

**Bottle Shapes, VG style**

• Helashrink 150 Series, with rib

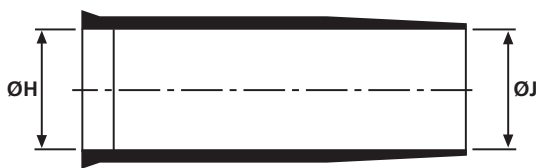
This style is used in conjunction with a circular grooved adaptor, providing strain relief and enviromental sealing. For VG shapes with portholes "P" please refer to product standards tables in the appendix.



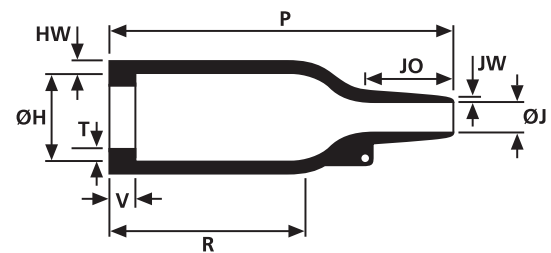
150 Series supplied.



150 Series boot recovered onto a connector.



a: Expanded form (supplied)



b: Fully recovered form (after heating)

**For Material / Adhesive selection and other information please refer to page 10.**

Sizes and Type Table												
Type	Designation as per VG-Norm	ØH min. a	ØH max. b	ØJ min. a	ØJ max. b	P ± 10%	R ± 10%	JO ± 10%	HW ± 20%	JW ± 20%	V ± 10%	T ± 20%
152-42	VG 95343 T06 B 001 A	24.0	10.5	24.0	6.0	38.0	21.0	10.0	1.6	0.5	3.0	1.0
153-42	VG 95343 T06 B 002 A	25.0	14.0	9.0	3.5	55.0	28.0	16.0	1.8	0.5	3.0	1.0
154-42	VG 95343 T06 B 003 A	30.0	14.0	30.0	6.0	55.0	32.0	13.0	1.8	1.0	3.0	1.0
155-42	VG 95343 T06 B 004 A	31.0	18.0	31.0	7.0	67.0	35.0	18.0	1.8	1.0	3.0	1.0
156-42	VG 95343 T06 B 005 A	36.0	22.5	36.0	8.5	80.0	42.0	20.0	2.0	1.0	3.0	1.0
157-43	VG 95343 T06 C 001 A	43.0	28.0	43.0	10.0	99.0	61.0	20.0	2.2	1.0	3.0	1.7
158-43	VG 95343 T06 C 002 A	60.0	35.0	60.0	16.0	130.0	72.0	38.0	3.2	1.5	3.0	1.7
159-43	VG 95343 T06 C 003 A	66.0	45.0	66.0	17.0	171.0	90.0	50.0	3.8	2.0	3.0	2.0
160-43	VG 95343 T06 C 004 A	82.0	58.0	82.0	27.0	213.0	113.0	62.0	3.8	3.8	3.0	2.0
152-41	VG 95343 T06 A 001 A	24.0	10.5	24.0	6.0	26.0	9.0	10.0	1.6	0.5	3.0	1.0
153-41	VG 95343 T06 A 002 A	25.0	14.0	9.0	3.5	40.0	13.0	16.0	1.8	0.5	3.0	1.0
154-41	VG 95343 T06 A 003 A	30.0	14.0	30.0	6.0	43.0	20.0	13.0	1.8	1.0	3.0	1.0
155-41	VG 95343 T06 A 004 A	31.0	18.0	31.0	7.0	47.0	15.0	18.0	1.8	1.0	3.0	1.0
156-41	VG 95343 T06 A 005 A	36.0	22.5	36.0	8.5	60.0	22.0	20.0	2.0	1.0	3.0	1.0
159-41	VG 95343 T06 A 008 A	66.0	45.0	66.0	17.0	130.0	50.0	50.0	3.8	2.0	3.0	2.0
157-42	VG 95343 T06 B 006 A	43.0	28.0	43.0	10.0	79.0	41.0	20.0	2.2	1.0	3.0	1.7
158-41	VG 95343 T06 A 007 A	60.0	35.0	60.0	16.0	90.0	32.0	38.0	3.2	1.5	3.0	1.7
159-41	VG 95343 T06 A 008 A	66.0	45.0	66.0	17.0	130.0	50.0	50.0	3.8	2.0	3.0	2.0
159-42	VG 95343 T06 B 008 A	66.0	45.0	66.0	17.0	150.0	70.0	50.0	3.8	2.0	3.0	2.0
160-41	VG 95343 T06 A 009 A	82.0	58.0	82.0	27.0	137.0	37.0	62.0	3.8	3.8	3.0	2.0
160-42	VG 95343 T06 B 009 A	82.0	58.0	82.0	27.0	158.0	58.0	62.0	3.8	3.8	3.0	2.0

All dimensions in mm. Subject to technical changes.

