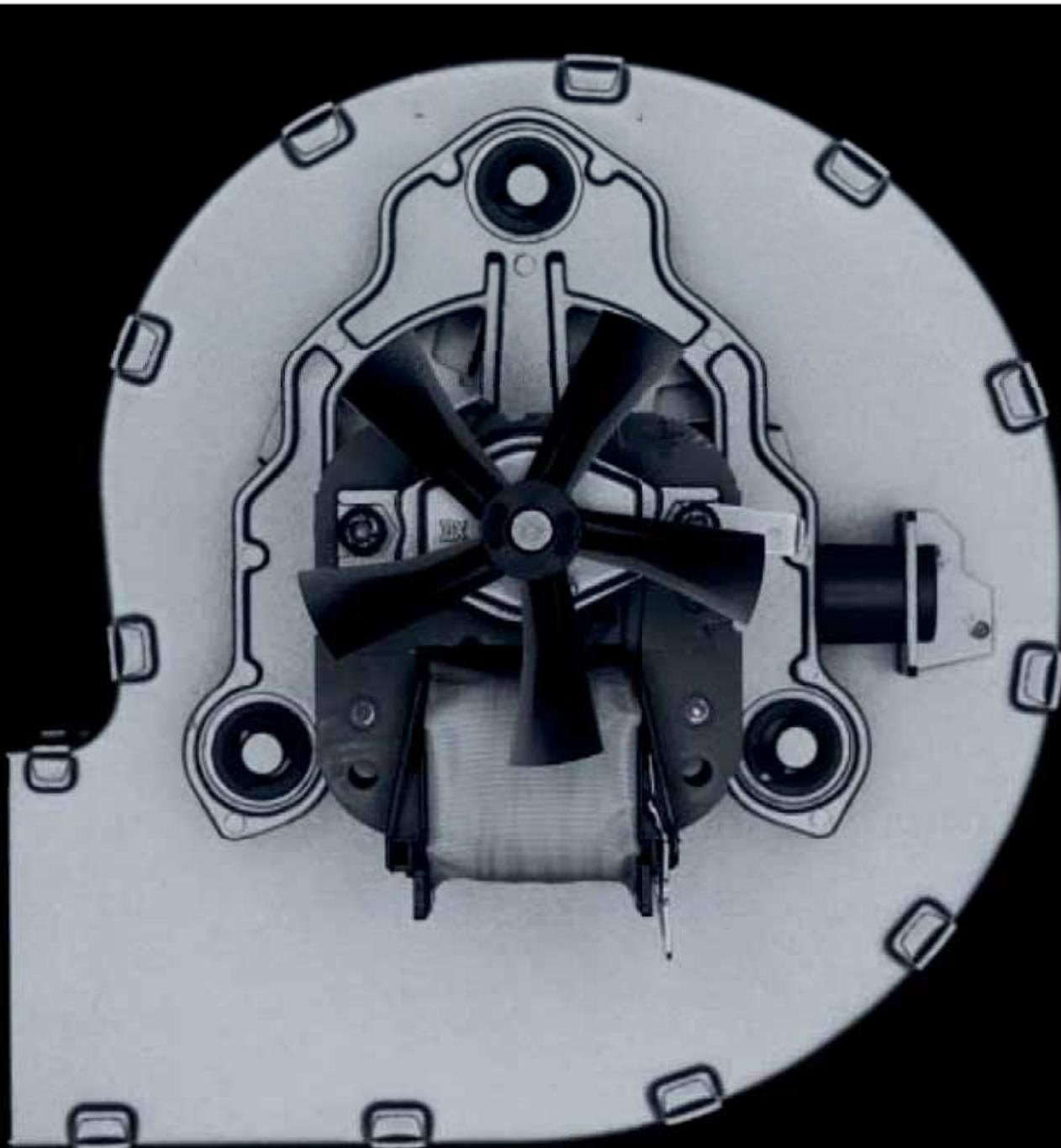
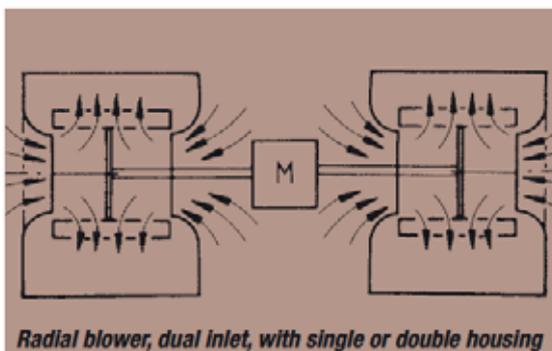
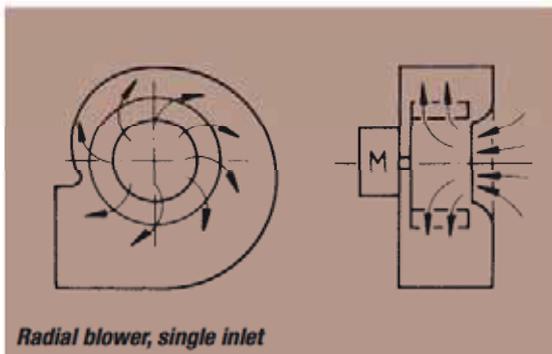




# Radial blowers with AC motor

Description	32
Radial blowers, motor directly mounted RL, RLF, RLD, RLA, RLE, RLS	33
Radial blowers with double housing	37
Radial blowers, motor decoupled mounted, high temperature version	39
Radial blowers D2E.. with external-rotor motor for extractor hoods	47





Radial blowers RL with forward curved impellers (drum impellers) feature high specific ratings at high maximum pressure, stable pressure/air flow characteristic curves, good efficiency and low noise levels. Both single and dual inlet versions are available, as are blowers with double housing.

The motors are mounted outside the air current on the blower housing itself.

For increased requirements in terms of temperature resistance, e.g. for use as flue gas blowers in gas heating appliances, the motors are thermally and acoustically decoupled from the blower unit using silicon elements.

A cooling vane on the motor shaft between the blower housing and the motor also reduces the temperatures transferred to the bearing system through the shaft. In conjunction with bearing systems suitable for high temperatures and a coil structure that complies with insulation class H, this means that all specific requirements for medium temperatures of between 180°C and 250°C can be met according to the design.

As a result of the elastic motor mounting, the mass of the motor must be supported depending on its mounting position. Therefore, it is essential that details of the mounting position are given.

Intake nozzles, guard grilles, pressure sensors, tachometers and other accessories can be supplied to adjust the units to suit specific requirements in heating systems.

# Radial blowers with AC internal-rotor motor

RL 59



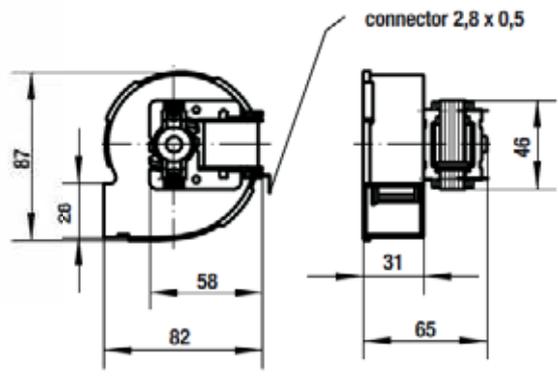
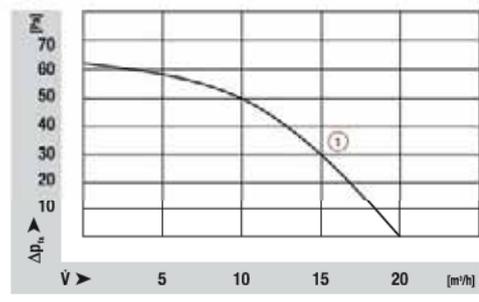
- mounting position: shaft horizontal
- insulation class B
- permissible ambient temperature 0 – 60 °C
- housing: plastic PA6 GF
- impeller: forward curved, plastic PA6 GF

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Nominal data		characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg
<b>RL59/2400-2112</b>	<b>RL59/0024-2112</b>	①	230	50	20	63	6	40	2400	0,30

\* Corresponding to dimensional drawing; Technical data valid at free air flow and rated voltage; bold print = standard type; subject to alterations

## Characteristic curves



# Radial blowers with AC internal-rotor motor

RLF 67



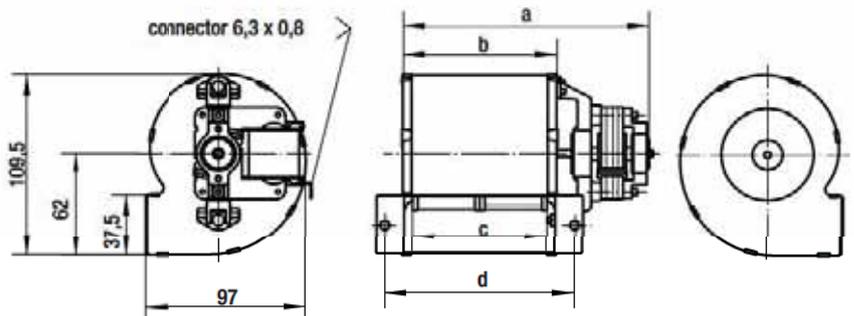
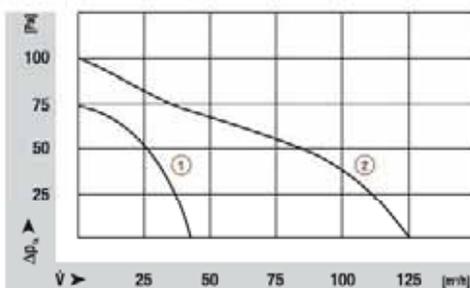
- mounting position: shaft horizontal
- insulation class B
- permissible ambient temperature 0 – 60 °C
- housing: galvanized sheet steel
- impeller: forward curved, aluminium (galvanized sheet steel)

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Nominal data		characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm			
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	b	c	d
<b>RLF67/3800-3015L</b>	RLF67/0038-3015L	①	230	50	40	73	12	90	2000	0,7	104	49	38	70
<b>RLF67/7600Z-3025L</b>	RLF67/0076Z-3025L	②	230	50	125	115	27	220	2500	1,2	164	92	76	113

\* Corresponding to dimensional drawing; Technical data valid at free air flow and rated voltage; bold print = standard type, subject to alterations

