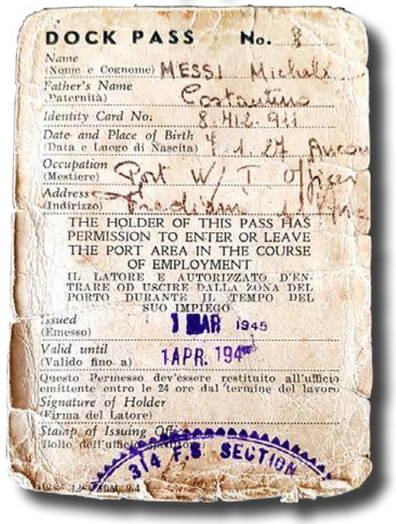

MESSI & PAOLONI
COAXIAL CABLES
77
signal corps
M&P
www.messi.it
Since 1946
The Pro Choice

PROUD OF "OUR" MADE IN ITALY

Messi & Paoloni celebrates on March 10th 2024, 78 years in business

The 18th of July 1944, Ancona was seized by the II Polish Army corps. During the ANGLO-AMERICAN occupation, two young boys, the 17 years old Messi Michele and the 21 years old Dino Paoloni, were employed as civil personnel in the allied military transmitting station of Ancona harbour, as Port W/T officers.

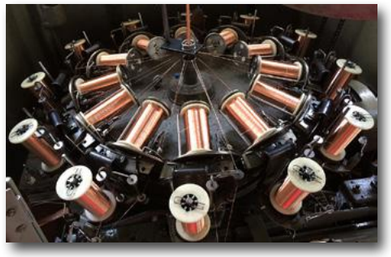

DOCK PASS No. 8
Name (Nome e Cognome) MESSI Michele
Father's Name (Paternità) Costantino
Identity Card No: 8.412.911
Date and Place of Birth (Data e Luogo di Nascita) 9.1.24 Ancona
Occupation (Mestiere) Port W/T Officer
Address (Indirizzo) Ancona
THE HOLDER OF THIS PASS HAS PERMISSION TO ENTER OR LEAVE THE PORT AREA IN THE COURSE OF EMPLOYMENT
IL LATORE È AUTORIZZATO D'ENTRARE OD USCIRE DALLA ZONA DEL PORTO DURANTE IL TEMPO DEL SUO IMPIEGO
Issued (Emesso) 1 MAR 1945
Valid until (Valido fino a) 1 APR. 194
Questo Permesso dev'essere restituito all'ufficio emittente entro le 24 ore dal termine del lavoro
Signature of Holder (Firma del Latore)
Stamp of Issuing Office (Bollo dell'ufficio)
3/4 F.B SECTION

It was here, during this job, that they first met each other, sharing their passion for telecommunications. Two years later, the two friends decided to establish the Messi & Paoloni company. After 10 years the company was deeply involved in telecommunications for TV reception. They decided to establish in 1974 the coaxial cable factory (primarily 75 Ohm).

Several years later, the passion for radiofrequency affected the two partners sons, Paolo Paoloni and Stefano Messi. This led to the start of 50 Ohm cables production. In 1985 we started our business relationship with the first German customer: a long lasting and satisfactory 50 Ohm experience together. With the acquisition of 100% of the shares in 1995, **Stefano and Maurizio Messi** took up the torch from the "founders", carrying out passionately complex projects and continuing the legacy of innovation. The continuous improvements in the different production cycles and continuous investments in research and technological innovation, brought the **"GAS EXPANDED Triple Layer"** technology.

The new models designed for the TELECOMMUNICATIONS and BROADCASTING WORLD, are all guaranteed with screening efficiency >105 dB between 100 and 2000 MHz ! This leads to an excellent immunity against electromagnetic interferences and **low frequency impulsive noises, responsible for the increasing of the background noise levels.** Moreover, the noise level emissions from the cable itself is dramatically reduced, minimizing troubles in urban flats and urban areas.

Differently, cables such as RG 213/U or RG 8, have 55 dB of screening efficiency, RG 58 C/U has 50 dB of screening efficiency and the extra shielded RG 214 A/U, despite its impressive dual screen, cannot show off more than 80 dB!

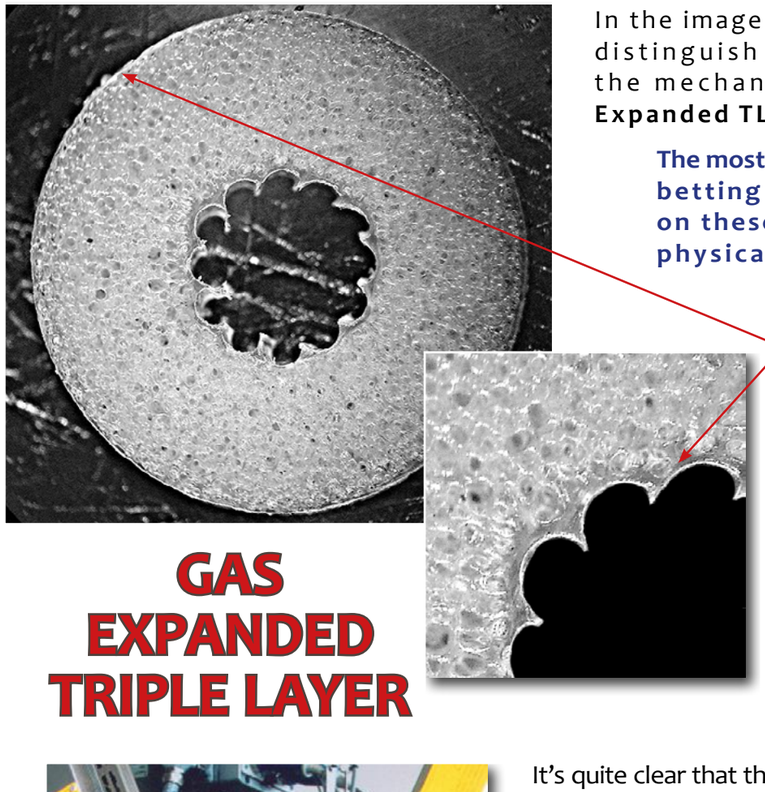


The introduction of our **"REACTIVE BRAID"** with 50% more crossovers (24 spools instead of 16), makes it possible to reach superior levels of screening efficiency and resistance to torsions.

Quality is the philosophy behind the construction of each one of our cables.
Our products are manufactured in compliance with: CEI 46-1 (construction parameters); EN 50117(screening efficiency); CEI EN 50289(SA test methods); IEC 60332-1-2(cables with LSZH and PVC jacket); CPR305/11(EN50575:2014); CEI UNEL 36762; R118(ISO7622-1)

The PRO choice
M&P
Messi & Paoloni coaxial cables
www.messi.it

The difficulty does not lie in making a triple layer dielectric, but in closing and sealing the perfectly homogeneous foam, with its alveolar structure and sophisticated mechanics, between two protective layers (skins).

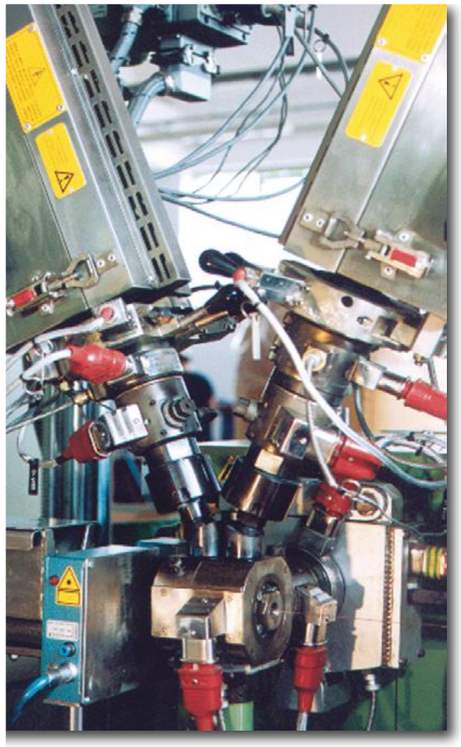


In the image at your left, we can clearly distinguish at 150 x magnifications, the mechanical structure of the **Gas Expanded TL (triple layer)** technology.

The most well-known manufacturers are betting technological supremacy on these few millimeters, on this physical-mechanical microcosm!

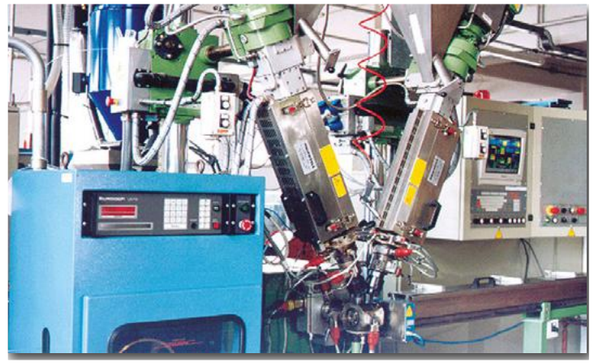
The two protective layers are adding to these cables, excellent resistance to high moisture persistence environments. (**anyway, water tight connectors are warmly recommended, as moisture can penetrate through the connector itself, circumventing the above mentioned protective layers.**)

GAS EXPANDED TRIPLE LAYER



It's quite clear that the outer sealing layer, is preserving the dielectric properties of the sophisticated structural geometry. The inner foam, is also enclosed by a protective inner barrier (in contact with the central conductor).

In the cables for underground laying, where more than in any other application, such moisture persistance might occur, in addition to these new protections, we apply a further expensive **Petrol Jelly (PJ)** layer over the braid.



1,4 Kg/100m lighter than RG58

3,6 dB/100m better @50 MHz than RG58

Ham Radio Pro Cables

M&P AIRBORNE 5

(H2005)

/.200"

MESSI & PAOLONI

JACKET:
UV shielded polyethylene
for direct burial and outdoor use
overall Ø 5mm ± 0,15
(0.200")

REACTIVE BRAID:
84% SCREENING - 96 wires of aluminium magnesium
Strong and lightweight braid for an ultimate result of toughness and reliability, under a structural and Screenining Attenuation (SA) point of view

ATTENTION:use only our connectors as with this sort of braid, no soldering is allowed!

Direct Burial

RoHS Compliant 2002/95/EC

DXpedition

FOIL: 100% SCREENING
First screen made of aluminium - polyester - aluminium: prevents cracking due to short radius bends

Waterproof Sturdy

DIELECTRIC:
High pressure physical injection
foamed polyethylene
TRIPLE LAYER
overall Ø 3 mm ± 0,05 (0.118")

INNER CONDUCTOR:
made of 99,9% pure bare copper
overall Ø 1,13 mm ± 0,05 (Ø 0.044")

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	1,7	0,5
3,5 MHz	2,3	0,7
7 MHz	3,0	0,9
10 MHz	3,4	1,0
14 MHz	4,0	1,2
21 MHz	4,8	1,4
28 MHz	5,5	1,6
50 MHz	7,1	2,1
100 MHz	9,4	2,8
144 MHz	11,1	3,3
200 MHz	12,8	3,9
400 MHz	18,3	5,6
430 MHz	19,0	5,7
800 MHz	26,5	8,1
1000 MHz	29,8	9,1
1296 MHz	34,2	10,4
2400 MHz	47,5	14,5
3000 MHz	53,5	16,3
4000 MHz	61,0	18,5
5000 MHz	68,6	20,9
6000 MHz	75,6	23,0

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 50mm (1.97 in) single bend (choke): 25mm (0.98 in)
Temperature:	-45°C to +70°C (-49°F to +158°F)
Capacitance:	76 pF/m ± 2 (23.2 pF/ft ± 2)
Velocity factor:	85%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	17 Ohm/Km (5.2 Ohm/1000ft)
Outer conductor resistance:	34 Ohm/Km (10.4 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight (100m/100ft):	2,3 Kg (1.5 lb)
Maximum peak power:	2000 WATT
Structural Return Loss:	0,3-600 MHz >30 dB; 600-1200 MHz >28 dB; 1200-2000 MHz >25 dB

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	1172 W	400 MHz	102 W
3,5 MHz	837 W	430 MHz	99 W
7 MHz	625 W	800 MHz	71 W
10 MHz	543 W	1000 MHz	63 W
14 MHz	471 W	1296 MHz	55 W
21 MHz	394 W	2400 MHz	39 W
28 MHz	346 W	3000 MHz	35 W
50 MHz	268 W	4000 MHz	31 W
100 MHz	198 W	5000 MHz	27 W
144 MHz	170 W	6000 MHz	25 W
200 MHz	146 W		

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH: CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); CPR305/11 - **EuroClass Fca** - EN50575:2014 - DoP number: MP0095

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-AIR-BORNE 5, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 41.1 % of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies. **REMEMBER: Make sure to match the line accurately!**

		M&P-AIRBORNE 5 /.200"												
	feet	16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters	5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length / MHz	Useful signal output (residual power %)												
Frequencies	85.71 m / 3,5	97,4	94,9	92,5	90,1	87,8	83,4	77,2	67,8	59,6	51,0	43,7	35,5	21,2
	42.85 m / 7	96,5	93,2	90,1	87,0	84,0	78,4	70,7	59,5	50,0	40,6	33,0	25,0	12,5
	21.42 m / 14	95,4	91,1	87,1	83,2	79,4	72,5	63,1	50,2	39,9	30,3	23,0	15,9	6,3
	10.71 m / 28	93,9	88,2	82,8	77,8	73,1	64,5	53,5	39,1	28,6	19,6	13,5	8,1	
	6 m / 50	92,2	85,0	78,4	72,3	66,7	56,8	44,6	29,8	19,9	12,2	7,5	3,9	
	2.08 m / 144	88,0	77,5	68,3	60,2	53,0	41,1	28,1	14,9	7,8	3,6			
	69 cm / 430	80,2	64,4	51,7	41,5	33,3	21,5	11,0	3,6					
	23.1 cm / 1296	66,8	44,9	30,1	20,1	13,3	5,7							
	12.5 cm / 2400	56,2	31,9	17,7	9,6	4,9								
	10 cm / 3000	52,4	27,6	14,2	6,9	3,0								
	7.5 cm / 4000	46,4	21,4	9,0										
	6 cm / 5000	39,1	14,3	3,0										
	5 cm / 6000	31,9	7,5											

AIRBORNE 5 /.200" Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

			Temperature C° / F°									
	Wave length	MHz	-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies	166.66 m	1,8	1600	1600	1600	1594	1467	1317	1172	1000	827	656
	85.71 m	3,5	1296	1252	1215	1138	1048	941	837	714	591	469
	42.85 m	7	968	935	908	850	783	703	625	533	441	350
	30 m	10	841	813	789	739	680	611	543	464	384	304
	21.42 m	14	729	705	684	641	590	530	471	402	333	264
	14.28 m	21	610	589	572	536	493	443	394	336	278	221
	10.71 m	28	536	518	502	470	433	389	346	295	244	194
	6 m	50	415	401	389	364	335	301	268	228	189	150
	3 m	100	307	297	288	270	248	223	198	169	140	111
	2.08 m	144	264	255	248	232	213	192	170	145	120	95
	1.5 m	200	226	218	212	198	183	164	146	124	103	82
	75 cm	400	158	153	148	139	128	115	102	87	72	57
	69 cm	430	153	148	143	134	123	111	99	84	70	55
	37.5 cm	800	109	106	102	96	88	79	71	60	50	40
	30 cm	1000	97	94	91	85	79	71	63	54	44	35
	23.1 cm	1296	85	82	80	75	69	62	55	47	39	31
	12.5 cm	2400	61	59	57	54	49	44	39	34	28	22
	10 cm	3000	54	52	51	48	44	39	35	30	25	20
	7.5 cm	4000	48	46	45	42	38	35	31	26	22	17
	6 cm	5000	42	41	40	37	34	31	27	23	19	15
	5 cm	6000	38	37	36	34	31	28	25	21	18	14

WATT

Do not use the cable as power supply for both direct current and 50-60 HZ mains

M&P
Hyperflex 5 */.212”*

Ham Radio Pro Cables — M&P — MESSI & PAOLONI

CE · Pb · RoHS Compliant 2002/95/EC

JACKET:
UV-resistant black PVC
overall Ø 5,4mm ± 0,15
(0.212”)

REACTIVE BRAID:
88% SCREENING - 120 wires of copper made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING
First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends

DIELECTRIC:
High pressure physical injection foamed polyethylene
TRIPLE LAYER
overall Ø 3,7 mm ± 0,05 (0.145”)

INNER CONDUCTOR:
19x0,29mm copper wires - overall Ø 1,4 mm ± 0,15
(19x0.011” - overall Ø 0.055”)

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	1,4	0,4
3,5 MHz	1,9	0,5
7 MHz	2,3	0,7
10 MHz	2,6	0,8
14 MHz	3,0	0,9
21 MHz	3,6	1,1
28 MHz	4,1	1,2
50 MHz	5,5	1,7
100 MHz	8,0	2,4
144 MHz	9,6	2,9
200 MHz	11,4	3,4
400 MHz	16,3	4,9
430 MHz	17,0	5,1
800 MHz	23,4	7,1
1000 MHz	26,4	8,0
1296 MHz	30,5	9,3
2400 MHz	42,5	12,9
3000 MHz	48,1	14,6
4000 MHz	56,9	17,3
5000 MHz	65,2	19,9
6000 MHz	72,9	22,2

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 50mm (1.97 in) single bend (choke): 25mm (0.98 in)
Temperature:	-45°C to +70°C (-49°F to +158°F)
Capacitance:	74 pF/m ± 2 (22.6 pF/ft ± 2)
Velocity factor:	87%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	14 Ohm/Km (4.3 Ohm/1000ft)
Outer conductor resistance:	11 Ohm/Km (3.4 Ohm/1000ft)
Tension test (spark test):	4 kV
Net weight (100m/100ft):	4,4 Kg (3 lb)
Maximum peak power:	2900 WATT
Structural Return Loss:	0,3-600 MHz >28 dB; 600-1200 MHz >25 dB; 1200-2000 MHz >22 dB

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	1274 W	400 MHz	115 W
3,5 MHz	987 W	430 MHz	111 W
7 MHz	809 W	800 MHz	80 W
10 MHz	717 W	1000 MHz	71 W
14 MHz	620 W	1296 MHz	62 W
21 MHz	518 W	2400 MHz	44 W
28 MHz	453 W	3000 MHz	39 W
50 MHz	338 W	4000 MHz	33 W
100 MHz	235 W	5000 MHz	29 W
144 MHz	195 W	6000 MHz	26 W
200 MHz	165 W		

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); R118 (ISO7622-1);
IEC 60332-1-2 (cables with PVC and LSZH jacket); CPR305/11 - **EuroClass Eca** - EN50575:2014 - DoP number: MP0097

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

The PRO choice — Messi & Paoloni coaxial cables www.messi.it

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-HYPERFLEX 5, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 45,8 % of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies.
REMEMBER: Make sure to match the line accurately!

