

## Product overview

# DC centrifugal fans



Our DC centrifugal product range includes fans for every application. Where it's a free-running impeller or a complete, ready-to-install, compact housing with inlet nozzle.



all fan types with efficient, brushless motor technology, electronically commutated drive and electronic reverse polarity protection impress with their long life expectancy and outstanding efficiency.



This reduces the thermal load, thus ensuring maximum efficiency and a long service life.



Conforming to IP20 as standard, we also offer environmental protection solutions up to IP68 and IP6k9k to meet the highest requirements.



GreenIntelligence enables the fan speed to be intelligently controlled and noise-optimized, efficient and tailored use to be monitored.

**ebmpapst**

engineering a better life

## Type code example: VBH0450PTTLZ

V	B	H	0450	P	T	T	L	Z
Product category	Product type Airflow direction	Product version	Diameter	Brand name	Motor	Motor size		Standard
						Diameter	Stack length	

Dimensions in mm	Type	Type (old)	Page
□ 51 x 15	VHS0035XUDAS	RLF 35	150
□ 65 x 66	VCS0045X...	RVE 45	152
□ 76 x 27	VHS0048X...	RL 48	154
97 x 93,5 x 33	VHS0065X...	RL 65	156
□ 121 x 37	VHS0090XUJBS	RL 90 N	158
□ 127 x 25	VCS0100XUGBS	RLF 100	160
□ 135 x 38	VHS0090XUJBS	RG 90 N	162
□ 135 x 38	VCS0125XUJBS	RG 125 N	164
□ 165 x 70	VCS0133RUJCS	RG 133 TD	166
□ 180 x 40	VCS0140XUJ CZ	RG 140 NTD	168
□ 220 x 56	VCS0160XULCS	RG 160 N	170
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□ 226 x 85	VCS0190RULDS	RG 190 TD	174
□ 270 x 99	VCS0220RULDS	RG 220 TD	176
□ 270 x 119	VCS0225RULDS	RG 225 TD	178
∅ 85 x 68	VFS0085XUJCS	RET 85	180
∅ 97 x 41	VFS0097XUJCS	RET 97 TD	182
∅ 104 x 25	VBS0100XUGBS	REF 100	184
∅ 101 x 52	VBS0101XUGDS	RER 101 N	186
∅ 120 x 54	VBS0120XUJCS	RER 120 TD	188
∅ 138 x 35	VBS0125XUJBS	RER 125 N	190
∅ 133 x 91	VBS0133X...	RER 133 TD	192
∅ 140 x 36	VBS0140XUJCS	RER 140 TD	194
∅ 165 x 51	VBS0160XULCS	RER 160 N	196
∅ 165 x 51	VBS0160XULCS	RER 160 NTD	198
∅ 175 x 55	VBS0175XULDS	REF 175 TD	200
∅ 175 x 69	VBS0175X...	RER 175 TD	202
∅ 190 x 69	VBS0190R...	RER 190 TD	204
∅ 190	VBS0190RUNCS	R1G 190	206
∅ 190	VBS0190R...	R3G 190	208
∅ 220	VBS0220RUNCS	R1G 220	210
∅ 220	VBS0220RUNES	R3G 220	212
∅ 220 x 71	VBS0220RULDS	RER 220 TD	214
∅ 225 x 99	VBS0225...	RER 225 TD	216
∅ 225	VBS0225RUNCS	R1G 225	218
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∅ 250	VBS0250RUNES	R1G 250	222
∅ 250	VBS0250RUNES	R3G 250	224
∅ 280	VBS0280RUNES	R1G 280	226
∅ 280	VBS0280RUNES	R3G 280	228
∅ 310	VBS0310RUNES	R3G 310	230
201...413 x 50 x 48	VTS0030X...	QG 030	232
∅ 108	VFS0108XULCS	*1G 108	234
∅ 120	VFS0120XULCS	*1G 120	236
∅ 133	VFS0133XULCS	*1G 133	238
∅ 140	VFS0140XULES	*1G 140	240
∅ 146	VFS0146XUNCS	*1G 146	242
∅ 160	VFS0160XUNCS	*1G 160	244
∅ 133	VHD0133XUNCS	D1G 133	246
∅ 133	VHD0133XUNES	D1G 133	248
∅ 146	VHD0146XUNES	D1G 146	250

# VHS0035XUDAS

DC centrifugal fans · max. 9.6 m<sup>3</sup>/h · □ 51 × 15 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC or 24VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 26
- Electrical protection class: III
- Weight: 36 g

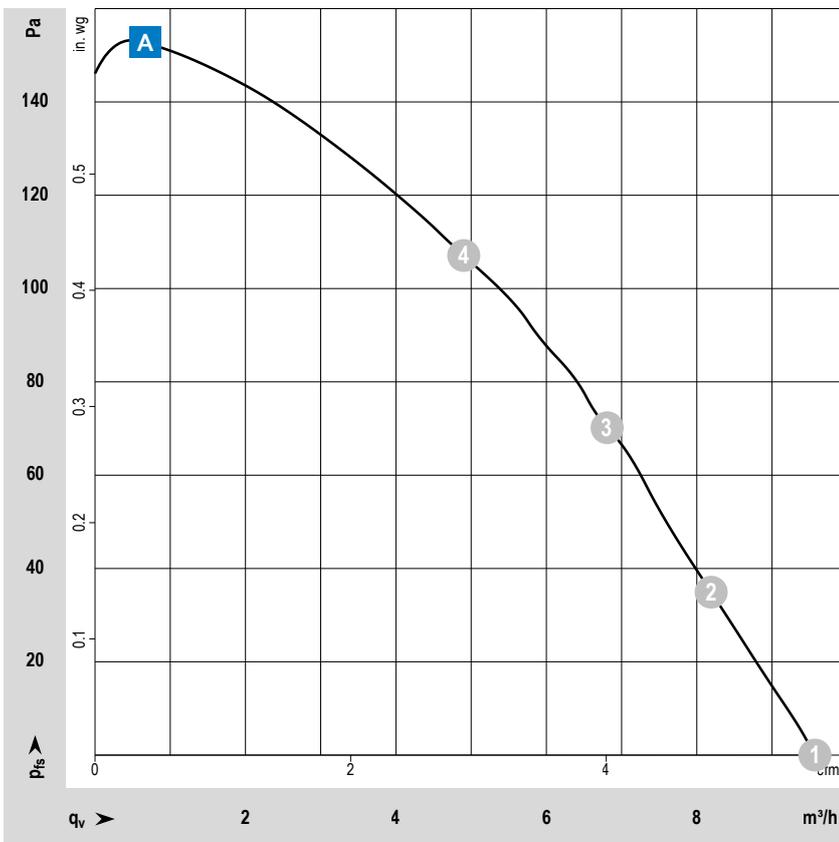
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- PWM control input
- Moisture protection

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

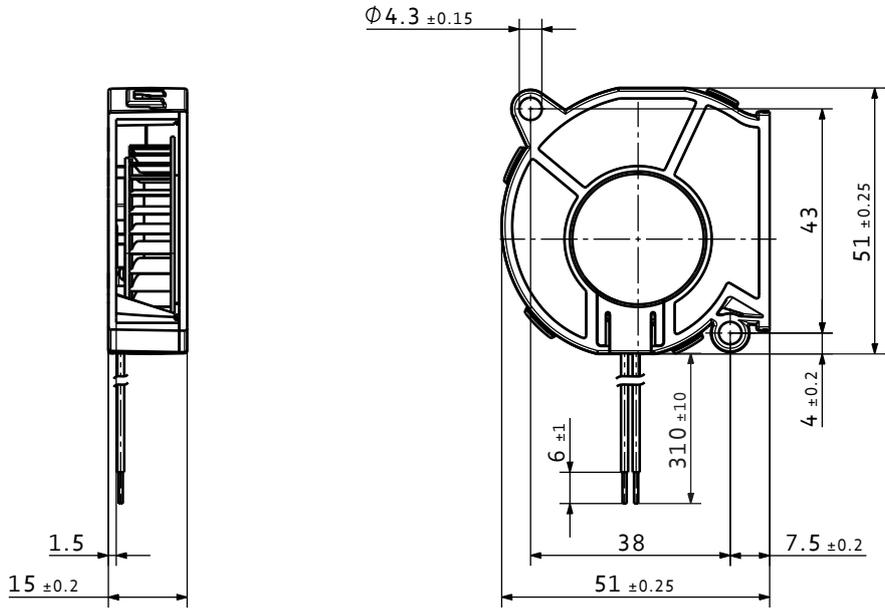
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)		°C	Hours
VHS0035XUDAS RLF 35-8/12 N	9591904100	12	8...13.2	A	①	9.6	5.7	6 700	4.0	5.4	-20...+70	60 000	102 500
						8.2	4.8	7 300	3.8	5.4			
						6.8	4.0	7 940	3.7	5.5			
						4.9	2.9	8 790	3.5	5.6			
VHS0035XUDAS RLF 35-8/14 N	9591904101	24	14...28	A	①	9.3	5.5	6 700	3.3	5.4	-20...+70	60 000	102 500
						8.0	4.7	7 270	3.1	5.4			
						6.6	3.9	7 850	3.0	5.5			
						4.8	2.8	8 690	2.8	5.6			

Subject to changes.

DC centrifugal fans

Technical drawing

Dimensions in mm



# VCS0045X...

DC centrifugal fans · max. 30 m<sup>3</sup>/h · □ 65 x 66 mm



## Material/Surface

- Scroll housing: Plastic (FDA approved)
- Impeller: Plastic (FDA approved)

## Mechanische Characteristics

- Version: Small powerful centrifugal blower in 12VDC and 24VDC, Highly dynamic motor behavior, low noise and max pressure increase
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 160 g

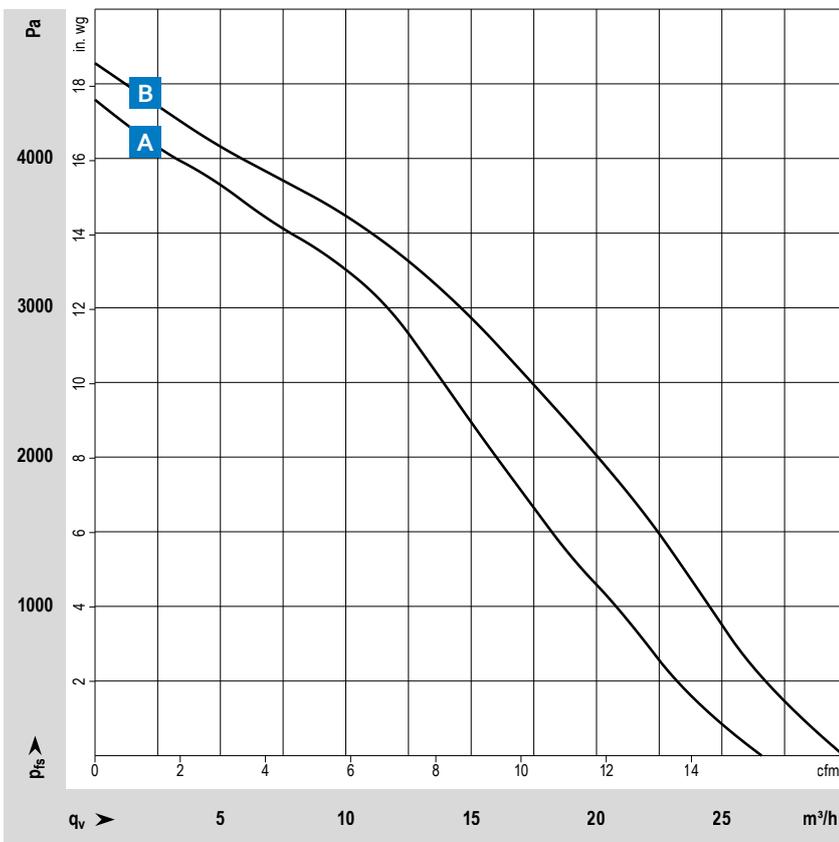
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Hose fitting at air inlet  
– Diameter 22 mm
- PWM control input (Standard)
- Analog control input

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Air flow	Air flow	Speed	Power consumption	Sound pressure (free air flow)	Perm. ambient temperature	Lebensdauer $L_{10}$ (25 °C) ebm-papst Standard	Lebensdauer-erwartung $L_{010PC}$ (25 °C) s. S. 11
		VDC	VDC		m <sup>3</sup> /h	cfm	rpm	W	dB(A)	°C	Hours	Hours
VCS0045XUGAS RVE45-3/52/2P	8315100111	12	9...15	<b>A</b>	26.6	15.7	33 000	27.7	58	-20...+55	20 000	45 000
VCS0045XUGAS RVE45-3/54/2P	8315100100	24	16...30	<b>B</b>	30.0	17.6	36 500	34.5	58	-20...+65	20 000	45 000
VCS0045XUGAS RVE45-3/54/2A	8315100115	24	16...30	<b>B</b>	30.0	17.6	36 500	34.5	58	-20...+65	20 000	45 000

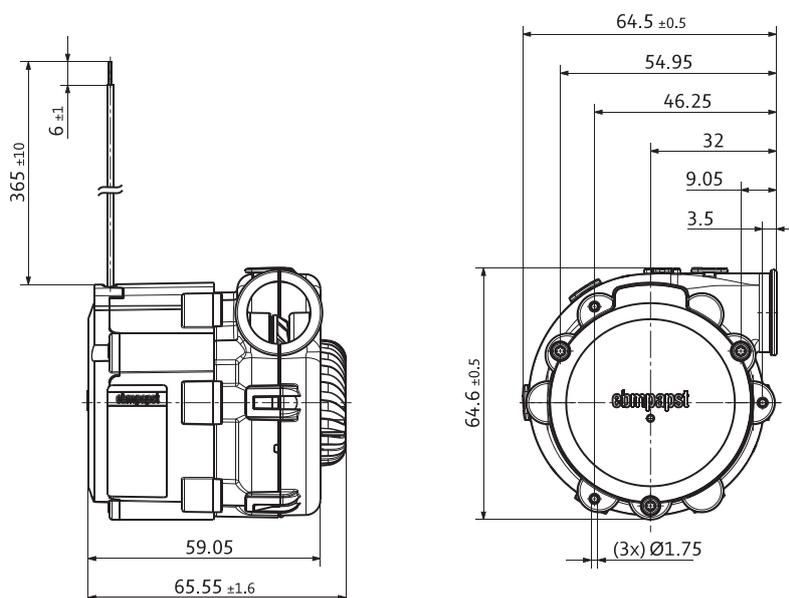
Subject to changes.

Extraction noise @ 1,000 Pa.

Blower with open intake side facing upwards, opposite side lays on 10 cm thick foam, outlet openings with hose and 4 mm standard nozzle (acoustically insulated), microphone 1.0 m vertical over blower, room noise level < 26 dB(A).

## Technical drawing

Dimensions in mm



# VHS0048X...

DC centrifugal fans · max. 27.2 m<sup>3</sup>/h · □ 76 x 27 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 26
- Electrical protection class: III
- Weight: 75 g

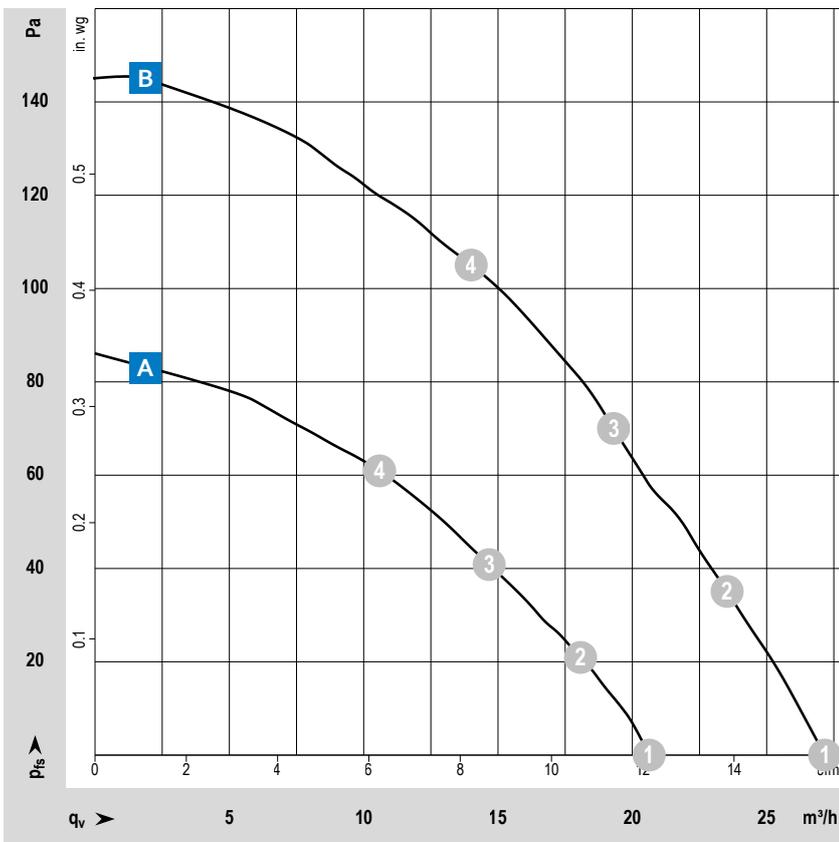
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm - alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

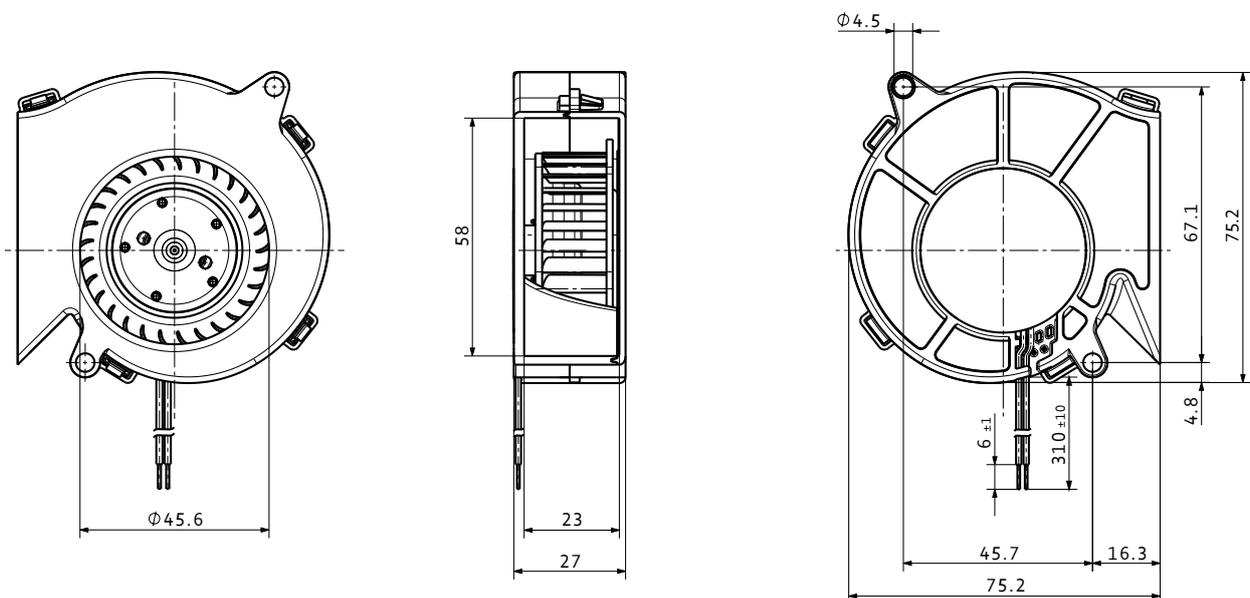
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> FC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm						
VHS0048XUEBS RL 48-19/12 ML	9592207003	12	8...15	A	① ② ③ ④	20.6	12.1	3 500	2.3	5.4	-20...+70	70 000	117 500
						18.1	10.7	3 770	2.1	5.2			
						14.7	8.7	4 070	2.0	5.2			
						10.6	6.2	4 490	1.7	5.2			
VHS0048XUEBS RL 48-19/12	9592207001	12	8...13.5	B	① ② ③ ④	27.2	16.0	4 400	4.5	5.9	-20...+70	60 000	102 500
						23.5	13.8	4 790	4.2	5.7			
						19.3	11.4	5 190	3.7	5.7			
						14.0	8.2	5 750	3.3	5.8			
VHS0048XUEBS RL 48-19/14 ML	9592207004	24	18...28	A	① ② ③ ④	19.8	11.7	3 500	2.2	5.4	-20...+70	70 000	117 500
						17.6	10.4	3 730	2.1	5.2			
						14.4	8.5	4 030	2.0	5.2			
						10.4	6.1	4 400	1.7	5.2			
VHS0048XUEBS RL 48-19/14	9592207002	24	18...26.4	B	① ② ③ ④	26.3	15.5	4 400	4.4	5.9	-20...+70	60 000	102 500
						22.7	13.4	4 720	4.0	5.7			
						18.6	10.9	5 100	3.7	5.7			
						13.6	8.0	5 630	3.2	5.8			
VHS0048XUEBZ RL 48-19/18 R-016	9592207016	48	36...56	B	① ② ③ ④	26.1	15.4	4 400	5.6	5.9	-32...+70	60 000	102 500
						22.8	13.4	4 740	5.3	5.7			
						19.2	11.3	5 220	4.8	5.7			
						14.2	8.4	5 820	4.4	5.8			

Subject to changes.

## Technical drawing

Dimensions in mm



# VHS0065X...

DC centrifugal fans · max. 59 m<sup>3</sup>/h · 97 x 93,5 x 33 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 26
- Electrical protection class: III
- Weight: 160 g

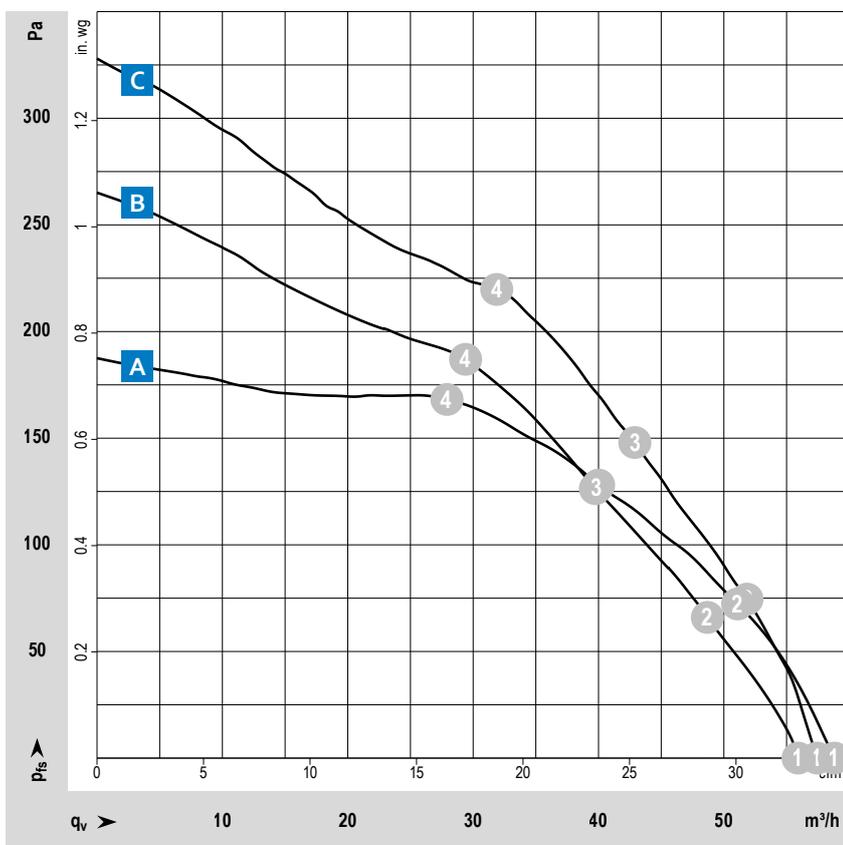
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

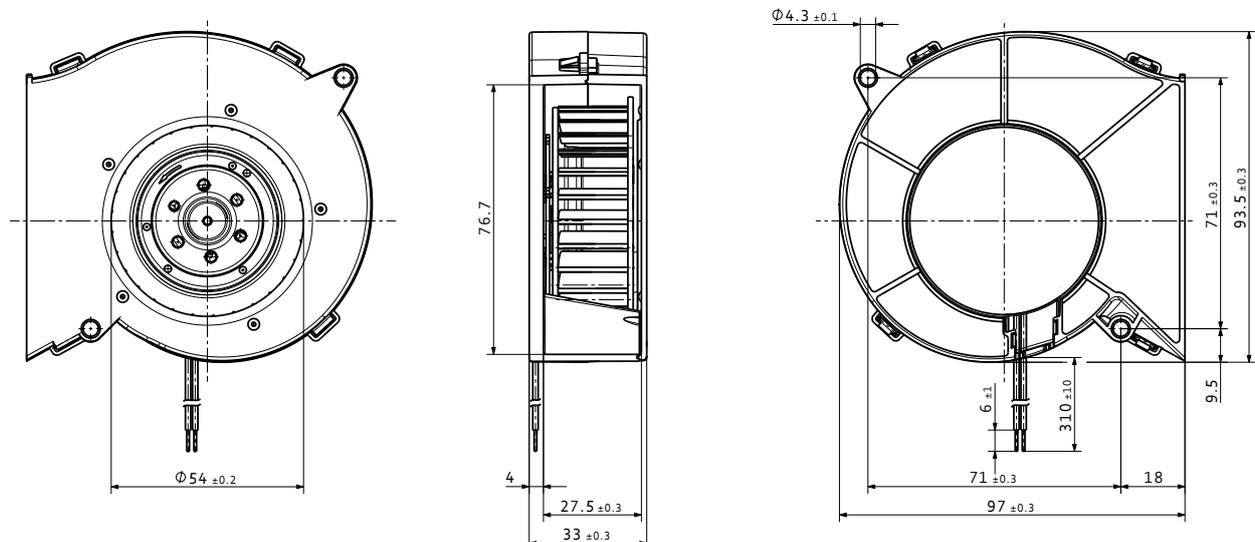
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm						
VHS0065XUFBS RL 65-21/12	9592910001	12	6.8...13.8	B	① ② ③ ④	55.0	32.4	4 500	14.7	6.9	-20...+70	60 000	102 500
						48.7	28.7	4 750	13.4	6.9			
						39.6	23.3	5 060	11.8	6.8			
						29.3	17.2	5 480	10.0	6.6			
VHS0065XUFBS RL 65-21/12 H	9592910004	12	6.8...13.2	C	① ② ③ ④	57.0	33.5	4 900	18.9	7.2	-20...+55	55 000	92 500
						52.0	30.6	5 100	17.6	7.1			
						42.9	25.2	5 440	15.6	7.2			
						31.9	18.8	5 880	13.2	6.9			
VHS0065XUFBS RL 65-21/14	9592910003	24	12...26.4	B	① ② ③ ④	56.0	33.0	4 500	13.6	6.9	-20...+70	60 000	102 500
						48.7	28.7	4 760	12.4	6.9			
						39.7	23.4	5 080	10.9	6.8			
						29.4	17.3	5 460	9.2	6.6			
VHS0065XUFBS RL 65-21/14 H	9592910005	24	12...26.4	C	① ② ③ ④	57.0	33.5	4 900	17.8	7.2	-20...+60	55 000	92 500
						52.0	30.6	5 120	16.6	7.1			
						43.2	25.4	5 500	14.7	7.2			
						32.3	19.0	5 960	12.5	6.9			
VHS0065XUFBZ RL 65-21/18/2 HPR-180	9792900180	48	36...60	A	① ② ③ ④	59.0	34.7	4 900	20.5	7.2	-20...+70	55 000	92 500
						51.0	30.0	4 910	17.2	7.0			
						40.0	23.5	4 920	12.5	6.8			
						27.9	16.4	4 910	8.4	6.5			

Subject to changes.

## Technical drawing

Dimensions in mm



# VHS0090XUJBS

DC centrifugal fans · max. 56 m<sup>3</sup>/h · □ 121 x 37 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 420 g

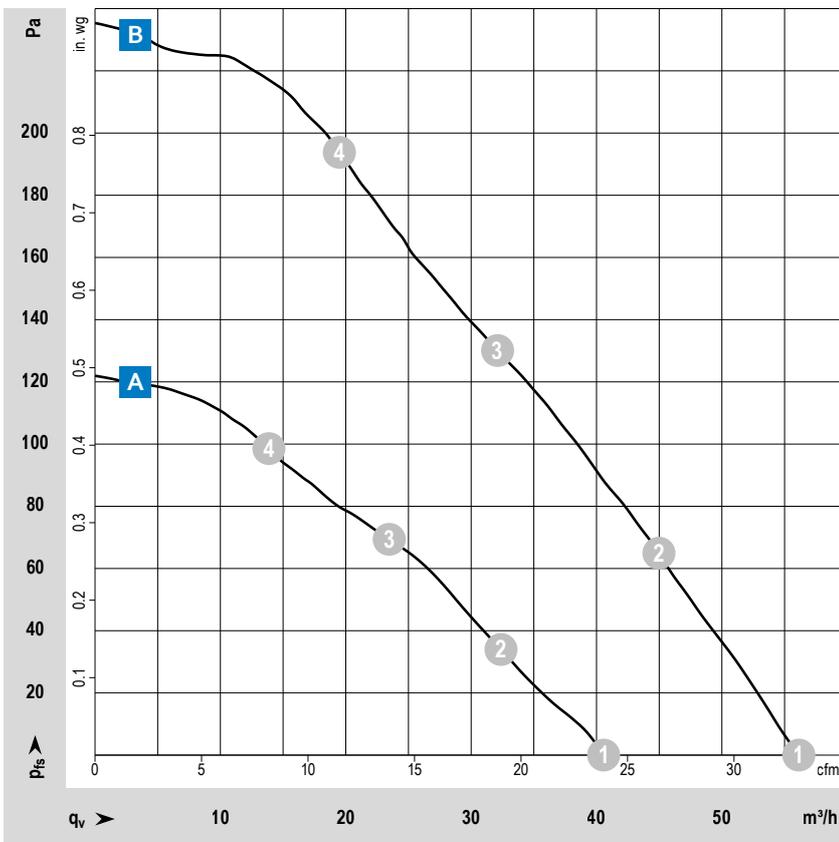
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

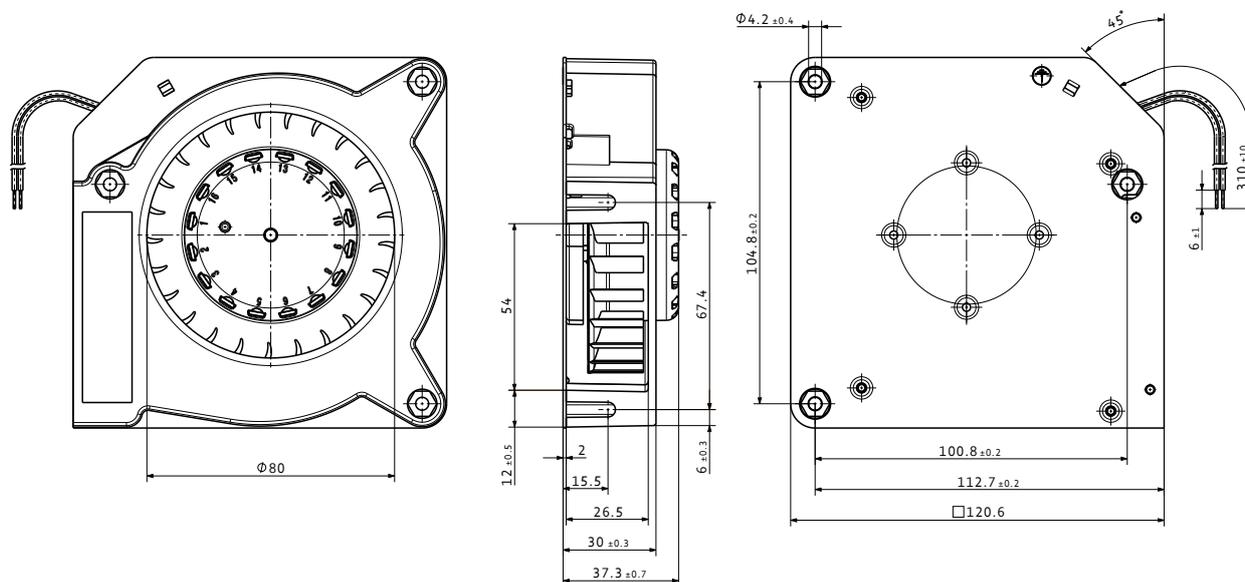
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. 11
		VDC	VDC			m³/h	cfm						
VHS0090XUJBS RL 90-18/12 N	9594310401	12	7...15	A	① ② ③ ④	38.2	22.5	2 500	5.5	6.2	-30...+75	62 500	105 000
						31.5	18.5	2 670	5.0	6.0			
						23.0	13.5	2 870	4.3	5.9			
						13.8	8.1	3 100	3.4	5.8			
VHS0090XUJBS RL 90-18/14 NG	9594310409	24	12...28	A	① ② ③ ④	37.2	21.9	2 500	5.0	6.2	-20...+75	62 500	105 000
						30.7	18.1	2 640	4.5	6.0			
						22.2	13.1	2 820	3.8	5.9			
						13.4	7.9	3 040	3.1	5.8			
VHS0090XUJBS RL 90-18/14 N	9594310400	24	12...28	A	① ② ③ ④	40.6	23.9	2 500	6.1	6.2	-30...+75	62 500	105 000
						32.4	19.1	2 690	5.4	6.0			
						23.4	13.8	2 920	4.5	5.9			
						13.9	8.2	3 180	3.7	5.8			
VHS0090XUJBS RL 90-18/18 NH	9594310413	48	36...53	B	① ② ③ ④	56.0	33.0	3 500	14.6	6.9	-30...+65	32 500	55 000
						45.0	26.5	3 750	12.6	6.8			
						32.1	18.9	4 090	10.3	6.8			
						19.5	11.5	4 470	8.1	6.8			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0100XUGBS

DC centrifugal fans · max. 80 m<sup>3</sup>/h · □ 127 x 25 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 300 g

