



VAKUTEC

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| Fans | <ul style="list-style-type: none">• VAKUTEC®-Small Radial Fans• VAKUTEC®-Radial Fans With Deep-Drawn Casing For Industrial Operation• VAKUTEC®-Radial Fans With Welded Casing For Industrial Operation• VAKUTEC®-Roof Radial Fans• VAKUTEC®-Pipe Radial Fans• VAKUTEC®-Axial Fans• Special Constructions |
| Air | <ul style="list-style-type: none">• Columns• Horizontal Washes• Mist Separatos• Sound Absorbes• Heat Exchanges• Pipe Systes• Elements For Pipe Systems |
| Water | <ul style="list-style-type: none">• Baths For Chemical Treatment• Containers• VFeed And Discharge Piping• Pipe Systems• Elements For Pipe Systems |



VAKUTEC®

**Documentation**

number of order Scheidt: _____

your order _____

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technical drawing: _____ on demand

technical data sheet: _____ received with receipt of order

Attachmentoperating instructions pump: _____ yes no operation instruction solenoid valve: _____ yes no operation instruction motor: _____ yes no operation instruction pH-gauging: _____ yes no operation instruction conductivity measuring: _____ yes no operation instruction pressure observer: _____ yes no lubrication plan: _____ yes no list of spare parts: _____ yes no

other instructions:

other certificates:

Operating Instructions General Notes

Documentation: The delivered documentation contained is written down on the cover. It has to be checked if it is complete. If necessary, the missing documentation has to be claimed at Scheidt Ventilatoren GmbH. Units without documentation shall not be put into service.

Address: Scheidt Ventilatoren GmbH
 Löhestr. 57
 53773 Hennef
 Tel.: 0049 - 2242 - 91354-70

Email: www.Scheidt-Ventilatoren.de

Controll of receipt: On receipt, the delivered units have to be checked if they are complete. It has to be confirmed in a written form that the units have been taken over free of defects. Transport defects must also be written down. The controller's signature has to be legible.

Technical drawing: : The unit construction is based on technical drawings which can be claimed at Scheidt Ventilatoren GmbH by referring to your number of order.

Planing/mounting: In front of and behind the aggregates sufficient straight pipes has to be planned. Easy access to the componends, especially to the fans must be guaranteed. All componends must be mounted tension free.

The Operating Authority's Obligation: The operating authority is obliged to have only have persons working on the unit who are familiar with the work safety regulations and are aware of security while working. It is the operating authority's task to instruct in this respect. The operating authority controls regularly if the norms relevant to security and secure working is kept. The operating authority is responsible for organising this control.

The Staff's Obligation: All persons that work on the unit are obliged to follow the regulations about work safety and accident prevention.

Protective Equipment: In most of the casings, aggressive media are precipitated. These media are known to the operating authority. The operation has to put at disposal the necessary protective equipment according to the media. These items belong to the personal protective equipment: eye protection, acid-resistant clothing, breathing mask and eye shower. As informal security measurement, the way to the next body shower has to be known.

Before Cleaning, Maintaining, or Inspecting: While cleaning, maintaining, or inspecting, the installations have to be out of service. It has to be made sure that the installation always remains under control and does not set automatically. In order to secure the installation, at least a second person is necessary. All electric supplies have to be secured expertly.

Transport and Storage: Transporting the unit has to be carried out only with the appropriate jacks. The unit has to be protected from effects of the weather by storing it properly. The storage temperature must remain between 5 and 30° Celsius.

Aufkleber: Stellen, von denen eine potentielle Gefahr ausgeht, sind mit entsprechenden Piktogrammen (Aufkleber) versehen. Die Drehrichtung der Laufräder für Ventilatoren ist mit einem aufgeklebten Pfeil definiert. Die Erläuterung der entsprechenden Piktogramme ist unten aufgeführt.

Trouble: The company Scheidt Ventilatoren GmbH has to be informed in writing immediately about upcoming trouble. The trouble description may be sent via fax or mail. Especially within the warranty period fixed in the contract, the operating authority is not allowed to repair or to alter the units without previous written approval by Scheidt Ventilatoren GmbH. In the casing of trouble, the operating authority has to decide themselves whether running an installation is acceptable or not. Scheidt Ventilatoren GmbH does not take responsibility for any upcoming trouble caused to environment, valuables, or persons.

Lifting: Appropriate jacks have to be used to lift units weighing more than the values persons should lift. While lifting, make sure that the unit does not wind up.

Flange connection: The flange connections have to be leak tested at all aggregates, for example fan, mist collector, air washer, pipe system etc. in regular intervals. The seals we use are acid-proofed, but the thermic and chemical stress could cause wearing and embrittlement. If there is a leakage You have to retorque the screws with 5 Nm. If required You must change the seals. If You have problems please contact our service department.

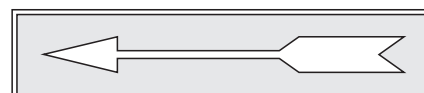
Fans: It is recommended to operate fans only under exeptional circumstances against a closed pipe system. If required, please contact the Scheidt Ventilatoren company.



Danger by acid media!
 Protective equipment necessary!



Danger by rotating parts!
 Secure installation against putting it into service!



Rotating and running direction!
 Follow it unconditionally!

Operating instructions for Containers Without Construction Authorisation

General Notes: Refer to "Operating Instructions General Notes"

In General: Containers have to be manufactured according to their physical and chemical capacity. Container execution occurs according to the local conditions.

Finish: Both round and square containers are manufactured with the necessary ripping. All units and installations agreed on in the contract belong to the equipment. The outline below shows possible equipment.

Test Run: Before Employing the unit under service conditions, there has to be run a test of at least one hour with unpolluted water. While running the test, the connected system of pipes has to be checked whether it is watertight. If necessary, screw connections must be tightened up. the test run must be protocollod and becomes part of the documentation. The documentation has to be archived for 10 years.

Operation: The container must only be put into service if it is put up unstressed on plain ground with full floor covering. The operation authority has to prove the assembly's static. The container liquids may only concentrate up to 3% at maximum of the air pollution to be segregated (at Chrom max. 0,5%). Further must be secured, that the container liquid at a "acid" process shows a pH-value of 10 to 7 and at a "alkaline" process shows a pH-value of 7 to 4. In case that the orderconfirmation of the manufacturer names other values, those are valid.

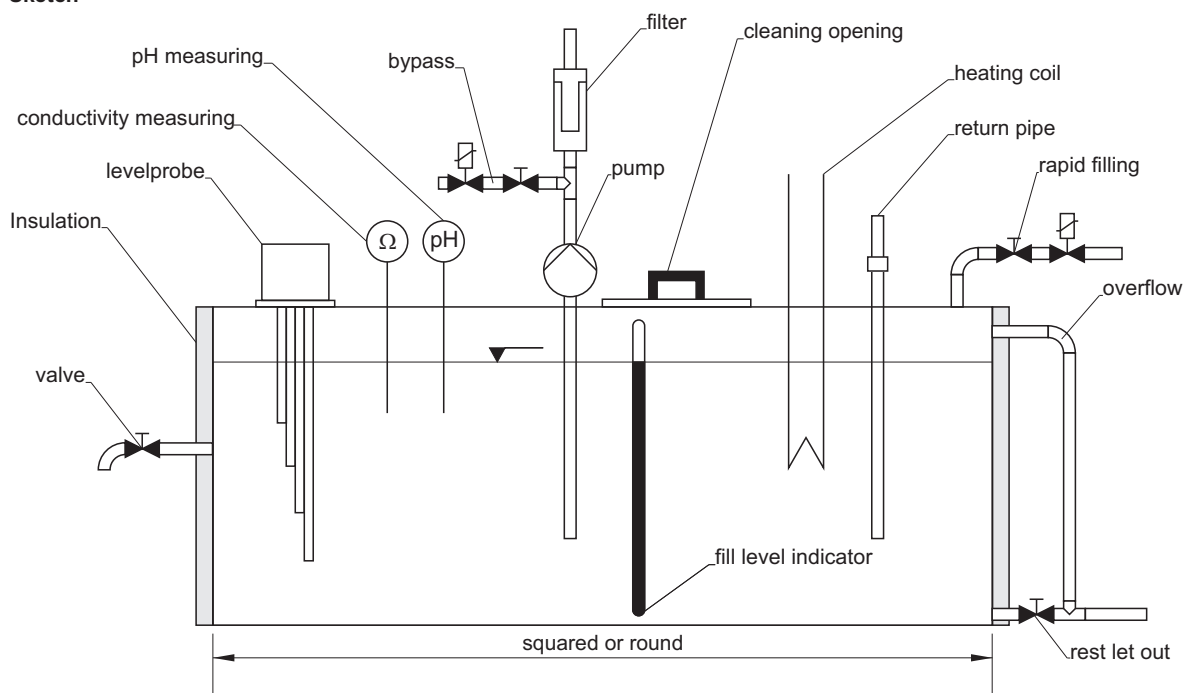
Employment As Agreed: Employment As Agreed: Employing the container as agreed means that it absorbs cleansing solution. The container is only designed for containing water or the cleansing solution agreed on in the contract. These container liquids may concentrate up with the pollution of the air stream (see operation). The maximum continuous operation temperature is 30° C or the operation the operation temperature agreed on in the contract. The container liquids may not be mixed with foam forming surfactants. Every other employment is not in accordance with the terms of contract. Changing the process conditions doe not comply with the employment according to the terms of contract. The decision whether the containers may be operated under altered process conditions is incumbent to Scheidt Ventilatoren GmbH and has to be confirmed by them in written.

First Inspektion: The first inspection has to be carried out after 50 hours in operation. In this course, it should be examined expertly if there are possibly leakages and if the pump operates smoothly. All screws in the flange connections have to be examined expertly if they are tight in and have to be tightened with a torque of 5 Nm if necessary. Bolted joints from plastic material have to be solid.

Cleaning: Containers need to be cleaned in regular intervals. In the course of inspection, the sludge sediment on the bottom of the tank has to be taken out and disposed expertly. Cleaning is important; otherwise waste disposals may destroy pump and lines. Only completely desalted water may be used for cleaning.

