



## Inspired by Paul Hellermann

Heat-shrinkable tubes have always made it easy to repair cables and pipes. Strictly speaking, however, Paul Hellermann used rubber bike valves to bring the insulation of damaged household cables to a mass market from 1935. The idea is the only thing that our modern heat-shrinkable tubes have in common with these simple chloroprene sleeves. Take SA47 (see page 250 ), which was specially developed in line with customer specifications and offers outstanding protection against moisture and corrosion, thus enabling vehicles to retain their functionality.



### 2.1 Heat Shrinkable Tubing

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### 2.2 Heat Shrinkable Moulded Shapes

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## Overview of Applications for Heat Shrink Tubing

When selecting the correct heat shrink tubing size, it is important to bear in mind the 80:20 rule. The heat shrink tubing must shrink by at least 20 % and not more than 80 % of its complete shrinkage capacity to achieve the right result. In our overview of applications you will find the best heat shrink tube for every cable diameter. The 80:20 rule has of course been taken into account in the table.

### Heat Shrinkable Tubing with a shrink ratio of 2:1

HFT-A, TL27, TF21, TF24, VITON®-E, TK20, TK29, TFE-2, TR27, TCN20, SE28

| Shrink ratio 2:1<br>Size mm |           | Cable/Wire Diameter |
|-----------------------------|-----------|---------------------|
| 1,2/0,6                     |           | 0,7 mm              |
|                             |           | 1,1 mm              |
|                             |           | 1,4 mm              |
| 3,2/1,6                     | 2,4/1,2   | 1,9 mm              |
|                             |           | 2,2 mm              |
|                             |           | 2,9 mm              |
| 6,4/3,2                     | 4,8/2,4   | 3,8 mm              |
|                             |           | 4,3 mm              |
|                             |           | 5,7 mm              |
| 12,7/6,4                    | 9,5/4,7   | 5,8 mm              |
|                             |           | 7,7 mm              |
|                             |           | 8,6 mm              |
| 25,4/12,7                   | 19,1/9,5  | 11,4 mm             |
|                             |           | 15,2 mm             |
|                             |           | 17,2 mm             |
| 50,8/25,4                   | 38,1/19,1 | 22,9 mm             |
|                             |           | 30,5 mm             |
|                             |           | 34,3 mm             |
| 101,6/50,8                  | 76,2/38,1 | 45,7 mm             |
|                             |           | 61,0 mm             |
|                             |           | 68,6 mm             |
|                             |           | 91,4 mm             |

### Heat Shrinkable Tubing with a shrinkage ratio of 3:1

With the optimal shrinkage ratio of 3:1, you can cover a wide range of applications with just a few sizes. This leads to reduced stock expenditure and requires less space. 3:1 heat shrink tubes: TF34, TF31, EPS-300, TCN20 overexpanded, TA32, TA37

| Shrink ratio 3:1<br>Size mm |      | Cable/Wire Diameter |
|-----------------------------|------|---------------------|
| 1,5/0,5                     |      | 0,7 mm              |
|                             |      | 1,3 mm              |
|                             |      | 1,4 mm              |
| 6/2                         | 3/1  | 2,6 mm              |
|                             |      | 2,8 mm              |
|                             |      | 5,2 mm              |
| 18/6                        | 12/4 | 5,6 mm              |
|                             |      | 8,4 mm              |
|                             |      | 10,4 mm             |
| 40/13                       | 24/8 | 11,2 mm             |
|                             |      | 15,6 mm             |
|                             |      | 18,4 mm             |
|                             |      | 20,8 mm             |
|                             |      | 34,6 mm             |

### Conversion from imperial to metric

| Inch | 1/32" | 3/64" | 1/16" | 5/64" | 3/32"  | 1/8"   | 3/16" | 1/4" | 3/8"  |
|------|-------|-------|-------|-------|--------|--------|-------|------|-------|
| mm   | 0,8   | 1,2   | 1,6   | 2,0   | 2,4    | 3,2    | 4,8   | 6,4  | 9,5   |
| Inch | 1/2"  | 5/8"  | 3/4"  | 1"    | 1-1/4" | 1-1/2" | 2"    | 3"   | 4"    |
| mm   | 12,7  | 15,9  | 19,1  | 25,4  | 31,8   | 38,1   | 50,8  | 76,2 | 101,6 |

VITON® is a registered trademark of DuPont.

## The Right Heat Shrink Tube

The 80:20 rule means that a heat shrink tube should shrink by a maximum of 80 % and a minimum of 20 %.

### For example:

A cable with a diameter of 5mm is to be wrapped in heat shrink tubing. In theory both sizes 6/2 and 12/4 would be suitable, since the required diameter of 5mm lies within the shrink range of both tube sizes.

#### Size 6/2

##### Maximum shrink (100 %)



Shrinkage of 4 mm

##### Optimum shrinkage max. (80 %)



Shrinkage of 0.8 mm

##### Optimum shrinkage min. (20 %)



Shrinkage of 3.2 mm

Size 6/2 has a range of application of between 2.8 mm and 5.2 mm and is therefore suitable for the cable diameter of 5 mm.

#### Size 12/4

##### Maximum shrink (100 %)



Shrinkage of 8 mm

##### Optimum shrinkage max. (80 %)



Shrinkage of 6.4 mm

##### Optimum shrinkage min. (20 %)



Shrinkage of 1.6 mm

The smallest application diameter of size 12/4 is 5.6 mm. This size is therefore unsuitable for a cable diameter of 5 mm.

### Calculator tool for Heat Shrink Tubing

The calculator tool for heat shrink tubing is a selection guide for shrink tubing sizes based on the object to be covered. Fill in your specification and the calculator presents the right tubing size according to the 80:20 rule.

Find more information under <http://www.HellermannTyton.co.uk/heatshrink-calculator>!

The calculator tool also checks if the heat shrink tubing you have chosen is suitable for your application. For example you can find the heat shrink tubing with the Product Search on the HellermannTyton website.



## Heat Shrinkable Tubing up to 4:1 - 1 m lengths

Insulation and protection of low voltage cable joints and terminations above and below ground.

