



Omnidirectional Antennas 225 - 480 MHz

ORDERNUMBER	TYPE
WS 400 44 1.	omnidirectional, heavy duty, with radome
WS 400 54 1.	omnidirectional, heavy duty, with radome
WS 400 74 1. .	hatantenna for wall mounting
WS 400 81 5. .	ground plane omnidirectional for wall mounting
WS 400 83 11	omnidirectional broadband 230 - 400 MHz
WS 400 84 10	omnidirectional 380 - 470 MHz
WS 400 84 1.	omnidirectional 220 ... 470 MHz
WS 400 86 1.	omnidirectional adjustable
WS 400 92 1	discone 225 - 1200 MHz
WS 401 02 12.	8 dB offset pattern antenna
WS 401 03 12.	8 dB offset pattern antenna, heavy duty, with radome
WS 401 02 13.	10 dB offset pattern antenna
WS 401 03 13.	10 dB offset pattern antenna, heavy duty, with radome
WS 401 03 15.	7 dB omnidirectional antenna, heavy duty, with radome
WS 401 12 10.	3 dB offset pattern antenna
WS 401 13 10.	3 dB offset pattern antenna, heavy duty, with radome
WS 401 12 11.	3 dB offset pattern antenna
WS 401 13 11 9	3 dB offset pattern antenna, heavy duty, with radome
WS 401 12 . 9 9	dipole for wall mounting
WS 401 13 . 9 9	dipole for wall mounting, heavy duty, with radome
WS 401 22 19 .	light dipole for wall mounting
WS 401 24 10 8	light dipole for with radome

KW3-08

Section 4.1. 1/23

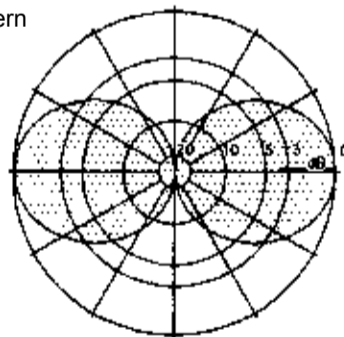
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**OMNIDIRECTIONAL ANTENNA
WS 400 14 56
380 ... 470 MHz**

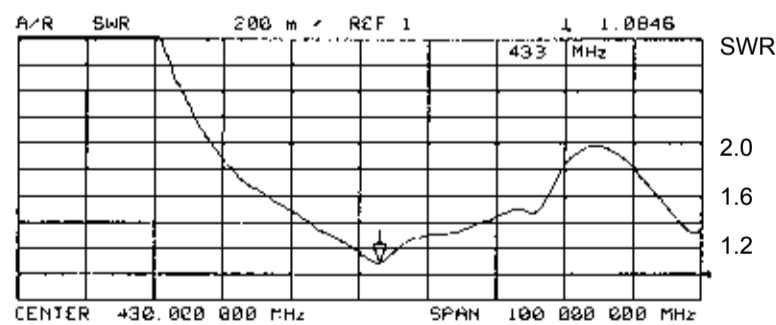
TYPE NO.	WS 400 14 54: 380 - 400 MHz WS 400 14 55: 400 - 430 MHz WS 400 14 56: 420 - 450 MHz WS 400 14 57: 440 - 470 MHz further frequencies on request
FREQUENCY	the antenna is tuned on the requested frequency band width 10 - 20 MHz
DESCRIPTION	dipole with black radome (white on request) The antenna is specifically designed for icing conditions
POLARIZATION	vertical
IMPEDANCE	50 Ω
GAIN	0 dB (ref. λ/2 dipole)
VSWR	< 1.3 on tuned frequency
POWER	max. 150 watts, higher ratings on request
3 dB BEAMWIDTH	horizontal, H plane: 360° vertical, E plane: 78°
TERMINATION	2.5 m cable RG 58 ending with BNC male 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, radome of uv-stabilized polyethylene
WEIGHT	1.5 kg
WIND AREA	0.028 m ²
WIND LOAD	34 N (150 km/h) 25 N (130 km/h)
DIMENSIONS	length of radome: ~ 350 mm diameter of radome: 63 mm

vertical radiation pattern



KW 6-06

Typical SWR tuned on 433 MHz

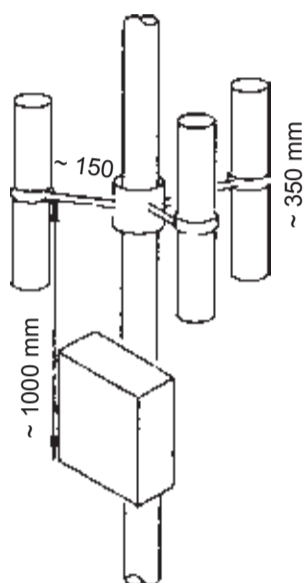


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OMNIDIRECTIONAL ANTENNA

WS 400 44 1.
400 ... 470 MHz



TYPE NO. **WS 400 44 17:** 400 - 430 MHz
 WS 400 44 18: 420 - 455 MHz
 WS 400 44 19: 435 - 470 MHz
 further frequencies on request

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

POLARIZATION vertical

IMPEDANCE 50 ohms nominal

GAIN 0 dB (ref. to $\lambda/2$ dipole)

VSWR < 1.3, at the band limits < 1.5

POWER max. 300 watts

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

TERMINATION in the junction box WAK 1, ending with N male

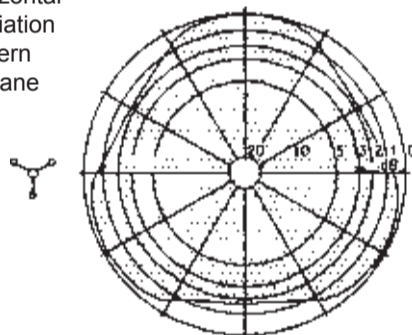
GROUNDING all metal parts are DC grounded

MOUNTING for mast with \varnothing 60 - 104 mm, other \varnothing on request

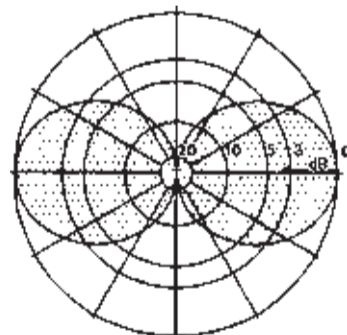
MATERIAL aluminium, bolts of stainless steel, radome of uv-stabilized polyethylen

WEIGHT 6 kg
WIND AREA 0.15 m²
WIND LOAD 190 N (150 km/h)
 145 N (130 km/h)

Horizontal Radiation Pattern H Plane



Vertical Radiation Pattern E Plane

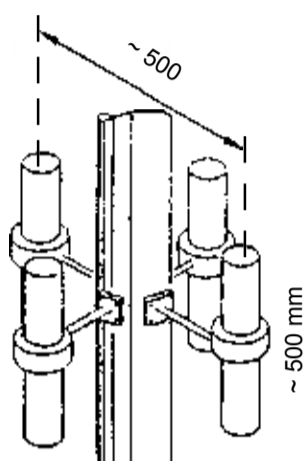


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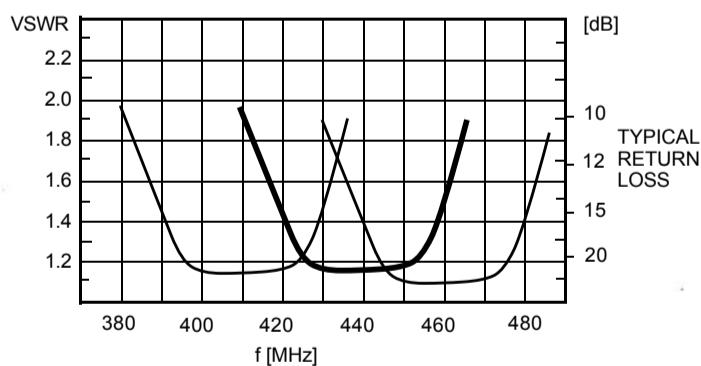
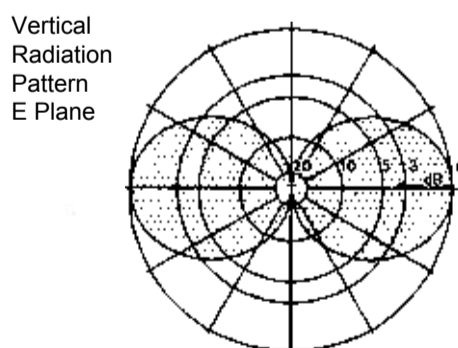
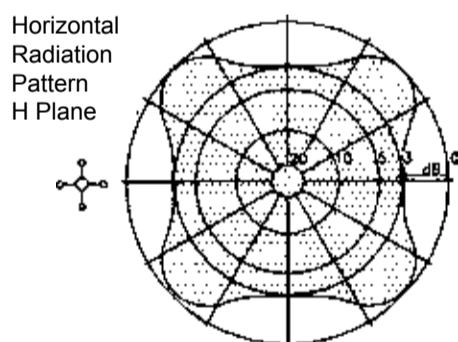
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**OMNIDIRECTIONAL ANTENNA
WS 400 54 1.
390 ... 480 MHz**



TYPE NO.	WS 400 54 17 : 390 - 430 MHz WS 400 54 18 : 420 - 460 MHz WS 400 54 19 : 440 - 480 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. $\lambda/2$ 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	inside the mast ending with N male other termination on request
GROUNDING	all metal parts are DC grounded
DELIVERY	four dipoles and transformer for the dipoles
MOUNTING	mast with outer $\varnothing \leq 104$ mm with clamp of hot dip galvanized steel
MATERIAL	aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene
WEIGHT	11 kg
WIND AREA	0.15 m ²
WIND LOAD	190 N (150 km/h) 145 N (130 km/h)

