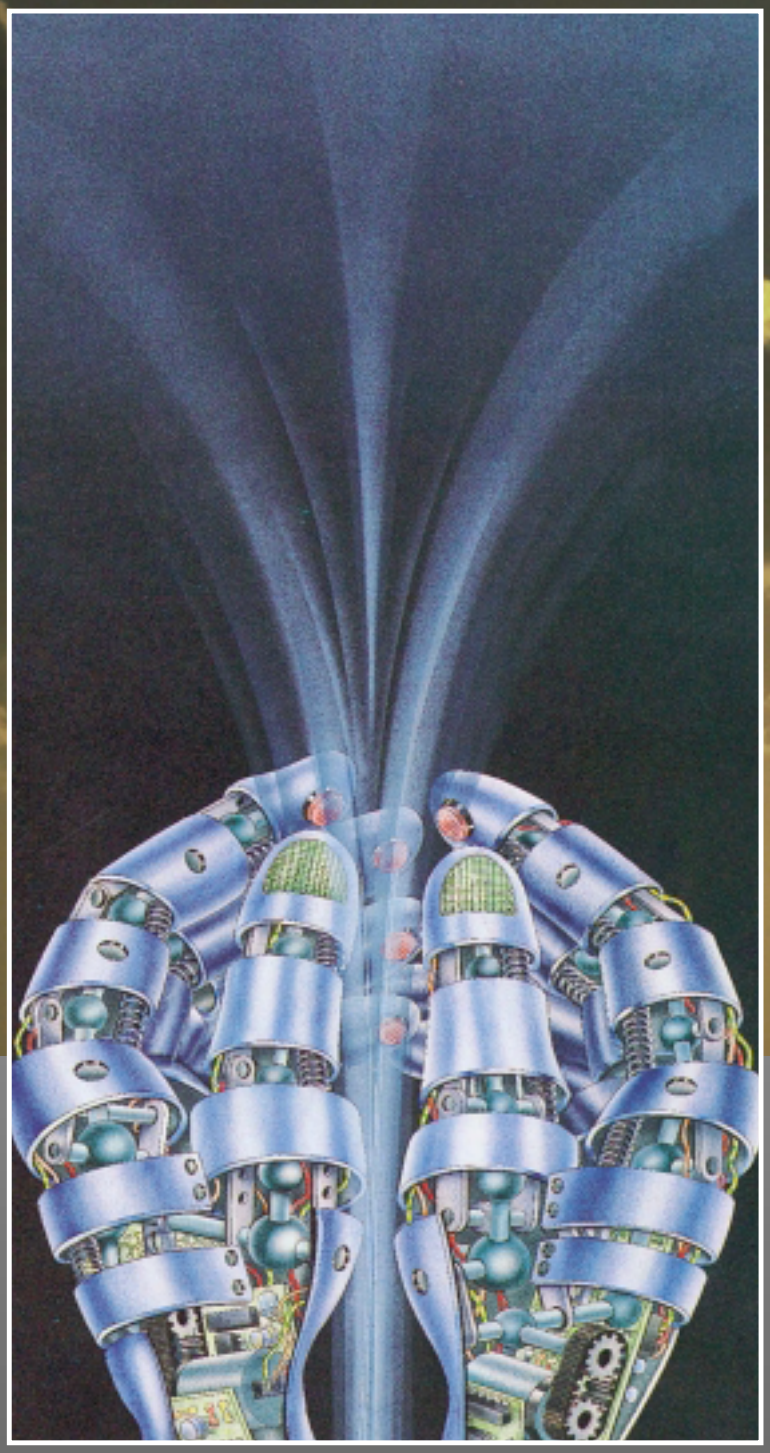
Mixedflow Vertical Discharge Rooffan



Mech-Elec®

Mixedflow Vertical Discharge Rooffan

Mech-Elec
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info@mech-elec.ie

Main features

- Very high efficiency.
- Very low noiselevels.
- Mixedflow impeller (axial+ centrifugal).
- All fans are speed controllable as a standard.
- Motor out of airstream. (IP 55, Insulation class F). and incl. of overload protection.
- Wide range of ambient working temperatures - 30/ +100 ºC.
- The fan is totaly recyclable.
- The casing is not vulnarable to deformation or breakage.

Impeller

The unique mixedflow impeller consists of two aluminium dishes with polyamide blades which, because of the very special shape and positioning between the dishes, gives the impeller its charasteristic axial and centrifugal mixedflow design.

Casing

The casing is made of HDPE (High Density Poly Ethylene. Colour light beige) and is 100% recyclable and resistant against all weather conditions.

All fans are supplied with a birdscreen on the discharge side.

Wiring

The fans are supplied with either a service switch or service switch with thermal overload protection mounted on the unit.

Noise

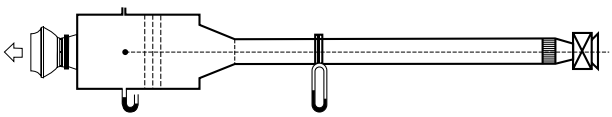
All noise figures are shown on the technical data sheets for each fan.

Special application

Acid resistant fans are available with all metal components either specially coated or made of stainless steel.

Flameproof fans are available upon request.

All fans are measured as per BS 848 part 1



Certificatenumber: D 390641

MIXED FLOW
Selection chart

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Ventilator type	Rec. r.p.m.	dB(A)* op/at 4 m. and free discharge	Capacity Qv at m³/h Pst at Pa (N/m²)													
			0	50	100	150	200	250	300	350	400	450	500	600	700	800
225	700	32	1000	480												
	750	32	1100	600												
	900	38	1250	950	400											
	1150	42	1500	1200	750											
	1400	48	1900	1670	1480	1160	720									
250	700	35	1490	970												
	750	35	1490	840												
	900	41	1900	1660	1080											
	1150	46	2310	1880	1490	980										
	1400	52	3000	2730	2490	2240	1900	1390	520							
315	700	40	2300	1540												
	750	40	2260	1400												
	900	46	2860	2430	1690	640										
	1150	50	3630	3250	2740	2150	1240									
	1400	56	4490	4250	3990	3600	3210	2490	1970	750						
400	450	37	1740	250												
	700	43	2780	2230	980											
	750	43	2690	2180	1190											
	900	49	3540	3190	2600	1800	490									
	1150	53	4250	3960	3480	2970	2420	1700	620							
	1400	58	5340	5180	4820	4500	4190	3860	3250	2690	2000	970				
450	450	35	3190	1920												
	700	44	4340	3710	2590	770										
	750	44	4480	3830	2960	1500										
	900	50	5580	5130	4490	3830	2980	1670								
	1150	54	7010	6530	6090	5420	4750	3860	3090	2120	1110					
	1400	60	8260	7910	7680	7380	6930	6550	6170	5610	5130	4410	3690	1720		
500	450	40	4410	3230	1190											
	700	50	6980	6280	5210	3920	1970									
	750	50	7190	6000	5210	4230	3780									
	900	55	8890	8500	7660	7210	6330	5500	4380	3190						
	1150	60	11200	10860	10340	9730	9280	8630	7910	7380	6510	5690	4750	1810		
	1400	66	14100	13810	13290	12920	12100	11300	11000	10700	10000	9600	8900	7650	5950	3700

