ANTENNAS

GENERAL CATALOG

F.M. ANTENNA SYSTEMS & ACCESSORIES

Telecomunicazioni Ferrara

antenne e componenti
alta frequenza

PRODUCT WARRANTY

Any product of **Telecomumicazioni Ferrara** is covered by a 12 (twelve) month warranty (standard).
Telecomumicazioni Ferrara S.r.l. extends to the original end-user purchaser all manufacturers warranties which are transferrable and all claims are to be made directly to **Telecomumicazioni Ferrara** per indicated procedures.

Warranty shall not include:

1. Connectors;
2. Re-shipment of the unit to **Telecomumicazioni Ferrara** for repair purposes;
3. Any unauthorized repair/ modification;
4. Incidental/ consequential damages as a result of any defect;
5. Nominal non-incidental defects;
6. Re-shipment costs or insurance of the unit or replacement units/ parts;

Any damage to the goods must be reported to the carrier in writing on the shipment receipt.

Any discrepancy or damage discovered subsequent to delivery, shall be reported to **Telecomumicazioni Ferrara** within **5** (five) days from delivery date.

To claim your rights under this warranty, you should follow this procedure:

- Contact the dealer or distributor where you purchased the unit. Describe the problem and, so that a possible easy solution can be detected. Dealers and Distributors are supplied with all the information about problems that may occur and usually they can repair the unit quicker than what the manufacturer could do. Very often installing errors are discovered by dealers.
- If your dealer cannot help you, contact **Telecomumicazioni Ferrara** and explain the problem. If it is decided to return the unit to the factory, **Telecomumicazioni Ferrara** will mail you a regular authorization with all the necessary instructions to sendback the goods.
- When you receive the authorization, you can return the unit. Pack it carefully for the shipment, preferably using the original packing and seal the package perfectly. DO NOT RETURN UNITS WITHOUT OUR AUTHORIZATION AS THEY WILL BE REFUSED.

Be sure to enclose a written technical report where mention all the problems found and a copy of your original invoice establishing the starting date of the warranty.

Replacement and warranty parts may be ordered from the following address:

Telecomunicazioni Ferrara

Telecomunicazioni Ferrara S.r.l.
Via Dei Calzolai, 156
44036 Francolino (Ferrara)
ITALY
Tel.: +39 0532 72.40.33
E-M ail: info@telecfe.it

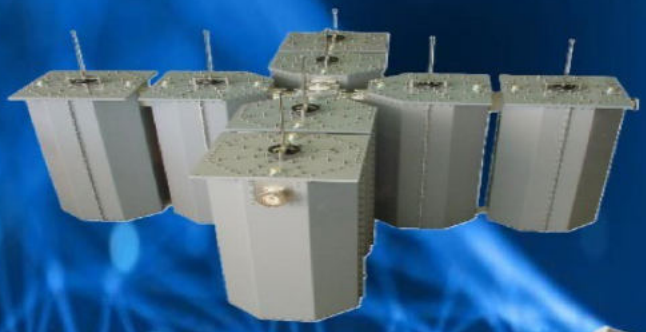
be sure to include the equipment model and serial number as well as part description and part number.

CUSTOMER SERVICE AND TECHNICAL ASSISTANCE

The technical assistance is aviable from **Telecomunicazioni Ferrara S.r.l.** by letter or prepaid telephone or telegram. Equipment requiring repair or over haul should be sent by common carrier, prepaid, insured and well protect. Do not mail equipment. We can assume no liability for inbound damage and necessary repairs become the obligation of the shipper.
Prior arrangement is necessary. Contact the dealer or distributor with all the informations about problems that may occur and usually thay can repair the unit quicker than what the manufacturer could do. Very often installing errors discovered by dealers.
If yoy dealer cannot help you, contact **Telecomunicazioni Ferrara S.r.l.** in Francolino (FE) and explain the problem. If it is decided to return the unit to the factory, **Telecomunicazioni Ferrara** will mail you a regular authirization with all the necessary instuctions to send back the goods.

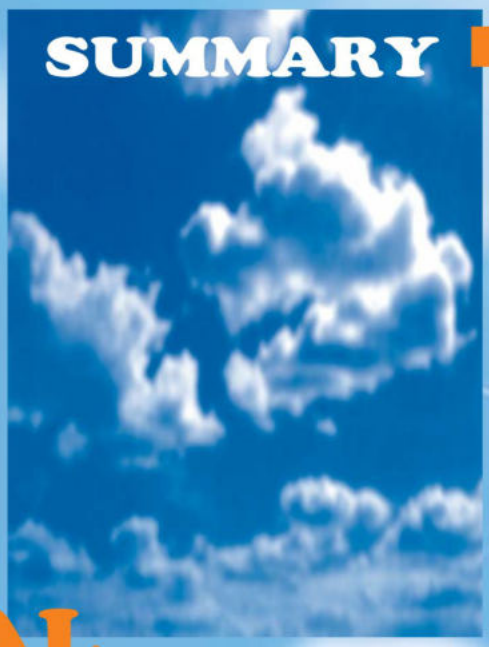
Broadcast solutions

Telecfe



mail info@telecfe.it
www.telecfe.it
phone +39 0532 724033

For over 35 year, antenna , filters combiners accessories has been a benchmark in radio an tv broadcasting technology.



GENERAL CATALOG

ANTENNAS & ACCESSORIES

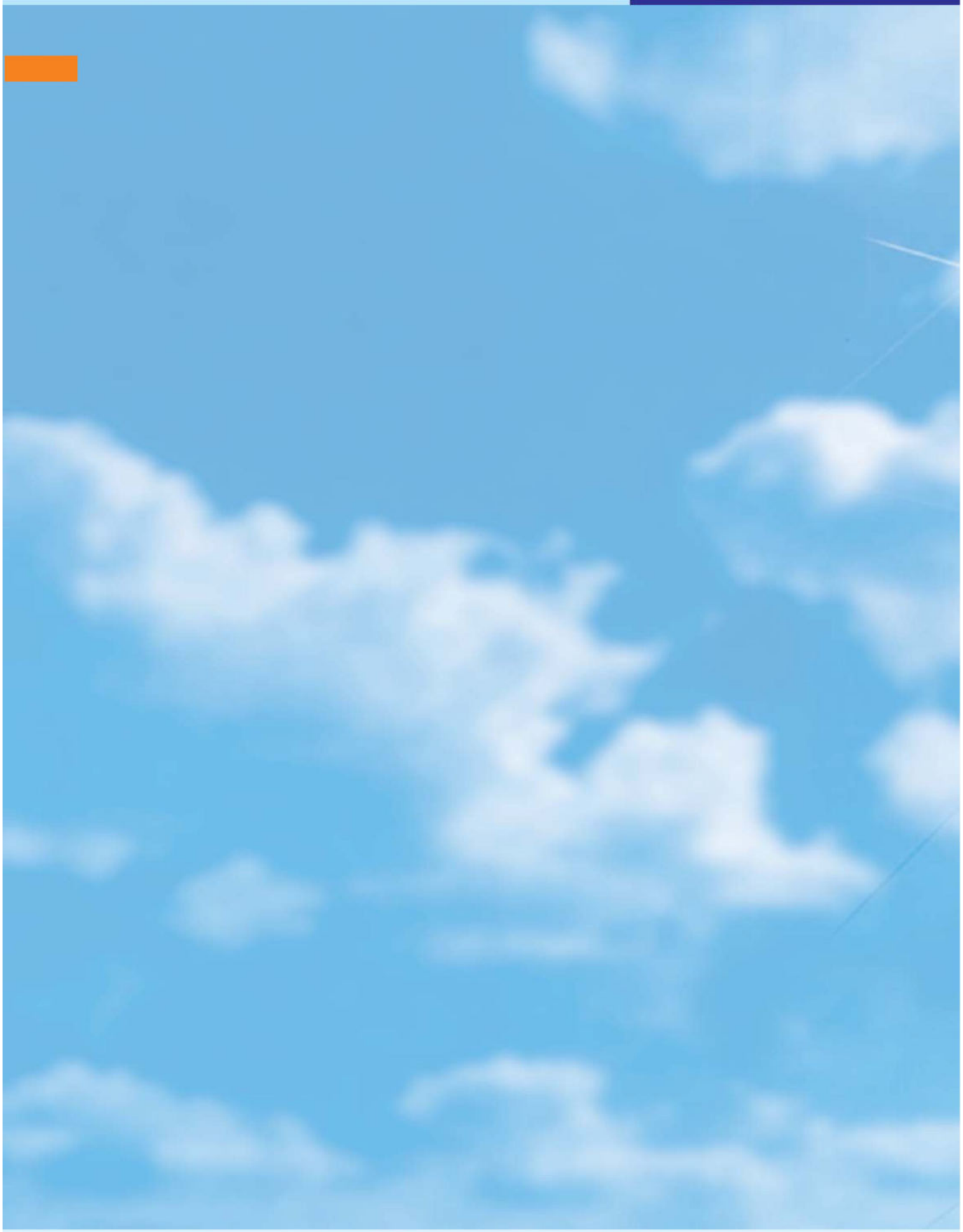
FM BAND ANTENNAS

BAND I – III – IV/V ANTENNAS

ACCESSORIES

TELECFE
BROADCAST SOLUTIONS

www. telecfe.it email: info@telecfe.it phone: +39 0532 724033



TELECFE
BROADCAST SOLUTIONS

www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

TELECOMUNICAZIONIFERRARA

BROADCAST SOLUTIONS

FM BAND ANTENNAS

GENERAL CATALOG

BROAD BAND HORIZONTAL AND VERTICAL POLARIZATION ANTENNAS

BROAD BAND CIRCULAR POLARIZATION ANTENNAS

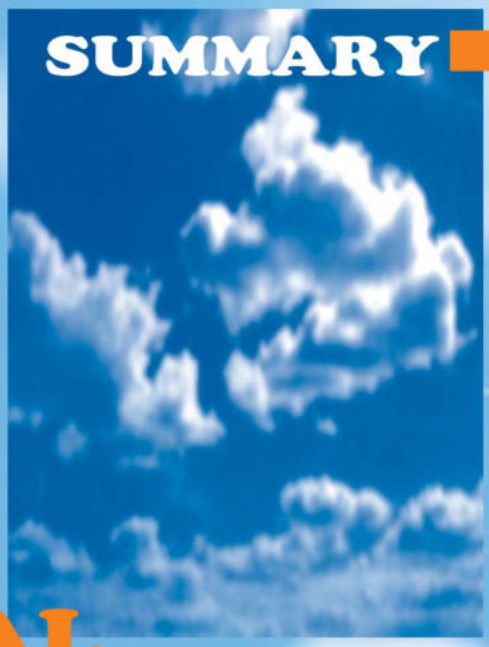
TUNED HORIZONTAL AND VERTICAL POLARIZATION ANTENNAS

TUNED CIRCULAR POLARIZATION ANTENNAS

TELECFE
BROADCAST SOLUTIONS

www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

SUMMARY



GENERAL CATALOG

F.M. BAND ANTENNAS

BROADBAND HORIZONTAL AND VERTICAL POLARIZATION ANTENNAS

TELECFE BROADCAST SOLUTIONS

www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

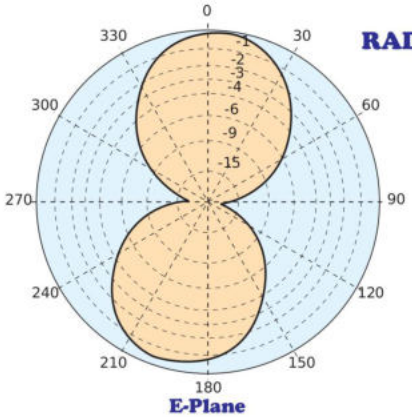
Model AJIF – AJIF 7/8

- **Band II dipole**
- **Broadband 87.5|108 MHz**
- **1,5 dB gain**
- **Vertical polarization**
- **Omni directional pattern**
- **Stainless steel AISI 304**

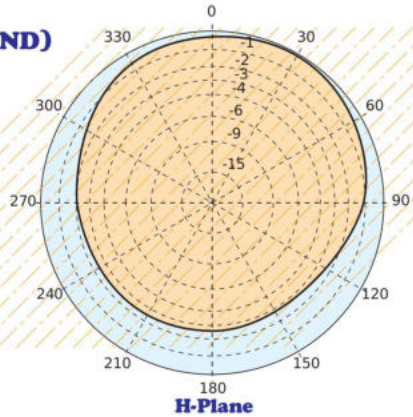
ELECTRICAL DATA	
Frequency range	87.5|108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" female or 7/8" EIA
Max Power	800W (N) – 2KW (7/16") – 3.5KW (7/8" EIA)
VSWR	≤ 1.23:1 Average
Polarization	Vertical
Gain	See table (referred to half-wave dipole)
Pattern	Omni directional 1.5 dB in free space Omni directional 3 dB with 100mm dia. pole
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	1360x1100x180 mm
Weight	9 kg with hardware mounting
Wind surface	0.06 m²
Wind load	10.1 kg (wind speed at 160 km/h – without radome)
Max wind velocity	220 km/h.
Materials	External parts: stainless steel Internal parts: passivated aluminium Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50|110 mm dia.

RADIATION PATTERN (MID BAND)

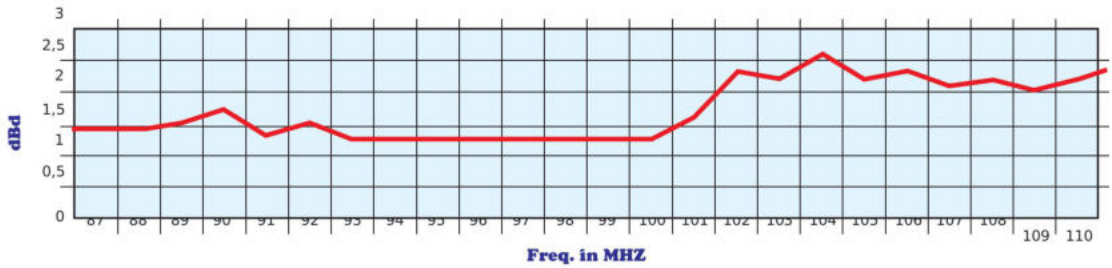


E-Plane



H-Plane

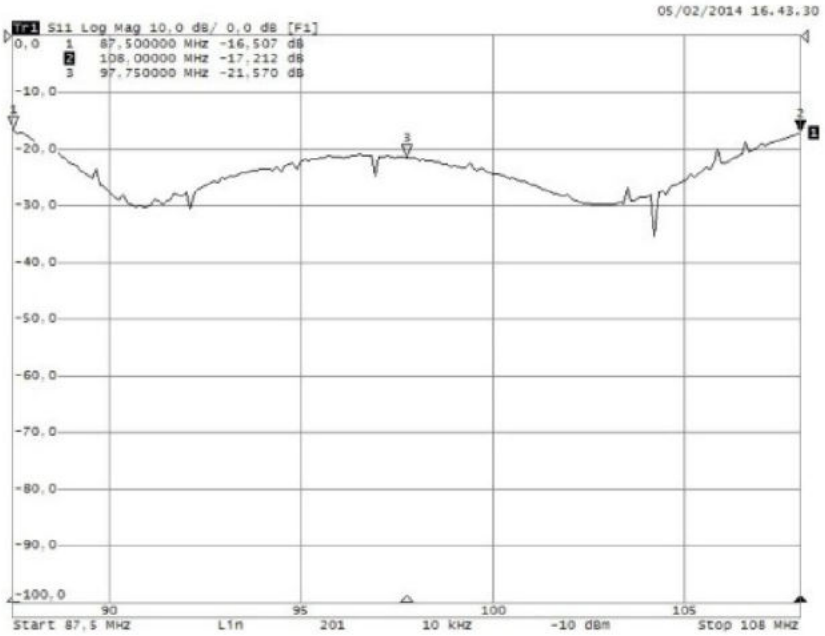
Gain



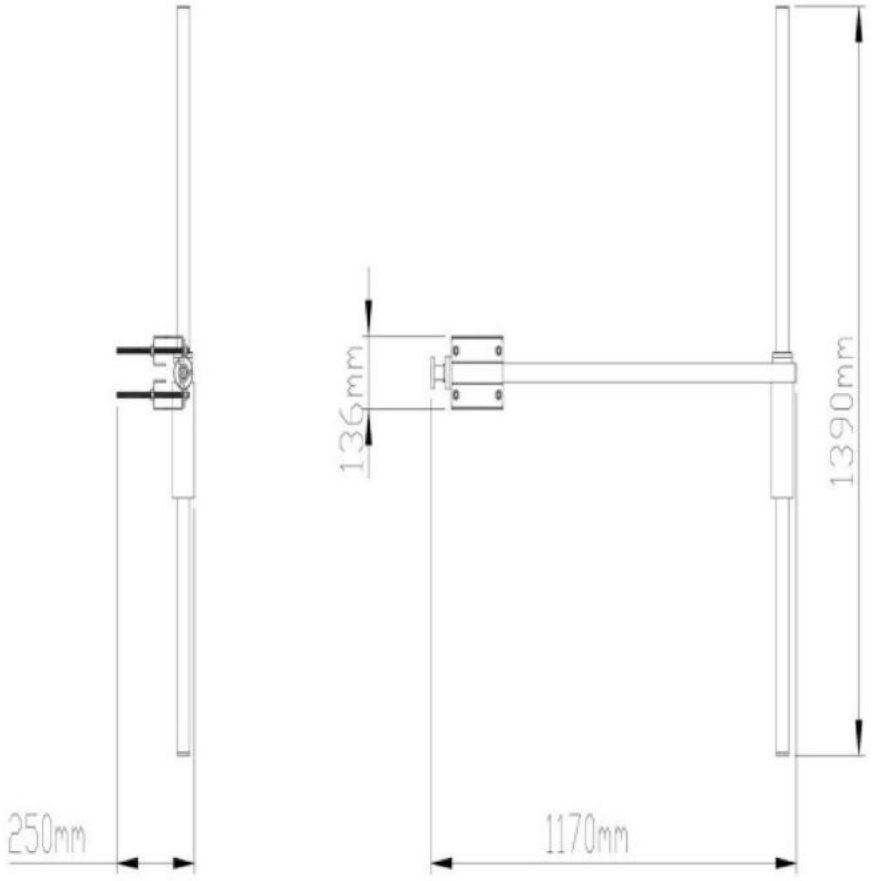
Freq. in MHZ

Model AJIF – AJIF 7/8

RETURN LOSS



DIMENSIONS



Model AJ1F – AJ1F 7/8

Radiations systems with AJ1F antenna

Omni-directional pattern

ELECTRICAL DATA	
Frequency range	87.5|108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.35:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome	Optional
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

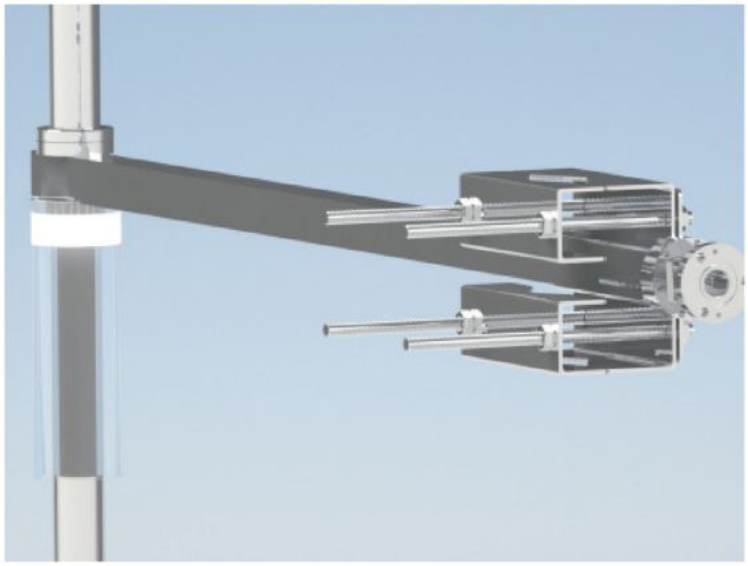
TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)	COLLINEARS SYSTEMS [3]			
		dB	times	kg	m	kg	2 KW	4 KW	6 KW	10 KW
1	1	1.5	1.4	9	1.4	10.1	AJ1F	AJ1F	-	-
2	1	4.5	2.8	18	4.0	20.2	AJ1FX22	AJ1FX24	AJ1FX26	-
4	1	7.5	5.6	36	9.2	40.4	AJ1FX42	AJ1FX44	AJ1FX46	AJ1FX410
6	1	9.3	8.4	54	14.5	60.6	AJ1FX62	AJ1FX64	-	AJ1FX610
8	1	10.5	11.3	72	20.0	80.8	AJ1FX82	AJ1FX84	AJ1FX86	AJ1FX810

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] The systems comprised: antennas, cables and splitter – for more details to see catalog – different version on request.

Gain is provided for vertical polarization.
When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details o installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Various views



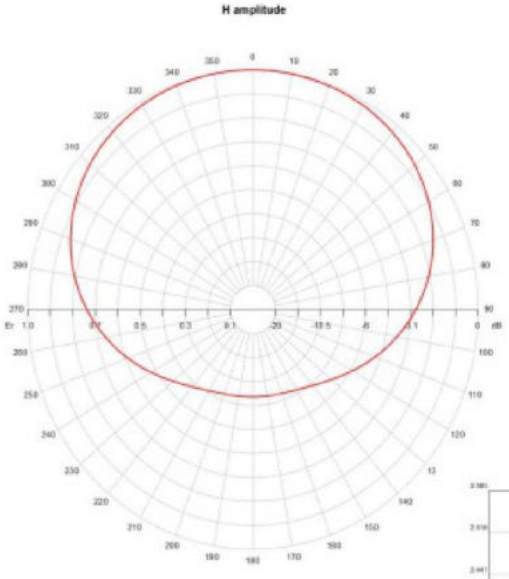
Model AJ1F10

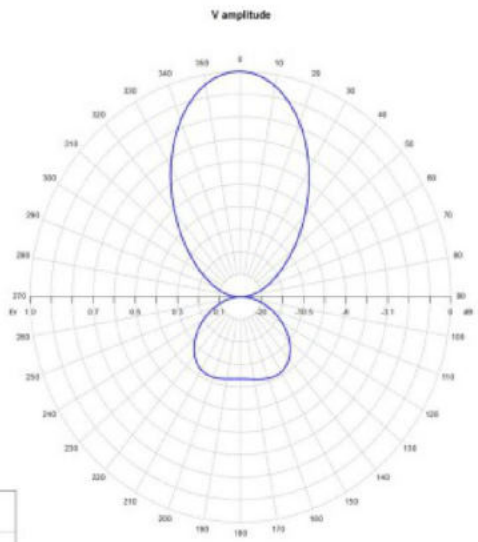
- **Band II dipole**
- **Broadband 87.5|108 MHz**
- **2.2 dBd average gain**
- **Vertical polarization**
- **Omni directional pattern**
- **Stainless steel AISI 304**

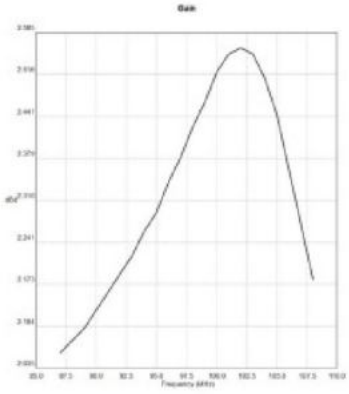
ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connectors	1+5/8"
Max Power	10 kW
VSWR	≤ 1.22:1 Average
Polarization	Vertical
Gain	See table (referred to half-wave dipole)
Pattern	See table calculated whith100mm dia. pole

MECHANICAL DATA	
Dimensions	1680x720x165 mm
Weight	15 kg with hardware mounting
Wind surface	0.15 m^2
Wind load	18.5 kg (wind speed at 160 km/h – without radome)
Max wind velocity	220 km/h.
Materials	External parts: stainless steel Internal parts: passivated aluminium, brass. Radome: teflon
Icing protection	Feed point radome
Radome	White
Mounting	With special pipe clamps 50 | 110 mm dia.

RADIATION PATTERN (MID BAND)

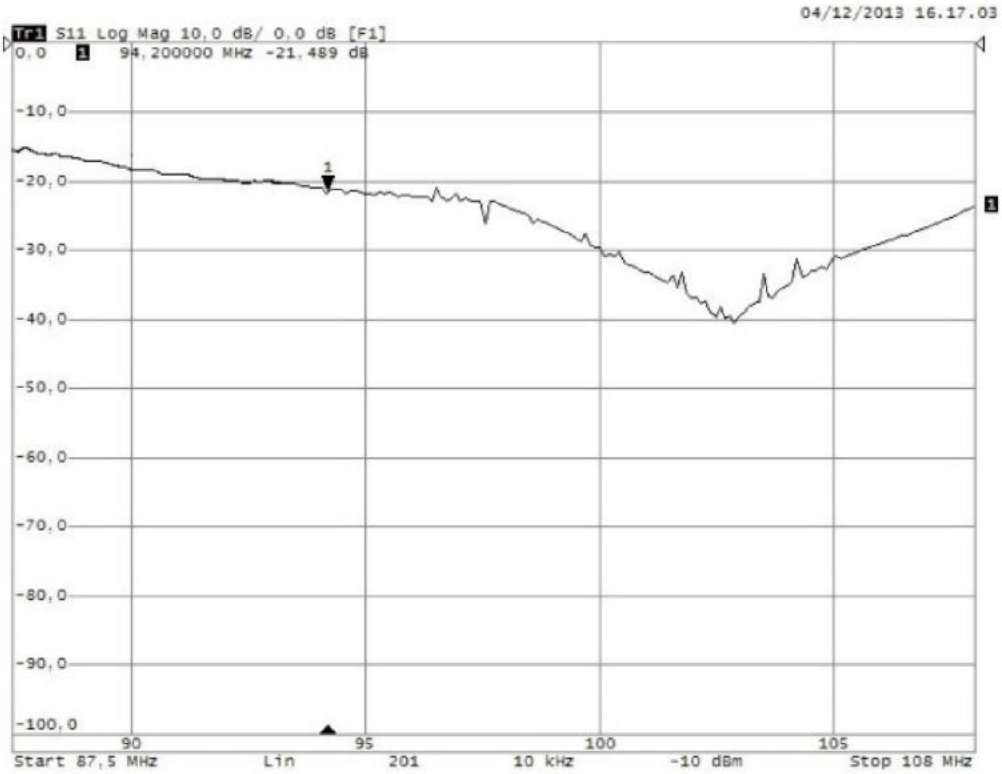




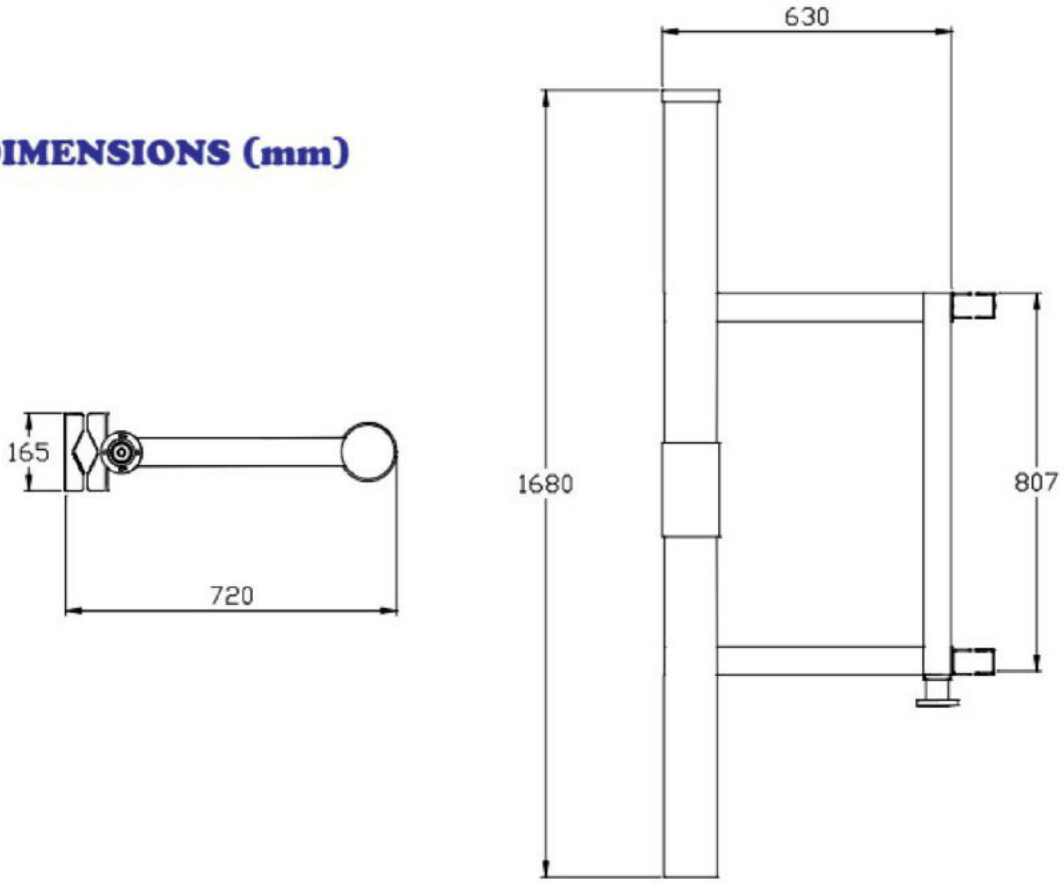


Model AJIF10

RETURN LOSS



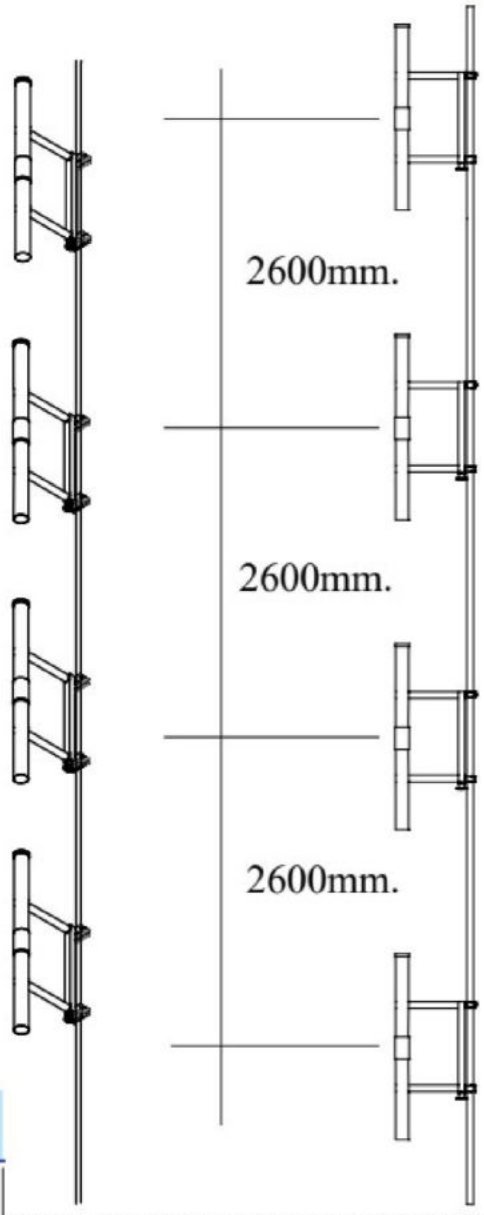
DIMENSIONS (mm)



Model AJ1F10

Radiations systems with AJ1F10 antenna

Omni-directional pattern



ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome	dotation
Mounting hardware	inox steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load
		dB	times	kg	mt.	(v=160 km/h) kg
1	1	2.2	1.66	15	1.7	18.5
2	1	5.2	3.311	30	4.30	37.0
3	1	6.4	4.365	45	6.00	55.5
4	1	8.2	6.607	60	9.50	74.0
6	1	10	10	90	14.80	111.0
8	1	11.2	13.183	120	20.30	148.0

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] The systems comprised: antennas, cables and splitter – for more details to see catalog – different version on request.

Gain is provided for vertical polarization.
When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model AJ1FENA

BROADBAND COST EFFECTIVE DIPOLE
LOW WEIGHT HIGH PERFORMANCE

- **Model A1JFENA – AJ1FEA6 – AJ1FEA7**
- **Band II dipole**
- **Broadband 87.5÷108 MHz**
- **2.15 dBd gain**
- **Vertical polarization**
- **Omni directional pattern**
- **Aluminium anticorodal**
- **Desmountable option**

ELECTRICAL DATA

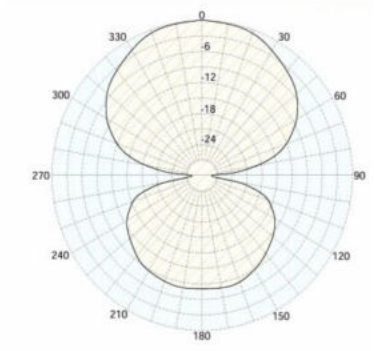
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N (AJ1FENA) – 7/16 female (AJ1FEA6) – 7/8 EIA (AJ1FEA7)
Max Power	800W (N) – 2KW (7/16" - 7/8" EIA)
VSWR	≤ 1.25:1 Average
Polarization	Vertical
Gain	2.15 dB (referred to half-wave dipole) at 98 MHz
Pattern	Omni directional ± 1.5 dB in free space Omni directional ± 3 dB with 100mm diameter pole
Lightning protection	All metal parts DC grounded

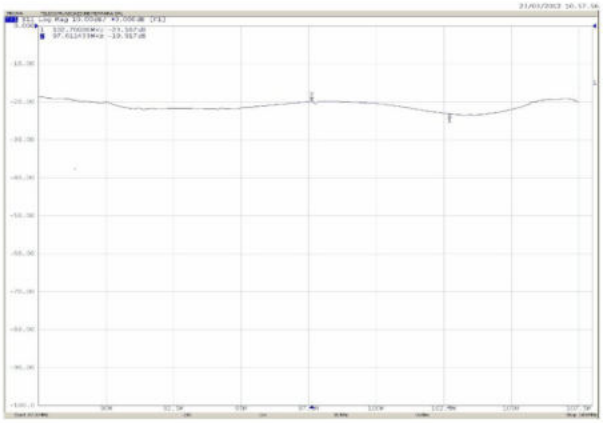
MECHANICAL DATA

Dimensions	1400x900x50 mm
Weight	6 kg with hardware mounting
Wind surface	0.05m2
Wind load	9.8 kg (wind speed at 160 km/h – without radome)
Max wind velocity	200 km/h.
Materials	External parts: Aluminium anticorodal Internal parts: brass Radome: fiberglass (optional)
Icing protection	Feed point radome (optional)
Radome (optional)	Color transparent
Mounting	With special pipe clamps 40÷110 mm diameter

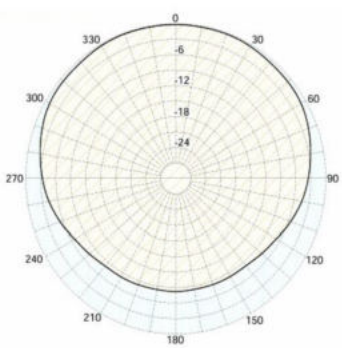
RADIATION PATTERN (MID BAND)

E-plane





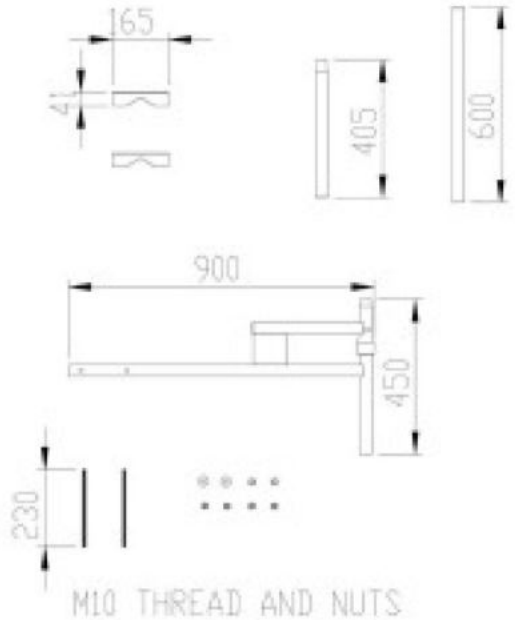
H-plane



Return Loss

DESMOUNTABLE VERSION OPTION

DESMOUNTABLE VERSION DIMENSIONS IN mm.



Broad Band Cost Effective Antenna Systems with the AJ1FENA

Omni - directional pattern

ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on demand)
Radome colour	transparent (optional)
Mounting hardware	Inox steel clamps (aisi 304)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
1	1	2.15	1.6	4	1.4	9.8
2	1	5.15	3.2	8	4.0	19.6
4	1	8.15	6.3	16	9.2	39.2
6	1	9.95	9.5	24	14.4	58.8
8	1	11.15	12.7	32	19.6	78.4

[1] Referred to half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] Systems comprise: antennas, cables and splitter – for more details look on catalog – different versions on demand

- Gain is provided for vertical polarisation.
- When antenna is pole mounted on the top of a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing are provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- A length of five ft(1.6mt) of pipe is required above the top bay and below the bottom bay to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model AJ1FENA

BROADBAND COST EFFECTIVE DIPOLE
LOW WEIGHT HIGH PERFORMANCE

- Model A1JFENA – AJ1FEA6 – AJ1FEA7
- Band II dipole
- Broadband 87.5÷108 MHz
- 2.15 dBd gain
- Vertical polarization
- Omni directional pattern
- Aluminium anticorodal
- Desmountable option

ELECTRICAL DATA

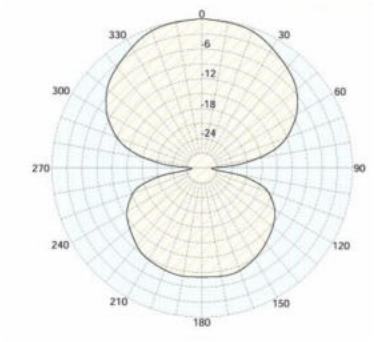
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N (AJ1FENA) – 7/16 female (AJ1FEA6) – 7/8 EIA (AJ1FEA7)
Max Power	800W (N) – 2KW (7/16" - 7/8" EIA)
VSWR	≤ 1.25:1 Average
Polarization	Vertical
Gain	2.15 dB (referred to half-wave dipole) at 98 MHz
Pattern	Omni directional ± 1.5 dB in free space Omni directional ± 3 dB with 100mm diameter pole
Lightning protection	All metal parts DC grounded

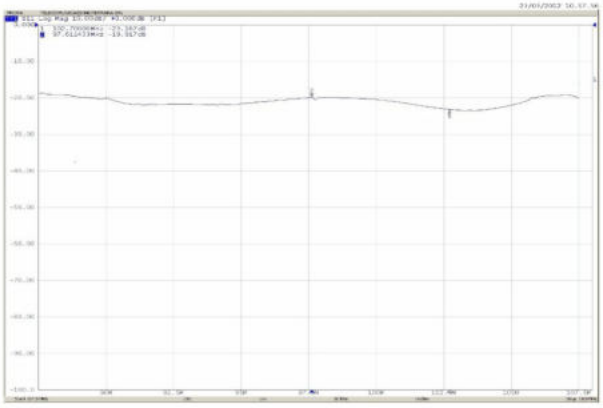
MECHANICAL DATA

Dimensions	1400x900x50 mm
Weight	6 kg with hardware mounting
Wind surface	0.05m2
Wind load	9.8 kg (wind speed at 160 km/h – without radome)
Max wind velocity	200 km/h.
Materials	External parts: Aluminium anticorodal Internal parts: brass Radome: fiberglass (optional)
Icing protection	Feed point radome (optional)
Radome (optional)	Color transparent
Mounting	With special pipe clamps 40÷110 mm diameter

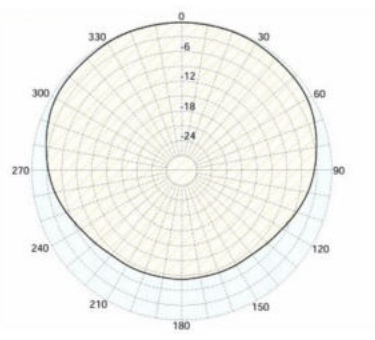
RADIATION PATTERN (MID BAND)

E-plane





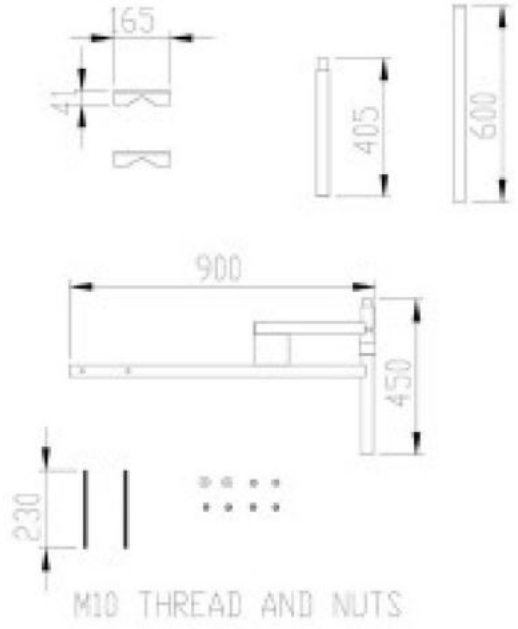
H-plane



Return Loss

DESMOUNTABLE VERSION OPTION

DESMOUNTABLE VERSION DIMENSIONS IN mm.



Broad Band Cost Effective Antenna Systems with the AJ1FENA

Omni - directional pattern

ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on demand)
Radome colour	transparent (optional)
Mounting hardware	Inox steel clamps (aisi 304)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
1	1	2.15	1.6	4	1.4	9.8
2	1	5.15	3.2	8	4.0	19.6
4	1	8.15	6.3	16	9.2	39.2
6	1	9.95	9.5	24	14.4	58.8
8	1	11.15	12.7	32	19.6	78.4

[1] Referred to half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] Systems comprise: antennas, cables and splitter – for more details look on catalog – different versions on demand

- Gain is provided for vertical polarisation.
- When antenna is pole mounted on the top of a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing are provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- A length of five ft(1.6mt) of pipe is required above the top bay and below the bottom bay to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

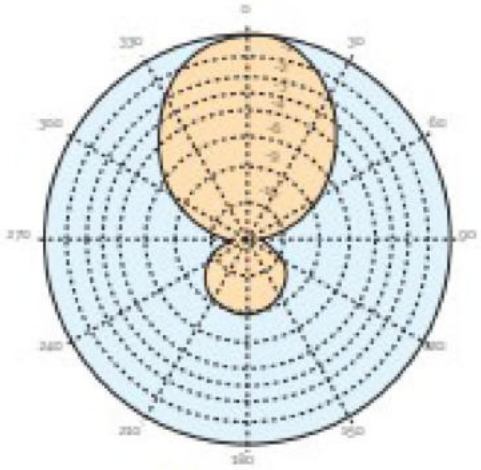
Model AJ2

- **Band II**
- **Broadband 87.5÷108 MHz**
- **Demountable**
- **Vertical or Horizontal polarization**
- **Stainless steel AISI 304**
- **Pressurizzable on request**

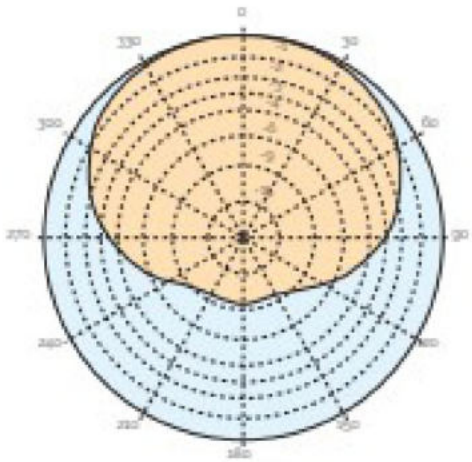
ELECTRICAL DATA	
Frequency range	87.5 ÷ 108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N) – 2KW (7/16") – 3.5KW (7/8" EIA)
VSWR	≤ 1.2:1
Polarization	Horizontal or Vertical
Gain	2.5 dB (refered to half-wave dipole)
Half power beam width	E plane ± 32° H plane ± 80°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	1740x1100x180 mm
Weight	11.5 kg with hardware mounting
Wind surface	0.14 m²
Wind load	20.1 kg (wind speed at 160 km/h – without radome)
Max wind velocity	200 km/h
Materials	External parts: stainless steel Internal parts: passivated aluminium Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50÷110 mm dia

RADIATION PATTERN (MID BAND)



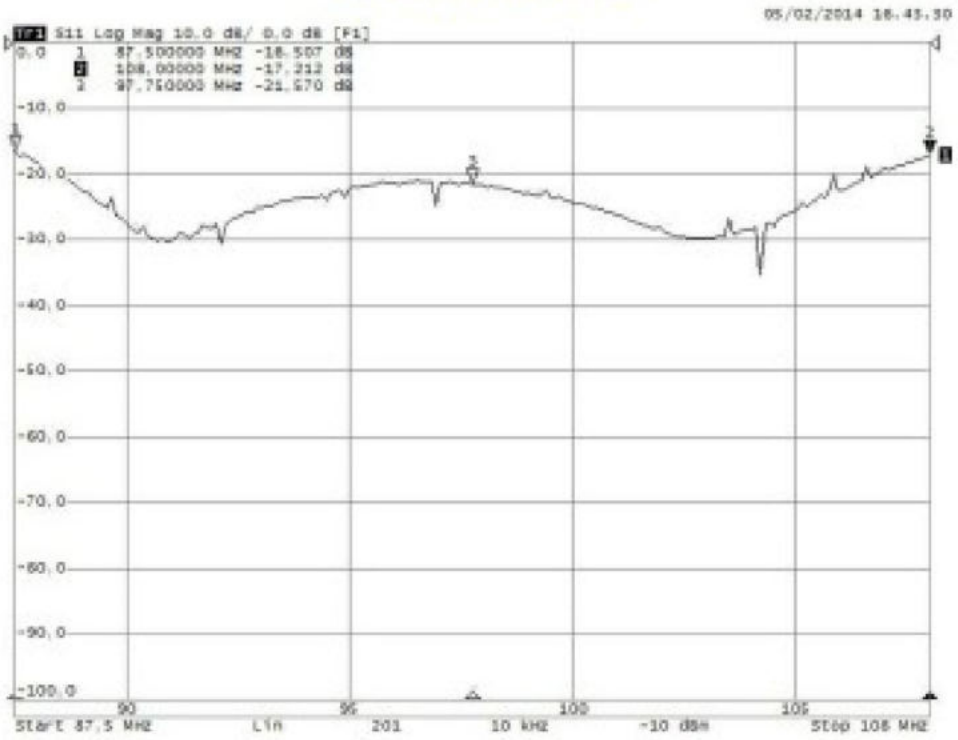
E-Plane



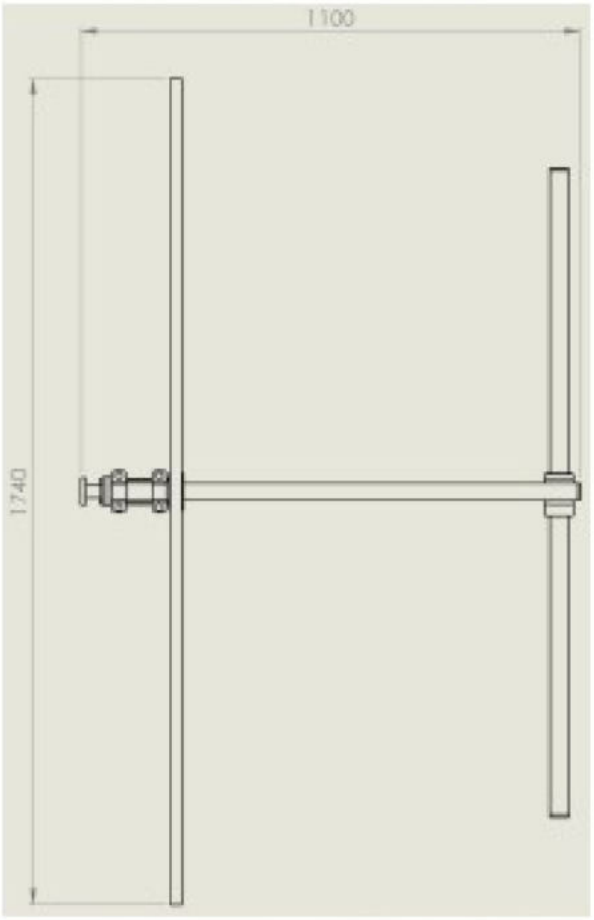
H-Plane

Model AJ2

RETURN LOSS



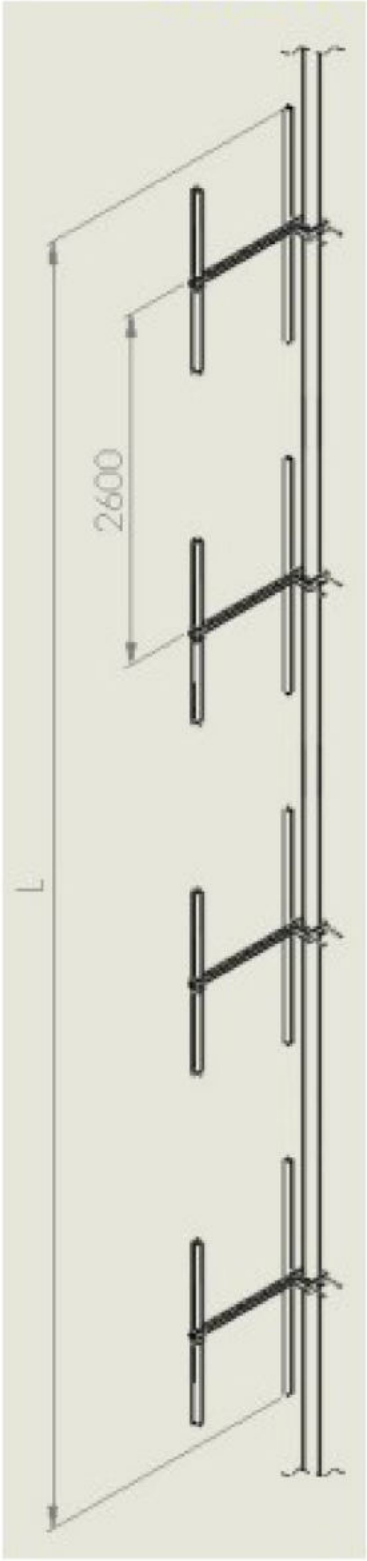
DIMENSIONS (mm)



Model AJ2

Radiations systems with AJ2 yagi antenna

Directional pattern



ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.3:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome	Optional
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)
		dB	times	kg	m	kg
2	1	5.5	3.5	23	4.4	40.2
4	1	8.5	7.1	46	9.6	80.4
6	1	10.3	10.7	69	14.8	120.6
8	1	11.5	14.2	92	20.0	160.8
12	1	13.3	21.4	138	30.5	241.2

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.

Gain is provided for vertical polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model AJ2FENA

BROADBAND COST EFFECTIVE DIPOLE
LOW WEIGHT HIGHT PERFORMANCE

- Model AJ2FENA
- Band II dipole
- Broadband 87.5 ÷108 MHz
- 3 dBd gain
- Vertical or horizontal polarization
- Semi directional pattern
- Aluminium anticorodal

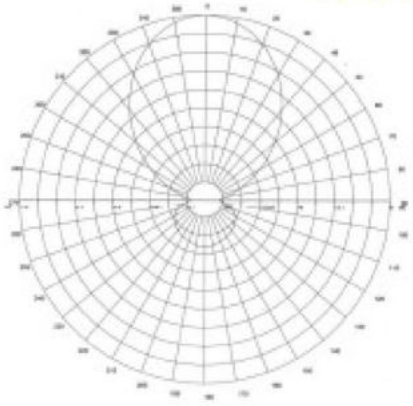
ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N – 7/16 female – 7/8 EIA
Max Power	800W (N) – 2KW (7/16" - 7/8" EIA)
VSWR	≤ 1.35:1
Polarization	Vertical
Gain	3,32 dB (referred to half-wave dipole) at 98 MHz
Pattern	Semi-directional
Lightning protection	All metal parts DC grounded

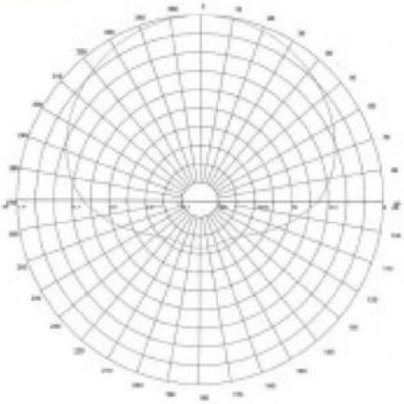
MECHANICAL DATA

Dimensions	1915x885x70 mm
Weight	5 kg with hardware mounting
Wind surface	0.17m2
Wind load	21.0 kg (wind speed at 160 km/h – without radome)
Max wind velocity	220 km/h.
Materials	External parts: Aluminium anticorodal Internal parts: brass Radome: fiberglass (optional)
Icing protection	Feed point radome (optional)
Radome (optional)	Color white
Mounting	With special pipe clamps 40÷110 mm diameter

RADIATION PATTERN (MID BAND)

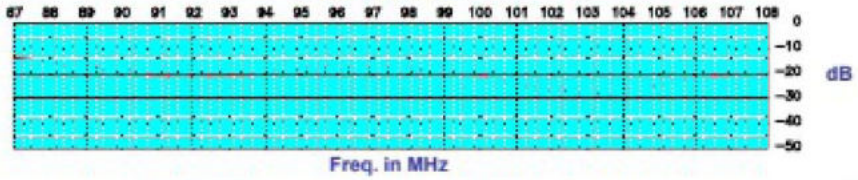


E-plane



H-plane

Return Loss



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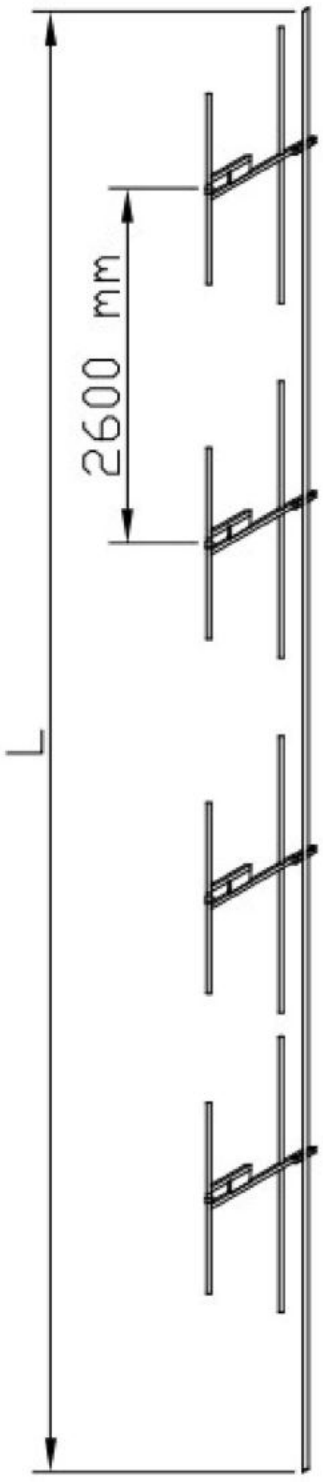
Broad Band Low Cost Antenna Systems with the AJ2FENA

Omni - directional pattern



ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.35:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
1	1	3.3	2.1	5	1.4	21
2	1	6.2	4.2	10	4.0	42
4	1	9.0	7.9	20	9.2	84
6	1	10.2	10.5	30	14.4	126
8	1	12.0	15.8	40	19.6	168

[1] Referred to half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] Systems comprise: antennas, cables and splitter – for more details look on catalog – different versions on demand

- Gain is provided for vertical polarisation.
- When antenna is pole mounted on the top of a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing are provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- A length of five ft(1.6mt) of pipe is required above the top bay and below the bottom bay to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model AJ2FENI

BROADBAND COST EFFECTIVE SEMIDIRECTIVE LOW WEIGHT HIGHT PERFORMANCE

- Model AJ2FENI
- Band II TWO ELEMENTS
- Broadband 87.5÷108 MHz
- 3 dBd gain
- Vertical or horizontal polarization
- Semi directional pattern
- INOX AISI 304

ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N – 7/16 female – 7/8 EIA
Max Power	800W (N) – 2KW (7/16" - 7/8" EIA)
VSWR	≤ 1.35:1
Polarization	Vertical
Gain	3,32 dB (referred to half-wave dipole) at 98 MHz
Pattern	Semi-directional
Lightning protection	All metal parts DC grounded

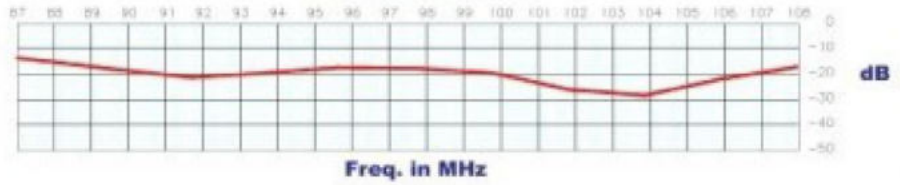
MECHANICAL DATA

Dimensions	1915x885x70 mm
Weight	7 kg with hardware mounting
Wind surface	0.17m2
Wind load	21.0 kg (wind speed at 160 km/h – without radome)
Max wind velocity	250 km/h.
Materials	External parts: inox aisi 304 Internal parts: brass,ptfe,silver plated, Radome: fiberglass (optional)
Icing protection	Feed point radome (optional)
Radome (optional)	Color trasparent
Mounting	With special pipe clamps 40÷110 mm diameter

RADIATION PATTERN (MID BAND)

E-plane H-plane

Return Loss



Freq. in MHz

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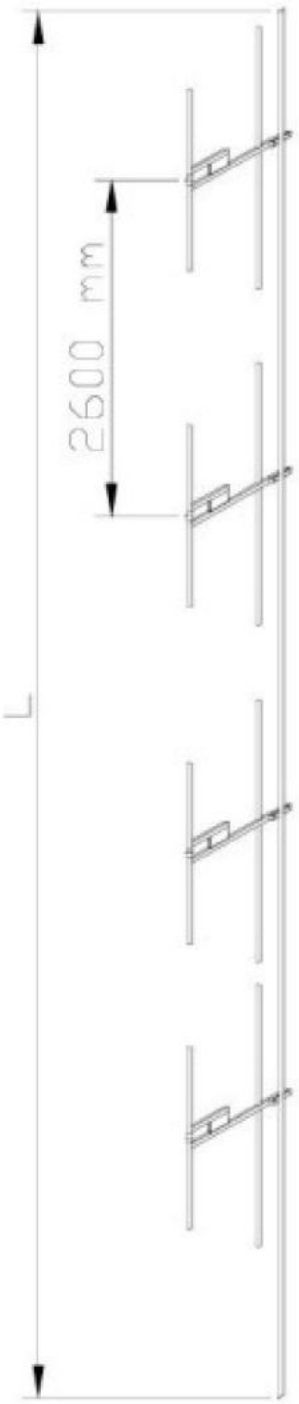
Broad Band Low Cost Antenna Systems with the AJ2FENI

Semi-directional pattern



ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.35:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
1	1	3.3	2.1	5	1.4	21
2	1	6.2	4.2	10	4.0	42
4	1	9.0	7.9	20	9.2	84
6	1	10.2	10.5	30	14.4	126
8	1	12.0	15.8	40	19.6	168

[1] Referred to half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] Systems comprise: antennas, cables and splitter – for more details look on catalog – different versions on demand

- Gain is provided for vertical polarisation.
- When antenna is pole mounted on the top of a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing are provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- A length of five ft(1.6mt) of pipe is required above the top bay and below the bottom bay to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

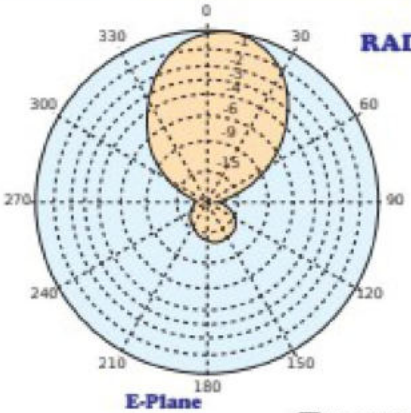
Model AJ3

- **Band II**
- **Broadband 87.5|108 MHz**
- **Demountable**
- **Vertical or Horizontal polarization**
- **Stainless steel AISI 304**
- **Pressurizzable on request**

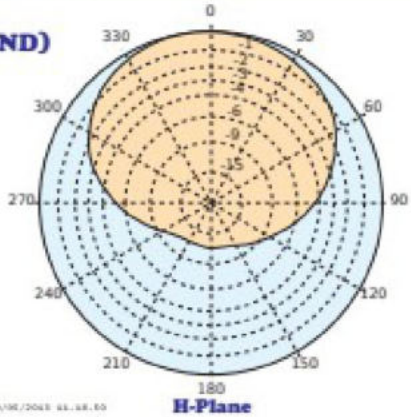
ELECTRICAL DATA	
Frequency range	87.5|108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N) – 2KW (7/16") – 5KW (7/8" EIA)
VSWR	≤ 1.25:1
Polarization	Horizontal or Vertical
Gain	4.8 dBd 6.95 dBi average
Half power beam width	E plane± 32° H plane± 63°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	1540x1780x180 mm
Weight	11.5 kg with hardware mounting
Wind surface	0.18 m²
Wind load	26.7 kg (wind speed at 160 km/h – without radome)
Max wind velocity	200 km/h.
Materials	External parts: stainless steel Internal parts: passivated aluminium Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50|120 mm dia.

RADIATION PATTERN (MID BAND)

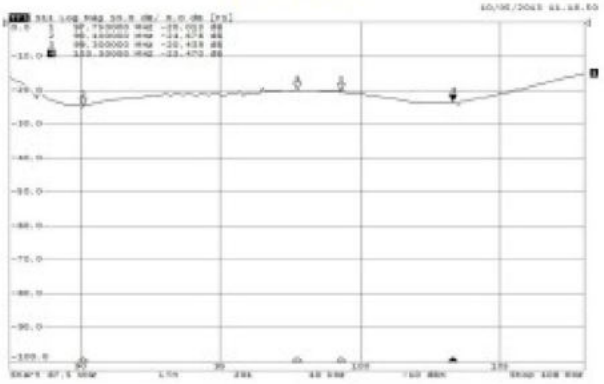


E-Plane



H-Plane

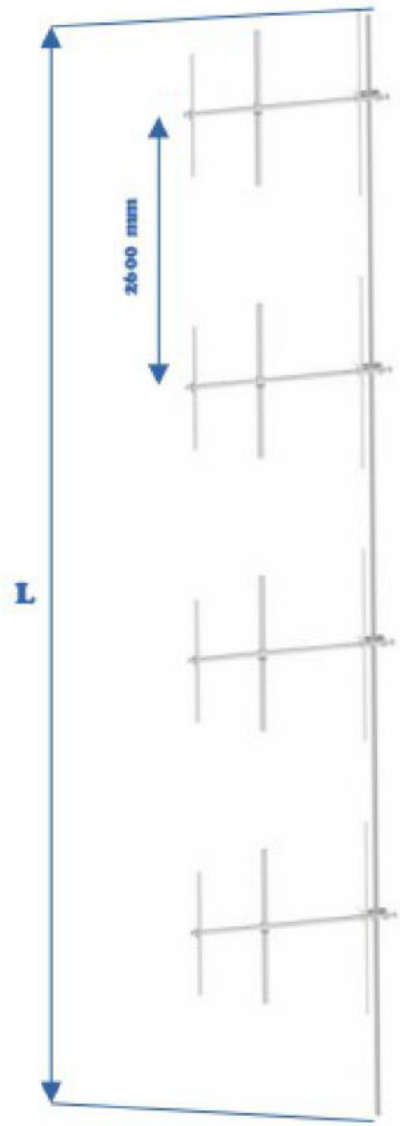
Return Loss



Model AJ3

Radiations systems with AJ3 yagi antenna

Directional pattern



ELECTRICAL DATA	
Frequency range	87.5|108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome	Optional
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg	COLLINEARS SYSTEMS [3]			
		dB	times				2 KW	4 KW	6 KW	10 KW
2	1	7.8	6.0	27	4.4	53.4	AJ3X22	AJ3X24	AJ3X26	-
4	1	10.8	12.0	54	9.6	106.8	AJ3X42	AJ3X44	AJ3X46	AJ3X410
6	1	12.6	18.2	81	14.8	160.2	AJ3X62	AJ3X64	-	AJ3X610
8	1	13.8	24.0	108	20.0	213.6	AJ3X82	AJ3X84	AJ3X86	AJ3X810
12	1	15.6	36.3	138	30.5	320.4	-	-	-	-

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] The systems comprised: antennas, cables and splitter – for more details to see catalog – different version on request.

