MOYANO

BROADCAST ANTENNAS

RADIO AND TV

MOYANO

Summary

MOYANO

MOYANO is since 1960 the pioneer Company in the Spanish Radio Frequencies technology, basing its development in the design and construction of Antennas, Power devices and Telecommunication Towers.

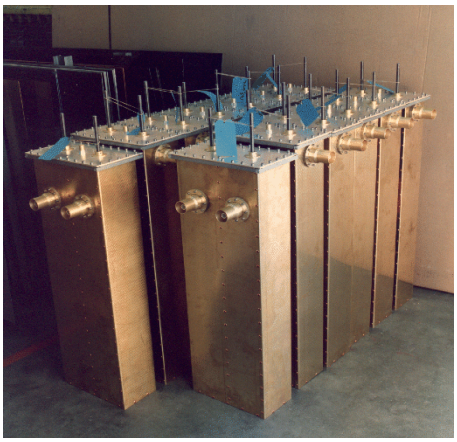
MOYANO is today the company that offers to their clients the best solutions in technology and Infrastructure for Broadcast Networks.

The technological development based in the applied engineering facility is fully supported by a production group as well as installtion and maintenance division.

Our installations incorporate the most modern technical facilities: Anechoic chambers, spectrum and network analysers, intermodulation product testing equipment, software to calculate radiation diagrams, calculation of coverege areas, antennas testing range, software to simulate electromagnetic structures, etc...

Broadcast

We offer the design, manufacture and installation of antennas, multiplexors, filters and other components for radiating systems such as TV/Radio Broadcasting systems.



Summary

Quality: MOYANO is a company who incorporates highly qualified personnel in its full range of products. Since its creation there has been special emphasis in the production quality to be superior to the general customer expectations

We have standard solutions an custom made designs for low, medium and high power systems, obtaining high gain, power and coverage.

Our range of products include Medium Wave and Bands I, II, III, IV/V (44-860 MHz) in several polarizations; horizontal, vertical, circular.

Likewise, we have developed solutions for DAB and DVB.

Television broadcasting - channel system standards

Many different channel systems are in use throughout the world, and vary per country. A channel number represents a frequency. To the average person, a channel is represented with a number (channel 2, channel 5, etc.). To a television set, a channel number is actually a frequency. One way channel systems differ is in the amount of space between channels. Other differences include the number of lines per screen and sound offset.

There are four distinct broadcast bands in television: VHF, UHF, KU-Band and C-Band. VHF (Very High Frequency) is the original broadcast band and consists of the lower numbered channels. UHF (Ultra High Frequency) is an extension of broadcasting channels using a higher range of frequencies. The C-band is used for satellite broadcasting using frequencies in the 4GHz range and the KU-band is also used for satellite broadcasting using frequencies in the 11GHz range.

Channel systems have almost no dependence on audio, video or subtitling systems, but most are defined to a specific broadcast band. Exemptions to dependencies include the channel system M which is always used with NTSC. Other channel systems are used in certain areas of the world. For example channel system K and K' are used only by France and its territories. Russia and many former Eastern Block countries use both D and K systems. Many countries use two different channel systems. The first one listed applies to VHF channels, while the second applies to UHF channels.

The chart below gives some technical aspects of each different channel system.

CHANNEL SYSTEM TECHNICAL ASPECTS

System	# / Frames	# / Lines	Freq. Band	Channel Width (MHz)	Vision Width (MHz)	Sound Offset (MHz)	Vision Modulation	Sound Modulation	In Use?
A	25	405	VHF	.	.	-3.5	Pos.	.	No
B	25	625	VHF	7.0	5.0	+5.5	Neg.	FM	Yes
C	25	625	VHF	.	.	+5.5	Pos.	FM	Yes
D	25	625	VHF	8.0	6.0	+6.5	Neg.	FM	Yes
E	25	819	VHF	.	.	11	Neg.	.	No
F	25	819	VHF	.	.	+5.5	Pos.	.	No
G	25	625	UHF	8.0	5.0	+5.5	Neg.	FM	Yes
H	25	625	UHF	8.0	5.0	+5.5	Neg.	FM	Yes
I	25	625	UHF	8.0	5.5	+6.0	Neg.	FM	Yes
K	25	625	UHF	8.0	6.0	+6.5	Neg.	FM	Yes
K'	25	625	UHF	8.0	6.0	+6.5	Neg.	FM	Yes
L	25	625	UHF	8.0	6.0	+6.5	Pos.	AM	Yes
M	30	525	both	6.0	4.2	+4.5	Neg.	FM	Yes
N	25	625	both	6.0	4.2	+4.5	Neg.	FM	Yes
C-	varies	varies	11GHz	.	.	+6.5	Pos.	FM	Yes
Ku-	varies	varies	11GHz	.	.	+6.5	Neg.	FM	Yes

Systems and Standards by Country

African Countries

Country	Color	VHF	UHF	Stereo
Algeria	PAL	B	G	-
Angola	PAL	I	-	-
Cameroon	PAL	B	G	-
Egypt	SECAM/PAL	B	G	-
Ethiopia	PAL	B	-	-
Ghana	PAL	B	G	-
Madagascar	SECAM(V)	K1	-	-
Mali	SECAM(V)	K1	-	-
Mauritania	SECAM(V)	B	-	-
Morocco	SECAM(V)	D	-	-
Mozambique	PAL	B	-	-
Somalia	PAL	B	-	-
South Africa	PAL	I	I	Nicam I
Sudan	PAL	B	G	-
Tunisia	SECAM(V)	K1	-	-
Zaire	SECAM(V)	K1	-	-
Zambia	PAL	B	G	-

European countries

Country	Color	VHF	UHF	Stereo
Austria	PAL	B	G	Zweiton
Belgium	PAL	B	H	Nicam
Bulgaria	SECAM(H)	D	K	-
Czech Republic	SECAM(H)/PAL	D	K	-
Denmark	PAL	B	G	Nicam
Finland	PAL	B	G	Nicam
France	SECAM(V)	L	L	-
Germany	PAL	B	G	-
Greece	SECAM/PAL	B	G	-
Hungary	SECAM/PAL	D	K	-
Italy	PAL	B	G	Zweiton
Netherlands	PAL	B'	G	-
Norway	PAL	B	G	Nicam
Poland	PAL	B	G	-
Portugal	PAL	B	G	-
Romania	PAL	B	G	-
Russia	SECAM(H)	D	K	-
Slovakia	PAL	B	G	-
Spain	PAL	B	G	-
Sweden	PAL	B	G	Nicam
Switzerland	PAL	B	G	-
Turkey	PAL	B	G	-
United Kingdom	PAL	I	I	-
Yugoslavia	PAL	B	G	-

American Countries

Country	Color	VHF	UHF	Stereo
Argentina	PAL-N	N	N	MTS
Bolivia	NTSC	M	N	-
Brazil	PAL M	M	M	-
Canada	NTSC	M	M	BTSC
Chile	NTSC	M	M	BTSC
Colombia	NTSC	M	M	-
Costa Rica	NTSC	M	M	-
Cuba	NTSC	M	M	-
Dominican Rep.	NTSC	M	M	-
Ecuador	NTSC	M	M	-
El Salvador	NTSC	M	M	-
Guatamala	NTSC	M	M	-
Honduras	NTSC	M	M	-
Mexico	NTSC	M	M	BTSC
Nicaragua	NTSC	M	M	-
Panama	NTSC	M	M	-
Paraguay	PAL-N	N	N	-
Peru	NTSC	M	M	-
Puerto Rico	NTSC	M	M	-
Uruguay	PAL-N	N	N	-
USA	NTSC	M	M	BTSC
Venezuela	NTSC	M	M	-

Asian countries and Australia

Country	Color	VHF	UHF	Stereo
Abu Dhabi	PAL	B	G	-
Afghanistan	PAL & SECAM (H)	B	-	-
Australia	PAL	B	G	Zweiton
Bangladesh	PAL	B	-	-
Belarus	SECAM	D	K	-
China	PAL	D	-	Zweiton D
Djibouti	SECAM(V)	B	G	-
India	PAL	B	-	-
Indonesia	PAL	B	G	-
Iran	SECAM(H)	B	G	-
Japan	NTSC	M	M	EIAJ
Malaysia	PAL	B	G	Zweiton
Pakistan	PAL	B	-	-
Philippines	NTSC	M	M	-
Saudi Arabia	PAL	B	G	-
Singapore	PAL	B	G	Nicam
Taiwan	NTSC	M	-	-
Thailand	PAL	B	-	-
Vietnam	NTSC	M	-	-

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Dragados Sistemas, S.A.

Circular Polarization — Tuned

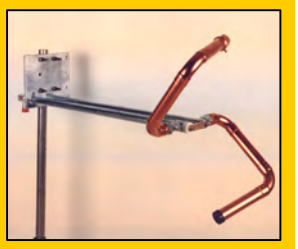
MY - HELIAX

Special balun to minimize tower influences. Easy tube instalation in array configuration

Technical Specification

Frequency	87.5 - 108 MHz Tuned
Polarization	Circular
Azimuthal Pattern	Omni +/- 2dB ex-tower influence
Axial Ratio	Less than 3 dB
Gain	2.15 dBi
VSWR	< 1.1 : 1 +/- 400 KHz
Impedance	50 Ω
Power Handling	2 Kw
Connectors	DIN 7/16
Lightning Protection	DC Grounded

Length	1300	mm
Width	400	mm
Height	600	mm
Weight	8	Kg
Mounting	To suit pole 60 mm ∅	
Wind Speed	160 Km/h	
Materials	Feeding lines galvanized steel	
	Helix in copper, teflon isolators	



MY - CYCLONE

Factory tuned upon request. Specially suited for individual use or stacked medium power systems

Technical Specification

Frequency	87.5 - 108 MHz Tuned
Polarization	Circular
Azimuthal Pattern	Omni +/- 2dB ex-tower influence
Axial Ratio	+/-3 dB free space
Gain	2.15 dBi
VSWR	< 1.1 : 1 ± 150 KHz
Impedance	50 Ω
Power Handling	600 w
Connectors	N(F)
Lightning Protection	DC Grounded

Length	1230	mm
Width	305	mm
Height	700	mm
Weight	3.8	Kg
Mounting	To suit pole 25 - 70 mm ∅	
Wind Speed	160 Km/h	
Materials	Stainless steel, plated brass	
	and PVC	

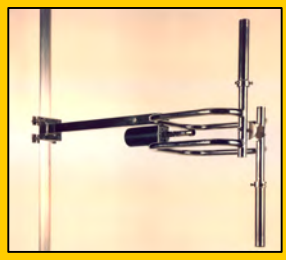
MY - SYREN

Factory tuned upon request. Specially suited for individual use or stacked medium power systems

Technical Specification

Frequency	87.5 - 108 MHz Tuned
Polarization	Circular
Azimuthal Pattern	Omni +/- 2dB ex-tower influence
Axial Ratio	+/-3 dB free space
Gain	2.15 dBi
VSWR	< 1.1 : 1 ± 200 KHz
Impedance	50 Ω
Power Handling	4 Kw
Connectors	EIA 7/8"
Lightning Protection	DC Grounded

Length	1300	mm
Width	325	mm
Height	800	mm
Weight	4.8	Kg
Mounting	To suit pole 25 - 70 mm ∅	
Wind Speed	160 Km/h	
Materials	Stainless steel, silver-plated	
	brass and PVC	
	Radomized connector for ice	
	protection	



			MY-Cyclone		MY-Syren		MY-Heliax	
BAYS	GAIN	LENGTH	POWER (Kw)	INPUT SPLITTER	POWER (Kw)	INPUT SPLITTER	POWER (Kw)	INPUT SPLITTER
2	5 dBi	2.5 m	0.6	N(H)	8	EIA 1 5/8"	4	EIA 1 5/8"
4	8 dBi	7.5 m	2.4	DIN 7/16	10	EIA 1 5/8"	8	EIA 1 5/8"
6	10 dBi	12.5 m	3.6	DIN 13/30 or EIA7/8"	12	EIA 1 5/8"	12	EIA 1 5/8"
8	11 dBi	17.5 m	4.8	DIN 13/30 or EIA7/8"	12	EIA 1 5/8"	16	EIA 3 1/8"
12	13 dBi	27.5 m	7.2	EIA 1 5/8"	30	EIA 3 1/8"	24	EIA 3 1/8"

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Dragados Sistemas, S.A.

Circular Polarization Broadband

MY - Tetra Q

Individual fed, enabling polarization control and possibility of using each conector in separate transmiters

Technical Specification

Frequency	87.5 - 108 MHz
Polarization	Circular
Azimuthal Pattern	Omni ± 1.5dB
Axial Ratio	± 3 dB in 240º
Gain	2.15 dBi
VSWR	< 1.3 : 1 Broadband
Impedance	50 Ω
Power Handling	2 x 2,5 Kw
Connectors	2 X DIN 7/16
Lightning Protection	DC Grounded

Length	900	mm
Width	1300	mm
Height	1300	mm
Weight	28	Kg
Mounting	To suit pole 60 or 101 mm ∅	
Wind Speed	30 Kg Front @ 160 Km/h	
Materials	Aluminum dipoles. Feeding lines in copper, Teflon isolators, Inclemency radome against enviroment adverse	

Tetra Q					
BAYS	GAIN (dBd) (each polarization)	LENGTH	POWER (Kw)	INPUT SPLITTER	WEIGHT (Kg)
2	1.7	4,4 m	10	EIA 1 5/8"	30
4	4.7	10	20	EIA 3 1/8"	60
6	6.5	15	30	EIA 3 1/8"	90
8	7.7	20.6	40	EIA 4 1/8"	120

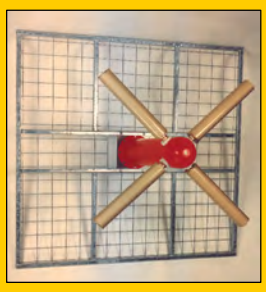
MY - Tetra Q2

Ideal for several faces mounting in triangular or square towers.

Technical Specification

Frequency	87.5 - 108 MHz
Polarization	Circular
H Beamwidth	110º
V Beamwidth	75º
Gain	6.6 dBi
VSWR	< 1.2 : 1 Broadband
Impedance	50 Ω
Power Handling	2 x 2,5 Kw
Connectors	2 X DIN 7/16
Lightning Protection	DC Grounded
Front to Back Ratio	> 12 dB

Length	1000	mm
Width	1700	mm
Height	1700	mm
Weight	57	Kg
Mounting	To suit pole 60 or 101 mm ∅	
Wind Load	90 Kg Front @ 160 Km/h	
Materials	Aluminum dipoles. Feeding lines in copper, Teflon isolators, Inclemency radome against enviroment adverse	



MY - Tetra Q3

High Gain. Ideal for several faces mounting in triangular or square towers.

Technical Specification

Frequency	87.5 - 108 MHz
Polarization	Circular
H Beamwidth	70º
V Beamwidth	100º
Gain	7.5 dBi
VSWR	< 1.15 : 1 Broadband
Impedance	50 Ω
Power Handling	2 x 2,5 Kw
Connectors	2 X DIN 7/16
Lightning Protection	DC Grounded
Front to Back Ratio	> 15 dB

Length	1300	mm
Width	1700	mm
Height	1700	mm
Weight	65	Kg
Mounting	To suit pole 60 or 101 mm ∅	
Wind Load	95 Kg Front @ 160 Km/h	
Materials	Aluminum dipoles. Feeding lines in copper, Teflon isolators, Inclemency radome against enviroment adverse	

Tetra Q2			
BAYS	FACES	GAIN (dBd) (each polarization)	POWER (Kw)
1	2	0.8	10
	3	-1	15
2	2	3.8	20
	3	2	30
3	2	5.5	30
	3	3.7	45

Tetra Q3 (each polarization)					
	GAIN (dBd) / POWER				
FACES	1	2	3	4	LENGTH
BAYS	5 Kw each bay	10 Kw each bay	15 Kw each bay	20 Kw each bay	(Mts)
1		1,7	0,2	-1,1	1,7
2	5.3	4,7	3,2	1,8	4
4	8.3	7,7	6,2	4,8	8,6
6	10.2	9,5	8.0	6,7	13,2
8	11.3	10,7	9.3	7,8	18

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Dragados Sistemas, S.A.

Circular Polarization HIGH GAIN PANEL

MY - 4DC

High Power:10 Kw per panel. Ideal for stacking for any radiation pattern

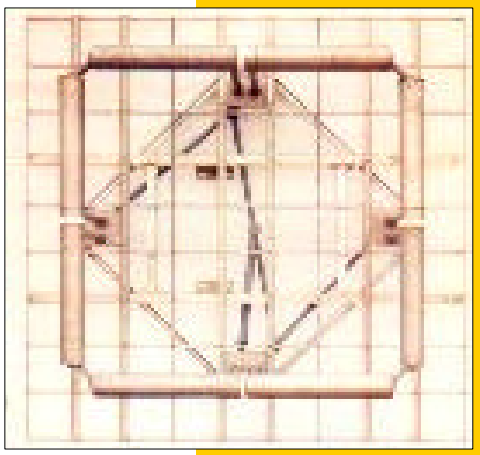
Technical Specification

Frequency	87.5 - 108 MHz	
Polarization	Circular	
H Beamwidth	70º	
V Beamwidth	60º	
Gain	9,5 dBi	
VSWR	< 1.1 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
DC1	2 X DIN 7/16	2 x 2,5 Kw
DC2	2 X DIN 13/30	2 x 5 Kw
DC3	1 X EIA 1 5/8"	10 Kw
Lightning Protection	DC Grounded	
Front to Back Ratio	> 18 dB	

Length	900	mm
Width	2315	mm
Height	2315	mm
Weight	140	Kg
Mounting	To suit pole 114 mm ∅	
Wind Load	210 Kg Front @ 150 Km/h	
	30 Kg Side @ 150 Km/h	
Materials	Hot dip galvanized dipoles. Feeding	
	lines in copper, Teflon isolators, hot	
	dip galvanized reflector grid.	