* *Soundpressurelevel in dB(A) on extraktside, 4 m freefield conditions.*

225 Mixedflow

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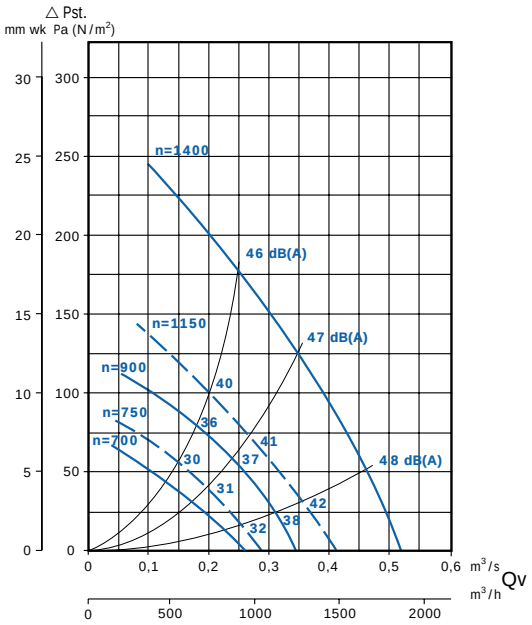
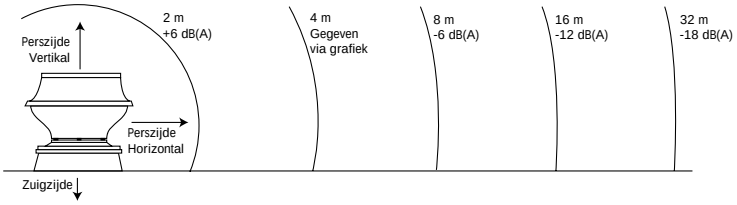
ventilator fan type	speed r.p.m.	motor power kW	running current A	weight kg	speed controller type
1 x 230V, 50 Hz.					
225/6W	900	0.06	0.80	12	TM2-0.9
225/4W	1400	0.09	0.80	12	TM2-0.9
3 x 400V, 50 Hz.					
225/6D	900	0.06	0.30	12	TM3-1
225/4D	1400	0.09	0.34	12	TM3-1
225/6-6D*	900/750	0.06/0.03	0.30/0.12	12	SD
225/4-4D*	1400/1150	0.09/0.03	0.34/0.18	12	SD
225/4-8D•	1400/700	0.18/0.05	0.75/0.30	12	DS

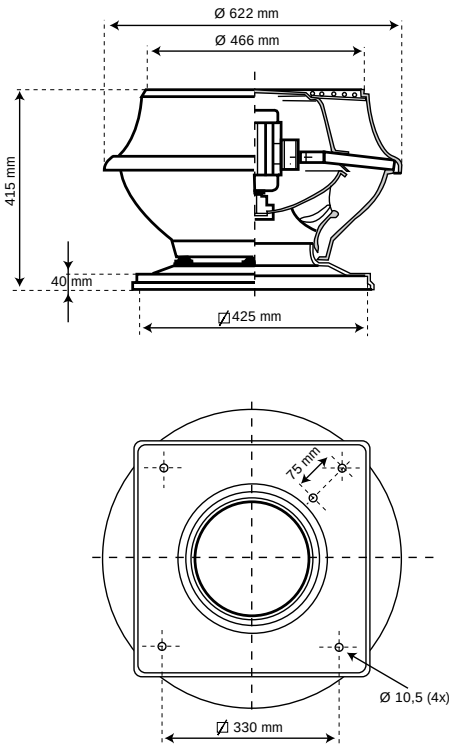
* *Two speed by Y Δ switch.*
• *Two speed by Dahlander winding.*

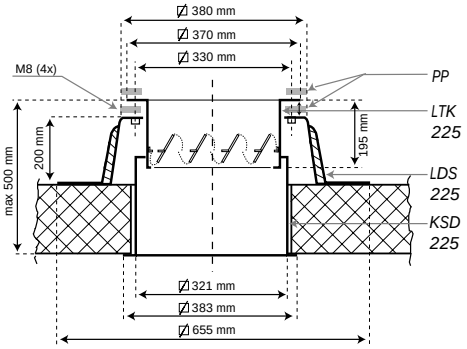


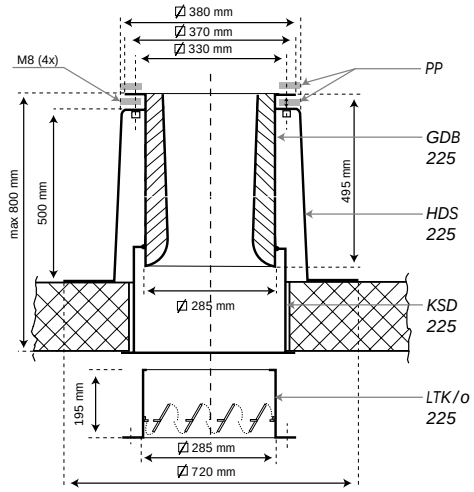


Ventilator	min⁻¹	125	250	500	1k	2k	4k	8k	Hz.
		Sound power level, intake side dB ref. 10^{-12} W							
225/6	900	41	52	43	49	41	36	29	dB.
225/4	1400	50	60	53	59	52	48	37	dB.
		Fan + Attenuator							
225/6 + GDB 225	900	38	45	35	37	25	22	21	dB.
225/4 + GDB 225	1400	47	53	45	47	36	34	29	dB.

