



with ESM and iQ-motor

The new generation of energy-saving fans

In almost all areas of life, saving energy has become an important issue. Our new energy-saving fan line, based on the energy-saving motor (ESM) and the iQ-motor, offers high efficiency and thus allows for considerable savings in energy across tremendously increased service life. This makes them particularly suitable for use in refrigeration systems, e.g. refrigeration and deep freeze or condenser units.

The new line

This line of energy-saving fans comprises axial fans and centrifugal modules based on the ESM as well as the iQ-motor, the energy-saving variant of the Q-motor.

These axial fans are available in size 172, 200, 230, 250 and 300 mm, with size 200 already firmly established on the market. As their rotors and wall rings were optimised as to aerodynamic criteria, these fans are even quieter in operation and, in keeping with our eco-friendly approach, do not need varnishing.

The energy-saving centrifugal modules are available in size 175, 190 and 220 mm. Their compact build and aerodynamically optimised design allow for quick and simple installation.

The energy-saving centrifugal module K1G200 with semi-centrifugal impeller design rounds off the new ESM line. Of particular advantage is their performance, optimised in terms of noise and airflow, in the medium pressure range. Once again, ebm-papst sets a new standard.

This whole line is completed by the energy-saving iQ-motor based on ebm-papst EC technology. Due to its identical dimensions and mounting possibilities as the Q-motor already established on the market, customers can replace the old Q-motor 1:1 without expensive conversion or remodelling. The iQ-motor can simply be installed with the usual axial impellers in diameters 154 to 254 mm.

Energy efficiency

Compared to the conventionally used shaded-pole motors, the energy-saving motors have a maximum efficiency of > 70 % and thus consume only about 1/3 to 1/6 of the power input of a shaded-pole motor. Higher efficiency translates into less intrinsic heat being generated in operation, which means less heat dissipation. This makes for even more energy being saved, as less cooling capacity is needed in the first place.

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Product line: The W1G200 axial fan already successfully established on the market has now been complemented by sizes 172, 230, 250 and 300 mm. As the rotors and wall rings were optimised according to aerodynamic criteria, the fans now operate even more quietly and are even more eco-friendly, as they do not need any varnish any more.

System: Not only has the shaded-pole motor used so far been replaced by a highly efficient motor, we also developed a comprehensive system consisting of finely adjusted components – EC motor – impeller – wall ring – as only this guarantees optimum efficiency at optimum acoustic performance.

Energy efficiency: In contrast to the conventionally used shaded-pole motor, our energy-saving motors have a maximum efficiency of $> 70\%$ while only consuming $1/3$ to $1/6$ of the power needed by a shaded-pole motor. Higher efficiency translates into lower intrinsic heat being generated in operation, and thus less heat is dissipated. As a consequence, even more energy is saved, as less cooling capacity has to be generated in the first place.

Easy to install: As a system, expenditure for installation and logistics is brought down to an absolute minimum for the customer. The only thing needed to install the fans is screws. As the connection lead is of the plug-and-play type, customers can enjoy even more savings. A preassembled cable harness may further reduce installation time. As programming is done after installation, the number of variants can also be drastically reduced, and air performance can be adjusted anew at a later point in time. As the design is in protection class 2, there is no need for a ground wire.

Robust design: After 7 years and more than 1 million energy-saving motors in the field, experience shows that the system is robust, maintenance-free and durable. Service life depends on ambient conditions and is normally beyond 60,000 h. The stator is hermetically moulded in plastic and thus optimally protected against environmental impact. The electronics are moisture-proof as a sealed lid is used, and so protection type IP 54 is met. Optionally, IP 65 is also possible. The sturdy design makes the fan resist shock impacts of $> 50\text{ g}$ without any problem.

Approvals: All approvals required in the refrigeration unit industry are available.

VDE: EN 60335-1; -2-24; -2-80; -2-89;

UL 1004-1; 1004-2; 1004-3; UL 507; UL 60730;

CCC; GOST

The new energy-saving axial fans

Size 172	6
Size 200	8
Size 230	14
Size 250	16
Size 300	18



Energy-saving axial fans

Ø 172



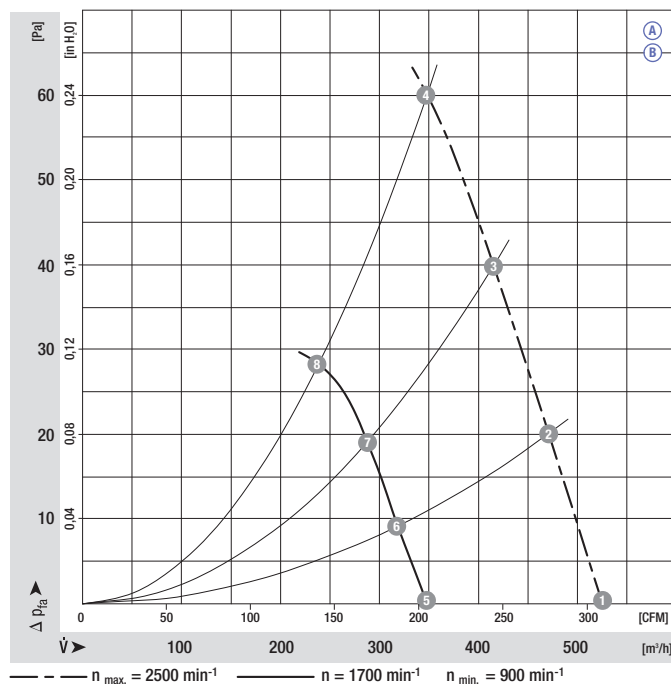
- **Material:** Wall ring: Plastic PP
Blade: Plastic PA, fiberglass-reinforced
- **Number of blades:** 5
- **Direction of air flow:** "V", exhaust over struts
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST; CCC is applied for
- **Speed:** Using the programming unit, 2 speeds between n_{min} and n_{max} can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operative range	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	rpm	W	A	Pa	°C	kg	
W1G172-EC95 -01	M1G 055-BD	(A)	1~ 115	50/60	2500	22	0,36	60	-25..+50	0,95
W1G172-EC91 -01	M1G 055-BD	(B)	1~ 230	50/60	2500	22	0,18	60	-25..+50	0,95

subject to alterations

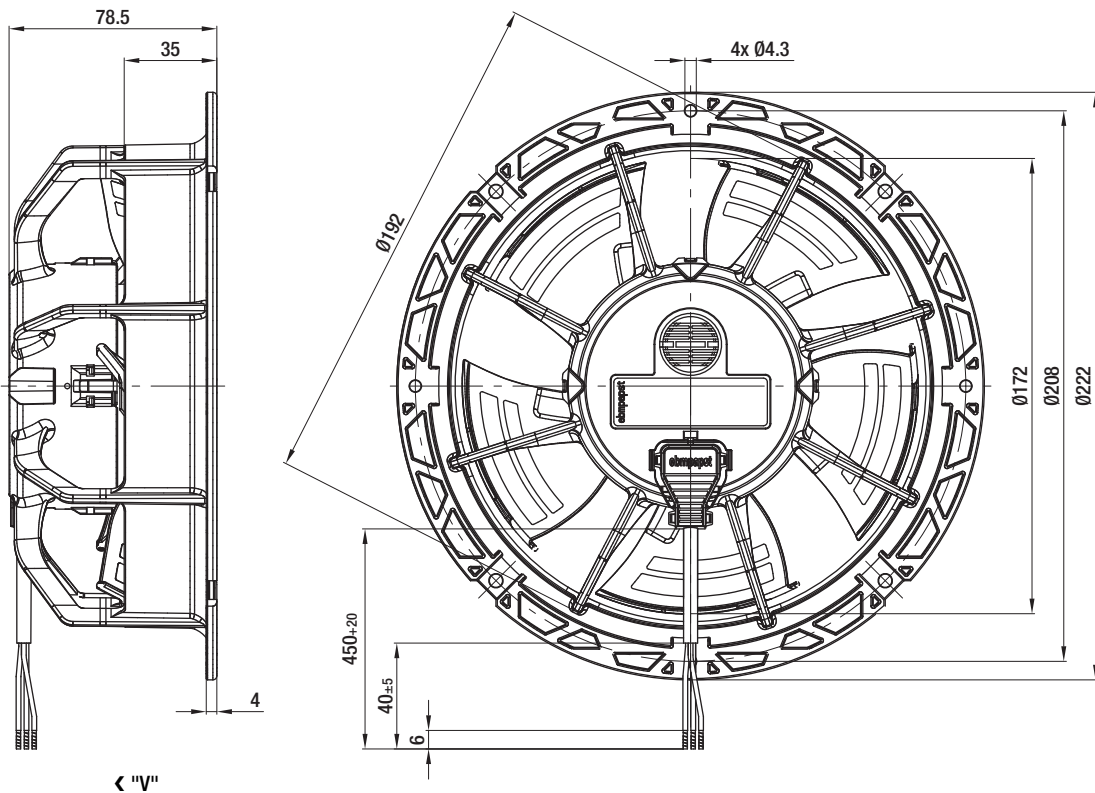
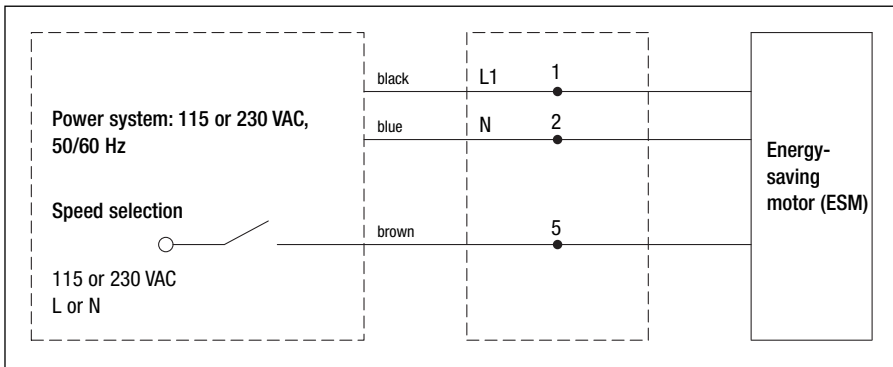
⁽¹⁾ Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



	n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
(A) 1	2500	21	0,34	62
(A) 2	2500	22	0,36	63
(A) 3	2500	22	0,36	63
(A) 4	2500	22	0,36	63
(A) 5	1700	9	0,14	54
(A) 6	1700	10	0,16	53
(A) 7	1700	10	0,16	53
(A) 8	1700	10	0,16	54
(B) 1	2500	21	0,17	62
(B) 2	2500	22	0,18	63
(B) 3	2500	22	0,18	63
(B) 4	2500	22	0,18	63
(B) 5	1700	9	0,07	54
(B) 6	1700	10	0,08	53
(B) 7	1700	10	0,08	53
(B) 8	1700	10	0,08	54

- **Electr. connection:**



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

Energy-saving axial fans

Ø 200



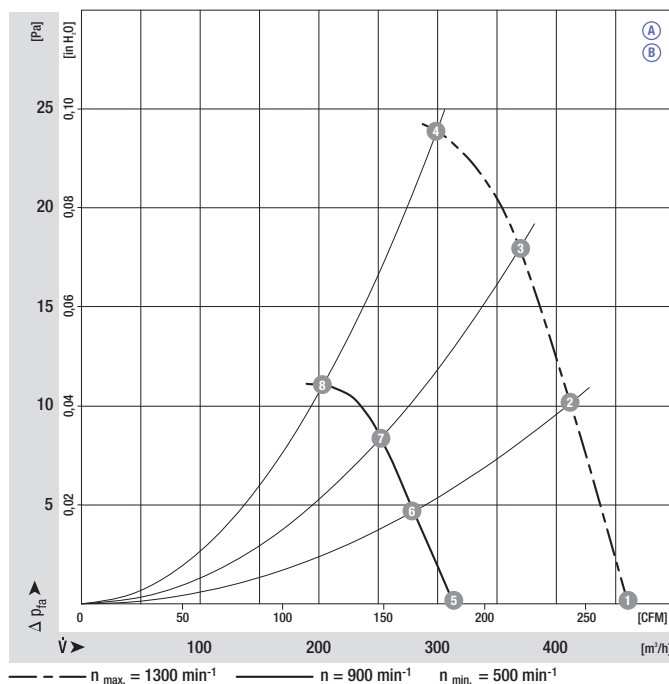
- **Material:** Wall ring: Plastic PP
Blade: Plastic PA, fiberglass-reinforced
- **Number of blades:** 5
- **Direction of air flow:** "V", exhaust over struts
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST; CCC is applied for
- **Speed:** Using the programming unit, 2 speeds between n_{min} and n_{max} can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operative range	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	rpm	W	A	Pa	°C	kg	
W1G200-EC91 -27	M1G 055-BD	Ⓐ	1~ 115	50/60	1300	8,0	0,11	24	-30..+50	1,0
W1G200-EC87 -25	M1G 055-BD	Ⓑ	1~ 230	50/60	1300	8,5	0,07	24	-30..+50	1,0

subject to alterations

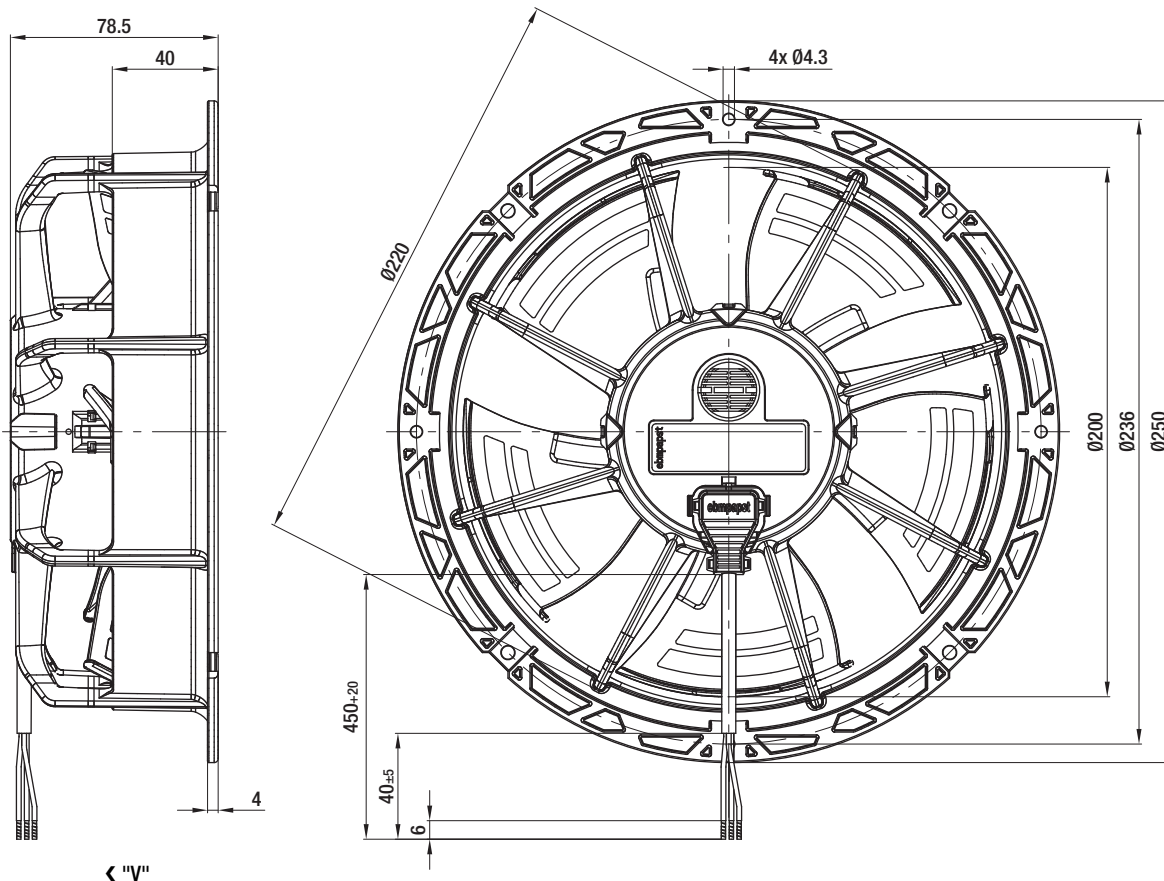
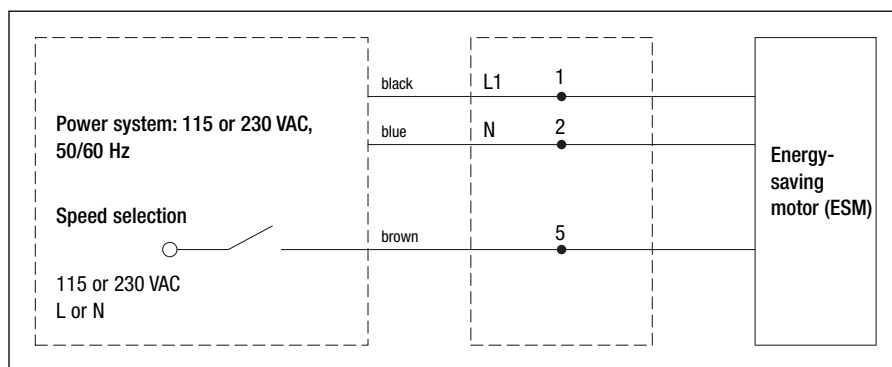
⁽¹⁾ Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



	n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
Ⓐ 1	1300	7	0,09	49
Ⓐ 2	1300	8	0,10	48
Ⓐ 3	1300	8	0,10	48
Ⓐ 4	1300	8	0,11	49
Ⓐ 5	900	3	0,05	41
Ⓐ 6	900	4	0,05	41
Ⓐ 7	900	4	0,05	40
Ⓐ 8	900	4	0,05	40
Ⓑ 1	1300	7	0,06	49
Ⓑ 2	1300	8	0,07	48
Ⓑ 3	1300	8,5	0,07	48
Ⓑ 4	1300	8,5	0,07	49
Ⓑ 5	900	3	0,03	41
Ⓑ 6	900	4	0,04	41
Ⓑ 7	900	4	0,04	40
Ⓑ 8	900	4	0,04	40

– Electr. connection:



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

Energy-saving axial fans

Ø 200



- **Material:** Wall ring: Plastic PP
Blade: Plastic PA, fibreglass-reinforced
- **Number of blades:** 5
- **Direction of air flow:** "V", exhaust over struts
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST; CCC is applied for
- **Speed:** Using the programming unit, 2 speeds between n_{min} and n_{max} can be programmed.

