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**Nominal data**

Type	A4D630-AI01-02				
Motor	M4D138-HF				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Wiring		$\Delta$	Y	$\Delta$	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min <sup>-1</sup>	1350	1105	1615	1310
Power consumption	W	1630	1150	2270	1590
Current draw	A	2.86	1.88	3.26	2.2
Max. back pressure	Pa	220	150	150	98
Max. back pressure	in. wg	0.88	0.6	0.6	0.39
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	60	60
Starting current	A	14	4.5	16	5.3

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

**Data according to Commission Regulation (EU) 327/2011**

	Actual	Req. 2015				
01 Overall efficiency $\eta_{es}$	%	35.5	34.9	09 Power consumption $P_e$	kW	1.58
02 Measurement category	A			09 Air flow $q_v$	m <sup>3</sup> /h	10345
03 Efficiency category	Static			09 Pressure increase $p_{fs}$	Pa	197
04 Efficiency grade N	40.6	40		10 Speed (rpm) n	min <sup>-1</sup>	1355
05 Variable speed drive	No			11 Specific ratio*		1.00

Data obtained at optimum efficiency level.  
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$ 

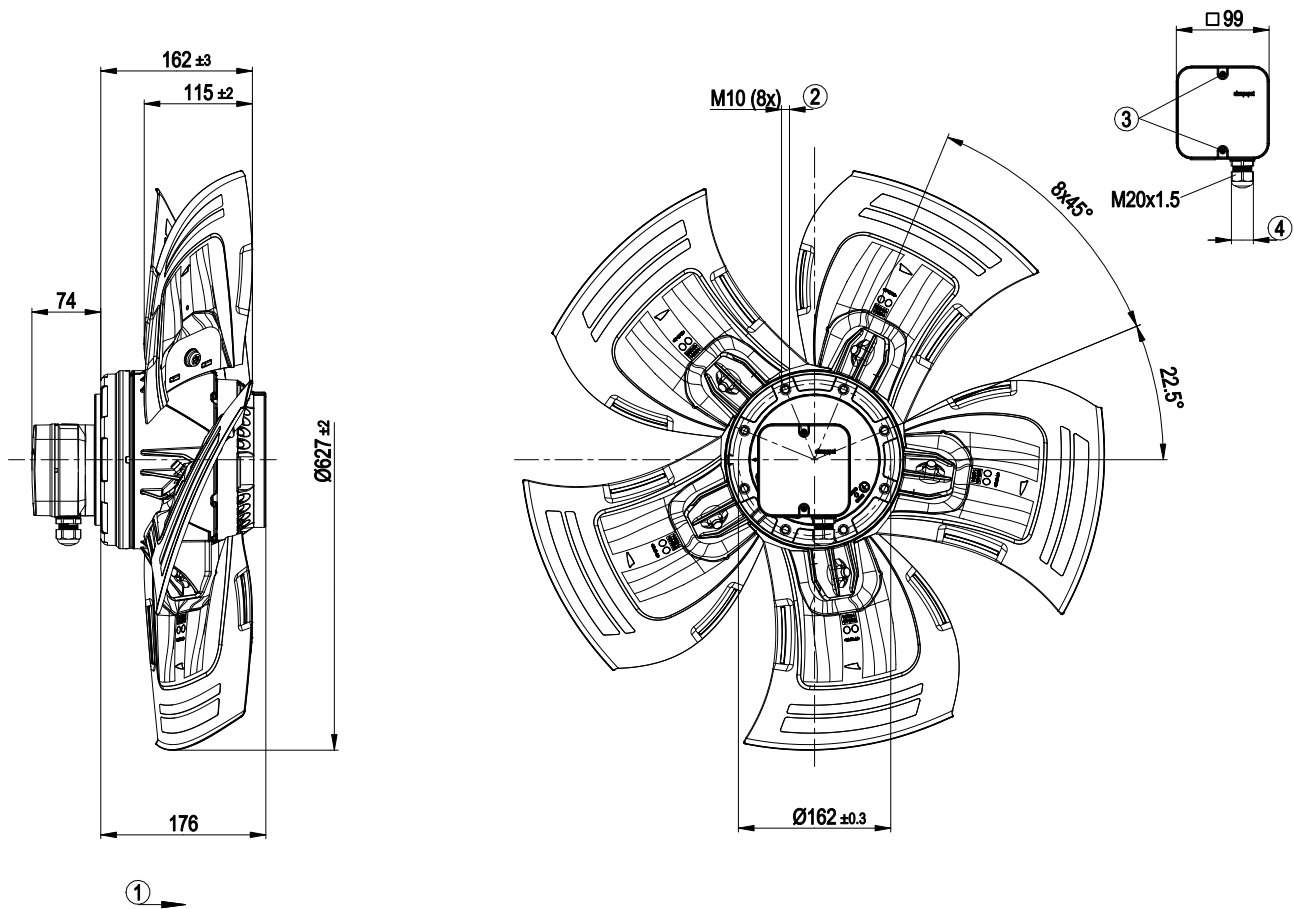
LU-115601



## Technical description

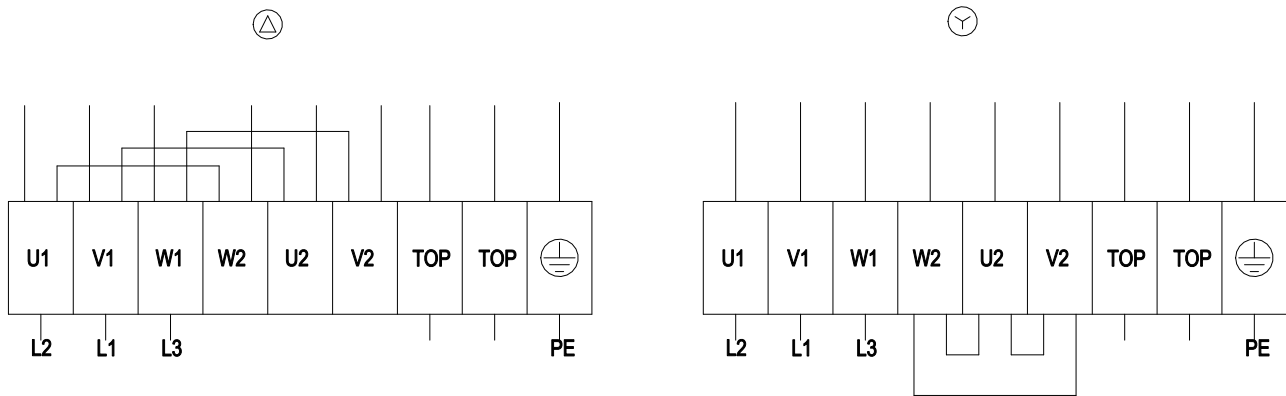
Weight	20 kg
Fan size	630 mm
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	Sheet aluminum insert, sprayed with PP plastic
Number of blades	5
Blade pitch	-10°
Airflow direction	"A"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F3-1
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our 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	Via terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); EN 61800-5-1; CE
Approval	VDE; EAC

## Product drawing



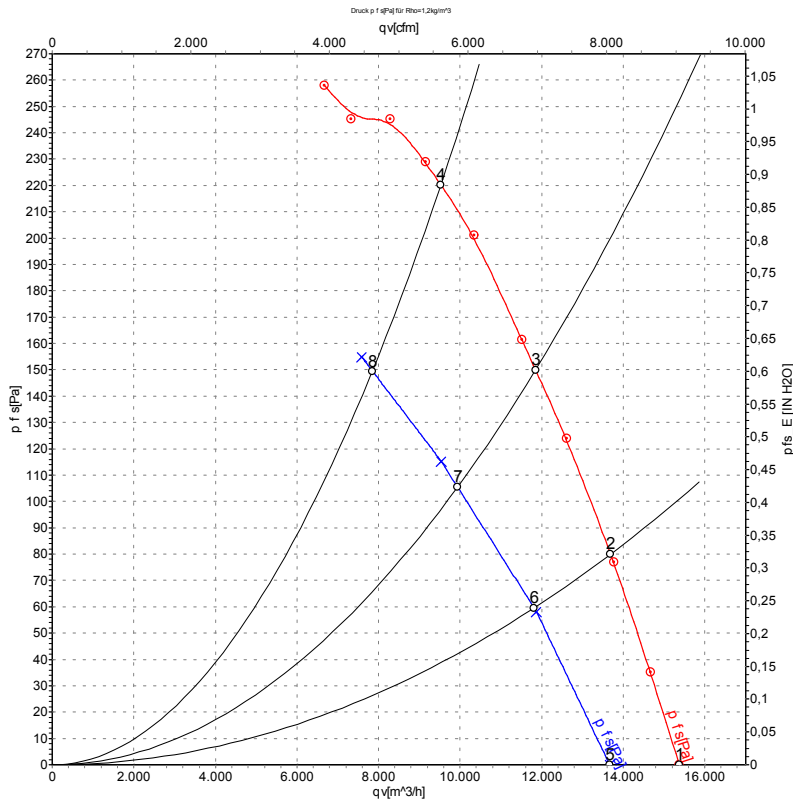
1	Direction of air flow "A"
2	Max. clearance for screw 18 mm
3	Tightening torque $1.5 \pm 0.2$ Nm
4	Cable diameter min. 7 mm, max. 14 mm, tightening torque $2 \pm 0.3$ Nm

