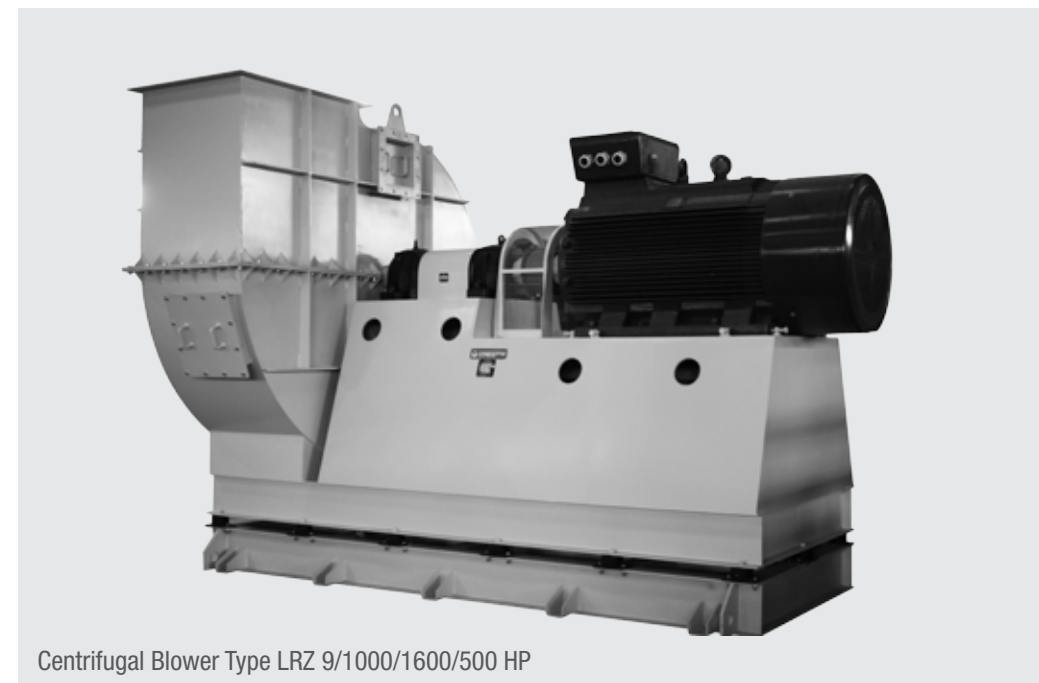
Among the major companies using Darmawan centrifugal fans are **Conoco Phillips, Indofood, Indocement, Holcim, Krakatau Steel, Kangar Consolidated Industries, South Pacific Viscose, Standard Toyo Polymer, Astra Daihatsu Motor, Nederman Indonesia, FNG and Cabot Indonesia**



Centrifugal Blower Type LRZ 9D/1000/1400/500 HP



Centrifugal Blower Type LRZ 9/1000/1600/500 HP



Centrifugal Blower Type LRZ 9/1000/1600/500 HP

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