



NASONS ELECTRIC LTD. Co.



*cables accessories*





# NASONS

NASONS ELECTRIC CO.,LTD. was founded in Jiangmen City, China to Manufacture electrical cables accessories for the growing electrical utility and international markets. Our production facility is in Guangdong Province, 100 km from Guangzhou and Shenzhen airports. We serve the electrical utility market with a complete line of distribution, Transmission and other pole-line hardware.

Our focus continues to be the highest quality cables accessories and line hardware supplier. Knowledge gained from over 30 years of our team members provided the opportunity for entry into many other markets. Our OEM focus is cables accessories and power line equipment, although several other markets are served. We expanded our production line into assembly cutout(- drop-out)fuses, arresters and manufacture by taking shares in partner manufacturers. This complements the manufacture of distribution equipment, transmission line equipment and substation equipment and other structural transmission components such as steel crossarms, davit arms and anchoring assemblies.

# NDWT

## TWIN-LAYER TUBING

### Twin Layer Screened Insulating Composite Tubing

#### Properties:

Semi-conductive, co-extruded twin layer.  
Shrink ratio 3:1.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

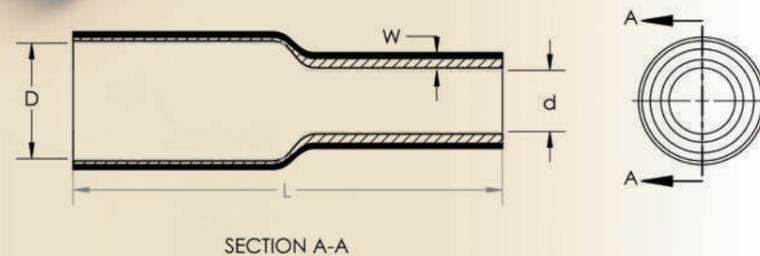
#### ORDERING INFORMATION:

Standard color available: Black/Red.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

- Twin layers combining semi-conductive and insulating materials.
- Co-extruded twin layer construction.
- Extra heavy wall insulation layer.
- Shrink ratio of 3:1.
- Minimum full recovery temperature: 130°C.
- Suitable for applications up to 15 KV.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Layer	Test Item	Test Method	Requirement
Insulation Layer	Tensile Strength	ASTM D 2671	Minimum 10 MPa
	Ultimate Elongation	ASTM D 2671	Minimum 200%
	Volume Resistivity	IEC 93	Maximum $10^{14}$ $\Omega$ -cm
	Water Absorption	ISO 62	Maximum 0.5%
Semi-Conductive Layer	Tensile Strength	ASTM D 2671	Minimum 12 MPa
	Ultimate Elongation	ASTM D 2671	Minimum 200%
	Volume Resistivity	ASTM D 257	Maximum $10^4$ $\Omega$ -cm

#### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Twin Layer Screened Insulating Composite Tubing - NDWT</b>									
36/12	36	12	5.4	1.0-1.2	85/30	85	30	6.0	1.0-1.2
45/15	45	15	5.4	1.0-1.2	95/34	95	34	6.0	1.0-1.2
55/18	55	18	5.4	1.0-1.2	100/38	100	38	6.0	1.0-1.2
65/22	65	22	6.0	1.0-1.2	115/34	115	34	6.0	1.0-1.2
73/26	73	26	6.0	1.0-1.2	120/45	120	45	6.1	1.0-1.2

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Outer Layer Wall thickness after fully recovered

# NSC-100

## STRESS-CON TUBING

### Stress Control Heat Shrink Tubing

#### Properties:

Designed for electrical stress relief in cable joints and terminations.  
Flexible.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

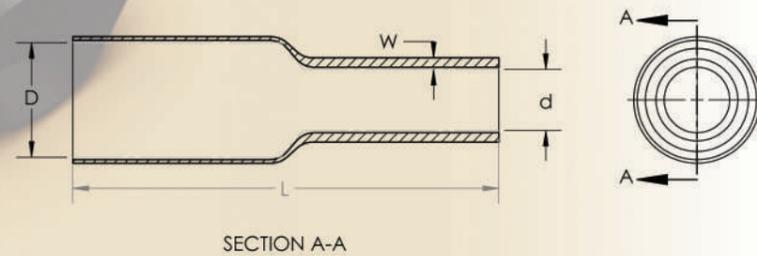
#### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

- Provides electric stress relief.
- UV resistant and flexible.
- Shrink ratio of 3:1.
- Minimum full recovery temperature: 120°C.
- Compliant with ESI 09-13 standard.
- Suitable for insulation applications up to 24 KV.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	≥ 8 MPa
Ultimate Elongation	ASTM D 2671	≥ 200%
Heat Shock (200°C, 30 min)	ASTM D 2671	No cracking or dripping
Permittivity	IEC 60250	15 – 35
Volume Resistivity	IEC 93	≥ 10 <sup>11</sup> Ω-cm
Tensile Strength	ASTM D 2671	≥ 8 MPa
Ultimate Elongation	ASTM D 2671	≥ 200%
Heat Shock (200°C, 30 min)	ASTM D 2671	No cracking or dripping
Permittivity	IEC 60250	15 – 35
Volume Resistivity	IEC 93	≥ 10 <sup>11</sup> Ω-cm

#### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Stress Control Heat Shrink Tubing - NSC-100</b>									
26/10	26	10	2.1	15m/spool or 1.0-1.5m	47/18	47	18	2.4	15m/spool or 1.0-1.5m
30/12	30	12	2.2	15m/spool or 1.0-1.5m	55/21	55	21	2.4	15m/spool or 1.0-1.5m
35/15	35	15	2.3	15m/spool or 1.0-1.5m	65/25	65	25	2.4	15m/spool or 1.0-1.5m
40/16	40	16	2.4	15m/spool or 1.0-1.5m	75/30	75	30	2.4	15m/spool or 1.0-1.5m

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Outer Layer Wall thickness after fully recovered

# NSC-360

## STRESS-CON TUBING

### Stress Control Heat Shrink Tubing

#### Properties:

Designed for electrical stress relief in cable joints and terminations.  
Flexible.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

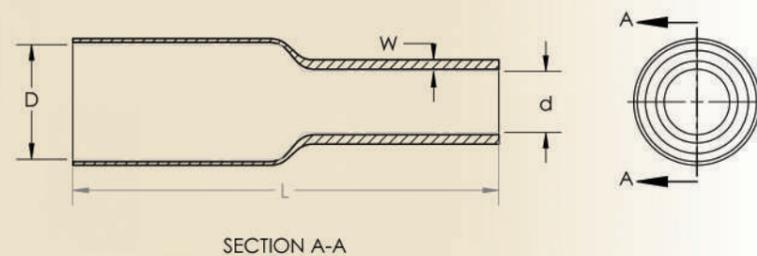
#### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

- Provides electric stress relief.
- UV resistant and flexible.
- Shrink ratio of 3:1.
- Minimum full recovery temperature: 120°C.
- Compliant with ESI 09-13 standard.
- Suitable for insulation applications up to 42 KV.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 8 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Heat Shock (200°C, 30 min)	ASTM D 2671	No cracking or dripping
Permittivity	IEC 60250	30 – 55
Volume Resistivity	IEC 93	Minimum 10 <sup>9</sup> Ω·cm

#### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Stress Control Heat Shrink Tubing - NSC-360</b>									
35/15	35	15	2.3	15m/spool or 1.0-1.5m	65/25	65	25	2.4	15m/spool or 1.0-1.5m
47/18	47	18	2.4	15m/spool or 1.0-1.5m	75/30	75	30	2.4	15m/spool or 1.0-1.5m
55/21	55	21	2.4	15m/spool or 1.0-1.5m					

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Outer Layer Wall thickness after fully recovered

# NSCT

## SEMI-CON TUBING

### Semi-Conductive Heat Shrink Tubing

#### Properties:

- Semi-conductive.
- Semi-rigid.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

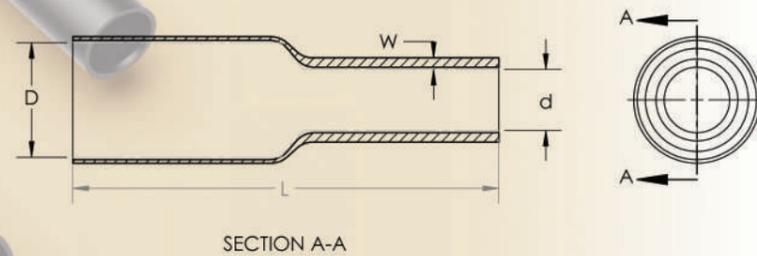
#### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

- Semi-conductive material.
- UV resistant.
- Semi-rigid construction.
- Shrink ratio of 3:1.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 10 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Tensile Strength after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 8 MPa
Ultimate Elongation after Aging	ASTM D 2671	Minimum 200%
Heat Shock (250°C, 30 min)	ASTM D 2671	No cracking or dripping
Density	ASTM D 792	Nominal 1.1 g/cm <sup>3</sup>
Volume Resistivity	ASTM D 257	Maximum 10 <sup>4</sup> Ω-cm
Low Temperature Flexibility (-40°C, 4 hrs)	ASTM D 2671	No cracking
Water Absorption	ISO 62	Maximum 0.15%

#### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Semi-Conductive Heat Shrink Tubing - NSCT</b>									
33/8	33	8	2.4	1.0-1.5	75/22	75	22	3.0	1.0-1.5
40/12	40	12	2.5	1.0-1.5	95/25	95	25	3.1	1.0-1.5
55/16	55	16	2.8	1.0-1.5					

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Outer Layer Wall thickness after fully recovered

# NTRT

## TRIPLE-LAYER TUBING

### Triple Layer Screened Insulating Composite Tubing

#### Properties:

Semi-conductive, co-extruded triple layer.  
Shrink ratio 3:1.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

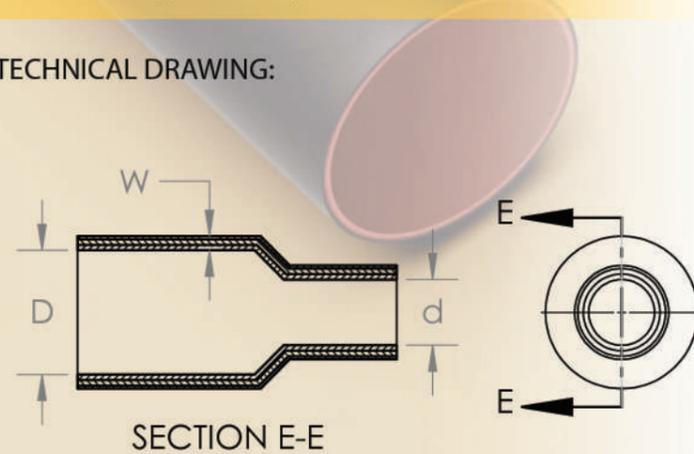
#### ORDERING INFORMATION:

Standard color available: Black/Red.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

- Triple layers combining semi-conductive and insulating materials.
- Co-extruded triple layer construction.
- Extra heavy wall insulation layer.
- Shrink ratio of 3:1.
- Minimum full recovery temperature: 130°C.
- Suitable for applications up to 42 KV.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Layer	Test Item	Test Method	Requirement
Insulation Layer	Tensile Strength	ASTM D 2671	Minimum 10 MPa
	Ultimate Elongation	ASTM D 2671	Minimum 200%
	Volume Resistivity	IEC 93	Maximum 10 <sup>14</sup> Ω-cm
	Water Absorption	ISO 62	Maximum 0.5%
Semi-Conductive Layer	Tensile Strength	ASTM D 2671	Minimum 5 MPa
	Ultimate Elongation	ASTM D 2671	Minimum 500%
	Volume Resistivity	IEC 93	Minimum 10 <sup>14</sup> Ω-cm
Semi-Conductive Layer	Tensile Strength	ASTM D 2671	Minimum 12 MPa
	Ultimate Elongation	ASTM D 2671	Minimum 200%
	Volume Resistivity	ASTM D 257	Maximum 10 <sup>4</sup> Ω-cm

#### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Triple Layer Screened Insulating Composite Tubing - NTRT</b>									
36/12	36	12	7.3	1.0-1.22	70/30	70	30	7.3	1.0-1.22
46/15	46	15	7.3	1.0-1.22	80/36	80	36	7.3	1.0-1.22
50/18	50	18	7.3	1.0-1.22	95/40	95	40	7.3	1.0-1.22
56/21	56	21	7.3	1.0-1.22	120/50	120	50	7.3	1.0-1.22
62/25	62	25	7.3	1.0-1.22					

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Outer Layer Wall thickness after fully recovered

# NKSJ

## HEAT SHRINK KITS

Heat Shrink Joint  
for XLPE or EPR Insulated Cables

**Properties:**

Heat shrink, Joint.  
According to CENELEC HD 629.1 S2 and IEC 60502.

**SHELF LIFE & STORAGE:**

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

**ORDERING INFORMATION:**

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

**FEATURES AND BENEFITS:**

- High mechanical strength.
- Wide cross-section range suitable for various conductor types.
- Compact design for easy installation.
- Enhanced UV and weather resistance.

Standard	IEC 60502			
	6.35/11(12)KV	8.7/15(17.5)KV	12/20(24)KV	18/30(36)KV
Voltage classes	10KV, <10pC	15KV, <10pC	20KV, <10pC	30KV, <10pC
Partial discharge test at ambient temperature	10KV, <10pC	15KV, <10pC	20KV, <10pC	30KV, <10pC
AC withstand voltage test	27KV 5min	39KV 5min	54KV 5min	81KV 5min
Impulse voltage	±75KV each polarity 10 times	±95KV each polarity 10 times	±125KV each polarity 10 times	±170KV each polarity 10 times

**DIMENSIONS:**

6.35/11(12)KV			8.7/15(17.5)KV		
Joint	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )	Joint	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )
<b>1x1 core</b>			<b>1x1 core</b>		
NKSJ-12/1x25-50	12.0-16.0	25-50	NKSJ-17.5/1x25-50	16.0-19.5	25-50
NKSJ-12/1x70-150	17.6-22.8	70-150	NKSJ-17.5/1x70-150	20.3-23.5	70-150
NKSJ-12/1x185-300	24.0-31.0	185-300	NKSJ-17.5/1x185-300	24.0-31.0	185-300
NKSJ-12/1x400-500	31.5-37.0	400-500	NKSJ-17.5/1x400-500	31.5-37.0	400-500
NKSJ-12/1x630	38.0-41.9	630	NKSJ-17.5/1x630	38.0-41.9	630
<b>1x3 cores</b>			<b>1x3 cores</b>		
NKSJ-12/3x25-50	12.0-16.0	25-50	NKSJ-17.5/3x25-50	16.0-19.5	25-50
NKSJ-12/3x70-150	17.6-22.8	70-150	NKSJ-17.5/3x70-150	20.3-23.5	70-150
NKSJ-12/3x185-300	24.0-31.0	185-300	NKSJ-17.5/3x185-300	24.0-31.0	185-300
NKSJ-12/3x400-500	31.5-37.0	400-500	NKSJ-17.5/3x400-500	31.5-37.0	400-500
<b>12/20(24)KV</b>			<b>18/30(36)KV</b>		
Joint	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )	Joint	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )
<b>1x1 core</b>			<b>1x1 core</b>		
NKSJ-24/1x25-50	17.5-20.3	25-50	NKSJ-36/1x50-95	25.0-29.5	50-95
NKSJ-24/1x70-150	21.5-26.5	70-150	NKSJ-36/1x120-240	30.5-36.5	120-240
NKSJ-24/1x185-300	27.5-33.0	185-300	NKSJ-36/1x300-400	38.0-42.5	300-400
NKSJ-24/1x400-500	34.2-39.5	400-500	NKSJ-36/1x500-630	43.5-48.5	500-630
NKSJ-24/1x630	40.5-43.0	630			
<b>1x3 cores</b>			<b>1x3 cores</b>		
NKSJ-24/3x25-50	17.5-20.3	25-50	NKSJ-36/3x50-95	25.0-29.5	50-95
NKSJ-24/3x70-150	21.5-26.5	70-150	NKSJ-36/3x120-240	30.5-36.5	120-240
NKSJ-24/3x185-300	27.5-32.8	185-300	NKSJ-36/3x300-400	38.0-42.5	300-400
NKSJ-24/3x400-500	33.5-39.5	400-500			

**NOTE:**

1. Cable insulation outer diameter is one of the prerequisites for cable accessories selection.
2. Above product selection is according to the IEC standard cable.

# NKIT

## HEAT SHRINK KITS

HS indoor Terminations  
for XLPE or EPR Insulated Cables

### Properties:

Heat shrink, indoor termination.  
According to CENELEC HD 629.1 S2 and IEC 60502.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

### ORDERING INFORMATION:

Standard color available: Red.  
Custom colors can be manufactured based on customer specifications.

### FEATURES AND BENEFITS:

High mechanical strength.  
Wide cross-section range suitable for various conductor types.  
Compact design for easy installation.  
Enhanced UV and weather resistance.