Cleaning Interval: We cannot give a general cleaning interval since the operation conditions are individually different. The cleaning interval has to be determined empirically by examining the ground for possible sediments after accordingly applied stoppage time. Stoppage time is necessary so that the floating particles may possibly settle. The cleaning intervals have to be documented. The data that that have to be documented are at least as follows: cleaning date, stoppage time, person who carries out the cleaning (name and signature) and notes.

Sketch



This sketch shows the possible equipment and design of a container. the real design has to be looked up in the receipt of order.

Operating Instructions For Demisters Or Demister Units

General Notes: Refer to "Operating Instructions General Notes"

In General: Demisters or rather the fin packages installed to demister, work according to the inertia principle. The drop that has to be segregated does not follow the deviation in the demister package but catches itself at the surface of the demister fin. Scheidt Ventilatoren GmbH has constructed the separator in a way that the air passes the fin package with a velocity of about 7 m/s and that the limiting drop, which is still demistered with a probability of 99.9%, is sized 15 µm. The pressure loss amounts to about 130 PA per demister package, and 200 PA per demister.

Finish: The demister is an independent unit or part of a unit (see sketch 4). The demister unit, at maximum tooling, consists of the first demister package, the demister, and the second demister package (see sketch 1).

Test Run: Before Employing the unit under service conditions, there has to be run a test of at least one hour with unpolluted water. While running the test, the connected system of pipes has to be checked whether it is watertight. If necessary, screw connections must be tightened up. the test run must be protocolled and becomes part of the documentation. The documentation has to be archived for 10 years.

Mounting: For aerodynamic reasons a straight pipe must be planned with a length of at least 3 times of the pipe diameter for the air inlet. For service reasons it is recommended to plan also at the outlet side a straight pipe of at least 0,5m up to 1,0m, depending of the component size.

Operation: The demister may only be operated if it can be integrated into the pipe system unstressed, if the flange connections are tight, and if the draining of the separated liquids through a dipped pipe or a siphon (lock of about 4000 Pa) are regulated.

Employment As Agreed: Employing the demister as agreed means that it segregates drops that may be mixed with electrolytes but not with foam forming substances. Every other employment is not in accordance with the terms of contract. Changing the process conditions of the demister does not agree with the employment as agreed. The decision whether the demisters may be operated under altered process conditions is incumbent to Scheidt Ventilatoren GmbH and has to be confirmed by them in written.

First Inspection: The first inspection has to be carried out after 50 hours in operation. Nozzles and drainings have to be examined expertly if they are possibly blocked with particles, and have to be cleaned if necessary. All screws have to be inspected if they are in tightly and have to be tightened with a torque of 5 Nm if necessary. The cover has to be close to the casing above the crossbeam (see sketch 3) and has to be tightened up if necessary. Bolted joints from plastic material have to be solid.

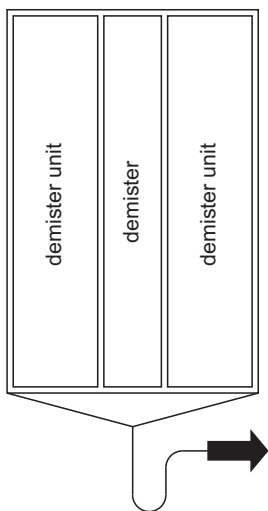
Cleaning: Demisters need to be cleaned in regular intervals. In the course of cleaning, the packets have to be taken out of the frame. The cleaning is carried out with water (steam jet device). Cleaning the demister is not only important to preserve the segregating effect and also keeps connected units from being possibly destructed.

Cleaning Intervall: We cannot give a general cleaning interval since the operation conditions are individually different. The cleaning interval has to be determined empirically by taking out the packages after one week of operation, examining them expertly, and cleaning them if necessary. The interval between to cleanings has to be regulated in a way that the packages' surface is not altered by dirtying. The cleaning intervals have to be protocolled. The data that have to be documented are at least as follows: cleaning date, stoppage time, person who carries out the cleaning (name and signature) and notes.

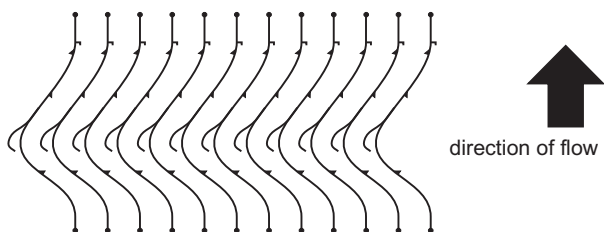
Package Expansion: The cover held by the crossbeams has to be removed (sketch 3). The segregation units may be taken out from the unit.

Installation: The demister package is only able to segregate if it is installed correctly (sketch 2).

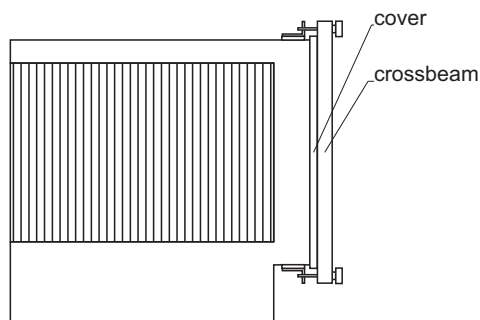
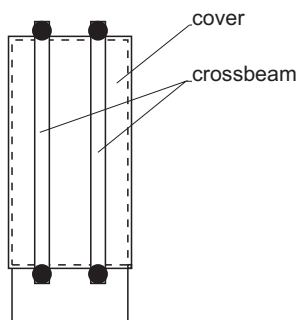
sketch 1



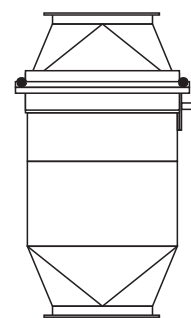
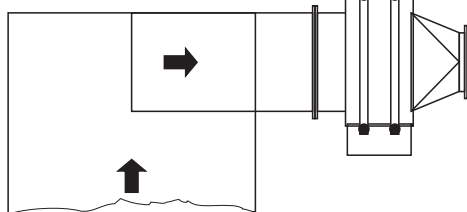
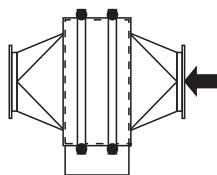
sketch 2



sketch 3



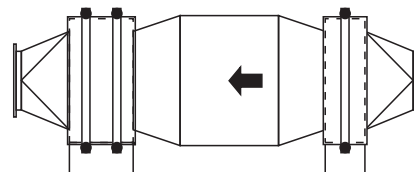
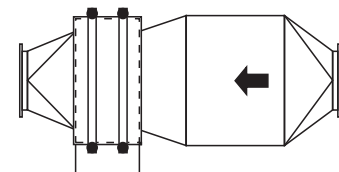
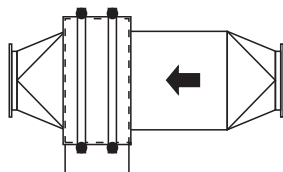
sketch 4



demister unit as independent unit

demister unit at the top of a washing column

demister unit for vertical installation



demister unit connected to short washer

demister unit connected to packed column washer

two demister units connected before and after in the packed column washer.

Operation Instruction Air Washer with and without packed columns, horizontal and vertical (see also demisters)

General Notes: Refer to "Operating Instructions General Notes"

In General: Air washers work according to the principle of material transference. The substance that has to be segregated from the air stream is transferred to a liquid supported in the cycle. If necessary, packed columns may be used to enlarge the contact surface. After being transferred, drops are segregated into a connected demister (see also Operating Instructions For Demisters Or Demister Units).

Finish: Air washers are constructed according to the chemical and physical requirements. Washers with and without packed columns, in horizontal and vertical types, with and without primary demister are employed.

Mounting: For aerodynamic reasons a straight pipe must be planned with a length of at least 3 times of the pipe diameter for the air inlet. For service reasons it is recommended to plan also at the outlet side a straight pipe of at least 0,5m up to 1,0m, depending of the component size.

Test Run: Before Employing the unit under service conditions, there has to be run a test of at least one hour. While running the test, the connected system of pipes has to be checked whether it is watertight. If necessary, screw connections must be tightened up. the test run must be protocolled and becomes part of the documentation. The documentation has to be archived for 10 years.

Operation: The air washer may only be operated if it can be integrated unstressed into the pipe system, if the flange connections are tight, and if the draining of the separated liquids through a dipped pipe or a siphon are regulated. The container liquids may only concentrate up to 3% at maximum of the air pollution to be segregated (at Chrom max. 0,5%). Further must be secured, that the container liquid at a "acid" process shows a pH-value of 10 to 7 and at a "alkaline" process shows a pH-value of 7 to 4. In case that the orderconfirmation of the manufacturer names other values, those are valid.

Employment As Agreed: Employing the air washer as agreed means that it segregates drops that may be mixed with electrolytes but not with foam forming substances. Every other employment is not in accordance with the terms of contract. Changing the process conditions of the demister does not agree with the employment as agreed. The decision whether the demisters may be operated under altered process conditions is incumbent to Scheidt Ventilatoren GmbH and has to be confirmed by them in written.

First Inspection: The first inspection has to be carried out after 50 hours in operation. Nozzles and drainings have to be examined expertly if they are possibly blocked with particles, and have to be cleaned if necessary. All screws have to be inspected if they are in tightly and have to be tightened with a torque of 5 Nm if necessary. The cover has to be close to the casing above the crossbeam (see sketch 2) and has to be tightened up if necessary. Bolted joints from plastic material have to be solid.

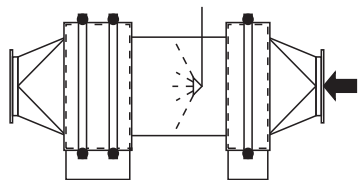
Cleaning: Air washers need to be cleaned in regular intervals. In the course of cleaning, the packets have to be taken out of the frame. The cleaning is carried out with water (steam jet device). Cleaning the demister is not only important to preserve the segregating effect and also keeps connected units from being possibly destructed.

