



CHANNELL

Heat-shrinkable products for
power distribution networks



SPECIFICATIONS

Low voltage series - moulded products

Endcaps / anode caps

Physical		
Hardness	50±3 ShoreD	ISO 868
Tensile strength	>16.5MPa	ISO 527
Ultimate elongation	>350 %	ISO 527
Low temperature flexibility	-40°C pass	ASTM 2671
Peel strength - T type	XLPE/XLPE >300N/25mm XLPE/Lead >200N/25mm	
Thermal		
Thermal ageing	168 hours at 150°C	BS 903
Tensile strength	>16.0 MPa	BS 903
Ultimate elongation	>350%	BS 903
Thermal shock-4hrs/225°C	No cracks splits or flaws	BS903
Chemical		
Water absorption	>0.2%	ISO 62
Electrical		
Dielectric strength	>12.0 kV/mm	IEC 243

Low voltage series - moulded products

Cable breakouts

Physical			
Tensile strength	9.0MPa		ISO 527
Ultimate elongation	250 %		ISO 527
Hardness	53±3 ShoreD		ISO 868
Flame retardance	Self extinguishing		ESI 09-11
Thermal			
Thermal ageing	168 hours at 150°C		BS903
Tensile strength	9.0MPa		BS903
Ultimate elongation	250%		BS903
Thermal shock-4hrs/225°C	No cracks splits or flaws		BS903
Electrical			
Dielectric strength	>15KV/mm		IEC 243
Chemical			
Water absorption	<0.5%		ISO 62
Chemical resistance			ISO 1817
		Tensile strength Map	Elongation %
• 1M acids and salts	168 hrs at 50°C	9.0	250
• 1M alkali	168 hrs at 50°C	9.0	250
• Fuel oil to BS2868	24 hrs at 23°C	8.8	250
• Insulating oil to BS148	24 hrs at 23°C	9.0	250
• Water	24 hrs at 85°C	9.0	250
• MIND compound	24 hrs at 85°C	9.0	250

Low voltage series - extruded products

Tubes (medium / heavy wall) / power-jointing kits

Physical		
Shrinking ratio	3:1 to 4:1	-
Tensile strength	≥12N/mm ²	ASTM D638
Elongation	≥400%	ASTM D638
Longitudinal shrinking	≤10%	ASTM D2671
Permeability	≤0.1%	UNIISO62
Secant module 2%	≥160MPa	ASTM D882
Thermal		
Continuous temperature limits	-55°C +125°C	IEC216
Shrinking temperature	120°C	IEC216
Thermal shock	No damage	ASTM D2671-746
Cracking low temperature	≥55°C	ASTM D2671
Flammability	Not self extinguishing	ASDM D867
Electrical		
Dielectric strength	≥15kV/mm	ASTM D149
Volume resistivity	≥1x10 ¹² Ωcm	ASTM D257
Chemical		
Mould resistance	No growth	ASTM G21-D638
Oil resistance	Excellent	ISO175
Environment resistance	No damage	ASTM D1693

Medium voltage series - moulded products

Rain sheds / spreader plates / cable breakouts - three-way / right-angled shrouds

Physical		
Tensile strength	≥8N/mm ²	ASTM D 638/UNI5819-66
Elongation	≥200%	UNI 5819-66
Permeability	≤0.3%	UNI ISO 62
Thermal		
Continuous temperature limits	-40°C +100°C	IEC216
Shrinking temperature	120°C	IEC216
Thermal shock	No damage	ASTM D 2671-746
Flammability	Self extinguishing	ASTM D 876
Electrical		
Dielectric strength	≥15kV/mm	ASTM D 149
Volume resistivity	≥1x10 ¹⁴ Ωcm	ASTM D 257
Permittivity	≤3	ASTM D 150
Track index	KA1	IEC 112
Chemical		
Mould resistance	No growth	ASTM G21- D638

MEDIUM VOLTAGE SERIES

Channell's range of heat-shrinkable products offers power utilities a comprehensive solution for cable connectivity and termination in medium voltage networks. All the products in the range are made from thermally stabilised, semi-rigid, cross-linked, carbonless (anti-tracking) polyolefin compound which weathers well and offers excellent thermal and abrasion resistance. It is resistant to environmental stress cracking and does not corrode conductors. It is suitable for use at ambient conductor temperatures and as electrical insulation and environmental protection.

