

QUALITY WIRELINE & CABLE CATALOG

 +1 877-836-3928

 f-e-t.com/qwc

 qualitywireline@f-e-t.com



Cable Specifications

GREASELESS ENVIRO-LITE E-LINE® CABLES

Cable Size	SIZE (in)	DIA (in)	B.S. lbs	WEIGHT (lbs/kft)	WEIGHT IN WATER (lbs/kft)	ARMOR WIRES IN/OUT	WIRES B.S. lbs IN/OUT	STRETCH COEFFICIENT ft/Kft/Klbs	CDR RESIS OHMS/Kft	CAP Pt/Ft	MAX TEMP °F	MIN SHEAVE DIA (in)	MAX VOLT
1-FT-295-12/12-HS-19-ETFJ	-	0.295	7000	117	86	12/12	314/250	2.1	4.0	55	375	24	1200
1-FT-350-11/14-HS-19-ETFJ	-	0.350	10,000	170	127	11/14	536/292	1.5	2.8	56	375	26	1500

CONVENTIONAL WIRELINE CABLES

Cable Size	SIZE (in)	DIA (in)	B.S. lbs	WEIGHT (lbs/kft)	WEIGHT IN WATER (lbs/kft)	ARMOR WIRES IN/OUT	WIRES B.S. lbs IN/OUT	STRETCH COEFFICIENT ft/Kft/Klbs	CDR RESIS OHMS/Kft	CAP Pt/Ft	MAX TEMP °F	MIN SHEAVE DIA (in)	MAX VOLT
1-P-380-12/18-G-19	3/8	0.380	15000	259	218	12/18	585/585	1.00	2.8	39	300	21	1500
1-FT-380-12/18-G-19	3/8	0.380	15000	269	227	12/18	585/585	1.00	2.8	39	500	21	1500

1-P-322-12/18-G-19	5/16	0.322	11300	188	158	12/18	420/420	1.20	2.8	46	300	18	1500
1-FT-322-12/18-G-19	5/16	0.322	11300	193	163	12/18	420/420	1.20	2.8	48	500	18	1500
1-A-322-12/18-G-19	5/16	0.322	11300	196	166	12/18	420/420	1.20	2.8	45	550	18	1500
1-Q-322-12/18-G-19	5/16	0.322	11300	196	166	12/18	420/420	1.20	2.8	45	600	18	1500
1-FT-322-12/18-75-19	5/16	0.322	10400	197	168	12/18	387/387	1.20	3.3	48	500	18	1500
1-FT-322-12/18-77-19	5/16	0.322	10400	197	168	12/18	387/387	1.20	3.3	48	500	18	1500
1-FT-322-12/18-35N-19	5/16	0.322	11000	206	176	12/18	400/400	1.20	3.3	48	500	18	1500

1-P-288-12/18-G-19	9/32	0.288	10000	154	130	12/18	370/370	1.60	2.8	57	300	16	1500
1-FT-288-12/18-G-19	9/32	0.288	10000	157	134	12/18	370/370	1.60	2.8	55	500	16	1500
1-A-288-12/18-G-19	9/32	0.288	10000	159	135	12/18	370/370	1.60	2.8	54	550	16	1500
1-Q-288-12/18-G-19	9/32	0.288	10000	159	135	12/18	370/370	1.60	2.8	54	600	16	1500
1-FT-288-12/18-75-19	9/32	0.288	8200	158	135	12/18	308/308	1.90	4.0	49	500	16	1500
1-FT-288-12/18-77-19	9/32	0.288	8200	157	134	12/18	308/308	1.90	4.0	49	500	16	1500
1-FT-288-12/18-35N-19	9/32	0.288	9200	167	144	12/18	335/335	1.90	4.0	49	500	16	1500

1-P-258-12/18-G-19	1/4	0.258	7000	122	104	12/18	282/282	1.90	4.0	50	300	14	1200
1-FT-258-12/18-G-19	1/4	0.258	7000	126	103	12/18	282/282	1.90	4.0	51	500	14	1200
1-A-258-12/18-G-19	1/4	0.258	7000	126	104	12/18	282/282	1.90	4.0	48	550	14	1200
1-Q-258-12/18-G-19	1/4	0.258	7000	126	104	12/18	282/282	1.90	4.0	48	600	14	1200
1-FT-258-12/18-75-19	1/4	0.258	6000	127	108	12/18	247/247	2.30	4.4	51	500	14	1200
1-FT-258-12/18-77-19	1/4	0.258	6500	127	107	12/18	272/272	2.30	4.4	51	500	14	1200
1-FT-258-12/18-35N-19	1/4	0.258	6500	135	115	12/18	272/272	2.00	4.4	51	500	14	1200

1-P-224-12/18-G-19	7/32	0.224	5600	94	79	12/18	204/204	2.50	4.0	59	300	14	1200
1-FT-224-12/18-G-19	7/32	0.224	5600	97	82	12/18	204/204	2.50	4.0	61	500	14	1200
1-A-224-12/18-G-19	7/32	0.224	5600	99	84	12/18	204/204	2.50	4.0	58	550	14	1200
1-Q-224-12/18-G-19	7/32	0.224	5600	99	84	12/18	204/204	2.50	4.0	58	600	14	1200
1-FT-224-12/18-75-7	7/32	0.224	4800	96	81	12/18	186/186	2.90	6.7	45	500	14	1200
1-FT-224-12/18-77-7	7/32	0.224	5200	96	81	12/18	196/196	3.10	6.7	45	500	14	1200
1-FT-224-12/18-35N-7	7/32	0.224	5200	103	89	12/18	204/204	2.90	6.7	45	500	14	1200

1-P-224-15/15-G-19	7/32	0.224	5600	94	79	15/15	129/282	2.20	4.0	60	300	14	1200
1-FT-224-15/15-G-19	7/33	0.224	5600	97	82	15/15	129/282	2.20	4.0	58	500	14	1200
1-A-224-15/15-G-19	7/32	0.224	5600	99	84	15/15	129/282	2.20	4.0	58	550	14	1200
1-Q-224-15/15-G-19	7/32	0.224	5600	99	84	15/15	129/282	2.20	4.0	58	600	14	1200
1-FT-224-15/15-75-7	7/32	0.224	4800	93.0	80	15/15	115/247	2.70	6.7	44	500	14	1200
1-FT-224-15/15-77-7	7/32	0.224	5200	93.0	79	15/15	125/272	3.00	6.7	44	500	14	1200
1-FT-224-15/15-35N-7	7/32	0.224	5200	99.0	85	15/15	125/272	2.40	6.7	44	500	14	1200

1-P-185-12/15-G-7	3/16	0.185	3900	63	54	12/15	127/198	4.00	9.8	46	300	12	1000
1-A-185-12/15-G-7	3/16	0.185	3900	66	56	12/15	127/198	4.00	9.8	45	550	12	1000
1-Q-185-12/15-G-7	3/16	0.185	3900	66	56	12/15	127/198	4.00	9.8	45	600	12	1000

About Us

Forum Energy Technologies manufactures high performance wireline cables for the oil and gas industry, specializing in cased hole wireline cables for all environments.

As a leading wireline cable OEM, our team is committed to providing our customers with quality cable solutions. Utilizing the latest manufacturing and quality control equipment in the industry, our team is able provide customers with a range of cable options.

