



## Omnidirectional Antennas 68 - 87.5 MHz

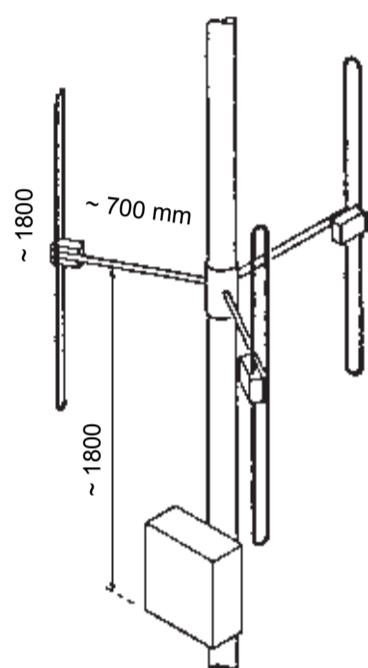
ORDERNUMBER	ANTENNA TYPE
WS 200 42 1.	omnidirectional
WS 200 44 1.	omnidirectional, heavy duty, with radome
WS 200 84 1.	omnidirectional groundplane
WS 200 86 1	omnidirectional groundplane, adjustable
WS 200 92 1	discone 66 - 1100 MHz
WS 201 12 10.	3 dB offset pattern antenna
WS 201 13 10.	3 dB offset pattern antenna, heavy duty, with radome
WS 201 12 19.	dipole for wall mounting
WS 201 13 19.	dipole for wall mounting, heavy duty, with radome
WS 201 12 11.	6 dB offset pattern antenna
WS 201 13 11.	6 dB offset pattern antenna, heavy duty, with radome
WS 201 12 12.	8 dB offset pattern antenna
WS 201 13 12.	8 dB offset pattern antenna, heavy duty, with radome
WS 201 13 21 .	omnidirectional, horizontal polarized

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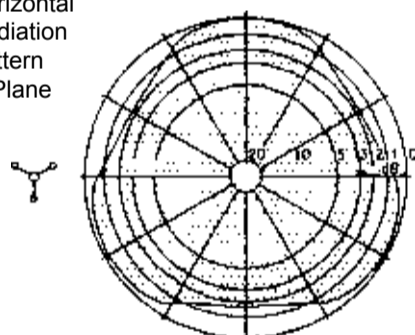
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**OMNIDIRECTIONAL ANTENNA  
WS 200 42 1.  
68 ... 88 MHz**

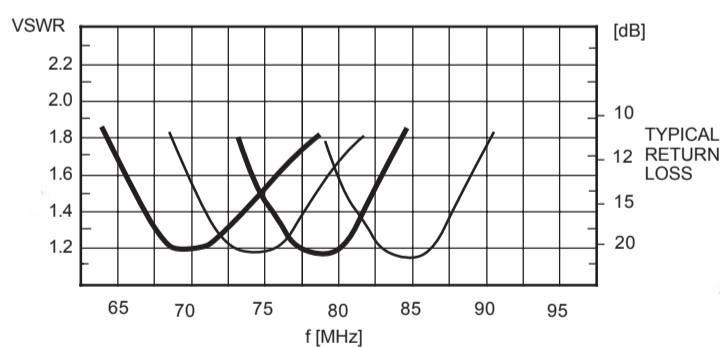
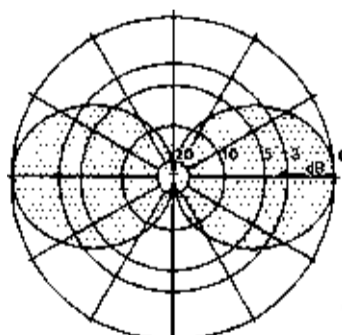


<b>TYPE NO.</b>	<b>WS 200 42 16: 68 - 72 MHz</b> <b>WS 200 42 17: 71 - 77 MHz</b> <b>WS 200 42 18: 76 - 82 MHz</b> <b>WS 200 42 19: 81 - 87.5 MHz</b> further frequencies on request
<b>POLARIZATION</b>	vertical
<b>IMPEDANCE</b>	50 Ω
<b>GAIN</b>	0 dB (ref. λ/2 dipole)
<b>VSWR</b>	< 1.3, at the limits of the band <1.5
<b>POWER</b>	max. 300 watts
<b>3 dB BEAMWIDTH</b>	horizontal, H plane: 360° (deviation from circularity ± 1.5 dB) vertical, E plane: 78°
<b>TERMINATION</b>	in the junction box WAK 1 ending with N male other termination on request
<b>GROUNDING</b>	all metal parts are DC grounded
<b>MOUNTING</b>	on mast with ø 60 ≤ 104 mm clamp for other mast-ø on request
<b>MATERIAL</b>	aluminium, bolts of stainless steel, weather-resistant plastics
<b>WEIGHT</b>	7 kg
<b>WIND AREA</b>	0.27 m <sup>2</sup>
<b>WIND LOAD</b>	344 N (150 km/h) 260 N (130 km/h)

Horizontal  
Radiation  
Pattern  
H Plane



Vertical  
Radiation  
Pattern  
E Plane



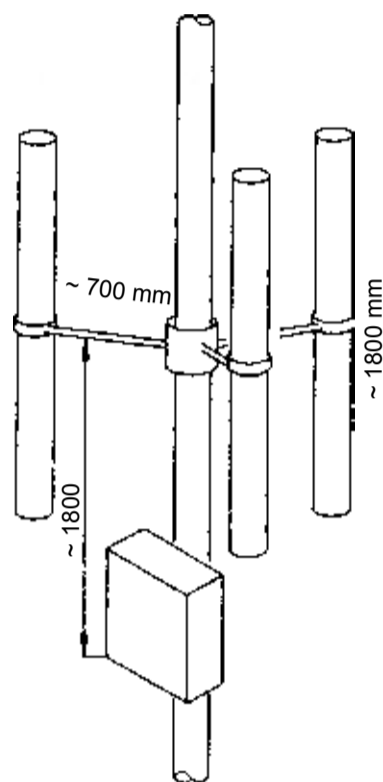
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## OMNIDIRECTIONAL ANTENNA

**WS 200 44 1.**  
**68 ... 88 MHz**



**TYPE NO.** WS 200 44 16: 68 - 72 MHz  
 WS 200 44 17: 71 - 77 MHz  
 WS 200 44 18: 76 - 82 MHz  
 WS 200 44 19: 81 - 87.5 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.