Cleaning Intervall: We cannot give a general cleaning interval since the operation conditions are individually different. The cleaning interval has to be determined empirically by taking out the packages and packed columns after one week of operation, examining them expertly, and cleaning them if necessary. The interval between two cleanings has to be regulated in a way that the packages' and the packed columns' surface are not altered by dirtying. The cleaning intervals have to be protocolled. The data that have to be documented are at least as follows: cleaning date, stoppage time, person who carries out the cleaning (name and signature) and notes.

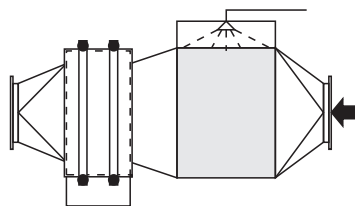
Removing / Installing Packages: Please refer to " Operating Instructions For Demisters Or Demister Units".

Packed Column: Packed Columns serve to enlarge the exchange surface. They may not be altered in their surface structure by dirtying.

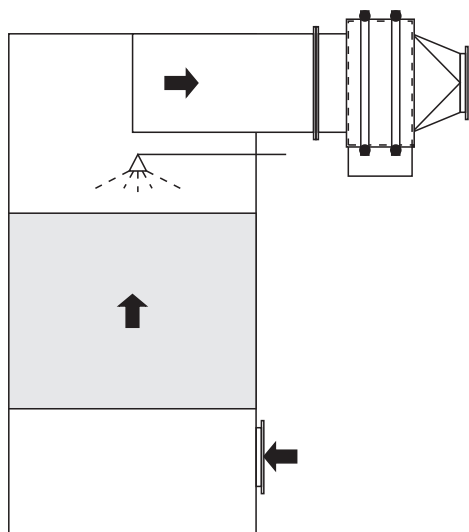
sketch 1



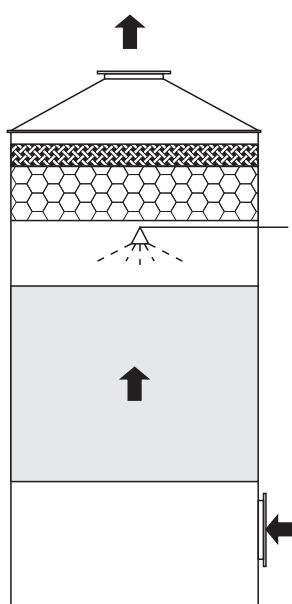
air washer horizontal with primary demister and connected demister



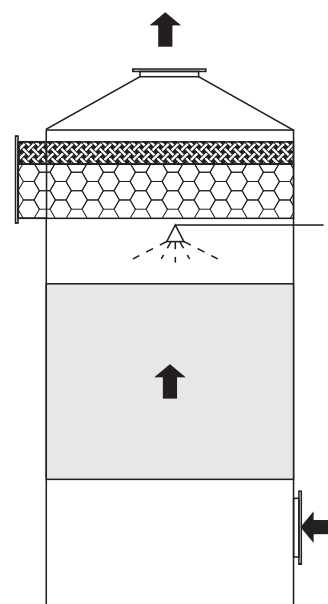
horizontal packed column washer with connected demister



tower (vertical packed column washer) with following horizontal mistseparator

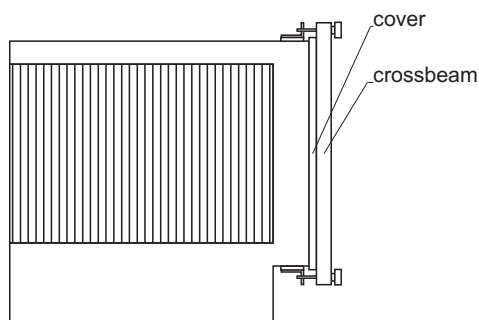
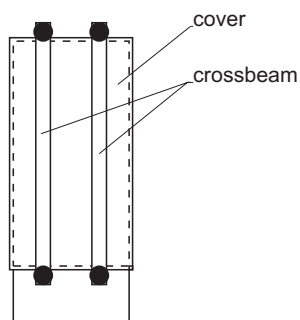


tower (vertical packed column washer) with integrated mistseparator and option demister
optionalem Demister. removal top.



tower (vertical packed column washer) with integrated mistseparator and option demister
optionalem Demister. removal side.

sketch 2



Operating Instructions Radial Fan and Axial Fan

General Notes: Refer to "Operating Instructions General Notes"

In General: Fans are delivery machines for gaseous substances. They are made of plastic material according to the process conditions. Analogously, the running wheels are made of coated steel or plastic material.

Finish: Fans are constructed according to the chemical and physical requirements and the local conditions. Radial fans with volute, pipe-radial fans, channel-radial fans, and roof-radial fans are employed (sketch 1). Radial fans appear in two different casing finishes with 7 positions each (sketch 2). Pipe- and channel-radial fans are constructed according to the local conditions for horizontal or vertical set-ups. Axial fans correspond to pipe-radial fans in their construction.

Mounting: The fan must be installed tension free into the pipe system. Compression or tension stress upon the plastic boots/compensators are inadmissible. To guarantee access during service, a removable pipe of at least a length of 0,5m up to 1,0m depending of the fan size must be planned. For aerodynamic reasons a straight pipe must be planned with a length of at least 3 times of the pipe diameter for the suction side and the pressure side must be planned. In case this guideline is not kept, the situation must be coordinated with the Scheidt Ventilatoren company.

Test Run: Before employing the unit under service conditions, there has to be run a test of at least one hour. In the course of the test run, the fan has to be examined expertly if it operates smoothly and vibration-free, if it has the correct sense of rotation, and if the power consumption is admissible. Furthermore, the fan has to be closely linked with the connected pipe system. If necessary, screw connections must be tightened up. The test run must be protocolled and becomes part of the documentation. The documentation has to be archived for 10 years.

Operation: The fan may only be operated if the conditions given under "test run" are fulfilled, if the electric coverage has been executed by a professional, and if the V-belt does not show any damage. The condensate pipe has to be tube analogously and may not be blocked. The fan may only be operated with connected tubing.

Employment As Agreed: Employing the fan as agreed means delivering a gaseous medium if the fan is installed unstressed into an existing tubing system. The fan may only be used according to the task. The power limits in which the fan may be operated are shown on the nameplate. Regular inspection and routine maintenance also belong to the employment as agreed. Every other employment is not in accordance with the terms of contract. Changing the process conditions of the demister does not agree with the employment as agreed. The decision whether the demisters may be operated under altered process conditions is incumbent to Scheidt Ventilatoren GmbH and has to be confirmed by them in written.

General Construction: The general construction of the drive, from the motor to the running wheel, may be seen on the sheet "General Instructions".

First And Second Inspection: The first inspection has to be carried out after 10 hours in operation, the second after 50. The following points belong to the first and second inspection:

1. Straining the V-belts, controlling the pulley alignment, and controlling for illegal abrasion
2. Examining expertly the smooth and vibration-free running of the fan, motor, flange or block bearings
3. Controlling connected tubing whether is its tight or not, and have to be tightened with a torque of 5 Nm if necessary.

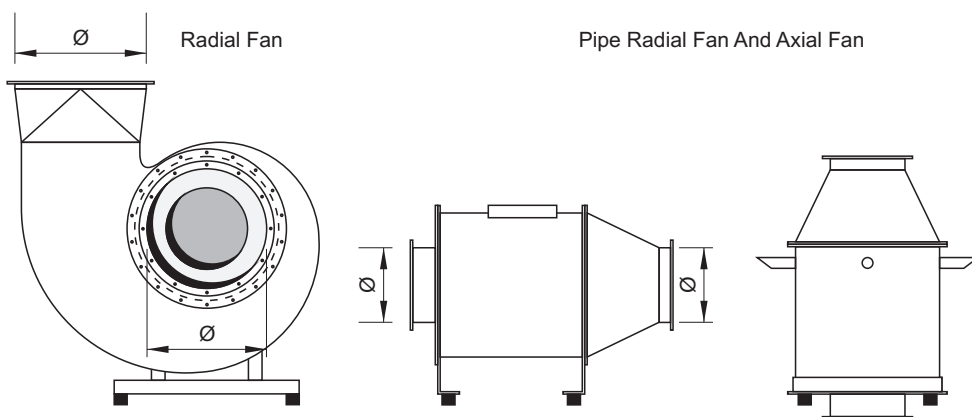
Cleaning: It is necessary to clean the fan regularly. In this case, the running wheel or the impeller have to be cleaned from detectable sediments.

Cleaning Interval: We cannot give a general cleaning interval since the operation conditions are individually different. The cleaning interval has to be determined empirically by examining expertly the running wheel after one week of operation and needs to be cleaned if necessary. The interval between two cleanings has to be regulated in a way that the running wheel's surface is not altered by dirtying. The cleaning intervals have to be protocolled. The data that have to be documented are at least as follows: cleaning date, stoppage time, person who carries out the cleaning (name and signature) and notes.

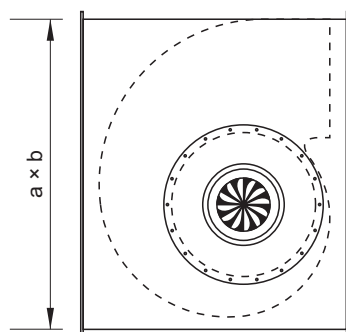
Maintenance And Inspection: The fans are maintenance-free, however, they have to be checked for detectable changes once per shift. V-belts have to be changed immediately after detecting abrasion with spare parts from Scheidt Ventilatoren GmbH. The lubricating plan is guilty for bearings that are lubricated again.

Removing / Installing / Altering: Removing and installing the running wheel, motor, flange or block bearing are only allowed with previous written permission from Scheidt Ventilatoren GmbH. Altering is not allowed.