M&P-HYPERFLEX 5 /.212”

	feet		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters		5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length	MHz	Useful signal output (residual power %)												
Frequencies	85.71 m	3,5	97,7	95,6	93,5	91,5	89,5	85,6	80,2	71,8	64,3	56,4	49,4	41,4	26,6
	42.85 m	7	97,3	94,7	92,2	89,7	87,3	82,8	76,4	66,8	58,4	49,7	42,3	34,1	19,9
	21.42 m	14	96,5	93,1	89,9	86,8	83,8	78,2	70,4	59,1	49,6	40,2	32,5	24,6	12,1
	10.71 m	28	95,2	90,8	86,5	82,5	78,6	71,4	61,8	48,7	38,3	28,7	21,5	14,6	5,5
	6 m	50	93,7	87,8	82,4	77,2	72,4	63,7	52,5	38,1	27,6	18,7	12,7	7,6	
	2.08 m	144	89,4	80,0	71,5	64,0	57,2	45,8	32,8	18,8	10,7	5,4			
	69 cm	430	82,1	67,4	55,4	45,6	37,4	25,3	14,0	5,2					
	23.1 cm	1296	69,8	48,9	34,2	23,9	16,6	7,9							
	12.5 cm	2400	59,7	35,9	21,4	12,5	7,0								
	10 cm	3000	55,9	31,5	17,4	9,3	4,7								
	7.5 cm	4000	48,7	23,8	10,8	4,1									
	6 cm	5000	40,8	15,9	4,2										
	5 cm	6000	33,2	8,7											

HYPERFLEX 5 /.212” Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

	Wave length	MHz	Temperature C° / F° -10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158	
Frequencies	166.66 m	1,8	1850	1850	1850	1732	1595	1432	1274	1086	899	713	WATT
	85.71 m	3,5	1528	1476	1433	1342	1236	1109	987	842	697	553	
	42.85 m	7	1252	1210	1175	1100	1013	909	809	690	571	453	
	30 m	10	1109	1072	1041	975	897	806	717	611	506	401	
	21.42 m	14	960	928	900	843	776	697	620	529	438	347	
	14.28 m	21	802	775	752	704	648	582	518	442	366	290	
	10.71 m	28	701	678	658	616	567	509	453	387	320	254	
	6 m	50	523	505	491	459	423	380	338	288	238	189	
	3 m	100	364	352	341	320	294	264	235	200	166	132	
	2.08 m	144	302	292	283	265	244	219	195	166	138	109	
	1.5 m	200	255	247	239	224	206	185	165	141	116	92	
	75 cm	400	178	172	167	157	144	129	115	98	81	64	
	69 cm	430	172	166	161	151	139	125	111	95	78	62	
	37.5 cm	800	124	120	117	109	101	90	80	68	57	45	
	30 cm	1000	110	107	103	97	89	80	71	61	50	40	
	23.1 cm	1296	96	92	90	84	77	69	62	53	44	35	
	12.5 cm	2400	69	66	64	60	55	50	44	38	31	25	
	10 cm	3000	61	59	57	53	49	44	39	33	28	22	
	7.5 cm	4000	51	50	48	45	41	37	33	28	23	19	
	6 cm	5000	45	43	42	39	36	32	29	25	20	16	
	5 cm	6000	40	39	38	35	32	29	26	22	18	14	

Do not use the cable as power supply for both direct current and 50-60 HZ mains

M&P UltraFlex 7 /.287"

(HIGHFLEXX 7)

Ham Radio Pro Cables — M&P — MESSI & PAOLONI

CE Pb RoHS Compliant 2002/95/EC

JACKET:
UV-resistant black PVC
overall Ø 7,3mm ± 0,15
(0.287")

REACTIVE BRAID:
83% SCREENING - 144 wires of copper made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING
First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends

Also available:
ULTRAFLEX 7 SAHARA White jacket for Hot Countries
EXTRAFLEX BURY 7: PE jacket for Direct Burial
ULTRAFLEX 7 LSZH Low Smoke Zero Halogen jacket

DIELECTRIC:
High pressure physical injection foamed polyethylene
TRIPLE LAYER
overall Ø 5 mm ± 0,05 (0.196")

INNER CONDUCTOR:
19x0,38mm copper wires - overall Ø 1,9 mm ± 0,15
(19x0.015" - overall Ø 0.075")

WRTC 2018 Gold SPONSOR — The official cable — WRTC 2022 Italia

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	1,1	0,3
3,5 MHz	1,3	0,4
7 MHz	1,7	0,5
10 MHz	1,9	0,6
14 MHz	2,2	0,6
21 MHz	2,6	0,8
28 MHz	3,0	0,9
50 MHz	4,0	1,2
100 MHz	5,8	1,7
144 MHz	6,9	2,1
200 MHz	8,2	2,5
400 MHz	11,8	3,6
430 MHz	12,3	3,7
800 MHz	17,1	5,2
1000 MHz	19,3	5,8
1296 MHz	22,3	6,8
2400 MHz	32,3	9,8
3000 MHz	36,2	11,0
4000 MHz	42,6	12,9
5000 MHz	49,3	15,0
6000 MHz	55,3	16,8
7000 MHz	61,6	18,7
8000 MHz	68,4	20,8

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 68mm (2.68 in) single bend (choke): 34mm (1.34 in)
Temperature:	-40°C to +60°C (-40°F to +140°F)
Capacitance:	75 pF/m ± 2 (22.9 pF/ft ± 2)
Velocity factor:	83%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	7,3 Ohm/Km (2.2 Ohm/1000ft)
Outer conductor resistance:	9,8 Ohm/Km (3.0 Ohm/1000ft)
Tension test (spark test):	4 kV
Net weight (100m/100ft):	6,9 Kg (4.6 lb)
Maximum peak power:	8000 WATT
Structural Return Loss:	0,3-600 MHz >28 dB; 600-1200 MHz >22 dB; 1200-2000 MHz >18 dB

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	4572 W	430 MHz	353 W
3,5 MHz	3393 W	800 MHz	254 W
7 MHz	2714 W	1000 MHz	225 W
10 MHz	2286 W	1296 MHz	195 W
14 MHz	1974 W	2400 MHz	134 W
21 MHz	1670 W	3000 MHz	120 W
28 MHz	1448 W	4000 MHz	102 W
50 MHz	1086 W	5000 MHz	88 W
100 MHz	749 W	6000 MHz	79 W
144 MHz	629 W	7000 MHz	71 W
200 MHz	530 W	8000 MHz	63 W
400 MHz	368 W		

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); R118 (ISO7622-1); IEC 60332-1-2 (cables with PVC and LSZH jacket); CPR305/11 - **EuroClass Eca** - EN50575:2014 - DoP number: MP00100

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

The PRO choice — M&P — Messi & Paoloni coaxial cables www.messi.it

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-ULTRAFLEX 7, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 57,2% of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies.
REMEMBER: Make sure to match the line accurately!

			M&P-ULTRAFLEX 7 /.287"												
	feet		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters		5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length	MHz	Useful signal output (residual power %)												
Frequencies	85.71 m	3,5	98,4	97,0	95,6	94,2	92,8	90,1	86,2	80,1	74,4	68,1	62,3	55,4	41,2
	42.85 m	7	98,1	96,3	94,5	92,8	91,1	87,8	83,1	75,8	69,1	61,8	55,4	47,8	33,0
	21.42 m	14	97,4	95,0	92,6	90,3	88,0	83,7	77,5	68,3	60,2	51,7	44,4	36,2	21,8
	10.71 m	28	96,5	93,2	90,1	87,0	84,0	78,4	70,7	59,5	50,0	40,6	33,0	25,0	12,5
	6 m	50	95,4	91,1	87,0	83,1	79,3	72,3	63,0	50,0	39,7	30,1	22,8	15,7	6,2
	2.08 m	144	92,3	85,2	78,7	72,7	67,1	57,2	45,1	30,3	20,3	12,6	7,8	4,1	
	69 cm	430	86,6	75,2	65,2	56,6	49,1	37,0	24,1	11,8	5,7				
	23.1 cm	1296	76,7	59,2	45,6	35,1	27,0	15,9	7,0						
	12.5 cm	2400	67,4	45,9	31,2	21,0	14,0	5,8							
	10 cm	3000	64,3	41,9	27,1	17,3	10,9	3,8							
	7.5 cm	4000	59,2	35,4	20,9	12,0	6,6								
	6 cm	5000	53,5	28,9	15,0	7,1									
	5 cm	6000	48,9	24,0	10,8	3,8									

ULTRAFLEX 7 /.287" Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

			Temperature C° / F°									
	Wave length	MHz	-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies	166.66 m	1,8	6838	6838	6638	6217	5724	5138	4572	3900	3228	2560
	85.71 m	3,5	5252	5076	4927	4614	4248	3814	3393	2894	2395	1900
	42.85 m	7	4202	4061	3941	3692	3398	3051	2714	2315	1916	1520
	30 m	10	3538	3420	3319	3109	2862	2569	2286	1950	1614	1280
	21.42 m	14	3056	2953	2866	2685	2472	2219	1974	1684	1394	1105
	14.28 m	21	2586	2499	2425	2272	2091	1878	1670	1425	1179	935
	10.71 m	28	2241	2166	2102	1969	1812	1627	1448	1235	1022	811
	6 m	50	1681	1624	1577	1477	1359	1220	1086	926	767	608
	3 m	100	1159	1120	1087	1018	937	842	749	639	529	419
	2.08 m	144	974	942	914	856	788	707	629	537	444	352
	1.5 m	200	820	792	769	720	663	595	530	452	374	297
	75 cm	400	570	551	534	501	461	414	368	314	260	206
	69 cm	430	547	528	513	480	442	397	353	301	249	198
	37.5 cm	800	393	380	369	345	318	285	254	217	179	142
	30 cm	1000	348	337	327	306	282	253	225	192	159	126
	23.1 cm	1296	301	291	283	265	244	219	195	166	137	109
	12.5 cm	2400	208	201	195	183	168	151	134	115	95	75
	10 cm	3000	186	179	174	163	150	135	120	102	85	67
	7.5 cm	4000	158	153	148	139	128	115	102	87	72	57
	6 cm	5000	136	132	128	120	110	99	88	75	62	49
	5 cm	6000	122	117	114	107	98	88	79	67	55	44
	4.2 cm	7000	109	105	102	96	88	79	71	60	50	39
	3.75 cm	8000	98	95	92	86	79	71	63	54	45	36

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Do not use the cable as power supply for both direct current and 50-60 HZ mains

M&P UltraFlex 10

(H2010) /.400”

Ham Radio Pro Cables — MESSI & PAOLONI

CE Pb RoHS Compliant 2002/95/EC

JACKET:
UV-resistant black PVC
overall Ø 10,3mm ± 0,15
(0.405”)

REACTIVE BRAID:
71% SCREENING - 144 wires of copper
made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING
First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends

DIELECTRIC:
High pressure physical injection foamed polyethylene
TRIPLE LAYER
overall Ø 7,3 mm ± 0,05 (0.287”)

INNER CONDUCTOR:
7x1.0mm copper wires - overall Ø 2,9 mm ± 0,15
(7x0.039“- overall Ø 0.114“)

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 80mm (3.15 in) single bend (choke): 40mm (1.57 in)
Temperature:	-40°C to +60°C (-40°F to +140°F)
Capacitance:	78 pF/m ± 2 (23.8 pF/ft ± 2)
Velocity factor:	83%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	3,2 Ohm/Km (1.0 Ohm/1000ft)
Outer conductor resistance:	9,2 Ohm/Km (2.8 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight x 100m (100ft):	13 Kg (8.7 lb)
Maximum peak power:	12000 WATT
Structural Return Loss:	0,3-600 MHz >30 dB; 600-1200 MHz >25 dB; 1200-2000 MHz >20 dB

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	0,8	0,2
3,5 MHz	1,0	0,3
7 MHz	1,2	0,3
10 MHz	1,3	0,4
14 MHz	1,5	0,4
21 MHz	1,8	0,5
28 MHz	2,0	0,6
50 MHz	2,7	0,8
100 MHz	3,9	1,1
144 MHz	4,7	1,4
200 MHz	5,7	1,7
400 MHz	8,3	2,5
430 MHz	8,6	2,6
800 MHz	12,1	3,7
1000 MHz	13,8	4,2
1296 MHz	16,4	5,0
2400 MHz	23,7	7,2
3000 MHz	27,3	8,3
4000 MHz	32,9	10,0
5000 MHz	38,9	11,8
6000 MHz	44,5	13,5
7000 MHz	50,2	15,3
8000 MHz	55,8	17,0

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	6427 W	430 MHz	587 W
3,5 MHz	5142 W	800 MHz	419 W
7 MHz	4285 W	1000 MHz	372 W
10 MHz	3955 W	1296 MHz	321 W
14 MHz	3428 W	2400 MHz	223 W
21 MHz	2856 W	3000 MHz	193 W
28 MHz	2437 W	4000 MHz	158 W
50 MHz	1849 W	5000 MHz	135 W
100 MHz	1275 W	6000 MHz	117 W
144 MHz	1049 W	7000 MHz	104 W
200 MHz	883 W	8000 MHz	93 W
400 MHz	610 W		

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); R118 (ISO7622-1); IEC 60332-1-2 (cables with PVC and LSZH jacket); CPR305/11 - **EuroClass Eca** - EN50575:2014 - DoP number: MP00102

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

The PRO choice — MRF — Messi & Paoloni coaxial cables www.messi.it

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-ULTRAFLEX 10, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 68.1 % of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies.
REMEMBER: Make sure to match the line accurately!

