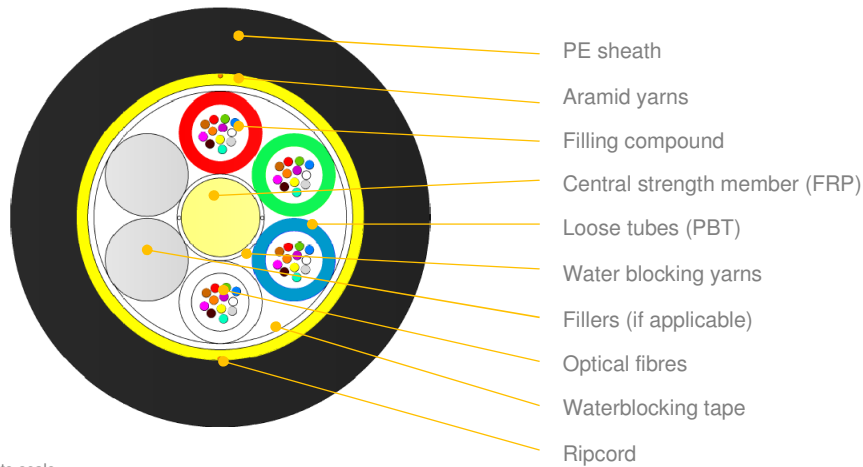


|           |            |          |
|-----------|------------|----------|
| Type:     | AERO-AS09  | REV: 2.2 |
| Issued:   | 30/06/2014 | SK       |
| Modified: | 29/12/2020 | KP       |

## Single jacket multitube self-supporting aerial cable AERO AS09



\*schematic drawing, not to scale

### APPLICATION:

For installation on poles or in ducts.  
Fully dielectric cable  
Self-supporting aerial cable with aramid reinforcement  
For installation along power lines with an operation voltage below 150 kV and producing space potential below 4 kV.

### DESIGN:

FRP strength and anti-buckling element  
Dry yarns to prevent moisture into the cable  
Loose tube (PBT Ø 2.5mm) with filling compound  
6-12 elements SZ stranded cable core  
Optical fibres  
Fillers (if applicable)  
Water-swellable tape  
Aramid yarns as strain relief and water absorbent  
UV stabilized PE sheath (black by default, other colours available)

### CONFIGURATION:

| Variant    | Quantity [pcs] |                    |                   |                 | Ø nominal<br>(±5%)<br>[mm] | Nominal<br>weight<br>(±10%)<br>[kg/km] | Max<br>allowed<br>tension<br>[N] | Max<br>static<br>tension<br>[N] |
|------------|----------------|--------------------|-------------------|-----------------|----------------------------|--|----------------------------------|---------------------------------|
|            | Fibres         | Fibres<br>per tube | Total<br>elements | Active<br>tubes |                            |  |                                  |                                 |
| 1-6T x 4F  | 4-24           | 4                  | 6                 | 1-6             | 11,6                       | 101                                    | 9300                             | 6600                            |
| 1-6T x 6F  | 6-36           | 6                  | 6                 | 1-6             | 11,6                       | 101                                    | 9300                             | 6600                            |
| 1-6T x 8F  | 8-48           | 8                  | 6                 | 1-6             | 11,6                       | 102                                    | 9200                             | 6000                            |
| 1-6T x 12F | 12-72          | 12                 | 6                 | 1-6             | 11,7                       | 104                                    | 9200                             | 6000                            |
| 8T x 6F    | 6-48           | 6                  | 8                 | 8               | 13,2                       | 137                                    | 9200                             | 6100                            |
| 8T x 12F   | 96             | 12                 | 8                 | 8               | 13,2                       | 138                                    | 9200                             | 6100                            |
| 12T x 12F  | 144            | 12                 | 12                | 12              | 16,3                       | 203                                    | 9200                             | 6100                            |

