



# A22

Mouldings in flexible  
PVC





Flexible PVC has long been known as one of the most economical and useful thermoplastic materials, particularly within the electrical industry. Injection moulded parts in PVC always yield a good surface finish and are dimensionally inert, particularly if the moulding is carried out by an experienced company.

For decades, SES-STERLING has gained this experience by manufacturing extruded and moulded parts in flexible PVC under the PLIO trademark.

Modern, up to date and sophisticated injection moulding machines ensure a very high production rate with consequent economic manufacturing costs. STERLING has its own design and toolmaking shop which also maintains and repairs tooling.

PLIO PVC has following properties:

- resistance against heat: + 90°C for short time, +70/75°C for long duration.
- resistance against cold: -25 to -30°C
- resistant to : water, ozone, UV, diluted acids, alkaline solutions and salts.
- very good resistance to ageing.
- average resistance to ketones, mineral oils, petrol, and esters.
- very good dielectric properties.
- wide range of colours.
- transparent or translucent mouldings are possible.

To complete its product range, SES-STERLING has other qualities (PP, PE, PA).

# PLIO standard grommets DK in flexible black PVC 9542



PLIO®




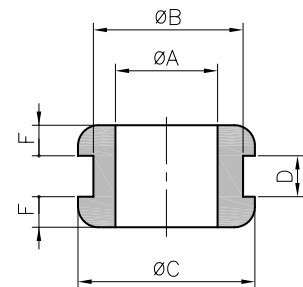
## DK-DKF-DR-DKP PVC

**Material:** flexible PVC  
**Colour:** black  
**Operating temperatures:** -30 to +70°C  
**Hardness Shore A:** 55 ± 5  
**Tensile strength at break:** 8 MPa  
**Ultimate elongation:** > 250 %  
**Dielectric strength:** > 20 kV/mm  
**Specification:** HB UL94



### • Series DK, perforated

type	article number	dimensions (mm)					F	
		A	B	C	D	F		
DK-PVC 2/5/8-1	0107 0001 010	2	5	8	1	1,5	100	
DK-PVC 2/5/8-1,5	0107 0002 010	2	5	8	1,5	1,5	100	
DK-PVC 2/5/8-2	0107 0003 010	2	5	8	2	1,5	100	
DK-PVC 3/5/8-1	0107 0004 010	3	5	8	1	1,5	100	
DK-PVC 3/5/8-1,5	0107 0005 010	3	5	8	1,5	1,5	100	
DK-PVC 3/5/8-2	0107 0006 010	3	5	8	2	1,5	100	
DK-PVC 4/6/11-4	0107 0100 010	4	6	11	4	2	100	
DK-PVC 4/8/11-1	0107 0007 010	4	8	11	1	2	100	
DK-PVC 4/8/11-1,5	0107 0008 010	4	8	11	1,5	2	100	
DK-PVC 4/8/11-2	0107 0009 010	4	8	11	2	2	100	
DK-PVC 4,8/8/12-1,5	0107 0123 010	4,8	8	12	1,5	2	100	
DK-PVC 5/7/11-3	0107 0110 010	5	7	11	3	2	100	
DK-PVC 5/8/11-1	0107 0010 010	5	8	11	1	2	100	
DK-PVC 5/8/11-1,5	0107 0011 010	5	8	11	1,5	2	100	
DK-PVC 5/8/11-2	0107 0012 010	5	8	11	2	2	100	
DK-PVC 5,5/8/12-1,5	0107 0013 010	5,5	8	12	1,5	2	100	
DK-PVC 5,5/9/12-1	0107 0014 010	5,5	9	12	1	2	100	
DK-PVC 5,5/9/12-1,5	0107 0015 010	5,5	9	12	1,5	2	100	
DK-PVC 5,5/9/12-2	0107 0016 010	5,5	9	12	2	2	100	
DK-PVC 5,5/9/12-3	0107 0017 010	5,5	9	12	3	2	100	
DK-PVC 6/8/12-1,5	0107 0069 010	6	8	12	1,5	2	100	
DK-PVC 6/9/12-1	0107 0018 010	6	9	12	1	2	100	
DK-PVC 6/9/12-1,5	0107 0019 010	6	9	12	1,5	2	100	
DK-PVC 6/9/12-2	0107 0020 010	6	9	12	2	2	100	
DK-PVC 6/9/12-3	0107 0021 010	6	9	12	3	2	100	
DK-PVC 6/9/12-4	0107 0090 010	6	9	12	4	2	100	
DK-PVC 6/9/12-5	0107 0091 010	6	9	12	5	2	100	
DK-PVC 6/9/12-6	0107 0092 010	6	9	12	6	2	100	
DK-PVC 6/9/12-7	0107 0093 010	6	9	12	7	2	100	
DK-PVC 6/9/12-8	0107 0094 010	6	9	12	8	2	100	
DK-PVC 6/9/12-9	0107 0095 010	6	9	12	9	2	100	
DK-PVC 6/12/18-2	0107 0087 010	6	12	18	2	2,5	100	
DK-PVC 6/13/18-7	0107 0070 010	6	13	18	7	2,5	100	
DK-PVC 6/14/18-1	0107 0071 010	6	14	18	1	2,5	100	
DK-PVC 7/10/14-1	0132 0090 010	7	10	14	1	2,5	100	
DK-PVC 7/10/14-1,5	0132 0091 010	7	10	14	1,5	2,5	100	
DK-PVC 7/10/14-2	0132 0092 010	7	10	14	2	2,5	100	
DK-PVC 7/10/14-3	0132 0093 010	7	10	14	3	2,5	100	
DK-PVC 7/12/16-1	0107 0088 010	7	12	16	1	2,5	100	




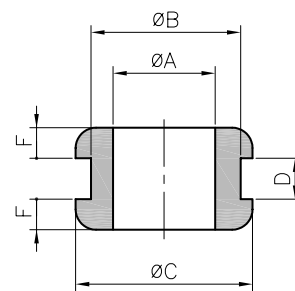
# PLIO standard grommets DK in flexible black PVC 9542



PLIO®

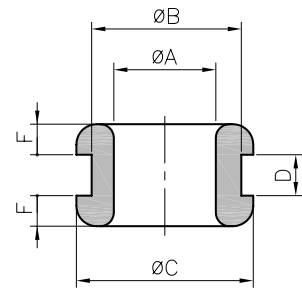


type	article number	dimensions (mm)					
		A	B	C	D	F	
DK-PVC 7/14/18-1	0107 0022 010	7	14	18	1	2,5	100
DK-PVC 7/14/18-2	0107 0023 010	7	14	18	2	2,5	100
DK-PVC 7/14/18-3	0107 0024 010	7	14	18	3	2,5	100
DK-PVC 8/10/14-1	0132 0094 010	8	10	14	1	2,5	100
DK-PVC 8/10/14-1,5	0132 0095 010	8	10	14	1,5	2,5	100
DK-PVC 8/10/14-2	0132 0096 010	8	10	14	2	2,5	100
DK-PVC 8/10/14-3	0132 0097 010	8	10	14	3	2,5	100
DK-PVC 8/12/16-1	0132 0098 010	8	12	16	1	2,5	100
DK-PVC 8/12/16-1,5	0132 0099 010	8	12	16	1,5	2,5	100
DK-PVC 8/12/16-2	0132 0100 010	8	12	16	2	2,5	100
DK-PVC 8/12/16-3	0132 0101 010	8	12	16	3	2,5	100
DK-PVC 8/14/18-1	0107 0025 010	8	14	18	1	2,5	100
DK-PVC 8/14/18-2	0107 0026 010	8	14	18	2	2,5	100
DK-PVC 8/14/18-3	0107 0027 010	8	14	18	3	2,5	100
DK-PVC 9/12/16-1	0132 0102 010	9	12	16	1	2,5	100
DK-PVC 9/12/16-1,5	0132 0103 010	9	12	16	1,5	2,5	100
DK-PVC 9/12/16-2	0132 0104 010	9	12	16	2	2,5	100
DK-PVC 9/12/16-3	0132 0105 010	9	12	16	3	2,5	100
DK-PVC 9/14/18-1	0107 0028 010	9	14	18	1	2,5	100
DK-PVC 9/14/18-2	0107 0029 010	9	14	18	2	2,5	100
DK-PVC 9/14/18-3	0107 0030 010	9	14	18	3	2,5	100
DK-PVC 10/12/16-1	0132 0106 010	10	12	16	1	2,5	100
DK-PVC 10/12/16-1,5	0132 0107 010	10	12	16	1,5	2,5	100
DK-PVC 10/12/16-2	0132 0108 010	10	12	16	2	2,5	100
DK-PVC 10/12/16-3	0132 0109 010	10	12	16	3	2,5	100
DK-PVC 10/18/22-1	0107 0031 010	10	18	22	1	2,5	100
DK-PVC 10/18/22-2	0107 0032 010	10	18	22	2	2,5	100
DK-PVC 10/18/22-3	0107 0033 010	10	18	22	3	2,5	100
DK-PVC 10/18/22-4	0107 0034 010	10	18	22	4	2,5	100
DK-PVC 11/18/22-1	0107 0035 010	11	18	22	1	2,5	100
DK-PVC 11/18/22-2	0107 0036 010	11	18	22	2	2,5	100
DK-PVC 11/18/22-3	0107 0037 010	11	18	22	3	2,5	100
DK-PVC 11/18/22-4	0107 0038 010	11	18	22	4	2,5	100
DK-PVC 12/18/22-1	0107 0039 010	12	18	22	1	2,5	100
DK-PVC 12/18/22-2	0107 0040 010	12	18	22	2	2,5	100
DK-PVC 12/18/22-3	0107 0041 010	12	18	22	3	2,5	100
DK-PVC 12/18/22-4	0107 0042 010	12	18	22	4	2,5	100
DK-PVC 14/22/27-1	0107 0043 010	14	22	27	1	3	100
DK-PVC 14/22/27-1,5	0107 0072 010	14	22	27	1,5	3	100
DK-PVC 14/22/27-2	0107 0044 010	14	22	27	2	3	100
DK-PVC 14/22/27-3	0107 0045 010	14	22	27	3	3	100
DK-PVC 14/22/27-4	0107 0046 010	14	22	27	4	3	100
DK-PVC 16/22/27-1	0107 0047 010	16	22	27	1	3	100
DK-PVC 16/22/27-1,5	0107 0073 010	16	22	27	1,5	3	100
DK-PVC 16/22/27-2	0107 0048 010	16	22	27	2	3	100
DK-PVC 16/22/27-3	0107 0049 010	16	22	27	3	3	100
DK-PVC 16/22/27-4	0107 0050 010	16	22	27	4	3	100
DK-PVC 18/22/27-1	0107 0051 010	18	22	27	1	3	100
DK-PVC 18/22/27-1,5	0107 0074 010	18	22	27	1,5	3	100
DK-PVC 18/22/27-2	0107 0052 010	18	22	27	2	3	100
DK-PVC 18/22/27-3	0107 0053 010	18	22	27	3	3	100
DK-PVC 18/22/27-4	0107 0054 010	18	22	27	4	3	100