			M&P-ULTRAFLEX 10 /.400”												
	feet		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters		5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length	MHz	Useful signal output (residual power %)												
Frequencies	85.71 m	3,5	98,9	97,8	96,8	95,8	94,9	92,9	90,1	85,5	81,2	76,3	71,7	66,0	53,6
	42.85 m	7	98,6	97,3	96,0	94,8	93,5	91,1	87,6	82,0	76,8	71,0	65,6	59,1	44,8
	21.42 m	14	98,1	96,3	94,6	92,8	91,2	87,9	83,2	75,9	69,2	62,0	55,6	48,0	34,2
	10.71 m	28	97,5	95,1	92,8	90,5	88,3	84,1	78,1	69,0	61,0	52,6	45,4	37,2	23,8
	6 m	50	96,8	93,7	90,8	88,0	85,2	80,0	72,7	62,0	52,9	43,7	36,1	28,0	14,8
	2.08 m	144	94,6	89,6	84,8	80,3	76,0	68,1	57,8	44,0	33,5	24,1	17,3	11,2	3,6
	69 cm	430	90,4	81,8	74,0	67,0	60,6	49,6	36,8	22,3	13,5	7,3	4,0	1,7	
	23.1 cm	1296	82,2	67,9	56,1	46,4	38,3	26,0	14,5	5,3					
	12.5 cm	2400	74,5	56,3	42,4	31,9	23,9	13,2	4,9						
	10 cm	3000	71,0	51,3	37,0	26,4	18,8	9,1							
	7.5 cm	4000	65,3	43,7	28,9	18,8	11,9	3,9							
	6 cm	5000	57,6	34,5	19,8	10,4	4,3								
	5 cm	6000	49,9	25,9	11,5										
	3.75 cm	8000	42,6	17,7	4,6										
	3 cm	10.000	36,3	11,5											
	2.5 cm	12.000	31,0	6,8											

ULTRAFLEX 10/.400” Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

			Temperature C° / F°									
	Wave length	MHz	-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies	166.66 m	1,8	9949	9615	9332	8741	8047	7224	6427	5482	4537	3599
	85.71 m	3,5	7960	7692	7466	6993	6438	5780	5142	4386	3630	2880
	42.85 m	7	6633	6410	6222	5828	5365	4816	4285	3655	3025	2400
	30 m	10	6122	5917	5743	5379	4952	4445	3955	3374	2792	2215
	21.42 m	14	5307	5128	4977	4662	4292	3853	3428	2924	2420	1920
	14.28 m	21	4421	4273	4147	3884	3576	3210	2856	2436	2016	1599
	10.71 m	28	3772	3646	3539	3314	3051	2739	2437	2079	1721	1365
	6 m	50	2862	2766	2685	2515	2315	2078	1849	1577	1305	1035
	3 m	100	1974	1907	1851	1734	1596	1433	1275	1088	900	714
	2.08 m	144	1624	1569	1523	1427	1313	1179	1049	895	741	587
	1.5 m	200	1367	1321	1282	1201	1106	992	883	753	623	494
	75 cm	400	944	913	886	830	764	686	610	520	431	342
	69 cm	430	909	878	852	798	735	660	587	501	414	329
	37.5 cm	800	649	627	608	570	525	471	419	357	296	235
	30 cm	1000	576	557	540	506	466	418	372	317	263	208
	23.1 cm	1296	497	480	466	437	402	361	321	274	227	180
	12.5 cm	2400	345	334	324	303	279	251	223	190	157	125
	10 cm	3000	299	289	280	262	242	217	193	165	136	108
	7.5 cm	4000	245	236	229	215	198	178	158	135	112	88
	6 cm	5000	209	202	196	184	169	152	135	115	95	76
	5 cm	6000	181	175	170	159	146	132	117	100	83	66
	4.2 cm	7000	161	156	151	141	130	117	104	89	73	58
	3.75 cm	8000	144	139	135	126	116	105	93	79	66	52

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Do not use the cable as power supply for both direct current and 50-60 HZ mains

M&P Hyperflex 10 /.400”

JACKET:
UV-resistant black PVC
overall Ø 10,3mm ± 0,15
(0.405”)

REACTIVE BRAID:
85% SCREENING - 192 wires of copper clad aluminium made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING
First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends

DIELECTRIC:
High pressure physical injection foamed polyethylene
TRIPLE LAYER
overall Ø 7,3 mm ± 0,05 (0.287”)

INNER CONDUCTOR:
19x0,59mm copper wires - overall Ø 2,9 mm ± 0,15
(19x0.023” - overall Ø 0.114”)

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	0,8	0,2
3,5 MHz	1,0	0,3
7 MHz	1,1	0,3
10 MHz	1,3	0,4
14 MHz	1,5	0,4
21 MHz	1,8	0,5
28 MHz	2,0	0,6
50 MHz	2,7	0,8
100 MHz	3,9	1,1
144 MHz	4,7	1,4
200 MHz	5,6	1,7
400 MHz	8,3	2,5
430 MHz	8,6	2,6
800 MHz	11,9	3,6
1000 MHz	13,4	4,1
1296 MHz	15,4	4,7
2400 MHz	21,8	6,6
3000 MHz	24,6	7,5
4000 MHz	29,1	8,8
5000 MHz	33,1	10,0
6000 MHz	36,9	11,2
7000 MHz	40,7	12,4
8000 MHz	44,2	13,4
9000 MHz	47,5	14,4
10.000 MHz	50,7	15,4

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 80mm (3.15 in) single bend (choke): 40mm (1.57 in)
Temperature:	-40°C to +60°C (-40°F to +140°F)
Capacitance:	78 pF/m ± 2 (23.8 pF/ft ± 2)
Velocity factor:	87%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	3,6 Ohm/Km (1.0 Ohm/1000ft)
Outer conductor resistance:	12 Ohm/Km (2.8 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight x 100m (100ft):	11,6 Kg (7,8 lb)
Maximum peak power:	10000 WATT
Structural Return Loss:	0,3-600 MHz >30 dB; 600-1200 MHz >25 dB; 1200-2000 MHz >20 dB

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	5581 W	430 MHz	543 W
3,5 MHz	4583 W	800 MHz	392 W
7 MHz	3861 W	1000 MHz	348 W
10 MHz	3447 W	1296 MHz	302 W
14 MHz	3013 W	2400 MHz	215 W
21 MHz	2528 W	3000 MHz	190 W
28 MHz	2214 W	4000 MHz	161 W
50 MHz	1656 W	5000 MHz	142 W
100 MHz	1152 W	6000 MHz	127 W
144 MHz	956 W	7000 MHz	116 W
200 MHz	808 W	8000 MHz	106 W
400 MHz	561 W	10.000 MHz	91 W

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); R118 (ISO7622-1); IEC 60332-1-2 (cables with PVC and LSZH jacket); CPR305/11 - **EuroClass Eca** - EN50575:2014 - DoP number: MP00103

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-HYPERFLEX 10, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 68% of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies. **REMEMBER: Make sure to match the line accurately!**

			M&P-HYPERFLEX 10 /.400”												
	feet		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters		5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length	MHz	Useful signal output (residual power %)												
Frequencies	85.71 m	3,5	98,9	97,8	96,8	95,8	94,9	92,9	90,1	85,5	81,2	76,3	71,7	66,0	53,6
	42.85 m	7	98,6	97,3	96,0	94,7	93,4	91,0	87,4	81,7	76,5	70,6	65,1	58,5	44,8
	21.42 m	14	98,1	96,4	94,7	93,0	91,4	88,2	83,6	76,4	69,9	62,8	56,4	48,9	34,2
	10.71 m	28	97,5	95,2	93,0	90,8	88,7	84,5	78,7	69,8	62,0	53,7	46,5	38,4	23,8
	6 m	50	96,8	93,7	90,8	88,0	85,2	80,0	72,7	62,0	52,9	43,7	36,1	28,0	14,8
	2 m	144	94,6	89,5	84,7	80,2	75,9	68,0	57,7	43,9	33,3	24,0	17,2	11,1	3,6
	69 cm	430	90,4	81,9	74,1	67,1	60,8	49,8	37,0	22,5	13,6	7,5	4,0		
	23.1 cm	1296	83,0	69,4	57,9	48,4	40,4	28,1	16,2	6,3					
	12.5 cm	2400	76,2	58,9	45,5	35,1	26,9	15,7	6,5						
	10 cm	3000	73,3	54,7	40,7	30,1	22,2	11,7	3,9						
	7.5 cm	4000	68,4	48,0	33,4	23,0	15,6	6,4							
	6 cm	5000	62,0	40,4	25,6	15,5	8,6								
	5 cm	6000	55,3	32,7	17,9	8,2									
	3.75 cm	8000	50,1	26,1	11,7	3,1									
	3 cm	10.000	45,8	21,1	7,4										
	2.5 cm	12.000	41,8	16,8	3,9										

HYPERFLEX 10 /.400” Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

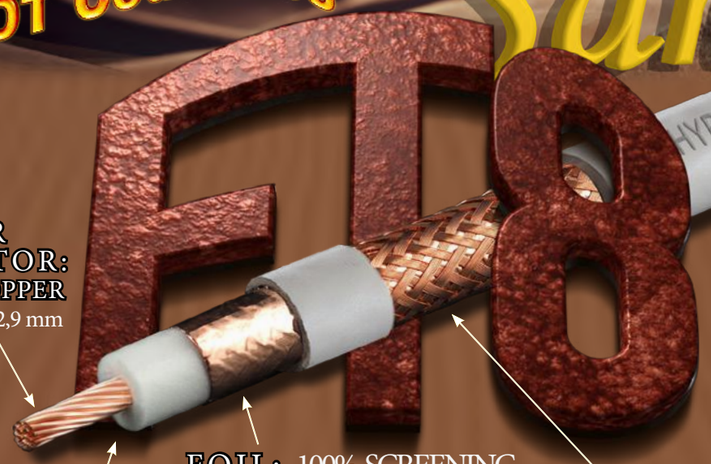
			Temperature C° / F°									
	Wave length	MHz	-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies	166.66 m	1,8	8639	8349	8104	7590	6987	6273	5581	4761	3940	3125
	85.71 m	3,5	7094	6856	6655	6233	5738	5151	4583	3909	3236	2566
	42.85 m	7	5977	5776	5606	5251	4834	4340	3861	3293	2726	2162
	30 m	10	5336	5157	5005	4688	4316	3874	3447	2940	2434	1930
	21.42 m	14	4664	4507	4375	4098	3772	3387	3013	2570	2127	1687
	14.28 m	21	3913	3782	3671	3438	3165	2841	2528	2156	1785	1416
	10.71 m	28	3427	3312	3215	3011	2772	2489	2214	1889	1563	1240
	6 m	50	2563	2477	2405	2252	2073	1861	1656	1413	1169	927
	3 m	100	1783	1723	1673	1567	1442	1295	1152	983	813	645
	2.08 m	144	1480	1430	1388	1300	1197	1075	956	815	675	535
	1.5 m	200	1251	1209	1173	1099	1012	908	808	689	570	452
	75 cm	400	868	839	815	763	702	631	561	479	396	314
	69 cm	430	841	812	788	738	680	610	543	463	383	304
	37.5 cm	800	607	586	569	533	491	441	392	334	277	220
	30 cm	1000	539	521	505	473	436	391	348	297	246	195
	23.1 cm	1296	467	452	439	411	378	339	302	258	213	169
	12.5 cm	2400	333	322	312	292	269	242	215	183	152	120
	10 cm	3000	294	284	276	258	238	214	190	162	134	106
	7.5 cm	4000	249	241	234	219	202	181	161	137	114	90
	6 cm	5000	220	212	206	193	178	160	142	121	100	80
	5 cm	6000	197	190	184	173	159	143	127	108	90	71
	4.2 cm	7000	180	174	168	158	145	130	116	99	82	65
	3.75 cm	8000	164	159	154	144	133	119	106	90	75	59
	3 cm	10.000	140	136	132	123	113	102	91	77	64	50

WATT

Do not use the cable as power supply for both direct current and 50-60 HZ mains

Hyperflex 10 Sahara

for HOT Countries



INNER CONDUCTOR:
19x0,59mm COPPER wires - overall Ø 2,9 mm

JACKET:
UV-resistant white PVC overall Ø 10,3mm ± 0,15 (0.405")

FOIL: 100% SCREENING
First screen made of COPPER with an applied PE-layer: prevents cracking due to short radius bends

DIELECTRIC:
High pressure physical injection FOAMED POLYETHYLENE
TRIPLE LAYER
overall Ø 7,3 mm ± 0,05 (0.287")

REACTIVE BRAID:
85% SCREENING - 216 COPPER WIRES made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 80mm (3.15 in) single bend (choke): 40mm (1.57 in)
Temperature:	-40°C to +60°C (-40°F to +140°F)
Capacitance:	78 pF/m ± 2 (23.8 pF/ft ± 2)
Velocity factor:	87%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	3,6 Ohm/Km (1.0 Ohm/1000ft)
Outer conductor resistance:	**6 Ohm/Km**
Tension test (spark test):	8 kV
Net weight (100m/100ft):	13,5 Kg (9,1 lb)
Maximum peak power:	13000 WATT
Structural Return Loss:	0,3-600 MHz >30 dB; 600-1200 MHz >25 dB; 1200-2000 MHz >20 dB

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	9927 W	200 MHz	1226 W
3,5 MHz	7721 W	400 MHz	837 W
7 MHz	5990 W	430 MHz	808 W
10 MHz	5186 W	800 MHz	581 W
14 MHz	4483 W	1000 MHz	516 W
21 MHz	3777 W	1296 MHz	449 W
28 MHz	3357 W	2400 MHz	319 W
50 MHz	2518 W	4000 MHz	239 W
100 MHz	1759 W	8000 MHz	157 W
144 MHz	1460 W	10.000 MHz	137 W

ATTENUATION (20°C/68°F)

FREQUENZA	dB/100m	dB/100ft
1,8 MHz	0,8	0,2
3,5 MHz	1,0	0,3
7 MHz	1,1	0,3
10 MHz	1,3	0,4
14 MHz	1,5	0,4
21 MHz	1,8	0,5
28 MHz	2,0	0,6
50 MHz	2,7	0,8
100 MHz	3,9	1,1
144 MHz	4,7	1,4
200 MHz	5,6	1,7
400 MHz	8,3	2,5
430 MHz	8,6	2,6
800 MHz	11,9	3,6
1000 MHz	13,4	4,1
1296 MHz	15,4	4,7
2400 MHz	21,8	6,6
4000 MHz	29,1	8,8
8000 MHz	44,2	13,4
10.000 MHz	50,7	15,4

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters);
EN 50117 (screening efficiency);
CEI EN 50289 (SA test methods);
R118 (ISO7622-1);
IEC 60332-1-2 (cables with PVC and LSZH jacket);
CPR305/11 (EN50575:2014)

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-HYPERFLEX 10, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 68% of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies. **REMEMBER: Make sure to match the line accurately!**

		M&P-HYPERFLEX 10 SAHARA FT8 /.400"												
feet		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
meters		5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length	MHz	Useful signal output (residual power %)											
Frequencies	85.71 m	3,5	98,9	97,8	96,8	95,8	94,9	92,9	90,1	85,5	81,2	76,3	71,7	66,0	53,6
	42.85 m	7	98,6	97,3	96,0	94,7	93,4	91,0	87,4	81,7	76,5	70,6	65,1	58,5	44,8
	21.42 m	14	98,1	96,4	94,7	93,0	91,4	88,2	83,6	76,4	69,9	62,8	56,4	48,9	34,2
	10.71 m	28	97,5	95,2	93,0	90,8	88,7	84,5	78,7	69,8	62,0	53,7	46,5	38,4	23,8
	6 m	50	96,8	93,7	90,8	88,0	85,2	80,0	72,7	62,0	52,9	43,7	36,1	28,0	14,8
	2 m	144	94,6	89,5	84,7	80,2	75,9	68,0	57,7	43,9	33,3	24,0	17,2	11,1	3,6
	69 cm	430	90,4	81,9	74,1	67,1	60,8	49,8	37,0	22,5	13,6	7,5	4,0		
	23.1 cm	1296	83,0	69,4	57,9	48,4	40,4	28,1	16,2	6,3					
	12.5 cm	2400	76,2	58,9	45,5	35,1	26,9	15,7	6,5						
	10 cm	3000	73,3	54,7	40,7	30,1	22,2	11,7	3,9						
	7.5 cm	4000	68,4	48,0	33,4	23,0	15,6	6,4							
	6 cm	5000	62,0	40,4	25,6	15,5	8,6								
	5 cm	6000	55,3	32,7	17,9	8,2									
	3.75 cm	8000	50,1	26,1	11,7	3,1									
	3 cm	10.000	45,8	21,1	7,4										
	2.5 cm	12.000	41,8	16,8	3,9										

HYPERFLEX 10/.400" Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

			Temperature C° / F°									
	Wave length	MHz	-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies	166.66 m	1,8	12000	12000	12000	11980	11178	10710	9927	8468	7008	5559
	85.71 m	3,5	11720	11450	11211	10500	9667	8678	7721	6586	5451	4324
	42.85 m	7	9273	8962	8698	8147	7500	6733	5990	5110	4229	3355
	30 m	10	8027	7758	7530	7053	6492	5829	5186	4423	3661	2904
	21.42 m	14	6940	6707	6509	6097	5613	5039	4483	3824	3165	2511
	14.28 m	21	5846	5650	5484	5136	4728	4245	3777	3221	2666	2115
	10.71 m	28	5196	5022	4874	4565	4203	3773	3357	2863	2370	1880
	6 m	50	3897	3766	3656	3424	3152	2830	2518	2148	1777	1410
	3 m	100	2723	2632	2554	2392	2203	1977	1759	1501	1242	985
	2.08 m	144	2260	2184	2120	1985	1828	1641	1460	1245	1031	818
	1.5 m	200	1897	1833	1779	1667	1534	1378	1226	1045	865	686
	75 cm	400	1296	1252	1216	1139	1048	941	837	714	591	469
	69 cm	430	1251	1209	1173	1099	1012	908	808	689	570	452
	37.5 cm	800	899	869	844	790	727	653	581	496	410	325
	30 cm	1000	799	772	749	702	646	580	516	440	364	289
	23.1 cm	1296	694	671	651	610	562	504	449	383	317	251
	12.5 cm	2400	493	477	463	434	399	358	319	272	225	179
	10 cm	3000	436	422	409	383	353	317	282	240	199	158
	7.5 cm	4000	370	357	347	325	299	268	239	204	169	134
	6 cm	5000	325	314	305	286	263	236	210	179	148	118
	5 cm	6000	291	281	273	256	235	211	188	160	133	105
	4.2 cm	7000	264	255	248	232	214	192	171	146	121	96
	3.75 cm	8000	243	235	228	214	197	177	157	134	111	88
	3 cm	10.000	212	205	199	186	172	154	137	117	97	77

WATT

Do not use the cable as power supply for both direct current and 50-60 HZ mains

M&P Extraflex BURY /.400”

Ham Radio Pro Cables — M&P — MESSI & PAOLONI

CE Pb RoHS Compliant 2002/95/EC

JACKET:
UV shielded polyethylene for direct burial and outdoor use
overall Ø 10,3mm ± 0,15 (0.405”)

