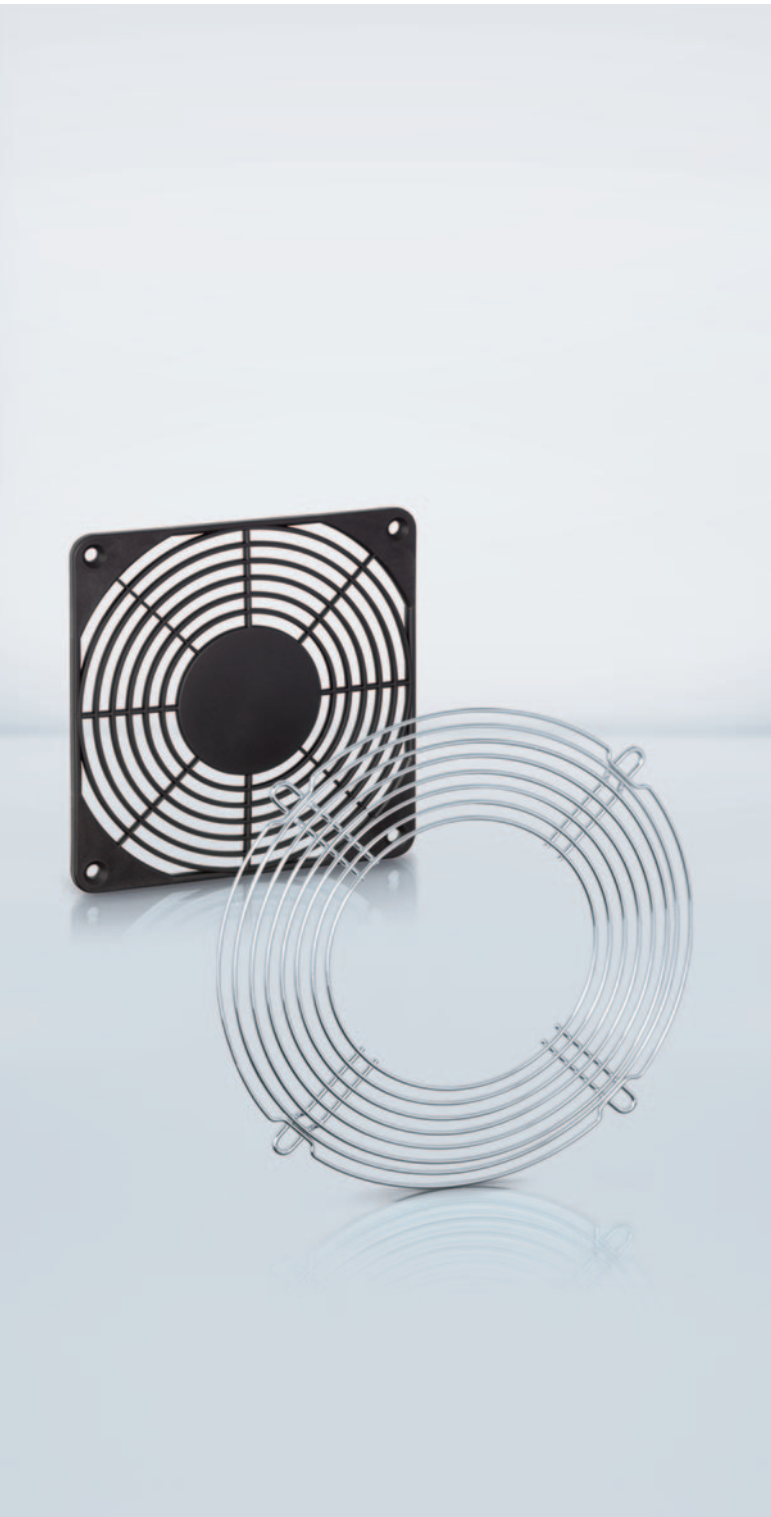


# Accessories



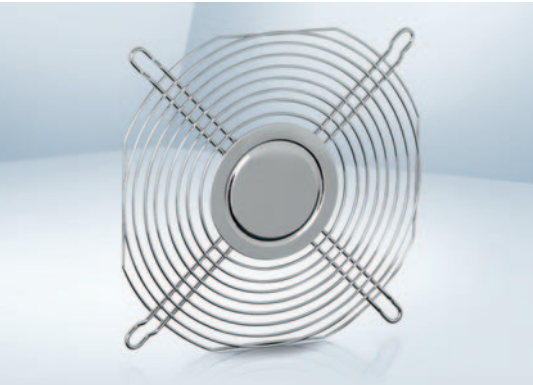
Finger guards	254
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Air inlet grill	267
Inlet rings	268
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Handheld Programmer	271
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ebm-papst offers a comprehensive selection of accessories for optimum fan operation, from temperature sensors for speed-controlled fans, to finger guards for all variants, to cables, filters, and screens, to spacers and installation parts. Even in the case of very special parts, you can be sure: We will assist you every way possible. The sales experts at ebm-papst will be happy to assist you with your question concerning fan installation and use.

From selection to accessories:

Insist on the efficient and reliable service provided by ebm-papst.

# Finger guards



- **Material:** Galvanized or nickel-plated steel wire
- **Note:** Finger guard according to DIN EN ISO 13857 (previously EN 294). Additional finger guards that do not satisfy DIN EN ISO 13857 available on request.  
Our finger guards are designed specifically to be used with ebm-papst fans. They combine the highest degree of safety with minimum effect on the operating noise. Please note that the safety-related clearances cannot be guaranteed when finger guards made by other manufacturers are used.

Fan size	Fan series	Type	Order number	Side	Drawing see page
40 x 40	400 F, 400, 420 J	<b>LZ29-1</b>	9920029001	Intake/Outlet	255
50 x 50	500 F	<b>LZ31</b>	9920031000	Intake/Outlet	255
60 x 60	600 F, 620, 630, 600 N, 600 J	<b>LZ28</b>	9920028000	Intake/Outlet	255
		<b>LZ28-1</b>	9920028001		
80 x 80	8450, 8400 N, 8300 N, 8200 J, 8000 N, CoR 8200 J	<b>LZ22-2</b>	9920022002	Intake/Outlet	255
		<b>LZ32-4</b>	9920032004		
		<b>LZ22-N</b>	9920022001		
		<b>LZ32-14</b>	9920145006		
92 x 92	3400 N, 3300 N, 3200 J, 3250 J, 3900, 3000	<b>LZ23</b>	9920023000	Intake/Outlet	255
		<b>LZ23-1</b>	9920023001		
119 x 119	4400 F, 4400 FN, 4300 N, 4400, 4100 N, 4000 N, 4000 Z, 9900	<b>LZ20</b>	9920020000	Intake/Outlet	255
		<b>LZ30</b>	9920030000		256
		<b>LZ30-3</b>	9920030003		256
		DV 4100	<b>LZ30-4</b>	9920030004	Intake/Outlet
127 x 127	DV 5200	<b>LZ35</b>	9920035000	Intake/Outlet	256
	5200 N, 5900	<b>LZ35</b>	9920035000	Intake/Outlet	256
		<b>LZ35-2</b>	9920035002	Intake/Outlet	256
135 x 135	5100 N, 5600	<b>LZ25</b>	9920025000	Intake/Outlet	256
140 x 140	5300, 5300 TD	<b>LZ53</b>	9920053000	Intake/Outlet	256
Ø 150	7100 N, 7200 N	<b>LZ24</b>	9920024000	Intake/Outlet	256
		<b>LZ27</b>	9920027000	Intake/Outlet	257
		<b>LZ36</b>	9920036000		
Ø 172	6300 N, 6300 NTD, 6300, 6300 TD	<b>LZ26</b>	9920026000	Intake/Outlet	257
		<b>LZ37</b>	9920037000		
		<b>LZ37-10</b>	9920145004		
		<b>LZ38</b>	9920038000		
		DV 6300	<b>LZ39</b>	9920039000	Outlet side
		<b>LZ52</b>	9920052000	Intake side	
172 x 150	6400, 6400 TD	<b>LZ38</b>	9920038000	Intake/Outlet	257
172 x 160	DV 6400, DV 6400 TD	<b>LZ38</b>	9920038000	Intake side	257
220 x 200	2200 FTD	<b>LZ22</b>	9920022000	Intake/Outlet	257
Fan unit		<b>LZ38-1</b>	9920038001		257

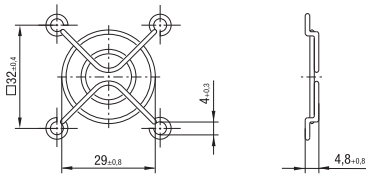
Subject to change

All measurements are given in mm.