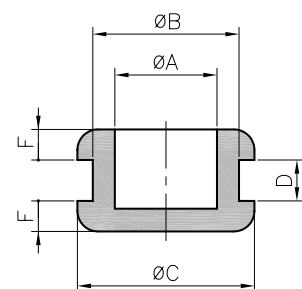
**• Grommets DR-PVC radiused edges**

type	article number	dimensions (mm)					100
		A	B	C	D	F	
DR-PVC 4/7/10-1	0132 0010 010	4	7	10	1	1,5	100
DR-PVC 4/7/10-1,5	0132 0011 010	4	7	10	1,5	1,5	100
DR-PVC 4/7/10-2	0132 0012 010	4	7	10	2	1,5	100
DR-PVC 5/8/11-1	0132 0013 010	5	8	11	1	1,5	100
DR-PVC 5/8/11-1,5	0132 0014 010	5	8	11	1,5	1,5	100
DR-PVC 5/8/11-2	0132 0015 010	5	8	11	2	1,5	100
DR-PVC 6/10/14-1	0132 0016 010	6	10	14	1	2	100
DR-PVC 6/10/14-1,5	0132 0017 010	6	10	14	1,5	2	100
DR-PVC 6/10/14-2	0132 0018 010	6	10	14	2	2	100
DR-PVC 6/10/14-3	0132 0019 010	6	10	14	3	2	100
DR-PVC 8/12/16-1	0132 0020 010	8	12	16	1	2	100
DR-PVC 8/12/16-1,5	0132 0021 010	8	12	16	1,5	2	100
DR-PVC 8/12/16-2	0132 0022 010	8	12	16	2	2	100
DR-PVC 8/12/16-3	0132 0023 010	8	12	16	3	2	100
DR-PVC 10/14/18-1	0132 0024 010	10	14	18	1	2	100
DR-PVC 10/14/18-1,5	0132 0025 010	10	14	18	1,5	2	100
DR-PVC 10/14/18-2	0132 0026 010	10	14	18	2	2	100
DR-PVC 10/14/18-3	0132 0027 010	10	14	18	3	2	100



**• Grommets DKF-PVC blind (with membrane to perforate)**

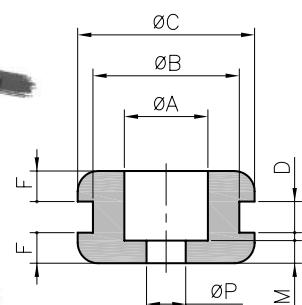
type	article number	dimensions (mm)					100
		A	B	C	D	F	
DKF-PVC 5/7/11-3	0107 0109 010	5	7	11	3	2	100
DKF-PVC 5,5/9/12-3	0107 0075 010	5,5	9	12	3	2	100
DKF-PVC 6/9/12-3	0107 0076 010	6	9	12	3	2	100
DKF-PVC 6/14/18-1	0107 0077 010	6	14	18	1	2,5	100
DKF-PVC 7/14/18-3	0107 0078 010	7	14	18	3	2,5	100
DKF-PVC 8/14/18-3	0107 0079 010	8	14	18	3	2,5	100
DKF-PVC 9/12/16-2	0107 0099 010	9	12	16	2	2,5	100
DKF-PVC 9/14/18-3	0107 0080 010	9	14	18	3	2,5	100
DKF-PVC 10/18/22-3	0107 0081 010	10	18	22	3	2,5	100
DKF-PVC 10/18/22-4	0107 0082 010	10	18	22	4	2,5	100
DKF-PVC 11/18/22-3	0107 0083 010	11	18	22	3	2,5	100
DKF-PVC 11/18/22-4	0107 0084 010	11	18	22	4	2,5	100
DKF-PVC 12/18/22-3	0107 0085 010	12	18	22	3	2,5	100
DKF-PVC 12/18/22-4	0107 0086 010	12	18	22	4	2,5	100



**• Grommets DKP-PVC (with perforated membrane)**

type	article number	dimensions (mm)							100
		A	B	C	D	F	M	P	
DKP-PVC 3-5/7/11-3	0107 0124 010	5	7	11	3	2,5	0,7	3	100
DKP-PVC 3-7/14/18-3	0107 0055 010	7	14	18	3	2,5	2,5	3	100
DKP-PVC 6,5-8/12/16-2	0107 0089 010	8	12	16	2	2,5	1	6,5	100
DKP-PVC 3,1-9/14/18-3	0107 0096 010	9	14	18	3	2,5	2	3,1	100
DKP-PVC 5,5-9/14/18-3	0107 0097 010	9	14	18	3	2,5	2	5,5	100
DKP-PVC 6-10/18/22-3	0107 0102 010	10	18	22	3	2,5	2	6	100
DKP-PVC 7-10/18/22-3	0107 0122 010	10	18	22	3	2,5	2	7	100
DKP-PVC 8-10/18/22-3	0107 0101 010	10	18	22	3	2,5	2	8	100
DKP-PVC 9-10/18/22-3	0107 0103 010	10	18	22	3	2,5	2	9	100

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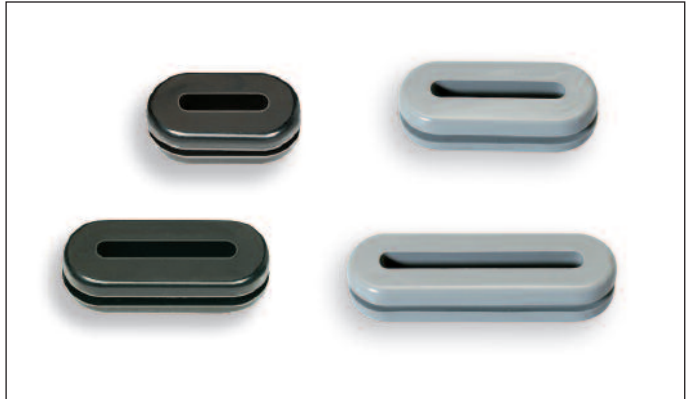
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# PLIO® DO oval grommets in flexible PVC