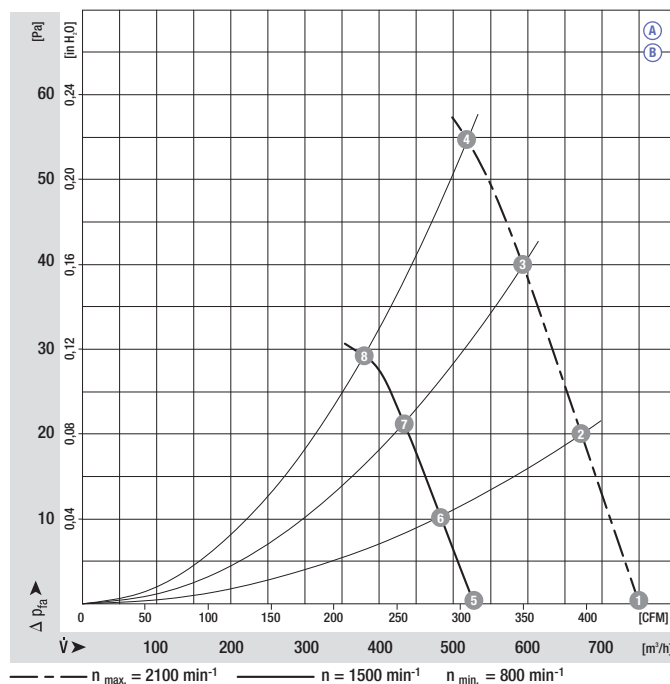
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operative range	Perm. amb. temp.	Mass
			VAC	Hz	rpm	W	A	Pa	°C	kg
W1G200-EC95 -47	M1G 055-BD	(A)	1~115	50/60	2100	31	0,48	55	-30..+50	1,0
W1G200-EC91 -45	M1G 055-BD	(B)	1~230	50/60	2100	31	0,24	55	-30..+50	1,0

subject to alterations

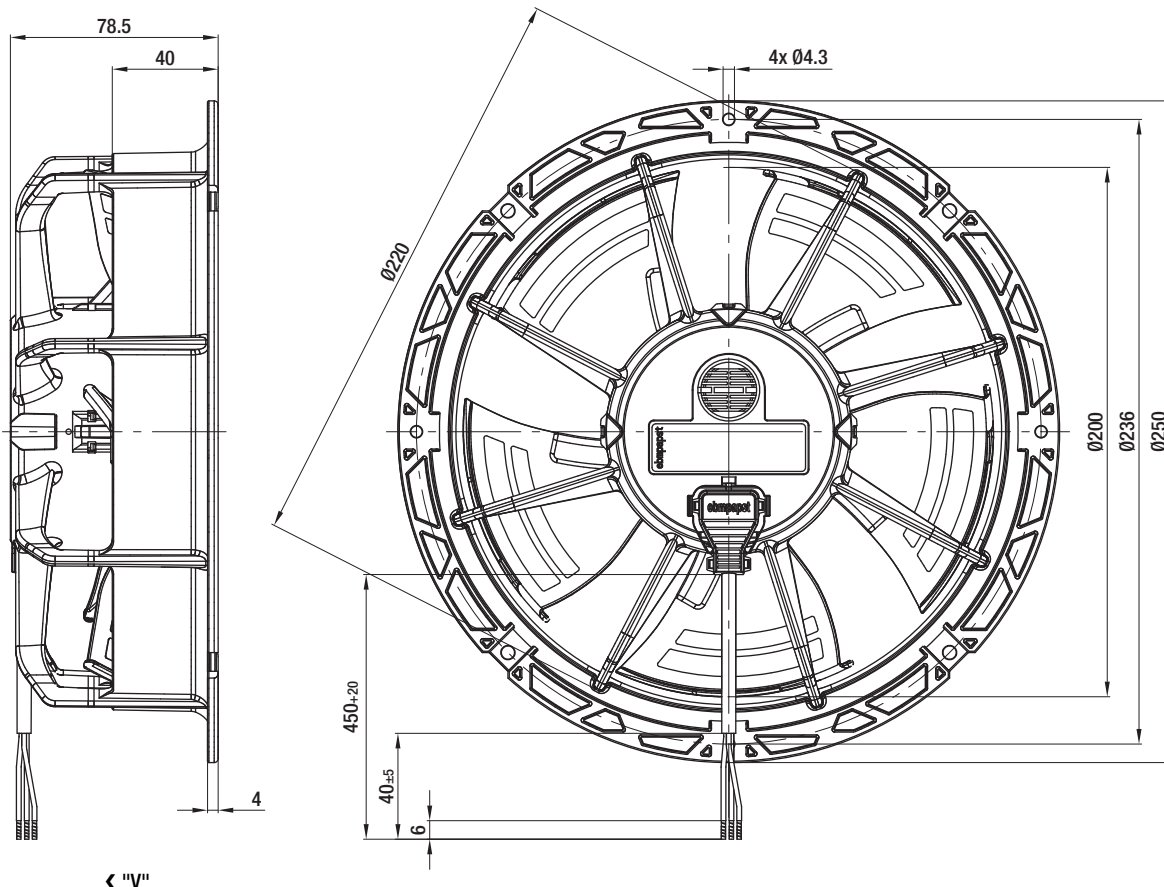
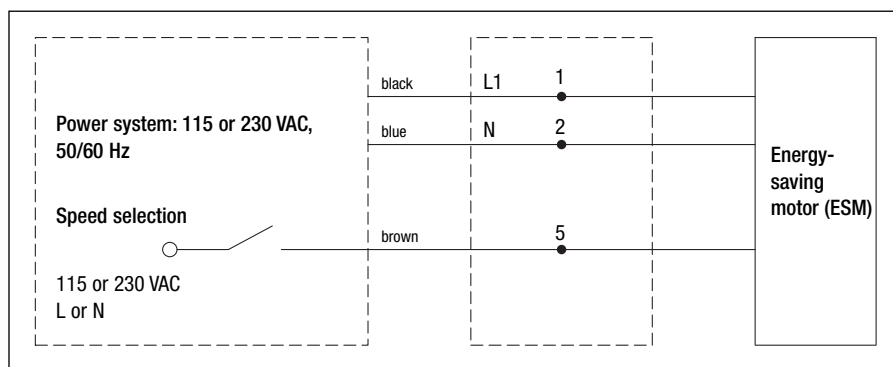
⁽¹⁾ Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



	n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
(A) 1	2100	29	0,44	62
(A) 2	2100	30	0,46	61
(A) 3	2100	31	0,48	60
(A) 4	2100	31	0,48	62
(A) 5	1500	14	0,22	54
(A) 6	1500	16	0,24	54
(A) 7	1500	16	0,26	53
(A) 8	1500	16	0,26	55
(B) 1	2100	29	0,22	62
(B) 2	2100	30	0,23	61
(B) 3	2100	31	0,24	60
(B) 4	2100	31	0,24	62
(B) 5	1500	14	0,11	54
(B) 6	1500	16	0,12	54
(B) 7	1500	16	0,13	53
(B) 8	1500	16	0,13	55

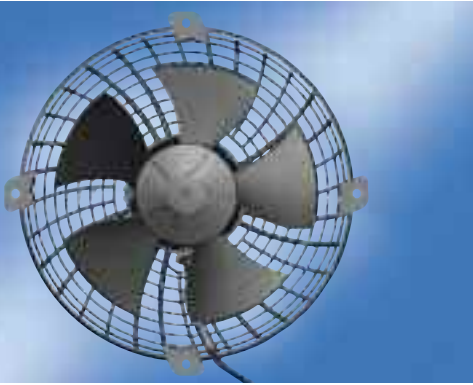
– Electr. connection:



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

Energy-saving axial fans

Ø 200



- **Material:** Blade: Plastic PA, fibreglass-reinforced
Guard grille: Plastic PP
- **Number of blades:** 5
- **Direction of air flow:** "A", intake over guard grille
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST; CCC is applied for
- **Speed:** Using the programming unit, 2 speeds between $n_{\min}$ and $n_{\max}$ can be programmed.

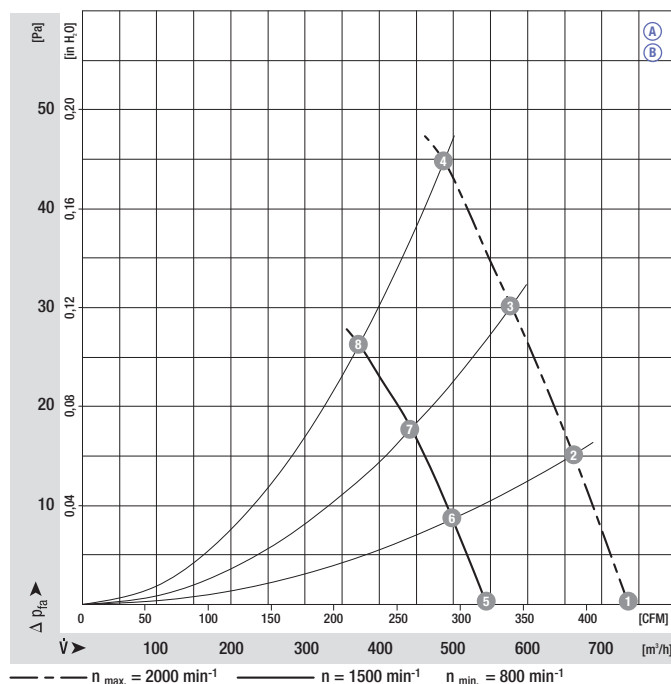
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operative range	Perm. amb. temp.	Mass
			VAC	Hz	rpm	W	A	Pa	°C	kg
S1G 200-CA95 -02	M1G 055-BD	A	1~115	50/60	2000	31	0,43	45	-30..+50	0,95
S1G 200-CA91 -02	M1G 055-BD	B	1~230	50/60	2000	33	0,25	45	-30..+50	0,95

subject to alterations

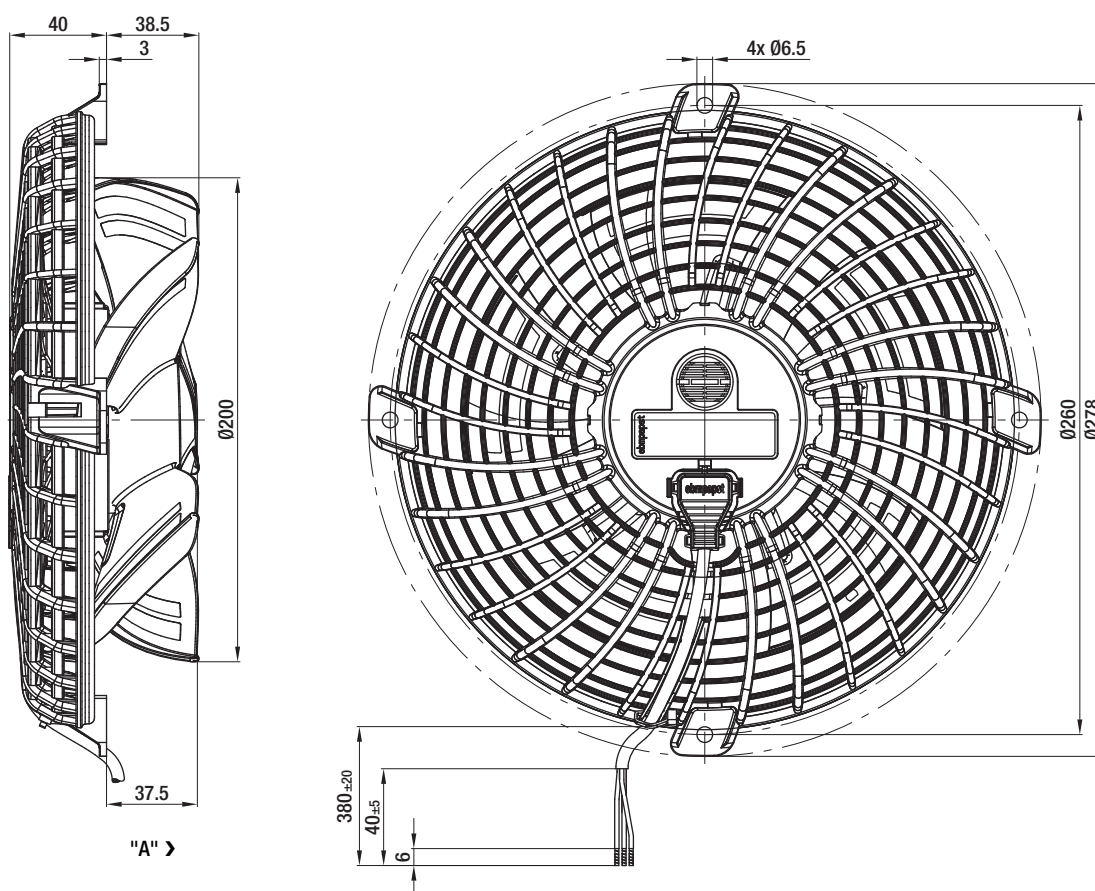
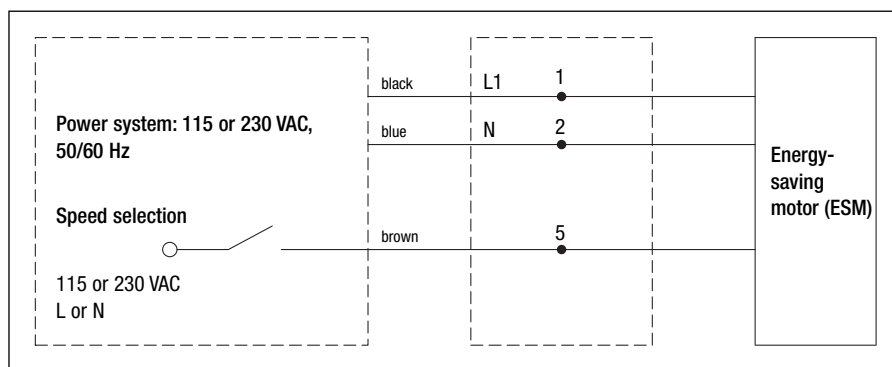
⁽¹⁾ Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



	n	P ₁	I	L _{wA}
	[rpm]	[W]	[A]	[dB(A)]
A 1	2000	30	0,43	64
A 2	2000	30	0,43	64
A 3	2000	30	0,43	63
A 4	2000	31	0,43	64
A 5	1500	17	0,29	59
A 6	1500	18	0,29	58
A 7	1500	19	0,29	58
A 8	1500	20	0,29	59
B 1	2000	32	0,24	64
B 2	2000	33	0,25	64
B 3	2000	33	0,25	63
B 4	2000	33	0,25	64
B 5	1500	18	0,16	59
B 6	1500	19	0,16	58
B 7	1500	19	0,16	58
B 8	1500	20	0,16	59

– Electr. connection:



