

Centrimaster GT-3
Belt driven, single inlet centrifugal fans
Technical Data



Version 12/2002

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Belt-driven, Single-inlet Centrifugal Fans



The type GT CENTRIMASTER belt-driven, single-inlet centrifugal fans cover air flows up to 27 m³/s and pressure rises up to 3.300 Pa. The fan series consists of centrifugal fans available with two types of impeller:

- Impeller with forward-curved blades for the GTLF fans
- Impeller with backward-curved blades for the GTLB and GTHB fans

The backward-curved blades in the GTLB fans have the same aerodynamic characteristics as those in the GTHB fans, but the GTHB is a reinforced version for higher speeds.

Versions

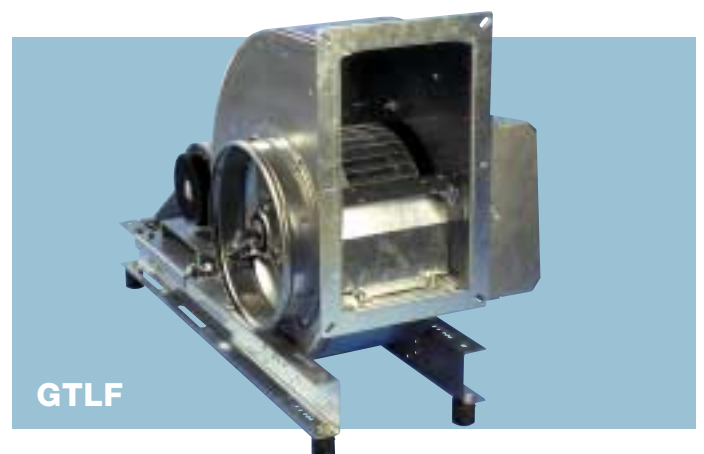
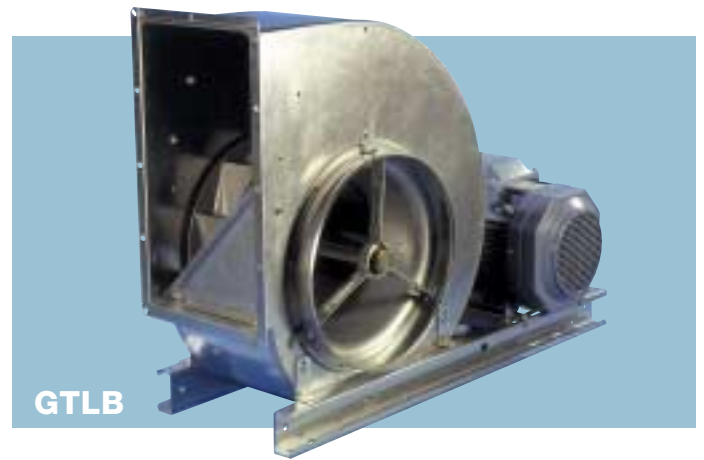
Besides the normal version, the fans are also available in a spark-proof version. The smoke extraction version of GT has been tested by the French CTICM institute and by the Russian VNIPO institute.

CTICM has tested the fans for +400 °C, 2 hours and the tests cover GTLB-3-025-140 as well as GTLF-3-031-071. VNIPO has tested the fans for +400 °C, 2 hours and for +600 °C, 1 hour and the tests cover all single inlet GT-fans. As compared with the normal version, the fans in the smoke extraction version have metallic bearing dampers.

The fans in the spark-proof version conform to the provisions of German Standard VDMA 24 169 3.1 – 3.2 and 3.4.

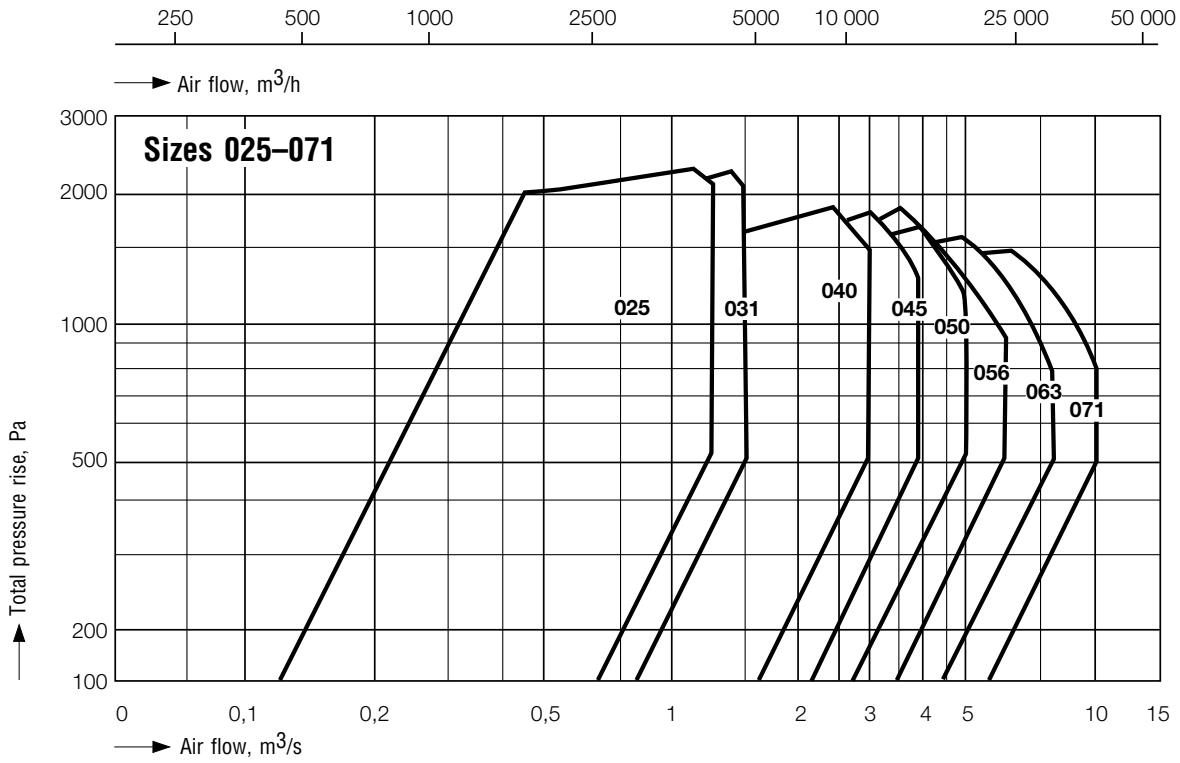
The inlet cone is made of brass and in the GTLF fans the inlet is fitted with a brass band.

The single-inlet fans are rated for continuous operation at temperatures up to +80 °C if the inlet of the fan is connected to the ducting. If the motor is exposed to the air stream, i.e. on a free inlet fan, the ambient temperature must not exceed +40 °C. Motors for higher temperatures are available to special order.

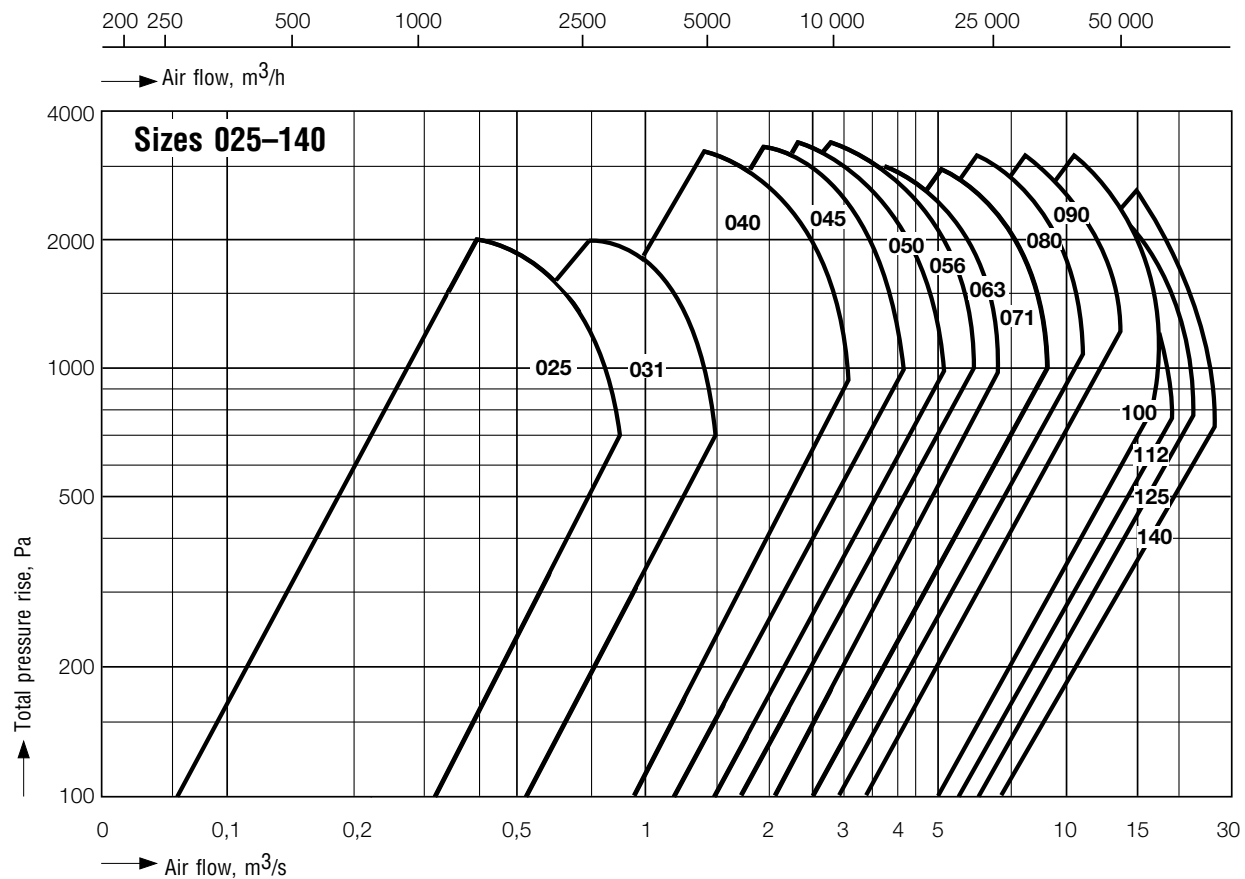


General Survey Charts

GTLF-3-



GTLB/GTHB-3-



Design

Fan Casing – Sizes 025–071

The fan casing is made of Sendzimir galvanised sheet steel. The casing side plates are stamped in one piece and the inlets are deep-pressed in the end walls. The fan casing is jointed by the "Pittsburg folding method" which produces tight, strong joints. This jointing method and the deep-pressed inlets guarantee a stable design and high, consistent quality. The fan tongue has been specially designed to offer optimised aerodynamic properties.

Fan Casing – Sizes 080–140

The fan casing is made of Sendzimir galvanised sheet steel. The casing of the size 080 and 090 fans is jointed by the Pittsburg folding method and the casing is as standard equipped with a stable, welded frame. The casing of the size 100–140 fan consists of five flanged sections that can be dismantled.



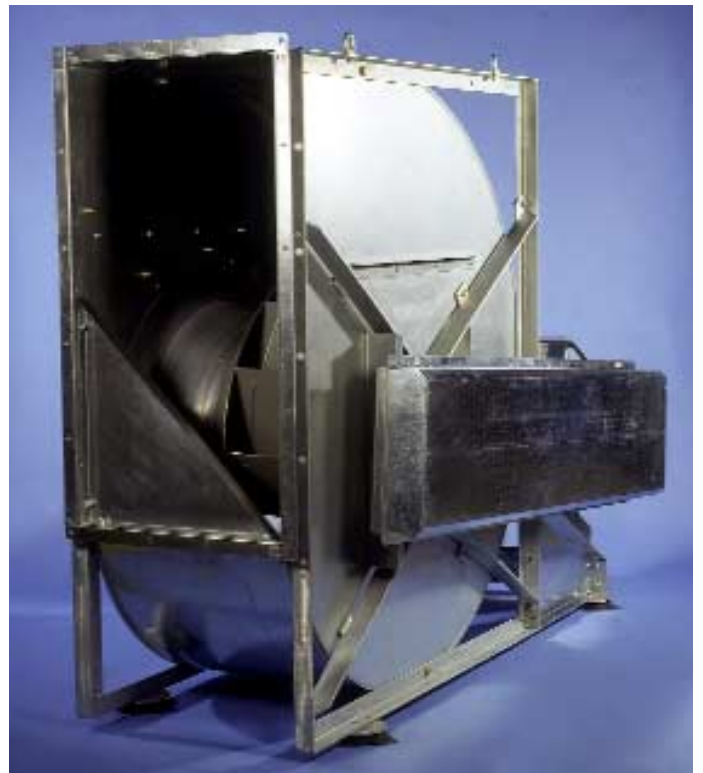
Pittsburg



Tunga för GTLB- och GTHB-fläktar

Fan Inlet

The design of the fan inlet is of vital importance to high fan efficiency and a low level of sound generated by the fan. On the size 025–071 GTLF fans, the inlet is directly deep-pressed into the end walls. On the GTLB and GTHB fans the inlet must be deeper and must also extend into the impeller with a certain amount of overlap and a small, accurately predetermined radial gap. The inlet cones of the GTLB and GTHB fans are deep-drawn in one piece and are fitted to end walls of GTLF fans. This means that the GTLB and GTHB fans have a "double inlet" that gives the fan casing additional rigidity. On the size 080–140 fans, the inlet cone is made separately for both types of fan and directly fitted to the end walls.



Design

Fan Impellers

The fan impellers with backward-curved blades (GTLB and GTHB) are made of sheet steel and welded, coated with 60 mm thick epoxy powder, (colour: AM 8043, dark grey). The fan impellers with forward-curved blades (GTLF) are made of Sendzimir galvanised sheet steel. The impellers of the size 040–140 GTLB and GTHB fans are dynamically balanced to an accuracy to ISO 1940–1973 G 2.5 at the maximum speed. The impeller of the size 025–031 GTLB fans and all sizes of GTLF fans are dynamically balanced to accuracy according to ISO Standard 1940–1973 G 6.3 at the maximum speed.

The impeller of the size 025–100 fans is secured to the shaft by means of a key.



Fan impeller of the type GTHB fans



Fan impeller of the type GTLF fans

Shafts

The shafts are made of steel and are provided with keyways for the belt pulleys. The shafts are designed with a high factor of safety against fatigue, and for a critical speed, which is at least 20% higher than the maximum fan speed. The shafts have anti-corrosion protection.



Design

Bearings

The size 025–071 GTLB and GTLF fans are equipped with single-row, deep-groove ball bearings (Y-bearings) that are permanently lubricated and sealed on both sides. These bearings are secured to the shaft by means of an eccentric locking collar. The bearings are supported by robust three-armed or four-armed bearing support.

The size 080–100 GTLB fans are equipped with single-row, deep-groove ball bearings seated in plummer blocks with grease nipple. These bearings are secured to the shaft by means of a tapered adapter sleeve. The bearings of the GTLB and GTLF fans are designed for a life cycle of 20.000 hours. The plummer blocks with grease nipple are supplied as accessories for the size 025–071 GTLF and GTLB fans. See under Accessories.

The size 040–071 GTHB fans are equipped with single-row, deep-groove ball bearings that are permanently lubricated and sealed on both sides. These bearings are secured to the shaft by means of a tapered adapter sleeve. This means that the dimension of the bearing increases by 5 mm in relation to the shaft and this increases the useful life of the bearing. The bearings are supported by a robust three-armed or four-armed bearing support. Plummer blocks with grease nipple are also available as accessories.

The size 080–100 GTHB fans and the size 112–140 GTLB fans are equipped with plummer blocks with roller bearings secured to a sturdy bearing bracket made of welded flat iron bar. All the roller bearings are as standard equipped with grease nipples. The bearings of the GTHB fans are designed for a life cycle of 40.000 hours.



Bearing of the type GTLF and GTLB fans up to size 071.



Bearing of the size 080 – 100 GTLB fans.



GTHB-040-071



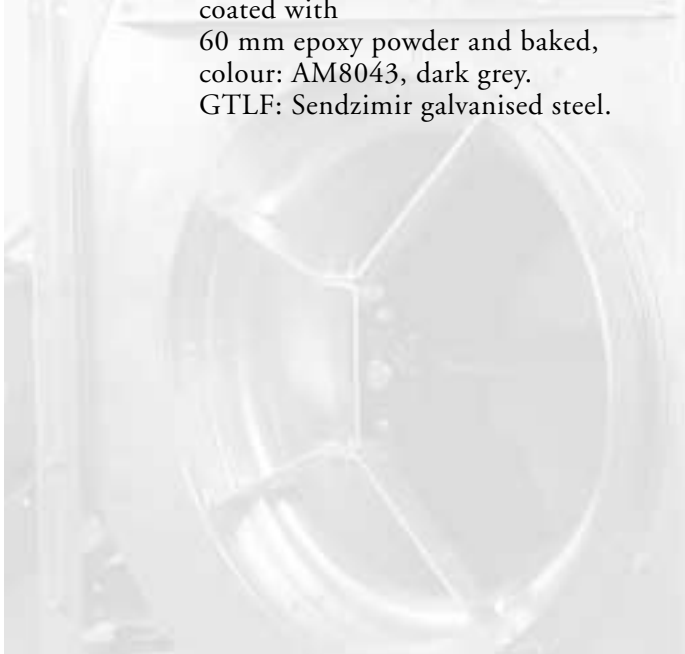
GTHB-080-100 and GTLB-112-140

Materials and Finish, Motor

Materials and Finish

The GX fans in the standard version meet the provisions of Environmental Class M2.

Fan casing:	Sendzimir galvanised sheet steel, (275 g/ m ² thick zinc)
Inlet cone:	Sendzimir galvanised sheet steel in the normal version. Brass in the spark-proof version.
Shaft:	Centreless-ground steel with anti-corrosion protection.
Fan impeller:	GTLB and GTHB: Sheet steel, welded, coated with 60 mm epoxy powder and baked, colour: AM8043, dark grey. GTLF: Sendzimir galvanised steel.



Motor

The GT fans are normally supplied with the motor mounted. This enables the fan to be trial run prior to dispatch and ABB can assume undivided warranty liability. If the fan is supplied without motor, the size and speed of the motor must be specified when the order is placed so that the correct belt drive can be selected.

Detailed motor data is tabulated in separate tables. See under Motor Data.

Belt Drive

The belt drive consists of belt pulleys and belt(s). The pulleys have a separate Taper-Lock-type hub, which is easy to fit and remove.

The belt guard and slide rails are included in the GT fan delivery.

Selecting the Motor

The shaft power (P, kW) and the recommended min. permissible motor output for direct on-line starting (P_M, kW) are specified in the fan charts, i.e. the safety factor is already included. Base your motor selection on this P_M figure.

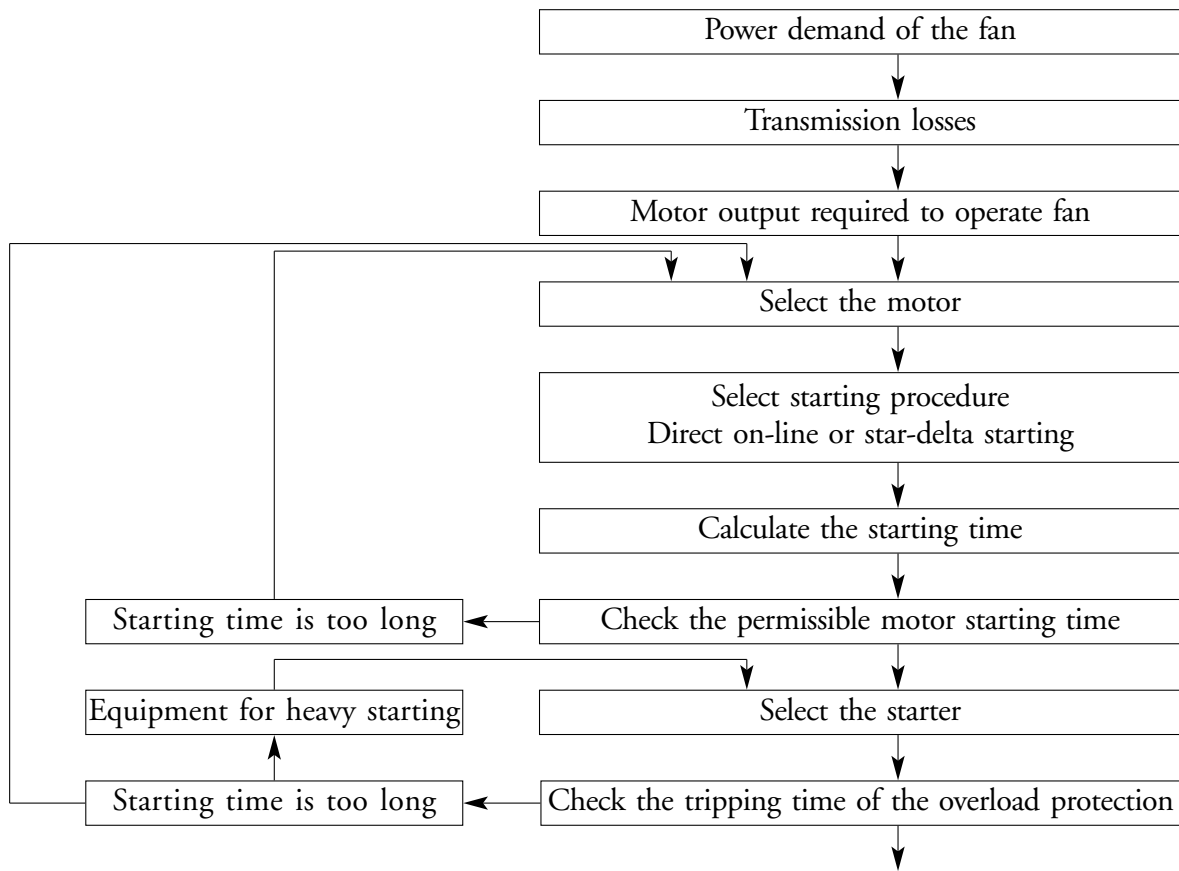
The safety factor covers belt losses that arise with standardised belt pulleys.

Recommendations:

When selecting GTLB and GTHB fans (with backward-curved blades) that at a given speed have an output peak within their operating range, use this output peak for selecting a motor and not the output at the duty point.

When selecting GTLF fans (with forward-curved blades) whose power demand, at a given speed, continuously increases as the air flow increases, use the shaft power demand P at the duty point (adding the safety factor!) or the recommended min. permissible motor output P_M. If you cannot with certainty plot the duty point in the fan chart, select a motor for an output that is another 15–20 % higher.

Starting of Fans



To calculate the starting time in direct on-line starting
Use the following formula:

$$t = \frac{J \cdot n_f^2 \cdot 10^{-3}}{46 \left[P \left(\frac{M_{max}}{M} + \frac{M_{st}}{M} \right) - P_m \right]}$$

The calculated starting time is the time needed for accelerating the fan from rest to full speed.

To calculate the starting time in star-delta starting
Use the following formula:

$$t = \frac{J \cdot n_f^2 \cdot 10^{-3}}{46 \left[P \left(\frac{1}{3} \cdot \frac{M_{max}}{M} + \frac{1}{4} \cdot \frac{M_{st}}{M} \right) - P_m \right]}$$

The calculated starting time is the time during which the star-delta starter must be in star for the fan to reach about 90 % of full speed, whereupon the starter switches over to delta. On star-delta starting, also check that the motor curve is higher than the fan torque curve during the star connection period. The lowest possible motor rating for star-delta starting can be calculated from the following expression.

$$P_{Y/D} = \frac{2,6}{\frac{M_{max}}{M}} \cdot P_m$$

Symbols used

P	= motor rating	kW
P _{m1})	= power demand with the fan running at rated speed (including any belt-drive losses)	kW
P _{Y/D}	= lowest rating of motor for which star-delta starting can be employed	kW
$\frac{M_{st}^{3)}$	= ratio of motor starting torque to normal torque	
$\frac{M_{max}^{3)}$	= ratio of maximum motor torque to normal torque	
n _f	= rated speed of fan	r/min
J ²⁾	= Moment of inertia of the system referred to the fan shaft	kg m ²
t	= starting time	s

- 1) PM som redovisas i vissa katalogavsnitt.
- 2) The moment of inertia of the impeller is given in the fan charts. The moment of inertia of the motor can generally be disregarded.
- 3) See the catalogue of the motor supplier.

Tolerances and Quality

Tolerances

The particulars in the charts of the size 040–140 GTLB- and GTHB fans are given with the tolerance specified in the DIN 24 166 Standard, Class 1. Tolerance Class 2 is applicable to the size 025–031 GTLB fans and all the GTLF fans.

DIN 24166	Tolerance Class		
	1	2	3
Air flow q_v :	±2,5%	±5,0%	±10,0%
Pressure rise, Δp_t :	±2,5%	±5,0%	±10,0%
Shaft power demand*, P:	+3,0%	+8,0%	+16,0%
Efficiency**, h:	-2,0%	-5,0%	-
A-weighted sound power level*, L_{WA} :	+3 dB	+4 dB	+6 dB

* Negative tolerance permissible

** Positive tolerance permissible

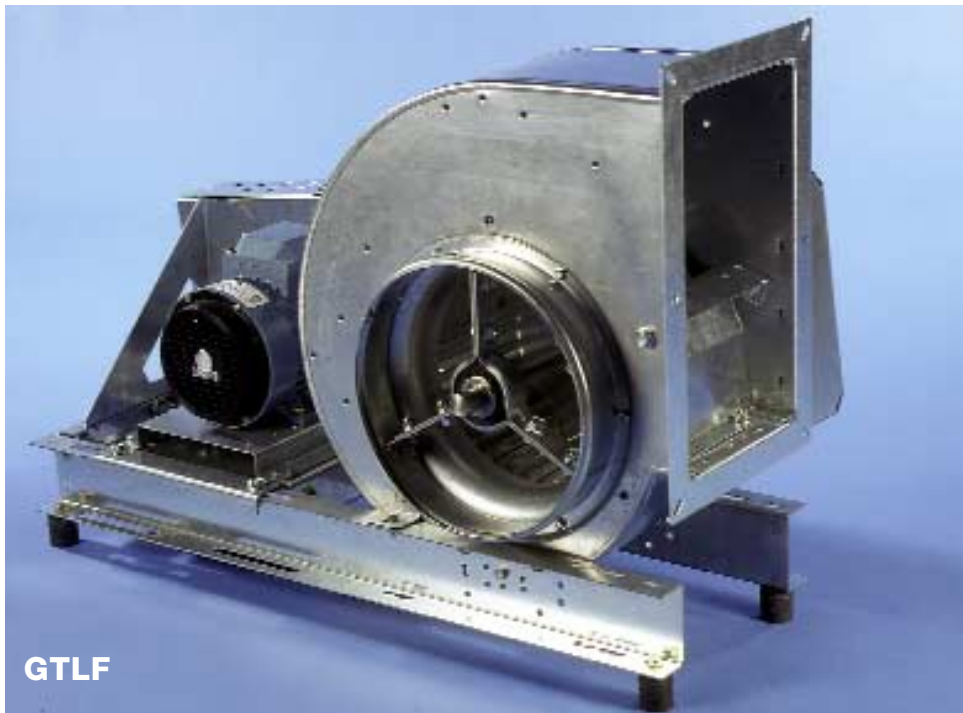
ISO 9001 and ISO 14001 Quality

Fläkt Woods has received quality management certification in accordance with ISO 9001. We document our quality management responsibility at every stage of our business activities from the product development to production, procurement and marketing.

We have received environmental management certification in accordance with ISO 14001. We aim to minimise the impact of our business activities and our products on the environment.



Specification Text – GTLF



Single-inlet centrifugal fan for a belt-drive. The fan casing is made of Sendzimir galvanised sheet steel, jointed by the "Pittsburg folding method". Fan impeller with forward-curved blades, made of Sendzimir galvanised sheet steel. The fan impeller is dynamically balanced to accuracy according to ISO Standard 1940 – 1973 G 6.3. The shaft is designed for a critical speed, which is at least 20% higher than the maximum fan speed. Single-row, deep-groove ball bearings are permanently lubricated and sealed on both sides. These bearings are secured to the shaft by means of an eccentric locking collar. The bearings are supported by three-arm or four-arm bearing supports. The specified aerodynamic performance has been measured in accordance with AMCA 210-85 and 300-85.

- Normal version
- Smoke extraction version – can withstand 400 °C for 2 hours
- Spark-proof version

Fan details for the GTLF in accordance with DIN 24166, Class 2

The quality management system of the supplier has been granted ISO 9001 certification and his environmental management system has been granted ISO 14001 certification.

Air flow, q_v	m^3/s
Total pressure rise, Δp_t	Pa
Power demand, P	kW
Min. fan efficiency, η	%
Max. A-weighted total sound power level, L_{WA} ...	dB

Specification Text - GTLB



Single-inlet centrifugal fan for a belt-drive. The fan casing is made of Sendzimir galvanised sheet steel, jointed by the "Pittsburg folding method", in size 100 consisting of five sections with flanges. Fan impeller with backward-curved blades, made of sheet steel, welded and coated with 60 mm thick epoxy powder. The fan impeller is dynamically balanced to accuracy according to ISO Standard 1940 – 1973 G 2.5 (sizes 040–140) or G 6.3 (sizes 025–031).

The shaft is designed for a critical speed, which is at least 20% higher than the maximum fan speed. Single-row, deep-groove ball bearings are permanently lubricated and sealed on both sides. These bearings are secured to the shaft by means of an eccentric locking collar. The bearings are supported by three-arm or four-arm bearing supports. The size 080–100 fans are equipped with plummer blocks with ball bearings and the size 112–140 with plummer blocks with roller bearings fitted to a sturdy bearing bracket made of welded flat iron bar.

The specified aerodynamic performance has been measured in accordance with AMCA 210-85 and 300-85.

- Normal version
- Smoke extraction version – can withstand 400 °C for 2 hours
- Spark-proof version

Fan details for the GTLB in accordance with DIN 24166

- Sizes 040–140: Class 1
- Sizes 025–031: Class 2

The quality management system of the supplier has been granted ISO 9001 certification and his environmental management system has been granted ISO 14001 certification.

Air flow, q_v	m ³ /s
Total pressure rise, Δp_t	Pa
Power demand, P	kW
Min. fan efficiency, η	%
Max. A-weighted total sound power level, L_{WA}	dB

Specification Text – GTHB



GTHB

Single-inlet centrifugal fan for a belt-drive. The fan casing is made of Sendzimir galvanised sheet steel, jointed by the "Pittsburg folding method", in size 100 consisting of five sections with flanges. Fan impeller with backward-curved blades, made of sheet steel, welded, coated with 60 mm thick epoxy powder and baked. The fan impeller is dynamically balanced to accuracy according to ISO Standard 1940 – 1973 G 2.5. The shaft is designed for a critical speed, which is at least 20% higher than the maximum fan speed.

The size 040–071 GTHB fans are equipped with single-row, deep-groove ball bearings that are permanently lubricated and sealed on both sides. These bearings are secured to the shaft by means of a tapered adapter sleeve. The bearings are supported by a robust three-armed or four-armed bearing support.

The size 080–100 GTHB fans are equipped with plummer blocks with roller bearings secured to a sturdy bearing bracket made of welded flat iron bar. The roller bearings are as standard equipped with grease nipples. The specified aerodynamic performance has been measured in accordance with AMCA 210-85 and 300-85.

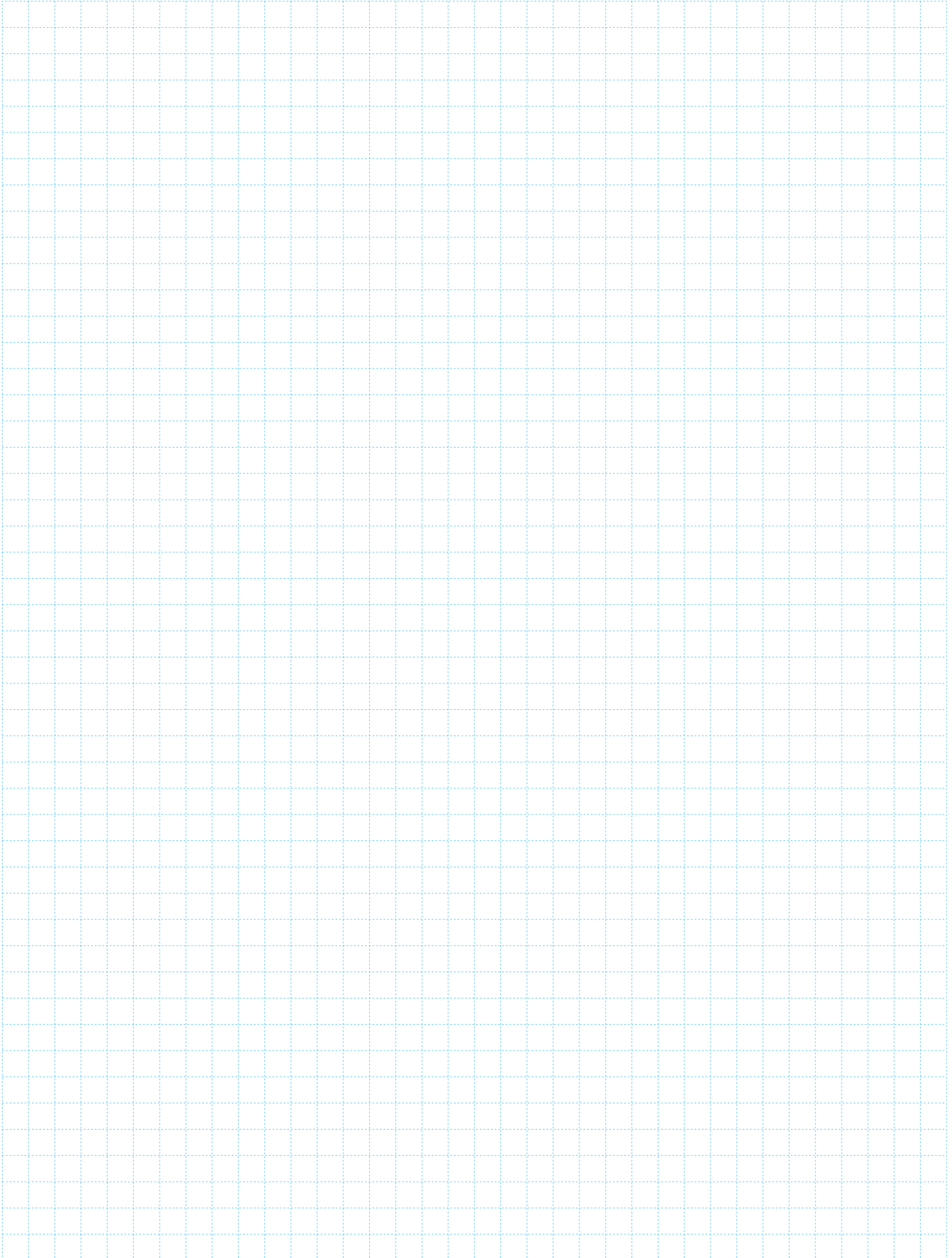
- Normal version
- Spark-proof version

Fan details for the GTHB in accordance with DIN 24166, Class 1

The quality management system of the supplier has been granted ISO 9001 certification and his environmental management system has been granted ISO 14001 certification.

Air flow, q_v	m ³ /s
Total pressure rise, Δp_t	Pa
Power demand, P	kW
Min. fan efficiency, η	%
Max. A-weighted total sound power level, L_{WA}	dB

Notes

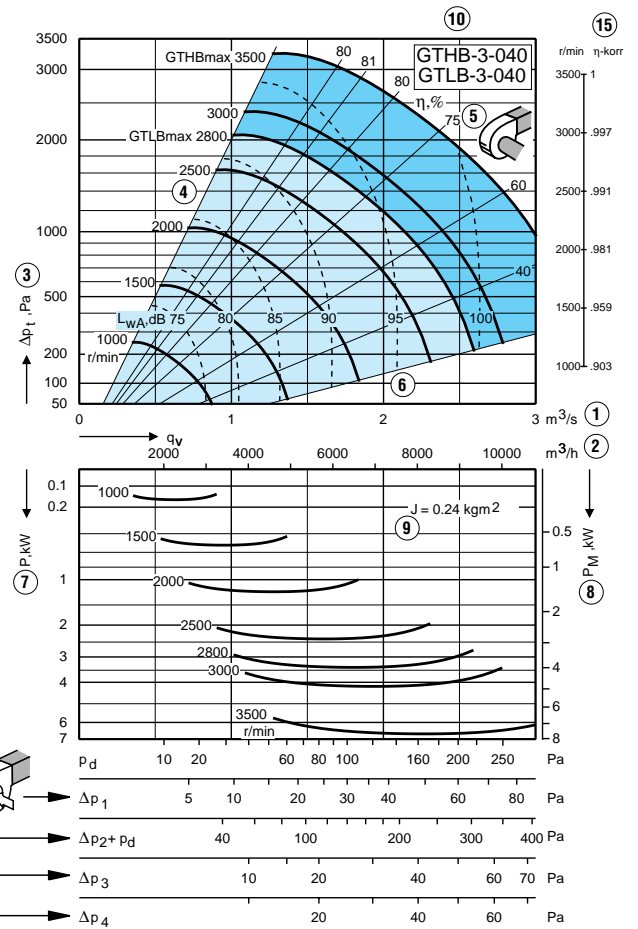


Fan Charts – Explanation

The GT fan charts on the following pages are applicable to air with a density of 1.2 kg/m³.

- ① = Air flow, m³/s (x-axis)
- ② = Air flow, m³/h (x-axis)
- ③ = Total pressure rise, Pa (y-axis)
- ④ = Fan speed, r/min
- ⑤ = Fan efficiency η , %
- ⑥ = Total sound power level L_{wA} (dB), broken line
- ⑦ = Power demand, P (kW)
- ⑧ = Min. recommended motor rating for direct on-line starting, P_M (kW)
- ⑨ = Moment of inertia, J (kg m²)
- ⑩ = Fan size
- ⑪ = Dynamic pressure at the outlet, p_d
- ⑫ = Connection loss at the inlet, Δp_1
- ⑬ = Connection loss at the outlet, $\Delta p_2 + p_d$
- ⑭ = Protective screen at the inlet, Δp_3
- ⑮ = Protective screen at the outlet, Δp_4
- ⑯ = Correction factor for the efficiency k_η

- = Recommended operating range
- = Recommended operating range of a heavy-duty fan



The bearing losses are included in the power consumption of the fan and influence its efficiency. The power consumed by the fan is defined in the fan chart as the power consumed at the shaft end and thus contains the bearing losses. The efficiency figures in the chart are applicable to a fan operating at max. speed.

The charts for fans with backward-curved blades include a k_η scale that indicates how much the efficiency will decrease if the fan is running at low speed. This scale can be applied with high precision within the normal operating range at which the power consumption of the fan at a given speed is fairly independent of the air flow.

Acoustic Data – Explanation

Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{W_{okt}(s)} = L_{WA} + K_{okt}(s)$$

Where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{WA(s)} - L_{WA}]$$

where the correction figure $L_{WA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figures $L_{W_{t(s)}} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

$$L_{W_{t(s)}} = L_{WA(s)} + [L_{W_{t(s)}} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction K_{okt} , dB								$L_{WA(s)} -$	$L_{W_{t(s)}} -$
		Octave band, mid-frequency, Hz								L_{WA}	$L_{WA(s)}$
		63	125	250	500	1 000	2 000	4 000	8 000	dB	dB
To outlet duct (1)	0 – 964	0	5	2	-3	-6	-9	-14	-18	0	8.2
	965 – 1928	-2	-1	3	-3	-6	-9	-14	-17	0	6.4
	1929 – 3200	-3	-4	-4	-1	-6	-8	-13	-16	0	4.1
To inlet duct (2)	0 – 964	4	3	0	-3	-4	-9	-12	-14	0.4	7.8
	965 – 1928	2	-1	0	-3	-5	-8	-10	-13	0.3	6.2
	1929 – 3200	-2	-5	-6	-2	-4	-7	-9	-14	0.8	3.3
To surroundings – the fan inlet and outlet ducted (3)	0 – 964	-8	-5	-6	-8	-11	-15	-22	-33	-6.1	6.1
	965 – 1928	-10	-8	-6	-10	-12	-16	-25	-36	-7.3	5.8
	1929 – 3200	-12	-14	-11	-8	-10	-16	-24	-35	-6.4	3.1
To fan outlet (open-discharge fan) (4)	0 – 964	-9	0	0	-3	-6	-9	-14	-18	-0.6	5.5
	965 – 1928	-13	-6	1	-3	-6	-9	-14	-17	-0.5	4.5
	1929 – 3200	-17	-9	-6	-1	-6	-8	-13	-16	-0.1	2.3

Description of sound path	Test arrangement
1 = To outlet duct 2 = To inlet duct 3 = To inlet duct (the fan inlet and outlet ducted)	
4 = To fan outlet (for open-discharge fan)	

Symbols used

L_{WA}	A-weighted sound power level emitted to outlet duct	dB(A)
s	Sound path	-
$L_{WA(s)}$	A-weighted sound power level equivalent to sound path s	dB(A)
$L_{W_{t(s)}}$	Total sound power level (without frequency weighting A), (corresponding to sound path s)	dB
$L_{W_{okt}(s)}$	Total sound power level at each octave band (without frequency weighting A), (corresponding to sound path s)	dB
$K_{okt}(s)$	Correction figure for breaking down sound level at each octave band, (corresponding to sound path s)	dB
L	Distance	m
ΔL	Distance absorption (applicable to ideal conditions with hemispherical sound propagation)	dB
$L_{pA(s)}$	A-weighted sound power level at distance L from fan, (corresponding to sound path s)	dB(A)

Acoustic Data – Explanation

Distance absorption

The following formula is used to obtain the sound pressure level $L_{pA(s)}$ on free sound emission to the surroundings (sound paths 3 and 4) at various distances L:

$$L_{pA(s)} = L_{WA(s)} - \Delta L$$

where the distance absorption ΔL can be obtained from the table below:

L, m	1	3	5	10	15	20	25	30	40	50	75	100
ΔL , dB	8	17	22	28	31	34	36	37	40	42	45	48

Example:

GTHB-3-045: Air flow $q_v = 2.2 \text{ m}^3/\text{s}$, total pressure rise $\Delta p_t = 1800 \text{ Pa}$.

From fan chart: Speed $n = 2670 \text{ r/min}$.
 Power demand $P = 5.25 \text{ kW}$.
 Fan efficiency $\eta = 0.996 \times 80\% = 79.7\%$.
 A-weighted sound power level to outlet duct $L_{WA} = 95.7 \text{ dB(A)}$.