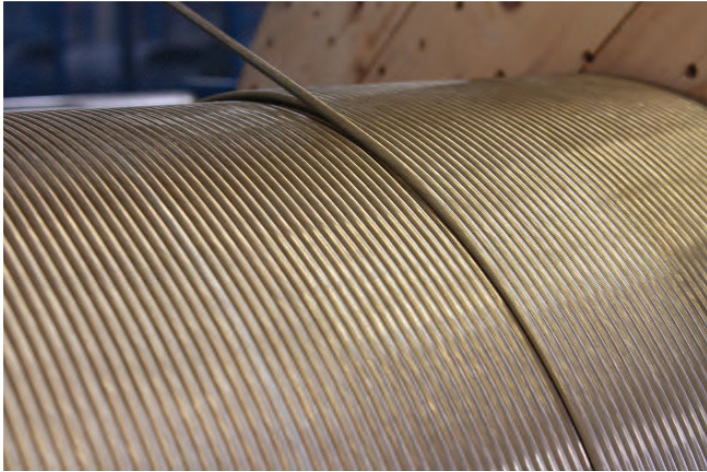
Dedicated to producing the perfect cable, our innovative team of experts developed a unique extrusion process for improved cable performance. Engineered to outperform industry standards, our wireline cables are also able to withstand both the considerable pressure and extreme temperature of well conditions.

The Quality Difference at Forum

Our quality control program is a five-star system with over 1,500 quality control checks during the manufacturing of each and every cable. This unparalleled effort results in cables that are approaching perfect in every way.

Our five-star quality system includes the following:

- A detailed quality control inspection is performed on all finished cables ensuring electrical and mechanical integrity.
- A complete and detailed final inspection report and quality control document is supplied with every cable and is archived along with a physical sample of the cable in the event it is required in the future.
- During the manufacture process the diameter and ovality of a cable is measured using laser technology at multiple points to ensure the consistency of the product. Digital history is logged and recorded detailing the diameter, ovality and concentricity of the extruded core, and the diameter and ovality of the inner and outer armor. Little is left to error with this level of quality control.
- Each finished cable once tested is covered with a flexible wrap to protect it during shipping.
- Our Quality Management System is registered to ISO-9001:2015.



Catalog Table of Contents	
About Us.....	1
Cable Designation Information.....	2
Design and Manufacturing Details.....	2
Enviro-Lite Cable.....	3
3/8" Conventional (12 Inner / 18 Outer).....	5
5/16" Conventional (12 Inner / 18 Outer).....	6
9/32" Conventional (12 Inner / 18 Outer).....	8
9/32" Corrosion Resistant (12 Inner / 18 Outer).....	9
1/4" Conventional (12 Inner / 18 Outer).....	10
1/4" Corrosion Resistant (12 Inner / 18 Outer).....	11
7/32" Conventional (12 Inner / 18 Outer).....	12
7/32" Corrosion Resistant (12 Inner / 18 Outer).....	13
7/32" Conventional (15 Inner / 15 Outer).....	14
7/32" Corrosion Resistant (15 Inner / 15 Outer).....	15
3/16" Conventional (12 Inner / 15 Outer).....	16
DyPak (3/16", 7/32", and 1/4").....	17
Training.....	18
Sales and Technical Contacts.....	19

Cable Designation Information

1	P	322	12/18	G	19
A	B	C	D	E	F

A Number of Conductors

C Cable Diameter (in thousands of an inch)

E Type of Armor Material

B Type of Electrical Insulation

D Armor Type (Inner Wires/Outer Wires)

G (GIPS)	35N (MP 35N)
75 (Alloy 75)	HS (High Strength)
77 (Alloy 77)	

A (PFA)	T (ETFE)
FT (FEP/ETFE)	Q (Q600)
P (Polypropylene)	X (Others)

12/18	15/15
11/12	12/15

F Type of Copper Construction

7 Wires	19 Wires
---------	----------

Design & Manufacturing Details

Manufactured & Tested to Meet Industry Standards

THE QUALITY ADVANTAGE

- Unique to Quality Wireline is our custom designed “infinite lay” armoring process which allows us to optimize armor coverage ensuring the highest quality cable.
- Our leading edge high speed Rewinder coupled with our rigorous quality control on wire supply eliminates the vast majority of potential quality problems related to wire.

GENERAL

- Temperature rating of the cable is based on a ‘normal tension and temperature profile.’ ‘Normal tension and temperature profile’ refers to situations in which cable tension and temperature increase with depth. Maximum temperature being at the bottom of the borehole.
- All cable diameters and wire diameter shown in the catalog are nominal.

ELECTRICAL

- All electrical conductors are water blocked using a process which precisely controls the amount of blocking material applied to the conductor. This process effectively minimizes the effects of fluid or gas migration through the conductor.
- 95%- 100% concentricity maintained on all extruded conductor.
- State-of-the-art non-contact measuring systems for diameter, ovality and concentricity provide real-time quality control data, enabling a fully closed loop control system to ensure optimum conductor quality. Electronic records are archived with the quality control documents.
- Repair to the electrical conductor insulation are not allowed if the copper conductor is exposed.
- Electrical conductor resistance and insulation is corrected to 20° C/ 68° F.
- Electrical resistance and capacitance values in the catalog are nominal.

CABLE & BREAKING STRENGTH

- There is a direct relationship between the tensile strength of the wire and the breaking strength of the cable
- Breaking strength values are specified on individual cable specification sheets.
- The cable breaking strength is tested and guaranteed, with no cable end rotation allowed.
- The cable breaking strength is a calculated value with ends fixed.
- The cable working load on standard cables has been extended to 60% of rated cable breaking strength.

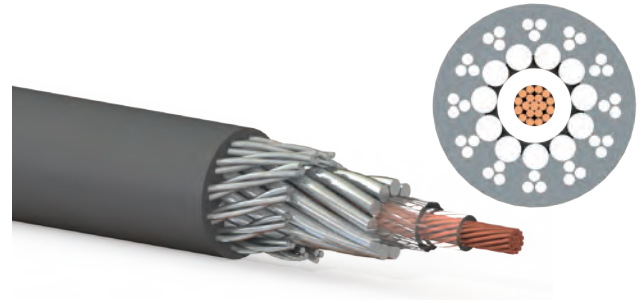
ARMOR

- Several armor types can be selected depending on the application and well conditions. Our standard cables are armored with galvanized improved plow steel (GIPS) wire, high strength cables are armored with extra galvanized improved plow steel (XGIPS). Our cables for corrosive environment are armored with corrosive resistant nickel alloy materials, including S75, S77 and MP-35N.
- TCI (Torque Compression Inhibitor) is applied between armor layers to minimize the fluid migration and for friction between the layers during the initial runs on the cable, until seasoning occurs.
- The cable armor is coated with a protective grease to maintain armor surface quality during shipping, handling and storage.
- All armor wires are pre-formed during the manufacturing process. Average pre-form value 77% (+/- 2.5%).
- Butt welds are NOT allowed in the outer armoring process.

.295" (7.49mm)

Enviro-Lite Cable

12 Inner / 12 Outer Wire Construction



Construction Characteristics

	English	Metric
Conductor – 16 AWG , 19 x 0.0119"	0.059"	1.50 mm
Insulation – OD	0.115"	2.92 mm
Inner Armor (GIPS) 12 Wires 0.0348"	0.178"	4.52 mm
Outer Armor (GIPS) 12 ea @ 3 x 0.0180" strands	0.295"	7.49 mm

Electrical Characteristics

	English	Metric
Voltage Rating	1,200 VDC	1,200 VDC
DC Conductor Resistance at 68°F (20°C)	4.0 Ω/kft	13.1 Ω/km
DC Armor Resistance at 68°F (20°C)	4.8 Ω/kft	15.7 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

	English	Metric
Breaking Strength (Ends Fixed)	7,000 lbs	3,175 kgs
Working Load (Maximum)	3,500 lbs	1,587 kgs
Individual Wire B.S. (Inner / Outer)	537/292 lbs	243/132 kgss
Suggested Minimum Sheave Diameter	24"	610 mm
Outside Diameter	0.295" $\frac{+0.003"}{-0.002"}$	7.49 mm $\frac{+0.076\text{ mm}}{-0.051\text{ mm}}$
Stretch Coefficient	2.1 ft/kft/klb	2.4 m/km/5kN

