YAMUNA DENSONS Heat Shrinkable Anti Tracking Tubing upto 66 kV

Features :

- Reduces bus bar clearance requirements
- Protects against accidental flashover
- Continuous operation temperature: -40°C to 125°C
- Halogen free
- Shrink Temperature: 120°C
- Anti tracking
- Suitable for switchgear applications

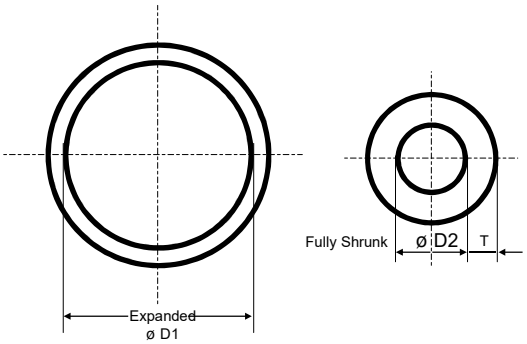
Cross linked Polyolefin Medium and Heavy Wall Anti-track Heat Shrinkable Tubing specifically designed for insulating medium voltage bus bar.

Specifications:

Dimension Chart for Heat Shrink Anti Tracking Tubing

Code	As Supplied	After Recovered	
	ø D1 (max.)	ø D2 (max.)	T (min.)
DSRU - 30/10	30	10	2.6
DSRU - 36/12	36	12	3.0
DSRU - 50/19	50	19	3.0
DSRU - 60/29	60	29	3.0
DSRU - 76/38	76	38	3.0
DSRU - 100/49	100	49	3.0
DSRU - 130/50	130	50	4.0

Note: All dimensions are in mm



Technical Data for Heat Shrink Non- Tracking Tubing (Red / Brown)

Property	Requirements	Test Method
Physical		
Specific Gravity	1.19	ASTM D 1505/ ISO 1183
Tensile Strength	8 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	200% (min.)	ASTM D 412 / ISO 37
Water Absorption (25°C)	0.5% (max.)	ASTM D 570
Thermal Ageing		
Continuous Operating Temperature	-55° C to +130° C	IEC 216
Shrink Temperature	120° C (min.)	IEC 216
Heat Shock (30 min. 200°C)	No cracking / No flowing	
Heat Ageing (168 hrs. 120°C)		
Tensile Strength	7.0 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	100% (min.)	
Low Temperature Flexibility (-20°C)	No cracking	ASTM D 2671
Flammability	Self extinguishing	ASTM D 2671 - B
Electrical Properties		
Dielectric Strength	10 kV/mm (min.)	ASTM D 149 / IEC 243
Volume Resistivity	1 x 10^{12} Ω cm (min.)	ASTM D 257 / IEC 93
Dielectric Constant	3 (min.) To 5 (max.)	ASTM D 150 / IEC 250
Tracking Erosion Resistance	No tracking or erosion up to 3.25 kV	ASTM D 2303

YAMUNA DENSONS Heat Shrinkable Medium Wall Tubing upto 66 kV

Features :

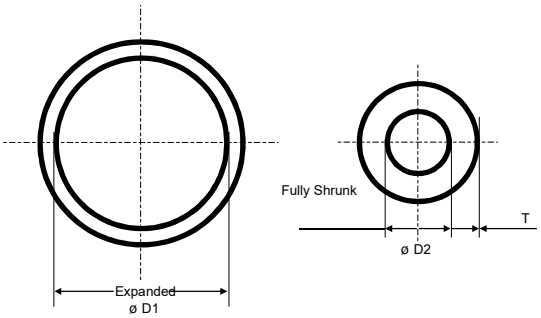
- Suitable for a variety of low voltage electrical and mechanical applications
- Suitable for underground buried conditions
- Continuous operation temperature: -40°C to 125°C
- Meets the requirements of ESI 09 13
- Shrink Temperature: 120°C
- Unlimited shelf life
- Adhesive lined also available

Cross linked Polyolefin Polymer suitable for low and medium voltage Indoor installation and shrouding on telephone lines, power lines and conditioning ducts etc.

Specifications:

Dimension Chart for Heat Shrink Medium Wall Tubing

Code	As Supplied	After Recovered	
	ø D1 (max.)	ø D2 (max.)	T (min.)
DMSR - 15/6	15	6	2.2
DMSR - 25/8	25	8	2.5
DMSR - 36/12	36	12	2.5
DMSR - 50/16	50	16	2.5
DMSR - 63/19	63	19	2.5
DMSR - 75/22	75	22	2.5
DMSR - 95/25	95	25	3.0
DMSR - 115/34	115	34	3.0
DMSR - 140/42	140	42	3.0
DMSR - 160/50	160	50	3.0
DMSR - 180/60	180	60	3.5



Note: All dimensions are in mm

Technical Data for Heat Shrink Medium Wall Tubing

Property	Requirements	Test Method
Physical		
Specific Gravity	1.10	ASTM D 1505 / ISO 1183
Tensile Strength	10 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	200% (min.)	ASTM D 412 / ISO 37
Water Absorption (25°C)	0.5% (max.)	ASTM D 570
Thermal Ageing		
Continuous Operating Temperature	-55°C to +130°C	IEC 216
Shrink Temperature	120°C (min.)	IEC 216
Heat Shock (30 min. 200°C)	No cracking / No flowing	
Heat Ageing (168 hrs 120°C)		
Tensile Strength	7.0 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	100% (min.)	
Low Temperature Flexibility (-20°C)	No cracking	ASTM D 2671
Electrical		
Dielectric Strength	10 kV/mm (min.)	ASTM D 149 / IEC 243
Volume Resistivity	1 x 10^{12} Ω cm (min.)	ASTM D 257 / IEC 93
Dielectric Constant	2 (min.) To 5 (max.)	ASTM D 150 / IEC 250

