

Directional Antenna

87.5 – 108 MHz

K 52 31 187, 752 119

KATHREIN

Antennen · Electronic

SITEL Caponago Tel.02 / 95.74.36.09

- Broadband directional antenna of hot-dip galvanized steel.
- Especially suitable for square masts.

Type No.	K 52 31 187	752 119
Input	7-16 female	
Frequency range	87.5 – 108 MHz	
VSWR	< 1.15	
Gain (ref. to $\lambda/2$ -dipole)	7.5 dB at mid-band	
Impedance	50 Ω	
Polarization	Horizontal	Vertical
Max. power	2.5 kW (higher power upon request)	
Weight	64 kg	
Wind load (at 160 km/h)		
frontal:	1500 N	1500 N
lateral:	815 N	825 N
Max. wind velocity	225 km/h	

Material: Hot-dip galvanized steel.
Radome: Fiberglass.

Mounting: Mounting hardware and mounting dimensions upon request.

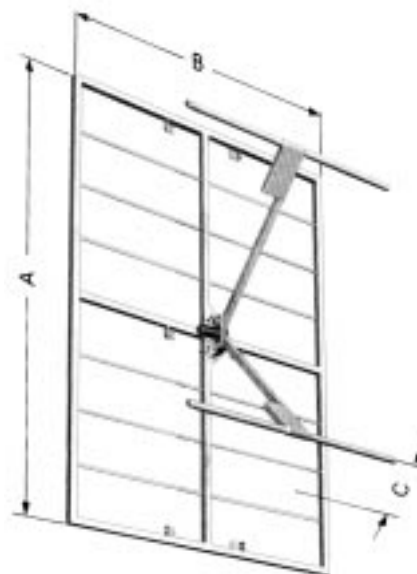
Ice protection: Even under severe icy conditions the antenna is still functional due to its heavy-duty construction and the fiberglass covers for the feeding points.

Grounding: Via mounting parts.

Combinations: The antenna is especially suitable as a component in arrays to achieve various radiation patterns. Particularly for square masts.

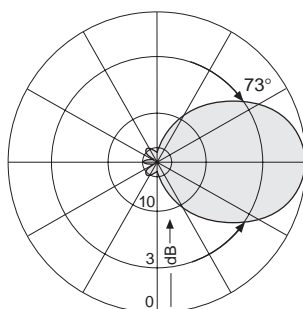
Scope of supply: Antenna without mounting clamps.

Special features: The antenna is shipped dismounted.

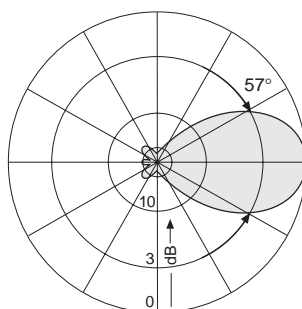


A: 2500 mm
B: 1700 mm
C: 730 mm

Radiation Patterns (at mid-band)



in E-plane



in H-plane

Directional Antenna

87.5 – 108 MHz

K 52 34 17

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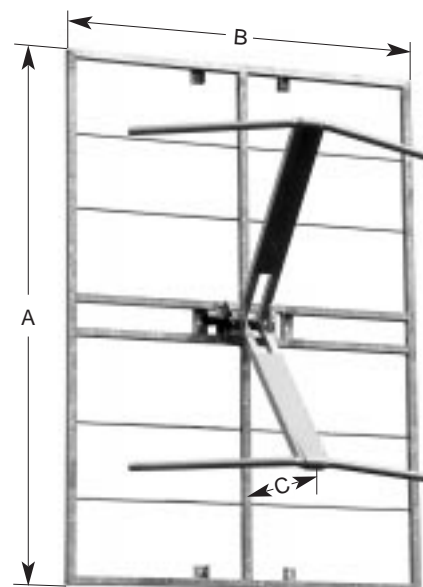
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- Broadband directional antenna of hot-dip galvanized steel.
- Especially suitable for triangular and round masts.

