R4D400-AD22-09

AC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	**R4D400-AD22-09**
Motor	**M4D094-HA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
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}	1415	1235	1610	1220
Power consumption	W	515	385	750	515
Current draw	A	1.41	0.7	1.44	0.93
Min. back pressure	Pa	0	0	0	0
Min. back pressure	in. wg	0	0	0	0
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	80	60	40
Starting current	A	5	1.7	4.7	1.6

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

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Technical description

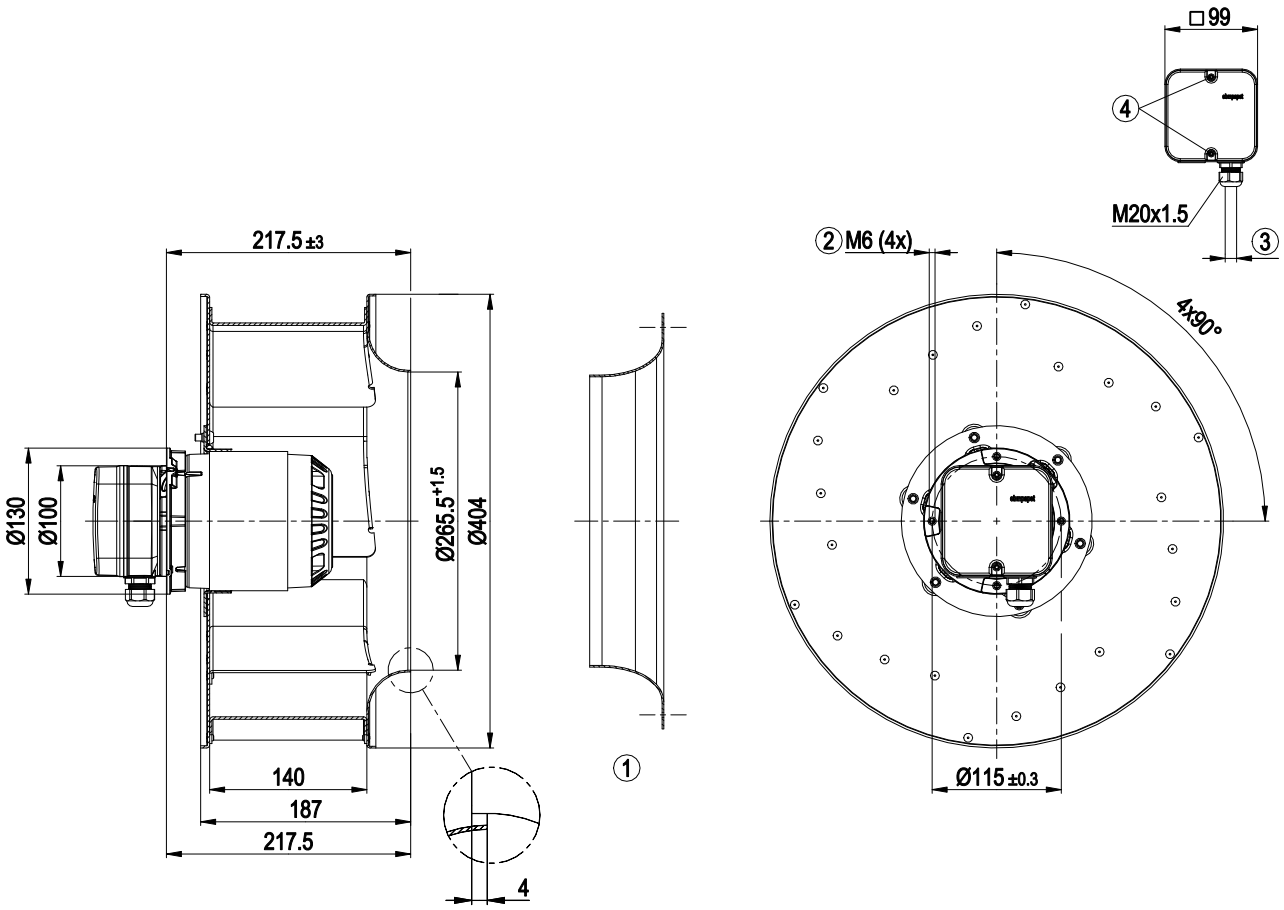
Weight	8.8 kg
Size	400 mm
Motor size	94
Rotor surface	Painted black
Terminal box material	PP plastic
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
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	None
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
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010)
Approval	EAC