REACTIVE BRAID:
85% SCREENING - 192 wires of copper clad aluminium made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING
First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends

DIELECTRIC:
High pressure physical injection foamed polyethylene
TRIPLE LAYER
overall Ø 7,3 mm ± 0,05 (0.287“)

INNER CONDUCTOR:
19x0,59mm copper wires - overall Ø 2,9 mm ± 0,15
(19x0.023”- overall Ø 0.114”)

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 80mm (3.15 in) single bend (choke): 40mm (1.57 in)
Temperature:	-40°C to +60°C (-40°F to +140°F)
Capacitance:	78 pF/m ± 2 (23.8 pF/ft ± 2)
Velocity factor:	87%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	3,6 Ohm/Km (1.0 Ohm/1000ft)
Outer conductor resistance:	12 Ohm/Km (2.8 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight x 100m (100ft):	10,4 Kg (7 lb)
Maximum peak power:	10000 WATT
Structural Return Loss:	0,3-600 MHz >30 dB; 600-1200 MHz >25 dB; 1200-2000 MHz >20 dB

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	0,8	0,2
3,5 MHz	1,0	0,3
7 MHz	1,1	0,3
10 MHz	1,3	0,4
14 MHz	1,5	0,4
21 MHz	1,8	0,5
28 MHz	2,0	0,6
50 MHz	2,7	0,8
100 MHz	3,9	1,1
144 MHz	4,7	1,4
200 MHz	5,6	1,7
400 MHz	8,3	2,5
430 MHz	8,6	2,6
800 MHz	11,9	3,6
1000 MHz	13,4	4,1
1296 MHz	15,4	4,7
2400 MHz	21,8	6,6
3000 MHz	24,6	7,5
4000 MHz	29,1	8,8
5000 MHz	33,1	10,0
6000 MHz	36,9	11,2
7000 MHz	40,7	12,4
8000 MHz	44,2	13,4
9000 MHz	47,5	14,4
10.000 MHz	50,7	15,4

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	5581 W	430 MHz	543 W
3,5 MHz	4583 W	800 MHz	392 W
7 MHz	3861 W	1000 MHz	348 W
10 MHz	3447 W	1296 MHz	302 W
14 MHz	3013 W	2400 MHz	215 W
21 MHz	2528 W	3000 MHz	190 W
28 MHz	2214 W	4000 MHz	161 W
50 MHz	1656 W	5000 MHz	142 W
100 MHz	1152 W	6000 MHz	127 W
144 MHz	956 W	7000 MHz	116 W
200 MHz	808 W	8000 MHz	106 W
400 MHz	561 W	10.000 MHz	91 W

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods);
CPR305/11 - **EuroClass Fca** - EN50575:2014 - DoP number: MP0124

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-EXTRAFLEX BURY, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 68% of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies. **REMEMBER: Make sure to match the line accurately!**

			M&P-EXTRAFLEX BURY 10 / .400”											
	feet		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters		5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length	MHz	Useful signal output (residual power %)												
Frequencies	85.71 m	3,5	98,9	97,8	96,8	95,8	94,9	92,9	90,1	85,5	81,2	76,3	71,7	66,0	53,6
	42.85 m	7	98,6	97,3	96,0	94,7	93,4	91,0	87,4	81,7	76,5	70,6	65,1	58,5	44,8
	21.42 m	14	98,1	96,4	94,7	93,0	91,4	88,2	83,6	76,4	69,9	62,8	56,4	48,9	34,2
	10.71 m	28	97,5	95,2	93,0	90,8	88,7	84,5	78,7	69,8	62,0	53,7	46,5	38,4	23,8
	6 m	50	96,8	93,7	90,8	88,0	85,2	80,0	72,7	62,0	52,9	43,7	36,1	28,0	14,8
	2 m	144	94,6	89,5	84,7	80,2	75,9	68,0	57,7	43,9	33,3	24,0	17,2	11,1	3,6
	69 cm	430	90,4	81,9	74,1	67,1	60,8	49,8	37,0	22,5	13,6	7,5	4,0		
	23.1 cm	1296	83,0	69,4	57,9	48,4	40,4	28,1	16,2	6,3					
	12.5 cm	2400	76,2	58,9	45,5	35,1	26,9	15,7	6,5						
	10 cm	3000	73,3	54,7	40,7	30,1	22,2	11,7	3,9						
	7.5 cm	4000	68,4	48,0	33,4	23,0	15,6	6,4							
	6 cm	5000	62,0	40,4	25,6	15,5	8,6								
	5 cm	6000	55,3	32,7	17,9	8,2									
	3.75 cm	8000	50,1	26,1	11,7	3,1									
	3 cm	10.000	45,8	21,1	7,4										
	2.5 cm	12.000	41,8	16,8	3,9										

EXTRAFLEX BURY 10 Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

			Temperature C° / F°									
	Wave length	MHz	-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies	166.66 m	1,8	8639	8349	8104	7590	6987	6273	5581	4761	3940	3125
	85.71 m	3,5	7094	6856	6655	6233	5738	5151	4583	3909	3236	2566
	42.85 m	7	5977	5776	5606	5251	4834	4340	3861	3293	2726	2162
	30 m	10	5336	5157	5005	4688	4316	3874	3447	2940	2434	1930
	21.42 m	14	4664	4507	4375	4098	3772	3387	3013	2570	2127	1687
	14.28 m	21	3913	3782	3671	3438	3165	2841	2528	2156	1785	1416
	10.71 m	28	3427	3312	3215	3011	2772	2489	2214	1889	1563	1240
	6 m	50	2563	2477	2405	2252	2073	1861	1656	1413	1169	927
	3 m	100	1783	1723	1673	1567	1442	1295	1152	983	813	645
	2.08 m	144	1480	1430	1388	1300	1197	1075	956	815	675	535
	1.5 m	200	1251	1209	1173	1099	1012	908	808	689	570	452
	75 cm	400	868	839	815	763	702	631	561	479	396	314
	69 cm	430	841	812	788	738	680	610	543	463	383	304
	37.5 cm	800	607	586	569	533	491	441	392	334	277	220
	30 cm	1000	539	521	505	473	436	391	348	297	246	195
	23.1 cm	1296	467	452	439	411	378	339	302	258	213	169
	12.5 cm	2400	333	322	312	292	269	242	215	183	152	120
	10 cm	3000	294	284	276	258	238	214	190	162	134	106
	7.5 cm	4000	249	241	234	219	202	181	161	137	114	90
	6 cm	5000	220	212	206	193	178	160	142	121	100	80
	5 cm	6000	197	190	184	173	159	143	127	108	90	71
	4.2 cm	7000	180	174	168	158	145	130	116	99	82	65
	3.75 cm	8000	164	159	154	144	133	119	106	90	75	59
	3 cm	10.000	140	136	132	123	113	102	91	77	64	50

WATT

Do not use the cable as power supply for both direct current and 50-60 HZ mains

45,3% lighter
than average 10,3 mm
full copper cables

Ham Radio
Pro Cables
M&P
AIRBORNE
MESSI & PAOLONI

19dB @ 2400 Mhz
by far the most performant
of its class (10.3 mm cables)

M&P AIRBORNE 10 /.400"

JACKET:
UV shielded polyethylene
for direct burial and outdoor use
overall Ø 10,3mm ± 0,15
(0.405")

REACTIVE BRAID:
85% SCREENING - 192 wires of copper clad aluminium made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING
First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends

Direct Burial

RoHS Compliant 2002/95/EC

DIELECTRIC:
High pressure physical injection
foamed polyethylene
TRIPLE LAYER
overall Ø 7,3 mm ± 0,05 (0.287")

INNER CONDUCTOR:
made of copper clad aluminium
overall Ø 2,78 mm ± 0,05 (Ø 0.109")

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	0,6	0,2
3,5 MHz	0,8	0,2
7 MHz	1,0	0,3
10 MHz	1,2	0,3
14 MHz	1,3	0,4
21 MHz	1,7	0,5
28 MHz	1,9	0,5
50 MHz	2,4	0,7
100 MHz	3,5	1,0
144 MHz	4,2	1,2
200 MHz	5,0	1,5
400 MHz	7,2	2,1
430 MHz	7,6	2,3
800 MHz	10,4	3,1
1000 MHz	11,8	3,6
1296 MHz	13,6	4,1
2400 MHz	19,2	5,8
3000 MHz	21,6	6,5
4000 MHz	25,6	7,8
5000 MHz	29,2	8,9
6000 MHz	32,8	10,0
7000 MHz	35,6	10,8
8000 MHz	38,6	11,7
10.000 MHz	44,6	13,5
12.000 MHz	50,2	15,3

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 103mm (4.05 in) single bend (choke): 65mm (2.56 in)
Temperature:	-45°C to +70°C (-49°F to +158°F)
Capacitance:	74 pF/m ± 2 (22.6 pF/ft ± 2)
Velocity factor:	87%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	4,4 Ohm/Km (1.3 Ohm/1000ft)
Outer conductor resistance:	12 Ohm/Km (3.7 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight (100m/100ft):	7,1 Kg (4,8 lb)
Maximum peak power:	11500 WATT
Structural Return Loss:	0,3-600 MHz >30 dB; 600-1200 MHz >25 dB; 1200-2000 MHz >20 dB

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	10831 W	430 MHz	944 W
3,5 MHz	8471 W	800 MHz	692 W
7 MHz	6667 W	1000 MHz	610 W
10 MHz	6000 W	1296 MHz	529 W
14 MHz	5180 W	2400 MHz	375 W
21 MHz	4114 W	3000 MHz	333 W
28 MHz	3731 W	4000 MHz	281 W
50 MHz	2939 W	5000 MHz	247 W
100 MHz	2045 W	6000 MHz	220 W
144 MHz	1710 W	7000 MHz	202 W
200 MHz	1440 W	8000 MHz	187 W
400 MHz	992 W	10.000 MHz	161 W

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods);
CPR305/11 - **EuroClass Fca** - EN50575:2014 - DoP number: MP0096

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-AIRBORNE 10, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 71.2% of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies. **REMEMBER: Make sure to match the line accurately!**

M&P-AIRBORNE 10 /.400"

	feet	16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters	5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length / MHz	Useful signal output (residual power %)												
Frequencies	85.71 m / 3,5	98,9	98,0	97,0	96,1	95,1	93,3	90,6	86,2	82,1	77,4	73,0	67,5	55,5
	42.85 m / 7	98,7	97,4	96,2	95,0	93,9	91,6	88,2	82,9	77,9	72,3	67,1	60,7	47,3
	21.42 m / 14	98,3	96,8	95,2	93,7	92,2	89,3	85,1	78,6	72,5	65,9	59,8	52,6	38,2
	10.71 m / 28	97,7	95,6	93,5	91,4	89,4	85,5	80,0	71,6	64,0	56,0	49,0	41,0	26,3
	6 m / 50	97,1	94,4	91,8	89,2	86,7	82,0	75,3	65,4	56,8	47,9	40,5	32,3	18,3
	2 m / 144	95,2	90,7	86,4	82,3	78,4	71,2	61,6	48,3	37,9	28,3	21,2	14,4	5,4
	69 cm / 430	91,5	83,8	76,8	70,3	64,4	54,0	41,5	26,8	17,2	10,1	5,9		
	23.1 cm / 1296	84,9	72,5	61,9	52,8	45,1	32,8	20,3	8,9	3,7				
	12.5 cm / 2400	78,6	62,7	49,9	39,7	31,5	19,7	9,4						
	10 cm / 3000	76,4	59,2	45,8	35,4	27,3	16,0	6,7						
	7.5 cm / 4000	72,9	53,9	39,7	29,2	21,3	11,1	3,7						
	6 cm / 5000	69,5	49,1	34,5	24,1	16,6	7,5							
	5 cm / 6000	66,6	45,0	30,2	20,1	13,1	5,1							
	3.75 cm / 8000	61,0	38,0	24,4	13,7	7,7								
	3 cm / 10.000	49,8	25,8	11,4										
	2.5 cm / 12.000	46,1	21,5	7,7										

AIRBORNE 10 /.400" Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

	Wave length	MHz	Temperature C° / F° -10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies	166.66 m	1,8	13300	13300	13300	13300	12900	12174	10831	9239	7647	6065
	85.71 m	3,5	13112	12672	12299	11520	10605	9521	8471	7225	5980	4744
	42.85 m	7	10320	9973	9680	9067	8347	7493	6667	5687	4707	3733
	30 m	10	9288	8976	8712	8160	7512	6744	6000	5118	4236	3360
	21.42 m	14	8018	7749	7521	7045	6485	5822	5180	4418	3657	2901
	14.28 m	21	6369	6155	5974	5595	5151	4624	4114	3509	2905	2304
	10.71 m	28	5775	5581	5417	5074	4671	4193	3731	3182	2634	2089
	6 m	50	4549	4396	4267	3997	3679	3303	2939	2507	2075	1646
	3 m	100	3166	3060	2970	2782	2561	2299	2045	1745	1444	1145
	2.08 m	144	2647	2558	2483	2326	2141	1922	1710	1459	1207	958
	1.5 m	200	2229	2154	2091	1958	1803	1619	1440	1228	1017	806
	75 cm	400	1535	1484	1440	1349	1242	1115	992	846	700	555
	69 cm	430	1461	1412	1370	1283	1181	1061	944	805	666	528
	37.5 cm	800	1072	1036	1005	942	867	778	692	591	489	388
	30 cm	1000	945	913	886	830	764	686	610	520	431	342
	23.1 cm	1296	820	792	769	720	663	595	529	452	374	296
	12.5 cm	2400	581	561	545	510	470	422	375	320	265	210
	10 cm	3000	516	499	484	453	417	375	333	284	235	187
	7.5 cm	4000	435	421	408	383	352	316	281	240	199	158
	6 cm	5000	382	369	358	335	309	277	247	210	174	138
	5 cm	6000	340	328	319	299	275	247	220	187	155	123
	4.2 cm	7000	313	303	294	275	253	227	202	173	143	113
	3.75 cm	8000	289	279	271	254	234	210	187	159	132	104
	3.3 cm	9000	269	260	252	236	217	195	173	148	122	97
	3 cm	10.000	250	242	234	220	202	181	161	138	114	90

WATT

Do not use the cable as power supply for both direct current and 50-60 HZ mains

M&P Hyperflex 13 /.500”

CE Pb RoHS Compliant 2002/95/EC

JACKET:
UV-resistant black PVC
overall Ø 12,7mm ± 0,15
(0.500”)

Also available:
HYPERFLEX 13 SAHARA White jacket for Hot Countries
EXTRAFLEX BURY 13: PE jacket for Direct Burial
HYPERFLEX 13 LSZH Low Smoke Zero Halogen Jacket

REACTIVE BRAID:
82% SCREENING - 240 wires of copper clad aluminium made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING
First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends

DIELECTRIC:
High pressure physical injection foamed polyethylene
TRIPLE LAYER
overall Ø 9,9 mm ± 0,05 (0.39 “)

INNER CONDUCTOR:
37x0,56mm copper wires - overall Ø 3,8 mm ± 0,15
(37x0.022” - overall Ø 0.149”)

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	0,5	0,1
3,5 MHz	0,6	0,2
7 MHz	0,8	0,2
10 MHz	1,0	0,3
14 MHz	1,1	0,3
21 MHz	1,3	0,4
28 MHz	1,5	0,4
50 MHz	2,0	0,6
100 MHz	2,8	0,8
144 MHz	3,6	1,1
200 MHz	4,2	1,3
400 MHz	6,1	1,8
430 MHz	6,4	1,9
800 MHz	9,0	2,7
1000 MHz	10,1	3,0
1296 MHz	11,7	3,5
2400 MHz	16,6	5,0
3000 MHz	18,9	5,7
4000 MHz	22,4	6,8
5000 MHz	25,6	7,8
6000 MHz	28,7	8,7
7000 MHz	31,7	9,6
8000 MHz	34,5	10,5
9000 MHz	37,5	11,4
10.000 MHz	40,5	12,3
12.000 MHz	46,0	14,0

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 140mm single bend (choke): 100mm
Temperature:	-40°C to +60°C (-40°F to +140°F)
Capacitance:	75 pF/m ± 2 (22.9 pF/ft ± 2)
Velocity factor:	86%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	2 Ohm/Km (0.6 Ohm/1000ft)
Outer conductor resistance:	9,5 Ohm/Km (2.0 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight x 100m (100ft):	18 Kg (12 lb)
Maximum peak power:	20000 WATT
Structural Return Loss:	0,3-600 MHz >30 dB; 600-1200 MHz >25 dB; 1200-2000 MHz >20 dB

*DUE TO THE DIMENSIONAL PARAMETERS OF THIS CABLE THE FREQUENCY OF 2500 MHz +/- 15 MHz IS NOT USABLE.

