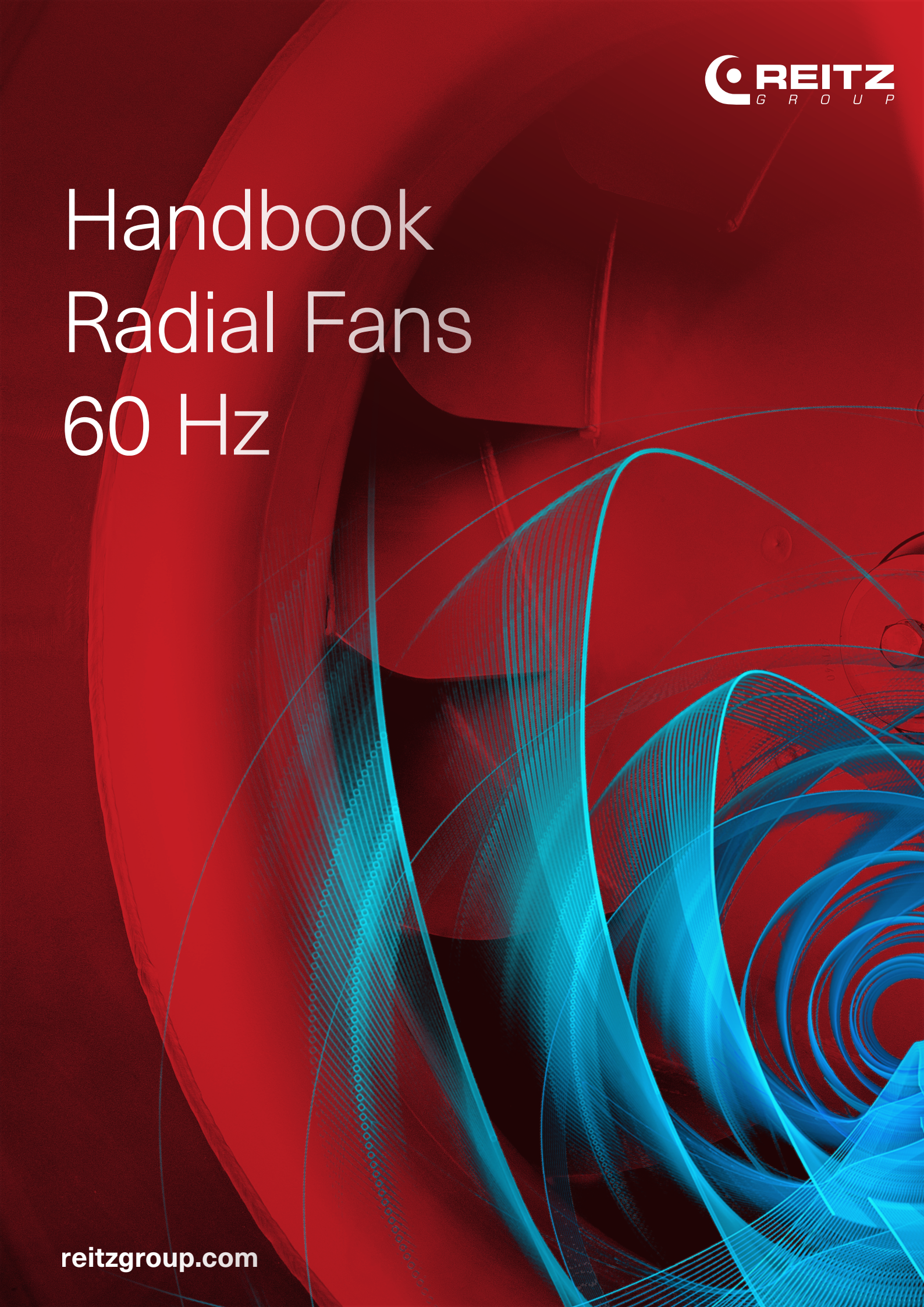
REITZ GROUP

Handbook Radial Fans 60 Hz



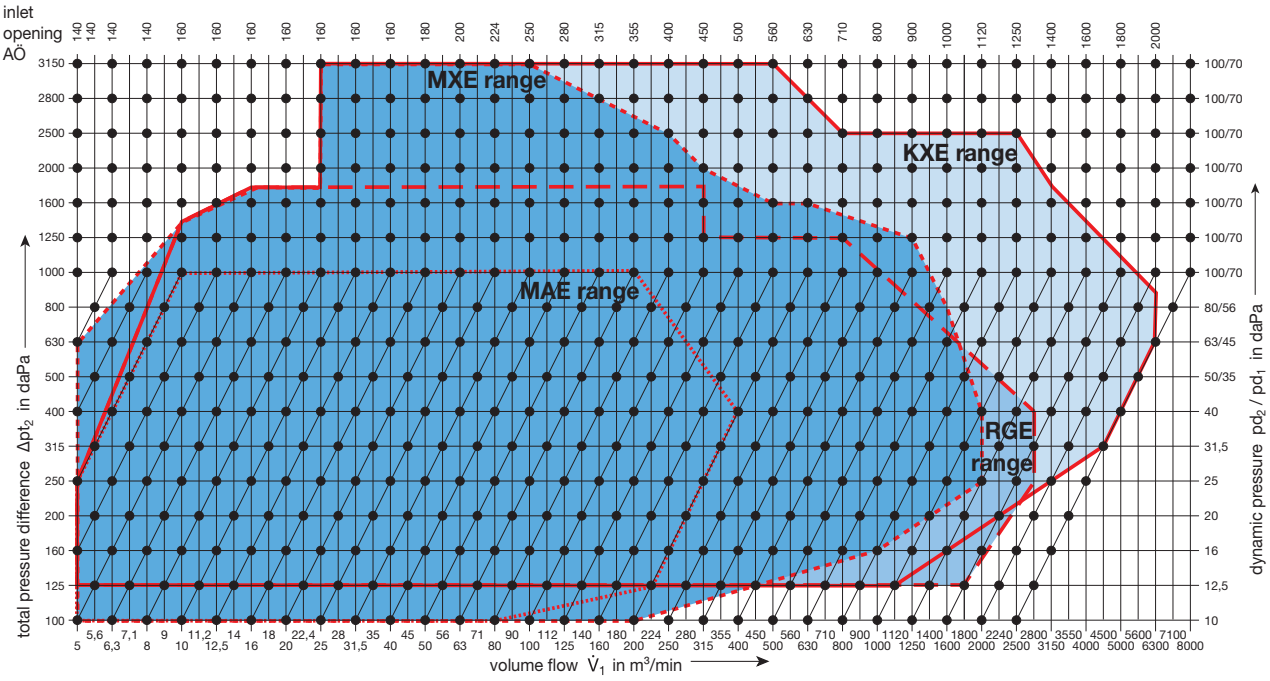
reitzgroup.com

Reitz - Handbook Radial Fans

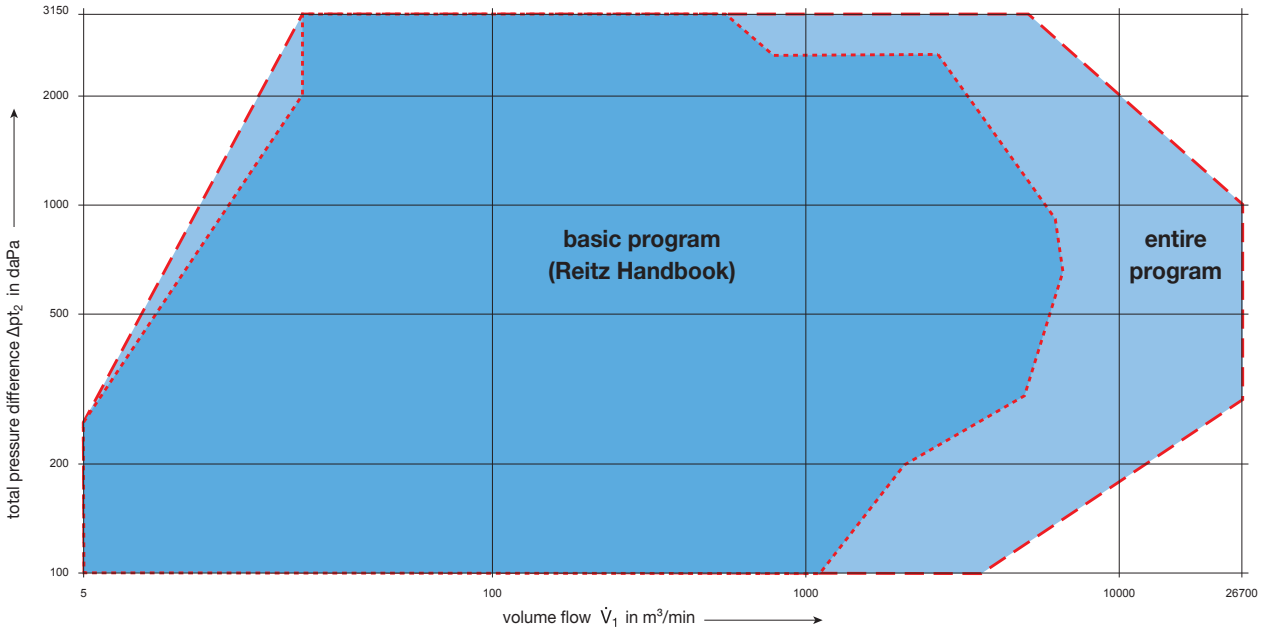
Our extensive basic program consists of four different structural designs with two types of drives. It offers a wide variety of radial fans for the most diverse tasks and performance requirements. State-of-the-art production processes and good vertical integration ensure top-quality standards, a very good price performance ratio and optimum delivery times of our fans.

Modifications of single components as per the customers' specifications can offer extended solutions in many cases.

The diagram below shows our basic program.



Should your requirements exceed these figures, we design and produce customised fans for all industrial applications.



ErP-Directive

By signing the Kyoto Protocol, the countries of the European Union agreed upon a common climate and energy policy and committed themselves to lower the CO_2 emissions by 20 % by 2020, to enhance the energy efficiency by 20% and, in addition, increase the total share of renewable energy to 20%. In pursuing these objectives, the European Union adopted the directive 2009/125/EC “establishing a framework for the setting of ecodesign requirements for **e**nergy-**r**elated **p**roducts”, or **ErP directive** for short, in 2009.

With the EC regulation 327/2011 to Directive 2007/125/EC, the European Parliament and the European Council laid down the requirements for eco-friendly design of fans that are driven by motors with an electric input power of 125W to 500 kW.

The regulation specifies two deadlines for the mandatory gradual introduction of the so-called efficiency classes. The first stage came into force on January 1, 2013 and has since been effective; the second stage came into effect on January 1, 2015.

Implementation of the directive

Fans from Reitz Group comply with the requirements that have been in effect as of January 1st, 2015.

The new type selection sheets of the basic program show whether the target energy efficiency is achieved or not or whether the target energy efficiency is relevant and fulfilled or not.

This is indicated by the symbols ○ directive fullfilled, ● directive not fulfilled, □ directive not relevant ■ directive not relevant but fulfilled

Please contact us for enquiries about fans marked in the type selections sheet with the symbol ●. We will be pleased to advise you.

Which products are governed by the ErP Directive?

- The ErP Directive applies to all fans in pure air applications up to pressure series 1000daPa inclusive and up to a maximum inlet temperature $t_1 \leq 100°C$

Which products are not governed by the ErP Directive?

- Fans whose operating motor temperature or annual average handled gas temperature in the environment do not fall below -40°C or exceed +65°C.
- Fans for application in the automotive and mobility sector.

Marking on the nameplate

As of January 1st, 2015, the fan’s nameplate must bear additional information about the turbo-machine’s efficiency which refers to the fan’s optimum calculated point, i.e. nominal point NP.

Compliant with the ErP Directive, the information about efficiency grade and target efficiency should be indicated in dependence of fan operation with fixed or variable speed. Since operation at fixed speed, however, has proven to be the worst case, all information on target efficiency and efficiency grade refers to the operation mode without variable speed.

In addition, the nameplate and the technical data sheets (product catalogue) indicate the efficiency grade η, the underlying measurement category and the degree of efficiency at the optimum energy efficiency point η_{opt}.

Design variants basic program

Unusual demands require unusual solutions. Apart from the basic configuration, all fans of the REITZ basic program are also available in the most diverse design variants. No matter which fans are required, from high-pressure fans to explosion-proof, stainless-steel fans, our comprehensive experience gained over many years ensures reliable operation, even in critical application areas. The following list provides an overview of the enormous variety of the REITZ basic program.

- low-wear design and non-corroding armouring made of material with surface hardness of up to 68 HRC or 700 Brinell.
- non-corroding design: use of stainless steel and layers like hard or soft rubber lining, PTFE, ETFE, etc.
- adaptation to procedural specific characteristics like Hygienic Design (EHEDG, FDA, etc.) or vibratory ground design
- temperature resistant design for low (-50°C) or high (+500°C) handled gas temperatures as well as designs for ambient temperatures from -50°C to +60°C
- pressure-resistant and pressure-shock proof designs
- explosion-proof design acc. to ATEX directive 2014/34/EU
- spark protection for non-EC applications
- gasproof and liquid-tight designs

This fan handbook is also called list 17_1. Compared to the former lists 2012 and 2010, we editorially reworked the present version and revised the technical descriptions in the type selection sheets.

You may download the handbook or parts thereof from our website or order further copies from us.

Please contact us for any questions and inquiry.

We will gladly give our expert advice anytime.

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Product description

Chapter 1 - Product description - PB

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- Position of the inspection opening
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- Pressure course at different operation modes
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- Conversion from pressure to vaccuum operation
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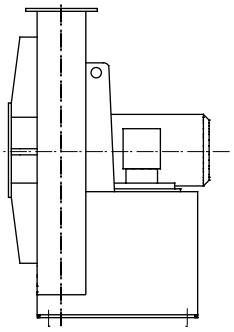
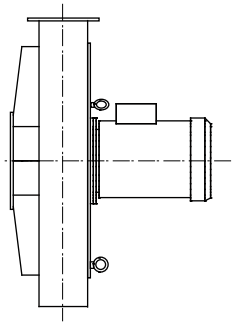
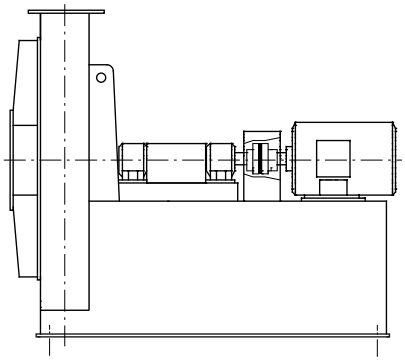
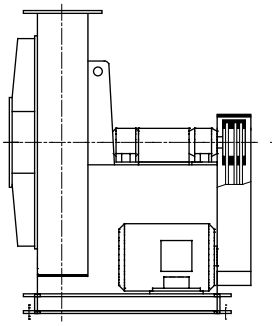
- Sound behaviour









Design conditions

General information

All fans listed herein are single-stage fans and manufactured in welded industrial design. Depending on the fan design, there is a common base frame made of steel to accommodate the housing, bearings and drive motor. The impellers are designed in accordance with state-of-the-art flow technology. The performance data is based on an inlet temperature of 20° C at an air pressure of 101,325 Pa relative to a density of 1.205 kg/m^3. The presently effective EU Directives are the basis for fan and equipment design. The technical design complies with DIN 24166, „Technical Delivery Conditions for Fans“. We are certified according to DIN EN ISO 9001.

Ambient temperature

The mechanical drive elements are designed for steady ambient temperatures of -20°C up to +40°C. Please consult us for other temperatures.

Operating temperature

All fan components in contact with the medium are designed to handle temperature ranges from -20°C to +80°C. The fan types MAE, MXE, KXE and RGE are suitable for temperatures of up to +180°C provided a heat flinger is installed. Please consult us for other temperatures.

Balancing technique

All fan impellers and other rotating parts are dynamically balanced in two planes. The permissible residual unbalance has been determined in compliance with the Standard DIN ISO 1940 Part I „Balance quality requirements of rigid rotors“. The balance quality grade of the entire fan unit is G 6.3. Other quality grades can be supplied for special requirements. Please enquire about the additional costs for other quality grades. All connections with key and slot are balanced by half keys according to DIN EN 60034-14.

Vibration technique

All fans meet the technical vibration requirements with respect to dynamic rigidity, quiet running, noise radiation and similar aspects. The evaluation of the vibration complies with DIN ISO 10816-3 „Evaluation of machine vibration by measurements on non-rotating parts – part 3: Industrial machines with nominal power above 15 kW and nominal speeds between 120 r/min and 15,000 r/min when measured in situ (ISO 10916-3:2009)“. Other applicable regulations: DIN ISO 10816 „Evaluation of machine vibration by measurements on non-rotating parts” and DIN ISO 13373-1 “Condition monitoring and diagnostics of machines– Part 1: General procedures”.

PB

Design conditions

Mechanical load

The fan design must ensure that all fan components can handle all possible load situations which may occur. Impellers in particular are key components heavily loaded. Apart from the static stress to which they are subjected, impellers also have to cope with supplementary dynamic loads. Frequent load changes caused by permanent control intervals and the aerodynamic influence of other plant components may substantially shorten the service life of the impeller and other components subjected to mechanical loads. Therefore it must be ensured that load changes are reduced. Load changes can have different causes:

a) Speed-dependent excitation
e.g. frequent start from standstill, control with a frequency converter, pole-changing motor etc.

b) Aerodynamic excitation
provided that the entire system resonates and is subjected to an unsteady volume flow or to deviation in pressure caused by unstable operating points (e.g. distinctive pumping of the system, constant change of operating points etc.)

c) Vibration-dependent excitation
e.g. caused by vibrations of the complete shafting system (motor, coupling, fan, shaft, impeller etc.); see standard VDI 3840 „Vibration of shafting systems“

In order to keep impact loads and alternating loads acting on mechanical components as small as possible, frequent switching must be avoided. High switching frequencies always occur whenever there are erratic changes of speed (e.g. starting from shutdown, speed changes of pole-changing motors and permanent control intervals by frequency converters, etc.). It must therefore be ensured that switching frequencies of 6 to 8 times per day are not exceeded. Please consult us for higher switching frequencies.

Remarks on transport

Fans should always be transported using means of transport that are suitable for the location where the fan is to be installed. Only use the lifting lugs and a fork-lift truck to lift and transport the fan. Do not attach lifting tackles to inlet or discharge or to the fan motor. Blank off all openings (nozzles, flanges, etc.) firmly to keep out foreign substances, moisture, dust, etc.

Warranty claims

We reserve the right to change all technical data shown in this list. Warranty claims made as a result of such technical modifications are excluded. Prior to mounting and commissioning on-site, the corresponding safety instructions and operating manuals have to be read. Adequate preservative measures are required for long-term storage on-site. Storage instructions are available on request.

Design conditions

Information required from the customer

Where the customer's order does not refer to catalogue details, the following information is required to select the correct type of fan and the required equipment.

1. Ambient conditions (e.g. ambient pressure or altitude, ambient temperature and relative humidity)
2. Inlet temperature and inlet density
3. Total pressure increase
4. Volume flow (based on the inlet condition at temperature t_1 and static pressure pst_1)
5. Handled gas or type of gas and its composition (gas constant); details as to whether the gas is e.g. explosive, aggressive, corrosive, dust or moisture containing, toxic or radioactive; type, composition and grain size distribution of the dust contained in the medium if the dust content of the gas handled is considerably higher than that of the external air in industrial areas (> 5 mg/m^3) (e.g. abrasive, adhesive, sticking and hygroscopic)
6. Information on the type of the system, machine or unit and its intended use; mounting and installation conditions, installation dimensions to be kept
7. Type of installation and connection:
   – A, B, C or D, see page PB 16.
8. Operating conditions such as permanent operation, interrupted operation, long standstill periods, start-up frequency and variable speed control by frequency control.
9. Type of drive, method of switching-on of the motor
   – see pages PB 13 to PB 15.
10. Voltage, fequency, special conditions of the supply system
    – Please pay particular attention to the speed changes and the resulting changes in output for a 60 Hz mains.
    – Please request further information from us.
11. Design features such as e.g. radial fan, position of housing, type of drive (e.g. belt or coupling) and arrangement or control units, if necessary.
    Please note:
    The fan sense of rotation is viewed from the fan driven end in the direction of the motor fan impeller (generally, this is the non-driven end motor bearing). The motor sense of rotation, however, is viewed from the free motor shaft end (usually, this is the driven end motor bearing), that is to say, the view direction is from the opposite side of the motor fan impeller. If, for example, the fan sense of rotation is clockwise, the motor sense of rotation is opposed to that, namely counter-clockwise.
12. Whether sealing is required for the housing a nd the shaft passage and whether gas has to be prevented from entering or escaping.
13. Other general information (e.g. protection against corrosion, information on material, life time of bearings, ducting forces, earthquake and vibration load, pressure-resistant and shockproof or gastight). Equipment e.g. guards, flexible connections, control devices and dampers, suction boxes.

Observe for warranty statement

In our capacity as the fan supplier, we are not generally familiar with the individual system design and local conditions. Therefore, the system designer or project manager should prepare the ordering data in such a way that it already refers to the peculiarities and local conditions that are specific to the system. Our warranty details relate to individual values and test conditions in accordance with the presently effective DIN Guidelines or Standards and Regulations. It is therefore essential to adapt these to the operating state under given local conditions. For built-in parts belonging to our scope of delivery such as transition pieces, dampers, suction boxes, filters, guards, silencers etc the system designer is required to determine the corresponding installation resistances and include them in the calculations which are required to determine the fan type.

PB

Structural designs

Type designation and article number

KX E 040 - 0500 15 - 00

- internal code
- **impeller speed** $n_L \cdot 100$ [min^{-1}] e.g.: 1,500 min^{-1}
- **volume flow** $\dot{V}_1$ [m^3/min] e.g.: 500 m^3/min
- **total pressure increase** $\Delta pt_2 \cdot 10$ [daPa] e.g.: 400 daPa
- **E = single-stage radial fan**
- **structural design**: MX motor on pedestal; MA flange-mounted motor; KX with coupling; RG with belt drive

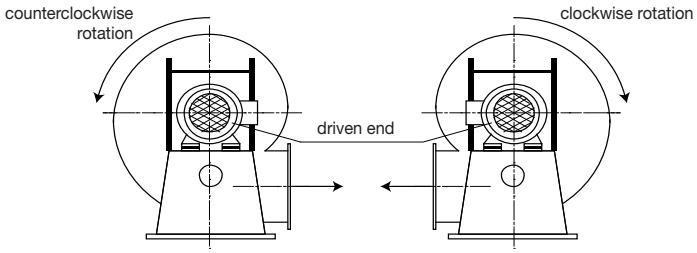
Important data needed to handle your order

1. Structural designs

_ MXE _ MAE _ KXE _ RGE

description see page PB 6

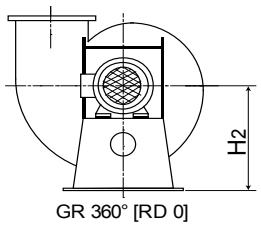
2. Sense of rotation



(viewed from the driven end) see page PB 7

_ counterclockwise rotation _ clockwise rotation

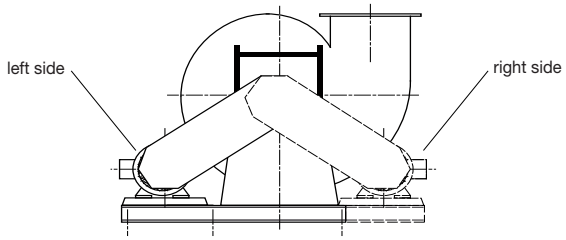
3. Position of discharge



GR 360° [RD 0] G .....

for example GR 360° see page PB 7

4. Arrangement of the motor



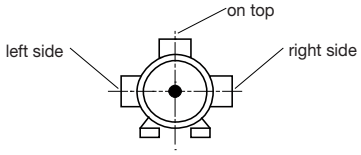
(for structural design RGE only)

_ right side _ left side see page PB 8

5. Motor size (if provided by customer)

P_M = _____ kW
n_M = _____ min^{-1}
motor size = _____
make = _____

6. Placing of terminal box

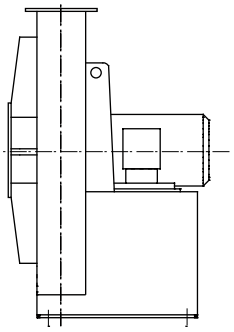


_ left side _ on top _ right side
viewed towards the motor shaft end

Structural designs

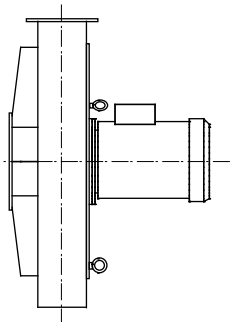
Structural design MXE

Directly driven by the motor shaft on which the impeller is mounted. The motor of foot mounting type (IMB3) is placed on the pedestal.



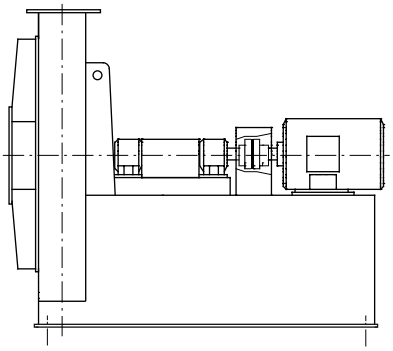
Structural design MAE

Directly driven by the motor shaft on which the impeller is mounted, suitable for surface mounting on a separator, filter etc. The motor of flange design (IMB5, IMV1) is directly flanged to the fan housing.



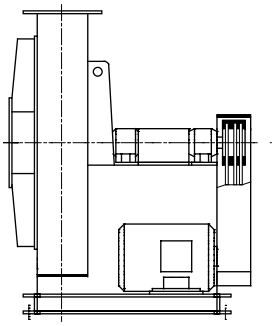
Structural design KXE

Power transmission from motor shaft to fan shaft by a flexible coupling. The fan shaft runs in two antifriction bearings.



Structural design RGE

Power transmission from motor shaft to fan shaft by V-belts. The fan shaft runs in two antifriction bearings. The motor is laterally arranged on a base frame made of channel.



PB

Design options

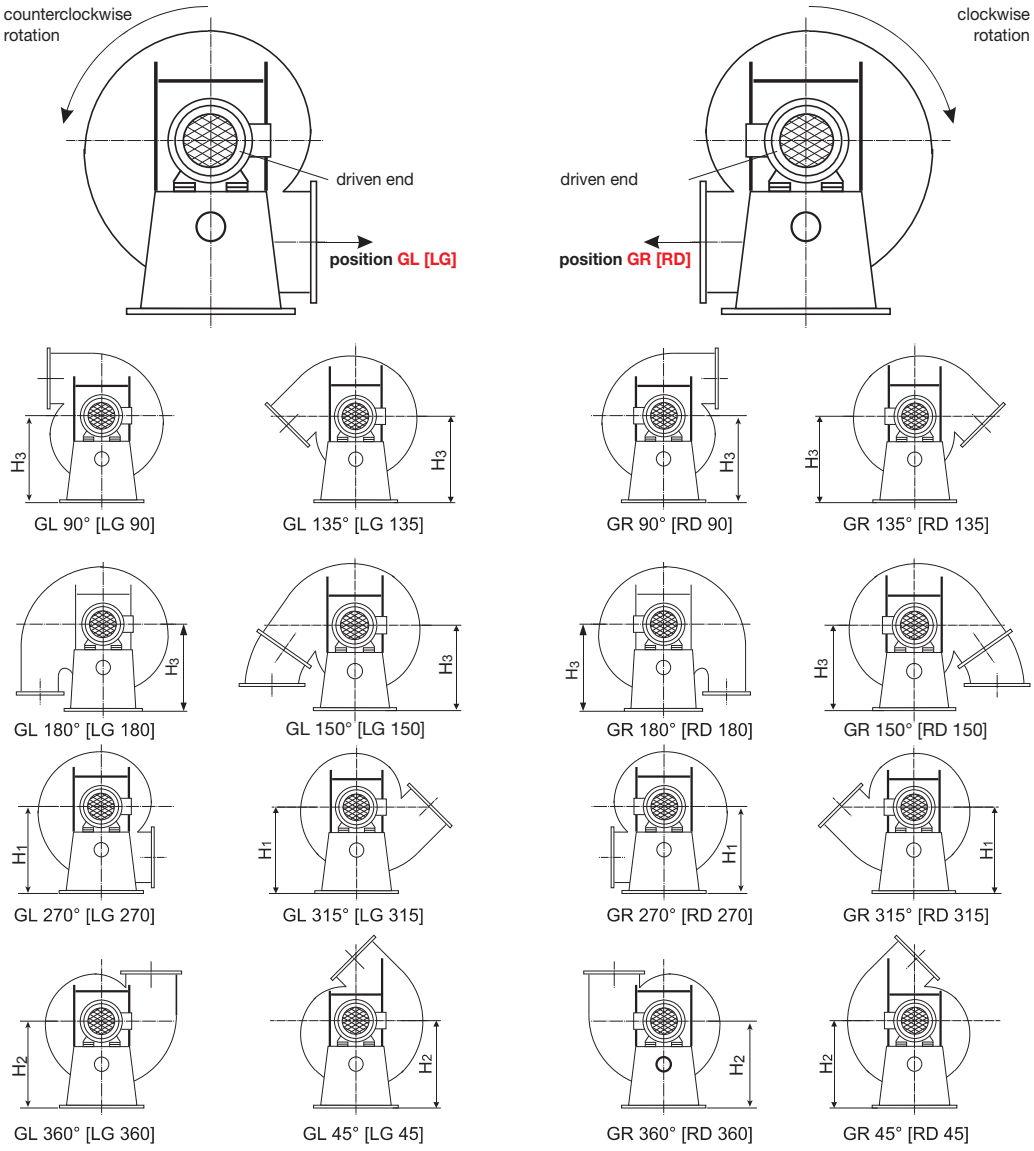
Sense of rotation

Single-stage radial fans are available in two directions of rotation. As viewed from the driven end it is:

GR = clockwise rotation [RD]*
GL = counterclockwise rotation [LG]*
* Identification in [.....] as per EUROVENT

Positions of discharge

The position of the housing or the direction of the discharge is indicated in position degrees. The sense of rotation or sense of impeller rotation is always indicated as viewed from the driven end VDMA 24 165).

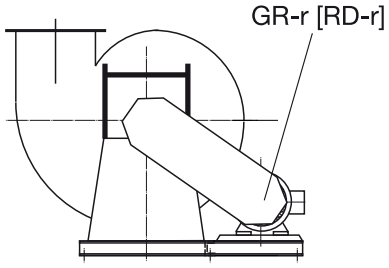


Motor arrangement

For structural design „RGE“ the motor can be arranged at the right or at the left side.

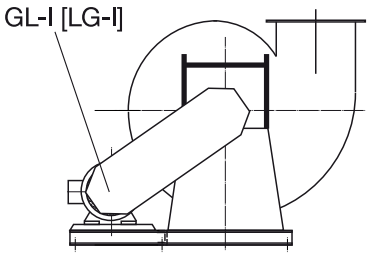
Design r

Arrangement of the motor on the right side of the base frame, viewed from the driven end.



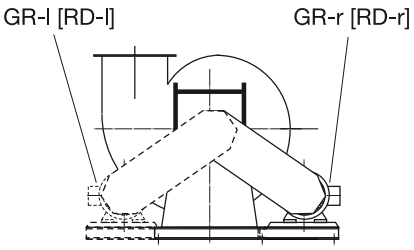
Design l

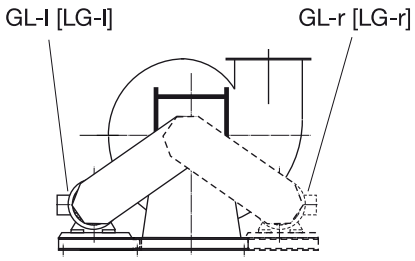
Arrangement of the motor on the left side of the base frame, viewed from the driven end.



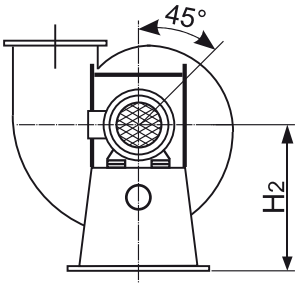
Design variants

Arrangement of the motor and sense of rotation for structural design RGE





Position of the inspection openings (IO)

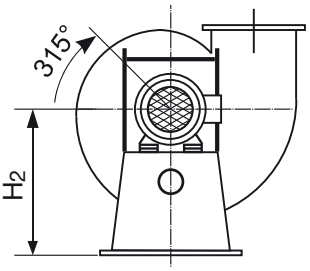


GR 360° [RD 360]

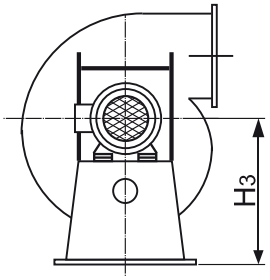
Example 1: Discharge position GR [RD] 360°
IO position at 45°

Example 2: Discharge position GL [LG] 360°
IO position at 315°

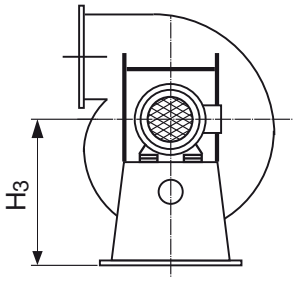
Arrangement options
viewed on the motor



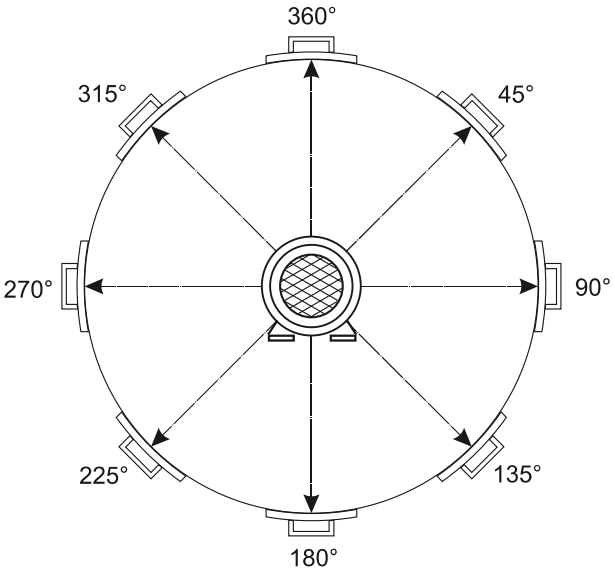
GL 360° [LG 360]

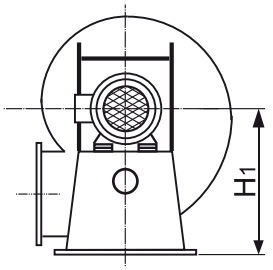


GR 90° [RD 90]

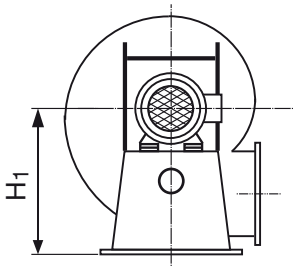


GL 90° [LG 90]

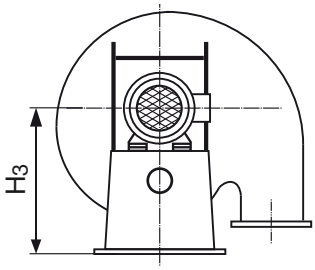




GR 270° [RD 270]

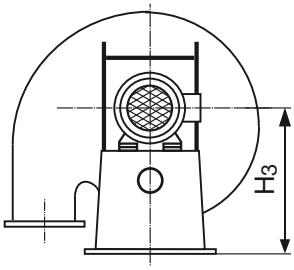


GL 270° [LG 270]

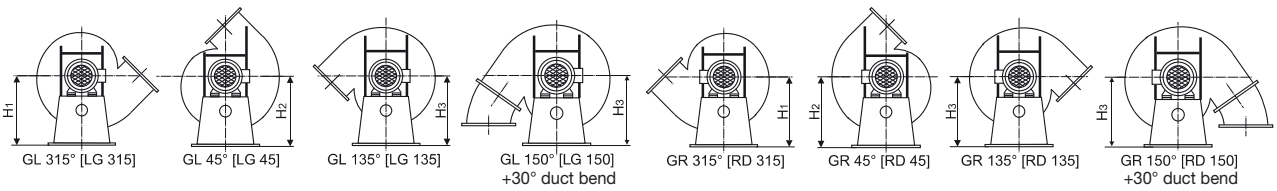


GR 180° [RD 180]*

The inspection opening position is always indicated in degrees of the circular housing. Direction of rotation always clockwise (righthanded) seen from the driven end. This is irrespective of the direction of rotation of the fan.



GL 180° [LG 180]*



Examples of possible housing positions.

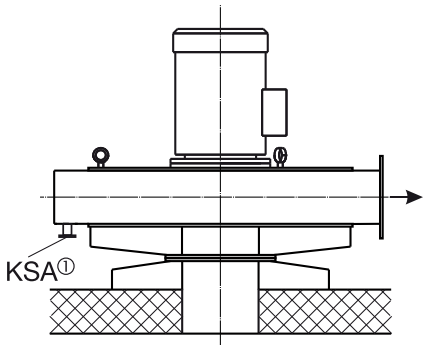
* Discharge position 180° depending on the size can only be achieved with 150° + 30° duct bend.

Arrangement of structural design MAE

Installation and mounting options and corresponding motor types

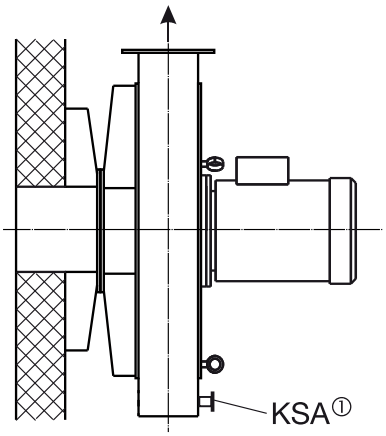
Fan arrangement

IMV1②



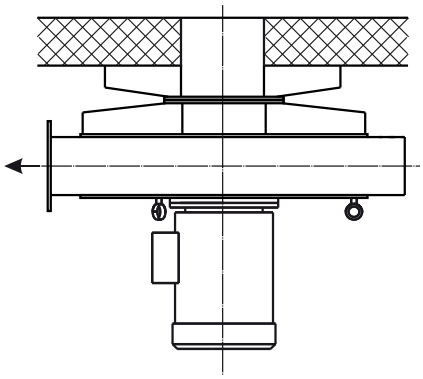
on top = O
appropriate motor type
as per DIN IEC 34.7

IMB5



lateral = S
appropriate motor type
as per IEC 34.7

IMV3

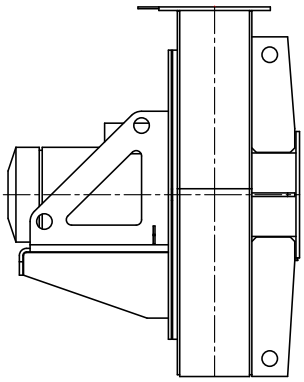


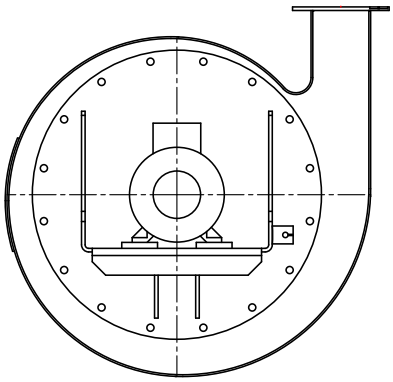
below = U
appropriate motor type
as per IEC 34.7

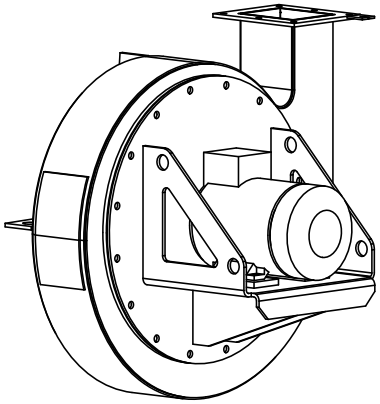
*KSA = drain. The drain, if any, is arranged as shown.
② Structural type of motor IMV1 can be designed with rainhood upon request.

Design MAE ATEX

Constructional changes are required for MAE ATEX. Please inquire for this structural design.







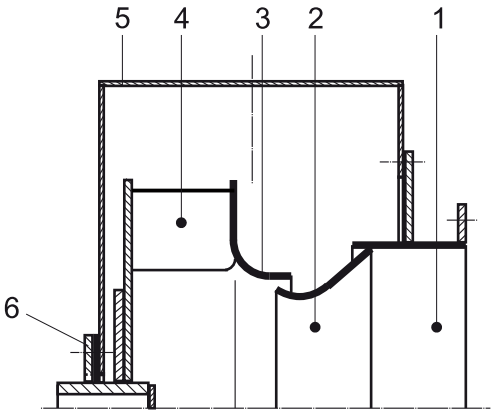
PB

Design characteristics

Inlet design

Our optimum aerodynamic flow design includes inlet, inlet cone and nozzle and ensures high efficiency degrees.

1 - inlet
2 - inlet cone
3 - nozzle
4 - impeller
5 - fan housing
6 - shaft seal



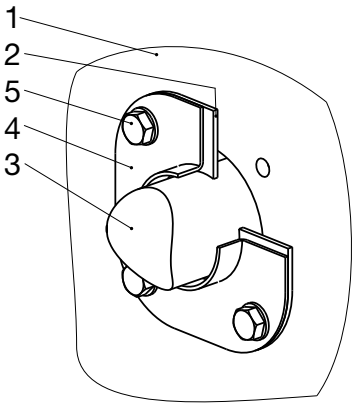
Design of fan connections

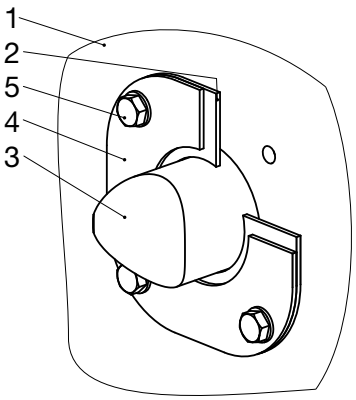
The fan is connected to the plant system with flanges according to DIN 24154 R2 edition July 90 or with flat frames as per DIN 24193 R3.
In case the fan is connected to duct work with flexible connections with hose clamps, the supplied fan can be of end piece design upon request.

Sealing of the shaft passage

The shaft passage is sealed in the basic version up to a handled gas temperature of + 180°C with an asbestos-free flat gasket. This type of seal is not absolutely tight. For operating temperatures of 181-300°C, the shaft seal is designed as a 1-groove carbon ring seal. Please inquire for higher-quality shaft seals.

1 - housing back plate
2 - flat seal
3 - impeller hub
4 - seal locking plate
5 - fastening screw





Design characteristics

Fan shaft bearings

Fan shafts for types KXE and RGE run in two anti-friction bearings. The bearing housings have re-lubricating devices and a grease quantity control.
Depending on the type of bearing, bearings are fixed on the fan shaft by conical bearings with clamping sleeves or with cylindrical bearing seats

bearing with clamping sleeve (figure 1)
bearing with cylindrical sleeve (figure 2)
multiple bearing block with cylindrical bore (figure 3)

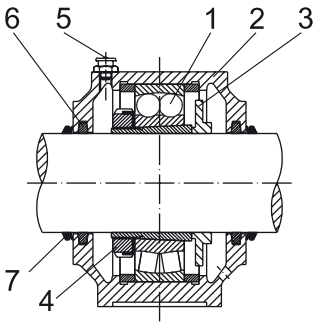


figure 1

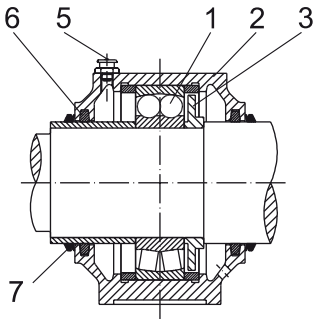


figure 2

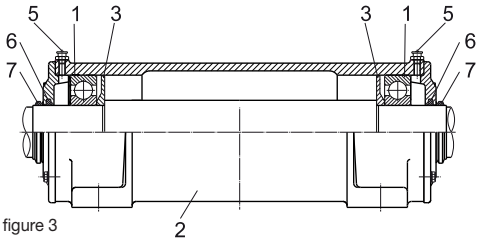


figure 3

1 - self-aligning ball or roller bearing as required
2 - single bearing
3 - grease quantity control
4 - shaft nut
5 - flat lubrication nipple
6 - felt seal
7 - additional seal against dust and dirt

Cooling system

Fans are provided with a heat flinger made of cast aluminium alloy when they handle gas whose temperature exceed 80°C. This heat flinger has heat-dissipating surfaces to reduce the heat radiation to the bearings (fig.4)

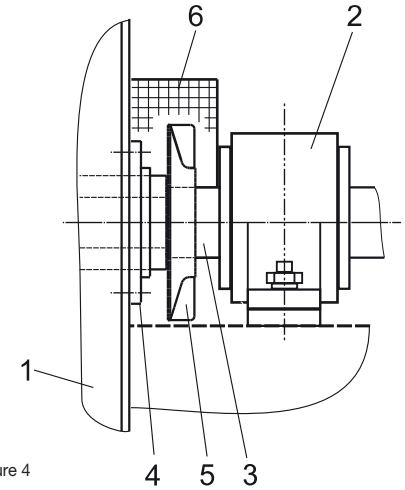


figure 4

1 - fan housing
2 - single bearing housing
3 - fan shaft
4 - shaft seal
5 - heat flinger
6 - guard

PB

Drive motor

Selection of drive motors

The very best branded three-phase standard motors of the protection system IP 55 are used for the drive. The motors are sufficiently dimensioned due to a power consumption that includes a safety margin. If the motors are installed in rooms with a cooling air temperature higher than 40°C, it has to be considered that the output will be reduced. Take values from the manufacturer's motor catalogue.

Protective motor devices

Protective motor devices are used to protect the motors from unacceptable temperature rise, to protect them against damage and to minimize the downtime of electric drives. The efficiency of a motor protection varies according to the applied technical means from most uncomplicated devices that respond often inaccurately only to the coarsest sources of faults, to most expensive and sophisticated equipment which allows to supervise all imaginable possibilities of danger. The inherent high starting current of all radial fans quickly heats up the stator and rotor windings, their temperature will be very high within a few seconds. Therefore it is important for a plant designer to consider the starting time. Starting times from 6 to 10 seconds are referred to as normal starts (the tripping time of the employed protective unit must exceed the starting time of the fan). Starts which take longer are referred to as heavy-duty starts.

Standard value

$$t_A \approx 6...10s = \text{normal start}$$
$$t_A \geq 6...10s = \text{heavy-duty start}$$

Performance of motor protective devices

The most important function of a motor protective device is to respond before the motor surpasses its maximum permissible excess temperature. However, motor protective devices must not respond if the motor is

- continuously operated with rated power,
- during the allowed run-up time with the allowed start-up current,
- overloaded in warm condition for 2 min with an allowed 1,5-fold nominal current according to DIN VDE 0530.

Explosion protection

Every motor must be protected with a power cut-out switch in order to meet the requirements of protection against explosion in the factory. When selecting the type of switch, care must be taken to ensure that in the event of a short circuit in the motor (i.e. locked rotor) the switch responds within the time t_E stated on the performance data plate, this must be initiated in accordance with the characteristics in the cold state (20 °C). With reference to the heating-up time t_E set out in the test regulations, the start-up conditions on motors with the „e" protection system must be checked with particular care. The generally permitted run-up time for motors with „e" protection system is as follows:.

$$t_A \leq 1.7 \times t_E$$

For run-up times of t_A within the t_E-time range, the protection of current-monitored motors becomes difficult because unnecessary triggering of the overload protector can be effected where start up isrepeated, or because the required triggering is not effected despite exceeding the temperature limit of the stator or rotor winding, since in the meantime the overload trigger has cooled more rapidly than the motor because of its smaller thermal time constant. Please contact the motor supplier for further information.

Starting behaviour

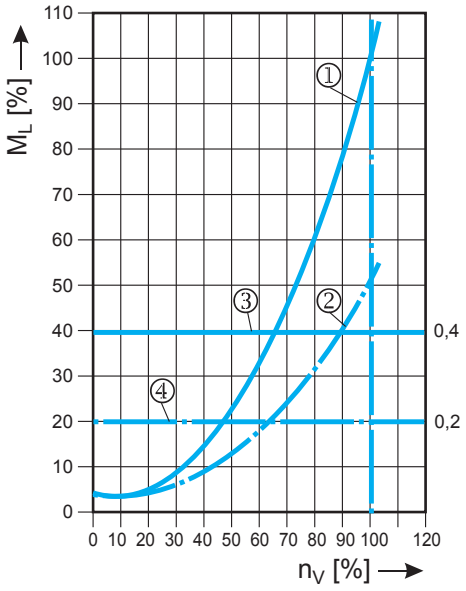
Start-up of radial fans

Fans are heavy-starting machines. To start them, the drive motor must overcome the mass moment of inertia of the impeller and when starting against the system resistance it must also overcome the load moment of the fan. Radial fans have a square-law rising load moment (see diagram load torque curve). This can produce unacceptable start-up times and, depending on the individual type of starting (direct or star – delta), run-up problems: the fan possibly does not run up to rated speed. Fans should therefore be started with closed damper where possible (shutter, damper, louvre damper or inlet guide vane). All the motor sizes recommended in our list have been defined accordingly. The run-up times stated in the type selection were calculated for motors whose start-up torque is [$M_A = 2.2$ x rated torque]. Different start-up torque levels of the individual makes will produce different run-up times.

Load torque curve

Start-up data in design point

1. Load moment
   with open damper
   $M_L = 9550 \times (P_W/n_V)$)
2. Load moment
   with closed damper
   $M_L = 9550 \times (P_W/n_V) \times 0.5$
3. Calculated load moment
   with open damper
   $M_{Lm} = 9550 \times (P_W/n_V) \times 0.4$
4. Calculated load moment
   with closed damper
   $M_{Lm} = 9550 \times (P_W/n_V) \times 0.2$



When the motor is ordered and supplied by customer, the following data must be notified to the motor manufacturer before selecting the motor:

1. Fan speed
2. Mass moment of inertia of the impeller
3. Power requirement in nominal point
4. **Starting the motor:**
   a) with open damper
   b) with closed damper
5. **Motor run-up:**
   a) in star-delta
   b) direct online
6. Switching frequency or number of start-ups per hour

The size of the motor and start-up mode can only be finally determined after the starting behaviour has been checked by the motor manufacturer.

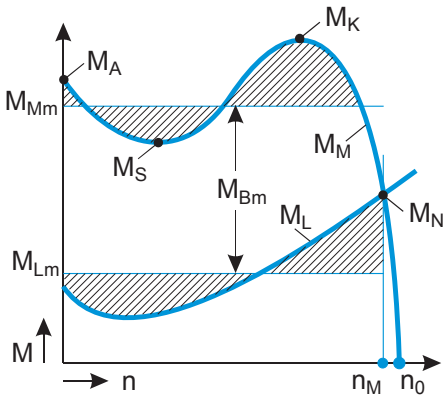
Start-up

Start-up time

Amongst other factors, the start-up time depends on the acceleration torque. The calculated acceleration torque is the difference between the motor torque and the load moment. A precise calculation can only be done by using integral calculus. In practise it is sufficient to ascertain the calculated acceleration torque and thereby to calculate the start-up time.

Calculated acceleration torque

M_{BM} = calculated acceleration torque
M_{Mm} = calculated motor torque
M_{Lm} = calculated load moment
M_A = start-up torque
M_S = pull-up torque
M_K = breakdown torque
M_M = motor torque
M_N = rated torque
M_L = load moment
P_M = rated motor power in kW
P_W = required shaft power in kW
n_M = motor speed (nominal speed)
n_0 = idling speed



Star-delta start-up

On star-delta start-up, only about 1/3 of the start-up torque is applied by the drive motor in the star circuit. Above a specific start-up speed the load torque of the fan exceeds the starting torque of the motor. The motor will not run up to rated speed. It must therefore be switched to direct online in time during the start-up period. However, this always produces a current peak.

Start-up current

The power supply, the switching devices and the monitoring equipment should essentially be checked by the client with regard to the type of start-up and current peak, ensuring that the dimensions are sufficient. Particular attention should be paid to the start-up current for direct switching. Depending upon the individual rotor category, this is 6 to 8 times the nominal current and must be electrically protected during run-up.

Start-up problems

The motor can only start-up with the fan if sufficient acceleration torque is available throughout the start-up range up to the nominal speed. Subsequent alterations to the absolute course of the motor torque cannot be implemented, thus the correct choice of motor, including the associated switching and monitoring controls, must be made on designing. It is recommended that PTC thermistors protect the motor.

Start-up current too high

Where local mains are too weak, a start-up coupling must be provided or converter technique must be applied on designing the plant. Changes of the fan dimensions should be taken into account.

Use of start-up coupling

Most start-up couplings – hydraulic or mechanical with flyweights – have a torque (friction moment) transferable from the coupling that is equivalent to the square of the RPM speed. For acceleration, the difference between motor and coupling momentums is available. The motor is virtually idling when running-up. The start-up time is lightly higher than the idle-running time. The high start-up current is therefore only of short duration. After this, when the coupling momentum exceeds the load momentum, the coupling's continuous slip moment accelerates against the load torque of the operating motor. The size of the additional inertia momentum has a significant effect on the run-up time of the machine. The start-up time can take e.g. 5 s or 100 s .

Operating conditions

Types of installation

Fans can be installed in a technical air system in different ways. In general, fans can be installed in four different types as per DIN 24163 T1.

type of installation	description of installation		figure	operation mode
	fan inlet	fan dischage		
A	free inlet	free discharge		Not permitted for radial fans. Motor will be overloaded.
B	free inlet	discharge ducted		pressure operation
C	inlet ducted	free discharge		vaccuum operation
D	inlet ducted	discharge ducted		mixed operation

Installation

In general, fans should be provided with flexible connections. Flexible connections prevent the transmission of structure-borne sound and vibrational forces. They are also supposed to avoid the transmissions of forces from the duct to the fan. At the same time, alignment errors of the duct work are compensated. The flexible connections should always be arranged directly at the fan connection flange except when a damper is installed. If the fan is mounted on anti-vibration mounts, flexible connections must always be provided at inlet and discharge.

Maintenance

The antifriction bearings of the fans of KXE and RGE designs are lubricated with grease or oil and are designed for a theoretic service life time of at least 40,000 operating hours. The belt drive of the „R" type is fitted with standard narrow V-belts with a service life time of at least 25.000 operating hours. The main maintenance points include bearings, coupling, belt drive, shaft seals and parts subject to wear and tear such as the impeller. An inspection opening must be provided for checking of the impeller condition. The impeller must be checked for wear and tear or sticking of dust and dirt at regular intervals determined by the degree of wear and tear or soiling level of the handled gas. When carrying out these checks the impeller must be examined in particular for any formation of cracks on the weld seams. Easy and quick accessibility of parts which need to be serviced is important. Appropriate lifting gears and the required space must be provided if necessary for assembly and dismantling. The impeller in particular must be easily accessible.

Monitoring

The type of fan monitoring is determined primarily by its function and its importance within a system. So, depending upon its importance for the system the following factors should be taken into account:

- replacement fan or standby unit
- monitoring devices such as:
  - bearing temperature and bearing condition monitoring
  - speed monitoring
  - vibration monitoring etc.

To ensure high operational safety it is recommended to install a vibration monitoring system in fans that are subject to special load. The system can be set to trigger a preliminary warning or a major alarm or to cause an automatic shutdown even in cases of minor irregularities. Optimum service life and safe operation can only be achieved, however, if proper maintenance is provided and regular checking of parts at risk is carried out. The maintenance and inspection instructions should therefore be precisely observed.

PB

Formeln und Einheiten

SI-unit for pressure

One pascal equals the amount of pressure acting constantly on a surface at which a force of 1 N is exerted on 1 m^2 surface.
All pressures in this list are stated in daPa.

1 Pa = 1 N/m^2
1 daPa = 1,02 mm WS (water column)

Total pressure increase Δpt

The total pressure increase is the total energy from the sum of the static and dynamic pressures.

$\Delta pt = pst + pd$ [daPa]

Static pressure pst

This is the internal pressure of a gas and it is exerted vertically to the duct wall.

pst_1 ; pst_2 [daPa]

Dynamic pressure pd

This corresponds to the kinetic energy of a flowing gas. This pressure is a function of speed “c” according to the following formula:

$$pd = \frac{\rho \cdot c^2}{20} \quad [daPa] \qquad \text{with c in m/s}$$

Conversion of pressure units

given \ required	daPa	Pa N/m^2	mbar	bar	mmWS kp/m^2	Torr
1 daPa	1	10	0,1	10^{-4}	1,02	$7,5 \cdot 10^{-2}$
1 Pa 1 N/m^2	0,1	1	10^{-2}	10^{-5}	0,102	$0,75 \cdot 10^{-2}$
1 mbar	10	10^2	1	10^{-3}	$0,102 \cdot 10^2$	0,75
1 bar	10^4	10^5	10^3	1	$0,102 \cdot 10^5$	750
1 mmWS 1 kp/m^2	0,981	9,81 ≈ 1 daPa	$9,81 \cdot 10^{-2}$	$9,81 \cdot 10^{-5}$	1	$735 \cdot 10^{-4}$
1 Torr	$13,3 \cdot 10^2$	$13,3 \cdot 10^2$	1,33	$1,33 \cdot 10^{-3}$	13,6	1

Volume flow

The volume flow $\dot{V}$ is the product of the volume and the associated time.
All volume flows in this list are specified in m^3/min.

$\dot{V}$ [m^3/s, m^3/min, m^3/h]

The volume flow is always referred to the vacuum operation, i.e. to the static pressure pst_1, in the inlet and to the inlet temperature t_1.

$$\dot{V}_1 = \frac{\dot{m}}{\rho_1}$$

If the temperature changes for operational reasons, the volume flow, however, is maintained.

Formulas and units

Mass flow $\dot{m}$

The mass flow is the product of the mass and the related time.

$$\dot{m} = \dot{V} \cdot \rho \quad [kg/s, kg/min, kg/h]$$

Standard cubic metres

The flow volume in standard cubic meters refers to the physical standard state when the temperature is 0° C and the air pressure 101,325 Pa.

$$\dot{V}_N \quad [Nm^3/s, Nm^3/min, Nm^3/h]$$

$$\dot{V}_1 = \dot{V}_N \cdot \frac{\rho_N}{\rho_1} \quad \text{bzw.} \quad \dot{V}_N = \dot{V}_1 \cdot \frac{\rho_1}{\rho_N}$$

ρ_1 in kg/m^3 = density in the operating state
ρ_N in kg/m^3 = standard density at 0°C and 101,325 Pa

Total specific supply Yt

The specific total supply is the effective energy difference between the inlet and the discharge referred to the mass.

$$Y_t = K \cdot \frac{\Delta pt}{\rho_1} \quad [J/kg, daJ/kg]$$

$$Y_t = \frac{\Delta pt}{\rho_m} \quad [J/kg, daJ/kg]$$

K = compression factor
ρ_m = average density = 1/2 ($\rho_{1+}\, \rho_2$)

Compression factor K

The compression factor K accounts for the compressibility of the air.

$$K = \rho_1 \cdot \frac{Y_t}{\Delta pt}$$

It can be determined with the mean density ρ_m.

$$K = \frac{\rho_1}{\rho_m}$$

Thumbrule for the calculation of K

$$K \approx 1 - 0{,}31 \cdot \frac{\Delta pst}{pa} \quad ; \quad \frac{\Delta pst}{pa} \leq 0{,}1$$

$$K \approx 0{,}994 - 0{,}25 \cdot \frac{\Delta pst}{pa} \quad ; \quad \frac{\Delta pst}{pa} > 0{,}1 \leq 0{,}3$$

Δpst = static pressure difference
pa = absolute pressure

PB

Formulas and units

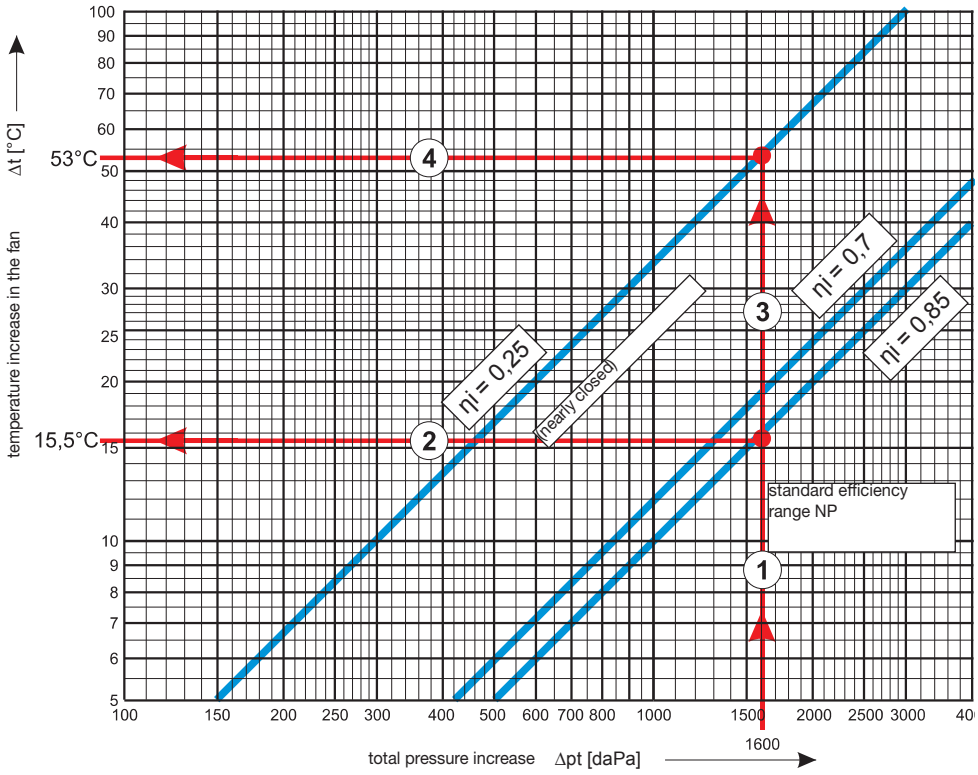
Compression heating in the fan with reference to the nominal point (NP)

The air inside the fan is subject to compression, the temperature rises from the inlet temperature t_1 to the discharge temperature t_2. The difference between the inlet and discharge temperature is the temperature increase or compression heating Δt with $\Delta t = t_2 - t_1$ in °C. The temperature increase can be easily calculated by approximation at a given fan efficiency level with the formula.

$$\Delta t = \frac{\Delta pt}{121 \cdot \eta_i} \cdot K$$

Δt	in °C
Δpt	in daPa
K	= compression factor (set as 1 in the formula)
ηi	= internal fan efficiency

Temperature increase inside the fan with reference to the nominal point and in dependence of the total pressure increase



Important remark on fan safety

The fan efficiency deteriorates when the flow is strongly reduced by dampers (deviation from nominal point). Thus, the temperature rises continuously. Temperatures of much more than 50°C can occur on the housing surfaces of high-pressure fans with a total pressure increase of $\Delta pt_2 > 1{,}000$ daPa. This is to be observed for reasons of the prevention of accidents. The diagram shows a strong reduction of flow (ηi = 0,25) as a standard value. When the dampers are completely closed (i.e. operation with no flow) the maximum temperature increase is to be assessed.

Formulas and units

Total supply output P_t

The total supply output is the product of the mass flow $\dot{m}$ and the total specific supply Y_t.

$$P_t = \frac{\dot{m} \cdot Y_t}{100} \quad [kW]$$

$\dot{m}$ [kg/s]
Y_t [daJ/kg]

Overall efficiency η_{tW}

Overall efficiency is to be understood as the total supply P_t to shaft power P_W ratio without V-belt drive losses.

$$\eta_{tW} = \frac{P_t}{P_W}$$

P_t ; P_W [kW]

Required shaft power P_W

The required shaft power P_W is the power taken up at the fan shaft including the corresponding mechanical losses such as bearing friction and coupling losses.

$$P_W = \frac{\dot{m} \cdot Y_t}{100 \cdot \eta_{tW}} \quad [kW]$$

$\dot{m}$ [kg/s]
Y_t [daJ/kg]

$$P_W = \frac{\dot{V} \cdot \Delta pt}{6000 \cdot \eta_{tW}} \cdot K \quad [kW]$$

Δpt [daPa]
$\dot{V}_1$ [m^3/min]

η_{tW} = overall efficiency of the fan referred to the fan shaft.
For total pressures up to Δpt_2 = 355 daPa the compression factor can be neglected.

$$P_W = \frac{\dot{V}_1 \cdot \Delta pt}{6000 \cdot \eta_{tW}} \quad [kW] \quad \text{for} \quad \Delta pt_2 \leq 355 \text{ daPa}$$

Efficiency η_{tWV} (without compression factor)

$$\eta_{tWV} = \frac{\Delta pt \cdot \dot{V}_1}{6000 \cdot P_W}$$

Δpt [daPa]
$\dot{V}_1$ [m^3/min]
P_W [kW]

Efficiency η_{tW} (with compression factor)

$$\eta_{tW} = \eta_{tWV} \cdot K$$

Formulas and units

Effect of density

In case of ideal gases the density can be determined from the general gas equation.

$$\rho = \frac{p}{R \cdot T} \quad [kg/m^3]$$

p = pressure [pa]
T = thermodynamic temperature [K]
R = gas constant [J/kgK]
At different air density levels the pressure and the shaft power changes in proportion to the density. By contrast, the flow volume is kept constant.

Index: I = initial condition
II = altered condition

$$\frac{\Delta pt_I}{\Delta pt_{II}} = \frac{\rho_I}{\rho_{II}} \quad ; \quad \frac{P_{WI}}{P_{WII}} = \frac{\rho_I}{\rho_{II}}$$

Influence of air pressure

Dependent on the altitude of the installation site, the absolute air pressure and consequently the corresponding air density changes.

$$p_a = p_0 \cdot \left[1 - \frac{6{,}5 \cdot h}{273 + t}\right]^{5{,}256} \quad [Pa]$$

p_a	=	absolute air pressure in „h“ m altitude	[Pa]
p_0	=	reference air pressure in „0“ m altitude	[Pa]
	=	101,325 Pa	
h	=	altitude of site	[km],
t	=	temperature	[°C]

$$\rho_a = \frac{p_a}{R \cdot T} \quad [kg/m^3]$$

Speed change

The flow volume alters proportional with the speed ratio.

$$\frac{\dot{V}_{1I}}{\dot{V}_{1II}} = \frac{n_I}{n_{II}}$$

The pressure alters with the square of speed ratio.

$$\frac{\Delta pt_I}{\Delta pt_{II}} = \left(\frac{n_I}{n_{II}}\right)^2$$

The shaft power changes with the third power of speed ratio.

$$\frac{P_{WI}}{P_{WII}} = \left(\frac{n_I}{n_{II}}\right)^3$$

Fan performance curve

General information

The fan performance curve always indicates the pressure for the corresponding volume flow. The indicated pressure is always the total pressure increase Δpt_2. For finding the static pressure p_{st}, subtract the dynamic pressure pd from Δpt_2. The graph of the performance curve depends on various geometric and ventilation parameters. Therefore, the performance curve type is indicated in the type selection for each type of fan. The graph of the performance curve should be taken from the respective performance curve (see sheets TA 46 to TA 52).

Nominal point NP

The ratings indicated in our type selection are within the optimal range of efficiency and are designated as nominal point NP.

Plant characteristic curve

There is a resistance to the fan in every plant. For most ventilation plants the resistance runs in the form of a parabola. This characteristic curve has to be carefully calculated by the client.

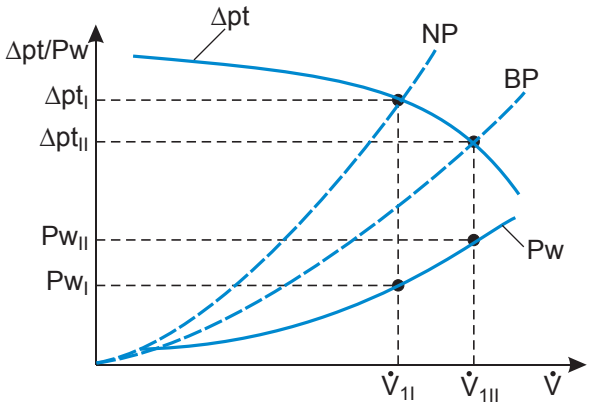
Operating point BP

As the fan can operate at any point of its performance curve depending on the plant resistance, the actual working point in the plant is called the operating point, OP.

Interaction of plant and fan

The interface point of the fan performance curve and the plant characteristic curve is the actual operating point OP. In the best case, it is close to the nominal point NP. Should the plant resistance be lower than calculated (Δpt_{II}), there will be a higher volume flow ($\dot{V}_{1\,II}$) at the operating point BP. As a result, the mounted motor will be overloaded and damaged. Especially for fans with a constant increase in power consumption (KL type 1, 2 and 3), the power consumption increases even when the nominal point is only slightly exceeded.

NP = nominal point = list data
BP = operation point = working point in the plant



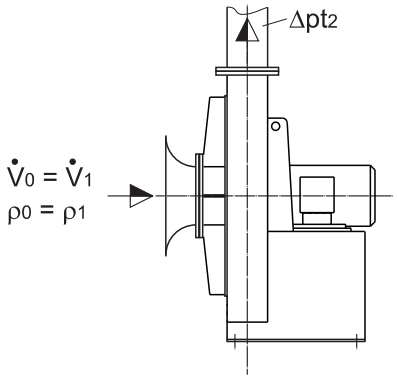
Reserve power

For this reason it is recommended to apply a motor with sufficient reserve. Experience shows that it is advisable to choose a driving power that is about 15-30% higher than the required shaft power.

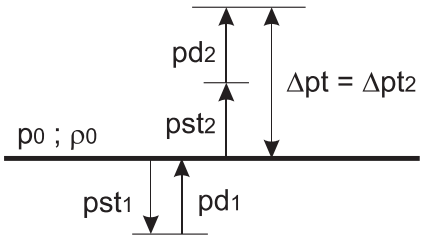
$P_M = P_W$ + 15 % bis 30 %

Pressure course at different operation modes

Pressure operation

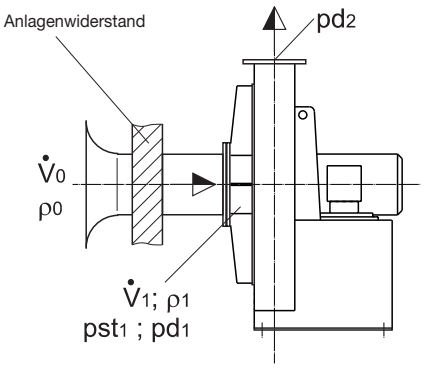


$\Delta pt_2 = pst_2 + pd_2$
$pst_2 = \Delta pt_2 - pd_2$

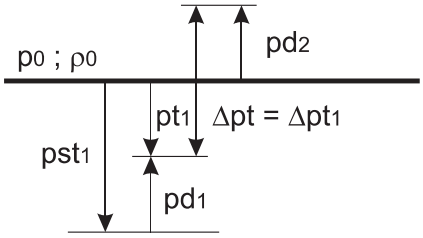


ρ_0 = reference density
p_0 = reference air pressure
Δpt_2 = total pressure increase - discharge
pst_2 = static pressure - discharge
pd_2 = dynamic pressure - discharge

Vacuum operation



$\Delta pt_1 = pst_1 + pd_2 - pd_1$
$pst_1 = \Delta pt_1 - pd_2 + pd_1$

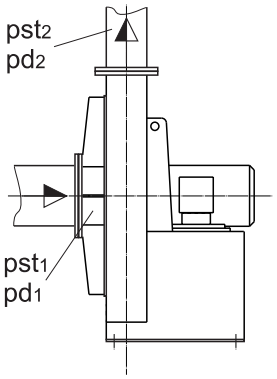


Δpt_1 = total pressure increase - inlet
pst_1 = static pressure – inlet (observe preceding sign for pst_1 (-))
pd_1 = dynamic pressure - inlet
pd_2 = dynamic pressure – discharge

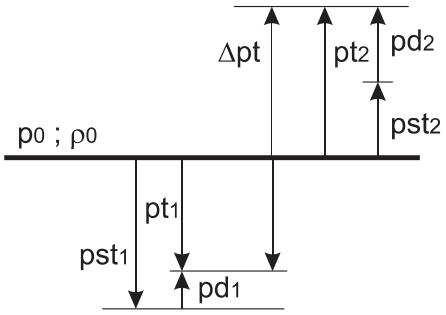
In case of operation at inlet the flow to be handled is always to be considered and indicated. The volume flow $\dot{V}_0$ at the intake or vacuum point is always smaller than the volume flow $\dot{V}_1$ at the fan inlet. To facilitate conversion from $\dot{V}_0$ to $\dot{V}_1$, the corresponding conversion factors $f_{\dot{V}0}$ are included in the type selection sheets (see TA 2).

$\dot{V}_1 \cdot \rho_1 = \dot{V}_0 \cdot \rho_0$ $\quad$ $\dot{V}_0 = \dot{V}_1 \cdot f_{\dot{V}0}$ $\quad$ $f_{\dot{V}0} = \rho_1 / \rho_0$ mit $\rho_0 = 1{,}205$ kg/m³

Mixed operation



$\Delta pt = pst_2 + pst_1 + pd_2 - pd_1$



Performance curve courses at different operation modes

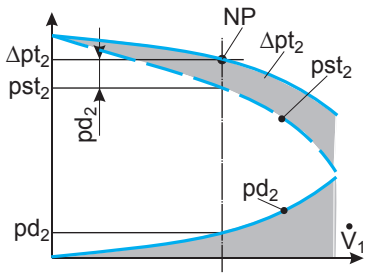
Pressure operation

$$\Delta pt_2 = pst_2 + pd_2$$
$$pst_2 = \Delta pt_2 - pd_2$$

$$\rho_2 = \frac{(pa + pst_2) \cdot 10}{R \cdot T_2}$$

$$c_2 = \frac{\dot{V}_2}{60 \cdot A_2} \qquad pd_2 = \frac{\rho_2}{20} \cdot c_2^2$$

A_2 = area of discharge



Vacuum operation

$$\Delta pt_1 = pst_1 + pd_2 - pd_1$$
$$pst_1 = \Delta pt_1 - pd_2 + pd_1$$

$$\rho_1 = \frac{(pa - pst_1) \cdot 10}{R \cdot T1}$$

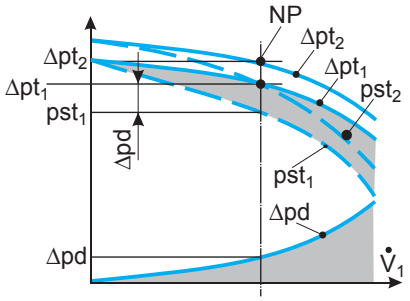
$$c_1 = \frac{\dot{V}_1}{60 \cdot A1} \qquad pd_1 = \frac{\rho_1}{20} \cdot c_1^2$$

$$\Delta pd = pd_2 - pd_1$$

if $A_1 = A_2$ then $\Delta p_d = 0$

$$\Delta pt_1 = pst_1$$

A_1 = area of inlet



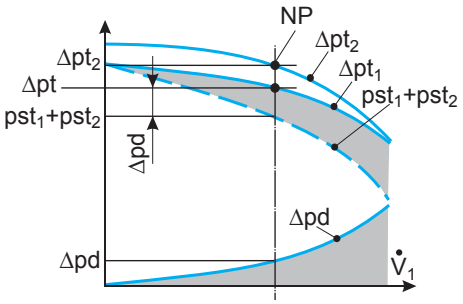
Mixed operation

$$\Delta pt = pst_2 + pst_1 + pd_2 - pd_1$$

$$\Delta pd = pd_2 - pd_1$$

if $A_1 = A2$ then $\Delta p_d = 0$

$$\Delta pt = pst_2 + pst_1$$



Change of density

The change of density from discharge to inlet operation is noticeable in case of a total pressure increase from Δpt_2 = 250 daPa onwards. The type selection indicates the respective total pressure increases for inlet operation Δpt_1 and for discharge operation Δpt_2 (see PB 25).

