MIETZSCH

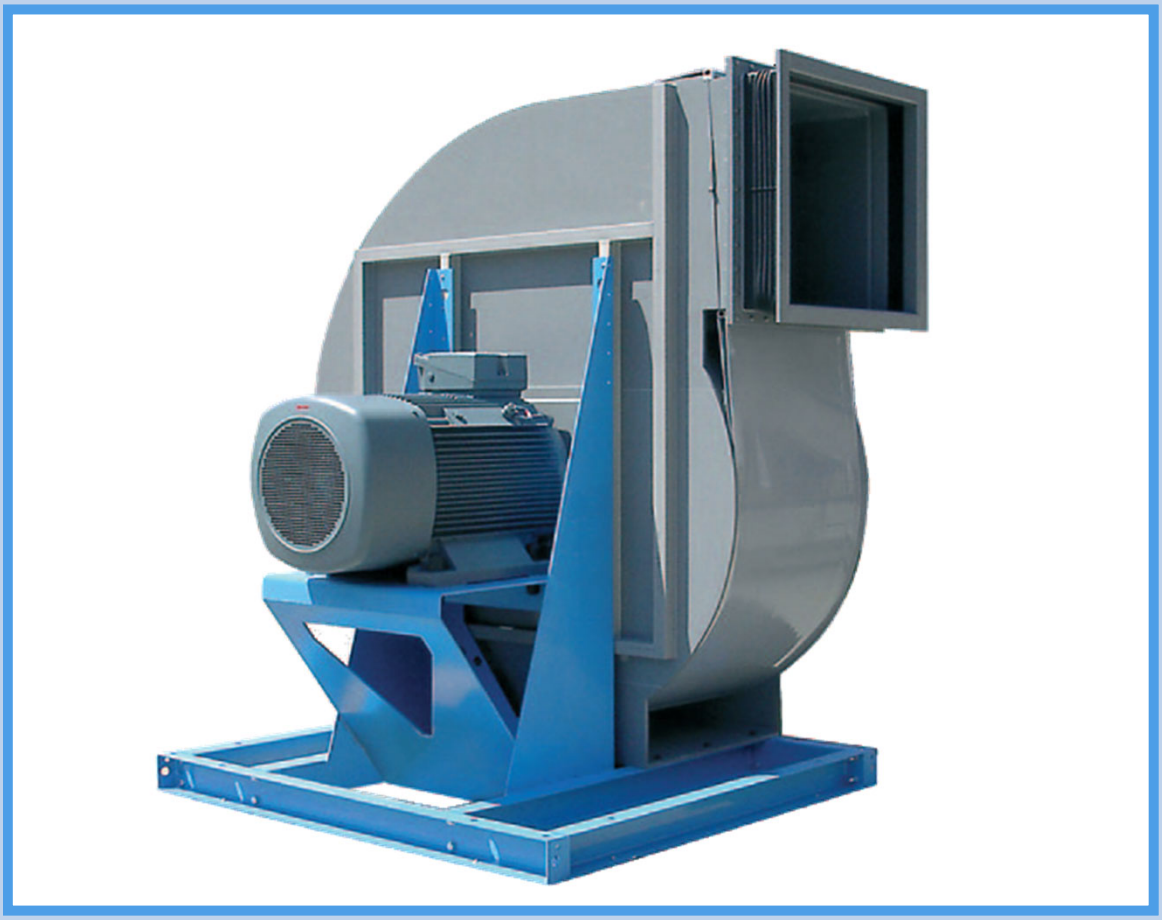
GmbH Lufttechnik Dresden

User information

RADIAL FAN

SERIES VRE 100 ... 1000

direct-driven



Plastic radial fans
series VRE 100 ... 1000 direct-driven

For use in all areas of ventilation technology

High chemical resistance through use of plastics
(PVC, PPs, PE, PVDF, GFRP, electrically conductive plastics)

High efficiency and low noise emission

Volumetric flow rate	up to 145,000 m3/h
Pressure increase	up to 6,200 Pa

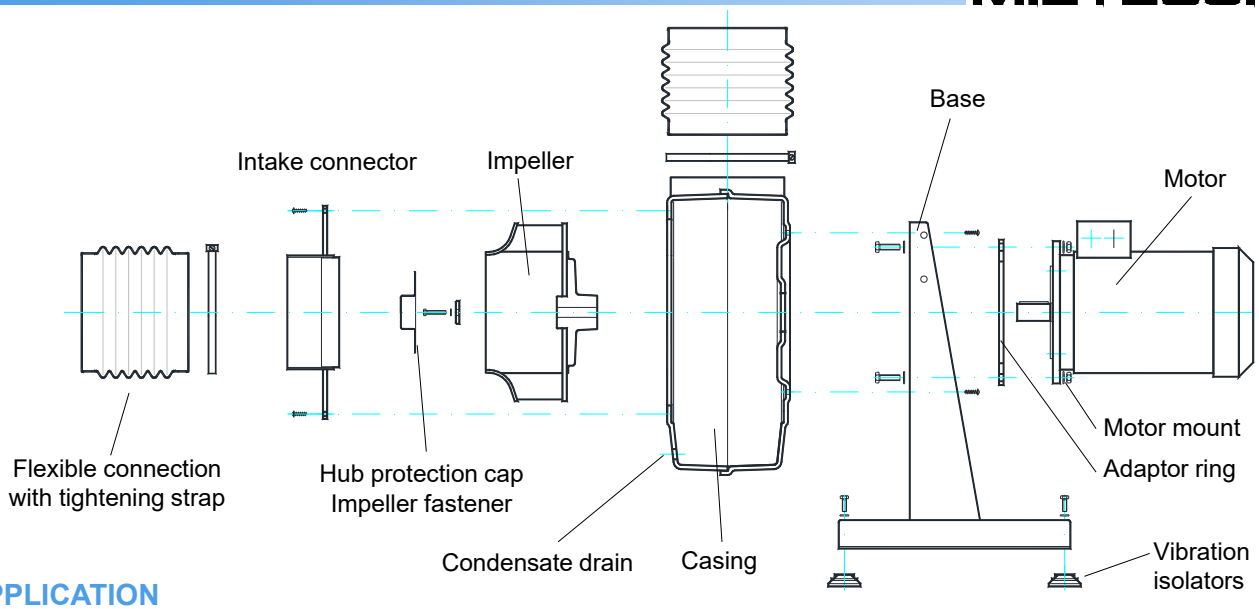
Performance scaling using 14 sizes and 4 impeller types

Casing position L and R

Explosion protected models in accordance with Directive 2014/34/EU (ATEX) 

Versatile casing connections

Extensive range of ventilation and electrical accessories



APPLICATION

Radial fans of the series VRE have a high corrosion resistance thanks to their use of high-grade plastics and are thus preferred for applications such as fume extraction of process gases in the chemical/pharmaceutical industry as well as ventilation of laboratories, battery rooms, pickling baths, scrubbers, electroplating units and agricultural facilities, etc.

TECHNICAL DESCRIPTION

The fans main components are the impeller, spiral casing, casing connections, base and drive motor. The motor is directly flanged horizontally onto the base and is completely separate from the flow. The impeller sits on the motor shaft and is driven directly. Steel parts such as screws, hub and hub connection are protected from corrosion by means of plastic covers or, alternatively, resistant steel is used.
The aerodynamic placement of the fans is state of the art and thus achieves high efficiency, low noise emissions and high power density.
Every fan is delivered as a complete ready-to-use assembly unit. Vibration isolators adjusted in size and numbers, elastic connections on the pressure and suction sides and a condensate well are included in the standard scope of delivery.

Design characteristics

Impeller: To cover a large performance spectrum, there are four impeller versions:
Type 731 with backward curved vanes
Type 733 with backward curved vanes
Type 734 with forward curved vanes
Type 673 with backward curved vanes
Special impellers are used for special applications. For example, impellers with radially arranged vanes are advantageous if the medium to be conveyed contains strongly adhesive substances.
The impellers are manufactured using modern joining technologies; dynamic balancing takes place in accordance with ISO 1940.
Materials: PVC, PPs, PVDF, GFRP (for strict requirements), electrically conductive plastics (EX fans)

Casing: The casings are welded together tightly using deep-drawn half shells (size 100 … 250 made of PVC or PPs) or straight side walls and a jacket. The suction side connection diameter is always identical to the nominal size of the fan. You can open the casing on the suction side for cleaning.
There is always a condensate drain at the lowest point.
The shaft passage is sealed sufficiently for many applications by means of the back side vanes on the impeller. In case of higher sealing requirements, an additional seal is used on the impeller/casing (see SHAFT SEAL section p. 04).
In case of high security requirements splinter protection or additional GFRP reinforcement is necessary.
A wide range of casing connections is available for connecting ventilation ducts.
Caution! Connected system components must not exert any mechanical loads on the fan.
Materials: PVC, PPs, PP, PE, PVDF, GFRP (see “special designs”, p. 66),
Electrically conductive plastics PEX, PPsX, GFRPX (EX fans)

Base: stable welded structure made of steel panels; galvanised or varnished depending on the size; can be supplied in stainless steel on request.

Motors: Standard motor: 3~400V/50Hz, protection level IP54, type B5 (in special cases B14 or B3)
Single phase motors 230V/50Hz, motors with special voltages and a different level of protection
Pole-changing and explosion protected motors
Motors with thermal winding protection (PTC thermistor) --> special design **TS**.
Motors with integrated frequency converter --> special design **MFU**

OPERATING CONDITIONS

perm. ambient temperature: -30 °C ... 40 °C (for EX motors -20 °C ... 40 °C)
perm. temperature of medium: -30 °C ... 40 °C
Higher temperatures are only permissible for certain sizes, materials and rotation speeds and only after consultation with the manufacturer.

The materials used feature high **resistance to** many **chemical** substances. Nevertheless, even plastic materials are susceptible to attack by certain chemical substances. The following factors play a role here:

Chemical composition and concentration of the conveyed medium
Temperature and exposure time
Mechanical load and residual tension from processing

In many application fields, e.g. in laboratories, chemical stores, agricultural facilities and moisture-laden processes, good experience has been made with "standard materials" such as PVC or PPS, which can generally be used without problems. Critical applications include process engineering fields such as surface finishing, pickling units, process exhaust air in microelectronics etc.
In order to select the most suitable material, the intended use of the fan and the type of medium must always be stated in requests for quotation or orders.

Media containing small amounts of dust particles can also be conveyed; however increased wear is to be expected.

Note regarding **outdoor use**: Avoid exposing the fan to intensive UV radiation
Plan weather protection for the motor
Consider ambient conditions when selecting materials

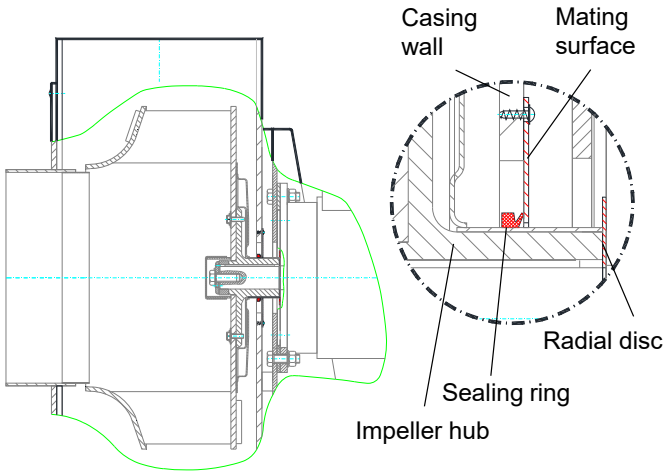
Work area: The fans work stably in the entire area of the depicted characteristic. Operation at lower flow rates is permissible but very uneconomical. Use at higher flow rates may overload the motor (in particular with type 734) and must be avoided.
Parallel connection: always possible for type 731, but only in consultation with the manufacturer for type 734
Series connection: only permissible after consultation with the manufacture (increased casing pressure)

SHAFT SEAL

By default, the VRE radial fans are equipped with rear vanes mounted to the rear hub cap. This ensures that outside air is constantly drawn in via the minimised gap on the shaft passage if the

suction side loss of pressure is larger than 2/3 of the overall loss of pressure.

Hence, you should always try to arrange components with high losses of pressure such as washers, filters, eliminators etc. before the fan, i.e. on the suction side.



Genügt diese "Aerodynamische Gehäuseabdichtung" nicht, z.B. wenn die Gefahr besteht, dass bei Stillstand aggressives Gas austreten kann, so wird eine Wellendichtung eingesetzt.

Bei der **Sonderausführung GD** wird ein Dichtring mit einer axial wirkenden flexiblen Dichtlippe auf dem Nabenkörper befestigt.
Die in die Gehäusewand eingesetzte Gegenlauffläche besteht aus einem Werkstoff mit guten Gleiteigenschaften (Edelstahl oder z.B. bei Einwirkung von Salzsäure, Chromsäure, Flußsäure usw. aus einem speziellen Kunststoff).

Diese Dichtung wird bei hohen Forderungen an die Gasdichtheit und bei relativ trockener Abluft verwendet und zeichnet sich durch eine hohe Standfestigkeit aus.

In case of very high sealing requirements, in particular when there is a lot of humidity or condensate, there are various special seals such as sealing gas seals, labyrinth seals etc. Please consult the manufacturer in relation to this.

SPECIAL DESIGNS and ACCESSORIES (for more information, see p. 67 of this brochure)

Cleaning hatch, splinter protection, weather protection for the motor, additional connections for condensate drain, stainless steel base, suction and blow out protection grids,
Air conducting parts: Pipes, ducts, arches, dampers, exhaust air hoods etc., pipe and splitter attenuators,
Electric accessories: Repair switch, motor protection switch, pole switch, complete fan controls,
frequency converter (also with pressure and volumetric flow control); air-flow monitor.

EXPLOSION PROTECTION

Directive 2014/34/EU **(ATEX)** re-regulates explosion protection for non-electrical devices as of 29/03/2014. Aside from complying with design and safety regulations as per DIN EN 14986 and DIN EN ISO 80079, the fan must be assigned to the respective protection type and be marked accordingly. The manufacturer must provide proof of compliance.

Explosion hazard areas are found in the chemical industry, gasworks, coking plants, painting facilities, fuelling stations, sewage treatment plants, and laboratories, etc.

Requirements for an explosion are
- flammable substance (e.g. gas, dust)
- sufficient oxygen (air)
- source of ignition (sparks, fire, hot surfaces, electrostatic discharge)

The following measures must be implemented in areas with a potential explosion hazard:
- An explosive atmosphere is prevented from developing
- Avoidance of sources of ignition
- Measures to weaken the deleterious effects of an explosion

In many cases, an efficient and monitored ventilation system is sufficient to prevent the formation of an ignitable atmosphere and thus an explosion hazard.

The protection requirements for a fan are based on the probability of occurrence of an explosive atmosphere in the medium and/or the environment. There are three types of explosion hazard zone:

Explosion hazard	Hazard zone	Avoidance of sources of ignition	Category acc. to ATEX
Continuous or long-term	Zone 0	that are very unlikely to occur	1
Occasional	Zone 1	that are likely to occur frequently	2
Only rarely and briefly	Zone 2	During routine operation	3

Which protection is required and the additional requirements to be observed is the responsibility of the system operator or the relevant supervisory authority. This means that the customer's order must specify the protection the fan is to have.

The VRE fans are supplied for the following ignition protection types:

Zone 1: CE Ex II 2G Ex h IIB+H2 T3 Gb

Zone 2: CE Ex II 3G Ex h IIB+H2 T3 Gc

- Gc — equipment protection level Zone 2 = cat. 3G
- T3 — temperature class T3 (ignition temperature of gas > 200 °C)
- IIB+H2 — explosion group of gases IIB+H2 (IIA and H2 included, IIC not included)
- h — non-electrical equipment
- 3G — category (3G = gases of zone 2)
- II — Equipment-group II (use in mining not permissible)

Use in Zone 0 is not possible as a matter of principle. Gases of explosion group IIC (except hydrogen), gases with an ignition temperature below 200°C as well as flammable dusts are also excluded.

In the rating, the internal (medium conveyed) and external (environment) areas are distinguished in general. Depending on the hazard zone, certain design variants are prescribed. Explosion protected devices (motors, switches etc.) are used and electrically conductive plastics (preferably conductive and flame retardant polypropylene --> PPsX). Basically, this results in the following ratings:

Hazard zone		MIETZSCH	Motor		Impeller/casing
internal	external	Designation	without converter	with converter	material
Zone 2	Zone 2	Z2Z2	Ex eb II, Ex ec II	Ex db (eb) II, Ex ec II	not conductive
Zone 2	none	Z2Z3	Ex eb II, Ex ec II, Standard	Ex ec II, Standard	not conductive
Zone 1	Zone 1	Z1Z1	Ex eb II	Ex db (eb) II	conductive
Zone 1	Zone 2	Z1Z2	Ex eb II	Ex db (eb) II	conductive

Special requirements for operation on the frequency converter
Motors with increased safety Ex eb II are not approved for converter operation: Pressure-resistant encapsulated Ex db eb II motors can run on the converter if they are equipped with winding protection (design TS).
If there is no EX zone on the outside and fan and installation location meet certain design requirements, standard motors may also be used which can then also be operated with a converter.

EXPLANATIONS REGARDING THE TYPE DESIGNATION

VRE 250 / 731 W 1450 - TS - GD - 090 L - PE/PPs

Fan (radial, single-sided suction)

Nominal size (suction diameter/mm)

Impeller type
- **731** - curved backwards
- **733** - curved backwards
- **734** - curved forwards
- **673** - curved backwards

(Other impeller types are also possible as a special design)

Direct drive

Rated speed rpm
(higher speed for pole changing motors)

Short designation of the special designs

E	= single-phase operation
TS	= with thermal winding protection (PTC thermistor)
P1	= pole-changing motor with rpm halving (Dahlander) e.g. 1,450 P1 = 1,450/710 rpm
P2	= pole-changing motor with separate winding e.g. 1,450 P2 = 1,450/950 rpm (switch to next lower rpm)
EX	= with explosion protected motor Ex eb II T3
EXde	= with explosion protected motor Ex db eb IIC T4
ZiZo	= ex protected fan for zone i=inside and o=outside e.g. Z1Z2 = inside zone 1 and outside zone 2
GD	= gastight, shaft passage technically gastight
GDS	= high casing tightness with humid exhaust air
DD	= triangular motor fastening for converter operation at 3x230V (with mounted repair switch)

Casing position/direction of rotation (when looking at intake socket)

Material (casing/impeller)

PERFORMANCE PARAMETERS

All performance parameters are determined on MIETZSCH's test bench. The setup complies with DIN EN ISO 5801. The **volumetric flow rate** is measured with a measurement nozzle compliant with EN ISO 5167.

For radial fans that are arranged in a plant in accordance with the directive, the **total pressure difference Δp_t**

$$\Delta p_t = p_{t\,D} - p_{t\,S} = (p_{stat\,D} + \rho/2 * c_D^2) - (p_{stat\,S} + \rho/2 * c_S^2)$$

is used. This figure corresponds to the total of all pressure losses from the fan that occur on the suction side (S) and on the pressure side (D). If the suctions and pressure joints are coextensive, the following applies:

$$\Delta p_t = p_{statD} - p_{statS} = \Delta p_{stat}$$

In practice, plant manufacturers often use a pressure difference that is reduced by the dynamic pressure. Here, it is assumed that the dynamic pressure on the fan output cannot be used. As for pressure fans, you can define the pressure difference for free outbound air flow Δp_{fa}

$$\Delta p_{fa} = \Delta p_t - \rho/2 * c_D^2$$ (The term *static pressure difference* is not correct for this variable.)

Duct sound power level L_{WA}
The measuring process for determining the channel sound power level is specified in DIN 45 635 "measurement of noise emitted by machines". Evaluation takes place according to

$$L_{WA} = L_{measured\ value} + 10 * \log (\pi / 4 * D^2)\ dB$$ D = diameter of the measuring line

Sound pressure level L_{3m}
Several measuring points are arranged on an enveloping surface around the fan. The conversion to the specified 3 m level takes place according to

$$L_{3m} = L_{measured\ value} + 20 * \log (r_m / 3\ m)\ dB$$

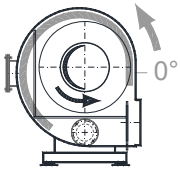
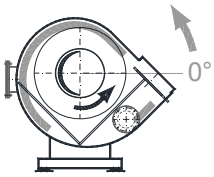
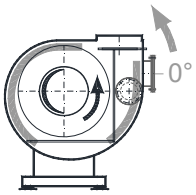
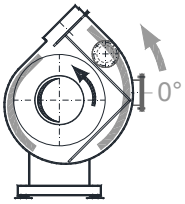
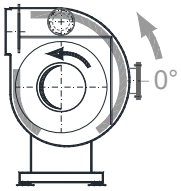
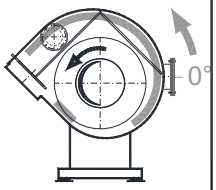
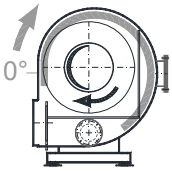
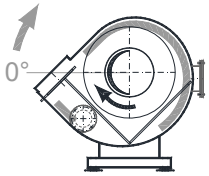
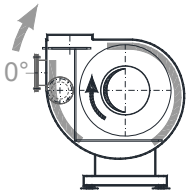
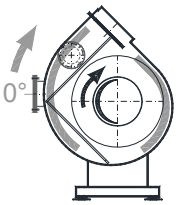
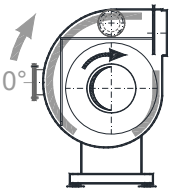
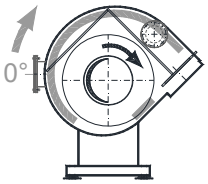
CASING POSITIONS (viewed from intake side)

The position of the casing is specified at the plant and would require significant effort to change subsequently.

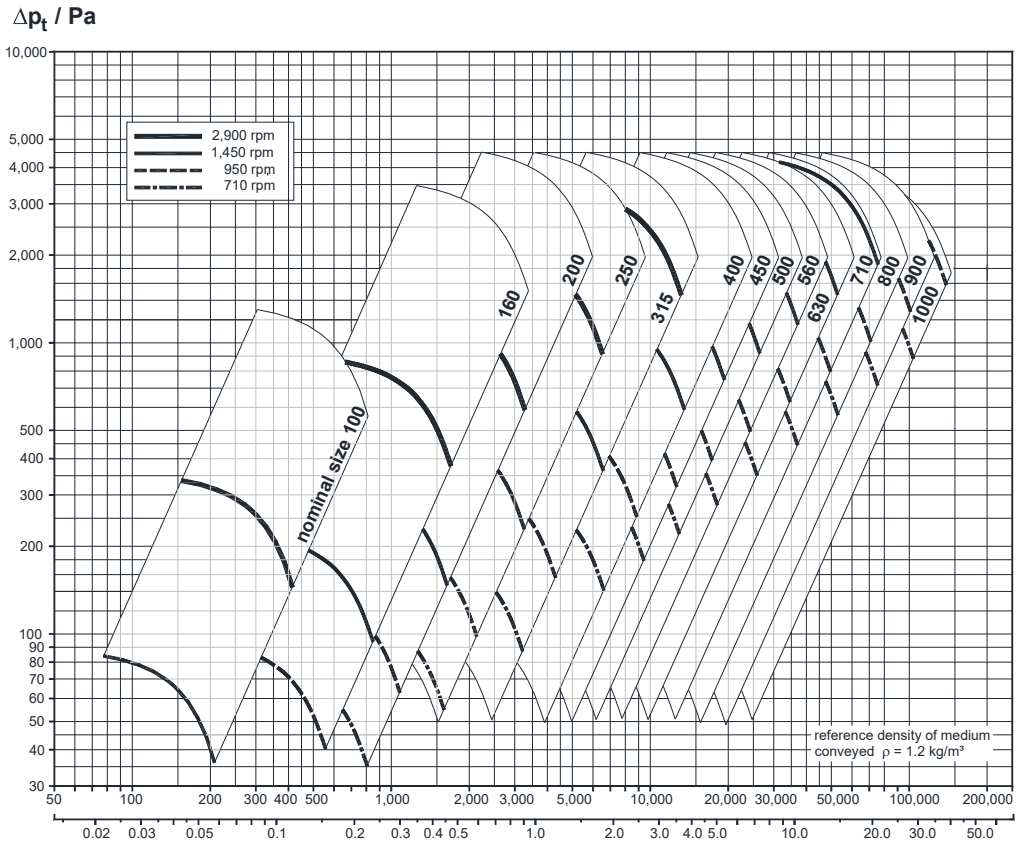
INSPECTION OPENING POSITION (viewed from intake side)

For large fans and high pollution, maintenance work can be reduced by means of an additional inspection opening.
The position of the inspection opening in the **intake side** and/or **drive side** is always near the pressure side connection, whereas the position of the inspection opening in the casing **jacket** can be selected by specifying a degree in accordance with the casing position.

Possible positions of the cleaning hatch in the **jacket** of the casing
135° Position specified in degrees

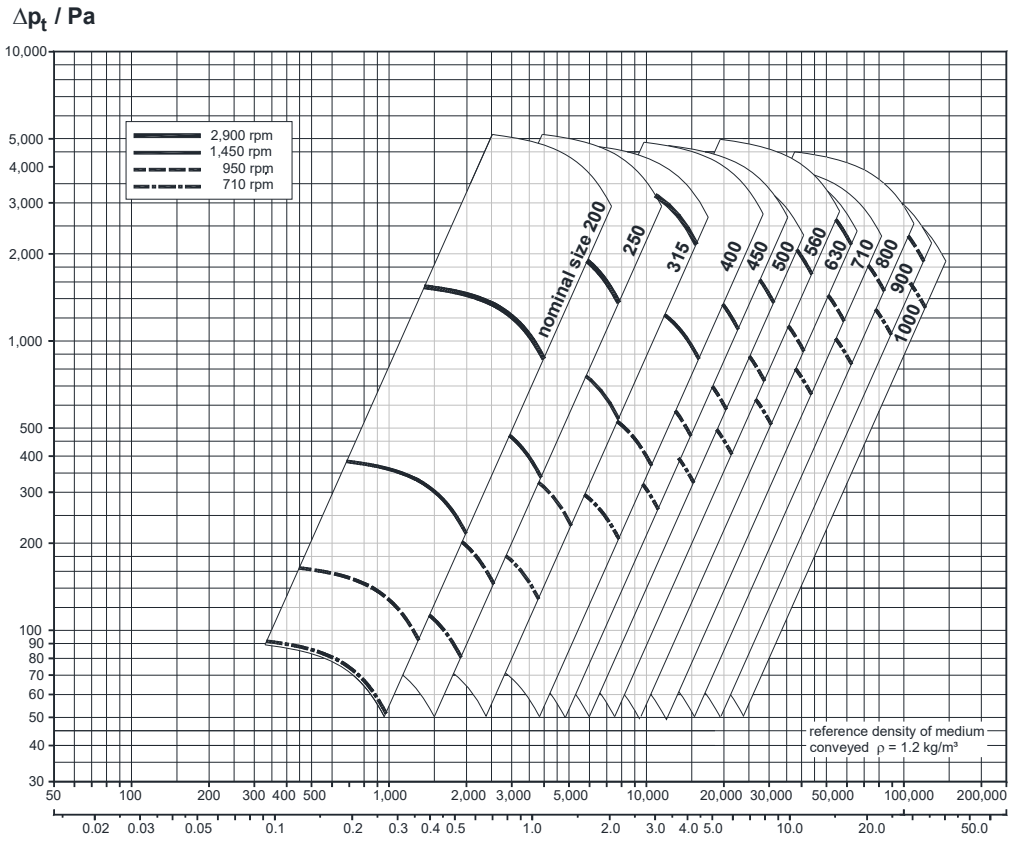
					
000L	045L	090L	135L	180L	225L
					
000R	045R	090R	135R	180R	225R

TYPE OVERVIEW - PRESELECTION



VRE 731

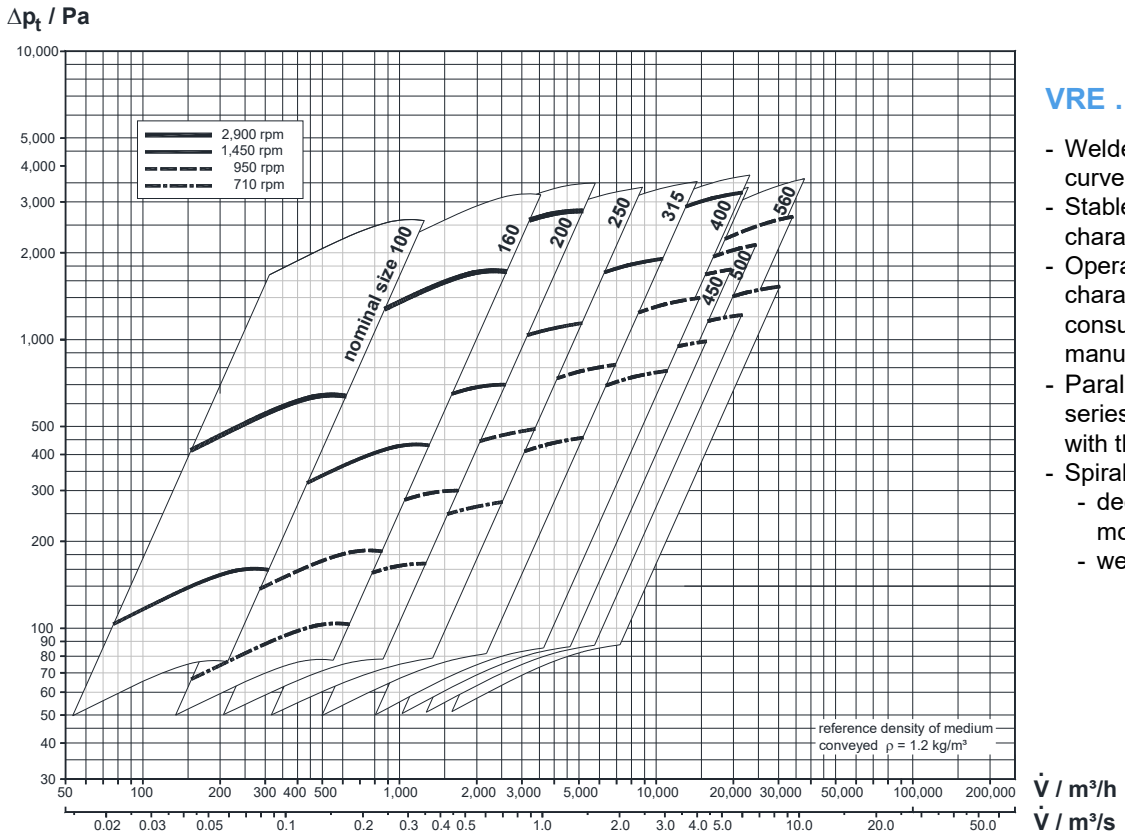
- Welded impeller with 8 backward curved vanes
- Stable operation in the entire characteristic range
- The fan can be operated outside of the specified characteristic range
- Parallel connection is possible, series connection in consultation with the manufacture
- Spiral casing
  - deep-drawn for models 100 .. 250
  - welded for special materials



VRE … / 733

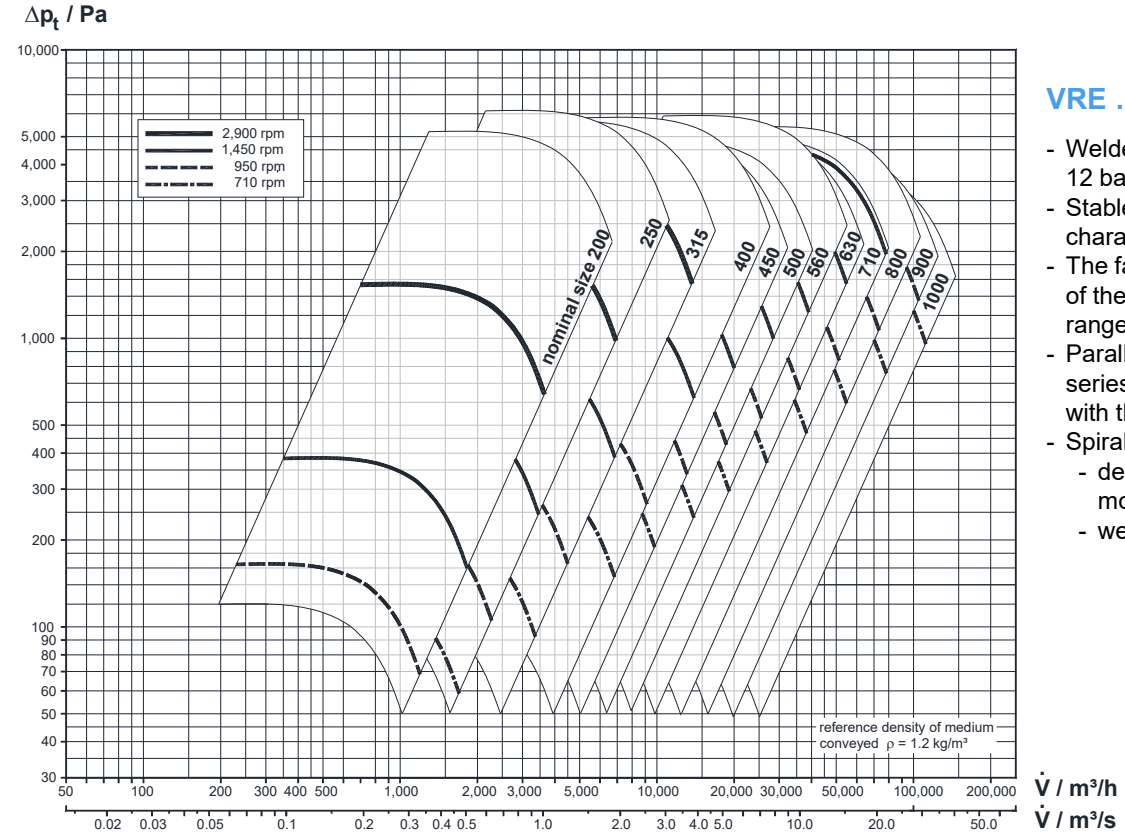
- Welded impeller with 12 backward curved vanes
- Stable operation in the entire characteristic range
- The fan can be operated outside of the specified characteristic range
- Parallel connection is possible, series connection in consultation with the manufacture
- Spiral casing
  - deep-drawn for models 100 .. 250
  - welded for special materials

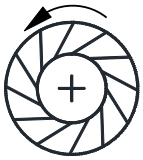
TYPE OVERVIEW - PRESELECTION



VRE … / 734

- Welded impeller with 35 forward curved vanes
- Stable operation in the entire characteristic range
- Operation outside of the characteristic range only in consultation with the manufacturer
- Parallel connection is possible, series connection in consultation with the manufacturer
- Spiral casing
  - deep-drawn for models 100 .. 250
  - welded for special materials

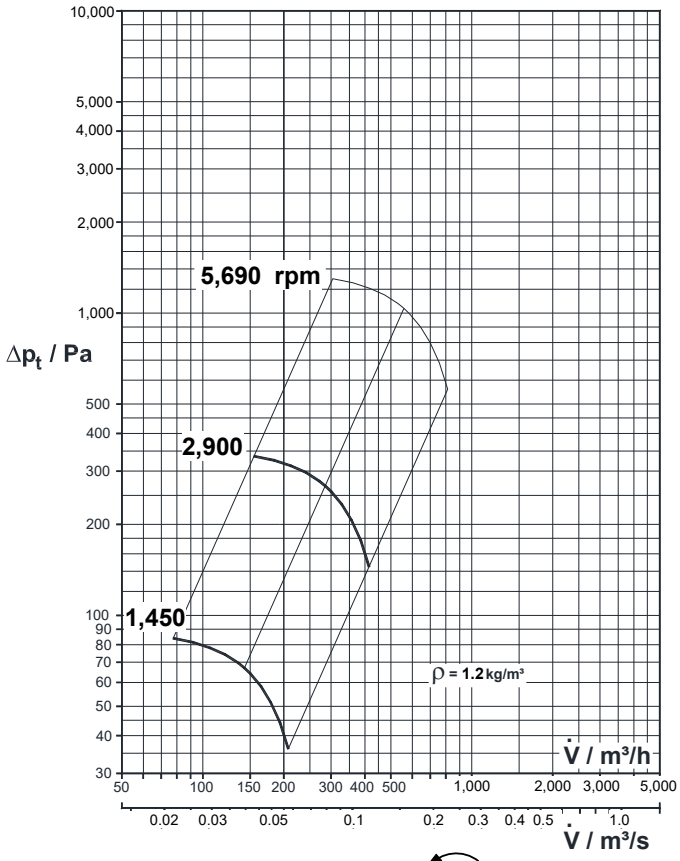




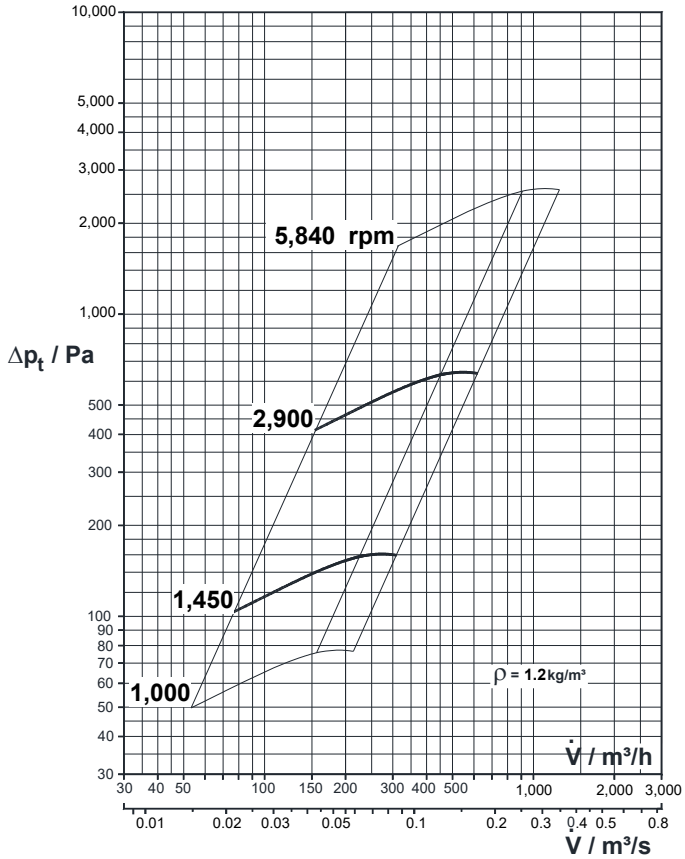
VRE … / 673

- Welded impeller with 12 backward curved vanes
- Stable operation in the entire characteristic range
- The fan can be operated outside of the specified characteristic range
- Parallel connection is possible, series connection in consultation with the manufacture
- Spiral casing
  - deep-drawn for models 100 .. 250
  - welded for special materials

Impeller type 731



Impeller type 734



Impeller materials: PPs, PPsX, PVC, PVDF GFRP CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 100/731W1450	1,450	0.004	0.12	0.50	9	45	62	39	43	58	54	54	55	44	37	- [2]
VRE 100/731W2900	2,900	0.032	0.18	0.50	9	51	68	52	60	62	63	61	55	46	36	- [2]
VRE 100/731W2900	5,690[1]	0.243	0.25	0.65	10	66	83	61	77	78	78	76	69	60	47	Level 2 [4]
VRE 100/734W1450	1,450	0.024	0.12	0.43	9	45	61	42	56	56	53	56	47	39	23	- [2]
VRE 100/734W2900	2,900	0.180	0.18	0.50	10	55	73	58	66	68	64	67	65	52	43	Level 2 [4]
VRE 100/734W2900	5,840[1]	1.550	2.20	4.40	25	70	88	67	77	84	80	82	80	66	57	Level 2 [4]

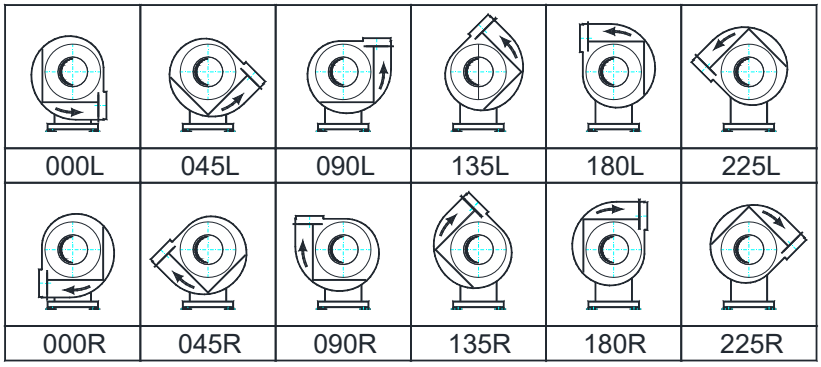
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

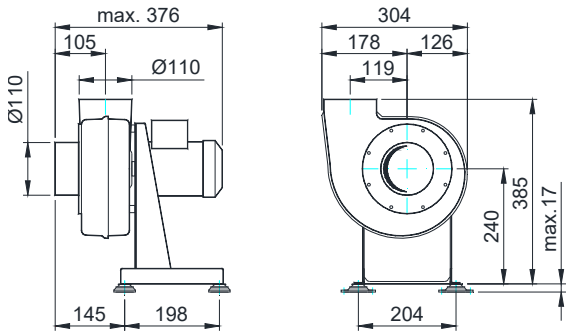
Corresponding drawings in dxf format are available on the MIETZSCH CD.