Features

- High tensile strength
- Good long-term stability
- High chemical and solvent resistance
- Wide shrinkage range means fewer sizes are required
- Continuous operating temperature range -55 to +120°C
- Unaffected by ultra-violet light
- Unlimited storage life



Channell Type E end caps

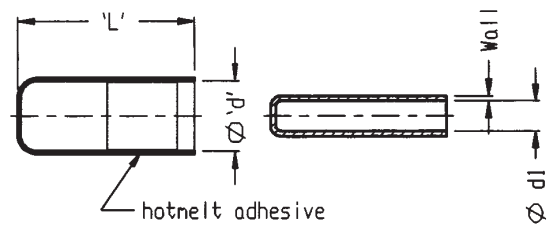
Channell Type E heat-shrinkable end caps provide a water-tight and dust-tight seal for the ends of underground or over-head power, pilot and supervisory cables.

The internal surface of each end cap is covered with a layer of hot melt adhesive which retains its flexible properties after recovery.



Ordering information and dimensions

Ordering reference	Description	Cable diameter (mm)	Supplied		Recovered		Nominal wall thickness $\pm 10\%$ (mm)
			d (mm)	L (mm)	d1 (mm)		
HCP 3005	E 12-4	4-9	12.0	35.0	4.0	2.0	
HCP 3015	E 16-6	6-13	16.0	58.0	6.0	2.0	
HCP 3020	E 20-8	8-18	20.0	52.0	7.5	2.5	
HCP 3022	E 23-8	8-20	23.0	54.0	7.5	2.5	
HCP 3025	E 26-11	13-22	26.0	77.0	11.0	2.5	
HCP 3034	E 36-15	16-32	36.5	85.0	14.5	3.4	
HCP 3040	E 40-17	18-36	40.0	98.0	17.0	3.0	
HCP 3045	E 57-22	28-50	57.0	141.5	22.0	3.0	
HCP 3050	E 75-32	38-70	75.0	165.0	32.0	4.0	
HCP 3060	E 105-45	55-95	105.0	175.0	45.0	4.0	
HCP 3070	E 120-60	70-110	120.0	195.0	60.0	4.0	
HCP 3036	EL 36-15	17-31	36.0	180.0	15.0	3.5	
HCP 3055	EL 75-32	38-70	75.0	185.0	32.0	4.0	



Channell Type EA anode caps

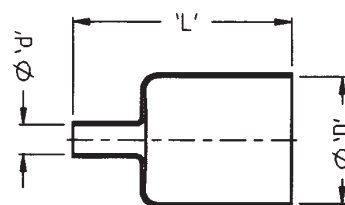
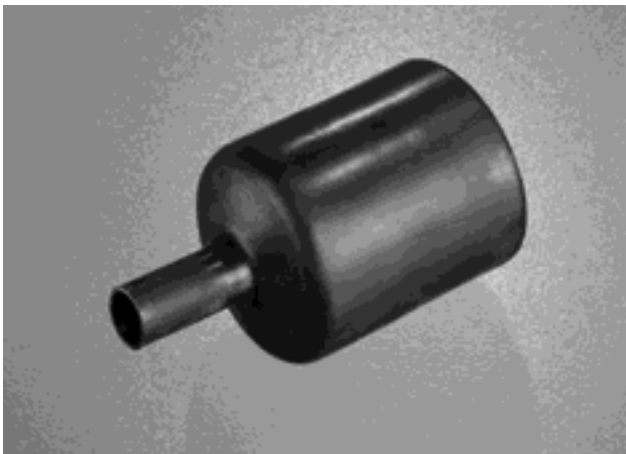
Channell anode caps provide protection for anode terminals, even in harsh environmental conditions.

