

TKF Catalogue



Offshore



www.tkf.eu

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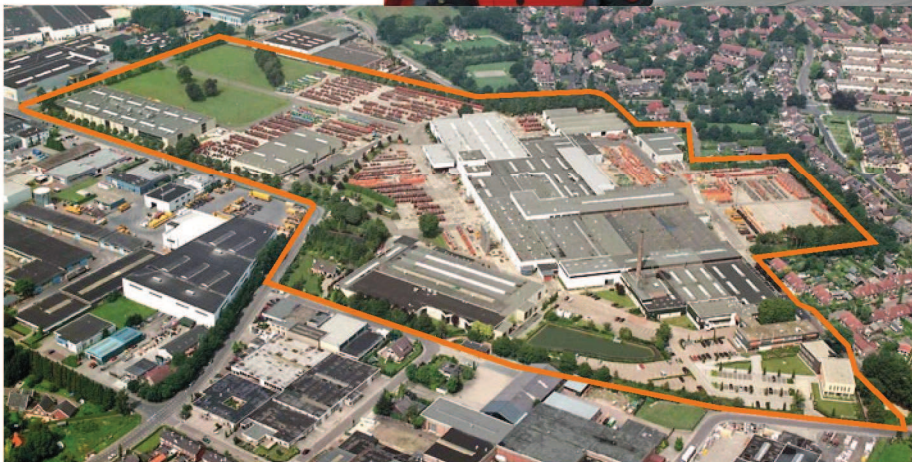
About TKF

Founded in 1930, TKF has developed from a local Dutch cable producer to a cable technology leader servicing customers all over the world. As a member of TKH Group NV, a Dutch-based international group of technology-powered companies, TKF has access to various international marketing, purchasing, sales and research groups with diverse specialisms.

TKF has dedicated itself to delivering innovative Telecom, Building and Industrial Solutions that match specific customer needs. A good strategy, looking at the long-term relationships between TKF and a growing number of companies. Professionals who value the continuous pursuit of a better understanding between suppliers, customers, contractors, installers and end-users.

TKF naturally takes its corporate social responsibility into account. Innovation, Growth and Responsibility are key factors for TKF.

Choose TKF - Choose quality!



Interested in more information about TKF and our wide range of products and services? Please visit our website www.tkf.nl for more information.

Symbols



Rodent protected

The cable is designed to give some protection against rodents.



Radial water blocking

The outer sheath of the cable is designed to prevent water entering into the cable. The cable is provided with a moisture barrier that prevents radial ingress of water.



Fire resistant

The cable has an improved operational reliability in fire situations.



Flame retardant

The outer sheath of the cable is made of a flame-retardant and self-extinguishing material.



Compact design

Smaller cable diameter due to the application of sector-shaped conductors.



Flexible cables

Cables with reduced bending stiffness.



Chemical resistance

Cables with improved resistance against aggressive chemicals.



Medium and High Voltage cables

Cables designed for the transportation of tensions of 6/10 kV up to 38/66 kV.



Data cables

Suitable for the transmission of optical or electric high frequency signal.



Copper telecommunication cables

Cables with symmetrically stranded elements for the transmission of telecommunication signals. Unshielded, shielded or multiple shielded.



Rodent resistant

The cable is rodent proof by means of a metal barrier.



Longitudinal water blocking

Due to the cable construction and the materials used, water inside the core cannot spread through the cable longitudinally.



Low smoke-halogen free

Reduced emissions of fume and toxic gas in case of fire.



Copper braid

Cables with (tinned) copper braid for improved shielding against electromagnetic influences and mechanical protection.



EMC/EMI

Excellent EMC/EMI properties.



Temperature range

Suitable for wide temperature range.



Marine and Offshore cables

Halogen free and flame retardant cables for application on board ships and offshore platforms.



Signal cables

Cables with numbered cores designed for the transport of signals between processes and control.



Engine cables

Three core cables for the electric supply of engines.



Instrumentation cables

Cables for instrumentation and control systems for various analogue and/or digital signal transmission.



Offshore cables

Halogen free and flame retardant cables for application on board offshore platforms.

Contents

Offshore

Low voltage power cables

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Communication cables

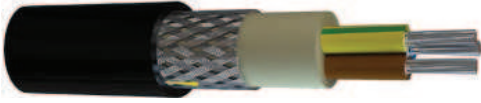
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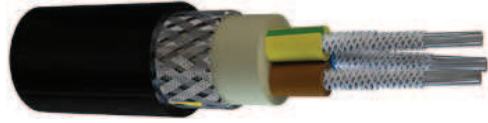
Offshore Cables

High-end solutions for all offshore cable applications

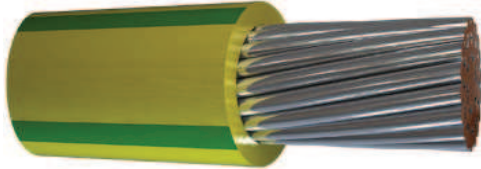
O-Line+ RFOU P1/P8
Low voltage power cable



O-Line+ BFOU P5/P12
Low voltage power cable



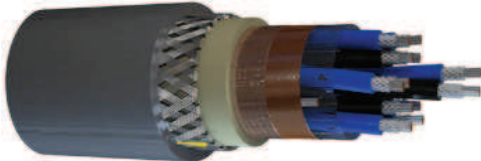
O-Line+ UX P15
Low voltage power cable



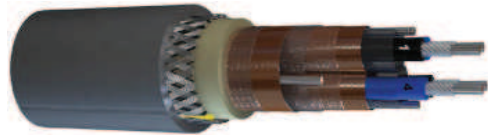
O-Line+ RFOU (i) S1/S5
Communication cable



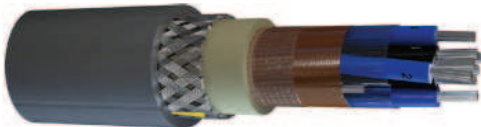
O-Line+ RFOU (c) S2/S6
Communication cable



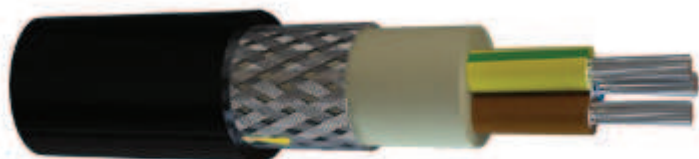
O-Line+ BFOU (i) S3/S7
Communication cable



O-Line+ BFOU (c) S4/S8
Communication cable



O-Line+ RFOU P1/P8 0,6/1 kV



Halogen Free & MUD-resistant low voltage cables for fixed installation on offshore topsides, in safe & EX-areas. For power, control and lighting applications. Design standards: IEC-60092-353 and NEK TS 606-2009. With tinned copper wire braid for EMI and mechanical protection, with sufficient cross section to be used as Protective Earth according to IEC 60092-352. Cores sizes >25mm² have extra flexible Class 5/6 conductors with resistance Class 2, for improved flexibility. Different sheath colours on request.

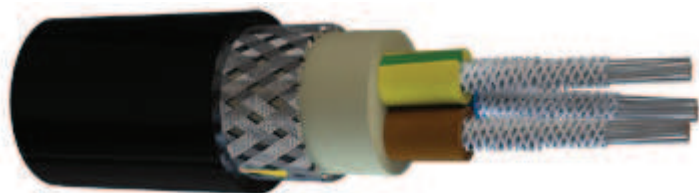
| Characteristics | Properties | Unit |
|---------------------------------|-------------------------------------|------|
| Product group | Shipboard low voltage cable | |
| Series | Offshore cable | |
| Type | O-Line+ RFOU P1/P8 0,6/1 kV | |
| Standardization | NEK TS 606 | |
| Conductor material | Cu, tinned | |
| Shape of conductor | Round | |
| Core insulation | Rubber (HEPR) | |
| Conductor category | Article dependant, see detail sheet | |
| Core identification | HD 308 S2 | |
| Construction outer shield | Tinned copper braiding | |
| Material outer sheath | SHF2 MUD | |
| Colour outer sheath | Article dependant, see detail sheet | |
| Flame retardant | IEC 60332-1 / IEC 60332-3-22 Cat. A | |
| Halogen free | IEC 60754-1/2 | |
| Nominal voltage U ₀ | 0.6 | kV |
| Nominal voltage U | 1 | kV |
| Maximum conductor temperature | 90 | °C |
| Operating temperature, flexible | -20 / 70 | °C |
| Operating temperature, fixed | -40 / 70 | °C |
| Specification | See appendix | |

| Partnumber | Construction | Nominal earthscreen diameter (mm ²) | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|-------------------------|---|--------------------|--|-----------------------------|------------------|
| 35001 | 2 x 1 mm ² | 4 | 207 | 69 | 11,5 | 30 |
| 35002 | 3 x 1 mm ² | 4 | 225 | 71 | 11,9 | 45 |
| 35003 | 4 x 1 mm ² | 4 | 251 | 76 | 12,6 | 60 |
| 35004 | 5 x 1 mm ² | 6 | 319 | 83 | 13,8 | 75 |
| 35026 | 3 G 1,5 mm ² | - | 255 | 75 | 12,5 | 68 |
| 35027 | 4 G 1,5 mm ² | - | 321 | 82 | 13,6 | 90 |
| 35028 | 5 G 1,5 mm ² | - | 364 | 88 | 14,7 | 113 |
| 35029 | 7 G 1,5 mm ² | - | 412 | 94 | 15,7 | 158 |
| 35010 | 1 x 1,5 mm ² | 2,5 | 117 | 53 | 8,9 | 23 |
| 35011 | 2 x 1,5 mm ² | 4 | 258 | 72 | 12 | 45 |
| 35012 | 3 x 1,5 mm ² | 4 | 255 | 75 | 12,5 | 68 |
| 35013 | 4 x 1,5 mm ² | 6 | 321 | 82 | 13,6 | 90 |
| 35014 | 5 x 1,5 mm ² | 6 | 364 | 88 | 14,7 | 113 |

| Partnumber | Construction | Nominal earthscreen diameter (mm ²) | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------------------|---|--------------------|--|-----------------------------|------------------|
| 35015 | 6 x 1,5 mm ² | 10 | 415 | 94 | 15,7 | 135 |
| 35016 | 7 x 1,5 mm ² | 10 | 412 | 94 | 15,7 | 158 |
| 35017 | 8 x 1,5 mm ² | 10 | 483 | 102 | 17 | 180 |
| 35018 | 10 x 1,5 mm ² | 10 | 567 | 113 | 18,8 | 225 |
| 35019 | 12 x 1,5 mm ² | 10 | 602 | 116 | 19,4 | 270 |
| 35020 | 16 x 1,5 mm ² | 10 | 725 | 128 | 21,3 | 360 |
| 35021 | 19 x 1,5 mm ² | 10 | 804 | 134 | 22,4 | 428 |
| 35022 | 24 x 1,5 mm ² | 10 | 988 | 149 | 24,9 | 540 |
| 35023 | 27 x 1,5 mm ² | 10 | 1049 | 155 | 25,9 | 608 |
| 35024 | 30 x 1,5 mm ² | 10 | 1124 | 161 | 26,9 | 675 |
| 35025 | 37 x 1,5 mm ² | 10 | 1318 | 175 | 29,2 | 833 |
| 35046 | 3 G 2,5 mm ² | - | 338 | 83 | 13,8 | 113 |
| 35196 | 3 G 2,5 mm ² | - | 336 | 82 | 13,7 | 113 |
| 35047 | 4 G 2,5 mm ² | - | 384 | 89 | 14,9 | 150 |
| 35048 | 5 G 2,5 mm ² | - | 440 | 95 | 15,9 | 188 |
| 35197 | 5 G 2,5 mm ² | - | 435 | 94 | 15,7 | 188 |
| 35049 | 7 G 2,5 mm ² | - | 511 | 103 | 17,2 | 263 |
| 35030 | 1 x 2,5 mm ² | 4 | 134 | 56 | 9,4 | 38 |
| 35031 | 2 x 2,5 mm ² | 4 | 273 | 77 | 12,9 | 75 |
| 35032 | 3 x 2,5 mm ² | 6 | 338 | 83 | 13,8 | 113 |
| 35033 | 4 x 2,5 mm ² | 6 | 384 | 89 | 14,9 | 150 |
| 35034 | 5 x 2,5 mm ² | 10 | 440 | 95 | 15,9 | 188 |
| 35035 | 6 x 2,5 mm ² | 10 | 511 | 103 | 17,2 | 225 |
| 35036 | 7 x 2,5 mm ² | 10 | 511 | 103 | 17,2 | 263 |
| 35037 | 8 x 2,5 mm ² | 10 | 597 | 112 | 18,6 | 300 |
| 35038 | 10 x 2,5 mm ² | 10 | 723 | 125 | 20,8 | 375 |
| 35039 | 12 x 2,5 mm ² | 10 | 752 | 128 | 21,3 | 450 |
| 35040 | 16 x 2,5 mm ² | 10 | 928 | 142 | 23,7 | 600 |
| 35041 | 19 x 2,5 mm ² | 10 | 1024 | 148 | 24,7 | 713 |
| 35042 | 24 x 2,5 mm ² | 10 | 1280 | 166 | 27,7 | 900 |
| 35043 | 27 x 2,5 mm ² | 10 | 1364 | 173 | 28,9 | 1013 |
| 35044 | 30 x 2,5 mm ² | 10 | 1466 | 180 | 30 | 1125 |
| 35045 | 37 x 2,5 mm ² | 16 | 1733 | 196 | 32,7 | 1388 |
| 35055 | 3 G 4 mm ² | - | 427 | 91 | 15,2 | 180 |
| 35056 | 4 G 4 mm ² | - | 491 | 97 | 16,2 | 240 |
| 35057 | 5 G 4 mm ² | - | 568 | 106 | 17,6 | 300 |
| 35050 | 1 x 4 mm ² | 4 | 155 | 59 | 9,9 | 60 |
| 35051 | 2 x 4 mm ² | 6 | 377 | 88 | 14,6 | 120 |
| 35052 | 3 x 4 mm ² | 10 | 427 | 91 | 15,2 | 180 |
| 35053 | 4 x 4 mm ² | 10 | 491 | 97 | 16,2 | 240 |
| 35054 | 5 x 4 mm ² | 10 | 568 | 106 | 17,6 | 300 |
| 35065 | 3 G 6 mm ² | - | 521 | 98 | 16,4 | 270 |
| 35066 | 4 G 6 mm ² | - | 617 | 107 | 17,8 | 360 |
| 35067 | 5 G 6 mm ² | - | 706 | 115 | 19,1 | 450 |
| 35060 | 1 x 6 mm ² | 4 | 184 | 63 | 10,5 | 90 |
| 35061 | 2 x 6 mm ² | 10 | 458 | 95 | 15,8 | 180 |
| 35062 | 3 x 6 mm ² | 10 | 521 | 98 | 16,4 | 270 |
| 35063 | 4 x 6 mm ² | 10 | 617 | 107 | 17,8 | 360 |
| 35064 | 5 x 6 mm ² | 10 | 709 | 115 | 19,1 | 450 |

| Partnumber | Construction | Nominal earthscreen diameter (mm ²) | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|------------------------|---|--------------------|--|-----------------------------|------------------|
| 35075 | 3 G 10 mm ² | - | 716 | 114 | 19 | 720 |
| 35076 | 4 G 10 mm ² | - | 853 | 124 | 20,6 | 960 |
| 35077 | 5 G 10 mm ² | - | 978 | 133 | 22,2 | 1200 |
| 35070 | 1 x 10 mm ² | 4 | 243 | 71 | 11,8 | 240 |
| 35071 | 2 x 10 mm ² | 10 | 615 | 109 | 18,1 | 480 |
| 35072 | 3 x 10 mm ² | 10 | 716 | 114 | 19 | 720 |
| 35073 | 4 x 10 mm ² | 10 | 853 | 124 | 20,6 | 960 |
| 35074 | 5 x 10 mm ² | 10 | 978 | 133 | 22,2 | 1200 |
| 35085 | 3 G 16 mm ² | - | 972 | 125 | 20,9 | 720 |
| 35086 | 4 G 16 mm ² | - | 1176 | 136 | 22,7 | 960 |
| 35087 | 5 G 16 mm ² | - | 1404 | 148 | 24,6 | 1200 |
| 35080 | 1 x 16 mm ² | 4 | 317 | 76 | 12,6 | 240 |
| 35081 | 2 x 16 mm ² | 16 | 859 | 119 | 19,9 | 480 |
| 35082 | 3 x 16 mm ² | 16 | 1010 | 125 | 20,9 | 720 |
| 35083 | 4 x 16 mm ² | 16 | 1202 | 136 | 22,7 | 960 |
| 35084 | 5 x 16 mm ² | 16 | 1429 | 148 | 24,6 | 1200 |
| 35095 | 3 G 25 mm ² | - | 1384 | 146 | 24,3 | 1125 |
| 35096 | 4 G 25 mm ² | - | 1689 | 159 | 26,5 | 1500 |
| 35097 | 5 G 25 mm ² | - | 2045 | 174 | 29 | 1875 |
| 35090 | 1 x 25 mm ² | 10 | 478 | 88 | 14,7 | 375 |
| 35091 | 2 x 25 mm ² | 16 | 1165 | 139 | 23,1 | 750 |
| 35092 | 3 x 25 mm ² | 16 | 1397 | 146 | 24,3 | 1125 |
| 35093 | 4 x 25 mm ² | 16 | 1689 | 159 | 26,5 | 1500 |
| 35094 | 5 x 25 mm ² | 16 | 2045 | 174 | 29 | 1875 |
| 35105 | 3 G 35 mm ² | - | 1777 | 169 | 28,2 | 1575 |
| 35107 | 5 G 35 mm ² | - | 2628 | 203 | 33,8 | 2625 |
| 35100 | 1 x 35 mm ² | 10 | 582 | 98 | 16,4 | 525 |
| 35101 | 2 x 35 mm ² | 16 | 1478 | 160 | 26,7 | 1050 |
| 35102 | 3 x 35 mm ² | 16 | 1777 | 169 | 28,2 | 1575 |
| 35103 | 4 x 35 mm ² | 16 | 2168 | 185 | 30,8 | 2100 |
| 35104 | 5 x 35 mm ² | 16 | 2628 | 203 | 33,8 | 2625 |
| 35115 | 3 G 50 mm ² | - | 2267 | 190 | 31,6 | 2250 |
| 35117 | 5 G 50 mm ² | - | 3533 | 235 | 39,2 | 3750 |
| 35110 | 1 x 50 mm ² | 10 | 724 | 106 | 17,7 | 750 |
| 35111 | 2 x 50 mm ² | 25 | 1987 | 181 | 30,1 | 1500 |
| 35112 | 3 x 50 mm ² | 25 | 2370 | 192 | 32 | 2250 |
| 35113 | 4 x 50 mm ² | 25 | 2854 | 210 | 35 | 3000 |
| 35114 | 5 x 50 mm ² | 25 | 3532 | 235 | 39,2 | 3750 |
| 35125 | 3 G 70 mm ² | - | 3256 | 224 | 37,4 | 3150 |
| 35120 | 1 x 70 mm ² | 10 | 964 | 121 | 20,2 | 1050 |
| 35121 | 2 x 70 mm ² | 35 | 2672 | 207 | 34,5 | 2100 |
| 35122 | 3 x 70 mm ² | 35 | 3315 | 224 | 37,4 | 3150 |
| 35123 | 4 x 70 mm ² | 35 | 4022 | 246 | 41 | 4200 |
| 35124 | 5 x 70 mm ² | 35 | 4834 | 271 | 45,2 | 5250 |
| 35135 | 3 G 95 mm ² | - | 4306 | 253 | 42,1 | 4275 |
| 35130 | 1 x 95 mm ² | 10 | 1248 | 130 | 21,7 | 1425 |
| 35131 | 2 x 95 mm ² | 50 | 3625 | 240 | 40 | 2850 |

