



Deep-water 300 kN armoured towed-array cable

# Type DG Q-12-RAW-300

## Armoured Deep-Water Marine Geophysical &

12-quad 300 kN contra-helically armoured deep-water geophysical towed-array cable



Type DG Q-12-RAW-300

300 kN MBL

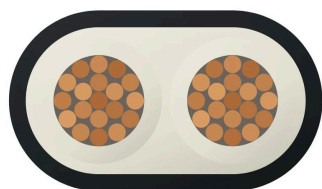
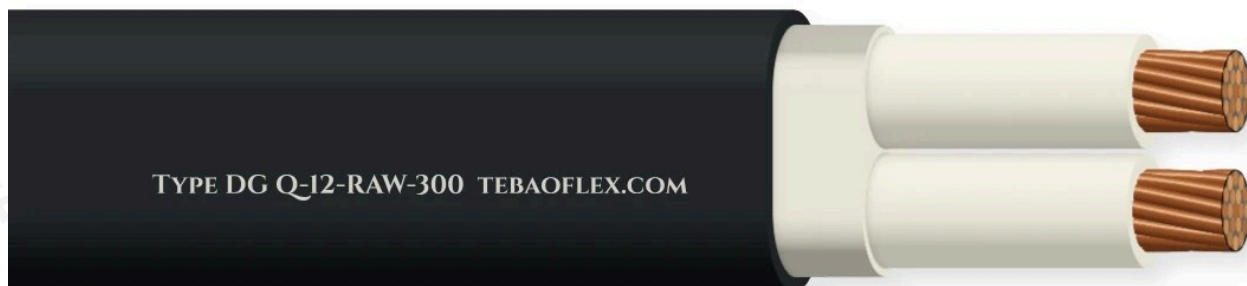
6,000 m Deep-Tow

### Application

Type DG Q-12-RAW-300 deep-water marine geophysical towed-array cable combining 12 individually screened low-capacitance star-quads, optional 316L FIMT optical core, and 300 kN contra-helical GIPS steel wire armour to 6,000 m depth.

**Typical uses:** Abyssal Deep-Tow Geophysics, Towed Acoustic & Hydrophone Arrays, Continental Margin Crustal Survey, Deep-Ocean Mineral Exploration, Subsea UXO & Pipeline Corridor Tow

### Construction



Cross-section, not to scale

- 1 12 precision star-quad conductors
- 2 High-pressure low-loss PE dielectric
- 3 Individual quad foil + overall braid
- 4 Pressure-compensated Hytrel/PE belt
- 5 Inner helical GIPS wire armour
- 6 Outer contra-helical RAW-300 wire armour

## Technical data

Typical values

|                              |                                               |
|------------------------------|-----------------------------------------------|
| Quad differential impedance  | 100 ± 5 Ω (or 120 ± 6 Ω) at 1 MHz             |
| Operating voltage rating     | 1,000 V AC/DC (quads) · up to 2,500 V (power) |
| AC dielectric test           | 3.5 kV AC rms for 5 min                       |
| Deck traction winch range    | –35 °C to +75 °C                              |
| Reference breaking load      | 300 kN (Q-12-RAW-300) · 100–420 kN series     |
| Design water depth           | 6,000 m (60 MPa hydrostatic)                  |
| Torsional rotation           | ≤ ±1.5°/m at 50 % MBL                         |
| Seabed rock & slope abrasion | Heavy outer RAW GIPS plow-steel wires         |
| Standards                    | MIL-DTL-24643 / ISO 13628-5                   |

|                               |                                                   |
|-------------------------------|---------------------------------------------------|
| Mutual capacitance            | ≤ 45 pF/m (quad pair)                             |
| Quad-to-quad NEXT             | ≥ 82 dB at 1 MHz                                  |
| Deepwater operating range     | –5 °C to +60 °C                                   |
| Max. conductor temperature    | +80 °C                                            |
| Safe working load (SWL)       | 75 kN (Q-12-RAW-300 at 4:1 factor)                |
| Min. bend radius (under load) | 20 × OD over traction winch & A-frame sheave      |
| Hydrostatic water blocking    | 100 % void-filled core and armour interstices     |
| Corrosion resistance          | Class A hot-dip galvanised GIPS + inhibitor flush |

## Sizes

12 standard constructions

Tick the sizes you need and send this page to [info@tebaoflex.com](mailto:info@tebaoflex.com) or WhatsApp +86 185 9591 3361.