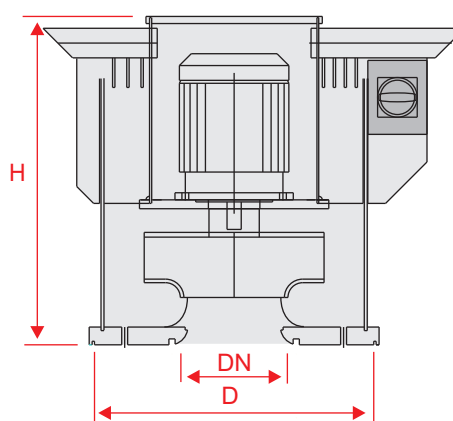
sketch 1



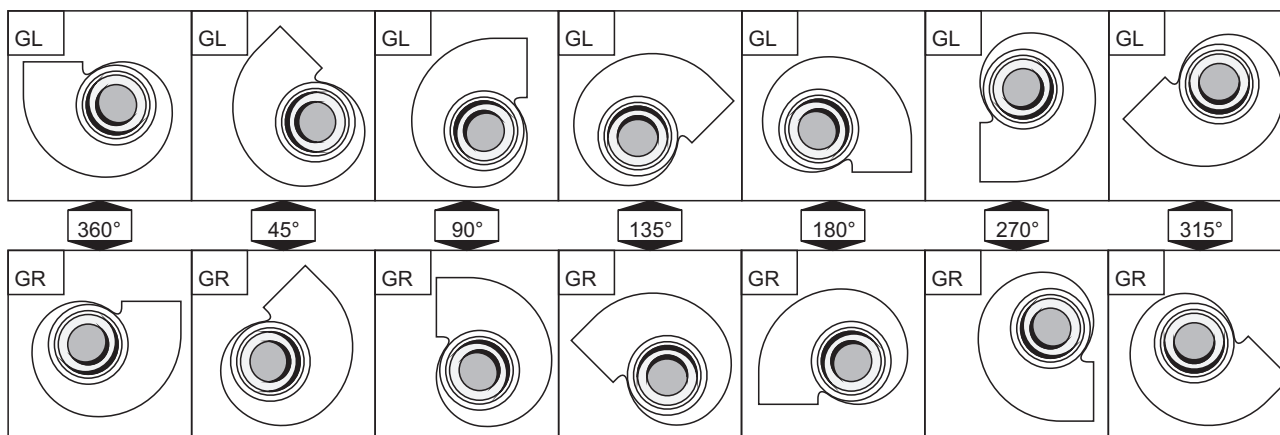
Channel Radial Fan



Roof Radial Fan



Sketch 2
showing the suction side



Operating Instructions Tubing, Channels and Moulding (referred to as pipe system)

General Notes: Refer to "Operating Instructions General Notes"

In General: The pipe systems are made according to their physical and chemical loads.

Finish: The pipe system will be manufactured according to the dimensions as to be agreed with the order.

Test Run: Before Employing the unit under service conditions, there has to be run a test of at least one hour. In the course of the test, all connections have to be checked for tightness. Screw connections have to be tightened if necessary. The test run must be protocolled and becomes part of the documentation. The documentation has to be archived for 10 years.

Operation: The pipe system may only be operated if it is installed unstressed and if there is sufficient Expansion compensation.

Employment As Agreed: The employment of the tubing system as agreed is the conducted discharge of exhaust air. The tubing system is only designed for the exhaust air agreed on in the contract. The maximum continuous operation temperature is 300 C or the operation the operation temperature agreed on in the contract. Every other employment is not in accordance with the terms of contract. Changing the process conditions of the demister does not agree with the employment as agreed. The decision whether the demisters may be operated under altered process conditions is incumbent to Scheidt Ventilatoren GmbH and has to be confirmed by them in written.

First Inspection: The first inspection has to be carried out after 50 hours in operation. In this course, it should be examined expertly and visually if there are possibly leakages and if the pump operates smoothly. All screws in the flange connections have to be examined expertly if they are tight in and have to be tightened with a torque of 5 Nm if necessary. Bolted joints from plastic material have to be solid.

Reinigung: The tubing system may only be cleaned with desalted water.

Cleaning Intervall: We cannot give a general cleaning interval since the operation conditions are individually different. The cleaning interval has to be determined empirically. The operator must decide by himself whether the grade of dirtying is tolerable or not. The cleaning intervals have to be protocolled. The data that that have to be documented are at least as follows: cleaning date, stoppage time, person who carries out the cleaning (name and signature) and notes.

Operating Instructions Sound Absorber

General Notes: Refer to "Operating Instructions General Notes"

In General: The sound absorbers are constructed according to their physical and chemical loads and their grade of absorption.

Finish: The sound absorbers are constructed according to the measures agreed on in the contract. pipe sound absorber and crank sound absorber are employed.

Probelauf: Before Employing the sound absorber under service conditions, there has to be run a test of at least one hour. In the course of the test, all connections have to be checked for tightness. Screw connections have to be tightened if necessary. The test run must be protocolled and becomes part of the documentation. The documentation has to be archived for 10 years.

Operation: The sound absorber may only be taken into operation when it is mounted tension free.

Employment As Agreed: The employment of the sound absorber as agreed is acoustic attenuation. The sound absorber is only designed for the exhaust air agreed on in the contract. The maximum continuous operation temperature is 300 C or the operation the operation temperature agreed on in the contract. Every other employment is not in accordance with the terms of contract. Changing the process conditions of the demister does not agree with the employment as agreed. The decision whether the demisters may be operated under altered process conditions is incumbent to Scheidt Ventilatoren GmbH and has to be confirmed by them in written.

First Inspection: The first inspection has to be carried out after 50 hours in operation. In this course, it should be examined expertly and visually if there are possibly leakages and if the pump operates smoothly. All screws in the flange connections have to be examined expertly if they are tight in and have to be tightened with a torque of 5 Nm if necessary. Bolted joints from plastic material have to be solid.

Cleaning: The pipe system may only be cleaned with desalted water.

Cleaning Interval: We cannot give a general cleaning interval since the operation conditions are individually different. The cleaning interval has to be determined empirically. The operator must decide by himself whether the grade of dirtying is tolerable or not. The cleaning intervals have to be protocolled. The data that that have to be documented are at least as follows: cleaning date, stoppage time, person who carries out the cleaning (name and signature) and notes.

Crank length	Insertion Loss per Crank For the Octave Mid-Band							
	63 [Hz]	125 [Hz]	250 [Hz]	500 [Hz]	1000 [Hz]	2000 [Hz]	4000 [Hz]	8000 [Hz]
1000	4	14	29	35	43	34	21	17
1250	5	15	35	37	45	38	24	19
1500	6	16	40	39	48	43	28	21

Operating Instructions for Level Switches NIS4

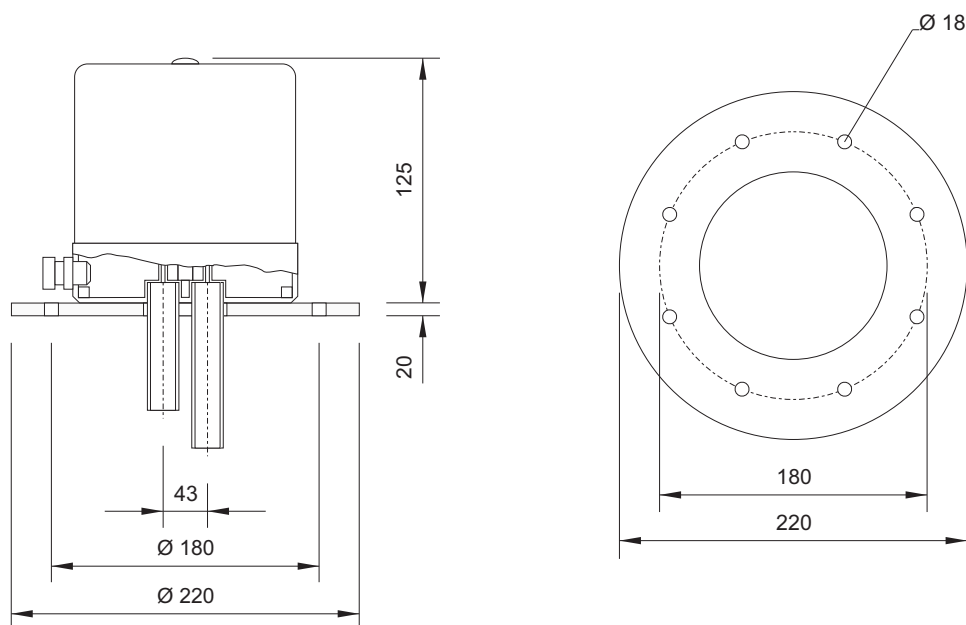
In General: The level switch NIS contains 1 to 4 membrane switches and the same number of dipped pipes connected to them for observing the liquid or Level height in pressure-free containers or open pits. They serve as signals in the case of shortcoming of liquid as well as in the case of exceeding a fixed Level height. However, it does not serve as overfilling security under §19 of the German WHG! If the liquid level rises, the air in the dipped pipes is compressed. If the pressure is increased by 100 mmWS, a jump switch is activated through the membranes and a signal is set. If the level drops by 50 mmWS at maximum, the air in the dipped pipes decompresses and the switch back is carried out. Due to the indirect measuring, the switch does not have contact to the medium. The liquid in the dipped pipes only increases slightly. For this reason, dirtying may almost be excluded. Due to the air absorption abilities of most liquids, the dipped pipes have to be vented regularly in order to avoid switching point displacement. The device is fastened above the container or the pit with a flange or rather, with a retaining plate. The dipped pipes end 100 mm at minimum or 5000 mm at maximum below the switching level provided for each one. The dipped pipe or the hose ends shall not be positioned in the area of the suction or filling connection.

Optional Equipment: Connecting a minimum compressor serves to stabilise the pressure in the dipped pipe, and also to maintain a constant switching point (see above, dipped pipe ventilation).

Materials: Casing, flange, retaining plates: polyvinyl chloride (PVC), polypropylene (PP); dipped pipes: polyvinyl chloride (PVC), polypropylene (PP), polyvinylidene fluoride (PVDF); membranes: NBR (perburane), FPM (vitoneA).