Standard	IEC 60502			
	6.35/11(12)KV	8.7/15(17.5)KV	12/20(24)KV	18/30(36)KV
Voltage classes	10KV, <10pC	15KV, <10pC	20KV, <10pC	30KV, <10pC
Partial discharge test at ambient temperature	10KV, <10pC	15KV, <10pC	20KV, <10pC	30KV, <10pC
AC withstand voltage test	27KV 5min	39KV 5min	54KV 5min	81KV 5min
Impulse voltage	±75KV each polarity 10 times	±95KV each polarity 10 times	±125KV each polarity 10 times	±170KV each polarity 10 times

### DIMENSIONS:

6.35/11(12)KV			8.7/15(17.5)KV		
indoor Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )	indoor Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )
<b>1x1 core</b>			<b>1x1 core</b>		
NKIT-12/1x25-50	12.0-16.0	25-50	NKIT-17.5/1x25-50	16.0-19.5	25-50
NKIT-12/1x70-150	17.6-22.8	70-150	NKIT-17.5/1x70-150	20.3-23.5	70-150
NKIT-12/1x185-300	24.0-31.0	185-300	NKIT-17.5/1x185-300	24.0-31.0	185-300
NKIT-12/1x400-500	31.5-37.0	400-500	NKIT-17.5/1x400-500	31.5-37.0	400-500
NKIT-12/1x630	38.0-41.9	630	NKIT-17.5/1x630	38.0-41.9	630
<b>1x3 cores</b>			<b>1x3 cores</b>		
NKIT-12/3x25-50	12.0-16.0	25-50	NKIT-17.5/3x25-50	16.0-19.5	25-50
NKIT-12/3x70-150	17.6-22.8	70-150	NKIT-17.5/3x70-150	20.3-23.5	70-150
NKIT-12/3x185-300	24.0-31.0	185-300	NKIT-17.5/3x185-300	24.0-31.0	185-300
NKIT-12/3x400-500	31.5-37.0	400-500	NKIT-17.5/3x400-500	31.5-37.0	400-500
<b>12/20(24)KV</b>			<b>18/30(36)KV</b>		
indoor Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )	indoor Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )
<b>1x1 core</b>			<b>1x1 core</b>		
NKIT-24/1x25-50	17.5-20.3	25-50	NKIT-36/1x50-95	25.0-29.5	50-95
NKIT-24/1x70-150	21.5-26.5	70-150	NKIT-36/1x120-240	30.5-36.5	120-240
NKIT-24/1x185-300	27.5-33.0	185-300	NKIT-36/1x300-400	38.0-42.5	300-400
NKIT-24/1x400-500	34.2-39.5	400-500	NKIT-36/1x500-630	43.5-48.5	500-630
NKIT-24/1x630	40.5-43.0	630			
<b>1x3 cores</b>			<b>1x3 cores</b>		
NKIT-24/3x25-50	17.5-20.3	25-50	NKIT-36/3x50-95	25.0-29.5	50-95
NKIT-24/3x70-150	21.5-26.5	70-150	NKIT-36/3x120-240	30.5-36.5	120-240
NKIT-24/3x185-300	27.5-32.8	185-300	NKIT-36/3x300-400	38.0-42.5	300-400
NKIT-24/3x400-500	33.5-39.5	400-500			

### \*NOTE:

1. Cable insulation outer diameter is a key factor for selecting the correct cable accessories.
2. The product selection is based on IEC standard cables.

# NKOT

## HEAT SHRINK KITS

HS outdoor Terminations  
for XLPE or EPR Insulated Cables

**Properties:**

Heat shrink, outdoor termination.  
According to CENELEC HD 629.1 S2 and IEC 60502.

**SHELF LIFE & STORAGE:**

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

**ORDERING INFORMATION:**

Standard color available: Red.  
Custom colors can be manufactured based on customer specifications.

**FEATURES AND BENEFITS:**

- High mechanical strength.
- Wide cross-section range suitable for various conductor types.
- Compact design for easy installation.
- Enhanced UV and weather resistance.

Standard	IEC 60502			
	6.35/11(12)KV	8.7/15(17.5)KV	12/20(24)KV	18/30(36)KV
Voltage classes	10KV, <10pC	15KV, <10pC	20KV, <10pC	30KV, <10pC
Partial discharge test at ambient temperature	10KV, <10pC	15KV, <10pC	20KV, <10pC	30KV, <10pC
AC withstand voltage test	27KV 5min	39KV 5min	54KV 5min	81KV 5min
Impulse voltage	±75KV each polarity 10 times	±95KV each polarity 10 times	±125KV each polarity 10 times	±170KV each polarity 10 times

**DIMENSIONS:**

6.35/11(12)KV			8.7/15(17.5)KV		
Outdoor Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )	Outdoor Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )
<b>1x1 core</b>			<b>1x1 core</b>		
NKOT-12/1x25-50	12.0-16.0	25-50	NKOT-17.5/1x25-50	16.0-19.5	25-50
NKOT-12/1x70-150	17.6-22.8	70-150	NKOT-17.5/1x70-150	20.3-23.5	70-150
NKOT-12/1x185-300	24.0-31.0	185-300	NKOT-17.5/1x185-300	24.0-31.0	185-300
NKOT-12/1x400-500	31.5-37.0	400-500	NKOT-17.5/1x400-500	31.5-37.0	400-500
NKOT-12/1x630	38.0-41.9	630	NKOT-17.5/1x630	38.0-41.9	630
<b>1x3 cores</b>			<b>1x3 cores</b>		
NKOT-12/3x25-50	12.0-16.0	25-50	NKOT-17.5/3x25-50	16.0-19.5	25-50
NKOT-12/3x70-150	17.6-22.8	70-150	NKOT-17.5/3x70-150	20.3-23.5	70-150
NKOT-12/3x185-300	24.0-31.0	185-300	NKOT-17.5/3x185-300	24.0-31.0	185-300
NKOT-12/3x400-500	31.5-37.0	400-500	NKOT-17.5/3x400-500	31.5-37.0	400-500
<b>12/20(24)KV</b>			<b>18/30(36)KV</b>		
Outdoor Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )	Outdoor Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )
<b>1x1 core</b>			<b>1x1 core</b>		
NKOT-24/1x25-50	17.5-20.3	25-50	NKOT-36/1x50-95	25.0-29.5	50-95
NKOT-24/1x70-150	21.5-26.5	70-150	NKOT-36/1x120-240	30.5-36.5	120-240
NKOT-24/1x185-300	27.5-33.0	185-300	NKOT-36/1x300-400	38.0-42.5	300-400
NKOT-24/1x400-500	34.2-39.5	400-500	NKOT-36/1x500-630	43.5-48.5	500-630
NKOT-24/1x630	40.5-43.0	630			
<b>1x3 cores</b>			<b>1x3 cores</b>		
NKOT-24/3x25-50	17.5-20.3	25-50	NKOT-36/3x50-95	25.0-29.5	50-95
NKOT-24/3x70-150	21.5-26.5	70-150	NKOT-36/3x120-240	30.5-36.5	120-240
NKOT-24/3x185-300	27.5-32.8	185-300	NKOT-36/3x300-400	38.0-42.5	300-400
NKOT-24/3x400-500	33.5-39.5	400-500			

**\*NOTE:**

1. Cable insulation outer diameter is a key factor for selecting the correct cable accessories.
2. The product selection is based on IEC standard cables.

# NAS NMB NMR

## HEAT SHRINK SHAPES

Anti-Tracking Rain Shed  
3 Cores Breakout / Right & Straight Boot

### Properties:

Anti-tracking.  
Coated with sealing mastic for enhanced protection.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

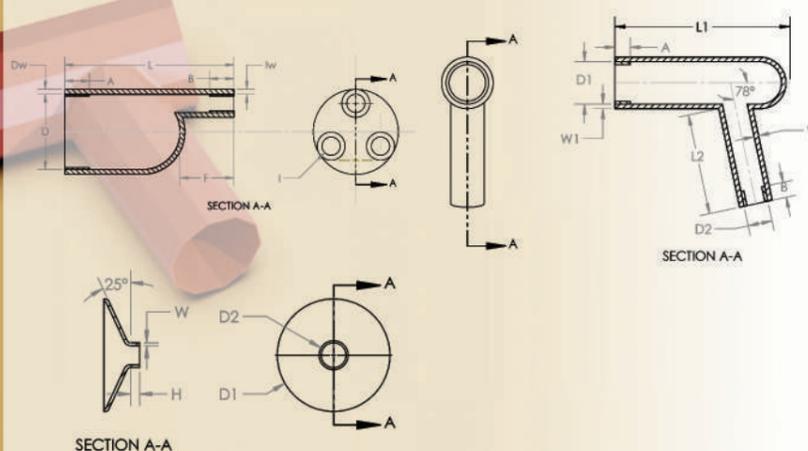
### ORDERING INFORMATION:

Standard color available: Red.  
Custom colors can be manufactured based on customer specifications.

### FEATURES AND BENEFITS:

Coated with sealing mastic.  
Anti-tracking properties.  
UV resistant.  
Shrink ratio between 2:1 and 3:1.  
Minimum full recovery temperature: 130°C.

### TECHNICAL DRAWING:



### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Volume Resistivity	IEC 93	Minimum 10 <sup>14</sup> Ω·cm
Dielectric Strength	IEC 60243	Minimum 10 KV/mm (3 mm)
Water Absorption	ISO 62	Maximum 0.5%
Heat Shock (225°C, 4 hrs)	ASTM D 2671	No cracking or dripping
Density	ASTM D 792	1.1 – 1.3 g/cm <sup>3</sup>

### DIMENSIONS:

Type (mm)	Supplied(mm)		Recovered(mm)			Recovered (mm) h(Min.)
	L*(±10%)	D*(Min.)	H(Min.)	D1 (Nom.)	W (±10%)	
<b>Anti-tracking rain shed - NAS</b>						
NAS 110 35/12	35	12	20	95	3.0	18
NAS 120 48/20	48	20	28	120	3.5	20
NAS 130 60/25	60	25	30	120	3.3	20
NAS 140 60/30	60	30	35	140	3.5	30
NAS 150 75/30	75	30	35	140	3.3	30
NAS 160 100/35	100	35	35	140	3.3	30

Type (mm)	Supplied (mm)±10%		D (mm)		l (mm)		Recovered length (mm) ±10%		Recovered wall (mm) ±20%	
	l*	f*	a* (Min.)	b* (Max.)	a* (Min.)	b* (Max.)	L	F	Dw	lw
<b>Anti-tracking 3 cores breakout - NMB</b>										
NMB320-60/25	175	38	60	25	26	8	170	40	3.0	2.5
NMB330-80/38	200	50	80	38	34	16	210	55	3.5	3.3
NMB340-110/50	210	55	110	50	46	19	230	55	3.8	3.5
NMB350-125/57	220	58	125	57	55	20	240	60	3.7	3.3
NMB360-140/70	250	58	140	70	62	26	270	65	3.8	3.6

Type (mm)	Supplied (mm)		Recovered (mm)							
	D1 (Min.)	D2 (Min.)	D1 (Max.)	D2 (Max.)	L1 (Nom.)	L2 (±10%)	L (±10%)	W1 (±10%)	W2 (±10%)	
<b>Anti-tracking right/straight boot - NMR</b>										
Right Angle	NMR110 (80/36-35/18)	80	35	36	18	160	120	/	3.5	3.5
	NMR120 (80/36-50/18)	80	50	36	18	160	120	/	3.5	3.5
	NMR130 (80/36-50/27)	80	50	36	27	145	135	/	3.6	3.3
	NMR140 (95/38-70/28)	95	70	38	28	155	130	/	4.2	4.5
Straight	NMR150 (145/72-68/34)	145	68	72	34	195	145	/	3.8	3.8
	NMR170 (80/35-58/20)	80	58	35	20	145	30	200	3.0	3.0
	NMR180 (140/65-90/33)	140	90	65	33	155	40	320	3.8	3.8

# NSEC

## HEAT SHRINK SHAPES

### Insulating End Cap

#### Properties:

Shrink ratio 3:1.  
Both insulating and conductive types.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

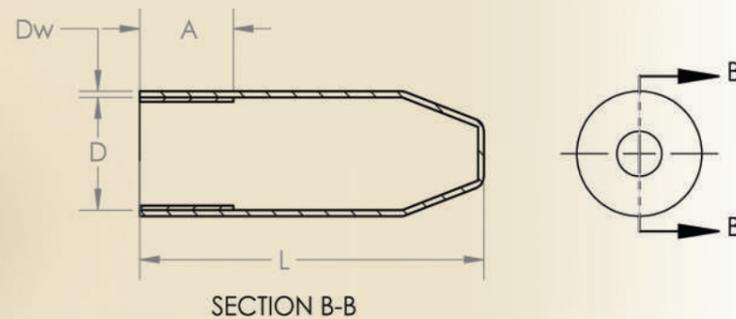
#### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENIFITS:

UV resistant.  
Shrink ratio: 3:1.  
Available with or without spiral adhesive coating.  
Minimum full recovery temperature: 120°C.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Volume Resistivity	IEC 93	Minimum 10 <sup>14</sup> Ω·cm
Dielectric Strength	IEC 60243	Minimum 12 KV/mm (1.0 mm)
Water Absorption	ISO 62	Maximum 0.5%
Heat Shock (225°C, 4 hrs)	ASTM D 2671	No cracking or dripping
Density	ASTM D 792	1.0 – 1.1 g/cm <sup>3</sup>

#### DIMENSIONS:

Type (mm)	Supplied (mm)		Recovered (mm)			
	L*(±10%)	D*(Min.)	A*(±10%)	d*(Min.)	l*(±10%)	D*(Min.)
<b>Cable end cap-NSEC</b>						
NSEC 105 12/4	38	12	15	4	40	2.6
NSEC 110 14/5	45	14	18	5	42	2.2
NSEC 115 20/6	65	20	25	6	55	2.5
NSEC 120 25/8.5	75	25	30	8.5	65	2.5
NSEC 130 35/16	92	35	35	16	83	3.3
NSEC 135 40/15	95	40	40	15	75	3.3
NSEC 140 55/26	114	55	50	26	105	3.5
NSEC 150 75/36	132	75	55	36	115	4.2
NSEC 160 100/52	153	100	70	52	130	5.0
NSEC 170 120/60	155	120	70	60	150	5.0
NSEC 180 145/60	160	145	70	60	150	5.0
NSEC 190 160/82	160	160	70	82	133	4.5
NSEC 200 200/90	170	200	70	90	145	4.5

L\* = Length of end cap Supplied  
D\* = Inner diameter Supplied  
A\* = Length of adhesive after fully recovered  
d\* = Inner diameter after fully recovered  
l\* = Length of end cap after fully recovered

# NCB

## HEAT SHRINK SHAPES

### Conductive Breakout

#### Properties:

- Conductive, sealing.
- Coated with sealing mastic for enhanced protection.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

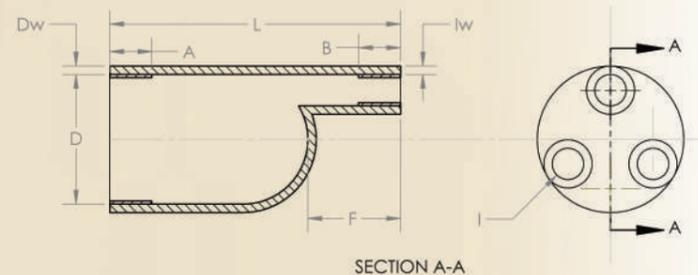
#### ORDERING INFORMATION:

- Standard color available: Black.
- Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

- Coated with sealing mastic.
- Conductive material.
- UV resistant.
- Shrink ratio between 2:1 and 3:1.
- Minimum full recovery temperature: 130°C.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Volume Resistivity	IEC 93	Minimum $10^{14} \Omega\text{-cm}$
Dielectric Strength	IEC 60243	Minimum 12 KV/mm (1.0 mm)
Water Absorption	ISO 62	Maximum 0.5%
Heat Shock (225°C, 4 hrs)	ASTM D 2671	No cracking or dripping
Density	ASTM D 792	1.0 – 1.1 g/cm <sup>3</sup>

#### DIMENSIONS:

Type (mm)	Supplied (mm) ±10%		D (mm)		l (mm)		Recovered length (mm) ±10%		Recovered wall (mm) ±20%	
	l*	f*	a* (Min.)	b* (Max.)	a* (Min.)	b* (Max.)	L	F	Dw	Iw
NCB320-60/25	170	40	60	25	26	8	170	40	2.8	2.6
NCB330-80/38	210	50	80	38	34	16	215	55	3.5	3.2
NCB340-110/50	210	55	110	50	46	19	230	60	3.5	3.3
NCB350-125/57	220	60	125	57	55	20	240	68	3.5	3.2

- l = The length of L Supplied
- f = The length of F Supplied
- a\* = Inner diameter Supplied
- b\* = Inner diameter after fully recovered

# NCFT

## HEAT SHRINK SHAPES

### Cable Feedthroughs

#### Properties:

Shrink ratio 2-3:1.  
Coated with sealing mastic for enhanced protection.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