YAMUNA DENSONS Heat Shrinkable Dual Wall Tubing upto 66 kV

Features :

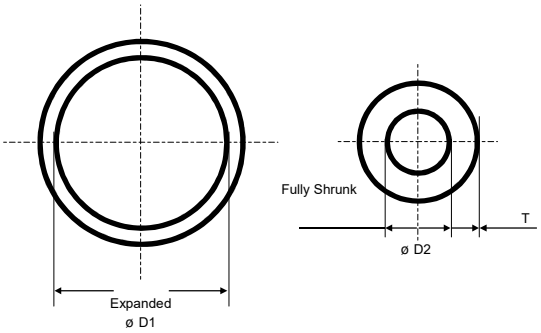
- Single Tube Solution
- Reduces time for installation
- Reduces skills
- Removes air entrapment caused by multi layer shrinking
- Ensures perfect bond between different layers
- Minimum shrink temperature: 110^0 C

Specifications:

Dimension Chart for Heat Shrink Dual Wall Tubing

Code	As Supplied	After Recovered	
	ø D1 (max.)	ø D2 (max.)	T (min.)
DDWT - 35/12	35	12	6.0
DDWT - 45/15	45	15	6.0
DDWT - 55/18	55	18	6.0
DDWT - 65/25	65	25	6.5
DDWT - 85/30	85	30	6.5
DDWT - 100/38	100	38	6.5
DDWT - 120/45	120	45	7.0
DDWT - 140/50	140	50	7.0

Note: All dimensions are in mm



Technical Data for Heat Shrink Dual Wall Tubing (for Inner Layer):

Property	Requirements	Test Method
Tensile Strength	8 N/mm^2 (min.)	ASTM D 2671
Elongation at Break	200% (min.)	ASTM D 2671
Water Absorption	0.5% (max.)	ISO 62
Volume Resistance	10^{12} Ω cm (min.)	IEC 93
Dielectric Strength	10 kV/mm (min.)	IEC 243

Technical Data for Heat Shrink Dual Wall Tubing (for External Layer):

Property	Requirements	Test Method
Tensile Strength	8 N/mm^2 (min.)	ASTM D 638
Elongation at Break	200% (min.)	ASTM D 638
Water Absorption	0.5% (max.)	ISO 62

YAMUNA DENSONS Heat Shrinkable Stress Control Tubing upto 36 kV

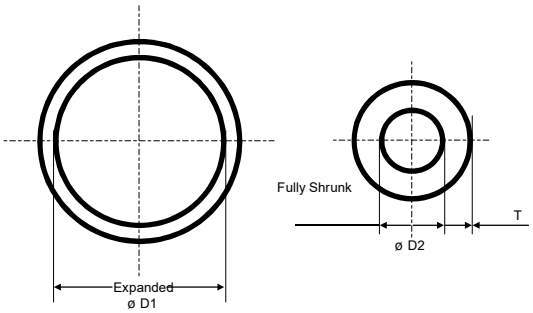
Features :

- Electrical Stress Control at the end of the cable shielding
- Suitable for underground buried Joint, Indoor & Outdoor termination
- Continuous operation temperature: -40°C to 125°C
- Meets the requirements of ENATS 09 13
- Shrink Temperature: 120°C
- Unlimited shelf life
- UV Resistant
- Shrink Ratio 3 : 1

Specifications:

Dimension Chart for Heat Shrink Stress Control Tubing

Code	As Supplied	After Recovered	
	ø D1 (max.)	ø D2 (max.)	T (min.)
DSCT - 26/10	26	10	2.1
DSCT - 30/12	30	12	2.2
DSCT - 35/15	35	15	2.3
DSCT - 40/16	40	16	2.4
DSCT - 47/18	47	18	2.4
DSCT - 55/21	55	21	2.4
DSCT - 65/25	65	25	2.4
DSCT - 75/30	75	30	2.4



Note: All dimensions are in mm

Technical Data for Heat Shrink Stress Control Tubing

Property	Requirements	Test Method
Physical		
Tensile Strength	10 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	200% (min.)	ASTM D 412 / ISO 37
Water Absorption (25°C)	0.5% (max.)	ASTM D 570
Thermal Ageing		
Continuous Operating Temperature	-55°C to +130°C	IEC 216
Shrink Temperature	120°C (min.)	IEC 216
Heat Shock (30 min. 200°C)	No cracking / No flowing	
Heat Ageing (168 hrs 120°C)		
Tensile Strength	8.0 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	100% (min.)	
Low Temperature Flexibility (-20°C)	No cracking	ASTM D 2671
Electrical		
Volume Resistivity	1 x 10^9 Ω cm (min.)	ASTM D 257 / IEC 93
Dielectric Constant	15 min.	ASTM D 150 / IEC 250