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

Energy-saving axial fans

Ø 230



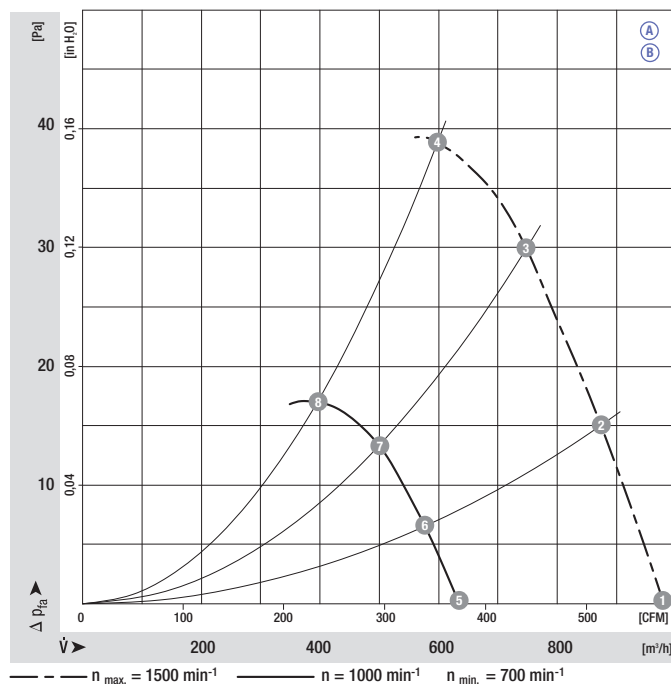
- **Material:** Wall ring: Plastic PP
Blade: Plastic PA, fibreglass-reinforced
- **Number of blades:** 5
- **Direction of air flow:** "V", exhaust over struts
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST; CCC is applied for
- **Speed:** Using the programming unit, 2 speeds between n_{min} and n_{max} can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operative range	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	rpm	W	A	Pa	°C	kg	
W1G230-EB97 -01	M1G 055-BD	Ⓐ	1~115	50/60	1500	23	0,35	38	-30..+50	1,05
W1G230-EB89 -01	M1G 055-BD	Ⓑ	1~230	50/60	1500	26	0,20	38	-30..+50	1,05

subject to alterations

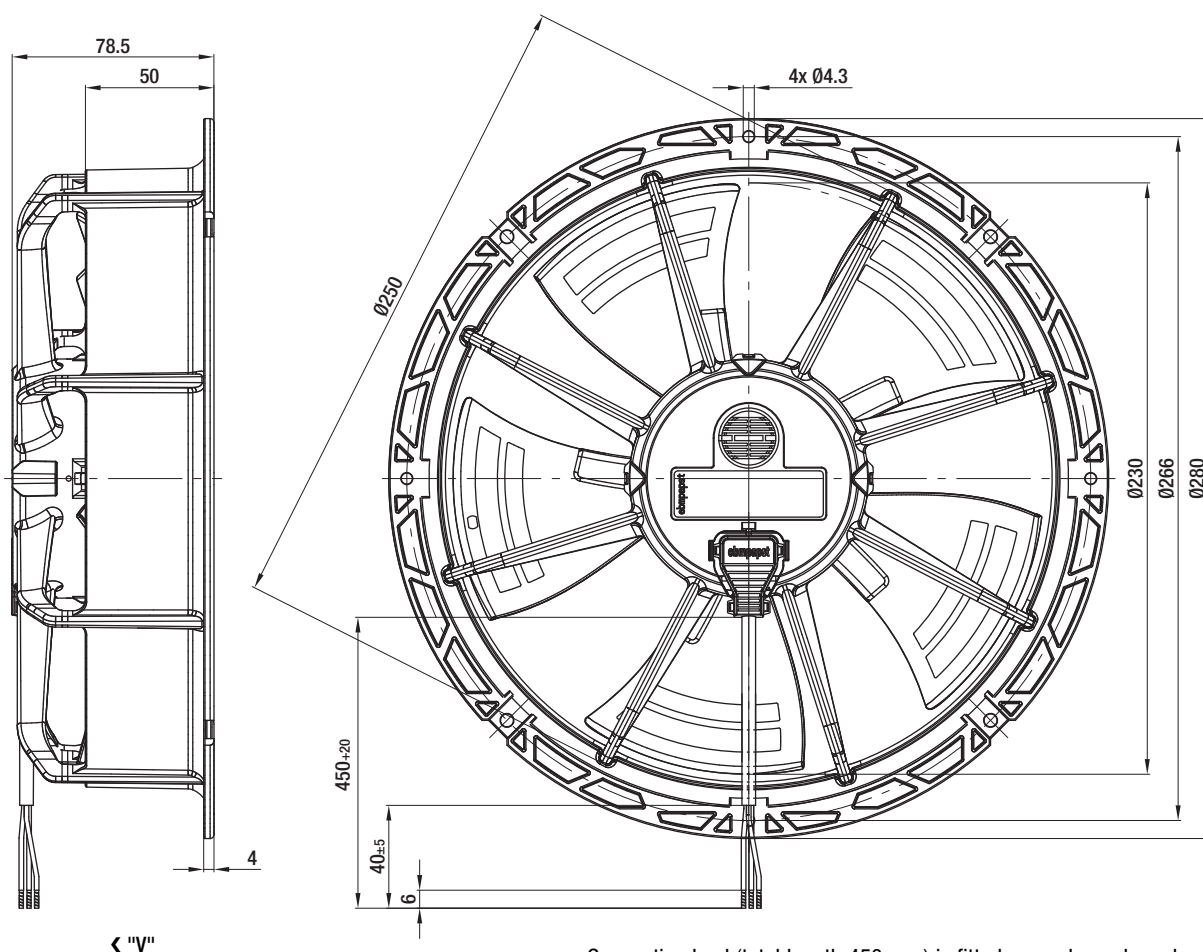
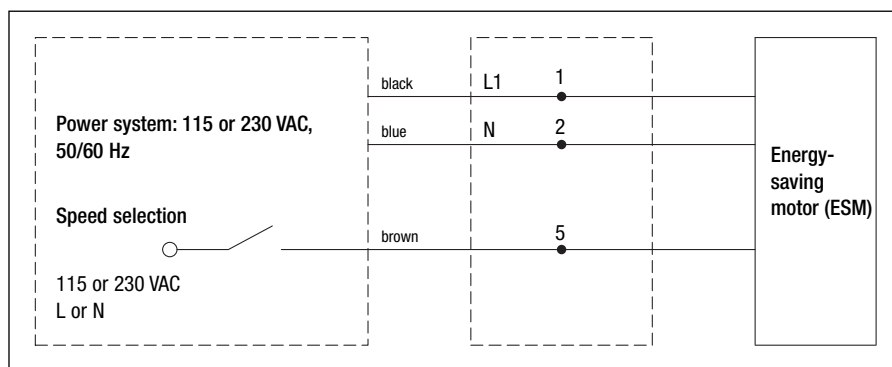
⁽¹⁾ Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



	n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
Ⓐ 1	1500	23	0,35	58
Ⓐ 2	1500	23	0,35	58
Ⓐ 3	1500	23	0,35	58
Ⓐ 4	1500	23	0,35	57
Ⓐ 5	1000	9	0,15	48
Ⓐ 6	1000	10	0,16	48
Ⓐ 7	1000	10	0,16	48
Ⓐ 8	1000	10	0,16	52
Ⓑ 1	1500	24	0,19	58
Ⓑ 2	1500	25	0,19	58
Ⓑ 3	1500	25	0,19	58
Ⓑ 4	1500	26	0,20	57
Ⓑ 5	1000	10	0,09	48
Ⓑ 6	1000	11	0,09	48
Ⓑ 7	1000	11	0,09	48
Ⓑ 8	1000	11	0,09	52

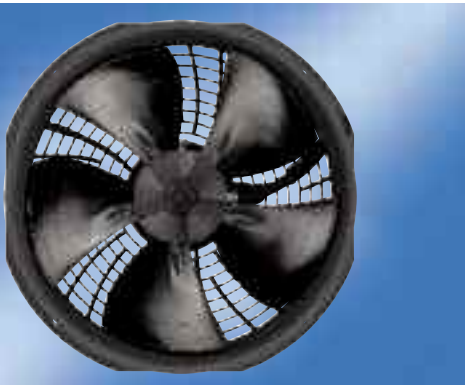
– Electr. connection:



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

Energy-saving axial fans

Ø 250



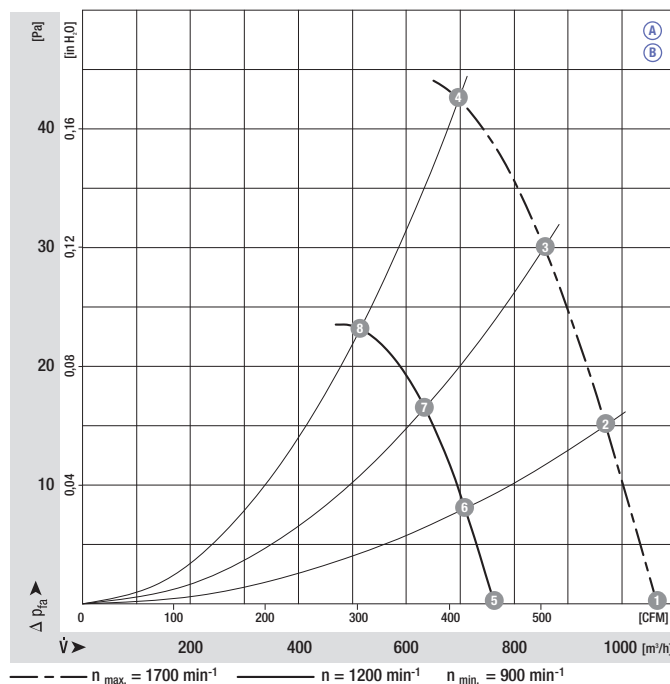
- **Material:** Wall ring: Plastic PP
Blade: Plastic PA, fibreglass-reinforced
- **Number of blades:** 5
- **Direction of air flow:** "V", exhaust over struts
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST; CCC is applied for
- **Speed:** Using the programming unit, 2 speeds between n_{min} and n_{max} can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operative range	Perm. amb. temp.	Mass
Type	Motor	VAC	Hz	rpm	W	A	Pa	°C	kg	
W1G250-BB21 -01	M1G 055-BI	A	1~ 115	50/60	1700	32	0,47	42	-30..+50	1,55
W1G250-BB17 -01	M1G 055-BI	B	1~ 230	50/60	1700	32	0,24	42	-30..+50	1,55

subject to alterations

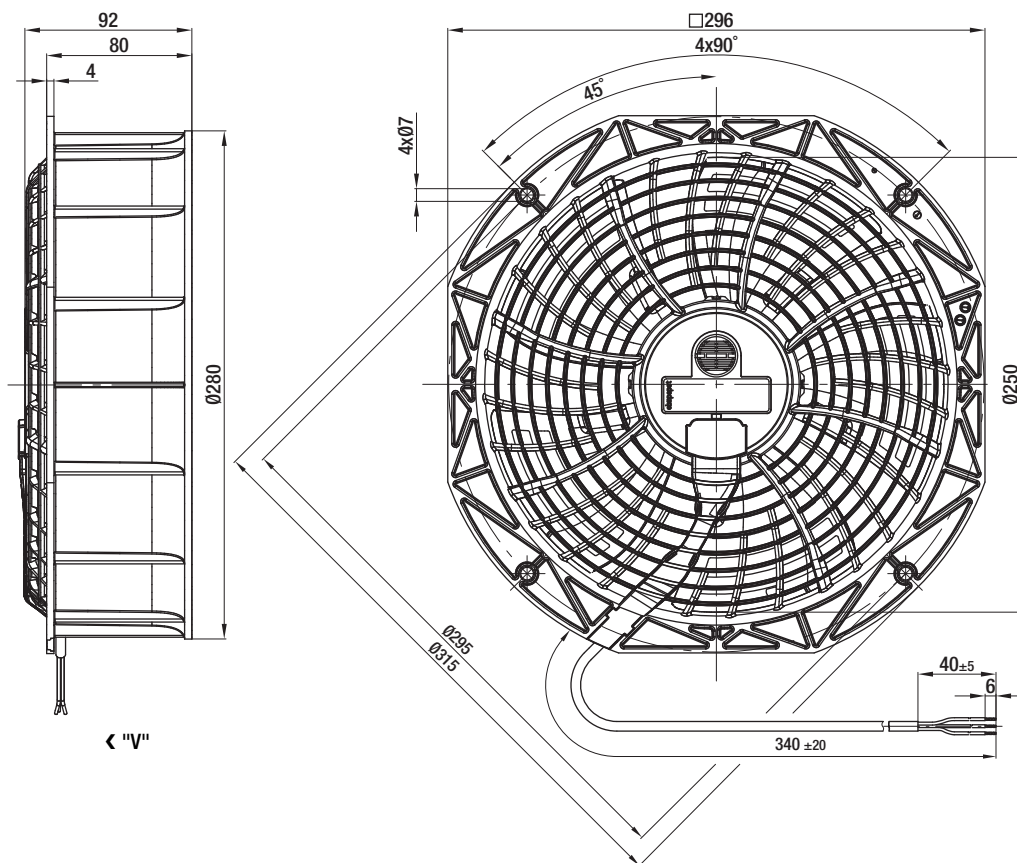
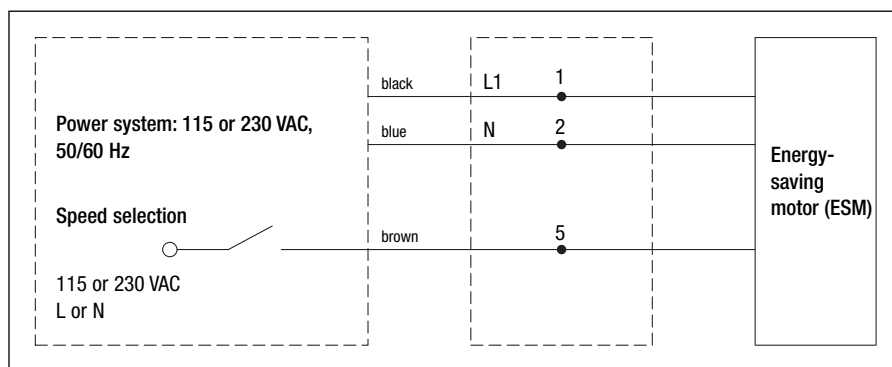
⁽¹⁾ Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



	n [rpm]	P ₁ [W]	I [A]	Lw _A [dB(A)]
A 1	1700	30	0,44	62
A 2	1700	31	0,45	63
A 3	1700	32	0,47	64
A 4	1700	32	0,47	66
A 5	1200	14	0,22	53
A 6	1200	15	0,24	54
A 7	1200	16	0,25	55
A 8	1200	17	0,26	57
B 1	1700	30	0,24	62
B 2	1700	31	0,24	63
B 3	1700	32	0,24	64
B 4	1700	32	0,24	66
B 5	1200	14	0,12	53
B 6	1200	15	0,13	54
B 7	1200	16	0,14	55
B 8	1200	17	0,14	57

– Electr. connection:



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

Energy-saving axial fans

Ø 300



- **Material:** Wall ring: Plastic PP
Blade: Plastic PA, fibreglass-reinforced
- **Number of blades:** 5
- **Direction of air flow:** "V", exhaust over struts
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST; CCC is applied for
- **Speed:** Using the programming unit, 2 speeds between n_{min} and n_{max} can be programmed.

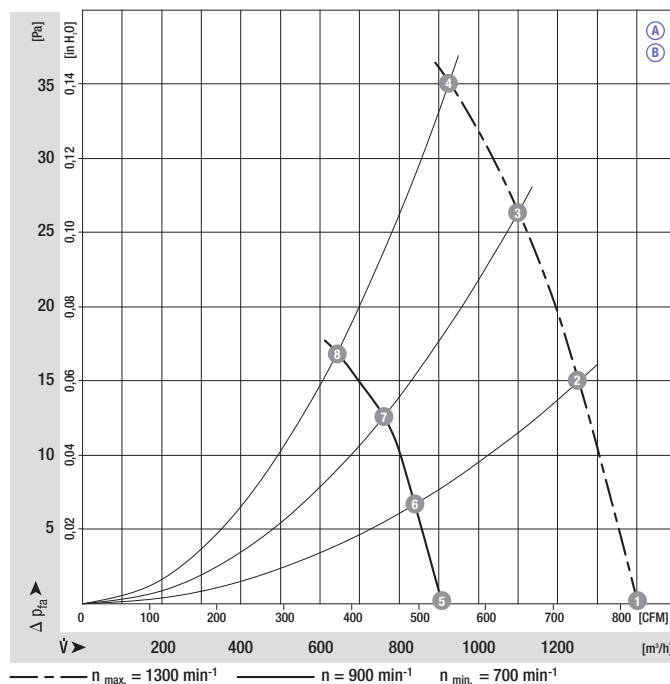
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operating range	Perm. amb. temp.	Mass
			VAC	Hz	rpm	W	A	Pa	°C	kg
W1G300-BB23 -01	M1G 055-BI	A	1~ 115	50/60	1300	35	0,50	35	-30..+50	1,75
W1G300-BB19 -01	M1G 055-BI	B	1~ 230	50/60	1300	35	0,27	35	-30..+50	1,75

subject to alterations

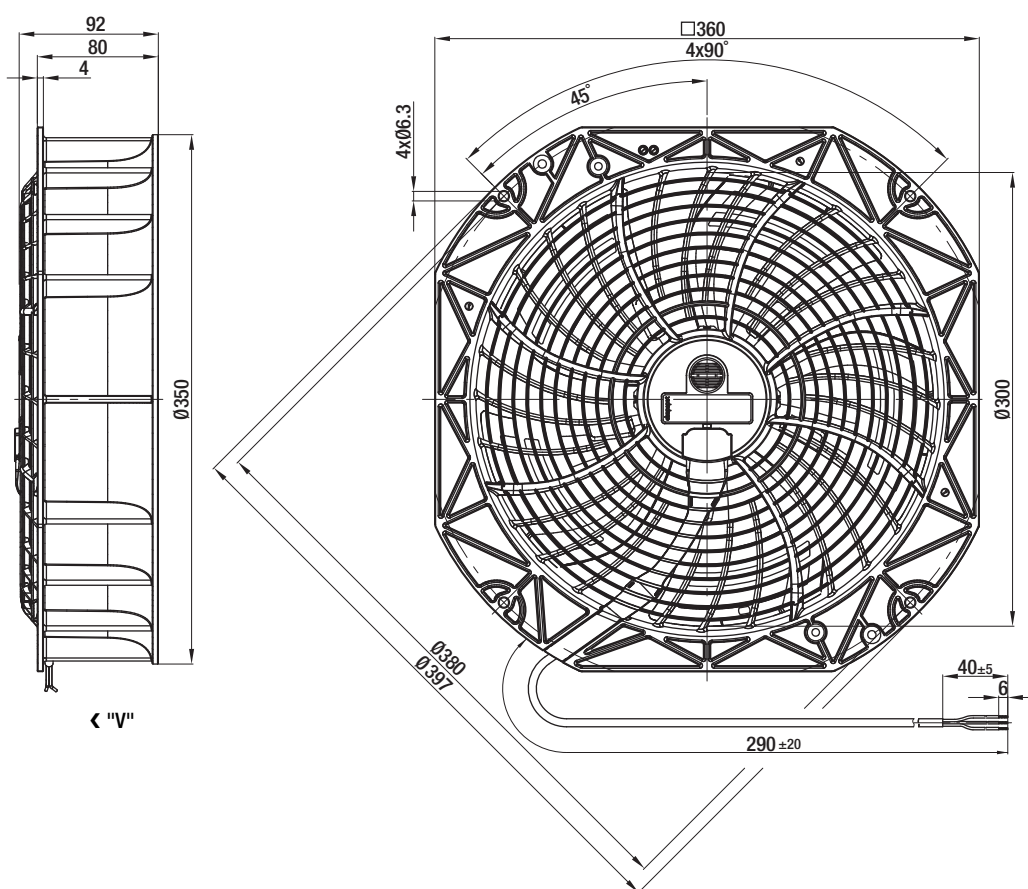
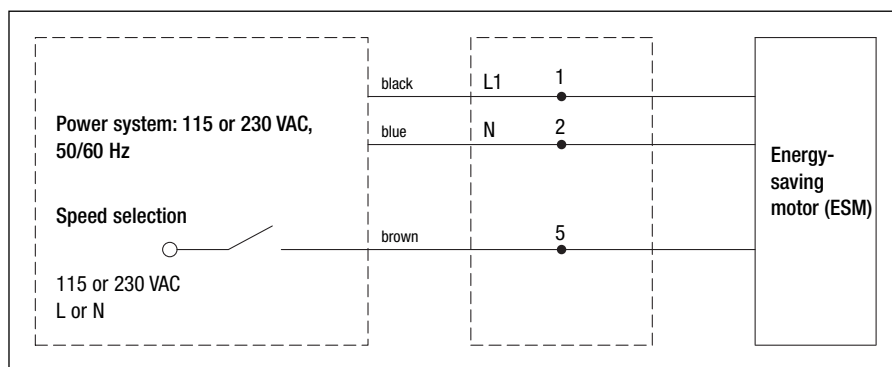
⁽¹⁾ Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



		n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
A	1	1300	28	0,41	58
A	2	1300	31	0,46	58
A	3	1300	32	0,47	57
A	4	1300	35	0,50	58
A	5	900	12	0,24	50
A	6	900	14	0,26	49
A	7	900	15	0,28	49
A	8	900	16	0,30	50
B	1	1300	32	0,25	58
B	2	1300	34	0,27	58
B	3	1300	34	0,27	57
B	4	1300	35	0,27	58
B	5	900	13	0,12	50
B	6	900	14	0,13	49
B	7	900	15	0,14	49
B	8	900	16	0,15	50