Gain is provided for vertical polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation.
Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model AJ3FENA

BROADBAND COST EFFECTIVE DIPOLE
LOW WEIGHT HIGHT PERFORMANCE

- **Band II dipole**
- **Broadband 87.5 ÷108 MHz**
- **3.8 dBd average gain**
- **Vertical polarization**
- **Aluminium anticorodal**

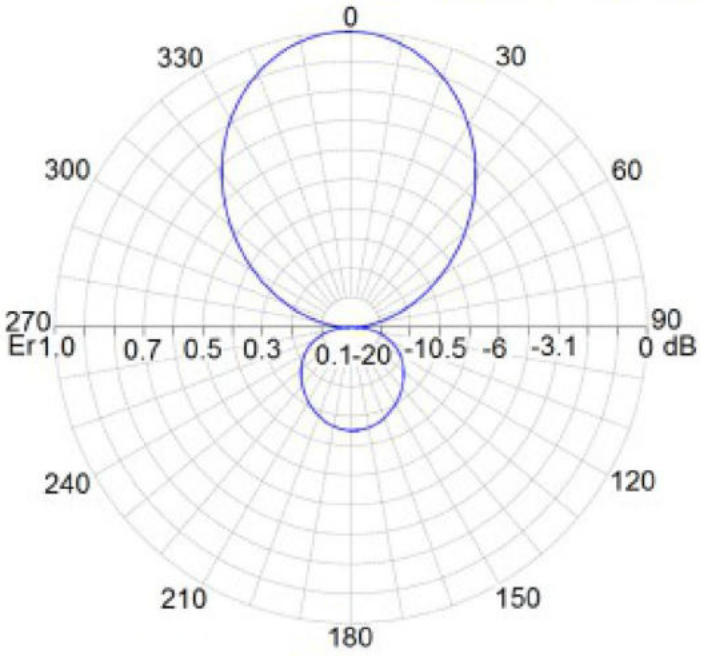
ELECTRICAL DATA

Frequency range	87.5 ÷ 108 MHz
Impedance	50 Ohm
Connectors	N or 7/16 female or 7/8 EIA
Max Power	800W (N) – 2KW (7/16 - 7/8" EIA)
VSWR	≤ 1.35:1 Average
Polarization	Vertical
Gain	3.8 dB average (referred to half-wave dipole) at 98 MHz
Half power Beam width	E plane ± 35° H plane ± 80°
Lightning protection	All metal parts DC grounded

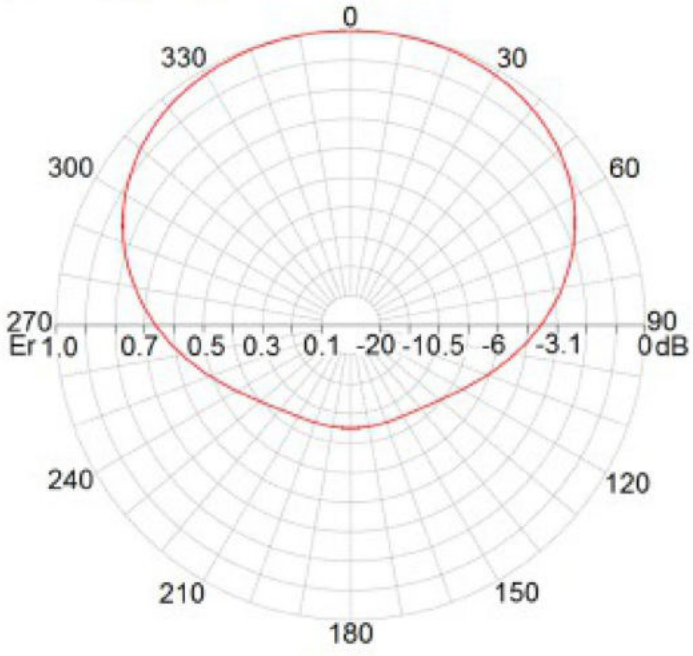
MECHANICAL DATA

Dimensions	1840x1630x180 mm
Weight	6 kg with hardware mounting
Wind surface	0.15m²
Wind load	19.4 kg (wind speed at 160 km/h – without radome)
Max wind velocity	220 km/h
Materials	External parts: Aluminium anticorodal Internal parts: brass Radome: fiberglass (optional)
Icing protection	Feed point radome (optional)
Radome (optional)	Color white
Mounting	With special pipe clamps 40÷110 mm diameter

RADIATION PATTERN (MID BAND)

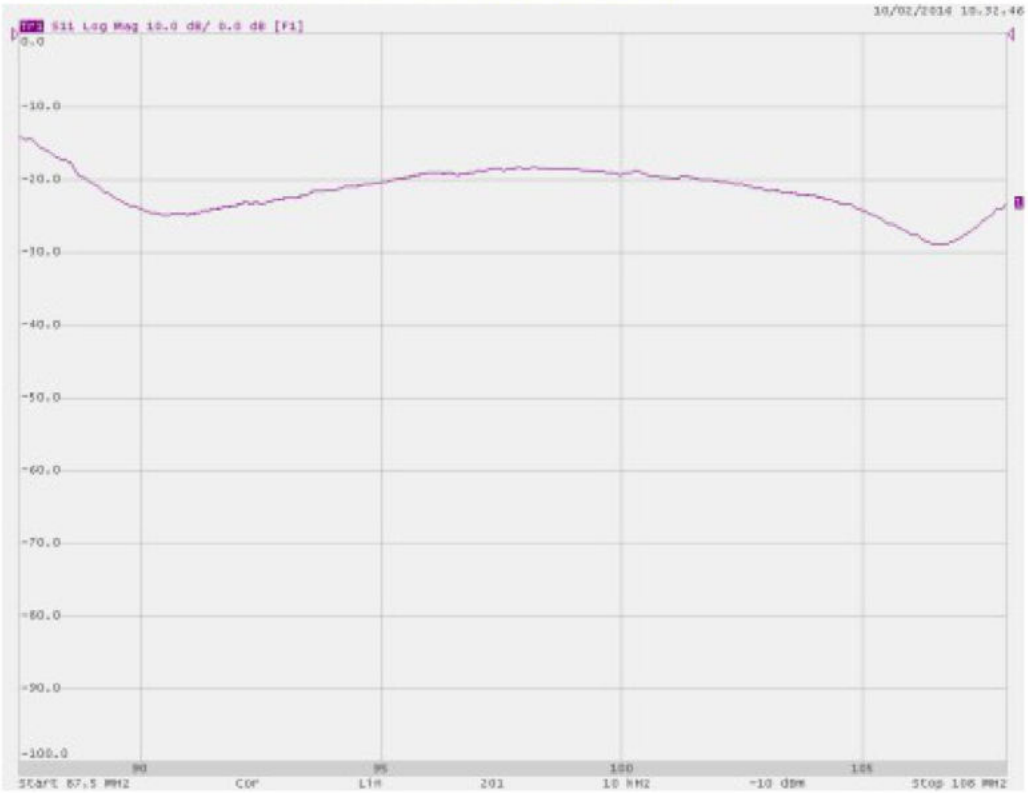


E-plane

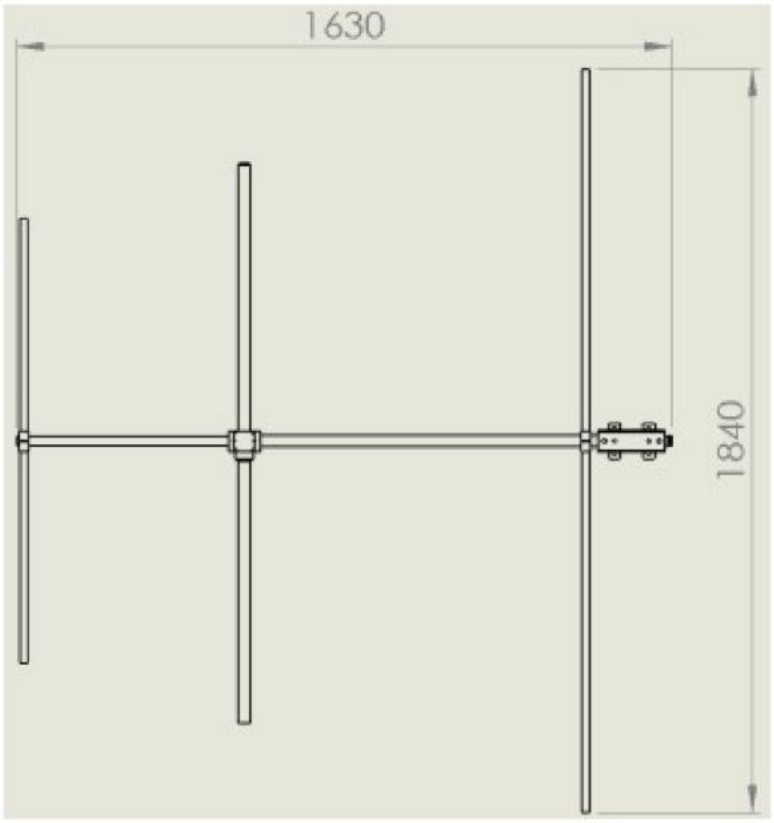


H-plane

Return Loss (EXAMPLE)

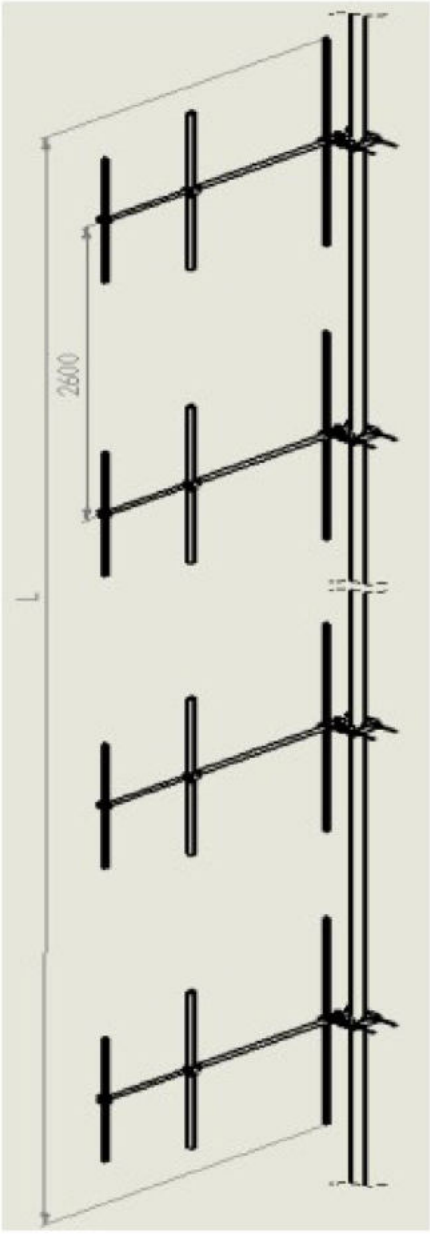


DIMENSIONS (mm)



Broad Band Antenna Systems with AJ3FENA

Omni - directional pattern



ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.35:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on demand)
Radome colour	White (optional)
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

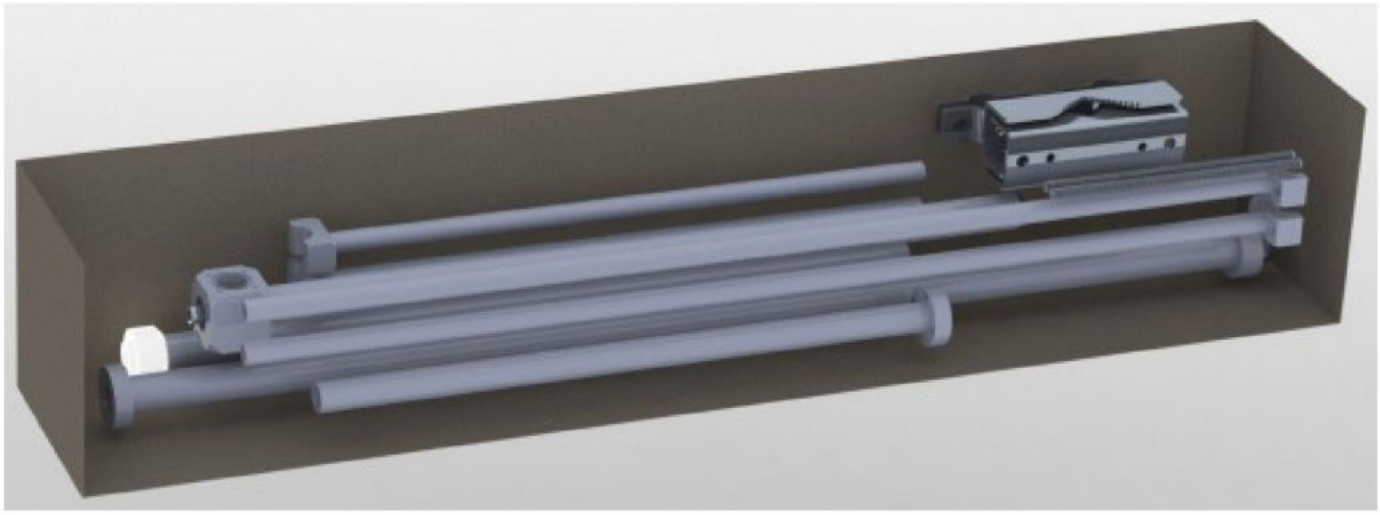
TECHNICAL DATA

Number of bays	per bay	Gain[1]		Weight[2] kg	height L m	Wind load (v=160 km/h) kg
1	1	3.8	2.4	6	1.8	19.4
2	1	6.8	4.8	12	4.4	38.8
4	1	9.8	9.5	24	9.6	77.6
6	1	11.6	14.4	36	14.8	116.4
8	1	12.8	19	48	20	155.2

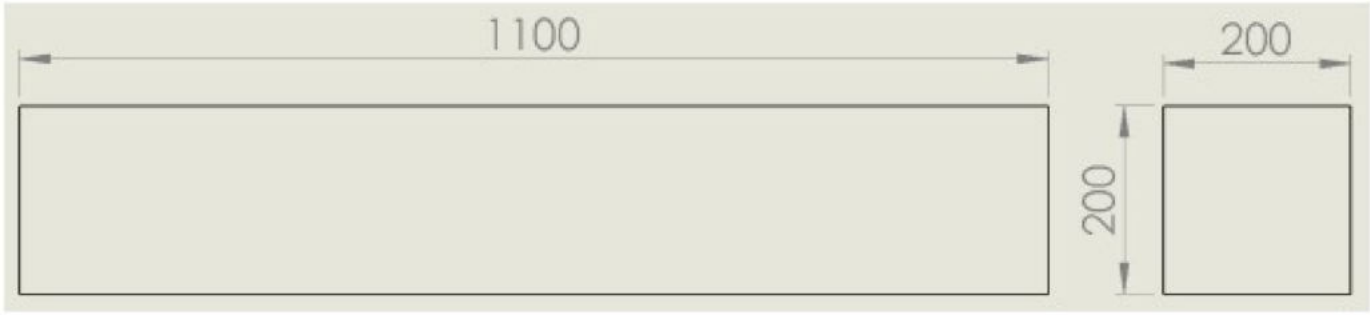
[1] Referred to half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] Systems comprise: antennas, cables and splitter – for more details look on catalog – different versions on demand

- Gain is provided for vertical polarisation.
- When antenna is pole mounted on the top of a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing are provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- A length of five ft(1.6mt) of pipe is required above the top bay and below the bottom bay to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

AJ3FENA disassembled can be inserted in a small package



Dimensions of the package (mm)



Model : AJ3FENI

- **Band II**
- **Broadband 87.5÷108 MHz**
- **Vertical polarization (special version horizontal a request)**
- **INOX STAINLESS STEEL AISI 304**

Version with
Radome (optinon)

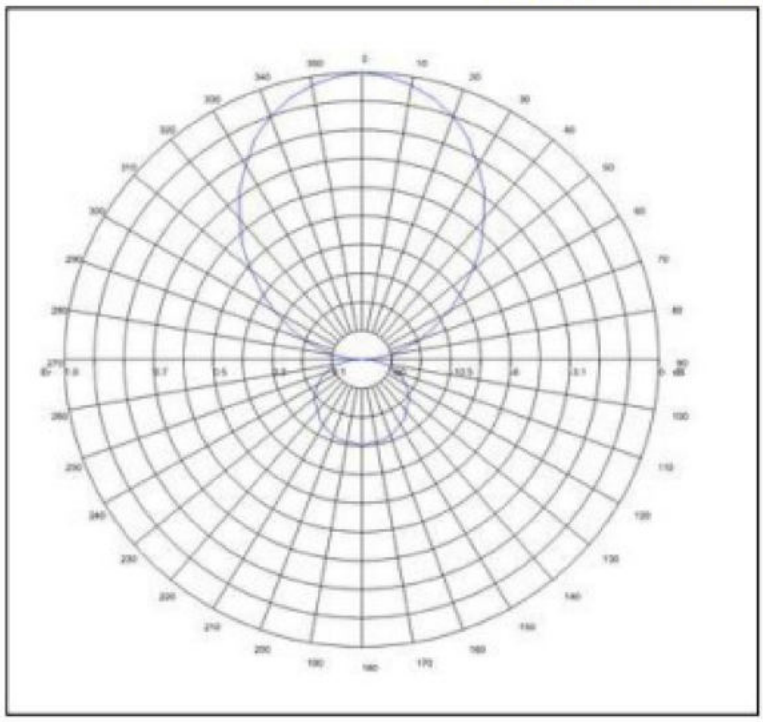
ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800 W (N) single carrier 2 KW (7/16") single carrier 3 KW (7/8" EIA) single carrier
VSWR	≤ 1.35:1
Polarization	Horizontal or Vertical
Gain at 98mhz.	3.8 dB (referred to half-wave dipole)
Half power beam width	E plane ± 35ƒ H plane ± 75ƒ
Lightning protection	All metal parts DC grounded

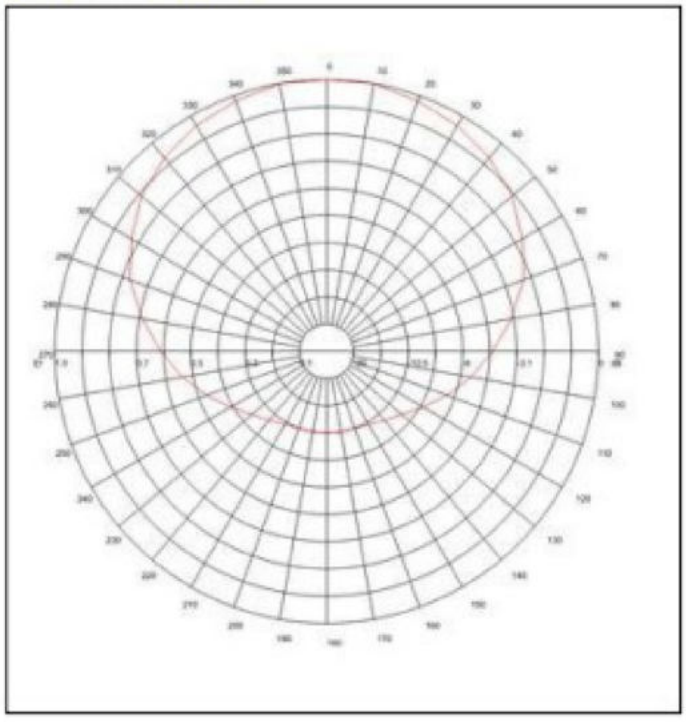
MECHANICAL DATA

Dimensions	1460x1800x180 mm
Weight	10 Kg with hardware mounting
Wind surface	0.19 m^2
Wind load	27 Kg (wind speed at 160 km/h – without radome)
Max wind velocity	200 Km/h
Materials	External parts: inox stainless steel aisi 304 Internal parts: aluminium treated Radome : fiberglass (option)
Icing protection	Feed point radome
Radome color	White (optional)
Mounting	With special pipe clamps 50 ÷ 110 mm dia.

RADIATION PATTERN (MID BAND)

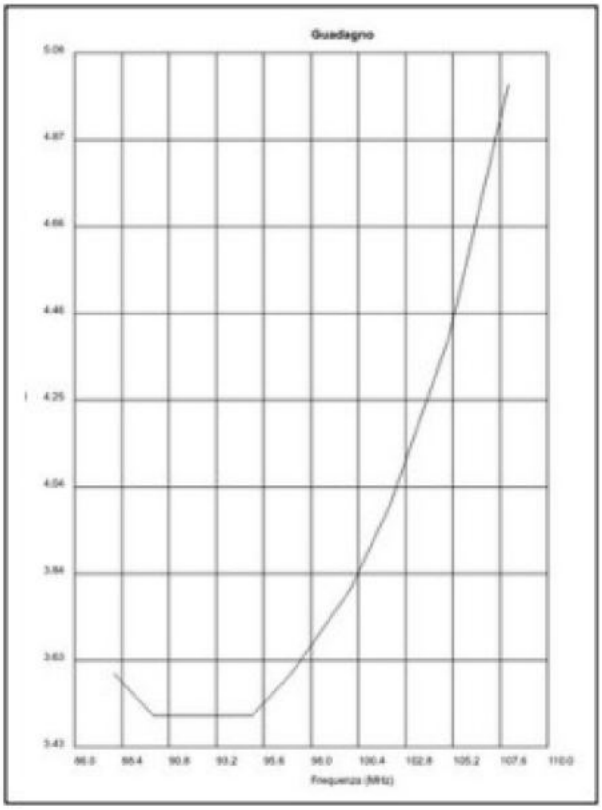


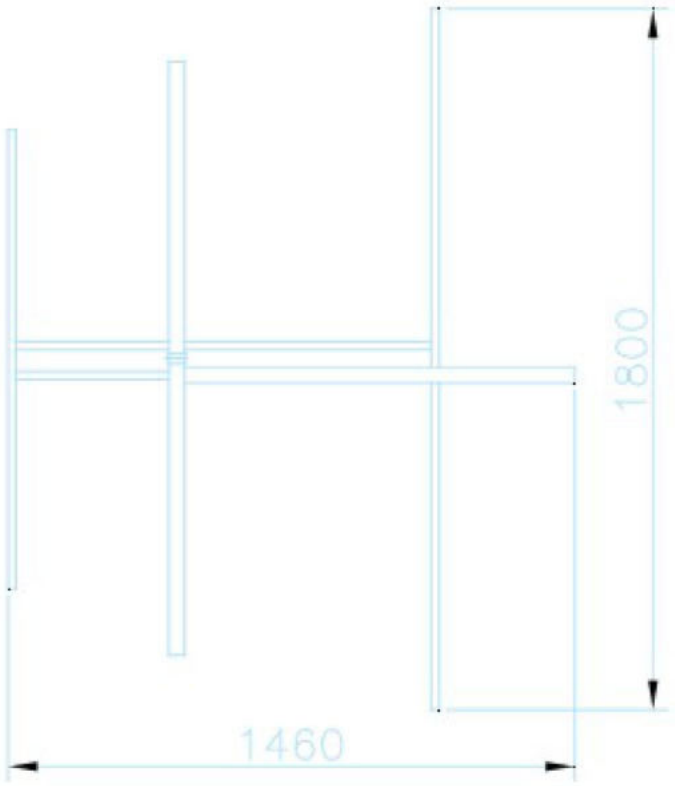
E- PLANE



H- PLANE

DIMENSIONS





Radiations systems with AJ3FENI Yagi antenna

Directional pattern

ELECTRICAL DATA	
Frequency range	87.5 ÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.35:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	White (optional)
Mounting hardware	Inox stainless steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipoles per bay	GainÄ		WeightÄ	Antenna height L	Wind load (v=160 km/h)	COLLINEARS SYSTEMS [3]			
		dB	times	kg	m	kg	2KW	4KW	6KW	10KW
2	1	6.8	5	27	4.4	53.4	AJ3FENIX22	AJ3FENIX24	AJ3FENIX26	-
4	1	9.8	10	54	9.6	106.8	AJ3FENIX42	AJ3FENIX44	AJ3FENIX46	AJ3FENIX410
6	1	11.6	15	81	14.8	160.2	AJ3FENIX62	AJ3FENIX64	-	AJ3FENIX610
8	1	12.8	20	108	20.0	213.6	AJ3FENIX82	AJ3FENIX84	AJ3FENIX86	AJ3FENIX810
12	1	14.6	30	138	30.5	320.4	-	-	-	-

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account..
[2] without mounting hardware
[3] the systems comprised: antennas, cables and splitter – for more details to see catalogue – different version on request

- Gain is provided for vertical polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model : AJ4

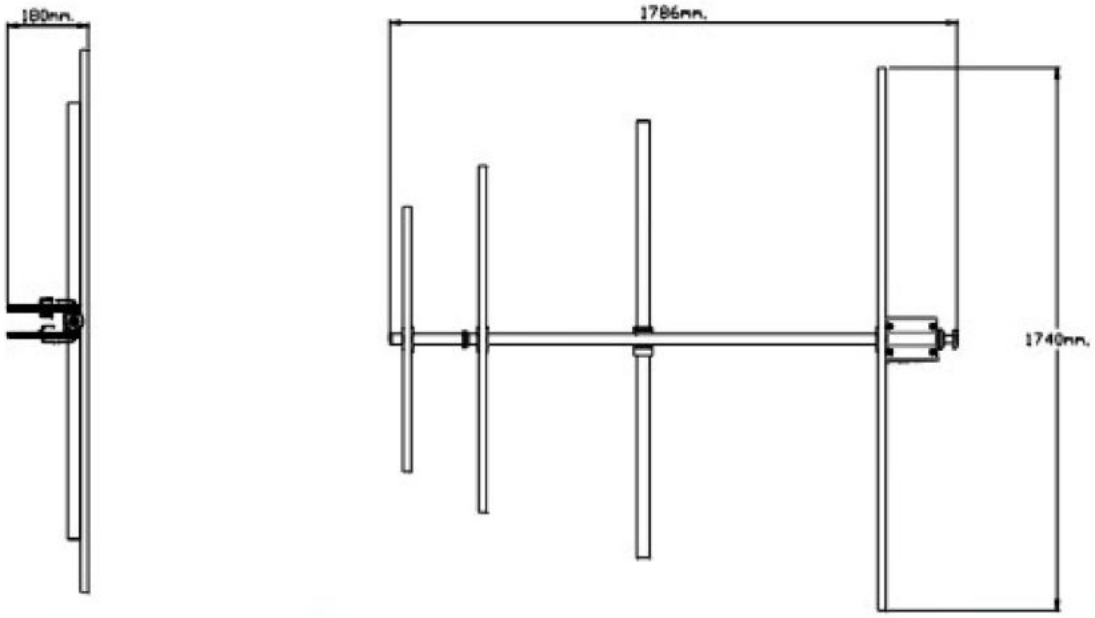
- **Band II**
- **Broadband 87.5÷108 MHz**
- **Demountable**
- **Vertical or Horizontal polarization**
- **Stainless steel AISI 304**
- **Pressurizzable on request**

ELECTRICAL DATA

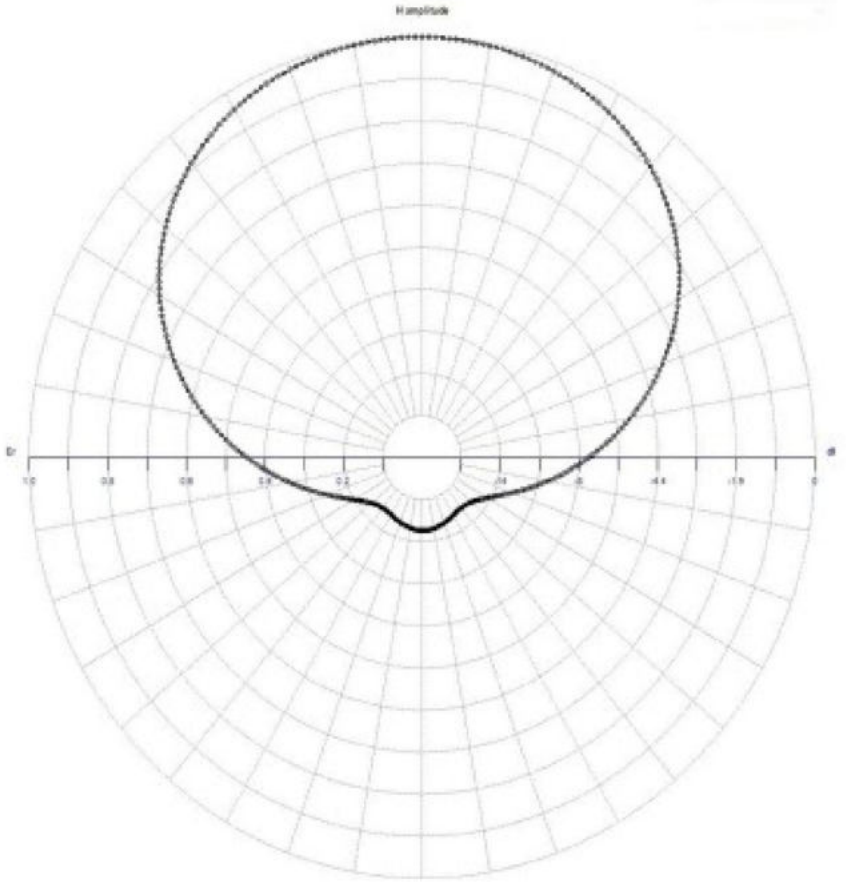
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N)–2KW (7/16")–3.5KW (7/8" EIA)
VSWR	≤ 1.20:1
Polarization	Horizontal or Vertical
Gain	5 dBd average-
Lightning protection	All metal parts DC grounded

MECHANICAL DATA

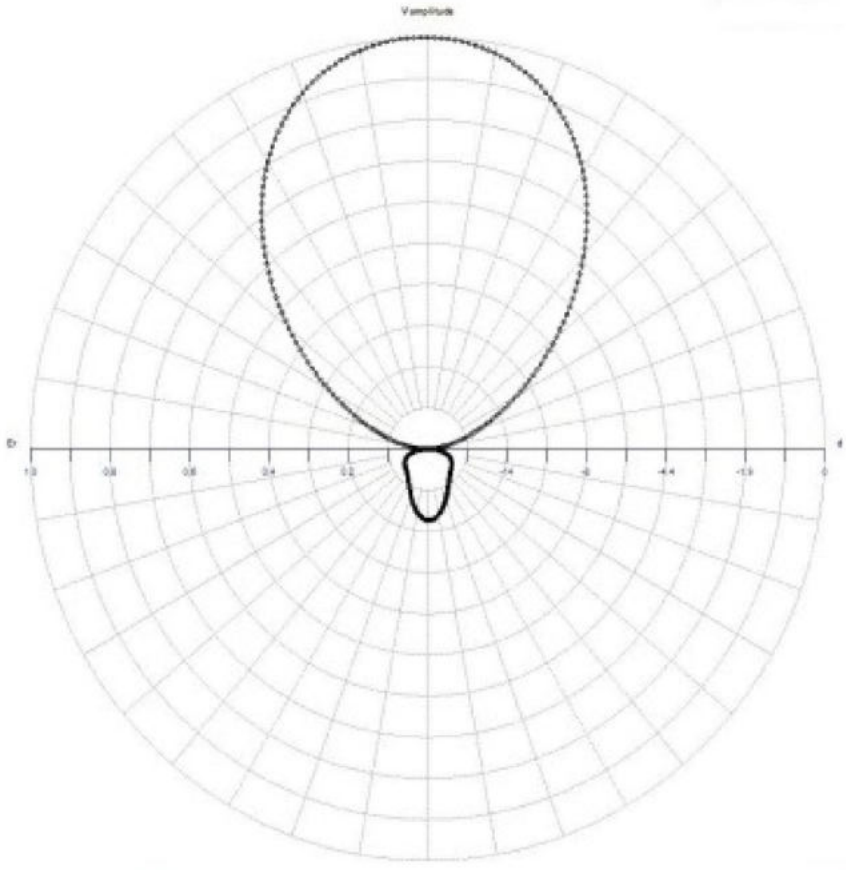
Dimensions	1786x1740x180 mm
Weight	16.5 Kg with hardware mounting
Wind surface	0.21 m^2
Wind load	31.1 Kg (wind speed at 160 km/h – without radome)
Max wind velocity	200 Km/h
Materials	External parts: stainless steel Internal parts: passivated aluminium Radome : PE (option)
Icing protection	Feed transparent (optional)
Radome color	Transparent (optional)
Mounting	With special pipe clamps 50 ÷ 110 mm dia.



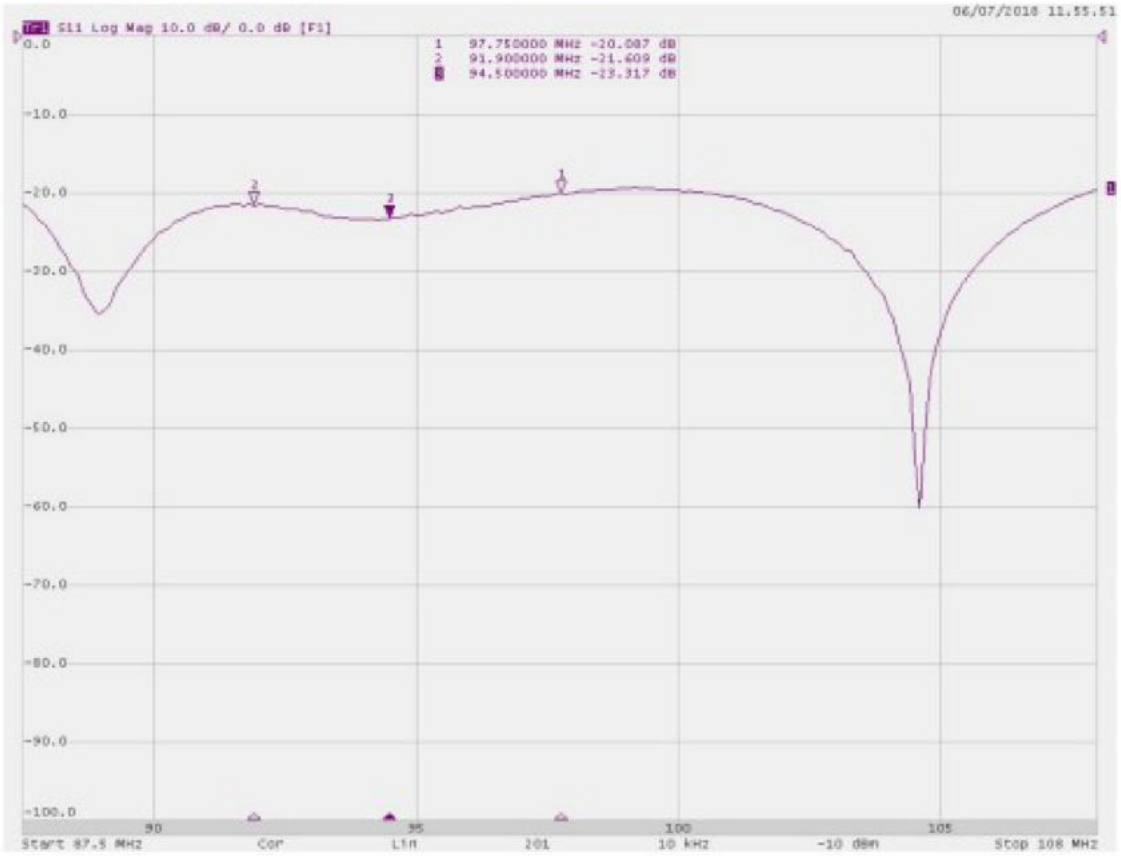
H-plane



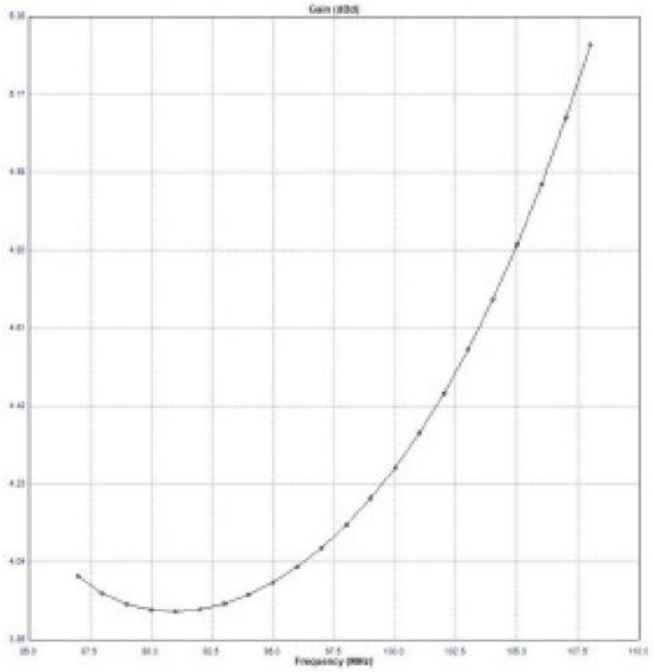
E-plane



Return Loss

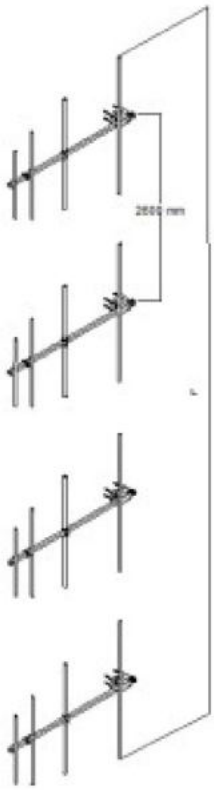


Gain



Radiations systems with AJ4 Yagi antenna

Directional pattern



ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.4:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	White (optional)
Mounting hardware	Hot dip galvanized steel clamps (option)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipoles per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg	COLLINEARS SYSTEMS[3]			
		dB	times				2KW	4KW	6KW	10KW
2	1	8	7.2	27	4.4	53.4	AJ4X22	AJ4X24	AJ4X26	-
4	1	11	14.4	54	9.6	106.8	AJ4X42	AJ4X44	AJ4X46	AJ4X410
6	1	13	21.8	81	14.8	160.2	AJ4X62	AJ4X64	-	AJ4X610
8	1	14	28.8	108	20.0	213.6	AJ4X82	AJ4X84	AJ4X86	AJ4X810
12	1	16	43.6	138	30.5	320.4	-	-	-	-

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account..
[2] without mounting hardware
[3] the systems comprised: antennas, cables and splitter – for more details to see catalogue – different version on request

- Gain is provided for vertical polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model : AJ5

- **Band II**
- **Broadband 87.5÷108 MHz**
- **Demountable**
- **Vertical or Horizontal polarization**
- **Stainless steel AISI 304**
- **Pressurizzable on request**

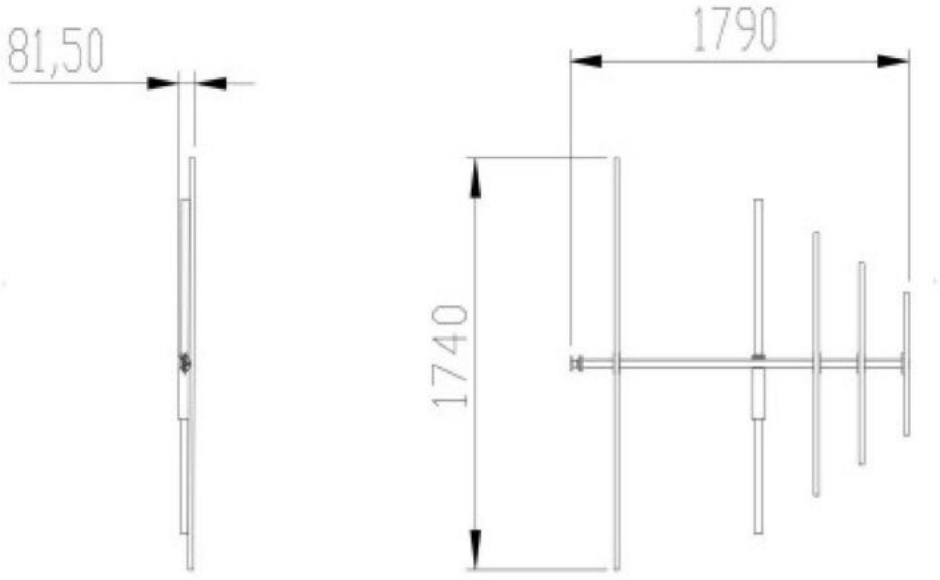
ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N)–2KW (7/16")– 4KW (7/8" EIA)
VSWR	≤ 1.22:1
Polarization	Horizontal or Vertical
Gain	5.7 dB (referred to half-wave dipole) average
Half power beam width	E plane ± 30° H plane ± 55°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA

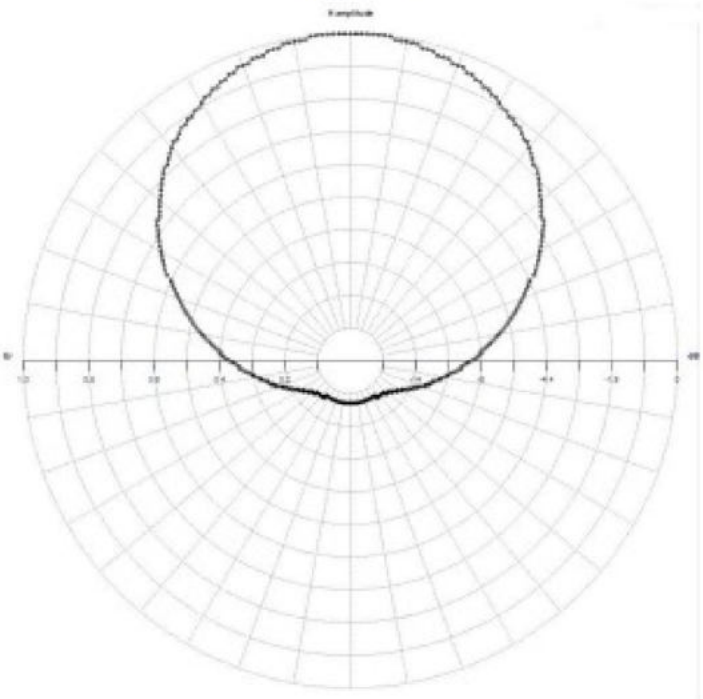
Dimensions	1790x1740x82 mm
Weight	17.5 Kg with hardware mounting
Wind surface	0.25 m²
Wind load	35.1 Kg (wind speed at 160 km/h – without radome)
Max wind velocity	200 Km/h (with rods parafil®)
Materials	External parts: stainless steel Internal parts: passivated aluminium Radome : metalcrilated (option)
Icing protection	Feed point radome (optional)
Radome color	Transparent (optional)
Mounting	With special pipe clamps 50÷110 mm dia.

DIMENSIONS (mm.)

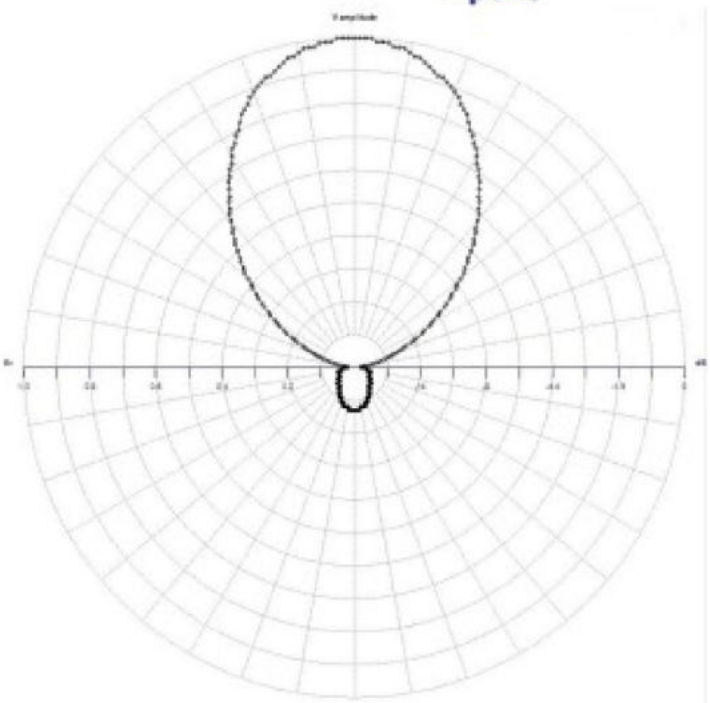


RADIATION PATTERN (MID BAND)

H-plane

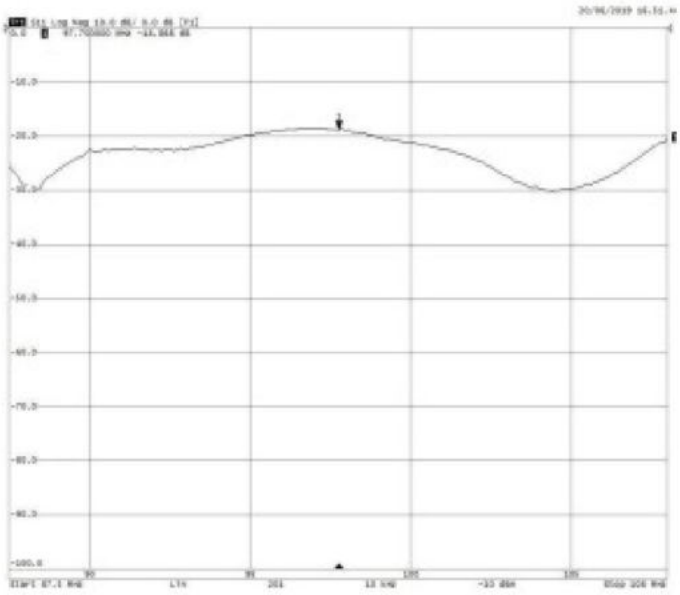


E-plane

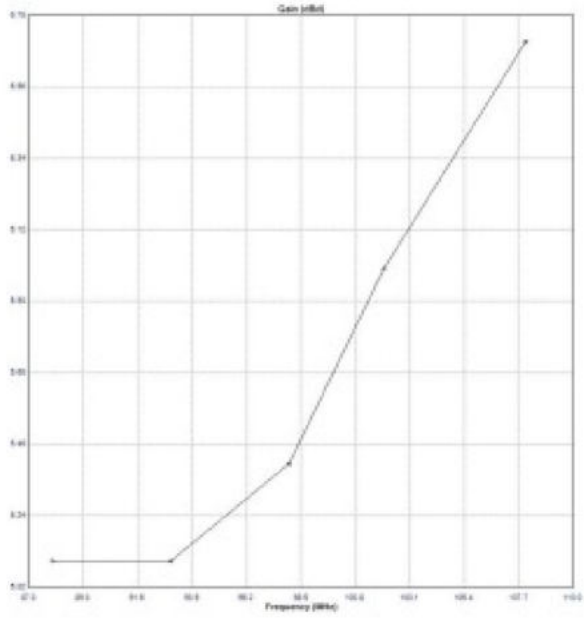


Return Loss

dB



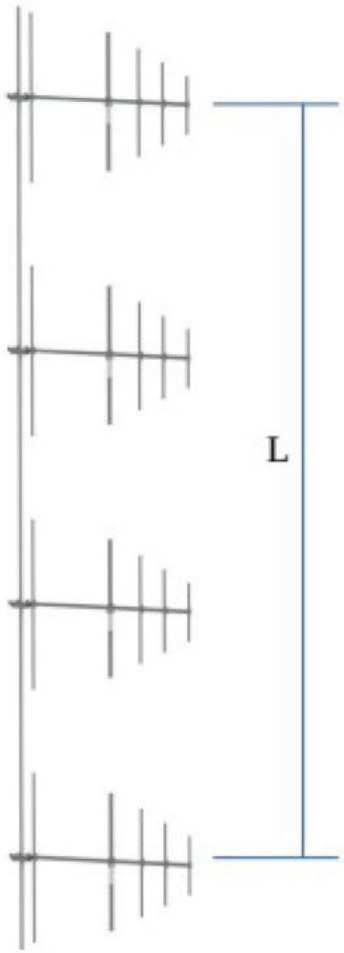
gain



Freq. in MHz

Radiations systems with AJ5 Yagi antenna

Directional pattern



ELECTRICAL DATA

Frequency range	87.5 ÷ 108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	Transparent (optional)
Mounting hardware	Stainless steel clamps (option)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipoles per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg	COLLINEARS SYSTEMS[3]			
		dB	times				2KW	4KW	6KW	10KW
2	1	9.0	7.9	31	4.4	61.4	AJ5X22	AJ5X24	AJ5X26	-
4	1	12.0	15.8	62	9.6	122.8	AJ5X42	AJ5X44	AJ5X46	AJ5X410
6	1	13.8	24	93	14.8	184.2	AJ5X62	AJ5X64	-	AJ5X610
8	1	15.0	31.6	124	20.0	250.6	AJ5X82	AJ5X84	AJ5X86	AJ5X810
12	1	16.8	47.8	162	30.5	368.4	-	-	-	-

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account..
[2] without mounting hardware
[3] the systems comprised: antennas, cables and splitter – for more details to see catalogue – different version on request

- Gain is provided for vertical polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

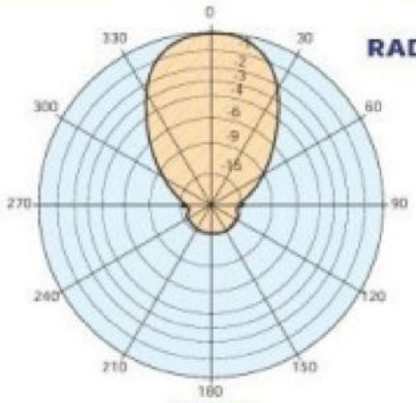
Model DPA1

- **Band II panel**
- **Broadband 87.5| 108 MHz**
- **Demountable**
- **Vertical or Horizontal polarization**
- **Stainless steel AISI 304**
- **Directional pattern**

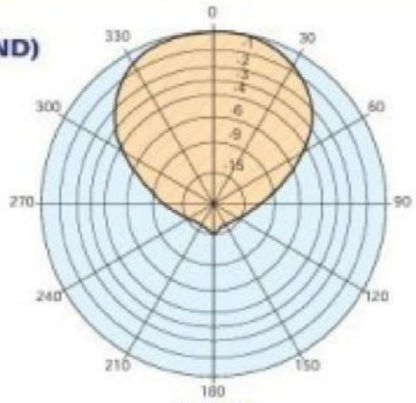
ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N) – 2KW (7/16") – 3.5KW (7/8" EIA)
VSWR	≤ 1.25:1
Polarization	Horizontal or Vertical
Gain	4.5 dB (refered to half-wave dipole)
Half power beam width	E plane ± 38° H plane ± 68°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	1400x1000x2000 mm
Weight	32 kg ref. stainless steel
Wind surface	0.13 m² (side) 0.56 m² (front)
Wind load	108 kg (front - wind speed at 160 km/h)
Max wind velocity	200 km/h.
Materials	Reflector: hot dip. galvanized Dipole: stainless steel Internal parts: passivated aluminium Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50| 110 mm dia.

RADIATION PATTERN (MID BAND)



E-Plane



H-Plane

VSWR

Freq. in MHZ

TELECFE BROADCAST SOLUTIONS
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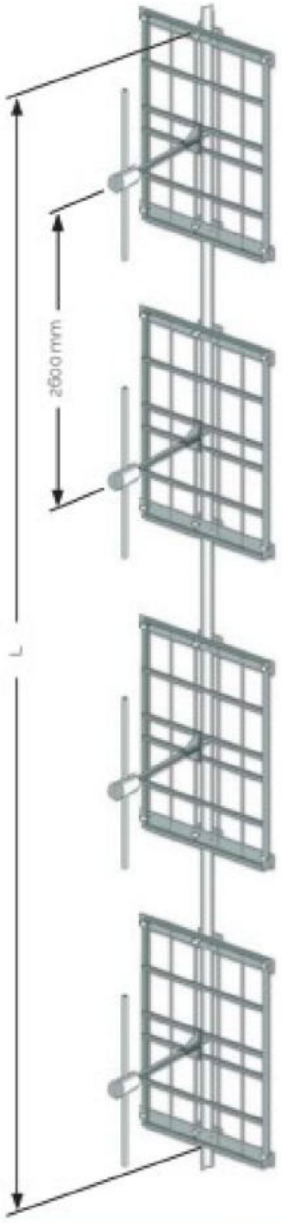
Model DPA1

Radiations systems with DPA1 antenna

Directional pattern



ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome	Optional
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Panels per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)	COLLINEARS SYSTEMS [3]			
		dB	times	kg	m	kg	2 KW	4 KW	6 KW	10 KW
2	1	7.5	5.6	64	4.6	216	DPA1X22	DPA1X24	DPA1X26	-
4	1	10.5	11.3	128	9.8	432	DPA1X42	DPA1X44	DPA1X46	DPA1X410
6	1	12.3	16.9	192	15.0	678	DPA1X62	DPA1X64	-	DPA1X610
8	1	13.5	22.5	256	20.2	864	DPA1X82	DPA1X84	DPA1X86	DPA1X810
12	1	15.3	33.8	384	30.6	1296	-	-	-	-

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] The systems comprised: antennas, cables and splitter – for more details to see catalog – different version on request.

Gain is provided for vertical polarization.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

TELECFE BROADCAST SOLUTIONS
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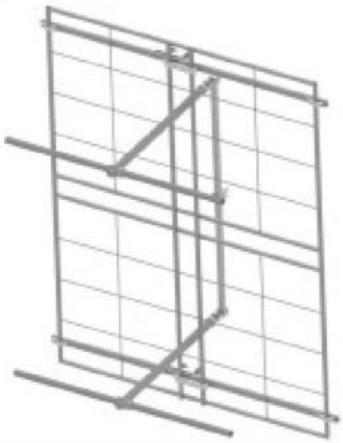
Model DPA2H

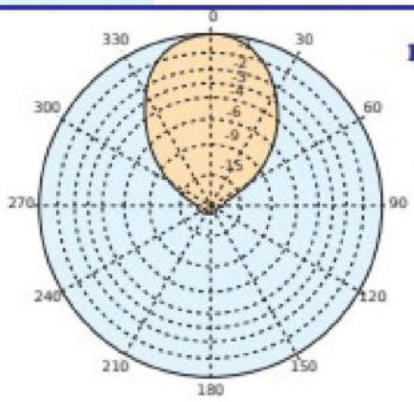
- **Band II panel**
- **Broadband 87.5|108 MHz**
- **Line junction option**
- **Horizontal polarization**
- **Directional pattern**
- **Suitable as a component in various array**



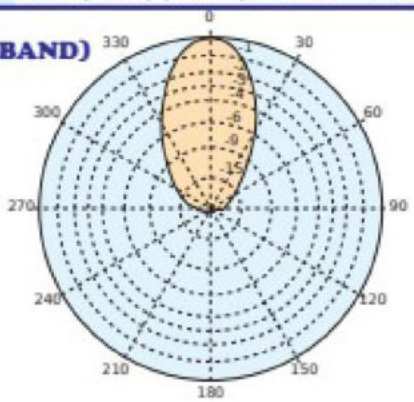
ELECTRICAL DATA	
Frequency range	87.5|108 MHz
Impedance	50 Ohm
Connectors	Two input connectors Type N or 7/16" or 7/8" EIA
Max Power	2x5KW (7/8" EIA) with line junction 1+5/8" 10 kw
VSWR	≤ 1.2:1 average
Polarization	Horizontal
Gain	7.5 dB (refered to half-wave dipole)
Half power beam width	E plane± 35° H plane± 28°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	2200x2200x1050 mm
Weight	75 kg aprox.
Wind surface	0.77 m^2 (front) 0.13 m^2 (side)
Wind load	148 kg (front - wind speed at 160 km/h)
Max wind velocity	200 km/h.
Materials	Reflector: stainless steel AISI 304 Radiating dipoles: stainless steel AISI 304 Internal parts: passivated aluminium Radome: (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50-110 mm. Dia.

RADIATION PATTERN (MID BAND)

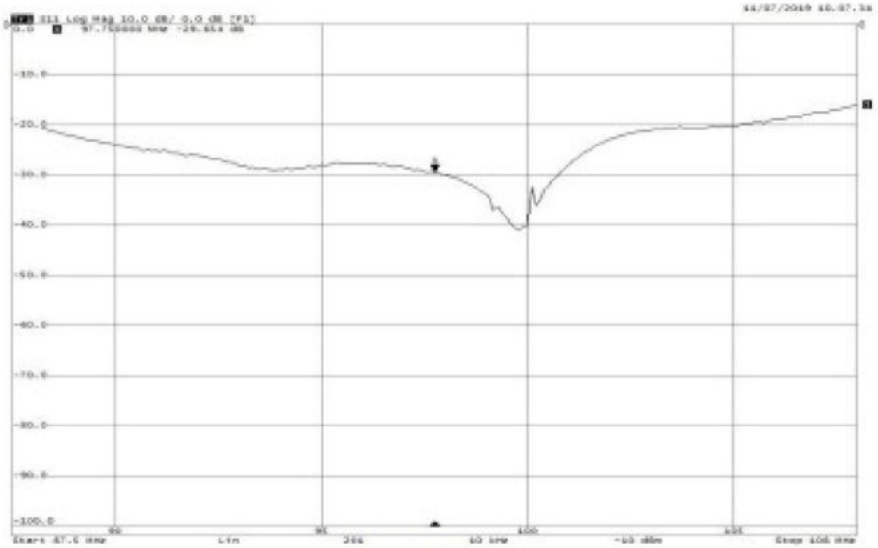


E-Plane



H-Plane

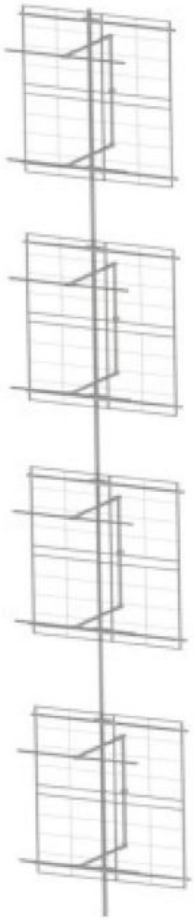
VSWR



Freq. in MHZ

Model DPAH

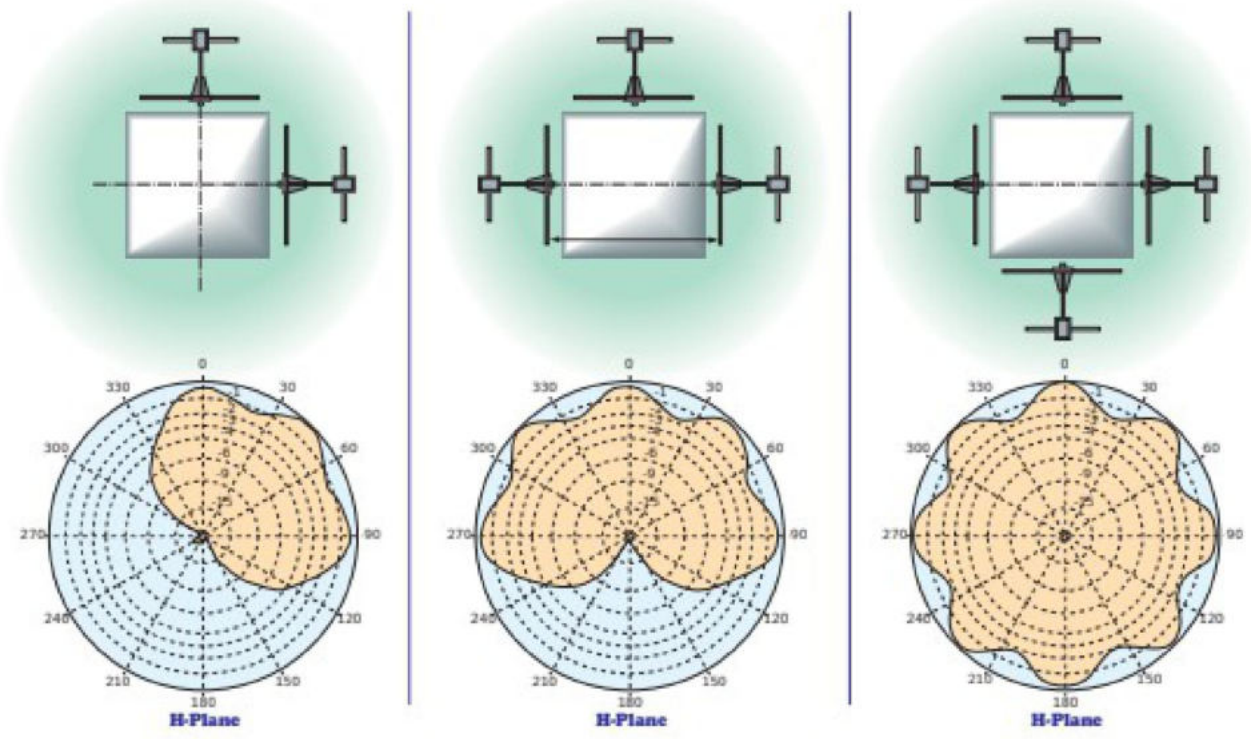
Radiations systems with DPA2H panel
Omnidirectional or directional pattern
Balanced or unbalanced splitting power
High power system
Broadband 87.5 | 108 MHz



ELECTRICAL DATA	
Frequency range	87.5|108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.2:1 average Max
Polarization	Horizontal
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

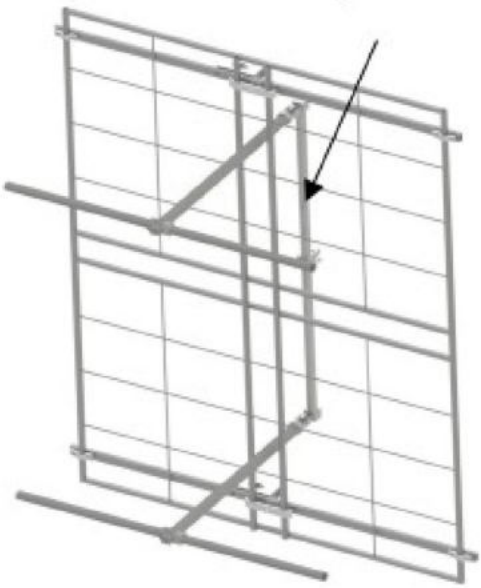
MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes
Radome	Optional
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

HORIZONTAL PATTERNS WITH 2, 3 AND 4 FACES AT 98 MHz



Model DPA2H

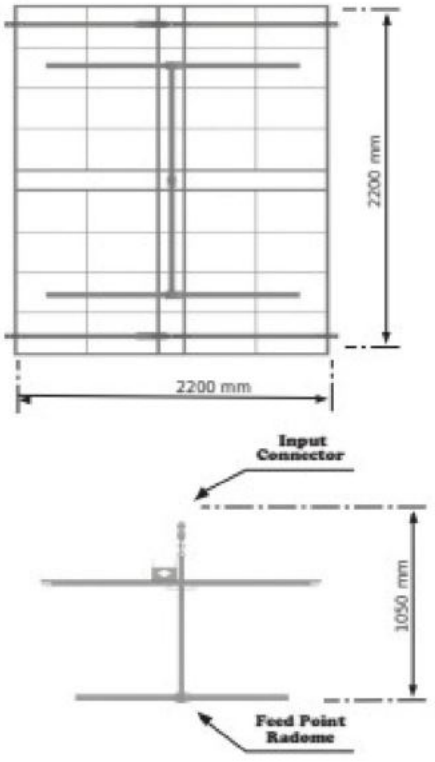
Line junction

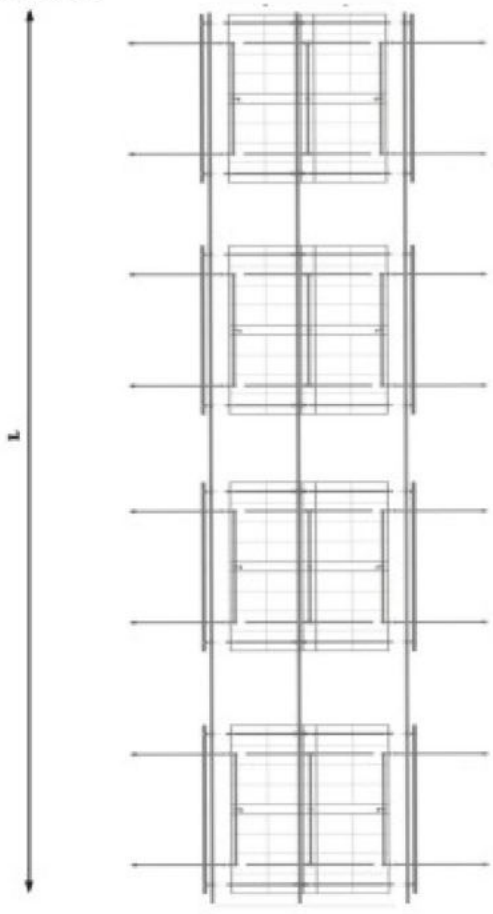


TECHNICAL DATA

Number of bays	Panels per bay	Gain[1]		Weight[2]	Antenna height L	Wind load[3] (v=160 km/h)
		dB	times	kg	m	kg
1	2	4.9	3.1	150	2.5	174
	3	2.8	2.1	225		199
	4	1.3	1.6	300		236
2	1	10.5	13.2	150	5.7	196
	2	7.8	6.5	300		348
	3	5.9	4.5	450		398
	4	4.3	3.3	600		472
4	1	13.5	26.2	300	12.1	592
	2	10.8	13.2	600		696
	3	8.9	9.2	900		796
	4	7.3	6.7	1200		944
6	1	15.3	39.8	450	18.5	888
	2	12.6	20.0	900		1044
	3	10.7	13.7	1350		1194
	4	9.1	10.0	1800		1416
8	1	15.9	55.0	600	24.9	1184
	2	13.8	27.6	1200		1392
	3	11.9	18.3	1800		1592
	4	10.3	13.7	2400		1888

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] According to the tower type, for more details contact us.

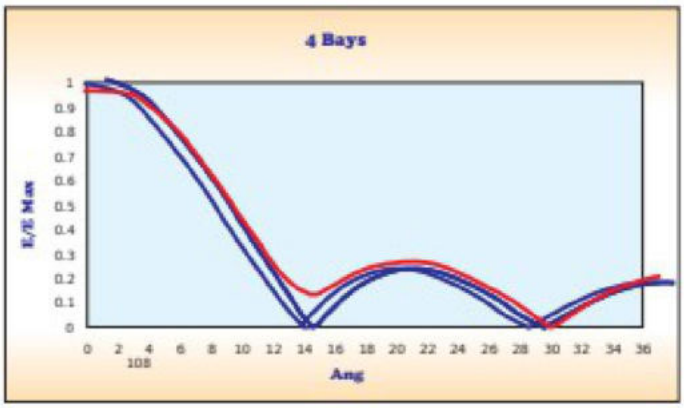


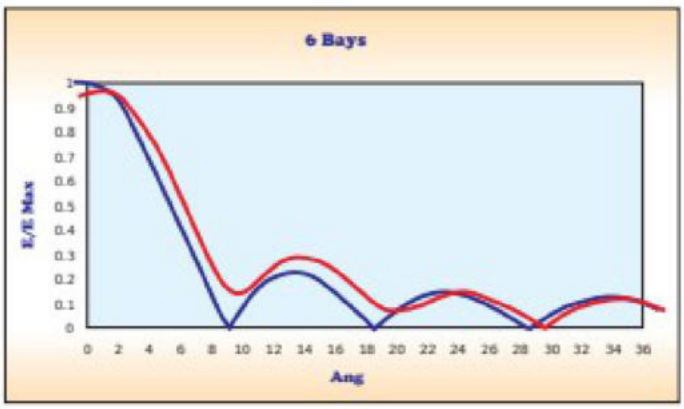


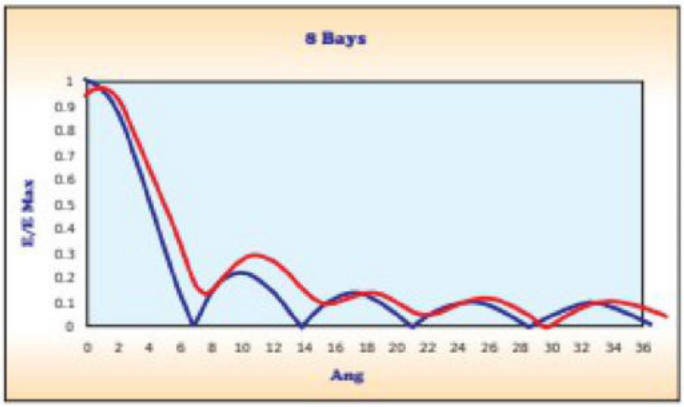
Model DPA2H

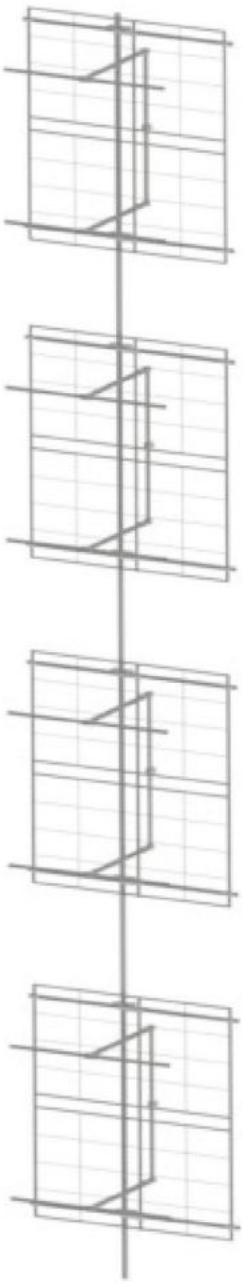
VERTICAL PATTERN

Without null fill
With null fill and beam tilt









Gain is provided for horizontal polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

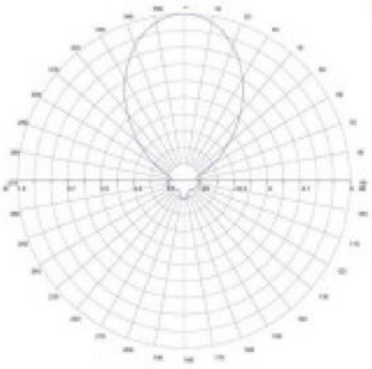
Model : DPA2HT

- **Band II panel**
- **Broadband 87.5÷108 MHz**
- **Demountable**
- **Horizontal polarization**
- **Directional pattern**
- **Suitable as a component in various arrays**

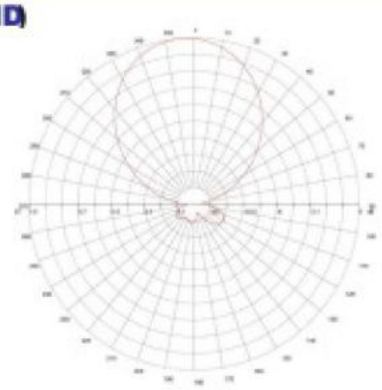
ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	Two input connectors of type 7/8" EIA
Max Power	5KW
VSWR	≤ 1.2:1
Polarization	Horizontal
Gain	6.5 dB (referred to half-wave dipole)
Half power beamwidth:	E plane ± 40° H plane ± 28
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	2500x1800x1050 mm
Weight	75 Kg
Wind surface	0.75 m² (front) 0.18 m² (side)
Wind load Max wind velocity	148 kg (wind speed at 160 km/h) 200 km/h.
Materials	Reflector: hot dip galvanized steel Radiating dipoles: stainless steel Internal parts: passivated aluminium Radome: fibreglass (option)
Icing protection	Feed point radome (optional)
Radome color Mounting	White (optional) With special pipe clamps 50÷ 110 mm dia.