YAMUNA DENSONS Heat Shrinkable Cable Repair Sleeve upto 36 kV

Features :

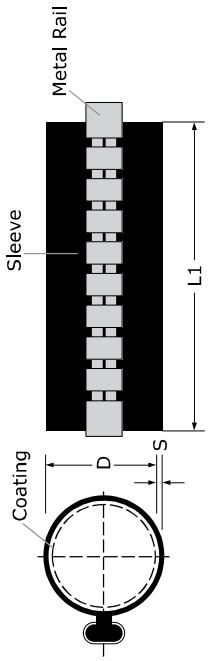
- Designed for Medium Voltage Application upto 36 kV
- Supplied with Hot melt Coating
- Continuous operation temperature: -55°C to 120°C
- Corrosion resistant
- Unlimited Shelf Life
- Resistant to aggressive media

Superior Heat Shrinkable wraparound insulation product, Ideal for providing insulation and protection for cable jacket, Shut down of system not required for repair, High shrink ratio covers even irregular shapes

Specifications:

Dimension Chart for Heat Shrink Cable Repair Sleeve

Code	L1	D1 (min.)	D2 (max.)	S
DRS - 42/8	250 mm 500 mm 750 mm 1000 mm & 1500 mm	42	8	3.0
DRS - 62/22		62	22	3.0
DRS - 75/22		75	22	3.0
DRS - 92/30		92	30	3.0
DRS - 100/30		100	30	3.0
DRS - 122/38		122	38	3.0
DRS - 139/38		139	38	3.0
DRS - 160/55		160	55	3.0
DRS - 190/55		190	55	3.0
DRS - 210/55		210	55	3.0
DRS - 240/60		240	60	3.0



D1: Dimensions as supplied
D2: Dimensions after full shrinking

Note: Longer length available on request

Technical Data for Heat Shrink Cable Repair Sleeve

Property	Requirements	Test Method
Physical		
Tensile Strength	10 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	200% (min.)	ASTM D 412 / ISO 37
Continuous Operating Temperature	- 55°C to 120°C	IEC 216
Minimum Shrink Temperature	120°C	IEC 216
Specific Gravity	1.1 max.	ASTM D 1505 / ISO1183
Dielectric Strength	10kV/mm (min.)	ASTM D 149 / IEC 243
Volume Resistivity	10^{12} Ω cm (min.)	ASTM D 257 / IEC 93
Low Temperature Flexibility	No cracking at - 20°C	ASTM D 2671
Heat Shock (4 hours at 225°C)	No cracking, dripping or flowing	
Water Absorption	0.2% max.	ASTM D 570
Resistance to Fungus	Does not support growth	ASTM G 21
Copper Corrosion	Non corrosive	

YAMUNA DENSONS Heat Shrinkable Bus-bar Insulation Tubing upto 66 kV

Features :

- Made from specially formulated radiation cross- linked compounds
- Carefully produced product can provide high resistance to tracking and arcing
- Used to enhance the insulation properties of bus-bar in switchgear and substation
- Shrink Temperature: 110^0 C

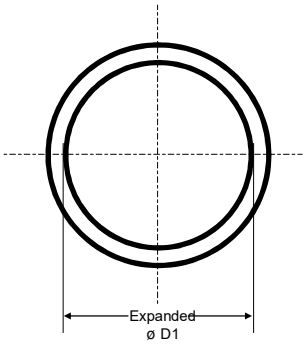
Specifications:

Dimension Chart for Heat Shrink DBM (Medium wall Bus-bar Tubing)

Code	As Supplied ø D1 (max.)	After Recovered ø D2 (max.)	After Recovered T (min.)	App. bus-bar dim. (mm)	Standard length (m/spool)
DBM - 25/10	25	10	2.0	25*3	30
DBM - 30/12	30	12	2.0	35*4	30
DBM - 35/14	35	14	2.0	35*4	30
DBM - 40/16	40	16	2.0	40*5	30
DBM - 50/20	50	20	2.0	50*5	30
DBM - 65/25	65	25	2.0	65*8	30
DBM - 75/30	75	30	2.0	75*8	15
DBM - 100/40	100	40	2.0	100*10	15

Dimension Chart for Heat Shrink DBT (Thick wall Bus-bar Tubing)

Code	As Supplied ø D1 (max.)	After Recovered ø D2 (max.)	After Recovered T (min.)	App. bus-bar dim. (mm)	Standard length (m/spool)
DBT - 15/6	15	6	3.0	15*3	15
DBT - 25/10	25	10	3.0	25*4	15
DBT - 30/12	30	12	3.0	35*4	15
DBT - 40/16	40	16	3.0	40*5	15
DBT - 50/20	50	20	3.0	50*5	15
DBT - 65/25	65	25	3.0	65*8	15
DBT - 75/30	75	30	3.0	75*8	15
DBT - 85/35	85	35	3.0	85*10	15
DBT - 100/40	100	40	3.0	100*10	15
DBT - 120/50	120	50	3.0	120*12	1000 mm
DBT - 150/60	150	60	3.0	150*15	1000 mm



Technical Data for Heat Shrink Bus-bar Insulation Tubing

Property	Requirements	Test Method
Tensile Strength	10 N/mm^2	ASTM D 2671
Longitudinal Shrinkage	0 to – 10%	ASTM D 2671
Elongation at Break	200%	ASTM D 2671
Elongation at Break after Ageing	≥ 100%	ASTM D 2671 / 120^0 C, 168 hrs.
Dielectric Strength	≥ 10 kV / mm	IEC 243 / ENATS 0913
Dielectric Constant	2 (min.) To 5 (max.)	IEC 250
Volume Resistance	10^{12} Ω cm	IEC 93
Flammability (Oxygen index)	≥ 25	ASTM 4589
Copper Corrosion	120°C, 168 hrs., no corrosion	ASTM D 2671
Cold Bend	-40°C, 4 hrs., no cracking	ASTM D 2671
Water Absorption	≤ 0.5%	ISO 62 / 23^0 C, 14 days.