### Features and Benefits

- Medium walled tubing with robust insulation characteristics
- Shrink tubing for above and underground cable applications
- Protects cable joints and terminations in low voltage applications
- Coated inside with thermoplastic adhesive
- Protects against humidity and other environmental impacts after shrinking

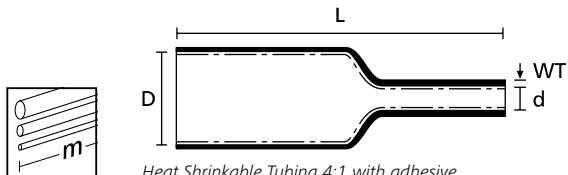


Medium wall tubing - lined or unlined.



**Cut lengths available on request.  
Please contact us!**

### MA47 - medium wall adhesive lined



Heat Shrinkable Tubing 4:1 with adhesive.

|  |                                 |
|--|---------------------------------|
| <b>MATERIAL</b>                            | Polyolefin, cross-linked (PO-X) |
| <b>Shrink Ratio</b>                        | up to 4:1                       |
| <b>Operating Temperature</b>               | -55 °C to +110 °C               |
| <b>Min. Shrink Temperature</b>             | +120 °C                         |
| <b>Softening Point Adhesive</b>            | +85 °C                          |
| <b>Longitudinal change after shrinkage</b> | -10 % max.                      |
| <b>Dielectric Strength</b>                 | 20 kV/mm                        |
| <b>Flammability</b>                        | not flame retarded              |
| <b>Insulation Class</b>                    | A (VDE 0530)                    |

HF ✓

RoHS ✓

| TYPE        | Supplied<br>Ø D min. | Recov.<br>Ø d max. | Wall<br>(WT) | Length<br>(L) | Colour     | Article-No. |
|-------------|----------------------|--------------------|--------------|---------------|------------|-------------|
| MA47-12/3   | 12.0                 | 3.0                | 2.00         | 1.0 m         | Black (BK) | 323-20120   |
| MA47-19/6   | 19.0                 | 6.0                | 2.50         | 1.0 m         | Black (BK) | 323-20190   |
| MA47-30/8   | 30.0                 | 8.0                | 2.50         | 1.0 m         | Black (BK) | 323-20300   |
| MA47-40/12  | 40.0                 | 12.0               | 2.50         | 1.0 m         | Black (BK) | 323-20400   |
| MA47-50/16  | 50.0                 | 16.0               | 2.70         | 1.0 m         | Black (BK) | 323-20500   |
| MA47-63/19  | 63.0                 | 19.0               | 2.80         | 1.0 m         | Black (BK) | 323-20630   |
| MA47-75/22  | 75.0                 | 22.0               | 3.00         | 1.0 m         | Black (BK) | 323-20750   |
| MA47-95/30  | 95.0                 | 30.0               | 3.00         | 1.0 m         | Black (BK) | 323-20950   |
| MA47-115/34 | 115.0                | 34.0               | 3.00         | 1.0 m         | Black (BK) | 323-21150   |
| MA47-140/42 | 140.0                | 42.0               | 3.00         | 1.0 m         | Black (BK) | 323-21400   |

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.





### Heat Shrinkable Cable Repair Sleeves

#### RMS

RMS sleeves are wrapped around the cable and closed with a steel channel. The inside of the sleeve is adhesive lined and will effectively seal the cable after shrinkage. RMS sleeves provide fast, watertight and reliable insulation.

#### Features and Benefits

- Fast, moisture proof and permanent repair of cable jackets
- Only 6 sizes for a wide range of cable diameters: from 15 mm up to 160 mm
- Available in 4 standard lengths and also available in custom lengths.
- Each RMS kit is ready for use and comes with instruction sheet, abrasive strip and cleaning sachet.
- The metal closure is made of 316 stainless steel for high overall corrosion resistance.
- Weather resistant and halogen free
- TCP (thermo chromatic paint) spots indicate the sleeve has been sufficiently heated



Application video: RMS

|  |  |
|--|--|
| <b>MATERIAL</b>                            | Polyolefin, chemically cross linked (PO-X) |
| <b>Shrink Ratio</b>                        | up to 4.5:1                                |
| <b>Operating Temperature</b>               | -40 °C to +120 °C                          |
| <b>Min. Shrink Temperature</b>             | +110 °C                                    |
| <b>Softening Point Adhesive</b>            | +105 °C                                    |
| <b>Longitudinal change after shrinkage</b> | -10 % max.                                 |
| <b>Dielectric Strength</b>                 | 30 kV/mm                                   |
| <b>Flammability</b>                        | not flame retarded                         |



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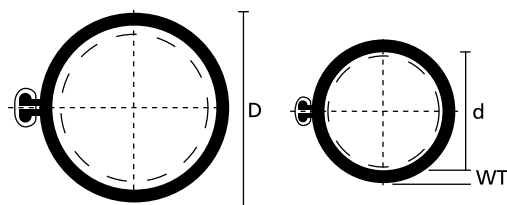
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RMS wrap-around sleeves for rapid and secure cable repair on site.



RMS: Repair sleeve, steel closure, abrasive strip, cleaning sachet, instruction sheet.



Cable Repair Sleeve RMS with adhesive

| TYPE       | Supplied<br>Ø D min. | Recov.<br>Ø d max. | Wall<br>(WT) | Suitable for<br>Cable Ø<br>from/to | Length<br>(L) | Colour     | Article-No. |
|------------|----------------------|--------------------|--------------|------------------------------------|---------------|------------|-------------|
| RMS 43-10  | 43                   | 10.0               | 2.30         | 15 - 35                            | 250.0         | Black (BK) | 450-20000   |
|            | 43                   | 10.0               | 2.30         | 15 - 35                            | 500.0         | Black (BK) | 450-20001   |
|            | 43                   | 10.0               | 2.30         | 15 - 35                            | 750.0         | Black (BK) | 450-20004   |
|            | 43                   | 10.0               | 2.30         | 15 - 35                            | 1,000.0       | Black (BK) | 450-20002   |
| RMS 52-15  | 52                   | 15.0               | 2.30         | 20 - 45                            | 250.0         | Black (BK) | 450-20010   |
|            | 52                   | 15.0               | 2.30         | 20 - 45                            | 500.0         | Black (BK) | 450-20011   |
|            | 52                   | 15.0               | 2.30         | 20 - 45                            | 750.0         | Black (BK) | 450-20014   |
|            | 52                   | 15.0               | 2.30         | 20 - 45                            | 1,000.0       | Black (BK) | 450-20012   |
| RMS 76-22  | 76                   | 22.0               | 2.50         | 28 - 65                            | 500.0         | Black (BK) | 450-20021   |
|            | 76                   | 22.0               | 2.50         | 28 - 65                            | 750.0         | Black (BK) | 450-20024   |
|            | 76                   | 22.0               | 2.50         | 28 - 65                            | 1,000.0       | Black (BK) | 450-20022   |
| RMS 100-30 | 100                  | 30.0               | 2.54         | 35 - 85                            | 500.0         | Black (BK) | 450-20030   |
|            | 100                  | 30.0               | 2.54         | 35 - 85                            | 1,000.0       | Black (BK) | 450-20031   |
| RMS 139-38 | 139                  | 38.0               | 2.77         | 45 - 120                           | 1,000.0       | Black (BK) | 450-20041   |
| RMS 185-55 | 185                  | 55.0               | 2.74         | 65 - 160                           | 1,000.0       | Black (BK) | 450-20050   |