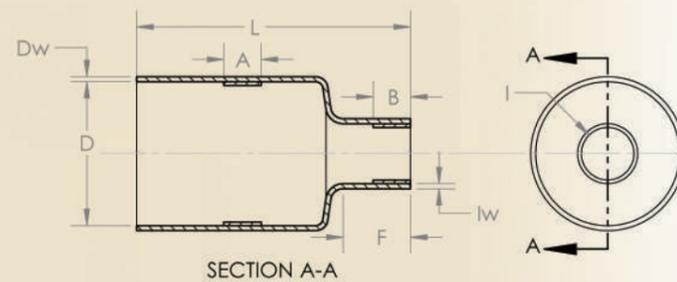
#### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

Coated with sealing mastic.  
Provides insulation.  
UV resistant.  
Shrink ratio between 2:1 and 3:1.  
Minimum full recovery temperature: 130°C.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Volume Resistivity	IEC 93	Minimum 10 <sup>14</sup> Ω·cm
Dielectric Strength	IEC 60243	Minimum 12 KV/mm (1.0 mm)
Water Absorption	ISO 62	Maximum 0.5%
Heat Shock (225°C, 4 hrs)	ASTM D 2671	No cracking or dripping
Density	ASTM D 792	1.0 – 1.1 g/cm <sup>3</sup>

#### DIMENSIONS:

Type (mm)	Supplied (mm)±10%		D (mm)		l (mm)		Recovered length (mm) ±10%		Recovered wall (mm) ±20%	
	l*	f*	a* (Min.)	b* (Max.)	a* (Min.)	b* (Max.)	L	F	Dw	Iw
NCFT 100 (45/15-15/5)	110	45	45	15	15	5	130	45	2.8	2.8
NCFT 110 (85/42-15/5)	110	45	85	42	15	5	130	45	2.8	2.8
NCFT 120 (60/30-45/10)	125	55	60	30	45	10	135	55	2.6	4.4
NCFT 130 (100/52-20/8)	150	55	100	52	20	8	170	65	3.0	3.0
NCFT 135 (150/92-14/5)	130	55	150	92	14	5	150	55	3.5	3.5
NCFT 140 (160/92-60/20)	125	35	160	92	60	20	145	55	3.0	3.2
NCFT 150 (160/92-100/45)	125	35	160	92	100	45	145	55	3.5	3.2

l = The length of L Supplied  
f = The length of F Supplied  
a\* = Inner diameter Supplied  
b\* = Inner diameter after fully recovered

# NLB

## HEAT SHRINK SHAPES

### Low Voltage Cable Breakouts for 2 to 5 Cores

#### Properties:

Shrink ratio 2-3:1.  
Adhesive coated.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

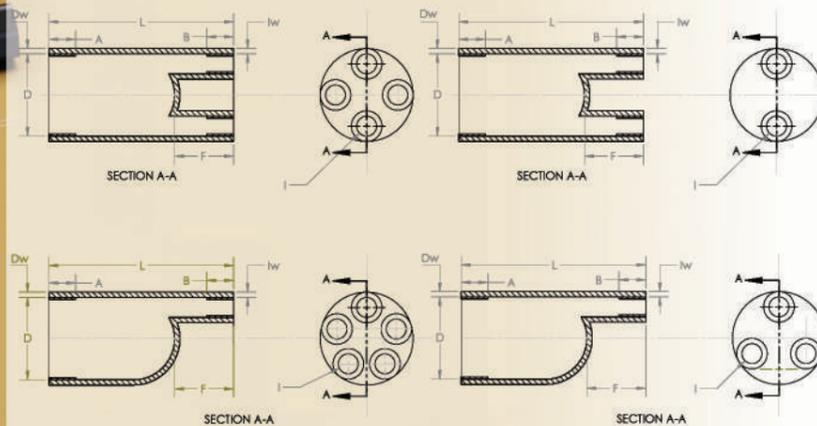
#### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

Spiral adhesive coated for secure bonding.  
Provides electrical insulation.  
UV resistant.  
Shrink ratio between 2:1 and 3:1.  
Minimum full recovery temperature: 120°C.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Volume Resistivity	IEC 93	Minimum 10 <sup>14</sup> Ω-cm
Dielectric Strength	IEC 60243	Minimum 12 KV/mm (1.0 mm)
Water Absorption	ISO 62	Maximum 0.5%
Heat Shock (225°C, 4 hrs)	ASTM D 2671	No cracking or dripping
Density	ASTM D 792	1.0 – 1.1 g/cm <sup>3</sup>

#### DIMENSIONS:

Type (mm)	Supplied (mm)±10%		D (mm)		I (mm)		Recovered length (mm) ±10%		Recovered wall (mm) ±20%	
	l*	f*	a* (Min.)	b* (Max.)	a* (Min.)	b* (Max.)	L	F	Dw	Iw
<b>2 Cores cable breakout</b>										
NLB205-22/8	55	16	22	12	11	3.5	60	18	2.2	1.8
NLB210-30/12	80	22	30	14	14	4.5	84	21	2.6	2.4
NLB215-40/16	100	30	40	16	15	5.0	110	30	2.2	2.2
NLB220-60/23	95	21	60	23	25	8.0	105	25	2.4	2.4
NLB230-90/60	165	45	90	60	30	8.0	170	48	3.0	3.0
NLB250-160/90	290	170	160	92	50	30	310	160	4.5	4.5
<b>3 Cores cable breakout</b>										
NLB310-38/16	100	35	38	16	15	5	110	30	2.3	2.0
NLB320-60/25	170	40	60	25	26	8	175	45	3.2	2.8
NLB325-70/28	175	45	70	28	32	10	180	45	3.3	3.0
NLB330-80/38	190	50	80	38	34	16	195	55	3.5	3.3
NLB340-110/50	220	55	110	50	46	19	230	60	3.8	3.5
NLB350-125/57	230	58	125	57	55	20	240	65	3.7	3.3
NLB360-140/70	250	58	140	70	62	26	270	68	3.9	3.6
NLB370-170/77	250	55	170	77	75	28	270	68	3.9	3.6
<b>4 Cores cable breakout</b>										
NLB410-40/15	95	23	40	15	12	5.0	100	24	2.2	2.0
NLB420-55/21	145	40	55	21	20	5.5	150	42	2.9	2.7
NLB425-65/26	170	45	65	26	25	7.5	180	50	3.3	3.1
NLB430-75/26	180	45	75	26	28	7.5	190	50	3.3	3.1
NLB440-82/37	170	46	82	37	30	11	180	45	3.3	3.0
NLB445-90/37	170	46	90	37	32	11	180	50	3.3	3.0
NLB450-100/47	180	55	100	47	38	12	190	55	3.9	3.3
NLB460-125/52	215	50	125	52	50	15	240	68	4.0	4.0
<b>5 Cores cable breakout</b>										
NLB510-40/19	90	20	40	19	13	4.5	85	20	2.5	2.2
NLB520-55/24	145	36	55	24	18	5.5	150	40	3.0	2.6
NLB530-80/33	160	46	80	33	26	8	175	50	3.2	3.0
NLB540-100/42	185	52	100	42	35	10	195	55	3.5	3.2
NLB510-40/19	90	20	40	19	13	4.5	85	20	2.5	2.2

# NEGT

INSULATION/ELASTOMERIC TUBING

High Insulation / Elastomeric Two-Layer Heat Shrink Tubing

**Properties:**

Shrink ratio 3:1.  
Heavy wall.

**SHELF LIFE & STORAGE:**

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

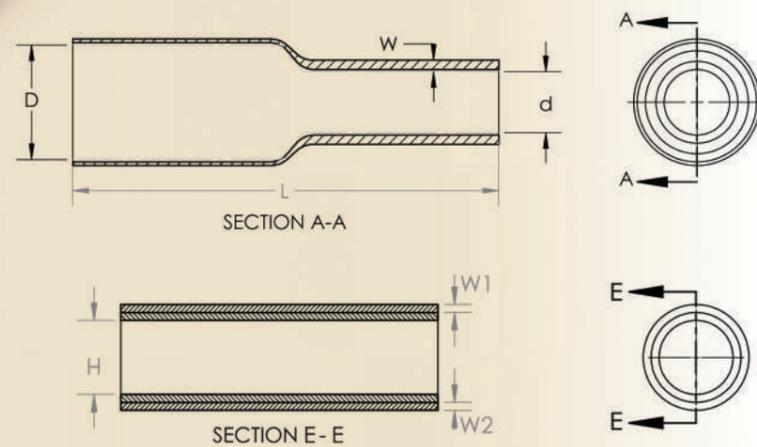
**ORDERING INFORMATION:**

Standard color available: Red.  
Custom colors can be manufactured based on customer specifications.

**FEATURES AND BENIFITS:**

High insulation performance.  
Heavy wall construction.  
Minimum full recovery temperature: 120°C.  
RoHS compliant.  
Suitable for applications up to 42 KV.

**TECHNICAL DRAWING:**



**TECHNICAL PERFORMANCE:**

Layer	Test Item	Test Method	Requirement
Inner Layer	Tensile Strength	ASTM D 2671	Minimum 5 MPa
	Ultimate Elongation	ASTM D 2671	Minimum 800%
	Water Absorption	ISO 62	Maximum 0.5%
	Dielectric Strength	IEC 60243	Minimum 22 KV/mm
	Volume Resistivity	IEC 93	Minimum 10 <sup>14</sup> Ω-cm
Outer Layer	Tensile Strength	ASTM D 2671	Minimum 12 MPa
	Ultimate Elongation	ASTM D 2671	Minimum 300%
	Dielectric Strength	IEC 60243	Minimum 20 KV/mm
	Volume Resistivity	IEC 93	Minimum 10 <sup>14</sup> Ω-cm
	Water Absorption	ISO 62	Maximum 0.5%

**DIMENSIONS:**

Type	H a (mm) Min.	H b (mm) Max.	W1 b (mm) nom.	W2 b (mm) Min.	W1+W2 b (mm) Min.	P Standard Length (m)
NEGT 42/16	42	16	1.9	2.0	3.9	0.38-1.5
NEGT 54/21	54	21	1.9	2.0	3.9	0.38-1.5
NEGT 62/26	62	26	1.9	2.0	3.9	0.38-1.5
NEGT 55/20	55	20	2.9	3.0	5.9	0.38-1.22
NEGT 62/25	62	25	2.9	3.0	5.9	0.38-1.22
NEGT 70/30	70	30	2.9	3.0	5.9	0.38-1.22
NEGT 80/34	80	34	2.9	3.0	5.9	0.38-1.22
NEGT 95/40	95	40	2.9	3.0	5.9	0.38-1.22

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>High Insulation / Elastomeric Two-Layer Heat Shrink Tubing - NEGt</b>									
19/6	19	6	2.00	30m/spool	66/20	66	20	4.4	1.0-1.5
25/10	25	10	2.00	30m/spool	75/25	75	25	5.0	1.0-1.5
30/12	30	12	2.00	30m/spool	95/30	95	30	5.0	1.0-1.5
35/14	35	14	2.50	30m/spool					

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Wall thickness after fully recovered

# NGT INSULATION TUBING

## High Insulation Heavy Wall Heat Shrink Tubing

### Properties:

Shrink ratio 3:1.  
Heavy wall.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

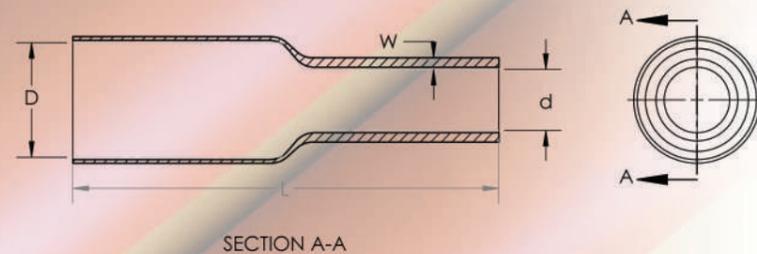
### ORDERING INFORMATION:

Standard color available: Red.  
Custom colors can be manufactured based on customer specifications.

### FEATURES AND BENEFITS:

Provides high electrical insulation.  
Heavy wall construction for enhanced protection.  
Shrink ratio of 3:1.  
Minimum full recovery temperature: 120°C.  
Suitable for medium voltage applications up to 42 KV.

### TECHNICAL DRAWING:



### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Volume Resistivity	IEC 93	Minimum $10^{14}$ $\Omega$ -cm
Dielectric Strength	IEC 60243	Minimum 20 KV/mm (1.0 mm)
Water Absorption	ISO 62	Maximum 0.5%

### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>High Insulation Heavy Wall Heat Shrink Tubing - NGT</b>									
35/12	35	12	3.2	1.0-1.5	66/20	66	20	4.4	1.0-1.5
45/14	45	14	3.5	1.0-1.5	75/25	75	25	5.0	1.0-1.5
52/15	52	15	3.9	1.0-1.5	95/30	95	30	5.0	1.0-1.5
55/18	55	18	3.9	1.0-1.5					

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Wall thickness after fully recovered

# NAT / NATA

## ANTI-TRACKING TUBING

### Anti-Tracking Insulation Tubing

#### Properties:

- Shrink ratio 3:1.
- Flexible.
- Tracking resistant.

#### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

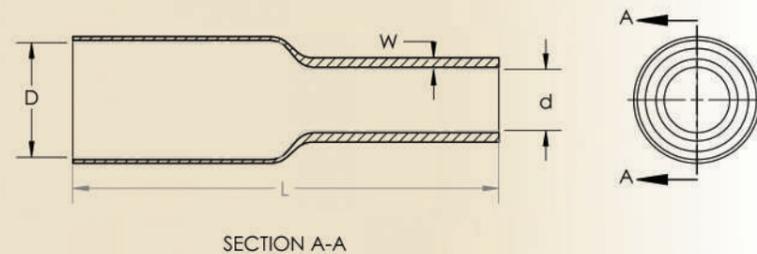
#### ORDERING INFORMATION:

Standard color available: Red.  
Custom colors can be manufactured based on customer specifications.

#### FEATURES AND BENEFITS:

- Medium wall busbar tubing made from halogen-free.
- UV and weather resistant.
- Excellent tracking resistance.
- Minimum full recovery temperature of 110°C.
- Suitable for applications up to 42 KV.

#### TECHNICAL DRAWING:



#### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 10 MPa
Ultimate Elongation	ASTM D 2671	Minimum 200%
Tensile Strength after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 10 MPa
Ultimate Elongation after Aging	ASTM D 2671	Minimum 100%
Heat Shock (200°C, 30 min)	ASTM D 2671	No cracking or dripping
Density	ASTM D 792	1.2 – 1.3 g/cm <sup>3</sup>
Dielectric Strength	IEC 60243	Minimum 10 KV/mm (2.5 mm thick)
Volume Resistivity	ASTM D 2671	Minimum 10 <sup>12</sup> Ω-cm
Low Temperature Flexibility (-40°C, 4 hrs)	ASTM D 2671 Proc. C	No cracking
Permittivity	ASTM D 150	Nominal 3
Tracking Resistance	ASTM D 2303	No tracking

#### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Continues length tubing - NAT</b>									
19/6	19	6	2.5	30m/spool or 0.5-1.5m	65/21	65	21	3.3	30m/spool or 0.5-1.5m
30/10	30	10	2.9	30m/spool or 0.5-1.5m	75/25	75	25	3.5	30m/spool or 0.5-1.5m
38/12	38	12	2.9	30m/spool or 0.5-1.5m	85/29	85	29	3.5	30m/spool or 0.5-1.5m
40/16	40	16	2.9	30m/spool or 0.5-1.5m	100/40	100	40	4.0	0.5-1.5m
49/16	49	16	2.9	30m/spool or 0.5-1.5m	130/50	130	50	4.0	1.0-1.5m
55/18	55	18	2.9	30m/spool or 0.5-1.5m					
<b>Cut length tubing - NATA</b>									
30/10	30	10	2.9	1.0-1.5	65/21	65	21	3.3	1.0-1.5
40/12	40	12	2.9	1.0-1.5	75/25	75	25	3.5	1.0-1.5
43/14	43	14	2.9	1.0-1.5	85/29	85	29	3.5	1.0-1.5
49/16	49	16	2.9	1.0-1.5	100/40	100	40	4.0	1.0-1.5
55/18	55	18	2.9	1.0-1.5	130/50	130	50	4.0	1.0-1.5

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Wall thickness after fully recovered

# NBM / NBT BUSBAR TUBING

Halogen-Free  
Busbar Insulation Tubing

**Properties:**

- Shrink ratio 3:1.
- Semi-rigid.
- Tracking resistant, flame retardant.