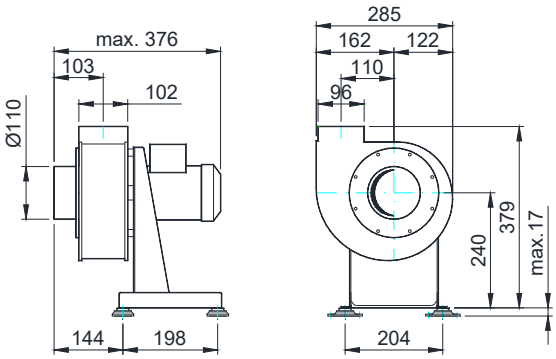
MAIN DIMENSIONS

for drive power <= 0,55 kW – Casing position 090R

Standard version deep-drawn half-shell casing
Casing material: PPs, PVC

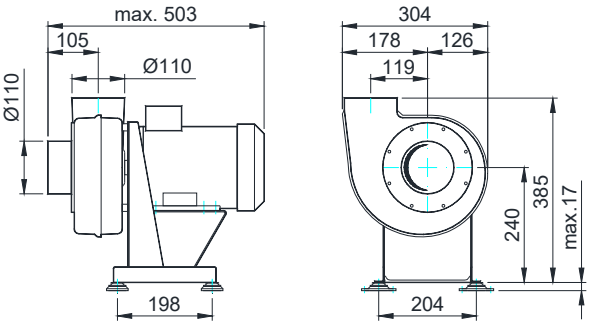


Special version square casing
Casing material: PE, PEX, PP, PPsX, PVDF

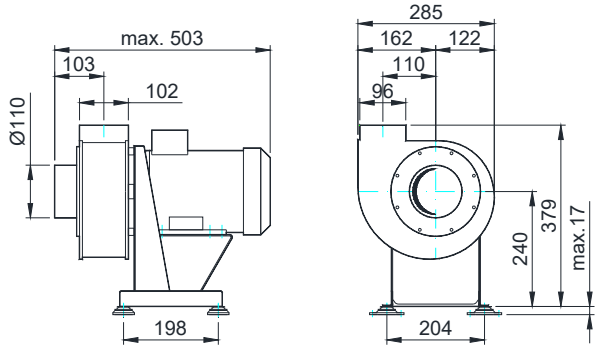


for drive power > 0,55 kW to 2,2 kW – Casing position 090R

Standard version deep-drawn half-shell casing
Casing material: PPs, PVC



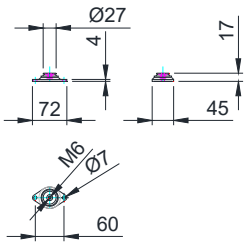
Special version square casing
Casing material: PE, PEX, PP, PPsX, PVDF



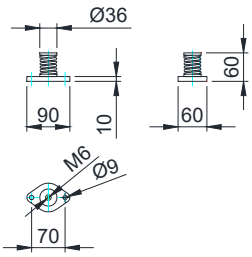
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 40-25SF that is designed for the size, speed and drive power of the fan. Stainless steel spring insulators as e.g. type MFI20 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type 40-25 SF



Type MFI 20 M6



FRAME / FLANGE

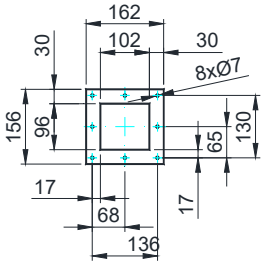
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.
Drilling pattern:

0 – undrilled (e.g. F0, KOF0)
1 – hole pattern 1 for normal requirements (e.g. KOF1)
2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

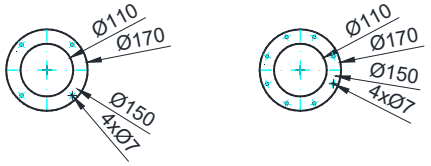
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F



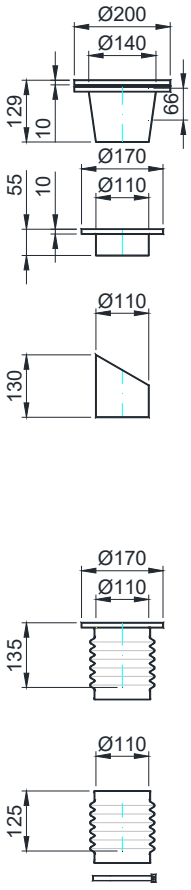
CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

Pressure side casing connection

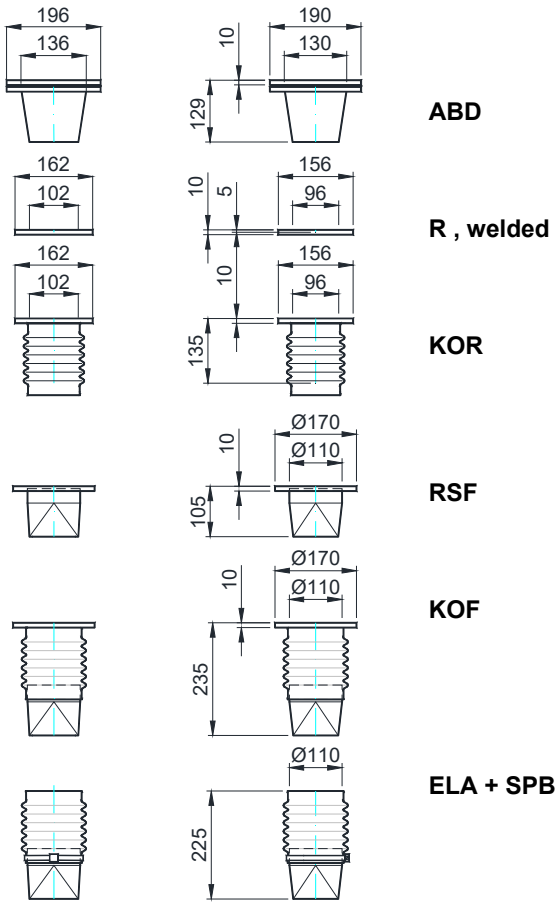
Standard version deep-drawn half-shell casing

Casing material: PPs, PVC

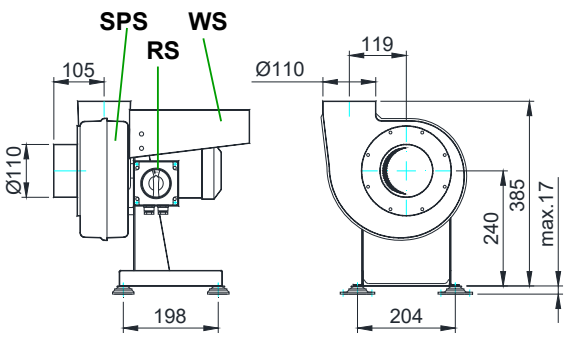


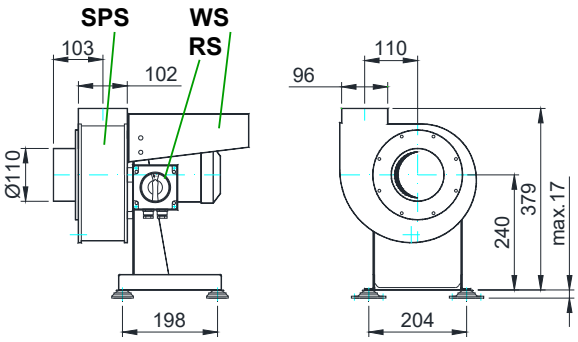
Special version square casing

Casing material: PE, PEX, PP, PPsX, PVDF



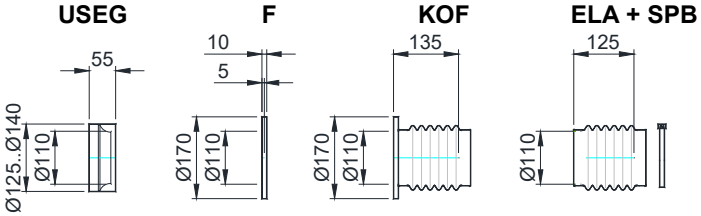
Accessories





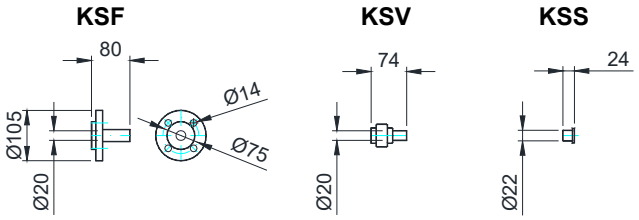
Suction side casing connection

Casing material: all

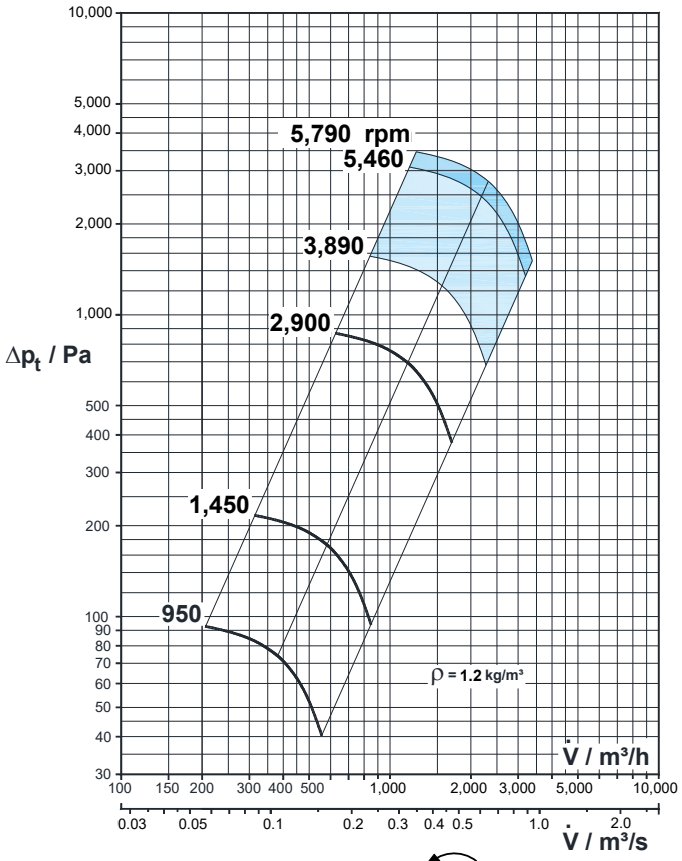


Condensate drain

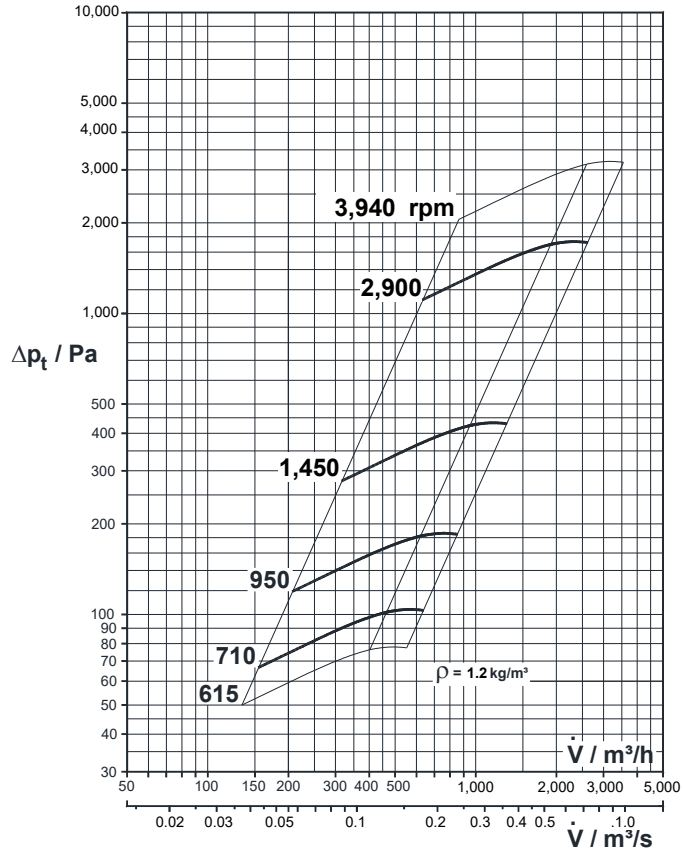
Casing material: all



Impeller type 731



Impeller type 734



Impeller materials: PPs, PPsX, PVC, PVDF GFRP CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 160/731W950	950	0.012	0.09	0.39	16	39	56	39	51	46	48	50	48	33	16	- [2]
VRE 160/731W1450	1,450	0.042	0.12	0.43	15	44	62	44	57	53	55	56	53	43	26	- [2]
VRE 160/731W2900	2,900	0.337	0.37	0.95	18	60	78	57	66	68	77	70	62	59	50	Level 2 [4]
VRE 160/731W2900	5,790 [1]	2.670	3.00	5.80	43	75	93	67	82	83	92	84	76	73	63	Level 2 [4]
VRE 160/734W950	950	0.082	0.09	0.39	16	45	63	45	53	53	60	56	52	41	27	- [2]
VRE 160/734W1450	1,450	0.250	0.25	0.76	18	53	70	55	60	58	64	68	58	51	40	Level 2 [4]
VRE 160/734W2900	2,900	2.200	2.20	4.40	31	63	82	59	72	72	76	78	76	70	62	Level 2 [4]
VRE 160/734W2900	3,942 [1]	5.500	5.50	10.10	62	73	89	64	78	79	83	85	83	77	69	Level 2 [4]

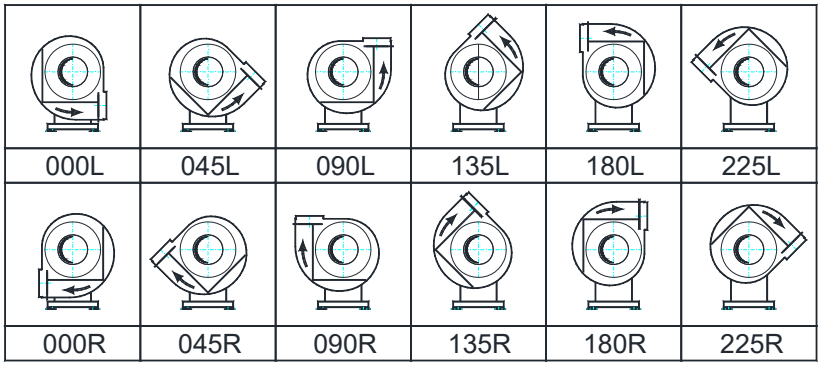
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

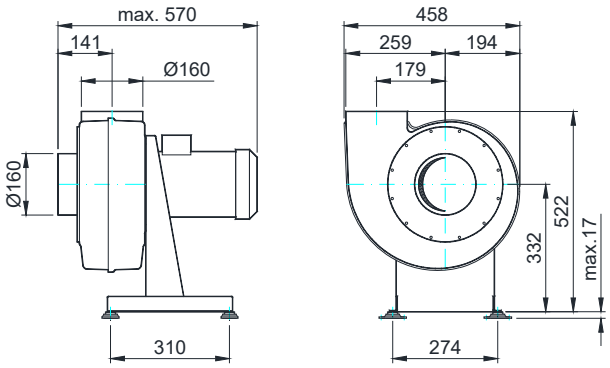
Corresponding drawings in dxf format are available on the MIETZSCH CD.



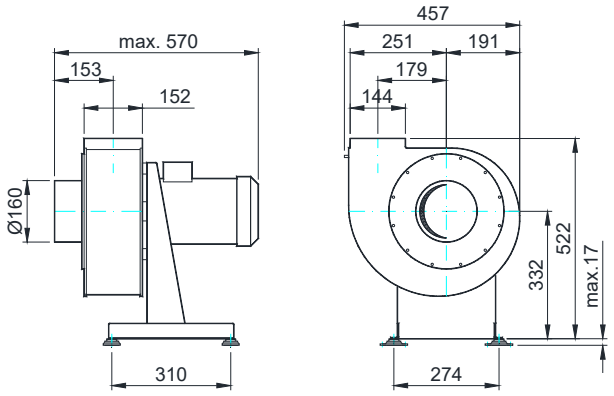
MAIN DIMENSIONS

for drive power <= 3,0 kW – Casing position 090R

Standard version deep-drawn half-shell casing
Casing material: PPs, PVC

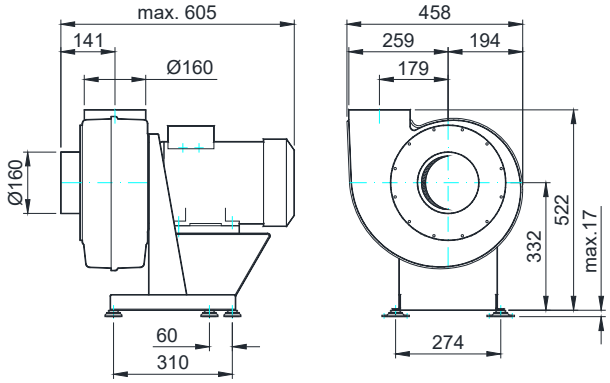


Special version square casing
Casing material: PE, PEX, PP, PPsX, PVDF

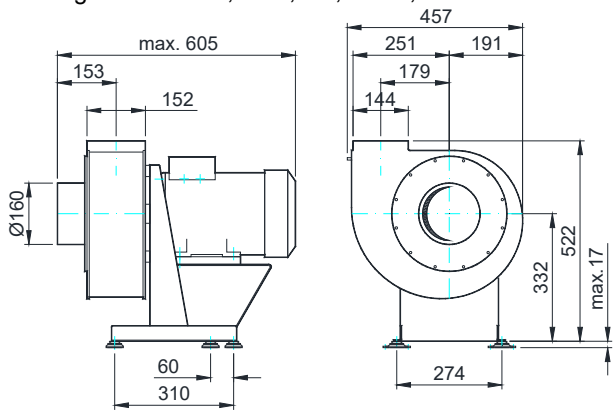


for drive power > 3,0 kW to 5,5 kW – Casing position 090R

Standard version deep-drawn half-shell casing
Casing material: PPs, PVC



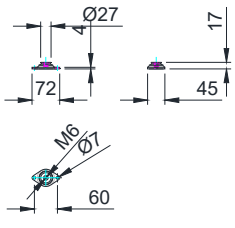
Special version square casing
Casing material: PE, PEX, PP, PPsX, PVDF



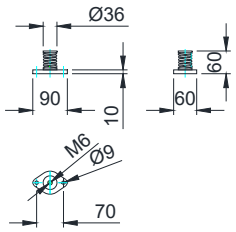
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 40-25SF that is designed for the size, speed and drive power of the fan.
Stainless steel spring insulators as e.g. type MFI20 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type 40-25 SF



Type MFI 20 M6



FRAME / FLANGE

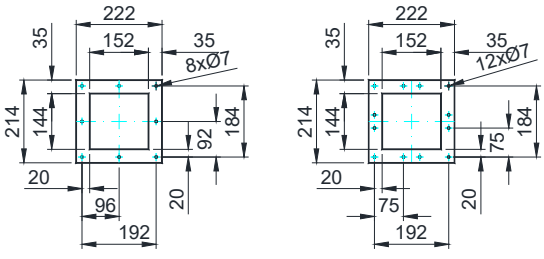
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

Drilling pattern:
- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

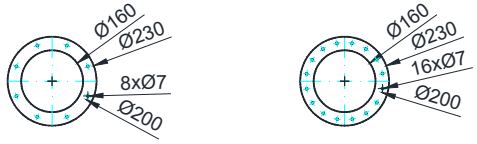
Models according to other standards or special designs are possible on request.

Hole pattern 1 | **Hole pattern 2**

Frame R



Flange F



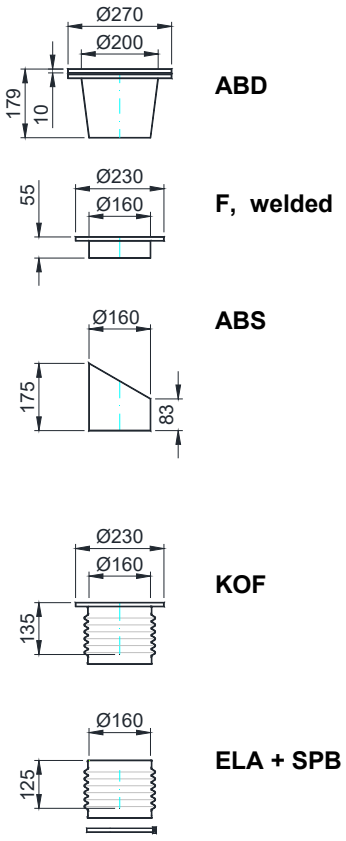
CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

Pressure side casing connection

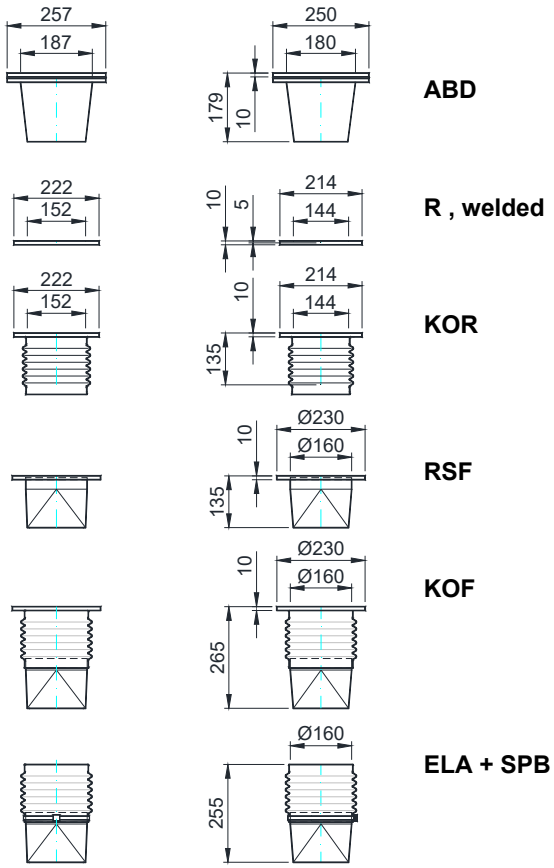
Standard version deep-drawn half-shell casing

Casing material: PPs, PVC

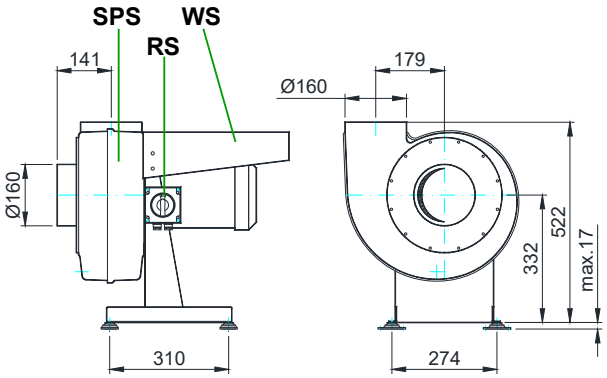


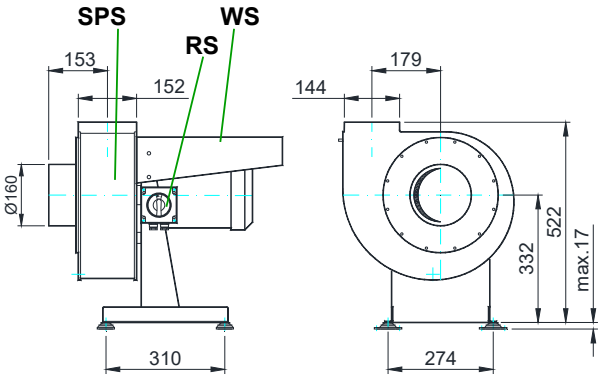
Special version square casing

Casing material: PE, PEX, PP, PPsX, PVDF



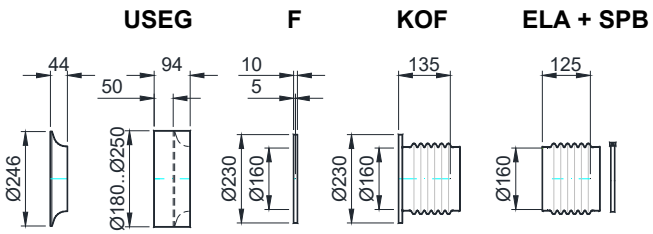
Accessories





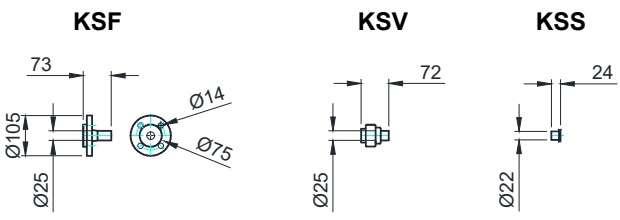
Suction side casing connection

Casing material: all

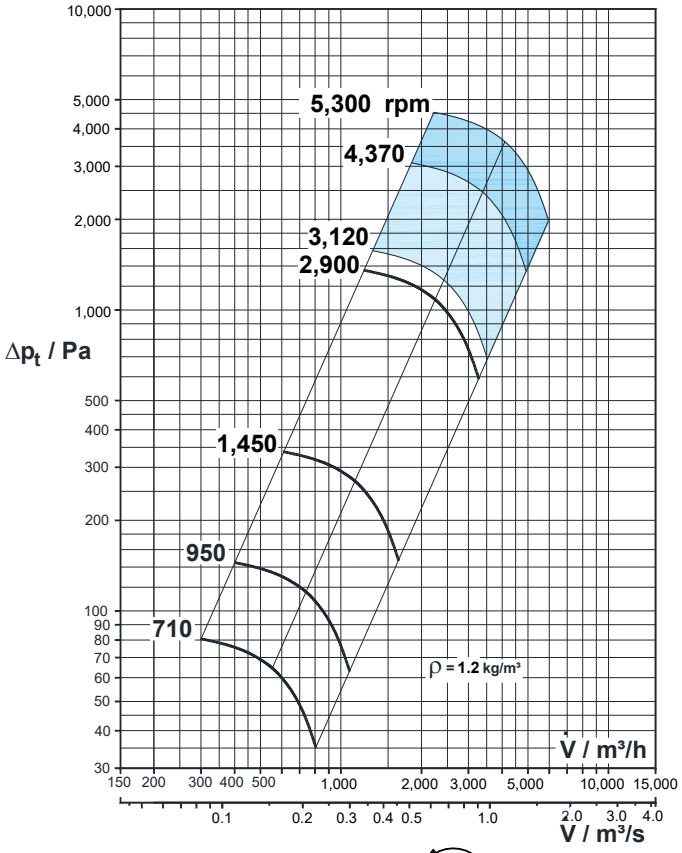


Condensate drain

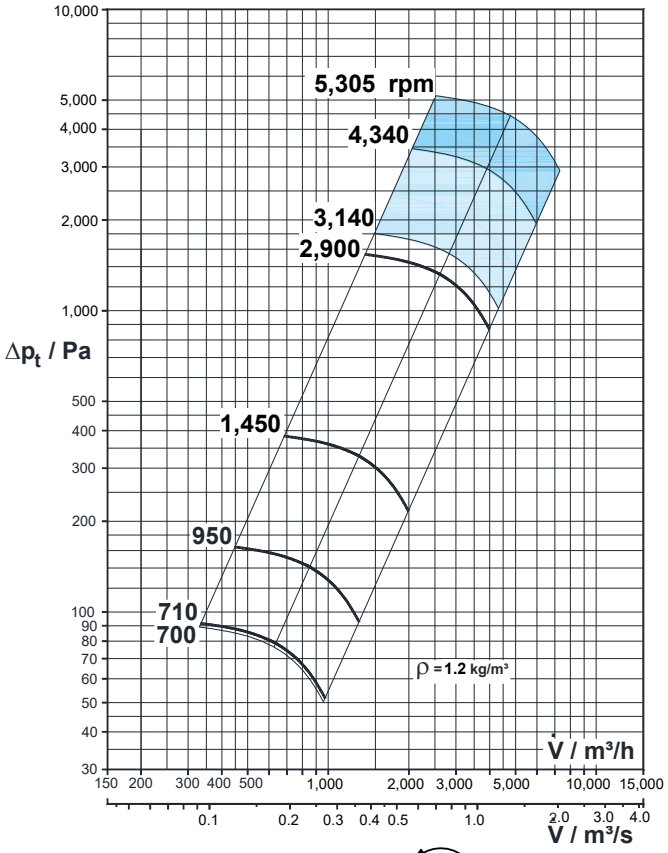
Casing material: all



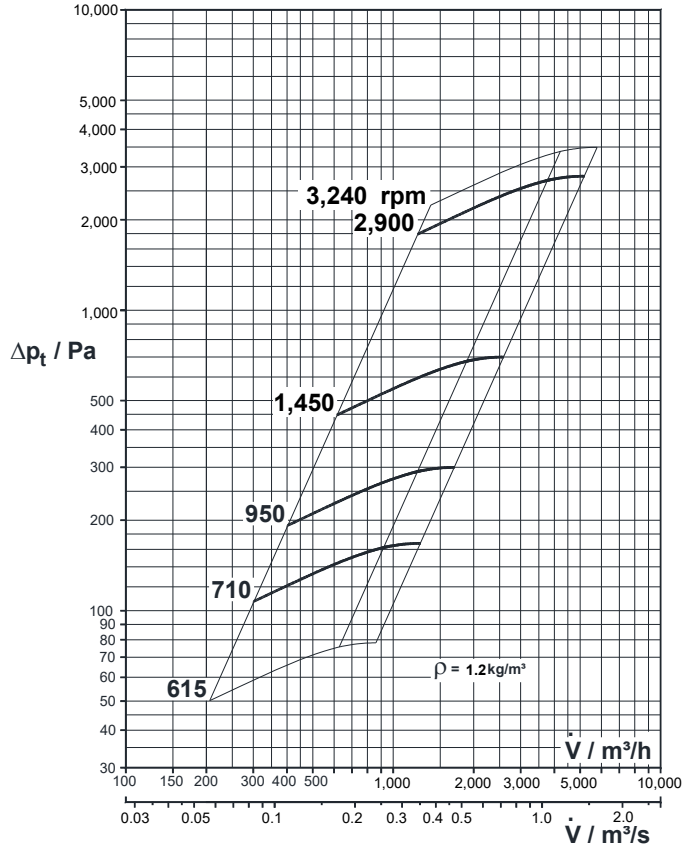
Impeller type 731



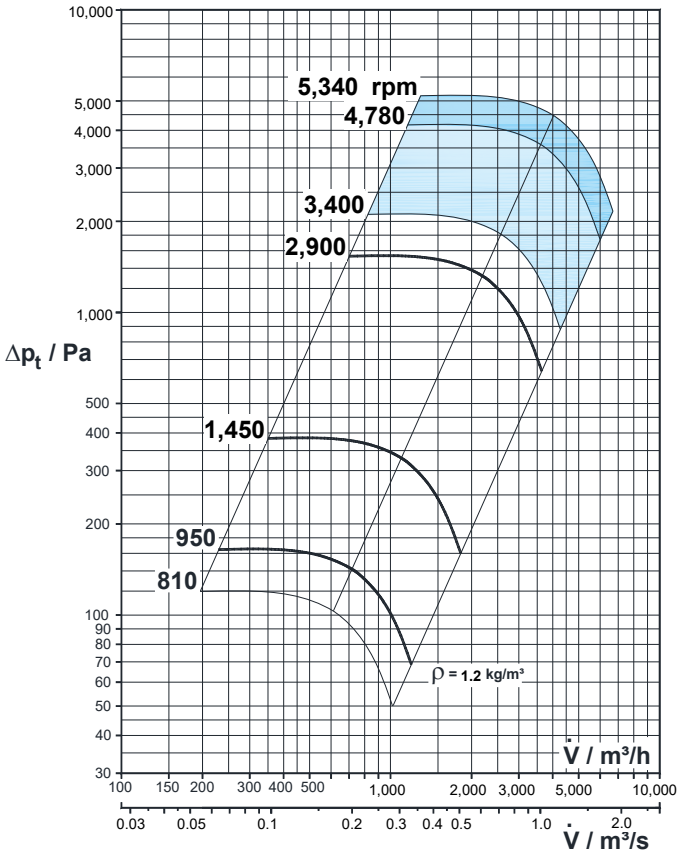
Impeller type 733



Impeller type 734



Impeller type 673



Impeller materials: PPs, PPsX, PVC, PVDF | GFRP | CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 200/731W710	710	0.015	0.09	0.38	23	40	57	44	49	49	52	49	43	31	22	- [2]
VRE 200/731W950	950	0.036	0.09	0.39	20	45	63	46	54	54	56	57	54	41	25	- [2]
VRE 200/731W1450	1,450	0.128	0.18	0.53	21	51	69	52	60	61	63	62	59	50	36	Level 2 [4]
VRE 200/731W2900	2,900	1.030	1.10	2.25	29	67	85	61	70	75	82	78	69	64	55	Level 2 [4]
VRE 200/731W2900	5,300 [1]	6.260	7.50	13.10	84	80	98	71	85	89	96	92	82	77	68	Level 2 [4]
VRE 200/733W710	710	0.024	0.09	0.38	23	43	60	49	55	50	53	50	44	32	26	- [2]
VRE 200/733W950	950	0.052	0.09	0.39	20	48	65	53	61	54	56	56	53	40	30	- [2]
VRE 200/733W1450	1,450	0.207	0.25	0.76	23	54	72	60	68	62	63	62	59	50	41	Level 2 [4]
VRE 200/733W2900	2,900	1.650	2.20	4.40	36	70	88	71	81	79	84	80	71	66	60	Level 2 [4]
VRE 200/733W2900	5,305 [1]	10.100	11.00	20.00	84	83	101	81	95	93	98	93	84	79	72	Level 2 [5]
VRE 200/734W710	710	0.102	0.12	0.53	23	46	63	49	54	55	58	54	49	46	33	- [3]
VRE 200/734W950	950	0.245	0.25	0.77	23	52	69	53	57	60	66	60	55	46	36	- [3]
VRE 200/734W1450	1,450	0.870	1.10	2.55	34	59	77	61	65	67	71	72	67	60	48	Level 2 [4]
VRE 200/734W2900	2,900	6.960	7.50	13.10	79	75	92	75	82	84	87	88	82	75	63	Level 2 [5]
VRE 200/734W2900	3,240 [1]	9.700	11.00	20.00	79	79	94	76	84	86	89	90	84	77	64	Level 2 [5]
VRE 200/673W950	950	0.045	0.09	0.39	20	43	60	50	54	54	53	52	45	39	31	- [3]
VRE 200/673W1450	1,450	0.161	0.18	0.53	20	51	68	58	62	63	61	58	55	47	39	Level 2 [4]
VRE 200/673W2900	2,900	1.300	1.50	3.05	33	67	85	70	79	80	79	75	70	65	55	Level 2 [4]
VRE 200/673W2900	5,340 [1]	8.050	11.00	20.00	84	82	99	79	90	95	94	91	85	78	72	Level 2 [5]

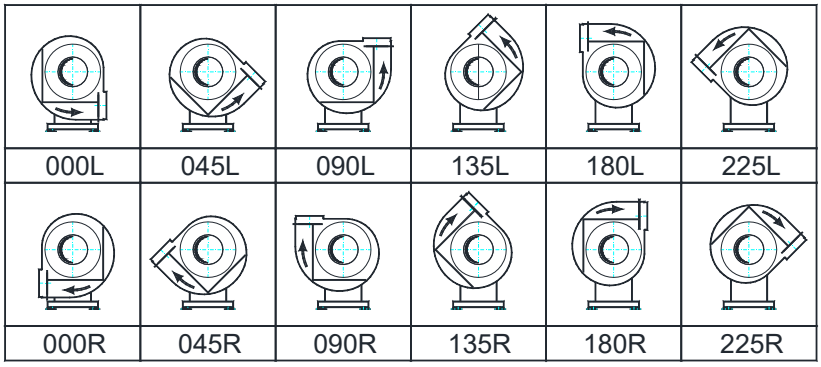
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

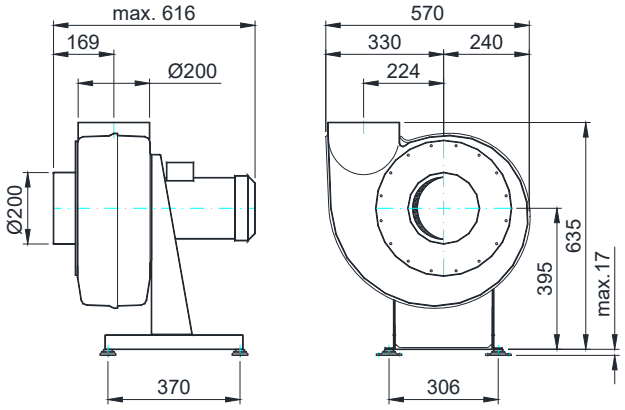


MAIN DIMENSIONS

for drive power <= 4,0 kW – Casing position 090R

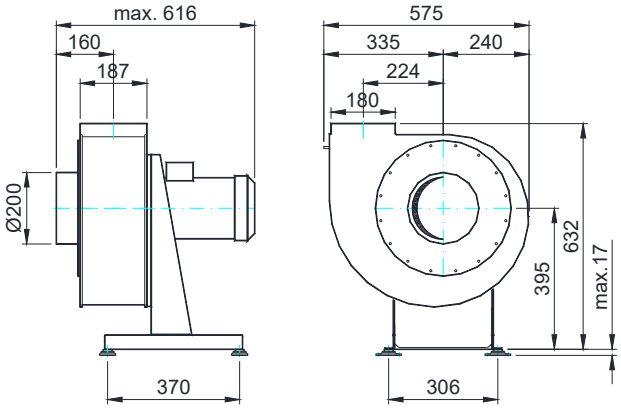
Standard version deep-drawn half-shell casing

Casing material: PPs, PVC



Special version square casing

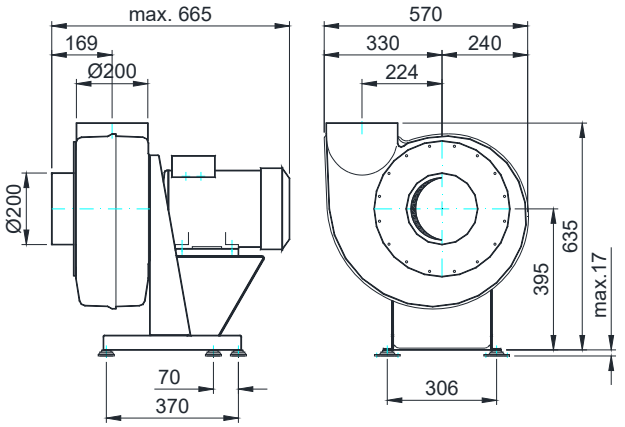
Casing material: PE, PEX, PP, PPsX, PVDF



for drive power > 4,0 kW to 11 kW – Casing position 090R

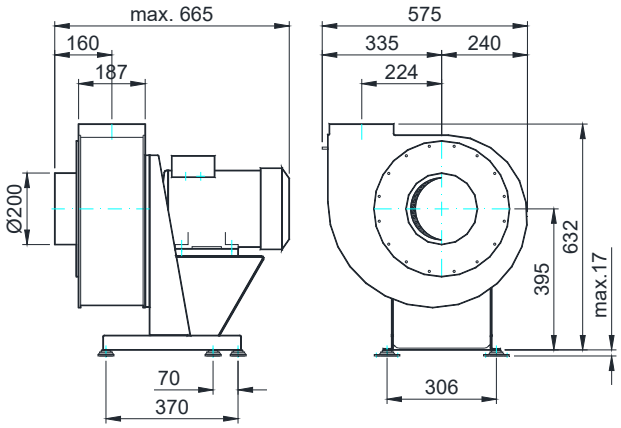
Standard version deep-drawn half-shell casing

Casing material: PPs, PVC



Special version square casing

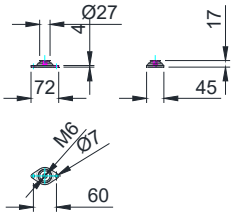
Casing material: PE, PEX, PP, PPsX, PVDF



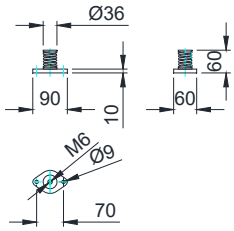
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 40-25SF that is designed for the size, speed and drive power of the fan.
Stainless steel spring insulators as e.g. type MFI20 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type 40-25 SF



Type MFI 20 M6



FRAME / FLANGE

Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

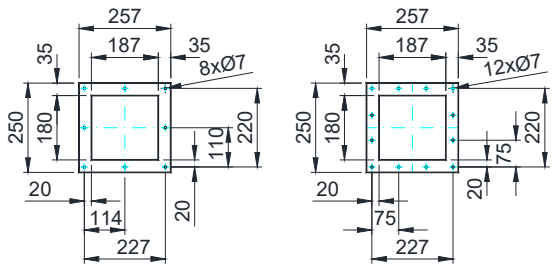
Drilling pattern:

- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

Models according to other standards or special designs are possible on request.

