WZD800-HG03-01

AC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle with AxiTop diffuser

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**WZD800-HG03-01**
Motor	**MZD138-HF**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Wiring		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		-	-	-	-
Speed (rpm)	min^{-1}	440	345	520	380
Power consumption	W	330	190	485	265
Current draw	A	1.05	0.43	1.1	0.5
Max. back pressure	Pa	37	23	50	27
Max. back pressure	in. wg	0.15	0.09	0.2	0.11
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	80	80	75	75
Starting current	A	2.2	0.9	2.2	0.9

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	42.4 kg
Size	800 mm
Motor size	138
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	Sheet aluminum insert, sprayed with PP plastic
Support ring material	Steel, coated with black plastic (RAL 9005)
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Outer diffuser material	PP plastic
Internal diffuser material including cover	PP plastic
Number of blades	5
Blade pitch	0°
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	On rotor and stator sides
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010)
Approval	VDE; EAC

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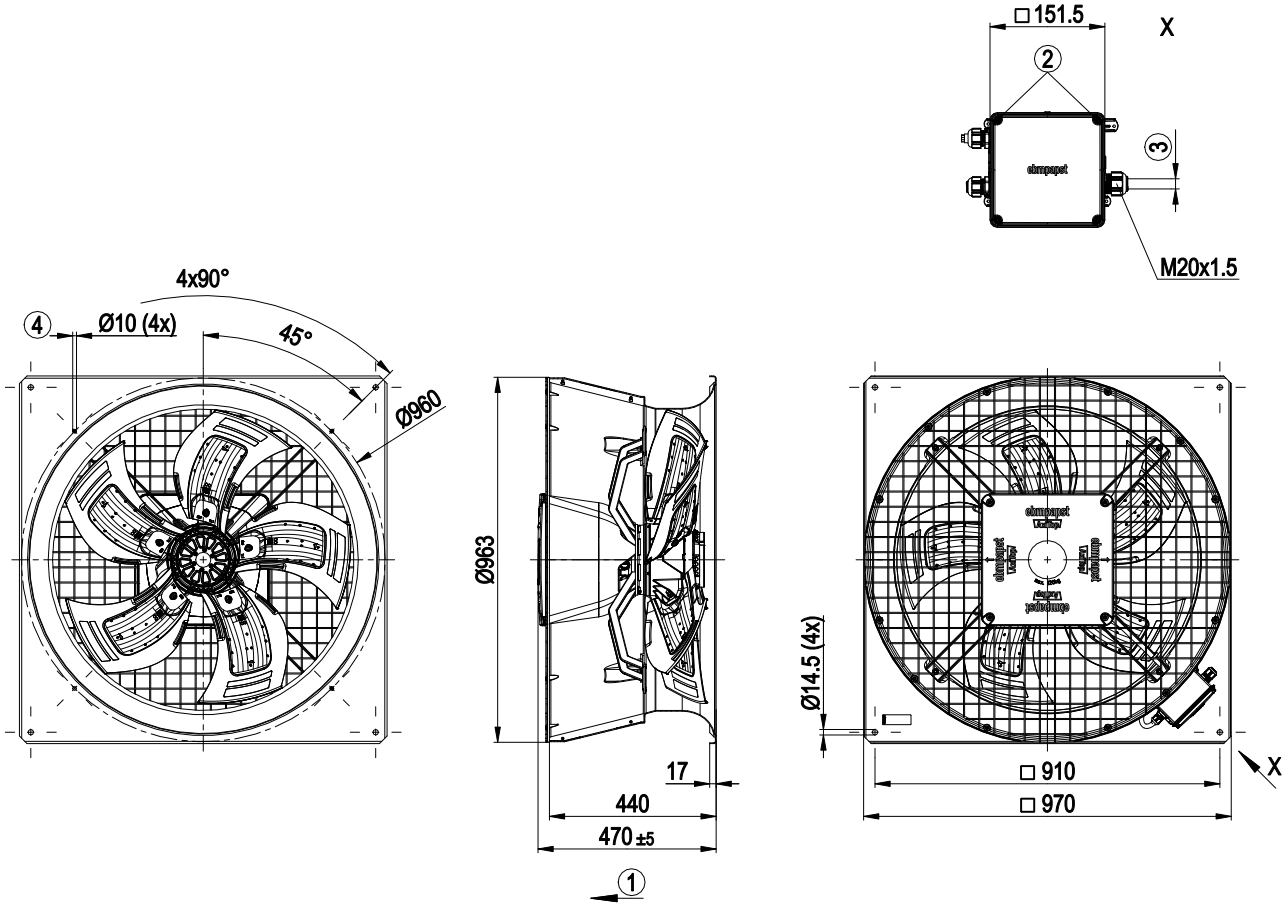
Product drawing