| Partnumber | Construction | Nominal earthscreen diameter (mm ²) | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|-------------------------|---|--------------------|--|-----------------------------|------------------|
| 35132 | 3 x 95 mm ² | 50 | 4479 | 255 | 42,5 | 4275 |
| 35133 | 4 x 95 mm ² | 50 | 5484 | 281 | 46,8 | 5700 |
| 35134 | 5 x 95 mm ² | 50 | 6562 | 308 | 51,4 | 7125 |
| 35145 | 3 G 120 mm ² | - | 5188 | 276 | 46 | 5400 |
| 35140 | 1 x 120 mm ² | 10 | 1497 | 141 | 23,5 | 1800 |
| 35141 | 2 x 120 mm ² | 60 | 4470 | 262 | 43,7 | 3600 |
| 35142 | 3 x 120 mm ² | 60 | 5416 | 278 | 46,4 | 5400 |
| 35143 | 4 x 120 mm ² | 60 | 6654 | 306 | 51 | 7200 |
| 35144 | 5 x 120 mm ² | 60 | 7997 | 338 | 56,3 | 9000 |
| 35150 | 1 x 150 mm ² | 10 | 1800 | 154 | 25,6 | 2250 |
| 35151 | 2 x 150 mm ² | 70 | 5321 | 286 | 47,7 | 4500 |
| 35152 | 3 x 150 mm ² | 70 | 6521 | 304 | 50,7 | 6750 |
| 35153 | 4 x 150 mm ² | 70 | 8013 | 336 | 56 | 9000 |
| 35154 | 5 x 150 mm ² | 70 | 9619 | 371 | 61,8 | 11250 |
| 35160 | 1 x 185 mm ² | 16 | 2228 | 169 | 28,1 | 2775 |
| 35161 | 2 x 185 mm ² | 95 | 6888 | 331 | 55,2 | 5550 |
| 35162 | 3 x 185 mm ² | 95 | 8427 | 352 | 58,6 | 8325 |
| 35163 | 4 x 185 mm ² | 95 | 10362 | 387 | 64,5 | 11100 |
| 35164 | 5 x 185 mm ² | 95 | 12466 | 427 | 71,1 | 13875 |
| 35170 | 1 x 240 mm ² | 16 | 2773 | 184 | 30,7 | 3600 |
| 35171 | 2 x 240 mm ² | 120 | 8647 | 365 | 60,9 | 7200 |
| 35172 | 3 x 240 mm ² | 120 | 10596 | 388 | 64,6 | 10800 |
| 35173 | 4 x 240 mm ² | 120 | 13069 | 428 | 71,4 | 14400 |
| 35174 | 5 x 240 mm ² | 120 | 15739 | 472 | 78,7 | 18000 |
| 35180 | 1 x 300 mm ² | 16 | 3386 | 208 | 34,6 | 4500 |
| 35181 | 2 x 300 mm ² | 150 | 10601 | 409 | 68,2 | 9000 |
| 35182 | 3 x 300 mm ² | 150 | 13070 | 434 | 72,4 | 13500 |
| 35183 | 4 x 300 mm ² | 150 | 16169 | 479 | 79,8 | 18000 |
| 35184 | 5 x 300 mm ² | 150 | 19565 | 527 | 87,9 | 22500 |
| 35185 | 1 x 400 mm ² | 25 | 4466 | 235 | 39,1 | 6000 |
| 35190 | 1 x 630 mm ² | 35 | 6929 | 284 | 47,4 | 9450 |



Fire Resistant, Halogen Free & MUD-resistant low voltage cables for fixed installation on offshore topsides in safe & EX-areas.. For power, control and lighting applications. Design standards: IEC-60092-353 and NEK TS 606-2009. With tinned copper wire braid for EMI and mechanical protection, with sufficient cross section to be used as Protective Earth according to IEC 60092-352. Meets the fire resistant standards set both by the IEC 60331-21 and the more demanding 60331-1/2 (2009) specification for use in areas where circuit integrity in fire conditions is required. Cores sizes >25mm² have extra flexible Class 5/6 conductors with resistance Class 2, for improved flexibility. Different sheath colours on request.

| Characteristics | Properties | Unit |
|---|-------------------------------------|------|
| Product group | Shipboard low voltage cable | |
| Series | Offshore cable | |
| Type | O-Line+ BFOU P5/P12 0,6/1 kV | |
| Standardization | NEK TS 606 | |
| Conductor material | Cu, tinned | |
| Shape of conductor | Round | |
| Core insulation | Mica + HEPR | |
| Conductor category | Class 2 = stranded | |
| Core identification | HD 308 S2 | |
| Construction outer shield | Tinned copper braiding | |
| Material outer sheath | SHF2 MUD | |
| Colour outer sheath | Black | |
| Flame retardant | IEC 60332-1 / IEC 60332-3-22 Cat. A | |
| Halogen free | IEC 60754-1/2 | |
| Insulation integrity in accordance with IEC 60331 | Yes | |
| Nominal voltage U ₀ | 0.6 | kV |
| Nominal voltage U | 1 | kV |
| Maximum conductor temperature | 90 | °C |
| Operating temperature, flexible | -20 / 70 | °C |
| Operating temperature, fixed | -40 / 70 | °C |
| Specification | See appendix | |

| Partnumber | Construction | Nominal earthscreen diameter (mm ²) | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|-------------------------|---|--------------------|--|-----------------------------|------------------|
| 35201 | 2 x 1 mm ² | 6 | 304 | 82 | 13,6 | 30 |
| 35202 | 3 x 1 mm ² | 6 | 322 | 85 | 14,1 | 45 |
| 35203 | 4 x 1 mm ² | 10 | 366 | 91 | 15,2 | 60 |
| 35204 | 5 x 1 mm ² | 10 | 414 | 97 | 16,2 | 75 |
| 35226 | 3 G 1,5 mm ² | - | 350 | 88 | 14,7 | 68 |
| 35227 | 4 G 1,5 mm ² | - | 404 | 95 | 15,9 | 90 |
| 35228 | 5 G 1,5 mm ² | - | 459 | 102 | 17 | 113 |
| 35229 | 7 G 1,5 mm ² | - | 521 | 110 | 18,4 | 158 |
| 35210 | 1 x 1,5 mm ² | 4 | 135 | 59 | 9,8 | 23 |
| 35211 | 2 x 1,5 mm ² | 6 | 326 | 85 | 14,1 | 45 |

| Partnumber | Construction | Nominal earthscreen diameter (mm ²) | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------------------|---|--------------------|--|-----------------------------|------------------|
| 35212 | 3 x 1,5 mm ² | 6 | 350 | 88 | 14,7 | 68 |
| 35213 | 4 x 1,5 mm ² | 10 | 403 | 95 | 15,9 | 90 |
| 35214 | 5 x 1,5 mm ² | 10 | 459 | 102 | 17 | 113 |
| 35215 | 6 x 1,5 mm ² | 10 | 531 | 110 | 18,4 | 135 |
| 35216 | 7 x 1,5 mm ² | 10 | 521 | 110 | 18,4 | 158 |
| 35217 | 8 x 1,5 mm ² | 10 | 611 | 119 | 19,9 | 180 |
| 35218 | 10 x 1,5 mm ² | 10 | 728 | 134 | 22,3 | 225 |
| 35219 | 12 x 1,5 mm ² | 10 | 761 | 137 | 22,9 | 270 |
| 35220 | 16 x 1,5 mm ² | 10 | 933 | 153 | 25,5 | 360 |
| 35221 | 19 x 1,5 mm ² | 10 | 1019 | 160 | 26,6 | 428 |
| 35222 | 24 x 1,5 mm ² | 10 | 1266 | 180 | 30 | 540 |
| 35223 | 27 x 1,5 mm ² | 16 | 1349 | 188 | 31,3 | 608 |
| 35224 | 30 x 1,5 mm ² | 16 | 1448 | 196 | 32,6 | 675 |
| 35225 | 37 x 1,5 mm ² | 25 | 1877 | 220 | 36,7 | 833 |
| 35246 | 3 G 2,5 mm ² | - | 418 | 95 | 15,9 | 113 |
| 35247 | 4 G 2,5 mm ² | - | 470 | 101 | 16,9 | 150 |
| 35248 | 5 G 2,5 mm ² | - | 551 | 110 | 18,4 | 188 |
| 35249 | 7 G 2,5 mm ² | - | 620 | 118 | 19,7 | 263 |
| 35230 | 1 x 2,5 mm ² | 4 | 152 | 61 | 10,2 | 38 |
| 35231 | 2 x 2,5 mm ² | 10 | 383 | 91 | 15,2 | 75 |
| 35232 | 3 x 2,5 mm ² | 10 | 417 | 95 | 15,9 | 113 |
| 35233 | 4 x 2,5 mm ² | 10 | 470 | 101 | 16,9 | 150 |
| 35234 | 5 x 2,5 mm ² | 10 | 551 | 110 | 18,4 | 188 |
| 35235 | 6 x 2,5 mm ² | 10 | 626 | 118 | 19,7 | 225 |
| 35236 | 7 x 2,5 mm ² | 10 | 620 | 118 | 19,7 | 263 |
| 35237 | 8 x 2,5 mm ² | 10 | 746 | 130 | 21,6 | 300 |
| 35238 | 10 x 2,5 mm ² | 10 | 889 | 146 | 24,3 | 375 |
| 35239 | 12 x 2,5 mm ² | 10 | 937 | 150 | 25 | 450 |
| 35240 | 16 x 2,5 mm ² | 16 | 1157 | 167 | 27,9 | 600 |
| 35241 | 19 x 2,5 mm ² | 10 | 1273 | 175 | 29,1 | 713 |
| 35242 | 24 x 2,5 mm ² | 16 | 1589 | 197 | 32,8 | 900 |
| 35243 | 27 x 2,5 mm ² | 16 | 1700 | 206 | 34,4 | 1013 |
| 35244 | 30 x 2,5 mm ² | 25 | 2006 | 222 | 37 | 1125 |
| 35245 | 37 x 2,5 mm ² | 25 | 2368 | 241 | 40,2 | 1388 |
| 35255 | 3 G 4 mm ² | - | 501 | 102 | 17 | 180 |
| 35256 | 4 G 4 mm ² | - | 584 | 110 | 18,4 | 240 |
| 35257 | 5 G 4 mm ² | - | 674 | 119 | 19,8 | 300 |
| 35250 | 1 x 4 mm ² | 4 | 179 | 65 | 10,8 | 60 |
| 35251 | 2 x 4 mm ² | 10 | 456 | 98 | 16,3 | 120 |
| 35252 | 3 x 4 mm ² | 10 | 511 | 102 | 17 | 180 |
| 35253 | 4 x 4 mm ² | 10 | 583 | 110 | 18,4 | 240 |
| 35254 | 5 x 4 mm ² | 10 | 674 | 119 | 19,8 | 300 |
| 35265 | 3 G 6 mm ² | - | 610 | 110 | 18,4 | 270 |
| 35266 | 4 G 6 mm ² | - | 710 | 119 | 19,8 | 360 |
| 35267 | 5 G 6 mm ² | - | 844 | 130 | 21,6 | 450 |
| 35260 | 1 x 6 mm ² | 4 | 210 | 69 | 11,5 | 90 |
| 35261 | 2 x 6 mm ² | 10 | 530 | 104 | 17,4 | 180 |
| 35262 | 3 x 6 mm ² | 10 | 610 | 110 | 18,4 | 270 |
| 35263 | 4 x 6 mm ² | 10 | 710 | 119 | 19,8 | 360 |

| Partnumber | Construction | Nominal earthscreen diameter (mm ²) | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|------------------------|---|--------------------|--|-----------------------------|------------------|
| 35264 | 5 x 6 mm ² | 10 | 843 | 130 | 21,6 | 450 |
| 35275 | 3 G 10 mm ² | - | 823 | 126 | 21 | 450 |
| 35276 | 4 G 10 mm ² | - | 965 | 136 | 22,6 | 600 |
| 35277 | 5 G 10 mm ² | - | 1138 | 148 | 24,7 | 750 |
| 35270 | 1 x 10 mm ² | 4 | 266 | 76 | 12,6 | 150 |
| 35271 | 2 x 10 mm ² | 10 | 703 | 119 | 19,8 | 300 |
| 35272 | 3 x 10 mm ² | 10 | 823 | 126 | 21 | 450 |
| 35273 | 4 x 10 mm ² | 10 | 965 | 136 | 22,6 | 600 |
| 35274 | 5 x 10 mm ² | 10 | 1138 | 148 | 24,7 | 750 |
| 35285 | 3 G 16 mm ² | - | 1085 | 137 | 22,8 | 720 |
| 35286 | 4 G 16 mm ² | - | 1304 | 149 | 24,8 | 960 |
| 35287 | 5 G 16 mm ² | - | 1568 | 163 | 27,1 | 1200 |
| 35280 | 1 x 16 mm ² | 6 | 378 | 83 | 13,8 | 240 |
| 35281 | 2 x 16 mm ² | 16 | 953 | 130 | 21,7 | 480 |
| 35282 | 3 x 16 mm ² | 16 | 1080 | 137 | 22,8 | 720 |
| 35283 | 4 x 16 mm ² | 16 | 1330 | 149 | 24,8 | 960 |
| 35284 | 5 x 16 mm ² | 16 | 1568 | 163 | 27,1 | 1200 |
| 35295 | 3 G 25 mm ² | - | 1542 | 160 | 26,7 | 1125 |
| 35296 | 4 G 25 mm ² | - | 1862 | 174 | 29 | 1500 |
| 35297 | 5 G 25 mm ² | - | 2254 | 191 | 31,8 | 1875 |
| 35290 | 1 x 25 mm ² | 10 | 515 | 94 | 15,7 | 375 |
| 35291 | 2 x 25 mm ² | 16 | 1304 | 151 | 25,2 | 750 |
| 35292 | 3 x 25 mm ² | 16 | 1541 | 160 | 26,7 | 1125 |
| 35293 | 4 x 25 mm ² | 16 | 1861 | 174 | 29 | 1500 |
| 35294 | 5 x 25 mm ² | 16 | 2254 | 191 | 31,8 | 1875 |
| 35305 | 3 G 35 mm ² | - | 1952 | 183 | 30,5 | 1575 |
| 35307 | 5 G 35 mm ² | - | 3068 | 228 | 38 | 2625 |
| 35300 | 1 x 35 mm ² | 10 | 615 | 104 | 17,4 | 525 |
| 35301 | 2 x 35 mm ² | 16 | 1638 | 173 | 28,8 | 1050 |
| 35302 | 3 x 35 mm ² | 16 | 1952 | 183 | 30,5 | 1575 |
| 35303 | 4 x 35 mm ² | 16 | 2385 | 201 | 33,5 | 2100 |
| 35304 | 5 x 35 mm ² | 25 | 3067 | 228 | 38 | 2625 |
| 35315 | 3 G 50 mm ² | - | 2440 | 203 | 33,8 | 2250 |
| 35317 | 5 G 50 mm ² | - | 3754 | 251 | 41,9 | 3750 |
| 35310 | 1 x 50 mm ² | 10 | 765 | 112 | 18,7 | 750 |
| 35311 | 2 x 50 mm ² | 25 | 2119 | 193 | 32,2 | 1500 |
| 35312 | 3 x 50 mm ² | 25 | 2518 | 205 | 34,2 | 2250 |
| 35313 | 4 x 50 mm ² | 25 | 3172 | 230 | 38,3 | 3000 |
| 35314 | 5 x 50 mm ² | 25 | 3754 | 251 | 41,9 | 3750 |
| 35325 | 3 G 70 mm ² | - | 3472 | 238 | 39,6 | 3150 |
| 35320 | 1 x 70 mm ² | 10 | 1015 | 128 | 21,3 | 1050 |
| 35321 | 2 x 70 mm ² | 35 | 2927 | 225 | 37,5 | 2100 |
| 35322 | 3 x 70 mm ² | 35 | 3498 | 238 | 39,6 | 3150 |
| 35323 | 4 x 70 mm ² | 35 | 4267 | 262 | 43,7 | 4200 |
| 35324 | 5 x 70 mm ² | 35 | 5082 | 287 | 47,9 | 5250 |
| 35335 | 3 G 95 mm ² | - | 4568 | 266 | 44,3 | 4275 |