If the fan has a ducted inlet and outlet, the sound level at each octave band and the total sound power level for each sound path will be the following:

Inlet duct: $L_{W63\text{Hz}} = 95.7 - 2 = 93.7 \text{ dB}$
 $L_{WA} = 95.7 + 0.8 = 96.5 \text{ dB(A)}$
 $L_{Wt} = 96.5 + 3.3 = 99.8 \text{ dB}$

Sound path	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	L_{WA} dB(A)	L_{Wt} dB
Outlet duct	92.7	91.7	91.7	94.7	89.7	87.7	82.7	79.7	95.7	99.8
Inlet duct	93.7	90.7	89.7	93.7	91.7	88.7	86.7	81.7	96.5	99.8
Surroundings (the fan inlet and outlet ducted)	83.7	81.7	84.7	87.7	85.7	79.7	71.7	60.7	89.3	98.8

The A-weighted sound power level at a distance of one metre from the fan will be: $L_{pA} = 89.3 - 7 = 82.3 \text{ dB(A)}$

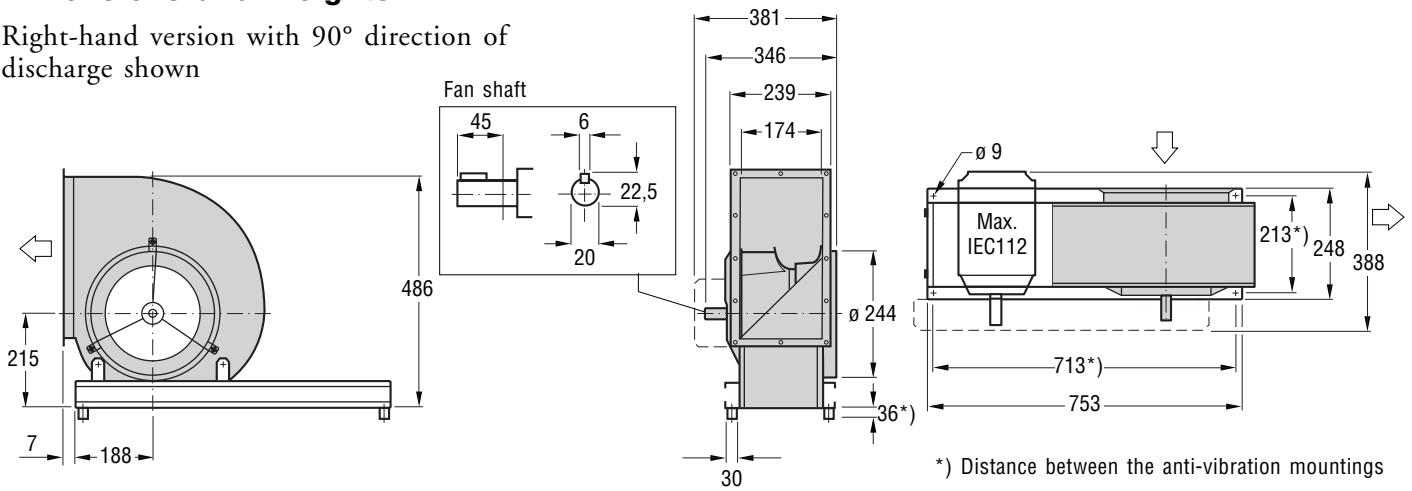
If the fan has an open discharge, the A-weighted sound power level at the fan outlet will be:
 $L_{WA} = 95.7 - 0.1 = 95.6 \text{ dB(A)}$.

The corresponding sound power level at a distance of 50 metres will be: $L_{pA} = 95.6 - 42 = 53.6 \text{ dB(A)}$.

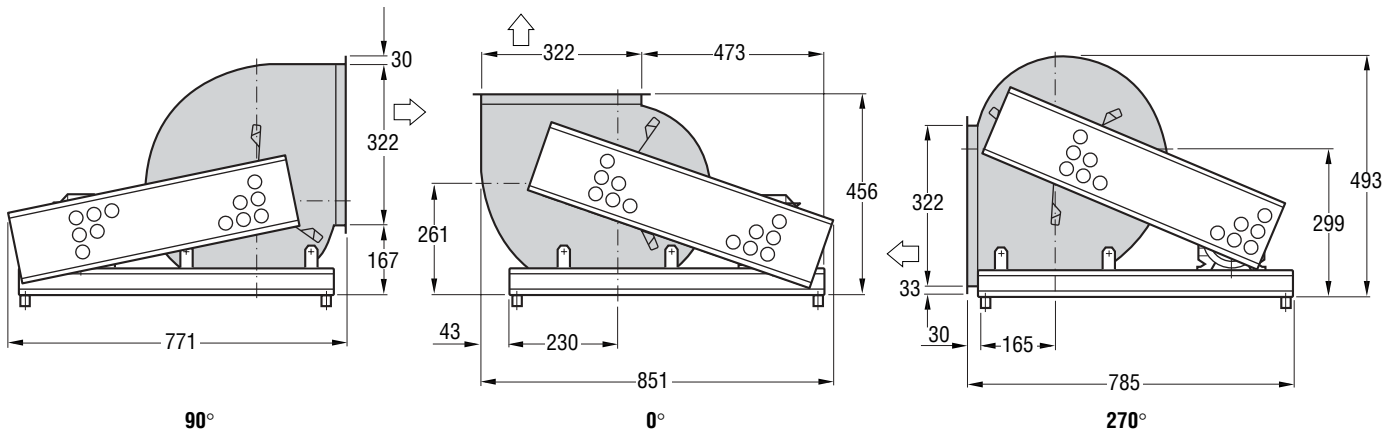
Dimensions and Weights - GTLF-3-025

Dimensions and Weights

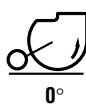
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



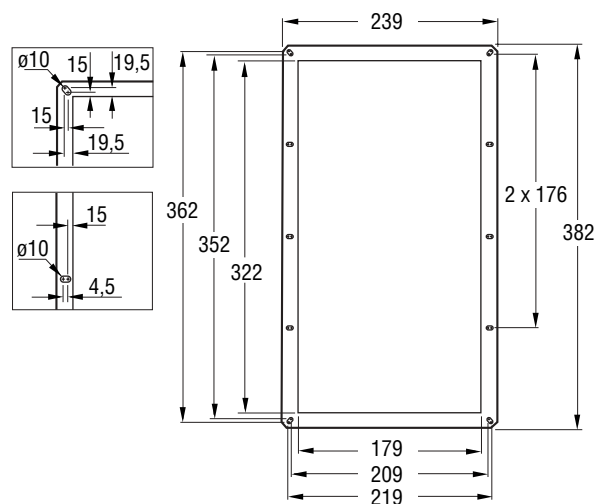
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLF-3-025: 17,5
Belt drive: 3,0

Outlet flange

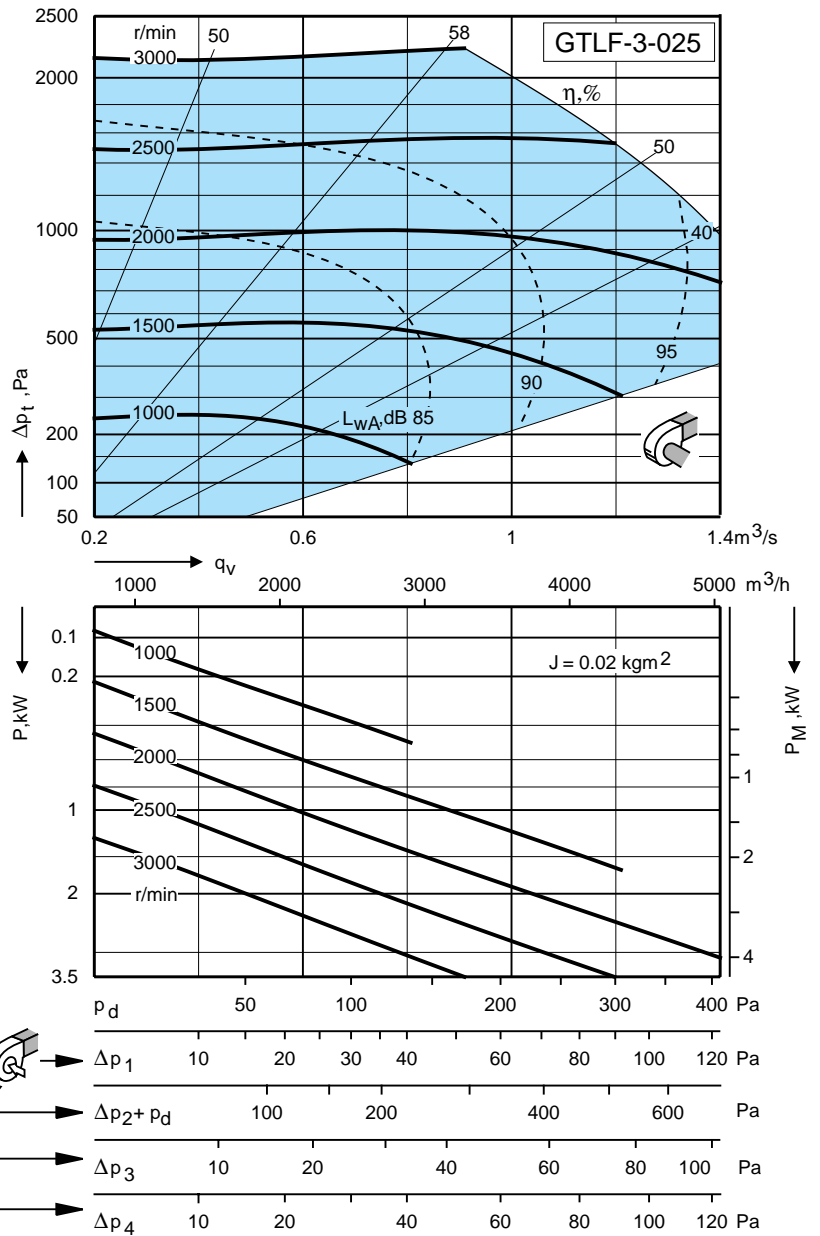


Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLF-3-025

Belt-driven, single-inlet, forward-curved blades

Impeller diameter: 250 mm



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{wA(s)}$ that can be used for obtaining the total sound power level on each sound path:

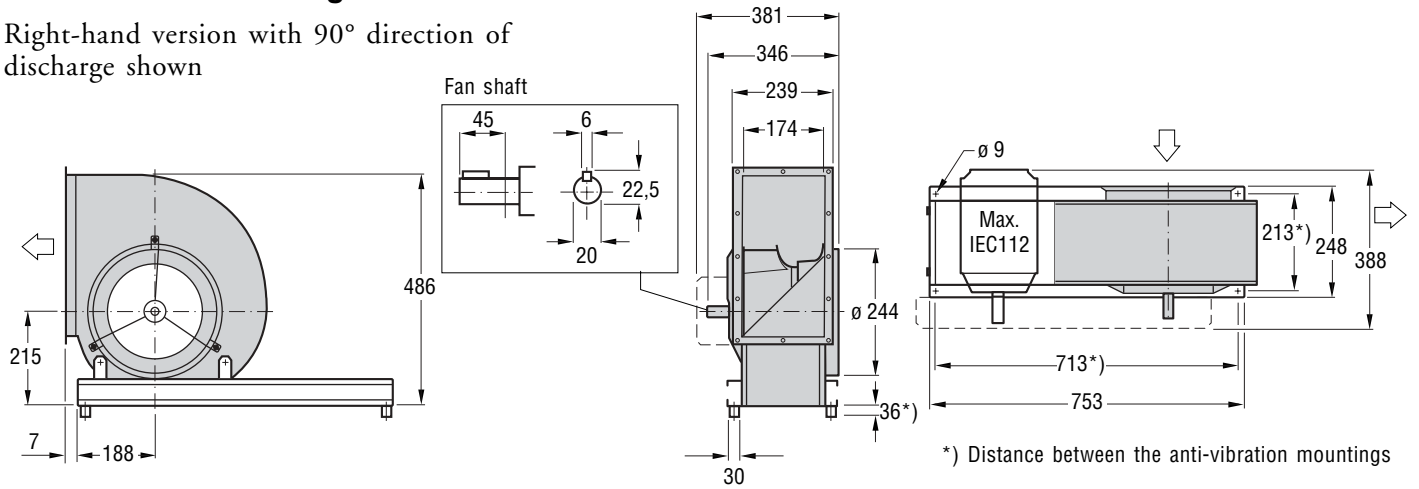
$$L_{wt(s)} = L_{wA(s)} + [L_{wt(s)} - L_{wA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{wA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 1116	4	5	1	-3	-7	-10	-12	-12	0	9
	1117 - 2233	5	4	-1	-6	-5	-8	-9	-11	0	8.7
	2234 - 3000	5	2	-3	-5	-7	-7	-8	-11	0	7.9
To inlet duct (2)	0 - 1116	8	-1	-4	-8	-6	-12	-13	-19	-2.4	11.5
	1117 - 2233	7	1	-8	-11	-6	-10	-10	-15	-2.0	10.4
	2234 - 3000	6	1	-5	-9	-9	-8	-9	-12	-1.7	9.6
To surroundings - the fan inlet and outlet ducted (3)	0 - 1116	-8	-6	-5	-4	-7	-12	-17	-22	-2.6	4.1
	1117 - 2233	-8	-7	-8	-10	-7	-9	-17	-23	-3.3	3.2
	2234 - 3000	-8	-7	-10	-10	-8	-6	-13	-20	-2.1	2.2
To fan outlet (open-discharge fan) (4)	0 - 1116	-15	-3	-3	-5	-7	-10	-10	-12	-1.3	3.9
	1117 - 2233	-16	-6	-5	-8	-5	-8	-9	-11	-0.6	2.2
	2234 - 3000	-18	-10	-7	-6	-7	-7	-8	-11	-0.6	1.4

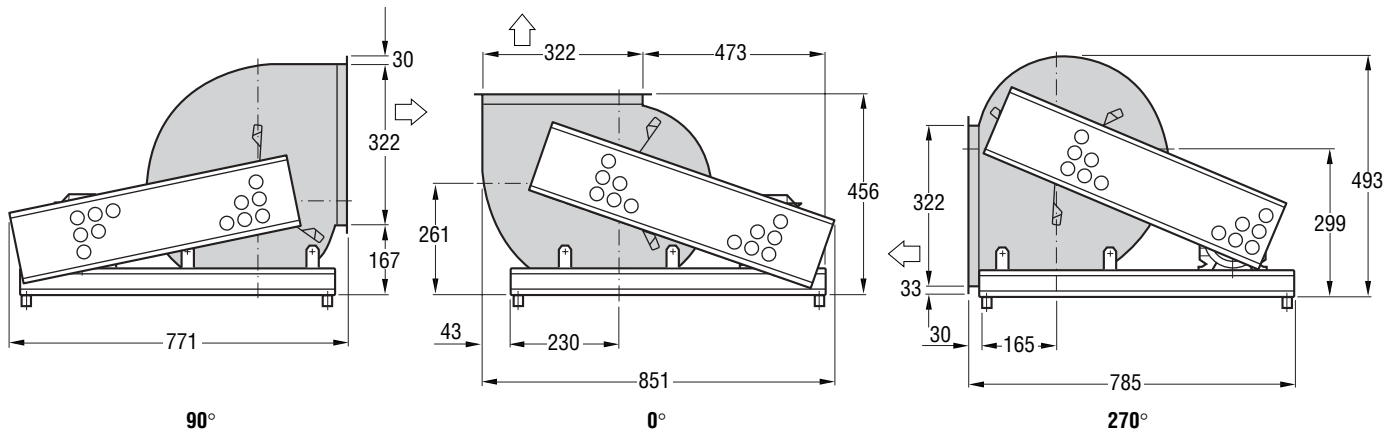
Dimensions and Weights - GTLB-3-025

Dimensions and Weights

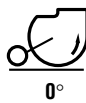
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



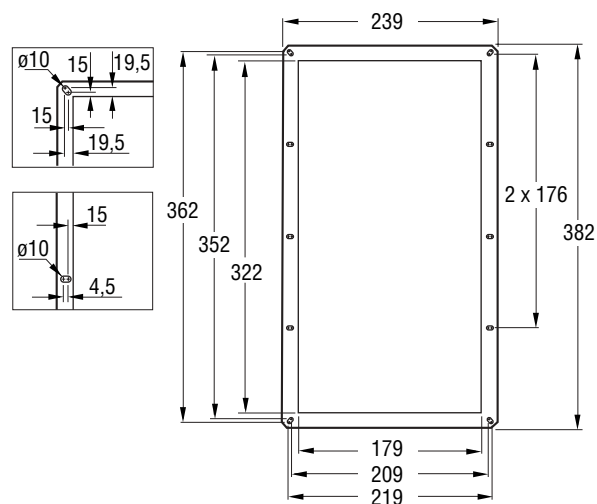
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLB-3-025: 18,5
Belt drive: 3,0

Outlet flange



Motor data: See separate motor list.

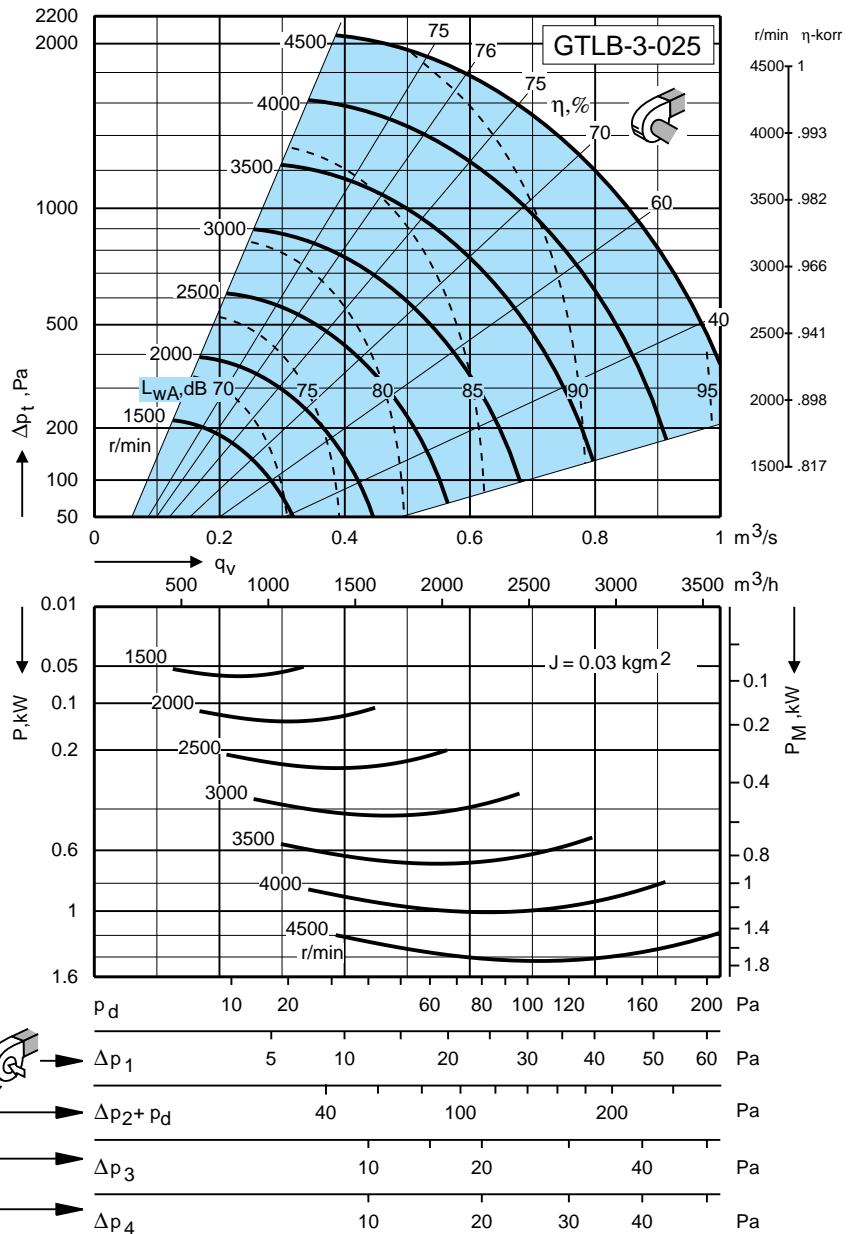
Fan Charts - Acoustic Data - GTLB-3-025

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 250 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{WA(s)} - L_{WA}]$$

where the correction figure $L_{WA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

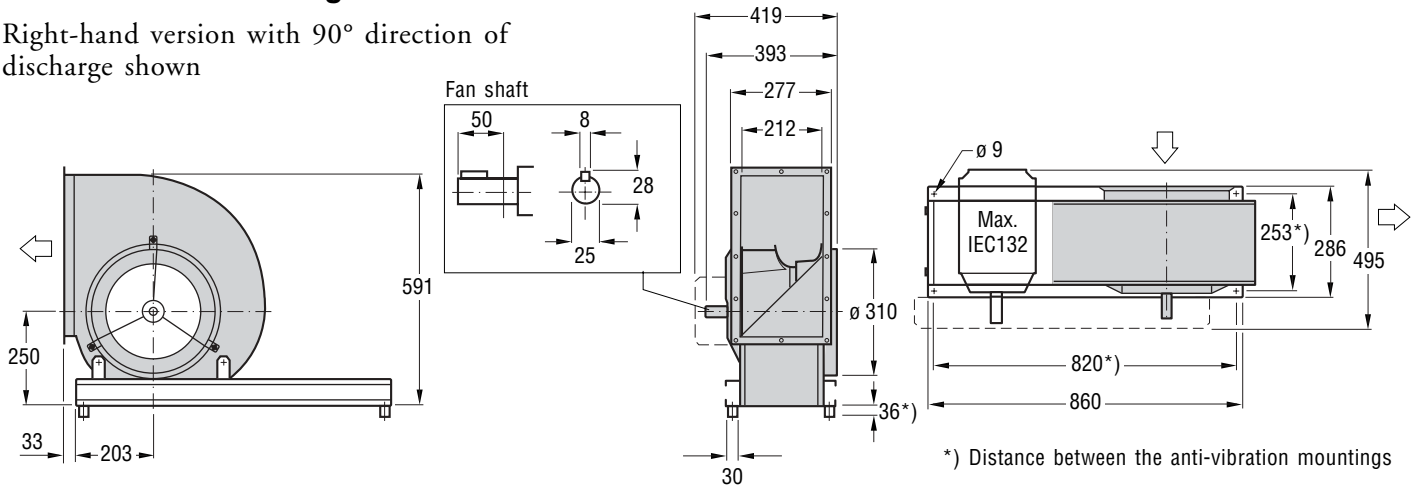
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 1928	1	2	3	-4	-7	-8	-13	-16	0	7.5
	1929 - 3857	-2	0	-7	0	-7	-10	-12	-15	0	5.1
	3858 - 4500	-4	-3	-3	-7	-3	-8	-11	-15	0	3.7
To inlet duct (2)	0 - 1928	1	2	3	-4	-5	-10	-13	-18	0	7.6
	1929 - 3857	-1	0	-8	0	-5	-11	-12	-17	0.3	5.1
	3858 - 4500	-4	-2	-4	-7	-2	-10	-12	-17	0.1	3.8
To surroundings - the fan inlet and outlet ducted(3)	0 - 1928	-7	-5	-4	-9	-12	-14	-21	-31	-6.1	6.7
	1929 - 3857	-11	-10	-10	-8	-11	-18	-23	-34	-7.0	4.3
	3858 - 4500	-13	-13	-9	-14	-10	-16	-22	-34	-7.5	3.5
To fan outlet (open-discharge fan) (4)	0 - 1928	-16	-6	-1	-5	-7	-8	-13	-16	-1.3	3.9
	1929 - 3857	-21	-9	-11	-1	-7	-10	-12	-15	-0.8	2.3
	3858 - 4500	-25	-13	-7	-8	-3	-8	-11	-15	0.3	1.0

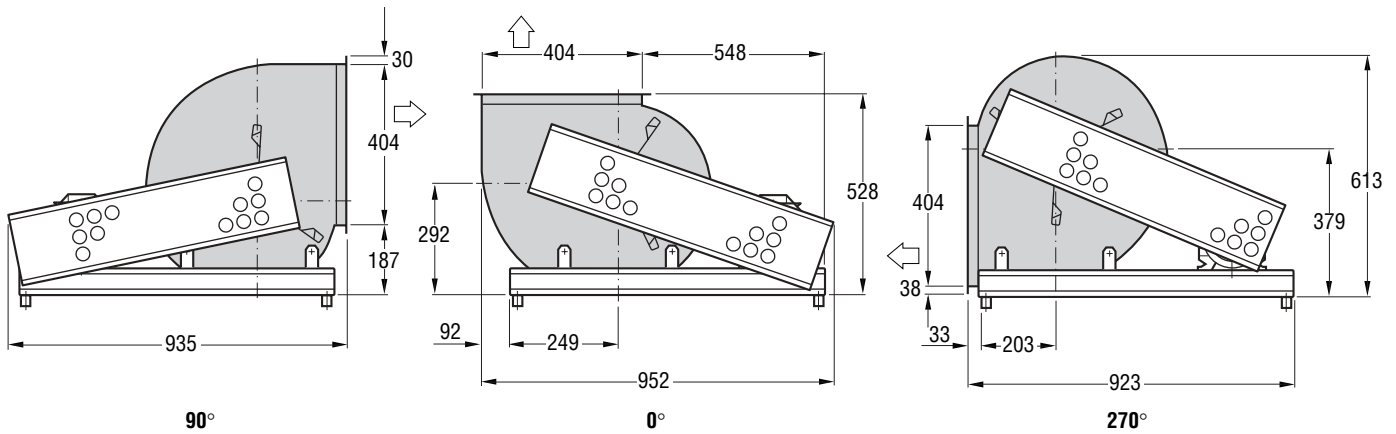
Dimensions and Weights - GTLF-3-031

Dimensions and Weights

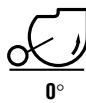
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



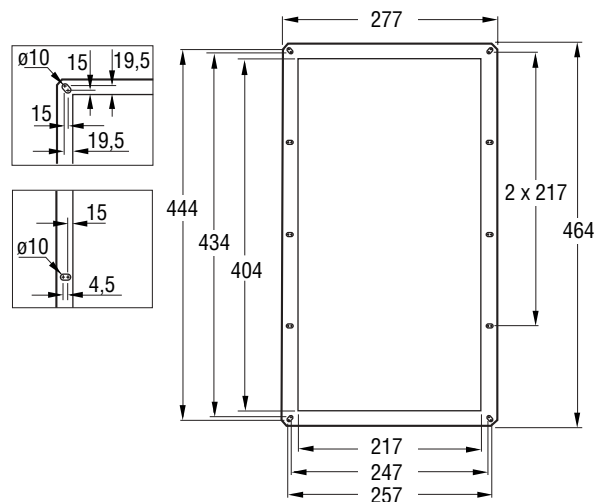
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLF-3-031: 23,5
Belt drive: 4,0

Outlet flange

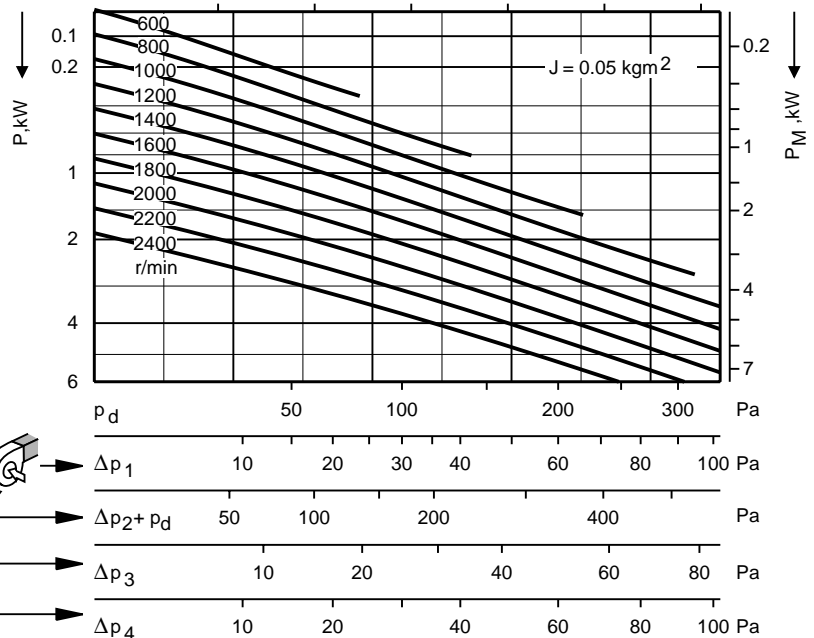
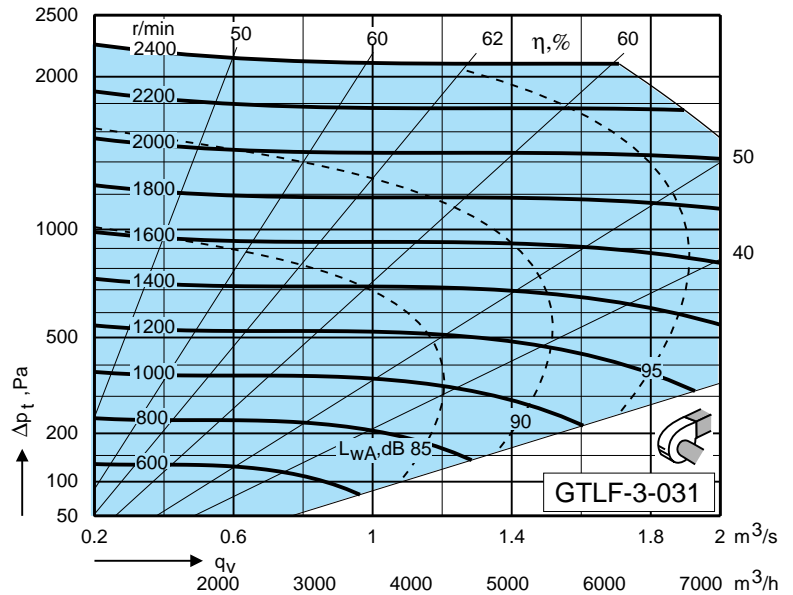


Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLF-3-031

Belt-driven, single-inlet, forward-curved blades

Impeller diameter: 315 mm



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w\text{okt}(s)} = L_{WA} + K_{\text{okt}(s)}$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{wA(s)}$ that can be used for obtaining the total sound power level on each sound path:

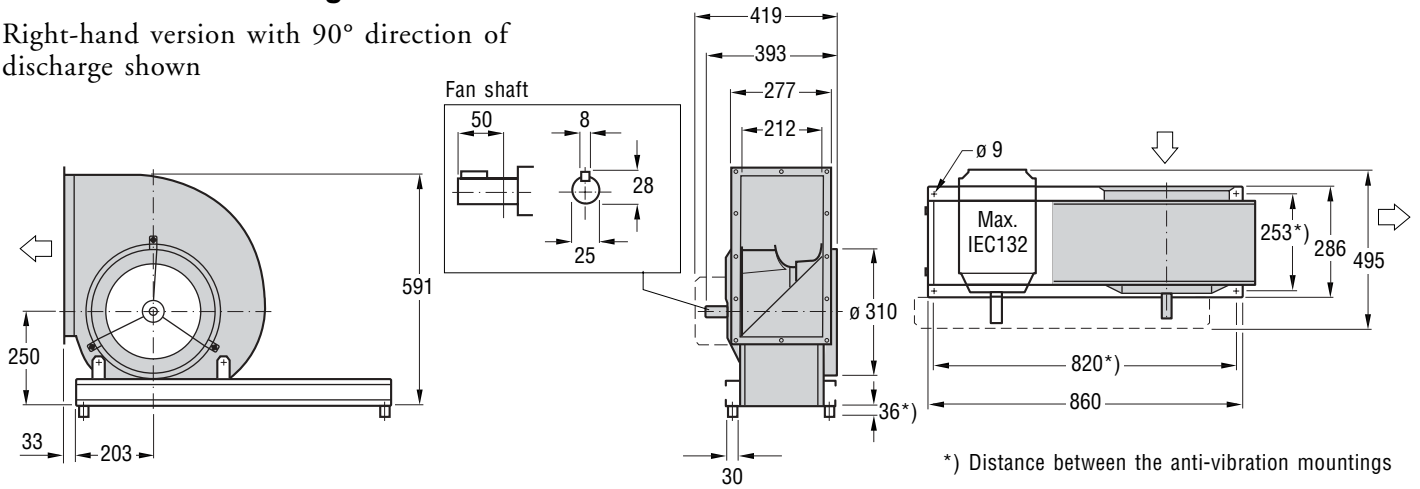
$$L_{wt(s)} = L_{wA(s)} + [L_{wt(s)} - L_{wA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{wA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 1010	3	4	-2	-2	-7	-9	-10	-11	0	8.0
	1011 - 2020	5	4	-2	-6	-5	-8	-9	-13	0	8.6
	2021 - 2400	5	4	-3	-7	-7	-6	-8	-12	0	8.5
To inlet duct (2)	0 - 1010	7	-3	-6	-5	-4	-10	-12	-19	-0.8	9.0
	1011 - 2020	7	-1	-7	-9	-3	-8	-10	-15	-0.1	8.5
	2021 - 2400	7	1	-6	-7	-8	-6	-8	-12	-0.5	9.2
To surroundings - the fan inlet and outlet ducted (3)	0 - 1010	-9	-6	-4	-3	-7	-11	-17	-21	-1.9	3.9
	1011 - 2020	-8	-7	-6	-10	-7	-9	-17	-25	-3.3	3.5
	2021 - 2400	-8	-9	-10	-12	-8	-5	-13	-21	-1.7	1.6
To fan outlet (open-discharge fan) (4)	0 - 1010	-13	-3	-5	-3	-7	-9	-10	-11	-0.7	3.4
	1011 - 2020	-12	-4	-5	-7	-5	-8	-9	-13	-0.6	2.7
	2021 - 2400	-13	-3	-6	-8	-7	-6	-8	-12	-0.5	2.6

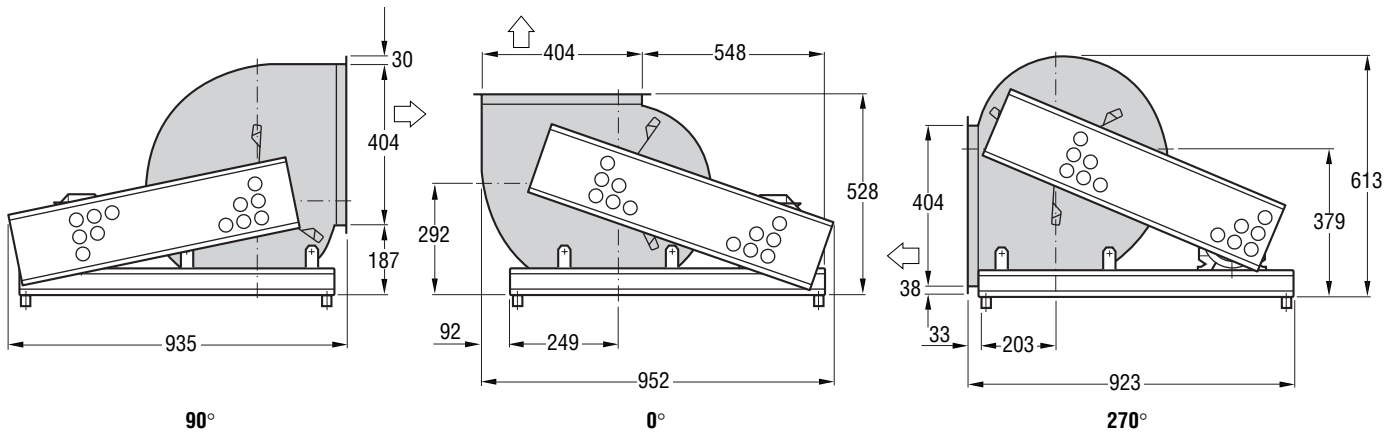
Dimensions and Weights - GTLB-3-031

Dimensions and Weights

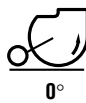
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



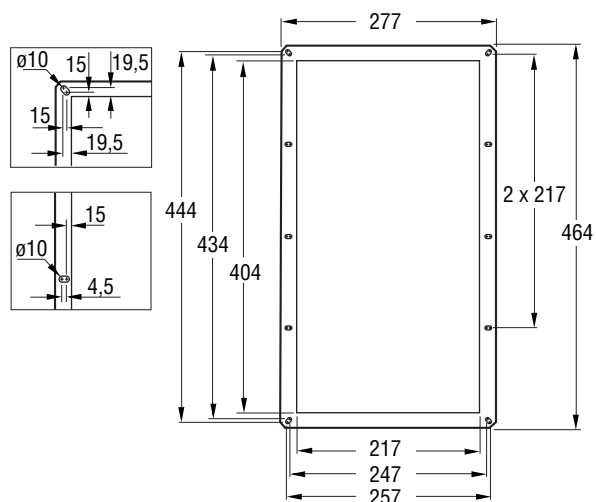
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLB-3-031: 25,0
Belt drive: 4,0

Outlet flange



Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLB-3-031

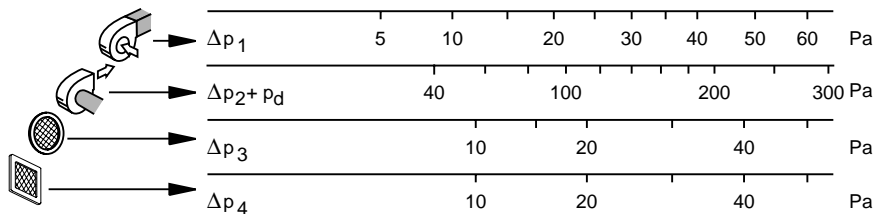
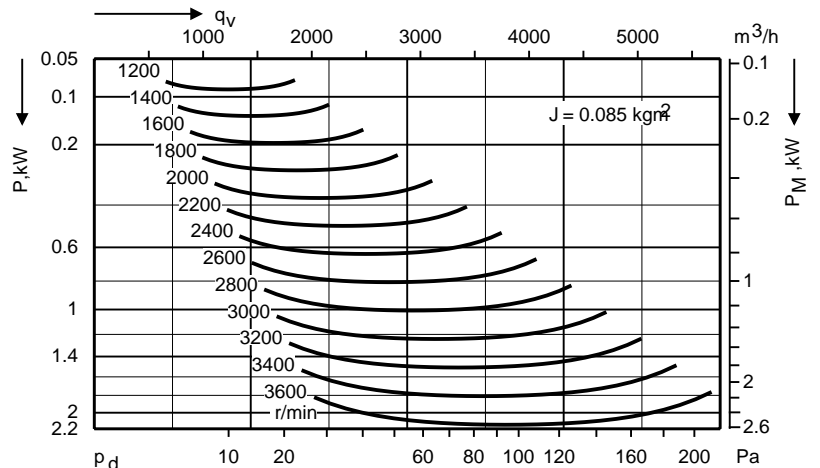
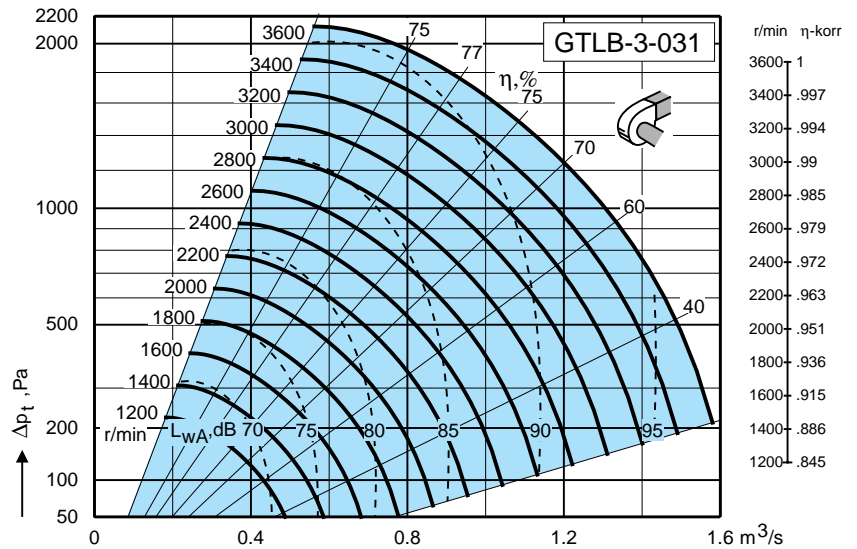
Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 315 mm



Only the GTLB is available in the smoke extraction version.