MY-4DC Panel

BAYS	FACES	GAIN (dBd) (each polarization)	WEIGHT (Kgs)	LENGHT (Mts)
1	2	1.5	280	2.3
	3	0.1	420	
	4	-1.2	560	
2	1	7.3	280	5.3
	2	4.5	560	
	3	3.3	840	
	4	1.8	1120	
4	1	10.3	560	11.5
	2	7.5	1120	
	3	6.3	1680	
	4	4.8	2240	
6	1	12.1	840	17.6
	2	9.3	1680	
	3	8.1	2520	
	4	6.6	3360	
8	1	13.3	1120	23.7
	2	10.5	2240	
	3	9.3	3360	
	4	7.8	4480	



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RADIO
FM Banda II

Lineal Polarization — HIGH GAIN PANEL

MY - BII2DD-TT -A -G

High Power:5 Kw per panel. Ideal for stacking triangular tower for any radiation pattern

Technical Specification

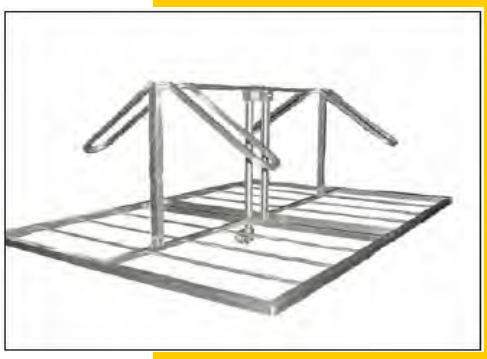
Frequency	87.5 - 108 MHz	
Polarization	Horizontal	
H Beamwidth	80º	
V Beamwidth	60º	
Gain	7 dBd	
VSWR	< 1.2 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	EIA 7/8"	4 Kw
	EIA 1 5/8"	5 Kw
Lightning Protection	DC Grounded	
Front to Back Ratio	> 18 dB	

Probe in the connector under request
-A: Aluminum -G:Galvanized

Length	2500	mm
Width	1700	mm
Height	780	mm
Weight	32 Al / 93 Stain	Kg
Mounting	To suit pole 42-114 mm ∅	
Wind Load	33Kg Front @ 160 Km/h	
	12 Kg Side @ 150 Km/h	
Materials	Galvanized/Aluminum dipoles. Feeding	
	lines in copper, Teflon isolators, hot	
	dip galvanized/Aluminum reflector grid.	
Packing	2600x1800x220mm	
Wind Survival	225 Km/h	

MY-BII2DD Panel

BAYS	F	GAIN (dBd)	WEIGHT (Kgs)	LENGHT (Mts)
1	2	3.8	64	2.5
	3	2.1	96	
	4	-0.3	128	
2	1	9.8	64	5
	2	6.8	128	
	3	5.1	192	
	4	2.7	256	
4	1	12.8	128	7.5
	2	9.8	256	
	3	8.1	384	
	4	5.7	512	
6	1	14.6	192	10
	2	11.6	384	
	3	9.9	576	
	4	7.5	768	
8	1	15.8	256	12.5
	2	12.8	512	
	3	11.1	768	
	4	8.7	1024	



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RADIO
FM Banda II

Lineal Polarization — HIGH GAIN PANEL

MY - BII2DD-ST -A -G

High Power:5 Kw per panel. Ideal for stacking square tower for any radiation pattern

Technical Specification

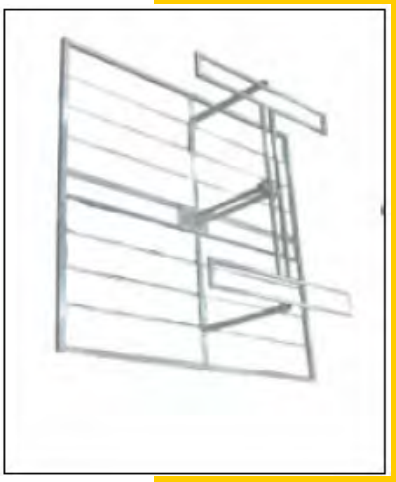
Frequency	87.5 - 108 MHz	
Polarization	Horizontal / Vertical	
E Beamwidth	70º	
H Beamwidth	60º	
Gain	7.5 dBd	
VSWR	< 1.15 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	EIA 7/8"	4 Kw
	EIA 1 5/8"	5 Kw
Lightning Protection	DC Grounded	
Front to Back Ratio	> 18 dB	

Probe in the connector under request
-A: Aluminum -G:Galvanized

Length	2300	mm
Width	2300	mm
Height	750	mm
Weight	36 Al/ 104 Gal	Kg
Mounting	To suit pole 42-114 mm ∅	
Wind Load	150Kg Front @ 150 Km/h	
	25 Kg Side @ 150 Km/h	
Materials	Galvanized/Aluminum dipoles. Feeding	
	lines in copper, Teflon isolators, hot	
	dip galvanized/Aluminum reflector grid.	
Packing	1500x2500x220mm	
Wind Survival	225 Km/h	

MY-BII2DD Panel

BAYS	F	GAIN (dBd)	WEIGHT (Kgs)	LENGHT (Mts)
1	2	4.3	208	2.3
	3	2.6	312	
	4	0.2	416	
2	1	10.3	208	5.3
	2	7.3	416	
	3	5.6	624	
	4	3.2	832	
4	1	13.3	416	11.3
	2	10.3	832	
	3	8.6	1248	
	4	6.2	1664	
6	1	15.1	416	17.3
	2	12.1	832	
	3	10.4	1872	
	4	8	1664	
8	1	16.3	416	23.3
	2	13.3	832	
	3	11.6	2496	
	4	9.2	1664	



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YAGI - FM

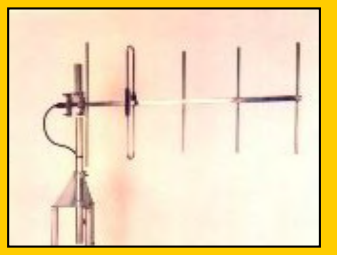
MY- YINX - FM

Yagi FM. Several Gains. Light and strong design.

Technical Specification

Frequency	87.5 - 108 MHz
Polarization	Linear (Vert. or Hor.)
Gain	From 5 to 12 dBi
VSWR	< 1.5 : 1 Broadband
Impedance	50Ω (or 75Ω upon request)
Power Handling	100 w (also 600w)
Connectors	N (F)
Lightning Protection	DC Grounded
Front to Back Ratio	>16dB
Connectors	N (F)
Lightning Protection	DC Grounded
Front to Back Ratio	>16dB

Weight	10	Kg
Mounting	To suit pole 50 to 60 mm ∅	
Wind Speed	200 Km/h	
Materials	Stainless steel and teflon	
Temperature	-40ºC to +50ºC	



MY-YINX-FM

TYPE	GAIN (dBi)	BEAMWIDTH E (º)	BEAMWIDTH H (º)	LENGTH (mm)
MY-YINX-FM2	5	75	170	750
MY-YINX-FM3	7	65	105	1445
MY-YINX-FM4	8.5	60	80	1955
MY-YINX-FM5	10	52	63	2581
MY-YINX-FM6	11	45	56	2860
MY-YINX-FM7	12	38	50	3200

WIDE BAND DIPOLE

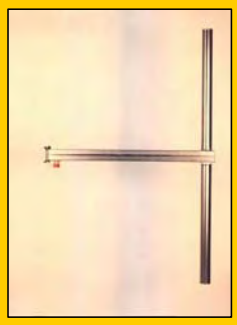
MY - FMPL 2Kw/5Kw

Specially suited for individual use or stacked medium power Systems. Gamma match adaptation

Technical Specification

Frequency	87.5 - 108 MHz
Polarization	Vertical
H Beamwidth	Omni ex-tower influence
V Beamwidth	80º
Gain	2.15 dBi
VSWR	< 1.3 : 1 Broadband
Impedance	50 Ω
Power Handling	2 Kw / 5 Kw
Connectors	DIN 7/16 EIA 7/8"
Lightning Protection	DC Grounded

Length	857	mm
Width	120	mm
Height	1352	
Weight	9	Kg
Mounting	To suit pole 60 mm ∅	
Wind Load	12 Kg @ 160 Km/h	
Materials	Fully Stainless Steel, silver-plated brass	
	copper-berylium and PTFE	



MY - FMPL2Y 2Kw/5Kw

Specially suited for individual use or stacked medium power Systems. Gamma match adaptation

Technical Specification

Frequency	87.5 - 108 MHz
Polarization	Vertical
H Beamwidth	180º
V Beamwidth	80º
Gain	5,15 dBi
VSWR	< 1.3 : 1 Broadband
Impedance	50 Ω
Power Handling	2 Kw / 5 Kw
Connectors	DIN 7/16 EIA 7/8"
Lightning Protection	DC Grounded

Length	857	mm
Width	120	mm
Height	1734	mm
Weight	11	Kg
Mounting	To suit pole 60 mm ∅	
Wind Load	25 Kg @ 160 Km/h	
Materials	Fully Stainless Steel, silver-plated brass	
	copper-berylium an PTFE	

					FMPL		FMPL2	
BAYS	VERTICAL BEAMWIDTH	JUMPERS CABLE	LENGTH	POWER (Kw)	GAIN (dBi)	INPUT SPLITTER	GAIN (dBi)	INPUT SPLITTER
2	36º	½"	3 m	4/10	5	1 5/8"	8	1 5/8"
4	17º	½"	9 m	8/12	8	1 5/8"	11	1 5/8"
6	11º	½"	15 m	12	10	1 5/8"	13	1 5/8"
8	9º	½"	21 m	16/40	11	3 1/8"	14	3 1/8"
10	7º	½"	27 m	20/40	12	3 1/8"	15	3 1/8"

MOYANO

Dragados Sistemas, S.A.

WIDE BAND DIPOLE

MY - GM

Wide Band. Excellent radiant pattern. Outdoor radome against environment adverse

Technical Specification

Frequency	87.5 - 108 MHz	
Polarization	Vertical	
H Beamwidth	Omni ex-tower influence	
V Beamwidth	80º	
Gain	2.15 dBi	
VSWR	< 1.3 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	DIN 7/16	2,5 Kw
	EIA 7/8"	4 Kw
	DIN 13/30	5 Kw
	EIA 1 5/8"	10 Kw
Lightning Protection	DC Grounded	

Length	1000	mm
Width	333	mm
Height	1260	mm
Weight	26	Kg
Mounting	To suit pole 60 mm ∅	
Wind Load	30 Kg @ 160 Km/h	
Materials	Aluminum dipoles. Feeding	
	lines in copper, Teflon isolators,	
	Inclemency radome against enviroment	
	adverse	
Radome Colour	Red	

MY - GM2YS

Also Omnidirectional and super-directive versions

Technical Specification

Frequency	87.5 - 108 MHz	
Polarization	Vertical	
H Beamwidth	220º	
V Beamwidth	67º	
Gain	5,15 dBi	
VSWR	< 1.3 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	DIN 7/16	2,5 Kw
	EIA 7/8"	4 Kw
	DIN 13/30	5 Kw
Lightning Protection	DC Grounded	
Front to Back Ratio	> 6 dB	

Length	1000	mm
Width	333	mm
Height	2090	mm
Weight	28.5	Kg
Mounting	To suit pole 60 mm ∅	
Wind Load	42 Kg @ 160 Km/h	
Materials	Aluminum dipoles. Feeding	
	lines in copper, Teflon isolators,	
	Inclemency radome against enviroment	
	adverse	
Radome Colour	Red	

MY - GM3YS

Wide Band. Excellent beaming pattern. Also Omnidirectional an super-directive versions

Technical Specification

Frequency	87.5 - 108 MHz	
Polarization	Vertical	
H Beamwidth	150º	
V Beamwidth	70º	
Gain	5,5 dBi	
VSWR	< 1.3 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	DIN 7/16	2,5 Kw
	EIA 7/8"	4 Kw
	DIN 13/30	5 Kw
Lightning Protection	DC Grounded	
Front to Back Ratio	> 12 dB	

Length	1320	mm
Width	333	mm
Height	2090	mm
Weight	30.5	Kg
Mounting	To suit pole 60 mm ∅	
Wind Load	55 Kg @ 160 Km/h	
Materials	Aluminum dipoles. Feeding	
	lines in copper, Teflon isolators,	
	Inclemency radome against enviroment	
	adverse	
Radome Colour	Red	

				GAIN (dBd)		
BAYS	POWER (Kw)	BEAMWIDTH H	LENGTH (Mts)	GM	GM2Y	GM3Y
2	5	36º	4.2	5	8	8.5
4	10	17º	9.2	8	11	11.5
6	15	11º	15	10	13	13.5
8	20	8º	21.3	11	14	14.5
10	25	7º	27	12	15	15.5

MOYANO

WIDE BAND DIPOLE

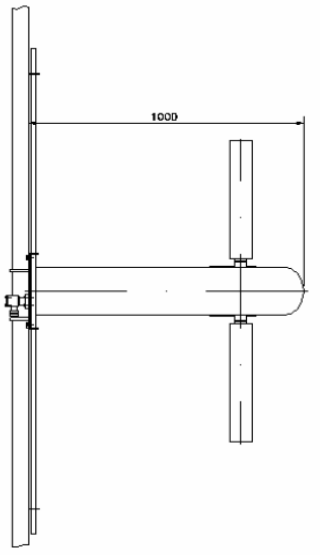
MY - GM2YPA

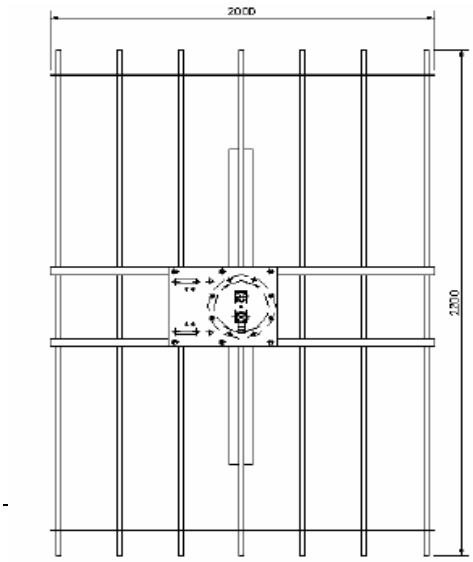
Wide Band. Excellent radiant pattern. Outdoor radome against environment adverse

Technical Specification

Frequency	87.5 - 108 MHz	
Polarization	Vertical	
H Beamwidth	120º	
V Beamwidth	24º	
Gain	5.5 dBi	
VSWR	< 1.3 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	DIN 7/16	2,5 Kw
	EIA 7/8"	4 Kw
	DIN 13/30	5 Kw
	EIA 1 5/8"	10 Kw
Lightning Protection	DC Grounded	

Length	2000	mm
Width	2200	mm
Height	1000	mm
Weight	45	Kg
Mounting	To suit pole 60 mm ∅	
Wind Load	125 Kg @ 160 Km/h	
Materials	Aluminum dipoles. Feeding	
	lines in copper, Teflon isolators,	
	Inclemency radome against enviroment	
	adverse	
Radome Colour	Red	





MOYANO

RADIO

FM Banda II

DIRECTIONAL PANEL

HIGH GAIN

MY - 2DV

Technical Specification

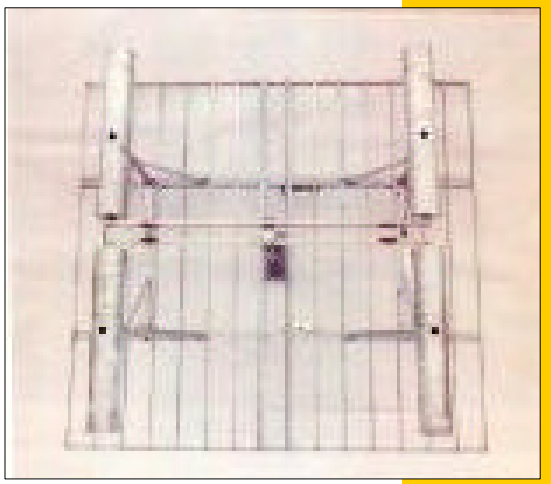
Frequency	87.5 - 108 MHz	
Polarization	Lineal (Hor. or Vert.)	
H Beamwidth	64º	
V Beamwidth	60º	
Gain	10 dBi	
VSWR	< 1.15 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	DIN 7/16	2,5 Kw
	EIA 1 5/8"	10 Kw
Lightning Protection	DC Grounded	
Front to Back Ratio	> 18 dB	

High Power:10 Kw per panel. Ideal for stacking for any radiation pattern

Length	970	mm
Width	2290	mm
height	2480	mm
Weight	130	Kg
Mounting	To suit pole 113 mm ∅	
Wind Load	147 Kg @ 160 Km/h	
Materials	Hot dip galvanized dipoles. Feeding	
	lines in copper, Teflon isolators, hot	
	dip galvanized reflector grid.	