**SHELF LIFE & STORAGE:**

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

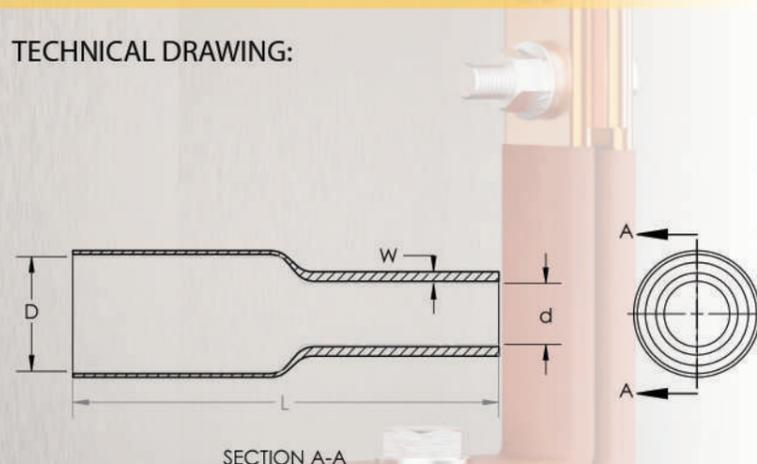
**ORDERING INFORMATION:**

- Standard color available: Red.
- Custom colors can be manufactured based on customer specifications.

**FEATURES AND BENEFITS:**

- Medium wall busbar tubing made from halogen-free.
- UV and weather resistant.
- Excellent tracking resistance.
- Minimum full recovery temperature of 110°C.
- suitable for medium voltage insulation (24 KV for NBM, 36 KV for NBT).

**TECHNICAL DRAWING:**



**TECHNICAL PERFORMANCE:**

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 500%
Longitudinal Shrinkage	ASTM D 2671	0 to -10%
Heat Aging (120°C, 168 hrs)	ASTM D 2671	Tensile Strength ≥ 10 MPa, Ultimate Elongation ≥ 250%
Dielectric Strength	IEC 243	Minimum 18 KV/mm
Dielectric Constant	IEC 250	Maximum 3.0
Volume Resistivity	IEC 93	Minimum 10 <sup>13</sup> Ω-cm
Flammability (Oxygen Index)	IEC 4589	Minimum 25
Copper Corrosion	UL 224	No corrosion
Cold Bend (-40°C, 4 hrs)	ASTM D 2671	No cracking
Water Absorption (23°C, 14 days)	ISO 62	Maximum 0.5%

**DIMENSIONS:**

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Medium wall tubing - NBM</b>									
19/6	19	6	1.9	30m/spool	75/30	75	30	1.9	15m/spool
25/10	25	10	1.9	30m/spool	100/40	100	40	1.9	15m/spool
30/12	30	12	1.9	30m/spool	120/50	120	50	2.9	15m/spool
35/14	35	14	1.9	30m/spool	150/60	150	60	2.9	15m/spool
40/16	40	16	1.9	30m/spool	180/60	180	60	2.9	1.0-1.5m
50/20	50	20	1.9	30m/spool	205/75	205	75	3.2	1.0-1.5m
65/25	65	25	1.9	15m/spool	235/75	235	75	3.2	1.0-1.5m
<b>Heavy wall tubing - NBT</b>									
19/6	19	6	2.5	15m/spool	65/25	65	25	2.9	15m/spool
25/10	25	10	2.9	15m/spool	75/30	75	30	2.9	15m/spool
30/12	30	12	2.9	15m/spool	85/35	85	35	2.9	15m/spool
35/14	35	14	2.9	15m/spool	100/40	100	40	2.9	15m/spool
40/16	40	16	2.9	15m/spool	120/50	120	50	2.9	15m/spool
50/20	50	20	2.9	15m/spool	150/60	150	60	3.0	15m/spool

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Wall thickness after fully recovered

# NBTM / NBTH

MV BUSBAR TUBING

Medium and Heavy Wall  
Tubing for Busbar Insulation

**Properties:**

- Flame retardant.
- Heavy wall.
- Tracking resistant.

**SHELF LIFE & STORAGE:**

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

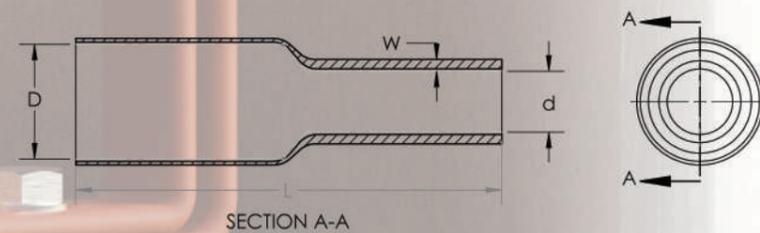
**ORDERING INFORMATION:**

Standard color available: Red.  
Custom colors can be manufactured based on customer specifications.

**FEATURES AND BENEFITS:**

- Tracking resistant and UV resistant.
- Flame retardant and flexible.
- Minimum full recovery temperature: 120°C.
- Compliant with IEC 60684-3-283.
- NBTH: Suitable for applications up to 36 KV.
- NBTM: Suitable for applications up to 24 KV.

**TECHNICAL DRAWING:**



**TECHNICAL PERFORMANCE:**

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 400%
Tensile Strength after Aging (120°C, 168 hrs)	ASTM D 2671	Minimum 10 MPa
Ultimate Elongation after Aging (120°C, 168 hrs)	ASTM D 2671	Minimum 300%
Density	ASTM D 792	Nominal 1.2 – 1.3 g/cm <sup>3</sup>
Dielectric Strength	IEC 60243	Minimum 12 KV/mm (3 mm thick)
Volume Resistivity	IEC 93	Minimum 10 <sup>12</sup> Ω-cm
Flammability	IEC 60684-2 Method C	Maximum 60 seconds
Low Temperature Flexibility (-40°C, 4 hrs)	ASTM D 2671 Proc. C	No cracking
Permittivity	IEC 60250	Maximum 5

**DIMENSIONS:**

Size (mm)	Supplied (mm) D*(Min.)	Recovering (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovering (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Medium wall tubing - NBTM</b>									
15/6	15	6	2.0	30m/spool	100/40	100	40	2.8	15m/spool
30/12	30	12	2.3	30m/spool	120/50	120	50	2.8	15m/spool
40/16	40	16	2.5	30m/spool	150/60	150	60	3.3	1.0-1.5m
50/20	50	20	2.5	15m/spool	205/75	205	75	3.8	1.0-1.2m
75/30	75	30	2.6	15m/spool	235/75	235	75	3.8	1.0-1.2m
<b>Heavy wall tubing - NBTH</b>									
25/10	25	10	4.0	1.0-1.5m	120/40	120	40	4.1	1.0-1.5m
40/16	40	16	4.0	1.0-1.5m	150/60	150	60	3.9	1.0-1.5m
75/25	75	25	4.0	1.0-1.5m	180/75	180	75	4.1	1.0-1.2m

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Wall thickness after fully recovered

# NRA2/NR2

## MEDIUM WALL TUBING

Medium wall tubing  
With / Without hot melt adhesive Coating

### Properties:

Shrink ratio 3:1.  
Semi-rigid.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

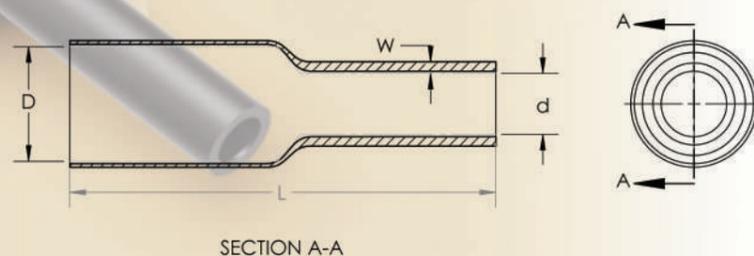
### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

### FEATURES AND BENEFITS:

Dual-wall tubing with hot melt adhesive lining.  
Supplied in cut pieces up to 1.5 meters in length.  
UV resistant and flammable.  
Minimum full recovery temperature: 120°C.

### TECHNICAL DRAWING:



### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 350%
Tensile Strength after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 300%
Density	ASTM D 792	1.0 to 1.1 g/cm <sup>3</sup>
Dielectric Strength	ASTM D 60243	Minimum 12 KV/mm (2 mm thick)
Volume Resistivity	ASTM D 2671	Minimum 10 <sup>12</sup> Ω-cm
Low Temperature Flexibility (-40°C, 4 hrs)	ASTM D 2671	No cracking of outer jacket
Hot Melt Adhesive Softening Point	ASTM E28	85 ± 5°C
Peel Strength (PE)	ASTM D 2671	Minimum 4 N/cm

### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Medium wall tubing with hot melting adhesive - NRA2</b>									
8/2	8	2	1.8	1.0-1.5	95/25	95	25	3.6	1.0-1.5
12/3	12	3	1.8	1.0-1.5	115/34	115	34	3.5	1.0-1.5
16/5	16	5	2.1	1.0-1.5	140/42	140	42	3.3	1.0-1.5
22/6	22	6	2.4	1.0-1.5	160/50	160	50	3.3	1.0-1.5
28/6	28	6	2.7	1.0-1.5	180/58	180	58	3.3	1.0-1.5
33/8	33	8	2.6	1.0-1.5	235/65	235	65	3.7	1.0-1.5
40/12	40	12	2.6	1.0-1.5	300/75	300	75	3.8	1.0-1.5
55/16	55	16	2.7	1.0-1.5	350/100	350	100	4.3	1.0-1.5
65/19	65	19	2.9	1.0-1.5	410/150	410	150	4.3	1.0-1.5
75/22	75	22	3.0	1.0-1.5					

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Medium wall tubing without hot melting adhesive - NR2</b>									
12/3	12	3	1.8	30m/spool or 1.0-1.5m	95/25	95	25	3.6	15m/spool or 1.0-1.5m
16/5	16	5	2.1	30m/spool or 1.0-1.5m	115/34	115	34	3.5	15m/spool or 1.0-1.5m
22/6	22	6	2.4	30m/spool or 1.0-1.5m	140/42	140	42	3.3	1.0-1.5m
28/6	28	6	2.7	30m/spool or 1.0-1.5m	160/50	160	50	3.3	1.0-1.5m
33/8	33	8	2.6	30m/spool or 1.0-1.5m	180/58	180	58	3.3	1.0-1.5m
40/12	40	12	2.6	30m/spool or 1.0-1.5m	235/65	235	65	3.7	1.0-1.5m
55/16	55	16	2.7	30m/spool or 1.0-1.5m	265/75	265	75	3.7	1.0-1.2m
65/19	65	19	2.9	30m/spool or 1.0-1.5m	350/100	350	100	4.3	1.0-1.2m
75/22	75	22	3.0	30m/spool or 1.0-1.5m	410/150	410	150	4.3	1.0-1.2m
12/3	12	3	1.8	30m/spool or 1.0-1.5m					

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Outer Layer Wall thickness after fully recovered

# NRA3/NR3

## HEAVY WALL TUBING

HEAVY wall tubing  
With / Without hot melt adhesive Coating

**Properties:**

Shrink ratio 3:1.  
Semi-rigid.

**SHELF LIFE & STORAGE:**

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

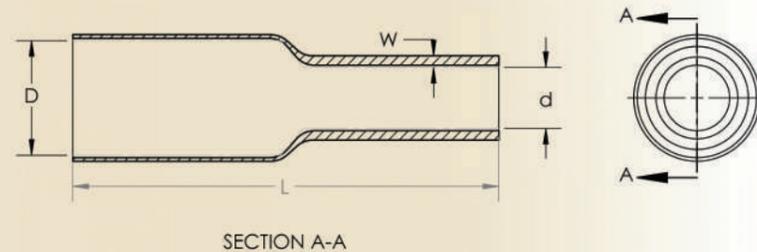
**ORDERING INFORMATION:**

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

**FEATURES AND BENEFITS:**

Heavy wall tubing with hot melt adhesive lining.  
Supplied in cut pieces up to 1.5 meters in length.  
UV resistant and flammable.  
Minimum full recovery temperature: 120°C.

**TECHNICAL DRAWING:**



**TECHNICAL PERFORMANCE:**

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 350%
Tensile Strength after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 300%
Density	ASTM D 792	1.0 – 1.1 g/cm <sup>3</sup>
Dielectric Strength	ASTM D 60243	Minimum 12 KV/mm (2 mm thick)
Volume Resistivity	ASTM D 2671	Minimum 10 <sup>12</sup> Ω-cm
Low Temperature Flexibility (-40°C, 4 hrs)	ASTM D 2671	No cracking of outer jacket
Hot Melt Adhesive Softening Point	ASTM E28	85 ± 5°C
Peel Strength (PE)	ASTM D 2671	Minimum 4 N/cm

**DIMENSIONS:**

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Heavy wall tubing with hot melting adhesive - NRA3</b>									
9/3	9	2	2.0	1.0-1.5	105/25	105	25	4.5	1.0-1.5
15/4	15	4	2.4	1.0-1.5	115/34	115	34	4.2	1.0-1.5
22/6	22	6	2.7	1.0-1.5	130/36	130	36	4.2	1.0-1.5
33/8	33	8	3.2	1.0-1.5	180/50	180	50	4.2	1.0-1.5
45/12	45	12	4.0	1.0-1.5	200/60	200	60	4.2	1.0-1.5
55/16	55	16	4.0	1.0-1.5	235/65	235	65	4.4	1.0-1.5
65/19	65	19	4.0	1.0-1.5	265/75	265	75	4.8	1.0-1.5
75/22	75	22	4.0	1.0-1.5	300/85	300	85	4.8	1.0-1.2
85/25	85	25	4.2	1.0-1.5	350/100	350	100	4.8	1.0-1.2
95/29	95	29	4.2	1.0-1.5	385/110	385	110	4.8	1.0-1.2

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Heavy wall tubing without hot melting adhesive - NR3</b>									
9/3	9	3	2.0	1.0-1.5	95/29	95	25	4.5	1.0-1.5
15/4	15	4	2.4	1.0-1.5	115/34	115	34	4.2	1.0-1.5
22/6	22	6	2.7	1.0-1.5	130/36	130	36	4.2	1.0-1.5
33/8	33	8	3.2	1.0-1.5	180/50	180	50	4.2	1.0-1.5
45/12	45	12	4.0	1.0-1.5	200/60	200	60	4.2	1.0-1.5
55/16	55	16	4.0	1.0-1.5	235/65	235	65	4.4	1.0-1.5
65/19	65	19	4.0	1.0-1.5	265/75	265	75	4.8	1.0-1.5
75/22	75	22	4.0	1.0-1.5	300/85	300	85	4.8	1.0-1.2
85/25	85	25	4.2	1.0-1.5					

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Outer Layer Wall thickness after fully recovered

# NRTM

## MEDIUM WALL TUBING

Co-extruded medium wall tubes with hot melt adhesive lining

### Properties:

Shrink ratio 3:1.  
Semi-rigid.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

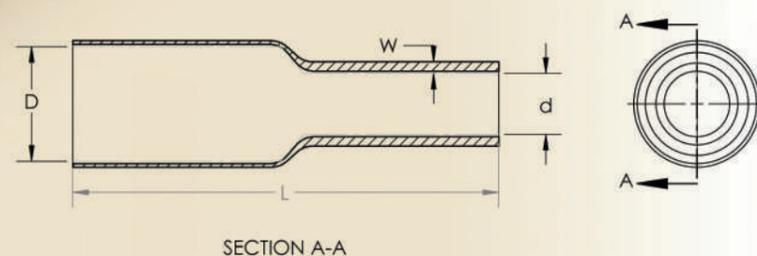
### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

### FEATURES AND BENEFITS:

Dual-wall tubing with hot melt adhesive lining by co-extrusion.  
Supplied in cut pieces up to 1.5 meters in length.  
UV resistant and flammable.  
Minimum full recovery temperature: 120°C.

### TECHNICAL DRAWING:



### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 350%
Tensile Strength after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 300%
Density	ASTM D 792	1.0 to 1.1 g/cm <sup>3</sup>
Dielectric Strength	ASTM D 60243	Minimum 12 KV/mm (2 mm thick)
Volume Resistivity	ASTM D 2671	Minimum 10 <sup>12</sup> Ω-cm
Low Temperature Flexibility (-40°C, 4 hrs)	ASTM D 2671	No cracking of outer jacket
Hot Melt Adhesive Softening Point	ASTM E28	105 ± 5°C
Peel Strength (PE)	ASTM D 2671	Minimum 4 N/cm

### DIMENSIONS:

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Medium wall tubing without hot melting adhesive - NRTM</b>									
8/2	8	2	1.8	1.0-1.5	45/12	45	12	2.4	1.0-1.5
12/3	12	3	1.9	1.0-1.5	55/16	55	16	2.4	1.0-1.5
16/5	16	5	1.9	1.0-1.5	65/19	65	19	2.6	1.0-1.5
19/5	19	5	1.9	1.0-1.5	75/22	75	22	2.8	1.0-1.5
22/6	22	6	2.1	1.0-1.5	95/25	95	25	3.1	1.0-1.5
28/6	28	6	2.6	1.0-1.5	115/34	115	34	3.5	1.0-1.5
33/8	33	8	2.4	1.0-1.5	140/42	140	42	3.4	1.0-1.5
40/12	40	12	2.4	1.0-1.5	160/50	160	50	3.4	1.0-1.5

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered

# NRTH

## HEAVY WALL TUBING

Co-extruded heavy wall tubes with hot melt adhesive lining

**Properties:**

Shrink ratio 3:1.  
Semi-rigid.