## Characteristic curves



# Radial blowers with AC internal-rotor motor

## RLD 76 (85)



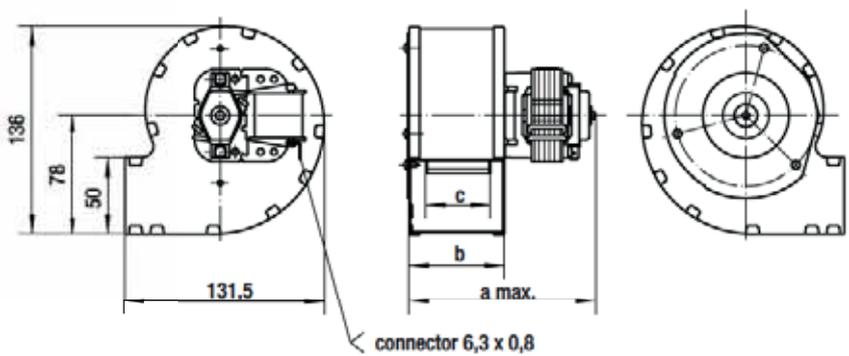
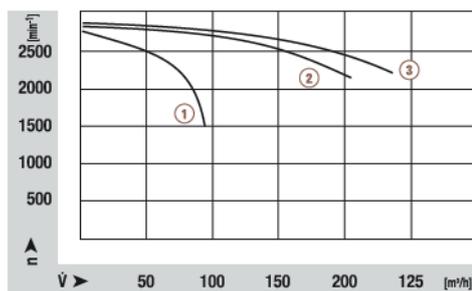
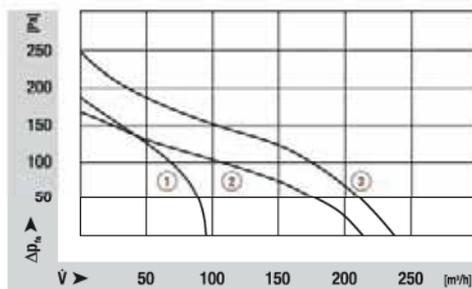
- mounting position: shaft horizontal
- insulation class B
- permissible ambient temperature 0 – 60 °C
- housing: FAL sheet steel
- impeller: forward curved, aluminium (FAL sheet steel)

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Nominal data		Characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm		
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	b	c
RLD85/4200-3020L	RLD85/0042-3020L	①	230	50	95	185	30	250	1500	1,1	123	62	42
RLD76/8600Z-3030L	RLD76/0086Z-3030L	②	230	50	210	165	58	530	2150	1,5	185	108	86
RLD85/8600Z-3038L	RLD85/0086Z-3038L	③	230	50	235	250	82	720	2250	1,9	193	108	86

\*] Corresponding to dimensional drawing; Technical data valid at free air flow with inlet ring; bold print = standard type; subject to alterations

### Characteristic curves



# Radial blowers with AC internal-rotor motor

RLA 97 (108)



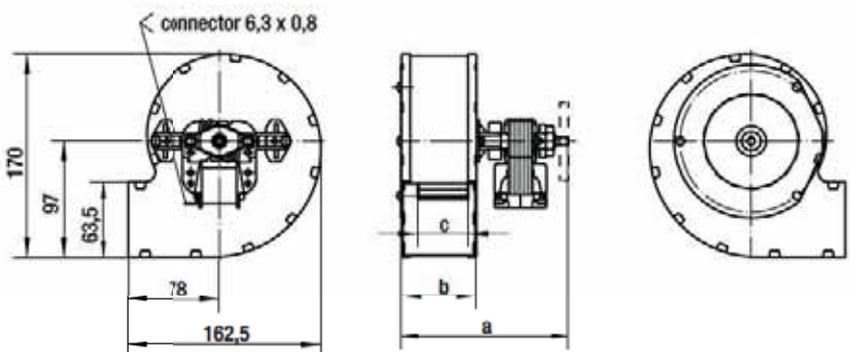
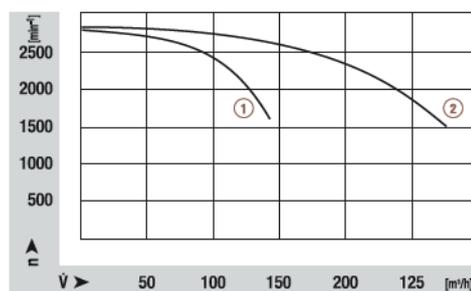
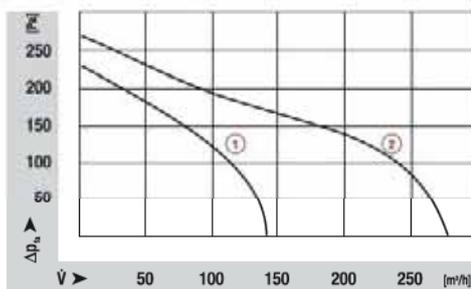
- mounting position: shaft horizontal
- insulation class B
- permissible ambient temperature 0 – 60 °C
- housing: FAL sheet steel
- impeller: forward curved, FAL sheet steel (aluminium)

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Nominal data		characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm		
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	b	c
RLA97/4200-3030L	RLA97/0042-3030L	①	230	50	140	225	54	480	1600	1,5	146	62	42
RLA97/8600Z-3045L		②	230	50	280	260	95	780	1550	2,3	204	112	86

\* Corresponding to dimensional drawing. Technical data valid at free air flow with inlet ring; bold print = standard type; subject to alterations

## Characteristic curves



# Radial blowers AC with double housing

RLF 67, RLD 85, RLA 97



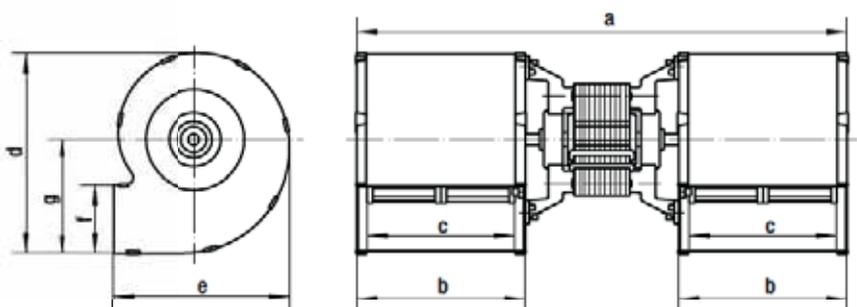
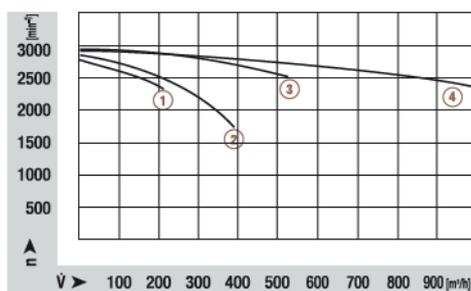
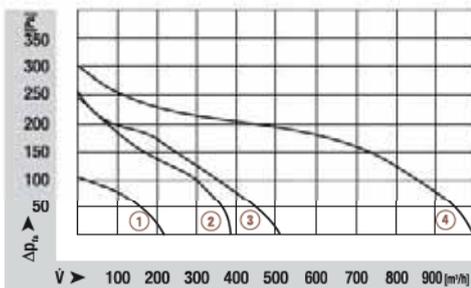
- mounting position: RLF, RLD shaft horizontal  
RLA all positions available
- insulation class B
- permissible ambient temperature 0 – 60 °C
- housing: FAL sheet steel
- impeller: forward curved, aluminium

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Nominal data	characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm						
										type	V	Hz	m <sup>3</sup> /h	Pa	W	mA
RLF67/7676Z-3030L	①	230	50	230	106	38	330	2400	1,6	267	92	76	110	97	37,5	62
RLD85/8686Z-3045L	②	230	50	380	240	95	910	1800	2,4	316	108	86	136	132	50	78
RLD85/8686Z-4020/2	③	230	50	512	254	120	503	2550	2,2	329	108	106	136	132	50	78
RLA97/120120Z-4340/2	④	230	50	1000	310	200	950	2300	3,9	445	146	120	170	163	63,5	97

Technical data valid at free air flow and rated voltage; bold print = standard type; subject to alterations

## Characteristic curves



# Radial blowers with AC internal-rotor motor

## RLS 170



- mounting position: shaft horizontal
- insulation class H
- permissible ambient temperature 90 °C
- housing: plastic PA6 GF
- impeller: backward curved, plastic PA6 GF

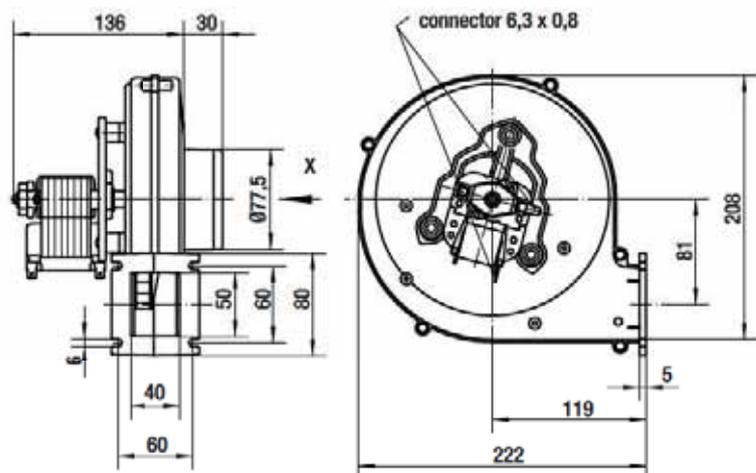
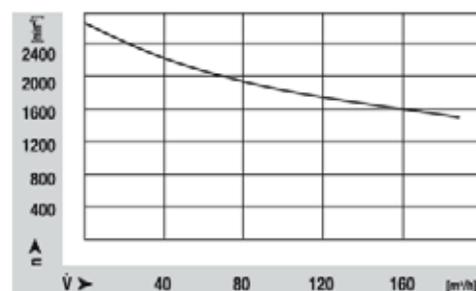
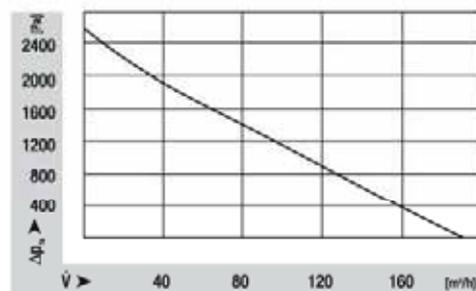
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### Nominal data

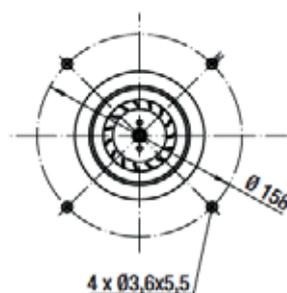
type	rated voltage V	frequency Hz	air flow m <sup>3</sup> /h	max. pressure increase Pa	power input W	rated current mA	speed min <sup>-1</sup>	mass kg
RLS170/0013-3030LH	230	50	95	460	46	350	1900	1,3