Note: Max. speed of the smoke extraction version is 3100 rpm.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{WA(s)} - L_{WA}]$$

where the correction figure $L_{WA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

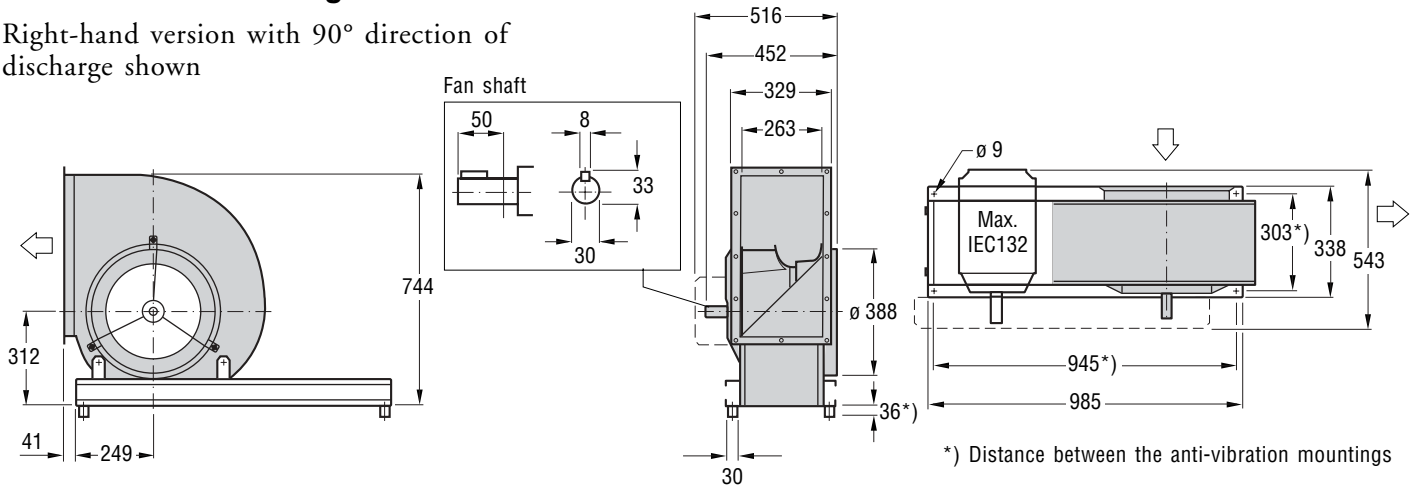
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Sound path (s) r/min	Correction K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 1928	1	-1	4	-4	-7	-8	-15	-17	0	7.3
	1929 - 3600	-1	-2	-6	-2	-6	-7	-12	-16	0	4.5
To inlet duct (2)	0 - 1928	1	-1	3	-1	-5	-10	-11	-16	0.9	6.4
	1929 - 3600	-2	-5	-9	0	-4	-8	-10	-16	1.0	3.4
To surroundings - the fan inlet and outlet ducted (3)	0 - 1928	-7	-8	-5	-9	-12	-14	-23	-32	-6.4	6.0
	1929 - 3600	-10	-12	-9	-9	-10	-15	-23	-35	-6.4	3.8
To fan outlet (open-discharge fan) (4)	0 - 1928	-13	-8	1	-5	-7	-8	-15	-17	-1.1	4.5
	1929 - 3600	-18	-9	-9	-3	-6	-7	-12	-16	-0.6	1.8

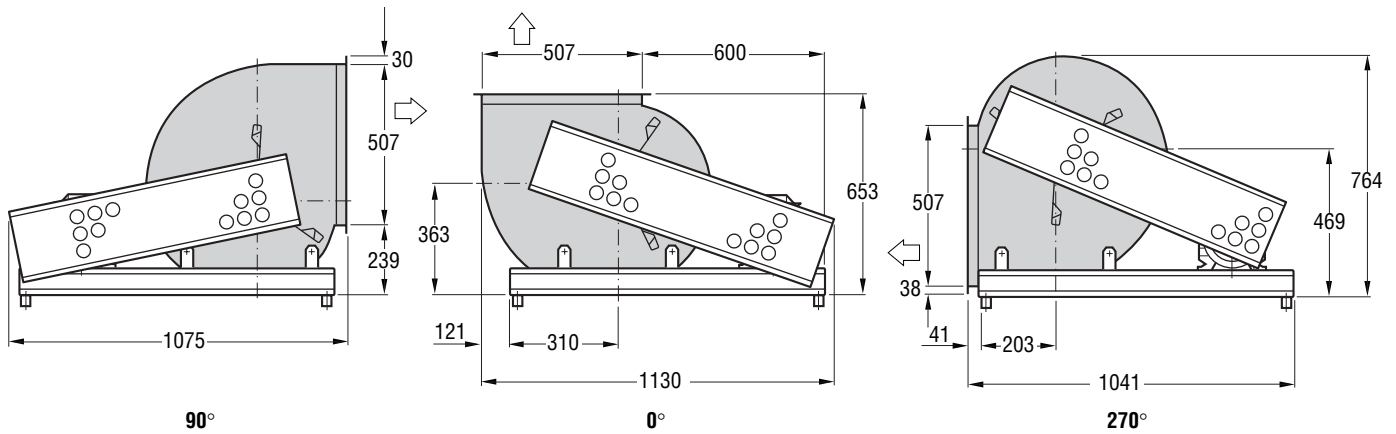
Dimensions and Weights - GTLF-3-040

Dimensions and Weights

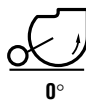
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



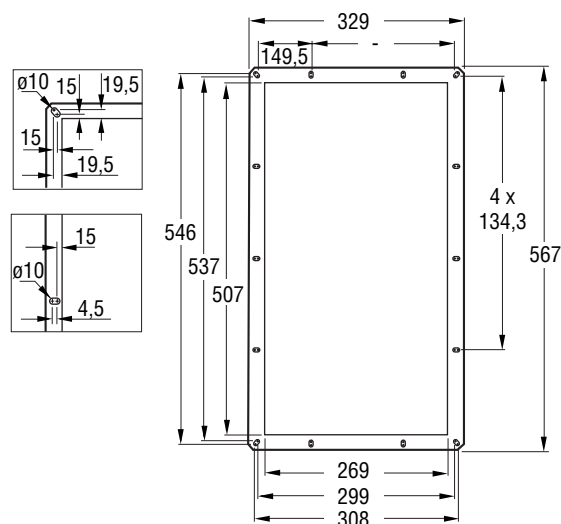
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLF-3-040: 39,0
Belt drive: 4,0

Outlet flange

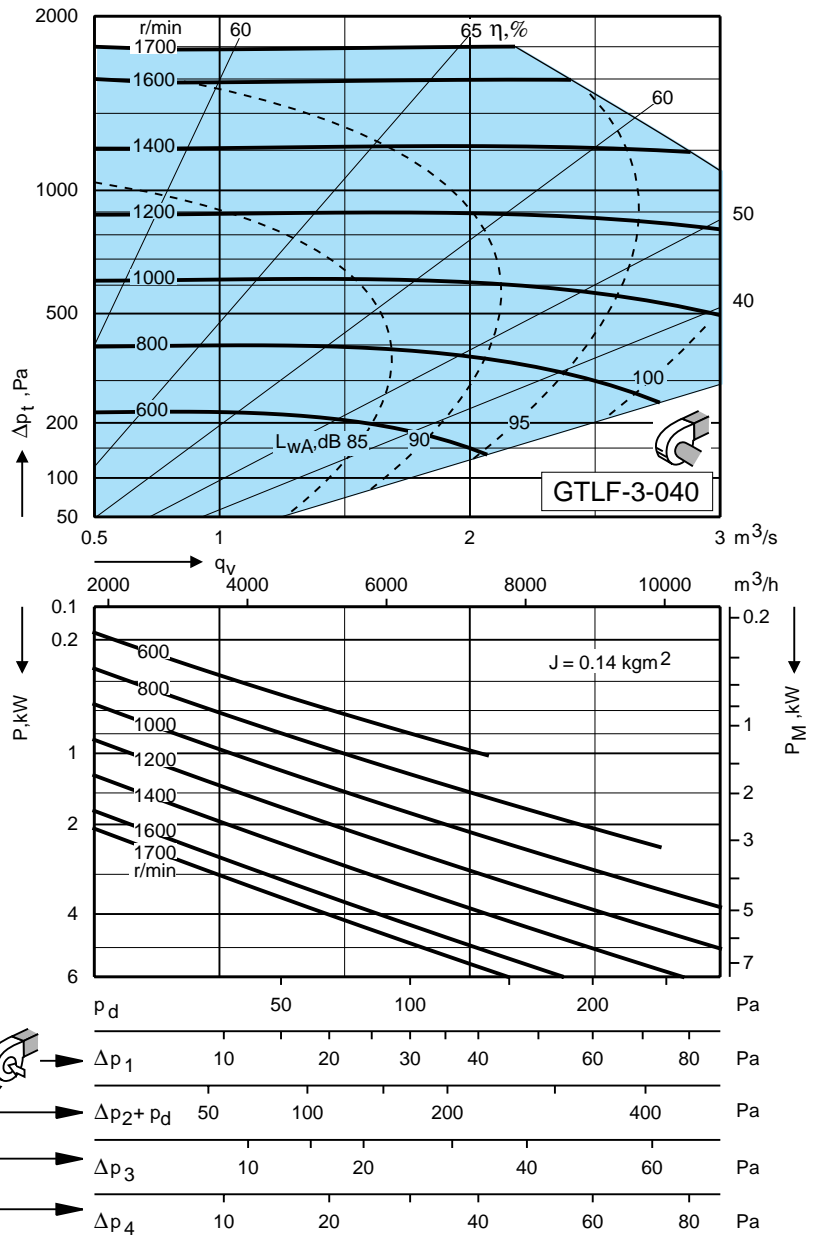


Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLF-3-040

Belt-driven, single-inlet, forward-curved blades

Impeller diameter: 400 mm



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{WA(s)} - L_{WA}]$$

where the correction figure $L_{WA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

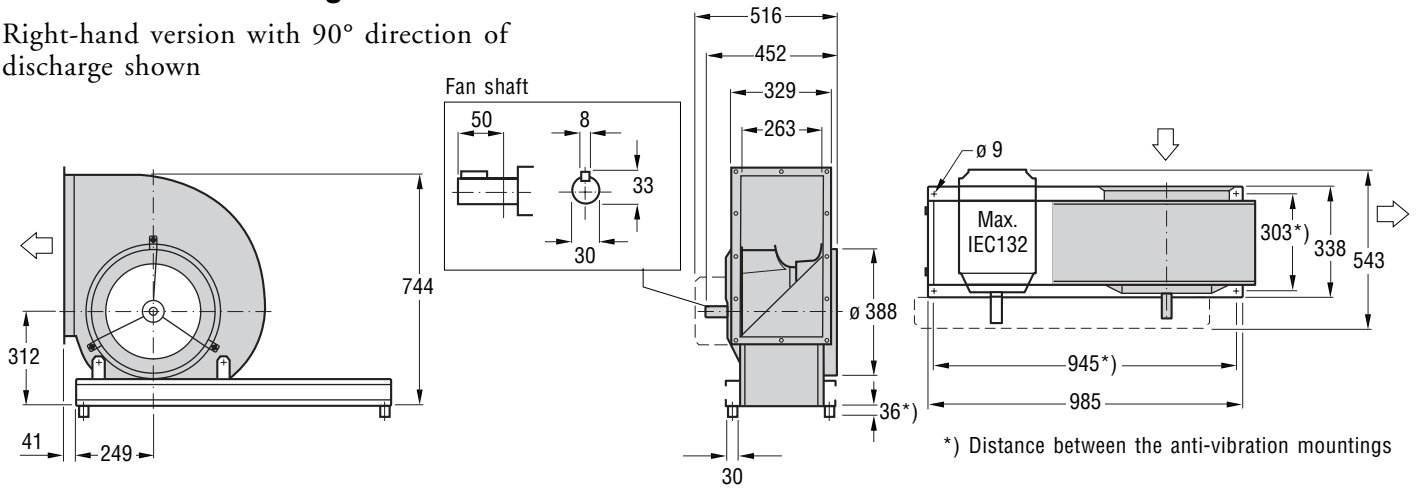
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 1010	4	3	-2	-3	-6	-8	-10	-14	0	7.9
	1011 - 1700	5	2	-4	-6	-5	-7	-9	-13	0	7.8
To inlet duct (2)	0 - 1010	5	2	-7	-6	-3	-7	-10	-16	0.4	7.4
	1011 - 1700	6	-1	-10	-8	-3	-6	-10	-14	0.4	7.3
To surroundings - the fan inlet and outlet ducted (3)	0 - 1010	-8	-6	-4	-4	-6	-10	-17	-24	-1.8	3.8
	1011 - 1700	-8	-7	-8	-10	-7	-8	-17	-25	-3.0	3.0
To fan outlet (open-discharge fan) (4)	0 - 1010	-11	-3	-4	-4	-6	-8	-10	-14	-0.6	3.4
	1011 - 1700	-11	-4	-6	-7	-5	-7	-9	-13	-0.4	2.5

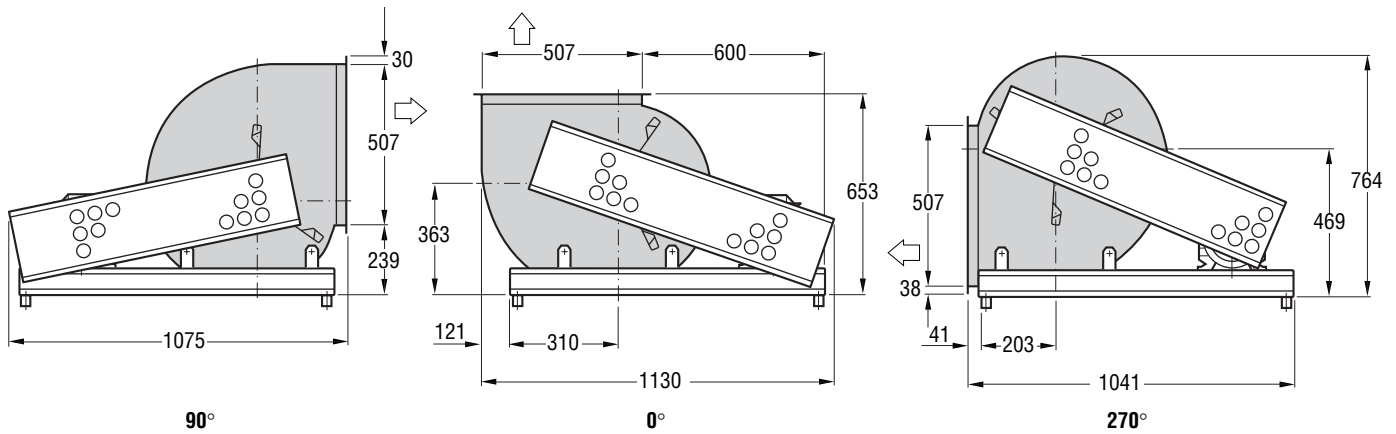
Dimensions and Weights - GTLB/GTHB-3-040

Dimensions and Weights

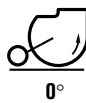
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



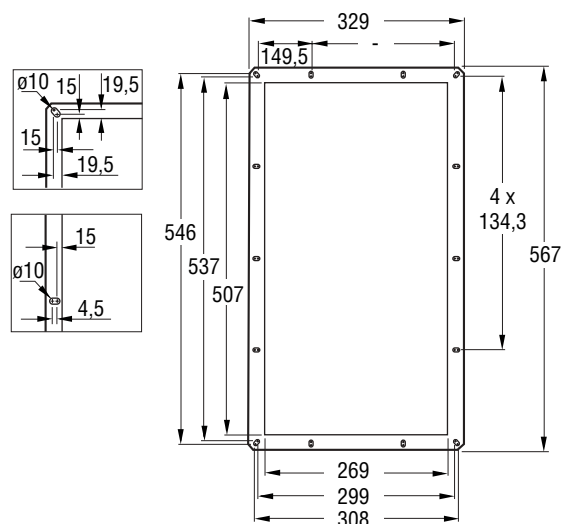
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLB/HB-3-040: 41,0
Belt drive: 4,0

Outlet flange



Motor data: See separate motor list.

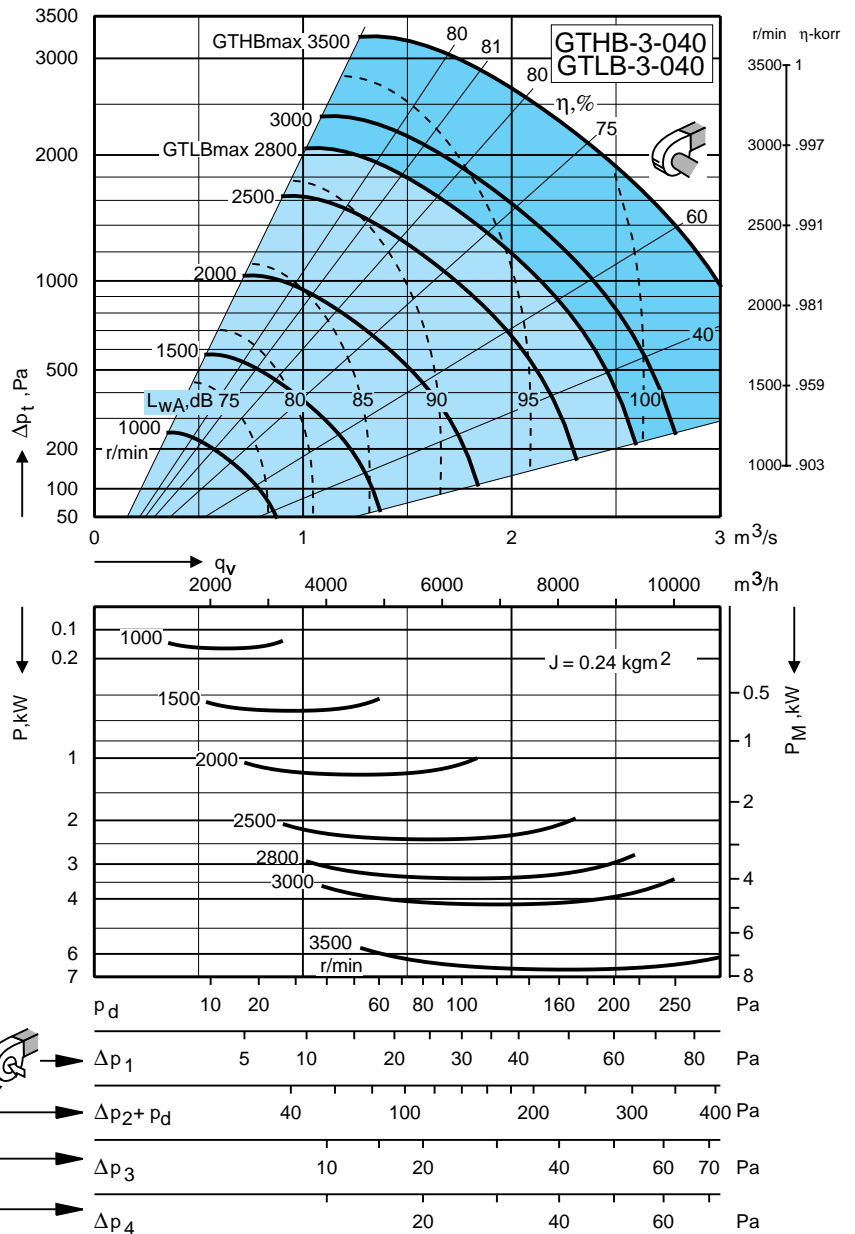
Fan Charts - Acoustic Data - GTLB/GTHB-3-040

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 400 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{WA(s)} - L_{WA}]$$

where the correction figure $L_{WA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

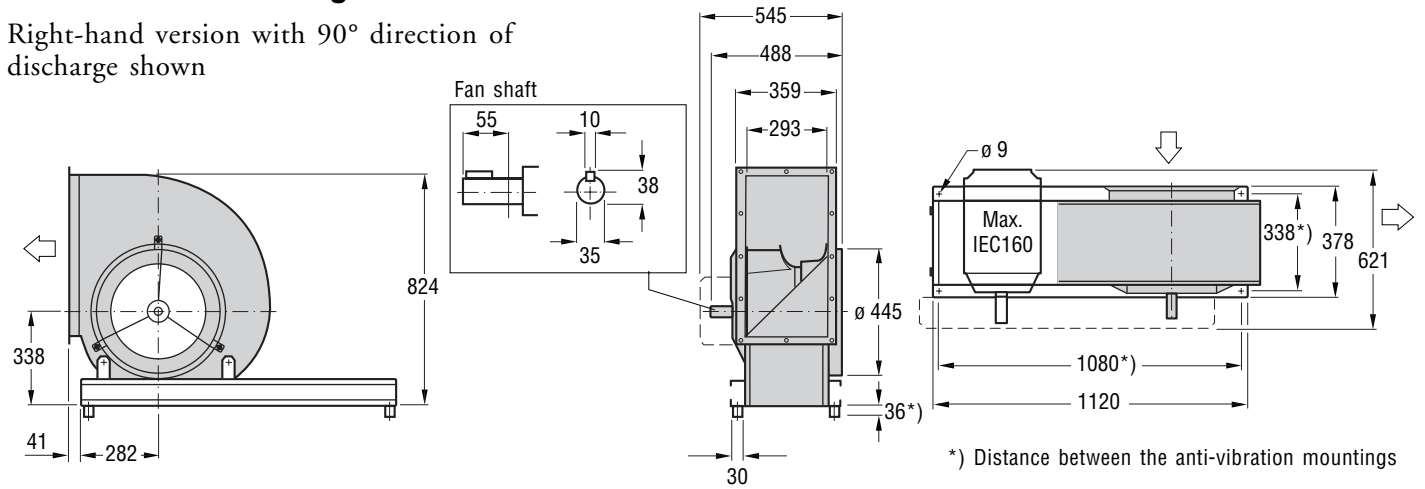
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 1928	1	-2	2	-5	-5	-8	-15	-18	0	6.3
	1929 - 3500	-1	-3	-7	-2	-5	-7	-12	-17	0	4.4
To inlet duct (2)	0 - 1928	2	0	-2	-3	-6	-9	-11	-11	-0.3	6.6
	1929 - 3500	-1	-4	-10	-2	-4	-6	-8	-15	1.1	3.3
To surroundings - the fan inlet and outlet ducted (3)	0 - 1928	-7	-9	-6	-10	-10	-14	-23	-33	-6.2	5.3
	1929 - 3500	-10	-13	-10	-9	-9	-15	-23	-36	-6.0	3.3
To fan outlet (open-discharge fan) (4)	0 - 1928	-11	-7	0	-6	-5	-8	-15	-18	-0.8	3.9
	1929 - 3500	-16	-8	-9	-3	-5	-7	-12	-17	-0.3	1.8

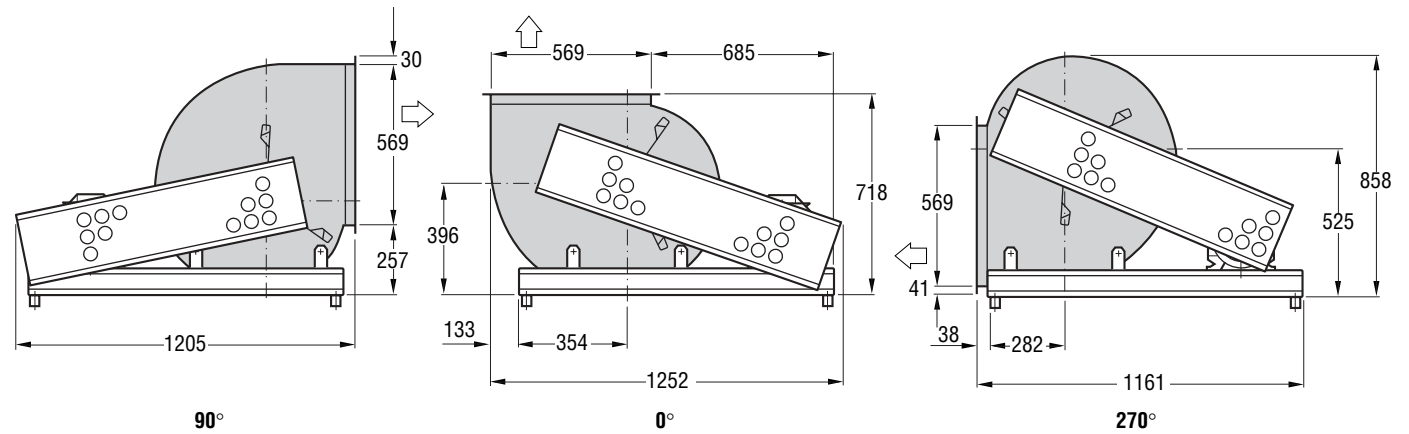
Dimensions and Weights - GTLF-3-045

Dimensions and Weights

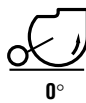
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



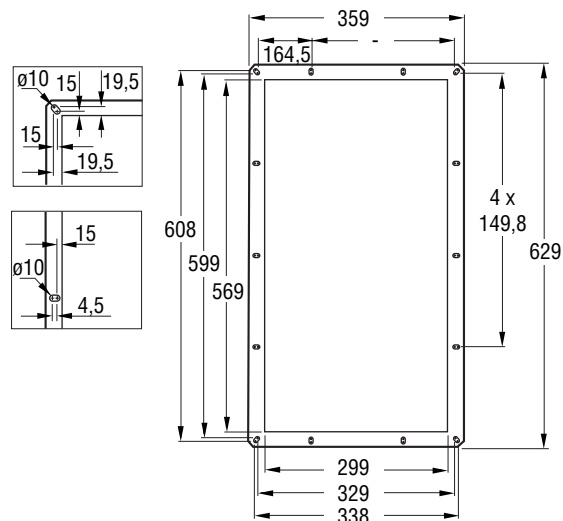
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLF-3-045: 45,0
Belt drive: 5,0

Outlet flange

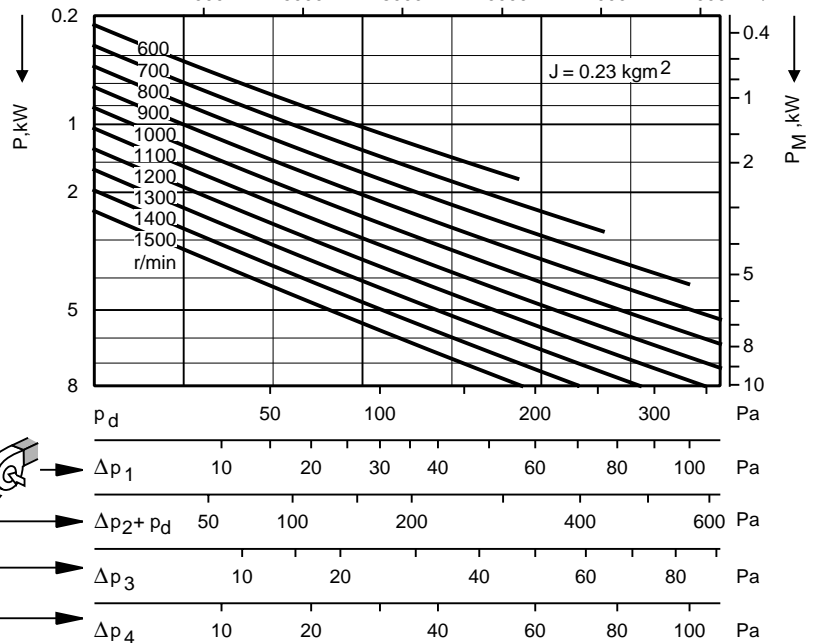
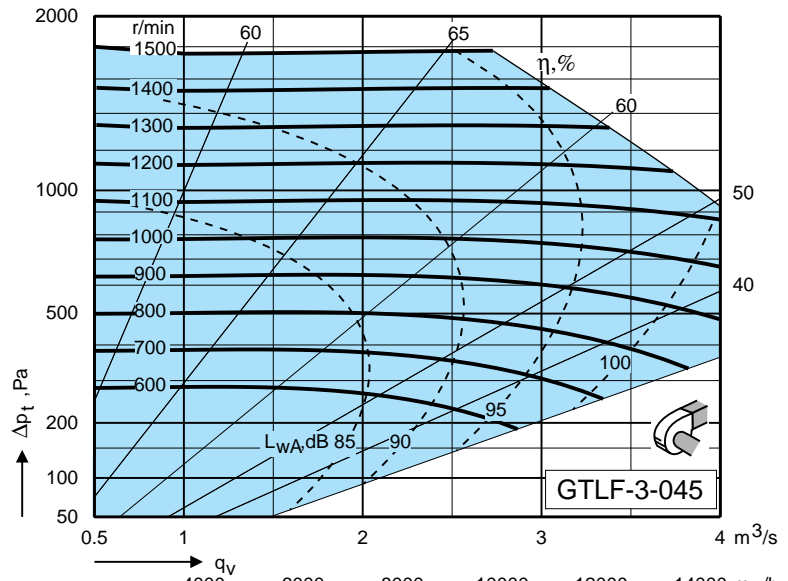


Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLF-3-045

Belt-driven, single-inlet, forward-curved blades

Impeller diameter: 450 mm



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{wA(s)}$ that can be used for obtaining the total sound power level on each sound path:

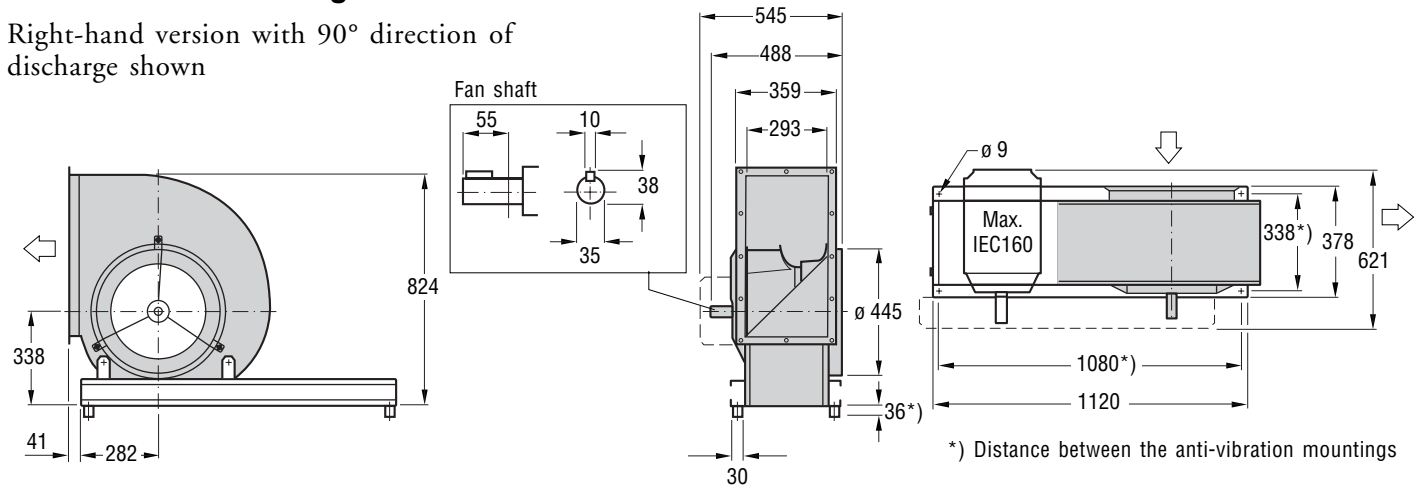
$$L_{wt(s)} = L_{wA(s)} + [L_{wt(s)} - L_{wA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{wA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 1010	1	3	-2	-3	-6	-7	-11	-15	0	6.9
	1011 - 1500	1	2	-4	-5	-5	-7	-10	-14	0	6.2
To inlet duct (2)	0 - 1010	3	1	-5	-5	-2	-7	-10	-15	1.0	7.9
	1011 - 1500	3	-2	-8	-6	-2	-6	-9	-13	1.2	7.3
To surroundings - the fan inlet and outlet ducted (3)	0 - 1010	-11	-6	-5	-4	-6	-9	-18	-25	-1.7	3.3
	1011 - 1500	-12	-9	-8	-9	-7	-8	-18	-26	-2.9	2.2
To fan outlet (open-discharge fan) (4)	0 - 1010	-14	-2	-4	-3	-6	-7	-11	-15	-0.2	3.5
	1011 - 1500	-15	-3	-6	-5	-5	-7	-10	-14	-0.3	2.7

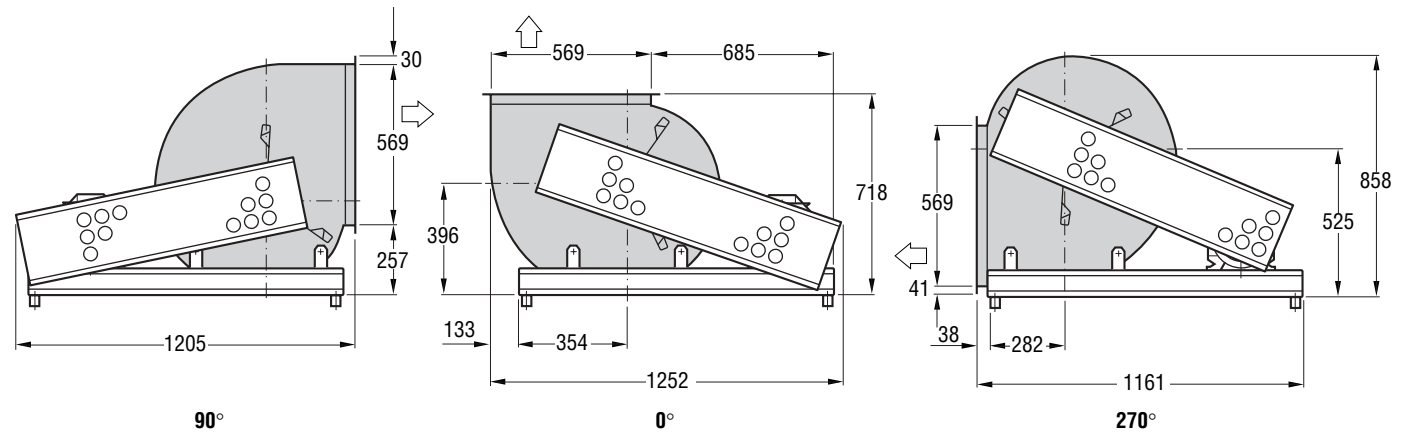
Dimensions and Weights - GTLB/GTHB-3-045

Dimensions and Weights

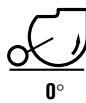
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



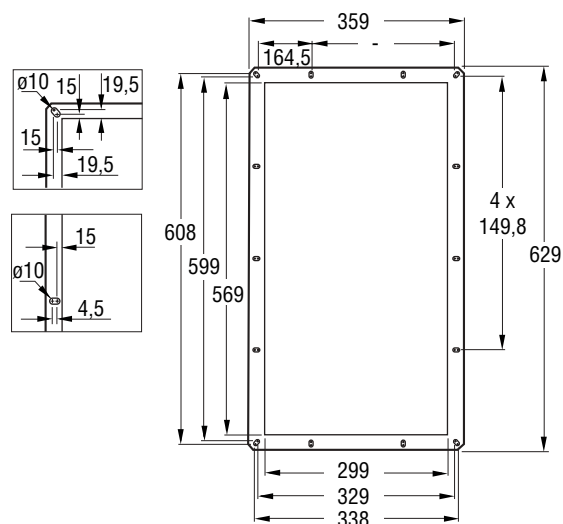
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLG/HB-3-045: 49,5
Belt drive: 5,0

Outlet flange



Motor data: See separate motor list.

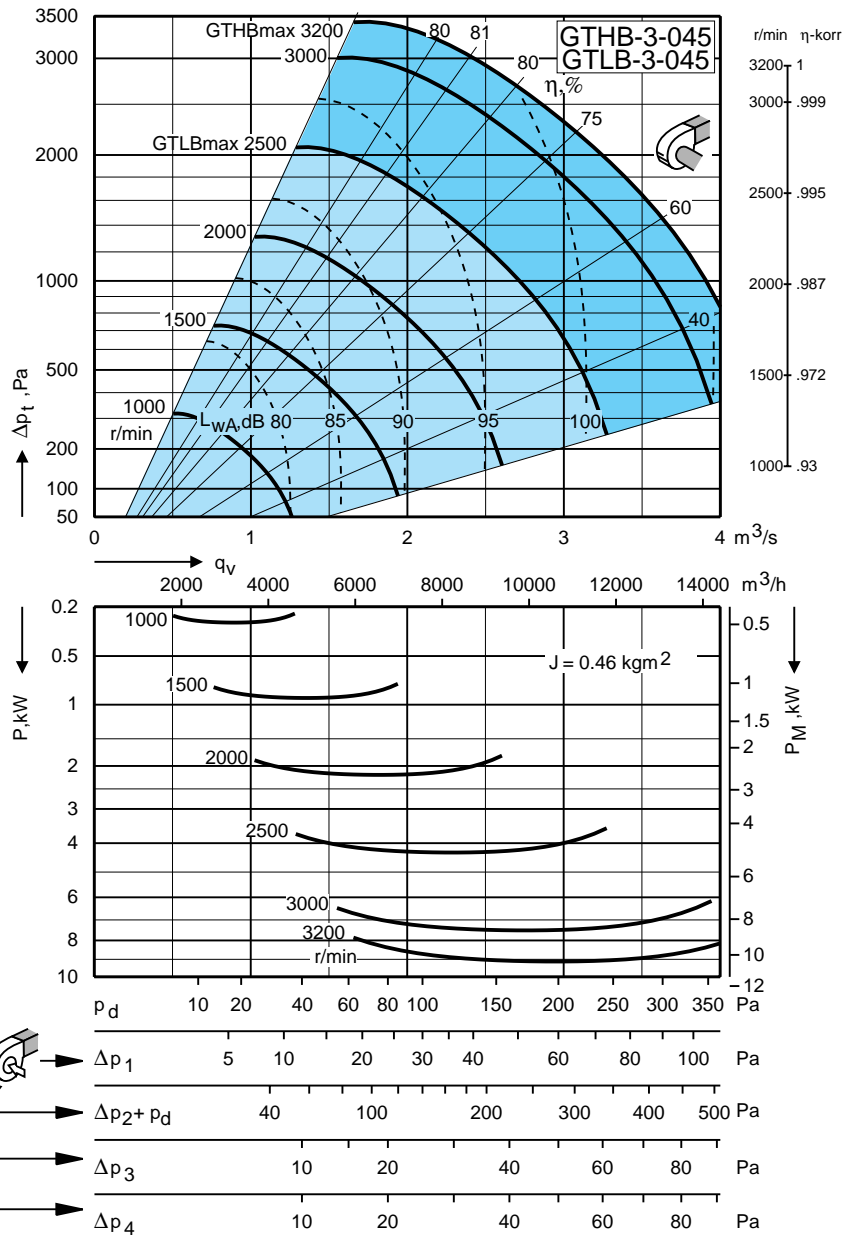
Fan Charts - Acoustic Data - GTLB/GTHB-3-045

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 450 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{wA(s)}$ that can be used for obtaining the total sound power level on each sound path:

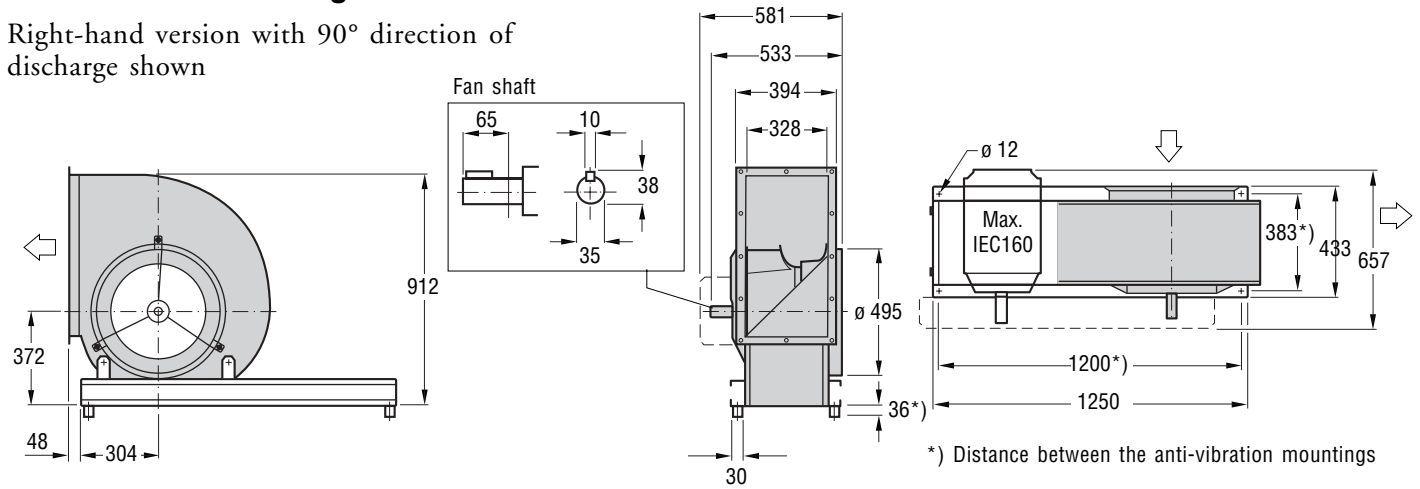
$$L_{wt(s)} = L_{wA(s)} + [L_{wt(s)} - L_{wA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{wA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 964	0	5	2	-3	-6	-9	-14	-18	0	8.2
	965 - 1928	-2	-1	3	-3	-6	-9	-14	-17	0	6.4
	1929 - 3200	-3	-4	-4	-1	-6	-8	-13	-16	0	4.1
To inlet duct (2)	0 - 964	4	3	0	-3	-4	-9	-12	-14	0.4	7.8
	965 - 1928	2	-1	0	-3	-5	-8	-10	-13	0.3	6.2
	1929 - 3200	-2	-5	-6	-2	-4	-7	-9	-14	0.8	3.3
To surroundings - the fan inlet and outlet ducted (3)	0 - 964	-8	-5	-6	-8	-11	-15	-22	-33	-6.1	6.1
	965 - 1928	-10	-8	-6	-10	-12	-16	-25	-36	-7.3	5.8
	1929 - 3200	-12	-14	-11	-8	-10	-16	-24	-35	-6.4	3.1
To fan outlet (open-discharge fan) (4)	0 - 964	-9	0	0	-3	-6	-9	-14	-18	-0.6	5.5
	965 - 1928	-13	-6	1	-3	-6	-9	-14	-17	-0.5	4.5
	1929 - 3200	-17	-9	-6	-1	-6	-8	-13	-16	-0.1	2.3

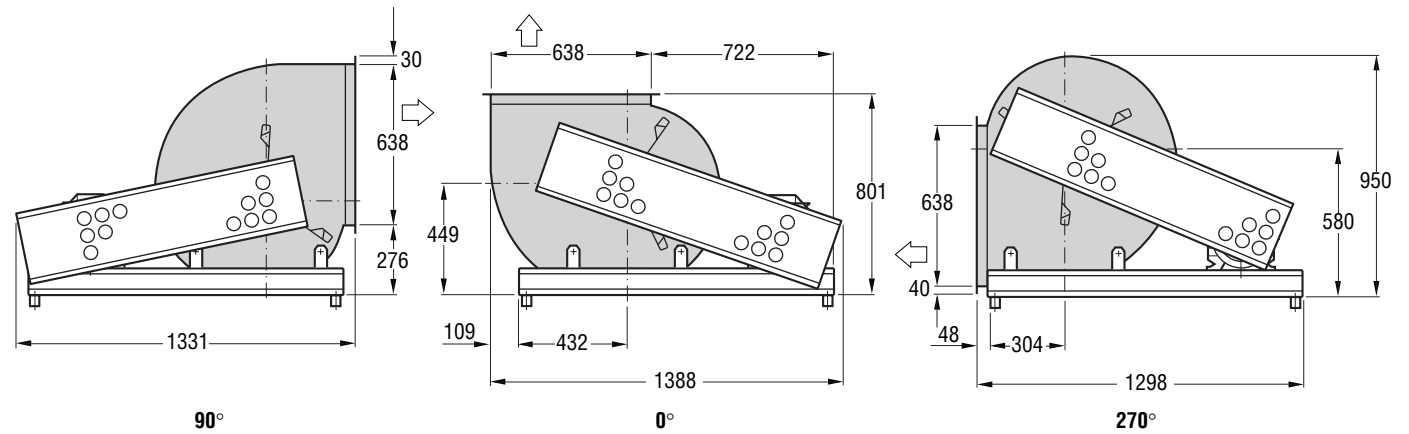
Dimensions and Weights - GTLF-3-050

Dimensions and Weights

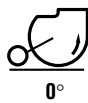
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



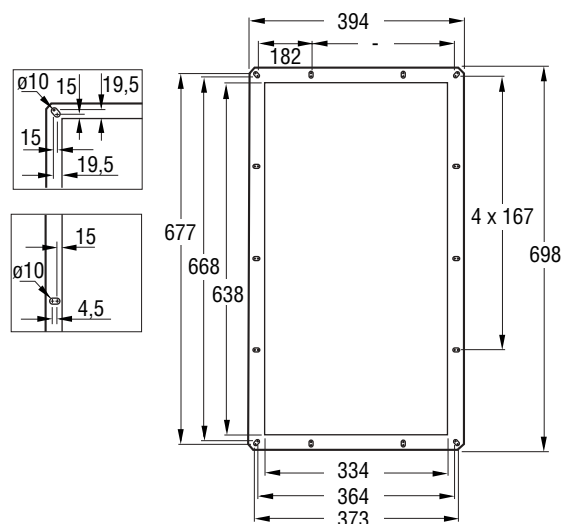
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLF-3-050: 56,0
Belt drive: 5,0