**SHELF LIFE & STORAGE:**

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

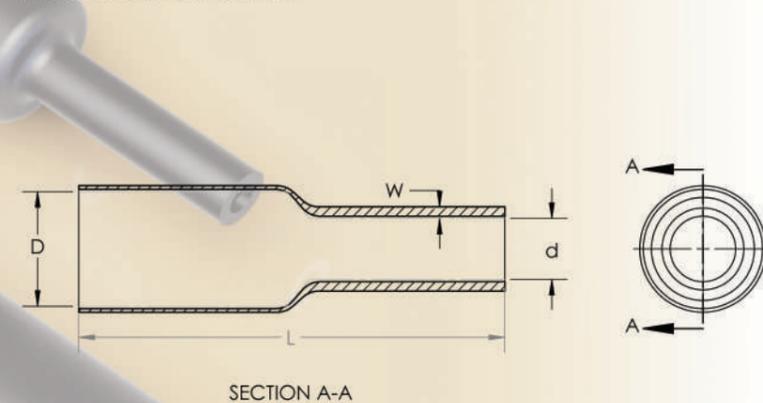
**ORDERING INFORMATION:**

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

**FEATURES AND BENEFITS:**

Heavy wall tubing with hot melt adhesive lining by co-extrusion.  
Supplied in cut pieces up to 1.5 meters in length.  
UV resistant and flammable.  
Minimum full recovery temperature: 120°C.

**TECHNICAL DRAWING:**



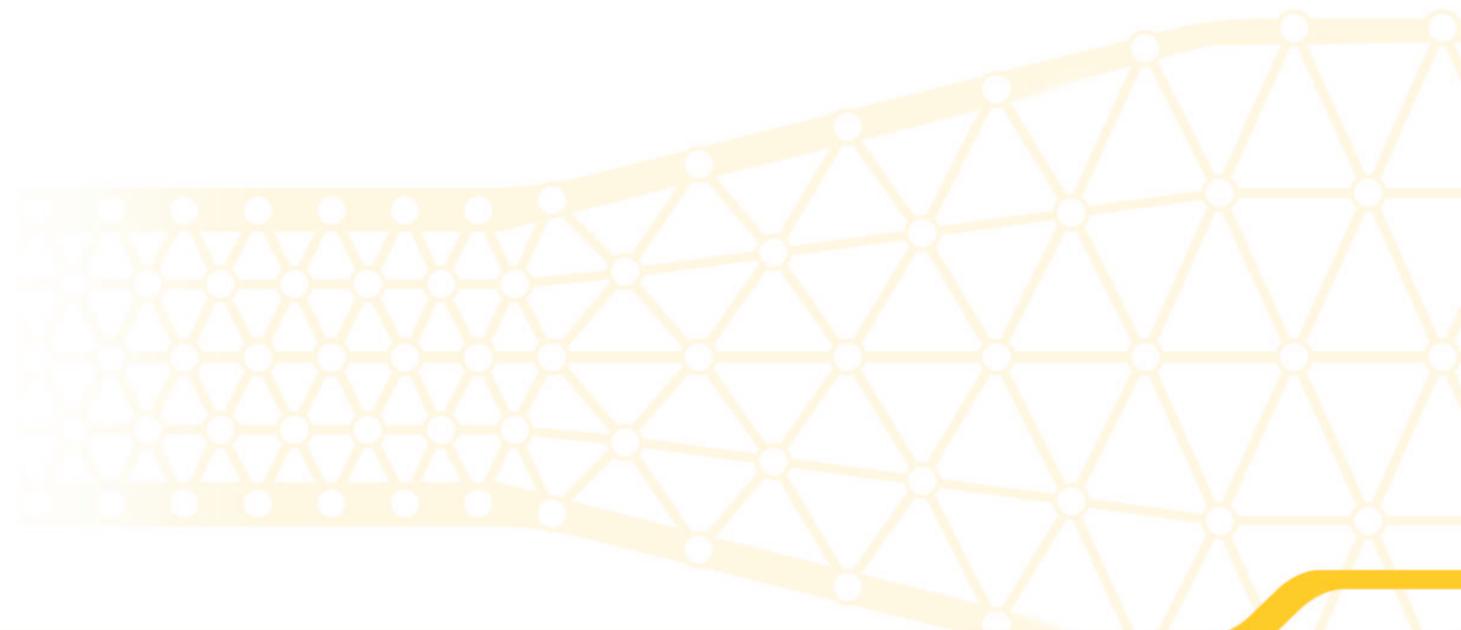
**TECHNICAL PERFORMANCE:**

Test Item	Test Method	Requirement
Tensile Strength	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation	ASTM D 2671	Minimum 350%
Tensile Strength after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 12 MPa
Ultimate Elongation after Aging (150°C, 168 hrs)	ASTM D 2671	Minimum 300%
Density	ASTM D 792	1.0 to 1.1 g/cm <sup>3</sup>
Dielectric Strength	ASTM D 60243	Minimum 12 KV/mm (2 mm thickness)
Volume Resistivity	ASTM D 2671	Minimum 10 <sup>12</sup> Ω-cm
Low Temperature Flexibility (-40°C, 4 hrs)	ASTM D 2671	No cracking of outer jacket
Hot Melt Adhesive Softening Point	ASTM E28	105 ± 5°C
Peel Strength (PE)	ASTM D 2671	Minimum 4 N/cm

**DIMENSIONS:**

Size (mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)	Size(mm)	Supplied (mm) D*(Min.)	Recovered (mm)		Standard length (m)
		d*(Max.)	w*(Min.)				d*(Max.)	w*(Min.)	
<b>Co-extruded Heavy Wall Tubing with Hot Melt Adhesive Lining - NRTH</b>									
9/3	9	3	1.9	1.0-1.5	75/22	75	22	4.0	1.0-1.5
16/4	16	4	2.4	1.0-1.5	85/25	85	25	4.0	1.0-1.5
24/6	24	6	2.6	1.0-1.5	95/25	95	25	4.0	1.0-1.5
34/8	34	8	3.2	1.0-1.5	105/25	105	25	4.0	1.0-1.5
48/12	48	12	4.0	1.0-1.5	115/30	115	30	4.0	1.0-1.5
55/16	55	16	4.0	1.0-1.5	130/35	130	35	4.2	1.0-1.5

D\* = Inner diameter Supplied  
d\* = Inner diameter after fully recovered  
w\* = Outer Layer Wall thickness after fully recovered



# NLVT / NLVJ

## HEAT SHRINK KITS

HS LV Joint & Termination  
for Insulated Cables

### Properties:

Heat shrink, LV Joint and Termination.  
Designed for high mechanical strength and compatible with a wide range of conductor cross-sections and connector types.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

### FEATURES AND BENEFITS:

High mechanical strength.  
Compact design for easy installation.  
Enhanced UV and weather resistance.  
Unlimited shelf life without aging.  
Allows immediate re-energizing after installation.

Test Item	Test Method	Requirement
Impulse withstand voltage test	20 KV ±10	PASS
AC withstand voltage test	4 KV, 1 min	PASS
Insulation resistance	≥ 50 MΩ	PASS

0.6/1.0(1.2)KV Heat Shrink Joint			0.6/1.0(1.2)KV Heat Shrink Termination		
Joint	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )	Termination	Cable Insulation OD(mm)	Cable Conductor CSA (mm <sup>2</sup> )
NLVJ-1.2/4x1.5-10	2.95-5.6	1.5-10	NLVT-1.2/4x1.5-10	2.95-5.6	1.5-10
NLVJ-1.2/4x16-50	6.4-10.0	16--50	NLVT-1.2/4x16-50	6.4-10.0	16--50
NLVJ-1.2/4x70-150	11.5-16.9	70-150	NLVT-1.2/4x70-150	11.5-16.9	70-150
NLVJ-1.2/4x185-400	18.5-26.5	185-400	NLVT-1.2/4x185-400	18.5-26.5	185-400

**\*NOTE:**

1. Cable insulation outer diameter is a key factor for selecting the correct cable accessories.
2. Customized products are available for 1 to 5 core cables.
3. Terminations and joints for 1-core cables can accommodate conductor cross-sections up to 1000 mm<sup>2</sup>.

Tape SS / Tape AT / Tape BS

# Mastic Tape

### Properties:

Provides excellent electrical properties and watertight sealing.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

### ORDERING INFORMATION:

Tape SS: Yellow.  
Tape AT: Red.  
Tape BS: Black.

### FEATURES AND BENEFITS:

Tape SS: Stress relief mastic, void filling, oil resistance, and high permittivity.  
Tape AT: Anti-tracking mastic with void filling and waterproof.  
Tape BS: Black sealing mastic offering UV resistance, self-amalgamation, watertight sealing, and excellent electrical properties.

### TECHNICAL PERFORMANCE:

Property	Test Method	Tape SS (Stress Relief)	Tape AT (Anti-Tracking)	Tape BS (Black Sealing)
Density	ASTM D792	1.3 g/cm <sup>3</sup>	1.2 g/cm <sup>3</sup>	1.2 g/cm <sup>3</sup>
Tensile Strength	ASTM D 638	0.1 MPa	0.1 MPa	0.1 MPa
Ultimate Elongation	ASTM D 638	>1000%	>1000%	>1000%
Dielectric Strength	IEC 250	≥10 KV/mm	≥15 KV/mm	≥15 KV/mm
Dielectric Constant	IEC 250	10 - 15	≤3	2 - 3
Volume Resistivity	ASTM D 527	10 <sup>9</sup> - 10 <sup>12</sup> Ω-cm	10 <sup>13</sup> Ω-cm	10 <sup>13</sup> Ω-cm
50Hz Loss Factor (tgδ)		0.035	0.035	0.035
Service Temperature		-20°C to +90°C	-20°C to +90°C	-20°C to +90°C

### DIMENSIONS:

Type	Thickness (mm)	Width (mm)	Length (m)
Tape SS	1.6	25	0.5, 1.5, 30
Tape AT	0.8	25	1.5, 50
Tape BS	3.0	38	1.5, 20

# NRSL REPAIR SLEEVE

## HS Cable Repair Sleeve for Low Voltage Applications

### Properties:

Heat Shrink Cable Repair Sleeve for Low Voltage Applications.  
Coated with thermo paint for added protection.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

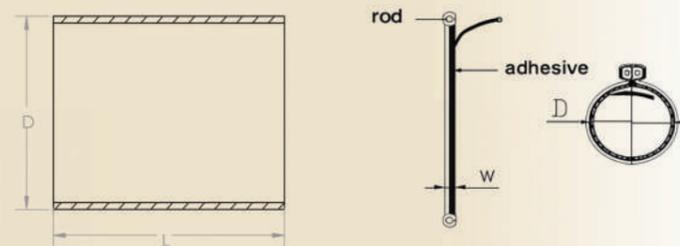
### ORDERING INFORMATION:

Standard color available: Black.  
Custom colors can be manufactured based on customer specifications.

### FEATURES AND BENEFITS:

- Quick and easy to install.
- Provides mechanical stress protection.
- Sleeves and channels can be trimmed for shorter applications.
- Suitable for insulation repair on low voltage cables up to 1000 V.
- Hot melt adhesive ensures a durable, moisture-resistant seal.
- Fits a wide range of cable sizes.

### TECHNICAL DRAWING:



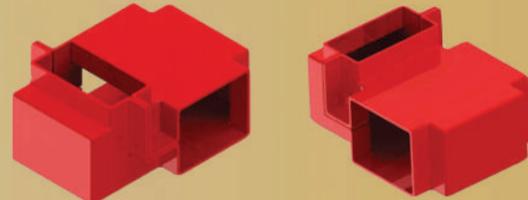
### TECHNICAL PERFORMANCE:

Test Item	Test Method	Requirement
Bursting Strength	Test Temp: 23 ±5°C	15MPa min.
Thermal Ageing	168 hrs. at 150°C±2°C	13.7MPa min
Bursting strength	After free shrinkable	14MPa min
Dielectric strength	Electrode Surface Dia: 6mm Wight: 50±2gms Voltage steps: 2KV/20sec	Min 12KV/mm
Split Resistance	Temp: 200±2°C Test time 23±3°C	No split Propagation
Carbon Content UV Res of Out/layer	Heating rate: 20°C/min Gas flow rate: 300cc/min	Min 2.6±0.25%
Cold Crack Resistance	Test temp ≤ -40°C	No cracking
Resistance to aggressive media Bursting Strength	Test media: Fuel oil, petroleum jelly Test temp: 70±2°C	Min 13.7MPa
Environmental Stress cracking	10% Igepal Co 630 solution immersion Time 30 days Test Temp: 50±3°C	No cracking
Temp. indicating paint conversion	Completely conversion	Completely conversion
Properties of Adhesive		
Adhesive Softening Point	Adhesive Softening Point	Adhesive Softening Point
Peel Strength	Peel Strength	Peel Strength
Shear Strength	Shear Strength	Shear Strength
Corrosive Effect	Corrosive Effect	Corrosive Effect

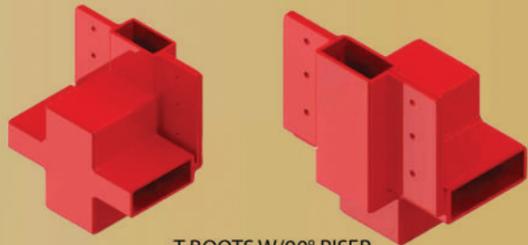
### DIMENSIONS:

Size (mm)	Supplied(mm)		Recovered(mm)		Standard Length L(mm)
	D*(mm)	W*(Min.)	d*(Max.)	w*(Min.)	
36/10	38	0.7	10	3.2	500, 750, 1000, 1500
55/13	57	0.7	13	3.2	500, 750, 1000, 1500
85/20	85	0.7	20	3.2	500, 750, 1000, 1500
108/27	110	0.7	27	3.2	500, 750, 1000, 1500
136/30	138	0.7	30	3.2	500, 750, 1000, 1500
180/50	183	0.7	50	3.2	500, 750, 1000, 1500

# HEAT SHRINK FITTINGS FOR BUSBARS



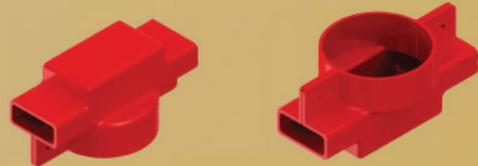
DROP LINK CONNECTION BOOTS



T BOOTS W/90° RISER



STANDOFF INSULATOR BOOTS



L BOOTS W/90° RISER

### Properties:

Heat shrink Joint.  
According to UL standard and ANSI C 37.20.2.

### SHELF LIFE & STORAGE:

NASONS's heat shrink products have a shelf life exceeding 5 years from the manufacturing date, provided they are stored in a humidity-controlled environment between -10°C and 40°C with less than 75% relative humidity.

