

# Declaration of Performance

Acc. to delegation regulation (EU) Nr. 574/2014  
annex III of regulation (EU) Nr. 305/2011  
(construction product regulation)

Reference number	FEP-2023-01-e
1. Unique identification code of the product type	LITGRID, 110 kV concrete FL poles The identification occurs by position number and design documentation
2. Intended use(s)	Spun concrete poles for load bearing purposes acc. EN 12843:2004
3. Manufacturer	FUCHS Europoles GmbH Europoles-Straße 1 92318 Neumarkt i.d.OPf.
4. Authorised representative	Not relevant
5. System of assessment and verification of constancy of performance	System 2+
6.a) Harmonized standard Notified body	Acc. EN 12843:2004 The notified body PÜZ BAU GmbH – NB-Nr. 1794 – has performed the initial inspection of the works and supervises the factory production control (FPC) continuously. Assessment and evaluation of the FPC is performed acc. to system 2+ and a certificate of conformity of the FPC is issued: 1794-CPR-13.345.00-12843
6.b) European evaluation document European technical evaluation Technical evaluation body: Notified body	Not relevant

## 7. Declared performance of construction product

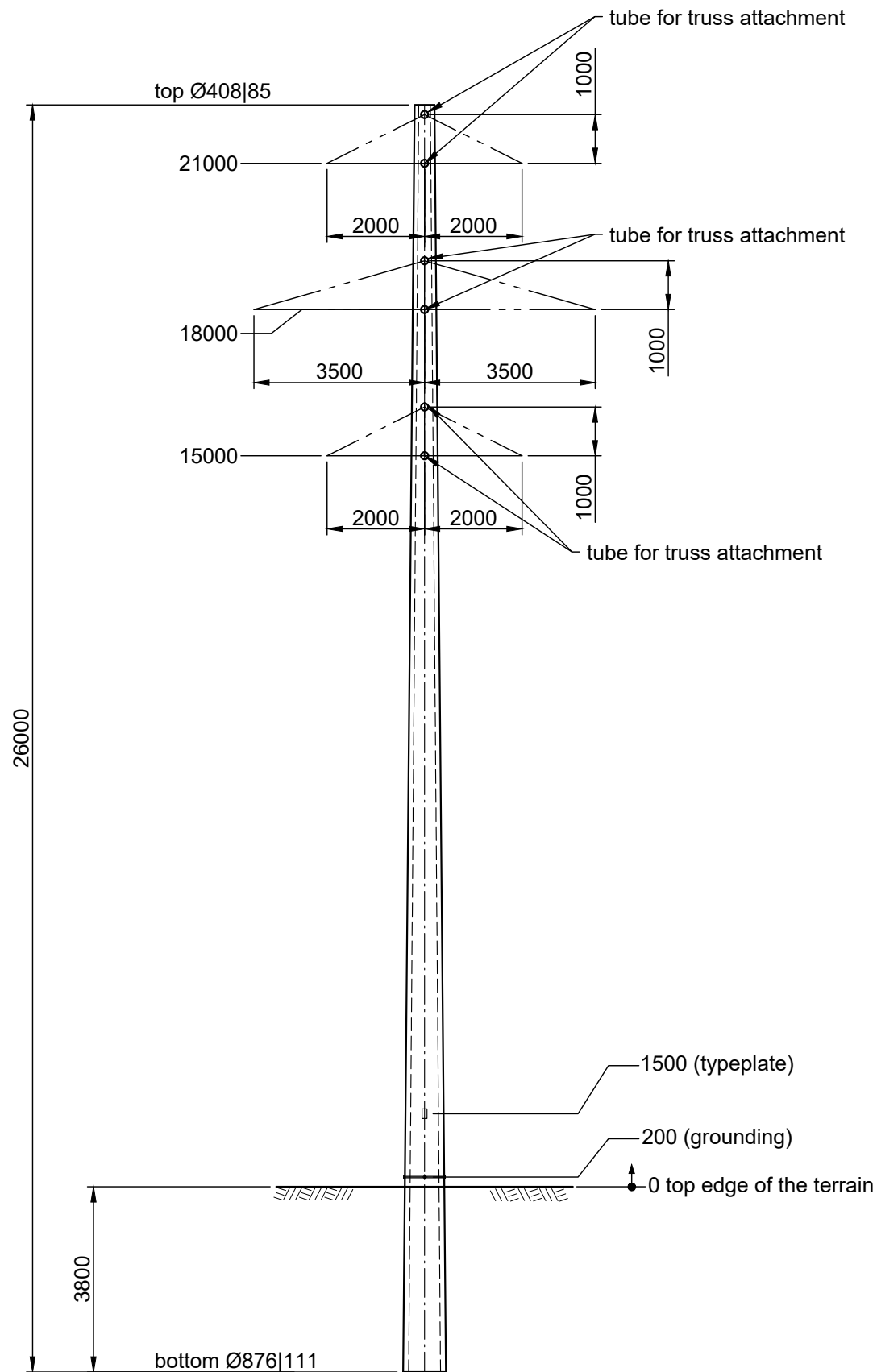
Essential characteristics	Performance	Harmonized standard
Type / geometric data	<ul style="list-style-type: none"> <li>Length: 26,0 m;</li> <li>External diameter of the pole top: Ø 408 mm</li> <li>External diameter of the pole bottom: Ø 876 mm</li> </ul>	
Tensile strength and elastic limit (of steel)	<ul style="list-style-type: none"> <li><math>f_{yk} = 500 \text{ MPa}</math>, <math>f_{tk} = 550 \text{ MPa}</math></li> <li><math>f_{p0,1k} = 1600 \text{ MPa}</math>, <math>f_{pk} = 1860 \text{ MPa}</math></li> </ul>	EN 12843:2004
Mechanical stability and structural design	<ul style="list-style-type: none"> <li>Max. bending torque: 969,1 kNm (at ground level)</li> <li>Bending torque limit by formation of cracks: 330 kNm (without cracks, at ground level)</li> <li>acc. General construction technique permit Z-15.13-343 Spun concrete elements with reduced concrete cover and increased reinforcement ratio</li> <li>acc. General construction technique permit Z-13.1-117 Strand tensioning process</li> </ul>	EN 12843:2004
Compressive strength	<ul style="list-style-type: none"> <li>C 80/95, see CE-marking and delivery notes</li> </ul>	EN 12843:2004
Durability	<ul style="list-style-type: none"> <li>Limitation of cracks width acc. to</li> <li>Concrete cover acc. to Z-15.13-343</li> </ul>	EN 1992-1-1:2005
Corrosion resistance	<ul style="list-style-type: none"> <li>XC4, XD3, XS3, XA1, WA</li> </ul>	EN 12843:2004
Freeze-thaw resistance	<ul style="list-style-type: none"> <li>XF3 (without Air entrainer)</li> </ul>	EN 12843:2004

## 8. Appropriate technical documentation and/or specific technical documentation: project documents

The performance of the above product corresponds to the declared performances according to the above table. The manufacturer named above is solely responsible for drawing up the declaration of performance in accordance with regulation (EU) No. 305 / 2011.

Signed for and on behalf of the manufacturer by  
ppa. Gerhard Dorr, plant manager

Neumarkt i.d.OPf., 07.01.2025



**Standards:**

Action on structures: EN 1991  
Characteristics and tests according to: EN 12843  
Design of concrete structures: EN 1992-1-1  
Geotechnical design: EN 1997-1  
Quality management system: ISO 9001

**building authority approval:**



Z-15.13-343: Spun concrete components  
Z-13.1-117: Strand tension process FUCHS Europoles

**Ambient conditions:**

Operating conditions: Underground and open air  
Highest operating ambient temperature: +50 °C  
Lowest operating ambient temperature: -40 °C  
The annual average relative air humidity of operating ambient: ≥90 %  
The maximum allowable ice thickness: 15 mm

**Electromechanical characteristics:**

Pole konstruktion type: Conical centrifuged  
Class of the environmental impact to concrete (according EN 206-1): XF3  
Frost resistance class of the concrete (according to EN 206-1): ≥ F200  
Water penetration resistance class of the concrete (according to EN 206-1) ≥ W6  
Class of the concrete (according to EN 206-1): C80/95  
The longitudinal reinforcement armature before concreting shall be: Prestressed concrete  
The pole has to be reinforced with armature EN ISO 15630-1:2011: B500B (longitudinal): B500A+P(transversal); St1660/1860  
Maximum bending torque: 969 kN m  
Limit of the bending moment at the ground surface (about 3.3 m from the pole bottom) until the cracks opens, kN'm: 320 kN m  
Maximum weight of the pole: 12,67 t  
The corrosion class of the metal structure is not less than (according to LST EN ISO 12944-2): C3

(intended use)				(permissible variation)		(surface)		scale 1:125		(material, halffinished prod.)			
state freigegeben													
					date	name		<div>Offer drawing</div> <div>Litgrid 110kV 26m Double Circuit</div> <div>offer Litgrid 26m 110kV</div>					
				dealing	25.11.2024	FRANK D.							
				checked									
				constr.	11.12.2024	FRANK D.							
				checked									
						EURO POLES		document number N2016685		class	sheet 1		
								article number		Rev: -			
state	design change	date	name	(EDP-Nr.)N2016685.dwg		(made for:)		(made through:)					
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