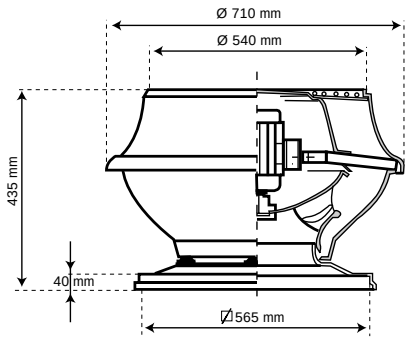
n

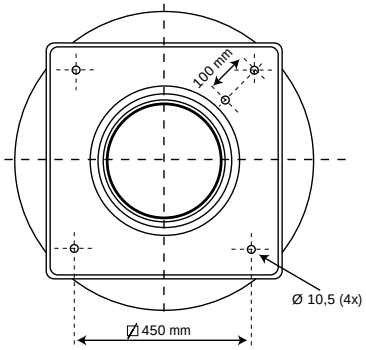


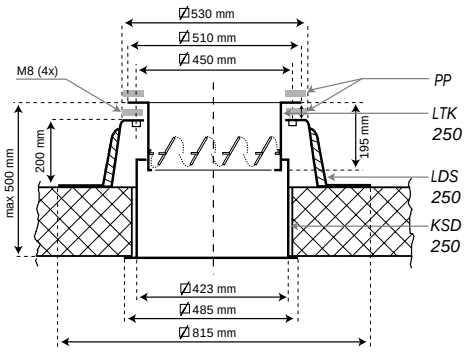


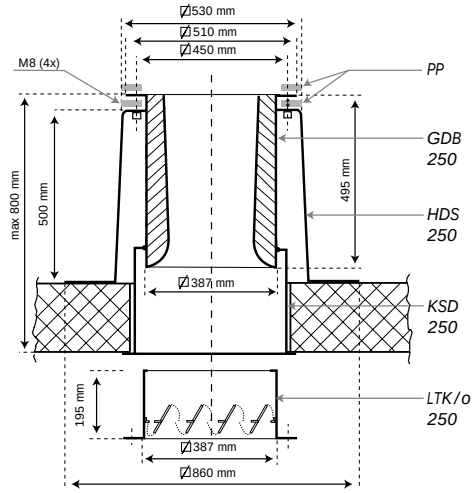


Mixedflow 250





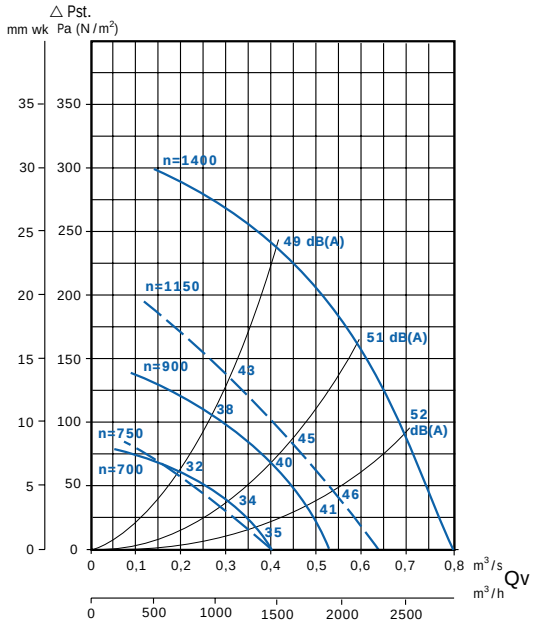


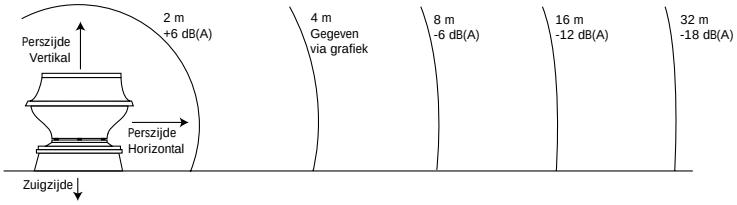


ventilator

fan type	speed r.p.m.	motor power kW	running current A	weight kg	speed controller type
1x 230V, 50 Hz.					
250/6W	900	0.06	0.85	15	TM2-0.9
250/4W	1400	0.18	1.8	15	TM2-2.2
3x 400V , 50 Hz.					
250/6D	900	0.06	0.31	15	TM3-1
250/4D	1400	0.18	0.63	15	TM3-1
250/6-6D*	900/750	0.06/0.03	0.31/0.13	15	SD
250/4-4D*	1400/1150	0.18/0.06	0.63/0.34	15	SD
250/4-8D•	1400/700	0.18/0.05	0.85/0.35	15	DS

* *Two speed by Y Δ switch.*
• *Two speed by Dahlander winding*





		Sound power level, intake side dB ref. 10^{-12} W							
Ventilator	min^{-1}	125	250	500	1k	2k	4k	8k	Hz.
250/6	900	50	53	50	55	40	39	29	dB.
250/4	1400	59	63	62	64	57	54	37	dB.
		Fan + Attenuator							
250/6 + GDB 250	900	46	46	40	40	24	27	23	dB.
250/4 + GDB 250	1400	55	56	52	49	41	42	31	dB.

315 Mixedflow

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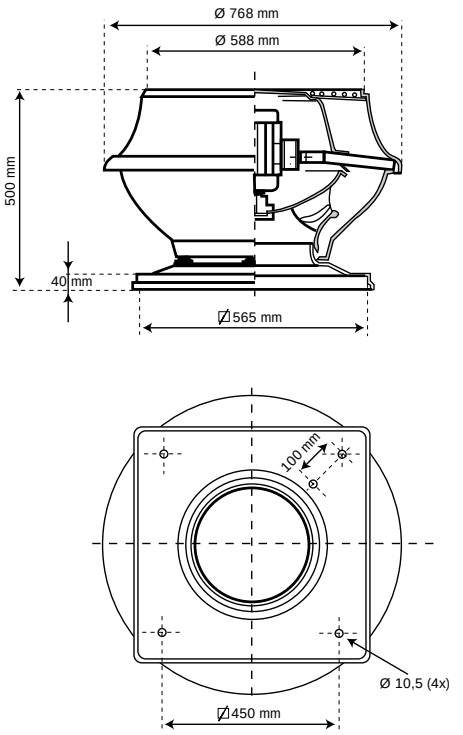
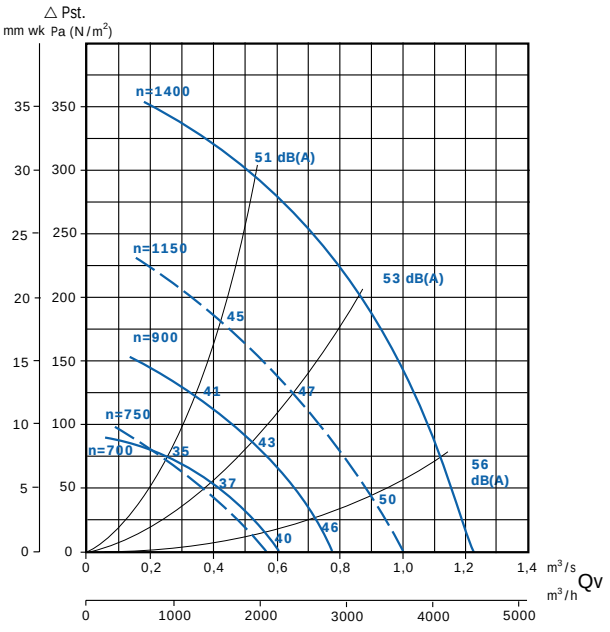
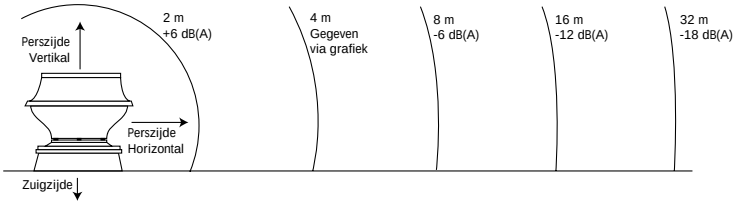
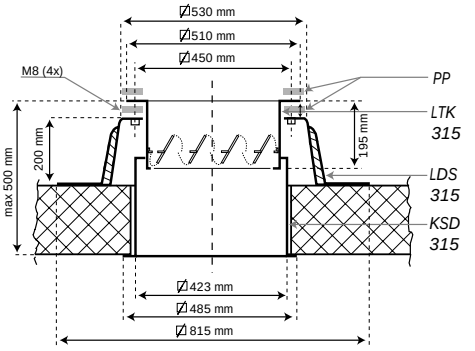
ventilator fan type	speed r.p.m.	motor power kW	running current A	weight kg	speed controller type
1x 230V, 50 Hz.					
315/6W	900	0.09	1.2	18	TM2-2.2
315/4W	1400	0.37	2.6	18	TM2-3
3x 400V, 50 Hz.					
315/6D	900	0.09	0.48	18	TM3-1
315/4D	1400	0.37	1.1	18	TM3-2
315/6-6D*	900/750	0.09/0.03	0.48/0.20	18	SD
315/4-4D*	1400/1150	0.37/0.12	1.1/0.59	18	SD
315/4-8D•	1400/700	0.37/0.07	1.4/0.5	18	DS