# Finger guards

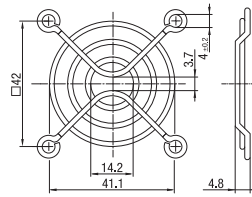
LZ29-1

Fan size 40 x 40



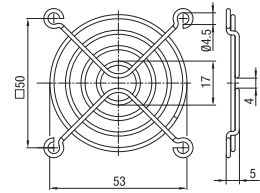
LZ31

Fan size 50 x 50



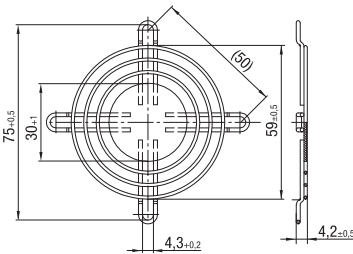
LZ28

Fan size 60 x 60



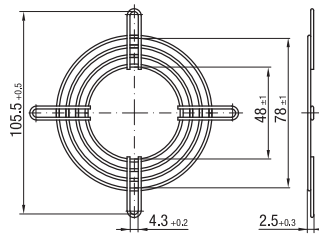
LZ28-1

Fan size 60 x 60



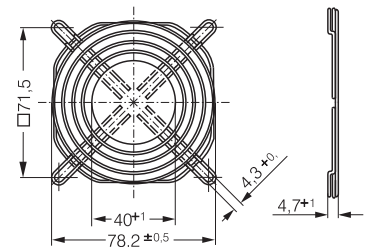
LZ22-2

Fan size 80 x 80



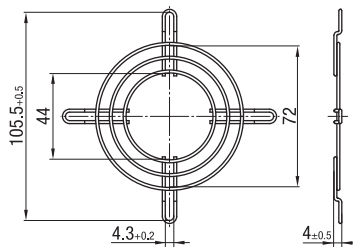
LZ32-4

Fan size 80 x 80



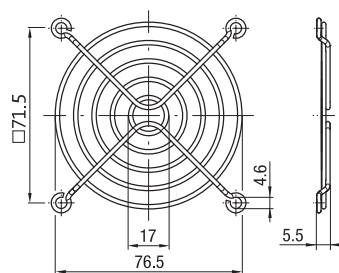
LZ22-N

Fan size 80 x 80



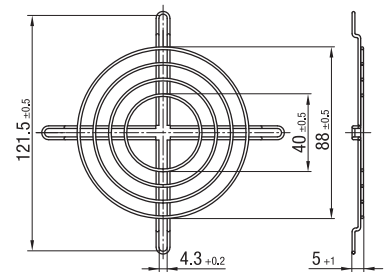
LZ32-14

Fan size 80 x 80



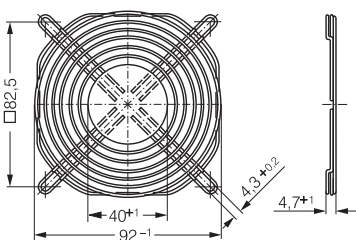
LZ23

Fan size 92 x 92



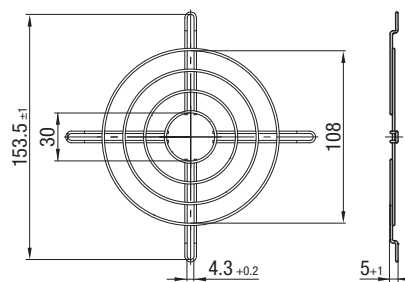
LZ23-1

Fan size 92 x 92



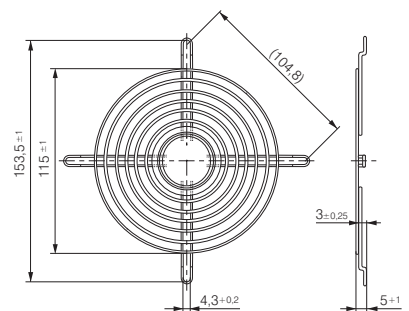
LZ20

Fan size 119 x 119



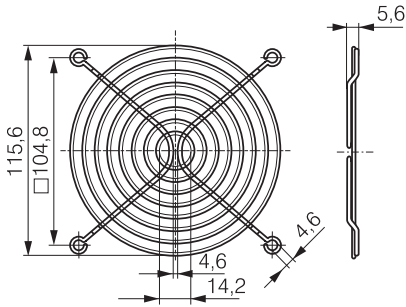
LZ30

Fan size 119 x 119

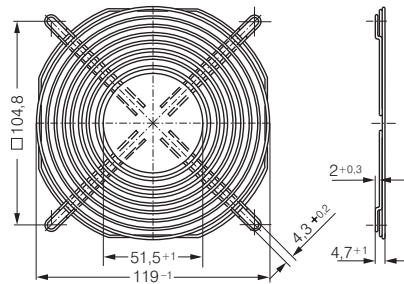


# Finger guards

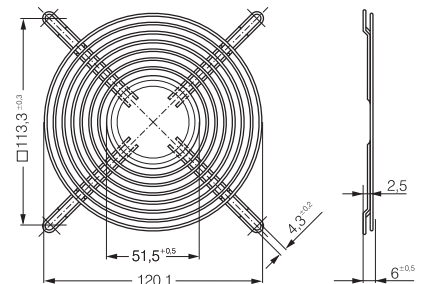
LZ30-3 Fan size 119 x 119



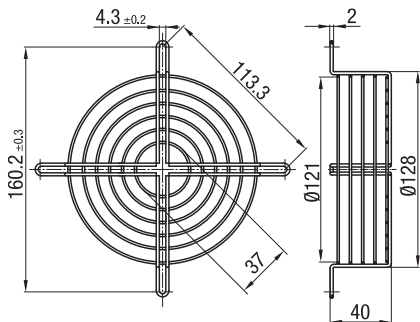
LZ30-4 Fan size 119 x 119



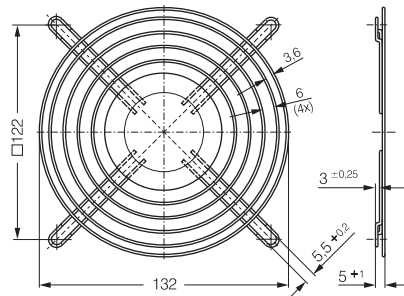
LZ35 Fan size 127 x 127



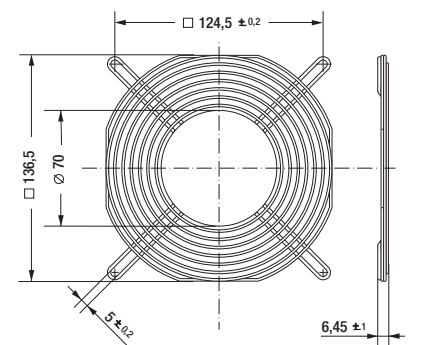
LZ35-2 Fan size 127 x 127



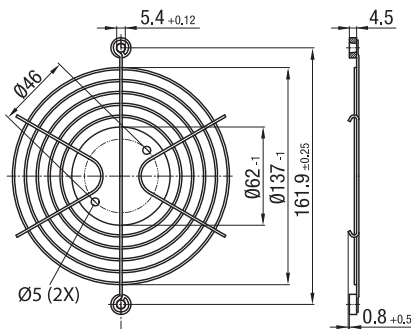
LZ25 Fan size 135 x 135



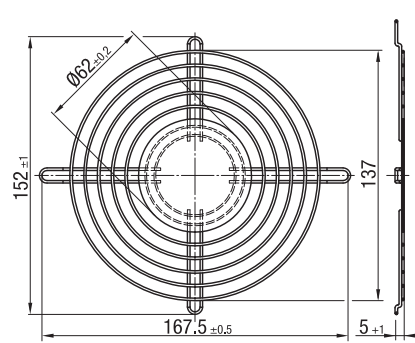
LZ53 Fan size 140 x 140



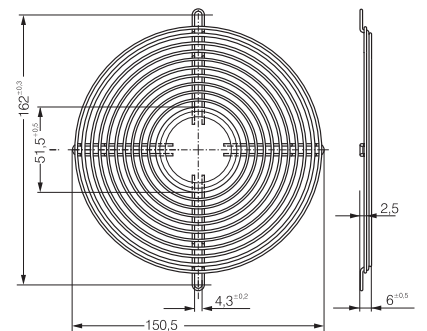
LZ24 Fan size Ø 150



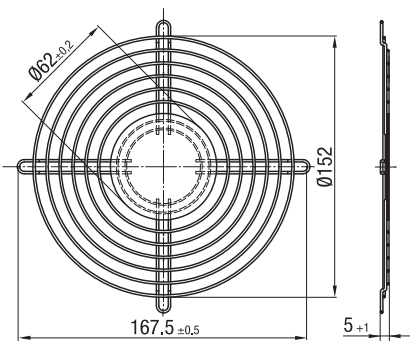
LZ27 Fan size Ø 150



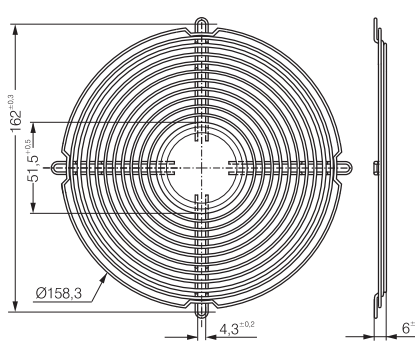
LZ36 Fan size Ø 150



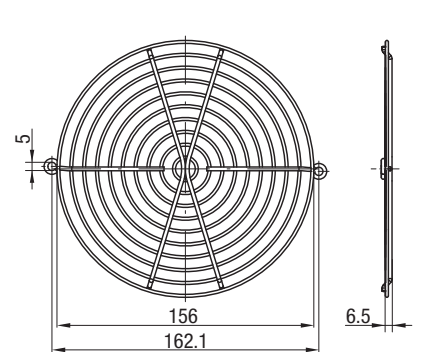
LZ26 Fan size Ø 172



LZ37 Fan size Ø 172



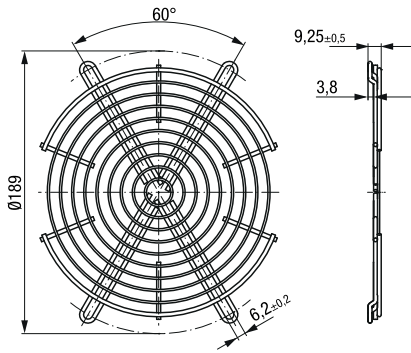
LZ37-10 Fan size Ø 172



# Finger guards

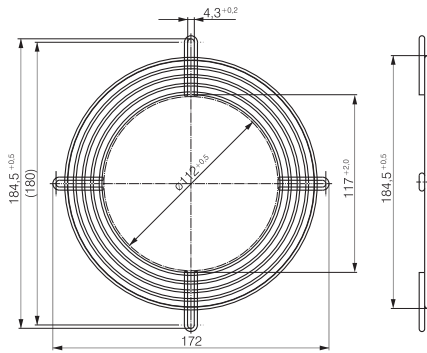
LZ38-1

Fan unit



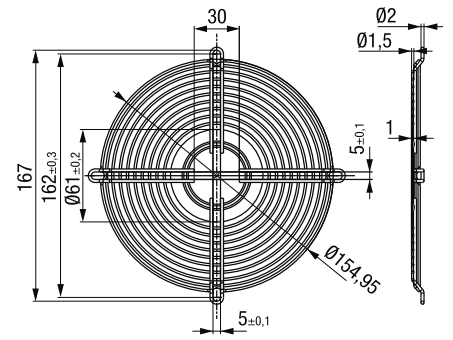
LZ39

Fan size Ø 172



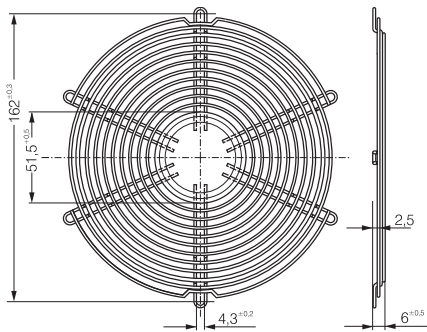