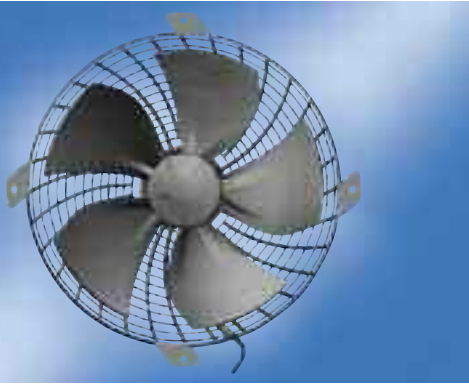
– Electr. connection:



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

Energy-saving axial fans

Ø 300



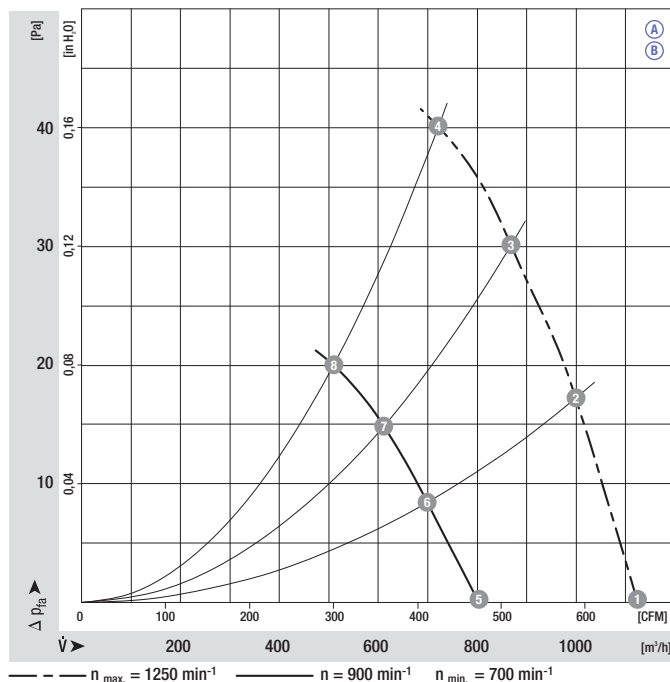
- **Material:** Blade: Plastic PA, fibreglass-reinforced
Guard grille: Plastic PP
- **Number of blades:** 5
- **Direction of air flow:** "A", intake over guard grille
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST; CCC is applied for
- **Speed:** Using the programming unit, 2 speeds between n_{min} and n_{max} can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operative range	Perm. amb. temp.	Mass
Type	Motor		VAC	Hz	rpm	W	A	Pa	°C	kg
S1G 300-CA23 -02	M1G 055-BI	A	1~ 115	50/60	1250	35	0,56	40	-30..+50	1,4
S1G 300-CA19 -02	M1G 055-BI	B	1~ 230	50/60	1250	35	0,28	40	-30..+50	1,4

subject to alterations

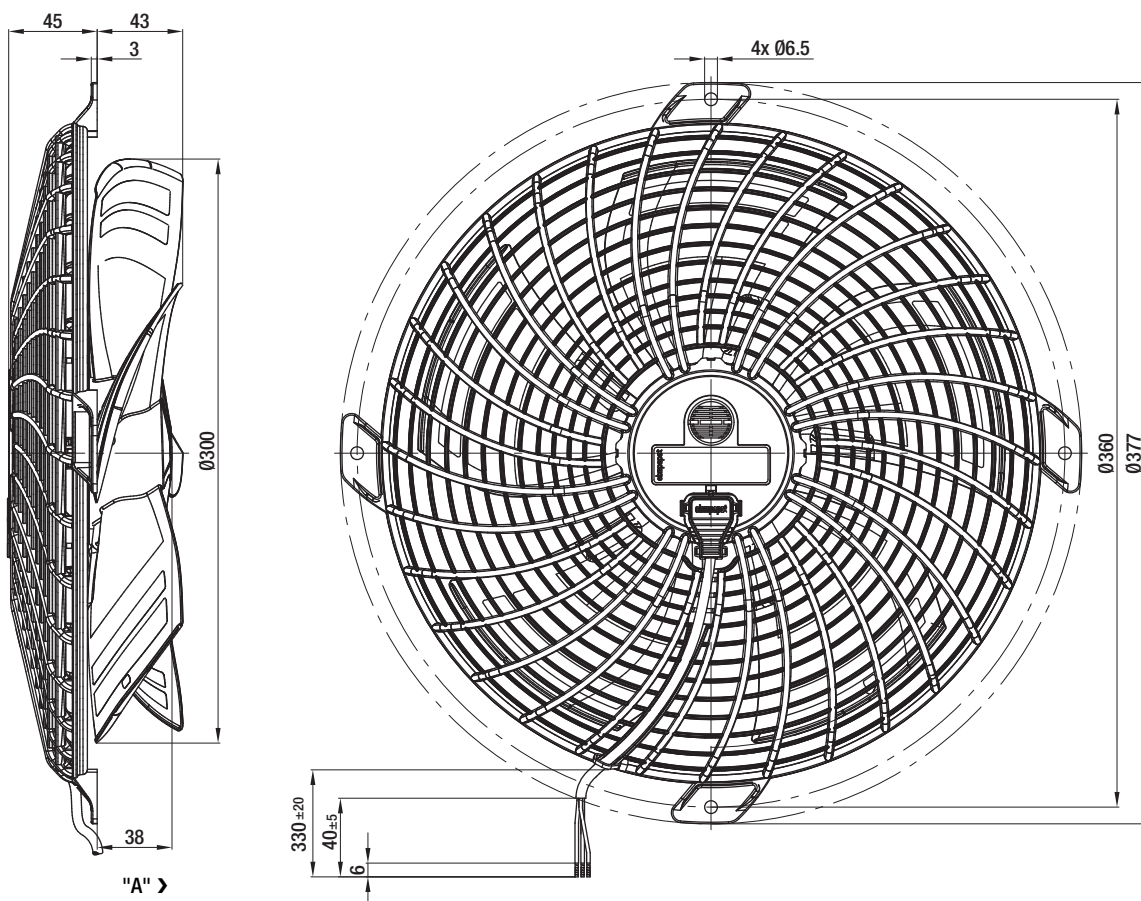
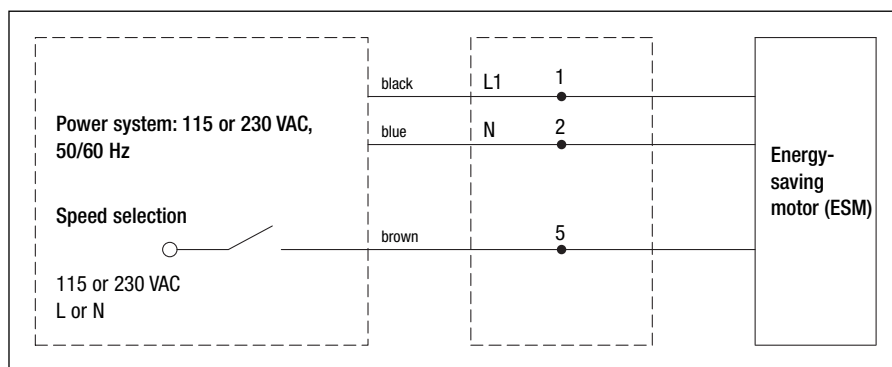
⁽¹⁾ Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



		n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
A	1	1250	26	0,42	64
A	2	1250	29	0,46	62
A	3	1250	33	0,52	62
A	4	1250	35	0,56	63
A	5	900	12	0,22	55
A	6	900	14	0,24	54
A	7	900	15	0,26	53
A	8	900	17	0,30	54
B	1	1250	26	0,21	64
B	2	1250	29	0,23	62
B	3	1250	33	0,26	62
B	4	1250	35	0,28	63
B	5	900	12	0,11	55
B	6	900	14	0,12	54
B	7	900	15	0,13	53
B	8	900	17	0,15	54

– Electr. connection:



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

The perfect match!

Backward curved centrifugal impellers and energy-saving motors as established on the market are now combined with our new compact modules. This results in a very compact unit with integrated inlet nozzle and a motor suspension which is directly connected to the mounting plate.

Mounting plate, inlet nozzle and motor suspension are made of robust and indestructible plastic, thereby taking advantage of the fact that no more compromises have to be made when it comes to their aero-acoustic design.

These new energy-saving centrifugal modules are available with impellers in diameters 175, 190 and 220 mm. They are extremely compact and also very easy to mount. There is no more need for elaborately adjusting the impeller to the nozzle. A plug-on guard grille on suction side is available as accessory.

The new semi-centrifugal K1G200 with energy-saving motor rounds off this new line. The new semi-centrifugal impeller design has been especially optimised in terms of noise and airflow performance in the medium pressure range and simply sets new standards.

Take advantage of what this completely pre-installed functional unit has to offer:

- compact design
- optimised, approved and guaranteed functional unit
- plug-and-play features
- easy to mount
- energy-saving motor (ESM)
- optional guard grille
- simple logistics

Energy efficiency

Compared to the conventionally used shaded pole motors, the energy-saving motors have a maximum efficiency of > 70 % and thus consume only about 1/3 to 1/6 of the power input of a shaded pole motor. Higher efficiency translates into less intrinsic heat being generated in operation, which means less heat dissipation. This makes for even more energy being saved, as less cooling capacity is needed in the first place.

The new energy-saving centrifugal modules

	Size 175, backward curved	24
	Size 190, backward curved	26
	Size 220, backward curved	28
	Size 200, semi-centrifugal	30



EC centrifugal module

backward curved, Ø 175



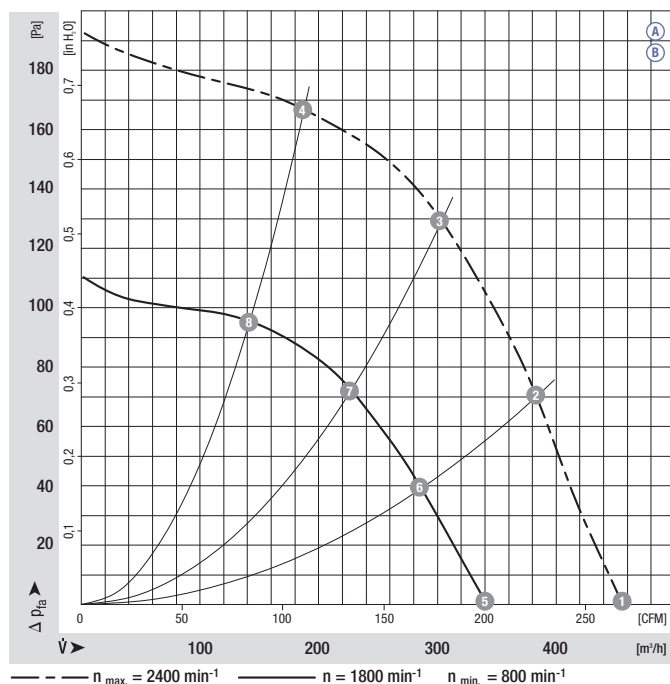
- **Material:** Housing: Plastic PA, fibreglass-reinforced
Impeller: Plastic PA, fibreglass-reinforced
Rotor: Galvanised
- **Number of blades:** 7
- **Direction of rotation:** clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None, open rotor
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST are applied for
- **Speed:** Using the programming unit, 2 speeds between $n_{\min}$ and $n_{\max}$ can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Perm. amb. temp.
Type	Motor	VAC	Hz	rpm	W	A	°C	
K1G 175	M1G 055-BD	A	1~ 115	50/60	2400	28	0,41	-30..+50
K1G 175	M1G 055-BD	B	1~ 230	50/60	2400	28	0,21	-30..+50

subject to alterations

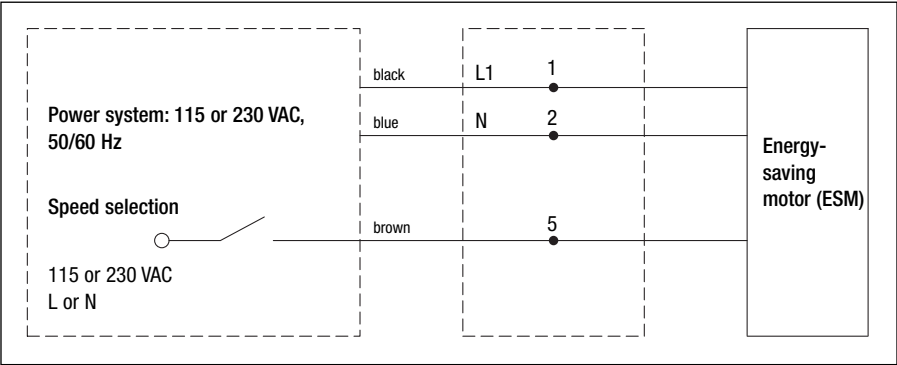
(1) Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



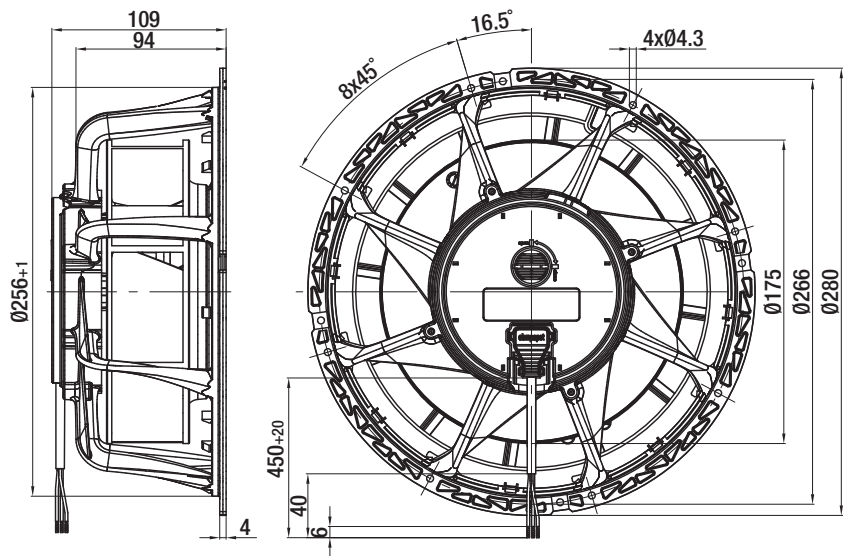
	n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
A 1	2400	17	0,22	63
A 2	2400	24	0,34	60
A 3	2400	28	0,41	60
A 4	2400	27	0,39	62
A 5	1800	10	0,15	57
A 6	1800	13	0,20	55
A 7	1800	16	0,25	54
A 8	1800	15	0,23	56
B 1	2400	17	0,15	63
B 2	2400	24	0,19	60
B 3	2400	28	0,21	60
B 4	2400	27	0,21	62
B 5	1800	10	0,08	57
B 6	1800	13	0,10	55
B 7	1800	16	0,13	54
B 8	1800	15	0,12	56

– Electr. connection:



Mass of centrifugal module with support bracket

Centrifugal module with support bracket	kg
K1G 175-AI50 -02	1,2
K1G 175-AI73 -02	1,2



