

## MOULDED PARTS



AEC/AEC-L  
AMEC  
ABOS  
ABOS-CON  
ABOS MV  
AMBT-MV  
AATRS

## Moulded Parts

### SELECTION GUIDE

Part number	Description	Ratio	Temperature	Zero Halogen	RoHS	UL VW1	Flame retardant	Waterproof	Page
AEC/AEC-L	Cable end caps for various cable applications	3:1	110°C	No	Yes	No	No	Yes	69
AMEC	Cable Mini End caps	3:1	125°C	No	Yes	No	No	Yes	70
ABOS	Low voltage breakout molded shapes	3:1	110°C	No	Yes	No	Yes	Yes	71-72
ABOS-CON	Conductive breakout molded shapes for MV applications	3:1	105°C	No	Yes	No	No	Yes	73
ABOS-MV	Medium voltage breakout molded shapes, anti-tracking	3:1	105°C	No	Yes	No	No	Yes	74
AMBT-MV	Bushing moulded shapes, anti-tracking	3:1	105°C	No	Yes	No	No	No	75
AATRS	Rain skirt moulded shapes for MV applications	3:1	110°C	No	Yes	No	No	Yes	76



### Applications

Recommended for use both in open air and on underground power distribution cables with PVC, lead or XLPE sheets. Definitive recovery with the layer of spiral coated hot melt adhesive.

### Features

Resistant to oxydation, ozone, UV radiation. Protects power cables up to 1000 V and telecommunication cables. Very easy to fit over cable end. Environment definitive watertight seal. Material: thermally stabilized crosslinked polyolefin, coated with specially hot melt adhesive.

### Various

Operating temperature: -55°C to +110°C  
Minimum full recovery: 120 °C

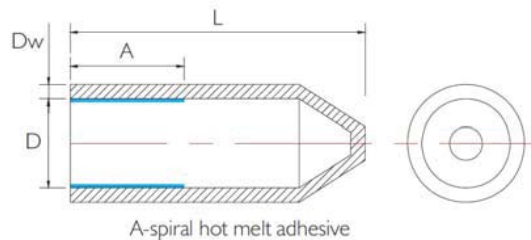
Effectively offering protection against oxidation, ozone, UV-radiation.  
Coated with hot melt adhesive to ensure environment seal.

Standard color: Black.



### Technical data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 638	>14 MPa
Elongation at break	ASTM D 638	> 400%
Elongation at break after aging	150°C/168 hrs.	>300%
Density	ASTM D 792	1.05
Flammability	/	Flammable
Dielectric strength	IEC 243	>15 kV/mm
Volume resistance	IEC 93	>10 <sup>14</sup> Ω.cm



### Dimensions

AEC	As supplied (mm)	After recovered (mm)				Cable Diameter (mm)
	D (min)	D (max)	A (±10%)	L (±10%)	Dw (±5%)	
Standard length end caps						
AEC 12/4	12	4.0	15	40	2.6	4-10
AEC 14/5	14	5.0	18	45	2.2	5-12
AEC 20/6	20	6.0	25	55	2.8	6-16
AEC 25/8.5	25	8.5	30	68	2.8	10-20
AEC 35/16	35	16.0	35	83	3.3	17-30
AEC 40/15	40	15.0	40	83	3.3	18-32
AEC 55/26	55	26.0	50	103	3.5	28-48
AEC 75/36	75	36.0	55	120	4.0	45-68
AEC 100/52	100	52.0	70	140	4.0	55-90
AEC 120/60	120	60.0	70	150	4.0	65-110
AEC 145/60	145	60.0	70	150	4.0	70-130
AEC 160/82	160	82.0	70	150	4.0	90-150
AEC 200/90	200	90.0	70	160	4.2	100-180
Extended length end cap						
AEC-L 14/5	14	5.0	30	55	2.2	5-12
AEC-L 42/15	42	15.0	40	110	3.3	18-34
AEC-L 55/23	55	23.0	70	140	3.8	25-48
AEC-L 62/23	62	23.0	70	140	3.8	25-55
AEC-L 75/32	75	32.0	70	150	4.0	40-68
AEC-L 75/36	75	36.0	70	170	4.2	45-68
AEC-L 105/45	105	45.0	65	150	4.0	50-90