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.



## Heat Shrinkable Tubing 2:1 - Elastomer

### SE28

SE28 is used for long-term protection of cables and wire harnesses in military equipment, motor sports and aviation.

#### Features and Benefits

- Flexible, high performance elastomeric heat shrink tubing
- Used in aerospace, defence, railway and automotive applications
- Resistant to diesel fuel, aviation and hydraulic fluids
- Provides a reliable protection against abrasion and mechanical damage
- Very suitable for protecting cables and wire harnesses



SE28 tubing.

|  |                               |
|--|-------------------------------|
| <b>MATERIAL</b>                            | Elastomer, cross-linked (POA) |
| <b>Shrink Ratio</b>                        | 2:1                           |
| <b>Operating Temperature</b>               | -75 °C to +150 °C             |
| <b>Min. Shrink Temperature - °C</b>        | +170 °C                       |
| <b>Longitudinal change after shrinkage</b> | -10 % max.                    |
| <b>Dielectric Strength</b>                 | 20 kV/mm                      |
| <b>Flammability</b>                        | VG 95343                      |

RoHS



SE28 is mainly used in high performance applications.



Heat Shrinkable Tubing 2:1

| TYPE            | Supplied<br>Ø D min. | Recov.<br>Ø d max. | Wall<br>(WT) | Reel<br>Length | Colour     | Designation as per<br>VG-Norm | Article-No. |
|-----------------|----------------------|--------------------|--------------|----------------|------------|-------------------------------|-------------|
| SE28 3,2/1,6    | 3.2                  | 1.6                | 0.70         | 150 m          | Black (BK) | VG 95343 T05 D 001 A          | 342-20000   |
| SE28 4,8/2,4    | 4.8                  | 2.4                | 0.80         | 60 m           | Black (BK) | VG 95343 T05 D 002 A          | 342-20010   |
| SE28 6,4/3,2    | 6.4                  | 3.2                | 0.90         | 60 m           | Black (BK) | VG 95343 T05 D 003 A          | 342-20020   |
| SE28 9,5/4,8    | 9.5                  | 4.8                | 1.00         | 60 m           | Black (BK) | VG 95343 T05 D 004 A          | 342-20030   |
| SE28 12,7/6,4   | 12.7                 | 6.4                | 1.20         | 60 m           | Black (BK) | VG 95343 T05 D 005 A          | 342-20040   |
| SE28 19,0/9,5   | 19.0                 | 9.5                | 1.40         | 30 m           | Black (BK) | VG 95343 T05 D 006 A          | 342-20050   |
| SE28 25,4/12,7  | 25.4                 | 12.7               | 1.80         | 30 m           | Black (BK) | VG 95343 T05 D 007 A          | 342-20060   |
| SE28 38,0/19,0  | 38.0                 | 19.0               | 2.40         | 30 m           | Black (BK) | VG 95343 T05 D 008 A          | 342-20070   |
| SE28 51,0/25,4  | 51.0                 | 25.4               | 2.80         | 30 m           | Black (BK) | VG 95343 T05 D 009 A          | 342-20080   |
| SE28 76,0/38,0  | 76.0                 | 38.0               | 3.20         | 15 m           | Black (BK) | VG 95343 T05 D 010 A          | 342-20090   |
| SE28 101,2/51,0 | 102.0                | 51.0               | 3.50         | 10 m           | Black (BK) | VG 95343 T05 D 011 A          | 342-20100   |

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.





### Heat shrinkable tubing 2:1 - flexible and coloured

HS-1,2m

#### Features and benefits

- Thin wall, flexible polyolefin tubing
- Fast shrinking and low shrink temperature
- Meets and exceeds lots of industrial standards
- Big variety of different colours and sizes
- Flame retarded and UL224 VW1 listed



Available in a wide range of colours and sizes.

|  |                                 |
|--|---------------------------------|
| <b>MATERIAL</b>                            | Polyolefin, cross-linked (PO-X) |
| <b>Shrink Ratio</b>                        | 2:1                             |
| <b>Operating Temperature</b>               | -55 °C to +125 °C               |
| <b>Min. Shrink Temperature</b>             | +70 °C                          |
| <b>Longitudinal change after shrinkage</b> | +/- 5 %                         |
| <b>Dielectric Strength</b>                 | 32 kV/mm                        |
| <b>Flammability</b>                        | ASTM D2671, UL22                |
| <b>Voltage Rating</b>                      | 600V                            |