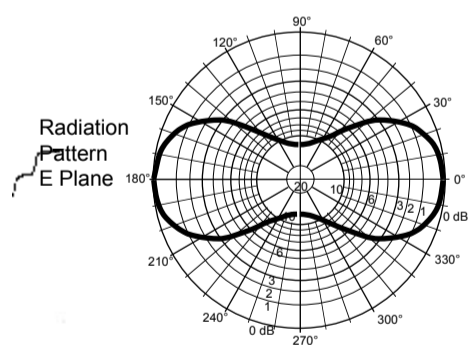
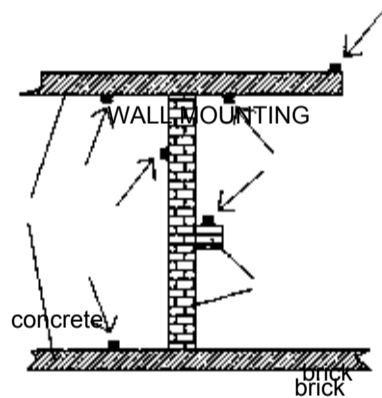
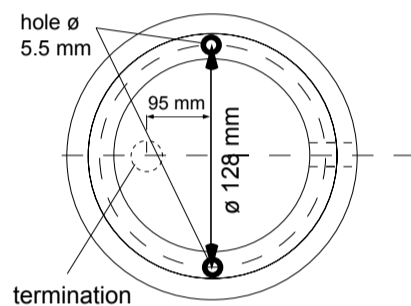
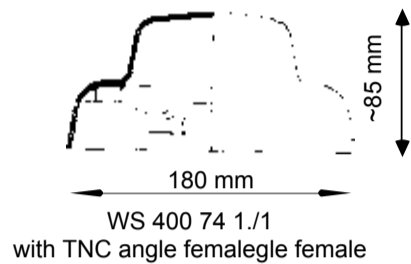


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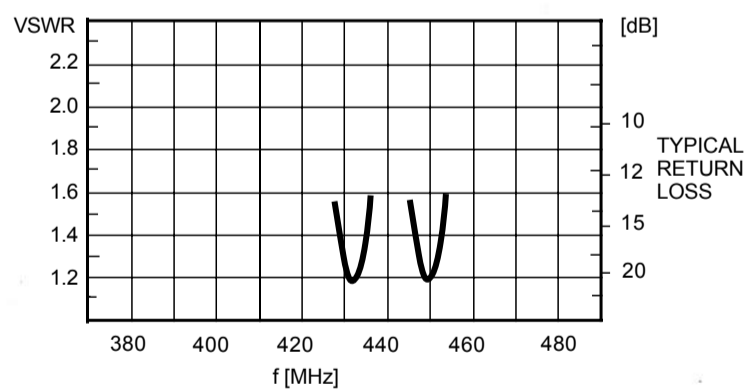
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OMNIDIRECTIONAL HAT ANTENNA FOR WALL MOUNTING
WS 400 74 1. .
430 ... 470 MHz



TYPE NO.	WS 400 74 14 .: 430 - 435 MHz WS 400 74 18 .: 448 - 453 MHz further frequencies on request
DESCRIPTION	antenne with white radome, other colours: option The antenna needs no counterpoise and works on walls of brick or concrete.
POLARIZATION	vertical or horizontal (depends on mounting)
IMPEDANCE	50 Ω
GAIN	0 dB (ref. $\lambda/2$ dipole)
VSWR	< 1.3, on tuned frequency bandwidth (SWR 1.5) \pm 2.5 MHz
POWER	max. 100 watts
3 dB BEAMWIDTH	horizontal, H plane: 360° vertical, E plane: 78° depends on wall construction
TERMINATION	WS 400 74 1. 1: TNC angle female WS 400 74 1. 2: TNC female other termination on request
GROUNDING	all metal parts are DC grounded
MOUNTING	with 2 bolts and 2 dowels (included)
MATERIAL	aluminium, bolts of stainless steel, weather-resistant plastics, radome of halogenfree plastics
WEIGHT	0.6 kg
WIND AREA	0.007 m ²



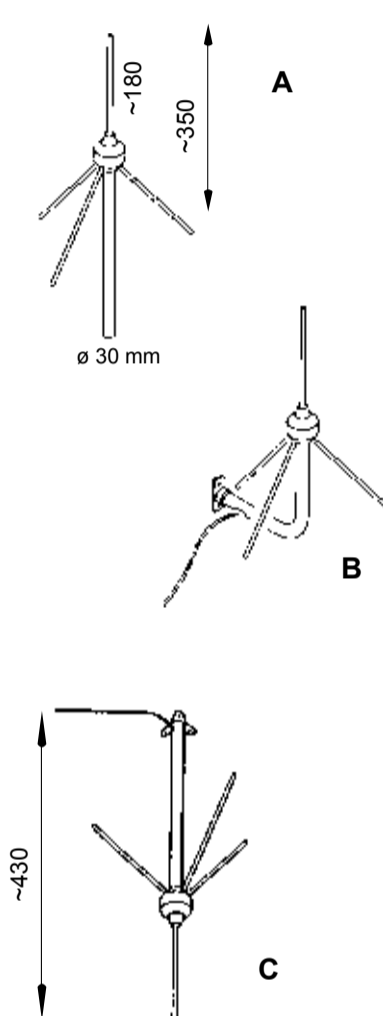
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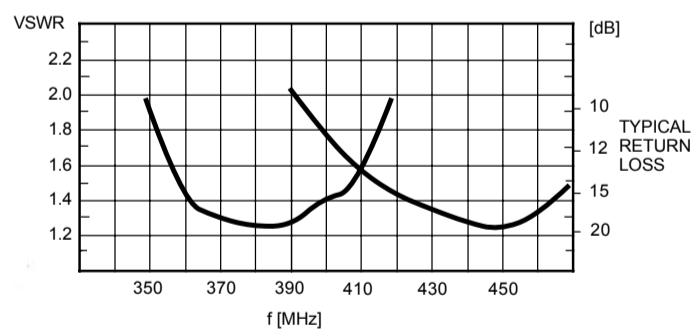
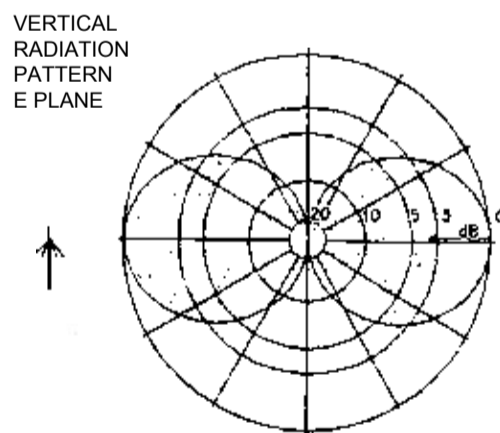
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OMNIDIRECTIONAL ANTENNA

WS 400 81 5. .
370 ... 470 MHz



TYPE NO.	WS 400 81 57 . : 370 - 400 MHz WS 400 81 59 . : 430 - 470 MHz further frequencies on request
DESCRIPTION	light ground plane antenna without radome
POLARIZATION	vertical
IMPEDANCE	50 Ω
GAIN	0 dB (ref. λ/2 dipole)
VSWR	< 1.5
POWER	max. 150 watts
3 dB BEAMWIDTH	horizontal, H plane: 360° vertical, E plane: 78°
TERMINATION	~ 1.5 m cable RG 213/U ending with N male other termination on request
GROUNDING	radiator not grounded, lightning protector type LPN is recommended
MOUNTING	WS 4 .. A on mast with clamp WB 137 (option) WS 4 .. B on walls with bracket and flange nr. 22 WS 4 .. C on ceiling/floor with flange no 22
MATERIAL	aluminium, bolts of stainless steel, weather-resistant plastics
WEIGHT	~ 0.9 kg
WIND AREA	0.03 m ²
WIND LOAD	38 N (150 km/h) 30 N (130 km/h)



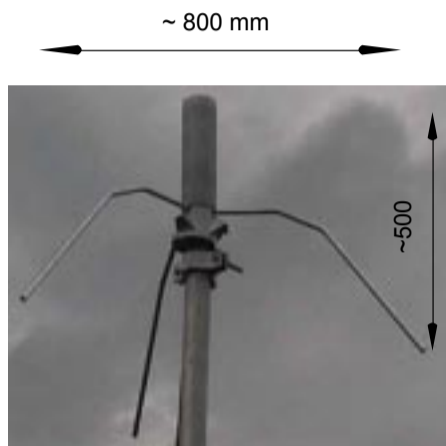
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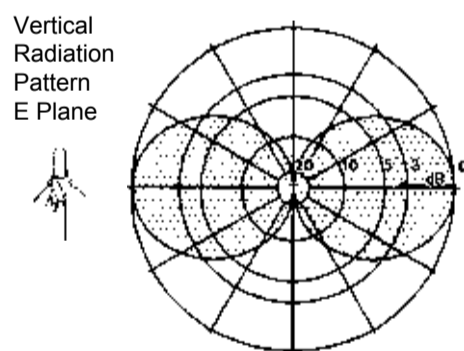