YAMUNA DENSONS Heat Shrinkable Heavy Wall Tubing upto 66 kV

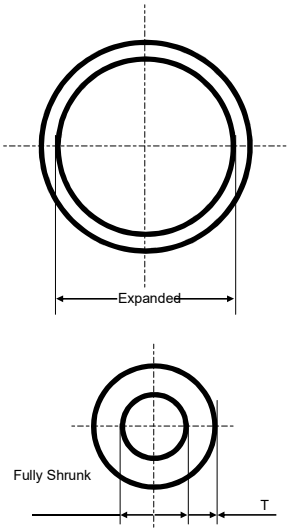
Features :

- Halogen Free.
- Suitable for underground buried conditions
- Continuous operation temperature: -40°C to 125°C
- Meets the requirements of ESI 09 13
- Shrink Temperature: 120°C
- Unlimited shelf life and Flame retardant

Specifications:

Dimension Chart for Heat Shrink Heavy Wall Tubing

Code	Diameter As Supplied (mm)	Diameter After Recovered (mm)	Recovered Wall Thickness (mm)
DTSR - ø9/3	9	3	1.8
DTSR - ø13/4	13	4	2.4
DTSR - ø22/6	22	6	2.7
DTSR - ø33/8	33	8	3.2
DTSR - ø40/12	40	12	4.1
DTSR - ø45/12	45	12	4.1
DTSR - ø55/16	55	16	4.1
DTSR - ø75/22	75	22	4.1
DTSR - ø85/25	85	25	4.1
DTSR - ø95/29	95	29	4.1
DTSR - ø115/34	115	34	4.3
DTSR - ø130/36	130	36	4.3
DTSR - ø160/50	160	50	4.3
DTSR - ø180/50	180	50	4.3
DTSR - ø200/60	200	60	4.3



Note: All dimensions are in mm

Technical Data for Heat Shrink Heavy Wall Tubing

Property	Requirements	Test Method
Physical		
Specific Gravity	1.10	ASTM D 1505 / ISO 1183
Tensile Strength	10 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	200% (min.)	ASTM D 412 / ISO 37
Water Absorption (25°C)	0.5% (max.)	ASTM D 570
Thermal Ageing		
Continuous Operating Temperature	-55°C to +130°C	IEC 216
Shrink Temperature	120°C (min.)	IEC 216
Heat Shock (30 min. 200°C)	No cracking / No flowing	
Heat Ageing (168 hrs 120°C)		
Tensile Strength	7.0 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	100% (min.)	
Low Temperature Flexibility (-20°C)	No cracking	ASTM D 2671
Electrical		
Dielectric Strength	10 kV/mm (min.)	ASTM D 149 / IEC 243
Volume Resistivity	1 x 10^{12} Ω cm (min.)	ASTM D 257 / IEC 93
Dielectric Constant	2 (min.) To 5 (max.)	ASTM D 150 / IEC 250

YAMUNA DENSONS Heat Shrinkable Breakouts Boots/Shapes

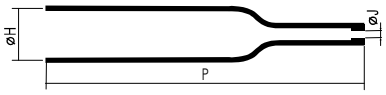
Features :

- Designed for Medium Voltage Application upto 36 kV
- Shaped components to meet a variety of configuration requirements
- Continuous operation temperature: -55° C to 120°C
- Shrink temperature: 120°C
- Flame retardant

Specifications:

Dimension Chart for Straight Boot

Code	Expanded Min.		Recovered Max.		After Recovered
	ø H	ø J	ø H	ø J	P ± 10%
DSB - 1	80.0	34.0	32.0	19.0	225.0
DSB - 2	80.0	58.0	32.0	19.0	225.0

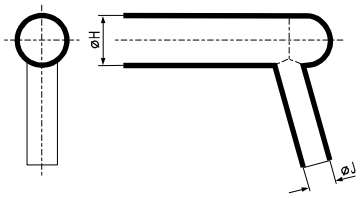


Dimension Chart for 3 Way Breakout (Red)

Code	Expanded Min.		Recovered Max.	
	ø H	ø J	ø H	ø J
DIB - 0820	60	27	20	8
DIB - 1330	75	32	30	13
DIB - 2145	110	55	45	21
DIB - 2755	135	64	55	27

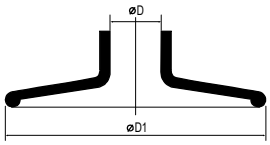
Dimension Chart for Right Angle Boot

Code	Expanded Min.		Recovered Max.	
	ø H	ø J	ø H	ø J
DRAB - 1	75	36	35	18
DRAB - 2	75	50	35	26
DRAB - 3	95	67	35	26