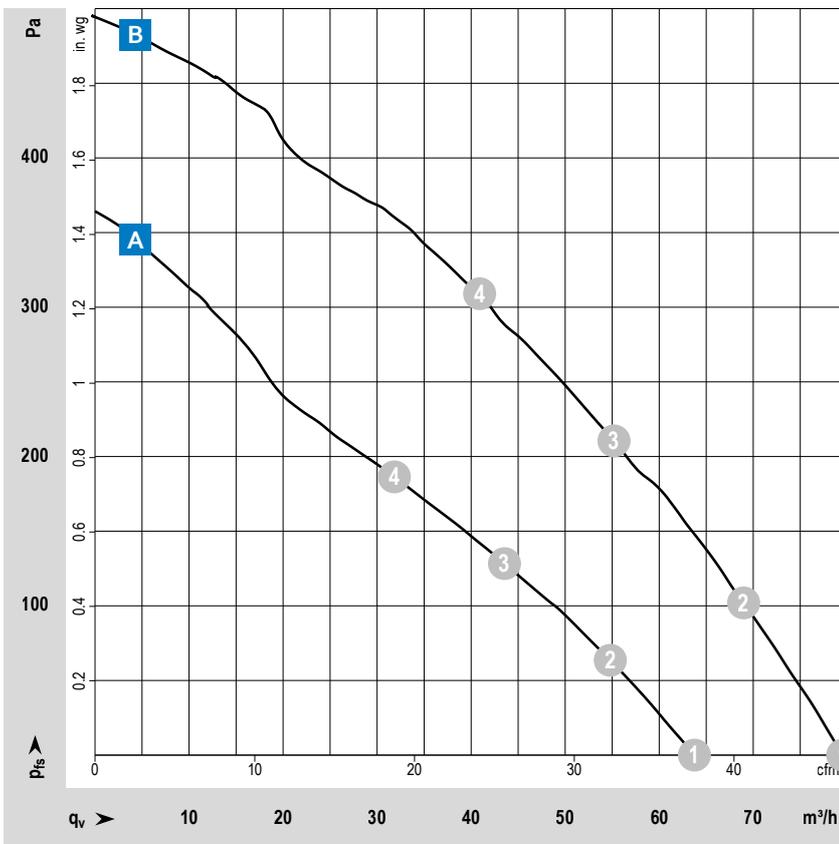
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: IP 54

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

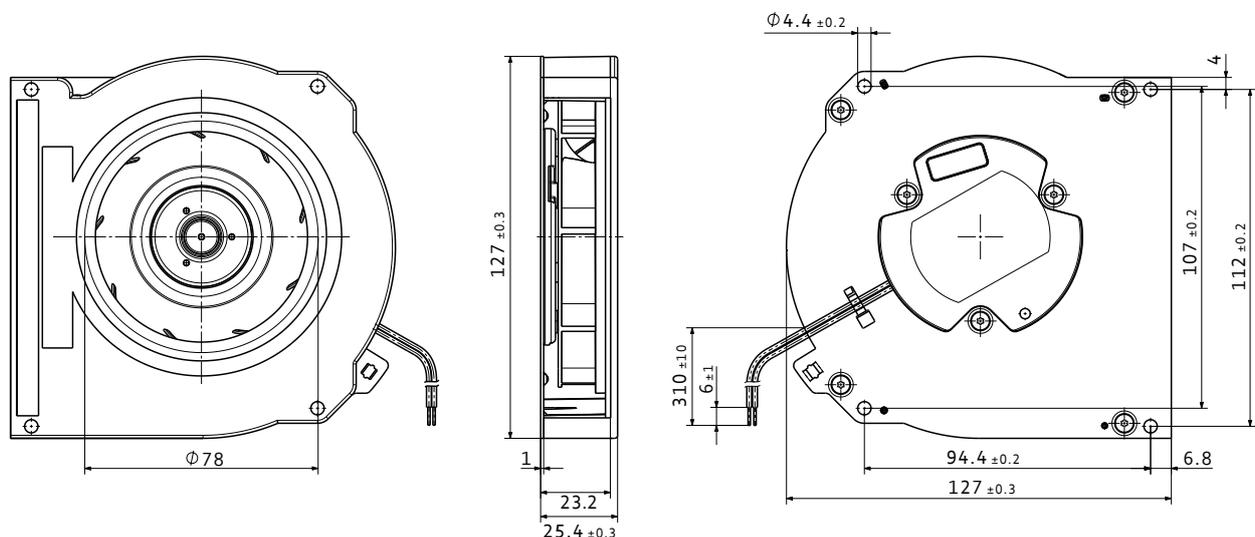
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> IFC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VCS0100XUGBS RLF 100-11/12	9593507051	12	8...15	A	① ② ③ ④	63.0	37.1	5 100	7.3	6.7	-20...+75	80 000	135 000
						54.0	31.8	5 040	7.4	6.5			
						42.9	25.2	5 020	7.5	6.4			
						31.2	18.4	5 070	7.4	6.4			
VCS0100XUGBS RLF 100-11/14	9593507052	24	16...30	A	① ② ③ ④	64.0	37.7	5 100	7.5	6.7	-20...+75	80 000	135 000
						55.0	32.4	5 040	7.7	6.5			
						43.5	25.6	5 020	7.8	6.4			
						31.8	18.7	5 090	7.5	6.4			
VCS0100XUGBS RLF 100-11/18	9593507056	48	36...60	A	① ② ③ ④	64.0	37.7	5 100	8.2	6.7	-20...+75	80 000	135 000
						54.0	31.8	5 040	8.4	6.5			
						43.5	25.6	5 000	8.5	6.4			
						31.8	18.7	5 070	8.3	6.4			
Fan type with speed signal and PWM control input as standard. Other versions on request													
VCS0100XUGBS RLF100-11/12/2HP	9793510200	12	10...13.2	B	① ② ③ ④	80.0	47.1	6 400	18.8	7.2	-20...+60	72 500	122 500
						69.0	40.6	6 400	19.6	7.1			
						56.0	33.0	6 400	20.2	7.0			
						41.0	24.1	6 400	19.7	7.1			
VCS0100XUGBS RLF100-11/18/2HP	9793510182	48	43...53	B	① ② ③ ④	80.0	47.1	6 400	15.5	7.2	-20...+70	72 500	122 500
						69.0	40.6	6 340	16.1	7.1			
						55.0	32.4	6 320	16.6	7.0			
						41.0	24.1	6 360	16.1	7.1			

Subject to changes.

## Technical drawing

Dimensions in mm



# VHS0090XUJBS

DC centrifugal fans · max. 56 m<sup>3</sup>/h · □ 135 x 38 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 440 g

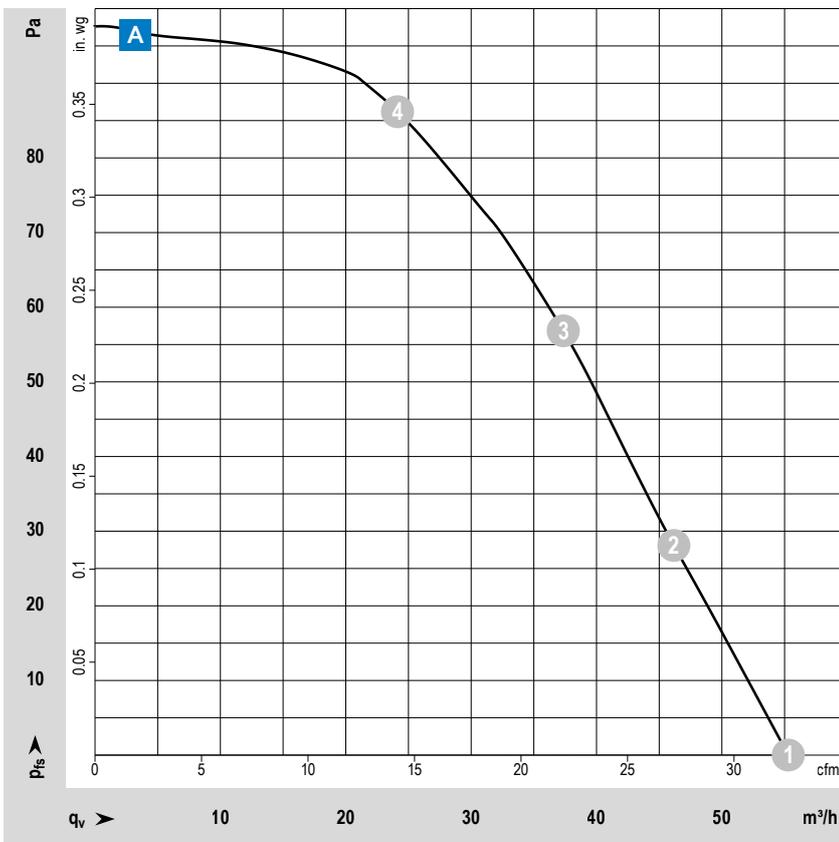
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

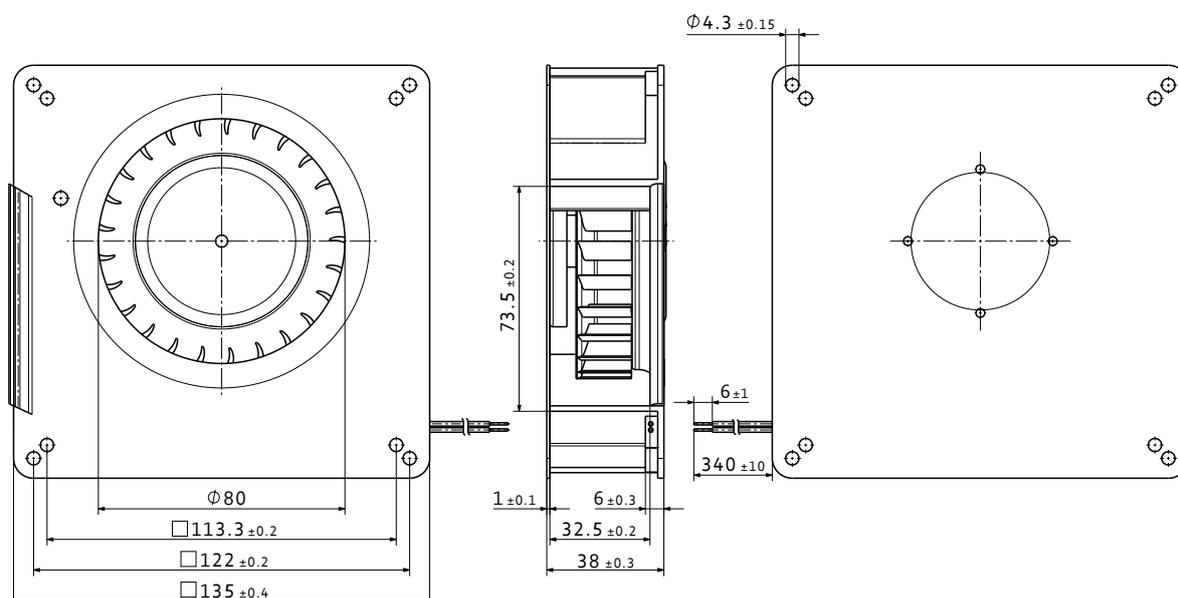
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm						
VHS0090XUJBS RG 90-18/12 N	9594310201	12	7...15	A	①	56.0	33.0	2 200	6.8	6.1	-30...+75	62 500	105 000
						47.4	27.9	2 350	6.2	6.0			
						38.5	22.7	2 530	5.5	5.8			
						25.0	14.7	2 850	4.4	5.6			
VHS0090XUJBS RG 90-18/14 N	9594310200	24	12...28	A	①	55.0	32.4	2 200	6.0	6.1	-30...+75	62 500	105 000
						46.1	27.1	2 350	5.4	6.0			
						37.4	22.0	2 480	4.8	5.7			
						24.1	14.2	2 750	3.8	5.6			
VHS0090XUJBS RG 90-18/18 N	9594310202	48	36...56	A	①	56.0	33.0	2 200	5.9	6.1	-30...+75	62 500	105 000
						46.5	27.4	2 340	5.3	6.0			
						37.2	21.9	2 490	4.7	5.7			
						24.0	14.1	2 740	3.8	5.6			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0125XUJBS

DC centrifugal fans · max. 133 m<sup>3</sup>/h · □ 135 x 38 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 730 g

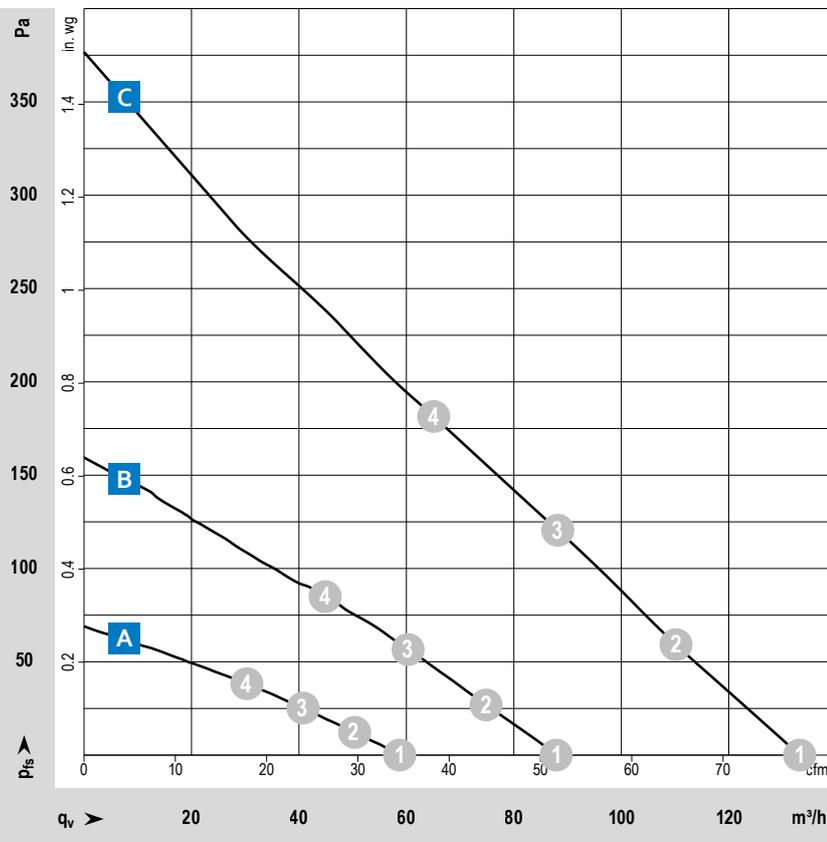
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## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68



### Measuring conditions

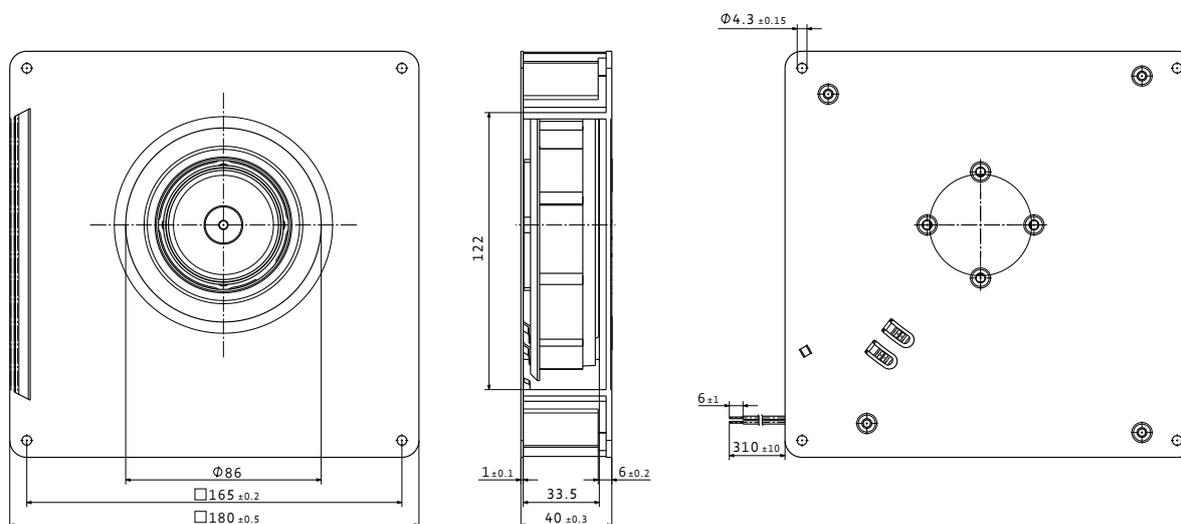
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm						
VCS0125XUJBS RG 125-19/12 NM	9594310123	12	7...15	A	① ② ③ ④	56.0	33.0	1 750	1.8	5.1	-30...+75	70 000	117 500
						48.9	28.8	1 730	1.8	5.1			
						39.9	23.5	1 730	1.8	5.0			
						29.9	17.6	1 750	1.8	4.9			
VCS0125XUJBS RG 125-19/12 N	9594310122	12	7...15	B	① ② ③ ④	84.0	49.4	2 550	5.1	6.1	-30...+75	62 500	105 000
						72.0	42.4	2 490	5.2	6.0			
						59.0	34.7	2 500	5.2	5.9			
						44.1	26.0	2 540	5.0	5.8			
VCS0125XUJBS RG 125-19/14 NM	9594310121	24	12...28	A	① ② ③ ④	59.0	34.7	1 750	1.9	5.1	-30...+75	70 000	117 500
						50.0	29.4	1 700	2.0	5.1			
						40.6	23.9	1 700	2.0	5.0			
						30.2	17.8	1 730	1.9	4.9			
VCS0125XUJBS RG 125-19/14 N	9594310120	24	12...28	B	① ② ③ ④	86.0	50.6	2 550	4.6	6.1	-30...+75	62 500	105 000
						73.0	43.0	2 500	4.8	6.0			
						59.0	34.7	2 520	4.8	5.9			
						44.2	26.0	2 560	4.6	5.8			
VCS0125XUJBS RG 125-19/18 N	9594310125	48	36...56	B	① ② ③ ④	88.0	51.8	2 550	4.7	6.1	-30...+75	62 500	105 000
						75.0	44.1	2 510	4.8	6.0			
						60.0	35.3	2 520	4.8	5.9			
						44.9	26.4	2 560	4.7	5.8			
VCS0125XUJBS RG 125-19/18 NH	9594310149	48	36...56	C	① ② ③ ④	133.0	78.3	4 000	17.0	7.3	-20...+70	55 000	92 500
						110.0	64.7	3 940	17.5	7.3			
						88.0	51.8	3 950	17.3	7.3			
						65.0	38.3	3 990	17.0	7.2			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0133RUJCS

DC centrifugal fans · max. 378 m<sup>3</sup>/h · □ 165 x 70 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Mechanische Characteristics

- Version: Centrifugal fan in 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48 V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 700 g

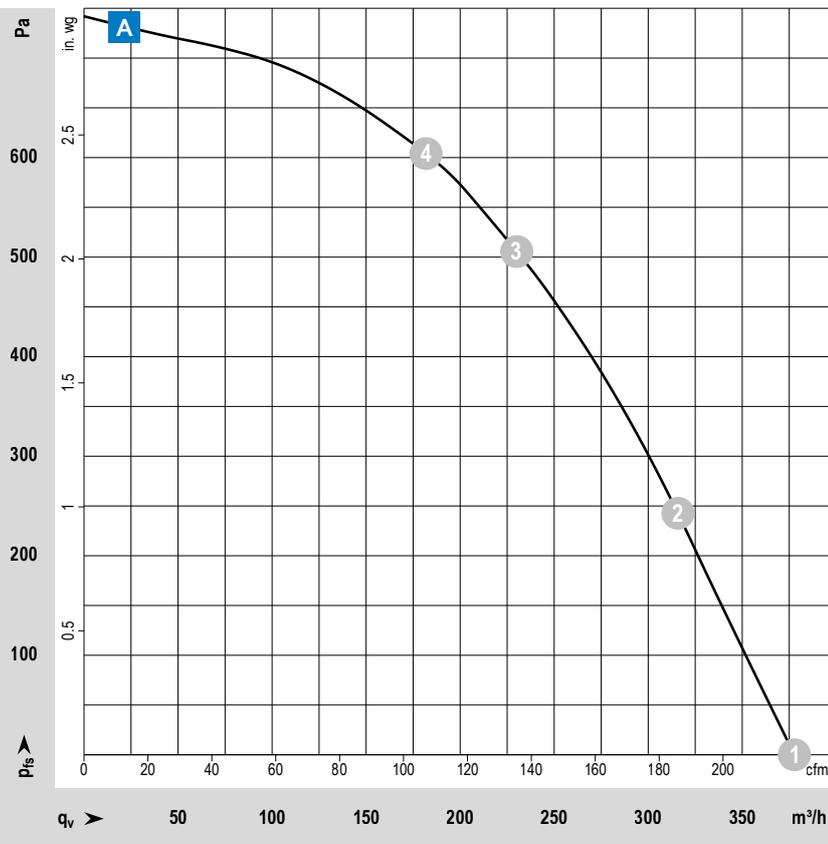
## Conformity with standard(s)/Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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### Measuring conditions

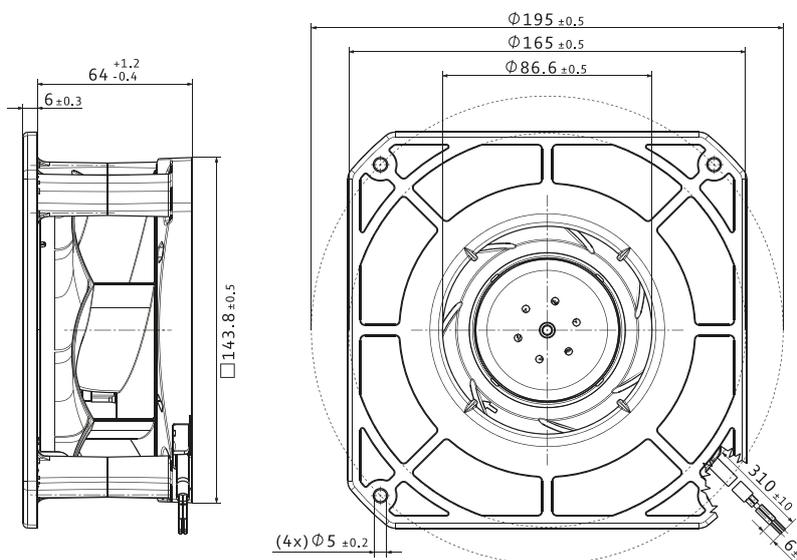
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see [http://www.ebmpapst.com/general\\_conditions](http://www.ebmpapst.com/general_conditions)

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VCS0133RUJCS RG 133-33/18/2TDMO	9594314200	48	36...60	A	1	378	222	5 600	63.0	8.1	-20...+65	55 000	92 500
					2	316	186	5 600	71.2	8.0			
					3	230	135	5 600	79.3	7.8			
					4	182	107	5 600	78.0	7.9			

Subject to changes. The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

## Technical drawing

Dimensions in mm



# VCS0140XUJCZ

DC centrifugal fans · max. 121 m<sup>3</sup>/h · □ 180 x 40 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC or 24VDC with backward-curved impeller; powerful due to 3-phase motor concept; special commutation electronics for extremely quiet operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 750 g

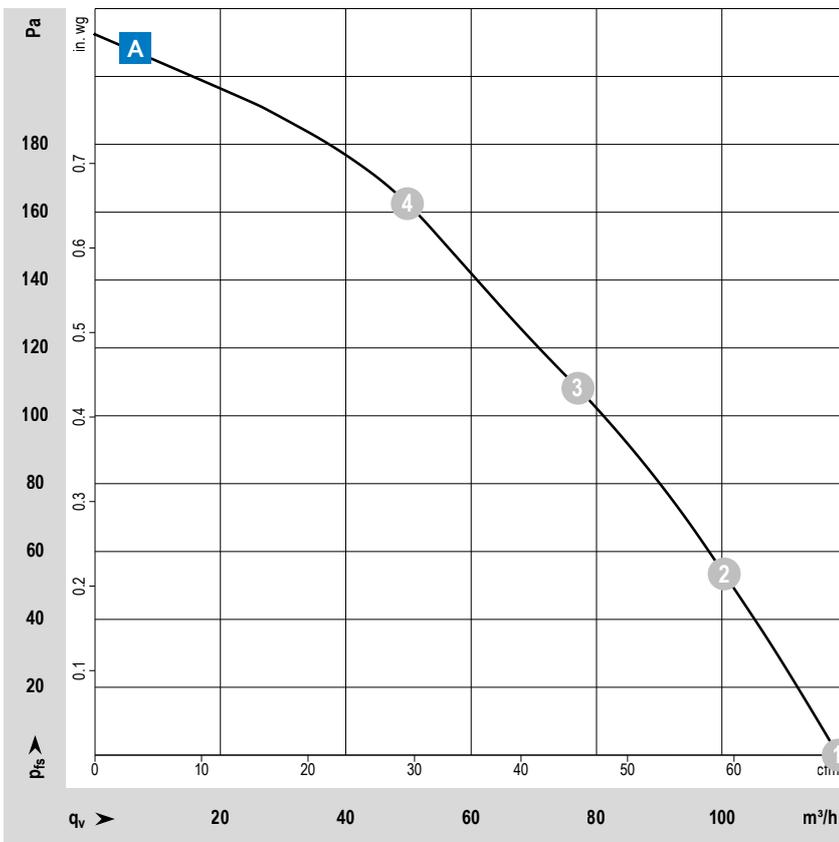
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / No Go Alarm
- Alarm with speed limit
- External temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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### Measuring conditions

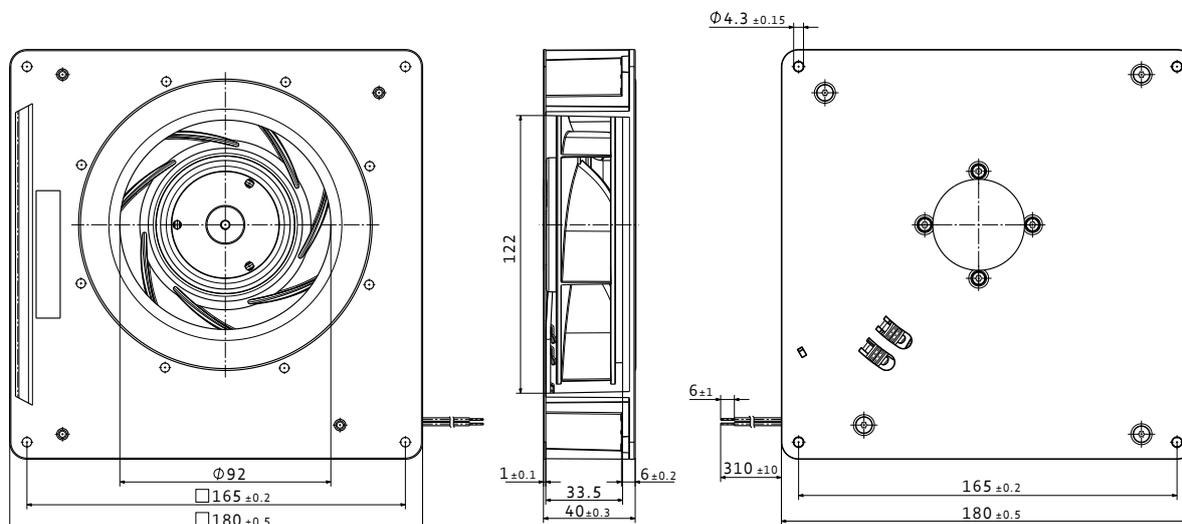
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II	
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours	
VCS0140XUJ CZ RG 140-22/12 N/2 TDAU-505	9794300505	12	10.8...13.2	A	①	121.0	71.2	2 500	10.3	6.6	-20...+70	62 500	105 000	
						②	102.0	60.0	2 500	10.2				6.4
						③	78.0	45.9	2 500	9.3				6.1
						④	49.8	29.3	2 500	7.6				6.1
VCS0140XUJ CZ RG 140-22/14 N/2 TDPU	9794300504	24	20.4...27.6	A	①	119.0	70.0	2 500	9.4	6.6	-20...+70	62 500	105 000	
						②	100.0	58.9	2 500	9.3				6.4
						③	77.0	45.3	2 500	8.8				6.1
						④	49.9	29.4	2 500	7.5				6.1

Subject to changes.

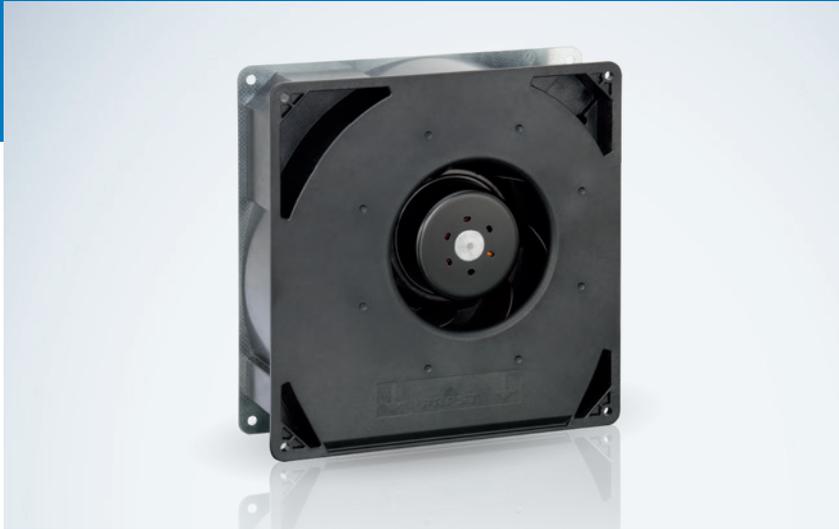
## Technical drawing

Dimensions in mm



# VCS0160XULCS

DC centrifugal fans · max. 209 m<sup>3</sup>/h · □ 220 x 56 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 1.4 kg

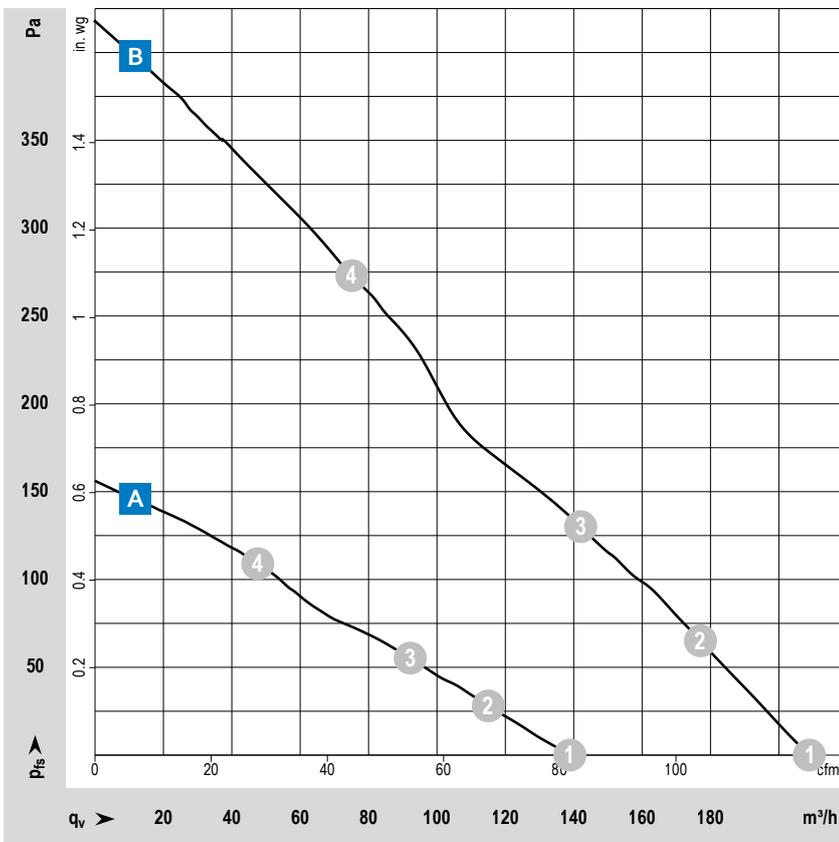
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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### Measuring conditions

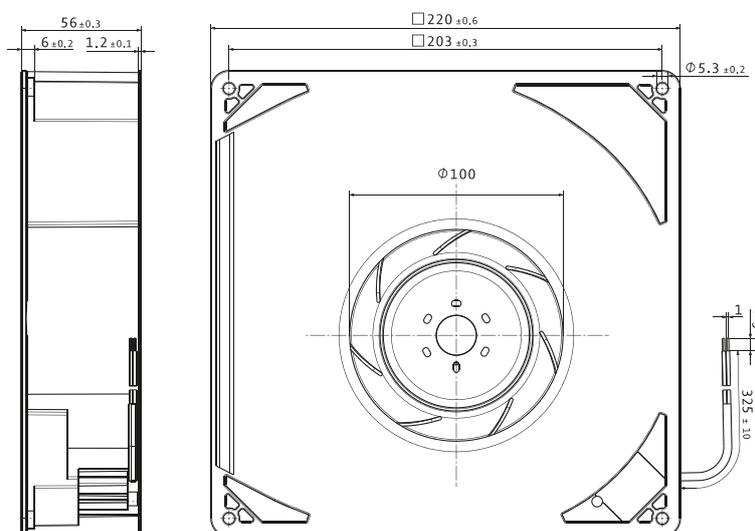
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10IFC</sub> (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)			
VCS0160XULCS RG 160-28/12 N	9595414101	12	7.5...14	B	①	208	122	2 850	18.7	7.2	-20...+70	70 000	117 500
					②	176	104	2 810	19.0	7.0			
					③	141	83	2 820	19.1	6.8			
					④	75	44	2 960	18.3	6.9			
VCS0160XULCS RG 160-28/14 NM	9595414102	24	12...28	A	①	139	82	1 900	7.3	6.4	-20...+70	80 000	135 000
					②	115	68	1 900	7.6	6.2			
					③	92	54	1 900	7.6	5.8			
					④	48	28	1 930	7.1	5.7			
VCS0160XULCS RG 160-28/14 N	9595414100	24	12...28	B	①	209	123	2 850	21.0	7.2	-20...+70	70 000	117 500
					②	178	105	2 830	21.6	7.0			
					③	143	84	2 840	21.7	6.8			
					④	76	45	2 960	19.4	6.9			
VCS0160XULCS RG 160-28/18 N	9595414115	48	28...60	B	①	209	123	2 850	18.6	7.2	-20...+70	70 000	117 500
					②	177	104	2 800	19.2	7.0			
					③	142	84	2 810	19.2	6.8			
					④	75	44	2 930	17.6	6.9			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0160XULCS

DC centrifugal fans · max. 436 m<sup>3</sup>/h · □ 220 x 56 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 1.4 kg

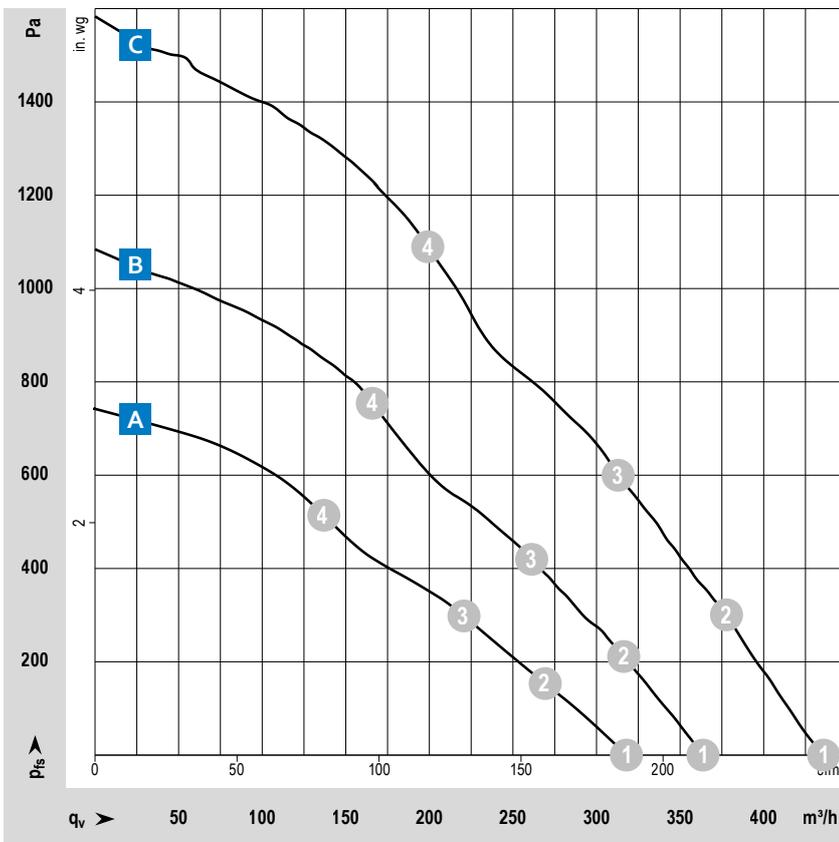
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

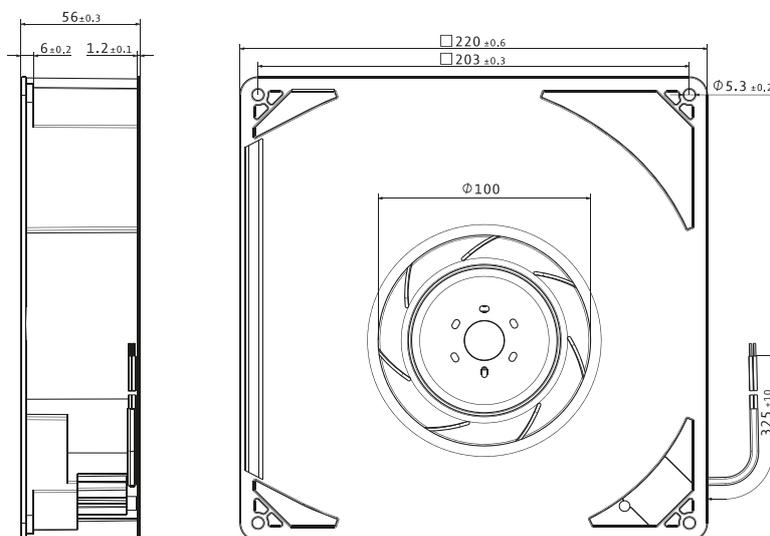
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)			
VCS0160XULCS RG 160-28/14 NTD	9595414315	24	16...28	A	①	317	187	4 200	66.2	8.1	-20...+60	55 000	92 500
						271	160	4 200	69.9	8.0			
						222	131	4 200	70.0	7.8			
						137	81	4 200	62.6	7.9			
VCS0160XULCS RG 160-28/14 NTDH	9595414353	24	16...28	B	①	364	214	5 000	105.9	8.4	-20...+60	50 000	85 000
						316	186	5 000	113.0	8.2			
						261	154	5 000	114.1	8.0			
						166	98	5 000	102.1	8.2			
VCS0160XULCS RG 160-28/18 N/2 TDHHP*	9595414377	48	36...60	C	①	436	257	6 000	177.8	8.8	-20...+65	40 000	67 500
						378	222	6 000	191.6	8.6			
						313	184	6 000	193.2	8.5			
						199	117	6 000	177.8	8.4			

Subject to changes.

