# Omnidirectional Antennas
108 - 144 MHz VHF

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<td>WS A80 22 31.</td>
<td>logper antenna 108 ... 1100 MHz</td>
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OMNIDIRECTIONAL ANTENNA
WS A00 54 1.
118 .. 162 MHz

TYPE NO.       WS A00 54 18:  118 - 144 MHz
               WS A00 54 19:  130 - 162 MHz
               further frequencies on request

DESCRIPTION  dipole with radome
               The radome protects the antenna dipole from environmental influences, icing, and increases the lightning protection.

Polarization  vertical

Impedance    50 Ω

Gain         0 dB (ref. λ/2 dipole)

VSWR         < 1.3, at the limits of the band <1.4

Power        max. 300 watts

3 dB Beamwidth
               horizontal, H plane:  360°
               vertical, E plane:   78°

Termination  N male inside the mast
               other termination on request

Grounding    all metal parts are DC grounded

Mounting     on tubular mast with diameter ≤ 500 mm
               cable runs inside or outside the mast
               (please specify diameter)

Material     aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene

Weight       11 kg

Wind Area    0.33 m²

Wind Load    421 N (150 km/h)
               316 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.
OMNIDIRECTIONAL ANTENNA
WS A00 84 1.
108 ... 162 MHz

Type No.  WS A00 84 14: 108 - 136 MHz
WS A00 84 15: 118 - 144 MHz
WS A00 84 16: 130 - 162 MHz

Further frequencies on request

Description  Antenna with radome
The radome protects the antenna from environmental influences, icing, and increases the lightning protection.

Polarization  Vertical

Impedance  50 Ω

Gain  0 dB (ref. λ/2 dipole)

VSWR  < 1.3, at the limits of the band <1.5

Power  Max. 150 watts

3 dB Beamwidth
Horizontal, H plane: 360°
Vertical, E plane: 78°

Termination
~ 1 m cable ending with N male
the cable must NOT be shortened (transformer)
other termination on request

Grounding  All metal parts are DC grounded

Mounting  To 40 - 66 mm ø mast
cable runs inside or outside the mast

Material  Aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene

Weight  1.7 kg

Wind Area  0.046 m²

Wind Load  59 N (150 km/h)
44 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.
OMNIDIRECTIONAL ANTENNA
WS A00 84 15.
118 ... 162 MHz

TYPE NO.  WS A00 84 15 5: 118 - 144 MHz
          WS A00 84 15 6: 130 - 162 MHz
further frequencies on request

DESCRIPTION  antenna with radome
The radome protects the antenna from environmental influences, icing, and increases the lightning protection.

POLARIZATION  vertical

IMPEDANCE  50 Ω

GAIN  0 dB (ref. λ/2 dipole)

VSWR  < 1.4, at the limits of the band <1.5

POWER  max. 150 watts

3 dB BEAMWIDTH  horizontal, H plane: 360° deviation from circulatory ± 2 dB
vertical, E plane: 78°

TERMINATION  ~ 1 m cable ending with N male
the cable must NOT be shortened (transformer)
other termination on request

GROUNDING  all metal parts are DC grounded

MOUNTING  side mounted lateral to the mast
            mast-ø clamp
            30-80 mm WG 51 (standard)
            50-104 mm WG 52 (option)
cable runs inside the support

MATERIAL  aluminium, hot dip galvanized steel, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene

WEIGHT  4 kg

WIND AREA  0.1 m²

WIND LOAD  127 N (150 km/h)
            95 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.
OMNIDIRECTIONAL ANTENNA adjustable
WS A00 86 1
104 ... 144 MHz

