

800.000 m³/h

20 kPa

500.000 m³/h

100.000 m³/h

KARL KLEIN -group – Made in Germany

radial FANS

50.000 m³/h



10.000 m³/h

ENGLISH

15 kPa

5 kPa

1 kPa





COMPACT

Fans with split-pole motor

As it began ...

The first product range at Karl Klein in **1965**.
... reliable until today.



KARL KLEIN-group – **convincing variety**

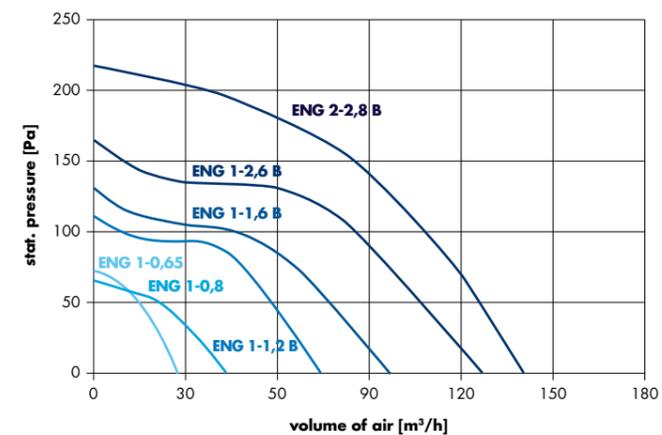
- competence in manufacturing radial fans in single-units and in series
- technologies for standardization and niche applications
- custom-made CAD-engineering
- development with computational fluid dynamics and calculation of fan wheels
- flexibility by in-house production depth
- quick response time
- short lead times for complex products

TYPES OF FANS

- **ENG 1-2,8 B**
- **ENG 1-2,6 B**
- **ENG 1-1,6 B**
- **ENG 1-1,2 B**
- **ENG 1-0,8**
- **ENG 1-0,65**

APPLICATIONS

- **extruders**
- **heating systems**
- **switch cabinets**

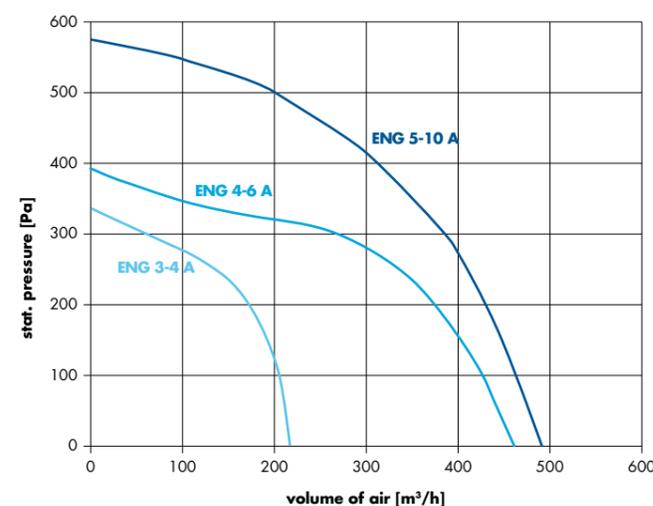


volume of air: up to 150 m³/h
power (in): up to 56 W



EXTERNAL ROTOR

Fans



TYPES OF FANS

- **ENG 5-10 A**
- **ENG 4-6 A**
- **ENG 3-4 A**

APPLICATIONS

- **apparatus engineering**
- **air handling systems**
- **cooling systems**



LOW PRESSURE

Fans forward curved up to 7.000 m³/h, 11,0 kw

Gapless product range for series production.