# MOULDED PARTS

## AMEC

### Cable mini end caps



#### Applications

AMEC is a dual wall heat shrinkable mini end cap designed to insulate and terminate connectors, electrical wires and other electrical equipment. Used to protect auto wires, shipping cable, bundle wires and metal tubes against water and moisture.

#### Features

Good electrical insulation and waterproof connection. Polyolefin, coated with specially hot melt adhesive.

#### Various

Operating temperature: -45°C to +125°C  
Minimum shrink temperature: 80°C

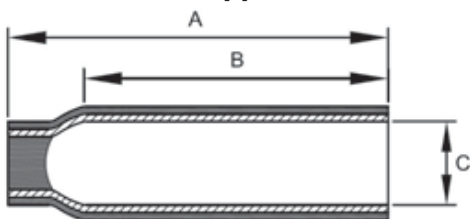
Standard color: Black.  
Packaging: 50 units.  
Special size or length available on request.



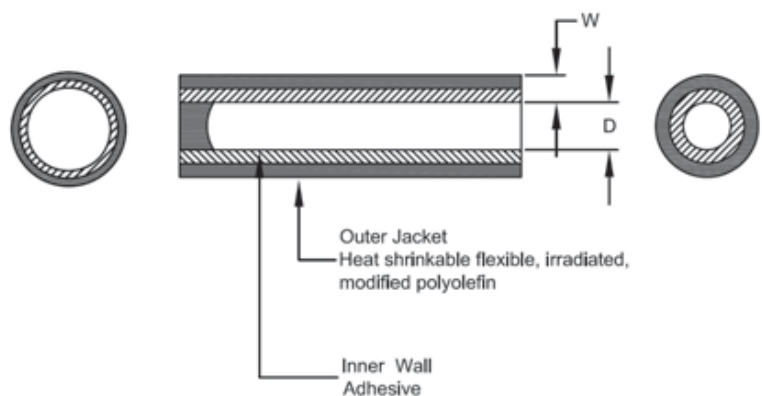
#### Technical data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-45°C to +125°C
Tensile strength	ASTM D 2671	>14 MPa min.
Elongation at break	ASTM D 2671	250% min.
Elongation at break after aging	158°C/168 hrs.	>300% min.
Density	ASTM D 792	1.05
Flammability	/	Flammable
Dielectric resistance	IEC 243	15 kV/mm min.
Volume resistance	IEC 93	10 <sup>14</sup> Ω cm min.

#### As supplied



#### After unrestricted recovery



#### Dimensions

AMEC	As supplied (mm)			After recovery (mm)		
	A	B	C	D	W	Adhesive wall (min.)
	± 10%	± 10%	Min.	Max.	Min.	
3.0/1.0	25	20	3.4	1.0	1.00	0.50
4.8/1.5	30	25	5.0	1.5	1.00	0.50
6.0/2.0	30	25	6.4	2.0	1.00	0.50
9.0/3.0	35	27	10.0	3.0	1.40	0.60



### Applications

ABOS LV heat shrinkable breakouts are made from radiation cross linked polyolefin. The material is weather and UV resistant and has excellent electrical insulating properties which makes them widely used in the electric power industry on low voltage terminations both indoor and outdoor.

### Features

Operating temperature:- 55°C to +110°C  
Minimum fully recovered temperature: 130 °C

UV Resistant.  
2 cores and 3 cores.