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Product drawing



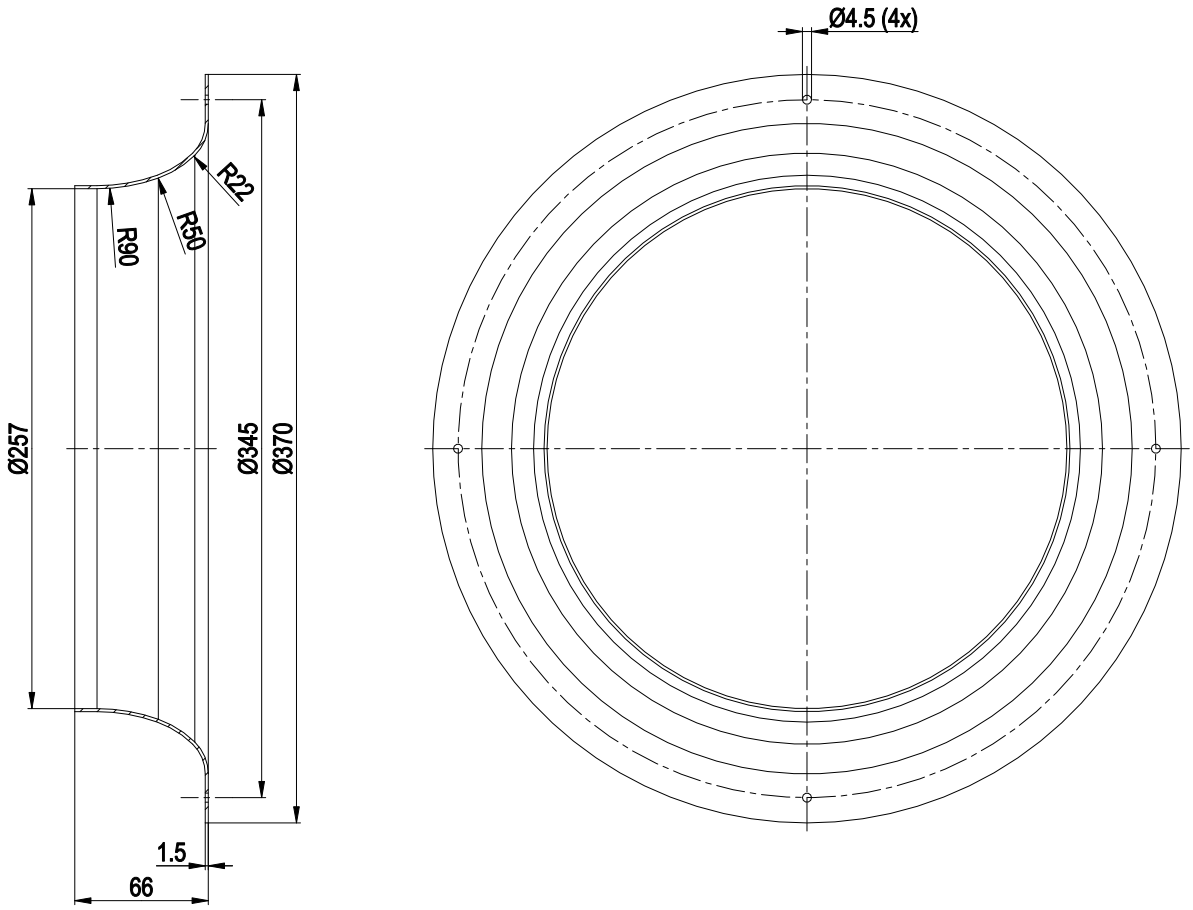
1	Accessory part: inlet ring 54476-2-4013 not included in scope of delivery
2	Max. clearance for screw 12 mm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 ± 0.3 Nm
4	Tightening torque 1.5 ± 0.2 Nm