RoHS



$D$ 
  
 Heat Shrinkable Tubing 2:1

| PART NUMBER | LV Heatshrink 2:1 Polyolefin 1.2 Metre Lengths | Wall (WT) | Colour              | Pack Size |
|-------------|--|-----------|---------------------|-----------|
| HS1.5BK/L   | HEATSHRINK 1.5MM BLACK x 1.2m                  | 0.32      | Black (BK)          | 10        |
| HS1.5BL/L   | HEATSHRINK 1.5MM BLUE x 1.2m                   | 0.32      | Blue (BU)           | 10        |
| HS1.5CL/L   | HEATSHRINK 1.5MM CLEAR x 1.2m                  | 0.32      | Clear (CL)          | 10        |
| HS1.5GN/L   | HEATSHRINK 1.5MM GREEN x 1.2m                  | 0.32      | Green (GN)          | 10        |
| HS1.5RD/L   | HEATSHRINK 1.5MM RED x 1.2m                    | 0.32      | Red (RD)            | 10        |
| HS1.5WH/L   | HEATSHRINK 1.5MM WHITE x 1.2m                  | 0.32      | White (WH)          | 10        |
| HS1.5YL/L   | HEATSHRINK 1.5MM YELLOW x 1.2m                 | 0.32      | Yellow (YE)         | 10        |
| HS2.5RD/L   | HEATSHRINK 2.5MM RED x 1.2m                    | 0.44      | Red (RD)            | 10        |
| HS2.5WH/L   | HEATSHRINK 2.5MM WHITE x 1.2m                  | 0.44      | White (WH)          | 10        |
| HS2.5BL/L   | HEATSHRINK 2.5MM BLUE x 1.2m                   | 0.44      | Blue (BU)           | 10        |
| HS2.5BK/L   | HEATSHRINK 2.5MM BLACK x 1.2m                  | 0.44      | Black (BK)          | 10        |
| HS2.5YG/L   | HEATSHRINK 2.5MM YELLOW/GREEN x 1.2m           | 0.44      | Yellow-Green (YEGN) | 10        |
| HS3.5RD/L   | HEATSHRINK 3.5MM RED x 1.2m                    | 0.44      | Red (RD)            | 10        |
| HS3.5WH/L   | HEATSHRINK 3.5MM WHITE x 1.2m                  | 0.44      | White (WH)          | 10        |
| HS3.5BL/L   | HEATSHRINK 3.5MM BLUE x 1.2m                   | 0.44      | Blue (BU)           | 10        |
| HS3.5BK/L   | HEATSHRINK 3.5MM BLACK x 1.2m                  | 0.44      | Black (BK)          | 10        |
| HS3.5YG/L   | HEATSHRINK 3.5MM YELLOW/GREEN x 1.2m           | 0.44      | Yellow-Green (YEGN) | 10        |
| HS3.5CL/L   | HEATSHRINK 3.5MM CLEAR x 1.2m                  | 0.44      | Clear (CL)          | 10        |

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.





| PART NUMBER | LV Heatshrink 2:1 Polyolefin 1.2 Metre Lengths | Wall (WT) | Colour              | Pack Size |
|-------------|--|-----------|---------------------|-----------|
| HS5BK/L     | HEATSHRINK 5MM BLACK x 1.2m                    | 0.56      | Black (BK)          | 5         |
| HS5BL/L     | HEATSHRINK 5MM BLUE x 1.2m                     | 0.56      | Blue (BU)           | 5         |
| HS5CL/L     | HEATSHRINK 5MM CLEAR x 1.2m                    | 0.56      | Clear (CL)          | 5         |
| HS5GN/L     | HEATSHRINK 5MM GREEN x 1.2m                    | 0.56      | Green (GN)          | 5         |
| HS5RD/L     | HEATSHRINK 5MM RED x 1.2m                      | 0.56      | Red (RD)            | 5         |
| HS5WH/L     | HEATSHRINK 5MM WHITE x 1.2m                    | 0.56      | White (WH)          | 5         |
| HS5YL/L     | HEATSHRINK 5MM YELLOW x 1.2m                   | 0.56      | Yellow (YE)         | 5         |
| HS5YG/L     | HEATSHRINK 5MM YELLOW/GREEN x 1.2m             | 0.56      | Yellow-Green (YEGN) | 5         |
| HS7CL/L     | HEATSHRINK 7MM CLEAR x 1.2m                    | 0.56      | Clear (CL)          | 5         |
| HS7GN/L     | HEATSHRINK 7MM GREEN x 1.2m                    | 0.56      | Green (GN)          | 5         |
| HS7RD/L     | HEATSHRINK 7MM RED x 1.2m                      | 0.56      | Red (RD)            | 5         |
| HS7WH/L     | HEATSHRINK 7MM WHITE x 1.2m                    | 0.56      | White (WH)          | 5         |
| HS7BK/L     | HEATSHRINK 7MM BLACK x 1.2m                    | 0.56      | Black (BK)          | 5         |
| HS7BL/L     | HEATSHRINK 7MM BLUE x 1.2m                     | 0.56      | Blue (BU)           | 5         |
| HS7YL/L     | HEATSHRINK 7MM YELLOW x 1.2m                   | 0.56      | Yellow (YE)         | 5         |
| HS7YG/L     | HEATSHRINK 7MM YELLOW/GREEN 1.2m               | 0.56      | Yellow-Green (YEGN) | 5         |
| HS10BK/L    | HEATSHRINK 10MM BLACK x 1.2m                   | 0.56      | Black (BK)          | 5         |
| HS10BL/L    | HEATSHRINK 10MM BLUE x 1.2m                    | 0.56      | Blue (BU)           | 5         |
| HS10CL/L    | HEATSHRINK 10MM CLEAR x 1.2m                   | 0.56      | Clear (CL)          | 5         |
| HS10GN/L    | HEATSHRINK 10MM GREEN x 1.2m                   | 0.56      | Green (GN)          | 5         |
| HS10RD/L    | HEATSHRINK 10MM RED 1.2m                       | 0.56      | Red (RD)            | 5         |
| HS10WH/L    | HEATSHRINK 10MM WHITE x 1.2m                   | 0.56      | White (WH)          | 5         |
| HS10YL/L    | HEATSHRINK 10MM YELLOW x 1.2m                  | 0.56      | Yellow (YE)         | 5         |
| HS10YG/L    | HEATSHRINK 10MM YELLOW/GREEN x 1.2m            | 0.56      | Yellow-Green (YEGN) | 5         |
| HS13BK/L    | HEATSHRINK 13MM BLACK x 1.2m                   | 0.56      | Black (BK)          | 5         |
| HS13BL/L    | HEATSHRINK 13MM BLUE x 1.2m                    | 0.56      | Blue (BU)           | 5         |
| HS13CL/L    | HEATSHRINK 13MM CLEAR x 1.2m                   | 0.56      | Clear (CL)          | 5         |
| HS13GN/L    | HEATSHRINK 13MM GREEN x 1.2m                   | 0.56      | Green (GN)          | 5         |
| HS13RD/L    | HEATSHRINK 13MM RED 1.2m                       | 0.56      | Red (RD)            | 5         |
| HS13WH/L    | HEATSHRINK 13MM WHITE x 1.2m                   | 0.56      | White (WH)          | 5         |
| HS13YL/L    | HEATSHRINK 13MM YELLOW x 1.2m                  | 0.56      | Yellow (YE)         | 5         |
| HS13YG/L    | HEATSHRINK 13MM YELLOW /GREEN x 1.2m           | 0.56      | Yellow-Green (YEGN) | 5         |
| HS20BK/L    | HEATSHRINK 20MM BLACK x 1.2m                   | 0.76      | Black (BK)          | 5         |
| HS20BL/L    | HEATSHRINK 20MM BLUE x 1.2m                    | 0.76      | Blue (BU)           | 5         |
| HS20CL/L    | HEATSHRINK 20MM CLEAR x 1.2m                   | 0.76      | Clear (CL)          | 5         |
| HS20GN/L    | HEATSHRINK 20MM GREEN x 1.2m                   | 0.76      | Green (GN)          | 5         |
| HS20RD/L    | HEATSHRINK 20MM RED x 1.2m                     | 0.76      | Red (RD)            | 5         |
| HS20WH/L    | HEATSHRINK 20MM WHITE x 1.2m                   | 0.76      | White (WH)          | 5         |
| HS20YL/L    | HEATSHRINK 20MM YELLOW x 1.2m                  | 0.76      | Yellow (YE)         | 5         |
| HS20YG/L    | HEATSHRINK 20MM YELLOW/GREEN x 1.2m            | 0.76      | Yellow-Green (YEGN) | 5         |
| HS25BK/L    | HEATSHRINK 25MM BLACK x 1.2m                   | 0.86      | Black (BK)          | 5         |
| HS25BL/L    | HEATSHRINK 25MM BLUE x 1.2m                    | 0.86      | Blue (BU)           | 5         |
| HS25CL/L    | HEATSHRINK 25MM CLEAR x 1.2m                   | 0.86      | Clear (CL)          | 5         |
| HS25GN/L    | HEATSHRINK 25MM GREEN x 1.2m                   | 0.86      | Green (GN)          | 5         |
| HS25RD/L    | HEATSHRINK 25MM RED x 1.2m                     | 0.86      | Red (RD)            | 5         |
| HS25WH/L    | HEATSHRINK 25MM WHITE x 1.2m                   | 0.86      | White (WH)          | 5         |
| HS25YL/L    | HEATSHRINK 25MM YELLOW x 1.2m                  | 0.86      | Yellow (YE)         | 5         |
| HS25YG/L    | HEATSHRINK 25MM YELLOW/GREEN x 1.2m            | 0.86      | Yellow-Green (YEGN) | 5         |