LZ52

Fan size Ø 172



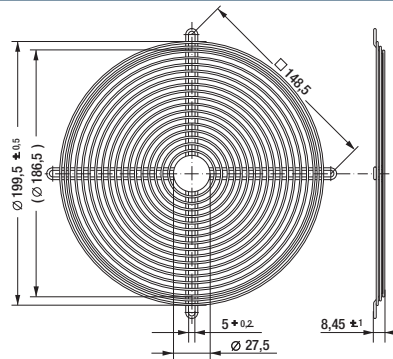
LZ38

Fan size 172 x 150  
172 x 160  
Ø 172



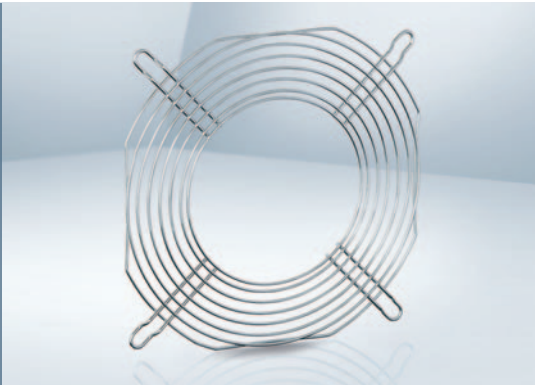
LZ22

Fan size 220 x 200



# Finger guards

ACmaxx / ACi



- **Material:** Galvanized or nickel-plated steel wire
- **Note:** Finger guard according to DIN EN ISO 13857 (previously EN 294).  
Finger guards for air outlet described on this page are specifically for fan series ACmaxx.  
For air intake side the standard finger guards with a corresponding dimension can be used.

## Finger guards made of metal

Fan size	Fan series	Type	Order number	Side	Drawing see page
80 x 80	AC 8300 H	<b>LZ32-7</b>	9920032007	Outlet side	259
	AC 8300 H	<b>LZ22-N</b>	9920022001	Intake side	255
		<b>LZ22-2</b>	9920022002		
		<b>LZ32-14</b>	9920145006		
		<b>LZ32-4</b>	9920032004		
92 x 92	AC 3200 J	<b>LZ23-6</b>	9920023006	Outlet side	259
	AC 3200 J	<b>LZ23</b>	9920023000	Intake side	255
		<b>LZ23-1</b>	9920023001		
119 x 119	ACi 4400, ACi 4400 N	<b>LZ20</b>	9920020000	Intake side	255
		<b>LZ30</b>	9920030000		
	AC 4400 FN	<b>LZ30-3</b>	9920030003		256
		<b>LZ30-4</b>	9920030004		
	AC 4400 FN AC 4300	<b>LZ30-9</b>	9920030009	Outlet side	259
Ø 172	AC 6200 N	<b>LZ26</b>	9920026000	Intake side	256
		<b>LZ37</b>	9920037000		
		<b>LZ37-10</b>	9920145004		257
		<b>LZ52</b>	9920052000		
	AC 6200 N	<b>LZ37-2</b>	9920037002	Outlet side	259

Subject to change

All measurements are given in mm.

## Finger guards made of plastic

Fan size	Fan series	Type	Order number	Side	Drawing see page
119 x 119	AC 4400 FN, AC 4300	<b>LZ30-5</b>	9920030005	Intake side	263
	ACi 4400, ACi 4400 N	<b>LZ30-6</b>	9920030006		
119 x 119	ACi 4400, ACi 4400 N	<b>LZ30-P</b>	9920030001	Intake/Outlet	263

Subject to change

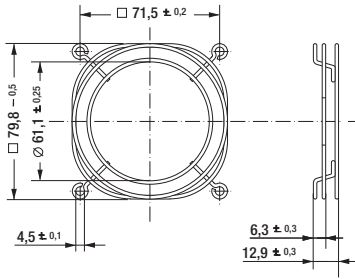
All measurements are given in mm.