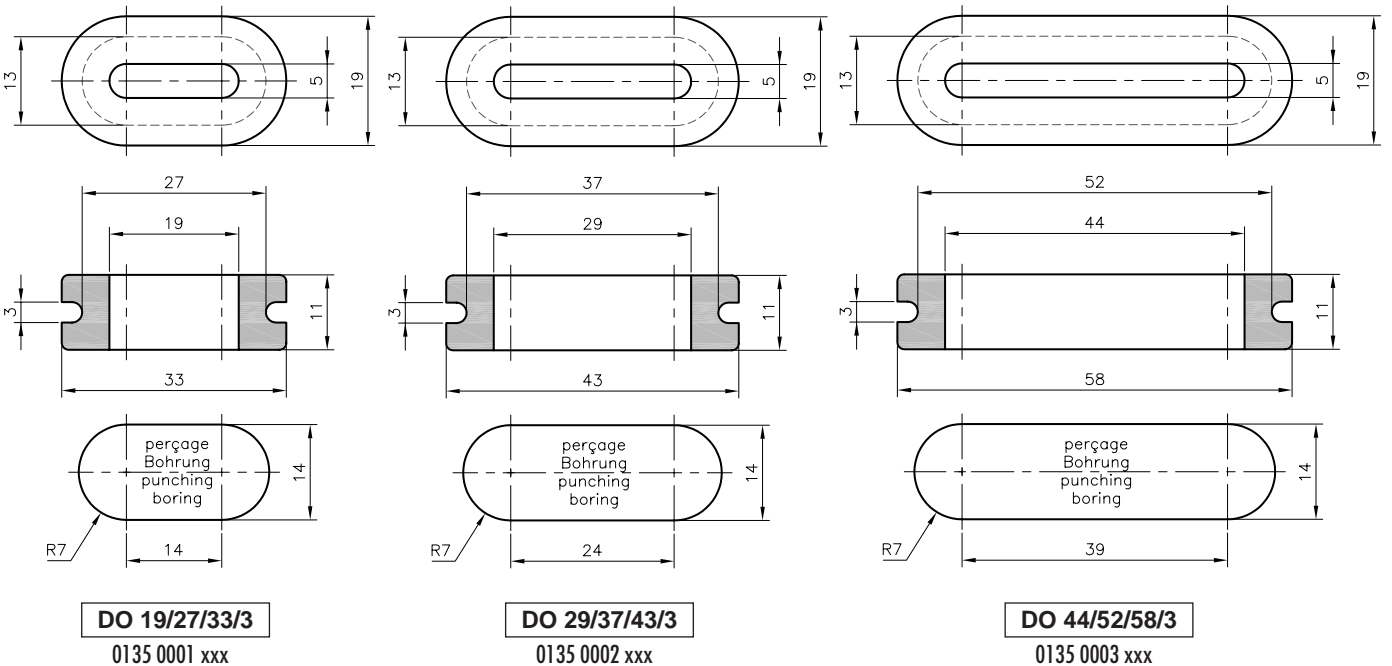
## DO-PVC

**Material:** flexible PVC  
**Colours:** black - grey  
**Operating temperatures:** -30 to +70°C  
**Hardness Shore A:** 55 ± 5  
**Tensile strength at break:** 8 MPa  
**Ultimate elongation:** > 250 %  
**Dielectric strength:** > 20 kV/mm  
**Specification:** HB UL94  
**Application:** for flat wire protection.



type	article number		
	black 010	grey 013	
DO-PVC 19/27/33/3	0135 0001 010	0135 0001 013	100
DO-PVC 29/37/43/3	0135 0002 010	0135 0002 013	100
DO-PVC 44/52/58/3	0135 0003 010	0135 0003 013	100

If no colour is mentioned on the order, DO grommets will be supplied in grey.



# PLIO® membrane grommets DG in flexible PVC



PLIO®



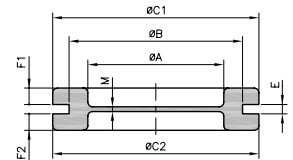
## DG-PVC

**Material:** flexible polyvinyl chloride  
**Colours:** black - light grey (RAL 7035)  
**Operating temperatures:** -30 to +70°C  
**Hardness Shore A:** 55 ± 5  
**Tensile strength at break:** 8 MPa  
**Ultimate elongation:** > 250 %  
**Dielectric strength:** > 20 kV/mm  
**Specification:** HB UL94  
**Application:** closure of unused entries.  
 They allow the passage of cables or conduits through the membrane by ensuring a dust free fit.



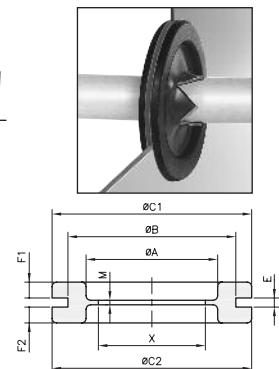
## • Membrane grommets

type	article number		dimensions (mm)									M	100
	black	grey	A	B	C1	C2	D	F1	F2	M			
DG-PVC 9	0133 0351 010	0133 0351 025	9	15	20	18	2	2,5	2,5	1	100		
DG-PVC 11	0133 0352 010	0133 0352 025	11	18	22,5	21,5	2	2,5	2,5	1	100		
DG-PVC 13,5	0133 0353 010	0133 0353 025	13,5	20	24	24	2	2,5	2,5	1	100		
DG-PVC 16	0133 0354 010	0133 0354 025	16	22	27,5	26	2	2,7	2,7	1	100		
DG-PVC 16/E3	0133 0360 010	-	16	22	27,5	26	3	2,7	2,7	2	100		
DG-PVC 21	0133 0355 010	0133 0355 025	21	28	34,5	34,5	2	3	3	1	100		
DG-PVC 21/E1	0133 0359 010	-	21	28	34,5	34,5	1	4	3	1,2	100		
DG-PVC 29	0133 0356 010	-	29	36,5	43	43	2,2	3,7	3,7	1,5	50		
DG-PVC 36	0133 0357 010	-	35	46	52,5	52,5	2,5	3,8	3,8	1,3	50		
DG-PVC 48	0133 0358 010	-	46,5	59	66,2	66,2	2,5	4	4	1,6	50		
DG-PVC M20	0133 0510 010	0133 0510 025	13,5	20	24	24	2	2,5	2,5	1	100		
DG-PVC M25	0133 0511 010	0133 0511 025	21	25	34,5	34,5	2	3	3	1	100		
DG-PVC M32	0133 0512 010	0133 0512 025	29	32	43	43	2	3,5	3,5	1,5	100		




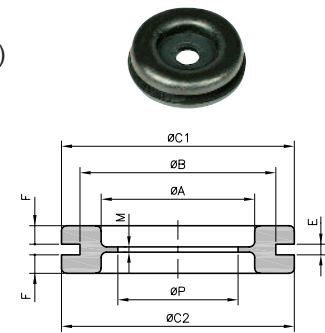
## • Cross-cut membrane grommets (other cut-outs possible upon request)

type	article number	dimensions (mm)									M	100
		A	B	C1	C2	D	F1	F2	X	M		
DGC-PVC 9	0133 0451 010	9	15	20	18	2	2,5	2,5	8	1	100	
DGC-PVC 11	0133 0452 010	11	18	22,5	21,5	2	2,5	2,5	10	1	100	
DGC-PVC 13,5	0133 0453 010	13,5	20	24	24	2	2,5	2,5	10	1	100	
DGC-PVC 16	0133 0454 010	16	22	27,5	26	2	2,7	2,7	14	1	100	
DGC-PVC 21	0133 0455 010	21	28	34,5	34,5	2	3	3	17	1	100	
DGC-PVC 21/E1	0133 0456 010	21	28	34,5	34,5	1	4	3	19,5	1,2	100	
DGC-PVC 29	0133 0457 010	29	36,5	43	43	2,2	3,7	3,7	25	1,5	50	
DGC-PVC 36	0133 0458 010	35	46	52,5	52,5	2,5	3,8	3,8	32	1,3	50	
DGC-PVC 48	0133 0464 010	46,5	59	66,2	66,2	2,5	4	4	42	1,6	50	




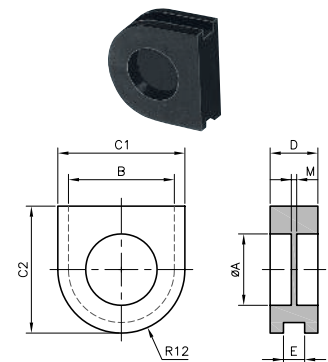
• **Grommets with perforated membrane** (other cut-outs possible upon request)

type	article number	dimensions (mm)									
		A	B	C1	C2	E	F	M	P		
<b>DG-PVC 11/4,5</b>	0133 0402 010	11	18	22,5	21,5	2	2,5	1	4,5	100	
<b>DG-PVC 16/7 E3</b>	0133 0412 010	16	22	27,5	26	3	2,7	2	7	100	




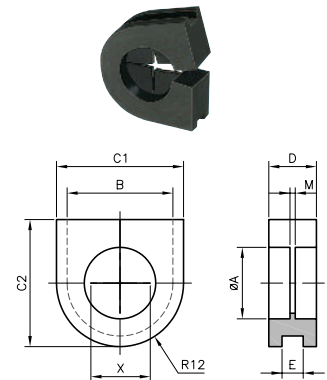
• **Special membrane grommets**

type	article number	dimensions (mm)							
		A	B	C1	C2	D	F	M	
<b>DG-PVC 14-747</b>	0133 0101 010	13,5	20	24	24	9	4	1	100
<b>DG-PVC 14-1475</b>	0133 0102 010	13,5	20	24	24	9	2	1	100