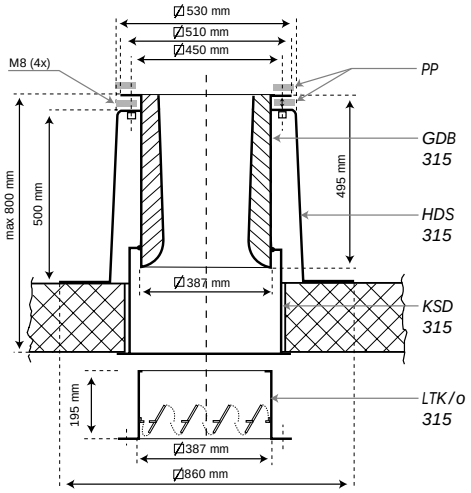
* *Two speed by Y Δ switch.*
• *Two speed by Dahlander winding*



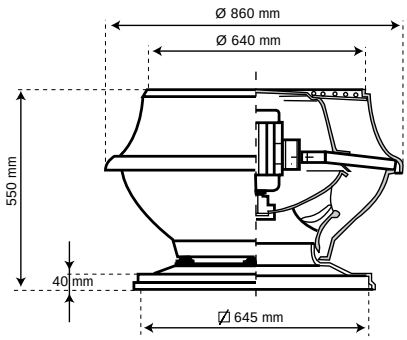


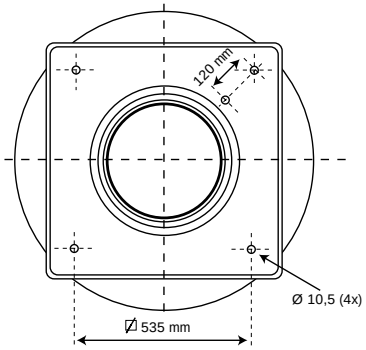


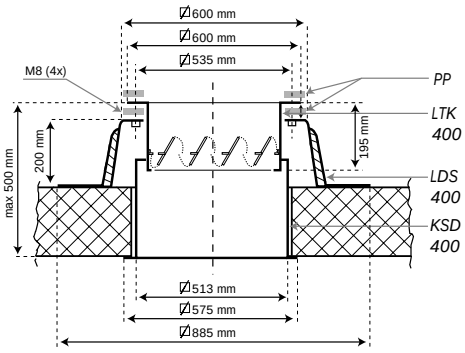


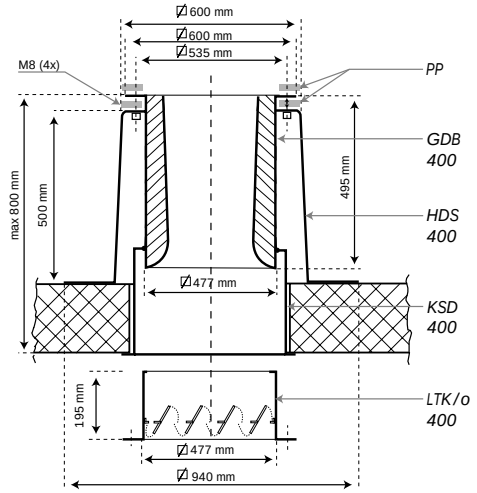


Ventilator	min⁻¹	125	250	500	1k	2k	4k	8k	Hz.
		Sound power level, intake side dB ref. 10^{-12} W							
315/6	900	52	58	52	55	42	43	31	dB.
315/4	1400	61	66	63	64	58	54	40	dB.
		Fan + Attenuator							
315/6 + GDB 315	900	48	51	42	40	26	31	25	dB.
315/4 + GDB 315	1400	57	59	53	49	42	42	34	dB.





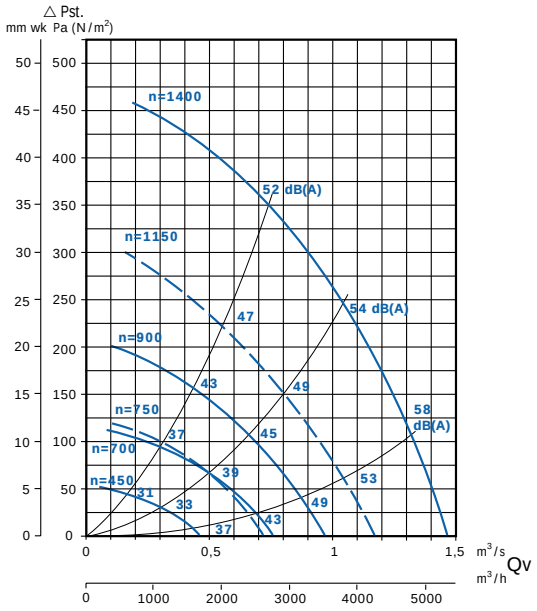


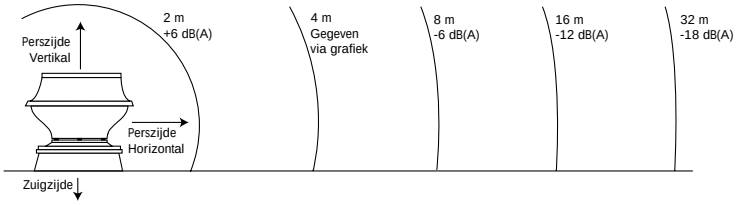


ventilator

fan type	speed r.p.m.	motor power kW	running current A	weight kg	speed controller type
1x 230V, 50 Hz.					
400/6W	900	0.18	1.9	20	TM2-2.2
400/4W	1400	0.55	3.4	21	TM2-4
3 x 400V, 50 Hz.					
400/6D	900	0.18	0.85	20	TM3-1
400/4D	1400	0.55	1.5	21	TM3-2
400/6-6D*	900/750	0.18/0.06	0.85/0.34	20	SD
400/4-4D*	1400/1150	0.55/0.18	1.5/0.8	21	SD
400/6-12D•	900/450	0.37/0.075	1.0/0.44	21	DS
400/4-8D•	1400/700	0.55/0.09	1.6/0.6	21	DS

* *Two speed by Y Δ switch.*
• *Two speed by Dahlander winding*





		Sound power level, intake side dB ref. 10^{-12} W							
Ventilator	min^{-1}	125	250	500	1k	2k	4k	8k	Hz.
400/6	900	57	61	56	62	52	49	33	dB.
400/4	1400	68	70	63	68	66	62	45	dB.
		Fan + Attenuator							
400/6 + GDB 400	900	54	54	46	48	37	35	26	dB.
400/4 + GDB 400	1400	65	63	53	54	51	48	38	dB.