PB

Conversion from pressure to vacuum operation

All fan design data (calculation data) refer to pressure operation based on an inlet temperature of 20°C in the fan inlet, an air pressure (atmospheric pressure) of ρ_0 = 10132.5 daPa and a density of ρ_0 = 1.205kg/m³.
For the calculation of the density ρ_1 and ρ_2 the static pressure is equated with the total pressure increase (Δ pt = pst) and provided that inlet and pressure openings have the same diameter.

Basic formula for the pressure conversion

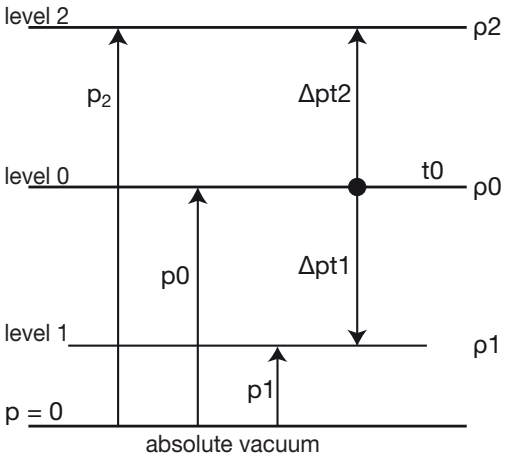
In the conversion from pressure to vacuum operation and vice versa, the pressures behave like the densities in pressure and vacuum operation under atmospheric condition

$$\frac{p_1}{p_0} = \frac{p_0}{p_2} = \frac{\Delta pt_1}{\Delta pt_2} = \frac{\rho_1}{\rho_0} = \frac{\rho_0}{\rho_2}$$

$$\Delta pt_1 = \Delta pt_2 \cdot \frac{\rho_0}{\rho_2} \quad \text{with} \quad \rho_2 = \frac{(p_0 + \Delta pt_2) \cdot 10}{287 \cdot (273 + 20)}$$

$$\Delta pt_2 = \Delta pt1 \cdot \frac{\rho_0}{\rho_1} \quad \text{with} \quad \rho_1 = \frac{(p_0 + \Delta pt_1) \cdot 10}{287 \cdot (273 + 20)}$$

ρ_0 = 1,205 kg/m³



Formula symbols

Δpt	= total pressure increase
pst	= static pressure
pd	= dynamic pressure
$\dot{V}_1$	= volume flow in m³/min
A	= surface area in m²
NP	= fan nominal point
ρ_0	= 1,205 kg/m³ = reference density
ρ	= density in kg/m³
T	= thermo-dynamic temperature in K
t	= temperature in °C
R	= gas constant for air = 287 J/kg · K

Index: 1 = inlet
2 = discharge
0 = reference figures with
p_0 = 10132,5 daPa atmospheric pressure
t_0 = 20°C inlet temperature
ρ_0 = 1,205 kg/m³ inlet density
p = absolute pressure in daPa

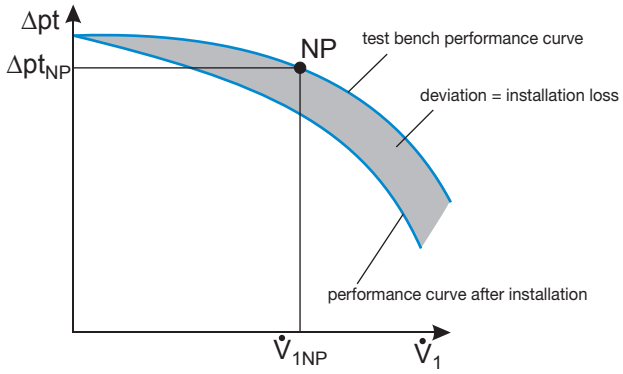
level 0 : reference pressure = atmospheric pressure
level 2 : operation at discharge (positive pressure)
level 1 : operation at inlet (negative pressure)

Operational behaviour

Installation loss

Both fan and plant are part of an interacting complex aerodynamic system. After the installation in a plant, there will consequently be a deviation from the standard performance curve depending on the kind of the inlet and discharge conditions. The deviations will be indicated as installation loss.

Deviation from the standard performance curve



In order to keep the installation loss as small as possible the following frequent malfunction sources should be avoided:

- bend directly up- or downstram of the fan
- dampers directly upstream of the inlet
- flexible connections with constricted cross-section
- inlet duct too short
- improper transition pieces
- pressure loss caused by suction box
- inlet whirl by components at inlet
- leakage loss in ducts and plant components
- stalls caused by plant
- dynamic pressure at discharge (diffusor)

Standard performance curve

According to DIN 24163 the standard performance curve of a fan is the interrelation between the fan pressure increase Δpt and the handled flow rate $\dot{V}_1$ metered on the test bench under accurate test conditions. To complete the operating data, the power consumption PW is also indicated. All data given in the technical literature is principally based on this standard performance curve. The performance of the standard curve depends on various geometrical and flow parameters. The design or calculation point of the performance curve is called the nominal point (NP). It is within the optimum range of efficiency. All ventilation data refers to the following reference figures:

air pressure $p_0 = pa = 10132.5$ daPa
inlet temperature $t_0 = t_1 = 20°C$
inlet density $\rho_0 = \rho_1 = 1.205$ kg/m³

PB

Tolerances

Basic criteria

Certain deviations from the agreed operational values are permissible due to unavoidable design, calculation and production tolerances (called „as-built tolerances“). The permissible deviations depend on the class of accuracy of the fan. The selection of the accuracy class for the individual fan depends on different criteria. It might be necessary to adapt the accuracy class to the ambient or operating conditions. Uncertainties concerning the defining of the operational values due to special installation conditions (e.g. disturbances at the inlet and discharge) are not included in the as-built tolerances and must be considered separately. For further information see our brochure „Fans in practice“.

As-built tolerances depending on the class of accuracy

class of accuracy according to DIN 24166		0	1	2	3
volume flow	$\dot{V}_1$	±1%	± 2,5%	±5%	± 10%
total pressure increase	Δpt	±1%	± 2,5%	±5%	± 10%
shaft power	P_W	+ 2%	+ 3%	+ 8%	+ 16%
efficiency	η_{tw}	- 1%	- 2%	- 5%	-
sound values	L_W, $\bar{L}_P$	+ 3dB	+ 3dB	+ 4dB	+ 6dB

In case no special specifications have been agreed upon, the following accuracy classes apply:

shaft power P_W > 50kW class 1
shaft power P_W < 50kW class 2

Special design fans (e.g. unshrouded impellers, rubberlined or coated impellers, impellers with strongly curved blades) are class 3. Class 2 applies to slightly modified impellers flow conditions.

Operational condition

The as-built tolerances apply only to design point or nominal point (NP) of the fan. It has been specified with regard to the speed, volume flow, pressure, density and handled gas.

As-built tolerances

The allowed deviations in the dimension sheets comply with ISO 2768-mK and EN ISO 13920-A.

nominal range (mm)	above **6** to **30**	above **30** to **120**	above **120** to **315**	above **315** to **1000**	above **1000** to **2000**	above **2000** to **4000**	above **4000** to **8000**
tolerance (mm)	+ 1	+1,5	+ 2	+ 3	+ 4	+ 5	+ 8

Sound behaviour

Correction supplements

For design and construction of ventilation plants, compliance with the given noise limits is necessary to protect the neighbourhood from sound irritation. The fan in particular is one of the most critical sound sources within the entire plant which should be paid particular attention to.
In order to maintain and prove the agreed sound specifications, it is necessary to measure noise according to the given standard regulations.
For sound measurements at fans, standardised regulations apply as described in DIN 45635, sheet 1 „Machine noise measurement“ and DIN 45635 part 38 „Fan noise measurement“ .
The standard describes the precondition for determination of the sound radiated directly from the fan into the environment (sound emission), according to standardised methods, so that the results can be compared. The measuring method described in the standard is only valid for free sound radiation i.e. in a reflexion-free environment.
In practise, however, there are generally no optimal terms. Noise values metered under operational conditions differ more or less from the values measured in reflexion-free space. The individual operating conditions and type of installation in combination with the environmental influences normally lead to considerable increases in the noise levels. The provision of warranty to the end-user is subject to the consideration of plant-specific additions and acoustic calculations.

fan noise level in the system	=	REITZ fan noise level specification	+	addition* (adjustment)

*addition from 3 to 9 db, db(A) are quite realistic

The plant designer or acoustic engineer has to ascertain and calculate the additions. The empiricals for the addition depend on the number of parameters which can be influenced

Influence of noises under operating conditions

In order to transfer measurements for the fan taken in optimum conditions to working conditions, it is indispendable to observe and take into account the following sources of interference

- noise of drive motors
- background noise generated by other machines
- level increase by room influence (reflexion)
- level increase by deviation from nominal point (fan is deviating from order values when operating in the plant)
- level increase caused by dampers (inlet guide vanes, valves, shutters, etc.)
- level increase caused by flexible connections (they represent areas of „noise leaks“ in the system)
- level increase caused by plant components as for instance ducts, bends, baffles, suction boxes, changes of cross section, transition pieces etc.
- level increase caused by stalls in the plant

In principle, the sources of interference produced by the plant itself as well as interference caused by set-up (locality) are to be calculated and determined by the designer of the plant. Please refer to our brochure entitled „Practical sound design“. This detailed information on sound is intended to avoid design and planning faults.

Type selection - 60 Hz

Chapter 2 - Type selection, sound tables - TA

Comments on type selection

Volume flow correction values

$\dot{V}_0 = \dot{V}_1 \cdot f_{\dot{V}0}$ = calculation of actual volume at vaccuum operation; **index 1** for inlet operation (Δpt_1); **index 2** for discharge operation (Δpt_2) (comment on $f_{\dot{V}0}$ see sheet PB 23)

pressure series	**100 daPa - 250 daPa**	$f_{\dot{V}0}$ **= 1,00**
pressure series	**315 daPa**	$f_{\dot{V}0}$ **= 0,98**
pressure series	**355 daPa**	$f_{\dot{V}0}$ **= 0,97**
pressure series	**400 daPa - 450 daPa**	$f_{\dot{V}0}$ **= 0,96**
pressure series	**500 daPa**	$f_{\dot{V}0}$ **= 0,95**
pressure series	**560 daPa**	$f_{\dot{V}0}$ **= 0,95**
pressure series	**630 daPa**	$f_{\dot{V}0}$ **= 0,94**
pressure series	**710 daPa**	$f_{\dot{V}0}$ **= 0,93**
pressure series	**800 daPa**	$f_{\dot{V}0}$ **= 0,93**
pressure series	**900 daPa**	$f_{\dot{V}0}$ **= 0,93**
pressure series	**1000 daPa**	$f_{\dot{V}0}$ **= 0,91**
pressure series	**1120 daPa**	$f_{\dot{V}0}$ **= 0,90**
pressure series	**1250 daPa**	$f_{\dot{V}0}$ **= 0,89**
pressure series	**1400 daPa**	$f_{\dot{V}0}$ **= 0,88**
pressure series	**1600 daPa**	$f_{\dot{V}0}$ **= 0,86**
pressure series	**1800 daPa**	$f_{\dot{V}0}$ **= 0,85**
pressure series	**2000 daPa**	$f_{\dot{V}0}$ **= 0,84**
pressure series	**2250 daPa**	$f_{\dot{V}0}$ **= 0,82**
pressure series	**2500 daPa**	$f_{\dot{V}0}$ **= 0,80**
pressure series	**2800 daPa**	$f_{\dot{V}0}$ **= 0,72**
pressure series	**3150 daPa**	$f_{\dot{V}0}$ **= 0,69**

Index terms to the type selection sheet

1. The recommended motor may possibly differ from the motor that actually must be chosen with regard to starting behaviour which depends on the motor make. Furthermore, motor selection must also consider the change of shaft power at sequences through the performance curve beyond the nominal point.Therefore,
   a) starting, starting behaviour, starting times and motor protection must be observed (see sheets PB 13 to 15)
   b) heavy-duty starting must be provided
   c) the customer should always check the main power supply, the switching devices and monitoring equipment with respect to starting mode and current peak values and have them adequately dimensioned
   d) it is recommended to use protective motor devices with PTC-thermistors
   e) the actual shaft power has to be checked when the nominal point of the performance curve is exceeded. Subsequently the actual motor power to be installed has to be adjusted. (see sheet PB 22).
2. Applies to drive motors listed in the type selection with a starting torque which is as high as 2.2 times the nominal torque.
3. Shaft power in nominal point for type „KXE“
   Shaft power for types RGE = Pw (1.03...1.07)

Pertaining performance curves

The performance curves for discharge operation can be found in the annex to the type selection sheets under TA178 to TA185.

Observe tolerances acccording to DIN 24166 (see sheet PB 27)

Comments on sound tables

Acoustic parameter

- Consider the noise of the corresponding drive motor.
- The bearing noise is already included in the calculation for the strutural designs K und R, which are fitted with shafts and anti-friction bearings.
- Rounding-off the values to integral numbers will invariably lead to differences in further calculation runs.

General comments

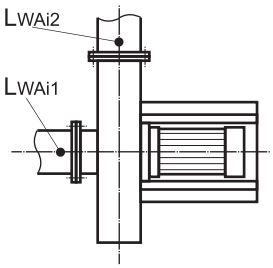
$\bar{L}_{PA} = L_{WAa} - L_S$ or $L_{WAa} = \bar{L}_{PA} + L_S$

$L_W = L_{WA} + \Delta L_{KA}$ or $\bar{L}_P = \bar{L}_{PA} + \Delta L_{KA}$

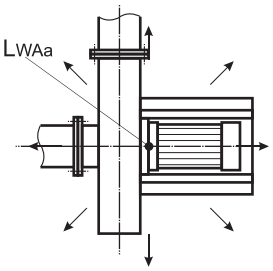
ΔL_{KA} = correction value for A-weighting

- The DIN 24 166 tolerances must always be observed. For more information see chapter „Acoustic technology" ST and pages PB 27and 28.
- All values refer to free-field conditions. As such they are subject to local influences such as sound level addition, reflection, external background noises, system components, ducts, etc. Weitere Erläuterungen siehe Kapitel 5 - Schalltechnik
- For further information, see chapter 5 - Acoustic technology

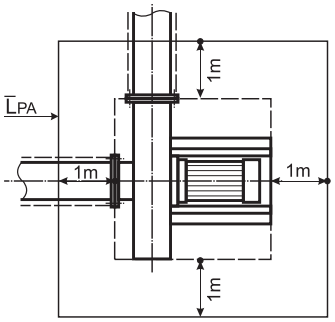
duct noise (see sheet ST 3)



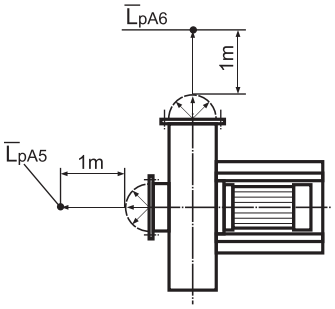
housing or fan radiation noise
with fan ducted (s. sheet ST 4)



sound pressure level on measuring surface
with fan ducted at free-field conditions (see sheet ST 5)



free inlet and/or free discharge noise
referred to a distance of 1m from the hemispherical radius of the inlet and/or discharge



Type selection for pressure series 100 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 100 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min⁻¹	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
010-000536	5,0	0,10	0,14	○	1,27	3420	140	100	125	0,03	5	9	26
010-000836	8,0	0,16	0,20	○	1,27	3420	140	112	125	0,03	5	9	30
010-001036	10,0	0,20	0,24	○	1,27	3420	140	125	125	0,03	5	9	30
010-001236	12,5	0,25	0,29	○	1,27	3420	140	140	125	0,03	5	9	32
010-001636	16,0	0,32	0,37	○	1,27	3420	160	160	125	0,04	6	9	32
010-002036	20,0	0,40	0,45	○	1,27	3420	180	180	140	0,05	6	9	37
010-002536	25,0	0,50	0,56	○	1,27	3420	200	200	160	0,05	6	9	39
010-003136	31,5	0,63	0,70	○	1,27	3420	224	224	180	0,06	6	9	43
010-004036	40,0	0,80	0,88	○	1,27	3420	250	250	200	0,08	6	9	44
010-005018	50,0	1,00	1,09	○	1,27	1692	280	280	224	0,40	5	9	83
010-005036	50,0	1,00	1,08	○	1,27	3420	280	280	224	0,09	7	9	55
010-006318	63,0	1,27	1,36	○	1,75	1704	315	315	250	0,46	6	9	86
010-006336	63,0	1,27	1,35	○	1,75	3420	315	315	250	0,12	7	9	58
010-008018	80,0	1,61	1,71	○	2,55	1716	355	355	280	0,62	6	9	110
010-010018	100,0	2,01	2,13	○	2,55	1716	400	400	315	0,73	6	9	123
010-012518	125,0	2,51	2,66	○	3,45	1728	450	450	355	0,91	6	9	132
010-016018	160,0	3,21	3,41	○	4,55	1740	500	500	400	1,14	7	9	163
010-020018	200,0	4,02	4,23	○	4,55	1740	560	560	450	1,37	7	9	173

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 100 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 99 daPa** density at inlet operation of **ρ1 = 1,193 kg/m³**

Specific supply **Yt2 ≈ 83 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 125 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 125 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
012-000536	5,6	0,11	0,19	○	1,27	3420	140	100	125	0,04	5	9	30
012-000936	9,0	0,18	0,28	○	1,27	3420	140	112	125	0,04	5	9	31
012-001136	11,2	0,22	0,33	○	1,27	3420	140	125	125	0,04	5	9	31
012-001436	14,0	0,28	0,41	○	1,27	3420	160	140	125	0,05	5	9	33
012-001836	18,0	0,36	0,51	○	1,27	3420	160	160	125	0,05	5	9	33
012-002236	22,4	0,45	0,63	○	1,27	3420	180	180	140	0,06	6	9	38
012-002836	28,0	0,56	0,78	○	1,27	3420	200	200	160	0,07	6	9	40
012-003536	35,0	0,70	0,96	○	1,27	3420	224	224	180	0,08	6	9	43
012-004536	45,0	0,90	1,22	○	1,75	3420	250	250	200	0,09	6	9	53
012-005618	56,0	1,12	1,53	○	1,75	1704	315	280	224	0,67	5	9	99
012-005636	56,0	1,12	1,51	○	1,75	3420	280	280	224	0,11	6	9	57
012-007136	71,0	1,43	1,89	○	2,55	3450	315	315	250	0,14	7	9	68
012-007118	71,0	1,43	1,90	○	2,55	1716	315	315	250	0,69	5	9	106
012-009018	90,0	1,81	2,40	○	2,55	1716	355	355	280	0,82	6	9	113
012-009036	90,0	1,81	2,40	○	2,55	3450	355	355	280	0,18	7	9	78
012-011218	112,0	2,25	2,99	○	3,45	1728	400	400	315	0,98	6	9	141
012-014018	140,0	2,81	3,71	○	4,55	1740	450	450	355	1,09	6	9	148
012-018018	180,0	3,62	4,77	○	6,3	1740	500	500	400	1,56	7	9	186
012-022418	224,0	4,50	5,90	○	6,3	1740	560	560	450	1,92	7	9	220
012-028018	280,0	5,62	7,37	○	8,6	1752	630	630	500	2,38	7	9	243

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**125 daPa**	reference density of	**ρ0 =**	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**124 daPa**	density at inlet operation of	**ρ1 =**	1,190 kg/m³
Specific supply	**Yt2 ≈**	**103 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 160 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 160 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
016-000636	6,3	0,13	0,27	○	1,27	3420	140	100	125	0,05	4	9	32
016-001036	10,0	0,20	0,39	○	1,27	3420	140	112	125	0,05	4	9	32
016-001236	12,5	0,25	0,48	○	1,27	3420	140	125	125	0,06	4	9	32
016-001636	16,0	0,32	0,60	○	1,27	3420	160	140	125	0,06	5	9	34
016-002036	20,0	0,40	0,73	○	1,27	3420	160	160	125	0,07	5	9	34
016-002536	25,0	0,50	0,90	○	1,27	3420	180	180	140	0,08	5	9	39
016-003136	31,5	0,63	1,12	○	1,27	3420	200	200	160	0,09	6	9	44
016-004036	40,0	0,80	1,40	○	1,75	3420	224	224	180	0,10	6	9	52
016-005036	50,0	1,00	1,73	○	2,55	3450	250	250	200	0,12	6	9	54
016-006318	63,0	1,27	2,19	○	2,55	1716	315	280	224	0,88	5	9	118
016-006336	63,0	1,27	2,16	○	2,55	3450	280	280	224	0,14	6	9	66
016-008018	80,0	1,61	2,75	○	3,45	1728	355	315	250	1,03	5	9	122
016-008036	80,0	1,61	2,75	○	3,45	3480	315	315	250	0,18	7	9	72
016-010018	100,0	2,01	3,39	○	4,55	1740	355	355	280	1,04	5	9	129
016-010036	100,0	2,01	3,41	○	4,55	3480	355	355	280	0,22	7	9	82
016-012518	125,0	2,51	4,25	○	4,55	1740	400	400	315	1,23	6	9	143
016-012536	125,0	2,51	4,23	○	4,55	3480	400	400	315	0,29	7	9	98
016-016018	160,0	3,21	5,44	○	6,3	1740	450	450	355	1,68	6	9	171
016-020018	200,0	4,02	6,76	○	8,6	1752	500	500	400	1,96	6	9	213
016-025018	250,0	5,02	8,44	○	12,6	1752	560	560	450	2,74	6	9	246
016-031518	315,0	6,33	10,57	○	12,6	1752	630	630	500	3,30	7	9	321
016-040018	400,0	8,03	13,40	○	17,3	1752	710	710	560	4,78	7	9	381
016-050018	500,0	10,04	16,7	○	21,3	1752	800	800	630	6,21	7	9	464
016-063018	630,0	12,65	20,9	○	25,3	1764	900	900	710	8,08	7	9	517
016-080012	800,0	16,07	26,7	○	36	1176	1000	1000	800	24,68	8	9	895
016-100012	1000,0	20,08	33,1	○	36	1176	1120	1120	900	33,02	8	9	1026

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**160 daPa**	reference density of	ρ0 =	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**158 daPa**	density at inlet operation of	ρ1 =	1,186 kg/m³
Specific supply	**Yt2 ≈**	**132 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 200 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 200 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
020-000736	7,1	0,14	0,38	○	1,27	3420	140	100	125	0,07	4	9	35
020-001136	11,2	0,22	0,55	○	1,27	3420	140	112	125	0,07	4	9	35
020-001436	14,0	0,28	0,67	○	1,27	3420	160	125	125	0,08	4	9	36
020-001836	18,0	0,36	0,84	○	1,27	3420	160	140	125	0,08	4	9	40
020-002236	22,4	0,45	1,02	○	1,27	3420	180	160	125	0,10	5	9	40
020-002836	28,0	0,56	1,25	○	1,75	3420	180	180	140	0,10	5	9	44
020-003536	35,0	0,70	1,54	○	1,75	3420	200	200	160	0,11	5	9	46
020-004536	45,0	0,90	1,96	○	2,55	3450	224	224	180	0,13	6	9	61
020-005636	56,0	1,12	2,41	○	2,55	3450	250	250	200	0,15	6	9	63
020-007118	71,0	1,43	3,07	○	3,45	1728	315	280	224	1,12	5	9	120
020-007136	71,0	1,43	3,03	○	3,45	3480	280	280	224	0,18	6	9	70
020-009018	90,0	1,81	3,85	○	4,55	1740	355	315	250	1,28	5	9	124
020-009036	90,0	1,81	3,85	○	4,55	3480	315	315	250	0,22	6	9	73
020-011218	112,0	2,25	4,81	○	6,3	1740	400	355	280	1,59	5	9	166
020-011236	112,0	2,25	4,76	○	6,3	3498	355	355	280	0,28	7	9	96
020-014018	140,0	2,81	5,93	○	6,3	1740	400	400	315	1,65	6	9	183
020-014036	140,0	2,81	5,92	○	6,3	3498	400	400	315	0,42	7	9	110
020-018018	180,0	3,62	7,62	○	8,6	1752	450	450	355	2,14	6	9	197
020-018036	180,0	3,62	7,54	○	8,6	3504	450	450	355	0,55	7	9	121
020-022418	224,0	4,50	9,42	○	12,6	1752	500	500	400	2,84	6	9	238
020-028018	280,0	5,62	11,77	○	12,6	1752	560	560	450	3,39	6	9	275
020-035518	355,0	7,13	14,9	○	17,3	1752	630	630	500	4,70	7	9	333
020-045018	450,0	9,04	18,8	○	21,3	1752	710	710	560	5,72	7	9	426
020-056018	560,0	11,25	23,3	○	25,3	1764	800	800	630	7,63	7	9	476
020-071018	710,0	14,26	29,3	○	34,5	1764	900	900	710	11,09	7	9	618
020-090018	900,0	18,08	37,4	○	42,5	1764	1000	1000	800	14,97	8	9	788
020-112012	1120,0	22,49	46,3	○	54	1176	1120	1120	900	43,74	8	9	1324
020-140012	1400,0	28,12	57,6	○	66	1176	1250	1250	1000	57,94	8	11	1662

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**200 daPa**	reference density of	**ρ0 =**	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**196 daPa**	density at inlet operation of	**ρ1 =**	1,181 kg/m³
Specific supply	**Yt2 ≈**	**165 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 250 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
025-000536	5,0	0,10	0,38	○	1,27	3420	140	100	125	0,10	3	9	36
025-000836	8,0	0,16	0,54	○	1,27	3420	140	100	125	0,10	3	9	36
025-001236	12,5	0,25	0,77	○	1,27	3420	140	112	125	0,10	3	9	36
025-001636	16,0	0,32	0,95	○	1,27	3420	160	125	125	0,11	4	9	37
025-002036	20,0	0,40	1,16	○	1,27	3420	160	140	125	0,11	4	9	40
025-002536	25,0	0,50	1,43	○	1,75	3420	180	160	125	0,13	4	9	49
025-003136	31,5	0,63	1,76	○	2,55	3450	200	180	140	0,14	5	9	53
025-004036	40,0	0,80	2,18	○	2,55	3450	200	200	160	0,14	5	9	54
025-005036	50,0	1,00	2,70	○	3,45	3480	224	224	180	0,18	5	9	65
025-006336	63,0	1,27	3,4	○	4,55	3480	250	250	200	0,20	6	9	67
025-008018	80,0	1,61	4,3	○	6,3	1740	355	280	224	1,71	5	11	151
025-008036	80,0	1,61	4,3	○	4,55	3480	280	280	224	0,24	6	9	81
025-010018	100,0	2,01	5,3	○	6,3	1740	355	315	250	1,75	5	11	155
025-010036	100,0	2,01	5,3	○	6,3	3498	315	315	250	0,29	6	9	91
025-012518	125,0	2,51	6,7	○	8,6	1752	400	355	280	2,06	5	11	172
025-012536	125,0	2,51	6,6	○	8,6	3504	355	355	280	0,42	6	9	99
025-016018	160,0	3,21	8,4	○	12,6	1752	400	400	315	2,74	5	11	206
025-016036	160,0	3,21	8,4	○	12,6	3510	400	400	315	0,69	7	9	133
025-020018	200,0	4,02	10,5	○	12,6	1752	450	450	355	3,12	6	9	245
025-020036	200,0	4,02	10,4	○	12,6	3510	450	450	355	0,81	7	9	140
025-025036	250,0	5,02	13,0	○	17,3	3528	500	500	400	1,02	7	9	194
025-025018	250,0	5,02	13,2	○	17,3	1752	500	500	400	3,66	6	9	268
025-031518	315,0	6,33	16,5	○	21,3	1752	560	560	450	4,70	6	9	312
025-040018	400,0	8,03	20,9	○	25,3	1764	630	630	500	5,77	6	9	395
025-050018	500,0	10,04	26,0	○	34,5	1764	710	710	560	8,41	7	9	463
025-063018	630,0	12,65	32,6	○	34,5	1764	800	800	630	10,26	7	9	505
025-080018	800,0	16,07	41,1	○	52	1770	900	900	710	13,46	7	9	735
025-100018	1000,0	20,08	51,6	○	63	1776	1000	1000	800	18,70	8	9	874
025-125018	1250,0	25,10	64,5	○	86	1776	1120	1120	900	28,14	8	9	1281

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 250 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 244 daPa** density at inlet operation of **ρ1 = 1,181 kg/m³**

Specific supply **Yt2 ≈ 206 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 315 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 315 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
031-000536	5,6	0,11	0,54	○	1,75	3420	140	100	125	0,14	3	9	44
031-000936	9,0	0,18	0,77	○	1,75	3420	140	100	125	0,14	3	9	44
031-001436	14,0	0,28	1,10	○	2,55	3450	160	112	125	0,15	4	9	44
031-001836	18,0	0,36	1,36	○	1,75	3420	160	125	125	0,15	4	9	44
031-002236	22,4	0,45	1,64	○	1,75	3420	180	140	125	0,17	4	9	50
031-002836	28,0	0,56	2,01	○	2,55	3450	180	160	125	0,17	4	9	50
031-003536	35,0	0,70	2,45	○	3,45	3480	200	180	140	0,19	5	9	57
031-004536	45,0	0,90	3,10	○	3,45	3480	224	200	160	0,22	5	9	67
031-005618	56,0	1,12	4,04	○	4,55	1740	280	224	180	1,86	3	11	129
031-005636	56,0	1,12	3,8	○	4,55	3480	250	224	180	0,26	5	9	71
031-007118	71,0	1,43	5,0	○	6,3	1740	315	250	200	2,07	4	11	160
031-007136	71,0	1,43	4,8	○	6,3	3498	250	250	200	0,28	5	9	80
031-009018	90,0	1,81	6,1	○	8,6	1752	355	280	224	2,49	4	11	186
031-009036	90,0	1,81	6,1	○	8,6	3504	280	280	224	0,35	6	9	91
031-011218	112,0	2,25	7,6	○	8,6	1752	400	315	250	2,86	5	11	192
031-011236	112,0	2,25	7,5	○	8,6	3504	315	315	250	0,44	6	9	95
031-014036	140,0	2,81	9,3	○	12,6	3510	355	355	280	0,68	6	9	121
031-014018	140,0	2,81	9,4	○	12,6	1752	400	355	280	3,32	5	11	221
031-018018	180,0	3,62	12,0	○	17,3	1752	450	400	315	4,06	5	11	243
031-018036	180,0	3,62	11,9	○	12,6	3510	400	400	315	0,80	6	9	134
031-022418	224,0	4,50	14,8	○	17,3	1752	450	450	355	4,17	5	11	254
031-022436	224,0	4,50	14,7	○	17,3	3528	450	450	355	0,92	7	9	172
031-028036	280,0	5,62	18,4	○	21,3	3528	500	500	400	1,26	7	9	199
031-028018	280,0	5,62	18,5	○	21,3	1752	500	500	400	5,18	6	9	351
031-035518	355,0	7,13	23,4	○	25,3	1764	560	560	450	6,62	6	9	376
031-035536	355,0	7,13	23,3	○	33,5	3552	560	560	450	1,98	7	9	265
031-045018	450,0	9,04	29,5	○	34,5	1764	630	630	500	8,66	6	9	428
031-056018	560,0	11,25	36,5	○	42,5	1764	710	710	560	10,89	6	9	481
031-071018	710,0	14,26	46,0	○	52	1770	800	800	630	13,31	7	9	685
031-090018	900,0	18,08	58,6	○	63	1776	900	900	710	16,83	8	9	765
031-112018	1120,0	22,49	72,6	○	86	1776	1000	1000	800	26,26	8	9	1174
031-140018	1400,0	28,12	90,3	○	104	1776	1120	1120	900	34,86	8	9	1306

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 315 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 306 daPa** density at inlet operation of **ρ1 = 1,168 kg/m³**

Specific supply **Yt2 ≈ 259 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 355 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 355 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
035-000836	7,5	0,15	0,77	○	1,75	3420	140	100	125	0,16	3	9	51
035-001236	12,5	0,25	1,14	○	2,55	3450	140	100	125	0,16	3	9	45
035-001936	19,0	0,38	1,62	○	3,45	3480	160	125	125	0,18	3	9	48
035-002436	23,6	0,47	1,95	○	2,55	3450	180	140	125	0,19	4	9	55
035-003036	30,0	0,60	2,44	○	3,45	3480	200	160	125	0,22	4	9	59
035-003836	37,5	0,75	2,95	○	3,45	3480	200	180	140	0,22	4	9	65
035-004836	47,5	0,95	3,68	○	4,55	3480	224	200	160	0,24	5	9	67
035-006036	60,0	1,21	4,59	○	6,3	3498	250	224	180	0,31	5	9	79
035-007536	75,0	1,51	5,65	○	6,3	3498	250	250	200	0,35	5	9	82
035-009518	95,0	1,91	7,3	○	8,6	1752	355	280	224	2,89	4	11	188
035-009536	95,0	1,91	7,2	○	8,6	3504	280	280	224	0,40	6	9	95
035-011818	118,0	2,37	9,1	○	12,6	1752	400	315	250	3,61	4	11	206
035-011836	118,0	2,37	8,9	○	12,6	3510	315	315	250	0,67	6	9	116
035-015018	150,0	3,01	11,3	○	12,6	1752	400	355	280	3,91	4	11	224
035-015036	150,0	3,01	11,2	○	12,6	3510	355	355	280	0,75	6	9	122
035-019018	190,0	3,82	14,3	○	17,3	1752	450	400	315	4,60	5	11	298
035-019036	190,0	3,82	14,1	○	17,3	3528	400	400	315	0,86	6	9	164
035-023618	236,0	4,74	17,8	○	21,3	1752	500	450	355	5,92	5	11	318
035-023636	236,0	4,74	17,6	○	21,3	3528	450	450	355	1,14	7	9	177
035-030018	300,0	6,03	22,3	○	25,3	1764	500	500	400	5,83	6	9	356
035-030036	300,0	6,03	22,2	○	24,5	3540	500	500	400	1,45	7	9	203
035-037518	375,0	7,53	27,8	○	34,5	1764	560	560	450	7,77	6	9	396
035-047518	475,0	9,54	35,0	○	42,5	1764	630	630	500	10,34	6	9	444
035-060018	600,0	12,05	43,9	○	52	1770	710	710	560	12,16	6	9	630
035-075018	750,0	15,06	54,6	○	63	1776	800	800	630	14,87	7	9	711
035-095018	950,0	19,08	69,6	○	86	1776	900	900	710	23,84	8	9	1001
035-118018	1180,0	23,70	86,1	○	104	1776	1000	1000	800	29,78	8	9	1218
035-150018	1500,0	30,13	108,8	○	127	1776	1120	1120	900	39,67	8	9	1353

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 355 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 343 daPa** density at inlet operation of **ρ1 = 1,164 kg/m³**

Specific supply **Yt2 ≈ 292 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 400 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
040-000636	6,3	0,13	0,78	○	1,75	3420	140	100	125	0,20	3	9	52
040-001036	10,0	0,20	1,10	○	2,55	3450	140	100	125	0,19	3	9	52
040-001636	16,0	0,32	1,60	○	3,45	3480	160	112	125	0,21	3	9	56
040-002036	20,0	0,40	1,93	○	3,45	3480	160	125	125	0,21	3	9	56
040-002536	25,0	0,50	2,35	○	2,55	3450	180	140	125	0,23	4	9	55
040-003136	31,5	0,63	2,89	○	3,45	3480	200	160	125	0,26	4	9	59
040-004036	40,0	0,80	3,55	○	4,55	3480	200	180	140	0,25	4	9	66
040-005036	50,0	1,00	4,36	○	6,3	3498	224	200	160	0,30	5	9	75
040-006336	63,0	1,27	5,42	○	6,3	3498	250	224	180	0,38	5	9	83
040-008036	80,0	1,61	6,9	○	8,6	3504	280	250	200	0,44	5	9	86
040-010036	100,0	2,01	8,5	○	12,6	3510	280	280	224	0,66	5	9	114
040-012518	125,0	2,51	10,8	○	12,6	1752	400	315	250	4,41	4	11	266
040-012536	125,0	2,51	10,6	○	12,6	3510	315	315	250	0,73	6	9	117
040-016018	160,0	3,21	13,6	○	17,3	1752	400	355	280	4,46	4	11	278
040-016036	160,0	3,21	13,4	○	17,3	3528	355	355	280	0,82	6	9	123
040-020018	200,0	4,02	16,9	○	21,3	1752	450	400	315	5,22	5	11	302
040-020036	200,0	4,02	16,7	○	21,3	3528	400	400	315	1,01	6	9	167
040-025036	250,0	5,02	20,9	○	24,5	3540	450	450	355	1,32	7	9	181
040-025018	250,0	5,02	21,1	○	25,3	1764	500	450	355	7,03	5	11	342
040-031518	315,0	6,33	26,2	○	34,5	1764	500	500	400	7,52	5	11	383
040-031536	315,0	6,33	26,1	○	33,5	3552	500	500	400	1,85	7	9	248
040-040018	400,0	8,03	33,3	○	42,5	1764	560	560	450	9,76	6	9	452
040-040036	400,0	8,03	33,3	○	41,5	3552	560	560	450	2,41	7	9	301
040-050018	500,0	10,04	41,4	○	52	1770	630	630	500	11,79	6	9	587
040-063018	630,0	12,65	51,8	○	63	1776	710	710	560	13,99	6	9	658
040-080018	800,0	16,07	65,4	○	86	1776	800	800	630	18,79	6	9	872
040-100018	1000,0	20,08	82,6	○	104	1776	900	900	710	26,20	7	9	1104
040-125018	1250,0	25,10	102,5	○	127	1776	1000	1000	800	34,29	8	9	1203

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 400 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 385 daPa** density at inlet operation of **ρ1 = 1,159 kg/m³**

Specific supply **Yt2 ≈ 328 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 450 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 450 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
045-000936	8,5	0,17	1,11	○	2,55	3450	140	100	125	0,23	3	9	53
045-001336	13,2	0,27	1,57	○	3,45	3480	140	100	125	0,24	3	9	56
045-002136	21,2	0,43	2,30	○	4,55	3480	180	125	125	0,27	3	9	57
045-002736	26,5	0,53	2,81	○	3,45	3480	180	140	125	0,28	3	9	59
045-003436	33,5	0,67	3,46	○	4,55	3480	200	160	125	0,30	4	9	62
045-004236	42,5	0,85	4,25	○	4,55	3480	224	180	140	0,33	4	9	69
045-005336	53,0	1,06	5,19	○	6,3	3498	224	200	160	0,38	4	9	79
045-006736	67,0	1,35	6,47	○	8,6	3504	250	224	180	0,42	5	9	84
045-008536	85,0	1,71	8,23	○	12,6	3510	280	250	200	0,67	5	9	103
045-010636	106,0	2,13	10,1	○	12,6	3510	280	280	224	0,72	5	9	115
045-013218	132,0	2,65	12,9	○	17,3	1752	400	315	250	5,06	4	11	271
045-013236	132,0	2,65	12,5	○	17,3	3528	315	315	250	0,80	6	9	118
045-017018	170,0	3,41	16,5	○	21,3	1752	450	355	280	5,88	5	11	285
045-017036	170,0	3,41	16,0	○	17,3	3528	355	355	280	0,91	6	9	151
045-021218	212,0	4,26	20,2	○	25,3	1764	450	400	315	5,86	5	11	321
045-021236	212,0	4,26	19,9	○	21,3	3528	400	400	315	1,14	6	9	169
045-026518	265,0	5,32	25,1	○	34,5	1764	500	450	355	8,26	5	11	362
045-026536	265,0	5,32	24,8	○	33,5	3552	450	450	355	1,73	6	9	198
045-033536	335,0	6,73	31,6	○	33,5	3552	500	500	400	2,20	7	9	252
045-033518	335,0	6,73	31,7	○	34,5	1764	560	500	400	10,03	5	11	430
045-042536	425,0	8,54	39,7	○	51	3564	560	560	450	2,62	7	9	303
045-042518	425,0	8,54	39,7	○	42,5	1764	560	560	450	11,23	6	9	511
045-053018	530,0	10,64	49,2	○	63	1776	630	630	500	13,51	6	9	613
045-053036	530,0	10,64	49,3	○	62	3570	630	630	500	3,74	7	9	389
045-067018	670,0	13,46	61,8	○	86	1776	710	710	560	16,18	6	9	801
045-085018	850,0	17,07	77,9	○	86	1776	800	800	630	23,63	6	9	943
045-106018	1060,0	21,29	97,9	○	104	1776	900	900	710	30,47	7	9	1142
045-132018	1320,0	26,51	121,4	○	152	1776	1000	1000	800	38,47	8	9	1280

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 450 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 431 daPa** density at inlet operation of **ρ1 = 1,153 kg/m³**

Specific supply **Yt2 ≈ 369 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 500 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
050-000736	7,1	0,14	1,12	○	2,55	3450	140	100	125	0,29	2	11	56
050-001136	11,2	0,22	1,57	○	3,45	3480	140	100	125	0,29	2	11	59
050-001836	18,0	0,36	2,27	○	4,55	3480	160	112	125	0,30	3	9	59
050-002236	22,4	0,45	2,71	○	4,55	3480	180	125	125	0,32	3	9	60
050-002836	28,0	0,56	3,30	○	6,3	3498	180	140	125	0,34	3	9	69
050-003536	35,0	0,70	4,03	○	4,55	3480	200	160	125	0,35	4	9	63
050-004536	45,0	0,90	5,00	○	6,3	3498	224	180	140	0,40	4	9	77
050-005636	56,0	1,12	6,09	○	8,6	3504	224	200	160	0,42	4	9	80
050-007136	71,0	1,43	7,60	○	8,6	3504	250	224	180	0,48	5	9	85
050-009036	90,0	1,81	9,7	○	12,6	3510	280	250	200	0,77	5	9	128
050-011236	112,0	2,25	11,8	○	12,6	3510	280	280	224	0,78	5	9	140
050-014036	140,0	2,81	14,7	○	17,3	3528	315	315	250	0,90	6	9	144
050-014018	140,0	2,81	15,2	○	17,3	1752	400	315	250	6,00	4	11	275
050-018036	180,0	3,62	18,8	○	21,3	3528	355	355	280	1,12	6	9	155
050-018018	180,0	3,62	19,3	○	21,3	1752	450	355	280	7,27	4	11	325
050-022418	224,0	4,50	23,6	○	25,3	1764	450	400	315	7,69	4	11	367
050-022436	224,0	4,50	23,2	○	33,5	3552	400	400	315	1,63	6	9	190
050-028018	280,0	5,62	29,4	○	34,5	1764	500	450	355	9,30	5	11	401
050-028036	280,0	5,62	29,1	○	33,5	3552	450	450	355	1,86	6	9	219
050-035518	355,0	7,13	37,2	○	42,5	1764	560	500	400	11,49	5	11	492
050-035536	355,0	7,13	37,0	○	41,5	3552	500	500	400	2,36	7	9	282
050-045018	450,0	9,04	46,4	○	52	1770	560	560	450	13,04	5	11	523
050-045036	450,0	9,04	46,5	○	51	3564	560	560	450	2,94	7	9	307
050-056036	560,0	11,25	57,6	○	62	3570	630	630	500	3,98	7	9	391
050-056018	560,0	11,25	57,6	○	63	1776	630	630	500	15,16	6	9	619
050-071018	710,0	14,26	72,5	○	86	1776	710	710	560	22,16	6	9	881
050-071036	710,0	14,26	73,6	○	84	3570	710	710	560	5,97	7	9	586
050-090018	900,0	18,08	91,4	○	104	1776	800	800	630	27,18	6	9	961
050-112018	1120,0	22,49	114,5	○	127	1776	900	900	710	35,32	7	9	1192
050-140018	1400,0	28,12	142,7	○	152	1776	1000	1000	800	42,34	7	9	1289

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 500 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 477 daPa** density at inlet operation of **ρ1 = 1,148 kg/m³**

Specific supply **Yt2 ≈ 409 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 560 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 560 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
056-000836	7,5	0,15	1,34	○	3,45	3480	140	100	125	0,35	2	11	60
056-001536	15,0	0,30	2,22	○	3,45	3480	160	100	125	0,35	3	9	60
056-002436	23,6	0,47	3,24	○	4,55	3480	180	125	125	0,37	3	9	60
056-003036	30,0	0,60	3,96	○	6,3	3498	200	140	125	0,42	3	9	70
056-003836	37,5	0,75	4,79	○	6,3	3498	200	160	125	0,42	4	9	70
056-004836	47,5	0,95	5,91	○	6,3	3498	224	180	140	0,46	4	9	78
056-006036	60,0	1,21	7,33	○	8,6	3504	250	200	160	0,55	4	9	103
056-007536	75,0	1,51	8,99	○	12,6	3510	250	224	180	0,71	4	9	125
056-009518	95,0	1,91	12,0	○	17,3	1752	355	250	200	6,09	3	11	282
056-009536	95,0	1,91	11,4	○	12,6	3510	280	250	200	0,84	5	9	129
056-011818	118,0	2,37	14,7	○	17,3	1752	400	280	224	6,86	4	11	304
056-011836	118,0	2,37	14,0	○	17,3	3528	315	280	224	0,96	5	9	142
056-015018	150,0	3,01	18,2	○	21,3	1752	400	315	250	7,60	4	11	316
056-015036	150,0	3,01	17,5	○	21,3	3528	315	315	250	0,99	5	9	146
056-019036	190,0	3,82	22,2	○	24,5	3540	355	355	280	1,31	6	9	159
056-019018	190,0	3,82	22,8	○	25,3	1764	450	355	280	8,29	4	11	345
056-023618	236,0	4,74	28,2	○	34,5	1764	500	400	315	10,44	5	11	392
056-023636	236,0	4,74	27,5	○	33,5	3552	400	400	315	1,83	6	9	211
056-030018	300,0	6,03	35,2	○	42,5	1764	500	450	355	10,85	5	11	460
056-030036	300,0	6,03	34,9	○	41,5	3552	450	450	355	2,23	6	9	260
056-037518	375,0	7,53	43,9	○	52	1770	560	500	400	13,63	5	11	504
056-037536	375,0	7,53	43,6	○	51	3564	500	500	400	2,59	6	9	285
056-047518	475,0	9,54	55,2	○	63	1776	630	560	450	17,47	5	11	590
056-047536	475,0	9,54	55,0	○	62	3570	560	560	450	3,64	7	9	363
056-060018	600,0	12,05	68,9	○	86	1776	630	630	500	19,67	6	9	812
056-060036	600,0	12,05	68,9	○	84	3570	630	630	500	4,60	7	9	444
056-075018	750,0	15,06	85,5	○	104	1776	710	710	560	24,93	6	9	896
056-075036	750,0	15,06	86,8	○	101	3570	710	710	560	6,60	7	9	594
056-095018	950,0	19,08	109,0	○	127	1776	800	800	630	34,21	7	9	1116
056-118018	1180,0	23,70	134,7	○	152	1776	900	900	710	39,30	7	9	1209
056-150018	1500,0	30,13	170,5	○	184	1776	1000	1000	800	56,57	7	9	1465

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 560 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 531 daPa** density at inlet operation of **ρ1 = 1,148 kg/m³**

Specific supply **Yt2 ≈ 458 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 630 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 630 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
063-000836	8,0	0,16	1,63	●	3,45	3480	140	100	125	0,43	2	11	71
063-001236	12,5	0,25	2,27	○	4,55	3480	140	100	125	0,42	2	11	70
063-002036	20,0	0,40	3,23	○	6,3	3498	160	112	125	0,44	3	9	78
063-002536	25,0	0,50	3,85	○	6,3	3498	180	125	125	0,46	3	9	78
063-003136	31,5	0,63	4,70	○	8,6	3504	200	140	125	0,49	3	9	90
063-004036	40,0	0,80	5,80	○	8,6	3504	200	160	125	0,50	3	9	90
063-005036	50,0	1,00	7,08	○	8,6	3504	224	180	140	0,53	4	9	100
063-006336	63,0	1,27	8,65	○	12,6	3510	250	200	160	0,80	4	9	121
063-008036	80,0	1,61	11,0	○	12,6	3510	280	224	180	0,92	5	9	128
063-010036	100,0	2,01	13,5	○	17,3	3528	280	250	200	0,92	5	9	130
063-012536	125,0	2,51	16,7	○	21,3	3528	315	280	224	1,06	5	9	144
063-016018	160,0	3,21	22,1	○	25,3	1764	400	315	250	8,95	3	11	337
063-016036	160,0	3,21	21,0	○	24,5	3540	315	315	250	1,18	5	9	151
063-020018	200,0	4,02	27,2	○	34,5	1764	450	355	280	10,24	4	11	406
063-020036	200,0	4,02	26,1	○	33,5	3552	355	355	280	1,74	6	9	194
063-025018	250,0	5,02	33,6	○	42,5	1764	500	400	315	12,34	4	11	448
063-025036	250,0	5,02	32,6	○	41,5	3552	400	400	315	2,00	6	9	223
063-031518	315,0	6,33	41,6	○	52	1770	500	450	355	12,46	4	11	467
063-031536	315,0	6,33	41,1	○	51	3564	450	450	355	2,40	6	9	262
063-040036	400,0	8,03	52,1	○	62	3570	500	500	400	3,31	6	9	341
063-040018	400,0	8,03	52,5	○	63	1776	560	500	400	16,46	5	11	568
063-050018	500,0	10,04	65,1	○	86	1776	630	560	450	21,98	5	11	778
063-050036	500,0	10,04	64,9	○	84	3570	560	560	450	4,14	7	9	411
063-063018	630,0	12,65	80,9	○	86	1776	630	630	500	22,48	5	11	824
063-063036	630,0	12,65	82,1	○	101	3570	630	630	500	5,45	7	9	492
063-080018	800,0	16,07	103,5	○	127	1776	710	710	560	31,38	7	9	1040
063-080036	800,0	16,07	105,0	○	123	3570	710	710	560	7,91	8	9	682
063-100018	1000,0	20,08	128,6	○	152	1776	800	800	630	38,55	7	9	1133
063-125018	1250,0	25,10	159,5	○	184	1776	900	900	710	47,73	7	9	1362

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 630 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 593 daPa** density at inlet operation of **ρ1 = 1,148 kg/m³**

Specific supply **Yt2 ≈ 514 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 710 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 710 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
071-000936	8,5	0,17	1,97	●	4,55	3480	140	100	125	0,53	2	11	80
071-001336	13,2	0,27	2,74	○	6,3	3498	140	100	125	0,53	2	11	87
071-002136	21,2	0,43	3,84	○	6,3	3498	180	112	125	0,54	3	9	87
071-002736	26,5	0,53	4,63	○	8,6	3504	180	125	125	0,54	3	9	87
071-003436	33,5	0,67	5,66	○	8,6	3504	200	140	125	0,58	3	9	91
071-004236	42,5	0,85	6,95	○	8,6	3504	224	160	125	0,62	3	9	92
071-005336	53,0	1,06	8,48	○	12,6	3510	224	180	140	0,79	3	9	118
071-006736	67,0	1,35	10,4	○	12,6	3510	250	200	160	0,90	4	9	122
071-008536	85,0	1,71	13,1	○	17,3	3528	280	224	180	1,02	4	9	129
071-010636	106,0	2,13	16,1	○	17,3	3528	280	250	200	1,03	4	9	132
071-013236	132,0	2,65	19,8	○	21,3	3528	315	280	224	1,27	5	9	164
071-017018	170,0	3,41	26,8	○	34,5	1764	450	315	250	12,01	4	11	427
071-017036	170,0	3,41	25,2	○	33,5	3552	355	315	250	1,86	5	9	188
071-021218	212,0	4,26	32,6	○	34,5	1764	450	355	280	12,75	4	11	446
071-021236	212,0	4,26	31,0	○	33,5	3552	355	355	280	1,91	5	9	196
071-026518	265,0	5,32	40,1	○	42,5	1764	500	400	315	14,41	4	11	487
071-026536	265,0	5,32	39,1	○	41,5	3552	400	400	315	2,35	6	9	251
071-033518	335,0	6,73	50,3	○	63	1776	560	450	355	17,63	5	11	571
071-033536	335,0	6,73	49,3	○	62	3570	450	450	355	3,23	6	9	317
071-042518	425,0	8,54	62,7	○	86	1776	560	500	400	21,13	5	11	754
071-042536	425,0	8,54	62,0	○	84	3570	500	500	400	3,98	6	9	390
071-053018	530,0	10,64	77,4	○	86	1776	630	560	450	24,99	5	11	824
071-053036	530,0	10,64	78,2	○	84	3570	560	560	450	5,08	6	9	420
071-067018	670,0	13,46	97,3	○	104	1776	710	630	500	33,15	5	11	952
071-067036	670,0	13,46	99,4	○	123	3570	630	630	500	6,26	7	9	616
071-085018	850,0	17,07	123,2	○	152	1776	710	710	560	40,33	6	11	1075
071-106018	1060,0	21,29	153,1	○	184	1776	800	800	630	48,06	7	9	1234

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**710 daPa**	reference density of	ρ0 =	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**664 daPa**	density at inlet operation of	ρ1 =	1,125 kg/m³
Specific supply	**Yt2 ≈**	**578 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 800 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
080-000936	9,0	0,18	2,39	●	6,30	3498	140	100	125	0,65	2	11	101
080-001436	14,0	0,28	3,33	○	6,3	3498	140	100	125	0,64	2	11	101
080-002236	22,4	0,45	4,62	○	8,6	3504	180	112	125	0,65	3	9	101
080-002836	28,0	0,56	5,61	○	8,6	3504	180	125	125	0,65	3	9	101
080-003536	35,0	0,70	6,71	○	12,6	3510	200	140	125	0,86	3	9	122
080-004536	45,0	0,90	8,36	○	12,6	3510	224	160	125	0,91	4	9	123
080-005636	56,0	1,12	10,1	○	17,3	3528	224	180	140	0,89	3	9	133
080-007136	71,0	1,43	12,5	○	17,3	3528	250	200	160	0,95	4	9	136
080-009036	90,0	1,81	15,8	○	17,3	3528	280	224	180	1,17	4	9	146
080-011236	112,0	2,25	19,1	○	21,3	3528	280	250	200	1,26	4	9	152
080-014036	140,0	2,81	23,5	○	33,5	3552	315	280	224	1,73	5	9	183
080-018018	180,0	3,62	32,0	○	34,5	1764	450	315	250	14,36	3	11	449
080-018036	180,0	3,62	29,9	○	33,5	3552	355	315	250	2,04	5	9	209
080-022436	224,0	4,50	36,8	○	41,5	3552	355	355	280	2,09	5	9	228
080-022418	224,0	4,50	38,7	○	42,5	1764	450	355	280	15,25	4	11	462
080-028018	280,0	5,62	48,1	○	52	1770	500	400	315	16,95	4	11	511
080-028036	280,0	5,62	46,3	○	51	3564	400	400	315	2,71	6	9	284
080-035518	355,0	7,13	60,0	○	86	1776	560	450	355	24,17	4	11	756
080-035536	355,0	7,13	58,6	○	62	3570	450	450	355	3,65	6	9	321
080-045036	450,0	9,04	73,5	○	84	3570	500	500	400	4,34	6	9	393
080-045018	450,0	9,04	74,7	○	86	1776	560	500	400	24,52	4	11	780
080-056018	560,0	11,25	91,9	○	104	1776	630	560	450	28,56	5	11	965
080-056036	560,0	11,25	92,5	○	101	3570	560	560	450	5,57	6	9	506
080-071018	710,0	14,26	117,1	○	127	1776	710	630	500	39,40	6	11	1051
080-071036	710,0	14,26	118,0	○	148	3576	630	630	500	7,92	6	11	1045
080-090018	900,0	18,08	146,1		184	1776	710	710	560	42,59	6	11	1142

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 800 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 742 daPa** density at inlet operation of **ρ1 = 1,116 kg/m³**

Specific supply **Yt2 ≈ 649 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 900 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 900 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
090-000936	9,5	0,19	2,90	●	8,6	3504	140	100	125	0,80	2	11	103
090-001536	15,0	0,30	3,97	●	8,6	3504	160	100	125	0,79	2	11	102
090-002436	23,6	0,47	5,58	○	8,6	3504	180	112	125	0,81	2	11	103
090-003036	30,0	0,60	6,76	○	12,6	3510	200	125	125	0,99	3	9	120
090-003836	37,5	0,75	8,14	○	12,6	3510	200	140	125	0,99	3	9	124
090-004836	47,5	0,95	10,0	○	17,3	3528	224	160	125	1,03	4	9	125
090-006036	60,0	1,21	12,2	○	17,3	3528	250	180	140	1,10	4	9	135
090-007536	75,0	1,51	14,9	○	21,3	3528	250	200	160	1,09	4	9	138
090-009536	95,0	1,91	18,8	○	21,3	3528	280	224	180	1,45	4	9	151
090-011836	118,0	2,37	22,7	○	24,5	3540	315	250	200	1,61	4	9	155
090-015036	150,0	3,01	28,4	○	33,5	3552	315	280	224	1,99	4	9	205
090-019018	190,0	3,82	38,2	○	42,5	1764	450	315	250	18,28	3	11	502
090-019036	190,0	3,82	35,4	○	41,5	3552	355	315	250	2,24	5	9	245
090-023618	236,0	4,74	46,4	○	52	1770	500	355	280	19,57	4	11	573
090-023636	236,0	4,74	44,7	○	51	3564	400	355	280	3,16	5	11	268
090-030018	300,0	6,03	57,9	○	63	1776	500	400	315	23,07	4	11	695
090-030036	300,0	6,03	56,0	○	62	3570	400	400	315	3,82	5	11	312
090-037518	375,0	7,53	71,2	○	86	1776	560	450	355	28,31	4	11	880
090-037536	375,0	7,53	69,2	○	84	3570	450	450	355	4,24	6	9	340
090-047518	475,0	9,54	88,8	○	104	1776	630	500	400	32,71	5	11	922
090-047536	475,0	9,54	88,5	○	101	3570	500	500	400	5,44	6	9	489
090-060018	600,0	12,05	110,7	○	127	1776	630	560	450	37,93	5	11	974
090-060036	600,0	12,05	110,8	○	123	3570	560	560	450	7,00	6	9	589
090-075018	750,0	15,06	138,2	○	152	1776	710	630	500	47,02	6	11	1077
090-095018	950,0	19,08	174,2	○	230	1776	800	710	560	64,87	6	13	1315

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 900 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 827 daPa** density at inlet operation of **ρ1 = 1,118 kg/m³**

Specific supply **Yt2 ≈ 728 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 1000 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
100-001036	10,0	0,20	3,46	●	8,6	3504	140	100	125	0,95	2	11	104
100-001636	16,0	0,32	4,76	●	8,6	3504	160	100	125	0,94	2	11	104
100-002536	25,0	0,50	6,62	○	12,6	3510	180	112	125	1,12	2	11	121
100-003136	31,5	0,63	7,95	○	12,6	3510	200	125	125	1,13	3	9	121
100-004036	40,0	0,80	9,7	○	17,3	3528	200	140	125	1,11	3	9	125
100-005036	50,0	1,00	11,7	○	17,3	3528	224	160	125	1,18	4	9	126
100-006336	63,0	1,27	14,3	○	21,3	3528	250	180	140	1,25	4	9	174
100-008036	80,0	1,61	18,0	○	24,5	3540	280	200	160	1,34	5	9	178
100-010036	100,0	2,01	22,1	○	24,5	3540	280	224	180	1,72	5	11	194
100-012536	125,0	2,51	26,9	○	33,5	3552	315	250	200	2,19	4	11	214
100-016036	160,0	3,21	33,9	○	41,5	3552	315	280	224	2,32	4	11	243
100-020036	200,0	4,02	41,9	○	51	3564	355	315	250	2,57	5	11	249
100-025036	250,0	5,02	52,3	○	62	3570	400	355	280	3,76	5	11	289
100-025018	250,0	5,02	55,2	○	63	1776	500	355	280	27,51	4	11	713
100-031518	315,0	6,33	67,3	○	86	1776	500	400	315	27,69	4	11	832
100-031536	315,0	6,33	65,0	○	84	3570	400	400	315	4,23	5	11	330
100-040018	400,0	8,03	84,3	○	104	1776	560	450	355	32,61	4	11	927
100-040036	400,0	8,03	81,6	○	101	3570	450	450	355	4,67	6	9	449
100-050036	500,0	10,04	103,0	○	123	3570	500	500	400	5,92	6	9	559
100-063036	630,0	12,65	129,7	○	148	3576	560	560	450	7,93	7	9	597
100-080036	800,0	16,07	164,4	○	180	3576	630	630	500	11,00	7	9	718

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1000 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 911 daPa** density at inlet operation of ρ1 = 1,096 kg/m³

Specific supply **Yt2 ≈ 807 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1120 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 1120 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
112-001036	10,0	0,20	4,19	□	8,6	3504	140	100	125	1,58	2	13	144
112-001636	16,0	0,32	5,67	□	12,6	3510	160	100	125	1,74	2	13	161
112-002536	25,0	0,50	7,78	□	17,3	3528	180	112	125	1,75	2	13	162
112-003136	31,5	0,63	9,26	◙	17,3	3528	200	125	125	1,79	2	13	163
112-004036	40,0	0,80	11,3	◙	21,3	3528	200	140	125	1,79	2	13	169
112-005036	50,0	1,00	13,4	◙	21,3	3528	224	160	125	1,82	4	11	178
112-006336	63,0	1,27	16,3	◙	24,5	3540	250	180	140	1,90	4	11	183
112-008036	80,0	1,61	20,4	◙	33,5	3552	280	200	160	2,33	5	11	203
112-010036	100,0	2,01	24,8	◙	33,5	3552	280	224	180	2,27	5	11	212
112-012536	125,0	2,51	30,1	◙	33,5	3552	315	250	200	2,45	4	11	216
112-016036	160,0	3,21	38,1	◙	41,5	3552	315	280	224	2,62	4	11	245
112-020036	200,0	4,02	46,9	◙	51	3564	355	315	250	3,05	4	11	255
112-025018	250,0	5,02	62,1	◙	86	1776	500	355	280	33,08	4	13	848
112-025036	250,0	5,02	58,5	◙	84	3570	400	355	280	4,48	5	11	309
112-031518	315,0	6,33	75,9	◙	86	1776	500	400	315	32,91	3	11	892
112-031536	315,0	6,33	72,6	◙	84	3570	400	400	315	4,64	5	11	333
112-040018	400,0	8,03	94,7	◙	104	1776	560	450	355	38,82	4	13	944
112-040036	400,0	8,03	91,8	◙	101	3570	450	450	355	5,36	5	11	455
112-050036	500,0	10,04	114,9	◙	148	3576	500	500	400	7,13	6	9	575
112-063036	630,0	12,65	143,3	◙	180	3576	560	560	450	8,36	6	9	605

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase **Δ pt2 = 1120 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1009 daPa** density at inlet operation of **ρ1 = 1,084 kg/m³**

Specific supply **Yt2 ≈ 901 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 1250 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
125-001036	10,0	0,20	4,88	□	12,6	3510	140	100	125	2,09	1	13	164
125-001636	16,0	0,32	6,54	□	12,6	3510	160	100	125	2,08	1	13	164
125-002536	25,0	0,50	8,92	□	17,3	3528	180	112	125	2,07	1	13	164
125-003136	31,5	0,63	10,5	◙	17,3	3528	200	125	125	2,17	2	13	166
125-004036	40,0	0,80	12,9	◙	21,3	3528	200	140	125	2,15	2	13	172
125-005036	50,0	1,00	15,1	◙	21,3	3528	224	160	125	2,14	3	11	181
125-006336	63,0	1,27	18,3	◙	24,5	3540	250	180	140	2,22	3	11	186
125-008036	80,0	1,61	22,9	◙	33,5	3552	280	200	160	2,56	3	11	206
125-010036	100,0	2,01	27,9	◙	33,5	3552	280	224	180	2,57	3	11	214
125-012536	125,0	2,51	34,2	◙	41,5	3552	315	250	200	2,95	4	11	255
125-016036	160,0	3,21	42,4	◙	51	3564	315	280	224	3,10	3	11	251
125-020036	200,0	4,02	51,9	◙	62	3570	355	315	250	3,74	3	11	277
125-025036	250,0	5,02	65,1	◙	84	3570	400	355	280	4,91	4	11	374
125-031536	315,0	6,33	80,8	◙	101	3570	400	400	315	5,05	4	11	432
125-040036	400,0	8,03	103,8	◙	123	3570	450	450	355	6,62	4	11	530
125-050036	500,0	10,04	127,8	◙	148	3576	500	500	400	7,96	5	9	580
125-063036	630,0	12,65	159,3	◙	180	3576	560	560	450	9,00	5	9	665

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1250 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1113 daPa** density at inlet operation of **ρ1 = 1,072 kg/m³**

Specific supply **Yt2 ≈ 1002 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 1400 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
140-001036	10,0	0,20	5,72	□	17,3	3528	140	100	125	2,51	1	13	188
140-001636	16,0	0,32	7,58	□	17,3	3528	160	100	125	2,48	1	13	188
140-002536	25,0	0,50	10,3	□	21,3	3528	180	112	125	2,49	1	13	190
140-003136	31,5	0,63	12,1	□	21,3	3528	200	125	125	2,55	2	13	191
140-004036	40,0	0,80	14,8	◙	24,5	3540	200	140	125	2,52	2	13	198
140-005036	50,0	1,00	17,4	◙	24,5	3540	224	160	125	2,62	2	13	209
140-006336	63,0	1,27	20,7	◙	33,5	3552	250	180	140	2,90	3	11	229
140-008036	80,0	1,61	26,0	◙	41,5	3552	280	200	160	2,97	3	11	268
140-010036	100,0	2,01	31,5	◙	41,5	3552	280	224	180	2,97	3	11	280
140-012536	125,0	2,51	38,4	◙	51	3564	315	250	200	3,55	4	11	290
140-016036	160,0	3,21	47,6	◙	62	3570	315	280	224	3,84	3	11	332
140-020036	200,0	4,02	58,7	◙	84	3570	355	315	250	4,64	3	11	358
140-025036	250,0	5,02	72,9	◙	84	3570	400	355	280	5,46	4	11	377
140-031536	315,0	6,33	90,3	◙	101	3570	400	400	315	5,53	4	11	435
140-040036	400,0	8,03	115,9	◙	148	3576	450	450	355	8,02	4	11	546
140-050036	500,0	10,04	144,2	◙	180	3576	500	500	400	9,74	4	11	651

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1400 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1231 daPa** density at inlet operation of **ρ1 = 1,058 kg/m³**

Specific supply **Yt2 ≈ 1118 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1600 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 1600 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
160-001636	16,0	0,32	9,0	□	21,3	3528	160	100	125	3,09	1	13	215
160-002536	25,0	0,50	12,0	□	24,5	3540	400	112	125	3,02	2	13	216
160-003136	31,5	0,63	13,9	□	24,5	3540	400	125	125	3,05	2	13	217
160-004036	40,0	0,80	16,9	◙	33,5	3552	450	140	125	3,14	2	13	240
160-005036	50,0	1,00	19,9	◙	33,5	3552	500	160	125	3,31	2	13	253
160-006336	63,0	1,27	24,0	◙	33,5	3552	160	180	140	3,47	3	11	259
160-008036	80,0	1,61	30,0	◙	33,5	3552	180	200	160	3,93	3	11	267
160-010036	100,0	2,01	36,3	◙	41,5	3552	200	224	180	3,92	3	11	287
160-012536	125,0	2,51	44,1	◙	51	3564	200	250	200	4,25	2	11	295
160-016036	160,0	3,21	54,9	◙	62	3570	224	280	224	4,62	2	11	336
160-020036	200,0	4,02	67,1	◙	84	3570	250	315	250	5,44	3	11	363
160-025036	250,0	5,02	83,2	◙	101	3570	280	355	280	6,45	3	11	455
160-031536	315,0	6,33	103,1	◙	123	3570	280	400	315	7,20	3	11	568
160-040036	400,0	8,03	131,9	◙	148	3576	315	450	355	9,03	4	11	603
160-050036	500,0	10,04	164,0	◙	180	3576	315	500	400	12,47	4	11	667

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1600 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1383 daPa** density at inlet operation of **ρ1 = 1,040 kg/m³**

Specific supply **Yt2 ≈ 1271 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 1800 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
180-001636	16,0	0,32	10,55	□	24,5	3540	160	100	125	3,78	1	13	253
180-002536	25,0	0,50	13,92	□	33,5	3552	180	112	125	3,92	1	13	270
180-003136	31,5	0,63	16,14	□	33,5	3552	200	125	125	4,00	2	13	271
180-004036	40,0	0,80	19,68	□	33,5	3552	200	140	125	3,88	2	13	278
180-005036	50,0	1,00	22,91	◙	41,5	3552	224	160	125	3,94	2	13	302
180-006336	63,0	1,27	27,63	◙	33,5	3552	250	180	140	4,59	2	13	314
180-008036	80,0	1,61	34,11	◙	41,5	3552	280	200	160	4,63	3	11	318
180-010036	100,0	2,01	41,23	◙	51	3564	280	224	180	4,56	3	11	330
180-012536	125,0	2,51	49,77	◙	62	3570	315	250	200	5,30	2	11	358
180-016036	160,0	3,21	62,0	◙	84	3570	315	280	224	5,52	2	11	424
180-020036	200,0	4,02	75,6	◙	84	3570	355	315	250	6,19	3	11	435
180-025036	250,0	5,02	93,6	◙	123	3570	400	355	280	9,59	3	11	546
180-031536	315,0	6,33	115,8	◙	148	3576	400	400	315	9,52	3	11	586
180-040036	400,0	8,03	147,9	◙	180	3576	450	450	355	12,24	4	11	627

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase **Δ pt2 = 1800 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1529 daPa** density at inlet operation of **ρ1 = 1,023 kg/m³**

Specific supply **Yt2 ≈ 1423 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 2000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 2000 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
200-002536	25,0	0,50	16,0	□	33,5	3552	180	112	125	6,25	1	13	283
200-003136	31,5	0,63	18,5	□	33,5	3552	200	125	125	6,33	2	13	284
200-004036	40,0	0,80	22,5	□	41,5	3552	200	140	125	6,13	2	13	301
200-005036	50,0	1,00	26,0	◙	51	3564	224	160	125	6,57	2	13	308
200-006336	63,0	1,27	31,3	◙	51	3564	250	180	140	6,83	2	13	328
200-008036	80,0	1,61	38,3	◙	62	3570	250	200	160	7,05	2	13	352
200-010036	100,0	2,01	46,3	◙	84	3570	280	224	180	7,41	3	11	380
200-012536	125,0	2,51	55,7	◙	84	3570	315	250	200	7,81	2	11	387
200-016036	160,0	3,21	69,5	◙	101	3570	315	280	224	7,78	2	11	440
200-020036	200,0	4,02	84,7	◙	123	3570	355	315	250	8,55	2	11	516
200-025036	250,0	5,02	104,2	◙	148	3576	400	355	280	10,92	3	11	556
200-031536	315,0	6,33	129,7	◙	180	3576	400	400	315	10,87	3	11	596

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 2000 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1671 daPa** density at inlet operation of **ρ1 = 1,006 kg/m³**

Specific supply **Yt2 ≈ 1573 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 2250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 2250 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
225-002536	25,0	0,50	19,2	□	33,5	3552	180	112	125	8,23	1	7	390
225-003136	31,5	0,63	21,9	□	33,5	3552	200	125	125	8,15	1	7	342
225-004036	40,0	0,80	26,5	□	41,5	3552	200	140	125	8,02	2	7	351
225-005036	50,0	1,00	30,5	□	51	3564	224	160	125	8,21	2	7	354
225-006336	63,0	1,27	36,0	◙	51	3564	250	180	140	8,29	2	7	428
225-008036	80,0	1,61	44,2	◙	62	3570	250	200	160	8,41	2	7	356
225-010036	100,0	2,01	53,7	◙	84	3570	280	224	180	9,07	3	7	513
225-012536	125,0	2,51	63,8	◙	84	3570	315	250	200	9,34	2	7	520
225-016036	160,0	3,21	79,4	◙	101	3570	315	280	224	9,38	2	7	447
225-020036	200,0	4,02	94,5	◙	148	3576	355	315	250	11,91	2	7	659
225-025036	250,0	5,02	117,3	◙	180	3576	400	355	280	12,72	3	7	687

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 2250 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1842 daPa** density at inlet operation of **ρ1 = 0,985 kg/m³**

Specific supply **Yt2 ≈ 1758 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 2500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 2500 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
250-002536	25,0	0,50	22,5	□	33,5	3552	180	112	125	10,10	2	7	396
250-003136	31,5	0,63	25,2	□	33,5	3552	200	125	125	10,07	2	7	398
250-004036	40,0	0,80	30,5	□	41,5	3552	200	140	125	9,71	2	7	408
250-005036	50,0	1,00	35,0	□	51	3564	224	160	125	9,79	2	7	411
250-006336	63,0	1,27	41,1	◙	62	3570	250	180	140	10,15	2	7	453
250-008036	80,0	1,61	50,1	◙	62	3570	250	200	160	10,00	2	7	458
250-010036	100,0	2,01	60,6	◙	84	3570	280	224	180	10,71	2	7	520
250-012536	125,0	2,51	72,0	◙	101	3570	315	250	200	11,17	3	7	529
250-016036	160,0	3,21	89,4	◙	123	3570	315	280	224	12,44	3	7	643
250-020036	200,0	4,02	106,5	◙	148	3576	355	315	250	14,12	3	7	667
250-025036	250,0	5,02	131,4	◙	180	3576	400	355	280	15,07	3	7	696

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 2500 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 2006 daPa** density at inlet operation of **ρ1 = 0,966 kg/m³**

Specific supply **Yt2 ≈ 1942 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 2800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 2800 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
280-002536	25,0	0,50	26,7	□	41,5	3552	180	112	125	12,54	2	7	468
280-003136	31,5	0,63	29,7	□	51	3564	200	125	125	12,22	2	7	432
280-004036	40,0	0,80	35,6	□	51	3564	200	140	125	11,86	2	7	444
280-005036	50,0	1,00	40,5	□	62	3570	224	160	125	12,31	2	7	465
280-006336	63,0	1,27	47,1	□	84	3570	250	180	140	12,55	2	7	531
280-008036	80,0	1,61	57,5	◙	84	3570	250	200	160	12,35	2	7	537
280-010036	100,0	2,01	69,1	◙	101	3570	280	224	180	12,88	2	7	560
280-012536	125,0	2,51	81,9	◙	123	3570	315	250	200	14,96	3	7	643
280-016036	160,0	3,21	101,2	◙	148	3576	315	280	224	15,20	3	7	690

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 2800 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 2195 daPa** density at inlet operation of **ρ1 = 0,943 kg/m³**

Specific supply **Yt2 ≈ 2159 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 3150 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MXE	volume flow and mass flow in NP at 3150 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MXE kg
315-002536	25,0	0,50	32,1	□	51	3564	180	112	125	15,62	2	7	501
315-003136	31,5	0,63	35,3	□	62	3570	200	125	125	15,58	2	7	497
315-004036	40,0	0,80	42,2	□	62	3570	200	140	125	15,39	2	7	511
315-005036	50,0	1,00	47,5	□	84	3570	224	160	125	15,47	2	7	554
315-006336	63,0	1,27	54,8	□	84	3570	250	180	140	15,45	2	7	582
315-008036	80,0	1,61	66,5	◙	101	3570	250	200	160	17,29	2	7	605
315-010036	100,0	2,01	79,2	◙	123	3570	280	224	180	17,83	2	7	694
315-012536	125	2,51	93,3	◙	148	3576	315	250	200	18,17	2	7	706

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 3150 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 2404 daPa** density at inlet operation of **ρ1 = 0,919 kg/m³**

