Standard Type Suspension Toughened Glass Insulator LXP3-160-LXP-550

Classes covered: U160BL, U210B, U240B, U300B, U420B, U500B

Standards: GB, ANSI, BS, DIN, AS, IEC

Certification: ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Lead time: 30 days production plus 30 days delivery

Product Overview

Where strings stop being routine. Six classes from a 160 kN U160BL to a 550 kN U500B, still the standard ribbed profile but built on a heavier frame. Diameter runs 280 mm to 380 mm, spacing 170 mm to 240 mm, and couplings step from 20 mm through 24 mm and 28 mm to 32 mm. Leakage distance rises with the frame, from 400 mm on the lighter classes to 640 mm on the U500B. This is the family a tension set on an angle tower, a dead end, or a long crossing span is built from.

Dimensional Mechanical And Electrical Values

Parameter	LXP-160 U160BL	LXP-210 U210B	LXP-240 U240B	LXP-300 U300B	LXP-420 U420B	LXP-550 U500B
Coupling Size mm	20	20	20 or 24	24	28	32
Diameter D mm	280	280	280	320	360	380
Spacing H mm	170	170	170	195	205	240
Leakage Distance mm	400	400	400	485	550	640
Mechanical Failing Load kN	160	210	240	330	420	550
Tension Proof Load kN	80	105	120	150	210	275
Power Frequency Dry Withstand kV	75	75	75	75	75	75
Power Frequency Wet Withstand kV	45	45	45	50	50	50
Dry Lightning Impulse Withstand kV	115	115	115	130	130	130
Power Frequency Puncture Voltage kV	130	130	130	130	130	130
RIV Test Voltage To Ground kV	10	10	10	10	10	10
Maximum RIV At 1000 kHz microvolts	50	50	50	50	50	50
Net Weight kg	6.6	7.1	8.0	10.7	14.5	18.2

Values are the published Huasheng table for this family. Confirm the class against your own specification before ordering.

Key Benefits

- Strength from 160 kN to 550 kN mechanical failing load in one dimensional family
- Tension proof load published from 80 kN to 275 kN for sizing tension sets properly
- 640 mm leakage distance on the U500B without moving to a fog profile
- Couplings up to 32 mm to mate with heavy line hardware
- Same self-identifying toughened glass failure mode as the lighter classes

Materials

- Shell in thermally toughened pressed glass
- Cap in galvanised malleable cast iron sized to the coupling
- Pin in galvanised forged steel
- Cement bonding between shell, cap and pin
- Locking device matched to the 20 mm to 32 mm coupling

Manufacturing Process

Glass batch melting → Shell pressing to profile → Thermal toughening → Thermal shock screening → Cap and pin cementing → Cement curing → Routine mechanical proof load → Electrical routine test → Marking and packing

Quality Control

- Every unit proof loaded to the published tension value, up to 275 kN on the U500B
- Thermal shock screening before assembly
- Coupling gauge check so heavy hardware mates on site without rework
- Electrical routine testing against the published withstand values
- Production under an ISO 9001:2015 certified quality management system

Customization

- Private label marking with your own brand
- Production to GB, ANSI, BS, DIN, AS or IEC designs
- Heavy duty packing and stacking specified for the destination

- Engineering support on coupling and hardware matching for tension sets

Handling And Selection Notes

- Take the design tension for the set and compare it with the published tension proof load, not the failing load
- Check the coupling size against the yoke plate and hardware already specified
- Allow for the greater spacing, 170 mm to 240 mm, when counting units for string length
- Verify the shed diameter against tower clearance before finalising the class
- Store and move the heavier classes on their caps, a 18.2 kg unit handled by the shell is a breakage
- Replace any unit whose shell has shattered at the next planned outage