450 Mixedflow

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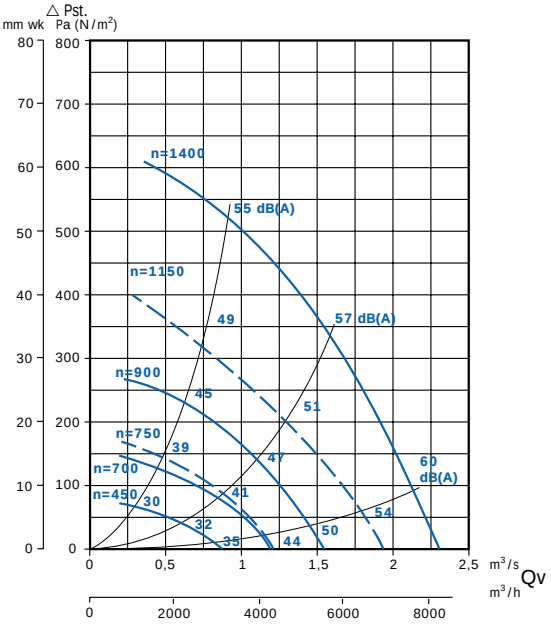
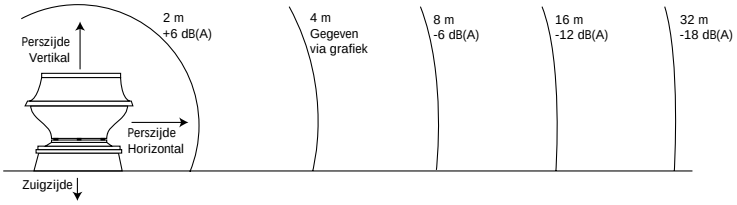
ventilator

fan type	speed r.p.m.	motor power kW	running current A	weight kg	speed controller type
1x 230V, 50 Hz.					
450/6W	900	0.37	2.8	25	TM2-3
3 x 400V, 50 Hz.					
450/6D	900	0.37	1.0	25	TM3-2
450/4D	1400	1.1	2.6	26	TM3-3
450/6-6D*	900/750	0.37/0.18	1.0/0.5	25	SD
450/4-4D*	1400/1150	1.1/0.4	2.6/1.4	26	SD
450/6-12D•	900/450	0.37/0.075	1.1/0.45	26	DS
450/4-8D•	1400/700	1.1/0.18	2.8/1.0	26	DS

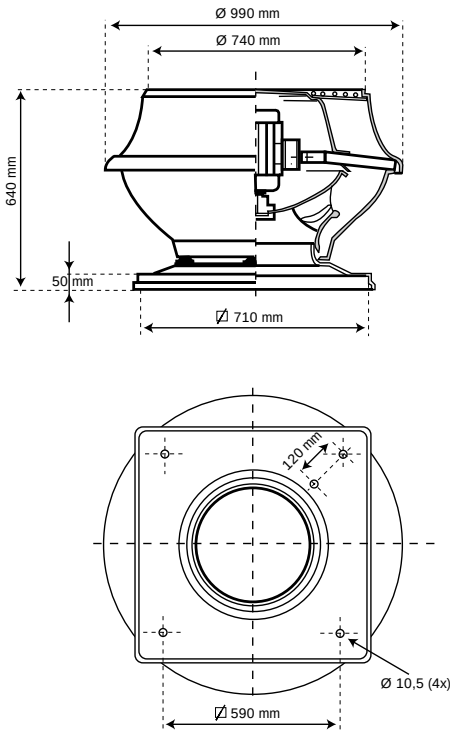
* *Two speed by Y Δ switch.*
• *Two speed by Dahlander winding*

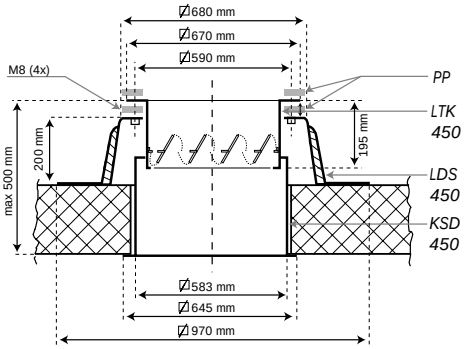


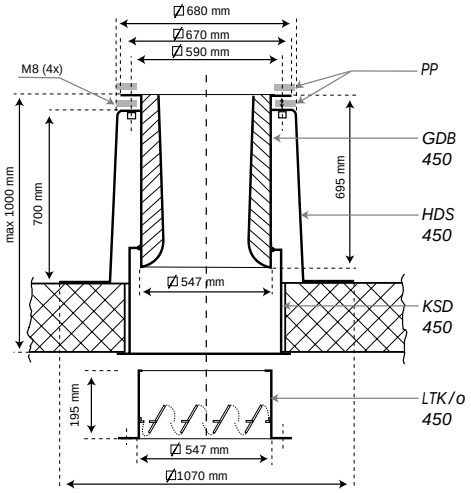


Sound power level, intake side dB ref. 10^{-12} W

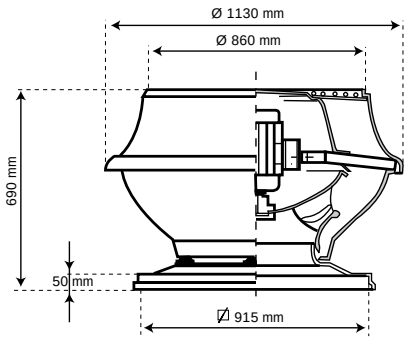
Ventilator	min^{-1}	125	250	500	1k	2k	4k	8k	Hz.
450/6	900	62	61	60	62	54	52	36	dB.
450/4	1400	71	70	70	72	65	64	48	dB.
Fan + Attenuator									
450/6 + GDB 450	900	59	55	50	47	38	37	28	dB.
450/4 + GDB 450	1400	68	64	60	57	49	49	40	dB.