Specific supply **Yt2 ≈ 2408 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 100 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 100 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
010-000536	5,0	0,10	0,14	○	1,27	3420	140	100	125	0,03	5	9	16
010-000836	8,0	0,16	0,20	○	1,27	3420	140	112	125	0,03	5	9	18
010-001036	10,0	0,20	0,24	○	1,27	3420	140	125	125	0,03	5	9	18
010-001236	12,5	0,25	0,29	○	1,27	3420	140	140	125	0,03	5	9	20
010-001636	16,0	0,32	0,37	○	1,27	3420	160	160	125	0,04	6	9	20
010-002036	20,0	0,40	0,45	○	1,27	3420	180	180	140	0,05	6	9	23
010-002536	25,0	0,50	0,56	○	1,75	3420	200	200	160	0,05	6	9	26
010-003136	31,5	0,63	0,70	○	1,75	3420	224	224	180	0,06	6	9	30
010-004036	40,0	0,80	0,88	○	1,75	3420	250	250	200	0,08	6	9	31
010-005018	50,0	1,00	1,09	○	2,55	1716	280	280	224	0,41	5	9	62
010-005036	50,0	1,00	1,08	○	2,55	3450	280	280	224	0,09	7	9	39
010-006318	63,0	1,27	1,36	○	2,55	1716	315	315	250	0,47	6	9	65
010-006336	63,0	1,27	1,35	○	2,55	3450	315	315	250	0,12	7	9	42
010-008018	80,0	1,61	1,71	○	3,45	1728	355	355	280	0,61	6	9	83

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 100 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 99 daPa** density at inlet operation of **ρ1 = 1,193 kg/m³**

Specific supply **Yt2 ≈ 83 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 125 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 125 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
012-000536	5,6	0,11	0,19	○	1,27	3420	140	100	125	0,04	5	9	18
012-000936	9,0	0,18	0,28	○	1,27	3420	140	112	125	0,04	5	9	18
012-001136	11,2	0,22	0,33	○	1,27	3420	140	125	125	0,04	5	9	19
012-001436	14,0	0,28	0,41	○	1,27	3420	160	140	125	0,05	5	9	22
012-001836	18,0	0,36	0,51	○	1,75	3420	160	160	125	0,05	5	9	21
012-002236	22,4	0,45	0,63	○	1,75	3420	180	180	140	0,06	6	9	25
012-002836	28,0	0,56	0,78	○	1,75	3420	200	200	160	0,07	6	9	26
012-003536	35,0	0,70	0,96	○	2,55	3450	224	224	180	0,07	6	9	30
012-004536	45,0	0,90	1,22	○	2,55	3450	250	250	200	0,09	6	9	36
012-005618	56,0	1,12	1,53	○	2,55	1716	315	280	224	0,67	5	9	75
012-005636	56,0	1,12	1,51	○	2,55	3450	280	280	224	0,11	6	9	40
012-007118	71,0	1,43	1,90	○	3,45	1728	315	315	250	0,68	5	9	78
012-007136	71,0	1,43	1,89	○	3,45	3480	315	315	250	0,15	7	9	49
012-009018	90,0	1,81	2,40	○	4,55	1740	355	355	280	0,79	6	9	85
012-009036	90,0	1,81	2,40	○	4,55	3480	355	355	280	0,20	7	9	55
012-011218	112,0	2,25	2,99	○	6,3	1740	400	400	315	0,99	6	9	96
012-014018	140,0	2,81	3,71	○	6,3	1740	450	450	355	1,11	6	9	116
012-018018	180,0	3,62	4,77	○	8,6	1752	500	500	400	1,54	7	9	130
012-022418	224,0	4,50	5,90	○	8,6	1752	560	560	450	1,84	7	9	158

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase	**Δ pt2 =**	**125 daPa**	reference density of	**ρ0 =**	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**124 daPa**	density at inlet operation of	**ρ1 =**	1,190 kg/m³
Specific supply	**Yt2 ≈**	**103 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 160 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 160 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
016-000636	6,3	0,13	0,27	○	1,27	3420	140	100	125	0,05	4	9	20
016-001036	10,0	0,20	0,39	○	1,27	3420	140	112	125	0,05	4	9	20
016-001236	12,5	0,25	0,48	○	1,27	3420	140	125	125	0,06	4	9	20
016-001636	16,0	0,32	0,60	○	1,75	3420	160	140	125	0,06	5	9	23
016-002036	20,0	0,40	0,73	○	1,75	3420	160	160	125	0,07	5	9	23
016-002536	25,0	0,50	0,90	○	1,75	3420	180	180	140	0,08	5	9	26
016-003136	31,5	0,63	1,12	○	2,55	3450	200	200	160	0,08	6	9	31
016-004036	40,0	0,80	1,40	○	2,55	3450	224	224	180	0,10	6	9	35
016-005036	50,0	1,00	1,73	○	3,45	3480	250	250	200	0,12	6	9	38
016-006318	63,0	1,27	2,19	○	3,45	1728	315	280	224	0,86	5	9	87
016-006336	63,0	1,27	2,16	○	3,45	3480	280	280	224	0,15	6	9	48
016-008018	80,0	1,61	2,75	○	4,55	1740	355	315	250	1,01	5	9	91
016-008036	80,0	1,61	2,75	○	4,55	3480	315	315	250	0,18	7	9	50
016-010018	100,0	2,01	3,39	○	6,3	1740	355	355	280	1,06	5	9	100
016-010036	100,0	2,01	3,41	○	6,3	3498	355	355	280	0,24	7	9	58
016-012518	125,0	2,51	4,25	○	6,3	1740	400	400	315	1,26	6	9	110
016-012536	125,0	2,51	4,23	○	6,3	3498	400	400	315	0,31	7	9	71
016-016018	160,0	3,21	5,40	○	8,6	1752	450	450	355	1,61	6	9	122
016-020018	200,0	4,02	6,76	○	12,6	1752	500	500	400	2,14	6	9	158

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 160 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 158 daPa** density at inlet operation of **ρ1 = 1,186 kg/m³**

Specific supply **Yt2 ≈ 132 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 200 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 200 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
020-000736	7,1	0,14	0,38	○	1,27	3420	140	100	125	0,07	4	9	24
020-001136	11,2	0,22	0,55	○	1,27	3420	140	112	125	0,07	4	9	24
020-001436	14,0	0,28	0,67	○	1,75	3420	160	125	125	0,08	4	9	24
020-001836	18,0	0,36	0,84	○	1,75	3420	160	140	125	0,08	4	9	26
020-002236	22,4	0,45	1,02	○	2,55	3450	180	160	125	0,09	5	9	27
020-002836	28,0	0,56	1,25	○	2,55	3450	180	180	140	0,10	5	9	30
020-003536	35,0	0,70	1,54	○	2,55	3450	200	200	160	0,11	5	9	32
020-004536	45,0	0,90	1,95	○	3,45	3480	224	224	180	0,14	6	9	37
020-005636	56,0	1,12	2,41	○	4,55	3480	250	250	200	0,16	6	9	44
020-007118	71,0	1,43	3,07	○	4,55	1740	315	280	224	1,10	5	9	89
020-007136	71,0	1,43	3,03	○	4,55	3480	280	280	224	0,18	6	9	49
020-009018	90,0	1,81	3,85	○	6,3	1740	355	315	250	1,30	5	9	95
020-009036	90,0	1,81	3,85	○	6,3	3498	315	315	250	0,24	6	9	53
020-011218	112,0	2,25	4,81	○	8,6	1752	400	355	280	1,53	6	9	118
020-011236	112,0	2,25	4,76	○	8,6	3504	355	355	280	0,28	7	9	65
020-014036	140,0	2,81	5,92	○	8,6	3504	400	400	315	0,42	7	9	74
020-014018	140,0	2,81	5,93	○	8,6	1752	400	400	315	1,62	6	9	127
020-018018	180,0	3,62	7,62	○	12,6	1752	450	450	355	2,31	6	9	150
020-018036	180,0	3,62	7,54	○	12,6	3510	450	450	355	0,72	7	9	96
020-022418	224,0	4,50	9,42	○	17,3	1752	500	500	400	2,84	6	9	165

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase	**Δ pt2 =**	**200 daPa**	reference density of	**ρ0 =**	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**196 daPa**	density at inlet operation of	**ρ1 =**	1,181 kg/m³
Specific supply	**Yt2 ≈**	**165 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 250 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
025-000536	5,0	0,10	0,38	○	1,27	3420	140	100	125	0,10	3	9	24
025-000836	8,0	0,16	0,54	○	1,27	3420	140	100	125	0,10	3	9	25
025-001236	12,5	0,25	0,77	○	1,75	3420	140	112	125	0,10	3	9	25
025-001636	16,0	0,32	0,95	○	1,75	3420	160	125	125	0,11	4	9	25
025-002036	20,0	0,40	1,16	○	2,55	3450	160	140	125	0,11	4	9	27
025-002536	25,0	0,50	1,43	○	2,55	3450	180	160	125	0,12	4	9	32
025-003136	31,5	0,63	1,75	○	3,45	3480	200	180	140	0,15	5	9	37
025-004036	40,0	0,80	2,18	○	3,45	3480	200	200	160	0,15	5	9	39
025-005036	50,0	1,00	2,70	○	4,55	3480	224	224	180	0,18	5	9	43
025-006336	63,0	1,27	3,4	○	6,3	3498	250	250	200	0,22	6	9	47
025-008036	80,0	1,61	4,3	○	6,3	3498	280	280	224	0,26	6	9	58
025-008018	80,0	1,61	4,3	○	6,3	1740	355	280	224	1,71	5	11	109
025-010018	100,0	2,01	5,3	○	8,6	1752	355	315	250	1,72	5	11	112
025-010036	100,0	2,01	5,3	○	8,6	3504	315	315	250	0,29	6	9	60
025-012518	125,0	2,51	6,7	○	12,6	1752	400	355	280	2,24	5	11	132
025-012536	125,0	2,51	6,6	○	12,6	3510	355	355	280	0,59	6	9	78
025-016018	160,0	3,21	8,4	○	12,6	1752	400	400	315	2,74	5	11	147
025-016036	160,0	3,21	8,4	○	12,6	3510	400	400	315	0,69	7	9	89
025-020036	200,0	4,02	10,4	○	17,3	3528	450	450	355	0,81	7	9	109
025-020018	200,0	4,02	10,5	○	17,3	1752	450	450	355	3,12	6	9	174
025-025018	250,0	5,02	13,2	○	21,3	1752	500	500	400	3,67	6	9	189
025-025036	250,0	5,02	13,0	○	21,3	3528	500	500	400	1,02	7	9	134

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase	**Δ pt2 =**	**daPa**	reference density of	ρ0 =	kg/m³
Total pressure increase	**Δ pt1 =**	**daPa**	density at inlet operation of	ρ1 =	kg/m³
Specific supply	**Yt2 ≈**	**daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 315 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 315 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
031-000536	5,6	0,11	0,54	○	1,75	3420	140	100	125	0,14	3	9	29
031-000936	9,0	0,18	0,77	○	1,75	3420	140	100	125	0,14	3	9	30
031-001436	14,0	0,28	1,10	○	2,55	3450	160	112	125	0,15	4	9	30
031-001836	18,0	0,36	1,36	○	2,55	3450	160	125	125	0,15	4	9	30
031-002236	22,4	0,45	1,64	○	3,45	3480	180	140	125	0,17	4	9	34
031-002836	28,0	0,56	2,01	○	3,45	3480	180	160	125	0,17	4	9	34
031-003536	35,0	0,70	2,45	○	4,55	3480	200	180	140	0,19	5	9	38
031-004536	45,0	0,90	3,10	○	4,55	3480	224	200	160	0,22	5	9	45
031-005618	56,0	1,12	4,04	○	6,3	1740	280	224	180	1,89	3	11	102
031-005636	56,0	1,12	3,8	○	6,3	3498	224	224	180	0,24	5	9	51
031-007118	71,0	1,43	4,9	○	8,6	1752	315	250	200	2,03	4	11	118
031-007136	71,0	1,43	4,8	○	8,6	3504	250	250	200	0,28	5	9	53
031-009018	90,0	1,81	6,1	○	8,6	1752	355	280	224	2,49	4	11	130
031-009036	90,0	1,81	6,1	○	8,6	3504	280	280	224	0,35	6	9	60
031-011218	112,0	2,25	7,6	○	12,6	1752	400	315	250	3,03	5	11	145
031-011236	112,0	2,25	7,5	○	12,6	3510	315	315	250	0,61	6	9	73
031-014018	140,0	2,81	9,4	○	17,3	1752	400	355	280	3,32	5	11	157
031-014036	140,0	2,81	9,3	○	17,3	3528	355	355	280	0,68	6	9	83
031-018018	180,0	3,62	12,0	○	17,3	1752	450	400	315	4,06	5	11	170
031-018036	180,0	3,62	11,9	○	17,3	3528	400	400	315	0,80	6	9	91
031-022418	224,0	4,50	14,8	○	21,3	1752	450	450	355	4,18	5	11	182
031-022436	224,0	4,50	14,7	○	21,3	3528	450	450	355	0,92	7	9	124
031-028018	280,0	5,62	18,5	○	25,3	1764	500	500	400	5,09	6	9	249
031-028036	280,0	5,62	18,4	○	24,5	3540	500	500	400	1,27	7	9	138
031-035518	355,0	7,13	23,4	○	34,5	1764	560	560	450	6,93	6	9	281
031-035536	355,0	7,13	23,3	○	33,5	3552	560	560	450	1,98	7	9	176

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 315 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 306 daPa** density at inlet operation of **ρ1 = 1,168 kg/m³**

Specific supply **Yt2 ≈ 259 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 355 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 355 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
035-000836	7,5	0,15	0,77	○	1,75	3420	140	100	125	0,16	3	9	34
035-001236	12,5	0,25	1,14	○	2,55	3450	140	100	125	0,16	3	9	30
035-001936	19,0	0,38	1,62	○	2,55	3450	160	125	125	0,17	3	9	35
035-002436	23,6	0,47	1,95	○	3,45	3480	180	140	125	0,20	4	9	39
035-003036	30,0	0,60	2,44	○	4,55	3480	200	160	125	0,22	4	9	40
035-003836	37,5	0,75	2,95	○	4,55	3480	200	180	140	0,22	4	9	44
035-004836	47,5	0,95	3,68	○	6,3	3498	224	200	160	0,26	5	9	47
035-006036	60,0	1,21	4,59	○	8,6	3504	250	224	180	0,30	5	9	52
035-007536	75,0	1,51	5,65	○	8,6	3504	250	250	200	0,34	5	9	55
035-009518	95,0	1,91	7,3	○	12,6	1752	355	280	224	3,06	4	11	142
035-009536	95,0	1,91	7,2	○	12,6	3510	280	280	224	0,57	6	9	73
035-011818	118,0	2,37	9,1	○	12,6	1752	400	315	250	3,61	4	11	149
035-011836	118,0	2,37	8,9	○	12,6	3510	315	315	250	0,67	6	9	77
035-015018	150,0	3,01	11,3	○	17,3	1752	400	355	280	3,91	4	11	161
035-015036	150,0	3,01	11,2	○	17,3	3528	355	355	280	0,75	6	9	84
035-019018	190,0	3,82	14,3	○	21,3	1752	450	400	315	4,61	5	11	220
035-019036	190,0	3,82	14,1	○	21,3	3528	400	400	315	0,86	6	9	115
035-023618	236,0	4,74	17,8	○	25,3	1764	500	450	355	5,82	5	11	240
035-023636	236,0	4,74	17,6	○	24,5	3540	450	450	355	1,15	7	9	128
035-030018	300,0	6,03	22,3	○	34,5	1764	500	500	400	6,14	6	9	260
035-030036	300,0	6,03	22,2	○	33,5	3552	500	500	400	1,75	7	9	149

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**355 daPa**	reference density of	ρ0 =	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**343 daPa**	density at inlet operation of	ρ1 =	1,164 kg/m³
Specific supply	**Yt2 ≈**	**292 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 400 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
040-000636	6,3	0,13	0,78	○	1,75	3420	140	100	125	0,20	3	9	35
040-001036	10,0	0,20	1,10	○	2,55	3450	140	100	125	0,19	3	9	35
040-001636	16,0	0,32	1,60	○	2,55	3450	160	112	125	0,21	3	9	36
040-002036	20,0	0,40	1,93	○	3,45	3480	160	125	125	0,21	3	9	37
040-002536	25,0	0,50	2,35	○	3,45	3480	180	140	125	0,24	4	9	40
040-003136	31,5	0,63	2,89	○	4,55	3480	200	160	125	0,26	4	9	41
040-004036	40,0	0,80	3,55	○	4,55	3480	200	180	140	0,25	4	9	45
040-005036	50,0	1,00	4,36	○	6,3	3498	224	200	160	0,30	5	9	48
040-006336	63,0	1,27	5,42	○	6,3	3498	250	224	180	0,38	5	9	57
040-008036	80,0	1,61	6,9	○	8,6	3504	280	250	200	0,44	5	9	60
040-010036	100,0	2,01	8,5	○	12,6	3510	280	280	224	0,66	5	9	75
040-012518	125,0	2,51	10,8	○	17,3	1752	400	315	250	4,41	4	11	196
040-012536	125,0	2,51	10,6	○	17,3	3528	315	315	250	0,72	6	9	78
040-016018	160,0	3,21	13,6	○	21,3	1752	400	355	280	4,47	4	11	208
040-016036	160,0	3,21	13,4	○	21,3	3528	355	355	280	0,82	6	9	85
040-020036	200,0	4,02	16,7	○	24,5	3540	400	400	315	1,01	6	9	118
040-020018	200,0	4,02	16,9	○	25,3	1764	450	400	315	5,16	5	11	223
040-025018	250,0	5,02	21,1	○	34,5	1764	500	450	355	7,34	5	11	256
040-025036	250,0	5,02	20,9	○	33,5	3552	450	450	355	1,62	7	9	138
040-031518	315,0	6,33	26,2	○	34,5	1764	500	500	400	7,52	5	11	271
040-031536	315,0	6,33	26,1	○	33,5	3552	500	500	400	1,85	7	9	164
040-040018	400,0	8,03	33,3	○	42,5	1764	560	560	450	9,76	6	9	330
040-040036	400,0	8,03	33,3	○	41,5	3552	560	560	450	2,41	7	9	212

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**400 daPa**	reference density of	ρ0 =	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**385 daPa**	density at inlet operation of	ρ1 =	1,159 kg/m³
Specific supply	**Yt2 ≈**	**328 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 450 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 450 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min⁻¹	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
045-000936	8,5	0,17	1,11	○	2,55	3450	140	100	125	0,23	3	9	36
045-001336	13,2	0,27	1,57	○	2,55	3450	140	100	125	0,23	3	9	36
045-002136	21,2	0,43	2,30	○	3,45	3480	180	125	125	0,27	3	9	38
045-002736	26,5	0,53	2,81	○	4,55	3480	180	140	125	0,28	3	9	41
045-003436	33,5	0,67	3,46	○	6,3	3498	200	160	125	0,32	4	9	46
045-004236	42,5	0,85	4,25	○	6,3	3498	224	180	140	0,35	4	9	50
045-005336	53,0	1,06	5,19	○	8,6	3504	224	200	160	0,37	4	9	53
045-006736	67,0	1,35	6,47	○	12,6	3510	250	224	180	0,60	5	9	67
045-008536	85,0	1,71	8,23	○	12,6	3510	280	250	200	0,67	5	9	70
045-010636	106,0	2,13	10,1	○	17,3	3528	280	280	224	0,72	5	9	76
045-013218	132,0	2,65	12,9	○	17,3	1752	400	315	250	5,06	4	11	199
045-013236	132,0	2,65	12,5	○	17,3	3528	315	315	250	0,80	6	9	79
045-017018	170,0	3,41	16,5	○	25,3	1764	450	355	280	5,79	5	11	214
045-017036	170,0	3,41	16,0	○	21,3	3528	355	355	280	0,91	6	9	108
045-021218	212,0	4,26	20,2	○	34,5	1764	450	400	315	6,17	5	11	234
045-021236	212,0	4,26	19,9	○	33,5	3552	400	400	315	1,45	6	9	127
045-026518	265,0	5,32	25,1	○	34,5	1764	500	450	355	8,26	5	11	260
045-026536	265,0	5,32	24,8	○	33,5	3552	450	450	355	1,73	6	9	140
045-033518	335,0	6,73	31,7	○	42,5	1764	560	500	400	10,37	5	11	316
045-033536	335,0	6,73	31,6	○	41,5	3552	500	500	400	2,20	7	9	169

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 450 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 431 daPa** density at inlet operation of **ρ1 = 1,153 kg/m³**

Specific supply **Yt2 ≈ 369 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 500 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
050-000736	7,1	0,14	1,12	○	2,55	3450	140	100	125	0,29	2	11	39
050-001136	11,2	0,22	1,58	○	2,55	3450	140	100	125	0,29	2	11	40
050-001836	18,0	0,36	2,27	○	3,45	3480	160	112	125	0,30	3	9	41
050-002236	22,4	0,45	2,71	○	4,55	3480	180	125	125	0,32	3	9	41
050-002836	28,0	0,56	3,30	○	4,55	3480	180	140	125	0,32	3	9	44
050-003536	35,0	0,70	4,03	○	6,3	3498	200	160	125	0,36	4	9	47
050-004536	45,0	0,90	5,00	○	8,6	3504	224	180	140	0,39	4	9	51
050-005636	56,0	1,12	6,09	○	8,6	3504	224	200	160	0,42	4	9	54
050-007136	71,0	1,43	7,60	○	12,6	3510	250	224	180	0,65	5	9	68
050-009036	90,0	1,81	9,7	○	17,3	3528	280	250	200	0,76	5	9	72
050-011236	112,0	2,25	11,8	○	17,3	3528	280	280	224	0,78	5	9	97
050-014018	140,0	2,81	15,2	○	21,3	1752	400	315	250	6,01	4	11	204
050-014036	140,0	2,81	14,7	○	21,3	3528	315	315	250	0,90	6	9	101
050-018018	180,0	3,62	19,3	○	25,3	1764	450	355	280	7,16	4	11	248
050-018036	180,0	3,62	18,8	○	24,5	3540	355	355	280	1,12	6	9	112
050-022418	224,0	4,50	23,6	○	34,5	1764	450	400	315	8,00	4	11	273
050-022436	224,0	4,50	23,2	○	33,5	3552	400	400	315	1,63	6	9	130
050-028018	280,0	5,62	29,4	○	42,5	1764	500	450	355	9,64	5	11	298
050-028036	280,0	5,62	29,1	○	41,5	3552	450	450	355	1,86	6	9	155
050-035518	355,0	7,13	37,2	○	52	1770	560	500	400	11,41	5	11	368
050-035536	355,0	7,13	37,0	○	51	3564	500	500	400	2,34	7	9	198

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**500 daPa**	reference density of	ρ0 =	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**477 daPa**	density at inlet operation of	ρ1 =	1,148 kg/m³
Specific supply	**Yt2 ≈**	**409 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 560 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 560 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
056-000836	7,5	0,15	1,34	○	3,45	3480	140	100	125	0,35	2	11	42
056-001536	15,0	0,30	2,22	○	3,45	3480	160	100	125	0,35	3	9	42
056-002436	23,6	0,47	3,24	○	4,55	3480	180	125	125	0,37	3	9	42
056-003036	30,0	0,60	3,96	○	6,3	3498	200	140	125	0,42	3	9	47
056-003836	37,5	0,75	4,79	○	6,3	3498	200	160	125	0,42	4	9	48
056-004836	47,5	0,95	5,91	○	8,6	3504	224	180	140	0,45	4	9	52
056-006036	60,0	1,21	7,33	○	8,6	3504	250	200	160	0,55	4	9	73
056-007536	75,0	1,51	8,99	○	12,6	3510	250	224	180	0,71	4	9	88
056-009518	95,0	1,91	12,0	○	17,3	1752	355	250	200	6,09	3	11	212
056-009536	95,0	1,91	11,4	○	12,6	3510	280	250	200	0,84	5	9	91
056-011818	118,0	2,37	14,7	○	21,3	1752	400	280	224	6,87	4	11	228
056-011836	118,0	2,37	14,0	○	17,3	3528	315	280	224	0,96	5	9	99
056-015018	150,0	3,01	18,2	○	34,5	1764	400	315	250	7,76	4	11	246
056-015036	150,0	3,01	17,5	○	33,5	3552	315	315	250	1,29	5	9	110
056-019018	190,0	3,82	22,8	○	34,5	1764	450	355	280	8,60	4	11	260
056-019036	190,0	3,82	22,2	○	33,5	3552	355	355	280	1,62	6	9	123
056-023618	236,0	4,74	28,2	○	42,5	1764	500	400	315	10,78	5	11	288
056-023636	236,0	4,74	27,5	○	41,5	3552	400	400	315	1,83	6	9	146
056-030018	300,0	6,03	35,2	○	52	1770	500	450	355	10,77	5	11	347
056-030036	300,0	6,03	34,9	○	51	3564	450	450	355	2,21	6	9	185

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**560 daPa**	reference density of	**ρ0 =**	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**531 daPa**	density at inlet operation of	**ρ1 =**	1,148 kg/m³
Specific supply	**Yt2 ≈**	**458 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 630 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 630 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
063-000836	8,0	0,16	1,63	●	3,45	3480	140	100	125	0,43	2	11	50
063-001236	12,5	0,25	2,27	○	4,55	3480	140	100	125	0,42	2	11	50
063-002036	20,0	0,40	3,23	○	6,3	3498	160	112	125	0,44	3	9	51
063-002536	25,0	0,50	3,85	○	6,3	3498	180	125	125	0,46	3	9	52
063-003136	31,5	0,63	4,70	○	8,6	3504	200	140	125	0,49	3	9	64
063-004036	40,0	0,80	5,80	○	8,6	3504	200	160	125	0,50	3	9	65
063-005036	50,0	1,00	7,08	○	12,6	3510	224	180	140	0,70	4	9	79
063-006336	63,0	1,27	8,65	○	12,6	3510	250	200	160	0,80	4	9	83
063-008036	80,0	1,61	11,0	○	17,3	3528	280	224	180	0,91	5	9	90
063-010036	100,0	2,01	13,5	○	17,3	3528	280	250	200	0,92	5	9	92
063-012536	125,0	2,51	16,7	○	21,3	3528	315	280	224	1,06	5	9	100
063-016018	160,0	3,21	22,1	○	34,5	1764	400	315	250	9,26	3	11	251
063-016036	160,0	3,21	21,0	○	33,5	3552	315	315	250	1,48	5	9	113
063-020018	200,0	4,02	27,2	○	34,5	1764	450	355	280	10,24	4	11	305
063-020036	200,0	4,02	26,1	○	33,5	3552	355	355	280	1,74	6	9	136
063-025018	250,0	5,02	33,6	○	42,5	1764	500	400	315	12,34	4	11	335
063-025036	250,0	5,02	32,6	○	41,5	3552	400	400	315	2,00	6	9	147

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 630 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 593 daPa** density at inlet operation of **ρ1 = 1,148 kg/m³**

Specific supply **Yt2 ≈ 514 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 710 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 710 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
071-000936	8,5	0,17	1,97	●	4,55	3480	140	100	125	0,53	2	11	59
071-001336	13,2	0,27	2,74	○	6,3	3498	140	100	125	0,53	2	11	61
071-002136	21,2	0,43	3,84	○	6,3	3498	180	112	125	0,54	3	9	61
071-002736	26,5	0,53	4,63	○	8,6	3504	180	125	125	0,54	3	9	61
071-003436	33,5	0,67	5,66	○	8,6	3504	200	140	125	0,58	3	9	65
071-004236	42,5	0,85	6,95	○	8,6	3504	224	160	125	0,62	3	9	66
071-005336	53,0	1,06	8,48	○	12,6	3510	224	180	140	0,79	3	9	80
071-006736	67,0	1,35	10,4	○	12,6	3510	250	200	160	0,90	4	9	84
071-008536	85,0	1,71	13,1	○	17,3	3528	280	224	180	1,02	4	9	92
071-010636	106,0	2,13	16,1	○	17,3	3528	280	250	200	1,03	4	9	94
071-013236	132,0	2,65	19,8	○	21,3	3528	315	280	224	1,27	5	9	115
071-017018	170,0	3,41	26,8	○	34,5	1764	450	315	250	12,01	4	11	317
071-017036	170,0	3,41	25,2	○	33,5	3552	355	315	250	1,86	5	9	129
071-021218	212,0	4,26	32,6	○	42,5	1764	450	355	280	13,09	4	11	343
071-021236	212,0	4,26	31,0	○	41,5	3552	355	355	280	1,91	5	9	138

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**710 daPa**	reference density of	ρ0 =	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**664 daPa**	density at inlet operation of	ρ1 =	1,125 kg/m³
Specific supply	**Yt2 ≈**	**578 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 800 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
080-000936	9,0	0,18	2,39	●	6,3	3498	140	100	125	0,65	2	11	71
080-001436	14,0	0,28	3,33	○	6,3	3498	140	100	125	0,64	2	11	71
080-002236	22,4	0,45	4,62	○	8,6	3504	180	112	125	0,65	3	9	71
080-002836	28,0	0,56	5,61	○	8,6	3504	180	125	125	0,65	3	9	71
080-003536	35,0	0,70	6,71	○	12,6	3510	200	140	125	0,86	3	9	85
080-004536	45,0	0,90	8,31	○	12,6	3510	224	160	125	0,90	3	9	92
080-005636	56,0	1,12	10,1	○	17,3	3528	224	180	140	0,89	3	9	91
080-007136	71,0	1,43	12,5	○	17,3	3528	250	200	160	0,95	4	9	94
080-009036	90,0	1,81	15,8	○	21,3	3528	280	224	180	1,17	4	9	104
080-011236	112,0	2,25	19,1	○	24,5	3540	280	250	200	1,26	4	9	109
080-014036	140,0	2,81	23,5	○	33,5	3552	315	280	224	1,73	5	9	125
080-018018	180,0	3,62	32,0	○	42,5	1764	450	315	250	14,70	3	11	346
080-018036	180,0	3,62	29,9	○	41,5	3552	355	315	250	2,04	5	9	150

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase	**Δ pt2 =**	**800 daPa**	reference density of	ρ0 =	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**742 daPa**	density at inlet operation of	ρ1 =	1,116 kg/m³
Specific supply	**Yt2 ≈**	**649 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 900 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 900 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min⁻¹	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
090-000936	30,0	0,60	6,76	○	12,6	3510	200	125	125	0,99	3	9	82
090-001536	37,5	0,75	8,14	○	12,6	3510	200	140	125	0,99	3	9	86
090-002436	47,5	0,95	9,91	○	17,3	3528	224	160	125	1,02	3	9	93
090-003036	60,0	1,21	12,20	○	17,3	3528	250	180	140	1,10	4	9	93
090-003836	75,0	1,51	14,89	○	21,3	3528	250	200	160	1,09	4	9	95
090-004836	95,0	1,91	18,8	○	24,5	3540	280	224	180	1,45	4	9	108
090-006036	118,0	2,37	22,7	○	33,5	3552	315	250	200	1,89	4	9	119
090-007536	150,0	3,01	28,4	○	41,5	3552	315	280	224	1,99	4	9	147
090-009536	190,0	3,82	38,2	○	52	1770	450	315	250	18,11	3	11	381
090-011836	190,0	3,82	35,4	○	51	3564	355	315	250	2,23	5	9	171
090-015036	150,0	3,01	28,4	○	41,5	3552	315	280	224	1,99	4	9	147
090-019018	190,0	3,82	38,2	○	52	1770	450	315	250	18,11	3	11	381
090-019036	190,0	3,82	35,4	○	51	3564	355	315	250	2,23	5	9	171

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 900 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 827 daPa** density at inlet operation of **ρ1 = 1,118 kg/m³**

Specific supply **Yt2 ≈ 728 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design MAE	volume flow and mass flow in NP at 1000 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor MAE kg
100-001036	10,0	0,20	3,46	●	8,6	3504	140	100	125	0,95	2	11	74
100-001636	16,0	0,32	4,76	●	8,6	3504	160	100	125	0,94	2	11	74
100-002536	25,0	0,50	6,62	○	12,6	3510	180	112	125	1,12	2	11	83
100-003136	31,5	0,63	7,95	○	12,6	3510	200	125	125	1,13	3	9	84
100-004036	40,0	0,80	9,7	○	17,3	3528	200	140	125	1,11	3	9	88
100-005036	50,0	1,00	11,7	○	17,3	3528	224	160	125	1,18	4	9	89
100-006336	63,0	1,27	14,3	○	21,3	3528	250	180	140	1,25	4	9	126
100-008036	80,0	1,61	18,0	○	24,5	3540	280	200	160	1,34	5	9	129
100-010036	100,0	2,01	22,1	○	33,5	3552	280	224	180	2,02	5	11	153
100-012536	125,0	2,51	26,9	○	33,5	3552	315	250	200	2,19	4	11	157
100-016036	160,0	3,21	33,9	○	41,5	3552	315	280	224	2,32	4	11	169
100-020036	200,0	4,02	41,9	○	62	3570	355	315	250	2,90	5	11	180

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1000 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 911 daPa** density at inlet operation of ρ1 = 1,096 kg/m³

Specific supply **Yt2 ≈ 807 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 125 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 125 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
012-000536	5,6	0,11	0,49	●	1,27	3420	140	100	125	0,04	5	9	69
012-000936	9,0	0,18	0,58	●	1,27	3420	140	112	125	0,04	5	9	69
012-001136	11,2	0,22	0,63	●	1,27	3420	140	125	125	0,04	5	9	70
012-001436	14,0	0,28	0,71	●	1,27	3420	160	140	125	0,05	5	9	73
012-001836	18,0	0,36	0,81	●	1,27	3420	160	160	125	0,05	5	9	72
012-002236	22,4	0,45	0,93	○	1,27	3420	180	180	140	0,06	6	9	80
012-002836	28,0	0,56	1,08	○	1,27	3420	200	200	160	0,07	6	9	81
012-003536	35,0	0,70	1,26	○	1,75	3420	224	224	180	0,08	6	9	89
012-004536	45,0	0,90	1,52	○	1,75	3420	250	250	200	0,09	6	9	100
012-005618	56,0	1,12	1,83	○	2,55	1716	315	280	224	0,7	5	9	163
012-005636	56,0	1,12	1,81	○	2,55	3450	280	280	224	0,13	6	9	109
012-007118	71,0	1,43	2,20	○	2,55	1716	315	315	250	0,7	5	9	165
012-007136	71,0	1,43	2,19	○	2,55	3450	315	315	250	0,15	7	9	120
012-009018	90,0	1,81	2,70	○	3,45	1728	355	355	280	0,8	6	9	173
012-009036	90,0	1,81	2,70	○	3,45	3480	355	355	280	0,20	7	9	136
012-011218	112,0	2,25	3,29	○	4,55	1740	400	400	315	1,0	6	9	192
012-014018	140,0	2,81	4,01	○	4,55	1740	450	450	355	1,1	6	9	232
012-018018	180,0	3,62	5,07	○	6,3	1740	500	500	400	1,5	7	9	264
012-022418	224,0	4,50	6,20	○	8,6	1752	560	560	450	1,8	7	9	313
012-028018	280,0	5,62	7,67	○	8,6	1752	630	630	500	2,4	7	9	354
012-035518	355,0	7,13	9,74	○	12,6	1752	710	710	560	3,8	8	9	496
012-045018	450,0	9,04	12,16	○	17,3	1752	800	800	630	5,0	8	9	642
012-056012	560,0	11,25	14,99	○	18	1164	900	900	710	14,9	8	9	879
012-071012	710,0	14,26	18,82	○	22	1164	1000	1000	800	20,0	8	9	1061
012-090012	900,0	18,08	23,74	○	26,5	1176	1120	1120	900	26,4	8	9	1366

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 125 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 124 daPa** density at inlet operation of **ρ1 = 1,190 kg/m³**

Specific supply **Yt2 ≈ 103 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 160 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 160 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
016-000636	6,3	0,13	0,57	●	1,27	3420	140	100	125	0,05	4	9	71
016-001036	10,0	0,20	0,69	●	1,27	3420	140	112	125	0,05	4	9	71
016-001236	12,5	0,25	0,78	●	1,27	3420	140	125	125	0,06	4	9	71
016-001636	16,0	0,32	0,90	●	1,27	3420	160	140	125	0,06	5	9	74
016-002036	20,0	0,40	1,03	○	1,27	3420	160	160	125	0,07	5	9	74
016-002536	25,0	0,50	1,20	○	1,27	3420	180	180	140	0,08	5	9	81
016-003136	31,5	0,63	1,42	○	1,75	3420	200	200	160	0,09	6	9	89
016-004036	40,0	0,80	1,70	○	2,55	3450	224	224	180	0,11	6	9	103
016-005036	50,0	1,00	2,03	○	2,55	3450	250	250	200	0,13	6	9	105
016-006318	63,0	1,27	2,49	○	3,45	1728	315	280	224	0,9	5	9	181
016-006336	63,0	1,27	2,46	○	3,45	3480	280	280	224	0,15	6	9	124
016-008036	80,0	1,61	3,05	○	3,45	3480	315	315	250	0,2	7	9	126
016-008018	80,0	1,61	3,05	○	3,45	1728	355	315	250	1,03	5	9	185
016-010018	100,0	2,01	3,69	○	4,55	1740	355	355	280	1,0	5	9	196
016-010036	100,0	2,01	3,71	○	4,55	3480	355	355	280	0,22	7	9	133
016-012518	125,0	2,51	4,55	○	6,3	1740	400	400	315	1,2	6	9	233
016-012536	125,0	2,51	4,53	○	6,3	3498	400	400	315	0,28	7	9	159
016-016018	160,0	3,21	5,74	○	6,3	1740	450	450	355	1,7	6	9	246
016-020018	200,0	4,02	7,06	○	8,6	1752	500	500	400	1,96	6	9	304
016-025018	250,0	5,02	8,74	○	12,6	1752	560	560	450	2,7	6	9	354
016-031518	315,0	6,33	10,87	○	12,6	1752	630	630	500	3,30	7	9	456
016-040018	400,0	8,03	13,70	○	17,3	1752	710	710	560	4,8	7	9	541
016-050018	500,0	10,04	17,0	○	21,3	1752	800	800	630	6,2	7	9	655
016-063018	630,0	12,65	21,2	○	25,3	1764	900	900	710	8,1	7	9	719
016-080012	800,0	16,07	27,0	○	36	1176	1000	1000	800	24,9	8	9	1314
016-100012	1000,0	20,08	33,4	○	36	1176	1120	1120	900	33,3	8	9	1457
016-125012	1250,0	25,10	41,7	○	44,5	1176	1250	1250	1000	48,2	8	9	1731

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 160 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 158 daPa** density at inlet operation of **ρ1 = 1,186 kg/m³**

Specific supply **Yt2 ≈ 132 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 200 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 200 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
020-000736	7,1	0,14	0,68	●	1,27	3420	140	100	125	0,07	4	9	75
020-001136	11,2	0,22	0,85	●	1,27	3420	140	112	125	0,07	4	9	75
020-001436	14,0	0,28	0,97	●	1,27	3420	160	125	125	0,08	4	9	75
020-001836	18,0	0,36	1,14	○	1,27	3420	160	140	125	0,08	4	9	81
020-002236	22,4	0,45	1,32	○	1,75	3420	180	160	125	0,10	5	9	85
020-002836	28,0	0,56	1,55	○	1,75	3420	180	180	140	0,10	5	9	88
020-003536	35,0	0,70	1,84	○	2,55	3450	200	200	160	0,12	5	9	94
020-004536	45,0	0,90	2,26	○	2,55	3450	224	224	180	0,14	6	9	113
020-005636	56,0	1,12	2,71	○	3,45	3480	250	250	200	0,16	6	9	120
020-007118	71,0	1,43	3,37	○	4,55	1740	315	280	224	1,1	5	9	187
020-007136	71,0	1,43	3,33	○	4,55	3480	280	280	224	0,18	6	9	121
020-009018	90,0	1,81	4,15	○	4,55	1740	355	315	250	1,3	5	9	191
020-009036	90,0	1,81	4,15	○	4,55	3480	315	315	250	0,22	6	9	124
020-011218	112,0	2,25	5,11	○	6,3	1740	400	355	280	1,6	5	9	242
020-011236	112,0	2,25	5,06	○	6,3	3498	355	355	280	0,26	7	9	145
020-014018	140,0	2,81	6,23	○	8,6	1752	400	400	315	1,6	6	9	275
020-014036	140,0	2,81	6,22	○	8,6	3504	400	400	315	0,40	7	9	169
020-018018	180,0	3,62	7,92	○	8,6	1752	450	450	355	2,1	6	9	289
020-018036	180,0	3,62	7,84	○	8,6	3504	450	450	355	0,53	7	9	182
020-022418	224,0	4,50	9,72	○	12,6	1752	500	500	400	2,8	6	9	344
020-028018	280,0	5,62	12,07	○	17,3	1752	560	560	450	3,39	6	9	413
020-035518	355,0	7,13	15,2	○	17,3	1752	630	630	500	4,7	7	9	478
020-045018	450,0	9,04	19,1	○	21,3	1752	710	710	560	5,7	7	9	595
020-056018	560,0	11,25	23,6	○	25,3	1764	800	800	630	7,6	7	9	679
020-071018	710,0	14,26	29,6	○	34,5	1764	900	900	710	10,8	7	9	860
020-090018	900,0	18,08	37,7	○	42,5	1764	1000	1000	800	14,6	8	9	1146
020-112012	1120,0	22,49	46,6	○	54	1176	1120	1120	900	45,0	8	9	1708
020-140012	1400,0	28,12	58,1	○	66	1176	1250	1250	1000	59,3	8	11	2210
020-180012	1800,0	36,15	74,5	○	90	1176	1400	1400	1120	89,3	8	11	2802

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 200 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 196 daPa** density at inlet operation of **ρ1 = 1,181 kg/m³**

Specific supply **Yt2 ≈ 165 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 250 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
025-000536	5,0	0,10	0,68	●	1,27	3420	140	100	125	0,10	3	9	76
025-000836	8,0	0,16	0,84	●	1,27	3420	140	100	125	0,10	3	9	76
025-001236	12,5	0,25	1,07	●	1,27	3420	140	112	125	0,10	3	9	76
025-001636	16,0	0,32	1,25	○	1,75	3420	160	125	125	0,11	4	9	80
025-002036	20,0	0,40	1,46	○	1,75	3420	160	140	125	0,11	4	9	85
025-002536	25,0	0,50	1,73	○	2,55	3450	180	160	125	0,14	4	9	100
025-003136	31,5	0,63	2,06	○	2,55	3450	200	180	140	0,15	5	9	104
025-004036	40,0	0,80	2,48	○	3,45	3480	200	200	160	0,15	5	9	111
025-005036	50,0	1,00	3,00	○	3,45	3480	224	224	180	0,18	5	9	119
025-006336	63,0	1,27	3,7	○	4,55	3480	250	250	200	0,20	6	9	117
025-008018	80,0	1,61	4,6	○	6,3	1740	355	280	224	1,7	5	11	232
025-008036	80,0	1,61	4,6	○	6,3	3498	280	280	224	0,23	6	9	138
025-010018	100,0	2,01	5,6	○	6,3	1740	355	315	250	1,7	5	11	236
025-010036	100,0	2,01	5,6	○	6,3	3498	315	315	250	0,27	6	9	140
025-012518	125,0	2,51	7,0	○	8,6	1752	400	355	280	2,1	5	11	259
025-012536	125,0	2,51	6,9	○	8,6	3504	355	355	280	0,39	6	9	155
025-016036	160,0	3,21	8,7	○	12,6	3510	400	400	315	0,5	7	9	184
025-016018	160,0	3,21	8,7	○	12,6	1752	400	400	315	2,74	5	11	319
025-020018	200,0	4,02	10,8	○	12,6	1752	450	450	355	3,1	6	9	353
025-020036	200,0	4,02	10,7	○	12,6	3510	450	450	355	0,62	7	9	193
025-025018	250,0	5,02	13,5	○	17,3	1752	500	500	400	3,7	6	9	403
025-025036	250,0	5,02	13,3	○	17,3	3528	500	500	400	0,9	7	9	279
025-031518	315,0	6,33	16,8	○	21,3	1752	560	560	450	4,7	6	9	450
025-040018	400,0	8,03	21,2	○	25,3	1764	630	630	500	5,8	6	9	570
025-050018	500,0	10,04	26,3	○	34,5	1764	710	710	560	8,1	7	9	676
025-063018	630,0	12,65	32,9	○	42,5	1764	800	800	630	10,3	7	9	803
025-080018	800,0	16,07	41,4	○	52	1770	900	900	710	13,5	7	9	1115
025-100018	1000,0	20,08	52,0	○	63	1776	1000	1000	800	18,7	8	9	1281
025-125012	1250,0	25,10	64,8	○	90	1176	1120	1120	900	64,1	8	11	2069
025-160012	1600,0	32,13	82,5	○	90	1176	1250	1250	1000	82,5	8	11	2437
025-200012	2000,0	40,17	102,8	○	132	1176	1400	1400	1120	104,6	8	11	2859
025-250012	2500,0	50,21	128,5	○	158	1176	1600	1600	1250	146	8	11	3668

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 250 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 244 daPa** density at inlet operation of **ρ1 = 1,181 kg/m³**

Specific supply **Yt2 ≈ 206 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 315 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 315 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
031-000536	5,6	0,11	0,84	●	1,75	3420	140	100	125	0,14	3	9	88
031-000936	9,0	0,18	1,07	●	1,75	3420	140	100	125	0,14	3	9	88
031-001436	14,0	0,28	1,40	○	2,55	3450	160	112	125	0,16	4	9	92
031-001836	18,0	0,36	1,66	○	2,55	3450	160	125	125	0,16	4	9	93
031-002236	22,4	0,45	1,94	○	2,55	3450	180	140	125	0,18	4	9	101
031-002836	28,0	0,56	2,31	○	2,55	3450	180	160	125	0,18	4	9	101
031-003536	35,0	0,70	2,75	○	3,45	3480	200	180	140	0,19	5	9	111
031-004536	45,0	0,90	3,40	○	4,55	3480	224	200	160	0,22	5	9	117
031-005618	56,0	1,12	4,34	○	6,3	1740	280	224	180	1,9	3	11	204
031-005636	56,0	1,12	4,1	○	4,55	3480	250	224	180	0,26	5	9	123
031-007118	71,0	1,43	5,3	○	6,3	1740	315	250	200	2,1	4	11	242
031-007136	71,0	1,43	5,1	○	6,3	3498	250	250	200	0,26	5	9	129
031-009018	90,0	1,81	6,4	○	8,6	1752	355	280	224	2,5	4	11	278
031-009036	90,0	1,81	6,4	○	8,6	3504	280	280	224	0,33	6	9	146
031-011218	112,0	2,25	7,9	○	8,6	1752	400	315	250	2,9	5	11	284
031-011236	112,0	2,25	7,8	○	8,6	3504	315	315	250	0,41	6	9	150
031-014018	140,0	2,81	9,7	○	12,6	1752	400	355	280	3,3	5	11	329
031-014036	140,0	2,81	9,6	○	12,6	3510	355	355	280	0,49	6	9	169
031-018018	180,0	3,62	12,3	○	17,3	1752	450	400	315	4,1	5	11	358
031-018036	180,0	3,62	12,2	○	17,3	3528	400	400	315	0,62	6	9	213
031-022418	224,0	4,50	15,1	○	17,3	1752	450	450	355	4,2	5	11	369
031-022436	224,0	4,50	15,0	○	17,3	3528	450	450	355	0,7	7	9	257
031-028036	280,0	5,62	18,7	○	21,3	3528	500	500	400	1,3	7	9	302
031-028018	280,0	5,62	18,8	○	21,3	1752	500	500	400	5,2	6	9	507
031-035518	355,0	7,13	23,7	○	25,3	1764	560	560	450	6,6	6	9	548
031-035536	355,0	7,13	23,6	○	33,5	3552	560	560	450	1,7	7	9	443
031-045018	450,0	9,04	29,8	○	34,5	1764	630	630	500	8,4	6	9	634
031-056018	560,0	11,25	36,8	○	42,5	1764	710	710	560	10,6	6	9	740
031-071018	710,0	14,26	46,4	○	52	1770	800	800	630	13,3	7	9	1049
031-090018	900,0	18,08	59,1	○	63	1776	900	900	710	16,8	8	9	1152
031-112018	1120,0	22,49	73,2	○	86	1776	1000	1000	800	26,3	8	9	1466
031-140018	1400,0	28,12	91,0	○	104	1776	1120	1120	900	34,9	8	9	1597
031-180012	1800,0	36,15	116,4	○	132	1176	1250	1250	1000	103,4	8	11	2669
031-224012	2240,0	44,99	144,5	○	158	1176	1400	1400	1120	135,9	8	11	3041
031-280012	2800,0	56,23	180,0	○	192	1176	1600	1600	1250	196,2	8	11	4348
031-355012	3550,0	71,30	228,8	○	288	1176	1800	1800	1400	308	8	11	5622
031-450009	4500,0	90,38	289,5	○	362	888	2000	2000	1600	660	8	11	7473

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 315 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 306 daPa** density at inlet operation of ρ1 = 1,168 kg/m³

Specific supply **Yt2 ≈ 259 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 355 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 355 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
035-000836	7,5	0,15	1,07	●	1,75	3420	140	100	125	0,16	3	9	99
035-001236	12,5	0,25	1,44	●	2,55	3450	140	100	125	0,17	3	9	93
035-001936	19,0	0,38	1,92	○	3,45	3480	160	125	125	0,18	3	9	98
035-002436	23,6	0,47	2,25	○	2,55	3450	180	140	125	0,20	4	9	107
035-003036	30,0	0,60	2,74	○	3,45	3480	200	160	125	0,22	4	9	113
035-003836	37,5	0,75	3,25	○	3,45	3480	200	180	140	0,22	4	9	120
035-004836	47,5	0,95	3,98	○	4,55	3480	224	200	160	0,24	5	9	118
035-006036	60,0	1,21	4,89	○	6,3	3498	250	224	180	0,28	5	9	128
035-007536	75,0	1,51	5,95	○	6,3	3498	250	250	200	0,32	5	9	131
035-009518	95,0	1,91	7,6	○	8,6	1752	355	280	224	2,9	4	11	280
035-009536	95,0	1,91	7,5	○	8,6	3504	280	280	224	0,38	6	9	150
035-011818	118,0	2,37	9,4	○	12,6	1752	400	315	250	3,6	4	11	320
035-011836	118,0	2,37	9,2	○	12,6	3510	315	315	250	0,47	6	9	163
035-015018	150,0	3,01	11,6	○	12,6	1752	400	355	280	3,9	4	11	332
035-015036	150,0	3,01	11,5	○	12,6	3510	355	355	280	0,6	6	9	170
035-019018	190,0	3,82	14,6	○	17,3	1752	450	400	315	4,6	5	11	434
035-019036	190,0	3,82	14,4	○	17,3	3528	400	400	315	0,7	6	9	248
035-023618	236,0	4,74	18,1	○	21,3	1752	500	450	355	5,9	5	11	457
035-023636	236,0	4,74	17,9	○	21,3	3528	450	450	355	1,1	7	9	280
035-030018	300,0	6,03	22,6	○	25,3	1764	500	500	400	5,8	6	9	523
035-030036	300,0	6,03	22,5	○	24,5	3540	500	500	400	1,4	7	9	307
035-037518	375,0	7,53	28,1	○	34,5	1764	560	560	450	7,5	6	9	597
035-047518	475,0	9,54	35,3	○	42,5	1764	630	630	500	10,0	6	9	695
035-060018	600,0	12,05	44,3	○	52	1770	710	710	560	12,2	6	9	988
035-075018	750,0	15,06	55,0	○	63	1776	800	800	630	14,9	7	9	1081
035-095018	950,0	19,08	70,1	○	86	1776	900	900	710	23,8	8	9	1282
035-118018	1180,0	23,70	86,8	○	104	1776	1000	1000	800	29,8	8	9	1510
035-150018	1500,0	30,13	109,6	○	127	1776	1120	1120	900	38,1	8	9	1758
035-190012	1900,0	38,16	138,2	○	158	1176	1250	1250	1000	125,3	8	11	2832
035-236012	2360,0	47,40	171,1	○	192	1176	1400	1400	1120	169,4	8	11	4005
035-300012	3000,0	60,25	216,7	○	230	1176	1600	1600	1250	216,0	8	11	4573
035-375012	3750,0	75,31	270,7	○	288	1176	1800	1800	1400	338,5	8	11	5945
035-375010	3750,0	75,31	270,5	○	315	980	1800	1800	1400	447	8	11	6539
035-475010	4750,0	95,40	342,4	○	400	980	2000	2000	1600	660	8	11	7545

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 355 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 343 daPa** density at inlet operation of **ρ1 = 1,164 kg/m³**

Specific supply **Yt2 ≈ 292 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 400 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
040-000636	6,3	0,13	1,08	●	1,75	3420	140	100	125	0,38	2	11	117
040-001036	10,0	0,20	1,40	●	2,55	3450	140	100	125	0,39	2	11	111
040-001636	16,0	0,32	1,90	○	3,45	3480	160	112	125	0,38	3	9	117
040-002036	20,0	0,40	2,23	○	3,45	3480	180	125	125	0,40	3	9	118
040-002536	25,0	0,50	2,65	○	3,45	3480	200	140	125	0,43	3	9	132
040-003136	31,5	0,63	3,19	○	3,45	3480	200	160	125	0,42	3	9	126
040-004036	40,0	0,80	3,85	○	4,55	3480	224	180	140	0,46	4	9	137
040-005036	50,0	1,00	4,66	○	6,3	3498	250	200	160	0,55	4	9	141
040-006336	63,0	1,27	5,72	○	6,3	3498	250	224	180	0,54	4	9	155
040-008036	80,0	1,61	7,2	○	8,6	3504	280	250	200	0,62	5	9	168
040-010036	100,0	2,01	8,8	○	12,6	3510	315	280	224	0,79	5	9	184
040-012518	125,0	2,51	11,1	○	12,6	1752	400	315	250	6,9	4	11	444
040-012536	125,0	2,51	10,9	○	12,6	3510	315	315	250	0,85	5	9	213
040-016018	160,0	3,21	13,9	○	17,3	1752	450	355	280	8,8	4	11	468
040-016036	160,0	3,21	13,7	○	17,3	3528	355	355	280	1,0	6	9	256
040-020018	200,0	4,02	17,2	○	21,3	1752	500	400	315	10,0	4	11	546
040-020036	200,0	4,02	17,0	○	21,3	3528	400	400	315	1,6	6	9	303
040-025018	250,0	5,02	21,4	○	25,3	1764	500	450	355	10,9	5	11	622
040-025036	250,0	5,02	21,2	○	24,5	3540	450	450	355	1,8	6	9	356
040-031518	315,0	6,33	26,5	○	34,5	1764	560	500	400	12,9	5	11	664
040-031536	315,0	6,33	26,4	○	33,5	3552	500	500	400	2,1	6	9	416
040-040036	400,0	8,03	33,6	○	41,5	3552	630	560	450	15,7	5	11	736
040-040018	400,0	8,03	33,6	○	42,5	1764	560	560	450	2,9	7	9	496
040-050018	500,0	10,04	41,7	○	52	1770	630	630	500	18,1	6	9	973
040-063018	630,0	12,65	52,2	○	63	1776	630	630	500	3,8	7	9	594
040-080018	800,0	16,07	65,9	○	86	1776	710	710	560	20,7	6	9	1135
040-100018	1000,0	20,08	83,2	○	104	1776	710	710	560	5,2	7	9	888
040-125018	1250,0	25,10	103,3	○	127	1776	800	800	630	28,3	6	9	1258
040-160018	1600,0	32,13	131,4	○	152	1776	900	900	710	37,6	7	9	1620
040-200018	2000,0	40,17	164,5	○	184	1776	1000	1000	800	47,3	7	9	1834
040-250012	2500,0	50,21	203,6	○	230	1176	1120	1120	900	63,0	8	11	2572
040-315012	3150,0	63,26	255,8	○	288	1176	1250	1250	1000	93,8	8	11	2949
040-400012	4000,0	80,33	324,5	○	362	1176	1400	1400	1120	280	7	11	5180
040-500012	5000,0	100,42	406,8	○	460	1176	1600	1600	1250	412	8	11	6078

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 400 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 385 daPa** density at inlet operation of ρ1 = 1,159 kg/m³

Specific supply **Yt2 ≈ 328 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 450 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design	volume flow and mass flow in NP at 450 daPa		shaft power in NP	ErP 2009/125/EG	recommended motor see instructions (1)	impeller speed	inlet	discharge		mass moment of inertia	performance curve type	number of blades	weight without motor
KXE	$\dot{V}_1$	$\dot{m}$	PW (3)		PM	nL	AÖ	B1	B2	I		z	KXE
	m³/min	kg/s	kW		kW	min-1	mm	mm		kgm²			kg
045-000936	8,5	0,17	1,41	●	2,55	3450	140	100	125	0,24	3	9	104
045-001336	13,2	0,27	1,87	●	3,45	3480	140	100	125	0,24	3	9	110
045-002136	21,2	0,43	2,60	○	4,55	3480	180	125	125	0,27	3	9	107
045-002736	26,5	0,53	3,11	○	3,45	3480	180	140	125	0,28	3	9	114
045-003436	33,5	0,67	3,76	○	4,55	3480	200	160	125	0,30	4	9	113
045-004236	42,5	0,85	4,55	○	6,3	3498	224	180	140	0,33	4	9	126
045-005336	53,0	1,06	5,49	○	6,3	3498	224	200	160	0,35	4	9	128
045-006736	67,0	1,35	6,77	○	8,6	3504	250	224	180	0,40	5	9	139
045-008536	85,0	1,71	8,53	○	12,6	3510	280	250	200	0,48	5	9	150
045-010636	106,0	2,13	10,4	○	12,6	3510	280	280	224	0,53	5	9	162
045-013236	132,0	2,65	12,8	○	17,3	3528	315	315	250	0,6	6	9	190
045-013218	132,0	2,65	13,2	○	17,3	1752	400	315	250	5,1	4	11	387
045-017018	170,0	3,41	16,8	○	21,3	1752	450	355	280	5,9	5	11	403
045-017036	170,0	3,41	16,3	○	17,3	3528	355	355	280	0,7	6	9	231
045-021218	212,0	4,26	20,5	○	25,3	1764	450	400	315	5,9	5	11	479
045-021236	212,0	4,26	20,2	○	24,5	3540	400	400	315	1,1	6	9	272
045-026518	265,0	5,32	25,4	○	34,5	1764	500	450	355	8,0	5	11	547
045-026536	265,0	5,32	25,1	○	33,5	3552	450	450	355	1,4	6	9	321
045-033518	335,0	6,73	32,0	○	34,5	1764	560	500	400	9,7	5	11	638
045-033536	335,0	6,73	31,9	○	41,5	3552	500	500	400	1,9	7	9	431
045-042518	425,0	8,54	40,0	○	42,5	1764	560	560	450	10,9	6	9	766
045-042536	425,0	8,54	40,0	○	51	3564	560	560	450	2,3	7	9	494
045-053018	530,0	10,64	49,6	○	63	1776	630	630	500	13,5	6	9	937
045-067018	670,0	13,46	62,2	○	86	1776	710	710	560	16,2	6	9	1079
045-085018	850,0	17,07	78,5	○	86	1776	800	800	630	23,6	6	9	1227
045-106018	1060,0	21,29	98,6	○	127	1776	900	900	710	30,5	7	9	1506
045-132018	1320,0	26,51	122,3	○	152	1776	1000	1000	800	38,5	8	9	1730
045-170018	1700,0	34,14	156,7	○	184	1776	1120	1120	900	52,6	8	9	2129
045-212018	2120,0	42,58	195,5	○	230	1776	1250	1250	1000	75,8	8	11	2720
045-265012	2650,0	53,22	242,0	○	288	1176	1400	1400	1120	230	8	11	4538
045-335012	3350,0	67,28	305,1	○	362	1176	1600	1600	1250	320	8	11	5788
045-425012	4250,0	85,35	388,1	○	460	1176	1800	1800	1400	456	8	11	6644
045-530012	5300,0	106,44	482,1	○	518	1176	2000	2000	1600	644	8	11	8143

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 450 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 431 daPa** density at inlet operation of **ρ1 = 1,153 kg/m³**

Specific supply **Yt2 ≈ 369 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 500 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
050-000736	7,1	0,14	1,42	●	2,55	3450	140	100	125	0,30	2	11	108
050-001136	11,2	0,22	1,87	●	3,45	3480	140	100	125	0,29	2	11	114
050-001836	18,0	0,36	2,57	○	4,55	3480	160	112	125	0,30	3	9	110
050-002236	22,4	0,45	3,01	○	4,55	3480	180	125	125	0,32	3	9	110
050-002836	28,0	0,56	3,60	○	6,3	3498	180	140	125	0,32	3	9	117
050-003536	35,0	0,70	4,33	○	6,3	3498	200	160	125	0,34	4	9	118
050-004536	45,0	0,90	5,30	○	6,3	3498	224	180	140	0,37	4	9	126
050-005636	56,0	1,12	6,39	○	8,6	3504	224	200	160	0,40	4	9	135
050-007136	71,0	1,43	7,90	○	8,6	3504	250	224	180	0,45	5	9	140
050-009036	90,0	1,81	10,0	○	12,6	3510	280	250	200	0,57	5	9	176
050-011236	112,0	2,25	12,1	○	17,3	3528	280	280	224	0,6	5	9	219
050-014018	140,0	2,81	15,5	○	17,3	1752	400	315	250	6,0	4	11	391
050-014036	140,0	2,81	15,0	○	17,3	3528	315	315	250	0,7	6	9	223
050-018018	180,0	3,62	19,6	○	21,3	1752	450	355	280	7,3	4	11	465
050-018036	180,0	3,62	19,1	○	21,3	3528	355	355	280	1,1	6	9	253
050-022436	224,0	4,50	23,5	○	33,5	3552	400	400	315	1,3	6	9	312
050-022418	224,0	4,50	23,9	○	34,5	1764	450	400	315	7,7	4	11	579
050-028018	280,0	5,62	29,7	○	34,5	1764	500	450	355	9,0	5	11	599
050-028036	280,0	5,62	29,4	○	33,5	3552	450	450	355	1,5	6	9	352
050-035518	355,0	7,13	37,5	○	42,5	1764	560	500	400	11,1	5	11	745
050-035536	355,0	7,13	37,3	○	41,5	3552	500	500	400	2,0	7	9	461
050-045018	450,0	9,04	46,8	○	52	1770	560	560	450	13,0	5	11	802
050-045036	450,0	9,04	46,9	○	51	3564	560	560	450	2,6	7	9	498
050-056018	560,0	11,25	58,0	○	63	1776	630	630	500	15,2	6	9	943
050-056036	560,0	11,25	58,1	○	62	3570	630	630	500	3,3	7	9	597
050-071018	710,0	14,26	73,0	○	86	1776	710	710	560	22,2	6	9	1155
050-090018	900,0	18,08	92,1	○	104	1776	800	800	630	27,2	6	9	1238
050-112018	1120,0	22,49	115,4	○	127	1776	900	900	710	33,8	7	9	1594
050-140018	1400,0	28,12	143,7	○	184	1776	1000	1000	800	42,5	7	9	1928
050-180018	1800,0	36,15	181,9	○	230	1776	1120	1120	900	61,5	7	9	2159
050-224018	2240,0	44,99	229,4	○	288	1776	1250	1250	1000	85,1	8	11	3077
050-280012	2800,0	56,23	280,2	○	362	1176	1400	1400	1120	276	7	11	5094
050-355012	3550,0	71,30	359,5	○	408	1176	1600	1600	1250	384	8	11	5866
050-450012	4500,0	90,38	453,8	○	518	1176	1800	1800	1400	542	8	11	6836
050-560012	5600,0	112,47	564,5	○	644	1176	2000	2000	1600	699	8	11	8408

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 500 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 477 daPa** density at inlet operation of **ρ1 = 1,148 kg/m³**

Specific supply **Yt2 ≈ 409 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 560 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 560 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
056-000836	7,5	0,15	1,64	●	3,45	3480	140	100	125	0,35	2	11	114
056-001536	15,0	0,30	2,52	○	3,45	3480	160	100	125	0,35	3	9	114
056-002436	23,6	0,47	3,54	○	4,55	3480	180	125	125	0,37	3	9	111
056-003036	30,0	0,60	4,26	○	6,3	3498	200	140	125	0,39	3	9	119
056-003836	37,5	0,75	5,09	○	6,3	3498	200	160	125	0,40	4	9	119
056-004836	47,5	0,95	6,21	○	8,6	3504	224	180	140	0,43	4	9	133
056-006036	60,0	1,21	7,63	○	8,6	3504	250	200	160	0,52	4	9	159
056-007536	75,0	1,51	9,29	○	12,6	3510	250	224	180	0,52	4	9	173
056-009518	95,0	1,91	12,3	○	17,3	1752	355	250	200	6,1	3	11	400
056-009536	95,0	1,91	11,7	○	12,6	3510	280	250	200	0,7	5	9	177
056-011818	118,0	2,37	15,0	○	17,3	1752	400	280	224	6,9	4	11	442
056-011836	118,0	2,37	14,3	○	17,3	3528	315	280	224	0,8	5	9	221
056-015018	150,0	3,01	18,5	○	21,3	1752	400	315	250	7,6	4	11	455
056-015036	150,0	3,01	17,8	○	21,3	3528	315	315	250	1,0	5	9	243
056-019018	190,0	3,82	23,1	○	25,3	1764	450	355	280	8,3	4	11	506
056-019036	190,0	3,82	22,5	○	24,5	3540	355	355	280	1,3	6	9	257
056-023618	236,0	4,74	28,5	○	34,5	1764	500	400	315	10,1	5	11	588
056-023636	236,0	4,74	27,8	○	33,5	3552	400	400	315	1,5	6	9	343
056-030018	300,0	6,03	35,5	○	42,5	1764	500	450	355	10,5	5	11	705
056-030036	300,0	6,03	35,2	○	41,5	3552	450	450	355	1,9	6	9	404
056-037518	375,0	7,53	44,2	○	52	1770	560	500	400	13,6	5	11	781
056-037536	375,0	7,53	44,0	○	51	3564	500	500	400	2,3	6	9	480
056-047518	475,0	9,54	55,6	○	63	1776	630	560	450	17,5	5	11	906
056-047536	475,0	9,54	55,5	○	62	3570	560	560	450	3,0	7	9	562
056-060018	600,0	12,05	69,4	○	86	1776	630	630	500	19,7	6	9	1091
056-060036	600,0	12,05	69,4	○	84	3570	630	630	500	4,0	7	9	747
056-075018	750,0	15,06	86,1	○	104	1776	710	710	560	24,9	6	9	1163
056-095018	950,0	19,08	109,8	○	127	1776	800	800	630	32,6	7	9	1502
056-118018	1180,0	23,70	135,7	○	152	1776	900	900	710	39,3	7	9	1658
056-150018	1500,0	30,13	171,8	○	184	1776	1000	1000	800	56,7	7	9	2048
056-190012	1900,0	38,16	215,7	○	230	1176	1120	1120	900	193,2	7	11	3541
056-236012	2360,0	47,40	266,3	○	288	1176	1250	1250	1000	254	7	11	4376
056-300012	3000,0	60,25	338,6	○	362	1176	1400	1400	1120	316	7	11	5391
056-375012	3750,0	75,31	425,1	○	460	1176	1600	1600	1250	451	8	11	6302
056-475012	4750,0	95,40	534,8	○	575	1176	1800	1800	1400	595	8	11	7573
056-600012	6000,0	120,50	678,3	○	725	1176	2000	2000	1600	842	8	11	9157

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 560 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 531 daPa** density at inlet operation of **ρ1 = 1,148 kg/m³**

Specific supply **Yt2 ≈ 458 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 630 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
063-000836	8,0	0,16	1,93	●	3,45	3480	140	100	125	0,43	2	11	126
063-001236	12,5	0,25	2,57	●	4,55	3480	140	100	125	0,42	2	11	122
063-002036	20,0	0,40	3,53	○	6,3	3498	160	112	125	0,42	3	9	127
063-002536	25,0	0,50	4,15	○	6,3	3498	180	125	125	0,44	3	9	127
063-003136	31,5	0,63	5,00	○	8,6	3504	200	140	125	0,47	3	9	145
063-004036	40,0	0,80	6,10	○	8,6	3504	200	160	125	0,47	3	9	146
063-005036	50,0	1,00	7,38	○	8,6	3504	224	180	140	0,51	4	9	156
063-006336	63,0	1,27	8,95	○	12,6	3510	250	200	160	0,6	4	9	168
063-008036	80,0	1,61	11,3	○	12,6	3510	280	224	180	0,7	5	9	176
063-010036	100,0	2,01	13,8	○	17,3	3528	280	250	200	0,8	5	9	203
063-012536	125,0	2,51	17,0	○	21,3	3528	315	280	224	1,1	5	9	241
063-016018	160,0	3,21	22,4	○	25,3	1764	400	315	250	9,0	3	11	496
063-016036	160,0	3,21	21,3	○	24,5	3540	315	315	250	1,2	5	9	247
063-020018	200,0	4,02	27,5	○	34,5	1764	450	355	280	9,9	4	11	591
063-020036	200,0	4,02	26,4	○	33,5	3552	355	355	280	1,4	6	9	318
063-025018	250,0	5,02	33,9	○	42,5	1764	500	400	315	12,0	4	11	692
063-025036	250,0	5,02	32,9	○	41,5	3552	400	400	315	1,7	6	9	366
063-031518	315,0	6,33	41,9	○	52	1770	500	450	355	12,5	4	11	737
063-031536	315,0	6,33	41,4	○	51	3564	450	450	355	2,1	6	9	418
063-040018	400,0	8,03	52,9	○	63	1776	560	500	400	16,5	5	11	883
063-040036	400,0	8,03	52,5	○	62	3570	500	500	400	2,7	6	9	545
063-050036	500,0	10,04	65,4	○	84	3570	560	560	450	3,6	7	9	697
063-050018	500,0	10,04	65,6	○	86	1776	630	560	450	22,0	5	11	1023
063-063018	630,0	12,65	81,5	○	104	1776	630	630	500	22,5	5	11	1103
063-063036	630,0	12,65	82,7	○	101	3570	630	630	500	5,2	7	9	829
063-080018	800,0	16,07	104,3	○	127	1776	710	710	560	29,8	7	9	1417
063-100018	1000,0	20,08	129,6	○	152	1776	800	800	630	38,6	7	9	1566
063-125018	1250,0	25,10	160,7	○	184	1776	900	900	710	47,9	7	9	1940
063-160018	1600,0	32,13	203,0	○	230	1776	1000	1000	800	63,3	6	9	2068
063-200018	2000,0	40,17	254,1	○	288	1776	1120	1120	900	85,3	7	11	2843
063-250018	2500,0	50,21	318,4	○	362	1776	1250	1250	1000	121	7	11	3177
063-315018	3150,0	63,26	402,3	○	460	1776	1400	1400	1120	180	8	11	4444
063-400012	4000,0	80,33	506,3	○	575	1176	1600	1600	1250	553	7	11	6506
063-500012	5000,0	100,42	634,5	○	725	1176	1800	1800	1400	748	8	11	8101
063-630012	6300,0	126,53	796,0	○	920	1176	2000	2000	1600	990	8	11	9439
063-630010	6300,0	126,53	788,0	○	1000	980	2000	2000	1600	1433	7	11	11371

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 630 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 593 daPa** density at inlet operation of **ρ1 = 1,148 kg/m³**

Specific supply **Yt2 ≈ 514 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 710 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 710 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
071-000936	8,5	0,17	2,27	●	4,55	3480	140	100	125	0,53	2	11	132
071-001336	13,2	0,27	3,04	●	6,3	3498	140	100	125	0,50	2	11	136
071-002136	21,2	0,43	4,14	○	6,3	3498	180	112	125	0,52	3	9	136
071-002736	26,5	0,53	4,93	○	8,6	3504	180	125	125	0,52	3	9	142
071-003436	33,5	0,67	5,96	○	8,6	3504	200	140	125	0,55	3	9	147
071-004236	42,5	0,85	7,25	○	8,6	3504	224	160	125	0,60	3	9	147
071-005336	53,0	1,06	8,78	○	12,6	3510	224	180	140	0,6	3	9	166
071-006736	67,0	1,35	10,7	○	12,6	3510	250	200	160	0,7	4	9	170
071-008536	85,0	1,71	13,4	○	17,3	3528	280	224	180	0,8	4	9	202
071-010636	106,0	2,13	16,4	○	21,3	3528	280	250	200	1,0	4	9	223
071-013236	132,0	2,65	20,1	○	21,3	3528	315	280	224	1,3	5	9	267
071-017018	170,0	3,41	27,1	○	34,5	1764	450	315	250	11,7	4	11	622
071-017036	170,0	3,41	25,5	○	33,5	3552	355	315	250	1,6	5	9	310
071-021218	212,0	4,26	32,9	○	42,5	1764	450	355	280	12,8	4	11	700
071-021236	212,0	4,26	31,3	○	33,5	3552	355	355	280	1,6	5	9	320
071-026518	265,0	5,32	40,4	○	52	1770	500	400	315	14,3	4	11	765
071-026536	265,0	5,32	39,4	○	51	3564	400	400	315	2,1	6	9	406
071-033518	335,0	6,73	50,7	○	63	1776	560	450	355	17,6	5	11	888
071-033536	335,0	6,73	49,7	○	62	3570	450	450	355	2,6	6	9	512
071-042518	425,0	8,54	63,2	○	86	1776	560	500	400	21,1	5	11	992
071-042536	425,0	8,54	62,4	○	84	3570	500	500	400	3,4	6	9	681
071-053018	530,0	10,64	78,0	○	86	1776	630	560	450	25,0	5	11	1105
071-053036	530,0	10,64	78,8	○	84	3570	560	560	450	4,5	6	9	706
071-067018	670,0	13,46	98,0	○	104	1776	710	630	500	33,2	5	11	1234
071-067036	670,0	13,46	100,2	○	123	3570	630	630	500	6,3	7	9	964
071-085018	850,0	17,07	124,1	○	152	1776	710	710	560	40,3	6	11	1505
071-106018	1060,0	21,29	154,3	○	184	1776	800	800	630	48,2	7	9	1727
071-132018	1320,0	26,51	191,3	○	230	1776	900	900	710	59,2	7	9	1970
071-170018	1700,0	34,14	245,0	○	288	1776	1000	1000	800	82	7	11	2685
071-212018	2120,0	42,58	305,0	○	362	1776	1120	1120	900	103	7	11	2995
071-265018	2650,0	53,22	383,1	○	408	1776	1250	1250	1000	142	8	11	3734
071-335012	3350,0	67,28	474,1	○	518	1176	1400	1400	1120	496	7	11	6065
071-425012	4250,0	85,35	603,8	○	644	1176	1600	1600	1250	628	7	11	7430
071-530012	5300,0	106,44	756,3	○	817	1176	1800	1800	1400	895	8	11	8755

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 710 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 664 daPa** density at inlet operation of ρ1 = 1,125 kg/m³