| Partnumber | Construction | Nominal earthscreen diameter (mm ²) | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|-------------------------|---|--------------------|--|-----------------------------|------------------|
| 35330 | 1 x 95 mm ² | 10 | 1307 | 136 | 22,7 | 1425 |
| 35331 | 2 x 95 mm ² | 50 | 3883 | 253 | 42,1 | 2850 |
| 35332 | 3 x 95 mm ² | 50 | 4709 | 268 | 44,7 | 4275 |
| 35333 | 4 x 95 mm ² | 50 | 5737 | 295 | 49,1 | 5700 |
| 35334 | 5 x 95 mm ² | 50 | 6952 | 325 | 54,1 | 7125 |
| 35345 | 3 G 120 mm ² | - | 5428 | 290 | 48,3 | 5400 |
| 35340 | 1 x 120 mm ² | 10 | 1538 | 147 | 24,5 | 1800 |
| 35341 | 2 x 120 mm ² | 60 | 4686 | 275 | 45,8 | 3600 |
| 35342 | 3 x 120 mm ² | 60 | 5688 | 292 | 48,7 | 5400 |
| 35343 | 4 x 120 mm ² | 60 | 6920 | 322 | 53,7 | 7200 |
| 35344 | 5 x 120 mm ² | 60 | 8290 | 356 | 59,3 | 9000 |
| 35350 | 1 x 150 mm ² | 10 | 1845 | 160 | 26,6 | 2250 |
| 35351 | 2 x 150 mm ² | 70 | 5563 | 300 | 50 | 4500 |
| 35352 | 3 x 150 mm ² | 70 | 6780 | 319 | 53,2 | 6750 |
| 35353 | 4 x 150 mm ² | 70 | 8301 | 352 | 58,7 | 9000 |
| 35354 | 5 x 150 mm ² | 70 | 9963 | 389 | 64,8 | 11250 |
| 35360 | 1 x 185 mm ² | 10 | 2291 | 175 | 29,1 | 2775 |
| 35361 | 2 x 185 mm ² | 95 | 7165 | 344 | 57,4 | 5550 |
| 35362 | 3 x 185 mm ² | 95 | 8764 | 367 | 61,2 | 8325 |
| 35363 | 4 x 185 mm ² | 95 | 10718 | 404 | 67,4 | 11100 |
| 35364 | 5 x 185 mm ² | 95 | 12867 | 446 | 74,3 | 13875 |
| 35370 | 1 x 240 mm ² | 16 | 2823 | 190 | 31,7 | 3600 |
| 35371 | 2 x 240 mm ² | 120 | 8921 | 378 | 63 | 7200 |
| 35372 | 3 x 240 mm ² | 120 | 10933 | 403 | 67,2 | 10800 |
| 35373 | 4 x 240 mm ² | 120 | 13471 | 445 | 74,1 | 14400 |
| 35374 | 5 x 240 mm ² | 120 | 16156 | 490 | 81,7 | 18000 |
| 35380 | 1 x 300 mm ² | 25 | 3619 | 221 | 36,8 | 4500 |
| 35381 | 2 x 300 mm ² | 150 | 10950 | 422 | 70,3 | 9000 |
| 35382 | 3 x 300 mm ² | 150 | 13542 | 449 | 74,9 | 13500 |
| 35383 | 4 x 300 mm ² | 150 | 16686 | 494 | 82,4 | 18000 |
| 35384 | 5 x 300 mm ² | 150 | 20181 | 545 | 90,9 | 22500 |
| 35385 | 1 x 400 mm ² | 25 | 4536 | 241 | 40,1 | 6000 |
| 35390 | 1 x 630 mm ² | 35 | 7048 | 292 | 48,6 | 9450 |




Halogen Free & MUD resistant earthing & bonding wire for use on offshore topsides. Cores sizes >25mm² have extra flexible Class 5/6 conductors with resistance Class 2, for improved flexibility.

| Characteristics | Properties | Unit |
|---------------------------------|--------------------------------|------|
| Product group | Shipboard low voltage cable | |
| Series | Offshore cable | |
| Type | O-Line UX P15 0,6/1 kV | |
| Standardization | NEK TS 606 | |
| Conductor material | Cu, tinned | |
| Shape of conductor | Round | |
| Core insulation | SHF2 MUD | |
| Conductor category | Class 2 = stranded | |
| Core identification | Colour | |
| Colour outer sheath | Green-yellow | |
| Flame retardant | In accordance with IEC 60332-1 | |
| Halogen free | IEC 60754-1/2 | |
| Nominal voltage U ₀ | 0.6 | kV |
| Nominal voltage U | 1 | kV |
| Maximum conductor temperature | 90 | °C |
| Operating temperature, flexible | -20 / 70 | °C |
| Operating temperature, fixed | -40 / 70 | °C |
| Specification | See appendix | |

| Partnumber | Construction | Shape of conductor | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|-------------------------|--------------------|--------------------|--|-----------------------------|------------------|
| 35902 | 1 x 2,5 mm ² | Round | 50 | 32 | 5,4 | 38 |
| 35903 | 1 x 4 mm ² | Round | 68 | 35 | 5,9 | 60 |
| 35904 | 1 x 6 mm ² | Round | 92 | 39 | 6,5 | 90 |
| 35905 | 1 x 10 mm ² | Round | 136 | 46 | 7,6 | 150 |
| 35906 | 1 x 16 mm ² | Round | 198 | 50 | 8,4 | 240 |
| 35907 | 1 x 25 mm ² | Round | 293 | 61 | 10,1 | 375 |
| 35908 | 1 x 35 mm ² | Round | 390 | 71 | 11,8 | 525 |
| 35909 | 1 x 50 mm ² | Round | 517 | 80 | 13,4 | 750 |
| 35910 | 1 x 70 mm ² | Round | 733 | 94 | 15,6 | 1050 |

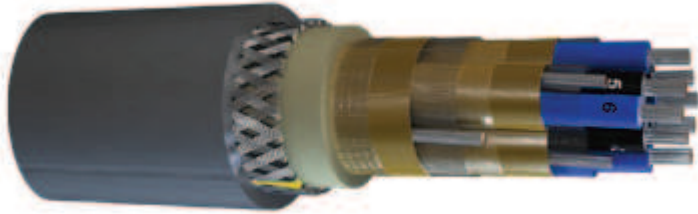
Offshore

O-Line UX P15 0,6/1 kV



| Partnumber | Construction | Shape of conductor | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|-------------------------|--------------------|--------------------|--|-----------------------------|------------------|
| 35911 | 1 x 95 mm ² | Round | 1000 | 106 | 17,7 | 1425 |
| 35912 | 1 x 120 mm ² | Round | 1227 | 118 | 19,6 | 1800 |
| 35913 | 1 x 150 mm ² | Round | 1510 | 130 | 21,7 | 2250 |
| 35914 | 1 x 185 mm ² | Round | 1916 | 145 | 24,2 | 2775 |
| 35915 | 1 x 240 mm ² | Round | 2436 | 162 | 27 | 3600 |
| 35916 | 1 x 300 mm ² | Round | 3003 | 179 | 29,8 | 4500 |

O-Line+ RFOU(i) S1/S5 250 V



Halogen Free & MUD-resistant instrumentation, communication, and monitoring & control cables for fixed installation on offshore topsides in safe & EX-areas.. Twisted pairs/triples with individual and overall screen of copper backed tape with tinned copper drain wire for EMI protection. Overall tinned copper wire braid with high coverage density for EMI and mechanical protection. Different sheath colours on request.

| Characteristics | Properties | Unit |
|---------------------------------|-------------------------------------|------|
| Product group | Shipboard communication cable | |
| Series | Offshore cable | |
| Type | O-Line+ RFOU(i) S1/S5 250 V | |
| Standardization | NEK TS 606 | |
| Stranding element | Article dependant, see detail sheet | |
| Conductor category | Class 2 = stranded | |
| Core insulation | Rubber (HEPR) | |
| Core identification | Numbers | |
| Construction outer shield | Tinned copper braiding | |
| Screen over stranding element | Cu/Pet foil | |
| Screen over stranding | Cu/Pet foil | |
| Material outer sheath | SHF2 MUD | |
| Colour outer sheath | Article dependant, see detail sheet | |
| Flame retardant | IEC 60332-1 / IEC 60332-3-22 Cat. A | |
| Maximum conductor temperature | 90 | °C |
| Operating temperature, flexible | -20 / 70 | °C |
| Operating temperature, fixed | -40 / 70 | °C |
| Specification | See appendix | |

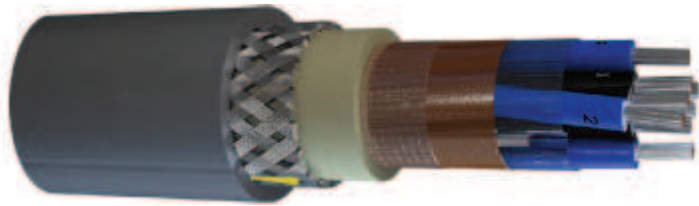
| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36700 | 1 x 2 x 0,75 | Class 2 = stranded | Blue | 187 | 63 | 10,5 | 23 |
| 36960 | 1 x 2 x 0,75 | Class 2 = stranded | Yellow | 186 | 63 | 10,5 | 23 |
| 35700 | 1 x 2 x 0,75 | Class 2 = stranded | Grey | 186 | 63 | 10,5 | 23 |
| 36716 | 1 x 3 x 0,75 | Class 2 = stranded | Blue | 200 | 65 | 10,8 | 34 |
| 35716 | 1 x 3 x 0,75 | Class 2 = stranded | Grey | 200 | 65 | 10,8 | 34 |
| 36701 | 1 x 4 x 0,75 | Class 2 = stranded | Blue | 223 | 69 | 11,5 | 45 |
| 35701 | 1 x 4 x 0,75 | Class 2 = stranded | Grey | 223 | 69 | 11,5 | 45 |
| 36702 | 2 x 2 x 0,75 | Class 2 = stranded | Blue | 347 | 89 | 14,8 | 45 |
| 36962 | 2 x 2 x 0,75 | Class 2 = stranded | Yellow | 346 | 89 | 14,8 | 45 |
| 35702 | 2 x 2 x 0,75 | Class 2 = stranded | Grey | 346 | 89 | 14,8 | 45 |
| 36717 | 2 x 3 x 0,75 | Class 2 = stranded | Blue | 390 | 93 | 15,5 | 68 |
| 35717 | 2 x 3 x 0,75 | Class 2 = stranded | Grey | 390 | 93 | 15,5 | 68 |
| 36703 | 4 x 2 x 0,75 | Class 2 = stranded | Blue | 452 | 98 | 16,4 | 90 |
| 35703 | 4 x 2 x 0,75 | Class 2 = stranded | Grey | 452 | 98 | 16,4 | 90 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|---------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36718 | 4 x 3 x 0,75 | Class 2 = stranded | Blue | 507 | 106 | 17,6 | 135 |
| 35718 | 4 x 3 x 0,75 | Class 2 = stranded | Grey | 507 | 106 | 17,6 | 135 |
| 36704 | 5 x 2 x 0,75 | Class 2 = stranded | Blue | 536 | 106 | 17,7 | 113 |
| 35704 | 5 x 2 x 0,75 | Class 2 = stranded | Grey | 535 | 106 | 17,7 | 113 |
| 36705 | 6 x 2 x 0,75 | Class 2 = stranded | Blue | 594 | 113 | 18,8 | 135 |
| 35705 | 6 x 2 x 0,75 | Class 2 = stranded | Grey | 593 | 113 | 18,8 | 135 |
| 36706 | 7 x 2 x 0,75 | Class 2 = stranded | Blue | 606 | 113 | 18,8 | 158 |
| 35706 | 7 x 2 x 0,75 | Class 2 = stranded | Grey | 605 | 113 | 18,8 | 158 |
| 36719 | 7 x 3 x 0,75 | Class 2 = stranded | Blue | 728 | 125 | 20,9 | 236 |
| 35719 | 7 x 3 x 0,75 | Class 2 = stranded | Grey | 727 | 125 | 20,9 | 236 |
| 36707 | 8 x 2 x 0,75 | Class 2 = stranded | Blue | 674 | 119 | 19,9 | 180 |
| 35707 | 8 x 2 x 0,75 | Class 2 = stranded | Grey | 674 | 119 | 19,9 | 180 |
| 36720 | 8 x 3 x 0,75 | Class 2 = stranded | Blue | 803 | 133 | 22,2 | 270 |
| 35720 | 8 x 3 x 0,75 | Class 2 = stranded | Grey | 802 | 133 | 22,2 | 270 |
| 36708 | 10 x 2 x 0,75 | Class 2 = stranded | Blue | 774 | 133 | 22,1 | 225 |
| 35708 | 10 x 2 x 0,75 | Class 2 = stranded | Grey | 773 | 133 | 22,1 | 225 |
| 36709 | 12 x 2 x 0,75 | Class 2 = stranded | Blue | 890 | 137 | 22,9 | 270 |
| 35709 | 12 x 2 x 0,75 | Class 2 = stranded | Grey | 889 | 137 | 22,9 | 270 |
| 36721 | 12 x 3 x 0,75 | Class 2 = stranded | Blue | 1068 | 152 | 25,3 | 405 |
| 35721 | 12 x 3 x 0,75 | Class 2 = stranded | Grey | 1067 | 152 | 25,3 | 405 |
| 36710 | 14 x 2 x 0,75 | Class 2 = stranded | Blue | 947 | 145 | 24,2 | 315 |
| 35710 | 14 x 2 x 0,75 | Class 2 = stranded | Grey | 946 | 145 | 24,2 | 315 |
| 36725 | 16 x 2 x 0,75 | Class 2 = stranded | Blue | 1068 | 153 | 25,5 | 360 |
| 35725 | 16 x 2 x 0,75 | Class 2 = stranded | Grey | 1067 | 153 | 25,5 | 360 |
| 36722 | 16 x 3 x 0,75 | Class 2 = stranded | Blue | 1300 | 169 | 28,2 | 540 |
| 35722 | 16 x 3 x 0,75 | Class 2 = stranded | Grey | 1299 | 169 | 28,2 | 540 |
| 36711 | 19 x 2 x 0,75 | Class 2 = stranded | Blue | 1151 | 163 | 27,1 | 428 |
| 35711 | 19 x 2 x 0,75 | Class 2 = stranded | Grey | 1150 | 163 | 27,1 | 428 |
| 36723 | 19 x 3 x 0,75 | Class 2 = stranded | Blue | 1398 | 180 | 30 | 641 |
| 35723 | 19 x 3 x 0,75 | Class 2 = stranded | Grey | 1397 | 180 | 30 | 641 |
| 36712 | 24 x 2 x 0,75 | Class 2 = stranded | Blue | 1375 | 178 | 29,7 | 540 |
| 35712 | 24 x 2 x 0,75 | Class 2 = stranded | Grey | 1374 | 178 | 29,7 | 540 |
| 36724 | 24 x 3 x 0,75 | Class 2 = stranded | Blue | 1705 | 199 | 33,1 | 810 |
| 35724 | 24 x 3 x 0,75 | Class 2 = stranded | Grey | 1704 | 199 | 33,1 | 810 |
| 36713 | 27 x 2 x 0,75 | Class 2 = stranded | Blue | 1590 | 187 | 31,2 | 608 |
| 35713 | 27 x 2 x 0,75 | Class 2 = stranded | Grey | 1589 | 187 | 31,2 | 608 |
| 36714 | 30 x 2 x 0,75 | Class 2 = stranded | Blue | 1634 | 194 | 32,4 | 675 |
| 35714 | 30 x 2 x 0,75 | Class 2 = stranded | Grey | 1633 | 194 | 32,4 | 675 |
| 36715 | 37 x 2 x 0,75 | Class 2 = stranded | Blue | 2112 | 219 | 36,5 | 833 |
| 35715 | 37 x 2 x 0,75 | Class 2 = stranded | Grey | 2110 | 219 | 36,5 | 833 |
| 36730 | 1 x 2 x 1,5 | Class 2 = stranded | Blue | 236 | 70 | 11,7 | 45 |
| 36964 | 1 x 2 x 1,5 | Class 2 = stranded | Yellow | 236 | 70 | 11,7 | 45 |
| 35730 | 1 x 2 x 1,5 | Class 2 = stranded | Grey | 236 | 70 | 11,7 | 45 |
| 36746 | 1 x 3 x 1,5 | Class 2 = stranded | Blue | 261 | 74 | 12,3 | 68 |
| 35746 | 1 x 3 x 1,5 | Class 2 = stranded | Grey | 261 | 74 | 12,3 | 68 |
| 36731 | 1 x 4 x 1,5 | Class 2 = stranded | Blue | 336 | 82 | 13,7 | 90 |
| 35731 | 1 x 4 x 1,5 | Class 2 = stranded | Grey | 335 | 82 | 13,7 | 90 |
| 36732 | 2 x 2 x 1,5 | Class 2 = stranded | Blue | 465 | 104 | 17,4 | 90 |
| 36966 | 2 x 2 x 1,5 | Class 2 = stranded | Yellow | 464 | 104 | 17,4 | 90 |
| 35732 | 2 x 2 x 1,5 | Class 2 = stranded | Grey | 464 | 104 | 17,4 | 90 |
| 36747 | 2 x 3 x 1,5 | Class 2 = stranded | Blue | 534 | 110 | 18,3 | 135 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 35747 | 2 x 3 x 1,5 | Class 2 = stranded | Grey | 534 | 110 | 18,3 | 135 |
| 36733 | 4 x 2 x 1,5 | Class 2 = stranded | Blue | 620 | 117 | 19,5 | 180 |
| 35733 | 4 x 2 x 1,5 | Class 2 = stranded | Grey | 619 | 117 | 19,5 | 180 |
| 36748 | 4 x 3 x 1,5 | Class 2 = stranded | Blue | 729 | 126 | 21 | 270 |
| 35748 | 4 x 3 x 1,5 | Class 2 = stranded | Grey | 728 | 126 | 21 | 270 |
| 36734 | 5 x 2 x 1,5 | Class 2 = stranded | Blue | 756 | 127 | 21,1 | 225 |
| 35734 | 5 x 2 x 1,5 | Class 2 = stranded | Grey | 755 | 127 | 21,1 | 225 |
| 36735 | 6 x 2 x 1,5 | Class 2 = stranded | Blue | 848 | 136 | 22,6 | 270 |
| 35735 | 6 x 2 x 1,5 | Class 2 = stranded | Grey | 848 | 136 | 22,6 | 270 |
| 36736 | 7 x 2 x 1,5 | Class 2 = stranded | Blue | 869 | 136 | 22,6 | 315 |
| 35736 | 7 x 2 x 1,5 | Class 2 = stranded | Grey | 869 | 136 | 22,6 | 315 |
| 36749 | 7 x 3 x 1,5 | Class 2 = stranded | Blue | 1066 | 152 | 25,3 | 473 |
| 35749 | 7 x 3 x 1,5 | Class 2 = stranded | Grey | 1065 | 152 | 25,3 | 473 |
| 36737 | 8 x 2 x 1,5 | Class 2 = stranded | Blue | 961 | 144 | 24 | 360 |
| 35737 | 8 x 2 x 1,5 | Class 2 = stranded | Grey | 960 | 144 | 24 | 360 |
| 36750 | 8 x 3 x 1,5 | Class 2 = stranded | Blue | 1185 | 162 | 27 | 540 |
| 35750 | 8 x 3 x 1,5 | Class 2 = stranded | Grey | 1183 | 162 | 27 | 540 |
| 36738 | 10 x 2 x 1,5 | Class 2 = stranded | Blue | 1106 | 161 | 26,9 | 450 |
| 35738 | 10 x 2 x 1,5 | Class 2 = stranded | Grey | 1105 | 161 | 26,9 | 450 |
| 36739 | 12 x 2 x 1,5 | Class 2 = stranded | Blue | 1293 | 169 | 28,1 | 540 |
| 35739 | 12 x 2 x 1,5 | Class 2 = stranded | Grey | 1292 | 169 | 28,1 | 540 |
| 36740 | 14 x 2 x 1,5 | Class 2 = stranded | Blue | 1381 | 178 | 29,7 | 630 |
| 35740 | 14 x 2 x 1,5 | Class 2 = stranded | Grey | 1380 | 178 | 29,7 | 630 |
| 36755 | 16 x 2 x 1,5 | Class 2 = stranded | Blue | 1583 | 188 | 31,4 | 720 |
| 35755 | 16 x 2 x 1,5 | Class 2 = stranded | Grey | 1373 | 188 | 31,4 | 720 |
| 35752 | 16 x 3 x 1,5 | Class 2 = stranded | Grey | 1972 | 209 | 34,9 | 1080 |
| 36741 | 19 x 2 x 1,5 | Class 2 = stranded | Blue | 1710 | 201 | 33,5 | 855 |
| 35741 | 19 x 2 x 1,5 | Class 2 = stranded | Grey | 1708 | 201 | 33,5 | 855 |
| 36742 | 24 x 2 x 1,5 | Class 2 = stranded | Blue | 2242 | 229 | 38,2 | 1080 |
| 35742 | 24 x 2 x 1,5 | Class 2 = stranded | Grey | 2241 | 229 | 38,2 | 1080 |
| 35754 | 24 x 3 x 1,5 | Class 2 = stranded | Grey | 2810 | 251 | 41,9 | 1620 |
| 36760 | 1 x 2 x 2,5 | Class 2 = stranded | Blue | 289 | 77 | 12,8 | 75 |
| 35760 | 1 x 2 x 2,5 | Class 2 = stranded | Grey | 289 | 77 | 12,8 | 75 |
| 36776 | 1 x 3 x 2,5 | Class 2 = stranded | Blue | 355 | 82 | 13,7 | 113 |
| 35776 | 1 x 3 x 2,5 | Class 2 = stranded | Grey | 354 | 82 | 13,7 | 113 |
| 36761 | 1 x 4 x 2,5 | Class 2 = stranded | Blue | 408 | 89 | 14,9 | 150 |
| 35761 | 1 x 4 x 2,5 | Class 2 = stranded | Grey | 407 | 89 | 14,9 | 150 |
| 36762 | 2 x 2 x 2,5 | Class 2 = stranded | Blue | 564 | 114 | 19 | 150 |
| 35762 | 2 x 2 x 2,5 | Class 2 = stranded | Grey | 563 | 114 | 19 | 150 |
| 36777 | 2 x 3 x 2,5 | Class 2 = stranded | Blue | 661 | 122 | 20,3 | 225 |
| 35777 | 2 x 3 x 2,5 | Class 2 = stranded | Grey | 661 | 122 | 20,3 | 225 |
| 36763 | 4 x 2 x 2,5 | Class 2 = stranded | Blue | 781 | 130 | 21,7 | 300 |
| 35763 | 4 x 2 x 2,5 | Class 2 = stranded | Grey | 780 | 130 | 21,7 | 300 |
| 36778 | 4 x 3 x 2,5 | Class 2 = stranded | Blue | 928 | 140 | 23,4 | 450 |
| 35778 | 4 x 3 x 2,5 | Class 2 = stranded | Grey | 927 | 140 | 23,4 | 450 |
| 36764 | 5 x 2 x 2,5 | Class 2 = stranded | Blue | 964 | 142 | 23,6 | 375 |
| 35764 | 5 x 2 x 2,5 | Class 2 = stranded | Grey | 964 | 142 | 23,6 | 375 |
| 36765 | 6 x 2 x 2,5 | Class 2 = stranded | Blue | 1085 | 152 | 25,3 | 450 |
| 35765 | 6 x 2 x 2,5 | Class 2 = stranded | Grey | 1084 | 152 | 25,3 | 450 |
| 36766 | 7 x 2 x 2,5 | Class 2 = stranded | Blue | 1118 | 152 | 25,3 | 525 |
| 35766 | 7 x 2 x 2,5 | Class 2 = stranded | Grey | 1117 | 152 | 25,3 | 525 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36779 | 7 x 3 x 2,5 | Class 2 = stranded | Blue | 1383 | 170 | 28,4 | 788 |
| 35779 | 7 x 3 x 2,5 | Class 2 = stranded | Grey | 1382 | 170 | 28,4 | 788 |
| 36767 | 8 x 2 x 2,5 | Class 2 = stranded | Blue | 1241 | 161 | 26,9 | 600 |
| 35767 | 8 x 2 x 2,5 | Class 2 = stranded | Grey | 1240 | 161 | 26,9 | 600 |
| 36780 | 8 x 3 x 2,5 | Class 2 = stranded | Blue | 1559 | 182 | 30,4 | 900 |
| 35780 | 8 x 3 x 2,5 | Class 2 = stranded | Grey | 1558 | 182 | 30,4 | 900 |
| 36768 | 10 x 2 x 2,5 | Class 2 = stranded | Blue | 1430 | 181 | 30,2 | 750 |
| 35768 | 10 x 2 x 2,5 | Class 2 = stranded | Grey | 1429 | 181 | 30,2 | 750 |
| 36769 | 12 x 2 x 2,5 | Class 2 = stranded | Blue | 1689 | 190 | 31,6 | 900 |
| 35769 | 12 x 2 x 2,5 | Class 2 = stranded | Grey | 1688 | 190 | 31,6 | 900 |
| 36770 | 14 x 2 x 2,5 | Class 2 = stranded | Blue | 1825 | 201 | 33,5 | 1050 |
| 35770 | 14 x 2 x 2,5 | Class 2 = stranded | Grey | 1824 | 201 | 33,5 | 1050 |
| 36785 | 16 x 2 x 2,5 | Class 2 = stranded | Blue | 2240 | 220 | 36,7 | 1200 |
| 35785 | 16 x 2 x 2,5 | Class 2 = stranded | Grey | 2238 | 220 | 36,7 | 1200 |
| 36771 | 19 x 2 x 2,5 | Class 2 = stranded | Blue | 2458 | 236 | 39,3 | 1425 |
| 35771 | 19 x 2 x 2,5 | Class 2 = stranded | Grey | 2456 | 236 | 39,3 | 1425 |
| 36772 | 24 x 2 x 2,5 | Class 2 = stranded | Blue | 2968 | 260 | 43,3 | 1800 |
| 35772 | 24 x 2 x 2,5 | Class 2 = stranded | Grey | 2966 | 260 | 43,3 | 1800 |