Hole pattern 1 | **Hole pattern 2**

Frame R



Flange F

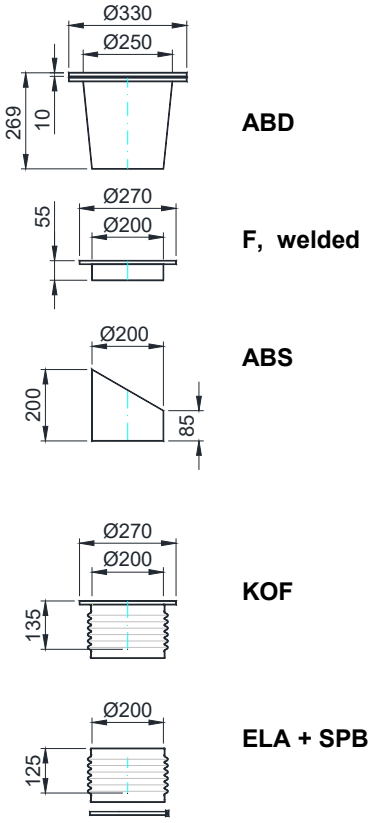
CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

Pressure side casing connection

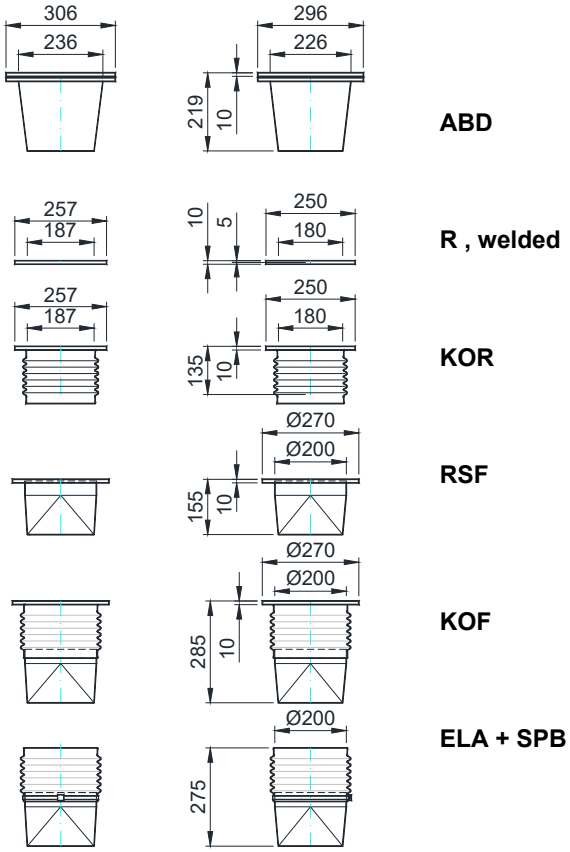
Standard version deep-drawn half-shell casing

Casing material: PPs, PVC

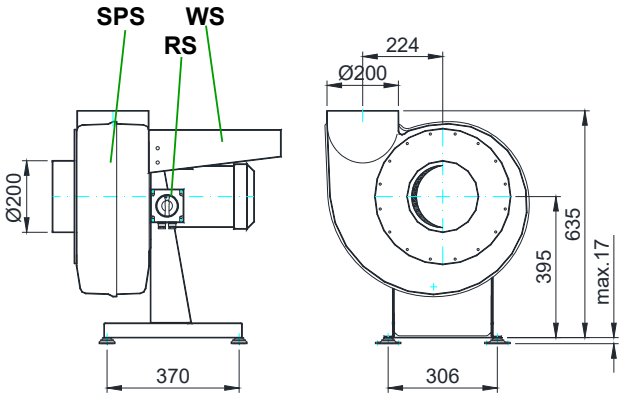


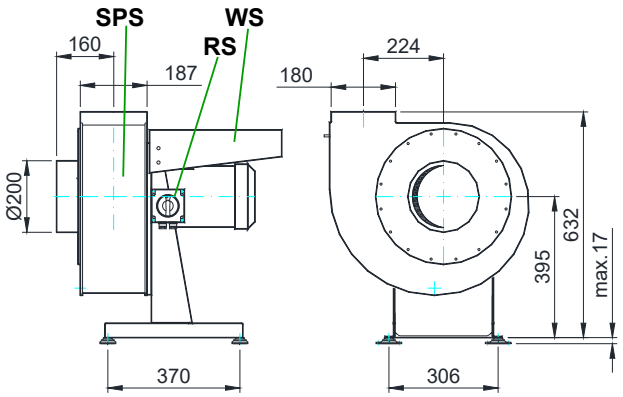
Special version square casing

Casing material: PE, PEX, PP, PPsX, PVDF



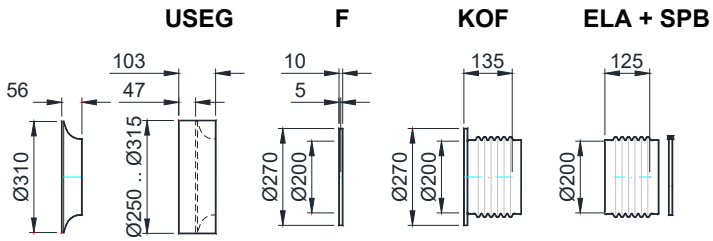
Accessories





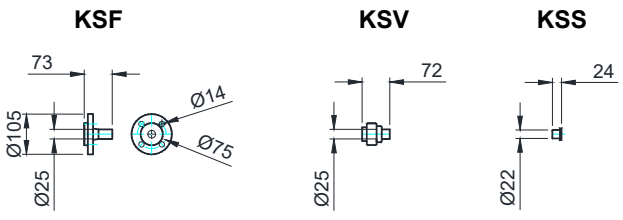
Suction side casing connection

Casing material: all

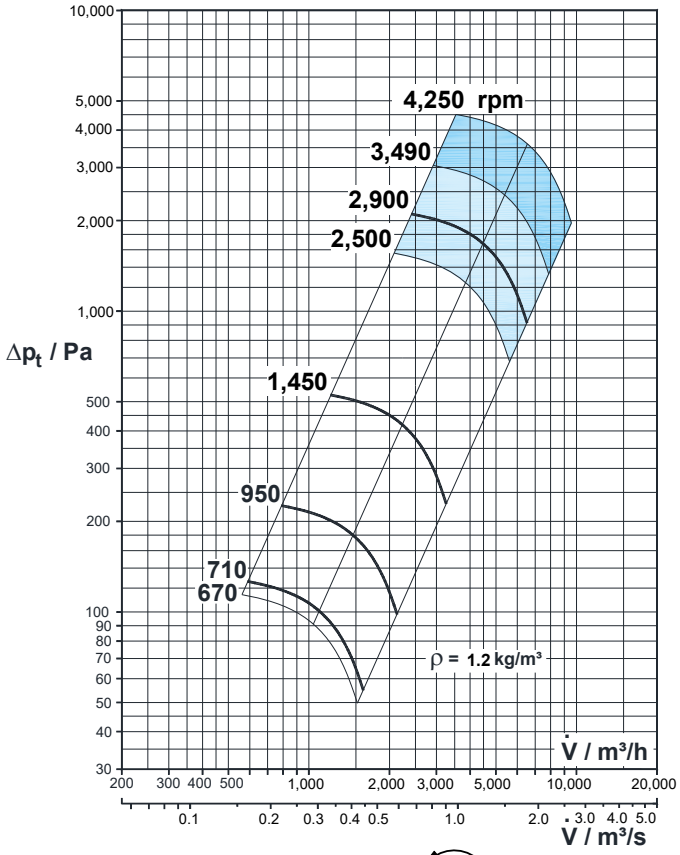


Condensate drain

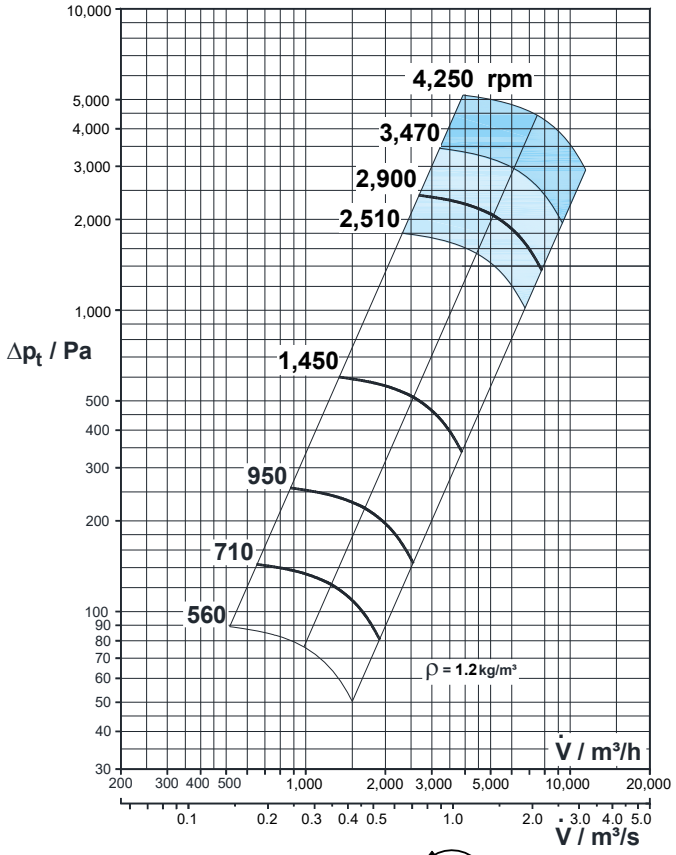
Casing material: all



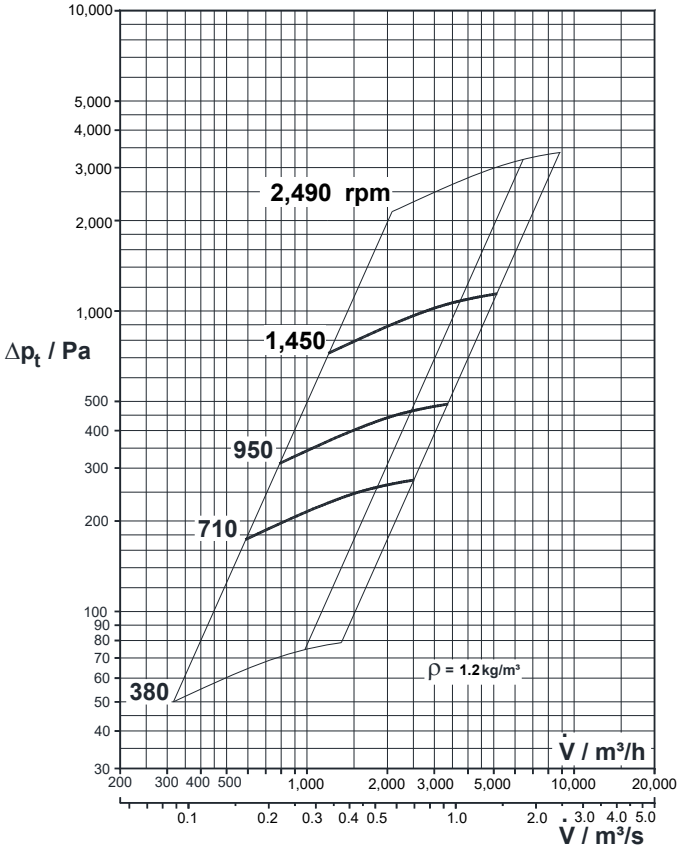
Impeller type 731



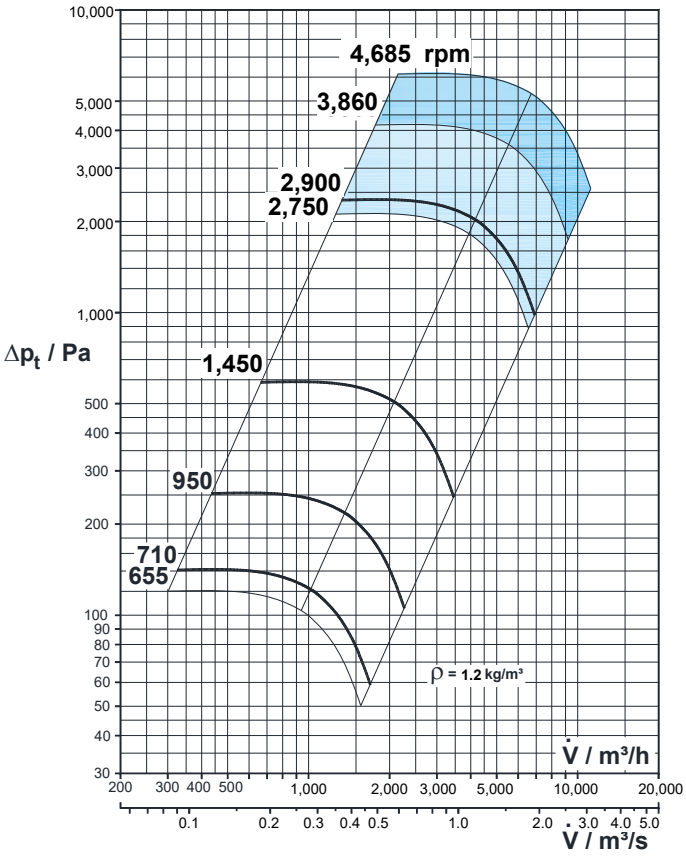
Impeller type 733



Impeller type 734



Impeller type 673



Impeller materials: PPs, PPsX, PVC, PVDF | GFRP | CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE250/731W710	710	0.046	0.09	0.38	35	42	59	46	53	50	55	52	44	30	21	- [2]
VRE250/731W950	950	0.110	0.18	0.67	36	47	64	50	55	56	57	60	53	46	28	- [3]
VRE250/731W1450	1,450	0.349	0.37	0.96	36	54	72	58	61	67	68	65	61	55	41	Level 2 [4]
VRE250/731W2900	2,900	3.160	4.00	7.60	75	70	88	74	78	83	84	80	76	69	56	Level 2 [4]
VRE250/731W2900	4,250 [1]	9.800	11.00	19.60	120	78	96	81	87	92	92	88	83	77	63	Level 2 [5]
VRE250/733W710	710	0.074	0.09	0.38	35	45	62	52	60	49	55	52	44	30	24	- [3]
VRE250/733W950	950	0.177	0.18	0.67	34	50	67	54	60	58	59	62	55	48	35	- [3]
VRE250/733W1450	1,450	0.630	0.75	1.81	42	58	76	61	65	71	70	67	63	57	48	Level 2 [4]
VRE250/733W2900	2,900	5.040	5.50	9.90	79	73	91	78	82	88	86	82	78	71	62	Level 2 [5]
VRE250/733W2900	4,250 [1]	16.900	18.50	32.00	131	82	100	85	91	97	95	91	86	79	69	Level 2 [5]
VRE250/734W710	710	0.308	0.37	1.17	40	48	65	50	55	57	64	54	51	47	33	- [3]
VRE250/734W950	950	0.739	0.75	1.98	46	54	71	55	58	64	69	59	55	49	40	Level 2 [4]
VRE250/734W1450	1,450	2.620	3.00	6.30	61	62	80	64	68	71	74	76	70	65	53	Level 2 [4]
VRE250/734W1450	2,490 [1]	13.300	15.00	28.50	136	74	92	76	81	84	87	88	82	77	64	Level 2 [5]
VRE250/673W710	710	0.057	0.09	0.38	33	41	58	48	53	52	51	50	43	37	29	- [2]
VRE250/673W950	950	0.136	0.18	0.67	32	47	64	54	58	58	57	56	49	43	35	- [3]
VRE250/673W1450	1,450	0.483	0.55	1.41	48	55	73	63	66	68	65	62	59	51	43	Level 2
VRE250/673W2900	2,900	3.870	4.00	7.60	76	71	89	74	83	84	83	79	74	69	59	Level 2 [4]
VRE250/673W2900	4,685 [1]	16.400	18.50	32.00	139	83	100	82	92	96	95	92	86	79	73	Level 2 [5]

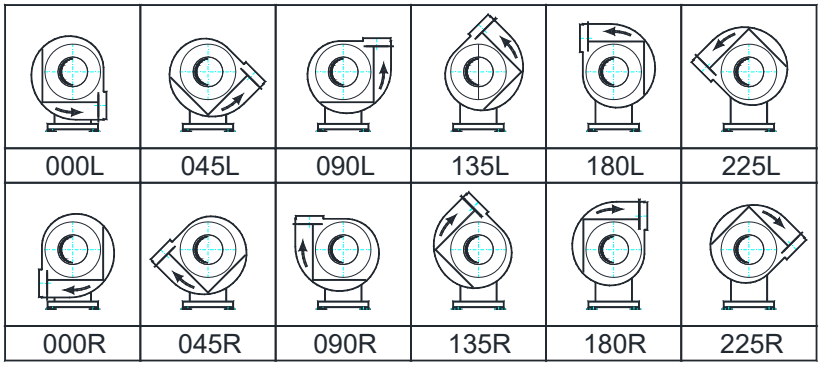
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

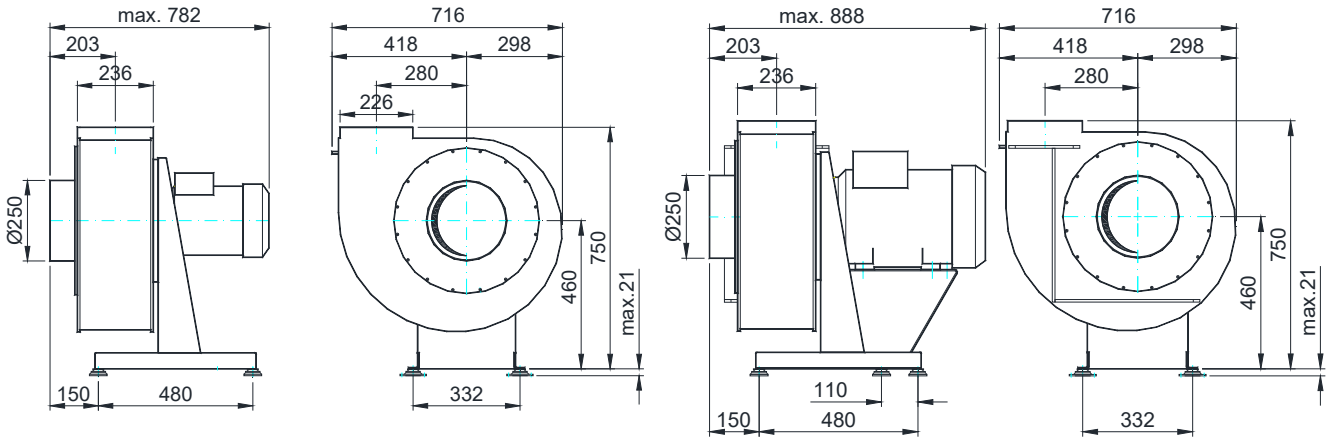


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

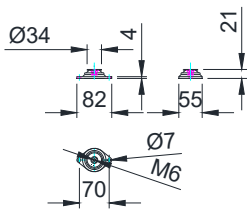
for drive power: **<= 5,5 kW** **> 5,5 kW to 15 kW**



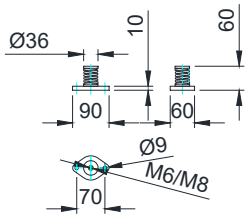
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 50-50SF that is designed for the size, speed and drive power of the fan.
Stainless steel spring insulators as e.g. type MFI20 / MFI40 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type 50-50 SF



Type MFI 20 M6 / MFI 40 M8



FRAME / FLANGE

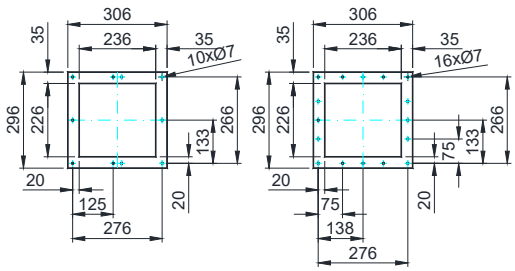
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

Drilling pattern:
- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

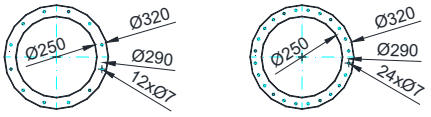
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F

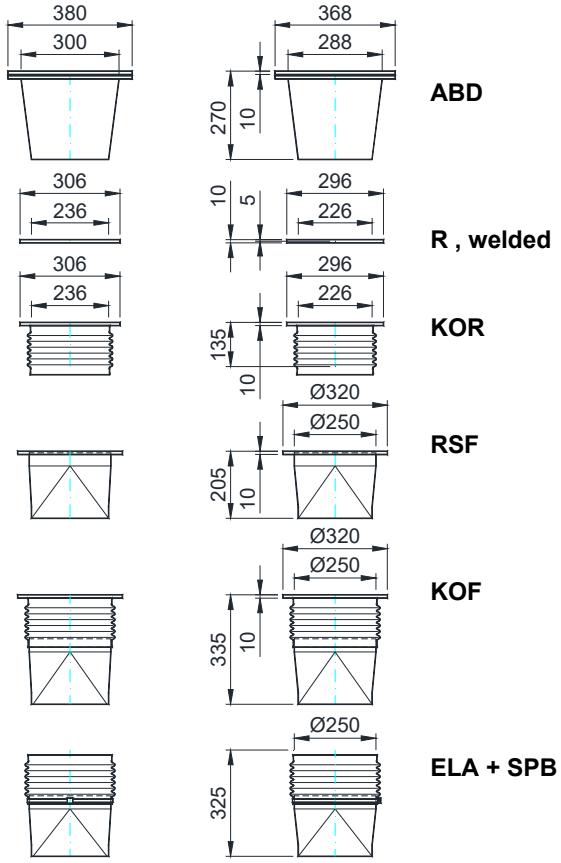


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

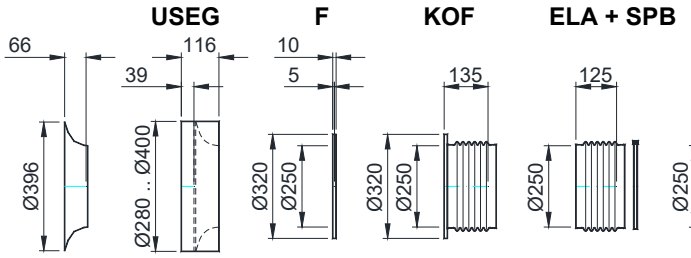
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

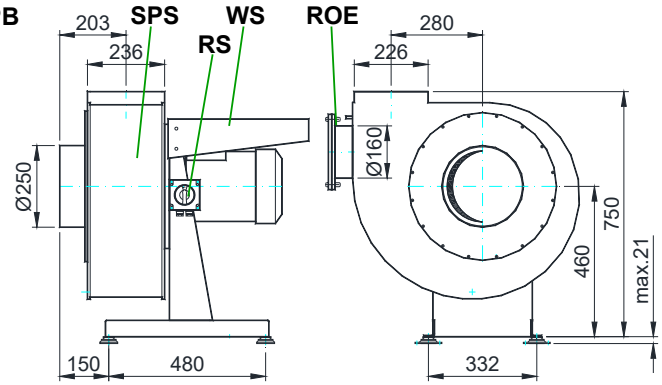


Suction side casing connection

Casing material: all

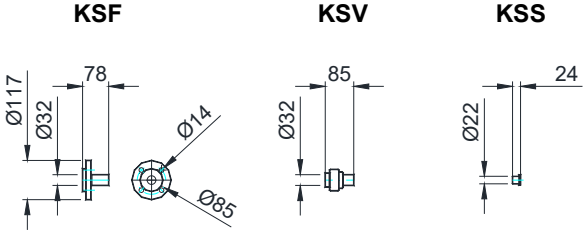


Accessories

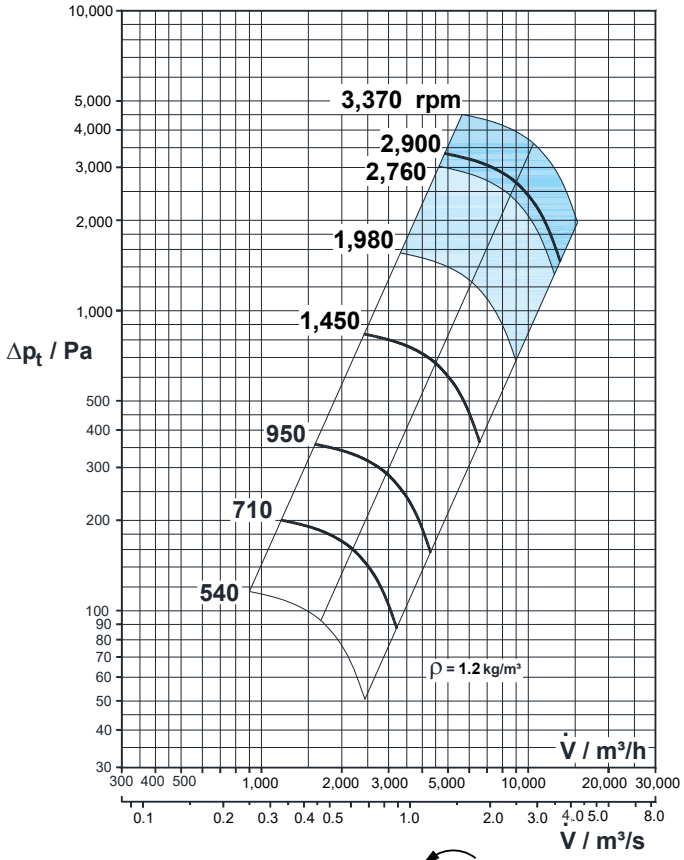


Condensate drain

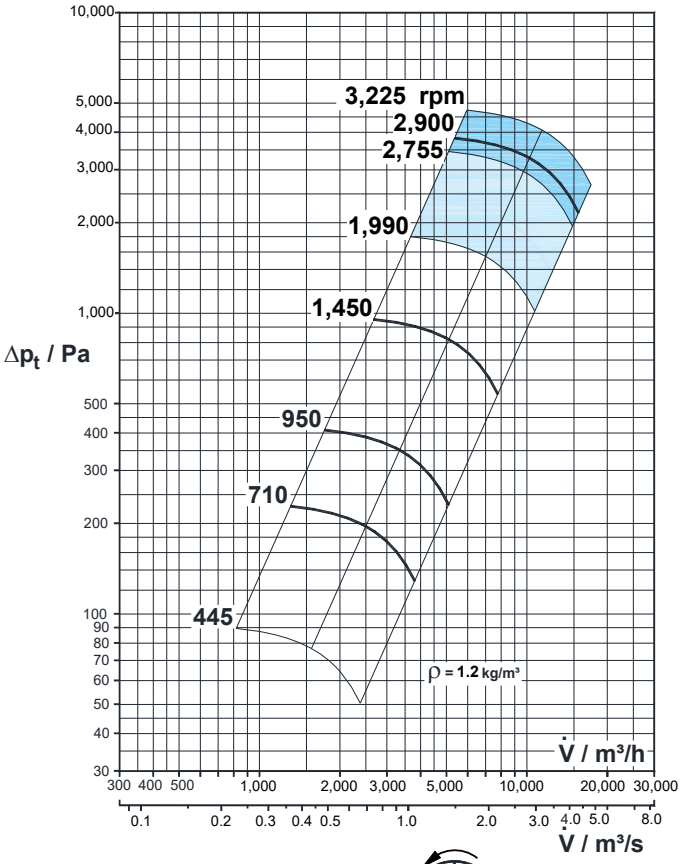
Casing material: all



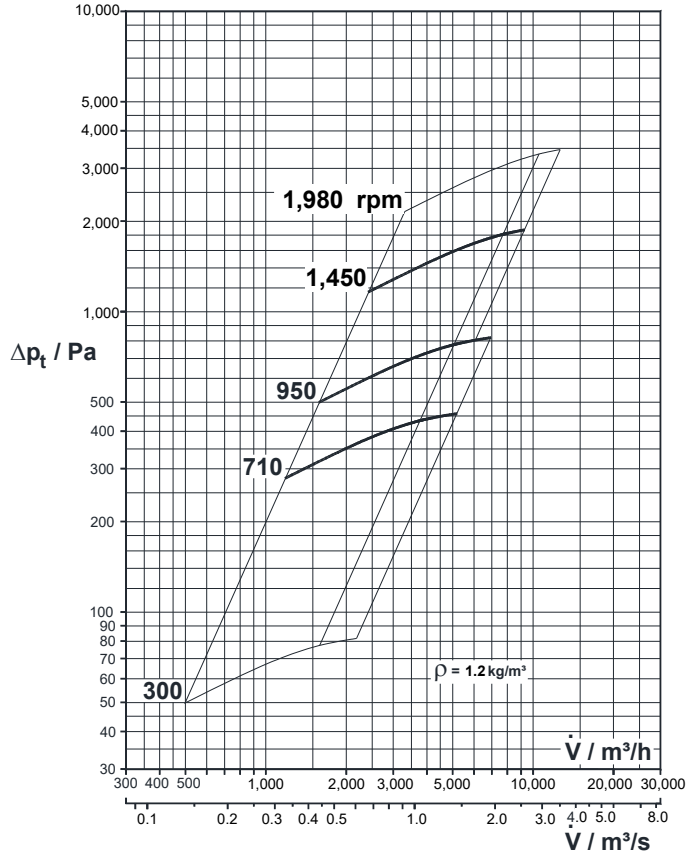
Impeller type 731



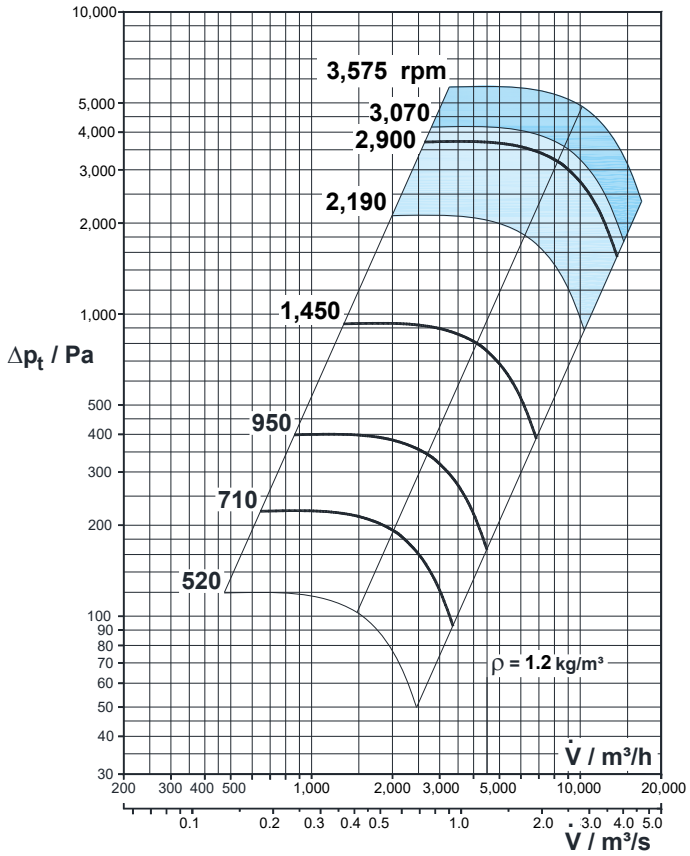
Impeller type 733



Impeller type 734



Impeller type 673



Impeller materials: PPs, PPsX, PVC, PVDF | GFRP | CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 315/731W710	710	0.146	0.18	0.78	68	48	65	53	59	58	60	58	53	45	38	- [3]
VRE 315/731W950	950	0.35	0.37	1.16	68	53	71	59	64	65	66	64	60	56	44	- [3]
VRE 315/731W1450	1,450	1.25	1.5	3.40	78	62	80	65	69	75	74	72	67	62	51	Level 2 [4]
VRE 315/731W2900	2,900	9.97	11.0	19.60	147	77	95	81	86	91	90	87	82	76	65	Level 2 [5]
VRE 315/731W2900	3,370 [1]	14.2	15.0	27.00	156	80	98	85	89	94	93	90	85	79	68	Level 2 [5]
VRE 315/733W710	710	0.235	0.25	1.06	69	51	68	57	64	58	61	59	54	46	41	- [3]
VRE 315/733W950	950	0.563	0.75	1.98	76	56	74	62	69	66	67	65	61	57	48	Level 2 [4]
VRE 315/733W1450	1,450	2.0	2.2	4.60	85	65	83	69	74	79	76	74	69	64	56	Level 2 [4]
VRE 315/733W2900	2,900	16.0	18.5	32.00	170	80	98	86	90	95	91	89	83	78	70	Level 2 [5]
VRE 315/733W2900	3,225 [1]	22.0	22.0	38.00	218	83	101	89	93	98	94	91	86	80	72	Level 2 [6]
VRE 315/734W710	710	1.05	1.1	3.00	83	55	72	57	60	65	69	64	59	55	43	Level 2
VRE 315/734W950	950	2.51	3.0	7.00	102	61	78	63	66	71	76	68	63	57	47	Level 2 [4]
VRE 315/734W1450	1,450	7.37	7.5	14.30	128	68	87	71	75	77	81	82	76	72	59	Level 2 [5]
VRE 315/734W1450	1,955 [1]	18.3	18.5	35.00	238	78	94	79	84	85	89	90	84	80	66	Level 2 [5]
VRE 315/673W710	710	0.172	0.18	0.78	67	48	65	55	60	59	58	57	50	44	36	- [3]
VRE 315/673W950	950	0.413	0.55	1.59	68	54	71	61	65	65	64	63	56	50	42	Level 2
VRE 315/673W1450	1,450	1.47	1.5	3.40	77	62	80	70	73	75	72	69	66	58	50	Level 2 [4]
VRE 315/673W2900	2,900	11.7	15.0	27.00	156	78	96	81	90	91	90	86	81	76	66	Level 2 [4]
VRE 315/673W2900	3,575 [1]	22.0	22.0	38.00	218	83	101	84	94	96	96	91	86	81	71	Level 2 [6]

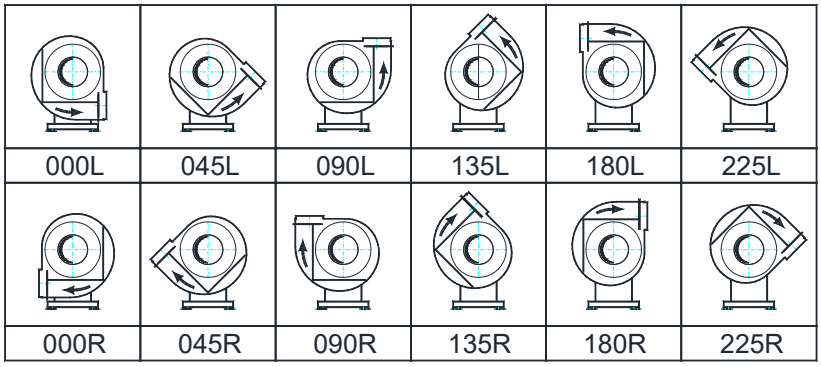
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