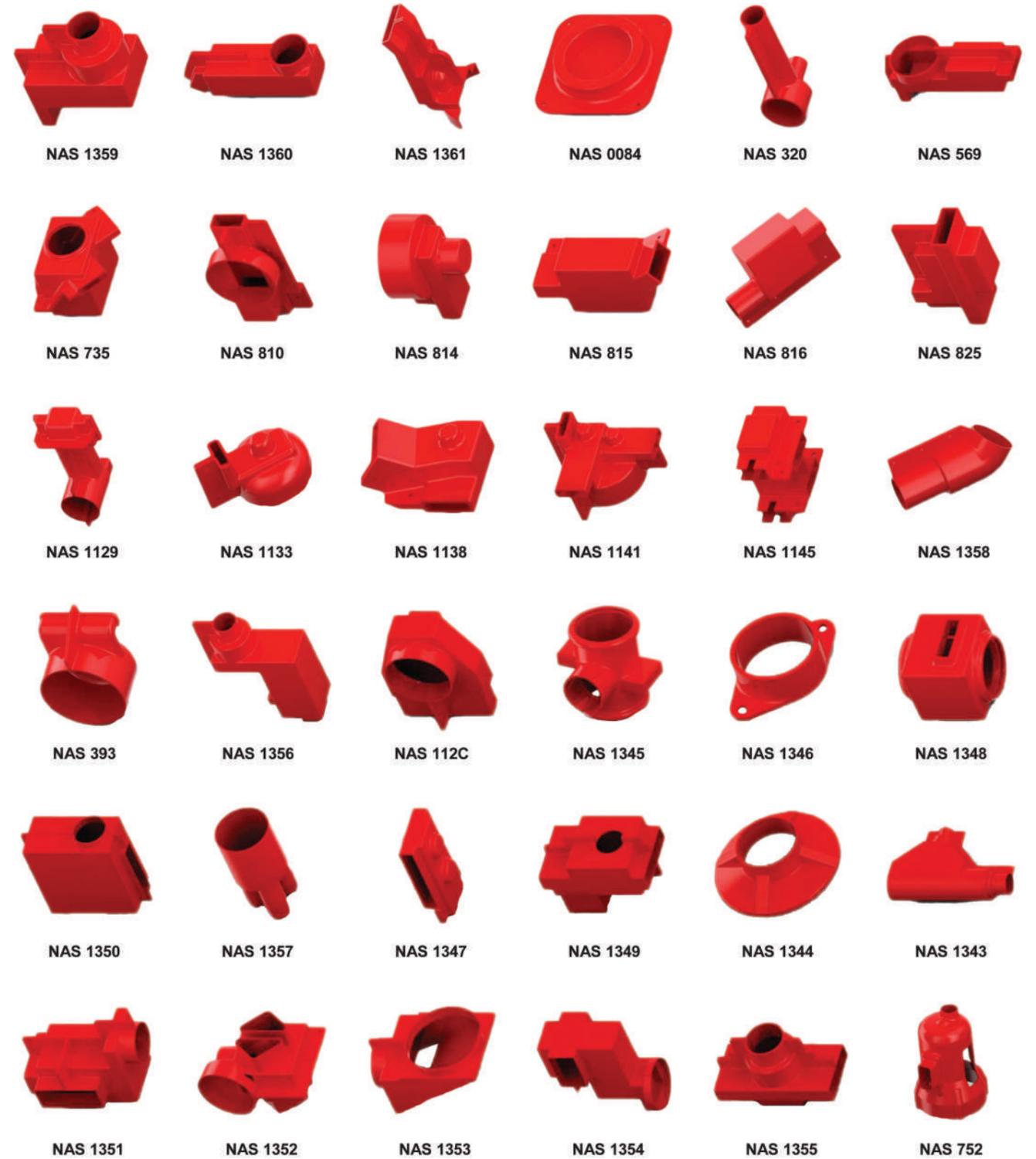
### ORDERING INFORMATION:

Standard color available: Red.  
Custom sizes and colors can be manufactured based on customer specifications.

### FEATURES AND BENEFITS:

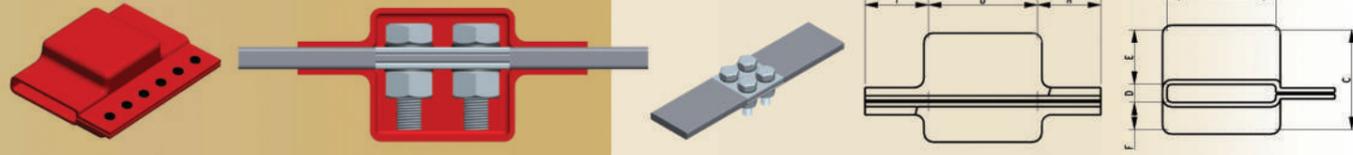
- High mechanical strength and antitracking characteristics.
- Wide cross-section range suitable for various connection types.
- Compact design for easy installation.
- Enhanced UV and weather resistance.
- Allows immediate re-energizing after installation.

Test Item	Test Method	Requirement
Dielectric Strength	ASTM D149	6 KV/mm. (min.)
Tensile Strength	ASTM D638	12 N/mm <sup>2</sup> (min.)
Elongation	ASTM D638	Minimum 300%
Density	ASTM D 792	1.0 to 1.1 g/cm <sup>3</sup>
Hardness	ASTM D2240	65 ± 5 shore A
Continuous Operating Temp	IEC 216	200C to 1150C
Flammability	UL 94-V0	Pass



# STRAIGHT CENTERED

Heat Shrink fittings for busbars



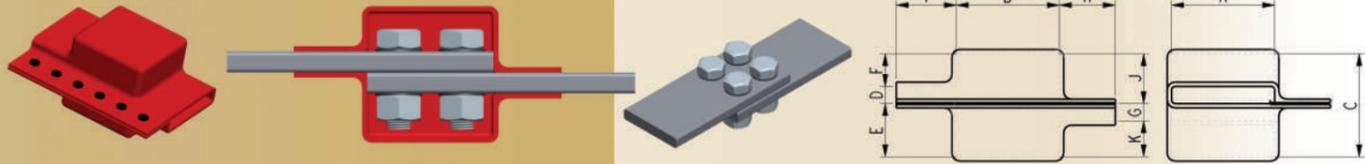
\*\*ADDITIONAL DIMENSIONS ARE AVAILABLE BASED ON CUSTOMER REQUIREMENTS:

S	Type	Busbar Size	Opening Busbar Size	B	*C	D	E	F	G	H	I
		A	A								
01	NAS 1204	30	32	50	79	52	16.5	10.5	52	12.5	12.5
02	NAS 539	30	35	50	50	30	10	10	30	12	12
03	NAS 775	30	35	60	55	15	25	15	15	25	25
04	NAS 1024	30	35	100	55	15	25	15	15	25	25
05	NAS 1852	35	40	155	70	30	30	10	30	25	25
06	NAS 1278	40	43	85	73	35	23	15	35	20	20
07	NAS 685	40	45	50	49	30	10	09	30	10	10
08	NAS 1023	40	45	100	55	15	25	15	15	25	25
09	NAS 1250	50	52	85	53	15	23	15	15	15	15
10	NAS 1636	50	55	80	55	20	20	15	12	25	25
11	NAS 1632	50	55	80	65	15	30	20	15	25	25
12	NAS 1022	50	55	100	55	15	25	15	15	25	25
13	NAS 2097	50	55	115	55	15	27.5	12.5	15	15	15
14	NAS 2095	50	55	115	75	35	27.5	12.5	35	15	15
15	NAS 2093	50	55	205	55	15	27.5	12.5	15	20	20
16	NAS 935	55	60	125	47	12	20	15	12	30	30
17	NAS 1817	55	60	135	70	30	22	18	30	23	23
18	NAS 1203	60	62	85	50	15	17.5	17.5	15	15	15
19	NAS 1277	60	62	85	70	32	25	13	32	18	18
20	NAS 331B	60	62	100	77	45	19	13	45	20	20
21	NAS 952	60	62	128	50	15	20	15	15	25	25
22	NAS 348	60	65	65	55	15	25	15	15	30	30
23	NAS 1968	60	65	85	57	21	26	10	13	10	10
24	NAS 1010	60	65	100	75	35	25	15	35	23	23
25	NAS 385	60	65	105	65	35	20	10	35	20	20
26	NAS 980A	60	65	130	55	15	25	15	15	25	25
27	NAS 1010A	60	65	130	75	35	25	15	35	25	25
28	NAS 384	60	65	145	65	35	20	10	35	20	20
29	NAS 1317	60	65	155	75	35	22.5	17.5	35	32	32
30	NAS 1292	75	80	70	72	21	35	16	35	25	16
31	NAS 1221	75	80	75	60	15	22.5	22.5	15	30	30
32	NAS 1158	75	80	100	75	15	30	30	38	25	25
33	NAS 2101	75	80	185	70	25	25	20	25	20	20
34	NAS 1238	75	80	220	60	14	32	14	14	15	15
35	NAS 1249	80	82	85	51	15	24	12	15	15	15
36	NAS 1424	80	82	85	116	73	29	14	73	15	15
37	NAS 576	80	83	80	67	16	30.5	20.5	16	30	30
38	NAS 1248	80	83	80	70	30	25	15	30	15	15
39	NAS 1949	80	85	55	60	15	27	18	35	25	25
40	NAS 322	80	85	110	55	10	25	20	10	10	10
41	NAS 2096	80	85	115	75	35	27.5	12.5	35	15	15
42	NAS 1304	80	85	120	50	15	17.5	17.5	15	30	30
43	NAS 347	80	85	120	115	75	22.5	17.5	75	25	25
44	NAS 798	80	85	125	55	15	25	15	15	23	23
45	NAS 796	80	85	130	75	35	25	15	35	23	23
46	NAS 1076	80	85	130	115	75	25	15	75	25	25
47	NAS 1325	80	85	150	70	30	25	15	30	40	40
48	NAS 1857	80	85	165	70	35	27	08	35	03	03

S	Type	Busbar Size	Opening Busbar Size	B	*C	D	E	F	G	H	I
		A	A								
49	NAS 1858	80	85	170	70	35	27	08	35	03	03
50	NAS 1738	80	85	170	75	30	22.5	22.5	30	25	25
51	NAS 1334	80	85	175	55	15	25	15	15	20	20
52	NAS 1301	85	90	100	50	10	20	20	10	25	25
53	NAS 1302	85	90	100	70	32	19	19	32	24	24
54	NAS 1332	95	100	70	42	05	20	17	05	25	25
55	NAS 213	95	100	110	85	45	25	15	45	20	20
56	NAS 1239	95	100	220	60	14	32	14	14	15	15
57	NAS 1821	95	100	235	70	30	20	20	30	22	22
58	NAS 1477	97	102	110	50	16	22	12	16	12.5	12.5
59	NAS 1253	100	102	50	120	92	15	13	92	15	15
60	NAS 1267	100	102	85	70	33	22	15	32.5	18	18
61	NAS 1423	100	102	85	116	73	29	14	73	15	15
62	NAS 1214	100	102	88	110	55	37	18	55	30	30
63	NAS 799	100	102	108	72	35	22	15	35	25	25
64	NAS 2086	100	105	55	60	15	27	18	35	25	25
65	NAS 1305	100	105	70	80	45	17.5	17.5	45	30	30
66	NAS 331A	100	105	100	80	45	20	15	45	20	20
67	NAS 346	100	105	105	55	15	25	15	15	29	29
68	NAS 1695	100	105	105	70	44	16	10	30	25	25
69	NAS 345	100	105	105	75	35	25	15	35	25	25
70	NAS 1219	100	105	110	40	05	20	15	05	35	35
71	NAS 127	100	105	110	40	10	15	15	10	30	30
72	NAS 1362	100	102	110	70	35	20	15	35	35	35
73	NAS 1217	100	105	110	80	45	20	15	45	30	30
74	NAS 1306	100	105	112	50	16	19	15	16	35	35
75	NAS 2094	100	105	115	95	55	27.5	12.5	55	15	15
76	NAS 1073	100	105	125	75	35	25	15	35	25	25
77	NAS 1069	100	105	125	115	75	25	15	75	25	25
78	NAS 529	100	105	170	50	10	25	15	10	30	30
79	NAS 530	100	105	170	70	35	25	10	35	30	30
80	NAS 386	100	105	205	65	32	18	15	32	30	30
81	NAS 1693	100	105	230	45	12	18.5	14.5	12	25	25
82	NAS 1775	100	105	230	75	28	32	15	28	25	25
83	NAS 1567	100	105	230	200	150	25	25	150	25	25
84	NAS 1322	100	105	240	100	55	30	15	55	30	30
85	NAS 1637	115	120	130	100	50	30	20	50	30	30
86	NAS 1927	115	120	255	70	30	20	20	30	20	20
87	NAS 134	120	125	45	82	52	20	10	52	25	25
88	NAS 552	120	125	85	70	30	25	15	30	15	15
89	NAS 1978	120	125	105	78	46	22	10	30	05	10
90	NAS 536	120	125	122	112	65	23.5	23.5	65	30	30
91	NAS 535	120	125	122.5	112	58	27	27	58	30	30
92	NAS 986	120	125	130	55	15	25	15	15	25	25
93	NAS 2052	120	125	225	65	13	38	14	13	25	25
94	NAS 1476	122	127	107	80	45	22.5	12.5	45	10	10
95	NAS 1478	122	127	107	60	26	22	12	26	12.5	12.5
96	NAS 1231	125	127	45	90	52	23	15	52	15	15
97	NAS 212	125	127	110	90	52	23	15	52	20	20
98	NAS 1216	125	128	90	110	52	38	20	55	30	30
99	NAS 133	125	128	110	85	50	22.5	12.5	50	25	25
100	NAS 1210	125	130	112	80	45	20	15	45	30	30
101	NAS 1230	125	130	112	88	53	22.5	12.5	53	20	20
102	NAS 1120	125	130	125	55	15	25	15	15	25	25
103	NAS 378	125	130	130	55	15	25	15	15	24	24
104	NAS 157	125	130	130	75	35	25	15	35	23	23
105	NAS 147	125	130	130	115	75	25	15	75	25	25
106	NAS 528	125	130	210	75	38	20	17	38	30	30
107	NAS 1564	127	132	228	200	150	25	25	150	25	25
108	NAS 1661	150	155	85	70	35	22.5	12.5	15	40	40
109	NAS 1660	150	155	85	100	65	22.5	12.5	45	40	40
110	NAS 1955	150	155	105	57	13	28	16	25	15	15
111	NAS 1785	150	155	105	85	35	29	21	45	25	25

# STRAIGHT OFF CENTERED

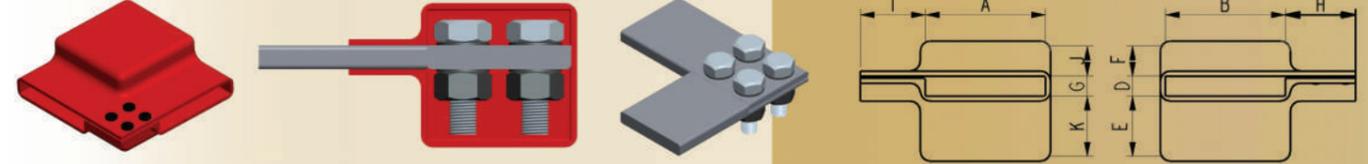
Heat Shrink fittings for busbars



\*\*ADDITIONAL DIMENSIONS ARE AVAILABLE BASED ON CUSTOMER REQUIREMENTS

S	Type	Busbar Size	Opening Busbar Size	B	*C	D	E	F	G	H	I	J	K
		A	A										
01	NAS 951	10	10	10	20	05	10	05	05	10	10	10	05
02	NAS 939	20	20	20	25	05	10	10	05	10	10	15	05
03	NAS 1854	25	30	25	50	12	30	08	12	25	25	20	18
04	NAS 942	25	30	30	45	10	20	15	10	20	20	25	10
05	NAS 1504	25	30	82	52	12	30	10	12	20	20	20	20
06	NAS 546	30	35	55	70	30	25	15	15	25	25	40	15
07	NAS 824	30	35	70	65	12	27	26	12	30	30	37	16
08	NAS 778	40	45	45	65	15	30	20	15	25	25	35	15
09	NAS 711	45	50	50	43	10	18	15	03	18	18	15	25
10	NAS 712	45	50	50	50	10	25	15	10	20	20	30	10
11	NAS 1881	47	52	54	80	32	29	19	32	20	20	29	19
12	NAS 1937	50	55	55	50	15	27	08	15	25	25	18	17
13	NAS 1333	50	55	55	85	38	32	15	42	23	33	25	18
14	NAS 969	60	65	65	55	15	22.5	17.5	15	25	25	27.5	12.5
15	NAS 2136	60	65	70	90	35	40	15	35	25	25	30	25
16	NAS 1963	60	65	85	54	12	23	19	12	15	15	31	11
17	NAS 1966	60	65	105	72	30	32	10	30	10	10	24	18
18	NAS 1335	75	80	50	45	15	18	12	15	20	20	17	13
19	NAS 1468	75	80	105	60	15	30	15	15	25	25	25	20
20	NAS 1950	80	85	55	50	15	18	17	15	25	25	27	08
21	NAS 208	80	85	55	80	35	25	20	35	30	30	30	15
22	NAS 1945	80	85	85	55	15	25	15	15	15	15	25	15
23	NAS 936	80	85	85	60	12	27.5	20.5	10	30	30	30	20
24	NAS 2141	80	85	90	90	35	40	15	35	25	25	30	25
25	NAS 2123	100	105	60	105	55	30	20	55	23	33	30	20
26	NAS 2127	100	105	60	140	90	30	20	90	23	33	30	20
27	NAS 2009	100	105	85	57	15	32	10	13	15	15	24	20
28	NAS 2008	100	105	95	52	12.5	31.5	08	13	25	25	23.5	15.5
29	NAS 1315	100	105	105	50	10	30	10	10	30	30	25	15
30	NAS 1969	100	105	105	54	12	31	11	12	15	15	23	19
31	NAS 1115	100	105	105	125	65	40	20	65	25	25	31	29
32	NAS 1583	102	107	85	75	31	34	10	33	25	15	24	18
33	NAS 1576	102	107	85	85	40	35	10	37	25	25	26.5	21.5
34	NAS 1973	120	125	105	68	30	20	18	30	15	15	28	10
35	NAS 215	125	130	70	90	55	20	15	55	20	20	25	10
36	NAS 1117	125	130	105	127	65	42	20	65	25	25	32	30
37	NAS 1313	125	130	130	50	10	25	15	10	30	30	30	10
38	NAS 1953	150	155	85	57	20	22	15	20	25	25	27	10
39	NAS 1954	150	155	105	60	10	34	14	12	15	15	29	21
40	NAS 1580	150	155	105	60	12	34	14	10	25	15	29	21
41	NAS 2045	150	155	105	72	30	32	10	30	15	15	23	19
42	NAS 1784	150	155	105	75	28	32	15	28	15	25	24	23
43	NAS 1951	150	155	155	54	12	31	11	12	15	15	23	19
44	NAS 1782	150	155	155	60	12	33	15	12	25	25	25	23
45	NAS 1309	150	155	155	70	27	28	15	27	25	25	25	18
46	NAS 1904	153	158	85	50	15	20	15	15	25	15	25	10
47	NAS 1901	153	158	85	75	40	20	15	40	25	15	25	10
48	NAS 2083	153	158	85	75	40	20	15	40	25	15	25	10
49	NAS 2025	155	158	92	82	36	33	13	36	34	34	23	23
50	NAS 1765	160	165	105	45	12	23	10	12	25	25	18	15
51	NAS 2088	180	185	105	60	12	34	14	10	15	15	29	21
52	NAS 1766	160	165	105	65	30	27	08	28	25	25	19	18
53	NAS 1956	180	185	155	54	12	31	11	12	15	15	23	19