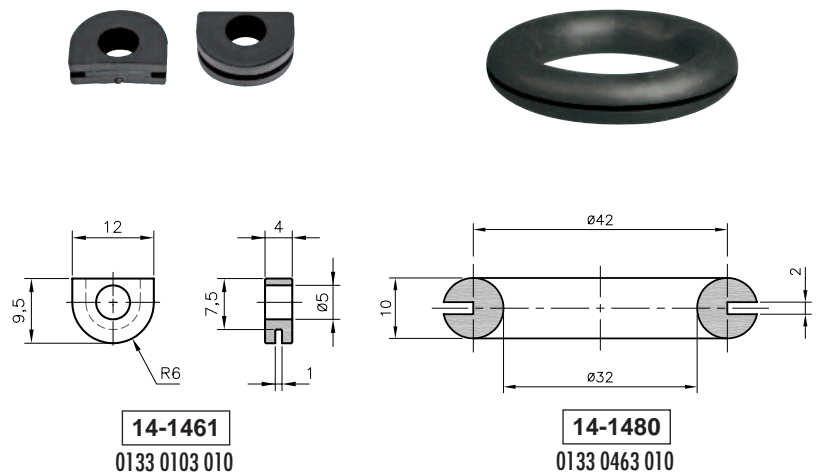
• **Cross-cut membrane grommets cut**

type	article number	dimensions (mm)									
		A	B	C1	C2	D	F	M	P		
<b>DGC-PVC 14-747/F</b>	0133 0459 010	13,5	20	24	24	9	4	1	12	100	
<b>DGC-PVC 14-1475/F</b>	0133 0460 010	13,5	20	24	24	9	2	1	12	100	



• **Special grommets**

type	article number	
<b>14-1461 PVC</b>	0133 0103 010	100
<b>14-1480 PVC</b>	0133 0463 010	50





## DG-MS

**Materials:** polypropylene  
thermoplastic elastomer (TPE)

**Colour:** light grey (RAL 7035)

**Operating temperatures:** -30 to +80°C

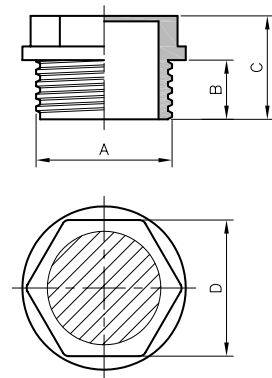
**Protection rating:** IP 66 according to EN 60 529

**Application:** hexagonal membrane grommet with screw thread that allows single cables, flat cables or several cables of small diameters to pass through it.



Delivered without lock-nut.

type	artide number	cable max. (mm)	A mm	B mm	C mm	D mm	boring mm	pcs
DG-MS 16	0133 0601 025	9	M16 x 1,5	9	15	17	16,5	100
DG-MS 20	0133 0602 025	13	M20 x 1,5	9	15	20	20,5	100
DG-MS 25	0133 0603 025	18	M25 x 1,5	9	15	24	25,5	100
DG-MS 32	0133 0604 025	25	M32 x 1,5	9	15	32	32,5	100



A8/2-03



## DG-MT

**Materials:** polyethylene  
thermoplastic elastomer (TPE)

**Colour:** light grey (RAL 7035)

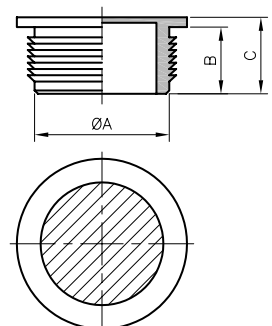
**Operating temperatures:** -40 to +80°C

**Protection rating:** IP 66 according to EN 60 529

**Application:** round membrane grommet in TPE to clip in that allows single cables, flat cables or several cables of small diameters to pass through it.



type	artide number	cable max. (mm)	A mm	B mm	C mm	boring mm	pcs
DG-MT 16	0133 0611 025	9	16	9,5	11	16,5	100
DG-MT 20	0133 0612 025	13	20	9,5	11	20,5	100
DG-MT 25	0133 0613 025	18	25	9,5	11	25,5	100
DG-MT 32	0133 0614 025	25	32	9,5	11	32,5	100



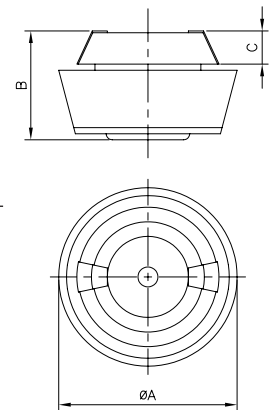
**PLIOFIX**

**Material:** TPE and Polyamide 6.6  
**Colours:** black  
 grey (RAL 7035)  
**Operating temperatures:** -20 to +125°C  
**Protection rating:** IP 65 / IP 67

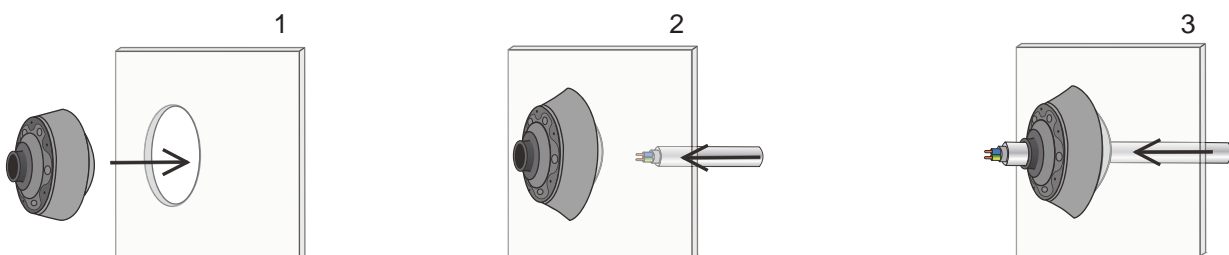
**Application:** they allow the passage of cables or conduits through their membranes allowing a dust free fit. They combine the advantages of grommets and a gland. They are in particular compact parts offering ease of use and speedy assembly.



type	article number		cable- mm		hole- mm	metal thickness mm	A mm	B mm	C mm	 pcs
	black 010	grey 025	IP 65	IP 67						
<b>PLIOFIX M20</b>	0144 0603 010	0144 0603 025	4-11	7-11	20,5	2-5	29,3-34,5	17-20	5,7	50
<b>PLIOFIX M25</b>	0144 0604 010	0144 0604 025	4-13	7-13	25,5	2-5	34,3-40	17-20	5,7	50



**Instructions**





**PLIOCAP**

<b>Materials:</b>	PE	PP	PA6.6
<b>Temperatures (°C):</b>	-50 to +85	-40 to +85	-40 to +110
<b>Self-extinguishing:</b>	-	-	V2 UL94
<b>Dielectric strength (kV/mm):</b>	>16	>20	26
<b>Colours:</b>	black - grey		

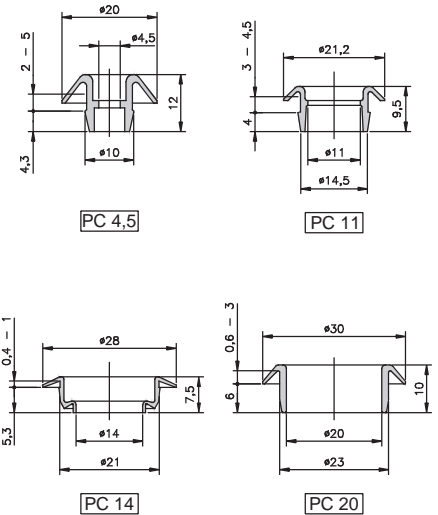
**Application:** The grommets change angular holes into fully isolated clean and smooth openings. They isolate and protect electric cables passing through a wall. The general version (PC -U) allows cables from Ø 2,6 to 25,2 mm passing through it.

The caps (PC -F) designed to close off unused entries. Simple, fast and safe use.