Outlet flange

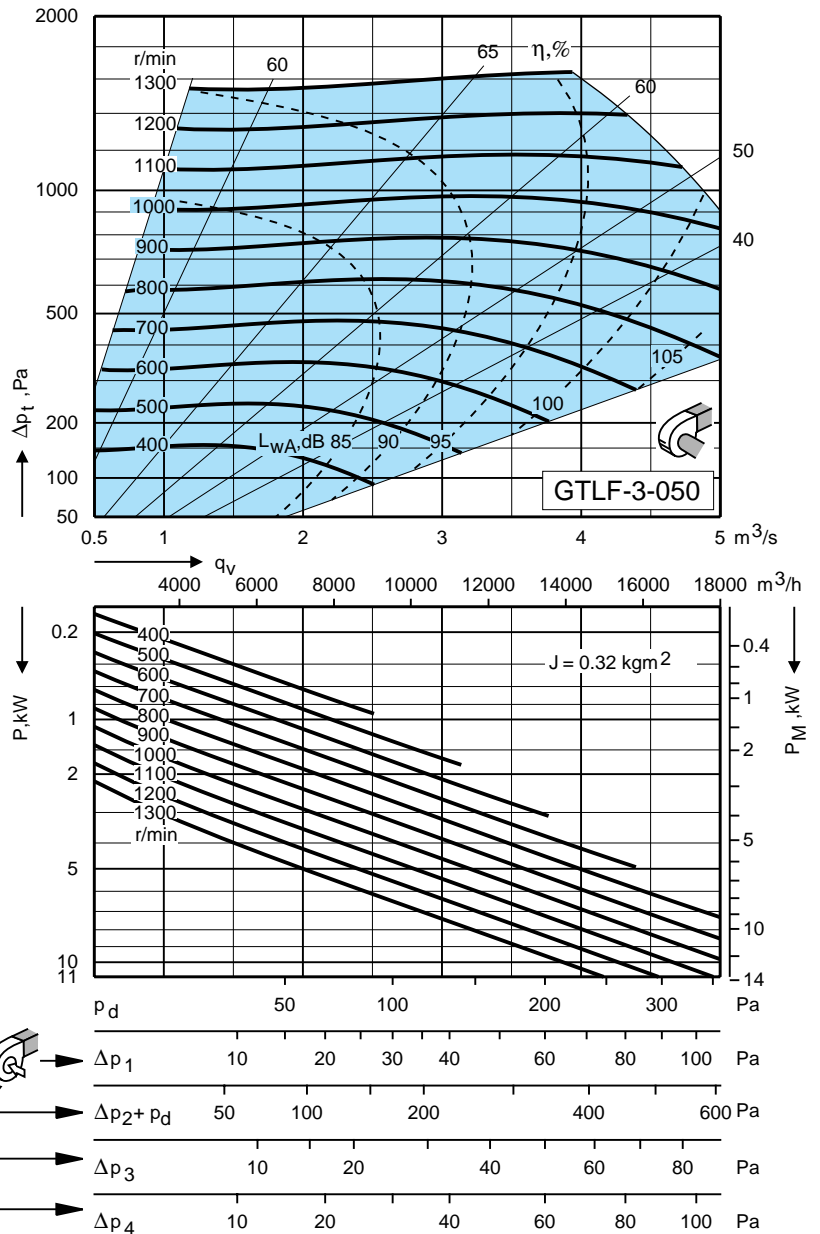


Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLF-3-050

Belt-driven, single-inlet, forward-curved blades

Impeller diameter: 500 mm



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{WA(s)} - L_{WA}]$$

where the correction figure $L_{WA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

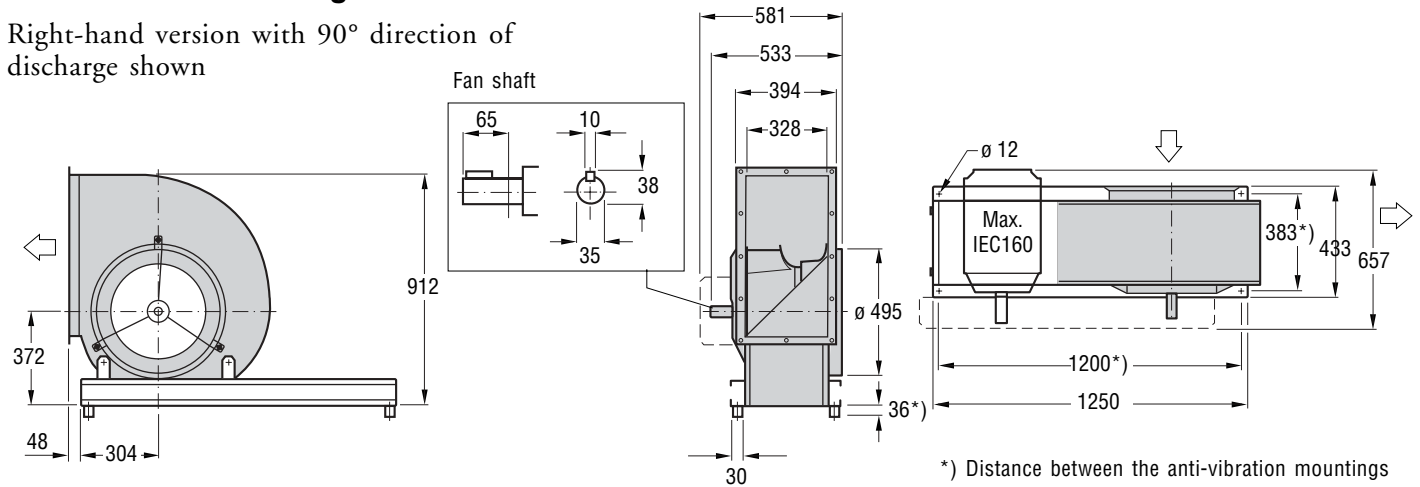
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 1010	-2	2	-2	-3	-6	-7	-11	-15	0	5.9
	1011 - 1300	-2	1	-5	-4	-5	-7	-10	-14	0	5.1
To inlet duct (2)	0 - 1010	1	-2	-3	-4	-2	-7	-9	-15	1.3	7.1
	1011 - 1300	0	-3	-8	-3	-2	-6	-8	-13	1.7	6.8
To surroundings - the fan inlet and outlet ducted (3)	0 - 1010	-14	-7	-5	-4	-6	-9	-18	-25	-1.7	3.0
	1011 - 1300	-15	-8	-9	-8	-7	-8	-18	-26	-2.8	2.1
To fan outlet (open-discharge fan) (4)	0 - 1010	-14	-2	-4	-3	-6	-7	-11	-15	-0.2	3.5
	1011 - 1300	-14	-3	-7	-4	-5	-7	-10	-14	-0.2	2.7

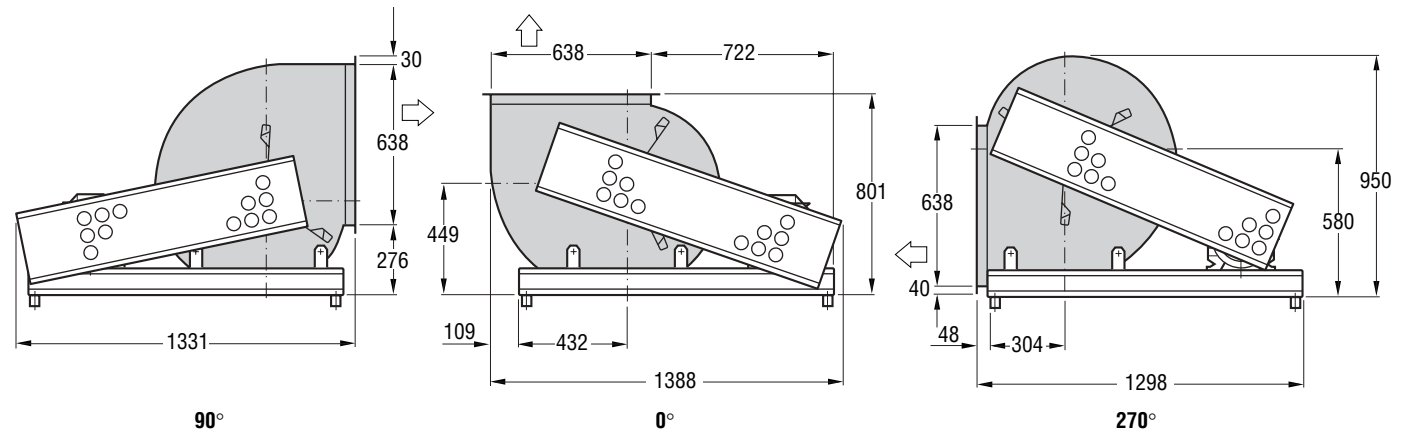
Dimensions and Weights - GTLB/GTHB-3-050

Dimensions and Weights

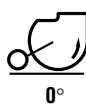
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



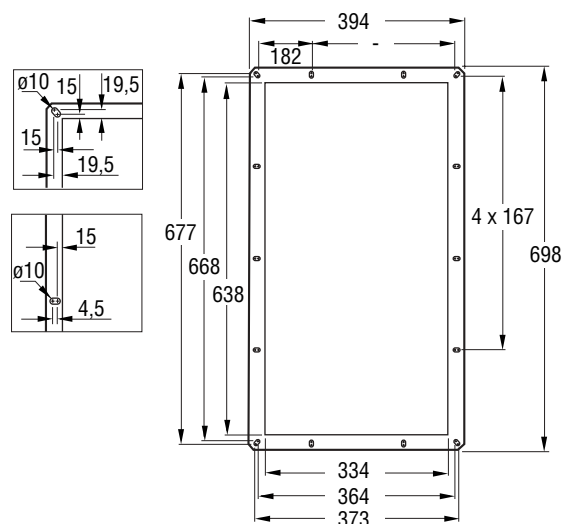
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLB/HB-3-050: 61,0
 Belt drive: 5,0

Outlet flange



Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLB/GTHB-3-050

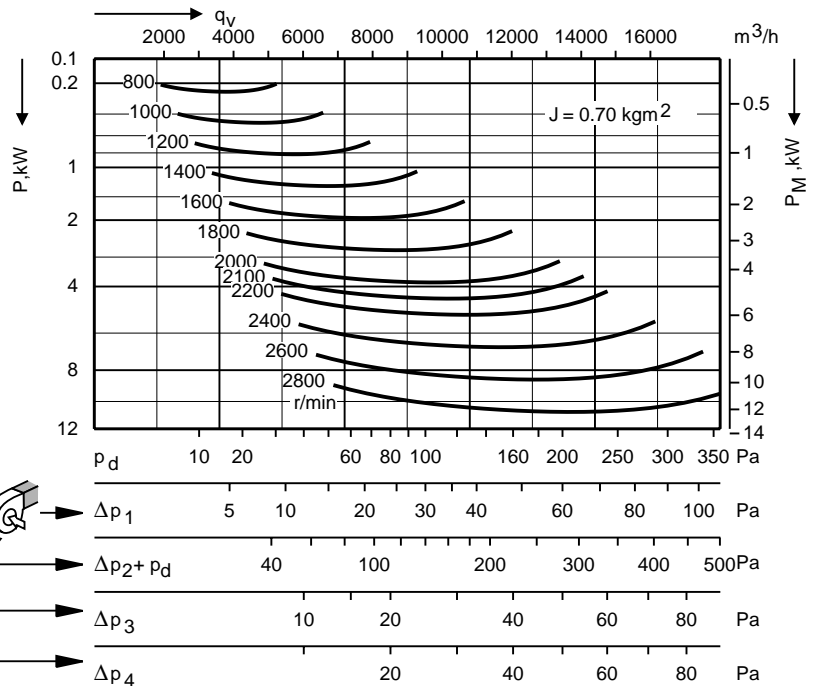
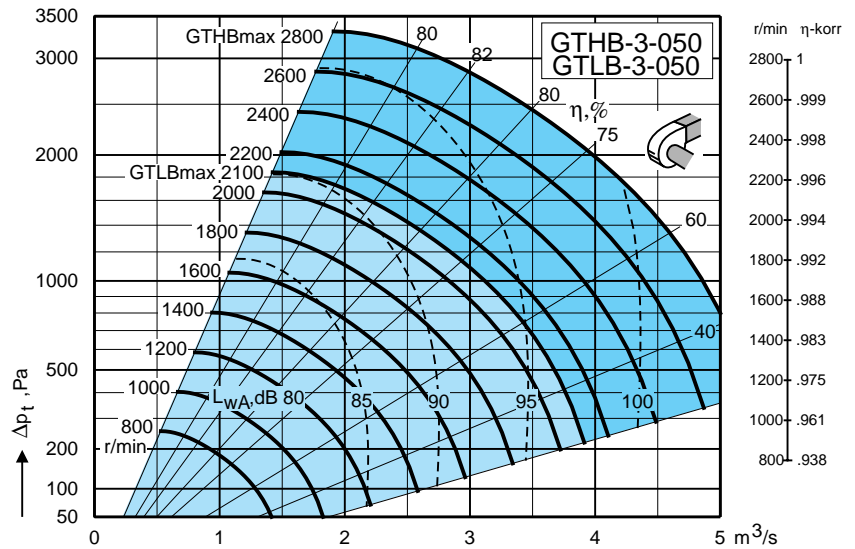
Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 500 mm



Only the GTLB is available in the smoke extraction version.

Note: Max. speed of the smoke extraction version is 870 rpm.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w\text{okt}(s)} = L_{WA} + K_{\text{okt}(s)}$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{wA(s)}$ that can be used for obtaining the total sound power level on each sound path:

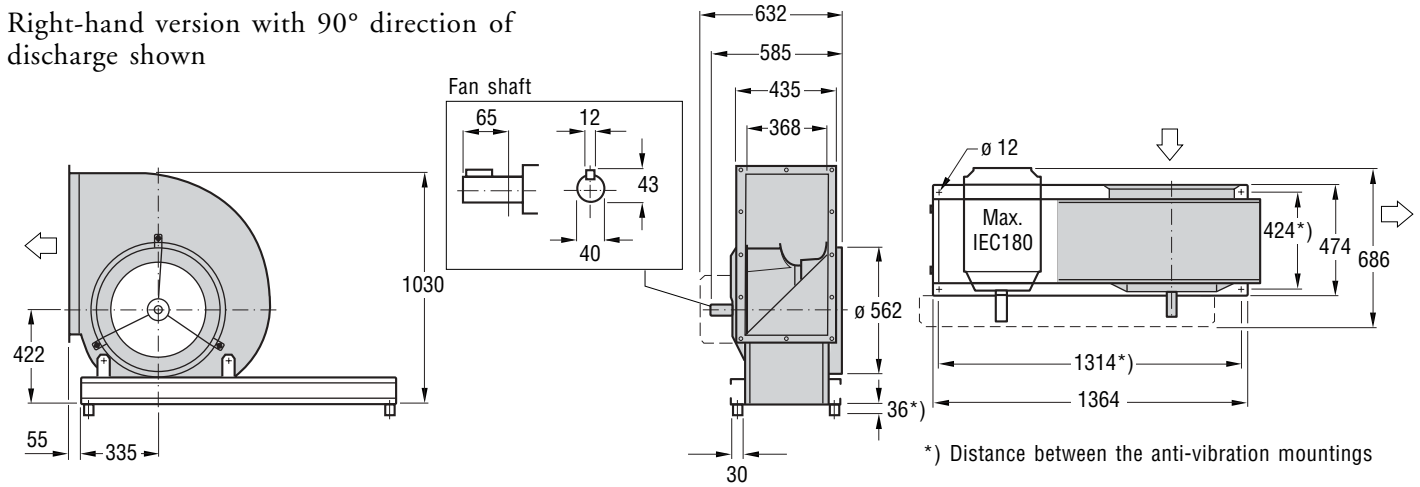
$$L_{wt(s)} = L_{wA(s)} + [L_{wt(s)} - L_{wA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{wA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 964	-4	5	2	-5	-5	-9	-14	-19	0	7.7
	965 - 1928	-4	0	3	-5	-5	-9	-14	-17	0	6.2
	1929 - 2800	-5	-4	-2	0	-6	-10	-14	-17	0	4.4
To inlet duct (2)	0 - 964	4	2	-1	-3	-3	-10	-13	-17	0.4	7.4
	965 - 1928	1	-2	1	-4	-4	-8	-11	-16	0.4	5.8
	1929 - 2800	-4	-6	-3	-1	-4	-8	-10	-14	0.9	3.3
To surroundings - the fan inlet and outlet ducted (3)	0 - 964	-12	-6	-7	-10	-10	-15	-22	-34	-6.4	5.2
	965 - 1928	-12	-7	-5	-12	-11	-16	-25	-36	-7.2	6.0
	1929 - 2800	-14	-14	-9	-7	-10	-18	-25	-36	-6.2	3.4
To fan outlet (open-discharge fan) (4)	0 - 964	-12	1	1	-5	-5	-9	-14	-19	-0.5	5.8
	965 - 1928	-13	-4	2	-5	-5	-9	-14	-17	-0.4	5.0
	1929 - 2800	-17	-8	-3	0	-6	-10	-14	-17	0	3.2

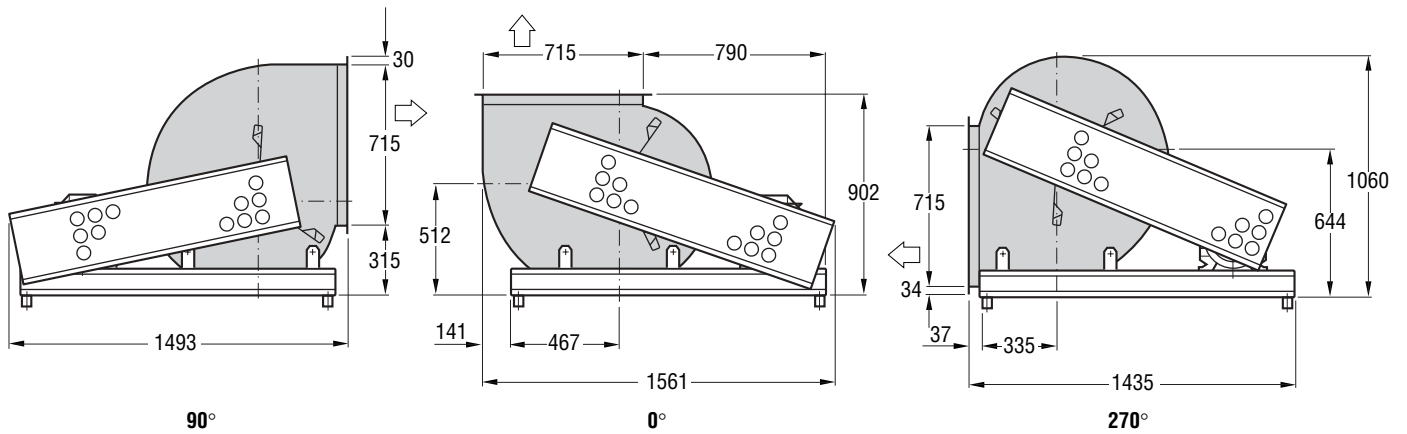
Dimensions and Weights - GTLF-3-056

Dimensions and Weights

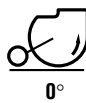
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



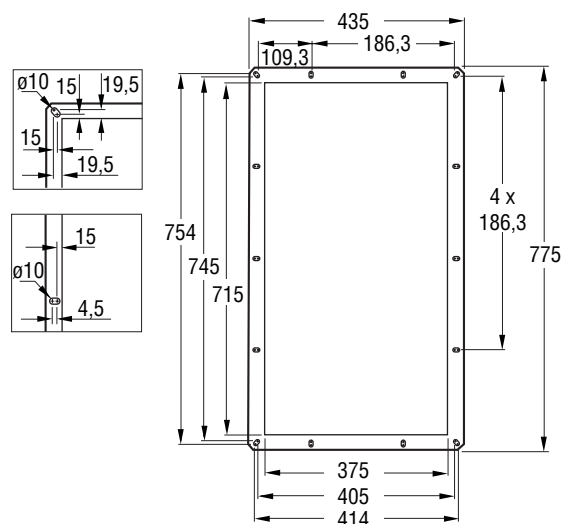
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLF-3-056: 84,0
Belt drive: 6,0

Outlet flange

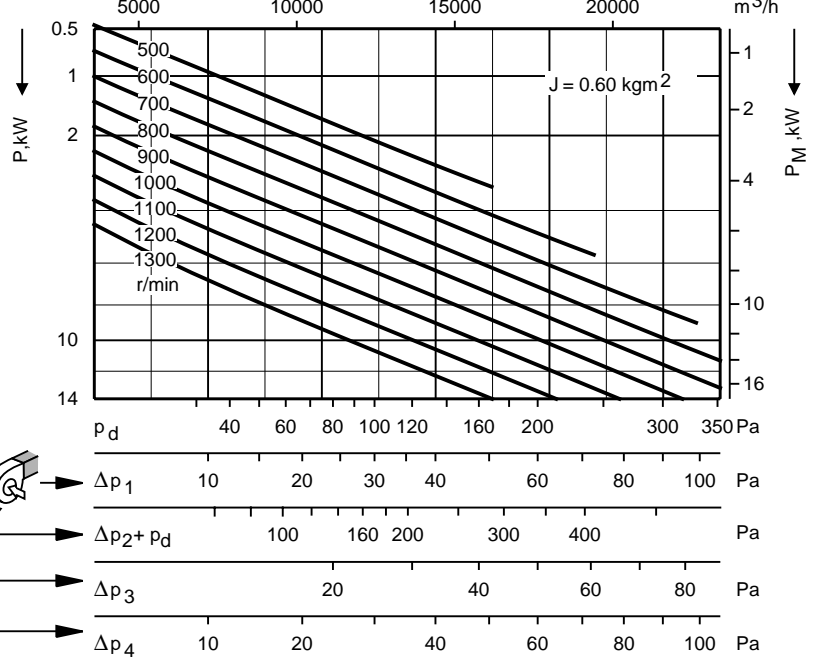
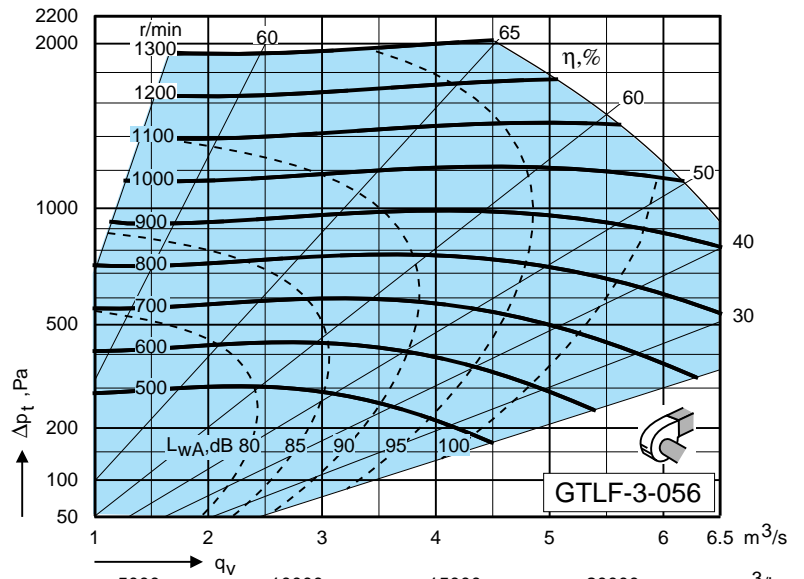


Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLF-3-056

Belt-driven, single-inlet, forward-curved blades

Impeller diameter: 560 mm



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{wA(s)}$ that can be used for obtaining the total sound power level on each sound path:

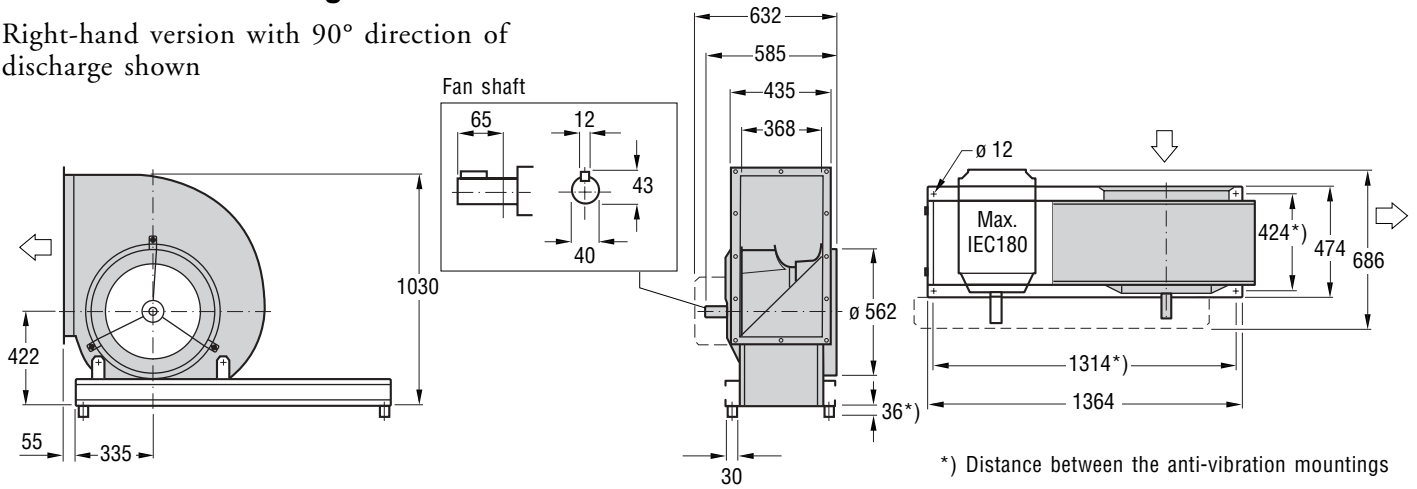
$$L_{wt(s)} = L_{wA(s)} + [L_{wt(s)} - L_{wA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{wA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 884	-2	1	-1	-3	-6	-7	-11	-16	0	5.7
	885 - 1200	-2	1	-4	-4	-5	-7	-10	-14	0	5.2
To outlet duct (2)	0 - 884	2	-3	-4	-5	-2	-6	-10	-15	1.2	4.6
	885 - 1200	1	-4	-7	-5	-1	-7	-10	-14	1.5	3.7
To surroundings - the fan inlet and outlet ducted (3)	0 - 884	-14	-7	-5	-4	-6	-9	-18	-26	-1.7	3.0
	885 - 1200	-15	-10	-8	-8	-7	-8	-18	-26	-2.8	2.0
To fan outlet (open-discharge fan) (4)	0 - 884	-13	-3	-2	-3	-6	-7	-11	-16	-0.2	3.7
	885 - 1200	-14	-3	-5	-4	-5	-7	-10	-14	-0.1	2.9

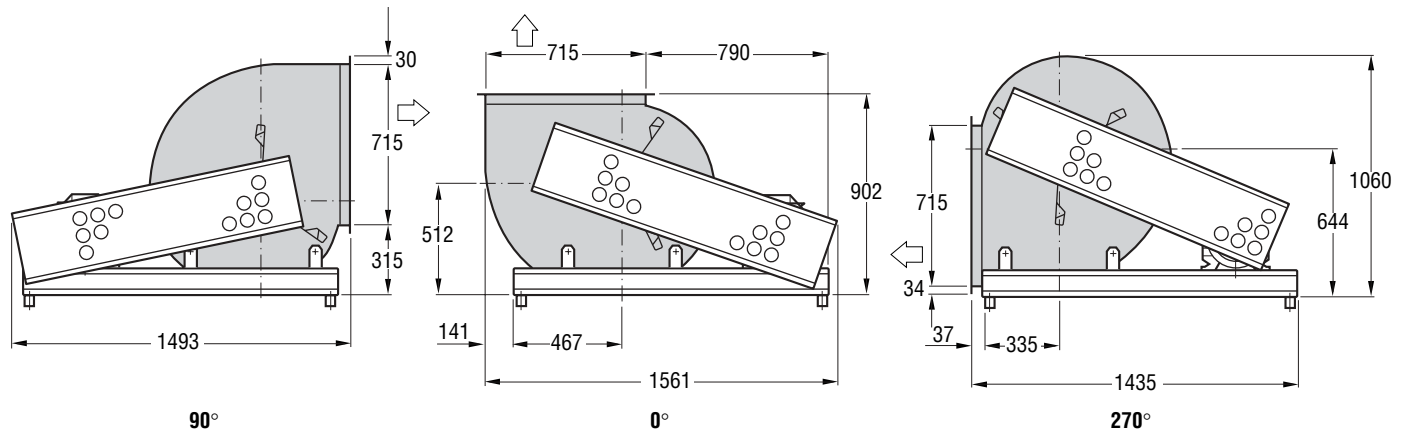
Dimensions and Weights - GTLB/GTHB-3-056

Dimensions and Weights

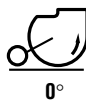
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



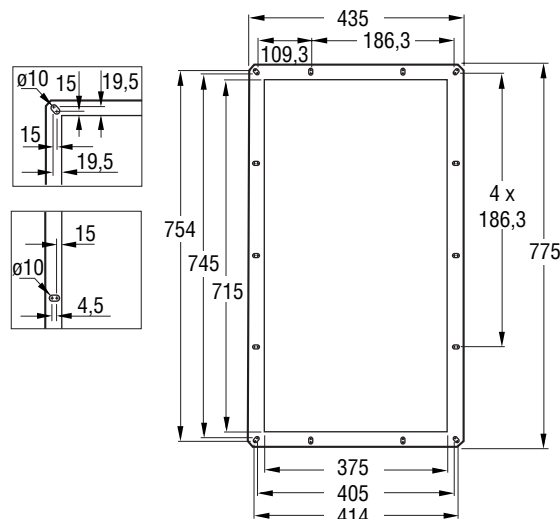
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLB/HB-3-056: 91,0
 Belt drive: 8,0

Outlet flange



Motor data: See separate motor list.

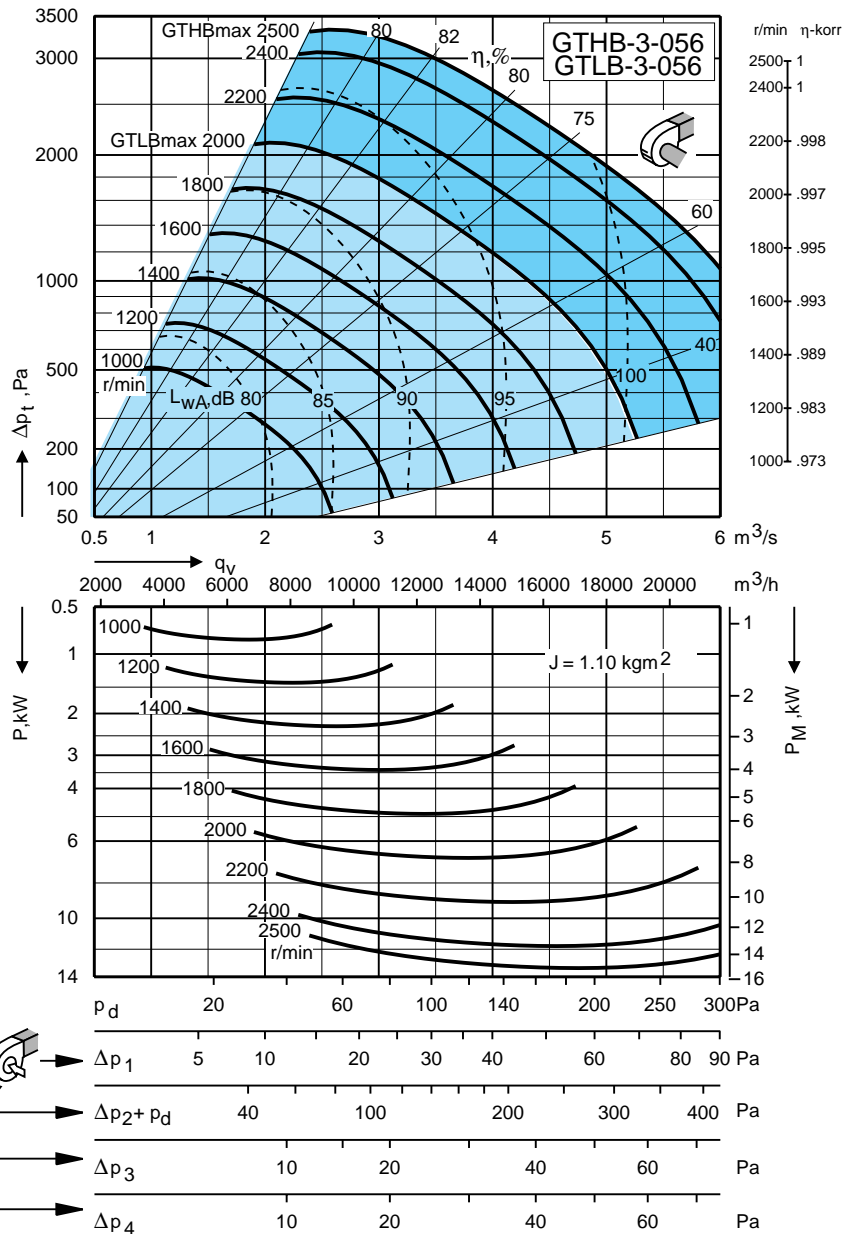
Fan Charts - Acoustic Data - GTLB/GTHB-3-056

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 560 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{WA(s)} - L_{WA}]$$

where the correction figure $L_{WA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

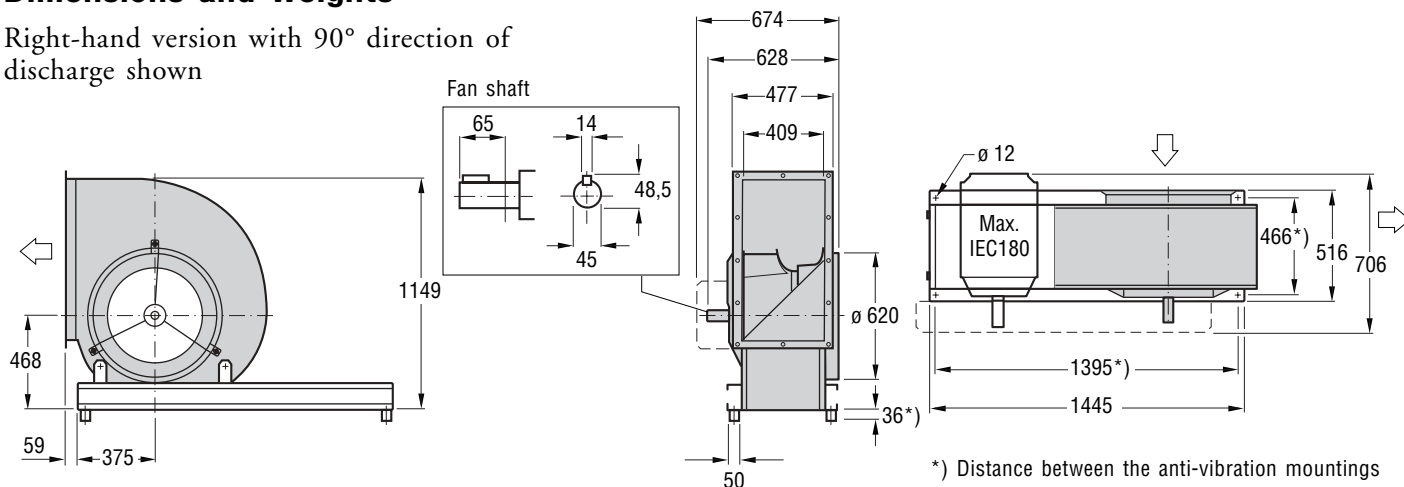
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 964	-5	4	1	-5	-4	-9	-14	-18	0	7.0
	965 - 1928	-5	-2	2	-5	-4	-9	-14	-17	0	5.4
	1929 - 2500	-6	-5	-3	-1	-5	-9	-14	-17	0	3.7
To inlet duct (2)	0 - 964	0	3	0	-5	-3	-8	-12	-15	0.6	6.4
	965 - 1928	-2	-3	1	-6	-3	-8	-12	-15	0.4	4.9
	1929 - 2500	-5	-6	-5	-1	-4	-8	-11	-14	0.7	3.0
To surroundings - the fan inlet and outlet ducted (3)	0 - 964	-13	-5	-7	-10	-9	-15	-22	-33	-5.9	5.1
	965 - 1928	-13	-9	-5	-12	-10	-16	-25	-36	-6.8	5.1
	1929 - 2500	-14	-12	-10	-8	-11	-16	-25	-36	-6.8	3.5
To fan outlet (open-discharge fan) (4)	0 - 964	-13	0	0	-5	-4	-9	-14	-18	-0.3	5.0
	965 - 1928	-14	-6	1	-5	-4	-9	-14	-17	-0.2	4.1
	1929 - 2500	-16	-9	-4	-1	-5	-9	-14	-17	0	2.7

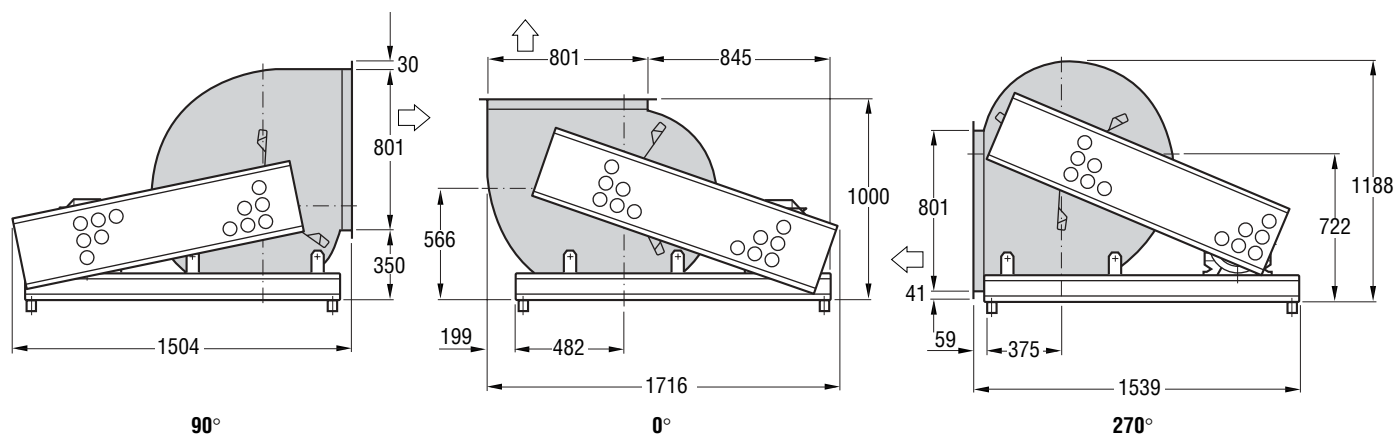
Dimensions and Weights - GTLF-3-063

Dimensions and Weights

Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



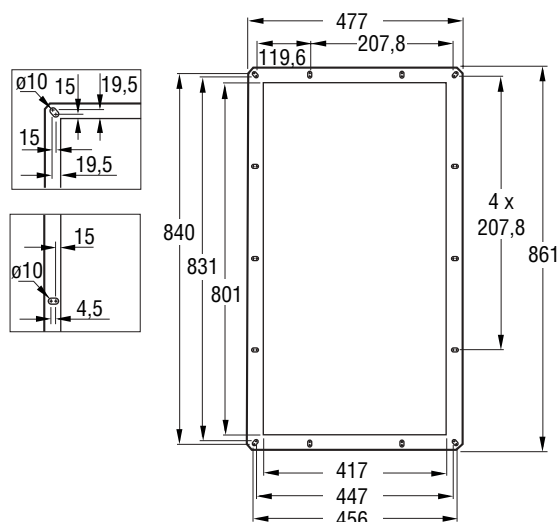
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLF-3-063: 107,0
 Belt drive: 6,0

Outlet flange

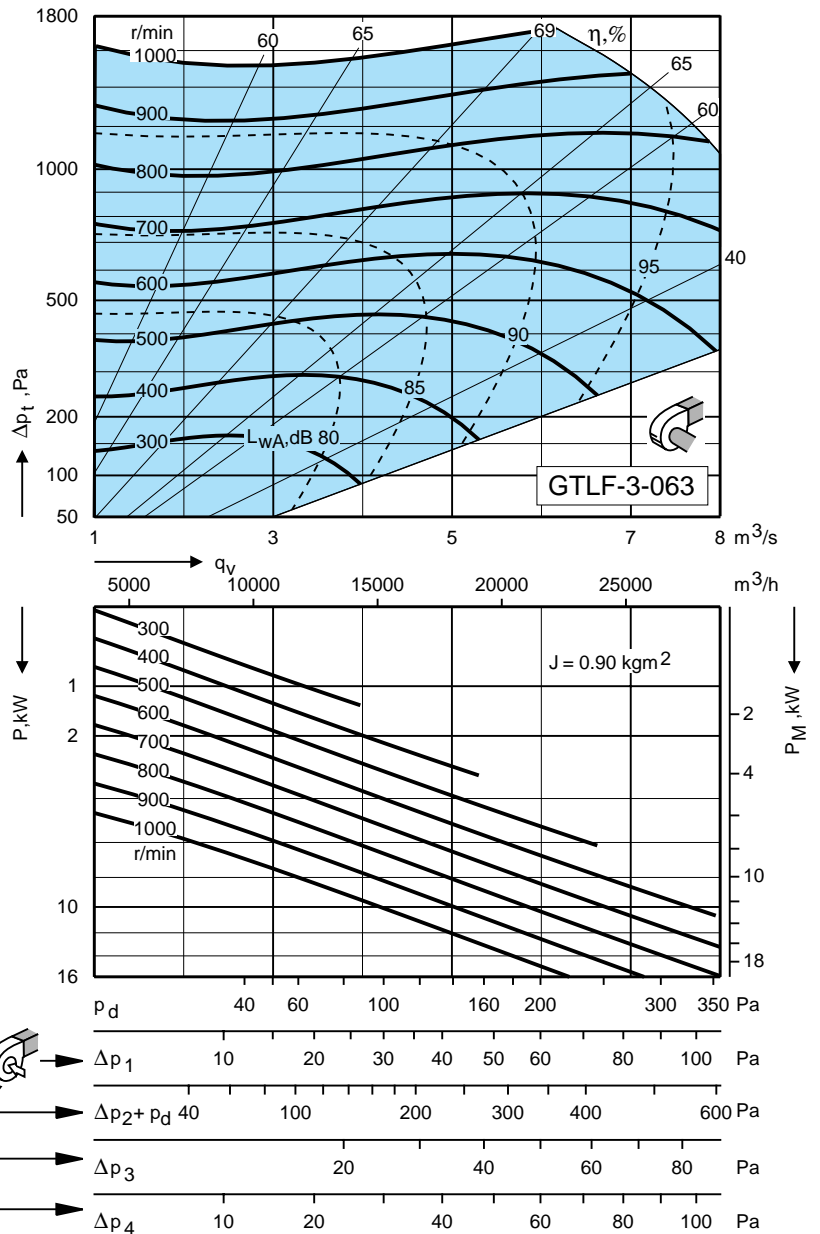


Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLF-3-063

Belt-driven, single-inlet, forward-curved blades

Impeller diameter: 630 mm



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{wA(s)}$ that can be used for obtaining the total sound power level on each sound path:

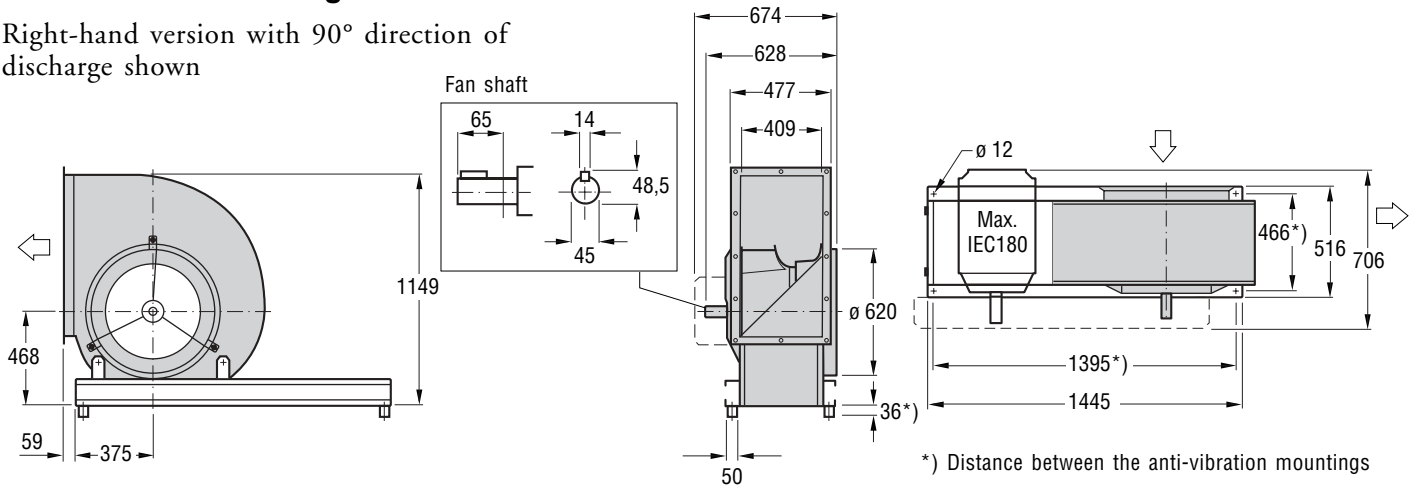
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 785	-2	1	-1	-3	-6	-7	-11	-16	0	5.7
	786 - 1000	-1	2	-4	-5	-5	-7	-10	-15	0	5.7
To inlet duct (2)	0 - 785	2	-4	-4	-5	-2	-6	-10	-16	1.2	4.5
	786 - 1000	2	-5	-4	-6	-2	-6	-9	-15	1.2	4.4
To surroundings - the fan inlet and outlet ducted (3)	0 - 785	-14	-7	-6	-4	-6	-9	-18	-26	-1.8	2.9
	786 - 1000	-14	-8	-9	-9	-7	-8	-18	-27	-3	2.2
To fan outlet (open-discharge fan) (4)	0 - 785	-10	-2	-2	-3	-6	-7	-11	-16	-0.1	3.9
	786 - 1000	-9	-1	-5	-5	-5	-7	-10	-15	-0.3	3.7

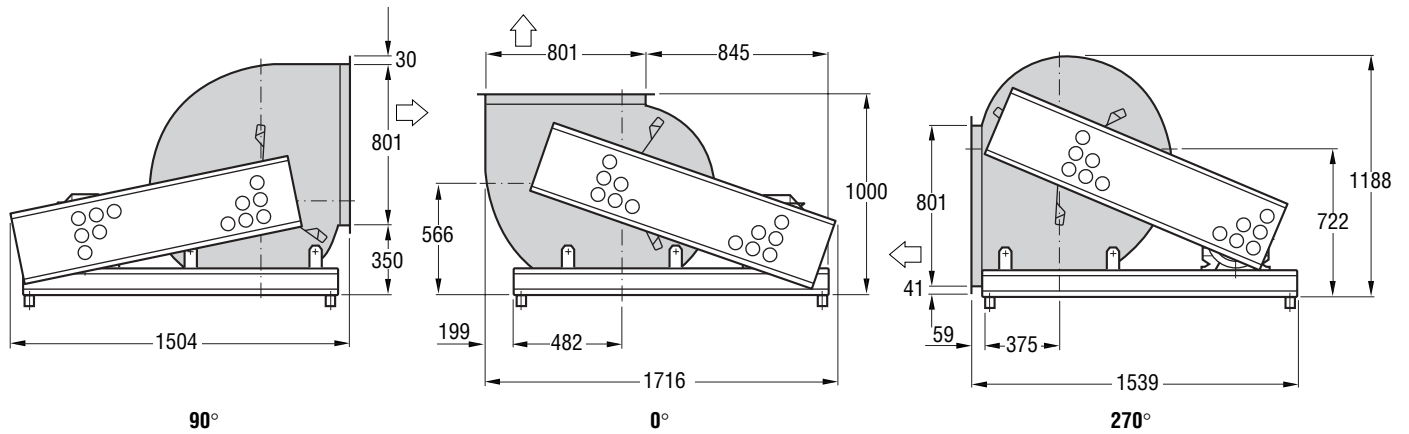
Dimensions and Weights - GTLB/GTHB-3-063

Dimensions and Weights

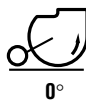
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



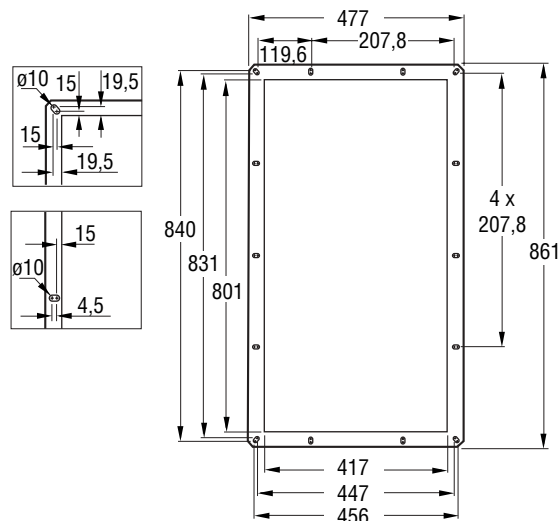
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLB/HB-3-063: 115,0
Belt drive: 8,0

Outlet flange



Motor data: See separate motor list.