**Bottle Shapes, MIL style**

- Helashrink 100 Series, with rib

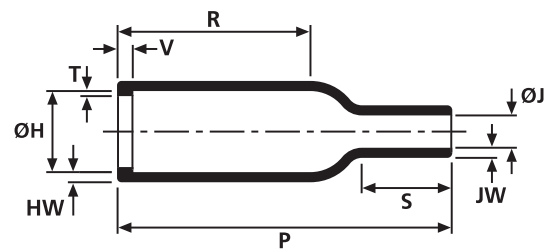
This style is used in conjunction with a circular grooved adaptor providing strain relief and environmental sealing when used in conjunction with one of our complementary adhesives.



104-4 supplied / fully recovered.



a: Expanded form (supplied)



b: Fully recovered form (after heating)

Sizes and Type Table												
Type	ØH min. a	ØH max. b	ØJ min. a	ØJ max. b	P ± 10%	R ± 10%	HW ± 20%	JW ± 20%	V ± 10%	T ± 20%	S nom	
1030-4	12.0	9.8	6.0	2.0	19.0	8.0	1.0	0.5	1.5	0.5	4.6	
1031-4	12.0	9.8	6.0	2.0	15.0	4.0	1.0	0.5	1.5	0.5	4.6	
1037-4	9.0	5.6	9.0	2.0	19.0	9.0	1.0	0.6	1.5	0.6	4.5	
1009-1	9.0	5.6	4.0	3.2	27.0	14.0	1.0	0.5	1.6	0.9	7.5	
113-4	10.7	7.9	4.6	2.0	25.4	14.5	1.3	1.0	3.0	1.0	4.6	
104-4	16.5	7.9	16.5	3.8	25.4	14.2	1.3	1.3	3.0	1.0	6.9	
105-4	23.4	10.4	23.4	5.6	38.1	14.2	1.5	1.5	3.0	1.0	10.2	
106-4	31.0	14.2	31.0	6.6	55.4	22.9	1.8	1.8	3.0	1.0	10.2	
101-4	31.0	17.8	31.0	7.1	67.0	38.1	2.0	2.0	3.0	1.0	17.8	
102-4	36.1	22.4	36.1	8.4	73.7	43.2	1.8	1.8	3.0	1.0	21.0	
103-4	42.7	28.2	42.7	9.9	99.1	54.0	2.0	2.0	3.0	1.7	24.0	
107-4	51.9	35.1	51.9	15.8	124.5	66.0	3.1	3.1	3.0	1.7	40.6	
118-4	66.0	44.4	66.0	20.3	160.5	91.4	3.8	3.8	3.0	2.0	48.3	

All dimensions in mm. Subject to technical changes.

**For Material / Adhesive selection and other information please refer to page 10.**

Combinations "On request"					
Adhesive	Material				
	B7	G	J	H	L
WM250	√	√	√	√	-
W8	√	√	√	√	-
W24	√	√	√	√	√
W21	√	√	√	√	-
HMT200A	√	√	√	√	-
V9500	√	√	√	√	-
Without Adhesive	√	√	√	√	√

Standard combinations	
Article-No.	Type
410-30480	1030-4-G
410-31001	1031-4-G
410-37001	1037-4-G
410-09001	1009-1-G
401-13480	113-4-G
401-04024	104-4-G
401-05034	105-4-G
401-06036	106-4-G
401-01037	101-4-G
401-02031	102-4-G
401-03041	103-4-G
401-07030	107-4-G
401-18018	118-4-B7

### Right Angle Shapes, VG style

- Helashrink 1100 Series, with rib

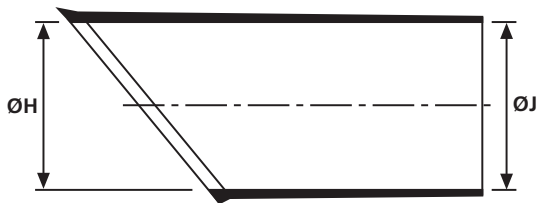
This style provides strain relief for harness systems when used in conjunction with a circular grooved adaptor. For VG shapes with portholes "P" please refer to product standards tables in the appendix.



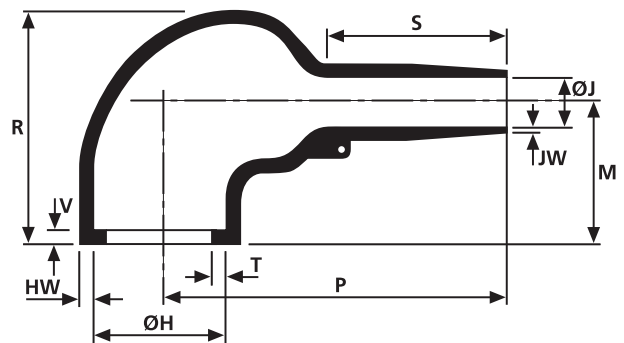
1152-4-G recovered onto a connector.