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

EC centrifugal module

backward curved, Ø 190



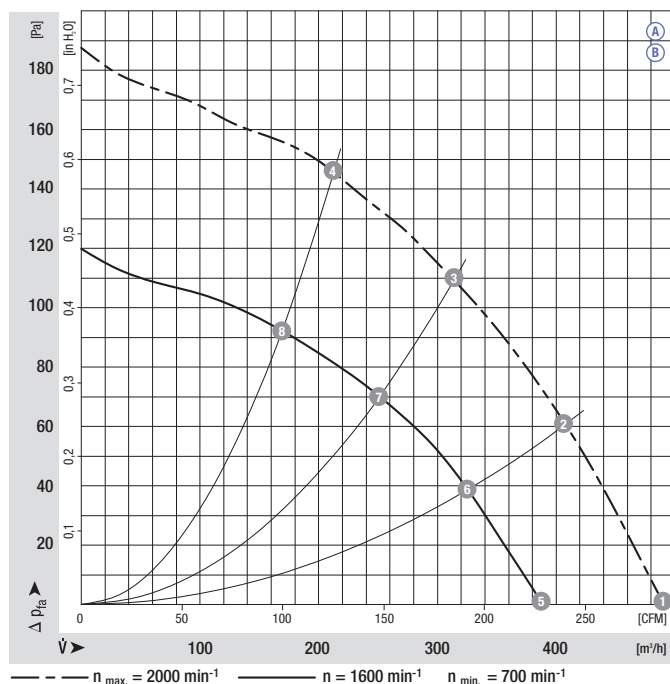
- **Material:** Housing: Plastic PA, fibreglass-reinforced
Impeller: Plastic PA, fibreglass-reinforced
Rotor: Galvanised
- **Number of blades:** 7
- **Direction of rotation:** clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None, open rotor
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST are applied for
- **Speed:** Using the programming unit, 2 speeds between $n_{\min}$ and $n_{\max}$ can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Perm. amb. temp.
Type	Motor	VAC	Hz	rpm	W	A	°C	
K1G 190	M1G 055-BD	A	1~115	50/60	2000	29	0,41	-30..+50
K1G 190	M1G 055-BD	B	1~230	50/60	2000	29	0,22	-30..+50

subject to alterations

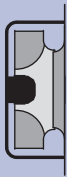
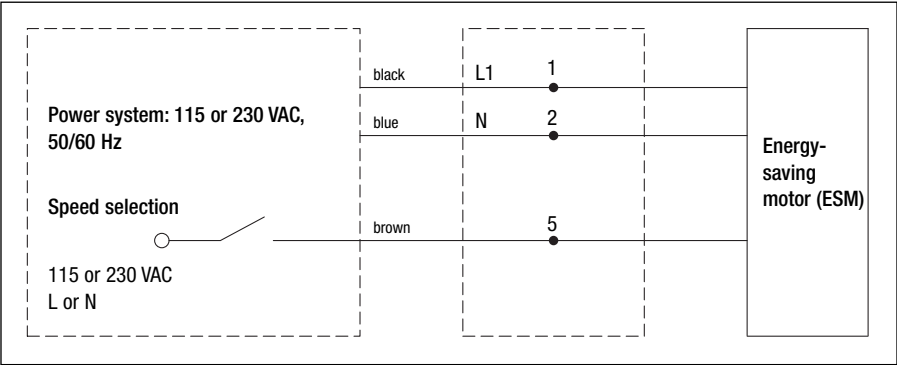
(1) Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



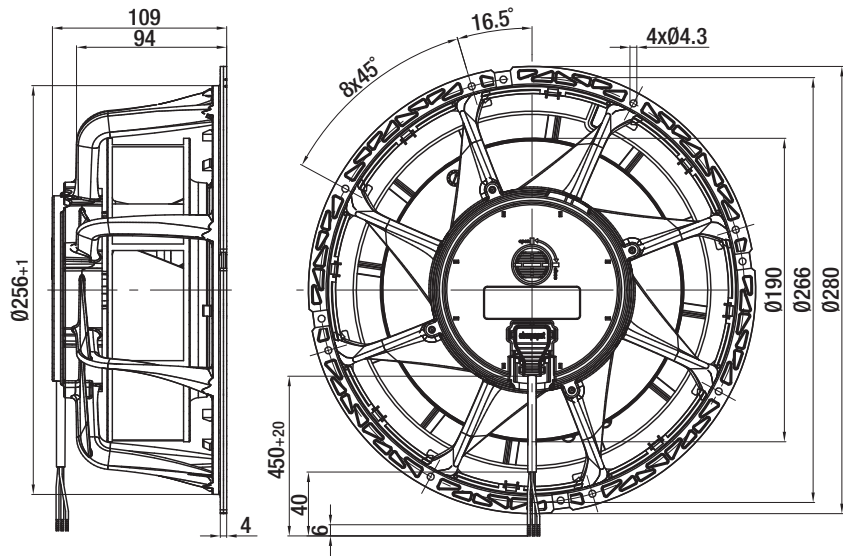
	n [rpm]	P ₁ [W]	I [A]	L _{W,A} [dB(A)]
A 1	2000	21	0,31	62
A 2	2000	26	0,36	60
A 3	2000	29	0,41	58
A 4	2000	28	0,39	59
A 5	1600	13	0,21	57
A 6	1600	17	0,25	55
A 7	1600	20	0,28	53
A 8	1600	18	0,27	54
B 1	2000	21	0,16	62
B 2	2000	26	0,20	60
B 3	2000	29	0,22	58
B 4	2000	28	0,22	59
B 5	1600	13	0,11	57
B 6	1600	17	0,13	55
B 7	1600	20	0,16	53
B 8	1600	18	0,14	54

– Electr. connection:



Mass of centrifugal module with support bracket

Centrifugal module with support bracket	kg
K1G 190-AD50 -02	1,3
K1G 190-AD73 -02	1,3



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

EC centrifugal module

backward curved, Ø 220



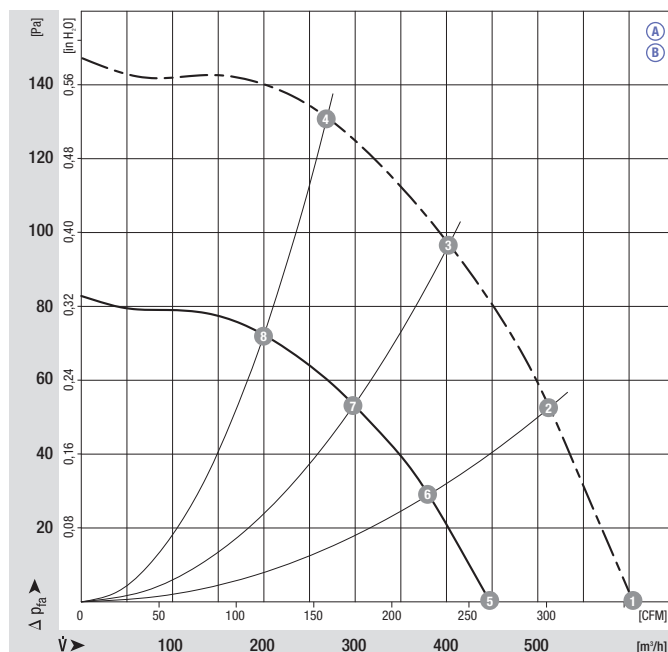
- **Material:** Housing: Plastic PA, fibreglass-reinforced
Impeller: Plastic PA, fibreglass-reinforced
Rotor: Galvanised
- **Number of blades:** 11
- **Direction of rotation:** clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None, open rotor
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST are applied for
- **Speed:** Using the programming unit, 2 speeds between $n_{\min}$ and $n_{\max}$ can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Perm. amb. temp.
Type	Motor		VAC	Hz	rpm	W	A	°C
K1G 220	M1G 055-BD	A	1~ 115	50/60	1600	31	0,44	-30..+50
K1G 220	M1G 055-BD	B	1~ 230	50/60	1600	31	0,26	-30..+50

subject to alterations

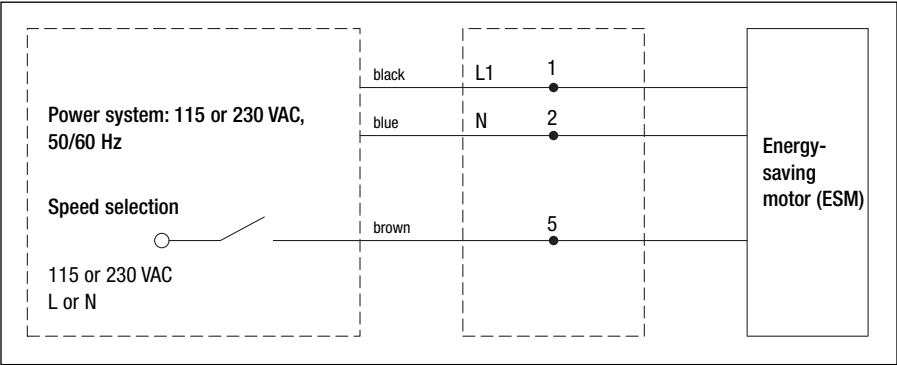
(1) Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



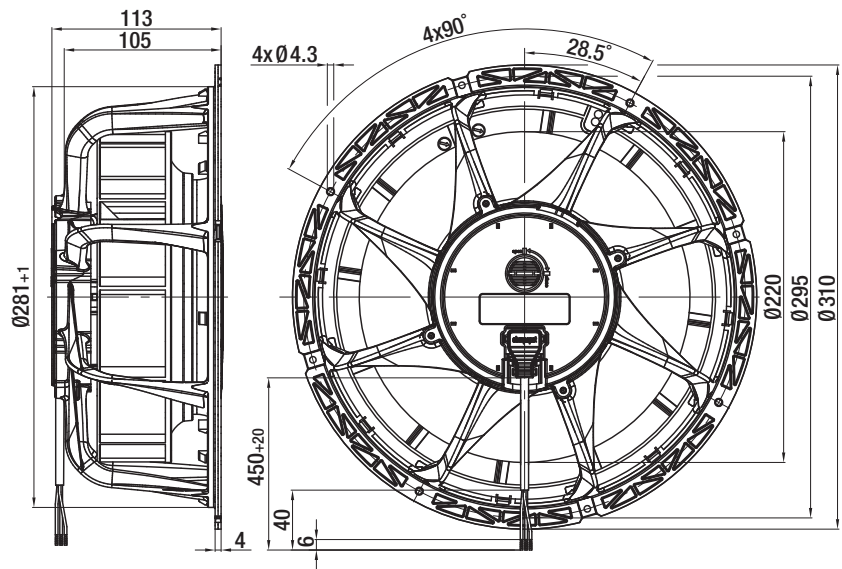
	n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
A 1	1600	18	0,25	58
A 2	1600	26	0,37	57
A 3	1600	31	0,44	55
A 4	1600	30	0,44	56
A 5	1200	7	0,10	52
A 6	1200	11	0,15	50
A 7	1200	13	0,18	48
A 8	1200	12	0,18	49
B 1	1600	18	0,14	58
B 2	1600	26	0,21	57
B 3	1600	31	0,26	55
B 4	1600	30	0,25	56
B 5	1200	7	0,06	52
B 6	1200	11	0,08	50
B 7	1200	13	0,11	48
B 8	1200	12	0,10	49

– Electr. connection:



Mass of centrifugal
module with support
bracket

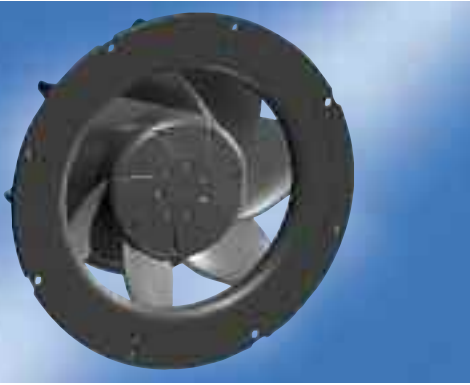
Centrifugal module with support bracket	kg
K1G 220-AF90 -02	1,4
K1G 220-AF92 -02	1,4



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

EC centrifugal module

semi-centrifugal, Ø 200



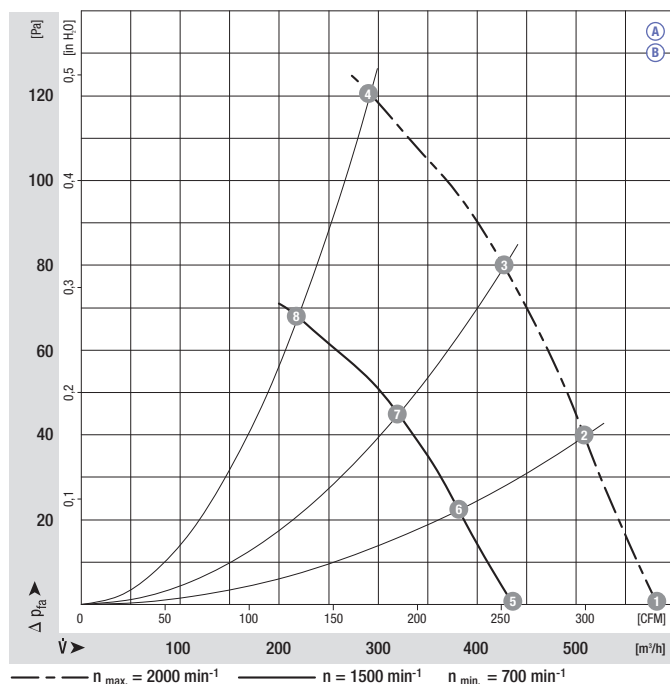
- **Material:** Housing: Plastic PA, fibreglass-reinforced
Blades: Plastic PA, fibreglass-reinforced
- **Number of blades:** 7
- **Direction of rotation:** clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None, open rotor
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics and TOP
- **Electrical connection:** Plug-in connection on motor side
- **Protection class:** II
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST are applied for
- **Speed:** Using the programming unit, 2 speeds between $n_{\min}$ and $n_{\max}$ can be programmed.

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm ⁽¹⁾	Max. Power input ⁽¹⁾	Max. Current draw ⁽¹⁾	Max. operating range	Perm. amb. temp.
Type	Motor	VAC	Hz	rpm	W	A	PA	°C	
K1G 200	M1G 055-BD	A	1~115	50/60	2000	33	0,48	120	-30..+50
K1G 200	M1G 055-BD	B	1~230	50/60	2000	33	0,25	120	-30..+50

subject to alterations

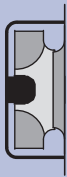
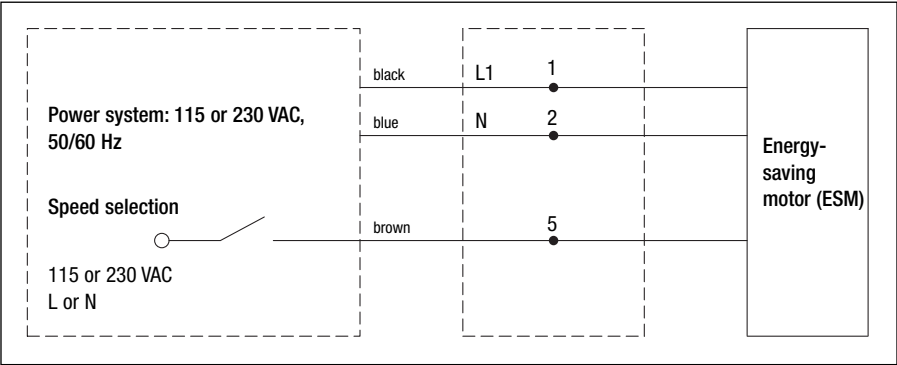
(1) Nominal data in operating point with maximum load and 115 or 230 VAC

Curves



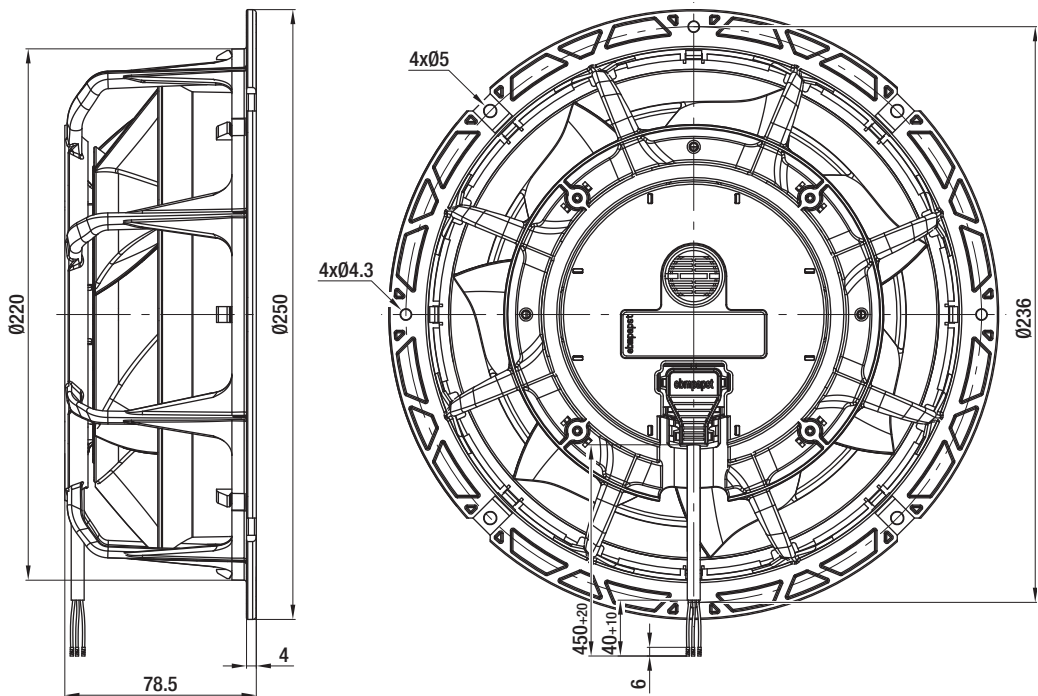
	n [rpm]	P ₁ [W]	I [A]	L _{wA} [dB(A)]
A 1	2000	27	0,40	64
A 2	2000	30	0,44	62
A 3	2000	33	0,48	61
A 4	2000	32	0,46	63
A 5	1500	15	0,21	59
A 6	1500	16	0,25	57
A 7	1500	18	0,25	55
A 8	1500	17	0,28	56
B 1	2000	27	0,21	64
B 2	2000	30	0,23	62
B 3	2000	33	0,25	61
B 4	2000	32	0,24	63
B 5	1500	15	0,13	59
B 6	1500	16	0,13	57
B 7	1500	18	0,14	55
B 8	1500	17	0,14	56

– Electr. connection:



Mass of centrifugal module with support bracket

Centrifugal module with support bracket	kg
K1G 200-AA95 -02	1,2
K1G 200-AA73 -02	1,2



Connection lead (total length 450 mm) is fitted ex works and can be detached
Other lengths available as accessory (see page 42).

