

How to use this catalogue



The ebm-papst catalogue combines a technical and a product-specific section.

Technical section: General information on how to select and find ebm-papst products for your specific application is found in the chapters "Selection" (p. 10) and "Technical parameters" (p. 572).

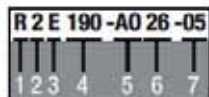
In case you require technical background information on ebm-papst product groups, simply turn to the chapters "Impellers" (p. 576), "Motors" (p.590) and "Control technology" (p. 594).

Product-specific section: The product-specific section is organised according to product diameters, lines, materials and/or design principles.

Headline

The headline indicates which technology (AC or EC), which design (centrifugal, axial, etc.), and which line (e.g. S-Range) the product belongs to. Impeller diameter or other features are also indicated.

Part designation / Type



This key designates and identifies all ebm-papst products and serves as part number:

1) Type

- A – axial fan
- S – axial fan with guard grille
- W – axial fan with wall ring
- V – axial combination
- R – centrifugal fan, single inlet
- G – centrifugal blower, single inlet (with scroll housing)
- B – centrifugal fan, dual inlet
- D – centrifugal blower, dual inlet (with scroll housing)
- K – centrifugal combination
- M – motor
- P – pumps

2) Number of poles (AC) / number of cores (EC)

2-, 4-, 6-, 8- and 12-pole (Z = 12) / 1- and 3-core

3) Type of motor

- D – 3-phase motor
- E – single-phase motor with capacitor
- G – EC motor
- S – shaded-pole motor
- Q – square shaded-pole motor

4) Impeller diameter in mm

5) Key for mechanical design

6) Key for electrical design

7) Key for mechanical variants

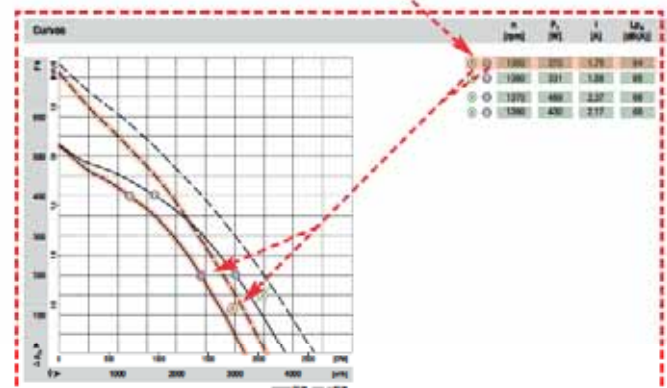
AC centrifugal fans

backward curved, 3-D, Ø 400



- Material: Impeller: Sheet aluminium, joined by tabs
Rotor: Coated in black
- Number of blades: 6
- Direction of rotation: Clockwise, seen on rotor
- Type of protection: IP 54 (acc. to EN 60529)
- Insulation class: "F"
- Mounting position: Any
- Condensate discharge: None
- Mode of operation: Continuous operation (S1)
- Bearings: Maintenance-free ball bearings