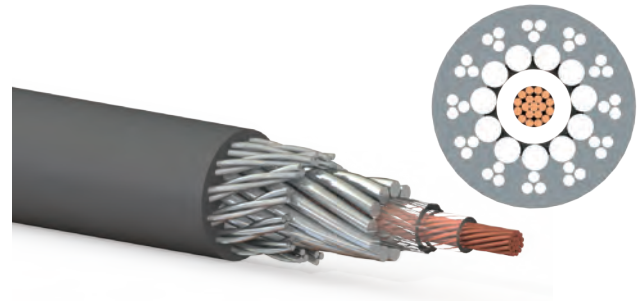
Cable Design Characteristics

	Measure	1-FT-350-11/12-HS-19-ETFJ
Temperature Rating	English	375 °F
	Metric	190 °C
Insulation	Type	FEP/ETFE
Capacitance Conductor to Armor	English	56 pF/ft
	Metric	184 pF/m
Weight in Air	English	164 lbs/kft
	Metric	245 kgs/km
Weight in Water	English	121 lbs/kft
	Metric	180 kgs/km

.350" (8.89mm)

Enviro-Lite Cable

11 Inner / 14 Outer Wire Construction



Construction Characteristics

	English	Metric
Conductor – 15 AWG , 19 x 0.0142"	0.071"	1.803 mm
Insulation – OD	0.136"	3.45 mm
Inner Armor (GIPS) 11 Wires 0.0455"	0.219"	5.56 mm
Outer Armor (GIPS) 14 ea @ 3 x 0.0200" strands	0.301"	7.67 mm

Electrical Characteristics

	English	Metric
Voltage Rating	1,500 VDC	1,500 VDC
DC Conductor Resistance at 68°F (20°C)	2.8 Ω/kft	9.2 Ω/km
DC Armor Resistance at 68°F (20°C)	3.4 Ω/kft	11.2 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

	English	Metric
Breaking Strength (Ends Fixed)	10,000 lbs	4,535 kgs
Working Load (Maximum)	5,000 lbs	12,267 kgs
Individual Wire B.S. (Inner / Outer)	537/292 lbs	243/132 kgss
Suggested Minimum Sheave Diameter	26"	660 mm
Outside Diameter	0.350" $\begin{matrix} +0.003" \\ -0.002" \end{matrix}$	8.89 mm $\begin{matrix} +0.076 \text{ mm} \\ -0.051 \text{ mm} \end{matrix}$
Stretch Coefficient	1.5 ft/kft/klb	1.7 m/km/5kN

Cable Design Characteristics

	Measure	1-FT-350-11/14-HS-19-ETFJ
Temperature Rating	English	375 °F
	Metric	190 °C
Insulation	Type	FEP/ETFE
Capacitance Conductor to Armor	English	56 pF/ft
	Metric	184 pF/m
Weight in Air	English	164 lbs/kft
	Metric	245 kgs/km
Weight in Water	English	121 lbs/kft
	Metric	180 kgs/km

Enviro-Lite

3/8" (9.65mm)

Mono Conductor Cable

12 Inner / 18 Outer Wire Construction



Conventional

Construction Characteristics

	English	Metric
Conductor – 15 AWG , 19 x 0.0142"	0.071"	1.803 mm
Insulation – OD	0.183"	4.648 mm
Inner Armor (GIPS) 12 Wires @ 0.0525"	0.275"	6.985 mm
Outer Armor (GIPS) 18 Wires @ 0.525"	0.380"	9.652 mm

Electrical Characteristics

	English	Metric
Voltage Rating	1,500 VDC	1,500 VDC
DC Conductor Resistance at 68°F (20°C)	2.8 Ω/kft	9.2 Ω/km
DC Armor Resistance at 68°F (20°C)	1.5 Ω/kft	4.92 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

	English	Metric
Breaking Strength (Ends Fixed)	15,000 lbs	6,804 kgs
Working Load (Maximum)	9,000 lbs	4,082 kgs
Individual Wire B.S. (Inner / Outer)	585 / 585 lbs	265 / 265 kgss
Suggested Minimum Sheave Diameter	21"	533 mm
Outside Diameter	0.380" $\begin{matrix} +0.006" \\ -0.002" \end{matrix}$	9.652 mm $\begin{matrix} +0.152 \text{ mm} \\ -0.051 \text{ mm} \end{matrix}$
Stretch Coefficient	1.0 ft/kft/klb	1.125 m/km/5kN

Cable Design Characteristics

	Measure	1-P-380-12/18-G-19	1-FT-380-12/18-G-19
Temperature Rating	English	300 °F	500 °F
	Metric	149 °C	260 °C
Insulation	Type	Polypropolyne	FEP/ETFE
Capacitance Conductor to Armor	English	39 pF/ft	39 pF/ft
	Metric	128 pF/m	128 pF/m
Weight in Air	English	259 lbs/kft	269 lbs/kft
	Metric	386 kgs/km	400 kgs/km
Weight in Water	English	218 lbs/kft	227 lbs/kft
	Metric	324 kgs/km	338 kgs/km

5/16" (8.18 mm)

Mono Conductor Cable

12 Inner / 18 Outer Wire Construction



Conventional

Construction Characteristics

	English	Metric
Conductor – 15 AWG , 19 x 0.0142"	0.071"	1.803 mm
Insulation – OD	0.155"	3.937 mm
Inner Armor (GIPS) 12 Wires @ 0.0445"	0.233"	5.918 mm
Outer Armor (GIPS) 18 Wires @ 0.0445"	0.322"	8.179 mm

Electrical Characteristics

	English	Metric
Voltage Rating	1,500 VDC	1,500 VDC
DC Conductor Resistance at 68°F (20°C)	2.8 Ω/kft	9.2 Ω/km
DC Armor Resistance at 68°F (20°C)	2.1 Ω/kft	6.9 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

	English	Metric
Breaking Strength (Ends Fixed)	11,300 lbs	5,125 kgs
Working Load (Maximum)	6,780 lbs	3,075 kgs
Individual Wire B.S. (Inner / Outer)	420 / 420 lbs	190 / 190 kgss
Suggested Minimum Sheave Diameter	18"	457 mm
Outside Diameter	0.322" $\begin{matrix} +0.005" \\ -0.002" \end{matrix}$	8.179 mm $\begin{matrix} +0.127\text{ mm} \\ -0.051\text{ mm} \end{matrix}$
Stretch Coefficient	1.2 ft/kft/klb	1.35 m/km/5kN

Cable Design Characteristics

	Measure	1-P-322-12/18-G-19	1-FT-322-12/18-G-19	1-A-322-12/18-G-19	1-Q-322-12/18/G-19
Temperature Rating	English	300 °F	500 °F	550 °F	600 °F
	Metric	149 °C	260 °C	288 °C	315 °C
Insulation	Type	Polypropolyne	FEP/ETFE	PFA	Q600
Capacitance Conductor to Armor	English	46 pF/ft	48 pF/ft	45 pF/ft	45 pF/ft
	Metric	151 pF/m	159 pF/m	148 pF/m	148 pF/m
Weight in Air	English	188 lbs/kft	193 lbs/kft	196 lbs/kft	196 lbs/kft
	Metric	280 kgs/km	287 kgs/km	292 kgs/km	292 kgs/km
Weight in Water	English	158 lbs/kft	163 lbs/kft	166 lbs/kft	166 lbs/kft
	Metric	235 kgs/km	244 kgs/km	247 kgs/km	247 kgs/km

5/16" (8.18 mm)

