



EN 50525-2-81 & Low-Reactance Resistance Welding Cables

Water-Cooled Kickless Welding Cable

600 V low-reactance interleaved 3+3 sector water-cooled resistance spot-welding gun jumper



600-1000 V ISO 5828 / RWMA

3+3 Interleaved Low-Reactance

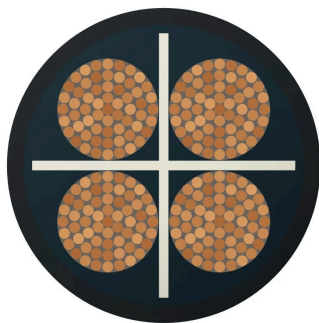
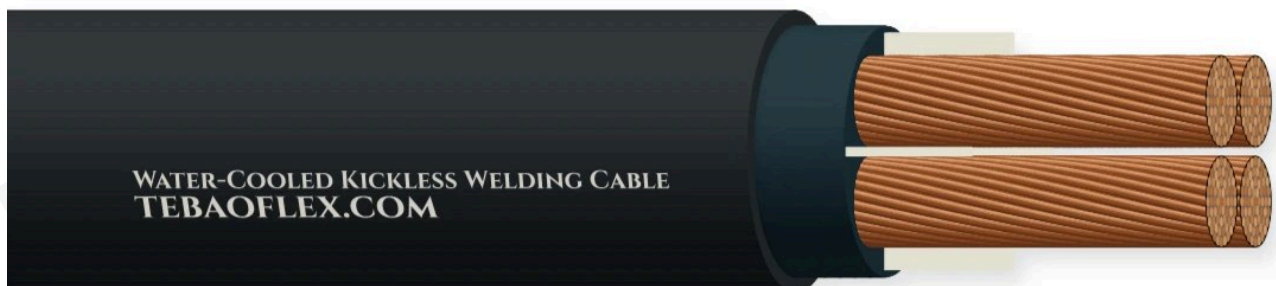
200 MCM to 600 MCM Water-Cooled

Application

Water-Cooled Kickless Welding Cable is a low-inductance secondary power jumper engineered to ISO 5828, RWMA and AWS J1.1 for high-current (8,000 A to 25,000 A) automotive body-in-white portable and robotic resistance spot-welding guns. Six (3+3) pie-shaped rop

Typical uses: Automotive body-in-white spot welding, Robotic C-gun & X-gun dress packs, Overhead manual portable spot guns, Appliance & sheet-metal resistance weld, MFDC & AC weld transformer jumpers

Construction



Cross-section, not to scale

1	3 + 3 interleaved sector copper ropes	ISO 5828
2	6-web Star EPDM polarity separator	ISO 5828
3	High-tenacity aramid/polyester reinforcement	ISO 5828
4	Non-conductive EPDM outer coolant hose	ISO 5828

Technical data

Typical values

Rated insulation voltage	600 V / 1,000 V rms between positive and negative sectors	Dielectric withstand test	2.5 kV AC rms dry / 1.5 kV AC wet between polarities
Inductive reactance @ 60 Hz	≈30–40 $\mu\Omega/\text{m}$ (up to 80 % lower voltage drop than twin single-core cables)	Required cooling water flow rate	3.8 to 7.5 L/min (1.0 to 2.0 GPM) at $\leq +30^\circ\text{C}$ inlet water temperature
Max. coolant outlet temperature	+60 $^\circ\text{C}$ (+85 $^\circ\text{C}$ hose compound rating)	Coolant working / burst pressure	6.0 bar (90 psi) working · ≥ 17 bar (250 psi) burst pressure
Minimum bending radius	5 × outer hose diameter	Electromagnetic force cancellation	Alternating 3+3 sector geometry neutralizes repulsive Lorentz kick during 10–25 kA weld pulses
Outer hose resistance	Non-conductive EPDM resists molten weld spatter, ozone, glycol coolant & shop oils	Standards	ISO 5828, RWMA Bulletin 16 & AWS J1.1

Sizes

8 standard constructions

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

Designation	Size per Polarity	Total Cu / Water Flow	Nom. OD mm	Copper kg/km	Total mass $\approx$ kg/km	Min. bend R mm
Water-Cooled Kickless Welding Cable size schedule 8 sizes						
☐ Kickless 200 MCM	200 MCM (100 mm ²)	2×100 mm ² · 3.8 L/m	28.50	1,920.0	2,650.0	142.5
☐ Kickless 250 MCM	250 MCM (125 mm ²)	2×125 mm ² · 4.2 L/m	30.50	2,400.0	3,200.0	152.5
☐ Kickless 300 MCM	300 MCM (150 mm ²)	2×150 mm ² · 4.5 L/m	33.00	2,880.0	3,780.0	165.0
☐ Kickless 350 MCM	350 MCM (185 mm ²)	2×185 mm ² · 5.0 L/m	35.00	3,550.0	4,550.0	175.0
☐ Kickless 400 MCM	400 MCM (200 mm ²)	2×200 mm ² · 5.7 L/m	38.00	3,840.0	4,950.0	190.0
☐ Kickless 450 MCM	450 MCM (225 mm ²)	2×225 mm ² · 6.0 L/m	39.50	4,320.0	5,500.0	197.5
☐ Kickless 500 MCM	500 MCM (250 mm ²)	2×250 mm ² · 6.5 L/m	41.50	4,800.0	6,100.0	207.5
☐ Kickless 600 MCM	600 MCM (300 mm ²)	2×300 mm ² · 7.5 L/m	44.50	5,760.0	7,250.0	222.5

– Dimensions and tolerances conform to ISO 5828 / RWMA / AWS J1.1.

Electrical data

8 sizes

Size per Polarity	Max. DC R @ 20 $^\circ\text{C}$ Ω/km	Current in air A	Installed / duty A
200 MCM (100 mm ²)	0.175	4,500	3,600
250 MCM (125 mm ²)	0.140	5,500	4,400
300 MCM (150 mm ²)	0.116	6,500	5,200
350 MCM (185 mm ²)	0.098	7,500	6,000
400 MCM (200 mm ²)	0.086	8,500	6,800
450 MCM (225 mm ²)	0.077	9,500	7,600
500 MCM (250 mm ²)	0.069	10,500	8,400
600 MCM (300 mm ²)	0.058	12,500	10,000

– Reference ampacities at +30 $^\circ\text{C}$ ambient; apply duty-cycle or grouping correction factors per standard.

Standards and approvals

- ✓ ISO 5828 Secondary Welding Cables
- ✓ RWMA (Resistance Welding Manufacturing Alliance)
- ✓ AWS J1.1 Compliant
- ✓ RoHS 3 & REACH Compliant

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/water-cooled-kickless-welding-cable



Typical values for this cable type, based on ISO 5828 / RWMA / AWS J1.1. Values for your order are confirmed in the quotation. Subject to change without notice.
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