RADIATION PATTERN (MID BAND)



E-plane



H-plane

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Radiations systems with DPA2HT panel

Omnidirectional or directional pattern

Balanced or unbalanced splitting power

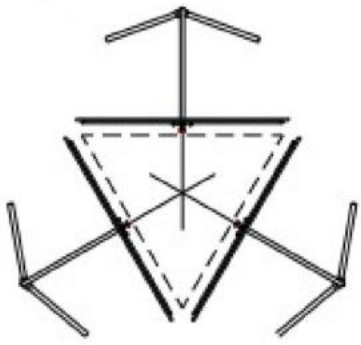
High power systems

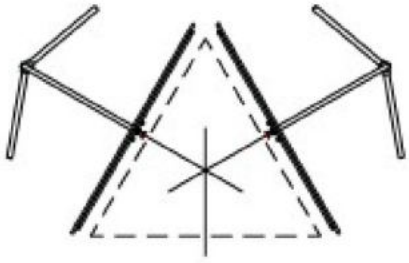
Broadband: 87.5÷108 MHz

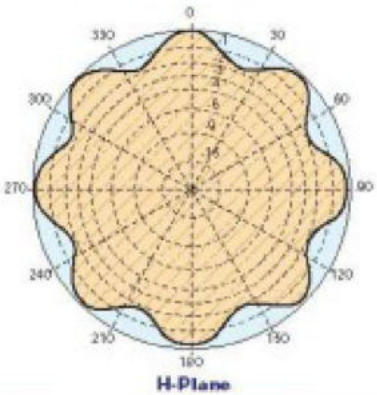
ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.2:1 Max
Polarization	Horizontal
Gain	According to requirement
Horizontal pattern	Any type according to requirement
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half con accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes
Radome color	White (optional)
Mounting hardware	Hot dip galvanized steel (option)
Shipping	As required

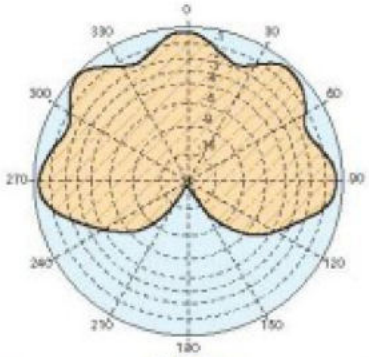
Horizontal patterns With 2 and 3 faces at 98 MHz







H-Plane

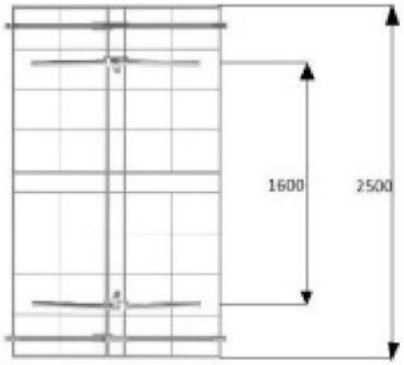


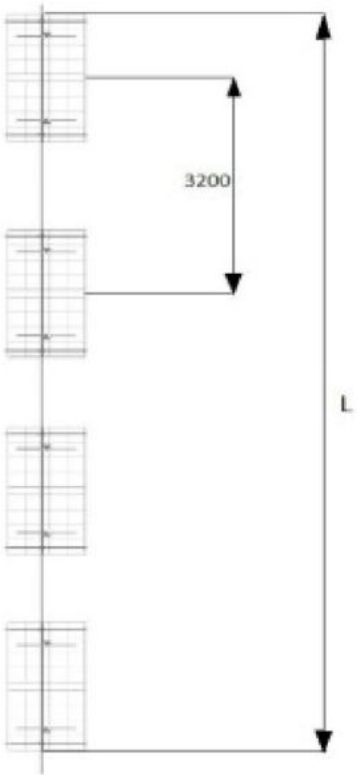
H-Plane

TECHNICAL DATA

Number of bays	Panels per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load[3] (v=160 km/h) kg
		dB	times			
1	2 3	3.31 1.62	2.14 1.45	150 225	2.5	216 324
2	1 2 3	9.52 6.51 4.83	8.95 4.48 3.04	150 300 450	5.7	216 432 648
4	1 2 3	12.72 9.71 8.01	18.71 9.34 6.32	300 600 900	12.1	432 864 1296
6	1 2 3	14.52 11.52 9.81	28.31 14.19 9.57	450 900 1350	18.5	648 1296 1944
8	1 2 3	15.82 12.81 11.12	38.19 19.01 12.94	600 1200 1800	22.4	864 1728 2592

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware
[3] according to the tower type, for more details contact us

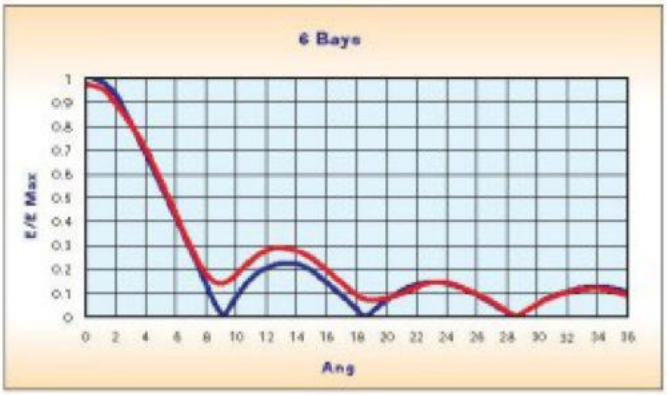


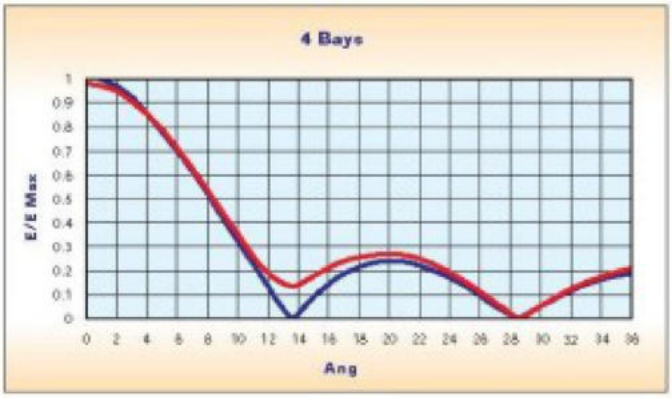


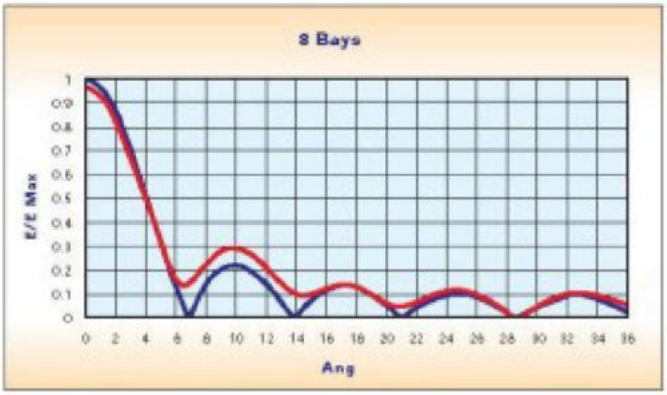
VERTICAL PATTERN

Without null fill

With null fill and beam tilt



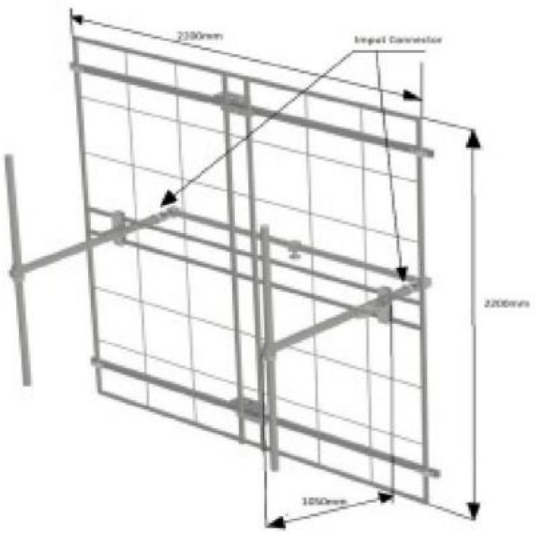




- Gain is provided for horizontal polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model DPA2V

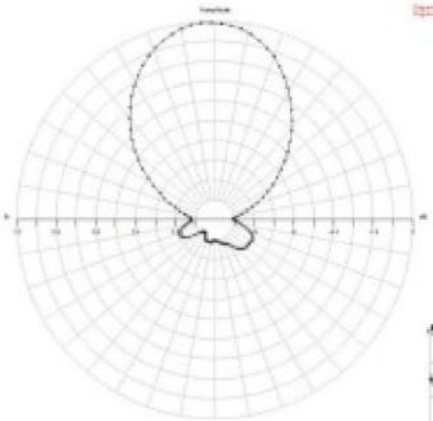
- **Band II panel**
- **Broadband 87.5|108 MHz**
- **Demountable**
- **Vertical polarization**
- **Directional pattern**
- **Suitable as a component in various array**

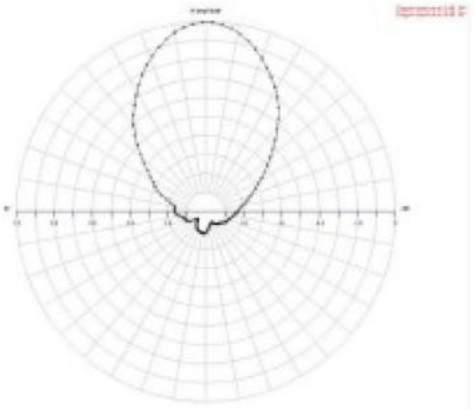


ELECTRICAL DATA	
Frequency range	87.5|108 MHz
Impedance	50 Ohm
Connectors	Two input connectors Type N or 7/16" or 7/8" EIA
Max Power	2x800W (N) – 2x2KW (7/16") 2x2.5KW (7/8" EIA) 2x 4kw (1+5/8") **With line junction**
VSWR	See diagram VSWR
Polarization	Vertical or horizontal
Gain	7.5 dB (refered to half-wave dipole)
Half power beam width	E plane± 35° H plane± 32°
Lightning protection	All metal parts DC grounded

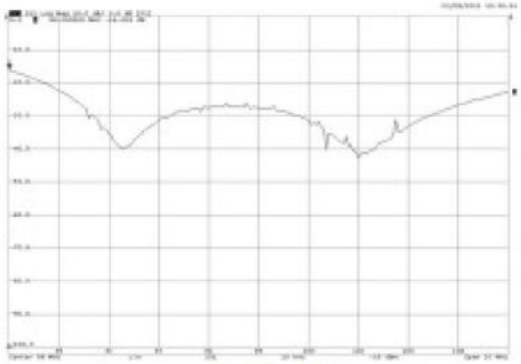
MECHANICAL DATA	
Dimensions	2200x2200x1050 mm
Weight	79 kg ref. stainless steel
Wind surface	0.90 m² (side) 0.22 m² (front)
Wind load	173,7 kg (front - wind speed at 160 km/h)
Max wind velocity	200 km/h.
Materials	Reflector: hot dip. galvanized Dipole: stainless steel Internal parts: passivated aluminium Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50÷110 mm dia.

RADIATION PATTERN (MID BAND)





VSWR



Freq. in MHZ

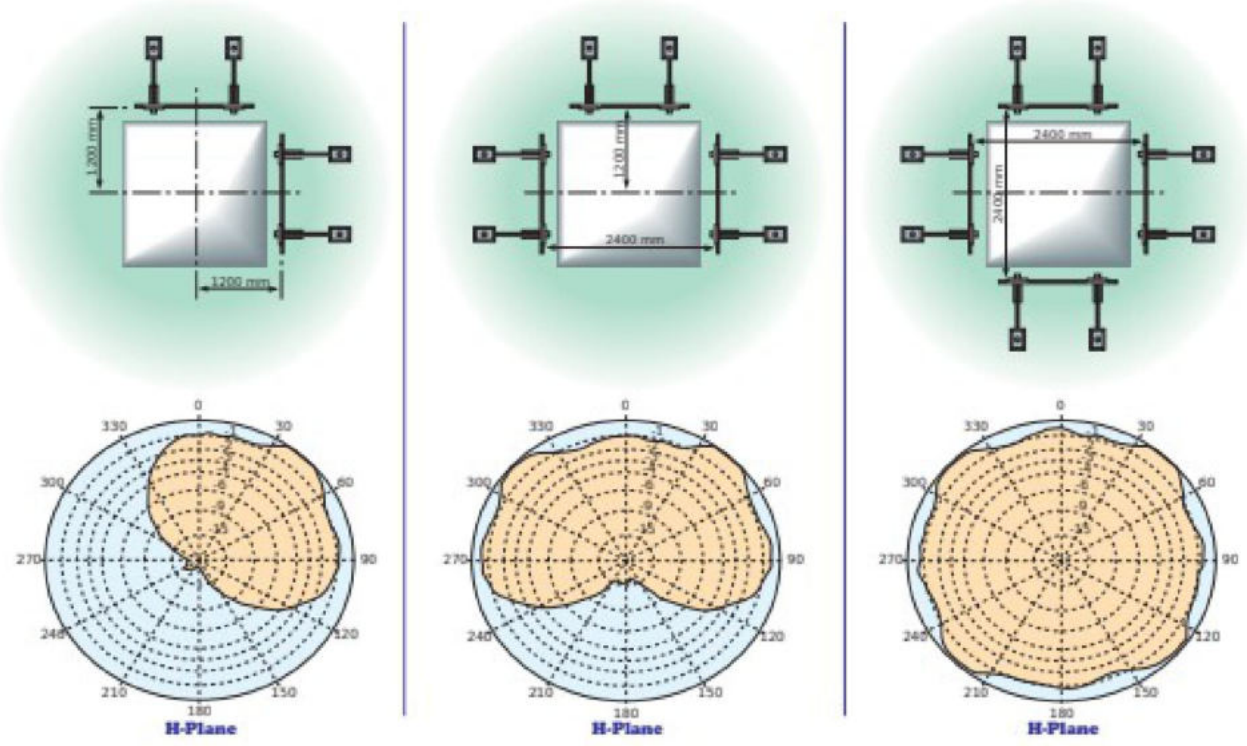
Model DPA2V

Radiations systems with DPA2V panel
Omnidirectional or directional pattern
Balanced or unbalanced splitting power
High power system
Broadband 87.5 | 108 MHz

ELECTRICAL DATA	
Frequency range	87.5|108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome	Optional
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

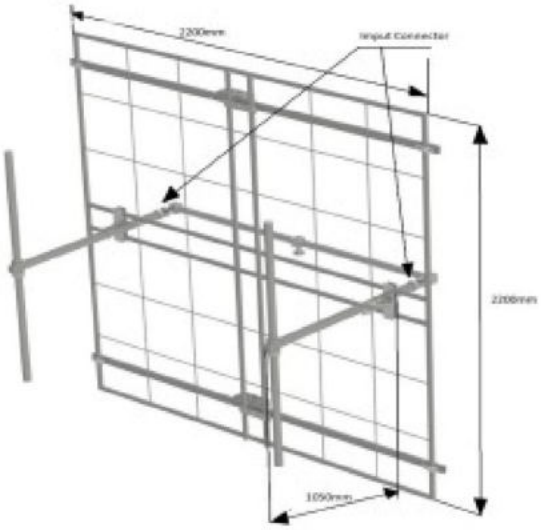
HORIZONTAL PATTERNS WITH 2, 3 AND 4 FACES AT 98 MHz



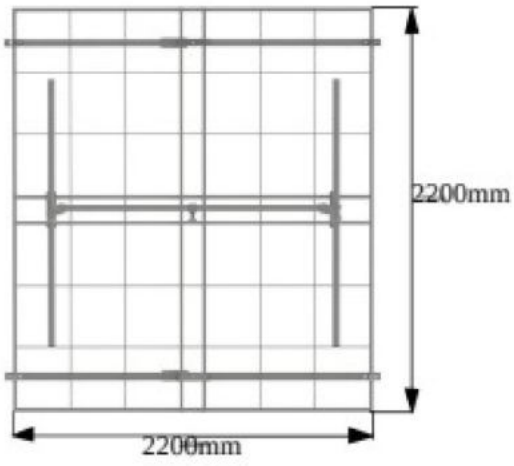
Model DPA2V

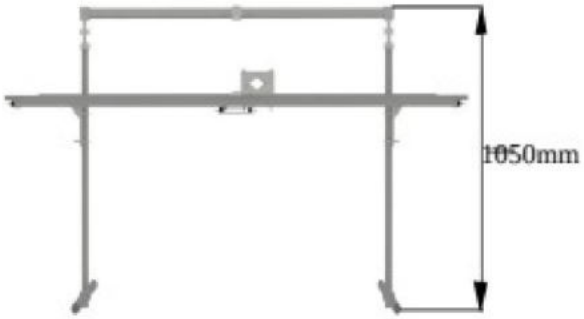
TECHNICAL DATA

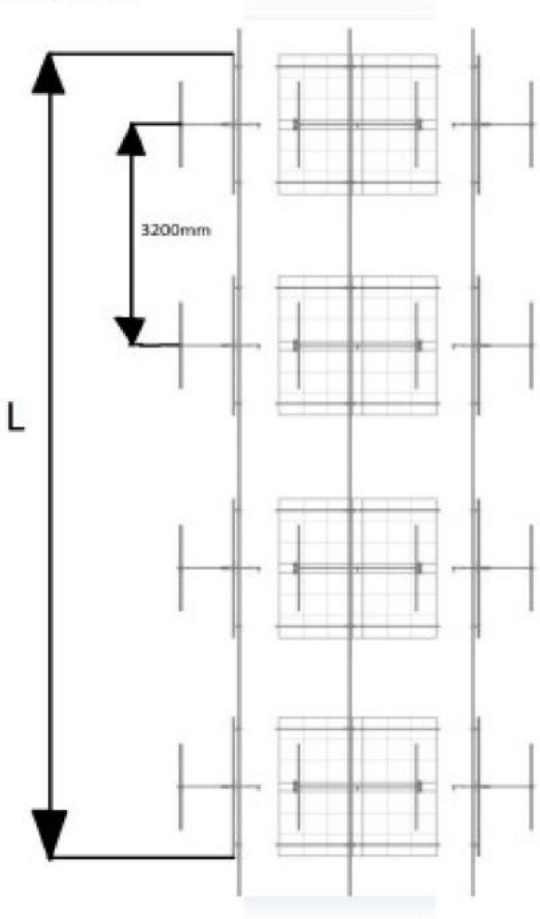
Number of bays	Panels per bay	Gain[1] dB	Gain[1] times	Weight[2] kg	Antenna height L m	Wind load[3] (v=160 km/h) kg
1	2	5.1	3.2	158	2.2	210
	3	3.1	2.0	237		259
	4	2.0	1.6	316		303
2	1	10.8	12.0	158	5.4	348
	2	8.1	6.5	316		402
	3	6.1	4.1	474		518
	4	5.2	3.3	632		606
4	1	13.9	25.5	316	11.8	695
	2	11.1	12.9	632		804
	3	9.3	8.5	984		1036
	4	8.1	6.5	1264		1212
6	1	15.5	35.5	474	18.2	1044
	2	12.9	19.5	984		1206
	3	10.8	12.0	1422		1554
	4	9.6	9.1	1896		1818
8	1	17.1	51.3	632	24.6	1390
	2	14.2	26.3	1264		1608
	3	12.1	16.2	1896		2072
	4	11.2	13.2	2528		2424



[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] According to the tower type, for more details contact us.







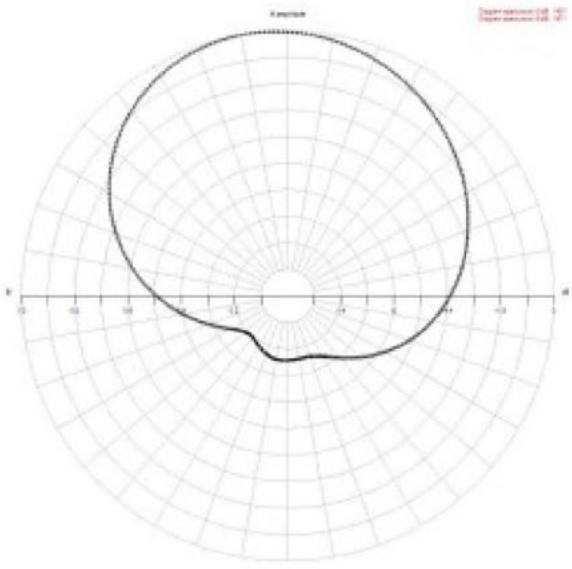
Model : DPA10

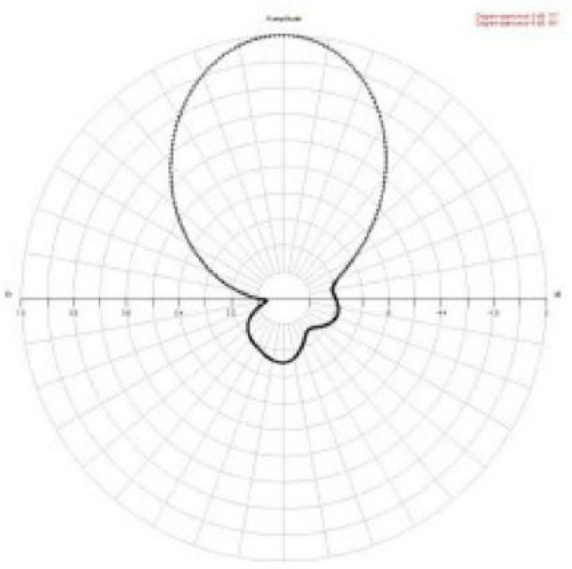
- Band II panel
- Broadband 87.5 ÷108 MHz
- Demountable
- Vertical or Horizontal polarization
- Stainless steel AISI 304
- Directional pattern

ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	1+5/8" EIA
Max Power	10KW (1+5/8" EIA)
VSWR	See table
Polarization	Horizontal or Vertical
Gain	4.3 dB (refered to half-wave Dipole) average
Half power beam width	E plane see diagram H plane see diagram
Lightning protection	All metal parts DC grounded

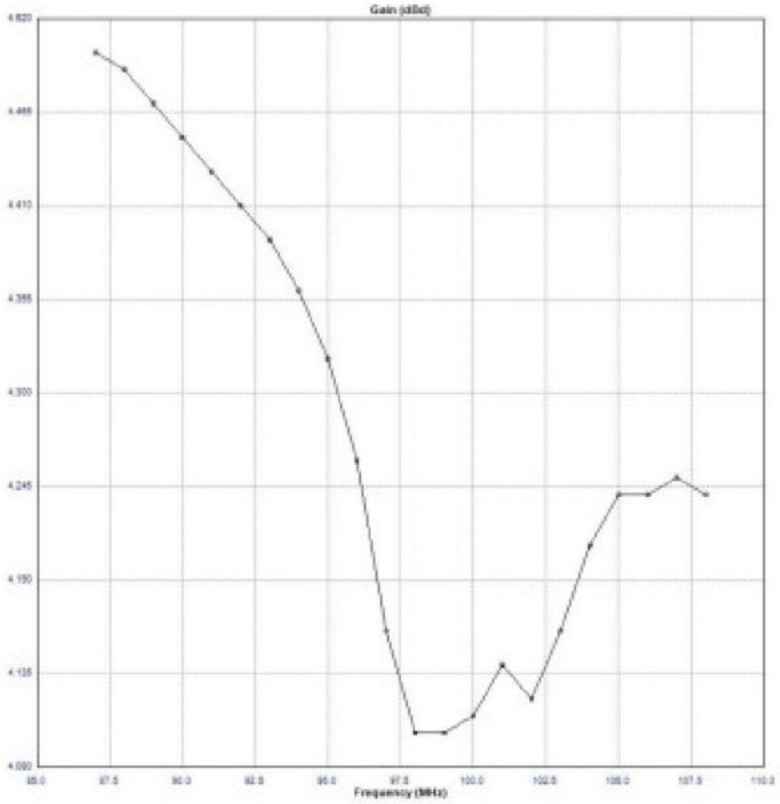
MECHANICAL DATA	
Dimensions	2125x720x990 mm
Weight	32 Kg ref. stainless steel
Wind surface	0.13 m^2 (side) 0.56 m^2 (front)
Wind load **Max wind velocity**	108 kg (front - wind speed at 160 km/h) 200 km/h.
Materials	Reflector: stainless steel AISI 304 Dipole: stainless steel AISI 304 Internal parts: treated aluminium Radome: PTFE
Icing protection	Feed point radome
Radome color	White
Mounting	With special pipe clamps 50 ÷ 110 mm dia.

RADIATION PATTERN (MID BAND)

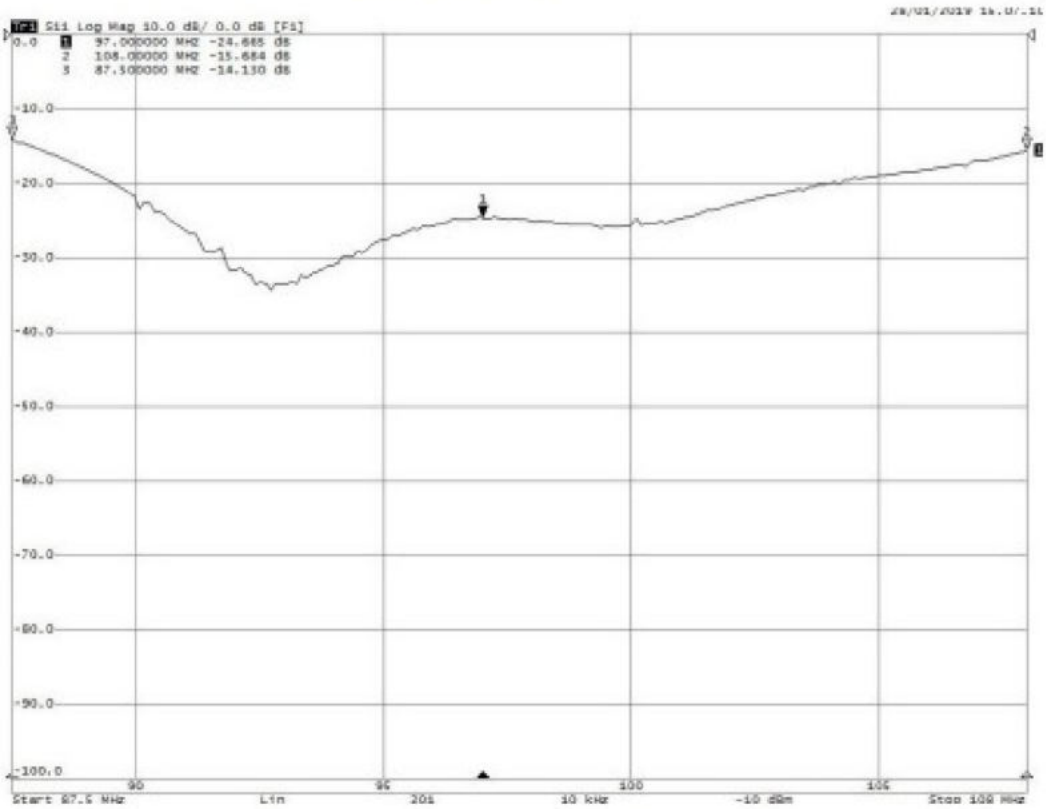




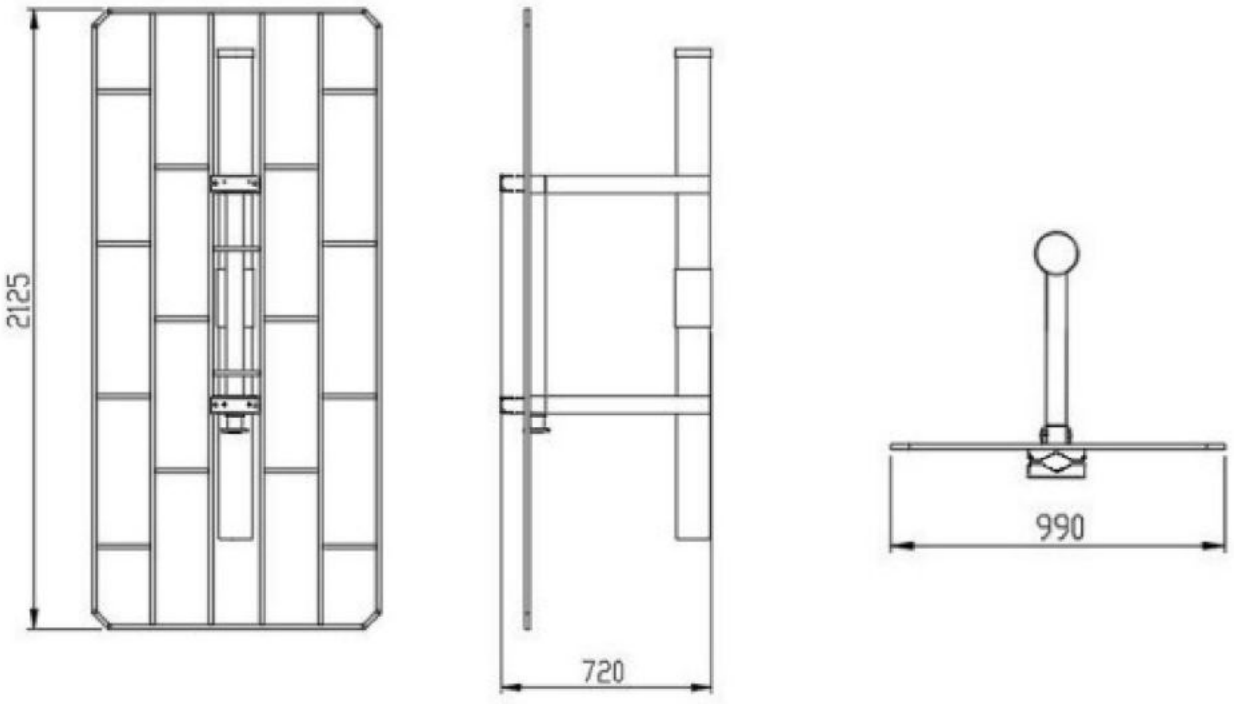
GAIN



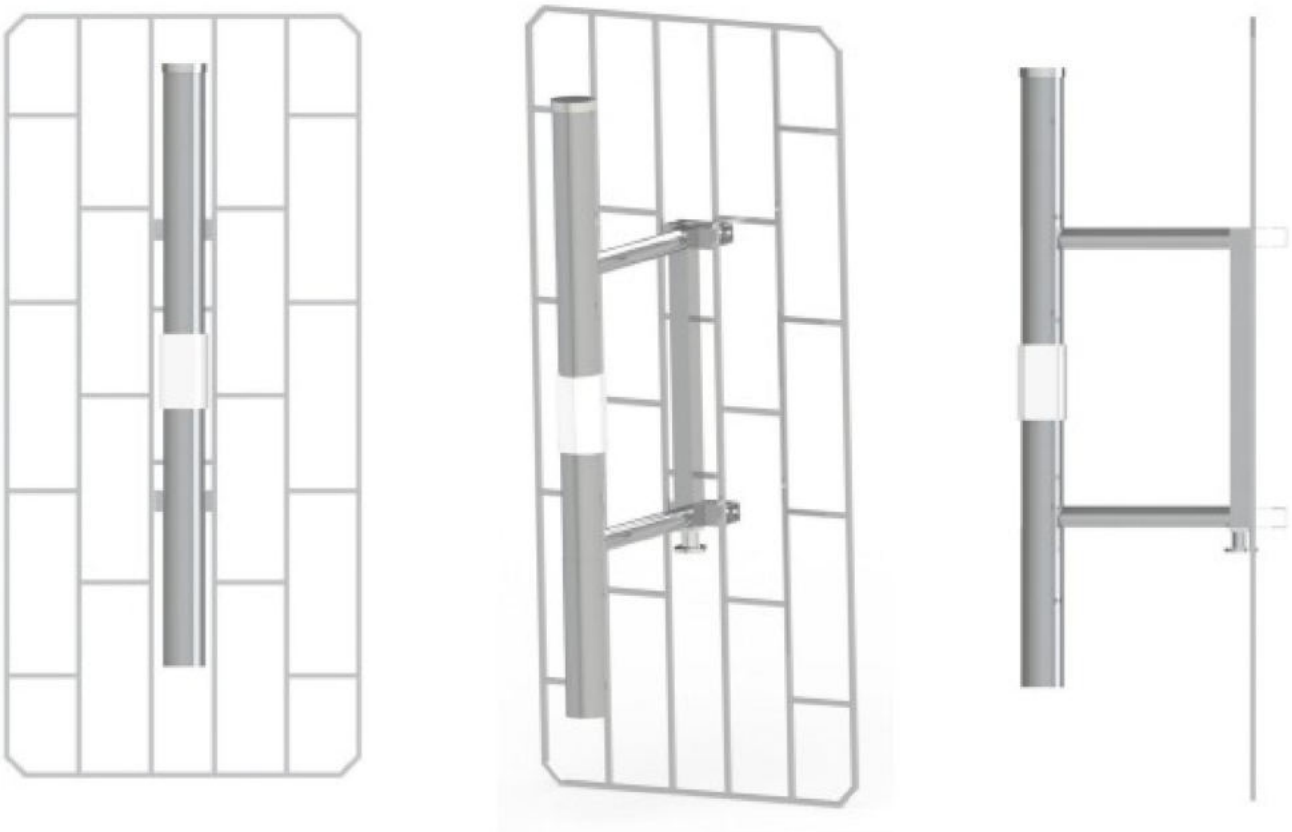
RETURN LOSS



Dimensions mm.

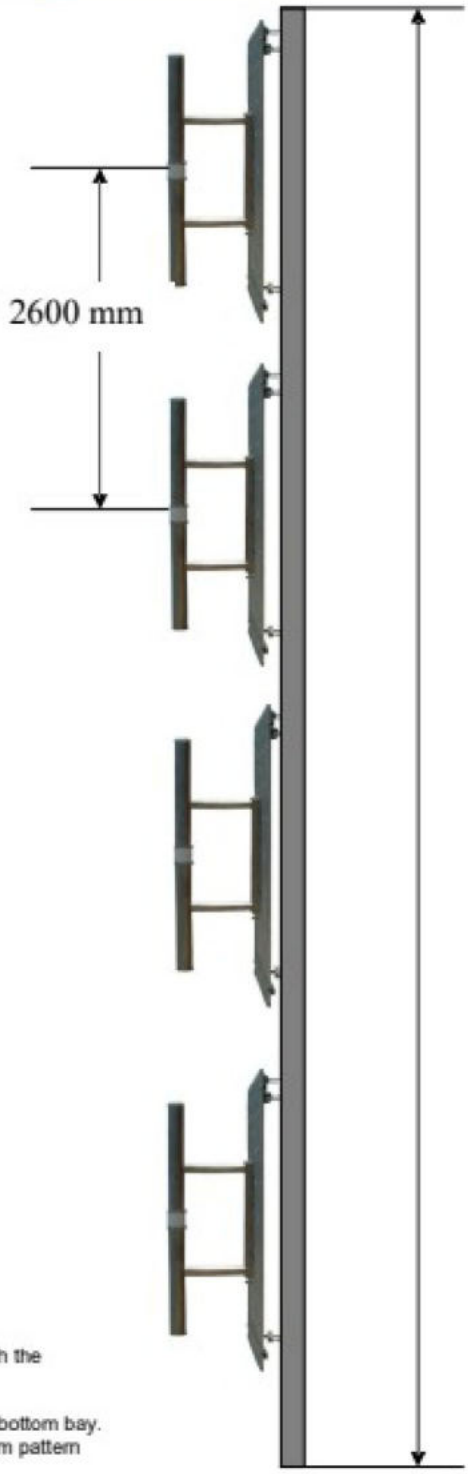


Various view



Radiations systems with DPA10 antenna

Directional pattern



ELECTRICAL DATA	
Frequency range	87.5 ÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	White
Mounting hardware	Stainless steel clamps
Shipping	As required

TECHNICAL DATA midle band

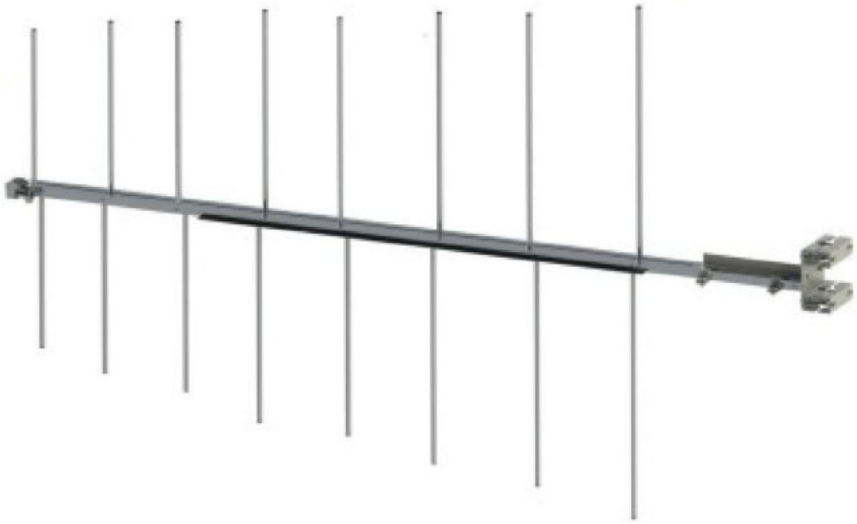
Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
2	1	7.3	5.6	64	4.6	216
4	1	10.3	11.3	128	9.8	432
6	1	12	16.9	192	15.0	678
8	1	13.3	22.5	256	20.2	864
12	1	15.1	33.8	384	30.6	1296

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account..
[2] without mounting hardware
[3] the systems comprised: antennas, cables and splitter – for more details to see catalog different version on request

- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

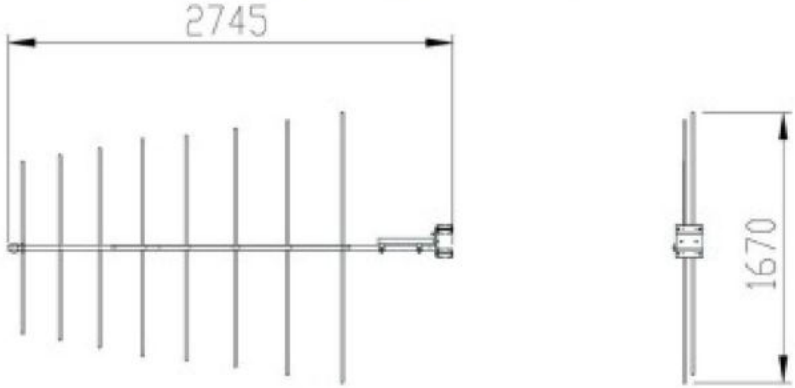
Models: LGPRD-LGPRD/I-LGPRD/S

- **Band II**
- **Broadband 87.5|108 MHz**
- **Demountable**
- **V or H polarization**



ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N) – 2KW (7/16") – 2.5KW (7/8" EIA)
VSWR	≤ 1.35:1 in the channel 1.12:1 with fine matcher
Polarization	Horizontal or Vertical
Gain	7.0 dB (refered to half-wave dipole)
Half power beam width	E plane ± 30° H plane ± 45°
Lightning protection	All metal parts DC grounded

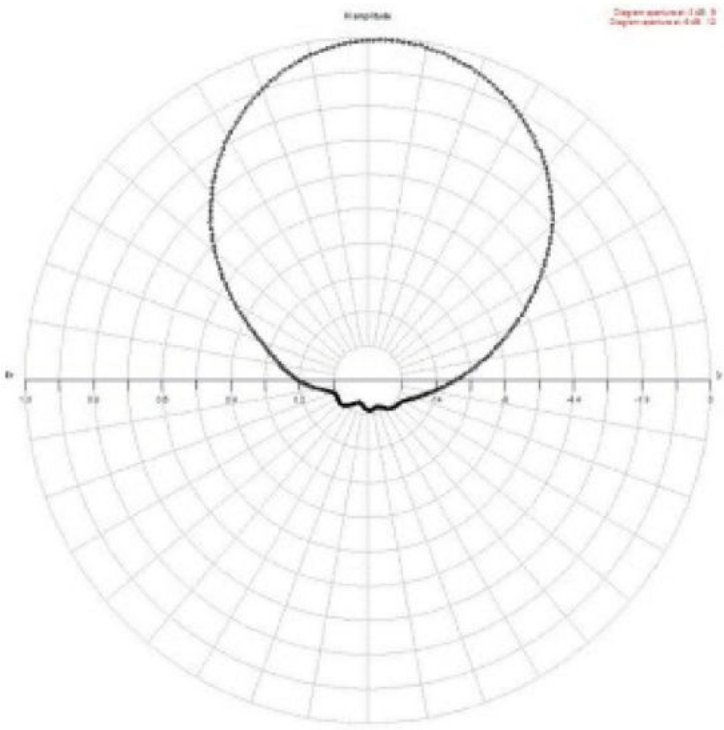
MECHANICAL DATA	
Dimensions	See dimensions
Weight	9 kg LGPRD - 20 kg LGPRD/I approx.
Wind surface	0.27 m^2
Wind load	41 kg (wind speed at 160 km/h)
Max wind velocity	140 km/h.
Materials	LGPRD: Aluminium LGPRD/I: Stainless steel LGPRD/S: Welded version
Mounting	With special pipe clamps 50 | 110 mm dia. Support weight 6 kg approx.



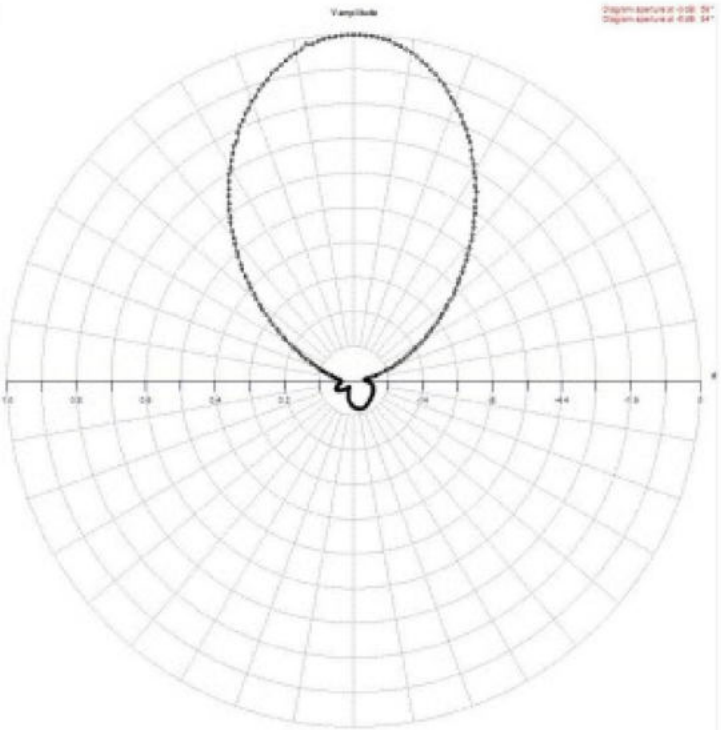
DIMENSIONS mm.

RADIATION PATTERN (MID BAND)

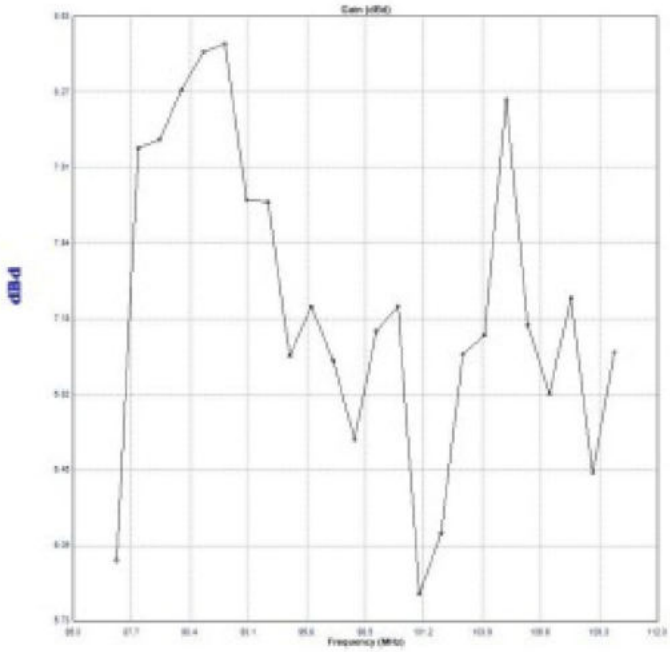
H-Plane



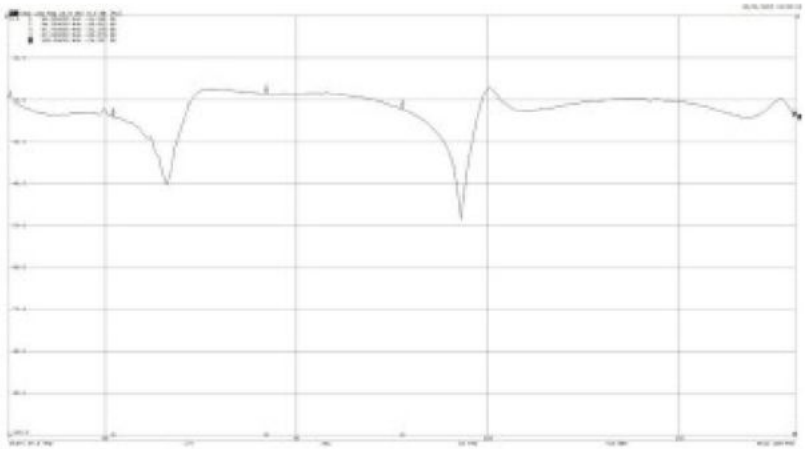
E-Plane



GAIN



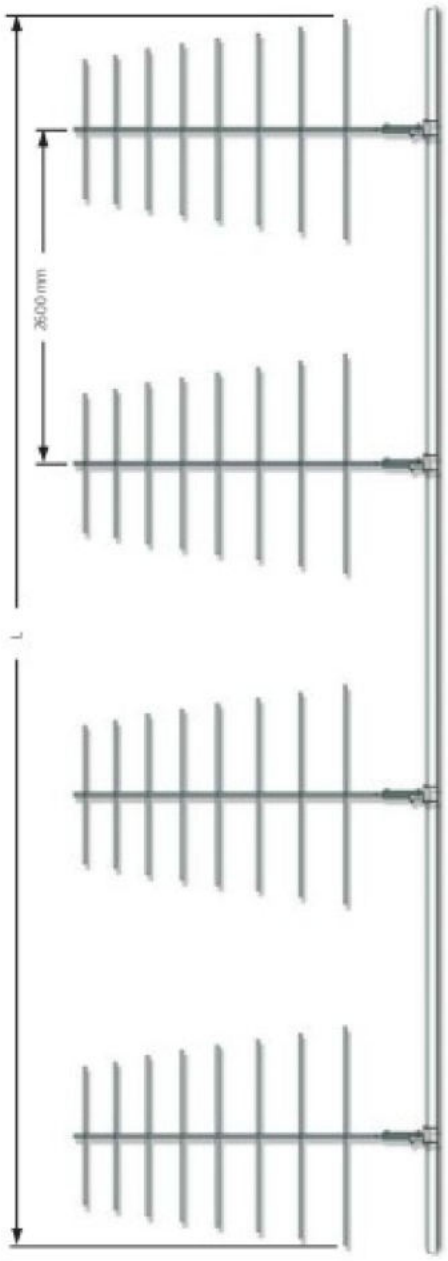
RETURN LOSS



Models: LGPRD-LGPRD/I-LGPRD/S

Radiations systems with LGPRD antenna

Directional pattern



ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.35:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)
		dB	times	kg	m	kg
2	1	10.0	10.0	18	4.3	82.0
4	1	13.0	20.0	36	9.5	164.0
6	1	14.8	30.0	54	14.7	246.0
8	1	16.0	40.0	72	20.0	328.0
12	1	17.8	60.0	108	30.3	492.0

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Example for LGPRD (aluminium) without mounting hardware.

Gain is provided for vertical polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model: LGPRDSM

- **Band II**
- **Broadband 87.5÷108 MHz**
- **Demountable (Welding option)**
- **Vertical or Horizontal polarization**

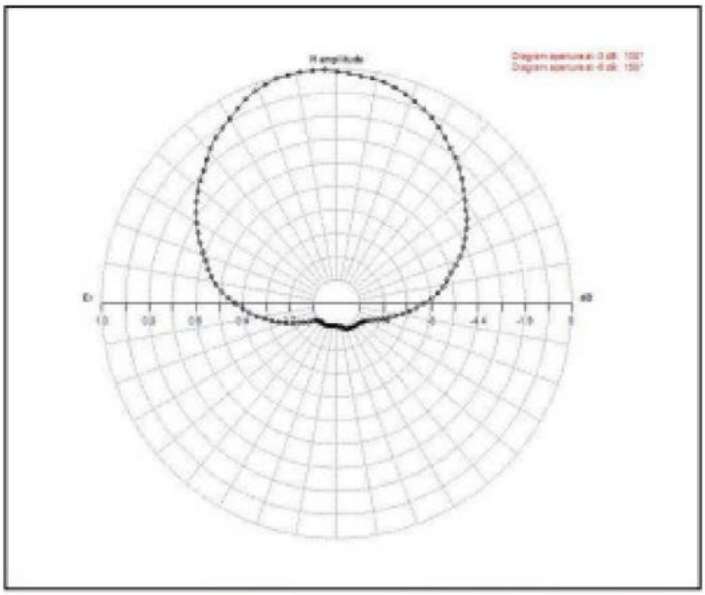
ELECTRICAL DATA

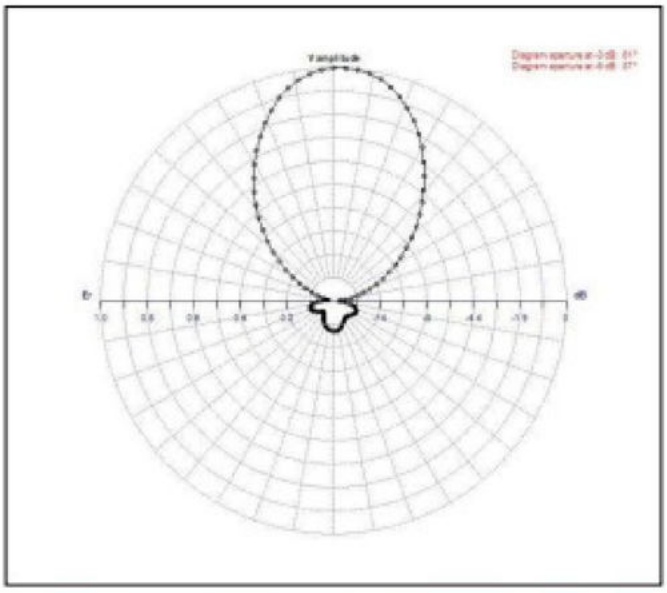
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N) – 1200W (7/16" – 7/8" EIA)
VSWR	≤ 1.20:1
Polarization	Horizontal or Vertical
Gain	5 dB (referred to half-wave dipole)
Half power beam width	E plane ± 30° H plane ± 55°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA

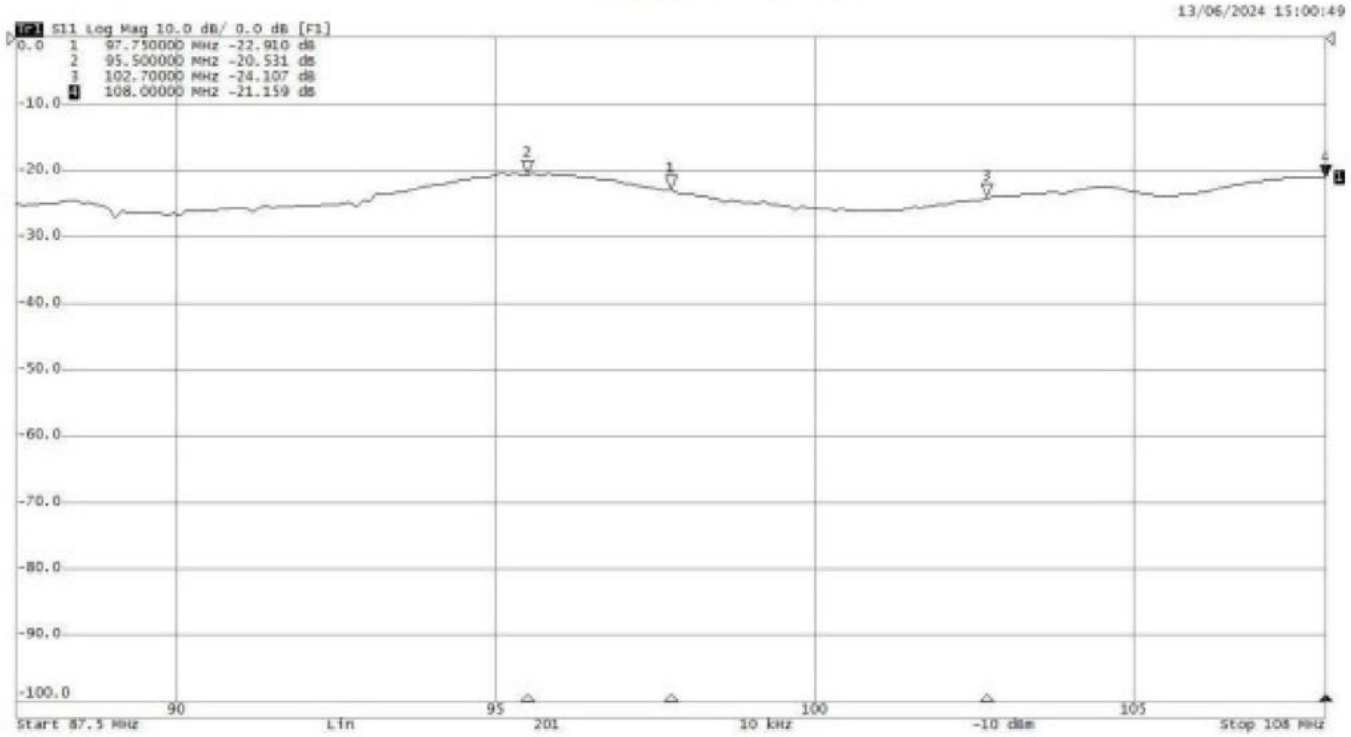
Dimensions	1720x1420x40 mm
Weight	7 Kg (with clamp) alluminium version 9.5Kg Kg (with clamp) inox version
Wind surface	0.21 m^2
Wind load **Max wind velocity**	31,1 kg (wind speed at 160 km/h) 140 km/h.
Materials	Aluminium or inox aisi 304
Mounting	With special pipe clamps 50÷ 110 mm dia.
Colour	Enamel Gray Ral 7001

DIAGRAMS



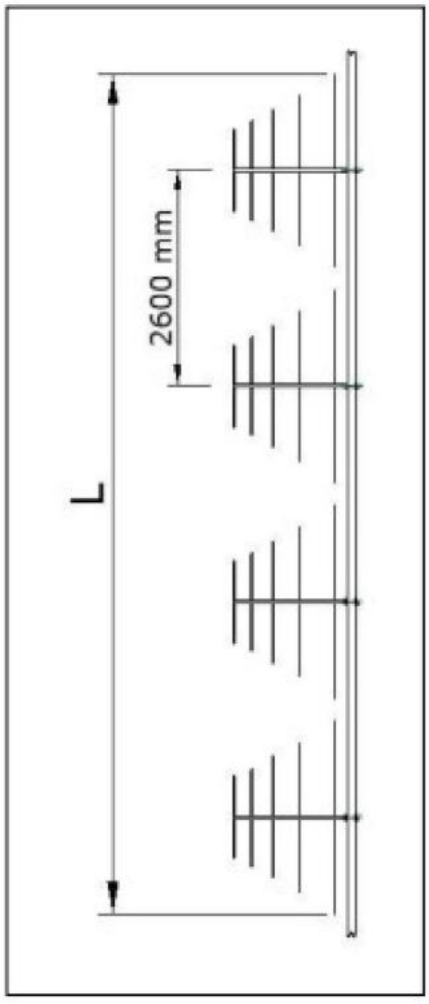


RETURN LOSS



Radiations systems with LGPRDSM antenna

Directional pattern

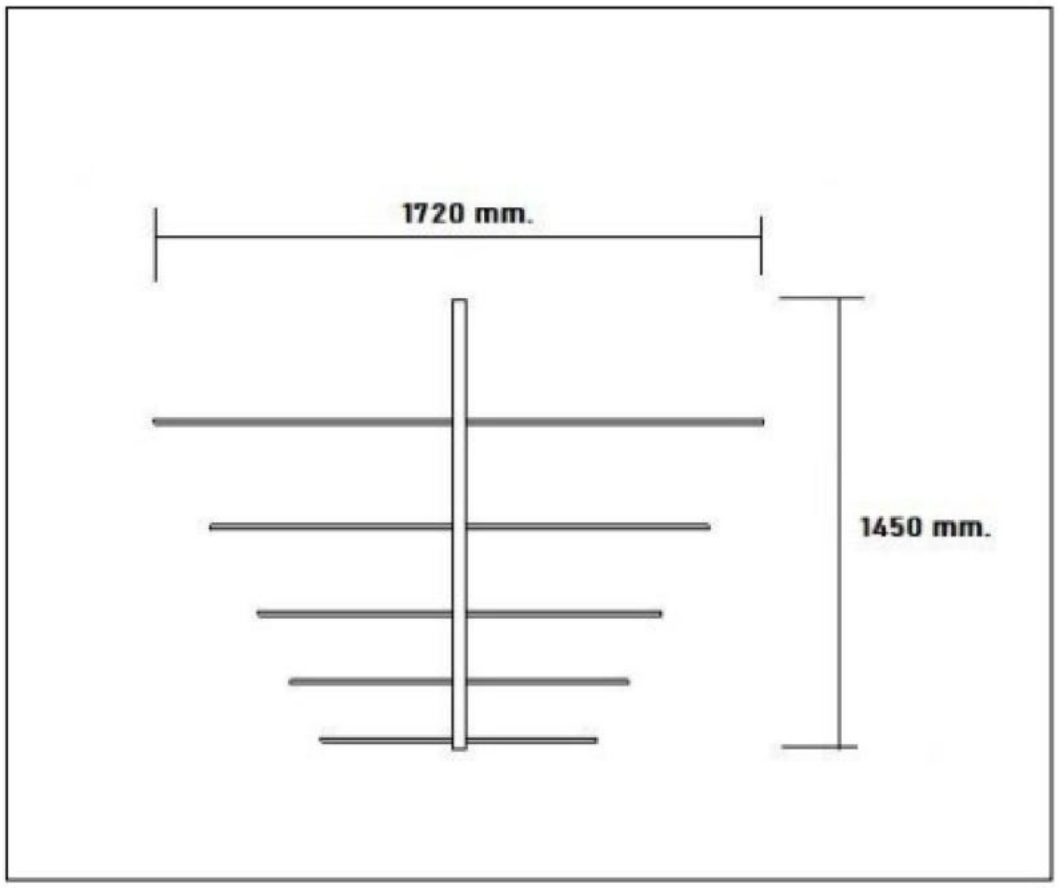


ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.35:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

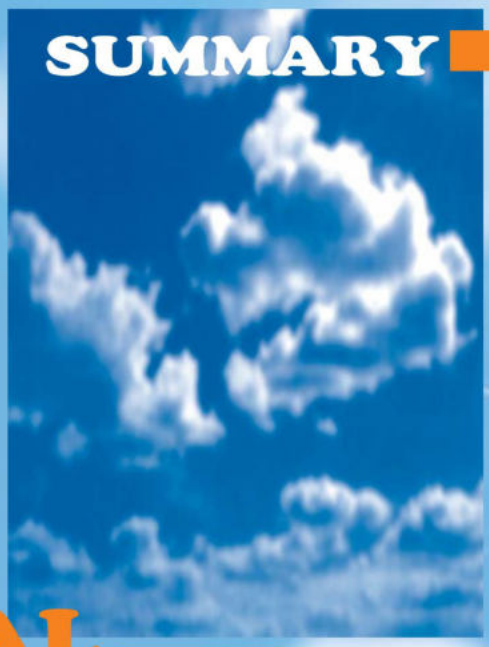
[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account..
[2] without mounting hardware

DIMENSIONS



- Gain is provided for vertical polarisation.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

SUMMARY



GENERAL CATALOG

F.M. BAND ANTENNAS

BROADBAND CIRCULAR/ELLIPTICAL POLARIZATION ANTENNAS

TELECFE BROADCAST SOLUTIONS

www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

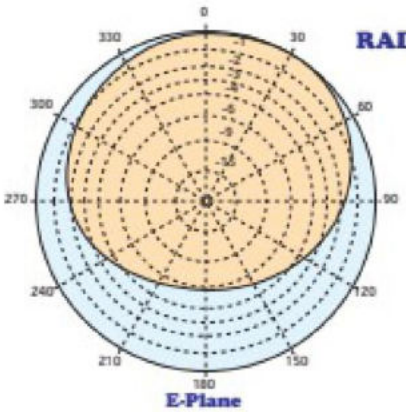
Model ACP1W

- **Band II**
- **Broadband**
- **Demountable**
- **Circular polarization**
- **Stainless steel AISI 304**
- **Pressurizzable on request**
- **Connector 1+5/8" on request**
- **Radome on request**

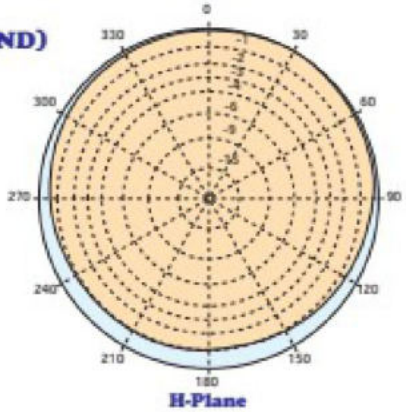
ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA option 1+5/8"
Max Power(Single)	800W (N) – 2KW (7/16") – 5KW (7/8" EIA) 1+5/8" (5KW)
VSWR	≤ 1.25:1 in all band option fine matcher for optimizer swr in the channel
Polarization	Circular (elliptical)
Gain	Refer to table
Pattern	Omni directional ± 1.5 dB in free space Omni directional ± 3 dB with 100mm dia. pole
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	1560x1150x1150 mm
Weight	13 kg
Wind surface	0.19 m ² (side) 0.13 m ² (front)
Wind load	31.1 kg (side - wind speed at 160 km/h)
Max wind velocity	220 km/h.
Materials	External parts: stainless steel Internal parts: aluminium treated
Mounting	With special pipe clamps 50 | 110 mm dia.
Radome (option)	Material: PTFE Color: white

RADIATION PATTERN (MID BAND)



E-Plane

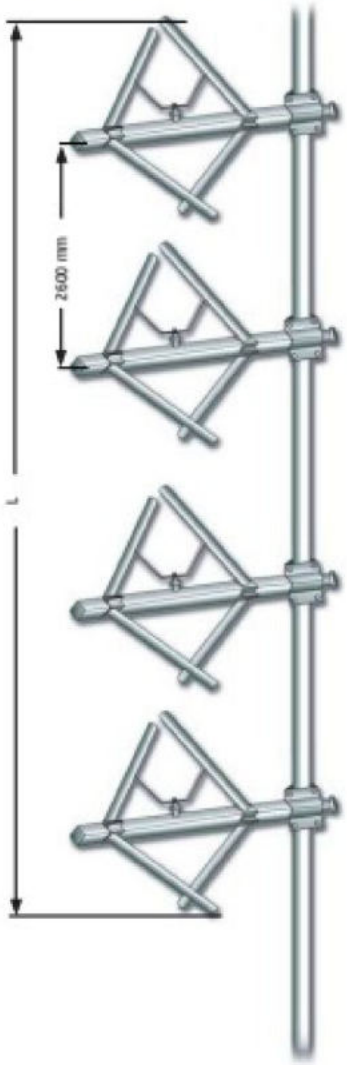


H-Plane

Model ACP1/ACP1-L/ACP1-H

Radiations systems with ACP1 antenna

Omnidirectional patterns



ELECTRICAL DATA	
Frequency range	87.5 – 108 mhz.
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤1.25:1 Max
Polarization	Circular/Elliptical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA (1 Wave)

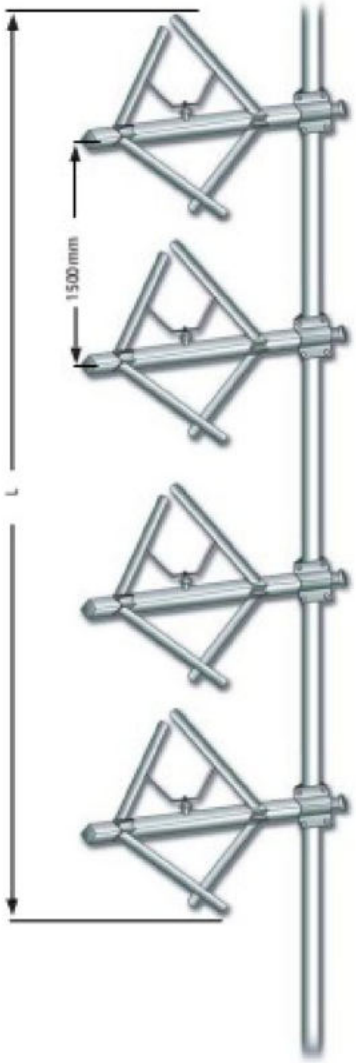
Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)	SYSTEMS MODELS [3]			
		dB	times	kg	m	kg	2 KW	5 KW	6 KW	10 KW
1	1	-1.50	0.70	13	2.5	31.1	-	-	-	-
2	1	1.50	1.40	26	3.8	62.2	ACP1X22	ACP1X24	ACP1X26	-
3	1	3.30	2.10	39	6.4	93.3	-	-	-	-
4	1	4.50	2.80	52	9.0	124.4	ACP1X42	ACP1X44	ACP1X46	ACP1X410
6	1	6.30	4.20	78	14.2	186.6	ACP1X62	ACP1X64	-	ACP1X610
8	1	7.50	5.70	104	19.4	248.8	ACP1X82	ACP1X84	ACP1X86	ACP1X810
10	1	8.30	6.80	130	24.6	311.0	-	-	-	-
12	1	9.30	8.50	156	29.8	373.2	-	-	-	-

[1] Total gain (not separate components). Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] The systems comprised: antennas, cables and splitter – for more details see catalog – different version on request.
Gain is provided for vertical polarization.
When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model ACP1/ACP1-L/ACP1-H

Radiations systems with ACP1 antenna

Omnidirectional patterns



ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤1.25:1 Max
Polarization	Circular/Elliptical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA (1/2 Wave)

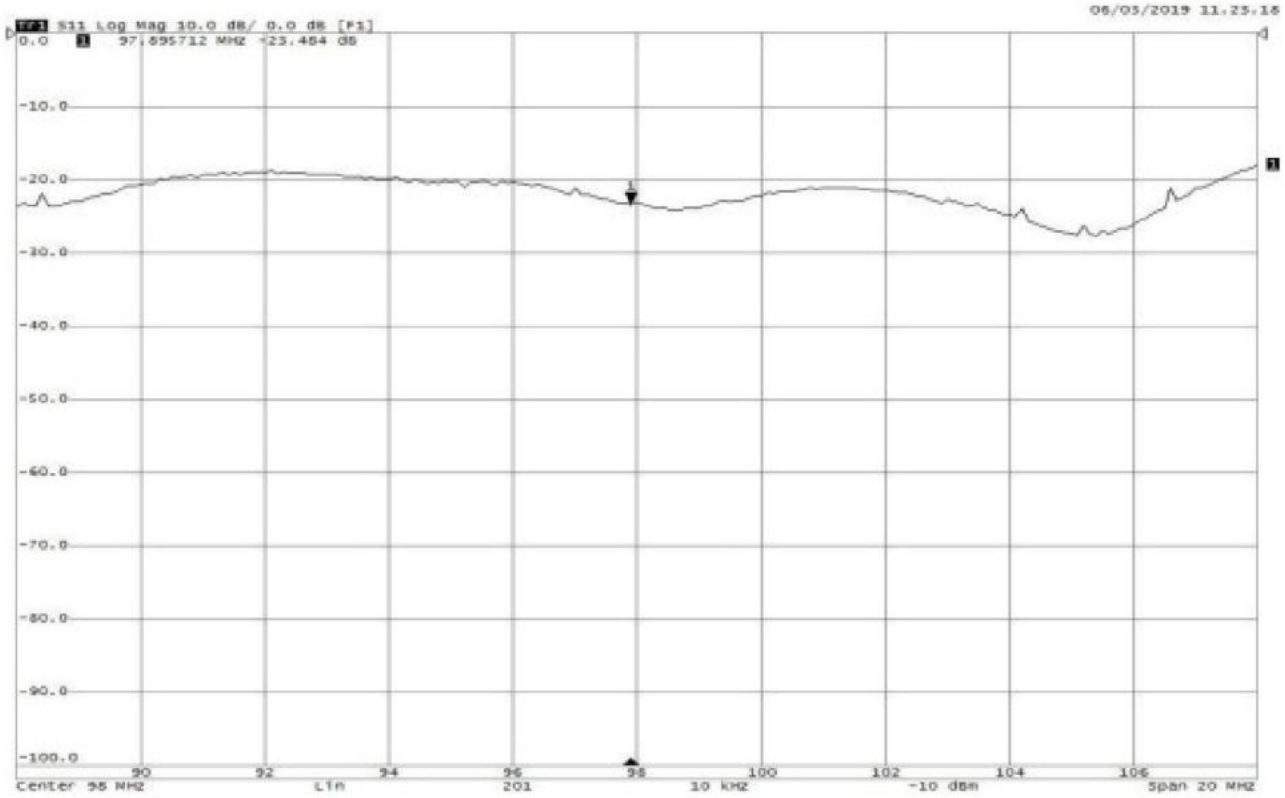
Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)	SYSTEMS MODELS [3]			
		dB	times	kg	m	kg	2 KW	4 KW	6 KW	10 KW
2	1	-1.50	0.71	26	2.65	62.2	ACP1X22	ACP1X24	ACP1X26	-
3	1	0.27	1.06	39	4.15	93.3	-	-	-	-
4	1	1.50	1.42	52	5.65	124.4	ACP1X42	ACP1X44	ACP1X46	ACP1X410
6	1	3.28	2.13	78	8.65	186.6	ACP1X62	ACP1X64	-	ACP1X610
8	1	4.50	2.84	104	11.65	248.8	ACP1X82	ACP1X84	ACP1X86	ACP1X810
10	1	5.30	3.38	130	14.65	622.0	-	-	-	-
12	1	6.29	4.26	156	17.65	373.2	-	-	-	-

[1] Total gain (not separate components).Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] The systems comprised: antennas, cables and splitter – for more details to see catalog – different version on request.

Gain is provided for vertical polarization.
When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model ACP1/ACP1-L/ACP1-H

SWR ACP1 STANDARD BAND 87.5 - 108 MHz



Model: ACP1HP

- **Band II dipole**
- **Broadband 87.5÷108 MHz**
- **Circular polarization**
- **Stainless steel AISI 304**
- **Pressurizzable on request**

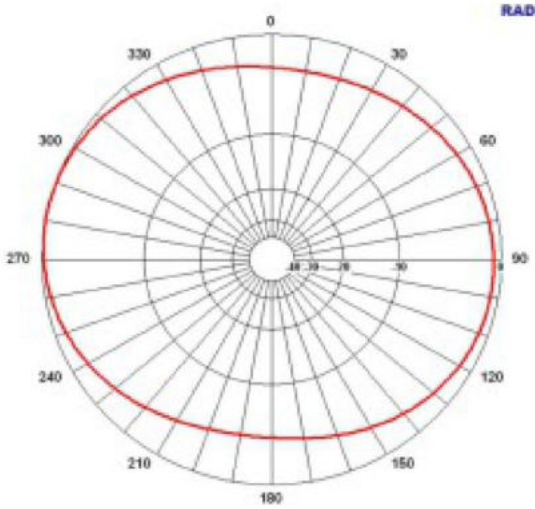
ELECTRICAL DATA

Frequency range	87.5÷108 MHz semi band
Impedance	50 Ohm
Connectors	1+5/8" – 7/8"
Max Power	8 KW *with 1+5/8" connector* 5 KW *with 7/8" connector*
VSWR	≤ 1.4:1 all band (option optimize)
Polarization	Circular (elliptical)
Gain	Refer to table
Pattern:	Omnidirectional ± 1.5 dB in free space Omnidirectional ± 3 dB with 100 mm diameter pole
Lightning protection	All metal parts DC grounded

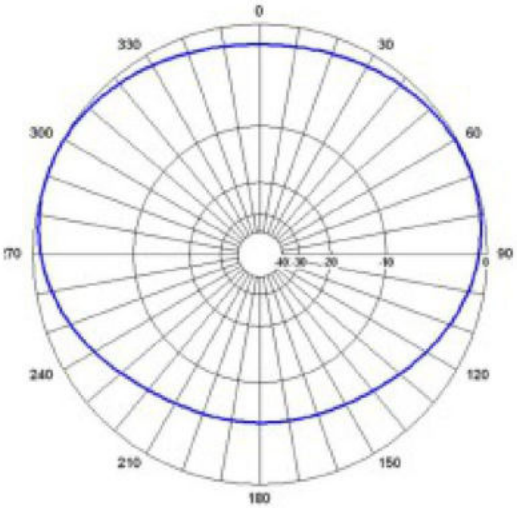
MECHANICAL DATA

Dimensions	1560x1150x1150 mm
Weight	22 Kg
Wind surface	0.4 m^2
Wind load	79 kg (side - wind speed at 160 km/h)
Max wind velocity	200 km/h.
Materials	External parts (stainless steel) Internal parts (aluminium treated) Radome: fibreglass (option)
Icing protection	Feed point radome (option)
Radome color	White (optional)
Mounting	With special pipe clamps 50 ÷ 110 mm dia.

