

# AC centrifugal fans backward curved

Centrifugal fans, backward curved

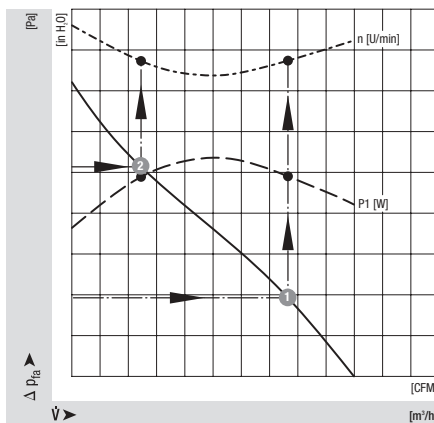
26



## Technical information

Backward curved centrifugal fans feature extremely long blades. These impellers are highly resistant to dirt and dust. Moreover, their hydraulic efficiency is very high. They are mainly used in sucking mode. In most cases, a scroll housing becomes superfluous. Depending on the application, it suffices to place a square or round box around the impeller to convert part of the dynamic pressure of the fan and to guide the air flow in the desired direction.

Especially when used in range hoods, computer fan trays, duct fans, roof units etc, this kind of fan is of particular advantage due to its dimensions and performance. In range hoods, for example, the rectangular-shaped over-pressure area around the impeller facilitates the simple switch from exhaust to re-circulated air. This principle allows you to freely choose the exhaust air direction.



Air performance characteristics for backward curved centrifugal fans

## Air performance characteristic

Air performance data are determined with ebm-papst inlet rings at sucking operation and free air flow.

Each air performance curve shows two operation points for which the corresponding data, such as speed and power input, is listed in the adjoining table.

## Impellers

Backward curved impellers, also called free-blowing, are available in various versions:

- plastic with sheet metal flange made of galvanised sheet steel
- completely made of plastic
- completely made of galvanised sheet steel
- completely made of aluminium sheet

The impellers are press-fitted onto the rotor or screwed onto a flange. In keeping with DIN ISO 1940, the unit is dynamically balanced in two planes.

**Direction of rotation**

clockwise rotation, seen on suction side

**Type of protection**

IP44 when installed

(final evaluation has to be carried out in the customer's application)

**Bearings**

maintenance-free ball bearings

**Approvals**

CE

**Cable exit**

variable, either lateral or front side

**Electrical data**

Electrical data has been established at free air flow, i.e. at a back pressure of 0 Pa.

In the lower third of the air performance curve, there is maximum power consumption. After that, power consumption decreases as back pressure increases.

**Insulation class**

"B" if not otherwise stated

**Moisture protection**

The stator is humidity protected and the rotor has condensate discharge.

# AC centrifugal fans

backward curved, Ø 133



- **Material:** impeller completely made of plastic PA 6.6 (polyamide, glass-fibre reinforced), injection-moulded round sheet-metal plate

ebm-papst • Mulfingen

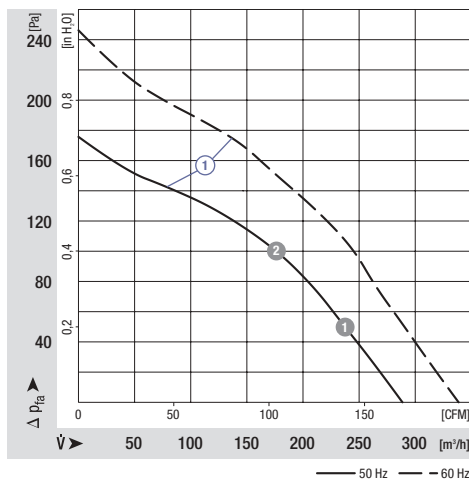
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg
R2E 133-BH66 -05	M2E052-BF	①	230	50	290	2800	24	0,11	1,0/400	56	45	0,7
			230	60	345	3300	27	0,13	1,0/400	60	60	
R2S 133-AE17 -05	M2S052-CA	②	230	50	280	2780	36	0,25	---	55	40	0,9
			230	60	320	3200	34	0,21	---	58	60	

subject to alterations

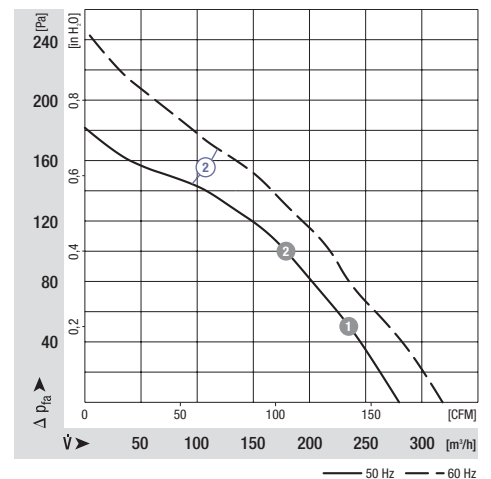
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	2710	25
① ②	2700	26

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	2720	38
② ②	2720	38

## Characteristics

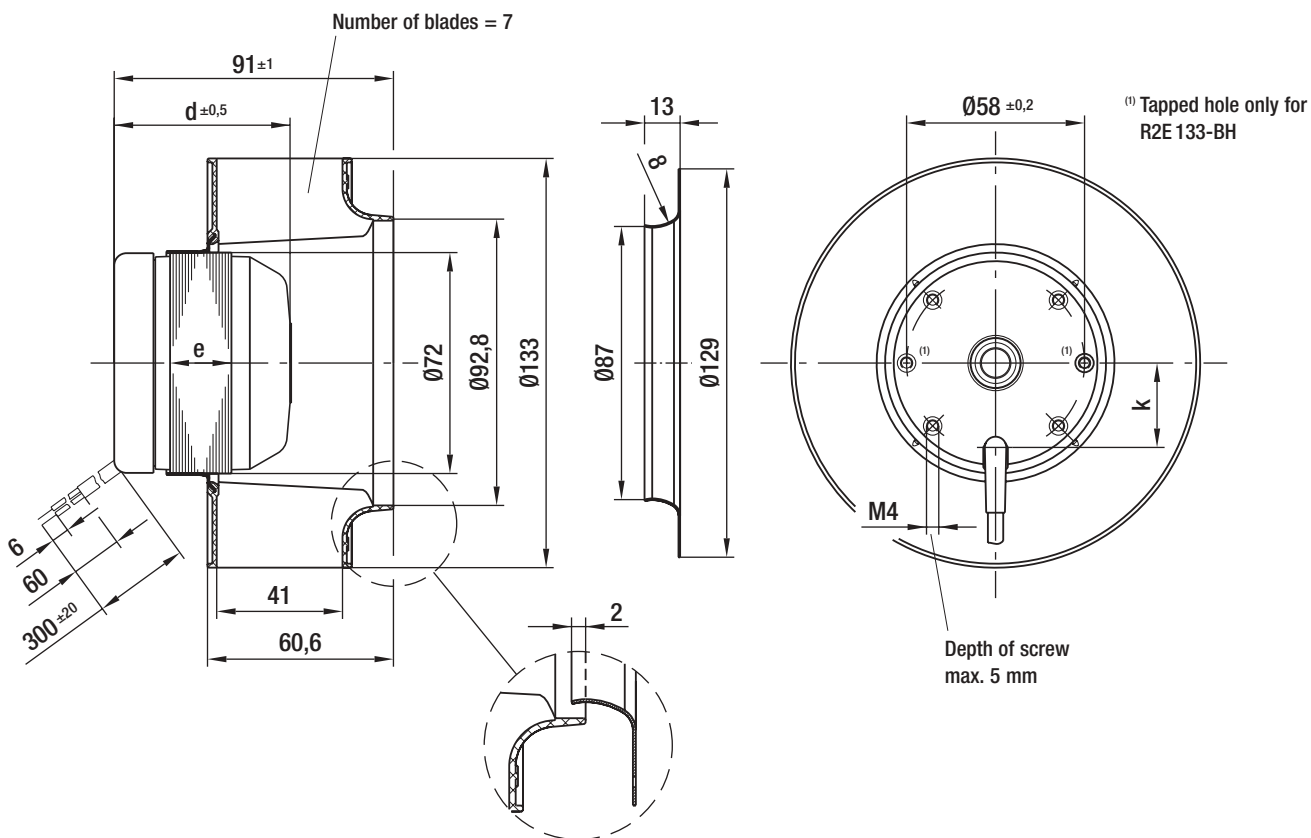


## Characteristics



Dimensions

Type	d	e	k	Inlet ring
R2E 133-BH66 -05	53,6	15	27,5	09566-2-4013
R2S 133-AE17 -05	58,0	20	28,5	09566-2-4013



# AC centrifugal fans

backward curved, Ø 175 / 190



- **Material:** impeller completely made of plastic PA 6.6 (polyamide, glass-fibre reinforced), injection-moulded round sheet-metal plate

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Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	°C	kg	
R2E 175-AR72 -05 <sup>(1)</sup>	M2E052-CA	①	230	50	490	2650	50	0,25	1,5/400	63	50	0,9
			230	60	570	3100	51	0,23	1,5/400	68	80	
R2S 175-AB56 -01	M2S052-CA	②	230	50	440	2350	53	0,33	---	61	40	0,9
			230	60	430	2300	51	0,29	---	60	55	
R2E 190-A026 -05	M2E068-BF	③	230	50	570	2500	58	0,26	2,0/400	62	50	1,2
			230	60	620	2700	75	0,34	2,0/400	64	55	

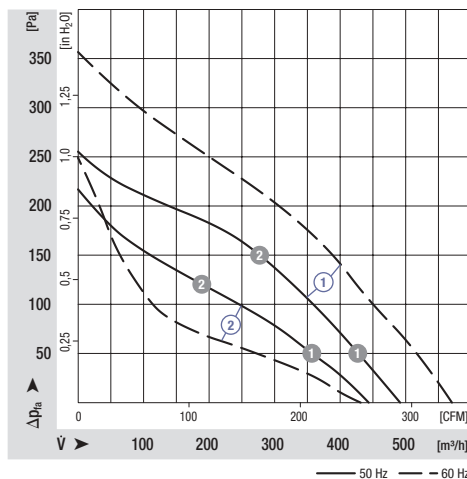
subject to alterations

<sup>(1)</sup> Insulation class "F"

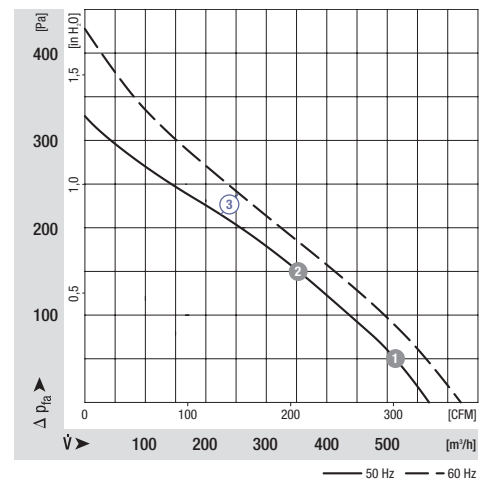
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	2600	51
① ②	2530	53
② ①	2240	54
② ②	2120	56

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
③ ①	2490	59
③ ②	2410	61

## Characteristics

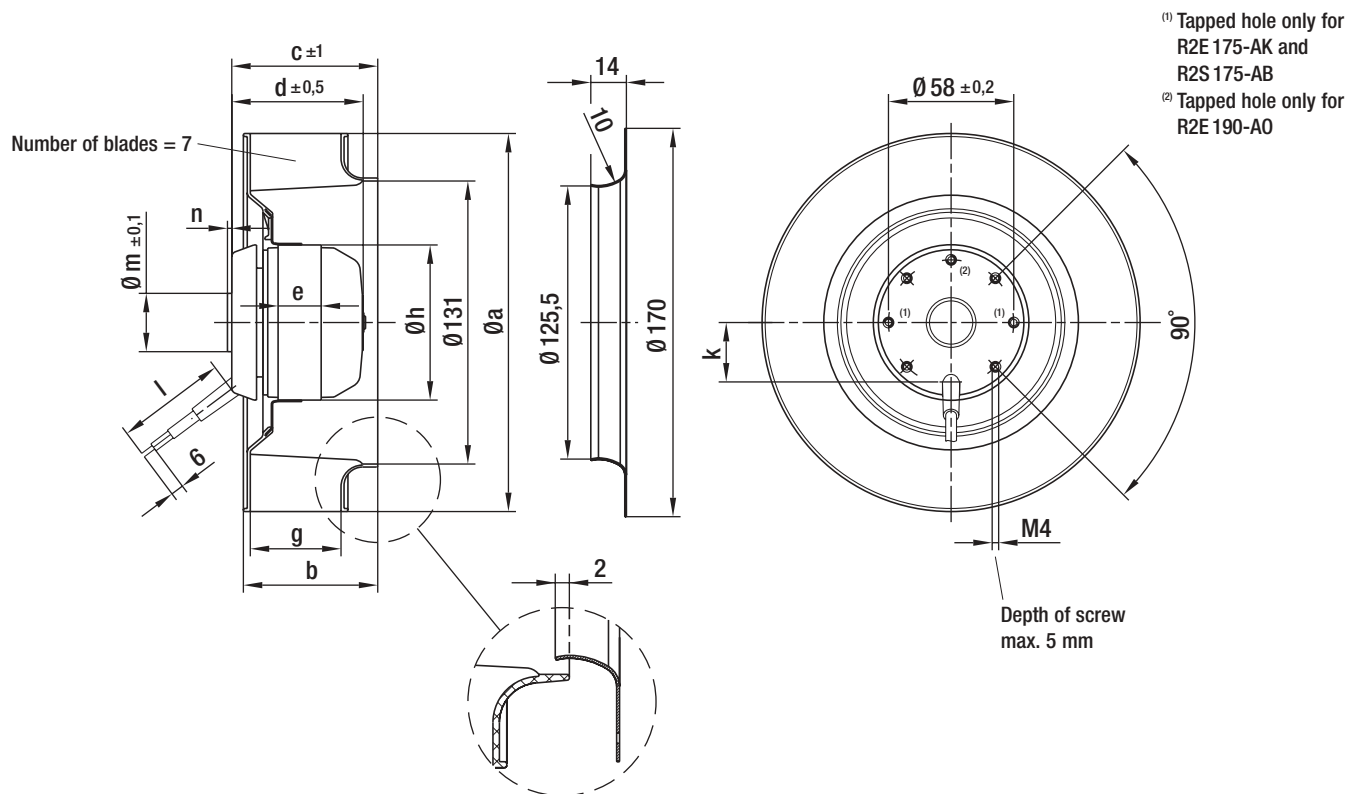


## Characteristics



## Dimensions

Type	a	b	c	d	e	g	h	k	l	m	n	Inlet ring
R2E 175-AR72 -05	175	62,0	68,5	61,5	20	42,0	72	27,5	450	---	---	09576-2-4013
R2S 175-AB56 -01	175	62,0	69,0	61,5	20	42,0	72	27,5	400	---	---	09576-2-4013
R2E 190-A026 -05	190	62,8	68,5	62,7	15	44,6	92	27,0	450	27	2	09576-2-4013



# AC centrifugal fans

backward curved, Ø 220 / 225



- **Material:** impeller completely made of plastic PA 6.6 (polyamide, glass-fibre reinforced), injection-moulded round sheet-metal plate

ebm-papst • Muldingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg	
R2E 220-AA40 -05	M2E 068-BF	①	230	50	860	2600	85	0,38	3,0/400	73	40	1,5
			230	60	900	2700	90	0,40	2,0/400	74	40	
R2E 220-AB06 -05	M2E 068-CF	②	230	50	885	2700	85	0,38	2,5/400	72	55	2,5
			230	60	990	3050	115	0,51	2,5/400	75	55	
R2E 225-BD92 -09 <sup>(1)</sup>	M2E 068-DF	③	230	50	1200	2650	135	0,60	4,0/450	69	60	2,3
			230	60	1340	2950	200	0,88	4,0/450	71	60	
R4E 225-AT01 -05	M4E 068-CF	④	230	50	655	1420	40	0,20	1,5/400	59	50	1,8
			230	60	765	1660	37	0,18	1,0/400	61	80	

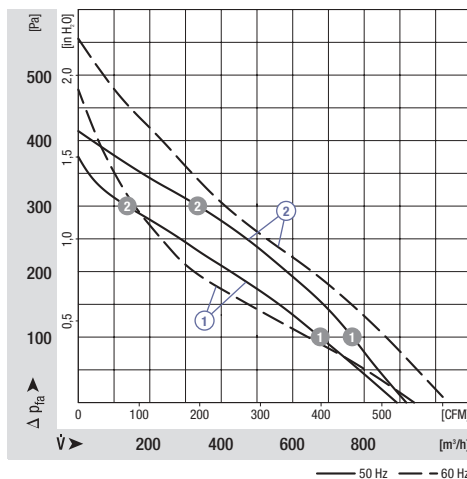
subject to alterations

<sup>(1)</sup> Insulation class "F"

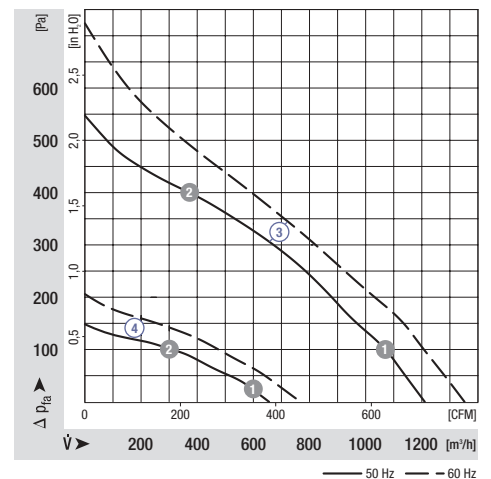
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	2390	95
① ②	2490	90
② ①	2650	96
② ②	2600	102

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
③ ①	2610	146
③ ②	2650	138
④ ①	1410	41
④ ②	1400	43

## Characteristics



## Characteristics

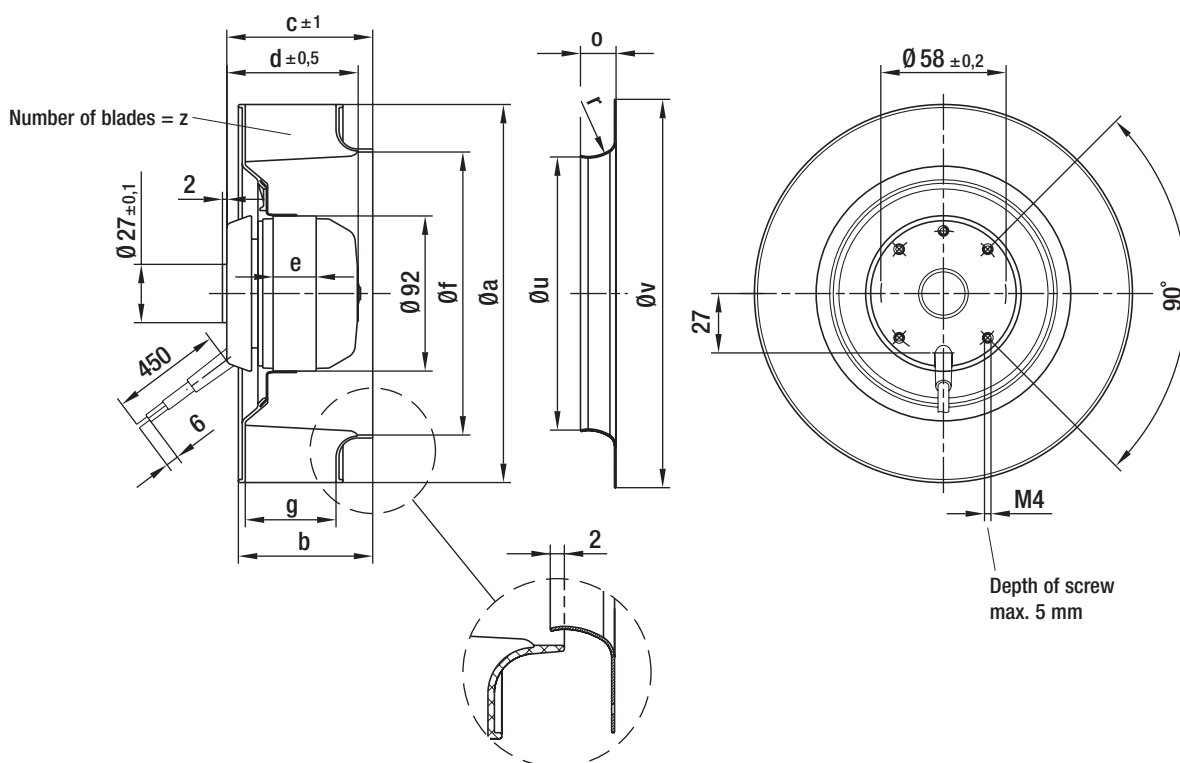




Dimensions

Dimensions

Type	a	b	c	d	e	f	g	z	Inlet ring	o	r	u	v
R2E 220-AA40 -05	220	63,0	71	63,0	15	159	44,0	11	09609-2-4013	21	22	155	252
R2E 220-AB06 -05	220	63,0	71	73,0	25	159	44,0	11	09609-2-4013	21	22	155	252
R2E 225-BD92 -09	225	89,3	99	83,0	35	153	62,6	7	96358-2-4013	28	25	146	223
R4E 225-AT01 -05	225	89,3	99	72,6	25	153	62,6	7	96358-2-4013	28	25	146	223



# AC centrifugal fans

backward curved, Ø 250



- **Material:** plastic impeller made of PA 6.6 (polyamide, glass-fibre reinforced), round sheet-metal plate

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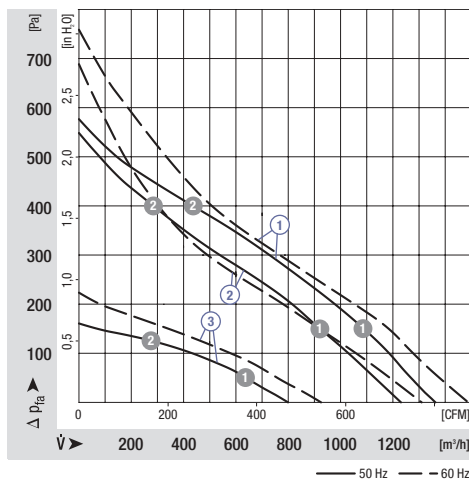
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	°C	kg
R2E 250-AS47 -05	M2E 068-EC	①	230	50	1450	2600	155	0,70	5,0/400	75	50	3,1
			230	60 <sup>(1)</sup>	1490	2700	215	0,95	5,0/400	76	45	
R2E 250-AQ05 -05	M2E 068-DF	②	230	50	1230	2550	130	0,57	4,0/400	73	50	2,6
			230	60	1320	2750	180	0,80	4,0/400	75	40	
R4E 250-AH01 -05	M4E 068-CF	③	230	50	810	1400	43	0,20	1,5/400	61	70	2,2
			230	60	930	1600	43	0,20	1,0/400	64	80	

subject to alterations

<sup>(1)</sup> Insulation class "F" required at 60 Hz

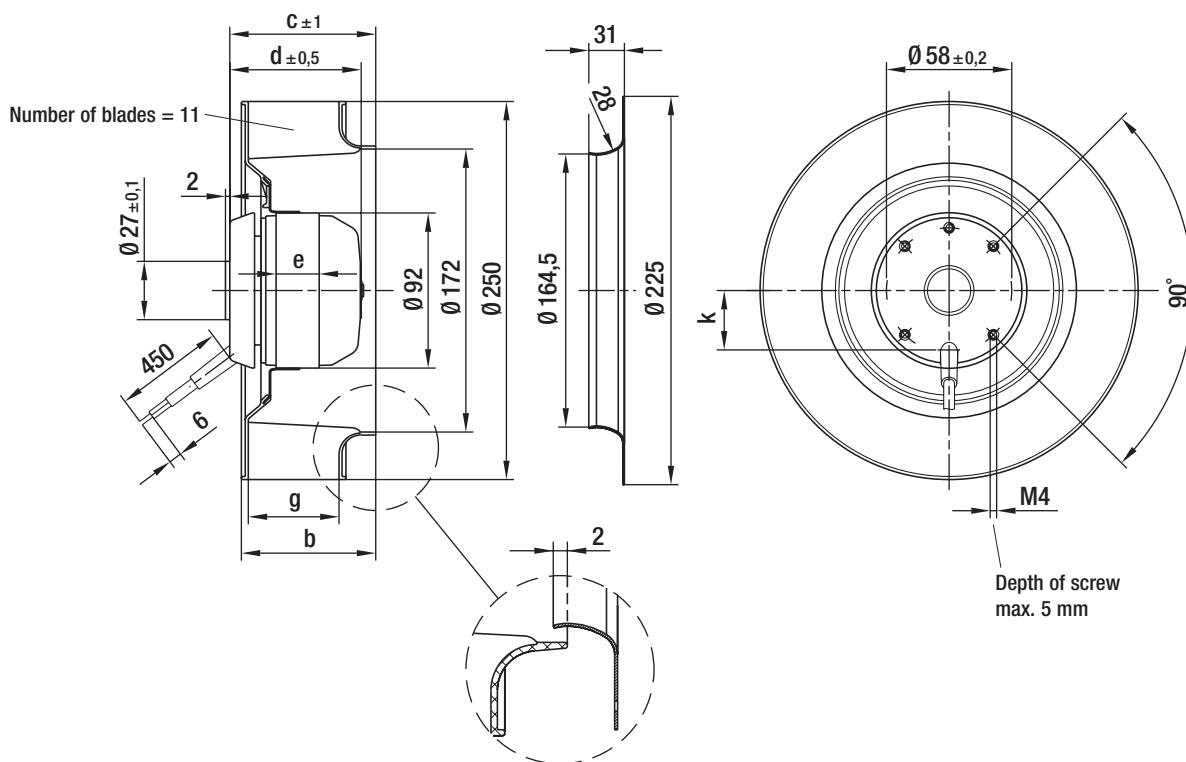
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	2400	152
① ②	2400	152
② ①	2460	172
② ②	2435	175
③ ①	1385	46
③ ②	1370	47

## Characteristics



Dimensions

Type	b	c	d	e	g	k	Inlet ring
R2E 250-AS47 -05	84,3	99	97,5	42	56	27	96359-2-4013
R2E 250-AQ05 -05	73,3	89	82,5	35	45	27	96359-2-4013
R4E 250-AH01 -05	84,3	99	72,6	25	56	29	96359-2-4013



# AC centrifugal fans

backward curved, Ø 310 / 330 / 355

- **Material:** plastic PA 6.6 V0



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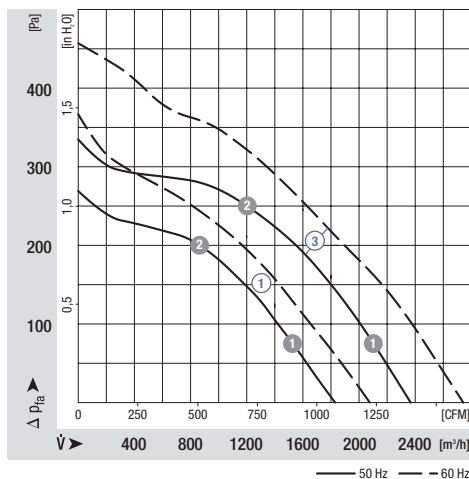
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg	
R4E 310-AT06 -01	M4E068-EI	①	230	50	1830	1400	105	0,50	4,0/400	63	55	3,5
			230	60	2070	1600	140	0,62	4,0/400	66	55	
R4E 330-AA06 -05	M4E074-DF	②	230	50	1760	1450	95	0,44	4,0/400	66	60	3,6
			230	60	2070	1700	135	0,61	4,0/400	69	40	
R4E 355-AF05 -05	M4E074-EI	③	230	50	2365	1410	170	0,78	6,0/400	66	55	4,4
			230	60	2740	1630	250	1,10	6,0/400	70	40	
R4E 355-AG02 -05	M4E074-GA	④	230	50	2850	1430	210	0,97	7,0/400	67	45	4,5
R6E 355-AB16 -05	M6E074-DF	⑤	230	50	1875	910	65	0,29	2,0/400	61	70	4,0
			230	60	2050	1000	90	0,40	2,0/400	62	50	

subject to alterations

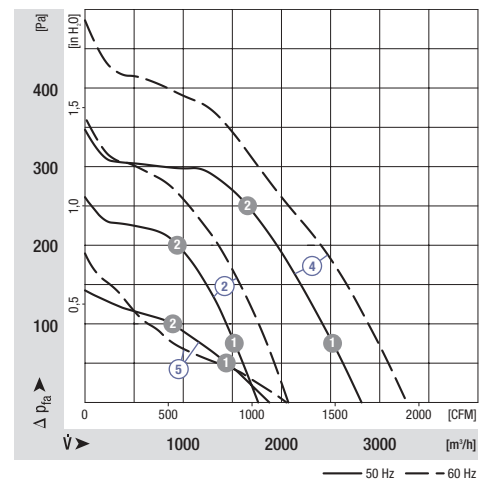
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1380	118
① ②	1360	127
③ ①	1390	190
③ ②	1360	212

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	1420	112
② ②	1395	128
④ ①	1425	233
④ ②	1400	267
⑤ ①	870	73
⑤ ②	835	77