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	14681 W	430 MHz	1435 W
3,5 MHz	12650 W	800 MHz	1022 W
7 MHz	9880 W	1000 MHz	907 W
10 MHz	8321 W	1296 MHz	786 W
14 MHz	7130 W	2400 MHz	552 W
21 MHz	5732 W	3000 MHz	487 W
28 MHz	4962 W	4000 MHz	410 W
50 MHz	3873 W	5000 MHz	358 W
100 MHz	2795 W	6000 MHz	320 W
144 MHz	2396 W	8000 MHz	266 W
200 MHz	2150 W	10.000 MHz	227 W
400 MHz	1486 W	12.000 MHz	200 W

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); R118 (ISO7622-1); IEC 60332-1-2 (cables with PVC and LSZH jacket); CPR305/11 - **EuroClass Eca** - EN50575:2014 - DoP number: MP00109

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-HYPERFLEX 13, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 74.7 % of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies. **REMEMBER: Make sure to match the line accurately!**

M&P-HYPERFLEX 13/.500”

	feet		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters		5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length	MHz	Useful signal output (residual power %)												
Frequencies	85.71 m	3,5	99,1	98,3	97,5	96,7	96,0	94,4	92,2	88,5	85,0	81,0	77,2	72,3	61,6
	42.85 m	7	98,9	97,8	96,8	95,8	94,9	92,9	90,1	85,5	81,2	76,3	71,7	66,0	53,6
	21.42 m	14	98,6	97,2	95,9	94,6	93,3	90,8	87,2	81,5	76,1	70,1	64,6	58,0	44,2
	10.71 m	28	98,1	96,3	94,6	92,9	91,2	87,9	83,3	76,0	69,4	62,2	55,8	48,2	33,5
	6 m	50	97,6	95,4	93,2	91,1	89,0	85,0	79,3	70,7	63,0	54,9	47,8	39,7	25,0
	2 m	144	95,8	91,9	88,2	84,6	81,2	74,7	66,0	53,6	43,6	33,9	26,4	19,0	8,2
	69 cm	430	92,7	86,1	80,0	74,3	69,0	59,5	47,6	32,9	22,7	14,5	9,3	5,1	
	23.1 cm	1296	86,8	75,8	66,1	57,7	50,4	38,3	25,4	12,6	6,1				
	12.5 cm	2400	81,9	67,5	55,6	45,8	37,7	25,4	14,0	5,0					
	10 cm	3000	79,4	63,7	51,1	40,9	32,7	20,8	10,4						
	7.5 cm	4000	76,2	58,6	45,1	34,6	26,5	15,4	6,5						
	6 cm	5000	73,4	54,4	40,2	29,6	21,8	11,6	4,2						
	5 cm	6000	70,3	50,0	35,5	25,1	17,6	8,3							
	3.75 cm	8000	65,6	43,5	28,7	18,8	12,1	4,6							
	3 cm	10.000	59,6	36,2	21,5	12,3	6,6								
	2.5 cm	12.000	55,7	31,5	17,3	8,9	3,9								

HYPERFLEX 13 /.500” Power Handling/Temperature (in Continuous Carrier - 50% Duty Cycle)

	Wave length	MHz	Temperature C° / F° -10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158	
Frequencies	166.66 m	1,8	18000	18000	18000	18000	18000	16501	14681	12523	10365	8221	WATT
	85.71 m	3,5	18000	18000	18000	17204	15838	14219	12650	10790	8931	7084	
	42.85 m	7	15295	14781	14346	13437	12370	11105	9880	8428	6975	5533	
	30 m	10	12880	12448	12081	11316	10417	9352	8321	7097	5874	4660	
	21.42 m	14	11037	10666	10353	9697	8927	8014	7130	6082	5034	3993	
	14.28 m	21	8873	8574	8322	7795	7176	6442	5732	4889	4047	3210	
	10.71 m	28	7682	7424	7205	6749	6213	5578	4962	4233	3503	2779	
	6 m	50	5995	5794	5624	5267	4849	4353	3873	3304	2734	2169	
	3 m	100	4327	4182	4059	3801	3500	3142	2795	2384	1973	1565	
	2.08 m	144	3709	3584	3479	3258	3000	2693	2396	2044	1691	1342	
	1.5 m	200	3327	3216	3121	2923	2691	2416	2150	1834	1518	1204	
	75 cm	400	2301	2223	2158	2021	1861	1671	1486	1268	1049	832	
	69 cm	430	2222	2147	2084	1952	1797	1613	1435	1224	1013	804	
	37.5 cm	800	1582	1529	1484	1390	1280	1149	1022	872	722	572	
	30 cm	1000	1404	1357	1317	1234	1136	1020	907	774	641	508	
	23.1 cm	1296	1217	1176	1142	1069	984	884	786	671	555	440	
	12.5 cm	2400	854	825	801	750	691	620	552	470	389	309	
	10 cm	3000	754	728	707	662	609	547	487	415	344	273	
	7.5 cm	4000	634	613	595	557	513	461	410	350	289	229	
	6 cm	5000	555	536	520	487	449	403	358	306	253	201	
	5 cm	6000	496	479	465	436	401	360	320	273	226	179	
	4.2 cm	7000	449	434	421	395	363	326	290	247	205	162	
	3.75 cm	8000	412	398	386	362	333	299	266	227	188	149	
	3.3 cm	9000	380	367	356	334	307	276	245	209	173	137	
	3 cm	10.000	352	340	330	309	284	255	227	194	160	127	

Do not use the cable as power supply for both direct current and 50-60 HZ mains

RG MIL C17 F*

CONSTRUCTION PARAMETERS

RG 58 C/U	RG 213 PLUS	RG 214 A/U
JACKET (± 0,15mm)		
PVC Ø 5mm (.200")	PVC Ø 10,3mm (.405")	PVC Ø 10,8mm (0.425")
BRAID		
tinned copper screening: 92% 112 wires	copper clad aluminium screening: 85% 192 wires	silver plated copper 1° screen: 96% 144 wires 2° screen: 98% 168 wires
FOIL		
/	copper + polyethylene screening: 100%	/
DIELECTRIC (± 0,05mm)		
solid polyethylene 2,95mm	solid polyethylene 7,25mm	solid polyethylene 7,25mm
INNER CONDUCTOR		
tinned copper Ø 0,90mm 19x0,18mm wires	bare copper Ø 2,25mm 7x0,75mm wires	silver plated copper Ø 2,25mm 7x0,75mm wires

Example of M&P coils packaging.

ELECTRICAL DATA

MODELS:	RG 58 C/U	RG 213 PLUS	RG 214 A/U
Class:	A++	A++	A++
Capacitance (pF/m):	101 pF/m ± 2	101 pF/m ± 2	101 pF/m ± 2
Minimum bending radius: multiple/single	50/25mm	120/60mm	120/60mm
Temperature:	-40°C to + 60°C	-45°C to + 70°C	-40°C to + 60°C
Velocity factor:	66%	66%	66%
Screening efficiency: MHz 100-900	> 55 dB	> 105 dB	> 80 dB
Inner conductor resistance	3,7 Ohm/Km	5,8 Ohm/Km	5,5 Ohm/Km
Outer conductor resistance	15 Ohm/Km	11 Ohm/Km	4 Ohm/Km
Tension test (jacket)	4 kV	8 kV	8 kV
Weight (100m)	3,7 Kg	12 Kg	20 Kg
Maximum peak power:	2000 W	16000W	16000W
ATTENUATION at 20°C (db/100m)			
Mhz 1,8	2,1	0,8	1,2
Mhz 10	4,7	1,7	2,0
Mhz 28	7,9	2,6	3,4
Mhz 50	10,8	3,5	4,6
Mhz 144	19,3	6,2	8,3
Mhz 200	22,1	7,4	10,0
Mhz 430	34,9	11,4	15,4
Mhz 800	51,1	16,3	21,6
Mhz 1296	63,0	21,8	31,8
SRL			
MHz 0,3-600	>35 dB	>30 dB	>30 dB
MHz 600-1200	>30 dB	>25 dB	>30 dB
MHz 1200-2000	>30 dB	>25 dB	>25 dB
POWER HANDLING			
Mhz 1,8	1321 W	8372 W	5533 W
Mhz 10	702 W	4114 W	3600 W
Mhz 28	418 W	2667 W	2118 W
Mhz 50	306 W	2033 W	1565 W
Mhz 144	171 W	1152 W	867 W
Mhz 430	95 W	628 W	468 W
Mhz 800	/	439 W	333 W
Mhz 1296	/	328 W	226 W

75 Ohm

ELECTRICAL DATA

MODELS:	INTSAT 110	INTSAT 170	DIGISAT 5
Class:	A++	A++	A++
Capacitance (pF/m):	52 pF/m ± 2	52 pF/m ± 2	52 pF/m ± 2
Minimum bending radius: multiple/single	69/44mm	101/64mm	69/44mm
Velocity factor:	85%	85%	85%
Inner conductor resistance	17,5 Ohm/Km	8,5 Ohm/Km	17,5 Ohm/Km
Outer conductor resistance	9 Ohm/Km	9 Ohm/Km	9 Ohm/Km
Tension test (jacket)	8 kV	8 kV	4 kV
Weight (100m)	4,6 Kg	8,5 Kg	5,1 Kg
Connettori "F" PPC a compressione	EX6-5,1/8,3 EX6-5,1/8,3-A*	EX 11 B004-FM*	EX6-5,1/8,3 EX6-5,1/8,3-A*
Connettori "F" a crimpare	MP-CRP7	/	MP-CRP7
Connettori "F" a vite	C.TV.FM7 C.TV.FM7 oring	C.TV.FM10	C.TV.FM7 C.TV.FM7 oring
ATTENUATION at 20°C (db/100m)			
Mhz 5	0,8	0,7	0,8
Mhz 50	3,6	2,6	3,6
Mhz 200	7,4	5,4	7,4
Mhz 470	11,5	8,5	11,5
Mhz 860	15,8	11,7	15,8
Mhz 1000	17,2	12,6	17,2
Mhz 1750	23,2	17,0	23,2
Mhz 2050	25,2	18,4	25,2
Mhz 2150	25,9	19,0	25,9
SRL			
MHz 30-470	>33 dB	>32 dB	>33 dB
MHz 1000-2000	>30 dB	>28 dB	>30 dB
MHz 2000-3000	>26 dB	>25 dB	>26 dB
SCREENING EFFICIENCY			
MHz 30-1000	> 105 dB	> 105 dB	> 105 dB
MHz 1000-2000	> 105 dB	> 100 dB	> 105 dB
MHz 2000-3000	> 103 dB	> 90 dB	> 103 dB

CONSTRUCTION PARAMETERS

INTSAT 110	INTSAT 170	DIGISAT 5
JACKET (± 0,15mm)		
Polyethylene Ø 6,9mm (.271")	Polyethylene Ø 10,1mm (.397")	PVC Ø 6,8mm (.267")
BRAID		
bare copper screening: 82% 144 wires *con strato di petrol jelly antiossidazione*	bare copper screening: 66% 144 wires *con strato di petrol jelly antiossidazione*	bare copper screening: 82% 144 wires
FOIL		
polyethylene screening: 100%	copper + polyethylene screening: 100%	copper + polyethylene screening: 100%
DIELECTRIC (± 0,05mm)		
foamed polyethylene 4,8mm	foamed polyethylene 7,25mm	foamed polyethylene 4,8mm
INNER CONDUCTOR		
bare copper Ø 1,13mm	bare copper Ø 1,63mm	bare copper Ø 1,13mm

FINE TUNING RECEPTION & ANTENNA MATCHING

NOTE: for outdoor use we warmly recommend PPC® AquaTight connectors

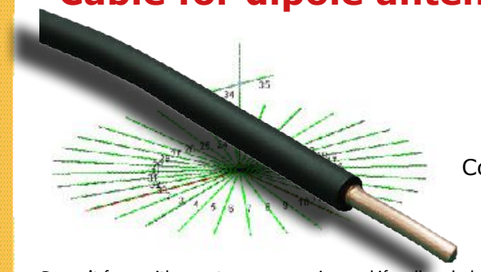
The new label with all the reference norms currently in force

DIPOFLEX for dipole antennas

The DIPOFLEX cable is the best solution for the construction of dipole antennas.
The 1.25- Sq mm. conductor ensures excellent conductivity at all frequencies, as opposed to the wires in CCS that due to the skin effect, have a poor conductivity at low frequencies. The mechanical seal is guaranteed by the strong and flexible rope composed by 19 copper wires. The sheath of polyethylene with anti-UV additives in the compound, ensures a long life even under extreme conditions.

Dipole antenna wire, made of pure copper geometrically stranded.	
Conductor:	Copper 19 X 0,29mm (19 X 0.011 in)
Diameter:	1,45 mm (0.057 in)
Section:	1,25 mm² (0.0019 in²)
Electrical resistance:	15 Ohm/Km (4.6 Ohm/1000ft)
Sheath:	PE black with UV filter
Diameter:	3.1 mm (0.122 in)
Tear resistance:	45 Kg (99.2 lb)
Weight:	1,338 Kg/100m (0.9 lb/100ft)

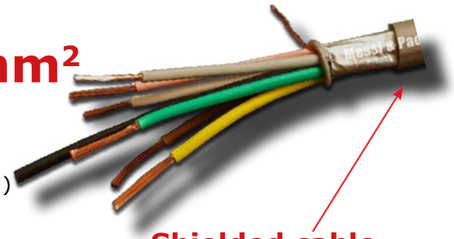
Cable for dipole antennas and radial grounding - GR 163



Inner conductor:	pure copper 99,99 %
Diameter:	1,63 mm (0.064 in)
Section:	2,1 mm² (0.0032 in²)
Conductor resistance:	7,8 Ohm/Km (2.4 Ohm/1000ft)
Jacket:	black PE
Diameter:	2,9 mm (0.114 in)

Doesn't fear neither water nor corrosion and if well sealed on both ends, can be buried underground and it is virtually eternal. (Remember to seal the ends)

CPR 6 x 0,75 mm²



Shielded cable for rotor operated antennas

DATASHEET

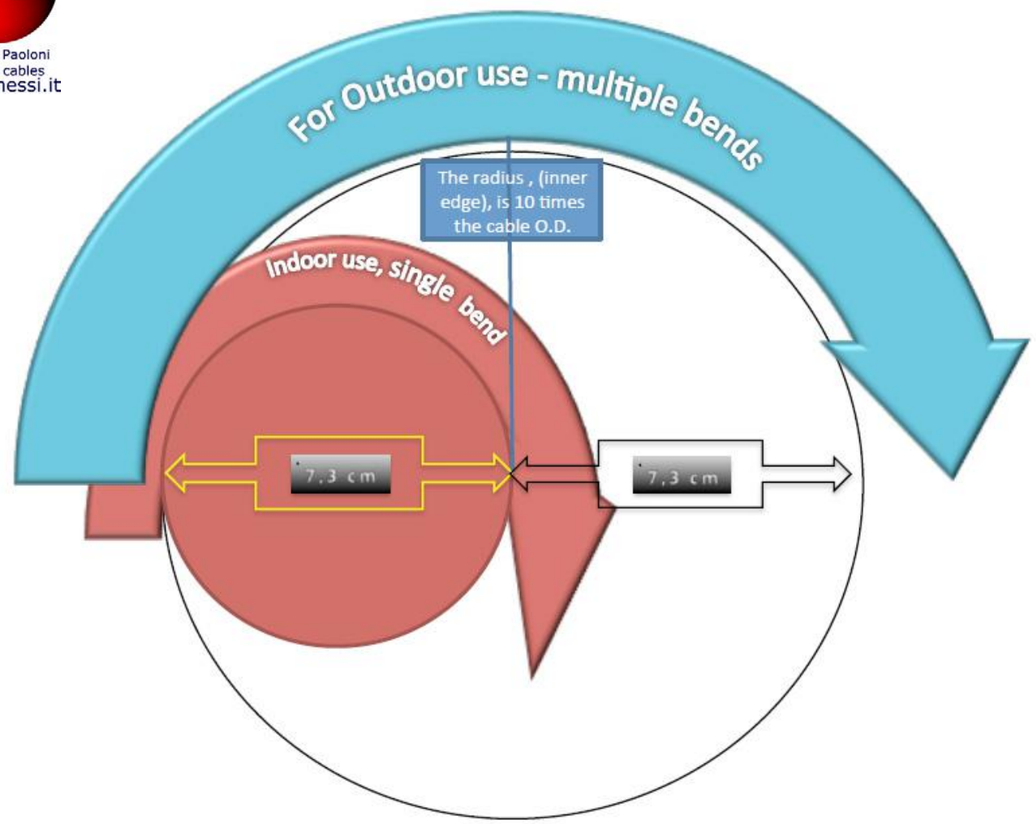
Number of condors:	6 (+ one PVC cilinder for centering the cable)
Section of each conductor:	0,75 mm² (0.0011 in²)
Conductor colors:	White, Brown, Green, Grey, Yellow, Pink
Shielding:	Alluminium tape matched with a polyesther film (+ flexible earth conductor)
External insulation:	Grey PVC Jacket - FLAME RETARDANT - Ø 7,6mm (0.299 in)
Packaging:	Coils 100m ; Coils 50m

SPECIAL COAX SCISSORS

Scissors specifically designed for ensuring great accuracy in the cutting of each cable layers. It has a nickel-plated blade with stripping groove and an isolated red handle.