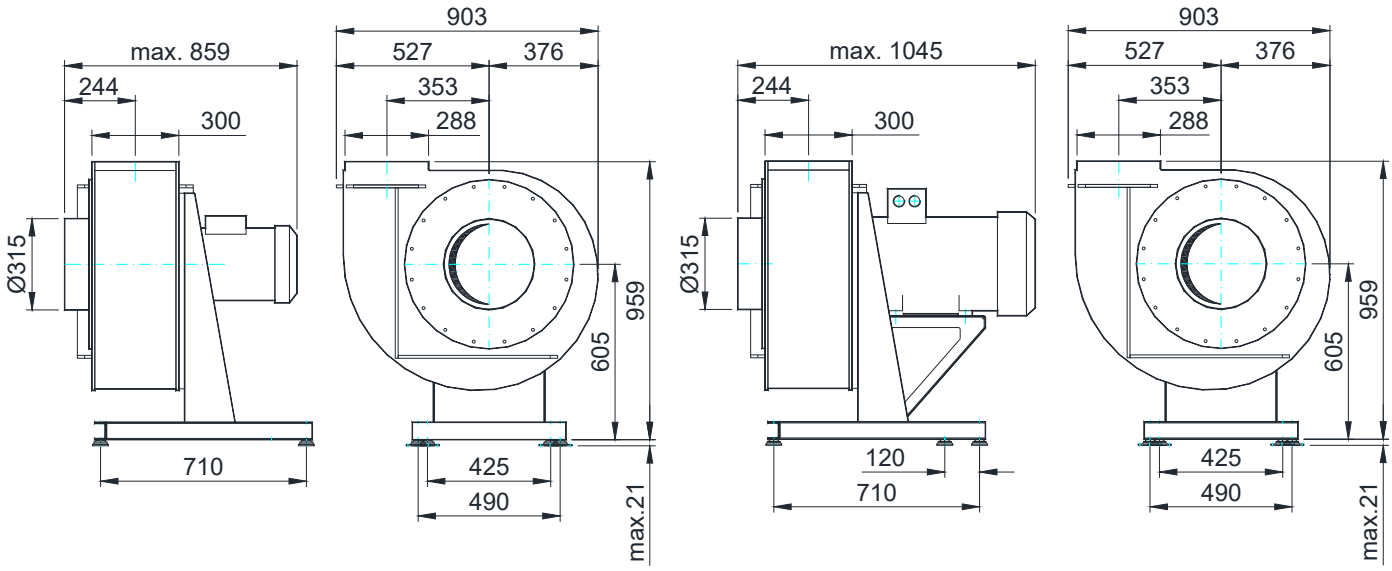


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

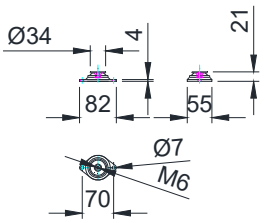
for drive power: **<= 15 kW** **> 15 kW to 22 kW**



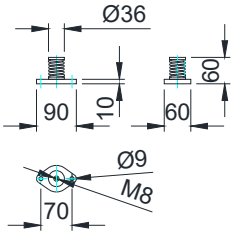
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 50-50SF that is designed for the size, speed and drive power of the fan.
Stainless steel spring insulators as e.g. type MFI40 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type 50-50 SF



Type MFI 40 M8



FRAME / FLANGE

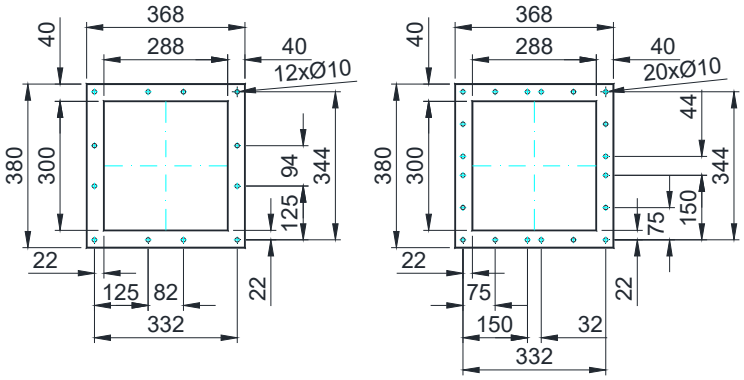
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

Drilling pattern:
- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

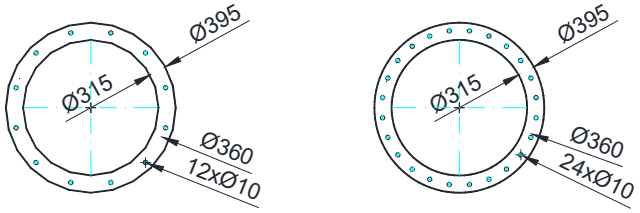
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F

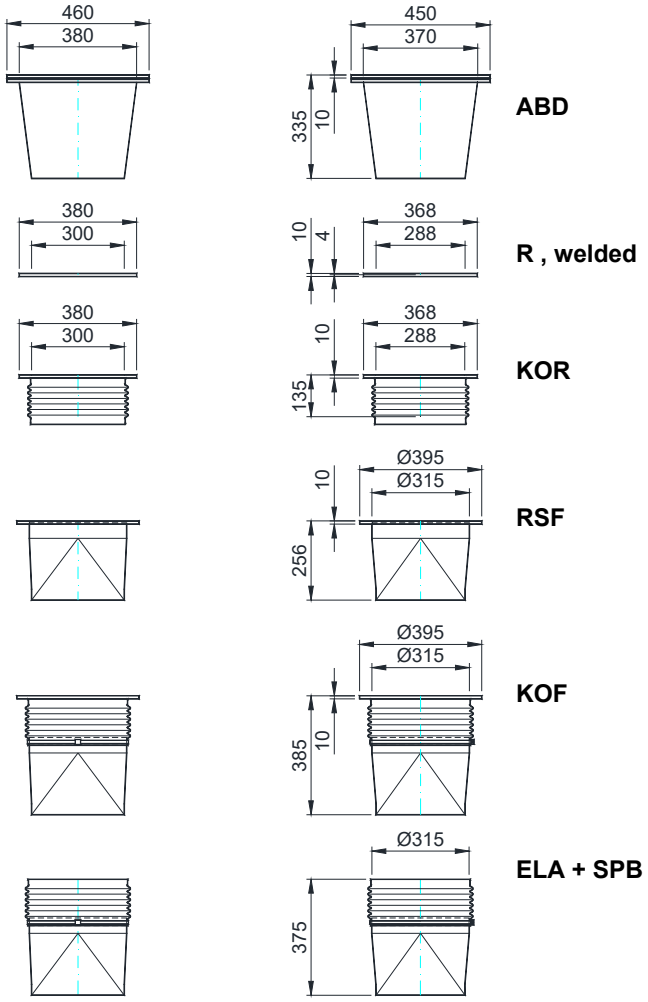


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

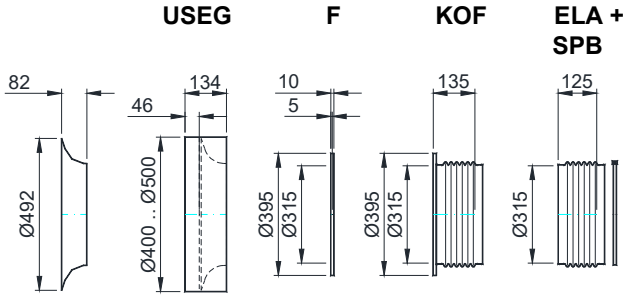
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

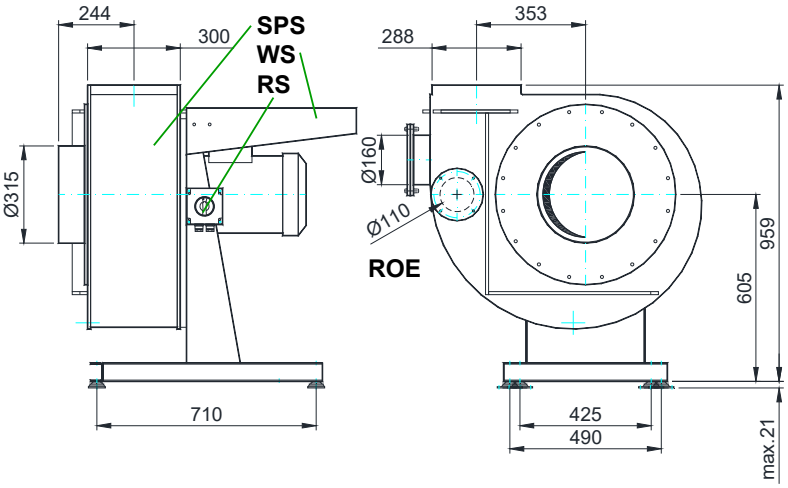


Suction side casing connection

Casing material: all

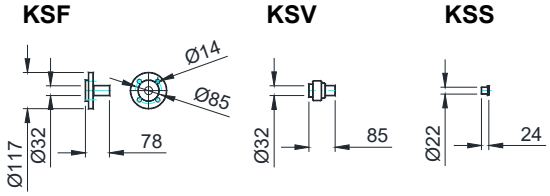


Accessories

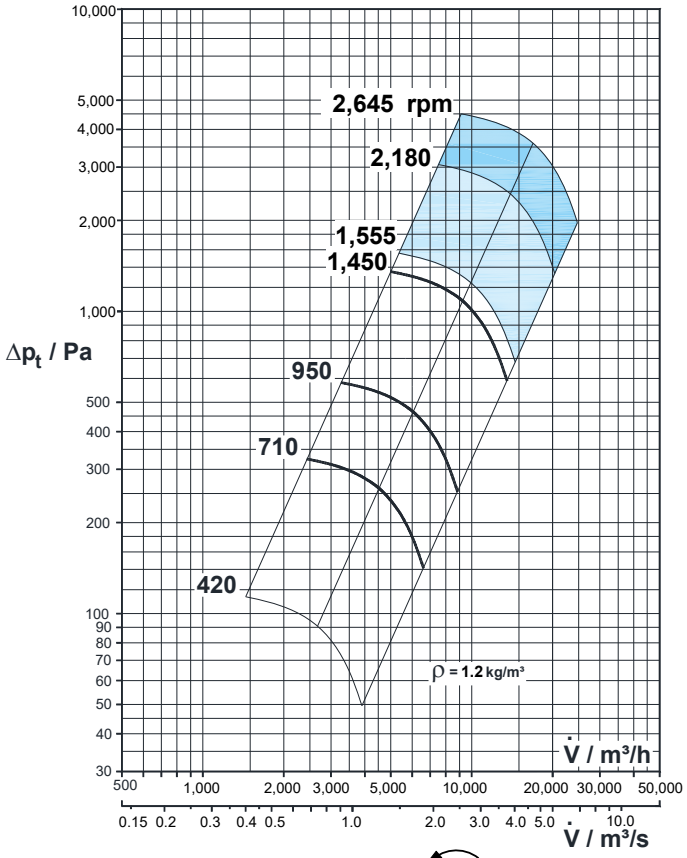


Condensate drain

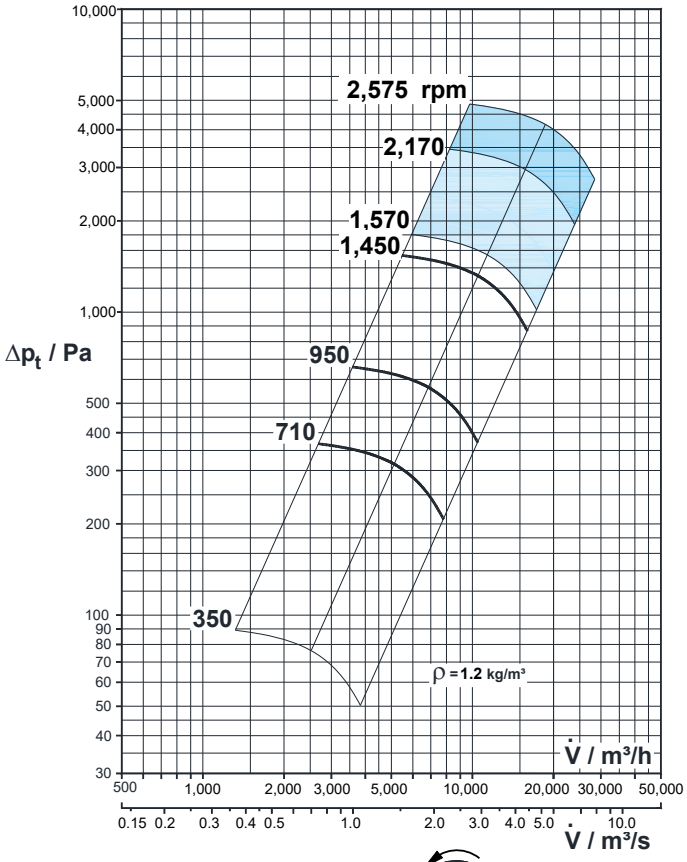
Casing material: all



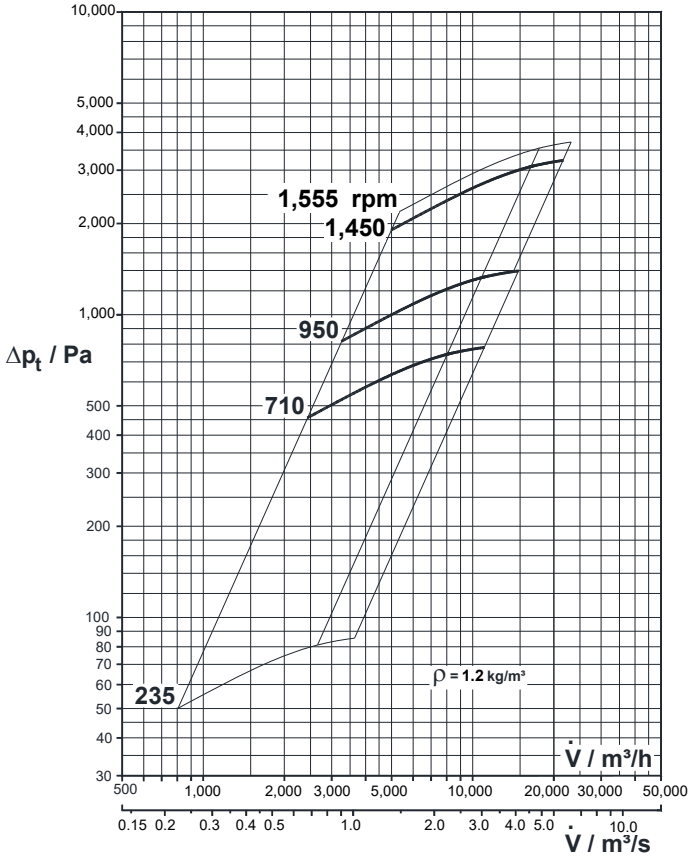
Impeller type 731



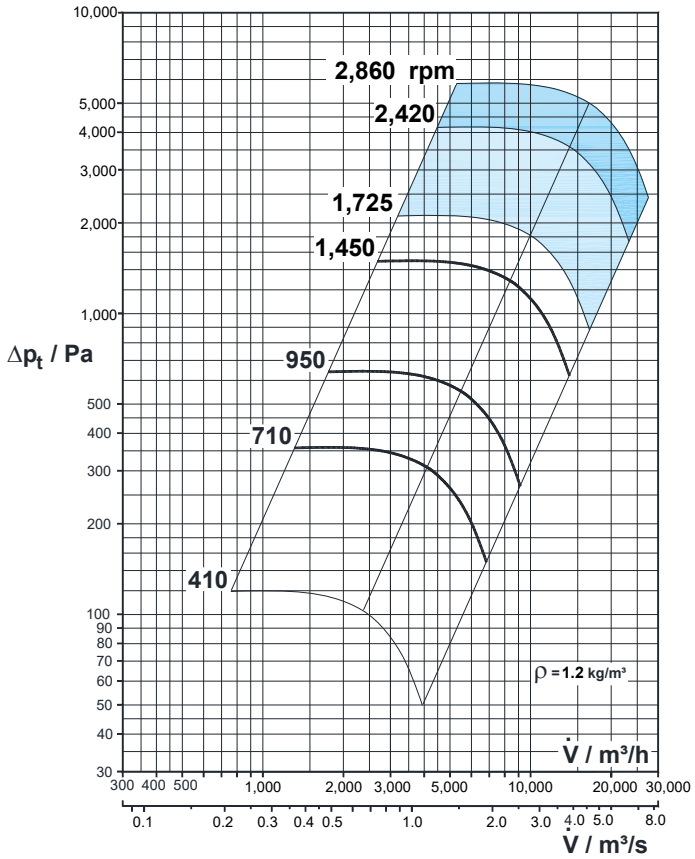
Impeller type 733



Impeller type 734



Impeller type 673



Impeller materials: PPs, PPsX, PVC, PVDF | GFRP | CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 400/731W710	710	0.483	0.55	1.63	110	55	72	59	65	69	66	62	60	57	53	- [3]
VRE 400/731W950	950	1.160	1.50	3.70	123	61	79	66	70	76	73	68	65	63	58	Level 2 [4]
VRE 400/731W1450	1,450	4.110	5.50	10.80	149	68	86	73	76	84	80	75	72	69	60	Level 2 [4]
VRE 400/731W1450	2,645 [1]	25.000	30.00	55.00	364	82	99	86	89	97	92	87	84	80	71	Level 2 [5]
VRE 400/733W710	710	0.776	1.10	3.00	119	58	75	62	67	71	66	62	60	57	55	- [3]
VRE 400/733W950	950	1.860	2.20	5.50	139	64	82	69	74	79	73	68	65	63	60	Level 2 [4]
VRE 400/733W1450	1,450	6.610	7.50	14.30	164	71	89	76	79	87	80	75	72	69	63	Level 2 [5]
VRE 400/733W1450	2,645 [1]	37.000	37.00	66.00	409	84	101	88	92	100	92	87	83	80	73	Level 2 [5]
VRE 400/734W710	710	3.790	4.00	10.20	180	62	79	63	65	72	77	72	67	63	52	Level 2
VRE 400/734W950	950	9.080	11.00	23.00	231	68	85	70	74	78	82	75	70	64	54	Level 2 [5]
VRE 400/734W1450	1,450	29.500	30.00	55.00	366	75	93	77	81	84	87	88	83	78	66	Level 2 [5]
VRE 400/734W1450	1,555 [1]	37.000	37.00	66.00	411	77	95	79	83	86	89	90	85	80	68	Level 2 [5]
VRE 400/673W710	710	0.564	0.75	2.25	121	55	73	62	67	67	66	65	58	52	44	- [3]
VRE 400/673W950	950	1.350	1.50	3.70	128	61	78	68	73	72	71	70	63	57	49	Level 2 [4]
VRE 400/673W1450	1,450	4.810	5.50	10.80	154	69	87	77	80	82	80	76	73	65	57	Level 2 [4]
VRE 400/673W1450	2,860 [1]	37.000	37.00	66.00	409	85	103	88	97	98	97	93	88	83	73	Level 2 [5]

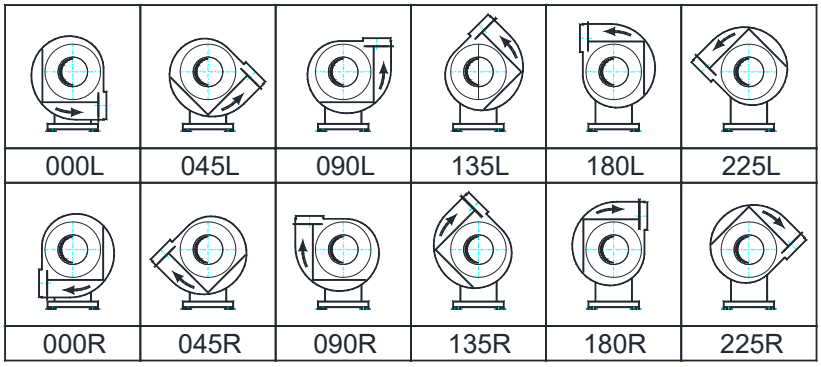
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

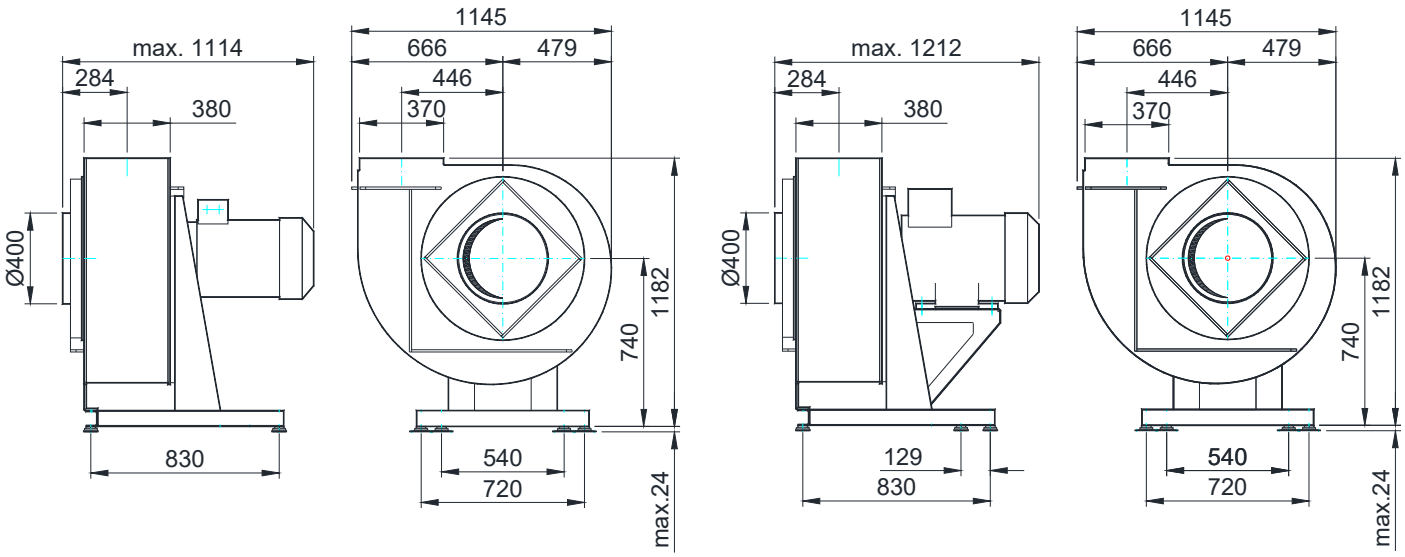


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

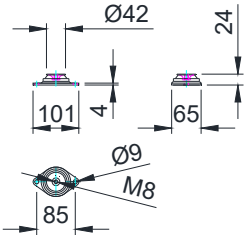
for drive power: **<= 15 kW** **> 15 kW to 37 kW**



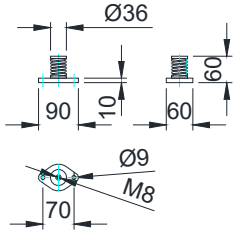
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 60-100SF that is designed for the size, speed and drive power of the fan.
Stainless steel spring insulators as e.g. type MFI40-M8 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type 60-100 SF M8



Type MFI 40 M8



FRAME / FLANGE

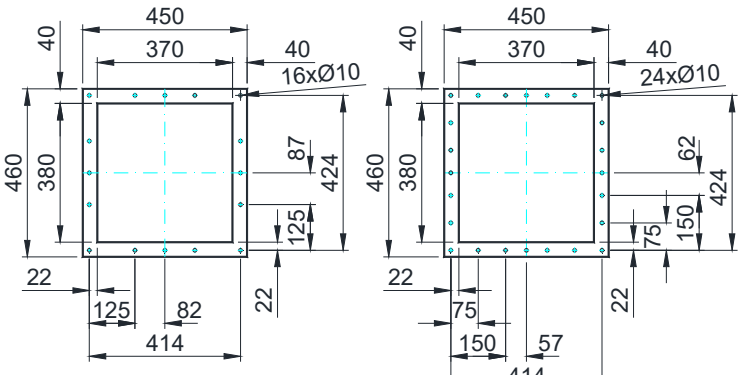
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

Drilling pattern:
- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

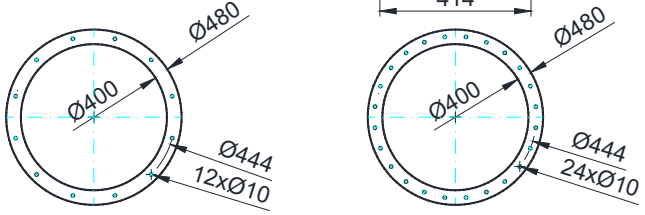
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F

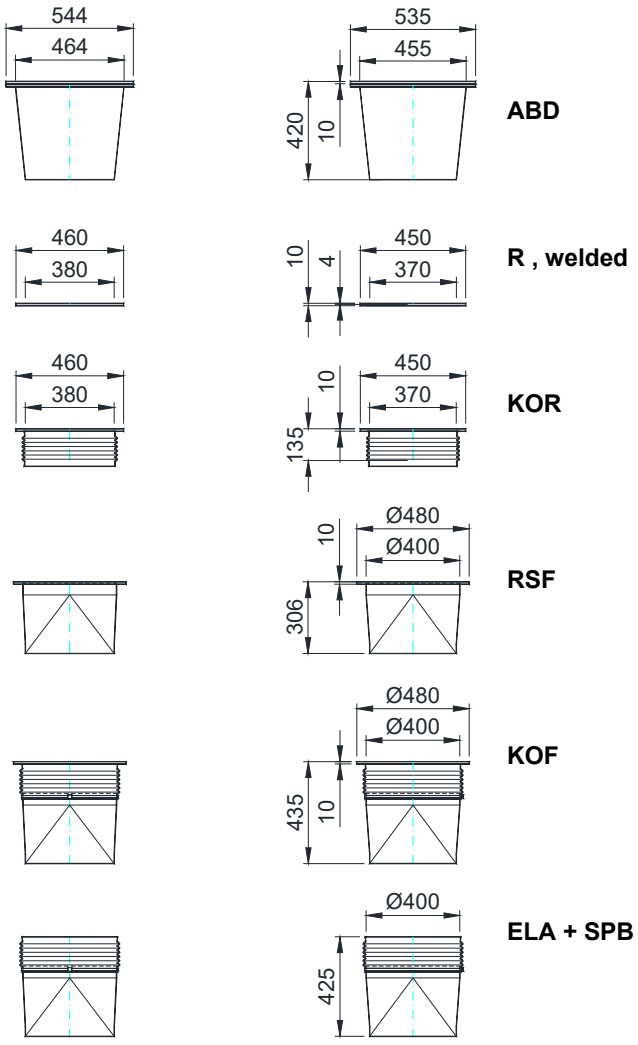


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

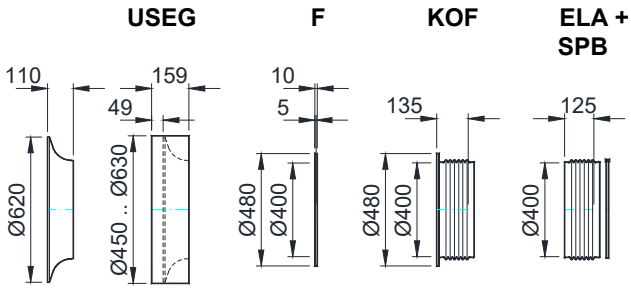
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

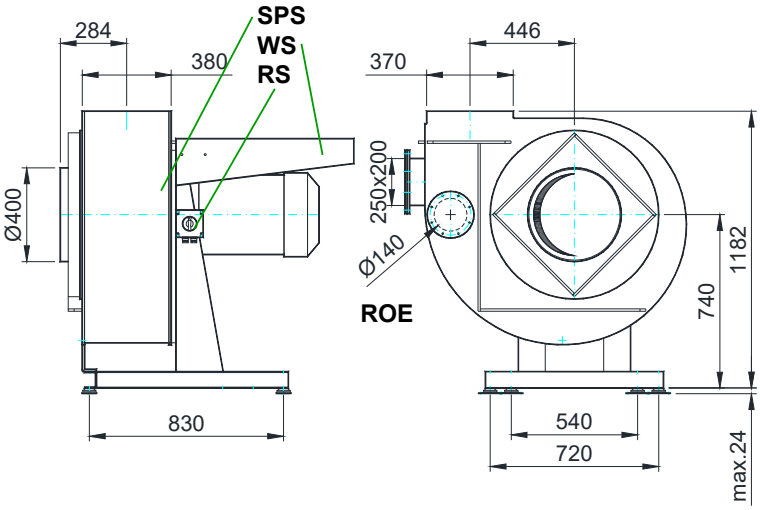


Suction side casing connection

Casing material: all

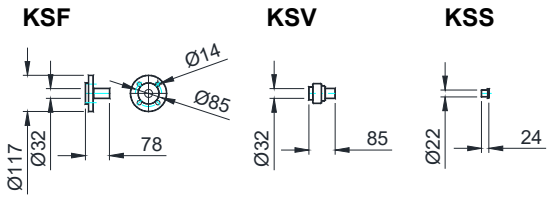


Accessories

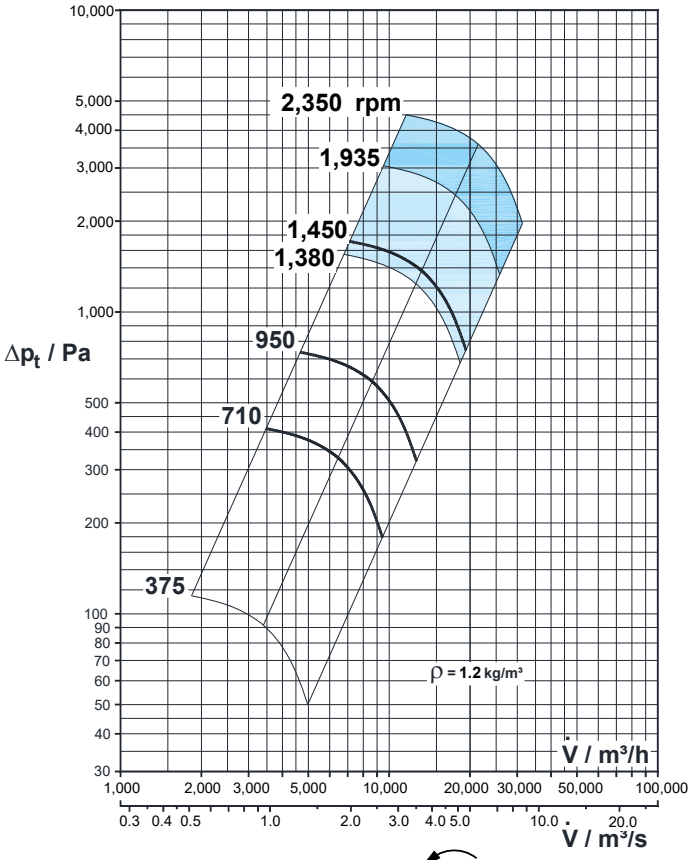


Condensate drain

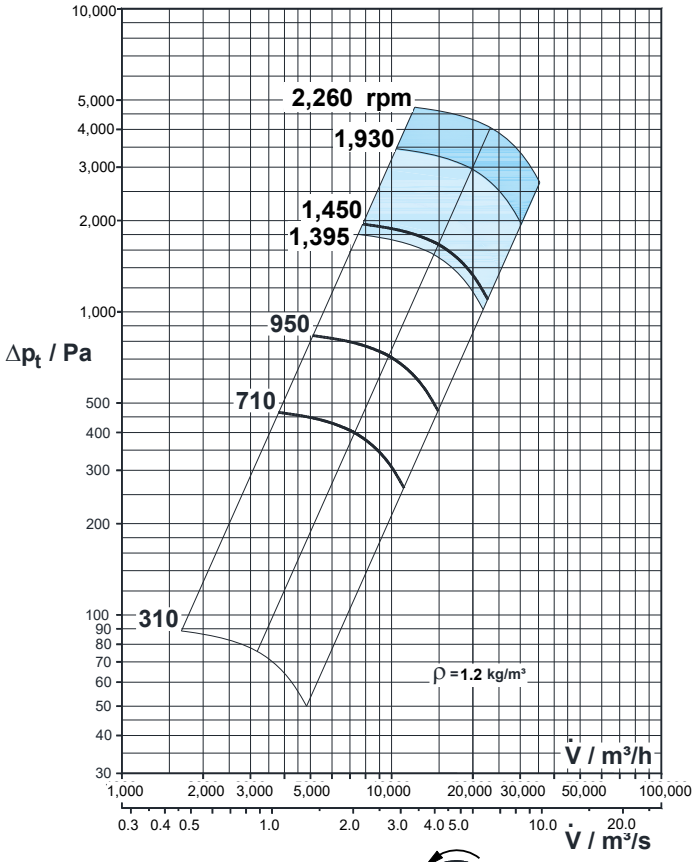
Casing material: all



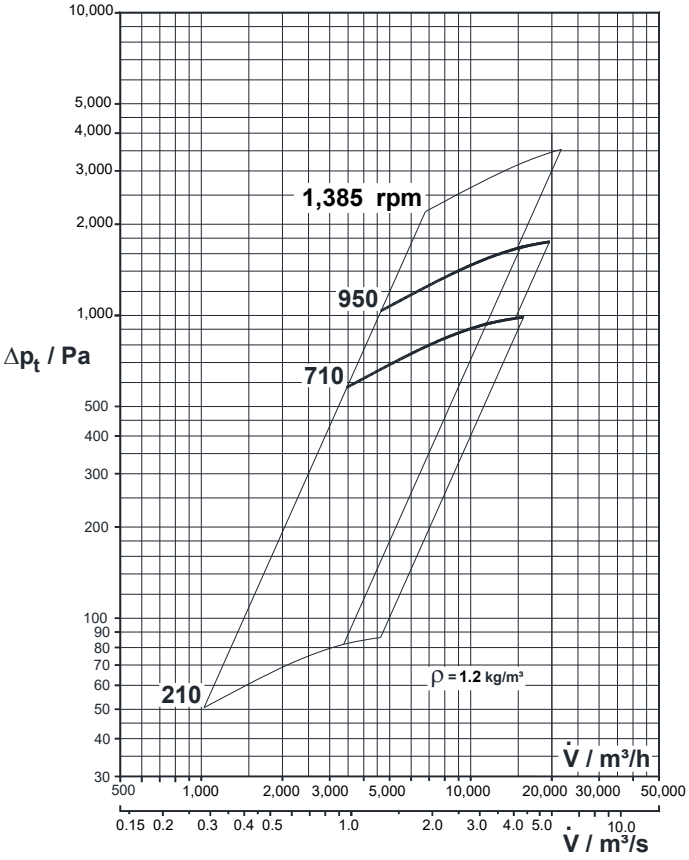
Impeller type 731



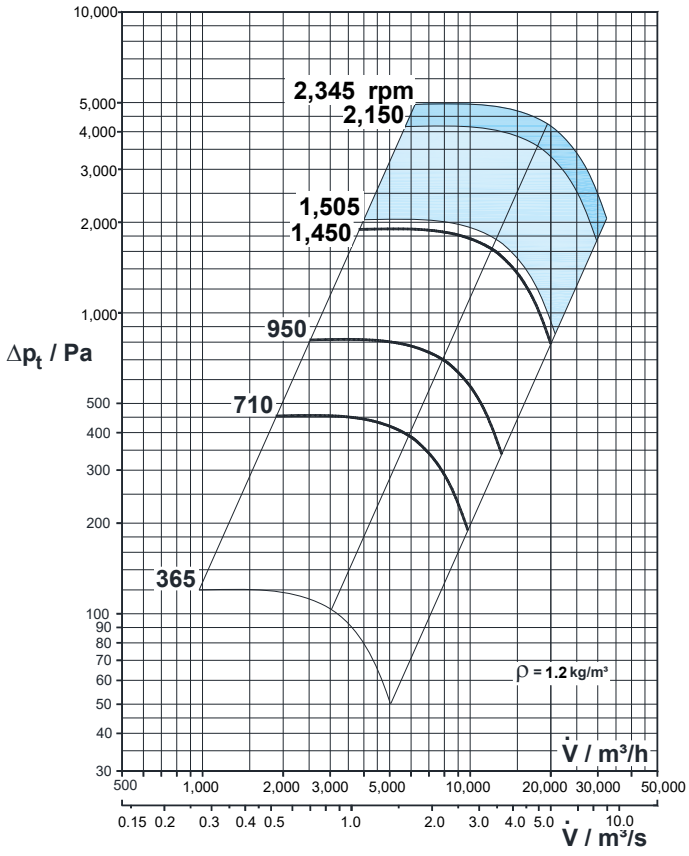
Impeller type 733



Impeller type 734



Impeller type 673



Impeller materials: PPs, PPsX, PVC, PVDF | GFRP | CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 450/731W710	710	0.83	1.1	3.0	151	57	75	62	68	72	69	65	63	60	56	- [3]
VRE 450/731W950	950	2.09	2.2	5.5	171	63	81	68	72	78	75	70	67	65	60	Level 2 [4]
VRE 450/731W1450	1,450	7.37	7.5	14.3	200	72	90	77	80	88	84	79	76	73	64	Level 2 [5]
VRE 450/731W1450	2,350 [1]	31.6	37.0	66.0	435	82	100	87	90	98	93	88	85	82	72	Level 2 [5]
VRE 450/733W710	710	1.40	1.5	3.95	149	60	78	66	71	75	70	66	64	61	58	- [3]
VRE 450/733W950	950	3.35	4.0	8.4	181	66	84	72	77	82	76	71	68	66	63	Level 2 [4]
VRE 450/733W1450	1,450	11.90	15.0	28.5	240	75	93	80	83	91	84	79	76	73	67	Level 2 [5]
VRE 450/733W1450	2,260 [1]	45.00	45.0	80.0	470	84	103	91	94	102	94	89	86	82	76	Level 2 [5]
VRE 450/734W710	710	6.83	7.5	17.9	237	66	83	67	69	76	81	76	71	67	56	Level 2
VRE 450/734W950	950	14.60	15.0	29.5	323	71	89	74	78	82	86	79	74	68	58	Level 2 [5]
VRE 450/734W950	1,385 [1]	30.00	30.0	56.0	477	78	96	80	85	88	91	91	86	80	69	Level 2 [5]
VRE 450/673W710	710	1.02	1.1	3.0	140	59	76	66	70	70	69	68	61	55	47	Level 2
VRE 450/673W950	950	2.45	4.0	8.4	178	65	82	72	76	76	75	74	67	61	53	Level 2 [4]
VRE 450/673W1450	1,450	8.73	11.0	20.5	212	73	90	80	84	85	83	80	77	69	61	Level 2 [5]
VRE 450/673W1450	2,346 [1]	37.00	37.0	66.0	435	84	102	89	96	96	96	92	87	82	72	Level 2 [5]

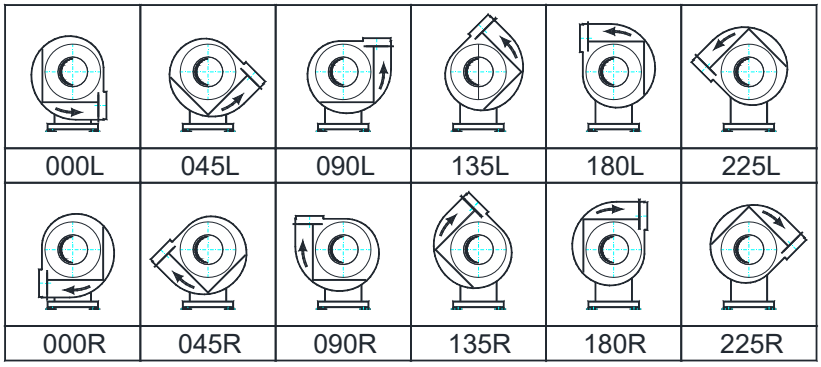
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