Technical data valid at free air flow and rated voltage; subject to alterations

### Characteristic curves



view X



# Radial blowers high temperature version

RLD 85...LH



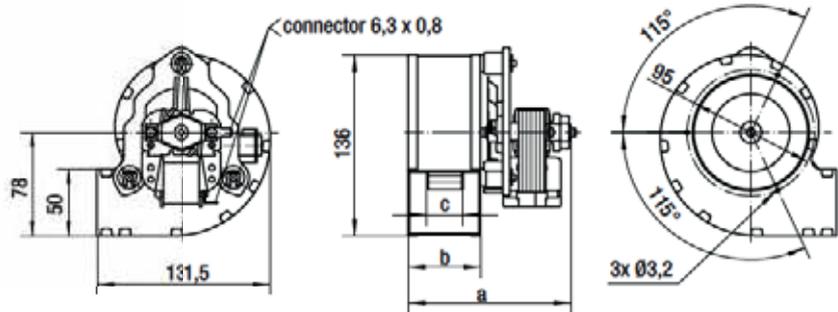
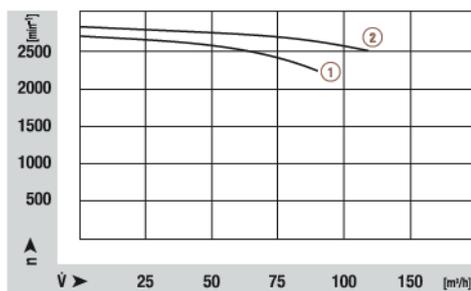
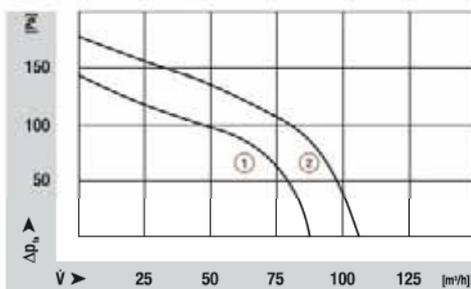
- insulation class H
- max. ambient air stream temperature 180 °C (250 °C with FAL impeller)
- housing: FAL sheet steel
- impeller: forward curved, aluminium (FAL sheet steel)
- motor mounting decoupled by silicon elements
- mounting position must be specified for corresponding support elements

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Nominal data		Characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm		
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	b	c
RLD85/2700-3020LH	RLD85/0027-3020LH	①	230	50	86	150	28	245	2300	1,1	113	45	27
RLD85/3400-3025LH	RLD85/0034-3025LH	②	230	50	108	180	39	350	2550	1,3	129	54	34

\* Corresponding to dimensional drawing; Technical data valid at free air flow without inlet ring; bold print = standard type; subject to alterations

## Characteristic curves



# Radial blowers high temperature version

RLA 97 (108)...LH



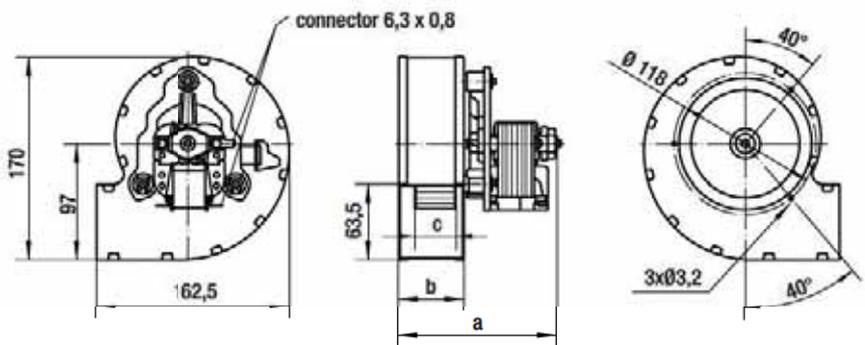
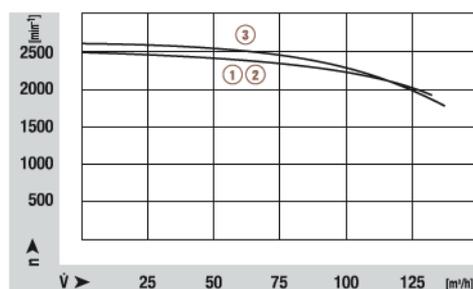
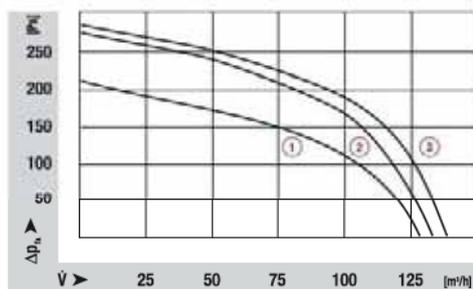
- insulation class H
- max. ambient air stream temperature 250 °C
- housing: FAL sheet steel
- impeller: forward curved, FAL sheet steel
- motor mounting decoupled by silicon elements
- mounting position must be specified for corresponding support elements

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Nominal data		characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm		
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	b	c
RLA97/4200-3030LH	RLA97/0042-3030LH	①	230	50	130	220	41	390	2000	1,6	146	62	42
RLA108/3400-3030LH	RLA108/0034-3030LH	②	230	50	135	280	58	490	1925	1,6	144	54	34
RLA108/4200-3030LH	RLA108/0042-3030LH	③	230	50	140	290	64	520	1870	1,6	152	62	42

\* Corresponding to dimensional drawing; Technical data valid at free air flow without inlet ring; bold print = standard type; subject to alterations

## Characteristic curves



# Radial blowers high temperature version

RLE 108 (120)...LH



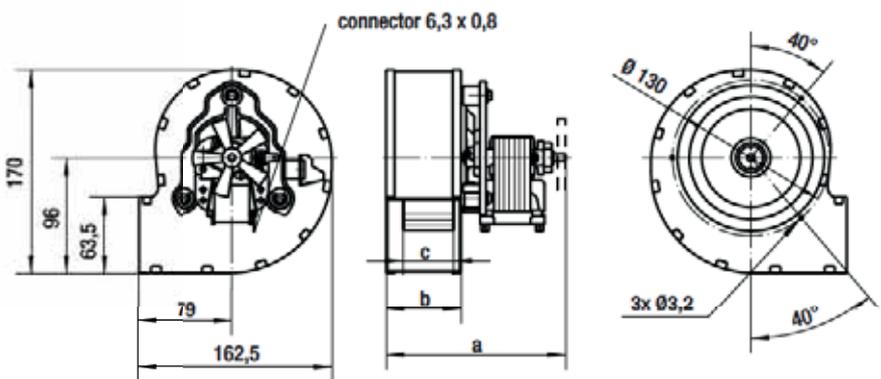
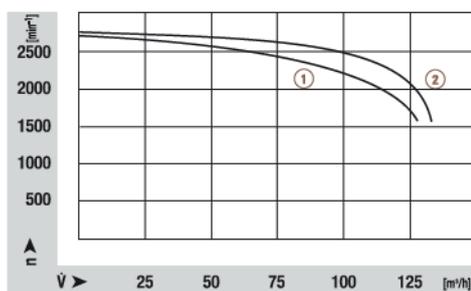
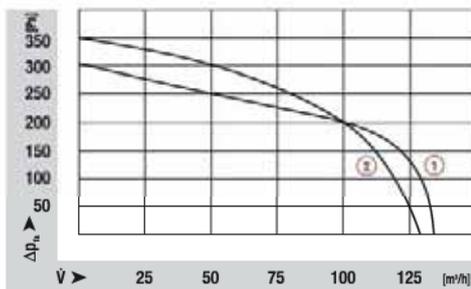
- insulation class H
- max. ambient air stream temperature 250 °C
- housing: FAL sheet steel
- impeller: forward curved, FAL sheet steel
- motor mounting decoupled by silicon elements
- mounting position must be specified for corresponding support elements

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Nominal data		Characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm		
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	b	c
RLE108/3400-3030LH		①	230	50	135	300	53	440	1500	1,6	134	54	34
RLE120/3400-3030LH		②	230	50	130	350	62	520	1550	1,6	134	54	34

\* Corresponding to dimensional drawing; Technical data valid at free air flow with inlet ring; bold print – standard type; subject to alterations

## Characteristic curves



# Radial blowers high temperature version

RLB 130...LH



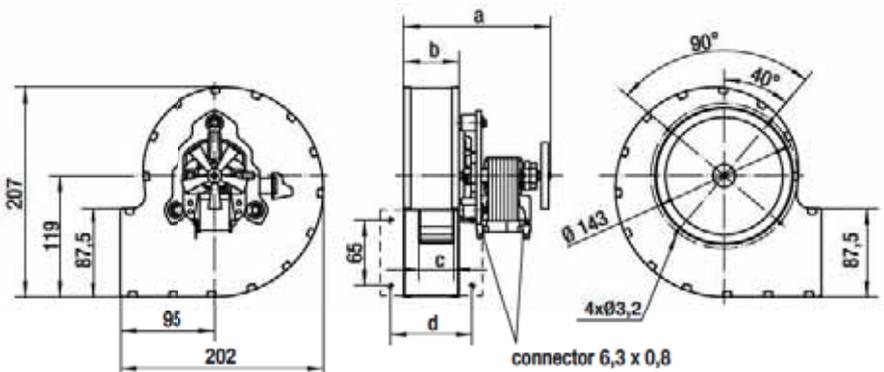
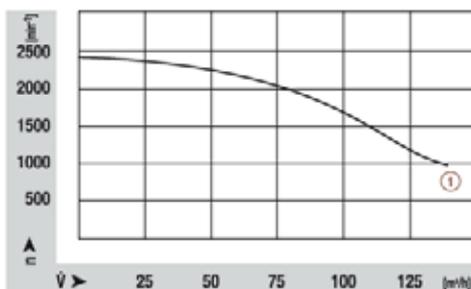
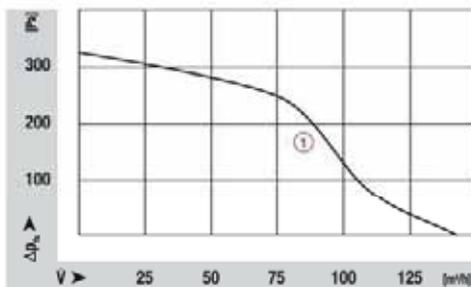
- insulation class H
- max. ambient air stream temperature 180 °C
- housing: FAL sheet steel
- impeller: forward curved, aluminium
- motor mounting decoupled by silicon elements
- mounting position must be specified for corresponding support elements

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Nominal data	characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm			
										type	V	Hz	m <sup>3</sup> /h
RLB130/3400-3038LH	①	230	50	140	325	70	600	950	2,0	145	54	34	-