**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. 300 watts

**3 dB BEAMWIDTH** horizontal, H plane: 360°  
 (deviation from circularity ± 1.5 dB)  
 vertical, E plane: 78°

**TERMINATION** in the junction box WAK 1 ending with N male  
 other termination on request

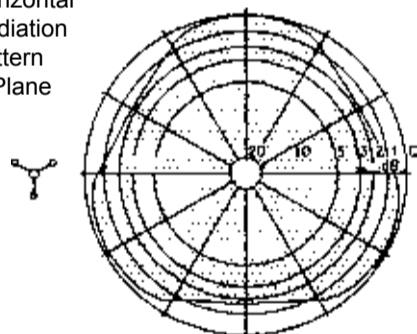
**GROUNDING** all metal parts are DC grounded

**MOUNTING** on mast with ø 60 ≤ 104 mm  
 clamp for other mast-ø on request

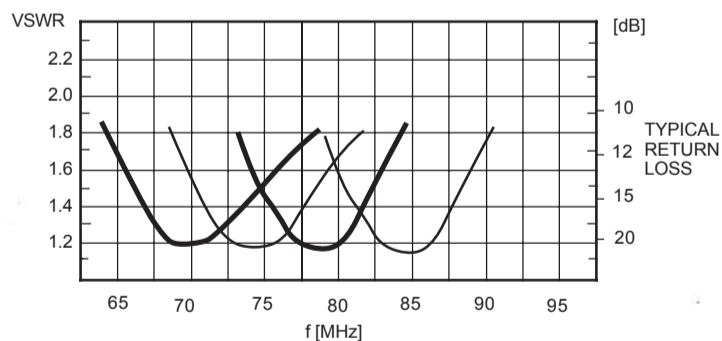
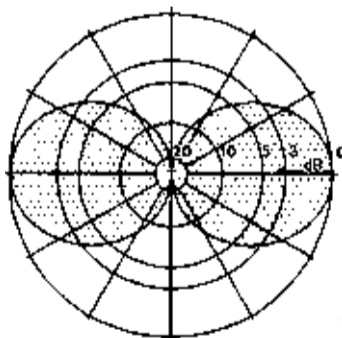
**MATERIAL** aluminium, bolts of stainless steel, weather-resistant  
 plastics, radome of UV-stabilized polyethylene

**WEIGHT** 17 kg  
**WIND AREA** 0.54 m<sup>2</sup>  
**WIND LOAD** 670 N (150 km/h)  
 520 N (130 km/h)

Horizontal  
Radiation  
Pattern  
H Plane



Vertical  
Radiation  
Pattern  
E Plane

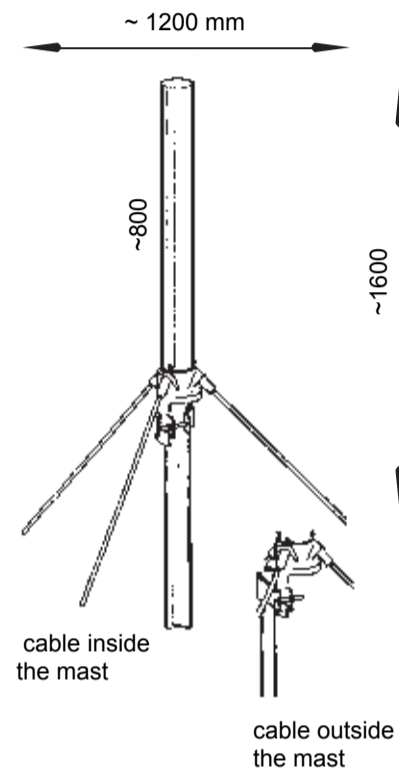


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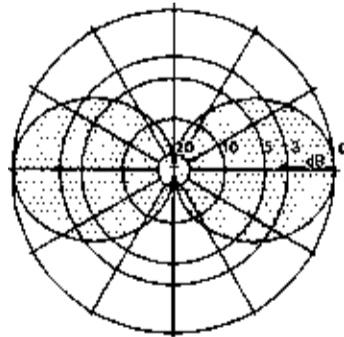
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**OMNIDIRECTIONAL ANTENNA  
WS 200 84 1.  
68 ... 87.5 MHz**

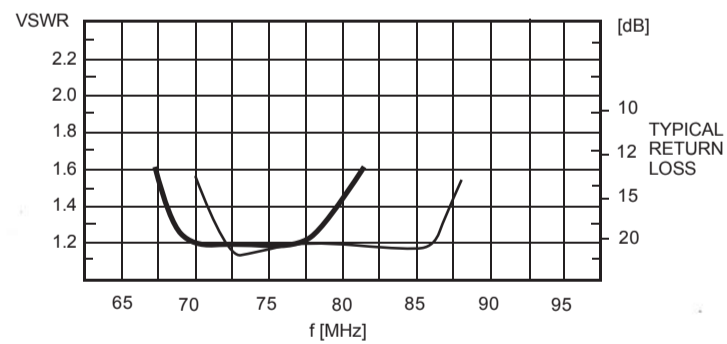


<b>TYPE NO.</b>	<b>WS 200 84 14: 68 - 80 MHz</b> <b>WS 200 84 15: 72 - 87.5 MHz</b> further frequencies on request
<b>DESCRIPTION</b>	antenna with radome The radome protects the antenna from environmental influences, icing, and increases the lightning protection.
<b>POLARIZATION</b>	vertical
<b>IMPEDANCE</b>	50 Ω
<b>GAIN</b>	0 dB (ref. λ/2 dipole)
<b>VSWR</b>	< 1.3, at the limits of the band <1.5
<b>POWER</b>	max. 150 watts
<b>3 dB BEAMWIDTH</b>	horizontal, H plane: 360° vertical, E plane: 78°
<b>TERMINATION</b>	~ 1 m cable ending with N male the cable must NOT be shortened (transformer) other termination on request
<b>GROUNDING</b>	all metal parts are DC grounded
<b>MOUNTING</b>	to 40 - 66 mm ø mast cable running inside or outside the mast
<b>MATERIAL</b>	aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene
<b>WEIGHT</b>	2.2 kg
<b>WIND AREA</b>	0.06 m <sup>2</sup>
<b>WIND LOAD</b>	76 N (150 km/h) 57 N (130 km/h)

