

# Porcelain Longrod Insulators



- Wet Process Porcelain
- Extruded Technology
- Wet Turning Process
- C130 High Strength Alumina Porcelain
- High Creepage Options
- **Voltage Class:** 1 – 1100 kV (>170 kV in serial unit arrangements)
- **Product Standards:** IEC 60433, IEC 60383, IEC 60672
- **Experience:** > 70 years

## Main advantages

- Most Reliable Insulator Product (CIGRE Study/Survey WG 22.03)
- Extreme Weather and Environmental Resistant
- Type A (non puncturable) according to IEC 60383
- High Mechanical Strength up to 350 kN per Unit
- Life-Expectancy >40 years
- Standardised String Designs
- Silicone Coatings available for Applications under Extreme Pollution
- Proven for more than 70 years

## References

- 15 kV German Railway
- 25 kV Dutch Railway
- 15 kV Indian Railway
- 15 kV NORGES, Norwegian Railway
- 25 kV RSD, Russian Railway
- 25 kV SBB, Swiss Railway
- 15 kV ÖBB, Austrian Railway
- 123 – 420 kV All German Utilities (RWE, EON, ENBW, Vattenfall, DB Energie)
- 123 – 420 kV All Swiss Utilities (EOS, BKW, ATEL, Rätia Energie, EKL)
- 123 – 420 kV All Austrian Utilities
- 123 – 420 kV SEC, Saudi Aramco, Saudi Arabia
- 145 – 245 kV MEW, Oman
- 145 – 245 kV Libya
- 123 kV PSE Poland
- 525 kV CPG, China (HVAC and HVDC)
- 123 – 765 kV Hungaria
- 145 – 420 kV ESKOM, South Africa
- 300 kV MEW, Kuwait

## Designs



Shank Ø		EMF** Class (max.)	Pollution Class*	h1, Max**
[mm]	[inch]	[kN]	[mm / kV]	[mm]
45	1.78	60	12 – 45	600
60	2.36	100	12 – 45	1500
75	2.95	160	12 – 45	1700
85	3.35	210	12 – 45	2000
95	3.74	250	12 – 45	2000
105	4.13	300	12 – 45	2000
115	4.53	350	12 – 45	2000

\* in accordance with IEC 60815, higher SCD possible in individual cases

\*\*\* max connection length

\*\* EMF: Electro Mechanical Failing load, routine test load of 80 % EMF

## End Fittings

- All IEC 60120 and IEC 60471 types
- All DIN 48006 fittings, Flanges
- Special customer and tailor-made fittings, e.g. for railway applications

LAPP Insulators GmbH  
 Bahnhofstraße 5  
 D-95632 Wunsiedel / Germany  
 Phone: +49 (0) 92 32 - 50 19 2  
 sales@lappinsulators.com

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