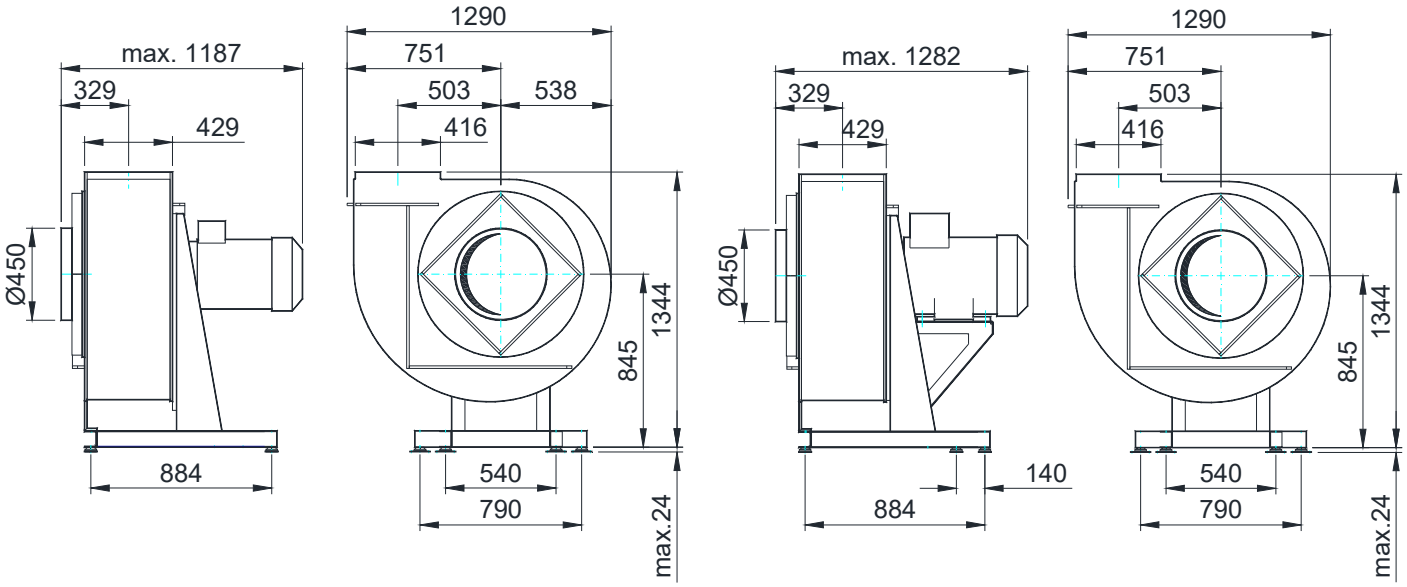


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

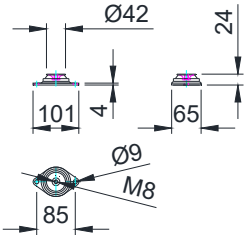
for drive power: **<= 15 kW** **> 15 kW to 37 kW**



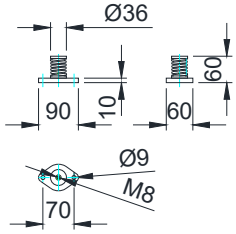
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 60-100SF that is designed for the size, speed and drive power of the fan.
Stainless steel spring insulators as e.g. type MFI40-M8 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type 60-100 SF M8



Type MFI 40 M8



FRAME / FLANGE

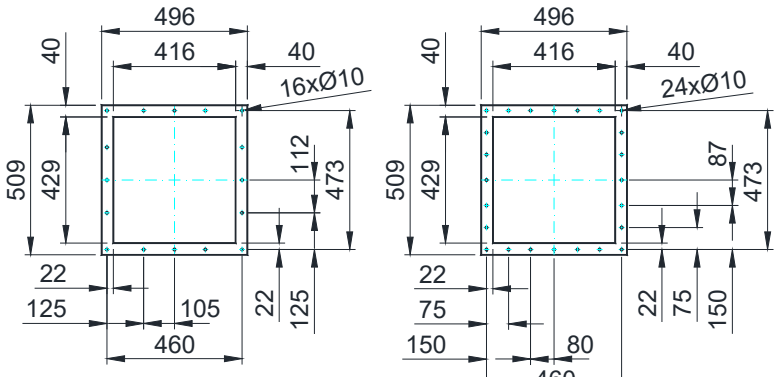
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

Drilling pattern:
- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

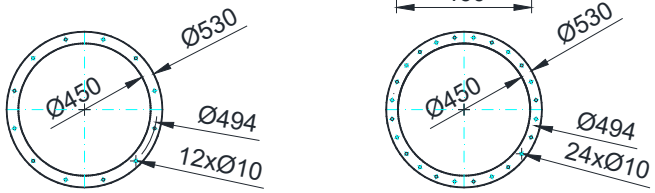
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F

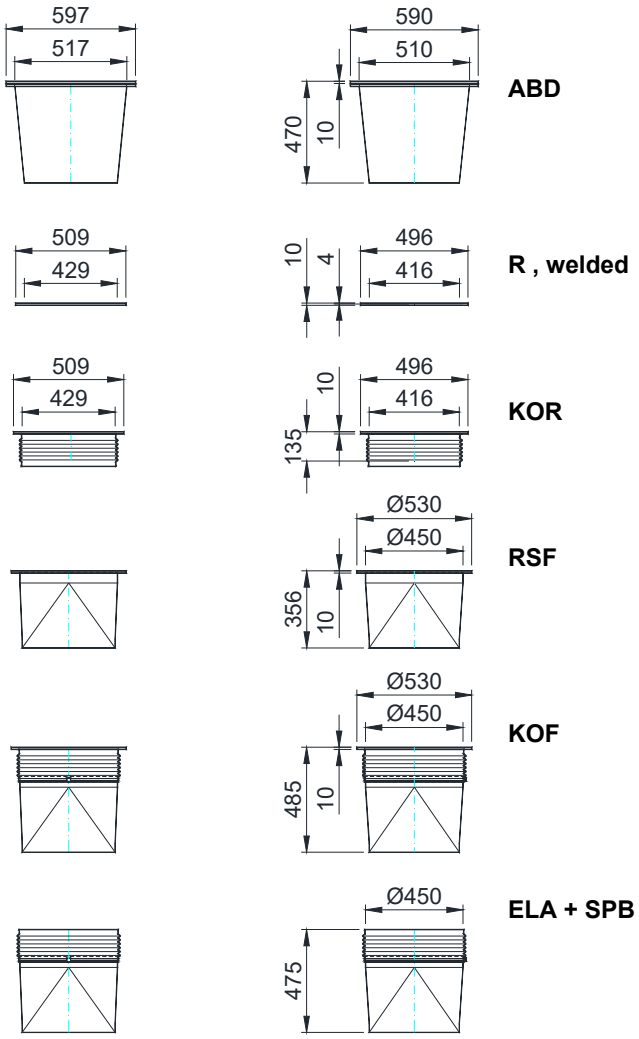


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

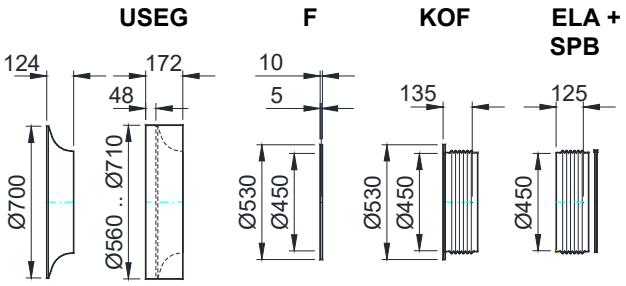
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

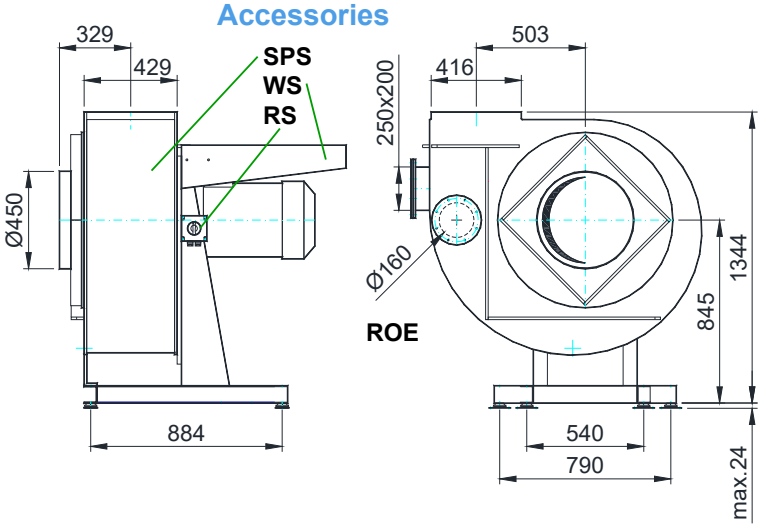


Suction side casing connection

Casing material: all

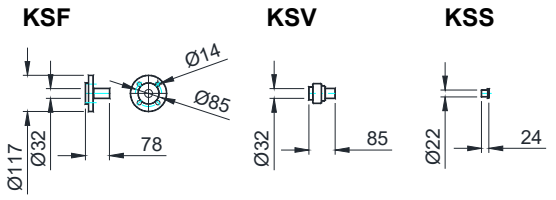


Accessories

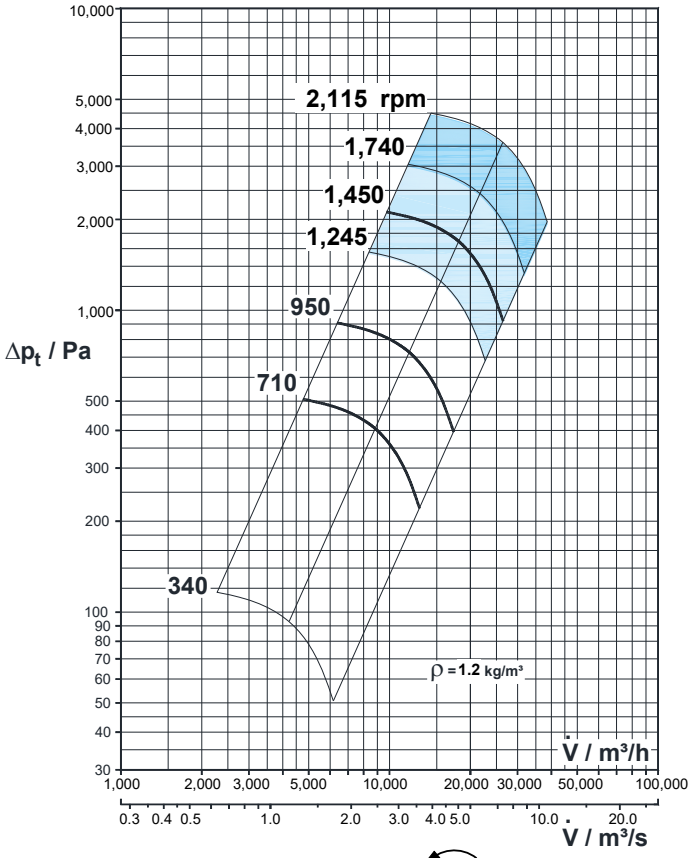


Condensate drain

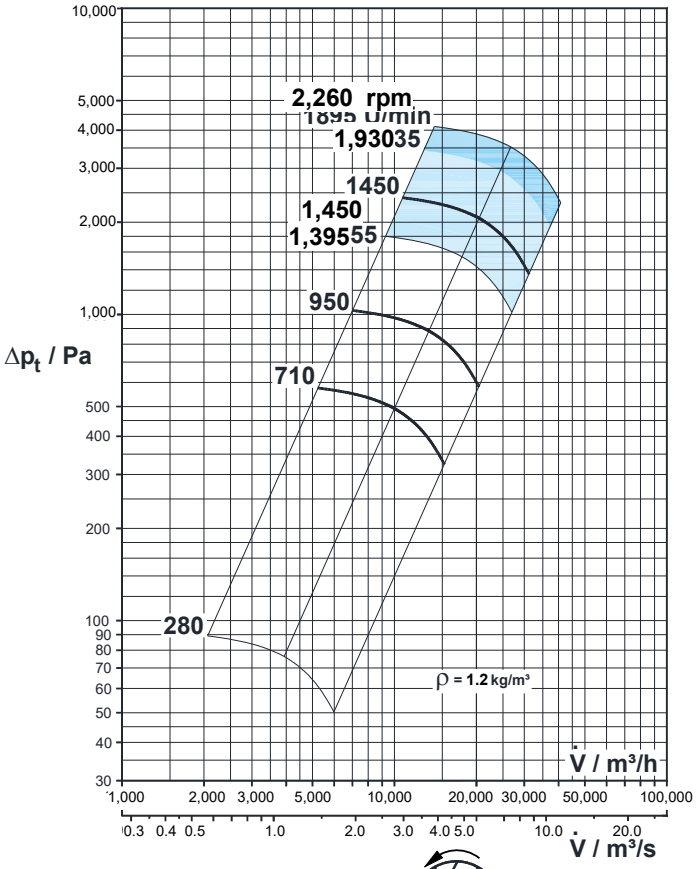
Casing material: all



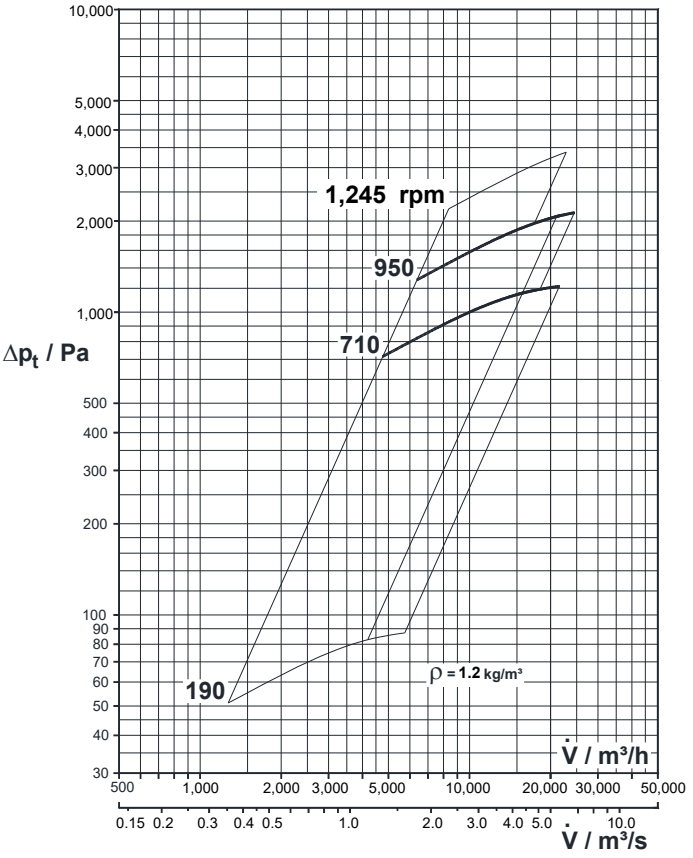
Impeller type 731



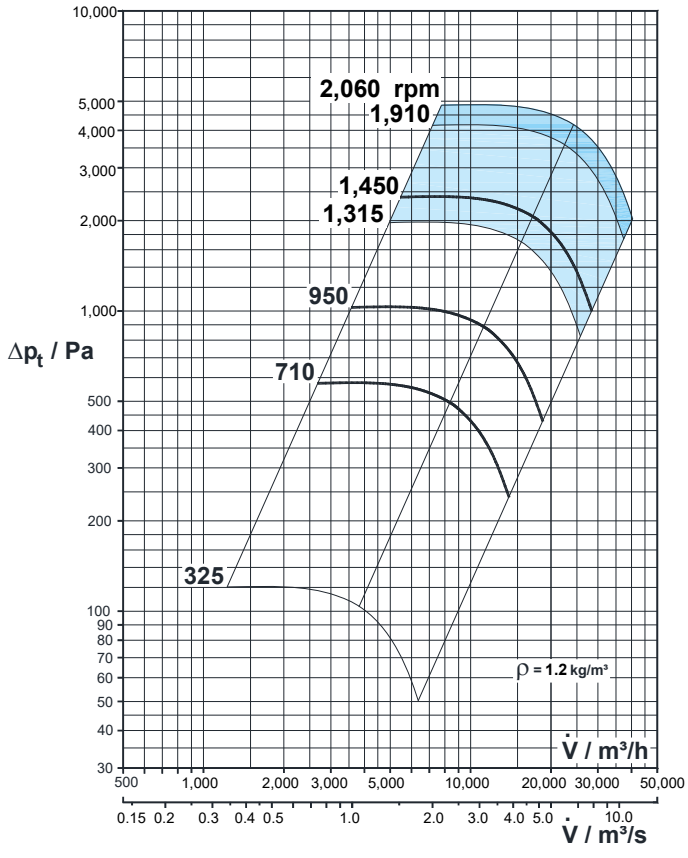
Impeller type 733



Impeller type 734



Impeller type 673



Impeller materials: PPs, PPsX, PVC, PVDF | GFRP | CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 500/731W710	710	1.47	1.5	3.95	182	59	79	67	72	75	72	69	67	64	60	- [3]
VRE 500/731W950	950	3.53	4.0	8.4	215	66	85	72	75	82	80	74	72	70	65	Level 2 [4]
VRE 500/731W1450	1,450	12.60	15.0	28.5	280	75	93	80	83	91	87	82	79	76	67	Level 2 [5]
VRE 500/731W1450	2,115 [1]	39.00	45.0	80.0	500	83	101	88	9	99	95	89	86	83	74	Level 2 [5]
VRE 500/733W710	710	2.38	3.0	7.8	199	63	82	70	75	77	73	70	68	65	62	- [3]
VRE 500/733W950	950	5.67	7.5	16.0	276	69	88	74	77	85	80	74	72	70	67	Level 2 [5]
VRE 500/733W1450	1,450	20.80	22.0	41.0	350	78	96	83	86	94	87	82	79	76	70	Level 2 [5]
VRE 500/733W1450	1,895 [1]	45.00	45.0	80.0	500	84	102	89	93	101	93	88	85	82	75	Level 2 [5]
VRE 500/734W710	710	11.60	15.0	32.0	359	69	86	69	72	79	84	79	74	70	59	Level 2
VRE 500/734W950	950	21,20	22.0	43.5	413	74	92	77	81	85	89	82	77	71	61	Level 2 [5]
VRE 500/734W950	1,245 [1]	30.00	30.0	56.0	508	79	97	82	86	89	93	90	85	80	69	Level 2 [5]
VRE 500/673W710	710	1.85	2.2	5.9	182	62	79	69	74	73	72	71	65	58	50	Level 2
VRE 500/673W950	950	4.42	5.5	12.0	210	68	85	75	79	79	78	77	70	64	56	Level 2 [4]
VRE 500/673W1450	1,450	15.70	18.5	35.0	345	76	94	84	87	89	86	83	80	72	64	Level 2 [5]
VRE 500/673W1450	2,060 [1]	45.00	45.0	80.0	500	84	102	90	96	97	95	92	89	80	72	Level 2 [5]

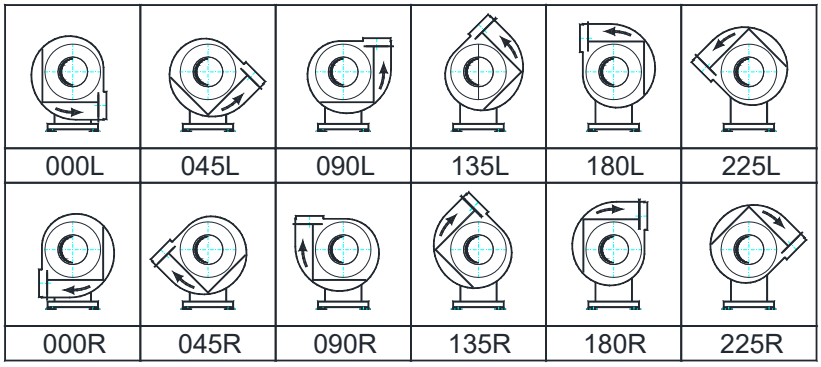
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

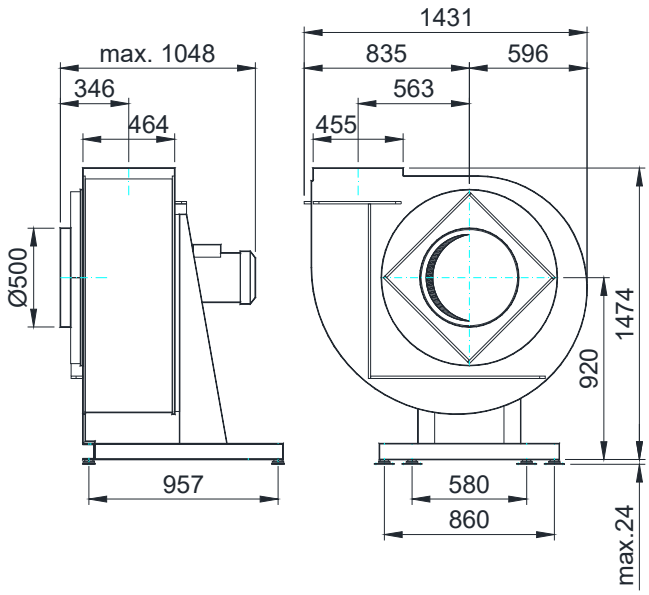


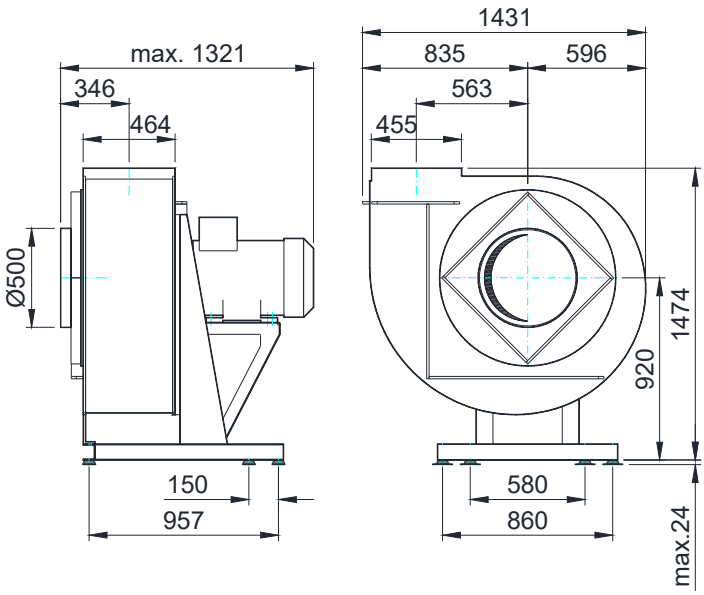
MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

for drive power: **<= 7,5 kW** **> 7,5 kW to 45 kW**

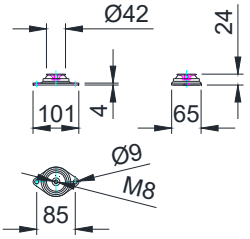




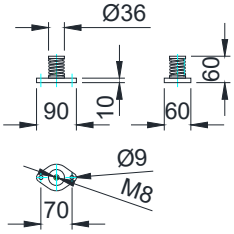
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 60-100SF that is designed for the size, speed and drive power of the fan.
Stainless steel spring insulators as e.g. type MFI40-M8 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type
60-100 SF M8



Typ
MFI 40 M8



FRAME / FLANGE

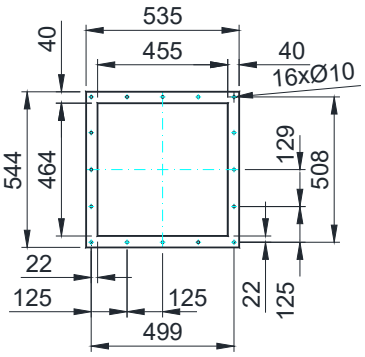
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

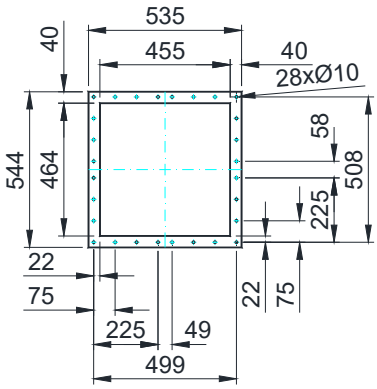
Drilling pattern:
- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

Models according to other standards or special designs are possible on request.

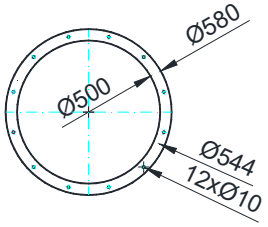
Hole pattern 1 **Hole pattern 2**

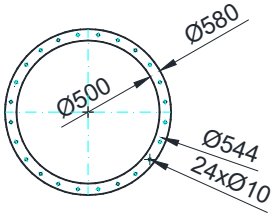
Frame R





Flange F



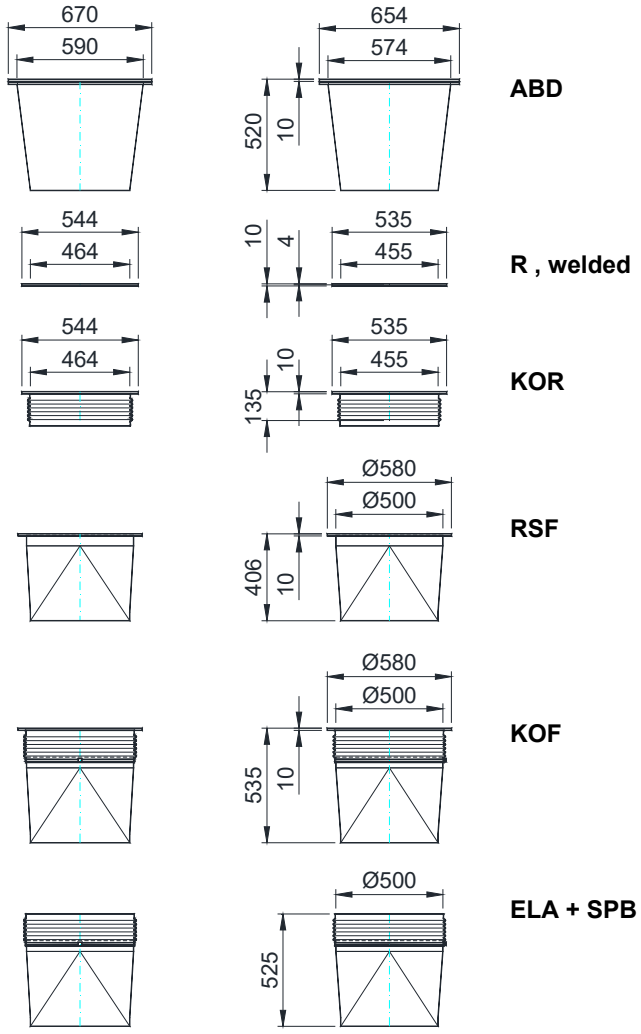


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

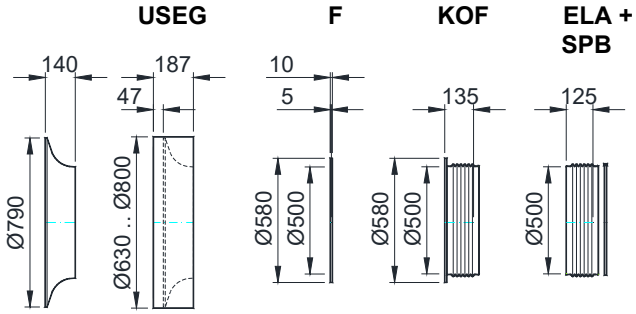
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

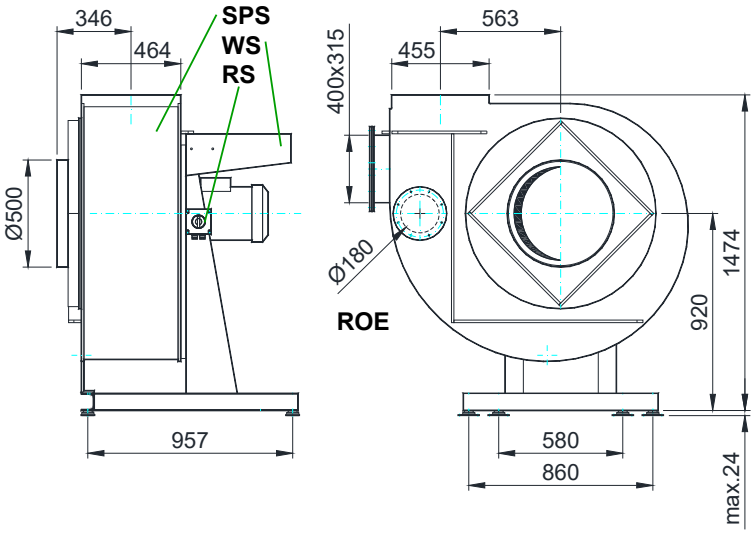


Suction side casing connection

Casing material: all

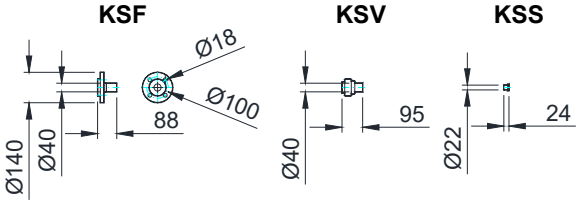


Accessories

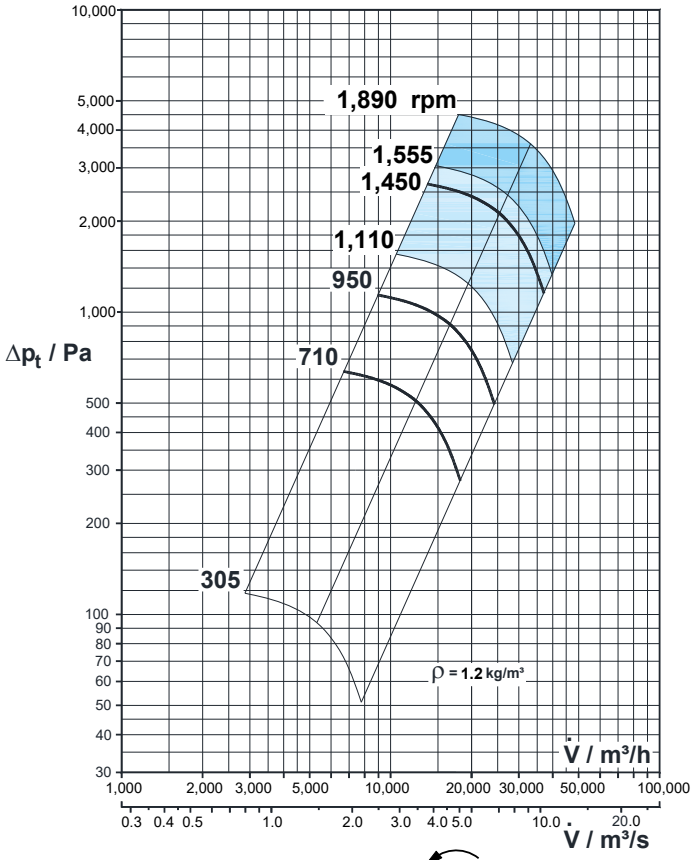


Condensate drain

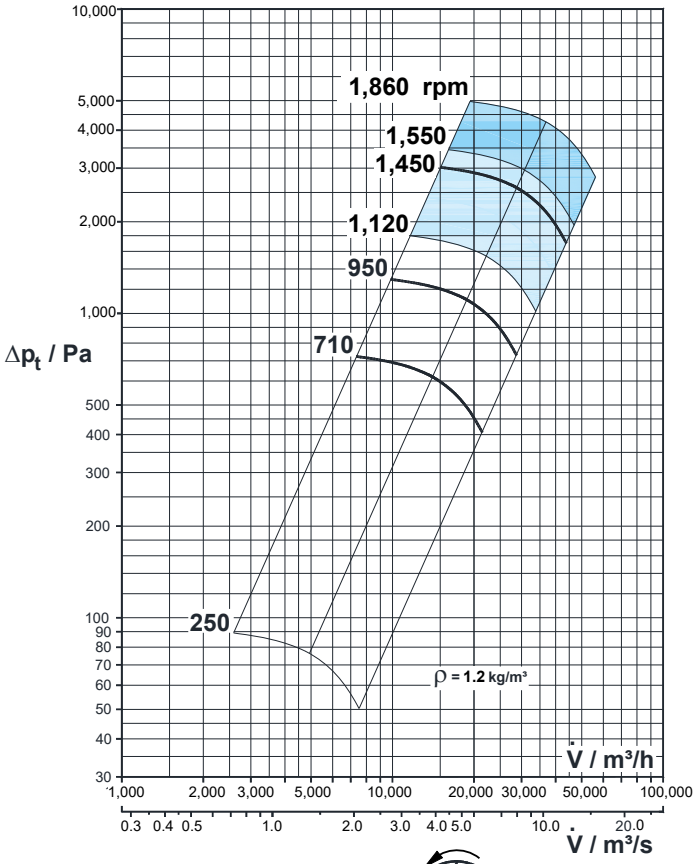
Casing material: all



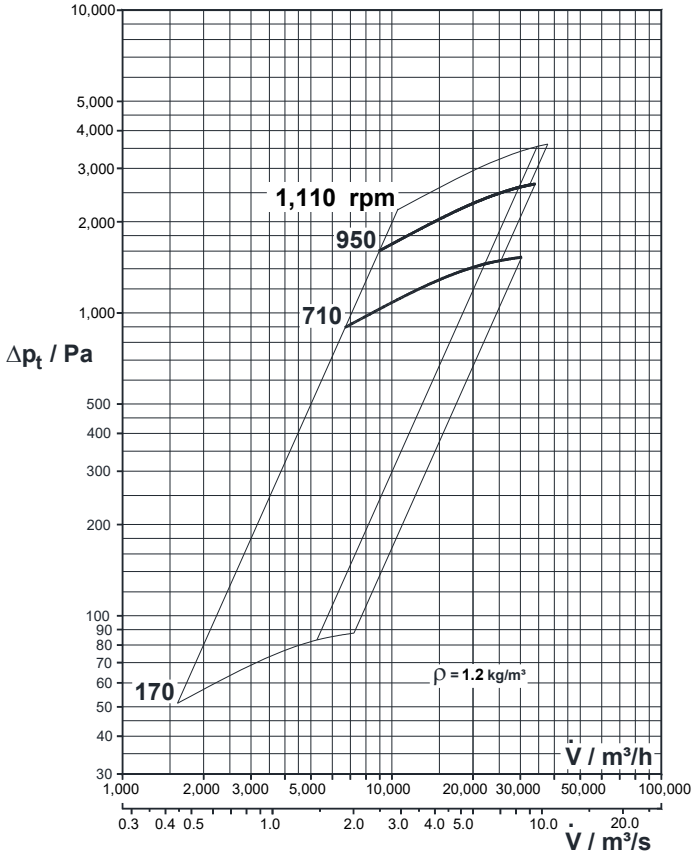
Impeller type 731



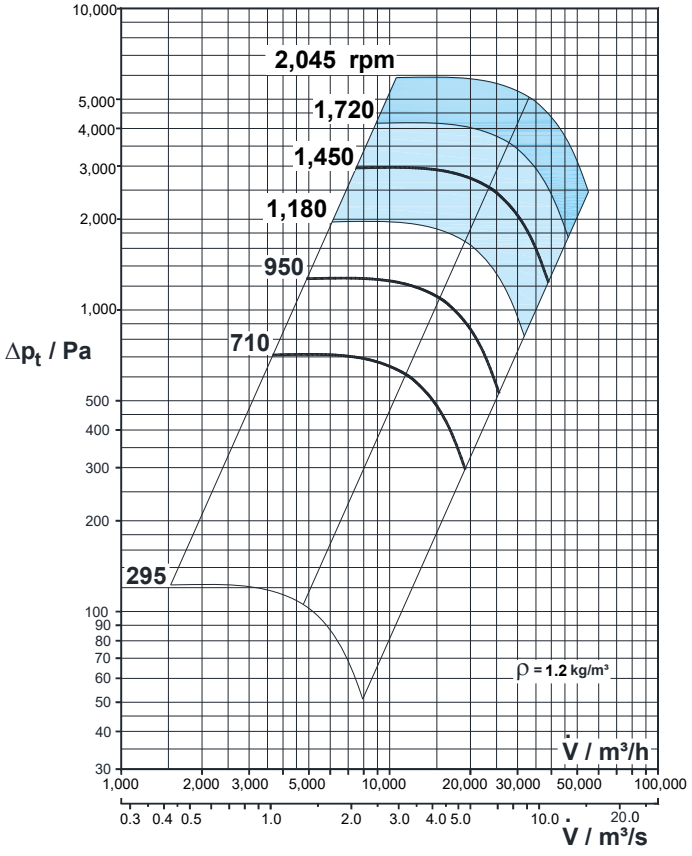
Impeller type 733



Impeller type 734



Impeller type 673



Impeller materials: PPs, PPsX, PVC, PVDF | GFRP | CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 560/731W710	710	2.60	3.0	7.8	234	63	82	68	72	78	77	71	69	67	62	- [3]
VRE 560/731W950	950	6.22	7.5	16.0	299	69	88	74	78	84	83	77	75	73	68	Level 2 [5]
VRE 560/731W1450	1,450	22.10	30.0	55.0	468	79	97	83	86	94	90	85	82	79	70	Level 2 [5]
VRE 560/731W1450	1,890 [1]	43.40	45.0	80.0	569	84	103	90	93	101	97	92	88	85	76	Level 2 [5]
VRE 560/733W710	710	4.17	5.5	13.3	302	66	85	71	75	81	78	72	70	68	65	- [3]
VRE 560/733W950	950	9.99	11.0	23.0	343	72	91	77	81	87	84	78	76	74	71	Level 2 [5]
VRE 560/733W1450	1,450	35.50	37.0	66.0	514	82	100	86	89	98	90	85	82	79	73	Level 2 [5]
VRE 560/733W1450	1,860 [1]	75.00	75.0	133.0	866	87	105	93	96	104	96	91	88	85	78	Level 2 [5]
VRE 560/734W710	710	20.40	22.0	45.0	434	72	89	72	75	82	87	82	77	73	62	Level 2
VRE 560/734W950	950	37.00	37.0	67.0	645	78	95	80	84	88	92	85	80	74	64	Level 2 [5]
VRE 560/734W950	1,110 [1]	55.00	55.0	99.0	847	81	98	83	87	91	94	90	85	79	69	Level 2 [5]
VRE 560/673W710	710	3.13	4.0	10.2	268	66	83	73	77	77	76	75	68	62	54	Level 2
VRE 560/673W950	950	7.49	7.5	15.2	297	71	89	78	83	83	82	80	73	67	59	Level 2 [5]
VRE 560/673W1450	1,450	26.60	30.0	55.0	468	79	97	87	90	92	90	87	84	75	67	Level 2 [5]
VRE 560/673W1450	2,045 [1]	74.90	75.0	133.0	866	88	105	94	99	101	98	95	92	83	75	Level 2 [5]

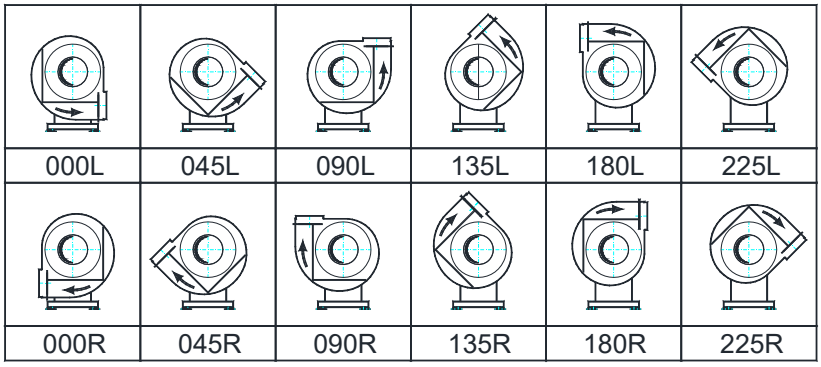
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

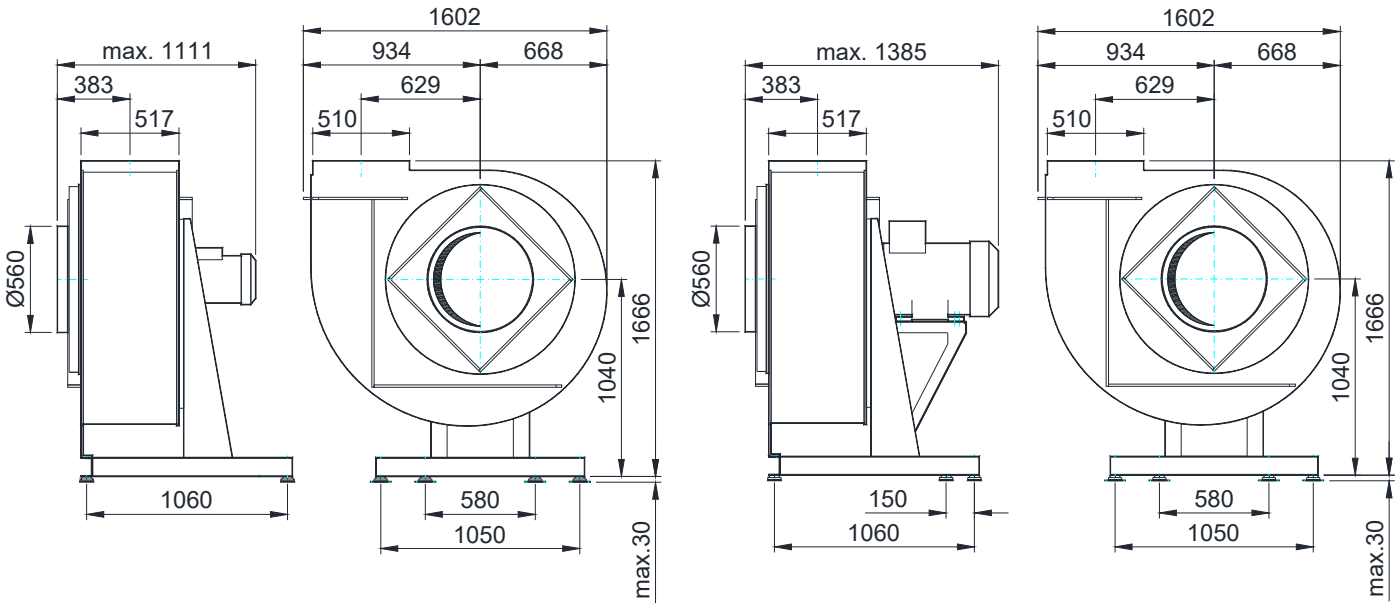


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

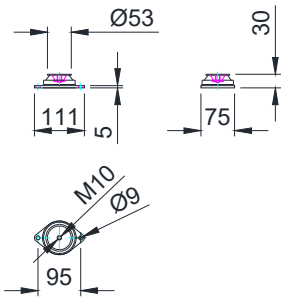
for drive power: **<= 7,5 kW** **> 7,5 kW to 75 kW**



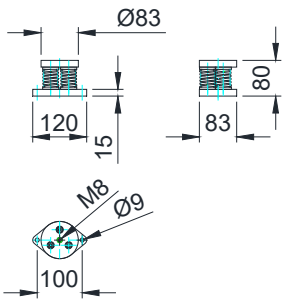
VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type 70-200SF that is designed for the size, speed and drive power of the fan.
Stainless steel spring insulators as e.g. type MFI120-M8 can be exploited on special demand if natural frequency and isolation effectiveness require particulary high demands on vibration isolation. Due to the materials used (stainless steel A2 and PE-HD) stainless steel spring insulators can be used in areas sensitive to corrosion and hygiene.