Vertical Radiation Pattern E Plane

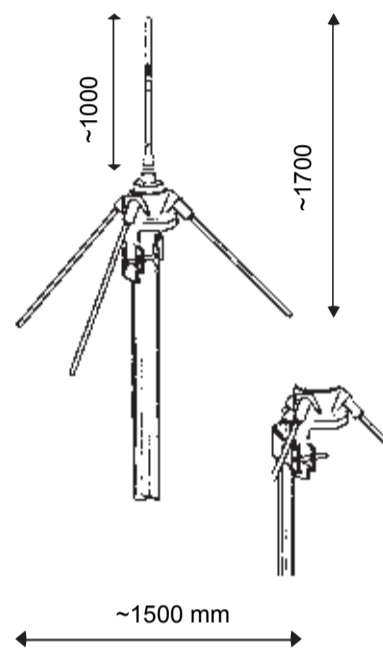


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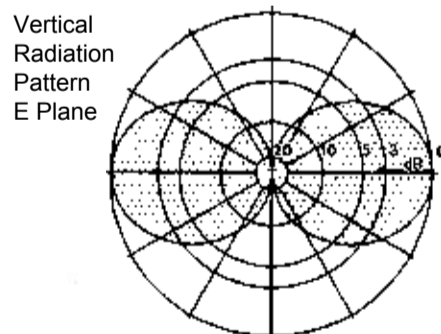




**GROUND PLANE ANTENNA, ADJUSTABLE**  
**WS 200 86 1**  
**68 ... 87.5 MHz**



<b>TYPE NO.</b>	<b>WS 200 86 1: 68 ... 87.5 MHz</b> other frequencies on request	
<b>DESCRIPTION</b>	light ground plane antenna with adjustable radiator	
<b>POLARIZATION</b>	vertical	
<b>IMPEDANCE</b>	50 Ω	
<b>GAIN</b>	0 dB (ref. to λ/2 dipole)	
<b>VSWR</b>	< 1.2 on tuned frequency	
<b>POWER</b>	200 watts	
<b>3 dB BEAMWIDTH</b>	horizontal (H-plane)	360°
	vertical (E-plane)	78°
<b>TERMINATION</b>	1 m cable RG 213/U with N male	
<b>GROUNDING</b>	radiator not grounded	
<b>MOUNTING</b>	to 40 - 66 mm ø mast cable runs inside or outside the mast	
<b>MATERIAL</b>	aluminium, bolts of stainless steel, weather-resistant plastic	
<b>WEIGHT</b>	2 kg	
<b>WIND AREA</b>	0.13 m <sup>2</sup>	
<b>WIND LOAD</b>	166 N (150 km/h) 125 N (130 km/h)	

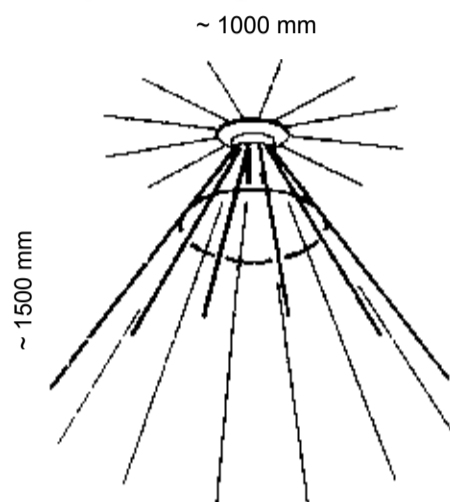


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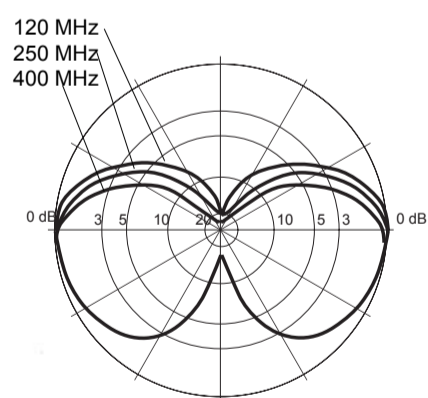
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**DISCONE ANTENNA  
WS 200 92 1  
60 - 1100 MHz**

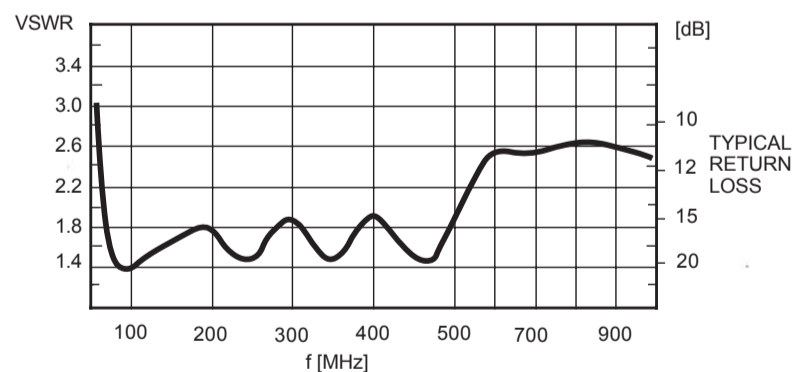


<b>TYPE NO.</b>	<b>WS 200 92 1: 60 - 1100 MHz</b>
<b>DESCRIPTION</b>	wideband omnidirectional antenna
<b>POLARIZATION</b>	vertical
<b>IMPEDANCE</b>	50 Ω
<b>GAIN</b>	0 dB (ref. λ/2 dipole)
<b>VSWR</b>	< 2 from 66 - 550 MHz < 5 from 66 - 1100 MHz
<b>POWER</b>	max. 600 watts (depeding on frequency)
<b>3 dB BEAMWIDTH</b>	horizontal, H plane: 360° (deviation from circularity ± 2 dB)
<b>TERMINATION</b>	1 m cable RG 213/U ending with N male other termination on request
<b>GROUNDING</b>	all metal parts are DC grounded
<b>MOUNTING</b>	on mast with outer ø 42 mm, adaptation for other ø on request (option)
<b>MATERIAL</b>	aluminium, bolts of stainless steel, weather-resistant plastics
<b>WEIGHT</b>	3.1 kg
<b>WIND AREA</b>	0.37 m <sup>2</sup>
<b>WIND LOAD</b>	470 N (150 km/h) 360 N (130 km/h)