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<th>WS A00 86 1: 104 ... 144 MHz</th>
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<td>light groundplane antenna with adjustable radiator</td>
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<td>a tuning table is delivered with the antenna</td>
<td></td>
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<tr>
<td>POLARIZATION</td>
<td>vertical</td>
</tr>
<tr>
<td>IMPEDANCE</td>
<td>50 Ω</td>
</tr>
<tr>
<td>GAIN</td>
<td>0 dB (ref. λ/2 dipole)</td>
</tr>
<tr>
<td>VSWR</td>
<td>&lt; 1.4 on tuned frequency</td>
</tr>
<tr>
<td>POWER</td>
<td>max. 150 watts</td>
</tr>
<tr>
<td>3 dB BEAMWIDTH</td>
<td>horizontal, H plane: 360°</td>
</tr>
<tr>
<td>vertical, E plane: 78°</td>
<td></td>
</tr>
<tr>
<td>TERMINATION</td>
<td>1 m cable RG 213/U ending with N male</td>
</tr>
<tr>
<td>other termination on request</td>
<td></td>
</tr>
<tr>
<td>GROUNDING</td>
<td>radiator not DC grounded</td>
</tr>
<tr>
<td>MOUNTING</td>
<td>to 40 - 66 mm ø mast</td>
</tr>
<tr>
<td>cable runs inside or outside the mast</td>
<td></td>
</tr>
<tr>
<td>MATERIAL</td>
<td>aluminium, bolts of stainless steel, weather-resistant plastics</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>1.5 kg</td>
</tr>
<tr>
<td>WIND AREA</td>
<td>0.05 m²</td>
</tr>
<tr>
<td>WIND LOAD</td>
<td>63 N (150 km/h)</td>
</tr>
<tr>
<td></td>
<td>47 N (130 km/h)</td>
</tr>
</tbody>
</table>

WIPIC reserves the right to amend specifications in the light of continuing development.
DISCONE ANTENNA
WS A00 92 1
118 - 1100 MHz

TYPE NO. WS A00 92 1: 118 - 1100 MHz
DESCRIPTION wideband omnidirectional antenna
POLARIZATION vertical
IMPEDEANCE 50 Ω
GAIN 0 dB (ref. λ/2 dipole)
VSWR < 2 from 118 - 500 MHz
< 2.8 from 80 - 1100 MHz
POWER max. 150 watts
3 dB BEAMWIDTH horizontal, H plane: 360°
(deviation from circularity ± 2 dB)
TERMINATION 1 m cable RG 213/U ending with N male
other termination on request
GROUNDING all metal parts are DC grounded
MOUNTING on mast with outer ø 42 mm, reduction for other ø
on request (option)
MATERIAL aluminium, bolts of stainless steel, weather-resistant
plastics
WEIGHT 2.4 kg
WIND AREA 0.19 m²
WIND LOAD 242 N (150 km/h)
182 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.

Section 9. 6/20
OMNIDIRECTIONAL OFFSET-PATTERN GAIN ANTENNA
WS A01 12 10 .
110 ... 162 MHz

TYPE NO.     WS A01 12 10 7: 110 - 136 MHz
             WS A01 12 10 8: 118 - 144 MHz
             WS A01 12 10 9: 130 - 162 MHz
light execution without radome

POLARIZATION vertical

IMPEDANCE 50 Ω

GAIN +3 dB (ref. to λ/2 dipole)
       -3 dB in reverse direction

VSWR < 1.3, at the limits of the band < 1.6

POWER max. 200 watts, higher ratings on request

3 dB BEAMWIDTH horizontal (H-plane): 180°
       vertical (E-plane): 75°

TERMINATION 2 m cable RG 213/U ending with N male
               other termination on request

GROUNDING all metal parts are DC grounded

MOUNTING with mounting bracket WG 11,
       30 - 80 mm or WG 12, 50 - 104 mm (option)

MATERIAL aluminium, bolts of stainless steel,
       weather-resistant plastic

WEIGHT 1.2 kg

WIND AREA 0.04 m²

WIND LOAD 50 N (150 km/h)
           40 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.
OMNIDIRECTIONAL OFFSET-PATTERN GAIN ANTENNA
WS A01 13 10
110 ... 162 MHz

TYPE NO.  WS A01 13 10 7: 110 - 136 MHz
          WS A01 13 10 8: 118 - 144 MHz
          WS A01 13 10 9: 130 - 162 MHz
          further frequencies on request

DESCRIPTION  heavy duty with radome
The radome protects the antenna against environmental influences, icing, and increases the lightning protection.