\*The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

## Technical drawing

Dimensions in mm



# VCS0190RULDS

DC centrifugal fans · max. 922 m<sup>3</sup>/h · □ 226 x 85 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 1210 g

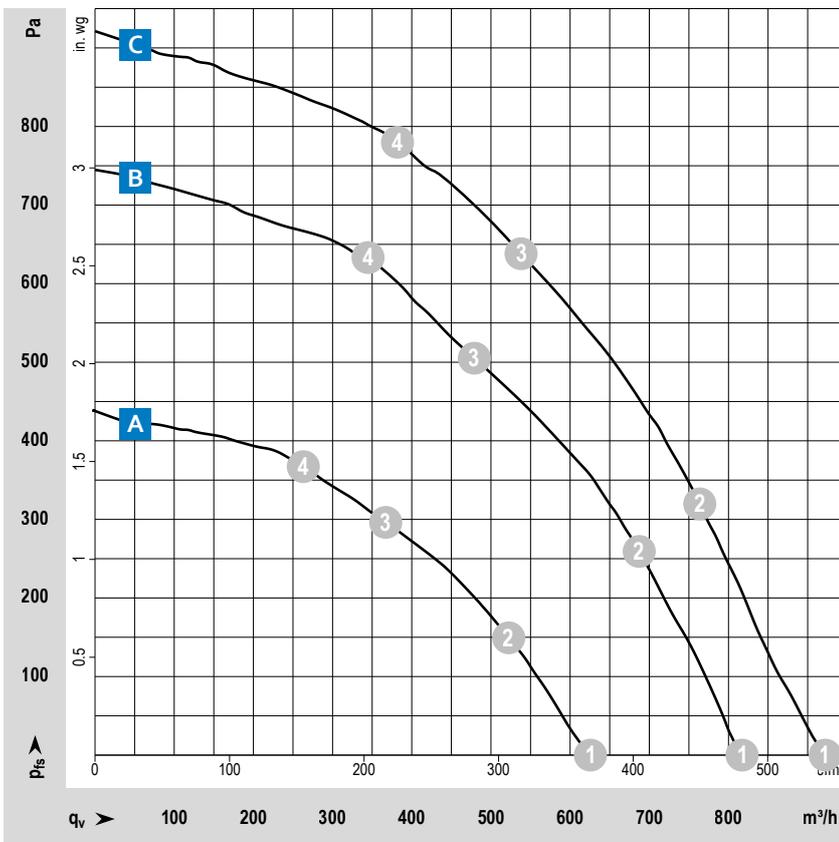
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

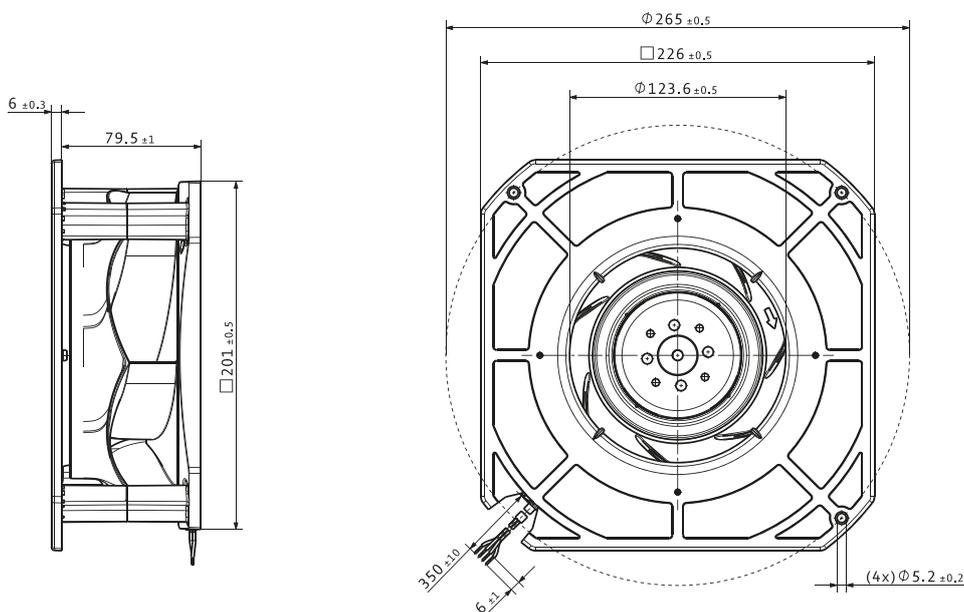
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm						
VCS0160XULCS RG 190-39/14/2 TDMLO	9595414741	24	16...30	A	① ② ③ ④	623	367	3 000	53.0	7.5	-20...+60	55 000	92 500
						521	307	2 990	68.0	7.3			
						367	216	2 980	75.9	7.3			
						263	155	3 040	73.2	7.4			
VCS0160XULCS RG 190-39/14/2 TDMO	9595420221	24	16...36	B	① ② ③ ④	817	481	3 900	107.3	8.3	-20...+65	52 500	87 500
						687	404	3 890	137.1	8.0			
						479	282	3 860	150.0	8.0			
						345	203	3 960	148.2	8.0			
VCS0160XULCS RG 190-39/18/2 TDMLO	9595414743	48	36...57	A	① ② ③ ④	626	368	3 000	53.4	7.5	-20...+60	55 000	92 500
						522	307	2 970	67.5	7.3			
						367	216	2 970	75.2	7.3			
						263	155	3 020	72.4	7.4			
VCS0160XULCS RG 190-39/18/2 TDMO	9595420223	48	36...72	B	① ② ③ ④	822	484	3 900	101.6	8.3	-20...+65	52 500	87 500
						683	402	3 880	129.3	8.0			
						482	284	3 870	145.2	8.0			
						342	201	3 930	138.6	8.0			
VCS0160XULCS RG 190-39/18/2 TDO	9595420220	48	36...72	C	① ② ③ ④	922	543	4 400	141.4	8.6	-20...+65	40 000	67 500
						764	450	4 340	179.6	8.3			
						538	317	4 340	201.8	8.1			
						382	225	4 400	192.8	8.1			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0220RULDS

DC centrifugal fans · max. 1 098 m<sup>3</sup>/h · □ 270 x 99 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 1560 g

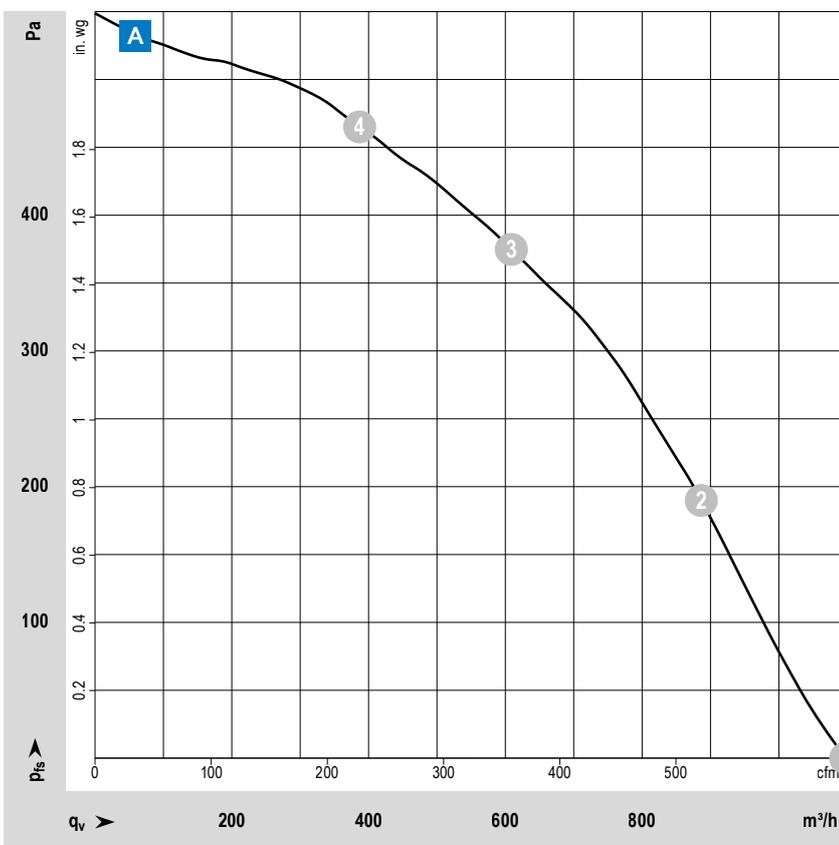
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

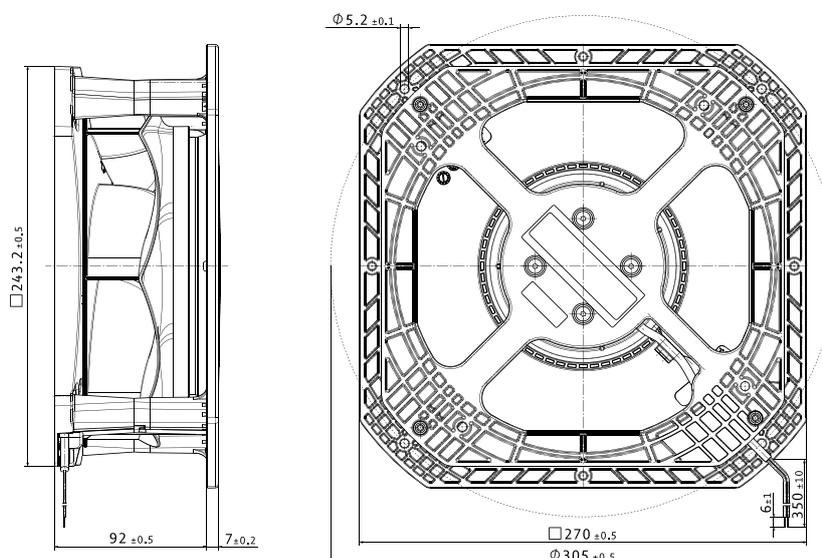
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VCS0220RULDS RG 220-43/14/2 TDMO	9595420305	24	16...36	A	1	1 098	646	3 000	96.0	7.8	-20...+55	55 000	92 500
					2	887	522	2 950	121.2	7.5			
					3	609	358	2 940	143.7	7.6			
					4	387	228	3 000	135.6	7.7			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0225RULDS

DC centrifugal fans · max. 1 445 m<sup>3</sup>/h · □ 270 x 119 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

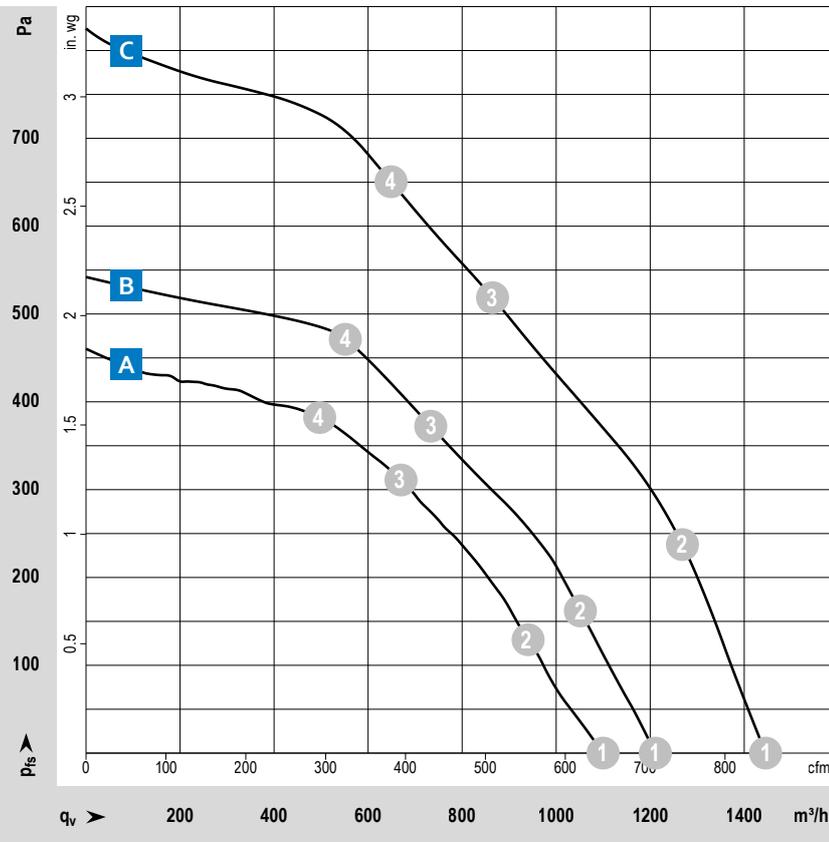
- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 1750 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

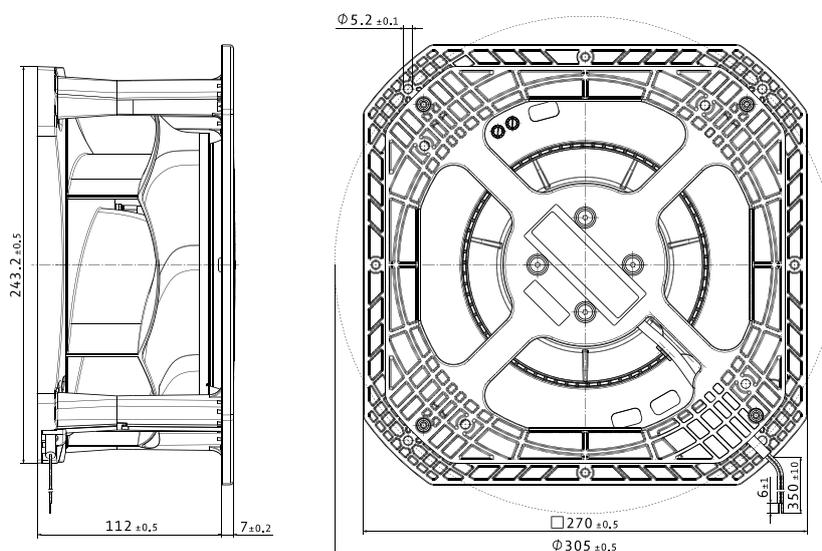
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10IPFC</sub> (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)			
VCS0225RULDS RG 225-55/14/2 TDMLO	9595420431	24	16...36	A	①	1 100	647	2 500	89.0	7.7	-20...+65	52 500	87 500
					②	940	553	2 460	107.4	7.5			
					③	670	394	2 480	125.7	7.4			
					④	497	293	2 520	120.4	7.5			
VCS0225RULDS RG 225-55/18/2 TDMO	9595420430	48	36...72	B	①	1 211	713	2 800	123.3	8.1	-20...+55	55 000	92 500
					②	1 052	619	2 752	149.2	8.0			
					③	733	431	2 721	170.0	8.0			
					④	552	325	2 814	169.0	8.0			
VCS0225RULDS RG 225-55/18/2 TDO	9595420432	48	36...60	C	①	1 445	850	3 300	183.4	8.5	-20...+40	30 000	50 000
					②	1 270	747	3 299	239.4	8.3			
					③	865	509	3 185	250.0	8.1			
					④	649	382	3 271	250.0	8.1			

Subject to changes.

The specific service life is valid when an external capacitor is wired between the positive and negative wires.

## Technical drawing

Dimensions in mm



# VFS0085XUJCS

DC centrifugal fans · max. 94 m<sup>3</sup>/h · Ø 85 x 68 mm



## Material/Surface

- Impeller: Metal

## Characteristics

- Version: Centrifugal fan in 24VDC with forward-curved impeller; Powerful due to 3-phase motor concept; Low-noise operation, fan requires scroll housing
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG24
- Electrical protection class: III
- Weight: 450 g

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from page 350 Accessories

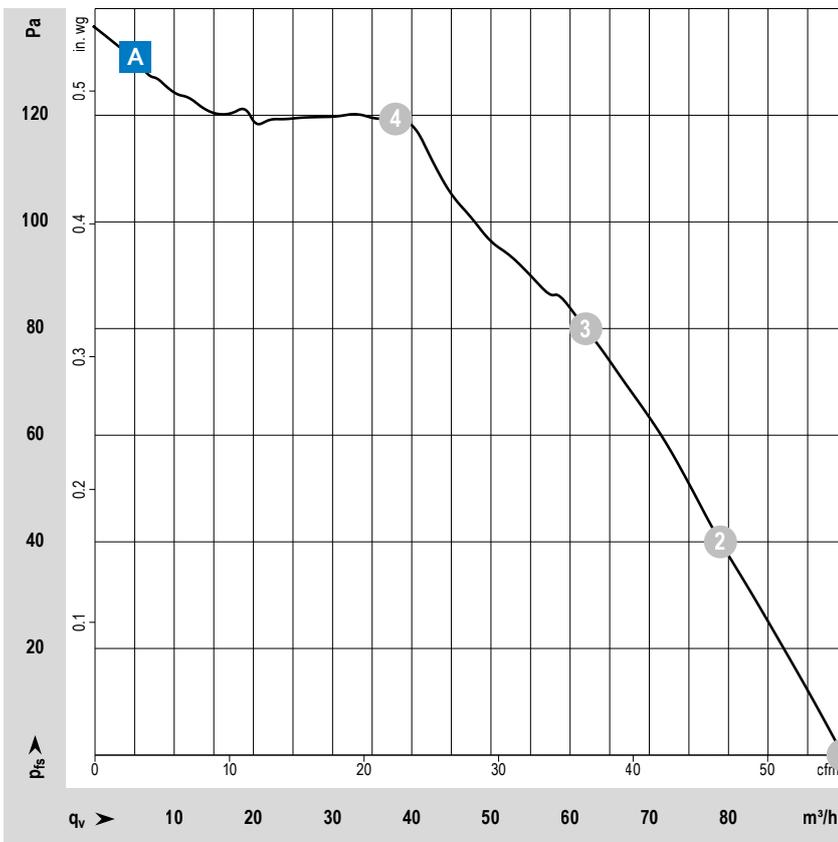
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- PWM control input
- Analog control input
- Multi-options control input (O)
- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!

For detailed information see <http://www.ebmpapst.com/general-conditions>

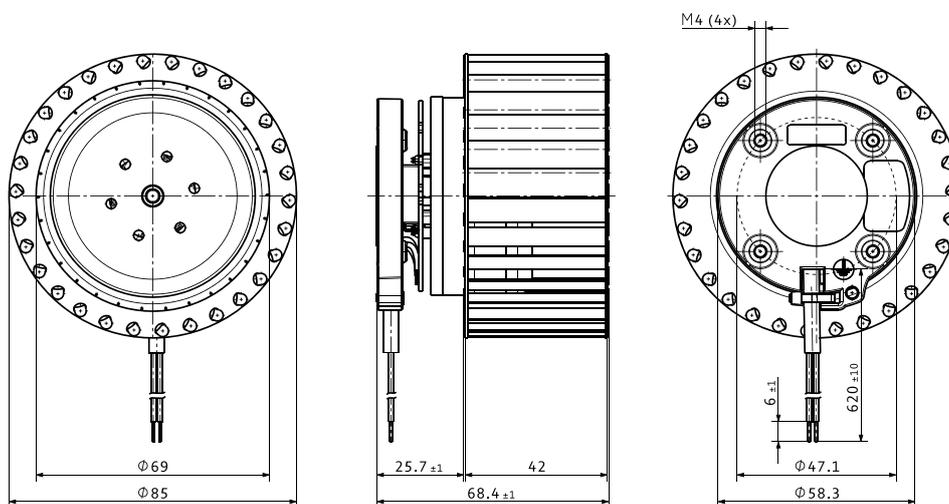
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> IFC (40 °C) s. p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VFS0085XUJCS RET 85-42/14/2 TDLOR-402	9594314402	24	20...28	A	1	94	55	2 850	13.0	6.9	-20...+60	62 500	105 000
					2	79	46	2 850	10.8	6.7			
					3	62	36	2 850	8.6	6.7			
					4	38	22	2 850	5.9	6.6			

Subject to changes.

All nominal data were measured in the scroll housing.

Technical drawing

Dimensions in mm



# VFS0097XUJCS

DC centrifugal fans · max. 230 m<sup>3</sup>/h · Ø 97 x 41 mm



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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Metal

## Characteristics

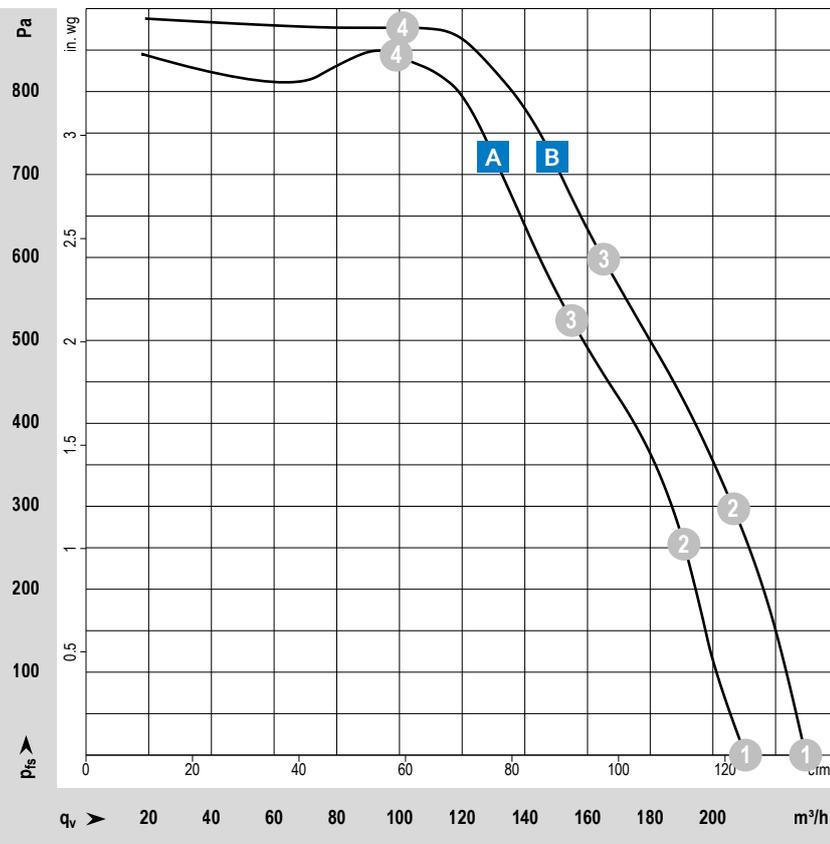
- Version: Centrifugal fan in 24 or 48VDC with forward-curved impeller; Powerful due to 3-phase motor concept; Low-noise operation, fan requires scroll housing
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 430 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

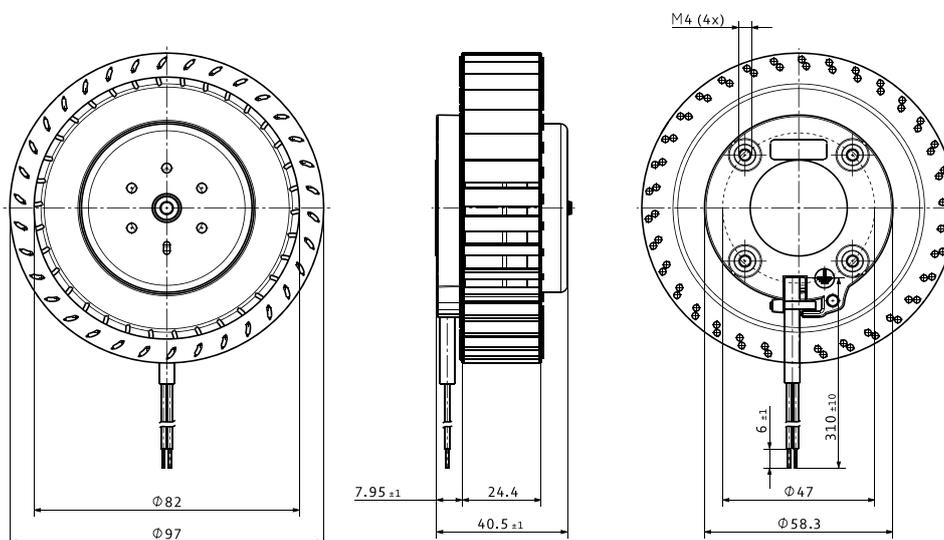
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VFS0097XUJCS RET 97-25/14/2 TDP	9594314052	24	16...32	A	①	210	124	5 600	140.1	8.4	-20...+60	80 000	135 000
					②	191	112	5 900	134.9	8.4			
					③	155	91	6 030	109.6	8.4			
					④	99	58	6 050	62.1	7.9			
VFS0097XUJCS RET 97-25/18/2 TDP	9594314050	48	36...60	B	①	230	135	6 000	169.1	8.6	-20...+60	80 000	135 000
					②	207	122	6 220	152.6	8.6			
					③	165	97	6 210	111.2	8.5			
					④	101	59	6 270	64.4	8.0			

Subject to changes.

The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet. All nominal data were measured in the scroll housing.

## Technical drawing

Dimensions in mm



# VBS0100XUGBS

DC centrifugal fans · max. 105 m<sup>3</sup>/h · Ø 104 x 25 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 160 g

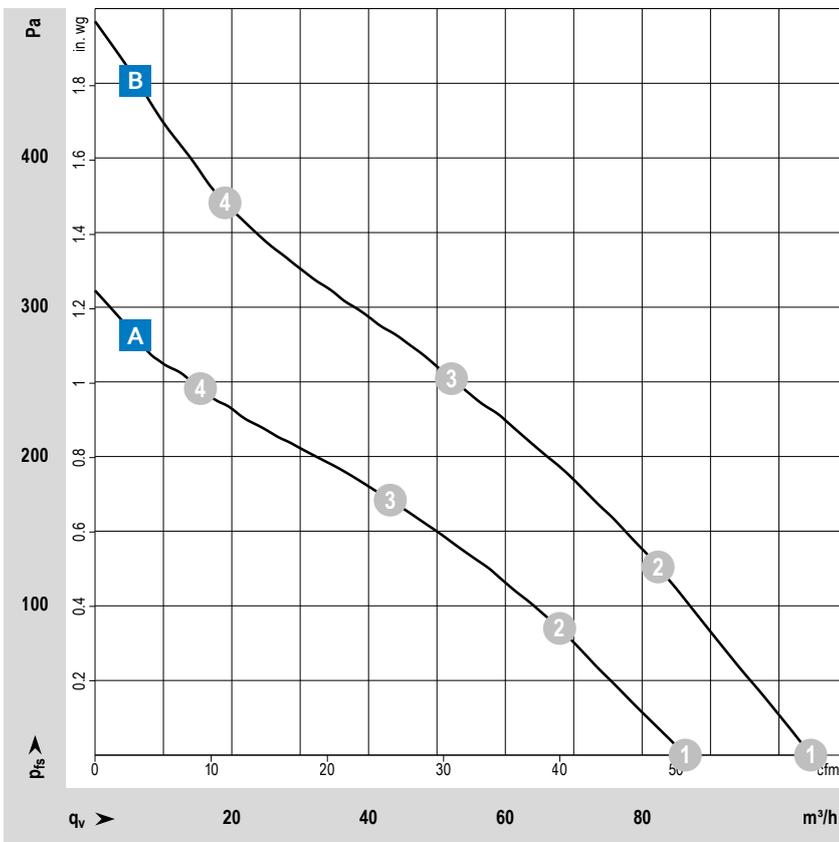
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: IP 54

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

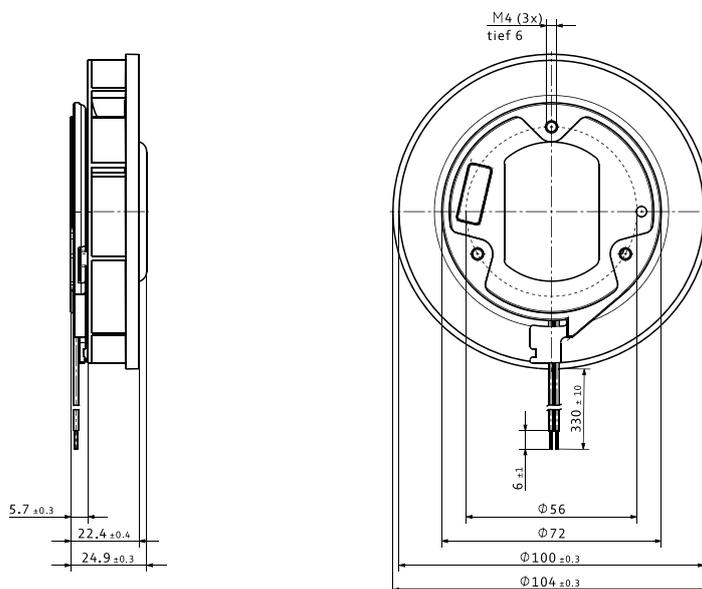
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> FC (40 °C) s. p. II
		VDC	VDC			m³/h	cfm						
VBS0100XUGBS REF 100-11/12	9593507002	12	8...15	A	① ② ③ ④	86.0	50.6	5 400	6.7	7.0	-20...+75	80 000	135 000
						68.0	40.0	5 170	7.3	6.6			
						43.2	25.4	5 000	8.0	6.4			
						15.4	9.1	5 400	6.7	6.8			
VBS0100XUGBS REF 100-11/14	9593507003	24	16...30	A	① ② ③ ④	85.0	50.0	5 400	6.6	7.0	-20...+75	80 000	135 000
						67.0	39.4	5 230	7.2	6.6			
						43.1	25.4	5 070	7.8	6.4			
						15.3	9.0	5 400	6.7	6.8			
VBS0100XUGBS REF 100-11/18/2	9593507008	48	36...60	A	① ② ③ ④	83.0	48.9	5 400	7.3	7.0	-20...+75	80 000	135 000
						66.0	38.8	5 220	7.9	6.6			
						42.3	24.9	5 050	8.4	6.4			
						15.2	8.9	5 400	7.3	6.8			
VBS0100XUGBS REF 100-11/18 H	9593507005	48	36...56	B	① ② ③ ④	105.0	61.8	6 700	13.2	7.3	-20...+70	67 500	115 000
						82.0	48.3	6 430	14.4	7.0			
						52.0	30.6	6 200	15.6	6.8			
						19.0	11.2	6 690	13.3	7.3			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0101XUGDS

DC centrifugal fans · max. 195 m<sup>3</sup>/h · Ø 101 x 52 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 305 g