BROADBAND OMNIDIRECTIONAL ANTENNA

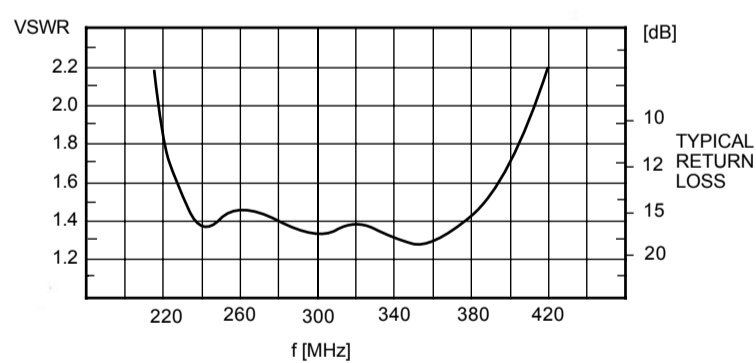
WS 400 83 11
230 - 400 MHz



cable running
inside the mast



TYPE NO.	WS 400 83 11: 230 - 400 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	< 1.5, at the limits of the band <1.8
POWER	max. 150 watts
3 dB BEAMWIDTH	horizontal, H plane: 360° vertical, E plane: 270 MHz 110° 330 MHz 78°
TERMINATION	~ 1 m cable ending with N male other termination on request
GROUNDING	radiator not grounded lightning protector recommended
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	1.9 kg
WIND AREA	0.05 m ²
WIND LOAD	63 N (150 km/h) 47 N (130 km/h)



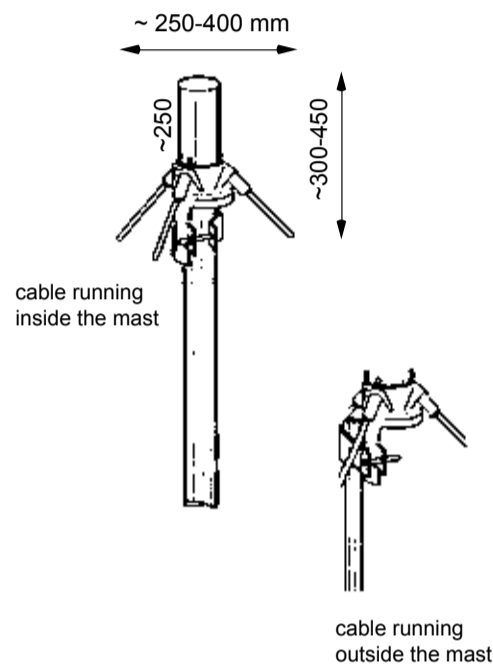
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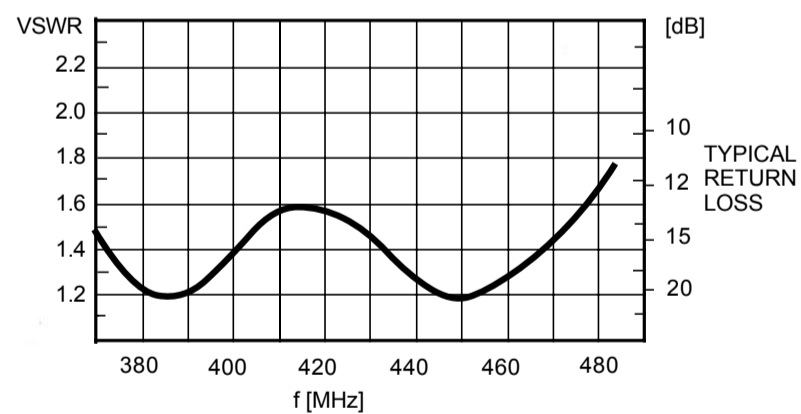
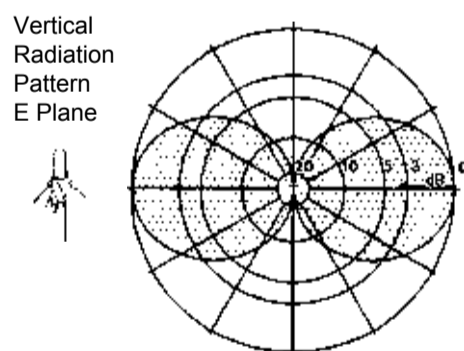
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**OMNIDIRECTIONAL ANTENNA
WS 400 84 10
380 - 470 MHz**

NEW



TYPE NO.	WS 400 84 10: 380 - 470 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. $\lambda/2$ dipole)
VSWR	< 1.5 preferred, other <1.6
POWER	max. 150 watts
3 dB BEAMWIDTH	horizontal, H plane: 360° vertical, E plane: 78°
TERMINATION	~ 0.5 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 \varnothing mast cable runs inside or outside the mast
MATERIAL	aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene
WEIGHT	1.3 kg
WIND AREA	0.023 m ²
WIND LOAD	30 N (150 km/h) 22 N (130 km/h)

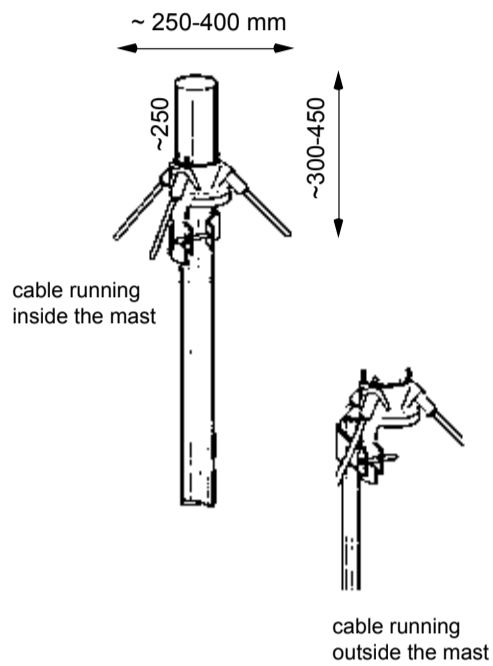


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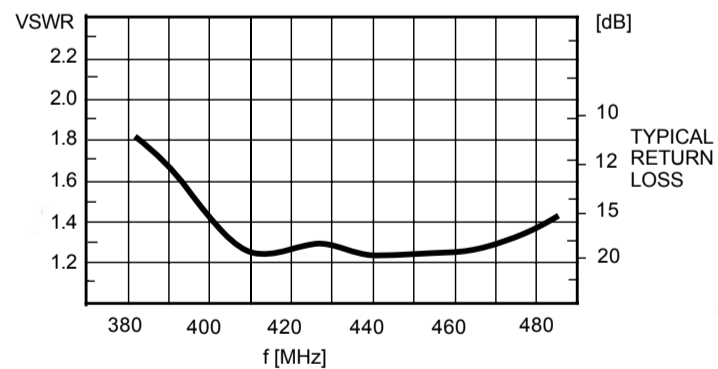
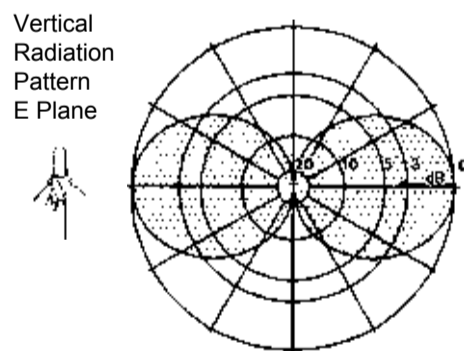
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**OMNIDIRECTIONAL ANTENNA
WS 400 84 1.
220 ... 470 MHz**



TYPE NO.	WS 400 84 14: 220 - 250 MHz WS 400 84 15: 240 - 280 MHz WS 400 84 16: 270 - 315 MHz WS 400 84 17: 304 - 370 MHz WS 400 84 18: 340 - 410 MHz WS 400 84 19: 400 - 470 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	WS 400 ... 9	WS 400 .. 4
WIND AREA	1.3 kg	1.45 kg
WIND LOAD	0.023 m ²	0.033 m ²
	30 N (150 km/h)	42 N
	22 N (130 km/h)	31 N
	WS 400 84 19	

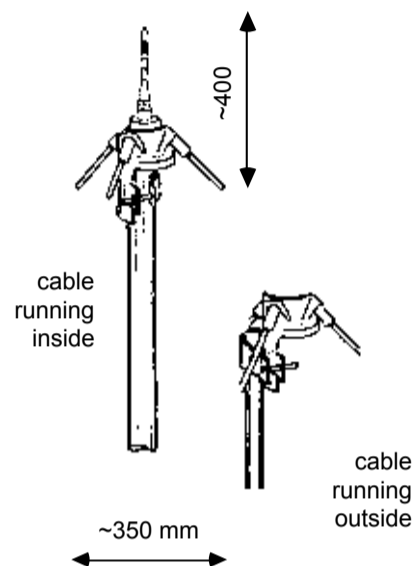


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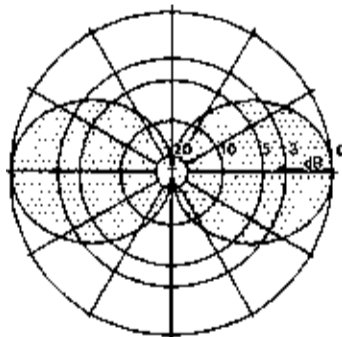


OMNIDIRECTIONAL ANTENNA, ADJUSTABLE
WS 400 86 1.
230 ... 480 MHz



TYPE NO.	WS 400 86 16: 230 ... 320 MHz WS 400 86 17: 330 ... 410 MHz WS 400 86 18: 390 ... 480 MHz further frequencies on request
DESCRIPTION	light ground plane antenna with adjustable radiator
POLARIZATION	vertical
IMPEDANCE	50 Ω
GAIN	0 dB (ref. λ/2 dipole)
VSWR	< 1.3, on tuned frequency
POWER	max. 150 watts
3 dB BEAMWIDTH	horizontal, H plane: 360° vertical, E plane: 78°
TERMINATION	1 m cable RG 213/U ending with N male other termination on request
GROUNDING	radiator not grounded, lightning protector recommended
MOUNTING	to 40 - 66 mm ø mast cable runs inside or outside the mast
MATERIAL	aluminium, bolts of stainless steel, weather-resistant plastics
WEIGHT	0.7 kg
WIND AREA	ca. 0.04 m ²
WIND LOAD	50 N bei 150 km/h 38 N bei 130 km/h