Technical data valid at free air flow with inlet ring; bold print = standard type; subject to alterations

## Characteristic curves



# Radial blowers high temperature version

RLG 97 (108)...LH



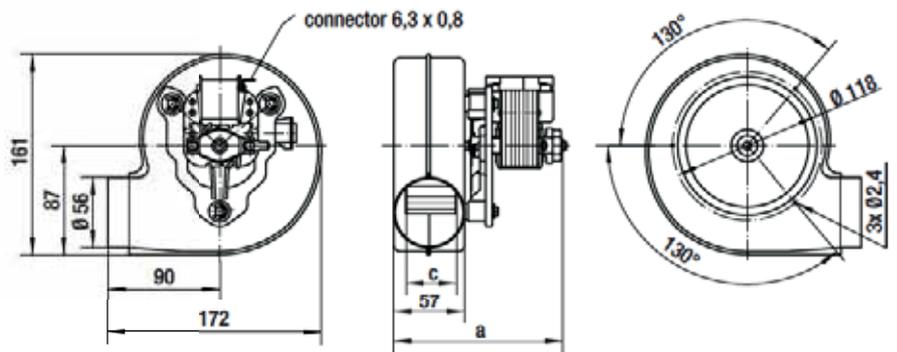
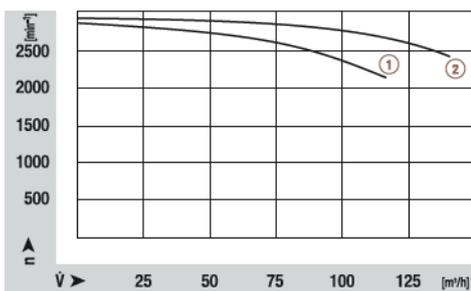
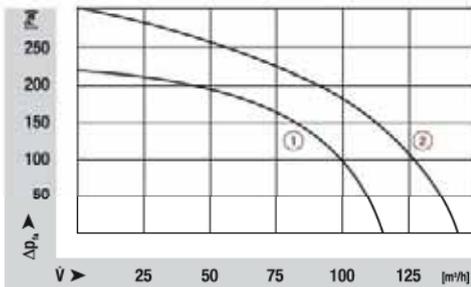
- insulation class H
- max. ambient air stream temperature 250 °C
- housing: FAL sheet steel
- impeller: forward curved, FAL sheet steel
- motor mounting decoupled by silicon elements
- mounting position must be specified for corresponding support elements

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Nominal data		characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm	
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	c
RLG97/4200-3025LH	RLG97/0042-3025LH	①	230	50	115	220	42	360	2100	1,5	132	42
RLG108/4200-3030LH	RLG108/0042-3030LH	②	230	50	145	300	60	520	2400	1,6	138	42

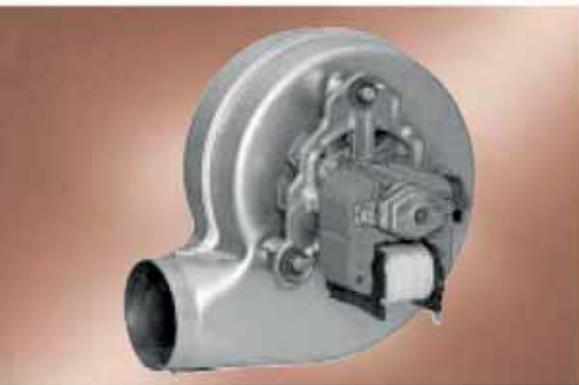
\* Corresponding to dimensional drawing. Technical data valid at free air flow without inlet ring; bold print = standard type, subject to alterations

## Characteristic curves



# Radial blowers high temperature version

RLH 108 (120)...LH



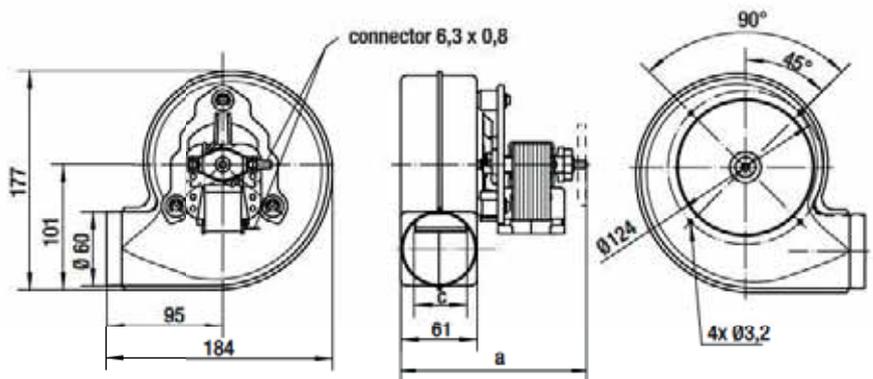
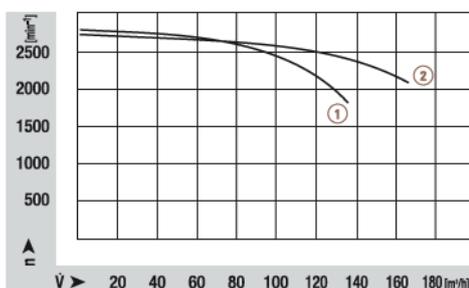
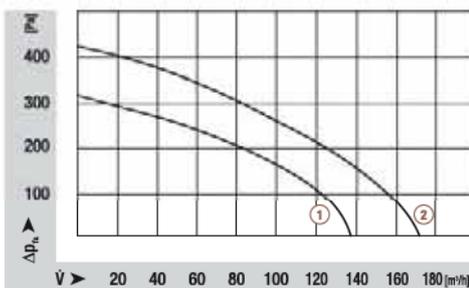
- insulation class H
- max. ambient air stream temperature 250 °C
- housing: FAL sheet steel
- impeller: forward curved, FAL sheet steel
- motor mounting decoupled by silicon elements
- mounting position must be specified for corresponding support elements

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Nominal data		characteristic curve	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm	
motor right*	motor left		V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	c
RLH108/4200-3030LH	RLH108/0042-3030LH	①	230	50	135	315	58	480	1850	1,7	143	42
RLH120/3800-3038LH	RLH120/0038-3038LH	②	230	50	170	420	92	870	2100	2,0	155	38

\*) Corresponding to dimensional drawing; Technical data valid at free air flow with inlet ring; bold print = standard type; subject to alterations

## Characteristic curves



# Radial blowers high temperature version

RLK 108...LH



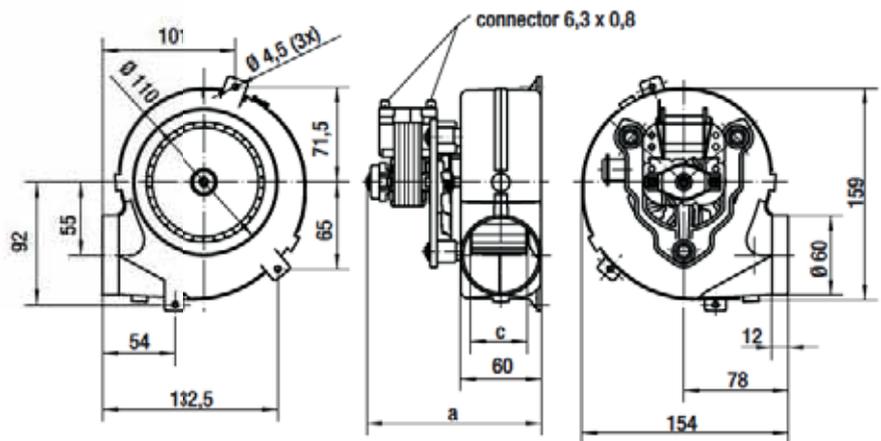
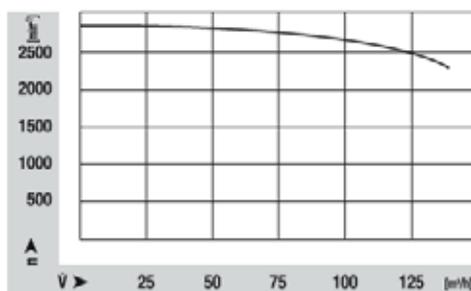
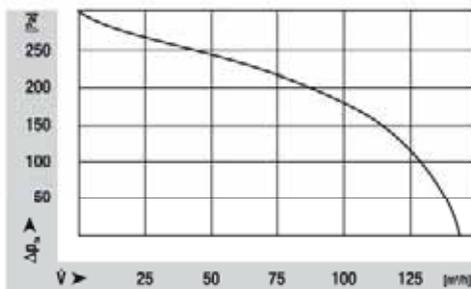
- housing: die-cast aluminium
- insulation class H
- max. ambient air stream temperature 250 °C
- impeller: forward curved, FAL sheet steel
- motor mounting decoupled by silicon elements
- mounting position must be specified for corresponding support elements

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Nominal data	rated voltage	frequency	air flow	max. pressure increase	power input	rated current	speed	mass	Dimensions mm	
	V	Hz	m <sup>3</sup> /h	Pa	W	mA	min <sup>-1</sup>	kg	a	c
RLK108/0042-3030LH	230	50	142	385	65	550	2350	1,4	142	42

Technical data valid at free air flow and rated voltage; bold print = standard type; subject to alterations

## Characteristic curves



# Impulse transmitter

SG 2



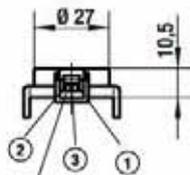
The signal transmitter SG2 is an impulse transmitter suitable to be connected to EM30 and KM motors. 12 square impulses per rotation of the motor shaft are formed by means of a 24-pole, plastic-bonded ferrite magnet ring, in connection with a Hall-IC.

A secondary electronic system can be applied to use this signal as speed recognition, speed control.

In a simple case, a supply voltage of 4.5 - 24 Volts as well as a pull-up resistor of e.g. 2.7 k $\Omega$  and 0.25W is necessary to obtain a digital signal of equal amplitude at the output.