Mono Conductor Cable
12 Inner / 18 Outer Wire Construction

Construction Characteristics

	Measure	1-FT-322-12/18-75-19	1-FT-322-12/18-77-19	1-FT-322-12/18-35N-19
Conductor – 15 AWG , 19 x 0.0142"	English	0.071"	0.071"	0.071"
	Metric	1.803 mm	1.803 mm	1.803 mm
Insulation – OD	English	0.155"	0.155"	0.155"
	Metric	3.937 mm	3.937 mm	3.937 mm
Inner Armor (Alloy) 12 Wires @ 0.0445"	English	0.233"	0.233"	0.233"
	Metric	5.918 mm	5.918 mm	5.918 mm
Outer Armor (Alloy) 18 Wires @ 0.0445"	English	0.322"	0.322"	0.322"
	Metric	8.179 mm	8.179 mm	8.179 mm

Mechanical Characteristics

	Measure	1-FT-322-12/18-75-19	1-FT-322-12/18-77-19	1-FT-322-12/18-35N-19
Weight in Air	English	197 lbs/kft	197 lbs/kft	206 lbs/kft
	Metric	293 kgs/km	293 kgs/km	307 kgs/km
Weight in Water	English	168 lbs/kft	168 lbs/kft	176 lbs/kft
	Metric	250 kgs/km	250 kgs/km	262 kgs/km
Breaking Strength (Ends Fixed)	English	10,400 lbs	10,400 lbs	11,000 lbs
	Metric	4,717 kgs	4,717 kgs	4,990 kgs
Working Load (Maximum)	English	5,200 lbs	5,200 lbs	5,500 lbs
	Metric	2,360 kgs	2,360 kgs	2,495 kgs
Individual Wire Breaking Strength (Inner / Outer)	English	387 / 387 lbs	387 / 387 lbs	400 / 400 lbs
	Metric	175 / 175 kgs	175 / 175 kgs	181 / 181 kgs
Stretch Coefficient	English	1.2 ft/kft/klb	1.2 ft/kft/klb	1.2 ft/kft/klb
	Metric	1.35 m/km/5kN	1.35 m/km/5kN	1.35 m/km/5kN
Outside Diameter	English	0.322" $\frac{+0.005"}{-0.002"}$	0.322" $\frac{+0.005"}{-0.002"}$	0.322" $\frac{+0.005"}{-0.002"}$
	Metric	8.179 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$	8.179 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$	8.179 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$
Suggested Minimum Sheave Diameter	English	18"	18"	18"
	Metric	457 mm	457 mm	457 mm

Electrical Characteristics

	Measure	1-FT-322-12/18-75-19	1-FT-322-12/18-77-19	1-FT-322-12/18-35N-19
Temperature Rating	English	500 °C	500 °C	500 °C
	Metric	260 °C	260 °C	260 °C
Insulation	Type	FEP/ETFE	FEP/ETFE	FEP/ETFE
Voltage Rating:	English	1,500 VDC	1,500 VDC	1,500 VDC
	Metric	1,500 VDC	1,500 VDC	1,500 VDC
DC Conductor Resistance at 68°F (20°C)	English	3.3 Ω/kft	3.3 Ω/kft	3.3 Ω/kft
	Metric	10.8 Ω/km	10.8 Ω/km	10.8 Ω/km
DC Armor Resistance at 68°F (20°C)	English	9.0 Ω/kft	11.0 Ω/kft	11 Ω/kft
	Metric	29.5 Ω/km	36.0 Ω/km	36 Ω/km
Capacitance Conductor to Armor	English	48 pF/ft	48 pF/ft	48 pF/ft
	Metric	159 pF/m	159 pF/m	159 pF/m
Minimum Insulation Resistance	English	1,500 MΩ*kft	1,500 MΩ*kft	1,500 MΩ*kft
	Metric	457 MΩ*km	457 MΩ*km	457 MΩ*km

Corrosion Resistant

9/32" (7.31 mm)

Mono Conductor Cable

12 Inner / 18 Outer Wire Construction



Conventional

Construction Characteristics

	English	Metric
Conductor – 15 AWG , 19 x 0.0142"	0.071"	1.803 mm
Insulation – OD	0.137"	3.480 mm
Inner Armor (GEIPS) 12 Wires @ 0.040"	0.208"	5.283 mm
Outer Armor (GEIPS) 18 Wires @ 0.040"	0.288"	7.315 mm

Electrical Characteristics

	English	Metric
Voltage Rating	1,500 VDC	1,500 VDC
DC Conductor Resistance at 68°F (20°C)	2.8 Ω/kft	9.2 Ω/km
DC Armor Resistance at 68°F (20°C)	2.8 Ω/kft	9.2 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

	English	Metric
Breaking Strength (Ends Fixed)	10,000 lbs	4,535 kgs
Working Load (Maximum)	6,000 lbs	2,721 kgs
Individual Wire B.S. (Inner / Outer)	370 / 370 lbs	167 / 167 kgss
Suggested Minimum Sheave Diameter	16"	406 mm
Outside Diameter	0.288" $\begin{matrix} +0.005" \\ -0.002" \end{matrix}$	7.32 mm $\begin{matrix} +0.127 \text{ mm} \\ -0.051 \text{ mm} \end{matrix}$
Stretch Coefficient	1.6 ft/kft/klb	1.8 m/km/5kN

Cable Design Characteristics

	Measure	1-P-288-12/18-G-19	1-FT-288-12/18-G-19	1-A-288-12/18-G-19	1-Q-288-12/18-G-19
Temperature Rating	English	300 °F	500 °F	550 °F	600 °F
	Metric	149 °C	260 °C	288 °C	315 °C
Insulation	Type	Polypropolyne	FEP/ETFE	PFA	Q600
Capacitance Conductor to Armor	English	57 pF/ft	55 pF/ft	54 pF/ft	54 pF/ft
	Metric	187 pF/m	180 pF/m	177 pF/m	177 pF/m
Weight in Air	English	154 lbs/kft	157 lbs/kft	159 lbs/kft	159 lbs/kft
	Metric	229 kgs/km	233 kgs/km	237 kgs/km	237 kgs/km
Weight in Water	English	130 lbs/kft	134 lbs/kft	135 lbs/kft	135 lbs/kft
	Metric	194 kgs/km	198 kgs/km	201 kgs/km	201 kgs/km

9/32" (7.31 mm)

Mono Conductor Cable
12 Inner / 18 Outer Wire Construction

Construction Characteristics

	Measure	1-FT-288-12/18-75-19	1-FT-288-12/18-77-19	1-FT-288-12/18-35N-19
Conductor – 16 AWG , 19 x 0.0128"	English	0.064"	0.064"	0.064"
	Metric	1.63 mm	1.626 mm	1.626 mm
Insulation – OD	English	0.137"	0.137"	0.137"
	Metric	3.480 mm	3.480 mm	3.480 mm
Inner Armor (Alloy) 12 Wires @ 0.040"	English	0.208"	0.208"	0.208"
	Metric	5.283 mm	5.283 mm	5.283 mm
Outer Armor (Alloy) 18 Wires @ 0.040"	English	0.288"	0.288"	0.288"
	Metric	7.315 mm	7.315 mm	7.315 mm

Electrical Characteristics

	Measure	1-FT-288-12/18-75-19	1-FT-288-12/18-77-19	1-FT-288-12/18-35N-19
Temperature Rating	English	500 °C	500 °C	500 °C
	Metric	260 °C	260 °C	260 °C
Insulation	Type	FEP/ETFE	FEP/ETFE	FEP/ETFE
Voltage Rating:	English	1,500 VDC	1,500 VDC	1,500 VDC
	Metric	1,500 VDC	1,500 VDC	1,500 VDC
DC Conductor Resistance at 68°F (20°C)	English	4.0 Ω/kft	4.0 Ω/kft	4.0 Ω/kft
	Metric	13.1 Ω/km	13.1 Ω/km	13.1 Ω/km
DC Armor Resistance at 68°F (20°C)	English	10.0 Ω/kft	10.0 Ω/kft	10.0 Ω/kft
	Metric	32.8 Ω/km	32.8 Ω/km	32.8 Ω/km
Capacitance Conductor to Armor	English	49 pF/ft	49 pF/ft	49 pF/ft
	Metric	161 pF/m	161 pF/m	161 pF/m
Minimum Insulation Resistance	English	1,500 MΩ*kft	1,500 MΩ*kft	1,500 MΩ*kft
	Metric	457 MΩ*km	457 MΩ*km	457 MΩ*km