Specific supply **Yt2 ≈ 578 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 800 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
080-000936	9,0	0,18	2,69	●	6,3	3498	140	100	125	0,6	2	11	151
080-001436	14,0	0,28	3,63	●	6,3	3498	140	100	125	0,6	2	11	151
080-002236	22,4	0,45	4,92	○	8,6	3504	180	112	125	0,6	3	9	157
080-002836	28,0	0,56	5,91	○	8,6	3504	180	125	125	0,6	3	9	158
080-003536	35,0	0,70	7,01	○	12,6	3510	200	140	125	0,7	3	9	171
080-004536	45,0	0,90	8,62	○	12,6	3510	224	160	125	0,7	3	9	172
080-005636	56,0	1,12	10,4	○	17,3	3528	224	180	140	0,7	3	9	213
080-007136	71,0	1,43	12,8	○	17,3	3528	250	200	160	0,8	4	9	216
080-009036	90,0	1,81	16,1	○	17,3	3528	280	224	180	1,0	4	9	226
080-011236	112,0	2,25	19,4	○	21,3	3528	280	250	200	1,3	4	9	250
080-014036	140,0	2,81	23,8	○	33,5	3552	315	280	224	1,4	5	9	306
080-018018	180,0	3,62	32,3	○	34,5	1764	450	315	250	14,1	3	11	647
080-018036	180,0	3,62	30,2	○	33,5	3552	355	315	250	1,7	5	9	331
080-022418	224,0	4,50	39,0	○	42,5	1764	450	355	280	14,9	4	11	707
080-022436	224,0	4,50	37,1	○	41,5	3552	355	355	280	1,8	5	9	362
080-028018	280,0	5,62	48,4	○	52	1770	500	400	315	17,0	4	11	790
080-028036	280,0	5,62	46,7	○	51	3564	400	400	315	2,4	6	9	476
080-035518	355,0	7,13	60,4	○	86	1776	560	450	355	24,2	4	11	998
080-035536	355,0	7,13	59,0	○	84	3570	450	450	355	3,3	6	9	587
080-045018	450,0	9,04	75,2	○	86	1776	560	500	400	24,5	4	11	1021
080-045036	450,0	9,04	74,1	○	84	3570	500	500	400	3,8	6	9	684
080-056018	560,0	11,25	92,6	○	104	1776	630	560	450	28,6	5	11	1241
080-056036	560,0	11,25	93,2	○	101	3570	560	560	450	5,4	6	9	840
080-071018	710,0	14,26	118,0	○	127	1776	710	630	500	37,8	6	11	1428
080-071036	710,0	14,26	118,9	○	148	3576	630	630	500	7,9	7	9	978
080-090018	900,0	18,08	147,2	○	184	1776	710	710	560	42,7	6	11	1618
080-112018	1120,0	22,49	180,6	○	230	1776	800	800	630	52,7	6	9	1876
080-140018	1400,0	28,12	225,8	○	288	1776	900	900	710	76	6	11	2313
080-180018	1800,0	36,15	288,5	○	362	1776	1000	1000	800	91	6	11	2711
080-224018	2240,0	44,99	360,0	○	408	1776	1120	1120	900	127	7	11	3417
080-280012	2800,0	56,23	441,7	○	518	1176	1250	1250	1000	472	6	11	5710
080-280018	2800,0	56,23	447,7	○	575	1776	1250	1250	1000	162	7	11	4066
080-355012	3550,0	71,30	560,9	○	644	1176	1400	1400	1120	589	6	11	6406
080-450012	4500,0	90,38	718,0	○	817	1176	1600	1600	1250	778	7	11	7856
080-560012	5600,0	112,47	893,2	○	1120	1176	1800	1800	1400	1053	7	11	9295

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase	**Δ pt2 =**	**800 daPa**	reference density of	ρ0 =	1,205 kg/m³
Total pressure increase	**Δ pt1 =**	**742 daPa**	density at inlet operation of	ρ1 =	1,116 kg/m³
Specific supply	**Yt2 ≈**	**649 daJ/kg**			

○ ErP 2009/125/EG fulfilled from 01.01.2015
● ErP 2009/125/EG not fulfilled, please inquire
□ **does not require labeling according to** ErP 2009/125/EG
◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 900 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 900 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
090-000936	9,5	0,19	3,20	●	8,6	3504	140	100	125	0,8	2	11	159
090-001536	15,0	0,30	4,27	●	8,6	3504	160	100	125	0,8	2	11	159
090-002436	23,6	0,47	5,88	○	8,6	3504	180	112	125	0,8	2	11	159
090-003036	30,0	0,60	7,06	○	12,6	3510	200	125	125	0,8	3	9	168
090-003836	37,5	0,75	8,44	○	12,6	3510	200	140	125	0,8	3	9	172
090-004836	47,5	0,95	10,2	○	17,3	3528	224	160	125	0,9	3	9	198
090-006036	60,0	1,21	12,5	○	17,3	3528	250	180	140	0,9	4	9	215
090-007536	75,0	1,51	15,2	○	21,3	3528	250	200	160	1,1	4	9	236
090-009536	95,0	1,91	19,1	○	21,3	3528	280	224	180	1,5	4	9	249
090-011836	118,0	2,37	23,0	○	24,5	3540	315	250	200	1,6	4	9	253
090-015036	150,0	3,01	28,7	○	33,5	3552	315	280	224	1,7	4	9	328
090-019018	190,0	3,82	38,5	○	42,5	1764	450	315	250	17,9	3	11	756
090-019036	190,0	3,82	35,7	○	41,5	3552	355	315	250	1,9	5	9	390
090-023618	236,0	4,74	46,7	○	52	1770	500	355	280	19,6	4	11	893
090-023636	236,0	4,74	45,0	○	51	3564	400	355	280	2,9	5	11	424
090-030018	300,0	6,03	58,4	○	63	1776	500	400	315	23,1	4	11	1028
090-030036	300,0	6,03	56,5	○	62	3570	400	400	315	3,2	5	11	506
090-037518	375,0	7,53	71,8	○	86	1776	560	450	355	28,3	4	11	1163
090-037536	375,0	7,53	69,7	○	84	3570	450	450	355	3,7	6	9	590
090-047518	475,0	9,54	89,5	○	104	1776	630	500	400	32,7	5	11	1200
090-047536	475,0	9,54	89,2	○	101	3570	500	500	400	5,2	6	9	820
090-060018	600,0	12,05	111,5	○	127	1776	630	560	450	36,4	5	11	1335
090-060036	600,0	12,05	111,6	○	123	3570	560	560	450	7,0	6	9	935
090-075018	750,0	15,06	139,3	○	152	1776	710	630	500	47,0	6	11	1501
090-095018	950,0	19,08	175,5	○	230	1776	800	710	560	65	6	13	1891
090-118018	1180,0	23,70	218,9	○	288	1776	800	800	630	79	6	13	2303
090-150018	1500,0	30,13	273,0	○	362	1776	900	900	710	89	7	11	2693
090-190012	1900,0	38,16	342,7	○	408	1176	1120	1000	800	347	6	13	4897
090-236012	2360,0	47,40	426,0	○	460	1176	1120	1120	900	402	6	13	5272
090-300012	3000,0	60,25	535,3	○	575	1176	1250	1250	1000	572	7	11	5956
090-375012	3750,0	75,31	672,3	○	725	1176	1400	1400	1120	700	7	11	7224
090-475012	4750,0	95,40	847,6	○	920	1176	1600	1600	1250	939	7	11	8283
090-600012	6000,0	120,50	1071,5	○	1250	1176	1800	1800	1400	1193	7	11	10721

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 900 daPa** reference density of ρ_{60} = 1,205 kg/m³

Total pressure increase **Δ pt1 = 827 daPa** density at inlet operation of ρ_{t1} = 1,118 kg/m³

Specific supply **Yt2 ≈ 728 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 1000 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
100-001036	10,0	0,20	3,76	●	8,6	3504	140	100	125	0,9	2	11	160
100-001636	16,0	0,32	5,06	●	8,6	3504	160	100	125	0,9	2	11	160
100-002536	25,0	0,50	6,92	●	12,6	3510	180	112	125	0,9	2	11	169
100-003136	31,5	0,63	8,25	○	12,6	3510	200	125	125	0,9	3	9	169
100-004036	40,0	0,80	10,0	○	17,3	3528	200	140	125	0,9	3	9	198
100-005036	50,0	1,00	12,0	○	17,3	3528	224	160	125	1,0	4	9	199
100-006336	63,0	1,27	14,6	○	21,3	3528	250	180	140	1,3	4	9	277
100-008036	80,0	1,61	18,3	○	24,5	3540	280	200	160	1,3	5	9	282
100-010036	100,0	2,01	22,4	○	24,5	3540	280	224	180	1,7	5	11	298
100-012536	125,0	2,51	27,2	○	33,5	3552	315	250	200	1,9	4	11	338
100-016036	160,0	3,21	34,2	○	41,5	3552	315	280	224	2,0	4	11	387
100-020036	200,0	4,02	42,2	○	51	3564	355	315	250	2,3	5	11	405
100-025018	250,0	5,02	55,6	○	63	1776	500	355	280	27,5	4	11	1047
100-025036	250,0	5,02	52,7	○	62	3570	400	355	280	3,1	5	11	441
100-031518	315,0	6,33	67,8	○	86	1776	500	400	315	27,7	4	11	1081
100-031536	315,0	6,33	65,5	○	84	3570	400	400	315	3,7	5	11	578
100-040018	400,0	8,03	84,9	○	104	1776	560	450	355	32,6	4	11	1207
100-040036	400,0	8,03	82,2	○	101	3570	450	450	355	4,5	6	9	770
100-050018	500,0	10,04	104,5	○	127	1776	630	500	400	37,4	4	11	1337
100-050036	500,0	10,04	103,8	○	123	3570	500	500	400	5,9	6	9	905
100-063018	630,0	12,65	129,7	○	152	1776	630	560	450	43	4	11	1434
100-063036	630,0	12,65	130,7	○	148	3576	560	560	450	7,9	7	9	945
100-080018	800,0	16,07	163,4	○	184	1776	710	630	500	59	5	13	1605
100-080036	800,0	16,07	165,6	○	180	3576	630	630	500	11	7	9	1207
100-100018	1000,0	20,08	202,2	○	230	1776	800	710	560	70	5	13	1907
100-125018	1250,0	25,10	252,7	○	288	1776	800	800	630	86	5	13	2331
100-160018	1600,0	32,13	318,7	○	362	1776	900	900	710	106	6	11	2747
100-200018	2000,0	40,17	399,0	○	460	1776	1000	1000	800	142	6	11	3317
100-250018	2500,0	50,21	501,2	○	575	1776	1120	1120	900	183	7	11	4053
100-315018	3150,0	63,26	628,6	○	725	1776	1250	1250	1000	245	7	11	4780
100-400018	4000,0	80,33	801,7	○	920	1776	1400	1400	1120	335	8	11	5872
100-500012	5000,0	100,42	991,6	○	1120	1176	1600	1600	1250	1117	7	11	9247

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase **Δ pt2 = 1000 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 911 daPa** density at inlet operation of ρ1 = 1,096 kg/m³

Specific supply **Yt2 ≈ 807 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1120 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 1120 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
112-001036	10,0	0,20	4,49	□	8,6	3504	140	100	125	1,6	2	13	205
112-001636	16,0	0,32	5,97	□	12,6	3510	160	100	125	1,6	2	13	215
112-002536	25,0	0,50	8,08	□	17,3	3528	180	112	125	1,6	2	13	242
112-003136	31,5	0,63	9,56	□	17,3	3528	200	125	125	1,6	2	13	243
112-004036	40,0	0,80	11,6	◙	21,3	3528	200	140	125	1,8	2	13	268
112-005036	50,0	1,00	13,7	◙	21,3	3528	224	160	125	1,8	4	11	277
112-006336	63,0	1,27	16,6	◙	24,5	3540	250	180	140	1,9	4	11	287
112-008036	80,0	1,61	20,7	◙	33,5	3552	280	200	160	2,0	5	11	327
112-010036	100,0	2,01	25,1	◙	33,5	3552	280	224	180	2,0	5	11	336
112-012536	125,0	2,51	30,4	◙	33,5	3552	315	250	200	2,1	4	11	340
112-016036	160,0	3,21	38,4	◙	41,5	3552	315	280	224	2,3	4	11	390
112-020036	200,0	4,02	47,3	◙	62	3570	355	315	250	2,7	4	11	425
112-025018	250,0	5,02	62,5	◙	86	1776	500	355	280	33,1	4	13	1100
112-025036	250,0	5,02	58,9	◙	84	3570	400	355	280	3,9	5	11	502
112-031518	315,0	6,33	76,5	◙	86	1776	500	400	315	32,9	3	11	1179
112-031536	315,0	6,33	73,1	◙	84	3570	400	400	315	4,1	5	11	581
112-040018	400,0	8,03	95,4	◙	104	1776	560	450	355	38,8	4	13	1225
112-040036	400,0	8,03	92,5	◙	101	3570	450	450	355	5,1	5	11	777
112-050018	500,0	10,04	118,1	◙	152	1776	630	500	400	50,1	4	13	1491
112-050036	500,0	10,04	115,8	◙	148	3576	500	500	400	7	6	9	923
112-063018	630,0	12,65	146,3	◙	184	1776	630	560	450	58,2	4	13	1610
112-063036	630,0	12,65	144,4	◙	180	3576	560	560	450	8	6	9	959
112-080018	800,0	16,07	182,8	◙	230	1776	710	630	500	66,8	5	13	1804
112-080036	800,0	16,07	182,7	◙	224	3576	630	630	500	10	6	9	1062
112-100018	1000,0	20,08	228,1	◙	288	1776	800	710	560	91	5	13	2238
112-125018	1250,0	25,10	282,2	◙	362	1776	800	800	630	96	5	13	2350
112-160018	1600,0	32,13	355,3	◙	408	1776	900	900	710	117	6	11	3128
112-200018	2000,0	40,17	444,5	◙	575	1776	1000	1000	800	167	6	11	3766
112-250018	2500,0	50,21	556,8	◙	630	1776	1120	1120	900	218	7	11	4540
112-315018	3150,0	63,26	707,4	◙	817	1776	1250	1250	1000	286	7	11	4850
112-400018	4000,0	80,33	892,9	◙	1000	1776	1400	1400	1120	387	7	11	6358

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1120 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 1009 daPa** density at inlet operation of ρ1 = 1,084 kg/m³

Specific supply **Yt2 ≈ 901 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 1250 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
125-001036	10,0	0,20	5,18	□	12,6	3510	140	100	125	2,1	1	13	247
125-001636	16,0	0,32	6,84	□	12,6	3510	160	100	125	2,1	1	13	247
125-002536	25,0	0,50	9,22	□	17,3	3528	180	112	125	2,1	1	13	271
125-003136	31,5	0,63	10,8	□	17,3	3528	200	125	125	2,2	2	13	273
125-004036	40,0	0,80	13,2	◙	21,3	3528	200	140	125	2,2	2	13	279
125-005036	50,0	1,00	15,4	◙	21,3	3528	224	160	125	2,1	3	11	287
125-006336	63,0	1,27	18,6	◙	24,5	3540	250	180	140	2,2	3	11	307
125-008036	80,0	1,61	23,2	◙	33,5	3552	280	200	160	2,6	3	11	381
125-010036	100,0	2,01	28,2	◙	33,5	3552	280	224	180	2,6	3	11	391
125-012536	125,0	2,51	34,5	◙	41,5	3552	315	250	200	3,0	4	11	457
125-016036	160,0	3,21	42,7	◙	51	3564	315	280	224	3,4	3	11	482
125-020036	200,0	4,02	52,3	◙	62	3570	355	315	250	3,7	3	11	503
125-025036	250,0	5,02	65,6	◙	84	3570	400	355	280	4,4	4	11	628
125-031518	315,0	6,33	86,1	◙	104	1776	500	400	315	41,8	2	13	1255
125-031536	315,0	6,33	81,4	◙	101	3570	400	400	315	4,8	4	11	758
125-040018	400,0	8,03	107,1	◙	127	1776	560	450	355	45,2	3	13	1364
125-040036	400,0	8,03	104,6	◙	123	3570	450	450	355	7	4	11	875
125-050018	500,0	10,04	132,0	◙	152	1776	630	500	400	58,2	3	13	1507
125-050036	500,0	10,04	128,7	◙	148	3576	500	500	400	8	5	9	928
125-063036	630,0	12,65	160,5	◙	180	3576	560	560	450	9	5	9	1028
125-063018	630,0	12,65	163,5	◙	184	1776	630	560	450	67	3	13	1628
125-080018	800,0	16,07	203,8	◙	230	1776	710	630	500	76	3	13	2067
125-100018	1000,0	20,08	253,9	◙	288	1776	800	710	560	104	4	13	2508
125-125018	1250,0	25,10	313,9	◙	362	1776	800	800	630	115	4	13	2661
125-160018	1600,0	32,13	401,3	◙	460	1776	900	900	710	153	4	13	3354
125-200018	2000,0	40,17	502,3	◙	575	1776	1000	1000	800	206	5	13	4101
125-250018	2500,0	50,21	620,6	◙	725	1776	1120	1120	900	236	6	11	4480
125-315018	3150,0	63,26	785,4	◙	920	1776	1250	1250	1000	309	6	11	5600
125-400018	4000,0	80,33	990,7	◙	1100	1776	1400	1400	1120	430	6	11	6411

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1250 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1113 daPa** density at inlet operation of **ρ1 = 1,072 kg/m³**

Specific supply **Yt2 ≈ 1002 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 1400 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
140-001036	10,0	0,20	6,02	□	17,3	3528	140	100	125	2,5	1	13	302
140-001636	16,0	0,32	7,88	□	17,3	3528	160	100	125	2,5	1	13	302
140-002536	25,0	0,50	10,6	□	21,3	3528	180	112	125	2,5	1	13	302
140-003136	31,5	0,63	12,4	□	21,3	3528	200	125	125	2,6	2	13	303
140-004036	40,0	0,80	15,1	□	24,5	3540	200	140	125	2,5	2	13	320
140-005036	50,0	1,00	17,7	◙	24,5	3540	224	160	125	2,6	2	13	332
140-006336	63,0	1,27	21,0	◙	33,5	3552	250	180	140	2,9	3	11	416
140-008036	80,0	1,61	26,3	◙	41,5	3552	280	200	160	3,0	3	11	472
140-010036	100,0	2,01	31,8	◙	41,5	3552	280	224	180	3,0	3	11	484
140-012536	125,0	2,51	38,7	◙	51	3564	315	250	200	3,9	4	11	526
140-016036	160,0	3,21	47,9	◙	62	3570	315	280	224	3,8	3	11	607
140-020036	200,0	4,02	59,1	◙	84	3570	355	315	250	4,1	3	11	610
140-025036	250,0	5,02	73,4	◙	84	3570	400	355	280	4,9	4	11	631
140-031536	315,0	6,33	91,0	◙	101	3570	400	400	315	5,3	4	11	761
140-040036	400,0	8,03	116,8	◙	148	3576	450	450	355	8,0	4	11	893
140-050018	500,0	10,04	148,3	◙	184	1776	630	500	400	74	3	13	1801
140-050036	500,0	10,04	145,3	◙	180	3576	500	500	400	9,8	4	11	1013
140-063018	630,0	12,65	183,4	◙	230	1776	630	560	450	79	3	13	1984
140-063036	630,0	12,65	178,9	◙	224	3576	560	560	450	11,3	5	9	1134
140-080018	800,0	16,07	228,1	◙	288	1776	710	630	500	91	3	13	2370
140-100018	1000,0	20,08	283,6	◙	362	1776	800	710	560	126	4	13	2678
140-125018	1250,0	25,10	350,4	◙	408	1776	800	800	630	130	4	13	3167
140-160018	1600,0	32,13	452,4	◙	575	1776	900	900	710	169	5	13	3855
140-200018	2000,0	40,17	561,7	◙	630	1776	1000	1000	800	254	5	13	4438
140-250018	2500,0	50,21	691,4	◙	750	1776	1120	1120	900	264	6	11	5069
140-315018	3150,0	63,26	873,7	◙	950	1776	1250	1250	1000	375	6	11	6095

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1400 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1231 daPa** density at inlet operation of **ρ1 = 1,058 kg/m³**

Specific supply **Yt2 ≈ 1118 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1600 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 1600 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
160-001636	16,0	0,32	9,3	□	21,3	3528	160	100	125	3,1	1	13	330
160-002536	25,0	0,50	12,3	□	24,5	3540	180	112	125	3,0	2	13	341
160-003136	31,5	0,63	14,2	□	24,5	3540	200	125	125	3,1	2	13	342
160-004036	40,0	0,80	17,2	□	33,5	3552	200	140	125	3,1	2	13	420
160-005036	50,0	1,00	20,2	◙	33,5	3552	224	160	125	3,3	2	13	433
160-006336	63,0	1,27	24,3	◙	41,5	3552	250	180	140	3,5	3	11	473
160-008036	80,0	1,61	30,0	◙	51	3564	250	200	160	3,6	3	11	506
160-010036	100,0	2,01	36,6	◙	41,5	3552	280	224	180	3,9	3	11	492
160-012536	125,0	2,51	44,5	◙	51	3564	315	250	200	4,6	2	11	530
160-016036	160,0	3,21	55,3	◙	62	3570	315	280	224	4,6	2	11	611
160-020036	200,0	4,02	67,6	◙	84	3570	355	315	250	4,9	3	11	615
160-025036	250,0	5,02	83,8	◙	101	3570	400	355	280	6,2	3	11	786
160-031536	315,0	6,33	103,8	◙	123	3570	400	400	315	7,2	3	11	919
160-040036	400,0	8,03	132,9	◙	148	3576	450	450	355	9,0	4	11	957
160-050018	500,0	10,04	170,2	◙	184	1776	630	500	400	90	3	13	1939
160-050036	500,0	10,04	165,3	◙	180	3576	500	500	400	12,5	4	11	1139
160-063018	630,0	12,65	210,3	◙	230	1776	630	560	450	95	3	13	2131
160-063036	630,0	12,65	205,2	◙	224	3576	560	560	450	12,9	4	11	1144
160-080018	800,0	16,07	260,8	◙	288	1776	710	630	500	108	3	13	2508
160-100018	1000,0	20,08	323,3	◙	362	1776	800	710	560	149	3	13	2712
160-125018	1250,0	25,10	399,3	◙	460	1776	800	800	630	152	3	13	3199
160-160018	1600,0	32,13	514,5	◙	575	1776	900	900	710	227	5	13	3960
160-200018	2000,0	40,17	638,1	◙	725	1776	1000	1000	800	285	5	13	4815
160-250018	2500,0	50,21	791,2	◙	920	1776	1120	1120	900	294	5	13	5193
160-315018	3150,0	63,26	991,3	◙	1100	1776	1250	1250	1000	424	6	11	6349

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 1600 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 1383 daPa** density at inlet operation of ρ1 = 1,040 kg/m³

Specific supply **Yt2 ≈ 1271 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 1800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 1800 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
180-001636	16,0	0,32	10,85	□	24,5	3540	160	100	125	3,8	1	13	387
180-002536	25,0	0,50	14,22	□	33,5	3552	180	112	125	3,9	1	13	461
180-003136	31,5	0,63	16,44	□	33,5	3552	200	125	125	4,0	2	13	462
180-004036	40,0	0,80	19,98	□	33,5	3552	200	140	125	3,9	2	13	471
180-005036	50,0	1,00	23,21	◙	41,5	3552	224	160	125	3,9	2	13	508
180-006336	63,0	1,27	27,89	◙	51	3564	250	180	140	4,9	2	13	590
180-008036	80,0	1,61	34,41	◙	41,5	3552	280	200	160	4,6	3	11	560
180-010036	100,0	2,01	41,54	◙	51	3564	280	224	180	4,9	3	11	610
180-012536	125,0	2,51	50,15	◙	62	3570	315	250	200	5,3	2	11	635
180-016036	160,0	3,21	62,5	◙	84	3570	315	280	224	5,0	2	11	723
180-020036	200,0	4,02	76,2	◙	84	3570	355	315	250	5,6	3	11	733
180-025036	250,0	5,02	94,3	◙	123	3570	400	355	280	9,6	3	11	992
180-031536	315,0	6,33	116,7	◙	148	3576	400	400	315	9,5	3	11	1044
180-040036	400,0	8,03	149,1	◙	180	3576	450	450	355	12,3	4	11	1092
180-050018	500,0	10,04	192,6	◙	230	1776	630	500	400	111,6	2	13	2212
180-050036	500,0	10,04	185,1	◙	224	3576	500	500	400	14	4	11	1197
180-063018	630,0	12,65	237,6	◙	288	1776	630	560	450	115,5	2	13	2590
180-063036	630,0	12,65	229,7	◙	280	3576	560	560	450	17	4	11	1294
180-080018	800,0	16,07	293,8	◙	362	1776	710	630	500	138	3	13	2686
180-100018	1000,0	20,08	363,2	◙	408	1776	800	710	560	173	3	13	3224
180-125018	1250,0	25,10	448,2	◙	575	1776	800	800	630	177	3	13	3447
180-160018	1600,0	32,13	576,6	◙	630	1776	900	900	710	261	5	13	4439
180-200018	2000,0	40,17	711,7	◙	817	1776	1000	1000	800	325	5	13	5113
180-250018	2500,0	50,21	885,2	◙	1000	1776	1120	1120	900	364	5	13	6010
180-315018	3150,0	63,26	1117,6	◙	1350	1776	1250	1250	1000	509	5	13	6679

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase **Δ pt2 = 1800 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1529 daPa** density at inlet operation of **ρ1 = 1,023 kg/m³**

Specific supply **Yt2 ≈ 1423 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 2000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 2000 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
200-002536	25,0	0,50	16,3	□	33,5	3552	180	112	125	6,3	1	13	559
200-003136	31,5	0,63	18,8	□	33,5	3552	200	125	125	6,3	2	13	561
200-004036	40,0	0,80	22,8	□	41,5	3552	200	140	125	6,1	2	13	594
200-005036	50,0	1,00	26,3	□	51	3564	224	160	125	6,9	2	13	642
200-006336	63,0	1,27	31,6	□	51	3564	250	180	140	7,2	2	13	695
200-008036	80,0	1,61	38,5	◙	62	3570	250	200	160	7,1	2	13	712
200-010036	100,0	2,01	46,6	◙	84	3570	280	224	180	6,9	3	11	711
200-012536	125,0	2,51	56,1	◙	84	3570	315	250	200	7,3	2	11	718
200-016036	160,0	3,21	70,1	◙	101	3570	315	280	224	7,6	2	11	875
200-020036	200,0	4,02	85,3	◙	123	3570	355	315	250	8,6	2	11	962
200-025036	250,0	5,02	105,0	◙	148	3576	400	355	280	10,9	3	11	1003
200-031536	315,0	6,33	130,7	◙	180	3576	400	400	315	10,9	3	11	1059
200-040036	400,0	8,03	165,2	◙	180	3576	450	450	355	13,8	3	11	1165
200-050018	500,0	10,04	215,3	◙	288	1776	630	500	400	148	2	13	2551
200-050036	500,0	10,04	204,9	◙	224	3576	500	500	400	15,7	4	11	1296
200-063018	630,0	12,65	265,3	◙	288	1776	630	560	450	161	2	13	2669
200-080018	800,0	16,07	330,3	◙	362	1776	710	630	500	186	3	13	2884
200-100018	1000,0	20,08	403,3	◙	460	1776	800	710	560	214	3	13	3419
200-125018	1250,0	25,10	497,4	◙	575	1776	800	800	630	237	3	13	3972
200-160018	1600,0	32,13	638,3	◙	725	1776	900	900	710	321	4	13	4936
200-200018	2000,0	40,17	787,1	◙	920	1776	1000	1000	800	369	5	13	5319
200-250018	2500,0	50,21	986,7	◙	1100	1776	1120	1120	900	449	5	13	6126

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase **Δ pt2 = 2000 daPa** reference density of ρ0 = 1,205 kg/m³

Total pressure increase **Δ pt1 = 1671 daPa** density at inlet operation of ρ1 = 1,006 kg/m³

Specific supply **Yt2 ≈ 1573 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 2250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 2250 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
225-002536	25,0	0,50	19,5	□	33,5	3552	180	112	125	8,2	1	7	716
225-003136	31,5	0,63	22,2	□	33,5	3552	200	125	125	8,2	1	7	669
225-004036	40,0	0,80	26,8	□	41,5	3552	200	140	125	8,0	2	7	678
225-005036	50,0	1,00	30,8	□	51	3564	224	160	125	8,6	2	7	722
225-006336	63,0	1,27	36,3	□	51	3564	250	180	140	8,6	2	7	817
225-008036	80,0	1,61	44,5	◙	62	3570	250	200	160	8,4	2	7	716
225-010036	100,0	2,01	54,1	◙	84	3570	280	224	180	8,5	3	7	909
225-012536	125,0	2,51	64,3	◙	84	3570	315	250	200	8,8	2	7	916
225-016036	160,0	3,21	80,0	◙	101	3570	315	280	224	9,2	2	7	882
225-020036	200,0	4,02	95,2	◙	148	3576	355	315	250	11,9	2	7	1121
225-025036	250,0	5,02	118,2	◙	180	3576	400	355	280	12,8	3	7	1156
225-031536	315,0	6,33	144,7	◙	180	3576	400	400	315	12,9	3	7	1210
225-040036	400,0	8,03	182,1	◙	224	3576	450	450	355	15,9	3	7	1233
225-050036	500,0	10,04	226,5	◙	280	3576	500	500	400	21	4	7	1361
225-050018	500,0	10,04	244,2	◙	288	1776	630	500	400	195,1	2	13	2743
225-063018	630,0	12,65	300,5	◙	362	1776	630	560	450	194	2	13	2829
225-080018	800,0	16,07	372,7	◙	408	1776	710	630	500	230	2	13	3301
225-100018	1000,0	20,08	453,7	◙	575	1776	800	710	560	250	3	13	4262
225-125018	1250,0	25,10	559,0	◙	630	1776	800	800	630	280	3	13	4754
225-160018	1600,0	32,13	715,7	◙	817	1776	900	900	710	376	4	13	4990
225-200018	2000,0	40,17	881,1	◙	1000	1776	1000	1000	800	467	5	13	6105
225-250018	2500,0	50,21	1104,5	◙	1350	1776	1120	1120	900	514	5	13	6609

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 2250 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 1842 daPa** density at inlet operation of **ρ1 = 0,985 kg/m³**

Specific supply **Yt2 ≈ 1758 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 2500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 2500 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
250-002536	25,0	0,50	22,8	□	33,5	3552	180	112	125	10,1	2	7	793
250-003136	31,5	0,63	25,5	□	33,5	3552	200	125	125	10,1	2	7	795
250-004036	40,0	0,80	30,8	□	41,5	3552	200	140	125	9,7	2	7	806
250-005036	50,0	1,00	35,3	□	51	3564	224	160	125	10,1	2	7	851
250-006336	63,0	1,27	41,4	□	62	3570	250	180	140	10,2	2	7	914
250-008036	80,0	1,61	50,5	□	62	3570	250	200	160	10,0	2	7	920
250-010036	100,0	2,01	61,0	◙	84	3570	280	224	180	10,2	2	7	1023
250-012536	125,0	2,51	72,6	◙	101	3570	315	250	200	11,0	3	7	1077
250-016036	160,0	3,21	90,1	◙	123	3570	315	280	224	12,4	3	7	1233
250-020036	200,0	4,02	107,3	◙	148	3576	355	315	250	14,1	3	7	1259
250-025036	250,0	5,02	132,3	◙	180	3576	400	355	280	15,1	3	7	1297
250-031536	315,0	6,33	162,7	◙	180	3576	400	400	315	15,2	3	7	1350
250-040036	400,0	8,03	204,9	◙	224	3576	450	450	355	20,3	4	7	1384
250-050018	500,0	10,04	276,2	◙	362	1776	630	500	400	241	3	13	3306
250-050036	500,0	10,04	254,6	◙	280	3576	500	500	400	24,1	4	7	1508
250-063018	630,0	12,65	340,5	◙	408	1776	630	560	450	240	3	13	3576
250-080018	800,0	16,07	420,0	◙	460	1776	710	630	500	277	3	13	4006
250-100018	1000,0	20,08	511,4	◙	575	1776	800	710	560	333	3	13	4536
250-125018	1250,0	25,10	627,3	◙	725	1776	800	800	630	337	3	13	4924
250-160018	1600,0	32,13	793,3	◙	920	1776	900	900	710	434	4	13	5382
250-200018	2000,0	40,17	975,5	◙	1100	1776	1000	1000	800	532	4	13	6356
250-250018	2500,0	50,21	1221,2	◙	1350	1776	1120	1120	900	611	4	13	6942

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 2500 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 2006 daPa** density at inlet operation of **ρ1 = 0,966 kg/m³**

Specific supply **Yt2 ≈ 1942 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 2800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 2800 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
280-002536	25,0	0,50	27,0	□	41,5	3552	180	112	125	12,5	2	7	888
280-003136	31,5	0,63	30,0	□	51	3564	200	125	125	12,6	2	7	871
280-004036	40,0	0,80	35,9	□	51	3564	200	140	125	12,2	2	7	883
280-005036	50,0	1,00	40,8	□	62	3570	224	160	125	12,3	2	7	904
280-006336	63,0	1,27	47,5	□	84	3570	250	180	140	12,0	2	7	1033
280-008036	80,0	1,61	57,9	□	84	3570	250	200	160	11,8	2	7	1039
280-010036	100,0	2,01	69,6	◙	101	3570	280	224	180	12,7	2	7	1107
280-012536	125,0	2,51	82,5	◙	123	3570	315	250	200	15,0	3	7	1221
280-016036	160,0	3,21	102,0	◙	148	3576	315	280	224	15,2	3	7	1283
280-020036	200,0	4,02	120,6	◙	148	3576	355	315	250	16,7	3	7	1299
280-025036	250,0	5,02	148,8	◙	180	3576	400	355	280	17,9	3	7	1339
280-031536	315,0	6,33	182,7	◙	224	3576	400	400	315	19,0	3	7	1379
280-040036	400,0	8,03	229,4	◙	280	3576	450	450	355	25,2	4	7	1559
280-050036	500,0	10,04	284,6	◙	350	3576	500	500	400	28,0	4	7	829
280-063036	630,0	12,65	352,2	◙	398	3576	560	560	450	30,9	4	7	875

Comments (1) (2) (3) on type selection see sheet TA 2

Total pressure increase **Δ pt2 = 2800 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 2195 daPa** density at inlet operation of **ρ1 = 0,943 kg/m³**

Specific supply **Yt2 ≈ 2159 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Type selection for pressure series 3150 daPa 60 Hz 180 °C

Efficiency grade N61, measuring catagory „C“, inlet duct test bench, SFV 1.0 and SFV2.4

fan type structural design KXE	volume flow and mass flow in NP at 3150 daPa $\dot{V}_1$ m³/min	 $\dot{m}$ kg/s	shaft power in NP PW (3) kW	ErP 2009/125/EG	recommended motor see instructions (1) PM kW	impeller speed nL min-1	inlet AÖ mm	discharge B1 mm	 B2 mm	mass moment of inertia I kgm²	performance curve type	number of blades z	weight without motor KXE kg
315-002536	25,0	0,50	32,4	□	51	3564	180	112	125	16,0	2	7	527
315-003136	31,5	0,63	35,6	□	62	3570	200	125	125	15,6	2	7	510
315-004036	40,0	0,80	42,5	□	62	3570	200	140	125	15,4	2	7	525
315-005036	50,0	1,00	47,8	□	84	3570	224	160	125	14,9	2	7	506
315-006336	63,0	1,27	55,2	□	84	3570	250	180	140	14,9	2	7	523
315-008036	80,0	1,61	67,0	□	101	3570	250	200	160	17,1	2	7	567
315-010036	100,0	2,01	79,8	◙	123	3570	280	224	180	17,8	2	7	600
315-012536	125	2,51	94,0	◙	148	3576	315	250	200	18,2	2	7	606
315-016036	160	3,21	116,6	◙	148	3576	315	280	224	18,3	2	7	631
315-020036	200	4,02	136,9	◙	148	3576	355	315	250	20,3	3	7	648
315-025036	250	5,02	167,1	◙	224	3576	400	355	280	21,4	3	7	676
315-031536	315	6,33	206,3	◙	224	3576	400	400	315	24,8	3	7	725
315-040036	400	8,03	257,4	◙	280	3576	450	450	355	29,7	4	7	789
315-050036	500	10,04	318,3	◙	350	3576	500	500	400	32,6	4	7	874

Comments (1) (2) (3) **on type selection see sheet TA 2**

Total pressure increase **Δ pt2 = 3150 daPa** reference density of **ρ0 = 1,205 kg/m³**

Total pressure increase **Δ pt1 = 2404 daPa** density at inlet operation of **ρ1 = 0,919 kg/m³**

Specific supply **Yt2 ≈ 2408 daJ/kg**

○ ErP 2009/125/EG fulfilled from 01.01.2015

● ErP 2009/125/EG not fulfilled, please inquire

□ **does not require labeling according to** ErP 2009/125/EG

◙ **does not require labeling according to** ErP 2009/125/EG, but ErP 2009/125/EG has been fulfilled

Sound table acc. to types for pressure series 100 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
010-000536	9	85	83	62	49	75	77	13	7
010-000836	9	84	82	62	49	73	75	13	7
010-001036	9	83	81	61	48	73	75	13	7
010-001236	9	83	81	62	48	72	75	13	7
010-001636	9	83	82	62	48	73	74	13	7
010-002036	9	83	82	62	49	73	74	13	7
010-002536	9	84	83	64	50	75	75	13	7
010-003136	9	85	85	66	52	76	76	14	7
010-004036	9	87	86	68	54	77	78	14	7
010-005018	9	83	81	66	52	72	74	14	9
010-005036	9	88	88	70	56	79	79	14	7
010-006318	9	84	83	67	53	74	75	14	9
010-006336	9	89	89	71	57	80	80	14	7
010-008018	9	85	85	70	55	75	76	15	9
010-010018	9	86	86	72	57	76	77	15	9
010-012518	9	88	88	74	58	78	78	15	9
010-016018	9	90	90	76	61	80	80	16	9
010-020018	9	91	91	78	62	81	81	16	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 125 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
012-000536	9	87	84	65	52	76	78	13	7
012-000936	9	86	83	63	50	74	77	13	7
012-001136	9	85	82	63	50	74	77	13	7
012-001436	9	85	83	64	51	74	76	13	7
012-001836	9	85	83	63	50	74	76	13	7
012-002236	9	85	84	65	51	75	76	13	7
012-002836	9	86	85	66	52	76	77	13	7
012-003536	9	87	87	68	54	78	78	14	7
012-004536	9	88	88	70	56	79	79	14	7
012-005618	9	85	84	69	55	74	76	15	9
012-005636	9	90	89	72	58	80	81	14	7
012-007118	9	86	85	70	56	75	77	15	9
012-007136	9	91	91	74	60	82	82	14	7
012-009018	9	87	86	72	57	77	78	15	9
012-009036	9	93	93	76	62	84	83	14	7
012-011218	9	89	88	74	59	78	79	15	9
012-014018	9	90	90	76	61	80	80	15	9
012-018018	9	92	91	78	62	82	82	16	9
012-022418	9	93	93	80	64	83	83	16	9
012-028018	9	94	95	82	66	84	84	16	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 160 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
016-000636	9	89	85	67	54	77	80	13	7
016-001036	9	88	84	66	53	76	79	13	7
016-001236	9	87	84	65	52	75	79	13	7
016-001636	9	87	84	66	52	76	78	13	7
016-002036	9	87	84	65	52	75	78	13	7
016-002536	9	87	86	67	53	77	79	13	7
016-003136	9	88	87	69	55	78	80	14	7
016-004036	9	89	89	71	57	80	81	14	7
016-005036	9	91	90	72	58	81	82	14	7
016-006318	9	88	85	72	57	76	78	15	9
016-006336	9	92	91	74	60	82	83	14	7
016-008018	9	89	87	73	59	78	79	15	9
016-008036	9	94	93	76	62	84	84	14	7
016-010018	9	90	88	75	60	79	80	15	9
016-010036	9	95	95	78	64	86	85	14	7
016-012518	9	91	90	77	61	80	81	15	9
016-012536	9	96	96	81	66	87	87	15	7
016-016018	9	92	92	78	63	82	83	15	9
016-020018	9	94	93	81	65	83	84	16	9
016-025018	9	95	95	82	66	85	85	16	9
016-031518	9	96	96	84	67	86	86	16	9
016-040018	9	98	98	86	69	88	87	17	9
016-050018	9	99	100	88	71	89	88	17	9
016-063018	9	101	101	90	73	90	90	17	9
016-080012	9	99	99	90	71	88	88	18	11
016-100012	9	101	101	92	73	89	89	19	12

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 200 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
020-000736	9	91	87	70	56	78	82	13	7
020-001136	9	90	85	68	55	77	81	13	7
020-001436	9	89	86	68	55	77	80	13	7
020-001836	9	89	85	68	55	77	80	13	7
020-002236	9	89	86	68	55	78	80	13	7
020-002836	9	90	87	70	56	78	81	14	7
020-003536	9	90	89	71	57	80	82	14	7
020-004536	9	92	90	73	59	81	83	14	7
020-005636	9	93	92	74	60	83	84	14	7
020-007118	9	90	87	74	60	78	81	15	9
020-007136	9	94	93	76	62	84	85	14	7
020-009018	9	91	89	76	61	79	82	15	9
020-009036	9	96	95	78	64	86	86	14	7
020-011218	9	92	91	78	63	81	83	15	9
020-011236	9	97	97	81	66	87	87	15	7
020-014018	9	93	92	79	64	82	84	16	9
020-014036	9	98	98	83	68	89	89	15	7
020-018018	9	95	94	81	65	84	85	16	9
020-018036	9	100	100	85	70	90	90	15	6
020-022418	9	96	95	83	67	85	86	16	9
020-028018	9	97	97	85	69	87	87	16	9
020-035518	9	98	98	86	69	88	88	16	9
020-045018	9	100	100	88	71	89	89	17	9
020-056018	9	101	102	90	73	91	90	17	9
020-071018	9	103	103	92	74	92	91	18	9
020-090018	9	105	105	95	77	93	93	18	9
020-112012	9	103	103	94	75	91	91	19	12
020-140012	11	103	103	95	75	91	91	19	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
025-000536	9	97	92	76	62	83	88	13	5
025-000836	9	95	90	74	61	82	87	13	5
025-001236	9	94	89	73	59	80	85	13	5
025-001636	9	91	87	70	57	78	82	13	7
025-002036	9	90	86	70	56	78	82	13	7
025-002536	9	91	88	71	58	79	83	14	7
025-003136	9	92	90	73	59	81	83	14	7
025-004036	9	93	90	74	60	81	84	14	7
025-005036	9	94	92	75	61	83	85	14	7
025-006336	9	95	94	77	63	85	86	14	7
025-008018	11	92	89	77	62	80	83	15	9
025-008036	9	96	96	79	65	86	87	14	7
025-010018	11	93	90	78	63	81	84	15	9
025-010036	9	98	97	81	66	88	88	14	7
025-012518	11	94	92	80	64	82	85	15	9
025-012536	9	99	99	83	68	89	90	15	7
025-016018	11	95	93	81	66	83	85	16	9
025-016036	9	100	100	85	70	91	91	15	6
025-020018	9	97	95	84	68	86	87	16	9
025-020036	9	102	102	87	72	92	92	15	6
025-025018	9	98	97	85	69	87	88	16	9
025-025036	9	103	104	89	73	94	93	16	6
025-031518	9	99	98	86	70	88	89	16	9
025-040018	9	101	100	88	72	90	90	17	9
025-050018	9	102	102	90	73	91	91	17	9
025-063018	9	103	103	92	75	93	92	17	9
025-080018	9	105	105	94	76	94	93	18	9
025-100018	9	107	107	97	79	95	95	18	9
025-125018	9	108	108	98	80	97	96	19	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 315 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
031-000536	9	99	93	79	65	84	90	13	5
031-000936	9	97	92	77	63	83	89	13	5
031-001436	9	94	89	73	60	80	85	13	7
031-001836	9	93	88	73	59	80	84	13	7
031-002236	9	93	89	73	60	80	84	14	7
031-002836	9	94	90	74	60	81	85	14	7
031-003536	9	94	91	75	61	83	86	14	7
031-004536	9	95	93	77	63	84	86	14	7
031-005618	11	95	89	79	64	80	86	15	8
031-005636	9	96	95	79	64	86	87	14	7
031-007118	11	94	90	79	64	80	85	15	9
031-007136	9	97	95	79	65	86	88	14	7
031-009018	11	95	91	80	65	82	85	15	9
031-009036	9	99	98	82	67	88	90	14	7
031-011218	11	96	93	82	66	83	86	15	9
031-011236	9	100	99	83	68	90	91	14	7
031-014018	9	96	94	83	67	84	87	16	9
031-014036	11	101	101	85	70	91	92	15	6
031-018018	11	98	96	84	68	86	88	16	9
031-018036	9	102	102	87	72	93	93	15	6
031-022418	11	98	96	86	70	87	89	16	9
031-022436	9	104	104	88	73	94	94	15	6
031-028018	9	100	99	87	71	89	90	16	9
031-028036	9	105	106	91	75	96	96	16	6
031-035518	9	101	101	89	72	90	91	17	9
031-035536	9	107	108	93	77	97	97	16	6
031-045018	9	103	102	91	74	92	92	17	9
031-056018	9	104	104	92	75	93	93	17	9
031-071018	9	105	105	94	77	94	94	18	9
031-090018	9	107	107	96	79	96	96	18	9
031-112018	9	108	109	98	80	97	97	18	9
031-140018	9	110	110	100	82	98	98	19	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 355 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
035-000836	9	99	93	80	66	84	91	14	5
035-001236	9	98	92	77	64	83	89	13	5
035-001936	9	97	92	76	63	83	88	14	5
035-002436	9	94	90	75	61	81	86	14	7
035-003036	9	95	92	76	62	83	87	14	7
035-003836	9	96	92	77	63	83	87	14	7
035-004836	9	96	94	78	64	85	88	14	7
035-006036	9	98	95	80	66	86	88	14	7
035-007536	9	98	96	81	66	87	89	14	7
035-009518	11	96	92	82	66	83	87	15	9
035-009536	9	100	99	83	68	89	91	15	7
035-011818	11	97	94	83	67	84	87	16	9
035-011836	9	101	100	84	70	91	92	15	6
035-015018	11	98	95	84	68	85	88	16	9
035-015036	9	102	102	86	71	92	93	15	6
035-019018	11	99	97	85	69	87	89	16	9
035-019036	9	103	103	88	72	94	94	15	6
035-023618	11	100	98	87	71	88	90	16	9
035-023636	9	105	105	90	74	95	95	15	6
035-030018	9	101	100	89	72	90	91	16	9
035-030036	9	107	107	92	76	97	97	16	6
035-037518	9	103	102	90	74	91	92	17	9
035-047518	9	104	103	92	75	93	93	17	9
035-060018	9	105	105	93	76	94	94	17	9
035-075018	9	106	106	95	78	95	95	18	9
035-095018	9	108	108	98	80	97	97	18	9
035-118018	9	109	110	99	81	98	98	18	9
035-150018	9	111	111	101	83	99	99	18	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
040-000636	9	101	95	82	68	86	93	14	5
040-001036	9	100	93	80	67	85	91	14	5
040-001636	9	98	93	79	65	84	90	14	5
040-002036	9	98	92	78	64	84	89	14	5
040-002536	9	96	91	77	63	82	87	14	7
040-003136	9	97	93	78	64	84	88	14	7
040-004036	9	97	93	78	64	84	88	14	7
040-005036	9	98	95	79	65	86	89	14	7
040-006336	9	99	96	81	67	87	90	14	7
040-008036	9	100	98	83	68	89	91	14	6
040-010036	9	101	99	84	69	90	92	15	6
040-012518	11	98	95	84	68	85	89	16	9
040-012536	9	102	101	85	71	92	93	15	6
040-016018	11	99	95	85	69	86	89	16	9
040-016036	9	103	103	87	72	93	94	15	6
040-020018	11	100	97	86	70	88	90	16	9
040-020036	9	105	104	89	74	95	95	15	6
040-025018	11	101	99	88	72	89	91	16	9
040-025036	9	106	106	91	75	96	96	15	6
040-031518	11	102	100	89	73	90	92	16	9
040-031536	9	108	108	93	77	98	98	16	6
040-040018	9	104	103	92	75	92	94	17	9
040-040036	9	109	110	95	79	100	99	16	6
040-050018	9	105	104	93	76	94	94	17	9
040-063018	9	106	106	94	77	95	95	17	9
040-080018	9	107	107	96	79	96	97	18	9
040-100018	9	109	109	98	80	98	98	18	9
040-125018	9	111	111	100	82	99	99	18	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 450 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
045-000936	9	102	95	82	68	86	93	14	5
045-001336	9	101	93	81	67	85	92	14	5
045-002136	9	99	94	80	66	86	91	14	5
045-002736	9	100	95	81	67	86	91	14	5
045-003436	9	98	94	79	65	85	89	14	7
045-004236	9	98	95	80	66	86	90	14	7
045-005336	9	99	96	81	67	87	90	14	6
045-006736	9	100	97	82	68	88	91	14	6
045-008536	9	101	99	84	69	90	92	14	6
045-010636	9	102	100	85	71	91	93	15	6
045-013218	11	99	96	85	69	86	90	16	9
045-013236	9	103	102	87	72	93	94	15	6
045-017018	11	101	98	87	71	88	91	16	9
045-017036	9	104	104	88	73	94	95	15	6
045-021218	11	101	98	88	71	89	91	16	9
045-021236	9	106	105	90	75	96	96	15	6
045-026518	11	102	100	89	73	90	92	16	9
045-026536	9	107	107	92	77	97	97	15	6
045-033518	11	104	102	91	75	92	93	17	9
045-033536	9	109	109	95	79	99	99	16	6
045-042518	9	105	104	92	75	93	95	17	9
045-042536	9	110	111	96	80	101	100	16	6
045-053018	9	106	105	94	77	95	96	17	9
045-053036	9	112	112	98	82	102	102	16	6
045-067018	9	107	107	95	78	96	97	17	9
045-085018	9	109	108	98	80	97	98	18	9
045-106018	9	110	110	99	81	99	99	18	9
045-132018	9	112	111	101	83	100	100	18	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
050-000736	11	103	96	84	70	87	95	14	5
050-001136	11	102	94	82	69	86	93	14	5
050-001836	9	101	94	81	68	86	92	14	5
050-002236	9	101	95	81	67	86	92	14	5
050-002836	9	101	96	82	68	87	92	14	5
050-003536	9	99	95	80	66	86	90	14	6
050-004536	9	100	96	81	67	87	91	14	6
050-005636	9	100	97	82	68	88	91	14	6
050-007136	9	101	98	83	69	89	92	14	6
050-009036	9	102	100	85	70	91	93	15	6
050-011236	9	103	101	86	71	92	94	15	6
050-014018	11	101	96	86	71	87	91	16	9
050-014036	9	104	103	87	72	94	95	15	6
050-018018	11	102	98	88	72	89	92	16	9
050-018036	9	106	105	89	74	95	96	15	6
050-022418	11	102	99	89	73	89	93	16	9
050-022436	9	107	106	91	76	97	97	15	6
050-028018	11	103	101	91	74	91	93	17	9
050-028036	9	108	108	93	78	98	98	16	6
050-035518	11	105	103	92	75	93	94	17	9
050-035536	9	110	110	95	79	100	100	16	6
050-045018	11	105	104	93	76	93	95	17	9
050-045036	9	111	112	97	81	101	101	16	6
050-056018	9	107	106	95	78	96	97	17	9
050-056036	9	113	113	99	83	103	102	16	6
050-071018	9	108	107	97	79	97	98	18	9
050-071036	9	115	115	102	85	105	104	17	6
050-090018	9	110	109	99	81	98	99	18	9
050-112018	9	111	111	101	83	100	100	18	9
050-140018	9	113	112	102	84	101	101	18	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 560 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
056-000836	11	104	96	85	71	88	96	14	5
056-001536	9	103	96	83	70	87	94	14	5
056-002436	9	102	96	83	69	88	93	14	5
056-003036	9	103	98	84	70	89	94	14	4
056-003836	9	100	95	81	68	87	92	14	6
056-004836	9	101	97	83	69	88	92	14	6
056-006036	9	102	98	83	69	89	93	14	6
056-007536	9	102	99	85	70	90	93	15	6
056-009518	11	102	96	88	72	87	93	16	8
056-009536	9	104	101	86	71	92	94	15	6
056-011818	11	101	97	88	72	87	92	16	9
056-011836	9	105	103	88	73	94	95	15	6
056-015018	11	102	97	88	72	88	92	16	9
056-015036	9	105	104	88	74	94	96	15	6
056-019018	11	103	99	90	73	90	93	16	9
056-019036	9	107	106	90	75	96	97	15	6
056-023618	11	104	101	91	74	91	94	16	9
056-023636	9	108	107	93	77	98	99	15	6
056-030018	11	105	102	91	75	92	95	17	9
056-030036	9	110	109	94	78	99	100	16	6
056-037518	11	106	104	93	76	93	96	17	9
056-037536	9	111	111	96	80	101	101	16	6
056-047518	11	107	105	94	77	95	96	17	9
056-047536	9	112	113	98	82	102	102	16	6
056-060018	9	108	107	96	79	97	98	17	9
056-060036	9	114	114	100	84	104	104	16	6
056-075018	9	109	108	98	80	98	99	18	9
056-075036	9	116	116	103	86	106	105	17	6
056-095018	9	111	110	100	82	99	100	18	9
056-118018	9	112	112	102	84	100	101	18	9
056-150018	9	114	113	104	85	102	102	18	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 630 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
063-000836	11	106	97	87	73	89	97	14	5
063-001236	11	104	96	86	72	87	96	14	5
063-002036	9	103	96	85	71	87	95	14	4
063-002536	9	103	97	85	71	89	95	14	4
063-003136	9	104	99	85	71	90	95	14	4
063-004036	9	104	99	86	71	90	96	14	4
063-005036	9	103	98	84	70	89	94	15	6
063-006336	9	103	99	85	70	90	94	15	6
063-008036	9	104	101	86	72	92	95	15	6
063-010036	9	105	102	87	73	93	96	15	6
063-012536	9	106	104	89	74	94	96	15	6
063-016018	11	105	100	91	75	90	95	16	8
063-016036	9	107	105	90	75	95	97	15	6
063-020018	11	104	100	90	74	91	95	16	9
063-020036	9	108	107	92	77	97	98	15	6
063-025018	11	105	102	92	75	92	95	16	9
063-025036	9	109	108	94	78	99	100	15	6
063-031518	11	106	103	93	76	93	96	17	9
063-031536	9	111	110	95	79	100	101	16	6
063-040018	11	107	104	94	77	94	97	17	9
063-040036	9	112	112	98	82	102	102	16	6
063-050018	11	108	106	96	78	96	98	17	9
063-050036	9	113	113	99	83	103	103	16	6
063-063018	11	109	107	97	79	97	98	17	9
063-063036	9	115	115	101	84	105	105	16	6
063-080018	9	111	110	99	82	99	100	18	9
063-080036	9	117	117	104	87	107	107	17	6
063-100018	9	112	111	101	83	100	101	18	9
063-125018	9	113	113	103	85	101	102	18	9
063-125015	11	111	110	101	83	99	100	19	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 710 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
071-000936	11	107	98	88	74	89	98	14	5
071-001336	11	106	97	86	72	88	97	14	5
071-002136	9	105	98	85	71	89	96	14	4
071-002736	9	105	98	86	72	90	96	14	4
071-003436	9	106	100	87	72	91	97	14	4
071-004236	9	106	101	87	73	92	97	14	4
071-005336	9	106	101	88	74	93	98	15	4
071-006736	9	104	100	86	72	91	95	15	6
071-008536	9	105	102	88	73	93	96	15	6
071-010636	9	106	103	89	74	94	97	15	6
071-013236	9	107	105	90	75	95	98	15	6
071-017018	11	105	101	91	75	91	96	16	9
071-017036	9	108	106	92	77	97	99	15	6
071-021218	11	106	101	92	76	92	96	16	9
071-021236	9	109	107	93	78	98	100	15	6
071-026518	11	107	103	93	77	93	97	17	9
071-026536	9	111	109	94	79	100	101	15	6
071-033518	11	108	105	95	78	94	97	17	9
071-033536	9	112	111	97	81	102	102	16	6
071-042518	11	108	105	95	78	95	98	17	9
071-042536	9	113	113	99	82	103	103	16	6
071-053018	11	109	107	97	80	97	99	17	9
071-053036	9	115	115	101	84	105	105	16	6
071-067018	11	110	109	98	80	98	100	17	9
071-067036	9	117	117	103	86	106	106	16	6
071-085018	11	112	110	100	82	99	101	18	9
071-106018	9	113	112	103	85	101	102	18	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
080-000936	11	108	99	90	76	90	100	14	5
080-001436	11	107	98	89	74	89	99	14	5
080-002236	9	106	99	88	73	90	98	14	4
080-002836	9	107	100	88	74	91	98	14	4
080-003536	9	107	101	89	74	92	98	15	4
080-004536	9	108	102	89	75	93	99	15	4
080-005636	9	108	103	90	76	94	99	15	4
080-007136	9	106	101	88	74	92	97	15	6
080-009036	9	107	103	90	75	94	98	15	6
080-011236	9	107	104	90	76	95	98	15	6
080-014036	9	108	106	92	77	96	99	15	6
080-018018	11	108	103	94	78	93	98	16	8
080-018036	9	109	107	92	77	98	100	15	6
080-022418	11	107	102	93	77	92	97	17	9
080-022436	9	110	108	94	78	99	101	15	6
080-028018	11	108	104	95	78	94	98	17	9
080-028036	9	112	110	96	81	101	102	16	6
080-035518	11	109	106	96	79	95	99	17	9
080-035536	9	113	112	98	82	102	103	16	6
080-045018	11	110	106	97	80	96	99	17	9
080-045036	9	114	114	100	84	104	104	16	6
080-056018	11	110	108	98	81	97	100	17	9
080-056036	9	116	116	102	86	106	106	16	6
080-071018	11	112	110	100	83	99	101	17	9
080-071036	9	118	118	104	88	107	108	16	6
080-090018	11	113	111	101	84	100	102	18	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 900 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
090-000936	11	110	100	91	77	91	101	14	5
090-001536	11	108	99	90	75	91	100	14	5
090-002436	11	107	100	89	74	91	99	14	5
090-003036	9	108	102	90	75	93	100	14	4
090-003836	9	109	102	90	76	93	100	15	4
090-004836	9	109	103	91	76	94	100	15	4
090-006036	9	109	104	92	77	95	100	15	4
090-007536	9	107	102	90	75	93	98	15	6
090-009536	9	108	104	91	77	95	99	15	6
090-011836	9	109	106	92	77	97	100	15	6
090-015036	9	110	107	93	77	97	100	15	6
090-019018	11	109	104	96	79	94	100	17	8
090-019036	9	111	108	94	79	99	101	15	6
090-023618	11	109	104	96	79	94	99	17	9
090-023636	11	111	110	96	80	100	102	16	6
090-030018	11	110	105	96	79	95	100	17	9
090-030036	11	112	111	97	81	101	103	16	6
090-037518	11	110	106	97	80	96	100	17	9
090-037536	9	114	113	99	83	103	104	16	6
090-047518	11	111	108	98	81	98	101	17	9
090-047536	9	116	115	101	85	105	106	16	6
090-060018	11	112	109	99	82	98	101	17	9
090-060036	9	117	117	103	87	107	107	16	6
090-075018	11	113	111	101	84	100	102	17	9
090-095018	13	113	111	102	84	100	102	18	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
100-001036	11	114	104	95	81	95	105	14	5
100-001636	11	112	103	94	79	95	104	14	5
100-002536	11	111	103	92	78	94	102	14	5
100-003136	9	111	104	92	78	95	102	14	4
100-004036	9	110	103	92	77	94	101	15	4
100-005036	9	110	104	92	78	95	102	15	4
100-006336	9	111	105	93	78	96	102	15	4
100-008036	9	109	105	92	77	96	100	15	6
100-010036	11	109	105	92	77	96	100	15	6
100-012536	11	110	106	93	78	97	100	15	6
100-016036	11	110	107	94	79	98	101	15	6
100-020036	11	111	109	95	80	99	102	15	6
100-025018	11	112	106	98	81	97	102	17	8
100-025036	11	113	111	97	81	101	103	16	6
100-031518	11	111	106	97	80	96	101	17	9
100-031536	11	113	111	98	82	102	104	16	6
100-040018	11	111	107	99	81	97	101	17	9
100-040036	9	115	114	100	84	104	106	16	6
100-050036	9	117	116	102	86	106	107	16	6
100-063036	9	118	118	104	88	108	108	16	6
100-080036	9	120	119	107	90	109	110	17	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1120 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
112-001036	13	114	103	96	81	95	105	15	5
112-001636	13	113	103	94	80	94	104	15	5
112-002536	13	111	103	93	78	94	102	15	5
112-003136	13	110	103	92	77	94	101	15	5
112-004036	13	110	102	92	77	93	101	15	5
112-005036	11	111	105	93	78	96	102	15	4
112-006336	11	111	106	94	79	97	102	15	4
112-008036	11	110	105	92	77	96	101	15	6
112-010036	11	110	105	93	78	96	101	15	6
112-012536	11	111	107	94	79	98	101	15	6
112-016036	11	112	108	95	80	98	102	15	6
112-020036	11	112	109	96	81	100	103	15	6
112-025018	13	112	106	98	81	96	102	17	8
112-025036	11	113	111	98	82	102	104	16	6
112-031518	11	113	108	100	83	98	103	17	8
112-031536	11	114	112	99	83	102	105	16	6
112-040018	13	112	107	99	82	97	101	17	9
112-040036	11	116	114	100	84	104	106	16	6
112-050036	9	118	117	103	87	107	108	16	6
112-063036	9	119	118	105	88	108	109	16	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
125-001036	13	116	104	100	86	95	107	15	5
125-001636	13	114	104	96	81	95	105	15	5
125-002536	13	113	104	94	79	95	104	15	5
125-003136	13	112	104	93	78	95	103	15	5
125-004036	13	111	103	93	78	94	102	15	5
125-005036	11	113	105	95	80	97	104	15	4
125-006336	11	113	107	95	80	98	104	15	4
125-008036	11	114	108	96	81	99	105	15	4
125-010036	11	114	109	97	82	100	105	15	4
125-012536	11	112	108	96	80	99	103	15	6
125-016036	11	113	108	96	81	99	103	15	6
125-020036	11	113	110	97	81	100	104	15	6
125-025036	11	114	112	99	83	102	105	16	6
125-031536	11	115	113	100	84	103	106	16	6
125-040036	11	117	115	102	86	105	107	16	6
125-050036	9	119	117	104	88	107	109	16	6
125-063036	9	120	119	106	89	109	110	17	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
140-001036	13	117	105	99	84	96	108	15	5
140-001636	13	115	105	98	83	96	107	15	5
140-002536	13	114	105	96	81	96	105	15	5
140-003136	13	113	105	95	80	96	104	15	5
140-004036	13	112	104	95	80	95	104	15	5
140-005036	13	112	105	95	80	96	104	15	5
140-006336	11	114	108	97	82	99	105	15	4
140-008036	11	115	109	98	82	100	106	15	4
140-010036	11	115	110	98	83	101	106	15	4
140-012536	11	113	109	97	81	99	104	16	6
140-016036	11	114	109	97	82	100	104	16	6
140-020036	11	114	111	98	83	101	105	16	6
140-025036	11	115	113	100	84	103	106	16	6
140-031536	11	116	113	101	85	104	107	16	6
140-040036	11	118	116	103	87	106	108	16	6
140-050036	11	119	117	105	88	108	109	16	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1600 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
160-001636	13	117	106	99	84	97	108	15	5
160-002536	13	115	105	97	82	97	107	15	5
160-003136	13	114	105	96	81	97	106	15	5
160-004036	13	114	105	96	81	96	105	15	5
160-005036	13	114	106	96	81	97	105	15	5
160-006336	11	116	109	98	83	100	107	15	4
160-008036	11	117	110	99	84	101	107	15	4
160-010036	11	117	111	100	85	102	108	15	4
160-012536	11	117	112	101	85	103	108	16	4
160-016036	11	118	113	101	86	104	109	16	4
160-020036	11	116	112	100	84	102	106	16	6
160-025036	11	117	113	102	85	104	107	16	6
160-031536	11	117	114	102	86	104	108	16	6
160-040036	11	119	116	104	88	107	109	16	6
160-050036	11	120	118	106	89	108	110	16	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
180-001636	13	118	107	101	86	98	110	15	5
180-002536	13	117	106	100	84	98	108	15	5
180-003136	13	116	106	99	83	98	107	15	5
180-004036	13	115	106	98	83	97	107	15	5
180-005036	13	115	107	98	83	98	106	15	5
180-006336	13	115	108	99	83	99	106	16	5
180-008036	11	118	111	102	86	102	109	16	4
180-010036	11	118	112	102	86	103	109	16	4
180-012536	11	119	113	103	87	104	109	16	4
180-016036	11	119	114	103	87	104	110	16	4
180-020036	11	117	113	101	85	103	108	16	6
180-025036	11	118	114	103	87	105	108	16	6
180-031536	11	119	115	104	87	105	109	16	6
180-040036	11	120	117	105	89	107	110	16	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 2000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
200-002536	13	118	107	101	86	99	110	15	5
200-003136	13	117	107	100	85	99	108	15	5
200-004036	13	117	107	100	84	98	108	15	5
200-005036	13	117	108	100	84	99	108	15	5
200-006336	13	117	109	100	85	100	108	16	5
200-008036	13	117	109	101	85	100	108	16	5
200-010036	11	120	113	104	88	104	111	16	4
200-012536	11	120	114	104	88	105	111	16	4
200-016036	11	120	115	105	89	105	111	16	4
200-020036	11	121	116	105	89	107	112	16	4
200-025036	11	119	115	104	88	105	110	16	6
200-031536	11	120	116	105	89	106	110	16	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 2250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
225-002536	7	120	108	103	87	100	111	16	5
225-003136	7	119	109	102	87	100	110	16	5
225-004036	7	118	108	102	86	99	110	16	5
225-005036	7	118	109	102	86	100	109	16	5
225-006336	7	118	110	102	86	101	109	16	5
225-008036	7	119	111	102	87	102	110	16	5
225-010036	7	119	112	103	87	103	110	16	5
225-012536	7	119	113	103	87	104	110	16	5
225-016036	7	120	114	104	88	104	111	16	5
225-020036	7	120	114	104	88	105	110	16	5
225-025036	7	118	114	103	86	104	109	16	7

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 2500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
250-002536	7	121	109	104	88	101	112	16	5
250-003136	7	120	109	103	87	101	112	16	5
250-004036	7	120	109	103	87	100	111	16	5
250-005036	7	120	110	103	87	101	111	16	5
250-006336	7	120	111	103	87	102	111	16	5
250-008036	7	120	111	104	88	102	111	16	5
250-010036	7	121	113	104	88	104	112	16	5
250-012536	7	121	114	104	88	105	111	16	5
250-016036	7	121	114	105	89	105	112	16	5
250-020036	7	121	115	105	89	106	112	16	5
250-025036	7	122	117	106	90	107	112	16	5

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 2800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
280-002536	7	123	110	106	90	101	114	16	5
280-003136	7	122	110	105	89	102	113	16	5
280-004036	7	121	110	104	89	101	113	16	5
280-005036	7	121	111	104	89	102	112	16	5
280-006336	7	122	112	108	92	103	113	16	5
280-008036	7	122	113	105	89	104	113	16	5
280-010036	7	122	114	106	90	105	113	16	5
280-012536	7	122	115	106	90	106	113	16	5
280-016036	7	123	115	107	90	106	113	16	5

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 3150 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
315-002536	7	124	111	108	92	102	115	16	5
315-003136	7	123	111	107	91	103	115	16	5
315-004036	7	123	111	106	90	102	114	16	5
315-005036	7	123	112	106	90	103	114	16	5
315-006336	7	123	113	107	90	104	114	16	5
315-008036	7	123	114	107	91	105	114	16	5
315-010036	7	124	115	108	92	106	115	16	5
315-012536	7	124	116	108	92	107	114	16	5

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 100 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
010-000536	9	85	83	62	49	75	77	13	7
010-000836	9	84	82	61	49	73	75	13	7
010-001036	9	83	81	61	48	73	75	13	7
010-001236	9	83	81	61	48	72	75	13	7
010-001636	9	83	82	61	48	73	74	13	7
010-002036	9	83	82	62	49	73	74	13	7
010-002536	9	84	83	64	50	75	75	13	7
010-003136	9	85	85	65	52	76	76	13	7
010-004036	9	87	86	67	54	77	78	13	7
010-005018	9	83	81	66	52	72	74	14	9
010-005036	9	88	88	69	56	79	79	14	7
010-006318	9	84	83	67	53	74	75	14	9
010-006336	9	89	89	71	57	80	80	14	7
010-008018	9	85	85	70	55	75	76	15	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 125 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
012-000536	9	87	84	64	52	76	78	13	7
012-000936	9	86	83	63	50	74	77	13	7
012-001136	9	85	82	63	50	74	77	13	7
012-001436	9	85	83	64	51	74	76	13	7
012-001836	9	85	83	63	50	74	76	13	7
012-002236	9	85	84	64	51	75	76	13	7
012-002836	9	86	85	66	52	76	77	13	7
012-003536	9	87	87	67	54	78	78	13	7
012-004536	9	89	88	69	56	79	80	14	7
012-005618	9	85	84	69	55	75	76	14	9
012-005636	9	90	90	71	58	80	81	14	7
012-007118	9	86	85	70	56	75	77	14	9
012-007136	9	91	91	74	60	82	82	14	7
012-009018	9	87	86	72	57	77	78	15	9
012-009036	9	93	93	76	62	84	83	14	7
012-011218	9	89	88	74	59	79	79	15	9
012-014018	9	90	90	76	61	80	80	15	9
012-018018	9	92	92	78	63	82	82	15	9
012-022418	9	93	93	80	64	83	83	16	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 160 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
016-000636	9	89	85	67	54	77	80	13	7
016-001036	9	88	84	65	53	76	79	13	7
016-001236	9	87	84	65	52	75	79	13	7
016-001636	9	87	84	65	52	76	78	13	7
016-002036	9	87	84	65	52	75	78	13	7
016-002536	9	87	86	67	53	77	79	13	7
016-003136	9	88	87	69	55	78	80	13	7
016-004036	9	90	89	70	57	80	81	14	7
016-005036	9	91	90	72	58	81	82	14	7
016-006318	9	88	85	72	57	76	79	15	9
016-006336	9	92	92	74	60	82	83	14	7
016-008018	9	89	87	73	59	78	79	15	9
016-008036	9	94	93	76	62	84	84	14	7
016-010018	9	90	88	74	60	79	80	15	9
016-010036	9	95	95	78	64	86	86	14	7
016-012518	9	91	90	76	61	80	81	15	9
016-012536	9	96	96	80	66	87	87	14	7
016-016018	9	92	92	78	63	82	83	15	9
016-020018	9	94	93	80	65	83	84	15	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 200 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
020-000736	9	91	87	69	56	78	82	13	7
020-001136	9	90	85	68	55	77	81	13	7
020-001436	9	89	86	68	55	77	80	13	7
020-001836	9	89	85	68	55	77	80	13	7
020-002236	9	89	86	68	55	78	80	13	7
020-002836	9	90	87	70	56	78	81	13	7
020-003536	9	90	89	71	57	80	82	13	7
020-004536	9	92	90	72	59	82	83	14	7
020-005636	9	93	92	74	61	83	84	14	7
020-007118	9	90	87	74	60	78	81	15	9
020-007136	9	94	93	76	62	84	85	14	7
020-009018	9	91	89	75	61	79	82	15	9
020-009036	9	96	95	78	64	86	86	14	7
020-011218	9	92	91	78	63	81	83	15	9
020-011236	9	97	97	80	66	87	87	14	7
020-014018	9	93	92	79	64	82	84	15	9
020-014036	9	98	98	82	68	89	89	14	7
020-018018	9	95	94	81	66	84	85	15	9
020-018036	9	100	100	85	70	90	90	15	6
020-022418	9	96	95	82	67	85	86	15	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
025-000536	9	97	92	75	62	83	88	13	5
025-000836	9	95	90	74	61	82	87	13	5
025-001236	9	94	89	72	59	80	85	13	5
025-001636	9	91	87	70	57	78	82	13	7
025-002036	9	90	87	70	57	78	82	13	7
025-002536	9	91	88	71	58	79	83	13	7
025-003136	9	92	90	73	59	81	83	13	7
025-004036	9	93	90	74	60	82	84	14	7
025-005036	9	94	92	75	61	83	85	14	7
025-006336	9	95	94	76	63	85	86	14	7
025-008018	11	92	89	77	62	80	83	15	9
025-008036	9	96	96	79	65	87	87	14	7
025-010018	11	93	90	78	63	81	84	15	9
025-010036	9	98	97	80	66	88	88	14	7
025-012518	11	94	92	80	65	82	85	15	9
025-012536	9	99	99	82	68	89	90	14	7
025-016018	11	95	93	81	66	83	85	15	9
025-016036	9	100	100	85	70	91	91	15	6
025-020018	9	97	95	83	68	86	87	16	9
025-020036	9	102	102	86	71	92	92	15	6
025-025018	9	98	97	85	69	87	88	16	9
025-025036	9	103	104	88	73	94	93	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 315 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
031-000536	9	99	93	78	65	84	90	13	5
031-000936	9	97	92	77	63	83	89	13	5
031-001436	9	94	89	73	60	80	85	13	7
031-001836	9	93	88	72	59	80	84	13	7
031-002236	9	93	89	73	60	81	85	13	7
031-002836	9	94	90	74	60	81	85	13	7
031-003536	9	94	91	75	61	83	86	13	7
031-004536	9	95	93	77	63	84	86	14	7
031-005618	11	95	89	79	64	80	86	15	8
031-005636	9	96	94	78	64	85	87	14	7
031-007118	11	94	90	79	64	80	85	15	9
031-007136	9	97	95	79	65	86	88	14	7
031-009018	11	95	91	80	65	82	85	15	9
031-009036	9	99	98	81	67	88	90	14	7
031-011218	11	96	93	81	66	83	86	15	9
031-011236	9	100	99	83	69	90	91	14	6
031-014018	11	96	94	82	67	84	87	15	9
031-014036	9	101	101	85	70	91	92	14	6
031-018018	11	98	96	84	69	86	88	15	9
031-018036	9	102	102	87	72	93	93	15	6
031-022418	11	98	96	85	70	87	89	16	9
031-022436	9	104	104	88	73	94	94	15	6
031-028018	9	100	99	87	71	89	90	16	9
031-028036	9	105	106	90	75	96	96	15	6
031-035518	9	101	101	89	73	90	91	16	9
031-035536	9	107	108	93	78	97	97	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 355 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
035-000836	9	99	93	79	66	84	91	13	5
035-001236	9	98	92	77	64	83	89	13	5
035-001936	9	97	91	77	63	83	88	13	5
035-002436	9	95	90	75	62	82	86	14	7
035-003036	9	95	92	76	62	83	87	14	7
035-003836	9	96	92	77	63	83	87	14	7
035-004836	9	97	94	78	64	85	88	14	7
035-006036	9	98	96	79	66	86	89	14	7
035-007536	9	98	96	80	67	87	89	14	7
035-009518	11	96	92	81	66	83	87	15	9
035-009536	9	100	99	83	69	89	91	14	6
035-011818	11	97	94	83	67	84	87	15	9
035-011836	9	101	100	84	70	91	92	14	6
035-015018	11	98	95	84	68	85	88	15	9
035-015036	9	102	102	86	71	92	93	14	6
035-019018	11	99	97	85	69	87	89	16	9
035-019036	9	103	103	87	73	94	94	15	6
035-023618	11	100	98	87	71	89	90	16	9
035-023636	9	105	105	90	75	95	95	15	6
035-030018	9	101	100	88	72	90	91	16	9
035-030036	9	107	107	91	76	97	97	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 400 daPa

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
040-000636	9	101	95	81	68	86	93	13	5
040-001036	9	100	93	80	66	85	91	13	5
040-001636	9	98	93	78	65	84	90	13	5
040-002036	9	98	92	78	65	84	89	13	5
040-002536	9	96	91	77	63	83	87	14	7
040-003136	9	97	93	77	64	84	88	14	7
040-004036	9	97	93	78	64	84	88	14	7
040-005036	9	98	95	79	65	86	89	14	7
040-006336	9	99	96	81	67	87	90	14	7
040-008036	9	100	98	83	69	89	91	14	6
040-010036	9	101	99	84	70	90	92	14	6
040-012518	11	98	95	84	68	85	89	15	9
040-012536	9	102	101	85	71	92	93	14	6
040-016018	11	99	95	85	69	86	89	16	9
040-016036	9	103	103	87	73	93	94	14	6
040-020018	11	100	97	86	70	88	90	16	9
040-020036	9	105	104	89	74	95	95	15	6
040-025018	11	101	99	88	72	89	91	16	9
040-025036	9	106	106	91	76	96	96	15	6
040-031518	11	102	100	89	73	90	92	16	9
040-031536	9	108	108	93	78	98	98	15	6
040-040018	9	104	103	92	75	92	94	16	9
040-040036	9	109	110	94	79	100	99	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 450 daPa