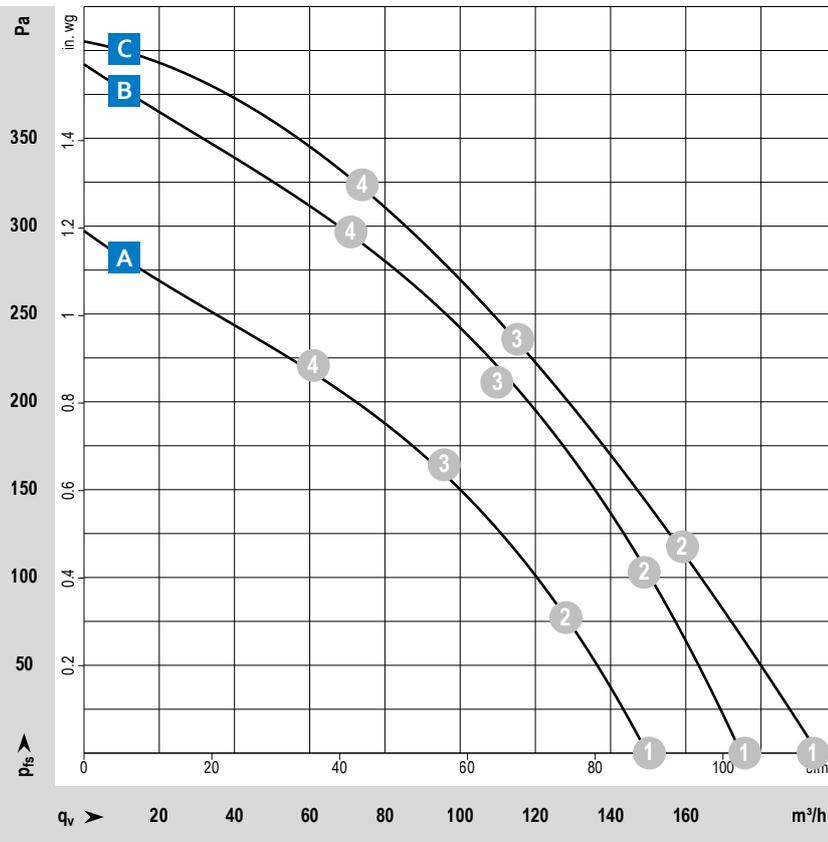
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

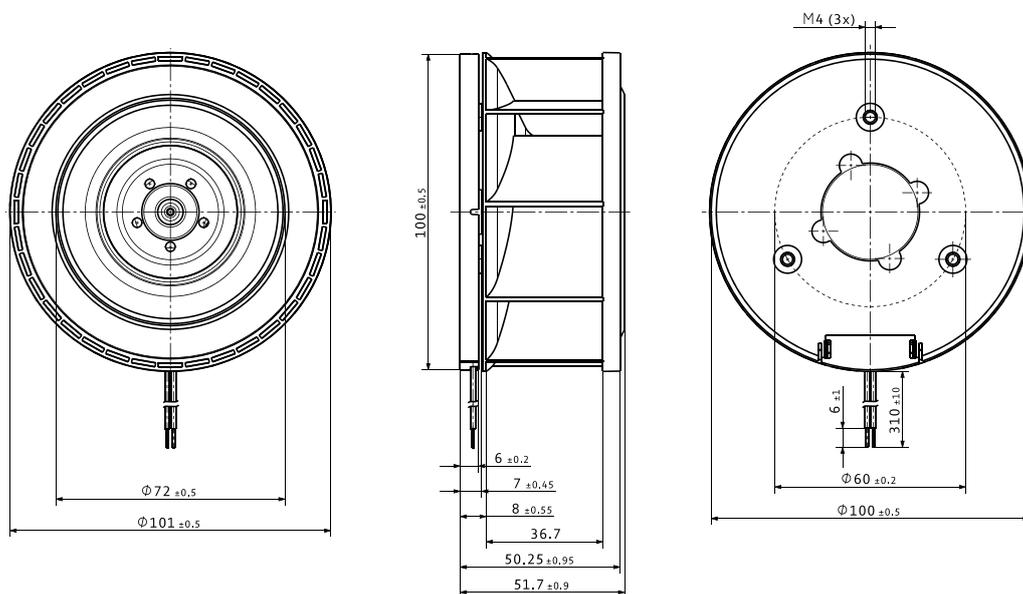
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VBS0101XUGDS RER 101-36/12 NH	9793520196	12	9...13.6	A	①	150	88	5 000	11.4	7.2	-20...+70	65 000	110 000
					②	128	75	4 900	12.2	7.0			
					③	96	57	4 820	12.9	7.0			
					④	61	36	4 870	12.5	6.9			
VBS0101XUGDS RER 101-36/12 NHH	9793520192	12	9...13.6	C	①	191	112	6 000	20.6	7.9	-20...+70	60 000	102 500
					②	156	92	5 800	22.0	7.7			
					③	114	67	5 690	22.5	7.6			
					④	74	44	5 800	22.0	7.5			
VBS0101XUGDS RER 101-36/14 NHH	9793520190	24	18...27.2	C	①	195	115	6 050	22.5	7.9	-20...+70	60 000	102 500
					②	161	95	5 760	22.4	7.7			
					③	117	69	5 630	23.0	7.6			
					④	73	43	5 780	22.6	7.5			
VBS0101XUGDS RER 101-36/18 NHH	9793520191	48	36...60	B	①	176	104	5 850	17.0	7.7	-20...+70	60 000	102 500
					②	149	88	5 740	18.5	7.5			
					③	110	65	5 650	19.6	7.3			
					④	71	42	5 640	18.2	7.3			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0120XUJCS

DC centrifugal fans · max. 381 m<sup>3</sup>/h · Ø 120 x 54 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 430 g

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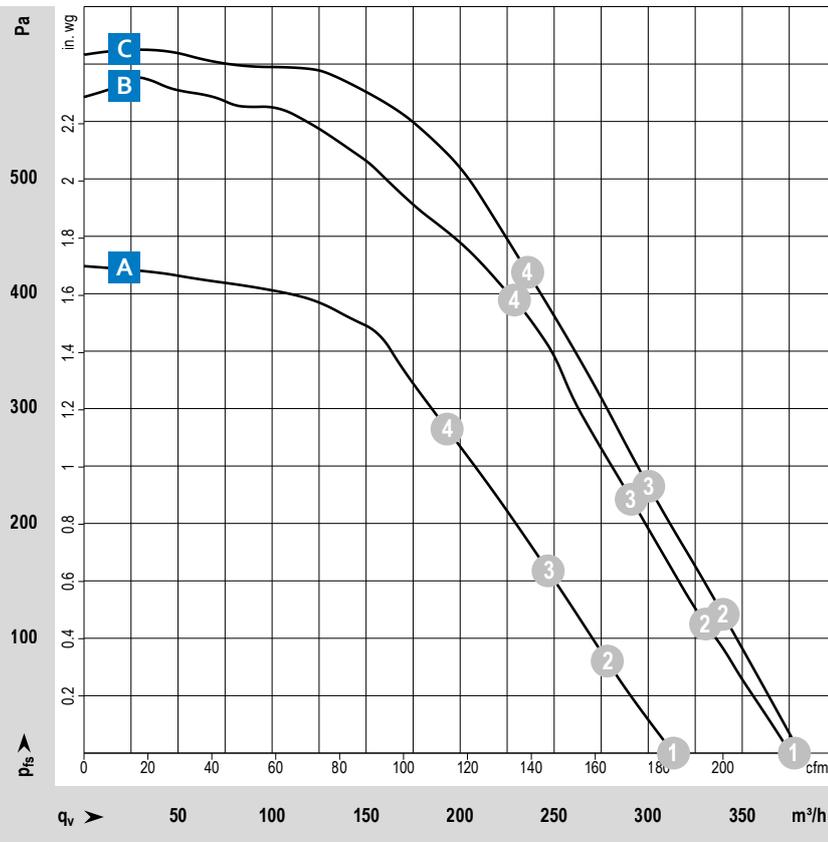
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

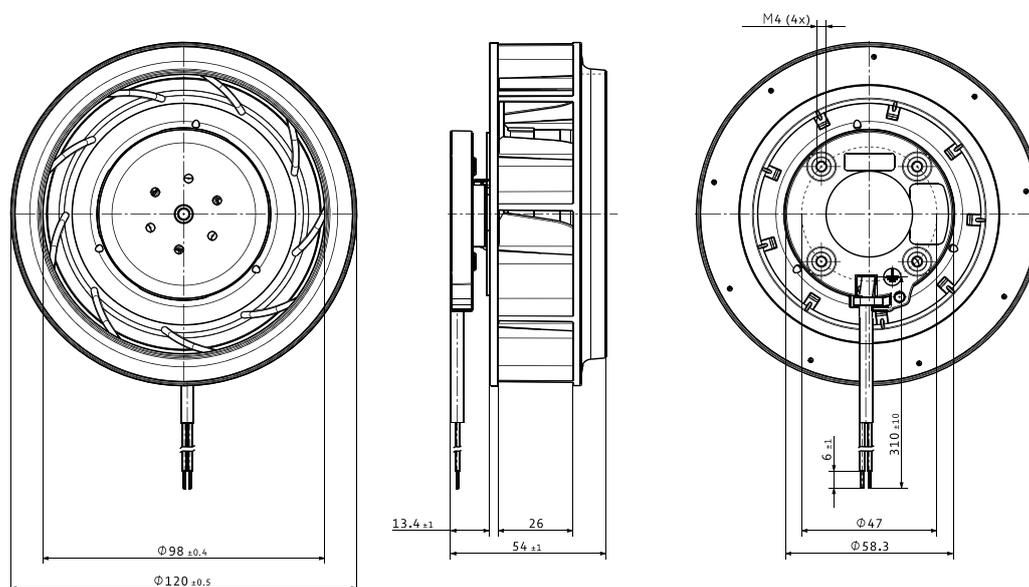
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm						
VBS0120XUJCS RER 120-26/14/2 TDP	9594314001	24	16...32	B	① ② ③ ④	376	221	6 100	96.1	8.4	-20...+60	55 000	92 500
						330	194	6 130	98.1	8.4			
						291	171	6 140	98.4	8.4			
						229	135	6 200	93.9	8.4			
VBS0120XUJCS RER 120-26/18/2 TDMP	9594314005	48	36...60	A	① ② ③ ④	313	184	5 200	53.4	8.1	-20...+60	57 500	97 500
						278	164	5 200	54.1	8.1			
						247	145	5 200	54.7	8.1			
						193	114	5 200	53.7	8.1			
VBS0120XUJCS RER 120-26/18/2 TDP	9594314000	48	36...60	C	① ② ③ ④	381	224	6 300	100.8	8.5	-20...+60	50 000	85 000
						340	200	6 300	103.4	8.5			
						300	177	6 300	103.9	8.5			
						236	139	6 360	100.3	8.5			

Subject to changes.

The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

## Technical drawing

Dimensions in mm



# VBS0125XUJBS

DC centrifugal fans · max. 152 m<sup>3</sup>/h · Ø 138 x 35 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 320 g

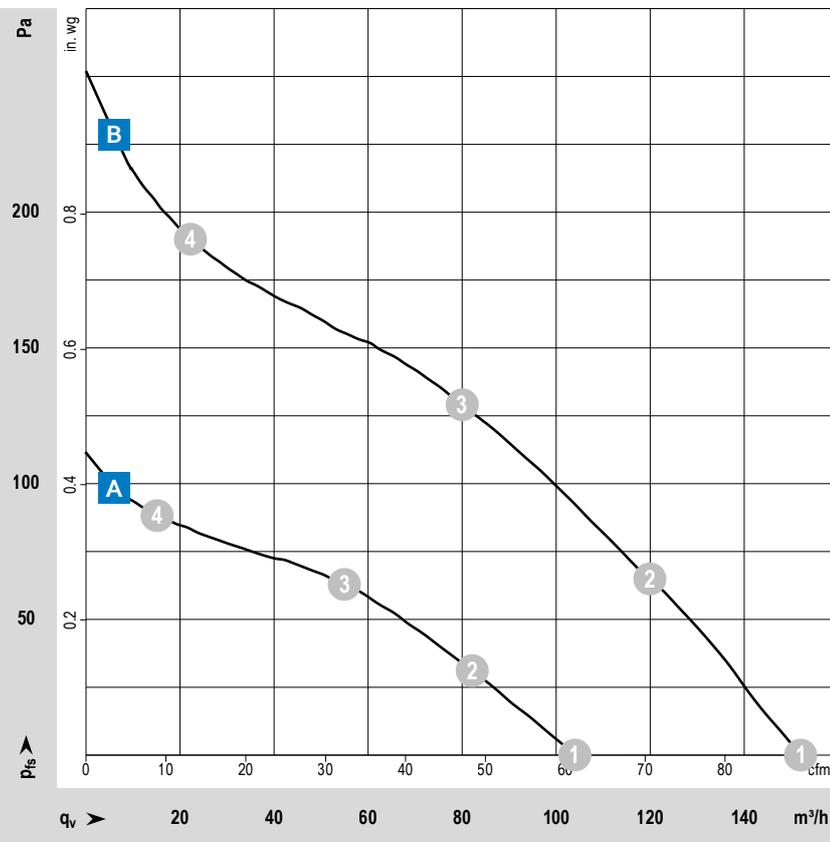
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

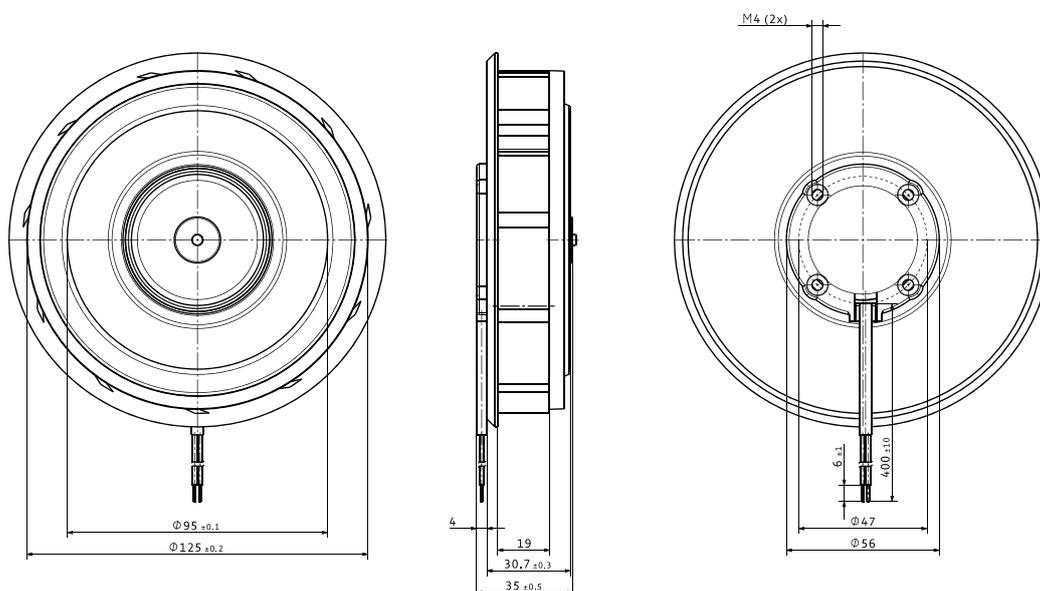
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)		°C	L <sub>10</sub> (40 °C) ebm-papst standard
VBS0120XUJCS RER 125-19/12 N	9594310157	12	7...15	A	① ② ③ ④	100.0	58.9	2 650	3.8	6.0	-30...+75	62 500	105 000
						80.0	47.1	2 560	4.2	5.9			
						54.0	31.8	2 490	4.4	5.8			
						15.0	8.8	2 620	4.0	5.8			
VBS0120XUJCS RER 125-19/14 N	9594310155	24	12...28	A	① ② ③ ④	104.0	61.2	2 650	4.1	6.0	-30...+75	62 500	105 000
						82.0	48.3	2 560	4.4	5.9			
						55.0	32.4	2 490	4.7	5.8			
						15.1	8.9	2 620	4.2	5.8			
VBS0120XUJCS RER 125-19/14 NH-172	9594310172	24	12...28	B	① ② ③ ④	152.0	89.5	4 000	10.2	6.9	-20...+70	55 000	92 500
						120.0	70.6	3 840	11.0	6.8			
						80.0	47.1	3 720	11.6	6.9			
						22.2	13.1	3 920	10.6	6.9			
VBS0120XUJCS RER 125-19/18 N	9594310170	48	36...56	A	① ② ③ ④	101.0	59.4	2 650	3.7	6.0	-30...+75	62 500	105 000
						81.0	47.7	2 560	4.0	5.9			
						54.0	31.8	2 500	4.2	5.8			
						15.1	8.9	2 620	3.8	5.8			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0133X...

DC centrifugal fans · max. 539 m<sup>3</sup>/h · Ø 133 x 91 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 890 g; 460 g RadiCal

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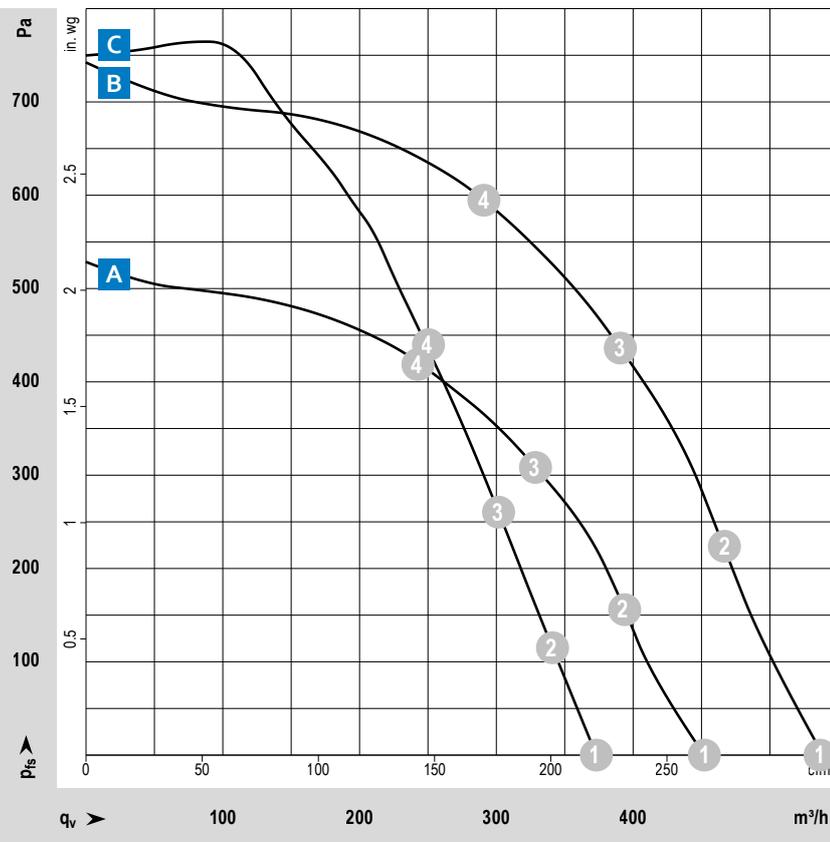
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

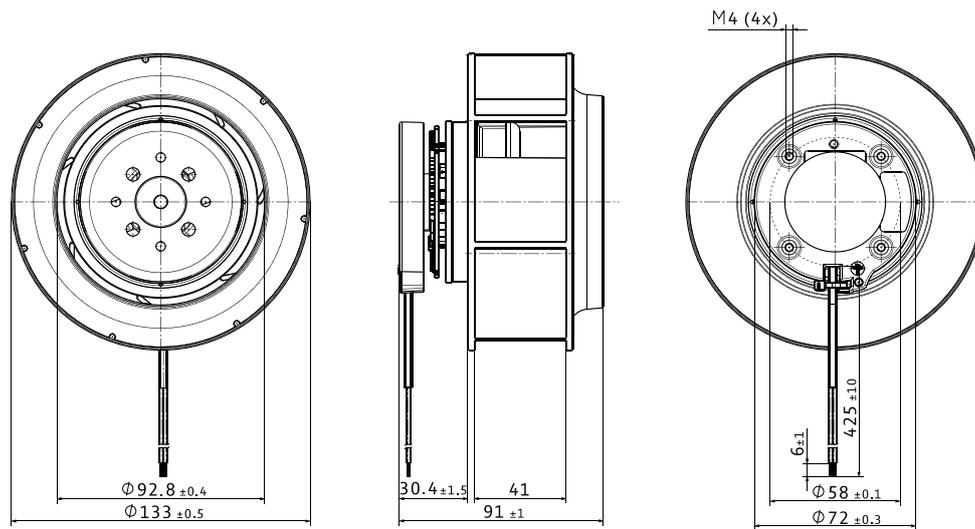
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> IFC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
<b>VBS0133XULCS</b> RER 133-41/14/2 TDMP	9595414520	24	16...30	<b>A</b>	① ② ③ ④	452	266	5 000	58.5	8.3	-20...+65	72 500	122 500
						394	232	4 990	71.0	8.1			
						329	194	4 980	80.1	7.9			
						244	144	5 040	75.9	7.9			
<b>VBS0133XULDS</b> RER 133-41/14/2 TDP	9595420062	24	16...36	<b>B</b>	① ② ③ ④	539	317	6 000	90.8	8.6	-20...+65	70 000	117 500
						468	275	5 960	111.6	8.4			
						391	230	5 960	127.7	8.3			
						291	171	6 020	121.1	8.2			
<b>VBS0133XULDS</b> RER 133-41/18/2 TDP	9595420050	48	36...72	<b>B</b>	① ② ③ ④	537	316	6 000	93.2	8.6	-20...+65	70 000	117 500
						468	275	6 000	114.7	8.4			
						382	225	5 840	120.0	8.3			
						286	168	5 940	120.0	8.2			
<b>VBS0133RUJCS*</b> RER 133-33/18/2 TDMO RadiCal	9594314204	48	36...60	<b>C</b>	① ② ③ ④	373	220	5 600	58.9	8.7	-20...+65	55 000	92 500
						341	201	5 580	62.9	8.6			
						302	178	5 530	67.6	8.4			
						249	147	5 530	73.5	7.9			

Subject to changes.

\* The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

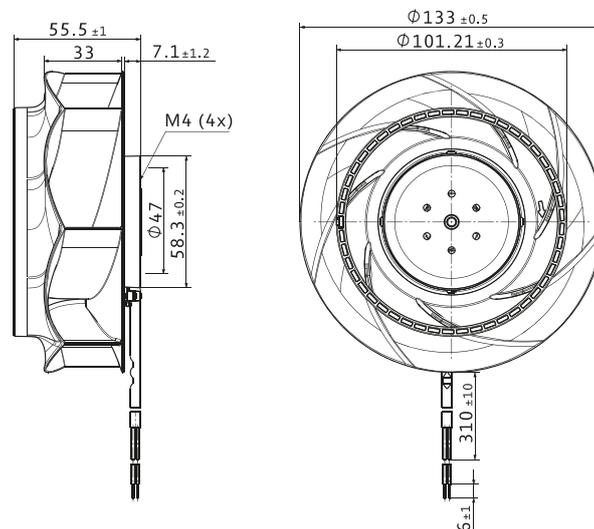
## Technical drawing VBS0133XULCS + VBS0133XULDS RER 133 TD

Dimensions in mm



## Technical drawing VBS0133RUJCS RER 133-33/18/2 TDMO RadiCal

Dimensions in mm



# VBS0140XUJCS

DC centrifugal fans · max. 259 m<sup>3</sup>/h · Ø 140 x 36 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 360 g

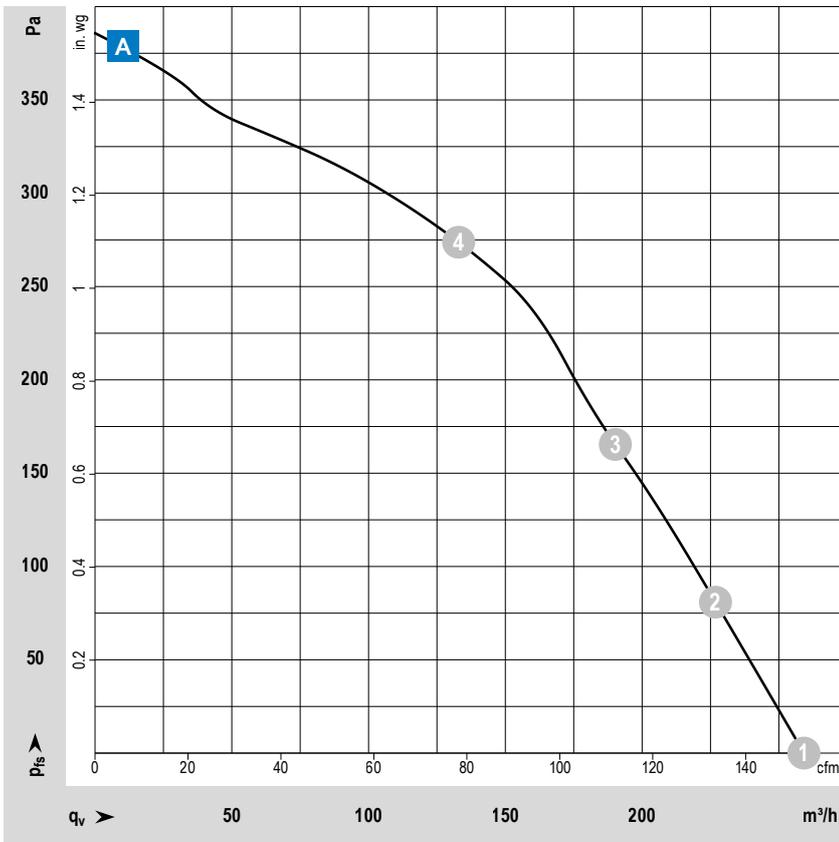
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

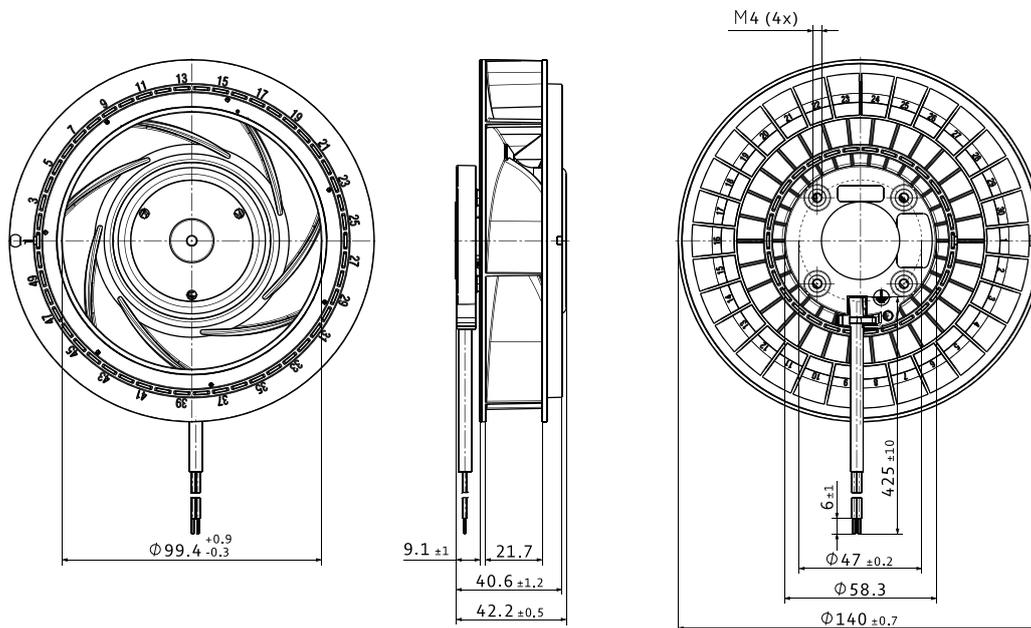
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

		Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
Type / Type old	Part number												
<b>VBS0140XUJCS</b> RER 140-22/14 N/2TDP	<b>9594314500</b>	<b>24</b>	20...28	<b>A</b>	1	259	152	3 850	37.5	7.8	-20...+65	55 000	92 500
					2	227	134	3 850	39.4	7.8			
					3	190	112	3 850	40.7	7.6			
					4	133	78	3 850	35.7	7.1			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0160XULCS

DC centrifugal fans · max. 265 m<sup>3</sup>/h · Ø 165 x 51 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC or 24VDC with backward-curved impeller
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 22
- Electrical protection class: III
- Weight: 600 g

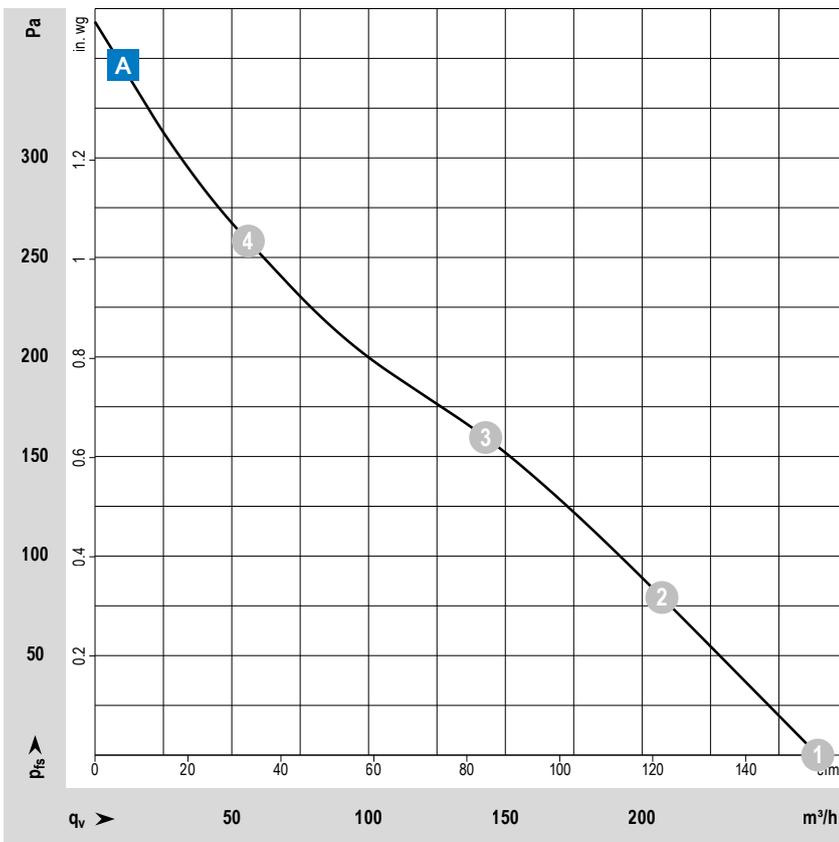
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 68

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

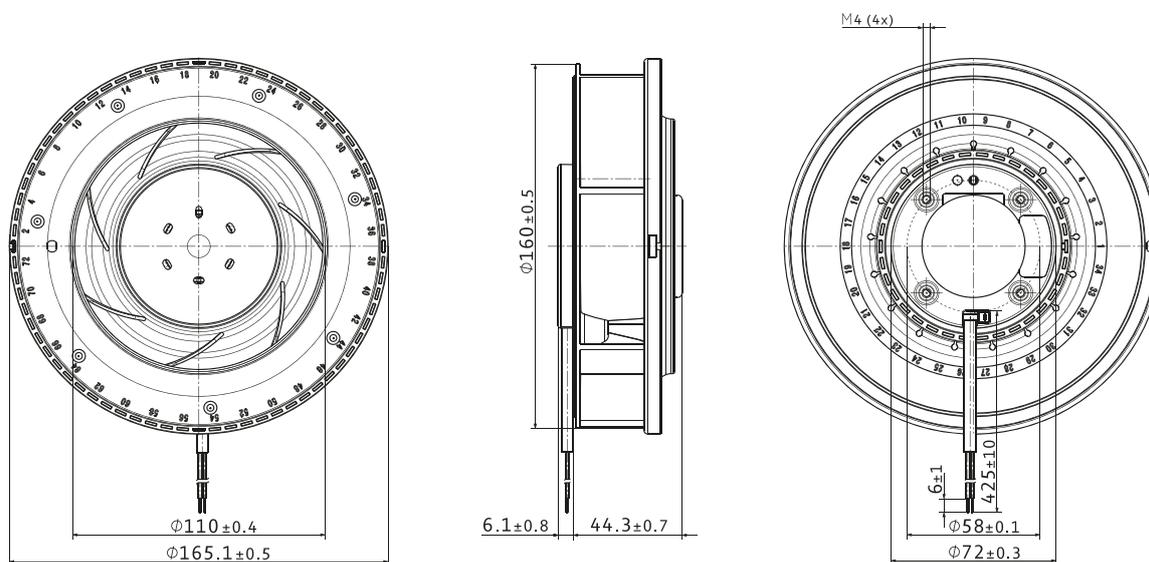
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)		°C	Hours
VBS0140XUJCS RER 160-28/12 N	9595414153	12	7.5...14	A	①	265	156	3 000	17.9	7.4	-20...+70	75 000	127 500
					②	209	123	2 870	18.9	7.0			
					③	144	85	2 830	19.3	6.7			
					④	56	33	3 040	17.8	7.1			
VBS0140XUJCS RER 160-28/14 N	9595414150	24	12...28	A	①	264	155	3 000	17.0	7.4	-20...+70	75 000	127 500
					②	207	122	2 860	17.5	7.0			
					③	143	84	2 810	17.8	6.7			
					④	56	33	3 030	17.0	7.1			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0160XULCS

DC centrifugal fans · max. 373 m<sup>3</sup>/h · Ø 165 x 51 mm



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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Plastic

## Characteristics

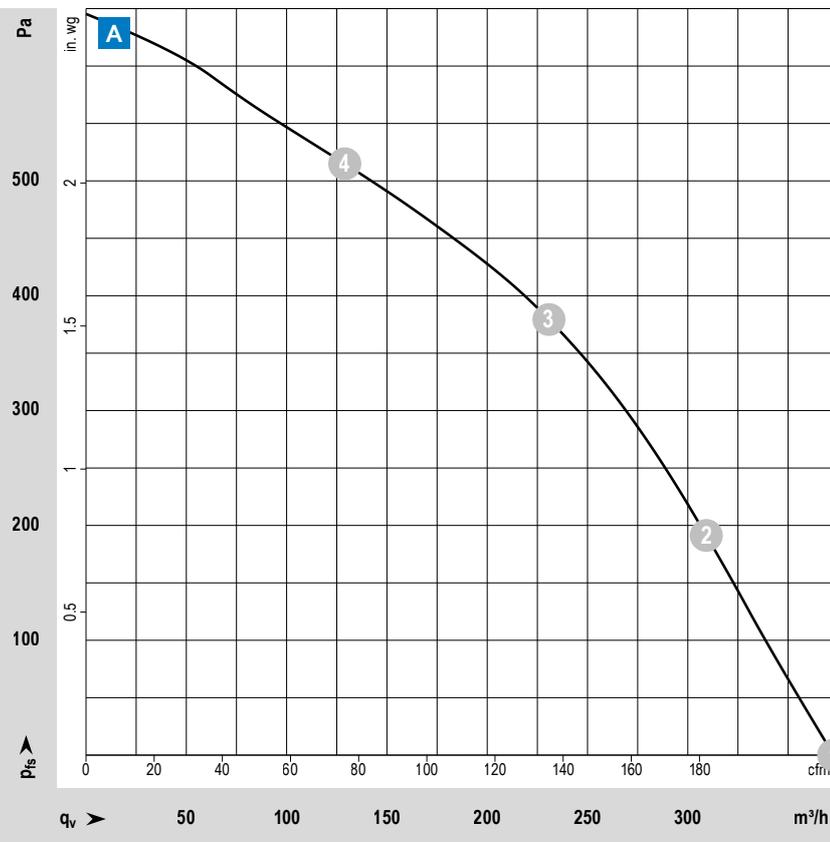
- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 22
- Electrical protection class: III
- Weight: 600 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