1	Airflow direction "V"
2	Tightening torque 1.8±0.3 Nm
3	Cable diameter min. 9 mm, max. 16 mm, tightening torque 2.5±0.4 Nm
4	FlowGrid

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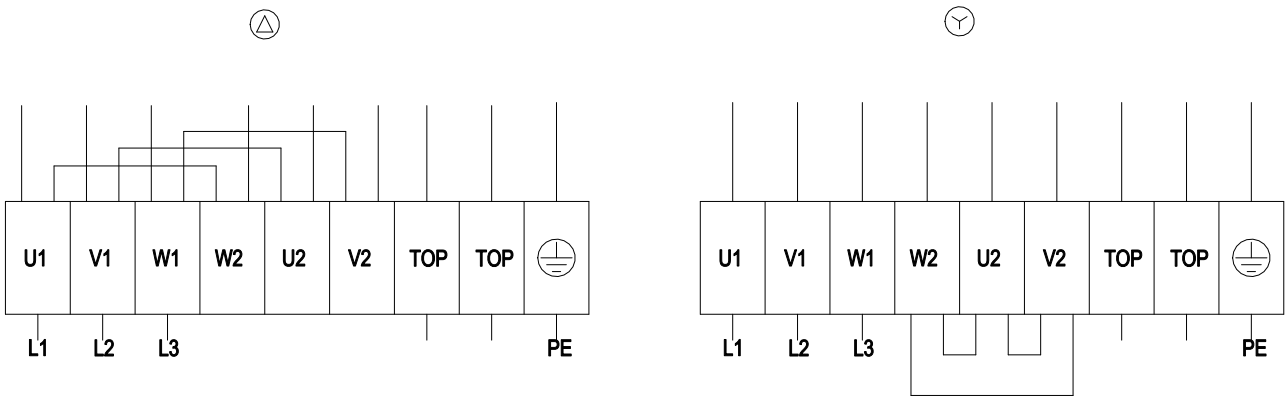
Connection diagram



Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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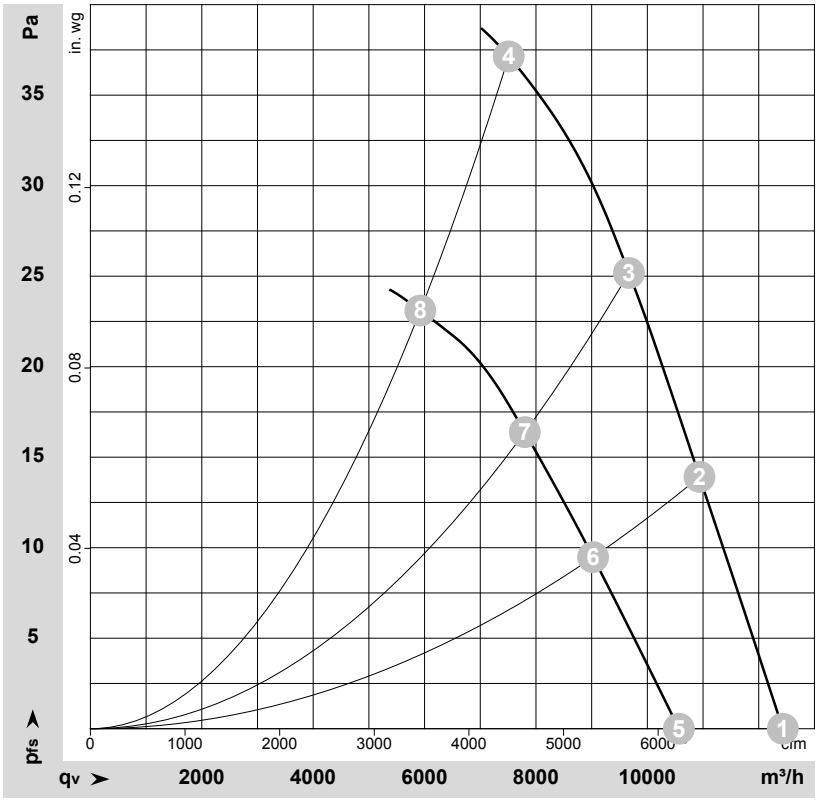
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-185417-1
Measurement: LU-185481-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	460	268	1.00	52	59	59	12430	0	7315	0.00
2	Δ	400	50	455	293	1.01	50	57	57	10935	14	6435	0.06
3	Δ	400	50	450	310	1.02	50	57	57	9670	25	5690	0.10
4	Δ	400	50	440	330	1.05	50	58	58	7510	37	4420	0.15
5	Y	400	50	395	157	0.38	49	55	55	10565	0	6220	0.00
6	Y	400	50	375	171	0.40	46	52	52	9025	10	5310	0.04
7	Y	400	50	365	179	0.42	44	50	50	7800	16	4590	0.06
8	Y	400	50	345	190	0.43	43	51	51	5925	23	3485	0.09