Vertical Radiation Pattern, E plane



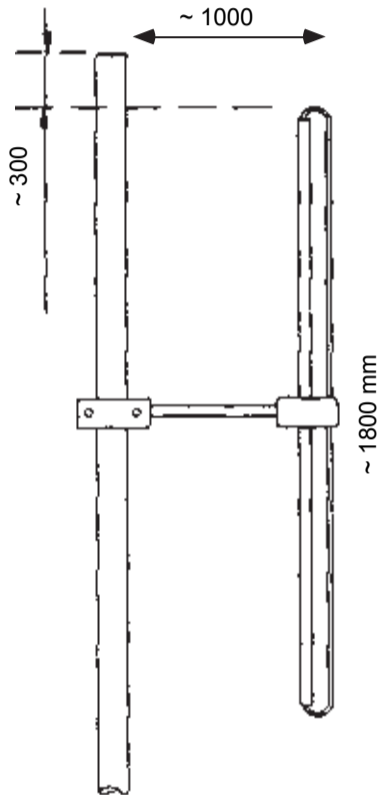
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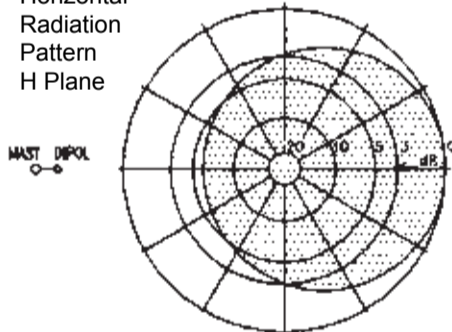
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**OMNIDIRECTIONAL OFFSET-PATTERN ANTENNA  
WS 201 12 10 .  
68 ... 88 MHz**

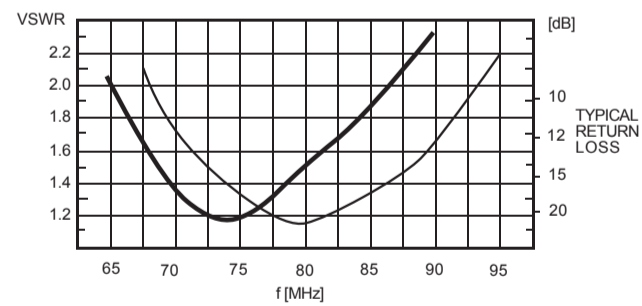
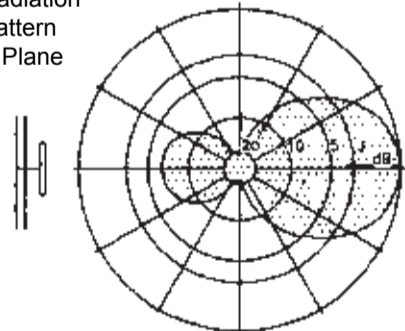


<b>TYPE NO.</b>	<b>WS 201 12 10 4: 68 - 80 MHz</b> <b>WS 201 12 10 5: 74 - 88 MHz</b> further frequencies on request
<b>POLARIZATION</b>	vertical
<b>IMPEDANCE</b>	50 Ω
<b>GAIN</b>	1.7 dB (ref. to λ/2 dipole)
<b>VSWR</b>	< 1.3, at the limit of the band <1.5
<b>POWER</b>	250 watts
<b>3 dB BEAMWIDTH</b>	horizontal (H-plane) 210° vertical (E-plane) 76°
<b>TERMINATION</b>	2 m cable RG 213/U ending with N male other termination on request
<b>GROUNDING</b>	all metal parts are DC grounded
<b>MOUNTING</b>	<i>mast-ø</i> <i>clamps</i> 30 - 80 mm    WG 13 (standard) 50 - 104 mm    WG 14 (option) clamps for other mast-ø on request
<b>MATERIAL</b>	aluminium, bolts of stainless steel, weather-resistant plastics
<b>WEIGHT</b>	1.5 kg
<b>WIND AREA</b>	0.061 m <sup>2</sup>
<b>WIND LOAD</b>	77 N 150 km/h 58 N 130 km/h

Horizontal  
Radiation  
Pattern  
H Plane

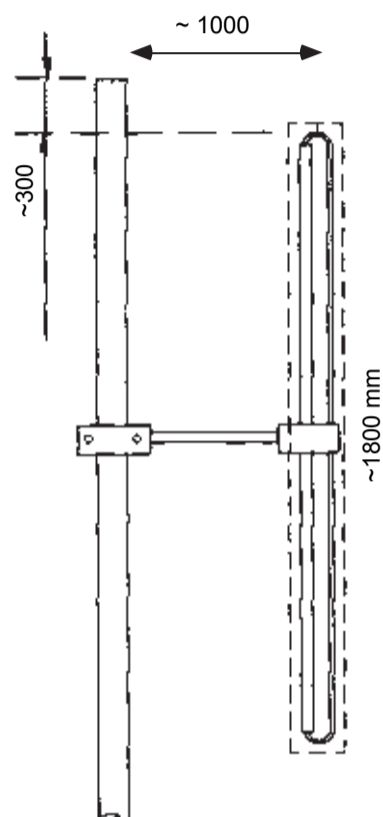


Vertical  
Radiation  
Pattern  
E Plane

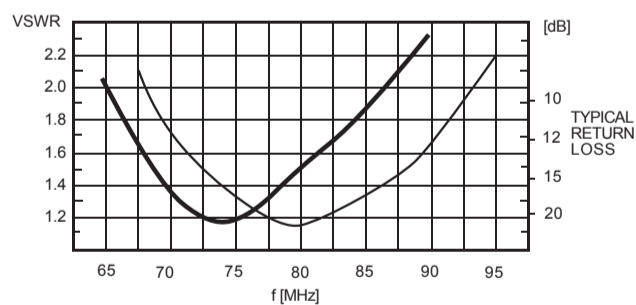
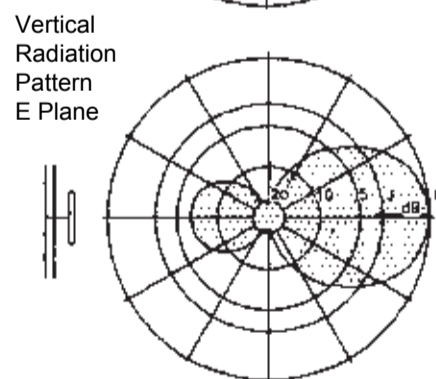
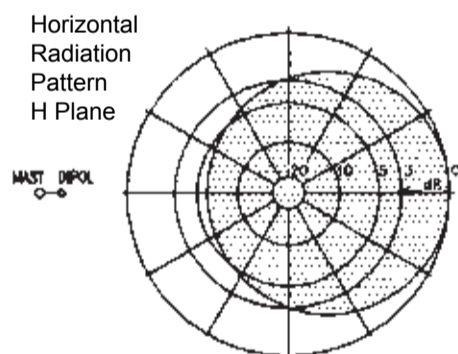


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**OMNIDIRECTIONAL OFFSET-PATTERN ANTENNA**
**WS 201 13 10 .**  
**68 ... 88 MHz**