Nominal data		Core	Nominal voltage	Frequency	Speeds in rpm	Max. power input	Max. speed	Max. torque	Phase	Elect. connection
Type	Motor		VAC	Hz	rpm	W	A	pF/VDB	°C	p. 596 f.
84E 400	84E 04-04	1	230	50	1350	270	1.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	2	230	50	1350	540	2.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	3	230	50	1350	810	3.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	4	230	50	1350	1080	5.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	5	230	50	1350	1350	6.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	6	230	50	1350	1620	7.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	7	230	50	1350	1890	8.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	8	230	50	1350	2160	10.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	9	230	50	1350	2430	11.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	10	230	50	1350	2700	12.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	11	230	50	1350	2970	13.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	12	230	50	1350	3240	15.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	13	230	50	1350	3510	16.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	14	230	50	1350	3780	17.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	15	230	50	1350	4050	18.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	16	230	50	1350	4320	20.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	17	230	50	1350	4590	21.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	18	230	50	1350	4860	22.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	19	230	50	1350	5130	23.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	20	230	50	1350	5400	25.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	21	230	50	1350	5670	26.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	22	230	50	1350	5940	27.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	23	230	50	1350	6210	28.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	24	230	50	1350	6480	30.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	25	230	50	1350	6750	31.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	26	230	50	1350	7020	32.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	27	230	50	1350	7290	33.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	28	230	50	1350	7560	35.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	29	230	50	1350	7830	36.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	30	230	50	1350	8100	37.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	31	230	50	1350	8370	38.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	32	230	50	1350	8640	40.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	33	230	50	1350	8910	41.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	34	230	50	1350	9180	42.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	35	230	50	1350	9450	43.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	36	230	50	1350	9720	45.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	37	230	50	1350	9990	46.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	38	230	50	1350	10260	47.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	39	230	50	1350	10530	48.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	40	230	50	1350	10800	50.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	41	230	50	1350	11070	51.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	42	230	50	1350	11340	52.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	43	230	50	1350	11610	53.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	44	230	50	1350	11880	55.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	45	230	50	1350	12150	56.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	46	230	50	1350	12420	57.50	0.21/400	-40 to +40	K20
84E 400	84E 04-04	47	230	50	1350	12690	58.75	0.21/400	-40 to +40	K20
84E 400	84E 04-04	48	230	50	1350	12960	60.00	0.21/400	-40 to +40	K20
84E 400	84E 04-04	49	230	50	1350	13230	61.25	0.21/400	-40 to +40	K20
84E 400	84E 04-04	50	230	50	1350	13500	62.50	0.21/400	-40 to +40	K20



What a product page is made up of (reduced scale - 50%)

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- Motor protection: Design with thermal overload protector
 - Cable exit: Diagonal
 - Protection class: I (acc. to EN 61000-5-1)
 - Product conforming to standard: CE

Centrifugal fan
 kg
 Dimensions
 Inlet nozzle (mm)

Centrifugal fan	kg	b	c	d	e	g	Inlet nozzle (mm)
RAE 400-4000-00	7.1	141.0	179.0	130.0	50.0	90.0	54475-0-4015
RAE 400-AP17-00	8.8	164.0	199.0	140.0	70.0	113.0	54476-0-4015

Mounting dimensions
 Inlet nozzle p. 590
 Guard grille p. 593
 Capacitor p. 590 L
 Cable connections p. 590 L

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Product description

Depending on the product, information is provided here on the following: material, number of blades, direction of air flow, direction of rotation, system of protection, insulation class, mounting position, condensate discharge holes, mode of operation, design, bearing, technical equipment, EMC, leakage current, motor protection, electrical connection, cable exit, protection class, capacitor, product conforming to standards, approvals and options.

Nominal data

AC products (up to motor size 074) and EC products (DC-fed):

Free-blowing or at minimal backpressure

AC products (from motor size 094) and EC products (AC-fed):

In operating point at maximum load

Graphic rendition of products

All drawings represent the design principle and are not to scale.

Dimensions are either given in the product drawing or, with varying dimensions, in the table of dimensions given above the drawing.

Indication of relevant accessories and additional information

The pages indicated at the bottom refer to the accessories, e.g. inlet nozzles, guard grilles, wall rings, etc. for this particular product, as well as additional information (e. g. the connection diagram).

Curves and operating points

The diagram gives air performance curves pertaining to the product. Refer to the operating point table to the right for information on speed, power consumption, current draw, sound level or sound pressure level and overall efficiency of the impeller.

How to select your ebm-papst product



Solutions for ventilation offered by ebm-papst

In the field of ventilation, ebm-papst offers the perfect solution for a vast number of applications. Depending on motor, impeller and control technology, there is almost no limit to the number of possible combinations, thus making sure you can find the best solution for your application.