POLARIZATION  vertical

IMPEDEANCE  50 Ω

GAIN  +3 dB (ref. to λ/2 dipole)
       -3 dB in reverse direction

VSWR  < 1.3, at the limits of the band < 1.6

POWER  max. 500 watts, higher ratings on request

3 dB BEAMWIDTH  horizontal (H-plane) 180°
                 vertical (E-plane) 75°

TERMINATION  2 m cable RG 213/U ending with N male
              other termination on request

GROUNDING  all metal parts are DC grounded

MOUNTING  with mounting bracket WG 17,
          30 - 80 mm or WG 18, 50 - 104 mm (option)

MATERIAL  aluminium, bolts of stainless steel,
          radome of UV-stabilized polyethylene

WEIGHT  3 kg

WIND AREA  0.11 m²

WIND LOAD  140 N (150 km/h)
           105 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.

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**OMNIDIRECTIONAL ANTENNA**
**WS A01 13 10 . spec.**
**118 ... 162 MHz**

| TYPE NO.   | WS A01 13 10 8 spec.: 118 - 144 MHz  
| WS A01 13 10 9 spec.: 130/162 MHz  
| further frequencies on request |
| DESCRIPTION | heavy duty, with radome  
| The radomes protects the antenna dipoles against environmental influences, icing, and increases the lightning protection.  
| By the long bracket the radiation pattern becomes nearly omnidirectional, independ of the mast ø |
| POLARIZATION | vertical  
| IMPEDANCE | 50 Ω  
| GAIN | 0 dB (ref. to λ/2 dipole)  
| VSWR | < 1.3, at the limits of the band < 1.5  
| (see SWR graph) |
| POWER | 500 watts  
| 3 dB BEAMWIDTH | horizontal (H-plane): omnidirectional deviation from circularity ± 3 dB  
| vertical (E-plane): 78° |
| TERMINATION | 3m RG 213/U ending with N male  
| other termination on request |
| GROUNDING | all metal parts are DC grounded  
| MOUNTING | with flange no. 12 (see chappt. 10)  
| cable runs inside the mast |
| MATERIAL | aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene |
| WEIGHT | 5.5 kg  
| WIND AREA | 0.2 m²  
| WIND LOAD | 260 N (150 km/h)  
| 190 N (130 km/h)  

WIPIC reserves the right to amend specifications in the light of continuing development.
HALO ANTENNA
WS A01 52 20 5
108 - 118 MHz

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<td>POLARIZATION</td>
<td>horizontal</td>
</tr>
<tr>
<td>IMPEDANCE</td>
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<td>GAIN</td>
<td>-0.8 dB (ref. λ/2 dipole)</td>
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<td>3 dB BEAMWIDTH</td>
<td>horizontal, H plane: 360° (deviation from circularity ± 3 dB)</td>
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<td>TERMINATION</td>
<td>2 m cable RG 214/U ending with N male other termination on request</td>
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<td>all metal parts are DC grounded</td>
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<td>MOUNTING</td>
<td>mast-ø clamp 30 - 80 mm WG 8 (standard) 50 - 104 mm WG 9 (option)</td>
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<tr>
<td>MATERIAL</td>
<td>aluminium, bolts of stainless steel, weather-resistant plastics</td>
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<td>WEIGHT</td>
<td>1.1 kg</td>
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<td>WIND AREA</td>
<td>0.04 m²</td>
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<td>WIND LOAD</td>
<td>50 N (150 km/h) 40 N (130 km/h)</td>
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WIPIC reserves the right to amend specifications in the light of continuing development.

Section 9. 10/20
### 2 ELEMENT YAGI ANTENNA

**WS A02 02 .1 .**  
107 ... 144 MHz

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<tr>
<td>WS A02 02 21 .</td>
<td>107 ... 144 MHz horizontal polarization</td>
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</table>