Features

- Protective mastic internal lining
- Resistant to chemical and moisture attack

Ordering information and dimensions

Ordering reference	Description	Supplied		Recovered		Anode diameter (mm)	Anode head diameter (mm)
		D (mm)	d (mm)	D (mm)	d (mm)		
HAC 0086	EA 86-45	86	18	45	6.5	51	76
HAC 0112	EA 112-60	112	18	60	6.5	76	102



LOW VOLTAGE SERIES

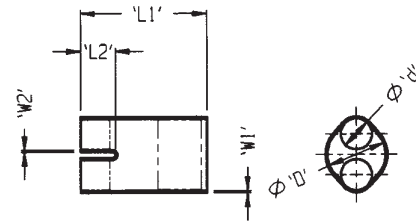
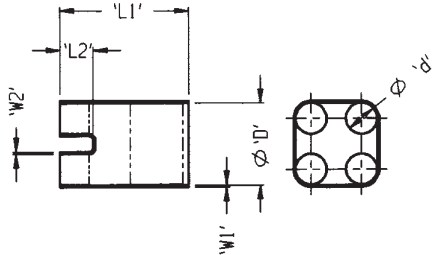
Channell Type EB cable breakouts

Channell Type EB heat-shrinkable cable breakouts provide economical termination of low voltage, multi-core distribution and service cables.



Ordering information and dimensions

Ordering reference	Description	Cable size (mm)	Supplied		Recovered		L ₁ (mm)	L ₂ (mm)	W ₁ (mm)	W ₂ (mm)
			D (mm)	d (mm)	D (mm)	d (mm)				
HBO 2300	EB 2-30-9	6-35	30	15	9	4.0	90	25	2	2
HBO 3560	EB 3-56-22	70-150	56	30	22	9.0	180	44	3	2
HBO 3800	EB 3-80-35	185-300	80	45	35	17.5	178	44	4	3
HBO 4350	EB 4-35-12	6-35	35	16	12	4.0	100	25	2.5	1.5
HBO 4420	EB 4-42-12	6-50	42	16	12	4.0	100	25	2.5	1.5
HBO 4550	EB 4-55-25	50-150	55	25	25	9.4	190	45	3.5	2.8
HBO 4556	EB 4-55-25L	50-150	55	25	25	9.4	235	45	3.5	2.8
HBO 4610	EB 4-60-23	35-95	60	30	23	6.0	200	38	3.5	2.8
HBO 4680	EB 4-68-25	70-185	68	34	25	9.4	190	45	3.5	2.8
HBO 4686	EB 4-68-25L	70-185	68	34	25	9.4	235	45	3.5	2.8
HBO 4780	EB 4-78-30	85-300	78	38	30	12.0	205	45	4	3.3
HBO 4786	EB 4-78-30L	185-300	78	38	30	12.0	235	45	4	3.3
HBO 4900	EB 4-90-30	300-400	90	38	30	12.0	205	45	4	3.3
HBO 4906	EB 4-90-30L	300-400	90	38	30	12.0	235	45	4	3.3



Channell Type ECSG cable sealing gland

Channell Type ECSG heat-shrinkable cable sealing glands provide water-tight cable or pipe entry into enclosures or through bulk heads, using standard ISO fittings. They are suitable for cable or pipe diameters from 3mm to 52mm.

The body is moulded from tough UV stabilised nylon 6.6. The tube is made from semi-rigid, cross-linked polyolefin compound, and the seal washers, from high quality nylon sealing compound.

