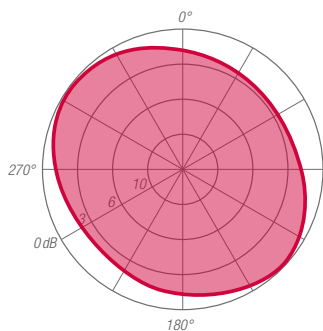


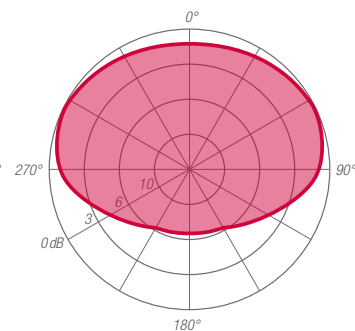
## ANTENNA FEATURES

- Double-crossed dipole antenna.
- Circular polarization.
- Broadband 87.5÷108 MHz.
- Omnidirectional radiation pattern.
- Demountable.
- Pressurizable.
- Aluminum or stainless steel version.

## RADIATION PATTERNS (Mid Band)

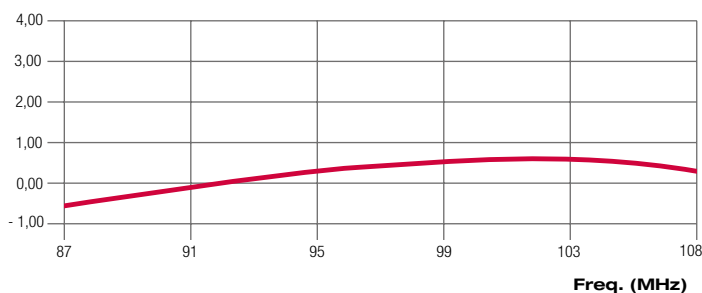


**E - Plane**  
Horizontal component

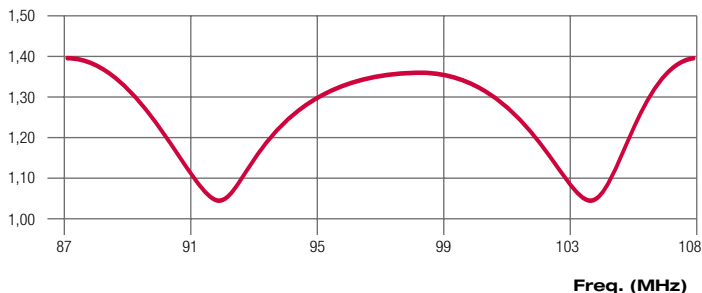


**H - Plane**  
Vertical component

### GAIN (dB)



### VSWR



## ELECTRICAL DATA

WORKING BAND:	87.5 - 108 MHz
BANDWIDTH:	VHF - Band FM
GAIN:	0.45 dBd (2.65 dBi)
VSWR:	≤ 1.4:1 (-15.5 dB) (ACF02022XX) ≤ 1.29:1 (-18 dB) (ACF020221X Hi or Lo version)
POLARIZATION:	Circular
IMPEDANCE:	50 Ohm unbalanced
HALF POWER BEAMWIDTH:	Omnidirectional ± 1.5 dB in free space Omnidirectional ± 2.0 dB with pole ø104mm (4")
LIGHTNING PROTECTION:	All metal parts DC grounded including inner conductors
AVAILABLE VERSION AND CODE:	ACF0202215 - EIA 7/8" - max 5000W rms ACF0202216 - DIN 7/16" - max 3000W rms ACF0202217 - N - max 800W rms ACF0202215A - EIA 7/8" 90° UP/DOWN 5000W rms ACF0202235 - EIA 7/8" - max 5000W rms ACF0202236 - DIN 7/16" - max 3000W rms ACF0202237 - N - max 800W rms ACF0202235A - EIA 7/8" 90° UP/DOWN 5000W rms
AVAILABLE SEMI-BAND MODEL	ACF020221XHi (Freq. 94 - 108 MHz) ACF020221XLo (Freq. 87.5 - 104 MHz)

## MECHANICAL DATA

MATERIALS:	Stainless steel version (ACF020223X) Aluminium version (ACF020221X) Aluminium internal lines
MOUNTING:	Directly on supporting structure
MOUNTING BRACKETS:	Included for Ø60÷114mm pipe (Ø 2.36" - 4+1/2")
ICING PROTECTION:	Feed point radome included
TREATMENTS:	Dipoles and antenna body military norms treatment (MIL-C-5541) (Version ACF020221X)
PRESSURIZATION:	5.0 psi
ANTENNA DIMENSIONS:	1505x1180x1180 mm (59.2x46.4x46.4 in)
ANTENNA WEIGHT:	15 kg (33.1 lb) (Version ACF020223X) 7 kg (15.4 lb) (Version ACF020221X)
WIND SURFACE:	0.09m² (1.18ft²) front - 0.20m² (2.04 ft²) side
WIND LOAD (160 km/h and 30°C)	0.07 kN front - 0.21 kN side
SURVIVAL WIND:	220 km/h (136.7 mph)
PACKING DIMENSIONS:	Box 1670x410x250mm - 32kg (Version ACF020223X) (65.7x16.1x9.8 in - 70.54lb) Box 1670x410x250mm - 18kg (Version ACF020221X) (65.7x16.1x9.8 in - 39.68lb)
SPECIAL FEATURES	Additional reflector (XREFACF - ACF020221X) (XREFACFI - ACF020223X)