Messi & Paoloni coaxial cables
www.messi.it

Minimum Bending Radius



With reference to norms: IEC 60092 and CEI 11/17 we can affirm as follows:

To determine how tightly a given cable can be bent without damage, the radius of the curve of the inner edge of any bend, shall not be less than 10 times the cable Overall Diametre (O.D.). Since the radius is one half the diameter, you can then multiply your result by 2 to get the actual diameter of the object that the cable can be safely bent around repeatedly, (for example a bobbin). In DXpeditions, there is a basic need to unwind the cable and later on to rewind it in the same bobbin. (multiple bends). For this operation, needed twice per DXpedition, please consider 20 times the cable O.D. **(this will preserve your cable for a much longer number of DXpeditions)** Solid inner conductor cables, need more attention, even though we have succeeded to make them a little more flexible (M&P-BROAD-PRO 50C). The smaller the bend radius, the greater is the material flexibility. Cables such as M&P-ULTRAFLEX 7 or M&P-ULTRAFLEX 10, having a stranded inner conductor, a strong and flexible 24 spools braid, and an excellent quality PVC jacket, ALLOW MORE, but never infringe the values in the cables datasheets. (always to be taken with good sense… careful)!
The diagram above illustrates a cable with a 7,3 centimeter bend radius (M&P-ULTRAFLEX 7). When meaning Outdoor use, we intend that the variety of harsh temperatures we could have outside, might change temporarily the physics of the cable components, requiring therefore more cautiousness. (20 times O.D.)

In case we need to effect a sharper bend, (ex. Like in a choke), we can do only if:
1) **We shall effect Just a single bend (possibly always indoor)**
2) The operation is made at temperatures never below 15° C . (59° F)
3) The cable is coiled over a Cylinder with an O.D. equal or bigger than ten times the cable O.D.

POWER HANDLING

An indication that must be managed from time to time! Pw or Pmax: the power handling indicates the maximum power applicable to a cable in relation to the frequency.

PV=Ed * ri*Ln(Re/ri)

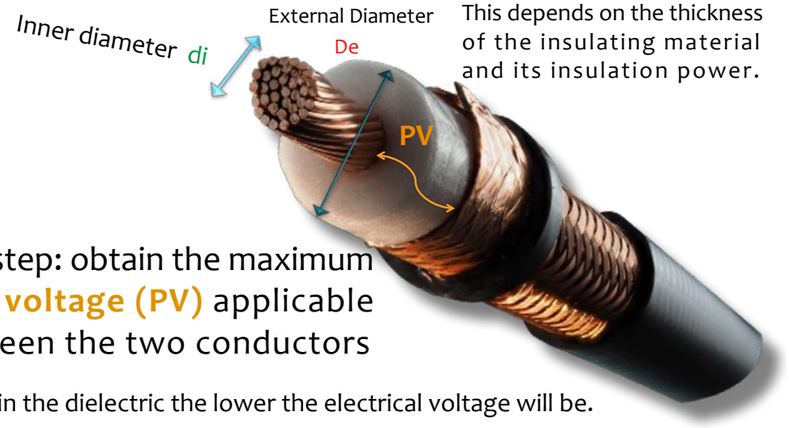
PV= Peak Voltage

Ed= Dielectric hardness*

ri= di/2 (inner radius)

Re= De/2 (external radius)

*= Electric isolation of PE per mm (50 kV)



This depends on the thickness of the insulating material and its insulation power.

First step: obtain the maximum **Peak voltage (PV)** applicable between the two conductors

The more we add air in the dielectric the lower the electrical voltage will be.

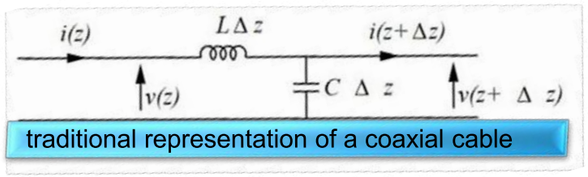
Air insulates 3 kV per mm - Polyethylene 50 kV per mm

In a 50 Ohm coaxial transmission line, given the presence of rather high voltages (kV) and low currents, the conductor section is negligible while **the insulating factor of the dielectric is FUNDAMENTAL**

Peak power = Peak voltage² / (2*Zo) **Zo= Impedance**

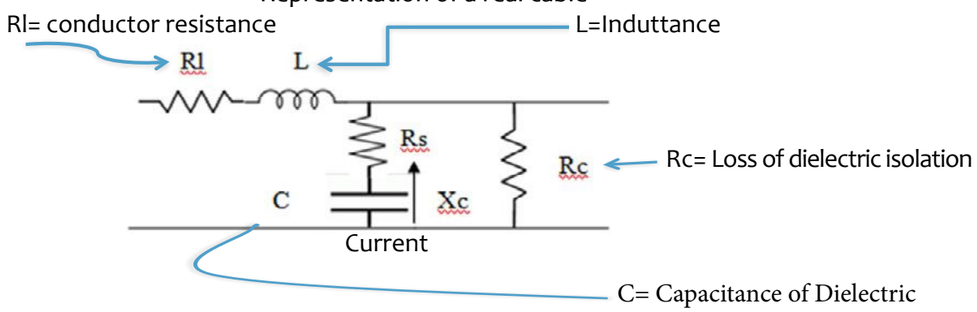
Peak power is a theoretical value with few practical purposes: it is used to determine the final power handling.

When an alternating signal is transmitted in a coaxial cable, there are losses that increase with the carrier frequency. These losses are transformed into heat by the cable itself. If we put a 1000W CW carrier, in a 15m long cable, ended with an antenna, and we measure an output of 700w in antenna, it means that the cable has to dissipate 20w on every meter (300w / 15m), **BUT** the maximum heat concentration will be in the immediate vicinity of the amplifier or transmitter.

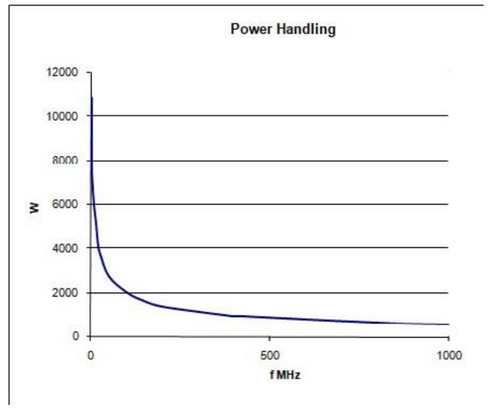


Traditional theoretical representation of a coaxial cable, with a pure capacity, and a resistance of conductors = **0** (unrealistic, without dispersions)

Representation of a real cable



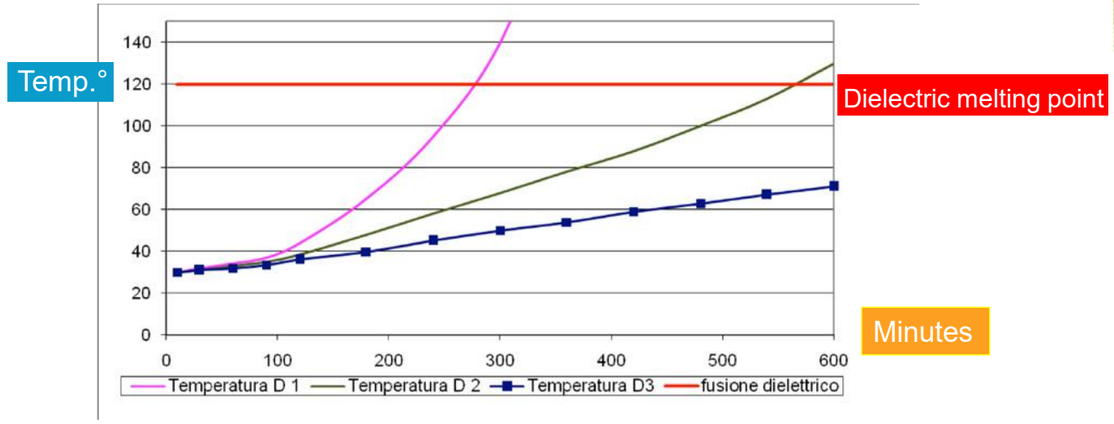
The heat generated inside the cable, is given by the reactive component (Xc) of the dielectric capacitance (C), which decreases with the increasing of frequency. Letting a current flow through the resistance (Rs) in series with the capacitance itself.



Pw=Power handling (in Watt)
(DF*Peak Power/(2*α)

DF=Dielectric heat Dissipation Factor
(given by the Pe manufacturer and close to 1)
α= Attenuation in dB

The Power Handling provides the value of the maximum power dissipable (and therefore applicable) to the cable, according to the frequency (CW continuous wave carrier), at an ambient temperature of 40°C, (104°F.), humidity 50%, with a VSWR= 1 (obviously theoretical conditions!)



D1 = power fed into the cable near the max value of Power Handling, in conditions of stagnant air.

D2 = power fed into the cable at the limit of the PW with good ventilation at 30°C.(86°F.)

D3 = power fed into the cable at 75% of maximum power (PW), with very good ventilation.

Summary:

1) Use a very efficient ventilation system close to the amplifier and /or Transceiver.
2) Check frequently the temperature on the cable near the connector fixed to the amplifier or transceiver.
3) Check humidity of air: it increases the problem.

This is the reason why we have created our

"HEAT SUPPRESSORS"

4) **Use any means to reduce the heat transferred from the amplifier to the connector attached to it, which in turn transfers the heat to the cable inside it.** An eccessive intense heating after days of transmission, during contests, can lead to deformation of the dielectric.

This will lead to: A) irreversible impedance mismatch,
B) increased VSWR,
C) dangerous worsening of SRL values (Structural Return Loss)

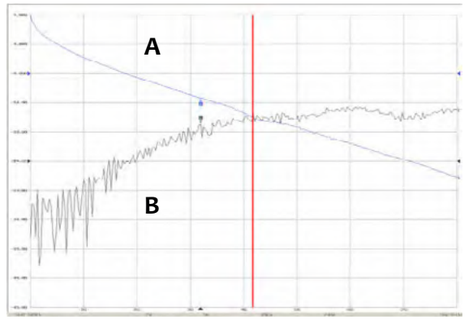
As a result of these factors, in a progressive **"avalanche effect"**, more and more power will come back. Example: input 3 kW, return 1.5 kW, result 4.5 kW and the dielectric melting will be progressively accelerated.

ATTENUATION/SRL RATIO

When designing a transmission line, it is necessary to carefully choose the cable to be used, based on the frequency and the distance between the transmitter and the antenna. We assume that the impedance matching between the various components has been treated with the utmost diligence.

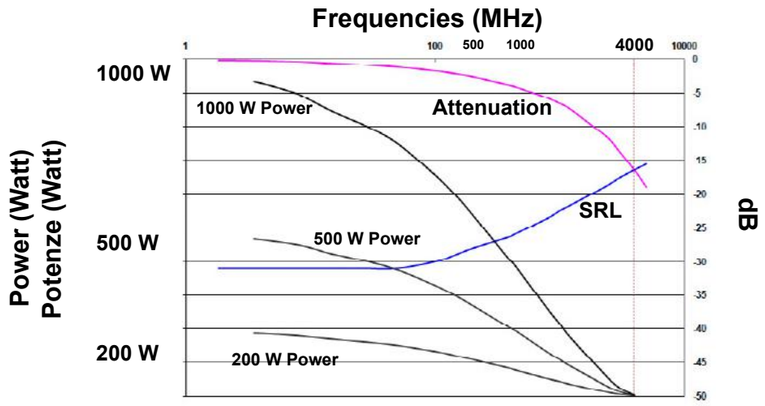
Everyone knows how important is to buy a REALLY low-loss cable, but not everyone reminds that -3dB = ½ the power available. It is also important to verify that the difference between the value of SRL and attenuation should be as wide as possible. In fact, as seen in the picture, it is inevitable that the two curves will cross each other. With increasing frequency, the attenuation curve (A) is approaching more and more to the reflected waves one (B). Comes the point where the attenuation value in dB and that of SRL meet each other. Starting from this frequency and beyond, the output signal will be ZERO, regardless of the input power value.

The example concerns a test on the cable **M&P-ULTRAFLEX 7**, (a 35 meters long coil). In these conditions the signal is **reduced to zero** at the frequency of 4.2 GHz (in transmission only). It is clearly inadvisable to use such a cable length at this frequency, but the chart clearly indicates that at all frequencies lower than 4.2 GHz, the transmission line works in an excellent manner. Increasing the cable length, inevitably increases the attenuation so that the intersection with the SRL curve, will happen before (at a lower frequency). Differently, shortening the cable length will assure a correct use at higher frequencies.



A: Attenuation **B: SRL**

In the following chart we can see how the SRL affects the power. The graph is showing a **50m long**, perfectly tuned transmission line. The cable used is **M&P-BROAD-PRO 50C**. The red curve is the attenuation, the blue curve is the SRL. The three black curves, are 3 different input powers: 200, 500 and 1000 Watts. As previously said, regardless of the input power, when the SRL dB values are equivalent to attenuation values, there is no more output signal. Please note that as soon as the SRL value increases, (for example due to an impedance mismatch), the output power quickly collapses. Although an optimal SRL (**S**tructural **R**eturn **L**oss, in simple words, attenuation on the reflected wave) is typically between -40 and -30 dB, we can say that until -18 dB there are no considerable losses. Increasing the SRL to higher values, the closer the SRL values are to 0, the more the effects evolve from troublesome to destructive. In the presence of strong SRL, (dB values close to zero), along the cable will occur overvoltage and overcurrent.



Peak Voltage

It is the maximum peak voltage applied between the conductors of the cable in order to prevent the dielectric piercing (breakdown voltage). This depends exclusively on the characteristics of the insulating dielectric.
The formula for determining the Peak Voltage is as follows: Ed * Ri * ln (Re / Ri)
Where "Ed" is the dielectric strength of the insulation, "Ri" is the inner radius of the dielectric and "Re" the outer radius.

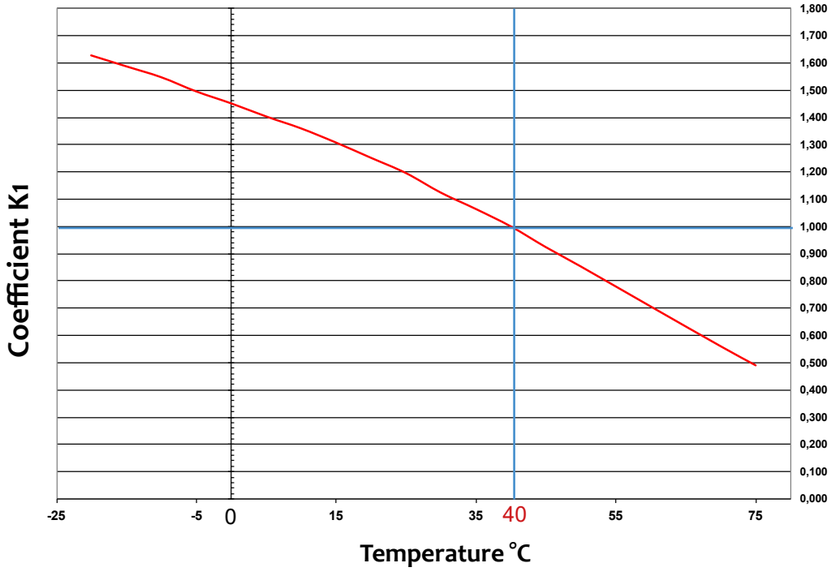
Peak Power

By Peak voltage and the Impedance is obtained Peak Power, which is independent from frequency.
It is calculated as: $(V \text{ peak max})^2 / (2 * Zo)$, where Zo is the impedance of the cable.
This value must never be exceeded.

Power Handling

The power Handling indicates the parameters for power in which a cable can operate, depends on the characteristics of the conductors (inner / outer), but especially by the ability of the dielectric to dissipate heat. The power handling depends strongly on the frequency of use and is inversely proportional to this. The values stated in the tab, refer to the temperature **detected on the surface of the cable** at 40°C/104°F(please take in consideration that when exposed to direct sunlight, the cable overheats), a VSWR of less than 1.5 and an altitude of 0-300m above sea level.
The higher is the operating temperature (ambient t.), the lower the chances to dissipate the heat generated inside the cable towards the outside. Conversely, with low temperatures the heat is easily dissipated so that the cable can operate at higher powers. See Table…

Graph N1 **Temperature Factor K1 / Fattore Temperatura K1**

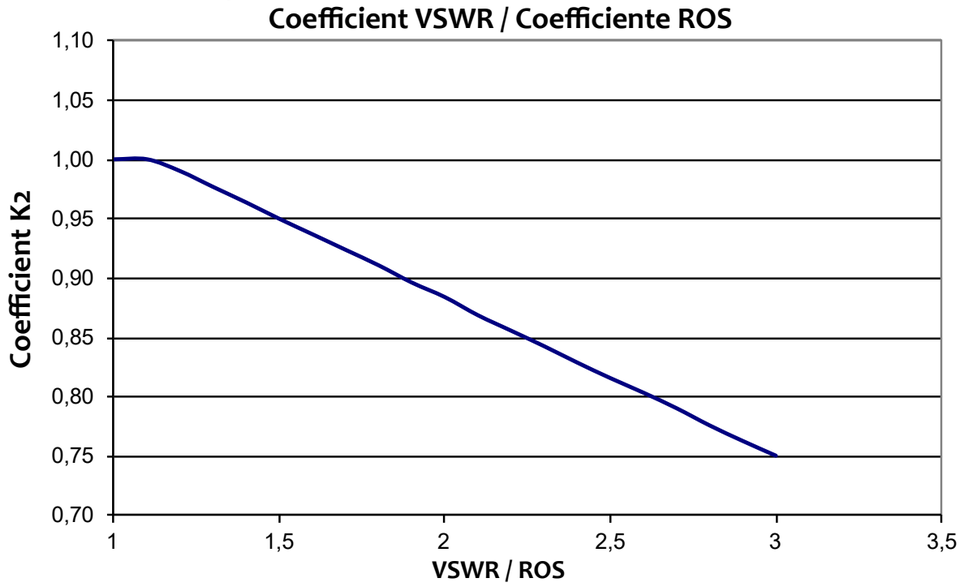


The VSWR table, has to be considered valid only for measurements taken in proximity of the antenna.