Vertical
Radiation
Pattern
E Plane



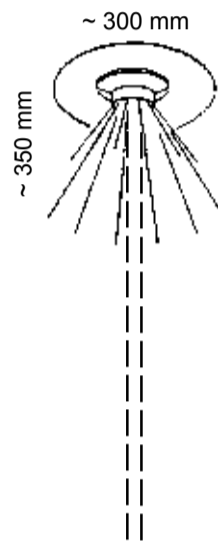
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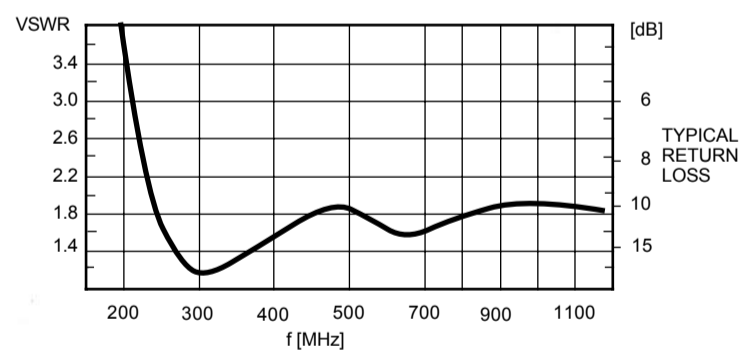
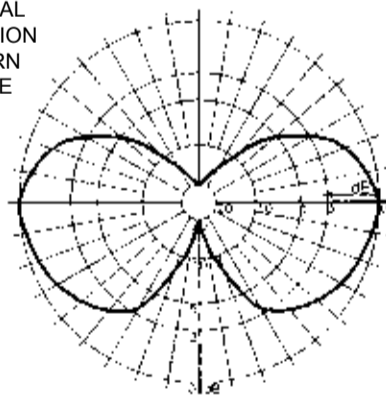
**DISCONE ANTENNA
WS 400 92 1
225 - 1200 MHz**



New! radiator grounded

TYPE NO.	WS 400 92 1: 225 - 1200 MHz
POLARIZATION	vertical
IMPEDANCE	50 Ω
GAIN	0 dB (ref. λ/2 dipole)
VSWR	≤ 1.8, at the limits of the band ≤ 2
POWER	max. 200 watts (depending on frequency)
3 dB BEAMWIDTH	horizontal, H plane: 360°, ± 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 tubular mast with outer ø 42 mm (sandartd) cable running inside the mast clamps for other mast ø on request, with reduction to the supporting mast (option) additional parts have to be ordered separately
MATERIAL	aluminium, bolts of stainless steel, weather-resistant plastics
WEIGHT	2 kg
WIND AREA	0.08 m ²
WIND LOAD	102 N (150 km/h) 76 N (130 km/h)

VERTICAL
RADIATION
PATTERN
H PLANE



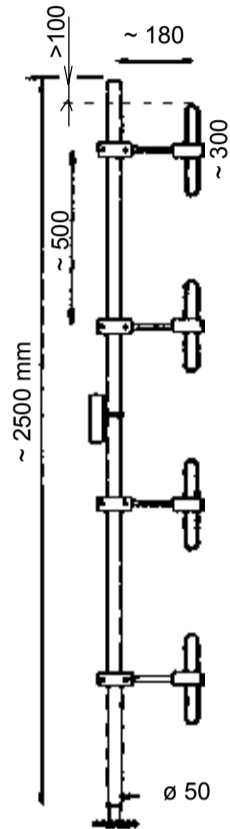
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**OMNIDIRECTIONAL OFFSET PATTERN GAIN ANTENNA
WS 401 02 12 .
375 ... 470 MHz**



TYPE NO. WS 401 02 12 7 : 375 - 400 MHz
WS 401 02 12 8 : 400 - 435 MHz
WS 401 02 12 9 : 435 - 470 MHz
further frequencies and tilt on request

POLARIZATION vertical

IMPEDANCE 50 Ω

GAIN ref. λ/2 dipole
8 dB in forward direction
2 dB in reverse direction

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

POWER max. 150 watts

3 dB BEAMWIDTH horizontal, H plane: 180°
vertical, E plane: 20°

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

GROUNDING all metal parts are DC grounded

DELIVERY 4 dipoles with junction and box WAK 1

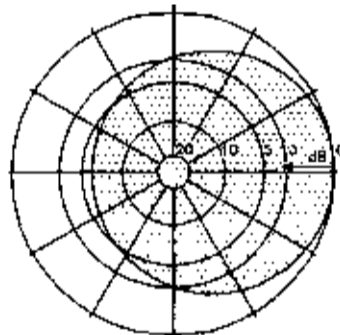
MOUNTING mast-ø clamps
30 - 80 mm WG 8 (standard)
50 - 104 mm WG 9 (option)
clamp for other mast-ø on request

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

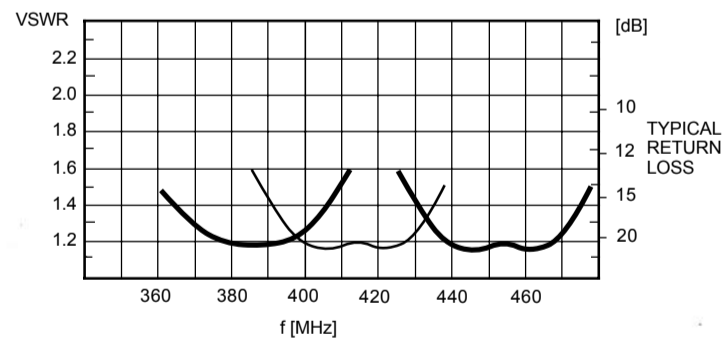
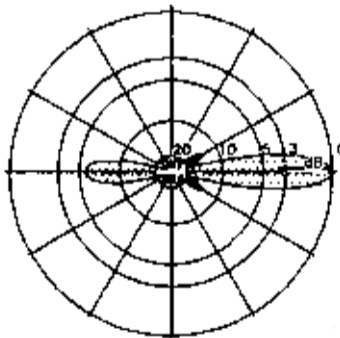
WEIGHT 7.1 kg
WIND AREA 0.15 m²
WIND LOAD 192 N (150 km/h)
145 N (130 km/h)

Horizontal Radiation Pattern H Plane

MAST DIPOLE



Vertical Radiation Pattern E Plane

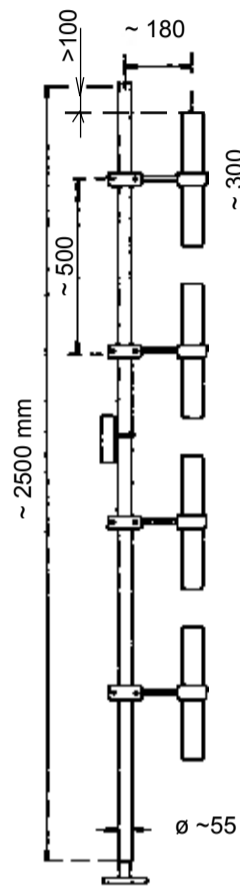


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OMNIDIRECTIONAL OFFSET PATTERN GAIN ANTENNA
WS 401 03 12 .
375 ... 470 MHz



TYPE NO. WS 401 03 12 7 : 375 - 400 MHz
 WS 401 03 12 8 : 400 - 435 MHz
 WS 401 03 12 9 : 435 - 470 MHz
 further frequencies and tilt 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 ref. λ/2 dipole
 8 dB in forward direction
 2 dB in reverse direction

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

POWER max. 300 watts

3 dB BEAMWIDTH horizontal, H plane: 180°
 vertical, E plane: 20°

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

GROUNDING all metal parts are DC grounded

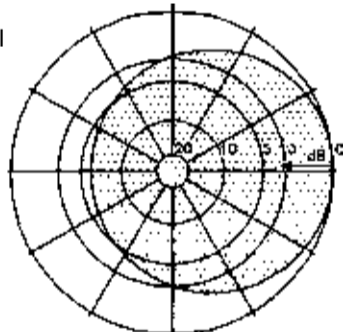
DELIVERY 4 dipoles with junction and box WAK 1

MOUNTING mast-ø clamps
 30 - 80 mm WG 5 (standard)
 50 - 104 mm WG 6 (option)
 clamp for other mast-ø on request

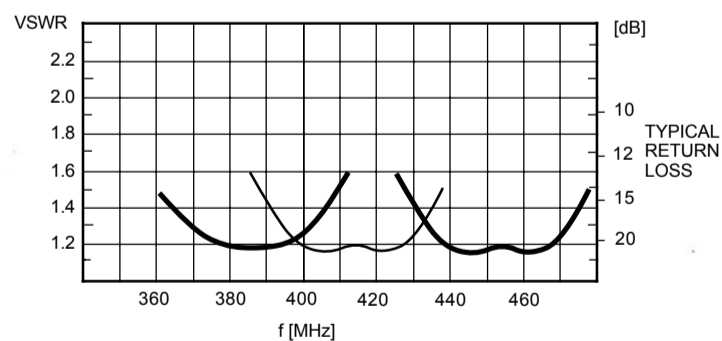
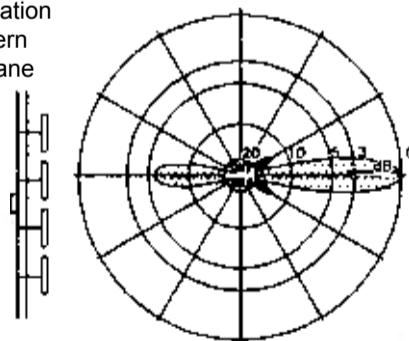
MATERIAL aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene

WEIGHT 14 kg
WIND AREA 0.24 m²
WIND LOAD 310 N (150 km/h)
 230 N (130 km/h)