**Light Execution without Radome**

- **Impedance**: 50 Ω
- **Gain**: 3.5 dB (ref. to λ/2 dipole)
- **VSWR**: < 1.3, at the limits of the band < 1.5
- **Power**: max. 150 watts, higher on request
- **3 dB Beamwidth**: horizontal: 74°  
vertical to polar: H-plane: 130°
- **Termination**: 2 m cable RG 213/U ending with N male  
other termination on request
- **Grounding**: all metal parts are DC grounded
- **Mounting**: mast ø clamp (see chap. 10)  
30 - 80 mm WG 11 (standard)  
50 - 104 mm WG 12 (option)  
clamp for other mast ø on request
- **Material**: aluminium, bolts of stainless steel, weather-resistant plastic
- **Weight**: 2.2 kg
- **Wind Area**: 0.06 m²
- **Wind Load**: 76 N (150 km/h)  
57 N (130 km/h)

**Section 9**

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WIPIC reserves the right to amend specifications in the light of continuing development.
2 ELEMENT YAGI ANTENNA

WS A02 03.1
110 ... 144 MHz

TYPE NO.  WS A02 03 11 7: 110 - 136 MHz horizontal polarization
WS A02 03 11 8: 115 - 144 MHz vertical polarization
WS A02 03 21 7: 110 - 136 MHz horizontal polarization
WS A02 03 21 8: 115 - 144 MHz horizontal polarization

further frequencies on request

DESCRIPTION heavy duty, with radome
The radome protects the antenna dipol against environmental influences, icing, and increases the lightning protection.

IMPEDEANCE 50 Ω

GAIN 3.5 dB (ref. to λ/2 dipole)

VSWR < 1.3, at the limits of the band < 1.5

POWER max. 150 watts, higher power on request

3 dB BEAMWIDTH in polarization, E-plane: 74°
vertical to pol. H-plane: 130°

TERMINATION 2 m cable RG 213/U with N male
other termination on request

GROUNDING all metal parts are DC grounded

MOUNTING mast ø clamp (see chap. 10)
30 - 80 mm WG 17 (standard)
50 - 104 mm WG 18 (option)
other clamp on request

MATERIAL aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene

WEIGHT 5 kg

WIND AREA 0.16 m²

WIND LOAD 204 N (150 km/h)
153 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.

Section 9. 12/20
3-ELEMENT YAGI ANTENNA
WS A03 02.1
105 ... 144 MHz

TYPE NO.  WS A03 02 11 7: 108 - 136 MHz vertical polarization
          WS A03 02 11 8: 118 - 144 MHz vertical polarization
          WS A03 02 21 7: 108 - 136 MHz horizontal polarization
          WS A03 02 21 8: 118 - 144 MHz horizontal polarization

light execution without radome

IMPEDANCE  50 Ω

GAIN  5 dB (ref. to λ/2 dipole)

VSWR  < 1.3, at the limits of the band < 1.4

POWER  max. 150 watts, higher power on request

3 dB BEAMWIDTH in polarization
E-plane:  60°
vertical to pol. H-plane:  110°

TERMINATION  2 m cable RG 213/U ending with N male
other termination on request

GROUNDING  all metal parts are DC grounded

MOUNTING  mast ø
clamp (see chap. 10)
30 - 80 mm  WG 11 (standard)
50 - 104 mm  WG 12 (option)
clamp for other mast-ø on request

MATERIAL  aluminium, bolts of stainless steel, weather-resistant
plastics

WEIGHT  2.4 kg

WIND AREA  0.08 m²

WIND LOAD  102 N (150 km/h)
            76 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.