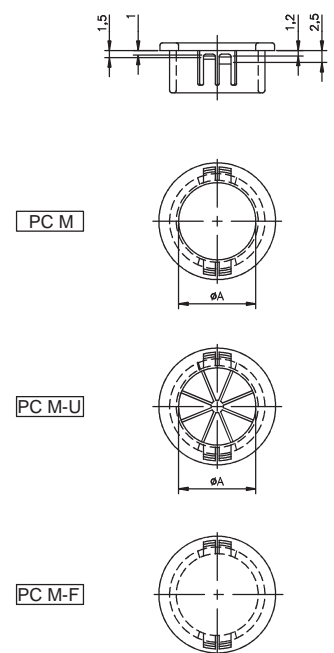
**• Grommets (difficult to remove)**

type	article number		quality		dimensions (mm)			quantity
	black 010	grey 013	PE	PP	punching	cable	wall width	
PC 4,5	0143 0004 010	0143 0004 013	X		10	4,5	2 - 5	500
PC 11	0143 0002 010	0143 0002 013	X		14,5	11	3 - 4,5	500
PC 14	0143 0001 010	0143 0001 013		X	21	14	0,4 - 1	500
PC 20	0143 0003 010	0143 0003 013		X	23	20	0,6 - 3	100



**• Grommets (easy removal) - Quality PA 6.6**

type	article number		punching	dimensions (mm)		wall width	quantity
	black 010	grey 013		A			
<b>Standard grommets</b>							
PC M16	0143 0010 010	0143 0010 013	16	12,2		1 - 2,5	100
PC M20	0143 0012 010	0143 0012 013	20	16,2		1 - 2,5	100
PC M25	0143 0014 010	0143 0014 013	25	20,2		1 - 2,5	50
PC M32	0143 0016 010	0143 0016 013	32	25,2		1 - 2,5	50
<b>Universal grommets</b>							
PC M16-U	0143 0018 010	0143 0018 013	16	12,2		1 - 2,5	100
PC M20-U	0143 0019 010	0143 0019 013	20	16,2		1 - 2,5	100
PC M25-U	0143 0020 010	0143 0020 013	25	20,2		1 - 2,5	50
PC M32-U	0143 0021 010	0143 0021 013	32	25,2		1 - 2,5	50
<b>Caps</b>							
PC M16-F	0143 0011 010	0143 0011 013	16	-		1 - 2,5	100
PC M20-F	0143 0013 010	0143 0013 013	20	-		1 - 2,5	100
PC M25-F	0143 0015 010	0143 0015 013	25	-		1 - 2,5	50
PC M32-F	0143 0017 010	0143 0017 013	32	-		1 - 2,5	50

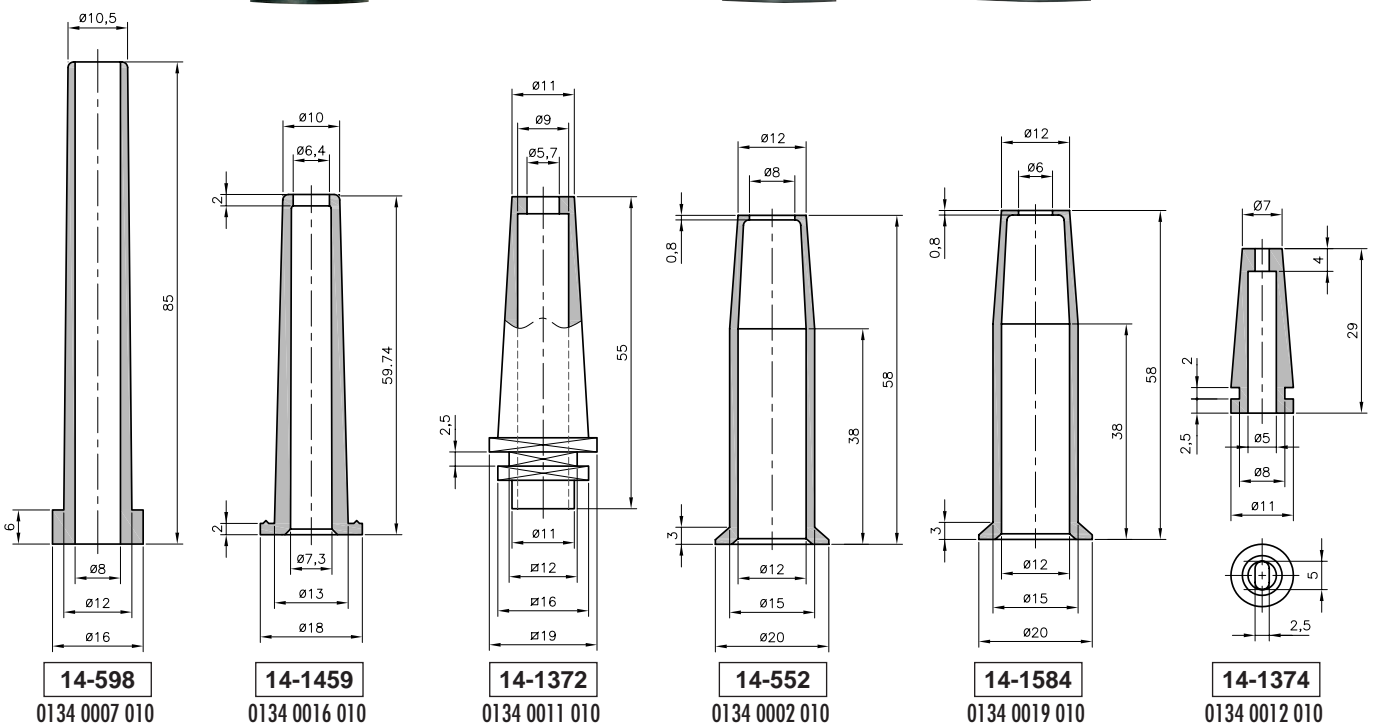
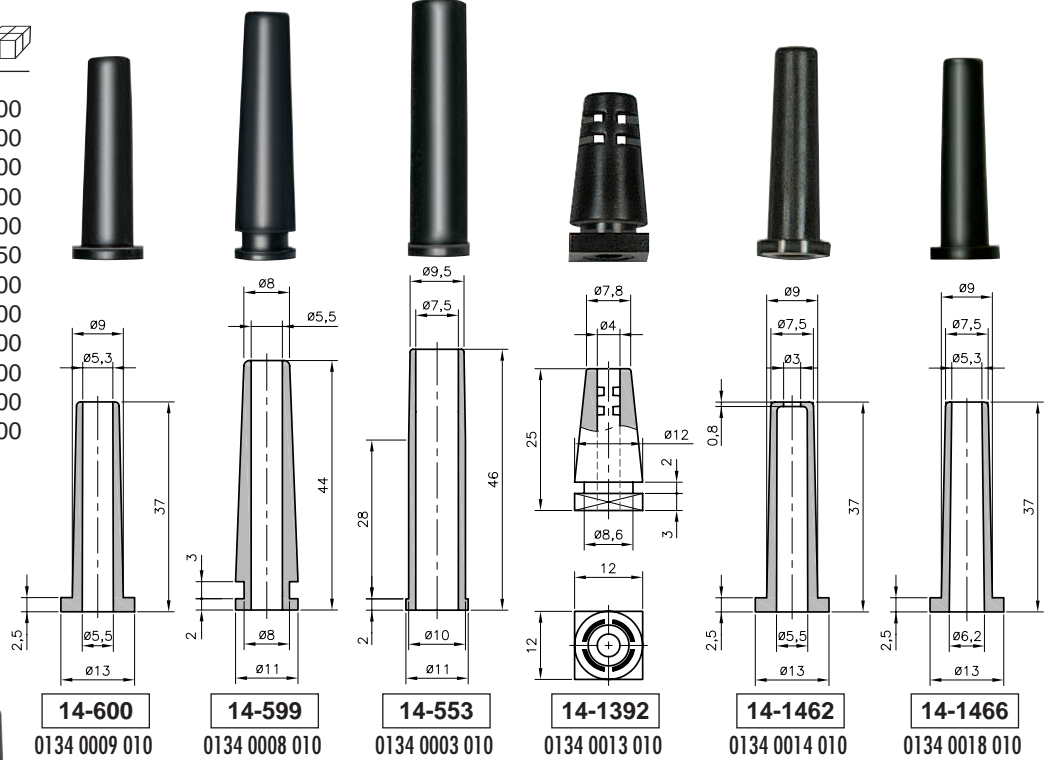


# PLIO® strain relief grommets in flexible PVC



PLIO®  
-30 to +70°C  
RoHS

type	article number	
14-552 PVC	0134 0002 010	100
14-553 PVC	0134 0003 010	100
14-598 PVC	0134 0007 010	100
14-599 PVC	0134 0008 010	100
14-600 PVC	0134 0009 010	100
14-1372 PVC	0134 0011 010	50
14-1374 PVC	0134 0012 010	100
14-1392 PVC	0134 0013 010	100
14-1459 PVC	0134 0016 010	100
14-1462 PVC	0134 0014 010	100
14-1466 PVC	0134 0018 010	100
14-1584 PVC	0134 0019 010	100



# PLIO® strain relief bushes in flexible PVC



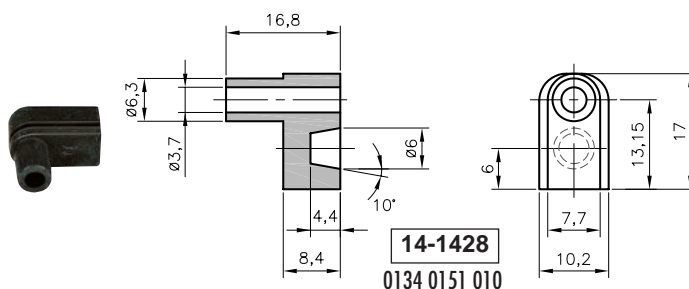
PLIO®  
-30 to +70°C



type	article number	
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### Protective strain relief bushes PLIO in PVC