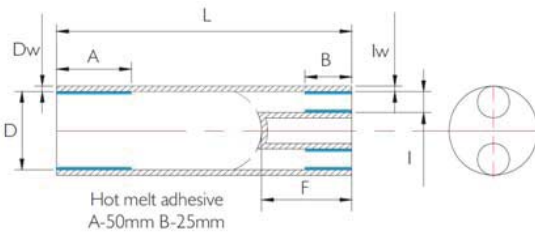
Standard color: Black.



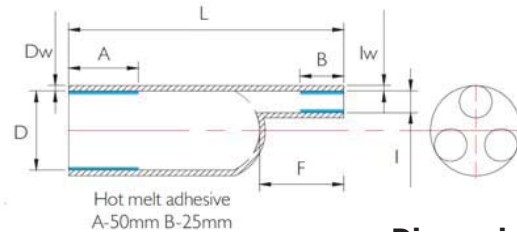
### Technical data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	13MPa (min.)
Tensile strength after thermal aging	ASTM D 2671 (120°C/168hrs.)	10 MPa (min.)
Elongation at break after thermal aging	ASTM D 2671 (120°C/168hrs.)	250% (min.)
Elongation at break	ASTM D 2671	300% (min.)
Water absorption	ISO 62	1% (max.)
Volume resistance	IEC 93	10 <sup>13</sup> Ω cm (min.)
Dielectric strength	IEC 243	15kV/mm (min.)
Flammability	/	Flammable

**ABOS-LV2**



**ABOS-LV3**



### Dimensions

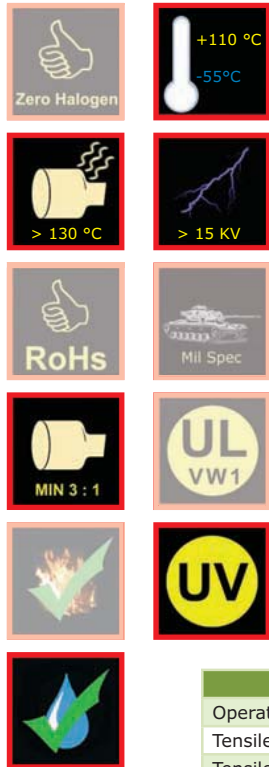
ABOS	D (mm)		I (mm)		Recovered length		Recovered wall thickness	
	a (min.)	b (max.)	a (min.)	b (max.)	L (mm)	F (mm)	Dw (mm)	Iw (mm)
<b>2 cores breakout</b>								
ABOS-LV2 22/8	22	8	9	3.5	55	18	2.2	1.8
ABOS-LV2 30/12	30	12	14	4.5	93	23	2.6	2.2
ABOS-LV2 40/16	40	16	15	5.0	125	35	2.1	2.1
ABOS-LV2 60/23	60	23	25	7.5	118	29	2.6	2.6
ABOS-LV2 60/23-L	60	23	25	7.5	155	45	2.6	2.6
ABOS-LV2 90-60	90	60	30	8.5	190	50	3.0	3.0
ABOS-LV2 150/90	150	90	20	6.5	150	70	3.0	3.0
<b>3 cores breakout</b>								
ABOS LV3 38/16	38	16	15	4.5	110	35	2.1	2.1
ABOS-LV3 40/16-L	40	16	15	4.5	125	35	2.1	2.1
ABOS-LV3 60/25	60	25	25	8.0	165	50	3.0	2.5
ABOS-LV3 60/24-L	60	24	25	8.0	180	45	3.2	2.8
ABOS-LV3 80/38	80	38	35	11.0	185	55	3.5	3.5
ABOS-LV3 80/38-L	80	38	35	11.0	215	57	4.0	4.0
ABOS-LV3 110/50	110	50	46	17.5	250	65	4.0	4.0
ABOS-LV3 125/57	125	57	55	20.0	260	75	4.0	4.0
ABOS-LV3 140/70	140	70	62	26.0	280	75	4.0	4.0
ABOS-LV3 170/77	170	77	75	28.0	280	80	4.0	4.0

\* a: as supplied b: after recovery

# MOULDED PARTS

## ABOS

### LV breakouts 4-5 fingers



### Applications

ABOS LV heat shrinkable breakouts are made from radiation cross linked polyolefin. The material is weather and UV resistant and has excellent electrical insulating properties which makes them widely used in the electric power industry on low voltage terminations both indoor and outdoor.