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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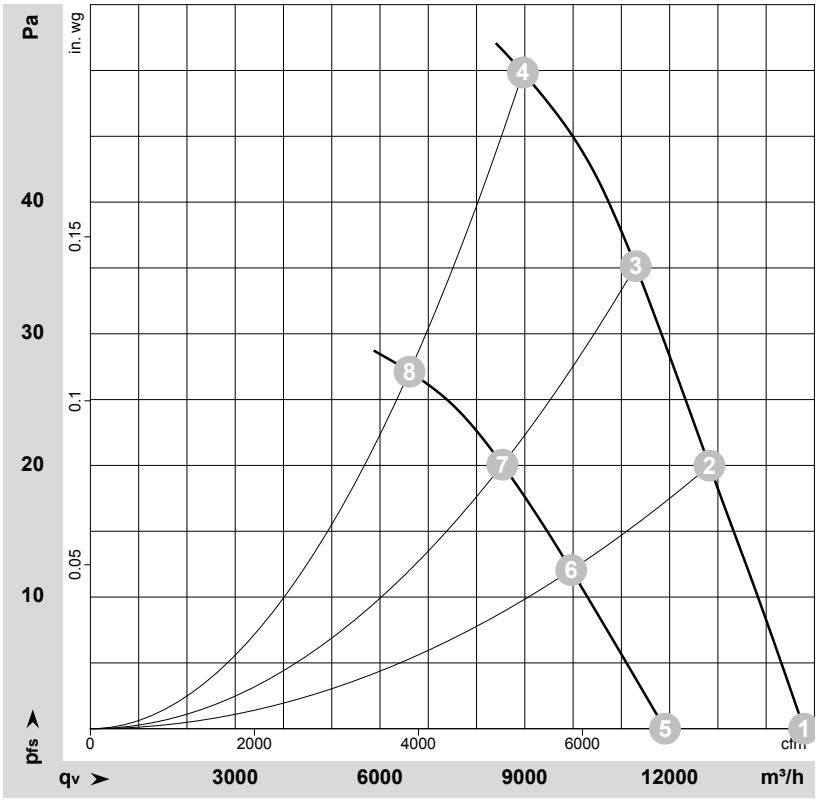
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-185479-1
Measurement: LU-185486-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Δ	480	60	545	383	1.05	55	62	62	14785	0	8700	0.00
2	Δ	480	60	535	425	1.07	53	59	60	12825	20	7550	0.08
3	Δ	480	60	530	453	1.09	53	60	60	11295	35	6650	0.14
4	Δ	480	60	520	485	1.10	54	61	61	8960	50	5275	0.20
5	Y	480	60	445	230	0.45	51	57	57	11905	0	7005	0.00
6	Y	480	60	415	248	0.48	48	55	54	9960	12	5865	0.05
7	Y	480	60	400	257	0.49	47	54	54	8535	20	5025	0.08
8	Y	480	60	380	265	0.50	46	54	55	6610	27	3890	0.11

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase