



DAFIBRE 180 AL

Rectangular glass-fibre covered conductor of aluminium, class 180

Product name:

Dafibre 180 AL

Properties:

- Good resistance to mechanical stress
- Suitable in lightweight designs

Specifications:

Internal LWW or customer specification

Field of application:

- Generators
- Large motors
- Magnet coils
- Welding equipment

UL approval:

Not approved

Standard packaging:

Drum 500 and 630

Class: 180

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

Heat shock: $\geq 180^{\circ}\text{C}$

Conductor material

AL according to EN 1715

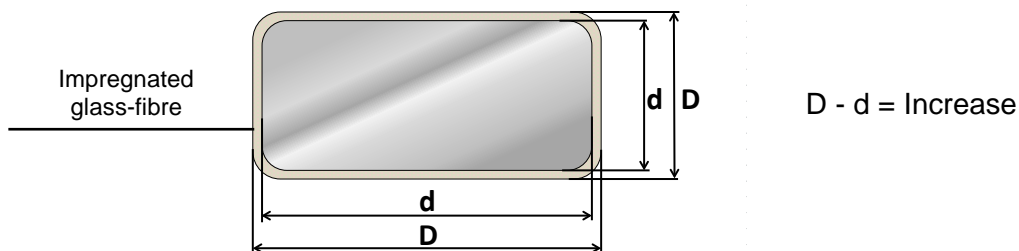
Shelf life:

5 years, under normal ambient conditions

Insulation:

1-3 layers of glass-fibre yarn

Impregnation: Polyesterimide



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

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%

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Insulation increase

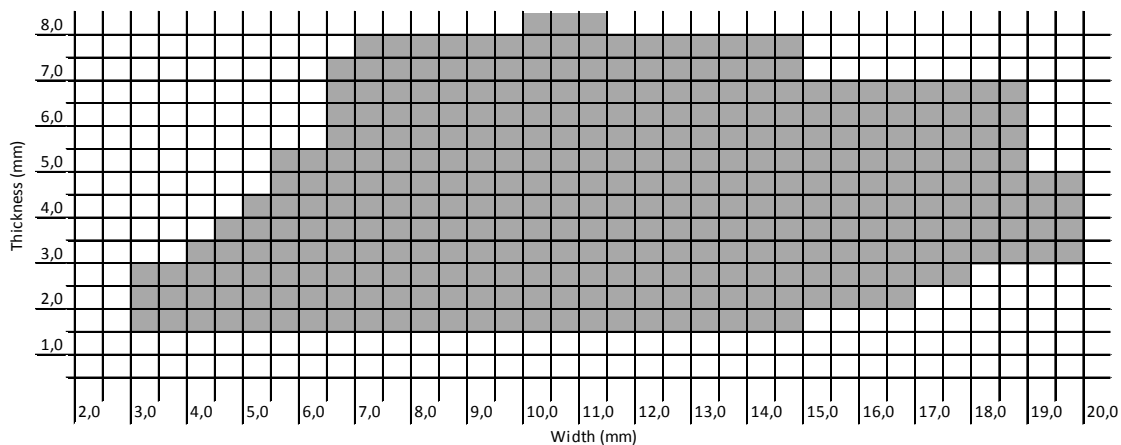
Designation	Nominal width of conductor	Increase in thickness	Increase in width
Dafibre 180 AL 1	$2,00 \leq W \leq 3,15$	$0,16 \pm 0,04$	max. 0,20
	$3,15 < W \leq 6,30$	$0,18 \pm 0,04$	max. 0,22
	$6,30 < W \leq 12,50$	$0,21 \pm 0,05$	max. 0,26
	$12,50 < W \leq 20,50$	$0,24 \pm 0,06$	max. 0,30
Dafibre 180 AL 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
Dafibre 180 AL 3	$2,00 \leq W \leq 3,15$	$0,44 \pm 0,09$	max. 0,53
	$3,15 < W \leq 6,30$	$0,46 \pm 0,09$	max. 0,55
	$6,30 < W \leq 12,50$	$0,50 \pm 0,11$	max. 0,61
	$12,50 < W \leq 20,50$	$0,64 \pm 0,14$	max. 0,78

Properties for DAFIBRE 180 AL

Main characteristics	Test method	Interval	Acceptance criteria
Electrical properties			
Conductor resistance	IEC 60851 - 5.3	1)	$0,02789 \Omega \text{mm}^2/\text{m}$
Conductivity	1/R	1)	$> 35,5 \text{ m}/(\Omega \text{mm}^2)$
Breakdown voltage	IEC 60851 - 5.4	All sizes	350 V
- Dafibre 180 AL 1			560 V
- Dafibre 180 AL 2			900 V
- Dafibre 180 AL 3			
Mechanical properties			
Elongation	IEC 60851-3.3	$T \leq 3,15$	$\geq 15\%$
		$T > 3,15$	$\geq 20\%$
Flexibility	IEC 60851-3.5	All sizes	10 x thickness
- Bending flatwise			
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 reserve the right to make any amendments deemed necessary

Liljedahl Winding Wire

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