RADIATION PATTERN (MID BAND)

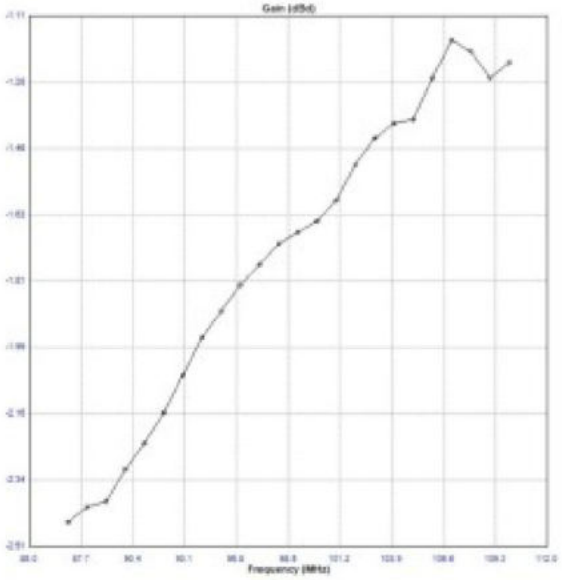


E – PLANE H component

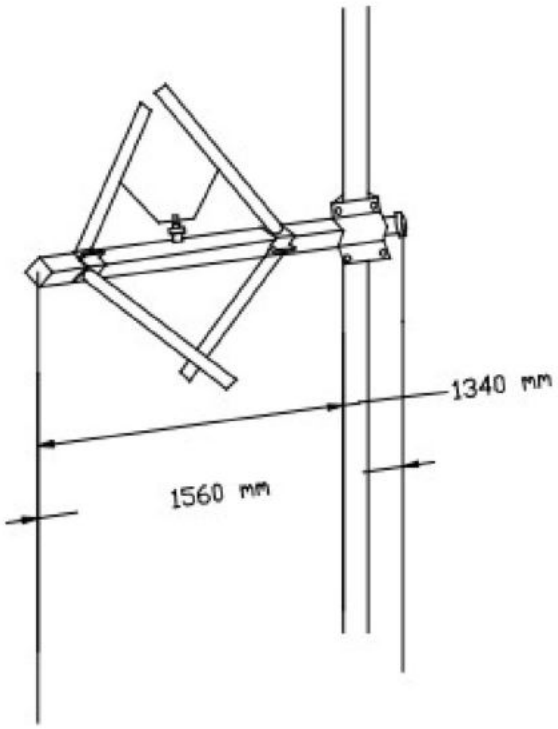


H – PLANE V component

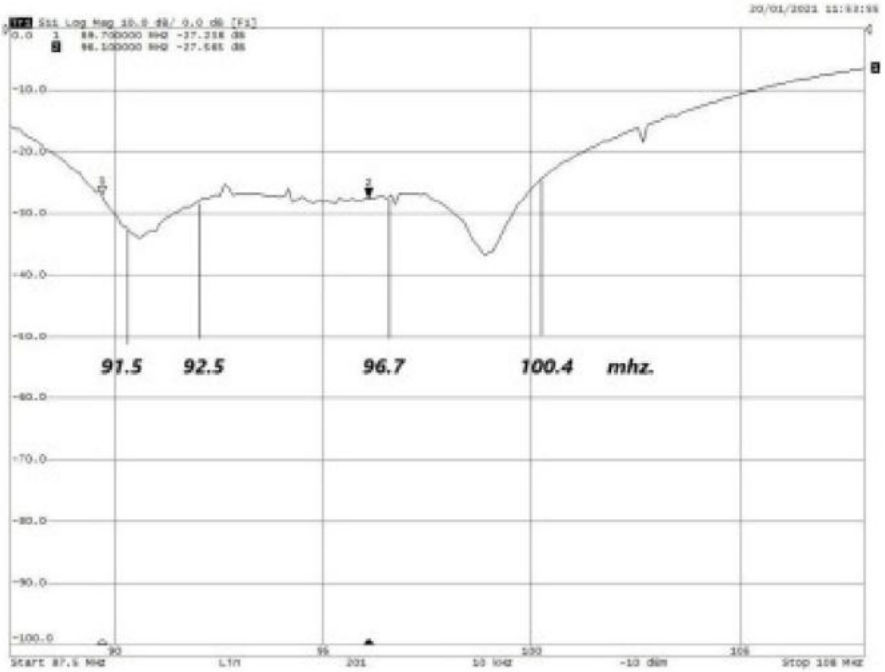
TOTAL GAIN



DIMENSIONS mm.

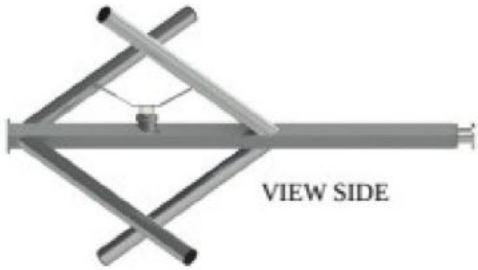


Example ottimization



Radiations Systems with ACP1HP antenna

Omnidirectional patterns

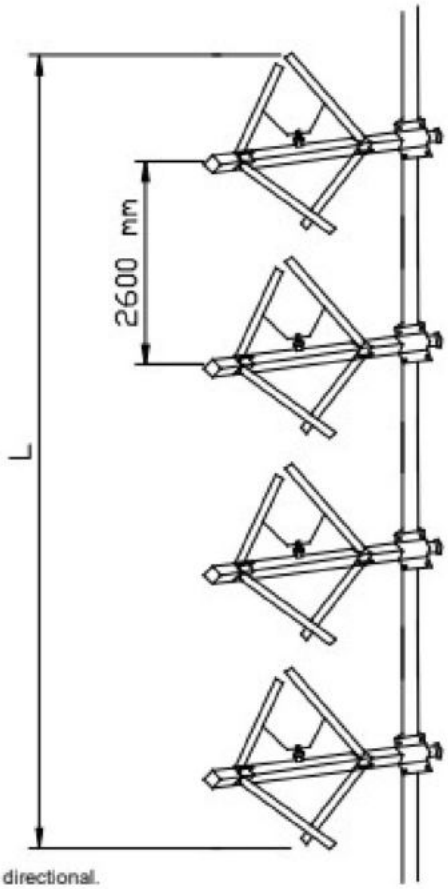


ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.4:1 all band (optimize)
Polarization	Circular
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome color	White (optional)
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required



TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
2	1	1.5	1.4	44	3.8	158
3	1	3.2	2.1	66	6.4	237
4	1	4.5	2.8	88	9.0	316
6	1	6.2	4.2	132	14.2	474
8	1	7.5	5.6	176	19.4	632
12	1	9.2	8.4	264	29.8	948

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account total gain.
[2] without mounting hardware (cables and dividers are not included)

- Gain is provided for one polarization.
- When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

"These specifications are subject to change without notice"

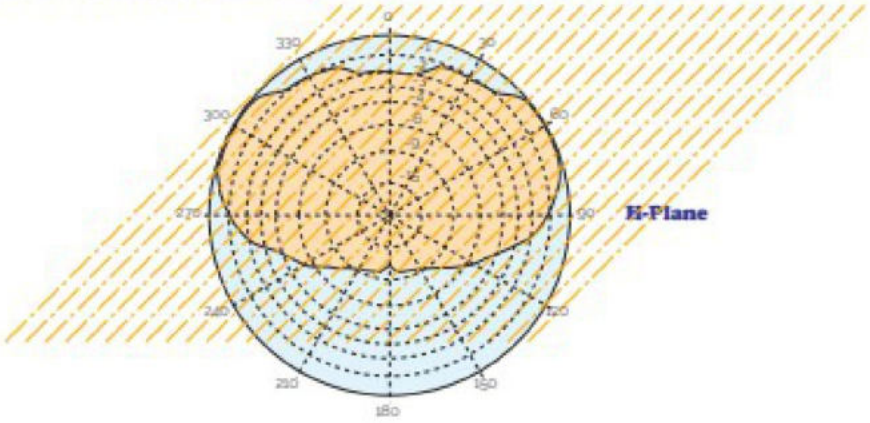
Model ACP2

- **Band II**
- **Broadband 87.5| 108 MHz**
- **Circular polarization**
- **Stainless steel AISI 304**
- **Pressurizzable on request**

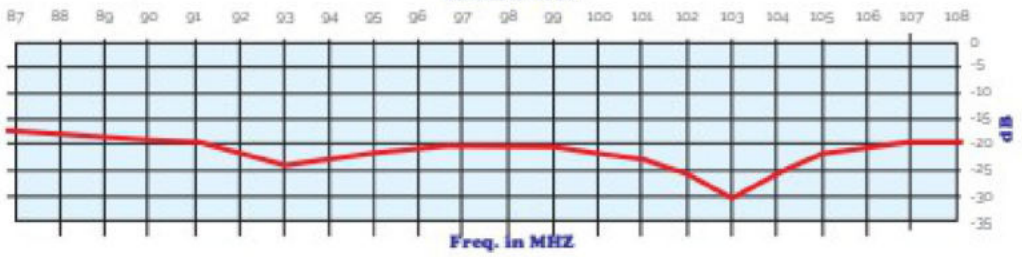
ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N) – 2KW (7/16") – 3KW (7/8" EIA)
VSWR	≤ 1.35:1 - 1.20:1 in operating channels
Polarization	Circular
Gain	-0.5 dB (ref. to half wave dipole)
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	2210x1300x1300 mm
Weight	20 kg
Wind surface	0.32 m² (side) 0.23 m² (front)
Wind load	46.7 kg (side - wind speed at 160 km/h)
Max wind velocity	160 km/h.
Materials	External parts: stainless steel Internal parts: aluminium treated
Mounting	With special pipe clamps 50| 110 mm dia.

RADIATION PATTERN (MID BAND) WITH POLE MOUNTING 100mm DIAMETER



Return Loss



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Model ACP2

Radiations systems with ACP2 antenna

Collinears systems

ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.35:1 Max
Polarization	Circular
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)
		dB	times	kg	m	kg
1	1	0.50	1.1 2	20	2.5	46.7
2	1	3.50	2.24	40	3.9	93.4
3	1	5.26	3.35	60	6.5	140.1
4	1	6.50	4.46	80	9.1	186.8
6	1	8.27	6.71	120	14.3	280.2
8	1	9.50	8.91	160	19.5	373.6

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.

[2] Without mounting hardware.

Gain is provided for vertical polarization.

If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.

Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.

Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.

Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.

Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.

Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

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Model DPC4

- **Band II panel**
- **Broadband 87.5÷108 MHz**
- **Demountable**
- **Circular polarization**
- **Directional pattern**
- **Suitable as a component in various array**
- **Dipole Inox AISI304**

ELECTRICAL DATA

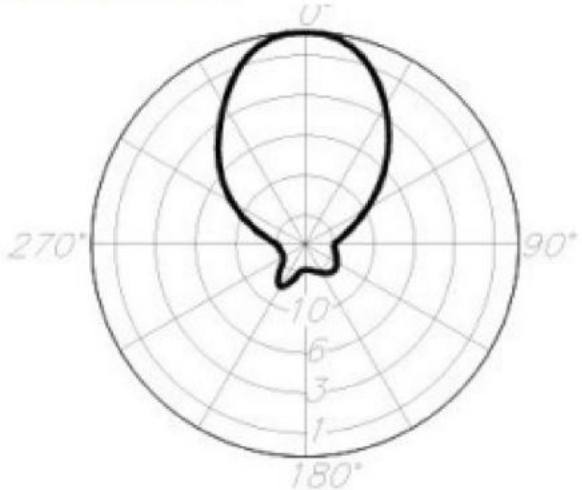
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	Four input connectors Type 7/8" EIA or 7/16" DIM
Max Power	20KW (5KW for each input))
VSWR	≤ 1.2 in circular polarization max.
Polarization	Circular
Gain	4.5 dB (referred to half wave dipole: Circular polarization) 7.5 dB (referred to half-wave dipole: Linear polarization)
Half power beam width	E plane ± 32° (Vertical) H plane ± 30° (Horizontal)
Lightning protection	All metal parts DC grounded

MECHANICAL DATA

Dimensions	2200x2200x1050 mm
Weight	75 Kg aproximate
Wind surface	0.960 m^2
Wind load **Max wind velocity**	187 kg (wind speed at 150 km/h) 220 km/h. (Safety factor → 2)
Materials	Reflector: hot dip galvanized steel Dipole: stainless steel AISI304 Internal parts: anticorodal aluminium Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome color	White (optional)
Mounting	Directly on supporting mast

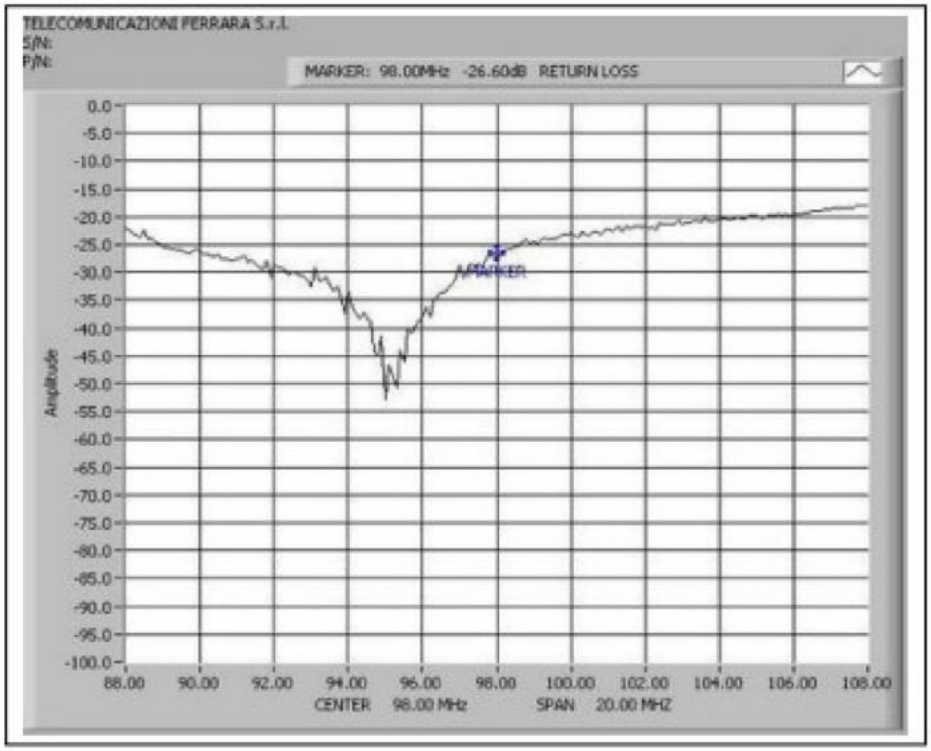
RADIATION PATTERN (MID BAND)

E-Plane

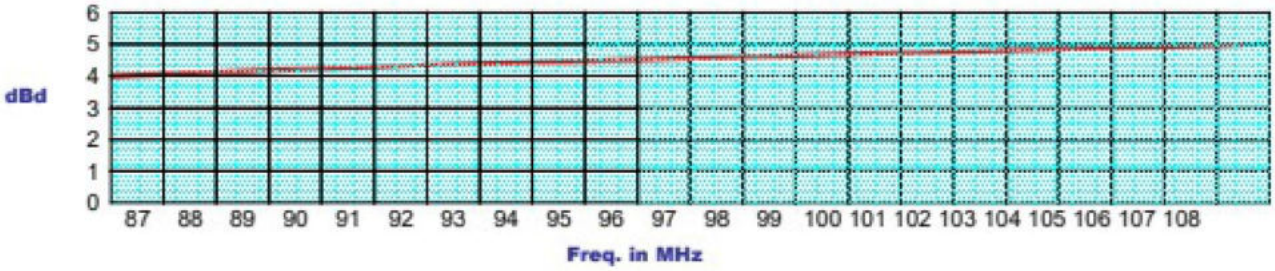


H-Plane

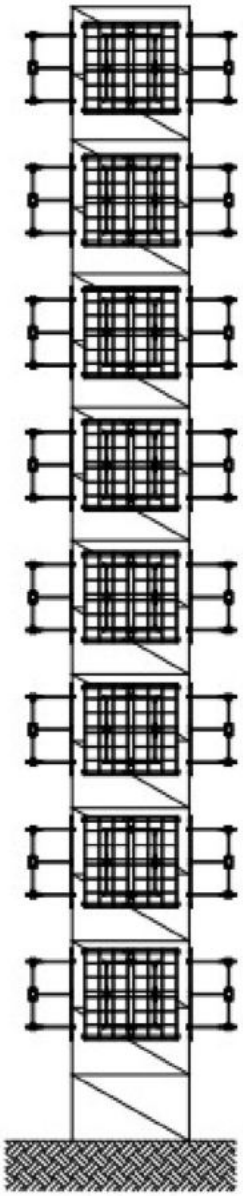
RETURN LOSS



GAIN



Pannel Circular Polarization directional pattern



Broadband 87.5÷108 MHz

High power system

Omni-directional or directional pattern

Balanced or unbalanced splitting power

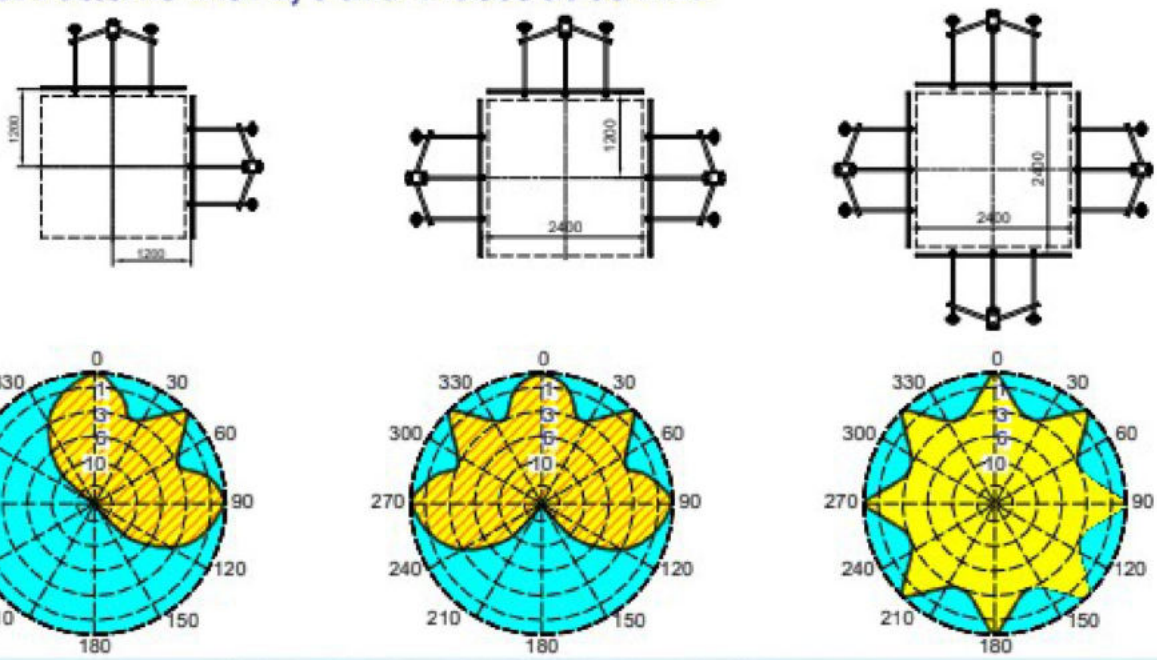
ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.15 (throughout the frequency range (Lower figures for individual channels on request)
Polarization	Circular
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power (option)

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	White (optional)
Mounting hardware	Hot dip galvanized steel clamps (option)
Shipping	As required

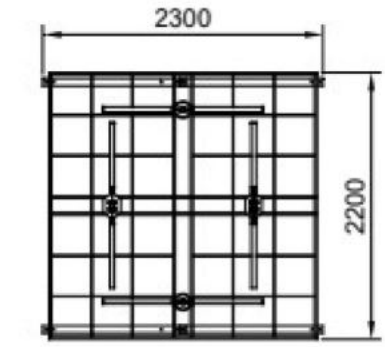
Horizontal Patterns with 2, 3 and 4 faces at 98 MHz

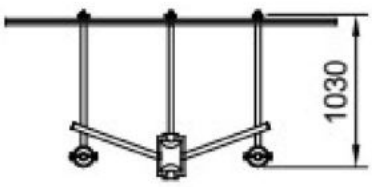


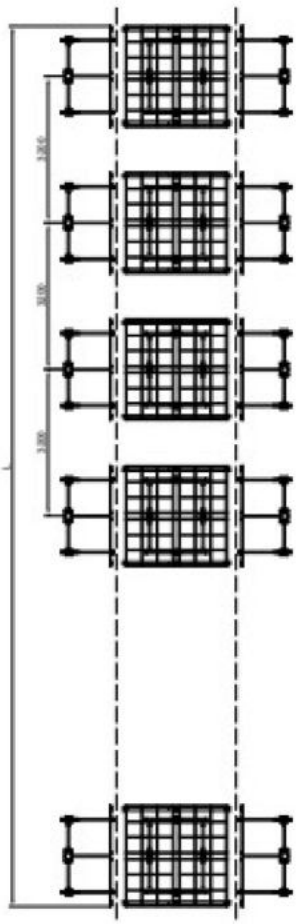
TECHNICAL DATA

Number of bays	Panels per bay	Gain[1]		Weight[2]	Antenna height L	Wind load[3] (v=150 km/h)
		dB	times	kg	m	kg
1	2	1.85	1.53	210	2.2	296
	3	0.3	1.01	340		370
	4	-0.65	0.86	440		440
2	1	7.5	5.62	210	5.4	376
	2	5.0	3.16	440		592
	3	3.35	2.16	790		740
	4	2.45	1.76	880		880
4	1	10.5	11.22	752	11.8	752
	2	7.8	6.03	1184		1184
	3	6.3	4.27	1480		1480
	4	5.55	3.59	1760		1760
6	1	12.3	16.98	1128	18.2	1128
	2	9.9	9.77	1776		1776
	3	8.4	6.92	2220		2220
	4	6.95	4.96	2640		2640
8	1	13.7	23.44	1504	26.6	1504
	2	10.95	12.45	2368		2368
	3	9.5	8.91	2960		2960
	4	8.5	7.08	3520		3520

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account .
[2] without mounting hardware
[3] according to the tower type, for more details contact us



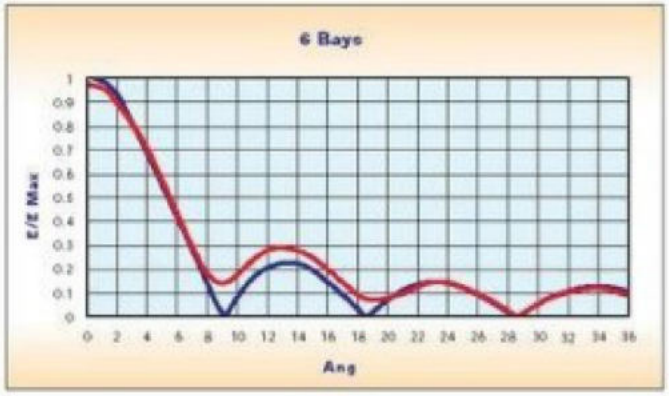


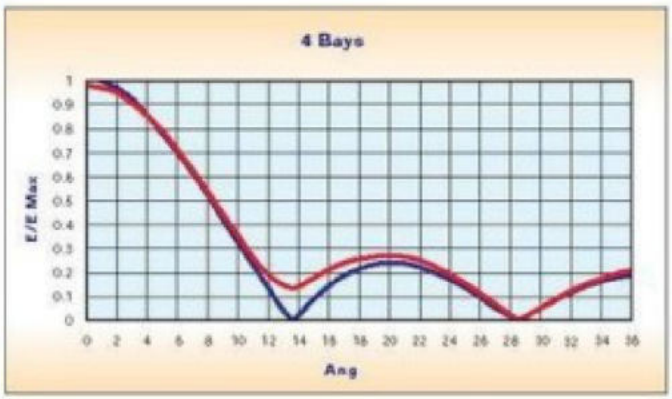


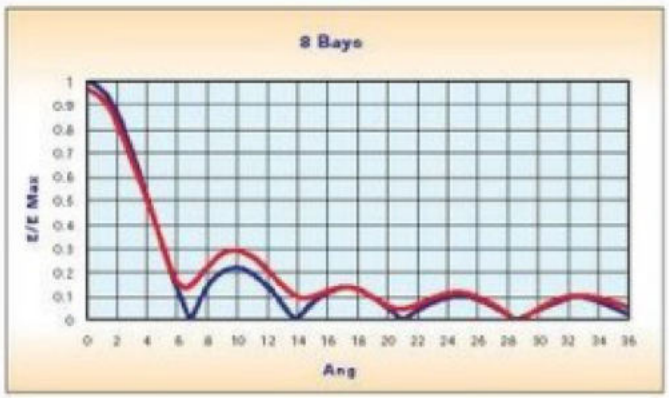
VERTICAL PATTERN

Without null fill

With null fill and beam tilt

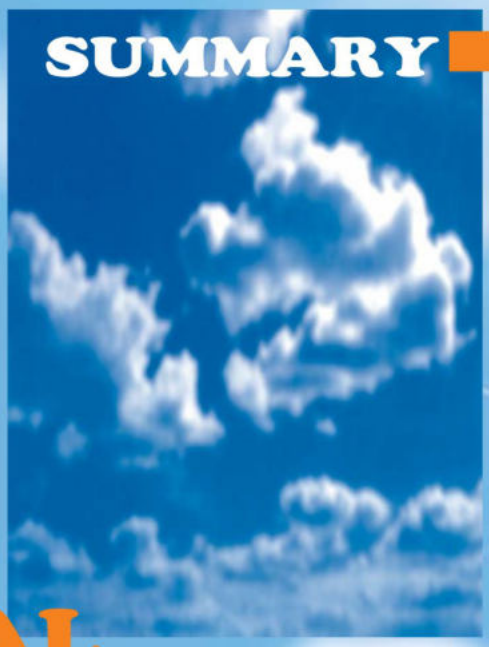






- Gain is provided for total.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

SUMMARY



GENERAL CATALOG

F.M. BAND ANTENNAS

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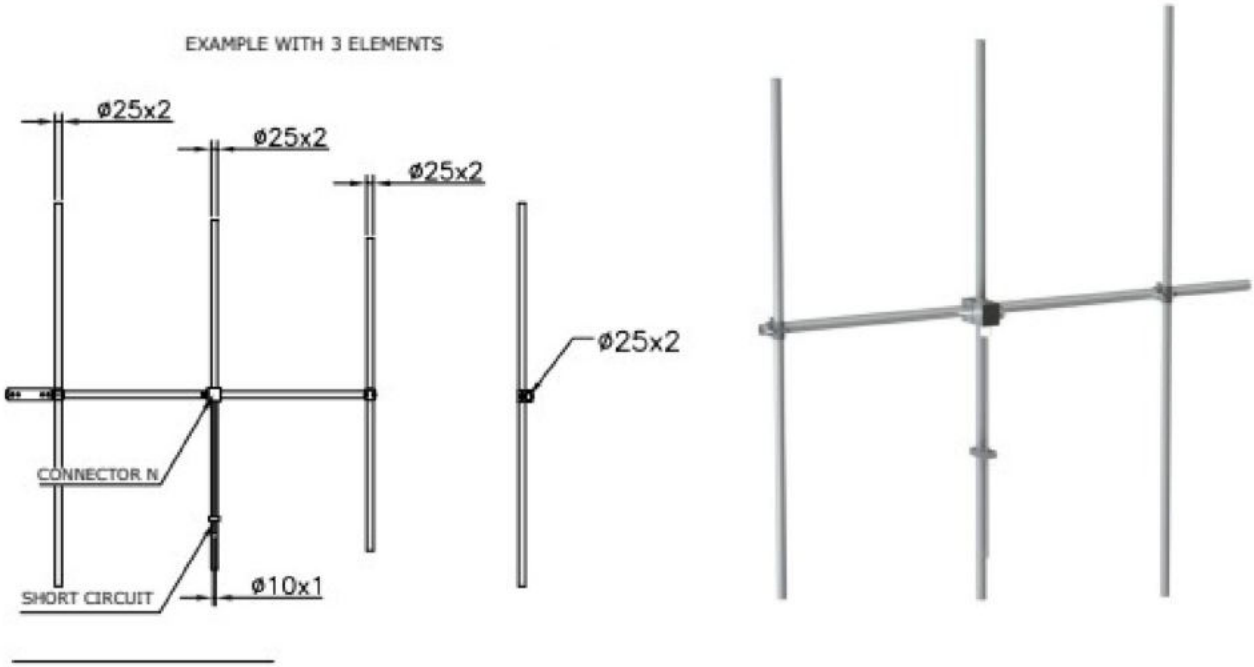
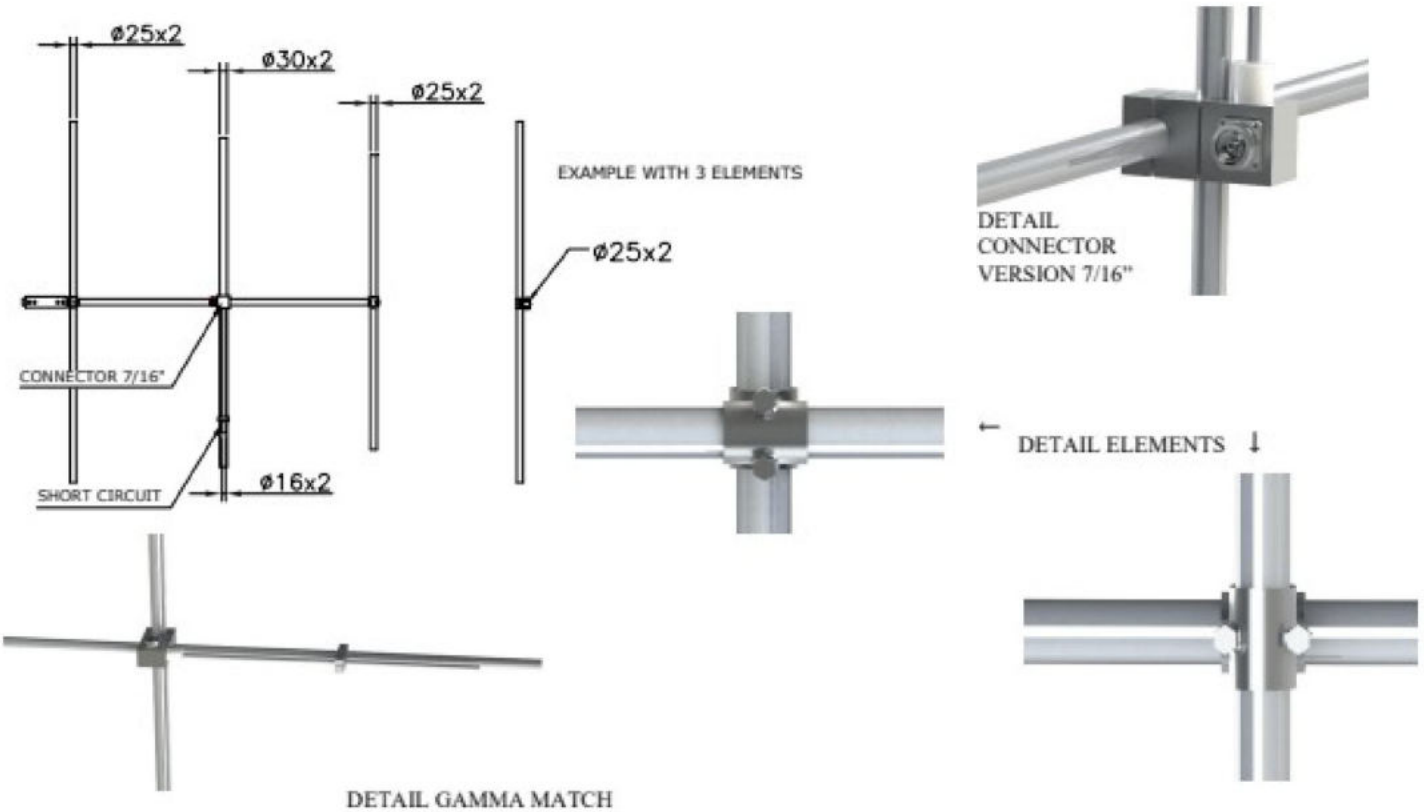
DETAILED LIST TUNED ANTENNA

STANDARD VERSION ALUMINIUM/INOX CONNECTOR N

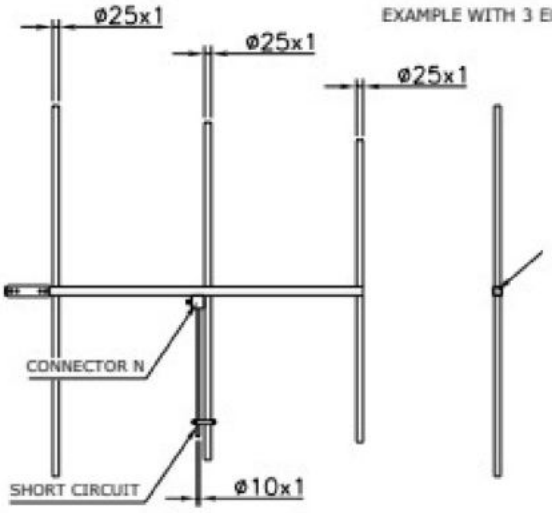


STANDARD VERSION ALUMINIUM/INOX CONNECTOR 7/16" – 7/8"

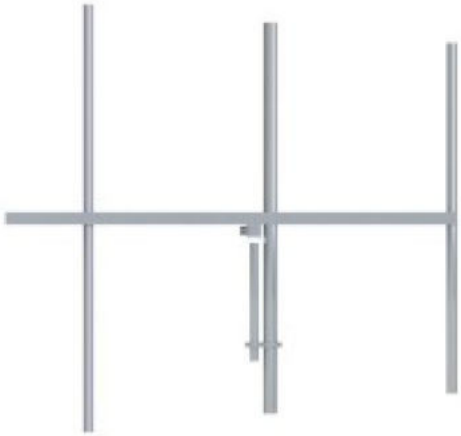


DETAIL GAMMA MATCH

WELDED VERSION INOX CONNECTOR N

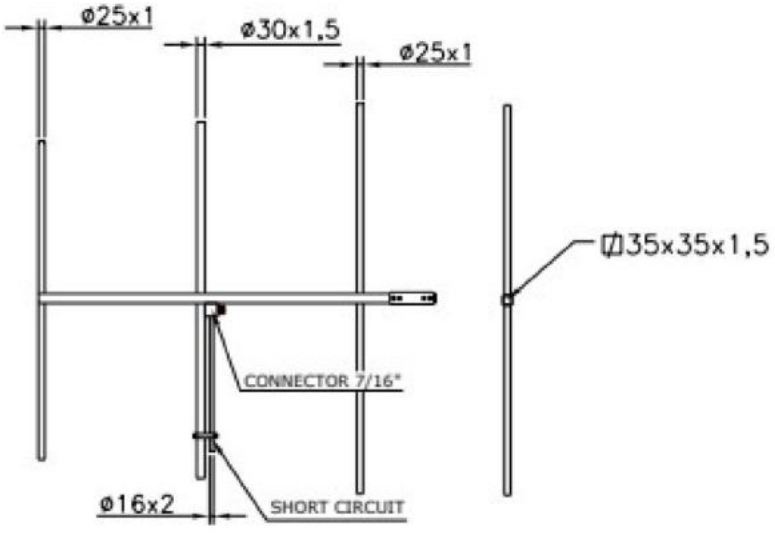


EXAMPLE WITH 3 ELEMENTS

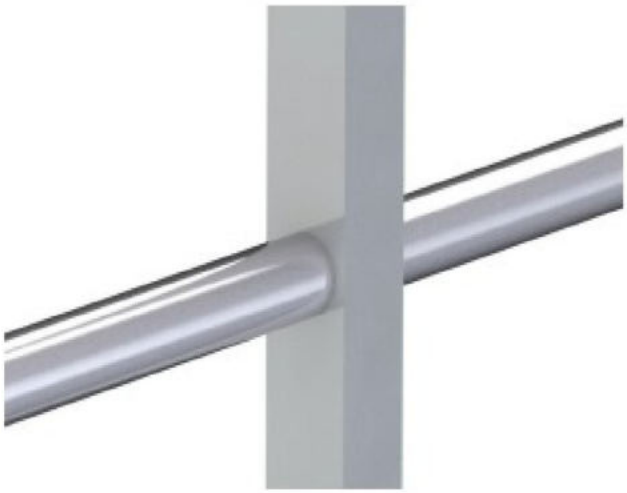


DETAIL CONNECTOR (7/16")

WELDED VERSION INOX CONNECTOR 7/16"

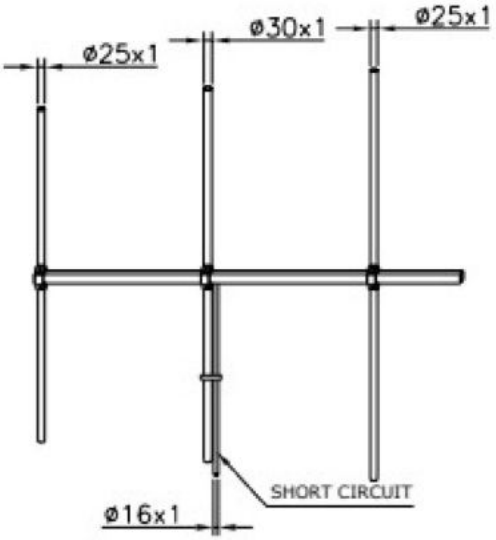


EXAMPLE WITH 3 ELEMENTS



↑ DETAIL WELDED ELEMENT

DEMOUNTABLE VERSION INOX CONNECTOR N /7/16”



Ø 35

CLAMP →

↑ DETAIL

↓ CONNECTOR (7/16")

DETAIL GAMMA MATCH ↓

DEMOUNTABLE: PARTICULAR VERSION INOX

OPTION RADOME

5 ELEMENTS

DIPOLE

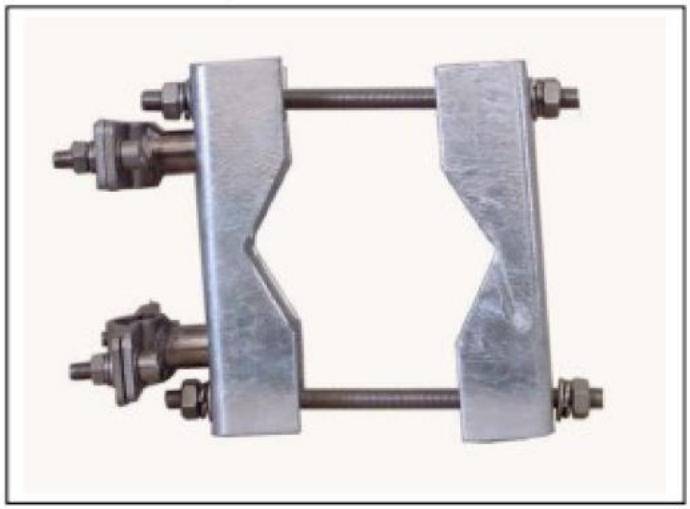
3 ELEMENTS

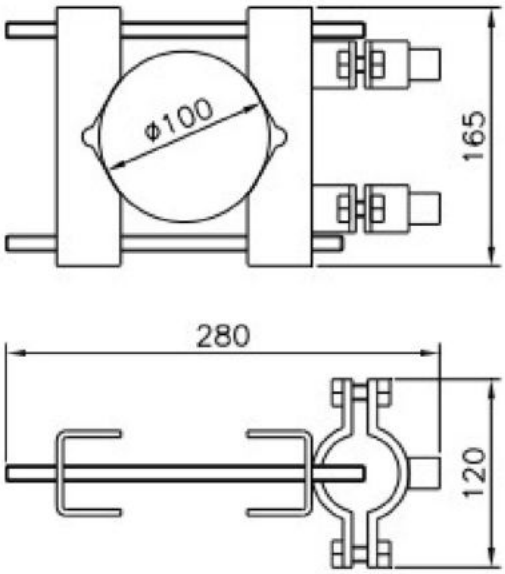
4 ELEMENTS

2 ELEMENTS

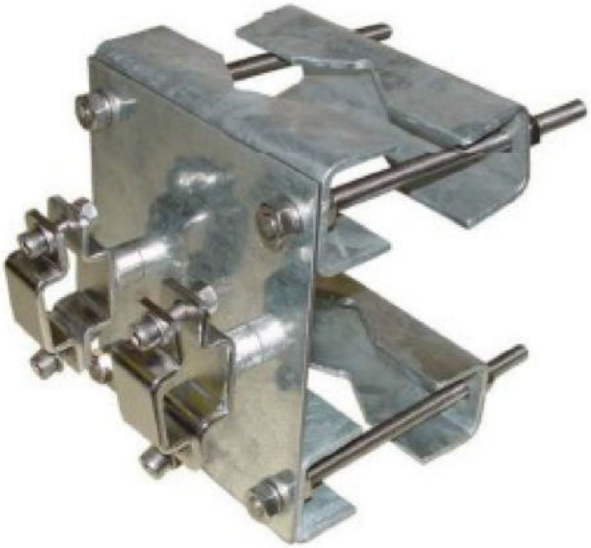
HARDWARE MOUNTING

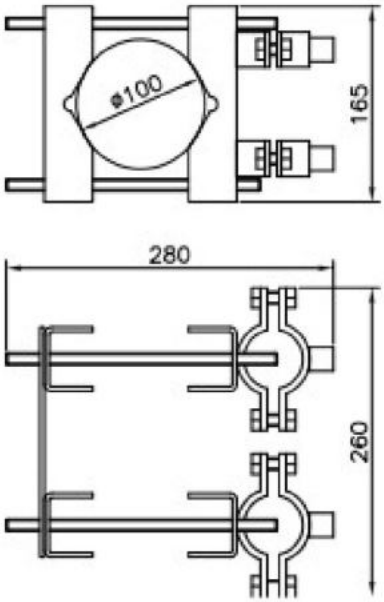
STANDARD CLAMP





REINFORCED CLAMP (DOUBLE CLAMP)





Model : ACP0H

- **Band II**
- **FM Band 87.5÷108 MHz**
- **Horizontal Polarization**
- **Omnidirectional Pattern**
- **Tuned antenna**
- **No Pressurization Needed**
- **Economical**
- **Digital Ready**
- **Stainless steel AISI 304**

ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N female
Max Power	700W
VSWR ± 100KHz	≤ 1.1:1
Polarization	Horizontal
Gain	-0.3 dB (ref.to to half wave dipole)
Pattern	Omnidirectional ±1.5 dB with 100 mm dia. pole
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	360x360x100 mm
Net Weight	2 Kg without clamp
Wind surface	0.0384 m^2
Wind load	6,5 kg (wind speed at 160 km/h)
Max wind velocity	220 km/h.
Materials	External parts: stainless steel, Plexiglas Internal parts: silver plated brass
Mounting	With special pipe clamps 50÷ 110 mm dia.

Radiations systems with ACP0H antenna

Collinear systems

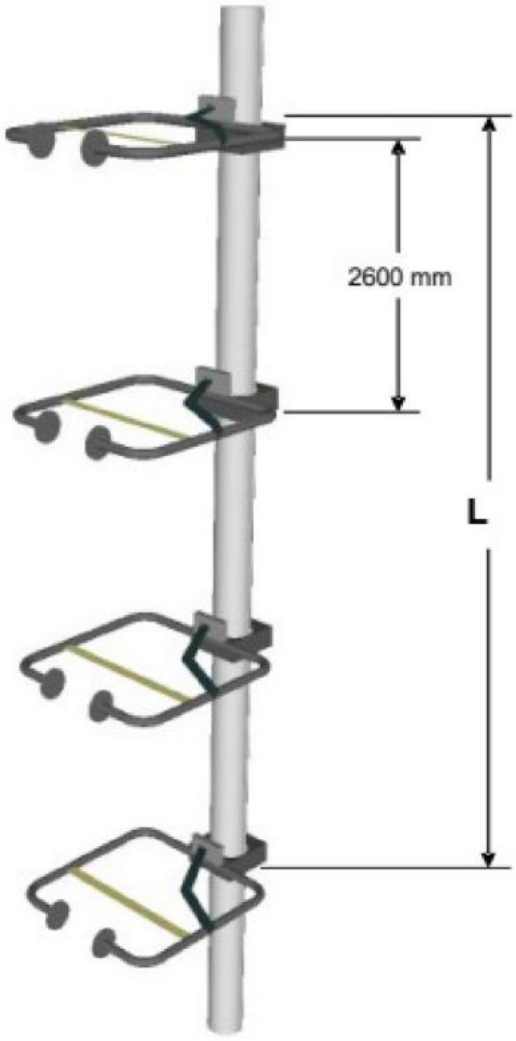
MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	N female
VSWR ± 100KHz	1.1:1 in the operating channel
Polarization	Horizontal
Gain	Refer to table
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power.

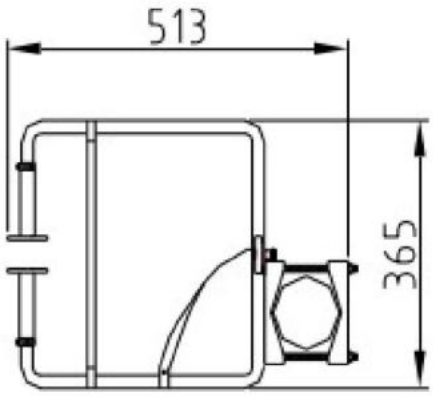
TECHNICAL DATA

Number of bays	Dipoles per bay	Gain[1]		Weight[2] Kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
2	1	2.7	1.8	4	2.7	13.0
3	1	4.5	2.8	6	5.3	19.5
4	1	5.7	3.7	8	7.9	26.0
6	1	7.5	5.6	12	13.1	39.0
8	1	8.7	7.5	16	18.3	52.0

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware



DIMENSIONS

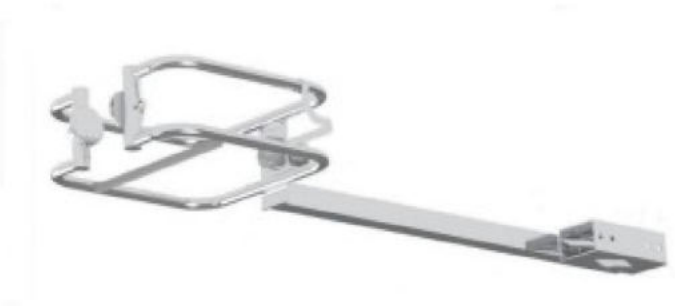


- Gain is provided for Horizontal polarization.
- When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

"These specifications are subject to change without notice"

Model : ACP0HHP

- **Band II**
- **FM Band 87.5÷108 MHz**
- **H Polarization**
- **Tuned antenna**
- **Digital Ready**
- **Stainless steel AISI 304**
- **Adjustable Fine-Matching Transformer (OPTION)**



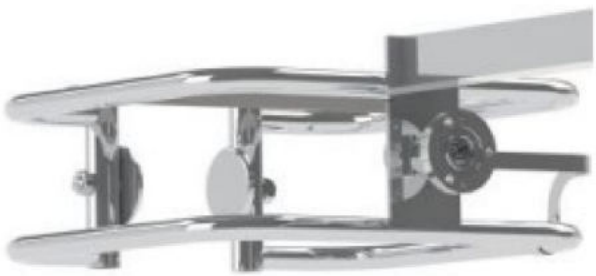
ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	7/8" (5KW) or 7/16" (2KW)
Max Power	5 KW
VSWR ± 100KHz	≤ 1.1:1
Polarization	Horizontal
Gain	-0.3 dB (referred to half wave dipole)
Azimut Pattern Circularity:	Omnidirectional ± 1.5 dB in free space Omnidirectional ± 2 dB with 100 mm dia. pole
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	1200x375x775 (HxWxL) mm
Net Weight	5 Kg without clamp 7,5 Kg with clamp
Wind surface	0.052 m^2
Wind load	9.5 kg (wind speed at 160 km/h) Side
Max wind velocity	220 km/h.
Materials	External parts: stainless steel, plexiglas Internal parts: silver plated brass
Mounting	With special pipe clamps 50÷ 110 mm dia.

Radiations systems with ACP0HP antenna - Collinear systems

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Mounting hardware	Stainless steel aisi 304 clamps
Shipping	As required

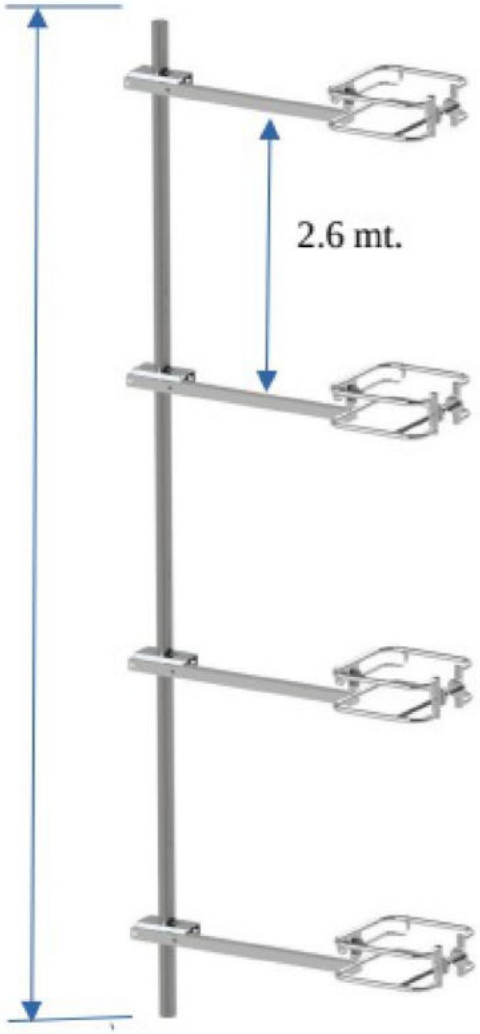
ELECTRICAL DATA	
Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	N female
VSWR ± 100KHz	1.1:1 in the operating channel
Polarization	horizontal
Gain	Refer to table
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power



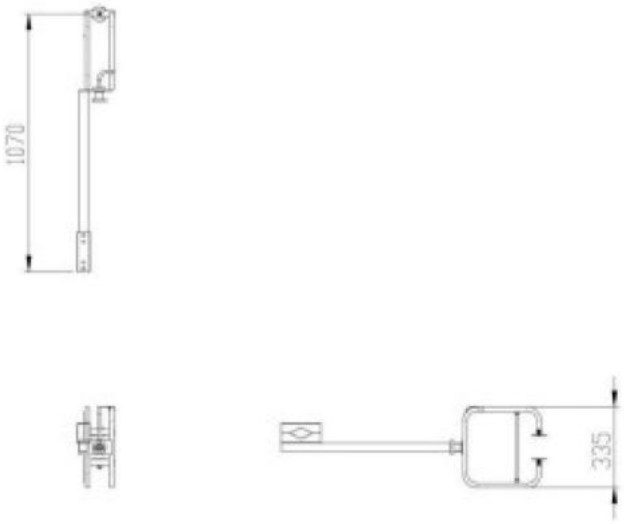
TECHNICAL DATA (FULL-WAVE-SPACED)

Number of bays	Dipoles per bay	Gain[1]		Weight[2] Kg	Antenna height L (98 mhz) m	Wind load (v=160 km/h) kg
		dB	times			
1	1	-0.3	1.072	5	---	9.5
2	1	1.78	1.51	10	3.6	19
4	1	4.76	2.99	20	8.8	38
6	1	6.52	4.48	30	14.0	57
8	1	7.76	5.9	40	21.8	76
10	1	8.7	7.5	50	29.6	95

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware
[3] without radome



DIMENSIONS mm.



- Gain is provided for Horizontal polarization.
- When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model AJ1E – AJ1EBI – AJ1E/INOX - AJ1E/IT

- **High Power Version (H.P.)**
- **FM Band 87.5 - 108 MHz**
- **Suitable for VHF, Band I-II-III and OIRT Band**
- **Gamma Match Tuned**
- **Omni directional pattern**
- **Vertical polarization**
- **Light - Low Cost Demountable**

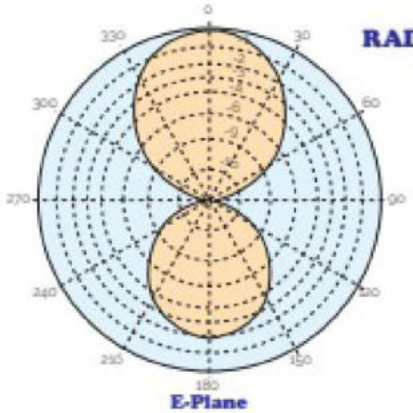
VERSION WITH RADOME OPTION

VERSION STANDARD

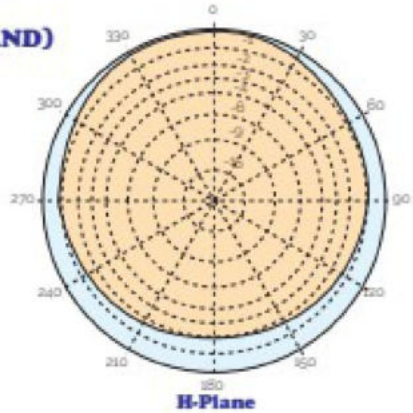
ELECTRICAL DATA	
Frequency range	87.5 – 108 mhz
Impedance	50 Ohm
Connectors	N or 7/16" female or 7/8" EIA
Max Power	650W (N) – 1300W (7/16" – H.P. Version)
VSWR	≤ 1.1:1 in the operating channel
Polarization	Vertical
Gain	1 dB (referred to half-wave dipole)
Pattern	Omni directional ± 1.5 dB in free space Omni directional ± 3 dB with 100mm dia. pole
Lightning protection	No DC grounded

MECHANICAL DATA	
Dimensions	According to the working frequency 1380 (H) x 760 (L) x 100 (W) mm at 98 MHz standard ver.
Weight	According to the working frequency (aluminium or stainless steel)
Wind surface	0.05 m² (at 98 MHz) standard version
Wind load	6.7 kg (wind speed at 160 km/h standard version)
Max wind velocity	200 km/h (AJ1E/IT model)
Materials	AJ1E: Aluminium elements and boom AJ1EBI: Aluminium elements and inox boom AJ1E/INOX: Stainless steel elements and boom AJ1E/IT: Stainless steel elements and boom Tig Welded Version Teflon insulator Radome: polietilene(option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50 – 110 mm. Diameter.

RADIATION PATTERN (MID BAND)



E-Plane



H-Plane

"These specifications are subject to change without notice"

Model AJ1E – AJ1EBI – AJ1E/INOX - AJ1E/IT

Radiations systems with AJ1E antenna

Omni-directional pattern

ELECTRICAL DATA	
Frequency range	87.5 – 108 mhz.
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.1:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	According to the working frequency
Wind load	Refer to table (at 98 MHz)
Pressurizzable	No
Radome	Optional
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)	COLLINEARS SYSTEMS [3]				
		dB	times	kg	m	kg	800 W	1 KW	2 KW	3 KW	5 KW
1	1	1.0	1.2	-	1.4	6.7	AJ1E	AJ1E(HP)	-	-	-
2	1	4.0	2.5	-	4.0	13.5	-	AJ1EX21	-	-	-
4	1	7.0	5.0	-	9.2	27	AJ1EX41	-	AJ1EX42	AJ1EX43	-
6	1	8.8	8.5	-	14.4	40.5	AJ1EX61	-	AJ1EX62	AJ1EX63	-
8	1	10.0	10.0	-	19.6	54	AJ1EX81	-	AJ1EX82	-	AJ1EX85

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] The systems comprised: antennas, cables and splitter – for more details to see catalog – different version on request.

Gain is provided for vertical polarization.
When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

These specifications are subject to change without notice

Model AJ1EL - AJ1ELHP

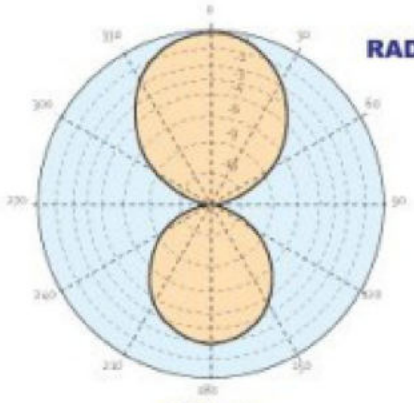
- **FM Band 87.5 | 108 MHz**
- **Suitable for FM band VHF**
- **Gamma Match wide band**
- **Omni directional pattern**
- **Vertical polarization**
- **Light - Low Cost - Demountable**

ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connectors	N female
Max Power	AJ1EL 500W (N) AJ1ELHP 1200W (7/16" or 7/8")
VSWR	see graphics
Polarization	Vertical
Gain	1 dB (referred to half-wave dipole)
Pattern	Omni directional 1.5 dB in free space Omni directional 3 dB with 100mm dia. pole
Lightning protection	No DC grounded

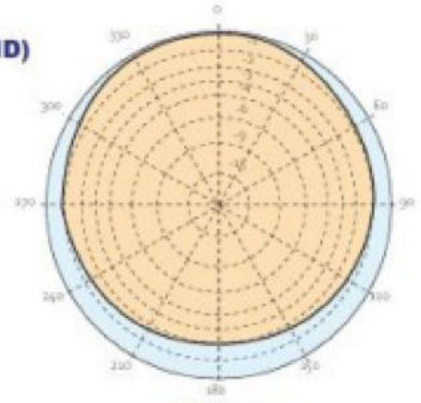
MECHANICAL DATA	
Dimensions	According to the working frequency 1380 (H) x 760 (L) x 100 (W) mm at 98 MHz
Weight	According to the working frequency (aluminium or stainless steel)
Wind surface	0.05 m² (at 98 MHz)
Wind load	6.7 kg (wind speed at 160 km/h)
Max wind velocity	200 km/h (AJ1E/IT model)
Materials	AJ1EL: Aluminium elements and boom Teflon insulator Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50 – 110 mm. Diam.

"These specifications are subject to change without notice"

RADIATION PATTERN (MID BAND)

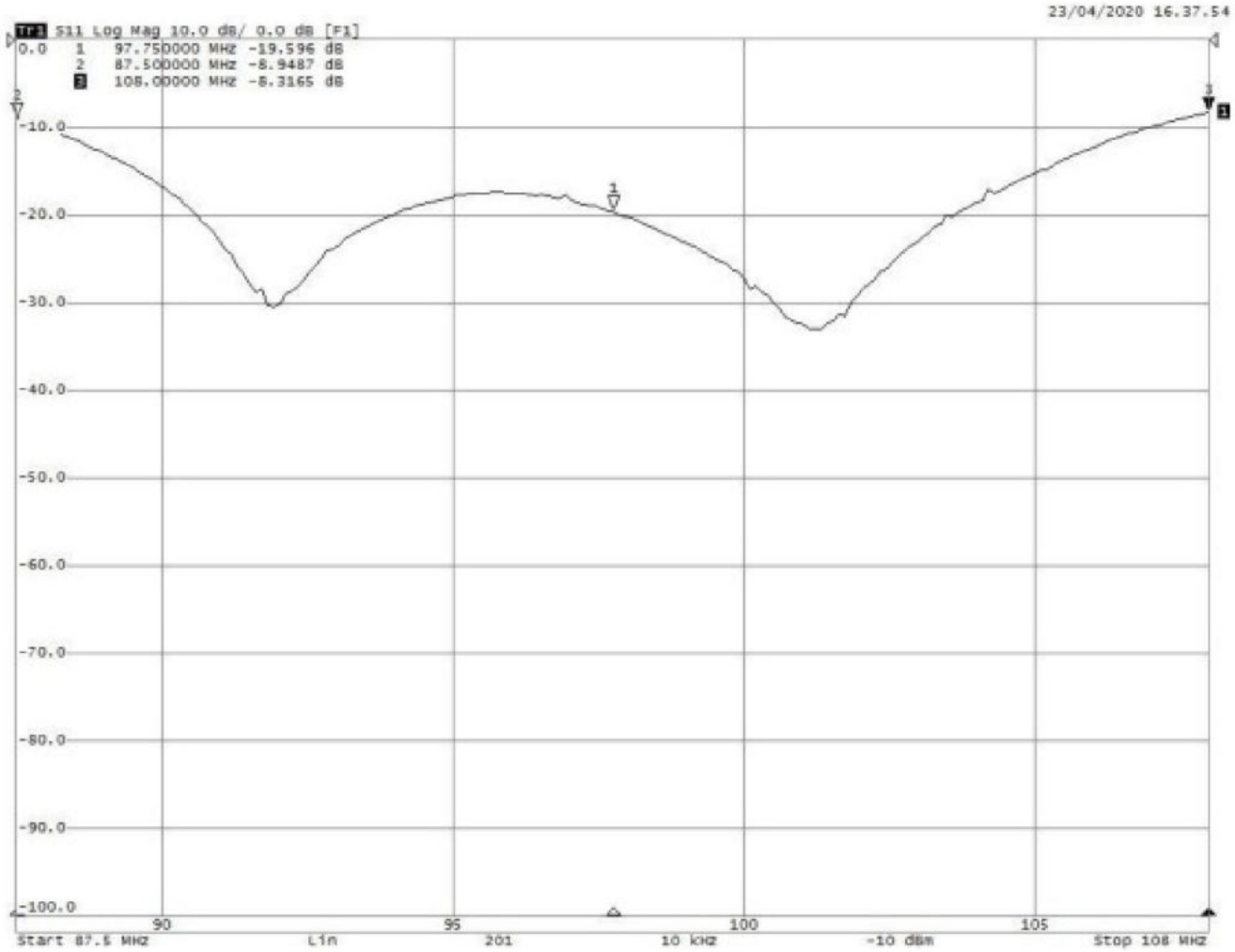


E-Plane



H-Plane

RETURN LOSS



"These specifications are subject to change without notice"

Models:AJ2E-AJ2EBI-AJ2E/IT

- High power verson H.P
- FM band 87.5-108MHz
- Suitable for VHS, Band Iand OIRT band on request
- Gamma match tuned
- Vertical polariztion
- Light- low cost- desmountable

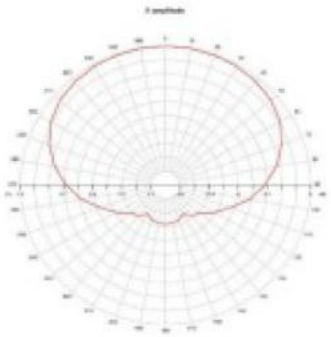
ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N or 7/16'' female or 778'' EIA
Max Power	650W (N)-1300 W (7/16''- H.P version)
VSWR	≤ 1.1:1in the opening channel
Polarization	Vertical
Gain	5dB (referred to half wave dipole)
Half power	E plane +_35° H plane +_54°
Lightning protection	No DC grounded

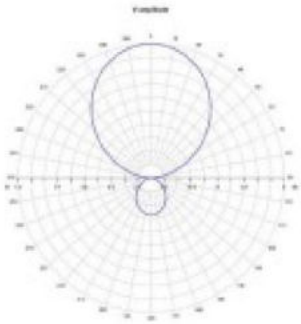
MECHANICAL DATA

Dimensions	According to the working frequency (1500(H)x860(L)x100(W) mm at 98Mhz
Weight	According to the working frequency
Wind surface	0.093m2 (at 98 Mhz)
Wind load	12.1 Kg (wind speed at 160Km/h)
Max wind velocity	200Km/h (AJ2E/IT model)
Materials	AJ2E: aluminium elements and boom AJ2EBI: aluminuim elements and inox boom AJ2E/INOX: inox elements and boom AJ2E/IT: -inox elements and boom -TIG welded versin Insulator. teflon Radome: fiberglass (optional)
Icing protection	Feed point radome
Radome (optional)	Color white (optional)
Mounting	With special pipe clamps 50÷110 mm diameter

RADIATION PATTERN (MID BAND)



H amplitude



E amplitude

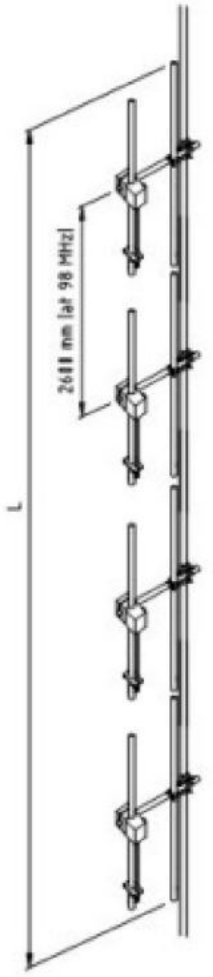
DIMENSIONS

Radiations systems with AJ2E antenna

Collinears systems

ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.1:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power



MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	According to working frequency
Wind load	Refer to table (at 98 Mhz)
Pressurizzable	No
Radome colour	White (optional)
Mounting hardware	Hot dip galvanized steel clamps (standard)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg	*800W*	*1Kw*	*2kw*	*3kw*	*5Kw*
		dB	times								
1	1	5	3.1	-	1.5	12.1	AJ2E	AJ2E(HP)	-	-	-
2	1	8	6.3	-	4.1	24.2	-	AJ2EX21	-	-	-
4	1	11	12.7	-	9.3	48.4	AJ2EX41	-	AJ2EX42	AJ2EX43	-
6	1	12.8	18.9	-	14.5	72.6	AJ2EX61	-	AJ2EX62	AJ2EX63	-
8	1	14	25.2	-	19.7	96.8	AJ2EX81	-	AJ2EX82	-	AJ2E X85

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware.
[3] the systems comprised: antennas, cables and splitter – for more details to see catalog – different version on request

- *Gain is provided for vertical polarisation.*
- *If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.*
- *Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.*
- *Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.*
- *Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.*
- *Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.*
- *Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.*

Models AJ3E-AJ3EBI-AJ3E/INOX-AJ3E/IT

- High power version (H.P.)
- FM band 87.5÷108 MHz
- Suitable for VHF, Band I and or OIRT Band on request
- Gamma match tuned
- Vertical polarization
- Light - low cost - demountable

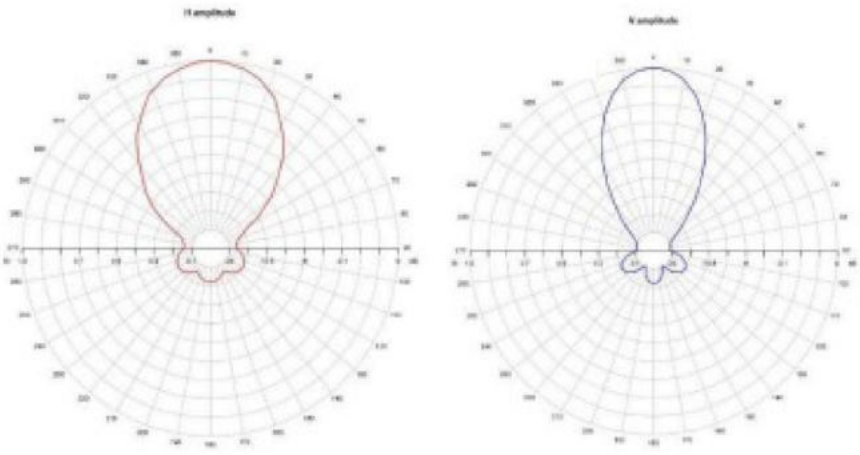
ELECTRICAL DATA

Frequency range	87.5 – 108 mhz.
Impedance	50 Ohm
Connectors	N or 7/16" female or 7/8" EIA
Max Power	650W (N) -1300W (7/16"-H.P version
VSWR ± 2MHz	≤ 1.1:1 in the opening channel
Polarization	Vertical or horizontal
Gain	7dB (referred to half wave dipole)
Half power beam width	E plane ± 25° H plane ± 30°
Lightning protection	No DC grounded

MECHANICAL DATA

Dimensions	According to the working frequency (1500(H)x1480(L)x100(W)mm at 98 MHz)
Weight	According to the mounting frequency
Wind surface	0.14 m² (at 98MHz)
Wind load	18 kg (wind speed at 160 km/h)
Max wind velocity	200 km/h. (AJ3E/IT version)
Materials	-AJ3E: Alluminium elements and boom -AJ3EBI: Alluminium and boom inox -AJ3E/INOX: Inox elements and boom -AJ3E/IT: Inox tig welded -Insulator: teflon; -Radome: PE (option icing protection)
Radome color	Transparent optional
Mounting	With special pipe clamps 50-110mm.Ø

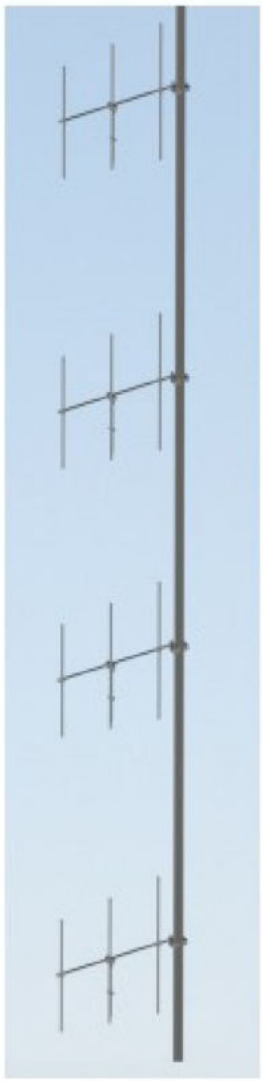
RADIATION PATTERN (MID BAND)



E plane V plane

Version radome option

Antenna Systems with the AJ3E directional pattern



ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.1:1 Max
Polarization	Vertical or horizontal
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	According to the working frequency
Wind load	Refer to table (at 98MHz)
Pressurizzable	No
Radome colour	Transparent (optional)
Mounting hardware	INOX AISI 304 clamps (standard)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg	COLLINEAR SYSTEMS[3]				
		dB	times				*800W*	*1Kw*	*2Kw*	*3Kw*	*5Kw*
1	1	7	5	-	1.5	18	AJ3E	AJ3E(HP)	-	-	
2	1	10	10	-	4.1	36	-	AJ3EX21	-	-	
4	1	13	20	-	9.3	72	AJ3EX41	-	AJ3EX42	AJ3EX43	
6	1	14.8	30	-	14.5	108	AJ3EX61	-	AJ3EX62	AJ3EX62	-
8	1	16	40	-	19.7	144	AJ3EX81	-	AJ3EX82	-	AJ3EX85

1 - Referred to half wave dipole. Attenuation of connecting cables not taken into account

2 - Without mounting hardware.

3 - Systems comprise: antennas, cables and splitter – for more details look on catalog – different versions on demand

- Gain is provided for vertical polarisation.
- When antenna is pole mounted on the top of a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing are provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- A length of five ft(1.6mt) of pipe is required above the top bay and below the bottom bay to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) as of EIA-222-C standard

Models:

AJ4E
AJ4EBI
AJ4E/INOX

AJ4E/IT

- High power verson H.P
- FM band 87.5-108MHz tunable
- Suitable for VHF, Band I and OIRT band on request
- Gamma match tuned
- Vertical or horizontal polariztion
- Light- low cost- desmountable

RADOME OPTIONAL VERSION

STANDARD VERSION

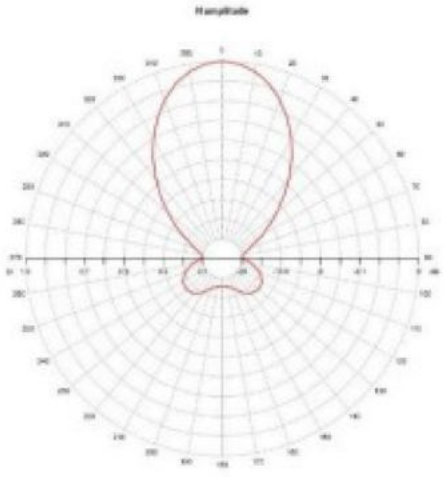
ELECTRICAL DATA

Frequency range	87.5 – 108 mhz.
Impedance 13 kg	50 Ohm
Connectors	N or 7/16'' female or 7/8'' EIA
Max Power	650W (N)-1300 W (7/16''- H.P version)
VSWR	≤ 1.1:1in the opening channel
Polarization	Vertical or horizontal
Gain	8dB (referred to half wave dipole)
Half power	E plane +_25° H plane +_30°
Lightning protection	No DC grounded

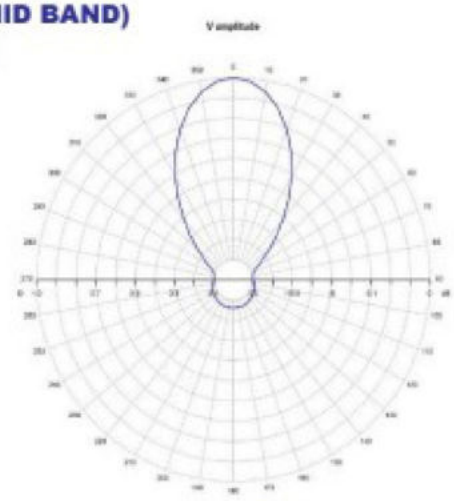
MECHANICAL DATA

Dimensions	According to the working frequency (1500(H)x860(L)x100(W) mm at 98Mhz)
Weight	According to the working frequency
Wind surface	0.18m2 (at 98 Mhz)
Wind load	23.3 Kg (wind speed at 160Km/h)
Max wind velocity	180Km/h (AJ4E/IT model)
Materials	AJ4E: aluminium elements and boom AJ4EBI: aluminuim elements and inox boom AJ4E/INOX: inox elements and boom AJ4E/IT: -inox elements and boom tig welded Insulator. teflon Radome: PE (optional)
Icing protection	Feed point radome
Radome	Color transparent (optional)
Mounting	With special pipe clamps 50÷110 mm diameter

RADIATION PATTERN (MID BAND)
DIMENSIONS



H PLANE

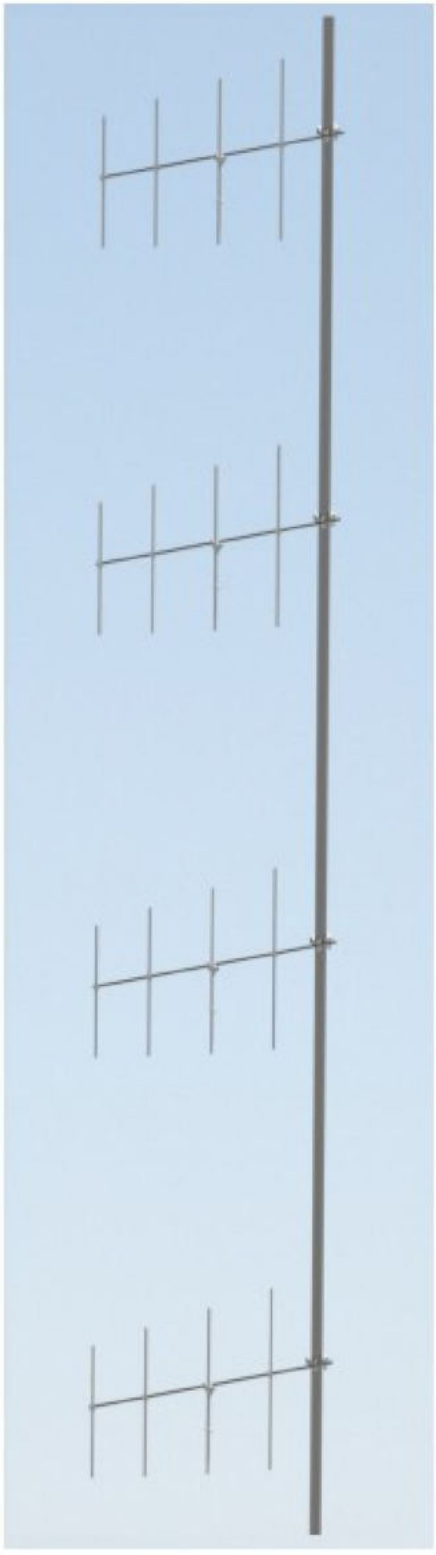


E PLANE

TELECFE BROADCAST SOLUTIONS
www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

Radiations systems with AJ4E antenna

Collinears systems



ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.1:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	According to working frequency
Wind load	Refer to table (at 98 Mhz)
Pressurizzable	No
Radome colour	White (optional)
Mounting hardware	Hot dip galvanized steel clamps (standard)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
1	1	8	6.3	-	1.5	23.3
2	1	11	12.6	-	4.1	46.6
4	1	14	25.2	-	9.3	93.2
6	1	15.8	37.8	-	14.5	139.8
8	1	17	50.4	-	19.7	186.4

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware.

- *Gain is provided for vertical polarisation.*
- *If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.*
- *Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.*
- *Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.*
- *Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.*
- *Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.*
- *Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.*

Model AJ5E-AJ5EBI-AJ5E/INOX-AJ5E/IT

- **High Power Version (H.P.)**
- **FM Band 87.5|108 MHz**
- **Suitable for VHF, Band I and OIRT Band**
- **Gamma Match Tuned**
- **Directional pattern**
- **Vertical or horizontal polarization**
- **Light - Low Cost Demountable**

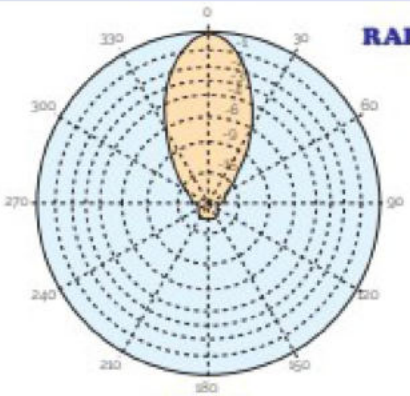
RADOME OPTIONAL VERSION

STANDARD VERSION

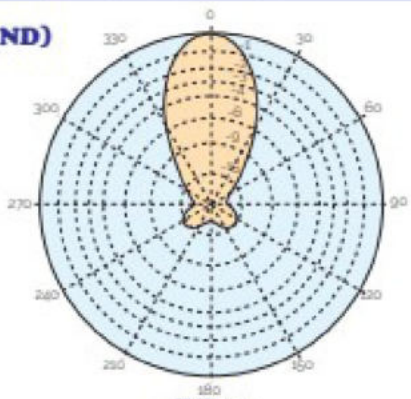
ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connectors	N or 7/16" female or 7/8" EIA
Max Power	650W (N) – 1300W (7/16" – H.P. Version)
VSWR	≤ 1.1:1 in the operating channel
Polarization	Vertical or horizontal
Gain	9.5 dB (referred to half-wave dipole)
Pattern	E plane ± 20° H plane ± 22°
Lightning protection	No DC grounded

MECHANICAL DATA	
Dimensions	According to the working frequency 1500 (H) x 2700 (L) x 100 (W) mm at 98 MHz
Weight	According to the working frequency (aluminium or stainless steel)
Wind surface	0.23 m² (at 98 MHz)
Wind load	30 kg (wind speed at 160 km/h)
Max wind velocity	160 km/h (AJ5E/IT model)
Materials	AJ5E: Aluminium elements and boom AJ5EBI: Alluminium elements and stainless steel boom AJ5E/INOX: Stainless steel elements and boom AJ5E/IT: Stainless steel elements and boom tig welded Teflon insulator Radome: PE (option)
Icing protection	Feed point radome (optional)
Radome	Transparent color Optional
Mounting	With special pipe clamps 50 110 mm dia.

RADIATION PATTERN (MID BAND)



E-Plane



H-Plane

Model AJ5E-AJ5EBI-AJ5E/INOX-AJ5E/IT

Radiations systems with AJ5E antenna

Collinears systems

ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.11 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	According to the working frequency
Wind load	Refer to table (at 98 MHz)
Pressurizzable	No
Radome	Optional
Mounting hardware	Hot dip galvanized steel clamps
Shipping	As required

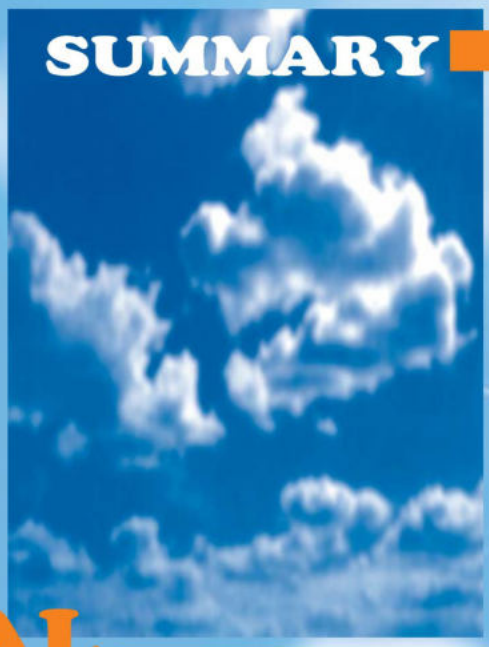
TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)
		dB	times	kg	m	kg
1	1	9.5	8.9	-	1.5	30
2	1	12.5	17.8	-	4.1	60
4	1	15.5	35.6	-	9.3	120
6	1	17.3	53.4	-	14.5	180
8	1	18.5	71.3	-	19.7	240

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.

Gain is provided for vertical polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

SUMMARY



GENERAL CATALOG

F.M. BAND ANTENNAS

TUNED CIRCULAR/ELLIPTICAL POLARIZATION ANTENNAS

TELECFE
BROADCAST SOLUTIONS

www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

Model : ACP0

- Band II
- FM Band 87.5 ÷108 MHz
- Tuned antenna
- True circular polarization
- Stainless steel AISI 304

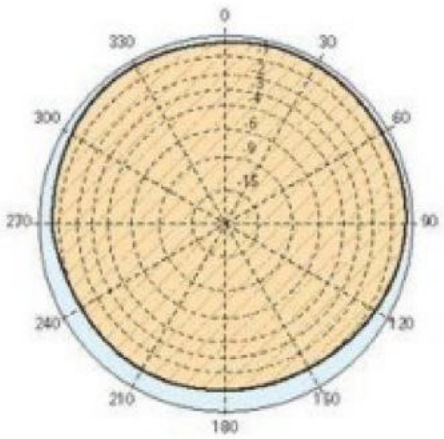
ELECTRICAL DATA

Frequency range	87.5÷108 MHz
Impedance	50 Ohm
Connectors	N female
Max Power	800W (N female)
VSWR ±100KHz	≤ 1.1:1
Polarization	Right circular
Gain	-3.4 dB
Pattern	Omnidirectional ± 1.5 dB in free space Omnidirectional ± 3 dB with 100 mm dia. pole
Lightning protection	All metal parts DC grounded

MECHANICAL DATA

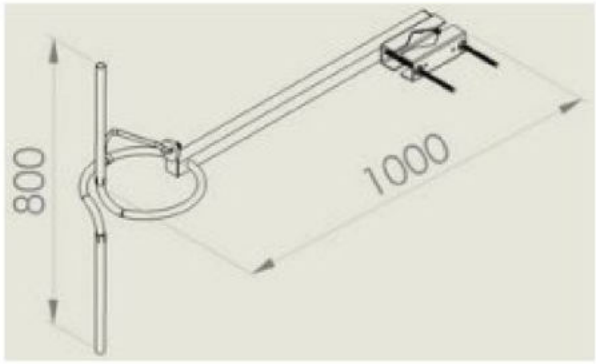
Dimensions	1000x300x800 mm
Net Weight	3 Kg without clamp 5.5 Kg with clamp
Wind surface	0.036 m^2
Wind load	6 kg (wind speed at 160 km/h)
Max wind velocity	220 km/h.
Materials	External parts: stainless steel Internal parts: silver plated brass
Mounting	With special pipe clamps 50 ÷ 110 mm dia.

RADIATION PATTERN (MID BAND)

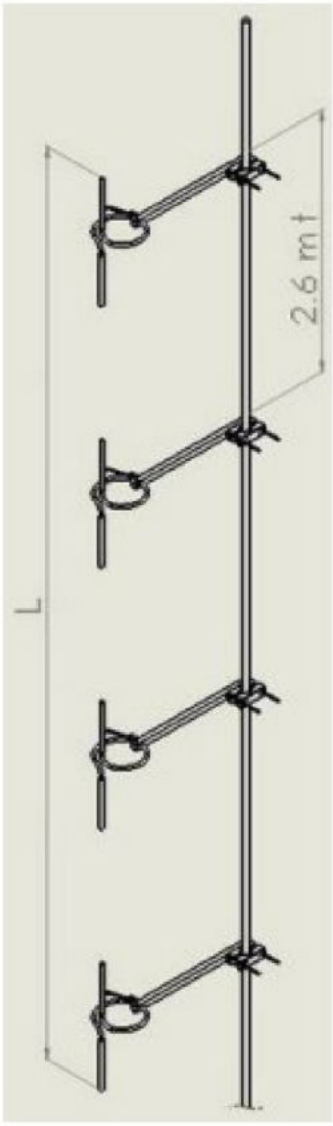


H-plane

DIMENSIONS (mm)



Radiation systems with ACP0 antenna
Collinear systems



ELECTRICAL DATA

Frequency range	87.5 ÷108 MHz
Impedance	50 Ohm
Connector	N female
VSWR ± 100KHz	1.1:1 in the operating channel
Polarization	Circular
Gain	Refer to table
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

Wind load & Weight

Number of bays	Wind load (without radomes) kg	lb	Weight[2] Kg	lb
1	6	13.2	5.5	12.1
2	12	26.4	11	24.2
3	18	39.7	16.5	36.4
4	24	52.9	22	48.5
5	30	66.1	27.5	60.6
6	36	79.4	33	72.8
8	48	105.8	44	97
12	72	158.7	66	145.5

[2] *without mounting hardware*

TECHNICAL DATA

Number of bays	Gain[1] dB	times	Antenna radiation aperture (L) ft	m	Pipe length Required ft	m	Total Tower space Recommended ft	m	SYSTEMS MODELS[3] 800W	1KW	2KW	3KW	5KW
1	-3.4	0.46	2	0.7	10	2.7	20	10	ACP0	-	-	-	-
2	-0.0	0.99	10	3.1	20	5.3	30	20	-	ACP0X21	-	-	-
3	1.9	1.55	20	6.1	30	7.9	40	30	-	-	-	-	-
4	3.2	2.12	30	9.1	40	10.5	50	40	ACP0X41	-	ACP0X42	ACP0X43	-
5	4.3	2.70	40	12.2	50	13.1	60	50	-	-	-	-	-
6	5.2	3.28	50	15.2	60	15.7	70	60	ACP0X61		ACP0X62	ACP0X63	-
8	6.5	4.40	70	21.3	80	20.9	90	80	ACP0X81	-	ACP0X82	-	ACP0X85
12	8.4	6.85	110	33.5	120	31.3	130	120	-	-	-	-	-

[1] *referred to a half wave dipole. Attenuation of connecting cables not taken into account.*
[3] *the systems comprised: antennas, cables and splitter – for more details to see catalogue – different version on request*

- *Gain is provided for one polarization.*
- *When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.*
- *If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.*
- *Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.*
- *Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.*
- *Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.*
- *Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.*
- *Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.*

Model : ACP0HP

- Band II
- FM Band 87.5 | 108 MHz
- True Circular Polarization
- Tuned antenna
- Economical
- Digital Ready
- Stainless steel AISI 304
- Adjustable Fine-Matching Transformer (OPTION)

ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connectors	7/8" (3KW) or 7/16" (2KW)
Max Power	3 KW
VSWR ± 100KHz	1:1.1 in the operating channel
Polarization	Right Circular
Gain	-3.4 dB (referred to half wave dipole)
Azimut Pattern Circularity:	Omnidirectional ± 1.5 dB in free space Omnidirectional ± 3 dB with 100 mm dia. pole
Lightning protection	All metal parts DC grounded

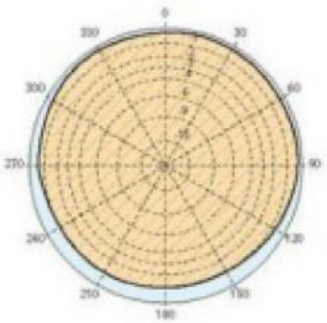
MECHANICAL DATA	
Dimensions	1200x375x775 (HxWxL) mm
Net Weight	6 Kg without clamp 8,5 Kg with clamp
Wind surface	0.072 m^2
Wind load	11.5 kg (wind speed at 160 km/h) Side
Max wind velocity	220 km/h.
Materials	External parts: stainless steel, plexiglas Internal parts: silver plated brass
Mounting	With special pipe clamps 50 | 110 mm dia.

Radiations systems with ACP0HP antenna - Collinear systems

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Mounting hardware	inox aisi 304 clamps
Shipping	As required

ELECTRICAL DATA	
Frequency range	87.5 | 108 MHz
Impedance	50 Ohm
Connector	N female
VSWR ± 100KHz	1.1:1 in the operating channel
Polarization	Circular
Gain	Refer to table
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

RADIATION PATTERN FREE SPACE

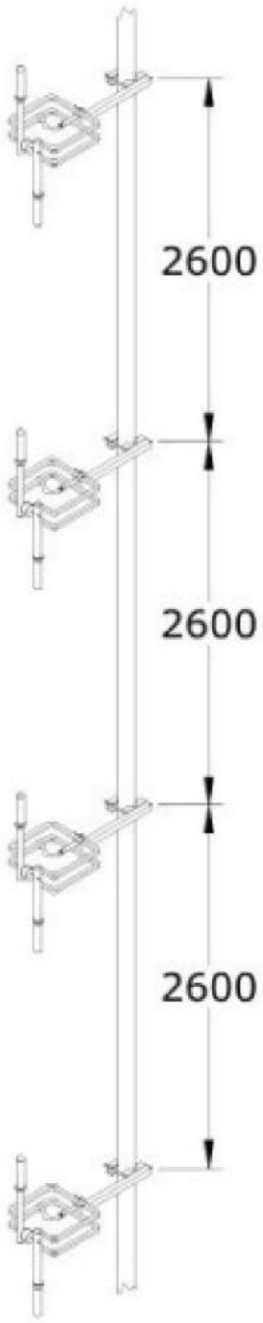


H-plane

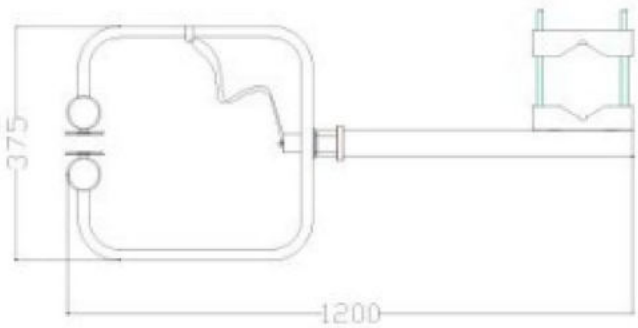
TECHNICAL DATA (FULL-WAVE-SPACED)

bays	bay	dB	times	Kg	m	kg
1	1	-3.4	0.5	6	---	11.5
2	1	0.0	1.0	12	3.6	23
4	1	3.2	2.1	24	8.8	46
6	1	5.2	3.3	36	14.0	69
8	1	6.5	4.5	48	21.8	92
12	1	8.4	6.9	72	29.6	138

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware
[3] without radome

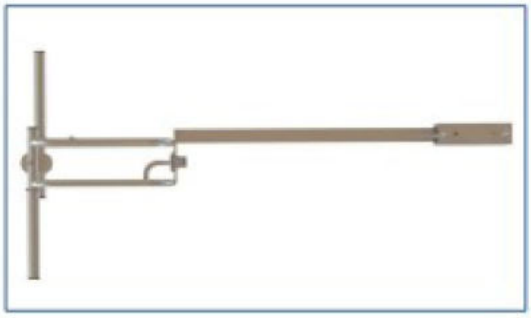


DIMENSIONS



Gain is provided for Horizontal polarization.
When antenna is pole mounted on the top a tower the horizontally polarized radiation pattern is omni - directional.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

OTHER ANTENNA VIEWS

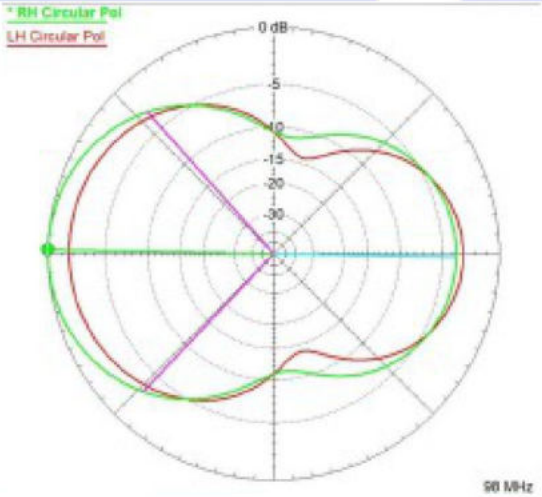


Model AJ2EC

- **FM Band 87.5 | 108 MHz tunable**
- **Suitable for VHF, FM Band**
- **Gamma Match Tuned**
- **Directional pattern**
- **Circular polarization**
- **Demountable**

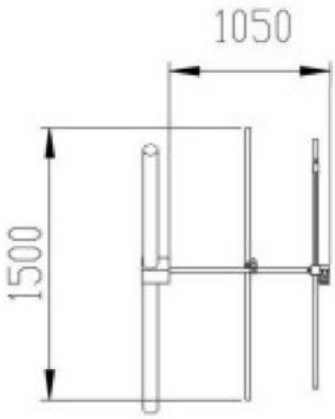
ELECTRICAL DATA	
Frequency range	87.5 - 108 MHz tunable
Impedance	50 Ohm
Connectors	N or 7/16" female or 7/8" EIA
Max Power	1400W (2 - N) - 2300W (2 -7/16" - H.P. Version)
VSWR	≤ 1.1:1 in the operating channel
Polarization	Circular
Gain	3.2 dBd peak gain 0.3 dBd total gain
Lightning protection	No DC grounded

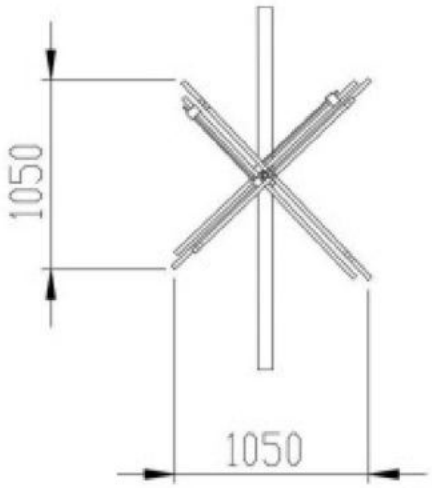
MECHANICAL DATA	
Dimensions	According to the working frequency
Weight	According to the working frequency (aluminium or stainless steel)
Wind surface	0.23 m² (at 98 MHz)
Wind load	20 kg (wind speed at 140 km/h)
Max wind velocity	140 km/h (AJ2E/IT model)
Materials	AJ2EC: Aluminium elements and boom Teflon insulator Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 110 mm dia.



RADIATION PATTERN (MID BAND)

Model AJ2EC dimensions mm.





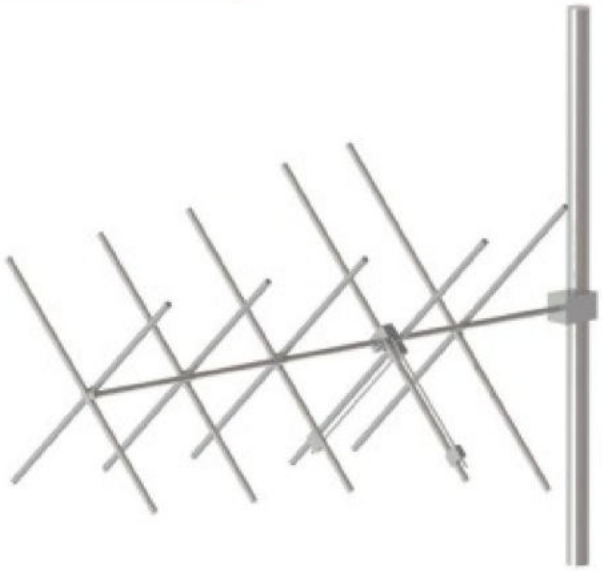
side

front

Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

Model AJ5EC

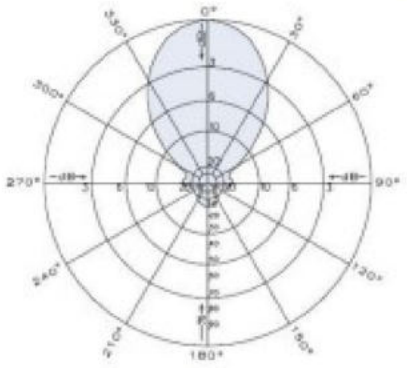
- FM Band 87.5 | 108 MHz
- Suitable for VHF, FM Band
- Gamma Match Tuned
- Directional pattern
- Circular polarization
- Demountable



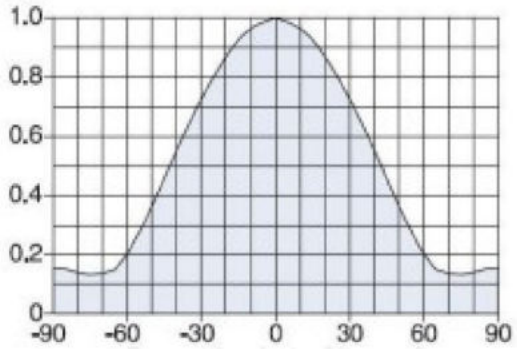
ELECTRICAL DATA	
Frequency range	87.5 - 108 MHz tunable
Impedance	50 Ohm
Connectors	N or 7/16" female or 7/8" EIA
Max Power	1400W (2 - N) - 2300W (2 -7/16" - H.P. Version)
VSWR	≤ 1.1:1 in the operating channel
Polarization	Circular
Gain	4.7 dB (referred to half-wave dipole total gain)
Pattern	E plane± 30° H plane± 30°
Lightning protection	No DC grounded

MECHANICAL DATA	
Dimensions	According to the working frequency 1500 (H) x 2250 (L) x 1050 (W) mm at 98 MHz
Weight	According to the working frequency (aluminium or stainless steel)
Wind surface	0.43 m² (at 98 MHz)
Wind load	50 kg (wind speed at 140 km/h)
Max wind velocity	140 km/h (AJ5E/IT model)
Materials	AJ5EC: Aluminium elements and boom Teflon insulator Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 110 mm dia.

RADIATION PATTERN (MID BAND)

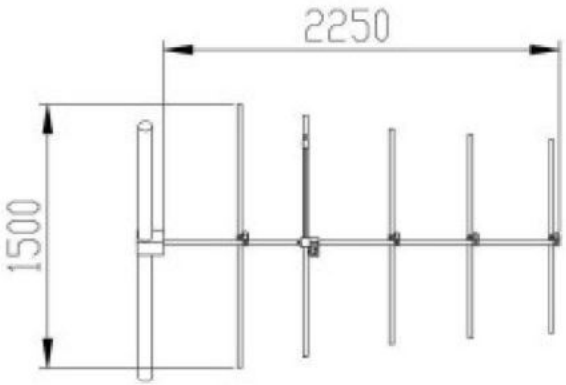


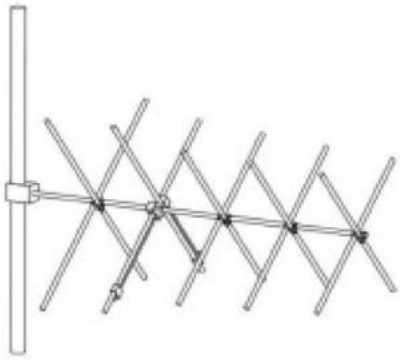
Azimut pattern

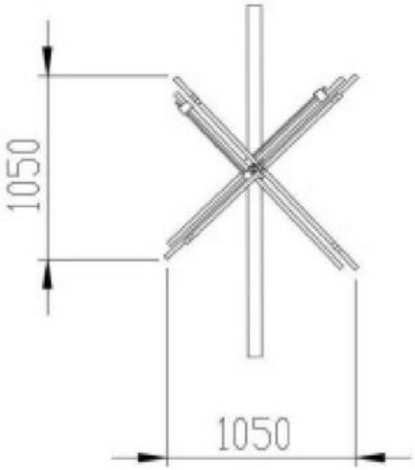


Elevation pattern

Model AJ5EC dimensions mm.

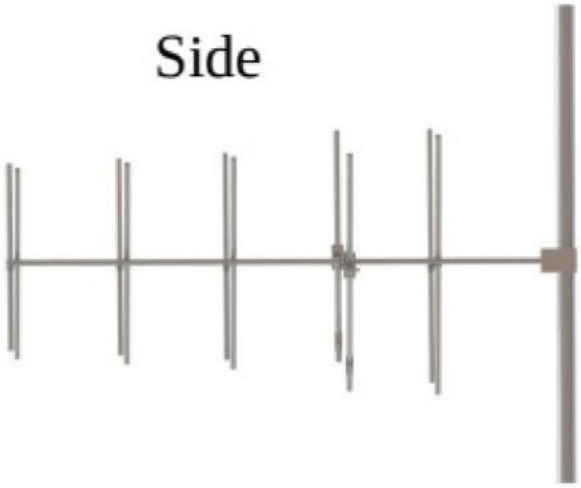






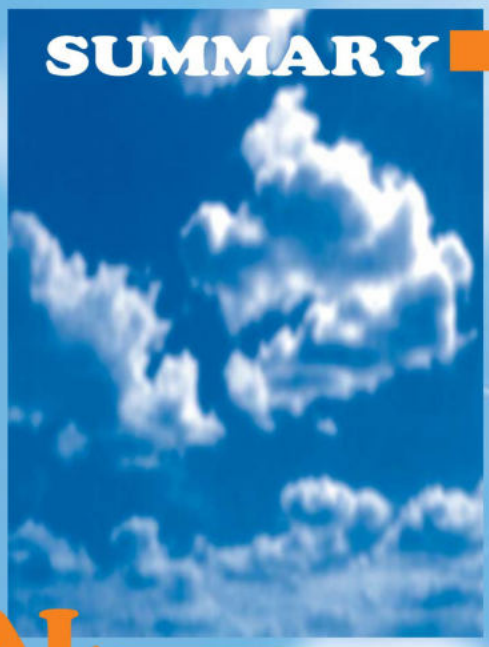
Front

Side



Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

SUMMARY



GENERAL CATALOG

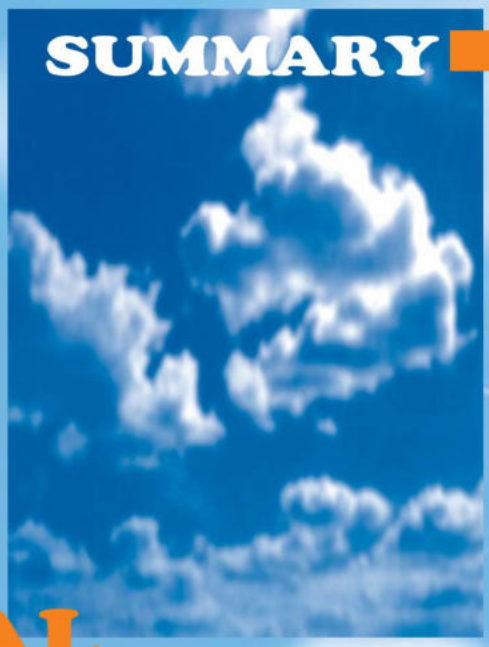
TV BAND ANTENNAS

BAND I

BAND III DAB

BAND IV-V

SUMMARY

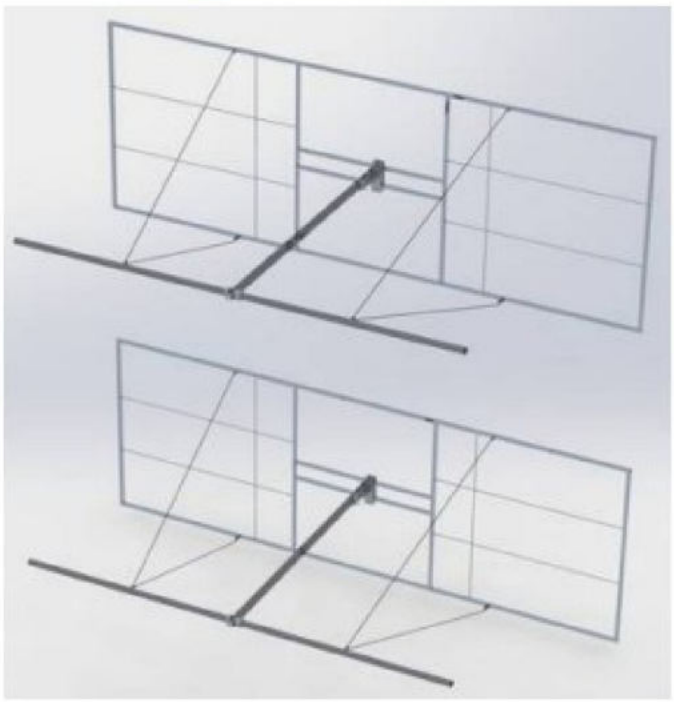


GENERAL CATALOG

TV BAND ANTENNAS

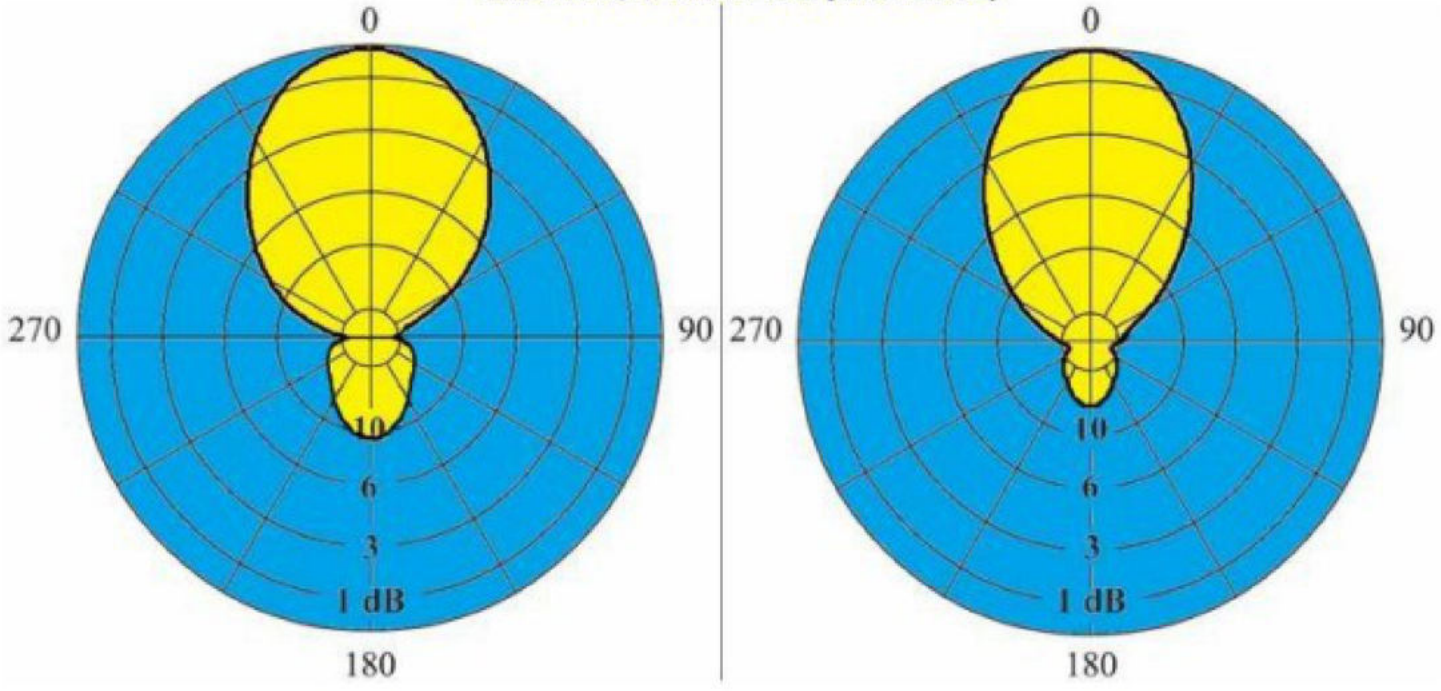
BAND I

Model: DPA1HB1#1 DPA1HB1#2 DPA1HB1#3 DPA1HB1#4 DPA1HB1#5 DPA1HB1#6

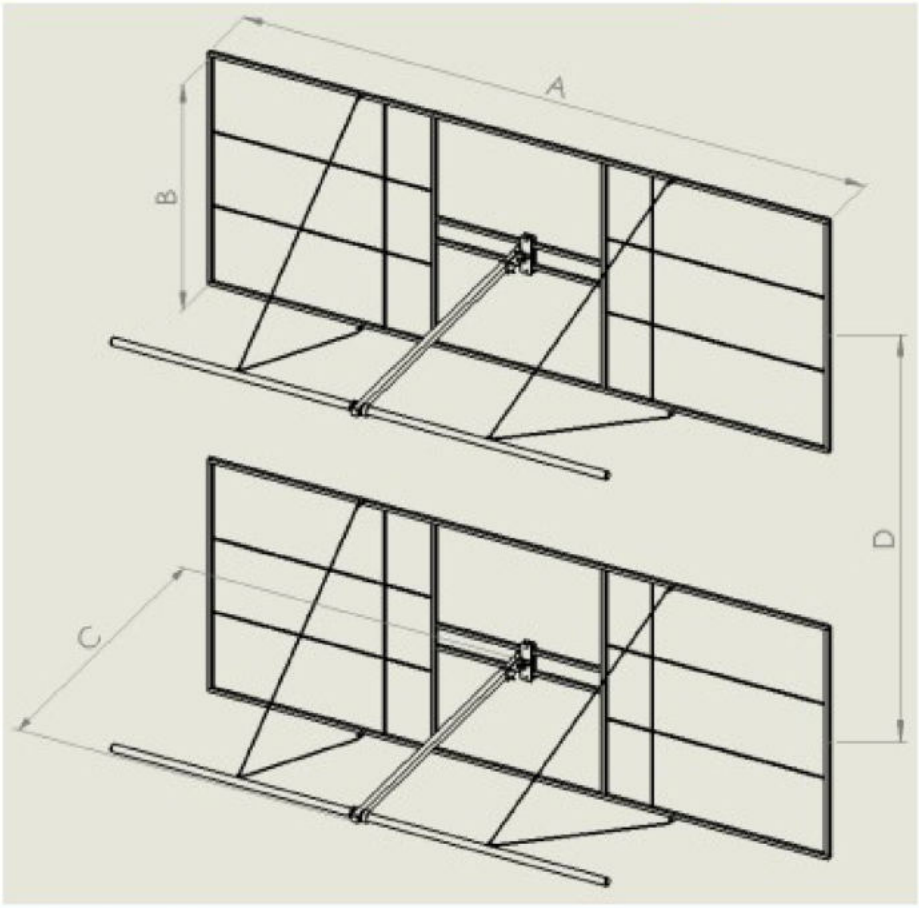


- Band I panel
- Broadband 47 ÷ 68 MHz
- Demountable
- Horizontal polarization
- Directional pattern
- Suitable as a component in various arrays

RADIATION PATTERN (MID BAND)



E-plane H-plane



ELECTRICAL DATA

Code	DPA1HB1#1	DPA1HB1#2	DPA1HB1#3	DPA1HB1#4	DPA1HB1#5	DPA1HB1#6
Frequency range	47 ÷ 54 MHz TYPE 1	54 ÷ 61 MHz TYPE 2	61 ÷ 68 MHz TYPE 3	66 ÷ 72 MHz TYPE 4	76 ÷ 82 MHz TYPE 5	82 ÷ 88 MHz TYPE 6
Impedance	50 Ohm					
Connector	2 x 7/8" EIA					
Max Power	2 x 2.5 kW					
VSWR	≤ 1.15:1					
Polarization	Horizontal					
Gain	7.5 dB (referred to half-wave dipole)					
Half power beamwidth:	E plane ± 35° H plane ± 27					
Lightning protection	All metal parts DC grounded					

MECHANICAL DATA

Code		DPA1HB1#1	DPA1HB1#2	DPA1HB1#3	DPA1HB1#4	DPA1HB1#5	DPA1HB1#6
Dimensions (mm)	A	3360	3020	2690	2460	2165	2000
	B	1300	1170	1060	970	850	810
	C	1700	1580	1490	1312	1245	1170
	D	2850	2500	2310	2100	2000	1900
Weight		135 Kg	122 Kg	110 Kg	96 Kg	90 Kg	80 Kg
Wind load at 150 km/h		380 Kg	350 Kg	310 Kg	291 Kg	265 Kg	260 Kg
Max wind velocity		220 km/h.					
Materials		Dipole: Brass, allluminium (internal) stainless steel aisi 304, PTFE (esternal) Reflector: Stainless steel aisi 304 Radome: metalcrilate (optional)					
Icing protection		Feed point radome (optional)					
Radome color		Transparent (optional)					
Mounting		With special pipe clamps 50 ÷ 110 mm dia.					

Radiations systems with DPA1HB#1/2/3/4/5/6

Omnidirectional or directional pattern

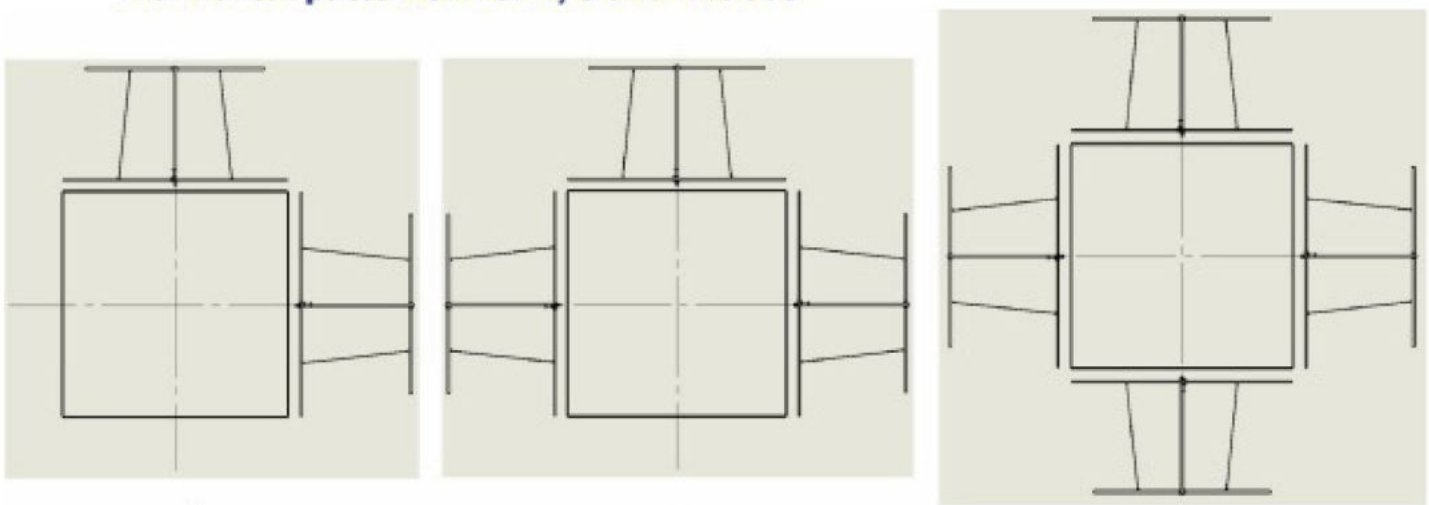
Balanced or unbalanced splitting power

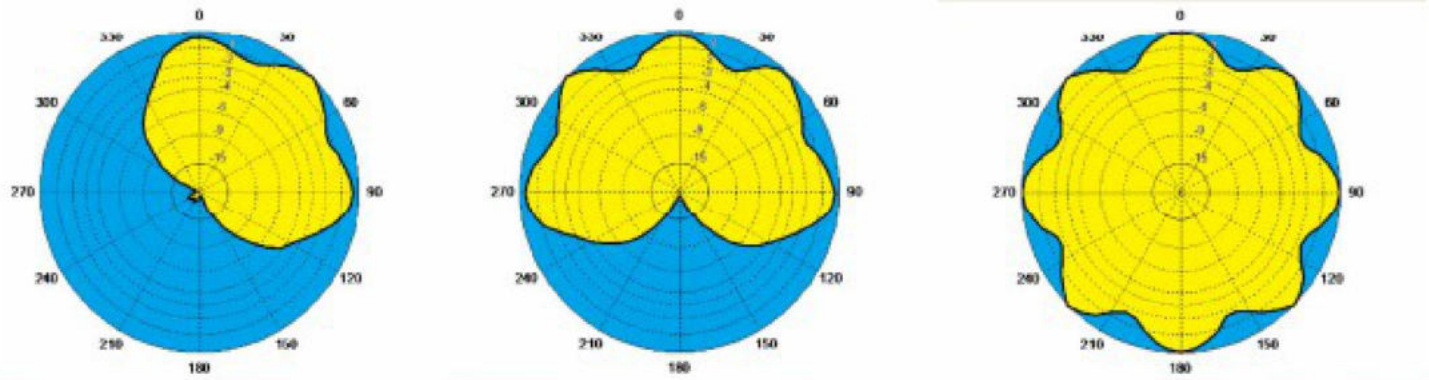
High power systems

ELECTRICAL DATA	
Frequency range	TYPE 1 47 ÷ 54 MHz ; TYPE 2 54 ÷ 61 MHz ; TYPE 3 61 ÷ 68 MHz TYPE 4 66 ÷ 72 MHz ; TYPE 5 76 ÷ 82 MHz ; TYPE 6 82 ÷ 88 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	1.22-:1 Max
Polarization	Horizontal
Gain	According to requirement
Horizontal pattern	Any type according to requirement
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes
Radome color	Transparent (optional)
Mounting hardware	Stainless steel
Shipping	As required

Horizontal patterns with 2, 3 and 4 faces





TECHNICAL DATA

N°	Pan per bay	Gain[1]		Weight[2] (kg)						Antenna height L (m) Interbay distance S (m)						Wind load[3] (kg)					
		dB	times	#1	#2	#3	#4	#5	#6	#1	#2	#3	#4	#5	#6	#1	#2	#3	#4	#5	#6
1	2	5.2	3.3	280	250	230	210	190	170							591	540	500	448	418	408
	3	3.6	2.3	440	395	365	335	305	275	L=4.2	L=3.7	L=3.4	L=3.1	L=2.8	L=2.7	887	815	764	693	622	612
	4	2	1.6	610	550	510	470	430	390							1091	999	907	836	785	754
2	1	11.2	13.2	280	250	230	210	190	170							1121	1019	938	877	805	785
	2	8.2	6.6	610	550	510	470	430	390	L=10.6	L=9.3	L=8.4	L=7.8	L=6.9	L=6.5	1193	1080	989	907	836	815
	3	6.6	4.6	950	860	800	740	680	620	S=6.4	S=5.6	S=5	S=4.7	S=4.1	S=3.8	1784	1631	1509	1254	1254	1223
	4	5.2	3.3	1240	1120	1040	960	880	800							2161	1998	1814	1682	1560	1478
4	1	14.2	26.3	610	550	510	470	430	390							2314	2079	1937	1763	1621	1580
	2	11.2	13.2	1240	1120	1040	960	880	800	L=23.4	L=20.5	L=18.4	L=17.2	L=15.1	L=14.1	2385	2130	1957	1794	1651	1621
	3	9.6	9.10	1830	1650	1530	1410	1290	1170	S=6.4	S=5.6	S=5	S=4.7	S=4.1	S=3.8	3568	3231	3007	2731	2508	2446
	4	8.2	6.60	2440	2200	2040	1880	1720	1560							4312	3945	3608	3364	3099	2956
6	1	16	39.8	950	860	800	740	680	620							3057	3150	2915	2650	2436	2385
	2	13	20	1830	1650	1530	1410	1290	1170	L=36.2	L=31.7	L=28.4	L=26.6	L=23.3	L=21.7	3588	3200	2925	2681	2467	2446
	3	11.4	13.8	2720	2450	2270	2090	1910	1730	S=6.4	S=5.6	S=5	S=4.7	S=4.1	S=3.8	5632	4760	4516	4098	3751	3649
	4	10	10	3560	3200	2960	2720	2480	2240							6493	5933	5423	5036	4638	4444
8	1	17.4	55	1240	1120	1040	960	880	800							4699	4230	3884	3557	3272	3191
	2	14.4	27.5	2440	2200	2040	1880	1720	1560	L=49.0	L=42.9	L=38.4	L=36	L=31.5	L=29.3	4781	4261	3914	3588	3303	3252
	3	12.6	18.2	3560	3200	2960	2720	2480	2240	S=6.4	S=5.6	S=5	S=4.7	S=4.1	S=3.8	7146	6453	6024	5474	5005	4882
	4	11.4	13.8	4680	4200	3880	3560	3240	2920							8644	7900	7277	6718	6177	5922

N° : number of bays

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.

[2] without mounting hardware

[3] wind velocity=150 km/h, according to the tower type, for more details contact us

#1 : referred to TYPE 1 (DPA1HB1#1)

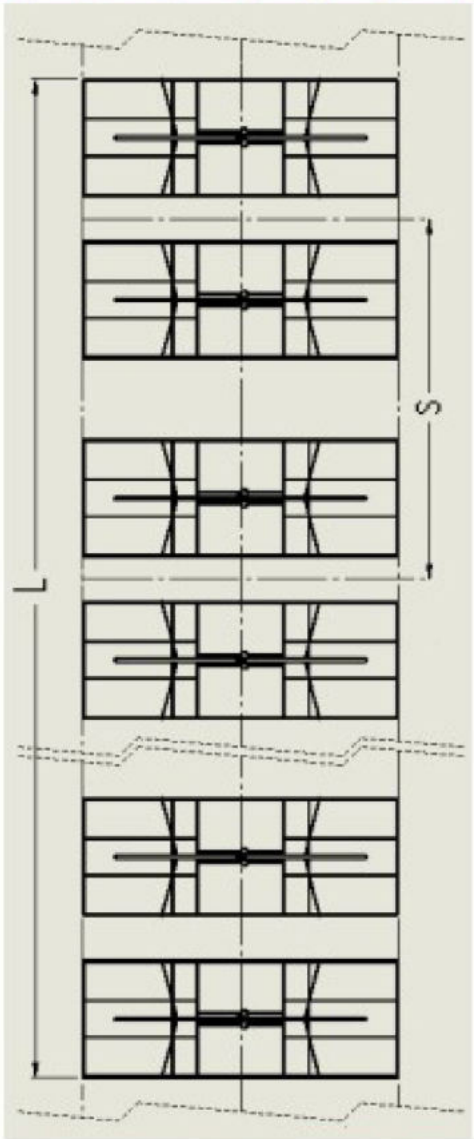
#2 : referred to TYPE 2 (DPA1HB1#2)

#3 : referred to TYPE 3 (DPA1HB1#3)

#4 : referred to TYPE 4 (DPA1HB1#4)

#5 : referred to TYPE 5 (DPA1HB1#5)

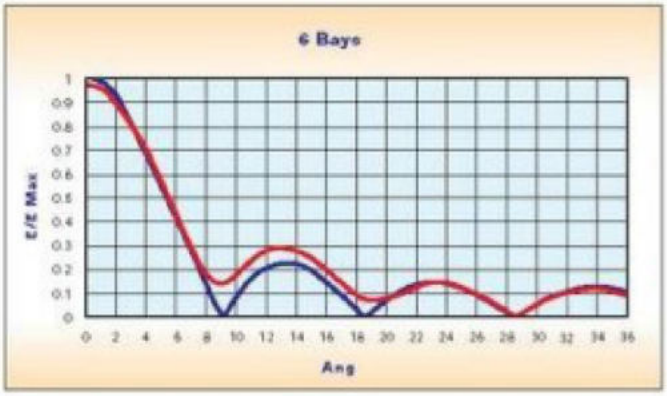
#6 : referred to TYPE 6 (DPA1HB1#6)

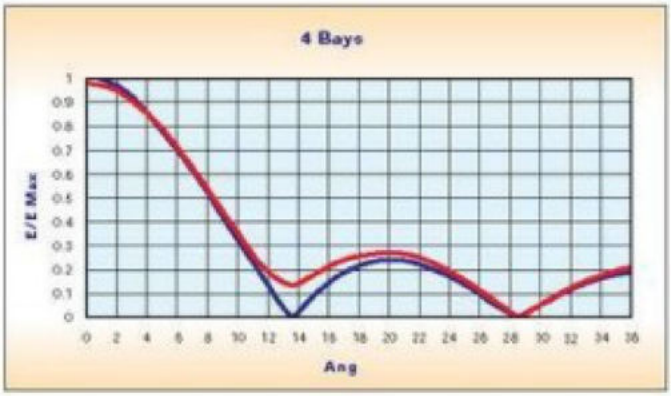


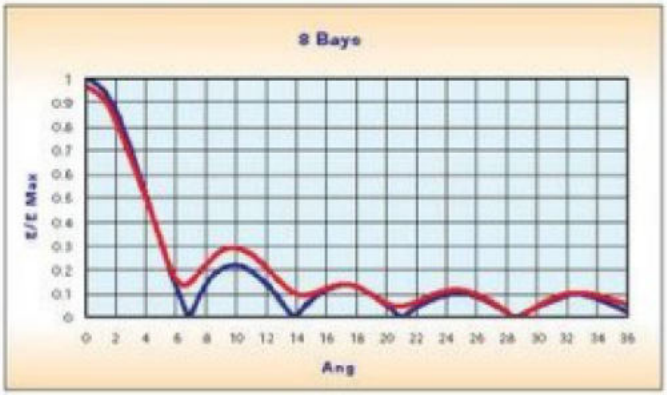
VERTICAL PATTERN

Without null fill

With null fill and beam tilt

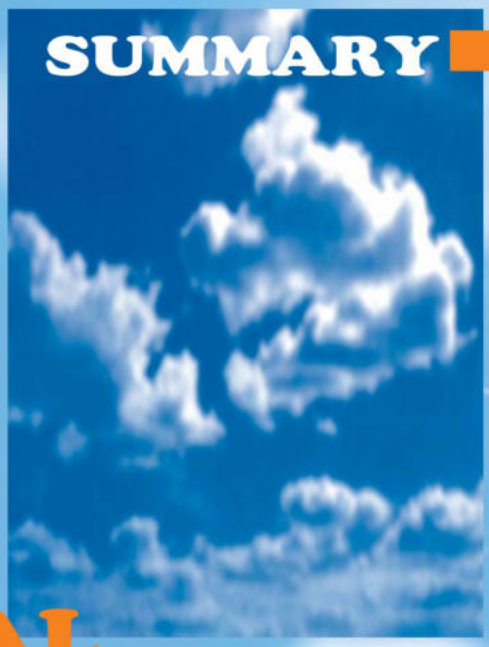






- Gain is provided for horizontal polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 93 Mph (150Km/h) per EIA-222-C standard.

SUMMARY



GENERAL CATALOG

TV BAND ANTENNAS

BAND III TV & DAB

TELECFE
BROADCAST SOLUTIONS

www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

Model AJ1FIII

- **Band III VHF dipole**
- **1.7 dB gain midle**
- **Vertical polarization**
- **Suitable for Digital Audio Broadcasting**
- **Stainless steel AISI 304**

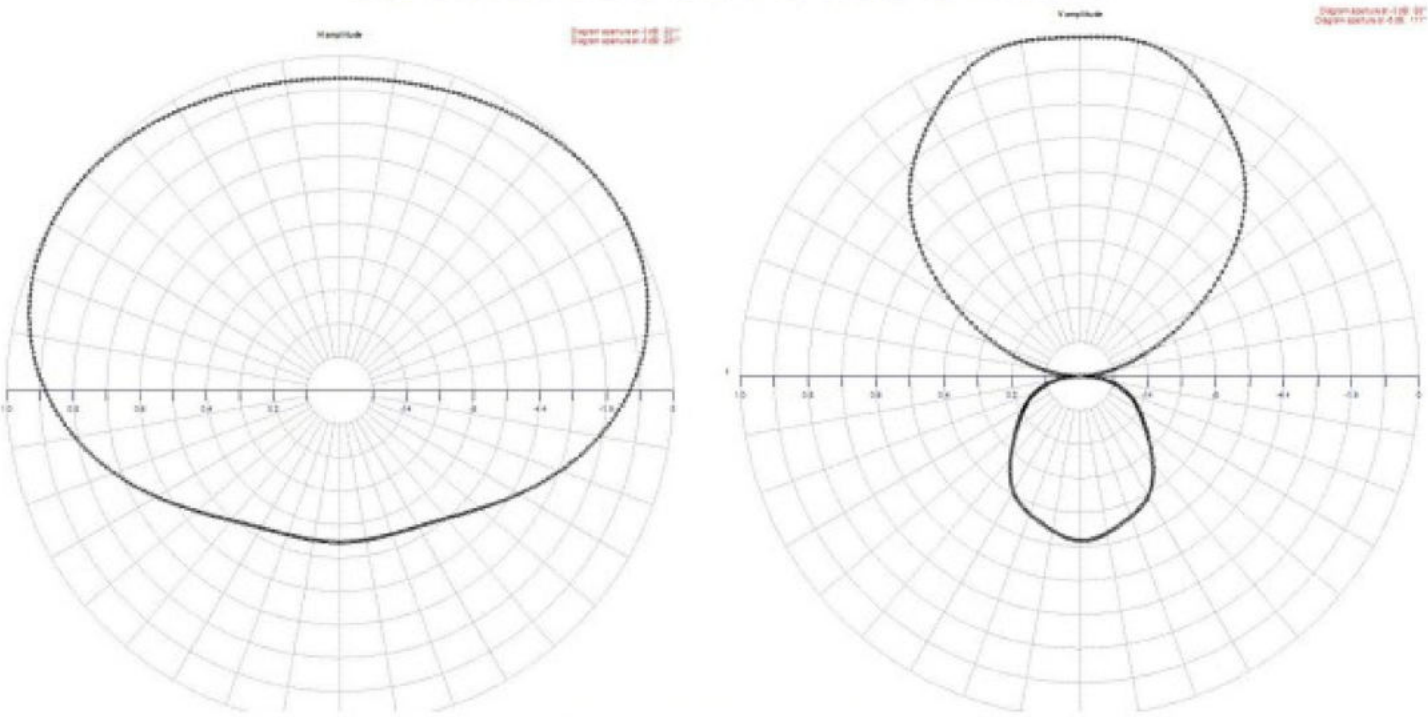
ELECTRICAL DATA

Models	AJ1FIII-1	AJ1FIII-2	AJ1FIII-3	AJ1FIII-4
Frequency Range (MHz)	174 ÷ 230	174 ÷ 216	182.5 ÷ 228.5	195 ÷ 240
Impedance	50 Ω			
Connectors	N female or 7-16 female or 7/8" EIA			
Max Power	800W (N) - 2kW (7-16) - 3.5 kW (7/8")			
VSWR ± 150 KHz	≤1.35	≤1.23	≤1.23	≤1.23
Polarization	Vertical			
Gain	1.2 dB (referred to half wave dipole)			
Pattern	Omni directional ± 1.5 dB in free space Omni directional ± 3 dB with Ø100 mm pole			
Lightning protection	All metal parts DC grounded			

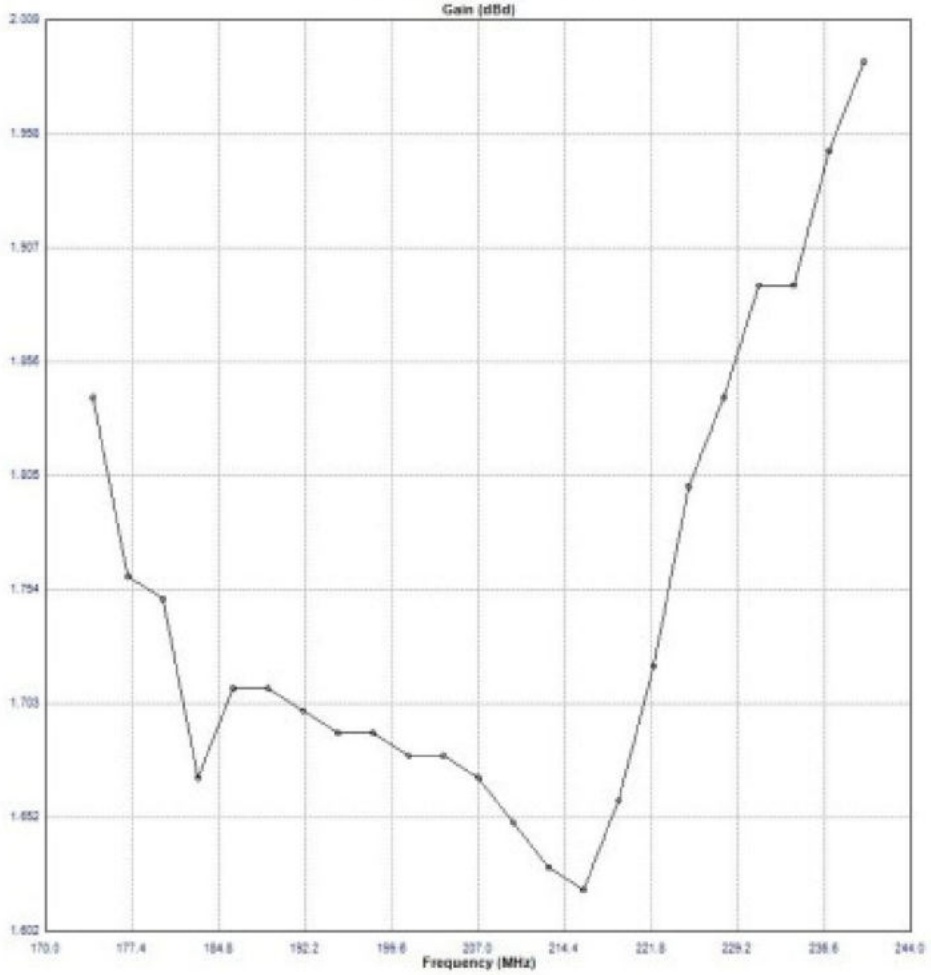
MECHANICAL DATA

Models	AJ1FIII-1	AJ1FIII-2	AJ1FIII-3	AJ1FIII-4
Dimensions (mm)	D1 730 x D2 670 x 180	D1 760 x D2 685 x 180	D1 730 x D2 670 x 180	D1 680 x D2 605 x 180
Weight	7 kg without hardware support			
Wind surface	0.114 m^2			
Wind load	16.3 kg (wind speed 150 km/h without radome)			
Max wind velocity	220km/h			
Materials	External parts: stainless steel Materials Internal parts: passivated aluminium Radome: fiberglass (option)			
Icing protection	Feed point radome			
Radome	Optional			
Mounting	With special pipe clamps Ø 50 ÷ 110 mm			

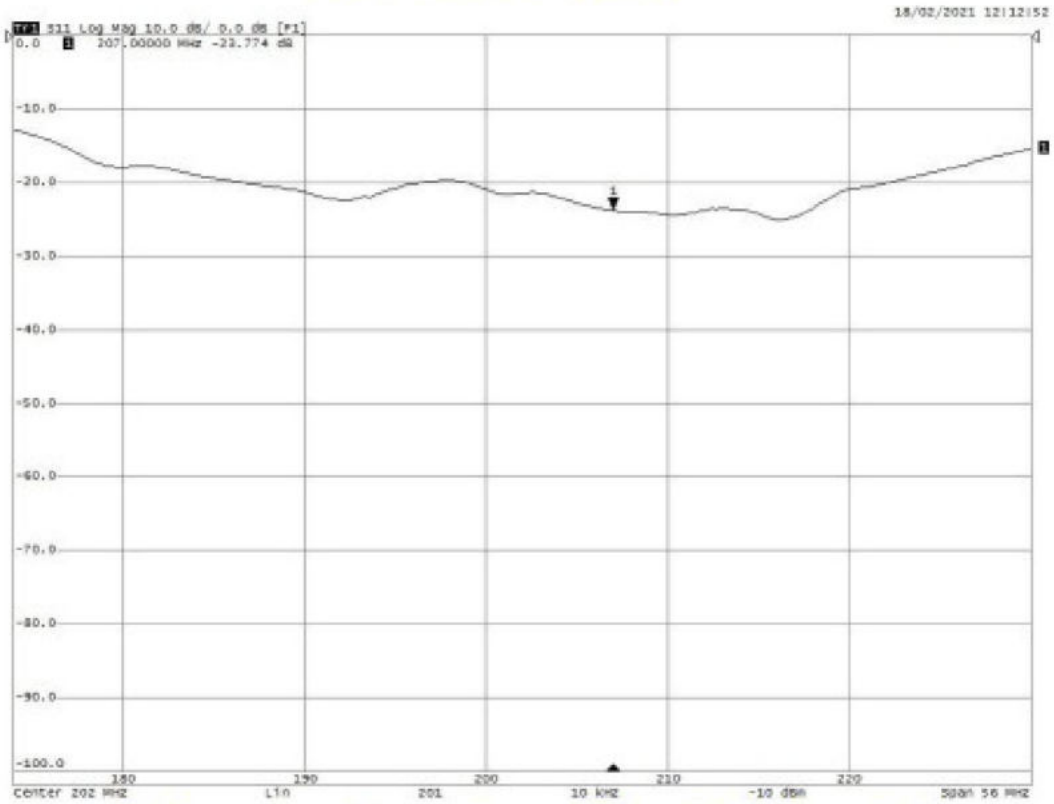
RADIATION PATTERN



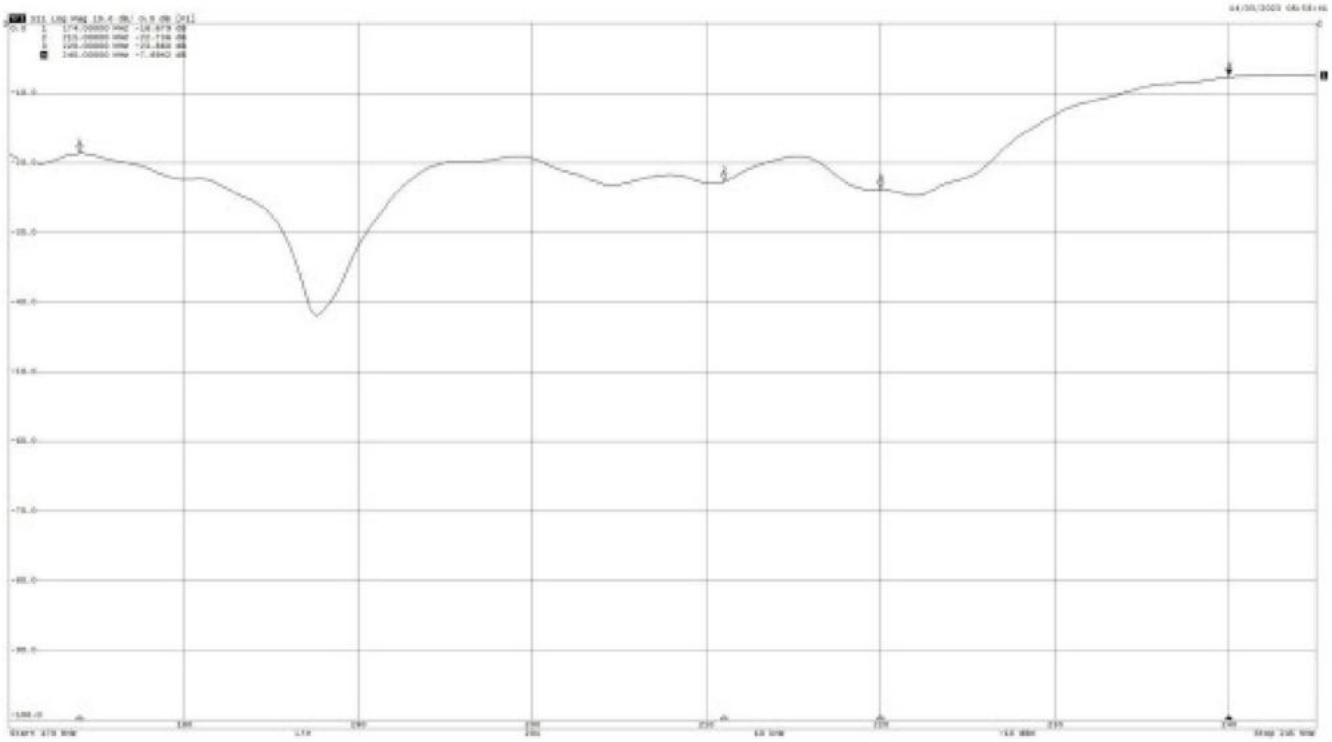
GAIN dB



Return loss



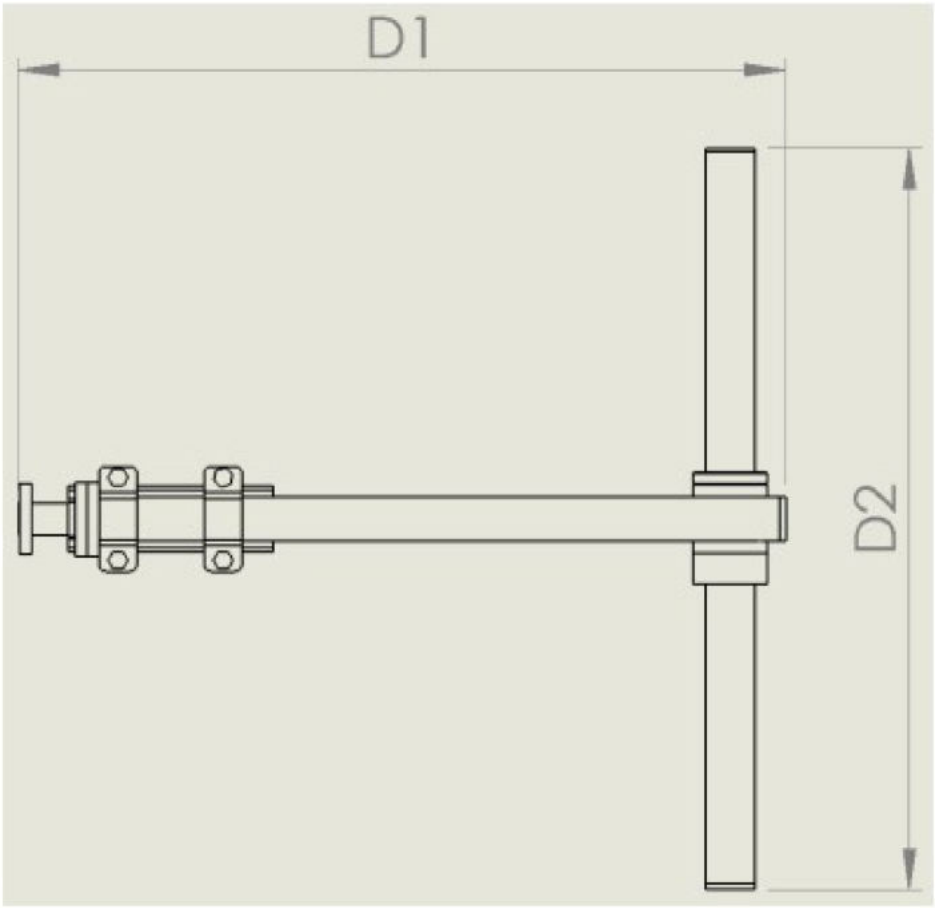
Example standard dipole



Example system 4 dipole

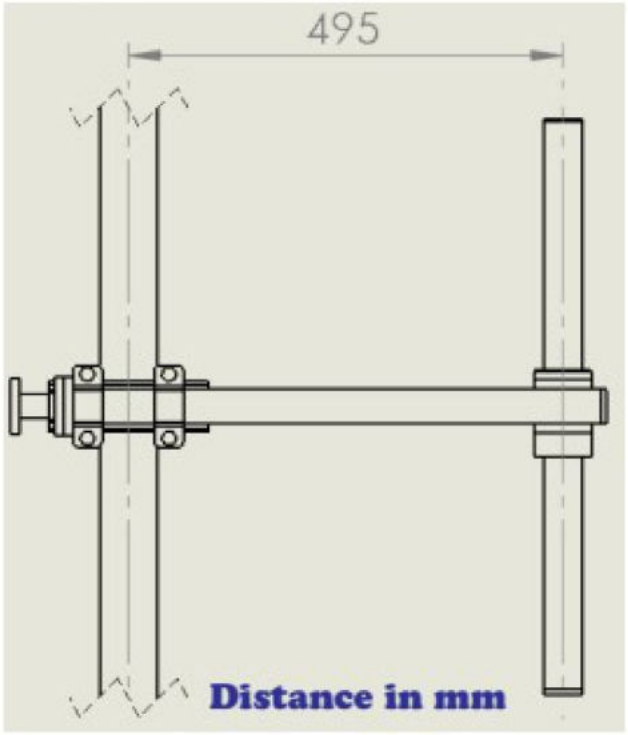
Model AJ FIII

DIMENSIONS (mm) (See table MECHANICAL DATA)