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.



| PART NUMBER | LV Heatshrink 2:1 Polyolefin 1.2 Metre Lengths | Wall (WT) | Colour              | Pack Size |
|-------------|--|-----------|---------------------|-----------|
| HS40BK/L    | HEATSHRINK 40MM BLACK x 1.2m                   | 0.97      | Black (BK)          | 5         |
| HS40BL/L    | HEATSHRINK 40MM BLUE x 1.2m                    | 0.97      | Blue (BU)           | 5         |
| HS40CL/L    | HEATSHRINK 40MM CLEAR x 1.2m                   | 0.97      | Clear (CL)          | 5         |
| HS40GN/L    | HEATSHRINK 40MM GREEN x 1.2m                   | 0.97      | Green (GN)          | 5         |
| HS40RD/L    | HEATSHRINK 40MM RED x 1.2m                     | 0.97      | Red (RD)            | 5         |
| HS40WH/L    | HEATSHRINK 40MM WHITE x 1.2m                   | 0.97      | White (WH)          | 5         |
| HS40YL/L    | HEATSHRINK 40MM YELLOW x 1.2m                  | 0.97      | Yellow (YE)         | 5         |
| HS40YG/L    | HEATSHRINK 40MM YELLOW/GREEN x 1.2m            | 0.97      | Yellow-Green (YEGN) | 5         |
| HS50BK/L    | HEATSHRINK 50MM BLACK x 1.2m                   | 0.97      | Black (BK)          | 1         |
| HS50BL/L    | HEATSHRINK 50MM BLUE x 1.2m                    | 0.97      | Blue (BU)           | 1         |
| HS50CL/L    | HEATSHRINK 50MM CLEAR x 1.2m                   | 0.97      | Clear (CL)          | 1         |
| HS50GN/L    | HEATSHRINK 50MM GREEN x 1.2m                   | 0.97      | Green (GN)          | 1         |
| HS50RD/L    | HEATSHRINK 50MM RED x 1.2m                     | 0.97      | Red (RD)            | 1         |
| HS50WH/L    | HEATSHRINK 50MM WHITE x 1.2m                   | 0.97      | White (WH)          | 1         |
| HS50YL/L    | HEATSHRINK 50MM YELLOW x 1.2m                  | 0.97      | Yellow (YE)         | 1         |
| HS50YG/L    | HEATSHRINK 50MM YELLOW/ GREEN x1.2m            | 0.97      | Yellow-Green (YEGN) | 1         |
| HS76BK/L    | HEATSHRINK 76MM BLACK x 1.2m                   | 1.17      | Black (BK)          | 1         |
| HS76BL/L    | HEATSHRINK 76MM BLUE x 1.2m                    | 1.17      | Blue (BU)           | 1         |
| HS76GN/L    | HEATSHRINK 76MM GREEN x 1.2m                   | 1.17      | Green (GN)          | 1         |
| HS76RD/L    | HEATSHRINK 76MM RED x 1.2m                     | 1.17      | Red (RD)            | 1         |
| HS76WH/L    | HEATSHRINK 76MM WHITE x 1.2m                   | 1.17      | White (WH)          | 1         |
| HS76YL/L    | HEATSHRINK 76MM YELLOW x 1.2m                  | 1.17      | Yellow (YE)         | 1         |

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.