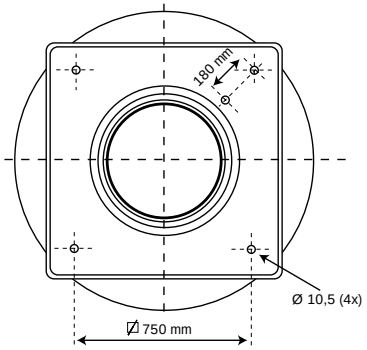


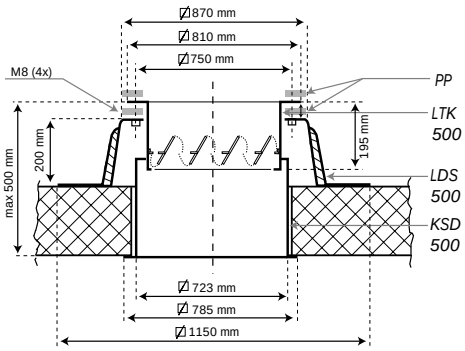


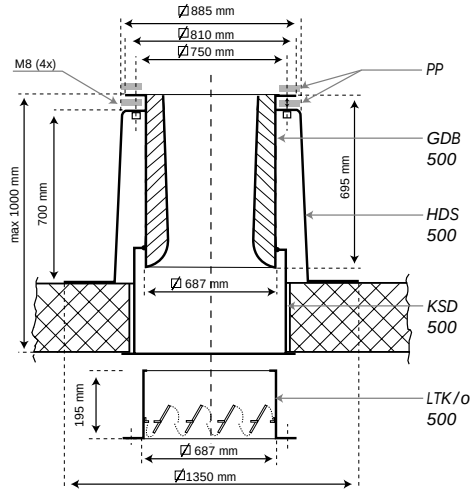


Mixedflow Vertical Discharge Rooffan 500



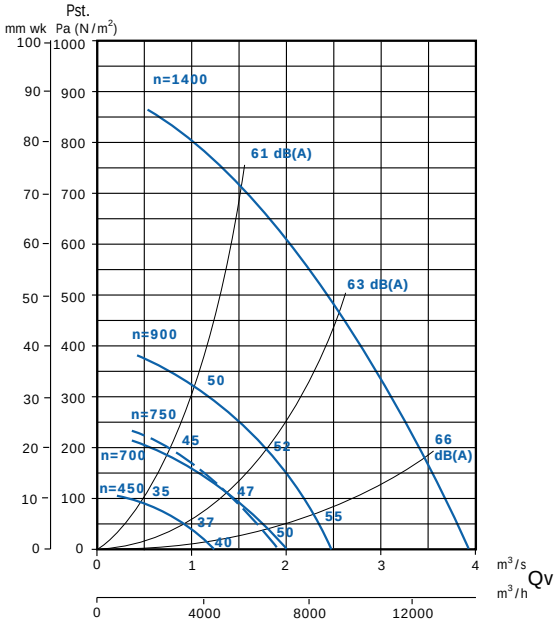


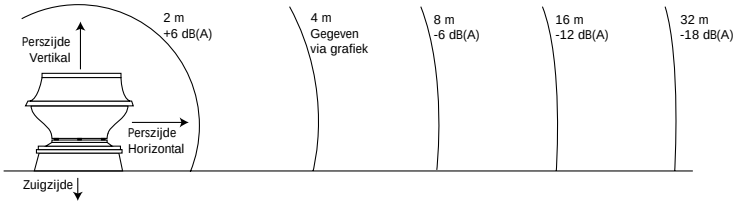




fan type	speed r.p.m.	motor power kW	running current A	weight kg	speed controller type
3 x 400V, 50 Hz.					
500/6D	900	0.75	1.9	34	TM3-2
500/4D	1400	2.4	5.3	40	-
500/4D R	1400	3.0	7.5	44	INCL
500/6-6D*	900/750	0.75/0.25	1.9/1.0	34	SD
500/4-6D•	1400/1000	3.0/1,1	7.0/3.2	40	DS
500/6-12D•	900/450	0.75/0.15	2.4/1.0	34	DS
500/4-8D•	1400/700	3.0/0.55	7.3/2.7	40	DS

* *Two speed by Y Δ switch.*
• *Two speed by Dahlander winding.*





		Sound power level, intake side dB ref. 10^{-12} W							
Ventilator	min^{-1}	125	250	500	1k	2k	4k	8k	Hz.
500/6	900	71	66	69	65	61	54	44	dB.
500/4	1400	81	76	79	76	71	66	54	dB.
		Fan + Attenuator							
500/6 + GDB 500	900	68	60	57	49	44	39	38	dB.
500/4 + GDB 500	1400	78	70	67	60	54	51	48	dB.

Accessories

LDS Extended insulated mounting curb. manufactured in glass fibre reinforced polyester.

HDS As LDS but not insulated. The HDS is supplied in combination with attenuatortype GDB if there is insufficient space underneath the mounting curb.

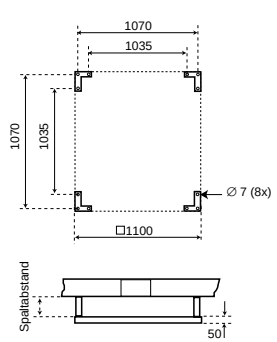
GDB Silencer. Manufactured of galvanised sheet steel filled with sound absorbing materials. Working temperatures + 90°C. Suitable for mounting in the mounting curb LDS or HDS.

GDH Silencer. Manufactured of galvanised sheet steel filled with sound absorbing materials. Working temperatures + 90°C. Suitable for mounting on the mounting curb LDS.

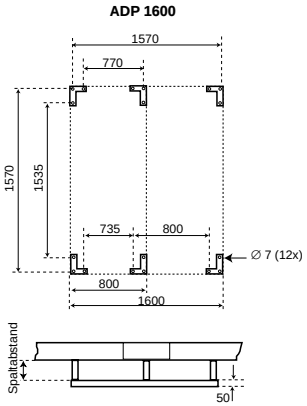
ADP Ceiling mounted attenautor finished in Pale Grey (enamel/powder paint).

VAP Ductconnection

ADP 1100



ADP 1600



Type	*Qv m³/h max.*	*ΔP max. Pa*	*Install high mm*	*Attenuation in dB by freq. Hz* 125	250	500	1000	2000	4000
ADP 1100	600	10	40	2	7	12	22	23	20
	2100	20	65	1	6	11	20	20	16
	4500	40	90	1	4	7	15	15	13
	7000	65	115	-	2	5	12	11	10
ADP 1600	7000	60	120	-	2	8	16	14	12
	16000	60	250	-	1	7	8	8	8

Type	*mm*	*Install high mm**	*weight*
ADP 1100	1100	115	15 kg
ADP 1600**	1600	250	31 kg

Mech-Elec
www.mech-elec.ie
info@mech-elec.ie

LTK Back draught damper. Manufactured of galvanised sheet steel, including of safetycard, mounted on air intakeside.

IMPORTANT

For pressure losses, see diagram.

Back draught shutter LTK	225	250	315	400	450	500
Min. Airvolume m^3/h	500	950	950	1500	1800	3200

In those situations wher the airvolume is too low the back draught damper can be supplied with a servomotor mounted on the damper.

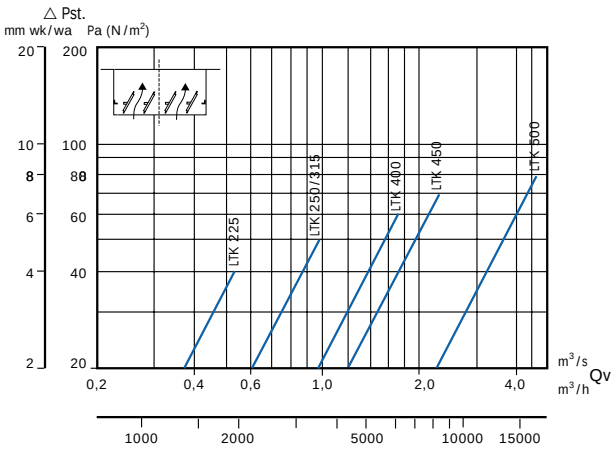
MXH Air intake curb. The air intake curb is also made of DPE with a stainless steel internal frame.

PP Sealingplate

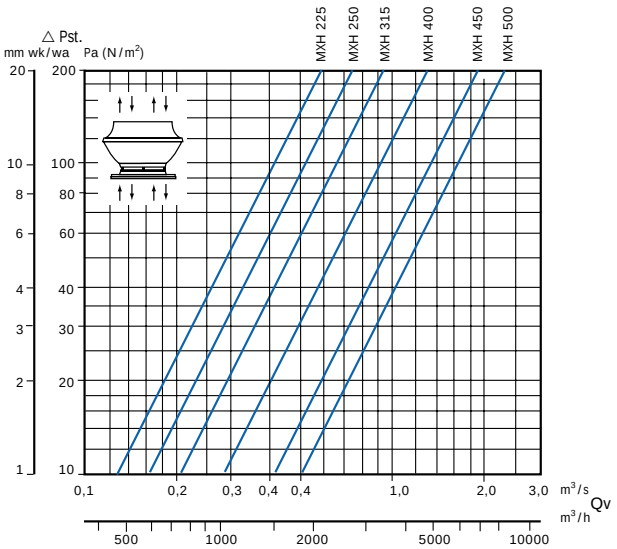
KSD Extention to LTK and GDB (length 310 mm).

All accessories are available in corrosion resistant execution.

Pressure loss LTK



Pressure loss MXH



Switches and controllers

WS Service switch mounted on the unit. 3 Pole switch for single speed 1 phase and 3 phase motors. 6 Pole switch for two speed 3 phase motor.