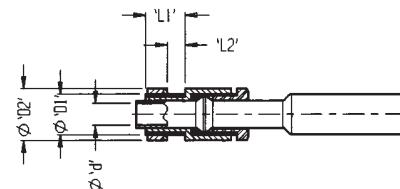
Features

- Blanks available for resealing of enclosure or bulk head after cables have been removed
- Unpressurised continuous operating temperature range -20 to +60°C



Ordering information and dimensions

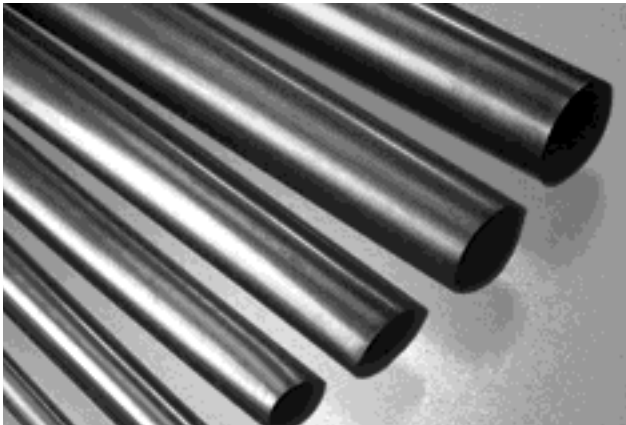
Ordering reference	Description	Supplied d (mm)	Recovered d (mm)	Supplied		Recovered	
				L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)
HSG 5101	ECSG 1	11	3	11	3	20.5	27
HSG 5102	ECSG 2	11	3	20	10	20.5	27
HSG 5103	ECSG 3	16	5	12	3	25	32
HSG 5104	ECSG 4	16	5	20	10	25	32
HSG 5105	ECSG 5	22.5	5	13	5	32	42
HSG 5106	ECSG 6	22.5	5	20	10	32	42
HSG 5107	ECSG 7	27	10	20.5	8	40	52
HSG 5108	ECSG 8	37	22	24	10	50	66
HSG 5109	ECSG 9	52	22	27	11	63.5	84



Channell Type EST-C tubes

Channell Type EST-C heat-shrinkable tubes provide a cost-effective and long-lasting solution for replacement of oversheaths and insulations for all types of low voltage power

distribution, control and supervisory cables. Tubes are available in heavy and medium wall versions with an optional hot melt adhesive lining, for good retention of flexibility after recovery.



Ordering information and dimensions

Ordering reference	Description	Supplied D (mm)	Recovered D (mm)	W ± 10% (mm)
Medium wall				
HST 14120	EST-C 12-3-1.5	12	3	1.5
HST 14190	EST-C 19-6-2.0	19	6	2.0
HST 14300	EST-C 30-8-2.0	30	8	2.0
HST 14400	EST-C 40-12-2.1	40	12	2.1
HST 14500	EST-C 50-16-2.2	50	16	2.2
HST 14630	EST-C 63-19-2.5	63	19	2.5
HST 14750	EST-C 75-22-3.0	75	22	3.0
HST 14950	EST-C 95-30-3.5	95	30	3.5
HST 141150	EST-C 115-34-3.5	115	34	3.5
HST 141400	EST-C 140-42-3.5	140	42	3.5
Heavy wall				
HST 15130	EST-C 13-4-2.5	13	4	2.5
HST 15190	EST-C 19-6-2.5	19	6	2.5
HST 15280	EST-C 28-9-3.0	28	9	3.0
HST 15400	EST-C 40-12-4.1	40	12	4.1
HST 15510	EST-C 51-16-4.1	51	16	4.1
HST 15680	EST-C 68-22-4.1	68	22	4.1
HST 15850	EST-C 85-25-4.6	85	25	4.6
HST 15900	EST-C 90-30-4.1	90	30	4.1
HST 16130	EST-C 130-36-4.2	130	36	4.2
HST 16160	EST-C 160-50-4.2	160	50	4.2
HST 161850	EST-C 185-50-4.5	185	50	4.5
HST 162400	EST-C 240-54-5.0	240	54	5.0

Channell Type PJK power-jointing kits

Channell Type PKJ heat-shrinkable power-jointing kits are suitable for use with PVC and XLPE insulated cables up to 1kV, with wire armour. They can be used with buried and ducted cable.