Horizontal Radiation Pattern H Plane



Vertical Radiation Pattern E Plane

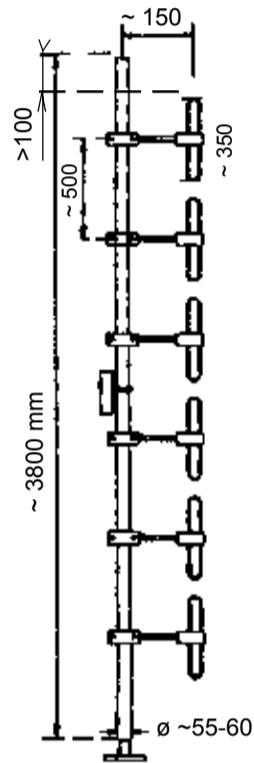


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OMNIDIRECTIONAL OFFSET-PATTERN GAIN ANTENNA
WS 401 02 13 .
370 ... 470 MHz

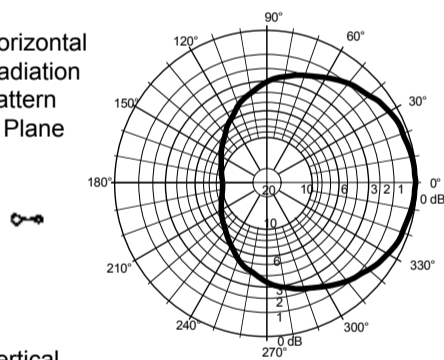


TYPE NO.	WS 401 02 13 7 : 370 - 400 MHz WS 401 02 13 8 : 400 - 435 MHz WS 401 02 13 9 : 435 - 470 MHz further frequencies and tilt on request
POLARIZATION	vertical
IMPEDANCE	50 Ω
GAIN	10 dB (ref. to λ/2 dipole) 2 dB in reverse direction
VSWR	≤ 1.4
POWER	max. 150 watts, higher ratings on request
3 dB BEAMWIDTH	horizontal (H-plane) 170° vertical (E-plane) 13°
TERMINATION	in the junction box WAK 1 with N male other termination on request
GROUNDING	all metal parts are DC grounded
DELIVERY	6 dipoles with junction and box WAK 1
MOUNTING	<i>mast</i> ∅ <i>clamp (see chapt. 10)</i> 30 - 80 mm WG 8 (standard) 50 - 104 mm WG 9 (option) clamp for other mast-∅ on request

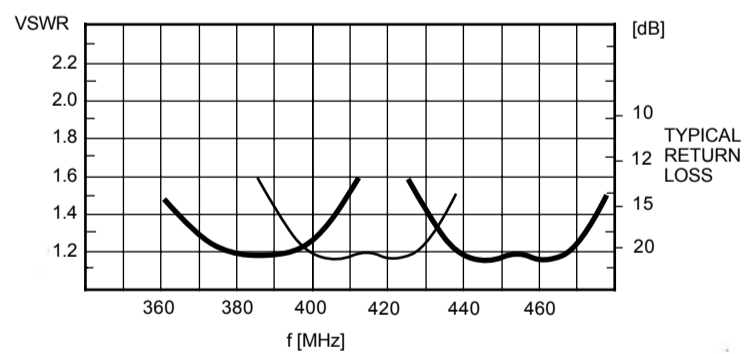
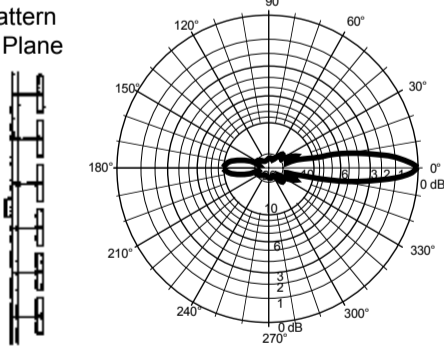
MATERIAL aluminium, bolts of stainless steel, weather-resistant plastics

WEIGHT 11 kg
WIND AREA 0.23 m²
WIND LOAD 300 N (150 km/h)
 230 N (130 km/h)

Horizontal Radiation Pattern H Plane



Vertical Radiation Pattern E Plane

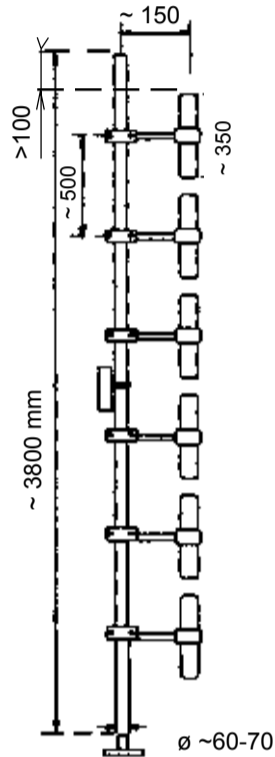


KW 1-08

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



OMNIDIRECTIONAL OFFSET-PATTERN GAIN ANTENNA
WS 401 03 13 .
370 ... 470 MHz



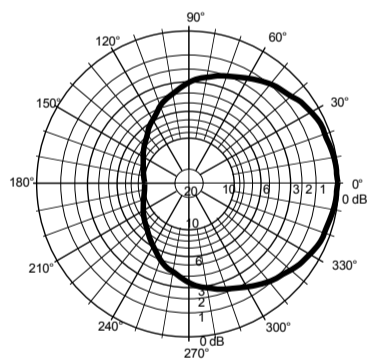
TYPE NO.	WS 401 03 13 7 : 370 - 400 MHz WS 401 03 13 8 : 400 - 435 MHz WS 401 03 13 9 : 435 - 470 MHz further frequencies and tilt on request
DESCRIPTION	The radome protects the antenna dipoles against environmental influences, icing, and increases the lightning protection.
POLARIZATION	vertical
IMPEDANCE	50 Ω
GAIN	10 dB (ref. to $\lambda/2$ dipole) 2 dB in reverse direction
VSWR	≤ 1.4
POWER	max. 300 watts, higher ratings on request
3 dB BEAMWIDTH	horizontal (H-plane) 170° vertical (E-plane) 13°
TERMINATION	in the junction box WAK 1 with N male other termination on request
GROUNDING	all metal parts are DC grounded
DELIVERY	6 dipoles with junction and box WAK 1

MOUNTING	<i>mast \varnothing</i> <i>clamp (see chapt. 10)</i> 30 - 80 mm WG 5 (standard) 50 - 104 mm WG 6 (option) clamp for other mast- \varnothing on request
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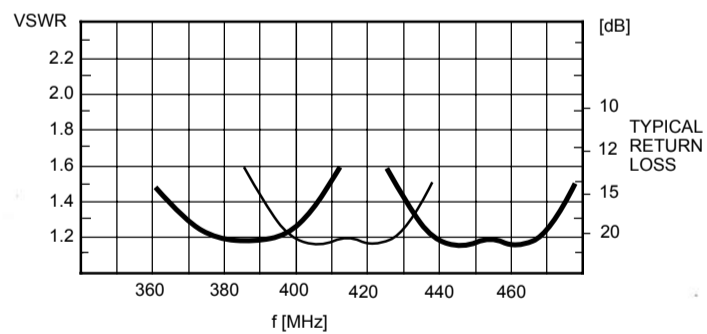
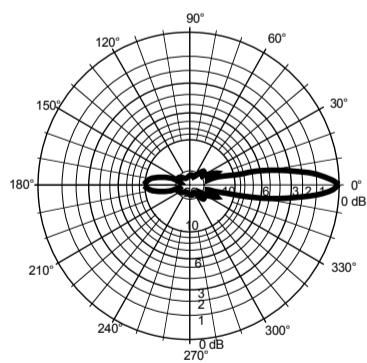
MATERIAL aluminium, bolts of stainless steel,
radome of UV-stabilized polyethylene

WEIGHT	17 kg
WIND AREA	0.36 m ²
WIND LOAD	460 N (150 km/h) 350 N (130 km/h)

Horizontal Radiation Pattern H Plane



Vertical Radiation Pattern E Plane

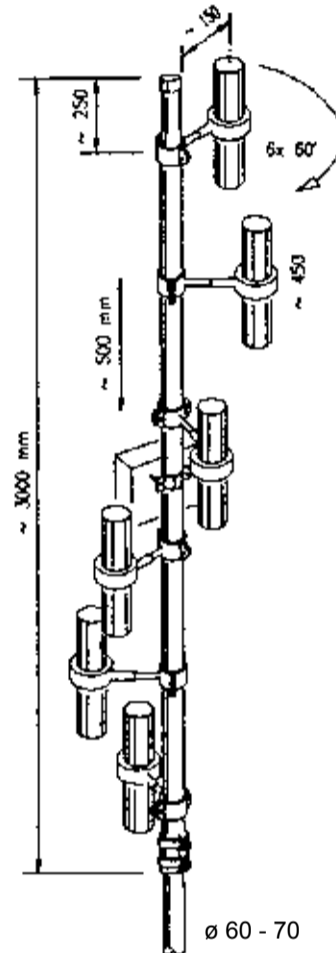


KW 1-08

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OMNIDIRECTIONAL GAIN ANTENNA
WS 401 03 15 .
390 - 470 MHz



TYPE NO. **WS 401 03 15 8: 390 - 435 MHz**
WS 401 03 15 9: 425 - 470 MHz
 further frequencies other tilt 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 7 dB (ref. λ/2 dipole)

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

POWER max. 300 watts, higher ratings on request

3 dB BEAMWIDTH horizontal, H plane: 360°
 vertical, E plane: 12°
 the E plane has an uptilt of 2°