Technical Data: dipped pipes: DN 25 (d=32 mm)
 dipped pipe length: 150 mm at minimum, 9950 mm at maximum
 operation temperatures: PVC - 15 to +60° C, PP +10 to 80° C, PDVF -40 to +120° C
 container diameter: 106 mm, for 1 to 4 dipped pipes
 allowed ambient temperature (switch operating temperature): +70° C at maximum
 switching pressure: 50 to 100 mmWS
 switching back pressure: 20 mmWS at minimum
 switching tolerance: ± 10% of the respective switching pressure, however, ± 7.5 mmWS at minimum
 lowest switching pressure difference in the level area 50 to 200 mmWS: 30 mmWS (0.3 mbar)
 lowest switching pressure difference in the level area 200 to 10,000 mmWS: ± 15% of the switching pressure
 highest switching pressure difference in the level area 50 to 2000 mmWS: 80% of the switching pressure at maximum
 highest switching pressure difference in the level area 2000 to 10,000 mmWS: 40% of the switching pressure at maximum
 breaking capacity (according to VDE 0630): 6 A / 250 V, 50 Hz, ohmic
 1 A / 250 V, 50 Hz, inductive (a contact protection relays is necessary at I > 1 A)
 type make-and-break contact: two-way switch (1 break contact, 1 make contact)
 electric contact: AMP - flat plug 6.3 according to DIN 42648
 casing contact: PG 16
 type of protection: IP65

Start up: Before start up of NIS4 the membran boxes under the cover must be checked for firm seating (thread should be tightened by hand). Loose boxes can effect misfunctions. Should the switching points during start up not accord to the operational requirements, then pipes lengths must be adjusted either by shortening or lenthening with a PVC muff.



operating instructions regulating flaps

General Notes: Refer to "Operating Instructions General Notes"

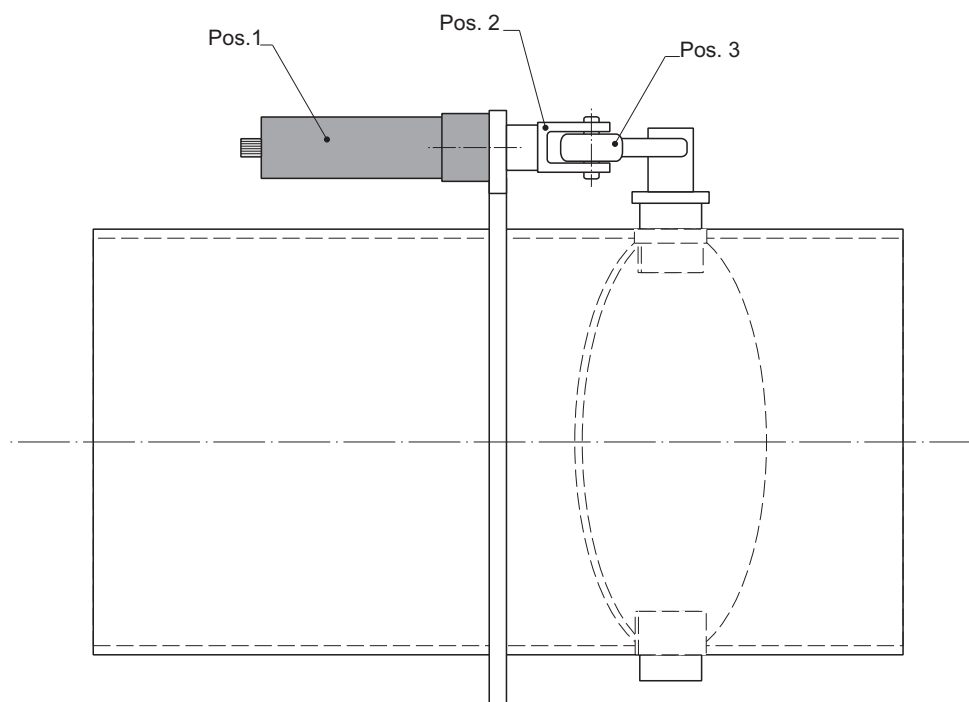
Cleaning: The pneumatic regulation flaps have to be checked for impurity in regular interval and to be cleaned if necessary. The pneumatic cylinder is maintenance-free. It is recommended to protect and to grease the movable parts with a preservation agent.

Cleaning Interval: A regular cleaning interval can't be relaxed, because the operating conditions are individual. The cleaning interval have to be determined empirically.

First Inspection: We recommend the first inspection after 100 operating hours.
Only use cleaning agents wich can't attack the material.
Don't use strong solvents.

Operating Pressure: Take care that the operating pressure doesn't exceed above 8 bar.

Security Instructions: The pneumatic regulating flaps are developed for acid-proofed work. So the staff have to concur with the accident prevention rules. Only inspect the regulation flaps when there is no compressed air in the system.

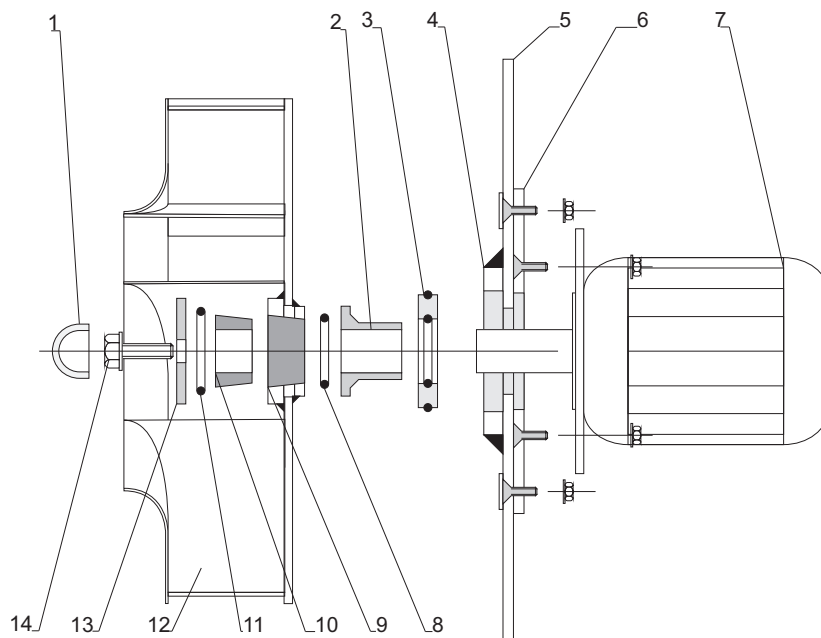


Pos.1: pneumatic cylinder
Pos.2: clevis
Pos.3: eye bolt

**General Construction
Direct Drive Radial Fan (Steel Running Wheel)**

Note: The carried out set-up may differ from the presentation

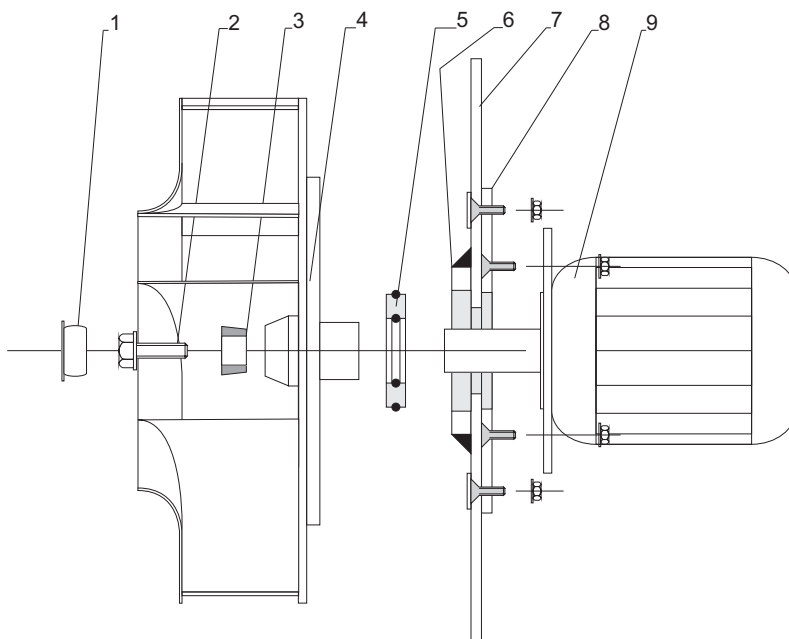
- 1 cover cap
- 2 collar
- 3 gasket
- 4 gasket accomodation
- 5 casing back
- 6 reinforcing plate
- 7 motor
- 8 gasket
- 9 welding hub
- 10 bushing
- 11 gasket
- 12 fan wheel
- 13 cover disc
- 14 fixing bolt