Same on the outside – better on the inside!

Typical of ebm-papst: we have taken a standard motor and a principle that for decades has enjoyed success in countless applications and made it more intelligent, energy-efficient and environmentally friendly! Features of the shaded-pole motor (Q-motor) such as outstanding running smoothness, low maintenance and a long service life have made asynchronous motors a standard component in small fans. Our objective was to significantly improve the inner mechanism of the Q-motor by incorporating EC technology – while keeping the exterior design identical. Conventional Q-motors can now be replaced with the new “iQ”-motors if the fans fail or if a more energy-efficient solution is required.

Exchange your old motor for 70 % more efficiency

During the development of the iQ-motor, our engineers took giant strides towards reducing energy costs and fulfilling environmental protection requirements. By integrating ebm-papst EC technology, new iQ-motor now features far better efficiency and pays for itself quickly due to its significant energy-savings.

The best part of all: from the outside, it is the same old fan. The identical dimensions and mounting options enable simple replacement without changes, structural modifications or any other extra effort. Axial impellers with diameters of 154 to 254 mm can be installed on the new iQ-motor just as before. The same applies to the mounting flange, the wall ring and the guard grille. Therefore, thousands of applications can easily be made more energy-efficient as part of routine maintenance, and may benefit at once from a drastic increase in efficiency, without any development effort.

The best equipment – not just in an emergency

Of course, the enormous increase in energy efficiency is not the only feature we have packed into the intelligent motor. Important electronic features ensure that the iQ-motor works even more “conscientiously” than its simple counterpart. For example, the motor has a closed loop speed control that keeps it at the same speed at all times, regardless of the diameter of the installed blade. With dirt or other interference factors, they do not cause an overload of the motor. The iQ-motor continues working at reduced speed.

One design – thousands of applications

Just one design is compatible with the entire range of impellers, from 154 to 254 mm. This makes logistics easier and keeps your development effort low. Moreover, the smallest size, the iQ 3608, is the most compact version of an EC motor for its field of application in refrigeration. It has an axial installation depth of only 74 mm, thus guaranteeing the necessary little bit of air in very tight installation spaces.

Energy-saving and quiet – throughout its long service

All variants share the low-noise performance and the famous long service life that have made this motor type so popular for so long. A critical role is played by a particularly low-friction bearing system with double ball bearings. Thus the iQ-motor can continue to yield its enormous savings potential for a very, very long time after only a brief amortisation phase. Available options include the IP 54 type of protection and, of course, a standards-compliant TÜV approval.

The iQ-motor

Quadratic. Practical. [Intelligent.](#)

	Technical data	34
	iQ savings potential	37
	Air performance curves	38



iQ-motor

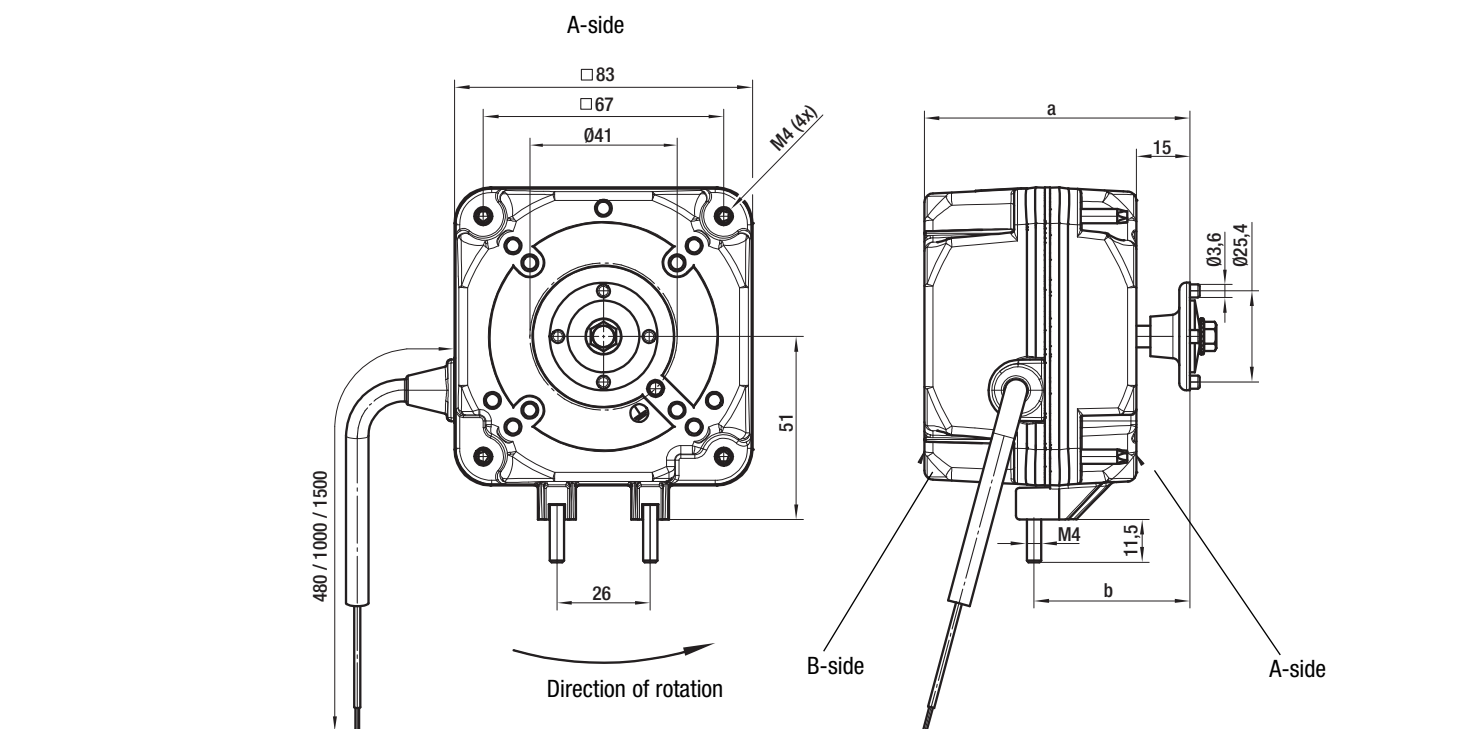


- **Material:**
Housing: Die-cast aluminium
- **Direction of air flow:** "V" and "A"
(depending on axial impeller used)
- **Direction of rotation:** Counterclockwise,
seen on shaft end
- **Type of protection:** IP 42 (only with
horizontal shaft), optional IP 54 (any shaft
position)
- **Insulation class:** "H"
- **Mounting position:** Any
- **Mode of operation:** Con. operation (S1)
- **Bearings:** Maintenance-free ball bearings
- **Motor protection:** Via electronics
- **Electrical connection:** Mains cable
- **Protection class:** I
- **Approvals:** TÜV; UL (in progress)
- **Mounting attachment parts:**
Guard grille and wall ring are attached to
the projecting thread ends on the A side
- **Axial impeller attachment:**
A plastic adapter with catching peg and
M4 screw is used to secure the impeller
on the motor shaft

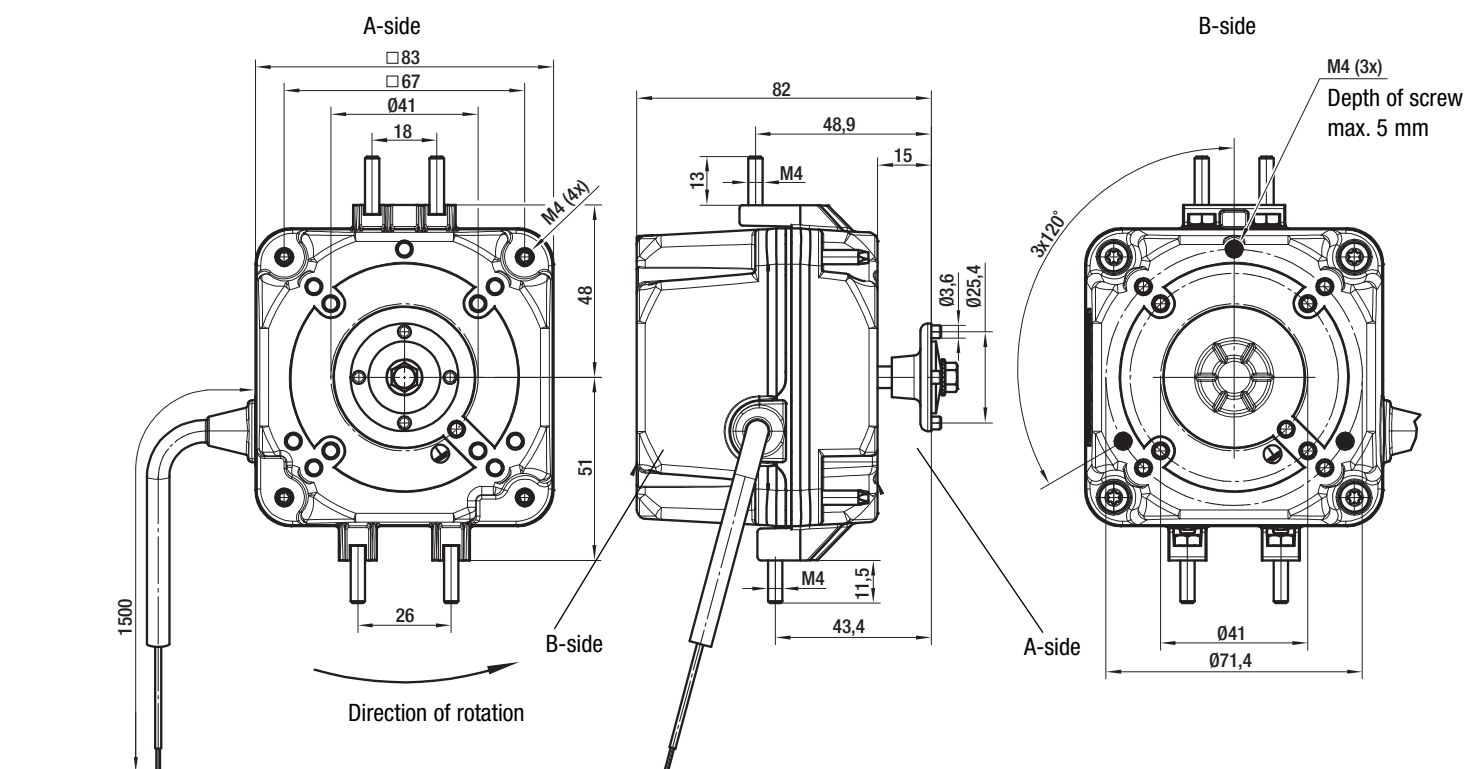
Nominal data	Nominal voltage	Frequency	Speed/rpm	Output capacity	Perm. amb. temp.	Mass	Dimensions	
Type	V	Hz	rpm	W	°C	kg	a	b
iQ 3608	220-240 115	50/60 50/60	1300 1550	3 3	-40..+50 -40..+50	0,5	74	43,5
iQ 3612	220-240 115	50/60 50/60	1300 1550	10 10	-40..+50 -40..+50	0,6	82	43,5
iQ 3620	220-240 115	50/60 50/60	1300 1550	20 20	-40..+50 -40..+50	0,8	90	51,5

subject to alterations

	Standard design	Design with 60° angle	Design with 90° angle
Number of specimens	10	10	10
Failure load (kN)	78.5 ± 1.5	78.5 ± 1.5	78.5 ± 1.5
Displacement at failure (mm)	1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2
Modulus of elasticity (GPa)	12.5 ± 0.5	12.5 ± 0.5	12.5 ± 0.5
Poisson's ratio	0.25 ± 0.02	0.25 ± 0.02	0.25 ± 0.02
Shear modulus (GPa)	9.4 ± 0.4	9.4 ± 0.4	9.4 ± 0.4
Volume fraction of fibers (%)	10 ± 1	10 ± 1	10 ± 1
Fiber length (mm)	10 ± 1	10 ± 1	10 ± 1
Fiber diameter (μm)	10 ± 1	10 ± 1	10 ± 1
Fiber aspect ratio	10 ± 1	10 ± 1	10 ± 1
Fiber volume fraction (%)	10 ± 1	10 ± 1	10 ± 1
Fiber orientation (°)	0 ± 5	0 ± 5	0 ± 5
Fiber distribution (mm)	10 ± 1	10 ± 1	10 ± 1
Fiber alignment (mm)	10 ± 1	10 ± 1	10 ± 1
Fiber dispersion (mm)	10 ± 1	10 ± 1	10 ± 1
Fiber density (g/cm³)	1.5 ± 0.1	1.5 ± 0.1	1.5 ± 0.1
Fiber strength (MPa)	1500 ± 100	1500 ± 100	1500 ± 100
Fiber elongation (%)	2.5 ± 0.2	2.5 ± 0.2	2.5 ± 0.2
Fiber modulus (GPa)	120 ± 5	120 ± 5	120 ± 5
Fiber Poisson's ratio	0.25 ± 0.02	0.25 ± 0.02	0.25 ± 0.02
Fiber shear modulus (GPa)	90 ± 4	90 ± 4	90 ± 4
Fiber volume fraction (%)	10 ± 1	10 ± 1	10 ± 1
Fiber orientation (°)	0 ± 5	0 ± 5	0 ± 5
Fiber distribution (mm)	10 ± 1	10 ± 1	10 ± 1
Fiber alignment (mm)	10 ± 1	10 ± 1	10 ± 1
Fiber dispersion (mm)	10 ± 1	10 ± 1	10 ± 1
Fiber density (g/cm³)	1.5 ± 0.1	1.5 ± 0.1	1.5 ± 0.1
Fiber strength (MPa)	1500 ± 100	1500 ± 100	1500 ± 100
Fiber elongation (%)	2.5 ± 0.2	2.5 ± 0.2	2.5 ± 0.2
Fiber modulus (GPa)	120 ± 5	120 ± 5	120 ± 5
Fiber Poisson's ratio	0.25 ± 0.02	0.25 ± 0.02	0.25 ± 0.02
Fiber shear modulus (GPa)	90 ± 4	90 ± 4	90 ± 4



Multi-function design (only iQ 3612)



iQ-motor – combination with axial impellers

Power input and air flow



- **Power ratings (220 - 240 V design):** Power input and air flow at 230 V / 50 Hz and a constant speed of 1300 min⁻¹.

Motor	Axial impeller diameter	Axial impeller blade angle	Curves	Max. power input	Power input running at free air	Air flow running at free air at n=1300 rpm
iQ 3608	mm	°		W	W	m³/h
	154	22	A	2,8	2,5	150
	154	28		3,2	3	190
	154	34		3,7	3,5	210
	172	22	B	5,3	3	240
	172	28		6,7	4,1	270
	172	34		7,5	5,5	300
	200	22	C	7,5	5	350
	200	28		7,5	6	400
iQ 3612	mm	°		W	W	m³/h
	200	22	D	9,5	4,4	350
	200	28		11	5,3	400
	200	34		15	7,8	460
	230	22	E	23	9,5	520
	230	28		21,5	15,5	720
	230	34		23	19,5	750
	254	22	F	23	15	700
	254 *	28		23	23	950
iQ 3620	mm	°		W	W	m³/h
	254	22	G	26	11,8	700
	254	28		30	18,3	950
	254	34		31	26,8	1000
	300	22	H	32	27,5	1400

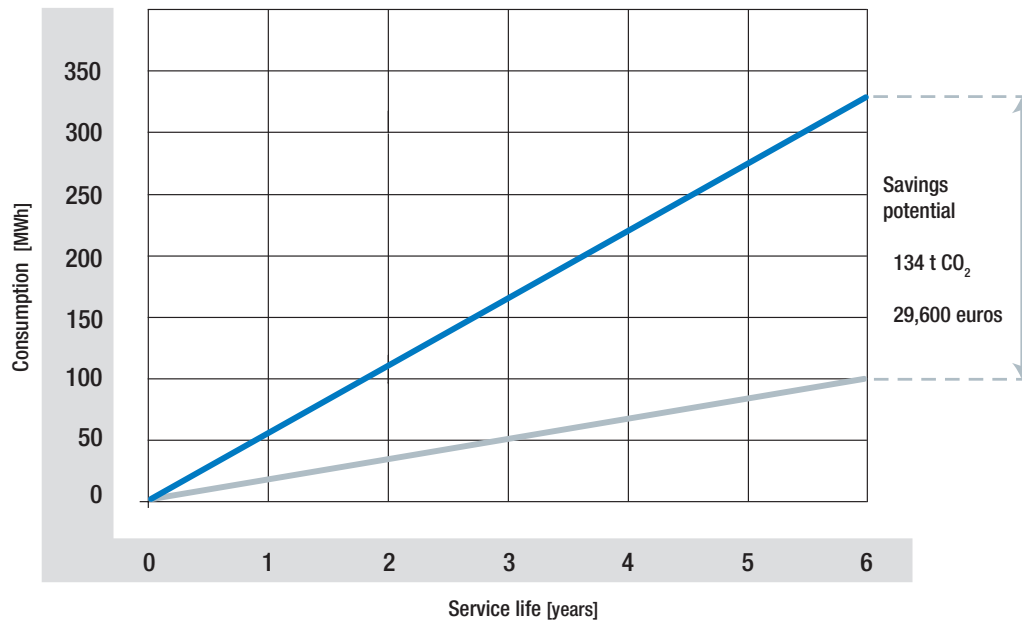
subject to alterations

* Depending on back pressure, full nominal speed of 1300 min⁻¹ is not reached to some part. Depending on mounting situation, a speed of approx. 1200 min⁻¹ (+/- 100 min⁻¹) is reached. Due to the intelligent electronics, however, safe (permanent) operation is still guaranteed.

iQ – Intelligence that pays

The iQ savings potential in the long term

If you look at the figures for the iQ-motor over a prolonged period, its considerable energy-savings potential becomes especially obvious.