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

GROUNDING all metal parts are DC grounded

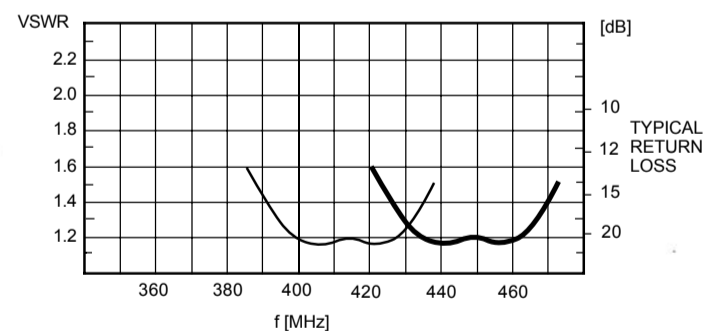
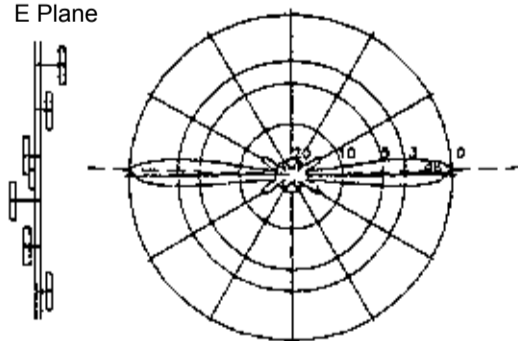
MASTPART 6 dipoles with junction and box WAK 1

MOUNTING *mast ø* *clamp (see chapt. 10)*
 30 - 80 mm WG 5 (standard)
 50 - 104 mm WG 6 (option)
 clamps for other mast ø on request

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

WEIGHT 18 kg
WIND AREA 0.55 m²
WIND LOAD 770 N (150 km/h)
 575 N (130 km/h)

Vertical
 Radiation
 Pattern
 E Plane

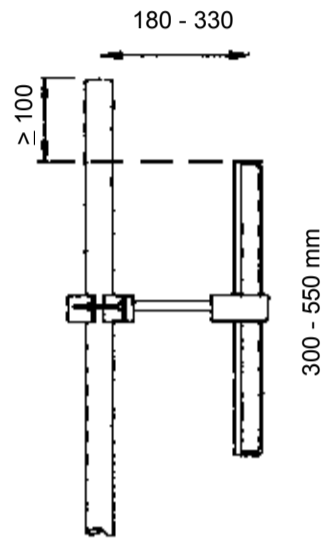


KW 1-08

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



OMNIDIRECTIONAL OFFSET-PATTERN ANTENNA
WS 401 12 10 .
225 ... 470 MHz



TYPE NO. WS 401 12 10 6: 225 - 230 MHz
 WS 401 12 10 7: 290 - 370 MHz
 WS 401 12 10 8: 350 - 440 MHz
 WS 401 12 10 9: 380 - 470 MHz
 further frequencies on request

POLARIZATION vertical
IMPEDANCE 50 Ω
GAIN 3 dB (ref. λ/2 dipole)
 5 dBi
VSWR < 1.3, at the limits of the band <1.4

POWER max. 150 watts
3 dB BEAMWIDTH horizontal, H plane: 180°
 vertical, E plane: 75°

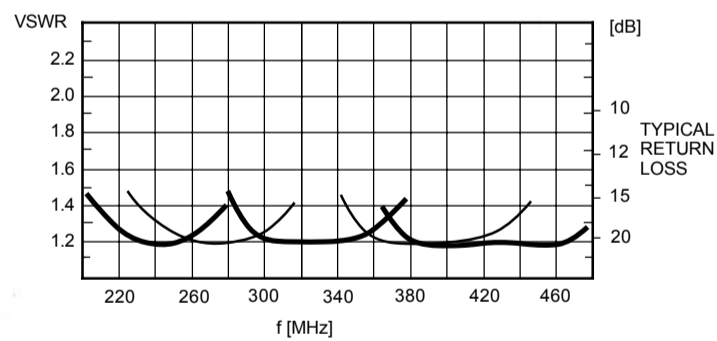
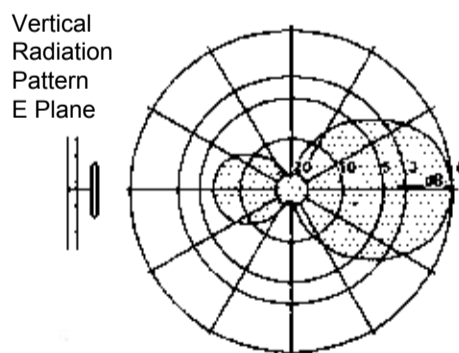
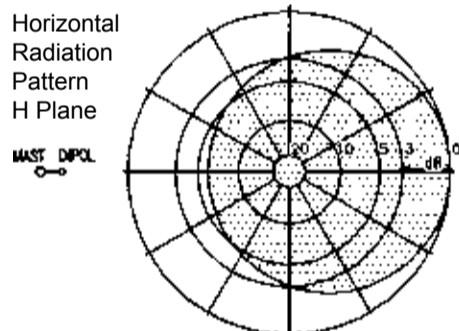
TERMINATION 2 m cable RG 213/U ending with N male
 other termination on request

GROUNDING all metal parts are DC grounded

MOUNTING mast-ø mounting clamps
 30 - 80 mm WG 8 (standard)
 50 - 104 mm WG 9 (option)
 clamp for other mast-ø on request

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

WEIGHT 1.2 kg
WIND AREA 0.021 m²
WIND LOAD 28 N (150 km/h)
 20 N (130 km/h)



KW 1-08

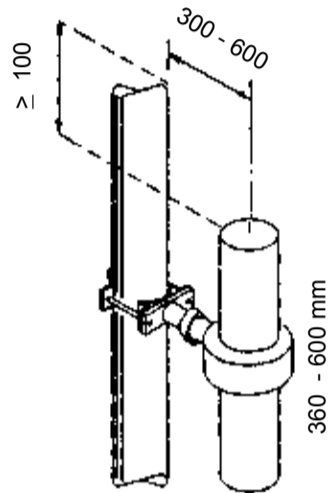
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OMNIDIRECTIONAL OFFSET-PATTERN ANTENNA

**WS 401 13 10 .
225 ... 470 MHz**



TYPE NO. WS 401 13 10 6: 225 - 300 MHz
 WS 401 13 10 7: 290 - 370 MHz
 WS 401 13 10 8: 360 - 425 MHz
 WS 401 13 10 9: 380 - 470 MHz
 further frequencies on request

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

POLARIZATION vertical

IMPEDANCE 50 Ω

GAIN 3 dB (ref. λ/2 dipole)
 5 dBi

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

POWER 300 watts

3 dB BEAMWIDTH horizontal, H plane: 180°
 vertical, E plane: 75°

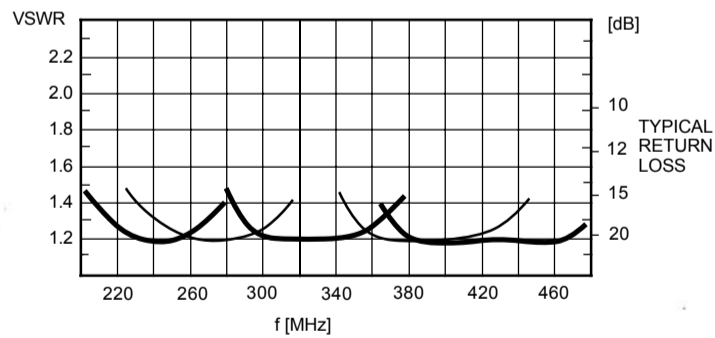
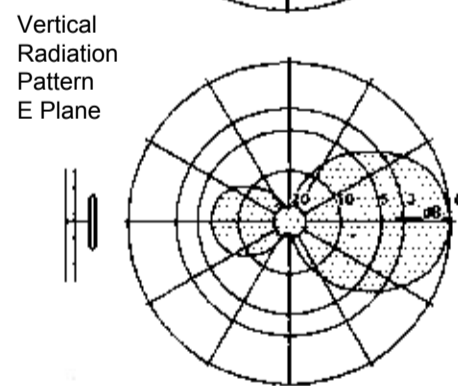
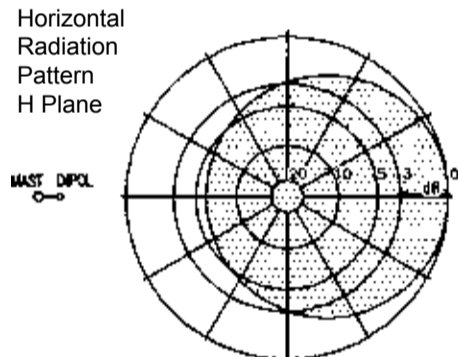
TERMINATION 2 m cable RG 213/U ending with N male
 other termination on request

GROUNDING all metal parts are DC grounded

MOUNTING mast-ø clamp
 30 - 80 mm WG 5 (standard)
 50 - 104 mm WG 6 (option)
 clamp for other mast-ø on request

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

WEIGHT 2.8 kg
WIND AREA 0.044 m²
WIND LOAD 57 N (150 km/h)
 43 N (130 km/h)

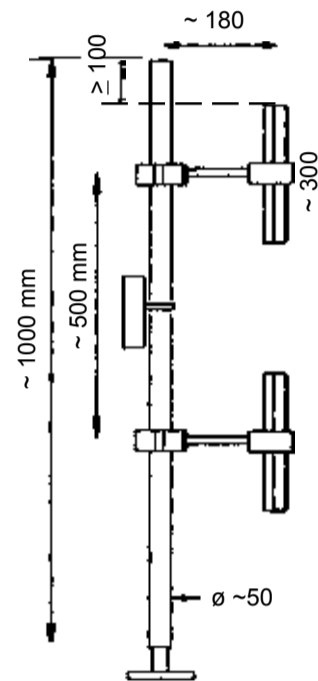


KW 1-08

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OMNIDIRECTIONAL OFFSET PATTERN GAIN ANTENNA
WS 401 12 11 .
230 ... 470 MHz