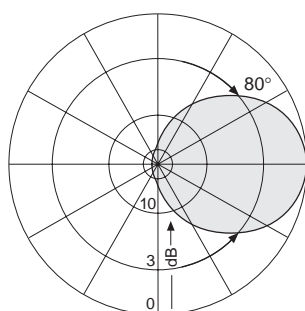
Type No.	K 52 34 17
Input	7-16 female
Frequency range	87.5 – 108 MHz
VSWR	< 1.2
Gain (ref. to $\lambda/2$ -dipole)	7 dB at mid-band
Impedance	50 Ω
Polarization	Horizontal
Max. power	2.5 kW (higher power upon request)
Weight	66 kg
Wind load (at 160 km/h)	frontal: 1690 N lateral: 876 N
Max. wind velocity	225 km/h

Material:	Hot-dip galvanized steel. Radome: Fiberglass.
Mounting:	Mounting hardware and mounting dimensions upon request.
Ice protection:	Even under severe icy conditions the antenna is still functional due to its heavy-duty construction and the fiberglass covers for the feeding points.
Grounding:	Via mounting parts.
Combinations:	The antenna is especially suitable as a component in arrays to achieve various radiation patterns. Particularly for triangular and round masts.
Scope of supply:	Antenna without mounting clamps.
Special features:	The antenna is shipped dismounted.

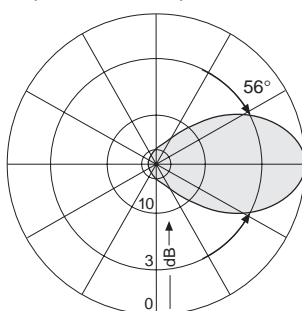


A: 2490 mm
B: 1740 mm
C: 760 mm

Radiation Patterns (at mid-band)



in E-plane
Horizontal Radiation Pattern



in H-plane
Vertical Radiation Pattern

Directional Antenna

87.5 – 108 MHz

772 500

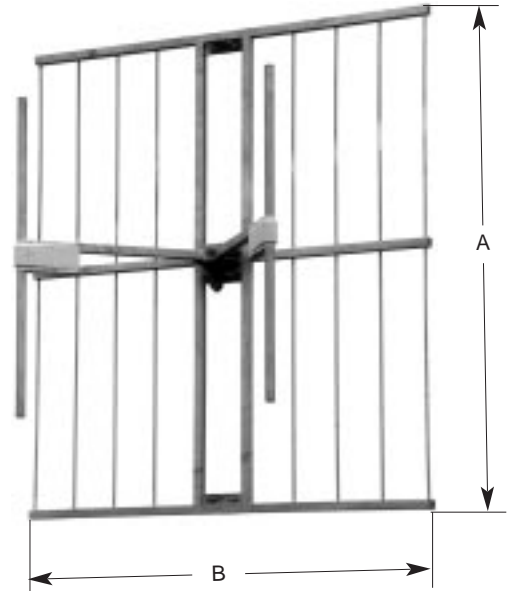
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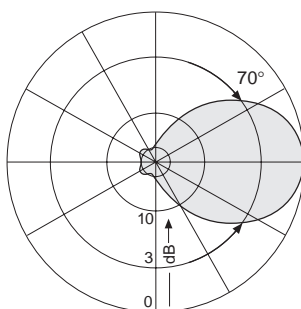
- Vertically polarized directional antenna.
- Especially suitable for triangular and round masts.

Type No.	772 500
Input	7-16 female
Frequency range	87.5 – 108 MHz
VSWR	< 1.15
Gain (ref. $\lambda/2$ -dipole)	6 dB at mid-band
Impedance	50 Ω
Polarization	Vertical
Max. power	2.5 kW (higher power upon request)
Weight	65 kg
Wind load (at 160 km/h)	frontal: 1620 N lateral: 990 N
Max. wind velocity	225 km/h
Dimensions	A 2200 mm B 2000 mm