Dimension Chart for Rain Shed

Code	Expanded Min.	Recovered Max.	
	ø D	ø D	ø D1 ± 10%
DCE - 0	32	10	65
DCE - 1	35	15	89
DCE - 2	52	21	122
DCE - 3	65	28	136
DCE - 4	75	28	136



Technical Data for Heat Shrink Breakouts Boots/Shapes

Property	Requirements	Test Method
Physical		
Tensile strength	8 N/mm^2 (min.)	ASTM D 412, ESI 09-13
Elongation at break	200% (min.)	ASTM D 412, ESI 09-13
Heat Ageing (500 hrs. at 120°C)		
Tensile Strength	7 N/mm^2 (min.)	ASTM D 412
Elongation	100% (min.)	ASTM D 412
Cold Temperature Flex (-40°C)	No Cracking	ASTM D 2671
Electrical		
Dielectric Strength	10 kV/mm (min.)	ASTM D 149, IEC 243
Volume Resistivity	1x10^{12} Ω cm	ASTM D 257
Track Resistance	Non-Tracking	ASTM D 2303
Corrosion Resistance		
Tensile Strength	7 N/mm^2 (min.)	ASTM D 412
Elongation	100% (min.)	ASTM D 412

YAMUNA DENSONS Heat Shrinkable Semi Conductive Breakout

Features :

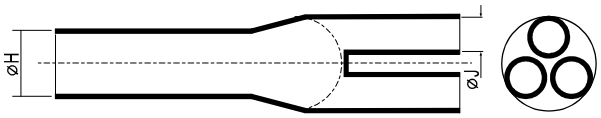
- Breakout can be used for cable terminations up to 36 KV
- The electrically semi-conductive breakout provides effective conductive screen and sealing protection to the cable termination
- Minimum fully recovered temperature: 130°C
- Flame retardant

Specifications:

Dimension Chart for 3 Semi Conductive Breakout (Black)

Code	Expanded		Recovered	
	ø H (min.)	ø J (min.)	ø H (max.)	ø J (max.)
DSCB - 0820	60	27	20	8
DSCB - 1330	75	32	30	13
DSCB - 2145	110	55	45	21
DSCB - 2755	135	64	55	27

Note: All Dimensions are in mm



Technical Data for Heat Shrinkable Semi Conductive Breakout

Property	Requirements	Test Method
Tensile Strength	8 N/mm^2 (min.)	ASTM D 638
Elongation at Break	200% (min.)	ASTM D 638
Water Absorption	0.5% (max.)	ISO 62
Volume Resistivity	1 x 10^4 Ω cm (min.)	IEC 93
Longitudinal Change	± 25 %	ENAT S 0913

YAMUNA DENSONS Heat Shrinkable Cable Breakout Boots (Black)

Features :

- Thermoplastic Adhesive Liner provides complete environmental protection and insulation
- Heat Shrinkable Boots for 2, 3 and 4 way cable breakouts
- Continuous operation temperatures : 135^0 C
- Provides strain relief & Mechanical protection
- Seals and protects multi-conductor cable and conduit breakouts
- Flame retardant

Heat Shrinkable Boots seal and protect multi-conductor cable and conduit breakouts.

Specifications:

Dimension Chart for Heat Shrink Breakout Boots (Black)

Code	Breakout Main Diameter		Finger Diameter		Full Length ±10% (mm)	Finger Length ±10% (mm)
	Expanded (mm)	Recovered (mm)	Expanded (mm)	Recovered (mm)		
2 Cores Breakouts						
DIBB - 2 33/12	33	12	14	4.5	90	20
DIBB - 2 60/23	60	23	25	7	120	30
3 Cores Breakouts						
DIBB - 3 38/16	38	16	14	4	100	25
DIBB - 3 60/24	60	24	25	8	185	45
DIBB - 3 80/36	80	36	36	12	210	55
DIBB - 3 110/48	110	48	46	16	250	65
DIBB - 3 125/55	125	55	52	20	260	80
DIBB - 3 140/68	140	68	62	25	280	80
4 Cores Breakouts						
DIBB - 4 35/12	35	12	16	4	100	25
DIBB - 4 55/25	55	25	25	9.4	235	45
DIBB - 4 68/25	68	25	34	9.4	235	45
DIBB - 4 78/30	78	30	38	12	235	45
DIBB - 4 90/30	90	30	38	12	235	45

Note: All Dimensions are in mm

Technical Data for Heat Shrink Breakout Boots (Black)

Property	Requirements	Test Method
Physical		
Tensile Strength	8 N/mm^2 (min.)	ASTM D 412
Ultimate Elongation	200% (min.)	ASTM D 412
Thermal Ageing (168 hrs at 175^0 C) Ultimate Elongation	100% (min.)	ASTM D 412
Low Temperature Flexibility (-20^{0}C)	No cracking	ASTM D 2671
Heat Shock (4 hrs at 225^{0}C)	No dripping, flowing or cracking	ASTM D 2671
Flammability	Self ext. within 60 second	ASTM D 2671
Electrical	10 kV/mm (min.)	
Dielectric Strength		ASTM D 149
Chemical	0.5 (max.)	
Water Absorption		ASTM D 570