MY-2DV Panel

BAYS	FACES	GAIN (dBd)	WEIGHT (Kgs)	LENGHT (Mts)
1	2	4.7	260	2.29
	3	3	390	
	4	1.7	520	
2	1	10.7	260	4.6
	2	7.7	520	
	3	6	780	
	4	4.6	1040	
4	1	13.7	520	10.6
	2	10.7	1040	
	3	9	1560	
	4	7.6	2080	
6	1	15.5	780	16
	2	12.5	1560	
	3	10.8	2340	
	4	9.4	3120	
8	1	16.7	1040	21.4
	2	13.7	2080	
	3	12	3120	
	4	10.6	4160	



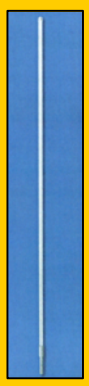
MY - 1130

Colinear antena. High gain design. Low profile & lightweight. High peak power rating. Low intemodulation products

Technical Specification

Frequency	195 - 223 MHz
Polarization	Vertical
H Beamwidth	Omni
V Beamwidth	28º
Gain	5 dBi
VSWR	< 1.5 : 1 Broadband
Impedance	50 Ω
Power Handling	500 W
Connectors	DIN 7/16 Female
Lightning Protection	DC Grounded

Length	3260	mm
Diameter	65	mm
Weight	8	Kg
Mounting	To suit pole 60 mm ∅	
Wind Load	35 Kg @ 180 Km/h	
Materials	Plated connector. Copper dipoles, aluminium spigot. Rugged fibreglass protection radome All parts welded	



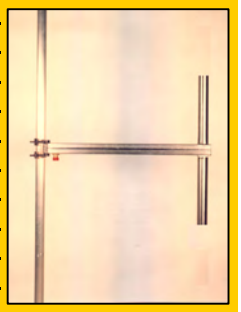
MY- 1150

DAB dipole. Gamma match adaptation. Fully stainless steel

Technical Specification

Frequency	195 - 223 MHz
Polarization	Vertical
H Beamwidth	Omni (ex-tower influence)
V Beamwidth	80º
Gain	2,15 dBi
VSWR	< 1.3 : 1 Broadband
Impedance	50 Ω
Power Handling	2 Kw
Connectors	DIN 7/16
Lightning Protection	DC Grounded
Tower influence	3-5 dB

Length	430	mm
Width	125	mm
Heigth	700	mm
Weight	6	Kg
Mounting	To suit pole 60 mm ∅	
Wind Load	25 Kg @ 160 Km/h	
Materials	Stainless steel, silver plated brass, copper-berylium and PTFE	



MY-1150

BAYS	VERTICAL BEAMWIDTH	GAIN (dBi)	POWER (Kw)	INPUT SPLITTER
2	36º	5	4	EIA 1 5/8"
4	17º	8	8	EIA 1 5/8"
6	11,4º	10	12	EIA 3 1/8"
8	8,5º	11	16	EIA 3 1/8"
10	7º	12	20	EIA 3 1/8"

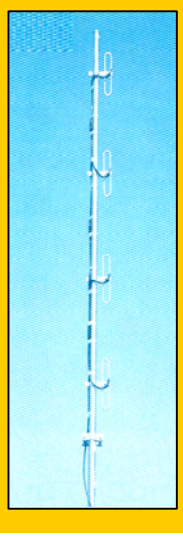
MY- 1180

Four Folded Colinear Dipoles. Electrical tilt available. Offsset horizontal radiation pattern.

Technical Specification

Frequency	195 - 223 MHz
Polarization	Vertical
H Beamwidth	160º
V Beamwidth	18º
Gain	10 dBi
VSWR	< 1.5 : 1 Broadband
Impedance	50 Ω
Power Handling	1 Kw
Connectors	DIN 7/16 (F)
Lightning Protection	DC Grounded

Length	5000	mm
Diameter	48	mm
Weight	14	Kg
Mounting	To suit pole 60 mm ∅	
Wind Speed	18 Kg @ 160 Km/h	
Materials	Stainless steel pole and dipoles	
Temperature	-55ºC to +65ºC	



MOYANO

POWER SPLITTERS

MY-S2

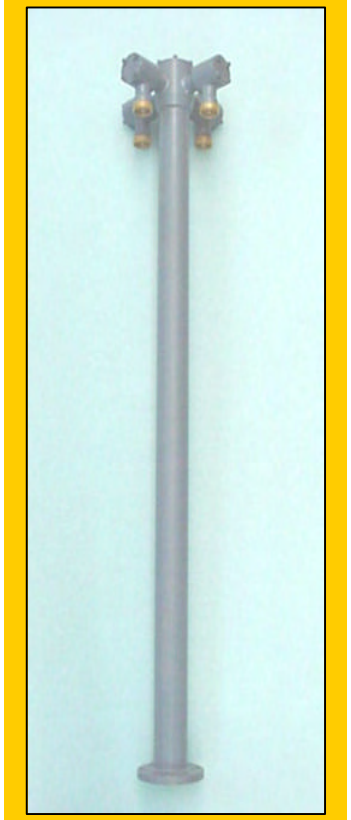
Vertical Output for easier instalation.

Technical Specification

Frequency	87.5 - 108 MHz
VSWR	<1.05 : 1 Broadband
Impedance	50 Ω
Insertion loss	< 0,18 dB
Power	From 0.6 to 140 Kw
Input Connector	N / EIA / DIN
Output Connector	N / EIA / DIN
Distribution	Symmetrical phase & amplitude

Number of outputs	2 to 12
Materials	Electrolytic copper, plated and
	passived brass, teflon insulators
	Leak proof by silicone tore joints.
	Copper-beryllium connectors
	termical processed and silver plated
Typical Length	1700 mm

MY-S2	Input connector code		Output connector code		Way number								Power (Kw)
	type	code	type	code	2	3	4	5	6	8	10	12	min/max
MY-S211x	N(F)	1	N(F)	1	x	x	x						0.6
MY-S222x	DIN 7/16 (F)	2	DIN 7/16	2	x	x	x		x				2.5
MY-S232x	EIA 7/8"	3	DIN 7/16	2			x	x	x				4
MY-S242x	DIN 13/30 (F)	4	DIN 7/16	2	x	x	x		x	x			5
MY-S244x		4	DIN 13/30	4	x								5
MY-S252x	EIA 1 5/8"	5	DIN 7/16	2	x	x	x	x	x	x	x	x	5 / 12
MY-S253x		5	EIA 7/8"	3	x		x						8 / 12
MY-S254x		5	DIN 13/30	4	x	x	x	x					10 / 12
MY-S255x		5	EIA 1 5/8"	5	x	x							12
MY-S272x	EIA 3 1/8"	7	DIN 7/16	2					x	x	x	x	15 / 30
MY-S273x		7	EIA 7/8"	3						x			30
MY-S274x		7	DIN 13/30	4			x	x	x	x	x		20 / 30
MY-S275x		7	EIA 1 5/8"	5	x	x	x	x	x				24 / 30
MY-S277x		7	EIA 3 1/8"	7	x								30
MY-S284x	DIN 43/98 (F)	8	DIN 13/30	4						x			40
MY-S285x		8	EIA 1 5/8"	5			x						48
MY-S286x		8	DIN 29/66	6	x	x	x						40 / 70
MY-S287x		8	EIA 3 1/8"	7	x								60
MY-S297x	EIA 4 1/2""	9	EIA 3 1/8"	7	x	x							60 / 80
MY-S207x	EIA 6 1/8"	0	EIA 4 1/2"	7	x								140



MOYANO

CAVITY FILTERS

MY-F2

Technical Specification

Frequency	87.5 - 108 MHz
VSWR	< 1.1 : 1 f_o +/-150 KHz
Impedance	50 Ω
Group delay	+/- 10 ns
Maximum Power	20 Kw

Materials	Electrolytic cupper, plated and
	passived brass, teflon isolators,
	cupper-berylllium connectors
	termical processed and silver-plated
	Pistons in silver-plated copper and
	invar rods.
	Cavities in brass

MY-F2	Power code					Atenuation (dB)		Dimensions (mm)			
	Power	code	code / cavities	Connectors	Insertion Loss (dB)	fo +/- 2MHz	fo +/- 6 MHz	Length	Heigth	Width	Weight (Kg)
MY-F2003	300 W	00	3	N(F)	≤ 0.7 dB	≥ 35 dB	≥ 60 dB	300	400	100	12.5
MY-F2012	1 Kw	01	2	DIN 7/16	≤ 0.3 dB	≥ 18 dB	≥ 38 dB	328	924	180	25
MY-F2013		01	3	DIN 7/16	≤ 0.5 dB	≥ 32 dB	≥ 60 dB	476	924	180	37
MY-F2014		01	4	DIN 7/16	≤ 0.7 dB	≥ 45 dB	≥ 80 dB	624	924	180	49
MY-F2032	2 Kw	03	2	DIN 7/16	≤ 0.3 dB	≥ 22 dB	≥ 40 dB	400	950	200	36
MY-F2033		03	3	DIN 7/16	≤ 0.4 dB	≥ 37 dB	≥ 60 dB	600	950	200	52.5
MY-F2034		03	4	DIN 7/16	≤ 0.7 dB	≥ 55 dB	≥ 80 dB	800	950	200	69
MY-F2052	5 Kw	05	2	EIA 1 5/8"	≤ 0.2 dB	≥ 24 dB	≥ 40 dB	674	1050	350	69
MY-F2053		05	3	EIA 1 5/8"	≤ 0.3 dB	≥ 42 dB	≥ 65 dB	998	1050	350	100.5
MY-F2054		05	4	EIA 1 5/8"	≤ 0.7 dB	≥ 60 dB	≥ 80 dB	1322	1050	350	132
MY-F2102	10 Kw	10	2	EIA 1 5/8"	≤ 0.1 dB	≥ 25 dB	≥ 40 dB	982	1050	495	100
MY-F2103		10	3	EIA 1 5/8"	≤ 0.2 dB	≥ 45 dB	≥ 65 dB	1427	1050	495	140
MY-F2104		10	4	EIA 1 5/8"	≤ 0.6 dB	≥ 60 dB	≥ 80 dB	1875	1050	495	180
MY-F2202	20 Kw	20	2	EIA 3 1/8"	≤ 0.1 dB	≥ 25 dB	≥ 40 dB	1338	1050	686	140
MY-F2203		20	3	EIA 3 1/8"	≤ 0.2 dB	≥ 45 dB	≥ 65 dB	1970	1050	686	190
MY-F2204		20	4	EIA 3 1/8"	≤ 0.6 dB	≥ 60 dB	≥ 80 dB	2600	1050	686	240

Vertical Output for easier
Other Input/Output connector uppon reque
Higher than 20 Kw, contact factory

MOYANO

Dragados Sistemas, S.A.

STARPOINT COMBINERS

MY-DPII

Technical Specification

Frequency	87.5 - 108 MHz
VSWR	< 1.1 : 1 (in one FM Channel)
Impedance	50 ohms
Isolation between inputs	≥ 30 dB
Group Delay	+/- 10 ns
Number of inputs	2 to 4

Materials	Aluminium, copper and brass	
Output Connector	Up to 3 Kw	DIN 7/16
	Up to 10 Kw	EIA 1 5/8"
	Up to 40 Kw	EIA 3 1/8"
	Up to 80 Kw	EIA 4 1/8"

MY-DPII Power code Freq. Spacing code

	Input Power	code	Minimum Freq. Spacing	code	Input connector	Insertion Loss
MY-DPII033	300 W	00	1.8 MHz	3	N(F)	≤ 0.9 dB
MY-DPII1K2	1 Kw	01	5 MHz	2	DIN 7/16	≤ 0.4 dB
MY-DPII1K3		01	2 MHz	3	DIN 7/16	≤ 0.6 dB
MY-DPII1K4		01	1.2 MHz	4	DIN 7/16	≤ 0.8 dB
MY-DPII2K2	2 Kw	03	4.5 MHz	2	DIN 7/16	≤ 0.3 dB
MY-DPII2K3		03	1.5 MHz	3	DIN 7/16	≤ 0.5 dB
MY-DPII2K4		03	1 MHz	4	DIN 7/16	≤ 0.7 dB
MY-DPII5K2	5 Kw	05	4 MHz	2	EIA 1 5/8"	≤ 0.2 dB
MY-DPII5K3		05	1.3 MHz	3	EIA 1 5/8"	≤ 0.4 dB
MY-DPII5K4		05	0.8 MHz	4	EIA 1 5/8"	≤ 0.7 dB
MY-DPII10K2	10 Kw	10	4 MHz	2	EIA 1 5/8"	≤ 0.1 dB
MY-DPII10K3		10	1.3 MHz	3	EIA 1 5/8"	≤ 0.2 dB
MY-DPII10K4		10	0.8 MHz	4	EIA 1 5/8"	≤ 0.6 dB
MY-DPII20K2	20 Kw	20	4 MHz	2	EIA 3 1/8"	≤ 0.1 dB
MY-DPII20K3		20	1.3 MHz	3	EIA 3 1/8"	≤ 0.2 dB
MY-DPII20K4		20	0.8 MHz	4	EIA 3 1/8"	≤ 0.6 dB

DIRECTIONAL COMBINERS

MY-CDII

Technical Specification

Frequency	87.5 - 108 MHz
VSWR	<1.1 : 1 (in one FM Channel)
Impedance	50 W
Isolation between inputs	≥ 40 dB
(with filter in wide band input)	
Group Delay	+/- 10 ns
Number of inputs	2 to 14
Atenuation to Balanced Load	≥ 20 dB

Materials	Connectors in passived and silvering brass	
	Pistons in silver-plated copper and	
	invar rods.	
	Copper-Beryllium thermic treated, silver-plated	
	and passived. Cavities in brass.	
Output Connector	Up to 3 Kw	DIN 7/16
	Up to 10 Kw	EIA 1 5/8"
	Up to 40 Kw	EIA 3 1/8"
	Up to 80 Kw	EIA 4 1/8"
	Up to 140 Kw	EIA 6 1/8"
	Up to 300 Kw	EIA 9"

AM-DC2 Power code Freq. Spacing code

	Input Power	code	Minimum Freq. Spacing	code	Input connector	Insertion Loss in Narrow Band	Insertion Loss in Wide Band (without filter)
AM-DC2003x	300 W	00	1.5 MHz	3	N(F)	≤ 0.7 dB	≤ 0.1 dB
AM-DC2012x	1 Kw	01	2.2 MHz	2	DIN 7/16	≤ 0.3 dB	≤ 0.1 dB
AM-CD2013x		01	1.2 MHz	3	DIN 7/16	≤ 0.5 dB	≤ 0.1 dB
AM-DC2014x		01	0.7 MHz	4	DIN 7/16	≤ 0.7 dB	≤ 0.1 dB
AM-DC2022x	2 Kw	03	2 MHz	2	DIN 7/16	≤ 0.3 dB	≤ 0.1 dB
AM-DC2023x		03	1 MHz	3	DIN 7/16	≤ 0.5 dB	≤ 0.1 dB
AM-DC2024x		03	0.7 MHz	4	DIN 7/16	≤ 0.7 dB	≤ 0.1 dB
AM-DC2052x	5 Kw	05	1.5 MHz	2	EIA 1 5/8"	≤ 0.2 dB	≤ 0.1 dB
AM-DC2053x		05	0.8 MHz	3	EIA 1 5/8"	≤ 0.3 dB	≤ 0.1 dB
AM-DC2054x		05	0.5 MHz	4	EIA 1 5/8"	≤ 0.7 dB	≤ 0.15 dB
AM-DC2102x	10 Kw	10	2 MHz	2	EIA 3 1/8"	≤ 0.1 dB	≤ 0.1 dB
AM-DC2103x		10	1 MHz	3	EIA 3 1/8"	≤ 0.2 dB	≤ 0.1 dB
AM-DC2104x		10	0.5 MHz	4	EIA 3 1/8"	≤ 0.6 dB	≤ 0.1 dB
AM-DC2202x	20 Kw	20	2 MHz	2	EIA 3 1/8"	≤ 0.1 dB	≤ 0.1 dB
AM-DC2203x		20	1 MHz	3	EIA 3 1/8"	≤ 0.2 dB	≤ 0.1 dB
AM-DC2204x		20	0.5 MHz	4	EIA 3 1/8"	≤ 0.6 dB	≤ 0.1 dB
AM-DC2205x		20	0.4 MHz	5	EIA 3 1/8"	≤ 0.4 dB	≤ 0.1 dB

Other Input/Output connector uppon request
Other Powers, contact factory

Patch panels manual & motorised / *Cuadros de conmutación manuales y motorizados*

RADIO&TV
All bands

This devices are customized designs used to switch between two transmiter to one antenna, one transmiter over two half-antennas or to a dummy load in all the possibles combinations.
Sistemas Radiantes F. Moyano, S.A. patch panels are versatiles, have low losses, vey low VSWR and low cost reliable solution to multiconnection routing situations.
Patch panels are available in sizes of 1-5/8" through 6-1/8" with 3, 4 or 7 ports, embendded splitter or diplexer.