Type 70-200 SF M10



Type MFI 120 M8



FRAME / FLANGE

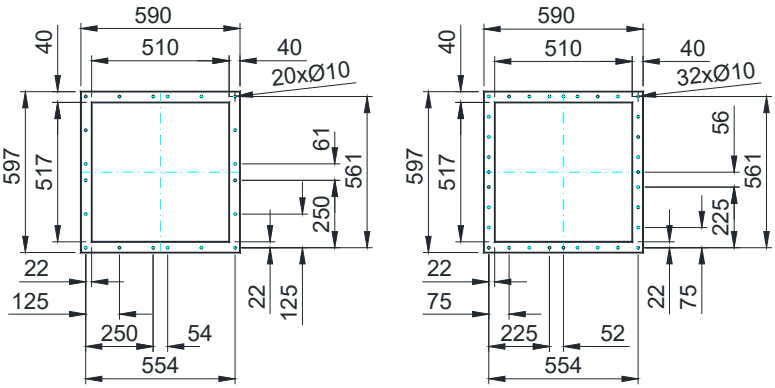
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

Drilling pattern:
- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

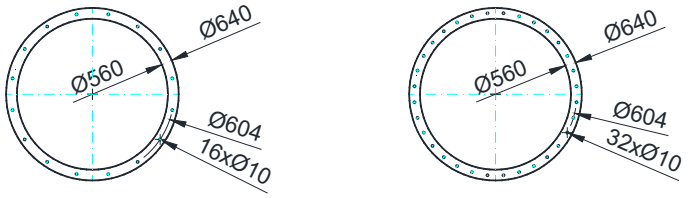
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flansch F

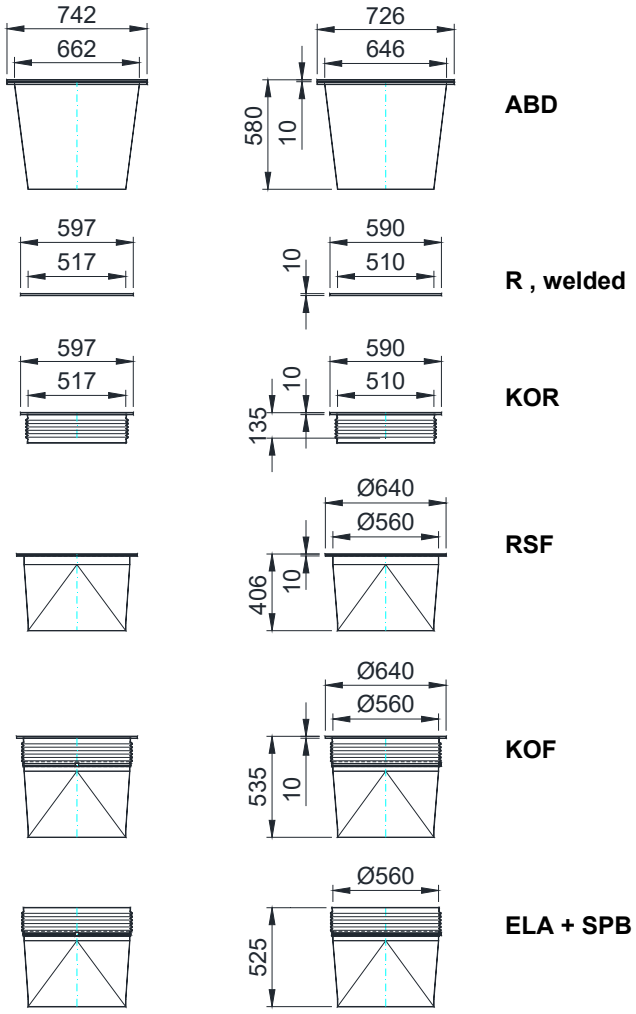


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

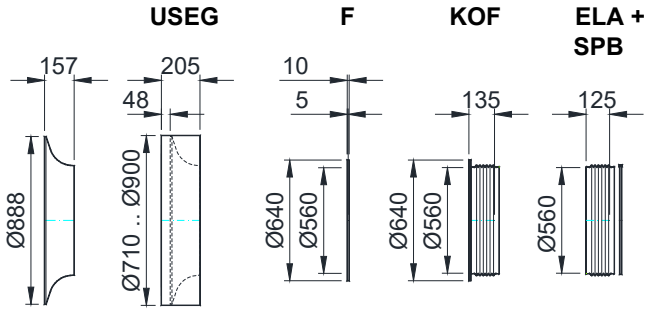
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

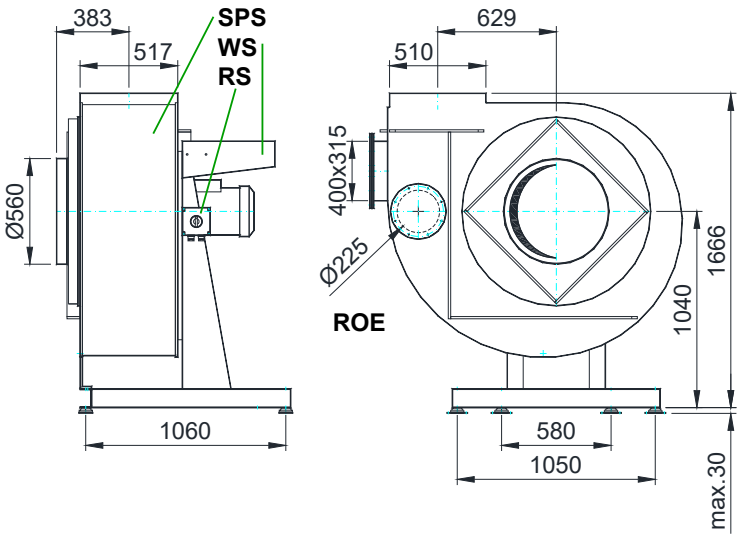


Suction side casing connection

Casing material: all

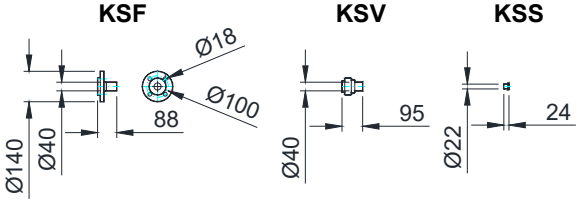


Accessories

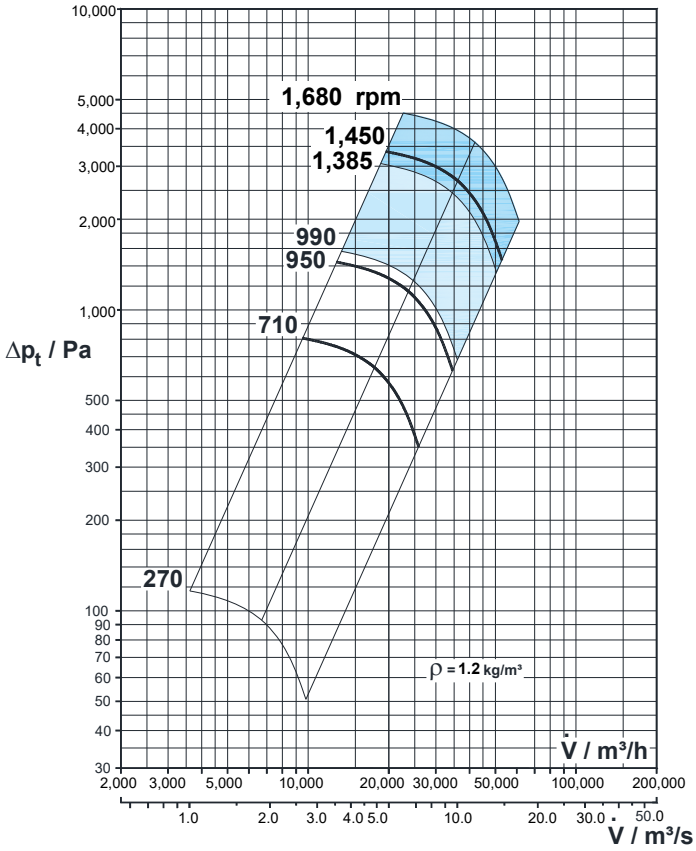


Condensate drain

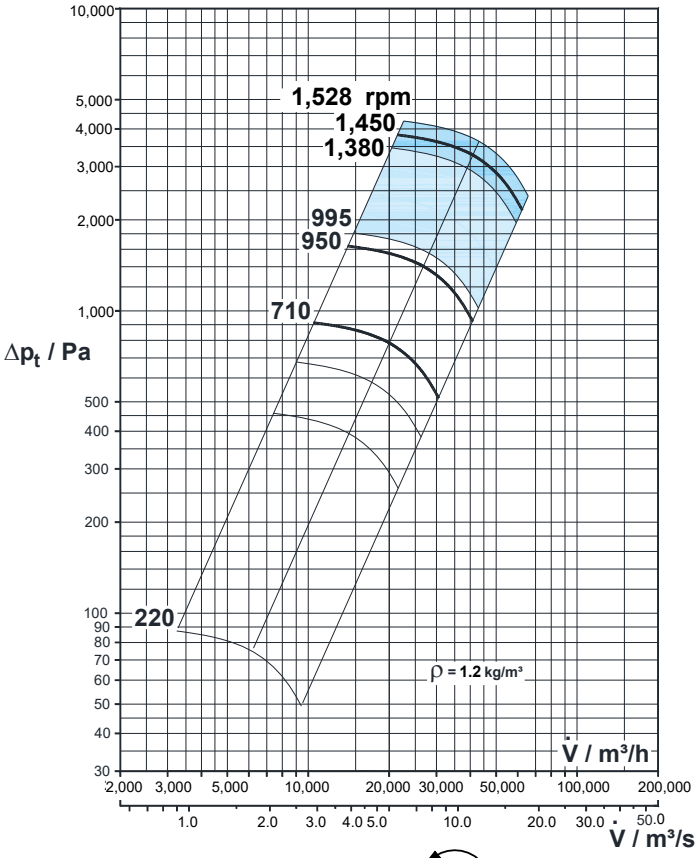
Casing material: all



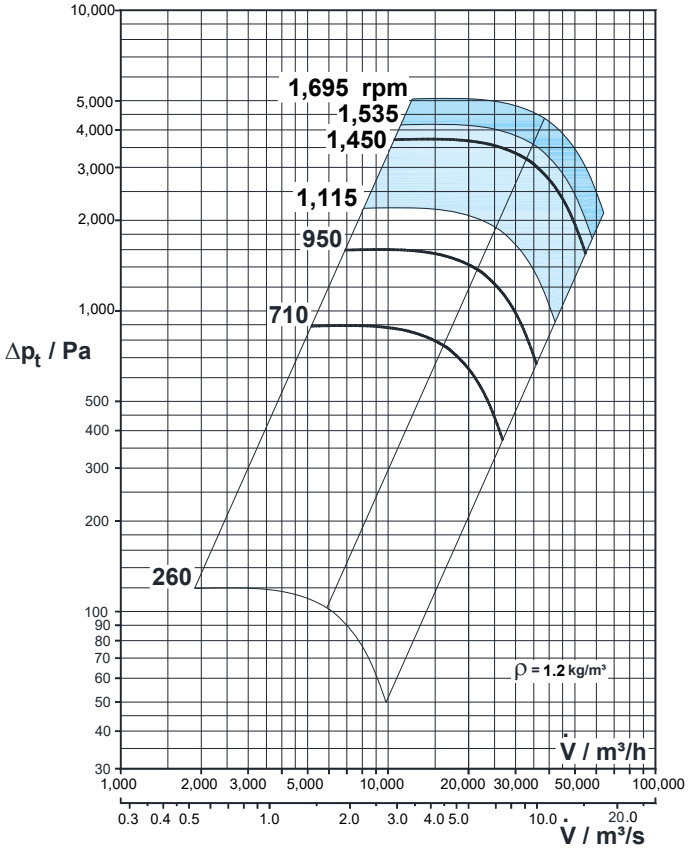
Impeller type 731



Impeller type 733



Impeller type 673



Impeller materials: GFRP CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 630/731W710	710	4.68	5.5	13.3	432	66	84	71	77	81	78	74	72	69	65	- [3]
VRE 630/731W950	950	11.2	15.0	29.5	538	72	90	77	81	87	84	79	76	74	69	Level 2 [5]
VRE 630/731W1450	1,450	39.9	45.0	80.0	678	82	100	87	90	98	94	89	86	83	74	Level 2 [5]
VRE 630/731W1450	1,680 [1]	62.0	75.0	133.0	992	85	103	90	93	101	97	92	88	85	76	Level 2 [5]
VRE 630/733W710	710	7.52	11.0	25.0	486	69	87	75	80	84	79	75	73	70	68	- [3]
VRE 630/733W950	950	18.0	18.5	37.0	573	75	93	81	86	91	85	80	77	75	72	Level 2 [5]
VRE 630/733W1450	1,450	64.0	75.0	133.0	992	85	103	90	93	101	94	89	86	83	77	Level 2 [5]
VRE 630/733W1450	1,528 [1]	75.0	75.0	133.0	992	86	104	91	94	103	95	90	87	84	78	Level 2 [5]
VRE 630/673W710	710	5.51	7.5	17.9	452	69	87	76	81	81	79	78	72	65	58	Level 2
VRE 630/673W950	950	13.2	15.0	29.5	538	75	92	82	86	86	85	84	77	71	63	Level 2 [5]
VRE 630/673W1450	1,450	47.0	55.0	96.0	817	83	101	91	94	96	93	90	87	79	71	Level 2 [5]
VRE 630/673W1450	1,695 [1]	75.0	75.0	133.0	992	87	104	94	98	99	97	94	91	82	74	Level 2 [5]

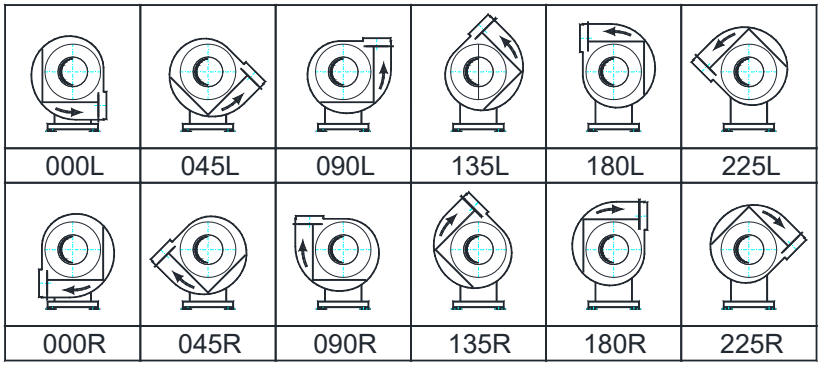
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

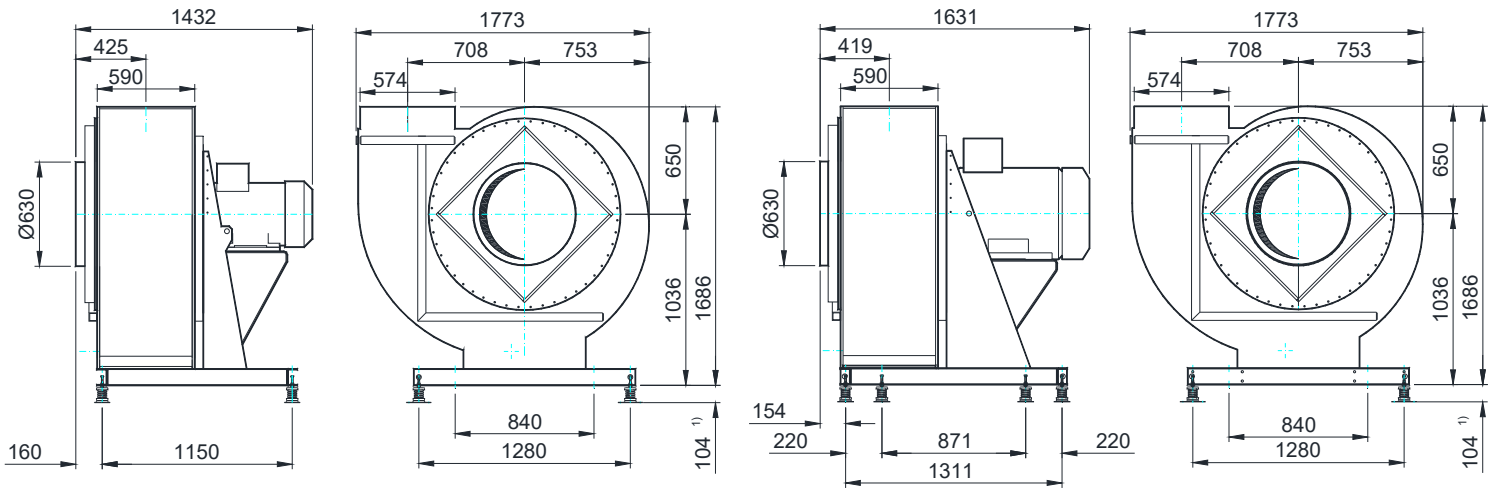


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PP, PPsX, PEX, PVDF

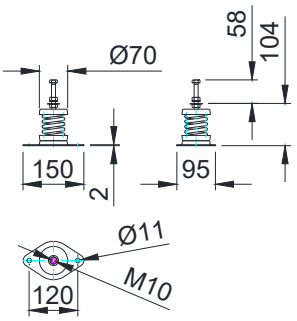
for drive power: **<= 45kW** **> 45 kW to 75 kW**



VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type SP775-M10 that is designed for the size, speed and drive power of the fan.

Type SP775-M10



FRAME / FLANGE

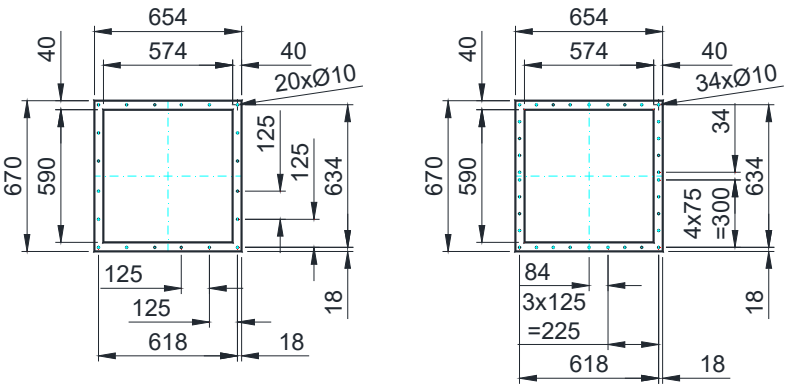
Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

Drilling pattern:
- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



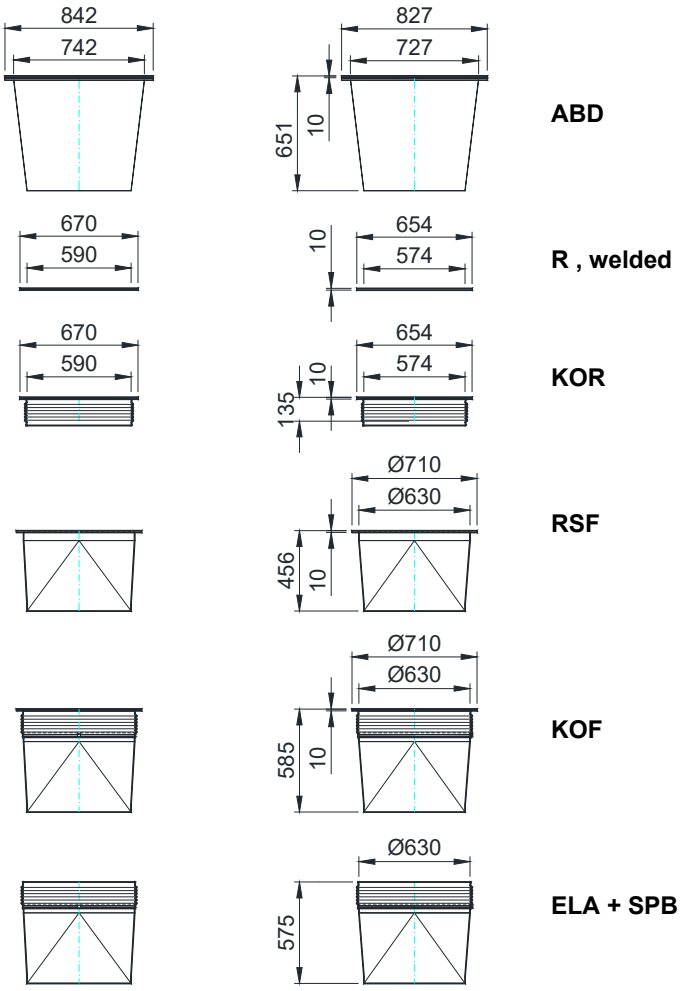
Flange F

CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

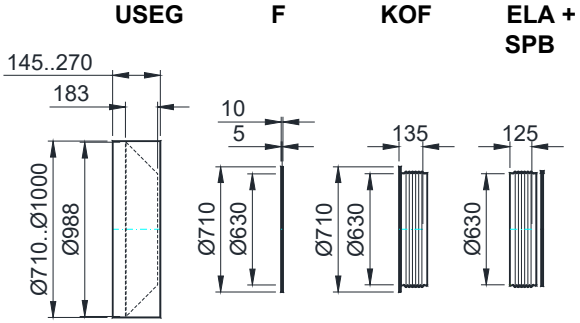
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

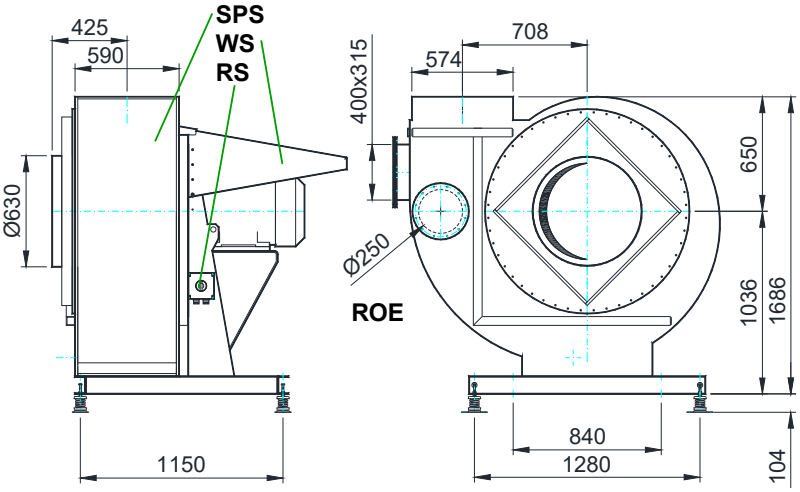


Suction side casing connection

Casing material: all

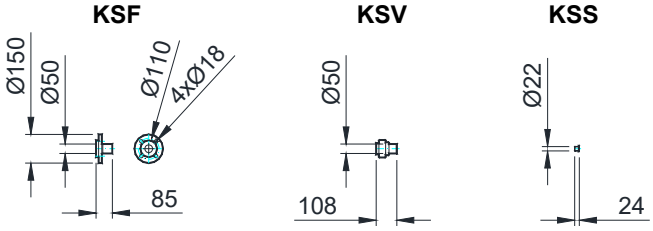


Accessories

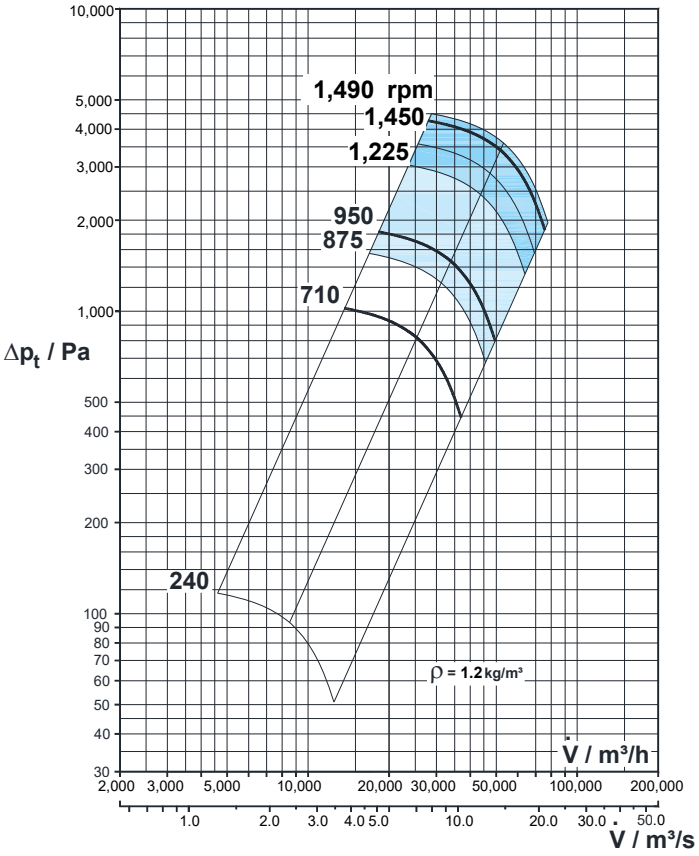


Condensate drain

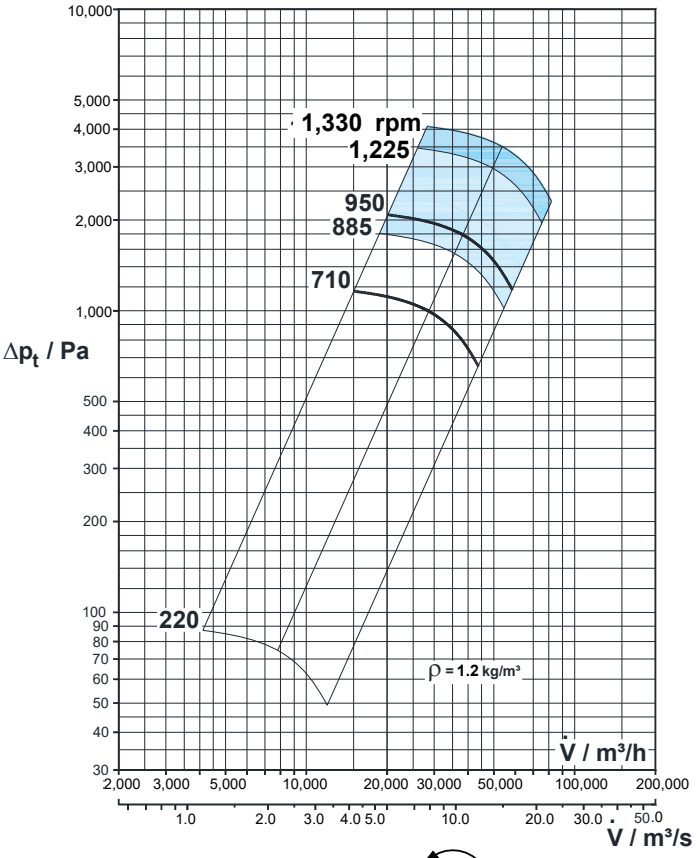
Casing material: all



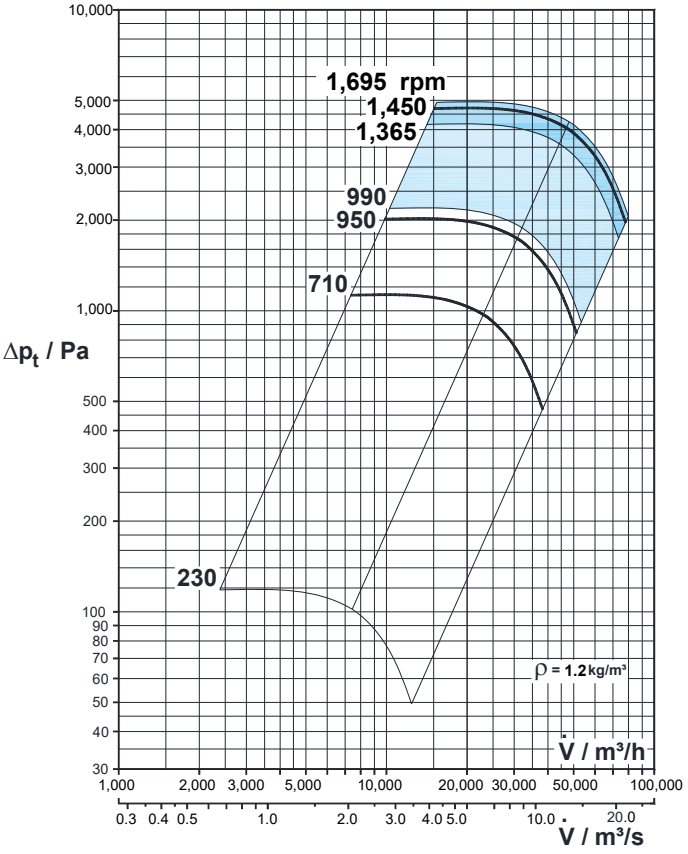
Impeller type 731



Impeller type 733



Impeller type 673



Impeller materials: GFRP CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 710/731W710	710	8.51	11.0	25.0	610	70	88	75	81	85	82	78	76	73	69	- [3]
VRE 710/731W950	950	20.4	22.0	43.5	712	76	94	81	85	91	88	83	80	78	73	Level 2 [5]
VRE 710/731W1450	1,450	72.5	75.0	133.0	1121	85	103	90	93	101	97	92	89	86	77	Level 2 [5]
VRE 710/731W1450	1,490 [1]	78.7	90.0	157.0	1221	86	104	91	94	102	98	93	90	87	78	Level 2 [5]
VRE 710/733W710	710	13.7	15.0	32.0	658	73	91	79	84	88	83	79	77	74	71	- [3]
VRE 710/733W950	950	32.7	37.0	67.0	887	79	97	85	90	95	89	84	81	79	76	- [3]
VRE 710/733W950	1,330 [1]	90.0	90.0	161.0	1442	86	104	91	95	102	96	91	88	85	79	Level 2 [5]
VRE 710/673W710	710	9.93	11.0	25.0	610	73	90	80	84	84	83	82	75	69	61	Level 2
VRE 710/673W950	950	23.8	30.0	56.0	807	78	96	86	90	90	89	88	81	75	67	Level 2 [5]
VRE 710/673W1450	1,450	84.6	90.0	157.0	1221	87	104	94	98	99	97	94	91	82	74	Level 2 [5]
VRE 710/673W1450	1,480 [1]	90.0	90.0	157.0	1221	87	105	95	98	100	98	94	91	83	75	Level 2 [5]

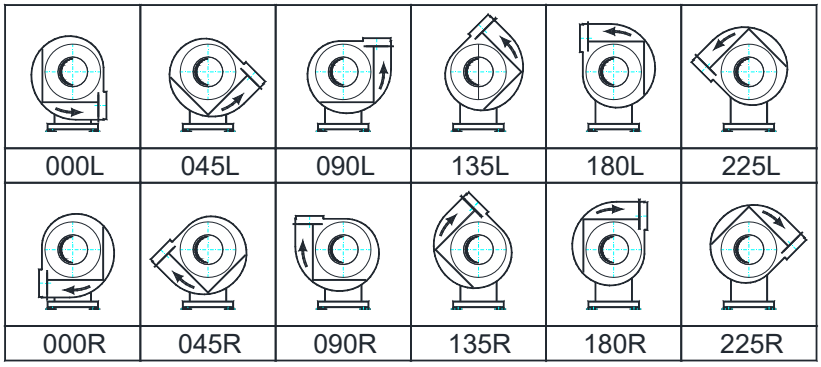
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

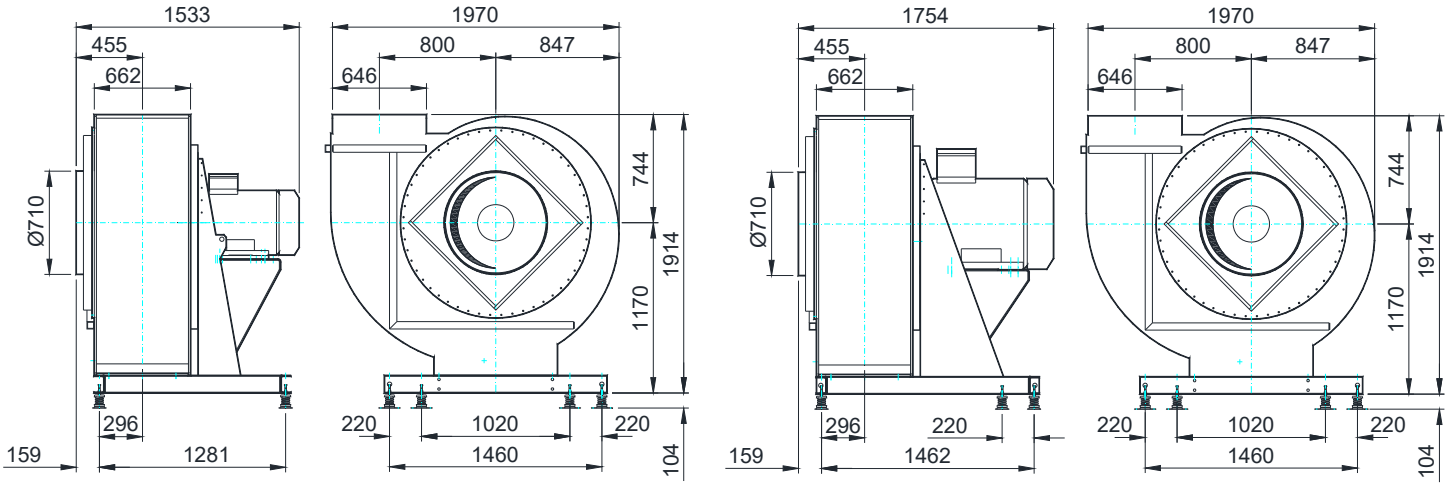


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PE, PPsX, PVC, PEX, PP, PVDF

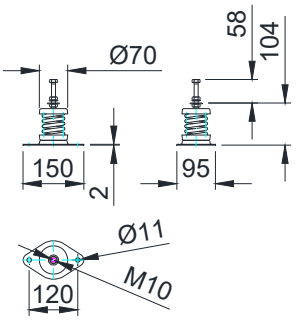
for drive power: **<= 37kW** **> 37 kW to 90 kW**



VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type SP775-M10 that is designed for the size, speed and drive power of the fan.