## Connection diagram



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

## Curves: Air performance 50 Hz



Measurement: LU-115601-1  
Measurement: LU-120164-1

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.

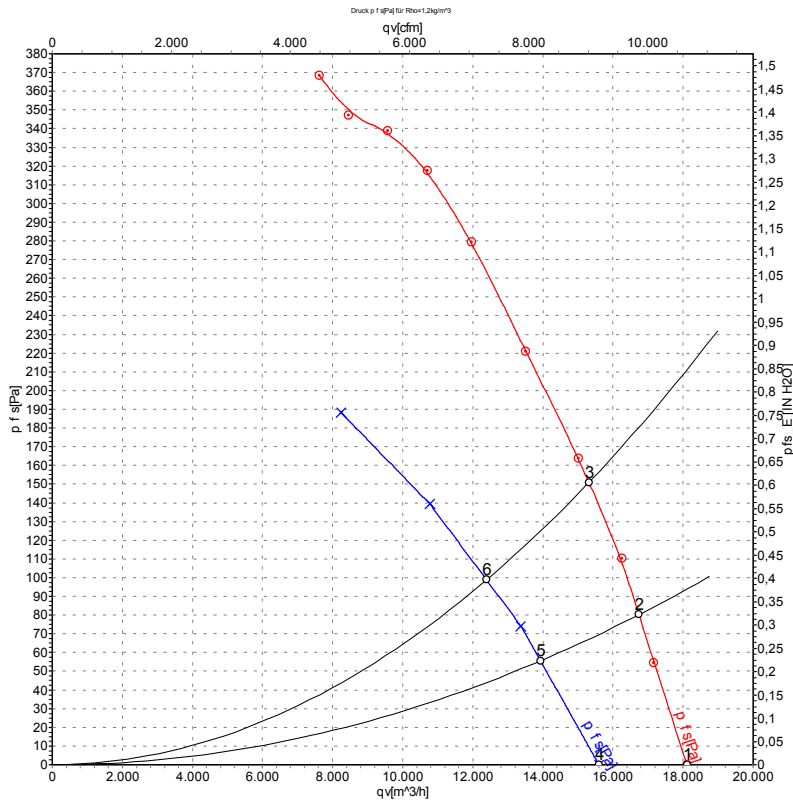
## Measured values

	Wired	U	f	n	P <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	Δ	400	50	1410	1074	2.21	71	78	78	15370	0	9045	0.00
2	Δ	400	50	1390	1286	2.46	69	75	75	13690	80	8060	0.32
3	Δ	400	50	1370	1472	2.68	71	77	77	11850	150	6975	0.60
4	Δ	400	50	1350	1630	2.86	74	81	81	9530	220	5610	0.88
5	Y	400	50	1250	843	1.37	68	74	75	13660	0	8040	0.00
6	Y	400	50	1195	970	1.57	65	71	71	11810	60	6950	0.24
7	Y	400	50	1145	1070	1.74	66	72	72	9935	105	5850	0.42
8	Y	400	50	1105	1150	1.88	69	76	75	7850	150	4620	0.60

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase



## Curves: Air performance 60 Hz



Measurement: LU-115609-1  
Measurement: LU-120166-1

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 <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	Δ	480	60	1665	1791	2.73	75	82	82	18110	0	10660	0.00
2	Δ	480	60	1640	2040	3.01	73	80	80	16740	80	9855	0.32
3	Δ	480	60	1615	2270	3.26	73	80	80	15310	150	9010	0.60
4	Y	480	60	1425	1356	1.85	71	78	78	15600	0	9180	0.00
5	Y	480	60	1365	1484	2.03	69	75	75	13930	56	8200	0.22
6	Y	480	60	1310	1590	2.20	68	75	75	12390	100	7290	0.40

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