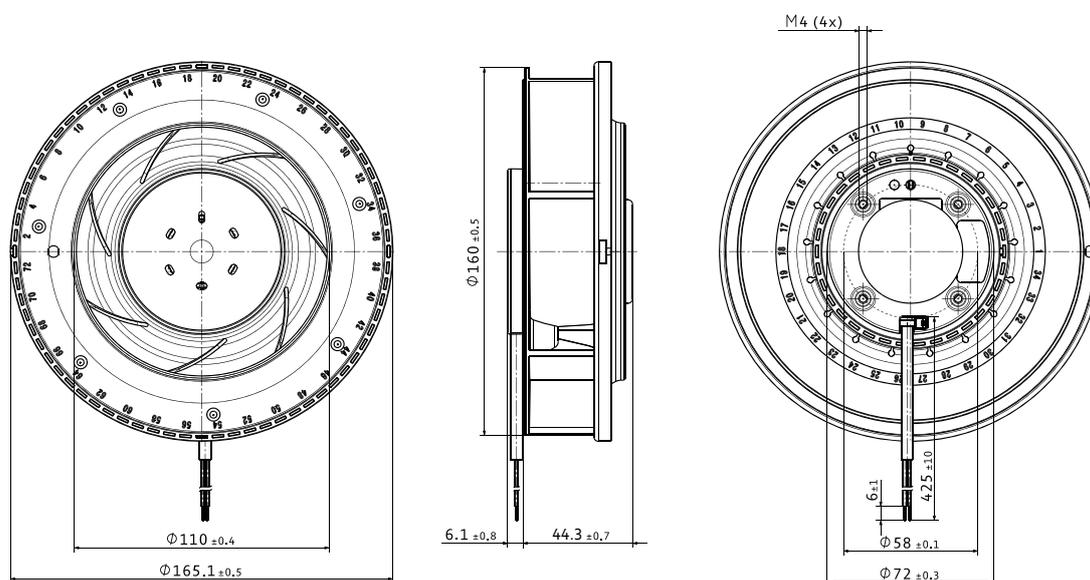
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)		°C	Hours
<b>VBS0160XULCS</b> RER160-28/14N/ 2TDA	<b>9595414360</b>	<b>24</b>	16...28	<b>B</b>	1	373	220	4 200	54.8	8.1	-20...+60	55 000	92 500
					2	309	182	4 200	66.3	7.8			
					3	231	136	4 200	72.6	7.6			
					4	129	76	4 200	64.2	8.0			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0175XULDS

DC centrifugal fans · max. 755 m<sup>3</sup>/h · Ø 175 x 55 mm



## Material/Surface

- Impeller: Metal

## Characteristics

- Version: Centrifugal fan in 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 20; speed signal and control input AWG 22
- Electrical protection class: I
- Weight: 933 g

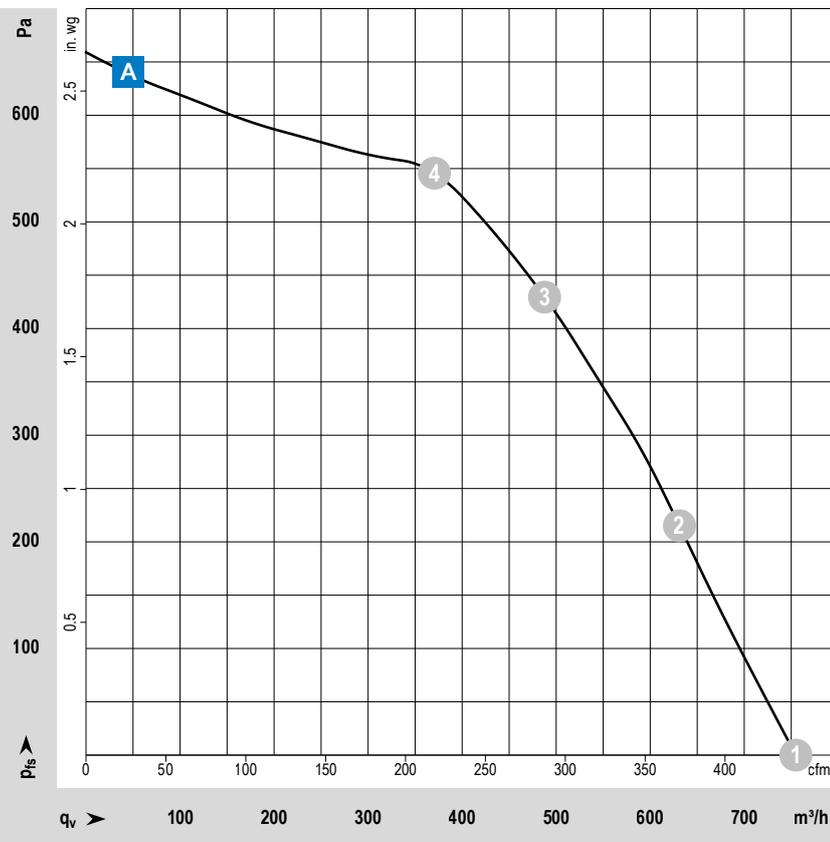
from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Degree of protection: IP 54



### Measuring conditions

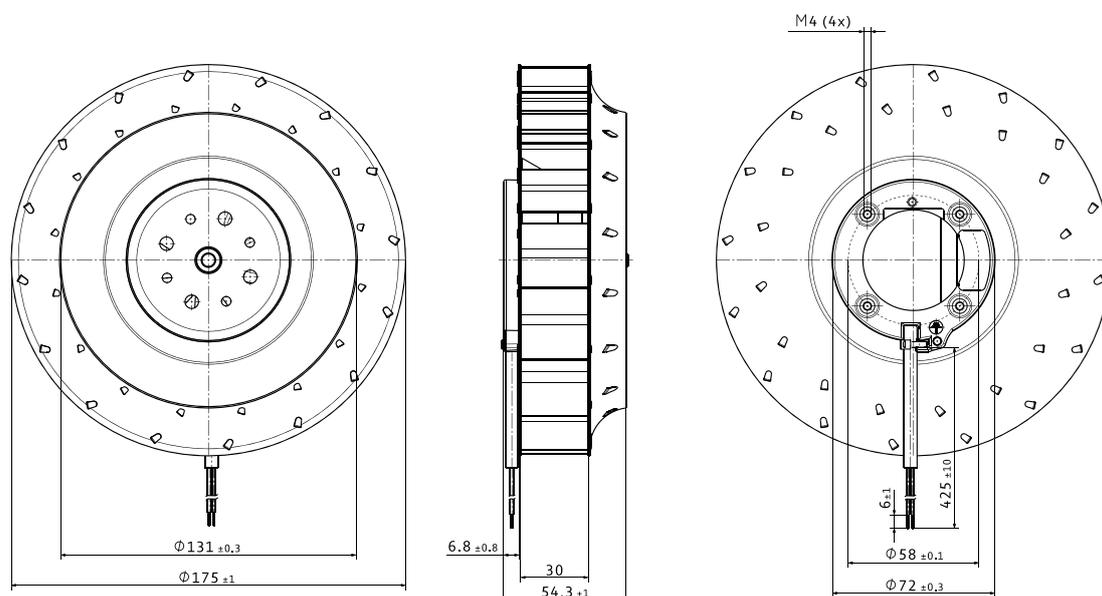
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VBS0175XULDS REF 175-30/18/2 TDP	9595420160	48	36...72	A	1	755	444	4 400	139.2	9.0	-20...+60	65 000	110 000
					2	631	371	4 380	154.2	8.8			
					3	488	287	4 310	160.0	8.6			
					4	372	219	4 340	160.0	8.6			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0175X...

DC centrifugal fans · max. 975 m<sup>3</sup>/h · Ø 175 x 69 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 775 g

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from page 350 Accessories

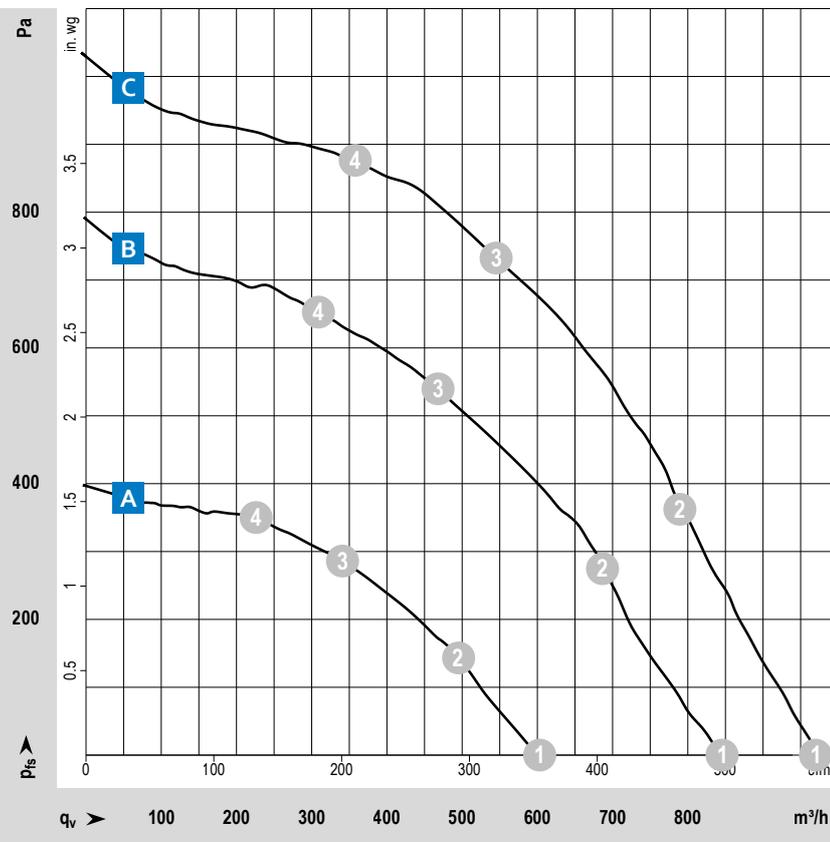
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

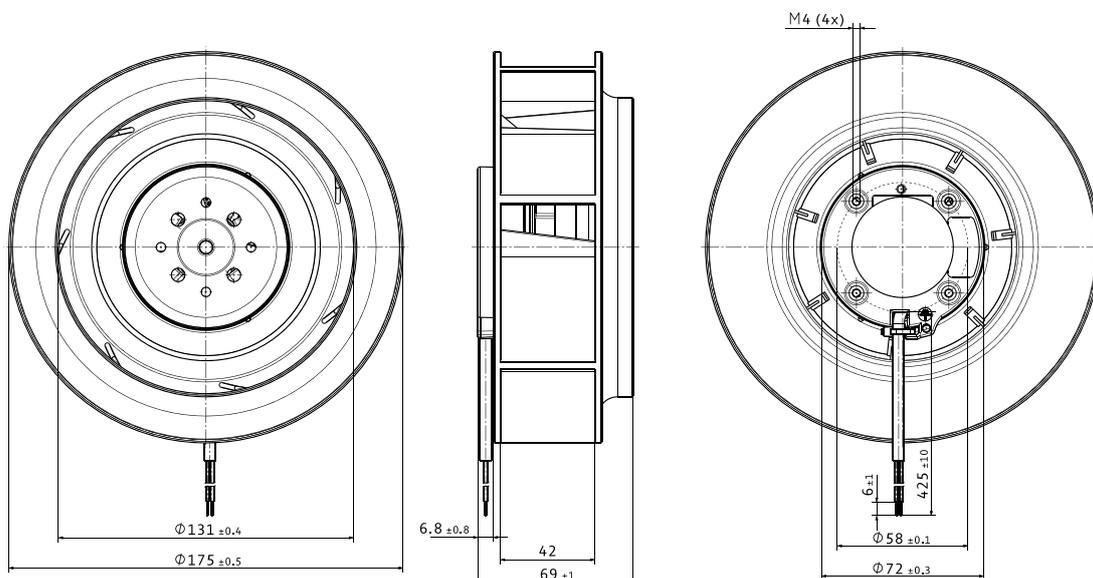
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)		°C	L <sub>10</sub> (40 °C) ebm-papst standard
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VBS0175XULCS RER 175-42/14/2 TDMLP	9595414620	24	16...30	A	①	592	348	3 400	48.8	7.6	-20...+65	72 500	122 500
					②	488	287	3 350	65.3	7.5			
					③	336	198	3 350	78.3	7.4			
					④	224	132	3 420	75.0	7.6			
VBS0175XULDS RER 175-42/14/2 TDMP	9595420102	24	16...36	B	①	860	506	4 860	121.3	8.5	-20...+65	70 000	117 500
					②	687	404	4 700	150.0	8.3			
					③	447	263	4 380	150.0	8.1			
					④	301	177	4 550	150.0	8.3			
VBS0175XULCS RER 175-42/18/2 TDMLP	9595414600	48	36...57	A	①	603	355	3 400	48.9	7.6	-20...+65	72 500	122 500
					②	495	291	3 370	67.0	7.5			
					③	341	201	3 370	79.9	7.4			
					④	226	133	3 440	76.1	7.6			
VBS0175XULDS RER 175-42/18/2 TDMP	9595420111	48	36...72	B	①	846	498	4 800	110.4	8.5	-20...+65	70 000	117 500
					②	689	406	4 750	148.7	8.3			
					③	468	275	4 660	170.0	8.2			
					④	309	182	4 740	160.7	8.4			
VBS0175XULDS RER 175-42/18/2 TDP	9595420100	48	36...72	C	①	975	574	5 400	168.8	8.6	-20...+65	60 000	102 500
					②	792	466	5 400	234.8	8.5			
					③	545	321	5 360	280.0	8.6			
					④	358	211	5 450	259.4	8.6			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0190R...

DC centrifugal fans · max. 965 m<sup>3</sup>/h · Ø 190 x 69 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 858 g

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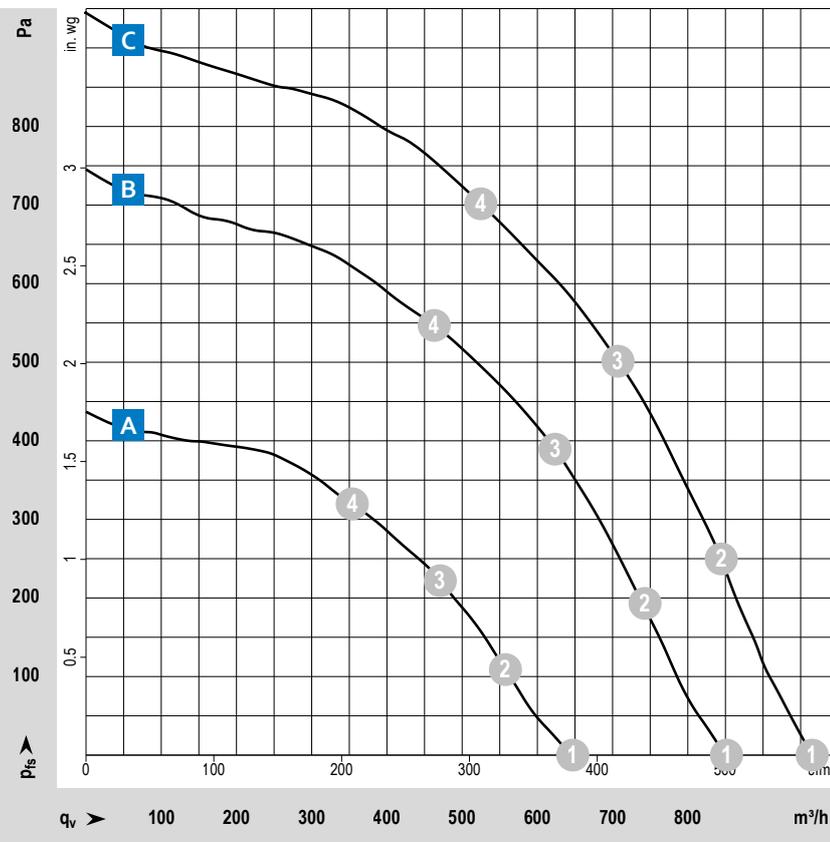
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

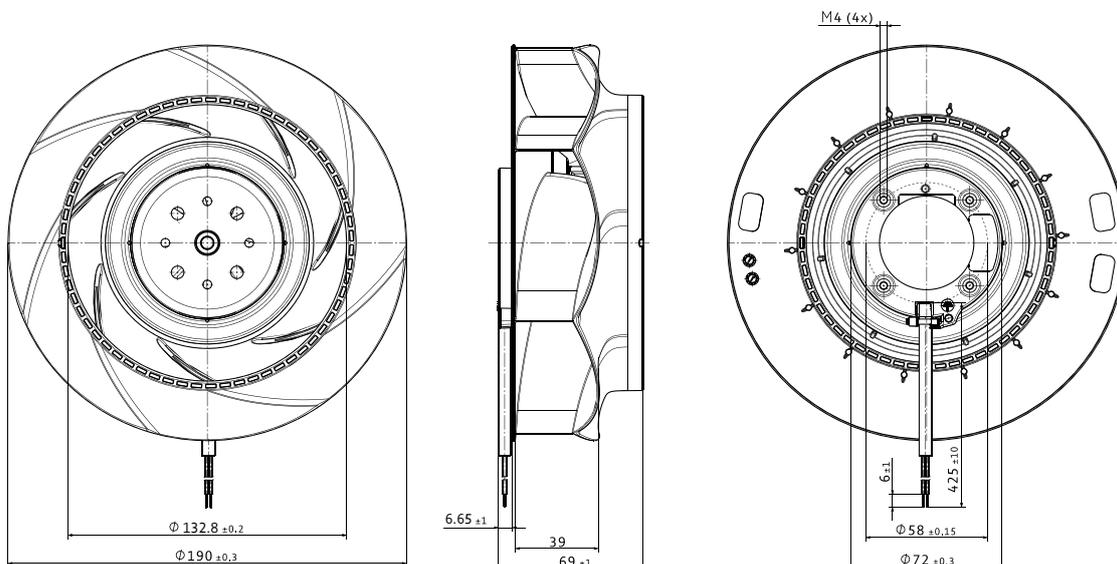
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10ipFC</sub> (40 °C) s. p. 11
		VDC	VDC										
<b>VBS0190RULCS</b> RER 190-39/14/2 TDMLO	<b>9595414720</b>	<b>24</b>	16...30	<b>A</b>	①	654	385	3 000	58.4	7.7	-20...+60	55 000	92 500
						565	333	2 940	67.2	7.4			
						477	281	2 940	77.6	7.2			
						354	208	2 980	76.0	7.1			
<b>VBS0190RULDS</b> RER 190-39/14/2 TDMO	<b>9595420202</b>	<b>24</b>	16...36	<b>B</b>	①	850	500	3 900	110.9	8.2	-20...+65	52 500	87 500
						740	436	3 850	130.9	8.1			
						624	367	3 850	150.0	7.8			
						463	273	3 880	147.4	7.7			
<b>VBS0190RULCS</b> RER 190-39/18/2 TDMLO	<b>9595414724</b>	<b>48</b>	36...57	<b>A</b>	①	647	381	3 000	58.0	7.7	-20...+65	55 000	92 500
						558	328	2 940	66.9	7.4			
						471	277	2 940	77.2	7.2			
						354	208	2 960	78.5	7.1			
<b>VBS0190RULDS</b> RER 190-39/18/2 TDO	<b>9595420304</b>	<b>48</b>	36...72	<b>C</b>	①	965	568	4 400	160.6	8.5	-20...+65	40 000	67 500
						845	497	4 350	189.1	8.4			
						707	416	4 340	213.6	8.1			
						525	309	4 360	210.0	8.0			

Subject to changes.

Speed control range from 800 rpm at 7 % PWM up to nominal speed at > 90 % PWM. Standstill at 0 % PWM, Standstill if control cable is interrupted.

## Technical drawing

Dimensions in mm



# VBS0190RUNCS

DC centrifugal fans · max. 820 m<sup>3</sup>/h · Ø 190 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

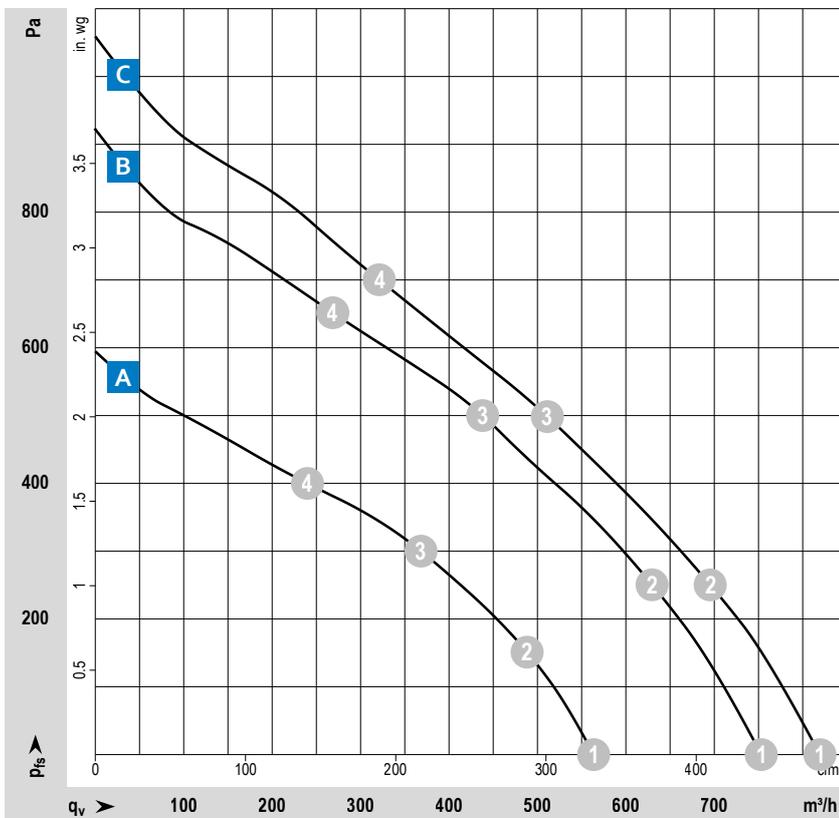
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.25–1.46 kg

## Approvals

- CSA CSA C22.2 Nr. 113; UL 507; EAC; CE
- **A**: UKCA not applicable;
- **B+C**: UKCA; CCC on request (only applicable with >36V)

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

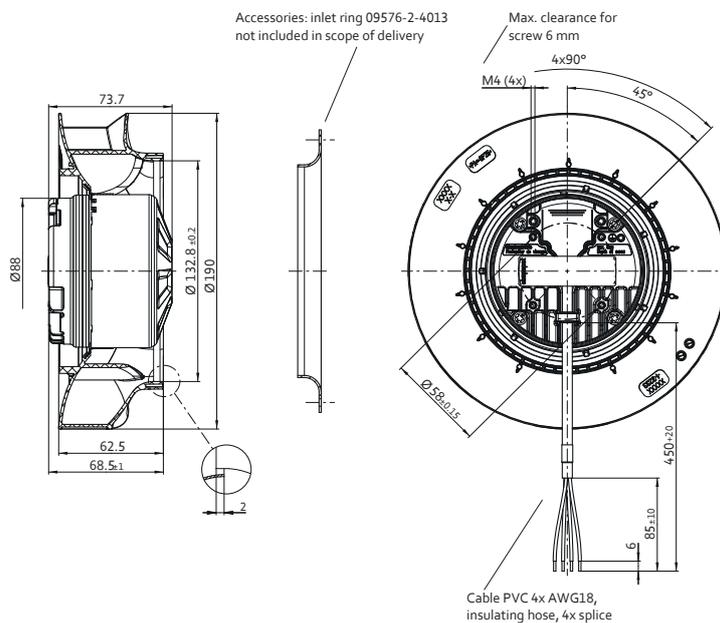
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current* A	Perm. ambient temperature °C
							m³/h	cfm				
VBS0190RUNCS	R1G190RD6102	centrifugal fan	12	8...16	A	① ② ③ ④	620	365	3 565	89	5.72	-25...+70
							535	315	3 505	95	6.15	
							405	240	3 470	102	6.67	
							260	155	3 535	97	6.28	
VBS0190RUNCS	R1G190RD7902	centrifugal fan	24	16...28	B	① ② ③ ④	795	465	4 395	155	5.51	-25...+60
							655	385	4 235	160	5.68	
							450	265	4 115	162	5.78	
							280	165	4 285	158	5.63	
VBS0190RUNCS	R1G190RD1602	centrifugal fan	48	36...57	C	① ② ③ ④	820	480	4 500	165	3.40*	-25...+70
							695	410	4 380	165	3.40*	
							510	300	4 215	167	3.50*	
							320	190	4 345	165	3.40*	
	09576-2-4013	Inlet ring										

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0190R...

DC centrifugal fans · max. 930 m<sup>3</sup>/h · Ø 190 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

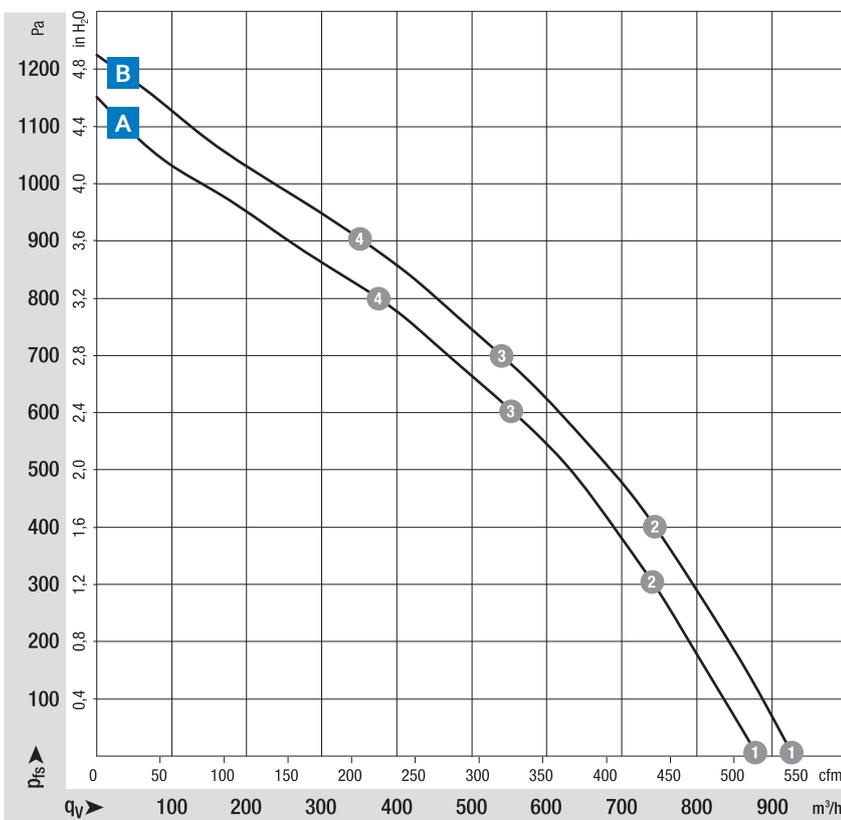
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.85 kg

## Approvals

- EN 62368-1;
- A + B: CE, EAC;
- B: CCC

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

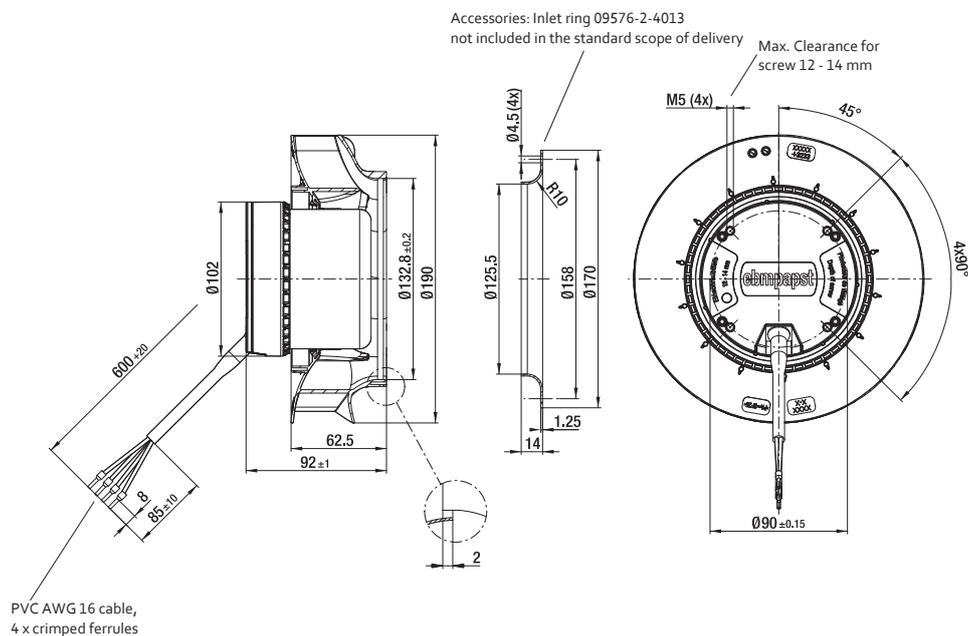
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
							m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VBS0190RUNEZ	R3G190RN3801	centrifugal fan	24	16...28	A	①	880	520	4 570	180	7.50*	8.4	-25...60
							740	435	4 525	188	7.83*	7.9	
							550	325	4 435	199	8.34*	7.7	
							375	220	4 520	191	7.96*	8.1	
VBS0190RUNES	R3G190RN9902	centrifugal fan	48	36...57	B	①	930	545	4 800	192	4.00	8.4	-25...60
							745	440	4 690	212	4.41	8.0	
							540	320	4 640	221	4.60	7.9	
							350	205	4 740	205	4.28	8.1	
	09576-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0220RUNCS

DC centrifugal fans · max. 1 125 m<sup>3</sup>/h · Ø 220 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

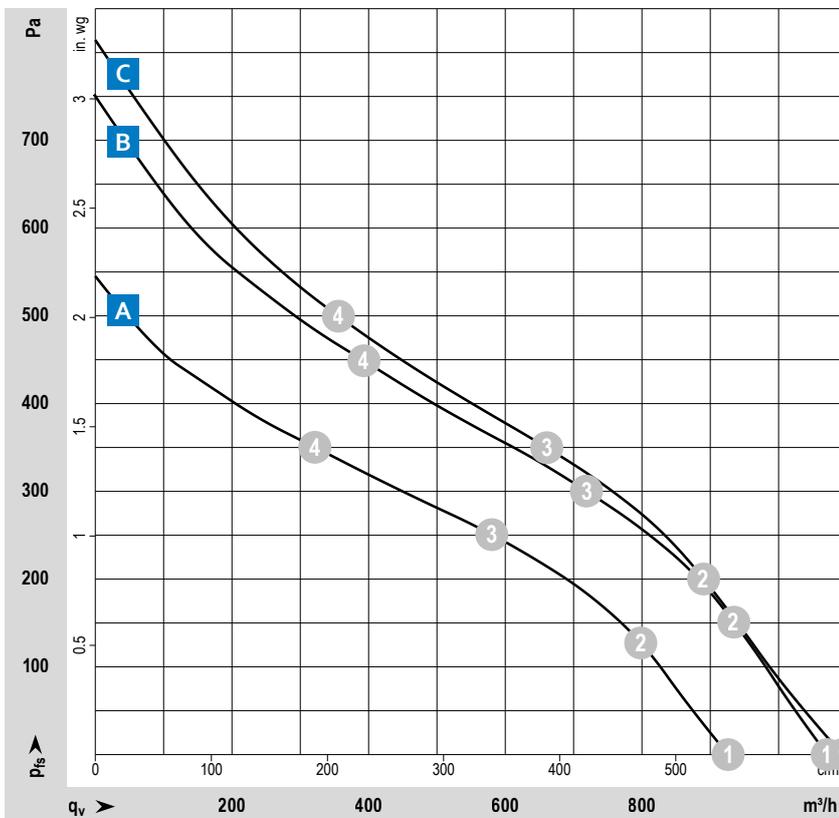
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.50 kg

## Approvals

- EAC; CSA CSA C22.2 Nr. 113; UL 507;
- **A**: CE not applicable;
- **B + C**: CE;
- CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

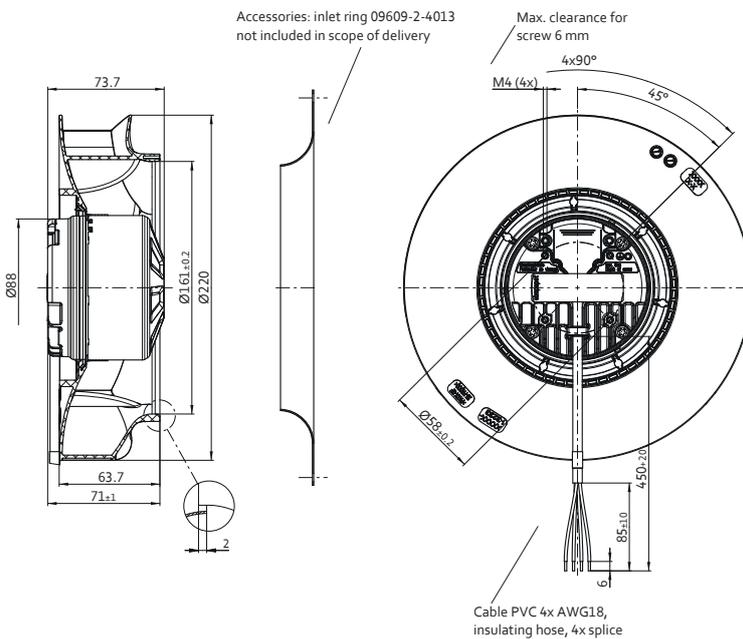
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm				
VBS0220RUNCS	R1G220RD6102	centrifugal fan	12	8...16	A	① ② ③ ④	990	585	2 905	110	8.77	-25...+70
							855	505	2 855	112	9.01	
							620	365	2 790	117	9.43	
							345	205	2 890	113	9.01	
VBS0220RUNCS	R1G220RD1002	centrifugal fan	24	16...28	B	① ② ③ ④	1 125	660	3 310	144	5.12	-25...+60
							980	575	3 220	146	5.19	
							750	440	3 085	149	5.29	
							410	240	3 185	146	5.19	
VBS0220RUNCS	R1G220RD0202	centrifugal fan	48	36...57	C	① ② ③ ④	1 095	645	3 240	136	2.80*	-25...+70
							890	525	3 100	139	2.90*	
							660	390	3 010	141	2.90*	
							355	210	3 140	138	2.90*	
	09609-2-4013	Inlet ring										