STANDARD

compact design

fan wheels with high performance and small dimensions, available max. 315 mm diameter or 11,0 kw

fan housings in sheet steel painted in black

clockwise or anti clockwise rotation

adjustable by frequency converters

OPTIONS

wide range of accessories

available as twin fans

up to 1,0 kw with multi tension 50/60 Hz

stainless steel AISI 314, from 0,55 kw also in AISI 316

for hot air up to 400°C (750°F) continuous operation

ATEX version for zone 1 and 2 or zone 22

railway qualified fans

with hydraulic motor

water cooled motor



LOW PRESSURE

Fans backward curved
up to 7.350 m³/h, 3,0 kw



Since **1994** Karl Klein conforms his production technology for manufacturing high performance process fans.

STANDARD

- 2- or 4-pole motors
- high efficiency fan wheels
- fans housings in sheet steel, painted in black
- clockwise or anti clockwise rotation
- adjustable by frequency converters

OPTIONS

- wide range of accessories
- stainless steel AISI 314 or AISI 316
- for hot air up to 400°C (750°F) continuous operation
- ATEX version for zone 1 and 2 or zone 22, railway qualified fans



LOW PRESSURE

Fans up to 72.000 m³/h, 200,0 kw



Many requests from customers induced Karl Klein from **2011** to project industrial radial fans up to 1,5 to weight.

TYPES OF FANS

. NHV 1250^①-1^②-500^③/75^④

- ① fan wheel diameter
- ② fan wheel type
- ③ width outlet
- ④ motor power

. individual performance on request available

differential pressure max.

120 mbar

volume of air max.

72.000 m³/h

motor power max.

max. 200,0 kw

APPLICATIONS

- . dedusting plants
- . railway systems
- . drinking machinery
- . surface technology
- . mill technology
- . drying systems
- . industrial ovens
- . packaging machinery
- . power station technology



MIDDLE PRESSURE

Fans up to 5,0 kPa, 7,5 kw

Based on the well approved know-how in smaller fans Karl Klein customers request from **1990** middle pressure fans and a new product range was established.



STANDARD

- fan housings in sheet steel, painted in black
- clockwise or anti clockwise rotation
- adjustable by frequency converters

OPTIONS

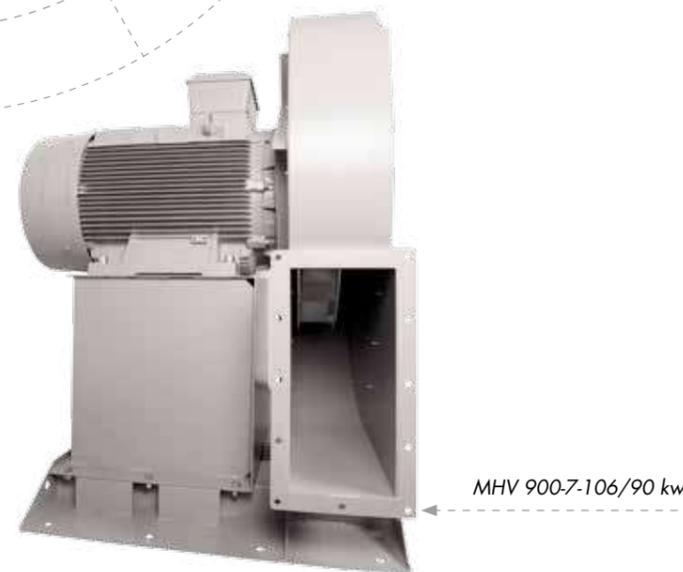
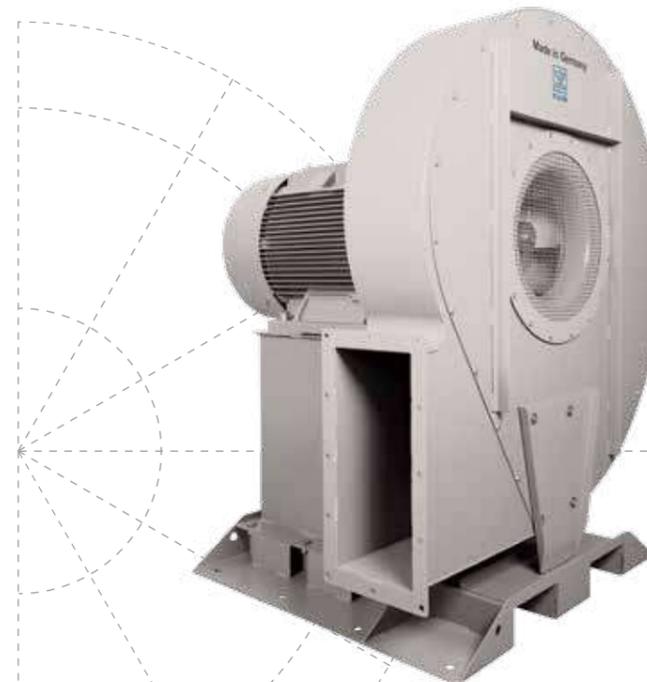
- wide range of accessories
- stainless steel AISI 314 or AISI 316
- for hot air up to 400°C (750°F) continuous operation
- ATEX version for zone 1 and 2 or zone 22
- railway qualified fans