Bolt type EIA flanges are standard. Transitions to *no flange* or other line sizes are available.

Suitable for FM, analog TV, DAB y DVB. Accurate measurements can be done with optionally probes.

Estos dispositivos se emplean para conmutar varios transmisores sobre una antena o un solo transmisor a un sistema de antena partida en todas sus posibles combinaciones.
Asímismo permiten cargar sobre una carga refrigerada. Bajo pedido se incluyen sondas calibradas en las líneas.
Proporcionan gran versatilidad. Las almas son de latón plateado de 10 micras y los contactos de cobre-berilio recocido y plateado. Todo ello a un ***precio muy competitivo*** *.*

Disponibles en norma EIA para 1 5/8" hasta 6 1/8" con 3,4 o 7 puertos. Incluyen opcionalmente interruptores de traba, lo que impide maniobras incorrectas.

Disponible con transiciones a línea sin brida. Diseñado para radio FM, TV analógica, DAB y DVB.

Patch panel with diplexer embendded for BIII
Cuadro conmutador con multiplexor embebido

Technical data for Patch Panels

Line	100 MHz	Pmáx 230 MHz	860 MHz
DIN 7/16	2.5 Kw	2 Kw	1 Kw
EIA 1 5/8"	15 Kw	8Kw	5Kw
DIN 43-98	65 Kw	38 Kw	25 Kw
EIA 3 1/8"	40 Kw	25 Kw	16 Kw
EIA 6 1/8"	140 Kw	85 Kw	60 Kw (up to 800 MHz)

Tamb=40ºC Tinner=120ºC

Typical VSWF < 1.07
Insertion loss < 0.07 dB full band

In the 7 ports pach panel version, you can:
(with power splitter)
1) Out over the two halves
2) Out over the botom half
3) Out over the upper half
4) Out over the dummy load

Patch panel with U-links with integrated power splitter
Cuadro de conmutación con divisor de potencia integrado

Suitble for mounting in a 19" rack normalized (Fabricado para montaje en rack 19")
Orientatives dimension of 7-ports patch panel
Dimensiones orientativas para cuadro de 7 bocas

	wide / altura	length/frente	deep/profundo
4 1/2"	**160**	**82**	**82**
6 1/8"	**160**	**100**	**100**

MOYANO

MOYANO

Dragados Sistemas, S.A.

DAB PANEL ANTENNA HIGH GAIN

MY - 1140

DAB 2 Dipoles panel antenna. Wideband & multichannel capability. High reliability & long operative life.

Technical Specification

Frequency	174 - 230 MHz	
Polarization	Horizontal	Vertical
H Beamwidth	70º	60º
V Beamwidth	60º	70º
Gain	10 dBi	
VSWR	< 1.15 : 1 Broadband	
Impedance	50 Ω	
Power Handling	2 Kw / 5 Kw	
Connectors	DIN 7/16 / DIN 13/30	
Lightning Protection	DC Grounded	
Front to back ratio	> 18 dB	

Length	574	mm
Width	1240	mm
Height	1240	mm
Weight	25	Kg
Mounting	To suit pole 42 - 48 mm	
Wind Load	Front 65 Kg, Side 28 Kg @ 200 Km/h	
Materials	hot dip galvanized reflector and dipoles	
	plated connectors.	
	passive brass in feeding lines	
Ice protection	Radome Optional	
Temperature	-40ºC to +70ºC	

MY - 1170

DAB 4 dipoles panel antenna. Wideband & multichannel capability. High reliability & long operative life.

Technical Specification

Frequency	174 - 230 MHz	
Polarization	Horizontal	Vertical
H Beamwidth	70º	60º
V Beamwidth	30º	26º
Gain	13,5 dBi	
VSWR	< 1.1 : 1 Broadband	
Impedance	50 Ω	
Power Handling	2 Kw / 5 Kw	
Connectors	DIN 7/16 / DIN 13/30	
Lightning Protection	DC Grounded	
Front to back ratio	> 18 dB	

Length	515	mm
Width	1240	mm
Height	2840	mm
Weight	83	Kg
Mounting	To suit pole 75,5 mm ∅ (2 1/2")	
Wind Load	Front 120 Kg, Side 45 Kg @ 200 Km/h	
Materials	hot dip galvanized reflector and dipoles	
	plated connectors.	
	passive brass in feeding lines	
Ice protection	Radome Optional	
Temperature	-40ºC to +70ºC	

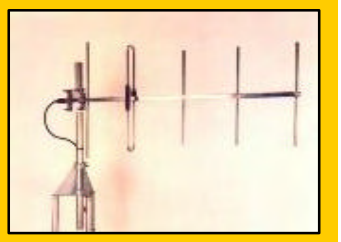
MY- 1160

Yagi DAB. Several Gains. Light and strong design

Technical Specification

Frequency	195 - 223 MHz
Polarization	Horizontal and Vertical
VSWR	< 1.3:1 fo +/-2%
	< 1.5:1 fo +/-10%
Impedance	50 Ω
Power Handling	100 w
Connectors	N (F)
Lightning Protection	DC Grounded
Front to Back Ratio	16 to 20 dB

Weight	2 to 10 Kg
Mounting	To suit pole 50 to 60 mm ∅
Wind Speed	200 Km/h
Materials	Stainless steel and teflon
Temperature	-40ºC to +70ºC



MY-1160				
	Gain (dBi)	Beamwidth E (°)	Beamwidth H (°)	Lenght (mm)
MY-1160-011	5	75	170	395
MY-1160-111	7	65	105	654
MY-1160-211	8.5	60	80	1084
MY-1160-311	10	52	63	1422
MY-1160-411	11.5	45	56	1760
MY-1160-511	12	38	50	2098
MY-1160-711	13	31	45	2774

MOYANO

POWER SPLITTERS

MY-S3 DAB

Vertical Output for easier instalation.

Technical Specification

Frequency	174 - 230 MHz
VSWR	< 1.05 : 1 Broadband
Impedance	50 Ω
Insertion loss	< 0,18 dB
Power	From 0.6 to 20 Kw
Input Connector	EIA / DIN
Output Connector	EIA / DIN
Distribution	Symmetrical phase & amplitude

Number of outputs	2 to 8
Materials	Electrolytic copper, plated and
	passived brass, teflon insulators
	Leak proof by silicone tore joints.
	Copper-beryllium connectors
	termical processed and silver plated
Typical Length	850 mm

MY-S3	Input connector code		Output connector code		Way number								Power (Kw)
	type	code	type	code	2	3	4	5	6	8	10	12	min/max
MY-S322x DAB	DIN 7/16 (F)	2	DIN 7/16	2	x	x							2
MY-S332x DAB	EIA 7/8"	3	DIN 7/16	2	x	x	x						3
MY-S352x DAB	EIA 1 5/8"	5	DIN 7/16	2	x	x	x						4 / 6
MY-S353x DAB		5	EIA 7/8"	3	x		x						6
MY-S355x DAB		5	EIA 1 5/8"	5	x	x							6
MY-S372x DAB	EIA 3 1/8"	7	DIN 7/16	2						x			16
MY-S373x DAB		7	EIA 7/8"	3						x			24
MY-S375x DAB		7	EIA 1 5/8"	5	x	x	x						12 / 18
MY-S377x DAB		7	EIA 3 1/8"	7	x								20

MOYANO

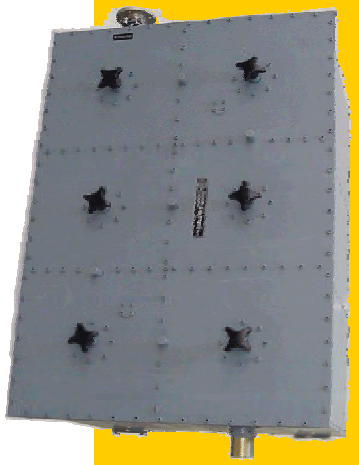
CAVITY FILTERS

MY-FA

Technical Specification

Frequency	174 -230 MHz
VSWR	<1.15 : 1 (in one block)
Impedance	50 Ω
Group delay	< 500 ns
Maximum Power	1.5 Kw
Critical mask:	Six cavities+one feedback

Materials	Electrolytic copper, silver-plated and
	passived brass, teflon isolators,
	copper-berylllium connectors
	termical processed
	Cavities in brass



MY-FA	Power code										
	Power	code	Input connector	Insertion Loss fo	Atenuation (dB)			Dimensions (mm)			Weight (Kg)
					fo +/- 0.77MHz	fo +/-0.97 MHz	fo +/- 1.75 MHz	Length	Heigth	Width	
MY-FA00	1 Kw	00	EIA 1 5/8"	≤ 1 dB	≤ 1.8 dB	≥ 11 dB	≥ 44 dB	623	541	426	85
MY-FA01	1.5 Kw	01	EIA 1 5/8"	≤ 0.9 dB	≤ 1.5 dB	≥ 11 dB	≥ 44 dB	923	541	626	102

MOYANO

HIGH GAIN PANEL

Panel 2 dipoles. High Power. Excellent directional radiant pattern. Detachable

MY - BI-D

Technical Specification

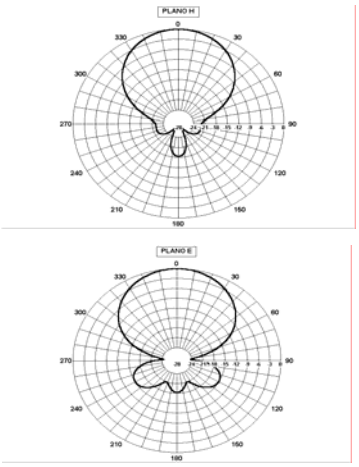
Frequency	47-68 MHz (CCIR) / 54-88 MHz (FCC)
Polarization	H
H Beamwidth	72º
V Beamwidth	56º
Gain	9.2 dBi
VSWR	< 1.1 : 1 (Factory tuned for 1 Channels)
	< 1.3 : 1 (Factory tuned for 3 Channels)
Power Handling & Conectors	EIA 1 5/8" 12 Kw
Impedance	50 Ω
Lightning Protection	DC Grounded

	FCC CH´S		
	2-3-4	3-4-5	4-5-6
Length (mm)	2840	2540	2340
Width (mm)	3760	3400	3100
Height (mm)	1400	1300	1200
Weight (Kg)	140	130	110
Wind Load (Kg)		80	
Wind Speed (Km/h)		200	

Mounting	To suit pole 114 mm ∅ (4")
Materials	Hot dip galvanized dipoles and reflector grid. Feeding lines in copper, Teflon isolators

Y-BI Panel Detachable

BAYS	FACES	GAIN (dBd)	LENGHT (Mts) FCC CH´S 2-3-4	3-4-5	4-5-6
1	2	3.7	4	3.6	3.2
	3	2			
	4	-0.4			
2	1	9.7	9.3	9	8
	2	6.7			
	3	5			
	4	2.6			
4	1	12.7	20	18	16
	2	9.7			
	3	8			
	4	5.6			
6	1	14.5	30.5	28	24
	2	11.5			
	3	9.8			
	4	7.4			
8	1	15.7	41	37	33
	2	12.7			
	3	11			
	4	8.6			



POWER SPLITTERS

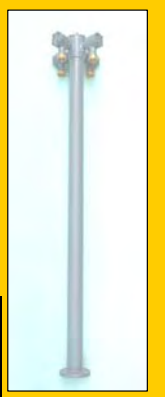
MY-S1

Vertical Output for easier instalation.

Technical Specification

Frequency	47 - 88 MHz
VSWR	< 1.05 : 1 Broadband
Impedance	50 Ω
Insertion loss	< 0,18 dB
Power	From 0.6 to 70 Kw
Input Connector	N / EIA / DIN
Output Connector	N / EIA / DIN
Distribution	Symmetrical phase & amplitude

Number of outputs	2 to 12
Materials	Electrolytic copper, plated and passived brass, teflon insulators
	Leak proof by silicone tore joints.
	Copper-beryllium connectors
	termical processed and silver plated
Typical Length	3000 mm



MY-S1	Input connector code		Output connector code		Way number								Power (Kw)
	type	code	type	code	2	3	4	5	6	8	10	12	min/max
MY-S122x	DIN 7/16 (F)	2	DIN 7/16	2	x	x	x	X	x				4
MY-S132x	EIA 7/8"	3	DIN 7/16	2	X	X	x	x	x				5
MY-S112x	DIN 13/30 (F)	4	DIN 7/16	2	x	x	x		x	x			4 / 10
MY-S144x		4	DIN 13/30	4	x								10
MY-S152x	EIA 1 5/8"	5	DIN 7/16	2	x	x	x	x	x	x	x	x	4 / 15
MY-1533x		5	EIA 7/8"	3	x		x						10 / 15
MY-S154x		5	DIN 13/30	4	x	x	x	x					15
MY-S155x		5	EIA 1 5/8"	5	x	x							15
MY-S172x	EIA 3 1/8"	7	DIN 7/16	2					x	x	x	x	24 / 48
MY-S173x		7	EIA 7/8"	3					x	x			30
MY-S174x		7	DIN 13/30	4			x	x	x	x			30 / 40
MY-S175x		7	EIA 1 5/8"	5	x	x	x						30 / 50
MY-S177x		7	EIA 3 1/8"	7	x								50
MY-S184x	EIA 4 1/2"	8	DIN 13/30	4						x	x	x	70
MY-S185x		8	EIA 1 5/8"	5		x	x						45 / 60
MY-S187x		8	EIA 3 1/8"	7	x								70

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Dragados Sistemas, S.A.

STARPOINT COMBINERS

MY-CSA

Technical Specification

Frequency	174 -230 MHz
VSWR	<1.15 : 1 (in one block)
Impedance	50 Ω
Isolation between inputs:	70 dB typical
Group Delay	< 700 ns
Number of inputs	2 to 4
Minimum freq. Spacing:	one block

Materials	Electrolytic copper, silver-plated and passived brass, teflon isolators, copper-beryllium connectors termical processed Cavities in brass.
Connectors	EIA 1 5/8"

MY-CSA	Power code		Nº inputs								
	Input	code	code	Insertion Loss	Atenuation (dB)			Dimensions (mm)			Weight (Kg)
					fo +/- 0.77MHz	fo +/-0.97 MHz	fo +/- 1.75 MHz	Length	Heigth	Width	
MY-CSA012	1 Kw	01	2	≤ 1 dB	≤ 1.8 dB	≥ 11 dB	≥ 44 dB	650	1100	500	175
MY-CSA022	1.5 Kw	02	2	≤ 0.9dB	≤ 1.5 dB	≥ 11 dB	≥ 44 dB	950	1100	650	215

DIRECTIONAL COMBINERS

MY-CDA

Technical Specification

Frequency	174 -230 MHz
VSWR	<1.15 : 1 (in one block)
Impedance	50 Ω
Isolation between inputs (with Filter in wide band input)	≥ 70 dB
Group Delay	< 700 ns
Number of inputs	2 to 5
Atenuation to Balanced Load	≥ 20 dB
Minimum freq. Spacing:	one block

Materials	Connectors in passived and silvering brass Pistons are available in silver-plated copper and stainless steel rods. Copper-Beryllium thermic treated, silverplated and passived. Cavities in brass.
Inputs connectors	EIA 1 5/8"
Output Connector	Up to 6 Kw EIA 1 5/8"
	Up to 24 Kw EIA 3 1/8"

MY-CDA	Power code		Nº inputs								
	Input Power	code	code	Insertion Loss in Narrow Band	Atenuation (dB)			Dimensions (mm)			Weight (Kg)
					fo +/- 0.77MHz	fo +/-0.97 MHz	fo +/- 1.75 MHz	Length	Heigth	Width	
MY-CDA002	1 Kw	00	2	≤ 1 dB	≤ 1.8 dB	≥ 11 dB	≥ 44 dB	900	1400	600	190
MY-CDA012	1.5 Kw	01	2	≤ 0.9dB	≤ 1.5 dB	≥ 11 dB	≥ 44 dB	1200	1400	750	230

Other Input/Output connector uppon request

Other Powers or adjacent blocks, contact factory

MOYANO

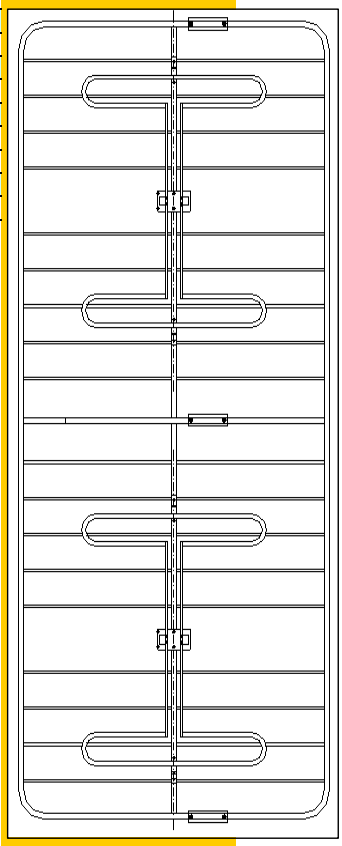
Horizontal Polarization HIGH GAIN PANEL

MY - BIII42DD

Technical Specification

Frequency	174 - 230 MHz
Polarization	Horizontal
H Beamwidth	65º
V Beamwidth	30º
Gain	12.5 dBi
VSWR	< 1.15 : 1 Broadband
Impedance	50 Ω
Power Handling & Conectors	2 Kω
Lateral lobe level	> 10 dB
Lightning Protection	DC Grounded

