

# WY380-3N

## 380-440 MHz Base Station 3 Element Yagi Antenna

### DESCRIPTION

Base station antenna conceived by using an innovative feed system studied and applied to have highly symmetrical radiation pattern in both planes (E and H). It's completely computer designed to get high performances of gain and front-to-back in the working band. All aluminium parts are protected by anodized treatment, hardware are of Stainless steel or zinc plated steel, mounting bracket is of extruded aluminium for the best strength and the connector is placed in rear position for an easily access. To increase the antenna gain please install it in stacked or bayed array. **Patent pending applied.**



### TECHNICAL DATA

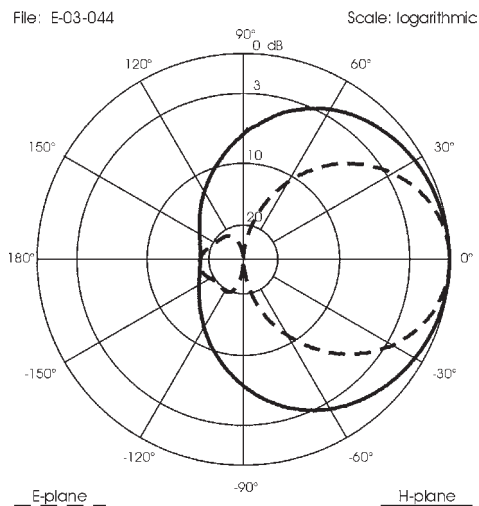
#### Electrical Data

Type	3 element Yagi
Frequency range	380 - 440 MHz
Impedance	50 $\Omega$ Unbalanced
Polarization	Linear Vertical or Horizontal
Radiation (H-plane)	beamwidth at -3 dB= 125° at 410 MHz
Radiation (E-plane)	beamwidth at -3 dB= 65° at 410 MHz
Max Gain	7 dBi
Front to Back ratio	$\geq 17$ dB
S.W.R. in bandwidth	$\leq 1.5:1$
Max Power	150 Watts (CW) at 30°C
Feed system / Position	RG303 Teflon coax with balun / inside boom
Lightning protection	DC-ground
Connector	N-female with rubber protection cap

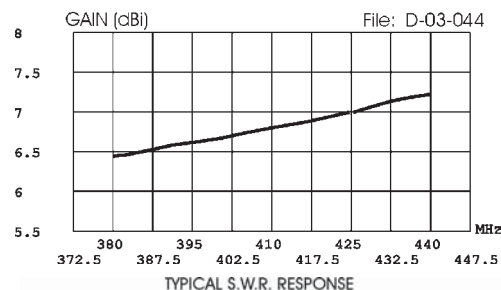
#### Mechanical Data

Materials	Anodized 6063-T5 Aluminium, Thermoplastic UV stabilized, Chromed Brass
Wind load / resistance	65 N at 150 Km/h / 180 Km/h
Wind surface	0.048 m <sup>2</sup>
Dimensions (approx.)	565 x 400 mm
Weight (approx.)	1130 gr
Turning radius	460 mm
Operating temperature	-40° C to +60° C
Mounting Mast	$\varnothing$ 35-52 mm