Criteria for selection

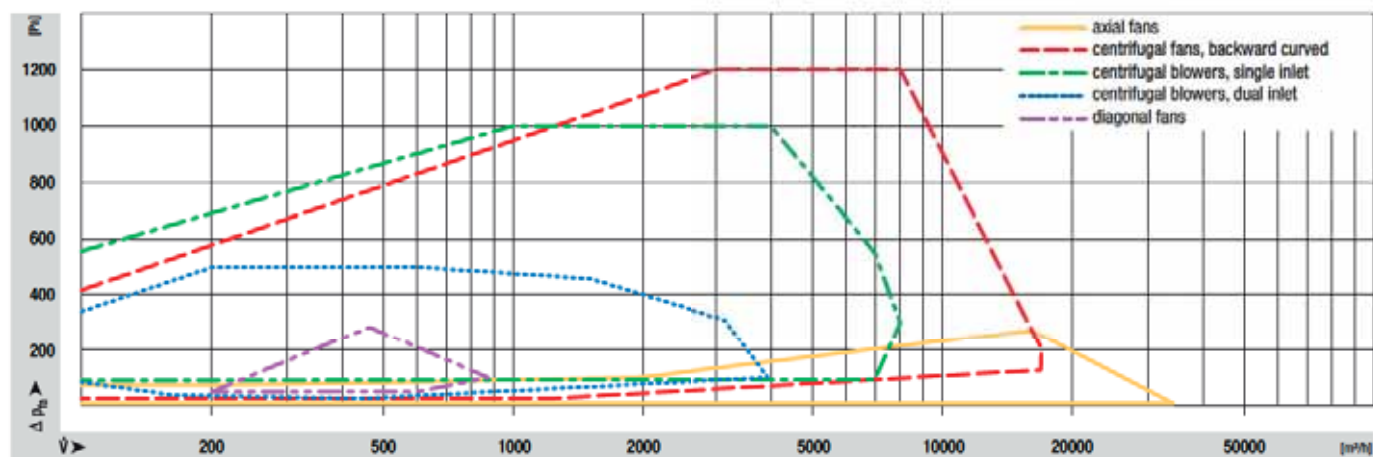
When selecting a fan for a specific application, these parameters play an important role:

- Air flow with given back pressure
- Voltage supply, divided into DC and AC voltage (1~, 3~)
- Noise generation
- Efficiency
- Available mounting space

Selecting a fan

The following diagram shows the range of characteristic curves for the most important fan designs and serves as a helpful tool in preselecting a design on the basis of air flow and back pressure.

Characteristic curves of the various designs



How to order your ebm-papst product



Have you found the suitable ebm-papst product and would like to order it now?

In this case, simply contact your nearest ebm-papst sales office by E-mail, fax or phone.

Don't know exactly which ebm-papst product you need to order?

In this case, simply contact your nearest ebm-papst sales office by E-mail, fax or phone. Our specialists in ventilation and drive technology are always there to help you find the best solution for your specific application.

Using the questions provided in the checklist here as a guideline, you can make sure your ebm-papst contact has all the necessary information to handle your enquiry as efficiently and quickly as possible.

How your ebm-papst product is delivered

In our order confirmation, you will find information on when, how and where to the delivery will be made.

We deliver:

- Ex works (excluding packaging)
- Via freight carrier (we also use postal services for shipments up to 30 kg)

All the other details such as packaging, freight, insurance and customs duty will be settled with your ebm-papst contact prior to the time we issue our order confirmation.

Is there anything else you need to know about your ebm-papst product?

In this case, simply contact your nearest ebm-papst sales office by E-mail, fax or phone. We have the answer to your problem and are always glad to be able to be of assistance.

Using the questions provided in the checklist here as a guideline, you can make sure your ebm-papst contact has all the necessary information to handle your enquiry as efficiently and quickly as possible.

Checklist

- Part designation / type
- Quantity needed
- Field of application
- Ambient conditions (humidity, temperature, climate)
- Impeller diameter
- Air flow
- Back pressure
- Voltage supply

For your nearest sales office, please turn to page 610.