O-Line+ RFOU(c) S2/S6 250 V



Halogen Free & MUD-resistant instrumentation, communication, and monitoring & control cables for fixed installation on offshore topsides in safe & EX-areas. Twisted pairs/triples with overall screen of copper backed tape with tinned copper drain wire for EMI protection & Overall tinned copper wire braid with high coverage density. Different sheath colours on request.

| Characteristics | Properties | Unit |
|---------------------------------|-------------------------------------|------|
| Product group | Shipboard communication cable | |
| Series | Offshore cable | |
| Type | O-Line+ RFOU(c) S2/S6 250 V | |
| Standardization | NEK TS 606 | |
| Stranding element | Article dependant, see detail sheet | |
| Conductor category | Class 2 = stranded | |
| Core insulation | Rubber (HEPR) | |
| Core identification | Numbers | |
| Construction outer shield | Tinned copper braiding | |
| Screen over stranding | Cu/Pet foil | |
| Material outer sheath | SHF2 MUD | |
| Colour outer sheath | Article dependant, see detail sheet | |
| Flame retardant | IEC 60332-1 / IEC 60332-3-22 Cat. A | |
| Maximum conductor temperature | 90 | °C |
| Operating temperature, flexible | -20 / 70 | °C |
| Operating temperature, fixed | -40 / 70 | °C |
| Specification | See appendix | |


| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36400 | 1 x 2 x 0,75 | Class 2 = stranded | Blue | 187 | 63 | 10,5 | 23 |
| 36900 | 1 x 2 x 0,75 | Class 2 = stranded | Yellow | 186 | 63 | 10,5 | 23 |
| 35400 | 1 x 2 x 0,75 | Class 2 = stranded | Grey | 186 | 63 | 10,5 | 23 |
| 36416 | 1 x 3 x 0,75 | Class 2 = stranded | Blue | 202 | 65 | 10,8 | 34 |
| 35416 | 1 x 3 x 0,75 | Class 2 = stranded | Grey | 202 | 65 | 10,8 | 34 |
| 36401 | 1 x 4 x 0,75 | Class 2 = stranded | Blue | 223 | 69 | 11,5 | 45 |
| 35401 | 1 x 4 x 0,75 | Class 2 = stranded | Grey | 223 | 69 | 11,5 | 45 |
| 36402 | 2 x 2 x 0,75 | Class 2 = stranded | Blue | 310 | 83 | 13,9 | 45 |
| 35402 | 2 x 2 x 0,75 | Class 2 = stranded | Grey | 310 | 83 | 13,9 | 45 |
| 36417 | 2 x 3 x 0,75 | Class 2 = stranded | Blue | 351 | 89 | 14,8 | 68 |
| 35417 | 2 x 3 x 0,75 | Class 2 = stranded | Grey | 350 | 89 | 14,8 | 68 |
| 36403 | 4 x 2 x 0,75 | Class 2 = stranded | Blue | 395 | 94 | 15,6 | 90 |
| 35403 | 4 x 2 x 0,75 | Class 2 = stranded | Grey | 395 | 94 | 15,6 | 90 |
| 36418 | 4 x 3 x 0,75 | Class 2 = stranded | Blue | 450 | 100 | 16,6 | 135 |
| 35418 | 4 x 3 x 0,75 | Class 2 = stranded | Grey | 450 | 100 | 16,6 | 135 |
| 36404 | 5 x 2 x 0,75 | Class 2 = stranded | Blue | 453 | 100 | 16,6 | 113 |
| 35404 | 5 x 2 x 0,75 | Class 2 = stranded | Grey | 453 | 100 | 16,6 | 113 |
| 36405 | 6 x 2 x 0,75 | Class 2 = stranded | Blue | 525 | 107 | 17,9 | 135 |
| 35405 | 6 x 2 x 0,75 | Class 2 = stranded | Grey | 524 | 107 | 17,9 | 135 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|---------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36406 | 7 x 2 x 0,75 | Class 2 = stranded | Blue | 527 | 107 | 17,9 | 158 |
| 35406 | 7 x 2 x 0,75 | Class 2 = stranded | Grey | 527 | 107 | 17,9 | 158 |
| 36419 | 7 x 3 x 0,75 | Class 2 = stranded | Blue | 626 | 118 | 19,7 | 236 |
| 35419 | 7 x 3 x 0,75 | Class 2 = stranded | Grey | 626 | 118 | 19,7 | 236 |
| 36407 | 8 x 2 x 0,75 | Class 2 = stranded | Blue | 567 | 112 | 18,7 | 180 |
| 35407 | 8 x 2 x 0,75 | Class 2 = stranded | Grey | 567 | 112 | 18,7 | 180 |
| 36420 | 8 x 3 x 0,75 | Class 2 = stranded | Blue | 703 | 126 | 21 | 270 |
| 35420 | 8 x 3 x 0,75 | Class 2 = stranded | Grey | 702 | 126 | 21 | 270 |
| 36408 | 10 x 2 x 0,75 | Class 2 = stranded | Blue | 658 | 124 | 20,7 | 225 |
| 35408 | 10 x 2 x 0,75 | Class 2 = stranded | Grey | 658 | 124 | 20,7 | 225 |
| 36409 | 12 x 2 x 0,75 | Class 2 = stranded | Blue | 716 | 129 | 21,5 | 270 |
| 35409 | 12 x 2 x 0,75 | Class 2 = stranded | Grey | 715 | 129 | 21,5 | 270 |
| 36421 | 12 x 3 x 0,75 | Class 2 = stranded | Blue | 887 | 143 | 23,8 | 405 |
| 35421 | 12 x 3 x 0,75 | Class 2 = stranded | Grey | 886 | 143 | 23,8 | 405 |
| 36410 | 14 x 2 x 0,75 | Class 2 = stranded | Blue | 805 | 137 | 22,8 | 315 |
| 35410 | 14 x 2 x 0,75 | Class 2 = stranded | Grey | 804 | 137 | 22,8 | 315 |
| 36425 | 16 x 2 x 0,75 | Class 2 = stranded | Blue | 856 | 143 | 23,8 | 360 |
| 35425 | 16 x 2 x 0,75 | Class 2 = stranded | Grey | 856 | 143 | 23,8 | 360 |
| 36422 | 16 x 3 x 0,75 | Class 2 = stranded | Blue | 1008 | 159 | 26,5 | 540 |
| 35422 | 16 x 3 x 0,75 | Class 2 = stranded | Grey | 1061 | 159 | 26,5 | 540 |
| 36411 | 19 x 2 x 0,75 | Class 2 = stranded | Blue | 957 | 152 | 25,3 | 428 |
| 35411 | 19 x 2 x 0,75 | Class 2 = stranded | Grey | 956 | 152 | 25,3 | 428 |
| 36423 | 19 x 3 x 0,75 | Class 2 = stranded | Blue | 1200 | 169 | 28,2 | 641 |
| 35423 | 19 x 3 x 0,75 | Class 2 = stranded | Grey | 1199 | 169 | 28,2 | 641 |
| 36412 | 24 x 2 x 0,75 | Class 2 = stranded | Blue | 1148 | 167 | 27,9 | 540 |
| 35412 | 24 x 2 x 0,75 | Class 2 = stranded | Grey | 1146 | 167 | 27,9 | 540 |
| 36424 | 24 x 3 x 0,75 | Class 2 = stranded | Blue | 1461 | 188 | 31,3 | 810 |
| 35424 | 24 x 3 x 0,75 | Class 2 = stranded | Grey | 1459 | 188 | 31,3 | 810 |
| 36413 | 27 x 2 x 0,75 | Class 2 = stranded | Blue | 1237 | 175 | 29,1 | 608 |
| 35413 | 27 x 2 x 0,75 | Class 2 = stranded | Grey | 1236 | 175 | 29,1 | 608 |
| 36414 | 30 x 2 x 0,75 | Class 2 = stranded | Blue | 1327 | 181 | 30,2 | 675 |
| 35414 | 30 x 2 x 0,75 | Class 2 = stranded | Grey | 1326 | 181 | 30,2 | 675 |
| 36415 | 37 x 2 x 0,75 | Class 2 = stranded | Blue | 1558 | 197 | 32,9 | 833 |
| 35415 | 37 x 2 x 0,75 | Class 2 = stranded | Grey | 1557 | 197 | 32,9 | 833 |
| 36430 | 1 x 2 x 1,5 | Class 2 = stranded | Blue | 236 | 70 | 11,7 | 45 |
| 36904 | 1 x 2 x 1,5 | Class 2 = stranded | Yellow | 236 | 70 | 11,7 | 45 |
| 35430 | 1 x 2 x 1,5 | Class 2 = stranded | Grey | 236 | 70 | 11,7 | 45 |
| 36446 | 1 x 3 x 1,5 | Class 2 = stranded | Blue | 267 | 74 | 12,3 | 68 |
| 35446 | 1 x 3 x 1,5 | Class 2 = stranded | Grey | 266 | 74 | 12,3 | 68 |
| 36431 | 1 x 4 x 1,5 | Class 2 = stranded | Blue | 336 | 82 | 13,7 | 90 |
| 35431 | 1 x 4 x 1,5 | Class 2 = stranded | Grey | 335 | 82 | 13,7 | 90 |
| 36432 | 2 x 2 x 1,5 | Class 2 = stranded | Blue | 418 | 98 | 16,3 | 90 |
| 36906 | 2 x 2 x 1,5 | Class 2 = stranded | Yellow | 418 | 98 | 16,3 | 90 |
| 35432 | 2 x 2 x 1,5 | Class 2 = stranded | Grey | 417 | 98 | 16,3 | 90 |
| 36447 | 2 x 3 x 1,5 | Class 2 = stranded | Blue | 487 | 105 | 17,5 | 135 |
| 35447 | 2 x 3 x 1,5 | Class 2 = stranded | Grey | 486 | 105 | 17,5 | 135 |
| 36433 | 4 x 2 x 1,5 | Class 2 = stranded | Blue | 556 | 111 | 18,5 | 180 |
| 35433 | 4 x 2 x 1,5 | Class 2 = stranded | Grey | 556 | 111 | 18,5 | 180 |
| 36448 | 4 x 3 x 1,5 | Class 2 = stranded | Blue | 657 | 120 | 20 | 270 |
| 35448 | 4 x 3 x 1,5 | Class 2 = stranded | Grey | 656 | 120 | 20 | 270 |
| 36434 | 5 x 2 x 1,5 | Class 2 = stranded | Blue | 646 | 120 | 20 | 225 |