## Characteristics



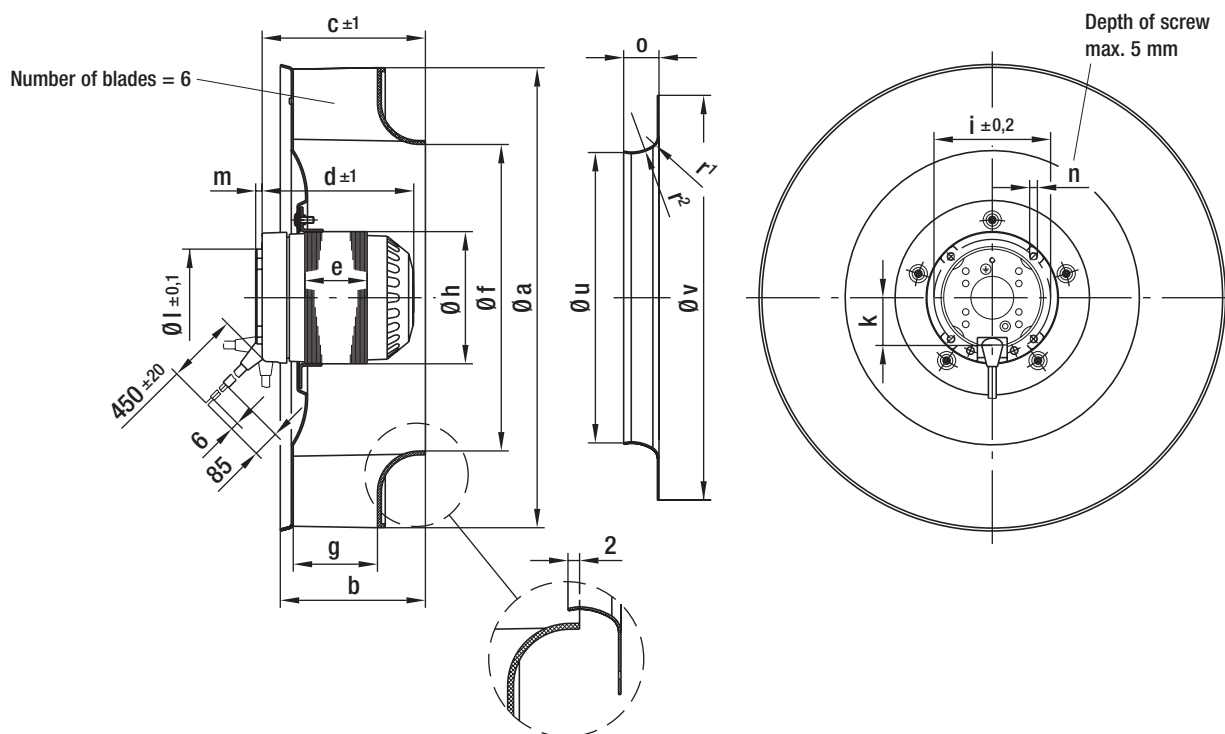
## Characteristics



Dimensions

Dimensions

Type	Dimensions													Inlet ring	Dimensions				
	a	b	c	d	e	f	g	h	i	k	l	m	n		o	r <sup>1</sup>	r <sup>2</sup>	u	v
R4E 310-AT06 -01	318	132,0	154,0	97,5	42	203	101,0	92	58	27	27	2	M4	97512-2-4013	53	30	60	192	300
R4E 330-AA06 -05	360	127,0	144,0	104,0	35	237	80,0	102	90	37	75	5	M6	51357-2-4013	60	54	28	224	350
R4E 355-AF05 -05	360	148,5	165,5	117,0	48	237	101,5	102	90	37	75	5	M6	51357-2-4013	60	54	28	224	350
R4E 355-AG02 -05	360	173,0	190,0	129,0	60	237	126,0	102	90	37	75	5	M6	51357-2-4013	60	54	28	224	350
R6E 355-AB16 -05	360	173,0	190,0	104,0	35	237	126,0	102	90	37	75	5	M6	51357-2-4013	60	54	28	224	350



# AC centrifugal fans

backward curved, Ø 250 / 270

- **Material:** sheet steel



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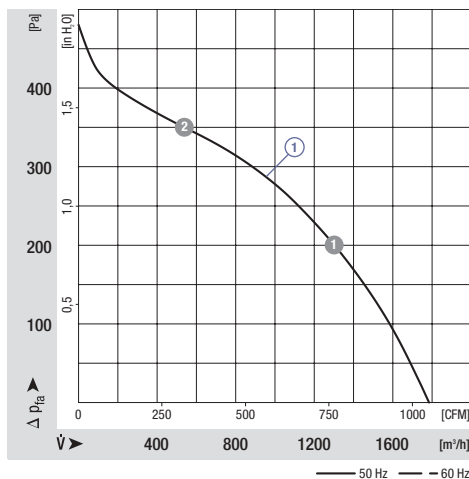
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	°C	kg
R2E 250-AW50 -05	M2E 068-EC	①	230	50	1780	2650	185	0,81	6,0/400	72	50	3,1
R2E 270-AA01 -05 <sup>(1)(2)</sup>	M2E 074-GA	②	230	50	2435	2750	280	1,23	10 / 400	77	60	4,7
			230	60	2760	3100	430	1,88	10 / 400	80	50	

subject to alterations ① FPU (P2) capacitor in keeping with IEC 252 ② Insulation class "F"

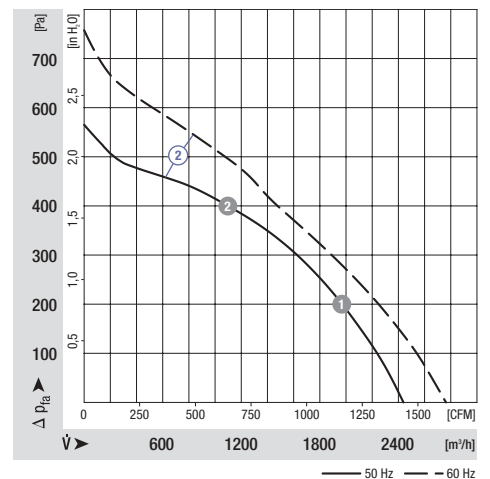
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	2510	220
① ②	2615	190

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
② ①	2665	245
② ②	2690	332

## Characteristics



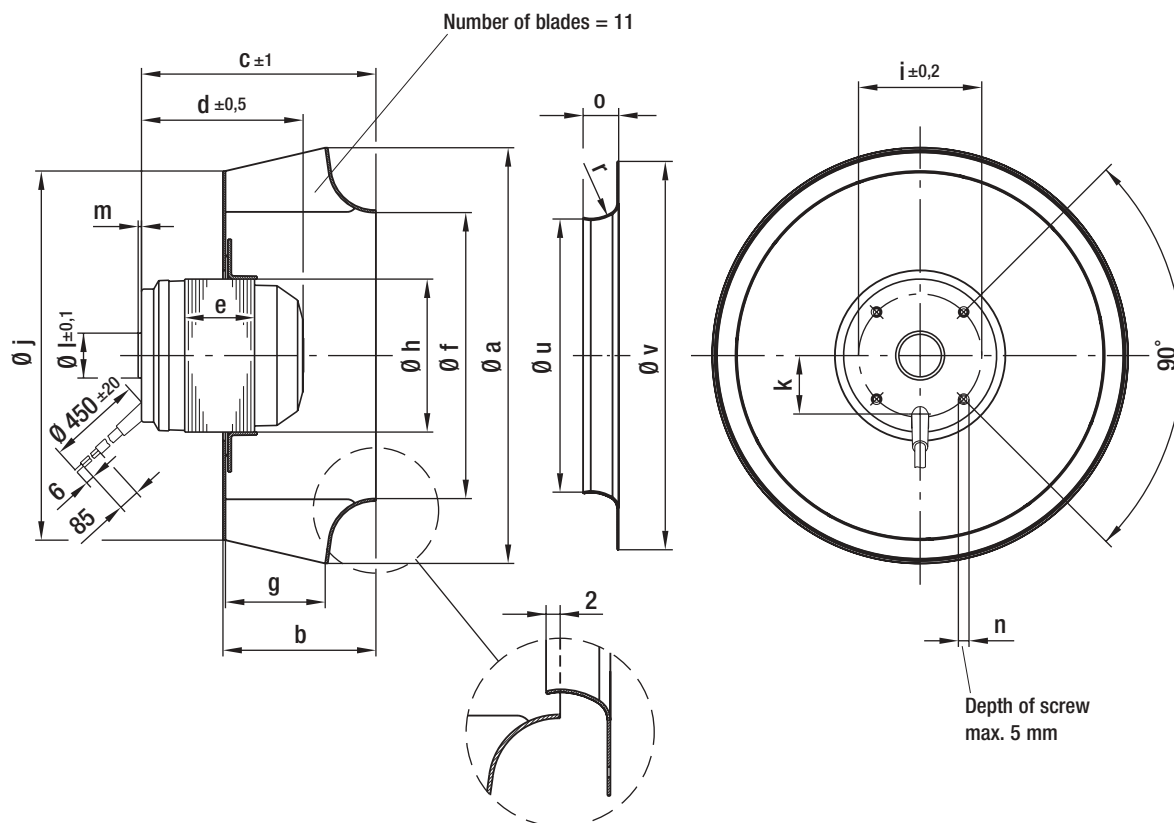
## Characteristics



Dimensions

Dimensions

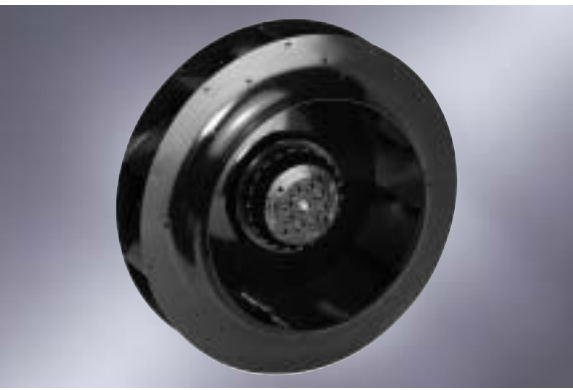
Type	a	b	c	d	e	f	g	h	i	j	k	l	m	n	Inlet ring	o	r	u	v
R2E 250-AW50 -05	250	92	141	97,5	42	172	60	92	58	222	27	27	2	M4	96359-2-4013	31	28	164,5	250
R2E 270-AA01 -05	270	102	171	129,0	60	191	70	102	90	240	37	75	5	M6	96360-2-4013	35	31	182,5	280



# AC centrifugal fans

backward curved, Ø 280

- **Material:** sheet steel



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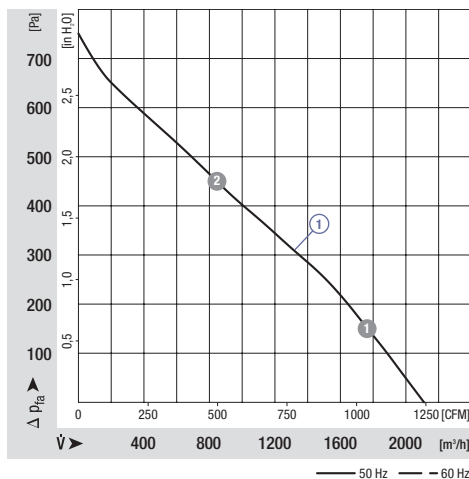
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	°C	kg	
<b>R2E 280-AE52 -05</b> <sup>(1)(2)</sup>	M2E068-EC	①	230	50	2110	2700	225	1,00	7,0/400	76	40	3,0
<b>R4E 280-AD08 -05</b>	M4E068-DF	②	230	50	1435	1420	78	0,35	2,5/450	62	40	2,8
			230	60	1685	1635	105	0,42	2,5/450	67	40	

subject to alterations ① FPU (P2) capacitor in keeping with IEC 252 ② Insulation class "F"

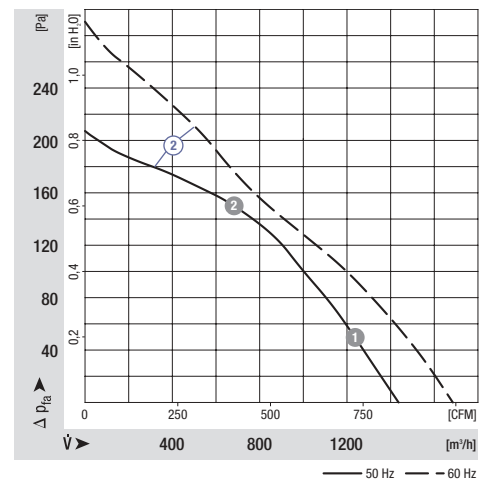
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	2560	265
① ②	2390	312

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
② ①	1380	88
② ②	1340	99

## Characteristics



## Characteristics

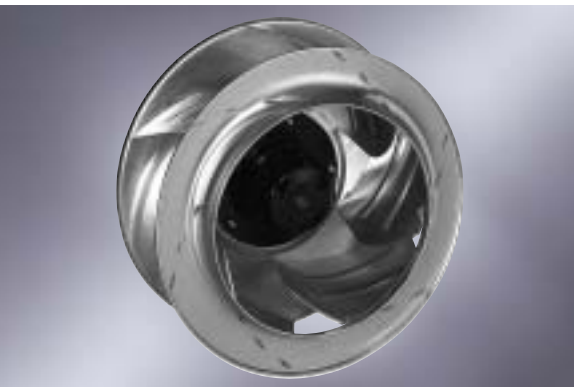






# AC centrifugal fans

backward curved, 3-D, Ø 310



- **Material:** sheet aluminium
- **Inlet ring:** data collected via short nozzle (using long nozzle, better air performance and noise figures can be attained)

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Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg	
R4D 310-AR18 -01 <sup>(1)</sup>	M4D068-EC	①	230/400	50	1710	1430	85	0,30	---	62	75	3,3
			230/400	60	1990	1650	115	0,26	---	66	80	
R4D 310-AS18 -01 <sup>(1)</sup>	M4D068-EC	②	230/400	50	2120	1400	110	0,32	---	60	65	3,4
			230/400	60	2450	1600	150	0,30	---	63	55	
R4E 310-AR06 -01	M4E068-EC	③	230	50	1690	1410	95	0,46	4,0/400	62	70	3,3
			230	60	1950	1650	125	0,56	4,0/400	66	65	
R4E 310-AS06 -01 <sup>(2)</sup>	M4E068-EC	④	230	50	2130	1370	120	0,54	4,0/400	59	85	3,4
			230	60	2380	1530	160	0,71	4,0/400	62	50	
R6E 310-AI04 -01	M6E068-EC	⑤	230	50	1110	950	45	0,21	1,5/450	51	75	3,3
			230	60	1320	1120	55	0,25	1,5/450	55	80	
R6E 310-AJ04 -01	M6E068-EC	⑥	230	50	1400	920	48	0,22	1,5/450	50	75	3,4
			230	60	1640	1070	60	0,27	1,5/450	53	75	

subject to alterations

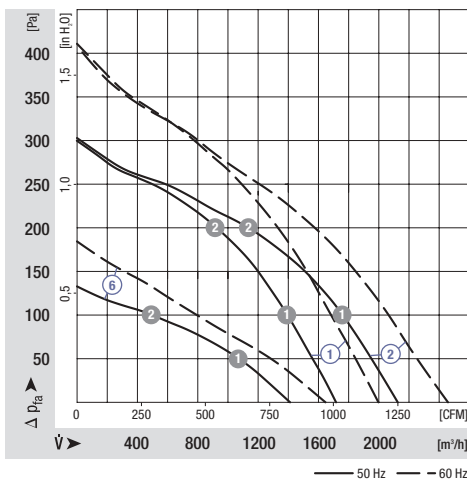
<sup>(1)</sup> 400 VAC Δ/Y for two speed steps available on request

<sup>(2)</sup> Insulation class "F"

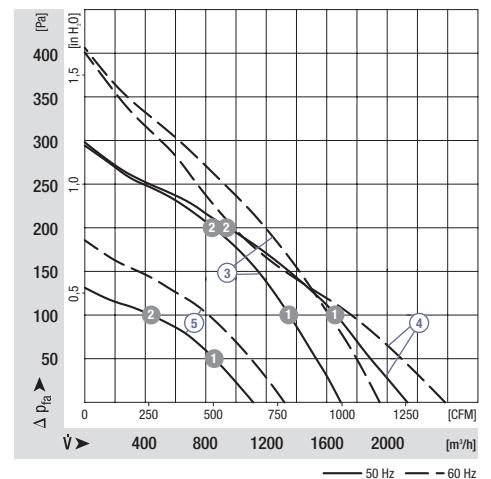
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1400	107
① ②	1400	113
② ①	1360	136
② ②	1350	141
⑥ ①	885	53
⑥ ②	900	51

	n [min⁻¹]	P <sub>1</sub> [W]
③ ①	1370	114
③ ②	1360	118
④ ①	1310	140
④ ②	1320	140
⑤ ①	950	46
⑤ ②	925	50

## Characteristics

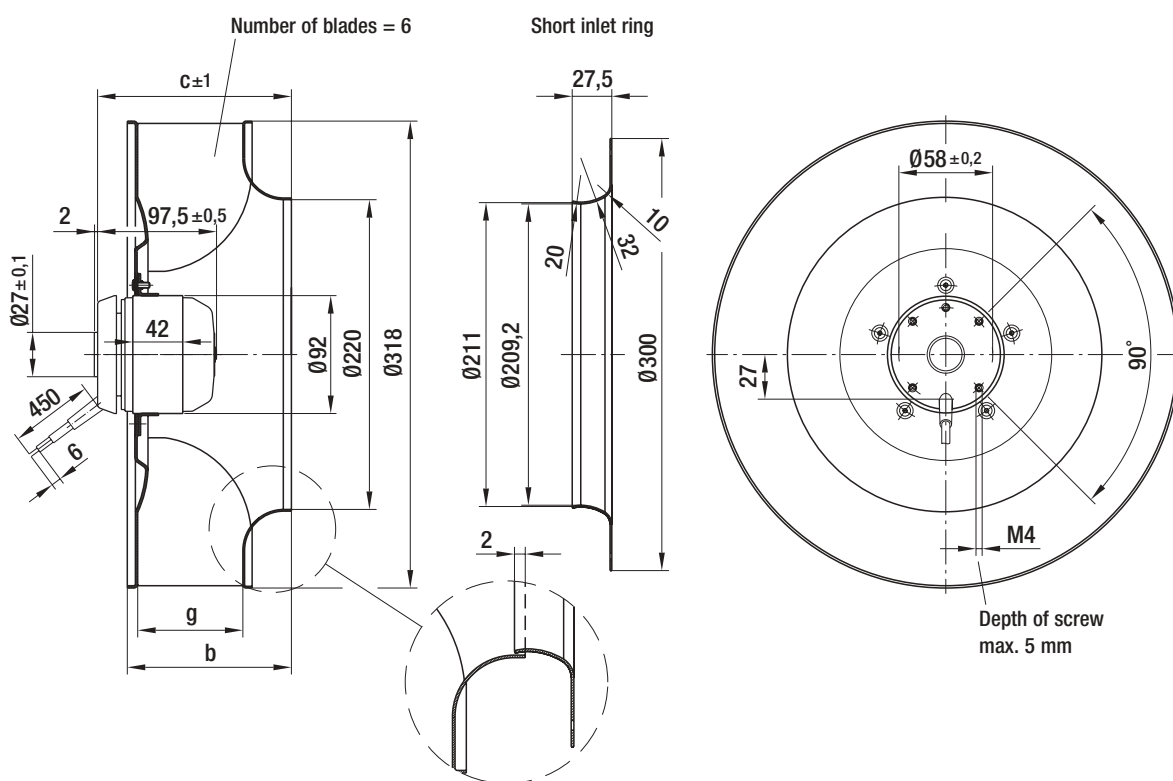


## Characteristics



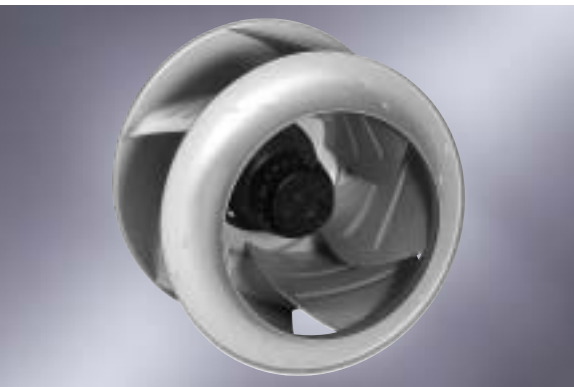
Dimensions

Type	b	c	g	Inlet ring short	(long)
R4D 310-AR18 -01	104	123	70	31051-2-4013	(31050-2-4013)
R4D 310-AS18 -01	139	154	101	31051-2-4013	(31050-2-4013)
R4E 310-AR06 -01	104	123	70	31051-2-4013	(31050-2-4013)
R4E 310-AS06 -01	139	154	101	31051-2-4013	(31050-2-4013)
R6E 310-AI04 -01	104	123	70	31051-2-4013	(31050-2-4013)
R6E 310-AJ04 -01	139	154	101	31051-2-4013	(31050-2-4013)



# AC centrifugal fans

backward curved, 3-D, Ø 355



- **Material:** sheet aluminium
- **Inlet ring:** data collected via short nozzle (using long nozzle, better air performance and noise figures can be attained)

ebm-papst • Muldingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg	
R4D 355-AH11 -05 <sup>(1)(2)</sup>	M4D074-EI	①	400 Y	50	2580	1400	170	0,52	---	65	70	4,7
			400 Y	60	2930	1600	235	0,50	---	69	65	
R4E 355-AK05 -05 <sup>(2)</sup>	M4E074-EI	②	230	50	2580	1400	180	0,80	6,0/450	66	60	4,7
			230	60	2940	1600	250	1,14	6,0/450	69	35	
R4E 355-AL02 -05 <sup>(2)</sup>	M4E074-GA	③	230	50	3160	1420	245	1,12	8,0/400	66	50	5,3
R6E 355-AD16 -05 <sup>(2)</sup>	M6E074-DF	④	230	50	1700	910	65	0,29	2,0/400	54	90	3,5
			230	60	1890	1000	85	0,37	2,0/400	57	75	
R6E 355-AE16 -05 <sup>(2)</sup>	M6E074-DF	⑤	230	50	1930	870	70	0,31	2,0/400	52	85	4,1
			230	60	1940	890	90	0,40	2,0/400	53	60	

subject to alterations

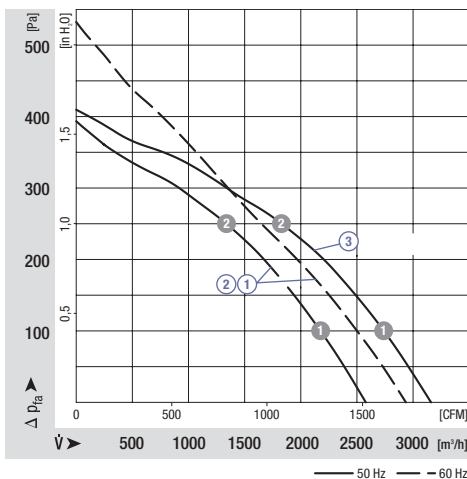
<sup>(1)</sup> 400 VAC Δ/Y for two speed steps available on request

<sup>(2)</sup> Insulation class "F"

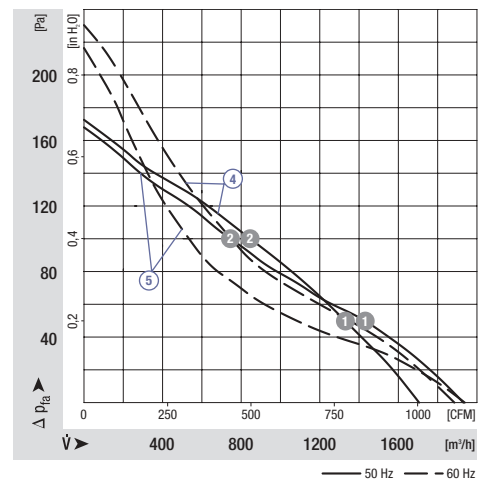
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1375	205
① ②	1360	227
② ①	1350	209
② ②	1330	229
③ ①	1395	273
③ ②	1375	295

	n [min⁻¹]	P <sub>1</sub> [W]
④ ①	860	71
④ ②	850	73
⑤ ①	785	80
⑤ ②	805	78

## Characteristics

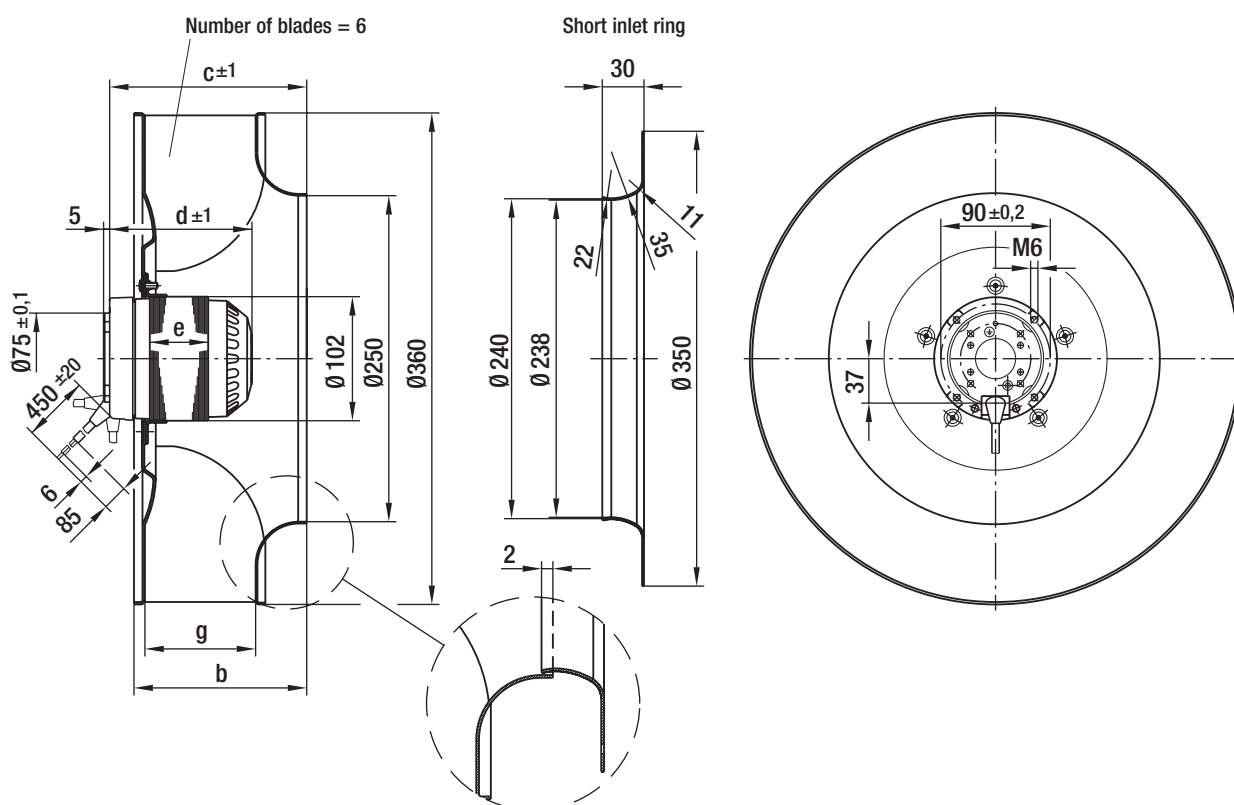


## Characteristics



## Dimensions

Type	b	c	d	e	g	Inlet ring short	(long)
R4D 355-AH11 -05	146,5	167	117	48	96,0	35561-2-4013	(35560-2-4013)
R4E 355-AK05 -05	146,5	167	117	48	96,0	35561-2-4013	(35560-2-4013)
R4E 355-AL02 -05	171,0	190	129	60	120,5	35561-2-4013	(35560-2-4013)
R6E 355-AD16 -05	146,5	167	104	35	96,0	35561-2-4013	(35560-2-4013)
R6E 355-AE16 -05	171,0	190	104	35	120,5	35561-2-4013	(35560-2-4013)



# AC centrifugal fans

backward curved, 3-D, Ø 400

- **Material:** sheet aluminium



ebm-papst • Mulfingen

## Nominal data

Type	Motor	Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg
R4E 400-AB23 -05 <sup>(1)</sup>	M4E 074-EI	①	230	50	3150	1300	270	1,20	8,0/400	68	45	5,2
R6E 400-AA04 -05	M6E 074-EI	②	230	50	2225	910	117	0,52	3,0/450	62	55	5,2
			230	60	2455	1000	160	0,70	3,0/450	64	40	

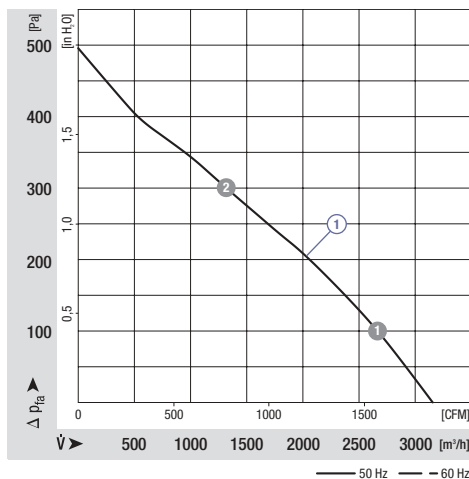
subject to alterations

<sup>(1)</sup> Insulation class "F"