YAMUNA DENSONS Heat Shrinkable Triple Layer Tubing

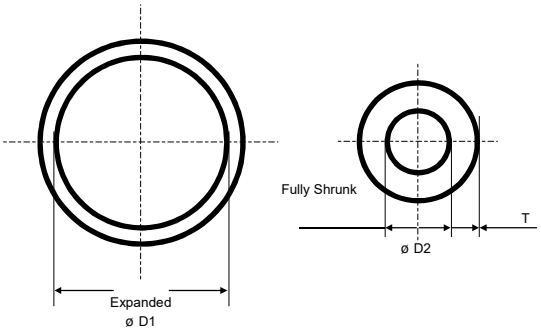
Features :

- Cross-linked heavy wall tubing
- Tri-layer design with high recovery forces
- Co-Extrusion technology
- Removes air entrapment caused by multi layer shrinking
- Eliminates partial discharge
- Helogen free
- Minimum shrink temperature: 135 - 150° C
- Voltage class: 10 to 35 kV

Specifications:

Dimension Chart for Heat Shrink Triple layer tubing

Code	As Supplied	After Recovered	
	ø D1 (max.)	ø D2 (max.)	T (±10%)
DTWT - 35/13	35	13	11.0
DTWT - 48/17	48	17	12.0
DTWT - 50/21	50	21	12.7
DTWT - 63/26	63	26	13.5
DTWT - 75/34	75	34	13.5
DTWT - 85/34	85	34	13.5
DTWT - 95/42	95	42	14.2
DTWT - 110/52	110	52	14.2
DTWT - 125/62	125	62	15.0



Note: All dimensions are in mm

Technical Data for Heat Shrink Triple Layer Tubing (for Inner Layer):

Property	Requirements	Test Method
Tensile strength	6 N/mm^2 (min.)	ASTM D 2671
Elongation at break	200% (min.)	ASTM D 2671
Water absorption	0.5% (max.)	ISO 62
Volume resistance (Insulating layer)	10^{12} Ω cm (min.)	ASTM D 257
Dielectric strength (Insulating layer)	10 kV/mm (min.)	IEC 243

Technical Data for Heat Shrink Triple Layer Tubing (for External Layer):

Property	Requirements	Test Method
Tensile Strength	6 N/mm^2 (min.)	ASTM D 2671
Elongation at Break	200% (min.)	ASTM D 2671
Water Absorption	0.5% (max.)	ISO 62
Volume Resistance	10^{4} Ω cm (min.)	ASTM D 257

YAMUNA DENSONS Heat Shrinkable Cable Repair Sleeve (Fibers integrated)

Features :

- Designed for application upto 66 kV
- Supplied with heat sensitive paint and adhesive flow
- Continuous operation temperature: -20°C to 150°C
- Suitable for repair of all types of non-pressurized cable

Heat Shrinkable wraparound sleeve is made from superior composite material. It is made of polyethylene with integrated fibers and has an inner laminated aluminum layer. Furthermore, it is ideal for providing insulation and protection for the cable outer layer.

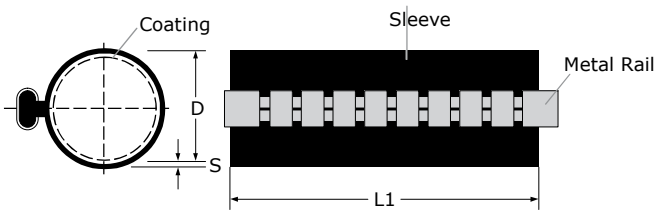
Specifications:

Dimension Chart for Heat Shrink Cable Repair Sleeve

Code	L1	D1 (min.)	D2 (max.)	S
DRSF - 43/8		43	8	4.5
DRSF - 55/12	500 mm	55	12	4.5
DRSF - 75/15	1000 mm	75	15	4.5
DRSF - 100/25	1500 mm	100	25	4.5
DRSF - 125/30	& 2000 mm	125	30	4.5
DRSF - 164/42		164	42	4.5
DRSF - 205/55		205	55	4.5

D1: Dimensions as supplied
D2: Dimensions after full shrinking
S: Sleeve thickness after shrinking

Note: Longer length available on request



Technical Data for Heat Shrink Cable Repair Sleeve

Property	Requirements	Test Method
Physical		
Tensile Strength	6 N/mm^2 (min.)	ASTM D 412 / ISO 37
Ultimate Elongation	100% (min.)	ASTM D 412 / ISO 37
Continuous Operating Temperature	- 20°C to 150°C	IEC 216
Specific Gravity	1.1 max.	ASTM D 1505 / ISO1183
Dielectric Strength	10kV/mm (min.)	ASTM D 149 / IEC 243
Volume Resistivity	10^{12} Ω cm (min.)	ASTM D 257 / IEC 93
Low Temperature Flexibility	No cracking at - 20°C	ASTM D 2671
Temperature Indicating (Paint Conversion)	230-250°C	Scraped off paint from sleeve

YAMUNA DENSONS Heat Shrinkable Flame retardant polyolefin colour thin wall tubing

Features :

- Clear version offers exceptional clarity.
- Minimum shrink temperature: 80°C
- Full recovery temperature: 125°C
- Flexible
- Halogen free
- Standard colour: Black, Transparent, Yellow, Red, Blue

  Other colours available on request

Specifications:

Dimension Chart for Heat Shrink Thin Wall Tube

Normal Size (mm)	As Supplied (mm) Inside diameter (Approx.)	After recovered (mm) Inside diameter (Max.)	After recovered (mm) Wall thickness (Min.)	Cable Diameter
DTWT 1.1/0.50	1.1	0.50	0.22	400
DTWT 1.5/0.65	1.5	0.65	0.28	400
DTWT 2.0/0.85	2.0	0.85	0.32	400
DTWT 2.5/1.00	2.5	1.00	0.35	400
DTWT 3.0/1.30	3.0	1.30	0.38	400
DTWT 3.5/1.50	3.5	1.50	0.40	400
DTWT 4.0/1.80	4.0	1.80	0.42	400
DTWT 4.5/2.00	4.5	2.00	0.45	400
DTWT 5.0/2.30	5.0	2.30	0.50	200
DTWT 5.5/2.5	5.5	2.5	0.55	200
DTWT 6.5/3.0	6.5	3.0	0.55	200
DTWT 7.5/3.5	7.5	3.5	0.55	100
DTWT 8.5/4.0	8.5	4.0	0.60	100
DTWT 9.5/4.5	9.5	4.5	0.60	100
DTWT 10.5/5.0	10.5	5.0	0.60	100
DTWT 11.5/5.5	11.5	5.5	0.60	100
DTWT 12.5/6.0	12.5	6.0	0.60	100
DTWT 13.5/6.5	13.5	6.5	0.65	100
DTWT 14.5/7.0	14.5	7.0	0.65	100
DTWT 15.5/7.5	15.5	7.5	0.70	100
DTWT 16.5/8.0	16.5	8.0	0.70	100
DTWT 17.5/8.5	17.5	8.5	0.70	100
DTWT 19.0/9.0	19.0	9.0	0.80	100
DTWT 21.0/10.0	21.0	10.0	0.80	100
DTWT 23.0/11.0	23.0	11.0	0.80	100
DTWT 26.0/12.5	26.0	12.5	0.90	50
DTWT 29.0/14.0	29.0	14.0	0.90	50
DTWT 31.5/15.0	31.5	15.0	0.95	50
DTWT 36.5/17.5	36.5	17.5	1.00	50
DTWT 41.5/20.0	41.5	20.0	1.00	50
DTWT 46.5/22.5	46.5	22.5	1.00	25
DTWT 50.0/25.0	50.0	25.0	1.00	25
DTWT 60.0/31.0	60.0	31.0	1.30	25
DTWT 70.0/36.0	70.0	36.0	1.30	25
DTWT 80.0/41.0	80.0	41.0	1.46	25
DTWT 90.0/46.0	90.0	46.0	1.46	25
DTWT 100.0/51.0	100.0	51.0	1.46	25
DTWT 120.0/61.0	120.0	61.0	1.56	25
DTWT 150.0/76.0	150.0	76.0	1.56	25
DTWT 180.0/91.0	180.0	91.0	1.56	25

Note: All Dimensions are in mm

Heat shrink tubing for general applications where flame-retardant properties are required and electrical insulation and mechanical performance

Technical Data

Property	Requirements	Test Method
Operating Temperature	-55 TO +105°C	UL 224
Tensile Strength	>8 mPA	ASTM D 2671
Elongation at Break	>200%	ASTM D 2671
Longitudinal Shrinkage	± 5%	UL 224
Eccentricity	<30%	ASTM D 2671
Flammability	Pass	VW - 1
Dielectric Strength	>10 kV/mm	IEC 243
Volume Resistance	$>10^{12}$ ohm cm	IEC 93

YAMUNA DENSONS Silicone Cold Shrink Tube with Mastic

Features :

- Open ended with water proofing mastic
- Excellent tight seal to prevent from moisture in joints and terminations
- Easy installation

Technical Data for Silicone Cold Shrink Tube with Mastic

Property	Requirements	Test Method
Physical		
Tensile Strength	8 MPa	ASTM D 412
Elongation at Break	600%	ASTM D 412
Thermal Ageing	Pass	ASTM D 412
Ozone Ageing	Pass	ASTM D 1149
UV Ageing	Pass	ASTM G 154
Electric Strength	10 kV/mm	ASTM D 4325

Packing

Item Code	Dimension	Colour
DC-97	Φ 25*120MM	Grey
DC-97	Φ 28*110MM	Grey
DC-97	Φ 28*200MM	Grey
DC-97	Φ 40*140MM	Grey
DC-97	Φ 40*240MM	Grey

YAMUNA DENSONS EPDM Cold Shrink Tube

Features :

- Open ended Cold Shrink EPDM Material
- Excellent moisture tight seals for termination & joints
- Easy installation
- Factory pre-expanded & assembled on removable core

Technical Data for EPDM Cold Shrink Tube

Property	Requirements	Test Method
Physical		
Tensile Strength	8 MPa	ASTM D 412
Elongation at Break	600%	ASTM D 412
Thermal Ageing	Pass	ASTM D 412
Ozone Ageing	Pass	ASTM D 1149
UV Ageing	Pass	ASTM G 154
Electric Strength	10 kV/mm	ASTM D 4325