1155-4 supplied.



a: Expanded form (supplied)



b: Fully recovered form (after heating)

Sizes and Type Table

Type	Designation as per VG-Norm	ØH min. a	ØH max. b	ØJ min. a	ØJ max. b	P ± 10%	R ± 10%	HW ± 20%	JW ± 20%	V ± 10%	T ± 20%	M nom	S nom
1152-4	VG95343T06E001A	24.0	10.5	24.0	6.0	26.0	25.0	1.3	0.5	3.0	1.0	19.0	10.0
1154-4	VG95343T06E002A	30.0	15.5	30.0	6.0	32.0	27.0	1.5	0.8	3.0	1.0	19.0	12.0
1155-4	VG95343T06E003A	31.0	18.0	31.0	7.0	40.0	31.0	1.8	1.0	3.0	1.0	21.0	15.0
1156-4	VG95343T06E004A	36.0	22.5	36.0	8.5	46.0	38.0	1.8	1.0	3.0	1.0	26.0	15.0
1157-4	VG95343T06E005A	43.0	28.5	43.0	10.0	55.0	45.0	2.0	1.0	3.0	1.7	30.0	16.0
1158-4	VG95343T06E006A	60.0	35.0	60.0	16.0	80.0	54.0	3.3	1.5	3.0	1.7	35.0	30.0
1159-4	VG95343T06E007A	66.0	45.0	66.0	17.0	108.0	68.0	3.8	2.0	3.0	2.0	42.0	51.0
1160-4	VG95343T06E008A	82.0	61.0	82.0	25.0	118.0	84.0	4.0	4.0	3.0	2.0	52.0	39.0

All dimensions in mm. Subject to technical changes.

Combinations "On request"

Adhesive	Material					
	B7	G	J	H	B8	L
WM250	√	√	√	√	√	-
W8	√	√	√	√	-	-
W24	√	√	√	√	-	√
V9500	√	√	√	√	-	-
HMT200A	√	√	√	√	√	-
W21	-	-	√	√	-	-
Without Adhesive	√	√	√	√	√	√

Standard combinations

Article-No.	Type
411-52480	1152-4-G
411-54480	1154-4-G
411-55480	1155-4-G
411-56480	1156-4-G
411-57480	1157-4-G
411-58480	1158-4-G
411-59480	1159-4-G
411-60480	1160-4-G

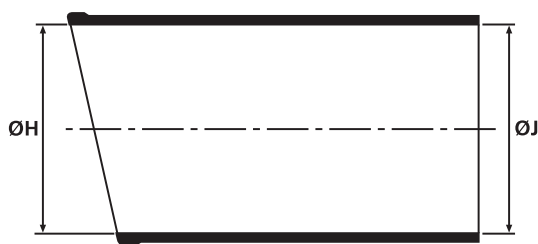
### Right Angle Shapes, MIL style

#### • Helashrink 1100 Series, with rib

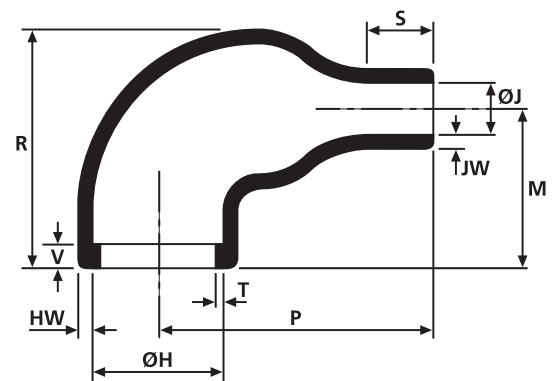
This style provides strain relief for harness systems when used in conjunction with circular grooved adaptor.



1108-4 supplied / fully recovered



a: Expanded form (supplied)



b: Fully recovered form (after heating)