### Features

Operating temperature:- 55°C to +110°C  
Minimum fully recovered temperature: 130 °C

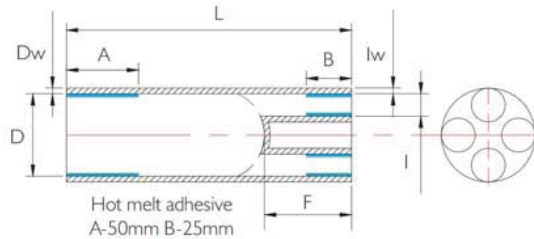
UV Resistant.  
4 cores and 5 cores.

Standard color: Black.

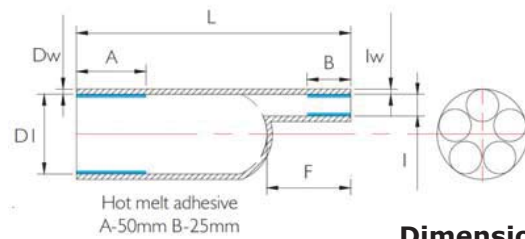
### Technical data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	13MPa (min.)
Tensile strength after thermal aging	ASTM D 2671 (120°C/168hrs)	10 MPa (min.)
Elongation at break after thermal aging	ASTM D 2671 (120°C/168hrs)	250% (min.)
Elongation at break	ASTM D 2671	300% (min.)
Water absorption	ISO 62	1% (max.)
Volume resistance	IEC 93	10 <sup>13</sup> Ω cm (min.)
Dielectric strength	IEC 243	15kV/mm (min.)
Flammability	/	Flammable

ABOS-LV4



ABOS-LV5



### Dimensions

ABOS	D (mm)		I (mm)		Recovered length		Recovered wall thickness	
	a (min.)	b (max.)	a (min.)	b (max.)	L (mm)	F (mm)	Dw (mm)	Iw (mm)
<b>4 cores breakout</b>								
ABOS LV4 40/15	40	15	14	3.5	105	26	2.2	2.0
ABOS LV4 55/21	55	21	20	5.0	150	40	3.1	2.6
ABOS LV4 65/26	65	26	26	7.0	175	45	3.3	2.9
ABOS LV4 75/26	75	26	28	7.0	175	45	3.3	2.9
ABOS LV4 82/37	82	37	30	9.0	190	60	4.0	3.0
ABOS LV4 90/37	90	37	32	9.0	190	60	4.0	3.0
ABOS LV4 100/47	100	47	38	12.0	198	58	4.0	3.0
ABOS LV4 125/52	125	52	52	15.0	240	75	4.0	4.0
ABOS LV4 160/70	160	70	64	19.0	260	75	4.0	4.0
<b>5 cores breakout</b>								
ABOS LV5 40/19	40	19	13	4.0	98	25	2.5	2.0
ABOS LV5 55/24	55	24	18	5.0	155	40	3.2	2.6
ABOS LV5 80/33	80	33	26	8.0	175	53	3.0	2.8
ABOS LV5 100/42	100	42	34	10.0	190	60	3.0	3.0

\* a: as supplied b: after recovery



### Applications

These three finger heat shrinkable conductive breakouts are electrically semi-conductive and ideal for creating a conductive screen on cable terminations up to 36kV cables.

The three fingers and the base are covered with insulating mastic which secures a watertight seal. They are also UV and weather resistant.