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0220RUNES

DC centrifugal fans · max. 1 210 m<sup>3</sup>/h · Ø 220 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

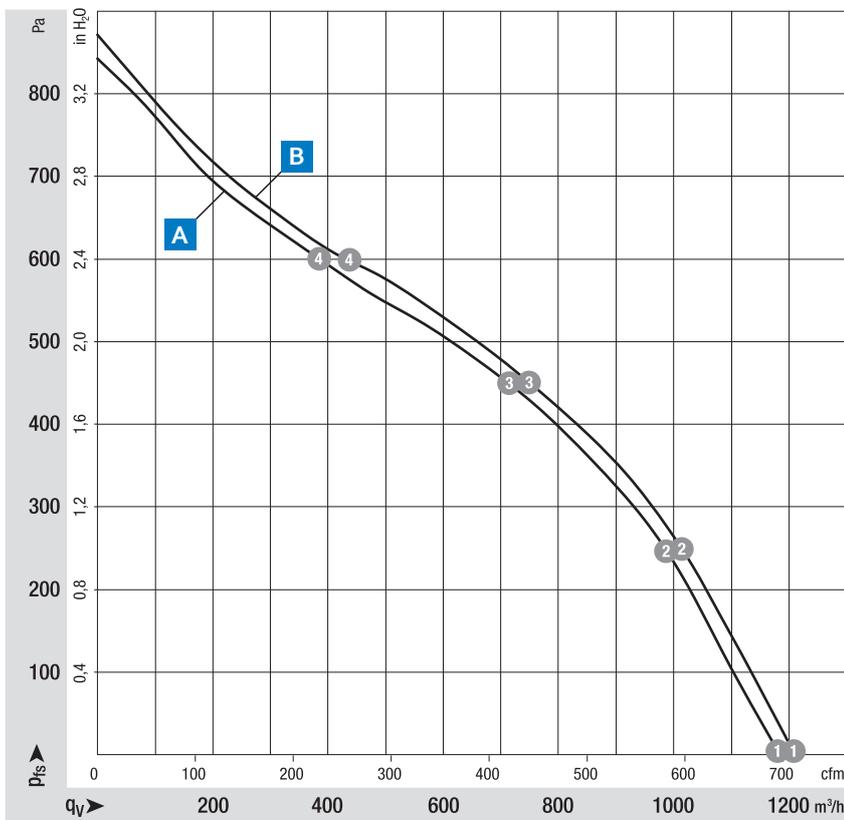
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.88 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

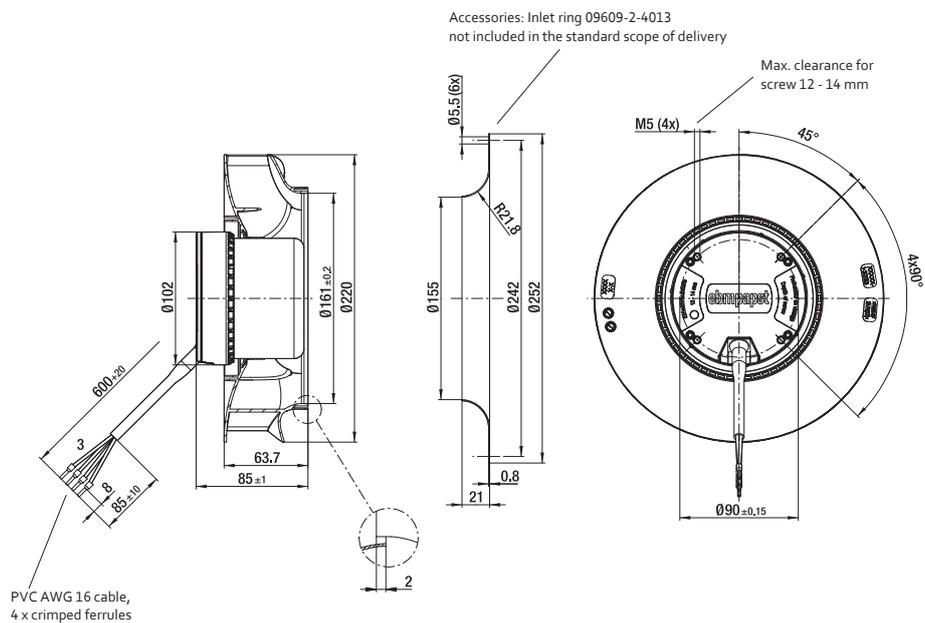
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Sound power level Bel(A)	Perm. ambient temperature °C	
							m³/h	cfm						
VBS0220RUNES	R3G220RN1201	centrifugal fan	24	16...28	A	①	1 185	695	3 460	157	6.50*	8.1	-25...+60	
							②	990	580	3 420	171	7.11*		7.7
							③	715	420	3 360	182	7.59*		7.4
							④	385	225	3 455	168	6.97*		7.9
VBS0220RUNES	R3G220RNB602	centrifugal fan	48	36...57	B	①	1 210	715	3 510	160	3.40	8.1	-25...+60	
							②	1 015	595	3 450	168	3.50		7.7
							③	750	440	3 385	178	3.71		7.4
							④	440	260	3 460	167	3.47		7.9
	09609-2-4013	Inlet ring												

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0220RULDS

DC centrifugal fans · max. 1 248 m<sup>3</sup>/h · Ø 220 x 71 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Plastic

## Characteristics

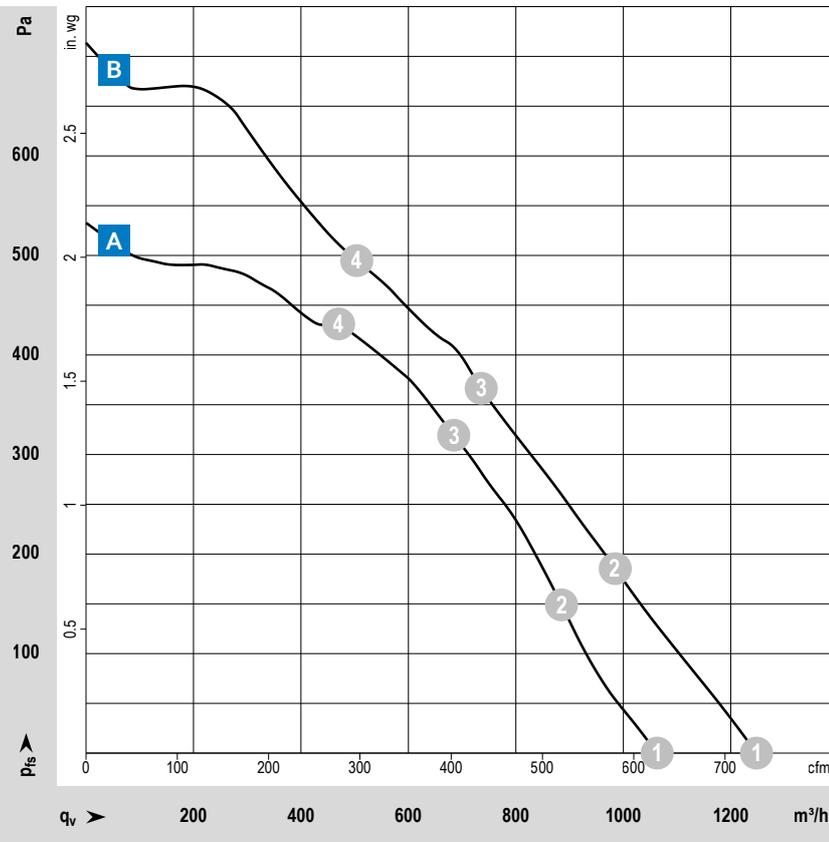
- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 890 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

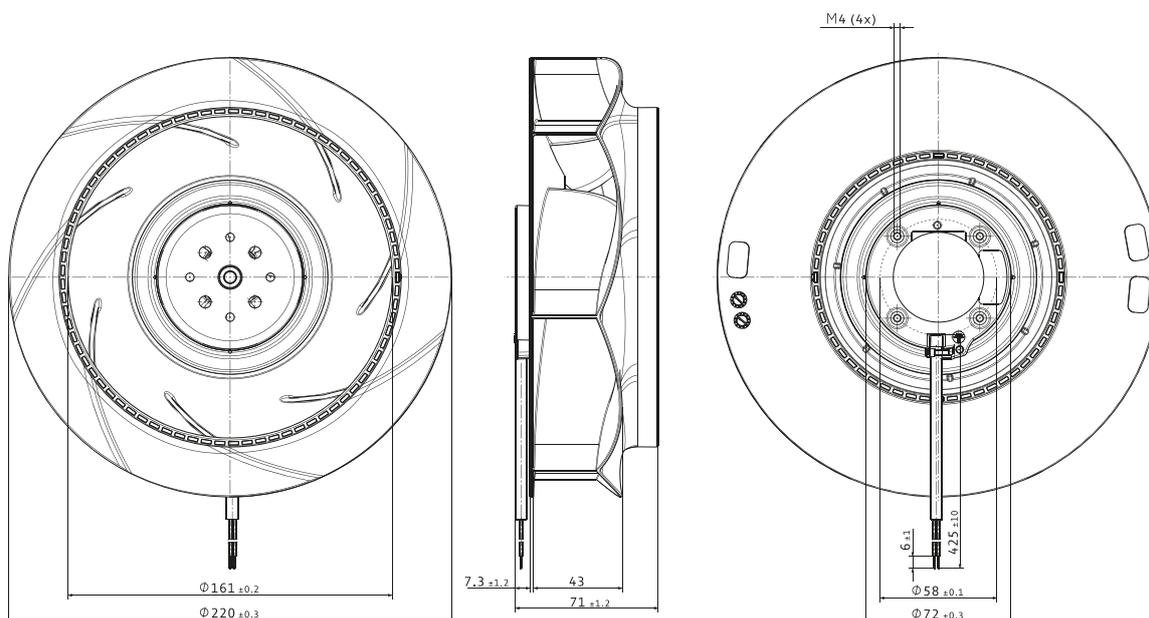
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)			
<b>VBS0220RULDS</b> RER 220-43/18/2 TDMO	<b>9595420303</b>	<b>48</b>	36...72	<b>A</b>	①	1 063	626	3 000	109.8	8.0	-20...+55	65 000	110 000
						885	521	2 960	126.6	8.0			
						684	403	2 950	145.0	7.9			
						470	277	3 040	141.7	7.9			
<b>VBS0220RULDS</b> RER 220-43/18/2 TDO	<b>9595420304</b>	<b>48</b>	36...72	<b>B</b>	①	1 248	735	3 500	166.9	8.2	-20...+55	60 000	102 500
						984	579	3 270	170.0	8.0			
						735	433	3 150	170.0	7.8			
						504	297	3 250	170.0	7.8			

Subject to changes.

Speed control range from 800 rpm at 7 % PWM up to nominal speed at > 90 % PWM. Standstill at 0 % PWM, Standstill if control cable is interrupted.

## Technical drawing

Dimensions in mm



# VBS0225...

DC centrifugal fans · max. 1 588 m<sup>3</sup>/h · Ø 225 x 99 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Plastic

## Characteristics

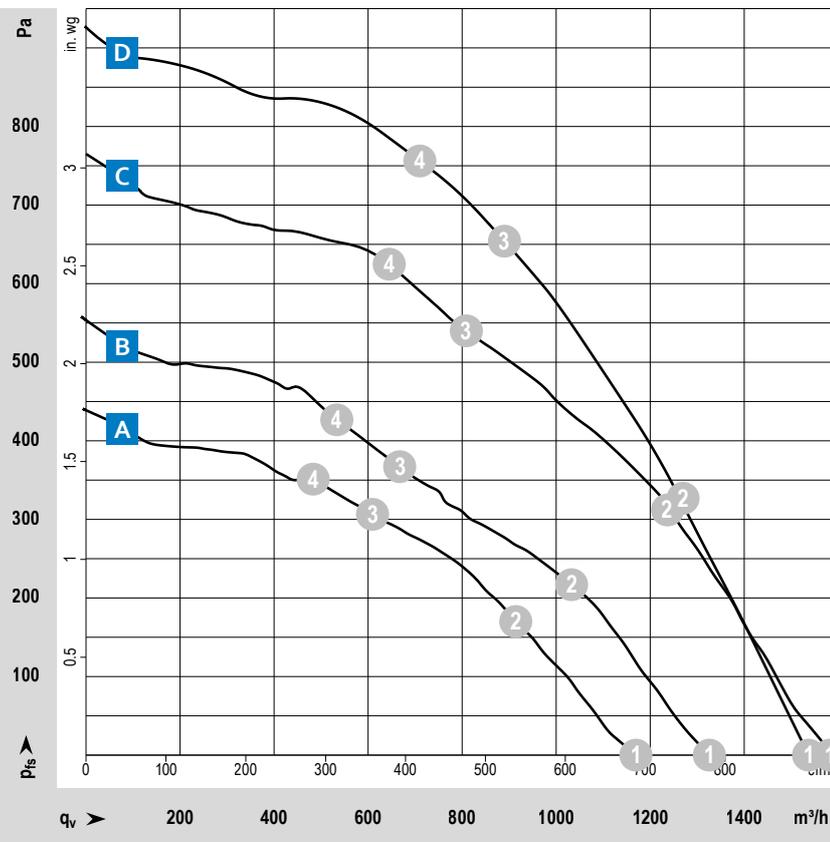
- Version: Centrifugal fan in 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: I
- Weight: 1 030 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VBS0225XULDS RER 225-63/18/2 TDMLO	9595420413	48	36...72	A	①	1170	689	2 500	82.5	7.7	-20...+55	55 000	92 500
					②	914	538	2 460	117.7	7.5			
					③	609	358	2 480	128.3	7.3			
					④	483	284	2 520	124.4	7.4			
VBS0225XULDS RER 225-63/18/2 TDMO	9595420411	48	36...72	B	①	1326	780	2 800	111.2	8.0	-20...+55	55 000	92 500
					②	1033	608	2 720	159.8	7.8			
					③	667	393	2 650	160.0	7.6			
					④	533	314	2 740	160.0	7.7			
VBS0225XULDS RER 225-63/18/2 TDO	9595420402	48	36...72	C	①	1588	935	3 300	177.0	8.4	-20...+55	52 500	87 500
					②	1241	730	3 250	249.8	8.3			
					③	809	476	3 220	255.0	8.1			
					④	645	380	3 300	255.0	8.3			
VBS0225RULFS RER 225-55/18/2 TDO RadiCal	9595430400	48	36...72	D	①	1537	905	3 500	216.9	8.6	-20...+55	50 000	85 000
					②	1265	745	3 460	271.2	8.3			
					③	890	524	3 460	301.1	8.0			
					④	710	418	3 490	293.7	8.1			

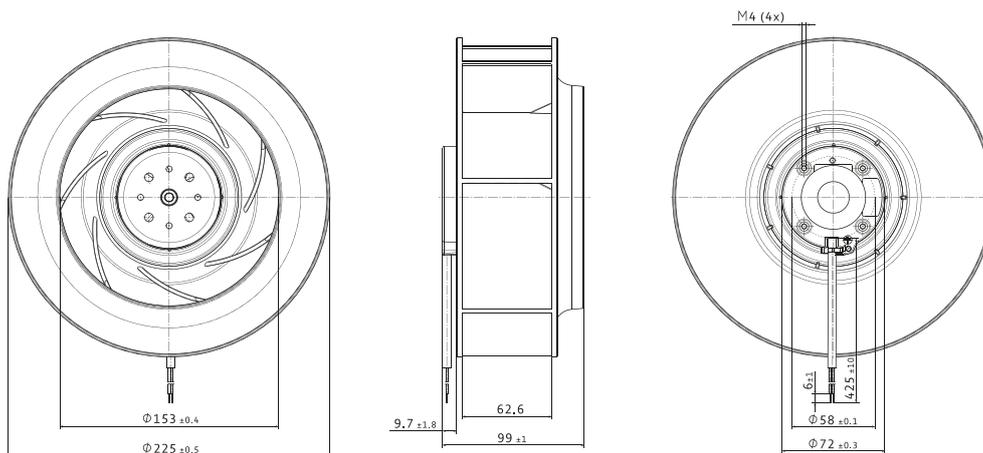
Subject to changes.

Speed control range from 800 rpm at 7 % PWM up to nominal speed at > 90 % PWM.

Standstill at 0 % PWM, Type O: Standstill if control cable is interrupted. Type P: Maximum speed if control cable is interrupted.

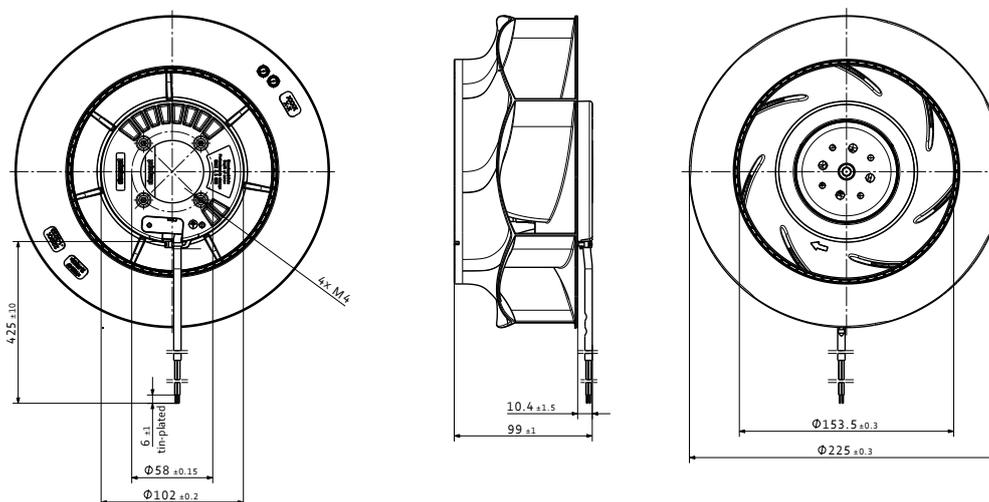
## Technical drawing

Dimensions in mm



## Technical drawing RadiCal

Dimensions in mm



# VBS0225RUNCS

DC centrifugal fans · max. 1 165 m<sup>3</sup>/h · Ø 225 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

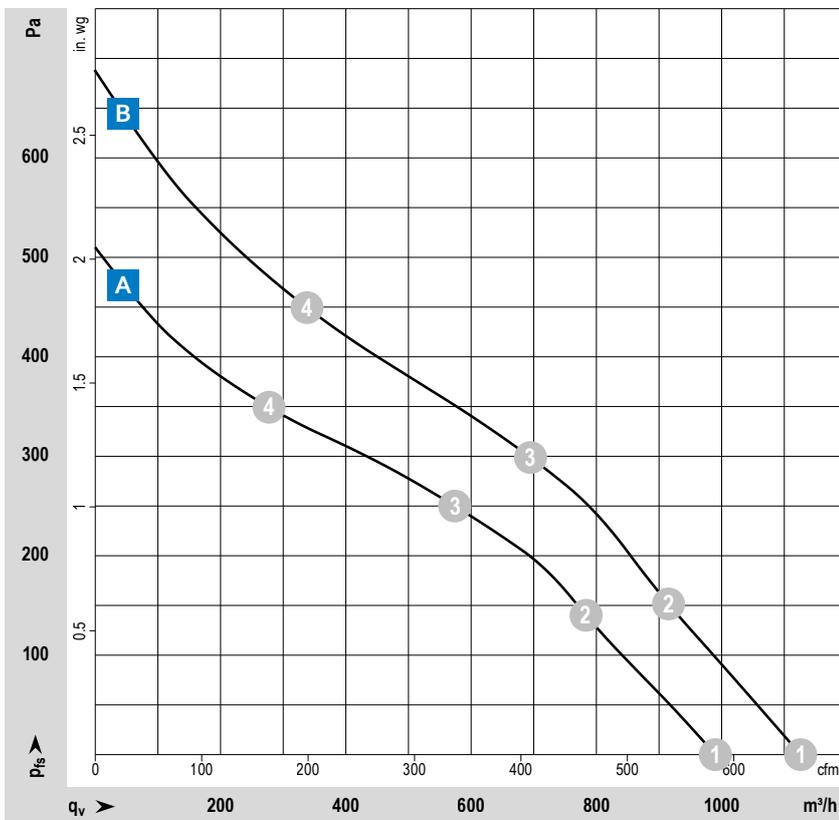
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.60 kg

## Approvals

- EAC; CSA CSA C22.2 Nr. 113; UL 507

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

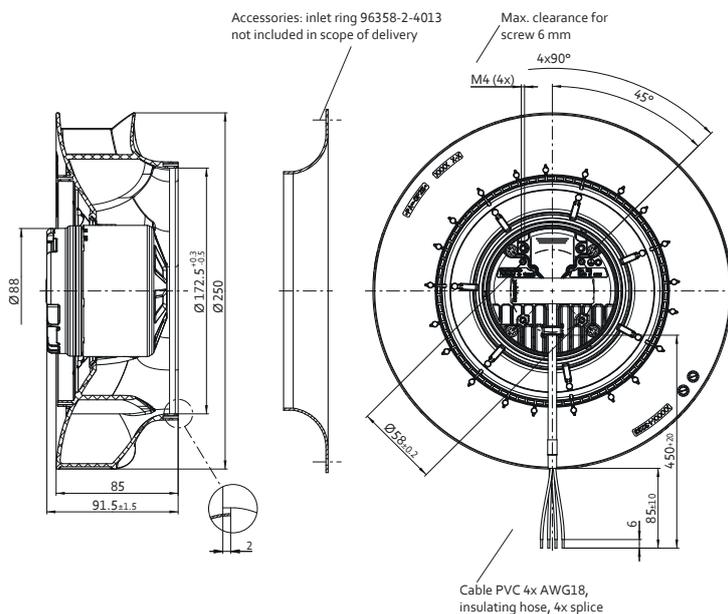
Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm				
VBS0225RUNCS	R1G225RD5902	centrifugal fan	12	8...16	A	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 045	615	2 490	100	7.89	-25...+70
							840	495	2 410	105	8.37	
							615	365	2 405	108	8.57	
							295	175	2 530	98	7.69	
VBS0225RUNCS	R1G225RD1402	centrifugal fan	24	16...28	B	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 165	685	2 775	130	4.63	-25...+70
							960	565	2 645	134	4.77	
							715	420	2 600	135	4.82	
							350	205	2 790	129	4.60	
	96358-2-4013	Inlet ring										

Subject to changes.

DC centrifugal fans

## Technical drawing

Dimensions in mm



# VBS0225RUNES

DC centrifugal fans · max. 1 335 m<sup>3</sup>/h · Ø 225 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

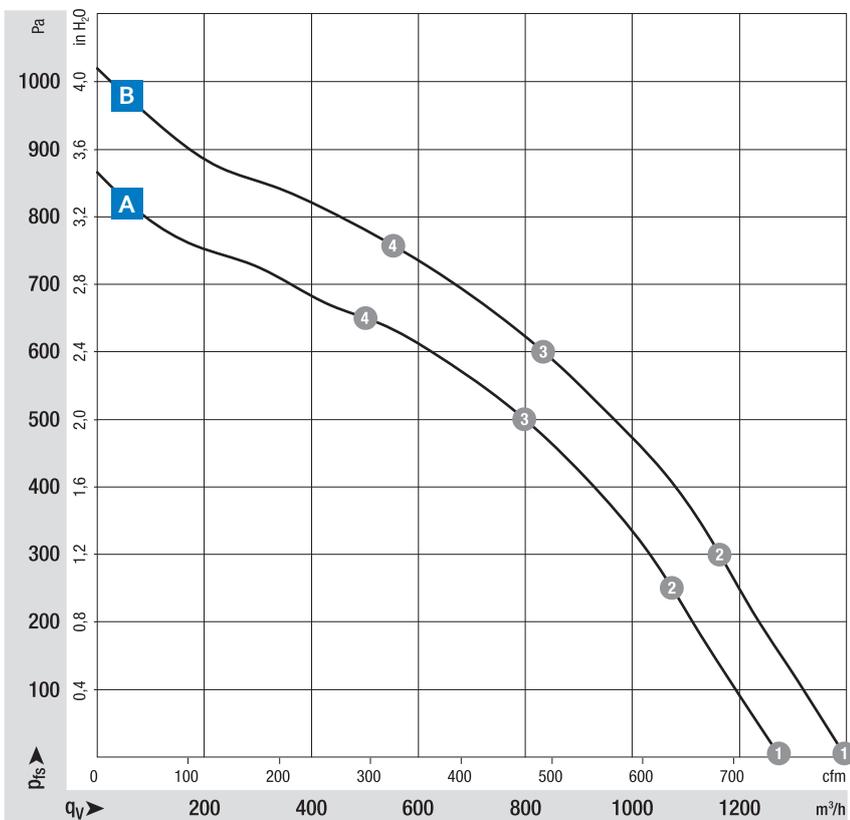
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.10 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

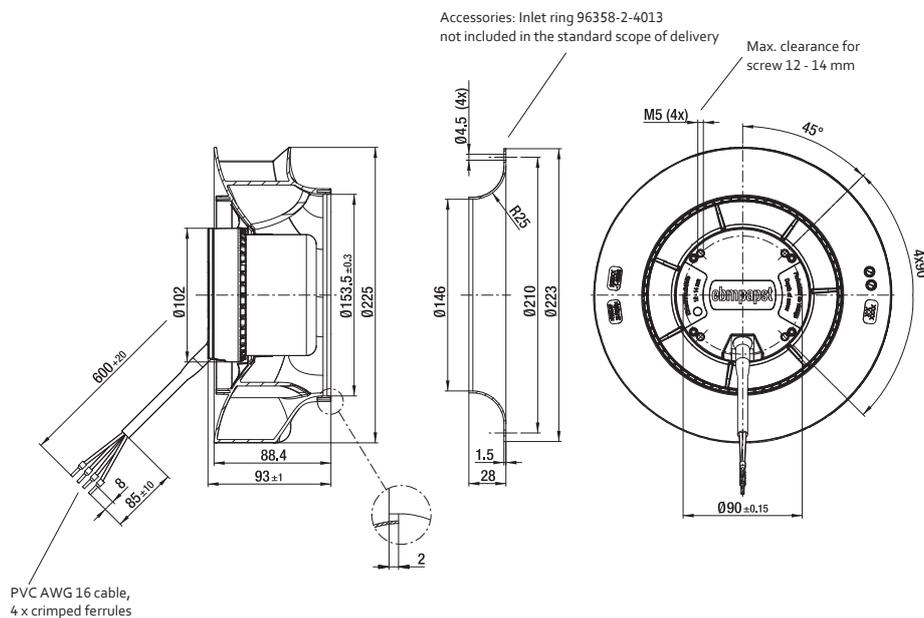
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
							m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VBS0225RUNES	R3G225RN2801	centrifugal fan	24	16...28	A	① ② ③ ④	1 275	750	3 270	205	8.50*	8.1	-25...+60
							1 070	630	3 200	208	8.66*	7.8	
							775	455	3 185	213	8.88*	7.4	
							425	250	3 275	182	7.76*	7.7	
VBS0225RUNES	R3G225RN1802	centrifugal fan	48	36...57	B	① ② ③ ④	1 335	785	3 400	230	4.80*	8.4	-25...+60
							1 095	645	3 375	236	4.90*	8.0	
							785	460	3 355	244	5.10*	7.6	
							455	265	3 435	218	4.50*	7.9	
	96358-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0250RUNES

DC centrifugal fans · max. 1 505 m<sup>3</sup>/h · Ø 250 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

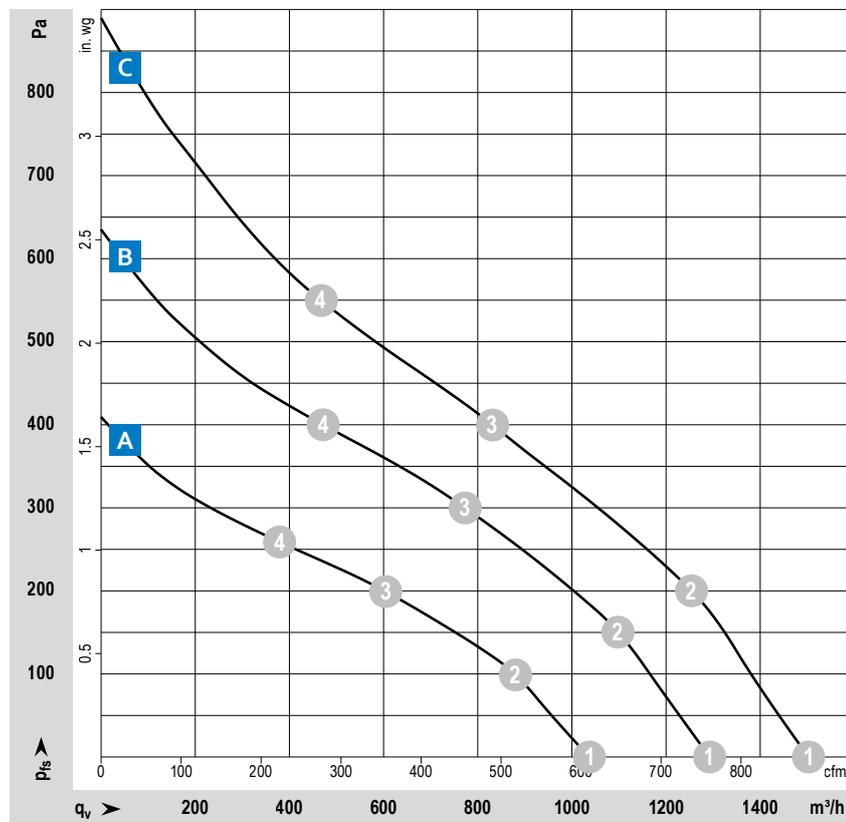
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.00 kg

## Approvals

- EAC; CSA CSA C22.2 Nr. 113; UL 507; **B** + **C**: CE; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

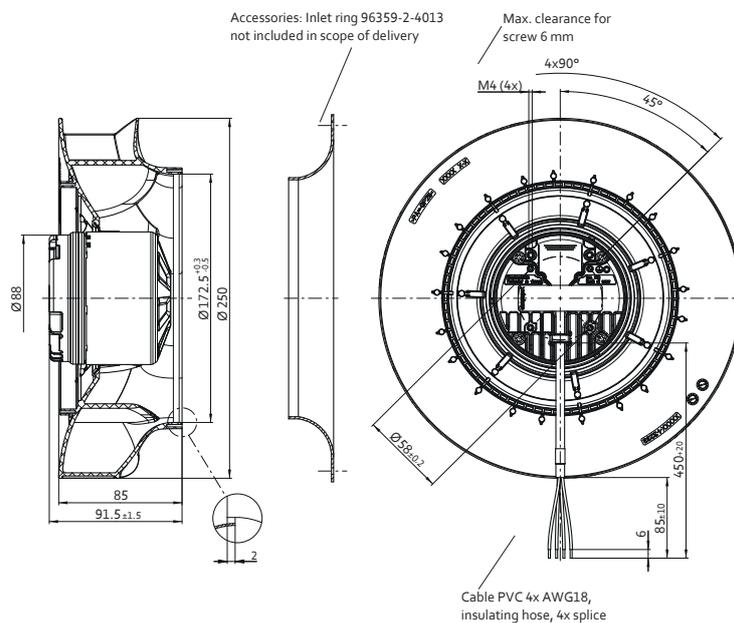
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type		Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Perm. ambient temperature
				VDC	VDC			m <sup>3</sup> /h	cfm	rpm			
VBS0250RUNES	R1G250RC7702	centrifugal fan		12	8...16	A	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 095	645	2 110	75	4.67	-25...+70
								935	550	2 065	80	4.96	
								645	380	2 020	86	5.36	
								405	240	2 070	82	5.08	
VBS0250RUNES	R1G250RC8702	centrifugal fan		24	16...28	B	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 375	810	2 645	144	5.11	-25...+60
								1 170	690	2 565	149	5.32	
								815	480	2 455	153	5.46	
								500	295	2 550	150	5.34	
VBS0250RUNES	R1G250RC8902	centrifugal fan		48	36...57	C	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 505	885	2 850	175	3.70*	-25...+60
								1 255	740	2 755	179	3.70*	
								830	490	2 650	182	3.80*	
								470	275	2 795	177	3.70*	
	96359-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0250RUNES

DC centrifugal fans · max. 1 640 m<sup>3</sup>/h · Ø 250 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

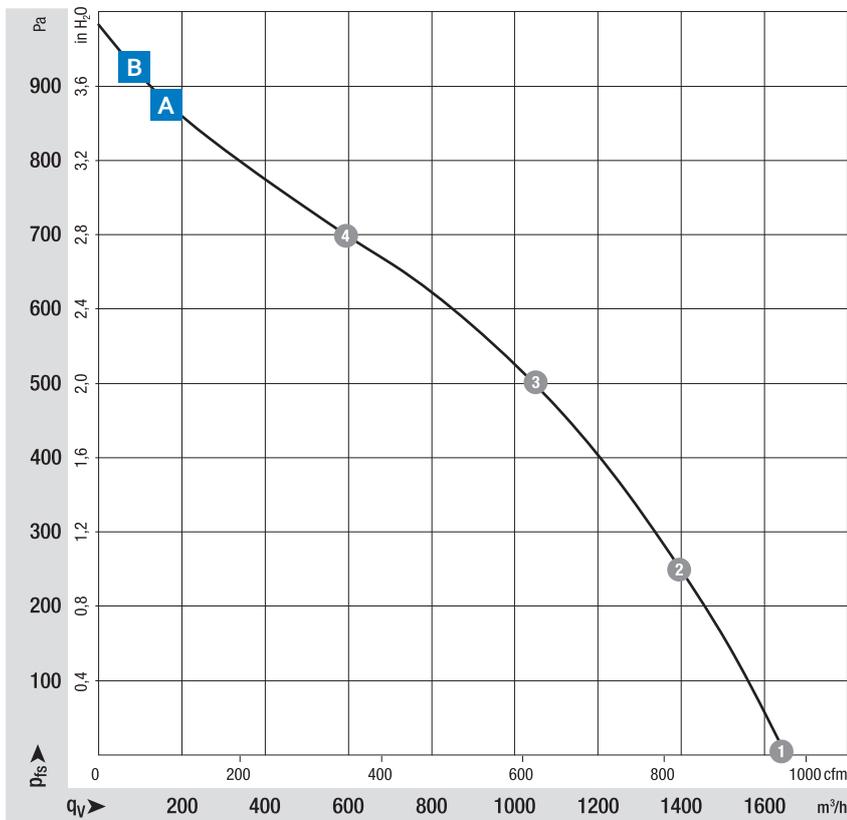
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.10 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

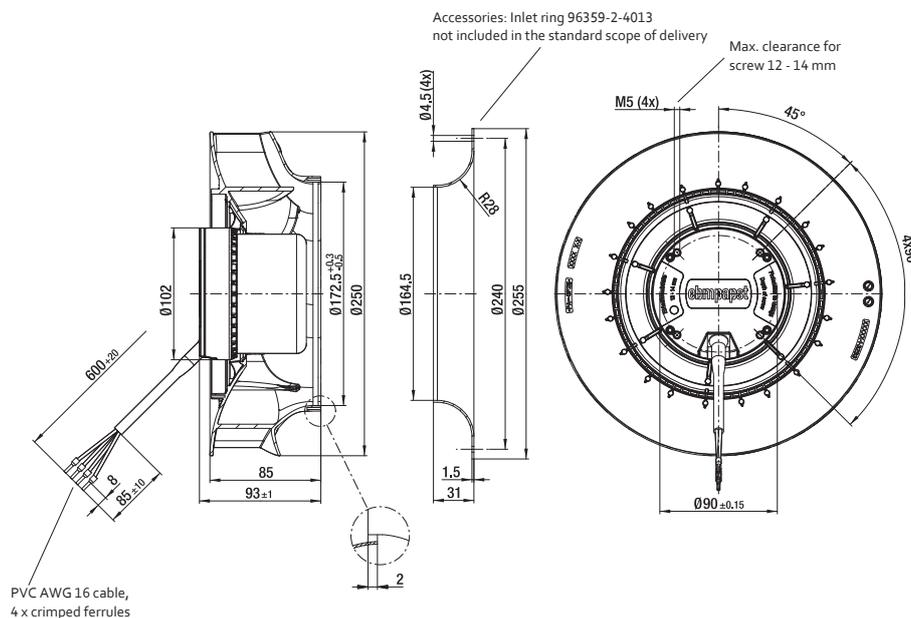
Type	Part number	Fan type	Nominal voltage		Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
			VDC	VDC			m <sup>3</sup> /h	cfm					
VBS0250RUNES	R3G250RN4601	centrifugal fan	24	16...28	A	①	1 505	885	2 850	175	7.20*	8.1	-25...+60
						②	1 225	720	2 820	195	8.10*	7.7	
						③	880	515	2 795	210	8.70*	7.1	
						④	580	340	2 840	197	8.20*	7.4	
VBS0250RUNES	R3G250RNB502	centrifugal fan	48	36...57	B	①	1 640	965	3 100	230	4.80*		-25...+60
						②	1 375	810	3 065	250	5.20*		
						③	1 010	595	3 025	266	5.60*		
						④	475	280	3 115	236	4.90*		
	96359-2-4013	Inlet ring											

Subject to changes.