TYPE NO. WS 401 12 11 5 : 230 - 275 MHz
 WS 401 12 11 6 : 260 - 310 MHz
 WS 401 12 11 7 : 300 - 360 MHz
 WS 401 12 11 8 : 350 - 420 MHz
 WS 401 12 11 9 : 380 - 470 MHz
 further frequencies and tilt on request

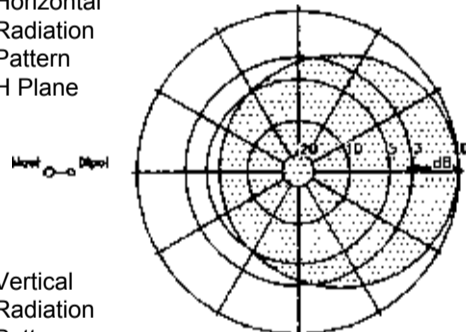
POLARIZATION vertical
IMPEDANCE 50 Ω
GAIN ref. λ/2 dipole
 6 dB in forward direction (8 dBi)
 0 dB in reverse direction (2 dBi)
VSWR < 1.3, at the limits of the band < 1.4
POWER max. 150 watts
3 dB BEAMWIDTH horizontal, H plane: 180°
 vertical, E plane: 40°
TERMINATION in then junction box WAK 1 ending with N male
 other termination on request
GROUNDING all metal parts are DC grounded
DELIVERY 2 dipoles with junction and box WAK 1

MOUNTING mast-ø clamps
 30 - 80 mm WG 8 (standard)
 50 - 104 mm WG 9 (option)
 clamp for other mast-ø on request

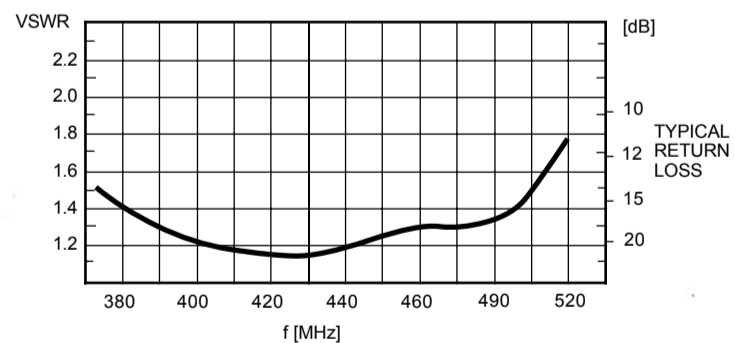
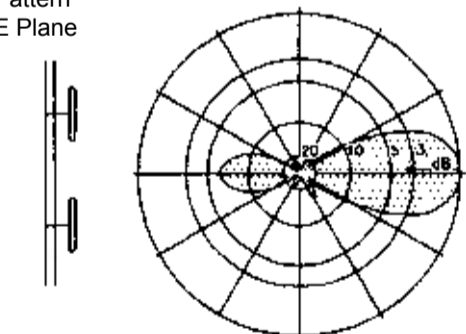
MATERIAL aluminium, bolts of stainless steel, weather-resistant plastics

WEIGHT 4 - 5 kg
WIND AREA 0.11 - 0.18 m²
WIND LOAD 140 - 230 N (150 km/h)
 106 - 172 N (130 km/h)

Horizontal Radiation Pattern H Plane



Vertical Radiation Pattern E Plane

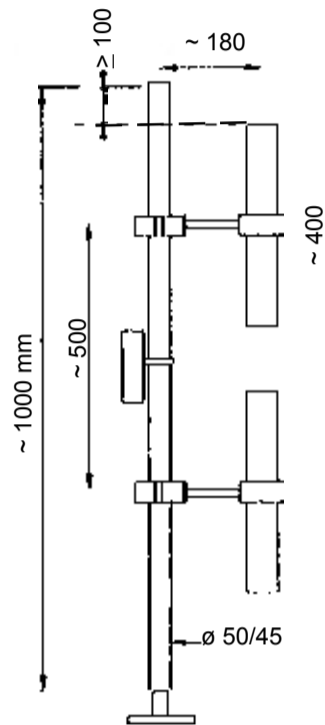


KW 1-08

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



OMNIDIRECTIONAL OFFSET PATTERN GAIN ANTENNA
WS 401 13 11 9
390 - 470 MHz



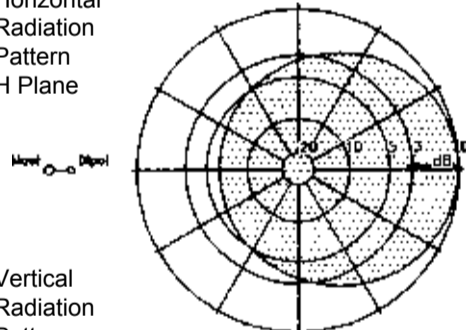
TYPE NO.	WS 401 13 11 9 : 380 - 470 MHz
	further frequencies and tilt on request
DESCRIPTION	heavy duty, with radome The radome protects the antenna dipole from environmental influences, icing, and increases the lightning protection.
POLARIZATION	vertical
IMPEDANCE	50 Ω
GAIN	ref. λ/2 dipole 6 dB in forward direction (8dBi) 0 dB in reverse direction (2 dBi)
VSWR	< 1.3, at the limits of the band <1.4
POWER	max. 300 watts
3 dB BEAMWIDTH	horizontal, H plane: 180° vertical, E plane: 40°
TERMINATION	in the junction box ending with N male other termination on request
GROUNDING	all metal parts are DC grounded
DELIVERY	2 dipoles with junction and box WAK 1

MOUNTING	<i>mast-ø</i>	<i>clamps</i>
	30 - 80 mm	WG 5 (standard)
	50 - 104 mm	WG 6 (option)
	clamp for other mast-ø on request	

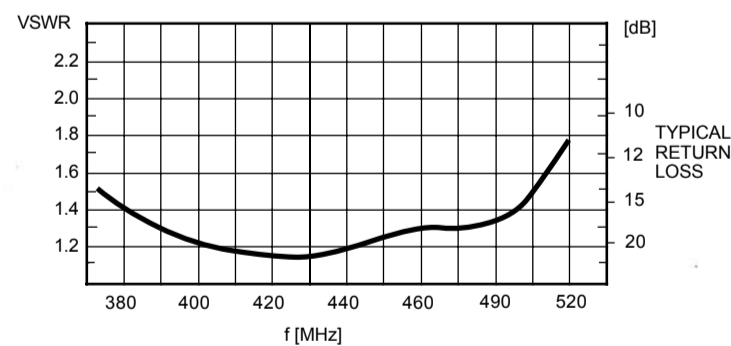
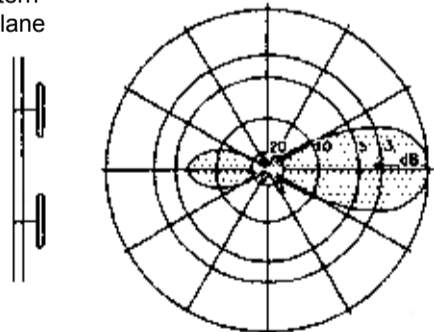
MATERIAL aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene

WEIGHT	4.2 kg
WIND AREA	0.11 m ²
WIND LOAD	140 N (150 km/h) 160 N (130 km/h)

Horizontal Radiation Pattern H Plane



Vertical Radiation Pattern E Plane

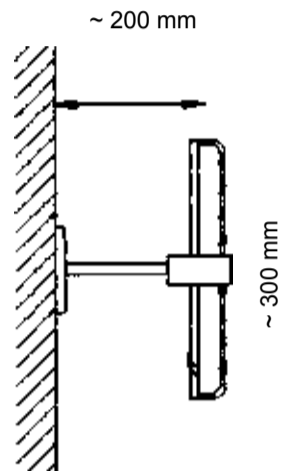


KW 1-08

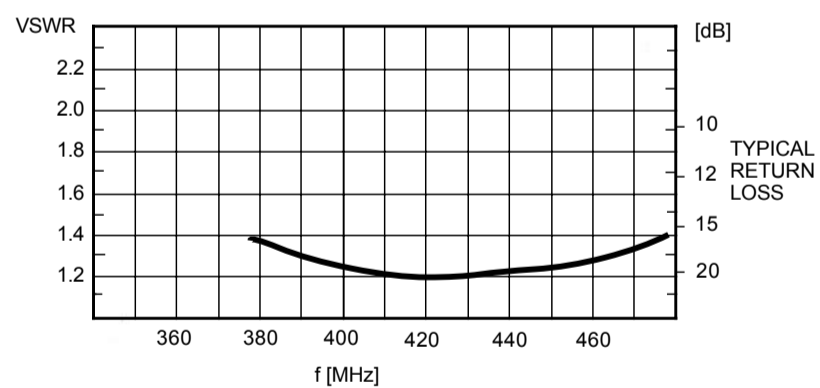
WIPIC reserves the right to amend specifications in the light of continuing development.