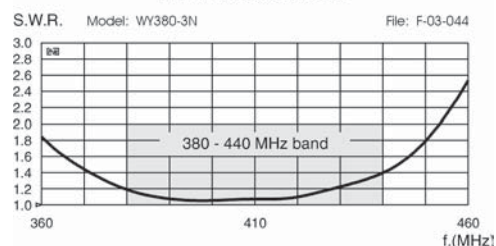
TYPICAL RADIATION PATTERN at 410 MHz



TYPICAL GAIN DIAGRAM vs FREQUENCY

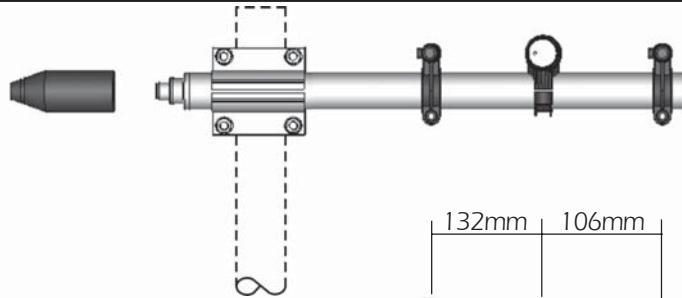


TYPICAL S.W.R. RESPONSE

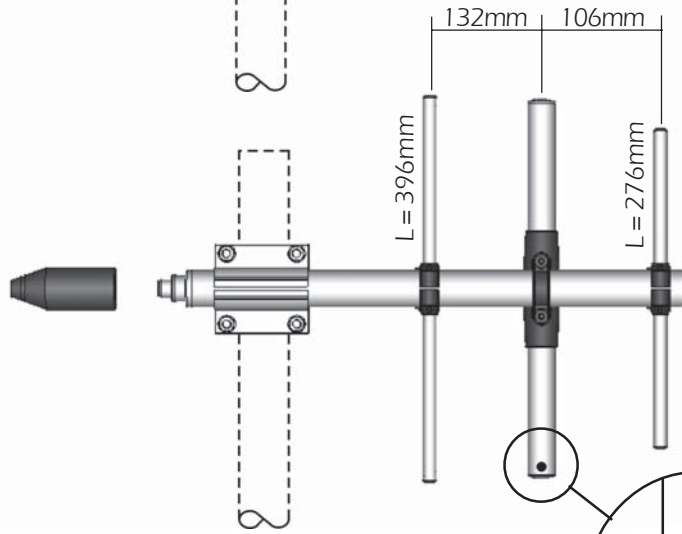


# MOUNTING INSTRUCTIONS

**Correct mounting for horizontal polarization**

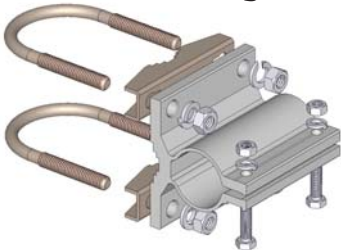


**Correct mounting for vertical polarization**



**If mounted for vertical polarization place the draining hole at the bottom.**

## Standard Mounting Bracket



**Spare parts: p/n SA197**  
Materials: extruded aluminum  
Hardware: stainless & zinc plated steel  
Dimensions : 80 x 76 x 65 mm  
Weight: 460 gr

### Part List

Q.ty	Description
1	Extruded aluminium bracket
2	Steel bracket
2	M8x200 U-bolt
4	M8 Grower washer
4	M8 Hexagonal nut
2	M6x20 Hexagonal head screw
2	M6 Grower washer
2	M6 Hexagonal nut

## Tilting Bracket\*

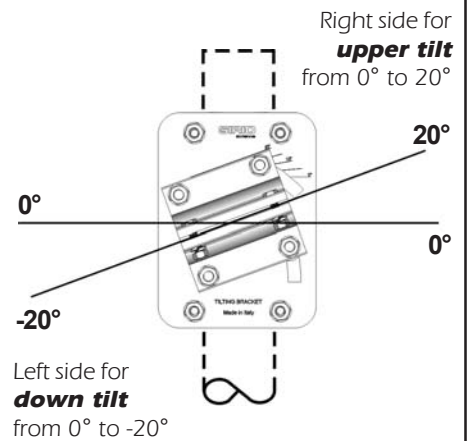


**Order p/n: 2519803.00**  
Materials & Hardware: zinc plated steel  
Dimensions: 110 x 150 x 6 mm.  
Weight: 800 gr

### Part List

Q.ty	Description
1	110x150x6 Tilting bracket
4	M8x25 Spheric head screw
4	M8 Grower washer
4	M8 Hexagonal nut