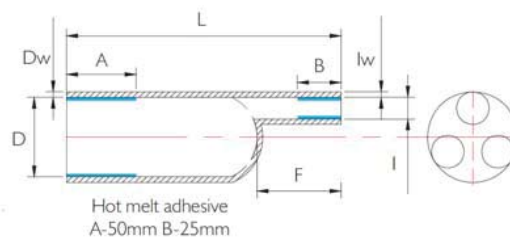
### Features

Operating temperature: -55°C to +105°C  
Standard color: Black.



### Technical data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55 °C to +105 °C
Tensile strength	ASTM D 2671	12 MPa min.
Tensile strength after thermal aging (120 °C/168 hrs.)	ASTM D 2671	10 MPa min.
Elongation at break	ASTM D 2671	250% min
Elongation at break after thermal (120 °C/168 hrs.)	ASTM D 2671	200% min
Water absorption	ISO 62	1% max
Volume resistance	IEC 93	10 <sup>4</sup> Ω.cm (max.)



### Dimensions

ABOS-MV	D (mm)		I (mm)		Recovered length ±10%		Recovered wall ±10%	
	a (min)	b (max)	a (min)	b (max)	L (mm)	F (mm)	Dw (mm)	Iv (mm)
60/24	60	24	25	8.0	183	45	3.0	2.5
80/38	80	38	35	11.0	215	57	4.0	4.0
110/50	110	50	46	17.5	250	65	4.0	4.0
125/57	125	57	55	20.0	260	57	4.0	4.0
140/70	140	70	62	26.0	280	70	4.0	4.0

\* a: as supplied b: after recovery



#### Applications

These three finger heat shrinkable anti-tracking breakouts are ideal for terminations for up to 36kV cables.

The three fingers and the base are covered with anti-tracking mastic which secures a complete environmental and electrical seal.

The breakouts are also UV resistant and flame retardant.

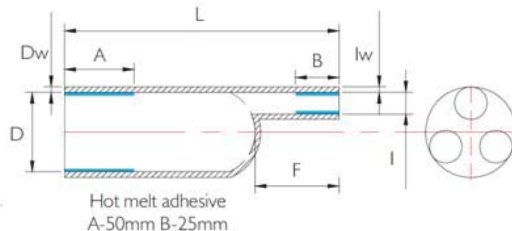
#### Features

Operating temperature: -55°C to +105°C

Standard color: Red.

#### Technical data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55 °C to +105 °C
Tensile strength	ASTM D 2671	8 MPa min.
Tensile strength after thermal aging (120 °C/168 hrs.)	ASTM D 2671	7 MPa min.
Elongation at break	ASTM D 2671	300% min
Elongation at break after thermal (120 °C/168 hrs.)	ASTM D 2671	200% min
Water absorption	ISO 62	1% max
Volume resistance	IEC 93	10 <sup>13</sup> Ω.cm
Dielectric strength	IEC 243	20 kV/mm min.
Resistance to tracking	ASTM D 2303	No tracking



#### Dimensions

ABOS-MV	D (mm)		I (mm)		Recovered length ±10%		Recovered wall ±10%	
	a (min)	b (max)	a (min)	b (max)	L (mm)	F (mm)	Dw (mm)	Iv (mm)
60/24	60	24	25	8.0	180	45	3.0	2.5
80/38	80	38	35	11.0	210	57	4.0	4.0
110/50	110	50	46	17.5	250	65	4.0	4.0
125/57	125	57	55	20.0	260	57	4.0	4.0
140/70	140	70	62	26.0	280	70	4.0	4.0
170/77	170	77	75	28.0	280	80	4.0	4.0

\* a: as supplied b: after recovery



#### Applications

These products have been developed to fit the two basic types of bushing arrangement, right angle and in line. Their main purpose is to minimize the required space and insulate terminations in compact size equipment and cable boxes.