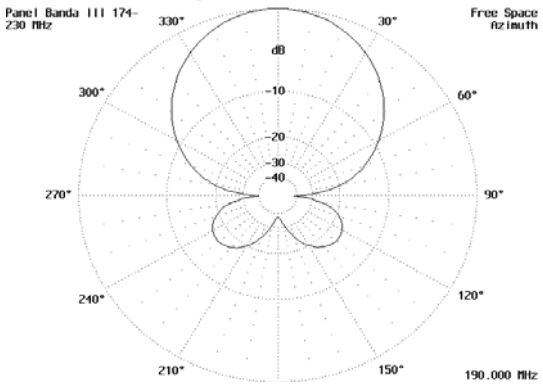
Length	2660	mm
Width	1200	mm
Height	400	mm
Weight	15	Kg
Mounting	To suit pole 42-76 mm ∅	
Wind Load	880/400N Front @ 160 Km/h	
Materials	Weatherproof aluminum & teflón	
Packing	1410x1265x110 mm	
Wind Survival	200 Km/h	



No. of Bays	Paneles per bay	Gain dBd Times (λ/2 reference) (1)		Weight Kg (With mounting hardware)	Antenna Height Mts (2)	Windload kN (@ 160 Km/h)
	2	7.5	5.6	94		2.2
	3	5.73	3.7	141		3.4
1	4	4.5	2.8	188	2.66	4
	2	10.5	11.2	188		4.4
	3	8.8	7.5	282		6.8
2	4	7.5	5.6	376	5.6	8
	2	12.3	16.8	282		6.6
	3	10.5	11.2	423		10.2
3	4	9.3	8.5	564	8.5	12
	2	11.5	22.5	376		8.8
	3	11.8	15	564		13.6
4	4	10.5	11.2	752	11.4	16
	2	14.5	28	470		11
	3	12.8	18.7	705		17
5	4	11.5	14	940	14.4	20
	2	15.3	33.6	564		13.2
	3	13.5	22.5	846		20.4
6	4	12.3	16.8	1128	17.3	24

(1) At mid band

(2) Distance between two panels edges as 260 mm



MOYANO

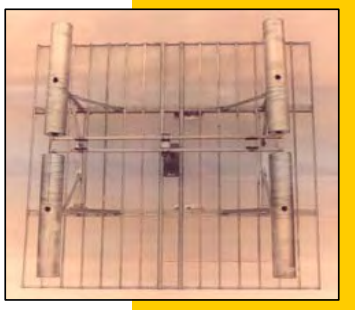
DIRECTIONAL PANEL HIGH GAIN

MY-BIII2D-G

Technical Specification

Frequency	174 - 230 MHz	
Polarization	Horizontal	Vertical
H Beamwidth	70º	60º
V Beamwidth	60º	70º
Gain	10 dBi	
VSWR	< 1.15 : 1 Broadband	
Impedance	50 Ω	
Power Handling	2 Kw / 5 Kw	
Connectors	DIN 7/16 / DIN 13/30	
Lightning Protection	DC Grounded	
Front to back ratio	> 18 dB	

Height	1240	mm
Width	1240	mm
Deep	574	mm
Weight	25	Kg
Mounting	To suit pole 42 - 48 mm Æ	
Wind Load	Front 65 Kg, Side 28 Kg @ 200 Km/h	
Materials	hot dip galvanized reflector and dipoles	
	plated connectors.	
	passive brass in feeding lines	
Ice protection	Radome Optional	
Temperature	-40ºC to +70ºC	



MY - 4D BIII PANEL

Technical Specification

Frequency	174 - 230 MHz	
Polarization	Vertical	
H Beamwidth	60º	
V Beamwidth	26º	
Gain	13,5 dBi	
VSWR	< 1.1 : 1 Broadband	
Impedance	50 Ω	
Power Handling	2 Kw / 5 Kw	
Connectors	DIN 7/16 / DIN 13/30	
Lightning Protection	DC Grounded	
Front to back ratio	> 18 dB	

Height	2840	mm
Width	1240	mm
Deep	515	mm
Weight	83	Kg
Mounting	To suit pole 75,5 mm ∅ (2 1/2")	
Wind Load	Front 120 Kg, Side 45 Kg @ 200 Km/h	
Materials	hot dip galvanized reflector and dipoles	
	plated connectors.	
	passive brass in feeding lines	
Ice protection	Radome Optional	
Temperature	-40ºC to +70ºC	

MY-4D BIII Panel

BAYS	FACES	GAIN (dBd)	WEIGHT (Kgs)	LENGHT (Mts)	POWER (Kw)	
					DIN 7/16	DIN 13/30
1	2	8.2	166	2.9	4	10
	3	6.7	249		6	15
	4	5.8	332		8	20
2	1	13.8	166	5.8	4	10
	2	11.2	332		8	20
	3	9.7	498		12	30
	4	8.8	664		16	40
4	1	16.8	332	11.6	8	20
	2	14.2	664		16	40
	3	12.5	996		24	60
	4	11.7	1328		32	80
6	1	18.5	498	17.4	12	30
	2	15.8	996		24	60
	3	14.3	1494		36	90
	4	13.4	1992		48	120
8	1	19.8	664	23.2	16	40
	2	17.2	1328		32	80
	3	15.7	1992		48	120
	4	14.8	2656		64	160

MOYANO

DIRECTIONAL PANEL — HIGH GAIN

MY-BIII2DD

Demountable panel. Ideal for stacking for any radiation pattern.

Technical Specification

Frequency	174 - 230 MHz	
Polarization	Horizontal	Vertical
H Beamwidth	65º	61º
V Beamwidth	61º	65º
Gain	9.6 dBi	
VSWR	< 1.15 : 1 Broadband	
Impedance	50 Ω	
Conector	DIN 7/16	
Maximum Power	1 Kw	
Lightning Protection	DC Grounded	
Front to Back Ratio	> 18 dB	

Length	450	mm
Width	1200	mm
Depth	1200	mm
Weight	7	Kg
Mounting	To suit pole 42 - 114 mm ∅	
Wind Load	Front 33 Kg, Side 12 Kg @ 160 Km/h	
Wind Velocity	200 Km/h	
Materials	Aluminium	
Temperature	-40ºC to +70ºC	

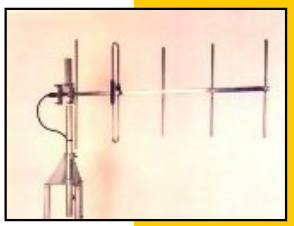
MY- BIII Yagi

Yagi BIII. Several Gains. Light and strong design

Technical Specification

Frequency	174 - 230 MHz
Polarization	Horizontal and Vertical
VSWR	< 1.3:1 fo +/-2%
	< 1.5:1 fo +/-10%
Impedance	50 Ω
Power Handling	100 w
Connectors	N (F)
Lightning Protection	DC Grounded
Front to Back Ratio	16 to 20 dB

Weight	2 to 10 Kg
Mounting	To suit pole 50 to 60 mm ∅
Wind Speed	200 Km/h
Materials	Stainless steel and teflon
Temperature	-40ºC to +70ºC

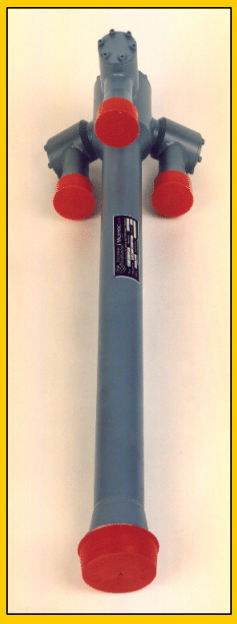


MY-1160

	Gain (dBi)	Beamwidth E (º)	Beamwidth H (º)	Lenght (mm)
MY-1160-011	5	75	170	395
MY-1160-111	7	65	105	654
MY-1160-211	8.5	60	80	1084
MY-1160-311	10	52	63	1422
MY-1160-411	11.5	45	56	1760
MY-1160-511	12	38	50	2098
MY-1160-711	13	31	45	2774

MOYANO

POWER SPLITTERS



MY-S3

Technical Specification

Frequency	174 - 230 MHz
VSWR	<1.05 : 1 Broadband
Impedance	50 Ω
Insertion loss	< 0,18 dB
Power	From 0.6 to 100 Kw
Input Connector	N / EIA / DIN
Output Connector	N / EIA / DIN
Distribution	Symmetrical phase & amplitude

Number of outputs	2 to 12
Materials	Electrolytic copper, plated and
	passived brass, teflon insulators
	Leak proof by silicone tore joints.
	Copper-beryllium connectors
	termical processed and silver plated
Typical Length	850 mm

Vertical Output for easier instalation.
Other Input/Output connector uppon request
Other powers, contact factory

MY-S3	Input connector code		Output connector code		Way number								Power (Kw)
	type	code	type	code	2	3	4	5	6	8	10	12	min/max
MY-S311x	N(F)	1	N(F)	1	x	x	x						0.6
MY-S322x	DIN 7/16 (F)	2	DIN 7/16	2	x	x	x		x				2
MY-S332x	EIA 7/8"	3	DIN 7/16	2			x	x	x				3
MY-S342x	DIN 13/30 (F)	4	DIN 7/16	2	x	x	x		x	x			4 / 5
MY-S344x		4	DIN 13/30	4	x								5
MY-S352x	EIA 1 5/8"	5	DIN 7/16	2	x	x	x	x	x	x	x	x	4 / 6
MY-S353x		5	EIA 7/8"	3	x		x						6
MY-S354x		5	DIN 13/30	4	x	x	x	x					6
MY-S355x		5	EIA 1 5/8'	5	x	x							6
MY-S372x	EIA 3 1/8"	7	DIN 7/16	2					x	x	x	x	12 / 25
MY-S373x		7	EIA 7/8"	3						x			24
MY-S374x		7	DIN 13/30	4			x	x	x	x	x		20 / 24
MY-S375x		7	EIA 1 5/8"	5	x	x	x	x	x				12 / 25
MY-S377x		7	EIA 3 1/8"	7	x								25
MY-S384x	EIA 4 1/2""	8	DIN 13/30	4						x			40 / 60
MY-S385x		8	EIA 1 5/8"	5			x						24 / 48
MY-S387x		8	EIA 3 1/8"	7	x								50 / 60
MY-S307x	EIA 6 1/8"	0	EIA 3 1/8'	7	x								100

CAVITY FILTERS

MY-F3

Technical Specification

Frequency	174 -230 MHz
VSWR	<1.1 : 1 in one TV-Channel (FCC or CCIR)
Impedance	50 Ω
Configuration	4 cavities
Maximum Power	10 Kw

Materials	Electrolytic copper, silver-plated and
	passived brass, teflon isolators,
	copper-berylllium connectors
	termical processed
	Cavities in brass
	Pistons in silver-plated brass and
	invar rods.

MY-F3	Power code		Input connector	Output connector	Insertion Loss (dB)	Dimensions (mm)			Weight (Kg)
	Power	code				Length	Heigth	Width	
MY-F3004	500 W	00	N(F)	N(F)	≤ 0.4 dB	350	250	50	3.5
MY-F3014	1 Kw	01	DIN 7/16	DIN 7/16	≤ 0.4 dB	600	600	120	30
MY-F3054	5 Kw	05	EIA 1 5/8"	EIA 1 5/8"	≤ 0.3 dB	800	620	200	70
MY-F3104	10 Kw	10	EIA 3 1/8"	EIA 3 1/8"	≤ 0.2 dB	1000	620	300	100

MOYANO

STARPOINT COMBINERS

MY-CS3

Technical Specification

Frequency	174 -230 MHz
VSWR	<1.1 : 1 in one TV-Channel (FCC or CCIR)
Impedance	50 Ω
Configuration	4 cavities
Isolation between inputs	≥ 40 dB
Number of inputs	2 to 3

Materials	Electrolytic copper, silver-plated and
	passived brass, teflon isolators,
	copper-berylllium connectors
	termical processed
	Cavities in brass
	Pistons in silver-plated brass and
	invar rods.
Output Connector	Up to 2 Kw DIN 7/16
	Up to 10 Kw EIA 1 5/8"
	Up to 30 Kw EIA 3 1/8"

MY-CS3	Power code				
	Input Power	code	Channel spacing minimum	Input connector	Insertion Loss
MY-CS300x	500 W	00	4 Channels	DIN 7/16	≤ 0.5 dB
MY-CS301x	1 Kw	01	4 Channels	EIA 1 5/8"	≤ 0.4 dB
MY-CS305x	5 Kw	05	4 Channels	EIA 1 5/8"	≤ 0.3 dB
MY-CS310x	10 Kw	10	4 Channels	EIA 3 1/8"	≤ 0.2 dB

DIRECTIONAL COMBINERS

MY-CD3

Technical Specification

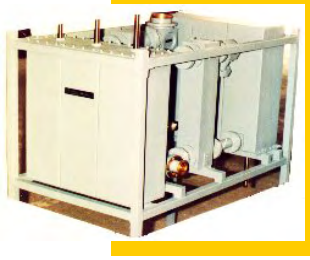
Frequency	174 - 230 MHz
VSWR	<1.1 : 1 in one TV-Channel (FCC or CCIR)
Impedance	50 Ω
Isolation between inputs (with Wide Band Filter)	≥ 40 dB
Atenuation to Balanced Load	≥ 20 dB
Number of inputs	2 to 4

Materials	Electrolytic copper, silver-plated and
	passived brass, teflon isolators,
	copper-berylllium connectors
	termical processed
	Cavities in brass
	Pistons in silver-plated brass and
	invar rods.
Output Connector	Up to 2 Kw DIN 7/16
	Up to 10 Kw EIA 1 5/8"
	Up to 30 Kw EIA 3 1/8"

MY-CS3	Power code					
	Input Power	code	Channel spacing minimum	Input connector	Insertion Loss in Narrow Band	Insertion Loss in Wide Band (without filter)
MY-CD300x	500 W	00	2 Channels	DIN 7/16	≤ 0.5 dB	≤ 0.1 dB
MY-CD301x	1 Kw	01	2 Channels	EIA 1 5/8"	≤ 0.4 dB	≤ 0.1 dB
MY-CD305x	5 Kw	05	2 Channels	EIA 1 5/8"	≤ 0.3 dB	≤ 0.1 dB
MY-CD310x	10 Kw	10	2 Channels	EIA 3 1/8"	≤ 0.2 dB	≤ 0.1 dB

Other Input/Output connector uppon request

Other Powers, contact factory



MOYANO

DIRECTIONAL PANEL HIGH GAIN

MY-PDP500

Panel 4 Printed Dipoles. Ideal for stacking for any radiation pattern. 5 Channels in Vertical.

Technical Specification

Frequency	470 - 862 MHz	
Polarization	Horizontal	
H Beamwidth	60º	
V Beamwidth	24º	
Gain	13,5 dBi	
VSWR	< 1.3 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	N (F)	100 w
	DIN 7/16 (F)	500 w
Crosspolar discrimination	>32 dB	
Lightning Protection	DC Grounded	
Front to Back Ratio	> 22 dB	

Length	1000	mm
Width	500	mm
Heigth	220	mm
Weight	15	Kg
Mounting	To suit pole 48 mm ∅	
Wind Load	55 Kg Front @ 160 Km/h	
Wind Speed	200 Km/h	
Materials	Dipoles in printed circuit. Feeder lines	
	in passived brass and silvery	
Temperature	-40ºC to +70ºC	
Radome	PRFV in Red	

MY-PDL1000 / PDL2500

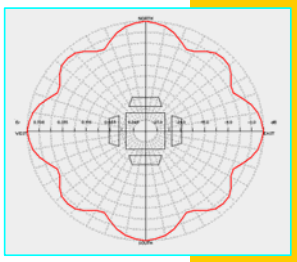
High Power:2,5 Kw per panel. Ideal for stacking for any radiation pattern. 7 Channels in Vertical.