## Heat shrinkable tubing 2:1 - flexible and coloured

### HS-Reels

#### Features and benefits

- Thin wall, flexible polyolefin tubing
- Fast shrinking and low shrink temperature
- Meets and exceeds lots of industrial standards
- Big variety of different colours and sizes
- Flame retarded and UL224 VW1 listed



Available in a wide range of colours and sizes.

|  |                                 |
|--|---------------------------------|
| <b>MATERIAL</b>                            | Polyolefin, cross-linked (PO-X) |
| <b>Shrink Ratio</b>                        | 2:1                             |
| <b>Operating Temperature</b>               | -55 °C to +125 °C               |
| <b>Min. Shrink Temperature</b>             | +70 °C                          |
| <b>Longitudinal change after shrinkage</b> | +/- 5 %                         |
| <b>Dielectric Strength</b>                 | 32 kV/mm                        |
| <b>Flammability</b>                        | ASTM D2671, UL22                |
| <b>Voltage Rating</b>                      | 600V                            |

RoHS



Heat Shrinkable Tubing 2:1

| PART NUMBER  | LV Heatshrink 2:1 Polyolefin Reels              | Wall (WT) | Colour              | Reel Length |
|--------------|---|-----------|---------------------|-------------|
| HS1.5RD/R300 | HEATSHRINK 1.5MM RED REEL OF 300METRES          | 0.32      | Red (RD)            | 300m        |
| HS1.5WH/R300 | HEATSHRINK 1.5MM WHITE REEL OF 300METRES        | 0.32      | White (WH)          | 300m        |
| HS1.5BL/R300 | HEATSHRINK 1.5MM BLUE REEL OF 300METRES         | 0.32      | Blue (BU)           | 300m        |
| HS1.5BK/R300 | HEATSHRINK 1.5MM BLACK REEL OF 300METRES        | 0.32      | Black (BK)          | 300m        |
| HS1.5CL/R300 | HEATSHRINK 1.5MM CLEAR REEL OF 300METRES        | 0.32      | Clear (CL)          | 300m        |
| HS2.5RD/R200 | HEATSHRINK 2.5MM RED REEL OF 200METRES          | 0.44      | Red (RD)            | 200m        |
| HS2.5WH/R200 | HEATSHRINK 2.5MM WHITE REEL OF 200METRES        | 0.44      | White (WH)          | 200m        |
| HS2.5BL/R200 | HEATSHRINK 2.5MM BLUE REEL OF 200METRES         | 0.44      | Blue (BU)           | 200m        |
| HS2.5BK/R200 | HEATSHRINK 2.5MM BLACK REEL OF 200METRES        | 0.44      | Black (BK)          | 200m        |
| HS2.5CL/R200 | HEATSHRINK 2.5MM CLEAR REEL OF 200METRES        | 0.44      | Clear (CL)          | 200m        |
| HS2.5YG/R200 | HEATSHRINK 2.5MM YELLOW/GREEN REEL OF 200METRES | 0.44      | Yellow-Green (YEGN) | 200m        |
| HS3.5RD/R150 | HEATSHRINK 3.5MM RED REEL OF 150METRES          | 0.44      | Red (RD)            | 150m        |
| HS3.5WH/R150 | HEATSHRINK 3.5MM WHITE REEL OF 150METRES        | 0.44      | White (WH)          | 150m        |
| HS3.5BL/R150 | HEATSHRINK 3.5MM BLUE REEL OF 150METRES         | 0.44      | Blue (BU)           | 150m        |
| HS3.5BK/R150 | HEATSHRINK 3.5MM BLACK REEL OF 150METRES        | 0.44      | Black (BK)          | 150m        |
| HS3.5CL/R150 | HEATSHRINK 3.5MM CLEAR REEL OF 150METRES        | 0.44      | Clear (CL)          | 150m        |