14-542 PVC	0134 0001 010	100
14-581 PVC	0134 0004 010	100
14-582 PVC	0134 0005 010	100
14-583 PVC	0134 0006 010	100
14-908 PVC	0134 0010 010	100



**14-1428**  
0134 0151 010

### Metal clamp for bushes

14-542, 14-582, 14-583, 14-908

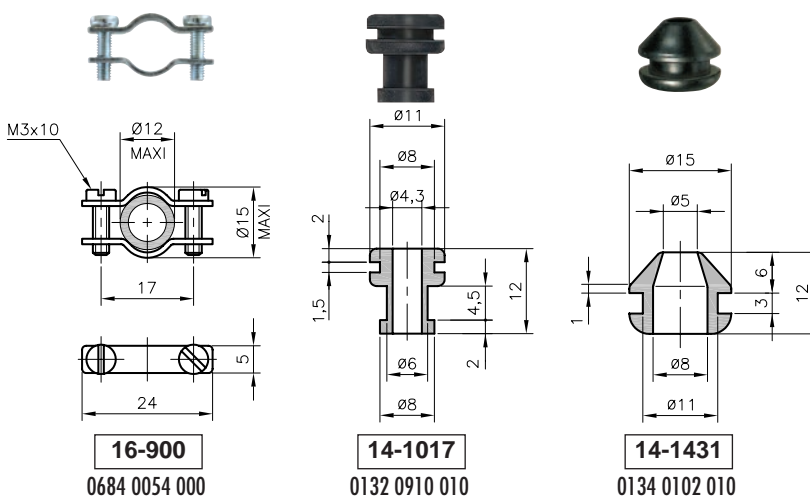
16-900	0684 0054 000	100
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### Special strain relief bushes PLIO

14-1431 PVC	0134 0102 010	100
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### Strain relief bushes PLIO

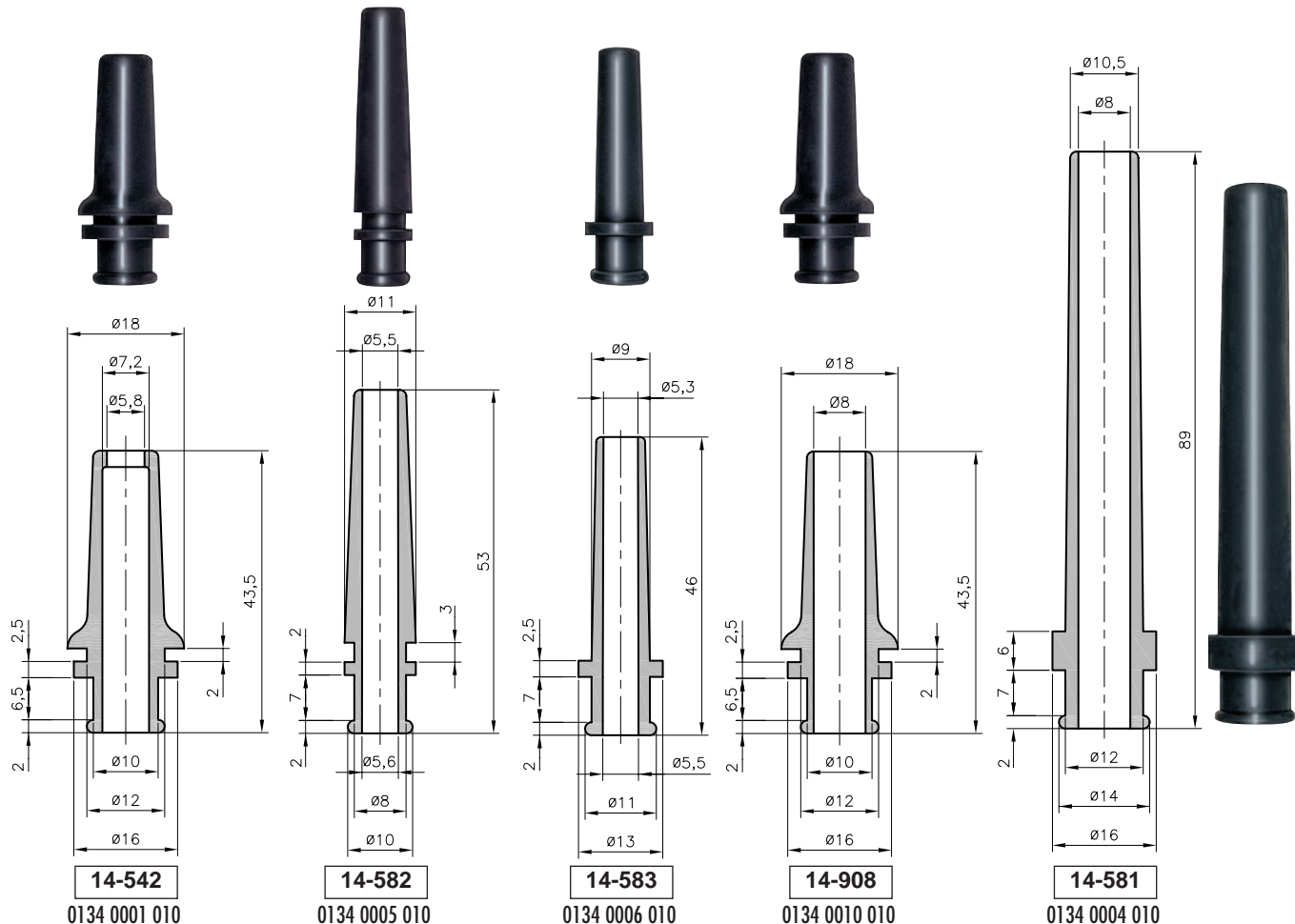
14-1017 PVC	0132 0910 010	100
14-1428 PVC	0134 0151 010	100



**16-900**  
0684 0054 000

**14-1017**  
0132 0910 010

**14-1431**  
0134 0102 010



**14-542**  
0134 0001 010

**14-582**  
0134 0005 010

**14-583**  
0134 0006 010

**14-908**  
0134 0010 010

**14-581**  
0134 0004 010

**SES® strain relief bushes DM**  
**in Polyamide 6 black and white**  
**for torsional protection**

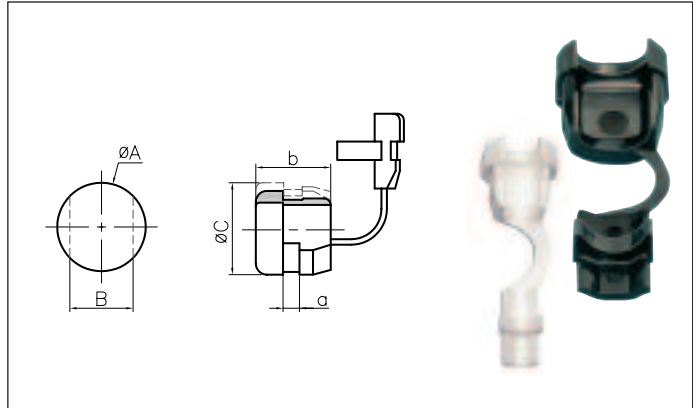


DM-SES®

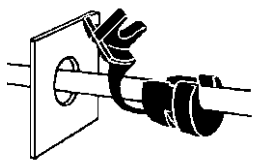


**DM-SES**

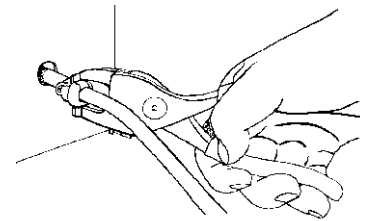
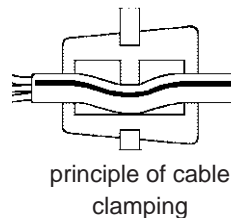
**Material:** polyamide 6  
**Colours:** black - white  
**Operating temperature:** -20 to +70°C  
**Tensile strength at break:** 80 MPa  
**Ultimate elongation:** > 50%  
**Dielectric strength:** 60 kV/mm  
**Flame resistance:** V2 UL94 (internal test)  
**Application:** for passing a cable through a wall with cable clamp.