Section 9  13/20
3-ELEMENT YAGI ANTENNA
WS A03 03 1.
105 - 144 MHz

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<tr>
<th>TYPE NO.</th>
<th>DESCRIPTION</th>
<th>IMPEDANCE</th>
<th>GAIN</th>
<th>VSWR</th>
<th>POWER</th>
<th>3 dB BEAMWIDTH</th>
<th>TERMINATION</th>
<th>GROUNDING</th>
<th>MOUNTING</th>
<th>MATERIAL</th>
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<tr>
<td>WS A03 03 11 7: 108 - 136 MHz vertical polarization</td>
<td>WS A03 03 11 8: 118 - 144 MHz vertical polarization</td>
<td>50 Ω</td>
<td>5 dB (ref. to λ/2 dipole)</td>
<td>&lt; 1.3, at the limits of the band</td>
<td>max. 500 watts, higher power on request</td>
<td>in polarization, E-plane: 66° H-plane: 110°</td>
<td>2 m cable RG 213/U with N male</td>
<td>all metal parts are DC grounded</td>
<td>mast ø clamp (see chap. 10)</td>
<td>aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene</td>
</tr>
<tr>
<td>WS A03 03 21 7: 108 - 136 MHz horizontal polarization</td>
<td>WS A03 03 21 8: 118 - 144 MHz horizontal polarization</td>
<td>50 - 80 mm WG 17 (standard) 50 - 104 mm WG 18 (option)</td>
<td>clamp for other mast ø on request</td>
<td>vertical to pol.</td>
<td>max. 500 watts, higher power on request</td>
<td>2 m cable RG 213/U with N male</td>
<td>all metal parts are DC grounded</td>
<td>mast ø clamp (see chap. 10)</td>
<td>aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene</td>
<td></td>
</tr>
<tr>
<td>further frequencies on request</td>
<td>further frequencies on request</td>
<td>50 - 80 mm WG 17 (standard) 50 - 104 mm WG 18 (option)</td>
<td>clamp for other mast ø on request</td>
<td>vertical to pol.</td>
<td>max. 500 watts, higher power on request</td>
<td>2 m cable RG 213/U with N male</td>
<td>all metal parts are DC grounded</td>
<td>mast ø clamp (see chap. 10)</td>
<td>aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene</td>
<td></td>
</tr>
<tr>
<td>WS A03 03 11 7: 108 - 136 MHz vertical polarization</td>
<td>WS A03 03 11 8: 118 - 144 MHz vertical polarization</td>
<td>50 Ω</td>
<td>5 dB (ref. to λ/2 dipole)</td>
<td>&lt; 1.3, at the limits of the band</td>
<td>max. 500 watts, higher power on request</td>
<td>in polarization, E-plane: 66° H-plane: 110°</td>
<td>2 m cable RG 213/U with N male</td>
<td>all metal parts are DC grounded</td>
<td>mast ø clamp (see chap. 10)</td>
<td>aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene</td>
</tr>
<tr>
<td>WS A03 03 21 7: 108 - 136 MHz horizontal polarization</td>
<td>WS A03 03 21 8: 118 - 144 MHz horizontal polarization</td>
<td>50 - 80 mm WG 17 (standard) 50 - 104 mm WG 18 (option)</td>
<td>clamp for other mast ø on request</td>
<td>vertical to pol.</td>
<td>max. 500 watts, higher power on request</td>
<td>2 m cable RG 213/U with N male</td>
<td>all metal parts are DC grounded</td>
<td>mast ø clamp (see chap. 10)</td>
<td>aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene</td>
<td></td>
</tr>
<tr>
<td>further frequencies on request</td>
<td>further frequencies on request</td>
<td>50 - 80 mm WG 17 (standard) 50 - 104 mm WG 18 (option)</td>
<td>clamp for other mast ø on request</td>
<td>vertical to pol.</td>
<td>max. 500 watts, higher power on request</td>
<td>2 m cable RG 213/U with N male</td>
<td>all metal parts are DC grounded</td>
<td>mast ø clamp (see chap. 10)</td>
<td>aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene</td>
<td></td>
</tr>
</tbody>
</table>

VSWR

TYPICAL RETURN LOSS

WIPIC reserves the right to amend specifications in the light of continuing development.

Section 9. 14/20
4-ELEMENT YAGI ANTENNA
WS A04 02.1
110 ... 144 MHz

TYPE NO.          WS A04 02 11 7: 110 - 136 MHz vertical polarization
                 WS A04 02 11 8: 118 - 144 MHz vertical polarization
                 WS A04 02 21 7: 110 - 136 MHz horizontal polarization
                 WS A04 02 21 8: 118 - 144 MHz horizontal polarization
light execution without radome

IMPEANCE            50 Ω

GAIN                6.5 dB (ref. to λ/2 dipole)

VSWR                < 1.3, at the limits of the band < 1.4

POWRE               max. 150 watts, higher power on request

3 dB BEAMWIDTH      in polarization E-plane: 58°
                 vertical to pol. H-plane: 90°