# Finger guards

ACmaxx / ACi

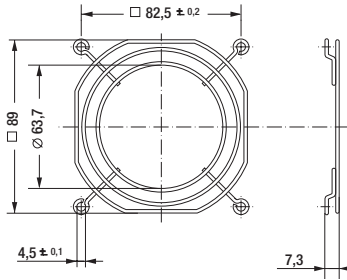
LZ32-7

Fan size 80 x 80



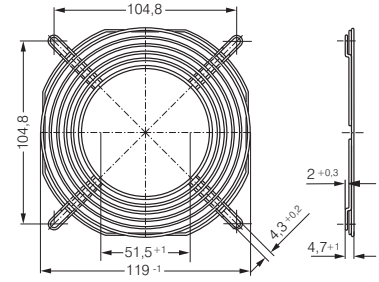
LZ23-6

Fan size 92 x 92



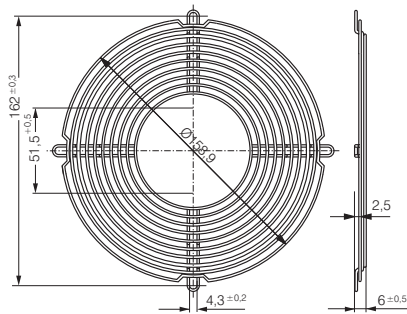
LZ30-9

Fan size 119 X 119



LZ37-2

Fan size  $\emptyset 172$



Information

DC axial fans

DC centrifugal fans

DC fans - specials

ACmaxx / EC axial fans

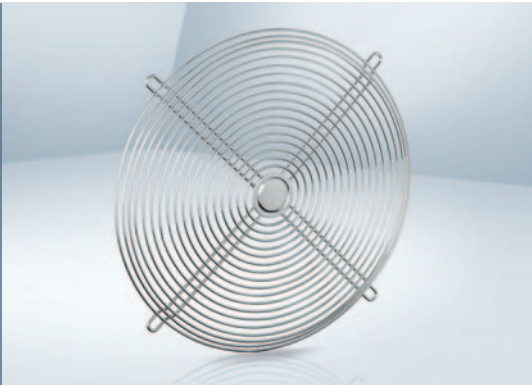
AC axial fans

AC centrifugal fans

Accessories

Representatives

# Finger guards



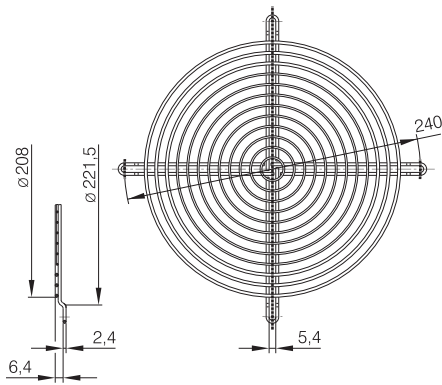
- **Material:** Steel wire, plastic-coated, with silver-metallic gloss

Fan size	Fan series	Order number	Side	Drawing see page
Ø 200	W3G 200	78128-2-4039	Intake/Outlet	260
Ø 250	W1G 250 W3G 250	09418-2-4039	Intake/Outlet	260

Subject to change All measurements are given in mm.

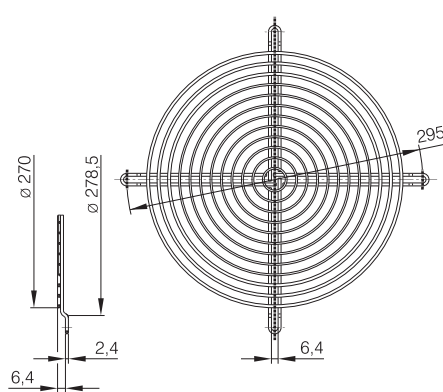
78128-2-4039

Fan size 200



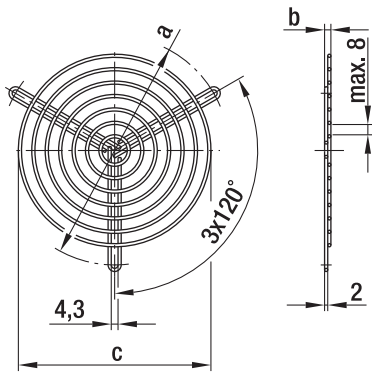
09418-2-4039

Fan size 250





# Finger guards



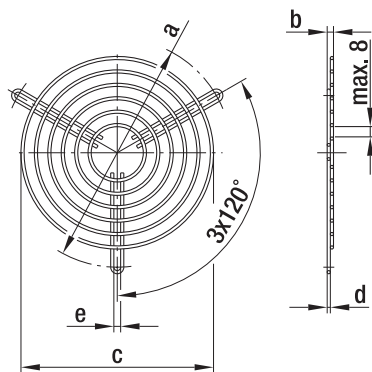
– **Material:** Steel wire

## Finger guards for centrifugal blowers with dual inlet

Fan size	Order no.	a	b	c	Coating	Highlights
097	83319-2-4039	96.0	3.5	71.0	Phosphated, plastic-coated in RAL no. 9005	for D2E097-CH
097	09485-2-4039	114.0	3.5	88.0	Phosphated, plastic-coated in RAL no. 9005	for D2E097-B
133 / 146	09500-2-4039	145.0	4.0	122.0	Phosphated, plastic-coated in RAL no. 9005	

Subject to change

All measurements are given in mm.



– **Material:** Phosphated steel wire, plastic-coated, silver-metallic gloss

## Finger guards for centrifugal blowers with dual inlet (versions with EW motor)

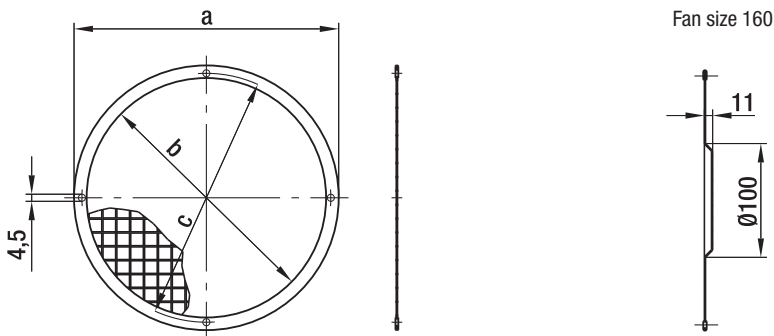
Fan size	Order no.	a	b	c	d	e
160	35000-2-4039	182.0	12.0	144.0	2.4	4.5

Subject to change

All measurements are given in mm.

# Finger guards

- **Material:** Welded screens made of hot-dip galvanized steel, border made of tin (0.4 mm thick)

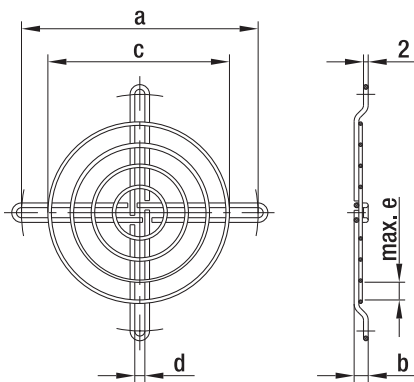


## Finger guards for centrifugal blowers with single inlet

Fan size	Order no.	a	b	c	Highlights
085	09489-2-4039	90.0	74.0	84.0	3 drilled holes staggered by 120°
108	09490-2-4039	126.0	110.0	118.0	
120	09494-2-4039	140.0	124.0	132.0	
140 / 146	09492-2-4039	168.0	152.0	158.0	
160	09503-2-4039	183.0	170.0	175.0	see picture fan size 160

Subject to change

All measurements are given in mm.



- **Material:** Steel wire

## Finger guards for centrifugal blowers with single inlet

Fan size	Order no.	a	b	c	d	e	Coating
076 / 085	98214-2-4039	101.0	6.0	79.0	4.3	8.0	Plastic coated, silver-metallic gloss
108	98214-2-4039	120.0	3.5	88.0	4.3	8.0	Plastic coated, silver-metallic gloss
140 / 146	25028-2-4039	162.0	8.5	139.0	4.3	8.0	Galvanized, chromitized in blue
160	17729-2-4039	175.0	3.5	139.0	4.6	7.0	Galvanized, chromitized in blue

Subject to change

All measurements are given in mm.

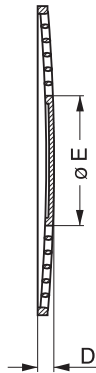
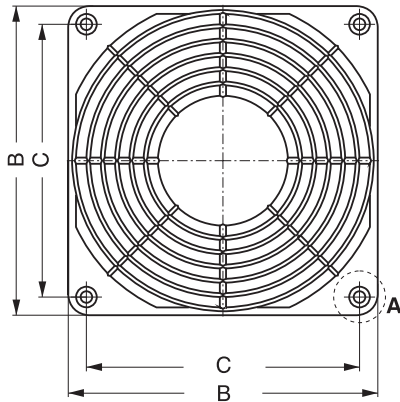
# Finger guards



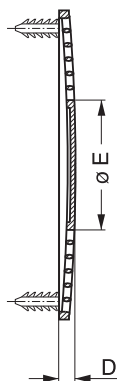
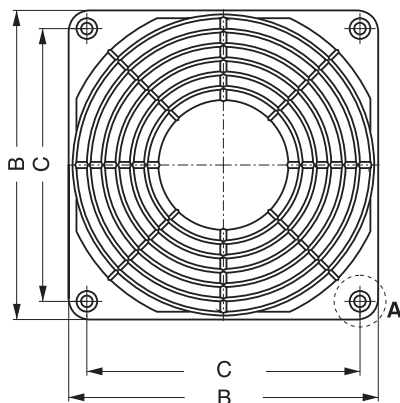
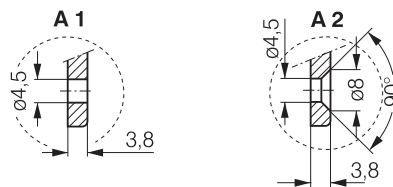
- **Material:** Fiberglass-reinforced plastic
- **Note:** Finger guard according to DIN EN ISO 13857 (previously EN 294). Plastic guards may not be used for the following models:  
8200 JH3 / JH4  
3200 JH3 / JH4  
4100 NH5 - NH8