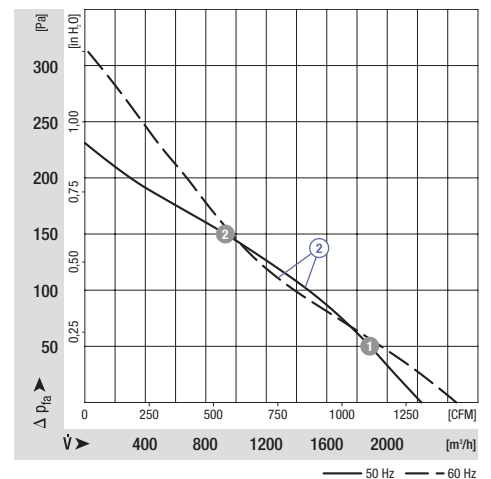
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1240	292
① ②	1250	287

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	880	125
② ②	880	125

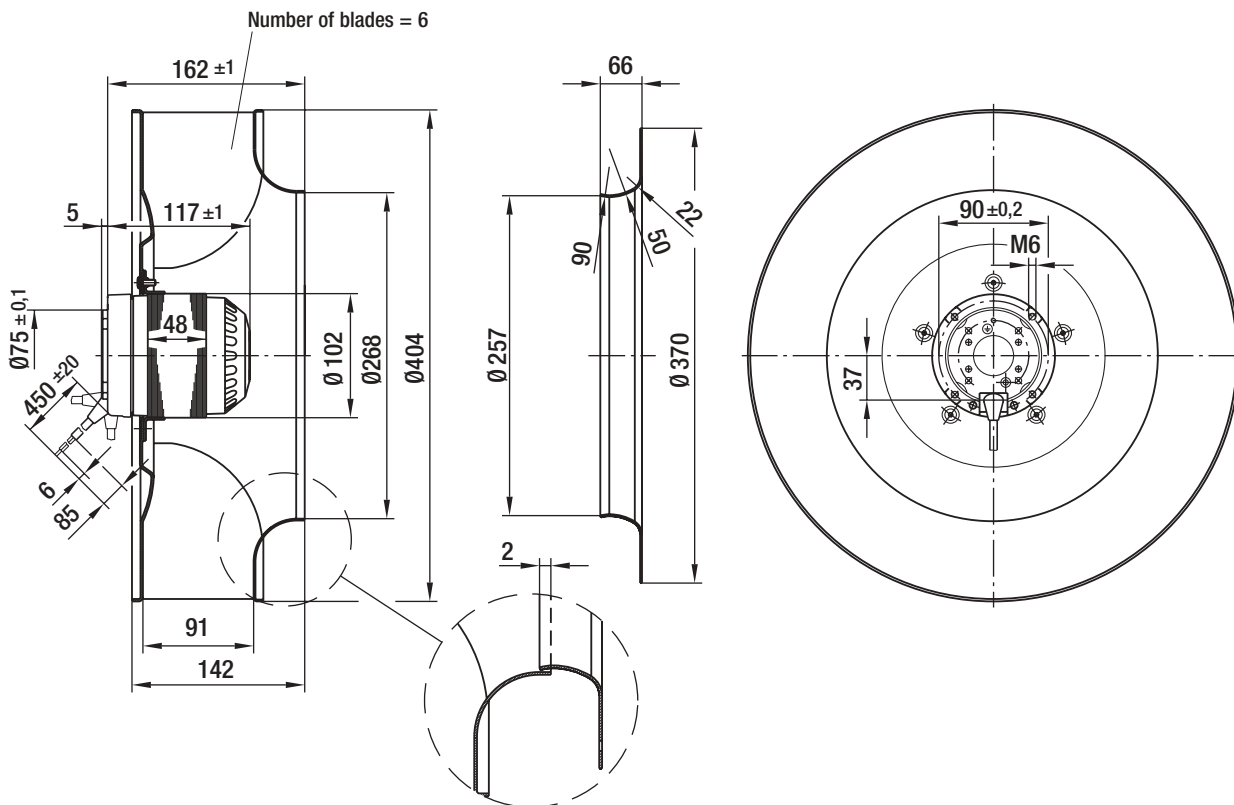
## Characteristics



## Characteristics



Type	Inlet ring
R4E 400-AB23 -05	54476-2-4013
R6E 400-AA04 -05	54476-2-4013



# AC centrifugal fans

backward curved, 3-D, Ø 400



- **Material:** sheet aluminium
- **Type of protection:** IP54 (please note drilled condensate discharges)
- **Approval:** complying with EN 60034-1
- **Locked-rotor protection:** thermal overload protector brought out

ebm-papst • Mulfingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg
R4E 400-AR05 -06 <sup>(1)</sup>	M4E 094-FA	①	230	50	3160	1380	330	1,60	8,0/400	72	60	7,1
			230	60	3530	1560	480	2,10	8,0/400	74	50	
R4E 400-AP17 -06 <sup>(1)</sup>	M4E 094-HA	②	230	50	3860	1400	410	2,10	10 / 450	71	80	8,8
			230	60	4360	1580	600	2,70	10 / 450	74	55	

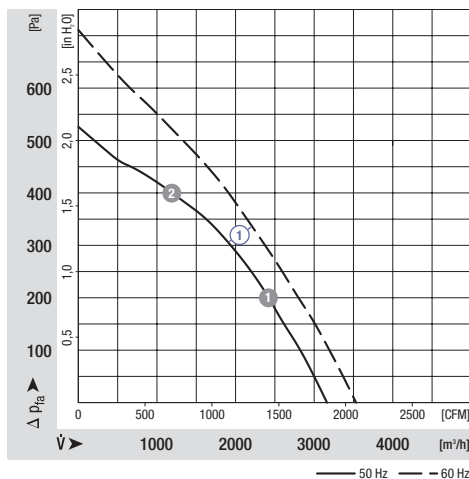
subject to alterations

<sup>(1)</sup> Insulation class "F"

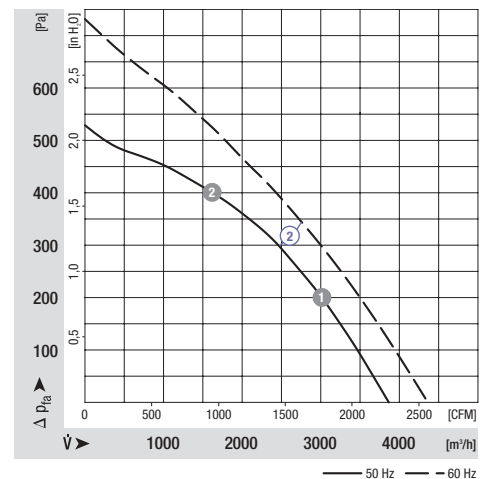
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1350	370
① ②	1380	331

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	1370	469
② ②	1390	430

## Characteristics



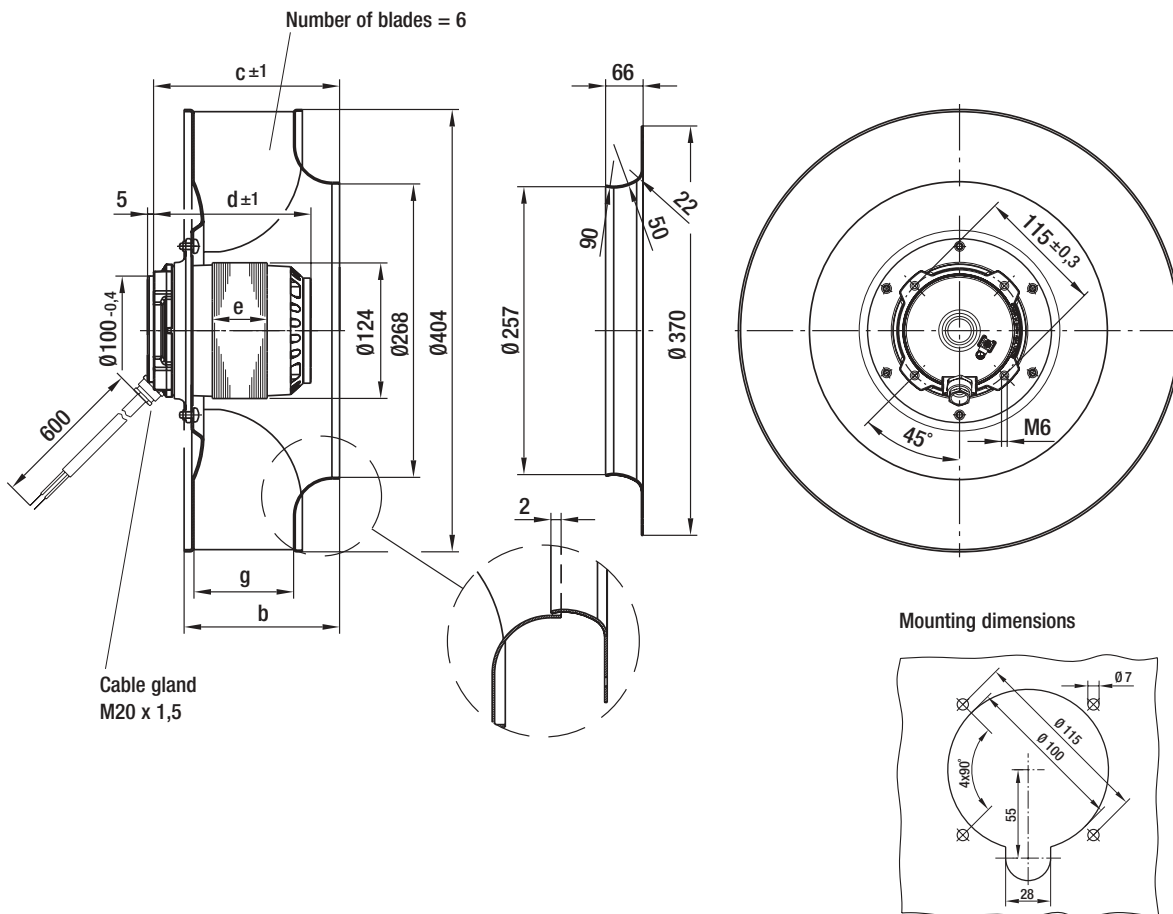
## Characteristics





Dimensions

Type	b	c	d	e	g	Inlet ring
R4E 400-AR05 -06	141	172	128	50	90	54476-2-4013
R4E 400-AP17 -06	164	193	148	70	113	54476-2-4013



# AC centrifugal fans

backward curved, 3-D, Ø 400



- **Material:** sheet aluminium
- **Type of protection:** IP54 (please note drilled condensate discharges)
- **Approval:** complying with EN 60034-1
- **Locked-rotor protection:** thermal overload protector brought out

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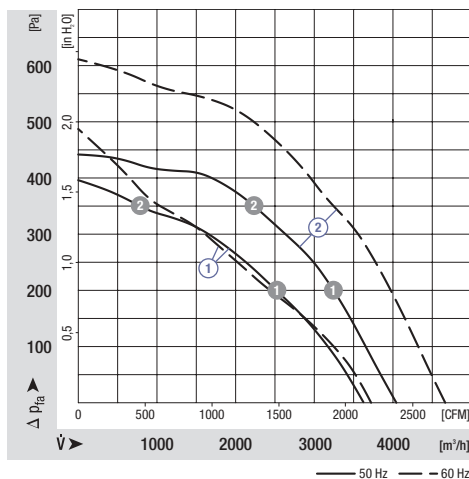
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg	
R4D 400-AD22 -06 <sup>(1)(2)</sup>	M4D094-HA	①	400 Y	50	3630	1300	325	0,58	---	69	80	8,7
			400 Y	60	3720	1330	465	0,82	---	70	40	
		②	400 Δ	50	4040	1430	445	1,40	---	72	60	8,7
			400 Δ	60	4670	1650	645	1,30	---	76	60	
R4E 400-AN09 -06 <sup>(2)</sup>	M4E094-HA	③	230	50	3900	1400	420	2,17	10 / 400	71	70	8,7
			230	60	4420	1580	615	2,75	10 / 450	74	55	
R6E 400-AK06 -06 <sup>(2)</sup>	M6E094-FA	④	230	50	2690	910	140	0,61	5,0 / 450	66	95	8,7
			230	60	3070	1040	205	0,90	5,0 / 450	67	85	

subject to alterations <sup>(1)</sup> 400 VAC Δ/Y for two speed steps available on request <sup>(2)</sup> Insulation class "F"

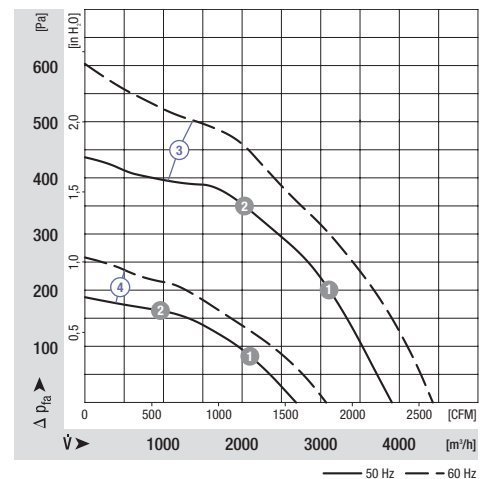
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1240	380
① ②	1320	281
② ①	1415	490
② ②	1415	500

	n [min⁻¹]	P <sub>1</sub> [W]
③ ①	1380	464
③ ②	1380	462
④ ①	900	149
④ ②	910	143

## Characteristics

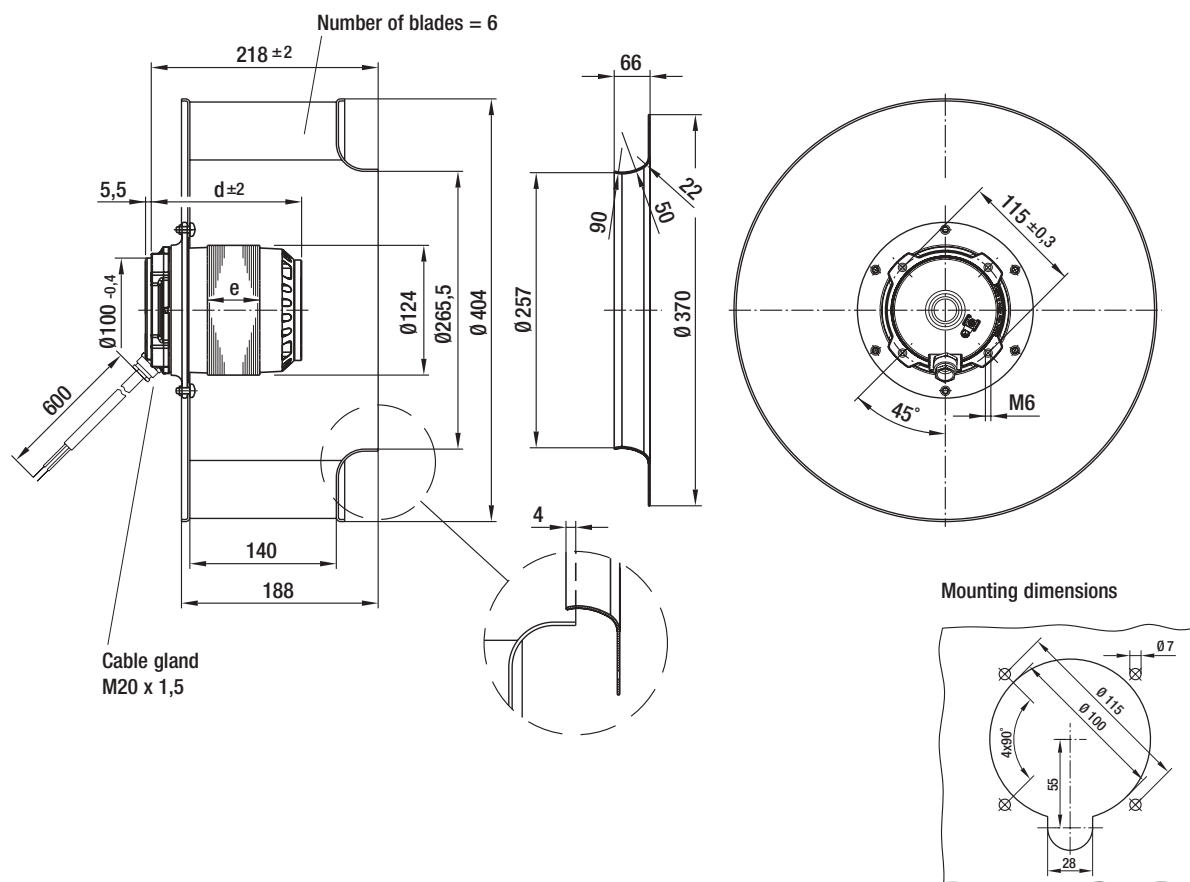


## Characteristics



Dimensions

Type	d	e	Inlet ring
R4D 400-AD22 -06	148	70	54476-2-4013
R4E 400-AN09 -06	148	70	54476-2-4013
R6E 400-AK06 -06	128	50	54476-2-4013



# AC centrifugal fans

backward curved, Ø 450 / 500



- **Material:** sheet aluminium
- **Type of protection:** IP54 (please note drilled condensate discharges)
- **Approval:** complying with EN 60034-1
- **Locked-rotor protection:** thermal overload protector brought out

ebm-papst • Mulfingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	°C	kg	
R4D 450-AD22 -06 <sup>(1)</sup>	M4D094-HA	①	400 Y	50	4070	1280	355	0,60	---	74	55	9,3
		②	400 Δ	50	4540	1430	455	1,40	---	76	50	9,3
R4E 450-AB09 -06 <sup>(1)</sup>	M4E094-HA	③	230	50	4410	1350	450	2,20 10 / 400	75	50	9,3	
R6E 450-AB06 -06 <sup>(1)</sup>	M6E094-HA	④	230	50	3930	920	290	1,45 10 / 400	69	40	9,6	
		④	230	60	4530	1060	385	1,68 10 / 450	72	55		
R6E 500-AB05 -06 <sup>(1)</sup>	M6E094-HA	⑤	230	50	5180	880	320	1,55 10 / 400	66	40	11,1	
		⑤	230	60	5810	990	420	1,83 10 / 450	69	40		

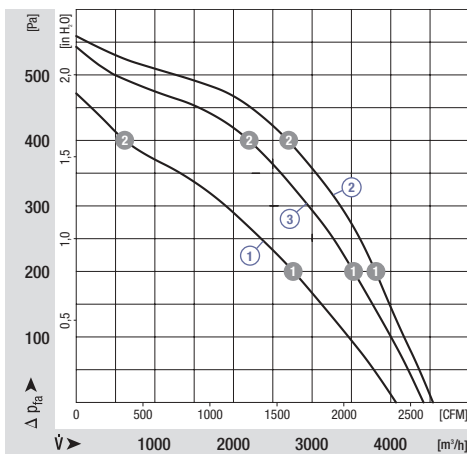
subject to alterations

<sup>(1)</sup> Insulation class "F"

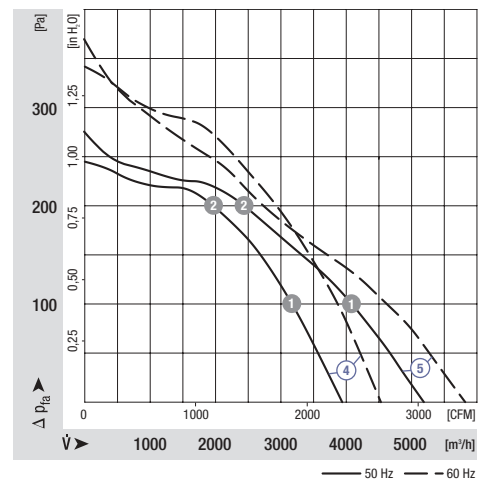
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1130	470
① ②	1260	350
② ①	1390	610
② ②	1380	650
③ ①	1310	602
③ ②	1310	596

	n [min⁻¹]	P <sub>1</sub> [W]
④ ①	910	305
④ ②	905	310
⑤ ①	845	360
⑤ ②	830	376

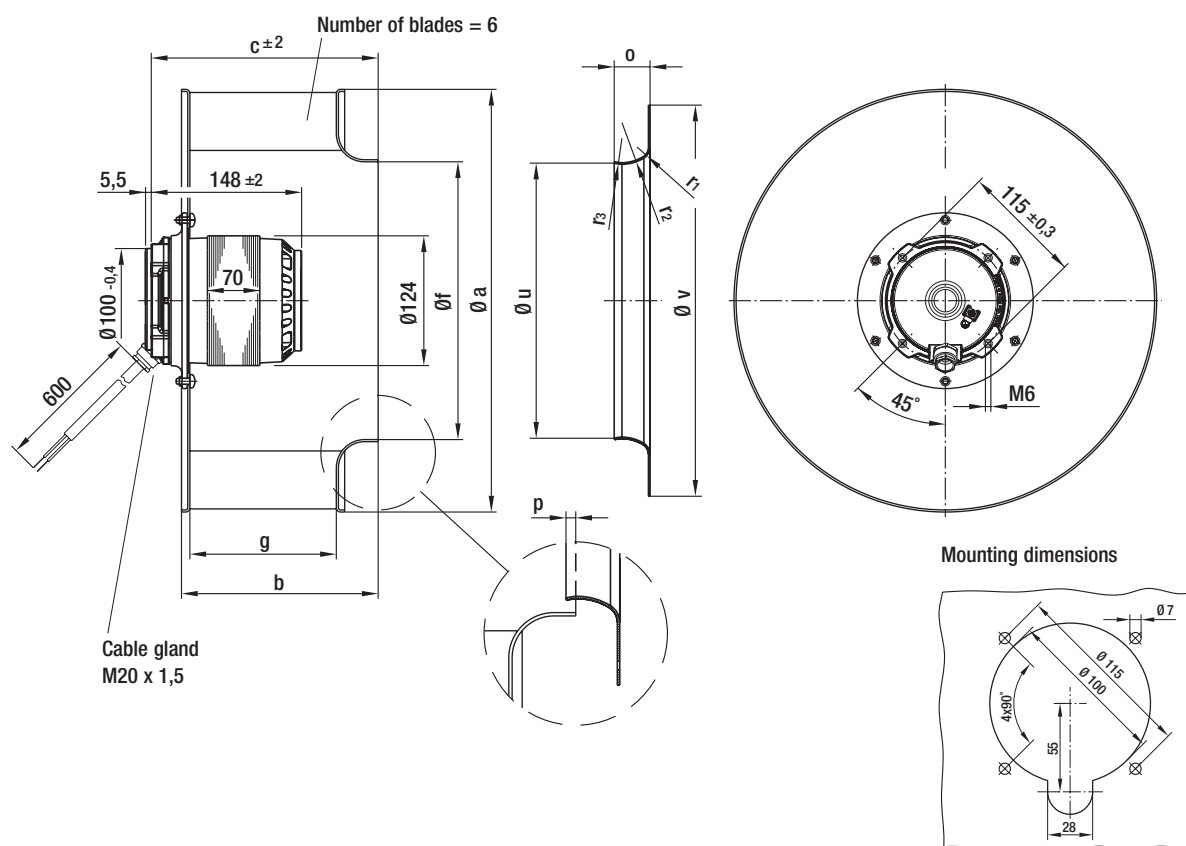
## Characteristics



## Characteristics



Type	Dimensions						Inlet ring	Dimensions					
	a	b	c	f	g	o		p	r <sup>1</sup>	r <sup>2</sup>	r <sup>3</sup>	u	v
R4D 450-AD22 -06	454	175	210,0	298,0	120	54478-2-4013	71	4	25	55	100	287	413
R4E 450-AB09 -06	454	175	210,0	298,0	120	54478-2-4013	71	4	25	55	100	287	413
R6E 450-AB06 -06	454	215	250,0	298,0	160	54478-2-4013	71	4	25	55	100	287	413
R6E 500-AB05 -06	504	241	269,5	334,5	180	54480-2-4013	79	5	28	65	115	323	456



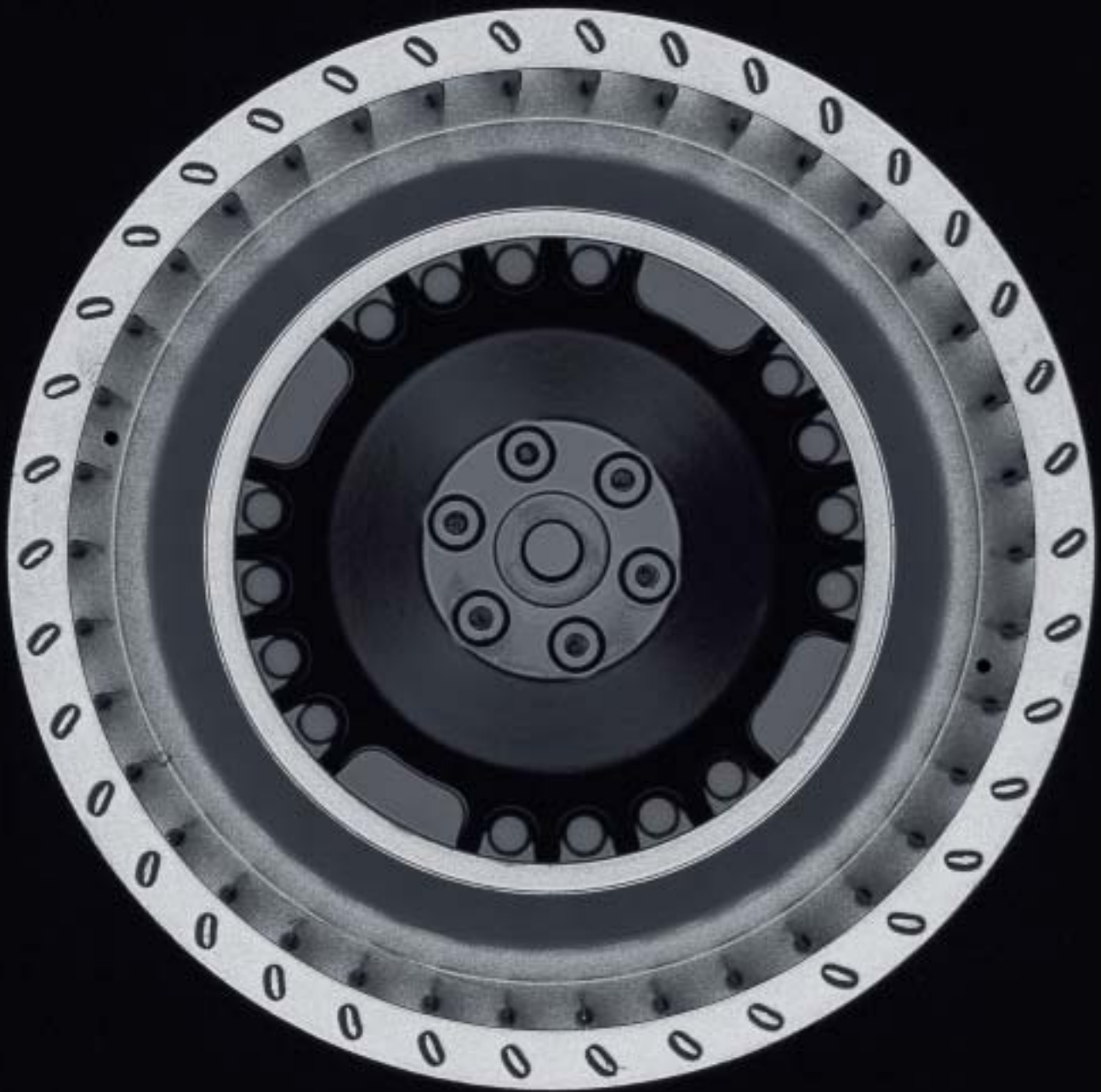
# AC centrifugal blowers and fans forward curved

Centrifugal blowers and fans, single inlet

56

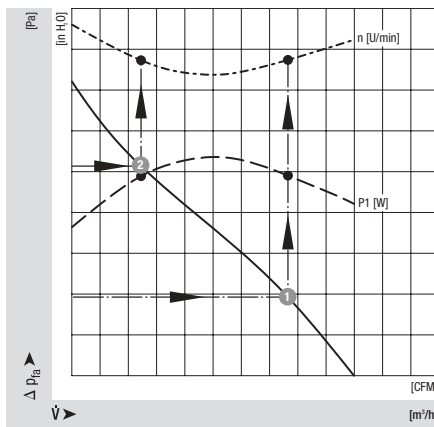
Centrifugal blowers, dual inlet

80



## Technical information

With forward curved centrifugal fans, maximum power consumption is reached at free air. Rising back pressure results in declining power consumption. Positioned at the centre of the air stream, the integrated external-rotor motor is excellently cooled. All motors have a special torque vs. speed characteristic which allows for speed control. Some centrifugal fans depend in their use on a minimal and specified back pressure.



Air performance characteristics for forward curved centrifugal fans

## Scroll housing

Versions:

- in aluminium die-cast alloy, with the two housing parts screwed together
- in galvanised sheet steel, with case and side-parts joined by slots and tabs
- in heat-resistant plastic
- case in galvanised sheet steel, side parts in heat-resistant plastic

Forward curved centrifugal fans require scrolls as guides. These scrolls guide the air stream from impeller to pressure stud.

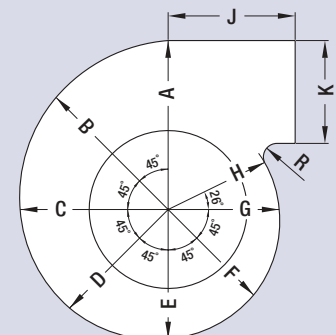
The dimensions of the centrifugal blowers can be taken from the respective pages.