Mechanical Characteristics

	Measure	1-FT-288-12/18-75-19	1-FT-288-12/18-77-19	1-FT-288-12/18-35N-19
Weight in Air	English	158 lbs/kft	157 lbs/kft	167 lbs/kft
	Metric	237 kgs/km	237 kgs/km	249 kgs/km
Weight in Water	English	135 lbs/kft	134 lbs/kft	144 lbs/kft
	Metric	203 kgs/km	203 kgs/km	215 kgs/km
Breaking Strength (Ends Fixed)	English	8,200 lbs	8,200 lbs	9,200 lbs
	Metric	3,727 kgs	3,727 kgs	4,182 kgs
Working Load (Maximum)	English	4,100 lbs	4,100 lbs	4,600 lbs
	Metric	1,860 kgs	1,860 kgs	2,091 kgs
Individual Wire Breaking Strength (Inner / Outer)	English	308 / 308 lbs	308 / 308 lbs	335 / 335 lbs
	Metric	139 / 139 kgs	139 / 139 kgs	151 / 151 kgs
Stretch Coefficient	English	1.9 ft/kft/klb	1.9 ft/kft/klb	1.9 ft/kft/klb
	Metric	2.13 m/km/5kN	2.13 m/km/5kN	2.13 m/km/5kN
Outside Diameter	English	0.288" $\begin{matrix} +0.005" \\ -0.002" \end{matrix}$	0.288" $\begin{matrix} +0.005" \\ -0.002" \end{matrix}$	0.288" $\begin{matrix} +0.005" \\ -0.002" \end{matrix}$
	Metric	7.32 mm $\begin{matrix} +0.127\text{ mm} \\ -0.051\text{ mm} \end{matrix}$	7.32 mm $\begin{matrix} +0.127\text{ mm} \\ -0.051\text{ mm} \end{matrix}$	7.32 mm $\begin{matrix} +0.127\text{ mm} \\ -0.051\text{ mm} \end{matrix}$
Suggested Minimum Sheave Diameter	English	16"	16"	16"
	Metric	406 mm	406 mm	406 mm

Corrosion Resistant

1/4" (6.55 mm)

Mono Conductor Cable

12 Inner / 18 Outer Wire Construction



Conventional

Construction Characteristics

	English	Metric
Conductor – 16 AWG, 19 x 0.0119"	0.059"	1.499 mm
Insulation – OD	0.123"	3.124 mm
Inner Armor (GIPS) 12 Wires @ 0.0358"	0.186"	4.724 mm
Outer Armor (GIPS) 18 Wires @ 0.0358"	0.258"	6.553 mm

Electrical Characteristics

	English	Metric
Voltage Rating	1,200 VDC	1,200 VDC
DC Conductor Resistance at 68°F (20°C)	4.0 Ω/kft	13.1 Ω/km
DC Armor Resistance at 68°F (20°C)	3.0 Ω/kft	9.84 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

	English	Metric
Breaking Strength (Ends Fixed)	7,000 lbs	3,175 kgs
Working Load (Maximum)	4,200 lbs	1,905 kgs
Individual Wire B.S. (Inner / Outer)	282 / 282 lbs	127 / 127 kgss
Suggested Minimum Sheave Diameter	14"	356 mm
Outside Diameter	0.258" $\begin{matrix} +0.005" \\ -0.002" \end{matrix}$	6.55 mm $\begin{matrix} +0.127\text{ mm} \\ -0.051\text{ mm} \end{matrix}$
Stretch Coefficient	1.9 ft/kft/klb	2.14 m/km/5kN

Cable Design Characteristics

	Measure	1-P-258-12/18-G-19	1-FT-258-12/18-G-19	1-A-258-12/18-G-19	1-Q-258-12/18-G-19
Temperature Rating	English	300 °F	500 °F	550 °F	600 °F
	Metric	149 °C	260 °C	288 °C	315 °C
Insulation	Type	Polypropolyne	FEP/ETFE	PFA	Q600
Capacitance Conductor to Armor	English	50 pF/ft	51 pF/ft	48 pF/ft	48 pF/ft
	Metric	164 pF/m	167 pF/m	156 pF/m	156 pF/m
Weight in Air	English	122 lbs/kft	126 lbs/kft	126 lbs/kft	126 lbs/kft
	Metric	181 kgs/km	188 kgs/km	188 kgs/km	188 kgs/km
Weight in Water	English	104 lbs/kft	103 lbs/kft	104 lbs/kft	104 lbs/kft
	Metric	155 kgs/km	153 kgs/km	155 kgs/km	155 kgs/km

1/4" (6.55 mm)

Mono Conductor Cable
12 Inner / 18 Outer Wire Construction

Construction Characteristics

	Measure	1-FT-258-12/18-75-19	1-FT-258-12/18-77-19	1-FT-258-12/18-35N-19
Conductor – 16 AWG , 19 x 0.0119"	English	0.059"	0.059"	0.059"
	Metric	1.499 mm	1.499 mm	1.499 mm
Insulation – OD	English	0.123"	0.123"	0.123"
	Metric	3.124 mm	3.124 mm	3.124 mm
Inner Armor (Alloy) 12 Wires @ 0.0358"	English	0.186"	0.186"	0.186"
	Metric	4.724 mm	4.724 mm	4.724 mm
Outer Armor (Alloy) 18 Wires @ 0.0358"	English	0.258"	0.258"	0.258"
	Metric	6.553 mm	6.553 mm	6.553 mm

Electrical Characteristics

	Measure	1-FT-258-12/18-75-19	1-FT-258-12/18-77-19	1-FT-258-12/18-35N-19
Temperature Rating	English	500 °C	500 °C	500 °C
	Metric	260 °C	260 °C	260 °C
Insulation	Type	FEP/ETFE	FEP/ETFE	FEP/ETFE
Voltage Rating:	English	1,200 VDC	1,200 VDC	1,200 VDC
	Metric	1,200 VDC	1,200 VDC	1,200 VDC
DC Conductor Resistance at 68°F (20°C)	English	4.4 Ω/kft	4.4 Ω/kft	4.4 Ω/kft
	Metric	14.4 Ω/km	14.4 Ω/km	14.4 Ω/km
DC Armor Resistance at 68°F (20°C)	English	13.5 Ω/kft	16.5 Ω/kft	17.1 Ω/kft
	Metric	44.3 Ω/km	54.2 Ω/km	56.2 Ω/km
Capacitance Conductor to Armor	English	51 pF/ft	51 pF/ft	51 pF/ft
	Metric	167 pF/m	167 pF/m	167 pF/m
Minimum Insulation Resistance	English	1,500 MΩ*kft	1,500 MΩ*kft	1,500 MΩ*kft
	Metric	457 MΩ*km	457 MΩ*km	457 MΩ*km

