# **SEDIVER**

#### TOUGHENED GLASS INSULATORS FOR RAILWAYS APPLICATIONS

### Experts & Pioneers

WORLDWIDE - 2025

### Sediver<sup>®</sup>, experts and pioneers in insulation technology

Sediver has been specialized for more than 70 years in the research, design, manufacturing testing & supply of glass and composite insulators and surge arresters for high voltage power networks and railway catenary systems.

Sediver is a key partner in all insulation applications with a solid experience of more than 2 million railway insulators on numerous Railway Projects, 600 million toughened glass insulators and over 5 million composite insulators operating on overhead lines in more than 150 countries.

### A reliable supplier for railway insulators

Since 1955, Sediver has been a reliable supplier of various types of catenary insulators to many railway companies, in operation under different application and voltages such as:

- 15 kV and 25 kV on AC systems and
- from 0,75 kV to 3 kV on DC systems

With over 70 years of specialized experience of insulators, complemented by laboratory tests, Sediver can offer the safest and most reliable toughened glass insulators for railways which can be depended upon for their mechanical and electrical strength.

As an example, Sediver has been selected and qualified by S.N.C.F (France) as supplier to the TGV – the French High Speed railway which imposes very stringent safety criteria and reliability requirements.



France, SNCF - Ligne Grande Vitesse (LGV) High Speed Train Eastern Europe 2007 (>365 km/h)

### Rigid construction of toughened Glass Railway Insulators

The top and strut insulators are of rigid construction comprising three or four toughened glass shells connected by intermediate metal fittings. The toughened glass shells and metal fittings are assembled together using alumina cement, to give a bond which is stronger than the components themselves.

The mechanical strength of Sediver toughened glass insulators is therefore determined by that of the metal components and, even if one or more of the glass shells is broken, the mechanical reliability of Sediver rigid insulators remains unchanged.

## Railway dedicated **product range**

Sediver studies and adapts its insulators and end fittings to the specifications of every railway company and can supply the following range of products:

#### Toughened glass:

- Feeder insulators
- Top tube insulators
- Strut tube insulators



Sediver studies the technical specifications of each railway company to offer insulators that perfectly meet the specific needs in terms of insulation and type of rigging.



Norway, NSB - 15 kV AC



Sediver references		TU 245 254/530	UT 245 254/550	TU 245 254/400	TU 100 254/540	TU 100 254/410		
DIMENSIONS								
Diameter (D)	mm	255	255	255	255	255		
Leakage Distance	mm	1200	1200	800	1200	800		
Length (P)	mm	625	625	500	625	500		
Spacing (P1)	mm	125	125	125	125	125		
Hole diameter (D1)	mm	18	18	18	18	18		
Hole diameter (D2)	mm	49	49	49	28	28		
Approximate net weight	kg	17.2	17.2	13.2	17.2	12.5		
MECHANICAL CHARACTERISTICS								
Bending moment	kN m	2.45	2.45	2.45				
Tensile strength	kN	80	80	80	50	50		
ELECTRICAL CHARACTERISTICS								
Wet power frequency withstand voltage	kV	95	95	70	95	70		
Dry lightning impulse withstand voltage	kV	250	250	170	250	170		

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Sediver references		F45 205/115	F12/127	PT15 175/100	PT15 175/120	XX30 175/100	ST140 205/200	ST 100 205/170
DIMENSIONS								
Diameter (D)	mm	205	255	175	175	175	205	205
Leakage Distance	mm	210	320	180	180	180	200	200
Spacing (P)	mm	115	127	106	123	112.5	200	168
Distance (P1)	mm			90	90			
Hanging standard	mm	IEC 16A	IEC 16A				IEC 20	IEC 16A
Hole diameter (D1)	mm			11.25	11.25	M18x2.5	26	24
Hole diameter (D2)	mm					M19.5x2.5		
Approximate net weight	kg	2	3.9	1.8	2.3	1.8	4.7	2.3
MECHANICAL CHARACTERISTICS								
Bending moment	kN m			15	15			
Torsion torque	mdaN				45			
Tensile strength	kN	45	110			30	140	100
ELECTRICAL CHARACTERISTICS								
Wet power frequency withstand voltage	kV	20	40	20	20	20	20	20
Dry lightning impulse withstand voltage	kV	60	100	60	60	60	60	60

### **Sediver contact**

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