type	art. no.		dimensions of the cables (mm)		dimensions (mm)					
	black 010	white 001	Ø PVC insulation	Ø rubber insulation	Ø A	B	bore a b		Ø C	
<b>round cables</b>										
DM 2	0131 0012 010	0131 0012 001	3 ... 4,5	3 ... 4,5	9,5	8,5	1,7	10,3	11	100
DM 2L	0131 0032 010	0131 0032 001	3 ... 4,5	3 ... 4,5	9,5	8,5	3,1	10,3	11	100
DM 4	0131 0001 010	0131 0001 001	5 ... 6,5	5 ... 7	13	11,5	2,5	12	14	100
DM 5	0131 0010 010	0131 0010 001	6,5 ... 7,5	6,5 ... 7,5	13	11,5	2,5	11	14	100
DM 6	0131 0002 010	0131 0002 001	6,6 ... 8	7,1 ... 9	16	14	3,5	17	18	100
DM 7	0131 0003 010	0131 0003 001	8,1 ... 10	9,1 ... 11	22,5	21	3,2	20	25	100
DM 8	0131 0004 010	0131 0004 001	10,1 ... 12,5	11,1 ... 14	22,5	21	3,6	22	22	100
<b>flat cables</b>										
			H x W	H x W	Ø A	B	a	b	Ø C	
DM 2P	0131 0022 010	0131 0022 001	3 x 5	3 x 5	9,5	8,5	1,7	10,3	11	100
DM 2LP	0131 0042 010	0131 0042 001	3 x 5	3 x 5	9,5	8,5	3,1	10,3	11	100
DM 4P	0131 0020 010	0131 0020 001	3 x 7,6	3,8 x 7,1	13	11,5	2,8	10,5	14	100
DM 6P	0131 0021 010	0131 0021 001	5 x 9	5 x 9	16	14	3	17	18	100



Round bore (ØA)  
 For torsional protection of strain relief grommets, an oblong bore (B) is required.



**• DM application tool**

Rack and pinion pliers with adjustable jaws to apply all types of strain relief grommets DM-SES for small or mid-sized series.

type	article number	characteristics		
		length (mm)	weight (g)	
R 29	0655 0001 000	180	270	1





**PLIO-PVC**

**Material:** PVC  
**Operating temperature:** -25 to +75°C  
**Hardness Shore A:** 70 +/- 5  
**Ultimate elongation:** 350%  
**Dielectric strength:** >20 kV/mm  
**Flame resistance:** HB UL94



Standard colours:

010	black
011	transparent
001	white
002	blue
003	green
004	yellow
005	orange
006	brown
007	red
008	violet
013	grey

Example for order:

code group	detail article	code colours
01050	XXXXX	XXXXX

type	black	article number	colours	for clips	cable Ø mm	length of the boot mm	
	010	transparent	xxx				

**for female push-on-terminals (right)**

<b>B-3 PVC</b>	0105 0007 010	0105 0007 011	0105 0007 ***	2,8	2,8	5,5	500
<b>B-4 PVC</b>	0105 0022 010	0105 0022 011	0105 0022 ***	4,8	3,2	7	500
<b>B-5 PVC</b>	0105 0003 010	0105 0003 011	0105 0003 ***	5 AMP	4,5	8	500
<b>B-6 PVC</b>	0105 0001 010	0105 0001 011	0105 0001 ***	6,3	3,6	8	500
<b>BL-6 PVC</b>	0105 0010 010	0105 0010 011	-	6,3	3,2	11	500
<b>BK-6 PVC</b>	0105 0011 010	0105 0011 011	-	6,3	3,2	6	500
<b>B-PVC</b>	0105 0004 010	0105 0004 011	0105 0004 ***	6,3	4	8	500
<b>BM-6 PVC</b>	0105 0012 010	0105 0012 011	-	6,3	5	11	500
<b>BN-6 PVC</b>	0105 0014 010	0105 0014 011	-	6,3	5	9	500

**for male push-on-terminals (right)**

<b>BW-6 PVC</b>	0105 0002 010	0105 0002 011	0105 0002 ***	6,3	3,6	5,5	500
<b>BF-6 PVC</b>	0105 0023 010	0105 0023 011	0105 0023 ***	6,3	3,6	11	500

**for female flag push-on-terminals**

<b>BE-6 PVC</b>	0105 0005 010	0105 0005 011	0105 0005 ***	6,3	3,6	13,7	500
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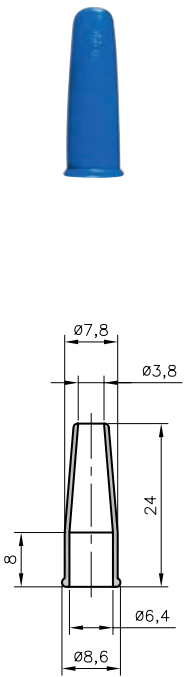


B10/4 - Printed boots

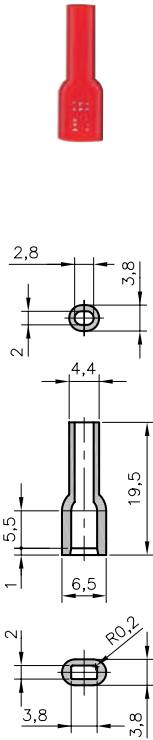


D6/3-02 - Clips

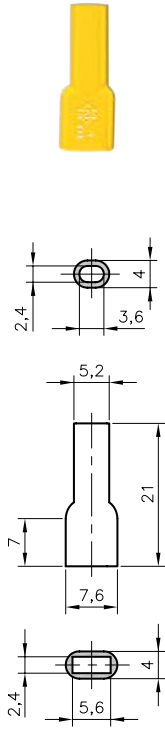




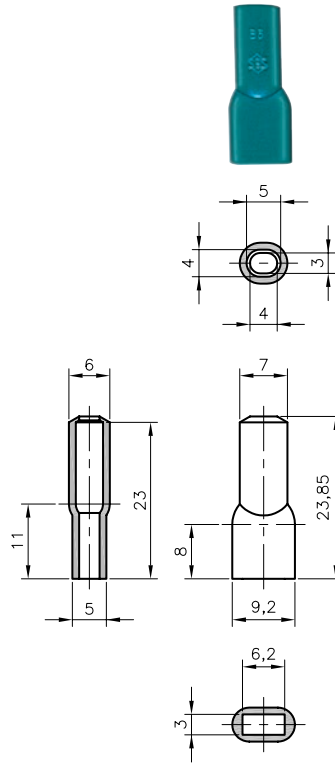
**B**  
0105 0004 xxx



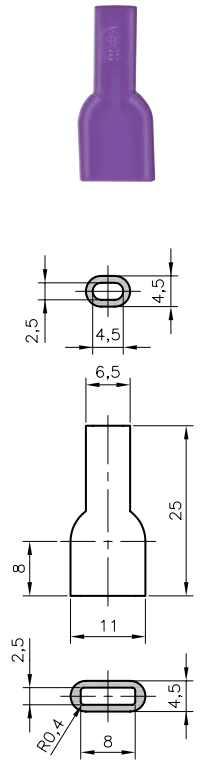
**B-3**  
0105 0007 xxx



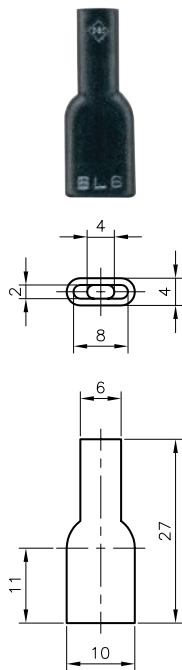
**B-4**  
0105 0022 xxx



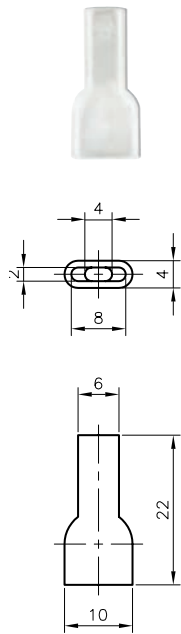
**B-5**  
0105 0003 xxx



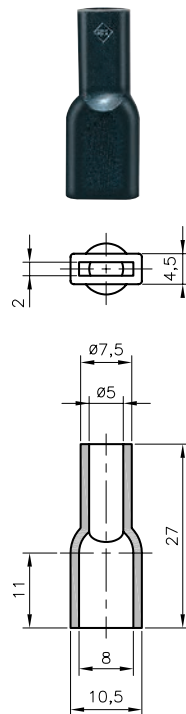
**B-6**  
0105 0001 xxx



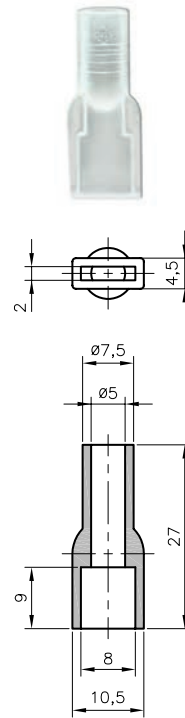
**BL-6**  
0105 0010 xxx



**BK-6**  
0105 0011 xxx



**BM-6**  
0105 0012 xxx



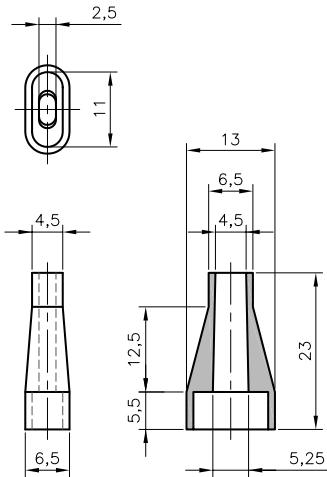
**BN-6**  
0105 0014 xxx



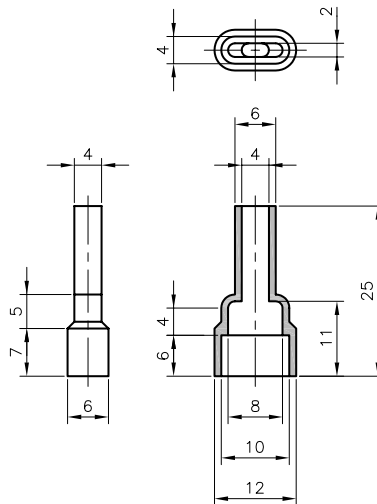
**PLIO® standard terminal boots**  
for courant use