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
045-000936	9	102	95	82	68	86	93	13	5
045-001336	9	100	93	80	67	85	92	13	5
045-002136	9	99	94	79	66	86	91	13	5
045-002736	9	100	95	80	67	86	91	14	5
045-003436	9	98	94	79	65	85	89	14	7
045-004236	9	99	95	80	66	86	90	14	6
045-005336	9	99	96	81	67	87	90	14	6
045-006736	9	100	97	82	68	88	91	14	6
045-008536	9	101	99	84	70	90	92	14	6
045-010636	9	102	100	85	71	91	93	14	6
045-013218	11	99	96	85	69	86	90	15	9
045-013236	9	103	102	86	72	93	94	14	6
045-017018	11	101	98	86	71	88	91	16	9
045-017036	9	104	104	88	73	94	95	15	6
045-021218	11	101	98	87	72	89	91	16	9
045-021236	9	106	105	90	75	96	96	15	6
045-026518	11	102	100	89	73	90	92	16	9
045-026536	9	107	107	92	77	97	97	15	6
045-033518	11	104	102	91	75	92	93	16	9
045-033536	9	109	109	94	79	99	99	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
050-000736	11	103	96	84	70	87	95	13	5
050-001136	11	102	94	82	69	86	93	13	5
050-001836	9	101	94	81	68	86	92	13	5
050-002236	9	101	95	81	67	86	92	13	5
050-002836	9	101	96	82	68	87	92	14	5
050-003536	9	99	95	80	66	86	90	14	6
050-004536	9	100	96	81	67	87	91	14	6
050-005636	9	100	97	82	68	88	91	14	6
050-007136	9	101	98	83	69	89	92	14	6
050-009036	9	102	100	85	71	91	93	14	6
050-011236	9	103	101	86	71	92	94	14	6
050-014018	11	101	96	86	71	87	91	15	9
050-014036	9	104	103	87	73	94	95	14	6
050-018018	11	102	98	88	72	89	92	16	9
050-018036	9	106	105	89	74	95	96	15	6
050-022418	11	102	99	89	73	89	93	16	9
050-022436	9	107	106	91	76	97	97	15	6
050-028018	11	103	101	90	74	91	93	16	9
050-028036	9	108	108	93	78	98	98	15	6
050-035518	11	105	103	91	75	93	94	16	9
050-035536	9	110	110	95	79	100	100	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 560 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
056-000836	11	104	96	85	71	88	96	13	5
056-001536	9	103	96	83	70	87	94	13	5
056-002436	9	102	96	82	69	88	93	13	5
056-003036	9	105	100	85	72	91	97	14	4
056-003836	9	100	95	81	68	87	92	14	6
056-004836	9	101	97	82	69	88	92	14	6
056-006036	9	102	98	83	69	89	93	14	6
056-007536	9	102	99	84	70	90	93	14	6
056-009518	11	102	96	87	72	87	93	15	8
056-009536	9	104	101	86	71	92	94	14	6
056-011818	11	101	97	87	72	87	92	16	9
056-011836	9	105	103	87	73	94	95	14	6
056-015018	11	102	97	88	72	88	92	16	9
056-015036	9	105	104	88	74	94	96	14	6
056-019018	11	103	99	89	74	90	93	16	9
056-019036	9	107	106	90	76	96	97	15	6
056-023618	11	104	101	91	75	91	94	16	9
056-023636	9	108	107	92	78	98	99	15	6
056-030018	11	105	102	91	75	92	95	16	9
056-030036	9	110	109	94	79	99	100	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 630 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
063-000836	11	106	97	87	73	89	97	14	5
063-001236	11	104	96	86	72	87	96	14	5
063-002036	9	103	96	84	71	87	95	14	4
063-002536	9	103	97	85	71	89	95	14	4
063-003136	9	107	101	87	73	92	98	14	4
063-004036	9	104	99	85	71	90	96	14	4
063-005036	9	103	98	84	70	89	94	14	6
063-006336	9	103	99	84	70	90	94	14	6
063-008036	9	104	101	86	72	92	95	14	6
063-010036	9	105	102	87	73	93	96	14	6
063-012536	9	106	104	88	74	94	96	14	6
063-016018	11	105	100	91	75	90	95	16	8
063-016036	9	107	105	89	75	95	97	14	6
063-020018	11	104	100	90	74	91	95	16	9
063-020036	9	108	107	92	77	97	98	15	6
063-025018	11	105	102	91	75	92	95	16	9
063-025036	9	109	108	94	79	99	100	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 710 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
071-000936	11	107	98	87	74	89	98	14	5
071-001336	11	106	97	86	72	88	97	14	5
071-002136	9	105	98	85	71	89	96	14	4
071-002736	9	105	98	85	72	90	96	14	4
071-003436	9	106	100	86	72	91	97	14	4
071-004236	9	106	101	87	73	92	97	14	4
071-005336	9	106	101	88	74	93	98	14	4
071-006736	9	104	100	86	72	91	95	14	6
071-008536	9	105	102	87	73	93	96	14	6
071-010636	9	106	103	88	74	94	97	14	6
071-013236	9	107	105	90	76	95	98	15	6
071-017018	11	105	101	91	75	91	96	16	9
071-017036	9	108	106	92	77	97	99	15	6
071-021218	11	106	101	92	76	92	96	16	9
071-021236	9	109	107	93	78	98	100	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
080-000936	11	108	99	89	75	90	100	14	5
080-001436	11	107	98	88	74	89	99	14	5
080-002236	9	106	99	87	73	90	98	14	4
080-002836	9	107	100	88	74	91	98	14	4
080-003536	9	107	101	88	74	92	98	14	4
080-004536	9	107	102	89	75	93	98	14	4
080-005636	9	108	103	90	76	94	99	14	4
080-007136	9	106	101	88	74	92	97	14	6
080-009036	9	107	103	90	75	94	98	14	6
080-011236	9	107	104	90	76	95	98	14	6
080-014036	9	108	106	91	77	96	99	15	6
080-018018	11	108	103	94	78	93	98	16	8
080-018036	9	109	107	92	77	98	100	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 900 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
090-000936	11	110	100	91	77	91	101	14	5
090-001536	11	108	99	89	75	91	100	14	5
090-002436	11	107	100	88	74	91	99	14	5
090-003036	9	108	102	89	75	93	100	14	4
090-003836	9	109	102	90	76	93	100	14	4
090-004836	9	109	103	90	76	94	100	14	4
090-006036	9	109	104	91	77	95	100	14	4
090-007536	9	107	102	90	75	93	98	14	6
090-009536	9	109	104	91	77	95	99	14	6
090-011836	9	109	106	92	77	97	100	14	6
090-015036	9	110	107	92	78	97	100	15	6
090-019018	11	109	104	96	80	94	100	16	8
090-019036	9	111	108	94	79	99	101	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design MAE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
100-001036	11	114	104	95	81	95	105	14	5
100-001636	11	112	103	93	79	95	104	14	5
100-002536	11	111	103	92	78	94	102	14	5
100-003136	9	111	104	92	78	95	102	14	4
100-004036	9	110	103	91	77	94	101	14	4
100-005036	9	110	104	92	78	95	102	14	4
100-006336	9	111	105	93	78	96	102	14	4
100-008036	9	109	105	91	77	96	100	14	6
100-010036	11	109	105	92	77	96	100	15	6
100-012536	11	110	106	92	78	97	100	15	6
100-016036	11	110	107	94	79	98	101	15	6
100-020036	11	111	109	95	80	99	102	15	6

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 125 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
012-000536	9	87	84	65	51	76	78	14	7
012-000936	9	86	83	64	50	74	77	14	7
012-001136	9	85	82	63	50	74	77	14	7
012-001436	9	85	83	64	50	74	76	14	7
012-001836	9	85	83	64	50	74	76	14	7
012-002236	9	85	84	65	51	75	76	14	7
012-002836	9	86	85	66	52	76	77	14	7
012-003536	9	87	87	68	54	78	78	14	7
012-004536	9	88	88	70	55	79	79	14	7
012-005618	9	85	84	69	54	75	76	15	9
012-005636	9	90	90	72	57	80	81	14	7
012-007118	9	86	85	70	55	75	77	15	9
012-007136	9	91	91	74	59	82	82	15	7
012-009018	9	87	86	72	57	77	78	15	9
012-009036	9	93	93	76	61	84	83	15	7
012-011218	9	89	88	74	58	79	79	16	9
012-014018	9	90	90	76	60	80	80	16	9
012-018018	9	92	91	78	62	82	82	16	9
012-022418	9	93	93	80	64	83	83	17	9
012-028018	9	94	95	82	65	84	84	17	9
012-035518	9	96	96	84	67	86	86	17	9
012-045018	9	98	98	87	69	87	87	18	9
012-056012	9	96	96	86	67	84	84	18	11
012-071012	9	97	97	88	69	86	86	19	11
012-090012	9	99	99	90	71	87	87	19	11

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 160 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
016-000636	9	89	85	67	54	77	80	14	7
016-001036	9	88	84	66	52	76	79	14	7
016-001236	9	87	84	65	52	75	79	14	7
016-001636	9	87	84	66	52	76	78	14	7
016-002036	9	87	84	66	52	75	78	14	7
016-002536	9	87	86	67	53	77	79	14	7
016-003136	9	88	87	69	55	78	80	14	7
016-004036	9	90	89	71	56	80	81	14	7
016-005036	9	91	90	72	58	81	82	14	7
016-006318	9	88	85	72	57	76	79	15	9
016-006336	9	92	92	74	60	82	83	15	7
016-008018	9	89	87	73	58	78	79	15	9
016-008036	9	94	93	76	61	84	84	15	7
016-010018	9	90	88	75	59	79	80	16	9
016-010036	9	95	95	78	63	86	85	15	7
016-012518	9	91	90	76	61	80	81	16	9
016-012536	9	96	96	80	65	87	87	15	7
016-016018	9	92	92	78	62	82	83	16	9
016-020018	9	94	93	81	64	83	84	16	9
016-025018	9	95	95	82	66	85	85	17	9
016-031518	9	96	96	84	67	86	86	17	9
016-040018	9	98	98	86	69	88	87	17	9
016-050018	9	99	100	88	71	89	88	18	9
016-063018	9	101	101	90	72	90	90	18	9
016-080012	9	99	99	90	71	88	88	19	11
016-100012	9	101	101	92	72	89	89	19	12
016-125012	9	102	103	94	74	90	90	20	12

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 200 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
020-000736	9	91	87	70	56	78	82	14	7
020-001136	9	90	85	68	55	77	81	14	7
020-001436	9	89	86	68	54	77	80	14	7
020-001836	9	89	85	68	54	77	80	14	7
020-002236	9	89	86	68	54	78	80	14	7
020-002836	9	90	87	70	56	78	81	14	7
020-003536	9	90	89	71	57	80	82	14	7
020-004536	9	92	90	73	59	81	83	14	7
020-005636	9	93	92	74	60	83	84	15	7
020-007118	9	90	87	74	59	78	81	15	9
020-007136	9	94	93	76	62	84	85	15	7
020-009018	9	91	89	75	60	79	82	15	9
020-009036	9	96	95	78	63	86	86	15	7
020-011218	9	92	91	78	62	81	83	16	9
020-011236	9	97	97	80	65	87	87	15	7
020-014018	9	93	92	79	63	82	84	16	9
020-014036	9	98	98	82	67	89	89	15	7
020-018018	9	95	94	81	65	84	85	16	9
020-018036	9	100	100	85	69	90	90	16	6
020-022418	9	96	95	83	66	85	86	17	9
020-028018	9	97	97	85	68	87	87	17	9
020-035518	9	98	98	86	69	88	88	17	9
020-045018	9	100	100	88	71	89	89	18	9
020-056018	9	101	102	90	72	91	90	18	9
020-071018	9	103	103	92	74	92	91	18	9
020-090018	9	105	105	94	76	93	93	19	9
020-112012	9	103	103	94	74	91	91	20	12
020-140012	11	103	103	95	75	91	91	20	10
020-180012	11	105	105	97	77	93	92	21	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
025-000536	9	97	92	75	62	83	88	14	5
025-000836	9	95	90	74	60	82	87	14	5
025-001236	9	94	89	73	59	80	85	14	5
025-001636	9	91	87	70	56	78	82	14	7
025-002036	9	90	86	70	56	78	82	14	7
025-002536	9	91	88	71	57	79	83	14	7
025-003136	9	92	90	73	58	81	83	14	7
025-004036	9	93	90	74	59	82	84	14	7
025-005036	9	94	92	75	61	83	85	15	7
025-006336	9	95	94	77	62	85	86	15	7
025-008018	11	92	89	77	62	80	83	16	9
025-008036	9	96	96	79	64	87	87	15	7
025-010018	11	93	90	78	62	81	84	16	9
025-010036	9	98	97	81	66	88	88	15	7
025-012518	11	94	92	80	64	82	85	16	9
025-012536	9	99	99	83	67	89	90	15	7
025-016018	11	95	93	81	65	83	85	16	9
025-016036	9	100	100	85	69	91	91	16	6
025-020018	9	97	95	84	67	86	87	17	9
025-020036	9	102	102	87	71	92	92	16	6
025-025018	9	98	97	85	69	87	88	17	9
025-025036	9	103	104	88	72	94	93	16	6
025-031518	9	99	98	86	69	88	89	17	9
025-040018	9	101	100	88	71	90	90	17	9
025-050018	9	102	102	90	73	91	91	18	9
025-063018	9	103	103	92	74	93	92	18	9
025-080018	9	105	105	94	76	94	93	18	9
025-100018	9	107	107	97	78	95	95	19	9
025-125012	11	104	104	95	75	92	92	20	10
025-160012	11	105	105	97	77	93	93	20	10
025-200012	11	107	107	99	78	94	94	21	10
025-250012	11	108	108	100	79	95	95	21	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 315 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
031-000536	9	99	93	78	64	84	90	14	5
031-000936	9	97	92	77	63	83	89	14	5
031-001436	9	94	89	73	59	80	85	14	7
031-001836	9	93	88	73	59	80	84	14	7
031-002236	9	93	89	73	59	81	84	14	7
031-002836	9	94	90	74	60	81	85	14	7
031-003536	9	94	91	75	61	83	86	14	7
031-004536	9	95	93	77	62	84	86	15	7
031-005618	11	95	89	79	64	80	86	16	8
031-005636	9	96	95	78	64	86	87	15	7
031-007118	11	94	90	79	63	80	85	16	9
031-007136	9	97	95	79	65	86	88	15	7
031-009018	11	95	91	80	64	82	85	16	9
031-009036	9	99	98	82	66	88	90	15	7
031-011218	11	96	93	82	65	83	86	16	9
031-011236	9	100	99	83	68	90	91	15	7
031-014018	11	96	94	83	66	84	87	16	9
031-014036	9	101	101	85	69	91	92	15	6
031-018018	11	98	96	84	68	86	88	17	9
031-018036	9	102	102	87	71	93	93	16	6
031-022418	11	98	96	85	69	87	89	17	9
031-022436	9	104	104	88	72	94	94	16	6
031-028018	9	100	99	87	70	89	90	17	9
031-028036	9	105	106	90	74	96	96	16	6
031-035518	9	101	101	89	72	90	91	17	9
031-035536	9	107	108	93	77	97	97	17	6
031-045018	9	103	102	91	73	92	92	17	9
031-056018	9	104	104	92	75	93	93	18	9
031-071018	9	105	105	94	76	94	94	18	9
031-090018	9	107	107	96	78	96	96	18	9
031-112018	9	108	109	98	79	97	97	19	9
031-140018	9	110	110	100	81	98	98	19	9
031-180012	11	107	107	99	78	95	95	20	10
031-224012	11	108	109	101	80	96	96	21	10
031-280012	11	110	110	102	81	97	97	21	10
031-355012	11	112	112	105	83	98	98	22	10
031-450009	11	111	111	105	83	97	97	23	12

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 355 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
035-000836	9	99	93	80	65	84	91	14	5
035-001236	9	98	92	77	63	83	89	14	5
035-001936	9	97	92	76	62	83	88	14	5
035-002436	9	94	90	75	61	81	86	14	7
035-003036	9	95	92	76	62	83	87	14	7
035-003836	9	96	92	77	62	83	87	15	7
035-004836	9	96	94	78	63	85	88	15	7
035-006036	9	98	95	80	65	86	88	15	7
035-007536	9	98	96	81	66	87	89	15	7
035-009518	11	96	92	82	66	83	87	16	9
035-009536	9	100	99	83	68	89	91	15	7
035-011818	11	97	94	83	66	84	87	16	9
035-011836	9	101	100	84	69	91	92	15	6
035-015018	11	98	95	84	67	85	88	16	9
035-015036	9	102	102	86	71	92	93	15	6
035-019018	11	99	97	85	68	87	89	17	9
035-019036	9	103	103	88	72	94	94	16	6
035-023618	11	100	98	87	70	88	90	17	9
035-023636	9	105	105	90	74	95	95	16	6
035-030018	9	101	100	88	71	90	91	17	9
035-030036	9	107	107	92	75	97	97	16	6
035-037518	9	103	102	90	73	91	92	17	9
035-047518	9	104	103	92	74	93	93	18	9
035-060018	9	105	105	93	75	94	94	18	9
035-075018	9	106	106	95	77	95	95	18	9
035-095018	9	108	108	98	79	97	97	19	9
035-118018	9	109	110	99	80	98	98	19	9
035-150018	9	111	111	101	82	99	99	20	9
035-190012	11	108	108	100	80	96	96	20	10
035-236012	11	109	110	101	80	97	97	21	10
035-300012	11	111	111	104	82	98	98	21	10
035-375012	11	112	113	106	84	99	99	22	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
040-000636	9	101	95	82	67	86	93	14	5
040-001036	9	100	93	80	66	85	91	14	5
040-001636	9	98	93	79	64	84	90	14	5
040-002036	9	98	92	78	64	84	89	14	5
040-002536	9	96	91	77	62	83	87	14	7
040-003136	9	97	93	77	63	84	88	14	7
040-004036	9	97	93	78	64	84	88	15	7
040-005036	9	98	95	79	65	86	89	15	7
040-006336	9	99	96	81	66	87	90	15	7
040-008036	9	100	98	83	68	89	91	15	6
040-010036	9	101	99	84	69	90	92	15	6
040-012518	11	98	95	84	67	85	89	16	9
040-012536	9	102	101	85	70	92	93	15	6
040-016018	11	99	95	85	68	86	89	17	9
040-016036	9	103	103	87	72	93	94	15	6
040-020018	11	100	97	86	69	88	90	17	9
040-020036	9	105	104	89	73	95	95	16	6
040-025018	11	101	99	88	71	89	91	17	9
040-025036	9	106	106	91	75	96	96	16	6
040-031518	11	102	100	89	72	90	92	17	9
040-031536	9	108	108	93	77	98	98	16	6
040-040018	9	104	103	92	74	92	94	18	9
040-040036	9	109	110	95	78	100	99	17	6
040-050018	9	105	104	93	75	94	94	18	9
040-063018	9	106	106	94	76	95	95	18	9
040-080018	9	107	107	96	78	96	97	18	9
040-100018	9	109	109	98	80	98	98	19	9
040-125018	9	111	111	100	81	99	99	19	9
040-160018	9	112	112	103	83	100	100	20	9
040-200018	11	113	113	104	84	101	101	20	9
040-250012	11	110	110	102	81	98	98	21	10
040-315012	11	112	112	104	83	99	99	21	10
040-400012	11	113	114	107	85	100	100	22	10
040-500012	11	115	115	109	86	101	101	22	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 450 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
045-000936	9	102	95	82	68	86	93	14	5
045-001336	9	101	93	81	66	85	92	14	5
045-002136	9	99	94	79	65	86	91	14	5
045-002736	9	100	95	81	66	86	91	14	5
045-003436	9	98	94	79	65	85	89	14	7
045-004236	9	99	95	80	65	86	90	15	6
045-005336	9	99	96	81	66	87	90	15	6
045-006736	9	100	97	82	67	88	91	15	6
045-008536	9	101	99	84	69	90	92	15	6
045-010636	9	102	100	85	70	91	93	15	6
045-013218	11	99	96	85	68	86	90	17	9
045-013236	9	103	102	86	71	93	94	15	6
045-017018	11	101	98	86	70	88	91	17	9
045-017036	9	104	104	88	72	94	95	16	6
045-021218	11	101	98	88	71	89	91	17	9
045-021236	9	106	105	90	74	96	96	16	6
045-026518	11	102	100	89	72	90	92	17	9
045-026536	9	107	107	92	76	97	97	16	6
045-033518	11	104	102	91	74	92	93	17	9
045-033536	9	109	109	94	78	99	99	16	6
045-042518	9	105	104	92	75	93	95	18	9
045-042536	9	110	111	96	79	101	100	17	6
045-053018	9	106	105	94	76	95	96	18	9
045-067018	9	107	107	95	77	96	97	18	9
045-085018	9	109	108	98	79	97	98	18	9
045-106018	9	110	110	99	80	99	99	19	9
045-132018	9	112	111	102	82	100	100	19	9
045-170018	9	113	113	104	84	101	101	20	9
045-212018	11	114	114	105	84	102	102	20	9
045-265012	11	111	111	103	82	99	99	21	10
045-335012	11	113	113	106	84	100	100	22	10
045-425012	11	114	115	108	86	101	101	22	10
045-530012	11	116	116	110	87	102	102	23	10
045-530010	11	114	114	108	85	100	100	23	11

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
050-000736	11	103	96	84	69	87	95	14	5
050-001136	11	102	94	82	68	86	93	14	5
050-001836	9	101	94	81	67	86	92	14	5
050-002236	9	101	95	81	67	86	92	14	5
050-002836	9	101	96	82	68	87	92	15	5
050-003536	9	99	95	80	66	86	90	15	6
050-004536	9	100	96	81	67	87	91	15	6
050-005636	9	100	97	82	67	88	91	15	6
050-007136	9	101	98	83	68	89	92	15	6
050-009036	9	102	100	85	69	91	93	15	6
050-011236	9	103	101	86	71	92	94	16	6
050-014018	11	101	96	86	70	87	91	17	9
050-014036	9	104	103	87	72	94	95	16	6
050-018018	11	102	98	88	71	89	92	17	9
050-018036	9	106	105	89	73	95	96	16	6
050-022418	11	102	99	89	72	89	93	17	9
050-022436	9	107	106	91	75	97	97	16	6
050-028018	11	103	101	91	73	91	93	17	9
050-028036	9	108	108	93	77	98	98	16	6
050-035518	11	105	103	91	74	93	94	17	9
050-035536	9	110	110	95	78	100	100	16	6
050-045018	11	105	104	93	75	93	95	18	9
050-045036	9	111	112	97	80	101	101	17	6
050-056018	9	107	106	95	77	96	97	18	9
050-056036	9	113	113	99	82	103	102	17	6
050-071018	9	108	107	97	78	97	98	18	9
050-090018	9	110	109	99	80	98	99	18	9
050-112018	9	111	111	101	82	100	100	19	9
050-140018	9	113	112	102	83	101	101	19	9
050-180018	9	114	114	104	85	102	102	20	9
050-224018	11	115	115	106	85	103	103	20	9
050-280012	11	112	112	104	83	99	99	21	10
050-355012	11	114	114	107	85	101	101	22	10
050-450012	11	115	116	109	87	102	102	22	10
050-560012	11	117	117	110	88	103	103	23	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 560 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
056-000836	11	104	96	85	71	88	96	14	5
056-001536	9	103	96	83	69	87	94	14	5
056-002436	9	102	96	83	68	88	93	14	5
056-003036	9	103	98	84	69	89	94	15	4
056-003836	9	100	95	81	67	87	92	15	6
056-004836	9	101	97	83	68	88	92	15	6
056-006036	9	102	98	83	68	89	93	15	6
056-007536	9	102	99	84	69	90	93	15	6
056-009518	11	102	96	88	71	87	93	17	8
056-009536	9	104	101	86	71	92	94	15	6
056-011818	11	101	97	88	71	87	92	17	9
056-011836	9	105	103	87	72	94	95	16	6
056-015018	11	102	97	88	71	88	92	17	9
056-015036	9	105	104	88	73	94	96	16	6
056-019018	11	103	99	89	73	90	93	17	9
056-019036	9	107	106	90	74	96	97	16	6
056-023618	11	104	101	91	74	91	94	17	9
056-023636	9	108	107	93	76	98	99	16	6
056-030018	11	105	102	91	74	92	95	17	9
056-030036	9	110	109	94	78	99	100	16	6
056-037518	11	106	104	93	75	93	96	18	9
056-037536	9	111	111	96	79	101	101	16	6
056-047518	11	107	105	94	76	95	96	18	9
056-047536	9	112	113	98	81	102	102	17	6
056-060018	9	108	107	96	78	97	98	18	9
056-060036	9	114	114	100	83	104	104	17	6
056-075018	9	109	108	98	80	98	99	18	9
056-095018	9	111	110	100	81	99	100	19	9
056-118018	9	112	112	102	83	100	101	19	9
056-150018	9	114	113	104	84	102	102	20	9
056-190012	11	111	110	102	81	98	99	20	10
056-236012	11	112	111	104	83	99	100	21	10
056-300012	11	113	113	106	84	101	101	21	10
056-375012	11	115	115	108	86	102	102	22	10
056-475012	11	116	116	109	87	103	103	22	10
056-600012	11	118	118	112	89	104	104	23	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 630 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
063-000836	11	106	97	87	73	89	97	15	5
063-001236	11	104	96	86	71	87	96	15	5
063-002036	9	103	96	85	70	87	95	15	4
063-002536	9	103	97	85	70	89	95	15	4
063-003136	9	104	99	85	70	90	95	15	4
063-004036	9	104	99	85	71	90	96	15	4
063-005036	9	103	98	84	69	89	94	15	6
063-006336	9	103	99	85	69	90	94	15	6
063-008036	9	104	101	86	71	92	95	15	6
063-010036	9	105	102	87	72	93	96	15	6
063-012536	9	106	104	89	73	94	96	16	6
063-016018	11	105	100	91	74	90	95	17	8
063-016036	9	107	105	90	74	95	97	16	6
063-020018	11	104	100	90	73	91	95	17	9
063-020036	9	108	107	92	76	97	98	16	6
063-025018	11	105	102	91	74	92	95	17	9
063-025036	9	109	108	94	78	99	100	16	6
063-031518	11	106	103	92	75	93	96	17	9
063-031536	9	111	110	95	79	100	101	16	6
063-040018	11	107	104	94	76	94	97	18	9
063-040036	9	112	112	97	81	102	102	17	6
063-050018	11	108	106	96	78	96	98	18	9
063-050036	9	113	113	99	82	103	103	17	6
063-063018	11	109	107	97	79	97	98	18	9
063-063036	9	115	115	101	84	105	105	17	6
063-080018	9	111	110	99	81	99	100	19	9
063-100018	9	112	111	101	82	100	101	19	9
063-125018	9	113	113	103	84	101	102	19	9
063-160018	9	114	114	104	85	103	103	20	9
063-200018	11	115	115	105	85	104	103	20	9
063-250018	11	117	117	107	87	105	105	20	9
063-315018	11	119	119	110	89	106	106	21	9
063-400012	11	116	116	109	87	103	103	22	10
063-500012	11	117	117	111	88	104	104	22	10
063-630012	11	119	119	113	90	105	105	23	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 710 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
071-000936	11	107	98	87	73	89	98	15	5
071-001336	11	106	97	86	72	88	97	15	5
071-002136	9	105	98	85	71	89	96	15	4
071-002736	9	105	98	86	71	90	96	15	4
071-003436	9	106	100	86	72	91	97	15	4
071-004236	9	106	101	87	72	92	97	15	4
071-005336	9	106	101	88	73	93	98	15	4
071-006736	9	104	100	86	71	91	95	15	6
071-008536	9	105	102	88	72	93	96	15	6
071-010636	9	106	103	88	73	94	97	15	6
071-013236	9	107	105	90	75	95	98	16	6
071-017018	11	105	101	91	74	91	96	17	9
071-017036	9	108	106	92	76	97	99	16	6
071-021218	11	106	101	92	75	92	96	17	9
071-021236	9	109	107	93	77	98	100	16	6
071-026518	11	107	103	93	76	93	97	17	9
071-026536	9	111	109	94	78	100	101	16	6
071-033518	11	108	105	94	77	94	97	18	9
071-033536	9	112	111	97	80	102	102	17	6
071-042518	11	108	105	95	78	95	98	18	9
071-042536	9	113	113	99	82	103	103	17	6
071-053018	11	109	107	97	79	97	99	18	9
071-053036	9	115	115	101	84	105	105	17	6
071-067018	11	110	109	98	80	98	100	18	9
071-067036	9	117	117	103	85	106	106	18	6
071-085018	11	112	110	100	81	99	101	19	9
071-106018	9	113	112	103	83	101	102	19	9
071-132018	9	114	114	104	85	102	103	20	9
071-170018	11	115	115	105	85	103	104	20	9
071-212018	11	117	116	107	87	105	105	20	9
071-265018	11	118	118	109	88	106	106	20	9
071-335012	11	115	115	108	86	102	103	22	10
071-425012	11	117	117	110	87	104	104	22	10
071-530012	11	118	118	112	89	105	105	23	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
080-000936	11	108	99	90	75	90	100	15	5
080-001436	11	107	98	88	74	89	99	15	5
080-002236	9	106	99	88	73	90	98	15	4
080-002836	9	107	100	88	73	91	98	15	4
080-003536	9	107	101	89	73	92	98	15	4
080-004536	9	107	102	89	74	93	99	15	4
080-005636	9	108	103	90	75	94	99	15	4
080-007136	9	106	101	88	73	92	97	15	6
080-009036	9	107	103	90	74	94	98	16	6
080-011236	9	107	104	90	75	95	98	16	6
080-014036	9	108	106	92	76	96	99	16	6
080-018018	11	108	103	94	77	93	98	17	8
080-018036	9	109	107	92	76	98	100	16	6
080-022418	11	107	102	93	76	92	97	17	9
080-022436	9	110	108	93	78	99	101	16	6
080-028018	11	108	104	95	77	94	98	18	9
080-028036	9	112	110	96	80	101	102	16	6
080-035518	11	109	106	96	78	95	99	18	9
080-035536	9	113	112	98	81	102	103	17	6
080-045018	11	110	106	97	79	96	99	18	9
080-045036	9	114	114	100	83	104	104	17	6
080-056018	11	110	108	98	80	97	100	18	9
080-056036	9	116	116	102	84	106	106	17	6
080-071018	11	112	110	100	81	99	101	19	9
080-071036	9	118	118	104	86	107	108	18	6
080-090018	11	113	111	101	82	100	102	19	9
080-112018	9	114	113	103	84	102	103	19	9
080-140018	11	115	114	104	85	103	103	19	9
080-180018	11	116	116	105	86	104	104	20	9
080-224018	11	117	117	108	87	106	106	20	9
080-280012	11	115	114	107	86	102	103	21	10
080-280018	11	119	119	109	89	107	107	20	9
080-355012	11	116	116	109	87	103	104	22	10
080-450012	11	118	118	111	89	105	105	22	10
080-560012	11	119	119	113	90	106	106	23	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 900 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
090-000936	11	110	100	91	76	91	101	15	5
090-001536	11	108	99	89	74	91	100	15	5
090-002436	11	107	100	88	74	91	99	15	5
090-003036	9	108	102	90	75	93	100	15	4
090-003836	9	109	102	90	75	93	100	15	4
090-004836	9	109	103	91	75	94	100	15	4
090-006036	9	109	104	92	76	95	100	15	4
090-007536	9	107	102	90	74	93	98	15	6
090-009536	9	108	104	91	76	95	99	16	6
090-011836	9	109	106	92	76	97	100	16	6
090-015036	9	110	107	92	77	97	100	16	6
090-019018	11	109	104	96	79	94	100	17	8
090-019036	9	111	108	94	78	99	101	16	6
090-023618	11	109	104	96	78	94	99	18	9
090-023636	11	111	110	95	79	100	102	16	6
090-030018	11	110	105	96	78	95	100	18	9
090-030036	11	112	111	97	80	101	103	16	6
090-037518	11	110	106	97	79	96	100	18	9
090-037536	9	114	113	99	82	103	104	17	6
090-047518	11	111	108	98	80	98	101	18	9
090-047536	9	116	115	101	84	105	106	17	6
090-060018	11	112	109	99	81	98	101	18	9
090-060036	9	117	117	103	85	107	107	17	6
090-075018	11	113	111	101	82	100	102	19	9
090-095018	13	113	111	102	83	100	102	19	9
090-118018	13	114	113	104	84	102	103	19	9
090-150018	11	116	115	105	86	104	105	20	9
090-190012	13	114	112	105	84	100	102	21	10
090-236012	13	115	113	107	86	101	103	21	10
090-300012	11	116	115	109	87	103	104	22	10
090-375012	11	118	117	110	88	104	105	22	10
090-475012	11	119	118	112	90	105	106	22	10
090-600012	11	120	120	114	91	107	107	23	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
100-001036	11	114	104	95	80	95	105	15	5
100-001636	11	112	103	94	79	95	104	15	5
100-002536	11	111	103	92	77	94	102	15	5
100-003136	9	111	104	92	77	95	102	15	4
100-004036	9	110	103	92	76	94	101	15	4
100-005036	9	110	104	92	77	95	102	15	4
100-006336	9	111	105	93	77	96	102	16	4
100-008036	9	109	105	92	76	96	100	16	6
100-010036	11	109	105	92	76	96	100	16	6
100-012536	11	110	106	93	77	97	100	16	6
100-016036	11	110	107	94	78	98	101	16	6
100-020036	11	111	109	95	79	99	102	16	6
100-025018	11	112	106	98	80	97	102	18	8
100-025036	11	113	111	96	80	101	103	16	6
100-031518	11	111	106	97	79	96	101	18	9
100-031536	11	113	111	98	81	102	104	17	6
100-040018	11	111	107	99	81	97	101	18	9
100-040036	9	115	114	100	83	104	106	17	6
100-050018	11	112	109	100	81	98	102	18	9
100-050036	9	117	116	102	85	106	107	17	6
100-063018	11	113	110	101	82	99	102	19	9
100-063036	9	118	118	104	87	108	108	17	6
100-080018	13	113	110	101	82	100	102	19	9
100-080036	9	120	119	107	89	109	110	18	6
100-100018	13	114	112	103	84	101	103	19	9
100-125018	13	115	113	104	85	102	104	19	9
100-160018	11	117	116	106	86	105	106	20	9
100-200018	11	118	118	108	88	106	107	20	9
100-250018	11	120	119	110	90	107	108	20	9
100-315018	11	121	121	112	91	109	109	21	9
100-400018	11	123	123	114	93	110	110	21	9
100-500012	11	120	119	113	91	106	107	23	10

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1120 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
112-001036	13	114	103	95	80	95	105	15	5
112-001636	13	113	103	94	79	94	104	15	5
112-002536	13	111	103	93	77	94	102	15	5
112-003136	13	110	103	92	76	94	101	15	5
112-004036	13	110	102	91	76	93	101	16	5
112-005036	11	111	105	93	77	96	102	16	4
112-006336	11	111	106	94	78	97	102	16	4
112-008036	11	110	105	92	76	96	101	16	6
112-010036	11	110	105	93	77	96	101	16	6
112-012536	11	111	107	94	78	98	101	16	6
112-016036	11	112	108	95	79	98	102	16	6
112-020036	11	112	109	96	80	100	103	16	6
112-025018	13	112	106	98	80	96	102	18	8
112-025036	11	113	111	97	81	102	104	17	6
112-031518	11	113	108	100	82	98	103	18	8
112-031536	11	114	112	99	82	102	105	17	6
112-040018	13	112	107	99	81	97	101	18	9
112-040036	11	116	114	100	83	104	106	17	6
112-050018	13	112	109	100	82	99	102	19	9
112-050036	9	118	117	103	86	107	108	17	6
112-063018	13	113	110	101	82	99	103	19	9
112-063036	9	119	118	105	87	108	109	17	6
112-080018	13	114	111	102	83	100	103	19	9
112-080036	9	120	120	107	89	110	110	18	6
112-100018	13	115	113	104	85	102	104	19	9
112-125018	13	116	114	105	86	103	105	19	9
112-160018	11	118	116	107	87	105	106	20	9
112-200018	11	119	118	109	89	107	108	20	9
112-250018	11	120	120	111	91	108	109	21	9
112-315018	11	122	122	113	93	109	110	21	9
112-400018	11	124	123	115	93	111	111	22	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
125-001036	13	115	104	97	81	95	107	15	5
125-001636	13	114	104	95	80	95	105	15	5
125-002536	13	113	104	94	78	95	104	15	5
125-003136	13	112	104	93	78	95	103	15	5
125-004036	13	111	103	93	77	94	102	16	5
125-005036	11	113	105	94	79	97	104	16	4
125-006336	11	113	107	95	79	98	104	16	4
125-008036	11	114	108	96	80	99	105	16	4
125-010036	11	114	109	97	81	100	105	16	4
125-012536	11	112	108	96	79	99	103	16	6
125-016036	11	113	108	96	80	99	103	16	6
125-020036	11	113	110	97	80	100	104	16	6
125-025036	11	114	112	98	82	102	105	17	6
125-031518	13	113	107	100	82	98	103	18	8
125-031536	11	115	113	100	83	103	106	17	6
125-040018	13	113	108	100	82	98	103	18	9
125-040036	11	117	115	102	85	105	107	17	6
125-050018	13	113	110	101	83	99	103	19	9
125-050036	9	119	117	104	87	107	109	17	6
125-063018	13	114	110	102	83	100	104	19	9
125-063036	9	120	119	106	88	109	110	18	6
125-080018	13	115	112	103	84	101	104	19	9
125-100018	13	116	113	104	85	102	105	19	9
125-125018	13	117	114	105	86	103	106	20	9
125-160018	13	118	116	107	87	105	107	20	9
125-200018	13	119	118	109	89	106	108	20	9
125-250018	11	121	120	112	91	108	110	21	9
125-315018	11	123	122	114	93	110	111	21	9
125-400018	11	124	124	116	94	111	112	22	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1400 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
140-001036	13	117	105	99	83	96	108	16	5
140-001636	13	115	105	98	82	96	107	16	5
140-002536	13	114	105	96	80	96	105	16	5
140-003136	13	113	105	95	80	96	104	16	5
140-004036	13	112	104	95	79	95	104	16	5
140-005036	13	112	105	95	79	96	104	16	5
140-006336	11	114	108	97	81	99	105	16	4
140-008036	11	115	109	98	81	100	106	16	4
140-010036	11	115	110	98	82	101	106	16	4
140-012536	11	113	109	96	80	99	104	16	6
140-016036	11	114	109	97	81	100	104	17	6
140-020036	11	114	111	98	81	101	105	17	6
140-025036	11	115	113	99	83	103	106	17	6
140-031536	11	116	113	101	84	104	107	17	6
140-040036	11	118	116	103	85	106	108	17	6
140-050018	13	115	110	102	83	100	104	19	9
140-050036	11	119	117	105	87	108	109	18	6
140-063018	13	115	111	103	84	101	105	19	9
140-063036	9	121	119	107	89	109	110	18	6
140-080018	13	116	112	104	85	102	105	19	9
140-100018	13	117	114	105	86	103	106	20	9
140-125018	13	117	115	107	87	104	107	20	9
140-160018	13	119	117	109	89	106	108	20	9
140-200018	13	120	118	110	90	107	109	21	9
140-250018	11	122	121	113	92	109	110	21	9
140-315018	11	124	123	115	93	110	111	21	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1600 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
160-001636	13	117	106	98	83	97	108	16	5
160-002536	13	115	105	97	81	97	107	16	5
160-003136	13	114	105	96	80	97	106	16	5
160-004036	13	114	105	96	80	96	105	16	5
160-005036	13	114	106	96	80	97	105	16	5
160-006336	11	116	109	98	82	100	107	16	4
160-008036	11	116	109	99	83	100	107	16	4
160-010036	11	117	111	100	84	102	108	16	4
160-012536	11	117	112	100	84	103	108	16	4
160-016036	11	118	113	101	85	104	109	17	4
160-020036	11	116	112	99	83	102	106	17	6
160-025036	11	117	113	101	84	104	107	17	6
160-031536	11	117	114	102	85	104	108	17	6
160-040036	11	119	116	104	87	107	109	17	6
160-050018	13	116	111	104	85	101	106	19	9
160-050036	11	120	118	106	88	108	110	18	6
160-063018	13	117	112	105	85	101	106	19	9
160-063036	11	121	119	107	89	109	111	18	6
160-080018	13	117	113	105	86	102	106	19	9
160-100018	13	118	115	107	87	104	107	20	9
160-125018	13	119	115	108	88	105	108	20	9
160-160018	13	120	118	110	90	106	109	20	9
160-200018	13	121	119	111	90	108	110	21	9
160-250018	13	122	120	112	91	108	110	21	9
160-315018	11	125	123	116	94	111	112	21	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 1800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
180-001636	13	118	107	101	85	98	110	16	5
180-002536	13	117	106	99	83	98	108	16	5
180-003136	13	116	106	98	82	98	107	16	5
180-004036	13	115	106	98	82	97	107	16	5
180-005036	13	115	107	98	82	98	106	16	5
180-006336	13	115	108	99	82	99	106	16	5
180-008036	11	118	111	101	85	102	109	16	4
180-010036	11	118	112	102	85	103	109	17	4
180-012536	11	119	113	102	86	104	109	17	4
180-016036	11	119	114	103	86	104	110	17	4
180-020036	11	117	113	101	84	103	108	17	6
180-025036	11	118	114	103	85	105	108	17	6
180-031536	11	119	115	104	86	105	109	17	6
180-040036	11	120	117	105	88	107	110	17	6
180-050018	13	118	113	106	87	103	108	19	8
180-050036	11	121	119	106	88	109	111	18	6
180-063018	13	119	114	107	88	103	108	19	8
180-063036	11	122	120	107	89	110	112	18	6
180-080018	13	118	114	107	87	103	108	20	9
180-100018	13	119	115	108	88	104	108	20	9
180-125018	13	120	116	109	89	105	109	20	9
180-160018	13	121	118	111	91	107	110	21	9
180-200018	13	122	120	112	91	108	110	21	9
180-250018	13	123	121	114	92	109	111	21	9
180-315018	13	124	123	115	94	110	112	22	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 2000 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
200-002536	13	118	107	101	84	99	110	16	5
200-003136	13	117	107	100	83	99	108	16	5
200-004036	13	117	107	99	83	98	108	16	5
200-005036	13	117	108	99	83	99	108	16	5
200-006336	13	117	109	100	84	100	108	16	5
200-008036	13	117	109	100	84	100	108	17	5
200-010036	11	120	113	103	87	104	111	17	4
200-012536	11	120	114	104	87	105	111	17	4
200-016036	11	120	115	105	88	105	111	17	4
200-020036	11	121	116	105	88	107	112	17	4
200-025036	11	119	115	104	87	105	110	17	6
200-031536	11	120	116	105	88	106	110	17	6
200-040036	11	121	118	106	88	108	111	17	6
200-050018	13	120	114	108	88	103	109	19	8
200-050036	11	122	120	107	90	110	112	18	6
200-063018	13	120	114	108	89	104	110	19	8
200-080018	13	120	115	109	89	104	109	20	9
200-100018	13	120	116	109	89	105	109	20	9
200-125018	13	121	117	111	90	106	110	20	9
200-160018	13	122	119	112	91	107	111	21	9
200-200018	13	123	120	113	92	109	111	21	9
200-250018	13	124	121	115	93	110	112	21	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 2250 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
225-002536	7	120	108	102	86	100	111	16	5
225-003136	7	119	109	102	86	100	110	16	5
225-004036	7	118	108	102	85	99	110	17	5
225-005036	7	118	109	102	85	100	109	17	5
225-006336	7	118	110	101	85	101	109	17	5
225-008036	7	119	111	102	86	102	110	17	5
225-010036	7	119	112	103	86	103	110	17	5
225-012536	7	119	113	103	86	104	110	17	5
225-016036	7	120	114	104	87	104	111	17	5
225-020036	7	120	114	104	86	105	110	17	5
225-025036	7	118	114	103	85	104	109	17	7
225-031536	7	119	114	103	86	105	109	18	7
225-040036	7	119	116	105	87	106	110	18	7
225-050018	13	121	115	109	90	104	111	19	8
225-050036	7	120	118	106	88	108	111	18	7
225-063018	13	121	115	110	91	105	111	20	8
225-080018	13	122	117	111	91	106	111	20	8
225-100018	13	121	117	110	90	106	110	20	9
225-125018	13	122	117	111	91	107	111	21	9
225-160018	13	123	119	113	92	108	112	21	9
225-200018	13	124	121	114	93	109	112	21	9
225-250018	13	125	122	116	94	110	113	21	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 2500 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
250-002536	7	121	109	103	87	101	112	16	5
250-003136	7	120	109	103	86	101	112	16	5
250-004036	7	120	109	102	86	100	111	17	5
250-005036	7	120	110	102	86	101	111	17	5
250-006336	7	120	111	103	86	102	111	17	5
250-008036	7	120	111	103	86	102	111	17	5
250-010036	7	121	113	104	87	104	112	17	5
250-012536	7	121	114	104	87	105	111	17	5
250-016036	7	121	114	105	88	105	112	17	5
250-020036	7	121	115	105	88	106	112	17	5
250-025036	7	122	117	106	89	107	112	17	5
250-031536	7	122	117	107	89	108	113	18	5
250-040036	7	121	117	106	88	107	111	18	7
250-050018	13	123	116	111	91	105	112	20	8
250-050036	7	122	119	107	90	109	112	18	7
250-063018	13	123	116	111	92	106	113	20	8
250-080018	13	123	118	112	92	107	113	20	8
250-100018	13	124	119	113	93	108	113	20	8
250-125018	13	124	119	114	93	108	113	21	8
250-160018	13	124	120	114	93	109	113	21	9
250-200018	13	125	121	115	94	110	113	21	9
250-250018	13	126	123	117	95	111	114	22	9

Comments on sound tables see sheet TA 3

Sound table acc. to types for pressure series 2800 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
280-002536	7	123	110	105	89	101	114	17	5
280-003136	7	122	110	104	88	102	113	16	5
280-004036	7	121	110	104	87	101	113	17	5
280-005036	7	121	111	104	87	102	112	17	5
280-006336	7	121	112	104	87	103	112	17	5
280-008036	7	122	113	105	88	104	113	17	5
280-010036	7	122	114	106	89	105	113	17	5
280-012536	7	122	115	106	89	106	113	17	5
280-016036	7	123	115	106	89	106	113	17	5
280-020036	7	122	116	106	89	107	113	17	5
280-025036	7	123	118	107	90	108	114	17	5
280-031536	7	124	118	108	91	109	114	18	5
280-040036	7	122	118	108	90	108	112	18	7
280-050036	7	123	119	110	92	109	113	18	7
280-063036	7	124	120	111	92	110	114	18	7

Comments on sound tables see sheet TA 3

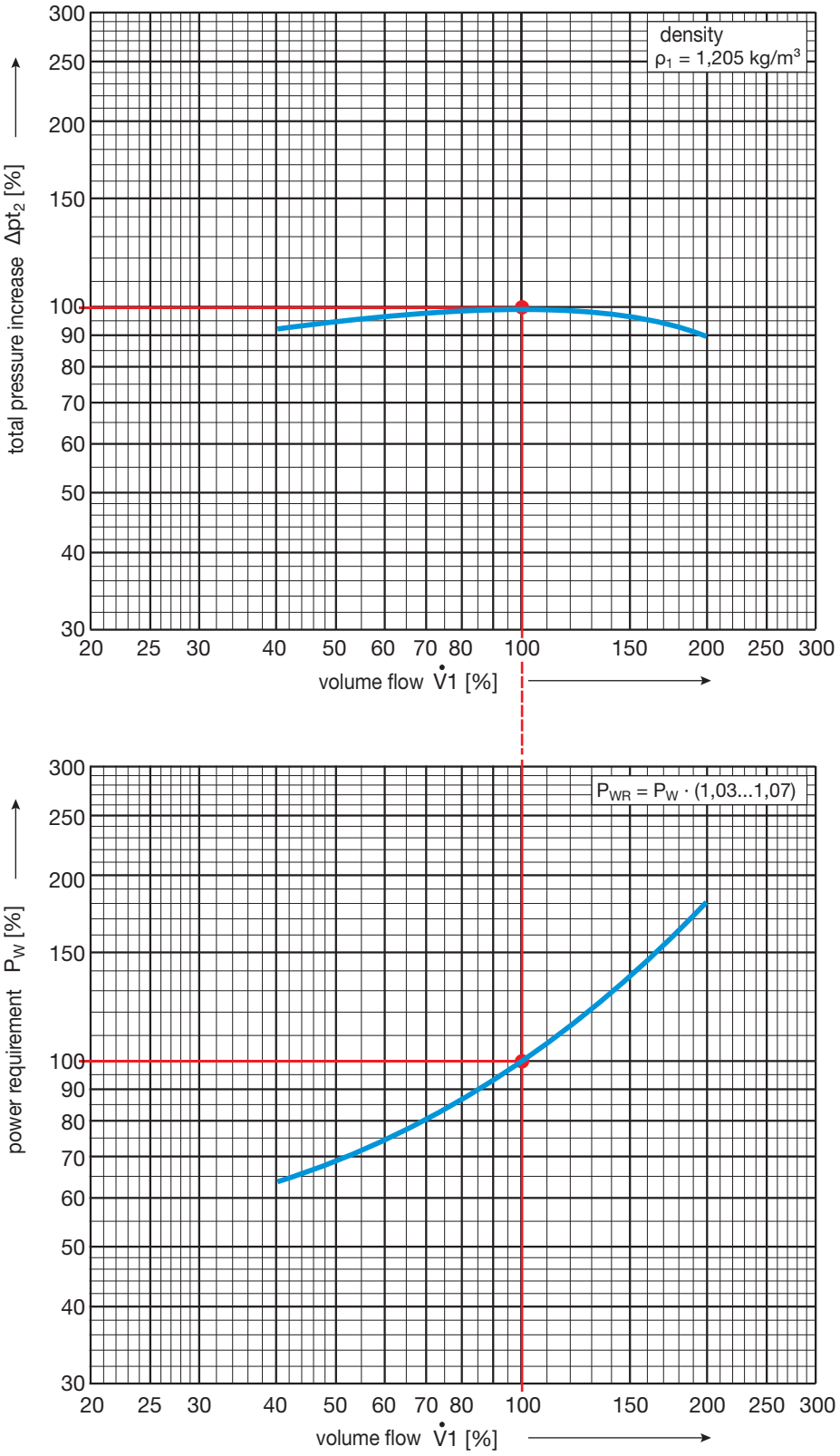
Sound table acc. to types for pressure series 3150 daPa 60 Hz 180 °C

Efficiency grade N61, measuring category „C“, suction side tube test, SFV 1.0 and SFV2.4

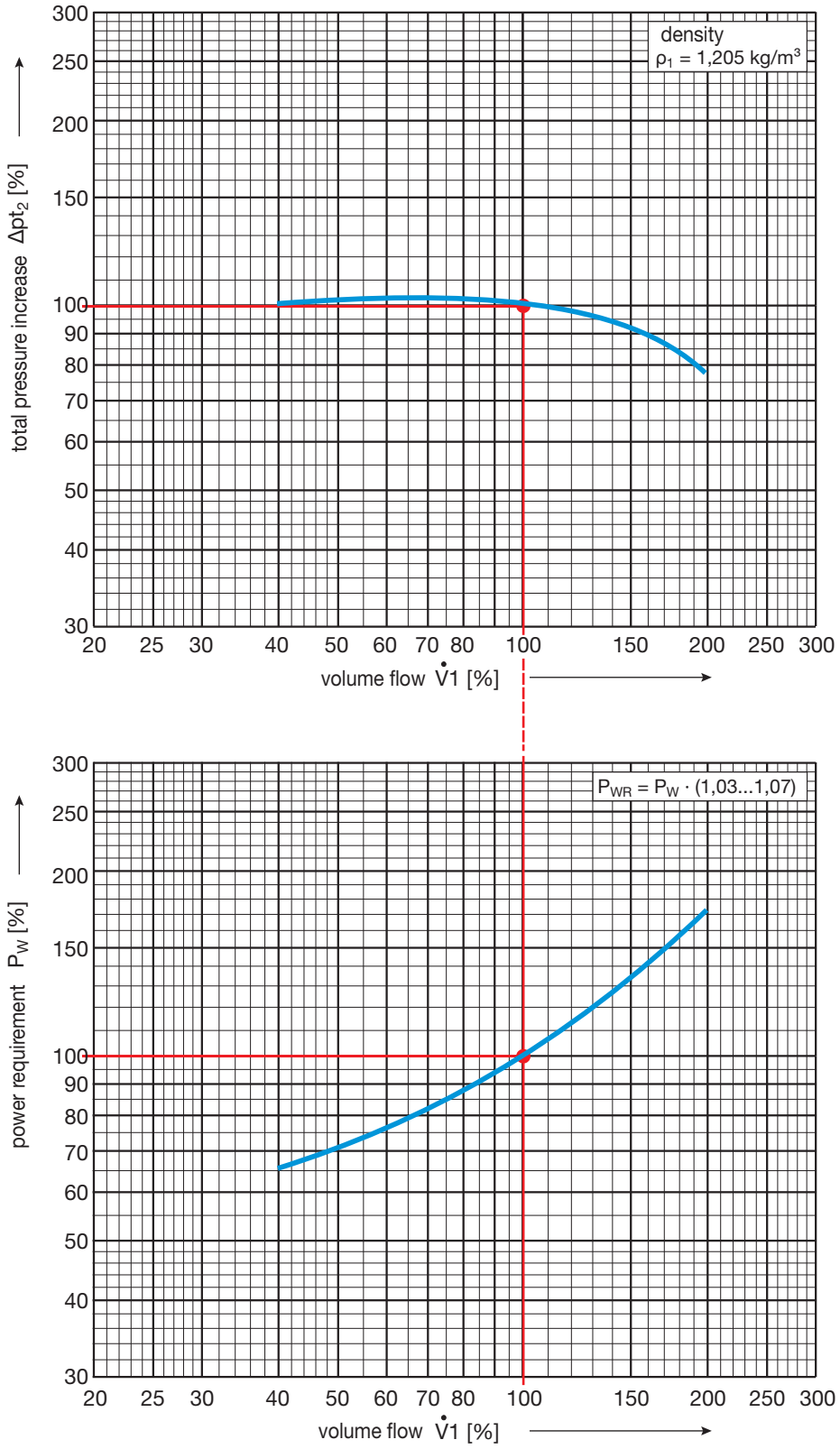
fan type structural design KXE	number of blades z	L_{WAi2} dB(A)	L_{WAi1} dB(A)	L_{WAa} dB(A)	$\overline{L}_{pA}$ dB(A)	$\overline{L}_{pA5}$ dB(A)	$\overline{L}_{pA6}$ dB(A)	L_S dB	ΔL_{KA} dB(A)
315-002536	7	124	111	108	91	102	115	17	5
315-003136	7	123	111	107	90	103	115	17	5
315-004036	7	123	111	107	90	102	114	17	5
315-005036	7	123	112	107	90	103	114	17	5
315-006336	7	123	113	107	90	104	114	17	5
315-008036	7	123	114	108	91	105	114	17	5
315-010036	7	124	115	108	91	106	115	17	5
315-012536	7	124	116	108	91	107	114	17	5
315-016036	7	124	116	109	92	107	115	17	5
315-020036	7	124	117	109	92	108	114	17	5
315-025036	7	124	118	110	92	109	115	18	5
315-031536	7	125	119	111	93	109	115	18	5
315-040036	7	123	118	110	92	109	114	18	7
315-050036	7	124	120	111	93	110	114	18	7

Comments on sound tables see sheet TA 3

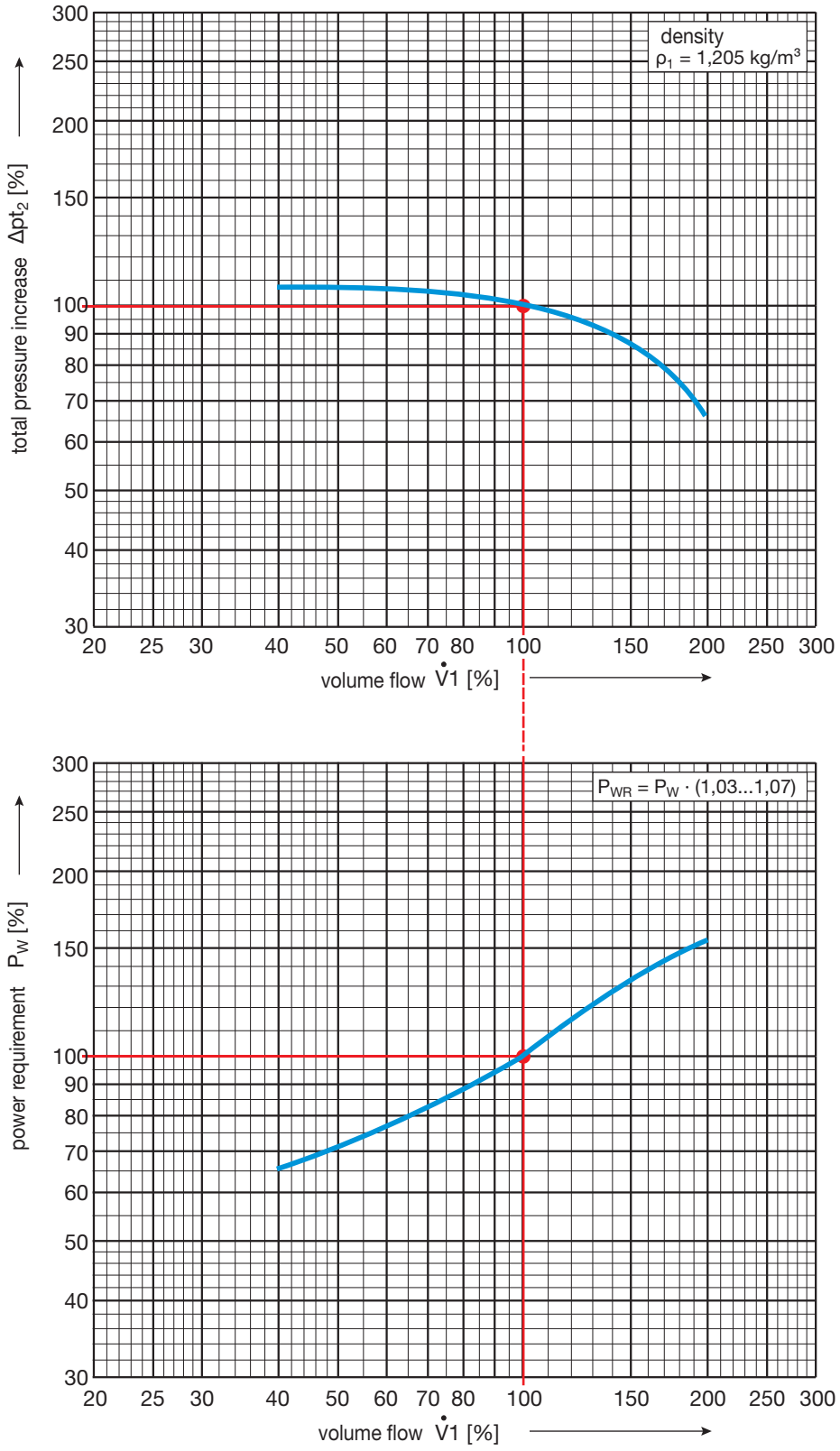
Discharge performance curve 1



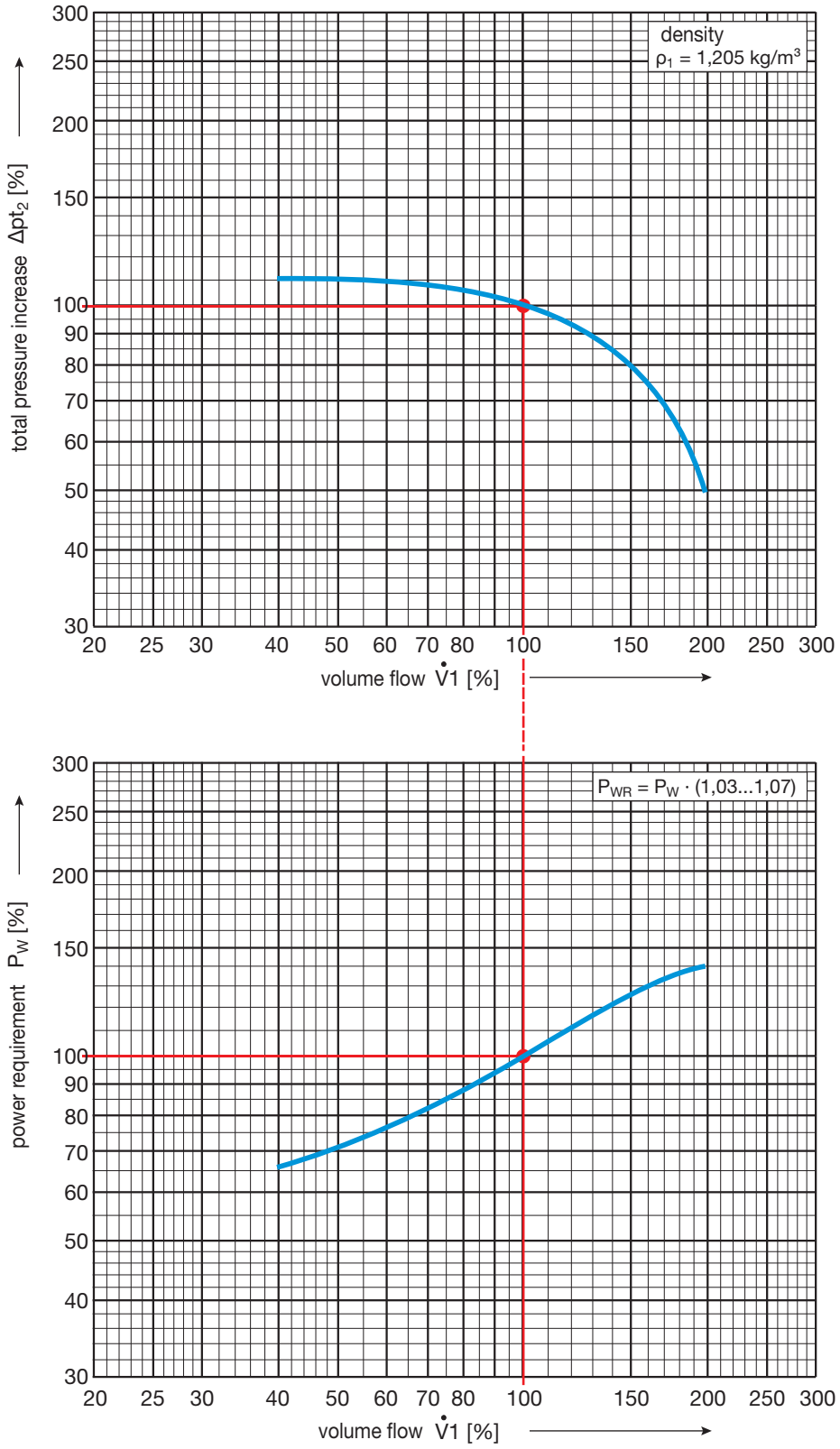
Discharge performance curve 2



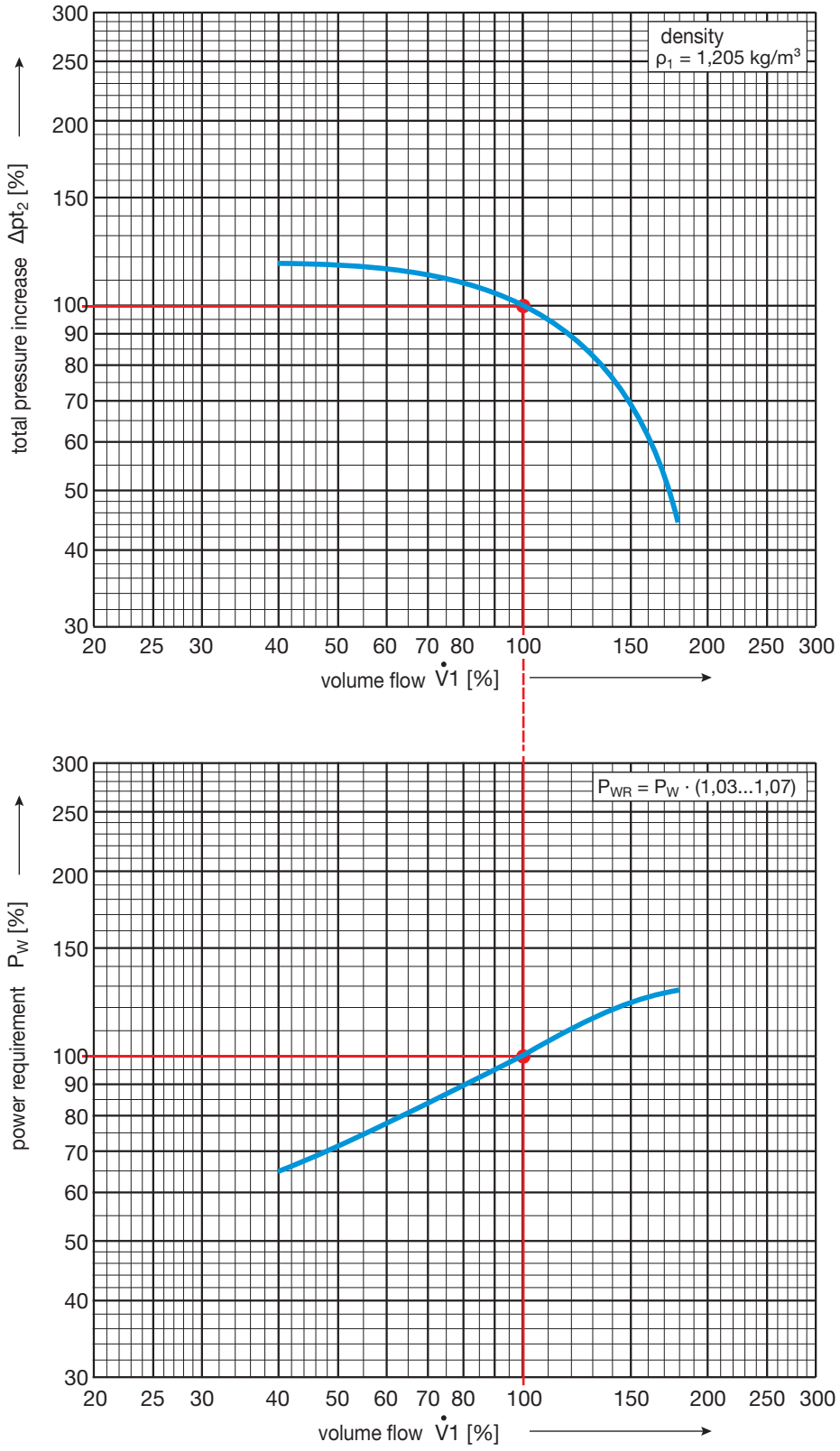
Discharge performance curve 3



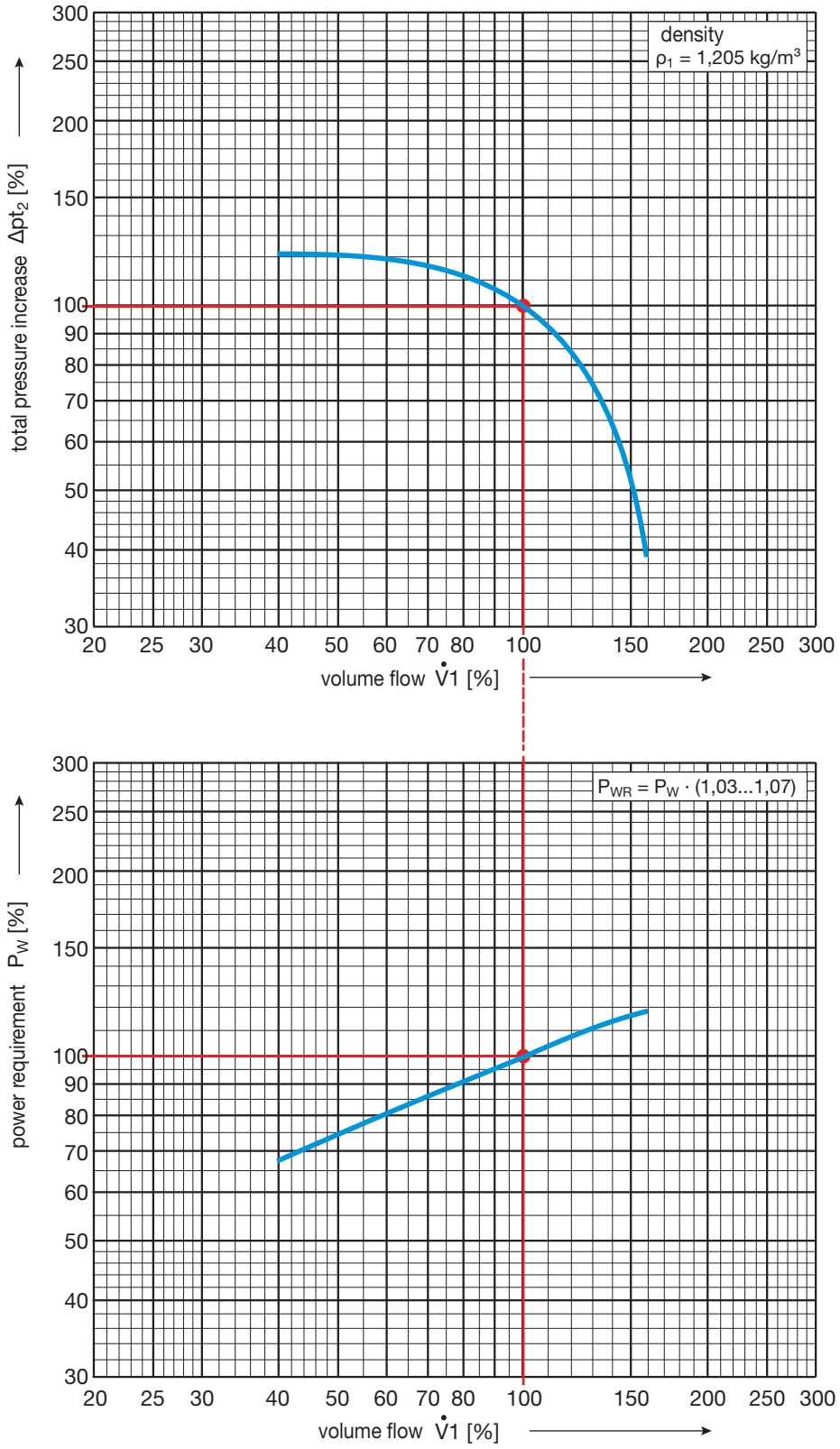
Discharge performance curve 4



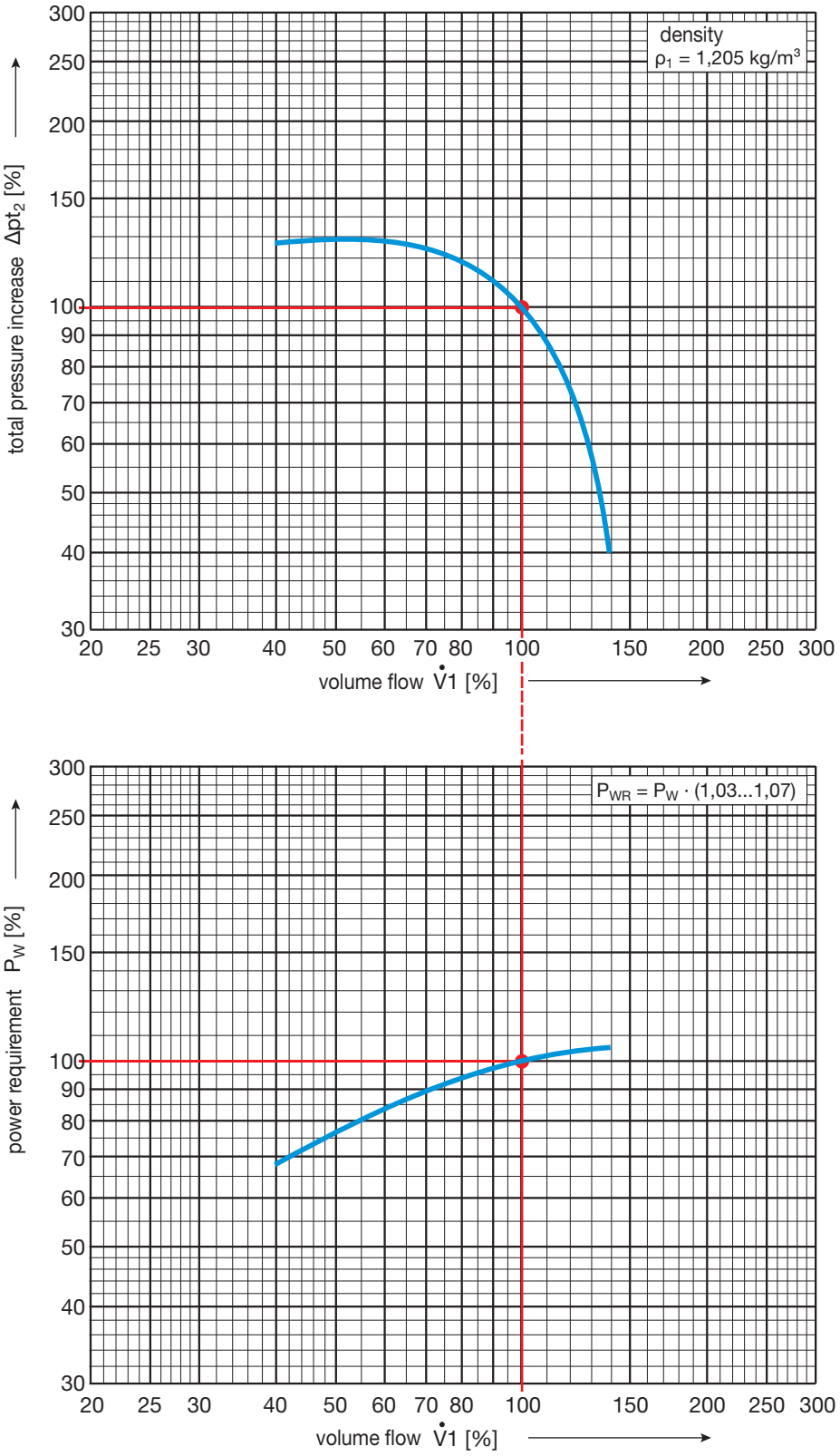
Discharge performance curve 5



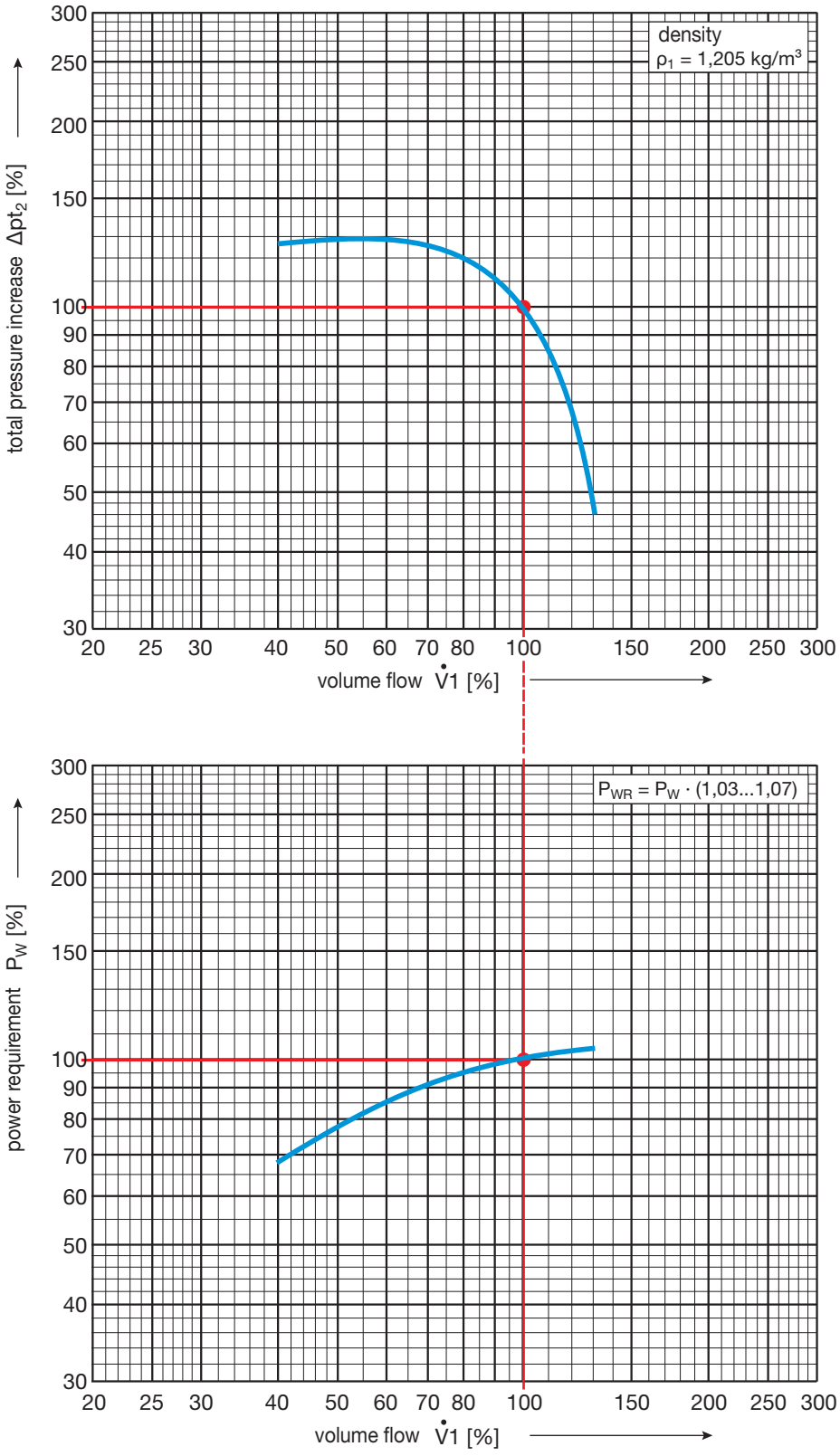
Discharge performance curve 6



Discharge performance curve 7

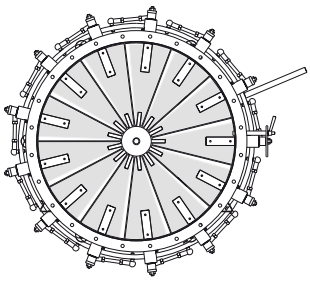


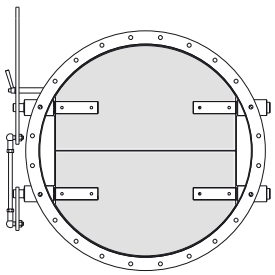
Discharge performance curve 8

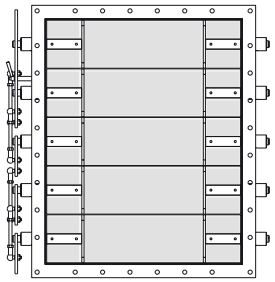


Chapter 3 - Dampers - DO

- General remarks
- Design characteristics
- Drives
- Instructions for installation
- Inlet guide vane
- Damper and Louvre damper
- Dimensions







Technical description

Article number and order code

article number = component size

DR D1 0 3 - 000 031 - 00

- 00 — variant code acc. to table 5
- 031 — nominal size code x 10 = D_N, B_N [mm]
- 000 — nominal size code x 10 = A_N [mm]
- 3 — flange code acc. to table 4
- 0 — drive code acc. to table 3
- D1 — product code acc. to table 2
- DR — symbol acc. to table 1

table 1

DR	inlet guide vane
DK	damper
DJ	louvre damper

table 2

D1	inlet guide vane with set leverage
D2	inlet guide vane with set collar
D3	damper
D4	louvre damper

table 3

0	hand lever
1	actuator

table 4

2	flat frames acc. to DIN 24193 (German Industrial Standard) series 3
3	flange acc. to DIN 24154 (German Industrial Standard) series 2, edition July 90

table 5

00	temperature from -10°C to 180°C
01	temperature from 181°C to 300°C
02	temperature from 301°C to 500°C

Technical description

General informations

Dampers control the volume flow of radial fans to adapt the fans to the different operating conditions of a system.
The alteration of flow with the help of dampers is an inexpensive but quite energy-consuming method of control. Inlet guide vanes prove to be much more reasonable. The form of the adjustable guiding vanes reduces the impact loss that results from guiding the air flow on entering the impeller.
Our product range includes dampers, louvre dampers and inlet guide vanes. Dampers of standard design can be used up to a maximum operating temperature of +180°C.
Dampers made of special material can be supplied if required.