Sizes and Type Table

Type	ØH min. a	ØH max. b	ØJ min. a	ØJ max. b	P ± 10%	R ± 10%	HW ± 20%	JW ± 30%	V max	T ± 20%	M nom	S nom
1181-4	12.0	9.8	6.0	2.0	19.0	13.0	1.0	0.5	1.5	0.6	11.0	6.0
1108-4	16.5	7.9	16.5	2.5	18.3	20.1	1.0	1.6	3.3	1.0	15.2	5.1
1106-4	23.3	10.4	23.3	5.6	20.3	22.9	1.3	1.3	3.3	1.0	15.2	5.8
1107-4	28.4	14.2	28.4	6.3	29.8	28.5	1.5	1.5	3.3	1.0	21.4	7.1
1104-4	30.9	17.8	30.9	7.1	35.6	30.5	1.8	1.8	3.3	1.0	20.6	8.6
1103-4	36.0	22.4	36.0	8.4	43.2	35.6	1.8	1.8	3.3	1.0	22.9	12.7
1101-4	42.6	27.9	42.6	9.7	53.3	43.2	2.0	2.0	3.3	1.7	27.9	15.7
1105-4	51.8	35.1	51.8	15.7	78.7	53.3	3.3	3.3	3.3	1.7	33.0	30.5

All dimensions in mm. Subject to technical changes.

Combinations "On request"

Adhesive	Material				
	B7	G	J	H	L
WM250	√	√	√	√	-
W8	√	√	√	√	-
W24	√	√	√	√	√
V9500	√	√	√	-	-
HMT200A	√	√	√	√	-
Without Adhesive	√	√	√	√	-

Standard combinations

Article-No.	Type
411-81480	1181-4-G
411-08015	1108-4-B7
411-06019	1106-4-G
411-07020	1107-4-G
411-04032	1104-4-G
411-03024	1103-4-G
411-01020	1101-4-G
411-05019	1105-4-J

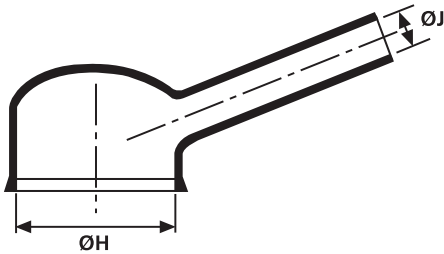
**Right Angle Shapes, VG style**

- Helashrink 1100 Series, with rib, low profile, high ratio

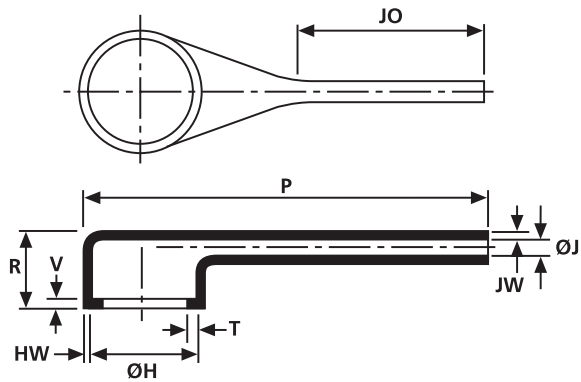
This style provides connector cable strain relief. Used in applications for partially loaded connectors with small cable diameters. The tail is designed to allow easy orientation prior to cooling.



1135-1-G supplied / fully recovered.



a: Expanded form (supplied)



b: Fully recovered form (after heating)

Sizes and Type Table												
Type	Designation as per VG-Norm	ØH	ØH	ØJ	ØJ	P	R	HW	JW	JO	V	T
		min. a	max. b	min. a	max. b	± 10%	± 10%	± 20%	± 20%	± 10%	± 10%	± 20%
1133-1	VG95343T06F011A	19.0	13.0	6.0	2.0	44.0	16.3	1.5	1.1	21.8	3.0	1.0
1133-2	-	19.0	13.0	6.0	2.0	30.0	16.0	1.5	1.1	1.0	3.3	1.0
1134-1	VG95343T18H001A	26.0	19.0	7.5	2.5	67.0	18.0	1.8	1.1	29.2	3.0	1.0
1135-1	VG95343T06F013A	34.0	26.0	9.5	3.0	81.0	18.8	1.8	1.1	35.3	3.0	1.0
1135-1	VG95343T06F013A	34.0	26.0	9.5	3.0	81.0	18.8	1.8	1.1	35.3	3.0	1.0
1136-1	VG95343T06F014A	43.5	34.0	11.5	3.5	116.0	21.3	1.8	1.1	47.0	3.0	1.7
1182-4	-	12.0	7.6	6.0	2.0	16.8	13.0	1.0	0.5	6.0	1.5	0.3

All dimensions in mm. Subject to technical changes.

Combinations "On request"					
Adhesive	Material				
	B7	G	J	H	L
WM250	√	√	√	√	-
W8	√	√	√	√	-
W24	√	√	√	√	√
V9500	√	√	√	√	-
HMT200A	√	√	√	√	-
W21	-	-	-	√	-
Without Adhesive	√	√	√	√	√

Standard combinations	
Article-No.	Type
411-33180	1133-1-G
411-33011	1133-2-G
411-34180	1134-1-G
411-35180	1135-1-G
411-35180	1135-1-G
411-36180	1136-1-G
411-82001	1182-4-G