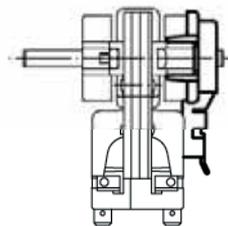
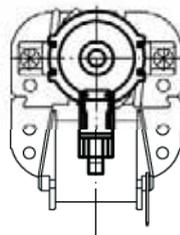
Features of the signal transmitter are high operating reliability, small Dimensions, no limitation to build-in position and no operating noise.

ebm-papst - Landshut



- ①  $\Delta$  V cc = 4,5...24V (supply)
- ②  $\Delta$  V out (square wave signal, open collector, max.25 mA)
- ③  $\Delta$  GND

suitable for Molex Mini Spox



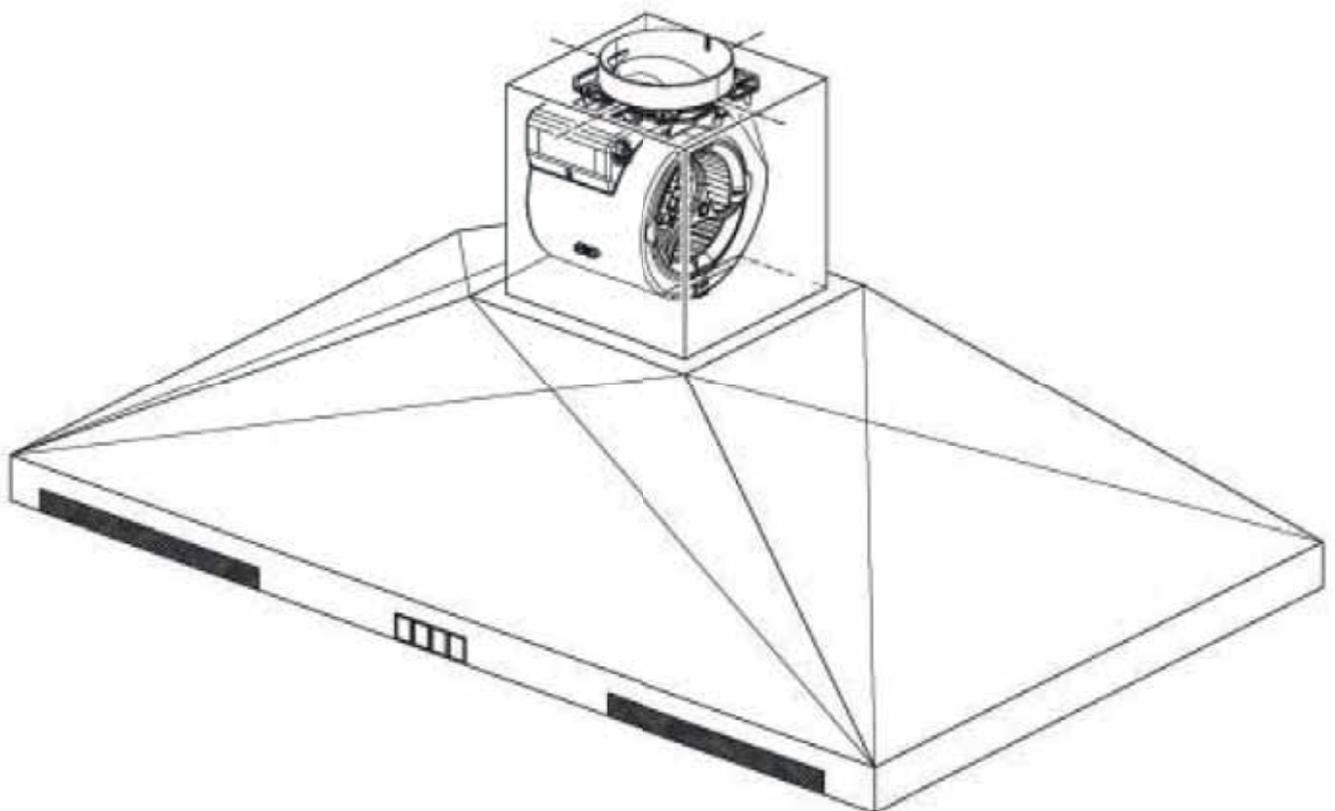
## Radial blowers dual inlet, for extractor hoods with AC external-rotor motor

Radial blowers, dual inlet, with external-rotor motor made by ebm-papst Mulfingen are available in special range hood design. The blowers listed on the following pages are mainly used in so called wall and island chimneys as well as in built-in hoods fitted with a blower module.

The blower range is extremely low in noise, even with high air performance. Another great advantage lies in the fact that this blower range is very easy to install. The dual inlet blower can be mounted in the customer's appliance in no time at all. Exhaust air pipes and bushing nozzles can be fitted without any problems.

The capacitor is part of the integrated terminal box for blower sizes  $\varnothing 140$  to  $\varnothing 160$  mm. The blower is also completely wired up and ready to be line-operated via a plug. The standard design comes in 4 speed steps, thus covering a wide range of possible applications.

ebm-papst Mulfingen also offer an extensive range of products, i. e. adapted fans and blowers, for other designs and types, e.g. flat screen hoods, intermediate or substructure hood. Please contact us for more information.



# Radial blowers dual inlet

D2E 140

with AC external-rotor motor



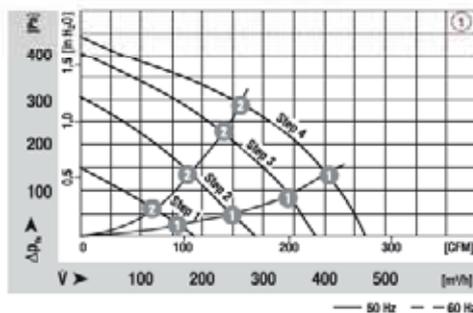
- **Material:** Housing: PP plastic, black  
Impeller: PP plastic, white  
Rotor: Partially cast in aluminium  
Terminal box: PP plastic, black
  - **Direction of rotation:** Clockwise, seen on rotor
  - **Type of protection:** IP 44
  - **Insulation class:** "F"
  - **Mounting position:** Any
  - **Condensate discharges:** None
  - **Mode of operation:** Continuous operation (S1)
  - **Design:** 4-step blower with integrated terminal box, standard external-rotor motor anti-vibration mounted on one side
- ebm-papst - Muldingen**

Nominal data		characteristic curve	voltage	frequency	air flow	speed	power input	rated current	capacitor	noise level	back pressure min.	perm. ambient temp.
type	motor		VAC	Hz	m³/h	min⁻¹	W	A	µF/VDB	dB(A)	Pa	°C
D2E 140	M2E068-CF	①	1~ 230	50	470	1150	130	0,58	2,0/400	58	0	-25 to +50
			1~ 230	60	430	1050	130	0,58	2,0/400	56	0	-25 to +40

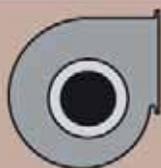
subject to alterations

	n [min-1]	P <sub>1</sub> [W]	I [A]	L <sub>pa</sub> [dBA]
① ① Step 1	690	56	0,26	36
① ② Step 1	1015	55	0,25	38
① ① Step 2	1000	73	0,33	46
① ② Step 2	1540	68	0,31	49
① ① Step 3	1385	93	0,41	52
① ② Step 3	2020	80	0,36	56
① ① Step 4	1675	118	0,51	56
① ② Step 4	2235	100	0,43	59

## Characteristic curves



- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Top wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE



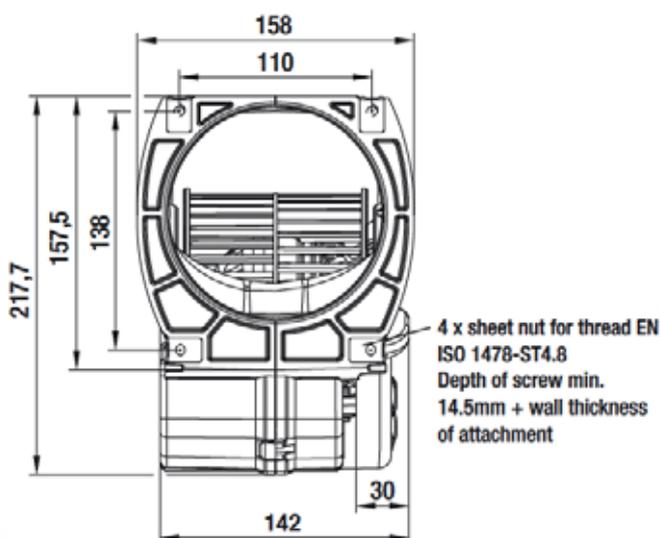
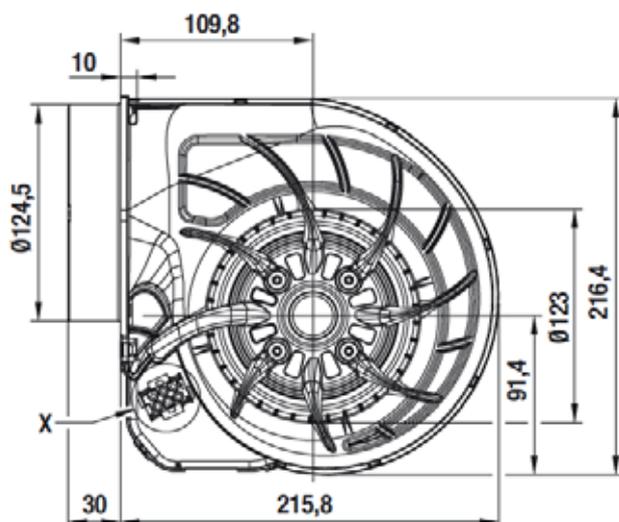
Mass of centrifugal blower

Centrifugal blower with flange

kg

D2E 140-HR97 -07

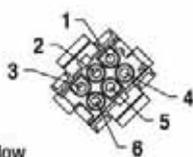
2,3



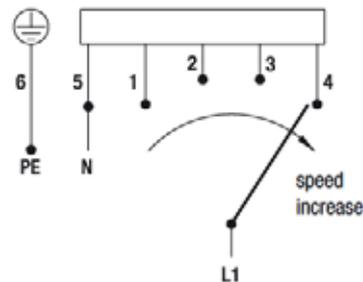
Detail X

Coded plug system AMP Universal-Mate-N-Lok  
connector shell: AMP 926 682-3  
6 x pin connector: 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 green/yellow



Connection diagram  
Switch has to break contact when turned.