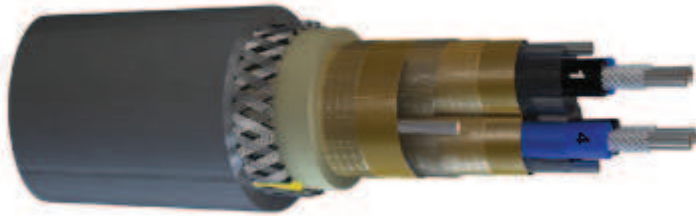
| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 35434 | 5 x 2 x 1,5 | Class 2 = stranded | Grey | 645 | 120 | 20 | 225 |
| 36435 | 6 x 2 x 1,5 | Class 2 = stranded | Blue | 758 | 128 | 21,4 | 270 |
| 35435 | 6 x 2 x 1,5 | Class 2 = stranded | Grey | 757 | 128 | 21,4 | 270 |
| 36436 | 7 x 2 x 1,5 | Class 2 = stranded | Blue | 906 | 128 | 21,4 | 315 |
| 35436 | 7 x 2 x 1,5 | Class 2 = stranded | Grey | 906 | 128 | 21,4 | 315 |
| 36449 | 7 x 3 x 1,5 | Class 2 = stranded | Blue | 963 | 145 | 24,2 | 473 |
| 35449 | 7 x 3 x 1,5 | Class 2 = stranded | Grey | 962 | 145 | 24,2 | 473 |
| 36437 | 8 x 2 x 1,5 | Class 2 = stranded | Blue | 849 | 136 | 22,7 | 360 |
| 35437 | 8 x 2 x 1,5 | Class 2 = stranded | Grey | 848 | 136 | 22,7 | 360 |
| 36450 | 8 x 3 x 1,5 | Class 2 = stranded | Blue | 1082 | 155 | 25,8 | 540 |
| 35450 | 8 x 3 x 1,5 | Class 2 = stranded | Grey | 1081 | 155 | 25,8 | 540 |
| 36438 | 10 x 2 x 1,5 | Class 2 = stranded | Blue | 990 | 152 | 25,3 | 450 |
| 35438 | 10 x 2 x 1,5 | Class 2 = stranded | Grey | 989 | 152 | 25,3 | 450 |
| 36439 | 12 x 2 x 1,5 | Class 2 = stranded | Blue | 1090 | 158 | 26,3 | 540 |
| 35439 | 12 x 2 x 1,5 | Class 2 = stranded | Grey | 1089 | 158 | 26,3 | 540 |
| 36440 | 14 x 2 x 1,5 | Class 2 = stranded | Blue | 1216 | 166 | 27,7 | 630 |
| 35440 | 14 x 2 x 1,5 | Class 2 = stranded | Grey | 1215 | 166 | 27,7 | 630 |
| 36455 | 16 x 2 x 1,5 | Class 2 = stranded | Blue | 1322 | 176 | 29,3 | 720 |
| 35455 | 16 x 2 x 1,5 | Class 2 = stranded | Grey | 1321 | 176 | 29,3 | 720 |
| 36441 | 19 x 2 x 1,5 | Class 2 = stranded | Blue | 1487 | 187 | 31,2 | 855 |
| 35441 | 19 x 2 x 1,5 | Class 2 = stranded | Grey | 1485 | 187 | 31,2 | 855 |
| 36442 | 24 x 2 x 1,5 | Class 2 = stranded | Blue | 1799 | 207 | 34,5 | 1080 |
| 35442 | 24 x 2 x 1,5 | Class 2 = stranded | Grey | 1798 | 207 | 34,5 | 1080 |
| 36460 | 1 x 2 x 2,5 | Class 2 = stranded | Blue | 289 | 77 | 12,8 | 75 |
| 35460 | 1 x 2 x 2,5 | Class 2 = stranded | Grey | 289 | 77 | 12,8 | 75 |
| 36476 | 1 x 3 x 2,5 | Class 2 = stranded | Blue | 356 | 82 | 13,7 | 113 |
| 35476 | 1 x 3 x 2,5 | Class 2 = stranded | Grey | 356 | 82 | 13,7 | 113 |
| 36461 | 1 x 4 x 2,5 | Class 2 = stranded | Blue | 408 | 89 | 14,9 | 150 |
| 35461 | 1 x 4 x 2,5 | Class 2 = stranded | Grey | 407 | 89 | 14,9 | 150 |
| 36462 | 2 x 2 x 2,5 | Class 2 = stranded | Blue | 513 | 109 | 18,1 | 150 |
| 35462 | 2 x 2 x 2,5 | Class 2 = stranded | Grey | 512 | 109 | 18,1 | 150 |
| 36477 | 2 x 3 x 2,5 | Class 2 = stranded | Blue | 604 | 115 | 19,2 | 225 |
| 35477 | 2 x 3 x 2,5 | Class 2 = stranded | Grey | 603 | 115 | 19,2 | 225 |
| 36463 | 4 x 2 x 2,5 | Class 2 = stranded | Blue | 718 | 124 | 20,7 | 300 |
| 35463 | 4 x 2 x 2,5 | Class 2 = stranded | Grey | 718 | 124 | 20,7 | 300 |
| 36478 | 4 x 3 x 2,5 | Class 2 = stranded | Blue | 830 | 133 | 22,1 | 450 |
| 35478 | 4 x 3 x 2,5 | Class 2 = stranded | Grey | 830 | 133 | 22,1 | 450 |
| 36464 | 5 x 2 x 2,5 | Class 2 = stranded | Blue | 825 | 133 | 22,1 | 375 |
| 35464 | 5 x 2 x 2,5 | Class 2 = stranded | Grey | 825 | 133 | 22,1 | 375 |
| 36465 | 6 x 2 x 2,5 | Class 2 = stranded | Blue | 960 | 143 | 23,9 | 450 |
| 35465 | 6 x 2 x 2,5 | Class 2 = stranded | Grey | 959 | 143 | 23,9 | 450 |
| 36466 | 7 x 2 x 2,5 | Class 2 = stranded | Blue | 989 | 143 | 23,9 | 525 |
| 35466 | 7 x 2 x 2,5 | Class 2 = stranded | Grey | 988 | 143 | 23,9 | 525 |
| 36479 | 7 x 3 x 2,5 | Class 2 = stranded | Blue | 1241 | 161 | 26,9 | 788 |
| 35479 | 7 x 3 x 2,5 | Class 2 = stranded | Grey | 1240 | 161 | 26,9 | 788 |
| 36467 | 8 x 2 x 2,5 | Class 2 = stranded | Blue | 1107 | 152 | 25,3 | 600 |
| 35467 | 8 x 2 x 2,5 | Class 2 = stranded | Grey | 1106 | 152 | 25,3 | 600 |
| 36480 | 8 x 3 x 2,5 | Class 2 = stranded | Blue | 1398 | 172 | 28,7 | 900 |
| 35480 | 8 x 3 x 2,5 | Class 2 = stranded | Grey | 1397 | 172 | 28,7 | 900 |
| 36468 | 10 x 2 x 2,5 | Class 2 = stranded | Blue | 1295 | 172 | 28,6 | 750 |
| 35468 | 10 x 2 x 2,5 | Class 2 = stranded | Grey | 1293 | 172 | 28,6 | 750 |

Offshore

O-Line+ RFOU(c) S2/S6 250 V



| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36469 | 12 x 2 x 2,5 | Class 2 = stranded | Blue | 1421 | 177 | 29,5 | 900 |
| 35469 | 12 x 2 x 2,5 | Class 2 = stranded | Grey | 1419 | 177 | 29,5 | 900 |
| 36470 | 14 x 2 x 2,5 | Class 2 = stranded | Blue | 1611 | 188 | 31,4 | 1050 |
| 35470 | 14 x 2 x 2,5 | Class 2 = stranded | Grey | 1610 | 188 | 31,4 | 1050 |
| 36485 | 16 x 2 x 2,5 | Class 2 = stranded | Blue | 1743 | 198 | 33 | 1200 |
| 35485 | 16 x 2 x 2,5 | Class 2 = stranded | Grey | 1742 | 198 | 33 | 1200 |
| 36471 | 19 x 2 x 2,5 | Class 2 = stranded | Blue | 2161 | 220 | 36,6 | 1425 |
| 35471 | 19 x 2 x 2,5 | Class 2 = stranded | Grey | 2159 | 220 | 36,6 | 1425 |
| 36472 | 24 x 2 x 2,5 | Class 2 = stranded | Blue | 2609 | 242 | 40,4 | 1800 |
| 35472 | 24 x 2 x 2,5 | Class 2 = stranded | Grey | 2607 | 242 | 40,4 | 1800 |



Fire Resistant, Halogen Free & MUD-resistant instrumentation, communication, and monitoring & control cables for fixed installation on offshore topsides in safe & EX-areas.. Twisted pairs/triples with individual and overall screen of copper backed tape with tinned copper drain wire for EMI protection. Overall tinned copper wire braid with high coverage density for EMI and mechanical protection. Meets the fire resistant standards set both by the IEC 60331-21 and the more demanding 60331- 1/ 2 (2009) specification for use in areas where circuit integrity in fire conditions is required. Different sheath colours on request.