MIDDLE PRESSURE

Fans up to 20,0 kPa, 200,0 kw

In the year of **2011** Karl Klein starts to project industrial process fans with more than 22,0 kw.



TYPES OF FANS

. **MHV 900¹-1²-275³/75⁴**

- ¹ fan wheel diameter
- ² fan wheel type
- ³ width outlet
- ⁴ motor power

. individual performance on request availabl

differential pressure max.
200 mbar

volume of air max.
36.000 m³/h

motor power max.
max. 200,0 kw

APPLICATIONS

- . **dedusting plants**
- . **railway systems**
- . **drinking machinery**
- . **surface technology**
- . **mill technology**
- . **drying systems**
- . **industrial ovens**
- . **packaging machinery**
- . **power station technology**
- . **food technology**



HIGH PRESSURE

Fans up to 10,0 kPa, 7,5 kw



SPECIALS

- rotation speed up to 105 Hz
- frequency converter directly on the motor or switch cabinet solution
- available for hot air to 300°C (572°F)
- available in ATEX (FC in switch cabinet)



BOILER

Fans



SPECIFICATIONS

- fan housings completely welded
- fan wheel with straight blades for transportation of dust or sooty particles
- temperature up to 300°C (572°F)

SPECIALS

- available with Hall-sensor



MOBILE

Fans



SPECIFICATIONS

2-wheel-carriage
telescope grips
pull-out supports to the ground

SPECIALS

verification certificate for
EN 14986 and EN 13463

3 x 400 V, 50 Hz drives,
from 0,12 kw up to 1,5 kw

convenient for zones 1, 2 and 22

APPLICATIONS

- petrol station services
- stocking systems
- containers of vessels
or railway
- filling stations
- adequate for long
suction tubes
- wood pellet vehicles
(no ATEX)

carry frame with grip and
rubber blocks



HOT AIR

Fans max. 400°C (750°F)
continuous operation



SPECIALS

available with sealed fan housing
and temperature guard

APPLICATIONS

- industrial ovens
- bakery machines
- heating radiators
for halls
- burners
- hardening plants
- air heating plants

PLUG-IN Radial fans

Temperature up to 800°C (1.450°F)
available from fan wheel diameter
710 mm and larger

see page 26



ATEX

Fans zone 1 und 2



SPECIALS

gas zone 1 and 2

motor explosion group IIB in accordance with EN 14986

temperature class T3, T4 - T6 on request

frequency converter operation

non-electrical equipment as per EN 13463

documentation for drive (electrical part) and fan (non-electrical part)

APPLICATIONS

- . biogas plants
- . environment systems
- . stocking systems
- . vessels
- . electrical heating systems
- . exhaust systems
- . clean room technology
- . filling stations
- . mill technology