Fan size	Fan series	Type	Order number	B	C	D	E	Mounting
60 x 60	600 F, 620, 630, 600 N, 600 J	<b>LZ28-3</b>	9920028003	60 <sup>-0.5</sup>	50.0 <sup>+0.2</sup>	3.0	24	A3
80 x 80	8450, 8400 N, 8300 N, 8200 J, 8000 N, CoR 8200 J	<b>LZ32-2</b>	9920032002	80 <sup>-0.5</sup>	71.5 <sup>+0.2</sup>	7.0	34	A1
		<b>LZ32-P</b>	9920032001					A2
		<b>LZ32-3</b>	9920032003					A3
92 x 92	3400 N, 3300 N, 3200 J, 3250 J, 3900, 3000	<b>LZ23-2</b>	9920023002	92 <sup>-0.5</sup>	82.5 <sup>+0.2</sup>	6.5	46	A1
		<b>LZ23-3</b>	9920023003					A3
119 x 119	4400 F, 4400 FN, 4300 N, 4400, 4100 N, 4000 N, 4000 Z, 9900, DV 4100	<b>LZ30-5</b>	9920030005	119 <sup>-0.5</sup>	105 <sup>+0.2</sup>	6.5	50	A2
		<b>LZ30-6</b>	9920030006					A4
		<b>LZ30-P</b>	9920030001					A2
127 x 127	5200 N, DV 5200, 5900	<b>LZ33-1</b>	9920033001	127 <sup>-0.5</sup>	113 <sup>+0.2</sup>	6.5	50	A2
		<b>LZ33-2</b>	9920033002					A4

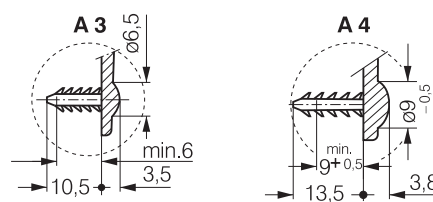
Subject to change All measurements are given in mm.



## Screw connection



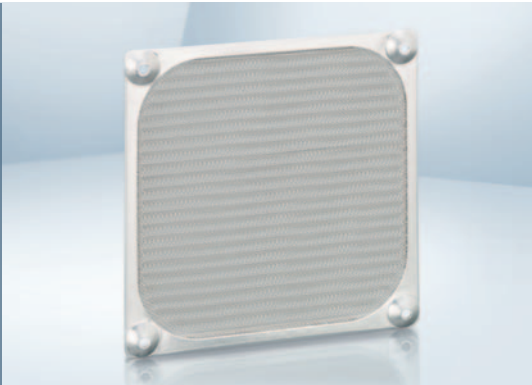
## Barbed inserts



Only suitable for bore hole diameter 4.3 - 4.7.

# Filter fan guards

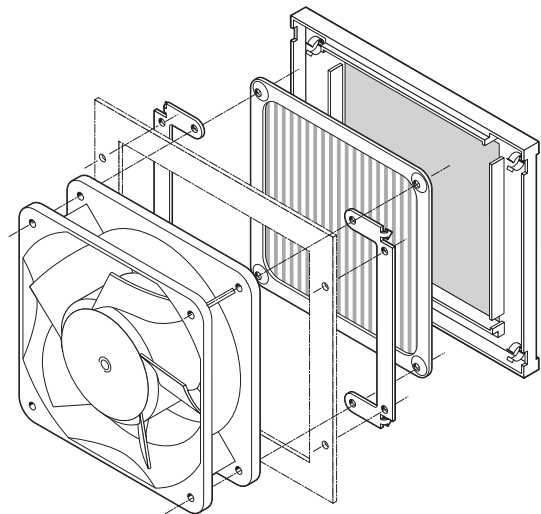
119 x 119



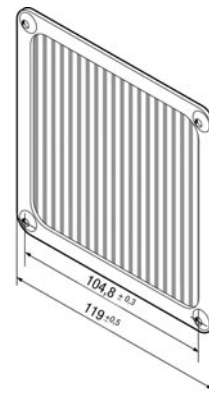
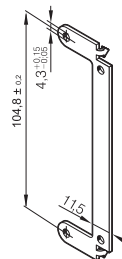
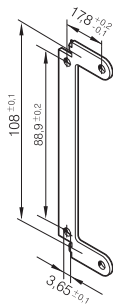
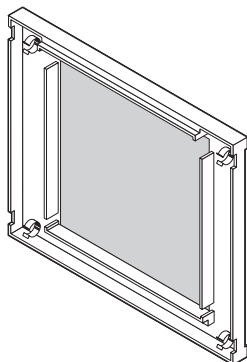
- **Material:** Filter guard LZ40 N: black, fiberglass-reinforced plastic with inserted wire mesh LZ60.  
Coarse filter LZ60: stainless steel wire mesh  
Mounting lug LZ40-1 for mounting

DC fan series	AC fan series	ACi fan series
4400 F	AC 4300	ACi 4400
4400 FN	9900	ACi 4400 N
4300 N	4000 N	
4400	4000 Z	
4100 N	AC 4400 FN	
DV 4100		

Subject to change All measurements are given in mm.



**LZ40N** Filter guard      **LZ40-1** Mounting lug      **LZ60** Coarse filter



# Filter fan guards



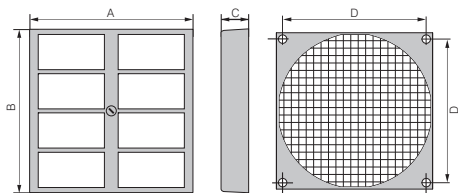
- **Material:** Guard cover: Injection-molded polycarbonate (PC) with mat surface.  
Mounting plate: wire mesh with black powder coating  
Filter pad: white, synthetically bonded fibers
- **Note:**  
Filter fan guards suitable for fitting on axial fan series in sizes: 60 mm, 80 mm, 92 mm, 119 mm,  $\varnothing$  172 mm. All filter units fit directly on the existing mounting holes of the fans.  
Filter fan guards consisting of 3 parts: external guard cover, internal mounting plate, and replaceable filter pad.  
The filter pad can be replaced quickly and easily via a quick release on the guard cover.  
The filter pads can be replaced even while the fan is running, as protection is provided by the welded wire mesh.

Fan size	Fan series	Type	Order number	A	B	C	D	Replacement filter*
60 x 60	600 F, 620, 630, 600 N, 600 J	<b>FF60</b>	9920034001	65	65	13.5	50.0	<b>RF 60</b>
80 x 80	8450, 8400 N, 8300 N, 8200 J, 8000 N, CoR 8200 J	<b>FF80</b>	9920034002	85	85	14.0	71.5	<b>RF 80</b>
92 x 92	3400 N, 3300 N, 3200 J, 3250 J, 3900, 3000	<b>FF92</b>	9920034003	125	105	17.5	82.5	<b>RF 92</b>
119 x 119	4400 F, 4400 FN, 4300 N, 4400, 4100 N, 4000 N, 4000 Z, 9900, DV 4100	<b>FF119</b>	9920034004	162	136	18.5	104.5	<b>RF 119</b>
$\varnothing$ 172 172 x 150 172 x 160	DV 6300, 6300, 6300 N, 6300 TD, 6300 NTD, DV 6300 TD, DV 6400, 6400, 6400 TD, DV 6400 TD	<b>FF172</b>	9920034005	226	190	19.5	162.0	<b>RF 172</b>

Subject to change \* Replacement filter available only in packages of 5.  
All measurements are given in mm.

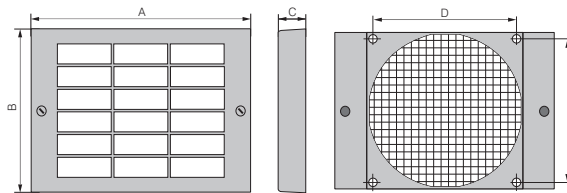
## FF60 / FF80

Fan size: 60 x 60 mm / 80 x 80 mm



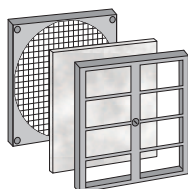
## FF92 / FF 119

Fan size: 92 x 92 mm / 119 x 119 mm



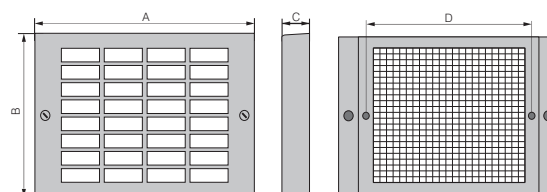
### Filter performance

The filter fan guard filters 75 % of dust particles with a size of 5-10 microns and can withstand temperatures of up to 100 °C. Filter class G3 according to DIN EN 779. Flame-retardant according to DIN 53438, class F1. When a clean filter is installed, a reduction of air flow of 20-30 % is possible.