Technical Specification

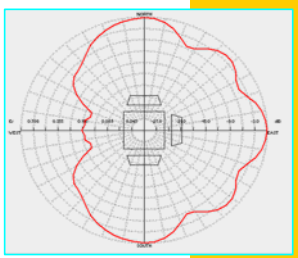
Frequency	470 - 862 MHz	
Polarization	Lineal (Hor. or Vert.)	
H Beamwidth	60º	(-3 dB)
V Beamwidth	24º	(-3 dB)
Gain	13,5 dBi	
VSWR	< 1.15 : 1 Broadband	
Impedance	50 Ω	
Power Handling & Conectors		
	DIN 7/16 (F)	1Kw
	DIN 13/30 8F)	2,5 Kw
Crosspolar discrimination	>32 dB	
Lightning Protection	DC Grounded	
Front to Back Ratio	> 22 dB	

Length	1000	mm
Width	500	mm
Heigth	220	mm
Weight	22	Kg
Mounting	To suit pole 48 mm ∅	
Wind Load	55 Kg Front @ 160 Km/h	
Wind Speed	200 Km/h	
Materials	Dipoles in brass. Feeder lines	
	in passived brass and silvery	
Temperature	-40ºC to +70ºC	
Radome	PRFV in Red	

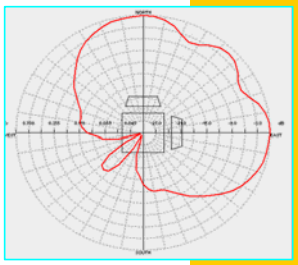
BAYS	FACES	GAIN (dBd) @ 650MHz	PATTERN	HEIGHT m
4	4	11.2	OMNI	4
	3	12.5	WIDE CARDIOD	4
	2	13.9	EIGHT	4
	2	14.3	NARROW	4
	1	16.9	VERY NARROW	4
6	4	12.9	OMNI	6
	3	14.2	WIDE CARDIOD	6
	2	15.4	EIGHT	6
	2	16	NARROW	6
	1	19.1	VERY NARROW	6
8	4	14.1	OMNI	8
	3	15.4	WIDE CARDIOD	8
	2	16.5	EIGHT	8
	2	17.2	NARROW	8
	1	20.3	VERY NARROW	8
10	4	15.1	OMNI	10
	3	16.4	WIDE CARDIOD	10
	2	17.5	EIGHT	10
	2	18.2	NARROW	10
	1	21.2	VERY NARROW	10
12	4	15.9	OMNI	12
	3	17.2	WIDE CARDIOD	12
	2	18.3	EIGHT	12
	2	19	NARROW	12
	1	22	VERY NARROW	12



OMNI



W. CARDIOD



NARROW

Attenuation of connecting cables not taken into account
Gains calculated @ 650MHz and may vay across the UHF band

MOYANO

YAGI - UHF

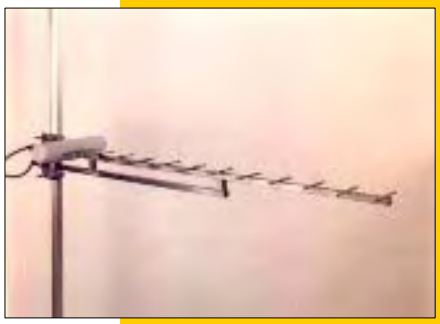
MY- YINX-UHF

Yagi UHF. Several Gains. Light and strong design.

Technical Specification

Frequency	470 - 862 MHz
Polarization	Lineal (Vert. or Hor.)
H Beamwidth	34º
V Beamwidth	37º
Gain	14 +/- 0,5 dBi
VSWR	< 1.5 : 1 (in sub-bands 56 MHz)
Impedance	50 Ω (or 75 Ω upon request)
Power Handling	100 w
Connectors	N (F)
Lightning Protection	DC Grounded
Front to Back Ratio	>20dB

Weight	10	Kg
Mounting	To suit pole 50 to 60 mm∅	
Wind Speed	200 Km/h	
Materials	Stainless steel and teflon	
	Radome polyester reinforced with	
	fibre glass	
Temperature	-40ºC to +70ºC	



MY-YINX-UHF			
Type	**Channels**	**Frequency (MHz)**	**Lenght (mm)**
MY-YINX-13.1.1A	21-27	470 - 526	2344
MY-YINX-13.1.1B	28-34	526 - 582	2124
MY-YINX-13.1.1C	35-41	582 - 638	1947
MY-YINX-13.1.1D	42-48	638 - 694	1803
MY-YINX-13.1.1E	49-55	694 - 750	1674
MY-YINX-13.1.1F	56-62	750 - 806	1566
MY-YINX-13.1.1G	63-69	806 - 862	1500

MOYANO

POWER SPLITTERS

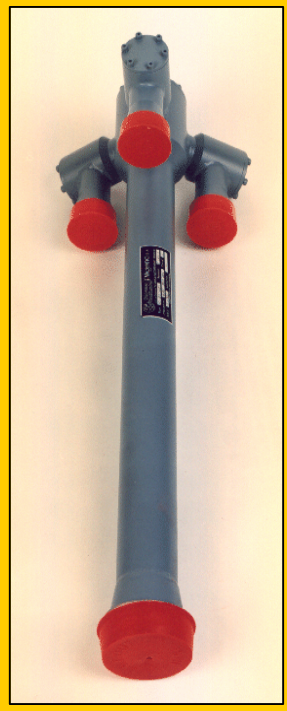
MY-S4

Vertical Output for easier instalation.

Technical Specification

Frequency	470 - 862 MHz
VSWR	< 1.05 : 1 Broadband
Impedance	50 Ω
Insertion loss	< 0,18 dB
Power	From 0.1 to 60 Kw
Input Connector	N / EIA / DIN
Output Connector	N / EIA / DIN
Distribution	Symmetrical phase & amplitude

Number of outputs	2 to 8
Materials	Electrolytic copper, plated and
	passived brass, teflon insulators
	Leak proof by silicone tore joints.
	Copper-beryllium connectors
	termical processed and silver plated
Typical Length	850 mm



MY-S4	Input connector code		Output connector code		Way number								Power (Kw)
	type	code	type	code	2	3	4	5	6	8	10	12	min/max
MY-S411x	N(F)	1	N(F)	1	x	x	x						0.1
MY-S422x	DIN 7/16 (F)	2	DIN 7/16	2	x	x	x		x				1
MY-S432x	EIA 7/8"	3	DIN 7/16	2			x	x	x				2
MY-S442x	DIN 13/30 (F)	4	DIN 7/16	2	x	x	x		x				2 / 3
MY-S444x		4	DIN 13/30	4	x								3
MY-S452x	EIA 1 5/8"	5	DIN 7/16	2	x	x	x	x	x				2 / 5
MY-S453x		5	EIA 7/8"	3	x		x						2 / 4
MY-S454x		5	DIN 13/30	4	x	x	x	x					2 / 5
MY-S455x		5	EIA 1 5/8"	5	x	x							5
MY-S473x	EIA 3 1/8"	7	EIA 7/8"	3						x			16
MY-S474x		7	DIN 13/30	4			x	x	x	x			12 / 18
MY-S475x		7	EIA 1 5/8"	5	x	x	x	x	x				10 / 18
MY-S477x		7	EIA 3 1/8"	7	x								12 / 18
MY-S484x	EIA 4 1/2"	8	DIN 13/30	4						x			24
MY-S485x		8	EIA 1 5/8"	5			x		x				20 / 30
MY-S487x		8	EIA 3 1/8"	7	x								30
MY-S407x	EIA 6 1/8"	0	EIA 4 1/2"	7	x								60

MOYANO

CAVITY FILTERS

MY-F4

Technical Specification

Frequency	470 - 862 MHz
VSWR	<1.1 : 1 in one TV-Channel (FCC or CCIR)
Impedance	50 Ω
Configuration	3 cavities
Maximum Power	10 Kw

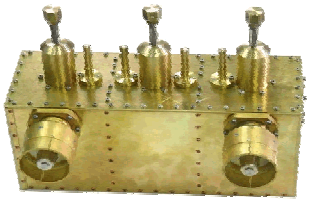
Materials	Silver-plated and passived brass,
	cupper-berylllium connectors termical
	processed and teflon isolators
	Pistons in silver-plated brass and
	invar rods.
	Cavities in brass

MY-F4	Power code					Frequency Spacing (MHz)		Dimensions (mm)			
	Power	code	Input connector	Output Connector	Insertion Loss (dB)	Atenuation ≥ 20 dB	Atenuation ≥ 35 dB	Length	Heigth	Width	Weight (Kg)
MY-F4003	500 W	00	DIN 7/16	DIN 7/16	≤ 1 dB	+/- 20 MHz	+/- 30 MHz	175	120	40	1.5
MY-F4023	2 Kw	02	EIA 1 5/8"	EIA 1 5/8"	≤ 0.4 dB	+/- 20 MHz	+/- 35 MHz	344	430	118	11.5
MY-F4053	5 Kw	05	EIA 1 5/8"	EIA 1 5/8"	≤ 0.3 dB	+/- 20 MHz	+/- 35 MHz	491	400	167	18
MY-F4103	10 Kw	10	EIA 3 1/8"	EIA 3 1/8"	≤ 0.2 dB	+/- 20 MHz	+/- 35 MHz	578	440	196	23.5

Vertical Output for easier instalation.

Other Input/Output connector uppon request

Other powers, contact factory



MOYANO

STARPOINT COMBINERS

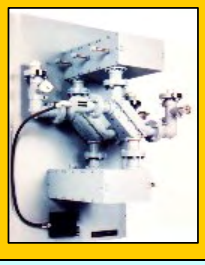
MY-CS4

Technical Specification

Frequency	470 - 862 MHz
VSWR	< 1.1 : 1 (in the input for one Channel)
Impedance	50 Ω
Isolation between inputs	≥ 40 dB
Number of inputs	2 to 4

Materials	Connectors in passived and silvering brass	
	Pistons in silver-plated brass and invar rods.	
	Copper-Beryllium thermic treated, silver-plated and passived. Cavities in brass.	
Output Connector	Up to 1 Kw	DIN 7/16
	Up to 6 Kw	EIA 1 5/8"
	Up to 16 Kw	EIA 3 1/8"
	Up to 28 Kw	EIA 4 1/2"

MY-CS4	Power code				
	Input Power	code	Channel spacing minimum	Input connector	Insertion Loss
MY-CS400x	200 W	00	4 Guard	DIN 7/16	≤ 1 dB
MY-CS402x	2 Kw	02	4 Guard	EIA 1 5/8"	≤ 0.4 dB
MY-CS405x	5 Kw	05	4 Guard	EIA 1 5/8"	≤ 0.3 dB
MY-CS410x	10 Kw	10	4 Guard	EIA 3 1/8"	≤ 0.2 dB



DIRECTIONAL COMBINERS

MY-CD4

Technical Specification

Frequency	470 - 862 MHz
VSWR	< 1.1 : 1 (in the input for one Channel)
Impedance	50 Ω
Isolation between inputs (with filter in wide band input)	≥ 40 dB
Number of inputs	2 to 5
Atenuation to Balanced Load	≥ 20 dB

Materials	Connectors in passived and silvering brass	
	Pistons in silver-plated brass and invar rods.	
	Copper-Beryllium thermic treated, silver-plated and passived. Cavities in brass.	
Output Connector	Up to 1 Kw	DIN 7/16
	Up to 5 Kw	EIA 1 5/8"
	Up to 16 Kw	EIA 3 1/8"
	Up to 28 Kw	EIA 4 1/2"

MY-CD4	Power code					
	Input Power	code	Channel spacing minimum	Input connector	Insertion Loss in Narrow band	Insertion Loss in Wide Band (without filter)
MY-CD400x	200 W	00	2 Guard	DIN 7/16	≤ 1 dB	≤ 0.1 dB
MY-CD402x	2 Kw	02	2 Guard	EIA 1 5/8"	≤ 0.4 dB	≤ 0.1 dB
MY-CD405x	5 Kw	05	2 Guard	EIA 1 5/8"	≤ 0.3 dB	≤ 0.1 dB
MY-CD410x	10 Kw	10	2 Guard	EIA 3 1/8"	≤ 0.2 dB	≤ 0.1 dB
MY-CD420x	20 Kw	20	2 Guard	EIA 4 1/2"	≤ 0.2 dB	≤ 0.1 dB

Other Input/Output connector uppon request
Other Powers, contact factory

MOYANO

Dragados Sistemas, S.A.

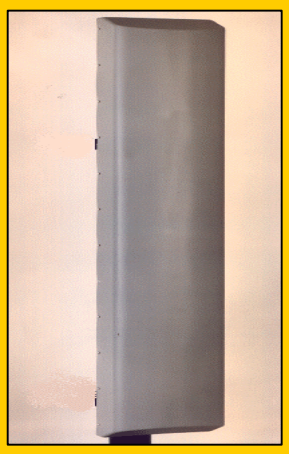
DIRECTIONAL PANEL HIGH GAIN

MY - DVB PANEL

Channels between 57-69. Ideal for stacking for any radiation pattern.

Technical Specification

Frequency	758 - 862 MHz		Length	140	mm
Polarization	Horizontal		Width	350	mm
H Beamwidth	60º		Heigth	700	mm
V Beamwidth	30º		Weight	11	Kg
Gain	13 dBi		Mounting	To suit pole 42-48 mm ∅	
VSWR	< 1.15 : 1 Broadband		Wind Load	Front 33 Kg, Side12 Kg @ 200 Km/h	
Impedance	50 Ω		Materials	Hot dip steel reflector, fibre glass,	
Power Handling & Conectors				plated connectors. Plated and passived	
	DIN 7/16 (F)	1Kw		brass in dipoles and feeder lines	
	DIN 13/30 (F)	2,5 Kw	Temperature	-40ºC to +60ºC	
Front to Back Ratio	> 20 dB		Radome	PRFV in grey	
Lightning Protection	DC Grounded				



MY-DVB PANEL

BAYS	FACES	GAIN (dBd)	WEIGHT (Kgs)	LENGHT (Mts)	POWER (Kw) DIN 7/16	POWER (Kw) DIN 13/30
1	2	7.8	10	0.7	2	5
	3	6.1	15		3	7.5
	4	4.8	20		4	10
2	1	13.8	10	1.45	2	5
	2	10.8	20		4	10
	3	9.1	30		6	15
	4	7.8	40		8	20
4	1	16.8	20	2.95	4	10
	2	13.8	40		8	20
	3	12.1	60		12	30
	4	10.8	80		16	40
6	1	18.6	30	4.45	6	15
	2	15.6	60		12	30
	3	13.8	90		18	45
	4	12.5	120		24	60
8	1	19.8	40	5.95	8	20
	2	16.8	80		16	40
	3	15.1	120		24	60
	4	13.8	160		32	80

MOYANO

POWER SPLITTERS

MY-S4 DVB

Vertical Output for easier instalation.

Technical Specification

Frequency	758 - 862 MHz
VSWR	< 1.05 : 1 Broadband
Impedance	50 Ω
Insertion loss	< 0,18 dB
Power	From 0.6 to 80 Kw
Input Connector	N / EIA / DIN
Output Connector	N / EIA / DIN
Distribution	Symmetrical phase & amplitude

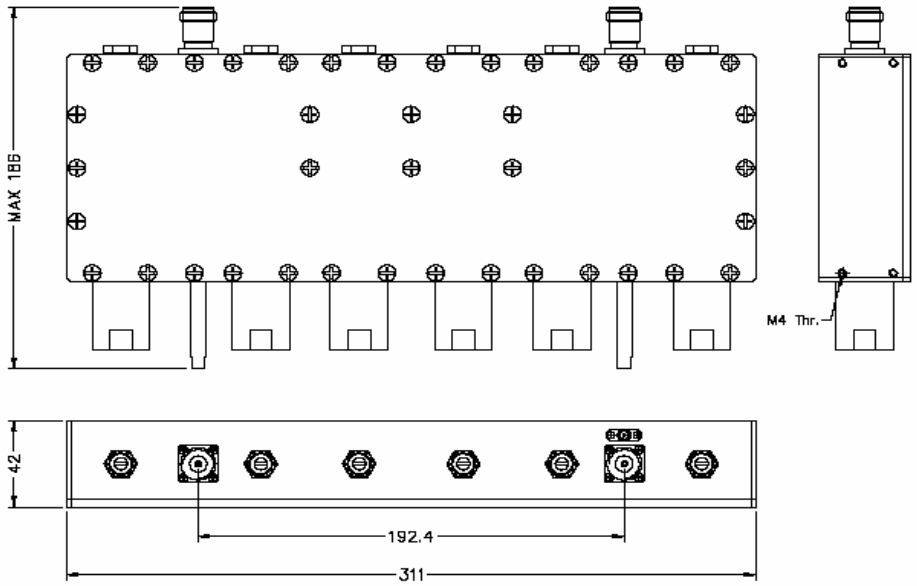
Number of outputs	2 to 8
Materials	Electrolytic cupper, plated and
	passived brass, teflon isolators
	Leak proof by silicone tore joints.
	Cupper-beryllium connectors
	termical processed and silver plated
Typical Length	300 mm

MY-S4	Input connector code		Output connector code		Way number								Power (Kw)
	type	code	type	code	2	3	4	5	6	8	10	12	min/max
MY-S422x DVB	DIN 7/16 (F)	2	DIN 7/16	2	x	x	x		x				1
MY-S432x DVB	EIA 7/8"	3	DIN 7/16	2	x	x	x						1.5
MY-S442x DVB	DIN 13/30 (F)	4	DIN 7/16	2	x	x	x		x				2
MY-S452x DVB	EIA 1 5/8"	5	DIN 7/16	2	x	x	x	x	x				2 / 4
MY-S553x DVB		5	EIA 7/8"	3	x	x	x						3 / 4
MY-S554x DVB		5	DIN 13/30	4	x	x	x	x					4
MY-S555x DVB		5	EIA 1 5/8"	5	x								4
MY-S572x DVB	EIA 3 1/8"	7	DIN 7/16	2					x	x			6 / 8
MY-S573x DVB		7	EIA 7/8"	3					x	x			10
MY-S575x DVB		7	EIA 1 5/8"	5	x	x	x						8 / 10
MY-S585x DVB	EIA 4 1/2"	8	EIA 1 5/8"	5			x						16
MY-S587x DVB		8	EIA 3 1/8"	7	x								20

