



IEC 60519-4 EAF water-cooled cable

EAF Water-Cooled Cable

300–6,000 mm² (10–90 kA) water-cooled flexible secondary jumper cable for EAF & LF



IEC 60519-4 & JB/T 6314

300–6,000 mm² · 10–90 kA

EAF, Ladle & Submerged-Arc Furnaces

Application

Heavy-duty high-current water-cooled flexible feeder cable (EAF Water-Cooled Cable) built to IEC 60519-4 and JB/T 6314 with hollow concentric ETP/OFHC copper rope strands around a non-collapsing central core, forged/brazed copper terminal heads and.

Typical uses: AC & DC Steelmaking Electric Arc Furnaces (EAF), Secondary Metallurgy Ladle Furnaces (LF), Ferroalloy & Silicon Submerged Arc Furnaces (SAF), Electroslag Remelting (ESR) & Vacuum Arc Furnaces

Construction



Cross-section, not to scale

- 1 Hollow concentric rope of fine copper sub-cables
- 2 Central coolant support core / spiral
- 3 Forged & silver-brazed hollow copper terminal heads
- 4 Multi-ply aramid/polyester reinforced EPDM outer hose

Technical data

Typical values

Rated secondary operating voltage	Up to 1,200 V / 1,800 V AC or DC (3.5 kV AC dielectric test on outer hose)	Current rating & design current density	10 kA to 90 kA continuous (15 to 25 A/mm ² water-cooled copper density)
Terminal-to-rope contact resistance	≤ 3 to 8 μΩ per terminal head (temperature rise ΔT ≤ 25 K)	Cooling water inlet / outlet temperature	Inlet +5 °C to +35 °C · Outlet max. +55 °C (ΔT ≤ 15–20 K)
Required cooling water flow rate	18 to 160 L/min per cable at 0.4–0.6 MPa differential pressure	Hose working & proof water pressure	0.4–0.8 MPa working · 1.2 MPa routine hydrostatic proof test (30 min)
Minimum dynamic bending radius	10 × outer hose diameter (withstands > 150,000 furnace tilt/swing cycles)	Outer hose dielectric breakdown strength	≥ 3,500 V AC rms (50 Hz, 1 min) and IR ≥ 20 MΩ in dry/wet state
Radiant heat & molten slag protection	EPDM rubber cover + rubber bumper rings + optional +1,100 °C peak slag	Standards	IEC 60519-4 (Arc furnace safety), JB/T 6314 & EN 60204-1

Sizes

7 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Copper area	Max. voltage	Hose OD ≈ mm	Rated current kA	Water flow L/min	Min. bend R mm
Ladle Furnace (LF) & Small EAF Water-Cooled Cables (500–1,500 mm ²) 3 sizes						
☐ WC-EAF-500	500 mm ²	1.2 kV	56.0	12.5	22	560
☐ WC-EAF-1000	1,000 mm ²	1.2 kV	72.0	22.0	35	720
☐ WC-EAF-1500	1,500 mm ²	1.5 kV	84.0	30.0	48	840
UHP AC/DC Electric Arc Furnace & SAF Main Feeders (2,500–6,000 mm ²) 4 sizes						
☐ WC-EAF-2500	2,500 mm ²	1.5 kV	104.0	45.0	75	1,040
☐ WC-EAF-3500	3,500 mm ²	1.5 kV	120.0	58.0	100	1,200
☐ WC-EAF-4500	4,500 mm ²	1.8 kV	136.0	70.0	125	1,360
☐ WC-EAF-6000	6,000 mm ²	1.8 kV	155.0	88.0	160	1,550

– Supplied as complete factory-tested assemblies with flat-palm or cylindrical clamp copper terminals and BSP/NPT/flanged water ports.

Standards and approvals

- ✓ IEC 60519-4 & JB/T 6314 Arc Furnace Certified
- ✓ 100 % 1.2 MPa Hydrostatic & Micro-Ohm Tested
- ✓ CE & ISO 9001 Heavy-Current QA

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/electric-arc-furnace-eaf-high-current-water-cooled-flexible-feeder-cable



Typical values for this cable type, based on IEC 60519-4 / JB/T 6314 / EN 50525. Values for your order are confirmed in the quotation. Subject to change without notice.
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