EN 13605 OFC-HC Hollow Water-Cooled Conductor

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Oxygen-Free Copper Hollow Water-Cooled Magnet Conductor Profile

EN 13605 / ASTM B152 (Cu-OFE CW009A) · Up to 10 kV · −40…+150 °C industrial OFC-HC



EN 13605 / ASTM B152 (Cu-OFE CW009A) | Up to 10 kV | −40…+150 °C

Application

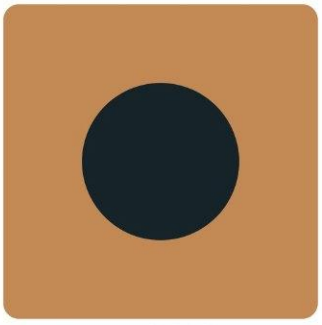
Oxygen-Free Copper (Cu-OFE) Hollow Water-Cooled Magnet Conductor Profile (OFC-HC Hollow Water-Cooled Conductor) engineered to EN 13605 / ASTM B152 (Cu-OFE CW009A) for Up to 10 kV service across −40…+150 °C, featuring internal deionized-water cooling

Typical uses: Metallurgical, Glass & Ceramic Furnaces, High-Temperature Thermal Processing, Heavy Industrial Kilns & Ovens, Power Generation & Petrochemical Heaters, Automated Assembly & Packaging Lines

Construction



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Cross-section, not to scale

1	Internal deionized-water cooling channel	EN 13605 / ASTM B152 (Cu-OFE CW009A)
2	Oxygen-Free Electronic Copper (Cu-OFE CW009A) body	EN 13605 / ASTM B152 (Cu-OFE CW009A)

Technical data

Typical values

Rated voltage / duty	Up to 10 kV (EN 13605 / ASTM B152 (Cu-OFE CW009A))	**Conductor construction**	Internal deionized-water cooling channel — Seamless precision-extruded circular or rectangular coolant bore for direct heat removal
Primary insulation / dielectric	Oxygen-Free Electronic Copper (Cu-OFE CW009A) body — ≥ 99.99 % pure Cu-OFE (≥ 101 % IACS) hollow magnet conductor profile per EN 13605	**Continuous operating temperature**	−40…+150 °C per EN 13605 / ASTM B152 (Cu-OFE CW009A)
Short-circuit / peak thermal limit	+160 °C to +250 °C (5 s adiabatic limit depending on dielectric class)	**Minimum installation temperature**	−5 °C (thermoplastic) / −25 °C (cross-linked or elastomer) / −40 °C (metallic)
Outer protection / covering	Oxygen-Free Electronic Copper (Cu-OFE CW009A) body — ≥ 99.99 % pure Cu-OFE (≥ 101 % IACS) hollow magnet conductor profile per EN 13605	**Minimum bending radius**	8 × OD (installed / static routing)
Layer count & geometry	2 concentric/structural layers verified by cross-section inspection	**Environmental & chemical durability**	Engineered for industrial service in accordance with EN 13605 / ASTM B152 (Cu-OFE CW009A)
RoHS & REACH compliance	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant	**Standards**	EN 13605 / ASTM B152 (Cu-OFE CW009A)

Sizes

10 standard constructions

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

Order designation	Nominal conductor	Max. overall Ø mm	Weight ≈ kg/km	Min. mandrel R mm
OFC-HC Hollow Water-Cooled Conductor Standard Precision Winding Schedule (−40…+150 °C) 10 sizes				
☐ OFC-HC Hollow Water-Cooled Conductor Ø 0.25 mm	Ø 0.25 mm (AWG 30)	0.29	0.45	2
☐ OFC-HC Hollow Water-Cooled Conductor Ø 0.40 mm	Ø 0.40 mm (AWG 26)	0.45	1.14	2
☐ OFC-HC Hollow Water-Cooled Conductor Ø 0.63 mm	Ø 0.63 mm (AWG 22)	0.69	2.82	3
☐ OFC-HC Hollow Water-Cooled Conductor Ø 0.80 mm	Ø 0.80 mm (AWG 20)	0.87	4.54	4
☐ OFC-HC Hollow Water-Cooled Conductor Ø 1.00 mm	Ø 1.00 mm (AWG 18)	1.08	7.08	5
☐ OFC-HC Hollow Water-Cooled Conductor Ø 1.25 mm	Ø 1.25 mm (AWG 16)	1.34	11.00	6
☐ OFC-HC Hollow Water-Cooled Conductor Ø 1.60 mm	Ø 1.60 mm (AWG 14)	1.70	18.10	8
☐ OFC-HC Hollow Water-Cooled Conductor Ø 2.00 mm	Ø 2.00 mm (AWG 12)	2.11	28.20	10
☐ OFC-HC Hollow Water-Cooled Conductor Ø 2.50 mm	Ø 2.50 mm (AWG 10)	2.62	44.10	13
☐ OFC-HC Hollow Water-Cooled Conductor Ø 3.15 mm	Ø 3.15 mm (AWG 8)	3.28	70.00	16

– Supplied on precision PT25 / PT45 / PT90 / Din 355 conical and cylindrical winding spools per EN 13605 / ASTM B152 (Cu-OFE CW009A).

DC resistance & dielectric breakdown voltage

5 sizes

Conductor size	Nominal R_{20} Ω/km	Min. breakdown VAC	Thermal class
Ø 0.25 mm (0.049 mm²)	351.00	4,200	−40…+150 °C
Ø 0.63 mm (0.312 mm²)	55.30	5,000	−40…+150 °C
Ø 1.00 mm (0.785 mm²)	21.90	5,500	−40…+150 °C
Ø 1.60 mm (2.011 mm²)	8.57	5,800	−40…+150 °C
Ø 2.50 mm (4.909 mm²)	3.51	6,000	−40…+150 °C

– Tested in accordance with IEC 60851-5 / EN 13605 / ASTM B152 (Cu-OFE CW009A) routine dielectric and elongation test methods.

Standards and approvals

- EN 13605 Compliant
- EN 10204 3.1 Routine Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

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/ofc-hc-hollow-water-cooled-copper-magnet-conductor

Typical values for this cable type, based on EN 13605 / ASTM B152 (Cu-OFE CW009A). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.