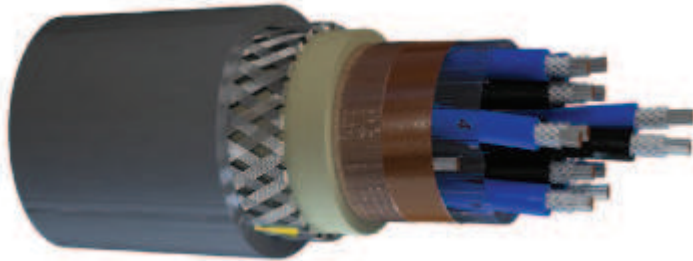
| Characteristics | Properties | Unit |
|---|-------------------------------------|------|
| Product group | Shipboard communication cable | |
| Series | Offshore cable | |
| Type | O-Line+ BFOU(i) S3/S7 250 V | |
| Standardization | NEK TS 606 | |
| Stranding element | Article dependant, see detail sheet | |
| Conductor category | Class 2 = stranded | |
| Core insulation | Mica + HEPR | |
| Core identification | Numbers | |
| Construction outer shield | Tinned copper braiding | |
| Screen over stranding element | Cu/Pet foil | |
| Screen over stranding | Cu/Pet foil | |
| Material outer sheath | SHF2 MUD | |
| Colour outer sheath | Article dependant, see detail sheet | |
| Flame retardant | IEC 60332-1 / IEC 60332-3-22 Cat. A | |
| Insulation integrity in accordance with IEC 60331 | Yes | |
| Maximum conductor temperature | 90 | °C |
| Operating temperature, flexible | -20 / 70 | °C |
| Operating temperature, fixed | -40 / 70 | °C |
| Specification | See appendix | |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36600 | 1 x 2 x 0,75 | Class 2 = stranded | Blue | 206 | 67 | 11,1 | 23 |
| 36940 | 1 x 2 x 0,75 | Class 2 = stranded | Yellow | 206 | 67 | 11,1 | 23 |
| 35600 | 1 x 2 x 0,75 | Class 2 = stranded | Grey | 206 | 67 | 11,1 | 23 |
| 36616 | 1 x 3 x 0,75 | Class 2 = stranded | Blue | 228 | 70 | 11,7 | 34 |
| 35616 | 1 x 3 x 0,75 | Class 2 = stranded | Grey | 227 | 70 | 11,7 | 34 |
| 36601 | 1 x 4 x 0,75 | Class 2 = stranded | Blue | 261 | 76 | 12,6 | 45 |
| 35601 | 1 x 4 x 0,75 | Class 2 = stranded | Grey | 261 | 76 | 12,6 | 45 |
| 36602 | 2 x 2 x 0,75 | Class 2 = stranded | Blue | 400 | 96 | 16 | 45 |
| 36942 | 2 x 2 x 0,75 | Class 2 = stranded | Yellow | 400 | 96 | 16 | 45 |
| 35602 | 2 x 2 x 0,75 | Class 2 = stranded | Grey | 400 | 96 | 16 | 45 |
| 36617 | 2 x 3 x 0,75 | Class 2 = stranded | Blue | 464 | 102 | 17 | 68 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|---------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 35617 | 2 x 3 x 0,75 | Class 2 = stranded | Grey | 463 | 102 | 17 | 68 |
| 36603 | 4 x 2 x 0,75 | Class 2 = stranded | Blue | 541 | 109 | 18,1 | 90 |
| 35603 | 4 x 2 x 0,75 | Class 2 = stranded | Grey | 541 | 109 | 18,1 | 90 |
| 36618 | 4 x 3 x 0,75 | Class 2 = stranded | Blue | 625 | 117 | 19,5 | 135 |
| 35618 | 4 x 3 x 0,75 | Class 2 = stranded | Grey | 624 | 117 | 19,5 | 135 |
| 36604 | 5 x 2 x 0,75 | Class 2 = stranded | Blue | 641 | 118 | 19,6 | 113 |
| 35604 | 5 x 2 x 0,75 | Class 2 = stranded | Grey | 640 | 118 | 19,6 | 113 |
| 36605 | 6 x 2 x 0,75 | Class 2 = stranded | Blue | 735 | 125 | 20,9 | 135 |
| 35605 | 6 x 2 x 0,75 | Class 2 = stranded | Grey | 735 | 125 | 20,9 | 135 |
| 36606 | 7 x 2 x 0,75 | Class 2 = stranded | Blue | 746 | 125 | 20,9 | 158 |
| 35606 | 7 x 2 x 0,75 | Class 2 = stranded | Grey | 745 | 125 | 20,9 | 158 |
| 36619 | 7 x 3 x 0,75 | Class 2 = stranded | Blue | 895 | 140 | 23,3 | 236 |
| 35619 | 7 x 3 x 0,75 | Class 2 = stranded | Grey | 894 | 140 | 23,3 | 236 |
| 36607 | 8 x 2 x 0,75 | Class 2 = stranded | Blue | 821 | 133 | 22,1 | 180 |
| 35607 | 8 x 2 x 0,75 | Class 2 = stranded | Grey | 820 | 133 | 22,1 | 180 |
| 36620 | 8 x 3 x 0,75 | Class 2 = stranded | Blue | 991 | 149 | 24,8 | 270 |
| 35620 | 8 x 3 x 0,75 | Class 2 = stranded | Grey | 990 | 149 | 24,8 | 270 |
| 36608 | 10 x 2 x 0,75 | Class 2 = stranded | Blue | 948 | 148 | 24,7 | 225 |
| 35608 | 10 x 2 x 0,75 | Class 2 = stranded | Grey | 947 | 148 | 24,7 | 225 |
| 36609 | 12 x 2 x 0,75 | Class 2 = stranded | Blue | 1063 | 154 | 25,6 | 270 |
| 35609 | 12 x 2 x 0,75 | Class 2 = stranded | Grey | 1062 | 154 | 25,6 | 270 |
| 36621 | 12 x 3 x 0,75 | Class 2 = stranded | Blue | 1269 | 170 | 28,4 | 405 |
| 35621 | 12 x 3 x 0,75 | Class 2 = stranded | Grey | 1268 | 170 | 28,4 | 405 |
| 36610 | 14 x 2 x 0,75 | Class 2 = stranded | Blue | 1167 | 163 | 27,1 | 315 |
| 35610 | 14 x 2 x 0,75 | Class 2 = stranded | Grey | 1166 | 163 | 27,1 | 315 |
| 36625 | 16 x 2 x 0,75 | Class 2 = stranded | Blue | 1317 | 172 | 28,6 | 360 |
| 35625 | 16 x 2 x 0,75 | Class 2 = stranded | Grey | 1316 | 172 | 28,6 | 360 |
| 36622 | 16 x 3 x 0,75 | Class 2 = stranded | Blue | 1546 | 190 | 31,7 | 540 |
| 35622 | 16 x 3 x 0,75 | Class 2 = stranded | Grey | 1544 | 190 | 31,7 | 540 |
| 36611 | 19 x 2 x 0,75 | Class 2 = stranded | Blue | 1437 | 182 | 30,4 | 428 |
| 35611 | 19 x 2 x 0,75 | Class 2 = stranded | Grey | 1436 | 182 | 30,4 | 428 |
| 36623 | 19 x 3 x 0,75 | Class 2 = stranded | Blue | 1793 | 204 | 34 | 641 |
| 35623 | 19 x 3 x 0,75 | Class 2 = stranded | Grey | 1791 | 204 | 34 | 641 |
| 36612 | 24 x 2 x 0,75 | Class 2 = stranded | Blue | 1726 | 202 | 33,6 | 540 |
| 35612 | 24 x 2 x 0,75 | Class 2 = stranded | Grey | 1725 | 202 | 33,6 | 540 |
| 36624 | 24 x 3 x 0,75 | Class 2 = stranded | Blue | 2355 | 233 | 38,8 | 810 |
| 35624 | 24 x 3 x 0,75 | Class 2 = stranded | Grey | 2353 | 233 | 38,8 | 810 |
| 36613 | 27 x 2 x 0,75 | Class 2 = stranded | Blue | 2001 | 218 | 36,3 | 608 |
| 35613 | 27 x 2 x 0,75 | Class 2 = stranded | Grey | 1999 | 218 | 36,3 | 608 |
| 36614 | 30 x 2 x 0,75 | Class 2 = stranded | Blue | 2246 | 228 | 38 | 675 |
| 35614 | 30 x 2 x 0,75 | Class 2 = stranded | Grey | 2244 | 228 | 38 | 675 |
| 36615 | 37 x 2 x 0,75 | Class 2 = stranded | Blue | 2643 | 248 | 41,3 | 833 |
| 35615 | 37 x 2 x 0,75 | Class 2 = stranded | Grey | 2640 | 248 | 41,3 | 833 |
| 36630 | 1 x 2 x 1,5 | Class 2 = stranded | Blue | 264 | 74 | 12,4 | 45 |
| 36944 | 1 x 2 x 1,5 | Class 2 = stranded | Yellow | 264 | 74 | 12,4 | 45 |
| 35630 | 1 x 2 x 1,5 | Class 2 = stranded | Grey | 264 | 74 | 12,4 | 45 |
| 36646 | 1 x 3 x 1,5 | Class 2 = stranded | Blue | 321 | 81 | 13,5 | 68 |
| 35646 | 1 x 3 x 1,5 | Class 2 = stranded | Grey | 321 | 81 | 13,5 | 68 |
| 36631 | 1 x 4 x 1,5 | Class 2 = stranded | Blue | 375 | 88 | 14,7 | 90 |
| 35631 | 1 x 4 x 1,5 | Class 2 = stranded | Grey | 375 | 88 | 14,7 | 90 |
| 36632 | 2 x 2 x 1,5 | Class 2 = stranded | Blue | 527 | 112 | 18,6 | 90 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36946 | 2 x 2 x 1,5 | Class 2 = stranded | Yellow | 526 | 112 | 18,6 | 90 |
| 35632 | 2 x 2 x 1,5 | Class 2 = stranded | Grey | 526 | 112 | 18,6 | 90 |
| 36647 | 2 x 3 x 1,5 | Class 2 = stranded | Blue | 623 | 119 | 19,9 | 135 |
| 35647 | 2 x 3 x 1,5 | Class 2 = stranded | Grey | 622 | 119 | 19,9 | 135 |
| 36633 | 4 x 2 x 1,5 | Class 2 = stranded | Blue | 732 | 127 | 21,2 | 180 |
| 35633 | 4 x 2 x 1,5 | Class 2 = stranded | Grey | 731 | 127 | 21,2 | 180 |
| 36648 | 4 x 3 x 1,5 | Class 2 = stranded | Blue | 861 | 137 | 22,9 | 270 |
| 35648 | 4 x 3 x 1,5 | Class 2 = stranded | Grey | 860 | 137 | 22,9 | 270 |
| 36634 | 5 x 2 x 1,5 | Class 2 = stranded | Blue | 865 | 138 | 23 | 225 |
| 35634 | 5 x 2 x 1,5 | Class 2 = stranded | Grey | 864 | 138 | 23 | 225 |
| 36635 | 6 x 2 x 1,5 | Class 2 = stranded | Blue | 991 | 148 | 24,7 | 270 |
| 35635 | 6 x 2 x 1,5 | Class 2 = stranded | Grey | 990 | 148 | 24,7 | 270 |
| 36636 | 7 x 2 x 1,5 | Class 2 = stranded | Blue | 1019 | 148 | 24,7 | 315 |
| 35636 | 7 x 2 x 1,5 | Class 2 = stranded | Grey | 1018 | 148 | 24,7 | 315 |
| 36649 | 7 x 3 x 1,5 | Class 2 = stranded | Blue | 1260 | 166 | 27,7 | 473 |
| 35649 | 7 x 3 x 1,5 | Class 2 = stranded | Grey | 1258 | 166 | 27,7 | 473 |
| 36637 | 8 x 2 x 1,5 | Class 2 = stranded | Blue | 1142 | 157 | 26,2 | 360 |
| 35637 | 8 x 2 x 1,5 | Class 2 = stranded | Grey | 1141 | 157 | 26,2 | 360 |
| 36650 | 8 x 3 x 1,5 | Class 2 = stranded | Blue | 1405 | 178 | 29,6 | 540 |
| 35650 | 8 x 3 x 1,5 | Class 2 = stranded | Grey | 1404 | 178 | 29,6 | 540 |
| 36638 | 10 x 2 x 1,5 | Class 2 = stranded | Blue | 1322 | 176 | 29,4 | 450 |
| 35638 | 10 x 2 x 1,5 | Class 2 = stranded | Grey | 1321 | 176 | 29,4 | 450 |
| 36639 | 12 x 2 x 1,5 | Class 2 = stranded | Blue | 1474 | 185 | 30,8 | 540 |
| 35639 | 12 x 2 x 1,5 | Class 2 = stranded | Grey | 1472 | 185 | 30,8 | 540 |
| 36640 | 14 x 2 x 1,5 | Class 2 = stranded | Blue | 1665 | 196 | 32,6 | 630 |
| 35640 | 14 x 2 x 1,5 | Class 2 = stranded | Grey | 1664 | 196 | 32,6 | 630 |
| 36655 | 16 x 2 x 1,5 | Class 2 = stranded | Blue | 1781 | 207 | 34,5 | 720 |
| 35655 | 16 x 2 x 1,5 | Class 2 = stranded | Grey | 1780 | 207 | 34,5 | 720 |
| 36641 | 19 x 2 x 1,5 | Class 2 = stranded | Blue | 2253 | 230 | 38,3 | 855 |
| 35641 | 19 x 2 x 1,5 | Class 2 = stranded | Grey | 2252 | 230 | 38,3 | 855 |
| 36642 | 24 x 2 x 1,5 | Class 2 = stranded | Blue | 2723 | 253 | 42,2 | 1080 |
| 35642 | 24 x 2 x 1,5 | Class 2 = stranded | Grey | 2720 | 253 | 42,2 | 1080 |
| 36660 | 1 x 2 x 2,5 | Class 2 = stranded | Blue | 350 | 83 | 13,9 | 75 |
| 35660 | 1 x 2 x 2,5 | Class 2 = stranded | Grey | 350 | 83 | 13,9 | 75 |
| 36676 | 1 x 3 x 2,5 | Class 2 = stranded | Blue | 378 | 86 | 14,4 | 113 |
| 35676 | 1 x 3 x 2,5 | Class 2 = stranded | Grey | 378 | 86 | 14,4 | 113 |
| 36661 | 1 x 4 x 2,5 | Class 2 = stranded | Blue | 447 | 95 | 15,8 | 150 |
| 35661 | 1 x 4 x 2,5 | Class 2 = stranded | Grey | 447 | 95 | 15,8 | 150 |
| 36662 | 2 x 2 x 2,5 | Class 2 = stranded | Blue | 651 | 123 | 20,5 | 150 |
| 35662 | 2 x 2 x 2,5 | Class 2 = stranded | Grey | 650 | 123 | 20,5 | 150 |
| 36677 | 2 x 3 x 2,5 | Class 2 = stranded | Blue | 763 | 130 | 21,7 | 225 |
| 35677 | 2 x 3 x 2,5 | Class 2 = stranded | Grey | 762 | 130 | 21,7 | 225 |
| 36663 | 4 x 2 x 2,5 | Class 2 = stranded | Blue | 908 | 140 | 23,4 | 300 |
| 35663 | 4 x 2 x 2,5 | Class 2 = stranded | Grey | 908 | 140 | 23,4 | 300 |
| 36678 | 4 x 3 x 2,5 | Class 2 = stranded | Blue | 1096 | 152 | 25,3 | 450 |
| 35678 | 4 x 3 x 2,5 | Class 2 = stranded | Grey | 1095 | 152 | 25,3 | 450 |
| 36664 | 5 x 2 x 2,5 | Class 2 = stranded | Blue | 1065 | 152 | 25,3 | 375 |
| 35664 | 5 x 2 x 2,5 | Class 2 = stranded | Grey | 1064 | 152 | 25,3 | 375 |
| 36665 | 6 x 2 x 2,5 | Class 2 = stranded | Blue | 1246 | 164 | 27,4 | 450 |
| 35665 | 6 x 2 x 2,5 | Class 2 = stranded | Grey | 1245 | 164 | 27,4 | 450 |
| 36666 | 7 x 2 x 2,5 | Class 2 = stranded | Blue | 1288 | 164 | 27,4 | 525 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 35666 | 7 x 2 x 2,5 | Class 2 = stranded | Grey | 1287 | 164 | 27,4 | 525 |
| 36679 | 7 x 3 x 2,5 | Class 2 = stranded | Blue | 1632 | 185 | 30,8 | 788 |
| 35679 | 7 x 3 x 2,5 | Class 2 = stranded | Grey | 1631 | 185 | 30,8 | 788 |
| 36667 | 8 x 2 x 2,5 | Class 2 = stranded | Blue | 1447 | 175 | 29,1 | 600 |
| 35667 | 8 x 2 x 2,5 | Class 2 = stranded | Grey | 1446 | 175 | 29,1 | 600 |
| 36680 | 8 x 3 x 2,5 | Class 2 = stranded | Blue | 1826 | 197 | 32,9 | 900 |
| 35680 | 8 x 3 x 2,5 | Class 2 = stranded | Grey | 1824 | 197 | 32,9 | 900 |
| 36668 | 10 x 2 x 2,5 | Class 2 = stranded | Blue | 1698 | 198 | 33 | 750 |
| 35668 | 10 x 2 x 2,5 | Class 2 = stranded | Grey | 1697 | 198 | 33 | 750 |
| 36669 | 12 x 2 x 2,5 | Class 2 = stranded | Blue | 1873 | 206 | 34,3 | 900 |
| 35669 | 12 x 2 x 2,5 | Class 2 = stranded | Grey | 1871 | 206 | 34,3 | 900 |
| 36670 | 14 x 2 x 2,5 | Class 2 = stranded | Blue | 2340 | 227 | 37,8 | 1050 |
| 35670 | 14 x 2 x 2,5 | Class 2 = stranded | Grey | 2338 | 227 | 37,8 | 1050 |
| 36685 | 16 x 2 x 2,5 | Class 2 = stranded | Blue | 2470 | 238 | 39,7 | 1200 |
| 35685 | 16 x 2 x 2,5 | Class 2 = stranded | Grey | 2469 | 238 | 39,7 | 1200 |
| 36671 | 19 x 2 x 2,5 | Class 2 = stranded | Blue | 2877 | 256 | 42,6 | 1425 |
| 35671 | 19 x 2 x 2,5 | Class 2 = stranded | Grey | 2875 | 256 | 42,6 | 1425 |
| 36672 | 24 x 2 x 2,5 | Class 2 = stranded | Blue | 3520 | 283 | 47,2 | 1800 |
| 35672 | 24 x 2 x 2,5 | Class 2 = stranded | Grey | 3518 | 283 | 47,2 | 1800 |



Fire Resistant, Halogen Free & MUD-resistant instrumentation, communication, and monitoring & control cables for fixed installation on offshore in safe & EX-areas. Twisted pairs/triples with overall screen of copper backed tape with tinned copper drain wire for EMI protection & overall tinned copper wire braid with high coverage density. Meets the fire resistant standards set both by the IEC 60331-21 and the more demanding 60331-1/2 (2009) specification for use in areas where circuit integrity in fire conditions is required. Different sheath colours on request.