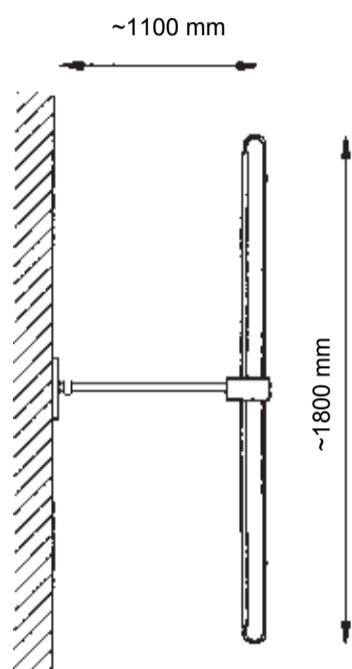
<b>TYPE NO.</b>	<b>WS 201 13 10 4: 68 - 80 MHz</b> <b>WS 201 13 10 5: 74 - 88 MHz</b> further frequencies on request	
<b>DESCRIPTION</b>	Heavy duty, dipole with radome The radom protects the antenna against environmental influences, icing, and increases the lightning protection.	
<b>POLARIZATION</b>	vertical	
<b>IMPEDANCE</b>	50 Ω	
<b>GAIN</b>	1.7 dB (ref. to λ/2 dipole)	
<b>VSWR</b>	< 1.3, at limits of the band < 1.5	
<b>POWER</b>	600 watts higher power on request	
<b>3 dB BEAMWIDTH</b>	horizontal (H-plane)	210°
	vertical (E-plane)	76°
<b>TERMINATION</b>	2 m cable RG 213/U ending with N male	
<b>GROUNDING</b>	all metal parts are DC grounded	
<b>MOUNTING</b>	<i>mast-ø</i> <i>clamps</i> 30 - 80 mm    WG 17 (standard) 50 - 104 mm   WG 18 (option) clamps for other mast-ø on request	
<b>MATERIAL</b>	aluminium, bolts of stainless steel, radom of UV-stabilized polyethylene	
<b>WEIGHT</b>	5 kg	
<b>WIND AREA</b>	0.172 m <sup>2</sup>	
<b>WIND LOAD</b>	220 N 150 km/h 165 N 130 km/h	



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**DIPOLE FOR WALL MOUNTING**  
**WS 201 12 19 .**  
**68 ... 88 MHz**


<b>TYPE NO.</b>	<b>WS 201 12 19 4: 68 - 80 MHz</b> <b>WS 201 12 19 5: 74 - 88 MHz</b> further frequencies on request
<b>DESCRIPTION</b>	light dipole for wall mounting the electrical data are influenced by the surroundings
<b>POLARIZATION</b>	vertical, horizontal on request
<b>IMPEDANCE</b>	50 Ω
<b>GAIN</b>	0-4 dB (ref. λ/2 dipole)
<b>VSWR</b>	≤ 1.5, at the limits of the band < 1.8
<b>POWER</b>	max. 250 watts
<b>3 dB BEAMWIDTH</b>	omnidirectional (depends on wall material)
<b>TERMINATION</b>	2 m cable RG 213/U ending with N male other termination on request
<b>GROUNDING</b>	all metal parts are DC grounded
<b>MOUNTING</b>	with flange no. 22 (see chapt. 10) on walls
<b>MATERIAL</b>	aluminium, bolts of stainless steel, weather-resistant plastics, UV-stabilized plastics
<b>WEIGHT</b>	1.5 kg
<b>WIND AREA</b>	0.1 m <sup>2</sup>
<b>WIND LOAD</b>	127 N (150 km/h) 95 N (130 km/h)

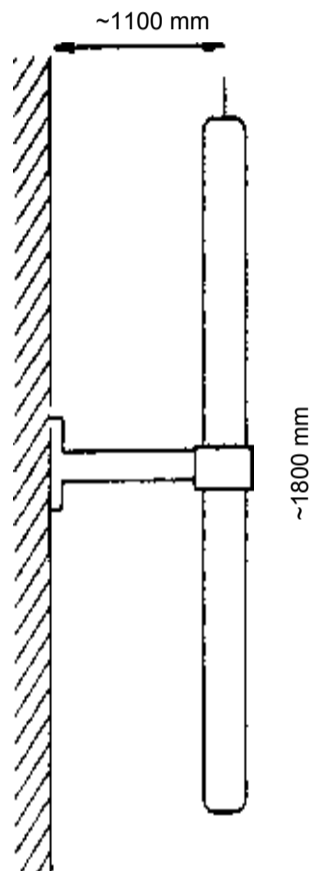
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**DIPOLE FOR WALL MOUNTING**  
**WS 201 13 19 .**  
**68 ... 88 MHz**



<b>TYPE NO.</b>	<b>WS 201 13 19 4: 68 - 80 MHz</b> <b>WS 201 13 19 5: 74 - 87.5 MHz</b> further frequencies on request
<b>DESCRIPTION</b>	dipole with radom The radome protects the antenna dipole from environmental influences, icing, and increases the lightning protection. The electrical datas are influenced by the surroundings
<b>POLARIZATION</b>	vertical, horizontal on request
<b>IMPEDANCE</b>	50 Ω
<b>GAIN</b>	0-4 dB (ref. λ/2 dipole)
<b>VSWR</b>	≤1.5
<b>POWER</b>	max. 250 watts
<b>3 dB BEAMWIDTH</b>	omnidirectional (depends on wall material)
<b>TERMINATION</b>	2 m cable RG 231/U ending with N male other termination on request
<b>GROUNDING</b>	all metal parts are DC grounded
<b>MOUNTING</b>	with flange no. 24 (see chapt. 10) on walls
<b>MATERIAL</b>	aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene
<b>WEIGHT</b>	4.7 kg
<b>WIND AREA</b>	0.14 m <sup>2</sup>
<b>WIND LOAD</b>	178 N (150 km/h) 134 N (130 km/h)

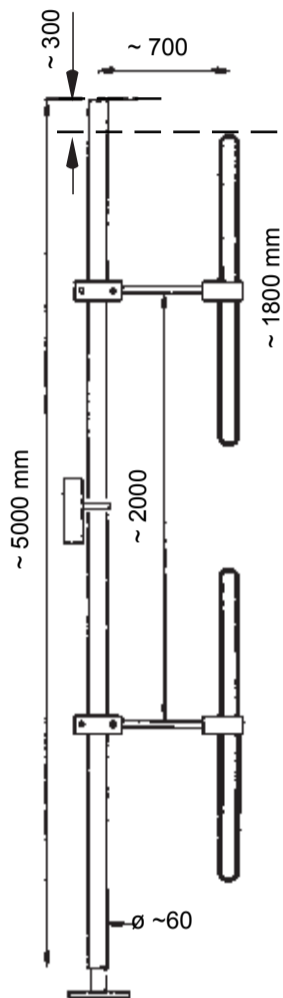
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**6 dB OMNIDIRECTIONAL OFFSET-PATTERN GAIN ANTENNA**  
**WS 201 12 11 .**  
**68 ... 87.5 MHz**



