



DAFIBRE EP 180

Rectangular conductor of copper, covered with glassfibre yarn and epoxy, class 180

Product name:

Dafibre EP 180 1
Dafibre EP 180 2

Specifications:

Internal LWW or customer specification

UL approval:

Not approved

Class: 180

Temperature index $\geq 180^{\circ}\text{C}$ acc. to experience
Heat shock: $\geq 200^{\circ}\text{C}$

Insulation:

1- 2 layers of glass-fibre yarn
Impregnation: Polyesterimide
Adhesive layer: Epoxy

Properties:

- Excellent resistance to mechanical stress
- B-stage cured epoxy layer allows pre-pressing of windings

Field of application:

- Stator coils
- Large generators
- Electric motors

Standard packaging:

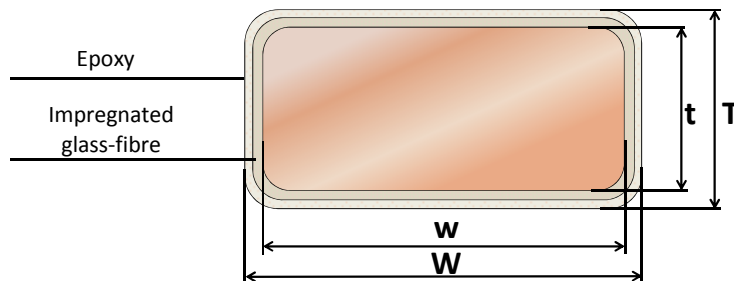
K500, VM630

Shelf life:

6 month, under normal ambient conditions

Conductor material

EN 1977 - ETP1 CW003 A
EN 1977 - ETP CW004A
ASTM B49 - ETP C11000/C11040



$T - t =$ Increase in thickness

$W - w =$ Increase in width

Conductor corner radius

| Nominal thickness of conductor (mm) | | Corner radius (mm) | Tolerance |
|-------------------------------------|---------------------|-----------------------|-----------|
| Over | Up to and including | | |
| - | 1,00 | 0,5 nominal thickness | +/- 25% |
| 1,00 | 1,60 | 0,50 | +/- 25% |
| 1,60 | 2,24 | 0,65 | +/- 25% |
| 2,24 | 3,55 | 0,80 | +/- 25% |
| 3,55 | - | 1,00 | +/- 25% |

Conductor tolerances

| Nominal width or thickness of the conductor (mm) | | Tolerance +/- (mm) |
|--|---------------------|--------------------|
| Over | Up to and including | |
| - | 3,15 | 0,030 |
| 3,15 | 6,30 | 0,050 |
| 6,30 | 12,50 | 0,070 |
| 12,50 | - | 0,100 |

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Insulation increase

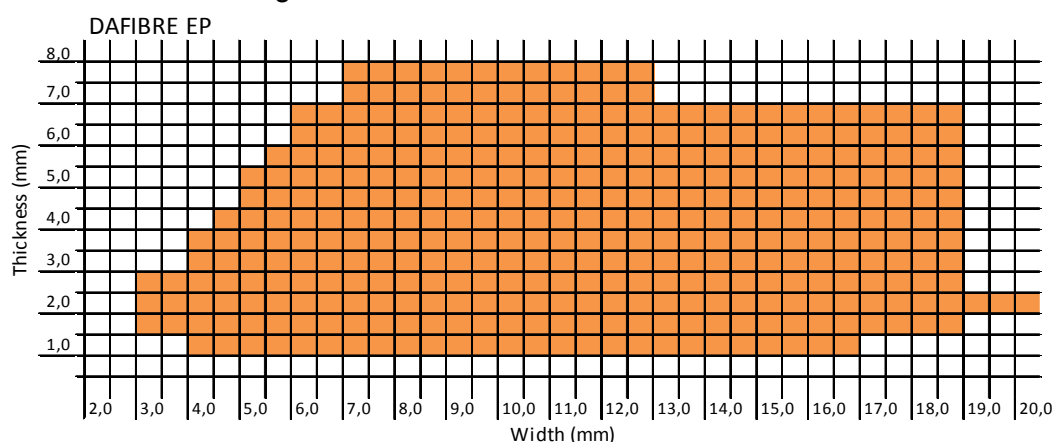
| Designation | Nominal width of conductor | Increase in thickness | Increase in width |
|------------------|----------------------------|-----------------------|-------------------|
| Dafibre EP 180 1 | $2,00 \leq w \leq 3,15$ | $0,16 \pm 0,04$ | max. 0,20 |
| | $3,15 < w \leq 6,30$ | $0,18 \pm 0,04$ | max. 0,22 |
| | $6,30 < w \leq 12,50$ | $0,21 \pm 0,05$ | max. 0,26 |
| | $12,50 < w \leq 20,50$ | $0,24 \pm 0,06$ | max. 0,30 |
| Dafibre EP 180 2 | $2,00 \leq w \leq 3,15$ | $0,27 \pm 0,06$ | max. 0,33 |
| | $3,15 < w \leq 6,30$ | $0,30 \pm 0,07$ | max. 0,37 |
| | $6,30 < w \leq 12,50$ | $0,35 \pm 0,08$ | max. 0,43 |
| | $12,50 < w \leq 20,50$ | $0,39 \pm 0,08$ | max. 0,47 |

Properties for DAFIBRE EP 180

| Main characteristics | Test method | Interval | Acceptance criteria |
|--|-----------------|-------------------------|---------------------------------------|
| Electrical properties | | | |
| Conductor resistance | IEC 60851 - 5.3 | 1) | $0,01724 \Omega \text{mm}^2/\text{m}$ |
| Conductivity | 1/R | 1) | $> 58 \text{ m}/(\Omega \text{mm}^2)$ |
| Breakdown voltage | IEC 60851 - 5.4 | All sizes | 350 V |
| - Dafibre 180 EP 1 - Dafibre 180 EP 2 | | | 560 V |
| Mechanical properties | | | |
| Elongation | IEC 60851-3.3 | $1,00 \leq t \leq 2,50$ | $\geq 30\%$ |
| | | $t > 2,50$ | $\geq 32\%$ |
| Springback angle | IEC 60851-3.4 | All sizes | $\leq 5,5^\circ$ |
| Flexibility | IEC 60851-3.5 | $w \leq 8 \text{ mm}$ | 10 x width |
| - Bending edgewise | | $w > 8 \text{ mm}$ | 15 x width |
| - Bending flatwise | | All sizes | 10 x thickness |
| Adherence | IEC 60851-3.5 | All sizes | 10 % stretch, no loss of adhesion |
| -Stretch | | | |

1. Dependence of dimension is expressed by the unit

Dimension range



The technical data included is up to date at the time of printing.
LWW reserves the right to make any amendments deemed necessary

Ed.A(2)

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