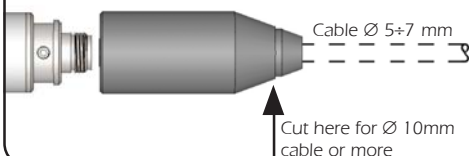
## Mounting example



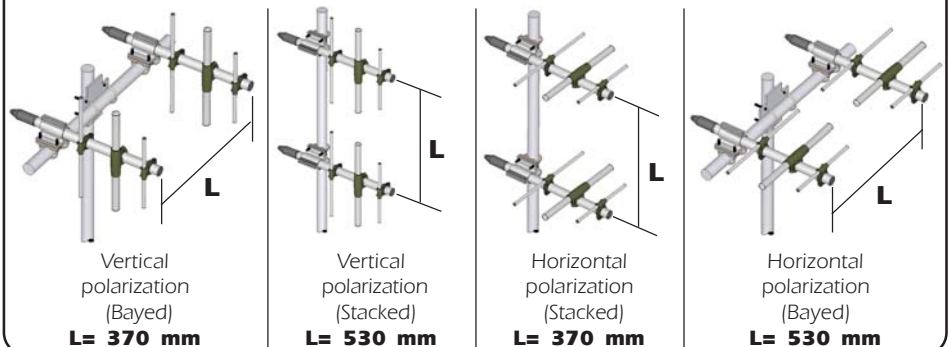
\* **Optional (not included).**

## Connector protection cap

**Spare parts: p/n TE06416**



## Stacking and Baying distance



# WY400-3N

## 400-470 MHz Base Station 3 Element Yagi Antenna

### DESCRIPTION

Base station antenna conceived by using an innovative feed system studied and applied to have highly symmetrical radiation pattern in both planes (E and H). It's completely computer designed to get high performances of gain and front-to-back in the working band. All aluminium parts are protected by anodized treatment, hardware are of Stainless steel or zinc plated steel, mounting bracket is of extruded aluminium for the best strength and the connector is placed in rear position for an easily access. To increase the antenna gain please install it in stacked or bayed array. **Patent pending applied.**



### TECHNICAL DATA

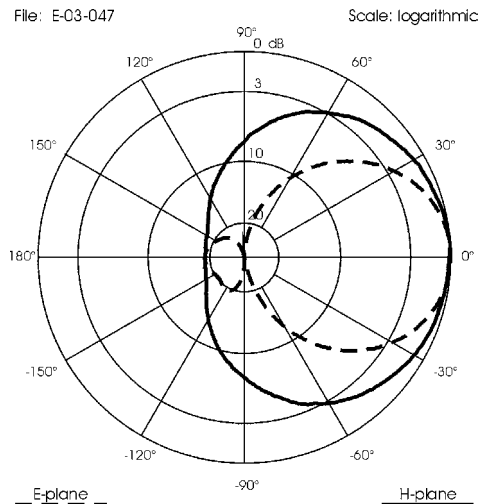
#### Electrical Data

Type	3 element Yagi
Frequency range	400 - 470 MHz
Impedance	50 $\Omega$ Unbalanced
Polarization	Linear Vertical or Horizontal
Radiation (H-plane)	beamwidth at -3 dB= 125° at 435 MHz
Radiation (E-plane)	beamwidth at -3 dB= 65° at 435 MHz
Max Gain	7 dBi
Front to Back ratio	$\geq 17$ dB
S.W.R. in bandwidth	$\leq 1.5:1$
Max Power	150 Watts (CW) at 30°C
Feed system / Position	RG303 Teflon coax with balun / inside boom
Lightning protection	DC-ground
Connector	N-female with rubber protection cap

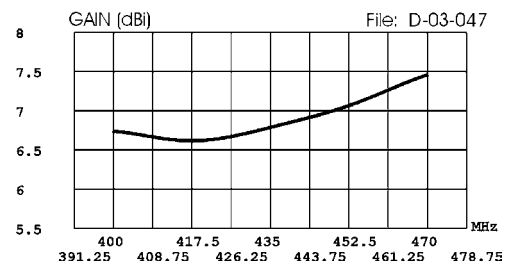
#### Mechanical Data

Materials	Anodized 6063-T5 Aluminium, Thermoplastic UV stabilized, Chromed Brass
Wind load / resistance	65 N at 150 Km/h / 180 Km/h
Wind surface	0.048 m <sup>2</sup>
Dimensions (approx.)	525 x 375 mm
Weight (approx.)	1100 gr
Turning radius	420 mm
Operating temperature	-40° C to +60° C
Mounting Mast	$\varnothing$ 35-52