## FF 172

Fan size:  $\varnothing$  172 mm



# Finger guards

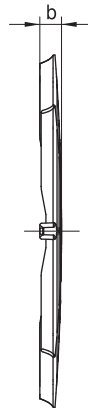
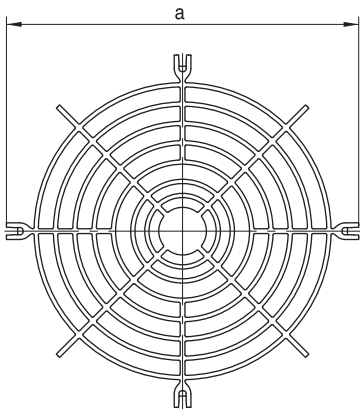
For compact centrifugal modules

- **Material:** PA plastic, fiberglass-reinforced
- **Highlights:** Flame protection class in line with UL 94V-0

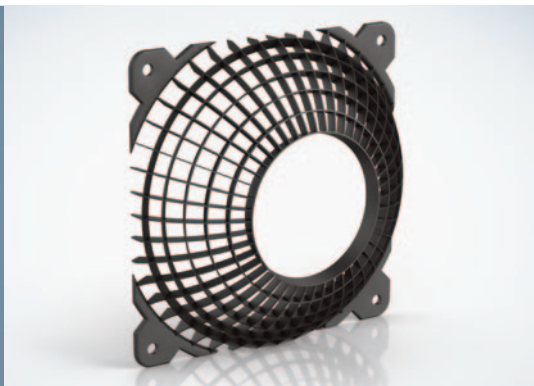


Fan size	Fan series	Type	Order number	a	b
Ø 190	RG 190 TD	<b>LZ46-1</b>	9920046001	133	9.0
Ø 220	RG 220 TD	<b>LZ47-1</b>	9920047001	166	8.7
Ø 225	RG 225 TD	<b>LZ48-1</b>	9920048001	158	8.7

Subject to change All measurements are given in mm.



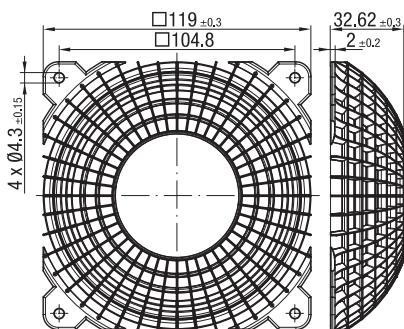
# Air inlet grill



- **Material:** PA plastic, fiberglass-reinforced
- **Note:** For axial and diagonal fans  
Assembled on the air intake, the fan grid reduces the noise emission dramatically and minimizes disturbing low frequency sound.

Fan size	Fan series	Type	Order number	Side	Drawing see page
119 x 119	ACi 4400, ACi 4400 N, 4400, 4400 F, 4400 FN, AC 4400 FN, AC 4300, 4300 N, 4100 N, 4000 N, 4000 Z, 9900, DV 4100	<b>FG 119</b>	9920070000	Intake side	265
Subject to change					
All measurements are given in mm.					

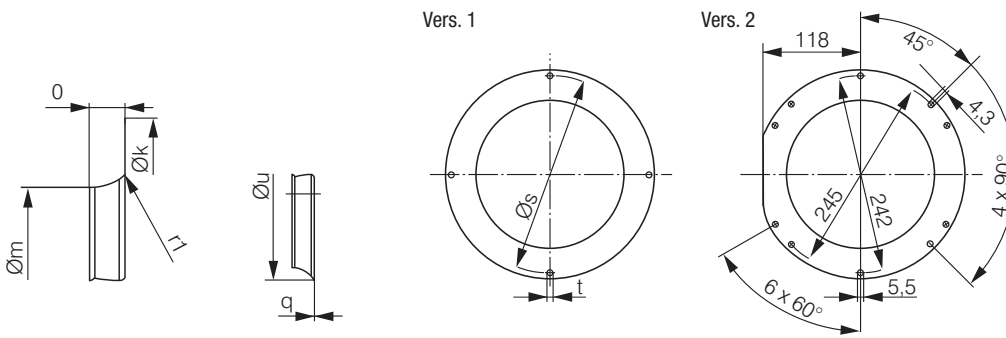
FG 119 Fan size 119 x 119



# Inlet rings

For centrifugal fans

– **Material:**  
Galvanized sheet steel



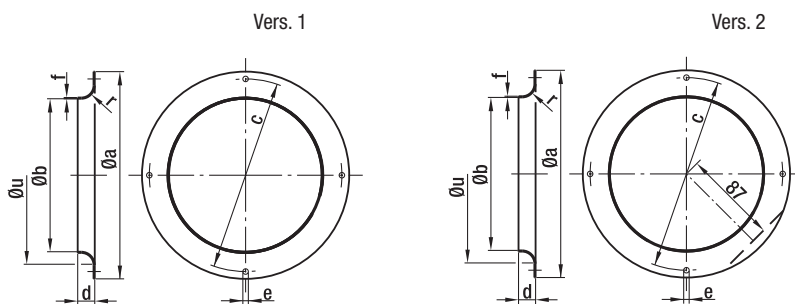
## Inlet rings for backward curved centrifugal fans

Fan size <sup>(1)</sup>	Type	Order number	Version	k	m	o	q	r <sub>1</sub>	s	t	u
RER 120 (S)/ 120 (P)	<b>LZ 1000-120</b>	96120-2-4013	1	146.0	94.4	18.0	0.80	16.0	134.0	4x4.5	126.0
RER 133 (P)	<b>LZ 1000-133</b>	09566-2-4013	1	129.0	87.0	13.0	1.00	8.0	118.0	4x4.5	103.0
RER 160 (S)	<b>LZ 1000-160</b>	09569-2-4013	1	142.0	100.0	9.0	1.00	8.0	132.0	4x4.5	—
RER 175/190 (P)	<b>LZ 1000-175</b>	09576-2-4013	1	170.0	125.5	14.0	1.25	10.0	158.0	4x4.5	146.0
RER 220 TD (P)	<b>LZ 1000-220</b>	09609-2-4013	2	252.0	155.0	21.0	0.80	21.8	242.0	6x5.5	119.0
RER 225 TD (P)	<b>LZ 1000-225</b>	96358-2-4013	1	223.0	146.0	28.0	1.50	25.0	210.0	4x4.5	196.0

Subject to change

(1) Fan size with key for impeller material: (P) = plastic, (S) = sheet steel, (A) = aluminum

All measurements are given in mm.



## Inlet rings for forward curved centrifugal fans

Fan size	Order number	Version	a	b	c	d	e	f	r	u	Highlights
085	09560-2-4013	1	92.0	63.4	84.0	6.0	3x4.2	0.80	6.8	—	3 drilled holes staggered by 120°
097	09563-2-4013	1	116.0	80.0	108.0	10.0	3x4.5	0.80	10.0	—	3 drilled holes staggered by 120°
108	09566-2-4013	1	129.0	87.0	118.0	13.0	4x4.5	1.00	8.0	—	
120	09569-2-4013	1	142.0	100.0	132.0	9.0	4x4.5	1.00	8.0	—	
133	09572-2-4013	1	150.0	112.0	142.0	12.0	4x4.5	1.00	10.0	—	
140 / 146	09576-2-4013	1	170.0	125.5	158.0	14.0	4x4.5	1.25	10.0	—	
160	09588-2-4013	2	185.0	130.0	175.0	17.0	4x4.5	0.75	12.0	—	

Subject to change

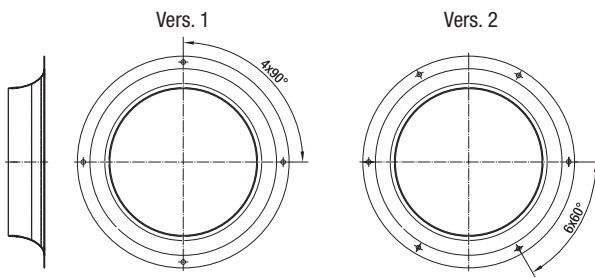
All measurements are given in mm.



# Inlet rings / air filter

For centrifugal fans

**Material:** Galvanized sheet steel

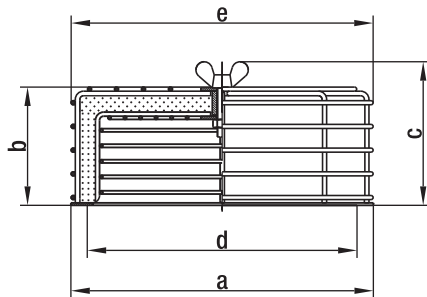


## Inlet rings without measuring device for backward curved centrifugal fans

Fan size	Order number	Version	Dimensions
190	09576-2-4013	1	See corresponding product page
220	09609-2-4013	2	See corresponding product page
225	96358-2-4013	1	See corresponding product page
250	96359-2-4013	1	See corresponding product page
280	28000-2-4013	1	See corresponding product page
310	31000-2-4013	1	See corresponding product page

Subject to change

All measurements are given in mm.