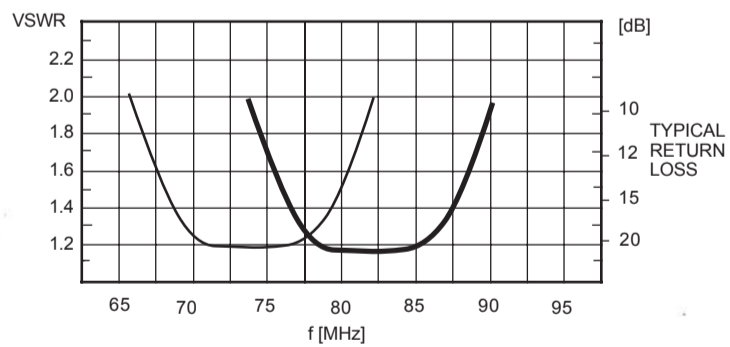
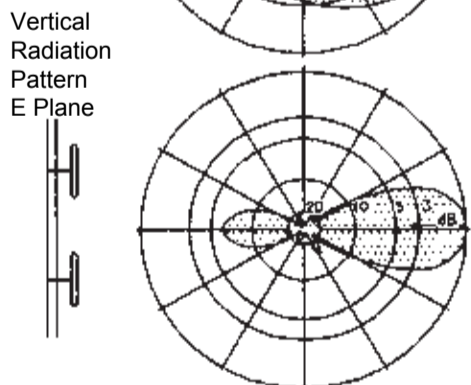
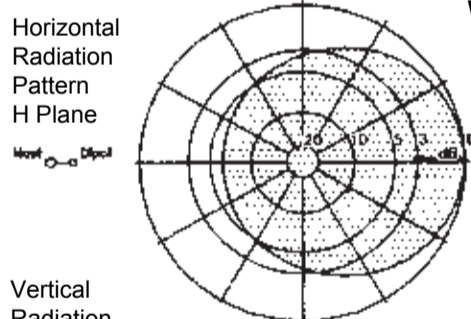
**TYPE NO.** WS 201 12 11 7. : 68 - 74 MHz  
 WS 201 12 11 8. : 74 - 82 MHz  
 WS 201 12 11 9. : 82 - 88 MHz  
 further frequencies and tilt on request

**POLARIZATION** vertical  
**IMPEDANCE** 50 Ω  
**GAIN** 6 dB (ref. to λ/2 dipole)  
 0 dB in reverse direction  
**VSWR** < 1.3, at the limits of the band < 1.5  
**POWER** 250 watts  
**3 dB BEAMWIDTH** horizontal (H-plane) 180°  
 vertical (E-plane) 40°  
**TERMINATION** in the junction box WAK 1 with N male  
**GROUNDING** all metal parts are DC grounded  
**DELIVERY** 2 dipoles with junction and box WAK 1

**MOUNTING** mast ø clamp (see chapt. 10)  
 30 - 80 mm WG 17 (standard)  
 50 - 104 mm WG 18 (option)

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

**WEIGHT** 12 kg  
**WIND AREA** 0.41 m<sup>2</sup>  
**WIND LOAD** 520 N (150 km/h)  
 390 N (130 km/h)

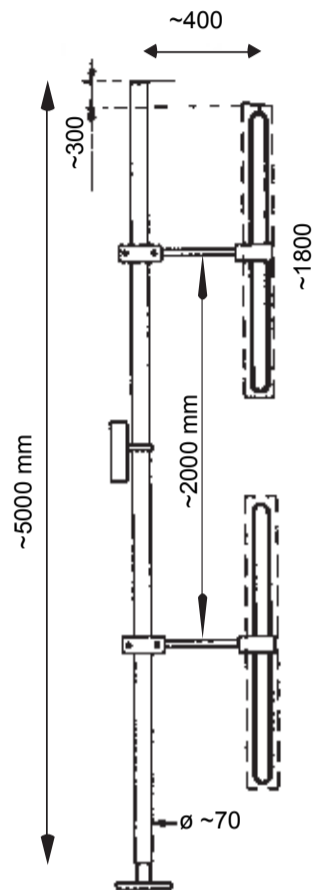


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**6 dB OMNIDIRECTIONAL OFFSET-PATTERN GAIN ANTENNA**  
**WS 201 13 11 .**  
**68 ... 87.5 MHz**



**TYPE NO.** WS 201 13 11 7. : 68 - 74 MHz  
 WS 201 13 11 8. : 74 - 82 MHz  
 WS 201 13 11 9. : 82 - 88 MHz  
 further frequencies and tilt on request

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

**POLARIZATION** vertical

**IMPEDANCE** 50 Ω

**GAIN** 6 dB (ref. to λ/2 dipole)  
 -0 dB in reverse direction

**VSWR** < 1.3

**POWER** 500 watts

**3 dB BEAMWIDTH** horizontal (H-plane) 180°  
 vertical (E-plane) 40°

**TERMINATION** in the junction box WAK 1 with N male

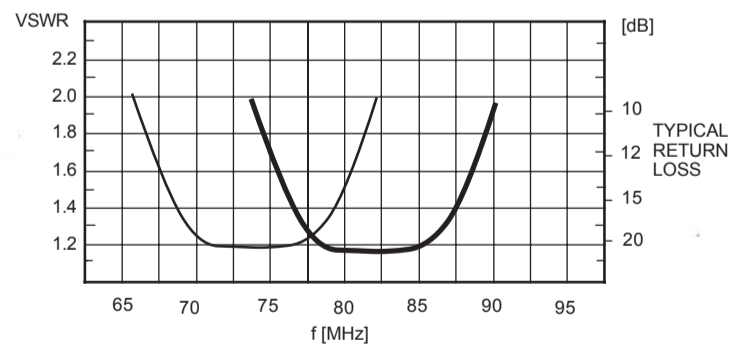
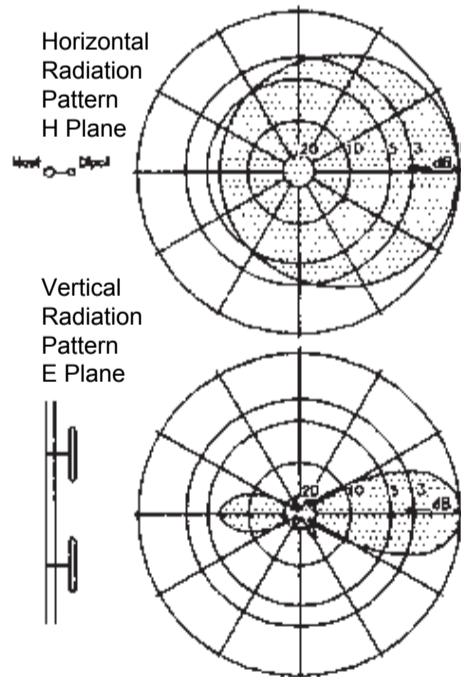
**GROUNDING** all metal parts are DC grounded