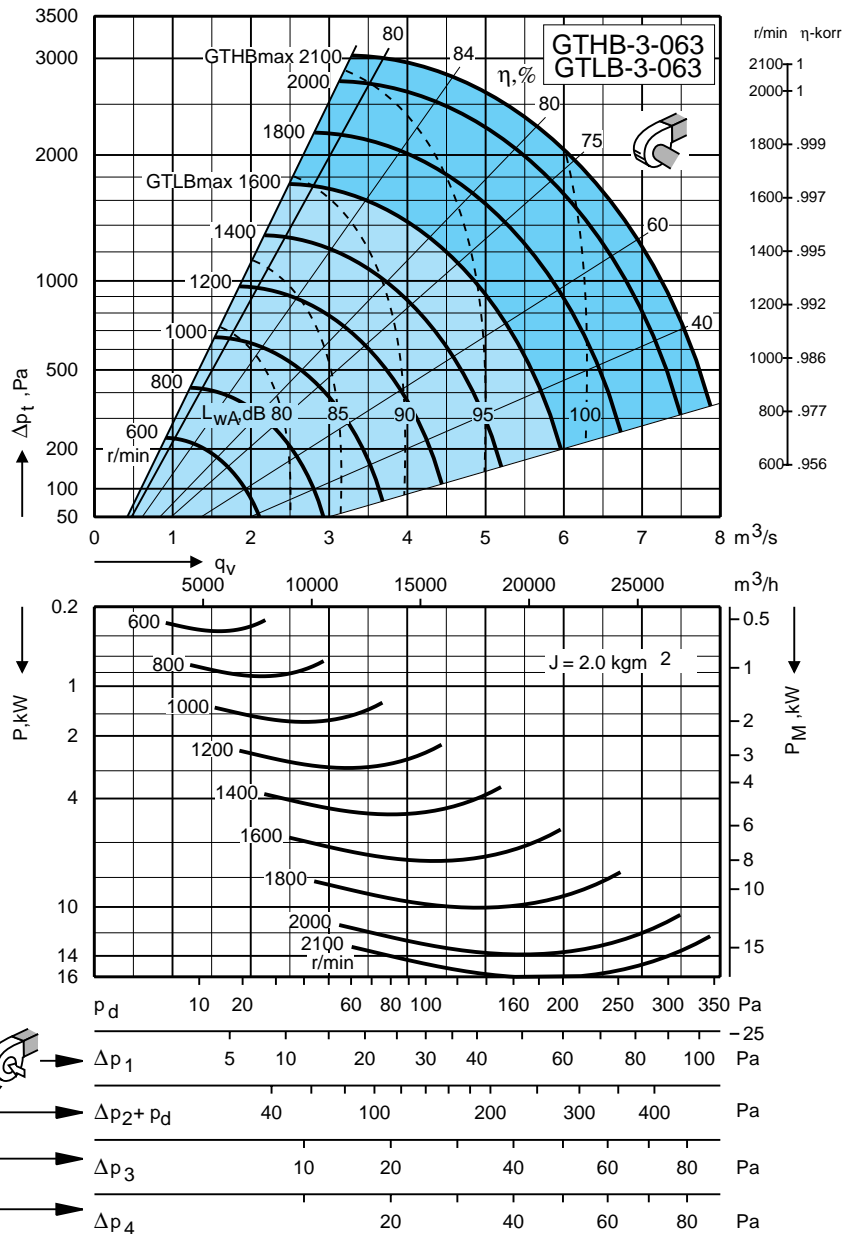
Fan Charts - Acoustic Data - GTLB/GTHB-3-063

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 630 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{WA(s)} - L_{WA}]$$

where the correction figure $L_{WA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

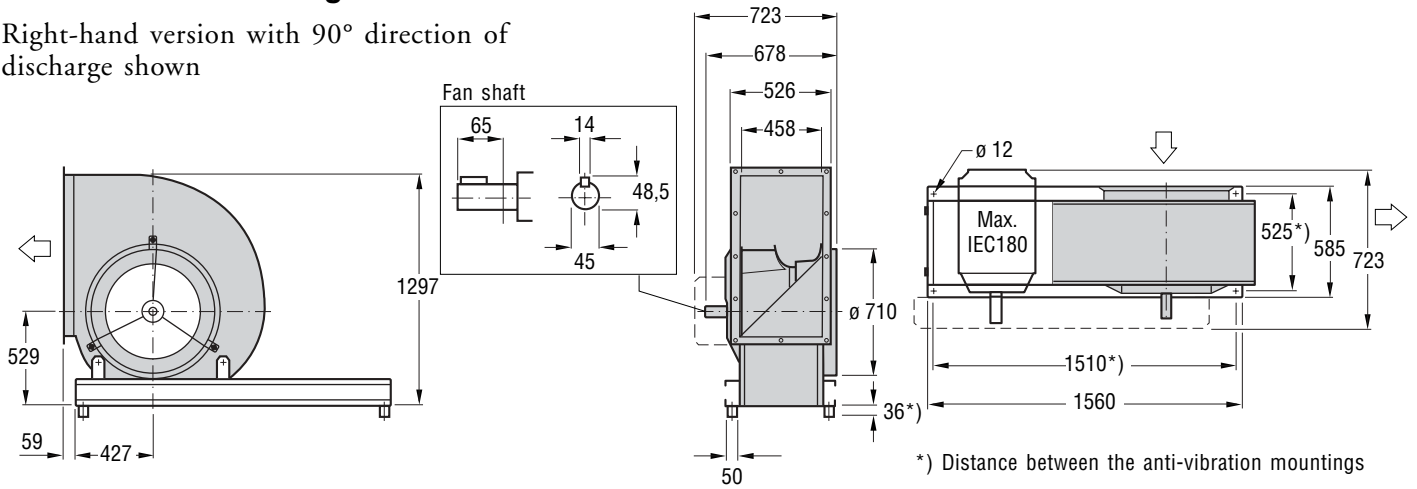
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 815	-5	3	0	-5	-4	-8	-14	-17	0	6.3
	816 - 1631	-6	-4	1	-5	-4	-8	-14	-17	0	4.5
	1632 - 2100	-7	-6	-5	-1	-5	-9	-14	-17	0	3.1
To inlet duct (2)	0 - 815	-4	3	0	-7	-3	-9	-11	-14	0.3	6.1
	816 - 1631	-5	-4	1	-8	-3	-9	-13	-14	0	4.5
	1632 - 2100	-8	-7	-5	-2	-3	-9	-12	-14	0.5	2.6
To surroundings - the fan inlet and outlet ducted (3)	0 - 815	-13	-6	-7	-10	-9	-14	-22	-32	-5.7	4.6
	816 - 1631	-14	-11	-7	-10	-9	-14	-22	-32	-5.8	3.5
	1632 - 2100	-15	-13	-9	-8	-11	-16	-25	-36	-6.7	3.5
To fan outlet (open-discharge fan) (4)	0 - 815	-12	0	-1	-5	-4	-8	-14	-17	-0.2	4.7
	816 - 1631	-13	-7	0	-5	-4	-8	-14	-17	-0.2	3.6
	1632 - 2100	-15	-9	-6	-1	-5	-9	-14	-17	-0.1	2.4

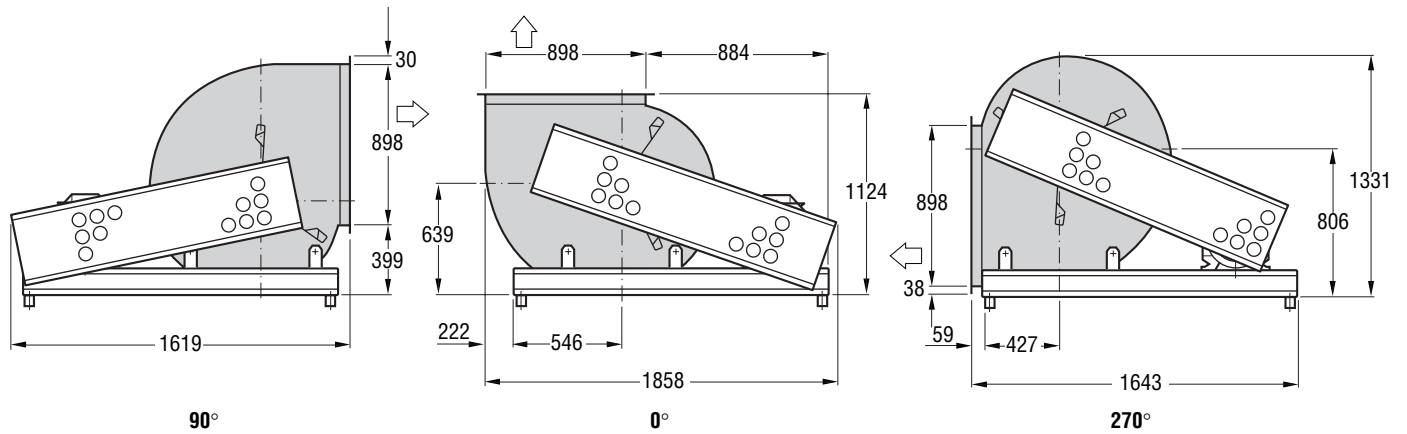
Dimensions and Weights - GTLF-3-071

Dimensions and Weights

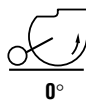
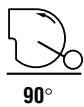
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



Left-hand version (same dimensions as the right-hand version)

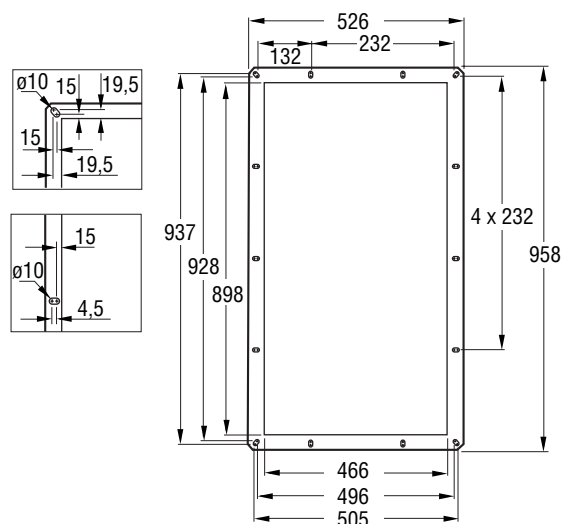


Weight (kg)

GTLF-3-071: 134,0

Belt drive: 6,0

Outlet flange

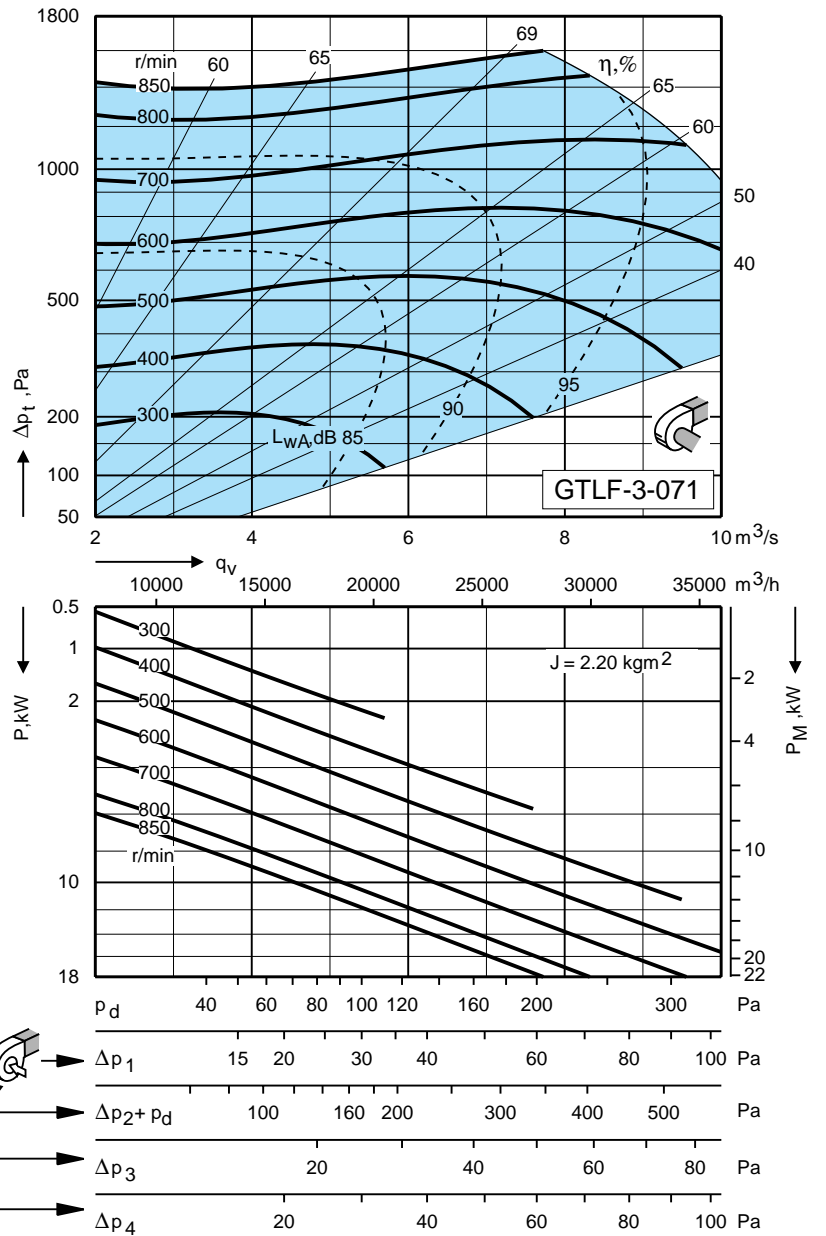


Motor data: See separate motor list.

Fan Charts - Acoustic Data - GTLF-3-071

Belt-driven, single-inlet, forward-curved blades

Impeller diameter: 710 mm



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w\text{okt}}(s) = L_{WA} + K_{\text{okt}}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA}(s) = L_{WA} + [L_{wA}(s) - L_{WA}]$$

where the correction figure $L_{wA}(s) - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt}(s) - L_{wA}(s)$ that can be used for obtaining the total sound power level on each sound path:

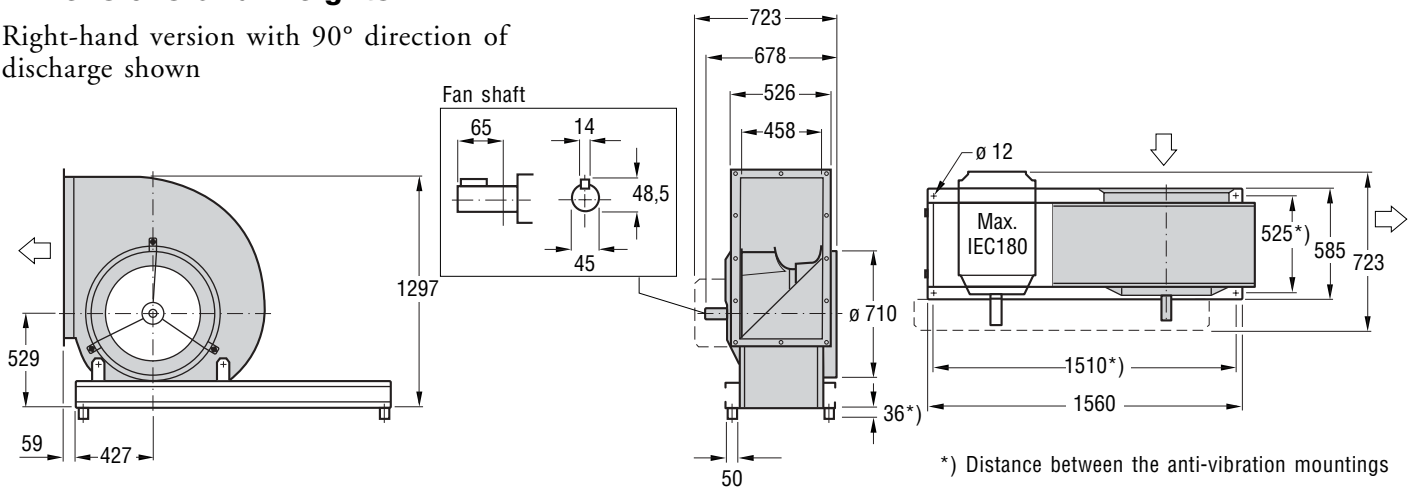
$$L_{wt}(s) = L_{WA}(s) + [L_{wt}(s) - L_{WA}(s)]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA}(s) - L_{WA}$ dB	$L_{wt}(s) - L_{wA}(s)$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 558	-2	-1	1	-2	-7	-8	-13	-18	0	5.7
	559 - 850	-2	0	-1	-3	-5	-8	-12	-16	0	5.4
To inlet duct (2)	0 - 558	1	-2	-1	-6	-3	-8	-11	-17	0.3	5.4
	559 - 850	1	-3	-4	-5	-2	-7	-10	-16	1.0	4.4
To surroundings - the fan inlet and outlet ducted (3)	0 - 558	-14	-6	-4	-3	-7	-10	-20	-28	-1.9	3.7
	559 - 850	-15	-8	-8	-7	-7	-9	-20	-28	-3.0	2.5
To fan outlet (open-discharge fan) (4)	0 - 558	-9	-4	0	-2	-7	-8	-13	-18	-0.3	4.4
	559 - 850	-10	-3	-2	-3	-5	-8	-12	-16	-0.2	3.8

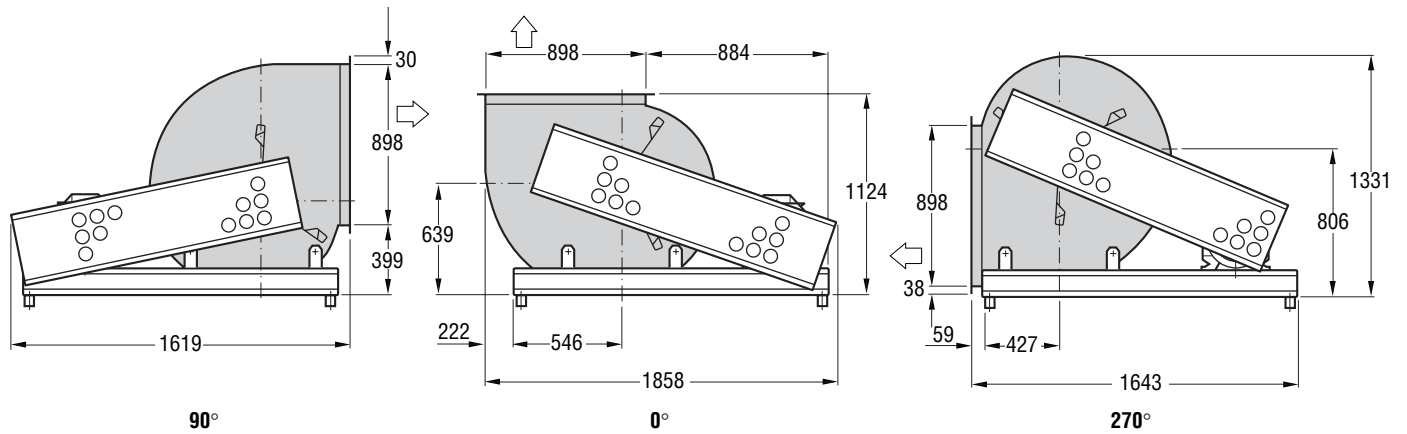
Dimensions and Weights - GTLB/GTHB-3-071

Dimensions and Weights

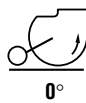
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



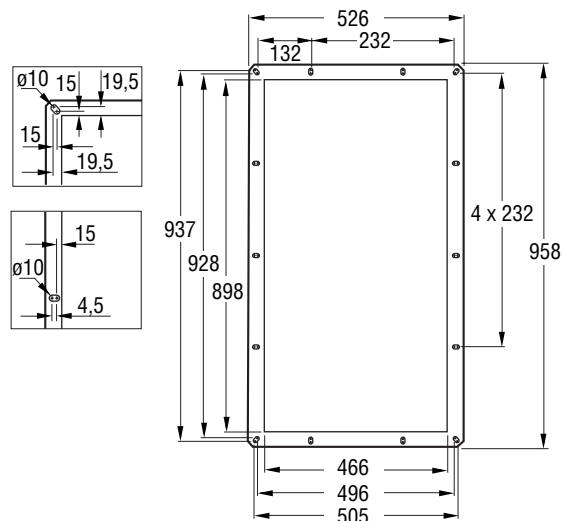
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLB/HB-3-071: 144,0
 Belt drive: 10,0

Outlet flange



Motor data: See separate motor list.

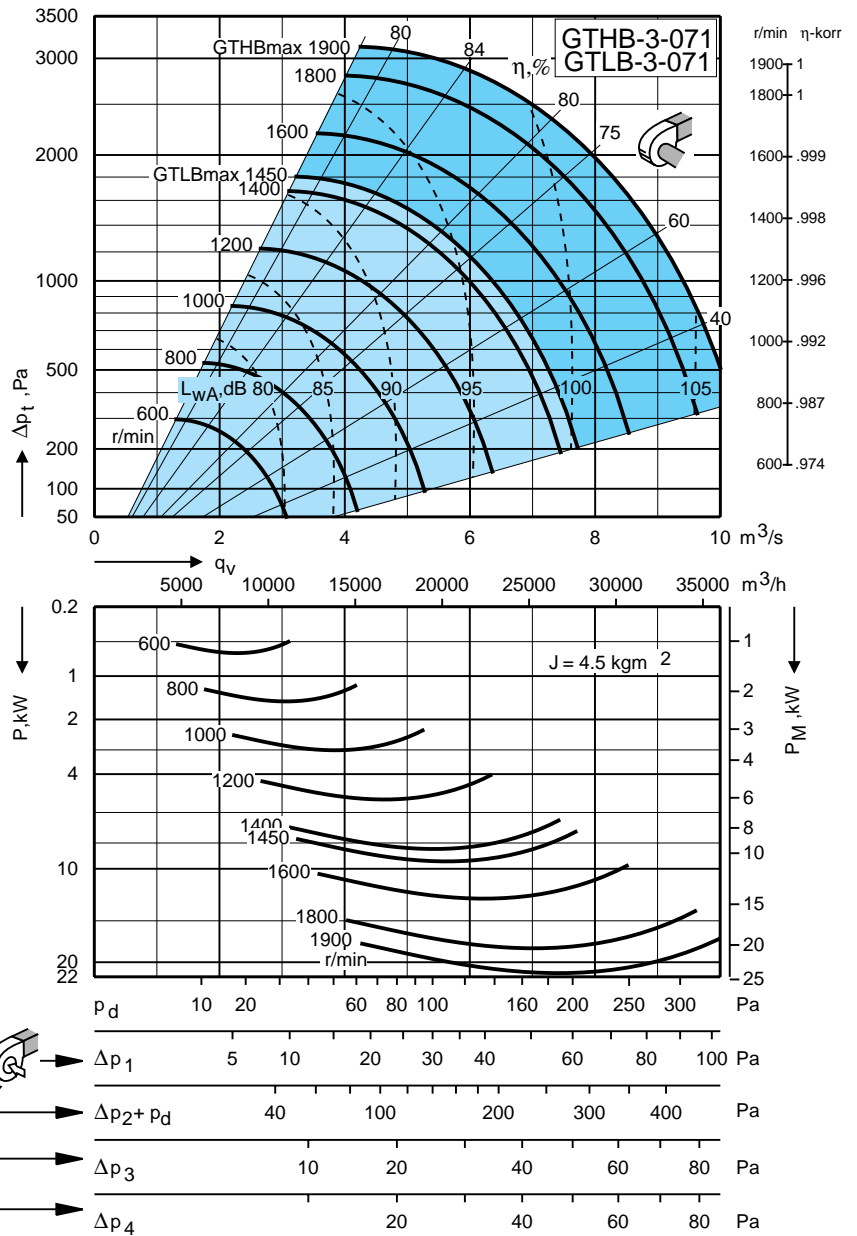
Fan Charts - Acoustic Data - GTLB/GTHB-3-071

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 710 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{wA(s)}$ that can be used for obtaining the total sound power level on each sound path:

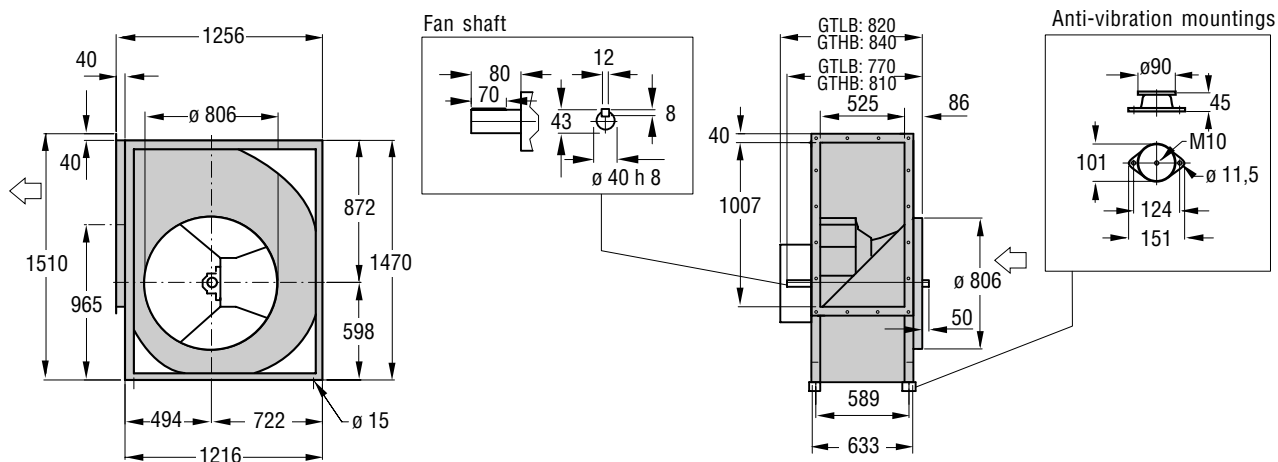
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 815	-5	2	-1	-4	-4	-9	-14	-20	0	5.6
	816 - 1631	-5	-6	-1	-4	-3	-9	-15	-20	0	3.9
	1632 - 1900	-6	-6	-4	-2	-4	-9	-14	-19	0	3.2
To inlet duct (2)	0 - 815	-3	2	-1	-6	-5	-9	-14	-19	-1.0	6.6
	816 - 1631	-3	-5	0	-7	-5	-10	-14	-19	-1.3	5.3
	1632 - 1900	-5	-6	-5	-2	-5	-9	-13	-18	-0.4	3.5
To surroundings - the fan inlet and outlet ducted (3)	0 - 815	-13	-6	-7	-9	-9	-15	-22	-35	-5.7	4.7
	816 - 1631	-13	-13	-7	-9	-8	-15	-23	-35	-5.3	3.2
	1632 - 1900	-14	-13	-10	-9	-10	-16	-25	-38	-6.7	3.2
To fan outlet (open-discharge fan) (4)	0 - 815	-11	-1	-2	-4	-4	-9	-14	-20	-0.4	4.3
	816 - 1631	-11	-9	-2	-4	-3	-9	-15	-20	0	2.8
	1632 - 1900	-13	-9	-5	-2	-4	-9	-14	-19	-0.1	2.4

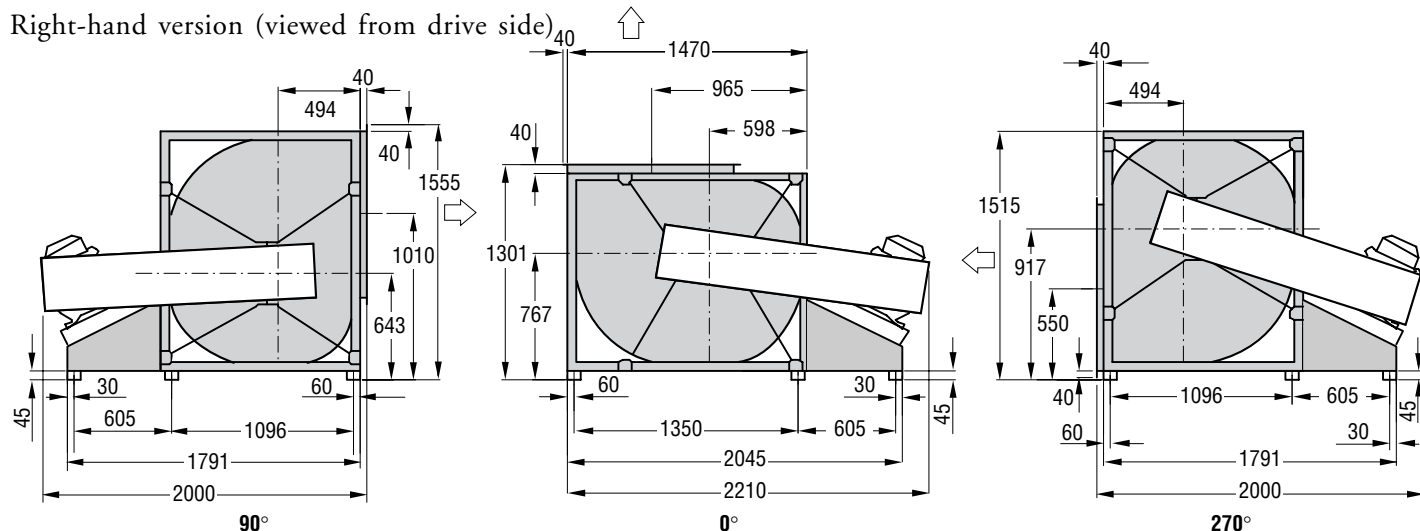
Dimensions and Weights - GTLB/GTHB-3-080

Dimensions and Weights

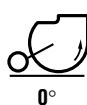
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



Left-hand version (same dimensions as the right-hand version)

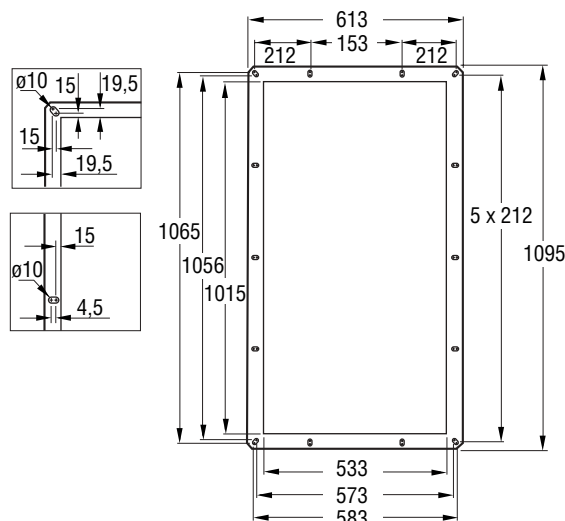


Weight (kg)

GTLB/HB-3-080: 267,0

Belt drive: 12,0

Outlet flange



Motor data: See separate motor list.

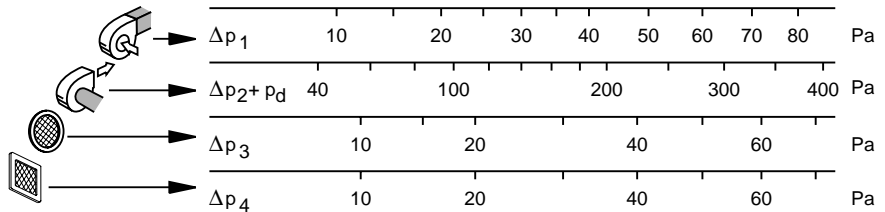
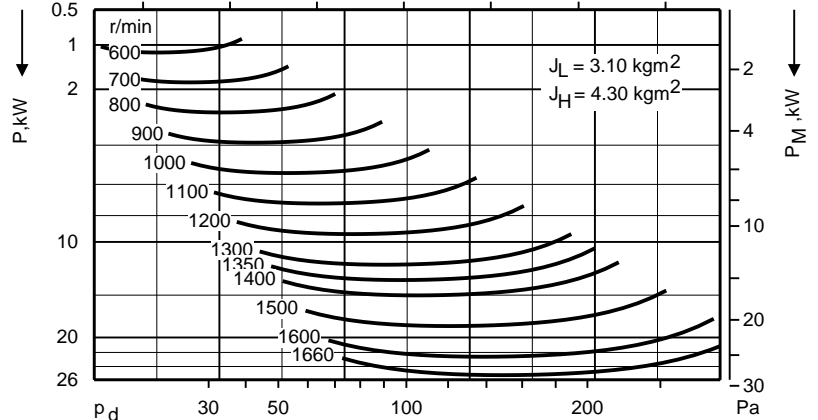
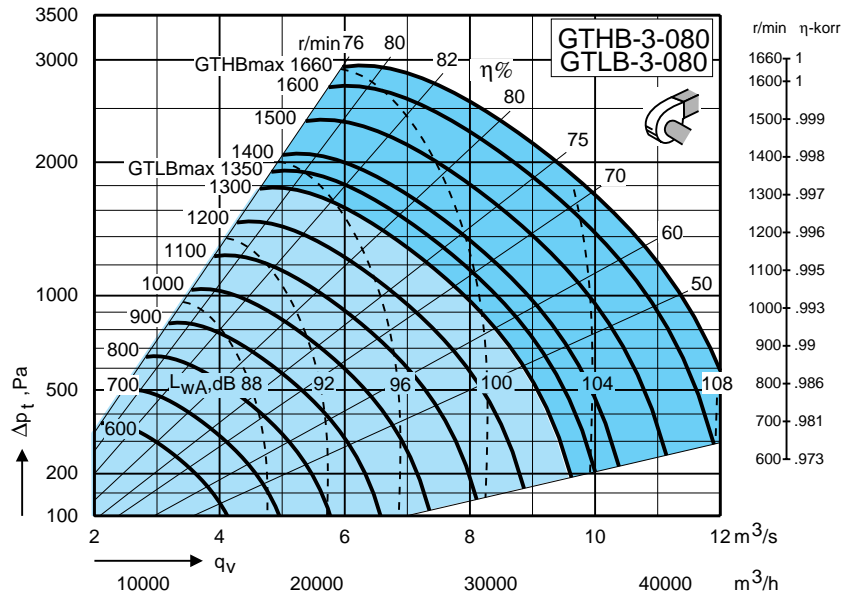
Fan Charts - Acoustic Data - GTLB/GTHB-3-080

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 800 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w\text{okt}(s)} = L_{WA} + K_{\text{okt}(s)}$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

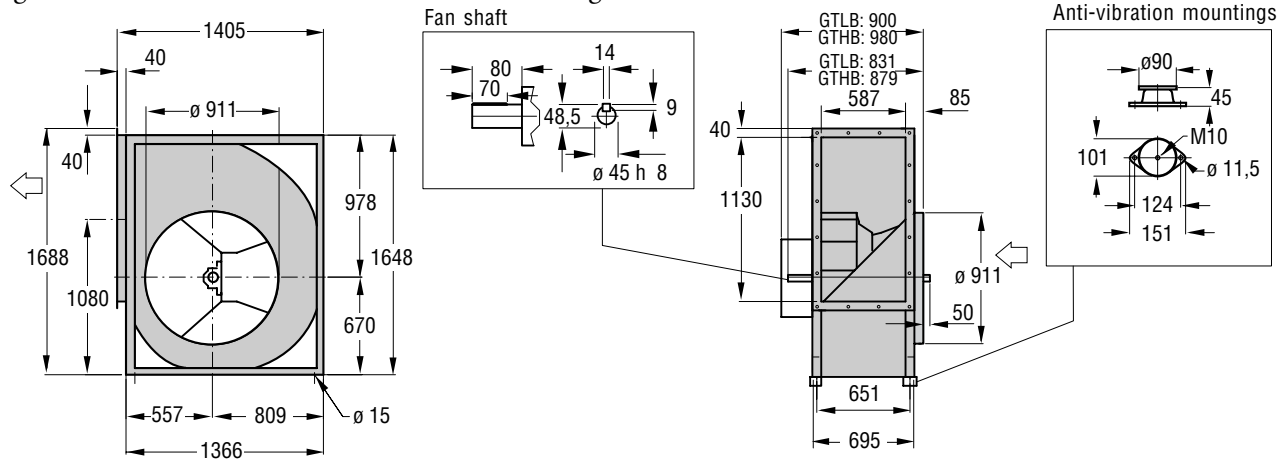
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} - dB								$L_{wA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 815	-4	0	-2	-3	-3	-10	-15	-23	0	5.0
	816 - 1631	-4	-8	-4	-3	-3	-9	-15	-23	0	3.3
	1632 - 1660	-4	-6	-5	-3	-4	-7	-14	-21	0	3.2
To inlet duct (2)	0 - 815	-2	0	-1	-5	-6	-11	-17	-24	-1.8	6.7
	816 - 1631	-2	-5	-2	-6	-7	-11	-17	-24	-2.7	6.0
	1632 - 1660	-3	-5	-4	-4	-6	-9	-15	-23	-1.5	4.6
To surroundings - the fan inlet and outlet ducted (3)	0 - 815	-11	-7	-9	-8	-8	-15	-23	-33	-5.1	3.9
	816 - 1631	-11	-16	-11	-9	-11	-14	-23	-33	-6.8	3.2
	1632 - 1660	-10	-13	-12	-10	-9	-13	-22	-31	-5.9	2.9
To fan outlet (open-discharge fan) (4)	0 - 815	-10	-2	-2	-3	-3	-10	-15	-23	0.1	4.1
	816 - 1631	-10	-10	-4	-3	-3	-9	-15	-23	0	2.5
	1632 - 1660	-10	-8	-5	-3	-4	-7	-14	-21	0	2.4

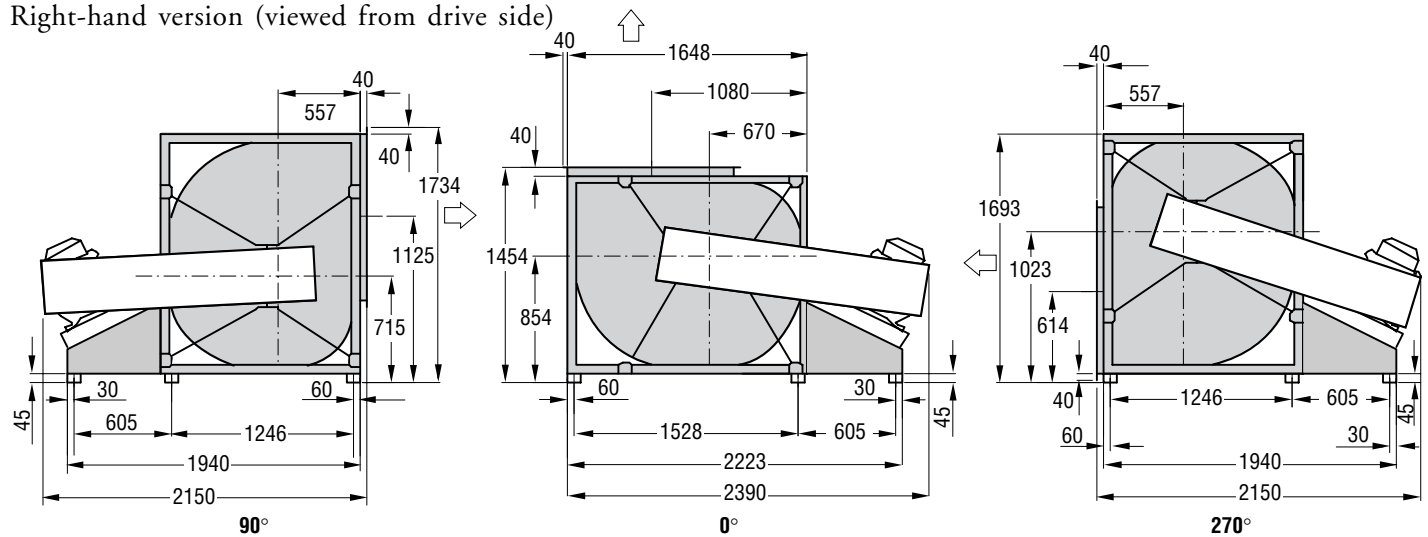
Dimensions and Weights - GTLB/GTHB-3-090

Dimensions and Weights

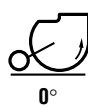
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



Left-hand version (same dimensions as the right-hand version)

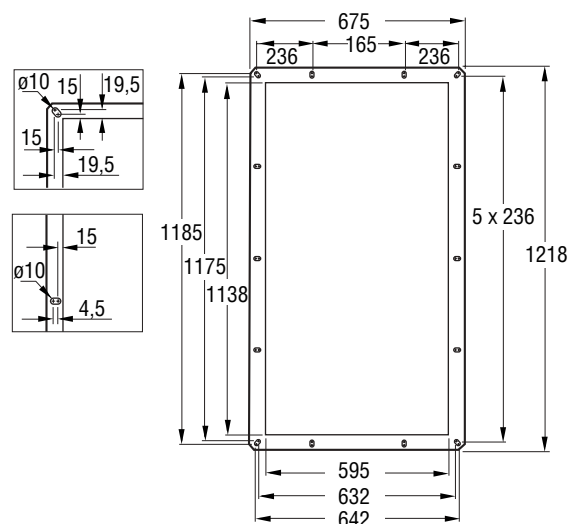


Weight (kg)

GTLB/HB-3-090: 320,0

Belt drive: 21,0

Outlet flange



Motor data: See separate motor list.