Other fiber counts available on demand

### MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

|                      |                                   |   |
|----------------------|-----------------------------------|---|
| Crush performance:   | 3000 [N/10 cm]                    | IEC 60794-1-21-E3, $\Delta\alpha\leq 0,05$ dB, reversible |
| Bending radius:      | Static: 15 x D<br>Dynamic: 20 x D | IEC 60794-1-21-E6, $\Delta\alpha\leq 0,05$ dB, reversible |
| Water penetration:   | 3[m] sample, 1[m] head, 24[h]     | IEC 60794-1-22-F5, no leakage                             |
| Temperature range    |                                   | IEC 60794-1-22-F1, $\Delta\alpha\leq 0,05$ dB/km          |
| Installation:        | -15... +55 [°C]                   |   |
| Operation:           | -40... +70 [°C]                   |   |
| Transport & Storage: | -40... +70 [°C]                   |   |

|           |            |          |
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## APPLICATION AND CABLE SPAN CHARACTERISTIC

### 6 tubes design

| Loading Conditions | Span | Installed Sag (2%) | Tension | Total sag | Horizontal sag | Vertical sag |
|--------------------|------|--------------------|---------|-----------|----------------|--------------|
|                    | [m]  | [m]                | [N]     | [m]       | [m]            | [m]          |
| NSC Light          | 530  | 10.6               | 9000    | 24.7      | 23.7           | 7.2          |
| NSC Medium         | 400  | 8.0                | 9000    | 20.1      | 12.4           | 15.8         |
| NSC Heavy          | 230  | 4.6                | 9000    | 12.4      | 6.2            | 10.7         |

### 8 tubes design

| Loading Conditions | Span | Installed Sag (2%) | Tension | Total sag | Horizontal sag | Vertical sag |
|--------------------|------|--------------------|---------|-----------|----------------|--------------|
|                    | [m]  | [m]                | [N]     | [m]       | [m]            | [m]          |
| NSC Light          | 470  | 9.4                | 9000    | 21.6      | 20.7           | 6.2          |
| NSC Medium         | 370  | 7.4                | 9000    | 18.1      | 11.1           | 14.3         |
| NSC Heavy          | 220  | 4.4                | 9000    | 11.7      | 5.8            | 10.2         |

### 12 tubes design

| Loading Conditions | Span | Installed Sag (2%) | Tension | Total sag | Horizontal sag | Vertical sag |
|--------------------|------|--------------------|---------|-----------|----------------|--------------|
|                    | [m]  | [m]                | [N]     | [m]       | [m]            | [m]          |
| NSC Light          | 370  | 7.4                | 9000    | 16.1      | 15.3           | 16.8         |
| NSC Medium         | 300  | 6.0                | 9000    | 13.8      | 8.2            | 11.1         |
| NSC Heavy          | 190  | 3.8                | 9000    | 9.6       | 4.6            | 8.5          |

## OPTICAL FIBRE AND LOOSE TUBES COLOUR IDENTIFICATION

For optical fibres and loose tube identification information please see DSH\_Colors\_CODE\_XXXX document.

## FIBRE PARAMETERS

For selected post-production optical fibres parameters please see DSH\_OFP document.

## MARKING

The following print (hot foil / laser printing) is applied at 1-meter intervals:

- Supplier: FIBRAIN
- Standard code (Product type, fibre type, fibre count)
- Year of manufacture: xxxx
- Length marking in meters
- Cable ID / Drum No

Example: FIBRAIN AERO AS09 T25 12F SM G652D 2T6F "YEAR OF MANUFACTURE" "LASER SYMBOL" "LENGTH MARKING" "BATCH NUMBER"

The accuracy of marking is  $\pm 0,5\%$ . Remarking is in accordance with Bellcore GR 20 and supersedes earlier markings. Occasional loss of marking is possible. Cables can be supplied with a range of single mode or multimode fibres and customized print.

## PACKING

Cables will be shipped on disposable wooden or treated wooden drums. Both ends of the cable will be capped and accessible for testing. Rotation direction arrow will be marked on the drum together with identification information.

## DELIVERY LENGTH

2000 – 8000 meters  $\pm 5\%$ , with possibility of supplying up to 5% of total contract quantity as short length cables which should be above 1000 meters long. Tolerance of 5 % of order quantity shall be allowed.

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