- **Material:** Steel wire or sheet steel, plastic coated in RAL no. 9005, black
- **Filter:** Viledon filter type R: PSB / 29 OS (according to DIN 24185)  
Separation capacity: < 86 %  
Efficiency: < 20 %  
Dust binding capacity: 650 g/m<sup>2</sup>

## Air filters for centrifugal blowers (with die-cast aluminum housing)

Fan size	Order number	a	b	c	d	e	Replacement filter
108 / 120	95777-1-5171	142.0	66.0	83.0	118-132	145.0	95779-1-5171
140 / 146 / 160	95778-1-5171	185.0	74.0	91.0	158-175	185.0	95780-1-5171

Subject to change

All measurements are given in mm.

# Cables

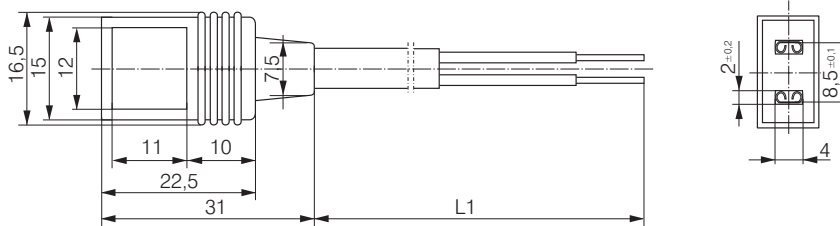
- Cable with molded plug connection in varying lengths.
- Wire end with wire end ferrules, crimped ferrules, or tin-plated.
- Straight or angled plug.
- For all fan types with flat plug 2.8 / 3.0 x 0.5.



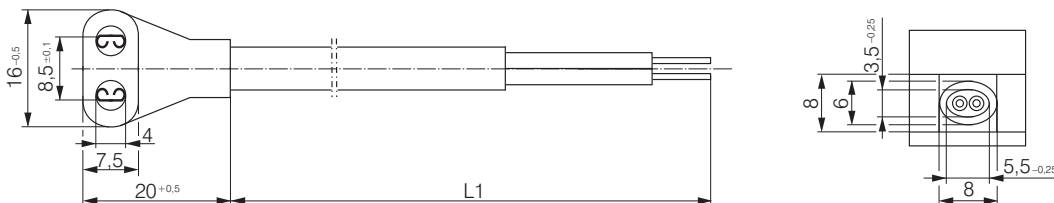
Order number	Type	L1 (mm)	Wires	Plug	Wire end	Flat push-on receptacle	Application
9920120000	<b>LZ120</b>	610	0.5 mm <sup>2</sup>	G	C	2.8 x 0.5	AC
9920120004	<b>LZ120-4</b>	2 000	0.5 mm <sup>2</sup>	G	A	2.8 x 0.5	AC
9920120005	<b>LZ120-5</b>	380	0.5 mm <sup>2</sup>	W	B	2.8 x 0.5	DC
9920120006	<b>LZ120-6</b>	610	0.5 mm <sup>2</sup>	W	B	2.8 x 0.5	DC
9920120010	<b>LZ120-10</b>	2 500	0.5 mm <sup>2</sup>	G	B	2.8 x 0.5	AC
9920120011	<b>LZ120-11</b>	2 000	0.5 mm <sup>2</sup>	G	A	2.8 x 0.5	DC
9920120013	<b>LZ120-13</b>	5 000	0.5 mm <sup>2</sup>	G	B	2.8 x 0.5	AC
9920120016	<b>LZ120-16</b>	800	0.5 mm <sup>2</sup>	G	B	2.8 x 0.5	AC
9920120017	<b>LZ120-17</b>	3 000	0.5 mm <sup>2</sup>	G	A	2.8 x 0.5	AC
9920120018	<b>LZ120-18</b>	4 000	0.5 mm <sup>2</sup>	G	A	2.8 x 0.5	AC
9920126000	<b>LZ126</b>	1 000	0.5 mm <sup>2</sup>	G	C	2.8 x 0.5	AC
9920127000	<b>LZ127</b>	1 600	0.5 mm <sup>2</sup>	G	B	2.8 x 0.5	AC
9920130001	<b>LZ130-1</b>	610	0.82 mm <sup>2</sup>	G	C	2.8 x 0.5	AC *
9920140000	<b>LZ140</b>	610	0.73 mm <sup>2</sup>	G	B	2.8 x 0.8	AC

All measurements are given in mm. \* UL-approved

**Cable** Straight plug (G)



**Cable** Angled plug (W)



**Wire end ferrules**

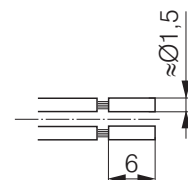
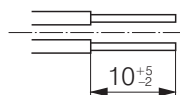
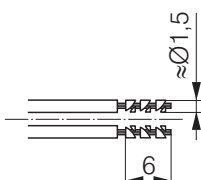
**Wire end A**

**Tin-plated**

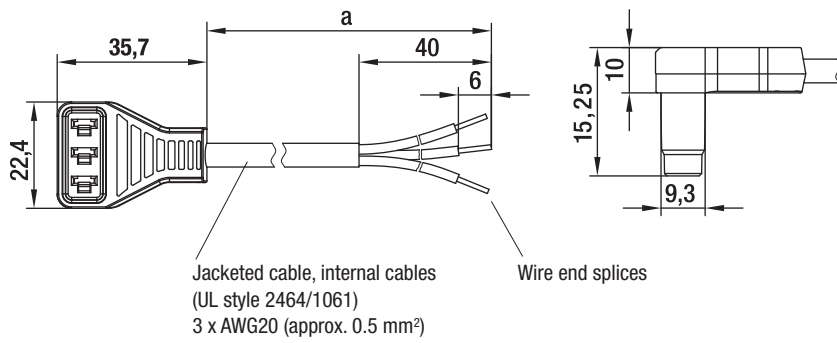
**Wire end B**

**Wire end ferrules**

**Wire end C**



# Cable (ESM) / Handheld Programmer



- **Design:** Cable conforms to UL standards sealed plug. Customized cables on request.

## Cables for energy-saving motors 115/230 VAC

Order number	a
13060-4-1040	450
13061-4-1040	1500

Subject to change



- Easy speed programming
- Battery operated
- User-friendly navigation menu
- Protective cover with folding stand

## For Energy Saving Motor (ESM) based products

Order number

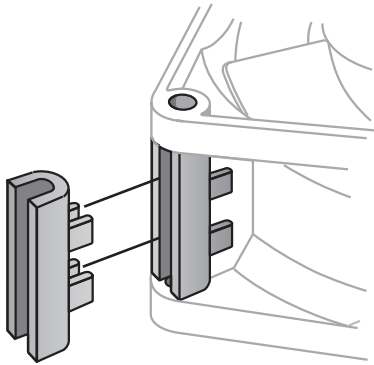
**CBC 000-AF08-01**

Subject to change

Makes quick work of programming the two ESM adjustable operating speeds. Eliminates the need for a PC, software adapter and second cable. Especially for use in production or by sales representatives. Automatic shut-off function for extended battery life. Mini USB plug for downloading software updates. Batteries, programming cable, and operating instructions included in scope of delivery.

# Accessories

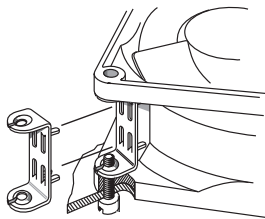
In addition to the accessories and installation parts listed here, ebm-papst also supplies a number of additional, sometimes very special parts for fans. Our company sales team is happy to offer you their expert assistance with all your questions regarding the installation and use of our fans.



Fan series	Type	Order number
4300 N	<b>LZ212</b>	9920212000
3400 N, 4400 F, 8400 N, 8450	<b>LZ261</b>	9920261000
4000, 5100, 5200, 5600, 5900, 7100, 7200, 9000	<b>LZ210</b>	9920210000
6200, 6300, 6300 N, 6400, 7100, 7200	<b>LZ215</b>	9920215000
For all temperature-controlled fans	<b>LZ370</b>	4871104201
For all fans with mounting holes of 4.3 mm	<b>LZ550</b>	6030020000
	<b>LZ551</b>	6030053002

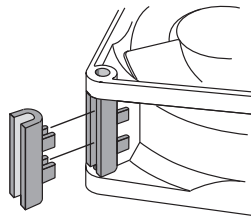
Subject to change

## LZ212



Screw clip of rustproof spring steel.  
For mounting fans with threaded pin  
3.5 DIN EN ISO 1478 (7970).