Dimension

Item Code	Diameter (mm)	Cable Size (mm) Min	Max	Length (mm)
DC-96	20	8	15	90-500
DC-96	25	10	20	90-500
DC-96	35	13	30	90-500
DC-96	40	17.5	33	90-500
DC-96	53	25	46	90-500
DC-96	70	32	63	90-500
DC-96	104	43	94	90-500
DC-96	125	46	114	90-500
DC-96	150	55	135	90-500

Note : Other size is available on request

YAMUNA DENSONS Medium Voltage Cold Applied Bushing Protection Boots
DCSB-DCRAB

DCSB/Straight Boot

DCRAB/Right Angle Boot

Application :

- Configuration 35-400mm^2 at 7.2/17.5 for straight boots and 46-70mm^2 up to 15kV right angle boots
- Mainly applied for RMU and cable branch system
- In compliance with IEC-60502-4

Features :

- Simple and easy installation
- Longer shelf life
- Unique bushing adaptor provides superior moisture ingress protection

Technical Data for Medium Voltage Cold Applied Bushing Protection Boots

Performance	DCSB	DCRAB
Max. System Voltage	17.5kV	15kV
Continuos Current	250A/630A	630A
Impulse Withstand	95kV	95kV
Adaptor	No/Yes	------
Bushing Diameter	31-45mm	46-70mm
Bushing Type	250A	400A/630A
Cable Cross Section	35-400mm^2	35-400mm^2

YAMUNA DENSONS Silicone Conductor Cover upto 220kV

Features :

- Anti-tracking
- Light Weight
- Superior UV and Abrasion Resistance
- Weather Resistance
- Range Taking
- Quick Installation
- Localized Installation

Specifications:

Dimension Chart for Silicone Conductor Cover for 11 kV

Suitable Conductor Selection mm²	Size - ø D mm	Thickness - A mm
25-50	ø12	2
70-95	ø15	2
120-150	ø20	2
185-240	ø24	2
300-400	ø30	2
500	ø35	2

Dimension Chart for Silicone Conductor Cover for 35 kV

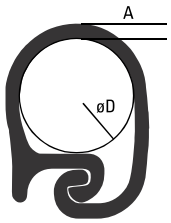
Suitable Conductor Selection mm²	Size - ø D mm	Thickness - A mm
25-50	ø12	3
70-95	ø15	3
120-150	ø20	3
185-240	ø24	3
300-400	ø30	3
500	ø35	3

Dimension Chart for Silicone Conductor Cover for 110 kV

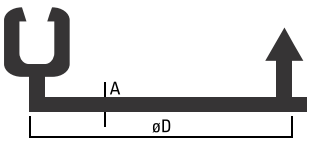
Suitable Conductor Selection mm²	Size - ø D mm	Thickness - A mm
25-50	ø12	4
70-95	ø15	4
120-150	ø20	4
185-240	ø24	4
300-400	ø30	4
500	ø35	4

Dimension Chart for Silicone Conductor Cover for 220 kV

Suitable Conductor Selection mm²	Size - ø D mm	Thickness - A mm
25-50	ø12	6
70-95	ø15	6
120-150	ø20	6
185-240	ø24	6
300-400	ø30	6
500	ø35	6



(Type A)



(Type B)

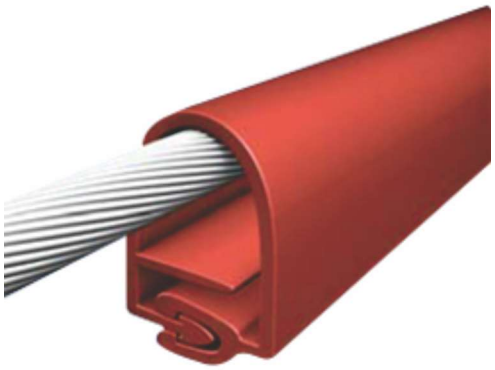
Technical Data for Silicon Conductor Cover

Property	Requirements	Test Method
Hardness Shore A	65	ISO 868
Elongation	200 % (min.)	ASTM D 638
Tensile Strength	4 N/mm² (min.)	ASTM D 638
Tear Strength	10 N/mm² (min.)	ASTM D 638
Dielectric Strength	10 kV/mm (min.)	ASTM D 2671
Volume Resistivity	10^{12} ohm cm (min.)	ASTM D 2671

YAMUNA DENSONS Medium Voltage Conductor Cover

Features :

- Anti-tracking
- Light Weight
- Superior UV and Abrasion Resistance
- Weather Resistance
- Range Taking
- Quick Installation
- Localized Installation
- Enhance Insulation



Specifications:

Dimension Chart for Medium Voltage Conductor Cover

Size	Suitable Voltage	Suitable Conductor Section	Max. Conductor Diameter
ø14	1-35 kV	≤ 70 mm^2	14 mm
ø18	1-35 kV	95 mm^2	18 mm
ø20	1-35 kV	120-150 mm^2	20 mm
ø28	1-35 kV	185-240 mm^2	28 mm
ø31	1-35 kV	≤ 400 mm^2	31 mm
ø38	1-35 kV	≤ 800 mm^2	38 mm

Technical Data for Medium Voltage Conductor Cover

Property	Requirements	Test Method
Dielectric Strength	10 kV/mm	IEC 243
Tensile Strength	≥ 8 N/mm^2	ASTM D 2671
Elongation	≥ 200%	ASTM D 2671
Volume Resistivity	≥ $1x10^{12}$ Ω cm	IEC 93