Mechanical Characteristics

	Measure	1-FT-258-12/18-75-19	1-FT-258-12/18-77-19	1-FT-258-12/18-35N-19
Weight in Air	English	127 lbs/kft	127 lbs/kft	135 lbs/kft
	Metric	189 kgs/km	190 kgs/km	201 kgs/km
Weight in Water	English	108 lbs/kft	107 lbs/kft	115 lbs/kft
	Metric	161 kgs/km	160 kgs/km	171 kgs/km
Breaking Strength (Ends Fixed)	English	6,000 lbs	6,500 lbs	6,500 lbs
	Metric	2,722 kgs	2,948 kgs	2,948 kgs
Working Load (Maximum)	English	3,000 lbs	3,250 lbs	3,250 lbs
	Metric	1,361 kgs	1,474 kgs	1,474 kgs
Individual Wire Breaking Strength (Inner / Outer)	English	247 / 247 lbs	272 / 272 lbs	272 / 272 lbs
	Metric	112 / 112 kgs	123 / 123 kgs	123 / 123 kgs
Stretch Coefficient	English	2.3 ft/kft/klb	2.3 ft/kft/klb	2.0 ft/kft/klb
	Metric	2.6 m/km/5kN	2.6 m/km/5kN	2.25 m/km/5kN
Outside Diameter	English	0.258" $\frac{+0.005"}{-0.002"}$	0.258" $\frac{+0.005"}{-0.002"}$	0.258" $\frac{+0.005"}{-0.002"}$
	Metric	6.55 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$	6.55 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$	6.55 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$
Suggested Minimum Sheave Diameter	English	14"	14"	14"
	Metric	356 mm	356 mm	356 mm

Corrosion Resistant

7/32" (5.69 mm)

Mono Conductor Cable

12 Inner / 18 Outer Wire Construction



Conventional

Construction Characteristics

	English	Metric
Conductor – 16 AWG, 19 x 0.0119"	0.059"	1.499 mm
Insulation – OD	0.108"	2.743 mm
Inner Armor (GIPS) 12 Wires @ 0.031"	0.162"	4.115 mm
Outer Armor (GIPS) 18 Wires @ 0.031"	0.224"	5.690 mm

Electrical Characteristics

	English	Metric
Voltage Rating	1,200 VDC	1,200 VDC
DC Conductor Resistance at 68°F (20°C)	4.0 Ω/kft	13.1 Ω/km
DC Armor Resistance at 68°F (20°C)	4.4 Ω/kft	14.4 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

	English	Metric
Breaking Strength (Ends Fixed)	5,600 lbs	2,540 kgs
Working Load (Maximum)	3,360 lbs	1,524 kgs
Individual Wire B.S. (Inner / Outer)	204 / 204 lbs	92 / 92 kgss
Suggested Minimum Sheave Diameter	14"	356 mm
Outside Diameter	0.224" $\begin{matrix} +0.005" \\ -0.002" \end{matrix}$	5.690 mm $\begin{matrix} +0.127\text{ mm} \\ -0.051\text{ mm} \end{matrix}$
Stretch Coefficient	2.5 ft/kft/klb	2.8 m/km/5kN

Cable Design Characteristics

	Measure	1-P-224-12/18-G-19	1-FT-224-12/18-G-19	1-A-224-12/18-G-19	1-Q-224-12/18-G-19
Temperature Rating	English	300 °F	500 °F	550 °F	600 °F
	Metric	149 °C	260 °C	288 °C	315 °C
Insulation	Type	Polypropolyne	FEP/ETFE	PFA	Q600
Capacitance Conductor to Armor	English	59 pF/ft	61 pF/ft	58 pF/ft	58 pF/ft
	Metric	193 pF/m	200 pF/m	190 pF/m	190 pF/m
Weight in Air	English	94 lbs/kft	97 lbs/kft	99 lbs/kft	99 lbs/kft
	Metric	140 kgs/km	145 kgs/km	147 kgs/km	147 kgs/km
Weight in Water	English	79 lbs/kft	82 lbs/kft	84 lbs/kft	84 lbs/kft
	Metric	118 kgs/km	122 kgs/km	125 kgs/km	125 kgs/km

7/32" (5.69 mm)

Mono Conductor Cable
12 Inner / 18 Outer Wire Construction

Construction Characteristics

	Measure	1-FT-224-12/18-75-7	1-FT-224-12/18-77-7	1-FT-224-12/18-35N-7
Conductor – 18 AWG ,7 x 0.0159"	English	0.048"	0.048"	0.048"
	Metric	1.219 mm	1.219 mm	1.219 mm
Insulation – OD	English	0.108"	0.108"	0.108"
	Metric	2.743 mm	2.743 mm	2.743 mm
Inner Armor (Alloy) 12 Wires @ 0.031"	English	0.162"	0.162"	0.162"
	Metric	4.115 mm	4.115 mm	4.115 mm
Outer Armor (Alloy) 18 Wires @ 0.031"	English	0.224"	0.224"	0.224"
	Metric	5.690 mm	5.690 mm	5.690 mm

Electrical Characteristics

	English	1-FT-224-12/18-75-7	1-FT-224-12/18-77-7	1-FT-224-12/18-35N-7
Temperature Rating	English	500 °C	500 °C	500 °C
	Metric	260 °C	260 °C	260 °C
Insulation	Type	FEP/ETFE	FEP/ETFE	FEP/ETFE
Voltage Rating:	English	1,200 VDC	1,200 VDC	1,200 VDC
	Metric	1,200 VDC	1,200 VDC	1,200 VDC
DC Conductor Resistance at 68°F (20°C)	English	6.7 Ω/kft	6.7 Ω/kft	6.7 Ω/kft
	Metric	22.0 Ω/km	22.0 Ω/km	22.0 Ω/km
DC Armor Resistance at 68°F (20°C)	English	18.1 Ω/kft	22.0 Ω/kft	22.0 Ω/kft
	Metric	59.4 Ω/km	72.2 Ω/km	72.2 Ω/km
Capacitance Conductor to Armor	English	45 pF/ft	45 pF/ft	45 pF/ft
	Metric	148 pF/m	148 pF/m	148 pF/m
Minimum Insulation Resistance	English	1,500 MΩ*kft	1,500 MΩ*kft	1,500 MΩ*kft
	Metric	457 MΩ*km	457 MΩ*km	457 MΩ*km

Mechanical Characteristics

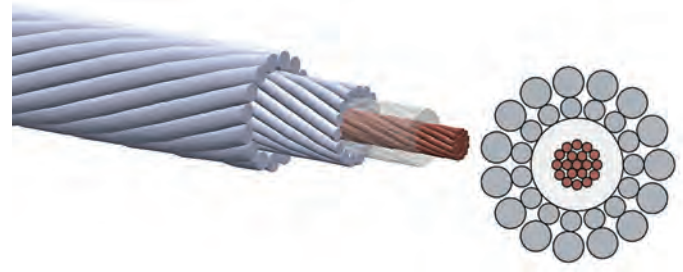
	Measure	1-FT-224-12/18-75-7	1-FT-224-12/18-77-7	1-FT-224-12/18-35N-7
Weight in Air	English	96 lbs/kft	96 lbs/kft	103 lbs/kft
	Metric	143 kgs/km	143 kgs/km	153 kgs/km
Weight in Water	English	81 lbs/kft	81 lbs/kft	89 lbs/kft
	Metric	120 kgs/km	120 kgs/km	132 kgs/km
Breaking Strength (Ends Fixed)	English	4,800 lbs	5,200 lbs	5,200 lbs
	Metric	2,180 kgs	2,360 kgs	2,360 kgs
Working Load (Maximum)	English	2,400 lbs	2,600 lbs	2,600 lbs
	Metric	1,100 kgs	1,180 kgs	1,180 kgs
Individual Wire Breaking Strength (Inner / Outer)	English	186 / 186 lbs	196 / 196 lbs	204 / 204 lbs
	Metric	84 / 84 kgs	88 / 88 kgs	92 / 92 kgs
Stretch Coefficient	English	2.9 ft/kft/klb	3.1 ft/kft/klb	2.9 ft/kft/klb
	Metric	3.3 m/km/5kN	3.5 m/km/5kN	3.3 m/km/5kN
Outside Diameter	English	0.224" $\frac{+0.005"}{-0.002"}$	0.224" $\frac{+0.005"}{-0.002"}$	0.224" $\frac{+0.005"}{-0.002"}$
	Metric	5.69 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$	5.69 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$	5.69 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$
Suggested Minimum Sheave Diameter	English	14"	14"	14"
	Metric	356 mm	356 mm	356 mm