## Centrifugal fans supplied without scroll

For the integration of the scroll into the unit or for customized solutions, the scroll dimensions as listed below apply. Changing the scroll dimensions results in changes of the air performance characteristic as well as in the parameters as specified.

The inlet nozzles required are listed in the accessories.

Size	A	B	C	D	E	F	G	H	J	K	R
076/085	60	57,0	55,0	53,0	52	51,0	48,0	47,0	60	42	6
097	75	71,5	68,0	65,5	62	58,5	57,5	56,5	75	48	5
108	93	83,0	77,0	73,0	68	67,0	64,0	60,0	79	50	12
120	91	91,0	89,0	85,0	79	73,0	69,0	67,0	82	50	6
133	91	88,0	81,5	79,0	77	76,5	73,5	73,0	87	71	4
140/146/160	137	128,5	120,0	113,0	105	98,0	90,0	87,0	103	92	11
180	156	146,0	137,0	128,0	119	111,0	104,0	102,0	120	110	8
200	217	197,0	179,0	163,0	149	137,0	127,0	118,0	136	146	13



**Impellers**

Forward curved impellers are press-fitted onto the rotor of the external-rotor motor.

This unit is dynamically balanced in two planes according to DIN ISO 1940.

**Centrifugal fans, single inlet**

The external-rotor motor (standard version) integrated in the impeller is mounted onto the side wall of the scroll housing.

**Centrifugal fans, dual inlet**

- a) Via a bracket, the integrated external-rotor motor (standard version) is mounted on one side of the scroll housing.
- b) As of size 133, an external-rotor motor with standing shaft (EW) can be used. In this version, the motor is anti-vibration mounted on both sides of the scroll housing via brackets. These fans have extremely low structural vibration rates.

**Direction of rotation**

Centrifugal fans with single inlet clockwise rotation as seen from suction side.

Centrifugal fans with dual inlet anti-clockwise rotation as seen from inlet opposite the cable exit.

Any exceptions to this are indicated on the relevant pages.

**Type of protection**

IP44 when being installed. Any evaluation has to be carried out in the customer's final application. Any exceptions to this are indicated on the relevant pages.

**Bearings**

Maintenance-free ball bearings (any exceptions to this are indicated on the relevant pages)

**Approvals**

CE

**Cable exit**

Variable cable exits either lateral or front side for centrifugal fans, single inlet.

For centrifugal blowers, single inlet, please consult relevant drawings.

**Air performance characteristic**

All air performance characteristics are based on measurements using the scroll housings shown on the respective pages.

**Insulation class**

"B" (types in insulation class "F" are marked)

**Electrical data**

Electrical data are determined at highest load, i.e. at free air flow.

Should free air flow be impossible for some blowers or fans, the values are determined in the minimal operating point.



# AC centrifugal blowers and fans

single inlet, Ø 085



- **Material:** scroll housing made of die-cast aluminium, impeller made of galvanised sheet steel

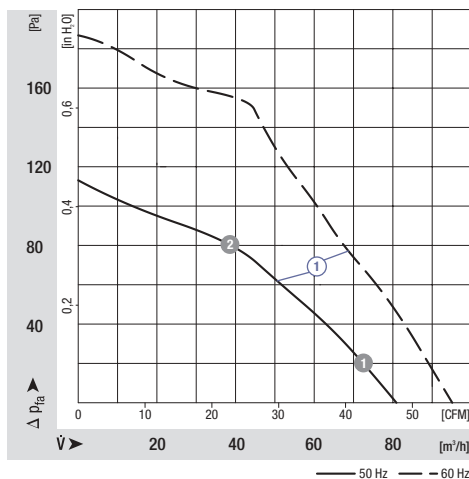
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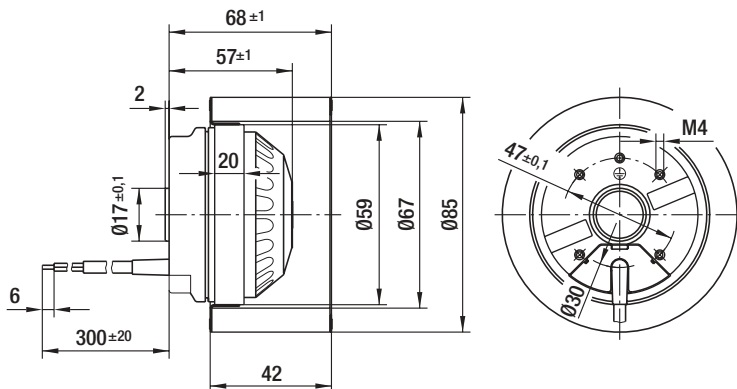
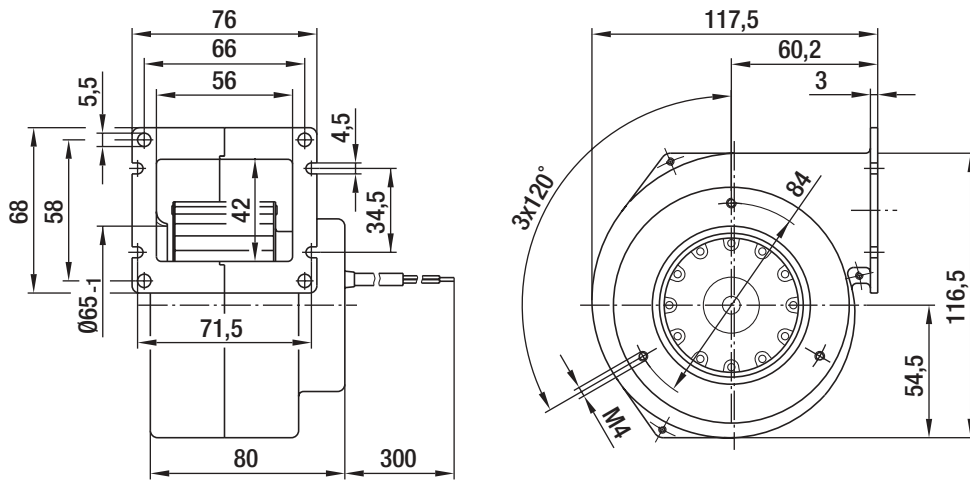
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
G2E 085-AA01 -01 <sup>(1)</sup>	M2E 042-CA	①	230	50	80	2350	32	0,15	1,0/400	53	0	60	0,9
R2E 085-AA01 -05 <sup>(1)</sup>			230	60	95	2800	30	0,14	1,0/400	57	0	70	0,7

subject to alterations ① FPU (P2) capacitor in keeping with IEC 252

	n [min⁻¹]	P <sub>1</sub> [W]
① ①	2430	32
① ②	2590	30

## Characteristics





# AC centrifugal blowers and fans

single inlet, Ø 097

- **Material:** scroll housing and impeller made of galvanised sheet steel



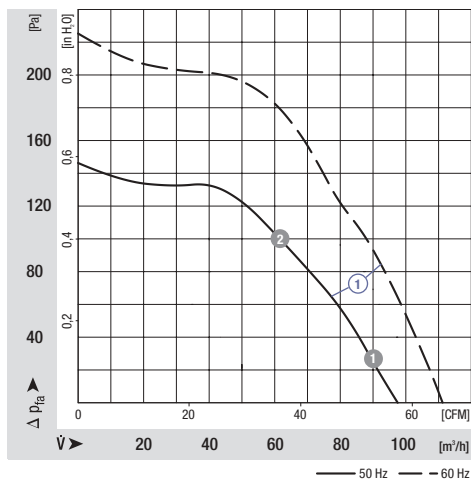
ebm-papst • Mulfingen

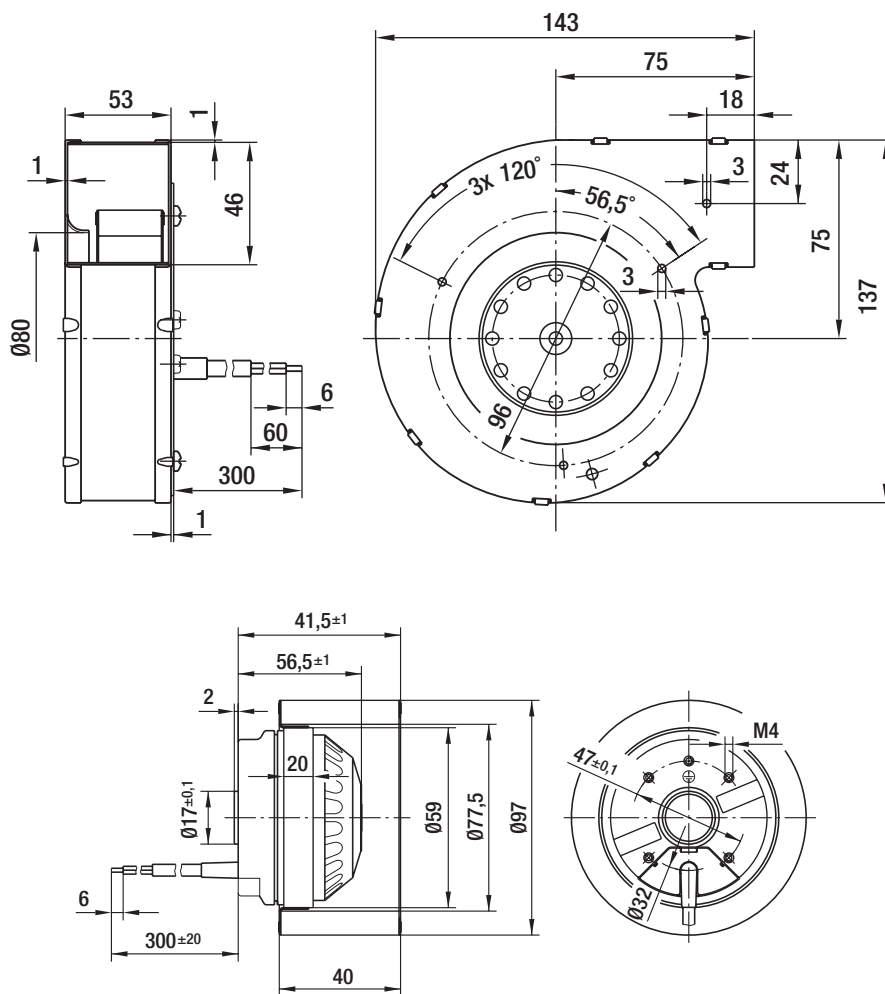
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C	kg
G2E 097-HD01 -02 <sup>(1)</sup>	M2E 042-CA	①	230	50	100	2050	35	0,16	1,5/400	55	0	40	1,1
R2E 097-AD01 -05 <sup>(1)</sup>			230	60	110	2300	37	0,17	1,5/400	58	0	55	0,6

subject to alterations ① FPU (P2) capacitor in keeping with IEC 252

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	2120	35
① ②	2335	33

## Characteristics





# AC centrifugal blowers and fans

single inlet, Ø 108 / 120



- **Material:** scroll housing made of die-cast aluminium, impeller made of galvanised sheet steel

ebm-papst • Mulfingen

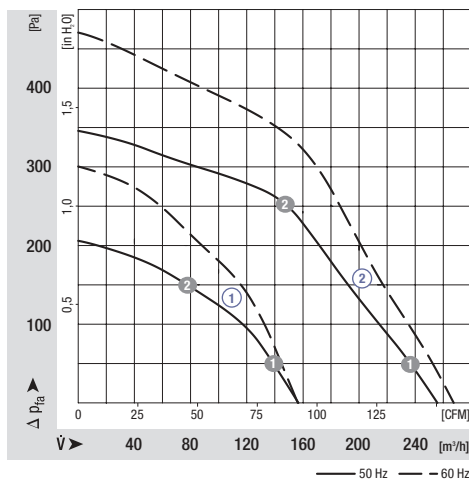
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
G2E 108-AA01 -01 <sup>(1)</sup>	M2E 042-CA	①	230	50	155	1650	41	0,19	1,5/400	54	0	55	1,3
R2E 108-AA01 -05 <sup>(1)</sup>			230	60	155	1650	44	0,20	1,5/400	54	0	55	0,6
G2E 120-AR77 -01	M2E 068-BF	②	230	50	255	2350	80	0,35	2,0/450	61	0	55	1,8
R2E 120-AR77 -05			230	60	265	2450	100	0,44	2,0/450	62	0	60	1,2

subject to alterations

<sup>(1)</sup> FPU (P2) capacitor in keeping with IEC 252

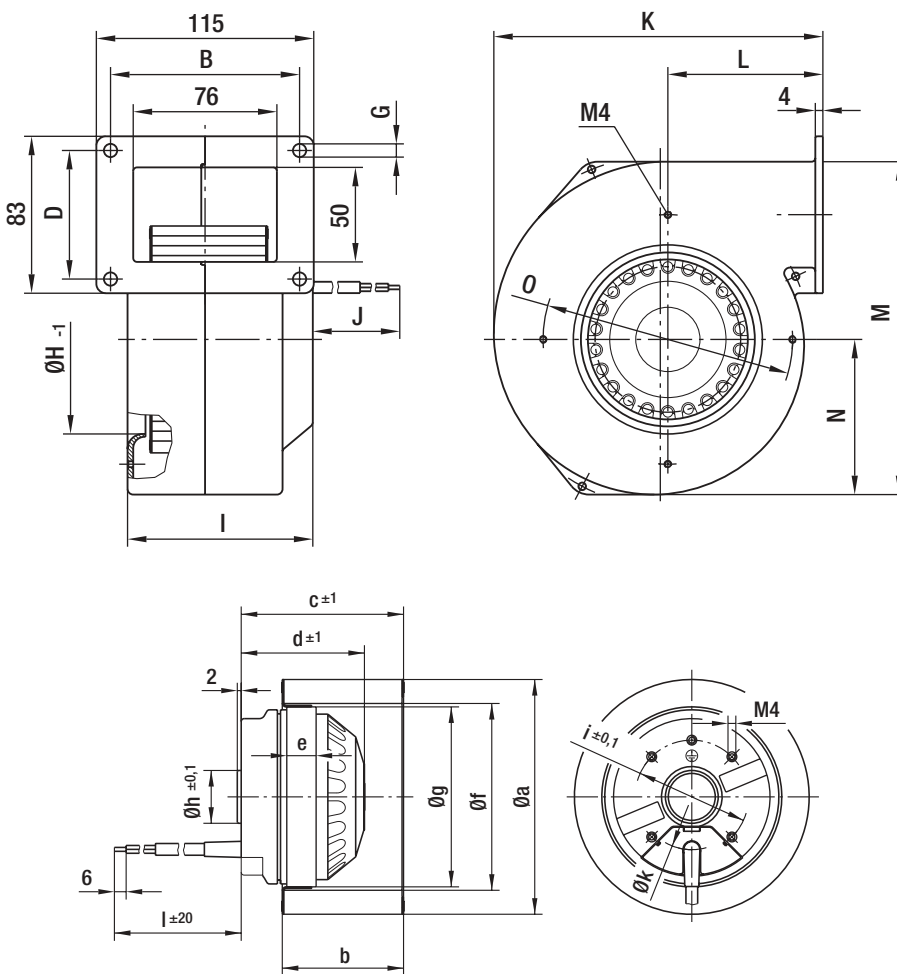
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	1920	39
① ②	2350	36
② ①	2460	77
② ②	2665	69

## Characteristics



Dimensions

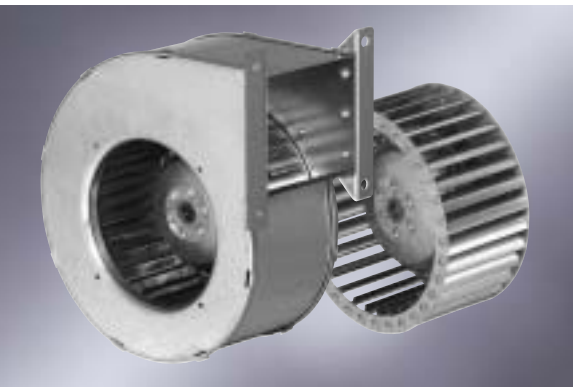
Type	B	D	G	H	I	J	K	L	M	N	O	a	b	c	d	e	f	g	h	i	k	l
G2E 108-AA01 -01 R2E 108-AA01 -05	97	66	8	87	82	300	159	79	168	71	118	108	52	53	57	20	84	59	17	47	32	300
G2E 120-AR77 -01 R2E 120-AR77 -05	100	68	7	100	98	450	178	82	184	86	132	120	62	83	63	15	96	92	27	58	55	450



# AC centrifugal blowers and fans

single inlet, Ø 120 / 133

- **Material:** scroll housing and impeller made of galvanised sheet steel



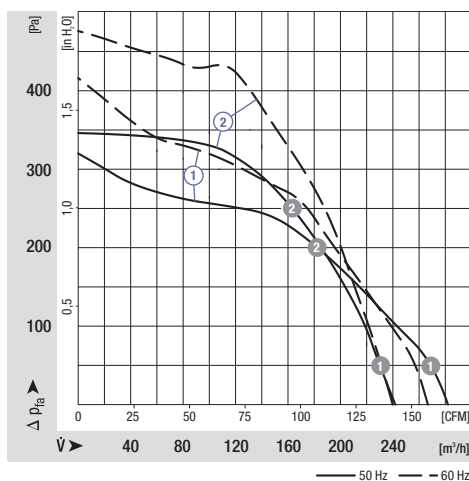
ebm-papst • Muldingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C	kg
G2E 120-CR21 -01	M2E 068-BF	①	230	50	275	2200	83	0,37	2,0/450	64	0	70	1,9
R2E 120-AR21 -05			230	60	255	2050	100	0,45	2,0/450	63	0	60	1,2
G2E 133-DN77 -01	M2E 068-BF	②	230	50	245	2150	88	0,39	2,0/450	65	0	60	1,9
R2E 133-AN77 -01			230	60	235	2100	110	0,49	2,0/450	65	0	50	1,6

subject to alterations

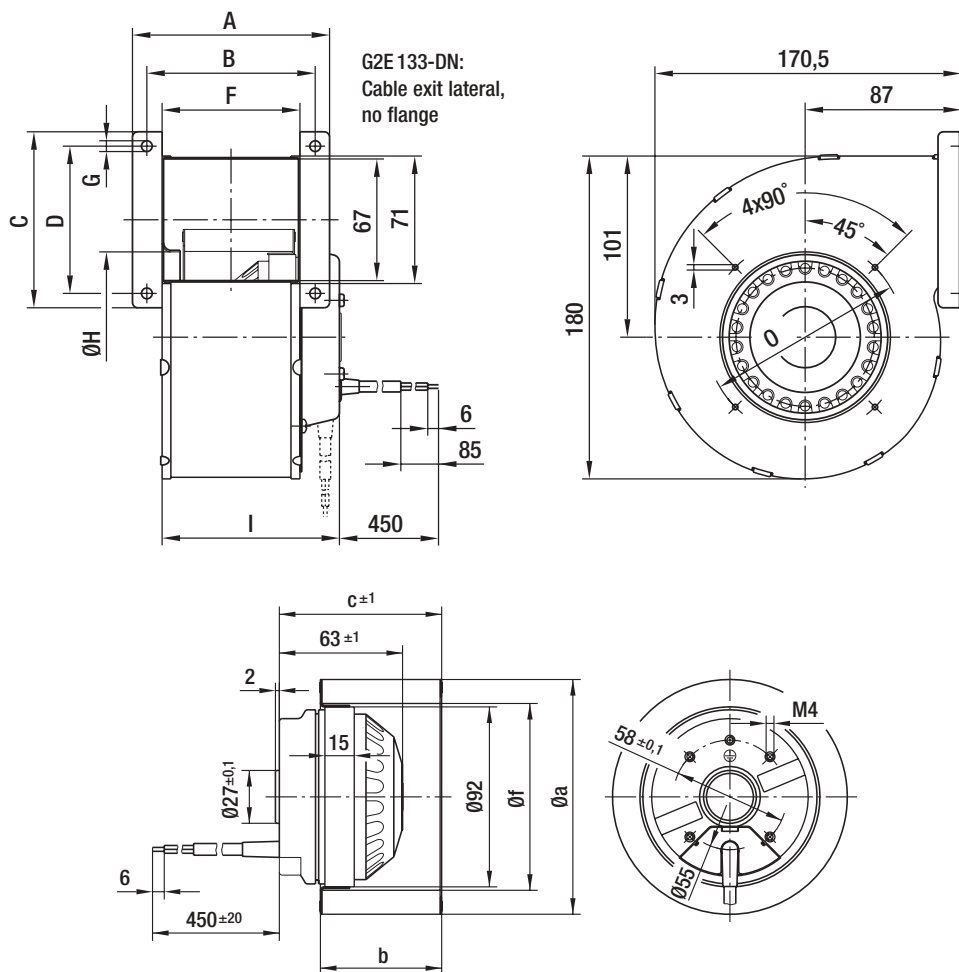
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	2335	80
① ②	2580	72
② ①	2290	83
② ②	2530	73

## Characteristics



Dimensions

Type	A	B	C	D	F	G	H	I	O	a	b	c	f
G2E 120-CR21 -01 R2E 120-AR21 -05	110	94	98	82	77	6	95	99	110	120	62	85,0	96
G2E 133-DN77 -01 R2E 133-AN77 -01	---	---	---	---	59	---	112	81	140	133	46	68,5	108





# AC centrifugal blowers and fans

single inlet, Ø 140

- **Material:** scroll housing made of die-cast aluminium, impeller made of galvanised sheet steel

ebm-papst • Mulfingen



## Nominal data

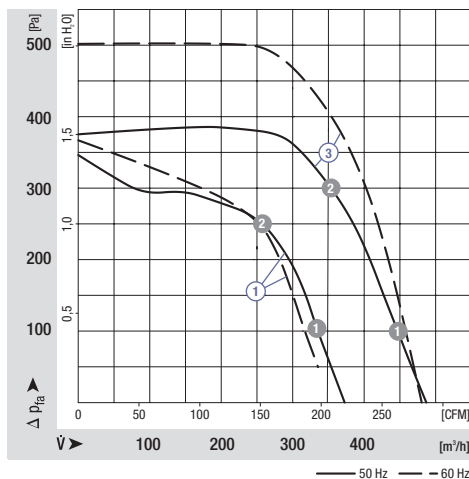
Type	Motor	Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
G2E 140-AE77 -01	M2E 068-BF	①	230	50	370	1400	105	0,46	2,0/450	59	0	40	2,6
R2E 140-AE77 -05			230	60	335	1500	115	0,51	2,0/450	57	50	45	1,2
G2E 140-AL40 -01	M2E 068-CF	②	230	50	385	1650	135	0,60	2,0/400	63	0	55	3,0
R2E 140-AL40 -05				230	60	305	1700	145	0,64	2,0/400	60	100	40
G2E 140-AI28 -01	M2E 068-DF	③	230	50	485	2400	160	0,70	4,0/400	72	0	70	2,6
R2E 140-AI28 -05				230	60	480	2350	205	0,90	4,0/400	71	0	45

subject to alterations

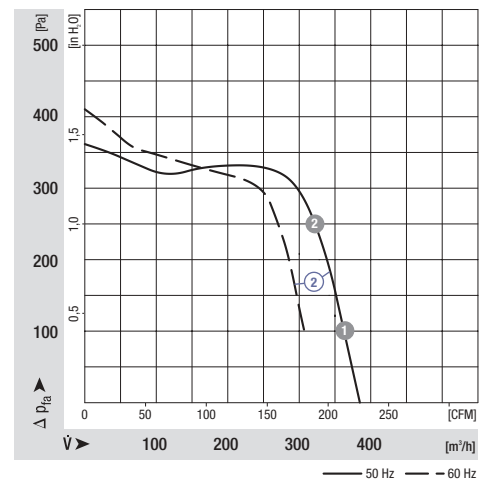
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1700	98
① ②	2100	89
③ ①	2485	148
③ ②	2630	128

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	1900	128
② ②	2200	117

## Characteristics

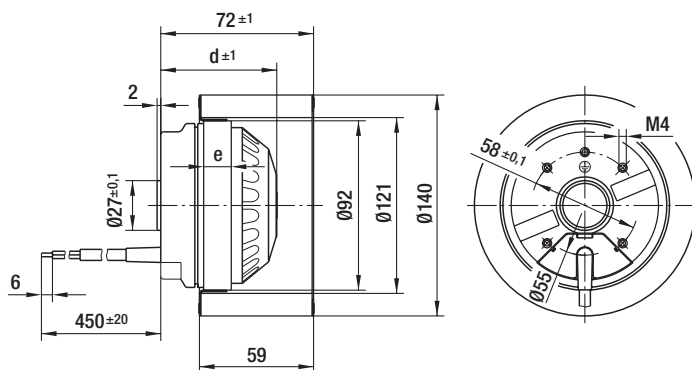
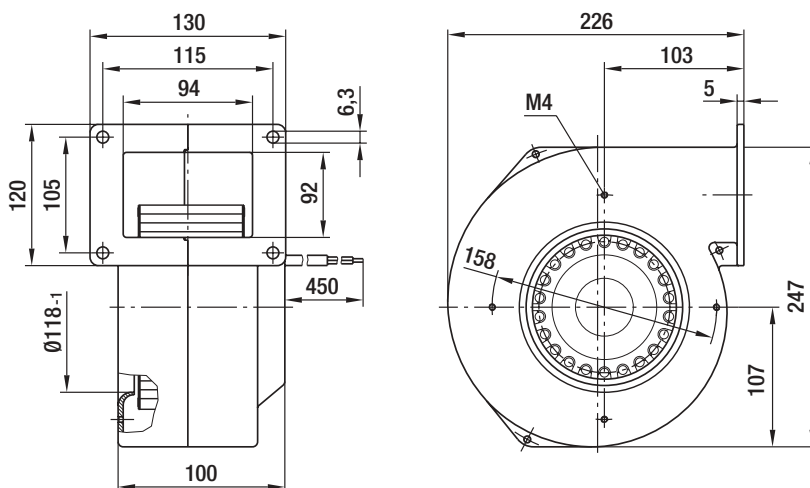


## Characteristics



Dimensions

Type	d	e
G2E 140-AE77 -01 R2E 140-AE77 -05	63	15
G2E 140-AL40 -01 R2E 140-AL40 -05	73	25
G2E 140-AI28 -01 R2E 140-AI28 -05	83	35



# AC centrifugal blowers

single inlet, Ø 140

- **Material:** scroll housing and impeller made of heat-resistant plastic



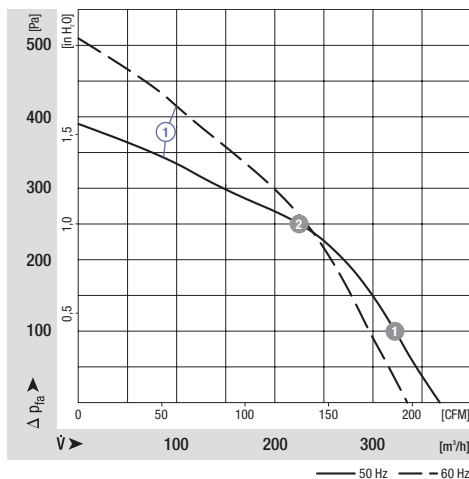
ebm-papst • Mulfingen

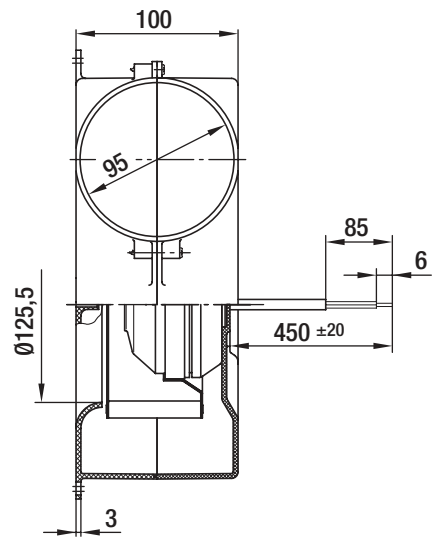
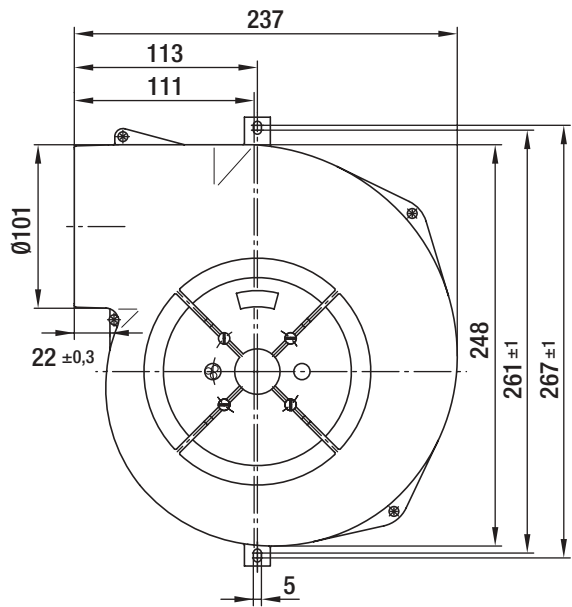
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
G2E 140-NS38 -01	M2E 068-BF	①	230	50	370	1650	105	0,46	2,0/400	59	0	55	1,6
			230	60	315	1700	115	0,51	2,0/400	57	50	40	

subject to alterations

	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1910	98
① ②	2280	86

## Characteristics





# AC centrifugal blowers and fans

single inlet, Ø 146 / 160

- **Material:** scroll housing made of die-cast aluminium, impeller made of galvanised sheet steel