**General Construction
Direct Drive Radial Fan (Fan Wheel Made of Plastic Material)**

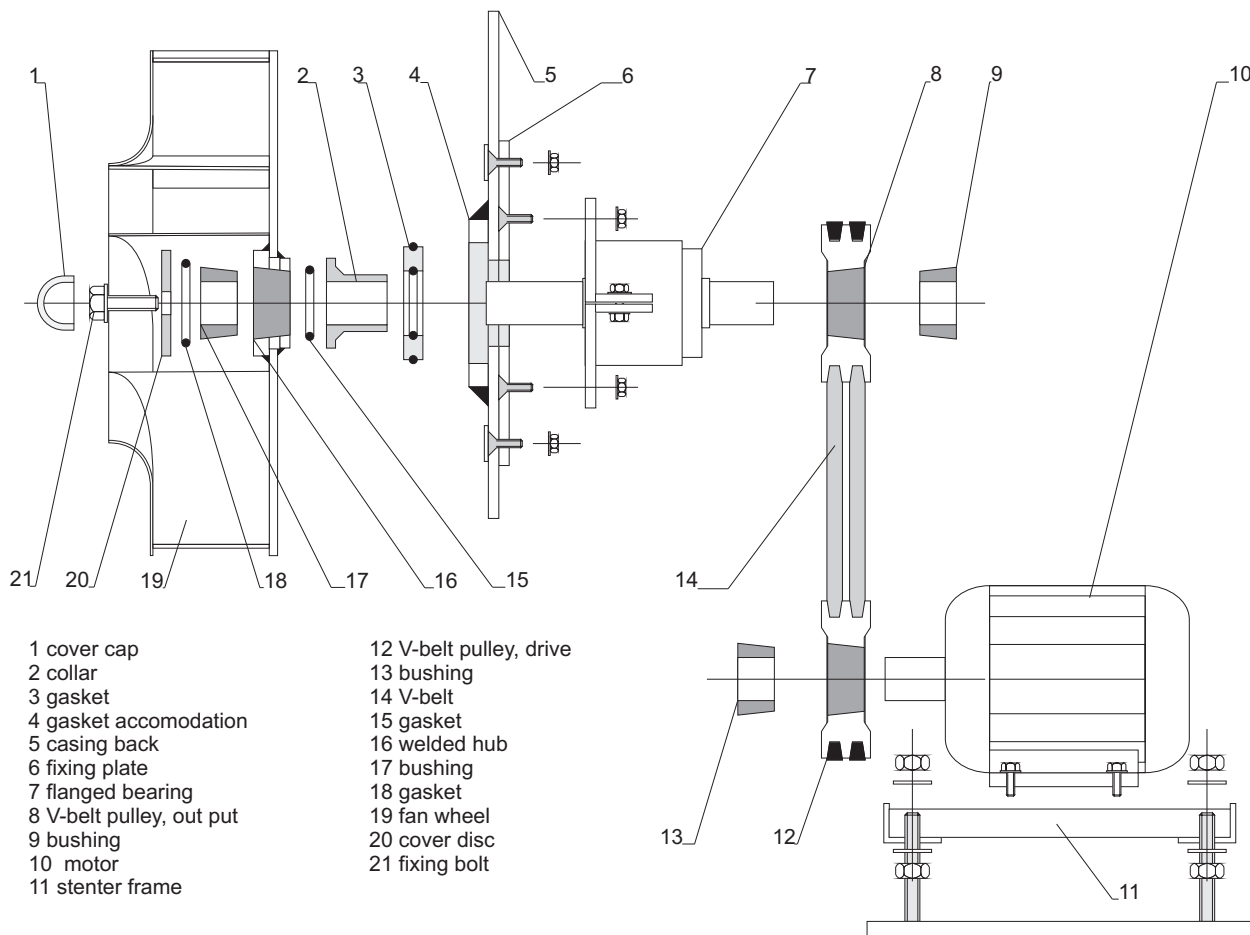
Note: The carried out set-up may differ from the presentation

- 1 cover plug
- 2 fixing bolt
- 3 bushing
- 4 afn wheel
- 5 gasket
- 6 gasket accomodation
- 7 casing back
- 8 reinforcing plate
- 9 motor



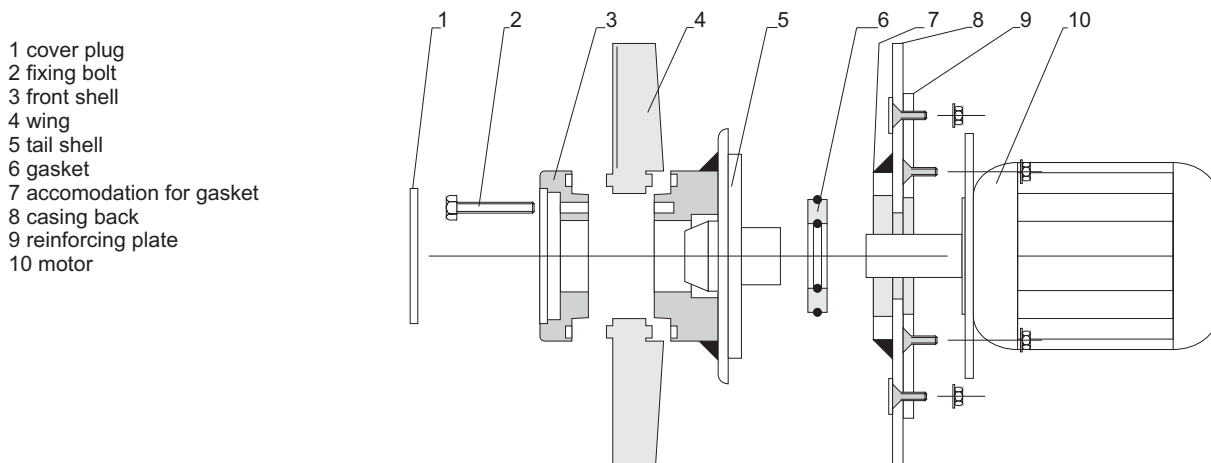
**General Construction
Indirect Drive Radial Fan (Steel Fan Wheel)**

Note: The carried out set-up may differ from the presentation



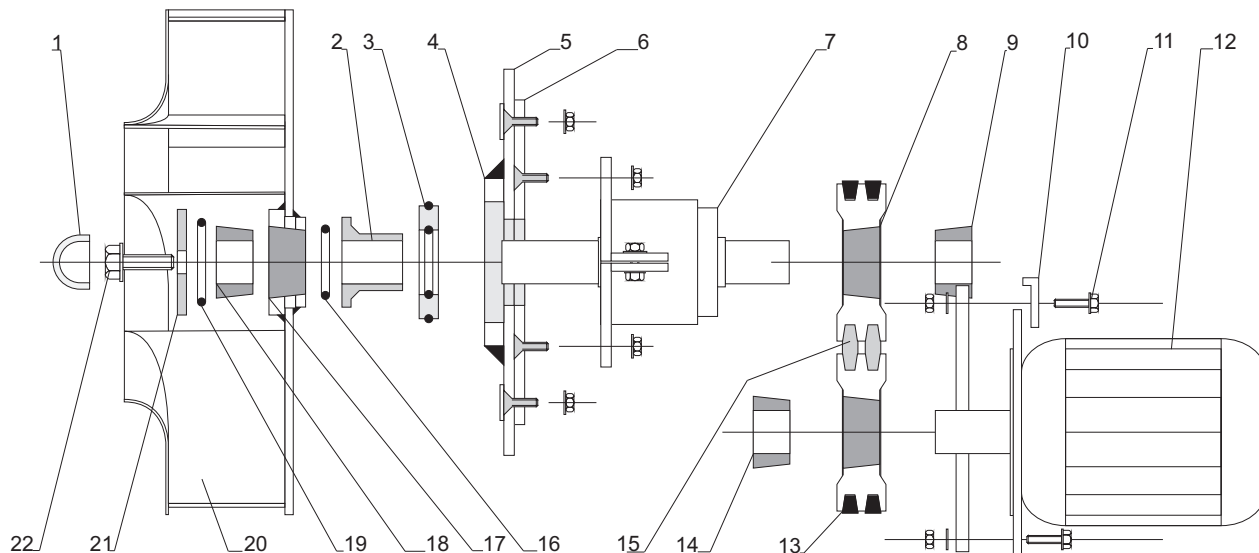
**General Construction
Direct Drive Axial Fan**

Note: The carried out set-up may differ from the presentation



**General Construction
Indirect Drive Radial Fan (Steel Running Wheel)**

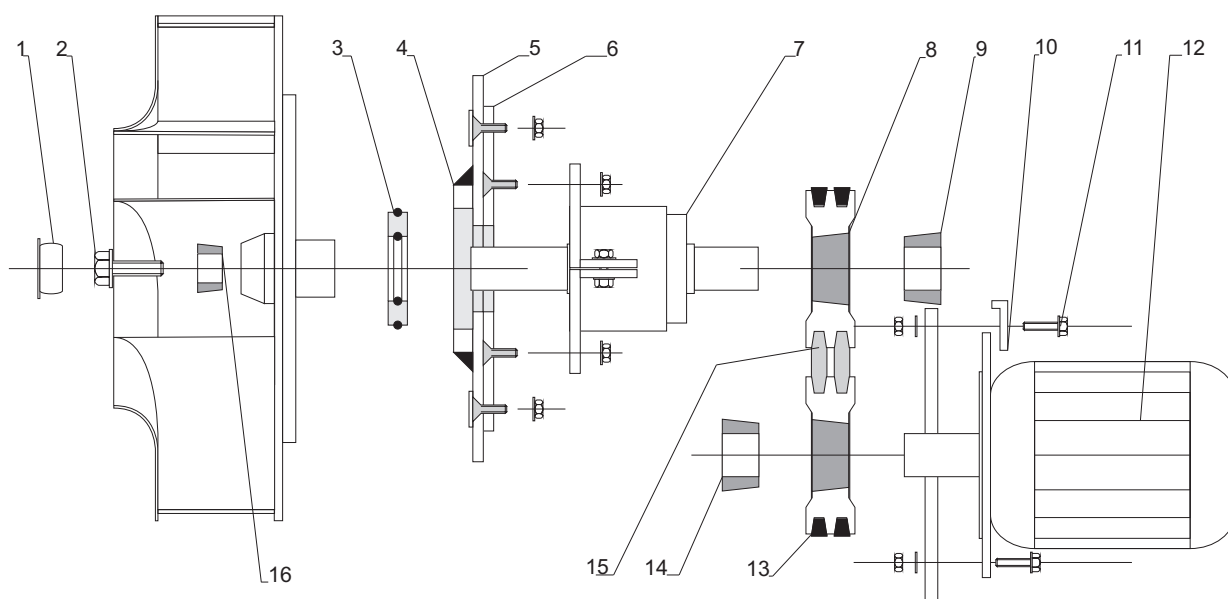
Note: The carried out set-up may differ from the presentation



- | | | |
|-------------------------|-------------------------|----------------|
| 1 cover cap | 9 bushing | 17 welded hub |
| 2 collar | 10 clamp | 18 bushing |
| 3 gasket | 11 fixing bolt, motor | 19 gasket |
| 4 gasket accomodation | 12 motor | 20 fan wheel |
| 5 casing back | 13 V-belt pulley, drive | 21 cover disc |
| 6 fixing plate for 7 | 14 bushing | 22 fixing bolt |
| 7 flanged bearing | 15 V-belt | |
| 8 V-belt pulley out put | 16 gasket | |