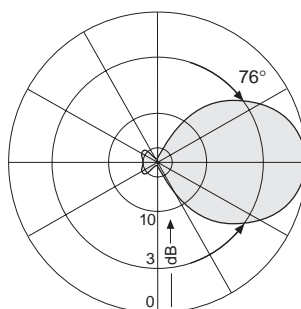


Material:	Hot-dip galvanized steel. Radome: Fiberglass.
Mounting:	To a vertical pipe of \varnothing 89 mm by 3 pcs. U-bolts (supplied) or to proper flanges. Mounting dimensions upon request.
Ice protection:	Even under severe icy conditions the antenna is still functional due to its heavy-duty construction and the fiberglass covers for the feeding points.
Grounding:	Via mounting parts.
Combinations:	The antenna is especially suitable as a component in arrays to achieve various radiation patterns. Particularly for triangular and round masts.
Scope of supply:	Antenna consisting of two half-wave dipoles with reflector screen and 3 U-bolts.
Special features:	The antenna is shipped dismounted.

Radiation Patterns (at mid-band)



E-plane
Vertical Radiation Pattern



H-plane
Horizontal Radiation Pattern

Dual Band Directional Antenna

66 – 73 MHz / 87.5 – 108 MHz

768 476

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SITEL Caponago Tel.02 / 95.74.36.09

- Dipole panel for OIRT and CCIR bands for FM radio.
- Especially suitable for square masts.

Type No.	768 476
Input	7-16 female
Frequency range	OIRT: 66 – 73 MHz / CCIR: 87.5 – 108 MHz
VSWR	66 – 73 MHz: ≤ 1.3 / 87.5 – 108 MHz: ≤ 1.2
Gain (ref. $\lambda/2$ -dipole)	66 – 73 MHz: 6 dB / 87.5 – 108 MHz: 7.5 dB
Impedance	50 Ω
Polarization	Horizontal
Max. power	6 kW (higher power upon request)
Weight	135 kg
Wind load (at 160 km/h)	frontal: 2.5 kN lateral: 1.1 kN
Max. wind velocity	225 km/h

Material: Hot-dip galvanized steel.
Radome: Fiberglass.

Mounting: Mounting hardware and mounting dimensions upon request.

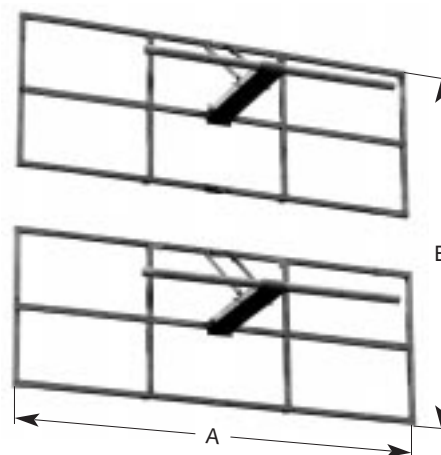
Ice protection: Even under severe icy conditions the antenna is still functional due to its heavy-duty construction and the fiberglass covers for the feeding points.

Grounding: Via mounting parts.

Combinations: The antenna is especially suitable as a component in arrays to achieve various radiation patterns. Particularly for square masts.

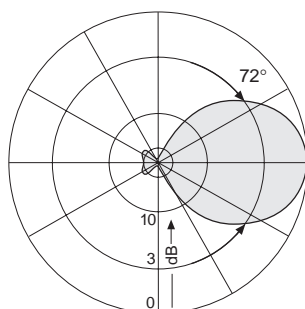
Scope of supply: Antenna consisting of two half-wave dipoles with reflector screens.

Special features: The antenna is shipped dismounted.

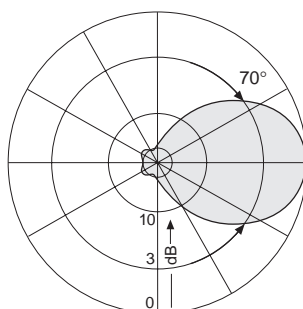


A: 2840 mm
B: 2580 mm

Radiation Patterns (at mid-band)



in E-plane
Horizontal Radiation Pattern



in H-plane
Vertical Radiation Pattern

Directional Antenna

87.5 – 108 MHz

K 53 32 18 7

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SITEL Caponago Tel.02 / 95.74.36.09

- Broadband directional antenna made of hot-dip galvanized steel.
- Especially suitable for square masts.
- Optionally for circular, horizontal, vertical or slant polarization.