The Power Handling is calculated at the temperature of 40°C/104°F (tested directly on the surface of the cable itself) and the variations in more or less, are leading to a decrease or increase of this value. See also all the tables of Power Handling / Temperature, where this factor has been already calculated for each cable.

Another factor to consider, is the impedance matching of the system. If not optimal, it generates stationary waves (VSWR). At low to medium values (1 - 1.5), these do not substantially modify the power handling, but at higher values, the cable has to withstand both the incident power and the reflected one. Consequently the power handling drops. In the GRAPH 2, the coefficient K2 is obtained (VSWR), which multiplied by the value of the Power handling declared, provides the maximum allowed power for the VSWR tested in your line.

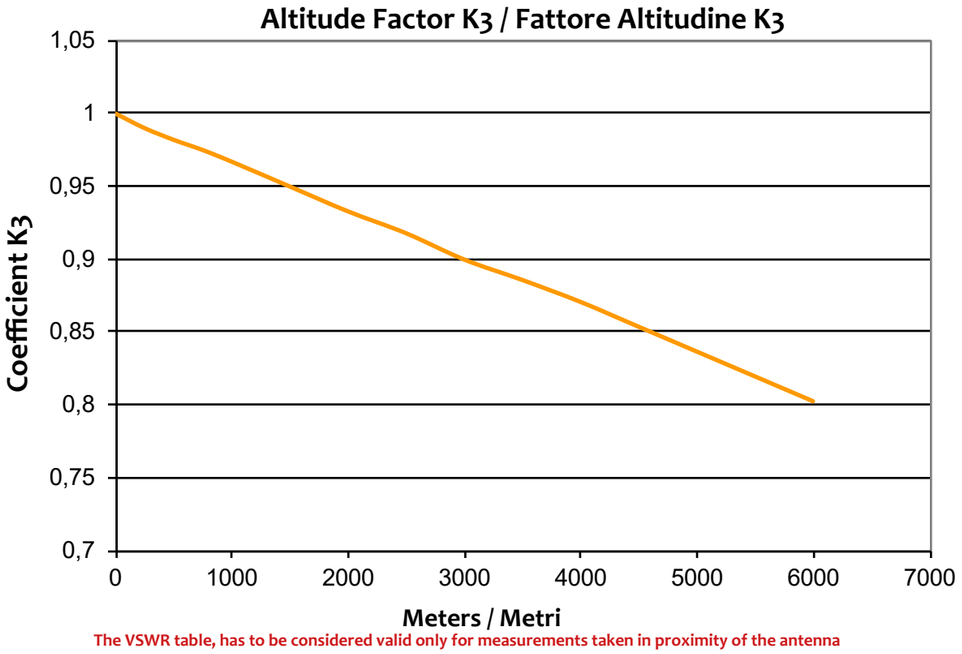
Graph N2



The VSWR table, has to be considered valid only for measurements taken in proximity of the antenna.

It's interesting to know that even the altitude interacts with this data: **the higher you climb in altitude, the more the heat dissipation decreases.** The graph N3, provides the coefficient K3 related to altitude. In order to have a given absolute figure of the power handling, you must multiply the value related to the temperature (in the Tabs of Power Handling / Temperature) by the factor K2 (VSWR) and the result by the factor K3 (Altitude).

Graph N3



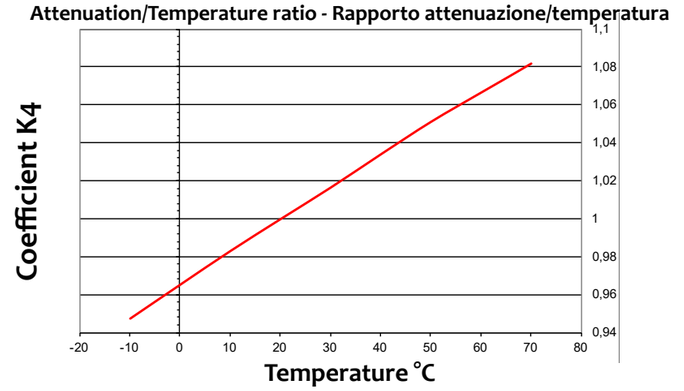
The VSWR table, has to be considered valid only for measurements taken in proximity of the antenna

It must also be considered the type of Rx-Tx transmission (RTTY or SSB). Physical accidental alterations and excessive VSWR values (impedance mismatch), are certainly increasing the lost power dissipated in the form of heat. Moreover unwanted stationary waves ratios, are making the situation even worse. In SSB operations a 5/6 seconds transmission time, followed by the same reception lag, is giving the chance to nearly double the power handling values. Be aware that the power should never be exceeding the declared peak power value.

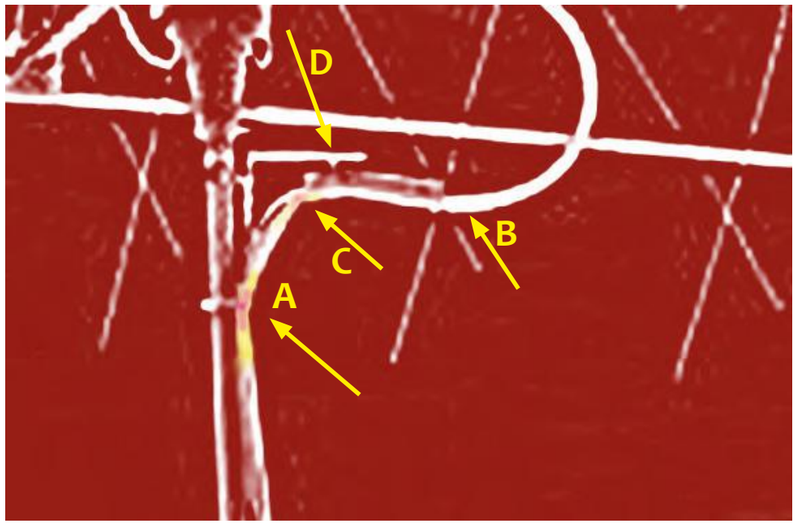
Attenuation Vs Temperature

The temperature, also affects the attenuation of the cable (dB).
Also in this case, with modest temperature ranges, the variation is negligible, but if you move far away from the reference temperature (in this case 20°C / 68°F), this can lead to variations remarkable by the more scrupulous operators. If you want to know the variation of attenuation related to temperature, multiply the attenuation value by the K4 coefficient, shown in the graph 4.

Graph N4



The VSWR table, has to be considered valid only for measurements taken in proximity of the antenna.



In critical situations like this, do not tie up the cable directly on the sheath. As clearly visible in the image, it is formed a constriction which rapidly deteriorates the cable and generates overheating in case of amplification (A and C). This is because the crushing of the dielectric, brings to an impedance mismatch with resulting peak of VSWR and localized heating of the cable. Instead, use an ordinary corrugated tube, tying it along the pole up to the point B, **especially securing the bracket D**, for discharging on it the same cable weight. Free to slide inside the corrugated tube, the cable will not undergo more constrictions of any kind, extending the operational life, especially with high amplifications in play.

QUICK REFERENCE COMPARISON BETWEEN M&P CABLES

ATTENUATION at 20°C (68°F)
dB/100m (dB/100ft)

overall diameter	MHz:	10 MHz	28 MHz	50 MHz	100 MHz	144 MHz	200 MHz	430 MHz	800 MHz	1296 MHz	2400 MHz	5000 MHz	8000 MHz
5mm (.200")	RG 58 C/U	4,7 (1,4)	7,9 (2,4)	10,8 (3,3)	15,8 (4,8)	19,3 (5,9)	22,1 (6,7)	34,9 (10,6)	51,1 (15,5)	63 (19,2)	/	/	/
	AIRBORNE 5	3,4 (1,0)	5,5 (1,6)	7,1 (2,1)	9,4 (2,8)	11,1 (3,3)	12,8 (3,9)	19 (5,7)	26,5 (8,1)	34,2 (10,4)	47,5 (14,5)	68,6 (20,9)	/
5,4mm (.212")	HYPERFLEX 5	2,6 (0,8)	4,1 (1,2)	5,5 (1,7)	8 (2,4)	9,6 (2,9)	11,4 (3,5)	17 (5,1)	23,4 (7,1)	30,5 (9,3)	42,5 (12,9)	65,2 (19,9)	/
7,3mm (.287")	ULTRAFLEX 7	1,9 (0,6)	3 (0,9)	4 (1,2)	5,8 (1,7)	6,9 (2,1)	8,2 (2,5)	12,3 (3,7)	17,1 (5,2)	22,3 (6,8)	32,3 (9,8)	49,3 (15,0)	68,4 (20,8)
10,3mm (.400")	RG 213/U	2,1 (0,6)	3,4 (1,0)	4,5 (1,3)	6,1 (1,8)	7,5 (2,2)	9 (2,7)	14,1 (4,3)	20,5 (6,2)	27,6 (8,4)	/	/	/
	ULTRAFLEX 10	1,3 (0,4)	2 (0,6)	2,7 (0,8)	3,9 (1,1)	4,7 (1,4)	5,7 (1,7)	8,6 (2,6)	12,1 (3,7)	16,4 (5,0)	23,7 (7,2)	38,9 (11,8)	55,8 (17,0)
	HYPERFLEX 10 EXTRAFLEX BURY	1,3 (0,4)	2 (0,6)	2,7 (0,8)	3,9 (1,1)	4,7 (1,4)	5,6 (1,7)	8,6 (2,6)	11,9 (3,6)	15,4 (4,7)	21,8 (6,6)	33,1 (10,1)	44,2 (13,4)
	BROAD-PRO50C	1,2 (0,3)	1,9 (0,5)	2,5 (0,7)	3,6 (1,1)	4,4 (1,3)	5,2 (1,5)	7,8 (2,3)	10,9 (3,3)	14,1 (4,3)	19,8 (6,0)	30,5 (9,3)	41 (12,5)
	AIRBORNE 10	1,2 (0,3)	1,9 (0,5)	2,4 (0,7)	3,5 (1,0)	4,2 (1,2)	5 (1,5)	7,6 (2,3)	10,4 (3,1)	13,6 (4,1)	19,2 (5,8)	29,2 (8,9)	38,6 (11,7)
10,8mm (.400")	RG 214 A/U	2 (0,6)	3,4 (1,0)	4,6 (1,4)	6,2 (1,8)	8,3 (2,5)	10 (3,0)	15,4 (4,7)	21,6 (6,5)	31,8 (9,6)	/	/	/
12,7mm (.500")	ULTRAFLEX 13	1 (0,3)	1,5 (0,4)	2 (0,6)	2,8 (0,8)	3,6 (1,1)	4,3 (1,3)	6,4 (1,9)	9,1 (2,8)	12 (3,6)	17,4 (5,3)	26,9 (8,2)	35,9 (10,9)
	HYPERFLEX 13	1 (0,3)	1,5 (0,4)	2 (0,6)	2,8 (0,8)	3,6 (1,1)	4,2 (1,3)	6,4 (1,9)	9 (2,7)	11,7 (3,5)	16,6 (5,0)	25,6 (7,8)	34,5 (10,5)

Band name	Abbr.	Frequency	Wave length	Example Uses
Low frequency	**LF**	30 - 300 kHz	10 - 1 km	Navigation, time signals, AM longwave broadcasting, RFID, amateur radio
Medium frequency	**MF**	300 – 3,000 kHz	1 km – 100 m	AM (medium-wave) broadcasts, amateur radio, avalanche beacons
High frequency	**HF**	3 – 30 MHz	100 – 10 m	Shortwave broadcasts, citizens band radio, amateur radio and over-the-horizon aviation communications and radar, RFID, automatic link establishment (ALE) / near-vertical incidence skywave (NVIS) radio communications, marine and mobile radio telephony
Very High frequency	**VHF**	30 - 300 MHz	10 - 1 m	FM, television broadcasts, line-of-sight ground-to-aircraft and aircraft to aircraft communications, land mobile and maritime mobile communications, amateur radio, weather radio
Ultra High frequency	**UHF**	300 - 3000 MHz	1 m - 10 cm	Television broadcasts, microwave oven, microwave devices/communications, radio astronomy, mobile phones, wireless LAN, Bluetooth, ZigBee, GPS and two-way radios such as land mobile, FRS and GMRS radios, amateur radio, satellite radio, Remote control Systems, ADSB
Super High frequency	**SHF**	3 - 30 Ghz	10 cm - 10 mm	Radio astronomy, microwave devices/communications, wireless LAN, DSRC, most modern radars, communications satellites, cable and satellite television broadcasting, DBS, amateur radio, satellite radio

CONVERSION CHART

VSWR/REFLECTED POWER

VOLTAGE STANDING WAVE RATIO (VSWR) RAPPORTO ONDE STAZIONARIE (ROS)	VSWR (dB)	SRL STRUCTURAL RETURN LOSS (dB) PERDITE CUMULATIVE DI RIFLESSIONE	REFLECTED POWER (%) POTENZA RIFLESSA	TRANSMISSION LOSS (dB) PERDITA DI TRASMISSIONE	TRANSMITTED POWER (%) POTENZA TRASMESSA	MODELS
1	0	∞	0	0	100	from 300 KHz to 450 MHz
1,1	0,83	26,44	0,227	0,01	99,773	
1,2	1,58	20,83	0,826	0,036	99,174	from 450MHz to 1 GHz
1,3	2,28	17,69	1,7	0,075	98,3	from 1 GHz to 2 Ghz
1,4	2,92	15,56	2,78	0,122	97,22	
1,5	3,52	13,98	4	0,177	96	
1,6	4,08	12,74	5,33	0,238	94,67	
1,7	4,61	11,73	6,72	0,302	93,28	
1,8	5,11	10,88	8,16	0,37	91,84	
1,9	5,58	10,16	9,6	0,44	90,4	
2	6,02	9,54	11,1	0,512	88,9	
2,1	6,44	9	12,6	0,584	87,4	
2,2	6,85	8,52	14,1	0,658	85,9	
2,3	7,23	8,09	15,5	0,732	84,5	
2,4	7,6	7,71	17	0,807	83	
2,5	7,96	7,36	18,4	0,881	81,6	
2,6	8,3	7,04	19,8	0,956	80,2	
2,7	8,63	6,76	21,1	1,03	78,9	
2,8	8,94	6,49	22,4	1,1	77,6	
2,9	9,25	6,25	23,7	1,18	76,3	
3	9,54	6,02	25	1,25	75	
3,2	10,1	5,62	27,4	1,39	72,6	
3,4	10,6	5,26	29,8	1,53	70,2	
3,6	11,1	4,96	31,9	1,67	68,1	
3,8	11,6	4,68	34	1,81	66	
4	12	4,44	36	1,94	64	
5	14	3,52	44,4	2,55	55,6	
6	15,6	2,92	51	3,1	49	
7	16,9	2,5	56,3	3,59	43,8	
8	18,1	2,18	60,5	4,03	39,5	
9	19,1	1,94	64	4,44	36	
10	20	1,74	66,9	4,81	33,1	

MODELS
M&P-AIRBORNE 5 /.200"
M&P-HYPERFLEX 5 /.287"
M&P-ULTRAFLEX 7 /.287"
M&P-ULTRAFLEX 10 /.400"
M&P-HYPERFLEX 10 /.400"
M&P-BROAD-PRO 50C /.400"
M&P-AIRBORNE 10 /.400"
M&P-EXTRAFLEX BURY /.400"
M&P-ULTRAFLEX 13 /.500"
M&P-HYPERFLEX 13 /.500"

CONVERSION TABLE
DECIBEL-VOLT-WATT (50 Ohm)

dBm	V	Po
+ 53	100.0	200 W
+ 50	70.7	100 W
+ 49	64.0	80 W
+ 48	58.0	64 W
+ 47	50.0	50 W
+ 46	44.5	40 W
+ 45	40.0	32 W
+ 44	32.5	25 W
+ 43	32.0	20 W
+ 42	28.0	16 W
+ 41	26.2	12.5 W
+ 40	22.5	10 W
+ 39	20.0	8 W
+ 38	18.0	6.4 W
+ 37	16.0	5 W
+ 36	14.1	4 W
+ 35	12.5	3.2 W
+ 34	11.5	2.5 W
+ 33	10.0	2 W
+ 32	9.0	1.6 W
+ 31	8.0	1.25 W

dBm	V	Po
+ 30	7.10	1.0 W
+ 29	6.40	800 mW
+ 28	5.80	640 mW
+ 27	5.00	500 mW
+ 26	4.45	400 mW
+ 25	4.00	320 mW
+ 24	3.55	250 mW
+ 23	3.20	200 mW
+ 22	2.80	160 mW
+ 21	2.52	125 mW
+ 20	2.25	100 mW
+ 19	2.00	80 mW
+ 18	1.80	64 mW
+ 17	1.60	50 mW
+ 16	1.41	40 mW
+ 15	1.25	32 mW
+ 14	1.15	25 mW
+ 13	1.00	20 mW
+ 12	0.90	16 mW
+ 11	0.80	12.5 mW
+ 10	0.71	10 mW

dBm	V	Po
+ 9	0.64	8 mW
+ 8	0.58	6.4 mW
+ 7	0.500	5 mW
+ 6	0.445	4 mW
+ 5	0.400	3.2 mW
+ 4	0.355	2.5 mW
+ 3	0.320	2.0 mW
+ 2	0.280	1.6 mW
+ 1	0.252	1.25 mW
0	0.225	1.0 mW
- 1	0.200	0.80 mW
- 2	0.180	0.64 mW
- 3	0.160	0.50 mW
- 4	0.141	0.40 mW
- 5	0.125	0.32 mW
- 6	0.115	0.25 mW
- 7	0.100	0.20 mW
- 8	0.090	0.16 mW
- 9	0.080	0.125 mW
- 10	0.071	0.10 mW

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DEFINITIONS OF THE ELECTRICAL FEATURES OF A CABLE

CAPACITY:
The capacity of a cable is the value that indicates the properties of the dielectric to store electrical charges between the central conductor and the screen.
The capacity is expressed in pF (picofarad, 1 pF = $1x10^{-12}$ F). The higher is the capacity the more high frequencies are attenuated along the cable. So the **best cable** is the one that has the **lowest capacity**.
(at the same impedance).