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Accessory part



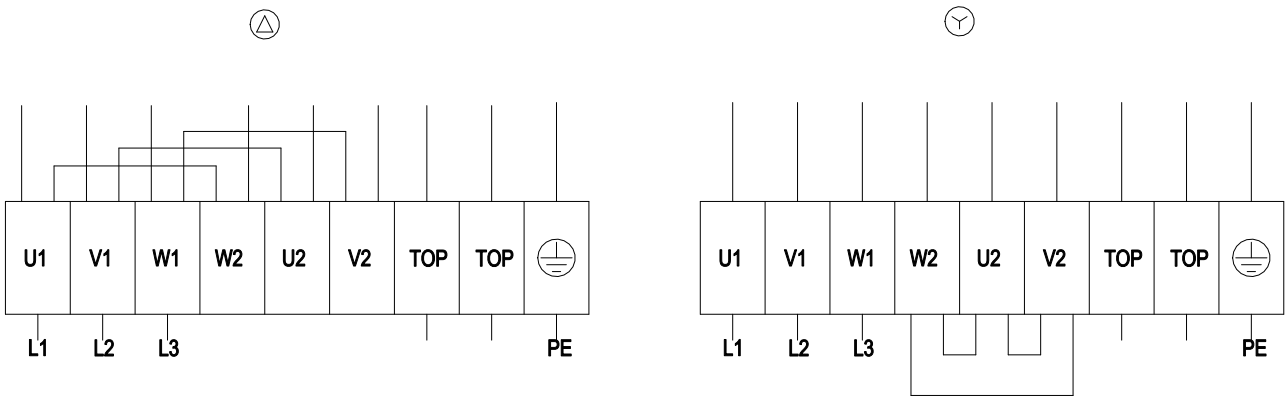
Inlet ring 54476-2-4013 not included in scope of delivery

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Connection diagram



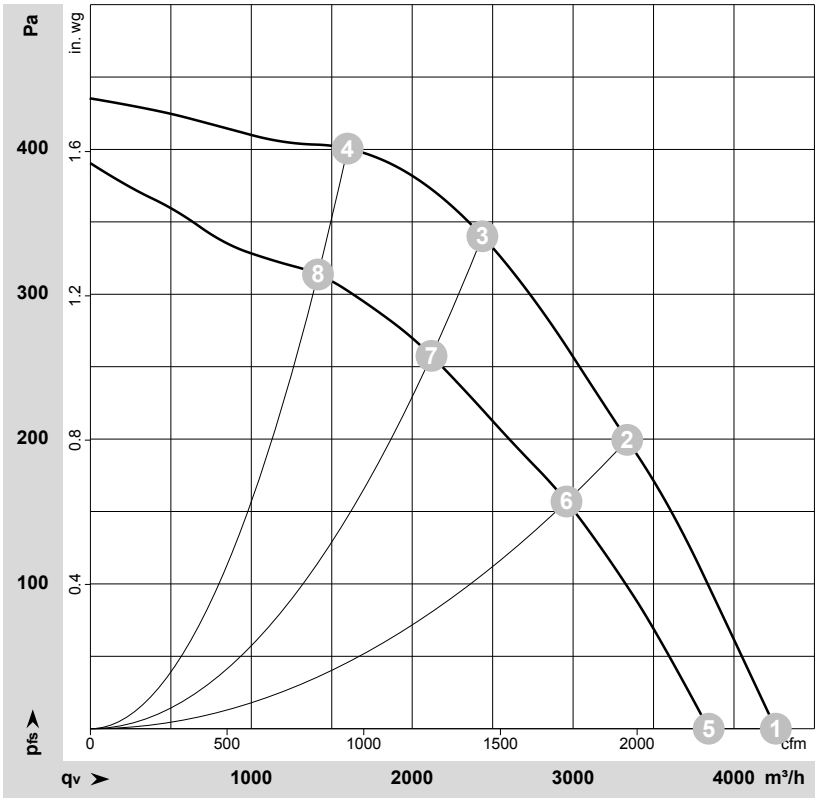
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-104783-1
Measurement: LU-104595-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	1425	445	1.20	4260	0	2505	0.00
2	Δ	400	50	1415	478	1.23	3335	200	1965	0.80
3	Δ	400	50	1415	515	1.41	2435	340	1435	1.36
4	Δ	400	50	1420	467	1.20	1600	400	940	1.61
5	Y	400	50	1275	343	0.61	3845	0	2260	0.00
6	Y	400	50	1235	383	0.67	2960	158	1740	0.63
7	Y	400	50	1235	385	0.70	2120	258	1250	1.04
8	Y	400	50	1255	358	0.63	1415	315	835	1.26