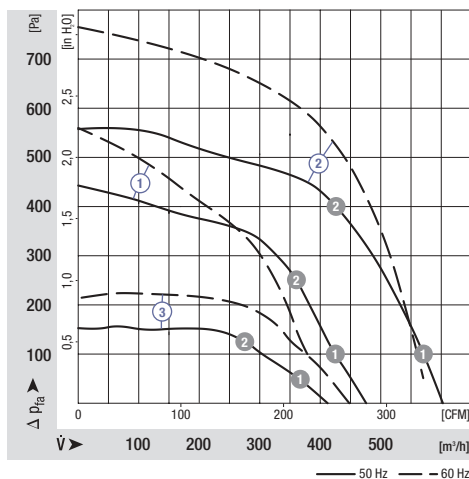
ebm-papst • Muldingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
G2E 146-DW07 -01	M2E 068-CA	①	230	50	470	1550	140	0,62	3,0/450	60	0	50	2,6
R2E 146-AW07 -05			230	60	380	1750	155	0,68	3,0/450	58	100	40	2,4
G2E 160-AY47 -01	M2E 068-EC	②	230	50	600	2100	240	1,05	6,0/400	72	0	50	3,9
R2E 160-AY47 -01			230	60	570	2100	280	1,23	6,0/400	71	50	40	2,6
G4E 160-AB01 -01	M4E 068-CF	③	230	50	410	1300	67	0,30	2,0/450	65	0	65	2,9
R4E 160-AB01 -01			230	60	445	1400	90	0,40	2,0/450	67	0	65	1,7

subject to alterations

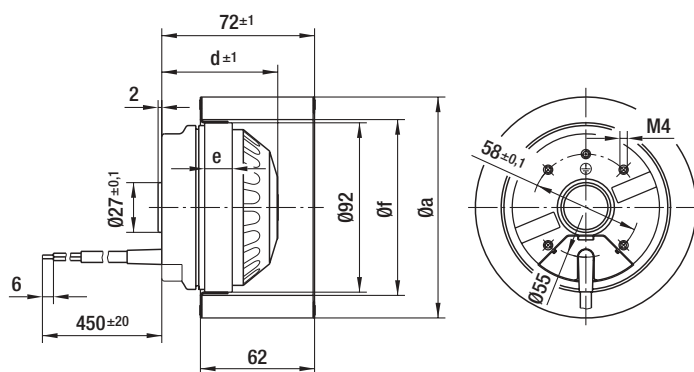
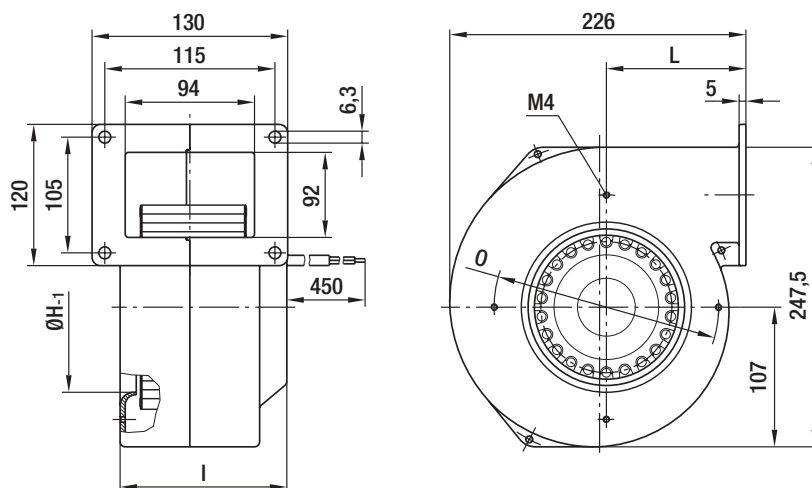
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1835	136
① ②	2070	126
② ①	2210	223
② ②	2525	172
③ ①	1350	63
③ ②	1395	58

## Characteristics



## Dimensions

Type	H	I	L	O	a	d	e	f
G2E 146-DW07 -01 R2E 146-AW07 -05	125,5	104	101	158	146	68	20	127
G2E 160-AY47 -01 R2E 160-AY47 -01	130,0	100	103	175	160	91	42	131
G4E 160-AB01 -01 R4E 160-AB01 -01	130,0	100	103	175	160	72	25	131



# AC centrifugal blowers and fans

single inlet, Ø 180



- **Material:** scroll housing made of die-cast aluminium, impeller made of galvanised sheet steel

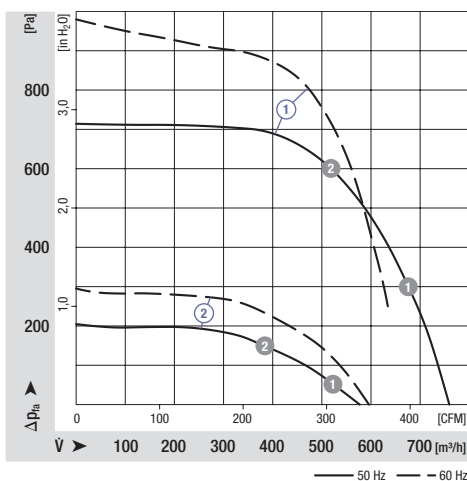
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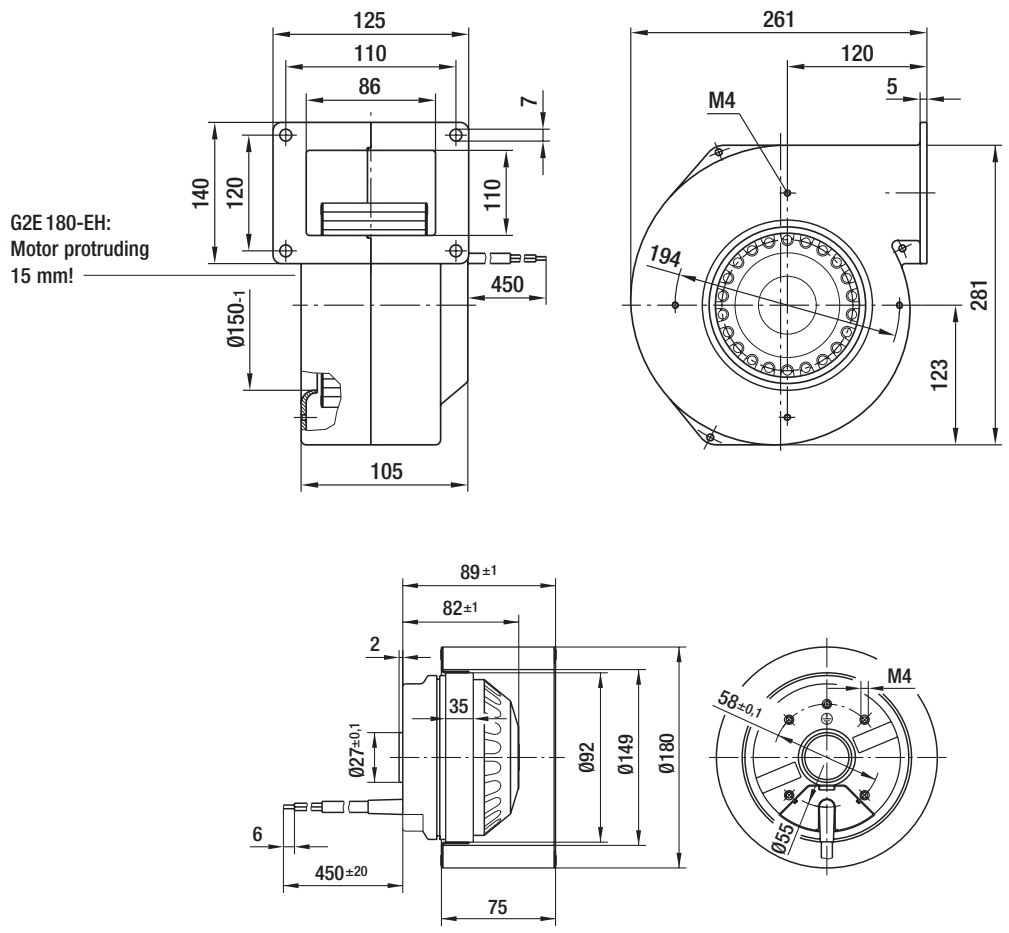
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
<b>G2E 180-EH03 -01</b>	M2E074-EI	①	230	50	760	1950	400	1,75	8,0/400	73	0	40	5,6
			230	60	630	2150	415	1,82	8,0/400	71	250	40	
<b>G4E 180-AB01 -01</b> <b>R4E 180-AB01 -05</b>	M4E068-DF	②	230	50	575	1250	110	0,49	3,0/450	65	0	55	3,7
			230	60	594	1300	145	0,64	3,0/450	65	0	45	1,7

subject to alterations

	n [min⁻¹]	P <sub>1</sub> [W]
① ①	2290	335
① ②	2600	255
② ①	1300	105
② ②	1385	92

## Characteristics







# AC centrifugal blowers and fans

single inlet, Ø 180

- **Material:** scroll housing and impeller made of galvanised sheet steel



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Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
G4D 180-FF20 -01 R4D 180-AF20 -05	M4D074-DF	①	230/400	50	1010	1330	175	0,39	---	67	0	60	6,4
			230/400	60	1090	1440	240	0,43	---	69	0	55	3,2
G4D 180-GF20 -01 <sup>(1)</sup>	M4D074-DF	②	230/400	50	1110	1290	195	0,40	---	69	0	60	6,4
			230/400	60	1180	1370	265	0,47	---	70	0	45	6,4
G4E 180-FS11 -01 R4E 180-AS11 -05	M4E074-DF	③	230	50	965	1220	160	0,71	4,0/400	66	0	60	6,4
			230	60	935	1200	197	0,87	4,0/400	65	0	40	3,2
G4E 180-GS11 -01 <sup>(1)</sup>	M4E074-DF	④	230	50	1030	1130	180	0,80	4,0/400	66	0	45	6,4
			230	60	910	1170	200	0,88	4,0/400	64	50	35	6,4

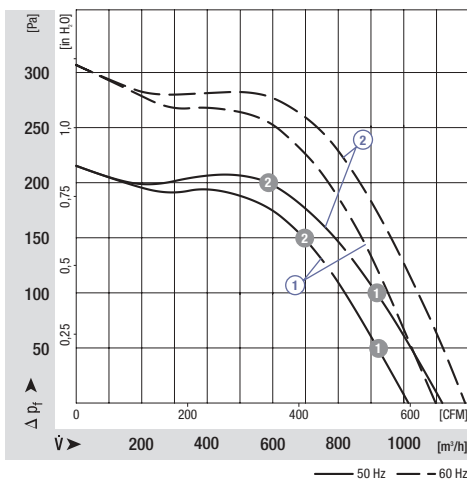
subject to alterations

<sup>(1)</sup> Data collected via exhaust duct of 1 m length serving as diffuser

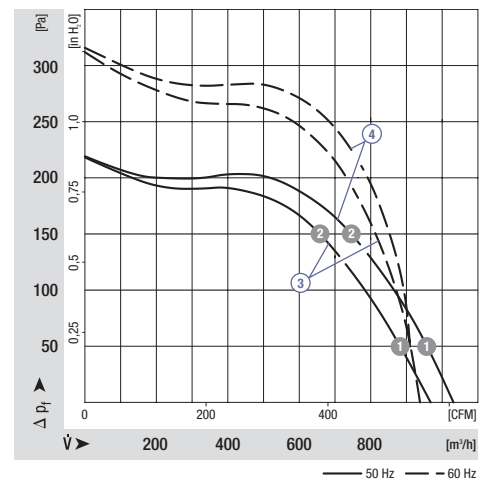
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1360	160
① ②	1410	120
② ①	1360	163
② ②	1420	105

	n [min⁻¹]	P <sub>1</sub> [W]
③ ①	1280	142
③ ②	1375	112
④ ①	1210	160
④ ②	1340	123

## Characteristics

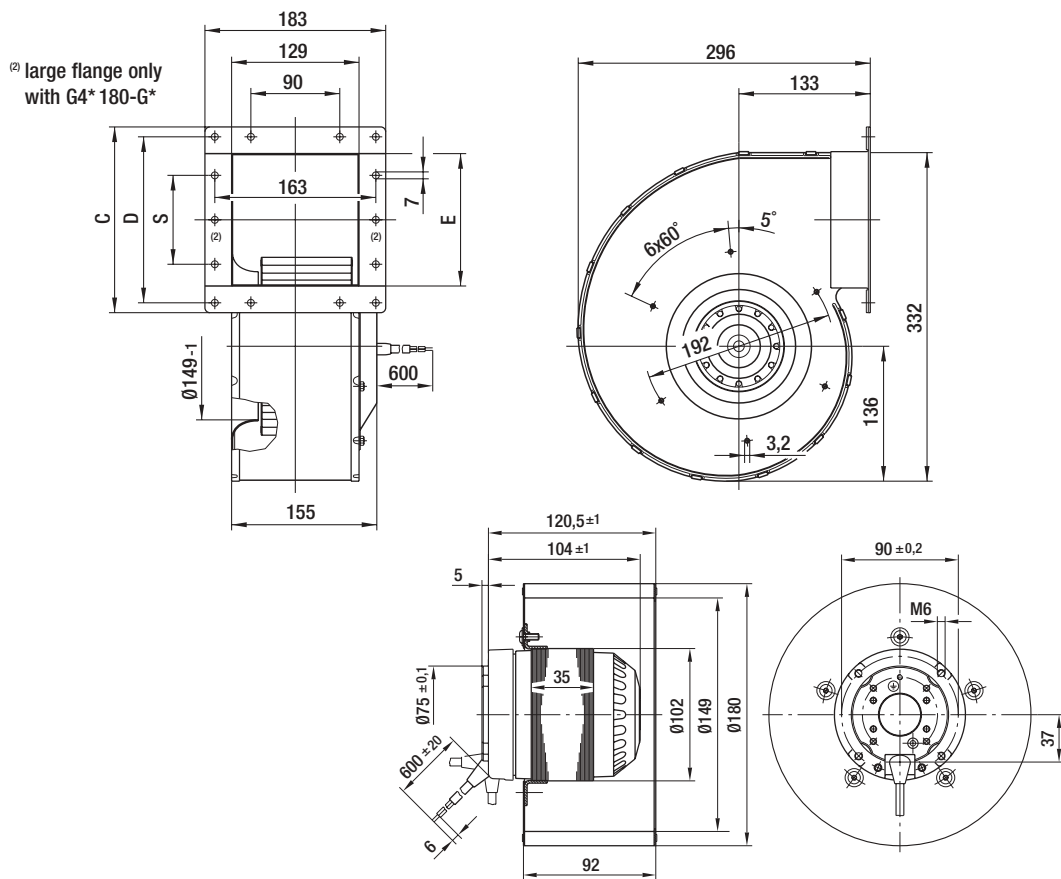


## Characteristics



Dimensions

Type	C	D	E	S
G4D 180-FF20 -01 R4D 180-AF20 -05	188	168	134	90
G4D 180-GF20 -01	278	258	224	180
G4E 180-FS11 -01 R4E 180-AS11 -05	188	168	134	90
G4E 180-GS11 -01	278	258	224	180



# AC centrifugal blowers and fans

single inlet, Ø 200

- **Material:** scroll housing and impeller made of galvanised sheet steel



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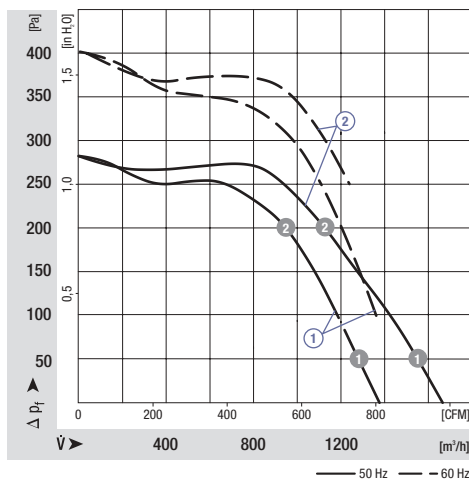
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg	
G4D 200-BL12 -01 R4D 200-AL12 -05	M4D074-EI	①	230/400	50	1375	1350	285	0,58	---	69	0	45	7,0
			230/400	60	1360	1530	360	0,65	---	69	100	45	3,7
G4D 200-CL12 -01 <sup>(1)</sup>	M4D074-EI	②	230/400	50	1665	1300	360	0,66	---	71	0	45	7,0
			230/400	60	1220	1550	340	0,62	---	69	250	40	7,0
G4E 200-BL03 -01 <sup>(2)(3)</sup> R4E 200-AL03 -05 <sup>(2)(3)</sup>	M4E074-EI	③	230	50	1370	1300	280	1,25	8,0/400	69	0	40	7,0
			230	60	1315	1480	350	1,55	8,0/400	69	100	40	3,7
G4E 200-CL03 -01 <sup>(1)(2)(3)</sup>	M4E074-EI	④	230	50	1540	1240	330	1,45	8,0/400	70	0	50	7,0
			230	60	1300	1430	370	1,62	8,0/400	68	170	40	7,0

subject to alterations <sup>(1)</sup> Data collected via exhaust duct of 1 m length serving as diffuser <sup>(2)</sup> FPU (P2) capacitor in keeping with IEC 252 <sup>(3)</sup> Insulation class "F"

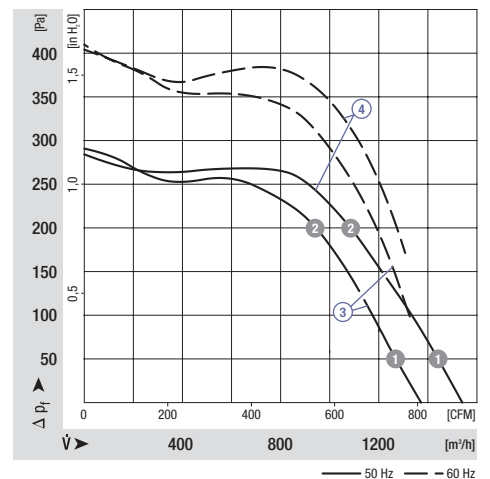
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	1375	255
① ②	1415	192
② ①	1315	330
② ②	1385	230

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
③ ①	1350	258
③ ②	1400	214
④ ①	1285	303
④ ②	1370	242

## Characteristics

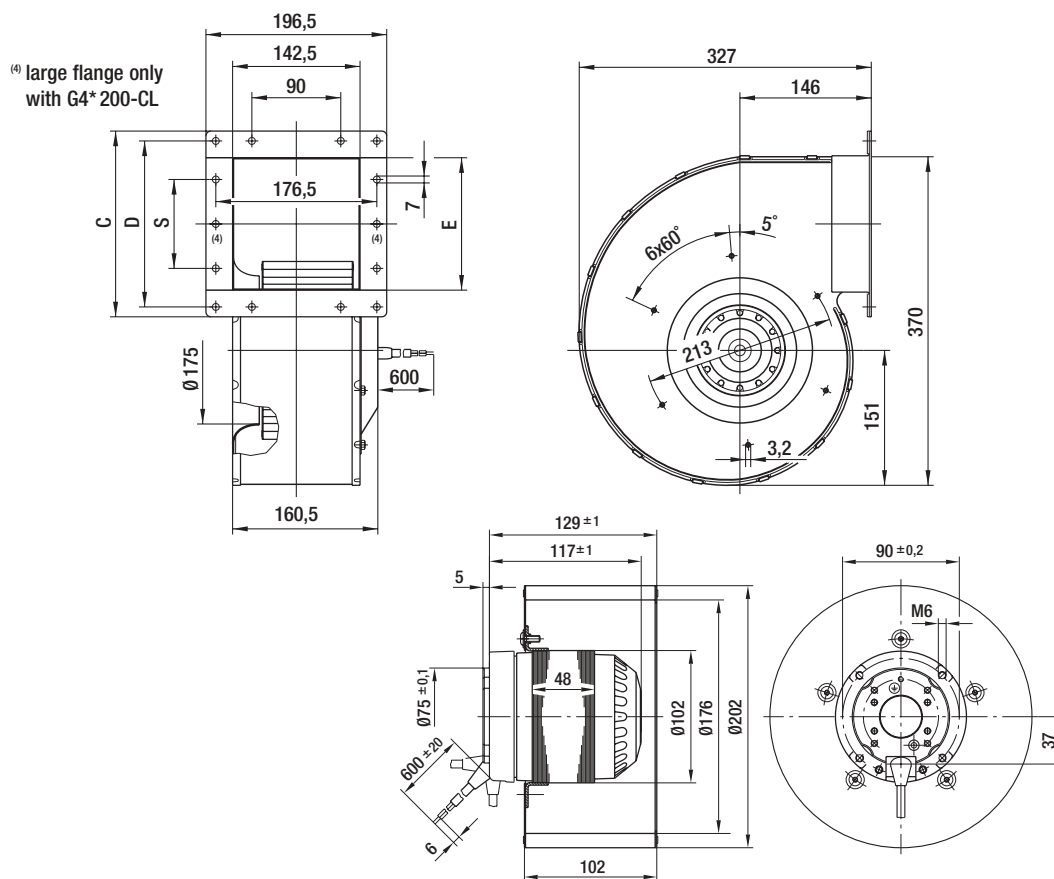


## Characteristics



## Dimensions

Type	C	D	E	S
G4D 200-BL12 -01 R4D 200-AL12 -05	200	180	146	90
G4D 200-CL12 -01	304	284	250	180
G4E 200-BL03 -01 R4E 200-AL03 -05	200	180	146	90
G4E 200-CL03 -01	304	284	250	180



# AC centrifugal blowers

single inlet, Ø 225



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Type of protection:** IP54 (please note drilled condensate discharges)
- **Approval:** complying with EN 60034-1
- **Locked-rotor protection:** thermal overload protector brought out

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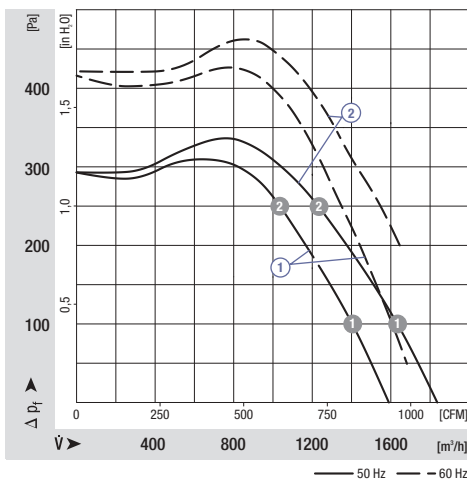
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg	
G4D 225-FK10 -03 <sup>(1)(2)</sup>	M4D094-FA	①	400 Y	50	1590	1350	380	0,75	---	73	0	90	9,7
			400 Y	60	1670	1500	540	0,94	---	74	50	55	
G4D 225-GK10 -03 <sup>(1)(2)(3)</sup>	M4D094-FA	②	400 Y	50	1830	1310	460	0,85	---	75	0	75	9,7
			400 Y	60	1630	1520	515	0,90	---	73	200	60	
G4E 225-DK05 -03 <sup>(1)</sup>	M4E094-FA	③	230	50	1540	1330	395	1,98	6,0/450	73	0	70	9,8
			230	60	1480	1500	500	2,30	6,0/450	73	100	50	
G4E 225-EK05 -03 <sup>(1)(3)</sup>	M4E094-FA	④	230	50	1770	1260	485	2,30	6,0/450	74	0	55	9,8
			230	60	1510	1470	510	2,30	6,0/450	72	200	45	

subject to alterations <sup>(1)</sup> Insulation class "F" <sup>(2)</sup> 400 VAC Δ/Y for two speed steps available on request <sup>(3)</sup> Data collected via exhaust duct of 1 m length serving as diffuser

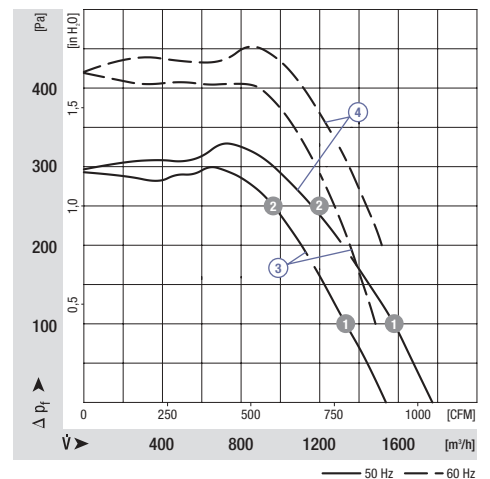
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	1380	325
① ②	1420	228
② ①	1345	388
② ②	1400	271

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
③ ①	1365	339
③ ②	1415	255
④ ①	1320	401
④ ②	1395	292

## Characteristics

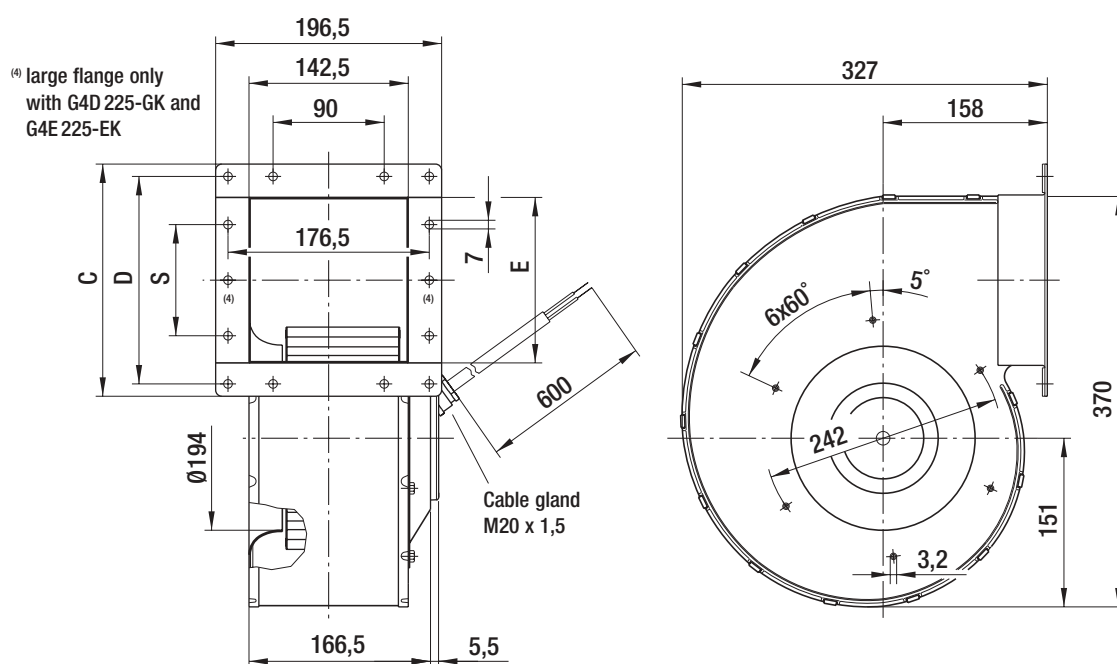


## Characteristics



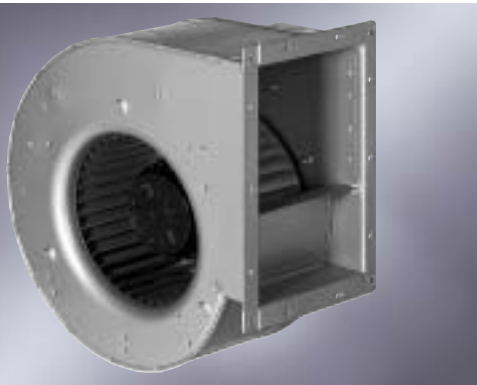
## Dimensions

Type	C	D	E	S
G4D 225-FK10 -03	200	180	146	90
G4D 225-GK10 -03	304	284	250	180
G4E 225-DK05 -03	200	180	146	90
G4E 225-EK05 -03	304	284	250	180



# AC centrifugal blowers

single inlet, Ø 250



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Type of protection:** IP54 (please note drilled condensate discharges)
- **Approval:** complying with EN 60034-1
- **Locked-rotor protection:** thermal overload protector brought out

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Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg	
<b>G4D 250-DC10 -03</b> <sup>(1)(2)</sup>	M4D094-HA	①	400 Y	50	2185	1350	590	1,17	---	75	0	80	13,5
			400 Y	60	2000	1560	710	1,26	---	77	150	60	
<b>G4D 250-EC10 -03</b> <sup>(1)(2)(3)</sup>	M4D094-HA	②	400 Y	50	2640	1280	800	1,46	---	77	0	50	13,5
			400 Y	60	1980	1560	700	1,24	---	73	300	55	
<b>G4E 250-DA09 -03</b> <sup>(1)</sup>	M4E094-HA	③	230	50	2050	1310	570	2,48	10 / 450	74	0	70	13,1
			230	60	1930	1470	690	3,05	10 / 450	75	100	55	
<b>G4E 250-EA09 -03</b> <sup>(1)(3)</sup>	M4E094-HA	④	230	50	2400	1150	760	3,80	10 / 450	76	0	45	13,1
			230	60	1970	1400	730	3,30	10 / 450	72	220	55	
<b>G6E 250-DK05 -03</b> <sup>(1)</sup>	M6E094-FA	⑤	230	50	1520	850	220	1,00	6,0/450	66	0	80	11,4
			230	60	1630	900	295	1,30	6,0/500	67	0	80	
<b>G6E 250-EK05 -03</b> <sup>(1)(3)</sup>	M6E094-FA	⑥	230	50	1690	780	255	1,15	6,0/450	67	0	80	11,4
			230	60	1650	760	305	1,35	6,0/500	65	0	70	

subject to alterations

<sup>(1)</sup> Insulation class "F"