| Characteristics | Properties | Unit |
|---|-------------------------------------|------|
| Product group | Shipboard communication cable | |
| Series | Offshore cable | |
| Type | O-Line+ BFOU(c) S4/S8 250 V | |
| Standardization | NEK TS 606 | |
| Stranding element | Article dependant, see detail sheet | |
| Conductor category | Class 2 = stranded | |
| Core insulation | Mica + HEPR | |
| Core identification | Numbers | |
| Construction outer shield | Tinned copper braiding | |
| Screen over stranding | Cu/Pet foil | |
| Material outer sheath | SHF2 MUD | |
| Colour outer sheath | Article dependant, see detail sheet | |
| Flame retardant | IEC 60332-1 / IEC 60332-3-22 Cat. A | |
| Insulation integrity in accordance with IEC 60331 | Yes | |
| Maximum conductor temperature | 90 | °C |
| Operating temperature, flexible | -20 / 70 | °C |
| Operating temperature, fixed | -40 / 70 | °C |
| Specification | See appendix | |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36500 | 1 x 2 x 0,75 | Class 2 = stranded | Blue | 206 | 67 | 11,1 | 23 |
| 36920 | 1 x 2 x 0,75 | Class 2 = stranded | Yellow | 206 | 67 | 11,1 | 23 |
| 35500 | 1 x 2 x 0,75 | Class 2 = stranded | Grey | 206 | 67 | 11,1 | 23 |
| 36516 | 1 x 3 x 0,75 | Class 2 = stranded | Blue | 228 | 70 | 11,7 | 34 |
| 35516 | 1 x 3 x 0,75 | Class 2 = stranded | Grey | 228 | 70 | 11,7 | 34 |
| 36501 | 1 x 4 x 0,75 | Class 2 = stranded | Blue | 261 | 76 | 12,6 | 45 |
| 35501 | 1 x 4 x 0,75 | Class 2 = stranded | Grey | 261 | 76 | 12,6 | 45 |
| 36502 | 2 x 2 x 0,75 | Class 2 = stranded | Blue | 365 | 92 | 15,3 | 45 |
| 35502 | 2 x 2 x 0,75 | Class 2 = stranded | Grey | 364 | 92 | 15,3 | 45 |
| 36517 | 2 x 3 x 0,75 | Class 2 = stranded | Blue | 405 | 97 | 16,1 | 68 |
| 35517 | 2 x 3 x 0,75 | Class 2 = stranded | Grey | 405 | 97 | 16,1 | 68 |
| 36503 | 4 x 2 x 0,75 | Class 2 = stranded | Blue | 472 | 103 | 17,2 | 90 |
| 35503 | 4 x 2 x 0,75 | Class 2 = stranded | Grey | 471 | 103 | 17,2 | 90 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|---------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36518 | 4 x 3 x 0,75 | Class 2 = stranded | Blue | 535 | 110 | 18,4 | 135 |
| 35518 | 4 x 3 x 0,75 | Class 2 = stranded | Grey | 535 | 110 | 18,4 | 135 |
| 36504 | 5 x 2 x 0,75 | Class 2 = stranded | Blue | 546 | 110 | 18,4 | 113 |
| 35504 | 5 x 2 x 0,75 | Class 2 = stranded | Grey | 545 | 110 | 18,4 | 113 |
| 36505 | 6 x 2 x 0,75 | Class 2 = stranded | Blue | 631 | 119 | 19,8 | 135 |
| 35505 | 6 x 2 x 0,75 | Class 2 = stranded | Grey | 630 | 119 | 19,8 | 135 |
| 36506 | 7 x 2 x 0,75 | Class 2 = stranded | Blue | 635 | 119 | 19,8 | 158 |
| 35506 | 7 x 2 x 0,75 | Class 2 = stranded | Grey | 634 | 119 | 19,8 | 158 |
| 36519 | 7 x 3 x 0,75 | Class 2 = stranded | Blue | 755 | 132 | 22 | 236 |
| 35519 | 7 x 3 x 0,75 | Class 2 = stranded | Grey | 754 | 132 | 22 | 236 |
| 36507 | 8 x 2 x 0,75 | Class 2 = stranded | Blue | 700 | 125 | 20,8 | 180 |
| 35507 | 8 x 2 x 0,75 | Class 2 = stranded | Grey | 700 | 125 | 20,8 | 180 |
| 36520 | 8 x 3 x 0,75 | Class 2 = stranded | Blue | 846 | 140 | 23,4 | 270 |
| 35520 | 8 x 3 x 0,75 | Class 2 = stranded | Grey | 845 | 140 | 23,4 | 270 |
| 36508 | 10 x 2 x 0,75 | Class 2 = stranded | Blue | 825 | 140 | 23,3 | 225 |
| 35508 | 10 x 2 x 0,75 | Class 2 = stranded | Grey | 825 | 140 | 23,3 | 225 |
| 36509 | 12 x 2 x 0,75 | Class 2 = stranded | Blue | 875 | 144 | 24 | 270 |
| 35509 | 12 x 2 x 0,75 | Class 2 = stranded | Grey | 874 | 144 | 24 | 270 |
| 36521 | 12 x 3 x 0,75 | Class 2 = stranded | Blue | 1074 | 160 | 26,7 | 405 |
| 35521 | 12 x 3 x 0,75 | Class 2 = stranded | Grey | 1073 | 160 | 26,7 | 405 |
| 36510 | 14 x 2 x 0,75 | Class 2 = stranded | Blue | 986 | 153 | 25,5 | 315 |
| 35510 | 14 x 2 x 0,75 | Class 2 = stranded | Grey | 985 | 153 | 25,5 | 315 |
| 36525 | 16 x 2 x 0,75 | Class 2 = stranded | Blue | 1020 | 160 | 26,7 | 360 |
| 35525 | 16 x 2 x 0,75 | Class 2 = stranded | Grey | 1019 | 160 | 26,7 | 360 |
| 36522 | 16 x 3 x 0,75 | Class 2 = stranded | Blue | 1220 | 179 | 29,8 | 540 |
| 35522 | 16 x 3 x 0,75 | Class 2 = stranded | Grey | 1218 | 179 | 29,8 | 540 |
| 36511 | 19 x 2 x 0,75 | Class 2 = stranded | Blue | 1205 | 173 | 28,8 | 428 |
| 35511 | 19 x 2 x 0,75 | Class 2 = stranded | Grey | 1204 | 173 | 28,8 | 428 |
| 36523 | 19 x 3 x 0,75 | Class 2 = stranded | Blue | 1473 | 191 | 31,9 | 641 |
| 35523 | 19 x 3 x 0,75 | Class 2 = stranded | Grey | 1471 | 191 | 31,9 | 641 |
| 36512 | 24 x 2 x 0,75 | Class 2 = stranded | Blue | 1431 | 189 | 31,5 | 540 |
| 35512 | 24 x 2 x 0,75 | Class 2 = stranded | Grey | 1430 | 189 | 31,5 | 540 |
| 36524 | 24 x 3 x 0,75 | Class 2 = stranded | Blue | 1952 | 219 | 36,5 | 810 |
| 35524 | 24 x 3 x 0,75 | Class 2 = stranded | Grey | 1950 | 219 | 36,5 | 810 |
| 36513 | 27 x 2 x 0,75 | Class 2 = stranded | Blue | 1548 | 197 | 32,9 | 608 |
| 35513 | 27 x 2 x 0,75 | Class 2 = stranded | Grey | 1546 | 197 | 32,9 | 608 |
| 36514 | 30 x 2 x 0,75 | Class 2 = stranded | Blue | 1680 | 205 | 34,2 | 675 |
| 35514 | 30 x 2 x 0,75 | Class 2 = stranded | Grey | 1678 | 205 | 34,2 | 675 |
| 36515 | 37 x 2 x 0,75 | Class 2 = stranded | Blue | 2150 | 231 | 38,5 | 833 |
| 35515 | 37 x 2 x 0,75 | Class 2 = stranded | Grey | 2148 | 231 | 38,5 | 833 |
| 36530 | 1 x 2 x 1,5 | Class 2 = stranded | Blue | 270 | 76 | 12,6 | 45 |
| 36924 | 1 x 2 x 1,5 | Class 2 = stranded | Yellow | 269 | 76 | 12,6 | 45 |
| 35530 | 1 x 2 x 1,5 | Class 2 = stranded | Grey | 269 | 76 | 12,6 | 45 |
| 36546 | 1 x 3 x 1,5 | Class 2 = stranded | Blue | 322 | 81 | 13,5 | 68 |
| 35546 | 1 x 3 x 1,5 | Class 2 = stranded | Grey | 322 | 81 | 13,5 | 68 |
| 36531 | 1 x 4 x 1,5 | Class 2 = stranded | Blue | 375 | 88 | 14,7 | 90 |
| 35531 | 1 x 4 x 1,5 | Class 2 = stranded | Grey | 375 | 88 | 14,7 | 90 |
| 36532 | 2 x 2 x 1,5 | Class 2 = stranded | Blue | 482 | 107 | 17,9 | 90 |
| 36926 | 2 x 2 x 1,5 | Class 2 = stranded | Yellow | 481 | 107 | 17,9 | 90 |
| 35532 | 2 x 2 x 1,5 | Class 2 = stranded | Grey | 481 | 107 | 17,9 | 90 |
| 36547 | 2 x 3 x 1,5 | Class 2 = stranded | Blue | 539 | 112 | 18,7 | 135 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 35547 | 2 x 3 x 1,5 | Class 2 = stranded | Grey | 539 | 112 | 18,7 | 135 |
| 36533 | 4 x 2 x 1,5 | Class 2 = stranded | Blue | 627 | 120 | 20 | 180 |
| 35533 | 4 x 2 x 1,5 | Class 2 = stranded | Grey | 626 | 120 | 20 | 180 |
| 36548 | 4 x 3 x 1,5 | Class 2 = stranded | Blue | 735 | 130 | 21,6 | 270 |
| 35548 | 4 x 3 x 1,5 | Class 2 = stranded | Grey | 734 | 130 | 21,6 | 270 |
| 36534 | 5 x 2 x 1,5 | Class 2 = stranded | Blue | 739 | 130 | 21,6 | 225 |
| 35534 | 5 x 2 x 1,5 | Class 2 = stranded | Grey | 738 | 130 | 21,6 | 225 |
| 36535 | 6 x 2 x 1,5 | Class 2 = stranded | Blue | 859 | 140 | 23,3 | 270 |
| 35535 | 6 x 2 x 1,5 | Class 2 = stranded | Grey | 858 | 140 | 23,3 | 270 |
| 36536 | 7 x 2 x 1,5 | Class 2 = stranded | Blue | 874 | 140 | 23,3 | 315 |
| 35536 | 7 x 2 x 1,5 | Class 2 = stranded | Grey | 873 | 140 | 23,3 | 315 |
| 36549 | 7 x 3 x 1,5 | Class 2 = stranded | Blue | 1080 | 158 | 26,3 | 473 |
| 35549 | 7 x 3 x 1,5 | Class 2 = stranded | Grey | 1079 | 158 | 26,3 | 473 |
| 36537 | 8 x 2 x 1,5 | Class 2 = stranded | Blue | 965 | 148 | 24,7 | 360 |
| 35537 | 8 x 2 x 1,5 | Class 2 = stranded | Grey | 964 | 148 | 24,7 | 360 |
| 36550 | 8 x 3 x 1,5 | Class 2 = stranded | Blue | 1212 | 168 | 28 | 540 |
| 35550 | 8 x 3 x 1,5 | Class 2 = stranded | Grey | 1211 | 168 | 28 | 540 |
| 36538 | 10 x 2 x 1,5 | Class 2 = stranded | Blue | 1111 | 166 | 27,7 | 450 |
| 35538 | 10 x 2 x 1,5 | Class 2 = stranded | Grey | 1110 | 166 | 27,7 | 450 |
| 36539 | 12 x 2 x 1,5 | Class 2 = stranded | Blue | 1238 | 173 | 28,8 | 540 |
| 35539 | 12 x 2 x 1,5 | Class 2 = stranded | Grey | 1236 | 173 | 28,8 | 540 |
| 36540 | 14 x 2 x 1,5 | Class 2 = stranded | Blue | 1396 | 184 | 30,6 | 630 |
| 35540 | 14 x 2 x 1,5 | Class 2 = stranded | Grey | 1395 | 184 | 30,6 | 630 |
| 36555 | 16 x 2 x 1,5 | Class 2 = stranded | Blue | 1500 | 193 | 32,2 | 720 |
| 35555 | 16 x 2 x 1,5 | Class 2 = stranded | Grey | 1499 | 193 | 32,2 | 720 |
| 36541 | 19 x 2 x 1,5 | Class 2 = stranded | Blue | 1702 | 207 | 34,5 | 855 |
| 35541 | 19 x 2 x 1,5 | Class 2 = stranded | Grey | 1700 | 207 | 34,5 | 855 |
| 36542 | 24 x 2 x 1,5 | Class 2 = stranded | Blue | 2235 | 236 | 39,3 | 1080 |
| 35542 | 24 x 2 x 1,5 | Class 2 = stranded | Grey | 2233 | 236 | 39,3 | 1080 |
| 36560 | 1 x 2 x 2,5 | Class 2 = stranded | Blue | 350 | 83 | 13,9 | 75 |
| 35560 | 1 x 2 x 2,5 | Class 2 = stranded | Grey | 350 | 83 | 13,9 | 75 |
| 36576 | 1 x 3 x 2,5 | Class 2 = stranded | Blue | 378 | 86 | 14,4 | 113 |
| 35576 | 1 x 3 x 2,5 | Class 2 = stranded | Grey | 378 | 86 | 14,4 | 113 |
| 36561 | 1 x 4 x 2,5 | Class 2 = stranded | Blue | 439 | 95 | 15,8 | 150 |
| 35561 | 1 x 4 x 2,5 | Class 2 = stranded | Grey | 439 | 95 | 15,8 | 150 |
| 36562 | 2 x 2 x 2,5 | Class 2 = stranded | Blue | 561 | 115 | 19,2 | 150 |
| 35562 | 2 x 2 x 2,5 | Class 2 = stranded | Grey | 560 | 115 | 19,2 | 150 |
| 36577 | 2 x 3 x 2,5 | Class 2 = stranded | Blue | 675 | 124 | 20,6 | 225 |
| 35577 | 2 x 3 x 2,5 | Class 2 = stranded | Grey | 674 | 124 | 20,6 | 225 |
| 36563 | 4 x 2 x 2,5 | Class 2 = stranded | Blue | 771 | 131 | 21,9 | 300 |
| 35563 | 4 x 2 x 2,5 | Class 2 = stranded | Grey | 770 | 131 | 21,9 | 300 |
| 36578 | 4 x 3 x 2,5 | Class 2 = stranded | Blue | 925 | 143 | 23,8 | 450 |
| 35578 | 4 x 3 x 2,5 | Class 2 = stranded | Grey | 924 | 143 | 23,8 | 450 |
| 36564 | 5 x 2 x 2,5 | Class 2 = stranded | Blue | 926 | 143 | 23,8 | 375 |
| 35564 | 5 x 2 x 2,5 | Class 2 = stranded | Grey | 925 | 143 | 23,8 | 375 |
| 36565 | 6 x 2 x 2,5 | Class 2 = stranded | Blue | 1088 | 156 | 26 | 450 |
| 35565 | 6 x 2 x 2,5 | Class 2 = stranded | Grey | 1087 | 156 | 26 | 450 |
| 36566 | 7 x 2 x 2,5 | Class 2 = stranded | Blue | 1119 | 156 | 26 | 525 |
| 35566 | 7 x 2 x 2,5 | Class 2 = stranded | Grey | 1118 | 156 | 26 | 525 |
| 36579 | 7 x 3 x 2,5 | Class 2 = stranded | Blue | 1387 | 175 | 29,2 | 788 |
| 35579 | 7 x 3 x 2,5 | Class 2 = stranded | Grey | 1385 | 175 | 29,2 | 788 |

| Partnumber | Construction | Conductor category | Colour outer sheath | Net weight (kg/km) | Bending radius after installation (mm) | Outer diameter approx. (mm) | Tensile load (N) |
|------------|--------------|--------------------|---------------------|--------------------|--|-----------------------------|------------------|
| 36567 | 8 x 2 x 2,5 | Class 2 = stranded | Blue | 1220 | 164 | 27,4 | 600 |
| 35567 | 8 x 2 x 2,5 | Class 2 = stranded | Grey | 1219 | 164 | 27,4 | 600 |
| 36580 | 8 x 3 x 2,5 | Class 2 = stranded | Blue | 1572 | 188 | 31,3 | 900 |
| 35580 | 8 x 3 x 2,5 | Class 2 = stranded | Grey | 1571 | 188 | 31,3 | 900 |
| 36568 | 10 x 2 x 2,5 | Class 2 = stranded | Blue | 1432 | 185 | 30,8 | 750 |
| 35568 | 10 x 2 x 2,5 | Class 2 = stranded | Grey | 1431 | 185 | 30,8 | 750 |
| 36569 | 12 x 2 x 2,5 | Class 2 = stranded | Blue | 1587 | 192 | 32 | 900 |
| 35569 | 12 x 2 x 2,5 | Class 2 = stranded | Grey | 1586 | 192 | 32 | 900 |
| 36570 | 14 x 2 x 2,5 | Class 2 = stranded | Blue | 1800 | 205 | 34,1 | 1050 |
| 35570 | 14 x 2 x 2,5 | Class 2 = stranded | Grey | 1798 | 205 | 34,1 | 1050 |
| 36585 | 16 x 2 x 2,5 | Class 2 = stranded | Blue | 2450 | 223 | 37,1 | 1200 |
| 35585 | 16 x 2 x 2,5 | Class 2 = stranded | Grey | 2449 | 223 | 37,1 | 1200 |
| 36571 | 19 x 2 x 2,5 | Class 2 = stranded | Blue | 2403 | 238 | 39,7 | 1425 |
| 35571 | 19 x 2 x 2,5 | Class 2 = stranded | Grey | 2402 | 238 | 39,7 | 1425 |
| 36572 | 24 x 2 x 2,5 | Class 2 = stranded | Blue | 2924 | 264 | 44 | 1800 |
| 35572 | 24 x 2 x 2,5 | Class 2 = stranded | Grey | 2922 | 264 | 44 | 1800 |

Technical Product information

Offshore Cables NEK606 TS-2009

General Design

All TKF O-Line+ offshore cables are constructed according to the latest NEK-606 and IEC 60092 standards. TKF took great care to provide cables with the best installability and safety properties possible, resulting in very flexible cables, no unneeded extra layers of foils that make stripping the cable time consuming, and a choice for materials with superior qualities.

Materials & Construction

Conductors

All conductors consist of stranded tinned copper conductors with a resistance according to Class 2 off IEC 60228. For the stranding we chose a fine stranded design with a much better flexibility than standard class 2 conductors.

Insulation

All offshore cables are insulated with EPR, cross linked Ethylene propylene rubber, according to IEC 60092-351, type HF-EPR. This material allows a continuous conductor temperature of 90 °C and withstands a temporary overload temperature of 130 °C and a short-circuit temperature of 250 °C. The Fire-Resistant cables have conductors fully wrapped in mica-glass tape before being insulated with EPR insulation.

Bedding/Inner covering

All RFOU & BFOU type offshore cables have a halogen free bedding material over the cores, with excellent properties on both gas-tightness and easy stripability

Armouring/Braiding

All O-Line+ RFOU & BFOU cables have tinned-copper wire braiding in compliance with IEC 60092-350, which can also be used as PE because of a sufficient cross section according to the IEC 60092-352 rules. The tinned wires give a high corrosion resistance of the braid and offer both mechanical and EMI protection.

Screening

The (C) type cables have twisted pairs overall screened with Copper-PET Foil with minimum overlap 25% and a tinned copper stranded drain wire. The (I) type cables have twisted pairs individually screened with Copper-PET Foil with minimum overlap 25% and a tinned copper stranded drain wire, and an overall screen of copper-PET foil with drain wire.

Sheathing

All TKF O-Line+ cables have a thermosetting cross-linked outer sheath, type SHF-2 (SHF-MUD) according to IEC 60092-359, flame retardant, halogen free and mud-resistant.

Environmental Conditions

Oil Resistancy

| Test Fluid | Temperature | Duration |
|--------------------------|-------------|----------|
| Mineral oil type IRM 902 | 100 °C | 24 Hrs |

Drilling MUD resistancy

The O-Line+ cables are drilling mud resistant according to NEK606-2009 and IEC 60092-353

| Test Fluid | Temperature | Test Duration |
|---|-------------|---------------|
| Mineral Oil type IRM 903 | 100 °C | 7 days |
| Water Based Mud (Calcium Bromide Brine) | 70 °C | 56 days |
| Oil Based Mud (CarboSea®) | 170 °C | 56 days |

Operating & installation temperatures

| | temperature |
|--|-------------|
| Max Conductor operating temperature | 90 °C |
| Min Environment temperature when installing | -20 °C |
| Minimum Environment temperature when installed | -40 °C |

Low Temperature behavior

The O-Line+ cables pass the special test for low temperature behaviour of CSA C22.2 and IEC 60092-350: 8.9 for Cold Bend & Impact

| Test | temperature |
|--|-------------|
| Cold Bend | -40 °C |
| Cold Impact | -35 °C |
| Minimum Environment temperature when installed | -40 °C |

Fire behavior

Flame Retardant

All O-Line+ cables provide resistance to ignition and flame spread. The RFOU and BFOU cables pass the tests for flame retardancy according to IEC 60332-1 (vertical flame

propagation for a single wire or cable) and IEC 60332-3-22 Cat. A (vertical flame spread of vertically mounted bunched wires or cables). The UX wires tested to IEC 60332-1 (vertical flame propagation for a single wire or cable)

Halogen Free

All O-Line+ cables are completely Halogen Free, which means that in case of fire no corrosive and toxic halogenic gases are released which could harm people or electronic equipment, even in locations where the fire itself is not present. The cable are tested for Halogen content according to IEC 60754 - 1 & IEC 60754 - 2

Low Smoke

In case of fire the O-Line+ cables have low-smoke emission, preventing people and emergency crews getting lost in thick smoke.

Low smoke emission is tested according to IEC 61034-2

Fire Resistancy

All O-Line+ Fire Resistant cables (BFOU types) enable circuit integrity in case of fire both to the old 60331-11/-21/-31 standard and the upgraded more realistic IEC 60331-1/2 standard. This ensures the working of emergency equipment in case of fire.

International Standards

The O-Line+ cables in this catalogue are designed and tested in accordance with the following standards, where applicable.

| Standard | Description |
|-----------------|---|
| NEK TS 606:2009 | Norwegian Elektrotechnical Standard - Cables for offshore installations halogen-free and/or mud resistant Technical Specification |
| IEC 61892-4 | Mobile and fixed offshore units - Electrical installations - Part 4: Cables |
| IEC 60092-350 | General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications |
| IEC 60092-351 | Insulating materials for shipboard offshore units, power, control, instrumentation, telecommunication and data cables |
| IEC 60092-352 | Electrical installations in ships –Choice and installation of cables for low-voltage power systems |
| IEC 60092-353 | Single and multicore non-radial field power cables with extruded solid insulation for rated voltages 1 kV and 3 kV |

| | |
|--------------------|--|
| IEC 60092-354 | Single- and three-core power cables with extruded solid insulation for rated voltages 6 kV (Um = 7.2 kV) up to 30 kV (Um = 36 kV) |
| IEC 60092-359 | Sheathing materials for shipboard power and telecommunication cables |
| IEC 60092-376 | Cables for control and instrumentation circuits 150/250 V (300 V) |
| IEC 60228 | Conductors of insulated cables |
| IEC 60331-11 | Tests for electric cables under fire conditions - circuit integrity - apparatus - fire alone at a flame temperature of at least 750 °C |
| IEC 60331-21 | Tests for electric cables under fire conditions - circuit integrity - procedures and requirements - cables of rated voltage up to and including 0.6/1.0 kV |
| IEC 60331-1/2 | Tests for electric cables under fire conditions – Test for method for fire with shock at temperature of at least 803° C for cables rated up to and including 0,6/1kV |
| IEC 60332-1 | Tests on electric cables under fire conditions - part 1: test on a single vertical insulated wire or cable |
| IEC 60332-3-22 - A | Tests on electric cables under fire conditions - part 3-22: test for vertical flame spread of vertically mounted bunched wires or cables - category A |
| IEC 60754-1 | Test on gases evolved during combustion of electric cables - determination of the amount of halogen acid gas |
| IEC 60811 | Common test methods for insulating and sheathing materials of electric cables |
| IEC 61034 series | Measurement of smoke density of electric cables burning under defined conditions |
| IEC 60446 | Basic and safety principles for man-machine interface, marking and identification of conductors by colours or alphanumeric |
| HD 308 S2: 2001 | European normalization (CENELEC) : Identification of cores in cables and flexible cords |

Cable Installation

Bending Radius

Recommended Minimum Bending Radii according to IEC 60092-352

| Cable Type | Bending Radius |
|--|----------------|
| UX <25 mm | R = 4 x D |
| UX >25 mm | R = 6 x D |
| RFOU, BFOU 0,6/1kV | R = 6 x D |
| RFOU(i), RFOU(c), BFOU (i), BFOU (c) | R = 8 x D |

Max. Pulling Force

The cable pulling tension during installation can be estimated by means of the following formula:

Max. Pulling Force (N) = $15 \times$ total cross section

Pulling instructions

It is recommended to use a sleeve on the cable head when pulling cable into cable trays, to evenly distribute the pulling stress over the whole conductor area of the cable. When using lubricants to lower the friction in cable pulling a lubricant suitable for Halogen Free cable should be used. When installing cables in below zero temperatures, installing the cable is greatly eased when the cable has been stored in a location with a temperature of +15 degrees for at least 24

hours. When pulling cable in winter conditions and the reels have been stored outside, please check the reels for ice buildup and layers of cable frozen together, which could cause damage to the cable when unwinding the reels.