UHF DVB BANDPASS FILTER 80W / 4 POLES+ 2 NOTCH

MYF4P2NK08

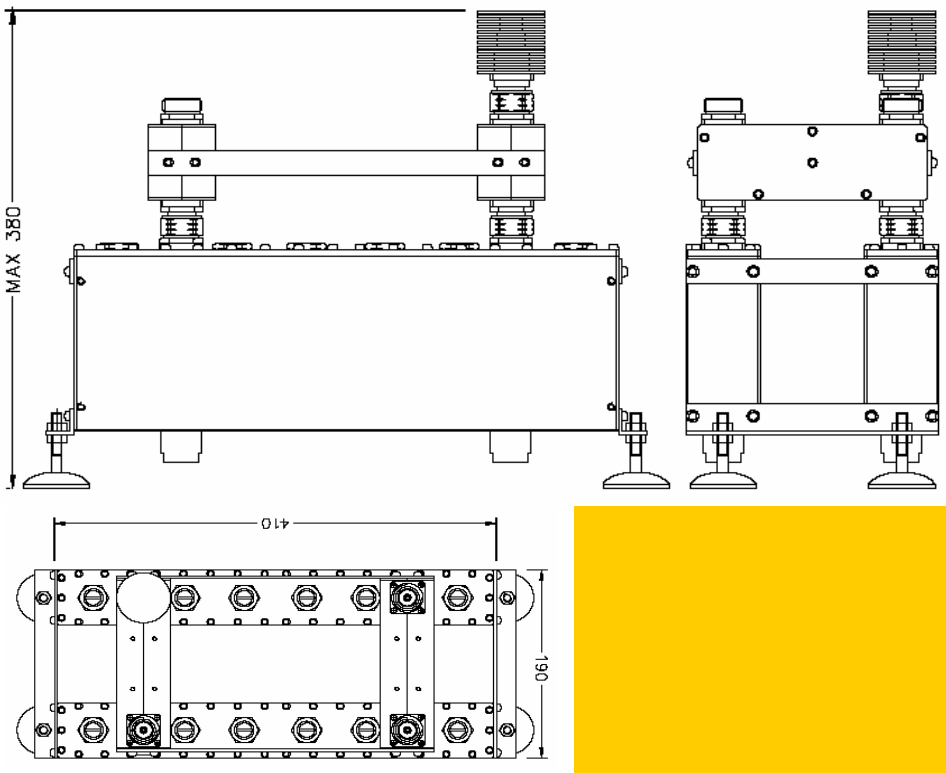
Technical Specifications	
Frequency range	470 ÷ 862 MHz
power	80w
Impedance	50 Ω
Insertion loss	< 1.00 dB @ 858 MHz < 0.80 dB @ 474 MHz
Connector	N (F)
Return loss	< -24 dB
Selectivity	< 1.8 dB @ ± 3.8 MHz > 15 dB @ ± 6.0 MHz > 30 dB @ ± 12 MHz
Bandwidth	8 MHz DVB-T standard
Group delay	< 200 ns
Weight	1.8 Kg
Colour	Aluminium
Temperature	-10°C to +50°C
stability	< 6 KHz/K



DVB-DIRECTIONAL COMBINERS

MYC4P2N1K5

Technical Specifications	MYC4P2N1K5
Frequency range	470 ÷ 862 MHz
Max total power	1.5 kW
NB Input power	400 W
Impedance	50 Ω
Insertion loss NB	< 0.83 dB @ 858MHz < 0.71 dB @ 474 MHz
Insertion loss WB	<0.1 dB
Connectors	DIN 7/16 (F) EIA 1 5/8" also available
Return loss	> 24 dB
Min spacing	1 guard channel
Decoupling	> 30 dB
Bandwidth	standard
Group delay	< 200 ns
Weight	12 Kg
Colour	Aluminium
Temperature	-10°C to +50°C



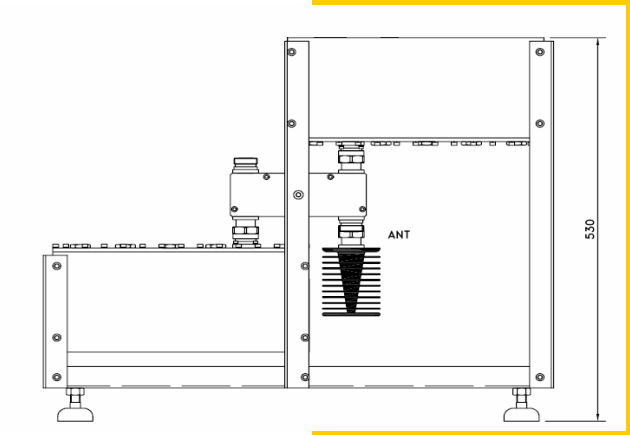
MOYANO

UHF DVB COMBINER CRITICAL-MASK RESPONSE

MYC8P2N1K5

Technical Specifications

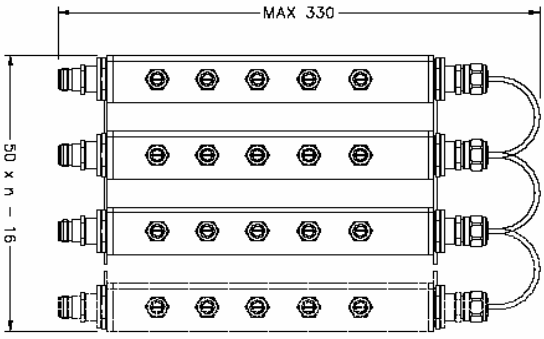
Frequency range	470 ÷ 860 MHz		
Max total power	1.5 kW		
NB Input power	400 W		
Impedance	50 Ω		
Insertion loss	**Fo (MHz)**	@474 MHz	@858 MHz
Passband filters	**0**	< 0.7 dB	< 1.10 dB
	± 3.8	< 1.6 dB	< 2.40 dB
	± 4.2	< 8.0 dB	< 8.00 dB
	± 6.0	< 40.0 dB	< 40.0 dB
	± 12.0	< 60.0 dB	< 60.0 dB
Insertion loss WB	< 0.1 dB		
Connectors	DIN 7/16 (F) EIA 1 5/8" also available		
Return loss	> 24 dB		
DVD mask	Critical. For adjacent channels		
Decoupling	> 35 dB		

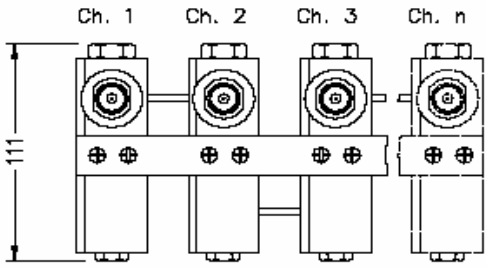


DVB COMBILINE 200W / 5POLES MODULAR MULTIPLEXER

MYC4P2N1K5

Technical Specifications	**MYCL5PK2-n**
Frequency range	470 ÷ 862 MHz
Max total power	200w
Max total input power	50w / each channel
Impedance	50 Ω
Insertion loss	< 1.3 + 0.05 x n dB
Max. inputs	10 any channel combination
Connector	N(F)
Return loss	> 24 dB
Selectivity	> 8 dB @ +/- 6 MHz > 35 dB @ +/-12 MHz
Bandwidth	standard
Group delay	< 80 ns
Min, spacing	1 guard channel
Peso	1.8 Kg x n
Colour	Aluminium
temperature	-10°C to +50°C



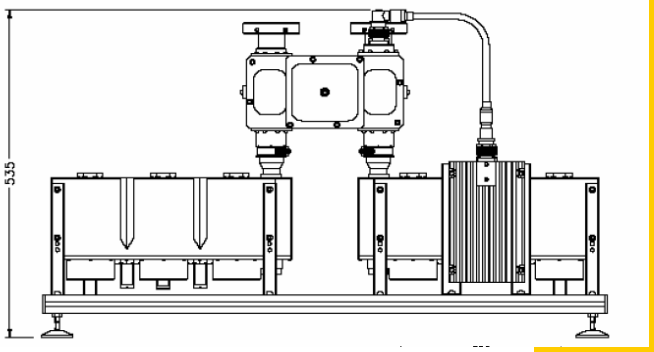


UHF DVB COMBINER 6 kW BRIDGE MODULAR MULTIPLEXER

MYC6P0N6K

Technical Specifications

Frequency range	470 ÷ 862 MHz
Max total power	6 kW
NB Input power	1.6 W
Impedance	50 Ω
Insertion loss NB	< 0.40 dB @ 858MHz < 0.34 dB @ 474 MHz
Insertion loss WB	<0.05 dB
Connectors	EIA 1 5/8"
Return loss	> 24 dB
Min spacing	1 guard channel
Decoupling	> 30 dB
Bandwidth	8 MHz DVB-T
Group delay	< 200 ns
Weight	24 Kg
Colour	Aluminium

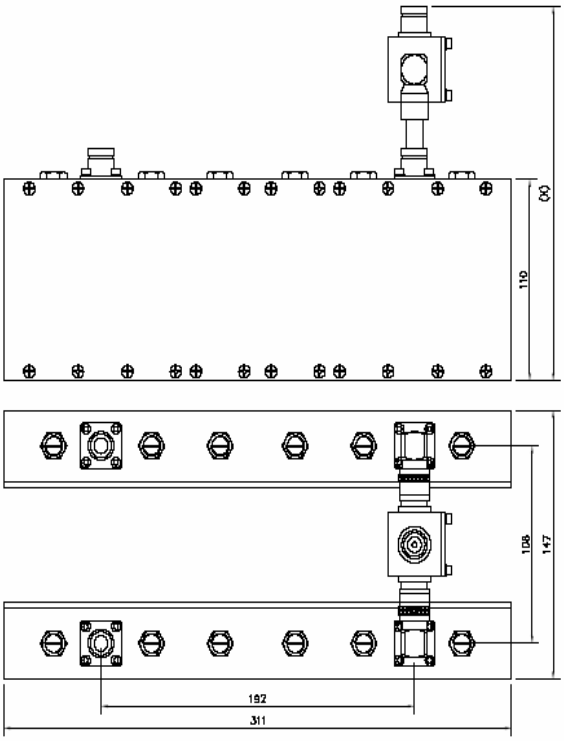


UHF DVB COMBINER 80W MODULAR STARPOINT

MYS4P2NK08

Technical Specifications

Frequency range	470 ÷ 862 MHz
Max input power	80w per channel DVB
Impedance	50 Ω
Insertion loss	< 1.00 dB @ 858 MHz < 0.80 dB @ 474 MHz
Max. inputs	5
Connectors	N(F)
Return loss	< -24 dB
Selectivity	> 15 dB @ ± 6 MHz > 30 dB @ ± 12 MHz
Bandwidth	standard
Group delay	< 200 ns
Min spacing	3 guard channel
Peso	1.8 Kg x n
Colour	Aluminium
temperature	-10°C to +50°C



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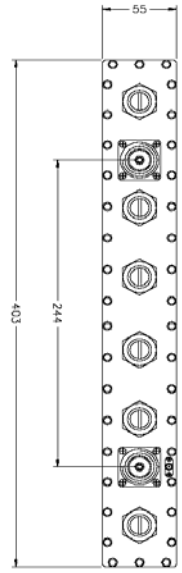
UHF DVB BANDPASS FILTER 200W / 6 POLES

MYF4P2NK2

Technical Specifications

Frequency range	470 ÷ 862 MHz
Max input power	200w
Impedance	50 Ω
Insertion loss	< 0.80 dB @ 858 MHz < 0.68 dB @ 474 MHz
Connector	DIN 7/16 (F)
Return loss	< -24 dB
Selectivity	< 1.5 dB @ ± 3.8 MHz < 16 dB @ ± 6.0 MHz < 35 dB @ ± 12 MHz
Bandwidth	8 MHz DVB-T standard
Group delay	< 200 ns
Weight	5 Kg
Colour	Aluminium
temperature	-10ºC to +50ºC

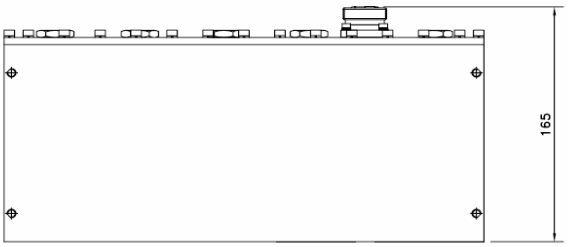


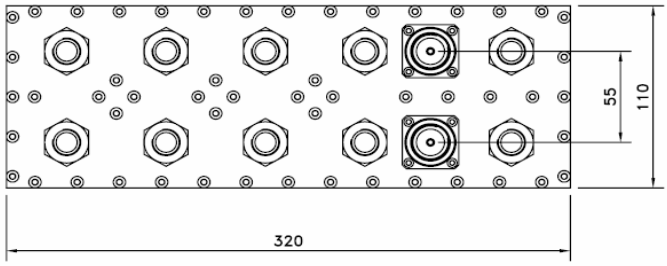
DVB BANDPASS FILTER 300W / 10 POLES CRITICAL-MASK

MYF8P2NK3

Technical Specifications

Frequency range	470 ÷ 862 MHz		
Max input power	300w		
Impedance	50 Ω		
Connector	2 x DIN 7/16 (F)		
Return loss	< -24 dB		
Insertion loss	fo (MHz)	@474 MHz	@858 MHz
	0	< 0.7 dB	< 1.10 dB
	± 3.8	< 1.6 dB	< 2.40 dB
	± 4.2	< 8.0 dB	< 8.00 dB
	± 6.0	< 40.0 dB	< 40.0 dB
Bandwidth	8 MHz DVB-T standard		
Group delay	< 350 ns		
Weight	12 Kg		
Colour	Aluminium		
Operating stability	-10ºC to +50ºC		
	< 4 KHz/K		



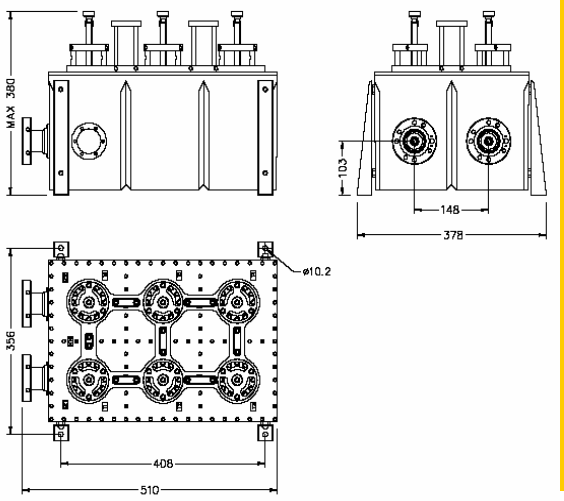


DVB UHF DVB BANDPASS FILTER 3kW / 6 POLES

MYF6P0N3K

Technical Specifications

Frequency range	470 ÷ 862 MHz	Selectivity	> 12 dB @ ± 4.2 MHz > 25 dB @ ± 6.0 MHz > 35 dB @ ± 12 MHz
Max input power	3 Kw DVB	Bandwidth	8 MHz DVB-T standard
Impedance	50 Ω	Group delay	< 350 ns
Insertion loss	< 0.32 dB @ 858 MHz < 0.24 dB @ 474 MHz < 1.5 dB @ ± 3.8 MHz	Weight	33 Kg
Connector	EIA 1 5/8"	Colour	Aluminium
Return loss	< -22 dB	Operating temperature	-10ºC to +50ºC
Temperature stability	< 2 KHz/K		



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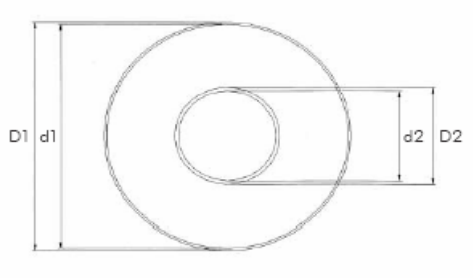
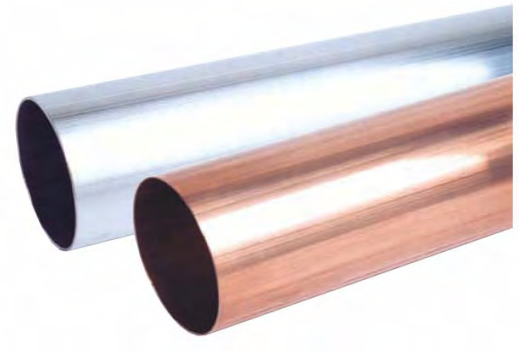
RIGID LINE