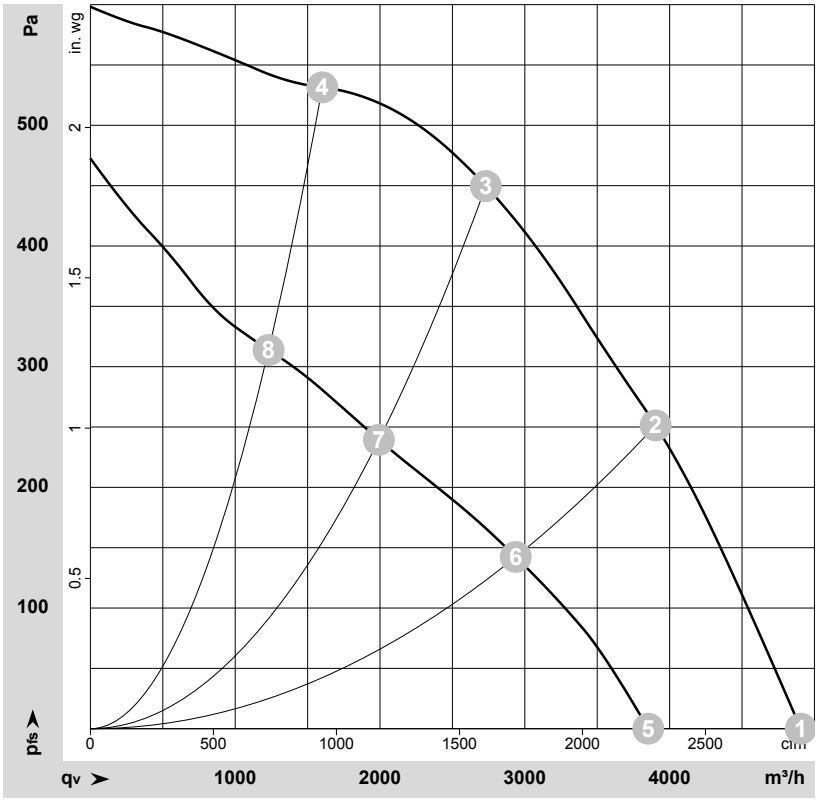
Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-104787-1
Measurement: LU-104598-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Δ	400	60	1650	651	1.22	4905	0	2890	0.00
2	Δ	400	60	1625	716	1.30	3905	250	2295	1.00
3	Δ	400	60	1610	750	1.44	2730	450	1605	1.81
4	Δ	400	60	1640	655	1.20	1600	530	940	2.13
5	Y	400	60	1275	480	0.85	3850	0	2265	0.00
6	Y	400	60	1215	502	0.89	2935	143	1730	0.57
7	Y	400	60	1220	515	0.93	1990	239	1170	0.96
8	Y	400	60	1260	473	0.83	1230	314	725	1.26

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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