**DELIVERY** 2 dipoles with junction and box WAK 1

**MOUNTING** mast ø clamp (see chapt. 10)  
 30 - 80 mm WG 17 (standard)  
 50 - 104 mm WG 18 (option)

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

**WEIGHT** 12 kg  
**WIND AREA** 0.41 m<sup>2</sup>  
**WIND LOAD** 520 N (150 km/h)  
 390 N (130 km/h)

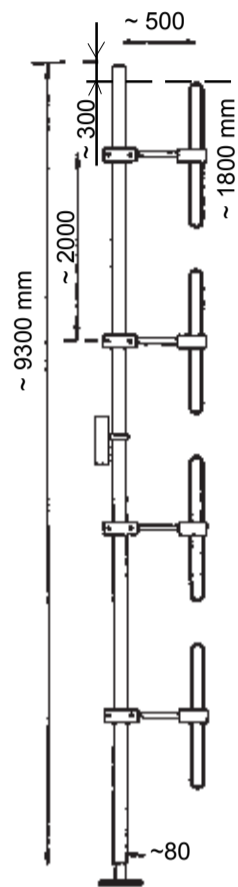


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**8 dB OMNIDIRECTIONAL OFFSET-PATTERN GAIN ANTENNA  
WS 201 12 12 .  
68 ... 88 MHz**

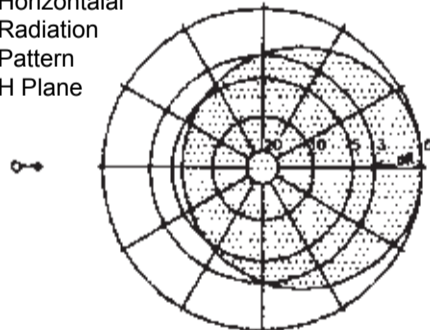


**TYPE NO.** WS 201 12 12 6 : 68 - 73 MHz  
WS 201 12 12 7 : 73 - 78 MHz  
WS 201 12 12 8 : 78 - 84 MHz  
WS 201 12 12 9 : 84 - 88 MHz  
further frequencies and tilt on request

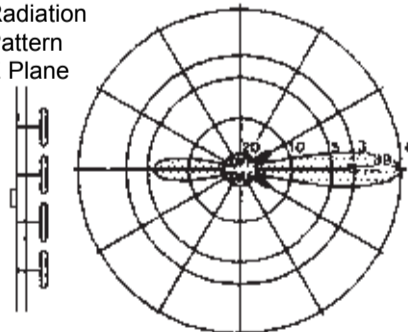
**POLARIZATION** vertical  
**IMPEDANCE** 50 Ω  
**GAIN** 8 dB (ref. to λ/2 dipole)  
2 dB in reverse direction  
**VSWR** < 1.3  
**POWER** 250 watts  
**3 dB BEAMWIDTH** horizontal (H-plane) 180°  
vertical (E-plane) 20°  
**TERMINATION** in the junction box WAK 1 with N male  
**GROUNDING** all metal parts are DC grounded  
**DELIVERY** 2dipoles with junction and box WAK 1  
**MOUNTING** mast ø clamp (see chapt. 10)  
30 - 80 mm WG 11 (standard)  
50 - 104 mm WG 12 (option)  
**MATERIAL** aluminium, bolts of stainless steel,  
weather-resistant plastics

**WEIGHT** 10 kg  
**WIND AREA** 0.41 m<sup>2</sup>  
**WIND LOAD** 450 N (150 km/h)  
340 N (130 km/h)

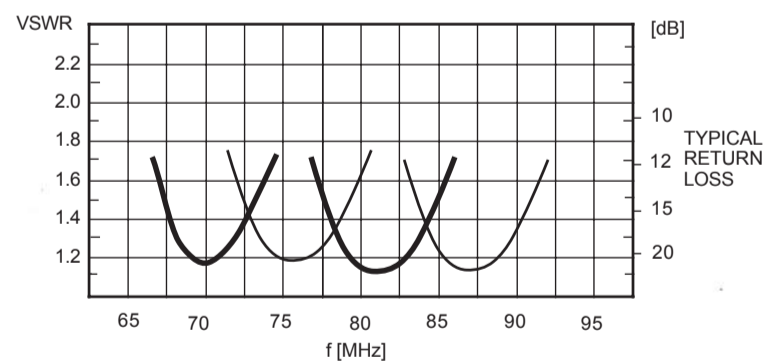
Horizontal  
Radiation  
Pattern  
H Plane



Vertical  
Radiation  
Pattern  
E Plane



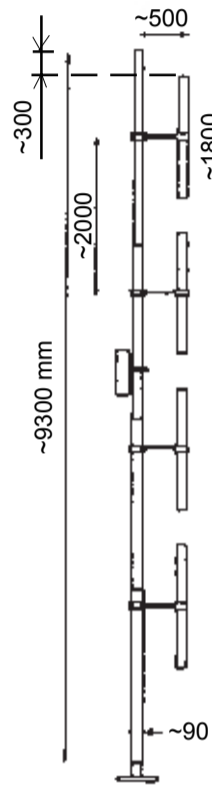
KW 1-08



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



**8 dB OMNIDIRECTIONAL OFFSET-PATTERN GAIN ANTENNA  
WS 201 13 12 .  
68 ... 88 MHz**



**TYPE NO.** WS 201 13 12 6 : 68 - 73 MHz  
 WS 201 13 12 7 : 73 - 78 MHz  
 WS 201 13 12 8 : 78 - 84 MHz  
 WS 201 13 12 9 : 84 - 88 MHz  
 further frequencies and tilt on request