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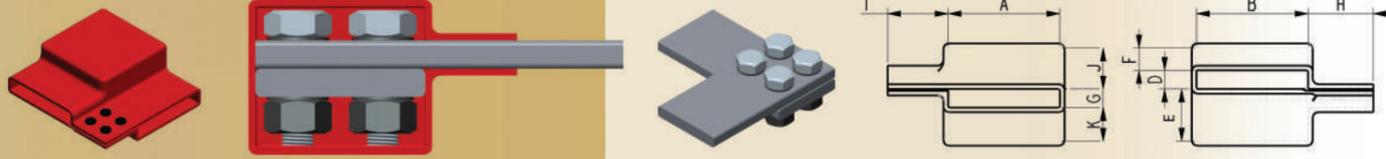


\*\*ADDITIONAL DIMENSIONS ARE AVAILABLE BASED ON CUSTOMER REQUIREMENTS

S	Type	Riser Size	Busbar Size	Opening Riser Size	Opening Busbar Size	*C	D	E	F	G	H	I	J	K
		A	B	A	B									
01	NAS 1943	30	60	33	63	62	32	15	15	16	35	35	23	23
02	NAS 1337	40	40	45	45	43	15	15.5	12.5	15	15	15	15.5	12.5
03	NAS 1327	40	75	45	80	70	15	30	25	35	40	40	17.5	17.5
04	NAS 1271	40	80	42.5	82.5	65	35	15	15	20	35	30	22.5	22.5
05	NAS 1289	50	50	55	55	85	40	22.5	22.5	40	50	50	22.5	22.5
06	NAS 1307	55	55	60	60	45	45	00	00	45	25	25	00	00
07	NAS 1209	55	55	60	60	55	15	22	18	15	35	35	22	18
08	NAS 130	60	60	62	62	42	42	00	00	42	15	15	00	00
09	NAS 1205	60	60	62	62	50	14	14	22	20	35	35	17.5	12.5
10	NAS 1235	60	60	62.5	62.5	42.5	42.5	00	00	42.5	12	32	00	00
11	NAS 1711	60	60	63	63	62	16	23	23	32	35	35	15	15
12	NAS 1964	60	60	65	65	61	21	20	20	21	25	25	20	20
13	NAS 2137	60	60	65	65	90	15	45	30	35	25	25	35	20
14	NAS 131	60	80	62	82	42	42	00	00	42	15	13	00	00
15	NAS 1236	60	80	62.5	82.5	42.5	42.5	00	00	42.5	18	12	00	00
16	NAS 2142	60	80	65	85	90	15	45	30	35	25	25	35	20
17	NAS 1788	60	125	63	128	62	16	23	23	32	35	35	15	15
18	NAS 1432	75	75	78.5	78.5	76	37	20	20	26	35	26.5	25	25
19	NAS 1295	75	75	80	80	50	17.5	17.5	15	17.5	00	00	17.5	15
20	NAS 1227	75	75	80	80	55	15	30	10	15	35	35	30	10
21	NAS 1157	75	75	80	80	75	15	30	30	38	25	25	18.5	18.5
22	NAS 1291	75	75	80	80	90	40	30	20	35	75	20	35	20
23	NAS 1298	75	100	80	105	100	40	30	30	65	18	60	17.5	17.5
24	NAS 132	80	80	82	82	82	52	15	15	52	25	25	15	15
25	NAS 216	80	80	82	82	85	55	15	15	55	18	18	15	15
26	NAS 1237	80	80	83	83	82	50	16	16	50	35	18	16	16
27	NAS 1720	80	80	83	83	62	16	23	23	32	35	35	15	15
28	NAS 1706	80	80	83	83	131	73	30	28	73	35	35	30	28
29	NAS 1946	80	80	85	85	61	25	18	18	25	25	25	18	18
30	NAS 126	80	100	85	105	40	10	15	15	10	25	25	15	15
31	NAS 1855	80	100	85	105	80	55	17	08	35	25	25	27	18
32	NAS 1224	80	100	85	105	85	15	35	35	35	30	35	25	25
33	NAS 49	80	100	85	105	85	15	35	35	35	45	30	24	26
34	NAS 1898	80	100	85	105	89	55	17	17	35	25	25	27	27
35	NAS 827	85	45	90	50	78	22	28	28	42	80	70	18	18
36	NAS 1713	100	80	103	83	62	16	23	23	32	35	35	15	15
37	NAS 1751	100	100	103	103	131	73	30	28	73	35	35	30	28
38	NAS 1970	100	100	105	105	61	21	20	20	21	25	25	20	20
39	NAS 1638	100	100	105	105	70	40	15	15	40	25	25	15	15
40	NAS 995	100	120	105	125	65	35	15	15	15	35	25	25	25
41	NAS 994	100	120	105	125	85	55	15	15	35	35	25	25	25
42	NAS 158	100	125	102	130	90	55	17.5	17.5	35	35	23	27.5	27.5
43	NAS 217	100	125	105	130	80	45	20	15	45	20	20	20	15
44	NAS 996	100	160	105	165	75	35	25	15	15	35	25	35	25
45	NAS 682	105	105	110	110	95	45	35	15	45	38	38	35	15
46	NAS 1682	105	105	110	110	65	35	17.5	12.5	15	25	25	27.5	22.5
47	NAS 1974	120	120	125	125	76	36	20	20	36	25	25	20	20
48	NAS 1218	120	120	127	127	90	55	18	17	55	30	25	18	17
49	NAS 1725	125	60	128	63	76	32	22	22	32	35	35	22	22
50	NAS 553	125												

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Heat Shrink fittings for busbars



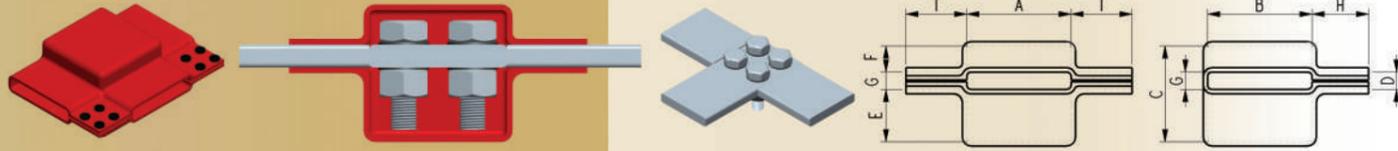
\*\*ADDITIONAL DIMENSIONS ARE AVAILABLE BASED ON CUSTOMER REQUIRMENTS

S	Type	Riser Size		Busbar Size		Opening Riser Size		Opening Busbar Size		* C	D	E	F	G	H	I	J	K
		A	B	A	B	A	B											
01	NAS 950	10	10	10	10	20	05	10	05	05	10	10	10	10	10	10	05	
02	NAS 937	15	15	20	20	35	10	20	05	10	25	25	15	10				
03	NAS 1890	25	25	30	30	42	10	18	14	10	25	25	24	08				
04	NAS 1899	25	25	30	30	42	10	18	14	10	25	25	24	08				
05	NAS 940	25	25	30	30	55	10	25	20	10	25	25	30	15				
06	NAS 1611	30	31.5	34	35.5	53	13	30	10	11	20	20	21	21				
07	NAS 1612	30	31.5	34	35.5	53	13	30	10	11	20	20	21	21				
08	NAS 1273	40	40	42.5	42.5	78	35	25	18	35	35	35	28	15				
09	NAS 1888	40	40	45	45	50	15	18	17	15	25	25	27	08				
10	NAS 1889	40	40	45	45	50	15	18	17	15	25	25	27	08				
11	NAS 776	40	40	45	45	65	15	35	15	15	25	25	30	20				
12	NAS 1328	40	75	45	80	80	35	25	20	37	40	40	28	15				
13	NAS 1282	40	80	42	82	60	22	28	10	25	42	30	30	17.5	17.5			
14	NAS 1287	40	80	42.5	82.5	42	20	14	08	15	30	30	20	07				
15	NAS 107 A	40	80	45	85	43	15	18	10	08	30	15	20	15				
16	NAS 2076	45	45	50	50	55	15	35	05	15	25	25	25	15				
17	NAS 1507	50	50	52	52	73	31	31	11	33	20	20	20	20				
18	NAS 1886	50	50	55	55	50	15	18	17	15	25	25	27	08				
19	NAS 1887	50	50	55	55	50	15	18	17	15	25	25	27	08				
20	NAS 1896	50	50	55	55	75	35	20	20	35	25	25	30	10				
21	NAS 1897	50	50	55	55	75	35	20	20	35	25	25	30	10				
22	NAS 1644	50	50	55	55	75	35	27.5	12.5	35	25	25	22.5	17.5				
23	NAS 1281	50	100	52	102	60	22	28	10	25	30	30	17.5	17.5				
24	NAS 533	55	95	60	100	60	22	25.5	12.5	25	30	20	17.5	17.5				
25	NAS 1756	60	40	63	43	87	43	26.5	17.5	43	35	35	27.5	16.5				
26	NAS 1241	60	60	62	62	70	10	35	25	10	25	20	35	25				
27	NAS 1279	60	60	62	62	70	32	23	15	32	30	30	25	13				
28	NAS 967	60	60	65	65	55	15	22.5	17.5	15	25	25	27.5	12.5				
29	NAS 1007	60	60	65	65	60	15	30	15	15	35	25	25	20				
30	NAS 1319	60	60	65	65	70	35	25	10	35	80	30	17.5	17.5				
31	NAS 1294	60	60	65	65	82	40	22	20	40	50	50	32	10				
32	NAS 1714	60	60	63	63	57	13	27	17	16.5	35	35	24	16.5				
33	NAS 1729	60	60	63	63	77	33	26.5	17.5	33	35	35	27.5	16.5				
34	NAS 2140	60	60	65	65	100	35	45	20	35	25	25	35	30				
35	NAS 541	60	65	60	65	60	15	25	20	15	15	15	30	15				
36	NAS 1242	60	80	62	82	70	10	35	25	10	35	20	25	35				
37	NAS 2105	60	80	64	84	60	14	36	10	14	25	25	26	20				
38	NAS 2106	60	80	64	84	60	14	36	10	14	25	25	26	20				
39	NAS 064	60	80	65	85	55	18	25	12	15	35	20	25	15				
40	NAS 1940	60	100	63	103	70	32	25	13	32	35	35	23	15				
41	NAS 1944	60	100	63	103	70	33	24	13	33	35	35	23	14				
42	NAS 1293	65	65	68	68	85	40	22.5	22.5	40	60	54	35	10				
43	NAS 1893	65	65	70	70	50	15	18	17	15	25	25	27	08				
44	NAS 1894	65	65	70	70	50	15	18	17	15	25	25	27	08				
45	NAS 1891	65	65	70	70	70	35	18	17	35	25	25	27	08				
46	NAS 1892	65	65	70	70	70	35	18	17	35	25	25	27	08				
47	NAS 1251	75	75	80	80	50	19.5	17.5	13	14	40	35	22	14				
48	NAS 1296	75	75	80	80	95	40	42.5	12.5	40	90	18	30	25				
49	NAS 1435	75	75	78.5	78.5	51	08	21.5	21.5	09	35	26	23	19				
50	NAS 1447	75	75	78.5	78.5	51	08	24	19	09	35	26.5	24	18				
51	NAS 1448	75	75	78.5	78.5	51	08	24	19	09	35	26.5	31	11				
52	NAS 2023	77	102	82	107	45	10	26	09	10	25	25	20	15				
53	NAS 2024	77	102	82	107	45	10	26	09	10	25	25	20	15				
54	NAS 1763	80	40	83	43	67	13	37	17	26.5	35	35	24	16.5				
55	NAS 1718	80	40	83	43	97	43	36.5	17.5	53	35	35	27.5	16.5				
56	NAS 1717	80	60	83	63	87	43	26.5	17.5	43	35	35	26.5	17.5				

S	Type	Riser Size		Busbar Size		Opening Riser Size		Opening Busbar Size		* C	D	E	F	G	H	I	J	K
		A	B	A	B	A	B											
57	NAS 1252	80	80	82	82	72	32	22.5	17.5	32	50	35	25	15				
58	NAS 1590	80	80	85	85	60	15	36	09	15	25	25	23	22				
59	NAS 1615	80	80	85	85	60	15	38	07	15	25	25	24	21				
60	NAS 187	80	80	85	85	60	16	27.5	16.5	16	20	20	32	12				
61	NAS 540	80	80	85	85	65	15	30	20	15	25	25	35	15				
62	NAS 1326	80	80	85	85	70	25	27.5	17.5	25	40	40	27.5	17.5				
63	NAS 1684	80	80	85	85	70	30	27.5	12.5	35	25	25	17.5	17.5				
64	NAS 1748	80	80	85	85	75	35	27.5	12.5	35	25	25	22.5	17.5				
65	NAS 1900	80	80	85	85	75	35	27.5	12.5	35	25	25	22.5	17.5				
66	NAS 1747	80	80	85	85	75	35	27.5	12.5	35	25	25	22.5	17.5				
67	NAS 1152	80	80	85	85	80	35	35	10	35	35	35	25	20				
68	NAS 1082	80	80	85	85	80	37	22	21	35	50	25	34	11				
69	NAS 188	80	80	85	85	80	38	22	20	35	35	50	35	10				
70	NAS 1746	80	80	85	85	80	50	17.5	12.5	35	25	25	22.5	22.5				
71	NAS 2144	80	80	85	85	100	35	45	20	35	25	25	35	30				
72	NAS 1646	80	80	85	85	95	35	33	27	35	35	35	33	27				
73	NAS 1077	80	80	85	85	125	75	35	15	75	35	25	25	25				
74	NAS 1813	80	80	88	88	55	18	26	11	18	25	10	21	16				
75	NAS 1814	80	80	88	88	55	18	26	11	18	25	10	21	16				
76	NAS 1522	85	105	88	108	60	13	28	19	13	62	65	25.5	21.5				
77	NAS 331C	95	95	100	100	77	30	25	22	45	35	35	20	12				
78	NAS 1709	100	50	103	53	97	43	36.5	17.5	53	35	35	27.5	16.5				
79	NAS 1240	100	100	102	102	70	10	35	25	10	35	20	35	25				
80	NAS 1270	100	100	102	102	70	32	23	15	32	40	40	22	13				
81	NAS 1694	100	100	105	105	45	12	22	11	12	35	25	19	14				
82	NAS 1316	100	100	105	105	50	10	25	15	10	30	30	25	15				
83	NAS 1696	100	100	105	105	60	28	22	10	28	35	25	18	14				
84	NAS 1774	100	100	105	105	75	28	32	15	28	25	25	24	23				
85	NAS 1006	100	100	105	105	80	35	30	15	35	35	25	25	20				
86	NAS 992	100	100	105	105	85	35	35	15	35	35	25	25	25				
87	NAS 1320	100	100	105	105	90	55	20	15	55	30	30	25	10				
88	NAS 42-2	100	100	105	105	95	35	35	25	35	35	35	25	35				
89	NAS 993	100	100	105	105	95	55	25	15	55	35	25	25	15				
90	NAS 1114	100	100	105	105	125	65	30	30	65								

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Heat Shrink fittings for busbars