Corrosion Resistant

7/32" (5.69 mm)

Mono Conductor Cable

15 Inner / 15 Outer Wire Construction



Conventional

Construction Characteristics

	Measurement	Metric
Conductor – 16 AWG, 19 x 0.0119"	0.059"	1.499 mm
Insulation – OD	0.108"	2.743 mm
Inner Armor (GIPS) 15 Wires @ 0.0243"	0.152"	3.861 mm
Outer Armor (GIPS) 15 Wires @ 0.0358"	0.224"	5.690 mm

Electrical Characteristics

	Measurement	Metric
Voltage Rating	1,200 VDC	1,200 VDC
DC Conductor Resistance at 68°F (20°C)	4.0 Ω/kft	13.1 Ω/km
DC Armor Resistance at 68°F (20°C)	4.3 Ω/kft	14.1 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

	Measurement	Metric
Breaking Strength (Ends Fixed)	5,600 lbs	2,540 kgs
Working Load (Maximum)	3,360 lbs	1,524 kgs
Individual Wire B.S. (Inner / Outer)	129 / 282 lbs	58 / 127 kgss
Suggested Minimum Sheave Diameter	14"	356 mm
Outside Diameter	0.224" $\begin{matrix} +0.005" \\ -0.002" \end{matrix}$	5.69 mm $\begin{matrix} +0.127\text{ mm} \\ -0.051\text{ mm} \end{matrix}$
Stretch Coefficient	2.2 ft/kft/klb	2.5 m/km/5kN

Cable Design Characteristics

	Measurement	1-P-224-15/15-G-19	1-FT-224-15/15-G-19	1-A-224-15/15-G-19	1-Q-224-15/15-G-19
Temperature Rating	English	300 °F	500 °F	550 °F	600 °F
	Metric	149 °C	260 °C	288 °C	315 °C
Insulation	Type	Polypropolyne	FEP/ETFE	PFA	Q600
Capacitance Conductor to Armor	English	60 pF/ft	61 pF/ft	58 pF/ft	58 pF/ft
	Metric	197 pF/m	200 pF/m	190 pF/m	190 pF/m
Weight in Air	English	94 lbs/kft	97 lbs/kft	99 lbs/kft	99 lbs/kft
	Metric	140 kgs/km	144 kgs/km	147 kgs/km	147 kgs/km
Weight in Water	English	79 lbs/kft	82 lbs/kft	84 lbs/kft	84 lbs/kft
	Metric	118 kgs/km	122 kgs/km	125 kgs/km	125 kgs/km

7/32" (5.69 mm)

Mono Conductor Cable
15 Inner / 15 Outer Wire Construction

Construction Characteristics

	Measurement	1-FT-224-15/15-75-7	1-FT-224-15/15-77-7	1-FT-224-15/15-35N-7
Conductor – 18 AWG ,7 x 0.0159"	English	0.047"	0.047"	0.047"
	Metric	1.193 mm	1.193 mm	1.193 mm
Insulation – OD	English	0.108"	0.108"	0.108"
	Metric	2.743 mm	2.743 mm	2.743 mm
Inner Armor (Alloy) 15 Wires @ 0.0243"	English	0.152"	0.152"	0.152"
	Metric	3.861 mm	3.861 mm	3.861 mm
Outer Armor (Alloy) 15 Wires @ 0.0358"	English	0.224"	0.224"	0.224"
	Metric	5.690 mm	5.690 mm	5.690 mm

Electrical Characteristics

	Measurement	1-FT-224-15/15-75-7	1-FT-224-15/15-77-7	1-FT-224-15/15-35N-7
Temperature Rating	English	500 °F	500 °F	500 °F
	Metric	260 °C	260 °C	260 °C
Insulation	Type	FEP/ETFE	FEP/ETFE	FEP/ETFE
Voltage Rating:	English	1,200 VDC	1,200 VDC	1,200 VDC
	Metric	1,200 VDC	1,200 VDC	1,200 VDC
DC Conductor Resistance at 68°F (20°C)	English	6.7 Ω/kft	6.7 Ω/kft	6.7 Ω/kft
	Metric	22.0 Ω/km	22.0 Ω/km	22.0 Ω/km
DC Armor Resistance at 68°F (20°C)	English	16.0 Ω/kft	18.5 Ω/kft	22.0 Ω/kft
	Metric	52.5 Ω/km	60.4 Ω/km	72.2 Ω/km
Capacitance Conductor to Armor	English	44 pF/ft	44 pF/ft	44 pF/ft
	Metric	144 pF/m	144 pF/m	144 pF/m
Minimum Insulation Resistance	English	1,500 MΩ*kft	1,500 MΩ*kft	1,500 MΩ*kft
	Metric	457 MΩ*km	457 MΩ*km	457 MΩ*km

Mechanical Characteristics

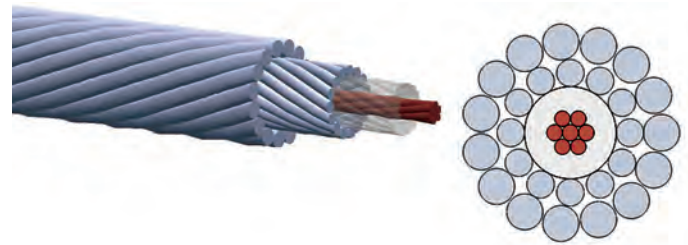
	Measurement	1-FT-224-15/15-75-7	1-FT-224-15/15-77-7	1-FT-224-15/15-35N-7
Weight in Air	English	93 lbs/kft	93 lbs/kft	99 lbs/kft
	Metric	139 kgs/km	139 kgs/km	147 kgs/km
Weight in Water	English	80 lbs/kft	80 lbs/kft	85 lbs/kft
	Metric	119 kgs/km	119 kgs/km	127 kgs/km
Breaking Strength (Ends Fixed)	English	4,800 lbs	5,200 lbs	5,200 lbs
	Metric	2,177 kgs	2,358 kgs	2,358 kgs
Working Load (Maximum)	English	2,400 lbs	2,600 lbs	2,600 lbs
	Metric	1,088 kgs	1,179 kgs	1,202 kgs
Individual Wire Breaking Strength (Inner / Outer)	English	115 / 247 lbs	125 / 272 lbs	125 / 272 lbs
	Metric	52 / 112 kgs	56 / 123 kgs	56 / 123 kgs
Stretch Coefficient	English	2.6 ft/kft/klb	2.5 ft/kft/klb	2.5 ft/kft/klb
	Metric	2.9 m/km/5kN	2.8 m/km/5kN	2.8 m/km/5kN
Outside Diameter	English	0.224" $\frac{+0.005"}{-0.002"}$	0.224" $\frac{+0.005"}{-0.002"}$	0.224" $\frac{+0.005"}{-0.002"}$
	Metric	5.69 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$	5.69 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$	5.69 mm $\frac{+0.127\text{ mm}}{-0.051\text{ mm}}$
Suggested Minimum Sheave Diameter	English	14"	14"	14"
	Metric	356 mm	356 mm	356 mm

Corrosion Resistant

3/16" (4.699 mm)

Mono Conductor Cable

12 Inner / 15 Outer Wire Construction



Conventional

Construction Characteristics

	English	Metric
Conductor – 20 AWG, 7 x 0.0128"	0.038"	0.965 mm
Insulation – OD	0.084"	2.135 mm
Inner Armor (GIPS) 12 Wires @ 0.0240"	0.125"	3.175 mm
Outer Armor (GIPS) 15 Wires @ 0.0298"	0.185"	4.699 mm