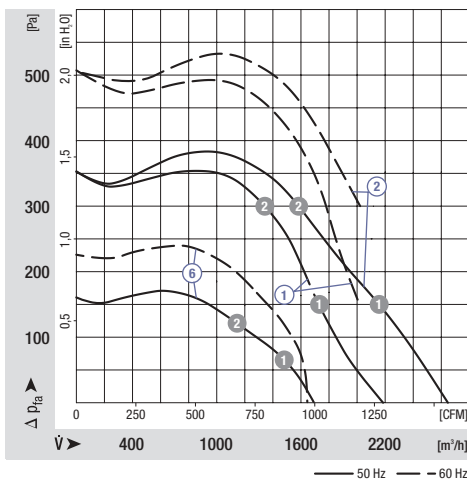
<sup>(2)</sup> 400 VAC Δ/Y for two speed steps available on request

<sup>(3)</sup> Data collected via exhaust duct of 1 m length serving as diffuser

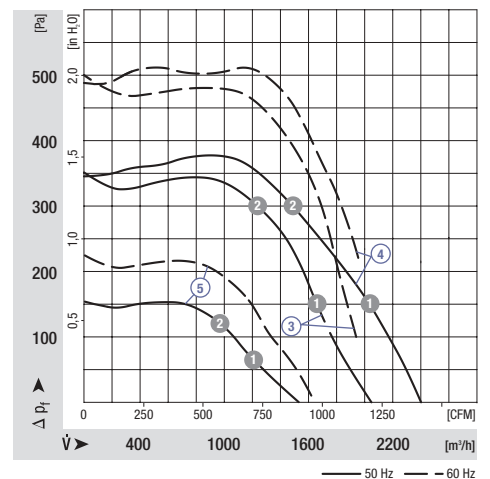
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1390	444
① ②	1430	312
② ①	1330	654
② ②	1410	386
⑤ ①	855	215
⑥ ②	910	173

	n [min⁻¹]	P <sub>1</sub> [W]
③ ①	1370	448
③ ②	1420	325
④ ①	1310	560
④ ②	1390	395
⑤ ①	900	180
⑤ ②	930	156

## Characteristics

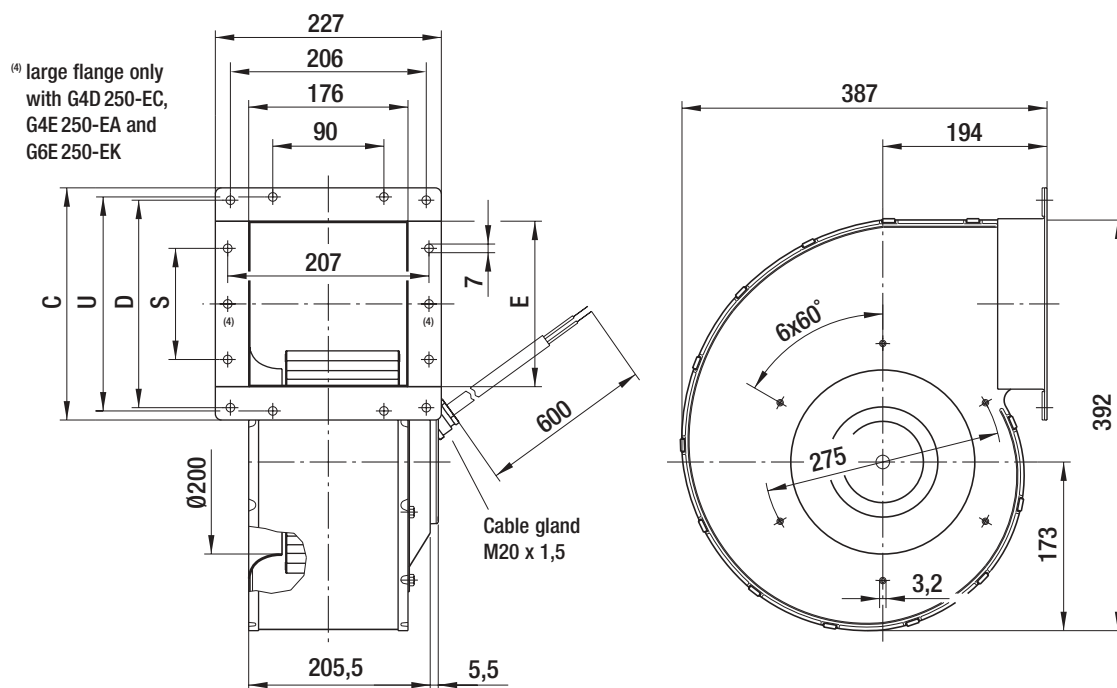


## Characteristics



## Dimensions

Type	C	D	E	S	U
G4D 250-DC10 -03	218	190	167	90	198
G4D 250-EC10 -03	313	285	262	180	293
G4E 250-DA09 -03	218	190	167	90	198
G4E 250-EA09 -03	313	285	262	180	293
G6E 250-DK05 -03	218	190	167	90	198
G6E 250-EK05 -03	313	285	262	180	293





# AC centrifugal blowers

dual inlet, Ø 140



- **Material:** scroll housing with integrated terminal box made of polypropylene, reinforced with French chalk - coloured in black, impeller made of polypropylene - natural colour (according to IEC 695 T2-2 and EN 60335-2-31)
- **Mounting:** SAL (standard external-rotor) motor mounted on one side of the scroll housing via brackets
- **Design:** 4-step blower with external-rotor motor
- **Bearings:** calotte sleeve bearing (medium life-cycle of 15,000 h) - applicable only in horizontal axis
- **Capacitor:** Integrated in terminal box completely wired up and ready for plug-in. FPU (P2) capacitor design.
- **Direction of rotation:** counter-clockwise, seen on plug

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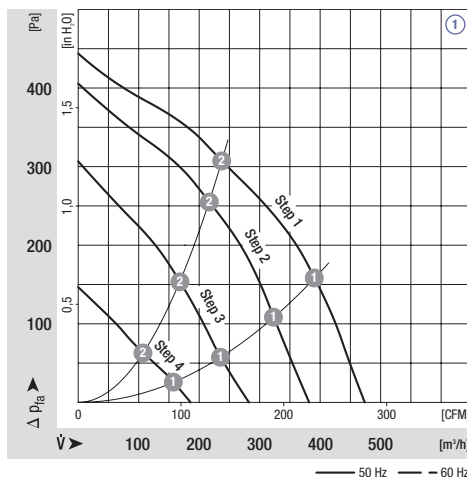
## Nominal data

Type	Motor	Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
			VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
D2E 140-HR97 -05	M2E 068-CF	①	230	50	470	1150	130	0,58	2,0/400	58	0	50	2,3
			230	60	430	1050	130	0,58	2,0/400	56	0	40	

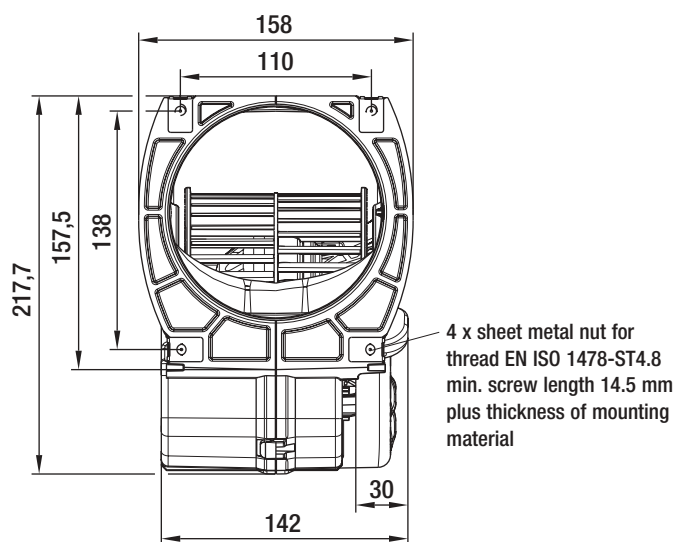
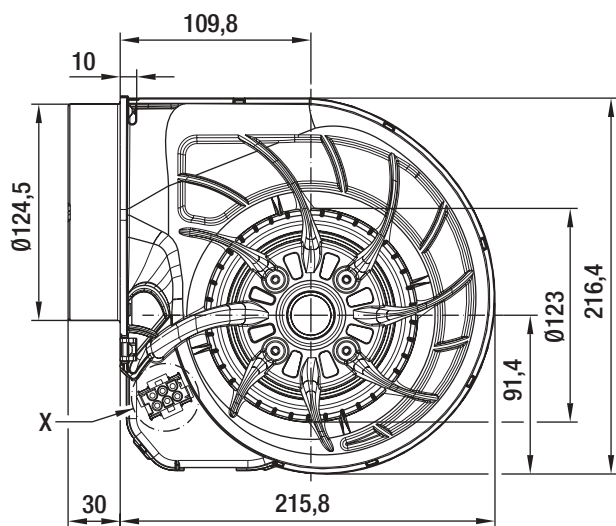
subject to alterations

		n [min⁻¹]	P <sub>1</sub> [W]	
①	①	Step 1	750	56
①	②	Step 1	1055	55
①	①	Step 2	1080	72
①	②	Step 2	1615	67
①	①	Step 3	1485	91
①	②	Step 3	2080	78
①	①	Step 4	1760	116
①	②	Step 4	2295	97

## Characteristics

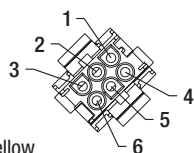


- **Insulation class:** "F"
- **Approvals:** VDE, CE; UL on request
- **Safety regulations:** with integrated temperature monitor and integrated FPU (P2) capacitor in keeping with EN 60335-2-31
- **Note:** Due to the capacitor connected, voltages exceeding 300 V can occur.

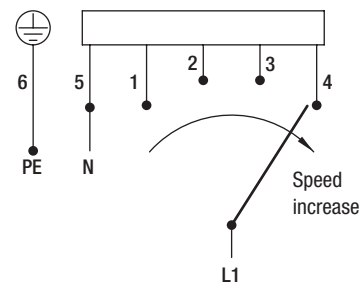


**View X**  
 coded plug system AMP Universal-Mate-N-Lok  
 connector shell AMP 926 682-3  
 6 x plug pin AMP 926 886-1

- 1 = Step 1 (min.) white
- 2 = Step 2 red
- 3 = Step 3 grey
- 4 = Step 4 (max.) black
- 5 = N blue
- 6 = Ground wire green / yellow



**Connection diagram**  
 When changing speeds,  
 the switch must break  
 the circuit.



# AC centrifugal blowers

dual inlet, Ø 146



- **Material:** scroll housing with integrated terminal box made of polypropylene, reinforced with French chalk - coloured in black (according to IEC 695 T2-2 and EN 60335-2-31), impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides
- **Design:** 4-step blower with external-rotor motor
- **Bearings:** calotte sleeve bearing (medium life-cycle of 15,000 h) - applicable only in horizontal axis
- **Capacitor:** Integrated in terminal box completely wired up and ready for plug-in. FPU (P2) capacitor design.
- **Direction of rotation:** counter-clockwise seen on plug
- **Type of protection:** IP20

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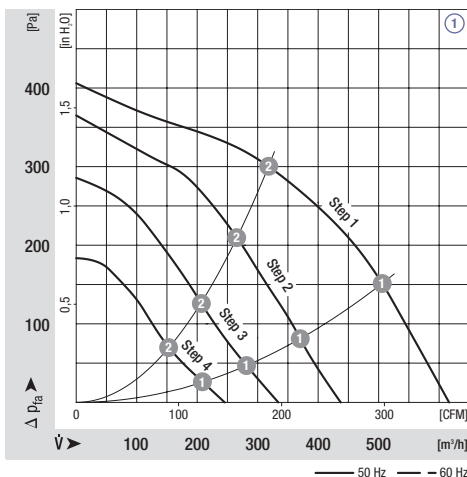
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
D2E 146-HR93 -01	M2E 068-CF	①	230	50	615	1050	150	0,66	4,0/400	52	0	50	3,0
			230	60	370	1750	165	0,73	4,0/400	63	220	50	
D2E 146-HS97 -01	M2E 068-DF	②	230	50	725	1450	200	0,88	5,0/400	58	50	50	3,5
			230	60	500	2000	215	0,95	5,0/400	63	250	50	

subject to alterations

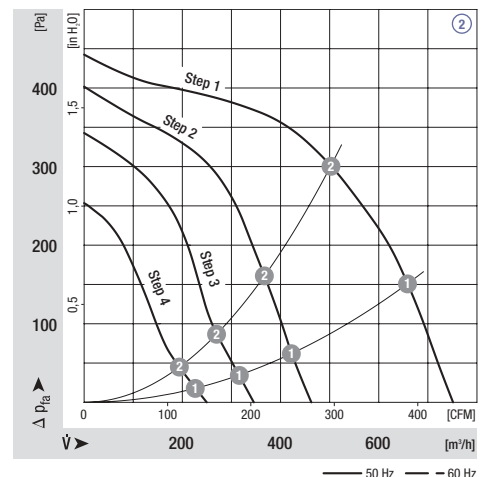
		n [min⁻¹]	P <sub>1</sub> [W]	
①	①	Step 1	670	71
①	②	Step 1	1020	55
①	①	Step 2	890	83
①	②	Step 2	1380	79
①	①	Step 3	1150	100
①	②	Step 3	1780	90
①	①	Step 4	1540	143
①	②	Step 4	2130	130

		n [min⁻¹]	P <sub>1</sub> [W]	
②	①	Step 1	560	94
②	②	Step 1	800	92
②	①	Step 2	820	108
②	②	Step 2	1200	105
②	①	Step 3	1150	127
②	②	Step 3	1610	118
②	①	Step 4	1715	190
②	②	Step 4	2120	173

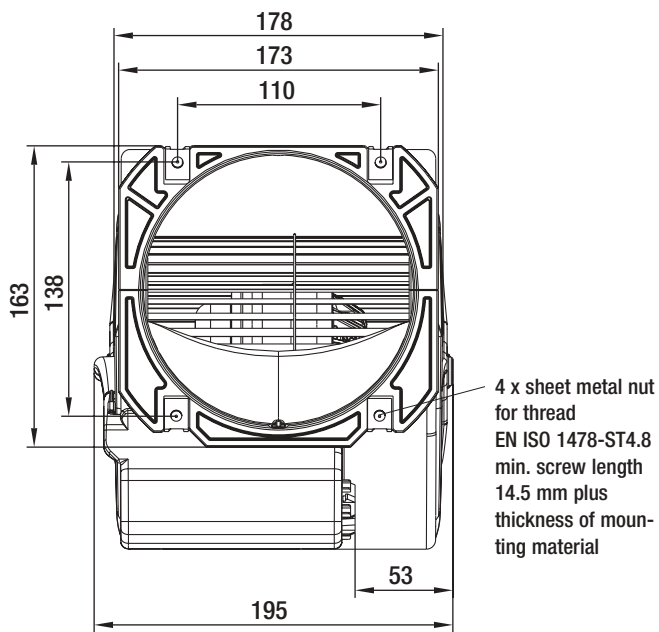
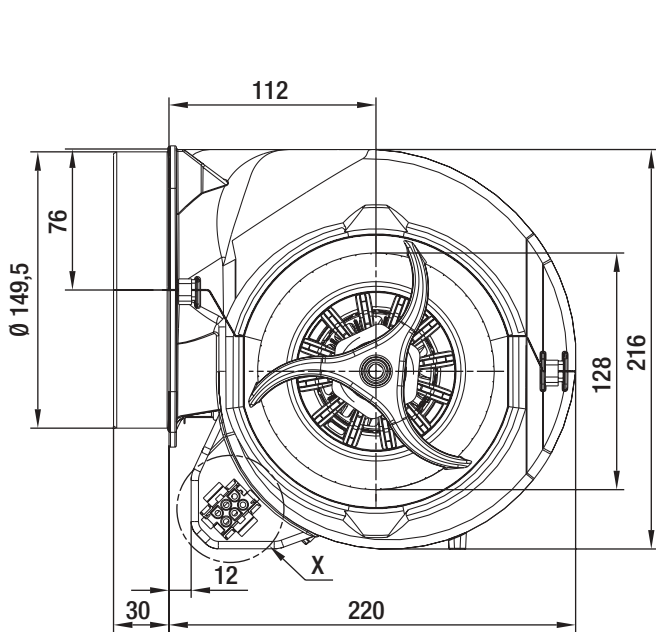
## Characteristics



## Characteristics

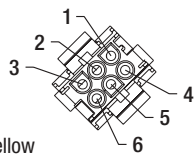


- **Insulation class:** "F"
- **Approvals:** VDE, CE; UL on request
- **Safety regulations:** with integrated temperature monitor and integrated FPU (P2) capacitor in keeping with EN 60335-2-31
- **Note:** Due to the capacitor connected, voltages exceeding 300 V can occur.

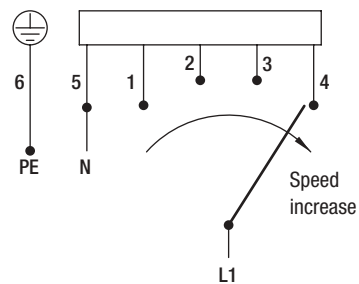


**View X**  
 coded plug system AMP Universal-Mate-N-Lok  
 connector shell AMP 926 682-3  
 6 x plug pin AMP 926 886-1

- 1 = Step 1 (min.) white
- 2 = Step 2 red
- 3 = Step 3 grey
- 4 = Step 4 (max.) black
- 5 = N blue
- 6 = Ground wire green / yellow



**Connection diagram**  
 When changing speeds,  
 the switch must break  
 the circuit.



# AC centrifugal blowers

dual inlet, Ø 146



- **Material:** scroll housing with integrated terminal box made of polypropylene, reinforced with French chalk - coloured in black (according to IEC 695 T2-2 and EN 60335-2-31), impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides
- **Design:** 4-step blower with external-rotor motor
- **Bearings:** calotte sleeve bearing (medium life-cycle of 15,000 h) - applicable only in horizontal axis
- **Capacitor:** Integrated in terminal box completely wired up and ready for plug-in. FPU (P2) capacitor design.
- **Direction of rotation:** counter-clockwise seen on plug
- **Type of protection:** IP20

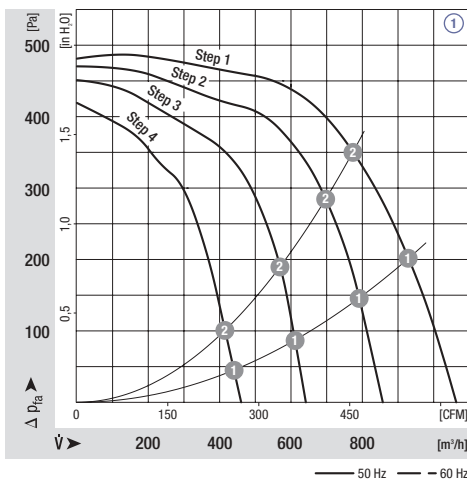
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Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
D2E 146-HT67 -01	M2E 068-EC	①	230	50	1060	1850	355	1,55	8,0/450	66	0	50	3,6
			230	60	875	2100	400	1,75	8,0/450	63	200	55	

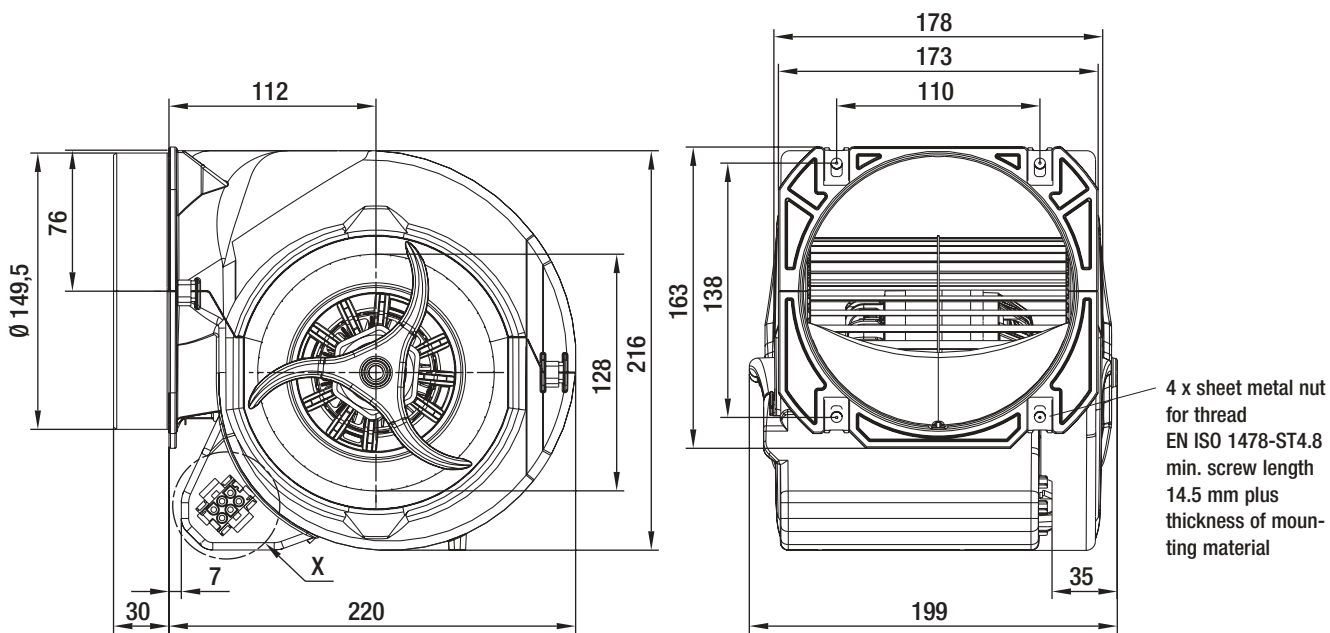
subject to alterations

		n [min⁻¹]	P <sub>1</sub> [W]	
①	①	Step 1	1065	190
①	②	Step 1	1315	182
①	①	Step 2	1460	222
①	②	Step 2	1765	203
①	①	Step 3	1840	262
①	②	Step 3	2140	232
①	①	Step 4	2145	318
①	②	Step 4	2355	280

## Characteristics

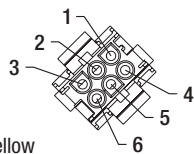


- **Insulation class:** "F"
- **Approvals:** VDE, CE; UL on request
- **Safety regulations:** with integrated temperature monitor and integrated FPU (P2) capacitor in keeping with EN 60335-2-31
- **Note:** Due to the capacitor connected, voltages exceeding 300 V can occur.



**View X**  
 coded plug system AMP Universal-Mate-N-Lok  
 connector shell AMP 926 682-3  
 6 x plug pin AMP 926 886-1

- 1 = Step 1 (min.) white
- 2 = Step 2 red
- 3 = Step 3 grey
- 4 = Step 4 (max.) black
- 5 = N blue
- 6 = Ground wire green / yellow



# AC centrifugal blowers

dual inlet, Ø 146



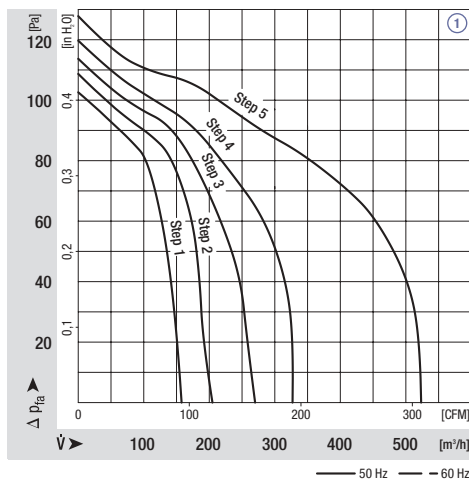
- **Material:** scroll housing made of plastic PP - coloured in black, impeller made of plastic PA - coloured in black (in keeping with UL 94 HB)
- **Design:** 5-step blower with integrated EW external-rotor motor and anti-vibration motor suspension on both sides
- **Bearings:** maintenance-free ball bearings both sides
- **Capacitor:** Integrated in terminal box completely wired up and ready for plug-in. FPU (P2) capacitor design.
- **Insulation class:** "F"
- **Approvals:** VDE, CE
- **Note:** Due to the capacitor connected, voltages exceeding 300 V can occur.

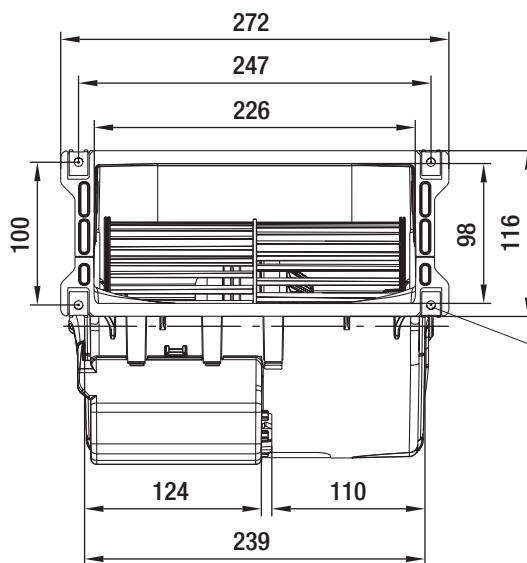
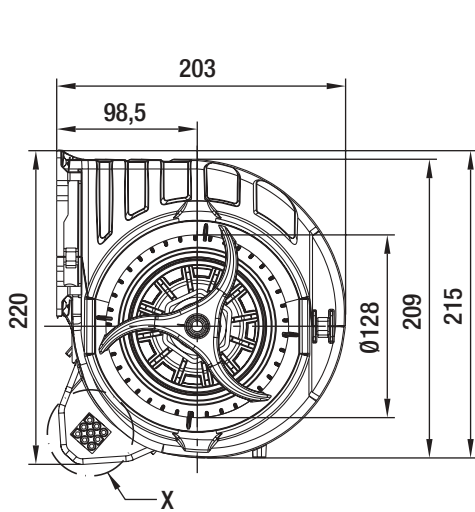
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Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C	kg
D4E 146-LV55 -01	M4E068-CF	①	230	50	565	780	65	0,29	2,0/400	46	0	50	2,5
			230	60	510	710	68	0,30	2,0/400	42	0	40	

subject to alterations

## Characteristics

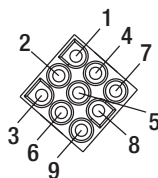




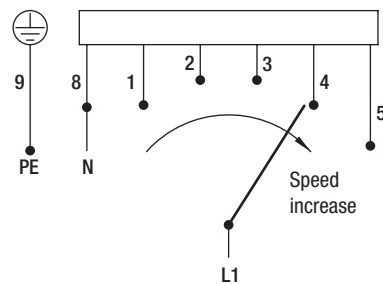
4 x sheet metal nut for thread  
EN ISO 1478-ST4.8  
min. screw length  
14.5 mm plus  
thickness of mounting material

**View X**  
coded plug system AMP Universal-Mate-N-Lok  
connector shell AMP 927 231-3  
7 x plug pin AMP 926 886-1

- 1 = Step 1 (min.)
- 2 = Step 2
- 3 = Step 3
- 4 = Step 4
- 5 = Step 5 (max.)
- 8 = N
- 9 = Ground wire



**Connection diagram**  
When changing speeds,  
the switch must break  
the circuit.





# AC centrifugal blowers unit

dual inlet, Ø 146



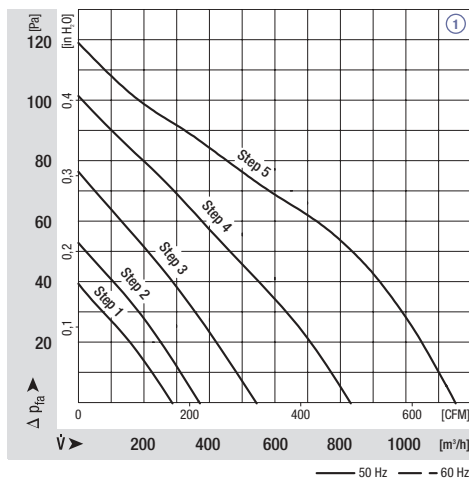
- **Material:** scroll housing made of plastic PP - coloured in black, impeller and suspension made of plastic PA - coloured in black (in keeping with UL 94 HB)
- **Design:** 5-step blower with integrated EW external-rotor motor and anti-vibration motor suspension on both sides
- **Bearings:** maintenance-free ball bearings on both sides
- **Capacitor:** Integrated in terminal box completely wired up and ready for plug-in. FPU (P2) capacitor design.
- **Insulation class:** "F"
- **Approvals:** VDE, CE
- **Note:** Due to the capacitor connected, voltages exceeding 300 V can occur.