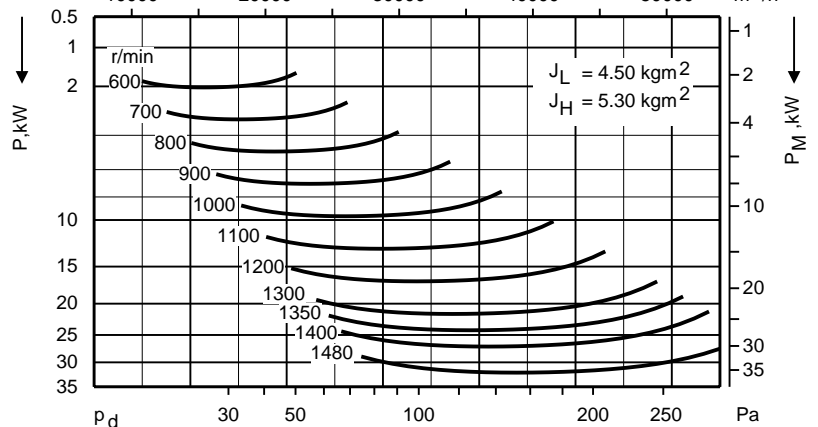
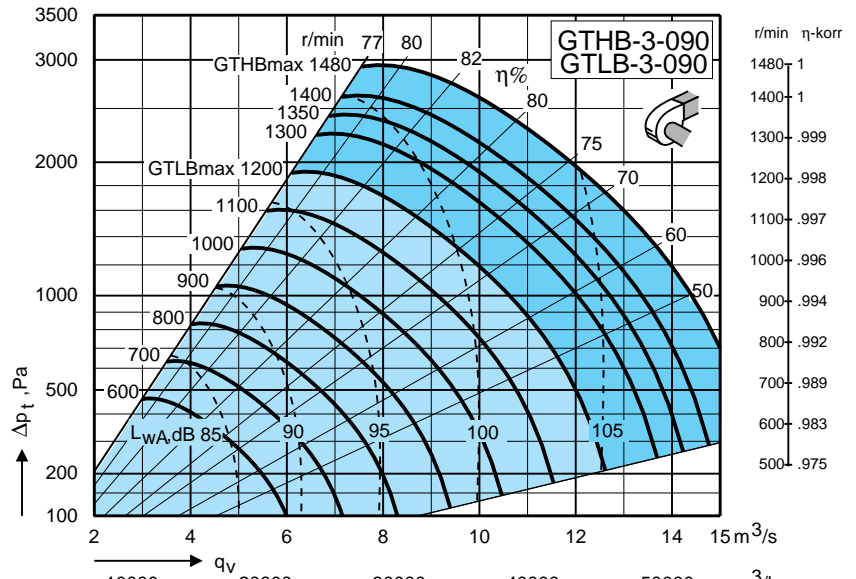
Fan Charts - Acoustic Data - GTLB/GTHB-3-090

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 900 mm



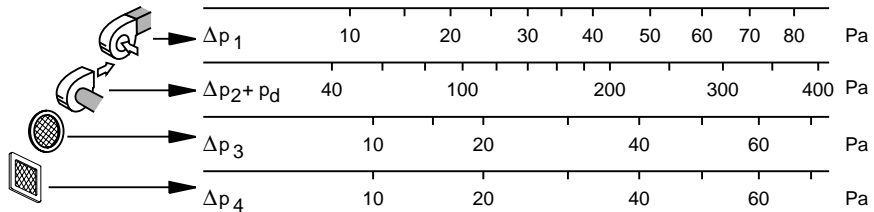
Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w\text{okt}(s)} = L_{WA} + K_{\text{okt}(s)}$$



where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

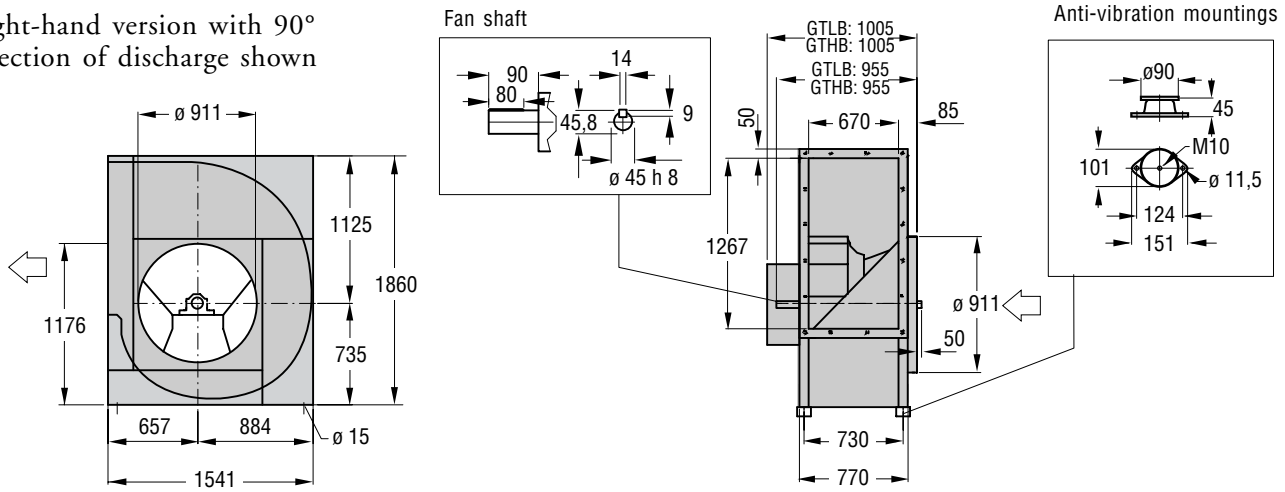
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{wA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{wA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 815	-3	-1	-2	-4	-3	-9	-15	-20	0	4.8
	816 - 1480	-4	-6	-3	-4	-3	-8	-14	-20	0	3.5
To inlet duct (2)	0 - 815	-3	0	-1	-4	-7	-11	-17	-23	-1.8	3.0
	816 - 1480	-3	-4	-2	-5	-6	-10	-17	-22	-1.8	1.7
To surroundings - the fan inlet and outlet ducted (3)	0 - 815	-10	-8	-9	-9	-8	-14	-23	-30	-5.2	3.7
	816 - 1480	-11	-14	-10	-10	-11	-13	-22	-30	-6.7	3.3
To fan outlet (open-discharge fan) (4)	0 - 815	-8	-3	-2	-4	-3	-9	-15	-20	0	3.7
	816 - 1480	-9	-8	-3	-4	-3	-8	-14	-20	0.1	2.7

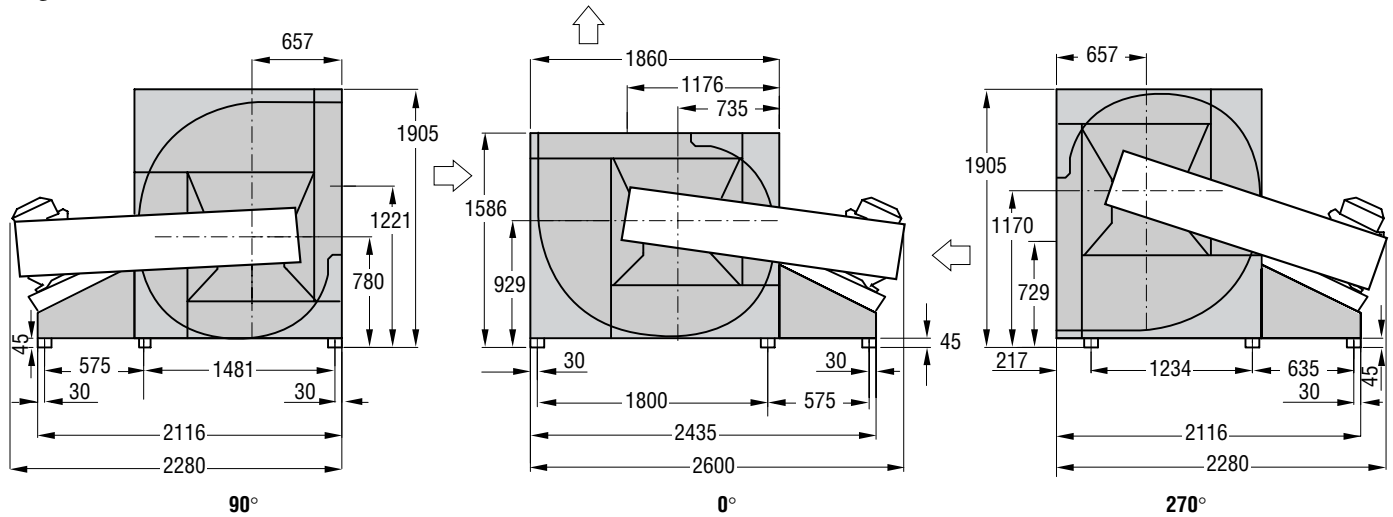
Dimensions and Weights - GTLB/GTHB-3-100

Dimensions and Weights

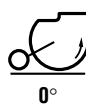
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



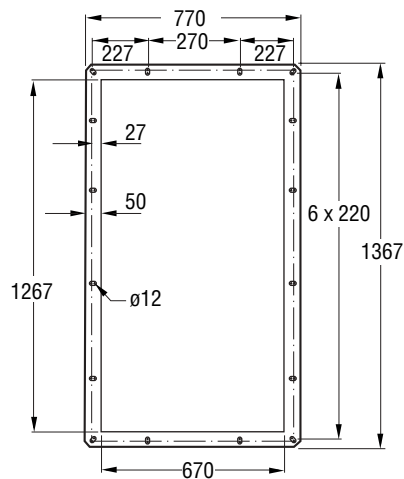
Left-hand version (same dimensions as the right-hand version)



Weight (kg)

GTLB/HB-3-100: 367,0
 Belt drive: 34,0

Outlet flange



Motor data: See separate motor list.

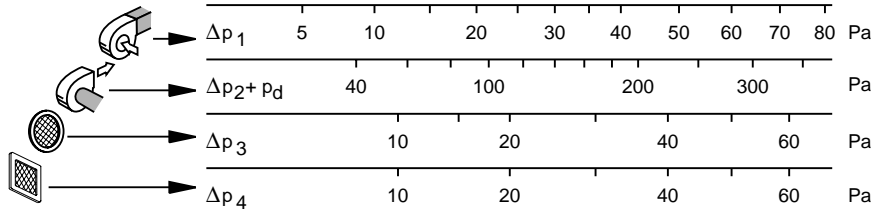
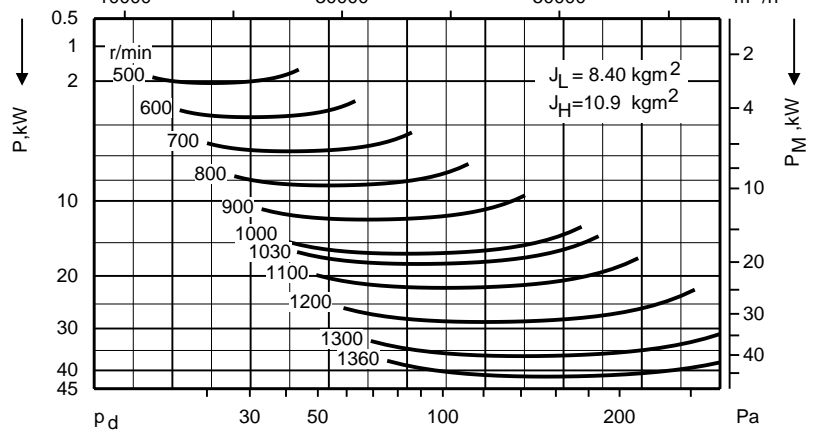
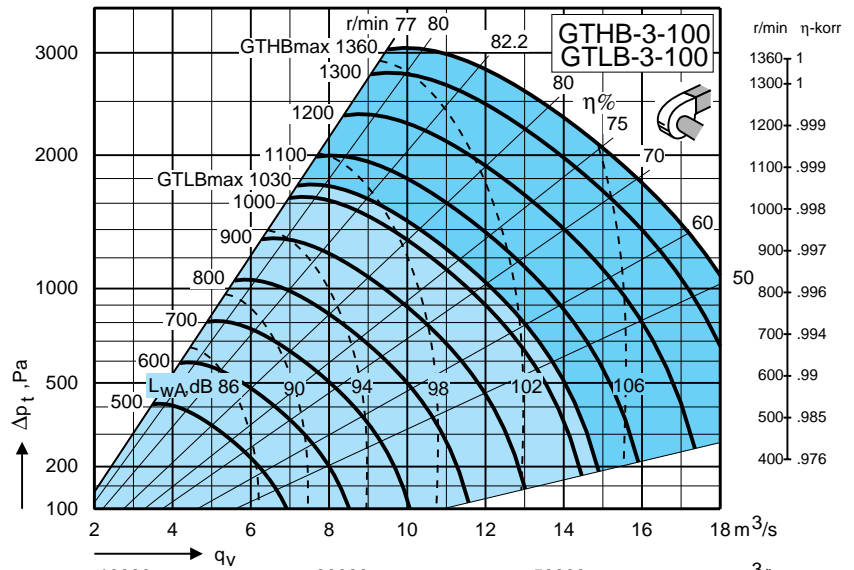
Fan Charts - Acoustic Data - GTLB/GTHB-3-100

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 1000 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w\text{okt}}(s) = L_{WA} + K_{\text{okt}}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA}(s) = L_{WA} + [L_{wA}(s) - L_{WA}]$$

where the correction figure $L_{wA}(s) - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt}(s) - L_{WA}(s)$ that can be used for obtaining the total sound power level on each sound path:

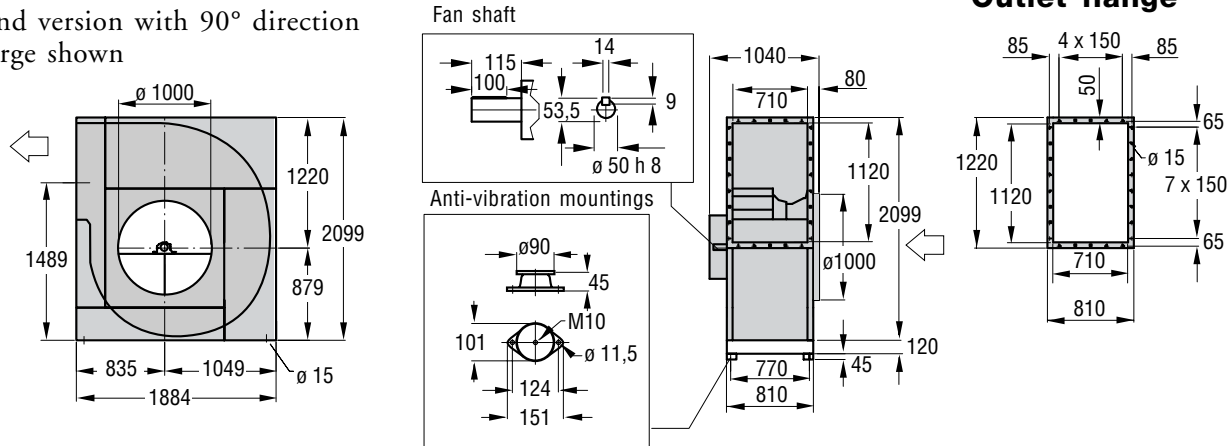
$$L_{wt}(s) = L_{WA}(s) + [L_{wt}(s) - L_{WA}(s)]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{wA}(s) - L_{WA}$ dB	$L_{wt}(s) - L_{wA}(s)$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 815	-1	-1	-3	-4	-4	-7	-13	-20	0	5.0
	816 - 1360	-4	-6	-3	-5	-4	-6	-13	-21	0	3.4
To inlet duct (2)	0 - 815	-2	0	-2	-3	-5	-11	-17	-23	-1.0	6.0
	816 - 1360	-3	-5	-2	-4	-6	-11	-17	-22	-1.7	5.1
To surroundings - the fan inlet and outlet ducted (3)	0 - 815	-8	-7	-10	-9	-9	-12	-21	-30	-5.3	4.2
	816 - 1360	-11	-14	-10	-11	-10	-11	-21	-31	-5.8	2.7
To fan outlet (open-discharge fan) (4)	0 - 815	-5	-2	-3	-4	-4	-7	-13	-20	0	4.0
	816 - 1360	-8	-7	-3	-5	-4	-6	-13	-21	0	2.7

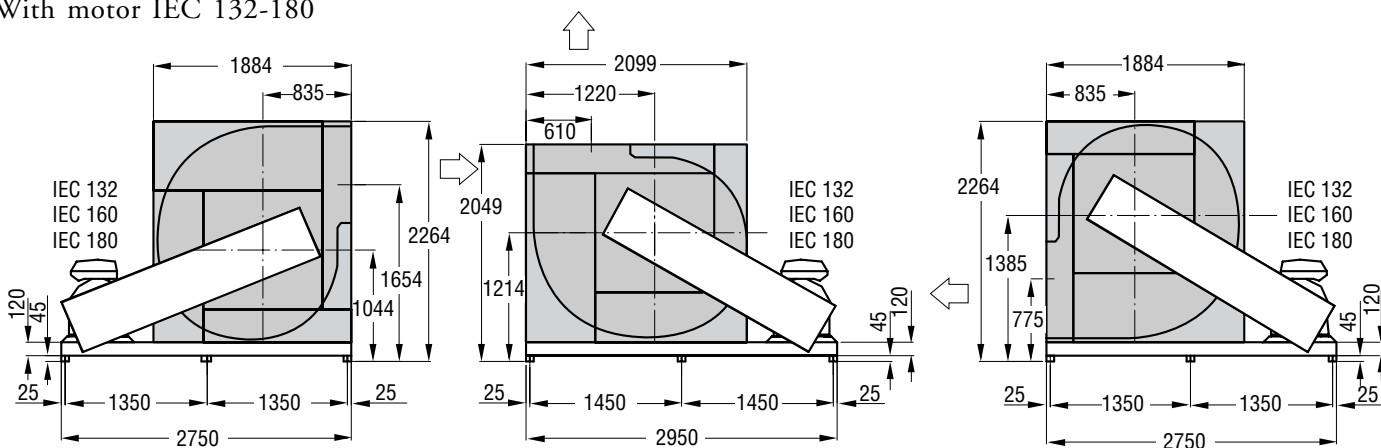
Dimensions and Weights - GTLB-3-112

Dimensions and Weights, motor in line with the fan

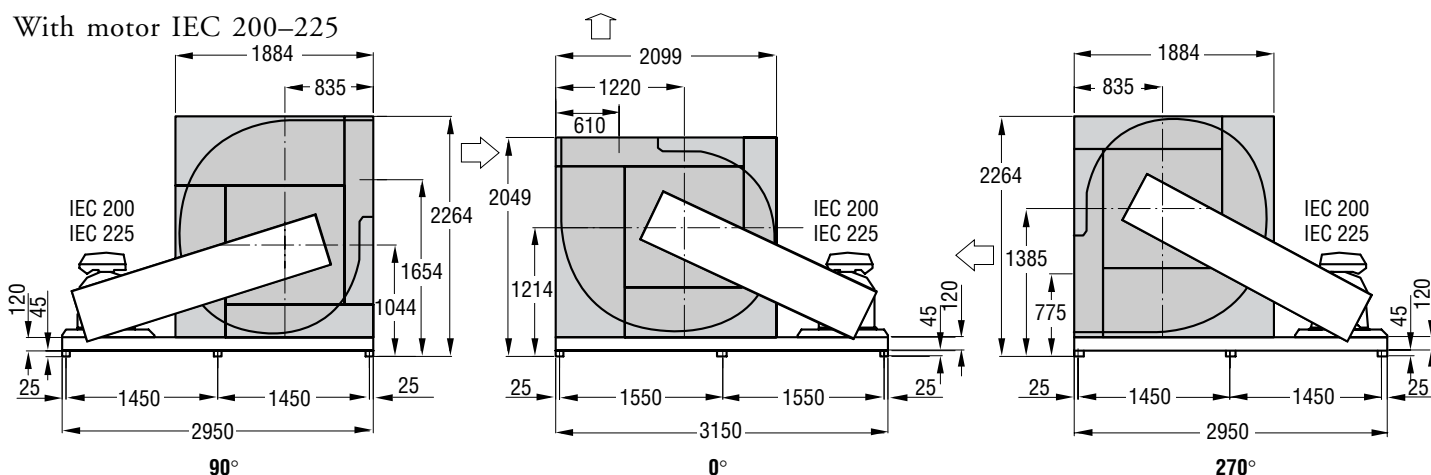
Right-hand version with 90° direction of discharge shown



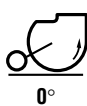
Right-hand version (viewed from drive side)
With motor IEC 132-180



With motor IEC 200-225



Left-hand version (same dimensions as the right-hand version)



Weight (kg)

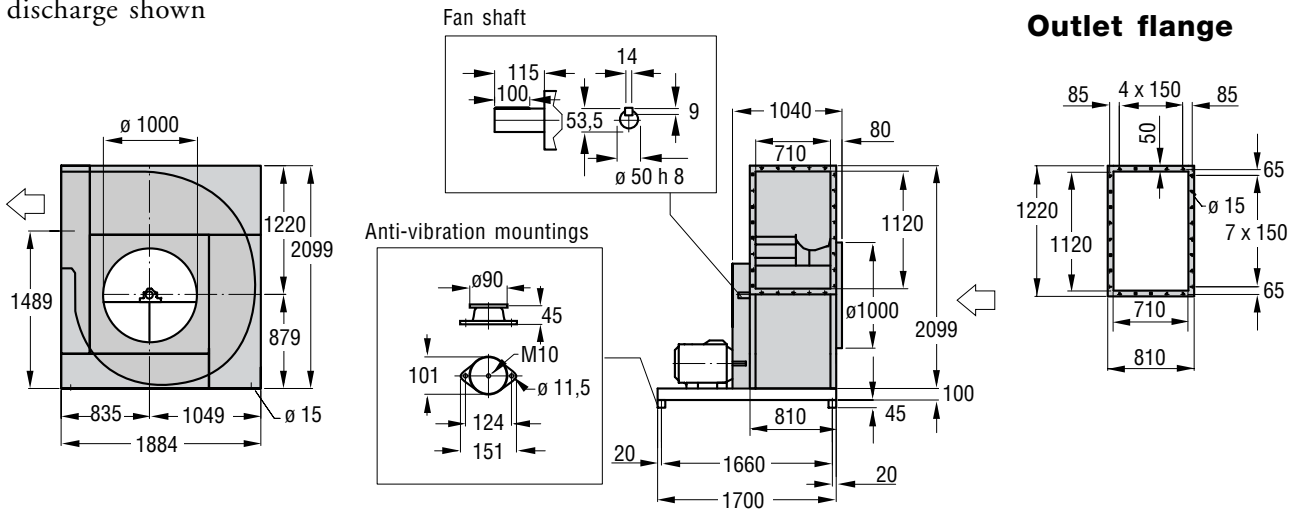
- GTLB-3-112: 353,0
- Base frame: 130,0
- Belt drive: 40,0

Motor data: See separate motor list.

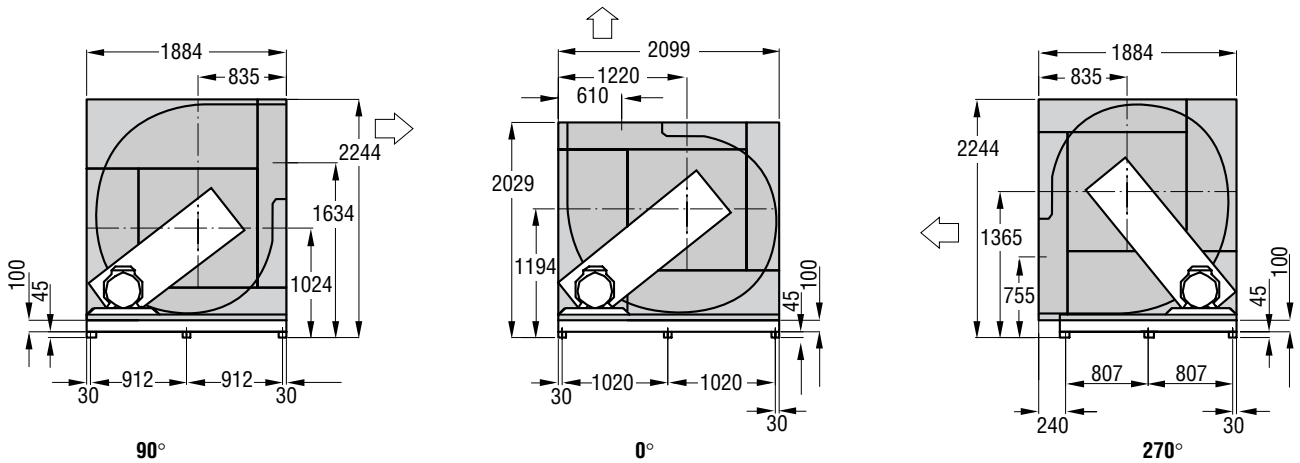
Dimensions and Weights - GTLB-3-112

Dimensions and Weights, motor placed beside the fan

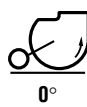
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



Left-hand version (same dimensions as the right-hand version)

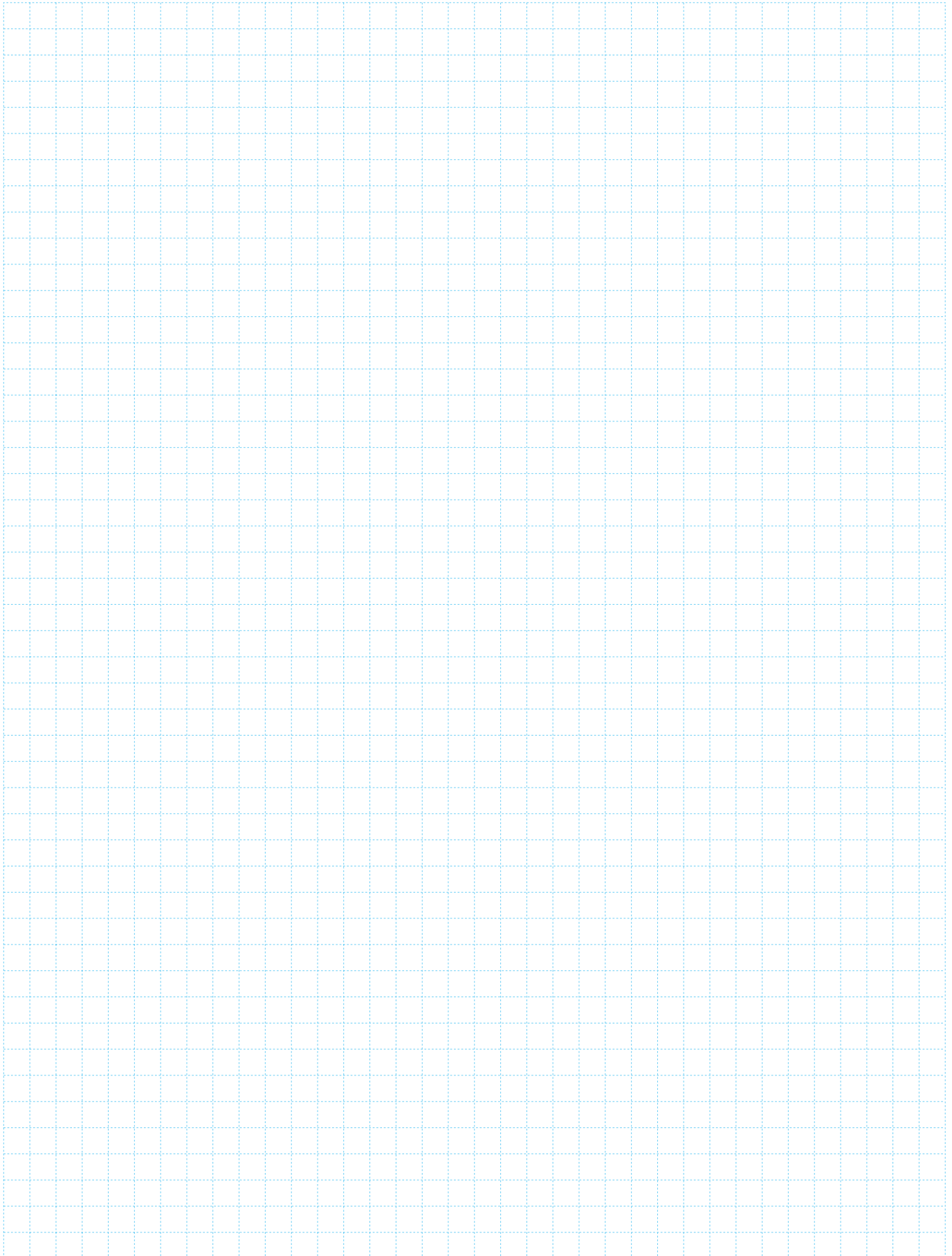


Weight (kg)

GTLB-3-112: 353,0
 Base frame: 150,0
 Belt drive: 40,0

Motor data: See separate motor list.

Notes



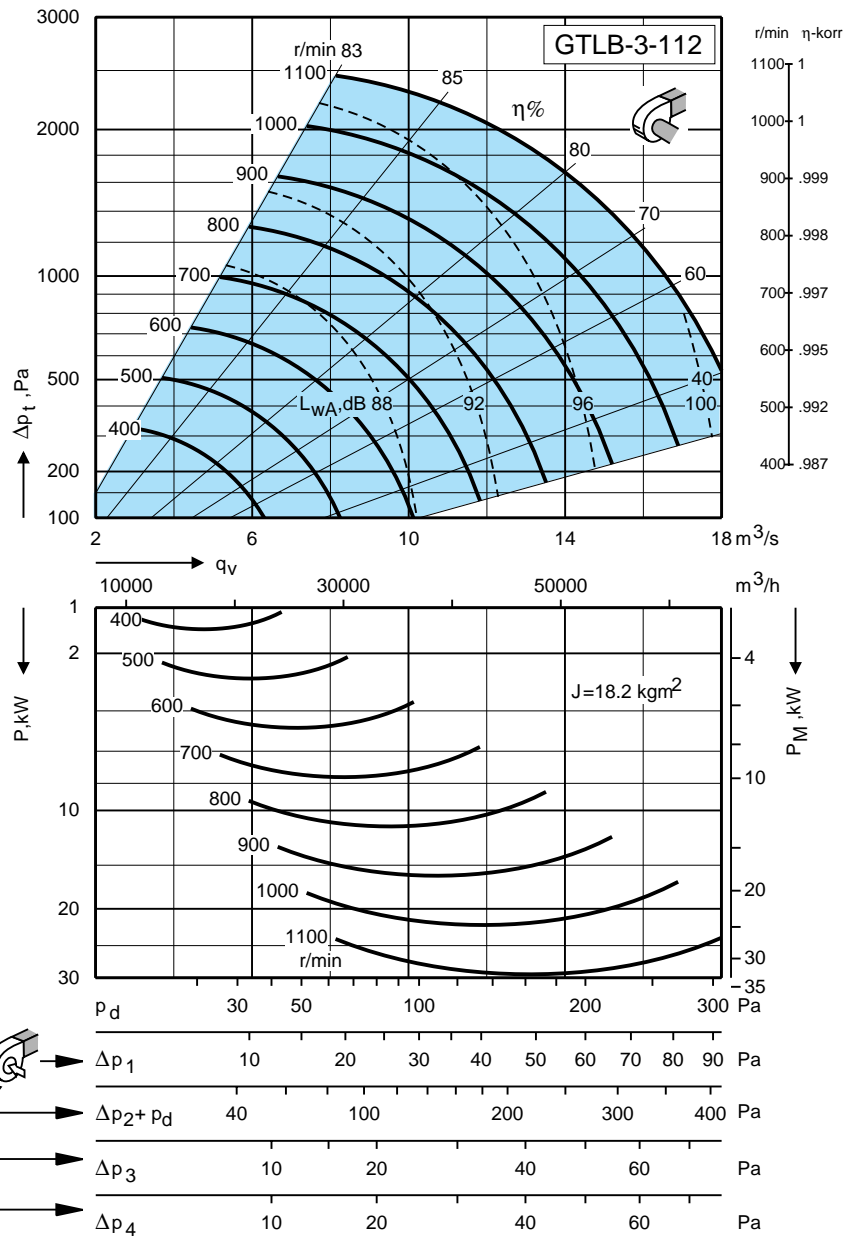
Fan Charts - Acoustic Data - GTLB-3-112

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 1120 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w\text{okt}(s)} = L_{WA} + K_{\text{okt}(s)}$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table. The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

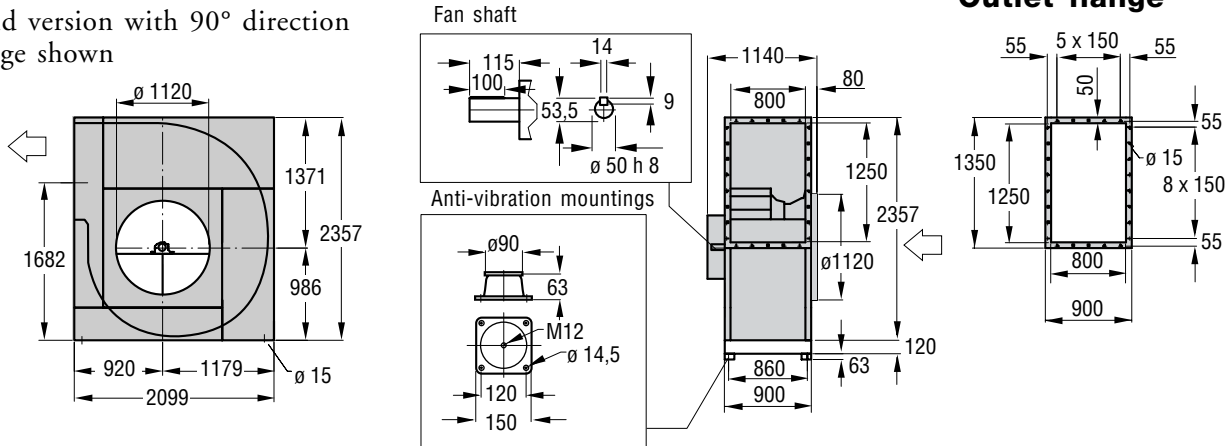
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 400	2	-1	-2	-3	-5	-7	-14	-27	0	6,2
	401 - 800	0	2	-1	-3	-5	-8	-13	-24	0	6,5
	801 - 1100	-4	-2	0	-2	-5	-8	-14	-25	0	4,9
To inlet duct (2)	0 - 400	2	-1	-2	-3	-5	-7	-14	-27	0	6,2
	401 - 800	0	2	-1	-3	-5	-8	-13	-24	0	6,5
	801 - 1100	-4	-2	0	-2	-5	-8	-14	-25	0	4,9
To surroundings - the fan inlet and outlet ducted (3)	0 - 400	-5	-8	-9	-10	-11	-12	-22	-37	-6,1	5,5
	401 - 800	-7	-4	-8	-8	-10	-13	-21	-34	-5,4	5,8
	801 - 1100	-11	-10	-7	-8	-10	-13	-22	-35	-5,7	4,0
To fan outlet (open-discharge fan) (4)	0 - 400	-2	-2	-2	-3	-5	-7	-14	-27	0	4,8
	401 - 800	-4	1	-1	-3	-5	-8	-13	-24	-0,1	5,6
	801 - 1100	-8	-3	0	-2	-5	-8	-14	-25	0	4,4

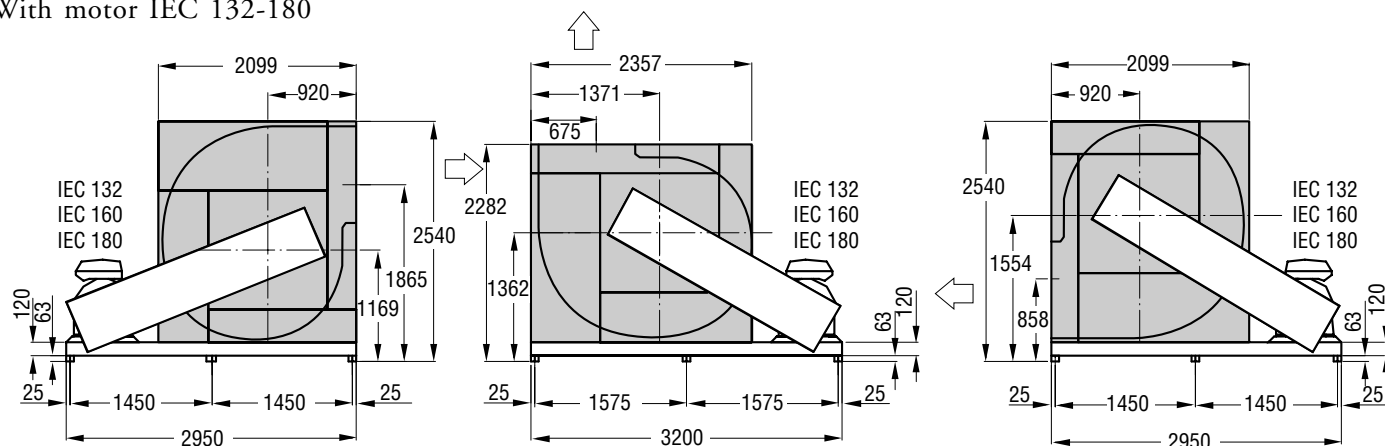
Dimensions and Weights - GTLB-3-125

Dimensions and Weights, motor in line with the fan

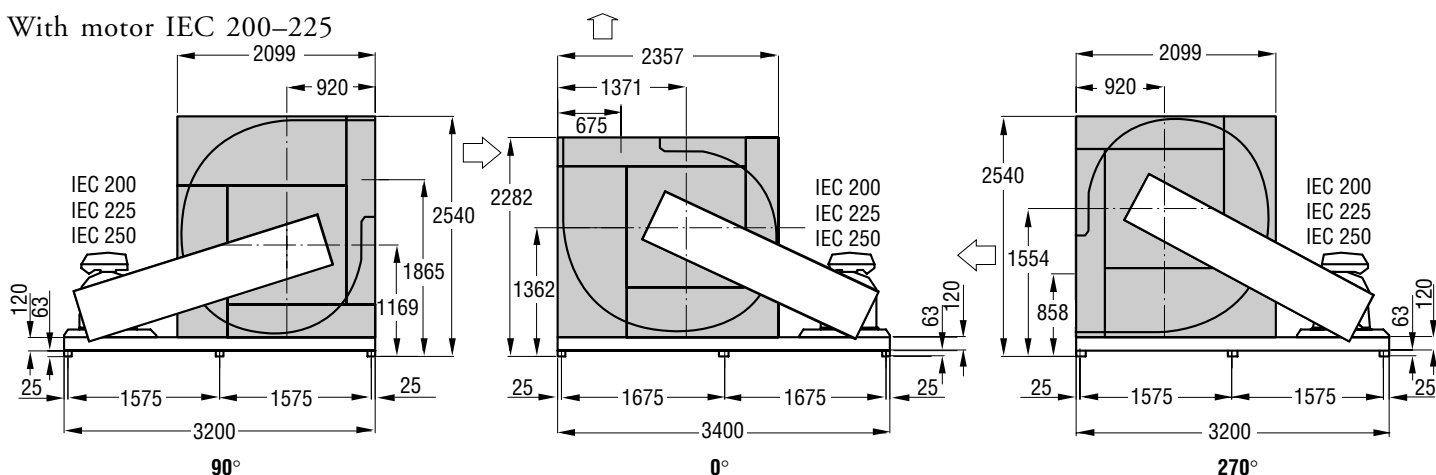
Right-hand version with 90° direction of discharge shown



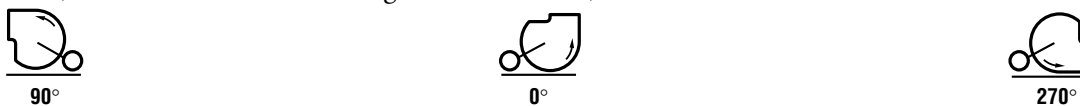
Right-hand version (viewed from drive side)
With motor IEC 132-180



With motor IEC 200-225



Left-hand version (same dimensions as the right-hand version)



Weight (kg)

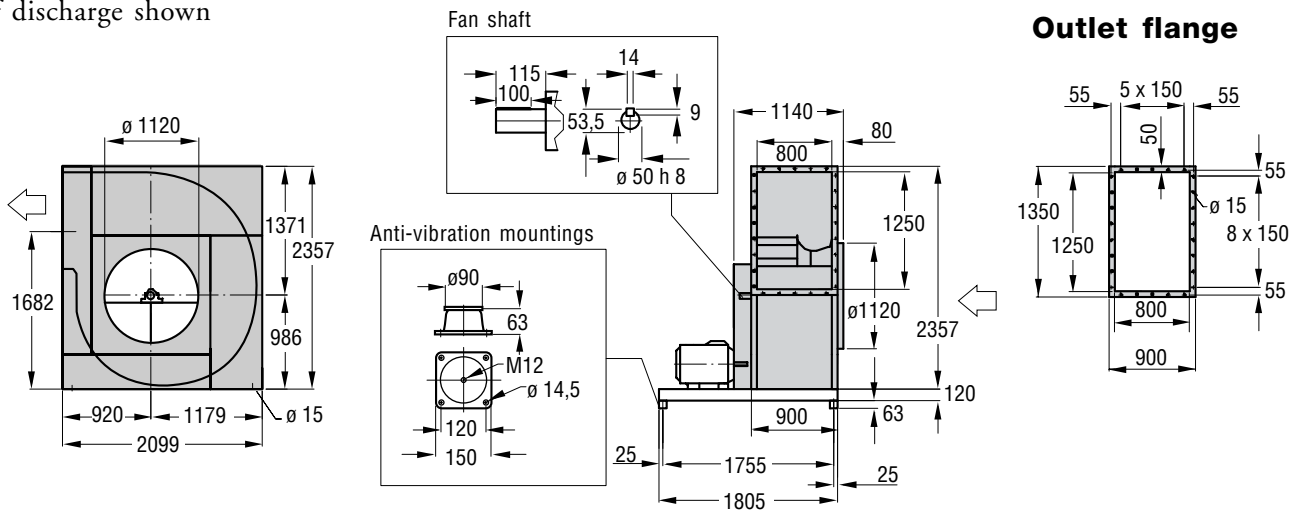
- GTLB-3-125: 421,0
- Base frame: 140,0
- Belt drive: 40,0

Motor data: See separate motor list.