ATEX

Fans zone 21 und 22



SPECIFICATION

gas zone 21 and 22

motor explosion group IIB in accordance with EN 14986

temperature class T4

frequency converter operation

protection mode IP 65, non-electrical equipment as per EN 13463

documentation for drive (electrical part) and fan (non-electrical part)

APPLICATIONS

- . filter plants
- . filling systems
- . milling systems



GASTIGHT

Fans



SPECIALS

- fans housings completely sealed welded
- qualified report about leakage
- motor with additional seal flange



BUILT-IN

Fans up to fan wheel diameter 500 mm



SPECIALS

- radial fans without housing
- plug in fans
- hot air up to 400°C (750°F)
- incl. thermal insulation
- special motor shafts on request
- customized bracket plate
- available in ATEX- version



STAINLESS STEEL

Fans



SPECIALS

- fan housing
- fan wheel
- motor shaft and screws in stainless steel
- materials AISI 314 or AISI 316 incl. accessories
- welded parts blasted



CAST IRON

Fans



Since **2012** in our product range: conveyor fans and middle pressure fans in cast iron material

STANDARD

- fan housing in cast iron material
- incl. foot mounting
- foot position rotatable in 45°
- flange connection with thread holes at the inlet and through holes at the exhaust
- felt gasket at shaft pass
- silicone gasket at inlet cover
- drives with PTC
- protection mode IP 55
- efficiency class IE2

OPTIONS

- 50 or 60 Hz-drive
- pole-changeable drives
- ATEX-certified drives
- frequency convertible

ACCESSOIRES

- flexible inlet and exhaust connections
- sound absorbing systems
- vibration absorber and inlet protection grate



CONVEYOR

Fans



Picture without suction cover for presentation purposes



SPECIALS

- fan housings in cast iron material
- fan wheel in steel with straight blades
- stainless steel or N-A-XTRA®
- convenient for conveying grit dust, shavings and light bulk material



SOUND ABSORBING

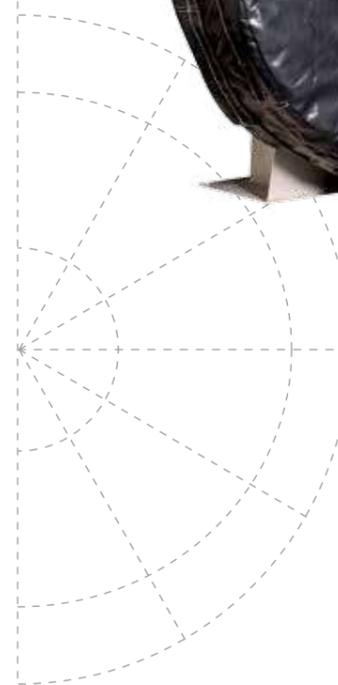
Arrangements



Fan coated with flexible insulating material

STANDARD

- sound absorbing case
- individually designed, pipe sound absorber (please see on www.karl-klein.de)



Fan coated with mineral cotton in a galvanized steel coat with refinishing window



FAN WHEELS

Wheels of Kamptmann



FAN WHEELS

Wheels of Kamptmann



In **individual production** or **small series production**

SPECIALS

covered fan wheels

open fan wheels for conveying materials for example, films or textile remnants

welded drum wheel forward curved

inlet nozzle

materials:

- . aluminium
- . sheet steel painted or galvanized
- . stainless steel AISI314 or 316, N-A-XTRA®