DC centrifugal fans

## Technical drawing

Dimensions in mm



# VBS0280RUNES

DC centrifugal fans · max. 2 120 m<sup>3</sup>/h · Ø 280 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

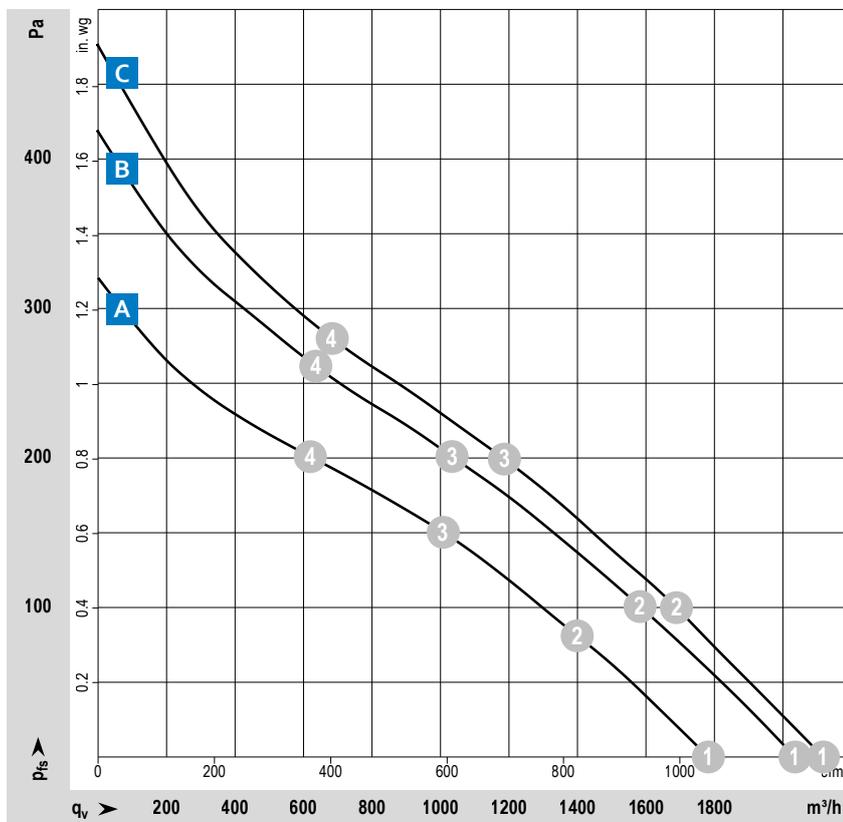
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.30 kg

## Approvals

- EAC; CSA CSA C22.2 Nr. 113; UL 507; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

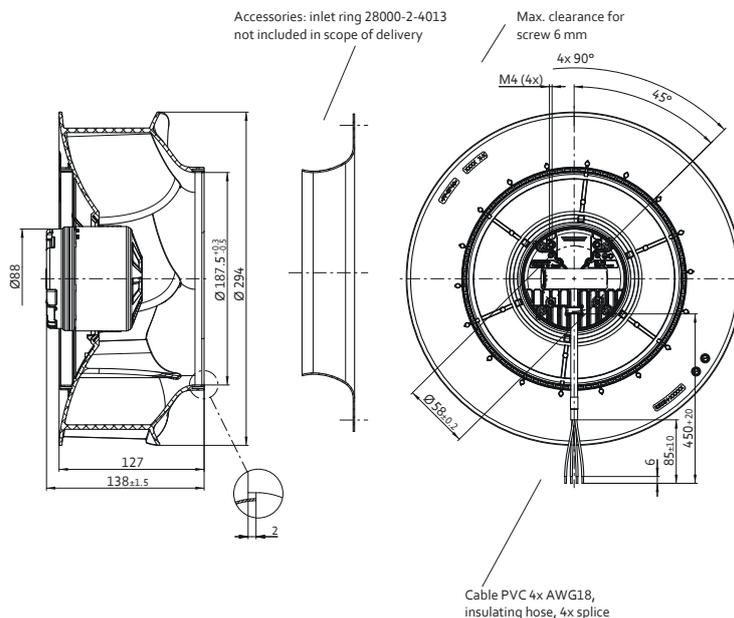
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm				
VBS0280RUNES	R1G280RC7502	centrifugal fan	12	8...16	A	① ② ③ ④	1 880	1 105	1 585	88	7.16	-25...+70
							1 490	880	1 495	97	7.98	
							1 065	625	1 470	100	8.25	
							655	385	1 520	95	7.78	
VBS0280RUNES	R1G280RC7102	centrifugal fan	24	16...28	B	① ② ③ ④	2 100	1 235	1 765	117	4.18	-25...+60
							1 640	965	1 635	123	4.41	
							1 070	630	1 600	126	4.49	
							660	385	1 685	121	4.31	
VBS0280RUNES	R1G280RC9302	centrifugal fan	48	36...57	C	① ② ③ ④	2 120	1 245	1 800	115	2.40*	-25...+60
							1 690	995	1 655	121	2.50*	
							1 190	700	1 610	123	2.60*	
							685	405	1 690	119	2.50*	
	98000-2-4013	Inlet ring										

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0280RUNES

DC centrifugal fans · max. 2 210 m<sup>3</sup>/h · Ø 280 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

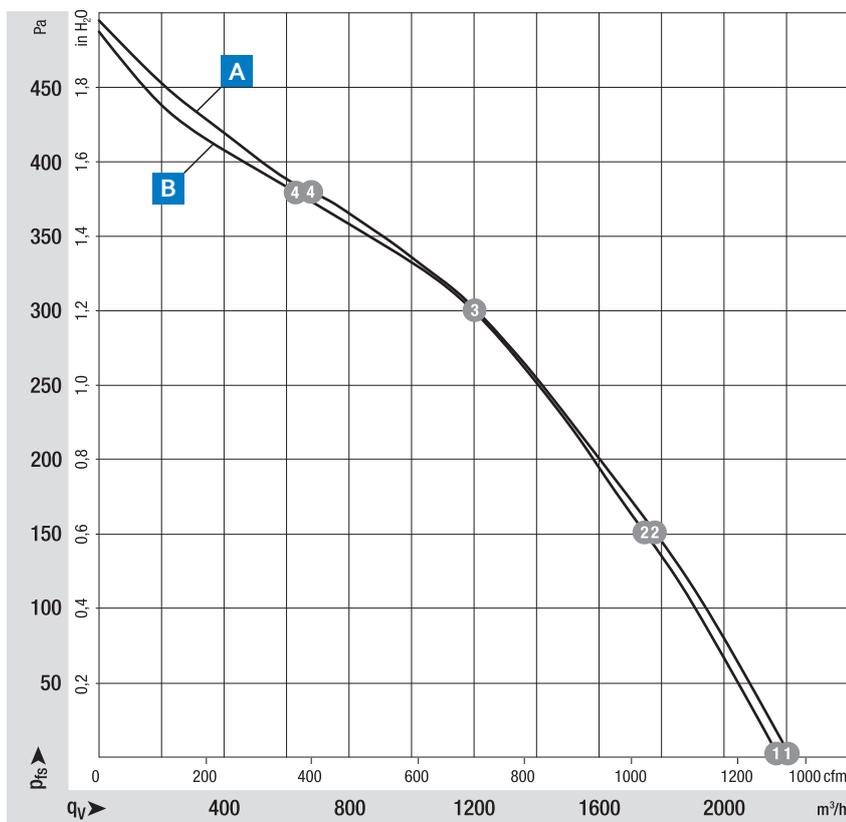
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.40 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

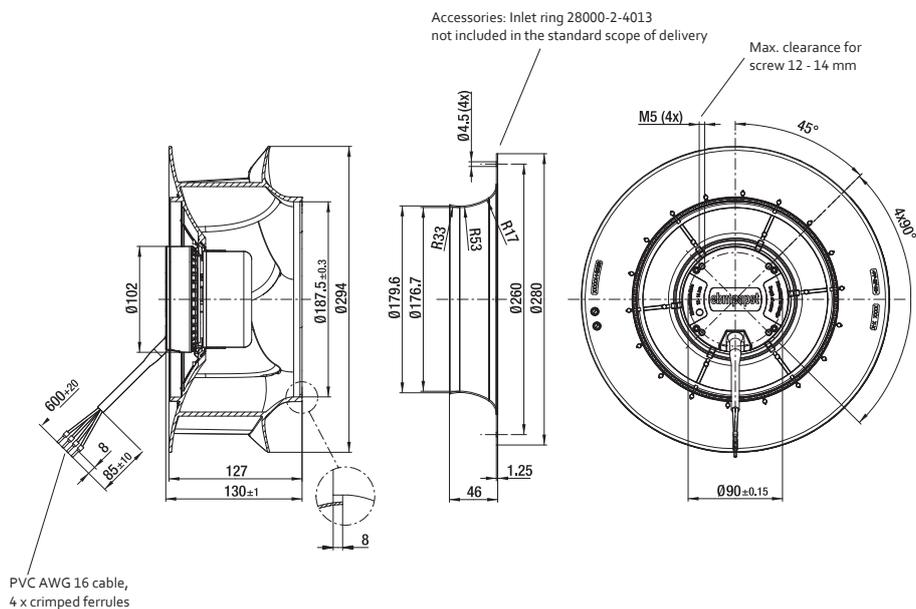
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
							m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VBS0280RUNES	R3G280RN3001	centrifugal fan	24	16...28	A	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	2 210	1 300	1 900	142	5.90	7.4	-25...+60
							1 775	1 045	1 870	162	6.76	6.7	
							1 205	710	1 840	173	7.21	6.4	
							675	400	1 905	153	6.36	6.8	
VBS0280RUNES	R3G280RNB102	centrifugal fan	48	36...57	B	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	2 175	1 280	1 910	140	2.90*	7.4	-25...+60
							1 745	1 030	1 845	158	3.30*	6.7	
							1 200	705	1 830	163	3.40*	6.4	
							630	370	1 900	141	2.93*	6.8	
	28000-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0310RUNES

DC centrifugal fans · max. 2 375 m<sup>3</sup>/h · Ø 310 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

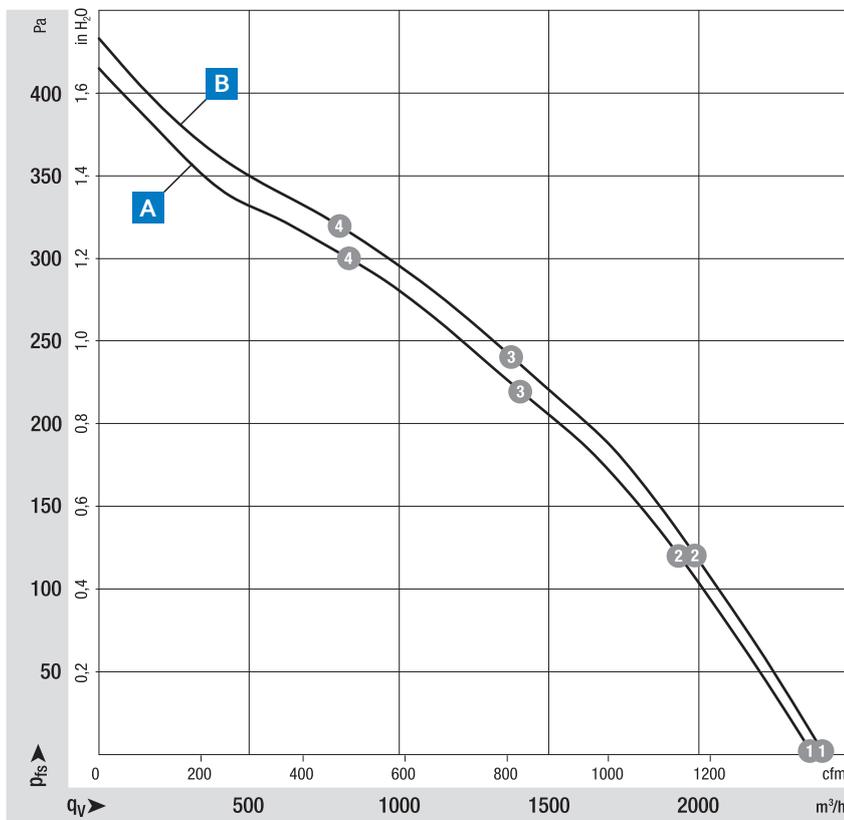
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.90 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

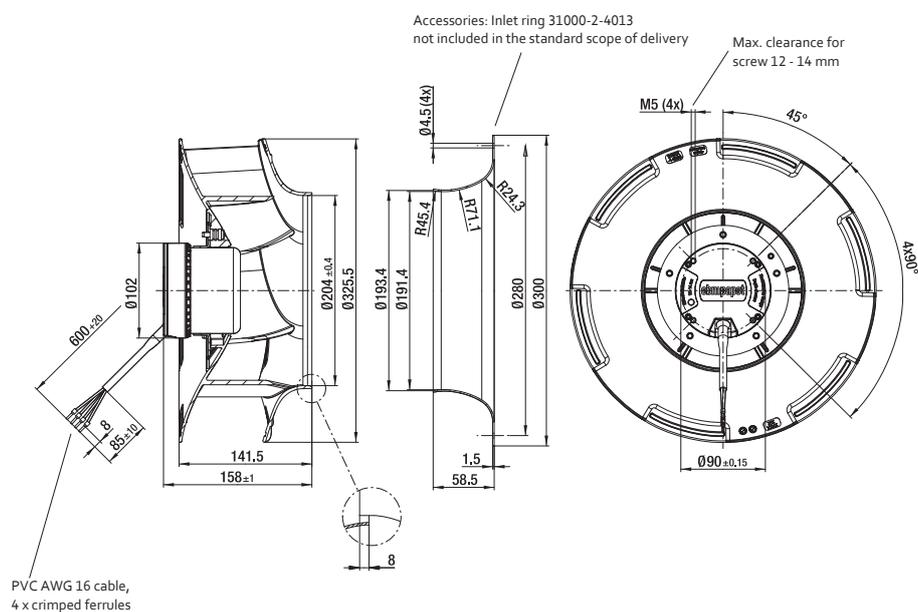
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Sound power level Bel(A)	Perm. ambient temperature °C
							m³/h	cfm					
VBS0310RUNES	R3G310RN9901	centrifugal fan	24	16...28	A	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	2 310	1 360	1 580	108	4.50*	-	-25...+60
							1 865	1 095	1 510	132	5.50*		
							1 335	785	1 485	138	5.80*		
							855	505	1 510	131	5.50*		
VBS0310RUNES	R3G310RN9802	centrifugal fan	48	36...57	B	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	2 375	1 400	1 620	123	2.60	7.0	-25...+60
							1 960	1 155	1 555	144	3.00	6.6	
							1 330	780	1 535	152	3.20	6.2	
							705	415	1 580	137	2.80	6.5	
	31000-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

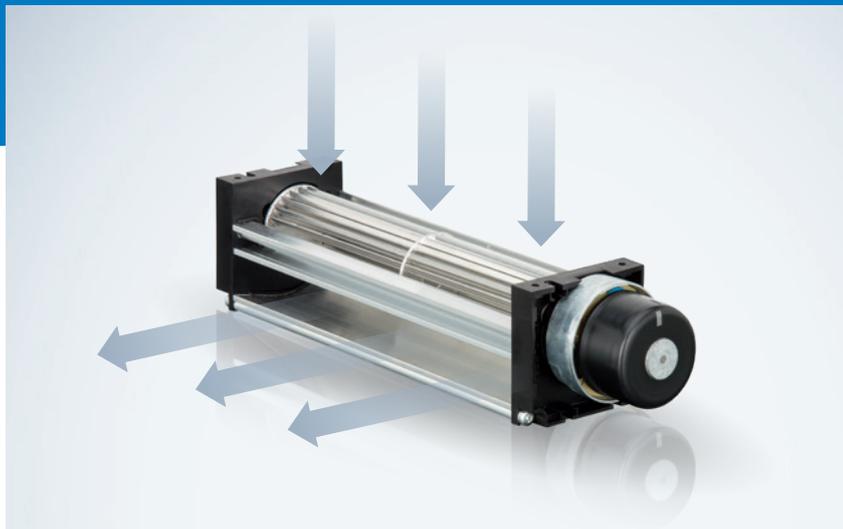
## Technical drawing

Dimensions in mm



# VTS0030X...

DC tangential fans · max. 142 m<sup>3</sup>/h · 201...413 x 50 x 48 mm



## Material/Surface

- Housing: Aluminum
- Housing side parts: Plastic
- Impeller: Aluminum

## Characteristics

- Version: Tangential blower in 12 VDC and 24 VDC. Uniform laminar air flow over the entire length
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 24
- Electrical protection class: III
- Weight: 235 / 290 / 380 / 415 g

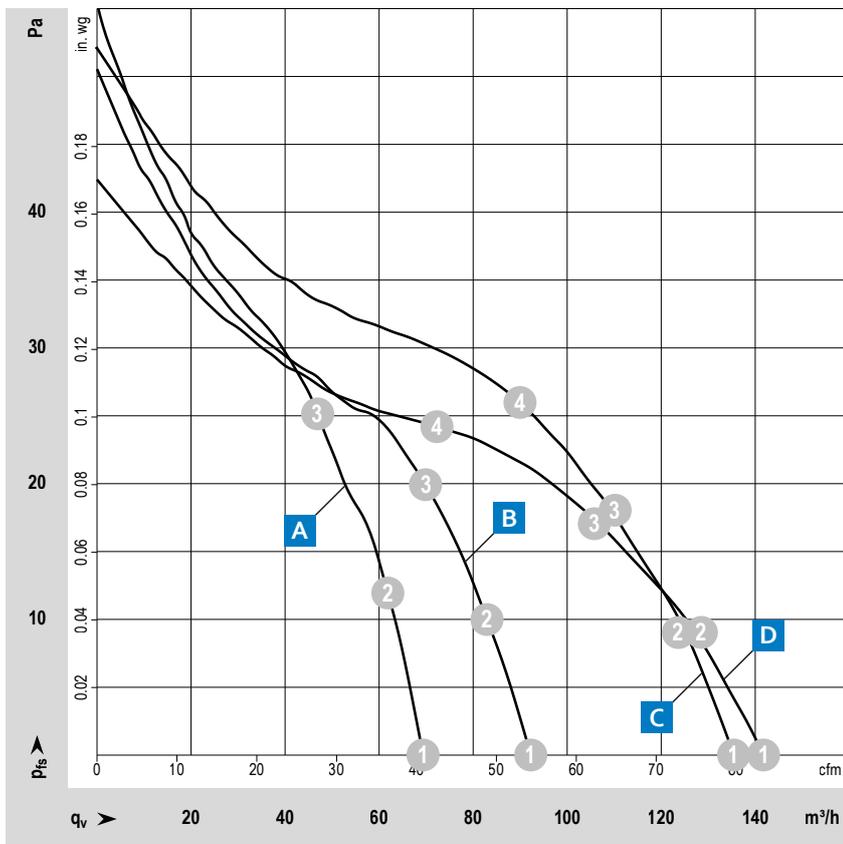
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

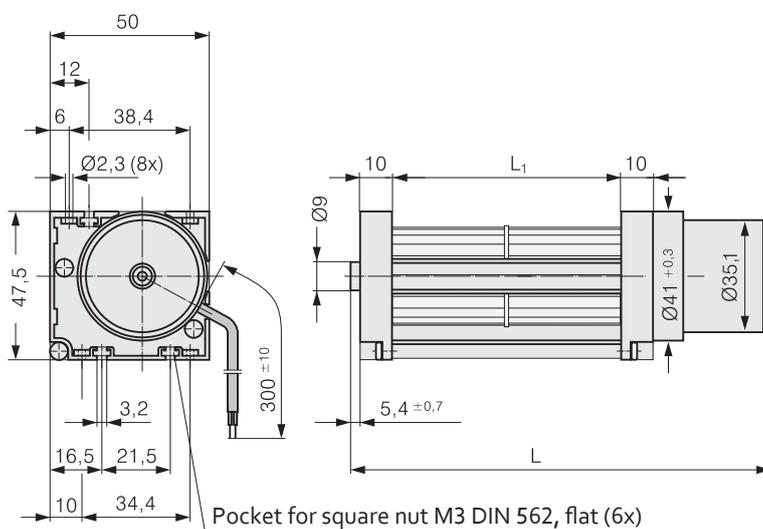
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VTS0030XUFBS QG 030-148/12	9392708001	12	8...14	A	① ② ③	69.0	40.6	4 450	4.9	5.9	49	-20...+60	30 000	50 000
						62.0	36.5	4 750	4.3	5.8				
						46.8	27.5	5 220	3.5	5.5				
VTS0030XUFCS QG 030-198/12	9392715011	12	8...14	B	① ② ③	90.0	53.0	4 300	5.7	6.0	51	-20...+60	30 000	50 000
						81.0	47.7	4 490	5.1	5.8				
						68.0	40.0	4 740	4.5	5.6				
VTS0030XUFCS QG 030-303/12	9392715001	12	8...14	C	① ② ③ ④	128.0	75.3	3 950	7.3	6.2	51	-20...+60	30 000	50 000
						118.0	69.5	4 150	6.7	6.0				
						104.0	61.2	4 420	5.9	5.8				
						85.0	50.0	4 720	4.9	5.5				
VTS0030XUFCS QG 030-353/12	9392715015	12	8...14	D	① ② ③ ④	139.0	81.8	3 700	8.2	6.1	51	-20...+60	30 000	50 000
						127.0	74.7	3 950	7.3	6.1				
						108.0	63.6	4 350	6.1	6.0				
						75.0	44.1	4 820	4.6	5.9				
VTS0030XUFBS QG 030-148/14	9392708002	24	16...28	A	① ② ③	66.0	38.8	4 450	4.7	5.9	49	-20...+60	30 000	50 000
						59.0	34.7	4 700	4.2	5.8				
						44.0	25.9	5 080	3.5	5.5				
VTS0030XUFCS QG 030-198/14	9392715013	24	16...28	B	① ② ③	92.0	54.1	4 400	6.3	6.0	51	-20...+60	30 000	50 000
						83.0	48.9	4 580	5.7	5.8				
						70.0	41.2	4 830	4.9	5.6				
VTS0030XUFCS QG 030-303/14	9392715002	24	16...28	C	① ② ③ ④	135.0	79.5	4 080	8.3	6.2	51	-20...+60	30 000	50 000
						125.0	73.6	4 290	7.6	6.0				
						110.0	64.7	4 600	6.7	5.8				
						90.0	53.0	4 950	5.6	5.6				
VTS0030XUFCS QG 030-353/14	9392715008	24	16...28	D	① ② ③ ④	142.0	83.6	3 800	7.6	6.1	51	-20...+60	30 000	50 000
						127.0	74.7	4 040	6.8	6.1				
						106.0	62.4	4 360	5.8	6.0				
						72.0	42.4	4 790	4.5	5.9				

Subject to changes.

The values for service life were recorded with the fan installed horizontally.

## Technical drawing

Dimensions in mm



Type	L	L <sub>1</sub>	Mass
VTS0030XUFBS QG 030-148/..	203.4 +1.5	148	235 g
VTS0030XUFCS QG 030-198/..	260.4 +1.5	198	290 g
VTS0030XUFCS QG 030-303/..	365.4 +1.5	303	380 g
VTS0030XUFCS QG 030-353/..	415.4 +1.5	353	415 g

# VFS0108XULCS

DC centrifugal fans and blowers · max. 225 m<sup>3</sup>/h · Ø 108 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

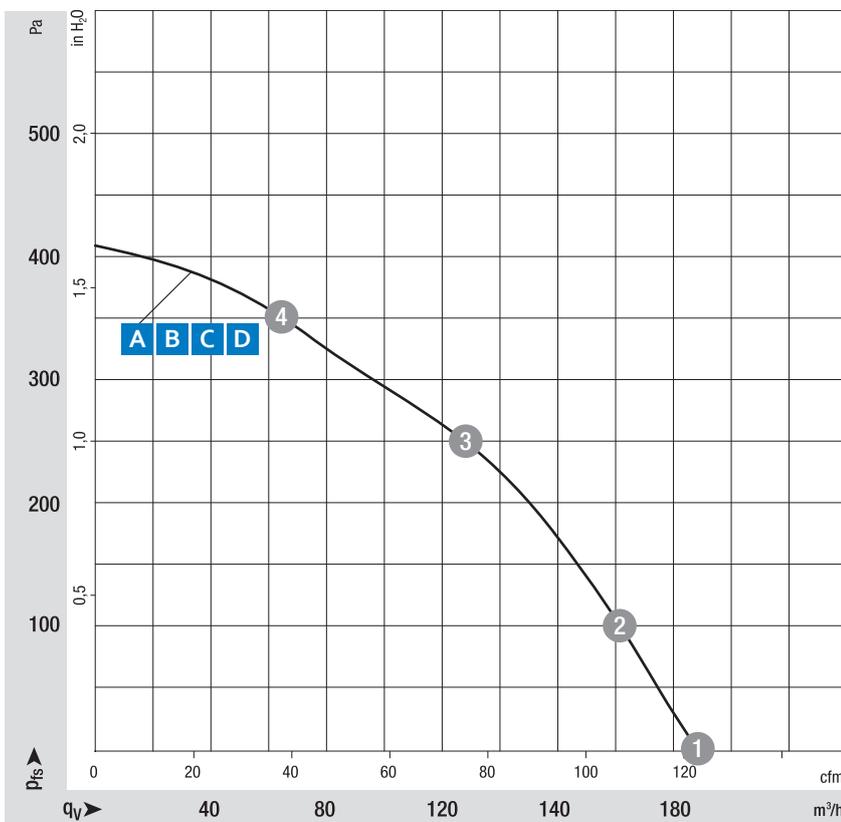
## Characteristics

- Version: DC centrifugal fan with housing (without flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 22
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 0.7 kg; centrifugal blower 1.4 kg

## Approvals

- EAC;
- **B**: UL 1004-1; CSA C22.2 Nr. 77;
- **B** + **D**: EN 62368-1;
- **C**: EN 60034-1; EN 60204-1; EN 60335-1; CCC on request (only applicable with >36V)

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

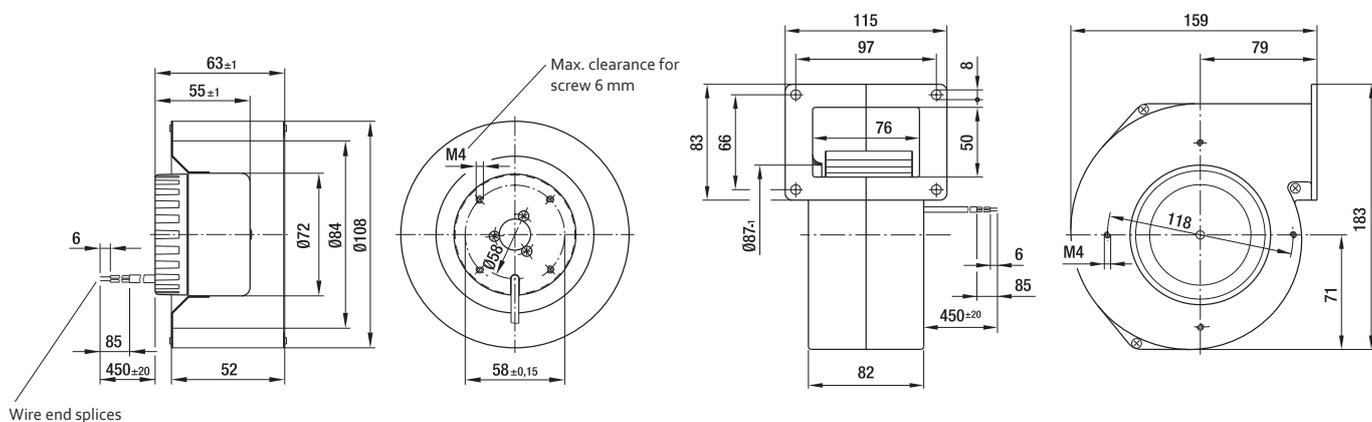
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m³/h	cfm					
VFS0108XULCS	R1G108AB1702	centrifugal fan	24	16...28	A	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	225	130	3 235	55	2.26	0	-25...+60
							190	115	3 480	51	2.06	149	
VHS0108XULCS	G1G108AB1702	centrifugal blower with flange	24	16...28	B		140	85	3 800	44	1.76	313	
							90	55	4 055	38	1.49	414	
VFS0108XULCS	R1G108AB4102	centrifugal fan	48	36...57	C	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	220	130	3 200	52	1.04	0	-25...+60
							175	105	3 520	47	0.92	174	
VHS0108XULCS	G1G108AB4102	centrifugal blower with flange	48	36...57	D		115	65	3 875	40	0.76	327	
							65	40	4 100	34	0.66	415	

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0120XULCS

DC centrifugal fans and blowers · max. 275 m<sup>3</sup>/h · Ø 120 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Galvanized

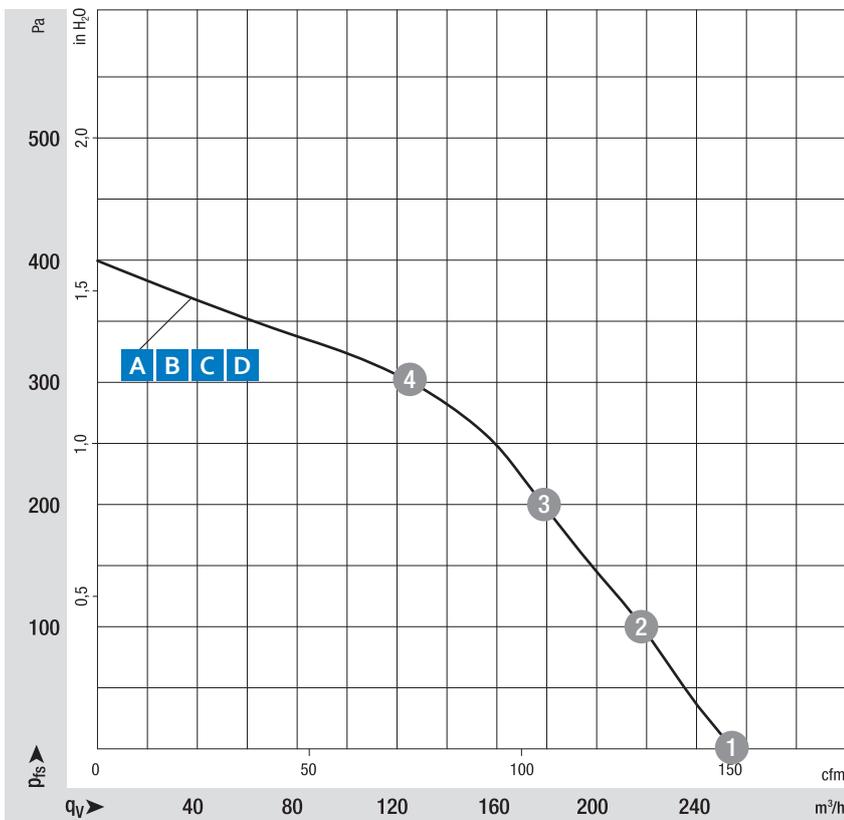
## Characteristics

- Version: DC centrifugal fan with housing (without flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 22
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 0.8 kg; centrifugal blower 1.5 kg

## Approvals

- EAC;
- **A**: 62368-1; UL 1004-1;
- **B**: EN 60034-1; EN 60204-1; EN 62368-1; UL 1004-1; CSA C22.2 Nr. 77;
- **D**: EN 60034-1; EN 60204-1; EN 60335-1; CCC on request (only applicable with >36V)