| Order designation                                                                  | Star-Quads + Power / Optical Core                      | Nominal OD<br>mm | Weight in air<br>kg/km | Weight in sea<br>kg/km | SWL<br>kN | MBL<br>kN | Min. sheave R<br>mm |
|------------------------------------------------------------------------------------|--------------------------------------------------------|------------------|------------------------|------------------------|-----------|-----------|---------------------|
| Type DG Multi-Quad Armoured Towed Array Cables (100–300 kN) 7 sizes                |                                                        |                  |                        |                        |           |           |                     |
| <input type="checkbox"/> Type DG Q-04-RAW-100                                      | 4 × 4×0.5 mm <sup>2</sup> Star-Quads (16C)             | 11.4             | 510                    | 405                    | 25        | 100       | 228                 |
| <input type="checkbox"/> Type DG Q-06-RAW-150                                      | 6 × 4×0.5 mm <sup>2</sup> Star-Quads (24C)             | 13.8             | 745                    | 590                    | 38        | 150       | 276                 |
| <input type="checkbox"/> Type DG Q-08-RAW-200                                      | 8 × 4×0.75 mm <sup>2</sup> Star-Quads (32C)            | 16.5             | 1,080                  | 855                    | 50        | 200       | 330                 |
| <input type="checkbox"/> Type DG Q-10-RAW-250                                      | 10 × 4×0.75 mm <sup>2</sup> Star-Quads (40C)           | 18.6             | 1,390                  | 1,105                  | 62        | 250       | 372                 |
| <input type="checkbox"/> Type DG Q-12-RAW-300                                      | 12 × 4×0.75 mm <sup>2</sup> Star-Quads (48C)           | 20.8             | 1,760                  | 1,405                  | 75        | 300       | 416                 |
| <input type="checkbox"/> Type DG Q-12-1.0-RAW-300                                  | 12 × 4×1.0 mm <sup>2</sup> Star-Quads (48C Heavy)      | 22.0             | 1,940                  | 1,545                  | 75        | 300       | 440                 |
| <input type="checkbox"/> Type DG Q-16-RAW-320                                      | 16 × 4×0.5 mm <sup>2</sup> Star-Quads (64C)            | 21.6             | 1,850                  | 1,475                  | 80        | 320       | 432                 |
| Type DG Electro-Optical FIMT & Ultra-Heavy Towed Array Cables (300–420 kN) 5 sizes |                                                        |                  |                        |                        |           |           |                     |
| <input type="checkbox"/> Type DG Q-12-RAW-300-FO                                   | 12 × 4×0.75 mm <sup>2</sup> Quads + 12FO 316L FIMT     | 21.4             | 1,820                  | 1,450                  | 75        | 300       | 428                 |
| <input type="checkbox"/> Type DG Q-12-RAW-300-JK                                   | 12 × 4×0.75 mm <sup>2</sup> Quads + HDPE Outer Jacket  | 24.0             | 1,930                  | 1,445                  | 75        | 300       | 480                 |
| <input type="checkbox"/> Type DG Q-12-3P-RAW-350                                   | 12 × 4×0.75 Quads + 3×4.0 mm <sup>2</sup> Power + 12FO | 23.8             | 2,240                  | 1,790                  | 88        | 350       | 476                 |
| <input type="checkbox"/> Type DG Q-18-RAW-380-FO                                   | 18 × 4×0.75 mm <sup>2</sup> Quads + 12FO 316L FIMT     | 25.2             | 2,510                  | 2,005                  | 95        | 380       | 504                 |
| <input type="checkbox"/> Type DG Q-24-RAW-420-FO                                   | 24 × 4×0.5 mm <sup>2</sup> Quads + 3×4.0 + 18FO FIMT   | 27.4             | 2,920                  | 2,330                  | 105       | 420       | 548                 |

– Designation breakdown: Q-12 = 12 screened star-quads (24 balanced pairs / 48 wires); RAW-300 = Round Armour Wire rated to 300 kN minimum breaking load.

## Standards and approvals

- ✓ MIL-DTL-24643 / ISO 13628-5 Deep-Tow Compliant
- ✓ 300 kN RAW-Grade Contra-Helical Armour Certified

## 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/type-dg-q-12-raw-300-armoured-deep-water-marine-geophysical-towed-array-cable](https://tebaoflex.com/cables/type-dg-q-12-raw-300-armoured-deep-water-marine-geophysical-towed-array-cable)



Typical values for this cable type, based on MIL-DTL-24643 / ISO 13628-5 / IEC 60794-3. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.