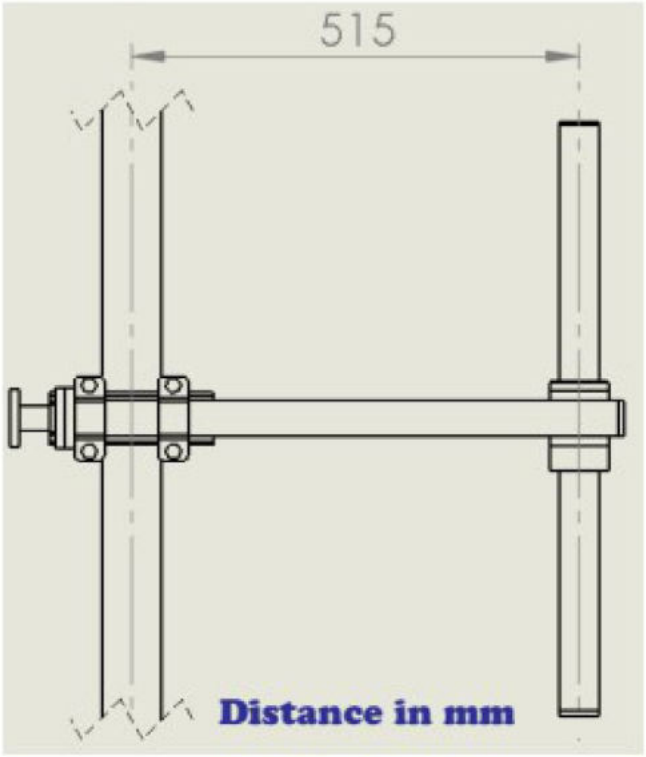


Model AJ1FIII

AJ1FIII-1

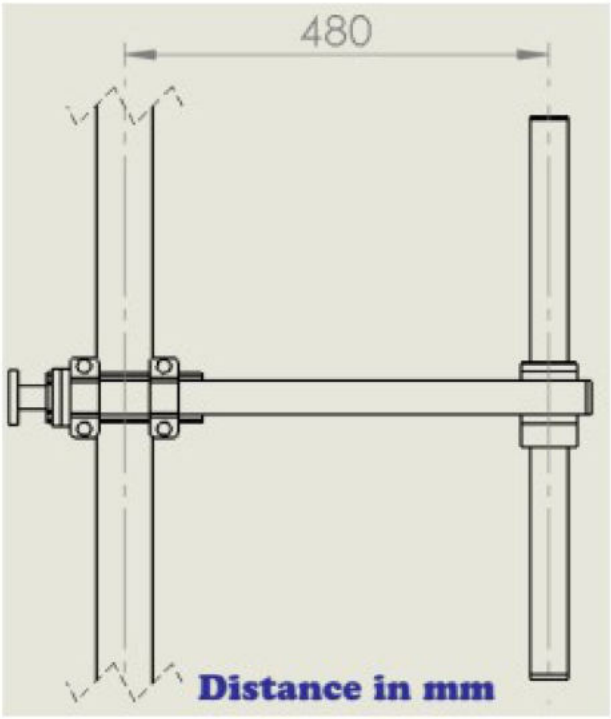


AJ1FIII-2

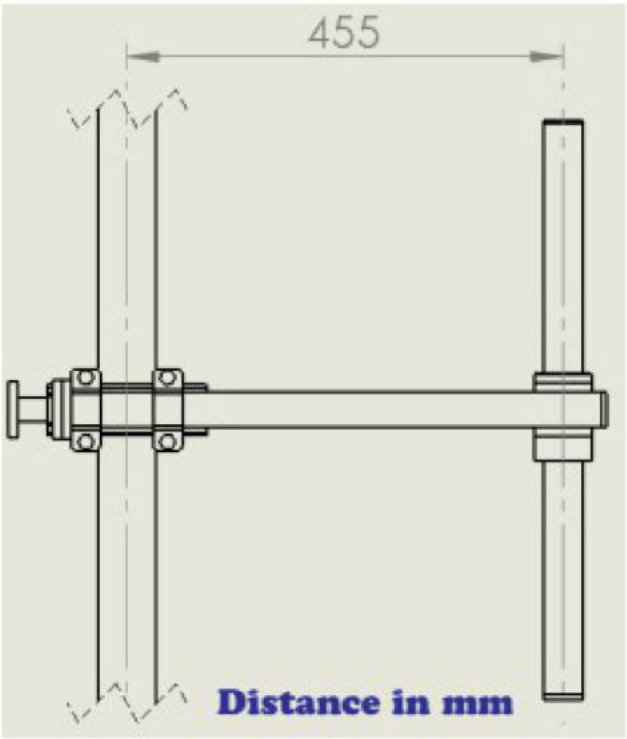


Model AJ1FIII

AJ1FIII-3

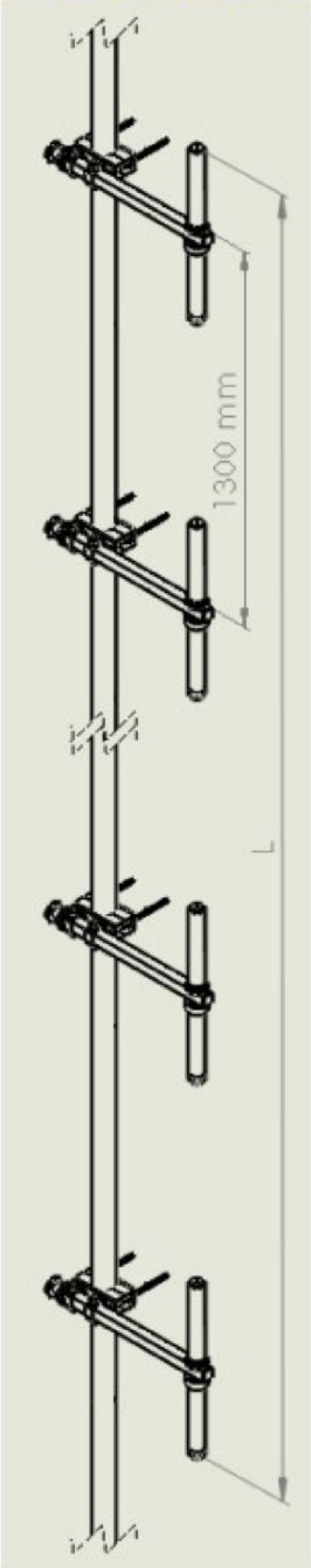


AJ1FIII-4



Model AJ1FIII

Radiation systems with AJ1FIII antenna
Omni-directional pattern



ELECTRICAL DATA

Frequency range	See table
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Vertical
Gain	According to requirement
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	White (optional)
Mounting hardware	Hot dip galvanized steel clamps (option)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipoles per bay	Gain[1]		Weight[2] kg	Antenna height L m (approx.)	Wind load (v=150 km/h) kg
		dB	times			
2	1	5	3	14	2	26.5
4	1	8	6.3	28	4.6	53
6	1	9.8	9.5	42	7.2	79.6
8	1	11	12.5	56	9.8	106
12	1	12.8	19	84	15	159

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware

- Gain is provided for vertical polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 93 Mph (150Km/h) per EIA-222-C standard.

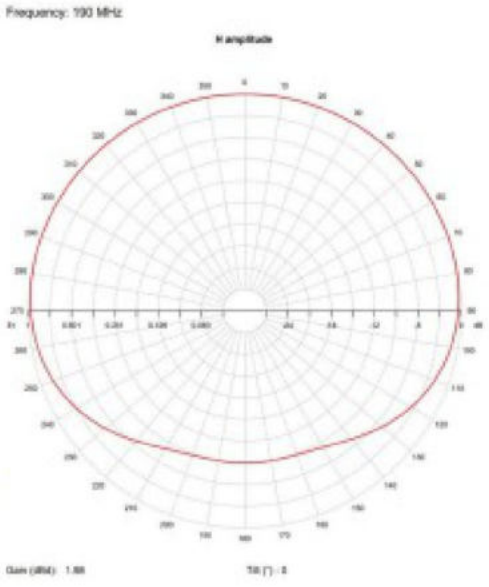
Model AJ2III

- **Band III VHF 2 ELEMENTS**
- **Broadband 175-230 MHz**
- **Vertical or Horizontal polarization**
- **Suitable for various patterns**
- **Stainless steel AISI 304**

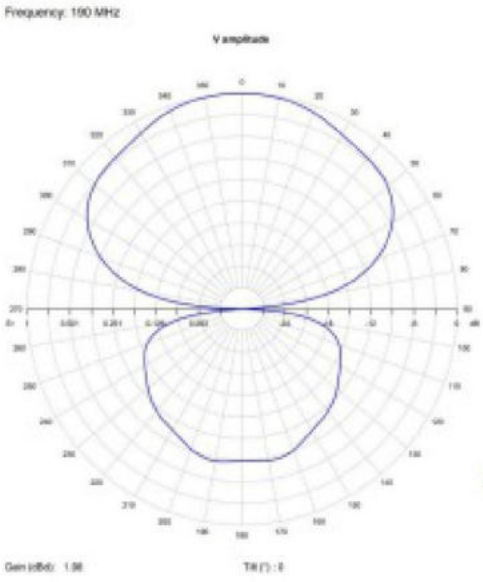
ELECTRICAL DATA	
Frequency range	175 – 230 MHZ.
Impedance	50 Ohm
Connectors	N or 7/16" female or 7/8" EIA
Max Power	800W (N) – 2KW (7/16") – 3.5KW (7/8" EIA)
VSWR	≤ 1.20:1 Average
Polarization	Vertical or Horizontal
Gain	See table
Pattern	See table
Lightning protection	All metal parts DC grounded

MECHANICAL DATA	
Dimensions	605x550 x 180 mm.
Weight	7.5 kg without hardware mounting
Wind surface	0.120 m^2
Wind load	16.9 kg (wind speed at 150 km/h – without radome)
Max wind velocity	220 km/h.
Materials	External parts: stainless steel Internal parts: passivated aluminium Radome: fiberglass (option)
Icing protection	Feed point radome (optional)
Radome	Optional
Mounting	With special pipe clamps 50 – 120 mm. diameter

RADIATION PATTERN (MID BAND)

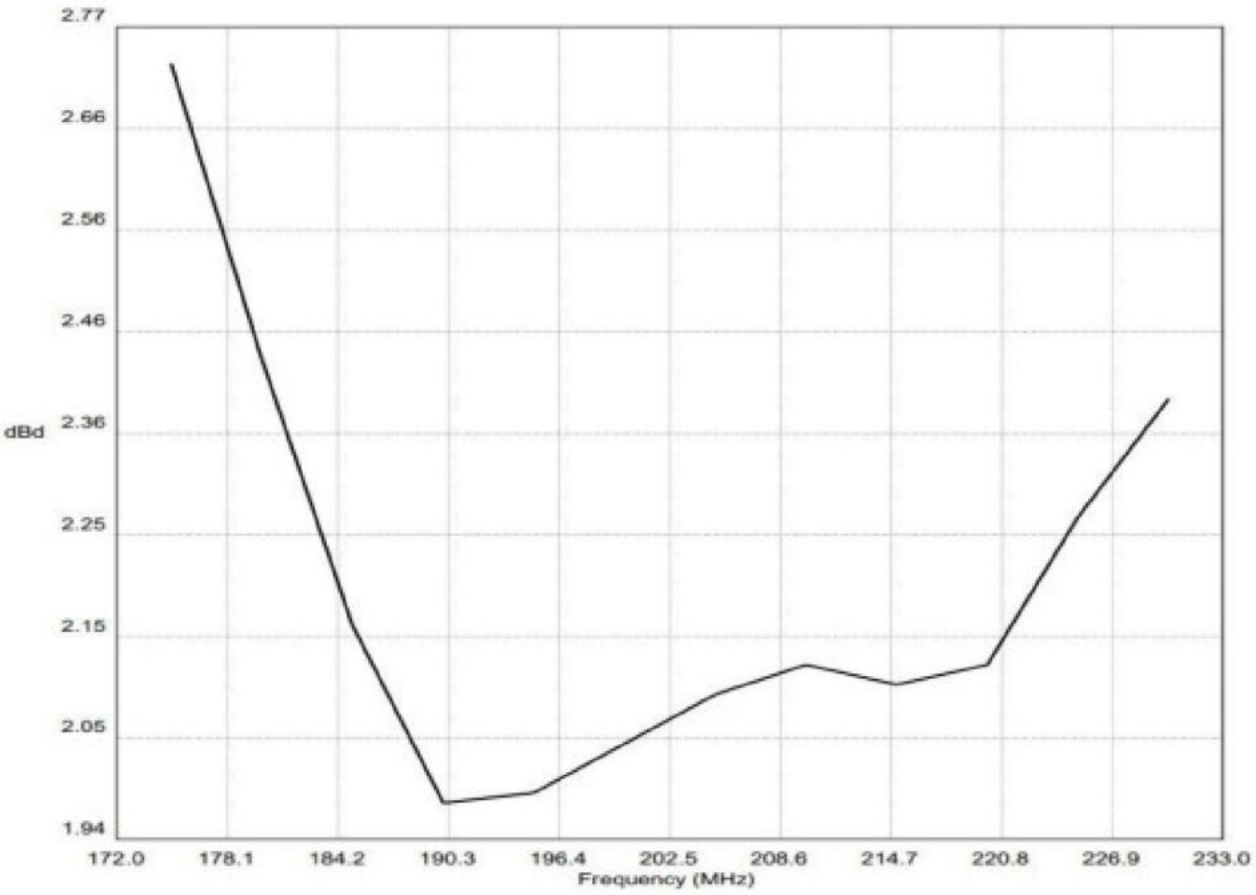


H-Plane

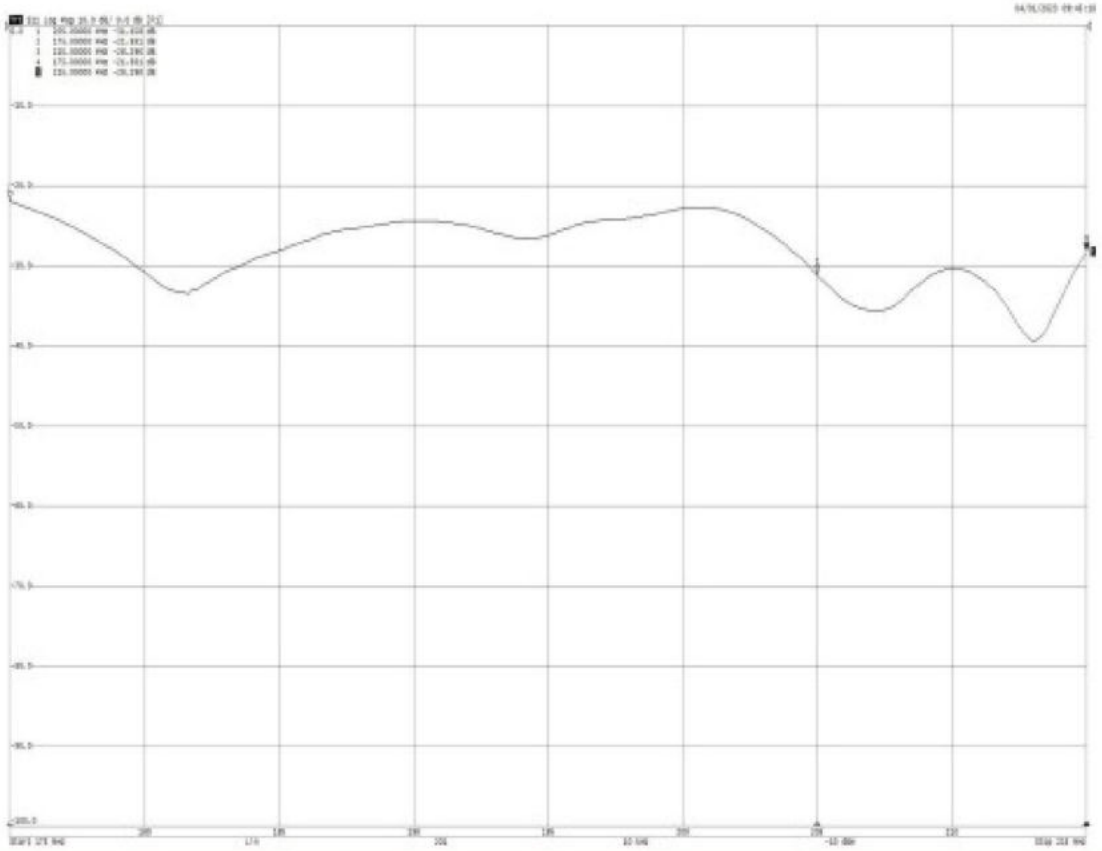


E-Plane

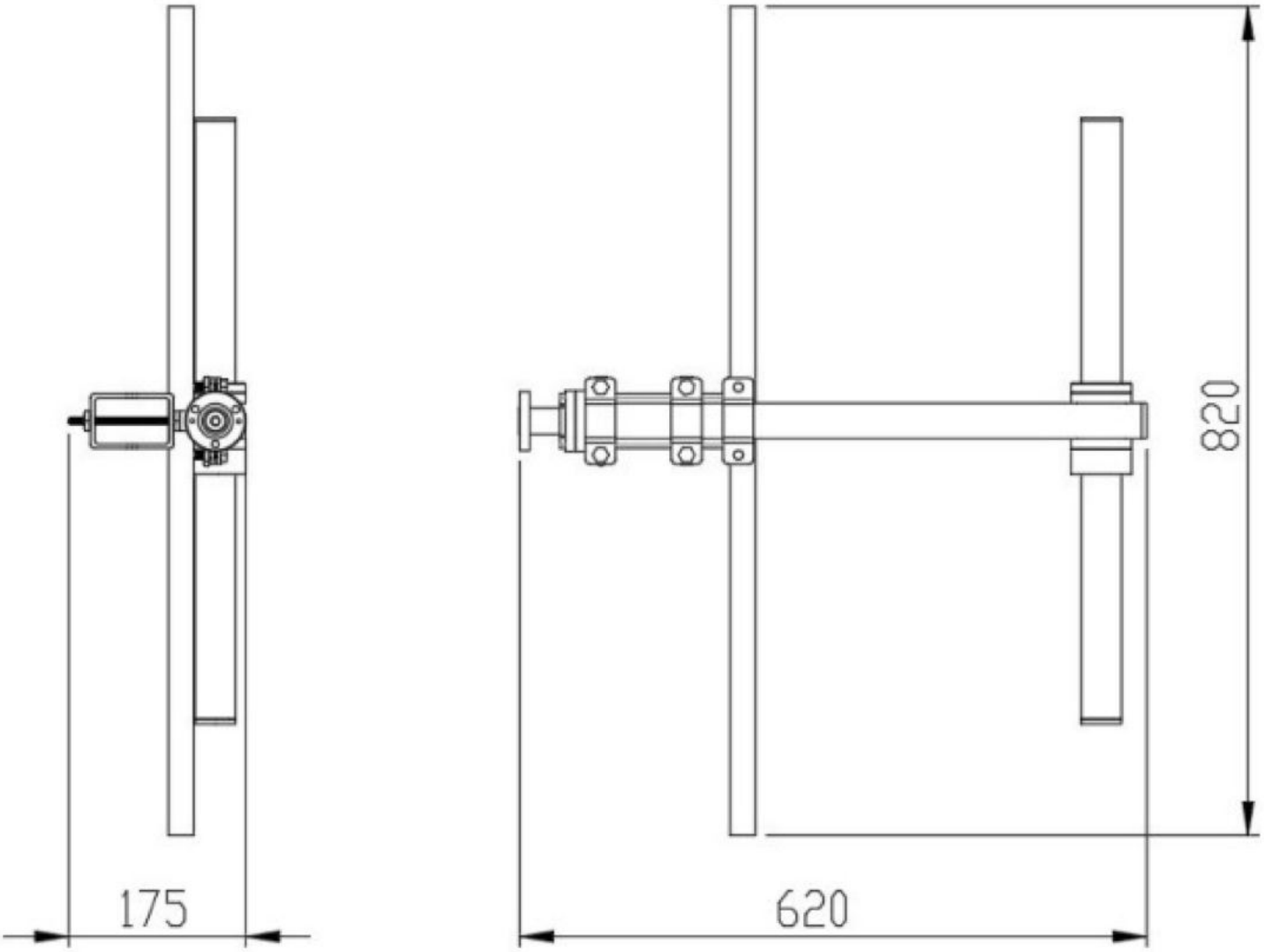
Gain



Return loss



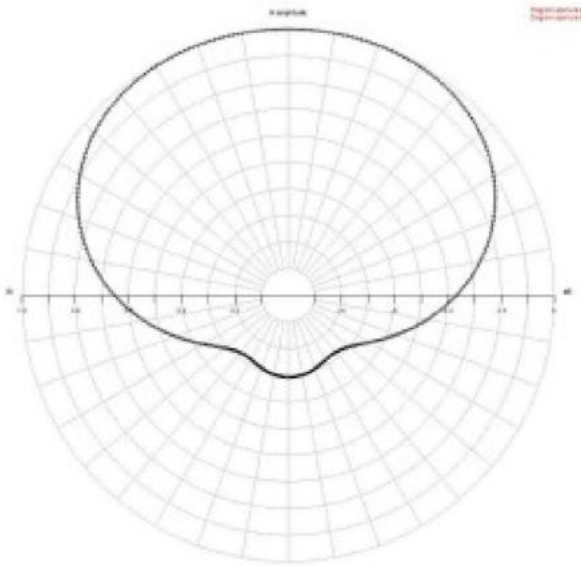
DIMENSIONS (mm)



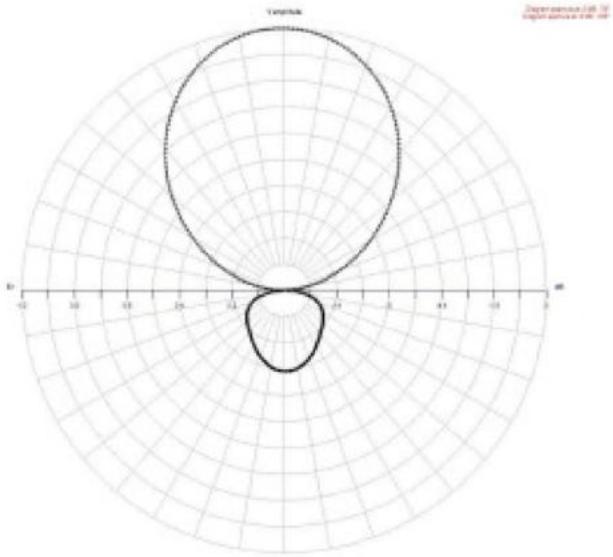
Model : AJ3III

- **Band III**
- **Broadband 170 ÷ 230 MHz**
- **Demountable**
- **Vertical or Horizontal polarization**
- **Pressurizzable on request**

RADIATION PATTERN (MID BAND)

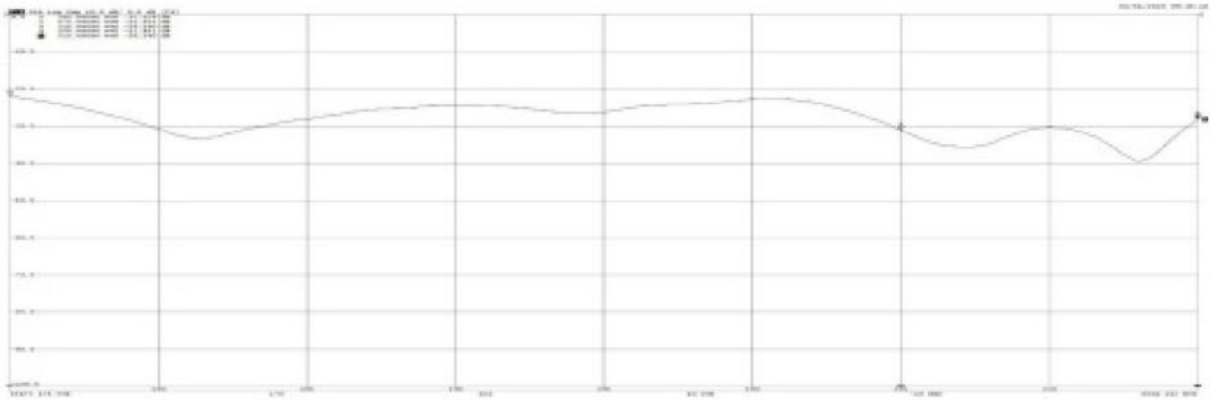


H-plane



E-plane

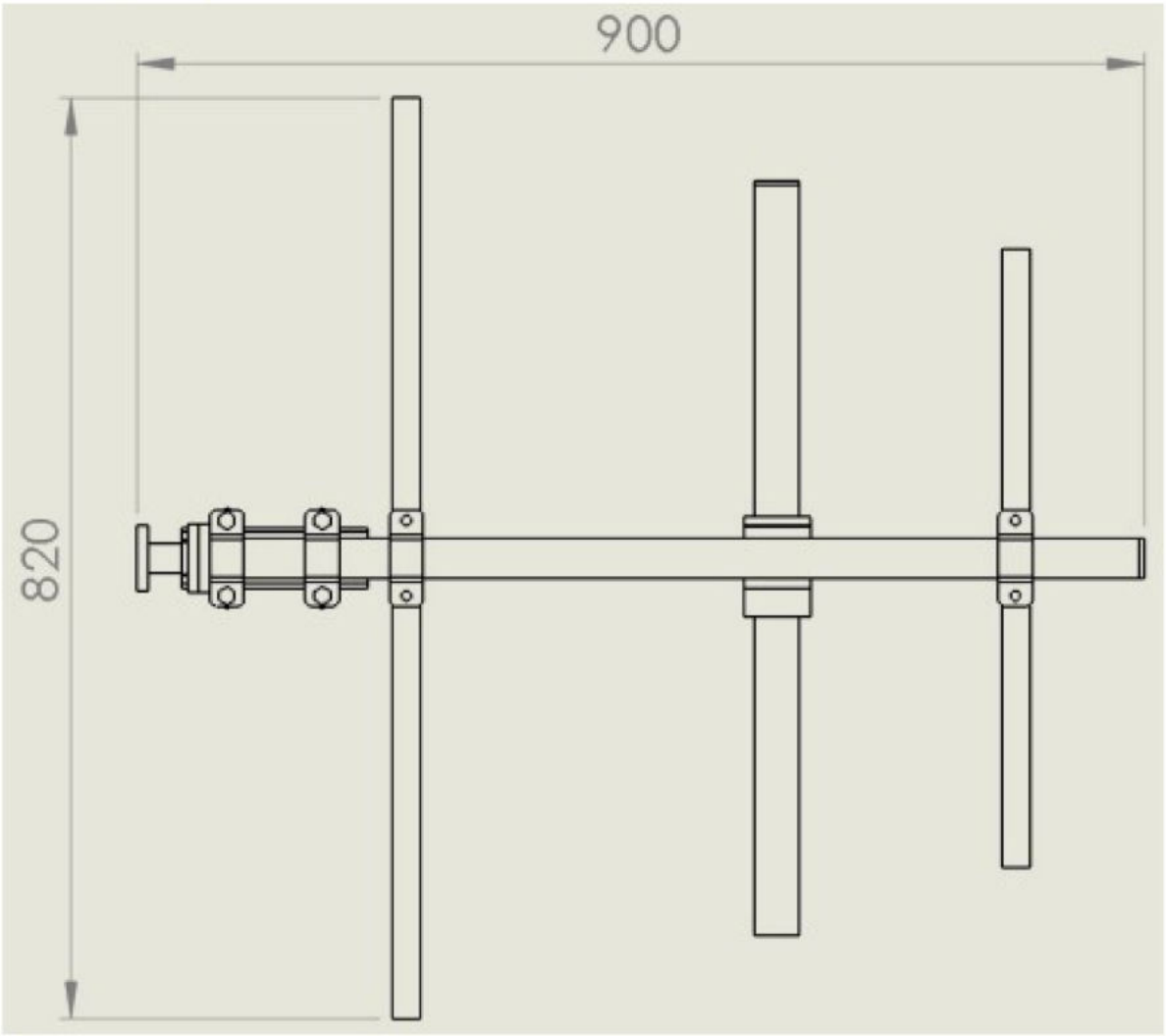
RETURN LOSS



dB

Freq. in MHz

Dimensions (mm)



ELECTRICAL DATA

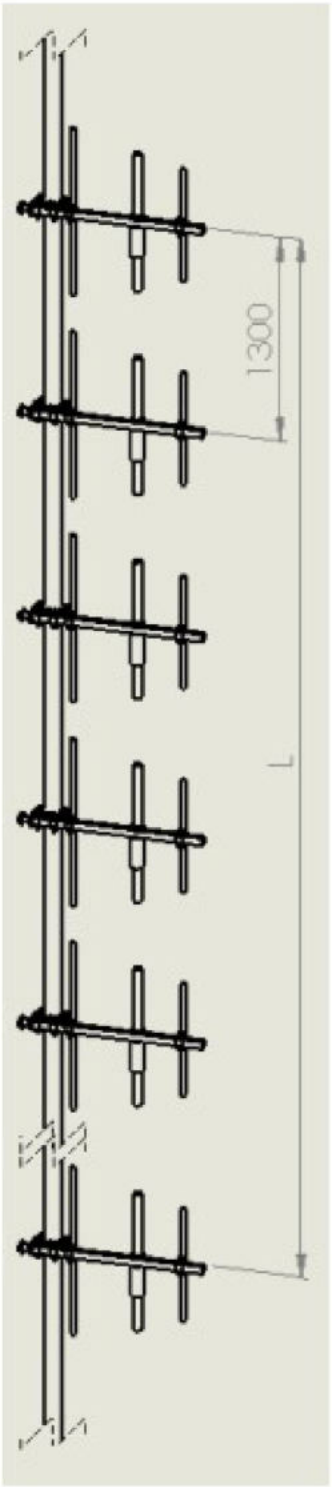
Frequency range	170 ÷ 230 MHz
Impedance	50 Ohm
Connectors	N or 7-16 or 7/8" EIA
Max Power	2KW (7-16) – 3 KW (7/8")
VSWR	≤ 1.20:1 Horizontal polarization with pole diam. 100 mm
Polarization	Horizontal or Vertical
Gain	4.2 dBd (referred to half-wave Dipole) max.
Half power beam width	E plane ± 38° H plane ± 82°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA

Dimensions	820x900x180 mm
Weight	9 Kg without hardware mounting
Wind surface	0.08m^2
Wind load	10.2 Kg (wind speed at 150 km/h – without radome)
Max wind velocity	220 Km/h
Materials	External parts: stainless steel Internal parts: passivated aluminium, brass Radome : Metalcrilate or PTFE(option)
Icing protection	Feed point radome (optional)
Radome color	Transparent (optional)
Mounting	With special pipe clamps 50 ÷ 110 mm dia.

Radiations systems with AJ3III Yagi antenna

Directional pattern



ELECTRICAL DATA

Frequency range	170 ÷ 230 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.20:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	Transparent (optional)
Mounting hardware	Inox stainless steel clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipoles per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=150 km/h) kg
		dB	times			
2	1	7.5	5.6	20	2.1	20.4
4	1	10.5	11.2	40	4.7	40.8
6	1	12.3	16.9	60	7.3	61.2
8	1	13.5	22.3	80	9.9	81.6
12	1	15.5	35.4	120	15.1	122.4

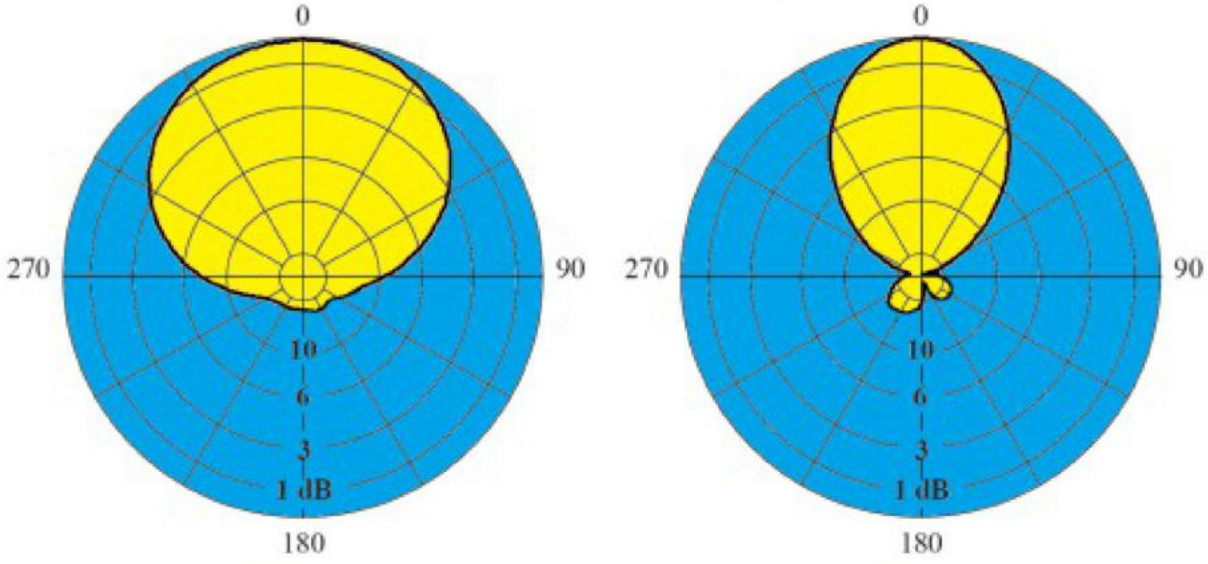
[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware

- Gain is provided for vertical polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 93 Mph (150Km/h) per EIA-222-C standard.

Model : AJ4III

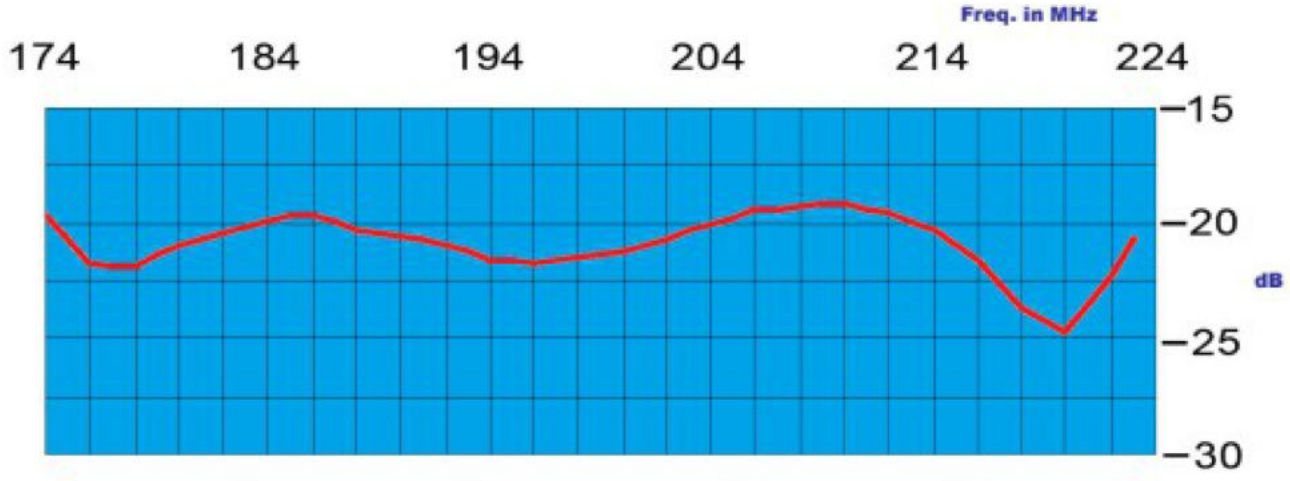
- Band III
- Broadband 174 ÷ 223 MHz
- Demountable
- Vertical or Horizontal polarization
- Pressurizzable on request

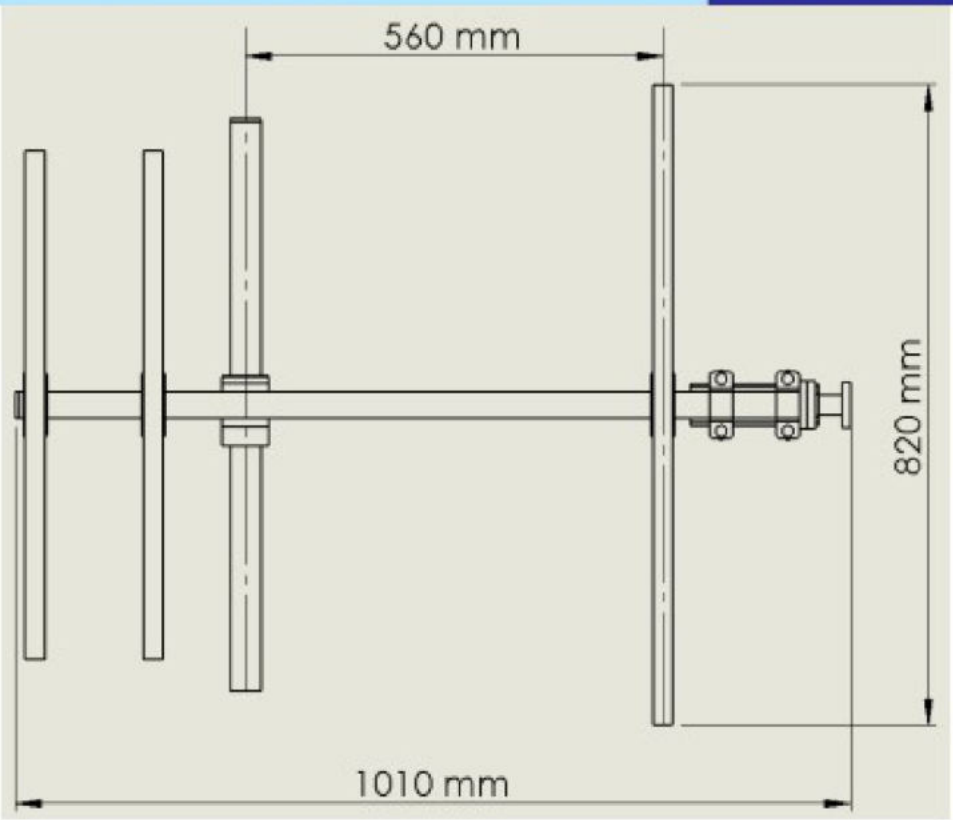
RADIATION PATTERN (MID BAND)



E-plane H-plane

RETURN LOSS





ELECTRICAL DATA

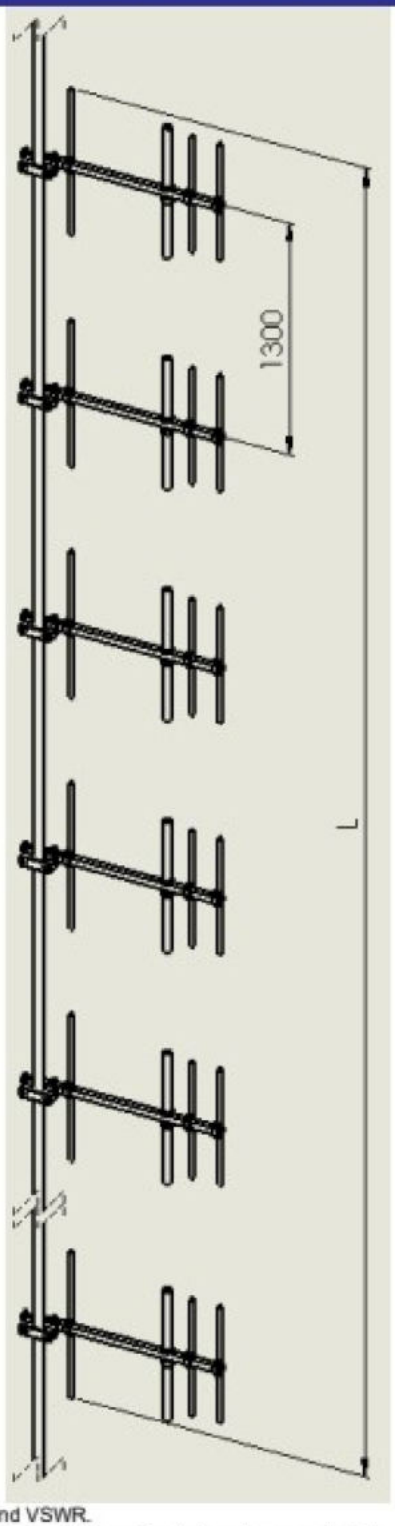
Frequency range	174 ÷ 223 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N)–2KW (7/16")–3 KW (7/8" EIA)
VSWR	≤ 1.22:1 Horizontal polarization with pole diam. 100 mm ≤ 1.25:1 Vertical polarization with pole diam. 100 mm
Polarization	Horizontal or Vertical
Gain	4.8 dB (referred to half-wave dipole)
Half power beam width	E plane ± 32° H plane ± 62°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA

Dimensions	1010x820x180 mm
Weight	11 Kg without hardware mounting
Wind surface	0.16 m^2
Wind load	21.4 Kg (wind speed at 150 km/h – without radome)
Max wind velocity	220 Km/h
Materials	External parts: stainless steel Internal parts: passivated aluminium, brass Radome : fiberglass or PTFE(option)
Icing protection	Feed point radome (optional)
Radome color	White (optional)
Mounting	With special pipe clamps 50 ÷ 110 mm dia.

Radiations systems with AJ4III Yagi antenna

Directional pattern



ELECTRICAL DATA

Frequency range	174 ÷ 223 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	White (optional)
Mounting hardware	Hot dip galvanized steel clamps (option)
Shipping	As required

TECHNICAL DATA

Number of bays	Dipoles per bay	Gain[1]		Weight[2] kg	Antenna height L. m	Wind load (v=150 km/h) kg
		dB	times			
2	1	7.8	6.0	22	2.1	42.8
4	1	10.8	12.0	44	4.7	85.6
6	1	12.6	18.1	66	7.3	128.4
8	1	13.8	23.9	88	9.9	171.2
12	1	15.6	36.3	132	15.1	256.8

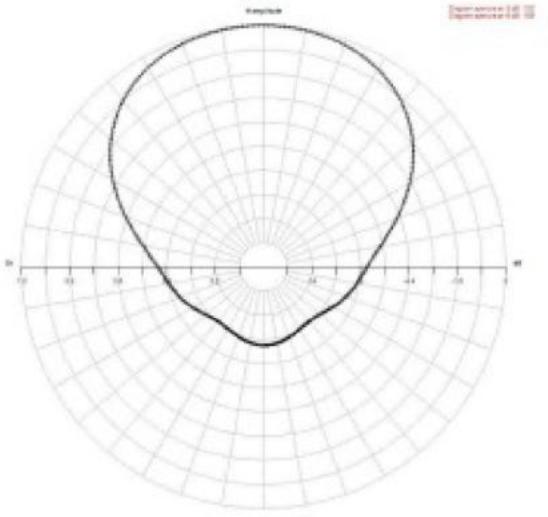
[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware

- Gain is provided for vertical polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 93 Mph (150Km/h) per EIA-222-C standard.

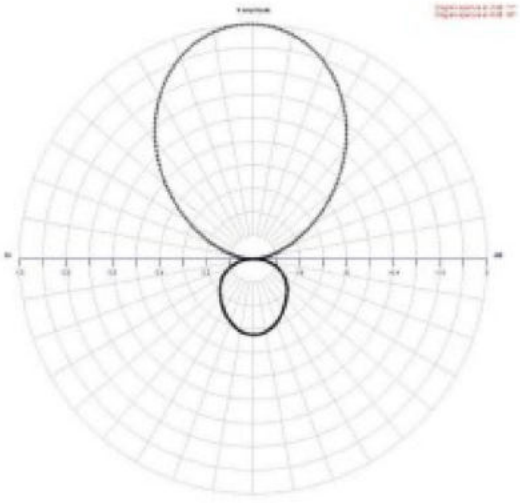
Model : AJ5III

- **Band III**
- **Broadband 180 ÷ 230 MHz**
- **Demountable**
- **Vertical or Horizontal polarization**
- **Pressurizzable on request**

RADIATION PATTERN (MID BAND)

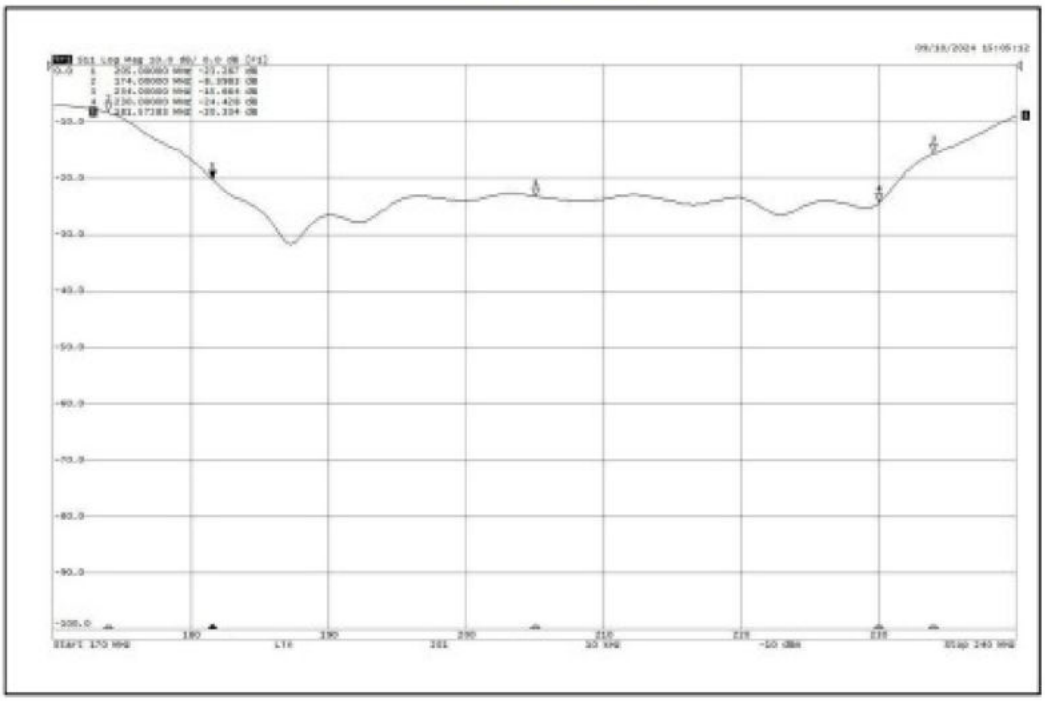


H-plane

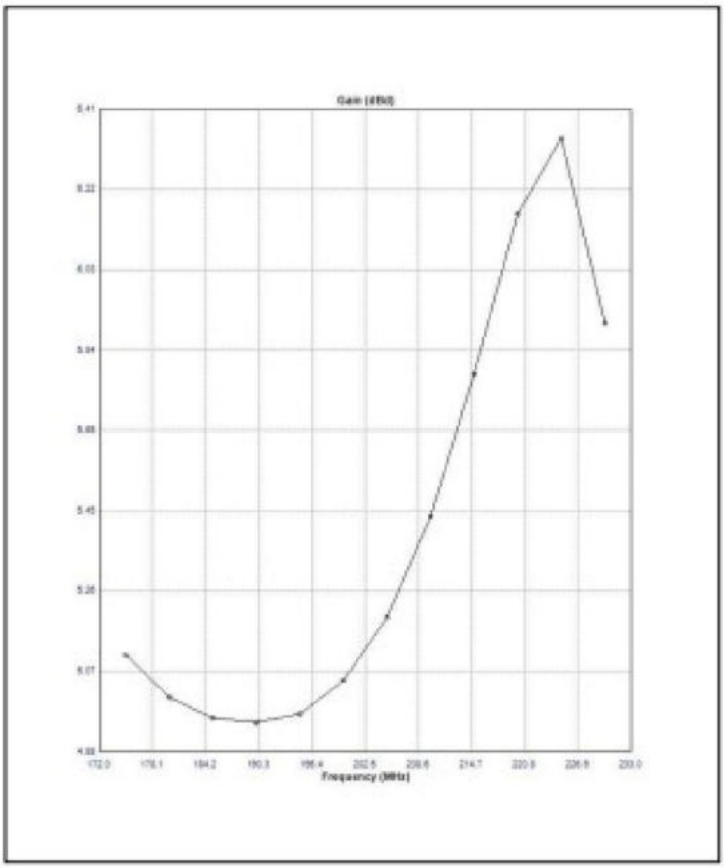


E-plane

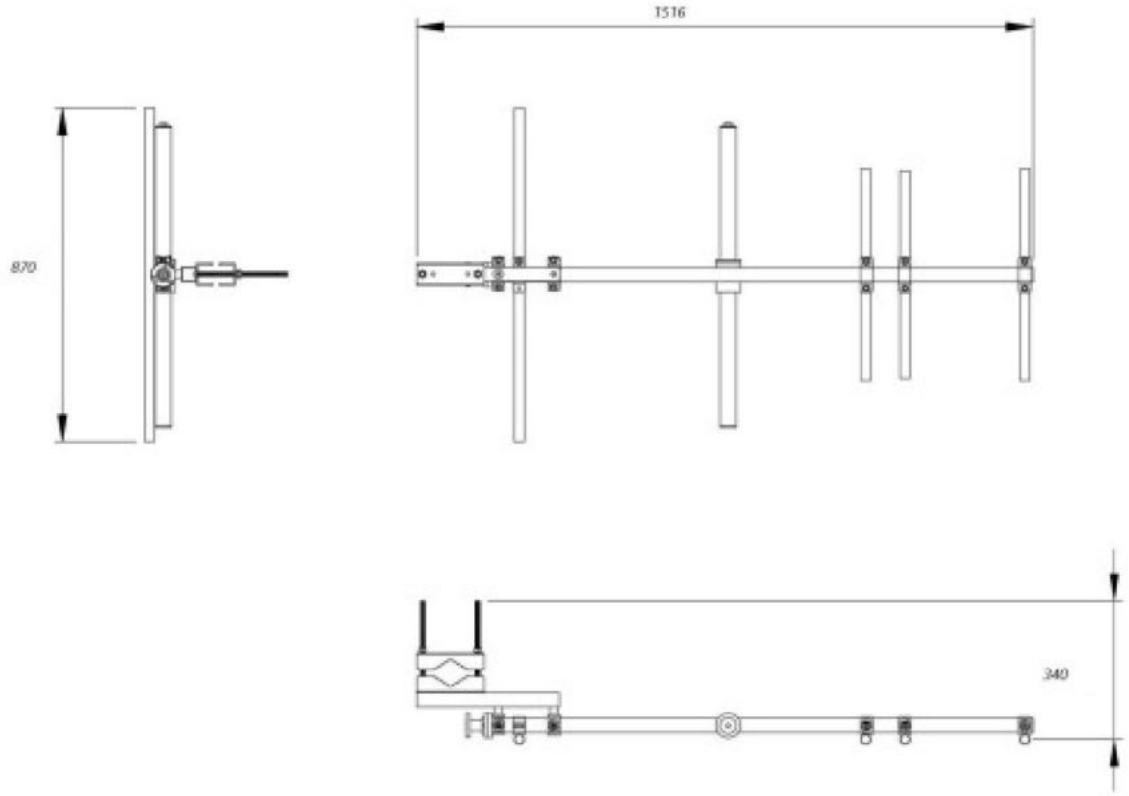
RETURN LOSS



GAIN



DIMENSIONS mm.



ELECTRICAL DATA

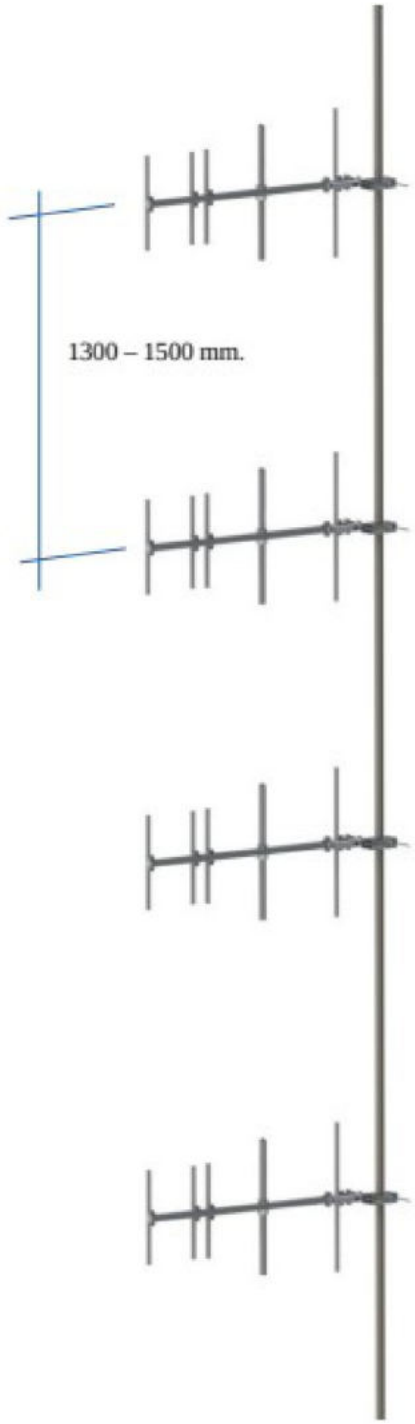
Frequency range	180 ÷ 230 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	800W (N)–2KW (7/16")–3 KW (7/8" EIA)
VSWR	≤ 1.20 :1 Horizontal polarization with pole diam. 100 mm ≤ 1.19 :1 Vertical polarization with pole diam. 100 mm
Polarization	Horizontal or Vertical
Gain	See figure (referred to half-wave dipole) middle band 5.20 dBd
Half power beam width	E plane ±35° H plane ±60°
Lightning protection	All metal parts DC grounded

MECHANICAL DATA

Dimensions	See figure
Weight	12 Kg without hardware mounting
Wind surface	0.17 m^2
Wind load	22.4 Kg (wind speed at 150 km/h – without radome)
Max wind velocity	220 Km/h
Materials	External parts: stainless steel (aisi 304) Internal parts: passivated aluminium, brass Radome : fiberglass or PTFE(option)
Icing protection	Feed point radome (optional)
Radome color	transparent (optional)
Mounting	With special pipe clamps 50÷ 110 mm dia.

Radiations systems with AJ5III Yagi antenna

Directional pattern



ELECTRICAL DATA

Frequency range	180- 230 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.20:1 Max see figure
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on request)
Radome colour	transparent (optional)
Mounting hardware	Inox aisi 304
Shipping	As required

TECHNICAL DATA

Number of bays	Dipoles per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=150 km/h) kg
		dB	times			
2	1	8.20	6.60	24	2.1	44.8
4	1	11.2	13.18	48	4.7	89.6
6	1	13.6	22.09	72	7.3	134.4
8	1	14.4	27.54	96	9.9	179.2
12	1	16.2	41.69	144	15.1	268.8

[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware

- Gain is provided for vertical polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 93 Mph (150Km/h) per EIA-222-C standard.

MODEL DPA2VIII

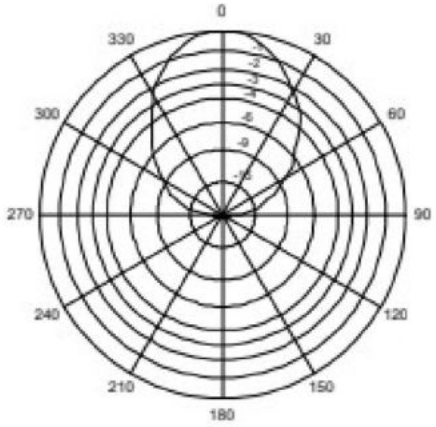
- BAND III VHF DIPOLE
- BROADBAND 174÷230 MHz
- 7.5 dB GAIN
- DIRECTIONAL PATTERN
- SUITABLE A COMPONENT IN VARIOUS ARRAYS
- EACH ANTENNA IS SEALED AND PRESSURIZABLE
- INPUT CONNECTOR IS NICKEL PLATED
- INTERNAL LINES ARE MADE OF SILVER PLATED BRASS
- THESE PANELS CAN BE USED IN VERTICAL POLARIZATION OR HORIZONTAL POLARIZATION TO SET UP SYSTEMS HAVING DIRECTIVE, SEMIDIRECTIVE AND OMNIDIRECTIONAL DIAGRAMS.
- SYSTEMS MADE UP WITH THESE PANELS CAN BE DESIGNED ON CUSTOMER SPECIFICATIONS

ELECTRICAL DATA	
Frequency range	175÷230 MHz
Impedance	50 Ohm
Connectors	7/8 EIA or 7/16"
Max Power	2 Kw with 7/8" EIA flange
VSWR	≤ 1.3:1
Polarization	Vertical or horizontal
Gain	7.4 dB
Half Power Beamwidth	E-Plane: ± 28° H-Plane: ± 28°
Lightning protection	All metal parts DC grounded

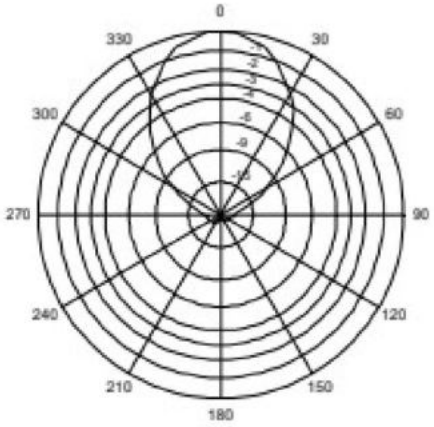
MECHANICAL DATA	
Dimensions	1250x873x535 mm
Weight	26 kg approx.
Wind load at 160 kmh	Frontal 527 N Lateral 76 N
Max wind velocity survival	180 km/h.
Materials	Reflector: hot dip galvanized Dipole: stainless steel Internal parts: passivated aluminum
Mounting	With special pipe clamps 50÷110 mm dia.