Type SP775-M10



FRAME / FLANGE

Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

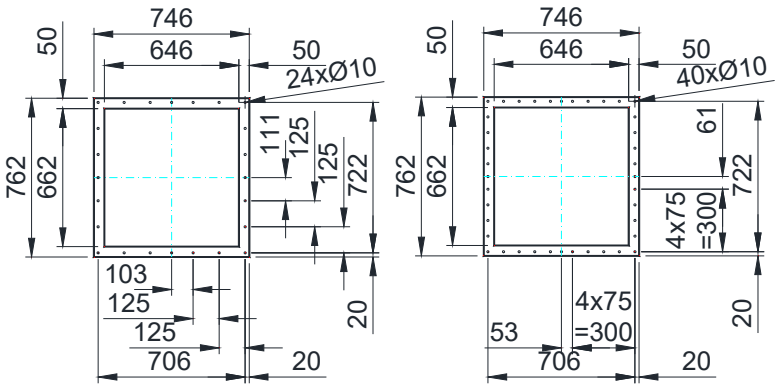
Drilling pattern:

- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

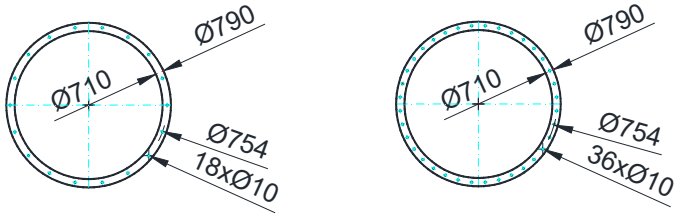
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F

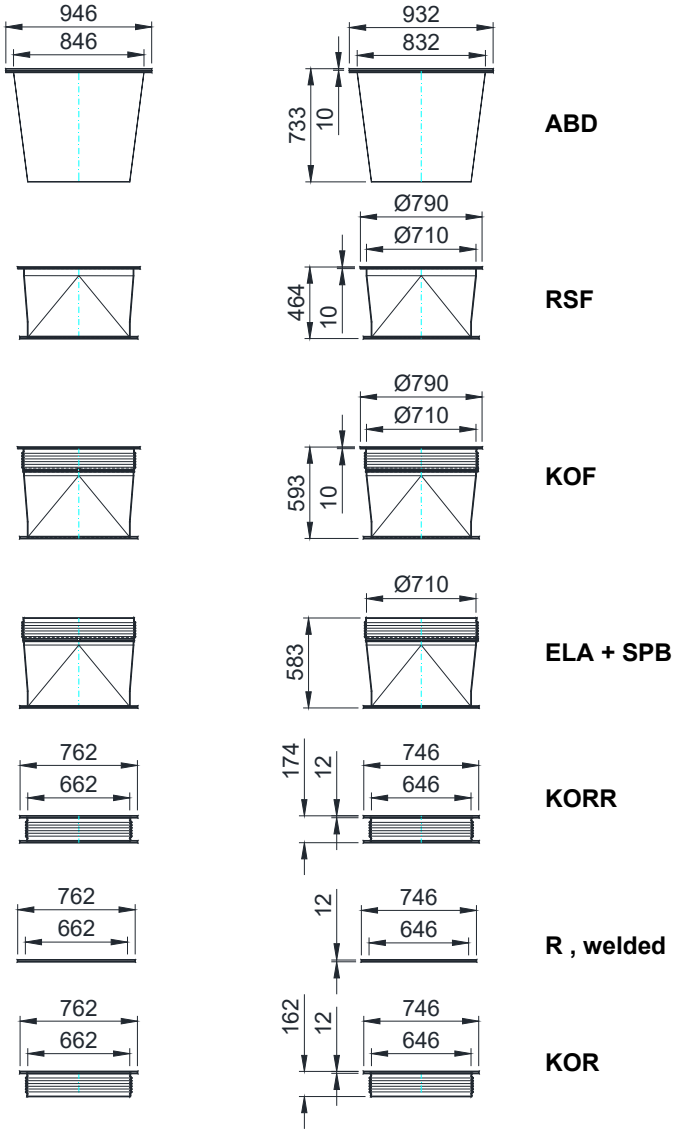


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

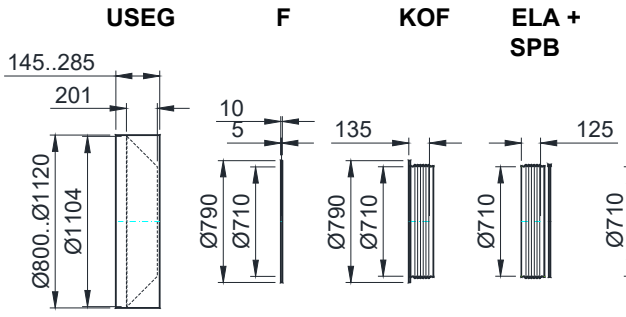
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

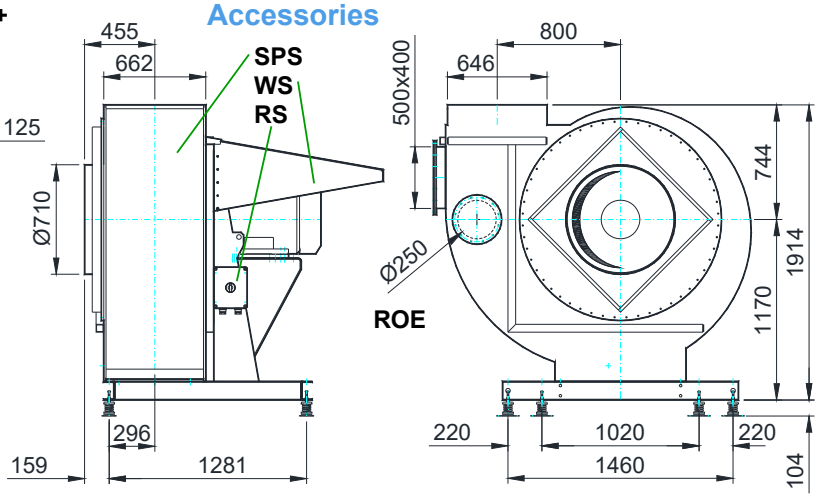


Suction side casing connection

Casing material: all

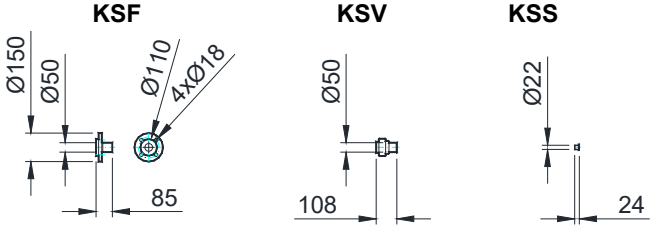


Accessories

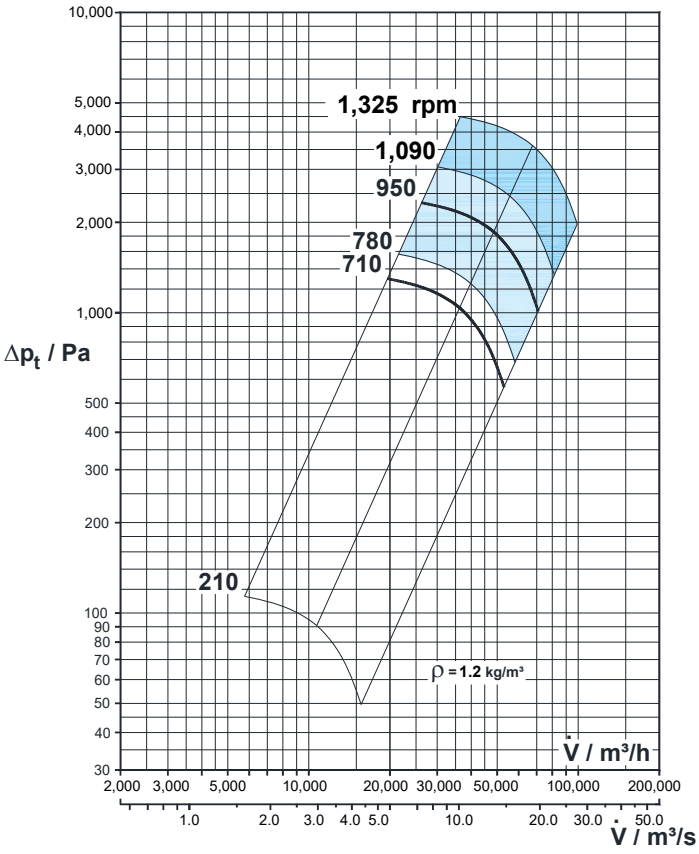


Condensate drain

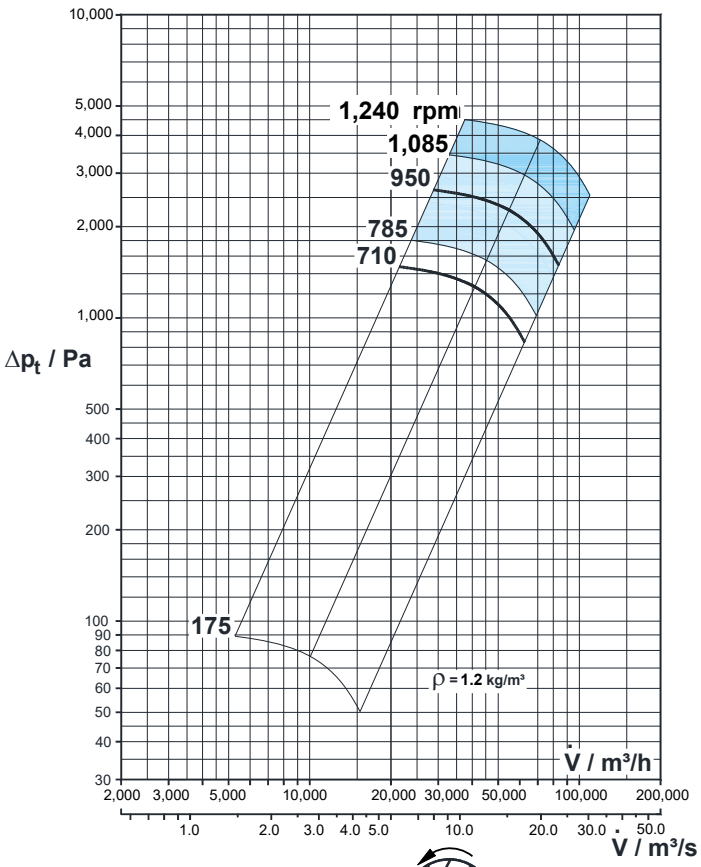
Casing material: all



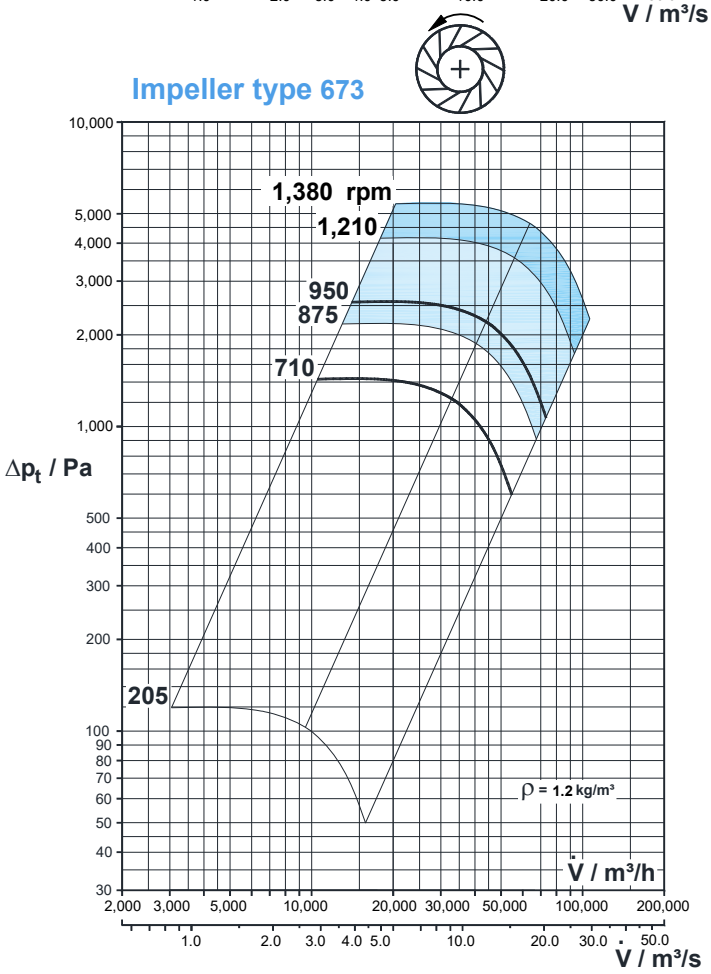
Impeller type 731



Impeller type 733



Impeller type 673



Impeller materials: GFRP CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 800/731W710	710	15.5	18.5	38.5	791	74	91	78	84	88	85	81	79	76	72	Level 2
VRE 800/731W950	950	37.0	45.0	82.0	1.202	80	98	85	89	95	92	87	84	82	77	Level 2 [5]
VRE 800/731W950	1,325 [1]	100.3	110.0	199.0	1.682	87	105	91	95	103	99	94	91	88	80	Level 2 [5]
VRE 800/733W710	710	24.8	30.0	60.0	992	77	94	82	87	91	86	82	80	77	75	- [3]
VRE 800/733W950	950	59.5	75.0	136.0	1.442	83	101	89	94	99	93	88	85	83	80	- [3]
VRE 800/733W950	1,240 [1]	132.0	132.0	240.0	1.802	89	107	94	98	105	99	94	91	88	83	Level 2 [5]
VRE 800/673W710	710	18.1	18.5	38.5	791	76	94	83	88	88	87	86	79	73	65	Level 2
VRE 800/673W950	950	43.1	45.0	82.0	1.202	82	99	89	94	93	92	91	84	78	70	Level 2 [5]
VRE 800/673W950	1,380 [1]	132.0	132.0	240.0	1.802	89	107	97	100	102	100	96	93	85	77	Level 2 [5]

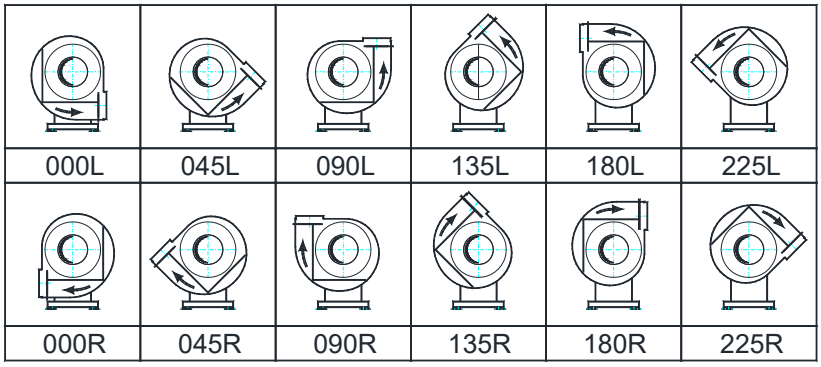
[1] - during operation with frequency converter > 50 Hz
[2] - Fan does not fall within scope of ErP directive
[3] - Fan for moving aggressive media
[4] - When using IE2 motors
[5] - When using IE3 motors
[6] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

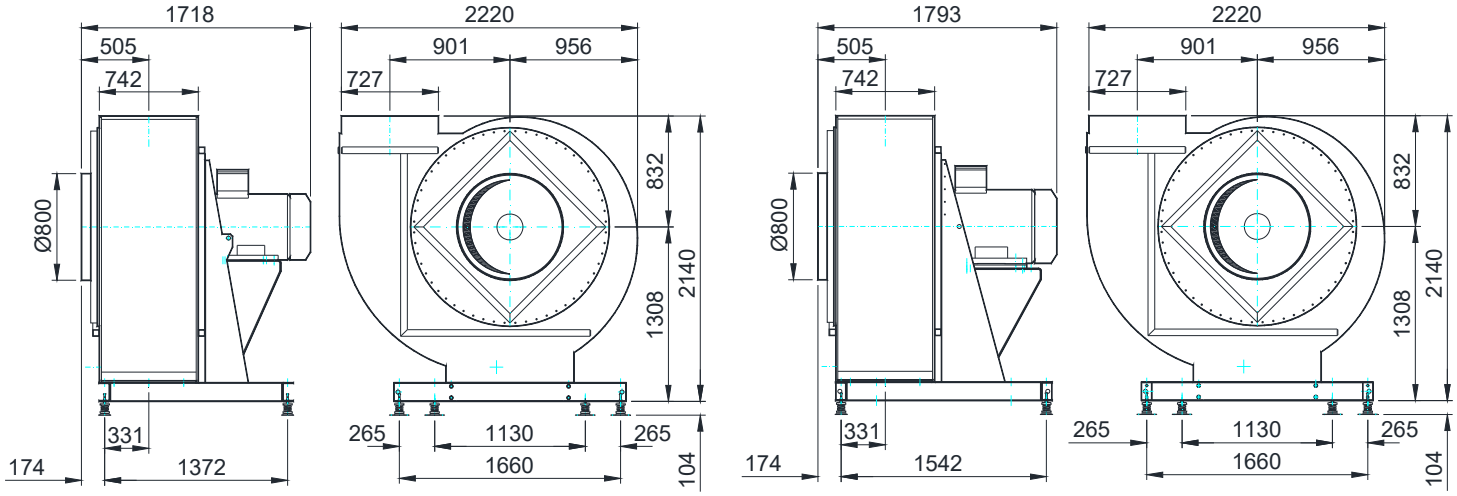


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PP, PPsX, PEX, PPsX, PVDF

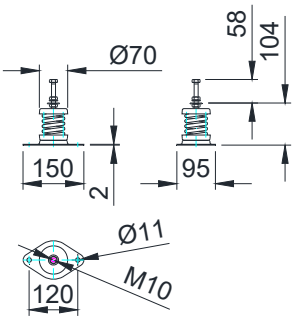
for drive power: **<= 37kW** **> 37 kW to 132 kW**



VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type SP775-M10 that is designed for the size, speed and drive power of the fan.

Type SP775-M10



FRAME / FLANGE

Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

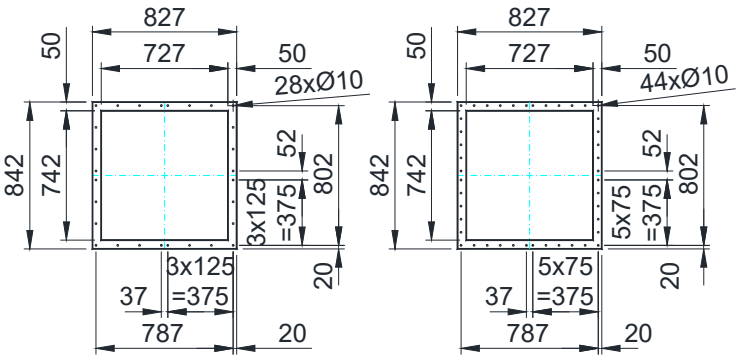
Drilling pattern:

- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

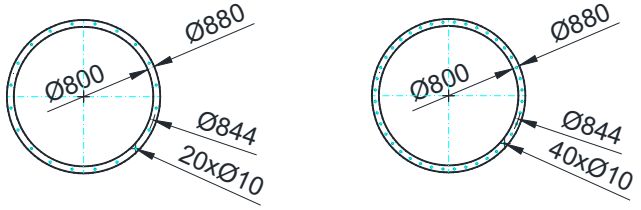
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F

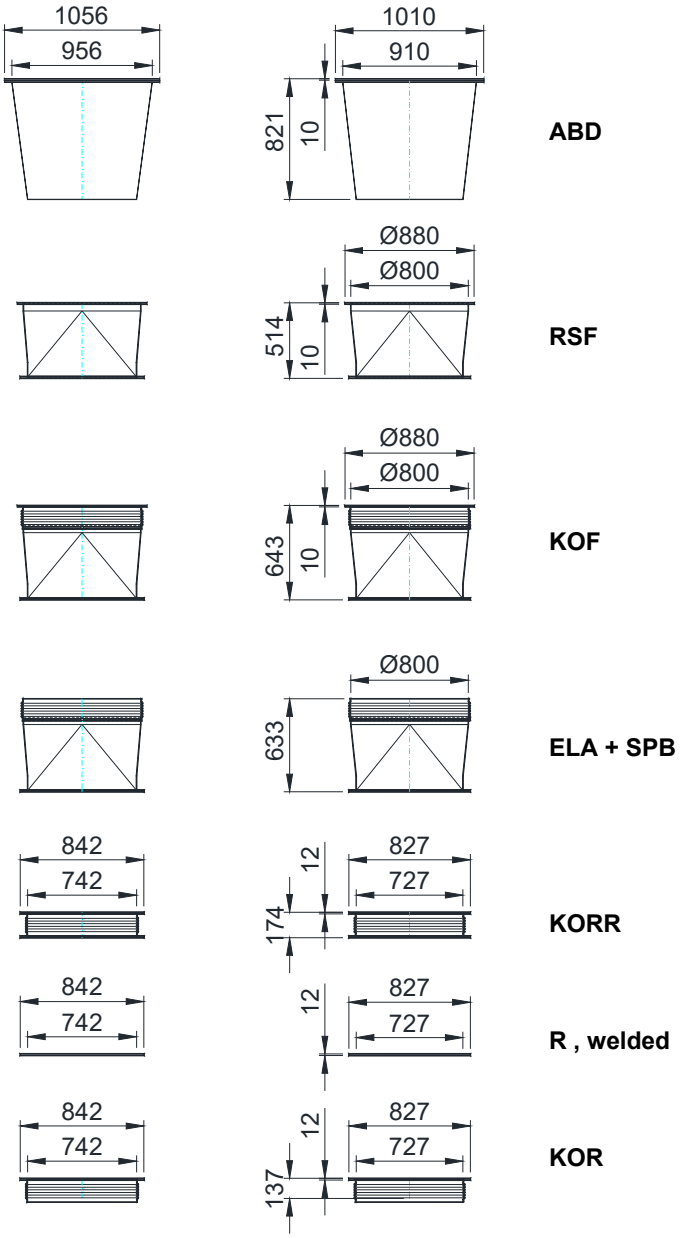


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

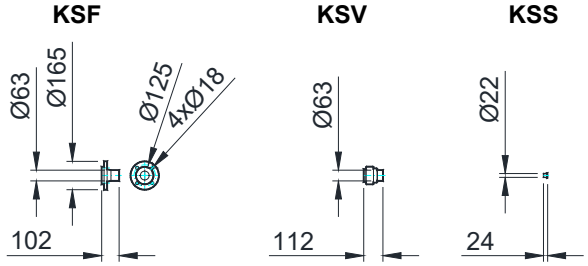
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF



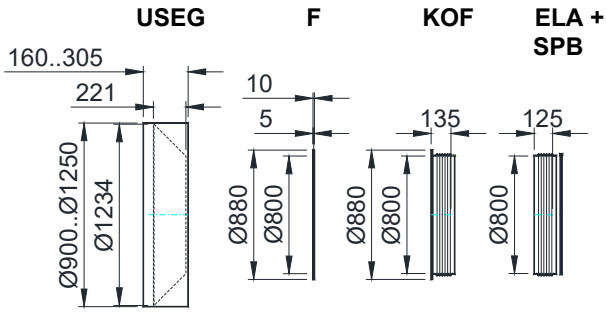
Condensate drain

Casing material: all

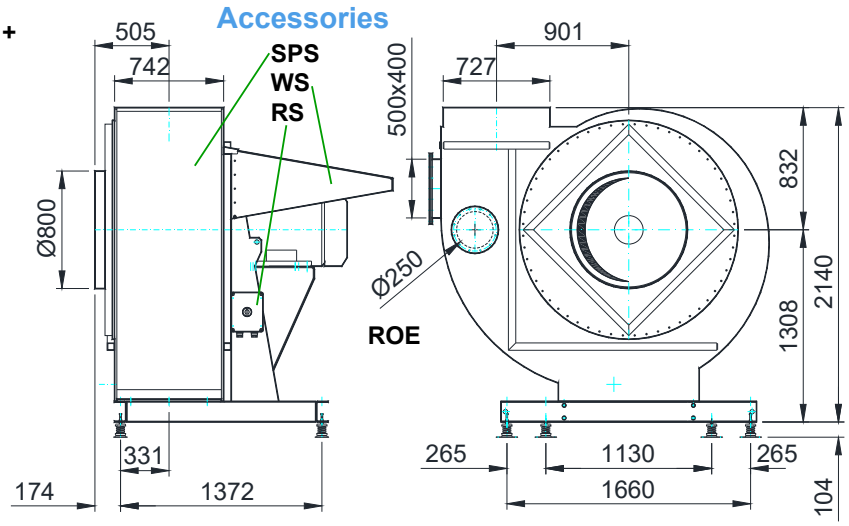


Suction side casing connection

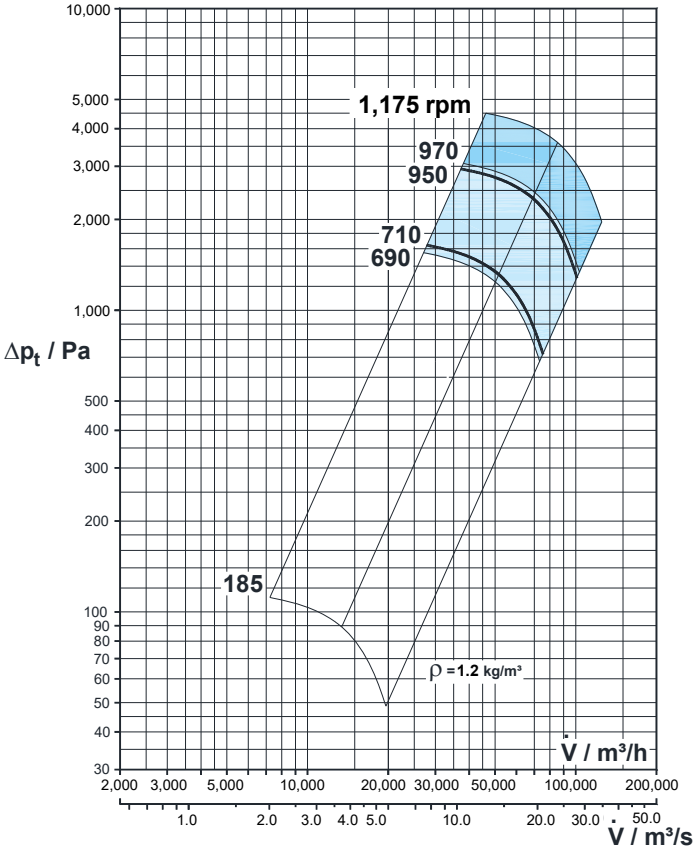
Casing material: all



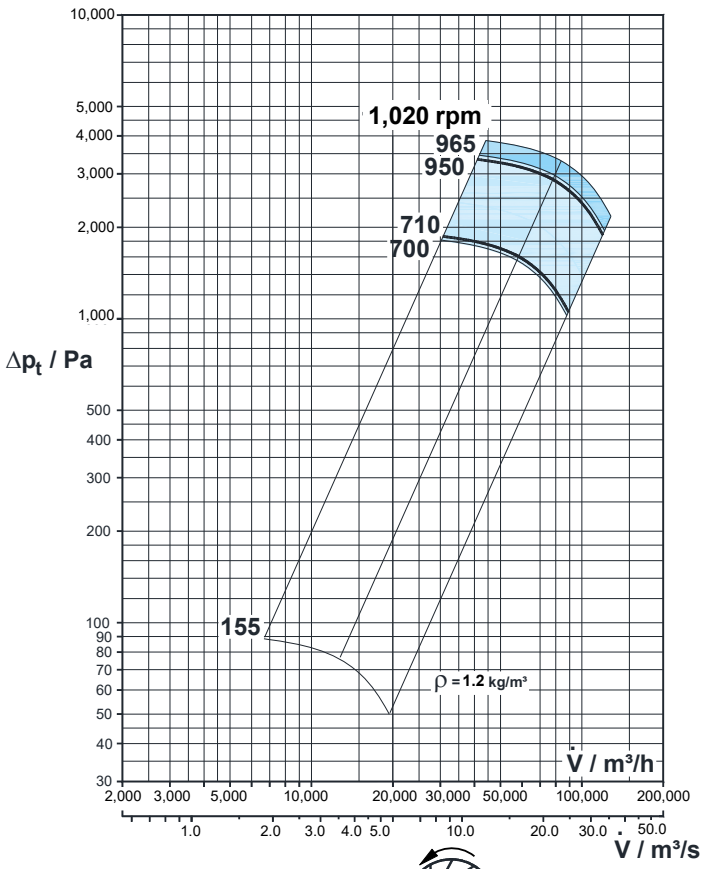
Accessories



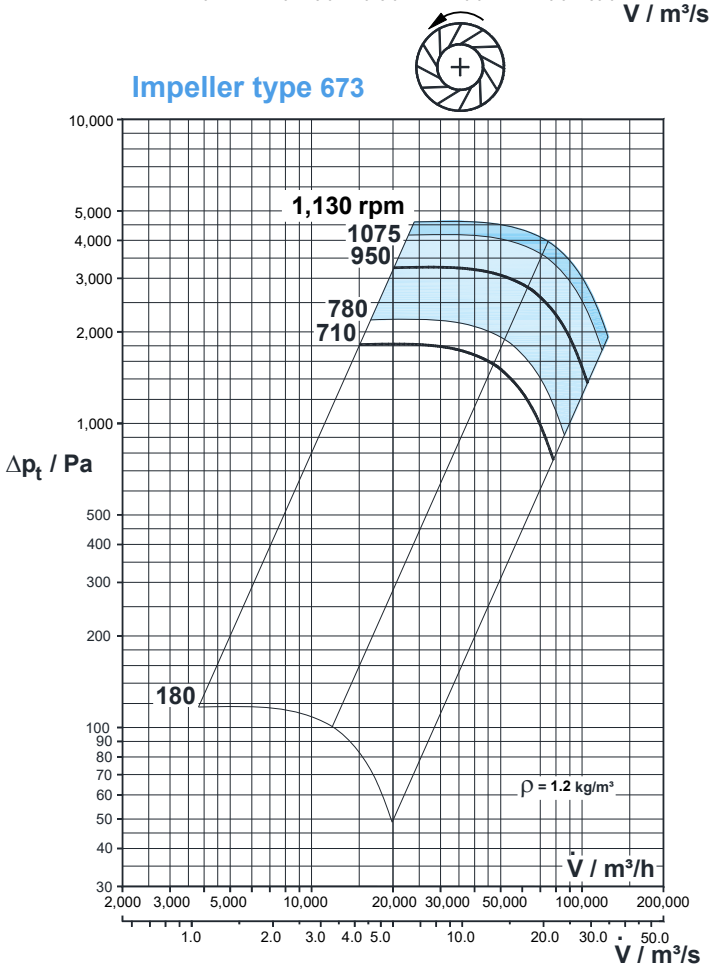
Impeller type 731



Impeller type 733



Impeller type 673



Impeller materials: GFRP CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 900/731W710	710	27.9	30.0	60.0	1.269	77	95	82	88	92	89	85	83	80	76	Level 2
VRE 900/731W950	950	66.7	75.0	136.0	1.646	84	102	89	93	99	96	91	88	86	81	Level 2[5)]
VRE 900/731W950	1,175[1)]	126.6	132.0	240.0	2.006	88	107	93	98	105	101	96	93	91	84	Level 2[5)]
VRE 900/733W710	710	44.7	55.0	107.0	1.576	80	98	86	91	95	90	86	84	81	79	-[3)]
VRE 900/733W950	950	107.2	132.0	240.0	2.006	87	105	93	98	103	97	92	89	87	84	Level 2[5)]
VRE 900/733W950	1,020[1)]	132.0	132.0	240.0	2.006	88	107	95	100	105	99	94	91	89	95	Level 2[5)]
VRE 900/673W710	710	32.8	37.0	73.0	1.394	80	97	87	91	91	90	89	82	76	68	Level 2
VRE 900/673W950	950	78.5	90.0	161.0	1.786	86	103	93	97	97	96	95	88	82	74	Level 2[5)]
VRE 900/673W950	1,130[1)]	132.0	132.0	240.0	2.006	89	106	96	100	102	99	96	93	85	77	Level 2[5)]

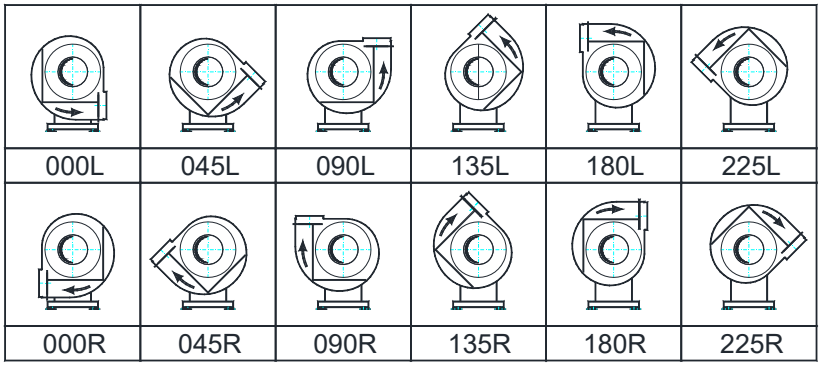
[1)] - during operation with frequency converter > 50 Hz
[2)] - Fan does not fall within scope of ErP directive
[3)] - Fan for moving aggressive media
[4)] - When using IE2 motors
[5)] - When using IE3 motors
[6)] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

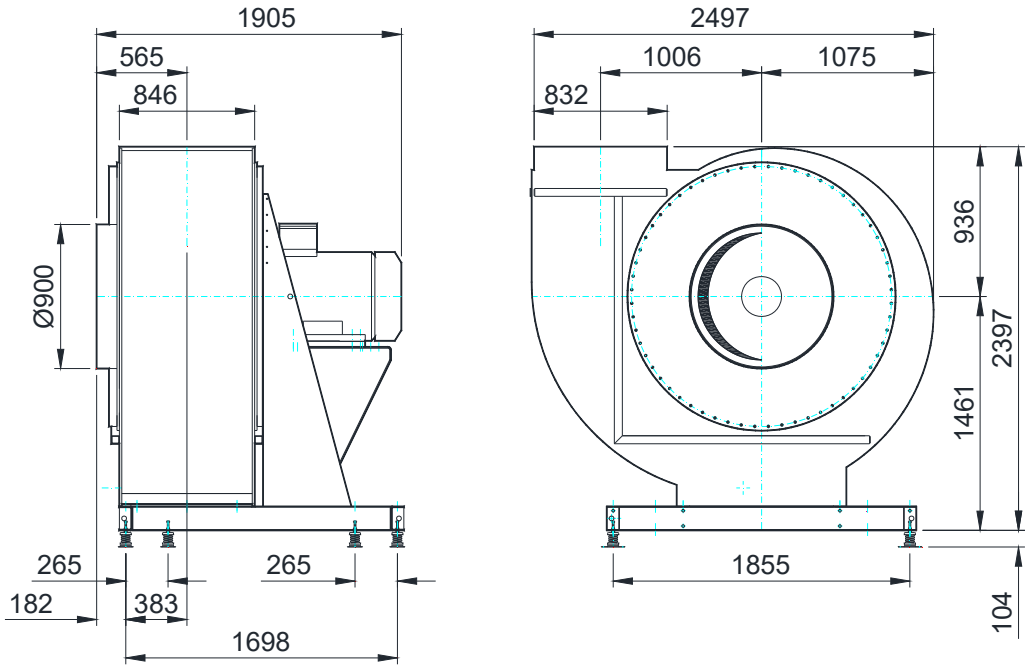


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PE, PVC, PEX, PP, PPsX, PVDF

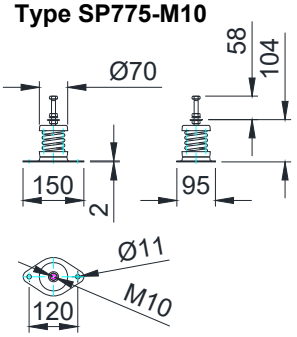
for drive power: **30kW to 132 kW**



VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type SP775-M10 that is designed for the size, speed and drive power of the fan.