Please note:

When closed, dampers are not completely airtight in the direction of the flow. The corresponding leak rate depends on the number of valves, the gap area and the existing pressure. Overlapping guiding vanes will reduce the leak rate. Inlet guide vanes with a nominal diameter of less than 900 mm have no central support and are open in the middle.

Inlet guide vane

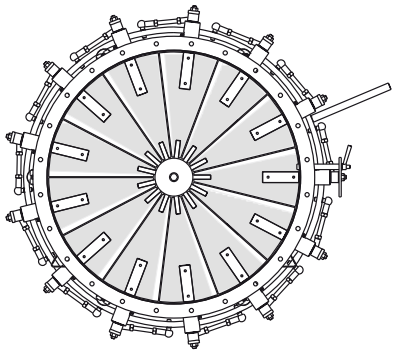


figure 1

Damper

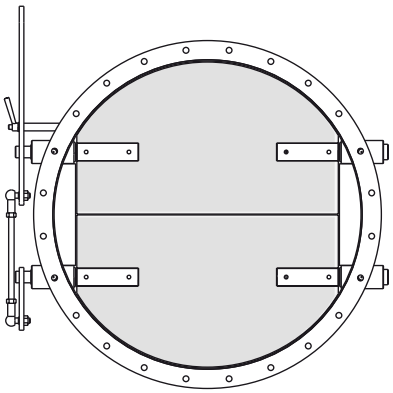


figure 2

Louvre damper

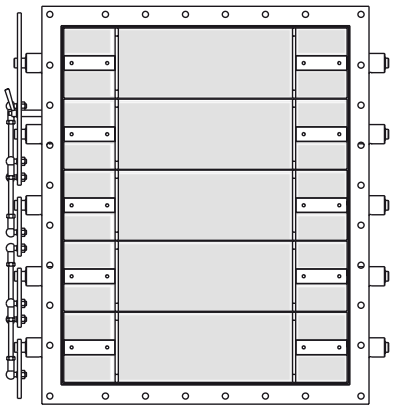


figure 3

Design characteristics

All dampers are designed in accordance with the operating conditions that were made known to us.
In general, the shafts of the valves or vanes run in sleeve bearings. These bearings offer an extensive range of application, their advantages are a low friction coefficient, high chemical stability and a wide range of operating temperatures.
Thanks to the aerodynamic design of the central support, the guiding blades of inlet guide vanes from nominal diameter size 900 mm upwards run in two bearings. Hence, the stress on the main bearing is relieved which leads to an extended service life of the bearing in general and reduces the power required for actuating the blades. Maintenance-free ball-and-socket joints and hinged joints transmit the power free-from-float on the individual axes. Misalignments which might occur due to tolerances in construction and varying thermal expansions are thus compensated and a continuous smooth running is guaranteed.
A supporting structure is offered for inlet guide vanes from nominal diameter 800 mm upwards which reduces stress on the inlet. The problem of different vibration behaviour of inlet guide vane and fan is solved by mounting the supporting stand on the fan housing (see figure 4). If the power is transmitted from actuator to inlet guide vane by a set leverage, a supporting structure as per figure 5 becomes necessary. This support takes up the actuator as well.

Support for inlet guide vane

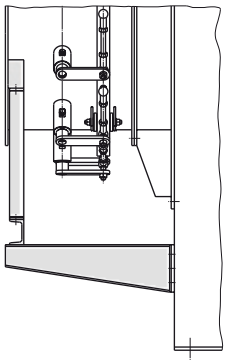


figure 4

Support for inlet guide vane taking up the actuator

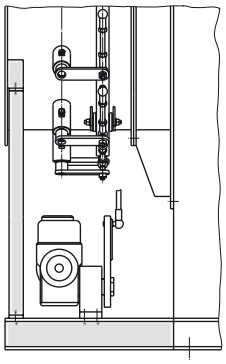


figure 5

There are two structural designs of inlet guide vanes:

Inlet guide vane type D1 with set leverage

type – D1 – is offered for light-duty operation. The parallel adjustment of blades is effected by a simple set leverage with hinged joints.

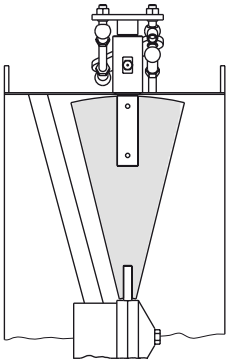


figure 6

Inlet guide vane type D2 with set collar

type – D2 – is suitable for heavy-duty operation. The parallel blade adjustment is effected by a set collar. The set collar moves on rolls which are supported on shafts.

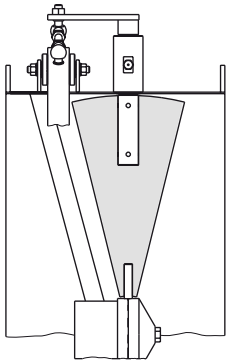


figure 7

Drives

Dampers can be operated by hand lever or by actuators. Actuators can be driven electrically, pneumatically or hydraulically according to requirements. In general, dampers are provided with electric actuators.
On request, drives are provided with additional limit switches and potentiometers. A control device for remote control is available as well.

Inlet guide vane type D1

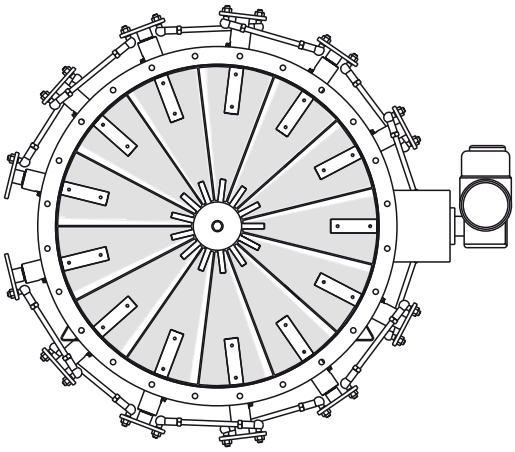


figure 8

Inlet guide vane type D2

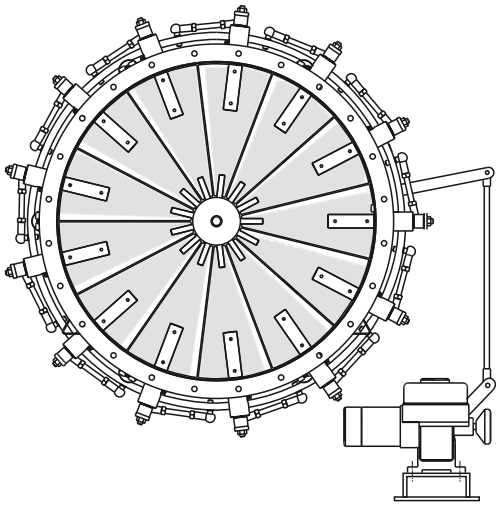


figure 9

Damper

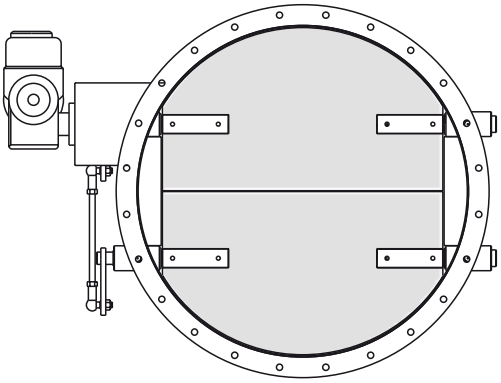


figure 10

Louvre damper

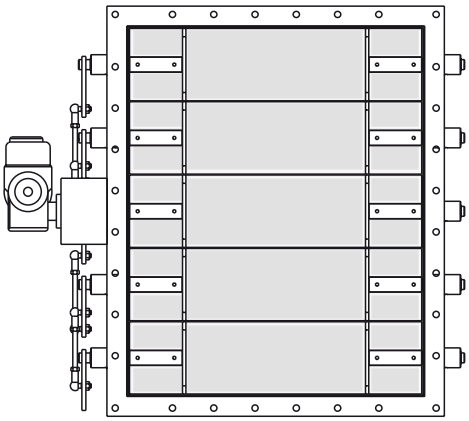


figure 11

Instructions for installation

Inlet guide vane

Inlet guide vanes must always be arranged directly at the inlet. We recommend the installation of a guarded inlet nozzle to minimise losses.
When viewed on the inlet guide vane, the direction of the pre-whirl must equal the sense of rotation of the fan.

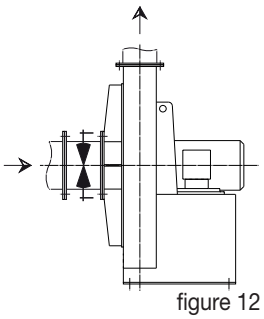


figure 12

Damper

Dampers can be mounted at inlet or discharge or at any other point within the system. If mounted at the inlet, there must be sufficient space between the damper and the fan to ensure a consant flow towards the impeller.
In case a damper is directly attached to the inlet, it may only be used as start-up damper. If it is connected directly to the discharge, the position of the rotating axis has to be observed.
For the connection to the square discharge end piece, a transition piece must always be provided.

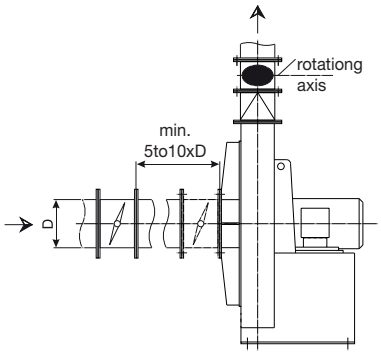


figure 13

Louvre damper

Louvre dampers can be directly arranged at the discharge or at any other point within the system. If directly mounted on discharge, the position of the rotating axis has to be observed.

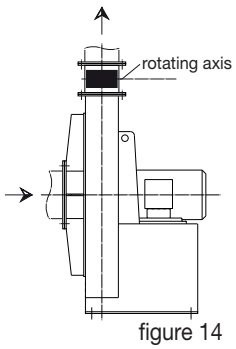


figure 14

Louvre damper at suction box

The louvre damper is directly arranged at the suction box. The valves rotary axes are positioned diagonally to the suction box.
Valves working in parallel or opposite direction are also available. Please specify when ordering.
We recommend louvre dampers with parallel valve adjustment in the fan's sense of rotation in order to produce a pre-whirl.

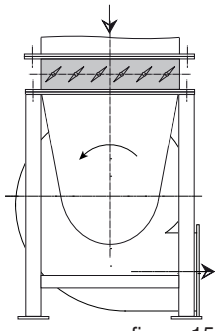


figure 15

Inlet guide vane

Control range

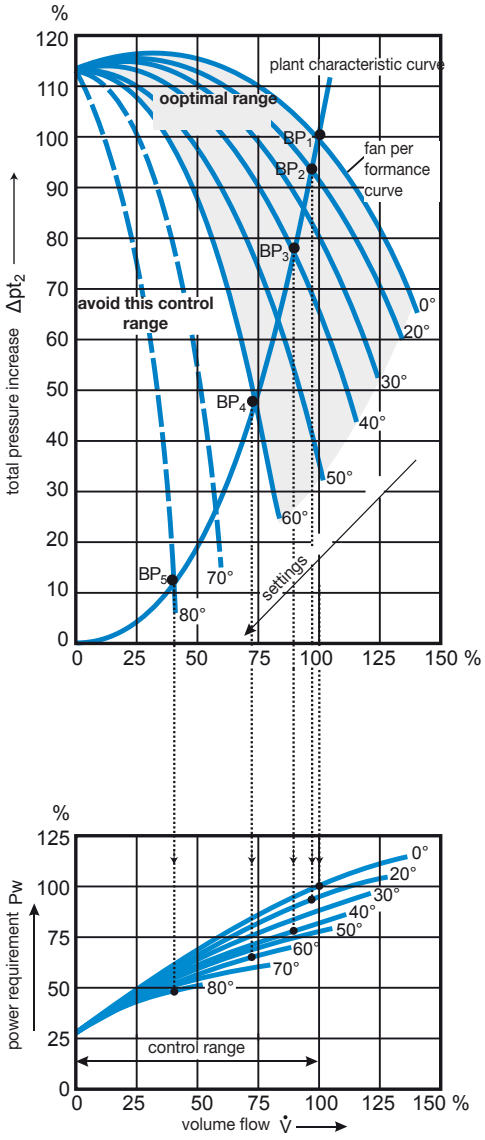
Compared to the damper and louvre damper the inlet guide vane offers much better control. Depending on the position of the blades, the inlet guide vane generates a pre-whirl which changes the fan performance curve. The power requirement curve of the fan also changes in accordance with the change of the blade angle. The direction of the pre-whirl must always equal the sense of rotation of the fan.

Installation resistance

Drag coefficient for open inlet guide vanes:
$\zeta = 0{,}25$ bis $0{,}5$

Stall at the guiding blade of the inlet guide vane

Excessive reduction of flow with an inlet guide vane will result in a critical stall at the guiding blades but only under certain conditions. These are unfavourable flow conditions and a small range of angle when the guiding blades are strongly or even almost closed. Such critical stalls can be prevented with an optimum design of the aerodynamic inflow and by avoiding the special critical angle of the blades. Therefore, select the ideal fan size where the performance curves of the system and of the fan meet in the calculated operating point and set the control range in the upper two-third part of the inlet guide vane position. Do not set the inlet guide vanes to a position of more than 60°.



Damper and Louvre Damper

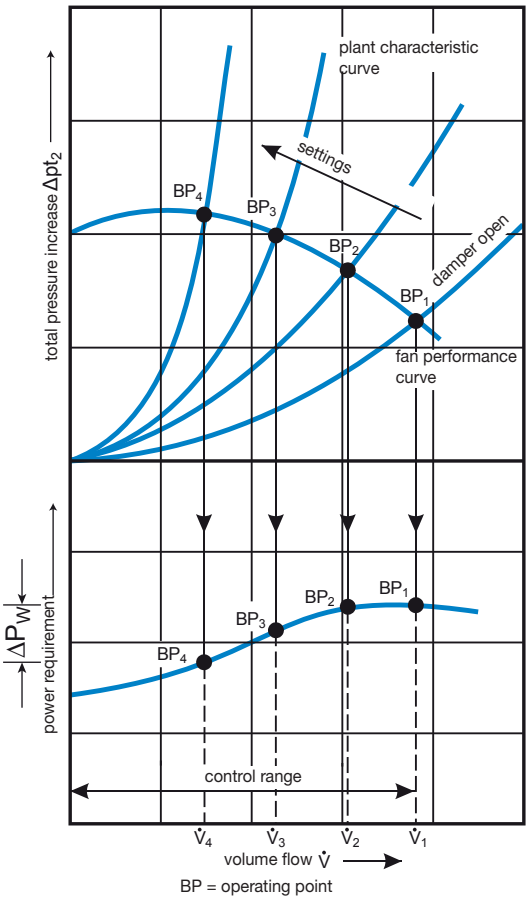
Control range

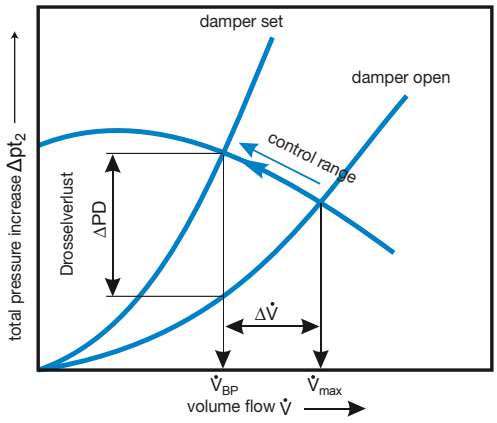
The easiest method to reduce the flow is to use a damper or a louvre damper but this also leads to high power loss. The resulting pressure loss depends on the angle of the adjusted damper vanes. The more the damper is closed, the higher the pressure loss is in the system. An additional resistance is generated which will lead to an alteration of the plant's performance curve. The power requirement curve of the fan is not affected.

Installation resistance

Drag coefficients for open dampers:

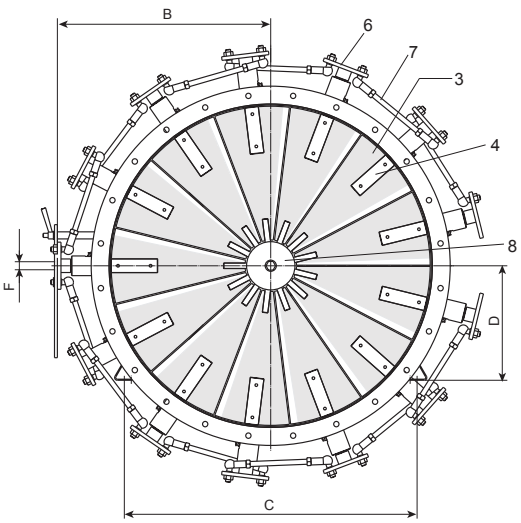
Dampers: ζ = 0,25 bis 0,5
Louvre dampers: ζ = 0,5 bis 1,0

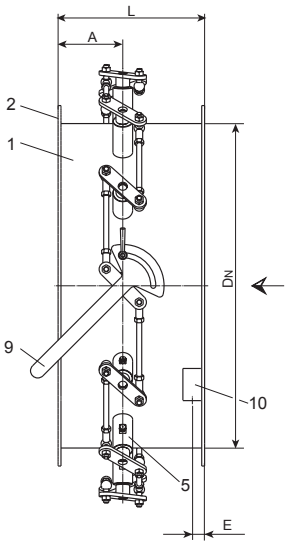




Dimensions

Inlet guide vane D1 with set leverage





1 inlet guide vane housing
2 flat flange
3 guiding blade
4 shaft
5 bearings
6 set linkage
7 joint rod
8 central support
9 hand lever
10 claw for support

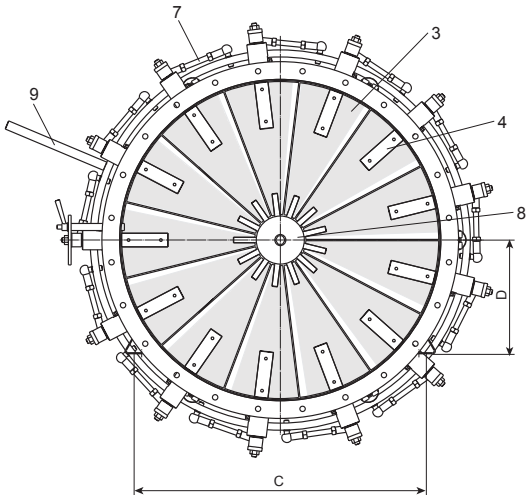
Flat flanges according to DIN 24154 (German Industrial Standard) series 2, edition July 90.

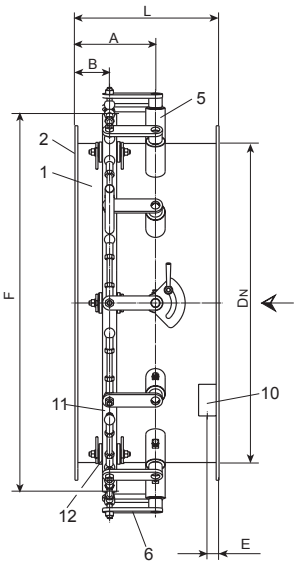
The specified actuating forces refer to a system pressure of Δpt = 3150 daPa.

article number component size	nominal size	dimensions							weight	actuating torque	number of valves
table 3 ↓ table 5 ↓	DN mm	L mm	A mm	B mm	C mm	D mm	E mm	F mm	kg	Nm	
DRD1.3-000 031-..	315	225	135	260,0	—	—	—	15	30	29	9
DRD1.3-000 035-..	355	225	135	279,0	—	—	—	15	32	36	9
DRD1.3-000 040-..	400	225	135	301,0	—	—	—	15	35	48	9
DRD1.3-000 045-..	450	250	135	325,5	460	125	33	15	43	63	9
DRD1.3-000 050-..	500	250	135	352,5	490	150	33	15	47	82	9
DRD1.3-000 056-..	560	250	135	383,5	490	235	33	15	50	116	9
DRD1.3-000 063-..	630	315	180	440,5	540	250	33	20	75	156	11
DRD1.3-000 071-..	710	315	180	479,0	600	275	33	20	92	193	11
DRD1.3-000 080-..	800	315	180	522,0	640	310	33	20	102	263	11
DRD1.3-000 090-..	900	400	220	587,5	780	320	33	25	177	280	13
DRD1.3-000 100-..	1000	400	220	642,0	860	350	33	25	188	300	13
DRD1.3-000 112-..	1120	400	220	703,5	940	410	35	25	232	335	13
DRD1.3-000 125-..	1250	450	255	781,5	1040	460	40	30	337	488	15
DRD1.3-000 140-..	1400	450	255	860,5	1180	500	40	30	370	700	15
DRD1.3-000 160-..	1600	450	255	942,5	1280	570	40	30	419	1024	15

Dimensions

Inlet guide vane D2 with set collar





1 damper housing
2 flat flange
3 guiding blade
4 shaft
5 bearings
6 set linkage
7 joint rod
8 central support
9 hand lever
10 claw for support
11 set collar
12 guide roll

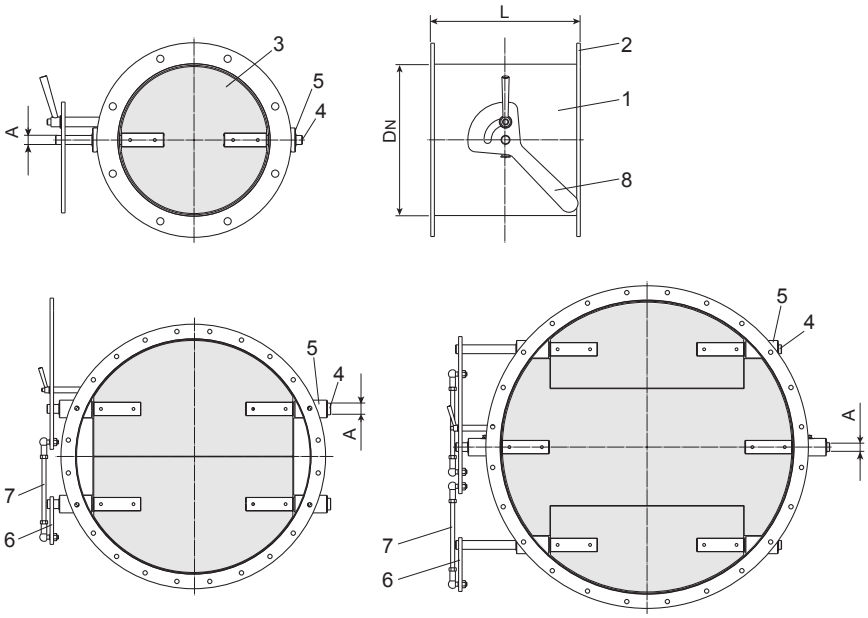
Flat flanges according to DIN 24154 (German Industrial Standard) series 2, edition July 90.

The specified actuating forces on the collar refer to a system pressure of Δpt = 3150 daPa.

article number component size	nominal size	dimensions							weight	set distance	actuating force	number of valves
table 3 ↓ table 5 ↓	DN mm	L mm	A mm	B mm	C mm	D mm	E mm	F mm	kg	mm	N	
DRD2.3-000 031-..	315	225	135	65	—	—	—	456	34	95	409	9
DRD2.3-000 035-..	355	225	135	65	—	—	—	495	37	94	506	9
DRD2.3-000 040-..	400	225	135	65	—	—	—	538	40	93	673	9
DRD2.3-000 045-..	450	250	135	65	460	125	33	587	48	97	893	9
DRD2.3-000 050-..	500	250	135	65	490	150	33	641	52	95	1172	9
DRD2.3-000 056-..	560	250	135	65	490	235	33	703	60	98	1658	9
DRD2.3-000 063-..	630	315	180	80	540	250	33	802	98	140	1551	11
DRD2.3-000 071-..	710	315	180	80	600	275	33	879	108	138	1928	11
DRD2.3-000 080-..	800	315	180	80	640	310	33	965	160	134	2662	11
DRD2.3-000 090-..	900	400	220	90	780	320	33	1063	199	175	1566	13
DRD2.3-000 100-..	1000	400	220	90	860	350	33	1172	216	173	1916	13
DRD2.3-000 112-..	1120	400	220	90	940	410	35	1295	250	180	2573	13
DRD2.3-000 125-..	1250	450	255	95	1040	460	40	1449	369	202	3050	15
DRD2.3-000 140-..	1400	450	255	95	1180	500	40	1603	384	223	4375	15
DRD2.3-000 160-..	1600	450	255	95	1280	570	40	1775	452	216	6400	15
DRD2.3-000 180-..	1800	450	255	95	1600	520	40	2037	548	223	8775	19
DRD2.3-000 200-..	2000	450	255	95	1800	580	40	2237	605	228	11160	19

Dimensions

Damper D3



1 damper housing
2 flat flange
3 control element
4 shaft
5 bearings
6 set linkage
7 joint rod
8 hand lever

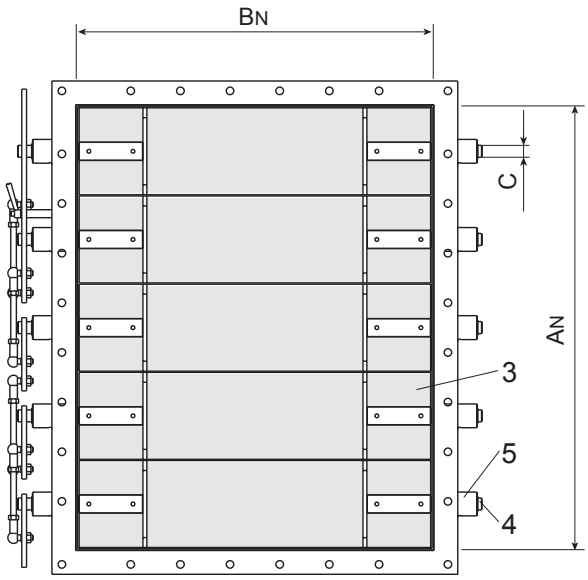
Flat flanges according to DIN 24154 (German Industrial Standard) series 2, edition July 90.

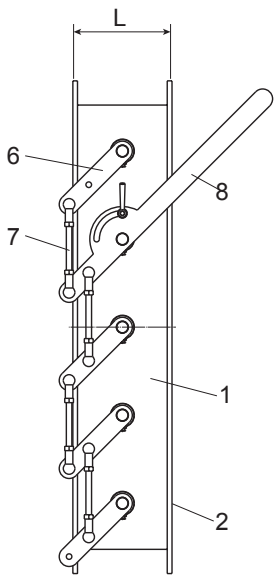
The given actuating torques refer to a system pressure of Δpt = 3150 daPa.

article number component size table 3 ↓ table 5 ↓	nominal size DN mm	dimensions L mm	 A mm	weight kg	actuating torque Nm	number of valves
DKD3.3-000 007-..	71	100	15	2,2	3,0	1
DKD3.3-000 008-..	80	100	15	2,4	3,0	1
DKD3.3-000 009-..	90	100	15	2,5	3,0	1
DKD3.3-000 010-..	100	100	15	2,8	3,0	1
DKD3.3-000 011-..	112	140	15	3,3	4,0	1
DKD3.3-000 012-..	125	140	15	3,6	4,5	1
DKD3.3-000 014-..	140	140	15	4,5	5,0	1
DKD3.3-000 016-..	160	160	15	5,2	5,5	1
DKD3.3-000 018-..	180	180	15	6,1	6,0	1
DKD3.3-000 020-..	200	200	15	7,2	7,5	1
DKD3.3-000 022-..	224	225	15	9,0	8,5	1
DKD3.3-000 025-..	250	250	15	10,0	10,0	1
DKD3.3-000 028-..	280	280	20	16,0	13,0	1
DKD3.3-000 031-..	315	315	20	18,0	16,0	1
DKD3.3-000 035-..	355	355	20	22,0	20,0	1
DKD3.3-000 040-..	400	400	20	26,0	26,0	1
DKD3.3-000 045-..	450	450	20	27,0	32,0	1
DKD3.3-000 050-..	500	315	25	52,0	44,0	2
DKD3.3-000 056-..	560	355	25	62,0	53,0	2
DKD3.3-000 063-..	630	400	25	70,0	68,0	2
DKD3.3-000 071-..	710	450	30	103,0	90,0	2
DKD3.3-000 080-..	800	500	30	122,0	114,0	2
DKD3.3-000 090-..	900	630	30	164,0	146,0	3
DKD3.3-000 100-..	1000	710	30	195,0	180,0	3
DKD3.3-000 112-..	1120	800	30	242,0	218,0	3
DKD3.3-000 125-..	1250	900	35	360,0	302,0	3
DKD3.3-000 140-..	1400	1000	35	436,0	378,0	3
DKD3.3-000 160-..	1600	1120	35	521,0	479,0	3
DKD3.3-000 180-..	1800	1250	35	628,0	604,0	3
DKD3.3-000 200-..	2000	1400	35	788,0	759,0	3

Dimensions

Louvre damper D4





1 louvre damper housing
2 flat flange
3 control element
4 shaft
5 bearings
6 set linkage
7 joint rod
8 hand lever

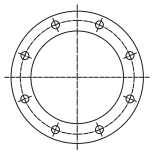
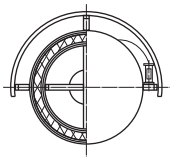
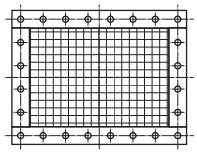
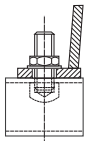
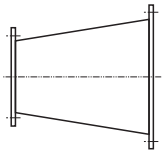
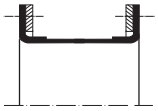
Flat flanges according to DIN 24193 (German Industrial Standard) series 3.

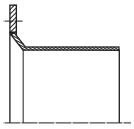
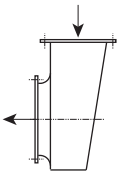
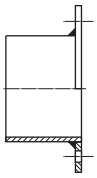
The specified actuating forces refer to a system pressure of Δpt = 3150 daPa.

article number component size table 3 ↓ table 5 ↓	nominal size		dimensions		weight	actuating torque	number of valves
	AN mm	BN mm	L mm	C mm	kg	Nm	
DJD4.2-010 012-..	100	125	140	15	3,4	7	1
DJD4.2-011 012-..	112	125	140	15	3,3	8	1
DJD4.2-012 012-..	125	125	140	15	3,6	9	1
DJD4.2-014 012-..	140	125	140	15	3,9	10	1
DJD4.2-016 012-..	160	125	200	15	5,2	12	1
DJD4.2-018 014-..	180	140	200	15	5,8	14	1
DJD4.2-020 016-..	200	160	200	15	6,5	17	1
DJD4.2-022 018-..	224	180	250	15	8,3	20	1
DJD4.2-025 020-..	250	200	250	15	9,2	26	1
DJD4.2-028 022-..	280	224	180	20	18,0	35	2
DJD4.2-031 025-..	315	250	180	20	20,0	48	2
DJD4.2-035 028-..	355	280	180	20	23,0	71	2
DJD4.2-040 031-..	400	315	200	20	27,0	90	2
DJD4.2-045 035-..	450	355	225	20	31,0	104	2
DJD4.2-050 040-..	500	400	250	20	36,0	118	2
DJD4.2-056 045-..	560	450	200	25	48,0	136	3
DJD4.2-063 050-..	630	500	225	25	55,0	164	3
DJD4.2-071 056-..	710	560	250	25	63,0	192	3
DJD4.2-080 063-..	800	630	200	25	95,0	271	4
DJD4.2-090 071-..	900	710	225	25	108,0	309	4
DJD4.2-100 080-..	1000	800	250	25	129,0	393	4
DJD4.2-112 090-..	1120	900	250	30	225,0	555	5
DJD4.2-125 100-..	1250	1000	250	30	256,0	691	5
DJD4.2-140 112-..	1400	1120	280	30	290,0	864	5
DJD4.2-160 125-..	1600	1250	280	35	409,0	1250	6
DJD4.2-180 140-..	1800	1400	315	35	494,0	1594	6
DJD4.2-200 160-..	2000	1600	315	35	702,0	2191	8
DJD4.2-224 180-..	2240	1800	355	35	909,0	2742	8
DJD4.2-250 200-..	2500	2000	355	35	1034,0	3423	8

Chapter 4 - Equipment - ZB

- Flat flanges
- Guards
- Transition pieces
- Inlet nozzles
- Suction boxes
- Round filters
- Anti-vibration mounts
- Flexible connections and chutes
- Flange pieces

Flat flange - round

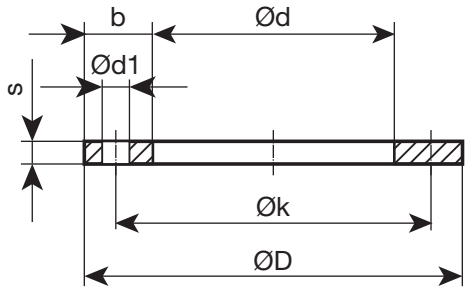
article no. = component size

FF Z1 03 - 000 063 - 00

- 063 - 00: nominal size code x 10 = DN [mm]
- 03: flange code 03: DIN 24 154 series 2
- Z1: product code Z1 = flanges
- FF: symbol FF = flat flanges

Flat flange - round

acc. to DIN 24154 R2 (flange code 3)
edition July 90



article no. component size	nominal size	weight	dimensions					screws	
	DN mm	kg	b x s mm	d mm	D mm	k mm	d1 mm	number	thread
FF Z1 03-000007-00	71	0,44	30 x 6	73	133	110	10	4	M8
FF Z1 03-000008-00	80	0,48	30 x 6	82	142	118	10	4	M8
FF Z1 03-000009-00	90	0,53	30 x 6	92	152	128	10	4	M8
FF Z1 03-000010-00	100	0,55	30 x 6	102	162	139	10	4	M8
FF Z1 03-000011-00	112	0,63	30 x 6	115	175	151	10	4	M8
FF Z1 03-000012-00	125	0,68	30 x 6	127	187	165	10	4	M8
FF Z1 03-000014-00	140	0,87	35 x 6	142	212	182	12	8	M10
FF Z1 03-000016-00	160	0,98	35 x 6	162	232	200	12	8	M10
FF Z1 03-000018-00	180	1,08	35 x 6	182	252	219	12	8	M10
FF Z1 03-000020-00	200	1,19	35 x 6	203	273	241	12	8	M10
FF Z1 03-000022-00	224	1,32	35 x 6	227	297	265	12	8	M10
FF Z1 03-000025-00	250	1,45	35 x 6	253	323	292	12	8	M10
FF Z1 03-000028-00	280	2,51	40 x 8	283	363	332	12	8	M10
FF Z1 03-000031-00	315	2,98	40 x 8	318	398	366	12	8	M10
FF Z1 03-000035-00	355	3,10	40 x 8	358	438	405	12	8	M10
FF Z1 03-000040-00	400	3,44	40 x 8	404	484	448	12	12	M10
FF Z1 03-000045-00	450	3,84	40 x 8	454	534	497	12	12	M10
FF Z1 03-000050-00	500	4,13	40 x 8	504	584	551	12	12	M10
FF Z1 03-000056-00	560	5,90	50 x 8	564	664	629	15	16	M12
FF Z1 03-000063-00	630	6,59	50 x 8	634	734	698	15	16	M12
FF Z1 03-000071-00	710	7,38	50 x 8	714	814	775	15	16	M12
FF Z1 03-000080-00	800	8,19	50 x 8	804	904	861	15	24	M12
FF Z1 03-000090-00	900	9,17	50 x 8	904	1004	958	15	24	M12
FF Z1 03-000100-00	1000	10,20	50 x 8	1005	1105	1067	15	24	M12
FF Z1 03-000112-00	1120	16,90	60 x 10	1125	1245	1200	19	32	M16
FF Z1 03-000125-00	1250	18,80	60 x 10	1255	1375	1337	19	32	M16
FF Z1 03-000140-00	1400	21,00	60 x 10	1405	1525	1475	19	32	M16
FF Z1 03-000160-00	1600	23,80	60 x 10	1605	1725	1675	19	40	M16
FF Z1 03-000180-00	1800	26,80	60 x 10	1805	1925	1875	19	40	M16
FF Z1 03-000200-00	2000	29,70	60 x 10	2005	2125	2073	19	40	M16

Flat flange - angular

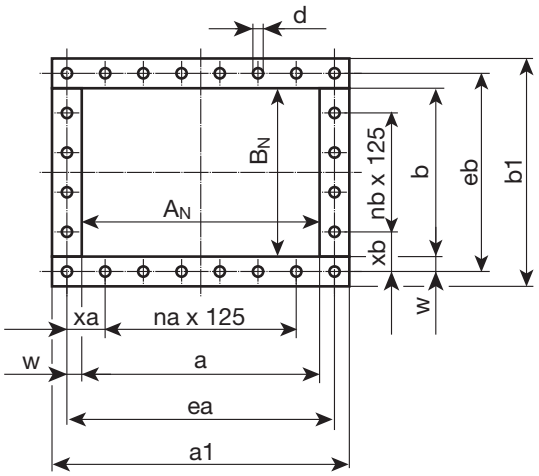
article no. = component size

FF Z1 02 - 063 050 - 00

- nominal size code x 10 = B_N [mm]
- nominal size code x 10 = A_N [mm]
- flange code 02: DIN 24 193 series 3
- product code Z1 = flanges
- symbol FF = flat flanges

Flat flange - angular

acc. to DIN 24193 R3 (flange code 2)



article no. component size	nominal size DN mm	weight kg	dimensions a mm	b mm	e_a mm	e_b mm	x_a mm	x_b mm	n_a	n_b	w mm	a_1 mm	b_1 mm	d mm	screws number	thread
FF Z1 02-010012-00	100 / 125	0,78	102	127	136	161	-	80,5	-	-	17	162	187	10	6	M8
FF Z1 02-011012-00	112 / 125	0,81	114	127	148	161	-	80,5	-	-	17	174	187	10	6	M8
FF Z1 02-012012-00	125/ 125	0,85	127	127	161	161	80,5	80,5	-	-	17	187	187	10	8	M8
FF Z1 02-014012-00	140 / 125	0,89	142	127	176	161	88,0	80,5	-	-	17	202	187	10	8	M8
FF Z1 02-016012-00	160 / 125	0,99	162	127	196	161	98,0	80,5	-	-	17	222	187	10	8	M8
FF Z1 02-018014-00	180 / 140	1,08	182	142	216	176	108,0	88,0	-	-	17	242	202	10	8	M8
FF Z1 02-020016-00	200 / 160	1,20	202	162	236	196	118,0	98,0	-	-	17	262	222	10	8	M8
FF Z1 02-022018-00	224 / 180	1,32	226	182	260	216	130,0	108,0	-	-	17	286	242	10	8	M8
FF Z1 02-025020-00	250 / 200	1,45	252	202	286	236	143,0	118,0	-	-	17	312	262	10	8	M8
FF Z1 02-028022-00	280 / 224	2,14	282	226	316	260	158,0	130,0	-	-	17	342	286	10	8	M8
FF Z1 02-031025-00	315 / 250	2,37	317	252	351	286	113,0	143,0	1	-	17	377	312	10	10	M8
FF Z1 02-035028-00	355 / 280	2,63	357	282	391	316	133,0	158,0	1	-	17	417	342	10	10	M8
FF Z1 02-040031-00	400 / 315	2,93	402	317	436	351	155,5	113,0	1	1	17	462	377	10	12	M8
FF Z1 02-045035-00	450 / 355	5,71	452	357	512	417	68,5	146,0	3	1	30	552	457	15	16	M12
FF Z1 02-050040-00	500 / 400	6,30	502	402	562	462	93,5	168,5	3	1	30	602	502	15	16	M12
FF Z1 02-056045-00	560 / 450	8,75	562	452	622	512	123,5	68,5	3	3	30	662	552	15	20	M12
FF Z1 02-063050-00	630 / 500	9,69	632	502	692	562	158,5	93,5	3	3	30	732	602	15	20	M12
FF Z1 02-071056-00	710 / 560	10,79	712	562	772	622	73,5	123,5	5	3	30	812	662	15	24	M12
FF Z1 02-080063-00	800 / 630	12,04	802	632	862	692	118,5	158,5	5	3	30	902	732	15	24	M12
FF Z1 02-090071-00	900 / 710	13,46	902	712	962	772	168,5	73,5	5	5	30	1002	812	15	28	M12
FF Z1 02-100080-00	1000 / 800	14,96	1002	802	1062	862	93,5	118,5	7	5	30	1102	902	15	32	M12
FF Z1 02-112090-00	1120 / 900	24,22	1122	902	1192	972	158,5	173,5	7	5	35	1242	1022	19	32	M16
FF Z1 02-125100-00	1250 / 1000	26,82	1252	1002	1322	1072	98,5	98,5	9	7	35	1372	1122	19	40	M16
FF Z1 02-140112-00	1400 / 1120	29,86	1402	1122	1472	1192	173,5	158,5	9	7	35	1522	1242	19	40	M16
FF Z1 02-160125-00	1600 / 1250	56,77	1602	1252	1692	1342	158,5	108,5	11	9	45	1762	1412	24	48	M20
FF Z1 02-180140-00	1800 / 1400	63,37	1802	1402	1892	1492	133,5	183,5	13	9	45	1962	1562	24	52	M20
FF Z1 02-200160-00	2000 / 1600	70,91	2002	1602	2092	1692	108,5	158,5	15	11	45	2162	1762	24	60	M20
FF Z1 02-224180-00	2240 / 1800	89,55	2242	1802	2342	1902	108,5	138,5	17	13	50	2422	1982	24	68	M20
FF Z1 02-250200-00	2500 / 2000	111,00	2502	2002	2612	2112	118,5	118,5	19	15	55	2702	2202	24	76	M20

Flat flanges for silencers with baffles

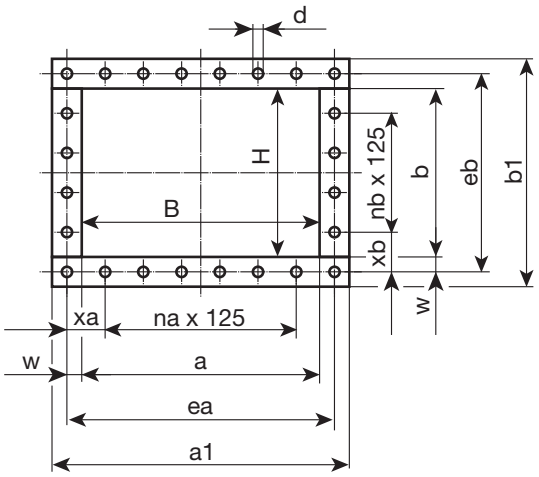
article no. = component size

FF Z1 06 - 037 062 - 00

- FF: symbol FF = flat flanges
- Z1: product code Z1 = flanges
- 06: flange code 06: for silencers series 1
- 037: nominal size code x 10 = B [mm]
- 062: nominal size code x 10 = H [mm]

Flat flanges for silencers with baffles

appropriate for silencers with baffles
series 1 (flange code 6)



article no. component size	nominal size B / H mm	weight kg	dimensions a mm	b mm	e_a mm	e_b mm	x_a mm	x_b mm	n_a	n_b	w mm	a_1 mm	b_1 mm	d mm	screws number	screws thread
FF Z1 06-037025-00	375 / 250	2,60	377	252	411	286	143,0	143,0	1	-	17	437	312	10	10	M8
FF Z1 06-037037-00	375 / 375	3,07	377	377	411	411	143,0	143,0	1	1	17	437	437	10	12	M8
FF Z1 06-037050-00	375 / 500	3,54	377	502	411	536	143,0	80,5	1	3	17	437	562	10	16	M8
FF Z1 06-037062-00	375 / 625	4,01	377	627	411	661	143,0	143,0	1	3	17	437	687	10	16	M8
FF Z1 06-075050-00	750 / 500	10,60	752	502	812	562	93,5	93,5	5	3	30	852	602	15	24	M12
FF Z1 06-075075-00	750 / 750	12,60	752	752	812	812	93,5	93,5		5	30	852	852	15	28	M12
FF Z1 06-075100-00	750 / 1000	14,60	752	1002	812	1062	93,5	93,5	5	7	30	852	1102	15	32	M12
FF Z1 06-112100-00	1125 / 1000	17,50	1127	1002	1187	1062	156,0	93,5	7	7	30	1227	1102	15	36	M12
FF Z1 06-112125-00	1125 / 1250	19,50	1127	1252	1187	1312	156,0	93,5	7	9	30	1227	1352	15	40	M12
FF Z1 06-112150-00	1125 / 1500	21,50	1127	1502	1187	1562	156,0	93,5	7	11	30	1227	1602	15	44	M12
FF Z1 06-150125-00	1500 / 1250	23,20	1502	1252	1562	1312	93,5	93,5	11	9	30	1602	1352	15	48	M12
FF Z1 06-150150-00	1500 / 1500	25,20	1502	1502	1562	1562	93,5	93,5	11	11	30	1602	1602	15	52	M12
FF Z1 06-150175-00	1500 / 1750	27,20	1502	1752	1562	1812	93,5	93,5	11	13	30	1602	1852	15	56	M12
FF Z1 06-181715-00	1875 / 1750	71,40	1877	1752	1967	1842	171,0	108,5	13	13	45	2037	1912	24	60	M20
FF Z1 06-187200-00	1875 / 2000	76,10	1877	2002	1967	2092	171,0	108,5	13	15	45	2037	2162	24	64	M20
FF Z1 06-225200-00	2250 / 2000	83,20	2252	2002	2342	2092	108,5	108,5	17	15	45	2412	2162	24	72	M20
FF Z1 06-225225-00	2250 / 2250	87,90	2252	2252	2342	2342	108,5	108,5	17	17	45	2412	2412	24	76	M20
FF Z1 06-225250-00	2250 / 2500	92,60	2252	2502	2342	2592	108,5	108,5	17	19	45	2412	2662	24	80	M20
FF Z1 06-262275-00	2625 / 2750	131,70	2627	2752	2737	2862	181,0	118,5	19	21	55	2827	2952	24	88	M20
FF Z1 06-262300-00	2625 / 3000	137,60	2627	3002	2737	3112	181,0	118,5	19	23	55	2827	3202	24	92	M20
FF Z1 06-300275-00	3000 / 2750	140,50	3002	2752	3112	2862	118,5	118,5	23	21	55	3202	2952	24	96	M20
FF Z1 06-300325-00	3000 / 3250	152,30	3002	3252	3112	3362	118,5	118,5	23	25	55	3202	3452	24	104	M20
FF Z1 06-337325-00	3375 / 3250	161,20	3377	3252	3487	3362	181,0	118,5	25	25	55	3577	3452	24	108	M20
FF Z1 06-337350-00	3375 / 3500	167,10	3377	3502	3487	3612	181,0	118,5	25	27	55	3577	3702	24	112	M20
FF Z1 06-375375-00	3750 / 3750	181,80	3752	3752	3862	3862	118,5	118,5	29	29	55	3952	3952	24	124	M20
FF Z1 06-375400-00	3750 / 4000	187,70	3752	4002	3862	4112	118,5	118,5	29	31	55	3952	4202	24	128	M20
FF Z1 06-412425-00	4125 / 4250	202,50	4127	4252	4237	4362	181,0	118,5	31	33	55	4327	4452	24	136	M20
FF Z1 06-412450-00	4125 / 4500	217,20	4127	4502	4237	4612	181,0	118,5	31	35	55	4327	4702	24	140	M20

Flat flange for suction boxes

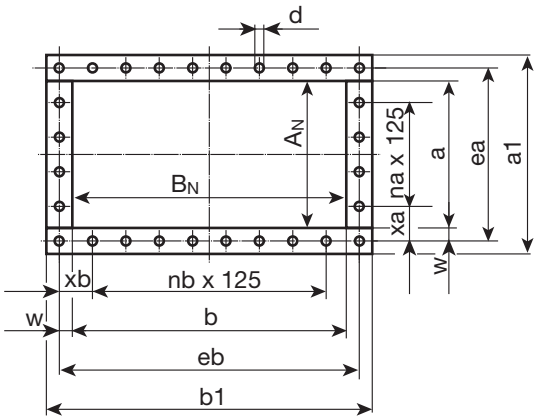
article no. = component size

FF Z1 04 - 014 031 - 00

- FF: symbol FF = flat flanges
- Z1: product code Z1 = flanges
- 04: flange code 04: DIN 24 193 R AK
- 014: nominal size code x 10 = A_N [mm]
- 031: nominal size code x 10 = B_N [mm]

Flat flange for suction boxes

acc. DIN 24 193 series 3 for suction boxes
(flange code 4)



article no. component size	nominal size	weight	dimensions												screws	
	A_N / B_N mm	kg	a mm	b mm	e_a mm	e_b mm	x_a mm	x_b mm	n_a	n_b	w mm	a_1 mm	b_1 mm	d mm	num-ber	thread
FF Z1 04-012028-00	125 / 280	1,8	127	282	161	316	80,5	158,0	-	-	17	187	342	10	8	M8
FF Z1 04-014031-00	140 / 315	2,0	142	317	176	351	88,0	113,0	-	1	17	202	377	10	10	M8
FF Z1 04-016035-00	160 / 355	2,2	162	357	196	391	98,0	133,0	-	1	17	222	417	10	10	M8
FF Z1 04-018040-00	180 / 400	2,4	182	402	216	436	108,0	155,5	-	1	17	242	462	10	10	M8
FF Z1 04-020045-00	200 / 450	4,7	202	452	262	512	131,0	68,5	-	3	30	302	552	15	14	M12
FF Z1 04-022050-00	224 / 500	5,2	226	502	282	562	143,0	93,5	-	3	30	326	602	15	14	M12
FF Z1 04-025056-00	250 / 560	7,2	252	562	312	622	156,0	123,5	-	3	30	352	662	15	14	M12
FF Z1 04-028063-00	280 / 630	8,0	282	632	342	692	171,0	158,5	-	3	30	382	732	15	14	M12
FF Z1 04-031071-00	315 / 710	8,9	317	712	377	772	126,0	73,5	1	5	30	417	812	15	20	M12
FF Z1 04-035080-00	355 / 800	9,9	357	802	417	862	146,0	118,5	1	5	30	457	902	15	20	M12
FF Z1 04-040090-00	400 / 900	11,0	402	902	462	962	168,5	168,5	1	5	3o	502	1002	15	20	M12
FF Z1 04-045100-00	450 / 1000	12,2	452	1002	512	1062	68,5	93,5	3	7	30	552	1102	15	28	M12
FF Z1 04-050112-00	500 / 1120	14,0	502	1122	572	1192	98,5	158,5	3	7	35	622	1242	19	28	M16
FF Z1 04-056125-00	560 / 1250	15,5	562	1252	632	1322	128,5	98,5	3	9	35	682	1372	19	32	M16
FF Z1 04-063140-00	630 / 1400	24,3	632	1402	702	1472	163,5	173,5	3	9	35	752	1522	19	32	M16
FF Z1 04-071160-00	710 / 1600	46,4	712	1602	802	1692	88,5	158,5	5	11	45	872	1762	24	40	M20
FF Z1 04-080180-00	800 / 1800	52,1	802	1802	892	1892	133,5	133,5	5	11	45	962	1962	24	44	M20
FF Z1 04-090200-00	900 / 2000	57,7	902	2002	992	2092	183,5	108,5	5	15	45	1062	2162	24	48	M20
FF Z1 04-100224-00	1000/ 2240	72,6	1002	2242	1102	2342	113,5	108,5	7	17	50	1182	2422	24	56	M20
FF Z1 04-112250-00	1120 / 2500	90,2	1122	2502	1232	2612	178,5	118,5	7	19	55	1322	2702	24	60	M20
FF Z1 04-125280-00	1250 / 2800	100,4	1252	2802	1362	2912	118,5	143,5	9	21	55	1452	3002	24	68	M20
FF Z1 04-140315-00	1400 / 3150	112,2	1402	3152	1512	3262	193,5	193,5	9	23	55	1602	3352	24	72	M20
FF Z1 04-160355-00	1600 / 3550	126,4	1602	3552	1712	3662	168,5	143,5	11	27	55	1802	3752	24	84	M20

Guards - round

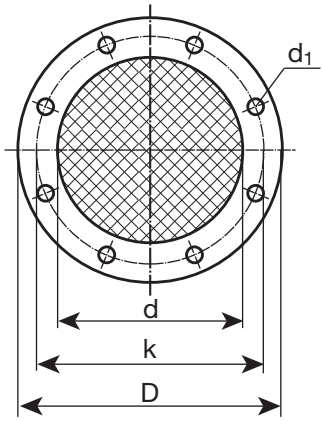
article no. = component size

SG Z3 03 - 000 063 - 00

- nominal size code x 10 = D_N [mm]
- flange code 03: DIN 24 154 R 2
- product code Z3 = guards
- symbol SG = guards

Guards - round

Flat flange according to DIN 24154 series 2
edition July '90



article no. component size	nominal size	weight	dimensions				screws	
	D_N mm	kg	d mm	k mm	D mm	d_1 mm	number	thread
SG Z3 03-000007-00	71	0,16	73	110	133	10	4	M8
SG Z3 03-000008-00	80	0,18	82	118	142	10	4	M8
SG Z3 03-000009-00	90	0,20	92	128	152	10	4	M8
SG Z3 03-000010-00	100	0,21	102	139	162	10	4	M8
SG Z3 03-000011-00	112	0,24	115	151	175	10	4	M8
SG Z3 03-000012-00	125	0,27	127	165	187	10	4	M8
SG Z3 03-000014-00	140	0,33	142	182	212	12	8	M10
SG Z3 03-000016-00	160	0,39	162	200	232	12	8	M10
SG Z3 03-000018-00	180	0,44	182	219	252	12	8	M10
SG Z3 03-000020-00	200	0,50	203	241	273	12	8	M10
SG Z3 03-000022-00	224	0,57	227	265	297	12	8	M10
SG Z3 03-000025-00	250	0,64	253	292	323	12	8	M10
SG Z3 03-000028-00	280	0,83	283	332	363	12	8	M10
SG Z3 03-000031-00	315	0,99	318	366	398	12	8	M10
SG Z3 03-000035-00	355	1,09	358	405	438	12	8	M10
SG Z3 03-000040-00	400	1,26	404	448	484	12	12	M10
SG Z3 03-000045-00	450	1,47	454	497	534	12	12	M10
SG Z3 03-000050-00	500	1,66	504	551	584	12	12	M10
SG Z3 03-000056-00	560	2,26	564	629	664	15	16	M12
SG Z3 03-000063-00	630	2,64	634	698	734	15	16	M12
SG Z3 03-000071-00	710	3,10	714	775	814	15	16	M12
SG Z3 03-000080-00	800	3,64	804	861	904	15	24	M12
SG Z3 03-000090-00	900	4,31	904	958	1004	15	24	M12
SG Z3 03-000100-00	1000	7,56	1005	1067	1105	15	24	M12
SG Z3 03-000112-00	1120	9,75	1125	1200	1245	19	32	M16
SG Z3 03-000125-00	1250	11,47	1255	1337	1375	19	32	M16
SG Z3 03-000140-00	1400	13,60	1405	1475	1525	19	32	M16
SG Z3 03-000160-00	1600	16,67	1605	1675	1725	19	40	M16
SG Z3 03-000180-00	1800	20,09	1805	1875	1925	19	40	M16
SG Z3 03-000200-00	2000	23,78	2005	2073	2125	19	40	M16

Guards - angular

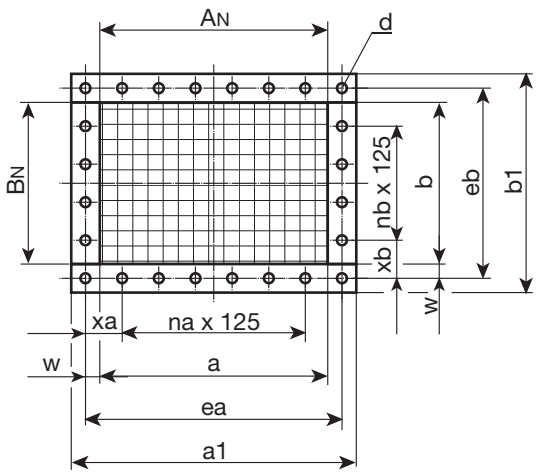
article no. = component size

SG Z3 02 - 063 050 - 00

- nominal size code x 10 = B_N [mm]
- nominal size code x 10 = A_N [mm]
- flange code 02: DIN 24 193 R 3
- product code Z3 = guards
- symbol SG = guards

Guards - angular

Flat flange according to DIN 24193 series 3



article no. component size	nominal size A_N / B_N mm	weight kg	dimensions a mm	b mm	e_a mm	e_b mm	x_a mm	x_b mm	n_a	n_b	w mm	a_1 mm	b_1 mm	d mm	screws number	screws thread
SG Z3 02-010012-00	100 / 125	0,13	102	127	136	161	-	80,5	-	-	17	162	187	10	6	M8
SG Z3 02-011012-00	112 / 125	0,14	114	127	148	161	-	80,5	-	-	17	174	187	10	6	M8
SG Z3 02-012012-00	125 / 125	0,15	127	127	161	161	80,5	80,5	-	-	17	187	187	10	8	M8
SG Z3 02-014012-00	140 / 125	0,17	142	127	176	161	88,0	80,5	-	-	17	202	187	10	8	M8
SG Z3 02-016012-00	160 / 125	0,20	162	127	196	161	98,0	80,5	-	-	17	222	187	10	8	M8
SG Z3 02-018014-00	180 / 140	0,23	182	142	216	176	108,0	88,0	-	-	17	242	202	10	8	M8
SG Z3 02-020016-00	200 / 160	0,27	202	162	236	196	118,0	98,0	-	-	17	262	222	10	8	M8
SG Z3 02-022018-00	224 / 180	0,33	226	182	260	216	130,0	108,0	-	-	17	286	242	10	8	M8
SG Z3 02-025020-00	250 / 200	0,39	252	202	286	236	143,0	118,0	-	-	17	312	262	10	8	M8
SG Z3 02-028022-00	280 / 224	0,46	282	226	316	260	158,0	130,0	-	-	17	342	286	10	8	M8
SG Z3 02-031025-00	315 / 250	0,55	317	252	351	286	113,0	143,0	1	-	17	377	312	10	10	M8
SG Z3 02-035028-00	355 / 280	0,67	357	282	391	316	133,0	158,0	1	-	17	417	342	10	10	M8
SG Z3 02-040031-00	400 / 315	0,82	402	317	436	351	155,5	113,0	1	1	17	462	377	10	12	M8
SG Z3 02-045035-00	450 / 355	1,19	452	357	512	417	68,5	146,0	3	1	30	552	457	15	16	M12
SG Z3 02-050040-00	500 / 400	1,42	502	402	562	462	93,5	168,5	3	1	30	602	502	15	16	M12
SG Z3 02-056045-00	560 / 450	2,87	562	452	622	512	123,5	68,5	3	3	30	662	552	15	20	M12
SG Z3 02-063050-00	630 / 500	3,46	632	502	692	562	158,5	93,5	3	3	30	732	602	15	20	M12
SG Z3 02-071056-00	710 / 560	4,22	712	562	772	622	73,5	123,5	5	3	30	812	662	12	24	M12
SG Z3 02-080063-00	800 / 630	5,18	802	632	862	692	118,5	158,5	5	3	30	902	732	15	24	M12
SG Z3 02-090071-00	900 / 710	6,39	902	712	962	772	168,5	73,5	5	5	30	1002	812	15	28	M12
SG Z3 02-100080-00	1000 / 800	7,80	1002	802	1062	862	93,5	118,5	7	5	30	1102	902	15	32	M12
SG Z3 02-112090-00	1120 / 900	11,69	1122	902	1192	972	158,5	173,5	7	5	35	1242	1022	19	32	M16
SG Z3 02-125100-00	1250 / 1000	14,50	1252	1002	1322	1072	98,5	98,5	9	7	35	1372	1122	19	40	M16
SG Z3 02-140112-00	1400 / 1120	17,81	1402	1122	1472	1192	173,5	158,5	9	7	35	1522	1242	19	40	M16
SG Z3 02-160125-00	1600 / 1250	23,44	1602	1252	1692	1342	158,5	108,5	11	9	45	1762	1412	24	48	M20
SG Z3 02-180140-00	1800 / 1400	28,87	1802	1402	1892	1492	133,5	183,5	13	9	45	1962	1562	24	52	M20
SG Z3 02-200160-00	2000 / 1600	35,88	2002	1602	2092	1692	108,5	158,5	15	11	45	2162	1762	24	60	M20
SG Z3 02-224180-00	2240 / 1800	45,22	2242	1802	2342	1902	108,5	138,5	17	13	50	2422	1982	24	68	M20
SG Z3 02-250200-00	2500 / 2000	56,05	2502	2002	2612	2112	118,5	118,5	19	15	55	2702	2202	24	76	M20

Transition piece - round-round

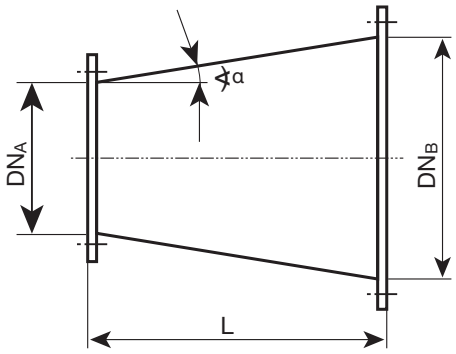
article no. = component size

US Y3 3 3 - 018 001 - 00

- code according to tables below
- nominal size code x 10 = DNA [mm]
  angular cross section
- flange code of
  large cross-section 3 = DIN 24154 R2
- flange code of
  small cross-section 3 = DIN 24154 R2
- product code Y3 = transition pieces
- symbol US = transition piece

Transition piece - round-round

Flat flange acc. to DIN 24154 R2 edition July 90



DNA mm	Transition piece DNA/DNB = 1 step article no. component size	DNB mm	L mm	< α ca.	weight[1] kg
90	US Y3 33-009001-00	100	100	7,0°	1,5
100	US Y3 33-010001-00	112	100	7,0°	1,6
112	US Y3 33-011001-00	125	100	7,0°	1,8
125	US Y3 33-012001-00	140	100	7,0°	2,1
140	US Y3 33-014001-00	160	100	7,0°	2,5
160	US Y3 33-016001-00	180	100	7,0°	2,8
180	US Y3 33-018001-00	200	100	7,0°	3,3
200	US Y3 33-020001-00	224	100	7,0°	3,7
224	US Y3 33-022001-00	250	100	15,0°	3,8
250	US Y3 33-025001-00	280	125	15,0°	5,7
280	US Y3 33-028001-00	315	125	15,0°	7,3
315	US Y3 33-031001-00	355	125	15,0°	8,5
355	US Y3 33-035001-00	400	140	15,0°	9,9
400	US Y3 33-040001-00	450	140	15,0°	11,0
450	US Y3 33-045001-00	500	160	15,0°	13,0
500	US Y3 33-050001-00	560	200	15,0°	18,0
560	US Y3 33-056001-00	630	200	15,0°	24,0
630	US Y3 33-063001-00	710	200	15,0°	28,0
710	US Y3 33-071001-00	800	225	15,0°	33,0
800	US Y3 33-080001-00	900	225	15,0°	39,0
900	US Y3 33-090001-00	1000	250	15,0°	52,0
1000	US Y3 33-100001-00	1120	250	15,0°	68,0
1120	US Y3 33-112001-00	1250	250	15,0°	79,0
1250	US Y3 33-125001-00	1400	280	15,0°	92,0
1400	US Y3 33-140001-00	1600	355	15,0°	107,0
1600	US Y3 33-160001-00	1800	355	15,0°	124,0
1800	US Y3 33-180001-00	2000	400	15,0°	144,0
2000	US Y3 33-200001-00	2240	560	15,0°	167,0

DNA mm	Transition piece DNA/DNB = 2 steps article no. component size	DNB mm	L mm	< α ca.	weight[1] kg
90	US Y3 33-009002-00	112	100	15,0°	1,6
100	US Y3 33-010002-00	125	100	15,0°	1,7
112	US Y3 33-011002-00	140	100	15,0°	2,1
125	US Y3 33-012002-00	160	100	15,0°	2,3
140	US Y3 33-014002-00	180	100	15,0°	2,7
160	US Y3 33-016002-00	200	100	15,0°	3,2
180	US Y3 33-018002-00	224	100	15,0°	3,6
200	US Y3 33-020002-00	250	100	15,0°	3,9
224	US Y3 33-022002-00	280	125	15,0°	5,9
250	US Y3 33-025002-00	315	125	15,0°	6,5
280	US Y3 33-028002-00	355	140	15,0°	8,3
315	US Y3 33-031002-00	400	140	15,0°	9,7
355	US Y3 33-035002-00	450	180	15,0°	11,0
400	US Y3 33-040002-00	500	180	15,0°	14,0
450	US Y3 33-045002-00	560	200	15,0°	18,0
500	US Y3 33-050002-00	630	200	15,0°	22,0
560	US Y3 33-056002-00	710	280	15,0°	28,0
630	US Y3 33-063002-00	800	280	15,0°	32,0
710	US Y3 33-071002-00	900	355	15,0°	40,0
800	US Y3 33-080002-00	1000	355	15,0°	46,0
900	US Y3 33-090002-00	1120	400	15,0°	57,0
1000	US Y3 33-100002-00	1250	400	15,0°	66,0
1120	US Y3 33-112002-00	1400	500	15,0°	86,0
1250	US Y3 33-125002-00	1600	560	22,5°	103,0
1400	US Y3 33-140002-00	1800	560	22,5°	122,0
1600	US Y3 33-160002-00	2000	630	22,5°	142,0

1) weight inclusive flanges

Transition piece - angular-round

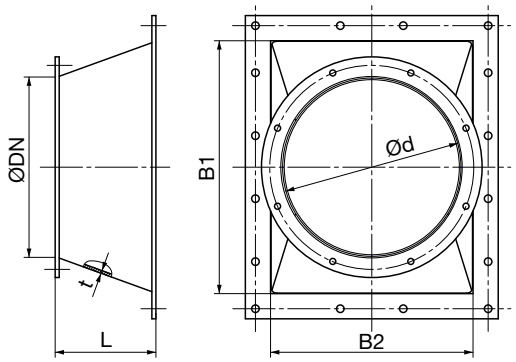
article no. = component size

US Y3 2 3 - 125 071 - 00

- nominal size round DN [mm]
- nominal size angular B1 [mm]
- flange code of cross-section round 3 = DIN 24154 R2
- flange code of cross-section angular 2 = DIN 24193 R3
- product code Y3 = transition pieces
- symbol US = transition piece

Transition piece - angular-round

flange round according DIN 24154 R2 ediion July 90
flange angular according DIN 24193 R3



article no. component size	nominal size DN mm	weight (incl. flanges) kg	dimensions B1 mm	B2 mm	d* mm	L mm	t mm
US Y3 23-125100-..	100	1,97	100	125	98	80	2,5
US Y3 23-125112-..	112	2,14	112	125	112	80	2,5
US Y3 23-125125-...	125	2,28	125	125	125	80	2,5
US Y3 23-125140-..	140	2,68	140	125	140	90	2,5
US Y3 23-125160-..	160	3,05	160	125	160	100	2,5
US Y3 23-140180-..	180	3,50	180	140	180	110	2,5
US Y3 23-160200-..	200	4,10	200	160	201	125	2,5
US Y3 23-180224-..	224	4,78	224	180	225	140	2,5
US Y3 23-200250-..	250	5,64	250	200	251	160	2,5
US Y3 23-224280-..	280	8,10	280	224	281	180	2,5

* d suitable for flanges according to DIN 24154 R2

Inlet nozzle

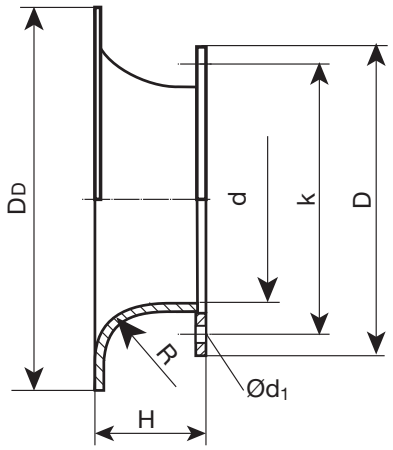
article no. = component size

AD Z6 03 - 000 063 - 00

- nominal size code x 10 = D_N[mm]
- flange code 03 = DIN 24154 R2, edition July 90
- product code Z6 = inlet nozzle
- symbol AD = inlet nozzle

Inlet nozzle

Flat flange acc. to DIN 24154 R2
edition July 90
Pressure loss:
pv = ζ · pd(DN) [daPa]
ζ = 0,25 - 0,35



article no. component size	nominal size	weight[1]	dimensions							screws	
	D_N mm	kg	d mm	D_D mm	H mm	R mm	D mm	k mm	d_1 mm	number	thread
AD Z6 03-000012-00	125	1,68	126	250	31	20	187	165	9,5	4	M8
AD Z6 03-000014-00	140	1,97	141	265	33	22	212	182	11,5	8	M10
AD Z6 03-000016-00	160	2,55	158	315	35	24	232	200	11,5	8	M10
AD Z6 03-000018-00	180	2,82	178	335	38	27	252	219	11,5	8	M10
AD Z6 03-000020-00	200	3,38	199	375	42	30	273	241	11,5	8	M10
AD Z6 03-000022-00	224	3,77	224	400	47	34	297	265	11,5	8	M10
AD Z6 03-000025-00	250	4,57	251	450	52	38	323	292	11,5	8	M10
AD Z6 03-000028-00	280	6,90	282	530	59	42	363	332	11,5	8	M10
AD Z6 03-000031-00	315	7,78	316	560	66	48	398	366	11,5	8	M10
AD Z6 03-000035-00	355	10,17	355	600	72	53	438	405	11,5	8	M10
AD Z6 03-000040-00	400	12,34	398	670	79	59	484	448	11,5	12	M10
AD Z6 03-000045-00	450	16,91	447	800	88	66	534	497	11,5	12	M10
AD Z6 03-000050-00	500	22,14	501	850	98	74	584	551	11,5	12	M10
AD Z6 03-000056-00	560	28,36	562	950	108	82	664	629	14,0	16	M12
AD Z6 03-000063-00	630	30,42	631	996	120	92	734	698	14,0	16	M12
AD Z6 03-000071-00	710	46,01	708	1150	133	103	814	775	14,0	16	M12
AD Z6 03-000080-00	800	56,31	794	1285	142	114	904	861	14,0	24	M12
AD Z6 03-000090-00	900	65,59	891	1400	161	130	1004	958	14,0	24	M12
AD Z6 03-000100-00	1000	79,47	1000	1550	181	125	1105	1067	14,0	24	M12
AD Z6 03-000112-00	1120	66,80	1120	1442	206	161	1245	1200	18,0	32	M16
AD Z6 03-000125-00	1250	113,80	1265	1595	193	165	1375	1337	18,0	32	M16
AD Z6 03-000140-00	1400	151,60	1403	1803	245	200	1525	1475	18,0	32	M16
AD Z6 03-000160-00	1600	188,50	1575	2023	267	224	1725	1675	18,0	40	M16
AD Z6 03-000180-00	1800	272,20	1768	2268	293	250	1925	1875	18,0	40	M16
AD Z6 03-000200-00	2000	338,50	1985	2545	328	280	2125	2073	18,0	40	M16

1) weight inclusive flanges

Suction box, series 2

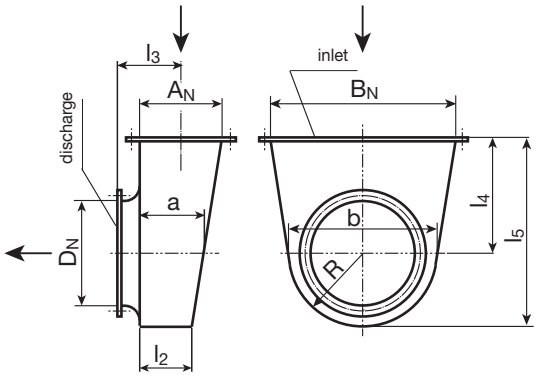
article no. = component size

AK Y1 02 - 063 050 - 00

- 00 = nominal size code x 10 = A_N[mm]
- 050 = nominal size code x 10 = D_N[mm]
- 02 = series code
- Y1 = product code Y1 = suction box
- AK = symbol AK = suction box

Suction box, series 2

Angular flanges according to DIN 24193 R3-AK, see sheet ZB5.
Round connection according to DIN 24154 R2, see sheet ZB2.
Important! Provide support to reduce the load of the suction box.
Pressure loss:
pv = ζ · pd(DN) [daPa]
ζ = 0,25 - 0,35



article no. component size	nominal size	nominal size	weight[1]	dimensions					
	D_N mm	A_N x B_N	kg	a x b mm	l_2 mm	l_3 mm	l_4 mm	l_5 mm	R mm
AK Y1 02-016012-00	160	125 x 280	13	80 x 224	80	125,0	200	312	112
AK Y1 02-018014-00	180	140 x 315	19	90 x 250	80	132,5	220	345	125
AK Y1 02-020016-00	200	160 x 355	23	100 x 280	80	142,5	240	380	140
AK Y1 02-022018-00	224	180 x 400	29	112x 315	80	152,5	270	430	160
AK Y1 02-025020-00	250	200 x 450	39	125 x 355	80	162,5	300	480	180
AK Y1 02-028022-00	280	224 x 500	49	140 x 400	90	168,5	340	540	200
AK Y1 02-031025-00	315	250 x 560	63	160 x 450	100	188,0	380	604	224
AK Y1 02-035028-00	355	280 x 630	79	180 x 500	112	209,0	430	680	250
AK Y1 02-040031-00	400	315 x 710	98	200 x 560	125	232,5	480	760	280
AK Y1 02-045035-00	450	355 x 800	123	224 x 630	140	261,5	540	855	315
AK Y1 02-050040-00	500	400x 900	202	250 x 710	160	294,0	600	955	355
AK Y1 02-056045-00	560	450 x 1000	260	280 x 800	180	329,0	670	1070	400
AK Y1 02-063050-00	630	500 x 1120	320	315 x 900	200	366,0	760	1210	450
AK Y1 02-071056-00	710	560 x 1250	484	355 x 1000	224	409,0	850	1350	500
AK Y1 02-080063-00	800	630 x 1400	619	400 x 1120	250	453,0	960	1520	560
AK Y1 02-090071-00	900	710 x 1600	805	450 x 1250	280	512,0	1080	1710	630
AK Y1 02-100080-00	1000	800 x 1800	1012	500 x 1400	315	577,0	1200	1910	710
AK Y1 02-112090-00	1120	900 x 2000	1063	560 x 1600	355	650,0	1340	2140	800
AK Y1 02-125100-00	1250	1000 x 2240	1324	630 x 1800	400	687,0	1500	2400	900
AK Y1 02-140112-00	1400	1120 x 2500	1683	710 x 2000	450	799,0	1680	2680	1000
AK Y1 02-160125-00	1600	1250 x 2800	2505	800 x 2240	500	886,0	1920	3040	1120
AK Y1 02-180140-00	1800	1400 x 3150	2608	900 x 2500	560	987,0	2160	3410	1250
AK Y1 02-200160-00	2000	1600 x 3550	3334	1000 x 2800	630	1122,0	2400	3800	1400

Round filter

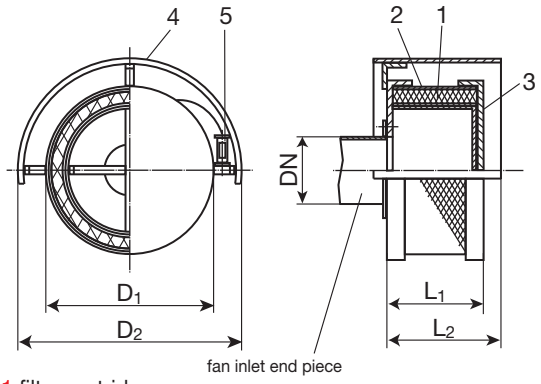
article no. = component size

RF F1 1 3 - 032 025 - 00

- respective connection nominal size code no. x 10 = D_N[mm]
- max. volume flow [m^3/min] acc. to table
- flange code 3: DIN 24154 R2
- installation code 1 = horizontal installation
- product code F1 = round filter
- symbol RF = round filter

Round filter

horizontal installation



1 filter cartridge
2 fence wire
3 cover
4 rainhood
5 U-tube manometer

article no. component sizee	weight	max.	max. volume flow		dimensions				replacement cartridge	weight
	kg	D_N mm	m^3/min	m^3/s	D_1 mm	D_2 mm	L_1 mm	L_2 mm	article no. component size	kg
RF F1 13-008 ...-00	5,5	160	8	0,133	335	460	95	165	FP F1 01-008040	0,18
RF F1 13-014 ...-00	9,0	200	14	0,233	375	550	95	185	FP F1 01-014040	0,28
RF F1 13-018 ...-00	10,0	224	18	0,300	375	550	125	215	FP F1 01-018040	0,38
RF F1 13-032 ...-00	12,0	250	32	0,533	375	550	245	335	FP F1 01-032040	0,68
RF F1 13-056 ...-00[1)]	14,0	315	56	0,933	500	700	285	395	FP F1 01-056040	1,05
RF F1 13-071 ...-00[1)]	16,0	315	71	1,183	500	700	355	465	FP F1 01-071040	1,36
RF F1 13-112 ...-00[1)]	24,0	355	112	1,866	500	700	575	685	FP F1 01-112040	2,10
RF F1 13-140 ...-00[1)]	28,0	450	140	2,330	630	940	595	755	FP F1 01-140040	3,20

Technical description

degree of dedusting: > 95% with a grain size of 30 - 50 µm
pressure loss: approx. 20 daPa for $\dot{V}_{max}$
filter material: latex-glued animal hair and plant fibres

Clean the filter cartridge by blowing, spraying or washing. The filter cartridge must be dry when it is replaced.
U-tube manometer pressure gauge measuring range up to 50daPa
Article no. = component size - UM F1 00-000050

1) Important: An additionally extended base frame must be provided to ensure stability of the MXE design model when installed on anti-vibration mounts for pressure series ≤250 daPa and motor size ≤112M.