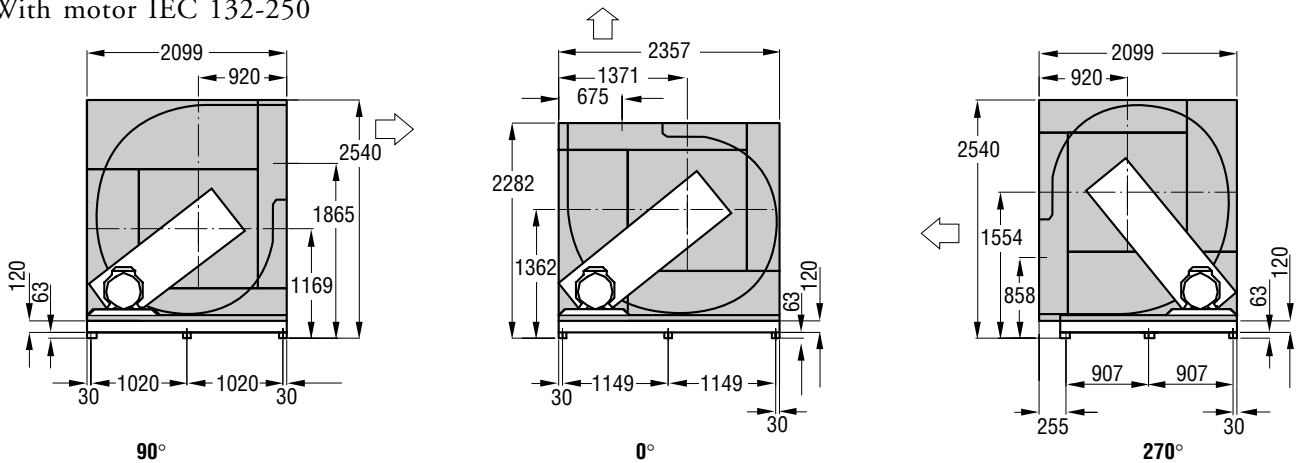
Dimensions and Weights - GTLB-3-125

Dimensions and Weights, motor placed beside the fan

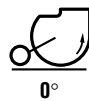
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)
With motor IEC 132-250



Left-hand version (same dimensions as the right-hand version)

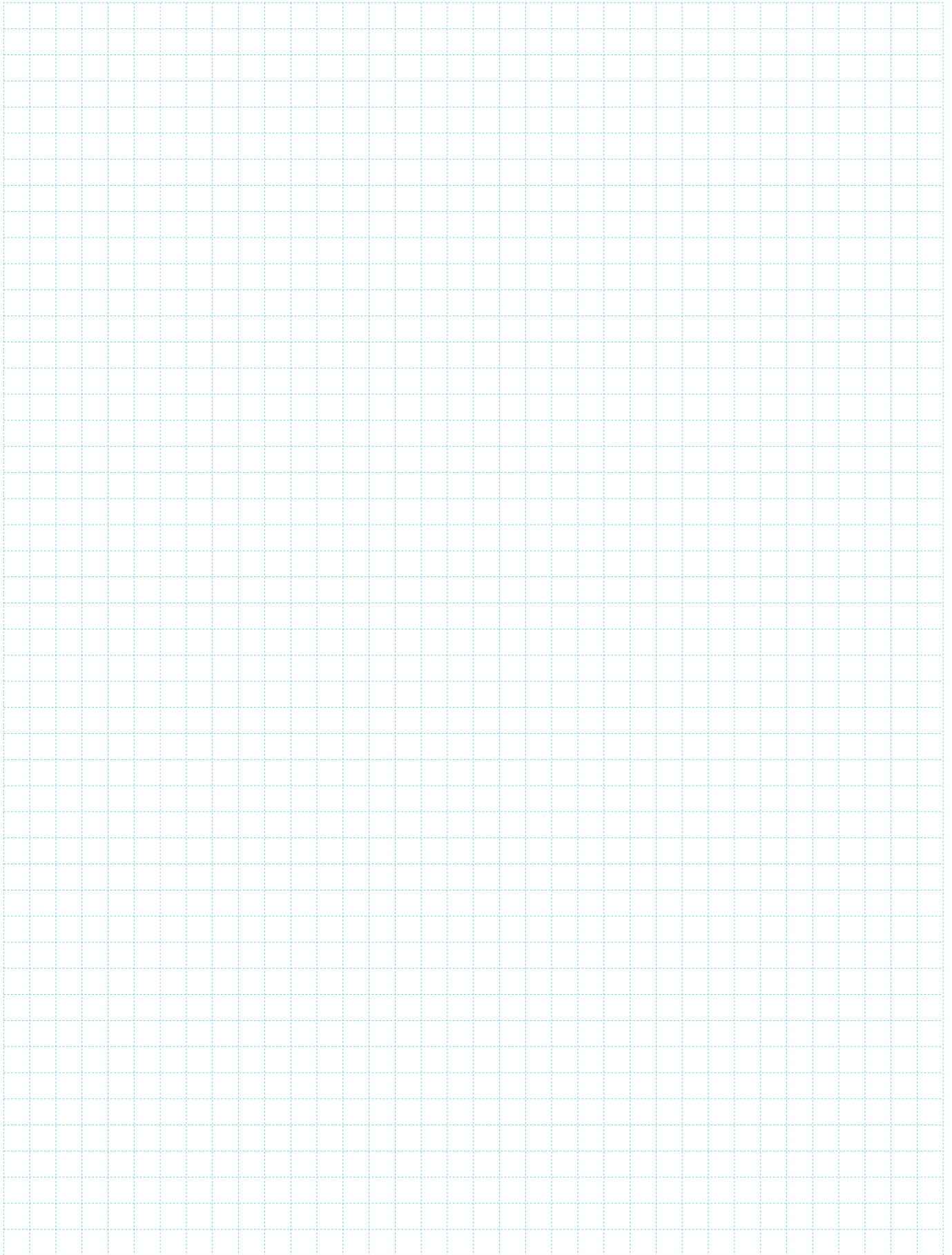


Weight (kg)

GTLB-3-125: 421,0
Base frame: 190,0
Belt drive: 40,0

Motor data: See separate motor list.

Notes



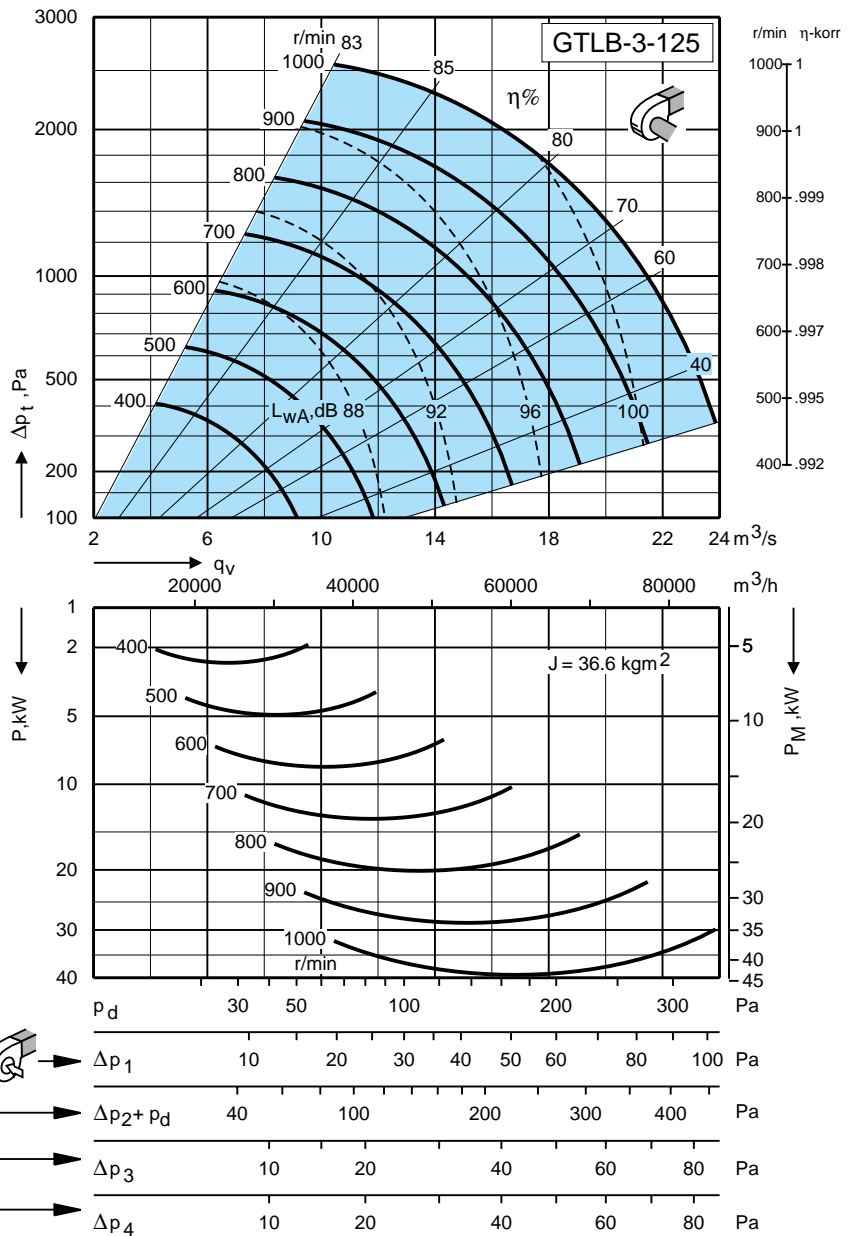
Fan Charts - Acoustic Data - GTLB-3-125

Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 1250 mm



Only the GTLB is available in the smoke extraction version.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table. The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

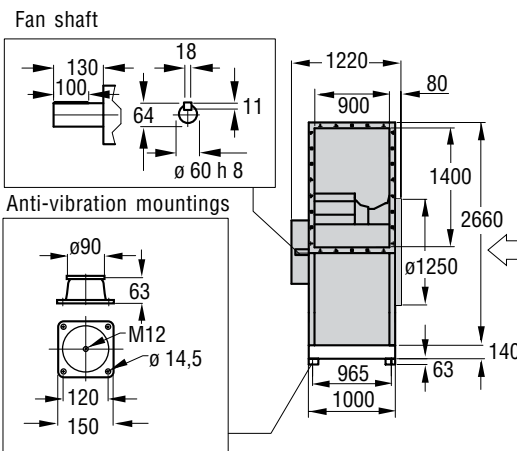
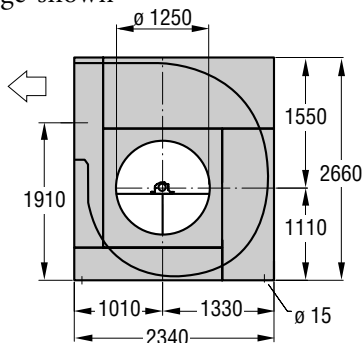
$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 400	2	-1	-2	-3	-5	-7	-14	-27	0	6,2
	401 - 800	0	2	-1	-3	-5	-8	-13	-24	0	6,5
	801 - 1000	-4	-2	0	-2	-5	-8	-14	-25	0	4,9
To inlet duct (2)	0 - 400	2	-1	-2	-3	-5	-7	-14	-27	0	6,2
	401 - 800	0	2	-1	-3	-5	-8	-13	-24	0	6,5
	801 - 1000	-4	-2	0	-2	-5	-8	-14	-25	0	4,9
To surroundings - the fan inlet and outlet ducted (3)	0 - 400	-5	-8	-9	-10	-11	-12	-22	-37	-6,1	5,5
	401 - 800	-7	-4	-8	-8	-10	-13	-21	-34	-5,4	5,8
	801 - 1000	-11	-10	-7	-8	-10	-13	-22	-35	-5,7	4,0
To fan outlet (open-discharge fan) (4)	0 - 400	-2	-2	-2	-3	-5	-7	-14	-27	0	4,8
	401 - 800	-4	1	-1	-3	-5	-8	-13	-24	-0,1	5,6
	801 - 1000	-8	-3	0	-2	-5	-8	-14	-25	0	4,4

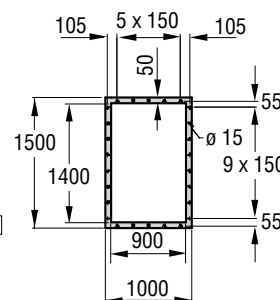
Dimensions and Weights - GTLB-3-140

Dimensions and Weights, motor in line with the fan

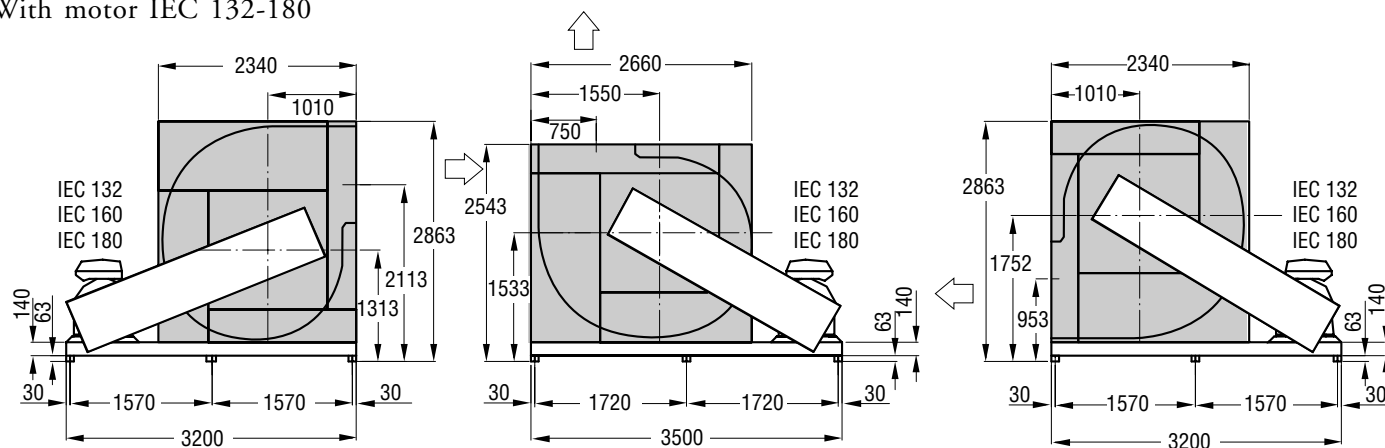
Right-hand version with 90° direction of discharge shown



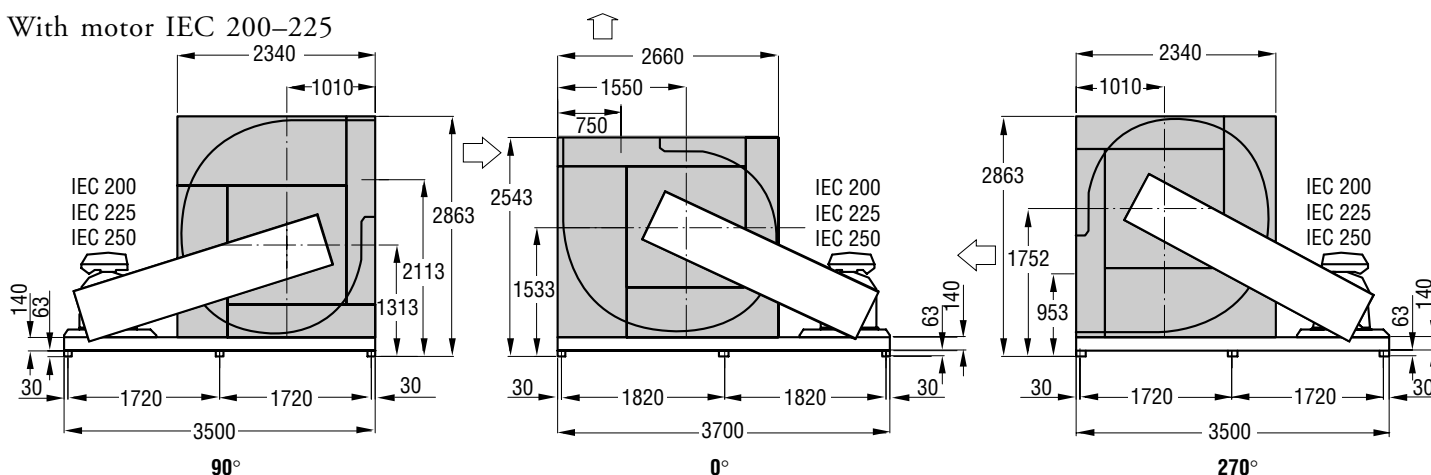
Outlet flange



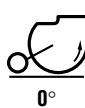
Right-hand version (viewed from drive side)
With motor IEC 132-180



With motor IEC 200-225



Left-hand version (same dimensions as the right-hand version)



Weight (kg)

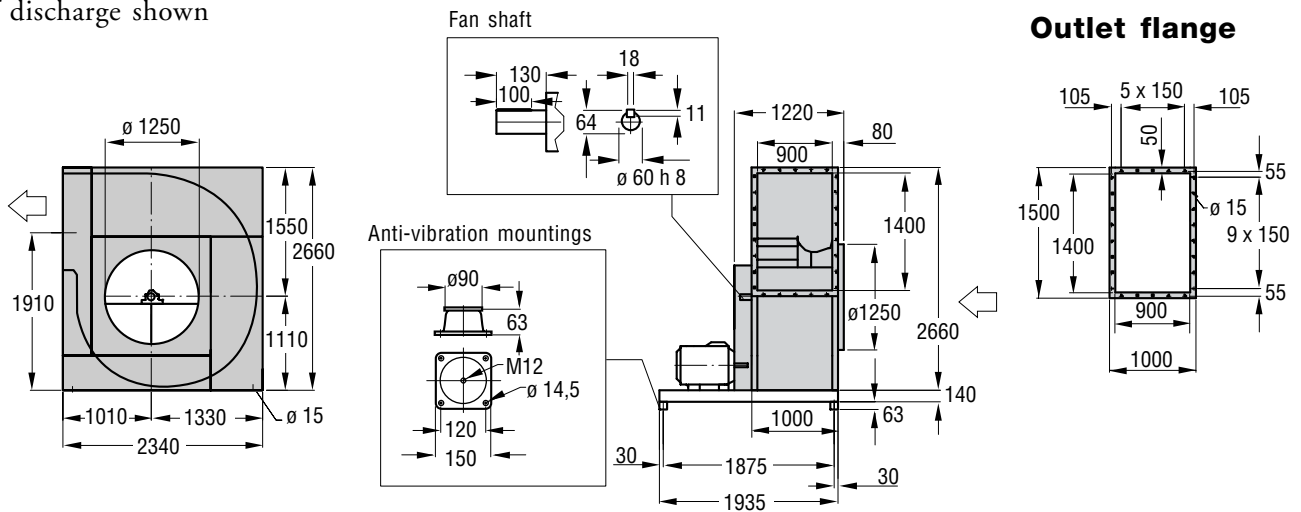
GTLB-3-140: 555,0
Base frame: 180,0
Belt drive: 50,0

Motor data: See separate motor list.

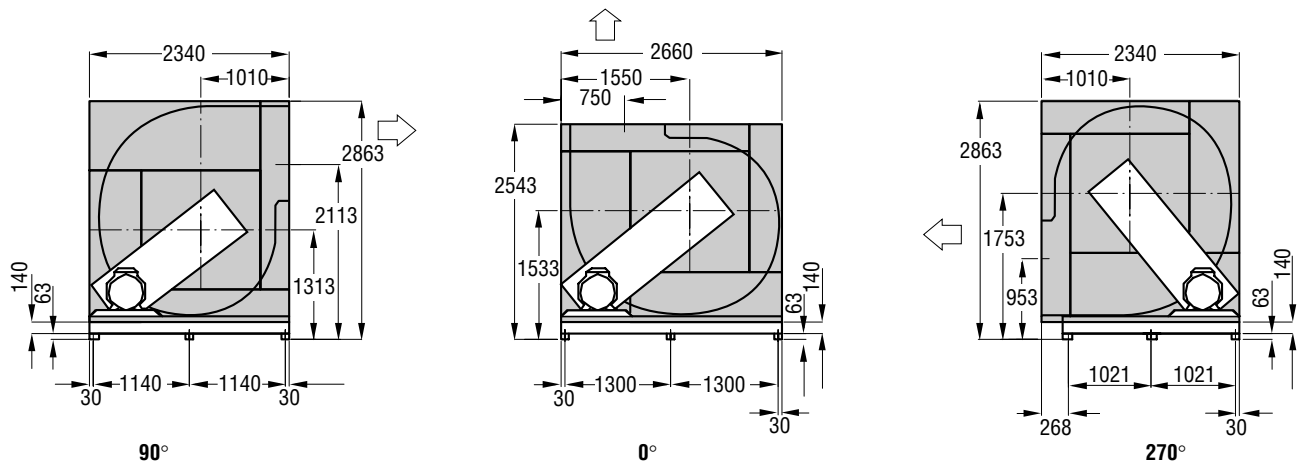
Dimensions and Weights - GTLB-3-140

Dimensions and Weights, motor placed beside the fan

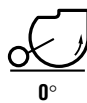
Right-hand version with 90° direction of discharge shown



Right-hand version (viewed from drive side)



Left-hand version (same dimensions as the right-hand version)

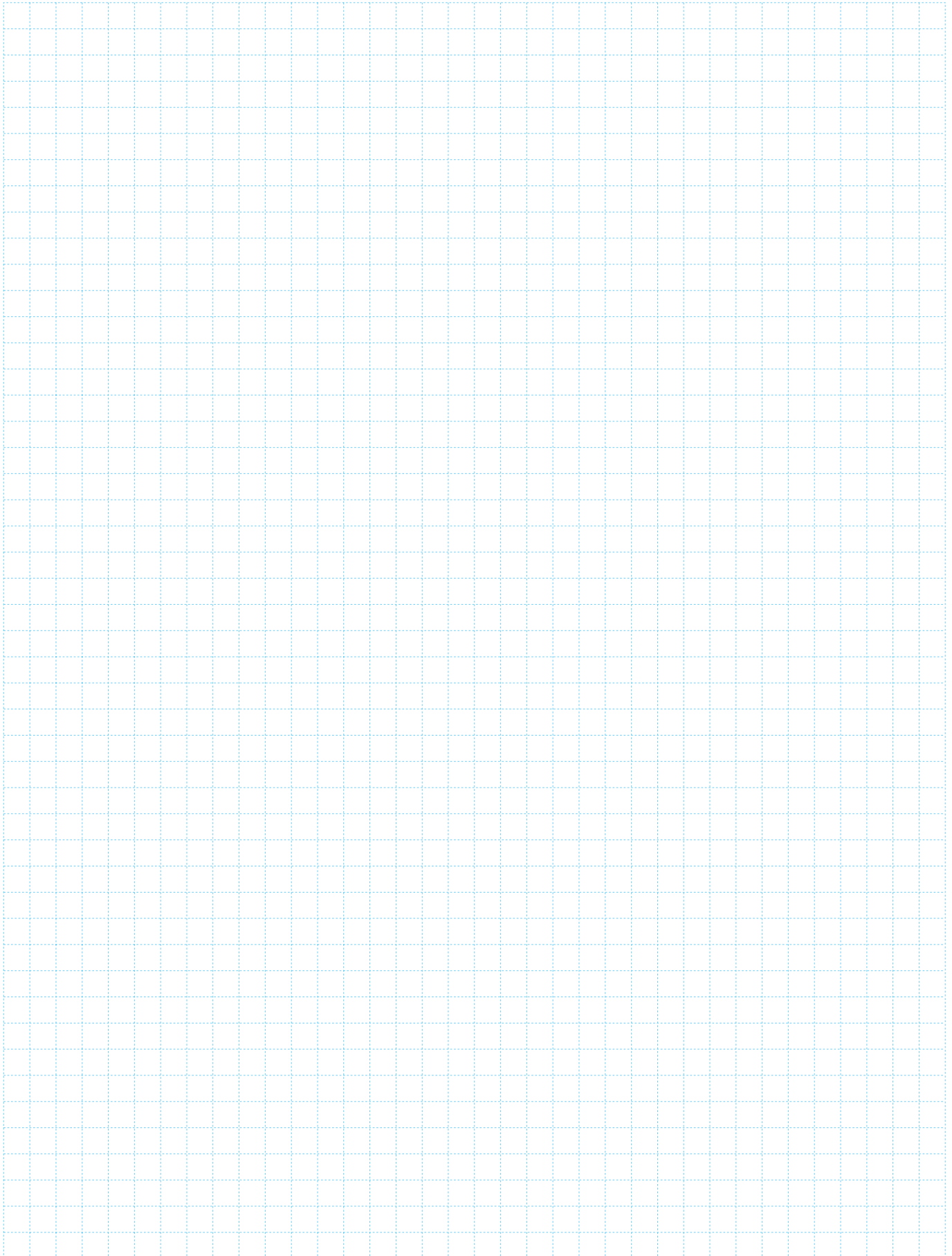


Weight (kg)

GTLB-3-140: 555,0
 Base frame: 240,0
 Belt drive: 50,0

Motor data: See separate motor list.

Notes



Fan Charts - Acoustic Data - GTLB-3-140

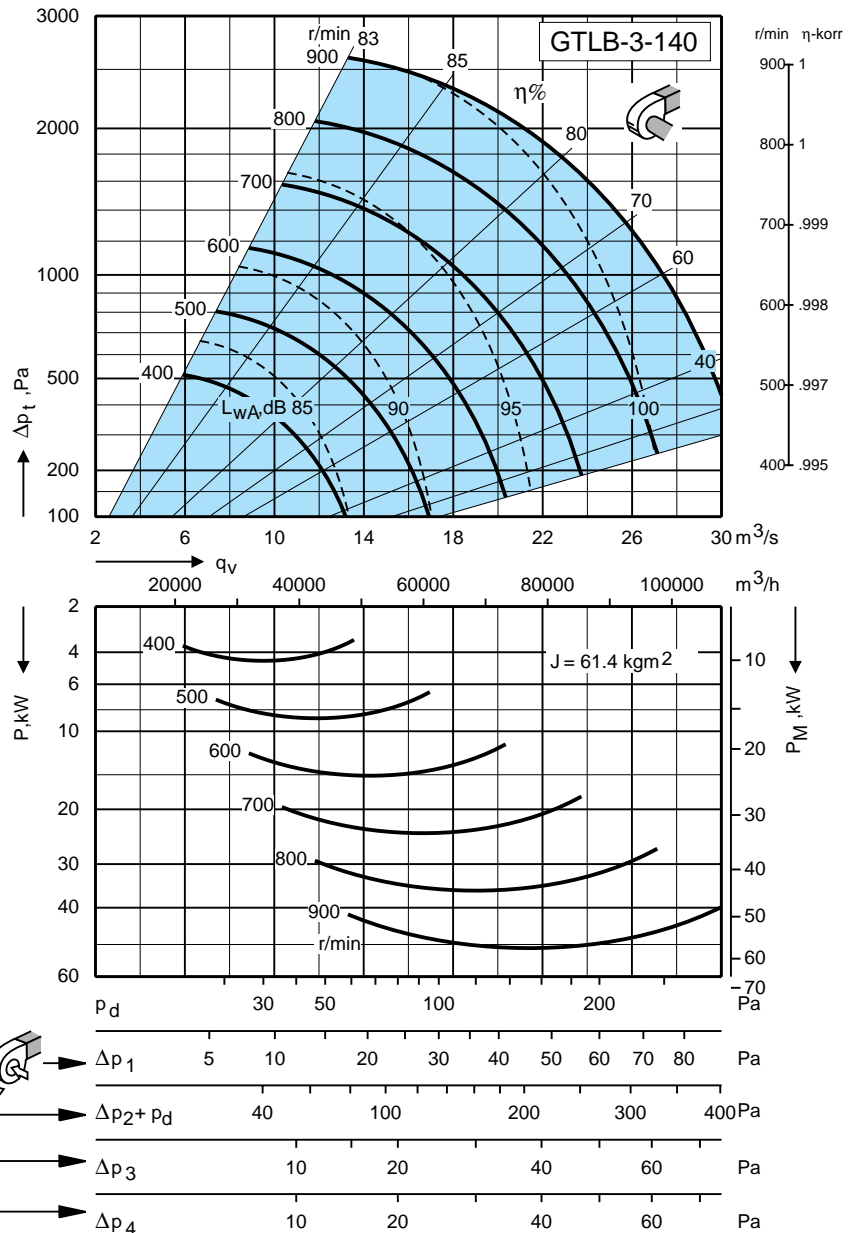
Belt-driven, single-inlet, backward-curved blades

Impeller diameter: 1400 mm



Only the GTLB is available in the smoke extraction version.

Note: Max. speed of the smoke extraction version is 870 rpm.



Acoustic Data

A-weighted sound power levels L_{WA} on the outlet side of a fan with the inlet and outlet ducted are specified in the chart. Correction figures can be read from the adjacent table. The following formula is used for breaking down the sound each octave band and each sound path:

$$L_{w_{okt}(s)} = L_{WA} + K_{okt}(s)$$

where K_{okt} can be obtained from the table. The following formula can be used for calculating the A-weighted sound power level on each sound path:

$$L_{WA(s)} = L_{WA} + [L_{wA(s)} - L_{WA}]$$

where the correction figure $L_{wA(s)} - L_{WA}$ can be obtained from the table.

The table also includes correction figure $L_{wt(s)} - L_{WA(s)}$ that can be used for obtaining the total sound power level on each sound path:

$$L_{wt(s)} = L_{WA(s)} + [L_{wt(s)} - L_{WA(s)}]$$

Sound path (s)	Speed range r/min	Correction, K_{okt} , dB								$L_{WA(s)} - L_{WA}$ dB	$L_{wt(s)} - L_{WA(s)}$ dB
		Octave band, mid-frequency, Hz									
		63	125	250	500	1000	2000	4000	8000		
To outlet duct (1)	0 - 400	2	-1	-2	-3	-5	-7	-14	-27	0	6,2
	401 - 800	0	2	-1	-3	-5	-8	-13	-24	0	6,5
	801 - 900	-4	-2	0	-2	-5	-8	-14	-25	0	4,9
To inlet duct (2)	0 - 400	2	-1	-2	-3	-5	-7	-14	-27	0	6,2
	401 - 800	0	2	-1	-3	-5	-8	-13	-24	0	6,5
	801 - 900	-4	-2	0	-2	-5	-8	-14	-25	0	4,9
To surroundings - the fan inlet and outlet ducted (3)	0 - 400	-5	-8	-9	-10	-11	-12	-22	-37	-6,1	5,5
	401 - 800	-7	-4	-8	-8	-10	-13	-21	-34	-5,4	5,8
	801 - 900	-11	-10	-7	-8	-10	-13	-22	-35	-5,7	4,0
To fan outlet (open-discharge fan) (4)	0 - 400	-1	-2	-2	-3	-5	-7	-14	-27	0	5,0
	401 - 800	-3	1	-1	-3	-5	-8	-13	-24	0	5,6
	801 - 900	-7	-3	0	-2	-5	-8	-14	-25	0	4,4

Motor Data - Single-speed Motors, 50 Hz

2 poles = 3000 r/min

Size designation		Ordering code APAL-	Rated output, kW	Speed, r/min	At rated output 1) Current at 400 V, ca A	$\frac{I_{st}^{2)}}$ I	$\frac{M_{st}}$ M	$\frac{M_{max}}$ M	Effici- ency, η %	Power factors, $\cos \varphi$	Weight, kg
IEC	ABB Motors										
71A	M2VA 71A	2-90037-c-d	0,37	2840	1,05	5,5	3,8	3,9	77,1	0,77	5,5
71B	M2VA 71B	2-90055-c-d	0,55	2830	1,39	5,7	3,6	3,7	79,2	0,78	6,5
80A	M2VA 80A	2-90075-c-d	0,75	2870	1,8	6,2	2,9	3,6	81,2	0,75	9
80B	M2VA 80B	2-90110-c-d	1,1	2850	2,5	6,1	2,3	3,5	82,2	0,78	11
90S	M2AA 90S	2-90150-c-d	1,5	2870	3,35	5,5	2,4	3,0	80,1	0,82	13
90L	M2AA 90L	2-90220-c-d	2,2	2870	4,55	7	2,7	3,0	80,8	0,86	16
100L	M2AA 100L	2-90300-c-d	3	2900	5,95	7,5	2,7	3,6	86	0,88	21
112 M	M2AA 112 M	2-00400-c-d	4	2850	7,4	7,5	2,8	3	86	0,91	25
132 SM	M2AA 132 SA	2-00550-c-d	5,5	2855	10,5	7,8	3,2	3,4	86	0,88	37
132 S	M2AA 132 SB	2-00750-c-d	7,5	2855	13,9	8,5	3,4	3,6	87	0,90	42
160 M	M2AA 160 MA	2-01100-c-d	11	2930	20	6,3	1,9	2,5	91,2	0,88	73
160 M	M2AA 160 M	2-01500-c-d	15	2920	26,5	6,6	2,3	2,5	91,7	0,90	84
160 L	M2AA 160 L	2-01850-c-d	18,5	2920	32	7,3	2,6	2,7	92,4	0,91	94
180 M	M2AA 180 M	2-02200-c-d	22	2930	38,5	7,2	2,5	2,7	92,8	0,89	119
200 ML	M2AA 200 MLA	2-03000-c-d	30	2955	53	7,3	2,4	3,1	93,2	0,88	175
200 ML	M2AA 200 MLB	2-03700-c-d	37	2950	64	7,3	2,5	3,2	93,6	0,89	200
225 SM	M2AA 225 SMB	2-04500-c-d	45	2960	79	7,3	2,5	2,8	93,9	0,88	235
250 SM	M2AA 250 SMA	2-05500-c-d	55	2970	95	7,5	2	3	94,4	0,89	285
280 S	M2CA 280 SA	2-07500-c-d	75	2977	131	7,4	2	2,9	94,9	0,88	480
280 SM	M2CA 280 SMA	2-09000-c-d	90	2975	152	7,2	2,1	2,7	95,3	0,90	545
315 S	M2CA 315 SA	2-11000-c-d	110	2982	194	7,6	2	3	95,5	0,86	695
315 SM	M2CA 315 SMA	2-13200-c-d	132	2982	228	7,4	2,2	3	95,7	0,88	770
315 M	M2CA 315 MB	2-16000-c-d	160	2981	269	7,5	2,3	3	96,1	0,89	840

1) Correction factors

The current values in the tables are applicable to motors wound for 400 V. All motors can be used for voltages between 380 and 420 V.

Motors with voltage code c=1 can be connected in delta to operate in the range of 220–240 V.
Motors with voltage code c=2 can be connected in star to operate in the range of 660–690 V.
The correction factors on the current in the range of 400 V will then be: 220–240 V = 1.73 and 660–690 V = 0.58.

The motors can also be wound for 500 V, and the voltage code is then c=5. The correction factor on the current at 400 V is then 0.8.

The speeds, efficiencies and power factors are applicable at 230, 400, 690 and 500 V.

2) $\frac{I_{st}}{I}$ = Ratio of motor starting current to full-load current.

Code suffix for voltage (c)

1 = 220–240 V delta/380–420 V star

2 = 380–420 V delta/660–690 V star

5 = 500 V star (sizes 71–100)
500 V delta (sizes 112–315)

Temperature sensors in the stator winding, code suffix (d)

0 = without

1 = with bimetal temperature contacts

2 = with thermistor

Motor Data – Single-speed Motors, 50 Hz

4 poles = 1500 r/min

Size designation		Ordering code APAL-	Rated output, kW	Speed, r/min	At rated output ¹⁾ Current at 400 V, ca A	$\frac{I_{st}^{2)}$	$\frac{M_{st}}{M}$	$\frac{M_{max}}{M}$	Effici- ency, η %	Power factors, $\cos \varphi$	Weight, kg
IEC	ABB Motors										
71A	M2VA 71A	4-90025-c-d	0,25	1410	0,78	4,3	2,7	2,9	70,4	0,71	5,5
71B	M2VA 71B	4-90037-c-d	0,37	1420	1,05	4,4	2,6	2,8	74,6	0,69	6,5
80A	M2VA 80A	4-90055-c-d	0,55	1390	1,55	4,6	2,6	2,9	75,3	0,71	9
80B	M2VA 80B	4-90075-c-d	0,75	1400	2,15	4,7	3,5	3,9	78,2	0,66	10,5
90S	M2AA 90S	4-90110-c-d	1,1	1410	2,59	5	2,2	2,7	77,5	0,81	13
90L	M2AA 90L	4-90150-c-d	1,5	1420	3,45	5	2,4	2,9	80,3	0,79	16
100LA	M2AA100 LA	4-90220-c-d	2,2	1430	4,8	5,5	2,4	2,9	83	0,81	21
100LB	M2AA100 LB	4-90300-c-d	3	1430	6,48	5,5	2,5	2,9	85	0,81	24
112 M	M2AA 112 M	4-00400-c-d	4	1435	8,6	7	2,9	3,1	85	0,80	27
132 S	M2AA 132 S	4-00550-c-d	5,5	1450	11,1	7,3	2,2	3	87	0,83	40
132 M	M2AA 132 M	4-00750-c-d	7,5	1450	14,8	7,9	2,5	3,2	88	0,83	48
160 M	M2AA 160 M	4-01100-c-d	11	1460	21,5	6,7	2,9	2,8	90,3	0,81	75
160 L	M2AA 160 L	4-01500-c-d	15	1455	28,5	6,8	3	2,8	91,1	0,84	94
180 M	M2AA 180 M	4-01850-c-d	18,5	1470	35	7	3,1	2,7	92,3	0,84	124
180 L	M2AA 180 L	4-02200-c-d	22	1470	41	7	2,9	2,8	92,4	0,83	141
200 ML	M2AA 200 MLA	4-03000-c-d	30	1475	56	6,7	2,6	2,8	92,9	0,83	180
225 SM	M2AA 225 SMA	4-03700-c-d	37	1480	68	6,6	2,4	2,5	93,6	0,84	215
225 SM	M2AA 225 SMB	4-04500-c-d	45	1480	83	6,7	2,7	2,6	94,2	0,83	230
250 SM	M2AA 250 SMA	4-05500-c-d	55	1480	98	7,5	2,3	2,8	94,6	0,86	275
280 S	M2CA 280 SA	4-07500-c-d	75	1483	137	6,9	2,2	2,8	94,6	0,84	445
280 SM	M2CA 280 SMA	4-09000-c-d	90	1484	163	7,6	2,5	2,9	95	0,85	490
315 S	M2CA 315 SA	4-11000-c-d	110	1487	198	6,5	2,1	2,6	95,4	0,85	675
315 SM	M2CA 315 SMA	4-13200-c-d	132	1486	238	7,3	2,2	2,7	95,6	0,85	730
315 M	M2CA 315 MB	4-16000-c-d	160	1486	282	7	2,4	2,7	96	0,86	850

1) Correction factors

The current values in the tables are applicable to motors wound for 400 V. All motors can be used for voltages between 380 and 420 V.

Motors with voltage code c=1 can be connected in delta to operate in the range of 220–240 V.
Motors with voltage code c=2 can be connected in star to operate in the range of 660–690 V.
The correction factors on the current in the range of 400 V will then be: 220–240 V = 1.73 and 660–690 V = 0.58.

The motors can also be wound for 500 V, and the voltage code is then c=5. The correction factor on the current at 400 V is then 0.8

The speeds, efficiencies and power factors are applicable at 230, 400, 690 and 500 V.

2) $\frac{I_{st}}{I}$ = Ratio of motor starting current to full-load current.