4 dipoles are arranged symmetrically in front of a reflector screen. With suitable feeding the antenna radiates circularly polarized. An isolation of 40 – 50 dB between horizontal and vertical pairs of dipoles is achieved through the special design. This design permits the transmission of 2 programs – horizontally and vertically polarized – independently from each other.

Type No.	K 53 32 18 7
Input	4 x 7-16-female connector
Frequency range	87.5 – 108 MHz
VSWR	< 1.25 (linear polarization) < 1.1 (circular polarization)
Gain (ref. $\lambda/2$ -dipole)	7.5 dB at mid-band (linear polarization) 4.5 dB at mid-band (circular polarization)
Impedance	50 Ω
Max. power	2.5 kW for each input (higher power upon request)
Wind load (at 160 km/h)	Frontal: 1.93 kN Lateral: 1.13 kN
Max. wind velocity	225 km/h
Weight	89 kg

Material: Hot-dip galvanized steel.
Weather protection: fiberglass cover.

Mounting: The antenna must be mounted so that the bent radiators are horizontally polarized. Mounting dimensions and mounting hardware on request.

Ice protection: Even under severe icy conditions the antenna is still functional due to its heavy-duty construction and the fibre-glass covers of the feeding points.

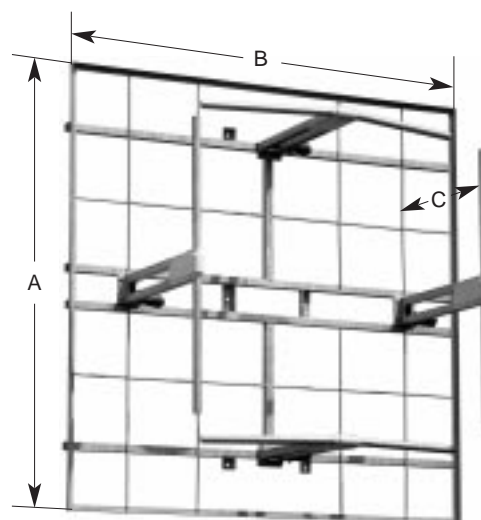
Grounding: Via mounting parts.

Polarization: Suitable feeding of the horizontal and vertical dipole pairs optionally result in left or right hand circular or elliptical or slant polarization or simultaneous horizontal and vertical polarization.

Combinations: The antenna is especially suitable as a component in arrays to achieve various radiation patterns. Particularly for square masts.

Scope of supply: Antenna without mounting clamps.

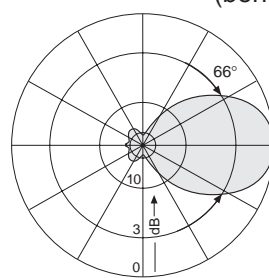
Special features: The antenna will be shipped dismounted.



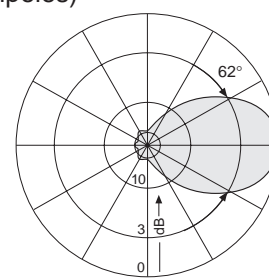
A = B: 2200 mm
C = 830 mm

Radiation Patterns (at mid-band)

Horizontal Polarization (bent dipoles)

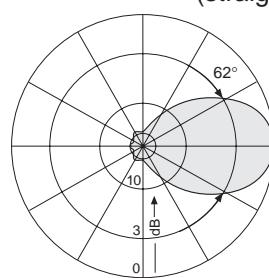


in E-plane
Horizontal Radiation Pattern

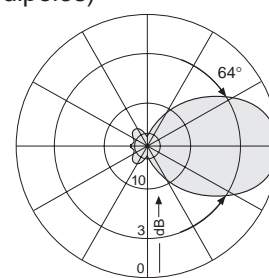


in H-plane
Vertical Radiation Pattern

Vertical Polarization (straight dipoles)



in H-plane
Horizontal Radiation Pattern



in E-plane
Vertical Radiation Pattern

Directional Antenna

87.5 – 108 MHz

754 154

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- Circularly polarized broadband directional antenna of hot-dip galvanized steel.
- Especially suitable for triangular and round masts.