RADIATION PATTERN (MID BAND)

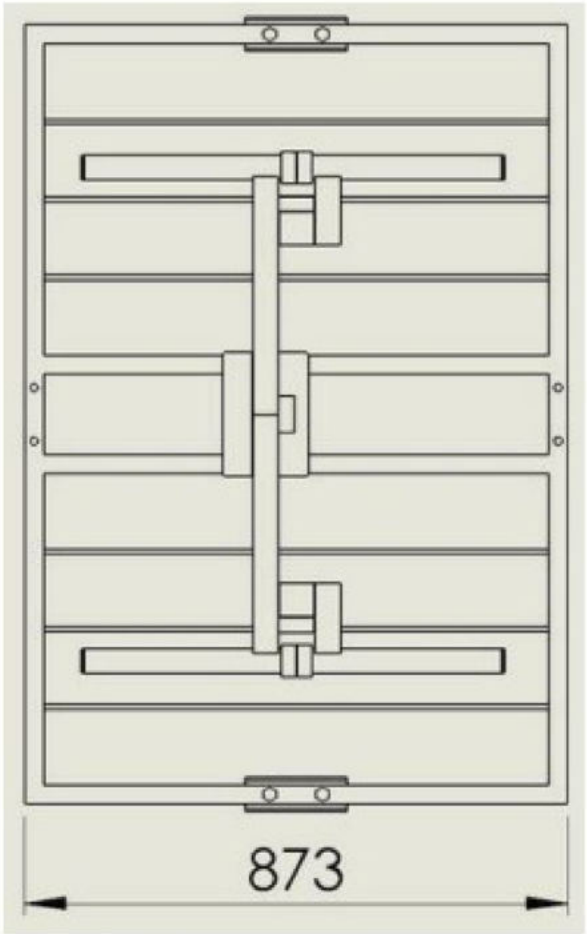
H-PLANE

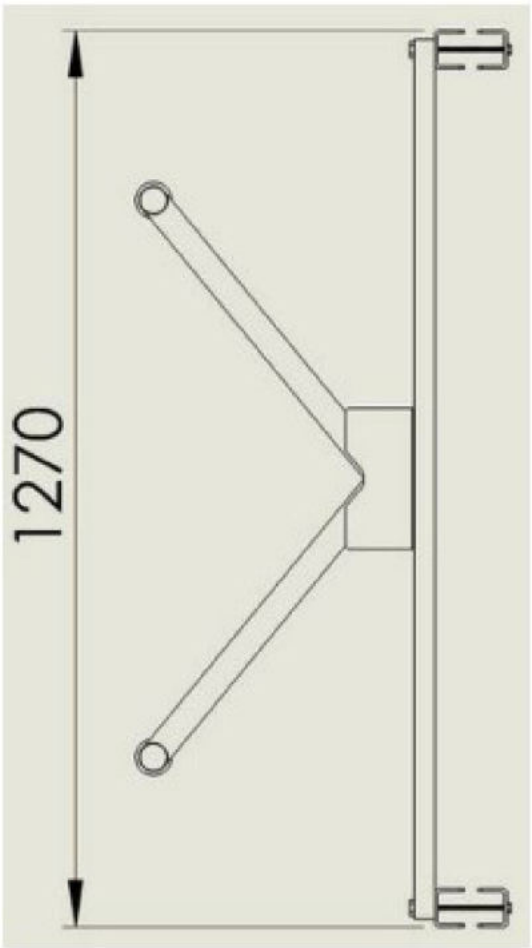


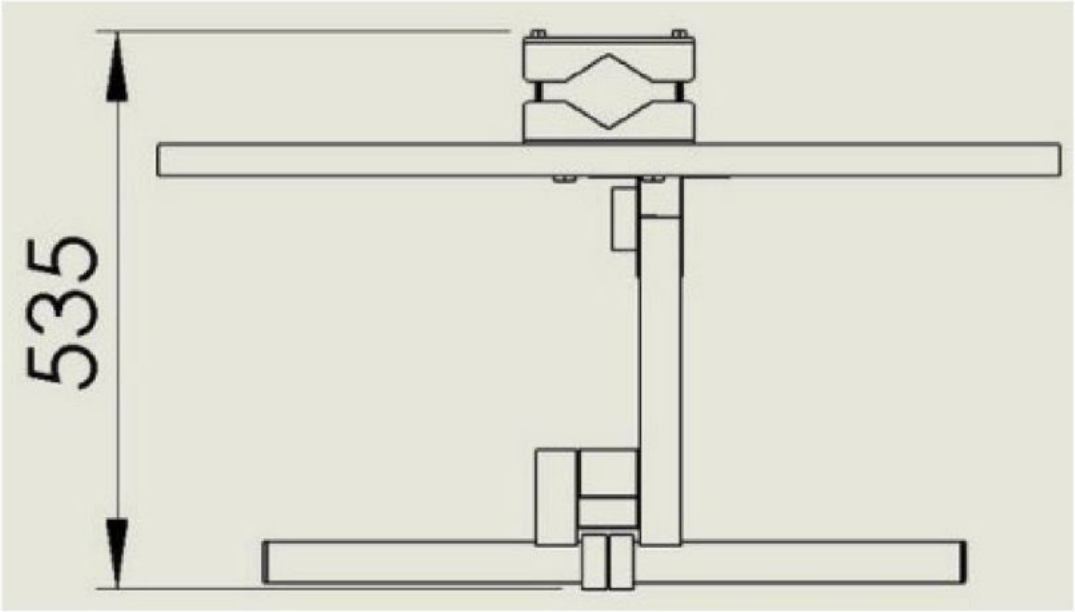
V-PLANE



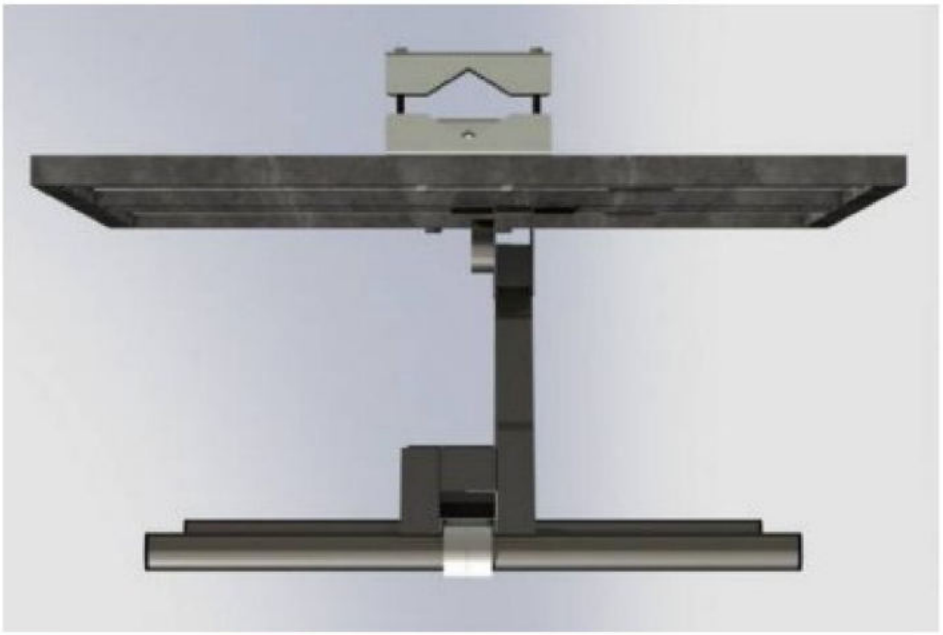
DIMENSIONS (mm)

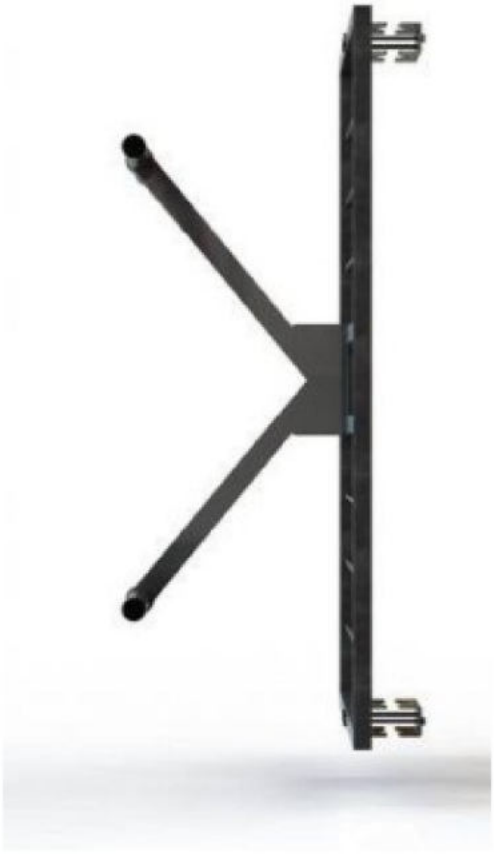






VIEWS OF THE SYSTEM





MODEL DPA2VIIIL

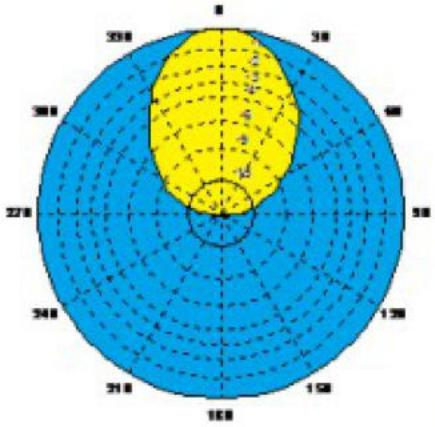
- BAND III VHF PANEL
- BROADBAND *174÷230* MHz
- 7.7 dB GAIN
- VERTICAL OR HORIZONTAL POLARIZATION
- DIRECTIONAL PATTERN
- SUITABLE AS COMPONENT ON VARIOUS ARRAYS
- EACH ANTENNA IS SEALED AND PRESSURIZABLE
- INPUT CONNECTOR IS NICKEL PLATED
- INTERNAL LINES ARE MADE OF BRASS AND SILVER PL*A*
- ALSO AVAILABLE A DISMOUNTABLE VERSION
- THESE PANELS CAN BE USED IN VERTICAL OR HORIZONTAL POLARIZATION TO SET UP SYSTEMS HAVING DIRECTIVE, SEMIDIRECTIVE AND OMNIDIRECTIONAL DIAGRAMS
- SYSTEMS MADE UP WITH DPA2VIIIL PANELS CAN BE DESIGNED ON CUSTOMER SPECIFICATIONS

ELECTRICAL DATA	
Frequency range	174÷230 MHz
Impedance	50 Ohm
Connectors	7/8 EIA or 7/16"
Max Power	2 Kw with 7/8" EIA flange
VSWR	≤ 1.12:1
Polarization	Vertical or horizontal
Gain	7.7 dB (referred to half wave dipole)
Half Power Beamwidth	E-Plane: ± 28° H-Plane: ± 28°
Lightning protection	All metal parts DC grounded

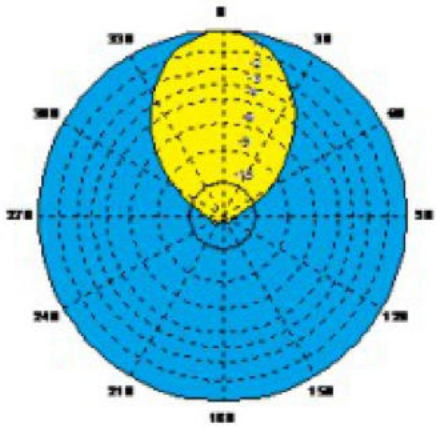
MECHANICAL DATA	
Dimensions	1300x1260x694 mm
Weight	32 kg net
Wind load at 160 kmh	Frontal 529 N Lateral 78 N
Max wind velocity survival	180 km/h.
Materials	**Reflector: stainless steel** Dipole: stainless steel Internal parts: brass,copper, contact silvering.
Mounting	With special pipe clamps 50÷110 mm dia. Or other measure on request

RADIATION PATTERN (MID BAND)

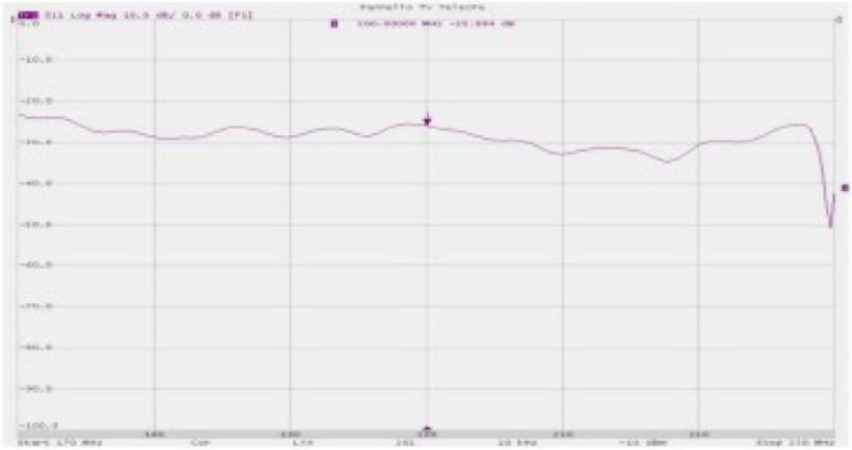
H-PLANE



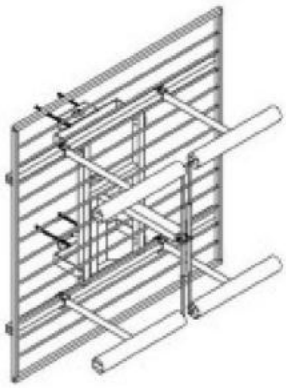
V-PLANE

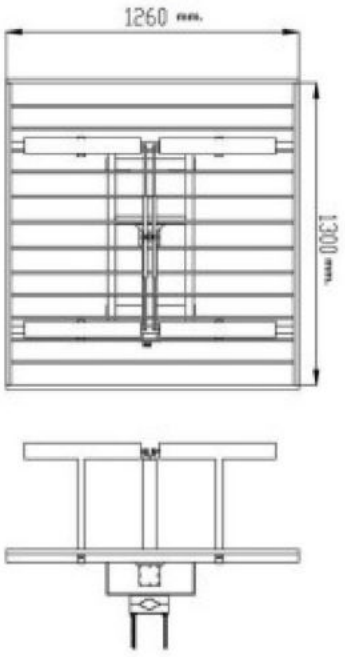


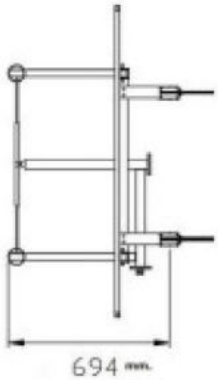
RETURN LOSS



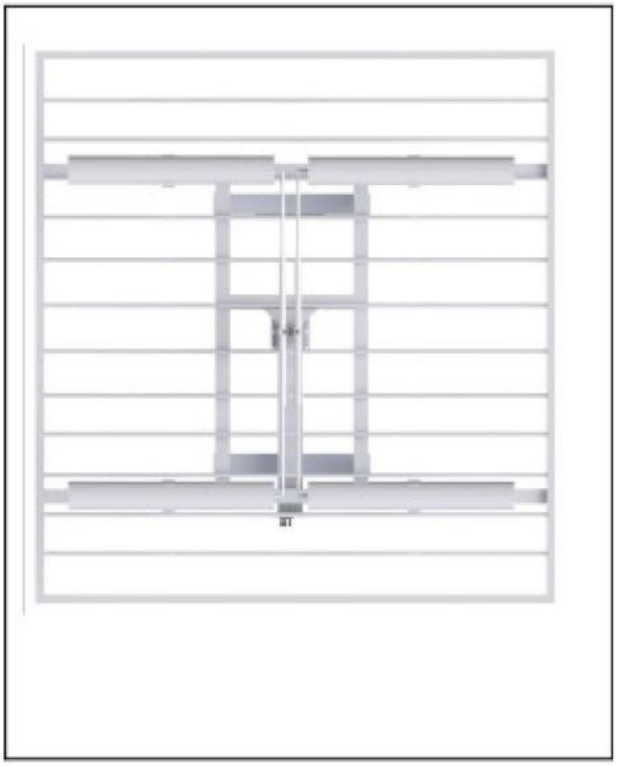
Dimensions mm.

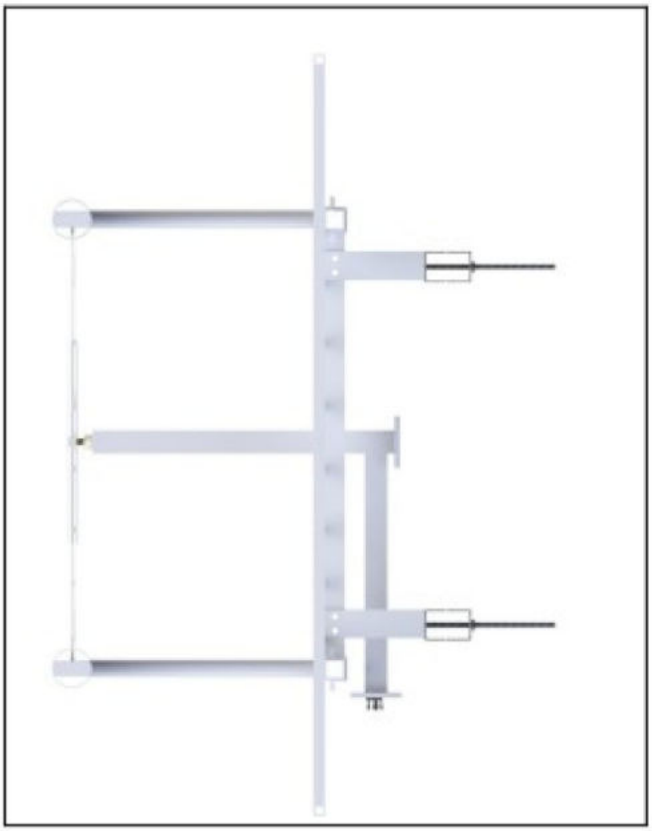


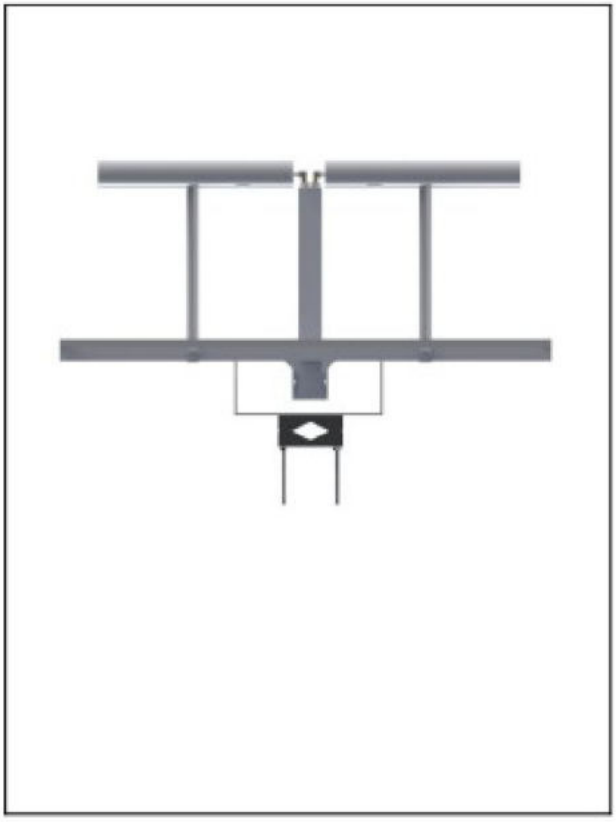




VARIOUS VIEW



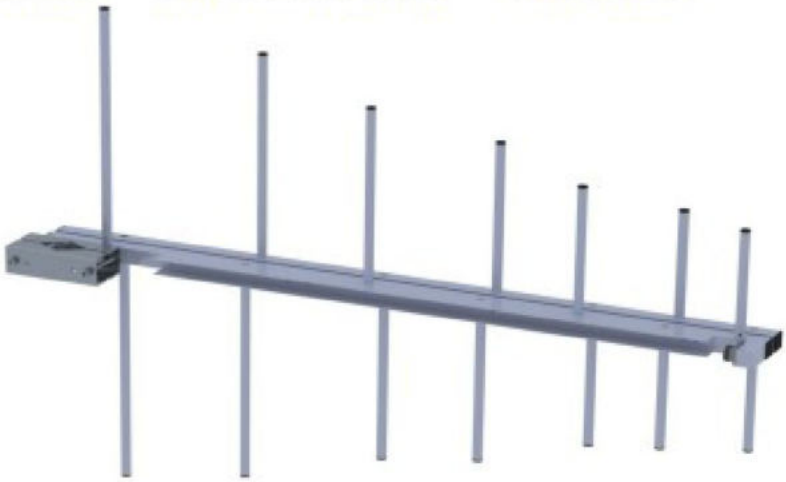




Models : LGPR7DAB/A – LGPR7DAB/AS - LGPR7DAB/I - LGPR7DAB/IS

(ALLUMINIUM DISASSEMBLEABLE) (ALLUMINIUM WELDED) (INOX DISASSEMBLEABLE) (INOX WELDED)

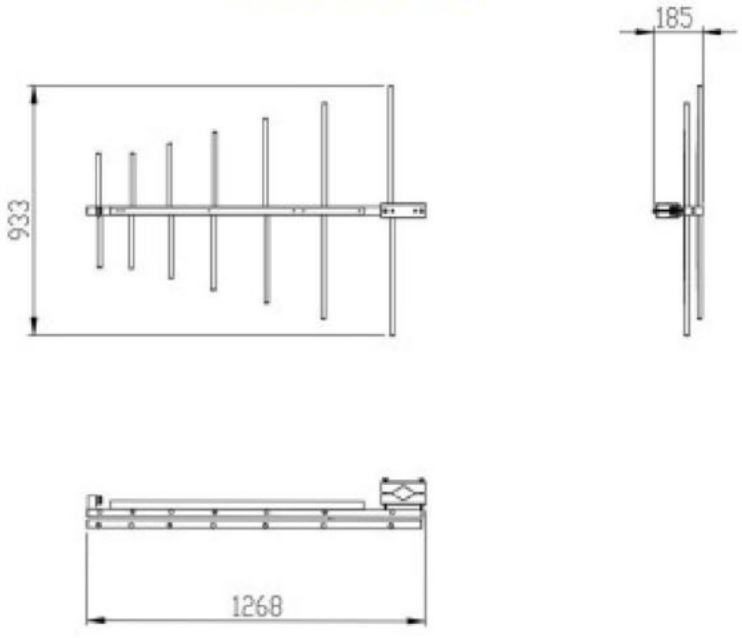
- **Band III DAB**
- **Broadband 174 - 240 MHz**
- **Demountable**
- **V or H polarization**
- **Radome optional**



ELECTRICAL DATA	
Frequency range	174 – 240 MHz
Impedance	50 Ohm
Connectors	N or 7/16" or 7/8" EIA
Max Power	500W (N) – 1.5KW (7/16") – 2KW (7/8" EIA)
VSWR	≤ 1.25:1 - 1.12:1 in the channel with fine matcher
Polarization	Horizontal or Vertical
Gain mid band	6.5 dB (refered to half-wave dipole)
Half power beam width at 202 mhz.	E plane ± 31 ° H plane ± 48°
Lightning protection	All metal parts DC grounded

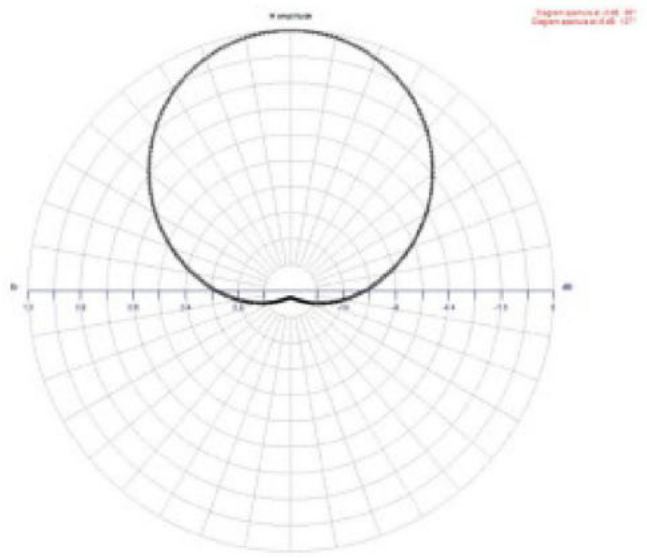
MECHANICAL DATA	
Dimensions	See dimensions
Weight	5 kg LGPR7DAB/A - 7 kg LGPR7DAB/I approx. Without hardware mounting (it is customizable)
Wind surface	0.019 m^2 (front) 0.23 m^2 (side)
Wind load V pol.	23 N (front) 35 N (side) (wind speed at 160 km/h)
Max wind survival	190 km/h. Alluminum version 220 K/h inox version
Materials	LGPR7DAB/A - LGPR7DAB/AS : Aluminium LGPR7DAB/I - LGPR7DAB/I S : Stainless steel Radome fiberglass (option)
Mounting	With special pipe clamps 50 - 110 mm dia. Support standard weight 3 kg appr
Weight With hardware mounting standard	LGPR7DAB/A - LGPR7DAB/AS : 8 KG. Aprox. LGPR7DAB/I - LGPR7DAB/IS : 10 KG. Aprox

DIMENSIONS mm.

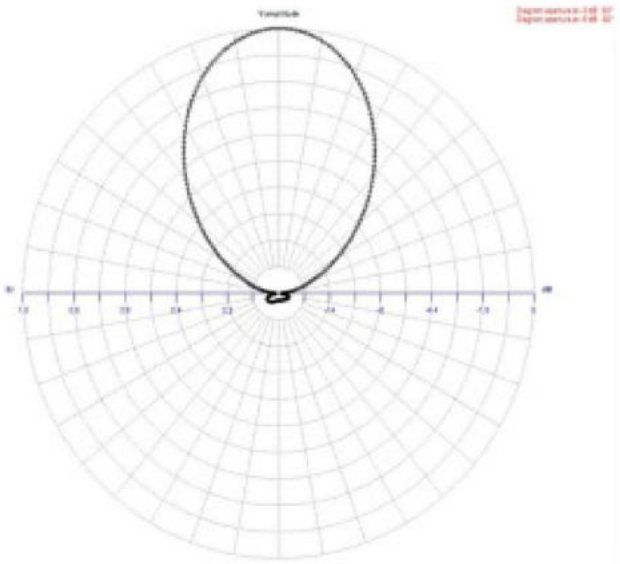


RADIATION PATTERN (MID BAND 202 mhz.)

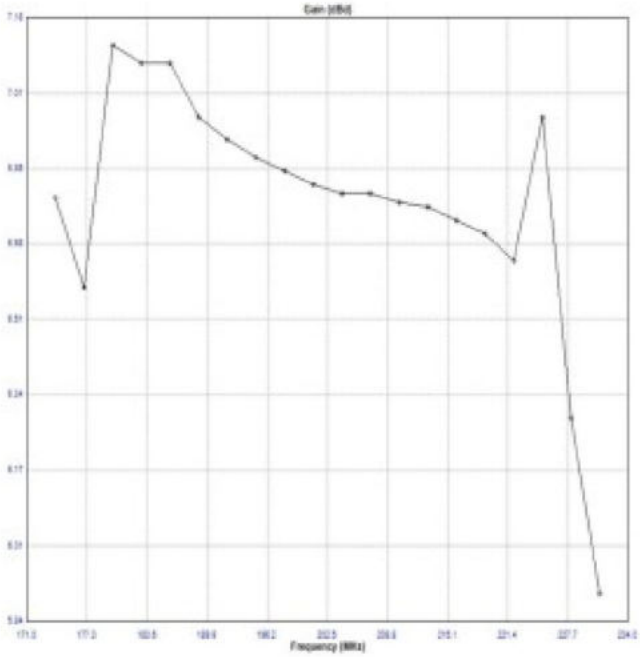
H-Plane



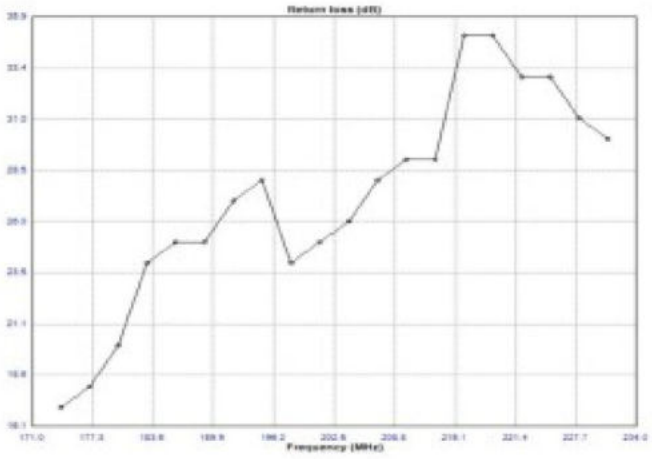
E-Plane



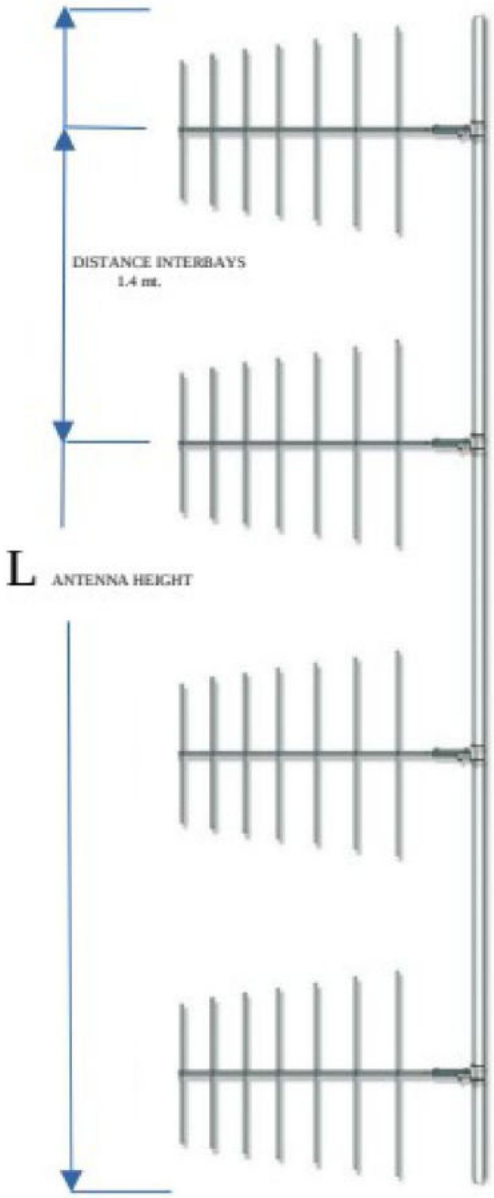
GAIN



RETURN LOSS



Radiations systems with LGPR7DAB series antenna
Directional pattern



ELECTRICAL DATA	
Frequency range	174 – 230 MHz
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.25:1 Max
Polarization	Horizontal or Vertical
Gain	According to requirement
Horizontal pattern	Any type according to requirements
Vertical pattern	Null fill, beam tilt and special requirements to order
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

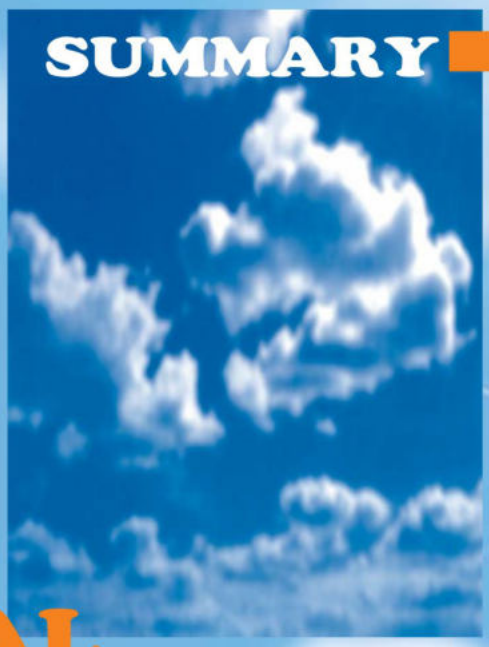
MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Mounting hardware	Inox steel (aisi 304) clamps
Shipping	As required

TECHNICAL DATA

Number of bays	Dipole per bay	Gain[1]		Weight[2]	Antenna height L	Wind load (v=160 km/h)
		dB	times	kg	m	kgf
2	1	9.5	8.9	18	2.4	72.0
4	1	12.5	17.8	36	6.6	145.0
6	1	14.3	27	54	8.0	218.0
8	1	15.5	35.4	72	10.8	290.0
12	1	17.3	53.7	108	16.4	439.0

[1] Referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] Example for LGPRD7DAB/A (aluminium) without mounting hardware.

Gain is provided for vertical polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
0.5mt of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard (30°t).



GENERAL CATALOG

TV BAND ANTENNAS

BAND IV - V

TELECFE
BROADCAST SOLUTIONS

www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

Model : PUHF1

- **Bandwidth 470 ÷ 860 MHz**
- **TV antenna**
- **4 dipoles antenna with panel reflector and protection radome**
- **Suitable for directional, semi-directional or omnidirectional UHF stacked-array systems**
- **Directional antenna**

ELECTRICAL DATA

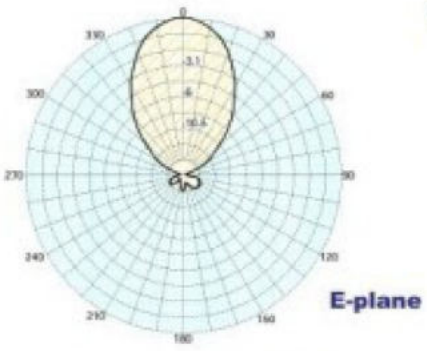
Frequency range	470 ÷ 860 MHz
Impedance	50 Ohm
Connectors	7/16" female input connector (7/8" EIA on request)
Max Power	1000W - 7/16" 2500W with 7/8" flange
VSWR	≤ 1.12:1
Polarization	Horizontal
Gain	9.55 dBd (11.7 dBi) - (470 MHz) 11.0 dBd (13.2 dBi) - (630 MHz) 12.0 dBd (14.1 dBi) - (860 MHz)
Half power beam width	E plane ± 60° at –3dB H plane ± 25° at –3dB
Lightning protection	DC grounded dipoles

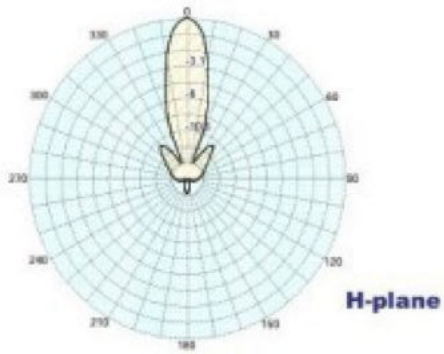
MECHANICAL DATA

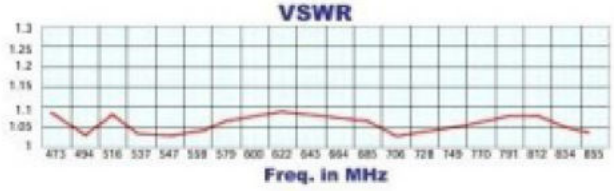
Dimensions	1000x450x270 mm (HxLxW) 1070x530x360 mm (Packing size)
Weight	14 Kg (17 Kg including packing)
Wind surface	0.45 m^2 (front) 0.25 m^2 (side)
Wind load	89 Kg (wind speed at 160 km/h)*
Max wind velocity	200 km/h*
Materials	Panel reflector and bolts: stainless steel Lines and Dipole: silver-plated copper and brass Silicone – O-rings – Teflon insulator Radome: fiberglass
Icing protection	Fiberglass radome
Radome color	White
Mounting	4 holes threated M8 at 980x85 mm spacing, or throught tiltable or fix mounting brackets for poles (optionals)

* Antenna wind load is calculated for 100 Mph (160 Km/h) per EIA-222-F standard

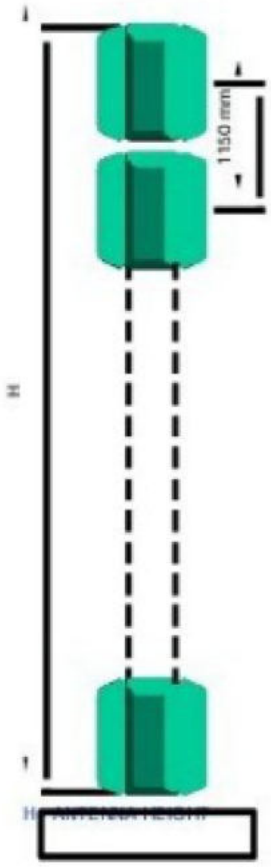
RADIATION PATTERN (MID BAND)







- **Radiations systems with PUHF1 antenna**
- **Omnidirectional or directional pattern**
- **Balanced or unbalanced splitting power**



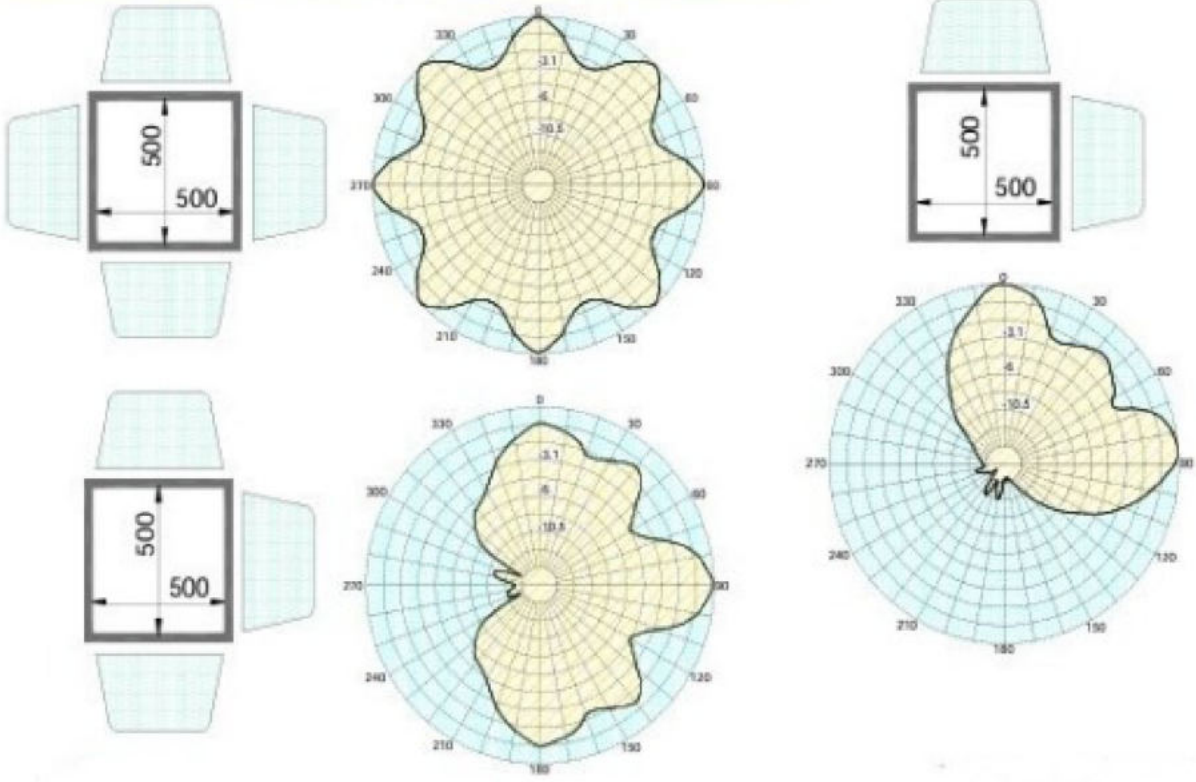
ELECTRICAL DATA

Frequency range	470 ÷ 860 MHz
Impedance	50 Ohm
Connector	7/16" female input connector (N female or 7/8" EIA on request)
VSWR	≤ 1.12:1 Max
Polarization	Horizontal
Gain	Refer to table
Horizontal pattern	Directional, omni-directional or customer designed
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA

Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Radome color	White
Mounting hardware	4 holes threated M8 at 980x85 mm spacing, or throught tiltable or fix mounting brackets for poles (optionals)
Shipping	As required

Horizontal Patterns with 2, 3 and 4 faces at Mid Band



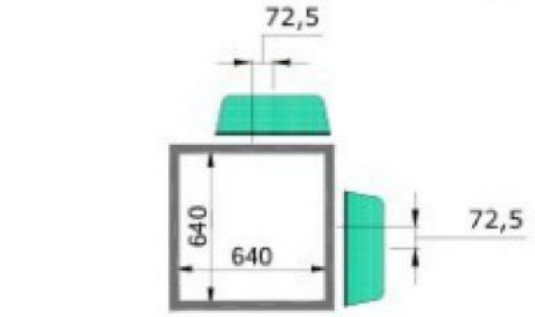
TECHNICAL DATA

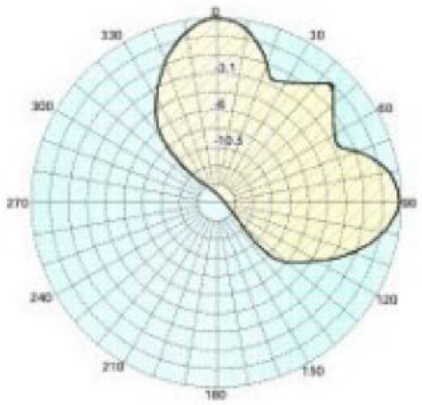
Number of bays	Panels per bay	Gain[1] 470 MHz dB	Gain[1] 470 MHz times	Gain[1] 630 MHz dB	Gain[1] 630 MHz times	Gain[1] 860 MHz dB	Gain[1] 860 MHz times	Weight[2] kg	Antenna height H m	Wind load[3] (v=160 km/h) kg
1	2	6.5	4.46	7.8	6.02	9.5	8.91	35	1.0	256
	3	5.0	3.16	5.8	3.80	7.7	5.89	50		313
	4	3.2	2.09	4.6	2.88	6.1	4.07	65		303
2	1	12.5	17.78	13.9	24.55	14.8	3.20	35	2.15	178
	2	9.5	8.91	10.8	12.02	12.5	17.78	65		382
	3	8.0	6.30	8.8	7.58	10.7	11.75	102		468
	4	6.2	4.17	7.6	5.75	9.1	8.13	130		453
4	1	15.5	35.48	16.9	48.90	17.8	60.25	65	4.45	356
	2	12.5	17.78	13.8	23.99	15.5	35.48	130		570
	3	11.0	12.59	11.8	15.13	13.7	23.44	188		698
	4	9.2	8.31	10.6	11.48	12.1	16.22	250		677
6	1	17.3	53.70	18.7	74.13	19.5	89.12	102	6.75	534
	2	14.3	26.91	15.6	36.30	17.9	61.66	188		851
	3	12.7	18.62	13.6	22.90	15.5	35.48	275		1048
	4	11.0	12.59	12.4	17.37	13.8	23.99	360		1015
8	1	18.5	70.79	19.9	97.72	20.8	120.23	130	9.05	712
	2	15.5	35.48	16.8	47.86	18.5	70.79	250		1135
	3	14.0	25.11	14.8	30.19	16.7	46.77	360		1397
	4	12.2	16.59	13.6	22.9	15.1	32.36	490		1354
12	1	20.3	107.15	21.7	147.91	22.5	177.83	188	13.65	1068
	2	17.3	53.70	18.6	72.44	20.2	104.71	360		1700
	3	15.7	37.15	16.6	45.71	18.5	70.79	550		2096
	4	14.0	25.11	15.4	34.67	16.8	47.86	730		2030
16	1	21.5	141.25	22.9	194.98	25.5	354.81	130	18.25	1424
	2	18.5	70.79	19.8	95.50	21.5	141.25	490		2270
	3	17.0	50.11	17.8	60.25	19.7	93.32	730		2795
	4	15.2	33.11	16.6	45.70	18.1	64.56	960		2707

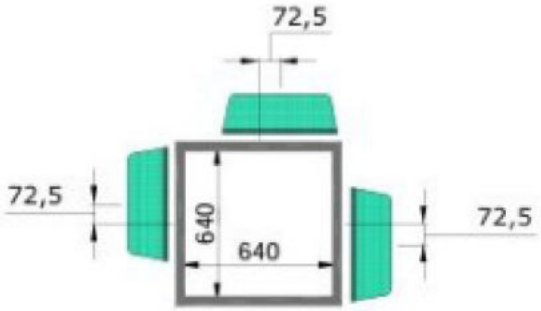
"These specifications are subject to change without notice"

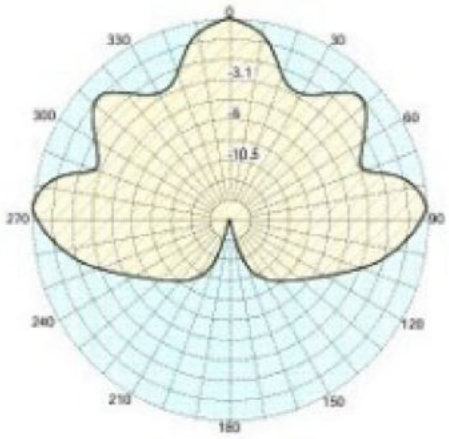
[1] referred to a half wave dipole. Attenuation of connecting cables not taken into account.
[2] without mounting hardware
[3] according to the tower type, for more details contact us

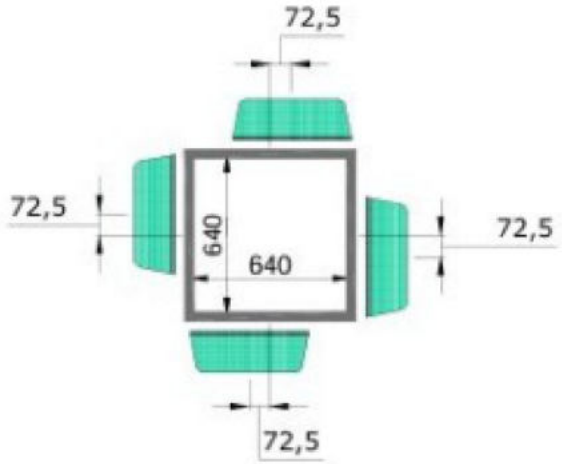
Horizontal Patterns with offset 2, 3 and 4 faces at Mid Band (650 MHz)

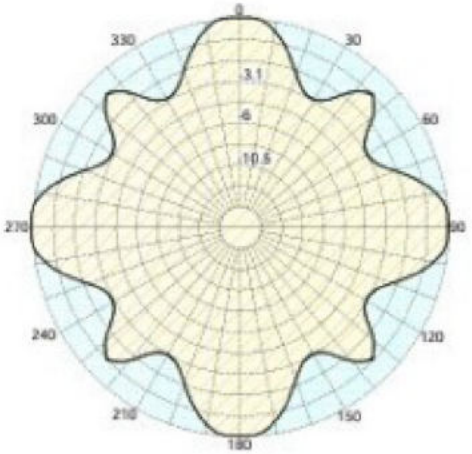






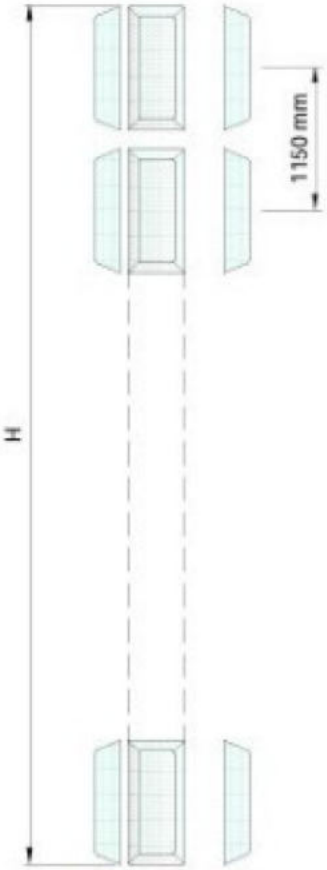






TECHNICAL DATA AT MID BAND (650 MHz)

Number of bays	Panels per bay	Gain[1] dB	Gain[1] times	Weight[2] kg	Antenna height H m	Windload/kg (V=150 km/h) Ø 1,65 m Without cylinder	Windload/kg (V=150 km/h) Ø 1,65 m With cylinder
2	1	15.1	32.8	30	2.15	131	310
	2	12.2	16.6	60		192	
	3	10.3	10.9	90		253	
	4	9.1	8.2	120		288	
4	1	18.3	68.1	60	4.45	262	650
	2	15.3	34	120		384	
	3	13.5	22.6	180		506	
	4	12.3	17	230		577	
6	1	20	101.2	90	6.75	393	1000
	2	17	50.6	180		576	
	3	15.3	33.7	260		760	
	4	14	25.3	350		866	
8	1	21.3	136.4	120	9.05	524	1350
	2	18.3	68.2	230		768	
	3	16.6	45.4	360		1015	
	4	15.3	34.1	460		1160	
10	1	22.3	172	150	11.35	655	1650
	2	19.3	86.1	300		960	
	3	17.6	57.3	430		1270	
	4	16.3	43	600		1450	
12	1	23	204	200	13.65	786	2000
	2	20.1	102	360		1152	
	3	18.3	68	520		1520	
	4	17.1	51	700		1730	
16	1	24.3	273.2	250	18.25	1048	2650
	2	21.3	136.6	480		1540	
	3	19.6	91	720		2030	
	4	18.4	68.3	920		2315	

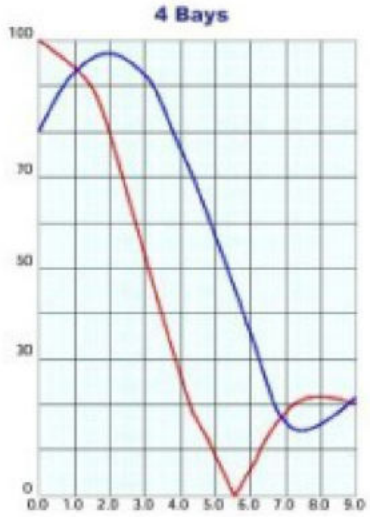


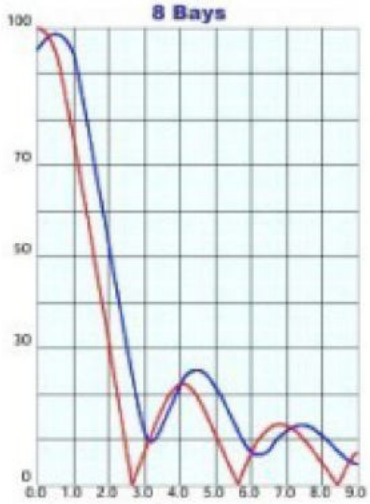
H= ANTENNA HEIGHT

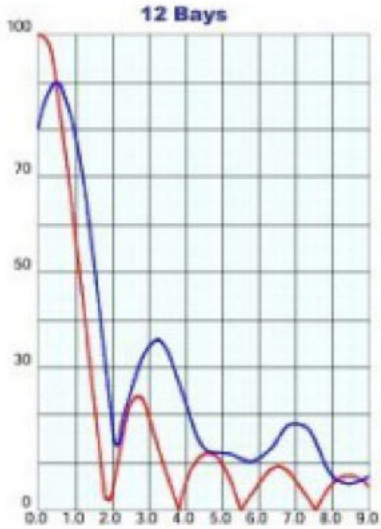
VERTICAL PATTERN

Without null fill

With null fill and beam tilt

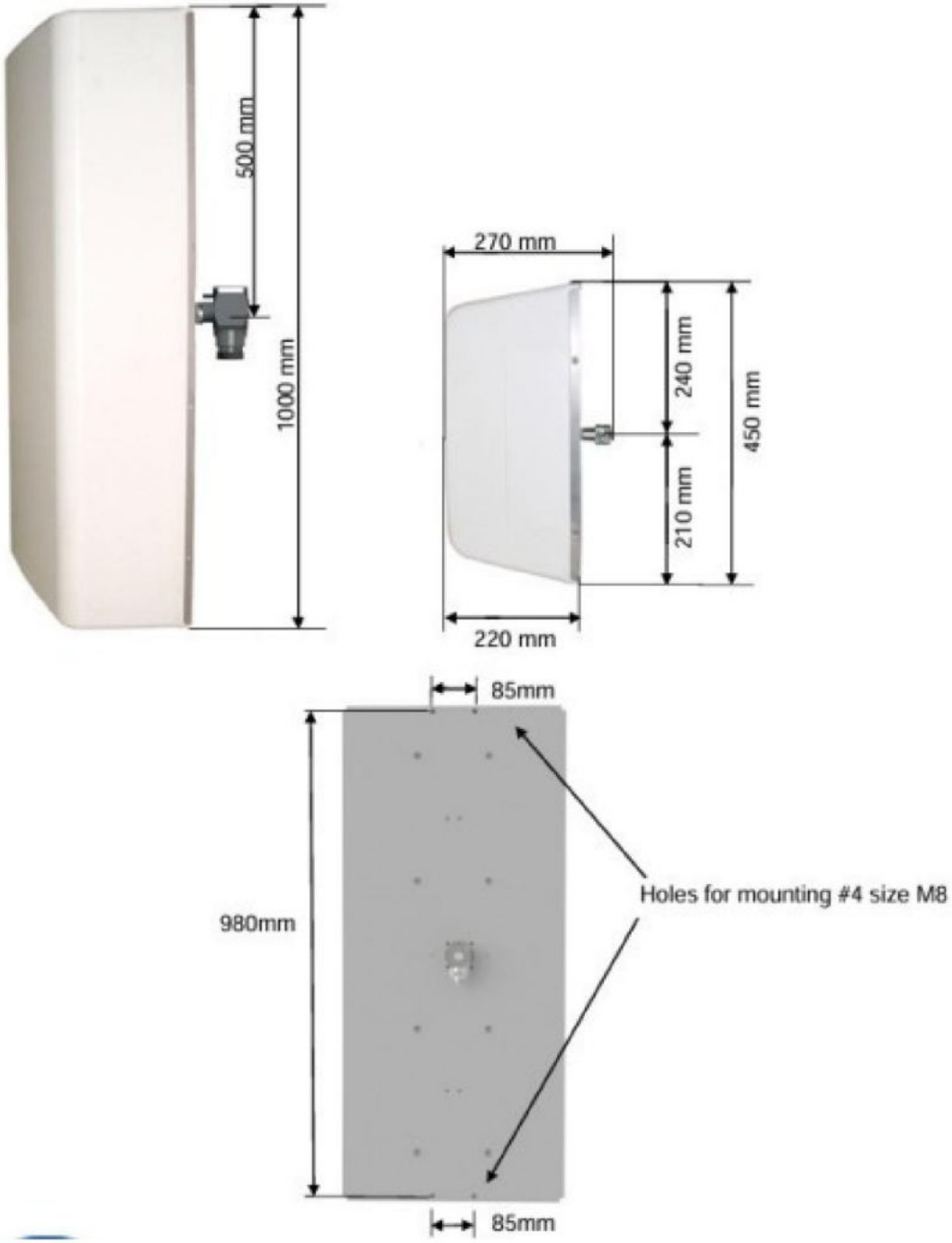






- Gain is provided for horizontal polarization.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-F standard.

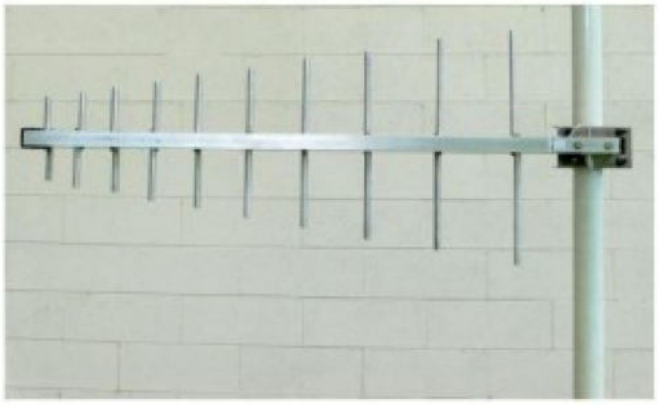
PANEL DIMENSION



MODEL LGPRDUHF

- BAND *470 ÷960 MHz*
- IMPEDANCE 50 Ohm

- Broadband and compact design
- Stainless steel bracket and hardware
- Customization available

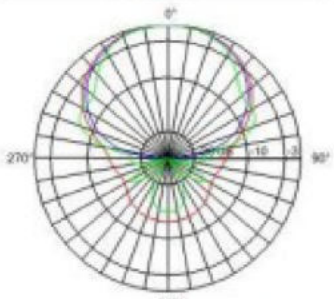


ELECTRICAL	
Frequency	470 ÷ 960 MHz
Polarization	linear vertical
VSWR	< 2 across band
Gain	8 ÷ 10 dBi
Front-to-back ratio	> 14 dB
Half power beamwidth	80° (Az) × 60° (El)
Power rating	150 W cw
Lightning protection	DC grounded

MECHANICAL	
Connector	N-female, 50 Ω
Boom × element lenght	760 × 305 mm
Mass	1220 g
Wind loading	7 kg @ 150 km/h
Standard finish	anticorodal aluminium, stainless steel hardware

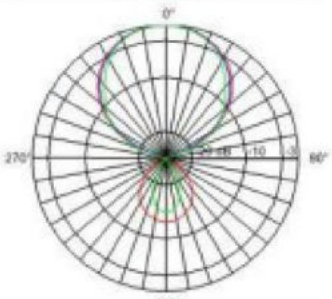
MOUNTING	
Standard interface	rear bracket
Mast diameter range	40 ÷ 60 mm

Azimuth pattern



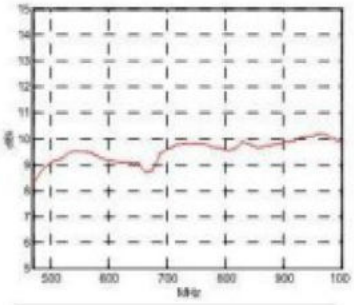
(frequency band start/mid/end)

Elevation pattern

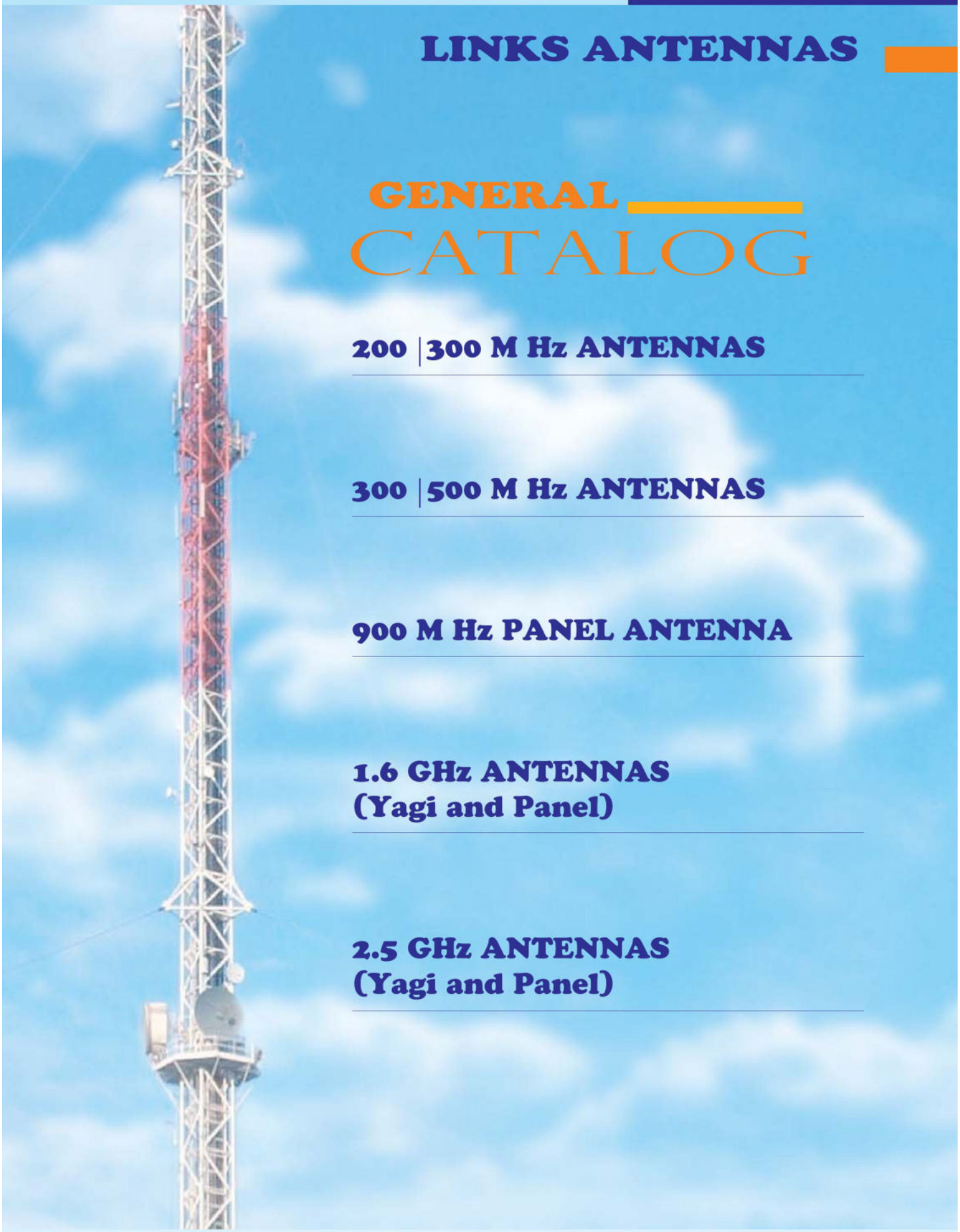


(frequency band start/mid/end)

Gain



LINKS ANTENNAS



GENERAL CATALOG

200 | 300 M Hz ANTENNAS

300 | 500 M Hz ANTENNAS

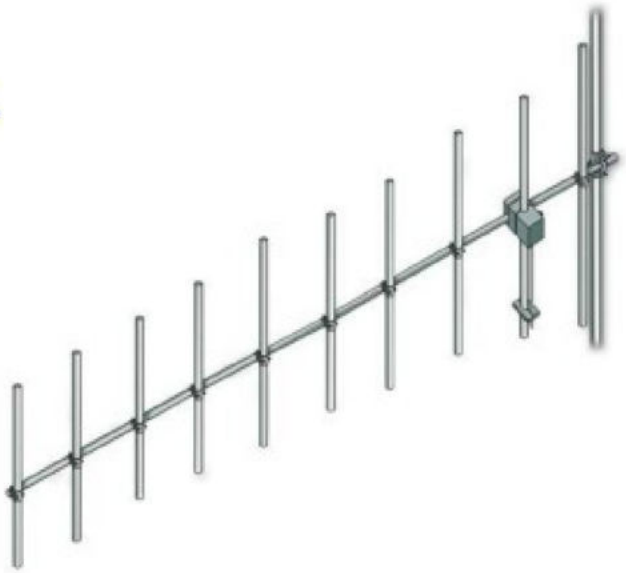
900 M Hz PANEL ANTENNA

1.6 GHz ANTENNAS (Yagi and Panel)

2.5 GHz ANTENNAS (Yagi and Panel)

Model AR10 – AR10I - AR10IS

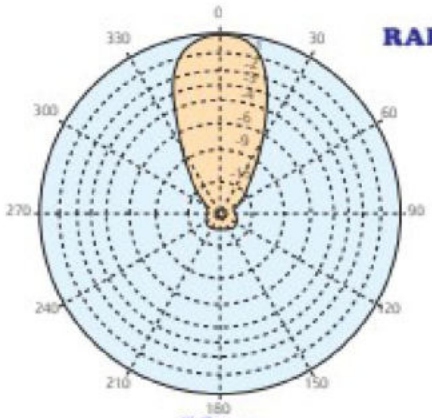
- **Yagi Antenna**
- **200_500 MHz tunable**
  Minimum band 20-30 mhz.
- **Gamma Match Tuned**
- **Vertical or Horizontal polarization**
- **Directional Pattern**



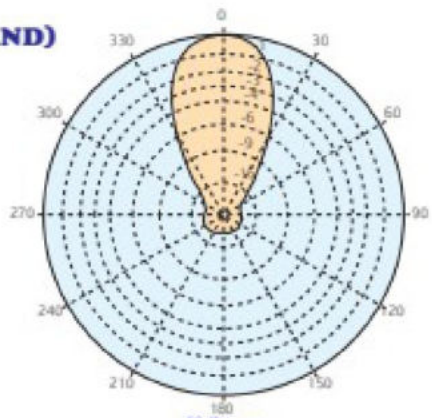
ELECTRICAL DATA	
Frequency range	200 | 500 MHz tunable
Impedance	50 Ohm
Connectors	N
Max Power	300W (N)
VSWR	≤ 1.1:1 in the working frequency
Polarization	Horizontal or Vertical
Gain	12 dBd (referred to half-wave dipole) 14.13 dBi
Pattern	E plane ±20° H plane ±22°

MECHANICAL DATA	
Dimensions	According to the working frequency (1650 x 380 x 50 mm at 385 MHz)
Weight	According to the working frequency and material used (aluminium or stainless steel)
Wind surface	0.1 m^2 (at 385 MHz)
Wind load	13 kg (wind speed at 160 km/h)
Max wind velocity	200 km/h (AR10I / AR10IS)
Materials	AR10 : Aluminium elements and stainless steel boom AR10I: Stainless steel elements and boom AR10IS: Stainless steel elements and boom TIG welded Teflon insulator
Mounting	With special pipe clamps 50 – 110mm. Ø

RADIATION PATTERN (MID BAND)



E-Plane



H-Plane

Gain is provided for vertical polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Actual values vary with the specific installation. Contact us for more details of your installation.
Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

TELECFE BROADCAST SOLUTIONS
www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

- *Models : AR102/AR102I/AR102IS*
- *Yagi-Antenna*
- *200 ÷300 MHz*
- *Gamma Match Tuned*
- *Vertical or Horizontal polarization*
- *Directional pattern*

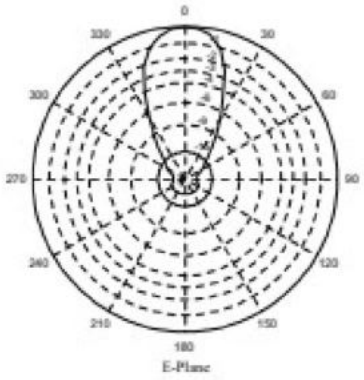
ELECTRICAL DATA

Frequency range	200 ÷ 300 MHz
Impedance	50 Ohm
Connectors	N
Max Power	300W
VSWR ±10MHz	≤ 1.1:1 in the working frequency
Polarization	Horizontal or Vertical
Gain	12 dB (referred to half-wave dipole)
Half power beam width	E plane ± 20° H plane ± 22°

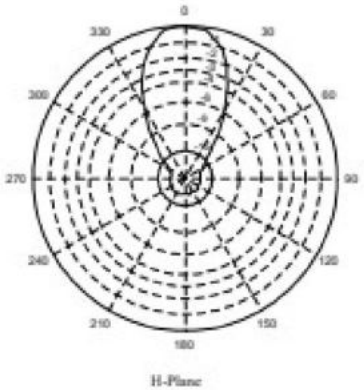
MECHANICAL DATA

Dimensions	According to the working frequency (2400- 590- 50 mm at 250 MHz)
Weight	According to the working frequency and material used (aluminum or stainless steel).
Wind surface	0.17 m^2 (at 250 MHz)
Wind load	22 kg (wind speed at 160 Km/h)
Max wind velocity	120 km/h. (AR102I/AR102IS)
Materials	AR102: Aluminum elements and inox boom AR102I: Stainless steel elements and boom AR102IS: Stainless steel elements and boom tig welded. Teflon insulator Radome: Fiberglass (option)
Icing protection	Feed point radome
Radome color	White (optional)
Mounting	With special pipe clamps 50 ÷ 100 mm dia.

RADIATION PATTERN (MID BAND)



E-Plane



H-Plane

Gain is provided for vertical polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Actual values vary with the specific installation. Contact us for more details of your installation.
Five ft(1.6mt) of pipe required above the top antenna and below the bottom antenna for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

- *Models : AR142/AR142I/AR142IS*
- *Yagi-Antenna*
- *200 ÷300 MHz*
- *Gamma Match Tuned*
- *Vertical or Horizontal polarization*
- *Directional pattern*

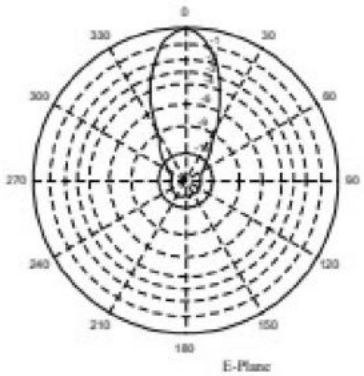
ELECTRICAL DATA

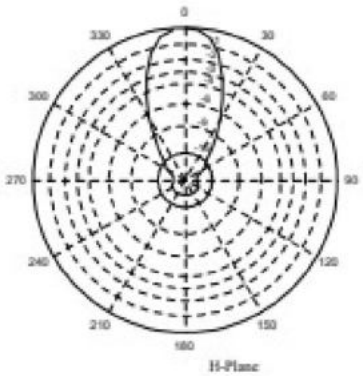
Frequency range	200÷300 MHz
Impedance	50 Ohm
Connectors	N
Max Power	300W
VSWR ±10MHz	≤ 1.1:1 in the working frequency
Polarization	Horizontal or Vertical
Gain	13 dB (refered to half-wave dipole)
Half power beam width	E plane ± 18° H plane ± 20°

MECHANICAL DATA

Dimensions	According to the working frequency (3360- 590- 50 mm at 250 MHz)
Weight	According to the working frequency and material used (aluminum or stainless steel).
Wind surface	0.22 m^2 (at 250 MHz)
Wind load	28.5 kg (wind speed at 160 Km/h)
Max wind velocity	100 km/h. (AR142I/AR142IS)
Materials	AR142: Aluminum elements and inox boom AR142I: Stainless steel elements and boom AR142IS: Stainless steel elements and boom tig welded. Teflon insulator Radome: Fiberglass (option)
Icing protection	Feed point radome
Radome color	White (optional)
Mounting	With special pipe clamps 50 ÷ 100 mm dia.

RADIATION PATTERN (MID BAND)

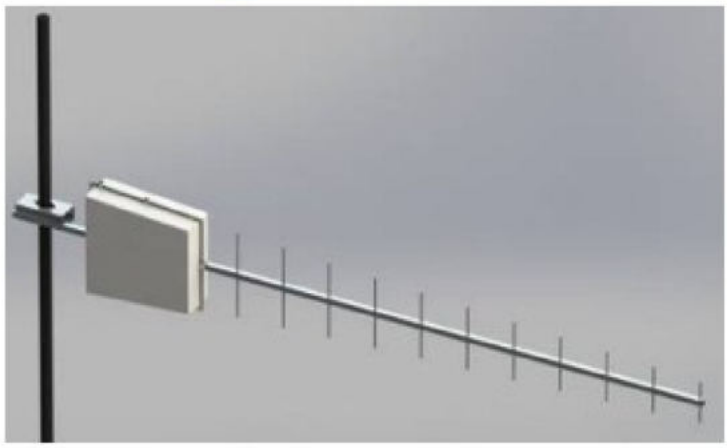




Gain is provided for vertical polarization.
If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
Actual values vary with the specific installation.
Contact us for more details of your installation.
Five ft(1.6mt) of pipe required above the top antenna and below the bottom antenna for to protect from pattern interference by other antennas.
Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

MODEL AR14IS

- **Yagi Antenna**
- **Tunable in the range 300 + 500 MHz**
- **Gamma match tuned**
- **Vertical or horizontal polarization**
- **Directional pattern**

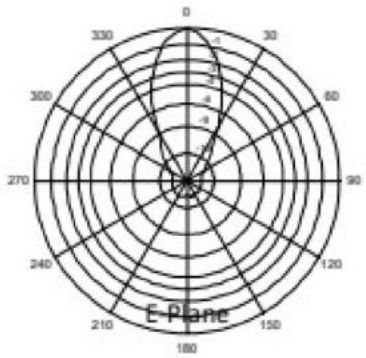


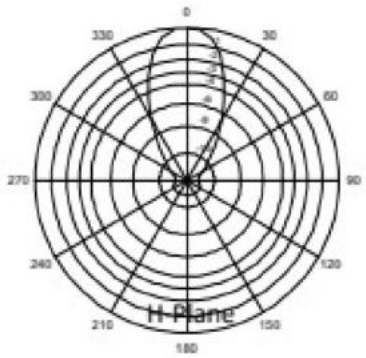
AR14IS
Version with radome (optional)

ELECTRICAL DATA	
Frequency range	300÷500 MHz
Impedance	50 Ohm
Connectors	N
Max Power	300W
VSWR ±10MHz	≤ 1.1:1 in the working frequency
Polarization	Horizontal or Vertical
Gain	13 dB 15dBi (referred to half-wave dipole)
Half power beam width	E plane ± 18° H plane ± 20°

MECHANICAL DATA	
Dimensions	According to the working frequency (2270×380×50 mm at 385 MHz)
Weight	According to the working frequency
Wind surface	0.10 m^2 (at 500 MHz)
Wind load	10 kg (wind speed at 160 Km/h)
Max wind velocity	200 km/h.
Materials	AR14IS: Stainless steel elements and boom tig welded. Teflon insulator Radome: Fiberglass (option)
Icing protection	Feed point radome (option)
Radome color	White (optional)
Mounting	With special pipe clamps 50÷ 100 mm dia.