**General construction
Indirect drive of radil fan (plastic fan wheel)**

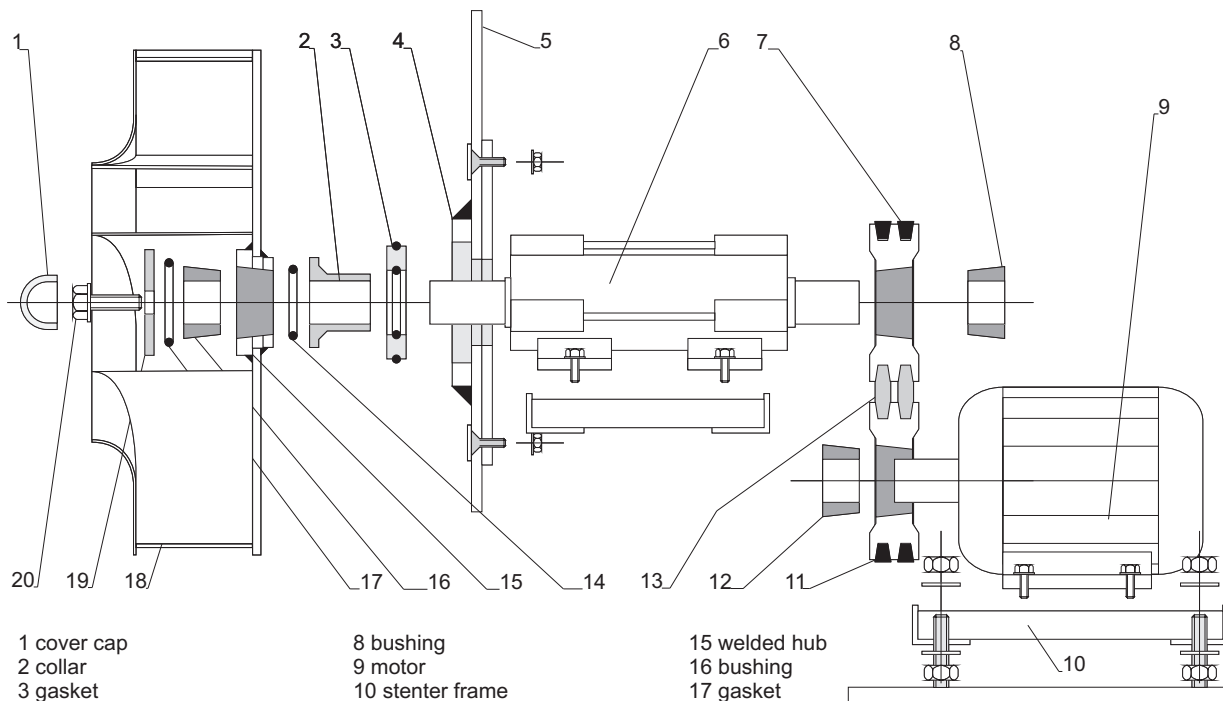
Note: The carried out set-up may differ from the presentation



- | | | |
|-----------------------|--------------------------|-------------------------|
| 1 cover plug | 7 flanged bearing | 13 V-belt pulley, drive |
| 2 fixing bolt | 8 V-belt pulley, out put | 14 bushing |
| 3 gasket | 9 bushing | 15 V-belt |
| 4 gasket accomodation | 10 clamp | 16 bushing |
| 5 casing back | 11 fixing bolt, motor | |
| 6 fixing plate for 7 | 12 motor | |

**General Construction
Indirect Drive Radial Fan (steel fan wheel)**

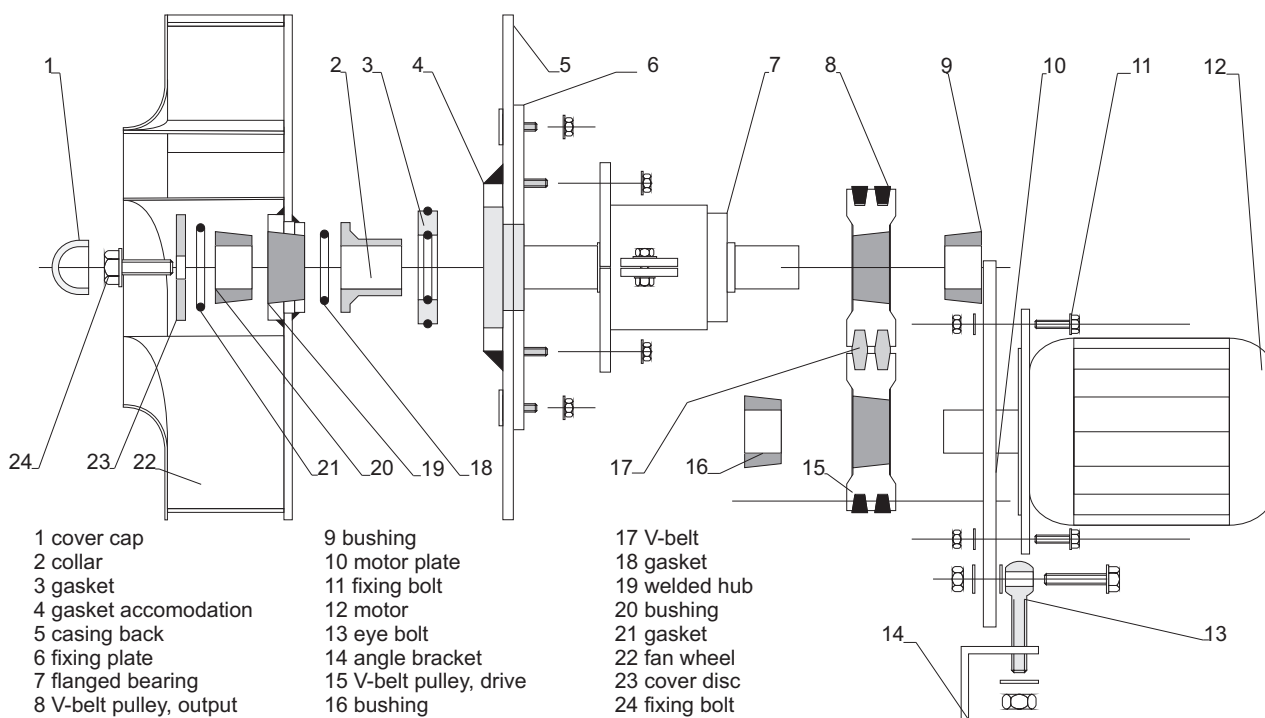
Note: The carried out set-up may differ from the presentation



- | | | |
|--------------------------|-------------------------|----------------|
| 1 cover cap | 8 bushing | 15 welded hub |
| 2 collar | 9 motor | 16 bushing |
| 3 gasket | 10 stenter frame | 17 gasket |
| 4 gasket accomodation | 11 V-belt pulley, drive | 18 fan wheel |
| 5 casing back | 12 bushing | 19 cover disc |
| 6 block bearing | 13 V-belt | 20 fixing bolt |
| 7 V-belt pulley, out put | 14 gasket | |

**General Construction
Indirect Drive Radial Fan (steel fan wheel)**

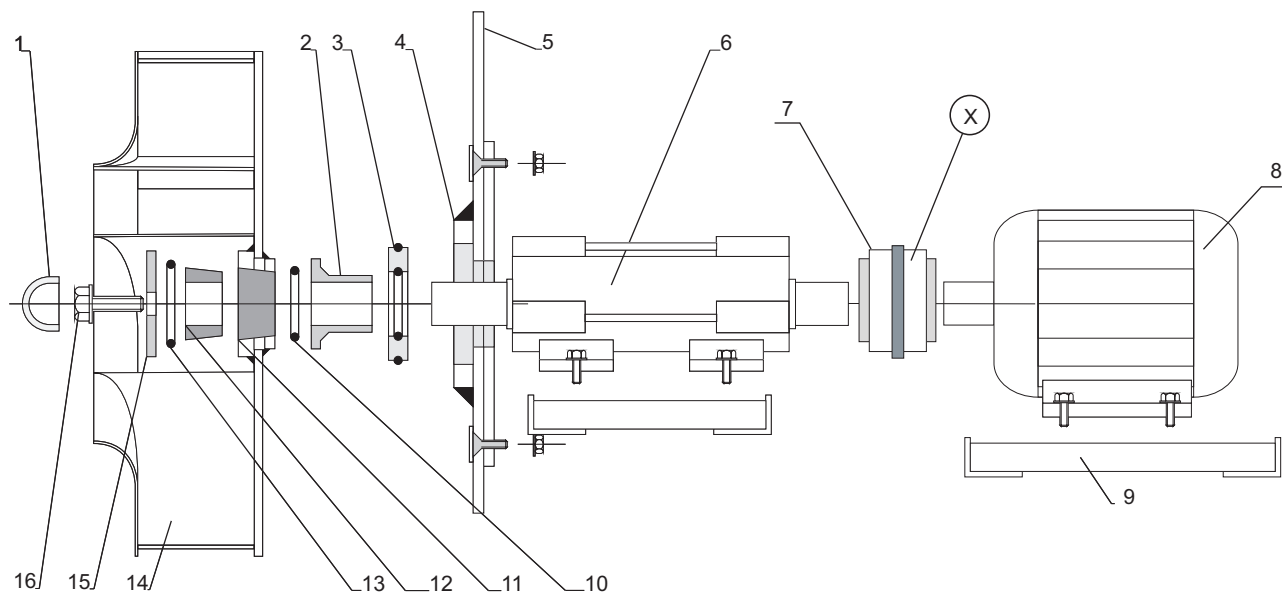
Note: The carried out set-up may differ from the presentation



- | | | |
|-------------------------|-------------------------|----------------|
| 1 cover cap | 9 bushing | 17 V-belt |
| 2 collar | 10 motor plate | 18 gasket |
| 3 gasket | 11 fixing bolt | 19 welded hub |
| 4 gasket accomodation | 12 motor | 20 bushing |
| 5 casing back | 13 eye bolt | 21 gasket |
| 6 fixing plate | 14 angle bracket | 22 fan wheel |
| 7 flanged bearing | 15 V-belt pulley, drive | 23 cover disc |
| 8 V-belt pulley, output | 16 bushing | 24 fixing bolt |