Specification are subject to change without notice



## ARRAY FEATURES

- Omnidirectional patterns
- Equal or unequal power distribution system
- Configurable for specific azimuth and elevation pattern
- Suitable for multiplexing many channels

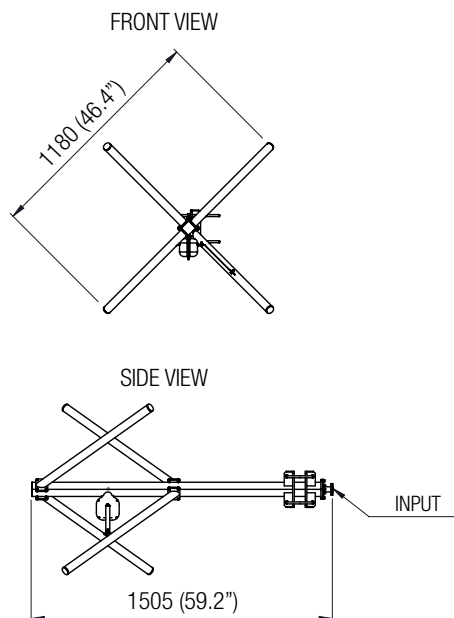
## ARRAY ELECTRICAL DATA

FREQUENCY RANGE	87.5 ÷ 108 MHz
IMPEDANCE	50 ohm
CONNECTOR	EIA flange according to system power rating
POWER RATING	The antenna system can accept any power according to requirements
VSWR	≤ 1.17 in the operating channels or ≤ 1.25 throughout the frequency range Antenna system VSWR value also depending from the supporting structure
POLARIZATION	Circular
GAIN	Refer to table
HORIZONTAL PATTERN	Omnidirectional
VERTICAL PATTERN	Null fill, beam tilt and special requirements to order
OTHER FEATURES	Antenna components and feed harnesses can be optimized for channels of interest.

## ARRAY MECHANICAL DATA

HEIGHT OF ARRAY	Subject to number of bays
TOTAL NET WEIGHT	Refer to table
WIND LOAD	Refer to table
PRESSURIZABLE	Yes
MOUNTING HARDWARE	Optional mounting for side mount configuration

## ANTENNA DIMENSIONAL DETAILS



## ARRAY TECHNICAL DATA

BAYS	PANELS PER BAY	GAIN <sup>(1)</sup> dB	GAIN TIMES <sup>(1)</sup>	WEIGHT <sup>(2)</sup> kg (lb)	ANTENNA HEIGHT <sup>(L)</sup> m (ft)	WIND LOAD <sup>(3)</sup> kN
2	1	3.45	2.2	39 (85.9)	3.9 (12.7)	0,43
4	1	6.45	4.4	73 (160.9)	9.3 (30.5)	0,86
6	1	8.25	6.6	108 (238.0)	14.2 (46.5)	1,28
8	1	9.45	8.8	164 (361.5)	19.4 (63.6)	1,71
12	1	11.25	13.3	267 (588.6)	30.0 (98.4)	2,57

(1) Gain data is relative to half-wave dipole. Values given are nominal and assume standard harness configurations. Gain will vary depending in specific feed system, null fill and beam tilt.

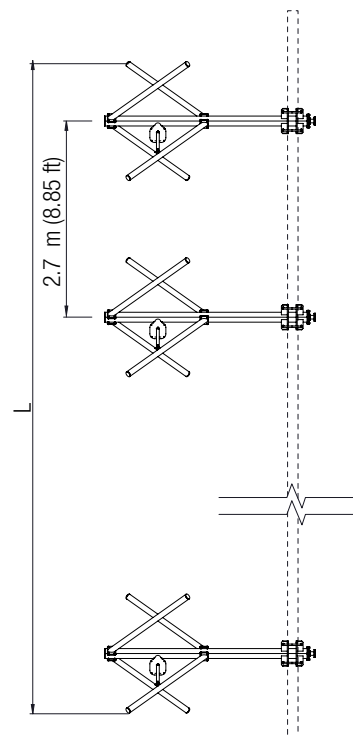
(2) Referred to Aluminum model ACF020221X and without mounting hardware.

(3) 160 km/h (100 mph) wind and 30°C (86°F) air temperature.

(L) Total Antenna Height.

## OPTIONS & SERVICES

PATTERN DESIGN	Custom azimuth and elevation (beam tilt and null fill) patterns can be designed to meet specific protection/coverage requirements
PATTERN CERTIFICATION	Proof-of-performance factory test and pattern measurements on ALDENA test plan area
MOUNTING HARDWARE	Turn-key antenna delivering Tower top/side spine Special hardware/brackets
TRANSMISSION LINE	Transmission line system design and layout
COMBINERS/FILTERS	Combiners/Filters to suit requirements can be supplied
CALCULATION SERVICES	Coverage/interference simulations EM Near Field control and reduction (Environmental impact studies)
ON-SITE SERVICES	Site Survey and Inspection Installation/commissioning and supervising Drive test & EM Field strength measurements After sales maintenance
TRAINING	Technical training certification and consultancy



**Note:**  
Total Antenna Height (L) is subject to change according to requirement.  
Custom designed antennas meeting special requirements such as specific azimuthal pattern, different gains and custom power input are available upon request.

Specification are subject to change without notice