Round filter

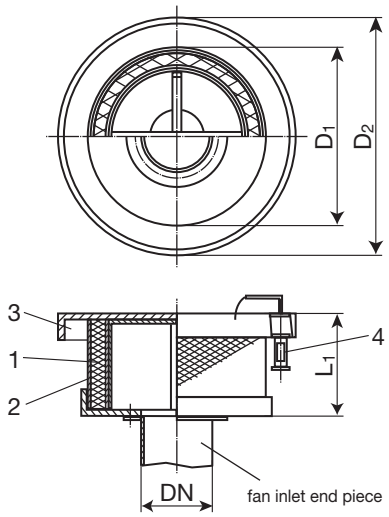
article no. = component size

RF F1 2 3 - 032 025 - 00

- respective connection nominal size code no. x 10 = D_N[mm]
- max. volume flow [m^3/min] acc. to table
- flange code 3: DIN 24154 R2
- installation code 2 = vertical installation
- product code F1 = round filter
- symbol RF = round filter

Round filter

vertical installation



1 filter cartridge
2 fence wire
3 cover
4 U-tube manometer

article no. component size	weight kg	max. D_N mm	max. volume flow m^3/min	m^3/s	dimensions D_1 mm	D_2 mm	L_1 mm	replacement cartridge article no. component size	weight kg
RF F1 23-008 . . .-00	3,5	160	8	0,133	335	500	95	FP F1-008040	0,18
RF F1 23-014 . . .-00	6,8	200	14	0,233	375	560	95	FP F1-014040	0,28
RF F1 23-018 . . .-00	7,5	224	18	0,300	375	630	125	FP F1-018040	0,38
RF F1 23-032 . . .-00	8,0	250	32	0,533	375	630	245	FP F1-032040	0,68
RF F1 23-056 . . .-00	8,5	315	56	0,933	500	800	285	FP F1-056040	1,05
RF F1 23-071 . . .-00	9,5	315	71	1,183	500	900	355	FP F1-071040	1,36
RF F1 23-112 . . .-00	15,0	355	112	1,866	500	1120	575	FP F1-112040	2,10
RF F1 23-140 . . .-00	16,0	450	140	2,330	630	1250	595	FP F1-140040	3,20

Technical description

degree of dedusting: > 95% with a grain size of 30 - 50 µm
pressure loss: approx. 20 daPa for $\dot{V}_{max}$
filter material: latex-glued animal hair and plant fibres

Clean the filter cartridge by blowing, spraying or washing. The filter cartridge must be dry when it is replaced.
U-tube manometer pressure gauge measuring range up to 50daPa
Article no. = component size - UM F1 00-000050

1) Important: An additionally extended base frame must be provided to ensure stability of the MXE design model when installed on anti-vibration mounts for pressure series ≤250 daPa and motor size ≤112M.

Anti-vibration mounts

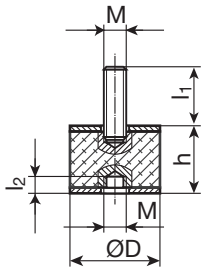
article no. = component size

SP Z4 2 . - 075 055 - 00

- height code h [mm]
- diameter code d [mm]
- design code: 0 = without mounting plate, 3 = with mounting plate
- hardness code: 1 = 40 Shore, 2 = 55 Shore
- product code Z4 = anti-vibration mounts
- symbol SP = anti-vibration mounts

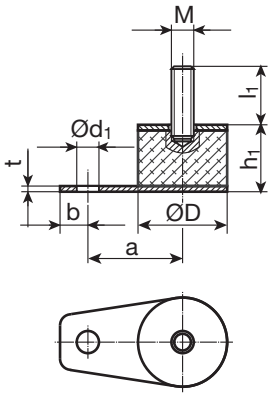
Design 0

with set screw and inside thread



Design 3

with set screw and mounting plate



article no. component size	Typ Nr.	dimensions									thread	hard-ness code	shore-hard-ness A	sur-face	weight design 0	weight design 3
		D mm	a mm	b mm	d_1 mm	t mm	h mm	h_1 mm	l_1 mm	l_2 mm				cm²	kg	kg
SPZ42.-050045-00	01	50	50	15	16,5	4	45	54	28	10	M10	2	55	19,6	0,20	0,25
SPZ42.-075055-00	02	75	75	20	20	4	55	65	37	12	M12	2	55	44,2	0,45	0,65
SPZ42.-100055-00	03	100	100	25	26	5	55	65	43	21	M16	2	55	78,5	0,85	1,35
SPZ42.-150075-00	04	150	150	35	26	6	75	85	43	21	M16	2	55	176,5	2,60	3,50
SPZ42.-150055-00	08	150	150	35	26	6	55	61	43	21	M16	2	55	176,5	1,90	2,60
SPZ41.-075055-00	05	75	75	20	20	4	55	65	37	12	M12	1	40	44,2	0,45	0,65
SPZ41.-100075-00	06	100	100	25	26	5	75	85	43	21	M16	1	40	78,5	1,15	1,85
SPZ41.-150075-00	07	150	150	35	26	6	75	85	43	21	M16	1	40	176,5	2,60	3,50

Technical data

F in N is the admissible loading per mount.
Loading = weight = (weight of fan + motor) · 9,81 m/s²
f_0 in mm = spring deflection or depth of impression
η in% = reduction efficiency (vibration reducing)

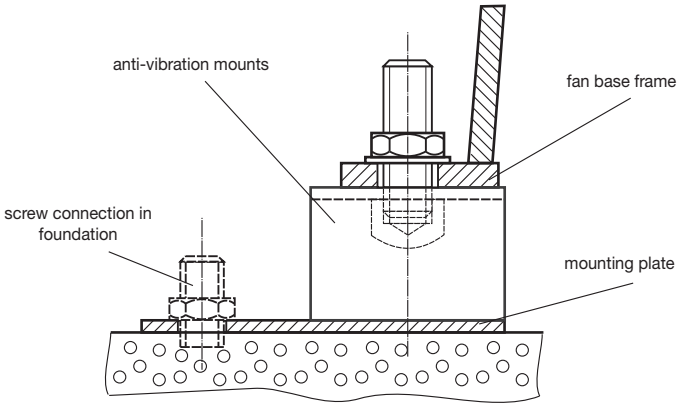
article no. component size	speed range in R.P.M.														
	3000 load F in N from to			1500 load F in N from to			1000 load F in N from to			750 load F in N from to			500 load F in N from to		
		f_0 mm	η %		f_0 mm	η %		f_0 mm	η %		f_0 mm	η %		f_0 mm	η %
SPZ42.-050045-00	250 - 550	2	95	400 - 880	3	85	–	–	–	–	–	–	–	–	–
SPZ42.-075055-00	485 - 970	2	95	730 - 1450	3	85	–	–	–	–	–	–	–	–	–
SPZ42.-100055-00	800 - 1600	2	95	1200 - 2400	3	85	–	–	–	–	–	–	–	–	–
SPZ42.-150075-00	1200 - 2400	2	95	1800 - 3650	3	85	–	–	–	–	–	–	–	–	–
SPZ42.-150055-00	–	–	–	5400 - 8100	3	85	–	–	–	–	–	–	–	–	–
SPZ41.-075055-00	–	–	–	–	–	–	550 - 1000	6	82	800 - 1400	8	75	–	–	–
SPZ41.-100075-00	–	–	–	–	–	–	1350 - 2700	6	82	2000 - 3600	8	75	2800 - 4500	10	60
SPZ41.-150075-00	–	–	–	–	–	–	1900 - 3850	6	82	2900 - 5100	8	75	4000 - 6400	10	60

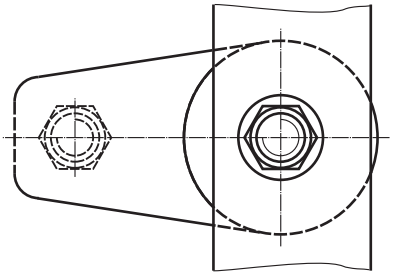
Arrangement of anti-vibration mounts

Arrangement of anti-vibration mounts with mounting plate

Screwed to foundation

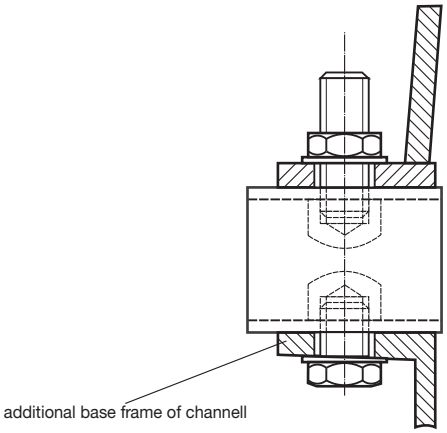
Please note:
Pegs can only be screwed using a drilling template.
The anchor bolts may only be screwed with appropriate foundation holes.
Grout the foundation bolt holes after aligning the fan.





Arrangement on an additional base frame

Additional base frame



Flexible connections

Description

Flexible connections are intended to prevent the transmission of structure -borne sound and vibrational forces. They should also avoid the transmissions of forces from the duct to the fan. At the same time, alignment errors of the duct work to be connected are compensated. The flexible connections should always be arranged directly at the fan connection flange except when a damper is mounted on the fan. If the fan is mounted on anti-vibration mounts, always provide flexible connections at inlet and discharge. The flexible connections must be installed in compressed form to enable the absorption of tension movements; see installation length.

Structural design K1

Flexible connection, round with hose clamps for flange pieces or cylindrical connection pieces.

Structural design K2, K3

Flexible connection, round or angular, fitted with two back flanges, suitable for direct flange mounting.
Instructions for installation
Structural design K1 with cylindrical connection piece.
Structural design K2 and K3 with flange connection.

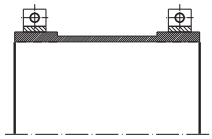
Chute

Provide chutes in accordance with arrangement and loading in case of:

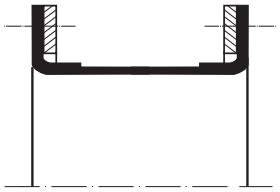
- temperatures above 90°C
- flow velocities above 30 m/s
- pressure loading above 1000 daPa
- agressive and abrasive media
- arrangement at inlet (so that the flexible connection is fixed with the chute at the given vacuum and does not restrict the entry cross-section to the fan)
- high acoustic requirements (chute effect is similar to duct with comparable absorption values)

Structural design

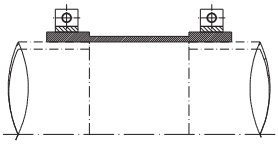
Structural design K1



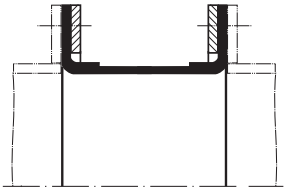
Structural design K2 und K3



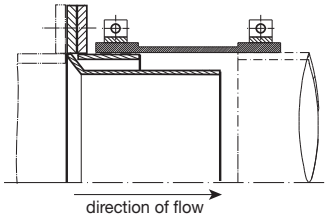
Structural design K1 with cylindrical pipe connection



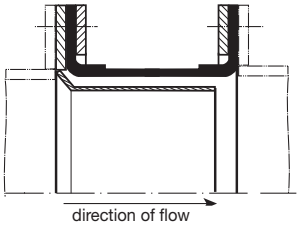
Structural design K2 and K3 with flange connection



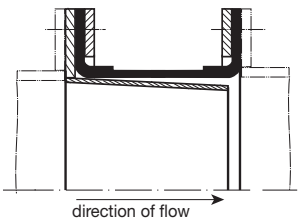
Structural design K1 with baffle



Structural design K2 with baffle



Structural design K3 with baffle



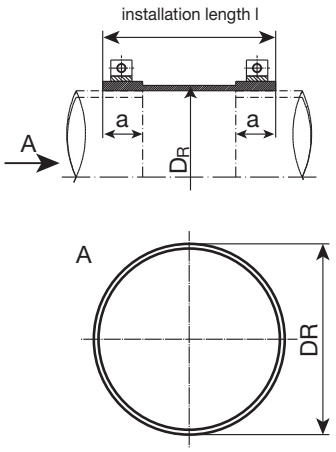
Flexible connection round with hose clamps

article no. = component size

KP K1 00 - 000 031 - 00

- KP = symbol KP = flexible connections
- K1 = product code K1 = round / hose clamps
- 00 = flange code 00 = without flange
- 031 = nominal size code x 10 = DN [mm]
- 00 = variant code acc. to list

Flexible connection round with hose clamps



article no. component size	nominal size DN	weight kg	D_R mm	l mm	hose clamps code no.
KP K1 00-000007- . .	71	0,21	72	160	SS V1 00-000007-00
KP K1 00-000008- . .	80	0,25	80	160	SS V1 00-000008-00
KP K1 00-000009- . .	90	0,30	90	160	SS V1 00-000009-00
KP K1 00-000010- . .	100	0,34	100	160	SS V1 00-000010-00
KP K1 00-000011- . .	112	0,37	115	160	SS V1 00-000011-00
KP K1 00-000012- . .	125	0,42	125	160	SS V1 00-000012-00
KP K1 00-000014- . .	140	0,47	140	160	SS V1 00-000014-00
KP K1 00-000016- . .	160	0,52	161	160	SS V1 00-000016-00
KP K1 00-000018- . .	180	0,58	181	160	SS V1 00-000018-00
KP K1 00-000020- . .	200	0,65	202	160	SS V1 00-000020-00
KP K1 00-000022- . .	224	0,73	226	160	SS V1 00-000022-00
KP K1 00-000025- . .	250	0,82	252	160	SS V1 00-000025-00
KP K1 00-000028- . .	280	0,92	281	160	SS V1 00-000028-00
KP K1 00-000031- . .	315	1,03	316	160	SS V1 00-000031-00
KP K1 00-000035- . .	355	1,15	356	160	SS V1 00-000035-00
KP K1 00-000040- . .	400	1,29	402	160	SS V1 00-000040-00
KP K1 00-000045- . .	450	1,44	452	160	SS V1 00-000045-00
KP K1 00-000050- . .	500	1,62	502	160	SS V1 00-000050-00
KP K1 00-000056- . .	560	1,81	562	160	SS V1 00-000056-00
KP K1 00-000063- . .	630	2,03	632	160	SS V1 00-000063-00
KP K1 00-000071- . .	710	2,28	712	160	SS V1 00-000071-00
KP K1 00-000080- . .	800	2,55	802	160	SS V1 00-000080-00
KP K1 00-000090- . .	900	2,86	902	160	SS V1 00-000090-00
KP K1 00-000100- . .	1000	3,21	1003	200	SS V1 00-000100-00
KP K1 00-000112- . .	1120	3,60	1123	200	SS V1 00-000112-00
KP K1 00-000125- . .	1250	4,10	1253	200	SS V1 00-000125-00
KP K1 00-000140- . .	1400	4,50	1403	200	SS V1 00-000140-00
KP K1 00-000160- . .	1600	5,10	1603	200	SS V1 00-000160-00
KP K1 00-000180- . .	1800	5,70	1803	200	SS V1 00-000180-00
KP K1 00-000200- . .	2000	6,40	2003	200	SS V1 00-000200-00

- installation length l:
  l = 160mm to DN 900
  l = 200mm from DN 1000
- a = 40mm
- axial motion intake ± 6% *
- lateral motion intake ± 3% *
  * ref. to length
- designs for temperatures > 180°C on request
- pressure loading: ± 3150 daPa max.

variant list

01 rubber	to 90°C
02 polyester	to 90°C
03 glass fabric	to 180°C

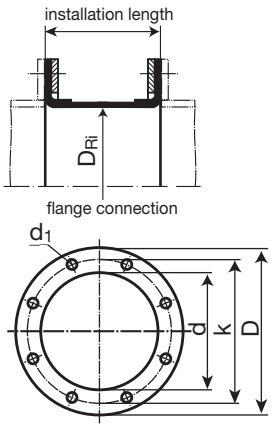
Flexible connection round with back flanges

article no. = component size

KP K2 03 - 000 031 - 00

- variant code acc. to list
- nominal size code x 10 = DN [mm]
- flange code 03: DIN 24 154 R 2
- product code K2 = round with back flanges
- symbol KP = flexible connection

Flexible connection round with back flanges



- connection flange acc. DIN 24154 R2 (edition July 90)
- installation length l:
  l = 150mm to DN 900
  l = 200mm from DN 1000
- axial motion intake
  ± 6% *
- lateral motion intake
  ± 3% *
  * ref. to length
- designs for temperatures >180°C on request
- pressure loading:
  ±3150 daPa max.

article no. component size	nominal size	weight[1]	dimensions						screws	
	D_N mm	kg	D_{Ri} mm	d mm	k mm	D mm	l mm	d_1 mm	number	thread
KP K2 03-000007- ..	71	1,15	67	73	110	133	150	9,5	4	M8
KP K2 03-000008- ..	80	1,25	75	82	118	142	150	9,5	4	M8
KP K2 03-000009- ..	90	1,37	85	92	128	152	150	9,5	4	M8
KP K2 03-000010- ..	100	1,44	95	102	139	162	150	9,5	4	M8
KP K2 03-000011- ..	112	1,62	110	115	151	175	150	9,5	4	M8
KP K2 03-000012- ..	125	1,75	120	127	165	187	150	9,5	4	M8
KP K2 03-000014- ..	140	2,19	135	142	182	212	150	11,5	8	M10
KP K2 03-000016- ..	160	2,46	156	162	200	232	150	11,5	8	M10
KP K2 03-000018- ..	180	2,70	176	182	219	252	150	11,5	8	M10
KP K2 03-000020- ..	200	2,97	197	203	241	273	150	11,5	8	M10
KP K2 03-000022- ..	224	3,29	221	227	265	297	150	11,5	8	M10
KP K2 03-000025- ..	250	3,62	247	253	292	323	150	11,5	8	M10
KP K2 03-000028- ..	280	5,86	276	283	332	363	150	11,5	8	M10
KP K2 03-000031- ..	315	6,88	311	318	366	398	150	11,5	8	M10
KP K2 03-000035- ..	355	7,22	351	358	405	438	150	11,5	8	M10
KP K2 03-000040- ..	400	8,01	397	404	448	484	150	11,5	12	M10
KP K2 03-000045- ..	450	8,93	447	454	497	534	150	11,5	12	M10
KP K2 03-000050- ..	500	9,64	497	504	551	584	150	11,5	12	M10
KP K2 03-000056- ..	560	13,50	557	564	629	664	150	14,0	16	M12
KP K2 03-000063- ..	630	15,07	626	634	698	734	150	14,0	16	M12
KP K2 03-000071- ..	710	16,86	706	714	775	814	150	14,0	16	M12
KP K2 03-000080- ..	800	18,73	796	804	861	904	150	14,0	24	M12
KP K2 03-000090- ..	900	20,49	896	904	958	1004	150	14,0	24	M12
KP K2 03-000100- ..	1000	23,07	997	1005	1067	1105	200	14,0	24	M12
KP K2 03-000112- ..	1120	37,02	1117	1125	1200	1245	200	18,0	32	M16
KP K2 03-000125- ..	1250	41,19	1247	1255	1337	1375	200	18,0	32	M16
KP K2 03-000140- ..	1400	46,01	1397	1405	1475	1525	200	18,0	32	M16
KP K2 03-000160- ..	1600	52,07	1597	1605	1675	1725	200	18,0	40	M16
KP K2 03-000180- ..	1800	58,60	1797	1805	1875	1925	200	18,0	40	M16
KP K2 03-000200- ..	2000	64,99	1997	2005	2073	2125	200	18,0	40	M16

[1] weight incl. back flanges

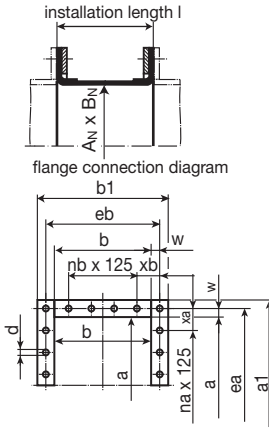
Flexible connection angular with back flanges

article no. = component size

KP K3 02 - 063 050 - 00

- symbol KP = flexible connection
- product code K3 = angular with back flanges
- flange code 02: DIN 24 193 R 3
- nominal size code x 10 = AN [mm]
- nominal size code x 10 = BN [mm]
- variant code acc. to list

Flexible connection angular with back flanges



- Connection flange acc.DIN 24193 R 3
- installation length l:
  l= 150 mm to AN/BN 1000/800
  l= 200 mm from AN/BN 1120/900
  l= 250 mm from AN/BN 2240/1800
- axial motion intake ± 6% *
- lateral motion intake ± 3% *
  * ref. to length
- designs for temperatures >180°C on request
- pressure loading: ± 3150 daPa max.

article no. component size	nominal size	weight[1]	dimensions													screws	
	A_N/ B_N mm	kg	a mm	b mm	e_a mm	e_b mm	x_a mm	x_b mm	n_a	n_b	w mm	a_1 mm	b_1 mm	l mm	d mm	num-ber	thread
KP K3 02-010012- ..	100/ 125	1,84	102	127	136	161	-	80,5	-	-	17	162	187	150	10	6	M8
KP K3 02-011012- ..	112/ 125	1,95	114	127	148	161	-	80,5	-	-	17	174	187	150	10	6	M8
KP K3 02-012012- ..	125/ 125	2,08	127	127	161	161	80,5	80,5	-	-	17	187	187	150	10	8	M8
KP K3 02-014012- ..	140/ 125	2,24	142	127	176	161	88,0	80,5	-	-	17	202	187	150	10	8	M8
KP K3 02-016012- ..	160/ 125	2,47	162	127	196	161	98,0	80,5	-	-	17	222	187	150	10	8	M8
KP K3 02-018014- ..	180/ 140	2,70	182	142	216	176	108,0	88,0	-	-	17	242	202	150	10	8	M8
KP K3 02-020016- ..	200/ 160	3,00	202	162	236	196	118,0	98,0	-	-	17	262	222	150	10	8	M8
KP K3 02-022018- ..	224/ 180	3,30	226	182	260	216	130,0	108,0	-	-	17	286	242	150	10	8	M8
KP K3 02-025020- ..	250/ 200	3,62	252	202	286	236	143,0	118,0	-	-	17	312	262	150	10	8	M8
KP K3 02-028022- ..	280/ 224	5,08	282	226	316	260	158,0	130,0	-	-	17	342	286	150	10	8	M8
KP K3 02-031025- ..	315/ 250	5,62	317	252	351	286	113,0	143,0	1	-	17	377	312	150	10	10	M8
KP K3 02-035028- ..	355/ 280	6,24	357	282	391	316	133,0	158,0	1	-	17	417	342	150	10	10	M8
KP K3 02-040031- ..	400/ 315	7,65	402	317	436	351	155,5	113,0	1	1	17	462	377	150	10	12	M8
KP K3 02-045035- ..	450/ 355	12,90	452	357	512	417	68,5	146,0	3	1	30	552	457	150	14	16	M12
KP K3 02-050040- ..	500/ 400	14,25	502	402	562	462	93,5	168,5	3	1	30	602	502	150	14	16	M12
KP K3 02-056045- ..	560/ 450	19,33	562	452	622	512	123,5	68,5	3	3	30	662	552	150	14	20	M12
KP K3 02-063050- ..	630/ 500	21,41	632	502	692	562	158,5	93,5	3	3	30	732	602	150	14	20	M12
KP K3 02-071056- ..	710/ 560	23,85	712	562	772	622	73,5	123,5	5	3	30	812	662	150	14	24	M12
KP K3 02-080063- ..	800/ 630	26,62	802	632	862	692	118,5	158,5	5	3	30	902	732	150	14	24	M12
KP K3 02-090071- ..	900/ 710	29,77	902	712	962	772	168,5	73,5	5	5	30	1002	812	150	14	28	M12
KP K3 02-100080- ..	1000/ 800	33,09	1002	802	1062	862	93,5	118,5	7	5	30	1102	902	150	14	32	M12
KP K3 02-112090- ..	1120/ 900	52,55	1122	902	1192	972	158,5	173,5	7	5	35	1242	1022	200	18	32	M16
KP K3 02-125100- ..	1250/ 1000	58,47	1252	1002	1322	1072	98,5	98,5	9	7	35	1372	1122	200	18	40	M16
KP K3 02-140112- ..	1400/ 1120	65,11	1402	1122	1472	1192	173,5	158,5	9	7	35	1522	1242	200	18	40	M16
KP K3 02-160125- ..	1600/ 1250	119,79	1602	1252	1692	1342	158,5	108,5	11	9	45	1762	1412	200	22	48	M20
KP K3 02-180140- ..	1800/ 1400	134,55	1802	1402	1892	1492	133,5	183,5	13	9	45	1962	1562	200	22	52	M20
KP K3 02-200160- ..	2000/ 1600	150,59	2002	1602	2092	1692	108,5	158,5	15	11	45	2162	1762	200	22	60	M20
KP K3 02-224180- ..	2240/ 1800	190,53	2242	1802	2342	1902	108,5	138,5	17	13	50	2422	1982	250	22	68	M20
KP K3 02-250200- ..	2500/ 2000	235,41	2502	2002	2612	2112	118,5	118,5	19	15	55	2702	2202	250	22	76	M20

[1] weight incl. back flanges

Chute - round

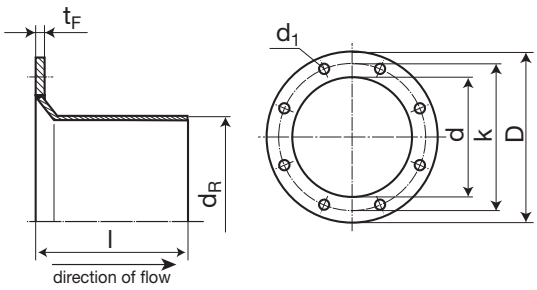
article no. = component size

LE K0 03 - 000 125 - 00

- nominal size code x 10 = DN [mm]
- flange code 03: DIN 24 154 R 2
- product code K0 = flexible connections in general
- symbol LE = chute

Chute - round

Flat flange according to DIN 24154 R 2
(edition July '90)



article no. component size	nominal size	weight[1]	dimensions							screws	
	D_N mm	kg	l mm	d_R mm	t_F mm	d mm	k mm	D mm	d_1 mm	number	thread
LE K0 03-000007-00	71	0,82	135	59	6	73	110	133	9,5	4	M8
LE K0 03-000008-00	80	0,91	135	67	6	82	118	142	9,5	4	M8
LE K0 03-000009-00	90	1,03	135	77	6	92	128	152	9,5	4	M8
LE K0 03-000010-00	100	1,12	135	88	6	102	139	162	9,5	4	M8
LE K0 03-000011-00	112	1,09	135	93	6	115	151	175	9,5	4	M8
LE K0 03-000012-00	125	1,75	135	110	6	127	165	187	9,5	4	M8
LE K0 03-000014-00	140	2,14	135	130	6	142	182	212	11,5	8	M10
LE K0 03-000016-00	160	2,17	135	145	6	162	200	232	11,5	8	M10
LE K0 03-000018-00	180	2,40	135	161	6	182	219	252	11,5	8	M10
LE K0 03-000020-00	200	2,68	135	182	6	203	241	273	11,5	8	M10
LE K0 03-000022-00	224	3,01	135	206	6	227	265	297	11,5	8	M10
LE K0 03-000025-00	250	3,36	135	232	6	253	292	323	11,5	8	M10
LE K0 03-000028-00	280	4,58	135	251	8	283	332	363	11,5	8	M10
LE K0 03-000031-00	315	5,34	135	286	8	318	366	398	11,5	8	M10
LE K0 03-000035-00	355	5,79	135	326	8	358	405	438	11,5	8	M10
LE K0 03-000040-00	400	6,52	135	372	8	404	448	484	11,5	12	M10
LE K0 03-000045-00	450	7,33	135	422	8	454	497	534	11,5	12	M10
LE K0 03-000050-00	500	8,04	135	472	8	504	551	584	11,5	12	M10
LE K0 03-000056-00	560	10,3	135	532	8	564	629	664	14,0	16	M12
LE K0 03-000063-00	630	12,6	135	602	8	634	698	734	14,0	16	M12
LE K0 03-000071-00	710	14,2	135	682	8	714	775	814	14,0	16	M12
LE K0 03-000080-00	800	15,0	135	772	8	804	861	904	14,0	24	M12
LE K0 03-000090-00	900	17,9	135	872	8	904	958	1004	14,0	24	M12
LE K0 03-000100-00	1000	23,0	180	963	8	1005	1067	1105	14,0	24	M12
LE K0 03-000112-00	1120	31,3	180	1083	10	1125	1200	1245	18,0	32	M16
LE K0 03-000125-00	1250	34,9	180	1213	10	1255	1337	1375	18,0	32	M16
LE K0 03-000140-00	1400	39,1	180	1363	10	1405	1475	1525	18,0	32	M16
LE K0 03-000160-00	1600	44,6	180	1563	10	1605	1675	1725	18,0	40	M16
LE K0 03-000180-00	1800	50,2	180	1763	10	1805	1875	1925	18,0	40	M16
LE K0 03-000200-00	2000	55,8	180	1963	10	2005	2073	2125	18,0	40	M16

1) weight incl. flange

Chute - angular

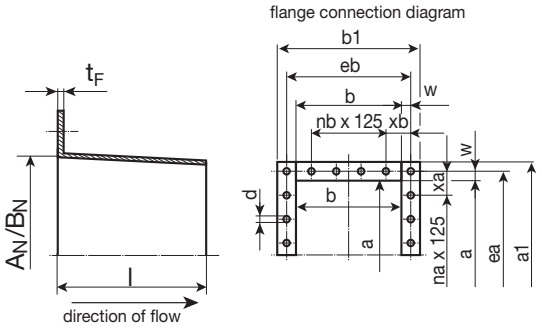
article no. = component size

LE K0 02 - 063 050 - 00

- LE: symbol LE = chute
- K0: product code K0 = flexible connections general
- 02: flange code 02: DIN 24 193 R 3
- 063: nominal size code x 10 = AN [mm]
- 050: nominal size code x 10 = BN [mm]

Chute - angular

Connection flange according to DIN 24193 R 3



article no. component size	nominal size A_N/B_N mm	weight 1) kg	dimensions l mm	t_F mm	a mm	b mm	e_a mm	e_b mm	x_a mm	x_b mm	n_a	n_a	w mm	a_1 mm	b_1 mm	d mm	screws number	screws thread
LE K0 02-010012-00	100 / 125	1,39	135	2,5	102	127	136	161	–	80,5	–	–	17	162	187	10	6	M8
LE K0 02-011012-00	112 / 125	1,47	135	2,5	114	127	148	161	–	80,5	–	–	17	174	187	10	6	M8
LE K0 02-012012-00	125 / 125	1,55	135	2,5	127	127	161	161	80,5	80,5	–	–	17	187	187	10	8	M8
LE K0 02-014012-00	140 / 125	1,65	135	2,5	142	127	176	161	88,0	80,5	–	–	17	202	187	10	8	M8
LE K0 02-016012-00	160 / 125	1,81	135	2,5	162	127	196	161	98,0	80,5	–	–	17	222	187	10	8	M8
LE K0 02-018014-00	180/ 140	2,04	135	2,5	182	142	216	176	108,0	88,0	–	–	17	242	202	10	8	M8
LE K0 02-020016-00	200 / 160	2,30	135	2,5	202	162	236	196	118,0	98,0	–	–	17	262	222	10	8	M8
LE K0 02-022018-00	224 / 180	2,58	135	2,5	226	182	260	216	130,0	108,0	–	–	17	286	242	10	8	M8
LE K0 02-025020-00	250 / 200	2,88	135	2,5	252	202	286	236	143,0	118,0	–	–	17	312	262	10	8	M8
LE K0 02-028022-00	280 / 224	3,18	135	2,5	282	226	316	260	158,0	130,0	–	–	17	342	286	10	8	M8
LE K0 02-031025-00	315 / 250	3,57	135	2,5	317	252	351	286	113,0	143,0	1	–	17	377	312	10	10	M8
LE K0 02-035028-00	355 / 280	4,02	135	2,5	357	282	391	316	133,0	158,0	1	–	17	417	342	10	10	M8
LE K0 02-040031-00	400 / 315	4,54	135	2,5	402	317	436	351	155,5	113,0	1	1	17	462	377	10	12	M8
LE K0 02-045035-00	450 / 355	5,88	135	2,5	452	357	512	417	68,5	146,0	3	1	30	552	457	14	16	M12
LE K0 02-050040-00	500 / 400	6,57	135	2,5	502	402	562	462	93,5	168,5	3	1	30	602	502	14	16	M12
LE K0 02-056045-00	560 / 450	7,37	135	2,5	562	452	622	512	123,5	68,5	3	3	30	662	552	14	20	M12
LE K0 02-063050-00	630 / 500	8,24	135	2,5	632	502	692	562	158,5	93,5	3	3	30	732	602	14	20	M12
LE K0 02-071056-00	710 / 560	11,10	135	3,0	712	562	772	622	73,5	123,5	5	3	30	812	662	14	24	M12
LE K0 02-080063-00	800 / 630	12,50	135	3,0	802	632	862	692	118,5	158,5	5	3	30	902	732	14	24	M12
LE K0 02-090071-00	900 / 710	14,10	135	3,0	902	712	962	772	168,5	73,5	5	5	30	1002	812	14	28	M12
LE K0 02-100080-00	1000 / 800	15,70	135	3,0	1002	802	1062	862	93,5	118,5	7	5	30	1102	902	14	32	M12
LE K0 02-112090-00	1120 / 900	21,40	185	3,0	1122	902	1192	972	158,5	173,5	7	5	35	1242	1022	18	32	M16
LE K0 02-125100-00	1250 / 1000	26,00	185	3,0	1252	1002	1322	1072	98,5	98,5	9	7	35	1372	1122	18	40	M16
LE K0 02-140112-00	1400 / 1120	29,10	185	3,0	1402	1122	1472	1192	173,5	158,5	9	7	35	1522	1242	18	40	M16
LE K0 02-160125-00	1600 / 1250	35,80	185	3,0	1602	1252	1692	1342	158,5	108,5	11	9	45	1762	1412	22	48	M20
LE K0 02-180140-00	1800 / 1400	40,20	185	3,0	1802	1402	1892	1492	133,5	183,5	13	9	45	1962	1562	22	52	M20
LE K0 02-200160-00	2000 / 1600	45,20	185	3,0	2002	1602	2092	1692	108,5	158,5	15	11	45	2162	1762	22	60	M20
LE K0 02-224180-00	2240 / 1800	62,20	235	3,0	2242	1802	2342	1902	108,5	138,5	17	13	50	2422	1982	22	68	M20
LE K0 02-250200-00	2500 / 2000	71,50	235	3,0	2502	2002	2612	2112	118,5	118,5	19	15	55	2702	2202	22	76	M20

1) weight incl. flange

Flange piece - round

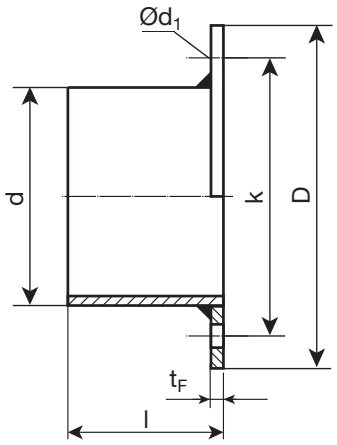
article no. = component size

FS Z2 03 - 000 063 - 00

- nominal size code x 10 = DN [mm]
- flange code 03: DIN 24 154 R 2
- product code Z2 = flange piece
- symbol FS = flange piece

Flange piece - round

Flat flange according to DIN 24154 R 2 (edition July '90)

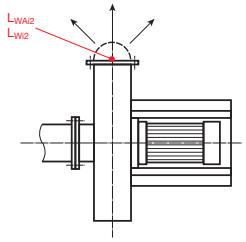


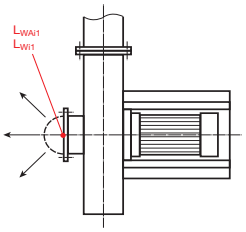
article no. component size	nominal size	weight[1]	dimensions						screws	
	D_N mm	kg	t_F mm	d mm	l mm	D mm	k mm	d_1 mm	number	thread
FS Z2 03-000007-00	71	0,65	6	72	80	133	110	9,5	4	M8
FS Z2 03-000008-00	80	0,86	6	80	80	142	118	9,5	4	M8
FS Z2 03-000009-00	90	0,96	6	90	80	152	128	9,5	4	M8
FS Z2 03-000010-00	100	1,03	6	100	80	162	139	9,5	4	M8
FS Z2 03-000011-00	112	1,18	6	115	80	175	151	9,5	4	M8
FS Z2 03-000012-00	125	1,28	6	125	80	187	165	9,5	4	M8
FS Z2 03-000014-00	140	1,68	6	140	80	212	182	11,5	8	M10
FS Z2 03-000016-00	160	1,76	6	161	80	232	200	11,5	8	M10
FS Z2 03-000018-00	180	1,96	6	181	80	252	219	11,5	8	M10
FS Z2 03-000020-00	200	2,17	6	202	80	273	241	11,5	8	M10
FS Z2 03-000022-00	224	2,42	6	226	80	297	265	11,5	8	M10
FS Z2 03-000025-00	250	2,68	6	252	80	323	292	11,5	8	M10
FS Z2 03-000028-00	280	3,89	8	281	80	363	332	11,5	8	M10
FS Z2 03-000031-00	315	4,53	8	316	80	398	366	11,5	8	M10
FS Z2 03-000035-00	355	4,85	8	356	80	438	405	11,5	8	M10
FS Z2 03-000040-00	400	5,41	8	402	80	484	448	11,5	12	M10
FS Z2 03-000045-00	450	6,06	8	452	80	534	497	11,5	12	M10
FS Z2 03-000050-00	500	6,60	8	502	80	584	551	11,5	12	M10
FS Z2 03-000056-00	560	8,66	8	562	80	664	629	14,0	16	M12
FS Z2 03-000063-00	630	10,32	8	632	80	734	698	14,0	16	M12
FS Z2 03-000071-00	710	11,58	8	712	80	814	775	14,0	16	M12
FS Z2 03-000080-00	800	12,92	8	802	80	904	861	14,0	24	M12
FS Z2 03-000090-00	900	14,49	8	902	80	1004	958	14,0	24	M12
FS Z2 03-000100-00	1000	17,60	8	1003	100	1105	1067	14,0	24	M12
FS Z2 03-000112-00	1120	25,19	10	1123	100	1245	1200	18,0	32	M16
FS Z2 03-000125-00	1250	28,05	10	1253	100	1375	1337	18,0	32	M16
FS Z2 03-000140-00	1400	31,36	10w	1403	100	1525	1475	18,0	32	M16
FS Z2 03-000160-00	1600	35,64	10	1603	100	1725	1675	18,0	40	M16
FS Z2 03-000180-00	1800	40,12	10	1803	100	1925	1875	18,0	40	M16
FS Z2 03-000200-00	2000	44,50	10	2003	100	2125	2073	18,0	40	M16

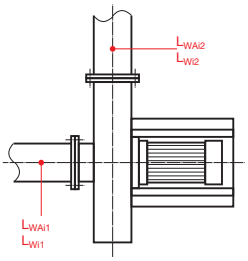
1) weight incl. flange

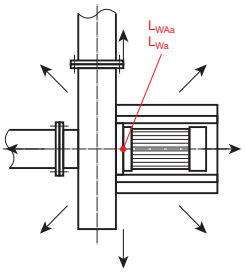
Chapter 5 - Acoustic technology - ST

- General remarks
- Parameter
- Level change









General specification

Introduction

For design and construction of ventilation plants, compliance with the given noise limits is necessary to protect the neighbourhood from sound irritation. The fan in particular is one of the most critical sound sources within a complete plant which should be paid particular attention to. This new brochure „Sound data for radial fans“ is structured in a way that the designing engineer can find in it all sound data specifications necessary for acoustic calculation (Chapter „Type selection/Sound tables“). Complicated computing can be omitted as the individual sound data for each fan is indicated in the sound lists acc. to types. The specific acoustic term is exactly detailed. The given sound data is the result of many years of measuring experience in a sound test room. The used meters are precision sound meters of the company Bruel & Kjaer.

Sound guarantee

In order to maintain and prove the agreed sound specifications, it is necessary to measure noise according to the given standard regulations. For sound measurements at fans, standardised regulations as described in DIN 45635, sheet 1 „Machine noise measurement“, resp. DIN 45635 part 38 „Fan noise measurement“ apply. The standard describes the precondition for determination of the sound radiated directly from the fan into the environment (sound emission), according to standardised methods, so that the results can be compared. The measuring method described in the standard is only valid for free sound radiation i.e. in a reflexion-free environment. In practise, however, optimum conditions are generally not given. Sound values measured under operational conditions differ more or less from the values measured in a reflexion-free environment, thus

fan noise level in the system = fan noise level specification + addition* (adjustment)

The experimental values for the addition depend on the number of influenceable parameters.
* Additions of 3 to 9 dB are quite realistic.

Tolerances acc. DIN 24166

Basic criteria.
Certain deviations from the agreed operational values are permissible in consequence of unavoidable design, calculation and production tolerances (together designated as „as-built tolerances“). The permissible deviations depend on the class of accuracy of the fan. The selection of the accuracy class for a certain fan depends on different criteria. It might be necessary to adapt the accuracy class to the ambient or operating conditions. Uncertainties concerning the definition of the operational values due to special installation conditions (e.g. disturbances at the inlet and discharge) are not included in the as-built tolerances and must be considered separately.
Tolerances depending on accuracy class

class of accuracy DIN 24166	0	1	2	3
tolerance for sound values L_{W1} L_P	+ 3 dB	+ 3 dB	+ 4 dB	+ 6 dB

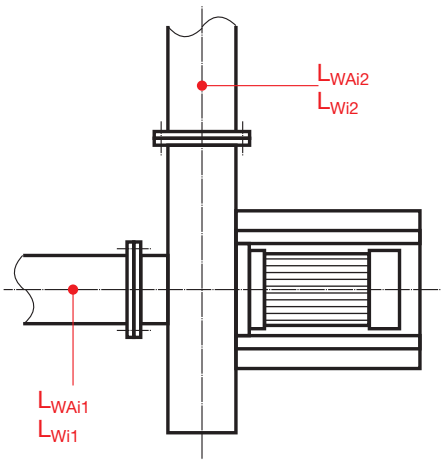
Should there be no special agreements the following accuracy classes apply:
shaft power P_W > 50 kW class 1
shaft power P_W < 50 kW class 2
Special design fans (e.g. impellers for material transport, rubber-lined or coated designs, impellers with highly curved blades) are class 3. Class 2 applies to slightly modified impellers or divergent flow conditions.

Source sound power level = Duct sound power level

The source sound power level or internal sound power level L_{Wi} indicates the sound energy of the total radiated sound emitted from the fan (at suction inlet or discharge), and serves for the design and calculation of silencers. It depends on the construction and design data of the fan (i.e. volume flow, pressure difference and efficiency): but it does not depend on the position, the distance, the assembly location or measuring room.
The source sound power level is defined in DIN 45635 part 38:
for the inlet duct sound power level L_{Wi1} [L_{W3}]
and for the discharge duct sound power level L_{Wi2} [L_{W4}].

figure 1

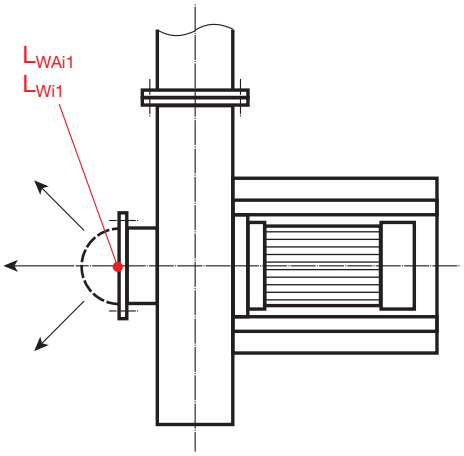
L_{WAi1} [L_{WA3}] [dB(A)]
L_{WAi2} [L_{WA4}] [dB(A)]
L_{Wi1} [L_{W3}] [dB]
L_{Wi2} [L_{W4}] [dB]



Free inlet resp. free discharge sound power level

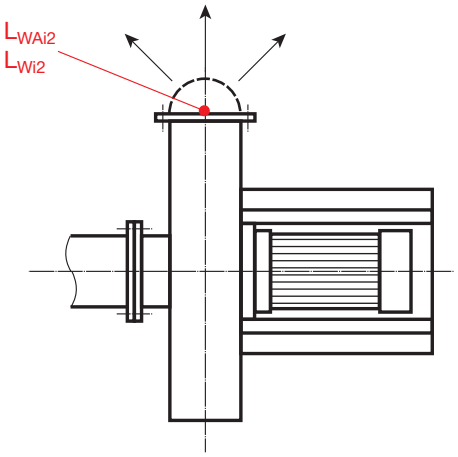
If the fan is connected to an air system either at the inlet or at the discharge, the source sound power level will be radiated directly at the disconnected side into the free field environment. According to DIN 45635 part 38 it is L_{W5} [L_{Wi1}] for free inlet sound power level and L_{Wi2} [L_{W6}] for free discharge sound power level.

figure 2



L_{WAi1} [L_{WA5}] [dB(A)]
L_{WAi2} [L_{WA6}] [dB(A)]
L_{Wi1} [L_{W5}] [dB]
L_{Wi2} [L_{W6}] [dB]

figure 3



Remark

The sound power level radiated to the open environment is approximately as high as the sound power level radiated inside a duct system disregarding the orifice reflection.

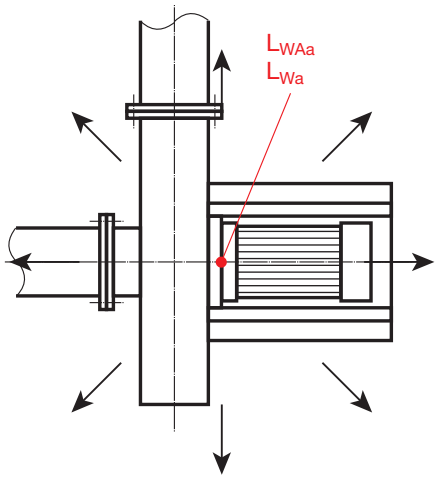
[...] designation according to DIN 45635 part 38

Sound power level of housing

The housing sound power level or external sound power level is the sound power radiated from the housing (including pedestal) to the environment when the fan is ducted. Mostly it is applied for projecting plants to determine the sound radiation of machines and plant components, acc. DIN 45635 T 38 for housing sound power level L_{Wa} [L_{W2}].

L_{WAa} [L_{WA2}] [dB(A)]
L_{Wa} [L_{W2}] [dB(A)]
$L_{Wa} = \bar{L}_p + L_S$ [dB]
$L_{WAa} = \bar{L}_{pA} + L_S$ [dB(A)]

figure 4



Measuring surface index

The measuring surface index is the logarithmic ratio of the measuring surface area to the reference surface area.

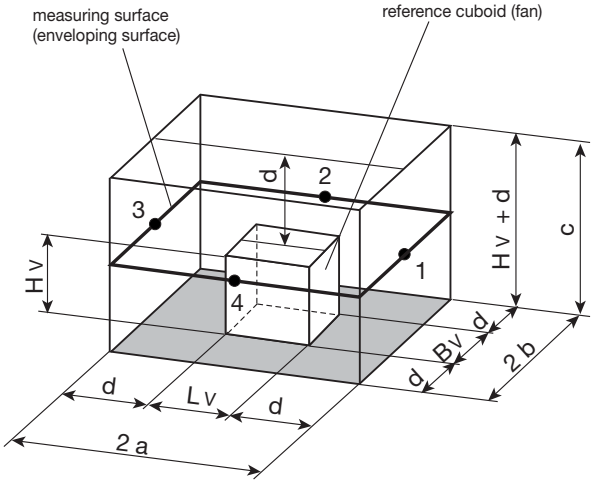
$$LS = 10 \lg \frac{S}{S_0} \quad [dB]$$

S = measuring surface area
S_0 = 1 m^2 = reference surface area

Measuring surface area

The measuring surface is an imaginary surface (enveloping surface) which envelopes the fan in a measuring distance of 1 m. The surface area of the measuring surface is the surface area S.

figure 5



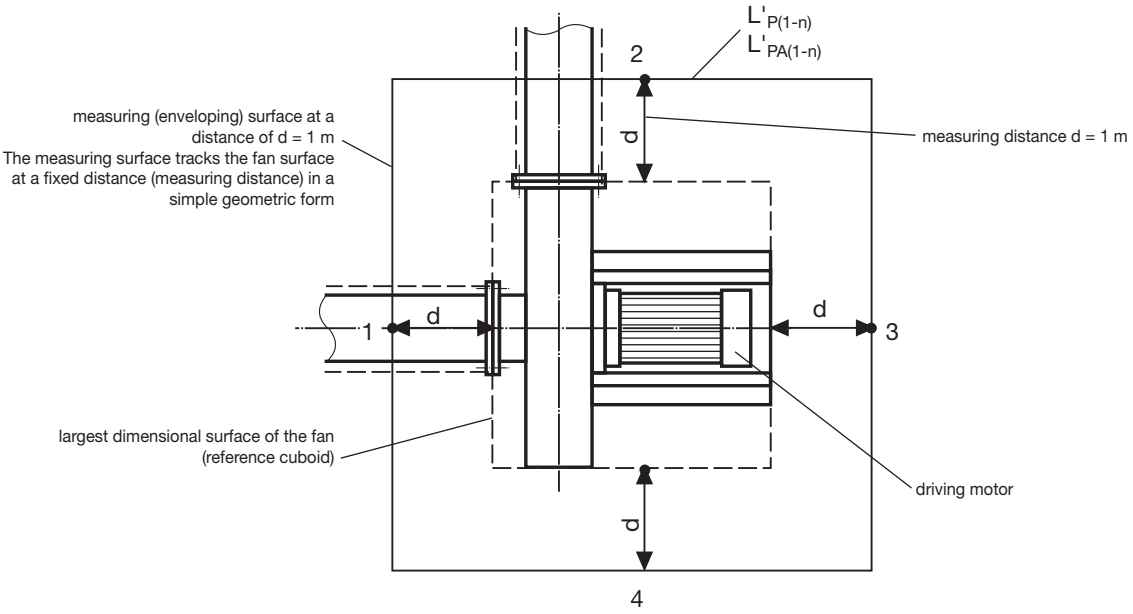
L_V = fan length
B_V = fan width
H_V = fan height
d = measuring distance = 1 m

Measuring surface area
$S = 4 (ab + ac + bc)$ [m^2]

Sound pressure level on measuring surface

The sound pressure level which is energetically averaged over the measuring surface and, if necessary, corrected by the influences of extraneous noise and ambient feedback is denoted in DIN45635 part 1 as measuring surface sound pressure level, $\bar{L}_p$. It is measured at a distance of 1 m from the contour of the fan with connected inlet and discharge, disregarding the radiation of the duct system itself.

figure 6



- measuring points L'_p (1, 2, 3, 4, ... n)

L'_p in dB sound pressure level measured value (1 to n)
$\bar{L}'_p$ in dB energetically averaged sound pressure level
$\bar{L}_p$ in dB measuring surface sound pressure level
K_0 in dB air pressure and air temperature correction
K_1 in dB extraneous noise correction (level addition)
K_2 in dB ambient noise correction (ambient influence)
n number of measuring points

Notification of sound pressure level

$$\bar{L}'_p = \frac{L'_{p1} + \dots L'_{pn}}{n}$$

Note!
If the difference between the smallest and highest sound pressure level Lp' measured on the enveloping surface is less than 5dB, simple arithmetic averaging may be used.

Measuring surface sound pressure level

$$\bar{L}_p = \bar{L}'_p - K_0 - K_1 - K_2 \qquad [dB]$$

A-weighted measuring surface sound pressure level

$$\bar{L}_{pA} = \bar{L}'_{pA} - K_0 - K_1 - K_2 \qquad [dB(A)]$$

see A-weighting - sheet ST 6

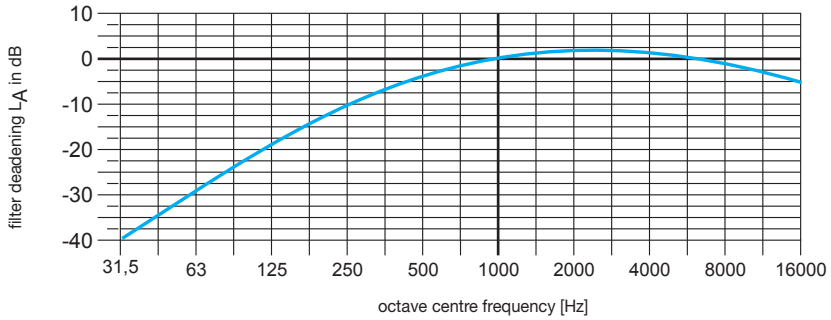
Noise weighting - weighting curve A

Every day experience shows that noise is assessed differently, depending on the perception of sound volume in different persons. In order to obtain an objective assessment which is adapted to the human ear, weighting curves as laid down in DIN 45633 were developed.

diagram 1

Frequency weighting according to DIN 45633

Weighting curve A



Precalculation according to the A-weighting curve (sequence of functions in the sound level meter)

table 1

designation	character	unit	octave centre frequency fm [Hz]							
			63	125	250	500	1000	2000	4000	8000
source sound power level	L_{Wi2}	dB	111							
relative sound power level	ΔL_{Wrel}	dB	-4	-5,5	-5,5	-11	-16	-21	-22	-34
octave spectrum of sound power level	$\Delta L_{Wi2 - OKt}$	dB	107	105,5	105,5	100	95	90	98	77
A-weighting	ΔLA	dB(A)	-26,2	-16,1	-8,6	-3,2	0	+1,2	-1,0	-1,1
octave spectrum of the A-weighted sound power level sources	$\Delta L_{WAi2 - OKt}$	dB(A)	80,8	89,4	96,9	96,8	95	91,2	88	75,9
A-weighted source sound power level $L_{WAi2} \approx 101$ dB(A)			+3 = 99,9 +1,0 = 100,9 + 0,5 = 101,4 dB(A)							

Determining the A-weighted parameters Correction value for A-weighting

The correction value ΔL_{KA} is the difference between the unweighted parameter and the weighted ones.
The correction value ΔL_{KA} for each fan type is listed in the corresponding sound table.

A-weighted total sound power level

$L_{WAi1,2} = L_{Wi1,2} - \Delta L_{KA}$ [dB(A)]

A-weighted housing-sound power level

$L_{WAa} = L_{Wa} - \Delta L_{KA}$ [dB(A)]

A-weighted measuring surface sound pressure level

$\overline{L}_{pA} = L_p - \Delta L_{KA}$ [dB(A)]

Determining the sound spectrum

If the sound spectrum is to be determined, the unweighted parameter must be corrected by the relative sound power level ΔL_{Wrel} .

Relative sound power level

table 2

speed range [min-1] von bis	impeller speed n[min-1]	no. of blades z	impeller geometry $\chi = D_1/D_2$ ①	octave centre frequency fm [Hz] 63	125	250	500	1000	2000	4000	8000
				relative sound power level ΔL_{Wrel} [dB]							
< 3700 > 2250	3000	11 - 14	A	- 9,0	- 6,0	- 5,5	- 4,5	-10	- 17	- 25	- 35
			B	- 5,0	- 5,5	- 7,0	- 6,0	- 12	- 17	- 23	- 29
< 2250 > 1125	1500	9 - 11	A	- 5,0	- 5,0	- 4,5	- 10	- 16	- 24	- 34	- 47
			B	- 4,0	- 5,5	- 5,5	- 11	- 16	- 21	- 27	- 34
<1125 > 560	750	9 - 11	A	- 3,0	- 4,0	- 9,0	- 13	- 18	- 25	- 32	- 40
			B								
< 560 > 280	375	9 - 11	A	- 2,0	- 5,5	- 10	- 15	- 22	- 29	- 37	- 46
			B								

① Impeller geometry A applies to impellers with a geometrical index of $\chi < 0.4$, complying with type 1 to 3 fan performance (refer to type selection sheets).
Impeller geometry B applies to impellers with a geometrical index of $\chi \geq 0.4$, complying with type 4 to 7 fan performance (refer to type selection).

Octave total sound power level

$L_{Wi1,2okt} = L_{Wi1,2} + \Delta L_{Wrel}$ [dB]

Octave housing sound power level

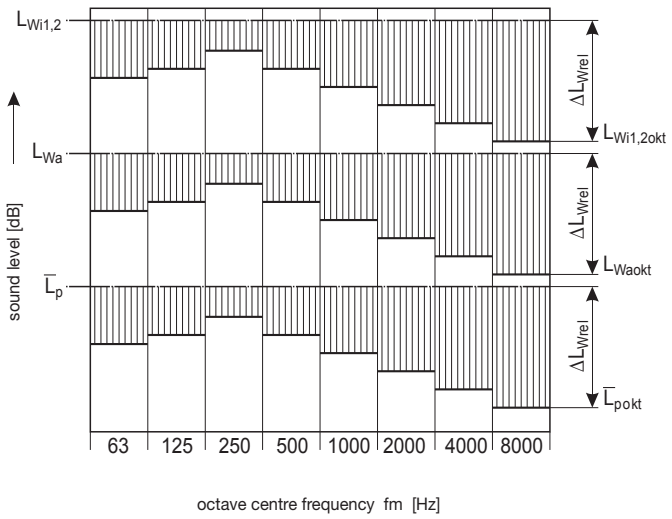
$L_{Waokt} = L_{Wa} + \Delta L_{Wrel}$ [dB]

Octave measuring surface sound pressure level

$\overline{L}_{pokt} = \overline{L}_{p} + \Delta L_{Wrel}$ [dB]

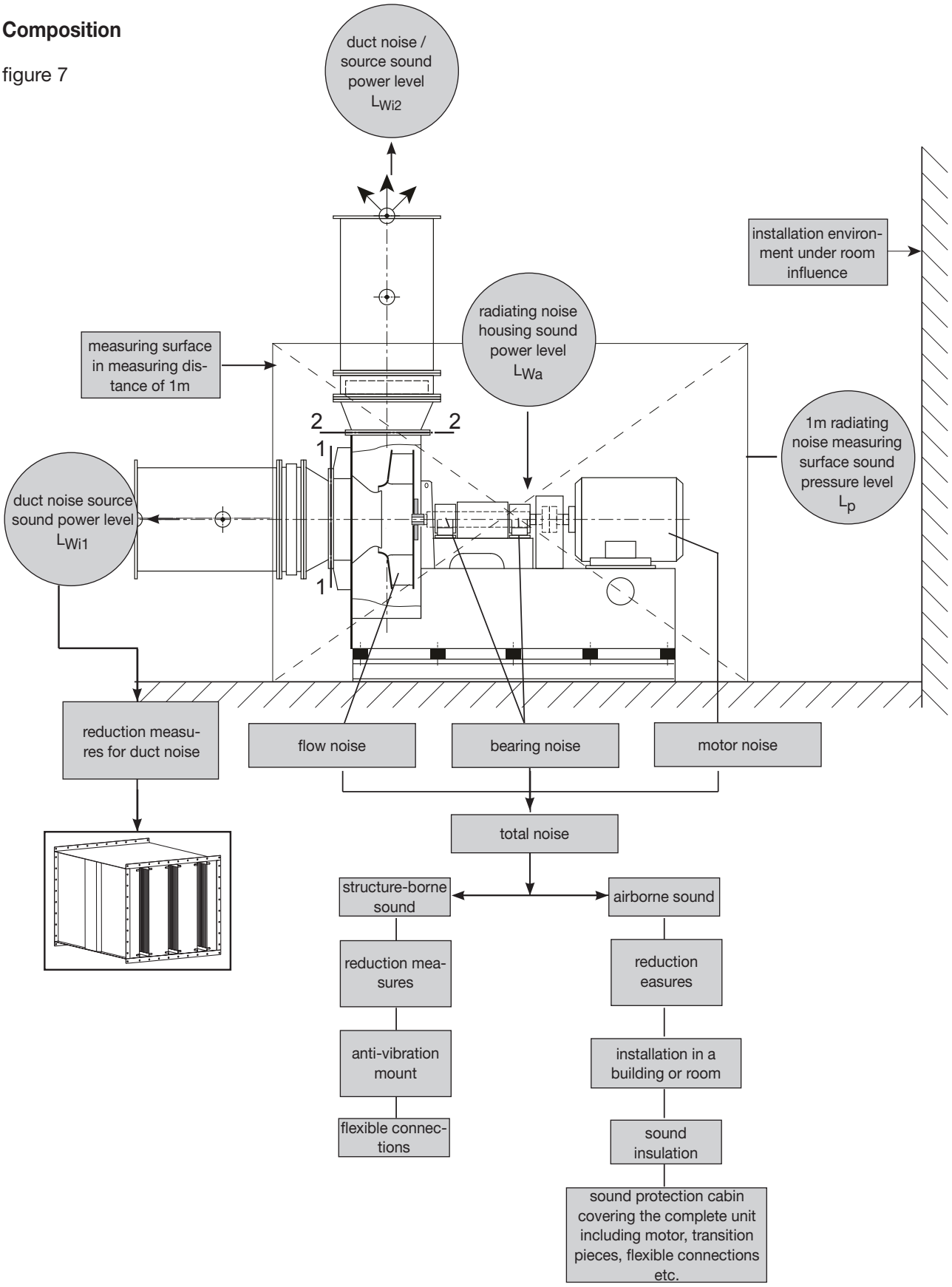
Graphical representation

diagram 2.1



Composition

figure 7



Parameter

Terms

L_W	dB	sound power level
$\overline{L}_p$	dB	measuring surface sound pressure level
$\overline{L}_{pA}$	dB(A)	A-weighted measuring surface sound pressure level
L_{Wi}	dB	source sound power level = duct sound
L_{WAi}	dB(A)	A-weighted source sound power level
L_{Wi2} [LW4]	dB	source sound power level – at discharge
L_{Wi1} [LW3]	dB	source sound power level – at inlet
L_{Wa} [LW2]	dB	housing resp. external sound power level
L_{Wa}	dB(A)	A-weighted housing sound power level
$L_{Wi2\text{-}okt}$	dB	octave-source sound power level – at discharge
$L_{Wi1\text{-}okt}$	dB	octave-source sound power level – at inlet
L_{Waokt}	dB	octave-housing sound power level
$\overline{L}_{pokt}$	dB	octave-measuring-sound pressure level
L_S	dB	measuring surface index
ΔL	dB	level difference
ΔL_{KA}	dB(A)	correction value for A-weighting
A-Bewertung	dB	A-weighting acc. DIN 45633 sheet 1
ΔL_{Wrel}	dB	relative octave spectrum = rel. sound power level difference
ΔL_{WS}	dB	specific sound power level difference

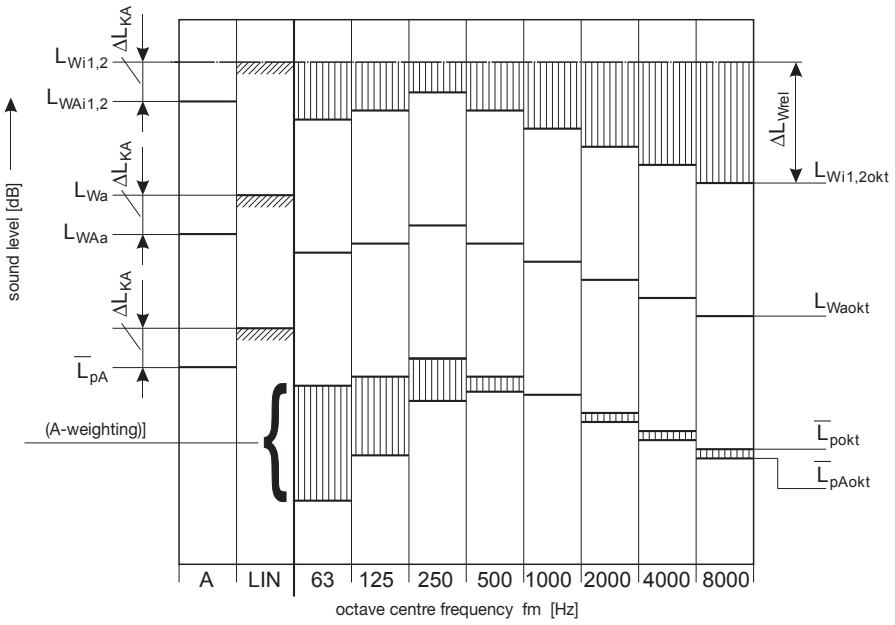
Composition

L_{Wi}	=	L_{WiNP}	holding for L_{Wi}, L_{Wi2}	[dB]1)
L_{WiBP}	=	$L_{WiNP} + \Delta L_{WS}$		[dB]
L_{WAi}	=	$L_{Wi} - \Delta L_{KA}$		[dB(A)]1)
L_{Wiokt}	=	$L_{Wi} - \Delta L_{Wrel}$		[dB]
L_{Wa}	=	L_{WaNP}		[dB]1)
L_{WAa}	=	$L_{Wa} - \Delta L_{KA}$		[dB(A)]
L_{Waokt}	=	$L_{Wa} - \Delta L_{Wrel}$		[dB]
$\overline{L}_{pA}$	=	$\overline{L}_{pANP}$		[dB(A)]1)
$\overline{L}_{p}$	=	$\overline{L}_{pA} - \Delta L_{KA}$		[dB]
$\overline{L}_{pokt}$	=	$\overline{L}_{p} + \Delta L_{Wrel}$		[dB]
L_{Wa}	=	$\overline{L}_{p} + L_S$		[dB]
L_{WAa}		$\overline{L}_{pA} + L_S$		[dB(A)]
$\overline{L}_{p}$	=	$\overline{L}_{p} - K_0 - K_1 - K_2$		[dB]
$\overline{L}_{pA}$	=	$\overline{L}'_{pA} - K_0 - K_1 - K_2$		[dB(A)]

1) Values according NP (nominal point resp. design point) see sound lists acc. to types. In case of deviations from the NP the specific sound power level changes. For all further calculations the specific sound power level difference must then be taken into account.

Graphical representation

Diagramm 2.2



Level change

Level decrease in the inlet or outlet opening with respect to 1m distance from the hemisphere radius

source sound power level $L_{WAi1,2}$ see sound lists acc. to types

Level decrease

$$\Delta L_{1m} = 8 + 20 \lg r \quad \text{with} \quad r = r_{DN} + 1m$$

Restriction

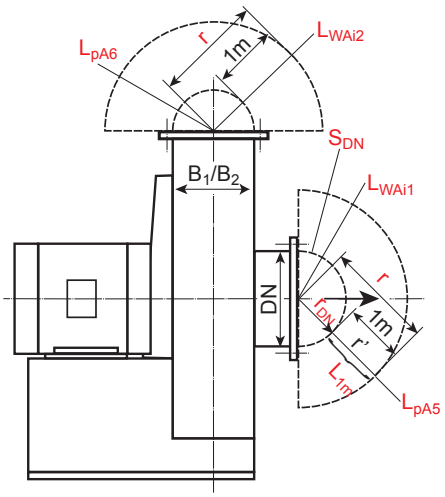
In the case of surface sound sources the sound pressure level near the sound source decreases but slowly.
Only for distances of $r \geq 0{,}4 \sqrt{s_{DN}} = r_{DN}$ the computation acc. the equation can be applied for calculation.

$L_{pA1} = L_{WAi1,2} - \Delta L_{1m}$ [dB(A)]

- ΔL_{1m}: level reduction acc. table 3
- $L_{WAi1,2}$: A-weighted sound power level
- L_{pA1}: A-weighted sound pressure level in **r m** distance

r = distance from the centre of the sound source
r_{DN} = hemispherical radius = DN/2
r‘ = at a distance of 1m from hemispherical radius
S_{DN} = hemispherical surface
$S_{DN} = 2 \cdot \pi \cdot r_{DN}^2$

figure 8



Level decrease designation referring to 1m

table 3

DN mm	B_1/B_2 mm	ΔL1m dB	DN mm	B_1/B_2 mm	ΔL1m dB	DN mm	B_1/B_2 mm	ΔL1m dB
100	-	8,5	280	280 / 224	9,5	800	800 / 630	11
112	-	8,5	315	315 / 250	9,5	900	900 / 710	11,5
125	-	8,5	355	355 / 280	9,5	1000	1000 / 800	11,5
140	-	8,5	400	400 / 315	9,5	1120	1120 / 900	12
160	160 / 125	9	450	450 / 355	10	1250	1250 / 1000	12,5
180	180 / 140	9	500	500 / 400	10	1400	1400 / 1120	13
200	200 / 160	9	560	560 / 450	10,5	1600	1600 / 1250	13
224	224 / 180	9	630	630 / 500	10,5	1800	1800 / 1400	13,5

All values refer to free-field conditions. Consider tolerances, level addition and reflexion.