Type No.	754 154
Input	2 x 7-16 female
Frequency range	87.5 – 108 MHz
VSWR	< 1.2
Gain (ref. $\lambda/2$ -dipole)	3.5 dB at mid-band
Impedance	50 Ω
Polarization	Circular
Max. power	2.5 kW for each input (higher power upon request)
Weight	60 kg
Wind load (at 160 km/h)	frontal: 1252 N seitlich: 876 N
Max. wind velocity	225 km/h

Material: Hot-dip galvanized steel.
Radome: Fiberglass.

Mounting: Mounting hardware and mounting dimensions upon request.

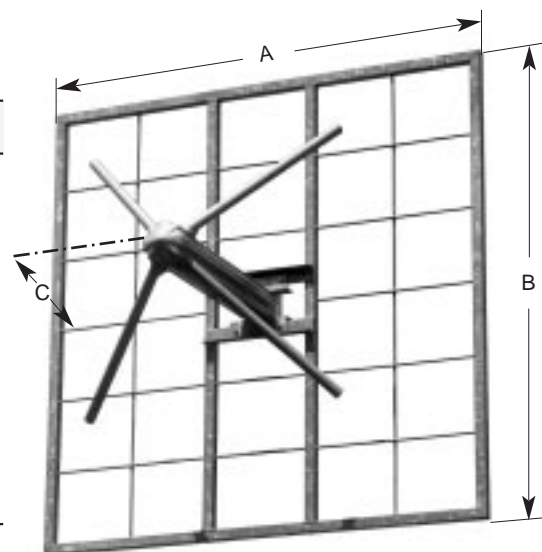
Ice protection: Even under severe icy conditions the antenna is still functional due to its heavy-duty construction and the fiberglass covers for the feeding points.

Grounding: Via mounting parts.

Combinations: The antenna is especially suitable as a component in arrays to achieve various radiation patterns. Particularly for triangular and round masts.

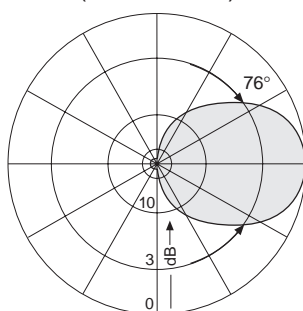
Scope of supply: Antenna without mounting clamps.

Special features: The antenna is shipped dismounted.



A = B: 1820 mm
C: 900 mm

Radiation Patterns (at mid-band)



Directional Antenna

87.5 – 108 MHz

K 52 40 17, K 52 40 11

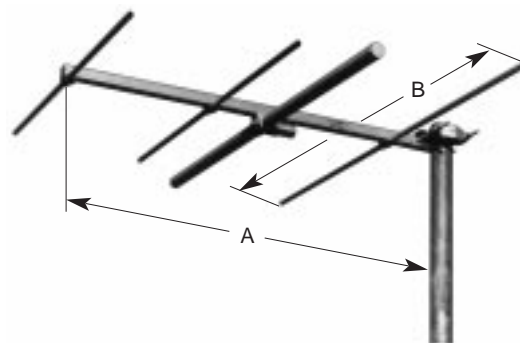
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- 4 element broadband Yagi antenna.
- Minimum weight.
- Component for low power transmitting antennas.

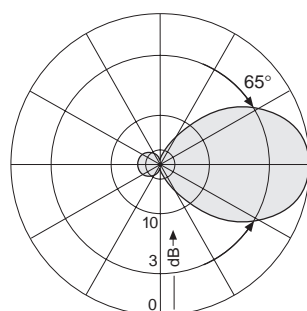
Type No.	K 52 40 17	K 52 40 11
Input	7-16 female	N female
Frequency range	87.5 – 108 MHz	
VSWR	$s < 1.3$	
Gain (ref. $\lambda/2$ -dipole)	5.5 dB at mid-band	
Impedance	50 Ω	
Polarization	Horizontal (vertical upon request)	
Max. power	500 Watt (at 40 °C ambient temperature)	
Weight	6.5 kg	
Wind load (at 160 km/h)	frontal: 216 N lateral: 154 N	
Max. wind velocity	225 km/h	
Packing size	160 x 160 x 1900 mm	