Features

- Simple and fast to install, no special tools required
- Immediate backfill and energisation
- Easy to re-enter
- Good material strength
- Good electrical insulation

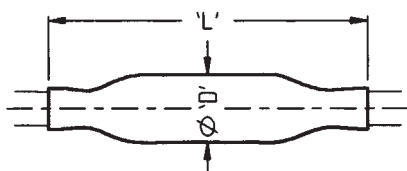
Kit contents

- Heat-shrinkable outer sleeve x 1
- Heat-shrinkable core insulation sleeves x 4
- Instruction leaflet



Ordering information and dimensions

Ordering reference	Description	L (mm)	D (mm)	Cable size (sq. mm)
HPK 30030	PJK 1.5-6	300	30	1.5 - 6.0
HPK 35040	PJK 10-16	350	40	10.0 - 16.0
HPK 45045	PJK 25-35	450	45	25.0 - 35.0
HPK 50054	PJK 50-70	500	54	50.0 - 70.0
HPK 70067	PJK 95-150	700	67	95.0 - 150.0
HPK 80084	PJK 185-300	800	84	185.0 - 300.0



Customised kits including a tinned-copper braided stocking and constant force springs are available.

LOW VOLTAGE SERIES

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Features

- High tensile strength
- Good long-term stability
- High chemical and solvent resistance
- Wide shrinkage range means fewer sizes are required
- Continuous operating temperature range -55 to +120°C
- Unaffected by ultra-violet light
- Unlimited storage life



Channell Type ERS rain sheds

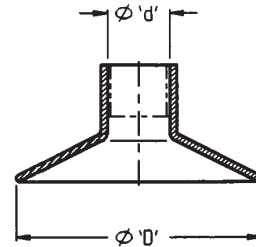


Channell rain sheds provide extension to creepage length of the protected cores of cable terminations.

- Hot melt adhesive coating on inner surface of the collar

Ordering information and dimensions

Ordering reference	Description	D (mm)	d Min (mm)	Max (sq. mm)
HRC 70	ERS 70	70	13	37
HRC 85	ERS 85	85	13	37
HRC 115	ERS 115	115	20	47
HRC 135	ERS 135	135	30	76



Channell Type ESP spreader plates

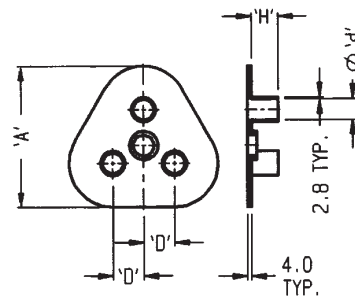


Channell spreader plates restrain the cable core from being over bent at the cable crutch.

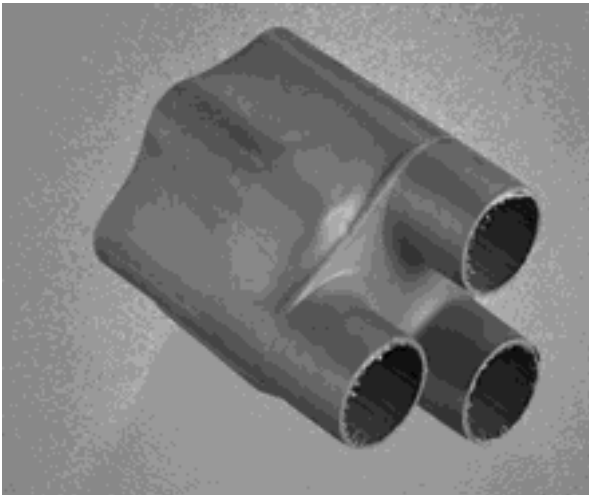
- Hot melt adhesive coating on inner surface of the ports