Installation temperature

Minimum recommended installation temperature for cables of rated voltage up to 20 kV, such as:
RFOU - BFOU - RU - BU = -20°C

Technical Product information

Offshore Cables NEK606 TS-2009

Electrical Characteristics

Electrical values instrumentation cables

| Type | Twisting & Core size | Approx Capacitance (nF/km) | Approx. Inductance, (mH/km) | Max. conductor Resistance at 20 °C, (Ohm/km) | L/R ratio, (mH/Ohm) |
|---------------------|----------------------|----------------------------|-----------------------------|--|---------------------|
| RFOU(c), BFOU (c) | Pair 0,75mm2 | 100 | 0,67 | 26,3 | 12,7 |
| | Triple 0,75mm2 | 100 | 0,67 | 26,3 | 12,7 |
| | Pair 1,5mm2 | 110 | 0,63 | 12,9 | 24,4 |
| | Triple 1,5mm2 | 110 | 0,63 | 12,9 | 24,4 |
| | Pair 2,5mm2 | 125 | 0,59 | 8,02 | 36,8 |
| | Triple 2,5mm2 | 125 | 0,59 | 8,02 | 36,8 |
| RFOU(i), BFOU(i) | Pair 0,75mm2 | 110 | 0,67 | 26,3 | 12,7 |
| | Triple 0,75mm2 | 110 | 0,67 | 26,3 | 12,7 |
| | Pair 1,5mm2 | 125 | 0,63 | 12,9 | 24,4 |
| | Triple 1,5mm2 | 125 | 0,63 | 12,9 | 24,4 |
| | Pair 2,5mm2 | 145 | 0,59 | 8,02 | 36,8 |
| | Triple 2,5mm2 | 145 | 0,59 | 8,02 | 36,8 |

Electrical values power cables

Reactance

Reactance of cables is based on the spacing between the conductors and of the magnetic properties of steelwork near the installed cables, and may thus vary based on the cable installation. For installations remote from steelwork the

calculated reactance can be calculated with the following formula and are tabulated below:

$$2 \cdot \pi \cdot f \cdot L$$

f = frequency in Hz

L = inductance in H

| Reactance | RFOU 0,6/1kV | | BFOU 0,6/1kV | |
|-----------|----------------------------------|-------|--------------|-------|
| | Cross Section (mm ²) | 50Hz | 60Hz | 50Hz |
| 0.5 | 0,110 | 0,132 | 0,115 | 0,138 |
| 2.5 | 0,103 | 0,123 | 0,107 | 0,129 |
| 4 | 0,096 | 0,115 | 0,100 | 0,120 |
| 6 | 0,090 | 0,108 | 0,094 | 0,112 |
| 10 | 0,084 | 0,101 | 0,088 | 0,105 |
| 16 | 0,080 | 0,096 | 0,082 | 0,099 |
| 25 | 0,079 | 0,095 | 0,081 | 0,098 |
| 35 | 0,076 | 0,092 | 0,078 | 0,094 |
| 50 | 0,076 | 0,092 | 0,078 | 0,093 |
| 70 | 0,075 | 0,091 | 0,077 | 0,092 |
| 95 | 0,073 | 0,088 | 0,075 | 0,090 |
| 120 | 0,072 | 0,086 | 0,073 | 0,088 |
| 150 | 0,072 | 0,087 | 0,073 | 0,088 |
| 185 | 0,072 | 0,086 | 0,073 | 0,088 |
| 240 | 0,072 | 0,086 | 0,072 | 0,087 |
| 300 | 0,071 | 0,086 | 0,072 | 0,086 |
| 400 | 0,110 | 0,132 | 0,115 | 0,138 |

Current Rating for General Installations

The current ratings are applicable for d.c. and a.c. with a nominal frequency of 50 Hz or 60 Hz and an ambient air temperature of 45° C. For higher frequencies, the current rating shall be calculated with an appropriate method (e.g. IEC 60287). For other ambient air temperatures the correction factors have to be applied. These ratings are applicable, without correction factors, for cables bunched together on cable trays, in cable conduits, pipes or trunking, unless more than six cables operating simultaneously at their full rated capacity are laid close together without free air circulating around them. In this case a correction factor of 0.85 should be applied. The tables are for general reference purposes only, and do not describe all installation methods existing in practice. For more detailed information see IEC 60092-352(2005) Annex A & B. For specific situations not covered by these standards exact current calculations can be made by our engineering office.

Correction Factors for ambient air temperatures for maximum conductor temperature of 90° C

| Air Temperature | 35° C | 40° C | 45° C | 50° C | 55° C | 60° C |
|-------------------|-------|-------|-------|-------|-------|-------|
| Correction Factor | 1.10 | 1.05 | 1.00 | 0.94 | 0.88 | 0.82 |
| Air Temperature | 65° C | 70° C | 75° C | 80° C | 85° C | 90° C |
| Correction Factor | 0.74 | 0.67 | 0.58 | 0.47 | - | - |

Current carrying capacities in continuous service at maximum rated conductor temperature of 90° C in A, at 45° C ambient air temperature

| Current Rating (A) | | | | | | |
|--------------------|------------------------|------|------|------|-------|------|
| Cross Section(mm2) | Number of cores loaded | | | | | |
| | 1 | | 2 | | 3 & 4 | |
| 1.5 | 23 | | 20 | | 16 | |
| 2.5 | 40 | | 26 | | 21 | |
| 4 | 51 | | 34 | | 28 | |
| 6 | 52 | | 44 | | 36 | |
| 10 | 72 | | 61 | | 50 | |
| 16 | 96 | | 82 | | 67 | |
| 25 | 127 | | 108 | | 89 | |
| 35 | 157 | | 133 | | 110 | |
| 50 | 196 | | 167 | | 137 | |
| 70 | 242 | | 206 | | 169 | |
| 95 | 293 | | 249 | | 205 | |
| 120 | 339 | | 288 | | 237 | |
| 150 | 389 | | 331 | | 272 | |
| 185 | 444 | | 377 | | 311 | |
| 240 | 522 | | 444 | | 365 | |
| 300 | 601 | | 511 | | 421 | |
| | d.c. | a.c. | d.c. | a.c. | d.c. | a.c. |
| 400 | 690 | 670 | 587 | 570 | 483 | 469 |
| 500 | 780 | 720 | 663 | 612 | 546 | 504 |
| 630 | 890 | 780 | 757 | 663 | 623 | 548 |

For cables with >4 conductors the current rating can be calculated with the following formula:

$$I = \frac{I_1}{\sqrt[3]{n}}$$

where I_1 = current rating for single core, n = number of cores

| # of cores | Ampacity (A) | | |
|------------|--------------|--------|------|
| | 1,5mm2 | 2,5mm2 | 4mm2 |
| 5 | 13 | 23 | 30 |
| 6 | 13 | 22 | 28 |
| 7 | 12 | 21 | 27 |
| 8 | 12 | 20 | 26 |
| 10 | 11 | 19 | 24 |
| 12 | 10 | 17 | 22 |
| 16 | 9 | 16 | 20 |
| 19 | 9 | 15 | 19 |
| 24 | 8 | 14 | 18 |
| 27 | 8 | 13 | 17 |
| 30 | 7 | 13 | 16 |
| 34 | 7 | 12 | 16 |
| 37 | 7 | 12 | 15 |

Short Circuit Current

The maximum permissible short circuit current for different cables is based on the formula

$$I_k = 146 \cdot \frac{S}{\sqrt{t}}$$

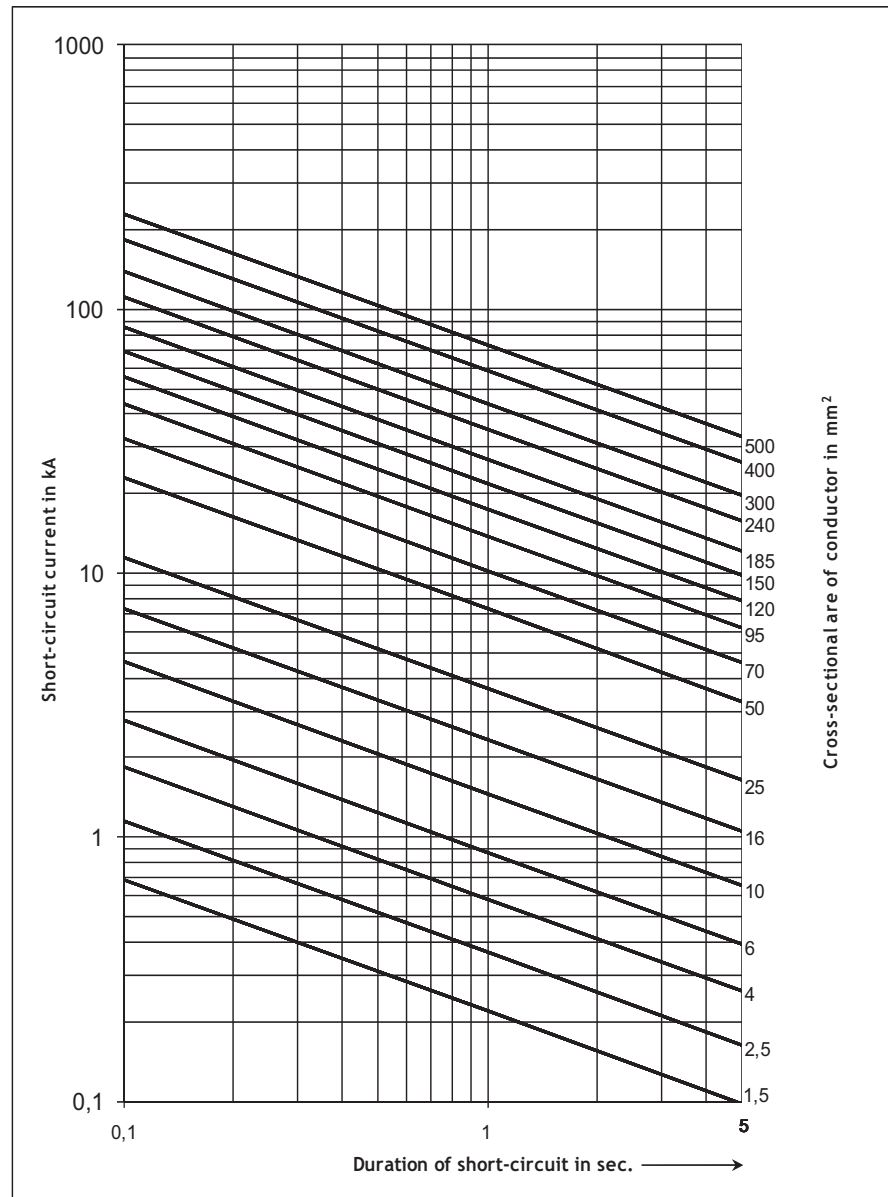
I_k = the maximum permissible short-circuit current in Ampere

S = the cross section area of the conductor in mm²

t = the duration of the short-circuit in seconds

The formula is acceptable for an increase in temperature from 90°C at the start to 250°C at the end (according to IEC 60093-3). In the figure the permissible short-circuit current is given in kA as a function of time (from 0.1 to 5 seconds) and as a function of the cross sectional area of the conductor.

| Max Short Circuit Current in kA | Duration Short Circuit | |
|---------------------------------|------------------------|----------|
| | 0,1 Second | 1 second |
| 1 | 0,461 | 0,146 |
| 1.5 | 0,692 | 0,219 |
| 2.5 | 1,154 | 0,365 |
| 4 | 1,846 | 0,584 |
| 6 | 2,77 | 0,876 |
| 10 | 4,616 | 1,46 |
| 16 | 7,387 | 2,336 |
| 25 | 11,542 | 3,65 |
| 35 | 16,159 | 5,11 |
| 50 | 23,084 | 7,3 |
| 70 | 32,318 | 10,22 |
| 95 | 43,86 | 13,87 |
| 120 | 55,403 | 17,52 |
| 150 | 69,253 | 21,9 |
| 185 | 85,413 | 27,01 |
| 240 | 110,806 | 35,04 |
| 300 | 138,507 | 43,8 |
| 400 | 184,677 | 58,4 |
| 500 | 230,846 | 73 |
| 630 | 290,866 | 91,98 |



Technical Product information

Offshore Cables NEK606 TS-2009

Sheath Colours & Core Identification

Overview types, standards, core identification and sheath colour.

All O-Line+ sheath and core colours are in accordance with NEK 606:2009, IEC60092-series, IEC 60446 and HD 308:S2

| Application | Type | Core Identification | Standard Sheath Colour |
|----------------------------|---------------------------------------|----------------------------|------------------------|
| Low voltage (0,6/1kV) | RFOU, BFOU | HD308 S2-2001 | black |
| Instrumentation (250/300V) | RFOU (I), RFOU(C), BFOU (I) BFOU(C) | Black/Blue cores + numbers | grey |

Different sheath colours on request

Core Identification

Low voltage power cables 0,6/1 kV -1,8/3kV - According to HD308 S2-2001

| Cond . | Without Yellow/Green Conductor | | | | | With Yellow/Green Conductor (G) | | | | |
|--------|--------------------------------|--------|-------|------|-------|---------------------------------|------|--------|-------|------|
| | N | L1/L2 | L/L2 | L3 | L3 | PE | N | L1/L2 | L/L2 | L3 |
| 1 | | | Black | | | | | | | |
| 2 | Blue | Orange | | | | | | | | |
| 3 | | Orange | Black | Grey | | Green/Yellow | Blue | Orange | | |
| 4 | Blue | Orange | Black | Grey | | Green/Yellow | | Orange | Black | Grey |
| 5 | Blue | Orange | Black | Grey | Black | Green/Yellow | Blue | Orange | | |
| >5 | | | Nr. | | | Green/Yellow | | | Nr. | |

Notes: 1) PE = protective conductor - beschermingsleiding - Schutzleiter - conducteur de protection
 N = neutral conductor - nulleiding - Neutralleiter - conducteur neutre
 L, L1, L2, L3 = phase conductors - faseleidingen - Phasenleiter - conducteurs de phase

Communication Cables 250/300 V- According to NEK 606:2009

| Pairs (n x 2 x y mm ²) | |
|------------------------------------|----------|
| 1 (Black) | 2 (Blue) |
| 3..etc | 4..etc |

| Triples (n x 3 x y mm ²) | | |
|--------------------------------------|----------|-----------|
| 1 (Black) | 2 (Blue) | 3 (Brown) |
| 4..etc | 5..etc | 6..etc |

More information

This catalogue also contains information about product families. Information at item level can be requested via our website and from our sales staff. This catalogue has been customised. Information about products that have not been included in this catalogue is available from our sales departments and can also be found on our website www.tkf.nl.



Please contact us for additional technical or commercial information. Contact information for our sales teams can be found on the next page and on our website.

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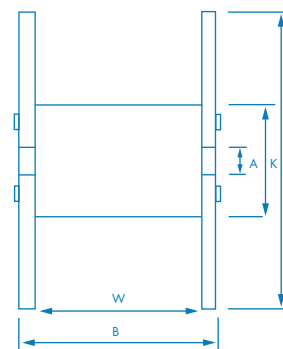
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Cable drum sizes and weights

A wide range of drums with various sizes and weights is used to store and transport our cables. The most common types of drum and their sizes and weights are shown in this table.

| Flange diameter (F) mm | Core diameter (K) mm | Central hole diameter (A) mm | Largest width (B) mm | Winding width (W) mm | Empty weight kg | Volume m ³ |
|---------------------------|-------------------------|---------------------------------|-------------------------|-------------------------|--------------------|--------------------------|
| *600 | 250 | 80 | 468 | 400 | 7,5 | 0,17 |
| *800 | 400 | 100 | 480 | 400 | 14 | 0,31 |
| 800 | 500 | 100 | 500 | 485 | 43 | 0,31 |
| *1000 | 500 | 100 | 605 | 485 | 28 | 0,31 |
| 1000 | 500 | 100 | 609 | 485 | 74 | 0,61 |
| 1200 | 600 | 100 | 724 | 600 | 108 | 1,04 |
| 1500 | 800 | 100 | 946 | 750 | 160 | 2,13 |
| 1600 | 800 | 100 | 1030 | 834 | 240 | 2,64 |
| 1800 | 900 | 100 | 1030 | 834 | 400 | 3,34 |
| 2100 | 900 | 100 | 1148 | 950 | 450 | 5,06 |
| 2250 | 1400 | 100 | 1122 | 830 | 600 | 5,68 |
| 2500 | 1450 | 100 | 1220 | 930 | 700 | 7,63 |
| 2500 | 1450 | 100 | 1458 | 1150 | 800 | 9,11 |
| 2650 | 1450 | 100 | 1488 | 1175 | 850 | 10,45 |
| 2800 | 1700 | 100 | 1520 | 1157 | 1050 | 11,92 |
| 3000 | 1600 | 100 | 1600 | 1235 | 1150 | 14,40 |

* Plastic drum



F = Diameter flange
K = Diameter core
A = Diameter axle-hole
B = Largest width
W = Winding width

Empty drum return

To get your empty drums in the Netherlands collected quickly, please send your request to our shipping department via the website (www.tkf.nl) or by e-mail to haspels@tkf.nl. If drums have to be collected outside the Netherlands, please contact our sales staff.





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