WST Isolating switch with thermal overload protection, IP65.

TM2 5-Speed controller with servo connection for 1 phase motors.

TMA2 5 Speed controller for 1 phase motors. The controller can be controlled with the 5 speed switch on board or remotely with an 5 speed switch or 5 step thermostat (T55), witch may be located remotely from the controller if required.

TM3 5-Speed controller with servo connection for 3 phase motors.

TMA3 5 Speed controller for 3 phase motors. The controller can be controlled with the 5 speed switch on board or remotely with an 5 speed switch or 5 step thermostat (T55), witch may be located remotely from the controller if required.

SD Star-Delta switch for 2 speeds.

DS Polechange switch for 2 speed fans with Dahlander motors (Y/YY).

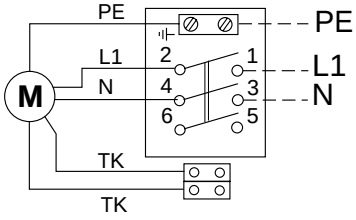
Mech-Elec
www.mech-elec.ie
info@mech-elec.ie

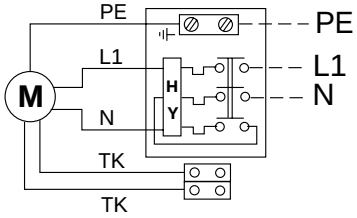
SERVICE SWITCH

MOTOR SWITCH WITH OVERLOAD PROTECTION

1~230V 50 Hz

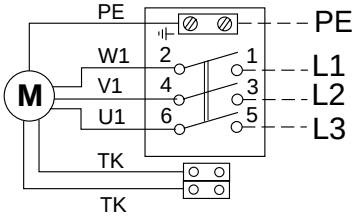
Single phase

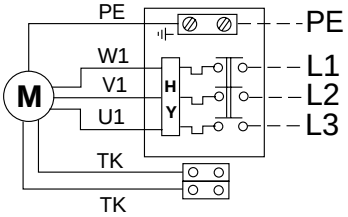




3~400V 50 Hz

Three phase

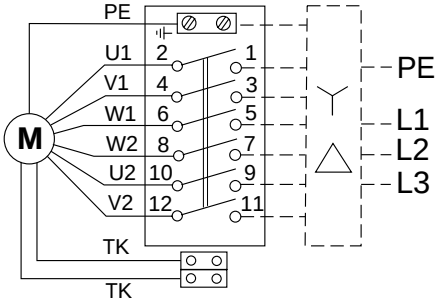


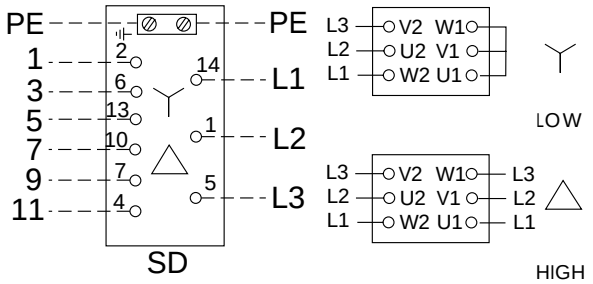


MOTOR SWITCH BOARD

3~400V 50 Hz

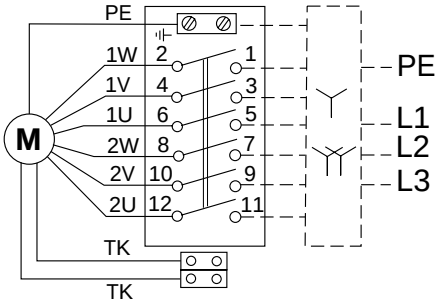
Y △
Three phase
Two speed
Y △ Connection switch

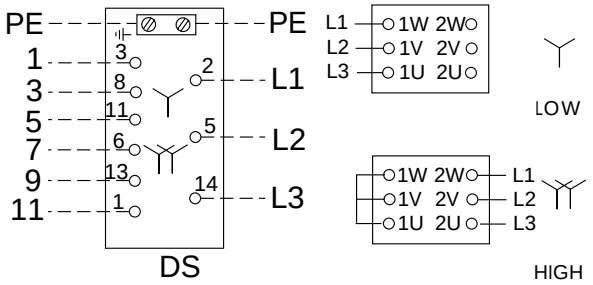




3~400V 50 Hz

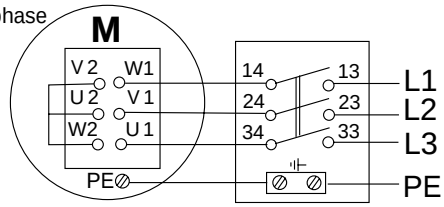
Three phase
Two speeds
Dahlander windings