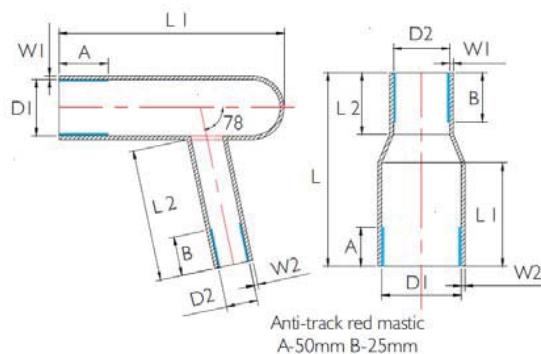
#### Features

Minimum shrink temperature: 110°C  
Standard color: Red.



#### Technical data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +105°C
Tensile strength	ASTM D 2671	12 MPa min.
Tensile strength after aging 120%, 168 hrs.	ASTM D 2671	8.5 MPa min.
Elongation at break	ASTM D 2671	300%
Elongation at break after aging 120%, 168 hrs.	ASTM D 2671	200%
Cold bend	ASTM D 2671 (40°C/4hrs.)	No cracking
Volume resistance	ASTM D 2303	10 <sup>13</sup> Ω.cm
Dielectric strength	ASTM D 2671	15 kV/mm min.
Flammability (Oxygen index)	IEC 93	>25



#### Dimensions

Type	Order Ref No	Bushing-end Diameter		Cable-end Diameter		Bushing-end Length	Cable-end Length	Full Length
		D1(mm)	D2(mm)	D1(mm)	D2(mm)	L1(mm)	L2(mm)	L(mm)
Right angle	AMBT R	80	35	35	18	170	125	-
Right angle	AMBT R	80	35	50	26	170	125	-
Right angle	AMBT R	95	35	70	26	160	140	-
Straight	AMBT S	80	32	34	19	145	30	220
Straight	AMBT S	80	32	58	19	145	30	220

a: as supplied, b: Full recovered



#### Applications

Used to provide insulation for cable outdoor termination.

#### Features:

Coated with weather resistant mastic. High creep resistance and antitracking properties of the products provide maximum operation reliability.

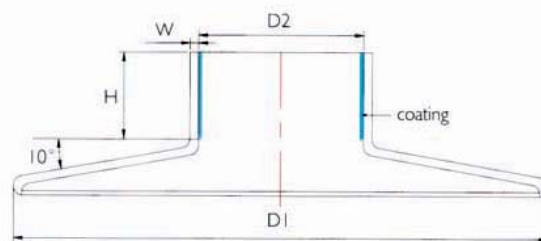


#### Various

Shrink temperature: minimum full recovery temperature 110 °C.  
Material: no PBB's, PBBO's, or PBBE's. Polyolefin compounds coated with antitrack.  
Standard color: Red.

#### Technical data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 13 MPa
Tensile strength after aging 120°C, 168 hrs.	ASTM D 2671	≥ 10.4 MPa
Elongation at break	ASTM D 2671	≥ 400%
Elongation at break 120C, 168 hrs.	ASTM D 2671	≥ 350%
Dielectric strength	ASTM D 2761	≥ 15KV / mm
Tracking resistance 3.75KV, 1 hr	ASTM D 2671	Pass
Electric constant	ASTM D 2303	3.0
Cold bend -40C, 4h.	IEC 250	No racking
Volume resistance	ASTM D 2303	10 <sup>14</sup> Ω cm
Flammability (oxygen index)	IEC 93	≥ 25
Copper corrosion 120C, 168 hrs.	ASTM D 2671	No corrosion



#### Dimensions

Size	As Supplied (mm)		D Recovered (mm)	h Minimum (mm)	W ±10% (mm)
	Expanded Minimum (mm)	After Recovery Maximum (nominal)			
AATRS 35/12	35	12	95	18	3.0
48/20	48	20	120	21	3.0
60/20	60	20	120	21	3.0
60/30	60	30	140	25	3.0
75/30	75	30	140	25	3.0
100/35	100	35	140	35	3.0
120/45	120	45	200	35	3.0