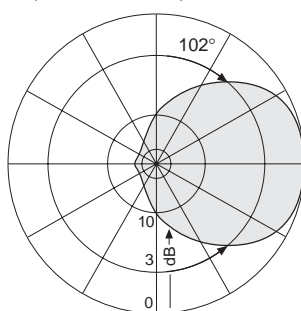
A = 1400 mm
B = 1700 mm

- Material:** Weather-proof aluminum.
Radiator in fiberglass radome.
- Mounting:** To pipes of 60 – 115 mm diameter by means of mounting clamps, supplied.
- Grounding:** Via mounting parts.
- Combinations:** The antenna is especially suitable as a component in arrays to achieve various radiation patterns.
- Special features:** The antenna is shipped dismantled.

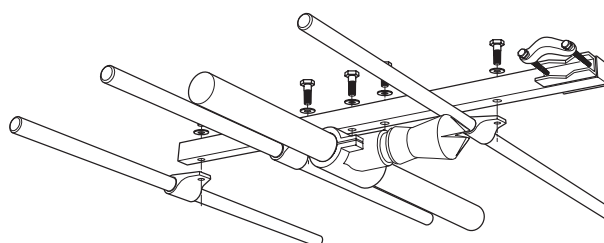
Radiation Patterns (at mid-band)



in E-plane
Horizontal Radiation Pattern



in H-plane
Vertical Radiation Pattern



Montage

Directional Antenna

87.5 – 108 MHz

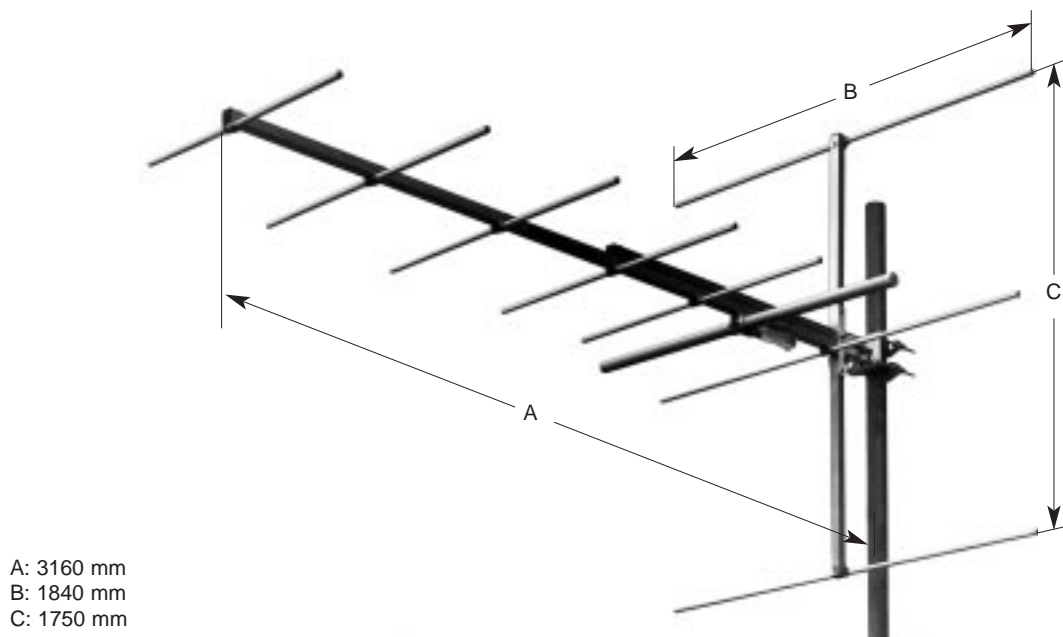
K 52 14 1.