Free inlet or discharge sound referring to a distance of 1m from the hemisphere radius of the inlet or discharge opening

$\bar{L}_{pA5} = L_{WAi1} - \Delta L_{1m}$ [dB(A)]
$\bar{L}_{pA6} = L_{WAi2} - \Delta L_{1m}$ [dB(A)]

$\bar{L}_{pA5}$; $\bar{L}_{pA6}$ see type-related sound tables.

Level decrease greater than 1m at the inlet or outlet opening without duct connection

source sound power level $L_{WAi1,2}$ see sound tables according to types

Level decrease

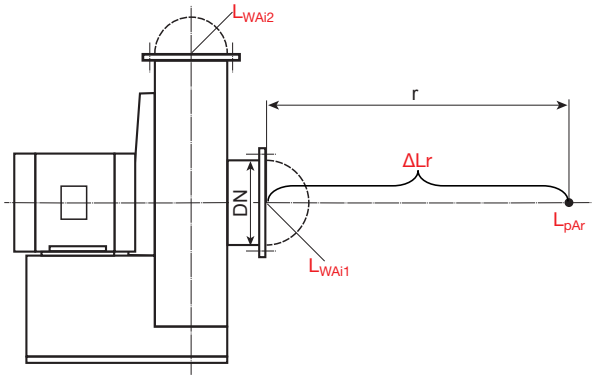
theoretical value ① $\Delta L_r = 10 \lg 2 \pi r^2$

actual value ② $\Delta Lr = 8 + 20 \lg r$

restriction $r_{min} \geq 0{,}4 \cdot \sqrt{s_{DN}}$

$$s_{DN} = \frac{\pi}{2} \cdot DN^2$$

figure 9



$L_{pAr} = L_{WAi1,2} - \Delta L_r$ [dB(A)]

ΔL_r: level decrease according diagram 3

$L_{WAi1,2}$: A-weighted sound power level

L_{pAr}: A-weighted sound pressure level in **r m** distance

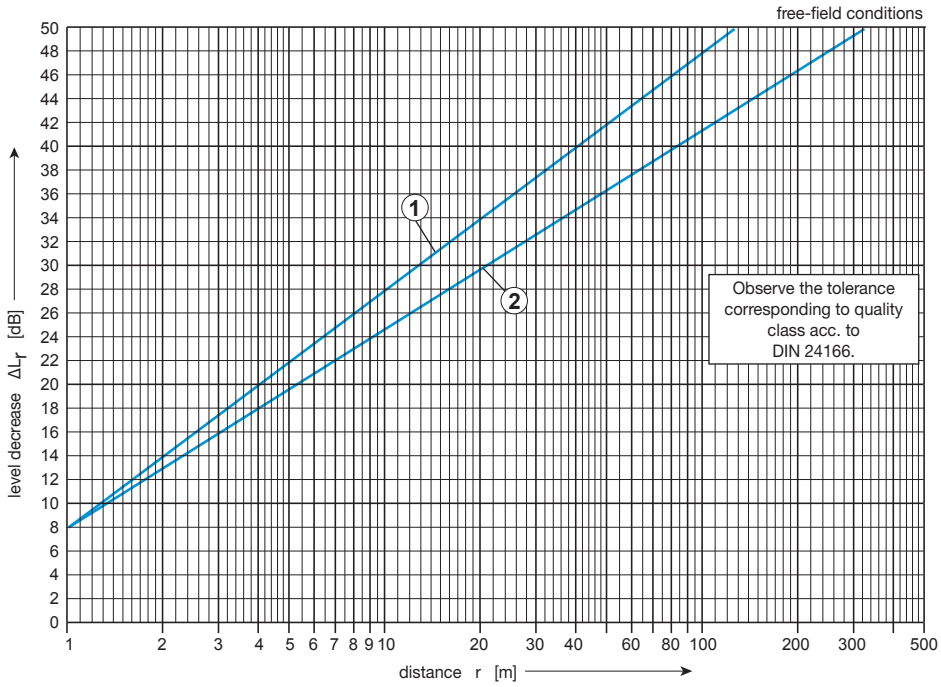
r = distance from the centre of the sound source

Level decrease

diagram 3

Consider tolerances, level addition and reflexion.

① theoretical level decrease
② actual level decrease



Level decrease of the ducted fan with reference to the housing sound power level

Level decrease

theoretical value ① $\Delta Lr = 10 \lg 2 \pi r^2 = 8 + 20 \lg r$

actual value ② $\Delta Lr = 8 + 16{,}7 \lg r$

Restriction

Valid only for distance r > D, D being the greater distance from the sound source or the fan. The surface sound pressure level in a distance of 1 m must therefore be calculated with reference to the surface measure „L_S“.

$\overline{L}_{pA1m} = L_{WAa} - L_S$

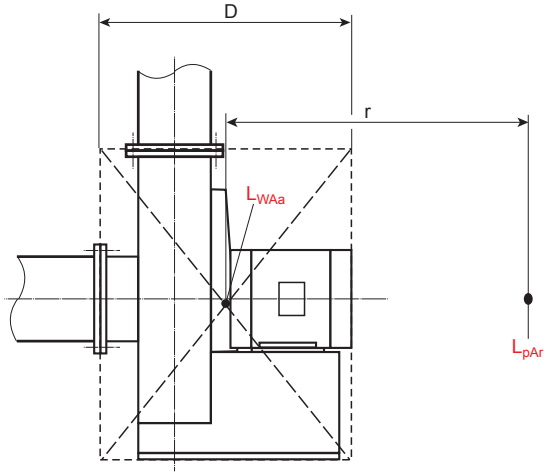
$L_{pAr} = L_{WAa} - \Delta L_r$ [dB(A)]

ΔL_r: level decrease according diagram 4

L_{WAa}: A-weighted housing-sound power level

r = distance from the centre of the sound source

figure 10

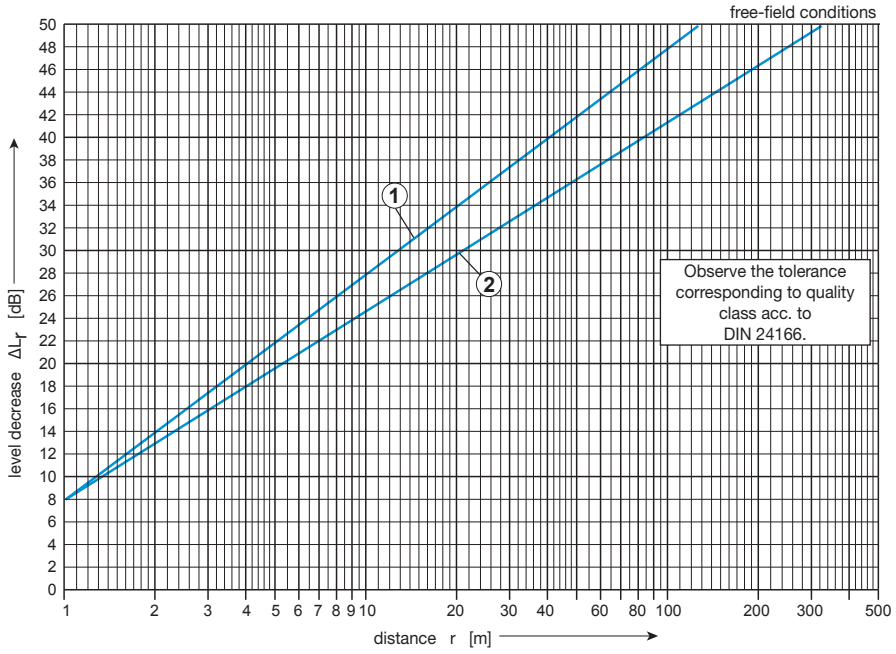


Level decrease

diagram 4

All values refer to free-field conditions. Consider tolerances, level addition and reflexion.

① theoretical level decrease
② actual level decrease



Noise interaction under operating conditions

In order to transfer measurements for the fan taken in optimum conditions to working conditions, it is indispendable to observe and take into account the following sources of interference:

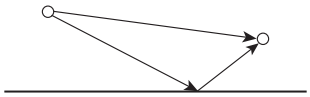
- Noise of drive motors
- Background noise generated by other machines
- Level increase by room influence (reflexion)
- Level increase by deviation from nominal point (fan is deviating from order values when operating in the plant)
- Level increase caused by dampers (inlet guide vanes, valves, shutters etc.)
- Level increase caused by flexible connections (they represent “noise leak” areas in the system)
- Level increase caused by plant components as for instance ducts, bends, baffles, suction boxes, changes of cross section, transition pieces etc.
- Level increase caused by stalls in the plant

In principle, the sources of interference produced by the plant itself as well as interference caused by set-up (locality) are to be calculated and determined by the designer of the plant.
The additional and correctional values listed on the following sheets are to be used in estimated calculations only.

Sources of interference

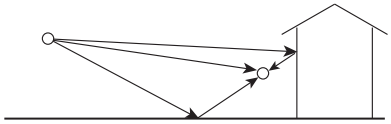
- Noise of drive motors
  Noise of drive motors considerably varies among the different makes. Exact values can be found in the respective motor catalogue. In any case the sound level must be known. It must be less than about 8dB below the required maximum value in order to avoid a level addition. If the noise values of fan and motor are the same, the sound level will increase by 3 dB(A) (see level addition).
- Background noise
  Any noise at the measuring points that is not caused by and directly radiated from the tested fan is considered as background noise. In order to avoid a level addition it must be about 8 dB(A) below the required value (see level addition).
- Sound reflexion – free-field conditions
  If any large, not sound absorbing surface is placed near the source of sound, the sound will be reflected from there. Reflexion from ground may cause an increase in noise level of about 3 dB(A).

Level increase by reflexion from ground



Level increase by reflexion from ground and surface reflexion

A further reflexion must also be considered if additional surfaces (walls, buildings, machines etc.) are close by. This may cause an increase in the sound level of an additional 3 dB(A).

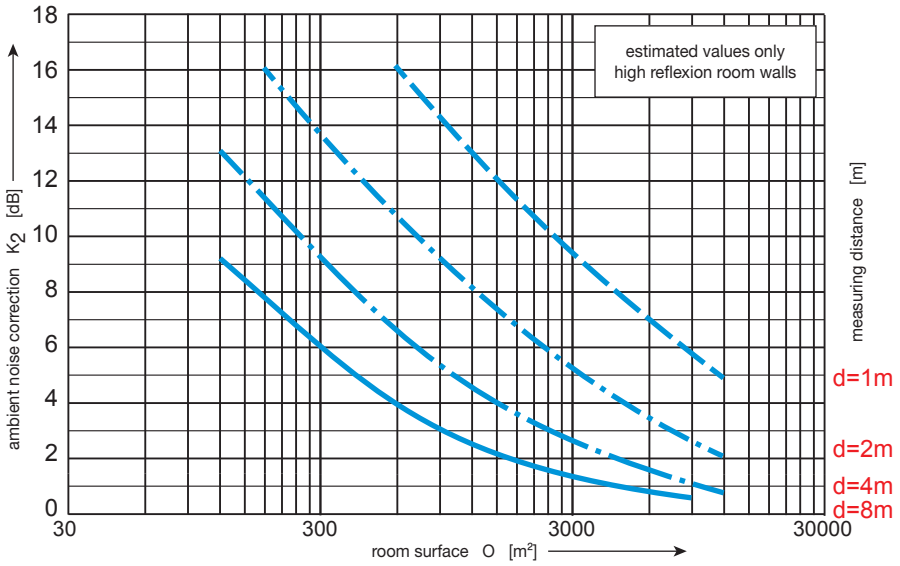


Level increase by influence of room

If the sound source is located inside a room, an increase of up to 10 dB(A) can occur. Among other factors, the increase depends on the size of the room and the kind of the room boundaries as well as on the complicated reflection and absorption ratio. The smaller the room and the higher the measuring distance, the higher the measuring distance by reflection will be (see diagram 5).

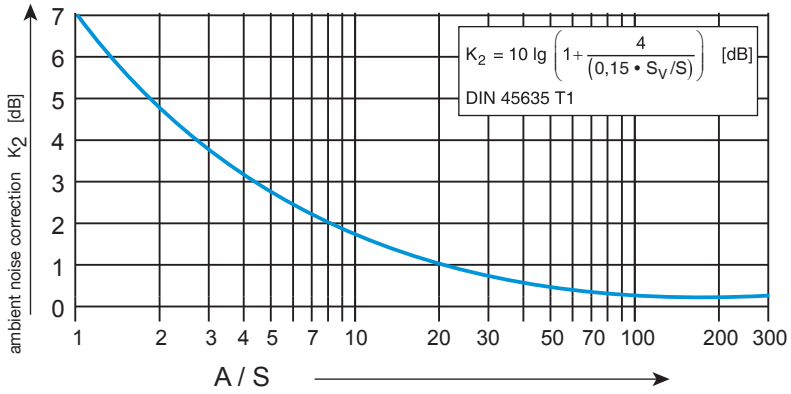
Ambient correction K2 depending on surface and the measuring distance

diagram 5



Ambient correction K2 depending on the sound absorbing surface

diagram 6



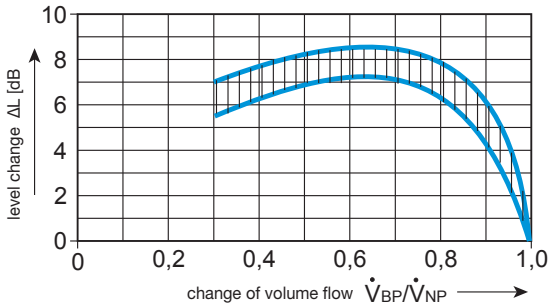
A = equivalent sound absorbing surface
$A = 0{,}15 \cdot S_V$, S_V = total sound surface of room
$S_V = 2 (L \cdot B + L \cdot H + B \cdot H)$
S = measuring surface and its contents of fan (see sheet ST4)

Level increase due to damper

Variable inlet guide vane
The employment of a variable inlet guide vane will modify the fan's characteristic curve. Depending on the guiding blades' angle a rotational swirl is created which causes a change of the inlet flow conditions. In consequence, the specific sound power level changes depending on the volume flow and the guiding blades' angle. Changes as in diagram 7.

Level increase due to variable inlet guide vane

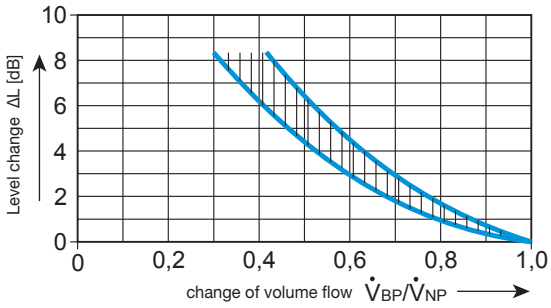
diagram 7



Damper
Using a damper will cause an additional plant resistance. The valves must be considered as an additional sound source. The noise behaviour depends on the design and number of valves (1– n valves) as well as the flow velocity and the position of the valves (open – closed). There are no secured measuring values in connection with fans yet. The values listed in the diagram below can be used as guide values.

Level increase due to damper

diagram 8



Level increase at frequency inverter operation

REITZ can only give information about a potential level increase of the motor at variable speed control operation when the related frequency inverter has been included in our scope of supply and the pertaining tuning works have been carried out by us, since even different parameter settings at the frequency inverter may result in a deviation of the level increase in comparison to mains operation within a margin from 5 – 15 dB(A).
Hence, we cannot guarantee the drive sound values in case the motor and the frequency inverter have been procured and supplied by the customer and the parametrization has been carried out in the customer's responsibility.
We would be glad to submit an offer for suitable motors and frequency inverters.

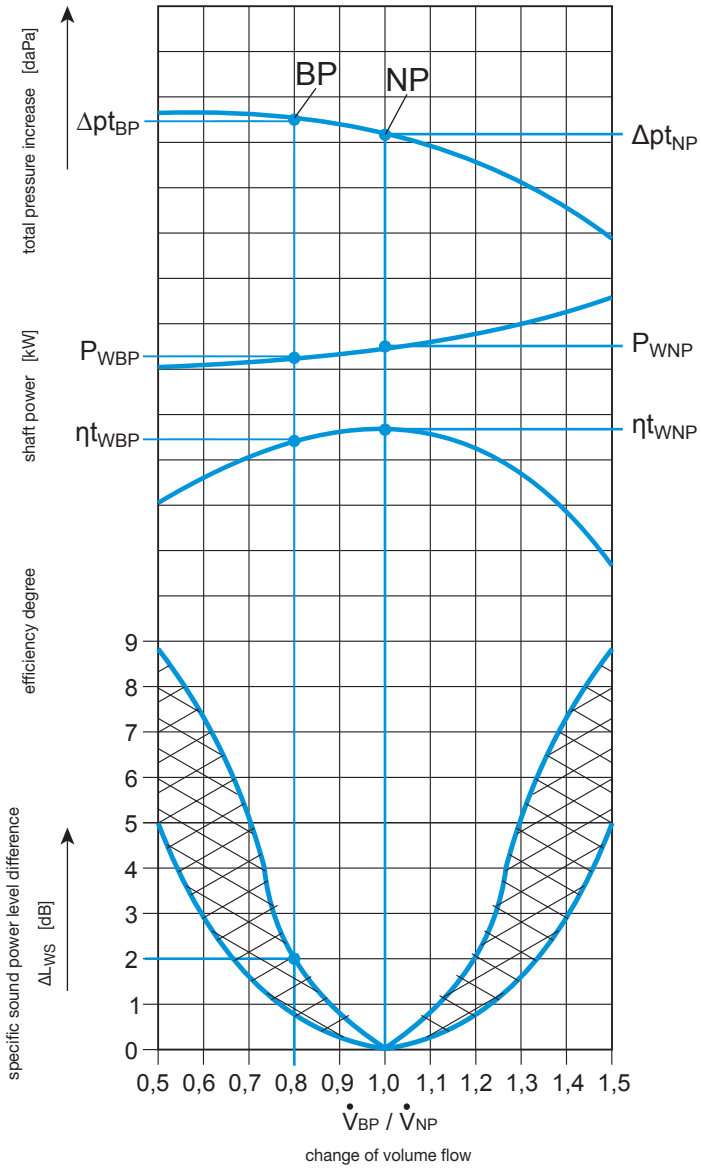
Level increase by deviation from nominal point

As the fan can work at any point of its characteristic curve depending on the plant resistance, the actual working point in the plant is designated as operating point. The specific sound power level changes in dependance of the volume flow. The minimum of noise generation of the fan approximately coincides with the optimum efficiency at $\dot{V}_{BP}/\dot{V}_{NP}$ = 1 = NP. See diagram 9 for the respective deviations of volume flow.

Level increase by deviation from nominal point

Fan performance curve
NP = nominal point = list data
BP = operating point = working point of plant

diagram 9

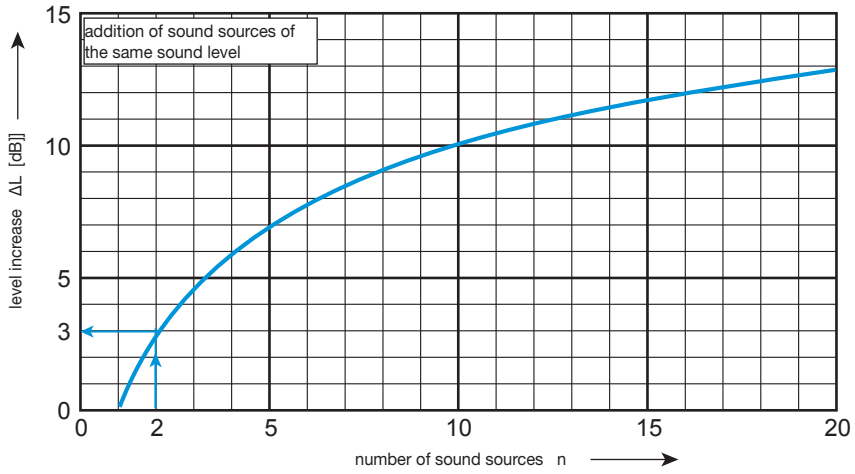


Level addition - general remarks

A second sound source (e.g. 2 fans or as usual one fan and a drive motor) causes a sound pressure level increase according to diagram 10 and 11.

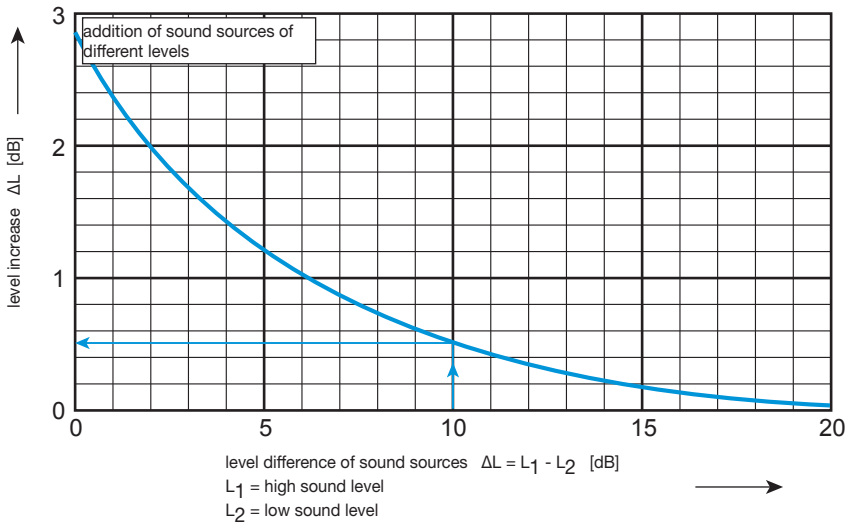
Addition of sound sources of the same sound level

diagram 10



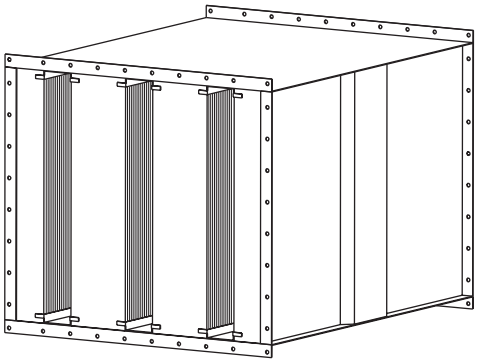
Addition of sound sources of different levels

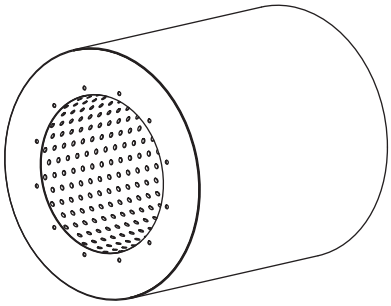
diagram 11



Chapter 6 - Silencers - SD

- Silencers with baffles
- Design characteristics
- Acoustic data
- Technical data
- Tubular silencers
- Design characteristics
- Acoustic data
- Technical data





Silencers with baffles - Design characteristics

Design characteristics

General informations

The standard silencer of series 1 is designed especially for radial fans. The design in the selection table is based on a flow rate of c_S = 15 m/s, 18 m/s and 20 m/s.

Technical data:

baffle thickness	d	= 250 mm
baffle distance	s	= 125 mm
lateral baffle	d/2	= 125 mm
cross-section ratio	A_S/A_{tot}	= 0,333

A_S = cross-sectional area, open
A_{tot} = cross-sectional area, total
pressure loss in the silencer, see sheet SD 9
max. air velocity c_S max = 20 m/s
max. temperature resistance 120°C
reference temperature = 20°C
design description see below

Design variant 3

Silencer housing made of sheet steel is continuously stiffened with beads or flat iron and provided with lead frames. Design variant 3 is designed for a constant, not altering or cyclic system pressure by changes in operating conditions of Δpt –3150 daPa to +3150 daPa. The static load-bearing capacity when installed in vertical position is ≤ 3000 kg.
The baffles are fixed in the housing with channel sections. Baffles provided with hydrophobic and non-abrasive impregnated surfaces made of 1.0 mm thick galvanized sheet steel. The perforation cover has 40 % transparency.
The housing is primarily coated. On request, it can also be supplied with a top coat.

Design variant 4

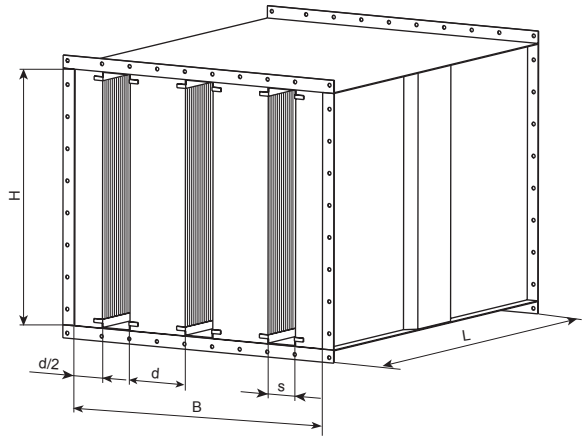
As design variant 3 but with detachable side and removable baffles.

Options:

- pressure-resistant and shock-proof
- temperature-resistant up to 300°C
- stainless steels
- provided with lugs for fixing
- welded gastight design
- with profiles at inlet
- baffles with foil covering
- surface galvanised
- surface hot-dipped galvanised

Silencers with baffles - Acoustic data

Standard silencers with baffles



article no. = component size

KS S1 1 3 - 03 08 04 - 00

- length code x 250 = L [mm] acc. to table 1 (**)
- height code x 125 = H [mm]
- width code x 375 = B [mm]
- design code 3
- series code: series 1
- product code: S1 = silencers with baffles
- symbol KS = silencers with baffles

Selection table

article number component size	number of baffles	width	height	air volume			flow noise at cs = 15 / 18 / 20 m/s					
design (3) length (**)	Stück 1)	B [mm]	H [mm]	$\dot{V}$ (m³/min)			L_W [dB]			L_{WA} [dB(A)]		
KSS113-0102..-00	0	375	250	28	31	35	51	54	57	42	47	51
KSS113-0103..-00	0	375	375	40	50	56	53	56	59	44	49	53
KSS113-0104..-00	0	375	500	56	63	71	54	57	60	45	50	54
KSS113-0105..-00	0	375	625	71	80	90	55	58	61	46	51	55
KSS113-0204..-00	1	750	500	112	125	140	57	60	63	48	53	57
KSS113-0206..-00	1	750	750	160	200	224	59	62	65	50	55	59
KSS113-0208..-00	1	750	1000	224	250	280	60	63	66	51	56	60
KSS113-0308..-00	2	1125	1000	315	400	450	61	64	67	52	57	61
KSS113-0310..-00	2	1125	1250	400	500	560	62	65	68	53	58	62
KSS113-0312..-00	2	1125	1500	500	560	630	63	66	69	54	59	63
KSS113-0410..-00	3	1500	1250	560	630	710	64	67	70	55	60	64
KSS113-0412..-00	3	1500	1500	630	800	900	65	68	71	56	61	65
KSS113-0414..-00	3	1500	1750	710	900	1000	65	68	71	56	61	65
KSS113-0514..-00	4	1875	1750	900	1120	1250	66	69	72	57	62	66
KSS113-0516..-00	4	1875	2000	1120	1250	1400	67	70	73	58	63	67
KSS113-0616..-00	5	2250	2000	1250	1600	1800	68	71	74	59	64	68
KSS113-0618..-00	5	2250	2250	1400	1800	2000	68	71	74	59	64	68
KSS113-0620..-00	5	2250	2500	1600	2000	2240	69	72	75	60	65	69
KSS113-0722..-00	6	2625	2750	2000	2240	2500	70	73	76	61	66	70
KSS113-0724..-00	6	2625	3000	2240	2500	2800	70	73	76	61	66	70
KSS113-0822..-00	7	3000	2750	2500	2800	3150	70	73	76	61	66	70
KSS113-0826..-00	7	3000	3250	2800	3150	3550	71	74	77	62	67	71
KSS113-0926..-00	8	3375	3250	3150	3550	4000	71	74	77	62	67	71
KSS113-0928..-00	8	3375	3500	3550	4000	4500	72	75	78	63	68	72
KSS113-1030..-00	9	3750	3750	4000	4500	5000	72	75	78	63	68	72
KSS113-1032..-00	9	3750	4000	4500	5000	5600	73	76	79	64	69	73
KSS113-1134..-00	10	4125	4250	5000	5600	6300	73	76	79	64	69	73
KSS113-1136..-00	10	4125	4500	5600	6300	7100	74	77	80	65	70	74

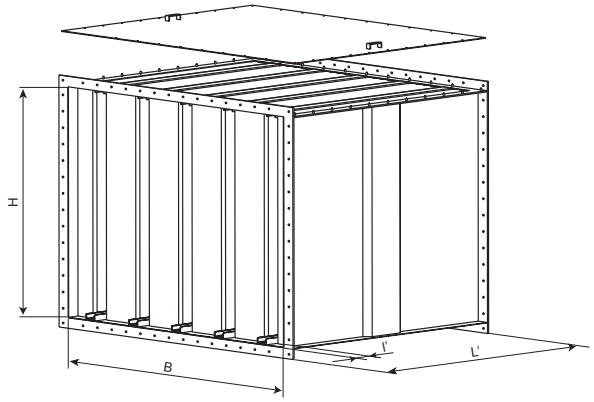
table 1 (**) length of silencer L

length code	02	03	04	05	06	07	08	09	10
L [mm]	500	750	1000	1250	1500	1750	2000	2250	2500

1) Since in general lateral baffles are applied, there is an additional 1/2 baffle installed at the right and left hand side (see figure).

Silencers with baffles - Acoustic data

Silencer with baffles with detachable side wall and removable baffles[2)]



article no. = component size

KS S1 1 4 - 03 08 04 - 00

- length code x 250 = L [mm] acc. to table 2 (**)
- height code x 125 = H [mm]
- width code x 375 = B [mm]
- design code 3
- series code: series 1
- product code: S1 = silencers with baffles
- symbol KS = silencers with baffles

Silencer elongation

article number component size design (4)	length (**)	number of baffles Stück [1)]	width B [mm]	height H [mm]	extension 2 l' [mm]
KSS114-0102..-00		0	375	250	+ 70
KSS114-0103..-00		0	375	375	+ 70
KSS114-0104..-00		0	375	500	+ 70
KSS114-0105..-00		0	375	625	+ 70
KSS114-0204..-00		1	750	500	+ 110
KSS114-0206..-00		1	750	750	+ 110
KSS114-0208..-00		1	750	1000	+ 110
KSS114-0308..-00		2	1125	1000	+ 110
KSS114-0310..-00		2	1125	1250	+ 110
KSS114-0312..-00		2	1125	1500	+ 110
KSS114-0410..-00		3	1500	1250	+ 110
KSS114-0412..-00		3	1500	1500	+ 110
KSS114-0414..-00		3	1500	1750	+ 110
KSS114-0514..-00		4	1875	1750	+ 170
KSS114-0516..-00		4	1875	2000	+ 170
KSS114-0616..-00		5	2250	2000	+ 170
KSS114-0618..-00		5	2250	2250	+ 170
KSS114-0620..-00		5	2250	2500	+ 170
KSS114-0722..-00		6	2625	2750	+ 210
KSS114-0724..-00		6	2625	3000	+ 210

Other sizes available on request

for silencer length $L \leq L_{max.}$ $L' = L + 2\,l'$
with L = length of baffles
L' = length of silencer
2 l' = silencer-extension

table 2 (**) silencer length L

length code	02	03	04	05	06	07	08	09	10
L [mm]	500	750	1000	1250	1500	1750	2000	2250	2500

1) Since in general lateral baffles are applied, there is an additional 1/2 baffle installed at the right and left hand side (see figure).
2) Remove of baffles at one side B x L' only.

Silencers with baffles - Acoustic data

Insertion loss in dependance of octave centre frequency

table 3

octave centre frequency	attenuation De [dB] - silencer length								
fm [HZ]	500	750	1000	1250	1500	1750	2000	2250	2500
63	3	3	4	4	5	6	6	7	7
125	5	6	8	10	12	13	15	17	19
250	10	13	17	20	23	27	30	33	36
500	17	24	30	35	41	47	48	48	48
1000	24	32	40	48	48	48	48	48	48
2000	20	26	32	38	44	48	48	48	48
4000	14	16	19	22	25	27	30	32	35
8000	11	12	13	15	17	18	20	21	22

A-weighted level difference of silencer

table 4

impeller speed n_L [min^{-1}]		level difference ΔL_A [dB(A)] in dependence of the silencer lenght L [mm]								
from - to	rate	500	750	1000	1250	1500	1750	2000	2250	2500
4500 > 2250	3000	20	24	27	29	31	32	33	35	36
2250 > 1125	1500	20	23	26	28	30	32	33	34	35
1125 > 560	750	22	24	26	28	30	31	32	34	34
560 > 280	375	23	25	27	28	30	31	32	33	34

A-weighted sound power level directly after silencer

$L_{Wi\ 1,2} = L_{WAi\ 1,2} + \Delta L_{KA}$

ΔL_{KA}: correction value for A-weighting

$L_{WAi\ 1,2}$: A-weighted source sound power level at inlet, at discharge

$L_{WA} = L_{Wi\ 1,2} - \Delta L_A$ [dB(A)]

ΔL_A: A-weighted level difference (table 4)

$L_{Wi\ 1,2}$: source sound power level at inlet, at discharge

L_{WA}: A-weighted power level directly downstream of silencer

Note

In the A-weighted level difference of the silencer, A-weighting is included in the calculation, therefore the A-weighted acoustic power level source in unadjusted power level source is to be converted.

Remark

The A-weighted level difference is only valid for radial fans as the value depends on the frequency spectrum of the fan.

Silencers with baffles - Acoustic data

Flow noise in the silencer

When designing silencers the flow noise inside the silencer must be about 10 dB lower than the permitted calculated level behind the silencer in order to avoid a level addition. For this reason the air flow noise has to be considered when choosing the silencer's cross-section B x H and the air flow rate c_S.

Sound power level

$L_W = L_{cs} + L_k$ **[dB]**

L_{cs}: flow noise acc. to diagram 1

L_k: correction value for the flow cross section acc. to table 5

Sound power level of the flow noise

diagram 1

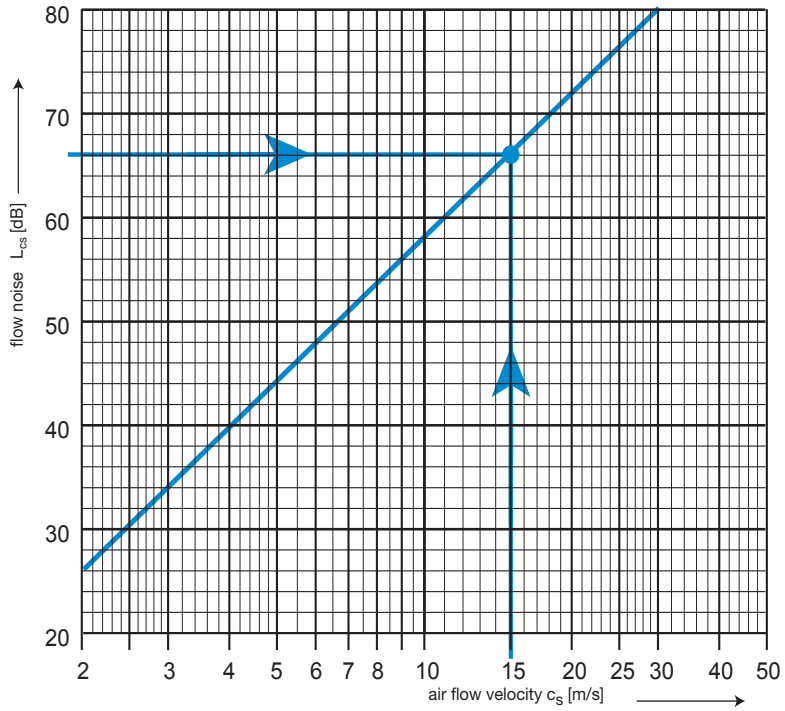


table 5

B x H		LK [dB]
	250	- 15
375 x	375	- 14
	500	- 12
	625	- 11
	500	- 9
750 x	750	- 7
	1000	- 6
	1000	5
1125 x	1250	4
	1500	3
	1250	2
1500 x	1500	1
	1750	1
1875 x	1750	0
	2000	1
	2000	2
2250 x	2250	2
	2500	3
2625 x	2750	4
	3000	4
3000 x	2750	4
	3250	5
3375 x	3250	5
	3500	6
3750 x	3750	6
	4000	7
4125 x	4250	7
	4400	8

A-weighted sound power level – correction values

$L_{WA} = L_W - 9$ dB(A) **[dB(A)]** applies for c_S = 15 m/s
$L_{WA} = L_W - 7$ dB(A) **[dB(A)]** applies for c_S = 18 m/s
$L_{WA} = L_W - 6$ dB(A) **[dB(A)]** applies for c_S = 20 m/s

Silencers with baffles - Acoustic data

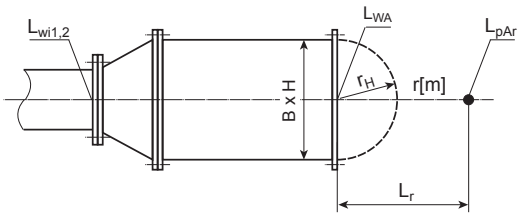
Level reduction referred to r m distance

$L_{pAr} = L_{WA} - \Delta L_r$ [dB(A)] mit $\Delta Lr = 8 + 20 \lg r$ [dB]

L_{pAr} = A-weighted sound pressure level **r m** distance

L_{WA} = A-weighted surface sound power level after silencer (see sheet SD 5)

ΔL_r = Level reduction according to table 6



Restriction

For surface sound sources, the sound pressure close to the sound source only decrease at a slow rate. Calculations using the above-mentioned formula for ΔLr can only be made for distance from r > r_H onwards.

$$r_H = 0{,}565 \cdot \sqrt{B \cdot H}$$

r_H [m] = radius of hemisphere (minimum distance)
r [m] = distance from the centre of the sound source
B, H [m] = silencer cross-section
ΔLr_H = level decrease in the distance of r_H

Level reduction

table 6

SD B x H mm	r_H m	ΔL1m dB	ΔL2m dB	ΔL3m dB	ΔL4m dB	ΔL6m dB	ΔL8m dB	ΔL10m dB
375 x 250	0,17	8	14	17	20	23	26	28
375 x 375	0,21	8	14	17	20	23	26	28
375 x 500	0,24	8	14	17	20	23	26	28
375 x 625	0,27	8	14	17	20	23	26	28
750 x 500	0,35	8	14	17	20	23	26	28
750 x 750	0,42	8	14	17	20	23	26	28
750 x1000	0,49	8	14	17	20	23	26	28
1125 x 1000	0,60	8	14	17	20	23	26	28
1125 x 1250	0,67	8	14	17	20	23	26	28
1125 x 1500	0,73	8	14	17	20	23	26	28
1500 x 1250	0,77	8	14	17	20	23	26	28
1500 x 1500	0,85	8	14	17	20	23	26	28
1500 x 1750	0,91	8	14	17	20	23	26	28
1875 x 1750	1,00	8	14	17	20	23	26	28

SD B x H mm	r_H m	ΔL1m dB	ΔL2m dB	ΔL3m dB	ΔL4m dB	ΔL6m dB	ΔL8m dB	ΔL10m dB
1875 x 2000	1,09	9	14	17	20	23	26	28
2250 x 2000	1,20	9	14	17	20	23	26	28
2250 x 2250	1,27	10	14	17	20	23	26	28
2250 x 2500	1,34	10	14	17	20	23	26	28
2625 x 2750	1,52	11	14	17	20	23	26	28
2625 x 3000	1,59	12	14	17	20	23	26	28
3000 x 2750	1,62	12	14	17	20	23	26	28
3000 x 3250	1,76	12	14	17	20	23	26	28
3375 x 3250	1,87	13	14	17	20	23	26	28
3375 x 3500	1,94	13	14	17	20	23	26	28
3750 x 3750	2,12	14	-	17	20	23	26	28
3750 x 4000	2,19	14	-	17	20	23	26	28
4125 x 4250	2,37	15	-	17	20	23	26	28
4125 x 4500	2,43	15	-	17	20	23	26	28

SD B x H mm	ΔL20m dB	ΔL30m dB	ΔL40m dB	ΔL60m dB	ΔL80m dB	ΔL100m dB	ΔL200m dB	ΔL300m dB	ΔL400m dB	ΔL500m dB
alle SD	34	37	40	44	46	48	54	57	60	62

All values refer to free-field conditions.
Consider tolerances, level addition and reflexion.

Silencers with baffles - Technical data

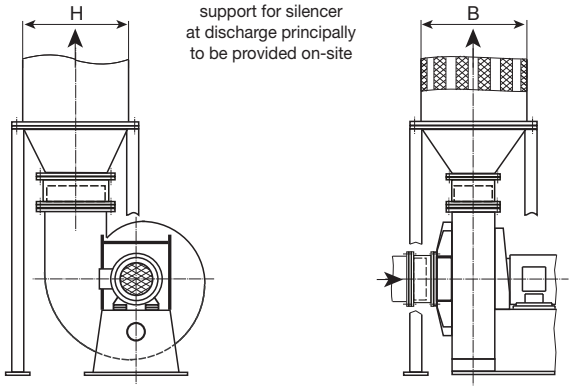
Technical data

General informations

The required silencer should be arranged very close to the fan, as then the entire downstream plant system will be charged with the reduced sound values only.
When mounting the fan on anti-vibration mounts, provide flexible connections at inlet and discharge. For acoustical reasons the flexible connections should have chutes since they then have the effect of a duct. In case of high noise requirements provide flexible connections and transition pieces with sound insulation up to the silencer centre.

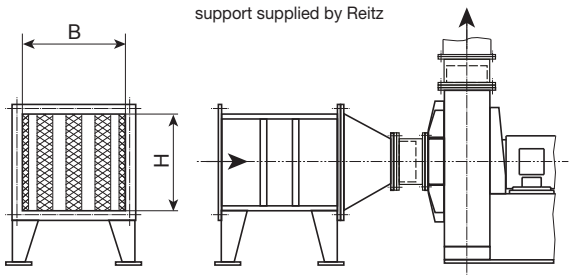
Silencer arranged at discharge

The silencer at discharge has principally to be mounted in a way to enable the air flow streaming through the baffles parallel to the height of the housing. When designing the transition piece the length of the edges has to be fixed adequately, i.e. the housing width „B2“ (see dimension sheet) is always coordinated to the silencer width „B“. The height of discharge part „B1“ is always analogously coordinated to the silencer height „H“.
This way it is also quite impossible that a horizontal arrangement of the absorber (discharge position 90° and 270°) would cause a horizontal arrangement of the baffles.



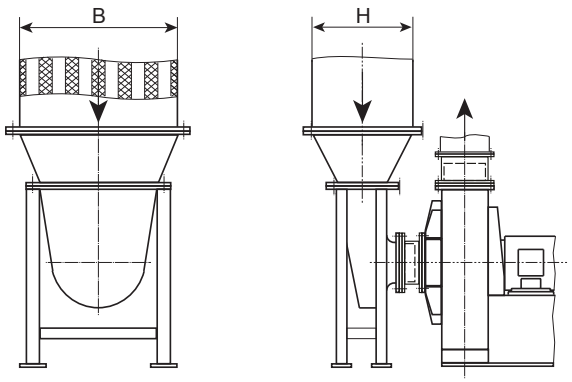
Silencer arranged at inlet

The arrangement of the silencer at inlet always has to provide a vertical position of the baffles.



Silencer arranged at the suction box at inlet

For design reasons, the position of the baffles is chosen in longitudinal direction to avoid an additional swirl of the incoming air.



Silencers with baffles - Technical data

Pressure losses

Pressure loss inside the silencer

Flow rate c_S in m/s	Pressure loss in silencer ΔpSD in daPa Silencer length L in mm								
	500	750	1000	1250	1500	1750	2000	2250	2500
15	10	10,5	11	11	11,5	12	12	12,5	13
18	14,5	15	15,5	16	16,5	17	17,5	18	18,5
20	18	18,5	19	19,5	20	20,5	21	22	22,5

In case of free inlet there is an additional pressure loss at the inlet

ΔP_E = 15 daPa at c_S = 15 m/s
ΔP_E = 23 daPa at c_S = 18 m/s
ΔP_E = 28 daPa at c_S = 20 m/s

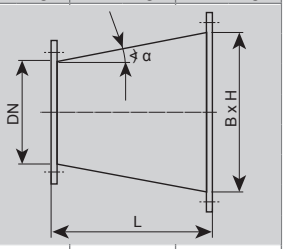
Pressure loss through protective grid with a free surface of 90 %

ΔP_{SG} = 3 daPa at c_S = 15 m/s
ΔP_{SG} = 5 daPa at c_S = 18 m/s
ΔP_{SG} = 6 daPa at c_S = 20 m/s
Pressure losses caused by transition pieces, ducts and bends are to be calculated by the customer.

Transition pieces

For calculating the silencer's space requirement please take the needed length of the transition pieces from the table. The lengths of the pieces are chosen soww that the < α max. 30°.

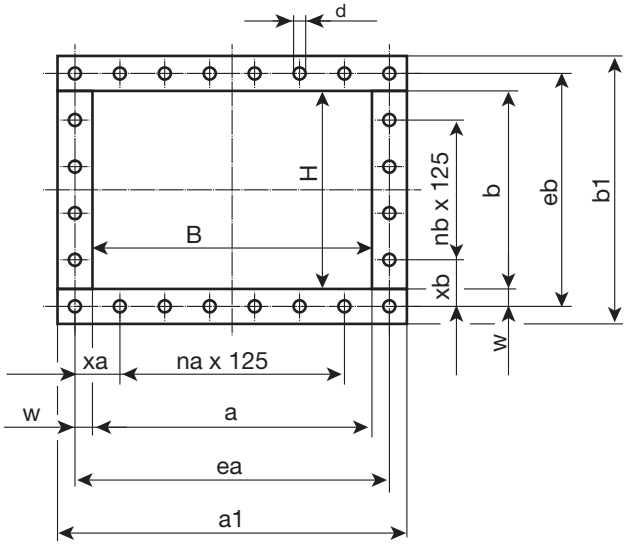
connection DN[1)]	silence width x height 375 x 250 375 x 375		375 x 500 375 x 625		750 x 500 750 x 750		750 x 1000		1125 x 1000 1125 x 1250		1125 x 1500 1500 x 1250 1500 x 1500		1500 x 1750 1875 x 1750 1875 x 2000		2250 x 2000 2250 x 2250 2250 x 2500		2625 x 2750 2625 x 3000 3000 x 2750		3375 x 3250 3375 x 3500 3750 x 3750 3750 x 4000		4125 x 4250 4125 x 4500	
	weight and length of transition piece																					
DN[1)]	L	kg	L	kg	L	kg	L	kg	L	kg	L	kg	L	kg	L	kg	L	kg	L	kg	L	kg
100	315	9,3	500	16,5	800	42,2	1000	56,5														
112	315	9,5	500	16,8	800	42,6	1000	57	1250	103												
125	315	9,7	500	17	710	40,2	1000	58,2	1250	104												
140	315	10	450	16,3	710	40,7	900	54,5	1250	105	1600	160										
160	315	10,3	450	16,7	710	41,3	900	55,2	1250	106	1600	162										
180	315	10,6	400	15,9	710	41,9	900	55,9	1120	100	1600	163	2000	300								
200	315	10,9	400	16,2	710	42,4	900	56,7	1120	101	1600	164	2000	302								
224	250	9,8	400	16,6	630	40,3	800	53,5	1120	102	1500	159	2000	304	2500	544						
250	250	10,2	400	17,6	630	40,9	800	54,3	1120	103	1500	160	2000	306	2500	548						
280	250	11,4	355	17,2	560	39,9	800	56,1	1120	106	1500	163	1800	288	2500	553	3350	900				
315	250	12,2	355	18	560	40,9	800	57,5	1120	108	1500	166	1800	294	2500	558	3350	908				
355	250	12,6	355	17,3	560	41,7	710	54,5	1000	101	1400	160	1800	297	2500	564	2800	812				
400			315	18	560	42,8	710	55,9	1000	103	1400	163	1800	300	2240	528	2800	819				
450			315	18,9	560	44	630	53,4	900	98	1250	153	1800	304	2240	535	2800	827				
500					560	45,1	630	54,6	900	100	1250	156	1800	308	2240	541	2800	835				
560					500	44,9	630	57,4	800	96	1250	160	1600	292	2240	550	2800	846				
630					500	46,7	630	59,5	800	99	1250	164	1600	297	2240	559	2800	857	3550	1634		
710					500	48,9	630	61,9	710	94	1120	156	1600	302	2000	525	2800	869	3550	1653		
800							630	64,6	710	97	1120	160	1600	308	2000	535	2800	883	3550	1675		
900							630	68	710	100	1000	152	1400	290	1800	508	2500	833	3550	1699	4000	2062
1000									710	104	1000	156	1400	296	1800	517	2500	846	3550	1723	4000	2089
1120									710	114	900	155	1120	270	1600	493	2240	807	3550	1757	4000	2127
1250											900	161	1120	276	1600	503	2240	822	3350	1713	4000	2163
1400											900	169	1120	265	1600	516	2240	730	3350	1746	4000	2203
1600													1000	274	1600	533	1800	747	3150	1710	3550	2061
1800													1000	284	1600	551	1800	765	3150	1751	3550	2107
2000													1000	296	1600	571	1800	783	2800	1638	3550	2153



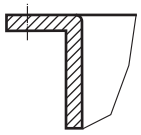
1) bei rechteckigen Querschnitten ist jeweils vom Kleinstmaß auszugehen, z.B. 500/400 →Bezugsmaß DN = 400

Silencers with baffles - Technical data

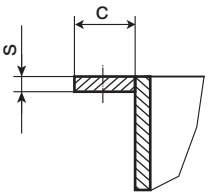
Connection dimensions



for silencer design 3 ≤ B x H 1500 x 1750



for silencer design 3 > B x H 1500 x 1750



Attention

For nominal size 375/250 there will be a hole in the middle axis on the short side of the flange.

nominal size			weight	dimensions in mm												
width B	height H	c x s	kg	a	b	ea	eb	xa	xb	na	nb	w	a1	b1	hole Ød	number of holes
375	250	30 x 3	2,04	377	252	411	286	143	143	1	-	17	437	312	10	10
375	375	30 x 3	2,38	377	377	411	411	143	143	1	1	17	437	437	10	12
375	500	30 x 3	2,72	377	502	411	536	143	80,5	1	3	17	437	562	10	16
375	625	30 x 3	3,06	377	627	411	661	143	143	1	3	17	437	687	10	16
750	500	50 x 3	11,42	752	502	812	562	93,5	93,5	5	3	30	852	602	14	24
750	750	50 x 3	12,85	752	752	812	812	93,5	93,5	5	5	30	852	852	14	28
750	1000	50 x 3	14,73	752	1002	812	1062	93,5	93,5	5	7	30	852	1102	14	32
1125	1000	50 x 3	17,56	1127	1002	1187	1062	156	93,5	7	7	30	1227	1102	14	36
1125	1250	50 x 3	19,45	1127	1252	1187	1312	156	93,5	7	9	30	1227	1352	14	40
1125	1500	50 x 3	21,33	1127	1502	1187	1562	156	93,5	7	11	30	1227	1602	14	44
1500	1250	50 x 3	23,03	1502	1252	1562	1312	93,5	93,5	11	9	30	1602	1352	14	48
1500	1500	50 x 3	24,91	1502	1502	1562	1562	93,5	93,5	11	11	30	1602	1602	14	52
1500	1750	50 x 3	26,80	1502	1752	1562	1812	93,5	93,5	11	13	30	1602	1852	14	56
1875	1750	80 x 10	76,29	1877	1752	1967	1842	171	108,5	13	13	45	2037	1912	22	60
1875	2000	80 x 10	81,12	1877	2002	1967	2092	171	108,5	13	15	45	2037	2162	22	64
2250	2000	80 x 10	88,37	2252	2002	2342	2092	108,5	108,5	17	15	45	2412	2162	22	72
2250	2250	80 x 10	93,20	2252	2252	2342	2342	108,5	108,5	17	17	45	2412	2412	22	76
2250	2500	80 x 10	98,03	2252	2502	2342	2592	108,5	108,5	17	19	45	2412	2662	22	80
2650	2750	100 x 10	174,53	2627	2752	2737	2862	181	118,5	19	21	55	2827	2952	22	88
2650	3000	100 x 10	182,08	2627	3002	2737	3112	181	118,5	19	23	55	2827	3202	22	92
3000	2750	100 x 10	185,85	3002	2752	3112	2862	118,5	118,5	23	21	55	3202	2952	22	96
3000	3250	100 x 10	200,95	3002	3252	3112	3362	118,5	118,5	23	25	55	3202	3452	22	104
3375	3250	100 x 10	212,28	3377	3252	3487	3362	181	118,5	25	25	55	3577	3452	22	108
3375	3500	100 x 10	219,83	3377	3502	3487	3612	181	118,5	25	27	55	3577	3702	22	112
3750	3750	100 x 10	238,70	3752	3752	3862	3862	118,5	118,5	29	29	55	3952	3952	22	124
3750	4000	100 x 10	246,25	3752	4002	3862	4112	118,5	118,5	29	31	55	3952	4202	22	128
4125	4250	100 x 10	265,13	4127	4252	4237	4362	181	118,5	31	33	55	4327	4452	22	136
4125	4500	100 x 10	272,68	4127	4502	4237	4612	181	118,5	31	35	55	4327	4702	22	140

Silencers with baffles - Technical data

Weights

cross-section of silencer width B mm	height H mm	weight in kg for design 3 silencer lenghts L in mm 500	750	1000	1250	1500	1750	2000	2250	2500
375	250	32	46	62	76	91	106	122	138	152
375	375	39	56	74	92	110	129	146	166	186
375	500	45	66	87	109	130	150	171	195	222
375	625	51	76	100	123	149	172	196	222	246
750	500	73	107	141	174	209	243	278	315	349
750	750	89	132	177	221	265	309	354	398	442
750	1000	107	158	212	264	318	370	422	476	529
1125	1000	141	210	279	349	419	488	559	628	699
1125	1250	163	243	323	405	485	567	648	728	809
1125	1500	185	277	371	459	550	642	735	826	917
1500	1250	201	300	400	502	603	702	802	903	1003
1500	1500	228	341	455	568	682	796	911	1023	1136
1500	1750	255	382	509	636	763	891	1019	1145	1272
1875	1750	399	549	700	849	1000	1150	1300	1450	1601
1875	2000	439	604	770	936	1102	1268	1434	1601	1767
2250	2000	502	695	888	1080	1273	1466	1659	1850	2044
2250	2250	546	757	967	1179	1387	1599	1812	2022	2234
2250	2500	590	818	1047	1277	1506	1735	2130	2358	2588
2625	2750	897	1178	1460	1741	2024	2306	2585	2868	3149
2625	3000	954	1256	1559	1861	2163	2465	2768	3070	3374
3000	2750	989	1304	1619	1938	2254	2571	2886	3203	3519
3000	3250	1112	1474	1836	2200	2560	2922	3285	3647	4008
3375	3250	1213	1614	2015	2416	2817	3218	3619	4019	4421
3375	3500	1280	1706	2134	2560	2988	3413	3840	4266	4693
3750	3750	1456	1954	2449	2946	3441	3938	4433	4928	5425
3750	4000	1529	2054	2577	3102	3626	4149	4674	5198	5721
4125	4250	1722	2322	2923	3523	4124	4727	5326	5926	6526
4125	4500	1799	2429	3060	3692	4322	4953	5585	6216	6849

Silencers with baffles - Technical data

Weights

cross-section of silencer		weight in kg for design 4 baffle length L in mm actual silencer length L in mm (see sheet SD 4)								
width B mm	height H mm	500	750	1000	1250	1500	1750	2000	2250	2500
375	250	36	51	65	80	94	107	130	145	161
375	375	45	63	80	98	114	132	161	178	196
375	500	55	75	95	117	136	156	189	210	232
375	625	63	87	111	134	157	180	221	244	268
750	500	95	130	160	191	224	257	319	351	384
750	750	122	163	204	245	286	328	408	449	491
750	1000	151	199	250	299	349	398	498	549	600
1125	1000	222	297	372	446	521	596	744	817	892
1125	1250	260	345	430	518	606	693	971	949	1037
1125	1500	298	407	493	590	790	888	986	1082	1179
1500	1250	391	512	631	752	1023	1144	1264	1385	1505
1500	1500	446	581	716	850	1162	1297	1432	1576	1702
1500	1750	501	650	800	949	1300	1450	1599	1749	1899
1875	1750	736	915	1097	1277	1459	1639	1821	2001	2182
1875	2000	806	1004	1202	1400	1598	1795	1993	2191	2389
2250	2000	933	1162	1392	1619	1848	2077	2306	2533	2762
2250	2250	1015	1263	1510	1759	2008	2255	2504	2751	3000
2250	2500	1097	1364	1631	1899	2166	2433	2702	2969	3236
2625	2750	1354	1680	2004	2329	2984	2980	3303	3629	3953
2625	3000	1469	1815	2160	2508	2856	3202	3549	3895	4243
3000	2750	1539	1901	2264	2630	2993	3357	3720	4084	4448

Desing characteristics

General remarks

The tubular silencer is designed especially for radial fans. The design is based on a flow rate of c_S = 15 m/s, 18 m/s and 20 m/s.
Pressure loss: as for ducts of the same nominal width, for design variant 4: 20 daPa bei c_S = 15 m/s

Technical data:

external diameter	D
nominal size	DN
wall thickness	d = 100 mm or 150 mm
core diameter	2d = 300 mm

Design variants 2 and 4 (welded)

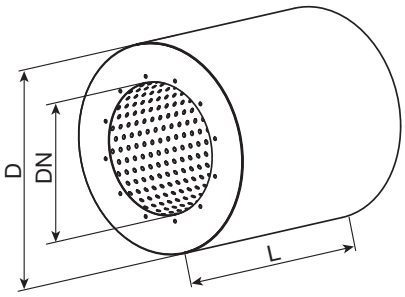
This tubular silencer is intended for installation in ducts subject to pressure loads. The end faces are equipped with flanges with hole circles in accordance to DIN 24 154 2 (edition July ´90). The sound-absorbing filling consists of moisture-resistant, nonflammable mineral matting behind an anti-crumbling layer and galvanised perforated metal plate. The silencer's surfaces are made of 3 mm carbon steel, welded and primarily coated.
The maximum pressure load is Δpt = -2400 daPa to +3150 daPa.
Maximum temperature resistance 120°C.
Design variant 4 is equipped with a sound absorbing core.

Options:

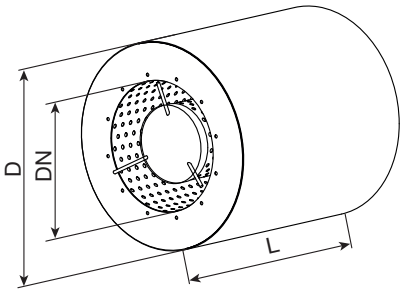
- with supports
- galvanised
- temperature-resistant
- pressure-resistant and shock proof
- stainless steel design
- special flanges
- foil covering at inlet

Acoustic data

Design variant 2



Design variant 4



article no. = component size

RS S2 1 . - ... ... - 00

- length code x 10 = L [mm] acc. table 8 (**)
- nominal size code x 10 = DN [mm]
- design code acc. table 7
- series code series 1
- product code: S2 = tubular silencers
- symbol RS = tubular silencers

Selection table

article no. = component size design (*) length (**)	design	nominal size DN mm	external diameter D mm	air volume $\dot{V}$ (m³/min)			flow noise at cs = 15 / 18 / 20 m/s L_W [dB]			flow noise at cs = 15 / 18 / 20 m/s L_{WA} [dB(A)]		
RSS21. - 012...-00	2	125	325	11	13	15	46	50	52	37	43	46
RSS21. - 014...-00	2	140	340	14	16	18	48	52	54	39	45	48
RSS21. - 016...-00	2	160	360	18	21	24	49	53	55	40	46	49
RSS21. - 018...-00	2	180	380	23	27	30	50	54	56	41	47	50
RSS21. - 020...-00	2	200	400	28	34	37	51	55	57	42	48	51
RSS21. - 022...-00	2	224	425	35	42	47	52	56	58	43	49	52
RSS21. - 025...-00	2	250	450	44	53	59	53	57	59	44	50	53
RSS21. - 028...-00	2	280	580	55	66	74	54	58	60	45	51	54
RSS21. - 031...-00	2	315	615	70	84	93	55	59	61	46	52	55
RSS21. - 035...-00	2	355	655	89	107	118	56	60	62	47	53	56
RSS21. - 040...-00	2	400	700	113	135	150	57	61	63	48	54	57
RSS21. - 045...-00	4	450	750	91	97	108	55	59	62	47	52	56
RSS21. - 050...-00	4	500	800	117	140	156	57	61	63	48	54	57
RSS21. - 056...-00	4	560	860	144	172	192	58	62	64	49	55	58
RSS21. - 063...-00	4	630	930	189	226	252	59	63	65	50	56	59

table 7 (*) design

design code	design
2	description acc. sheet SD 13
4	

table 8 (**) silencer length L

length codel	050	075	100	125	150	175	200	225	250
L [mm]	500	750	1000	1250	1500	1750	2000	2250	2500

A-weighted level difference

table 9

article no. = component size design (*) length (**)	nominal size DN mm	level difference ΔL_A [dB(A)] in dependence of the silencer length L [mm]								
		500	750	1000	1250	1500	1750	2000	2250	2500
RSS21.- 012...-00	125	26	31	34	36	39	40	43	44	46
RSS21.- 014...-00	140	25	29	32	35	37	39	41	42	45
RSS21.- 016...-00	160	23	27	30	33	35	37	38	40	41
RSS21.- 018...-00	180	22	26	29	32	33	35	37	38	40
RSS21.- 020...-00	200	21	25	28	30	32	34	36	37	38
RSS21.- 022...-00	224	21	24	27	29	31	33	34	36	37
RSS21.- 025...-00	250	20	23	27	28	31	31	34	35	36
RSS21.- 028...-00	280	19	23	27	28	30	31	34	35	36
RSS21.- 031...-00	315	18	23	26	28	30	31	34	35	36
RSS21.- 035...-00	355	17	22	25	27	30	31	33	35	35
RSS21.- 040...-00	400	16	21	24	27	29	30	33	34	35
RSS21.- 045...-00	450	-	26	29	32	33	36	38	39	40
RSS21.- 050...-00	500	-	25	28	31	33	34	37	38	39
RSS21.- 056...-00	560	-	24	27	29	31	33	34	35	38
RSS21.- 063...-00	630	-	24	26	28	30	31	33	33	34

A-weighted sound power level directly after silencer

$L_{Wi1,2} = L_{WAi1,2} + \Delta L_{KA}$ [dB]

- ΔL_{KA}: correction value for A-weighting
- $L_{WAi1,2}$: A-weighted total sound power level at inlet, at discharge

$L_{WA} = L_{Wi1,2} - \Delta L_A$ [dB(A)]

- ΔL_A: A-weighted noise level difference (table 9)
- $L_{Wi1,2}$: total sound power level at inlet, at discharge
- L_{WA}: A-weighted sound power level directly downstream of silencer

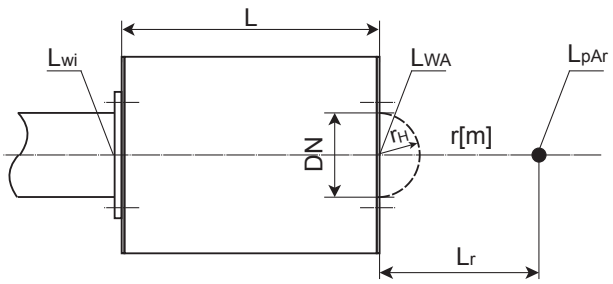
Remark

The A-weighted level difference is only valid for radial fans as the value depends on the frequency spectrum of the fan.

Level reduction referred to r m distance

$L_{pAr} = L_{WA} - \Delta L_r$ [dB(A)]

- ΔL_r: level decrease acc. table 10
- L_{WA}: A-weighted sound power level after silencer (see sheet SD 15)
- L_{pAr}: A-weighted sound pressure level in r m distance



r = Abstand vom Mittelpunkt der Schallquelle

Level reduction

table 10

	ΔL1m dB	ΔL2m dB	ΔL3m dB	ΔL4m dB	ΔL6m dB	ΔL8m dB	ΔL10m dB	ΔL20m dB	ΔL30m dB	ΔL40m dB	ΔL60m dB	ΔL80m dB	ΔL100m dB	ΔL200m dB	ΔL300m dB	ΔL400m dB	ΔL500m dB
design 2 + 4	8	14	17	20	23	26	28	33	37	40	44	47	49	57	62	65	67

All values refer to free-field conditions.

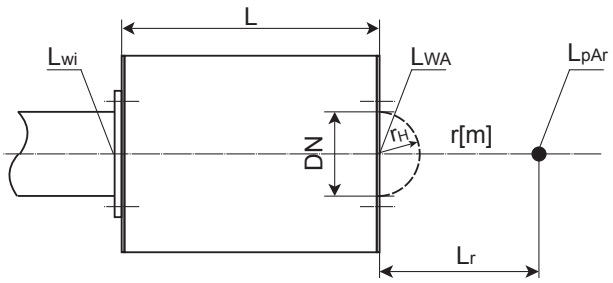
Consider tolerances, level addition and reflexion.

Level reduction - example

Fan type

KXE035-009515-00

L_{Wi2} = 96 dB(A)
n = 1500 min^{-1}



required
permitted noise $L_{pAR\ zul.}$ = 55 dB(A) at a distance of 10 m

1. Selection of the silencer nominal size

chosen
nominal size DN = 355 acc. sheet SD 14
further data
air speed c_s = 18 m/s
flow noise L_{WA} = 53 dB(A)

2. Selection of silencer length

item	designation		correction	value	unit	rule for calculation
1	source sound power level	$L_{Wi1,2}$	--	96	dB(A)	see General Acoustics
2	correction value for A-weighting	ΔL_{KA}	+ 10	106	dB	see General Acoustics
3	addition		+ 3	109	dB	tolerance acc. to DIN 24166 - class 1
4	Level reduction referred to 10 m	ΔL_r	- 27	82	dB	see table 10 - sheet SD 16
5	permitted sound level in a distance of 10 m	ΔL_{pAr}	--	55	dB(A)	required guarantee value
6	needed attenuation of silencer	ΔL_A	27	--	dB(A)	item 4 - item 5: 82 - 55 = 27 dB(A)
7	selected silencer L = 1250 mm	ΔL_A	27	55	dB(A)	acc. table 9 - sheet SD 15
8	exit noise close to silencer	L_{WA}	27	82	dB(A)	item 3 - item 7: 109 - 27 = 82 dB(A)

Attenuation versus silencer lengths

table 11

tubular silencer design 2																					
DN	length	Octave - spectrum									DN	length	Octave - spectrum								
		63	125	250	500	1000	2000	4000	8000	Hz			63	125	250	500	1000	2000	4000	8000	Hz
125	500	5	10	16	27	43	45	40	30	dB	**250**	500	2	5	9	16	22	21	14	13	dB
	750	7	13	23	38	48	48	48	37	dB		750	3	6	13	24	31	27	19	18	dB
	1000	8	16	29	48	48	48	48	44	dB		1000	4	8	17	30	40	34	23	21	dB
	1250	9	19	35	48	48	48	48	48	dB		1250	4	10	20	37	48	40	26	24	dB
	1500	11	22	41	48	48	48	48	48	dB		1500	5	12	24	44	48	47	30	26	dB
	1750	12	25	46	48	48	48	48	48	dB		1750	5	14	28	46	48	48	33	28	dB
	2000	14	28	47	48	48	48	48	48	dB		2000	6	15	31	47	48	48	36	30	dB
	2250	15	31	47	48	48	48	48	48	dB		2250	7	17	34	47	48	48	38	30	dB
	2500	16	34	47	48	48	48	48	48	dB		2500	7	19	38	47	48	48	41	31	dB
140	500	5	9	15	26	41	40	34	25	dB	**280**	500	3	7	11	17	21	20	13	13	dB
	750	6	11	21	36	48	48	45	32	dB		750	5	9	16	24	28	25	18	18	dB
	1000	7	14	27	45	48	48	48	38	dB		1000	6	12	20	31	36	31	21	22	dB
	1250	8	17	32	48	48	48	48	41	dB		1250	7	14	25	38	44	36	24	24	dB
	1500	9	20	38	48	48	48	48	46	dB		1500	8	17	29	44	48	41	28	26	dB
	1750	11	23	43	48	48	48	48	48	dB		1750	9	19	33	46	48	48	31	28	dB
	2000	12	26	47	48	48	48	48	48	dB		2000	10	21	37	47	48	48	33	29	dB
	2250	13	28	47	48	48	48	48	48	dB		2250	11	23	41	47	48	48	35	29	dB
	2500	14	31	47	48	48	48	48	48	dB		2500	12	26	45	47	48	48	37	30	dB
160	500	4	8	13	22	35	35	28	21	dB	**315**	500	3	6	10	15	17	16	12	12	dB
	750	5	10	18	32	48	47	36	27	dB		750	4	8	14	21	24	20	15	15	dB
	1000	6	12	23	41	48	48	45	32	dB		1000	5	10	19	27	31	24	18	19	dB
	1250	7	15	28	47	48	48	48	36	dB		1250	6	13	22	33	37	28	20	21	dB
	1500	8	18	33	48	48	48	48	39	dB		1500	7	15	26	38	44	33	23	23	dB
	1750	9	20	38	48	48	48	48	42	dB		1750	8	17	30	44	48	37	26	23	dB
	2000	10	23	42	48	48	48	48	45	dB		2000	9	19	34	45	48	41	28	25	dB
	2250	11	25	45	48	48	48	48	48	dB		2250	10	21	38	45	48	44	30	26	dB
	2500	12	27	45	48	48	48	48	48	dB		2500	11	23	41	45	48	48	31	27	dB
180	500	3	7	12	21	32	31	24	19	dB	**355**	500	2	6	9	13	15	14	11	10	dB
	750	4	9	17	30	44	42	31	24	dB		750	4	8	13	19	21	17	13	12	dB
	1000	5	11	21	38	48	48	38	27	dB		1000	5	9	17	24	27	20	15	16	dB
	1250	6	14	26	46	48	48	43	31	dB		1250	6	11	20	29	33	24	18	17	dB
	1500	7	16	30	48	48	48	48	34	dB		1500	6	14	24	35	39	27	20	20	dB
	1750	8	18	35	48	48	48	48	36	dB		1750	7	16	28	40	45	30	23	21	dB
	2000	9	20	39	48	48	48	48	38	dB		2000	8	18	31	45	48	34	25	23	dB
	2250	10	23	43	48	48	48	48	41	dB		2250	9	19	35	45	48	37	26	24	dB
	2500	11	25	45	48	48	48	48	43	dB		2500	10	21	38	45	48	39	27	25	dB
200	500	3	6	11	20	29	28	20	16	dB	**400**	500	2	6	9	12	13	11	9	8	dB
	750	4	8	15	28	40	38	26	21	dB		750	4	8	13	17	18	13	11	11	dB
	1000	5	10	20	36	48	47	32	24	dB		1000	5	9	17	22	23	15	14	13	dB
	1250	5	12	24	44	48	48	37	28	dB		1250	6	12	20	27	28	17	15	14	dB
	1500	6	15	28	48	48	48	42	30	dB		1500	6	14	24	32	32	20	17	16	dB
	1750	7	17	32	48	48	48	46	32	dB		1750	7	14	24	32	33	21	19	18	dB
	2000	8	19	36	48	48	48	48	34	dB		2000	8	18	31	42	41	25	21	19	dB
	2250	9	21	40	48	48	48	48	36	dB		2250	9	19	35	45	46	27	22	20	dB
	2500	10	23	44	48	48	48	48	38	dB		2500	10	21	38	45	48	29	23	21	dB
224	500	2	5	10	18	25	24	17	15	dB											
	750	3	7	14	25	35	31	23	19	dB											
	1000	4	9	18	33	45	39	27	22	dB											
	1250	5	11	22	40	48	47	31	26	dB											
	1500	5	13	26	46	48	48	35	28	dB											
	1750	6	15	30	46	48	48	39	31	dB											
	2000	7	17	33	47	48	48	42	32	dB											
	2250	8	19	37	47	48	48	45	33	dB											
	2500	8	20	41	47	48	48	47	35	dB											

Attenuation versus silencer lengths

table 12

DN	length	tubular silencer design 4 Octave - spectrum								
		63	125	250	500	1000	2000	4000	8000	Hz
450	750	5	8	18	30	42	36	22	16	dB
	1000	6	10	23	38	48	45	27	19	dB
	1250	6	13	28	45	48	48	31	22	dB
	1500	7	15	32	48	48	48	35	25	dB
	1750	9	18	37	48	48	48	40	29	dB
	2000	10	21	40	48	48	48	43	31	dB
	2250	11	24	44	48	48	48	46	33	dB
	2500	12	27	48	48	48	48	50	36	dB
500	750	4	7	17	27	37	31	19	14	dB
	1000	5	10	21	34	46	38	23	16	dB
	1250	6	12	25	41	48	46	26	18	dB
	1500	7	14	29	48	48	48	30	21	dB
	1750	8	16	34	48	48	48	33	23	dB
	2000	9	19	37	48	48	48	36	25	dB
	2250	10	22	40	48	48	48	39	27	dB
	2500	11	24	44	48	48	48	41	28	dB
560	750	4	7	15	25	32	26	16	12	dB
	1000	4	9	19	31	40	32	19	13	dB
	1250	5	11	23	37	48	38	21	15	dB
	1500	6	13	26	43	48	44	24	16	dB
	1750	7	15	30	48	48	48	26	18	dB
	2000	7	17	34	48	48	48	29	18	dB
	2250	8	19	37	48	48	48	31	20	dB
	2500	9	21	40	48	48	48	33	21	dB
630	750	3	7	14	22	27	21	13	10	dB
	1000	4	8	17	28	34	26	15	11	dB
	1250	5	10	20	33	40	31	16	11	dB
	1500	5	12	23	38	47	35	18	11	dB
	1750	5	13	27	44	48	40	20	12	dB
	2000	6	15	30	48	48	44	22	13	dB
	2250	6	17	34	48	48	48	23	13	dB
	2500	7	18	37	48	48	48	25	14	dB
	1750	8	18	35	48	48	48	48	36	dB
	2000	9	20	39	48	48	48	48	38	dB
	2250	10	23	43	48	48	48	48	41	dB
	2500	11	25	45	48	48	48	48	43	dB

Weight

table 13

article no. = component size length (**)	nominal size	weight in kg silencer lengths L in mm

design variant 2	DN mm	500 (**) 050	750 (**) 075	1000 (**) 100	1250 (**) 125	1500 (**) 150	1750 (**) 175	2000 (**) 200	2250 (**) 225	2500 (**) 250
RSS212-012...-00	125	13	17	21	25	29	34	39	44	48
RSS212-014...-00	140	13	18	22	26	32	37	42	47	53
RSS212-016...-00	160	14	20	25	28	36	42	48	53	59
RSS212-018...-00	180	15	20	26	31	37	43	49	54	60
RSS212-020...-00	200	16	22	27	32	39	45	52	58	64
RSS212-022...-00	224	18	24	30	34	42	49	56	62	69
RSS212-025...-00	250	19	25	31	37	44	52	59	66	73
RSS212-028...-00	280	29	37	47	39	65	75	86	96	107
RSS212-031...-00	315	31	41	52	59	74	86	98	110	122
RSS212-035...-00	355	34	43	52	65	76	88	100	112	124
RSS212-040...-00	400	37	48	60	67	82	95	108	121	134

design variant 4	DN mm	500 (**) 050	750 (**) 075	1000 (**) 100	1250 (**) 125	1500 (**) 150	1750 (**) 175	2000 (**) 200	2250 (**) 225	2500 (**) 250
RSS214-045...-00	450	-	62	84	104	125	145	165	186	206
RSS214-050...-00	500	-	69	92	115	138	161	183	207	229
RSS214-056...-00	560	-	72	96	120	144	168	192	216	240
RSS214-063...-00	630	-	78	103	128	153	179	204	229	254

flanges

designs 2 + 4:
flat flange acc. DIN 24154 R2 edition July 90

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