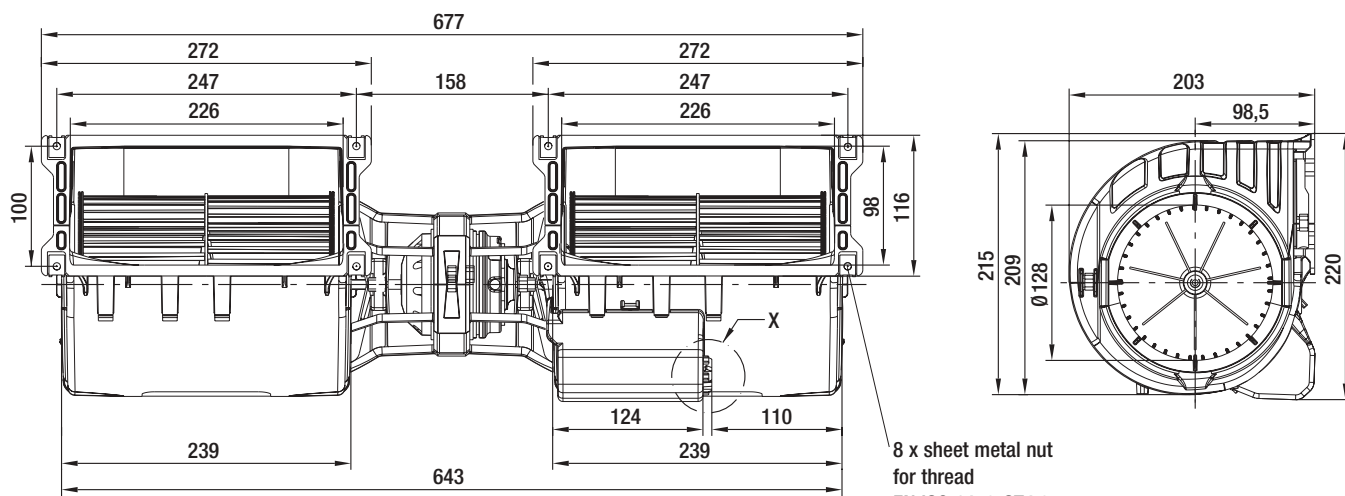
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Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
K4E 146-AB57 -01	M4E068-CF	①	230	50	1180	750	85	0,38	2,5/450	47	0	50	4,0

subject to alterations

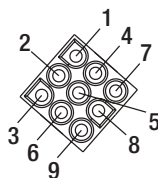
## Characteristics



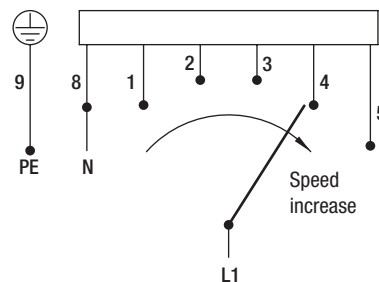


**View X**  
 coded plug system AMP Universal-Mate-N-Lok  
 connector shell AMP 927 231-3  
 7 x plug pin AMP 926 886-1

- 1 = Step 1 (min.)
- 2 = Step 2
- 3 = Step 3
- 4 = Step 4
- 5 = Step 5 (max.)
- 8 = N
- 9 = Ground wire



**Connection diagram**  
 When changing speeds, the switch must break the circuit.



# AC centrifugal blowers

dual inlet, Ø 160



- **Material:** side parts made of polyamide reinforced with glass fibre, steel case made of galvanised sheet steel, impeller made of polypropylene
- **Design:** blower with integrated EW external-rotor motor and anti-vibration motor suspension on both sides
- **Bearings:** calotte sleeve bearing (medium life-cycle of 15,000 h) - applicable only in horizontal axis
- **Capacitor:** mountable on housing - must be ordered separately
- **Direction of rotation:** counter-clockwise seen on plug
- **Insulation class:** "F"
- **Approvals:** VDE, CE; UL on request
- **Safety regulations:** with integrated thermal overload protection in keeping with EN 60335

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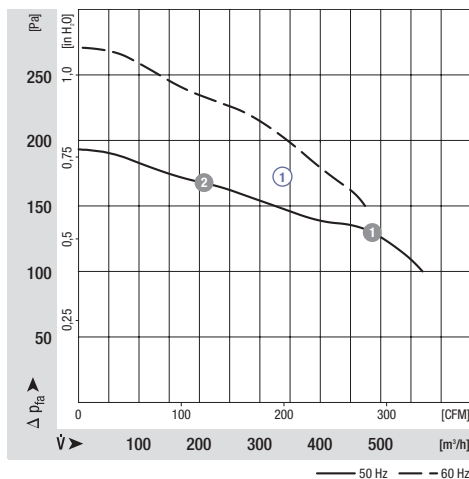
## Nominal data

Type	Motor	Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
			VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
D4E 160-HN46 -12	M4E068-CF	①	230	50	565	1280	93	0,42	2,0/450	54	100	40	2,7
			230	60	500	1450	110	0,49	2,0/450	56	150	40	

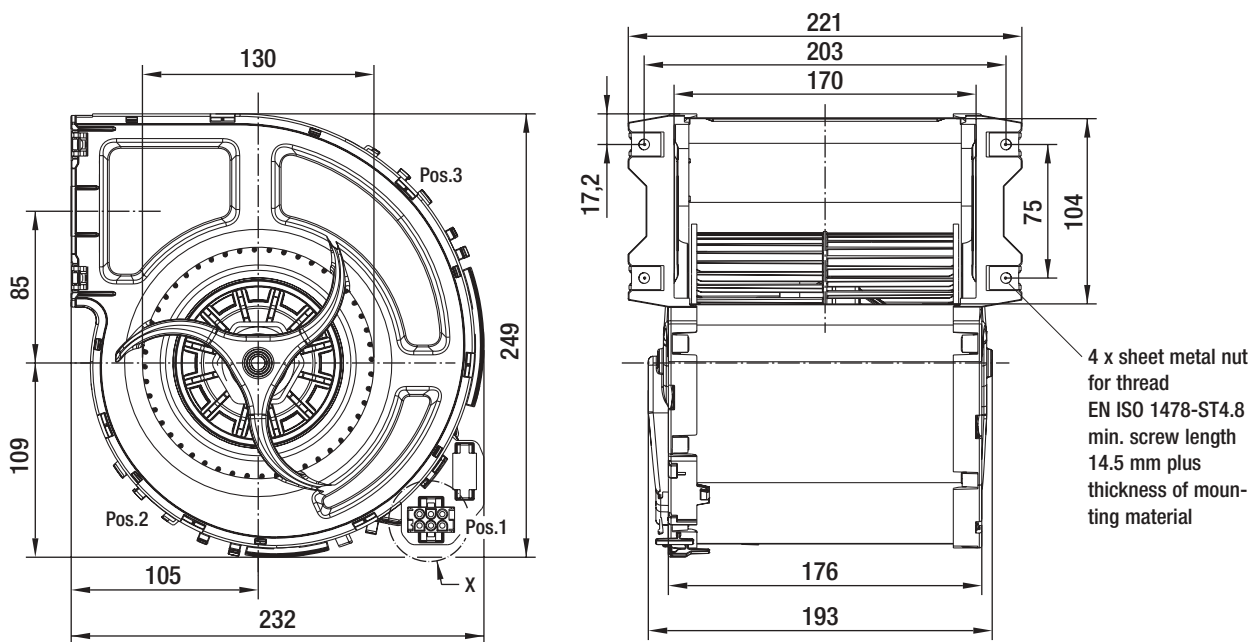
subject to alterations

	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1340	84
① ②	1430	69

## Characteristics

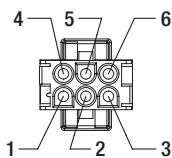


- **Position of plug:** Pos.1 is standard, Pos.2 or Pos.3 on request



**View X**  
 coded plug system AMP Universal-Mate-N-Lok  
 connector shell AMP 926 682-3  
 4 x plug pin AMP 926 886-1

- 1 = L
- 2 = not assigned
- 3 = N / C2
- 4 = ground wire
- 5 = not assigned
- 6 = C1



# AC centrifugal blowers

dual inlet, Ø 097



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** SAL (standard external-rotor) motor mounted via brackets on one side of the scroll housing

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Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg	
D2E 097-CB01 -12 <sup>(1)(3)</sup>	M2E 042-CA	①	230	50	180	1650	42	0,19	1,5/400	47	0	60	1,3
D2E 097-CB01 -02 <sup>(2)(3)</sup>			230	60	180	1650	42	0,20	1,5/400	47	0	60	
D2E 097-BE01 -65 <sup>(1)(3)</sup>	M2E 042-CA	②	230	50	270	1250	48	0,22	2,0/400	47	0	55	1,5
D2E 097-BE01 -02 <sup>(2)(3)</sup>			230	60	265	1200	54	0,26	2,0/400	47	0	50	
D2E 097-BI56 -48 <sup>(1)</sup>	M2E 052-CA	③	230	50	435	1950	87	0,39	2,0/400	58	0	40	1,5
D2E 097-BI56 -02 <sup>(2)</sup>			230	60	410	1850	100	0,45	2,0/400	57	0	35	

subject to alterations

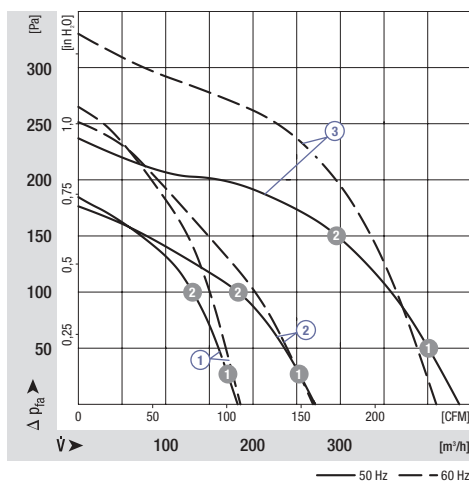
① With flange

② Without flange

③ FPU (P2) capacitor in keeping with IEC 252

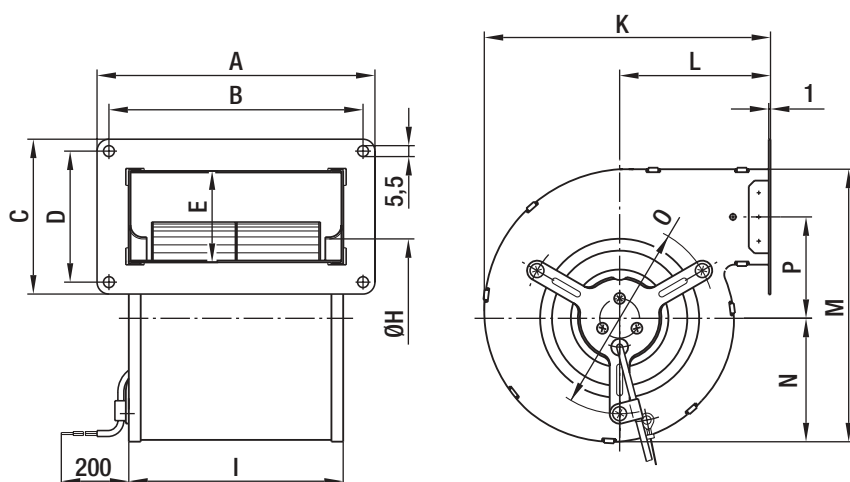
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1690	39
① ②	2090	36
② ①	1395	49
② ②	1900	45
③ ①	2150	83
③ ②	2475	73

## Characteristics



## Dimensions

Type	A	B	C	D	E	H	I	K	L	M	N	O	P
D2E 097-CB01 -12 D2E 097-CB01 -02	140	128	78	66	46	80,0	108	144	76	137	62	96	51,0
D2E 097-BE01 -65 D2E 097-BE01 -02	180	168	100	88	67	79,5	146	162	86	165	68	114	62,5
D2E 097-BI56 -48 D2E 097-BI56 -02	180	168	100	88	67	79,5	146	162	86	165	68	114	62,5



# AC centrifugal blowers

dual inlet, Ø 133



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** SAL (standard external-rotor) motor mounted via brackets on one side of the scroll housing

ebm-papst • Mulfingen

## Nominal data

Type	Motor	Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C	kg
D2E 133-AM47 -23 <sup>(1)(3)</sup>	M2E 068-DF	①	230	50	685	1500	190	0,84	3,0/450	59	0	45	3,5
D2E 133-AM47 -01 <sup>(2)(3)</sup>			230	60	510	1800	200	0,88	3,0/450	56	100	40	
D2E 133-CI33 -22 <sup>(1)</sup>	M2E 068-CF	②	230	50	700	1700	175	0,77	4,0/400	58	50	40	3,3
D2E 133-CI33 -56 <sup>(2)</sup>			230	60	500	2100	190	0,84	4,0/400	58	200	40	
D2E 133-DM47 -23 <sup>(1)(3)</sup>	M2E 068-DF	③	230	50	810	1150	190	0,84	3,0/450	56	0	40	4,4
D2E 133-DM47 -01 <sup>(2)(3)</sup>			230	60	600	1550	195	0,85	3,0/450	55	100	40	

subject to alterations

<sup>(1)</sup> With flange

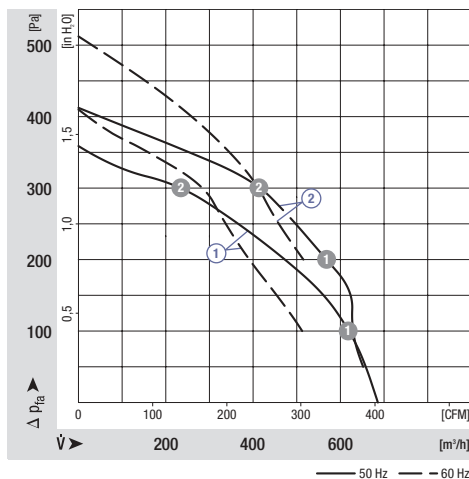
<sup>(2)</sup> Without flange

<sup>(3)</sup> Direction of rotation: clockwise as seen from inlet opposite the cable exit

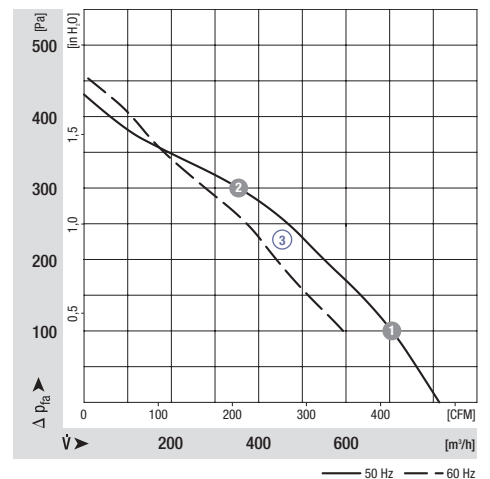
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	1885	180
① ②	2640	130
② ①	2135	160
② ②	2450	138

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
③ ①	1700	180
③ ②	2480	138

## Characteristics

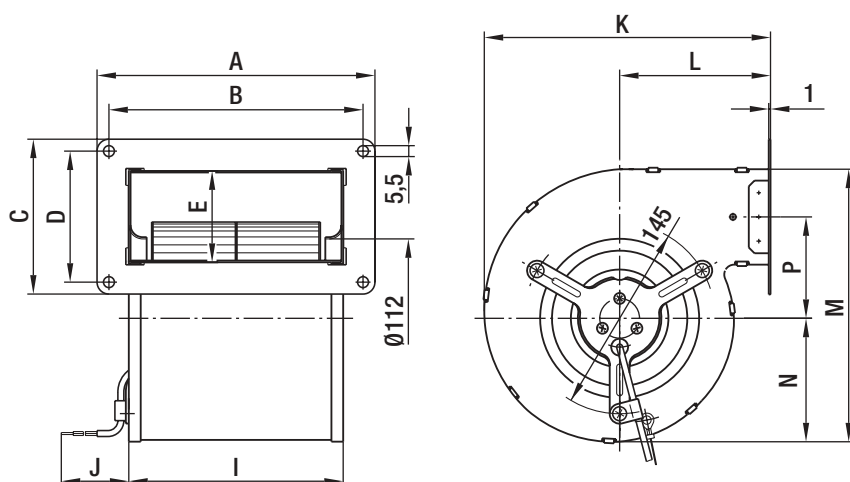


## Characteristics



## Dimensions

Type	A	B	C	D	E	I	J	K	L	M	N	P
D2E 133-AM47 -23 D2E 133-AM47 -01	254	238	108	92	69	215	300	171,5	88	180	79,0	66,0
D2E 133-CI33 -22 D2E 133-CI33 -56	206	190	142	126	102	168	400	204,0	97	213	93,5	67,5
D2E 133-DM47 -23 D2E 133-DM47 -01	270	254	142	126	102	232	300	204,0	97	213	98,0	67,5





# AC centrifugal blowers

dual inlet, Ø 133



- **Material:** scroll housing made of galvanised sheet steel, impeller made of plastic
- **Mounting:** SAL (standard external-rotor) motor mounted via brackets on one side of the scroll housing

ebm-papst • Mulfingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C	kg	
D4E 133-AH01 -58 <sup>(1)</sup>	M4E 068-BF	①	230	50	510	1180	70	0,32	2,0/400	52	0	40	2,6
D4E 133-AH01 -55 <sup>(2)</sup>			230	60	540	1240	80	0,35	2,0/400	54	0	40	
D4E 133-DH01 -J4 <sup>(1)</sup>	M4E 068-BF	②	230	50	670	1080	73	0,33	2,0/400	52	0	40	3,3
D4E 133-DH01 -J2 <sup>(2)</sup>			230	60	675	1100	83	0,37	2,0/400	52	0	40	
D4E 133-DL01 -J5 <sup>(1)</sup>	M4E 068-CF	③	230	50	760	1230	75	0,34	2,0/450	55	0	70	3,8
D4E 133-DL01 -H9 <sup>(2)</sup>			230	60	790	1280	95	0,43	2,0/450	56	0	60	

subject to alterations

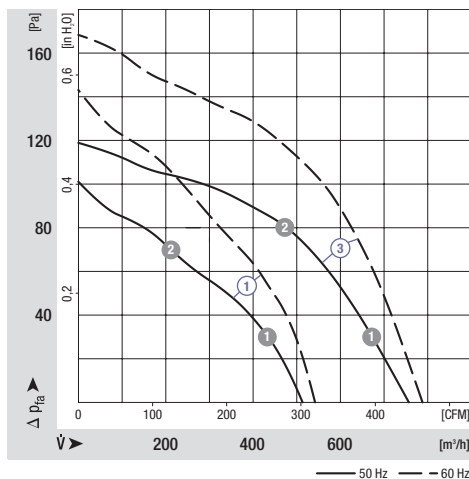
<sup>(1)</sup> With flange

<sup>(2)</sup> Without flange

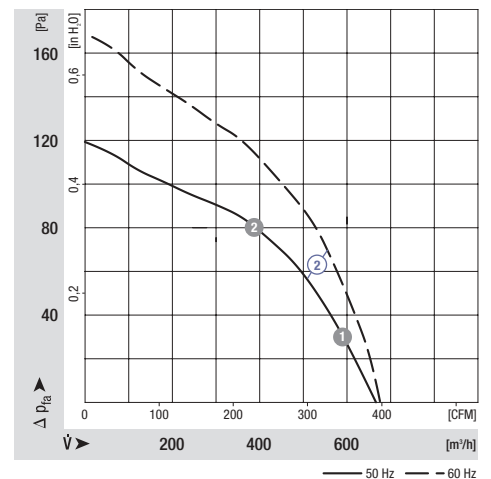
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	1240	66
① ②	1380	63
③ ①	1280	67
③ ②	1370	58

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
② ①	1150	69
② ②	1300	65

## Characteristics

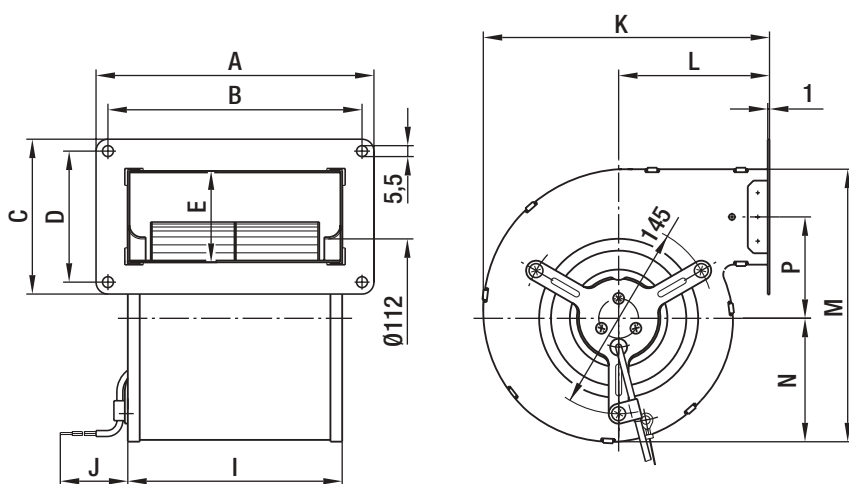


## Characteristics



## Dimensions

Type	A	B	C	D	E	I	J	K	L	M	N	P
D4E 133-AH01 -58 D4E 133-AH01 -55	254	238	108	92	69	215	300	171,5	88	180	76	66,0
D4E 133-DH01 -J4 D4E 133-DH01 -J2	270	254	142	126	102	232	300	204,0	97	213	98	67,5
D4E 133-DL01 -J5 D4E 133-DL01 -H9	270	254	142	126	102	232	300	204,0	97	213	98	67,5



# AC centrifugal blowers

dual inlet, Ø 146



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** SAL (standard external-rotor) motor mounted via brackets on one side of the scroll housing

ebm-papst • Mulfingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg	
D2E 146-AP43 -22 <sup>(1)</sup>	M2E 068-EC	①	230	50	935	1650	245	1,08	6,0/400	60	100	40	4,2
D2E 146-AP43 -02 <sup>(2)</sup>			230	60	690	2100	270	1,20	6,0/400	62	250	40	
D2E 146-AP47 -22 <sup>(1)</sup>	M2E 068-EC	②	230	50	970	2050	300	1,31	8,0/400	63	200	40	4,2
D2E 146-AP47 -02 <sup>(2)</sup>			230	60	690	2550	330	1,45	8,0/400	68	400	35	
D4E 146-AA07 -22 <sup>(1)</sup>	M4E 068-CF	③	230	50	835	1000	100	0,44	2,0/450	55	0	50	3,5
D4E 146-AA07 -02 <sup>(2)</sup>			230	60	765	950	116	0,51	2,0/450	53	0	50	

subject to alterations

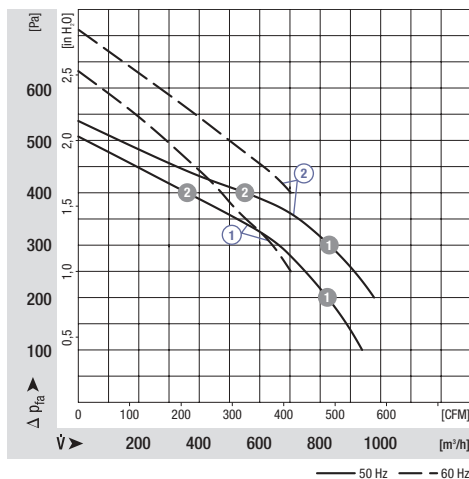
① With flange

② Without flange

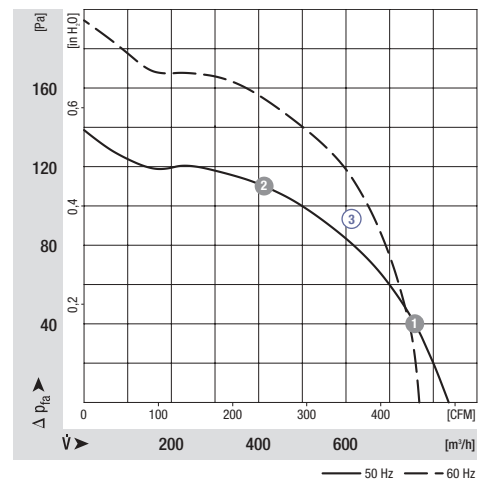
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1935	230
① ②	2560	167
② ①	2300	262
② ②	2600	206

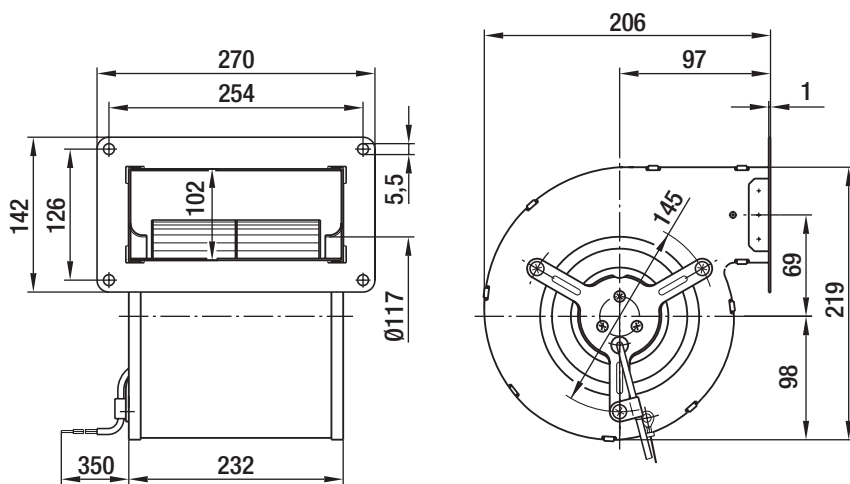
	n [min⁻¹]	P <sub>1</sub> [W]
③ ①	1180	88
③ ②	1390	65

## Characteristics



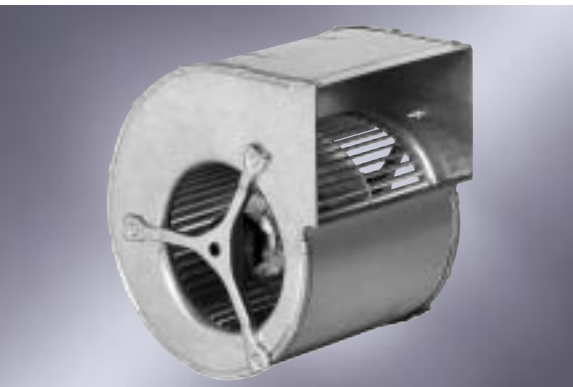
## Characteristics





# AC centrifugal blowers

dual inlet, Ø 146



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides

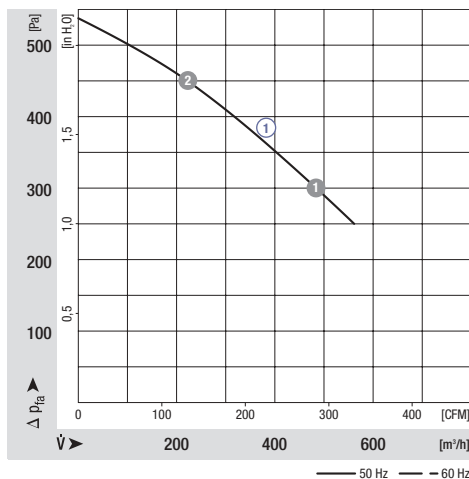
ebm-papst • Mulfingen

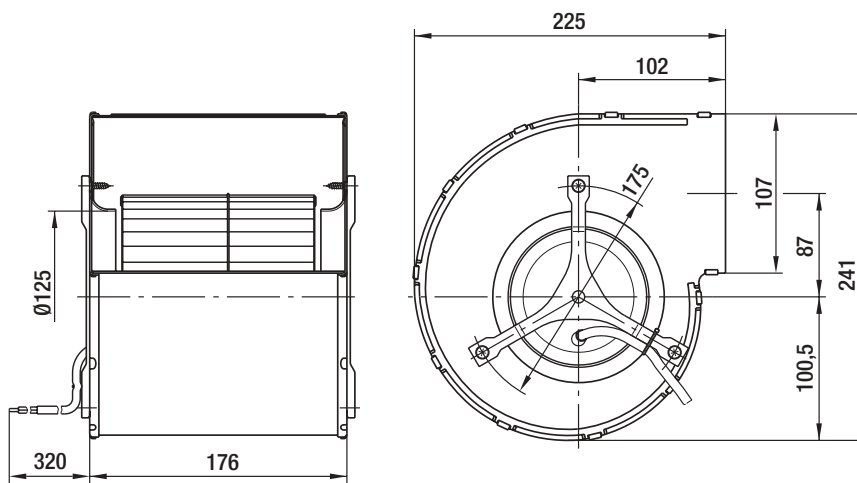
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C	kg	
D2E 146-CS03 -01 <sup>(1)</sup>	M2E 068-DF	①	230	50	555	1950	180	0,79	4,0/400	57	250	40	4,3

subject to alterations ① Flange on request

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	2160	182
① ②	2480	155

## Characteristics





# AC centrifugal blowers

dual inlet, Ø 160



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** SAL (standard external-rotor) motor mounted via brackets on one side of the scroll housing