fan wheel diameter max. 1.500 mm



LARGE-VOLUME

Radial fans

from our plant in Eisenberg/Thüringen



LARGE-VOLUME

Radial fans

from our plant in Eisenberg/Thüringen



SPECIALS

volume of air up to 1.000.000 m³/h

differential pressure up to 25,0 kPa

belt-coupling- or direct-driven
motors

heavy industrial design

painting customized

fan housing insulation coat

divided fan housing,
bottom half and
finishing half

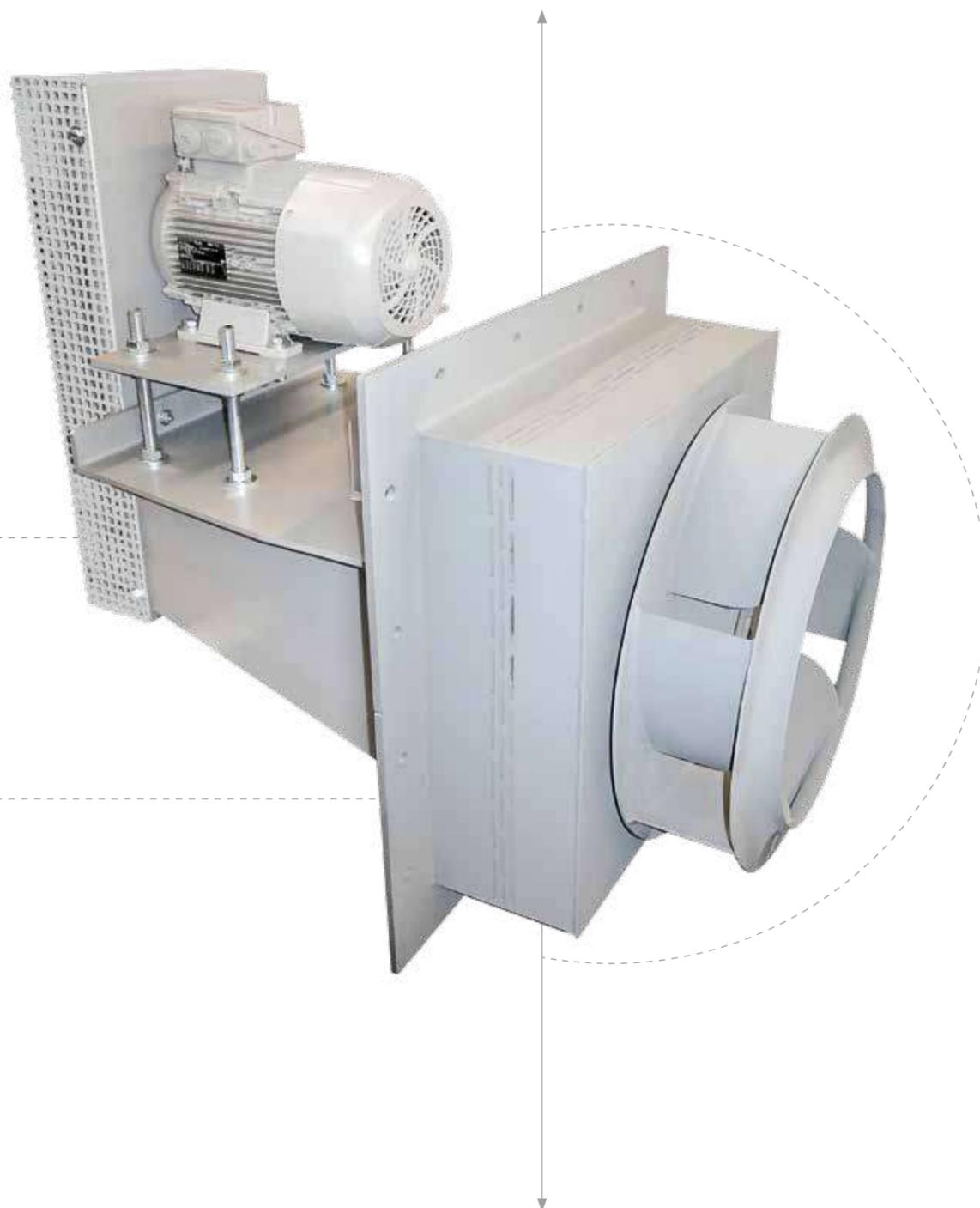
fan wheel to fold out



PLUG-IN

Radial fans

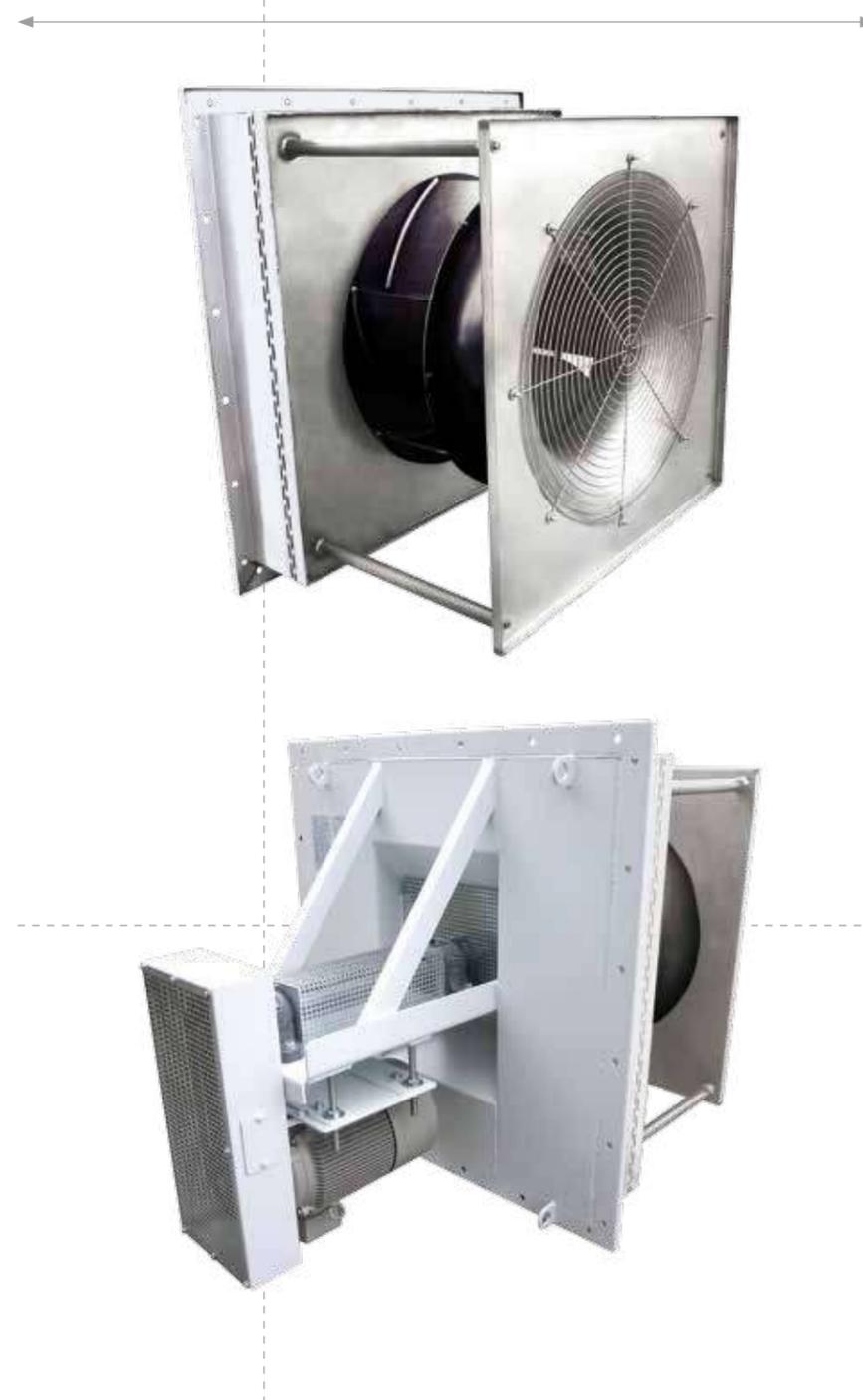
from our plant in Eisenberg/Thüringen



PLUG-IN

Radial fans

from our plant in Eisenberg/Thüringen



SPECIALS

backward curved high performance fan wheels from in-house production