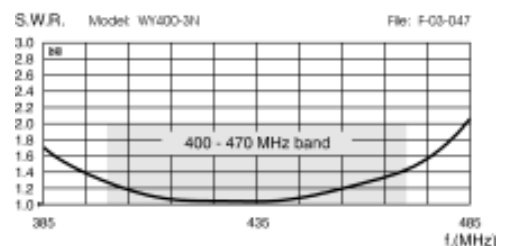
TYPICAL RADIATION PATTERN at 435 MHz



TYPICAL GAIN DIAGRAM vs FREQUENCY

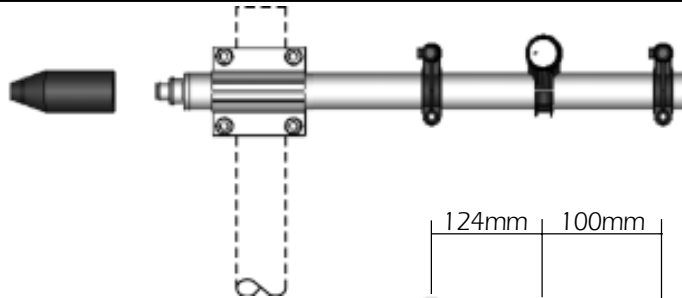


TYPICAL S.W.R. RESPONSE

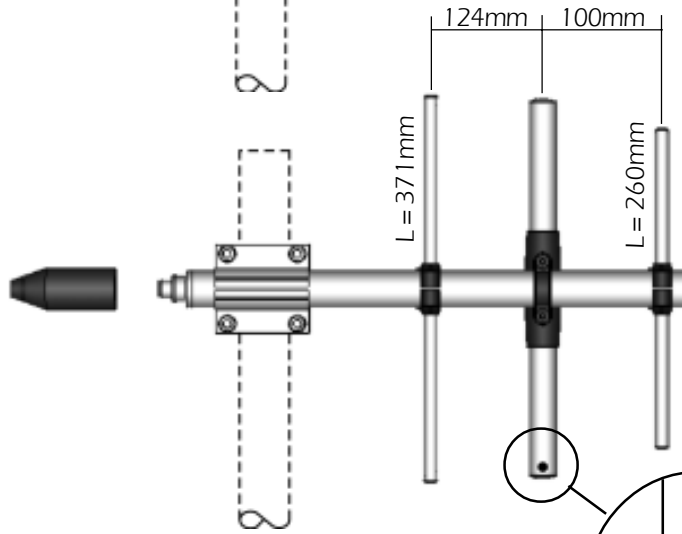


# MOUNTING INSTRUCTIONS

**Correct mounting for horizontal holarization**



**Correct mounting for vertical polarization**



**If mounted for vertical polarization place the draining hole at the bottom.**

## Standard Mounting Bracket



**Spare parts: p/n SA197**  
Materials: extruded aluminum  
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### Part List

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## Tilting Bracket\*

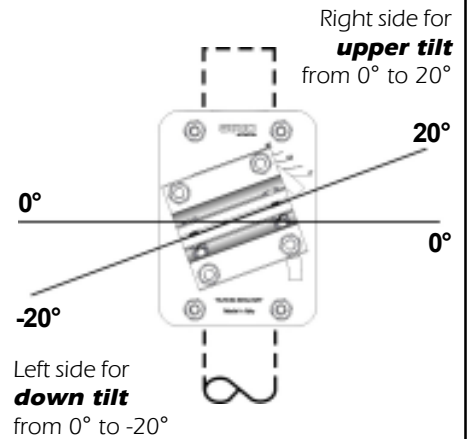


**Order p/n: 2519803.00**  
Materials & Hardware: zinc plated steel  
Dimensions: 110 x 150 x 6 mm.  
Weight: 800 gr

### Part List

Q.ty	Description
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4	M8 Hexagonal nut

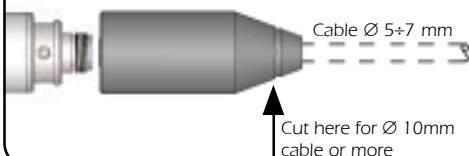
## Mounting example



**\* Optional (not included).**

## Connector protection cap

**Spare parts: p/n TE06416**



## Stacking and Baying distance