TERMINATION         2 m cable RG 213/U ending with N male
                 other termination on request

GROUNDING           all metal parts are DC grounded

MOUNTING            mast ø clamp (see chap. 10)
                 30 - 80 mm WG 11 (standard)
                 50 - 104 mm WG 12 (option)
                 clamp for other mast-ø on request

MATERIAL            aluminium, bolts of stainless steel, weather-resistant
                 plastic

WEIGHT              2.5 kg

WIND AREA           0.1 m²

WIND LOAD           130 N (150 km/h)
                 95 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.
### 4-ELEMENT YAGI ANTENNA
**WS A04 03.1**
110 ... 144 MHz

<table>
<thead>
<tr>
<th>TYPE NO.</th>
<th>WS A04 03 11 7: 110 - 136 MHz vertical polarization</th>
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<tbody>
<tr>
<td></td>
<td>WS A04 03 11 8: 118 - 144 MHz vertical polarization</td>
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<tr>
<td></td>
<td>WS A04 03 21 7: 110 - 136 MHz horizontal polarization</td>
</tr>
<tr>
<td></td>
<td>WS A04 03 21 8: 118 - 144 MHz horizontal polarization</td>
</tr>
</tbody>
</table>

**DESCRIPTION**
- heavy duty, with radome
  - The radome protects the antenna dipole against environmental influences, icing, and increases the lightning protection.

**IMPEDANCE**
- 50 Ω

**GAIN**
- 6.5 dB (ref. to λ/2 dipole)

**VSWR**
- < 1.3, at the limits of the band < 1.4

**POWER**
- max. 500 watts, higher power on request

**3 dB BEAMWIDTH**
- in polarization E-plane: 58°
- vertical to pol. H-plane: 90°

**TERMINATION**
- 2 m cable RG 213/U with N male
- other termination on request

**GROUNDING**
- all metal parts are DC grounded

**MOUNTING**
- mast ø clamp (see chap. 10)
  - 30 - 80 mm WG 17 (standard)
  - 50 - 104 mm WG 18 (option)
- clamp for other mast ø on request

**MATERIAL**
- aluminium, bolts of stainless steel, radome of UV-stabilized polyethylene

**WEIGHT**
- 5.4 kg

**WIND AREA**
- 0.2 m²

**WIND LOAD**
- 225 N (150 km/h)
- 190 N (130 km/h)

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WIPIC reserves the right to amend specifications in the light of continuing development.

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Section 9. 16/20
6-ELEMENT YAGI ANTENNA
WS A06 02 12.
110 ... 144 MHz

| TYPE NO. | WS A06 02 12 7: 110 - 136 MHz
| TYPE NO. | WS A06 02 12 8: 118 - 144 MHz
| POLARISATION | vertical (horizontal on request)
| IMPEDANCE | 50 Ω
| GAIN | 3.5 dB (ref. λ/2 dipole)
| VSWR | < 1.3, at the limits of the band <1.5
| POWER | max. 150 watts
| 3 dB BEAMWIDTH | horizontal, H plane: 70°
| TERMINATION | 2 m cable RG 213/U ending with N male
| GROUNDING | all metal parts are DC grounded
| MOUNTING | mast-ø clamp (see chapt. 10)
| MATERIAL | aluminium, bolts of stainless steel, weather-resistant plastics
| WEIGHT | 4.4 kg
| WIND AREA | 0.16 m²
| WIND LOAD | 200 N (150 km/h)
| | 150 N (130 km/h)