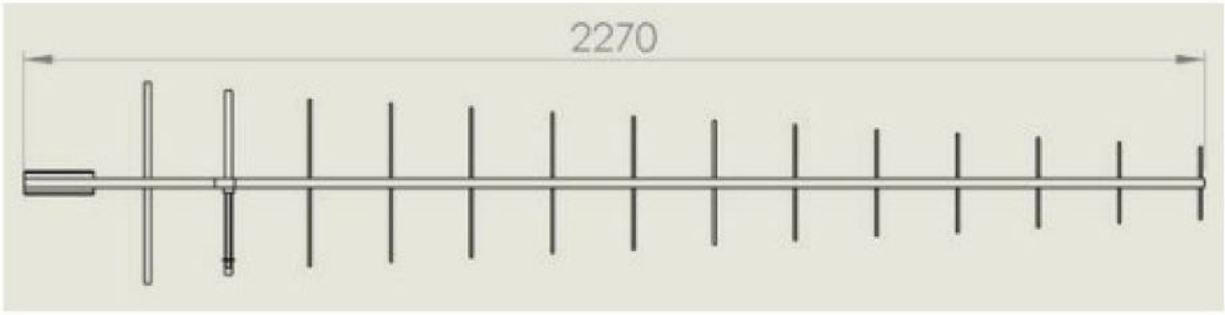
RADIATION PATTERN (MID BAND)

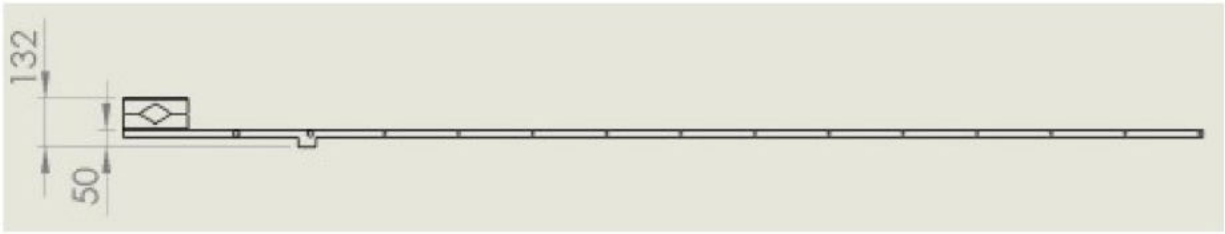


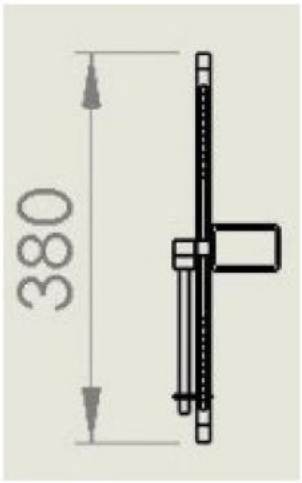


- *Gain is provided for vertical polarization.*
- *If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.*
- *Actual values vary with the specific installation. Contact us for more details of your installation.*
- *Five ft(1.6mt) of pipe required above the top antenna and below the bottom antenna for to protect from pattern interference by other antennas.*
- *Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.*

DIMENSIONS (mm) – EXAMPLE OF AR14IS TUNED @385 MHz

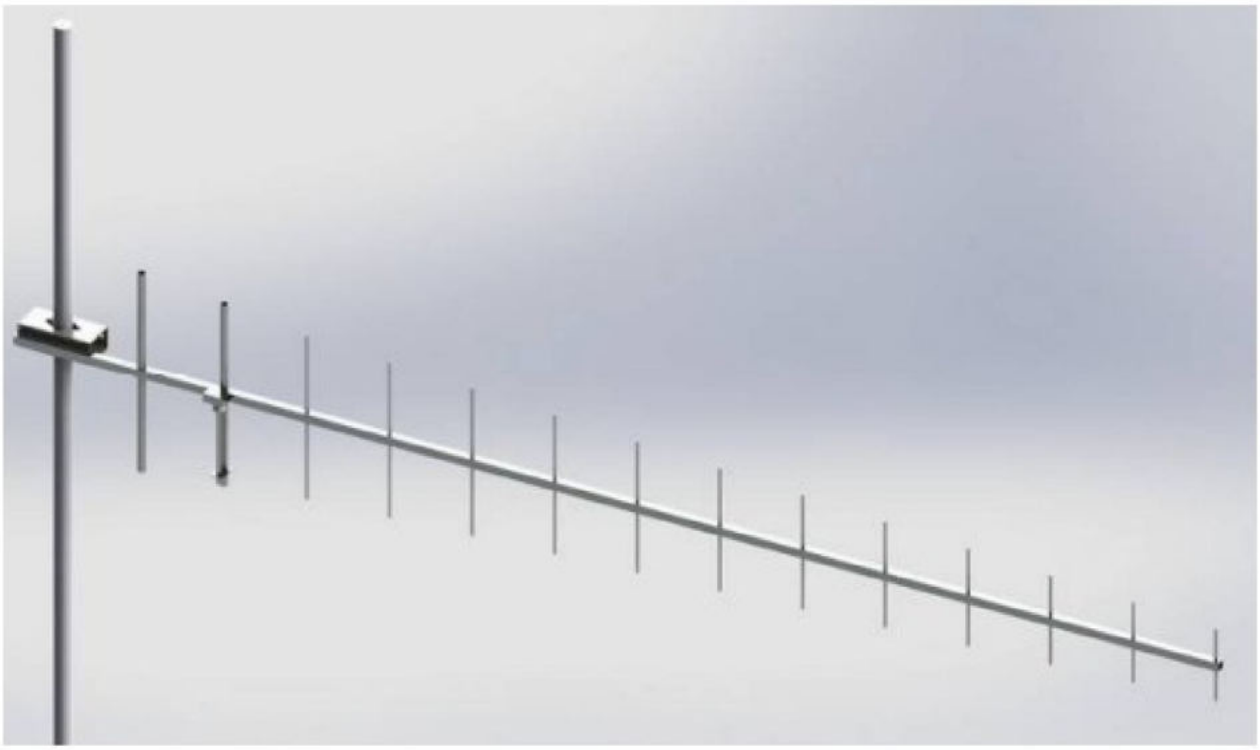


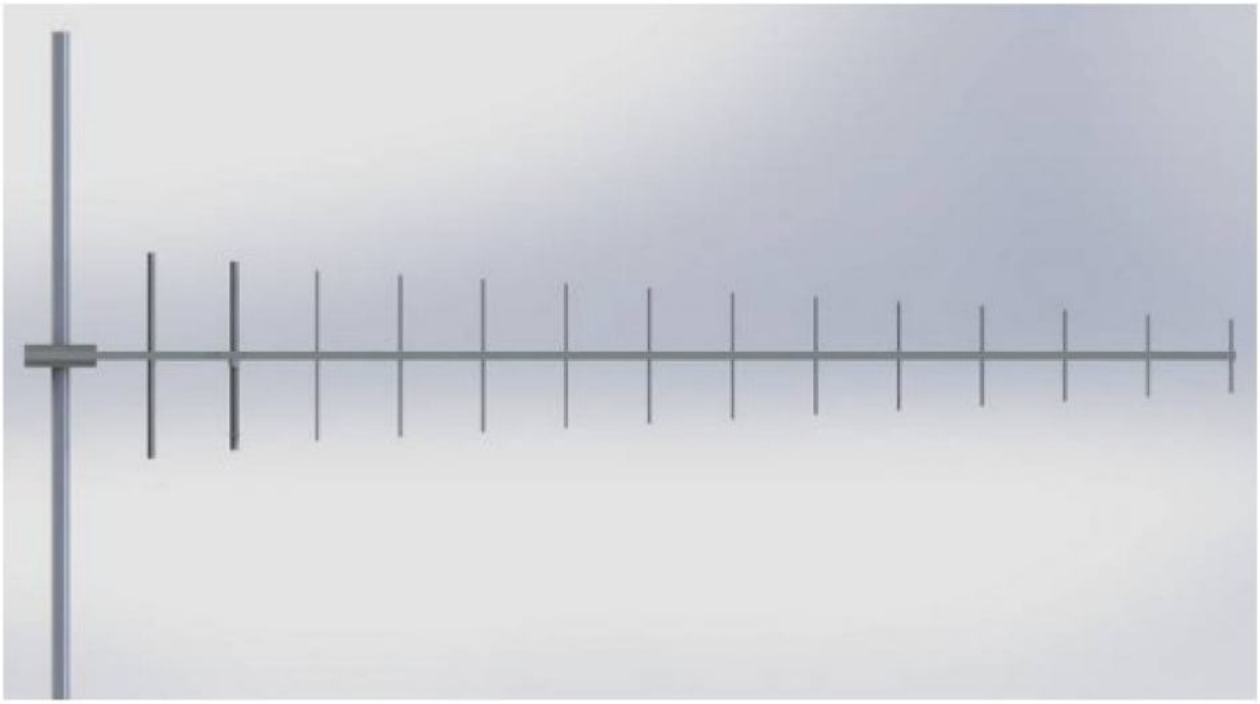




Dimensions	2270×380×50without support-132with support mm (89.3×14.9×1.9without support-5.1with support inch) (H×L×W)
Weight	≅ 8 Kg approx.

VIEWS OF THE ANTENNA – EXAMPLE OF AR14IS VERTICAL POLARIZATION





Model AJ1EITCI-II-III

TUNABLE COST EFFECTIVE DIPOLE
LOW WEIGHT HIGH PERFORMANCE

- Model A1JEITCI-II-III
- Band 50-250 MHZ. tunable
- 1 dBd gain
- Vertical polarization
- Omni directional pattern
- All Stainless Steel aisi 304

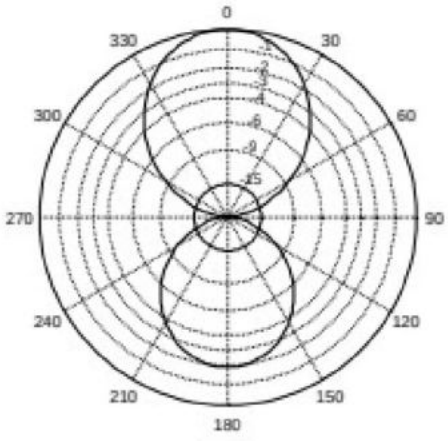
ELECTRICAL DATA

Frequency range	50 ÷ 250 MHz. tunable
Impedance	50 Ohm
Connectors	N female
Max Power	500W
VSWR	≤ 1.2:1 Average
Polarization	Vertical
Gain	1 dB (referred to half-wave dipole)
Pattern	Omni directional ± 1.5 dB in free space Omni directional ± 3 dB with 100mm diameter pole

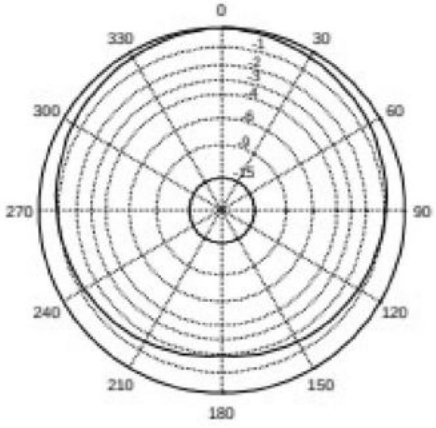
MECHANICAL DATA

Dimensions	See photo
Weight	5- 8 kg with hardware mounting
Wind surface	0.03 – 0.8 m2
Wind load	8 – 10 kg (wind speed at 160 km/h – without radome)
Max wind velocity	250 km/h.
Materials	External parts: Stainless Steel Internal parts: brass Radome: fiberglass (optional)
Icing protection	Feed point radome (optional)
Radome (optional)	Color trasparent
Mounting	With special pipe clamps 40÷110 mm diameter

RADIATION PATTERN (MID BAND)



E-plane



H-plane

Tunable Cost Effective Antenna Systems

Omni directional pattern

ELECTRICAL DATA	
Frequency range	50 +250 MHz tunable
Impedance	50 Ohm
Connector	EIA flange according to system power rating
VSWR	≤ 1.2:1 Max
Polarization	Vertical
Gain	According to requirement
Horizontal pattern	Any type according to the customer requirements
Vertical pattern	Null fill, beam tilt and special requirements on demand
Other facilities	The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power

MECHANICAL DATA	
Height of array	Subject to number of bays (refer to table)
Total net weight	Refer to table
Wind load	Refer to table
Pressurizzable	Yes (on demand)
Radome colour	transparent (optional)
Mounting hardware	Stainless steel aisi 304 clamps
Shipping	As required

TECHNICAL DATA model 150-170 mhz.

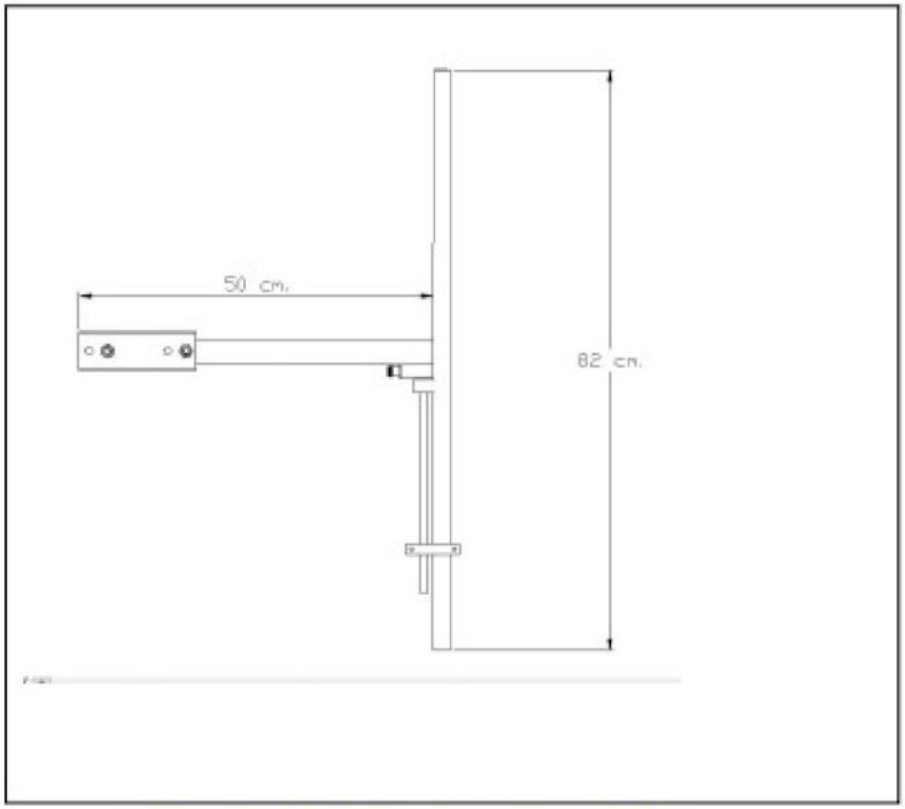
Number of bays	Dipole per bay	Gain[1]		Weight[2] kg	Antenna height L m	Wind load (v=160 km/h) kg
		dB	times			
1	1	1.0	1.2	4	1	8
2	1	4.0	2.5	8	3	16
4	1	7.0	5	16	7	32
6	1	8.8	8.5	24	9	48
8	1	10.0	10	32	15	64

[1] Referred to half wave dipole. Attenuation of connecting cables not taken into account.
[2] Without mounting hardware.
[3] Systems comprise: antennas, cables and splitter – for more details look on catalog – different versions on demand

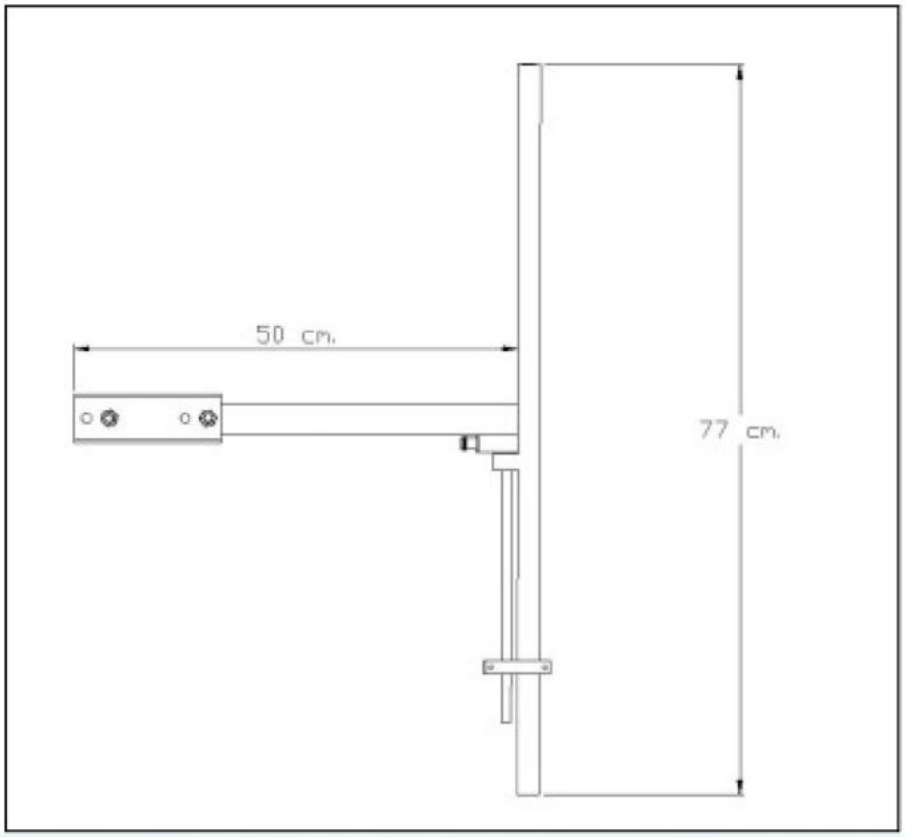
- Gain is provided for vertical polarisation.
- When antenna is pole mounted on the top of a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing are provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- A length of five ft(1.6mt) of pipe is required above the top bay and below the bottom bay to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.

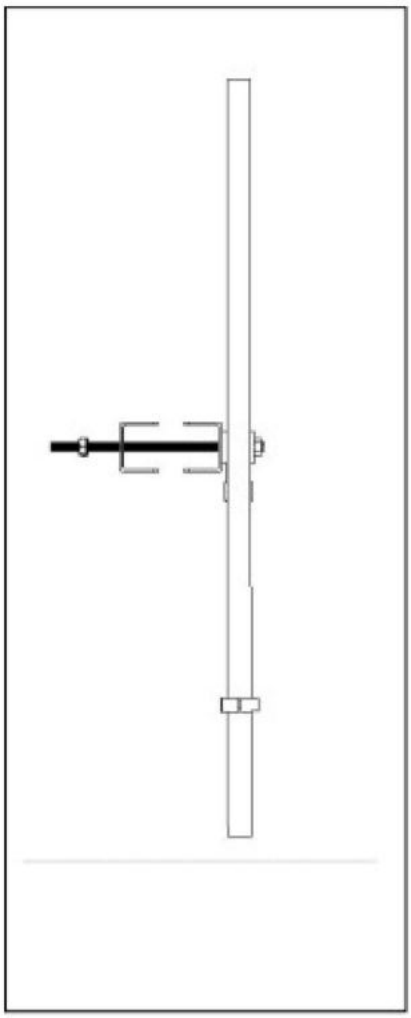
EXAMPLE DIMENSIONS

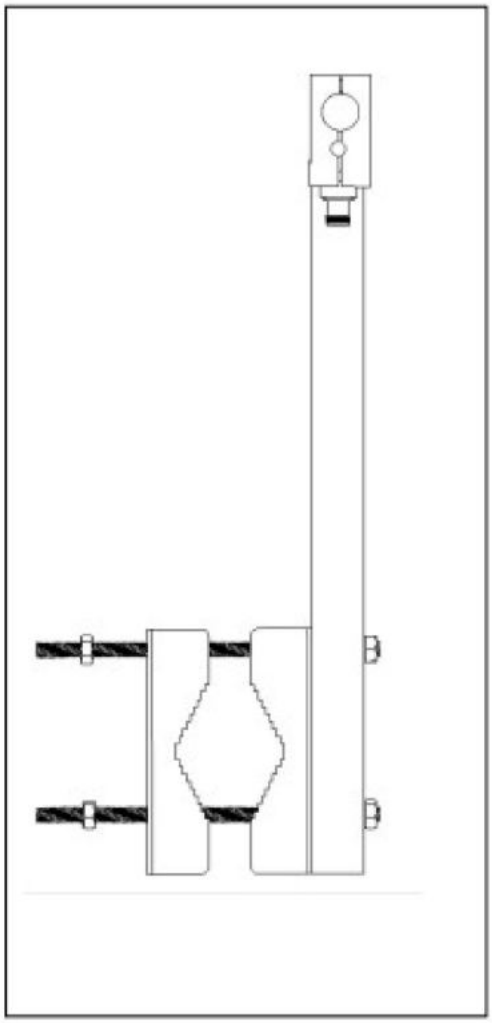
MODEL FREQUENCY 150-160 MHZ.



MODEL FREQUENCY 160-170 MHZ.





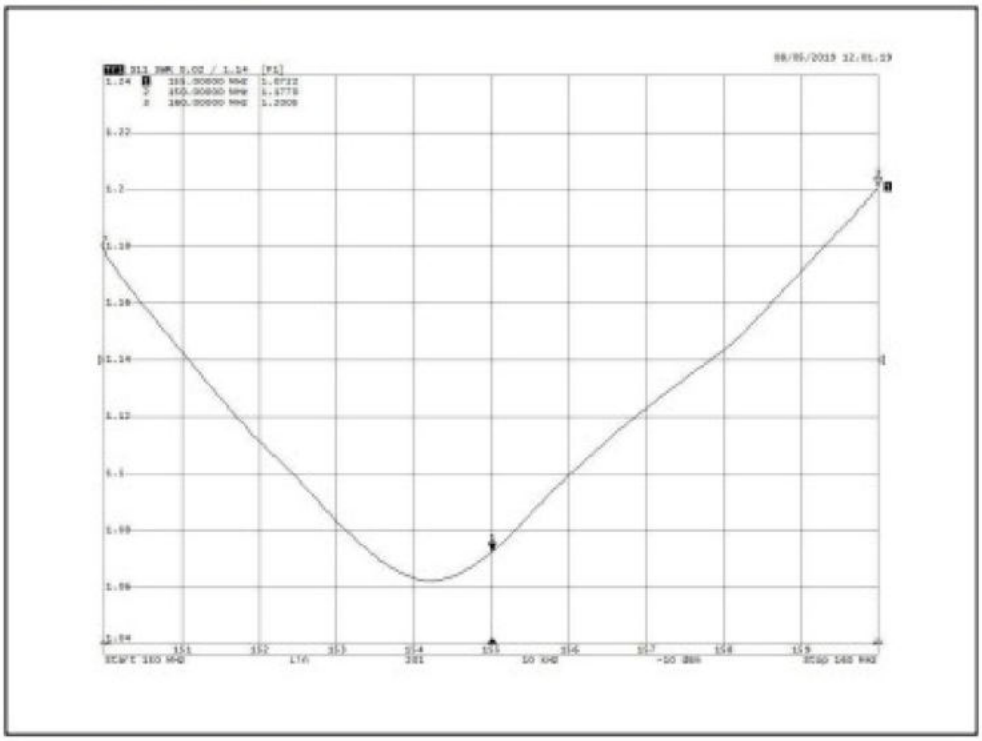


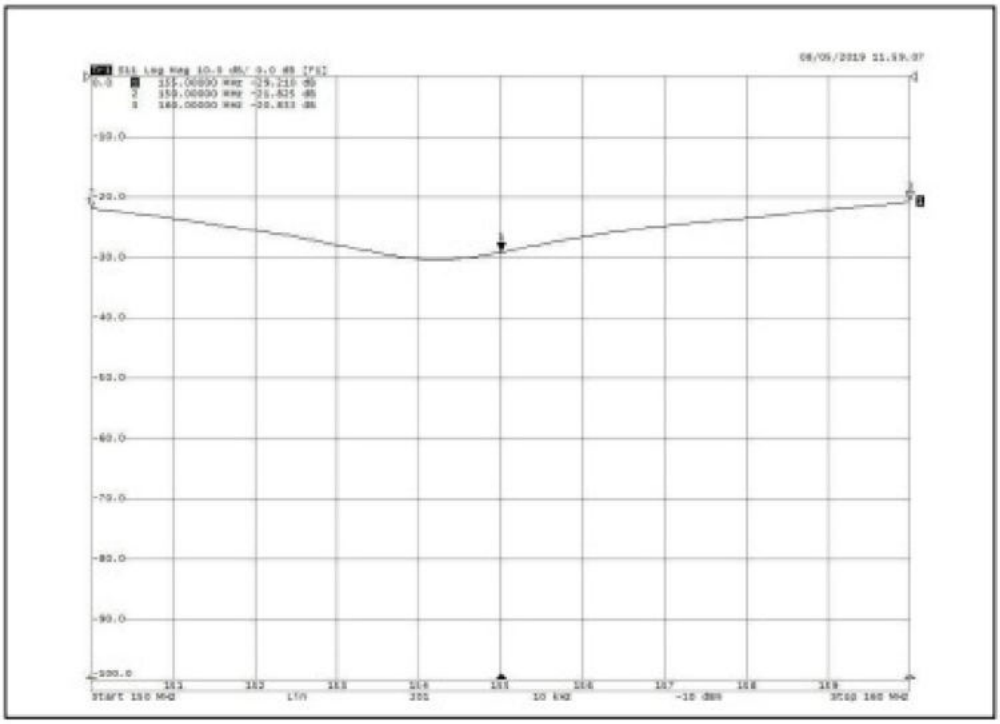
DIMENSION DIPOLE TUBULAR ROUND 25 X 1mm

DIMENSION BOOM TUBULAR SQUARE 35 X 35 X 1.5 mm.

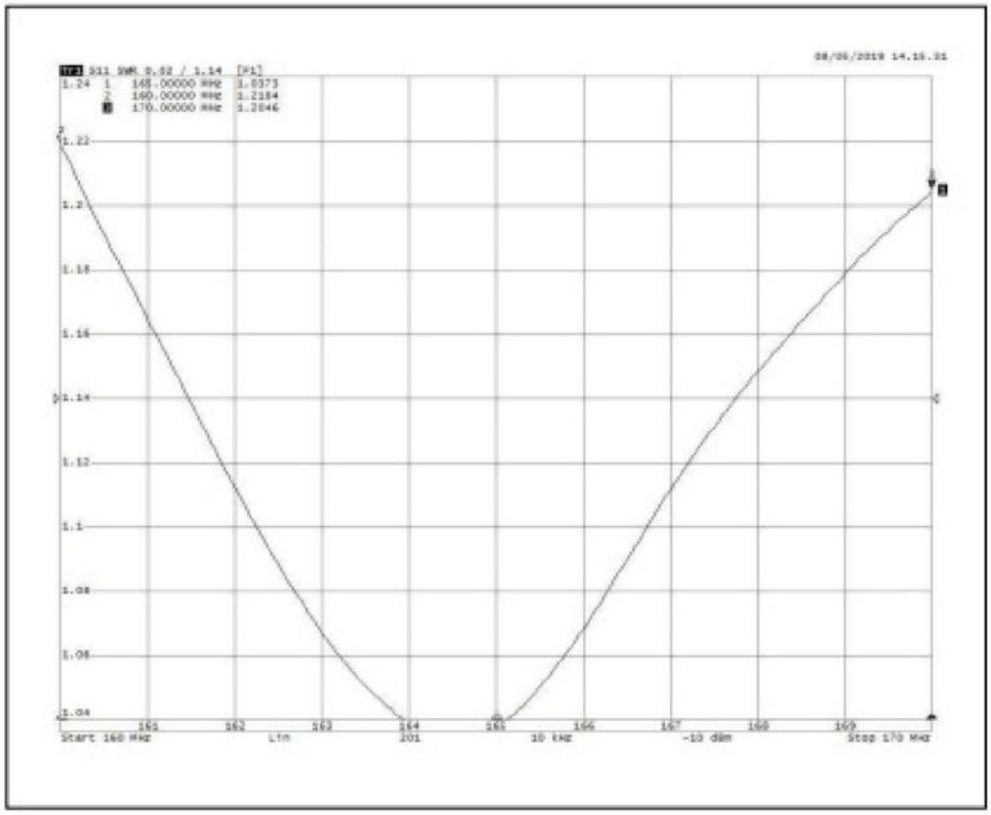
VSWR and RETURN LOSS

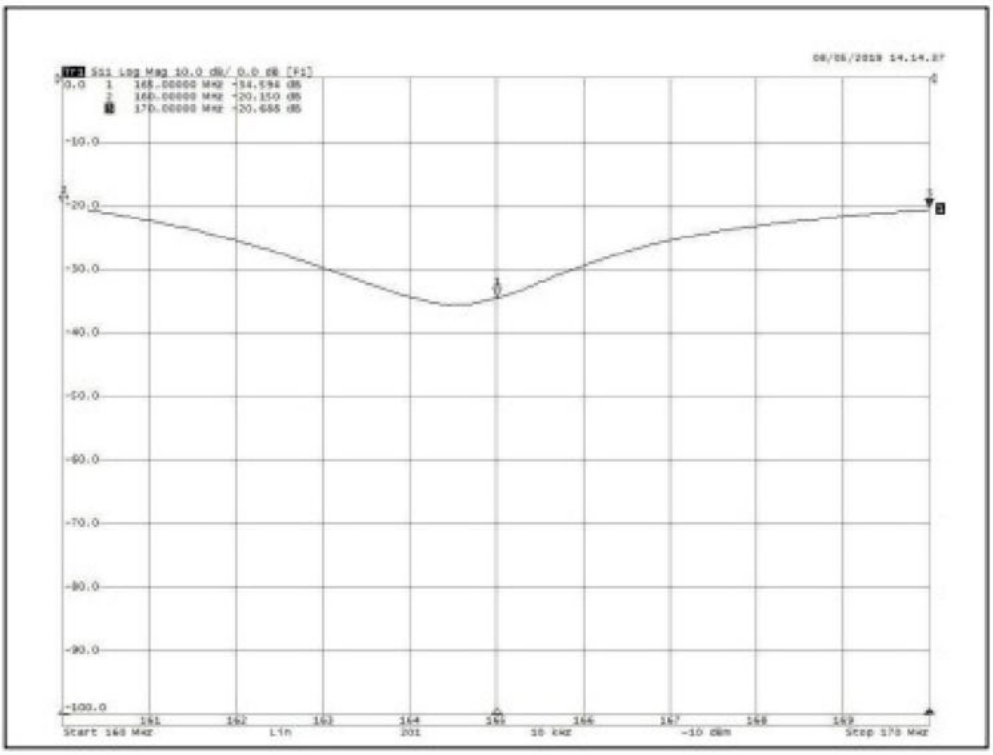
Example Model 150 – 160 mhz.



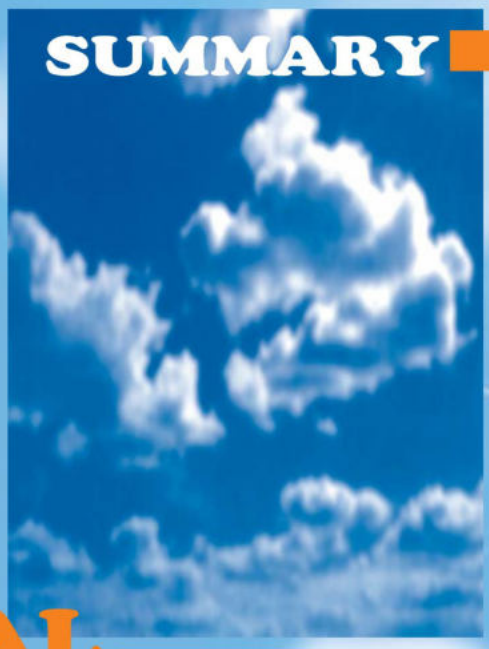


Example Model 160 – 170 mhz.





Various view



GENERAL CATALOG

FM TV DAB ACCESSORIES ANTENNAS

SPLITTERS BALANCED UNBALANCED
FINE MATCHER – DIRECTIONAL COUPLERS
HAIJACKER – SURGE PROTECTOR
IMPEDANCE TRANSFORMER
RF COMPONENTS AND ACCESSORIES

TELECFE
BROADCAST SOLUTIONS

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SPLITTER FM

- FM BAND 87.5 | 108 MHz
- Special version with unequal power splitting
- Pressurizzable on request
- Option Clamps (minimum 2 for Splitter)

TYPICAL SPECIFICATIONS

Impedance	50 Ohm
Frequency Range	87.5-108 MHz
VSWR	1.05:1 Max
Insertion Loss	0.05 dB Max
Connectors	N-7/16"-7/8"-1+5/8"-3+1/8"-4+1/8" -4+1/2" - 6+1/8" In according to the working power
Max Power Input	From 100 Watts to 100 KW In according to the model
Number of outputs	2- 8-12-16 (In according to the model)
Length approx.	1600 mm
Diameter external tube	From 40 to 120 mm In according to the working power
Mounting	With special pipe clamp
Working Temperature	-20°C | +50°C
Colour	Enamel gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12∝ thickness)

IN 7/8" OUT 4 7/8" ↑

IN 1+5/8" OUT 2 7/8" ↑

↑ IN 3+1/8" OUT 2 3+1/8"

IN 4+1/2" or 3+1/8" OUT 4 1+5/8"

→ IN 1+5/8" OUT 8 or 12 or 16 7/8"

← IN 1+5/8" OUT 4 7/16"

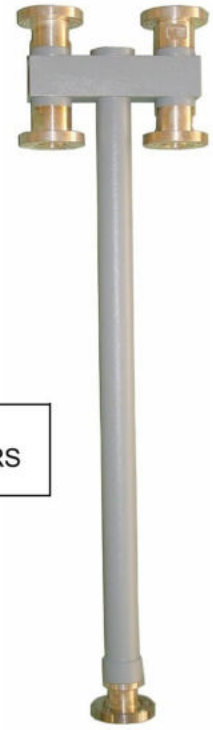
EXAMPLES OF SPLITTERS

"These specifications are subject to change without notice"

SPLITTER VHF-UHF

- **UHF BAND 470÷860 MHz**
- **VHF BAND 170-240 Mhz DAB**
- **Special version with unequal power splitting**
- **Pressurizzable on request**

← IN 7/8" OUT 2 7/8"



EXAMPLE OF SPLITTERS

TYPICAL SPECIFICATIONS

Impedance	50 Ohm
Frequency Range	**Band I 47-88 Band III 170-230 Band IV – V** 470-860 MHz
VSWR	<1.05 in each frequency range
Insertion Loss	0.05 dB Max
RF-Connectors	Female N, DIN 7/16, or EIA-flange 7/8", 1+5/8",3+1/8",4+1/2", 6+1/8"
Max Power Input	According to depending on connectors
Number of outputs	2-8 (In according to the model.)
Length approx.	Approx. 550 mm
Diameter external tube	From 40 to 120 mm In according to the working power
Mounting	With special pipe clamp
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless steel, Silvering (min 12μm thickness)

↑ IN 7/8" OUT 6 7/8"

↑ IN 1+5/8" OUT 47/8"

↑ IN 7/8" OUT 6 7/16"

IN 7/8" OUT 4 7/8" ↑

↑ IN 1+5/8" (optional 7/8")
OUT 8 7/16"

DIVIDERS VHF-DAB

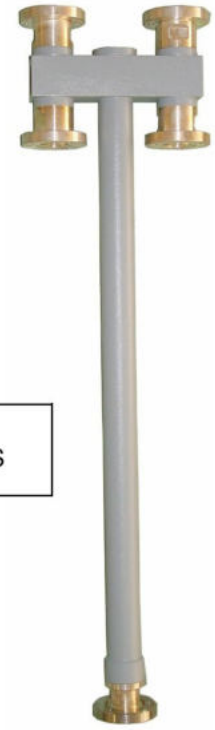
- **VHF BAND 170-240 Mhz DAB**
- **Special version with unequal power splitting**
- **Pressurizzable on request**

IN 7/8" OUT 2 7/8"

TYPICAL SPECIFICATIONS

Impedance	50 Ohm
Frequency Range	**Band III 170-230**
VSWR	<1.05 in each frequency range
Insertion Loss	0.05 dB Max
RF-Connectors	Female N, DIN 7/16, or EIA-flange 7/8", 1+5/8",3+1/8",4+1/2", 6+1/8"
Max Power Input	According to depending on connectors
Number of outputs	2-8 (In according to the model.)
Length approx.	Approx. 1200 mm
Diameter external tube	From 40 to 120 mm In according to the working power
Mounting	With special pipe clamp
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless steel, Silvering (min 12μm thickness)

EXAMPLE
OF DIVIDERS



IN 7/8" OUT 4 7/8"

IN 7/8" OUT 6 7/8"

IN 1+5/8" OUT 47/8"

IN 7/8" OUT 6 7/16"

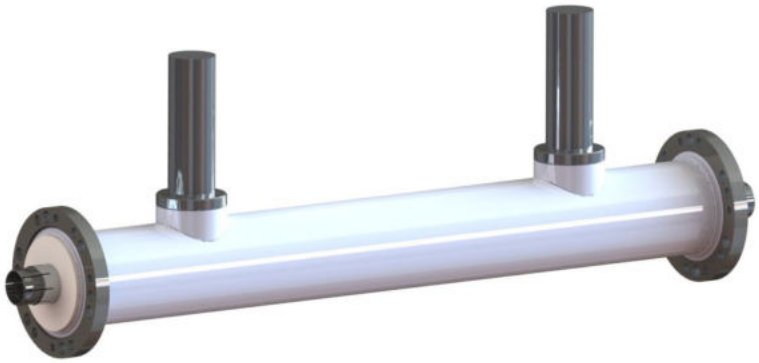
IN 1+5/8" (optional 7/8")
OUT 8 7/16"

MODEL FMT12K-FMT30K-FMT40K

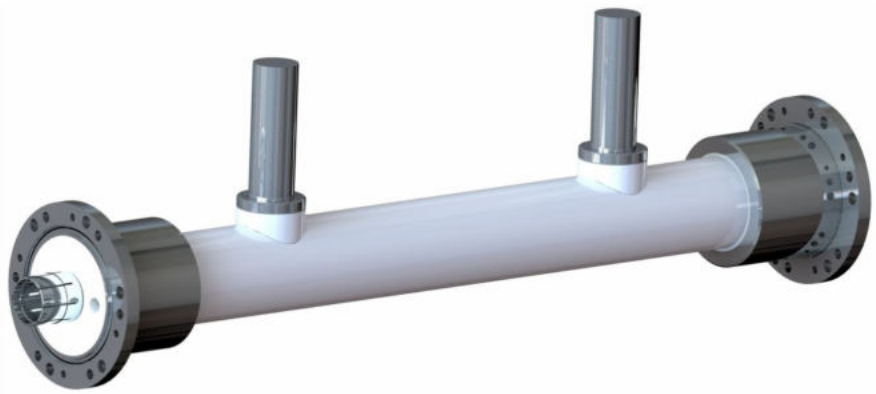
- FINE MATCHER
- FM BAND 87.5 | 108 MHz
- Band II
- FINE TUNED ANTENNA FOR MINIMUN VSWR

FMT12K

Although the TELECOMUNICAZIONI FERRARA antennas are tuned at the factory to provide a low standing wave ratio for the operating channel, when an antenna is mounted on a conductive metal object such as a tower or a pole its VSWR naturally increases. The fine matcher provides the user a quick and easy way to optimize the antenna for the absolute minimum VSWR and released signal degradation. With this device, tuning can be accomplished in a fraction of the time that it take to tune competitive antennas without having to disassemble the feed-line. Tuning can even be accomplished without loss of system pressure.



FMT30K

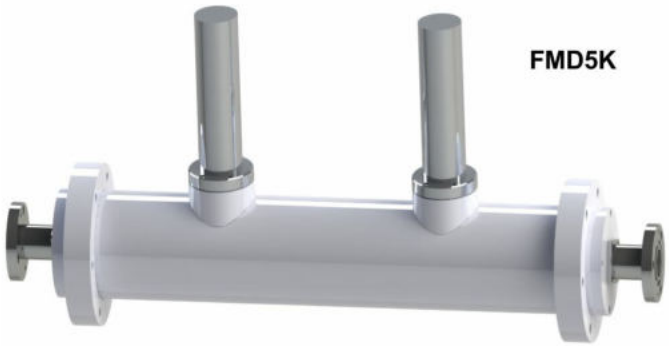


FMT40K

TYPICAL SPECIFICATIONS	
Model	FMT12K - FMT30K – FMT40K
Impedance	50 ohm
Frequency Range	87.5-108 MHz
Insertion Loss	0.05 dB Max
Connectors	Input-Output 1+5/8" (Opt. 7/8") FMT12K Input-Output 3+1/8" FMT30K Input-Output 4+1/2" FMT40K
Max Power	12-30-40KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12∝m thickness)

MODEL FMD5K

- FINE MATCHER
- FM BAND 174 - 240 Mhz.
- Band III VHF DAB
- FINE TUNED ANTENNA FOR MINIMUN VSWR



Although the TELECOMUNICAZIONI FERRARA antennas are tuned at the factory to provide a low standing wave ratio for the operating channel, when an antenna is mounted on a conductive metal object such as a tower or a pole its VSWR naturally increases. The fine matcher provides the user a quick and easy way to optimize the antenna for the absolute minimum VSWR and released signal degradation. With this device, tuning can be accomplished in a fraction of the time that it take to tune competitive antennas without having to disassemble the feed-line. Tuning can even be accomplished without loss of system pressure.

TYPICAL SPECIFICATIONS	
Model	FMD5K
Impedance	50 ohm
Frequency Range	174-240 MHz
Insertion Loss	0.05 dB Max
Connectors	Input-Output 7/8" (Opt. 1+5/8")
Max Power	5KW
Working Temperature	-20°C +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12 µm thickness)

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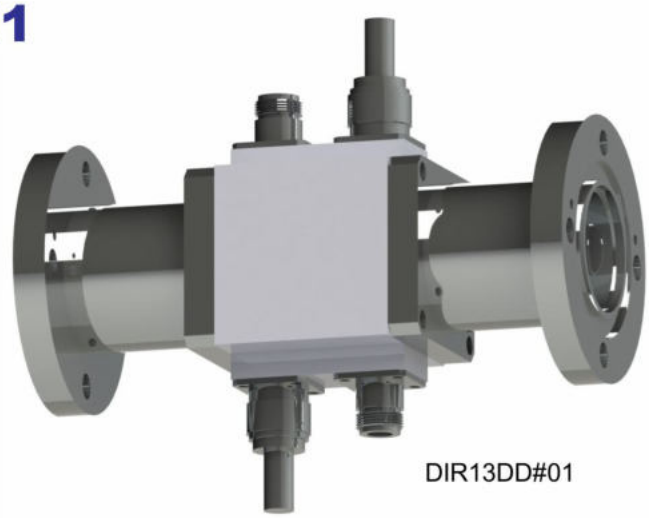
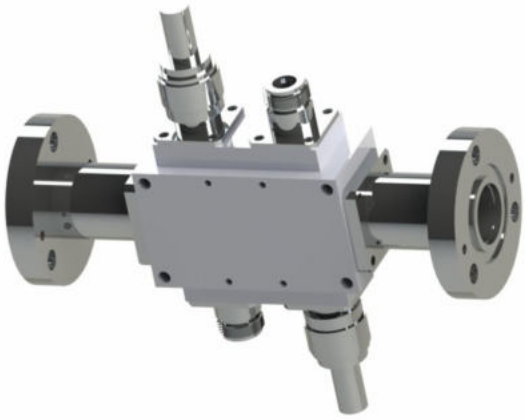
MODEL DIR5-BB#01 - DIR13DD#01- DIR30EE#01

DIRECTIONAL COUPLERS

DIR30EE#01



DIR13DD#01



DIR5-BB#01

TYPICAL SPECIFICATIONS

Model	DIR5-BB#01	DIR13DD#01	DIR30EE#01
Frequency Range	0,1 ÷ 860 MHz	0,1 ÷ 860 MHz	0,1 ÷ 860 MHz
Directivity	≥ 40dB	≥ 40dB	≥ 40dB
Impedance	50 ohm	50 ohm	50 ohm
Return Loss	≥ 30 dB	≥ 30 dB	≥ 30 dB
Coupling Factor	Settable	Settable	Settable
Working Temperature	-40 ÷ +60°C	-40 ÷ +60°C	-40 ÷ +60°C
Connectors	Input – Output 7/8"	Input - Output 1+5/8"	Input - Output 3+1/8"
Probe Connectors	"N" F	"N" F	"N" F
Max Power	5 KW	13 KW	30 KW

MATERIALS

DIR5-BB#01	Aluminium, Brass, Diclad, Gilding and Silvering
DIR13DD#01/DIR30EE#01	Nickel, Silver, PTFE

Model	Dimension	Net Weight	
DIR5-BB#01	165 x 160 x 60 mm.	≅0,5 Kg	
DIR13DD#01	190 x 162 x 90 mm.	≅3,5 Kg	(Data approx.)
DIR30EE#01	150 x 270 x 128 mm.	≅5,5 Kg	

Model HIJACKER5KW-HIJACKER30KW

- RF Power HIJACKER
- FM Band 87.5 | 108 MHz
- Band II

HIJACKER30KW

HIJACKER5KW

Presentation

RF Power Hijacker is a passive device that is inserted between a FM broadcast radio transmitter and its main antenna. Its main function is to shunt a part of the available power on to an auxiliary antenna.
RF Power Hijacker is designed for indoor placement, preferably in the transmitter's shelter.

Possible applications

- Diminution of the signal strength in a specific direction to reduce the interference against other broadcasters, or to avoid transmitting in other countries
- Signal enhancement in the direction where the preferred audience reside
- Adjustable horizontal radiation pattern rotation, to move the signal power to zones having variable population density
- Adjustment of the vertical radiation pattern, to modify the reached audience area
- RF power switching between two antennas without transmission interruption
- Removal of intermodulation for transmitters with near antennas
- Elimination with electrical uncoupling of interference for a receiving system.

In all the cases in that it is desirable to have signal power branching with adjustable power and phase.

TYPICAL SPECIFICATIONS

Model	HIJACKER5KW	HIJACKER30KW
Frequency Range	87.5-108 MHz	87.5-108 MHz
VSWR	≤ 1.1:1 Max	≤ 1.1:1 Max
Return Loss	≤ -26dB	≤ -26dB
Connectors	Input/Output 7/8"	Input/Output 3+1/8"
Max Power	5 KW	30 KW

GENERAL SPECIFICATIONS

Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12∝m thickness)

Description

RF Power Hijacker features 4 connectors and 2 regulators. The connectors are used to join the device to:
1. FM transmitter
2. Main antenna
3. Auxiliary antenna
4. Dummy Load

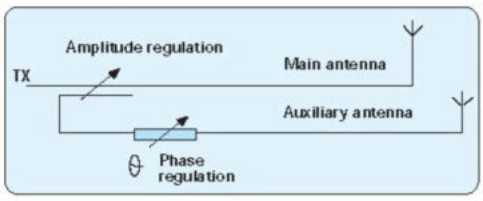
The first regulator adjusts the power distribution among the antennas, while the second one regulates the phase shift between the output signals.
The role of the dummy load is to dissipate possible reflected power in the system, this avoiding the transmitter being affected by it. The dummy load should not be needed for a well tuned and working system, but its presence guarantees better stability in the behaviour of the device.

Working principle

RF Power Hijacker consists of four functional parts:
1. Input signal splitter with fixed power ratio
2. A variable phase shifter
3. A signal combiner with fixed power ratio
4. A second variable phase shifter

The transmitted RF power is first divided by the power splitter. One of the outputs of the splitter is connected to one of the inputs of the combiner with a 50 Ohm transmission line. The other output is routed via the first phase shifter to the second input of the combiner. The last output of the input splitter is closed on a dummy load. The combiner has two output connectors: one is connected to the main antenna, while the other goes through the second phase adjuster to the auxiliary antenna. The phase shift between the signals at the combiner input determines the power ratio at the combiner output. The transmission line joining the splitter output with the combiner input determines the maximum range of the power ratio. The role of the dummy load is to dissipate possible reflected power in the system. The total loss of RF Power Hijacker is restricted to the insertion losses of the single components, as the total energy in the system is conserved and just divided in a determined way.

Scheme of principle



Model HIJACKER DAB VHF 5 KW

- **RF Power HIJACKER**
- **FM Band 170 ÷240 MHz**
- **Band III VHF**

Presentation

RF Power Hijacker is a passive device that is inserted between a DAB VHF broadcast radio transmitter and its main antenna. Its main function is to shunt a part of the available power on to an auxiliary antenna.
RF Power Hijacker is designed for indoor placement, preferably in the transmitter's shelter.

Possible applications

- Diminution of the signal strength in a specific direction to reduce the interference against other broadcasters, or to avoid transmitting in other countries
- Signal enhancement in the direction where the preferred audience reside
- Adjustable horizontal radiation pattern rotation, to move the signal power to zones having variable population density
- Adjustment of the vertical radiation pattern, to modify the reached audience area
- RF power switching between two antennas without transmission interruption
- Removal of intermodulation for transmitters with near antennas
- Elimination with electrical uncoupling of interference for a receiving system.

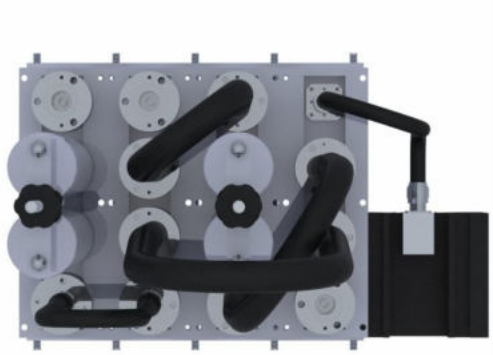
In all the cases in that it is desirable to have signal power branching with adjustable power and phase.

TYPICAL SPECIFICATIONS

Model	HIJACKERDABVHF5KW
Frequency Range	170-240 MHz
VSWR	≤ 1.1:1 Max
Return Loss	≤ -26dB
Connectors	Input/Output 7/8"or1+5/8"
Max Power	5 KW

GENERAL SPECIFICATIONS

Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)



Description

RF Power Hijacker features 4 connectors and 2 regulators. The connectors are used to join the device to:
1. DAB VHF transmitter
2. Main antenna
3. Auxiliary antenna
4. Dummy Load

The first regulator adjusts the power distribution among the antennas, while the second one regulates the phase shift between the output signals.
The role of the dummy load is to dissipate possible reflected power in the system, this avoiding the transmitter being affected by it. The dummy load should not be needed for a well tuned and working system, but its presence guarantees better stability in the behaviour of the device.

Working principle

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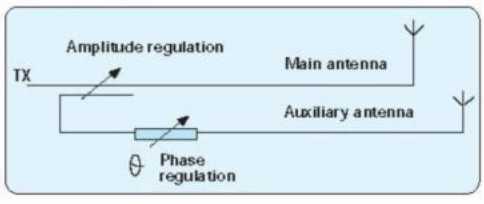
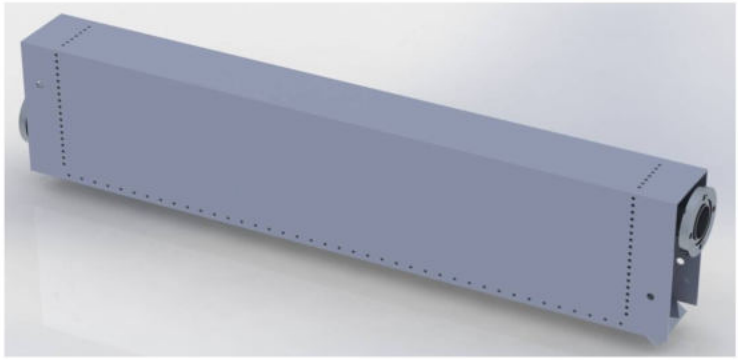
Scheme of principle



MODEL SP10K – SP20K



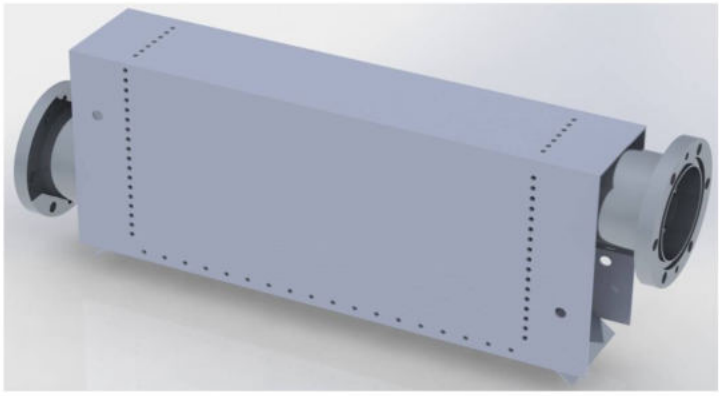
- SURGE PROTECTOR 10 KW / 20 KW
- QUARTER LAMBDA RESONATOR
- IMPEDANCE 50 Ohm
- FM BAND 87.5÷108 MHz
- WATERPROOF AND MAINTENANCE FREE
- PROTECTION LEVEL IP44

MODEL	INPUT CONNECTOR	OUTPUT CONNECTORS	MAX POWER IN	GROUNDING
SP10K	1+5/8" EIA	1+5/8" EIA	10 KW rms	M12
SP20K	3+1/8" EIA	3+1/8" EIA	20 KW rms	M14

TYPICAL SPECIFICATIONS	
Impedance	50 Ohm
Frequency Range	87.5 ÷ 108 MHz
VSWR	1.10:1 Max
Insertion Loss	0.05 dB Max
Return loss	Better than 26 dB
Length approx.	950 mm
Operating altitude	3.000 meters a.s.l.
Working Temperature	-30°C ÷ +70°C
Colour	Enamel gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Silvering,

DIMENSIONS (mm)

SP10 KU – SP20 KU



- SURGE PROTECTOR 10 KW / 20 KW
- QUARTER LAMBDA RESONATOR
- IMPEDANCE 50 Ohm
- UHF VI-V BAND 470-860 MHz
- WATERPROOF AND MAINTENANCE FREE
- DISCHARGE CURRENT 50 kA MAXIMUM (100 kA OPTION)
- PROTECTION LEVEL IP44

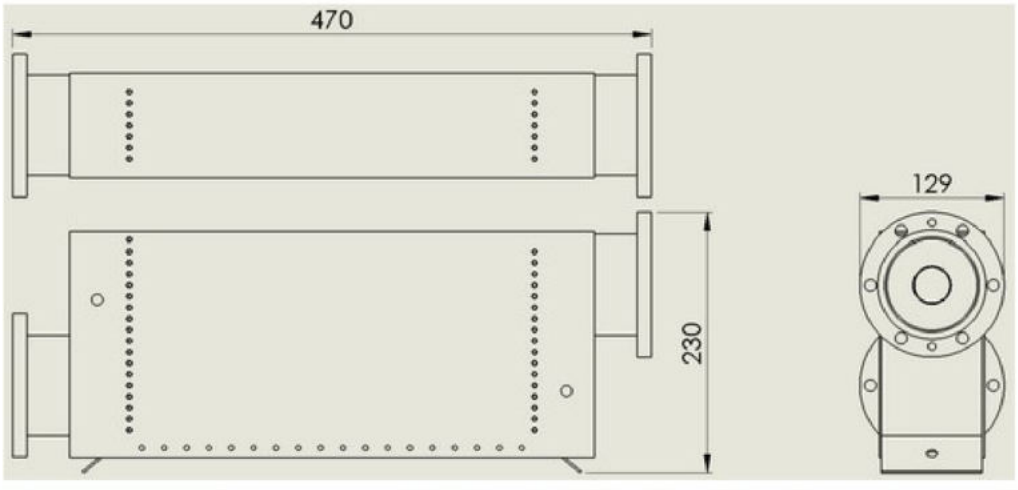
AVAILABLE MODELS:

MODEL	INPUT CONNECTOR	OUTPUT CONNECTORS	MAX POWER IN	GROUNDING
SP10KU	3+1/8" EIA	3+1/8" EIA	10 KW p.s / 20 KW rms	M12
SP20KU	4+1/2" EIA	4+1/2" EIA	20 KW p.s / 40 KW rms	M14

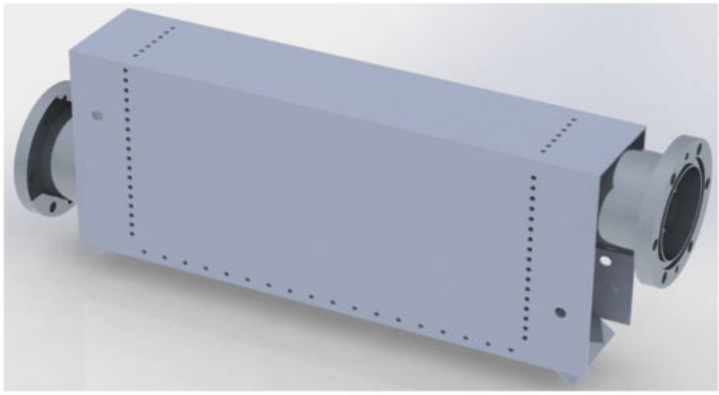
GENERAL SPECIFICATIONS:

TYPICAL SPECIFICATIONS	
Impedance	50 Ohm
Frequency Range	Band IV-V UHF 470 ÷ 860 MHz
VSWR	1.10:1 Max
Insertion Loss	0.05 dB Max
Return loss	Better than 26 dB
Length approx.	350 mm
Operating altitude	3.000 meters a.s.l.
Working Temperature	-30°C ÷ +70°C
Colour	Enamel gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Silvering,

DIMENSIONS (mm)



SP10 KV – SP20 KV



- SURGE PROTECTOR 10 KW / 20 KW
- QUARTER LAMBDA RESONATOR
- IMPEDANCE 50 Ohm
- VHF III BAND 170-240 MHz
- WATERPROOF AND MAINTENANCE FREE
- DISCHARGE CURRENT 50 kA MAXIMUM (100 kA OPTION)
- PROTECTION LEVEL IP44

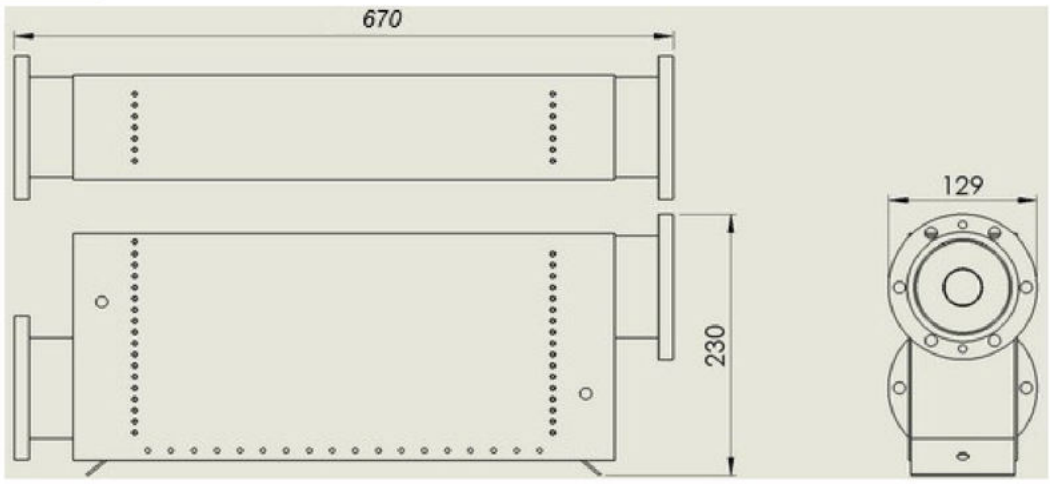
AVAILABLE MODELS:

MODEL	INPUT CONNECTOR	OUTPUT CONNECTORS	MAX POWER IN	GROUNDING
SP10KV	3+1/8" EIA	3+1/8" EIA	10 KW p.s / 20 KW rms	M12
SP20KV	4+1/2" EIA	4+1/2" EIA	20 KW p.s / 40 KW rms	M14

GENERAL SPECIFICATIONS:

TYPICAL SPECIFICATIONS	
Impedance	50 Ohm
Frequency Range	Band III VHF 170 ÷ 240 MHz
VSWR	1.10:1 Max
Insertion Loss	0.05 dB Max
Return loss	Better than 26 dB
Length approx.	670 mm
Operating altitude	3.000 meters a.s.l.
Working Temperature	-30°C ÷ +70°C
Colour	Enamel gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Silvering,

DIMENSIONS (mm)



IMPEDANCE TRANSFORMER

50 Ω - 75 Ω

- FM BAND 87.5 | 108 MHz
- Pressurizzable on request
- Option Clamps (minimum 2 for Transformer)

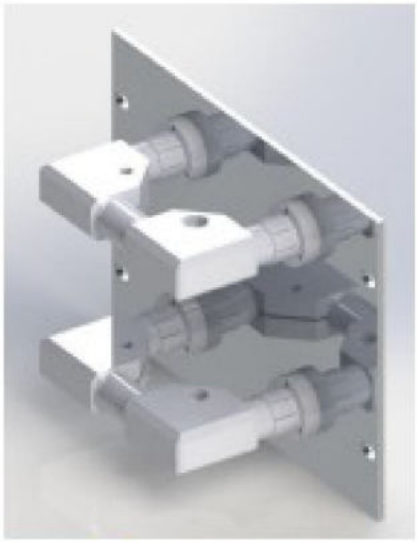
TYPICAL SPECIFICATIONS	
Impedance	50 Ohm
Frequency Range	87.5-108 MHz
VSWR	1.05:1 Max
Insertion Loss	0.05 dB Max
Connectors	N or 7/8" In according to the working power
Max Power Input	From 100 Watts to 5 KW In according to the model
Length approx.	735 mm (with conn. N) 785 mm (with conn. 7/8")
Diameter external tube	40 mm
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Brass, Copper, PTFE, Silvering

CONNECTOR N →

← CONNECTOR 7/8"

EXAMPLES OF IMPEDANCE TRANSFORMER

MODEL TFPP4782U#01

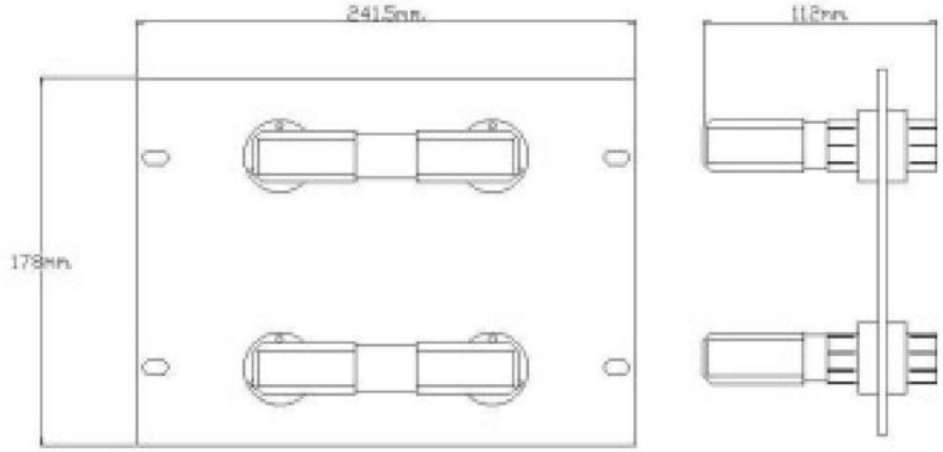


- 4 PORTS PATCH PANEL
- 2 U-LINKS
- IMPEDANCE 50 Ohm
- FREQUENCY RANGE *10 +400 MHz*
- BAND II

TYPICAL SPECIFICATIONS

Model	TFPP415&2U#01
Impedance	50 Ohm
Frequency Range	10 ÷ 400 MHz
VSWR	1.12:1 max
Insertion Loss	≤ 0.1 dB
No of Ports	4
Connectors	7/8"
Switch Over	7/8" U-LINKS
Max Power	5 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

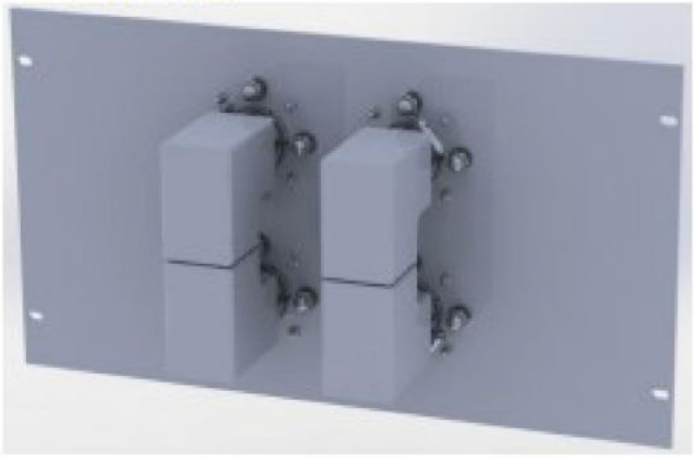
DIMENSIONS (mm)



Dimensions	178×241.5×112 mm (H×L×W)
Net Weight	≅ 4 Kg approx.

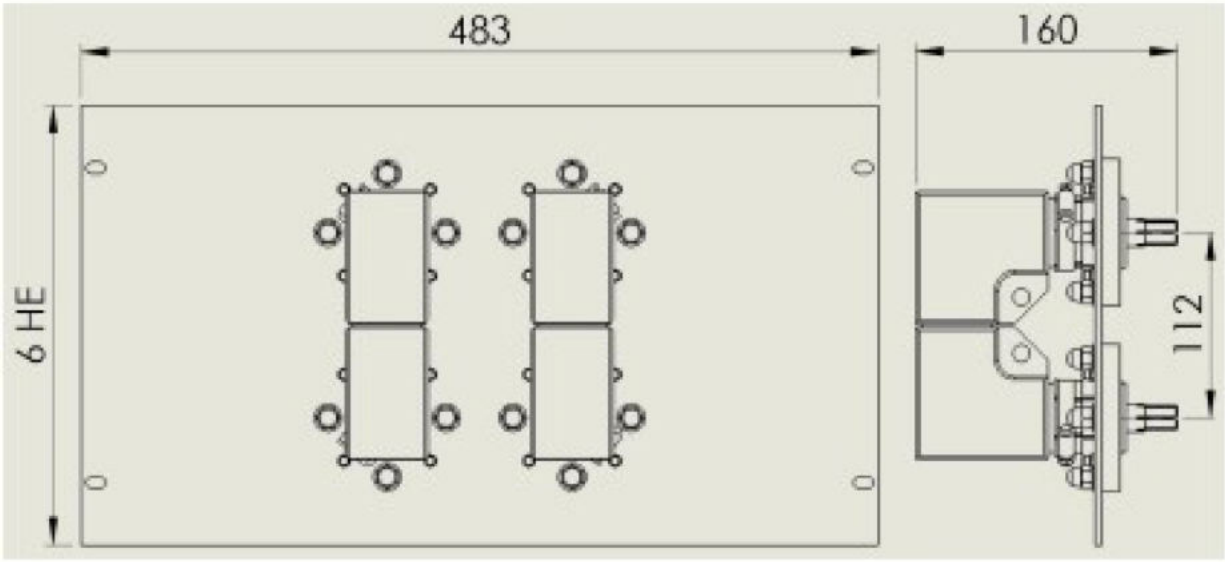
MODEL TFPP41582U#01

- 4 PORTS PATCH PANEL
- 2 U-LINKS
- IMPEDANCE 50 Ohm
- FREQUENCY RANGE *10 +400 MHz*
- BAND II



TYPICAL SPECIFICATIONS	
Model	TFPP41582U#01
Impedance	50 Ohm
Frequency Range	10 ÷ 400 MHz
VSWR	1.2:1 max
Insertion Loss	≤ 0.1 dB
No of Ports	4
Connectors	1+5/8"
Switch Over	1+5/8" U-LINKS
Max Power	15 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

DIMENSIONS (mm)



Dimensions	6 HE×483×160 mm (6 HE×19×6.3inch) (H×L×W)
Net Weight	≅ 6 Kg approx.

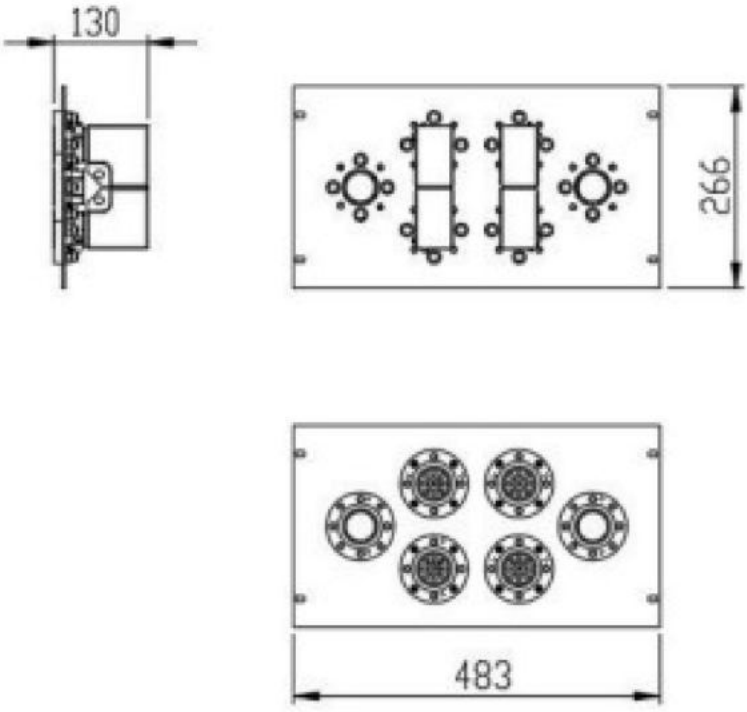
MODEL TFPP61582U#01

- 6 PORTS PATCH PANEL
- 2 U-LINKS
- IMPEDANCE 50 Ohm
- FREQUENCY RANGE *10 +400 MHz*
- BAND II

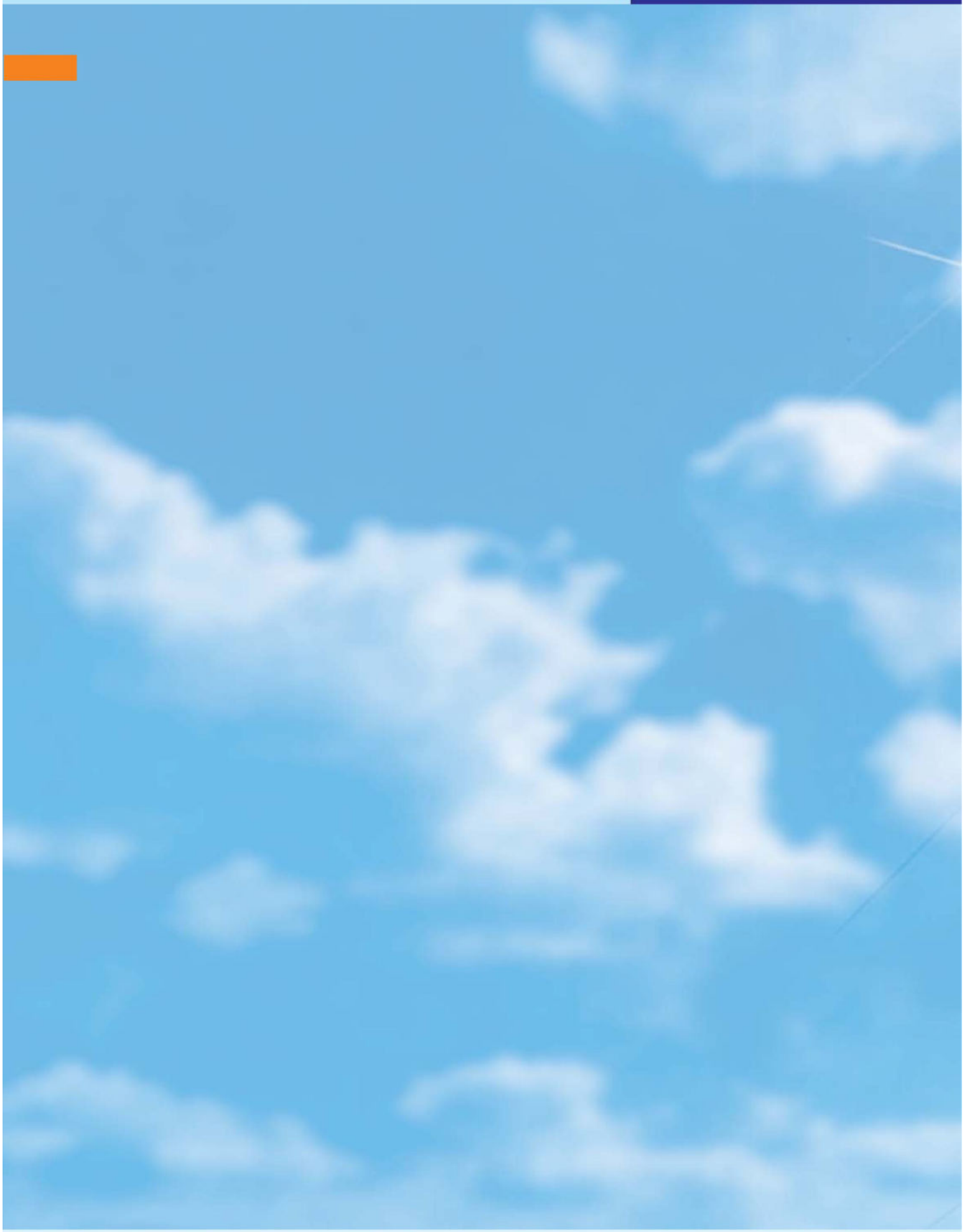
TYPICAL SPECIFICATIONS

Model	TFPP41582U#01
Impedance	50 Ohm
Frequency Range	10 ÷ 400 MHz
VSWR	1.2:1 max
Insertion Loss	≤ 0.1 dB
No of Ports	6
Connectors	1+5/8"
Switch Over	1+5/8" U-LINKS
Max Power	15 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

DIMENSIONS (mm)



Dimensions	6 HE×483×160 mm (6 HE×19×6.3inch) (H×L×W)
Net Weight	≈ 6 Kg approx.



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