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DIPOLE FOR WALL MOUNTING
WS 401 12 9 9
380 - 470 MHz



TYPE NO.	vertical polarization WS 401 12 19 9: 380 - 470 MHz horizontal polarization WS 401 12 29 9: 380 - 470 MHz further frequencies on request
IMPEDANCE	50 Ω
GAIN	0 - 6 dB (ref. $\lambda/2$ dipole), depends on wall material
VSWR	< 1.3, at the limits of the band < 1.5
POWER	max. 150 watts, depends on wall material
3 dB BEAMWIDTH	depends on wall material
TERMINATION	2 m cable RG 213/U ending with N male other termination on request
GROUNDING	all metal parts are DC grounded
MOUNTING	with flange no. 21 on wall
MATERIAL	aluminium, bolts of stainless steel, weather-resistant plastics
WEIGHT	0.9 kg
WIND AREA	0.022 m ²
WIND LOAD	28 N (150 km/h) 21 N (130 km/h)



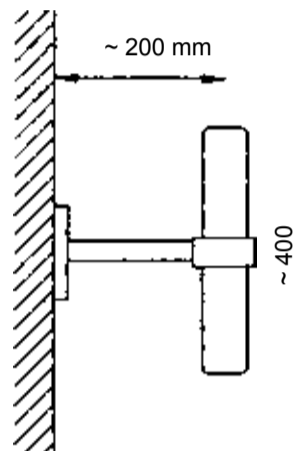
KW 1-08

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

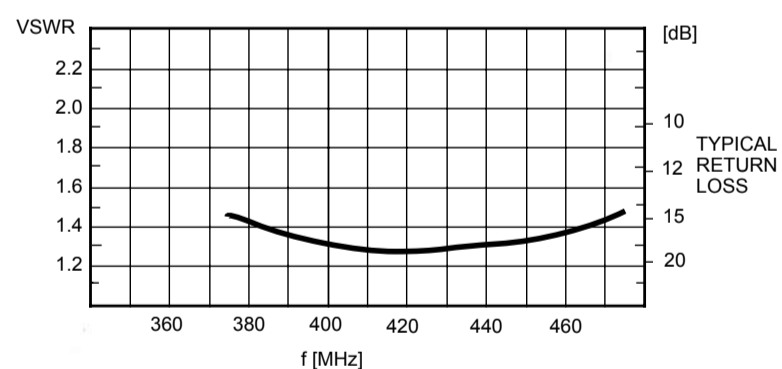
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DIPOLE FOR WALL MOUNTING
WS 401 13 .9 9
380 - 470 MHz



TYPE NO.	vertical polarization WS 401 13 19 9: 380 - 470 MHz horizontal polarization WS 401 13 29 9: 380 - 470 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.
IMPEDANCE	50 Ω
GAIN	0 - 6 dB (ref. $\lambda/2$ dipole), depends on wall material
VSWR	< 1.3, at the limits of the band <1.5
POWER	max. 300 watts
3 dB BEAMWIDTH	depends on wall material
TERMINATION	2 m cable RG 213/U ending with N male other termination on request
GROUNDING	all metal parts are DC grounded
MOUNTING	on wall with flange
MATERIAL	aluminium, bolts of stainless steel, weather-resistant plastics, radome of UV-stabilized polyethylene
WEIGHT	1.6 kg
WIND AREA	0.03 m ²
WIND LOAD	38 N (150 km/h) 28 N (130 km/h)



KW 1-08

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

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**ANTENNA FOR WALL MOUNTING
WS 401 22 19 .
365 ... 470 MHz**



TYPE NO. WS 401 22 19 7: 375 - 405 MHz
WS 401 22 19 8: 400 - 430 MHz
WS 401 22 19 9: 430 - 470 MHz
further frequencies on request

DESCRIPTION light dipole
POLARIZATION vertical (horizontal on request)
IMPEDANCE 50 Ω
GAIN ~3 dB depending on wall material
VSWR < 1.3, at the limits of the band <1.5
POWER max. 150 watts

3 dB BEAMWIDTH horizontal, H plane: 180°
vertical, E plane: 75°

TERMINATION 1 m cable RG 303/U ending with N male
other termination on request

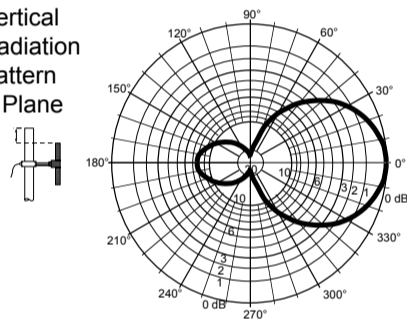
GROUNDING all metal parts are DC grounded

MOUNTING with flange
(similar no. 12)

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

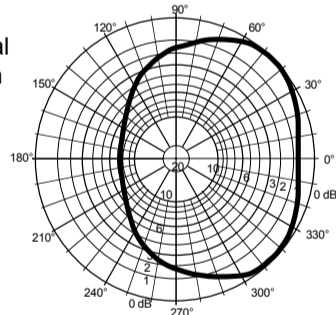
WEIGHT 0.5 kg
WIND AREA 0.015 m²
WIND LOAD 20 N (150 km/h)
15 N (130 km/h)

Vertical
Radiation
Pattern
E Plane



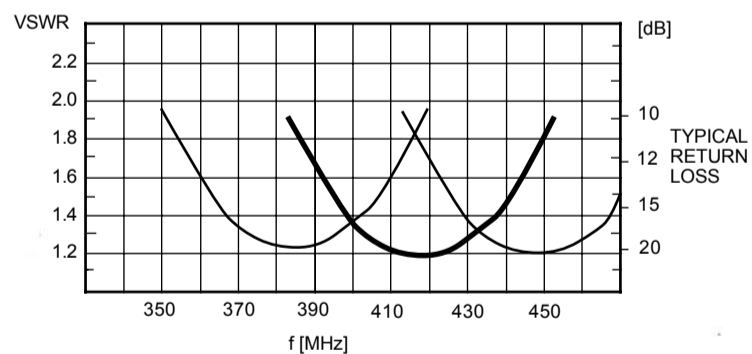
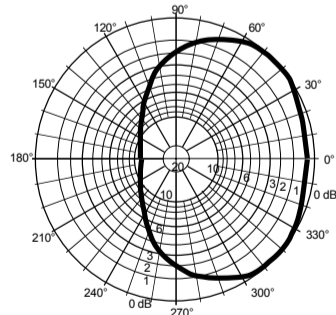
∅ mast 45 mm

Horizontal
Radiation
Pattern
H Plane



MAST DIPOL
D→

∅ mast 80 mm



KW 1-08

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

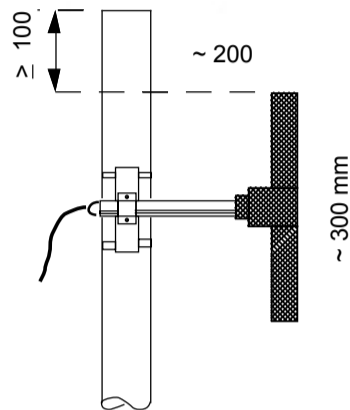


2 dB OMNIDIRECTIONAL OFFSET PATTERN ANTENNA

WS 401 24 10 8

400 - 470 MHz

NEW



TYPE NO. **WS 401 24 10 8: 400 - 470 MHz**
further frequencies on request

DESCRIPTION light dipole with radome
The radome protects the antenna dipole from environmental influences, icing, and increases the lightning protection, type for wall mounting on request

POLARIZATION vertical (horizontal on request)

IMPEDANCE 50 Ω

GAIN 2 dB (ref. $\lambda/2$ dipole)
-5 dB in reverse direction

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

POWER max. 100 watts

3 dB BEAMWIDTH horizontal, H plane: 210°
vertical, E plane: 78°

TERMINATION 1 m cable RG 303/U ending with N male
other termination on request

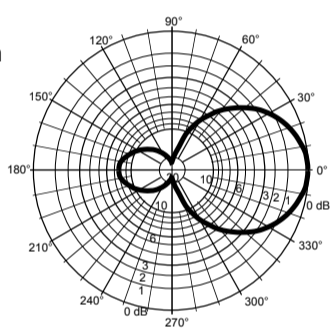
GROUNDING all metal parts are DC grounded

MOUNTING to 30 - 80 mm \varnothing mast with WG 21-80 (see *chapt. 10*)
clamps for other mast \varnothing on request

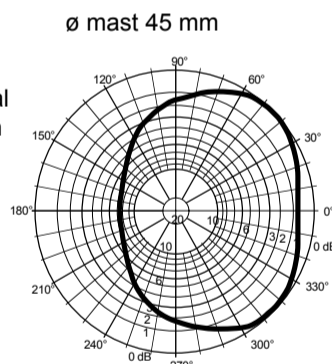
MATERIAL aluminium, bolts of stainless steel, weather-resistant
plastics, radome of UV-stabilized polyethylene

WEIGHT 0.9 kg
WIND AREA 0.015 m²
WIND LOAD 20 N (150 km/h)
15 N (130 km/h)

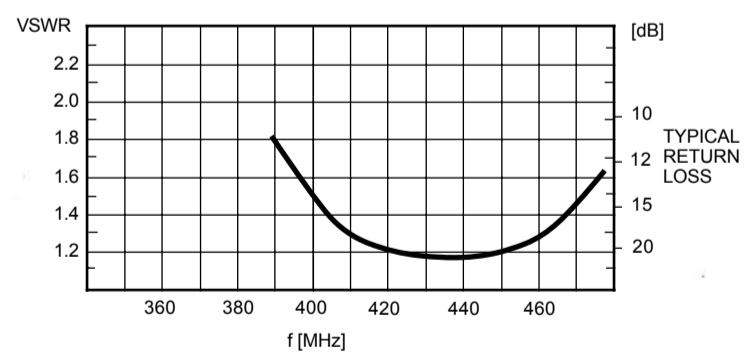
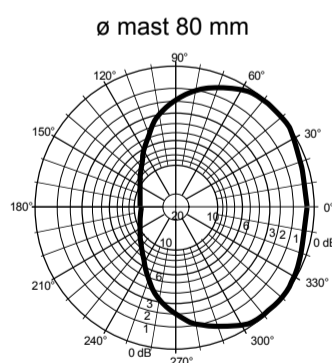
Vertical
Radiation
Pattern
E Plane



Horizontal
Radiation
Pattern
H Plane



MAST DIPOLE



KW 1-08

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