Code suffix for voltage (c)

1 = 220–240 V delat/380–420 V star

2 = 380–420 V delta/660–690 V star

5 = 500 V star (sizes 71–100)
500 V delta (sizes 112–315)

Temperature sensors in the stator winding, code suffix (d)

0 = without

1 = with bimetal temperature contacts

2 = with thermistor

Motor Data - Single-speed Motors, 50 Hz

6 poles = 1000 r/min

Size designation		Ordering code APAL-	Rated output, kW	Speed, r/min	At rated output 1) Current at 400 V, ca A	$\frac{I_{st}^{2)}}$	$\frac{M_{st}}{M}$	$\frac{M_{max}}{M}$	Efficiency, η %	Power factors, $\cos \phi$	Weight, kg
IEC	ABB Motors										
71A	M2VA 71A	6-90018-c-d	0,18	920	0,65	2,9	2,1	2,2	61,1	0,69	5,5
71B	M2VA 71B	6-90025-c-d	0,25	920	0,86	3,2	2,5	2,7	64,9	0,64	6,5
80A	M2VA 80A	6-90037-c-d	0,37	915	1,15	3,8	3,1	3,4	72,9	0,65	9
80B	M2VA 80B	6-90055-c-d	0,55	900	1,72	3,4	2,9	3,1	73,3	0,64	10
90S	M2AA 90S	6-90075-c-d	0,75	930	2,36	4	1,9	2,3	71,5	0,67	13
90L	M2AA 90L	6-90110-c-d	1,1	930	3,25	4	1,9	2,3	74,4	0,69	16
100L	M2AA 100L	6-90150-c-d	1,5	950	3,92	4,5	1,9	2,3	80	0,71	23
112 M	M2AA 112 M	6-00220-c-d	2,2	940	5,4	5,6	2,1	2,7	80,5	0,74	27
132 S	M2AA 132 S	6-00300-c-d	3	960	6,9	6,1	2,4	2,6	84,5	0,75	39
132 M	M2AA 132 MA	6-00400-c-d	4	960	8,7	7,1	2,6	2,8	85,5	0,78	46
132 M	M2AA 132 MB	6-00550-c-d	5,5	955	11,9	6,9	2,8	2,8	86	0,78	54
160 M	M2AA 160 M	6-00750-c-d	7,5	970	15,4	6,7	2	2,8	89,3	0,79	88
160 L	M2AA 160 L	6-01100-c-d	11	970	23	7,1	2,2	2,9	89,8	0,78	102
180 L	M2AA 180 L	6-01500-c-d	15	970	31	7	2,1	3	90,8	0,78	151
200 ML	M2AA 200 MLA	6-01850-c-d	18,5	985	36	7	2,5	2,7	91,1	0,81	165
200 ML	M2AA 200 MLB	6-02200-c-d	22	980	43	7,2	2,5	2,7	91,7	0,81	185
225 SM	M2AA 225 SMB	6-03000-c-d	30	985	56	6,6	2,5	2,7	92,8	0,83	225
250 SM	M2AA 250 SMA	6-03700-c-d	37	985	69	7,3	2,8	2,8	93,7	0,83	280
280 S	M2CA 280 SA	6-04500-c-d	45	990	85	7	2,6	2,6	94,2	0,82	440
280 SM	M2CA 280 SMA	6-05500-c-d	55	989	102	7	2,7	2,6	94,5	0,83	475
315 S	M2CA 315 SA	6-07500-c-d	75	990	143	6,8	2,2	2,6	94,7	0,81	630
315 SM	M2CA 315 SMA	6-09000-c-d	90	989	163	7	2,3	2,5	95,2	0,84	720
315 M	M2CA 315 MB	6-11000-c-d	110	988	198	6,8	2,4	2,5	95,3	0,84	805

1) Correction factors

The current values in the tables are applicable to motors wound for 400 V. All motors can be used for voltages between 380 and 420 V.

Motors with voltage code c=1 can be connected in delta to operate in the range of 220–240 V.

Motors with voltage code c=2 can be connected in star to operate in the range of 660–690 V.

The correction factors on the current in the range of 400 V will then be: 220–240 V = 1.73 and 660–690 V = 0.58.

The motors can also be wound for 500 V, and the voltage code is then c=5. The correction factor on the current at 400 V is then 0.8.

The speeds, efficiencies and power factors are applicable at 230, 400, 690 and 500 V.

Code suffix for voltage (c)

1 = 220–240 V delta/380–420 V star

2 = 380–420 V delta/660–690 V star

5 = 500 V star (sizes 71–100)

500 V delta (sizes 112–315)

Temperature sensors in the stator winding, code suffix (d)

0 = without

1 = with bimetal temperature contacts

2 = with thermistor

2) $\frac{I_{st}}{I}$ = Ratio of motor starting current to full-load current.

Motor Data – Single-speed Motors, 50 Hz

8 poles = 750 r/min

Size designation		Ordering code APAL-	Rated output, kW	Speed, r/min	At rated output 1) Current at 400 V, ca A	$\frac{I_{st}^{2)}}{I}$	$\frac{M_{st}}{M}$	$\frac{M_{max}}{M}$	Efficiency, η %	Power factors, $\cos \phi$	Weight, kg
IEC	ABB Motors										
80 A	M2VA 80A	8-90018-c-d	0,18	700	0,85	3,1	3,2	3,6	59,9	0,53	10
80 B	M2VA 80B	8-90025-c-d	0,25	680	0,95	3,1	2,9	3,1	70,7	0,56	10,5
90 S	M2AA 90S	8-90037-c-d	0,37	700	1,6	3	1,9	2,4	61,5	0,56	13
90 L	M2AA 90L	8-90055-c-d	0,55	690	2,35	3	1,7	2,1	62,9	0,57	16,5
100 L	M2AA 100LA	8-90075-c-d	0,75	700	2,55	3,5	2,1	2,7	72	0,59	20
100 L	M2AA 100LB	8-90110-c-d	1,1	700	3,35	3,5	2,1	2,7	73	0,64	22
112 M	M2AA 112 M	8-00150-c-d	1,5	695	4,5	4,1	1,9	2,4	75	0,65	28
132 S	M2AA 132 S	8-00220-c-d	2,2	720	5,9	5,3	1,9	2,5	81	0,67	46
132 M	M2AA 132 M	8-00300-c-d	3	720	7,8	5,5	2,4	2,6	82	0,68	53
160 M	M2AA 160 MA	8-00400-c-d	4	715	10	5,2	2,1	2,4	84	0,69	75
160 M	M2AA 160 M	8-00550-c-d	5,5	710	13,4	5,4	2,4	2,6	85	0,70	88
160 L	M2AA 160 L	8-00750-c-d	7,5	715	18,1	5,4	2,4	2,8	86	0,70	118
180 L	M2AA 180 L	8-01100-c-d	11	720	23,5	5,9	2,4	2,6	89	0,76	147
200 ML	M2AA 200 MLA	8-01500-c-d	15	740	29	7,4	1,8	3	91,1	0,82	175
225 SM	M2AA 225 SMA	8-01850-c-d	18,5	730	37	6,2	1,9	2,7	91,1	0,79	210
225 SM	M2AA 225 SMB	8-02200-c-d	22	730	45	6	1,9	2,7	91,5	0,77	225
250 SM	M2AA 250 SMA	8-03000-c-d	30	735	59	6,9	1,9	2,9	92,8	0,79	280
280 S	M2CA 280 SA	8-03700-c-d	37	741	74	6,8	1,6	2,7	93	0,78	460
280 SM	M2CA 280 SMA	8-04500-c-d	45	741	90	7,1	1,8	2,8	93,5	0,78	500
315 S	M2CA 315 SA	8-05500-c-d	55	741	107	7,1	1,8	2,8	94	0,80	630
315 SM	M2CA 315 SMA	8-07500-c-d	75	740	142	7,1	1,8	2,8	94,5	0,81	715
315 M	M2CA 315 MB	8-09000-c-d	90	740	169	7,3	1,9	2,8	94,7	0,82	800

1) Correction factors

The current values in the tables are applicable to motors wound for 400 V. All motors can be used for voltages between 380 and 420 V.

Motors with voltage code c=1 can be connected in delta to operate in the range of 220–240 V.

Motors with voltage code c=2 can be connected in star to operate in the range of 660–690 V.

The correction factors on the current in the range of 400 V will then be: 220–240 V = 1.73 and 660–690 V = 0.58.

The motors can also be wound for 500 V, and the voltage code is then c=5. The correction factor on the current at 400 V is then 0.8.

The speeds, efficiencies and power factors are applicable at 230, 400, 690 and 500 V.

Code suffix for voltage (c)

1 = 220–240 V delta/380–420 V star

2 = 380–420 V delta/660–690 V star

5 = 500 V star (sizes 71–100)

5 = 500 V delta (sizes 112–315)

2) $\frac{I_{st}}{I}$ = Ratio of motor starting current to full-load current.

Temperature sensors in the stator winding, code suffix (d)

0 = without

1 = with bimetal temperature contacts

2 = with thermistor

Motor Data - Two-speed Motors, 50 Hz

2/4 poles = 3000/1500 r/min
One stator winding (Dahlander wound)

Size designation		Ordering code ARAL-2-	No. of motor poles	Rated output, kW	Speed, r/min	At rated output 1)		$\frac{I_{st}^{2})}{I}$	$\frac{M_{st}}{M}$	$\frac{M_{max}}{M}$	Efficiency, η %	Power factors, $\cos \phi$	Weight, kg
IEC	ABB Motors					Current at 400 V, ca A							
71	M2VA 71 B	90055-c-d	2 4	0,55 0,12	2700 1470	1,3 0,75	3,8 3,4	1,4 2,2	1,5 2,3	67 55	0,91 0,42	6,5	
80	M2VA 80 A	90075-c-d	2 4	0,75 0,15	2850 1430	1,8 0,65	4,9 3,9	2,2 2,4	2,3 2,5	73 52	0,83 0,65	9	
80	M2VA 80 B	90110-c-d	2 4	1,1 0,25	2840 1430	2,6 0,9	4,9 3,9	2,2 2,2	2,3 2,3	73 60	0,84 0,67	11	
90 S	M2AA 90 S	90150-c-d	2 4	1,5 0,33	2860 1460	3,3 1,1	5,2 3,9	1,8 1,1	2,4 2,1	77 66	0,87 0,67	13	
90 L	M2AA 90 L	90220-c-d	2 4	2,2 0,45	2860 1460	4,6 1,4	5,9 4,4	2,1 1,2	2,6 2,3	80 73	0,88 0,65	16	
100 L	M2AA 100 LB	90350-c-d	2 4	3,5 0,7	2880 1470	7 2	6,2 4,8	2,1 1,2	2,6 3	80 77	0,91 0,65	25	
112 M	M2AA 112 M	00451-c-d	2 4	4,5 1	2875 1450	8,4 2,4	7 6	1,8 1,9	2,3 2,8	83 80	0,93 0,76	32	
132 S	M2AA 132 S	00620-c-d	2 4	6,2 1,3	2880 1455	11,8 3,5	7 6,5	2 2,6	2,6 3,3	84 80	0,91 0,67	42	
132 M	M2AA 132 M	00830-c-d	2 4	8,3 1,7	2875 1455	15,4 4,2	7,4 6,6	2,5 2,7	2,7 3,3	84 82	0,93 0,71	56	
160 M	M2AA 160MA	01000-c-d	2 4	10 2	2910 1465	19 4,8	5,9 6,1	1,5 2,4	2,3 2,8	85 83,5	0,89 0,73	73	
160 M	M2AA 160 M	01600-c-d	2 4	16 3,2	2915 1465	28,5 7	6,6 6,3	1,8 2,5	2,4 2,8	87,5 86,5	0,92 0,76	94	
160 L	M2AA 160 L	01950-c-d	2 4	19,5 4,5	2930 1465	36 9,7	7,6 6,4	2,3 2,5	2,9 2,8	89 88	0,89 0,77	100	
180 M	M2AA 180 M	02150-c-d	2 4	21,5 4,7	2935 1465	38 10	7 5,3	2,1 2,1	2,6 2,3	90 88	0,91 0,77	137	
180 L	M2AA 180 L	02600-c-d	2 4	26 5,2	2940 1470	47 11	6,9 5,8	2,3 2,4	2,6 2,4	90,5 89,5	0,89 0,75	151	
200 ML	M2AA 200 MLA	03200-c-d	2 4	32 8	2940 1465	58 16	7,1 6,2	2 2	2,5 2,2	90 89	0,89 0,85	180	
200 ML	M2AA 200 MLB	03900-c-d	2 4	39 10	2950 1475	69 19	7,4 6,2	2 2	2,6 2,3	91,5 91	0,89 0,85	205	
200 ML	M2AA 200 MLC	04200-c-d	2 4	42 11	2950 1470	75 23	7,7 5,6	2,2 2,1	3 2,5	92,5 91	0,89 0,77	205	
225 SM	M2AA 225 SMB	04500-c-d	2 4	45 13	2955 1475	76 25	7,4 5,3	2 2	2,6 2,1	93 91,5	0,92 0,82	235	
225 SM	M2AA 225 SMC	05500-c-d	2 4	55 15	2955 1475	94 29	7,3 5,4	2 2	2,6 2,2	93,5 92,5	0,91 0,82	260	
250 SM	M2AA 250 SMB	07500-c-d	2 4	75 25	2955 1475	125 48	8,9 5,5	2,3 2	3,1 2,2	94,5 93	0,92 0,82	330	

1) Correction factors
 Correction factors for current at other voltages:
 230 V = 1.74 ; 500 V = 0.80
 The speeds, efficiencies and power factors are applicable at 230, 400 and 500 V.

2) $\frac{I_{st}}{I}$ = Ratio of motor starting current to full-load current

Code suffix for voltage (c)

- 1 = 220-230 V (sizes 71-132)
230 V (sizes 160-250)
- 2 = 380-400 V (sizes 112-132)
400 V (sizes 160-315)
- 4 = 400-415 V (sizes 71-100)
415 V (sizes 160-315)
- 5 = 500 V (sizes 71-315)

Temperature sensors in the stator winding, code suffix (d)

- 0 = without
- 1 = with bimetal temperature contacts
- 2 = with thermistor

Motor Data – Two-speed Motors, 50 Hz

4/6 poles = 1500/1000 r/min
Two separate windings

Size designation		Ordering code ATAL-4-	No. of motor poles	Rated output, kW	Speed, r/min	At rated output 1) Current at 400 V, ca A	$\frac{I_{st}^{2})}{I}$	$\frac{M_{st}}{M}$	$\frac{M_{max}}{M}$	Efficiency, η %	Power factors, $\cos \phi$	Weight, kg
IEC	ABB Motors											
71	M2VA 71 B	90030-c-d	4 6	0,3 0,1	1350 900	0,9 0,6	2,8 2	1 1,05	1,1 1,15	54 30	0,86 0,79	6,5
80	M2VA 80 A	90045-c-d	4 6	0,45 0,15	1390 945	1,2 0,7	3,2 3	1,6 1,5	1,7 1,6	65 42	0,85 0,75	10
80	M2VA 80 B	90075-c-d	4 6	0,75 0,22	1400 955	1,9 0,9	3,3 3,2	1,7 1,6	1,8 1,7	67 48	0,86 0,74	10,5
90 S	M2AA 90 S	90100-c-d	4 6	1 0,3	1400 940	2,5 1,2	4,3 2,6	1,8 1	2,2 1,7	73 53	0,83 0,7	13
90 L	M2AA 90 L	90150-c-d	4 6	1,5 0,45	1400 930	3,5 1,6	4,3 2,9	1,7 1	2,1 1,8	72 52	0,84 0,73	16
100 L	M2AA 100 LA	90200-c-d	4 6	2 0,6	1430 960	4,5 2	5 3,3	1,8 1	2,4 1,9	77 62	0,85 0,72	20
100 L	M2AA 100 LB	90250-c-d	4 6	2,5 0,8	1430 960	5,5 2,5	5,6 3,5	2 1,1	2,5 2	79 68	0,84 0,71	23
112 M	M2AA 112 M	00300-c-d	4 6	3 1	1445 975	6,3 3,1	6 4	1,3 1	2,3 2,2	82 67	0,84 0,68	33
132 S	M2AA 132 S	00450-c-d	4 6	4,5 1,5	1460 985	9,2 5,1	6,5 4,2	1,5 1	2,3 2,2	83 67	0,85 0,64	48
132 M	M2AA 132 M	00600-c-d	4 6	6 2	1460 980	12 5,6	7,1 4,5	1,8 1,3	2,5 2	84 71	0,86 0,73	59
160 M	M2AA 160 M	01050-c-d	4 6	10,5 3,5	1460 965	21 8,6	6,4 4,1	2 1,3	2,5 1,7	87 75,5	0,84 0,78	94
160 L	M2AA 160 L	01450-c-d	4 6	14,5 4,5	1460 970	28 11	6,9 4,6	2,2 1,5	2,6 1,9	88,5 77	0,85 0,76	117
180 M	M2AA 180 M	01601-c-d	4 6	16 5	1470 980	31 12,5	6,3 4,6	1,9 1,5	2,5 2	89 78	0,83 0,73	137
180 L	M2AA 180 L	02001-c-d	4 6	20 6,5	1470 980	39 16	7,2 5	2,4 1,8	2,7 2	90 79,5	0,83 0,74	161
200 ML	M2AA 200 MLA	02300-c-d	4 6	23 7,2	1475 985	43 15	7,7 7,8	1,6 1,9	2,8 2,9	89,5 84	0,88 0,87	175
200 ML	M2AA 200 MLB	03000-c-d	4 6	30 9	1470 985	54 18	7,7 7,9	1,6 1,7	2,7 2,5	90 83,5	0,90 0,89	200
225 SM	M2AA 225 SMB	03400-c-d	4 6	34 11	1470 985	60 21	7,7 6,7	1,5 1,3	2,7 2,3	91 85	0,91 0,89	225
225 SM	M2AA 225 SMC	04200-c-d	4 6	42 14	1475 985	75 27	8,4 6,8	1,7 1,4	3 2,3	91,5 89	0,89 0,89	255
250 SM	M2AA 250 SMB	06300-c-d	4 6	63 18,5	1475 985	110 40	7,5 7,3	2,4 3	2,7 2,6	93,5 87	0,89 0,79	335
280 SM	M2CA 280 SMA	07700-c-d	4 6	77 25	1486 991	144 54	7,6 7,7	2,4 3,2	2,9 2,7	93,9 89,3	0,83 0,76	490
280 M	M2CA 280 MB	09000-c-d	4 6	90 28	1485 991	161 58	7,4 7,7	2,3 3,2	2,7 2,8	94,2 89,8	0,86 0,78	550
315 SM	M2CA 315 SMA	11000-c-d	4 6	110 32	1489 992	199 67	6,6 6,5	1,9 2,8	2,6 2,9	95,2 91,2	0,85 0,78	730
315 M	M2CA 315 MB	12500-c-d	4 6	125 37	1488 992	219 75	6,6 6,4	1,9 2,9	2,4 2,8	95,5 92,2	0,86 0,79	850
315 L	M2CA 315 LA	15000-c-d	4 6	150 44	1488 991	260 88	6,6 6,4	1,9 3	2,4 2,7	95,7 92,6	0,87 0,79	970

1) Correction factors
Correction factors for current at other voltages:
230 V = 1.74 ; 500 V = 0.80
The speeds, efficiencies and power factors are applicable at 230, 400 and 500 V.

2) $\frac{I_{st}}{I}$ = Ratio of motor starting current to full-load current

Code suffix for voltage (c)

- 1 = 220–230 V (sizes 71–132)
230 V (sizes 160–250)
- 2 = 380–400 V (sizes 112–132)
400 V (sizes 160–315)
- 4 = 400–415 V (sizes 71–100)
415 V (sizes 160–315)
- 5 = 500 V (sizes 71–315)

Temperature sensors in the stator winding, code suffix (d)

- 0 = without
1 = with bimetal temperature contacts
2 = with thermistor

Motor Data - Two-speed Motors, 50 Hz

4/8 poles = 1500/750 r/min
One stator winding (Dahlander-connection)

Size designation		Ordering code ARAL-4-	No. of motor poles	Rated output, kW	At rated output 1)								Weight, kg
IEC	ABB Motors				Speed, r/min	Current at 400 V, ca A	$I_{st}^{2)}$	$\frac{M_{st}}{M}$	$\frac{M_{max}}{M}$	Efficiency, η %	Power factors, $\cos \varphi$		
71	M2VA 71 B	90037-c-d	4 8	0,37 0,09	1360 700	1,1 0,48	3,1 1,7	1,3 1,8	1,4 1,9	58 19	0,84 0,52	6,5	
80	M2VA 80 A	90055-c-d	4 8	0,55 0,11	1410 690	1,7 0,6	3,6 2,4	1,9 1,6	2 1,7	62 40	0,74 0,65	9	
80	M2VA 80 B	90075-c-d	4 8	0,75 0,2	1410 690	2,1 1	3,7 2,4	2 1,6	2,1 1,7	69 46	0,76 0,64	10,5	
90 S	M2AA 90 S	90110-c-d	4 8	1,1 0,26	1410 700	2,8 1,2	4,2 2,4	1,8 1,2	2,3 1,9	73 53	0,80 0,63	13	
90 L	M2AA 90 L	90170-c-d	4 8	1,7 0,35	1390 700	4,0 1,6	4,5 2,5	2,2 1,5	2,6 2,1	74 57	0,82 0,57	16	
100 L	M2AA 100 LA	90230-c-d	4 8	2,3 0,5	1415 715	5,2 1,9	4,6 2,7	1,8 1,2	2,4 1,9	76 63	0,84 0,6	20	
100 L	M2AA 100 LB	90280-c-d	4 8	2,8 0,6	1430 720	6,4 2,2	5,2 3	2 1,2	2,6 2,2	81 68	0,82 0,58	23	
112 M	M2AA 112 M	00350-c-d	4 8	3,5 0,7	1430 720	7 2,5	6,8 4,4	1,6 1,7	2,5 2,7	81 71	0,89 0,58	32	
132 S	M2AA 132 S	00500-c-d	4 8	5 1	1450 725	9,9 3,3	6,4 3,6	1,5 1	2,3 2	83 74	0,87 0,59	48	
132 M	M2AA 132 M	00680-c-d	4 8	6,8 1,4	1460 730	13,7 5,1	7,6 3,6	2 1,4	2,8 2,7	85 73	0,84 0,55	59	
160 M	M2AA 160 M	01050-c-d	4 8	10,5 2,2	1460 735	21 7,4	6,9 3,7	2,2 1,5	2,7 2,3	87,5 79	0,84 0,54	94	
160 L	M2AA 160 L	01550-c-d	4 8	15,5 2,7	1460 735	30 9,5	6,9 3,9	2,2 1,7	2,6 2,6	88,5 79,5	0,85 0,51	117	
180 M	M2AA 180 M	01700-c-d	4 8	17 3,4	1470 730	33 11	5,8 4,3	1,7 1,2	2,3 1,9	88,5 78	0,85 0,56	137	
180 L	M2AA 180 L	02200-c-d	4 8	22 4,4	1475 735	43 15	6,7 3,9	2 1,7	2,6 2,3	89,5 79	0,83 0,53	161	
200 ML	M2AA 200 MLA	02900-c-d	4 8	29 6,5	1470 730	54 17	6,9 4,2	2,2 1,9	2,4 1,9	90,5 86	0,86 0,64	180	
200 ML	M2AA 200 MLB	03300-c-d	4 8	33 8	1475 730	61 21	7,8 4,2	2,6 1,9	2,6 1,8	91,5 86,5	0,86 0,64	205	
225 SM	M2AA 225 SMB	04200-c-d	4 8	42 10	1480 740	85 27	7,8 5	2,5 2,2	3 2,3	92 89,5	0,78 0,61	265	
225 SM	M2AA 225 SMC	05000-c-d	4 8	50 11	1465 735	91 28	7,3 4,7	2,3 2	2,5 2	92,5 89,5	0,87 0,65	265	
250 SM	M2AA 250 SMB	06000-c-d	4 8	60 15	1475 735	104 34	7,9 4,7	2,6 2,1	2,7 2	93 90	0,86 0,70	335	
280 S	M2CA 280 SA	06500-c-d	4 8	65 15	1484 743	121 38	7,5 5,3	2,7 2,8	2,9 2,3	93,2 90	0,84 0,63	445	
280 SM	M2CA 280 SMA	08000-c-d	4 8	80 20	1486 743	150 50	8,5 5,4	3,3 2,9	3,4 2,6	93,8 91,5	0,83 0,63	490	
280 M	M2CA 280 MB	09000-c-d	4 8	90 23	1486 742	164 56	8,8 5,4	3,6 2,8	3,5 2,6	94,1 91,8	0,85 0,64	550	
315 SM	M2CA 315 SMA	11000-c-d	4 8	110 22	1487 744	197 56	6,8 4,9	1,9 2,1	2,6 2,5	94,6 92,5	0,85 0,62	730	
315 M	M2CA 315 MB	13200-c-d	4 8	132 26	1486 746	235 65	6,8 4,8	2 2	2,6 2,4	94,9 93	0,86 0,64	850	
315 L	M2CA 315 LA	16000-c-d	4 8	160 32	1486 743	283 80	7 4,8	2,1 2,1	2,7 2,5	95,2 93,4	0,86 0,64	970	

1) Correction factors
Correction factors for current at other voltages:
230 V = 1.74 ; 500 V = 0.80
The speeds, efficiencies and power factors are applicable at 230, 400 and 500 V.

2) $\frac{I_{st}}{I}$ = Ratio of motor starting current to full-load current

Delkod för spänning (c)

- 1 = 220-230 V (sizes 71-132)
230 V (sizes 160-250)
- 2 = 380-400 V (sizes 112-132)
400 V (sizes 160-315)
- 4 = 400-415 V (sizes 71-100)
415 V (sizes 160-315)
- 5 = 500 V (sizes 71-315)

Temperature sensors in the stator winding, code suffix (d)

- 0 = without
- 1 = with bimetal temperature contacts
- 2 = with thermistor

Accessories

Plummer block with grease nipple

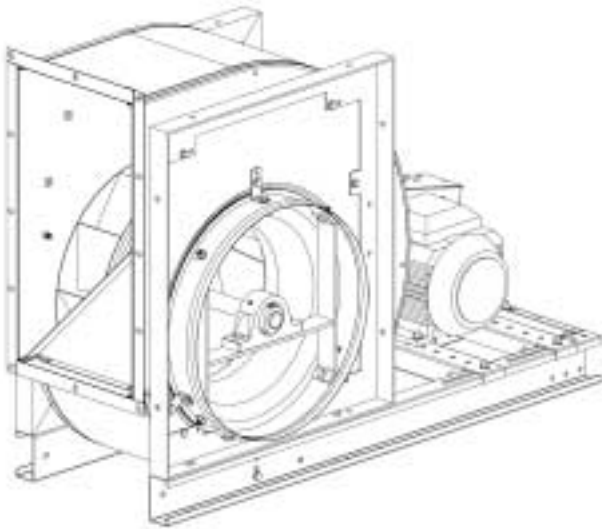
GTLZ-06-3-ccc-d-0 Plummer block with grease nipple for the GTHB-3 (for size 040–071)

GTLZ-09-3-ccc-d-0 Plummer block with grease nipple for the GTLB and GTLF (for sizes 025–071)

d = 1 for right-hand version

d = 2 for left-hand version

The type GTLZ-06 and -09 Plummer block with grease nipple is mounted on a welded, compact frame with



bearing bracket. Single-row, deep-groove ball bearings designed to be secured to the shaft by means of a tapered adapter sleeve are used in GTLZ-06 and -09 plummer blocks.

If the fan is supplied with a flat belt drive, it should be equipped with the GTLZ-06/09.

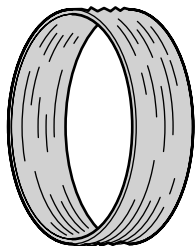


Accessories

Flexible connections, inlet

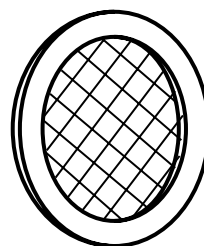
GTLZ-11-3-ccc-1-0 Normal version, max. +80 °C

GTLZ-12-3-ccc-1-0 Smoke extraction version,
max. +400 °C/2 hours



Protective screen, inlet

GTLZ-13-3-ccc-1-0 Protective screen



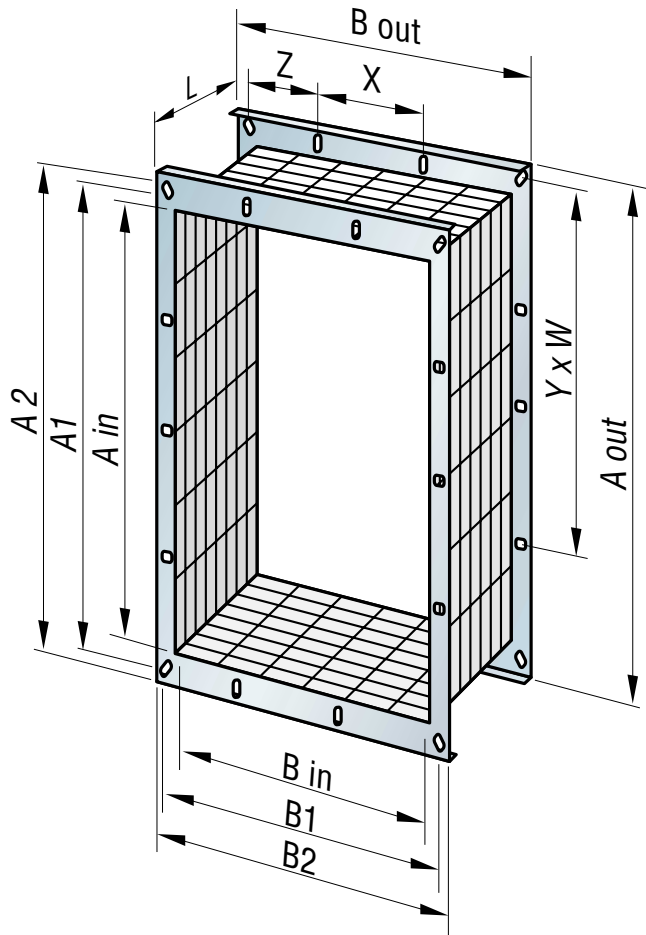
Accessories

Flexible connections, outlet

GTLZ-21-3-ccc-1-0 Normal version, max. +80 °C

GTLZ-22-3-ccc-1-0 Smoke extraction version,
max. +400 °C/2 hours

Dimension sketch



Protective screen, outlet

GTLZ-23-3-ccc-1-0 Protective screen, outlet

Counterflange, outlet

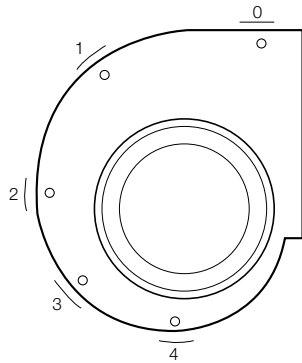
GTLZ-24-3-ccc-1-0 Counterflange

Size	A in	A out	A 1	A 2	B in	B out	B 1	B 2	Z	X	Y	W	n	D	L
025	322	382	352	362	179	239	209	219	-	-	2	176,0	6	10	115
031	404	465	434	444	217	277	247	257	-	-	2	217,0	6	10	115
040	507	567	537	546	269	329	299	308	149,5	-	4	134,3	12	10	115
045	569	629	599	530	299	359	329	338	164,5	-	4	149,8	12	10	150
050	638	698	668	677	334	394	364	373	182,0	-	4	167,0	12	10	150
056	715	775	745	754	375	435	405	414	109,3	186,3	4	186,3	14	10	150
063	801	861	831	840	417	477	447	456	119,6	207,8	4	207,8	14	10	150
071	898	958	928	937	466	526	496	505	132,0	232,0	4	232,0	14	10	150
080	1015	1095	1056	1065	533	613	573	583	212,0	153,0	5	212,0	16	10	145
090	1138	1218	1175	1185	595	675	632	642	236,0	165,0	5	236,0	16	10	145
100	1267	1367	-	1320	670	770	-	723	227,0	270,0	6	220,0	18	10	150
112	1120	1220	-	1180	710	810	-	770	150	300,0	7	150,0	20	15	150
125	1250	1350	-	1310	800	900	-	860	150	450,0	8	150,0	24	15	150
140	1400	1500	-	1460	/900	1000	-	960	150	450,0	9	150,0	24	15	150

Accessories

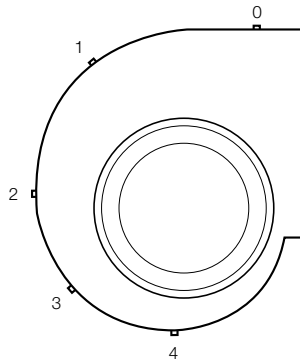
Inspection cover

GTLZ-32-3-ccc-d-0 Inspection cover
 Mounted on the back plate of the fan. Made of galvanised sheet steel.
 d = location on fan casing, 0 – 4, see illustration



Drain

GTLZ-34-3-ccc-d-0 Drain
 Mounted on the back plate of the fan. Made of galvanised sheet steel.
 d = location on fan casing, 0 – 4, see illustration



Note! The position of the inspection cover and drain depends on the discharge direction.

Recommended positions are:

GT...-3-bbb-c-d1-00 (0°)	GTLZ-32-3-ccc-4-0 GTLZ-34-3-ccc-2-0
GT...-3-bbb-c-d3-00 (90°)	GTLZ-32-3-ccc-1-0 GTLZ-34-3-ccc-4-0
GT...-3-bbb-c-d7-00 (270°)	GTLZ-32-3-ccc-3-0 GTLZ-34-3-ccc-0-0

Anti-vibration mountings

GTLZ-42-3-ccc-d-0 Anti-vibration mountings, rubber
 GT-3-025-071
 d = 1 GTLB and GTLF (4 pc.)
 d = 2 GTHB (4 pc.)

GT-3-080-100
 d = 1 with motor IEC 100–132 (4 pc.)
 d = 2 with motor IEC 160–225 (6 pc.)

GT-3-112-140
 d = 1 (6 pc.)

Accessories

Flow Measurement Device

- GTLZ-50-3-ccc-1-0** Flow measurement device for the GTLF
- GTLZ-51-3-ccc-1-0** Flow measurement device for the GTLB, (not for sizes 112–140)
- GTLZ-52-3-ccc-1-0** Flow measurement device for the GTHB

GTLZ-50, 51, 52 Flow measurement devices

The flow measurement device is used for measuring the air flow in type GT fans. This is done by measuring the differential pressure in the device. The flow measurement device should be mounted in the fan inlet. The air flow is calculated as a function of coefficient *k* and the differential pressure reading Δp_m in the following manner:

$$q = \frac{1}{k} \times \sqrt{\Delta p_m}$$

- där *q* = air flow (m³/s)
- Δp_m = differential pressure reading (Pa)
- k* = coefficient unique to the fan selected

The air flow that corresponds to the differential pressure reading can most easily be read with a manometer whose scale is graduated in accordance with the function above for a specific fan. On request, detailed charts can be supplied. The accuracy of the readings is ±10 %. If the flow measurement device is recalibrated at the site (for instance in an air handling unit), an accuracy of ±5 % can be achieved.



Flow Measurement Device with manometer

- GTLZ-53-3-ccc-1-0** Flow measurement device with manometer for the GTLF
- GTLZ-54-3-ccc-1-0** Flow measurement device with manometer for the GTLB, (not for sizes 112–140)
- GTLZ-55-3-ccc-1-0** Flow measurement device with manometer for the GTHB

GTLZ-53, 54, 55 Flow measurement devices

The flow measurement device is supplied with a manometer as well. The supply includes flow measuring device, manometer with scale and mounting bracket for the measuring device and hoses. For a technical specification, see the GTLZ-50, 51, 52 on the preceding page.



Accessories

Painted finish

GTLZ-60-3-ccc-d-0	Painted finish, inner and outer surfaces
d = 1	Epoxy powder coated and baked. 60 µm, colour: AM 8043, dark grey, M2
d = 2	Epoxy powder coated and baked. 100 µm, colour: AM 8043, dark grey, M3
d = 3	Wet-painted finish in three layers. 250 µm, colour: SSG28, light grey

d = 1 60 µm thick painted finish

The fan casing, impeller and bearing bracket as well as accessories are coated with 60 mm thick epoxy powder and baked. The colour is AM 8043, dark grey. All bolts and nuts must be made of stainless steel.

Painting process:

- Alkali degreasing
- Iron phosphate pre-treatment
- Flushing with +40 °C water
- Drying at 150 °C
- Powder painting, 60 µm coat in one layer
- Drying at 215 °C

Epoxy powder is well suited for coating objects that are subject to mechanical and chemical stress. It is an excellent rust-inhibitor and can withstand acids, alkaline solutions, greases and solvents.

d = 2 100 µm thick painted finish; meets the provisions for Environmental Class M3. The fan casing, impeller and bearing bracket as well as accessories are coated with 100 µm thick epoxy powder and baked. The colour is AM 8043, dark grey. All bolts and nuts must be made of stainless steel. The coating process and epoxy powder are the same as in version d = 1; the coat is 100 µm thick in one layer.

d = 3 250 µm wet painted finish in three coats. The fan casing and bearing bracket as well as accessories are painted with 250 µm thick epoxy in 3 layers. The colour is SSG28, light grey. The impeller is coated with 100 µm thick epoxy powder and baked. The colour is AM 8043, dark grey. All bolts and nuts must be made of stainless steel.



Motor cover

GTLZ-77-3-ccc-d-0 Motor cover, made of galvanised steel.

d = motor size (IEC)

For fan sizes 025–071

1 = 071–100

2 = 112–132

3 = 160–180

For fan sizes 080–140

4 = 100–160

5 = 180–250

Ordering Codes

Centrifugal fan

GTLB-a-bbb-c-dd-ee
GTHB-a-bbb-c-dd-ee
GTLF -a-bbb-c-dd-ee

LB = centrifugal fan with backward - curved blades (Sizes 025–140)
 HB = centrifugal fan with backward - curved blades (Sizes 040–100)
 LF = centrifugal fan with forward - curved blades (Sizes 025–071)

Fan type (a) _____
 3 = single-inlet fan for a belt drive

Size (bbb) _____
 025, 031, 040, 045, 050, 056, 063, 071, 080, 090, 100, 112, 125, 140

Version (c) _____
 1 = normal version
 6 = smoke extraction version (only GTLB and GTLF)
 8 = spark-proof version

Version and direction of discharge (dd) _____
 First d: 1 = right-hand version
 2 = left-hand version

Second d: 1 = 0°
 3 = 90°
 7 = 270°

Motor location and generation (ee) _____
 First e: 0 = motor behind fan
 First e: 1 = motor alongside the fan (sizes 112-140)
 Second e: 0 = first generation

Belt drive for GTLF-3 GTRF-3-bbb-1-dddd
Belt drive for GTLB/GTHB-3 GTRB-3-bbb-1-dddd

Fan size (bbb) _____
 Fan speed, r/min (dddd) _____
 (If a two-speed motor is used, specify the higher speed.)

Motor APAL-a-bbbbbb-c-d
ARAL-a-bbbbbb-c-d
ATAL-a-bbbbbb-c-d

See tables on pages 70–76
 Select the number of motor poles as follows:
 Fan speed < 459 r/min = 6-pole motor
 Fan speed 460-2344 r/min = 4-pole motor
 Fan speed > 2345 r/min = 2-pole motor

Note: Due to generation change of motors the first digit “b” is 9 instead of 0 in motor sizes IEC 071–100.

Accessories GTLZ-aa-b-ccc-d-e

- (aa) Type of accessory
- (b) 3 = Accessory for the GT.-3
- (ccc) Fan size
- (d) 1 = to be supplied with fan (specify d = 0 if you are placing an order for individual accessories only). See the ordering code as well.
- (e) Generation digit.

Plummer block with grease nipple GTLZ-06-3-ccc-d-0 for GTHB (for sizes 040–071)

Fan size (ccc) _____
 Delivery version (d) _____
 1 for right-hand version
 2 for left-hand version

Plummer block with grease nipple GTLZ-09-3-ccc-d-0 for GTLB and GTLF (for sizes 025–071)

Fan size (ccc) _____
 Delivery version (d) _____
 1 for right-hand version
 2 for left-hand version

Flexible connection, inlet GTLZ-11-3-ccc-1-0
Normal version, max. +80 °C

Fan size (ccc) _____

Flexible connection, inlet GTLZ-12-3-ccc-1-0
Smoke extraction version, max. +400 °C

Fan size (ccc) _____

Protective screen, inlet GTLZ-13-3-ccc-1-0

Fan size (ccc) _____

Flexible connection, outlet GTLZ-21-3-ccc-1-0
Normal version, max. +80 °C

Fan size (ccc) _____

Flexible connection, outlet GTLZ-22-3-ccc-1-0
Smoke extraction version, max. +400 °C

Fan size (ccc) _____

Protective screen, outlet GTLZ-23-3-ccc-1-0

Fan size (ccc) _____

Ordering Codes

Accessories

Counterflange, outlet **GTLZ-24-3-ccc-1-0**

Fan size (ccc) _____

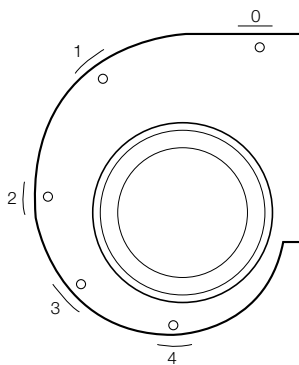
Inspection cover **GTLZ-32-3-ccc-d-0**

Fan size (ccc) _____

Location, se illustration (d) _____

d = 0

- 1
- 2
- 3
- 4



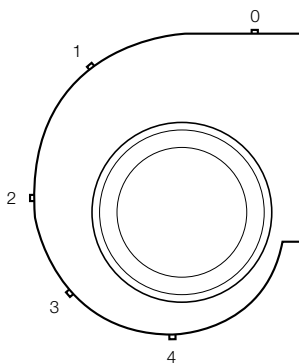
Drain **GTLZ-34-3-ccc-d-0**

Fan size (ccc) _____

Location, se illustration (d) _____

d = 0

- 1
- 2
- 3
- 4



Accessories

Anti-vibration mountings **GTLZ-42-3-ccc-d-0**

Fan size (ccc) _____

Version (d) _____
 1 = for GTLB and GTLF
 2 = for GTHB

Flow measurement device for GTLF **GTLZ-50-3-ccc-1-0**

Fan size (ccc) _____

Flow measurement device for GTLB (not for sizes 112–140) **GTLZ-51-3-ccc-1-0**

Fan size (ccc) _____

Flow measurement device for GTHB **GTLZ-52-3-ccc-1-0**

Fan size (ccc) _____

Flow measurement device with manometer GTLF **GTLZ-53-3-ccc-1-0**

Fan size (ccc) _____

Flow measurement device with manometer GTLB (not for sizes 112–140) **GTLZ-54-3-ccc-1-0**

Fan size (ccc) _____

Flow measurement device with manometer GTHB **GTLZ-55-3-ccc-1-0**

Fan size (ccc) _____

Painted finish, inner and outer surfaces **GTLZ-60-3-ccc-d-0**

Fan size (ccc) _____

Version (d) _____
 1 = painted finish, 60 µm
 2 = painted finish, 100 µm
 3 = wet-painted finish, 250 µm in three layers

Motor cover **GTLZ-77-3-ccc-d-0**



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