# Radial blowers dual inlet

D2E 146

with AC external-rotor motor



- **Material:** Housing: PP plastic, black  
Impeller: PP plastic, red-brown  
Rotor: Partially cast in aluminium  
Terminal box: PP plastic, black
  - **Direction of rotation:** Clockwise, seen on rotor
  - **Type of protection:** IP 44
  - **Insulation class:** "F"
  - **Mounting position:** Any
  - **Condensate discharges:** None
  - **Mode of operation:** Continuous operation (S1)
  - **Design:** 4-step blower with integrated terminal box, standard external-rotor motor anti-vibration mounted via support plate
- ebm-papst - Muldingen**

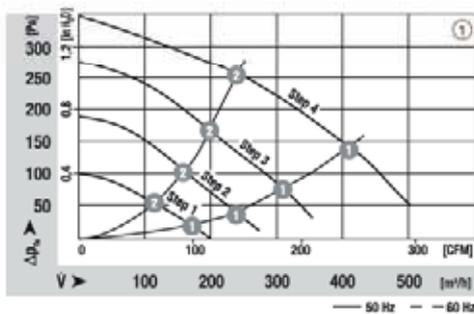
Nominal data		characteristic curve	voltage	frequency	air flow	speed	power input	rated current	capacitor	noise level	back pressure min.	perm. ambient temp.
type	motor		VAC	Hz	m3/h	min-1	W	A	µF/VDB	dB(A)	Pa	°C
D2E 146	M2E068-CA	①	1~ 230	50	520	1350	120	0,53	3,0/400	51	50	-25 to +55
			1~ 230	60	375	1400	125	0,55	3,0/400	53	100	-25 to +40
D2E 146	M2E068-CF	②	1~ 230	50	665	1250	160	0,70	4,0/400	53	0	-25 to +50
			1~ 230	60	390	1850	170	0,75	4,0/400	58	200	-25 to +40

subject to alterations

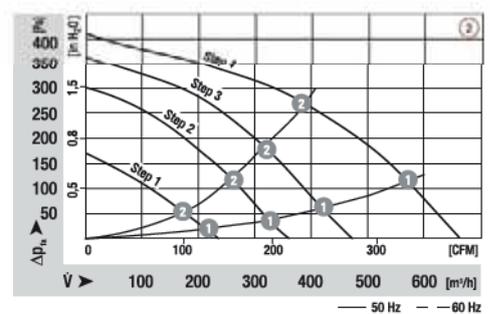
	n [min-1]	P <sub>i</sub> [W]	I [A]	L <sub>pA</sub> [dBA]	
① ①	Step 1	660	48	0,27	31
① ②	Step 1	960	46	0,26	38
① ①	Step 2	925	58	0,31	40
① ②	Step 2	1355	55	0,30	47
① ①	Step 3	1210	72	0,36	48
① ②	Step 3	1740	66	0,35	53
① ①	Step 4	1635	113	0,49	55
① ②	Step 4	2115	104	0,45	58

	n [min-1]	P <sub>i</sub> [W]	I [A]	
② ①	Step 1	660	71	0,37
② ②	Step 1	960	68	0,36
② ①	Step 2	950	85	0,43
② ②	Step 2	1440	80	0,42
② ①	Step 3	1230	101	0,50
② ②	Step 3	1800	92	0,47
② ①	Step 4	1675	151	0,66
② ②	Step 4	2185	136	0,60

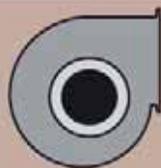
Characteristic curves



Characteristic curves

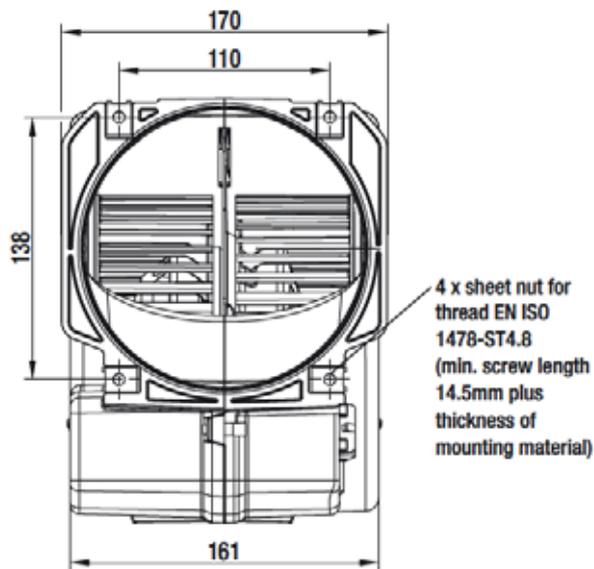
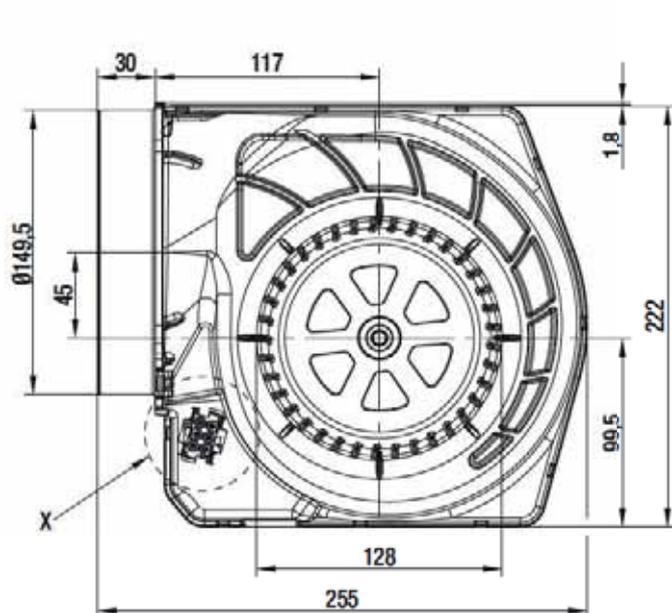


- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Top wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE



Mass of centrifugal blower

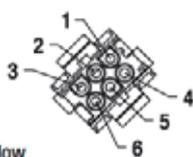
Centrifugal blower with flange	kg
D2E 146-KA45 -01	2,5
D2E 146-KB27 -01	2,7



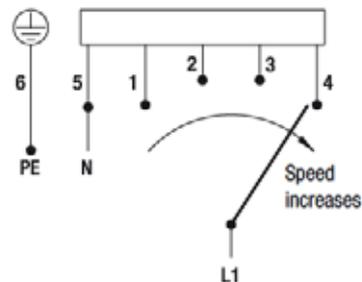
**Detail X**

Coded plug system AMP Universal-Mate-N-Lok  
 connector shell: AMP 926 682-3  
 6 x pin connector: 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 green/yellow



**Connection diagram**  
 Switch has to break contact when turned.



# Radial blowers dual inlet

D2E 146

with AC external-rotor motor



- **Material:** Housing: PP plastic, black  
Impeller: PP plastic, white  
Rotor: Partially cast in aluminium  
Terminal box: PP plastic, black
- **Direction of rotation:** Counter-clockwise, seen on plug
- **Type of protection:** IP 20
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, EW motor

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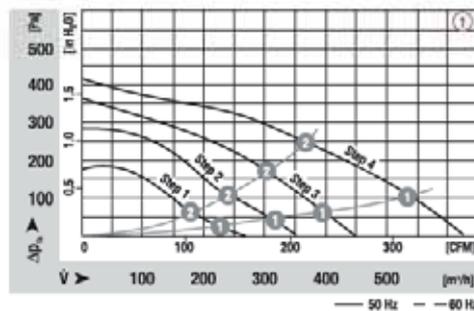
Nominal data		characteristic curve	voltage	frequency	voltage	speed	power input	rated current	capacitor	noise level	back pressure min.	perm. ambient temp.
type	motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C
D2E 146	M2E068-CF	①	1~230	50	630	1100	150	0,66	4,0/400	51	0	-25 to +50
			1~230	60	415	1600	160	0,71	4,0/400	55	150	-25 to +45
D2E 146	M2E068-DF	②	1~230	50	755	1350	195	0,86	5,0/400	57	0	-25 to +55
			1~230	60	580	1750	215	0,94	5,0/400	54	150	-25 to +40

subject to alterations

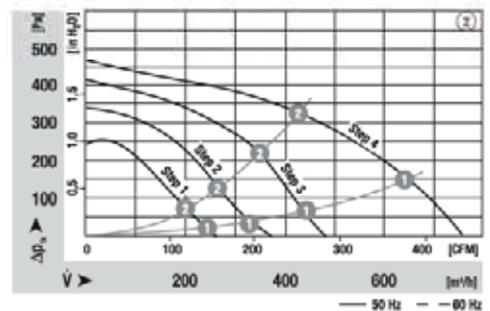
	n	P <sub>1</sub>	I	Lp <sub>A</sub>	
	[min <sup>-1</sup> ]	[W]	[A]	[dBA]	
① ①	Step 1	680	69	0,38	31
① ②	Step 1	990	67	0,37	35
① ①	Step 2	890	81	0,42	37
① ②	Step 2	1315	77	0,42	43
① ①	Step 3	1110	98	0,49	47
① ②	Step 3	1635	92	0,47	49
① ①	Step 4	1490	143	0,62	51
① ②	Step 4	2005	133	0,59	55

	n	P <sub>1</sub>	I	Lp <sub>A</sub>	
	[min <sup>-1</sup> ]	[W]	[A]	[dBA]	
② ①	Step 1	710	94	0,47	30
② ②	Step 1	1055	91	0,46	38
② ①	Step 2	910	106	0,52	38
② ②	Step 2	1415	100	0,50	45
② ①	Step 3	1210	125	0,60	45
② ②	Step 3	1820	112	0,57	52
② ①	Step 4	1790	185	0,81	56
② ②	Step 4	2290	164	0,72	59

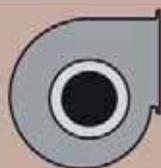
Characteristic curves



Characteristic curves

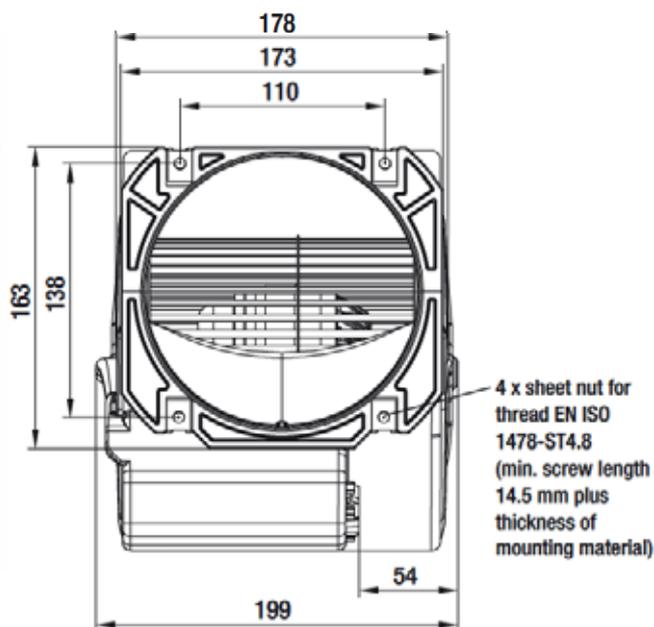
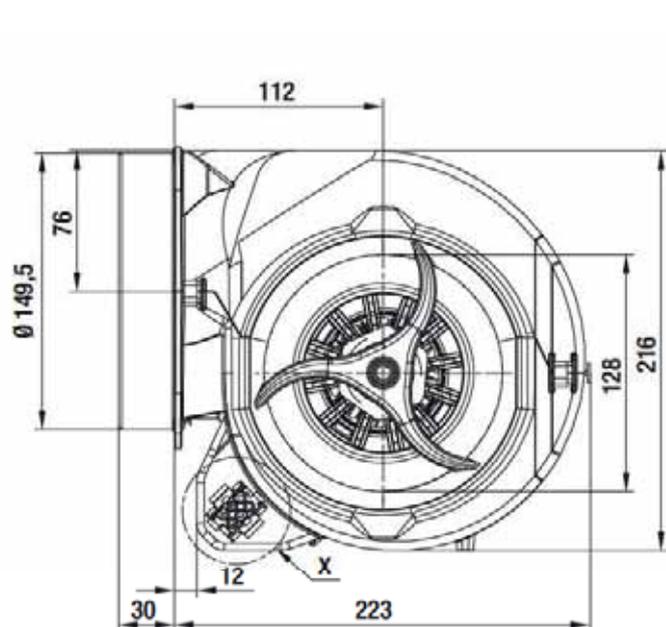


- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Top wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE, GOST; D2E 146-HR93 -03 CCC too



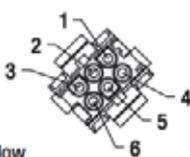
Mass of centrifugal blower

Centrifugal blower with flange	kg
D2E 146-HR93 -03	3,0
D2E 146-HS97 -03	3,5

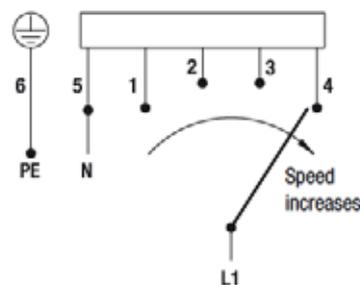


**Detail X**  
 Coded plug system AMP Universal-Mate-N-Lok  
 connector shell: AMP 926 682-3  
 6 x pin connector: AMP 926 886-1

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



**Connection diagram**  
 Switch has to break contact when turned.



# Radial blowers dual inlet

D2E 146

with AC external-rotor motor



- **Material:** Housing: PP plastic, black  
Impeller: Galvanised sheet steel  
Rotor: Partially cast in aluminium  
Terminal box: PP plastic, black
- **Direction of rotation:** Counter-clockwise, seen on plug
- **Type of protection:** IP 20
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, EW motor

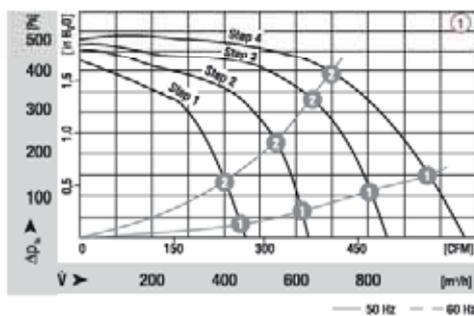
ebm-papst - Mulfingen

Nominal data		characteristic curve	voltage	frequency	voltage	speed	power input	rated current	capacitor	noise level	back pressure min.	perm. ambient temp.
type	motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C
D2E 146	M2E068-EC	①	1~230	50	1060	1850	355	1,55	8,0/450	66	0	-25 to 55
			1~230	60	875	2100	400	1,75	8,0/450	63	200	-25 to 50

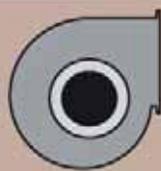
subject to alterations

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]	I [A]	Lp <sub>A</sub> [dBA]
① ①	Step 1 1000	192	0,88	45
① ②	Step 1 1415	180	0,84	49
① ③	Step 2 1375	225	1,03	54
① ④	Step 2 1885	197	0,94	57
① ⑤	Step 3 1770	268	1,20	61
① ⑥	Step 3 2230	222	1,04	62
① ⑦	Step 4 2075	328	1,42	66
① ⑧	Step 4 2430	269	1,17	61

## Characteristic curves



- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Top wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE



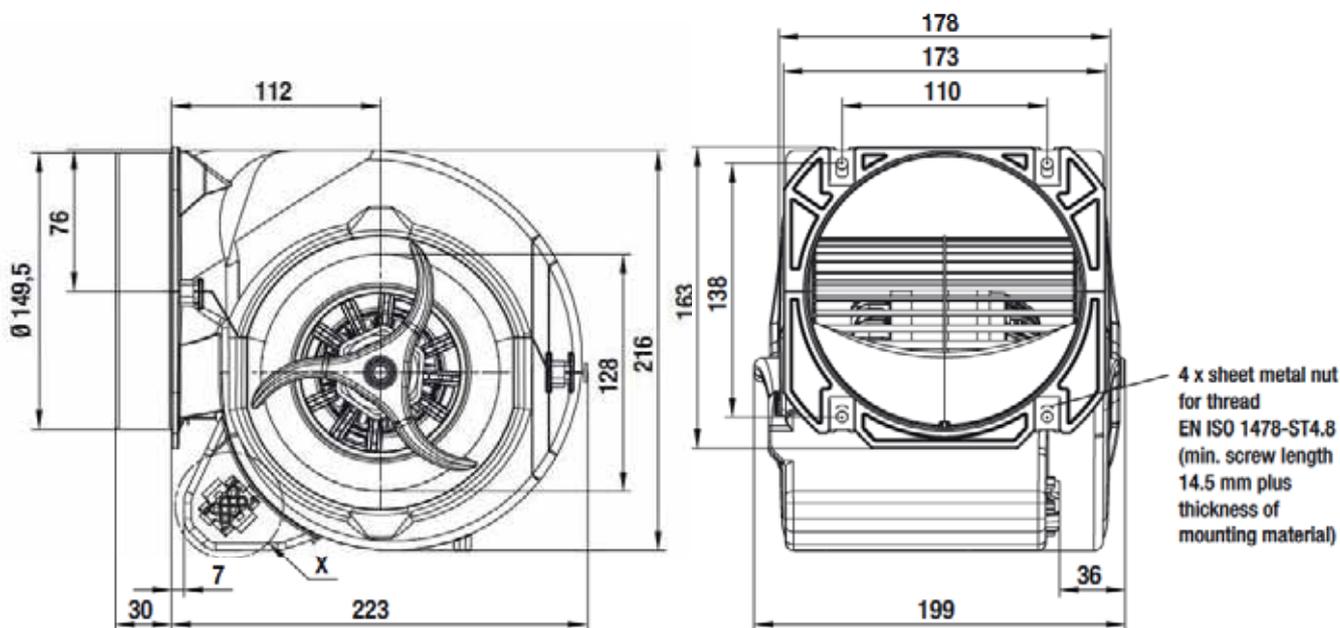
Mass of centrifugal blower

Centrifugal blower with flange

kg

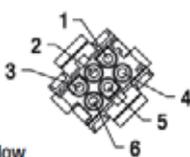
D2E 146-HT67 -02

3,6

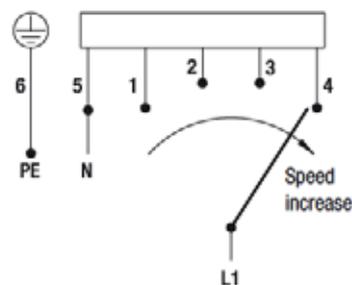


View X  
 coded plug system AMP Universal-Mate-N-Lok  
 connector shell AMP 926 682-3  
 6 x plug pin AMP 926 886-1

- 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.



# Radial blowers dual inlet

D2E 160

with AC external-rotor motor



- **Material:** Housing: PP plastic, black  
Impeller: Galvanised sheet steel  
Rotor: Partially cast in aluminium  
Terminal box: PP plastic, black
  - **Direction of rotation:** Clockwise, seen on rotor
  - **Type of protection:** IP 44
  - **Insulation class:** "F"
  - **Mounting position:** Any
  - **Condensate discharges:** None
  - **Mode of operation:** Continuous operation (S1)
  - **Design:** 4-step blower with integrated terminal box, standard external-rotor motor anti-vibration mounted on on side
- ebm-papst - Muldingen**

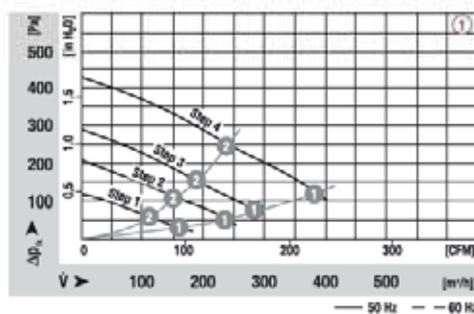
Nominal data		characteristic curve	voltage	frequency	voltage	speed	power input	rated current	capacitor	noise level	back pressure min.	perm. ambient temp.
type	motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C
D2E 160	M2E068-BF	①	1~ 230	50	400	1170	110	0,49	2,5/400	53	100	-25 to 45
D2E 160	M2E068-CF	②	1~ 230	50	550	1400	180	0,80	4,0/400	59	150	-25 to 40

subject to alterations

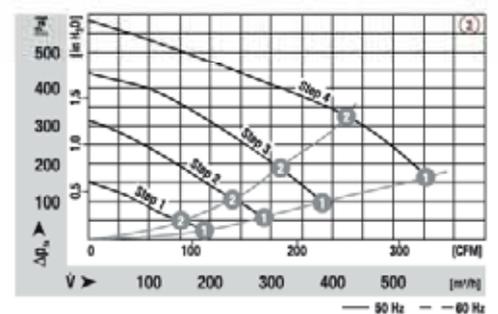
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]	I [A]	Lp <sub>A</sub> [dBA]	
① ①	Step 1	555	50	0,26	30
① ②	Step 1	835	49	0,25	36
① ③	Step 2	765	64	0,31	38
① ④	Step 2	1135	61	0,30	44
① ⑤	Step 3	910	74	0,35	43
① ⑥	Step 3	1345	71	0,34	48
① ⑦	Step 4	1210	108	0,47	51
① ⑧	Step 4	1735	102	0,44	55

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]	I [A]	Lp <sub>A</sub> [dBA]	
② ①	Step 1	500	76	0,38	28
② ②	Step 1	740	75	0,37	34
② ③	Step 2	770	96	0,46	40
② ④	Step 2	1115	93	0,45	44
② ⑤	Step 3	1010	120	0,56	48
② ⑥	Step 3	1450	113	0,53	52
② ⑦	Step 4	1430	176	0,76	57
② ⑧	Step 4	1920	162	0,70	60

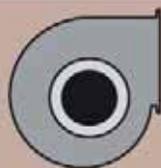
Characteristic curves



Characteristic curves



- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Top wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** CCC, GOST