Ordering information and dimensions

Ordering reference	Description	A (mm)	d (mm)	d (mm)	H (mm)	D (mm)
HSP 01	ESP 01	145	35	16	26	30
HSP 02	ESP 02	169	45	24	28	40
HSP 03	ESP 03	169	60	24	28	40



Channell Type EB three-way cable breakouts

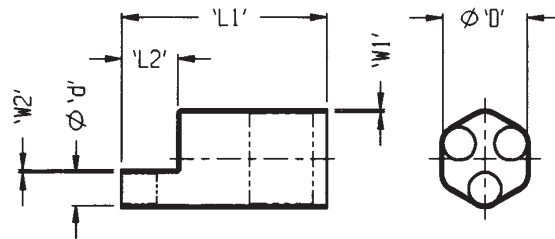


Channell three-way cable breakouts for medium voltage networks provide a positive environmental seal to the cable crutch.

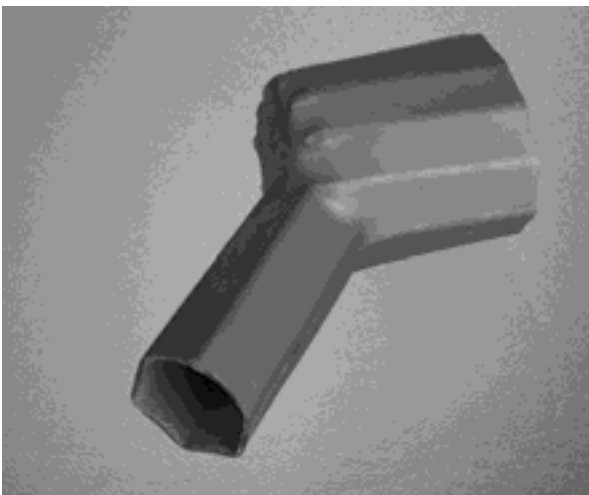
- Also available in semi-conductive versions
- Internal weatherproof mastic coating to customer specification

Ordering information and dimensions

Ordering reference	Description	Supplied d (mm)	Supplied D (mm)	Recovered d (mm)	Recovered D (mm)	L1 (mm)	L2 (mm)	W1 (mm)	W2 (mm)
HBO 3050	EB 3-50-22	50	22	20	8	135	187	3.5	2.2
HBO 3075	EB 3-75-32	75	32	30	13	160	205	3.8	2.5
HBO 3110	EB 3-110-52	110	52	45	21	160	232	3.8	2.8
HBO 3135	EB 3-135-64	135	64	55	27	230	267	3.8	2.8



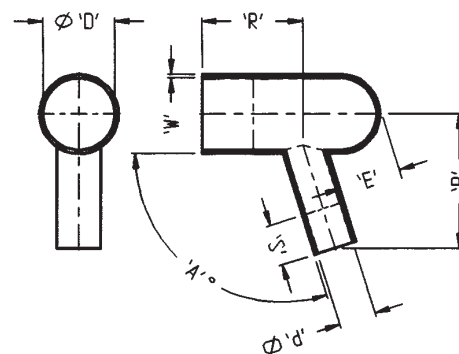
Channell Type ERAS right-angled shrouds



Channell right-angled shrouds insulate bushing in cable-end boxes integral with switchgear and transformers.

Ordering information and dimensions

Ordering reference	Description	Supplied D (mm)	Supplied d (mm)	Recovered D (mm)	Recovered d (mm)	P (mm)	R (mm)	W (mm)	S (mm)	E (mm)	A (degrees)
HRS 01	ERAS 01	70	37	36	20	130	100	3.5	30	25	105
HRS 02	ERAS 02	70	37	50	27	140	110	4.5	30	25	105
HRS 03	ERAS 03	95	37	67	27	140	120	4.5	30	25	105
HRS 04	ERAS 04	145	72	65	34	155	150	4.5	40	35	95



For more information or to order,
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