IMPEDANCE:
It indicates the opposition of a transmission line to the flow of electrons, it is expressed in Ohms and is derived from the relation between the voltage V and the current I at any point of the coaxial cable.

ATTENUATION:
It quantifies the loss of signal and is expressed in dB (Decibels). In reception and transmission (power) the attenuation is given by $10x\log_{10}(P_{in} / P_{out})$. **The signal is halved every 3 dB.**

SRL - STRUCTURAL RETURN LOSS:
It measures the intensity of reflected waves (toward the source) inside the cable. The SRL is highly affected by the imperfections of the impedance in one or more points along the transmission line.

SCREENING EFFICIENCY:
It generally indicates the ability of a screen to prevent electromagnetic interference, which can "contaminate" the signal along the cable and vice versa that the signal could be radiated outside of the cable. At high frequencies (> 30 MHz), this is expressed in **"Screening Attenuation" (SA)** and the unit of measurement is the decibel. At low frequencies (< 30 MHz), it's called **transfer impedance (Zt)** and it is expressed in mOhm/m.
The lower is the value in milliohms, the better is the cable performance.
In the old RG cables, the maximum screening efficiency obtained is 80 dB, while in our new cables is >105 dB (A++ CLASS).
The Zt in the old RG cables does not drop below 13 mΩ/m (RG 214), compared to 0.9 mΩ/m of our new cables:

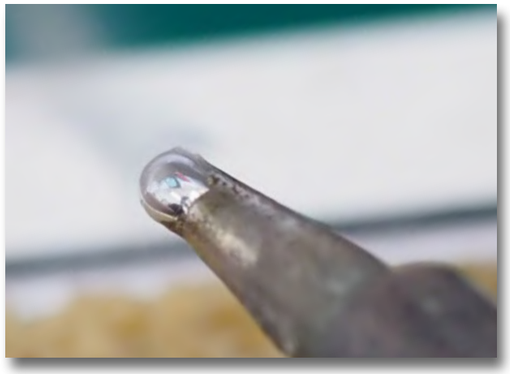
- **M&P-AIRBORNE 5 /.200"**
- **M&P-HYPERFLEX 5 /.212"**
- **M&P-ULTRAFLEX 7 /.287"**
- **M&P-ULTRAFLEX 10 /.400" and M&P-HYPERFLEX 10 /.400"**
- **M&P-EXTRAFLEX BURY /.400"**
- **M&P-BROAD-PRO 50/C /.400"**
- **M&P-AIRBORNE 10 /.400"**
- **M&P-ULTRAFLEX 13 /.500" and M&P-HYPERFLEX 13 /.500"**

VELOCITY RATIO:
It's the speed which the signal travels at, along the cable, and it is expressed as a percentage of the light speed. In the cables with plain polyethylene, the best value reached is 66%, against the 85% of the cables with foamed polyethylene dielectric.

SOLDERING INSTRUCTIONS

For a good weld on the connectors, proceed as follows:
use possibly an 80W welder at least, in order to be able to make a quick operation. It is essential that the metal to be welded (cable conductor + connector) is completely oxide free. In case of prolonged exposure to moisture, clean the parts to be welded with isopropyl alcohol and apply a thin layer of PasteFlux NO CLEAN (example: RMA-223 type), do not use solid paste. The temperature of the welder must be between 300 and 350°C (572°F and 662°F). If you do not have a professional welder with efficient compensation of the tip temperature, it is advisable to raise the temperature to 400-420°C (752°F-788°F). Once made the welding, lower the temperature in order to avoid the damaging of the welder tip.

(1)
Wipe the welder tip on a wet sponge.



(2)
Approach the tin wire to the welder tip, leaving a drop of tin on it.

It is useful that the cable and the connectors before the soldering process, are not too cold: (ideal temperature 20-24°C)(68°F-75,2°F), in order to avoid that the tin alloy cools down too quickly. In the above mentioned case, preheat the connector and the cable end.

DO NOT blow on the solder trying to accelerate the cooling.
The welding must be bright: a matte surface or a rough one, does not guarantee a good electrical contact.

For the lead free soldering alloy increase temperature by 30-35%.
For the tin-silver alloy (96% Sn - 4% Ag) increase temperature by 10%.

The welding must be as quick as possible: 2-3 seconds for "N" connectors.

To fill the cavity of the "UHF" connectors repeat the welding in 2-3 times by adding tin every time.

STANDARD PACKING			Quantity per packaging UNIT Metre	Weight per packaging UNIT Kg	Quantity per packaging UNIT Feet	Weight per packaging UNIT Pounds
M&P-AIRBORNE 5 /.200"	M&P-AB5 T100F	Shrinkwrapped coil	31	0,75	100	1,6
	M&P-AB5 T150F	Shrinkwrapped coil	46	1,11	150	2,4
	M&P-AB5 AR100	Shrinkwrapped coil	100	2,40	328	5,2
	M&P-AB5 AR200	Shrinkwrapped coil	200	4,76	656	10,4
	M&P-AB5 BP500	Plastic bobbin	500	12,54	1640	27,5
	M&P-AB5 BP1000	Plastic bobbin	1000	24,33	3280	53,5
	M&P-AB5 B2000	Wooden drum	2000	50,45	6560	111
M&P-HYPERFLEX 5 /.212"	M&P-HYF5 T100F	Shrinkwrapped coil	31	1,34	100	2,9
	M&P-HYF5 T150F	Shrinkwrapped coil	46	1,98	150	4,3
	M&P-HYF5 AR100	Shrinkwrapped coil	100	4,21	328	9,2
	M&P-HYF5 AR200	Shrinkwrapped coil	200	8,42	656	18,5
	M&P-HYF5 BP500	Plastic bobbin	500	34,45	2624	75,7
	M&P-HYF5 B1000	Wooden drum	1000	87,53	6560	192,5
M&P-ULTRAFLEX 7 /.287"	M&P-UF7 T100F	Shrinkwrapped coil	31	2,10	100	4,6
	M&P-UF7 T150F	Shrinkwrapped coil	46	3,12	150	6,8
	M&P-UF7 AR100	Shrinkwrapped coil	100	6,96	328	15,3
	M&P-UF7 BP200	Plastic bobbin	200	14,59	656	32,1
	M&P-UF7 BP500	Plastic bobbin	500	35,35	1640	77,7
	M&P-UF7 B1000	Wooden drum	1000	72,50	3280	159,5
	M&P-UF7 B2000	Wooden drum	2000	151,11	6560	332,4
M&P-ULTRAFLEX 10 /.400"	M&P-UF10 T100F	Shrinkwrapped coil	31	3,94	100	8,6
	M&P-UF10 T150F	Shrinkwrapped coil	46	5,88	150	12,9
	M&P-UF10 BP100	Plastic bobbin	100	13,79	328	30,3
	M&P-UF10 BP200	Plastic bobbin	200	26,84	656	59,0
	M&P-UF10 B500	Wooden drum	500	68,49	1640	150,6
	M&P-UF10 B1000	Wooden drum	1000	143,10	3280	314,8
M&P-HYPERFLEX 10 /.400"	M&P-HYF10 T100F	Shrinkwrapped coil	31	3,70	100	8,1
	M&P-HYF10 T150F	Shrinkwrapped coil	46	5,52	150	12,1
	M&P-HYF10 BP100	Plastic bobbin	100	11,89	328	26,1
	M&P-HYF10 BP200	Plastic bobbin	200	23,05	656	50,7
	M&P-HYF10 B500	Wooden drum	500	59,02	1640	129,8
	M&P-HYF10 B1000	Wooden drum	1000	124,06	3280	272,9
M&P-EXTRAFLEX BURY /.400"	M&P-EFB10 T100F	Shrinkwrapped coil	31	3,17	100	6,9
	M&P-EFB10 T150F	Shrinkwrapped coil	46	4,70	150	10,3
	M&P-EFB10 BP100	Plastic bobbin	100	10,8	328	23,8
	M&P-EFB10 BP200	Plastic bobbin	200	21,40	656	47,1
	M&P-EFB10 B500	Wooden drum	500	54,06	1640	119,1
	M&P-EFB10 B1000	Wooden drum	1000	117,72	3280	259,5
HYPERFLEX 10 SAHARA /.400"	M&P-HYF10S T100F	Shrinkwrapped coil	31	4,1	100	9
	M&P-HYF10S T150F	Shrinkwrapped coil	46	6,2	150	13,6
	M&P-HYF10S BP100	Plastic bobbin	100	14	328	30,8
	M&P-HYF10S BP200	Plastic bobbin	200	28	656	61,7
	M&P-HYF10S B500	Wooden drum	500	70,5	1640	155
	M&P-HYF10S B1000	Wooden drum	1000	146	3280	321
M&P-AIRBORNE 10 /.400"	M&P-AB10 T100F	Shrinkwrapped coil	31	2,32	100	5,1
	M&P-AB10 T150F	Shrinkwrapped coil	46	3,45	150	7,6
	M&P-AB10 BP100	Plastic bobbin	100	7,82	328	17,2
	M&P-AB10 BP200	Plastic bobbin	200	14,83	656	32,6
	M&P-AB10 B500	Wooden drum	500	38,43	1640	84,5
	M&P-AB10 B1000	Wooden drum	1000	82,97	3280	182,5
M&P-HYPERFLEX 13 /.500"	M&P-UF13 T100F	Shrinkwrapped coil	31	5,68	100	12,5
	M&P-UF13 T150F	Shrinkwrapped coil	46	8,50	150	18,7
	M&P-UF13 BP100	Plastic bobbin	100	20,44	328	44,9
	M&P-UF13 B300	Wooden drum	300	55,62	984	122,3
	M&P-UF13 B800	Wooden drum	800	152,32	2624	335,1
M&P-EXTRAFLEX BURY 13 /.500"	M&P-EFB13 T100F	Shrinkwrapped coil	31	5,30	100	11,6
	M&P-EFB13 T150F	Shrinkwrapped coil	46	8,2	150	18
	M&P-EFB13 BP100	Plastic bobbin	100	19,9	328	43,8
	M&P-EFB13 B300	Wooden drum	300	53,7	984	118,3
	M&P-EFB13 B800	Wooden drum	800	148	2624	326

Note:
T100F= Shrinkwrapped coil 100 feet (31 m instead of 30,5m)
T150F= Shrinkwrapped coil 150 Feet (46 m instead of 45,7m)
BP= Plastic Bobbin followed by the length in meters

Unwinders are sold separately.

NEW FACTORY MADE and LAB TESTED PRE-ASSEMBLED COAX JUMPERS !

THE M&P UNIVERSE

75° Anniversary

PERFORMANCE LAB TEST
INCLUDED IN EACH PACKAGING

NEW UHF (PL) CONNECTORS
EVOlution

THE ULTIMATE PROTECTION FOR YOUR CONNECTIONS

M&P FLUX FOR QUICK SOLDERING/DESOLDERING

HEAT SUPPRESSOR: PROLONG YOUR CABLE'S LIFE

CONNECTORS for any 5mm/.200” cables (AIRBORNE 5 & RG 58C/U) & any 5,4mm/.212” cables (HYPERFLEX 5)

UHF Solder Male (5mm)

N Solder Male (5mm)

N Solder Female

UHF Solder Female

PL259 Standard

BNC Solder Male

BNC Solder Female

BNC Crimp Male

TNC Solder Male

TNC Crimp Male (5mm)

UHF Solder Male (5,4mm)

N Solder Male (5,4mm)

BNC Right Angle

SMA Crimp Male (5mm)

SMA Crimp Male (5,4mm)

RP-SMA Male

SMA Right Angle

TNC Crimp Male (5,4mm)

RP-TNC

TNC Right Angle

CONNECTORS for any 7,3mm/.287” cables (ULTRAFLEX 7)

UHF/PL Solder Male

UHF/PL Solder Female

PL259 Standard

N Solder Male

N Solder Female

N Crimp Male

UHF Male Right Angle

BNC Solder Male

BNC Solder Female

BNC Crimp Male

N Male Right Angle

SMA Solder Male

TNC Solder Male

TNC Crimp Male

RP-SMA Male

CONNECTORS for any 10,3mm/.400” cables

(AIRBORNE 10, BROAD PRO50/C, EXTRAFLEX BURY, HYPERFLEX 10, RG 213, ULTRAFLEX 10)

UHF/PL Solder Male

CO.UHF.10M-S EVO

UHF/PL Solder Female

C.UHF.BROAD50F-S

N Solder Male

CO.N.10M-S

N Solderless Male/Female

C.N.BROAD50-SL

UHF Male Right Angle

C.UHF.BROAD50-M90

PL259 Standard

C.BROAD.PL259

N Crimp Male

C.N.BROAD50-MCR

N Male Right Angle

C.N.BROAD50-M90

N Crimp Female

C.N.BROAD50-FCR

7/16

CO.7/16.10M-S

TNC Solder Male

C.TNC.BROAD50M-S

RP-TNC Male

C.RP.TNC.10

BNC Solder Male

C.BNC.BROAD50M-S

BNC Solder Female

C.BNC.BROAD50-FS

SMA Solder Male

C.SMA.UF10M-S

RP-SMA Male

C.RP.SMA-10

CONNECTORS for any 12,7mm/.500” cables (ULTRAFLEX13 & HYPERFLEX13)

UHF/PL Male Solder / Solderless

CO.UHF.13M-SL

N Male Solder / Solderless

CO.N.13M-SL

N Female Solder / Solderless

C.N.UF13F-SL

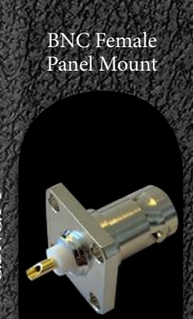
7/16

C.7-16.13M-S

PANEL MOUNT CONNECTORS

BNC Female Panel Mount

C.BNC.F.P



N Female Panel Mount

C.N.FDP-ROUND

UHF Female Panel Mount

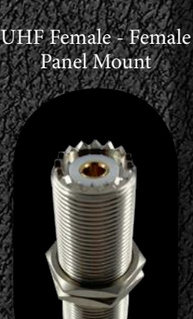
C.UHF.FDP

N Female - Female Panel Mount

N.F-N.F.PAN

UHF Female - Female Panel Mount

UHFF-UHFF



HEAT SUPPRESSOR:
PROLONG YOUR CABLE’S LIFE

Pairing to our “N” or “UHF” connectors for 10,3mm (.400”) and 12,7mm (.500”) coaxial cables only, the Heat Suppressor represents an extension of the operational life of your valuable cables and a greater homogeneity of their performance in hot enviroments. The benefits will also be more evident for those who use high power linear amplifiers for prolonged periods during contests.
Cooling and stabilizing the cable, could be the ace in your sleeve!

For other connectors and adapters
visit **www.messi.it** | contact us at **web@messi.it**

ADAPTERS

BNC Female - N Male

BNC.F-N.M

BNC Female - UHF Male

BNC.F-UHF.M

BNC Female - BNC Male

BNC.M-BNC.F

BNC Male - N Female

BNC.M-N.F

BNC Male - N Male

BNC.M-N.M

BNC Male - UHF Female

BNC.M-UHF.F

N Female - BNC Female

N.F-BNC.F

N Female - Female

N.F-N.F

N Female - UHF Male

N.F-UHF.M

N Female - Female Panel

N.F-N.F PAN

N Male - UHF Female

N.M-UHF.F

N Male - Male

N.M-N.M

BNC Female - Female

BNC.F-BNC.F

SMA Female - N Male

SMA.F-N.M

SMA Female - Female

SMA-FF

SMA Male - Female

SMA-MF

TNC Female - Female

TNC.F-TNC.F

UHF Female - Female

UHF.F-UHF.F

UHF Male - Male

UHF.M-UHF.M

UHF Female - Female Panel

UHFF-UHFF PAN

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