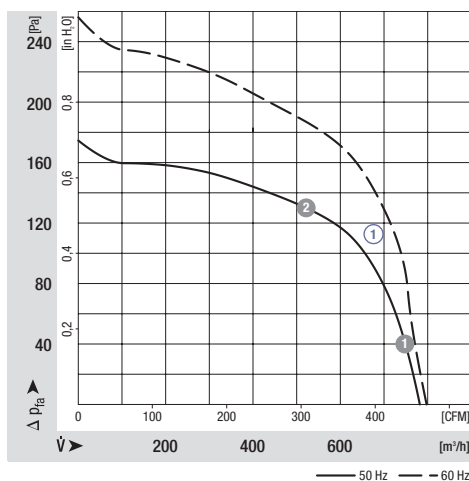
ebm-papst • Mulfingen

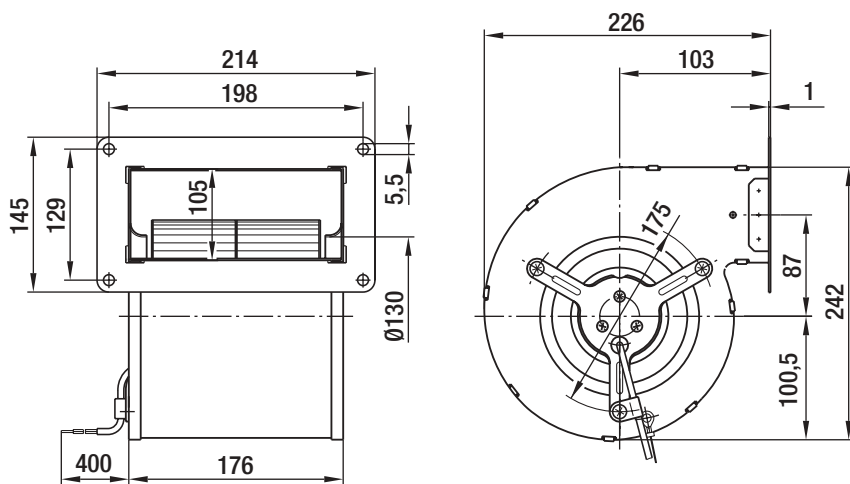
Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C	kg
D4E 160-DA01 -22 <sup>(1)</sup>	M4E068-DF	①	230	50	780	1200	117	0,51	3,0/450	58	0	55	4,3
D4E 160-DA01 -02 <sup>(2)</sup>			230	60	820	1200	140	0,62	3,0/450	58	0	40	

subject to alterations ① With flange ② Without flange

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	1230	114
① ②	1360	93

## Characteristics







# AC centrifugal blowers

dual inlet, Ø 160



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides

ebm-papst • Mulfingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg	
D2E 160-AB01 -06	M2E074-FA	①	230	50	1195	1850	410	1,80	10 / 400	64	200	40	5,7
D4E 160-EG06 -05	M4E068-EC	②	230	50	1240	1300	180	0,79	5,0/400	63	0	75	4,5
			230	60	1250	1350	245	1,07	5,0/400	64	10	40	
D4E 160-FH12 -05	M4E068-GA	③	230	50	1310	1350	185	0,81	6,0/400	64	0	80	5,9
			230	60	1410	1450	270	1,18	6,0/400	67	0	50	

subject to alterations

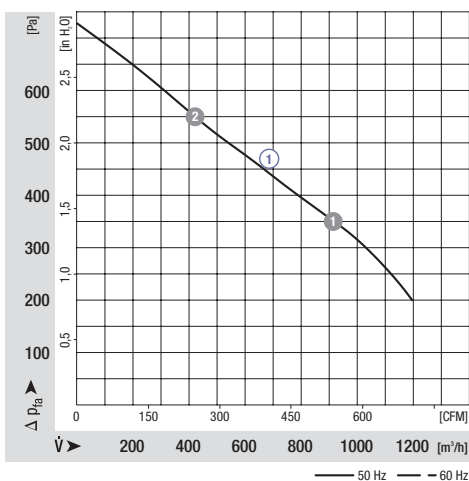
① Flange on request

② Insulation class "F"

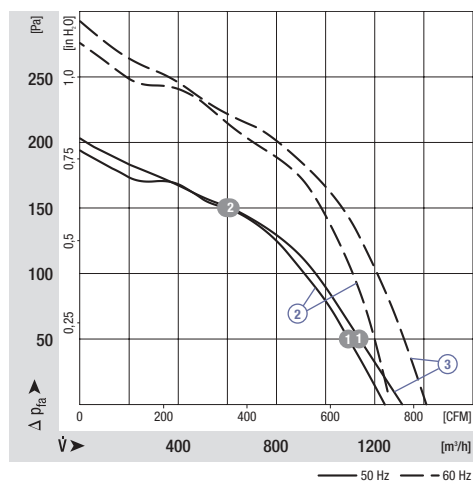
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	2265	380
① ②	2520	338

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	1355	153
② ②	1445	100
③ ①	1400	154
③ ②	1460	103

## Characteristics

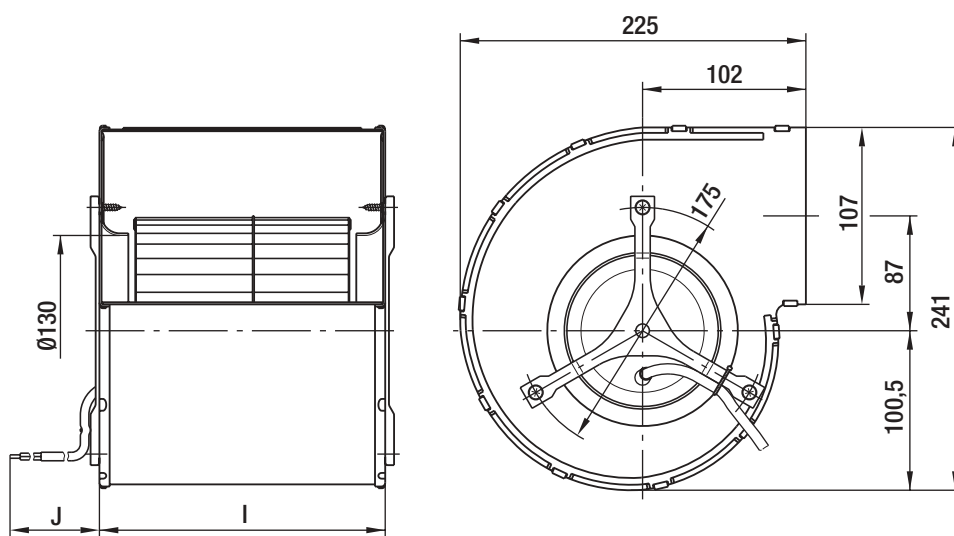


## Characteristics



Dimensions

Type	I	J
D2E 160-AB01 -06	276	1300
D4E 160-EG06 -05	232	400
D4E 160-FH12 -05	276	400



# AC centrifugal blowers

dual inlet, Ø 180



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides

ebm-papst • Mulfingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg	
<b>D4D 180-CB01 -02</b> <sup>(1)</sup>	M4D068-GA	①	230/400	50	1880	1050	290	0,53	---	62	0	55	9,5
			230/400	60	1860	1030	360	0,60	---	62	0	30	
<b>D4E 180-BA02 -02</b>	M4E068-LA	②	230	50	1900	1300	360	1,58	10 / 400	65	0	65	11,0
			230	60	2040	1360	460	2,02	10 / 400	66	0	40	
<b>D4E 180-CA02 -02</b> <sup>(1)</sup>	M4E068-LA	③	230	50	2110	1250	380	1,68	10 / 400	64	0	60	10,8
			230	60	2125	1280	495	2,16	10 / 400	64	0	35	

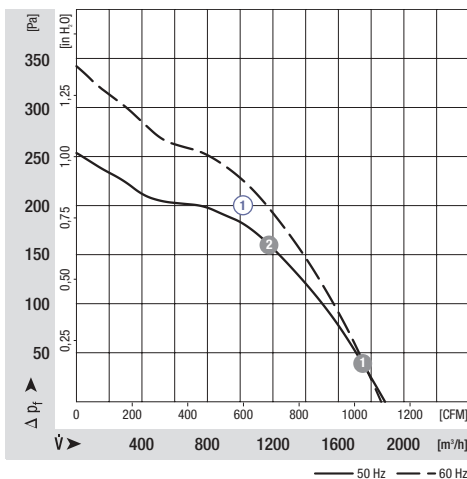
subject to alterations

<sup>(1)</sup> Data collected via exhaust duct of 1 m length serving as diffuser

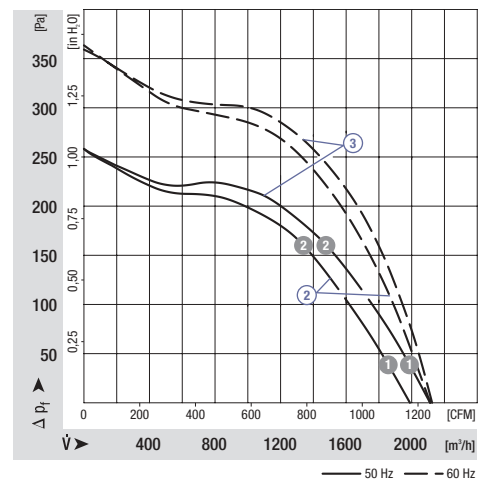
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1100	260
① ②	1275	175

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	1350	310
② ②	1400	240
③ ①	1300	360
③ ②	1385	270

## Characteristics

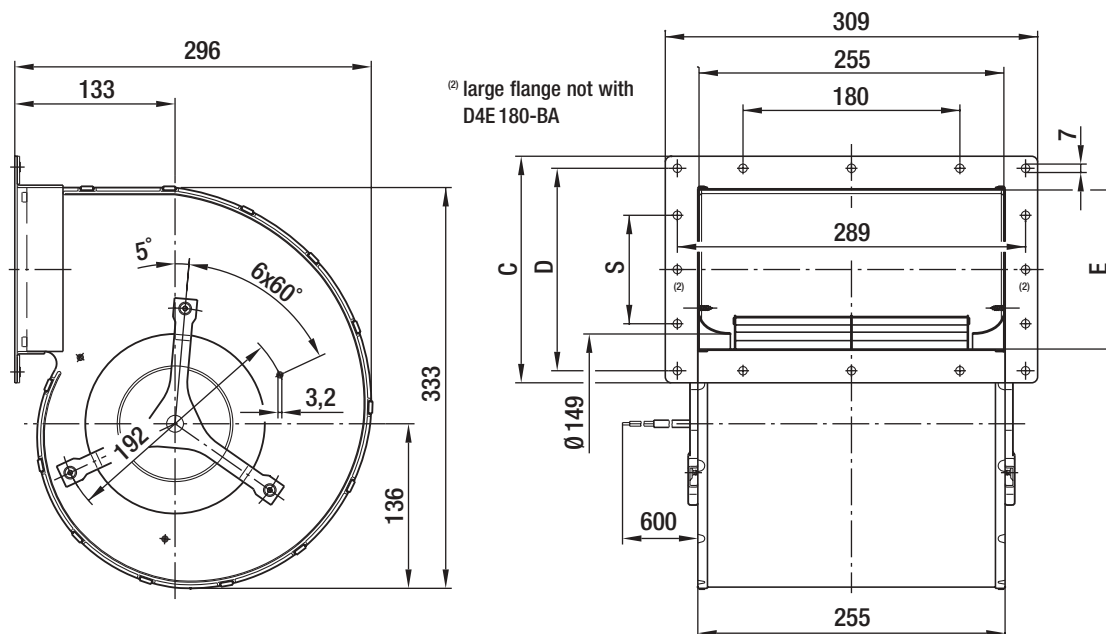


## Characteristics



## Dimensions

Type	C	D	E	S
D4D 180-CB01 -02	278	258	224	180
D4E 180-BA02 -02	188	168	134	90
D4E 180-CA02 -02	278	258	224	180



# AC centrifugal blowers

dual inlet, Ø 200



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides

ebm-papst • Mulfingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
D4D 200-CA01 -02 <sup>(1)</sup>	M4D068-LA	①	230/400	50	2550	1080	480	0,89	---	63	0	30	12,0
D4E 200-CA02 -02 <sup>(1)</sup>	M4E068-LA	②	230	50	2380	1100	490	2,15	10 / 400	60	50	40	11,9
			230	60	2050	1250	525	2,30	10 / 400	60	150	40	

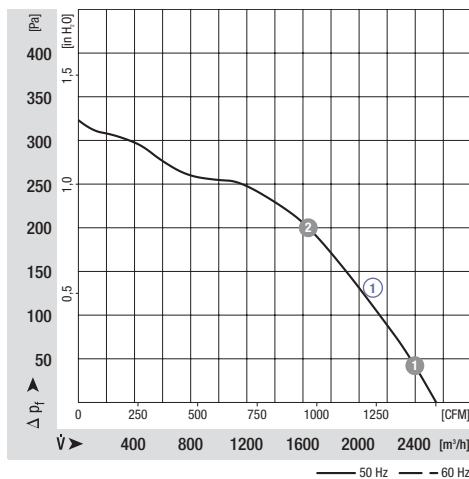
subject to alterations

<sup>(1)</sup> Data collected via exhaust duct of 1 m length serving as diffuser

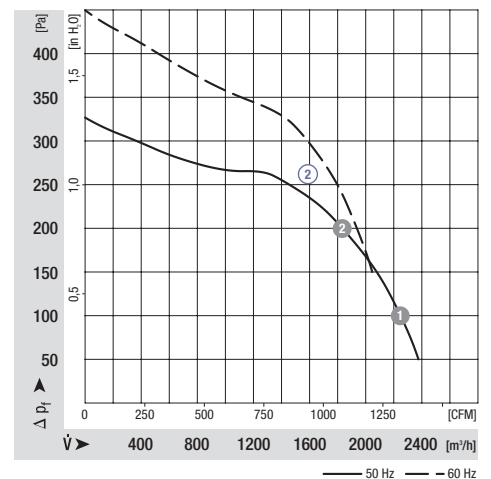
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1125	425
① ②	1260	310

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	1185	445
② ②	1300	350

## Characteristics



## Characteristics





# AC centrifugal blowers

dual inlet, Ø 225



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides

ebm-papst • Muldingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg	
D4D 225-CC01 -02 <sup>(1)</sup>	M4D074-LA	①	230/400	50	2980	1000	680	1,15	---	64	0	45	12,5
			230/400	60	2430	1050	700	1,25	---	62	100	35	
D4E 225-BC01 -02	M4E074-LA	②	230	50	2600	1100	700	3,05	25 / 400	67	20	40	12,1
D4E 225-CC01 -02 <sup>(1)</sup>	M4E074-LA	③	230	50	2650	1150	650	2,84	25 / 400	65	100	40	12,4
D6E 225-FB07 -02 <sup>(1)</sup>	M6E068-LA	④	230	50	2680	800	365	1,60	10 / 450	59	20	40	12,5
			230	60	2480	900	410	1,80	10 / 450	59	80	40	

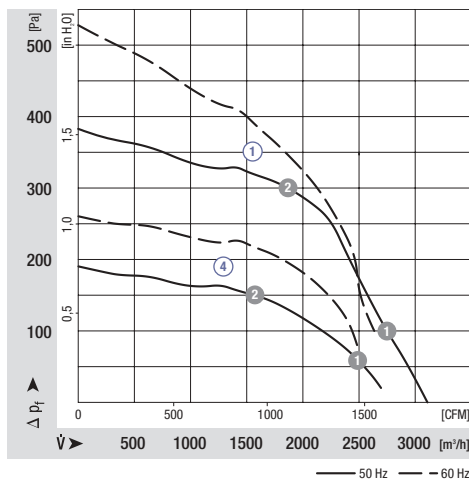
subject to alterations

<sup>(1)</sup> Data collected via exhaust duct of 1 m length serving as diffuser

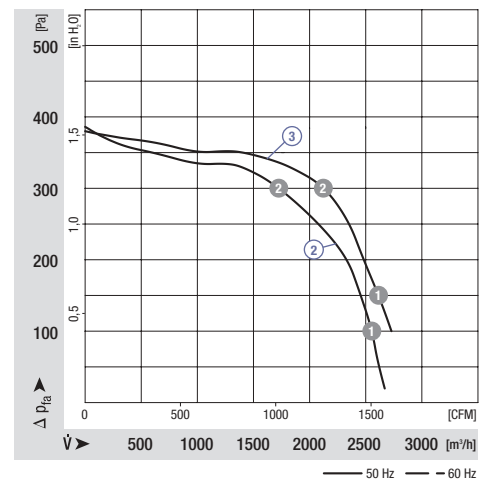
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1110	600
① ②	1300	385
④ ①	850	330
④ ②	940	245

	n [min⁻¹]	P <sub>1</sub> [W]
② ①	1200	660
② ②	1370	480
③ ①	1170	680
③ ②	1300	550

## Characteristics

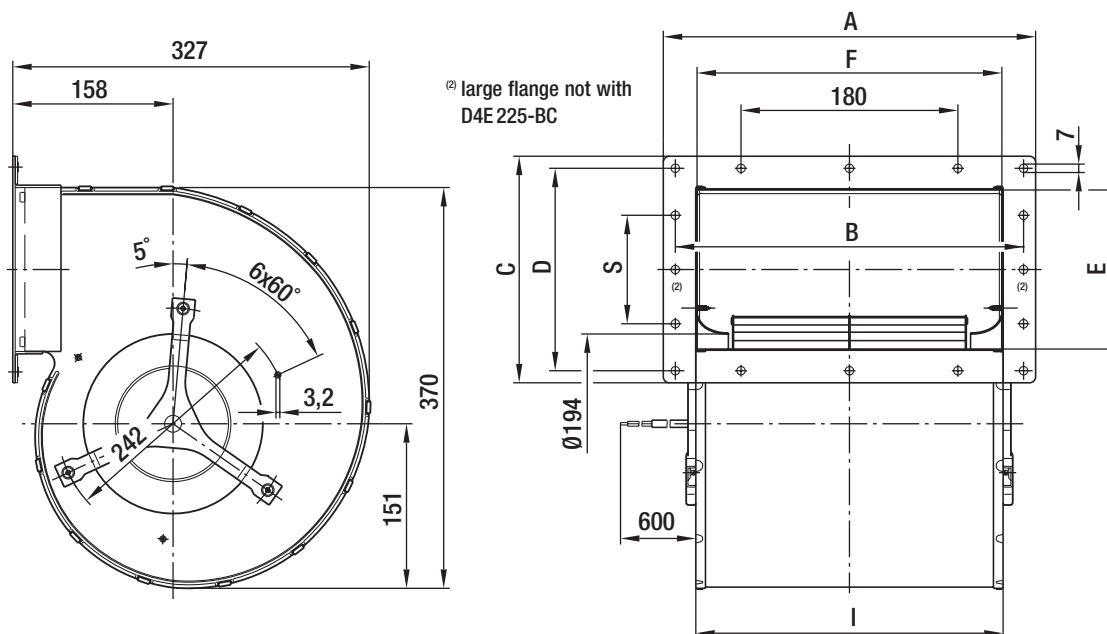


## Characteristics



## Dimensions

Type	A	B	C	D	E	F	I	S
D4D 225-CC01 -02	341	321	304	284	250	287	287	180
D4E 225-BC01 -02	341	321	200	180	146	287	287	90
D4E 225-CC01 -02	341	321	304	284	250	287	287	180
D6E 225-FB07 -02	387	367	304	284	250	333	333	180





# AC centrifugal blowers

dual inlet, Ø 225



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides, mounting brackets on request
- **Approval:** complying with EN 60034-1

ebm-papst • Mulfingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C	kg	
D4D 225-FH02 -01 <sup>(1)(2)</sup>	M4D094-LA	①	400 Y	50	3870	1300	950	1,82	---	75	0	85	15,6
			400 Y	60	4030	1350	1320	2,40	---	76	0	40	
D4D 225-GH02 -01 <sup>(1)(2)(3)</sup>	M4D094-LA	②	400 Y	50	4400	1230	1140	2,10	---	76	0	70	15,6
			400 Y	60	3940	1360	1280	2,30	---	74	150	50	
D4E 225-EH01 -01 <sup>(1)</sup>	M4E094-LA	③	230	50	3730	1230	1060	5,38	10 / 450	74	0	55	16,7
			230	60	3140	1410	1085	5,24	10 / 500	70	200	45	
D4E 225-DH01 -01 <sup>(1)(3)</sup>	M4E094-LA	④	230	50	3700	1230	1060	5,38	10 / 450	72	100	55	16,7
			230	60	3200	1370	1120	5,40	10 / 500	69	250	45	

subject to alterations

<sup>(1)</sup> Insulation class "F"

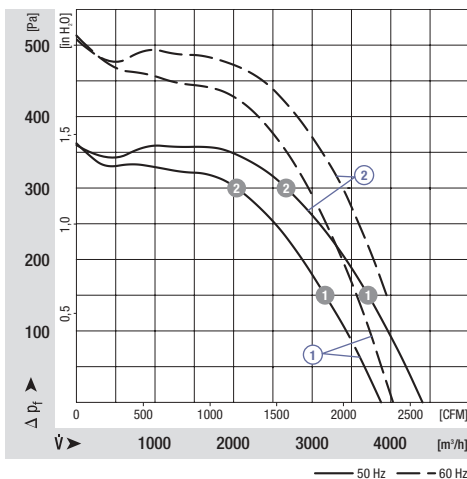
<sup>(2)</sup> 400 VAC Δ/Y for two speed steps available on request

<sup>(3)</sup> Data collected via exhaust duct of 1 m length serving as diffuser

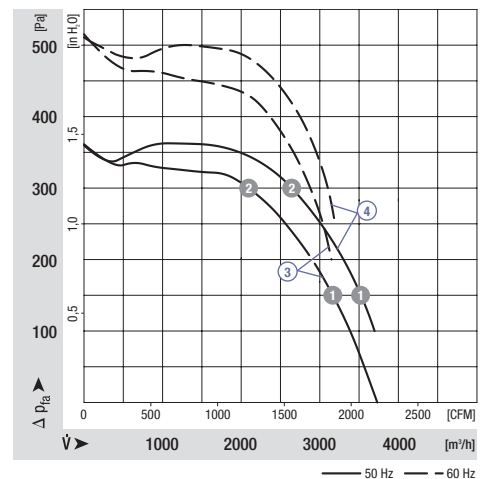
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
① ①	1360	717
① ②	1420	454
② ①	1320	877
② ②	1390	589

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]
③ ①	1330	802
③ ②	1410	530
④ ①	1270	947
④ ②	1380	652

## Characteristics

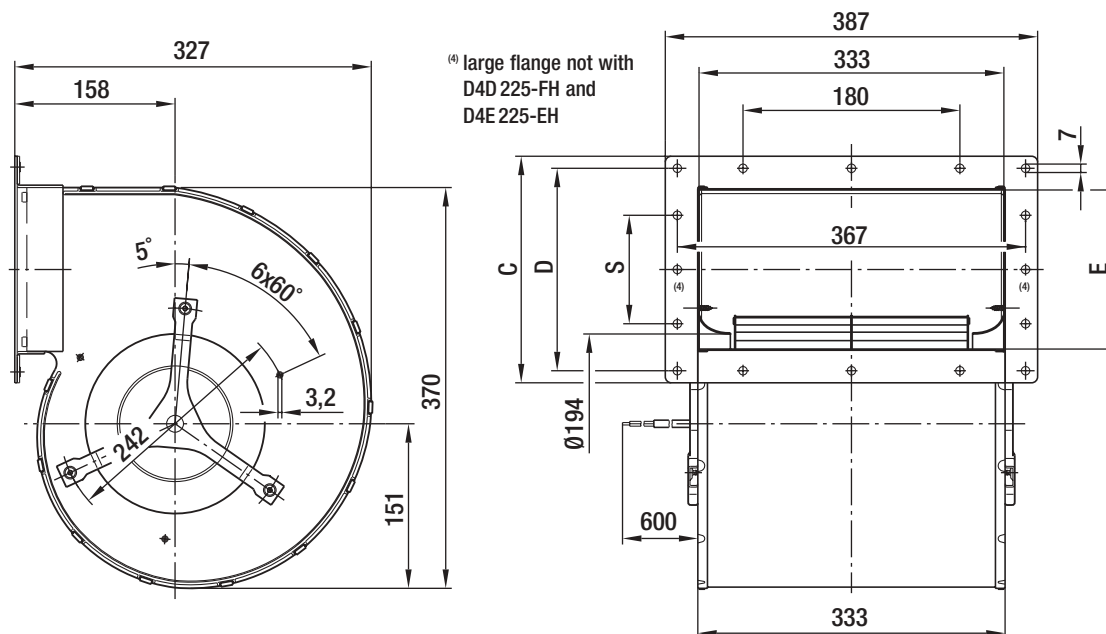


## Characteristics



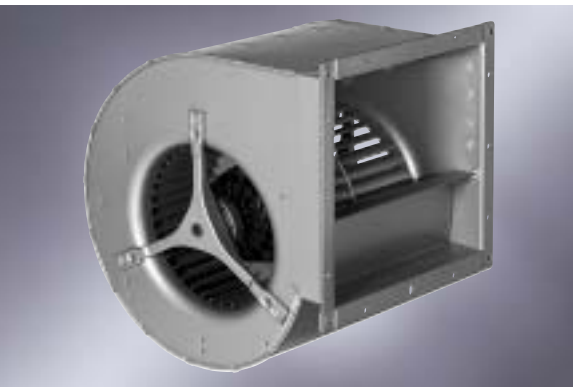
## Dimensions

Type	C	D	E	S
D4D 225-FH02 -01	200	180	146	90
D4D 225-GH02 -01	304	284	250	180
D4E 225-EH01 -01	200	180	146	90
D4E 225-DH01 -01	304	284	250	180



# AC centrifugal blowers

dual inlet, Ø 250



- **Material:** scroll housing and impeller made of galvanised sheet steel
- **Mounting:** EW-motor anti-vibration mounted on both sides, mounting brackets on request
- **Approval:** complying with EN 60034-1

ebm-papst • Muldingen

Nominal data		Characteristic	Voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Noise level	Min. back pressure	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C	kg
<b>D4D 250-BA02 -01</b> <sup>(1)(2)</sup>	M4D094-LA	①	400 Y	50	3790	1240	1140	2,10	---	76	0	60	16,7
			400 Y	60	3340	1410	1210	2,20	---	73	250	45	
<b>D4D 250-CA02 -01</b> <sup>(1)(2)(3)</sup>	M4D094-LA	②	400 Y	50	4040	1200	1270	2,30	---	76	50	45	16,7
			400 Y	60	3250	1410	1270	2,20	---	72	350	45	
<b>D4E 250-BA01 -01</b> <sup>(1)</sup>	M4E094-LA	③	230	50	3730	1210	1240	6,00	14 / 500	75	0	40	16,3
			230	60	3220	1460	1230	5,54	14 / 500	72	300	45	
<b>D4E 250-CA01 -01</b> <sup>(1)(3)</sup>	M4E094-LA	④	230	50	3770	1200	1250	6,00	14 / 500	74	100	40	16,3
			230	60	3310	1400	1285	5,90	14 / 500	71	350	40	
<b>D6E 250-BA01 -01</b> <sup>(1)</sup>	M6E094-HA	⑤	230	50	2480	800	400	1,85	10 / 400	63	0	80	14,4
			230	60	2390	770	480	2,15	10 / 450	62	0	80	
<b>D6E 250-CA01 -01</b> <sup>(1)(3)</sup>	M6E094-HA	⑥	230	50	2670	680	470	2,20	10 / 400	65	0	70	14,4
			230	60	2400	580	500	2,30	10 / 450	62	0	55	

subject to alterations

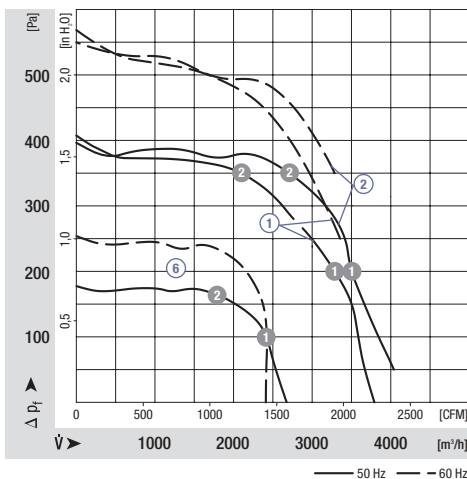
<sup>(1)</sup> Insulation class "F"

<sup>(2)</sup> 400 VAC Δ/Y for two speed steps available on request

<sup>(3)</sup> Data collected via exhaust duct of 1 m length serving as diffuser

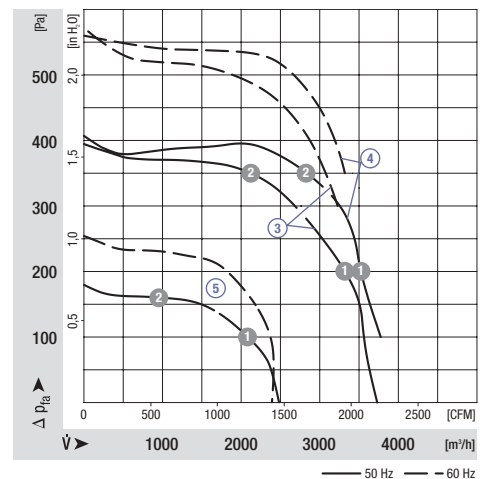
	n [min⁻¹]	P <sub>1</sub> [W]
① ①	1320	875
① ②	1410	481
② ①	1280	1001
② ②	1370	675
⑥ ①	830	375
⑥ ②	900	304

## Characteristics



	n [min⁻¹]	P <sub>1</sub> [W]
③ ①	1320	975
③ ②	1400	665
④ ①	1270	1100
④ ②	1370	788
⑤ ①	890	318
⑤ ②	940	244

## Characteristics



## Dimensions

Type	C	D	E	S	U
D4D 250-BA02-01	218	190	167	90	198
D4D 250-CA02-01	313	285	262	180	293
D4E 250-BA01-01	218	190	167	90	198
D4E 250-CA01-01	313	285	262	180	293
D6E 250-BA01-01	218	190	167	90	198
D6E 250-CA01-01	313	285	262	180	293