WIPIC reserves the right to amend specifications in the light of continuing development.
6-ELEMENT YAGI ANTENNA
WS A06 03 12
110 ... 144 MHz

| TYPE NO. | WS A06 03 12 7: 110 - 136 MHz
| WS A06 03 12 8: 118 - 144 MHz
| further frequencies on request |
| DESCRIPTION | heavy duty, with radome
| The radome protects the antenna dipole from environmental influences, icing, and increases the lightning protection. |
| POLARISATION | vertical (horizontal on request) |
| IMPEDANCE | 50 Ω |
| GAIN | 8.5 dB (ref. 1/2 dipole)
| f/b: ~ 18 dB |
| VSWR | < 1.3, at the limits of the band <1.5 |
| POWER | max. 150 watts |
| 3 dB BEAMWIDTH | horizontal, H plane: 70°
| vertical, E plane: 48° |
| TERMINATION | 2 m cable RG 213/U ending with N male
| other termination on request |
| GROUNDING | all metal parts are DC grounded |
| MOUNTING | mast-ø clamp (see chap. 10)
| 30 - 80 mm WG 63 (standard)
| 50 - 104 mm WG 64 (option)
| clamp for other mast-ø on request |
| MATERIAL | aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene |
| WEIGHT | 9.1 kg |
| WIND AREA | 0.32 m² |
| WIND LOAD | 410 N (150 km/h)
| 310 N (130 km/h) |

WIPIC reserves the right to amend specifications in the light of continuing development.
LOG PERIODIC ANTENNA

WS A80 22 31 3
108 - 470 MHz

TYPE NO.
WS A80 22 31 3: 108 - 470 MHz
other bands of request

POLARIZATION
vertical or horizontal

IMPEDANCE
50 Ω

GAIN
5 - 6.2 dB ref. λ/2 dipole
7.8 - 9.4 dBi
F/B < 30 dB

VSWR
≤ 2
preferred < 1.5

POWER
300 - 1000 watts (depends on frequency)

3 dB BEAMWIDTH
E-plane: 60°
H-plane: 90°

TERMINATION
2 m cable RG 213/U ending with N male
other termination on request

GROUNDING
all metal parts are DC grounded

MOUNTING
mast-ø clamp
30 - 80 mm WG 11 (standard)
50 - 104 mm WG 12 (option)
clamp for other mast-ø on request

MATERIAL
aluminium, bolts of stainless steel, weather-resistant
plastics

DIMENSIONS
boomlength ~ 2.5 m
longest element ~ 1.4 m

WEIGHT
4.5 kg

WIND AREA
0.15 m²

WIND LOAD
191 N at 150 km/h
143 N at 130 km/h

WIPIC reserves the right to amend specifications in the light of continuing development.

Section 9. 19/20
LOG PERIODIC ANTENNA
WS A80 22 31
108 ... 1100 MHz

<table>
<thead>
<tr>
<th>TYPE NO.</th>
<th>WS A80 22 31 1 108 - 1100 MHz</th>
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<tbody>
<tr>
<td>POLARIZATION</td>
<td>vertical (horizontal on request)</td>
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<tr>
<td>IMPEDANCE</td>
<td>50 or 75 Ω on request</td>
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<tr>
<td>GAIN</td>
<td>5-6dB ref. λ/2 Dipol</td>
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<tr>
<td></td>
<td>7-8 dBi</td>
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<td></td>
<td>F/B 20 - 25 dB</td>
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<tr>
<td>VSWR</td>
<td>≤ 2.5</td>
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<td></td>
<td>preferred &lt; 1.5</td>
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<tr>
<td>POWER</td>
<td>300 - 1000 watts (depends on frequency)</td>
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<tr>
<td>3 dB BEAMWIDTH</td>
<td>E-plane: 60 - 70°</td>
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<td></td>
<td>H-plane: 110 - 130°</td>
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<td>TERMINATION</td>
<td>2 m cable RG 213/U or RG 11 ending with N male</td>
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<td>other termination on request</td>
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<td>GROUNDING</td>
<td>all metal parts are DC grounded</td>
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<tr>
<td>MOUNTING</td>
<td>mast-ø clamp</td>
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<td>50 - 104 mm WG 12 (option)</td>
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<td>clamp for other mast-ø on request</td>
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<td>WEIGHT</td>
<td>A80 22</td>
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<tr>
<td>WIND AREA</td>
<td>3.1 kg</td>
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<td>WIND LOAD</td>
<td>0.19 m²</td>
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<td>270 N (150 km/h)</td>
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<tr>
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<td>200 N (130 km/h)</td>
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</table>

WIPIC reserves the right to amend specifications in the light of continuing development.

Section 9. 20/20