Electrical Characteristics

	English	Metric
Voltage Rating	1,000 VDC	1,000 VDC
DC Conductor Resistance at 68°F (20°C)	9.8 Ω/kft	32.2 Ω/km
DC Armor Resistance at 68°F (20°C)	6.4 Ω/kft	21.0 Ω/km
Minimum Insulation Resistance	1,500 MΩ*kft	457 MΩ*km

Mechanical Characteristics

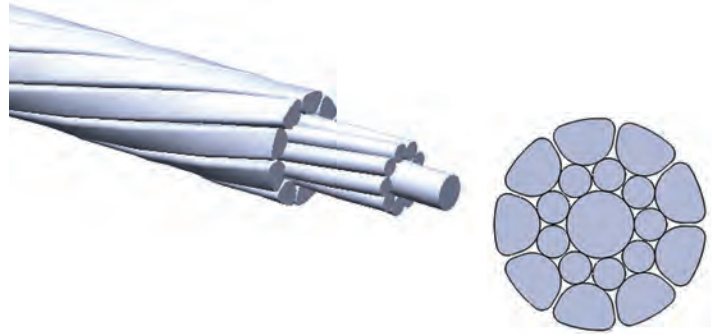
	English	Metric
Breaking Strength (Ends Fixed)	3,900 lbs	17.35 kgs
Working Load (Maximum)	1,950 lbs	8.67 kgs
Individual Wire B.S. (Inner / Outer)	127 / 198 lbs	57 / 89 kgss
Suggested Minimum Sheave Diameter	12"	305 mm
Outside Diameter	0.185" $\frac{+0.003"}{-0.002"}$	4.699 mm $\frac{+0.102\text{ mm}}{-0.051\text{ mm}}$
Stretch Coefficient	4.0 ft/kft/klb	4.5 m/km/5kN

Cable Design Characteristics

	Measure	1-P-185-12/15-G-7	1-A-185-12/15-G-7	1-Q-185-12/15-G-7
Temperature Rating	English	300 °F	550 °F	600 °F
	Metric	149 °C	288 °C	315 °C
Insulation	Type	Polypropolyne	PFA	Q600
Capacitance Conductor to Armor	English	46 pF/ft	45 pF/ft	45 pF/ft
	Metric	151 pF/m	146 pF/m	146 pF/m
Weight in Air	English	63 lbs/kft	66 lbs/kft	66 lbs/kft
	Metric	94 kgs/km	98 kgs/km	98 kgs/km
Weight in Water	English	54 lbs/kft	56 lbs/kft	56 lbs/kft
	Metric	80 kgs/km	83 kgs/km	83 kgs/km

DyPak

Compacted Swabline



Construction Characteristics

Measure		3/16"	7/32"	1/4"
Cable OD	English	0.188"	0.219"	0.250"
	Metric	4.775 mm	5.562 mm	6.350 mm
Armor- Center Wire	English	0.0575"	0.066"	0.075"
	Metric	1.460 mm	1.676 mm	1.905 mm
Inner Lay Direction	Type	Right	Right	Right
Inner Wires	English	9 x 0.0275"	9 x 0.0325"	9 x 0.037"
	Metric	9 x 0.698 mm	9 x 0.825 mm	9 x 0.939 mm
Outer Lay Direction	Type	Right	Right	Right
Outer Wires	English	9 x 0.0495"	9 x 0.0575"	9 x 0.066"
	Metric	9 x 1.257 mm	9 x 1.460 mm	9 x 1.676 mm

Mechanical Characteristics

Measure		3/16"	7/32"	1/4"
Weight in Air	English	85 lbs/kft	114 lbs/kft	158 lbs/kft
	Metric	127 kgs/km	170 kgs/km	235 kgs/km
Breaking Strength (Ends Fixed)	English	6,400 lbf	8,600 lbf	11,000 lbf
	Metric	28.5 kN	38.2 kN	48.9 kN
Working Load (Maximum)	English	3,200 lbf	4,300 lbf	5,500 lbf
	Metric	14.2 kN	19.1 kN	24.5 kN
Suggested Minimum Sheave Diameter	English	12"	14"	16"
	Metric	304 mm	356 mm	406 mm
Outside Diameter	English	0.188"	0.219"	0.250"
	Metric	4.78 mm	5.56 mm	6.35mm
Stretch Coefficient	English	2.17 ft/kft/klb	1.28 ft/kft/klb	0.87 ft/kft/klb
	Metric	2.44 m/km/5kN	1.44 m/km/5kN	0.98 m/km/5kN

**Dypak cables above requiring nickel alloy wire (316SS, 25-6MO, 27-7MO OR MP35N) can be manufactured on request.

Forum Cable School

Building the industry's leading cable is only part of our job. Training our customers how to improve their wireline operations is the other.



At Forum, our commitment to improving our customer's performance extends beyond your cable purchase. We offer comprehensive training programs to help our customers thrive. Our experts have over 100 years of combined experience delivering world class wireline manufacturing, cable installation, cable servicing and field operations in the industry, and are well qualified to help your team solve problems and apply best practices to enhance your wireline activity.

Offered for both conventional and greaseless cable, our training programs are developed to meet the needs and goals of our customers. Our customized programs are designed to include the fundamentals of operations, specific product information, as well as address common industry challenges and how to overcome them.

Popular program topics include:

- Cable Design**
- Manufacturing**
- Technical Support**
- Cable Installation**
- Care and Treatment of New Cables**
- Inspection and Maintenance of Cables**
- Field Operations**
- Sour Service Cables**
- Field Problems**

Contact us today to schedule a customized cable training program for your team.

Need Assistance?

Contact Your Regional Cable Expert Today

SALES TEAM

REGION

BACKGROUND

Terry Madden
Technical Sales Manager
Mobile: +1 337-278-0795
terry.madden@f-e-t.com

Globally

41 Years Troubleshooting Cable Issues
26 Years Managing Service Center
15 Years Cable Manufacturing

Brian Herren
Sales Manager
Mobile: +1 817-929-6627
brian.herren@f-e-t.com

US

18 Years Wireline Operations Experience
8 Years Wireline Management Experience
1 Year Cable Manufacturing

Tim Miller
Sales Manager
Mobile: +1 817-929-6627
brian.herren@f-e-t.com

Texas
New Mexico
Rockies

17 Years Wireline Operations Experience
8 Years Wireline Management Experience
1 Year Cable Manufacturing

Rodrigo Ruiz
Product Manager / Sales Manager
Mobile: +1 403-680-5996
rodrigo.ruiz@f-e-t.com

Mexico
Latin America
Product Support (Globally)

11 Years Cable Manufacturing
9 Years Troubleshooting Cable Issues
1 Year Product Manager

Ray Funke
Director of Operations
Mobile: +1 403-651-7402
ray.funke@f-e-t.com

Alberta
Saskatchewan
British Columbia
Manitoba

11 Years Troubleshooting Cable Issues
16 Years Cable Manufacturing

OUR CORE VALUES

No One Gets Hurt

The safety of our employees and customers is our first priority coupled with a healthy respect for the environment.

Integrity

In everything we do, in every interaction, both internally and externally, we strive to operate with the utmost integrity and mutual respect.


Customer Focused


Our products enhance our customer's performance and we listen to their needs and work with them to solve their challenges.

Good Place To Work

We are committed to creating a workplace that fosters innovation, teamwork and pride. Every team member is integral to our success and is treated equally and fairly.

Forum Energy Technologies

 10344 Sam Houston Park Drive, Suite 300
Houston, TX 77064

 +1 877-836-3928

 f-e-t.com/qwc

 QualityWireline@f-e-t.com