



Exploration & Production

ESP Cables

Round Cables

DW 400 R / DEVILINE R 400 °F

Round cable providing a high degree of flexibility and crush resistance. For easier installation and maintenance, Prysmian ESP cables are shipped on reels of a continuous, splice-free length. Maximum permissible temperature is 400 °F (204 °C).

APPLICATION

Downhole extraction systems are critical for crude oil extraction. The reliability of the electrical power supply to an Electrical Submersible Pump (ESP) system depends on the performance and reliability of the power feed through to the wellhead, power cable, motor lead cable, pig tail connectors and related equipment such as the pump and motor. Prysmian ESP cables offer an efficient, rugged and easy to handle solution that delivers reliable performance in a package that is straightforward to install and maintain.

STANDARDS & APPROVALS

IEEE 1018.

QUALITY & TESTING

Prysmian has a built-in multi-step quality assurance program, covering the production process from cable design and raw material purchases to final inspection and testing documentation.

The ISO 9001 quality system of Prysmian Group (together with ISO 14001 and OHSAS 18001) has been assessed, approved and is currently audited by SGS.

DESIGN & CONSTRUCTION

1 CONDUCTOR

Solid or stranded plain (or tinned) copper conductors. A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

2 INSULATION

A proprietary high quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

3 TAPE

A fluoropolymer tape is helically applied over the insulation to provide added protection against oil and insulation decompression.

4 BRAID

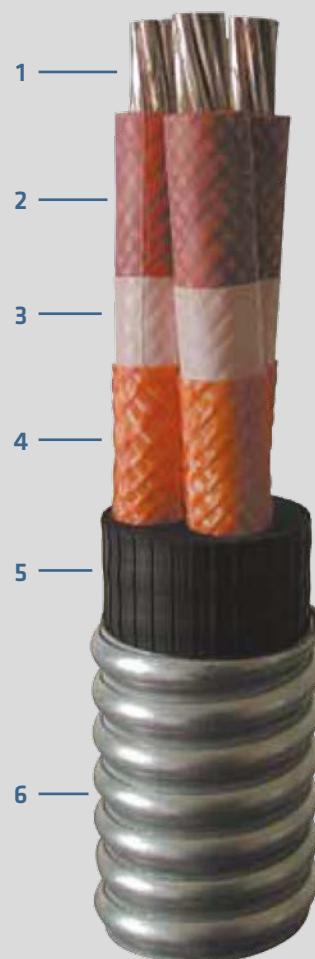
A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

5 JACKET

A proprietary EPDM high temperature formulation, specially compounded to provide excellent heat, oil resistance and very low swell, is extruded over the cabled insulated conductors.

6 ARMOUR

An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in thickness of 0.025" or 0.034". Stainless steel or Monel 400 armour is available for use in highly corrosive well environments. A selection of various armour profiles is available to suit various downhole applications.



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PERFORMANCES / RATINGS

CHEMICAL RESISTANCE



galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

MAXIMUM AXIAL LOAD



50 N/mm²

MIN. INSTALLATION TEMPERATURE



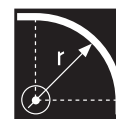
-40 °F
(-40 °C)

MAX. RATED TEMPERATURE



+400 °F
(+204 °C)

MIN. BENDING RADIUS FOR INSTALLED CABLES



7 times
overall diameter

TECHNICAL DATA

DEVILINE R 400 °F - 3 Conductors EPDM/EPDM/GSTA 5 kV - Insulation thickness 0,075" (1,91 mm)

SIZE		CONDUCTOR STRANDS	CONDUCTOR DIAMETER		INSULATION THICKNESS		INSULATION DIAMETER		DIMENSIONS UNDER ARMOUR		OVERALL DIMENSIONS		WEIGHT		ELECTRICAL PARAMETERS	
(awg)	(mm ²)	(nr)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r	x
1	42,4	7	0,331	8,41	0,075	1,91	0,49	12,4	1,24	31,5	1,44	36,6	1825	2715	0,226	0,034
1	42,4	1	0,289	7,34	0,075	1,91	0,44	11,2	1,15	29,2	1,35	34,3	1700	2535	0,220	0,033
2	33,6	7	0,292	7,42	0,075	1,91	0,45	11,4	1,15	29,2	1,35	34,3	1575	2345	0,294	0,035
2	33,6	1	0,258	6,55	0,075	1,91	0,41	10,4	1,08	27,4	1,28	32,5	1480	2200	0,286	0,035
4	21,2	1	0,204	5,18	0,075	1,91	0,36	9,1	0,96	24,4	1,16	29,5	1135	1690	0,441	0,037
6	13,3	1	0,162	4,11	0,075	1,91	0,32	8,1	0,87	22,1	1,07	27,2	910	1355	0,700	0,040

DEVILINE R 400 °F - 3 Conductors EPDM/EPDM/GSTA 5 kV - Insulation thickness 0,090" (2,29 mm)

SIZE		CONDUCTOR STRANDS	CONDUCTOR DIAMETER		INSULATION THICKNESS		INSULATION DIAMETER		DIMENSIONS UNDER ARMOUR		OVERALL DIMENSIONS		WEIGHT		ELECTRICAL PARAMETERS	
(awg)	(mm ²)	(nr)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r	x
1	42,4	7	0,331	8,41	0,090	2,29	0,52	13,2	1,30	33,0	1,50	38,1	1920	2860	0,226	0,035
1	42,4	1	0,289	7,34	0,090	2,29	0,47	11,9	1,21	30,7	1,41	35,8	1790	2665	0,220	0,035
2	33,6	7	0,292	7,42	0,090	2,29	0,48	12,2	1,22	31,0	1,42	36,1	1665	2475	0,294	0,036
2	33,6	1	0,258	6,55	0,090	2,29	0,44	11,2	1,14	29,0	1,34	34,0	1565	2330	0,286	0,036
4	21,2	1	0,204	5,18	0,090	2,29	0,39	9,9	1,03	26,2	1,23	31,2	1215	1805	0,441	0,039
6	13,3	1	0,162	4,11	0,090	2,29	0,35	8,9	0,94	23,9	1,14	29,0	985	1465	0,700	0,042

r = conductor electrical resistance at 400 °F | x = inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0.025" armour tape thickness

This product information sheet is provided for reference only.
For Voltage Drop/Ampacity data, please contact your Prysmian representative.