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

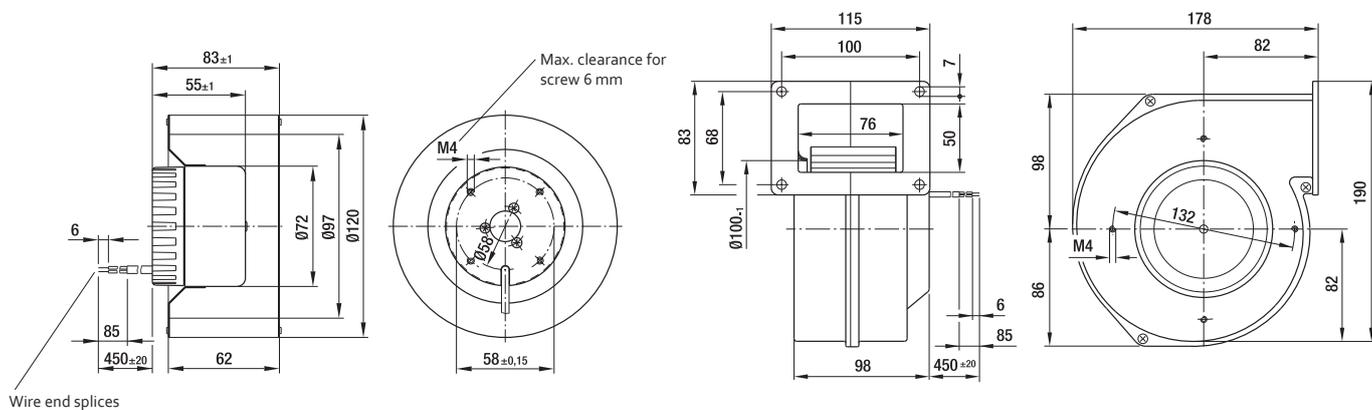
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C	
							m³/h	cfm						
VFS0120XULCS	R1G120AB6702	centrifugal fan	24	16...28	A	①	270	160	2380	49	2.09	0	-25...+60	
							②	215	125	2685	45	1.81		165
							③	150	90	3055	38	1.51		351
							④	90	55	3295	32	1.25		403
VHS0120XULCS	G1G120AB6702	centrifugal blower with flange	24	16...28	B	①	275	160	2420	51	1.05	0	-25...+60	
							②	240	140	2615	48	0.95		119
							③	200	115	2855	45	0.87		246
							④	140	85	3155	38	0.74		382

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0133XULCS

DC centrifugal fans and blowers · max. 245 m<sup>3</sup>/h · Ø 133 mm



## Material/Surface

- Housing: Hot-dip galvanized sheet steel
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Galvanized

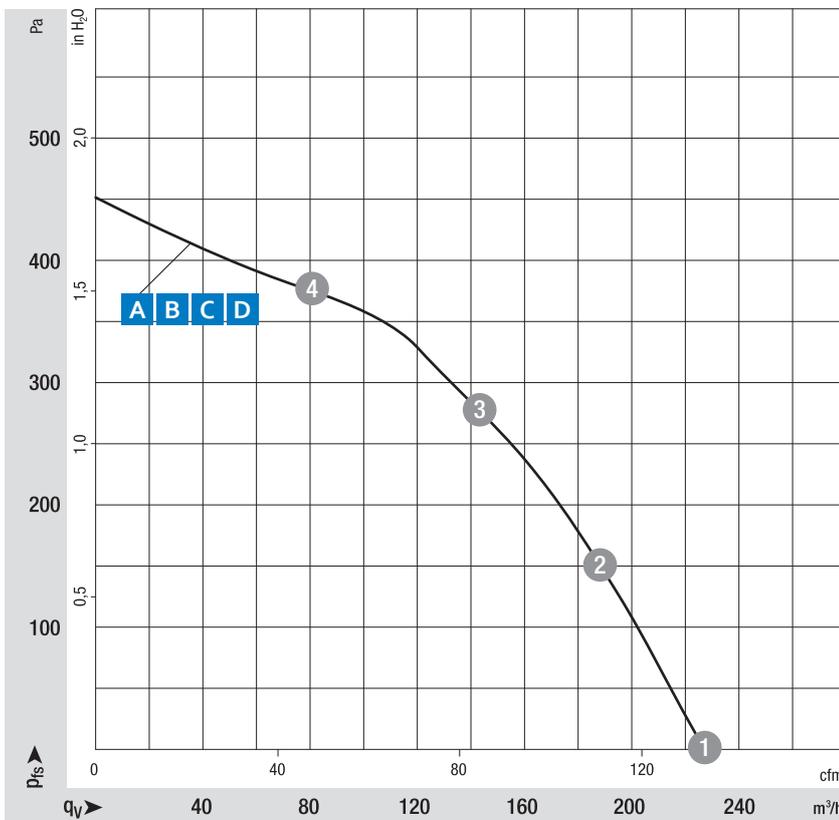
## Characteristics

- Version: DC centrifugal fan with housing (without flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 22
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 0.7 kg; centrifugal blower 1.3 kg

## Approvals

- EAC;
- A: EN 62368-1;
- B: EN 60034-1; EN 602041; EN 60335-1; UL 1004-1; CSA C22.2 Nr. 77; CCC on request (only applicable with >36V)

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

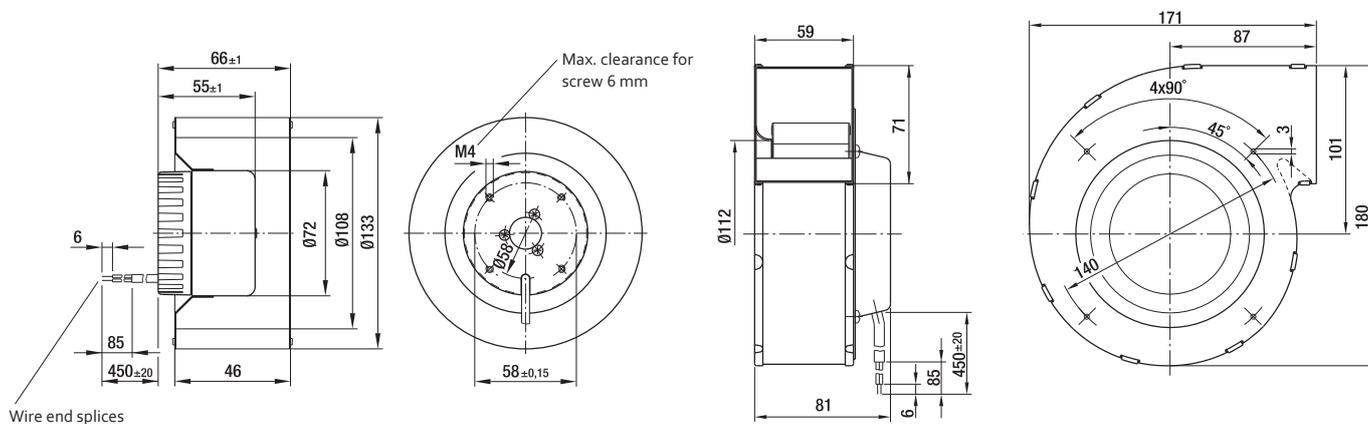
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm					
VFS0133XULCS	R1G133AE1902	centrifugal fan	24	16...28	A	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	240	140	2 155	50	2.13	0	-25...+60
							200	120	2 385	45	1.87	164	
							150	90	2 725	40	1.59	319	
							100	60	3 020	33	1.30	403	
VHS0133XULCS	G1G133DE1902	centrifugal blower with flange	24	16...28	B								
VFS0133XULCS	R1G133AE0302	centrifugal fan	48	36...57	C	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	245	145	2 175	58	1.26	0	-25...+60
							200	120	2 415	51	1.07	173	
							165	100	2 670	46	0.94	294	
							110	65	3 075	40	0.79	429	
VHS0133XULCS	G1G133DE0302	centrifugal blower with flange	48	36...57	D								

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0140XULES

DC centrifugal fans and blowers · max. 435 m<sup>3</sup>/h · Ø 140 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

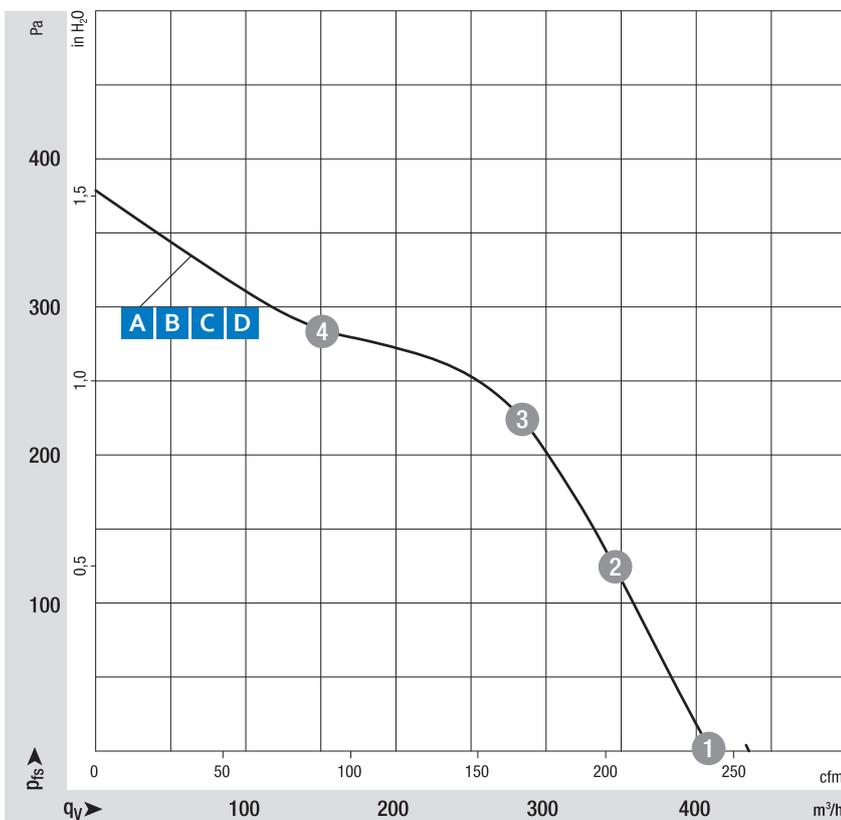
## Characteristics

- Version: DC centrifugal fan with housing (flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 22; depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 1.0 kg; centrifugal blower 2.5 kg

## Approvals

- EAC;
- B + D EN 60034-1; EN 60204-1; EN 60335-1; CCC on request (only applicable with >36V)

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

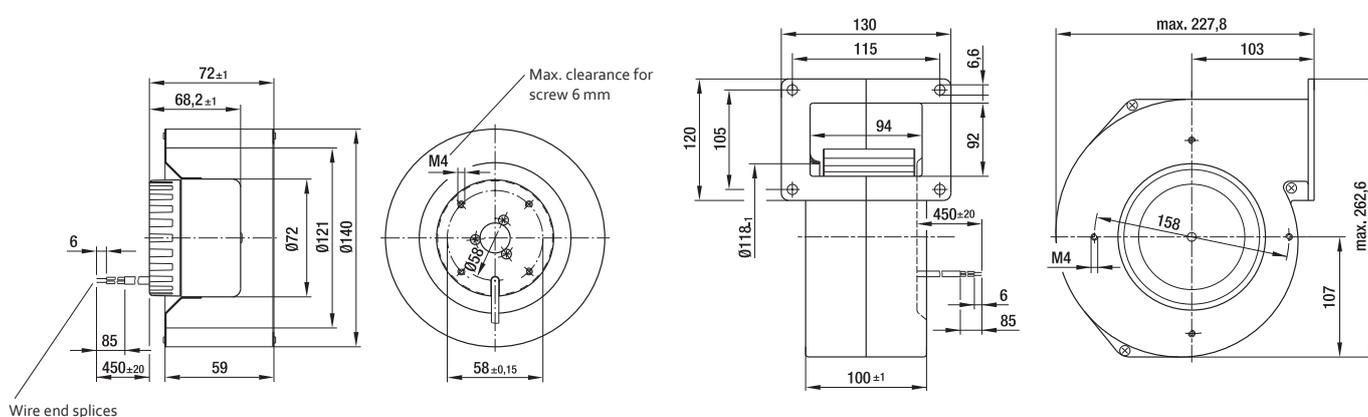
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type		Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Min. back-pressure	Perm. ambient temperature	
				VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	A	Pa	°C	
VFS0140XULES	R1G140AV1702	centrifugal fan		24	16...28	<b>A</b>	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	435	255	1 875	67	2.80	0	-25...+60	
								370	220	2 025	63	2.57	138		
VHS0140XULES	G1G140AV1702	centrifugal blower with flange		24	16...28	<b>B</b>			275	160	2 285	57	2.25		288
									150	90	2 590	44	1.75		346
VFS0140XULES	R1G140AV2102	centrifugal fan		48	36...57	<b>C</b>	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	435	255	1 855	66	1.40	0	-25...+60	
								355	210	2 050	61	1.25	160		
VHS0140XULES	G1G140AV2102	centrifugal blower with flange		48	36...57	<b>D</b>			265	155	2 305	55	1.10		302
									150	90	2 560	43	0.86		338

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0146XUNCS

DC centrifugal fans and blowers · max. 500 m<sup>3</sup>/h · Ø 146 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

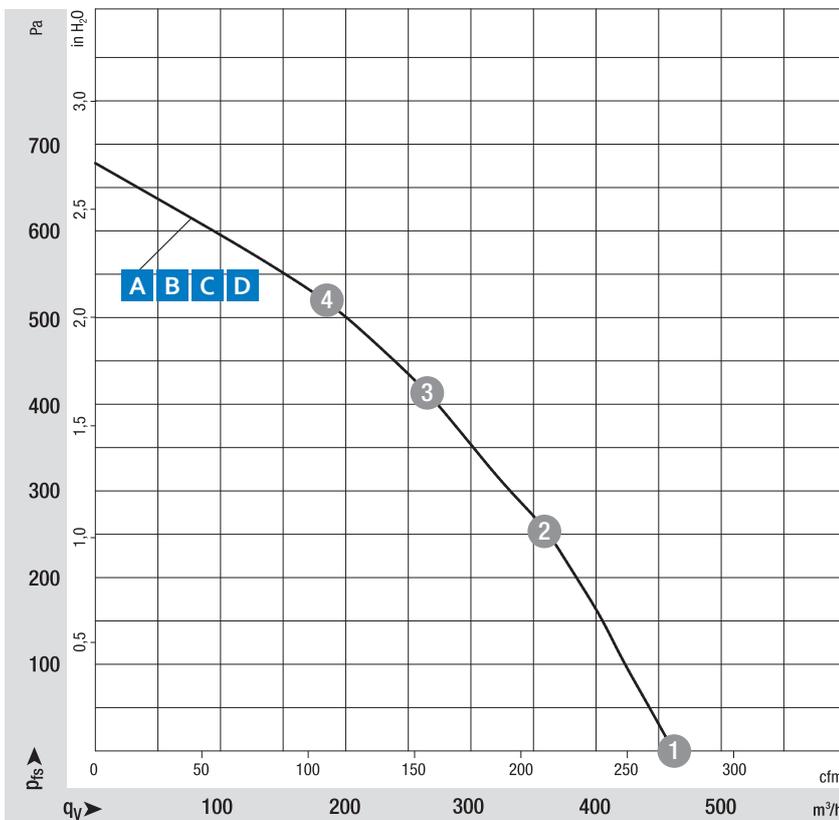
## Characteristics

- Version: DC centrifugal fan with housing (flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 1.4 kg; centrifugal blower 2.8 kg

## Approvals

- CSA C22.2 Nr.77; EAC; UL 1004-1; A + B + D: EN 62368-1; CCC on request (only applicable with >36V)

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

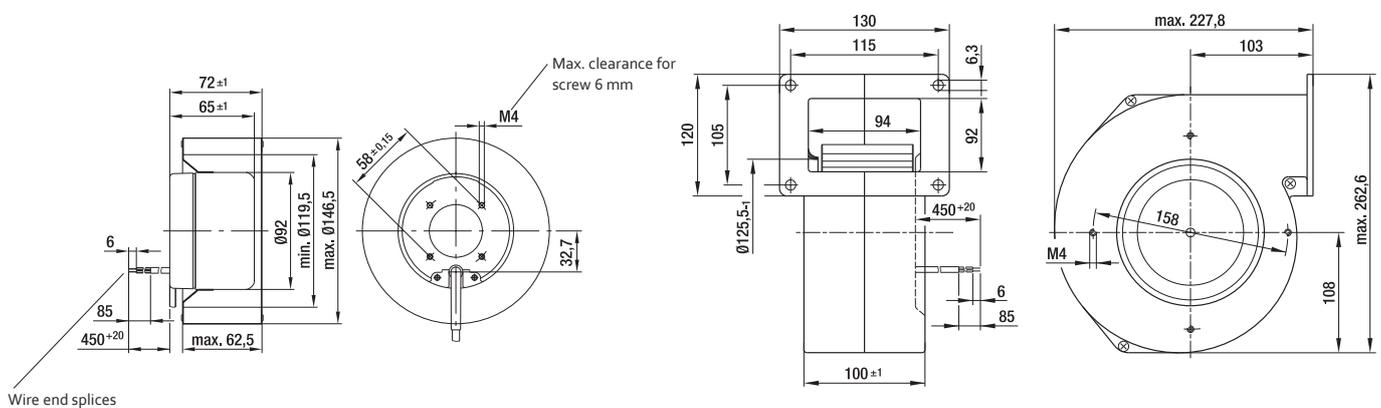
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm					
VFS0146XUNCS	R1G146AA0752	centrifugal fan	24	16...28	A	①	500	295	2 350	124	5.54	0	-25...+60
							415	245	2 600	117	5.00	224	
							290	170	3 010	109	4.42	466	
							185	110	3 370	96	3.80	605	
VHS0146XUNCS	G1G146BA0752	centrifugal blower with flange	24	16...28	B	②							
VFS0146XUNCS	R1G146AA1152	centrifugal fan	48	36...57	C	③	495	290	2 295	120	2.84	0	-25...+60
							415	245	2 535	113	2.54	226	
							300	175	2 910	105	2.21	451	
							205	120	3 270	99	2.00	598	
VHS0146XUNCS	G1G146BA1152	centrifugal blower with flange	48	36...57	D	④							

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0160XUNCS

DC centrifugal fans and blowers · max. 545 m<sup>3</sup>/h · Ø 160 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

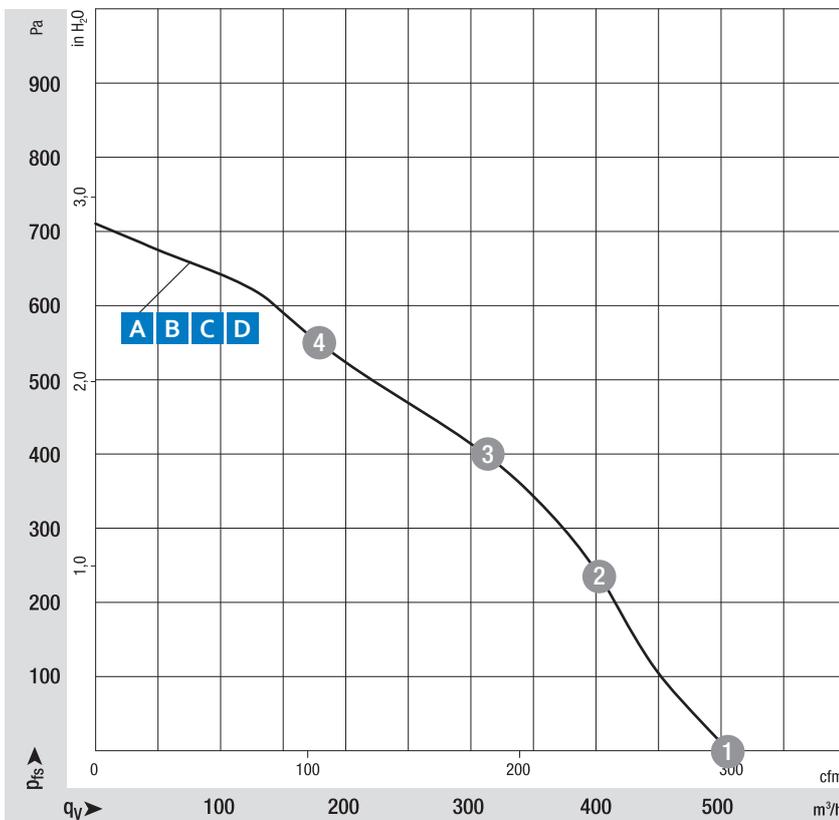
## Characteristics

- Version: DC centrifugal fan with housing (flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 1.4 kg; centrifugal blower 2.8 kg

## Approvals

- CSA C22.2 Nr.77; EAC; UL 1004-1; **B + D**: EN 62368-1; CCC on request (only applicable with >36V)

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

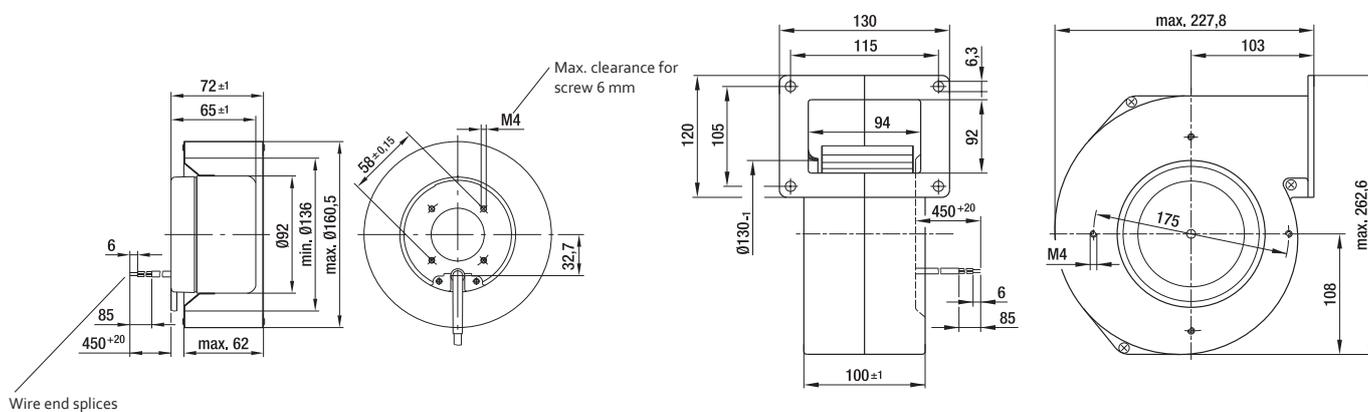
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C				
							m <sup>3</sup> /h	cfm									
VFS0160XUNCS	R1G160AH2952	centrifugal fan	24	16...28	A	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	540	320	1 870	134	6.43	0	-25...+60				
VHS0160XUNCS	G1G160BH2952	centrifugal blower with flange	24	16...28	B	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	450	256	2 115	121	5.54	229	-25...+60				
VFS0160XUNCS	R1G160AH3952	centrifugal fan	48	36...57	C	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	545	320	1 890	134	3.27	0	-25...+60				
VHS0160XUNCS	G1G160BH3952	centrifugal blower with flange	48	36...57	D	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	450	265	2 145	120	2.78	235	-25...+60				

Subject to changes.

## Technical drawing

Dimensions in mm



# VHD0133XUNCS

DC centrifugal blower · max. 745 m<sup>3</sup>/h · Ø 133 mm



## Material/Surface

- Housing: Galvanized Sheet steel
- Impeller: Galvanized Sheet steel
- Rotor: Painted black

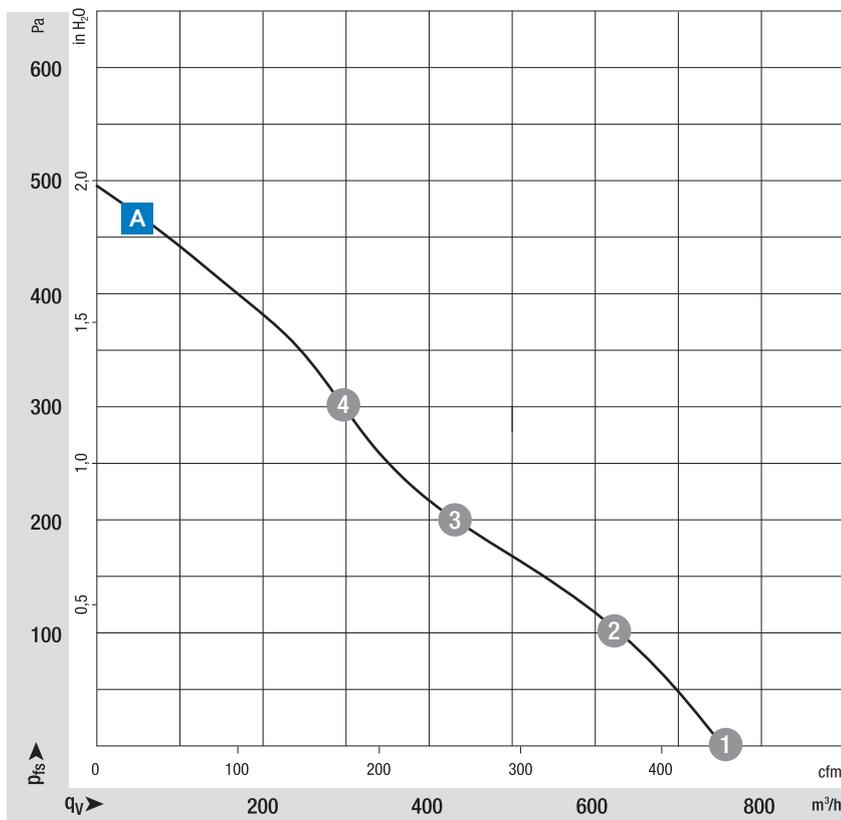
## Characteristics

- Version: DC centrifugal fan, forward-curved, dual inlet, with housing (flange or without flange)
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.8 kg

## Approvals

- CSA C22.2 Nr.77; EAC; UL 1004-1; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

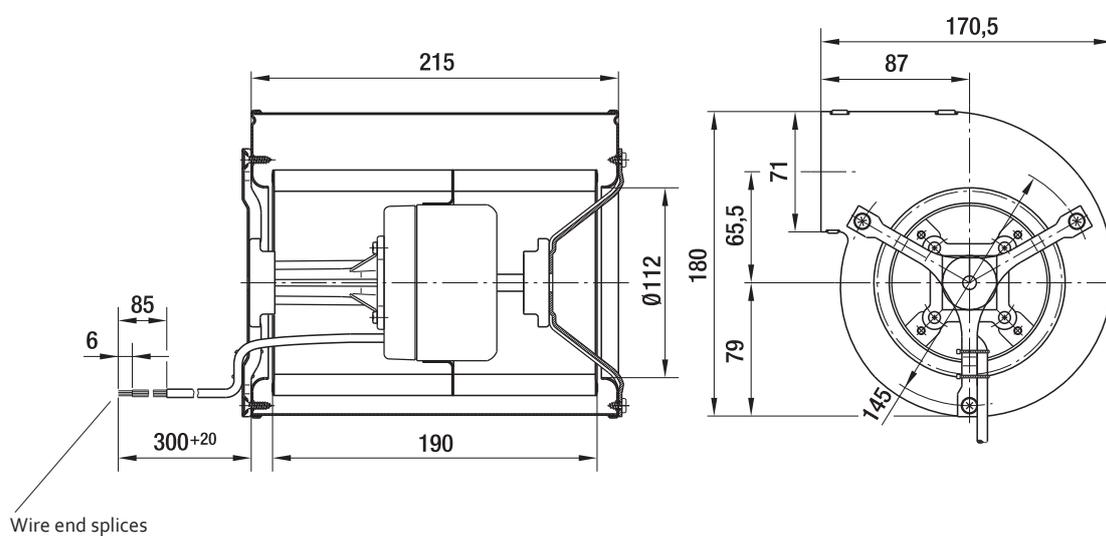
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage		Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Min. back-pressure	Perm. ambient temperature
			VDC	VDC			m <sup>3</sup> /h	cfm					
VHD0133XUNCS	D1G133AB2952	centrifugal blower with flange	24	16...28	A	①	745	435	1900	135	6.23	55	-25...+60
						②	535	315	2300	116	5.04	185	
						③	375	220	2655	107	4.41	278	
						④	250	145	3050	97	3.87	417	
VHD0133XUNCS	D1G133AB3952	centrifugal blower with flange	48	36...57	A	①	745	440	1890	130	3.24	58	-25...+60
						②	575	340	2230	114	2.64	174	
						③	375	220	2640	104	2.21	290	
						④	265	155	3005	98	1.98	412	

Subject to changes.

## Technical drawing

Dimensions in mm



# VHD0133XUNES

DC centrifugal blower · max. 1 105 m<sup>3</sup>/h · Ø 133 mm



## Material/Surface

- Housing: Galvanized Sheet steel
- Impeller: Galvanized Sheet steel
- Rotor: Painted black

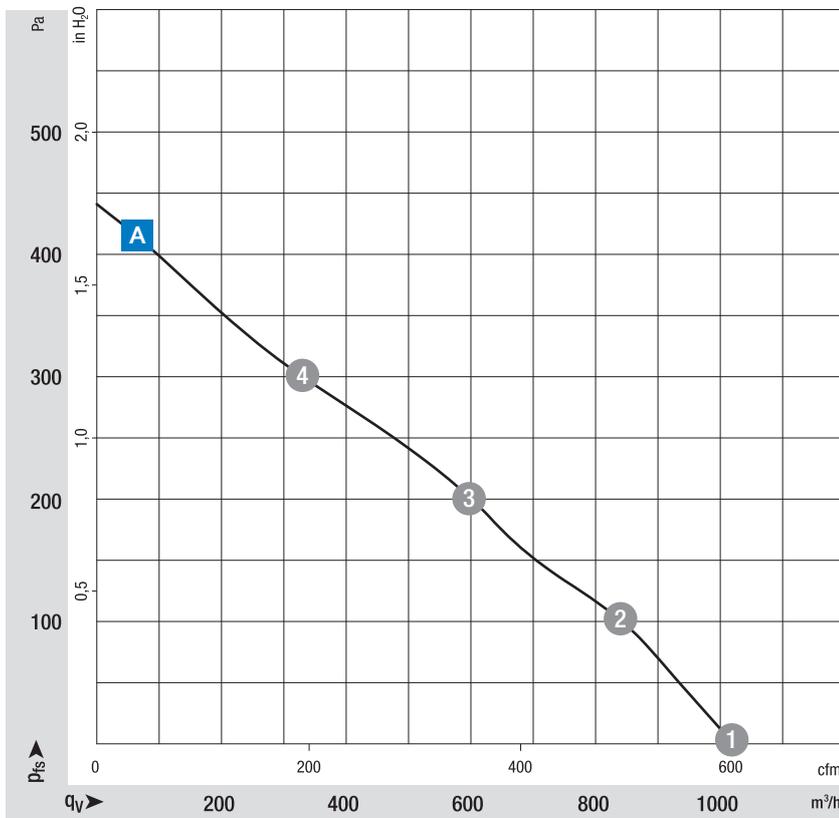
## Characteristics

- Version: DC centrifugal fan, forward-curved, dual inlet, with housing (without flange)
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 3.4 kg

## Approvals

- EN 62368-1; CSA C22.2 Nr.77; EAC; UL 1004-1

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>



# VHD0146XUNES

DC centrifugal blower · max. 1 085 m<sup>3</sup>/h · Ø 146 mm



## Material/Surface

- Housing: Galvanized Sheet steel
- Impeller: Galvanized Sheet steel
- Rotor: Painted black

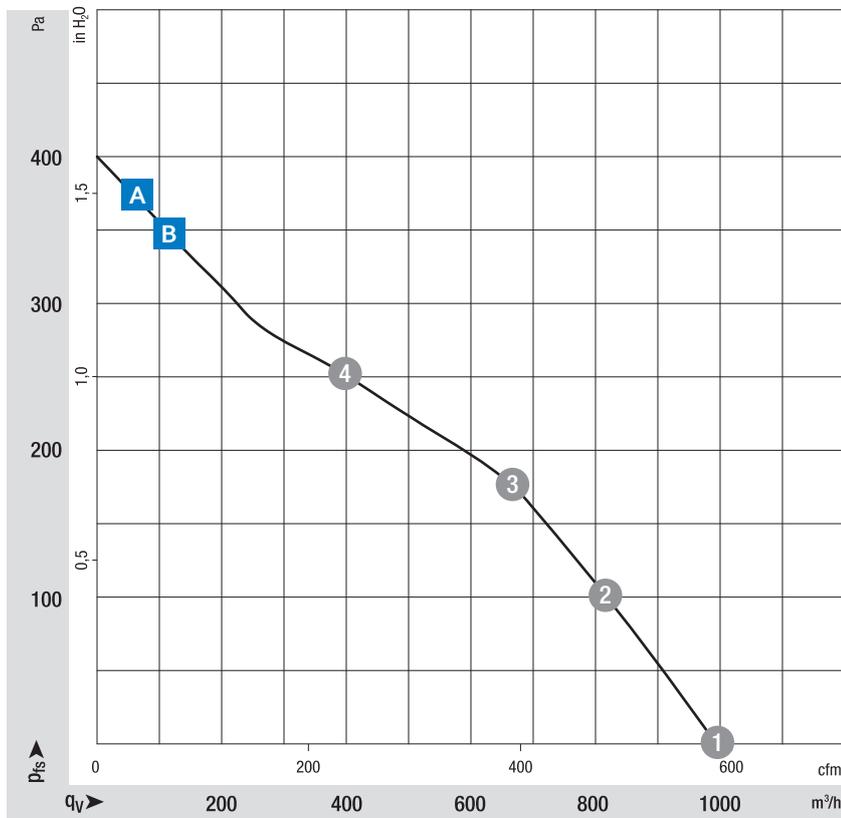
## Characteristics

- Version: DC centrifugal fan, forward-curved, dual inlet, with housing (without flange)
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 3.1 kg; 3.4 kg

## Approvals

- CSA C22.2 Nr.77; EAC; UL 1004-1;
- **B**: EN 60034-1; EN 60204-1; EN 60335-1

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage		Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Min. back-pressure	Perm. ambient temperature
			VDC	VDC			m³/h	cfm					
VHD0146XUNES	D1G146AA1952	centrifugal blower with flange	24	16...28	A	①	1 085	640	1 445	130	5.56	0	-25...+60
							915	535	1 630	120	4.94	92	
							735	430	1 840	111	4.45	190	
							500	295	2 115	97	3.81	270	
VHD0146XUNES	D1G146AA3352	centrifugal blower with flange	48	36...57	B	①	1 070	630	1 475	130	2.86	0	-25...+60
							925	545	1 640	121	2.58	91	
							755	445	1 840	114	2.35	187	
							490	290	2 175	100	2.05	295	

Subject to changes.

## Technical drawing

Dimensions in mm