Electricity price: 0.13 euro per kWh

Number of motors: 200

Continuous operation (24 h/365 d)

Axial blades: 200 mm/28° blade angle

CO₂ emissions factor: 0.596 kg per kWh (Federal Environment Agency, Dessau, May 2008)

— iQ 3612
— AC-shaded-pole motor (comparable)



All advantages at a glance

- High efficiency of up to 65 %
- Constant speed, even in the event of voltage fluctuations
- High running smoothness due to low-friction bearing system
- Intelligent electronics with n-control, overload and locked-rotor protection
- Conventional AC technology can be replaced easily
- Identical accessories and dimensions to Q-motor
- Long service life due to maintenance-free ball bearings
- One solution replaces multiple sizes of comparable AC motors

A quick example calculation:

A typical supermarket operates 200 AC fans with 200 mm blades (blade angle 28°) in its refrigeration units. If the shaded-pole motors were to be replaced by iQ motors, the energy consumption would be reduced by 38 megawatt hours. That is an annual saving of more than 4,950 euros* and a good 22.6 tonnes of CO₂.



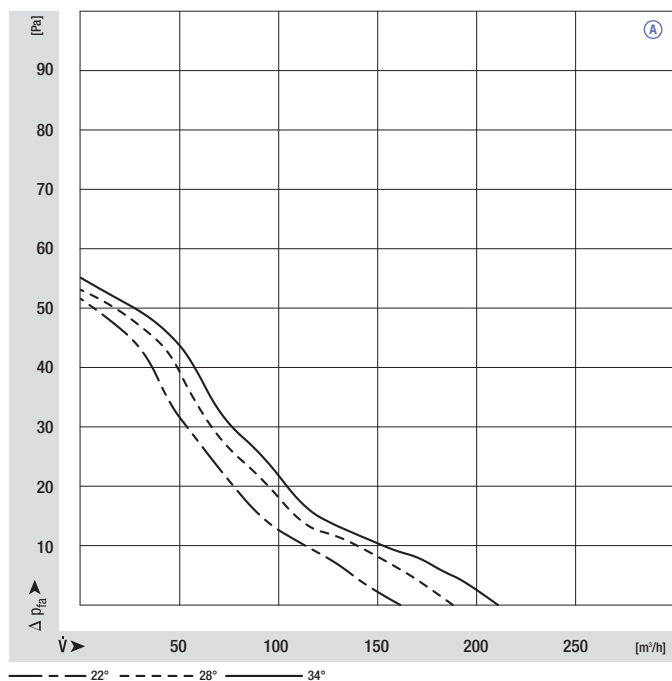
Reduction in power input:: 70 %	Annual reduction in energy consumption: 38 MWh	Annual reduction in energy costs: ≈ 4,950 euros total	Annual reduction in emissions: 22.6 tonnes CO₂
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*Assumptions: electricity price 0.13 euros per kWh, continuous operation 24 hours a day, 365 days a year

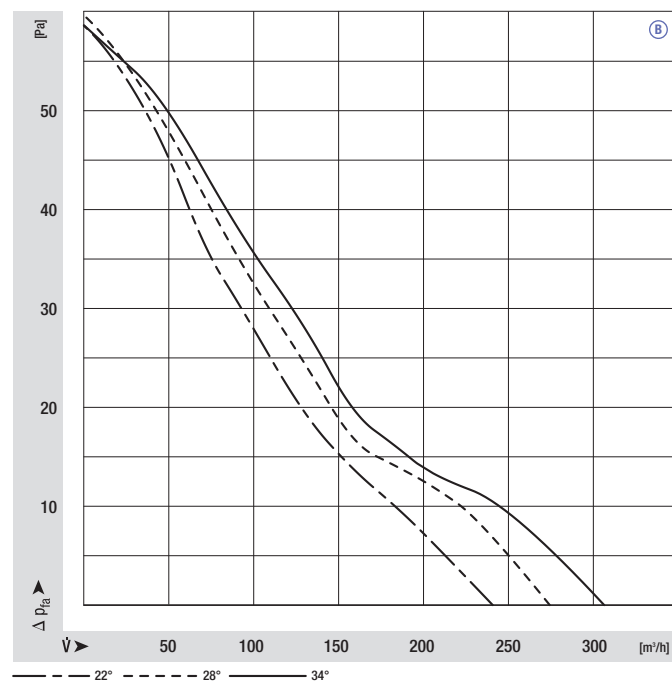
iQ-motor

Air performance curves (measured in wall ring)