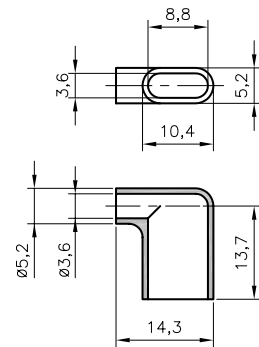
PLIO®



**BW-6**  
0105 0002 xxx



**BF-6**  
0105 0023 xxx



**BE-6**  
0105 0005 xxx



# PLIO® standard terminal boots for special use



PLIO®



## PLIO

Material:	PE	PA 6	PA 6.6	PP
Colours:	natural	natural	natural	natural or black
Operating temperature:	-50 to +85°C	-20 to +70°C	-40 to +110°C	-25 to +90°C
Ultimate elongation:	500%	>50%	300%	>150%
Dielectric strength:	-	60 kV/mm	26 kV/mm	50kV/mm
Flame resistance:	-	V2 UL94	V2 UL94	-



type	article number	article number		for clips mm	cable Ø mm	length of the boot mm	 pcs
	black 010	natural 018					

### Terminale boots for straight female clips

	PP	PE	PA6	PA6.6	PP				
BP-3	-	0105 0020 018	0105 0021 018	-	-	2,8	2,5	7,5	500
BP-6	-	0105 0008 018	0105 0009 018	-	-	6,3	-	9,5	500

### Removable caps for female clips flags - assembly after crimping

	PP	PE	PA6	PA6.6	PP				
BXC-4	-	-	-	0105 0031 018	-	4,8	3,2	6,1	500
BX-6	0105 0018 010	0105 0017 018	-	0105 0016 018	-	6,3	3,2	11	500
BXC-6	0105 0026 010	0105 0024 018	-	0105 0025 018	0105 0026 018	6,3	3,2	8,5	500



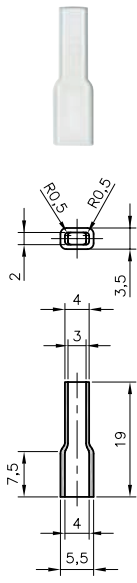
B10/4 - Printed boots

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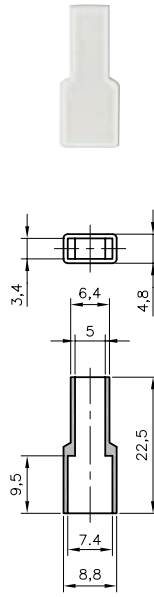
D6/3-02 - Clips



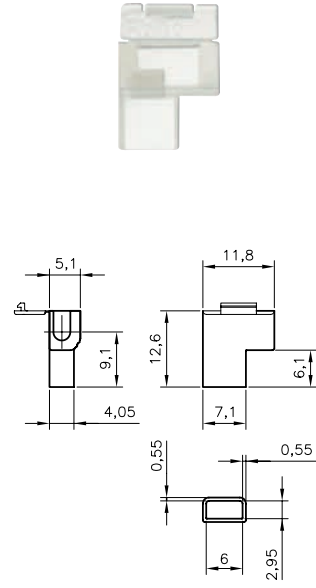
**PLIO® standard terminal boots**  
for special use



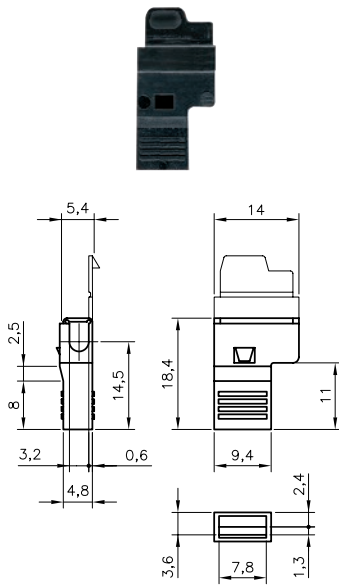
**BP-3**  
0105 0020 018  
0105 0021 018



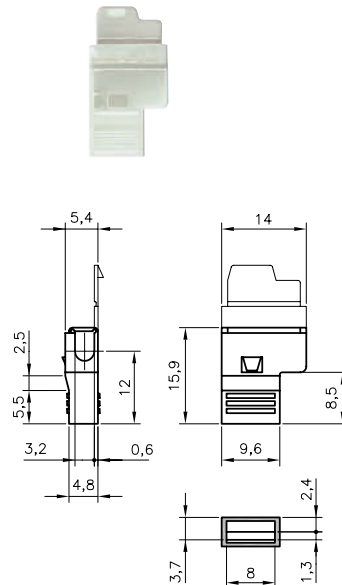
**BP-6**  
0105 0008 018  
0105 0009 018



**BXC-4**  
0105 0031 018



**BX-6**  
0105 0016 018  
0105 0017 018  
0105 0018 010



**BXC-6**  
0105 0024 018  
0105 0025 018  
0105 0026 xxx

# PLIO® standard terminal boots BA for application after crimping



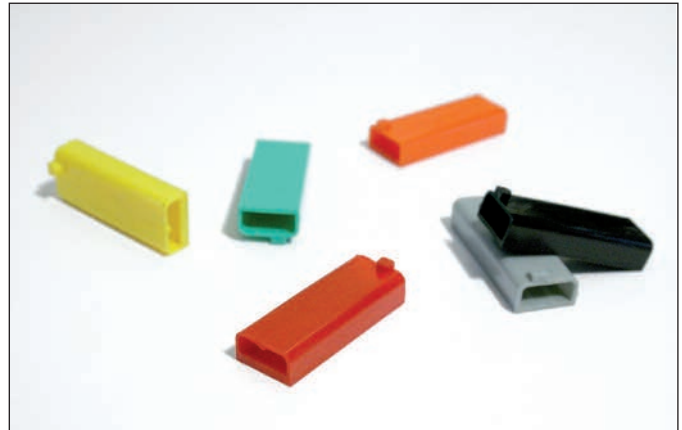
PLIO®



## PLIO BA

**Material:** polypropylene  
**Operating temperature:** -25 to +90°C (+120°C short time)  
**Ultimate elongation:** 30%  
**Dielectric strength:** >20 kV/mm

**Application:** our PLIO-BA boots can be applied over precrimped terminals, therefore they can be used with confidence on automatic application machines.



Standard colours:

001	002	003	004	005	006	007	010	013	015	017
white	blue	green	yellow	orange	brown	red	black	grey	pink	lila

Example for order:

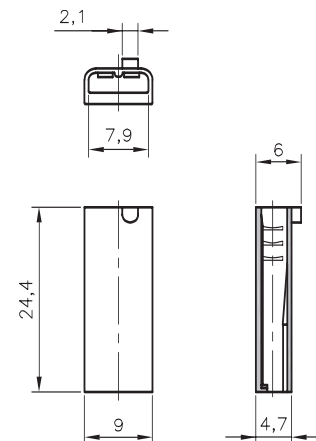
code group	detail article	code colour
0651	0001	xxx

type	article number	for clips mm	cable Ø mm	
BA-6 PP	0651 0001 ***	6,3	3,2	500

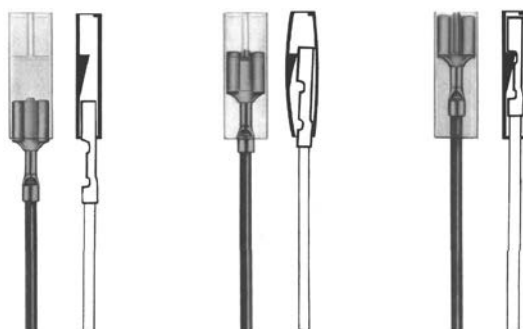
Standard colour:

018
natur

type	article number	for clips mm	cable Ø mm	
BA-6 PP nat.	0651 0002 018	6,3	3,2	500



## Assembly instruction



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