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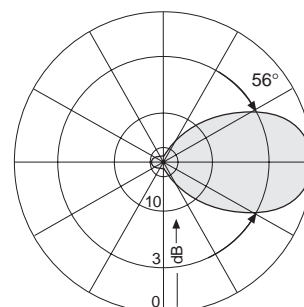
- 9 element broadband Yagi antenna of weatherproof aluminum.



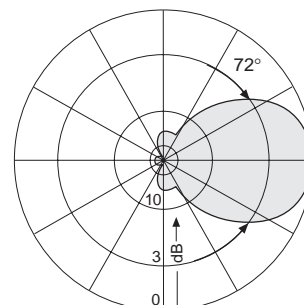
A: 3160 mm
B: 1840 mm
C: 1750 mm

Type No.	K 52 14 17	K 52 14 11
Input	7-16 female	N female
Frequency range	87.5 – 108 MHz	
VSWR	< 1.4	
Gain (ref. $\lambda/2$ -dipole)	7.5 dB at mid-band	
Impedance	50 Ω	
Polarization	Horizontal	
Max. power	100 Watt (higher power upon request)	
Weight	16 kg	
Wind load (at 160 km/h)	frontal: 586 N lateral: 529 N	
Max. wind velocity	225 km/h	
Packing size	310 x 22 x 22 cm	

Radiation Patterns (at mid-band)



in E-plane
Horizontal Radiation Pattern



in H-plane
Vertical Radiation Pattern

Material:	Weather-proof aluminum. Radiator in fiberglass radome.
Mounting:	To pipes of 60 – 115 mm diameter by means of mounting clamps, supplied. Mounting dimensions upon request.
Grounding:	Via mounting parts.
Combinations:	Two or more antennas can be combined to achieve higher gain and longer, narrower beam width.
Special features:	The antenna is shipped dismounted.

Directional Antenna

87.5 – 108 MHz

770 776

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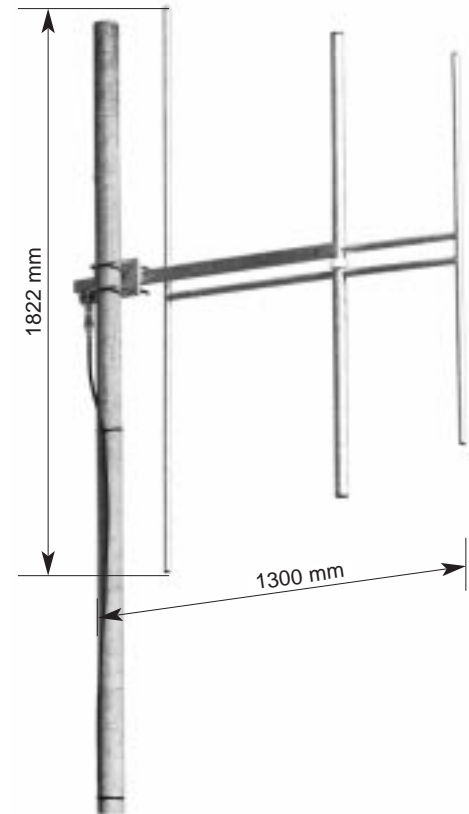
- 3 element broadband Yagi antenna.
- Mounting to pipes.
- Vertically polarized.
- 4 dB gain.

Type No.	770 776
Input	7/8" EIA-flange
Frequency	87.5 – 108 MHz
VSWR	$s < 1.3$
Gain (ref. $\lambda/2$ -dipole)	4 dB at mid-band
Impedance	50 Ω
Polarization	Vertical
Max. power	5 kW (at 40 °C ambient temperature)
Weight	13 kg
Wind load (at 160 km/h)	frontal: 210 N lateral: 350 N
Max. wind velocity	225 km/h
Packing size	1890 x 1550 x 92 mm