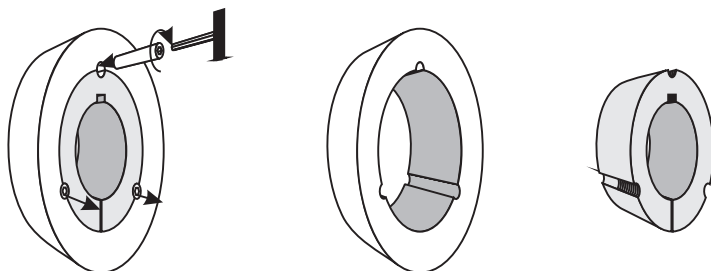
General Construction
Direct Drive Radial Fan (steel fan wheel)

Note: The carried out set-up may differ from the presentation

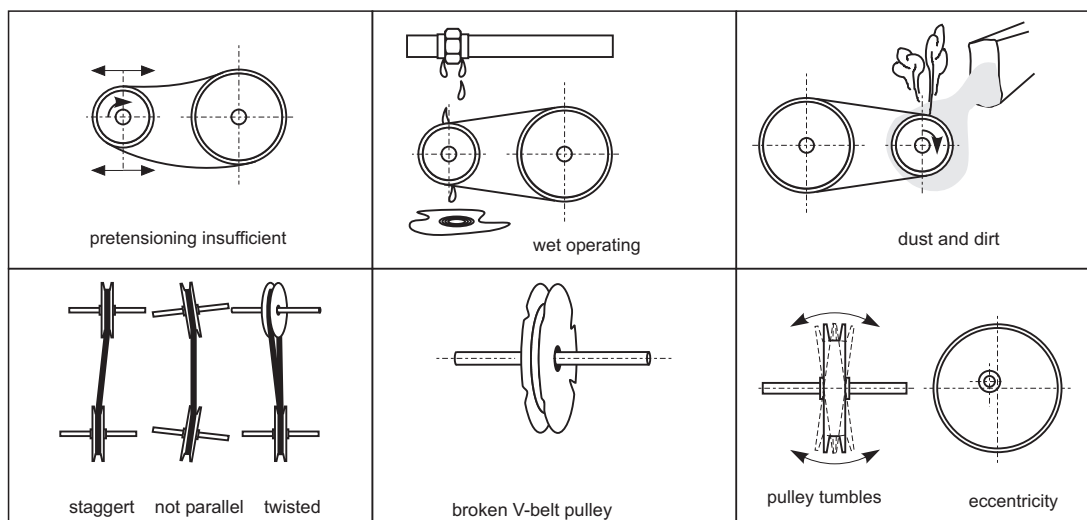


- | | | |
|------------------------|-----------------|----------------|
| 1 cover cap | 8 motor | 15 cover disc |
| 2 collar | 9 stenter frame | 16 fixing bolt |
| 3 gasket | 10 gasket | |
| 4 gasket accommodation | 11 welded hub | |
| 5 casing back | 12 bushing | |
| 6 block bearing | 13 gasket | |
| 7 coupling | 14 fan wheel | |

X = see attached description of coupling

bushing


bushing typ.	1108 1108	1310 1315	1210 1215	1610 1615	2012 2017	2517 2525	3020 3030	3535	4040	4545	5050
torque [Nm]	5,7	20	20	20	31	49	92	115	172	195	275

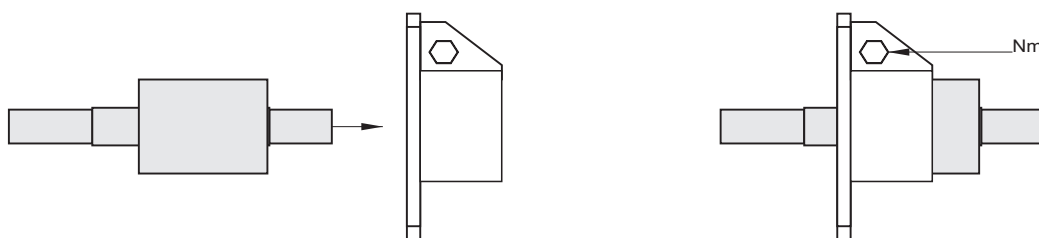
illegal Operating Conditions

Riemenspannung

pulley typ	diameter	first assembly	after run in
	smal pulley mm	N	N
SPZ	bis 71	200	150
XPZ	71 - 90	250	200
	90 - 125	350	250

pulley typ	diameter	first assembly	after run in
	smal pulley mm	N	N
SPA	bis 100	350	250
XPA	100-140	400	300
	140-200	500	400

pulley typ	diameter	first assembly	after run in
	smal pulley mm	N	N
SPB	bis 160	650	500
XPB	160 - 224	700	550
	224 - 355	900	700

pulley typ	diameter	first assembly	after run in
	smal pulley mm	N	N
SPC	bis 250	1000	800
XPC	250 - 355	1400	1100
	355 - 560	1800	1400

tightening torque for flanges


flange DFLS-SO	15/14	20/19	25/24	30/28	35/32	40/35	50/45	60/55
tightening-torque [Nm]	15	20	25	30	35	40	50	60

Weight of fan

The indications of weight serve as orientating help

BN3-224	82 kg	SN3-200	85 kg	SK7	6 kg
BN3-250	97 kg	SN3-224	100 kg	SK11	7 kg
BN3-280	97 kg	SN3-250	100 kg	SL-164	10 kg
BN3-315	107 kg	SN3-280	110 kg	SL-184	12 kg
BN3-355	147 kg	SN3-315	150 kg	SL-204	17 kg
BN3-400	167 kg	SN3-355	170 kg	SL-254	20 kg
BN3-450	192 kg	SN3-400	195 kg	SL-314	25 kg
BN3-500	257 kg	SN3-450	260 kg	SD-160/180	15 kg
BN3-560	297 kg	SN3-500	300 kg	SD-200	20 kg
BN3-630	367 kg	SN3-560	370 kg	SD-250	30 kg
BN3-710	447 kg	SN3-630	450 kg	SD-315	55 kg
BN3-800	587 kg	SN3-710	590 kg	SD-355	80 kg
BN3-900	687 kg	SN3-800	690 kg	SD-400	110 kg
BN3-1000	867 kg	SN3-900	870 kg	SD-450	140 kg
BN3-1120	1077 kg	SN3-1000	1080 kg	SD-500	170 kg
BN3-1250	1297 kg	SN3-1120	1300 kg	SRN3-224	50 kg
BM4-200	72 kg	SM4-180	75 kg	SRN3-250	55 kg
BM4-224	87 kg	SM4-200	90 kg	SRN3-280	65 kg
BM4-250	97 kg	SM4-224	100 kg	SRN3-315	110 kg
BM4-280	117 kg	SM4-250	120 kg	SRN3-355	125 kg
BM4-315	162 kg	SM4-280	165 kg	SRN3-400	140 kg
BM4-355	182 kg	SM4-315	185 kg	SRN3-450	200 kg
BM4-400	227 kg	SM4-355	230 kg	SRN3-500	220 kg
BM4-450	287 kg	SM4-400	290 kg	SRN3-560	270 kg
BM4-500	342 kg	SM4-450	345 kg	SRN3-630	340 kg
BM4-560	447 kg	SM4-500	450 kg	SRN3-710	460 kg
BM4-630	517 kg	SM4-560	520 kg	SRN3-800	540 kg
BM4-710	607 kg	SM4-630	610 kg	SRM4-224	55 kg
BM4-800	742 kg	SM4-710	745 kg	SRM4-250	70 kg
BM4-900	877 kg	SM4-800	880 kg	SRM4-280	125 kg
BM4-1000	1287 kg	SM4-900	1290 kg	SRM4-315	140 kg
BH4-160	87 kg	SH4-140	90 kg	SRM4-355	170 kg
BH4-180	97 kg	SH4-160	100 kg	SRM4-400	215 kg
BH4-200	107 kg	SH4-180	110 kg	SRM4-450	250 kg
BH4-224	122 kg	SH4-200	125 kg	SRM4-500	330 kg
BH4-250	137 kg	SH4-224	140 kg	SRM4-560	400 kg
BH4-280	177 kg	SH4-250	180 kg	SRM4-630	455 kg
BH4-315	212 kg	SH4-280	215 kg	SRH4-200	85 kg
BH4-355	297 kg	SH4-315	300 kg	SRH4-224	95 kg
BH4-400	342 kg	SH4-355	345 kg	SRH4-250	130 kg
BH4-450	432 kg	SH4-400	435 kg	SRH4-280	145 kg
BH4-500	502 kg	SH4-450	505 kg	SRH4-315	205 kg
BH4-560	567 kg	SH4-500	570 kg	SRH4-355	240 kg
BH4-630	732 kg	SH4-560	735 kg	SRH4-400	320 kg
BH4-710	847 kg	SH4-630	850 kg	SRH4-450	365 kg
BH4-800	1177 kg	SH4-710	1180 kg	SRH4-500	410 kg



Scheidt since 1984
Ventilatoren GmbH



EG-Declaration of Conformity

according to EG-machinery Directive 2006/42/EG

we, the Scheidt Ventilatoren GmbH
Löhestraße 57
D-53737 Hennef (Sieg)

declare under sole responsibility, that the type of machine
**SN, SM, SH, BN, BM, BH, BBN, BBM, BBH, SAX, SAF, SL, SK, SRN, SRM,
SRH, SD, VL**

as a separate component within an installation with the
following standards or normative documents:

DIN EN 14461	edition 10.2002
DIN EN ISO 12100:2010	edition 04.2011
DIN EN ISO 13857	edition 06.2008
DIN EN 60204-1	edition 06.2007
VDMA 24167	edition 10.1994

machinery Directive: 2006/42/EG

EMV-guideline (electromagnetic compatibility): **2014/30/EU**

NSR (Low Voltage Directive): **2014/35/EU**

excluding the responsibility for the customer which are added parts

Scheidt Ventilatoren GmbH

M. Scheidt, Geschäftsführer
Hennef den 01.01.2010



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