fan wheels
max. 2.000 mm diameter

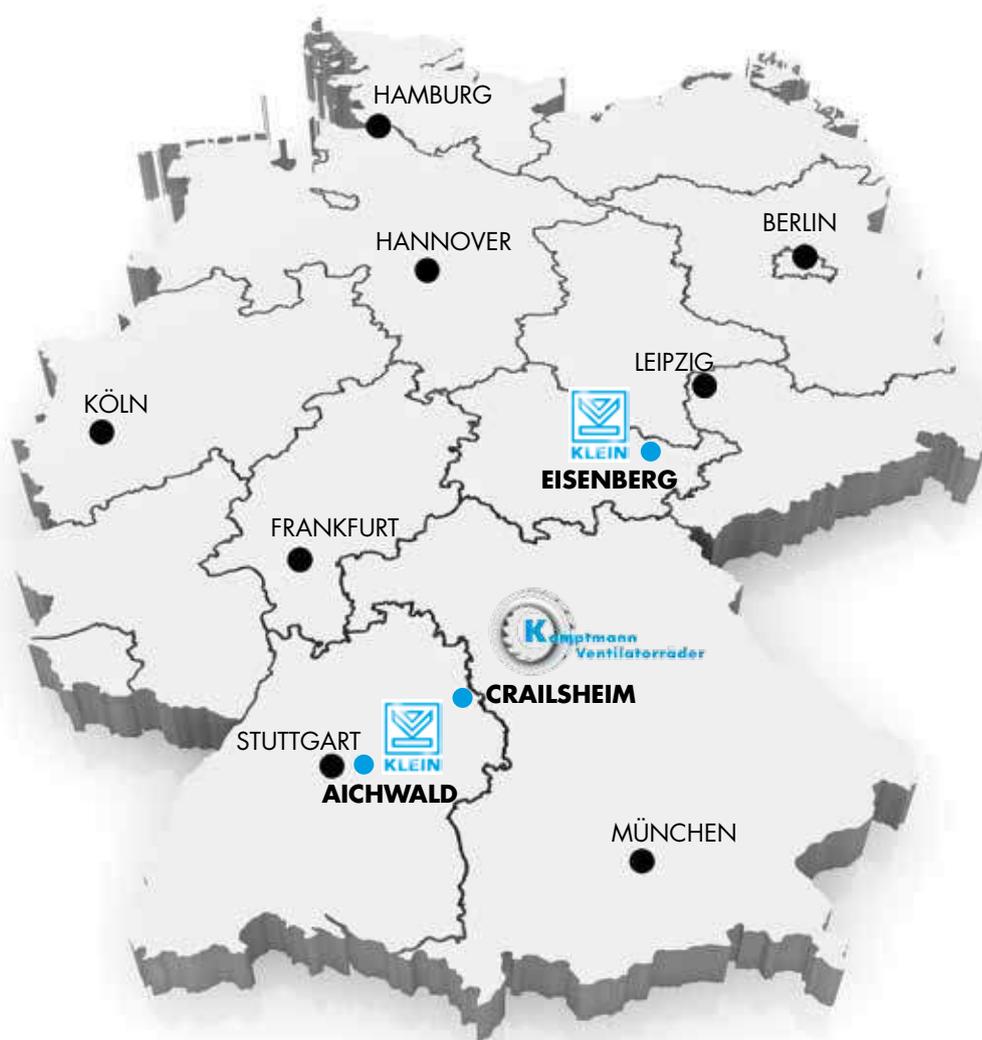
temperature
max. 800°C (1.450°F)

application-optimized selection of material, i.e. steel, stainless steel AISI 314 or 316, N-A-XTRA®

belt-driven or direct driven motors

available in ATEX-version

KARL KLEIN -group – Made in Germany



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