Type SP775-M10



FRAME / FLANGE

Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

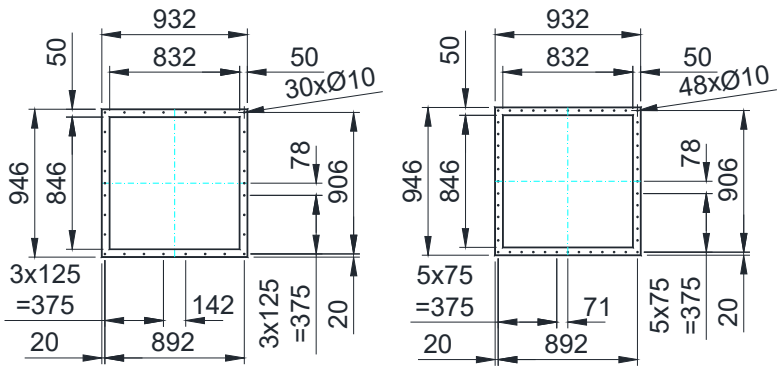
Drilling pattern:

- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

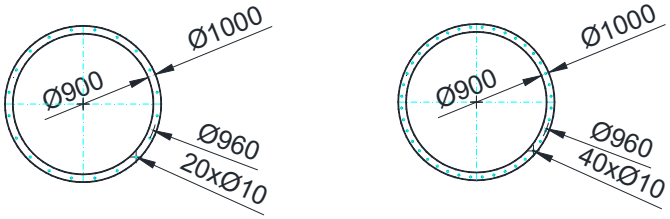
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F

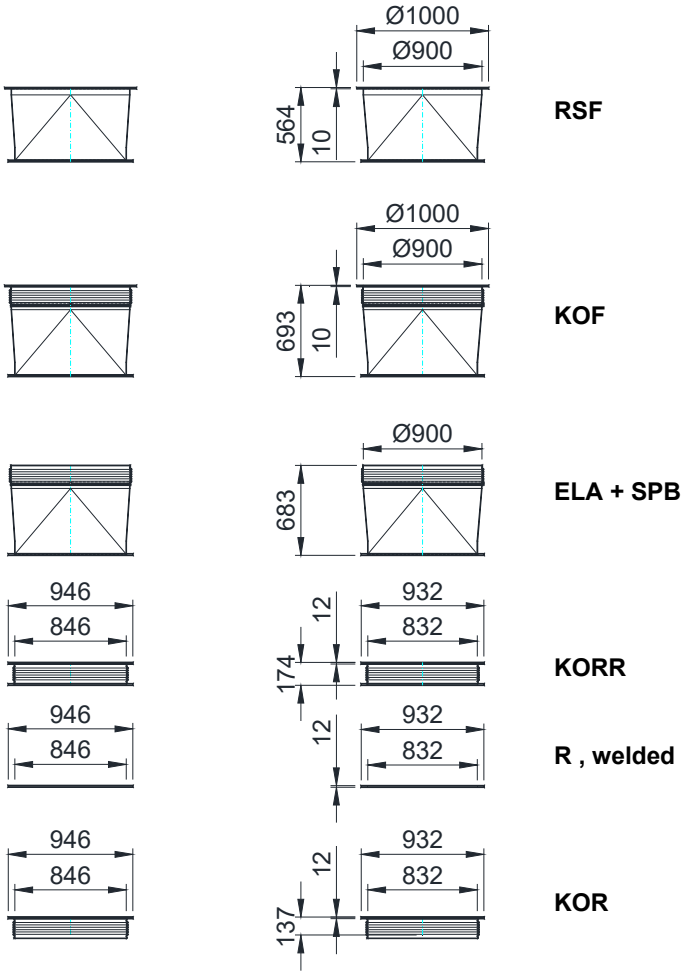


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

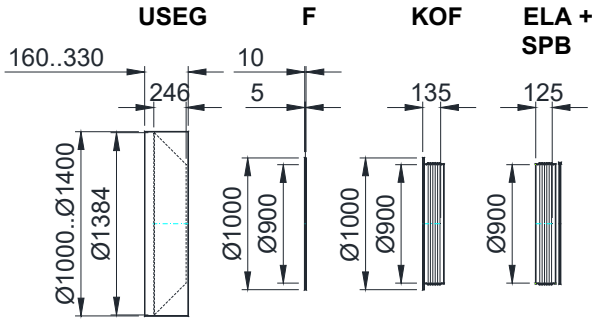
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

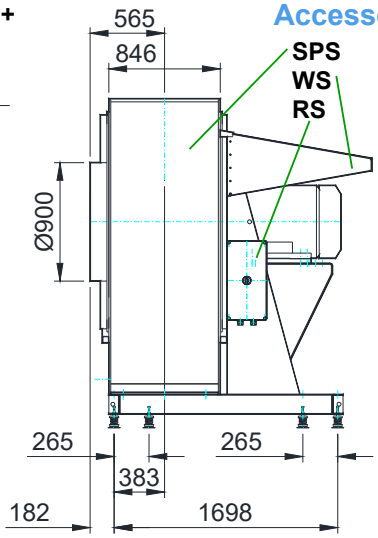


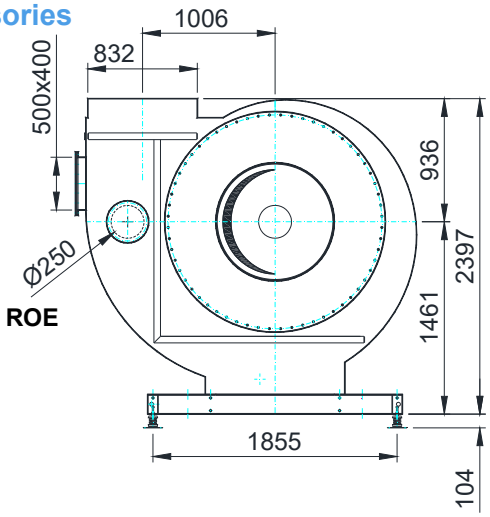
Suction side casing connection

Casing material: all



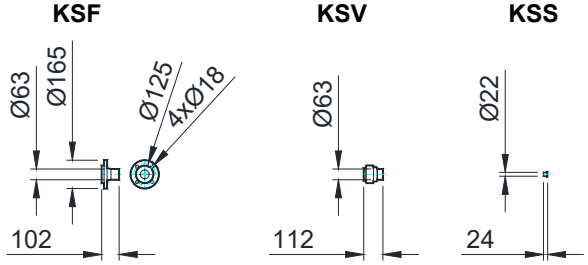
Accessories



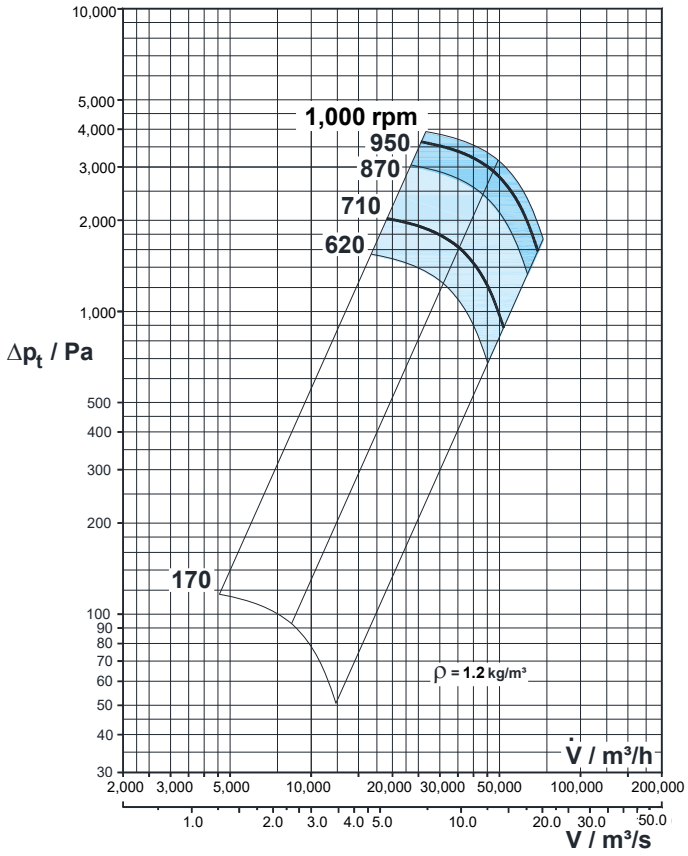


Condensate drain

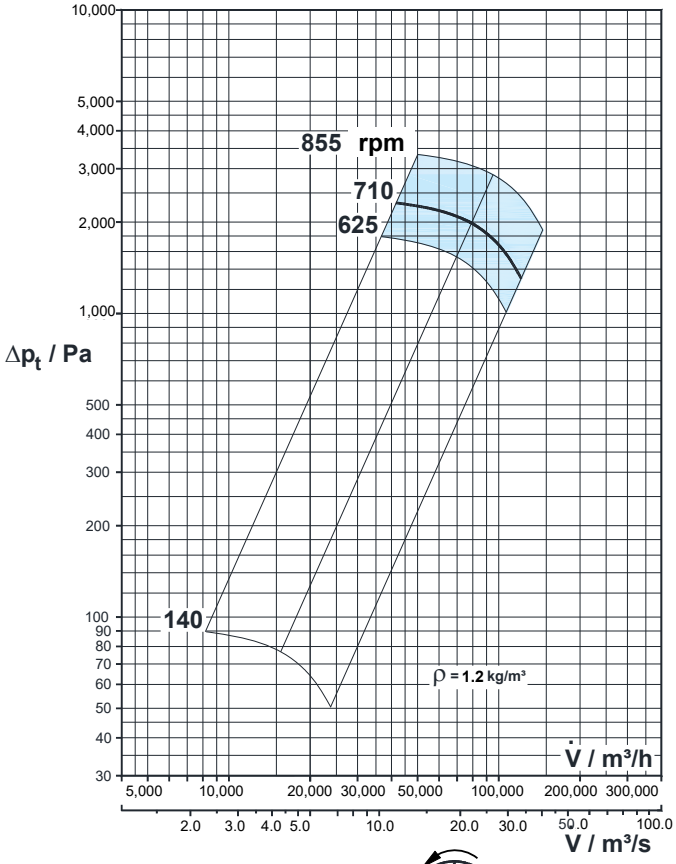
Casing material: all



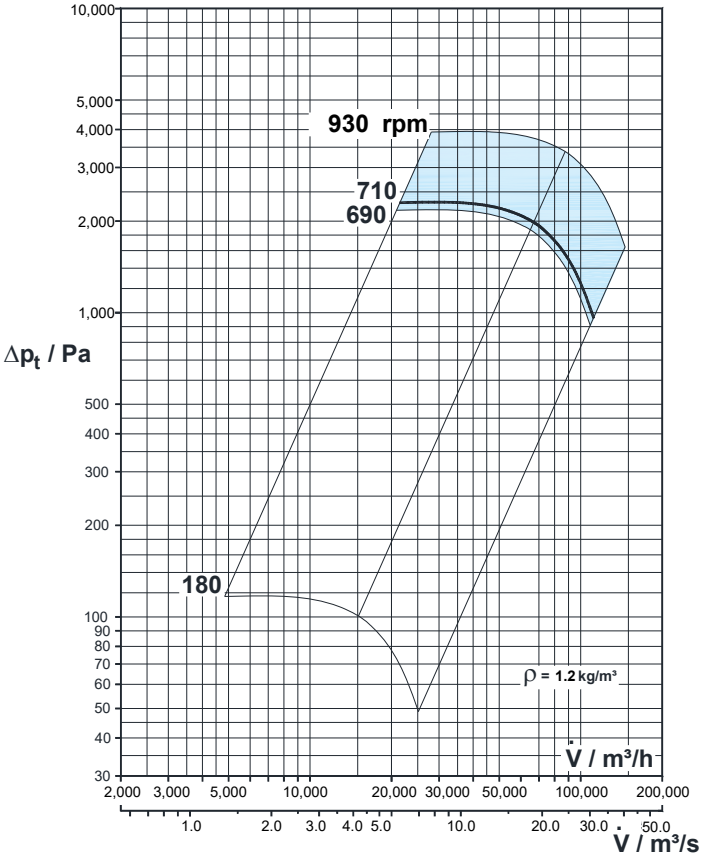
Impeller type 731



Impeller type 733



Impeller type 673



Impeller materials: GFRP CFRP

MOTOR VARIANTS for standard motor 3~400V/50Hz

(Data for other motor types e.g. single phase motors, pole changing motors or Ex motors on request)

Fan type	Speed rpm	Power require-ment kW	Nominal motor power kW	Nominal motor current A	Weight with Motor kg	L_{A3m} dB(A)	L_{WA} dB(A)	Octave level $L_{WA\text{-}Okt}$ / dB(A) 63	125	250	500	1000	2000	4000	8000	ErP cate-gory D-total
VRE 1000/731W710	710	47.2	55.0	107.0	1.723	81	99	86	92	96	93	89	87	84	80	Level 2
VRE 1000/731W950	950	113.0	132.0	240.0	2.153	87	105	92	96	102	99	94	91	89	84	Level 2[5)]
VRE 1000/731W950	1,000[1)]	131.8	132.0	240.0	2.153	88	106	92	97	103	100	95	92	90	85	Level 2[5)]
VRE 1000/733W710	710	75.8	90.0	169.0	1.908	84	102	90	95	99	94	90	88	85	82	-[3)]
VRE 1000/733W710	855[1)]	132.0	132.0	245.0	2.143	88	106	95	99	103	98	84	91	89	85	-[3)]
VRE 1000/673W710	710	59.1	75.0	141.0	1.788	83	101	90	95	95	94	92	86	79	72	Level 2
VRE 1000/673W710	930[1)]	132.0	132.0	240.0	2.313	88	106	95	100	100	99	98	91	84	76	Level 2[4)]

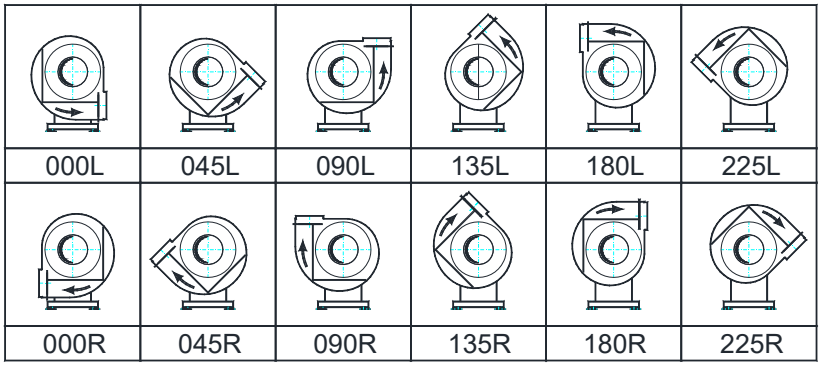
[1)] - during operation with frequency converter > 50 Hz
[2)] - Fan does not fall within scope of ErP directive
[3)] - Fan for moving aggressive media
[4)] - When using IE2 motors
[5)] - When using IE3 motors
[6)] - When using IE4 motors

L_{A3m} = A - evaluated noise level at a distance of 3 m
L_{WA} = A - evaluated noise level in the channel

CASING POSITIONS

The fan is available in casing positions **L** (left) and **R** (right), each in 6 different casing positions.
The position of the casing is set by the manufacturer and requires significant effort to change subsequently. The axle height specified with casing position 090R in the dimension drawing remains unchanged.

Corresponding drawings in dxf format are available on the MIETZSCH CD.

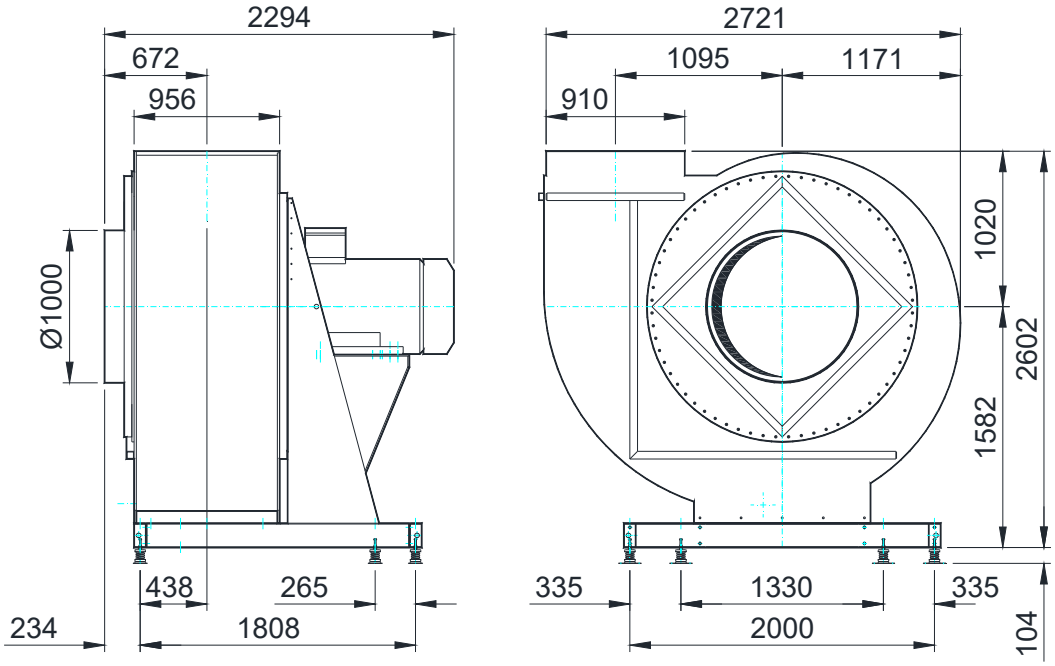


MAIN DIMENSIONS

Casing position **090R**

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

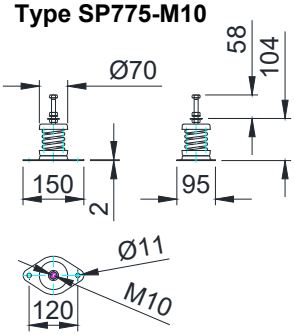
for drive power: **30kW to 132 kW**



VIBRATION ISOLATION

The manufacturer equips all fans with a set of rubber insulators of type SP775-M10 that is designed for the size, speed and drive power of the fan.

Type SP775-M10



FRAME / FLANGE

Frame and flange are designed according to MIETZSCH standard MWS 54030 or MWS 53030.

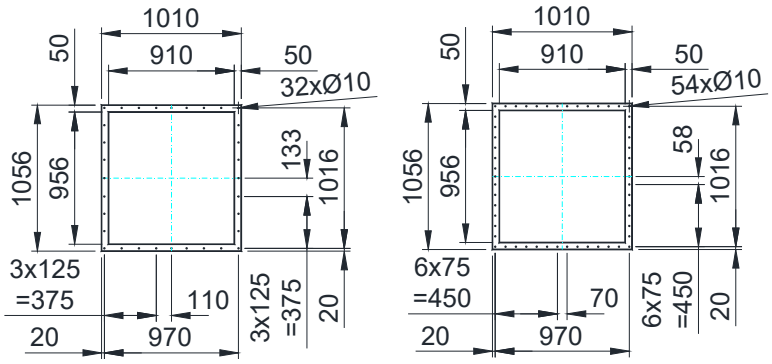
Drilling pattern:

- 0 – undrilled (e.g. F0, KOF0)
- 1 – hole pattern 1 for normal requirements (e.g. KOF1)
- 2 – hole pattern 2 (double the number of screws) for high positive pressures and strong condensation (e.g. F2, KOF2)

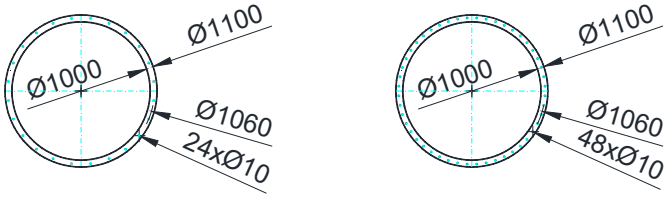
Models according to other standards or special designs are possible on request.

Hole pattern 1 **Hole pattern 2**

Frame R



Flange F

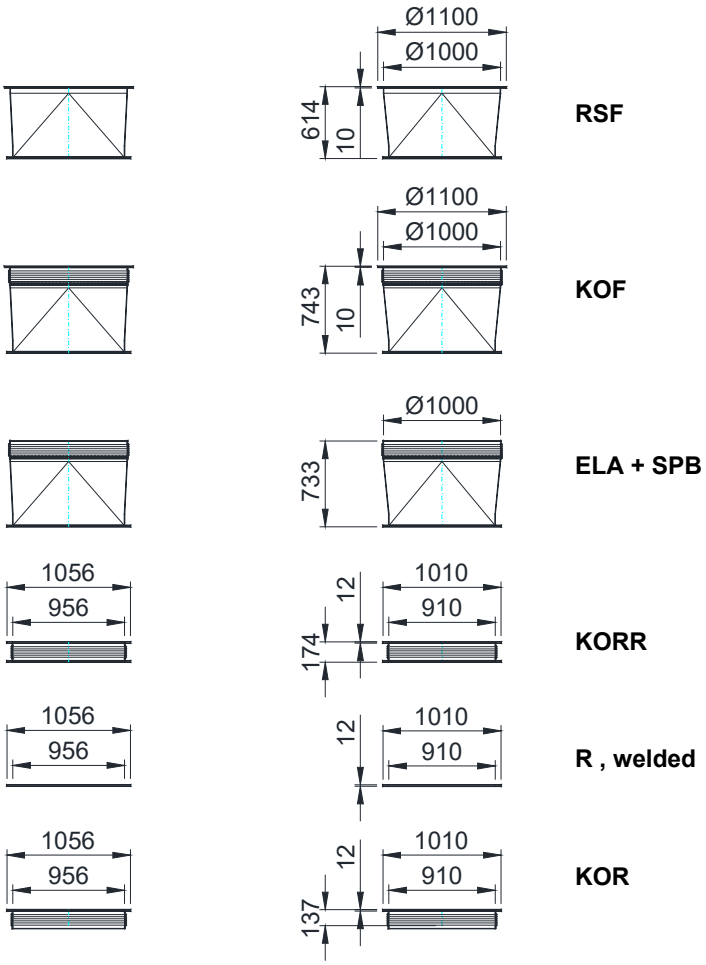


CASING CONNECTIONS

The basic model of the fan depicted under MAIN DIMENSIONS can be supplemented with a range of accessories and thus adapted optimally to the specific operating conditions. In addition to the standard range, special models and even special designs are possible on request. The variants shown in the dimension drawing therefore only cover the most frequently used casing connections and condensate drains. For detailed information, refer to the SPECIAL DESIGNS and ACCESSORIES sections.

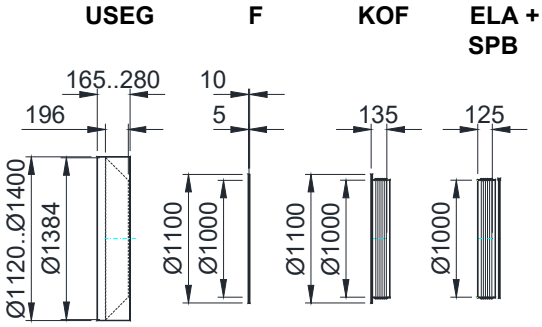
Pressure side casing connection

Casing material: PPs, PVC, PE, PEX, PP, PPsX, PVDF

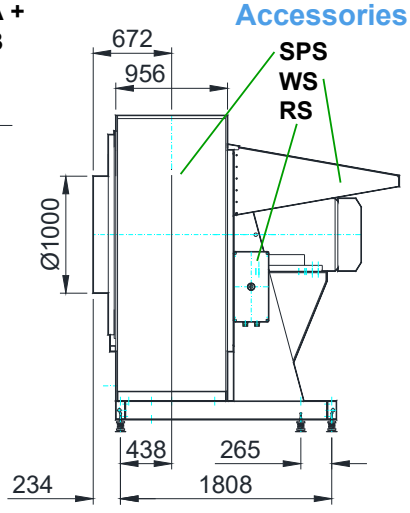


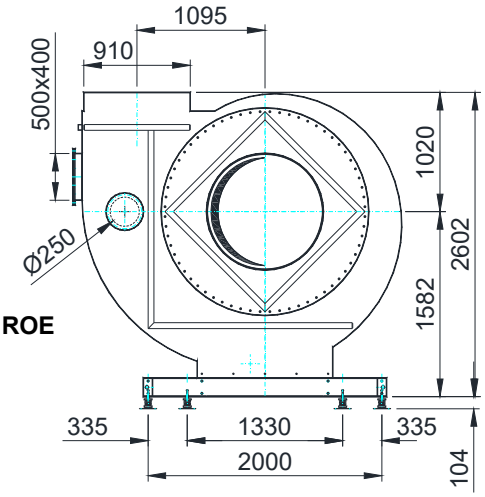
Suction side casing connection

Casing material: all



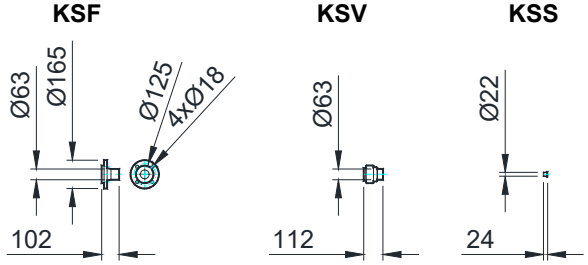
Accessories





Condensate drain

Casing material: all



Soundproof casing

The installation situation can necessitate measures to reduce the noise level of the fan. Soundproofing measures on the building side or encasing the fan with a soundproof capsula are not always possible.
To reduce the measuring surface sound pressure level by 7 .. 10 dBA, a soundproof casing can be used on request.
To this end, the casing is covered completely in a layer of mineral wool or soundproofing foam, which is covered in plastic in accordance with the casing material to protect it from damage or moisture.

Casings made of glass fibre reinforced plastic (GFRP)

Due to the operating conditions, use of thermoplastics might not be possible, but at the same time, plastics are required for the components that come into contact with the medium to ensure resistance to chemicals.
In these cases, the casing as well as the impeller can be made of glass fibre reinforced plastics based on vinylester and epoxy resin.
For use in explosion hazard areas, these can be coated with a conductive chemical protection layer so that use in hazard areas of zone 1 is possible (see “The technology explained”, page 05).
The casing is connected via a flange or frame (pressure side as of size 315) and compensators with the double-sided flange or frame.
Additional connecting parts are available on request.

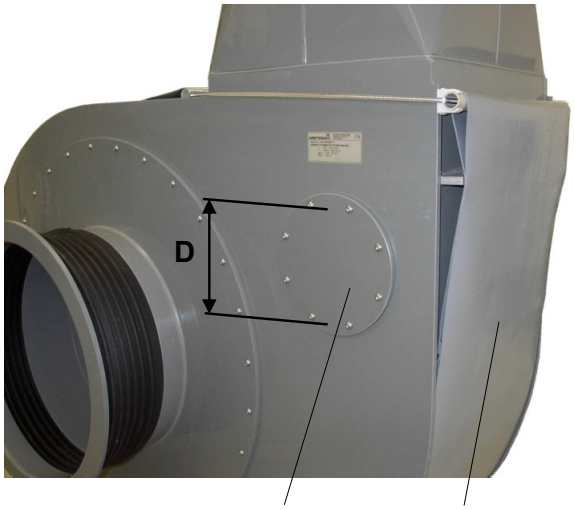
Splinter protection SPS and SPSG

The VRE fans have been dimensioned safely on the basis of many years of experience. An accident is almost impossible if all operating conditions are observed.
If impermissible operation cannot be avoided with sufficient certainty, e.g. due to caked on deposits on the impeller or impact of foreign bodies, you must use splinter protection. A soft PVC foil placed around the casing jacket reduces environmental hazards due to splinters in case the impeller is destroyed.

Ordering information:

SPS - splinter protection made of PVC foil
SPSG - splinter protection made of PVC foil with additional wire mesh

Additional safety can be achieved by reinforcing the casing jacket with glass-fibre reinforced plastic (GFRP).



Cleaning hatch ROE

For cleaning, the fan is removed from the plant and the intake connector is opened.
For large fans and high pollution, maintenance work can be reduced by means of an additional cleaning hatch in one or both sides of the casing or the jacket of the casing (see image above).

Ordering information:

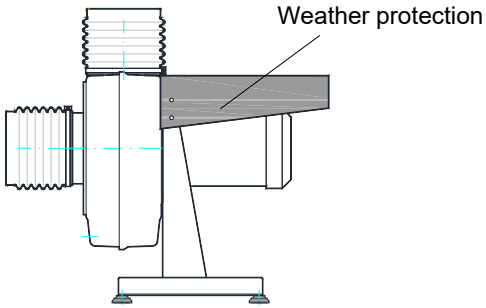
ROE – cleaning hatch
Position (suction side, motor side, jacket + degree specification, see page 07)

Cleaning opening		
Fan size	Casing Side	Coat
VRE 200	-	Ø160
VRE 250	-	Ø160
VRE 315	Ø110	250x200
VRE 400	Ø140	250x200
VRE 450	Ø160	250x200
VRE 500	Ø180	400x315
VRE 560 .. 630	Ø225	400x315
VRE 710 .. 1000	Ø250	500x400

Weather protection WS for the motor

By default, motors with protection level IP 55 are used, which are protected from hose water from all directions.
When installing fans outside, additional weather protection against all types of weather should be installed.

Ordering information: WS - weather protection



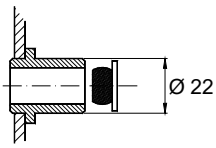
Condensate drain KSS / KSV / KSF

Every fan has a condensate drill hole with a sealing cap at its lowest point.
Various nozzles for installing a condensate hose are available on request.

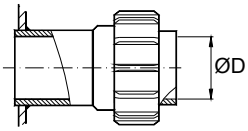
Ordering information:

KSS - condensate nozzles Ø 22 for 3/4” hose
KSV - condensate nozzles with screw connection EPDM seals
KSF - condensate nozzles with flange ISO/DIN 2501 PN10
KSB - condensate drill hole: Ø 14.5

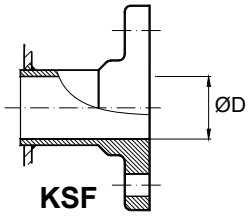
Cleaning opening	
Fan size	Ø D
VRE 100	20
VRE 160 .. 200	25
VRE 250 .. 450	32
VRE 500 .. 560	40
VRE 630 .. 710	50
VRE 800 .. 1000	63



KSS



KSV



KSF

Repair switch RS

The RS switch is used to completely disconnect the fan from the grid for maintenance and repair work. This ensures there is no risk of accidents due to uncontrolled activation. The switch is delivered either loose or mounted and wired to the fan.
The size of the switch is determined by the engine power and the mains voltage.

Repair switch three-pole	Type	Switching capacity / kW 3(1)x230V	3x400V	3x690V
(for single-phase and three-phase motors)	RS3-7.5	4	7,5	7,5
	RS3-15	11	15	18,5
with auxiliary contact	RS3-22	15	22	30
key-locked	RS3-45	25	45	45
degree of protection IP 65	RS3-80	45	80	80

If the fan is connected via a frequency converter, the cable connection is shielded.
For pole changing motors, 6-pole switches are used. For explosion protected fans, switches with EX protection EX db eb IICT6 are used in accordance with ATEX.

Motor protection switch MS

Connect each motor to the mains supply with a reactivation block. Protection switches of type MS are three-pole low voltage switching devices and are used for single phase and three-phase motors. They protect the engine from impermissible overloading and are used for operational switching of the fan.
The switch is delivered either loose or mounted and wired.
It is set for the respective nominal motor power.

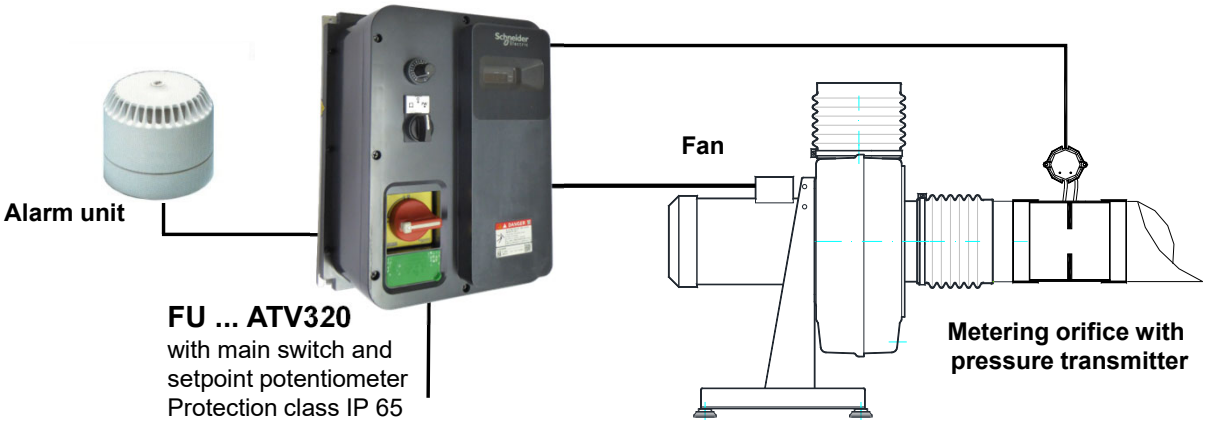
Motor protection switch three-pole (for single-phase and three-phase motors) degree of protection IP 54	Type	Currant range / A
	MS 1.0	0,6 ... 1,0
	MS 1.6	1,0 ... 1,6
	MS 2.5	1,6 ... 2,5
	MS 4.0	2,5 ... 4,0
	MS 6.3	4,0 ... 6,3
	MS 10.0	6,3 ... 10
	MS 16.0	10 ... 16
	MS 20.0	16 ... 20
	MS 25.0	20 ... 25
	MS 32.0	25 ... 32
	MS 40.0	32 ... 40

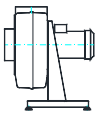
For pole-changing motors, a switch is required for each speed. For explosion protected fans, switches with EX protection EX db eb IICT6 are used in accordance with ATEX.

Frequency converter FU 0.18 ... 7.5-ATV320

By utilising its numerous functions and with some additional components, many simple control tasks can be solved very easily with frequency converter FU ... ATV320.
Based on this frequency converter, MIETZSCH supplies individual applications such as speed setting using a potentiometer, staggered operation, timer switching, pressure or volumetric flow control etc.
The user receives a complete system (fan, converter, switches, indicator lamps, measuring equipment, sensors, etc.) which is immediately ready for operation after electrical connection. All the necessary settings and programming are implemented at the factory.
The product range for outputs above 7.5 kW is supplemented by the ATV650 series.

Example: Volumetric flow control with alarm when the flow falls below the threshold



Seq no.	Quanti-fy	Object		Unit price EUR	Total price EUR

Plastic radial fan - direct drive

Mietzsch Lufttechnik - VRE / W series

Object:

Impeller optionally made of PVC / PPs welded / GFRP laminated, with balancing quality G 6.3 as per ISO 1940, mounted overhung on the motor shaft

Balancing quality and vibration level of the fan comply with ISO 14694

Spiral casing optionally made of PVC / PPs, single-sided suction, with condensate drain
Shaft passage: without seal / GD technically gastight

Direct drive with standard motor outside of the flow
Designed as single phase alternating current / three-phase current / pole-changeable
Winding protection: without / therm. winding protection PTC thermistor (TS)

Stable welded steel base for receiving the fan and motor
Corrosion protection: galvanised / varnished, including vibration isolators

Safety requirements as per VDMA 24 167

VRE _ _ _ / _ _ _ W _ _ _ _ - _ _ - _ _ - _ _ _ _ - _ _ _ _

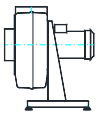
Nominal size
Impeller type
Nominal speed
Special designs
Casing position/direction of rotation
Casing / impeller material

Volumetric flow rate	:	_____	m^3/h
Total pressure increase	:	_____	Pa
Temperature of flow medium	:	_____	°C
Motor power	:	_____	kW
Voltage / frequency	:	_____	V ____ Hz
Nominal motor current	:	_____	A
Fan speed	:	_____	rpm
Noise level L_{A3m}	:	_____	dB(A)
Weight	:	_____	kg

Flow medium / intended use:

Accessories and special equipment

- Suction side casing connection: ELA-elast. connector round / KOF compensator with flange
- Pressure side casing connection: ELA-elast. connector / KOF compensator with flange
- Condensate drain: Drill hole with seal / nozzle with cap or screw cap
- Splinter protection: Soft foil / made of soft foil with wire mesh
- Weather protection for the motor
- Cleaning hatch
- Repair switch: loose / mounted, 3-pole with auxiliary contact & 6-pole with auxiliary contact
- Engine protection switch: loose / mounted
- Miscellaneous

Seq no.	Quanti-fy	Object		Unit price EUR	Total price EUR

Plastic radial fan - explosion protected direct drive

Mietzsch Lufttechnik - VRE / W series

Object:

Approved for EX category as per EU Directive EN 2014/34/EU (ATEX):

Location in relation to the fan	Category		
	Gas area 1	Gas area 2	no EX-area
inside	II 2G Ex h IIB+H2 T3 Gb ○	II 3G Ex h IIB+H2 T3 Gc ○	no ○
outside	II 2G Ex h IIB+H2 T3 Gb ○	II 3G Ex h IIB+H2 T3 Gc ○	no ○

Impeller optionally made of PVC / PPs welded / GFRP laminated or
electrically conductive plastic (PVCX / PPsX)
with balancing quality G 6.3 as per ISO 1940, mounted overhung on the motor shaft

Balancing quality and vibration level of the fan comply with ISO 14694

Spiral casing made of PVC / PPS or electrically conductive plastic (PVCX / PPsX)
single-sided suction, with condensate drain
Shaft passage: without seal / GD technically gastight

Direct drive with **EX motor** outside of the flow
Ignition protection type: EX eb II - increased safety
EX db eb II - flameproof enclosure

Direct drive with **standard motor** (no EX zone) outside of the flow.
Designed as single phase alternating current / three-phase current / pole-changeable

Winding protection: without / therm. winding protection PTC thermistor (TS)

Stable welded steel base for receiving the fan and motor
Corrosion protection: galvanised / varnished, including vibration isolators

Safety requirements as per VDMA 24 167

VRE _ _ _ / _ _ _ W _ _ _ _ - _ _ - _ _ - _ _ _ _ - _ _ _ _

Nominal size
Impeller type
Nominal speed
Special designs
Casing position / direction of rotation
Casing / impeller material

Volumetric flow rate	:	_____	m^3/h
Total pressure increase	:	_____	Pa
Temperature			
of the flow medium	:	_____	°C
of the environment	:	_____	°C
Motor power	:	_____	kW
Voltage / frequency	:	_____	V ____ Hz
Rated motor current	:	_____	A
Fan speed	:	_____	rpm
Noise level L_{A3m}	:	_____	dB(A)
Weight	:	_____	kg

Flow medium/intended use:

Accessories and special equipment
- Intake side casing connection: ELA-elast. connector round / KOF compensator with flange
- Pressure side casing connection: ELA-elast. connector / KOF compensator with flange

- Condensate drain: Drill hole with seal / nozzle with cap or screw cap
- Splinter protection: Soft foil / made of soft foil with wire mesh
- Weather protection for the motor
- Cleaning opening

- Repair switch: loose / mounted, 3-pole with auxiliary contact, standard / EX model
- Motor protection switch: loose / mounted, standard / EX model

- Miscellaneous

Abkürzungsverzeichnis

ABD	blow-out diffuser
ABS	discharge duct
ATEX	EU directive of explosion protection
CfK	carbon fibre reinforced plastic
CfKX	carbon fibre reinforced plastic, conductive
DD	motor, connected in delta connection for inverter operation at 3x230V
E	single-phase motor
ELA+SPB	expansion joint, fastening with tightening strap
EX	with explosion proof motor EEx e II T4
EXde	with explosion proof motor EEx de IIC T4
F	flange
FU	Frequency inverters
GD	gas-tight, shaft passage technically gas-tight
GDS	high pressure tightness of casing at conveying humid exhaust air
GfK	glass fiber reinforced plastic
GfKX	glass fiber reinforced plastic, electroconductive
KOF	expansion joint, welded with flange
KOFF	expansion joint, unassembled with flange on both sides
KOR	expansion joint, welded with frame
KORR	expansion joint, unassembled with frame on both sides
KSF	condensate drain with flange
KSS	condensate drain
KSV	condensate drain with screw connection
MFU	motors with integrated frequency inverter
MS	Motor protection switch
P1	motor, pole-changeable with half speed
P2	motor, pole-changeable with separate windings
PE	polyethylene
PEX	polyethylene, electroconductive
PP	polypropylene
PPs	polypropylene,
PPsX	polypropylene, electroconductive and flame-retardant
PVC	polyvinyl chloride
PVDF	polyvinylidene fluoride
R	frame
ROE	cleaning opening (besser evtl. access eye, cleanout)
RS	repair switch
RSF	symmetrical pipe transition, welded, with flange
SGD	soundproof casing
SPS	splinter protection made of PVC foil
SPSG	splinter protection made of PVC foil with additional wire mesh
TS	motors with thermal winding protection
USEG	discharge duct with inlet cone
VRE	radial fan
WSW	motor weather protection
ZiZo	explosion protected fan for zone i=inside and o=outside

Our program of products and services

Roof fans
of all-plastic design, horizontally or vertically blowing out with many assembly accessories

Radial fans
of thermoplastic material and FRP, direct and belt driven
up to about 150 000 m³/h and 6 500 Pa

Special fans
duct fans, built-in devices, mobile radial fans, Venturi injectors

Explosion-proof fans
according to ATEX for zone 1 and zone 2

AIR technology systems and components
pipes, ducts, fittings, flaps, gas-tight shutoff flaps, exhaust air hoods, deflector hoods, suction hoods and many more of plastic material, complete air technology systems for industry and craft, air cleaning plants, laboratory and process exhaust systems

Central ventilation systems
in housing construction, special-purpose fans, exhaust elements, controlling and regulating devices

Noise protection
rectangular and cylindrical sound attenuators, silencing casings in corrosion-proof design

Exhaust gas cleaning
droplet eliminators and moisteners, gas scrubbers for separation of gaseous dangerous substances, dust filter

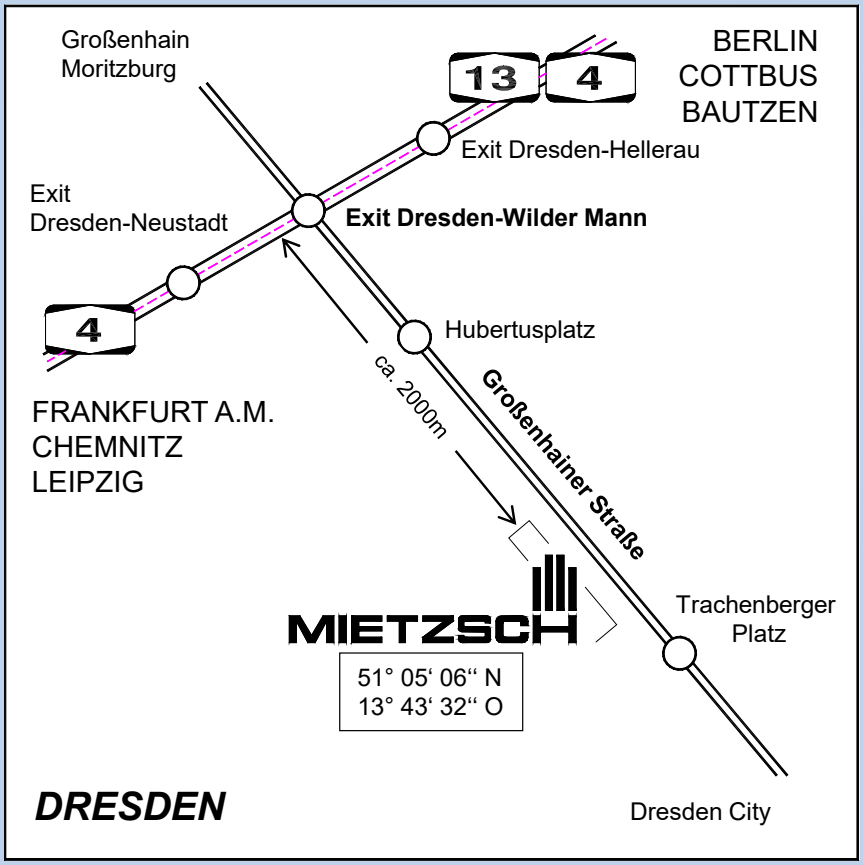
Heat exchangers
for heat recovery from moist and aggressive exhaust air

Tanks
of thermoplastic material for liquids endangering water, according to water resources regulations

Controlling and regulating elements and systems
switches, motor protection devices, speed controllers, frequency inverter, fan controls, flow supervision

Special designs
devices, linings, special components etc. of plastic material

Engineering performances
planning, calculation, and design, ventilation measurement on standardized test stands, low and high temperature test in company-own climatic test chambers



GmbH Lufttechnik Dresden

Großenhainer Straße 137
DE-01129 Dresden

Telefon:	+49 351 8433 0
FAX:	+49 351 8433 160
E-mail	mietzsch@mietzsch.de
Internet	http://www.mietzsch.de