ACCESORIES





Type of line	EIA 1 5/8"		EIA 3 1/8"		DIN 43/98		EIA 4 1/2"		EIA 6 1/8"		DIN 100/230	
Inner material	Low-loss copper		Low-loss copper		Low-loss copper		Low-loss copper		Low-loss copper		Low-loss copper	
Outer material	Copper		Copper		Copper		Copper		Copper		Aluminium	
Impedance	50		50		50		50		50		50	
D1 (mm/in)	41.28	1.63	79.38	3.13	100	3.94	107	4.21	155.6	6.13	235	9.25
d1	38.79	1.53	76.88	3.03	98	3.86	104	4.09	151.92	5.98	230	9.06
D2	16.87	0.66	33.4	1.31	42.55	1.68	45	1.77	66	2.60	100	3.94
d2	14.93	0.59	31.27	1.23	40	1.57	43	1.69	64.1	2.52	98	3.86
Frec. range(GHz)	2		1		0.9		0.8		0.6		0.4	
Velocity (%)	99.8		99.8		99.8		99.8		99.8		99.8	
Average power / Attenuation	Kw	dB/100m	Kw	dB/100m	Kw	dB/100m	Kw	dB/100m	Kw	dB/100m	Kw	dB/100m
@100 MHz *	16	0.70	45	0.35	70	0.27	80	0.26	154	0.20	340	0.10
@200 MHz	11	1.00	32	0.50	54	0.40	56	0.37	109	0.25	240	0.15
@400 MHz	8	1.50	22	0.70	34	0.50	40	0.50	77	0.36	180	0.20
@600 MHz	6	1.70	18	0.90	28	0.70	32	0.60	63	0.44	-	-
@800 MHz	5	2.00	16	1.00	24	0.80	28	0.70	54	0.51	-	-
@1000MHz	5	2.20	14	1.10	21	0.90	25	0.90	ND	-	-	-
Peak Voltage (Kv)@ 60 Hz	10		20		25		30		40		42	
Peak Power (Kw)@ RF **	198		715		1133		1271		2620		5828	
Weight 6 m (Kg)	12		25		45		50		65		110	

*** ROE = 1 @ 80 ºC inner Tª**

$$E_p := 3.17\cdot 10^{4}\cdot d\cdot\delta\cdot\log\left(\frac{D}{d}\right)\cdot\left(1+\frac{0.273}{\sqrt{d\cdot\delta}}\right) \qquad E_{rf} := \frac{0.7\cdot E_p}{SF\sqrt{2}} \qquad P_{pk} := \frac{\left(E_{rf}\right)^2}{Z_o}$$

Pk=Peak power D=Outer conductor (in) δ=Air density (1 standard atmosphere)
Z0= Line Impedance SF=1.4 to 2 d=Inner conductor (in)
Ep= Peak voltage (V)

** For 760 mm/Hg and T=23ºC

Accessories / Accesorios

Rigid Line /
Línea Rígida

50 Ohm Rigid coaxial transmission line /
Línea Rígida 50 Ohm (5002)
Brass swivel flange (with solder ring)/
Brida móvil soldada
Field Flange unpresurized (camp-type) /
Brida móvil corcelete (5005)
Field Flange pressurized (soft solder type) /
Brida fija soldada (5003)
"O" ring, Silicone /
Arandela de silicona
Hardware set for flanges /
Juego de Tornillería completo
90 degrees Elbows unflanged (with clamps) /
Codos sin brida (5004)
Straight adaptor (with inners inside) /
Empalme (5006)
Anchor insulator connector inner /
Bellota (5003)
Step Reducer 1st side Male to Type N(F)/
Reducción de Macho a N(H)
Step Reducer 1st side M to Type 7/16 DIN (F)/
Reducción de Macho a DIN 7/16 (H)
Fixed hanger /
Punto de Subjeción
Through wall anchor plate /
Pasamuros

Unit	7/16	7/8"	1" 5/8	13/30	3" 1/8	43/98	4"1/2	6"1/8
m			LR-02-4		LR-02-7	LR-02-8	LR-02-9	LR-02-10
Unit		LR-038-2	LR-038-4		LR-038-7	LR-038-8	LR-038-9	LR-038-10
Unit			LR-05-4		LR-05-7	LR-05-8	LR-05-9	LR-05-10
Unit		LR-036-2	LR-036-4		LR-036-7	LR-036-8	LR-036-9	LR-036-10
Unit	T-92-3	T-92-2	T-92-4	T-92-6	T-92-7	T-92-8	T92-9	T92-10
Set		LR-038-2T	LR-038-4T		LR-038-7T	LR-038-8T	LR-038-9T	LR-038-10T
Unit			LR-04-4		LR-04-7	LR-04-8	LR-04-9	LR-04-10
Unit			LR-06-4		LR-06-7	LR-06-8	LR-06-9	LR-06-10
Unit		LR-032-2	LR-032-4		LR-032-7	LR-032-8	LR-032-9	LR-032-10
Unit	TR-1104	TR-3004	TR-3104	TR-1704	TR-3204	TR-2504		
Unit		TR-3010	TR-3110	TR-1710				
Unit			T93-4		T93-7	T93-8	T93-9	T93-10
Unit			T70-4		T70-7	T70-8	T70-9	T70-10

Coaxial cable /
Cable coaxial

	1/2" FOAM	7/8" FOAM	7/8" AIRE	1"5/8 FOAM	1"5/8 AIRE	3"1/8 AIRE	4" AIRE
Cable code / Código de Cable	CBL-61	CBL-67	CBL-68	CBL-75	CBL-76	CBL-80	CBL-81
Grounding kit / Kit de tierra	T72-61	T72-67	T72-68	T72-75	T72-76	T72-80	T72-81
Fixed hanger / Punto de Subjeción	T93-61	T93-67	T93-68	T93-75	T93-76	T93-80	T93-81
Through Wall anchor plate / Pasamuros	T70-61	T70-67	T70-68	T70-75	T70-76	T70-80	T70-81

Connector /
Conector para Cable(5001)

N (M)	CXC-0561	CXC-0567	CXC-0568				
N (F)	CXC- 0461	CXC-0467	CXC-0468				
7/16 (M) DIN	CXC-1161	CXC- 1167	CXC-1168				
7/8" EIA	CXC-1261	CXC-1267	CXC-1268				
13/30 (M) DIN		CXC-1767	CXC-1768	CXC-1775	CXC-1776		
1" 5/8 EIA		CXC-1967	CXC-1968	CXC-1975	CXC-1976		
3"1/8 EIA						CXC-2280	CXC-2281
43/98 DIN						CXC-2580	CXC-2581

Also connector for Air Cables with valve for pressurization. Add "-V" option to code.
Disponibles Conectores para cables con aire con válvula de presurización. Añadir "-V" al código

Adapters /
Transiciones (5009)

Plate type Step Reducer		
1st side (half-inner)	2st Side	Code
3"1/8	1"5/8	TR-3231
1"5/8	13/30(F)	TR-3116
1"5/8	13/30(M)	TR-3117
1"5/8	7/8"	TR-3130
1"5/8	7/16(M)	TR-3111
7/8"	7/16(M)	TR-3011

Step Reducer		
1st side	2st Side	Code
6"1/8 EIA	3"1/8 EIA	TR-2922
13/30 (F)	N(F)	TR-1604
13/30 (F)	7/16 (F)	TR-1610
1"5/8 EIA	7/16 (M)	TR-1911
7/16 (F)	N(F)	TR-1004

Directional couplers for measurement/
Sondas (4003)

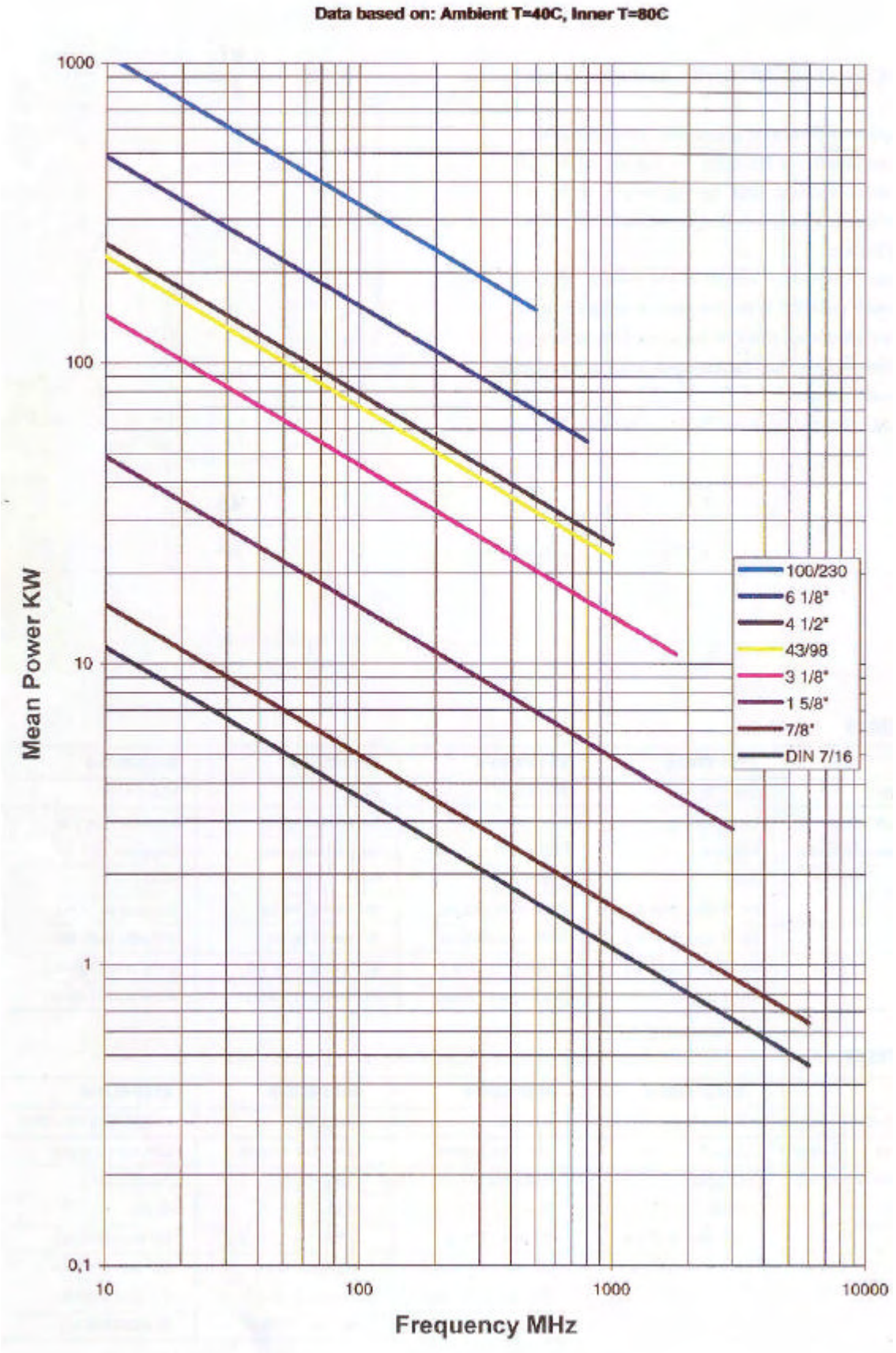
	1" 5/8	3" 1/8	43/98	6"1/8
1 probe coupler 2xBNC / 1 Sonda 2xBNC	CPL-4-1	CPL-7-1	CPL-8-1	CPL-10-1
2 probe coupler 2xBNC/ 2 Sondas 2xBNC	CPL-4-2	CPL-7-2	CPL-8-2	CPL-10-2

Charges /
Cargas

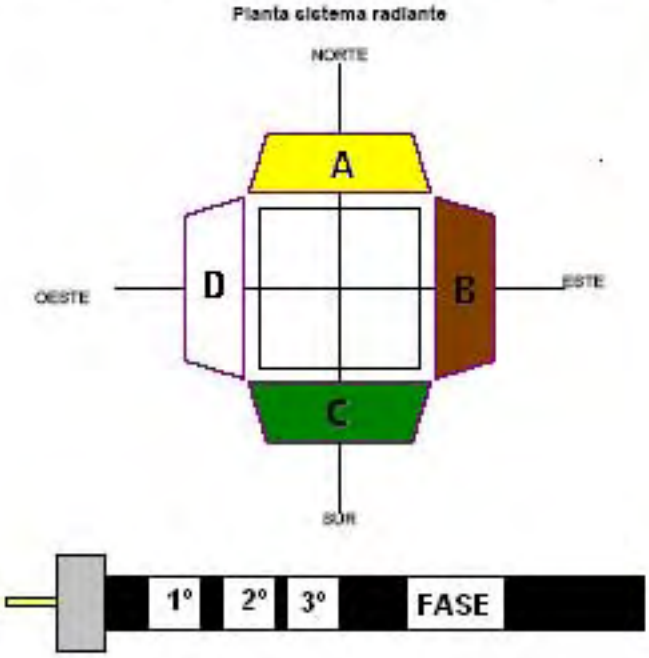
10W - N(M)	Z-0522	100W - N(F)	Z-0402
30W - 7/8 EIA	Z-1201	250W - N(F)	Z-0403
50W - 7/16 DIN	Z-1017	500W 7/16 - DIN	Z-1030

Shadowed codes are manufactured upon request and non-stocked. Ask for other unmentioned accesories./
Códigos sombreados se fabrican contra pedido y no se stockan. Pregunte por otros accesorios no mencionados..

RIGID LINE POWER RATING



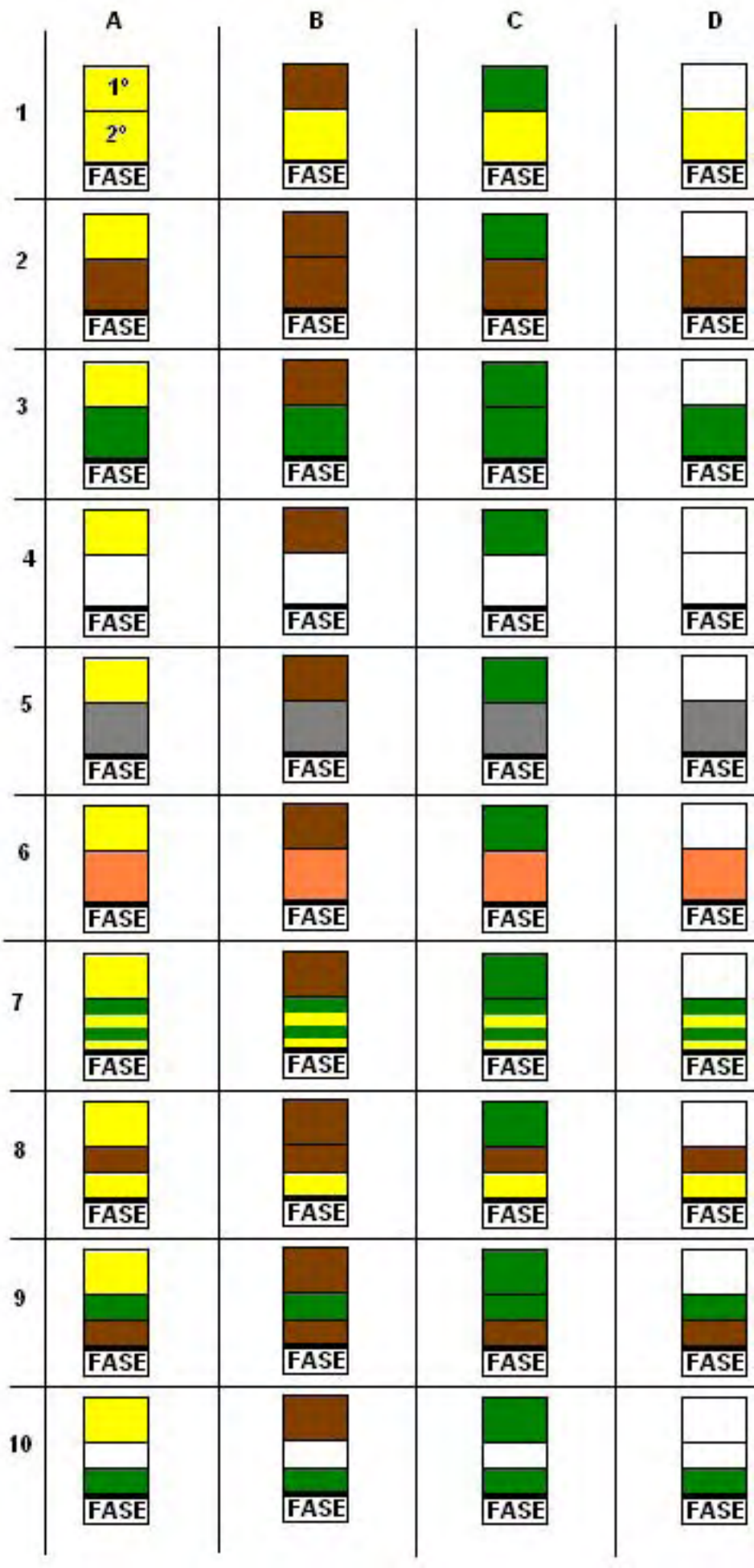
- LA CARA "A" ES LA MÁS CERCANA AL NORTE Y SE NOMBRAN SIGUIENDO EL SENTIDO HORARIO
- LA PLANTA 1 ES LA SUPERIOR Y SE NOMBRAN EN SENTIDO DESCENDENTE



1º	IDENTIFICA LA CARA
2º	IDENTIFICA LA PLANTA
3º	SE USA A PARTIR DE LA 8ª PLANTA
FASE	CUANDO ES POLARIZACION CIRCULAR

- A PARTIR DE LA 8ª PLANTA SE MARCAN CON TRES COLORES
- EL COLOR Nº 1 ES EL MÁS CERCANO AL CONECTOR
- SI HUBIESE POLARIZACIÓN CIRCULAR AÑADIR COLOR DE FASE

+ 45º: ROJO
- 45: AZUL



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Specifications are subject to change without notice.

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