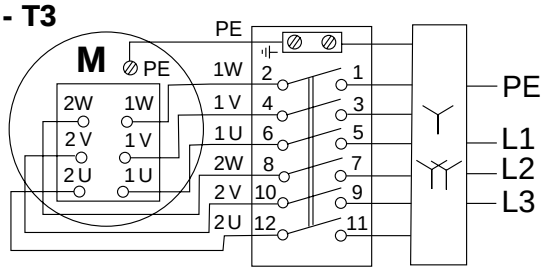
EEx-e - II - T1 - T3

Three phase



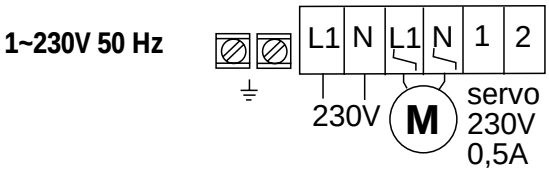
EEx-e - II - T1 - T3

Three phase
Two speeds
Dahlander windings

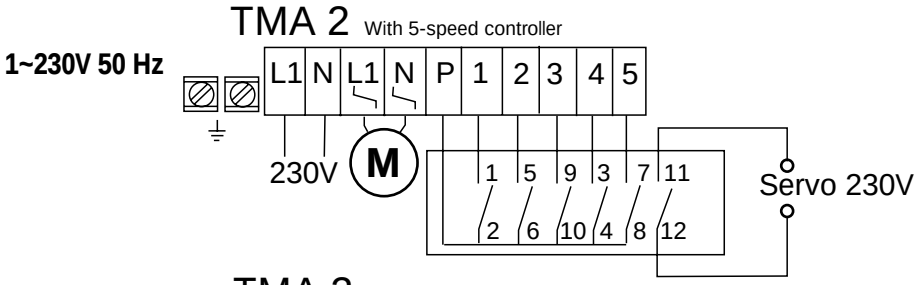


Wiring diagram for speed controller

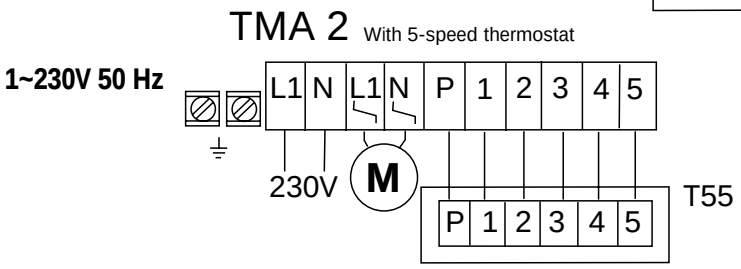
TM 2



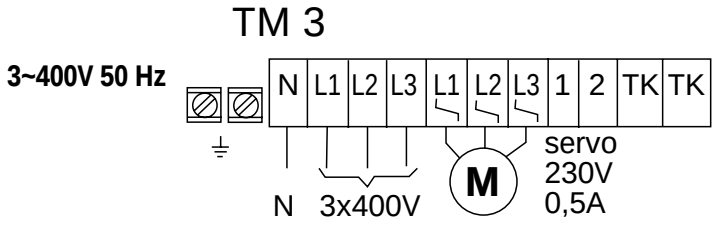
TMA 2 With 5-speed controller



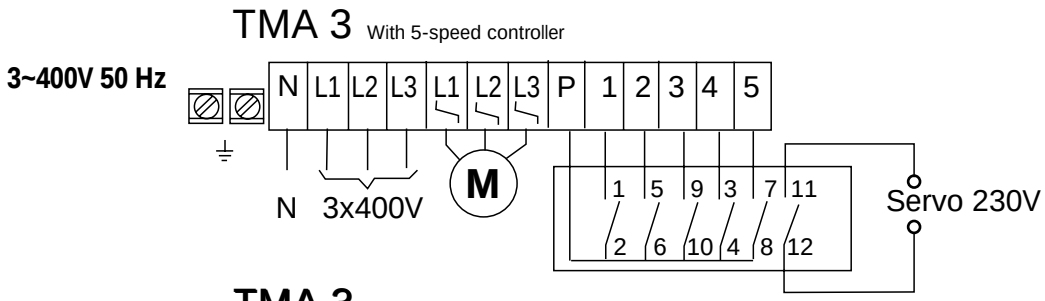
TMA 2 With 5-speed thermostat



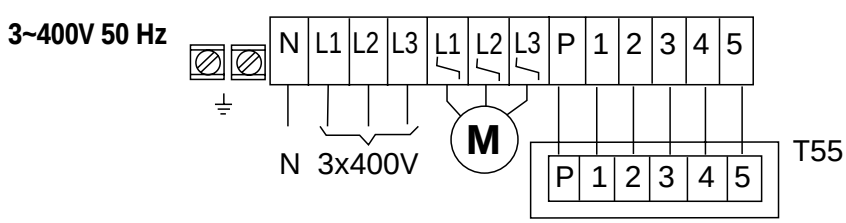
TM 3



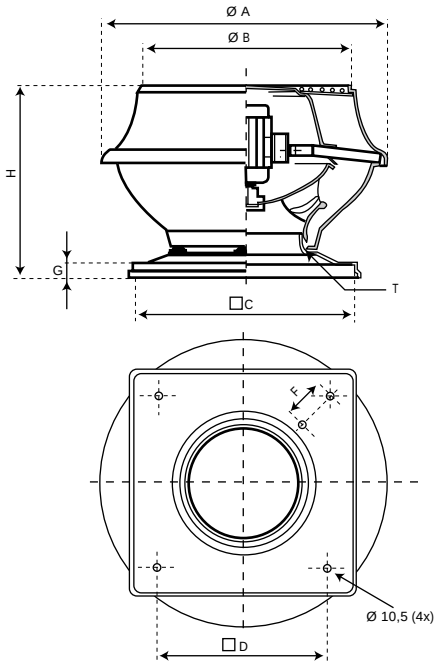
TMA 3 With 5-speed controller



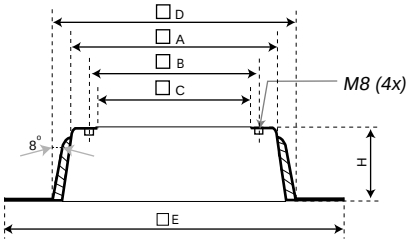
TMA 3 With 5-speed thermostat



Dimensions

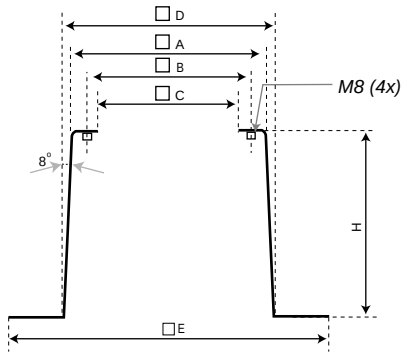


LDS

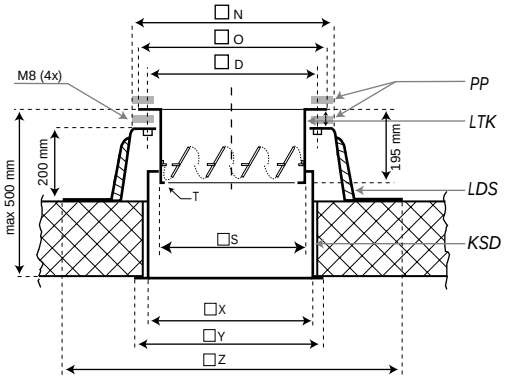


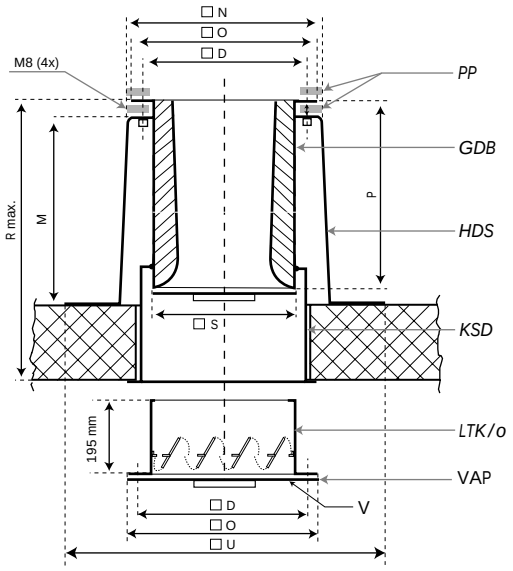
Type	A	B	C	D	E	H
LDS 225	380	330	300	440	640	200
LDS 250 /315	520	450	420	580	780	200
LDS 400	600	535	490	660	860	200
LDS 450	670	590	550	730	930	200
LDS 500	870	750	700	930	1150	200

HDS



Type	A	B	C	D	E	H
HDS 225	380	330	300	520	720	500
HDS 250 /315	520	450	420	660	860	500
HDS 400	600	535	490	740	940	500
HDS 450	670	590	550	870	1070	700
HDS 500	870	750	700	1070	1350	700





Vent type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U	V	W	X	Y	Z
225	622	466	425	330	259	75	40	415	279	229	30	500	380	370	495	800	285	M6x15 6x	720	ø7 6x	300	321	383	640
250	710	540	565	450	286	100	40	435	306	252	30	500	520	510	495	800	387	M6x15 6x	860	ø7 6x	400	423	485	780
315	768	588	565	450	356	100	40	500	382	322	30	500	520	510	495	800	387	M8x15 8x	860	ø9 8x	400	423	485	780
400	860	640	645	535	438	120	40	550	464	404	30	500	600	600	495	800	477	M8x15 6x	940	ø9 6x	490	513	575	860
450	990	740	710	590	487	120	50	640	513	453	30	700	670	670	695	1000	547	M8x15 6x	1070	ø9 6x	560	583	645	930
500	1130	860	915	750	541	180	50	690	567	507	30	700	870	810	695	1000	687	M8x15 6x	1350	ø9 6x	710	723	785	1150