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



| PART NUMBER  | LV Heatshrink 2:1 Polyolefin Reels              | Wall (WT) | Colour              | Reel Length |
|--------------|---|-----------|---------------------|-------------|
| HS3.5YG/R150 | HEATSHRINK 3.5MM YELLOW/GREEN REEL OF 150METRES | 0.44      | Yellow-Green (YEGN) | 150m        |
| HS5RD/R150   | HEATSHRINK 5MM RED REEL OF 150METRES            | 0.56      | Red (RD)            | 150m        |
| HS5WH/R150   | HEATSHRINK 5MM WHITE REEL OF 150METRES          | 0.56      | White (WH)          | 150m        |
| HS5BL/R150   | HEATSHRINK 5MM BLUE REEL OF 150METRES           | 0.56      | Blue (BU)           | 150m        |
| HS5BK/R150   | HEATSHRINK 5MM BLACK REEL OF 150METRES          | 0.56      | Black (BK)          | 150m        |
| HS5CL/R150   | HEATSHRINK 5MM CLEAR REEL OF 150METRES          | 0.56      | Clear (CL)          | 150m        |
| HS5YG/R150   | HEATSHRINK 5MM YELLOW/GREEN REEL OF 150METRES   | 0.56      | Yellow-Green (YEGN) | 150m        |
| HS7RD/R150   | HEATSHRINK 7MM RED REEL OF 150METRES            | 0.56      | Red (RD)            | 150m        |
| HS7WH/R150   | HEATSHRINK 7MM WHITE REEL OF 150METRES          | 0.56      | White (WH)          | 150m        |
| HS7BL/R150   | HEATSHRINK 7MM BLUE REEL OF 150METRES           | 0.56      | Blue (BU)           | 150m        |
| HS7BK/R150   | HEATSHRINK 7MM BLACK REEL OF 150METRES          | 0.56      | Black (BK)          | 150m        |
| HS7CL/R150   | HEATSHRINK 7MM CLEAR REEL OF 150METRES          | 0.56      | Clear (CL)          | 150m        |
| HS7YG/R150   | HEATSHRINK 7MM YELLOW/GREEN REEL OF 150METRES   | 0.56      | Yellow-Green (YEGN) | 150m        |
| HS10RD/R50   | HEATSHRINK 10MM RED REEL OF 50METRES            | 0.56      | Red (RD)            | 50m         |
| HS10WH/R50   | HEATSHRINK 10MM WHITE REEL OF 50METRES          | 0.56      | White (WH)          | 50m         |
| HS10BL/R50   | HEATSHRINK 10MM BLUE REEL OF 50METRES           | 0.56      | Blue (BU)           | 50m         |
| HS10BK/R50   | HEATSHRINK 10MM BLACK REEL OF 50METRES          | 0.56      | Black (BK)          | 50m         |
| HS10CL/R50   | HEATSHRINK 10MM CLEAR REEL OF 50METRES          | 0.56      | Clear (CL)          | 50m         |
| HS10YG/R50   | HEATSHRINK 10MM YELLOW/GREEN REEL OF 50METRES   | 0.56      | Yellow-Green (YEGN) | 50m         |
| HS13RD/R50   | HEATSHRINK 13MM RED REEL OF 50METRES            | 0.56      | Red (RD)            | 50m         |
| HS13WH/R50   | HEATSHRINK 13MM WHITE REEL OF 50METRES          | 0.56      | White (WH)          | 50m         |
| HS13BL/R50   | HEATSHRINK 13MM BLUE REEL OF 50METRES           | 0.56      | Blue (BU)           | 50m         |
| HS13BK/R50   | HEATSHRINK 13MM BLACK REEL OF 50METRES          | 0.56      | Black (BK)          | 50m         |
| HS13CL/R50   | HEATSHRINK 13MM CLEAR REEL OF 50METRES          | 0.56      | Clear (CL)          | 50m         |
| HS13YG/R50   | HEATSHRINK 13MM YELLOW/GREEN REEL OF 50METRES   | 0.56      | Yellow-Green (YEGN) | 50m         |
| HS20RD/R50   | HEATSHRINK 20MM RED REEL OF 50METRES            | 0.76      | Red (RD)            | 50m         |
| HS20WH/R50   | HEATSHRINK 20MM WHITE REEL OF 50METRES          | 0.76      | White (WH)          | 50m         |
| HS20BL/R50   | HEATSHRINK 20MM BLUE REEL OF 50METRES           | 0.76      | Blue (BU)           | 50m         |
| HS20BK/R50   | HEATSHRINK 20MM BLACK REEL OF 50METRES          | 0.76      | Black (BK)          | 50m         |
| HS20CL/R50   | HEATSHRINK 20MM CLEAR REEL OF 50METRES          | 0.76      | Clear (CL)          | 50m         |
| HS20YG/R50   | HEATSHRINK 20MM YELLOW/GREEN REEL OF 50METRES   | 0.76      | Yellow-Green (YEGN) | 50m         |
| HS25RD/R50   | HEATSHRINK 25MM RED REEL OF 50METRES            | 0.86      | Red (RD)            | 50m         |
| HS25WH/R50   | HEATSHRINK 25MM WHITE REEL OF 50METRES          | 0.86      | White (WH)          | 50m         |
| HS25BL/R50   | HEATSHRINK 25MM BLUE REEL OF 50METRES           | 0.86      | Blue (BU)           | 50m         |
| HS25BK/R50   | HEATSHRINK 25MM BLACK REEL OF 50METRES          | 0.86      | Black (BK)          | 50m         |
| HS25CL/R50   | HEATSHRINK 25MM CLEAR REEL OF 50METRES          | 0.86      | Clear (CL)          | 50m         |
| HS25YG/R50   | HEATSHRINK 25MM YELLOW/GREEN REEL OF 50METRES   | 0.86      | Yellow-Green (YEGN) | 50m         |
| HS40RD/R25   | HEATSHRINK 40MM RED REEL OF 25METRES            | 0.97      | Red (RD)            | 25m         |
| HS40WH/R25   | HEATSHRINK 40MM WHITE REEL OF 25METRES          | 0.97      | White (WH)          | 25m         |
| HS40BL/R25   | HEATSHRINK 40MM BLUE REEL OF 25METRES           | 0.97      | Blue (BU)           | 25m         |
| HS40BK/R25   | HEATSHRINK 40MM BLACK REEL OF 25METRES          | 0.97      | Black (BK)          | 25m         |
| HS40CL/R25   | HEATSHRINK 40MM CLEAR REEL OF 25METRES          | 0.97      | Clear (CL)          | 25m         |
| HS40YG/R25   | HEATSHRINK 40MM YELLOW/GREEN REEL OF 25METRES   | 0.97      | Yellow-Green (YEGN) | 25m         |
| HS50RD/R25   | HEATSHRINK 50MM RED REEL OF 25METRES            | 0.97      | Red (RD)            | 25m         |
| HS50WH/R25   | HEATSHRINK 50MM WHITE REEL OF 25METRES          | 0.97      | White (WH)          | 25m         |
| HS50BL/R25   | HEATSHRINK 50MM BLUE REEL OF 25METRES           | 0.97      | Blue (BU)           | 25m         |
| HS50BK/R25   | HEATSHRINK 50MM BLACK REEL OF 25METRES          | 0.97      | Black (BK)          | 25m         |
| HS50CL/R25   | HEATSHRINK 50MM CLEAR REEL OF 25METRES          | 0.97      | Clear (CL)          | 25m         |
| HS50YG/R25   | HEATSHRINK 50MM YELLOW/GREEN REEL OF 25METRES   | 0.97      | Yellow-Green (YEGN) | 25m         |

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.



## Heat shrinkable tubing 4:1 - 1.2 m lengths

### SA47-HT - standard wall adhesive lined

SA47-HT is a semi-rigid flame retardant polyolefin tubing with a thick inner liner of hot melt adhesive. The tubing has excellent tensile strength and strain relief. The adhesive liner provides excellent moisture protection. Ideal for electrical connections and splices in automobiles. Suitable for high temperature applications up to 150 °C. Tubing is black and hot melt adhesive is black.

#### Features and benefits

- Flexible, standard wall polyolefin heat shrink tubing
- Excellent tensile strength and strain relief
- Provides excellent moisture protection
- Tubing and hot melt adhesive is black
- Provides an environmental sealing of complex parts
- For high temperature applications up to 150 °C
- Flame retardant



One Step to the Web!



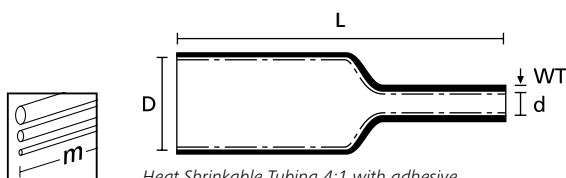
**SA47 has been developed with our Automotive partners to eliminate the risk of corrosion around cable splices and terminations.**



Heat shrink tubing SA47-HT for 150 °C application.