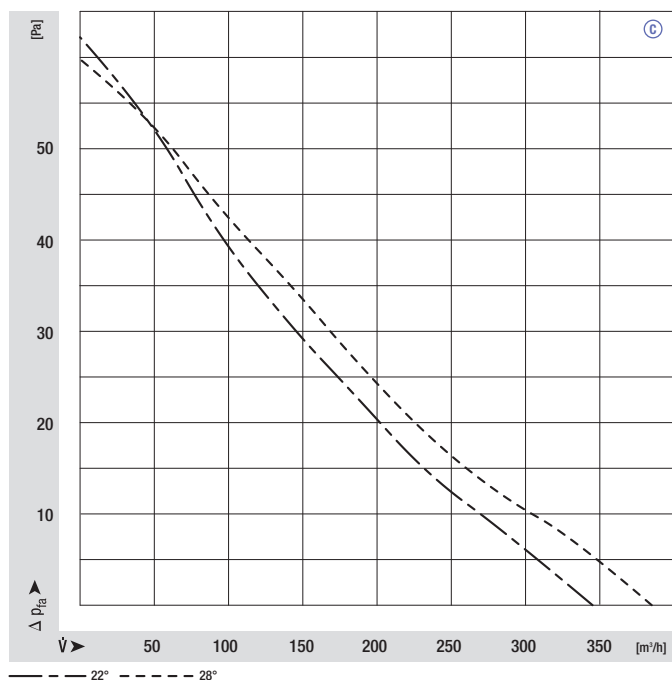
iQ 3608, Ø 154



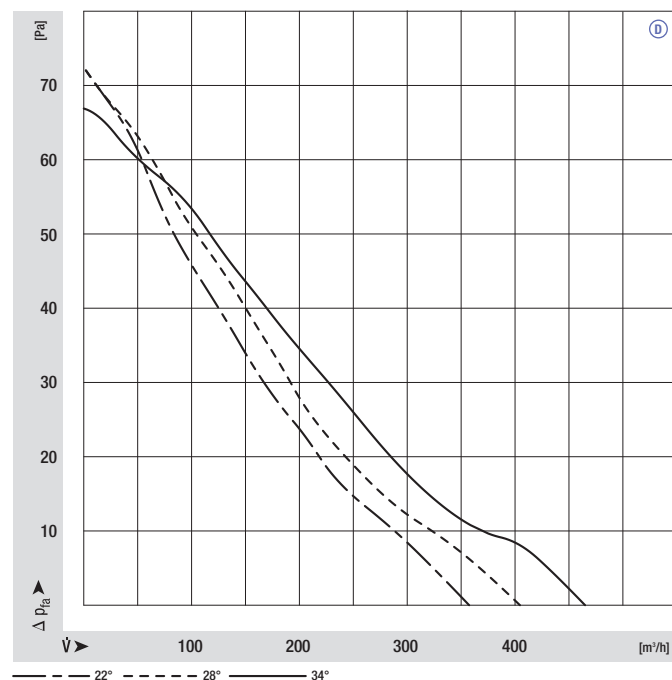
iQ 3608, Ø 172



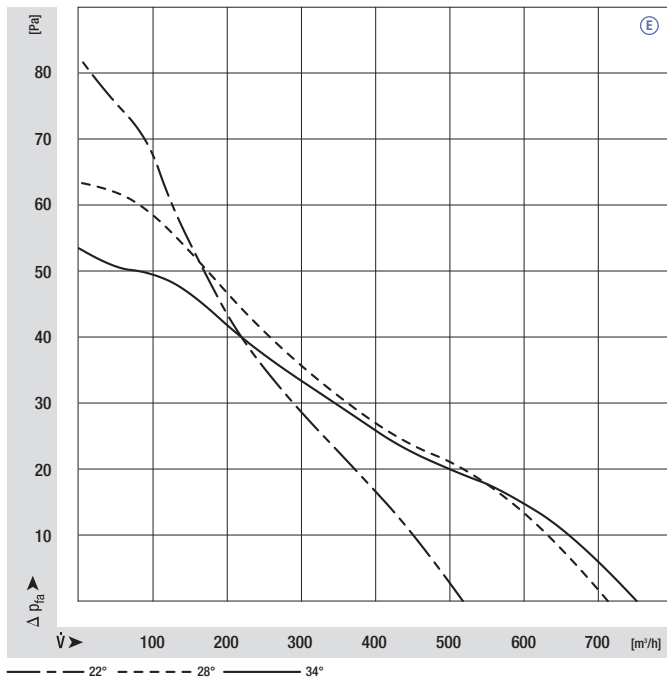
iQ 3608, Ø 200



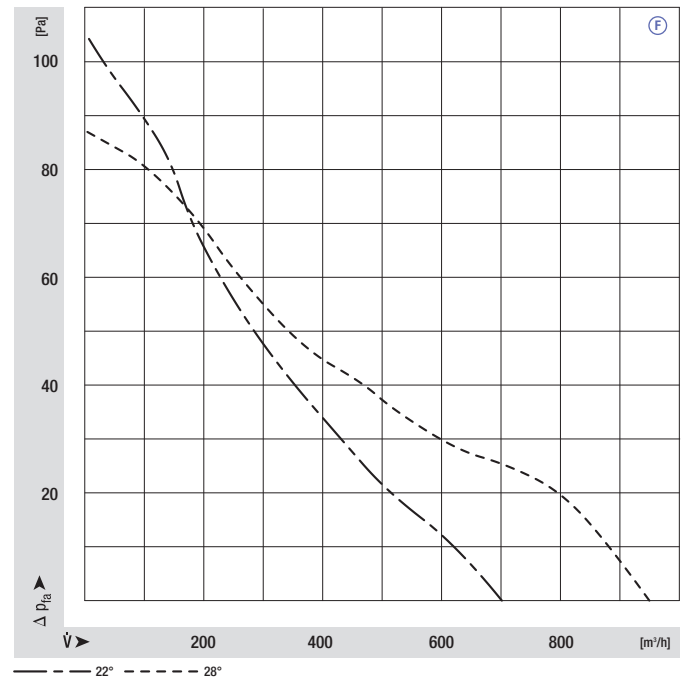
iQ 3612, Ø 200



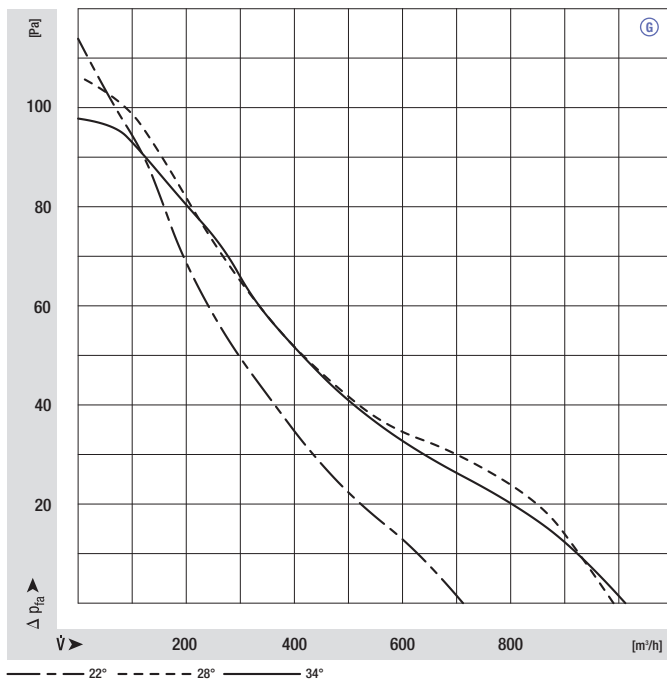
iQ 3612, Ø 230



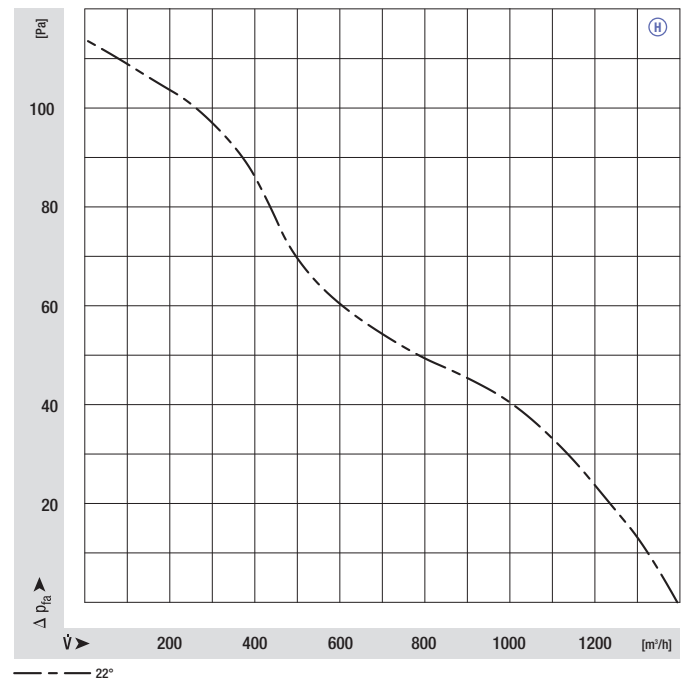
iQ 3612, Ø 254

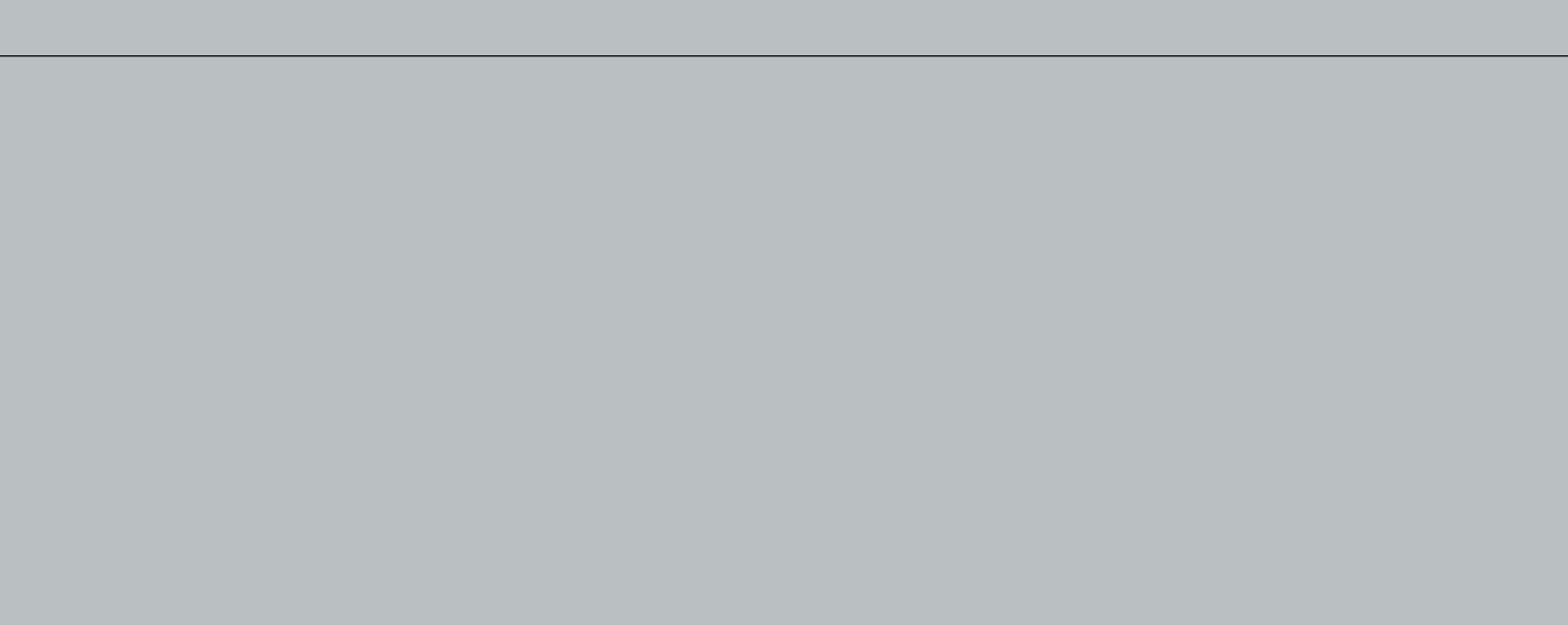


iQ 3620, Ø 254



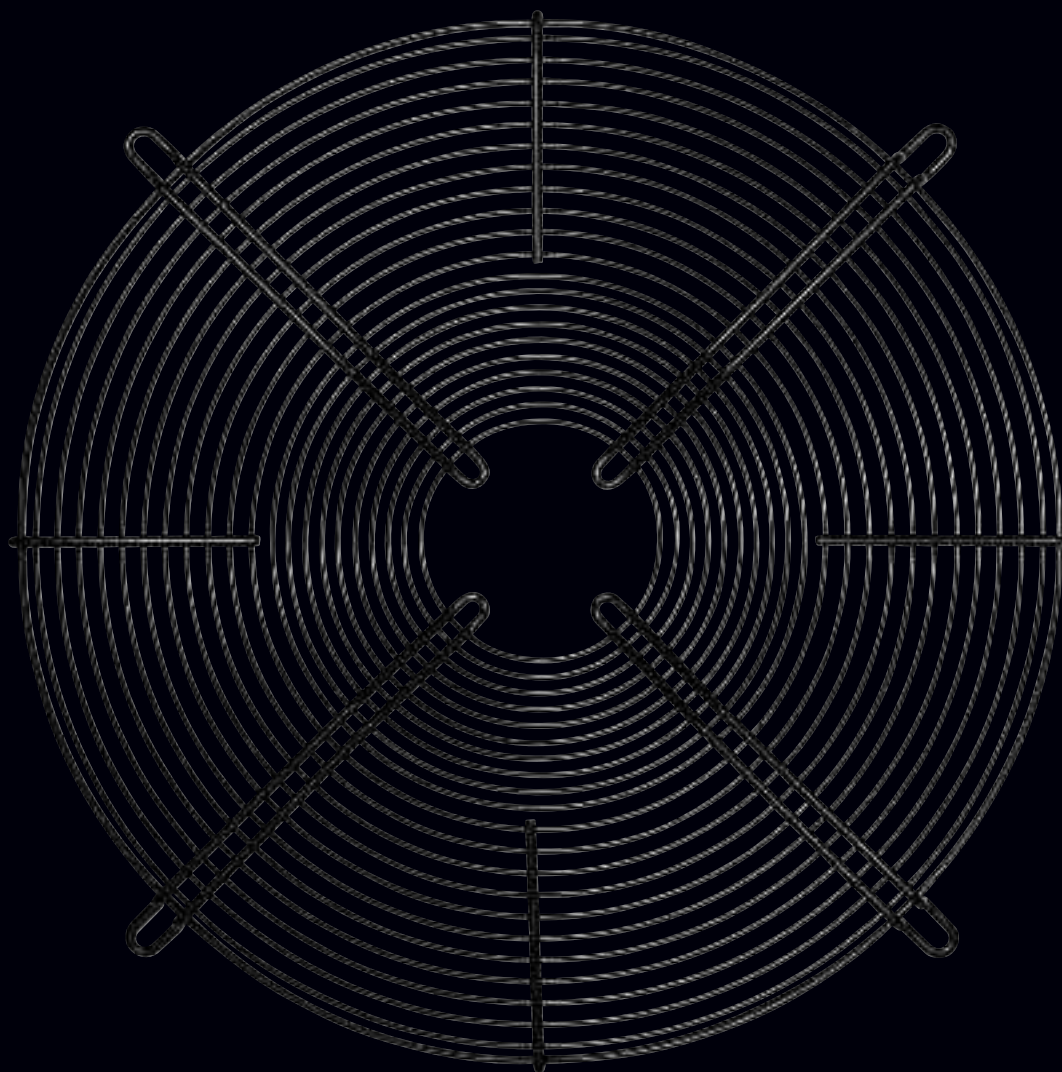
iQ 3620, Ø 300



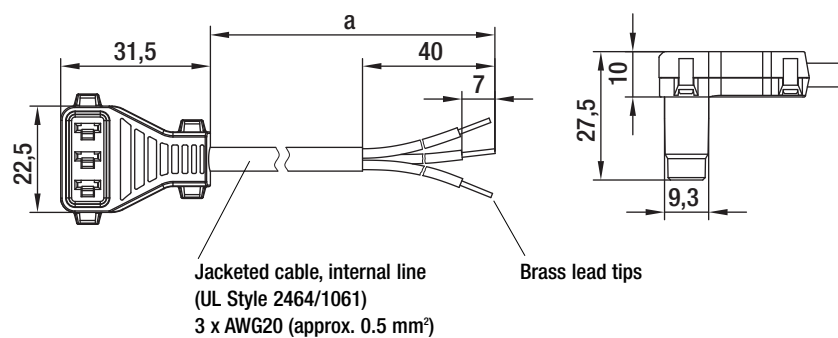


Accessories

	Connection leads and guard grilles for energy-saving fans (ESM)	42
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	Wall rings for iQ-motors	45
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Connection leads and guard grilles (ESM)

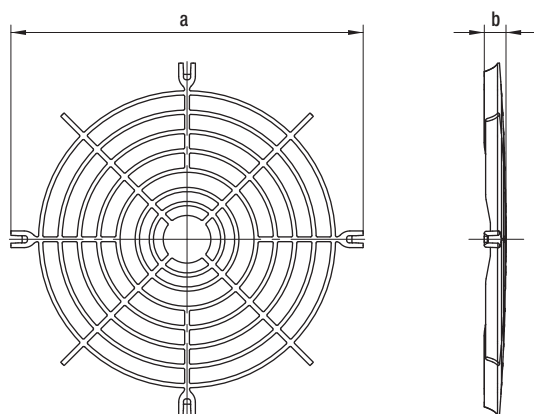


- **Design:** Cable conforms to UL standards, sealed plug. Custom-built connection leads on request.

Connection lines for energy-saving motors (ESM)

Part no.	a
10637-4-1040	450
10640-4-1040	600
10638-4-1040	1500
10639-4-1040	2000

subject to alterations



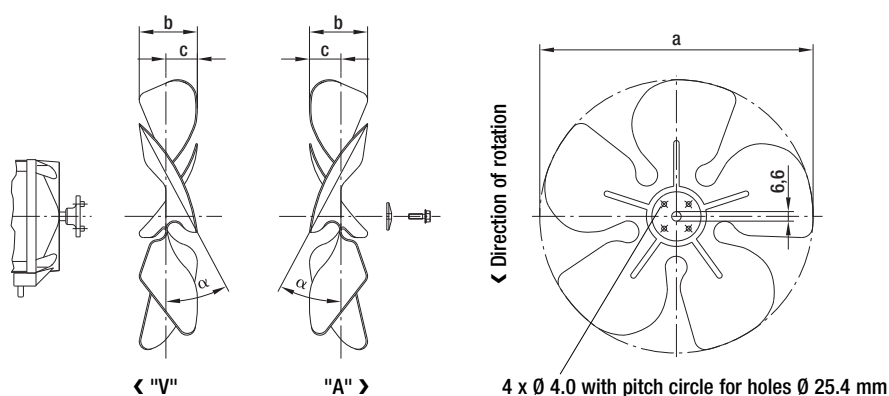
- **Material:** Plastic PA6, fibreglass-reinforced

Guard grille (sucking side) for energy-saving centrifugal modules

Part no.	Size	a	b
19050-2-2929	175	133,0	9,0
19050-2-2929	190	133,0	9,0
22050-2-2929	220	166,0	8,7

subject to alterations

Axial impellers

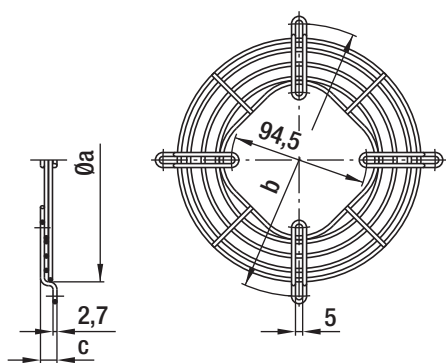


Axial impellers

Part no. for dir. of air flow "V"	Part no. for dir. of air flow "A"	Blade angle α	a	b	c
73801-2-3634	73761-2-3634	$22^\circ \pm 1^\circ 30'$	154,0	27,5	14,0
73802-2-3634	73762-2-3634	$28^\circ \pm 1^\circ 30'$	154,0	32,0	16,0
73803-2-3634	73763-2-3634	$34^\circ \pm 1^\circ 30'$	154,0	37,0	18,0
73804-2-3634	73764-2-3634	$22^\circ \pm 1^\circ 30'$	172,0	31,0	14,5
73805-2-3634	73765-2-3634	$28^\circ \pm 1^\circ 30'$	172,0	36,0	17,0
73806-2-3634	73766-2-3634	$34^\circ \pm 1^\circ 30'$	172,0	42,0	21,0
73807-2-3634	73767-2-3634	$22^\circ \pm 1^\circ 30'$	200,0	32,0	15,5
73808-2-3634	73768-2-3634	$28^\circ \pm 1^\circ 30'$	200,0	37,5	18,0
73809-2-3634	73769-2-3634	$34^\circ \pm 1^\circ 30'$	200,0	45,0	22,0
73810-2-3634	73770-2-3634	$22^\circ \pm 1^\circ 30'$	230,0	35,0	17,5
73811-2-3634	73771-2-3634	$28^\circ \pm 1^\circ 30'$	230,0	43,0	21,5
73812-2-3634	73772-2-3634	$34^\circ \pm 1^\circ 30'$	230,0	50,0	24,0
73813-2-3634	73773-2-3634	$22^\circ \pm 1^\circ 30'$	254,0	37,0	19,0
73814-2-3634	73774-2-3634	$28^\circ \pm 1^\circ 30'$	254,0	45,0	23,5
73815-2-3634	73775-2-3634	$34^\circ \pm 1^\circ 30'$	254,0	52,0	26,0
73816-2-3634	73776-2-3634	$22^\circ \pm 1^\circ 30'$	300,0	43,0	21,5

subject to alterations

Guard grille

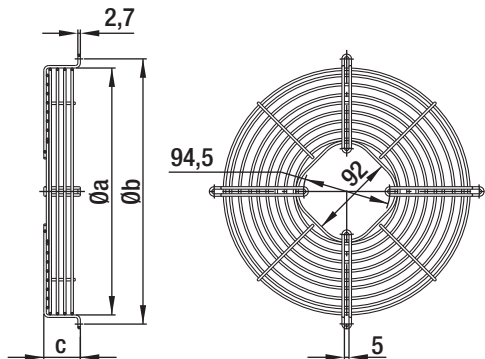


– **Material:** Steel, galvanized and blue chromated

Guard grille

Part no.	Size	Max. blade angle α at "V"	Max. blade angle α at "A"	a	b	c
50967-2-4039	154	34°	34°	170,0	190,0	11,5
50968-2-4039	172	34°	34°	188,0	208,0	11,5
50969-2-4039	200	34°	28°	214,0	236,0	11,5
50970-2-4039	230	28°	28°	246,0	266,0	17,5
50971-2-4039	254	28°	28°	270,0	290,0	17,5
50972-2-4039	300	—	22°	324,0	344,0	17,5

subject to alterations



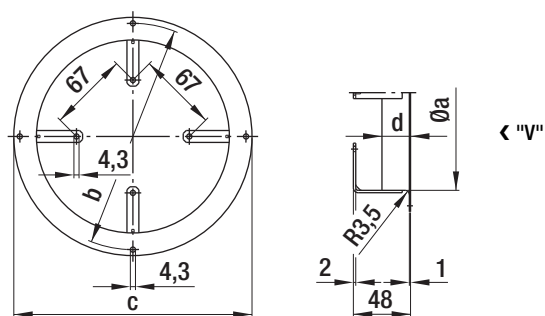
– **Material:** Steel, galvanized and blue chromated

Basket guard grille

Part no.	Size	Max. blade angle α at "V"	Max. blade angle α at "A"	a	b	c
66309-2-4039	172	34°	34°	188,0	208,0	37,5
66310-2-4039	200	34°	28°	212,0	236,0	37,5
66311-2-4039	230	28°	28°	246,0	266,0	40,0
66312-2-4039	254	28°	28°	270,0	290,0	40,0
66313-2-4039	300	—	22°	324,0	344,0	46,8

subject to alterations

Wall rings

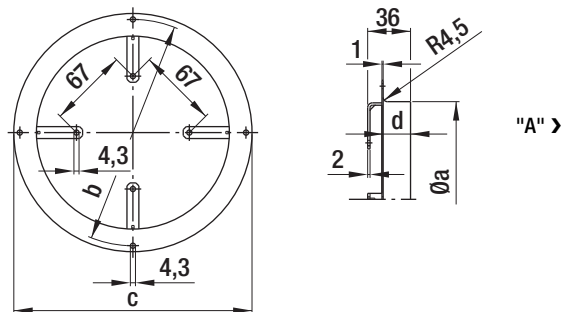


– **Material:** Sheet steel, coated in grey plastic

Wall rings, direction of air flow "V"

Part no.	Size	Max. blade angle α	a	b	c	d
52542-2-4037	154	34°	164,0	190,0	200,0	24,0
52543-2-4037	172	34°	182,0	208,0	223,0	24,0
52544-2-4037	200	34°	210,0	236,0	246,0	24,0
52545-2-4037	230	28°	240,0	266,0	276,0	24,0
52546-2-4037	254	28°	264,0	290,0	300,0	24,0
52547-2-4037	300	22°	308,0	344,0	356,0	24,0

subject to alterations



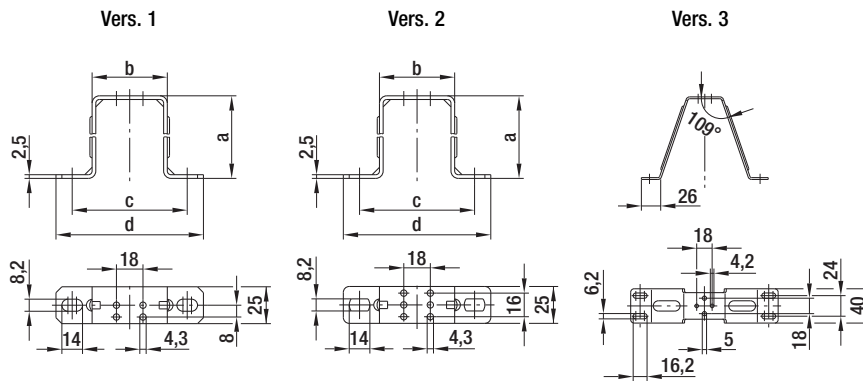
– **Material:** Sheet steel, coated in grey plastic

Wall rings, direction of air flow "A"

Part no.	Size	Max. blade angle α	a	b	c	d
52550-2-4037	154	34°	162,0	190,0	200,0	24,0
52551-2-4037	172	34°	180,0	208,0	223,0	24,0
52552-2-4037	200	28°	208,0	236,0	246,0	24,0
52553-2-4037	230	28°	238,0	266,0	276,0	24,0
52554-2-4037	254	28°	262,0	290,0	300,0	24,0
52555-2-4037	300	22°	308,0	344,0	356,0	24,0

subject to alterations

Mounting bracket

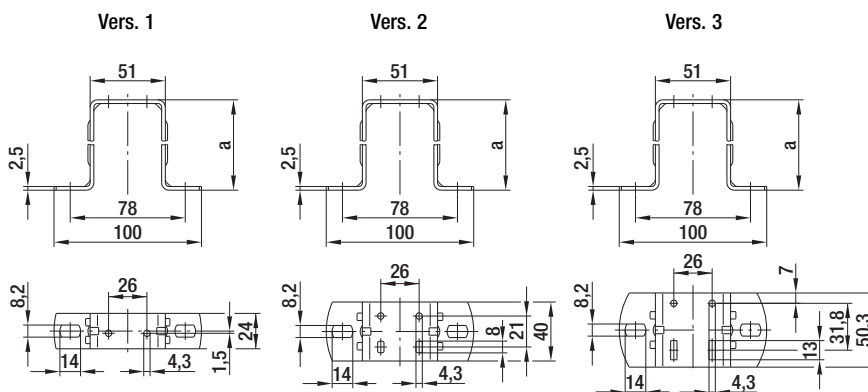


– **Material:** Sheet steel, galvanized and blue chromated

Mounting bracket - foot measure 18 mm (multi-function design)

Part no.	Size	Vers.	a	b	c	d
51025-2-4053	172	1	56,0	51,0	78,0	100,0
51028-2-4053	200	1	67,0	51,0	78,0	100,0
51026-2-4053	230	1	74,5	51,0	78,0	100,0
51027-2-4053	254	2	85,5	51,0	78,0	100,0
51014-2-4053	300	3	112,0	—	150,0	172,0

subject to alterations



– **Material:** Sheet steel, galvanized and blue chromated

Mounting bracket - foot measure 26 mm (standard design or multi-function design)

Part no.	Size	Vers.	a
71881-2-4053	154	1	39,0
71882-2-4053	172	1	52,0
71883-2-4053	200	1	72,0
	230	1	72,0
71884-2-4053	254	1	84,0
71885-2-4053	254	2	84,0
71886-2-4053	300	2	109,0
71887-2-4053	300	3	109,0

subject to alterations

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-  compact fan agent
-  motor specialist
-  motor agent

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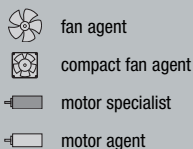
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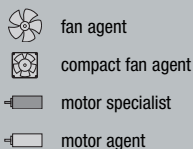
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