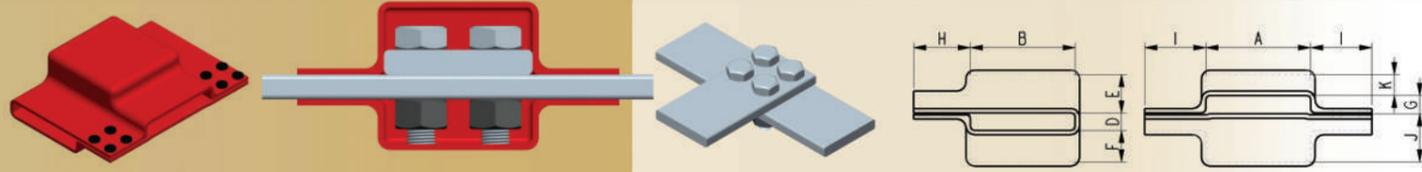
\*\*ADDITIONAL DIMENSIONS ARE AVAILABLE BASED ON CUSTOMER REQUIREMENTS

S	Type	Riser Size		Busbar Size		Opening Riser Size		Opening Busbar Size		* C	D	E	F	G	H	I	J	K
		A	B	A	B	A	B											
01	NAS 1202	30	60	32	62	70	32	25	13	15	15	15	32	23				
02	NAS 538	30	60	35	65	70	35	17.5	17.5	16	45	20	27	27				
03	NAS 1758	30	80	33	83	70	32	25	13	15	35	20	32	23				
04	NAS 358	30	80	35	85	75	20	27.5	27.5	35	30	25	20	20				
05	NAS 210	30	80	35	85	35	15	10	10	35	00	00	00	00				
06	NAS 1272	40	40	43	43	73	20	30	23	35	35	20	23	15				
07	NAS 1849	40	60	43	63	62	33	17.5	11.5	14	35	15	27	21				
08	NAS 176	40	60	45	65	70	35	17.5	17.5	15	30	20	27.5	27.5				
09	NAS 1005	40	60	45	65	70	35	17.5	17.5	15	35	20	27.5	27.5				
10	NAS 1088	40	60	45	65	75	15	30	30	35	35	25	20	20				
11	NAS 440	40	70	42	75	55	30	15	10	12.5	30	30	22.5	20				
12	NAS 1329	40	75	45	80	70	16	28	26	35	40	40	20	15				
13	NAS 1422	40	80	42	82	60	32	17.5	10.5	14	35	20	27	19				
14	NAS 2039	40	80	43	83	106	33	44	29	73	35	15	19	14				
15	NAS 1732	40	80	43	83	106	53	29	24	73	35	20	19	14				
16	NAS 107E	40	80	45	85	65	18	27	20	35	35	35	20	10				
17	NAS 168	40	80	45	85	70	35	17.5	17.5	15	30	18	27.5	27.5				
18	NAS 1735	40	100	43	103	91	53	19	19	33	35	20	29	29				
19	NAS 1845	40	100	43	103	106	53	30	23	73	35	15	20	13				
20	NAS 342	40	100	45	105	70	35	20	15	15	35	20	30	25				
21	NAS 983	40	120	45	125	70	35	17.5	17.5	15	35	25	27.5	27.5				
22	NAS 984	40	160	45	165	70	35	17.5	17.5	15	35	25	27.5	27.5				
23	NAS 1497	40	210	42	215	57	32	15	10	12	20	35	25	20				
24	NAS 550	50	60	55	65	75	15	30	30	35	40	25	20	20				
25	NAS 532-1	50	80	52	82	70	35	25	10	15	30	15	35	20				
26	NAS 645	50	90	52	95	57	30	15	12	12	20	35	25	20				
27	NAS 1225	50	100	54	103	40	15	12.5	12.5	15	75	30	12.5	12.5				
28	NAS 1208	55	55	60	60	55	15	22	18	15	25	15	22	18				
29	NAS 1755	60	60	63	63	59.5	14	24.5	21	33	35	20	14.5	12				
30	NAS 1803	60	60	63	63	81	33	25	23	33	35	15	25	23				
31	NAS 549	60	60	65	65	75	15	30	30	35	35	25	20	20				
32	NAS 2138	60	60	65	65	90	15	45	30	35	25	25	35	20				
33	NAS 1848	60	80	63	83	106	63	24	19	33	35	15	39	34				
34	NAS 068	60	80	65	85	65	17	26.5	21.5	35	50	40	17.5	12.5				
35	NAS 1716	60	80	63	83	106	13	49	44	73	35	20	19	14				
36	NAS 1715	60	80	63	83	106	53	29	24	73	35	20	19	14				
37	NAS 1091	60	80	65	85	70	35	17.5	17.5	15	35	25	27.5	27.5				
38	NAS 353	60	80	65	85	75	15	30	30	35	35	25	20	20				
39	NAS 2143	60	80	65	85	90	15	45	30	35	25	25	35	20				
40	NAS 1721	60	100	63	103	91	13	39	39	33	35	20	29	29				
41	NAS 1734	60	100	63	103	106	13	49	44	73	35	20	19	14				
42	NAS 1719	60	100	63	103	106	53	29	24	73	35	20	19	14				
43	NAS 602	60	110	62	115	57	32	15	10	12	25	35	25	20				
44	NAS 1727	60	125	63	128	91	13	39	39	33	35	20	29	29				
45	NAS 173	60	125	65	130	75	15	30	30	35	35	25	20	20				
46	NAS 1233	60	125	65	130	88	25	37	26	53	40	20	22.5	12.5				
47	NAS 977	60	160	65	165	74	15	29.5	29.5	34	35	25	20	20				
48	NAS 1506	60	210	62	215	77	32	25	20	12	20	35	35	30				
49	NAS 1856	65	35	70	40	60	15	27	18	35	25	25	17	08				
50	NAS 125	65	100	70	105	45	20	12.5	12.5	10	25	30	17.5	17.5				
51	NAS 1206	70	80	62	82	70	15	30	25	32	35	15	23.5	14.5				
52	NAS 668	75	75	78	78	75	35	25	15	15	50	50	35	25				
53	NAS 1226	75	75	80	80	60	15	22.5	22.5	15	35	35	22.5	22.5				
54	NAS 1290	75	75	80	80	90	40	30	20	35	75	20	35	20				
55	NAS 1308	75	100	80	105	98	55	26	17	50	30	30	28	20				

S	Type	Riser Size		Busbar Size		Opening Riser Size		Opening Busbar Size		* C	D	E	F	G	H	I	J	K
		A	B	A	B	A	B											
56	NAS 1274	80	40	83	44	73	20	30	23	35	35	20	23	15				
57	NAS 190	80	60	85	65	63	18	25	20	35	35	25	18	10				
58	NAS 1683	80	80	85	85	65	15	27.5	22.5	35	40	40	17.5	12.5				
59	NAS 1481	80	97	85	102	62	20	25.5	16.5	20	28	10	25.5	16.5				
60	NAS 1213	80	100	85	103	90	28	36	26	55	38	22	23	12				
61	NAS 1712	80	100	83	103	91	13	39	39	33	35	20	29	29				
62	NAS 1705	80	100	83	103	96	53	21.5	21.5	33	35	20	31.5	31.5				
63	NAS 1750	80	100	83	103	136	93	21.5	21.5	73	35	20	34	29				
64	NAS 124	80	100	85	105	40	10	15	15	10	28	28	15	15				
65	NAS 1016	80	100	85	105	65	35	17	13	15	35	25	27.5	22.5				
66	NAS 1268	80	100	85	105	75	47	15	13	32	40	18	23	20				
67	NAS 48	80	100	85	105	85	15	35	35	45	30	24	26					
68	NAS 1018	80	100	85	105	90	55	20	15	35	35	25	30	25				
69	NAS 988	80	120	85	125	65	35	17	13	15	35	25	27.5	22.5				
70	NAS 128	80	120	85	125	85	50	22.5	12.5	50	25	20	22.5	12.5				
71	NAS 218	80	120	85	125	85	50	22.5	12.5	50	25	25	22.5	12.5				
72	NAS 987	80	120	85	125	85	55	17	13	35	35	25	27.5	22.5				
73	NAS 1215	80	120	85	125	90	27	37	26	52	38	23	23	15				
74	NAS 1480	80	122	85	127	68	25	26.5	16.5	25	28	10	26.5	16.5				
75	NAS 1479	80	122	85	127	86	30	35.5	20.5	30	25	10	35.5	20.5				
76	NAS 1255	80	125	82	127.5	123	90	17	16	72	50	17	25.5	25.5				
77	NAS 1787	80	125	83	128	60	14	25	21	33	35	15	15	12				
78	NAS 2006	80	125	83	128	91	13	39	39	33	35	35	29	29				
79	NAS 1259	80	125	83	128	102	18	42	42	72	50	15	15	15				
80	NAS 135	80	125	85	127	85	23	36	26	50	25	25	22.5	12.5				
81	NAS 351/NAS 172	80	125	85	130	75	15	30	30	35	30	20	20	20				
82	NAS 1232	80	125	85	130	88	50	24	14	53	35	20	22.5	12.5				
83	NAS 1234	80	125	85	130	90	25	37.5	27.5	55	25	20	22.5	12.5				
84	NAS 827	85	45	90	50	78	22	28	28	42	80	70	18	18				
85	NAS 1211	90	95	92	100	75	35	20	20	35	20	20	20	20				
86	NAS 524	90	125	95	128	90	35	30	25	58	40	60	17	15				
87	NAS 1040	95	181	102	186	75	50	15	10	1								

# T OFF CENTERED

Heat Shrink fittings for busbars



\*\*ADDITIONAL DIMENSIONS ARE AVAILABLE BASED ON CUSTOMER REQUIREMENTS

S	Type	Riser Size		Busbar Size		Opening Riser Size		Opening Busbar Size		* C	D	E	F	G	H	I	J	K
		A	B	A	B	A	B											
01	NAS 1025	15	40	20	45	50	12	30	08	15	30	20	18	17				
02	NAS 071	20	40	25	45	65	35	17.5	12.5	15	35	20	27.5	22.5				
03	NAS 938	20	20	20	20	35	10	15	10	10	25	25	20	05				
04	NAS 1853	25	40	30	45	70	30	20	20	30	25	25	30	10				
05	NAS 1610	27	26	32	31	48	12	26	10	12	25	25	20	16				
06	NAS 941	30	30	30	30	55	10	25	20	10	25	25	30	15				
07	NAS 355	30	40	35	45	53	15	28	10	15	35	20	20	18				
08	NAS 076	30	50	35	55	65	38	15	12	15	35	18	30	20				
09	NAS 1759	30	60	33	63	70	32	25	13	32	35	20	23	15				
10	NAS 356	30	60	35	65	60	15	35	10	15	35	20	25	20				
11	NAS 1760	30	80	33	83	70	32	25	13	32	35	20	23	15				
12	NAS 1790	30	80	33	83	110	33	48.5	28.5	73	35	15	18.5	18.5				
13	NAS 362	30	80	35	85	60	20	30	10	15	35	20	25	20				
14	NAS 547	30	80	35	85	110	35	50	25	75	40	35	20	15				
15	NAS 1789	30	100	32	102	70	32	25	13	32	35	15	23	15				
16	NAS 1941	30	100	33	103	106	33	44	29	73	35	35	19	14				
17	NAS 357	30	100	35	105	58	20	26	12	15	35	15	25	18				
18	NAS 1111	30	110	32	115	48	12	26	10	12	20	20	20	16				
19	NAS 1068	30	125	35	130	110	35	50	25	75	35	25	19	16				
20	NAS 1437	30	142	35	147	58	14	33	11	14	20	20	22	22				
21	NAS 1446	30	182	35	187	58	14	33	11	14	20	20	22	22				
22	NAS 1336	40	30	45	35	50	15	10	25	15	30	20	17.5	17.5				
23	NAS 1028	40	30	45	35	56	20	28	08	15	35	20	23	18				
24	NAS 2100	40	35	45	40	65	15	30	20	25	25	25	30	10				
25	NAS 1265	40	40	42	42	55	22	17	16	17	50	15	22	16				
26	NAS 1981	40	40	45	45	47	15	21	11	15	25	25	21	11				
27	NAS 2069	40	40	45	45	50	15	30	05	15	25	25	20	15				
28	NAS 344	40	40	45	45	50	16	28	06	20	35	20	18	12				
29	NAS 1021	40	40	45	45	51	15	28	08	15	30	20	18	18				
30	NAS 777	40	40	45	45	65	15	30	20	15	25	25	35	15				
31	NAS 1338	40	40	45	45	73	35	28	10	35	50	50	20	18				
32	NAS 1266	40	50	42.5	52.5	54	20	20	14	15	40	15	22.5	16.5				
33	NAS 1019	40	50	45	55	51	15	28	08	15	30	20	18	18				
34	NAS 1284	40	60	42	62	70	30	25	15	30	35	15	25	15				
35	NAS 343 / NAS 205	40	60	45	65	55	15	30	10	15	35	23	20	20				
36	NAS 1004	40	60	45	65	80	35	30	15	35	40	25	25	20				
37	NAS 183 C	40	60	45	65	80	35	35	10	35	20	38	25	20				
38	NAS 1245	40	80	42	82	50	20	17.5	12.5	15	45	15	20	15				
39	NAS 1246	40	80	42	82	70	30	25	15	30	45	15	22.5	17.5				
40	NAS 1757	40	80	43	83	81	43	19	19	13	35	20	39	29				
41	NAS 1728	40	80	43	83	106	63	24	19	33	35	20	39	34				
42	NAS 1731	40	80	43	83	116	73	24	19	73	35	20	29	14				
43	NAS 1093	40	80	45	85	60	18	32	10	18	35	25	24	18				
44	NAS 107C	40	80	45	85	60	18	32	10	18	35	35	24	18				
45	NAS 184	40	80	45	85	62	35	17	10	18	35	35	22	22				
46	NAS 1085	40	80	45	85	65	18	27	20	35	35	25	18	12				
47	NAS 340	40	80	45	85	80	35	30	15	35	35	25	25	20				
48	NAS 339 A	40	80	45	85	110	35	50	25	76	35	30	18	16				
49	NAS 1761	40	100	43	103	106	33	44	29	73	35	15	19	14				
50	NAS 1736	40	100	43	103	106	63	24	19	33	35	20	39	34				
51	NAS 1762	40	100	43	103	116	73	24	19	73	35	15	29	14				
52	NAS 1075	40	100	45	105	65	15	30	20	35	35	25	18	12				
53	NAS 341	40	100	45	105	80	35	30	15	35	35	20	25	20				
54	NAS 1072	40	100	45	105	110	35	50	25	75	35	25	20	15				
55	NAS 1260	40	120	42	127	100	32	43	25	70	45	15	17.5	12.5				
56	NAS 1123	40	125	45	130	60	18	32	10	18	35	23	24	18				

S	Type	Riser Size		Busbar Size		Opening Riser Size		Opening Busbar Size		* C	D	E	F	G	H	I	J	K
		A	B	A	B	A	B											
57	NAS 160	40	125	45	130	73	35	25	13	35	35	35	23	15				
58	NAS 337	40	125	45	130	80	35	30	15	35	35	25	25	20				
59	NAS 150	40	125	45	130	110	35	50	25	75	35	35	20	15				
60	NAS 982	40	160	45	165	73	35	26	12	35	35	25	22	16				
61	NAS 1599	43	43	48	48	60	15	25	20	15	25	25	30	15				
62	NAS 708	45	45	50	50	50	10	25	15	10	15	15	25	15				
63	NAS 532-2	45	95	50	100	70	35	25	10	30	35	15	25	15				
64	NAS 1020	50	50	55	55	51	15	28	08	15	30	20	18	18				
65	NAS 2099	50	50	55	55	70	35	18	17	35	25	25	27	08				
66	NAS 1247	50	80	53	83	50	20	17	13	15	12.5	15	20	15				
67	NAS 2081	50	80	53	83	106	63	24	19	33	35	15	39	34				
68	NAS 1730	50	80	53	83	116	73	24	19	73	35	20	29	14				
69	NAS 1847	50	100	53	103	106	63	24	19	33	35	15	39	34				
70	NAS 1722	50	100	53	103	116	73	24	19	73	35	20	29	14				
71	NAS 1283	60	60	62	62	70	32	25	13	32	15	25	22.5	15.5				
72	NAS 1708	60	60	63	63	50	19.5	17.5	13	14	35	20	22.5	14				
73	NAS 167	60	60	65	65	55	15	22.5	17.5	15	25	25	27.5	12.5				
74	NAS 968	60	60	65	65	55	15	30	10	15	33	23	20	20				
75	NAS 1009	60	60	65	65	60	15	30	15	15	40	25	25	20				
76	NAS 107 B	60	60	65	65	60	16	33	11	15	35	35	25	20				
77	NAS 383	60	60	65	65	65	35	20	10	35	25	20	20	10				
78	NAS 1318	60	60	65	65	70	20	27.5	22.5	35	85	30	17.5	17.5				
79	NAS 1008	60	60	65	65	80	35	30	15	35	40	25	25	20				
80	NAS 189	60	60	65	65	80	40	30	10	35	35	40	22.5	22.5				
81	NAS 2151	60	60	65	65	100	35	35	30	35	25	25	45	20				
82	NAS 1726	60	80	63	83	51	13	26	12	13	35	20	22	16				
83	NAS 1733	60	80	63	83	116	73	24	19	73	35	20	29	14				
84	NAS 2104	60	80	64	84	60	14	36	10	14	25	25	26	20				
85	NAS 542	60	80	65	85	55	15	27.5	12.5	15	30	20	20	20				
86	NAS 1092	60	80	65	85	60	18	32	10	18	35	25	24	18				
87	NAS 063	60	80	65	85	60	20	27.5	12.5	15	40	38	25	20				
88	NAS 352	60	80	65	85	115	15	70	30	75	35	23	20	20				
8																		







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