SA47-HT provides optimum protection against moisture in high temperature applications.



Heat Shrinkable Tubing 4:1 with adhesive.

|  |                                 |
|--|---------------------------------|
| <b>MATERIAL</b>                            | Polyolefin, cross-linked (PO-X) |
| <b>Shrink Ratio</b>                        | 4:1                             |
| <b>Operating Temperature</b>               | -40 °C to +150 °C               |
| <b>Min. Shrink Temperature</b>             | +130 °C                         |
| <b>Melting Point</b>                       | starting from +120 °C           |
| <b>Longitudinal change after shrinkage</b> | -10 % max.                      |
| <b>Dielectric Strength</b>                 | >20 kV/mm                       |
| <b>Flammability</b>                        | self-extinguishing              |



| TYPE             | Supplied<br>Ø D min. | Recov.<br>Ø d max. | Wall<br>(WT) | Length<br>(L) | Colour     | Tools | Article-No. |
|------------------|----------------------|--------------------|--------------|---------------|------------|-------|-------------|
| SA47-HT 7,6/1,7  | 7.6                  | 1.7                | 1.52         | 1.2 m         | Black (BK) | 30-32 | 301-10010   |
| SA47-HT 9,0/2,3  | 9.0                  | 2.3                | 1.52         | 1.2 m         | Black (BK) | 30-32 | 301-10011   |
| SA47-HT 11,6/2,5 | 11.6                 | 2.5                | 2.29         | 1.2 m         | Black (BK) | 30-32 | 301-10012   |
| SA47-HT 17,8/4,4 | 17.8                 | 4.4                | 2.54         | 1.2 m         | Black (BK) | 30-32 | 301-10013   |
| SA47-HT 24/6     | 24.0                 | 6.0                | 2.54         | 1.2 m         | Black (BK) | 30-32 | 301-10015   |
| SA47-HT 32/8     | 32.0                 | 8.0                | 2.54         | 1.2 m         | Black (BK) | 30-32 | 301-10014   |

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.





### End Caps

#### Helashrink HSEC, low voltage with adhesive coating

End caps are suitable for use on both polymeric and paper insulated, lead jacketed cables which may include aluminium or steel armouring.

#### Features and benefits

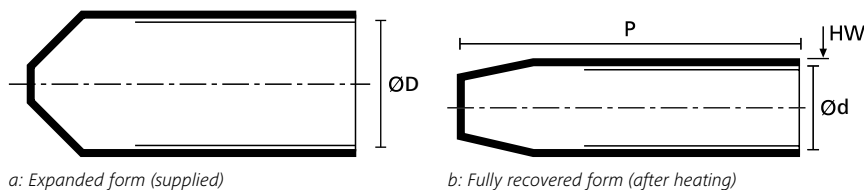
- Seal cables during storage or transportation
- Insulating cap for live LV cables (0.6/1kV)
- Adhesive lining for excellent environmental seal
- High shrink ratio to minimise number of sizes needed



The appropriate end cap for every cable diameter, and cable types.

|                                |                                 |
|--------------------------------|---------------------------------|
| <b>MATERIAL</b>                | Polyolefin, cross-linked (PO-X) |
| <b>Colour</b>                  | Black (BK)                      |
| <b>Shrink Ratio</b>            | up to 3:1                       |
| <b>Min. Shrink Temperature</b> | +135 °C                         |
| <b>Operating Temperature</b>   | -55 °C to +80 °C                |
| <b>Dielectric Strength</b>     | 15 kV/mm                        |
| <b>Flammability</b>            | ASTM D638                       |

**RoHS** ✓



a: Expanded form (supplied)

b: Fully recovered form (after heating)

| PART NUMBER | ØD min.<br>a | Ød max.<br>b | P ±<br>10 % | HW ±<br>10 % |
|-------------|--------------|--------------|-------------|--------------|
| HSEC105     | 12.0         | 4.0          | 40.0        | 2.6          |
| HSEC115     | 20.0         | 6.0          | 55.0        | 2.8          |
| HSEC120     | 25.0         | 8.5          | 68.0        | 2.8          |
| HSEC135     | 40.0         | 16.0         | 83.0        | 3.3          |
| HSEC140     | 55.0         | 26.0         | 103.0       | 3.5          |
| HSEC150     | 75.0         | 36.0         | 120.0       | 4.0          |
| HSEC160     | 100.0        | 52.0         | 140.0       | 4.0          |
| HSEC170     | 120.0        | 60.0         | 150.0       | 4.0          |
| HSEC180     | 145.0        | 60.0         | 150.0       | 4.0          |
| HSEC190     | 160.0        | 80.0         | 150.0       | 4.0          |

All dimensions in mm. Subject to technical changes.



**You expect tailormade products**  
We offer you best-fit solutions

## **Heat Shrinkable moulded shapes solutions that meet your special demands**

**HellermannTyton heat shrinkable moulded shapes combine the advantages of quick, easy installation with high electric strength, mechanical toughness and superior chemical and environmental resistance.**

Our products offer important functional and cost saving benefits for electrical and electronic applications ranging from insulation and protection of individual components to fabrication of complete inter-connecting cable harness assemblies.

Strain-relieving boots, transitions and connector backshell covers, as well as other specialised shapes, are available in a wide range of sizes and options. HellermannTyton's extensive product line includes low profile, bulbous and lipped types for use on circular and D-type connectors as well as complex multiway transitions. Only a minimum number of shapes are needed to cover a full range.

## Your One-Stop-Cable-Management-Source: HellermannTyton

### Applications

The use of our heat shrinkable moulded shapes in conjunction with our specialist heat shrinkable tubings makes it easy to ensure the proper degree of mechanical support, strain relief and environmental protection. Encapsulating the complete harnessing and interconnection system to the desired configuration is easily and neatly accomplished, with minimum weight and bulk.

### Choice of Materials

A range of specially formulated materials is available to meet a variety of performance requirements.



*Low Profile Convolute Boots*



*End Caps*



*Right Angle Shapes*

Comprehensive brochure  
available on request.