## LZ261



Spacer of fiberglass-reinforced plastic.  
For mounting with screws through both fan  
mounting flanges.

## LZ210



Screw clip of hardened steel.  
For mounting fans with threaded pin 6-32 UNC  
or 3.5 DIN 7970.

## LZ370

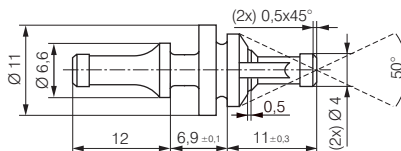


Required performance data:

$R_{25}$  = 100 K $\Omega$   $\pm$ 5% @25°C  
B-value = 4190  $\pm$ 2%  
 $P_{max}$  = 0,25 W

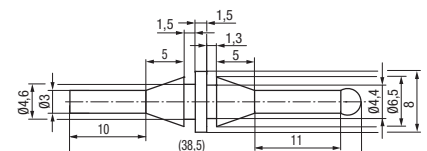
Temperature sensor for speed-controlled fan  
operation. Temperature range 30...50 °C.

## LZ550



Rubber anti-vibration mounts  
for fans with a hole diameter of 4.3  $\pm$ 0.2 mm  
and flange thickness of 3 to 5.5 mm.  
For a carrier plate with a hole diameter of  
6.5  $\pm$ 0.15 mm and plate thickness of 1 to 2 mm.

## LZ551



Rubber anti-vibration mounts  
for fans with a hole diameter of 4.3  $\pm$ 0.2 mm  
and flange thickness of 2 to 4 mm.  
For a carrier plate with a hole diameter of  
4.4  $\pm$ 0.15 mm and plate thickness of 1 to 2 mm.

# Connection diagrams EC

## E)

### Technical features (nominal voltage 24 / 48 VDC):

- Tach output
- Motor current limitation
- Soft start
- Control input 0-10 VDC / PWM
- Overvoltage detection
- Thermal overload protection for electronics
- Reverse polarity protection

Wire 1



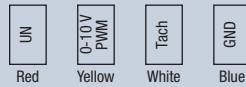
Wire	Designation	Color	Assignment/function
1	UN +24 VDC	Red	Power supply 24 VDC, supply voltage ripple $\pm$ 3.5 %
	0-10V /PWM	Yellow	Control input $R_e > 40\text{ K}$
	Tach	White	Tach output, 3 pulses per revolution, $I_{\text{sink max.}} = 10\text{ mA}$
	GND	Blue	Reference ground

# Connection diagrams EC G)

**Technical features** (nominal voltage 24 / 48 VDC):

- Tach output
- Soft start
- Control input 0-10 VDC / PWM

Wire 1



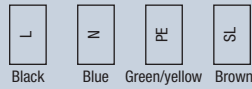
Wire	Designation	Color	Assignment/function
1	UN +24 VDC	Red	Power supply 24/48 VDC, supply voltage ripple $\pm 3.5\%$
	1-10V /PWM	Yellow	Control input $R_e > 100\text{ K}$
	Tach	White	Tach output: 2 pulses/revolution (M1G045/M1G055) 3 pulses/revolution (M1G074/M1G084)
	GND	Blue	Reference ground

# Connection diagrams EC H3)

## Technical features (M3G 055 with 2 speed stages):

- Speed setting input (230V)
- Power limitation
- Motor current limitation
- Soft start
- Thermal overload protection for electronics / motor
- Line undervoltage detection

Wire 1



Wire	Designation	Color	Assignment/function
1	L	Black	Power supply 230 VAC, 50 - 60 Hz, see type plate for voltage range
	N	Blue	Neutral conductor
	PE	Green/yellow	Ground conductor
	SL	Brown	Speed selection: switch open = speed 1; switch closed = speed 2

# Connection diagrams EC H4)

## Technical features (M3G 055 speed-controlled):

- Output 10 VDC max. 1.1 mA
- Tach output
- Power limitation
- Motor current limitation
- Soft start
- Control input 0-10 VDC / PWM
- Control interface with SELV potential safely disconnected from the mains
- Overvoltage detection
- Thermal overload protection for electronics / motor
- Line undervoltage detection



Wire	Designation	Color	Assignment/function
1	L	Black	Power supply 115/230 VAC, 50 - 60 Hz, see type plate for voltage range
	N	Blue	Neutral conductor
	PE	Green/yellow	Ground conductor
2	GND	Blue	GND - Connection for control interface
	0-10 V PWM	Yellow	Control input 0-10 V or PWM, electrically isolated
	10 V/max. 1,1 mA	Red	Voltage output +10 V / 1.1 mA, electrically isolated, not short-circuit-proof
	Tach	White	Tach output: Open collector, 1 pulse per revolution, electrically isolated

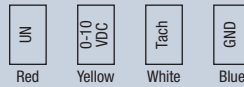


# Connection diagrams EC J5)

## Technical features (nominal voltage 24 / 48 VDC):

- Control input 0-10 VDC / PWM
- Output 10 VDC max. 1.1 mA
- Power limitation
- Soft start
- Motor current limitation
- Tach output
- Thermal overload protection for electronics / motor
- Overvoltage detection
- Line undervoltage detection
- Control interface with SELV potential safely disconnected from the mains

Wire 1



Wire	Designation	Color	Assignment/function
1	UN +24/48 VDC	Red	Power supply 24/48 VDC, supply voltage ripple $\pm 3.5\%$
	0-10 VDC	Yellow	Control input $R_e > 100\text{ K}$
	Tach	White	Tach output, 3 pulses per revolution, $I_{\text{sink max.}} = 10\text{ mA}$
	GND	Blue	Reference ground

# Connection diagrams EC

## Q)

### Technical features:

- Tach output
- Motor current limitation
- Soft start
- Control input 0-10 VDC / PWM
- Overvoltage detection
- Thermal overload protection for electronics
- Reverse polarity protection

Wire 1



Wire	Designation	Color	Assignment/function
1	UN +12/24 VDC	Red	Power supply 12/24 VDC, supply voltage ripple $\pm 3.5\%$
	PWM/LIN	Yellow	Control input $R_e > 40\text{ K}$
	Tach	White	Tach output, 3 pulses per revolution, $I_{\text{sink max.}} = 10\text{ mA}$
	GND	Blue	Reference ground

# Connection diagrams EC R)

## Technical features:

- Tach output
- Motor current limitation
- Soft start
- Control input 0-10 VDC / PWM
- Overvoltage detection
- Thermal overload protection for electronics
- Reverse polarity protection

Wire 1



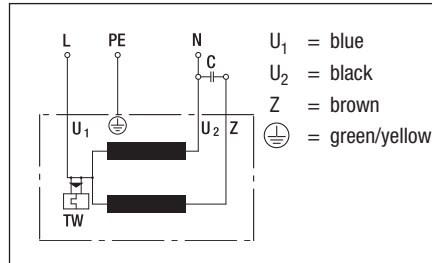
Wire	Designation	Color	Assignment/function
1	UN +48 VDC	Red	Power supply 48 VDC, supply voltage ripple $\pm$ 3.5 %
	0-10V /PWM	Yellow	Control input $R_e > 100\text{ K}$
	Tach	White	Tach output, 3 pulses per revolution, $I_{\text{sink max.}} = 10\text{ mA}$
	GND	Blue	Reference ground

# Connection diagrams AC

## A1) / A3) / C2)

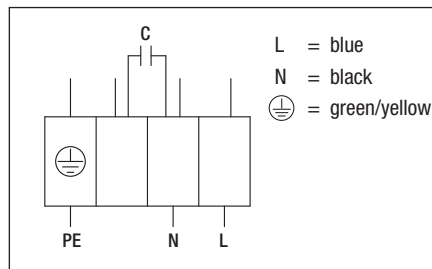
### A1) Single-phase capacitor motor (1~ 115/230 VAC power line)

with thermal overload protector wired internally



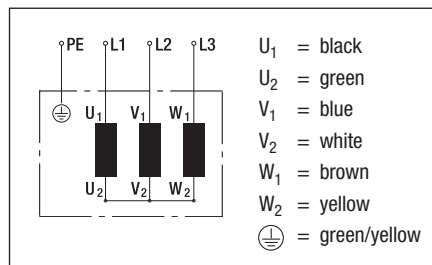
### A3) Single-phase capacitor motor (1~ 115/230 VAC power line)

with thermal overload protector wired internally



### C2) Star connection (3~ 400 VAC power line)

without thermal overload protector



# Connection diagrams AC J7)

**J7) Energy-saving motor (ESM) (1~ 115/230 VAC power line)**