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

**POLARIZATION** vertical

**IMPEDANCE** 50 Ω

**GAIN** 8 dB (ref. to λ/2 dipole)  
 2 dB in reverse direction

**VSWR** < 1.36

**POWER** 00 watts

**3 dB BEAMWIDTH** horizontal (H-plane) 180°  
 vertical (E-plane) 20°

**TERMINATION** in the junction box WAK 1 with N male

**GROUNDING** all metal parts are DC grounded

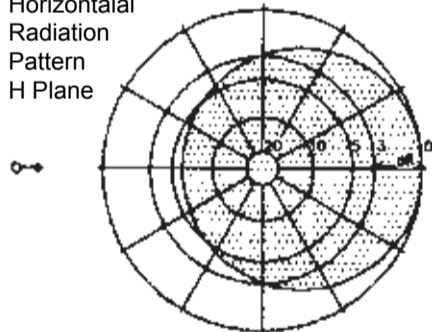
**DELIVERY** 2 dipoles with junction and box WAK 1

**MOUNTING** mast ø clamp (see chapt. 10)  
 30 - 80 mm WG 17 (standard)  
 50 - 104 mm WG 18 (option) (see chapt. 10)

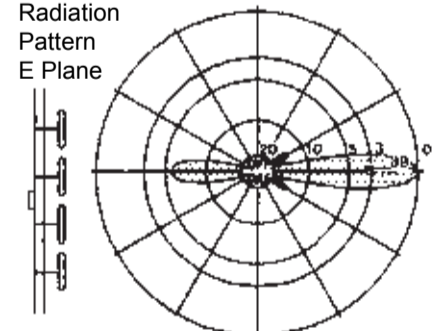
**MATERIAL** aluminium, bolts of stainless steel,  
 radom of UV-stabilized polyethylene

**WEIGHT** 24 kg  
**WIND AREA** 0.8 m<sup>2</sup>  
**WIND LOAD** 1020 N (150 km/h)  
 770 N (130 km/h)

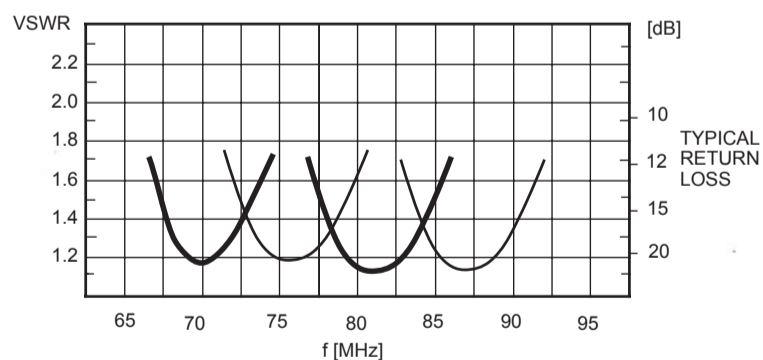
Horizontal Radiation Pattern H Plane



Vertical Radiation Pattern E Plane



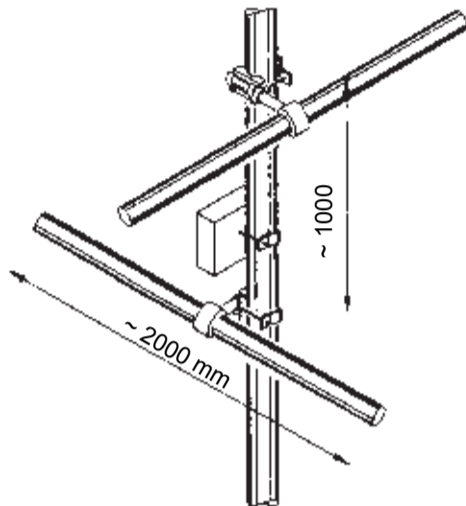
KW 1-08



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

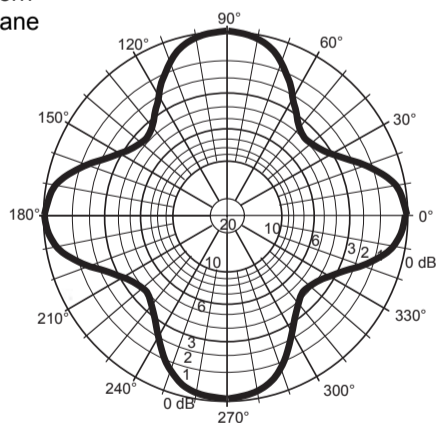
**wipic**

**OMNIDIRECTIONAL ANTENNA  
WS 201 13 21.  
68 ... 87.5 MHz**

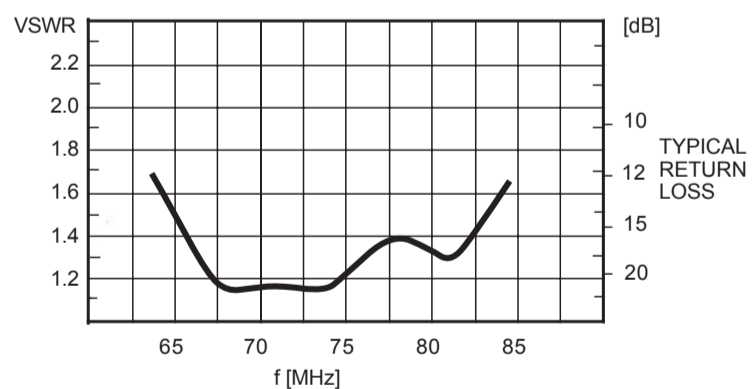


<b>TYPE NO.</b>	<b>WS 201 13 21 6: 68 - 76 MHz</b> <b>WS 201 13 21 7: 74 - 82 MHz</b> <b>WS 201 13 21 8: 80 - 88 MHz</b> further frequencies on request
<b>DESCRIPTION</b>	dipole with radome The radome protects the antenna dipole from environmental influences, icing, and increases the lightning protection.
<b>POLARIZATION</b>	horizontal
<b>IMPEDANCE</b>	50 Ω
<b>GAIN</b>	0 dB (ref. λ/2 dipole)
<b>VSWR</b>	< 1.3, at the limits of the band <1.4
<b>POWER</b>	max. 500 watts
<b>3 dB BEAMWIDTH</b>	horizontal, E plane: 360° deviation from circularity ± 2 dB vertical, H plane: 78°
<b>TERMINATION</b>	in the junction box WAK 1 ending with N male other termination on request
<b>GROUNDING</b>	all metal parts are DC grounded
<b>MOUNTING</b>	to 50 ≤ 104 mm ø mast cable runs outside the mast clamp for other mast ø on request
<b>MATERIAL</b>	aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene
<b>WEIGHT</b>	25 kg
<b>WIND AREA</b>	0.6 m <sup>2</sup>
<b>WIND LOAD</b>	766 N (150 km/h) 576 N (130 km/h)

Horizontal  
Radiation  
Pattern  
E Plane



KW 1-08



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