Mass of centrifugal blower

Centrifugal blower with flange

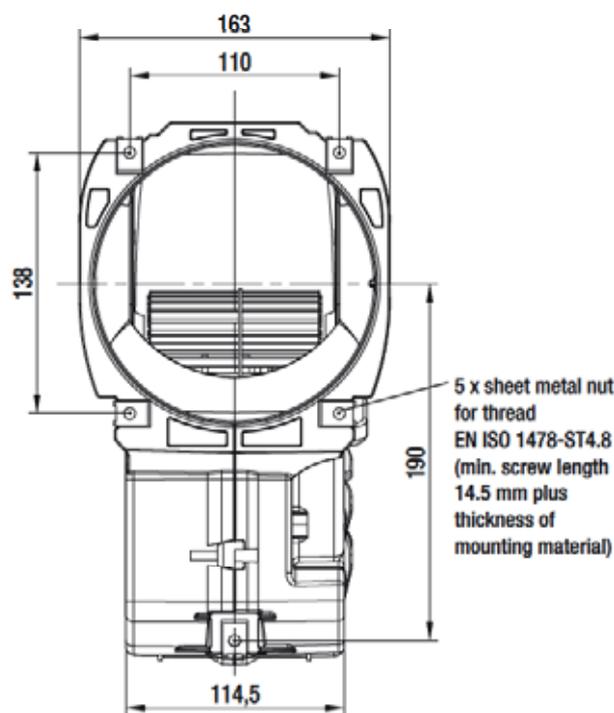
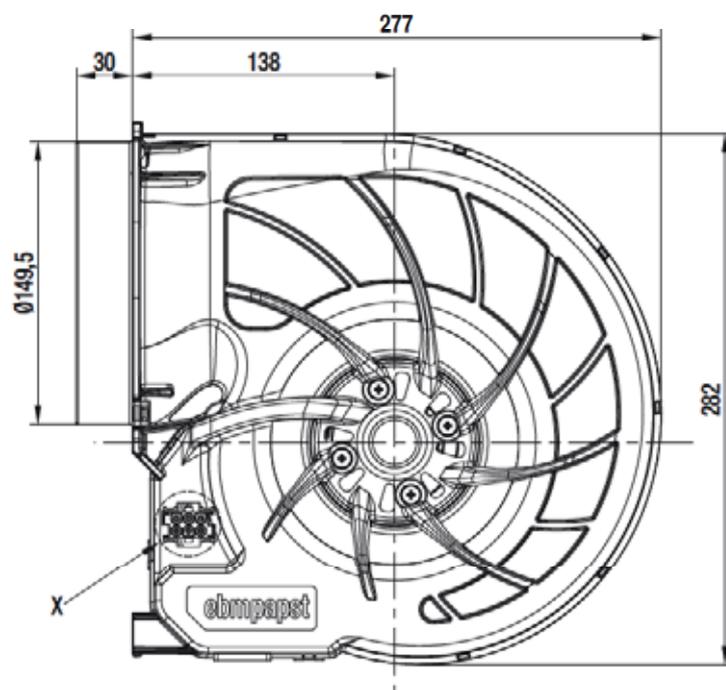
kg

D2E 160-FI01 -01

2,5

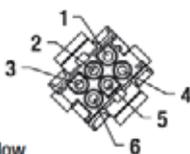
D2E 160-FK11 -02

3,0

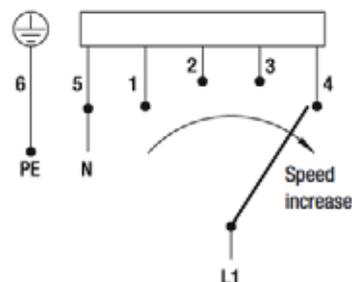


View X  
 coded plug system AMP Universal-Mate-N-Lok  
 connector shell AMP 926 682-3  
 6 x plug pin AMP 926 886-1

- 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.



# Radial blowers dual inlet

D2E 160

with AC external-rotor motor



- **Material:** Housing: PP plastic, black  
Impeller: Galvanised sheet steel  
Rotor: Partially cast in aluminium  
Terminal box: PP plastic, black
- **Direction of rotation:** Counter-clockwise, seen on plug
- **Type of protection:** IP 20
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, EW motor

ebm-papst - Muldingen

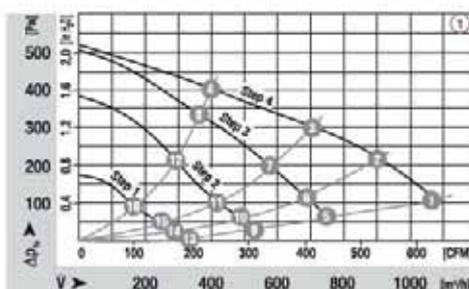
Nominal data		characteristic curve	voltage	frequency	air flow	speed/rpm	power input	current draw	capacitor	sound pressure level	min. back pressure	perm. amb. temp.
type	motor		VAC	Hz	m <sup>3</sup> /h	min <sup>-1</sup>	W	A	µF/VDB	dB(A)	Pa	°C
D2E 160	M2E068-EC	①	1~230	50	1070	1400	340	1,49	10,0/400	58	100	-25..+45
D2E 160	M2E074-HA	②	1~230	50	1495	1800	500	2,19	12,0/400	67	100	-25 to 40

subject to alterations

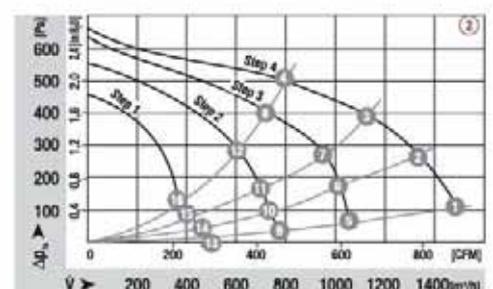
	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]	I [A]	Lp <sub>2</sub> [dB(A)]
① ①	1400	340	1,49	58
① ②	1650	337	1,47	58
① ③	1985	329	1,45	59
① ④	2280	312	1,39	---
① ⑤	1035	211	1,12	47
① ⑥	1260	208	1,12	48
① ⑦	1610	199	1,11	53
① ⑧	2115	179	1,09	---
① ⑨	730	160	0,92	37
① ⑩	900	158	0,92	38
① ⑪	1170	154	0,91	44
① ⑫	1665	143	0,90	---
① ⑬	455	129	0,78	23
① ⑭	565	128	0,78	24
① ⑮	730	126	0,77	30
① ⑯	1055	122	0,77	---

	n [min <sup>-1</sup> ]	P <sub>1</sub> [W]	I [A]	Lp <sub>2</sub> [dB(A)]
② ①	1800	500	2,19	67
② ②	2045	461	2,03	66
② ③	2320	405	1,82	65
② ④	2570	334	1,58	65
② ⑤	1205	403	1,80	56
② ⑥	1510	380	1,72	56
② ⑦	1895	339	1,58	59
② ⑧	2330	270	1,36	63
② ⑨	925	330	1,50	47
② ⑩	1085	323	1,47	47
② ⑪	1395	309	1,43	49
② ⑫	1950	262	1,28	58
② ⑬	680	281	1,29	35
② ⑭	805	276	1,27	36
② ⑮	960	272	1,24	37
② ⑯	1185	265	1,22	42

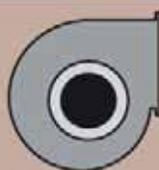
Characteristic curves



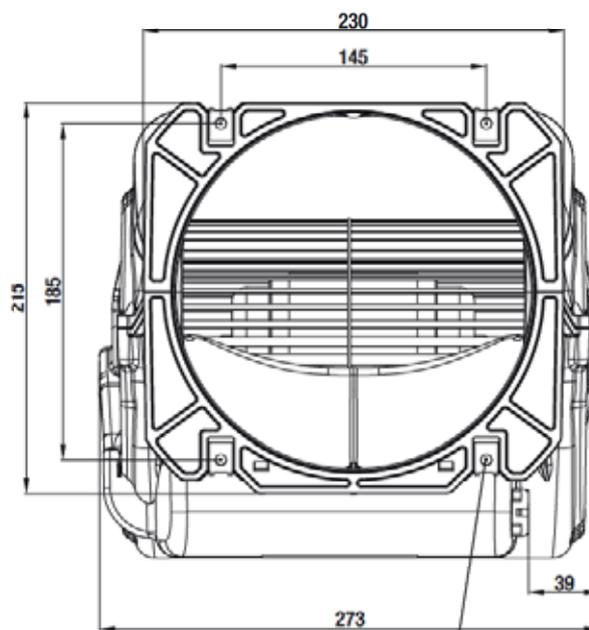
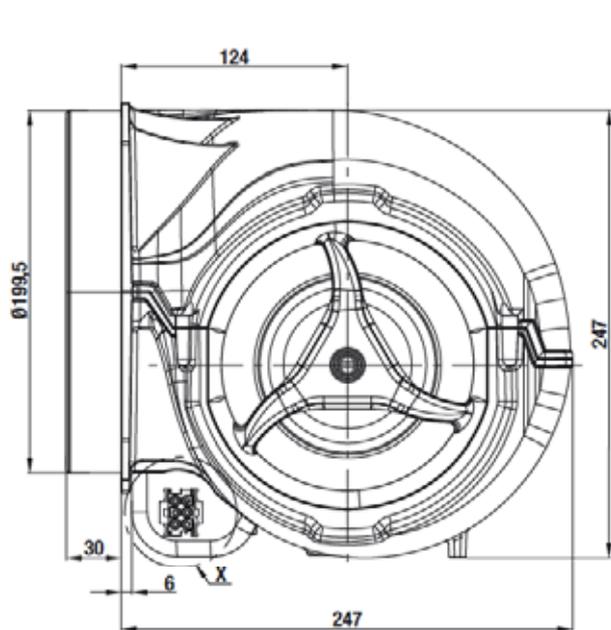
Characteristic curves



- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE, UL is applied for

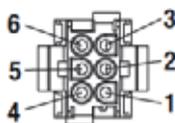


Centrifugal blower with flange	mass kg
D2E 160-GM93 -01	4,0
D2E 160-GL07 -01	5,5

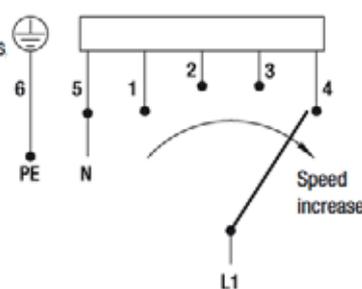


**View X**  
 coded plug system AMP Universal-Mate-N-Lok  
 connector shell AMP 926 682-3  
 6 x plug pin AMP 926 886-1

- 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.



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