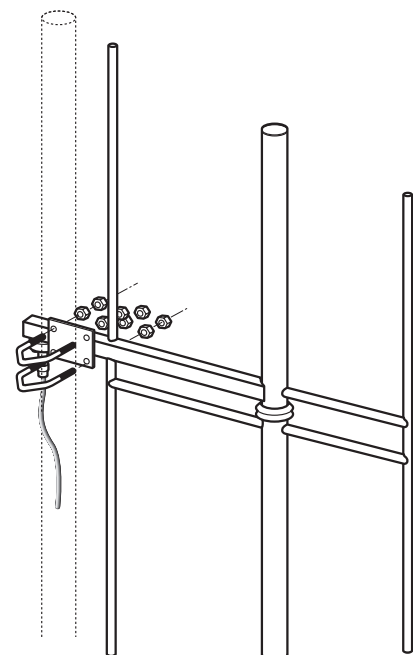
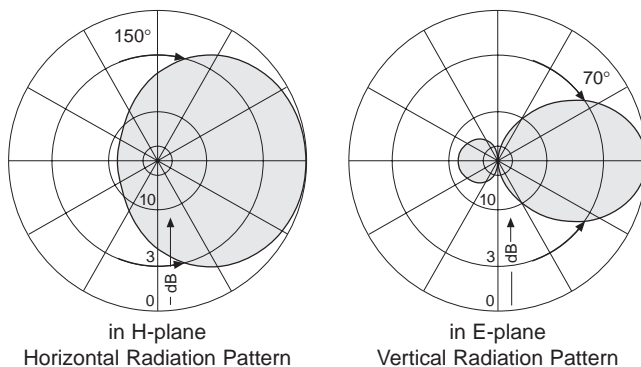
Material: Hot-dip galvanized steel.

Mounting: To pipes of 60 – 125 mm diameter by means of 2 U-bolts, supplied.
Mounting dimensions upon request.

Grounding: Via mounting parts.



Radiation Patterns (at mid-band)



Montage

Directional Antenna

87.5 – 108 MHz

K 52 22 17, K 52 22 11

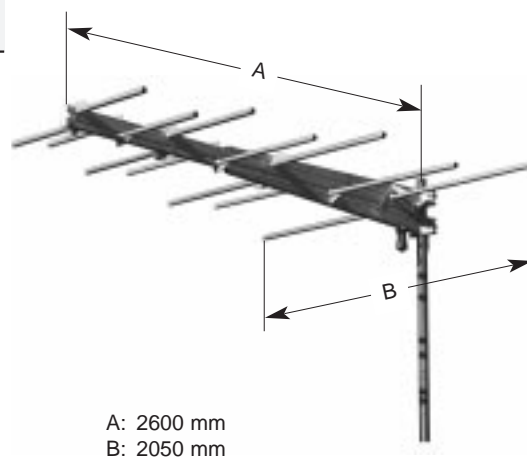
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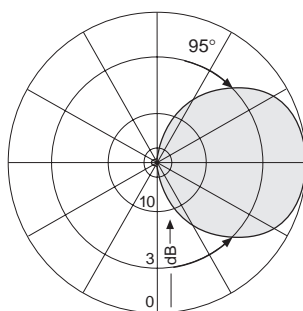
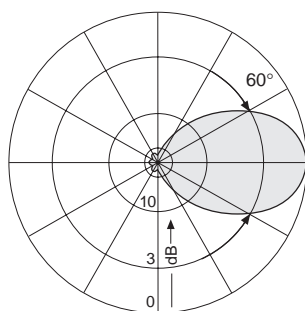
- Logarithmic-periodic broadband directional antenna with extremely low side-lobes.
- Especially rugged design of hot-dip galvanized steel.
- High reliability even under heavy icy conditions.

Type No.	K 52 22 17	K 52 22 11
Input	7-16 female	N female
Frequency range	87.5 – 108 MHz	
VSWR	< 1.3	
Gain (ref. to $\lambda/2$ -dipole)	6 dB at mid-band	
Impedance	50 Ω	
Side-lobe suppression	> 25 dB	
Polarization	Horizontal (special version for vertical polarization upon request)	
Max. power	1 kW (higher power upon request)	
Weight	46 kg	
Wind load (at 160 km/h)	frontal: 500 N lateral: 876 N	
Max. wind velocity	225 km/h	
Packing size	2650 x 2100 x 370 mm	



- Material:** Hot-dip galvanized steel.
- Mounting:** To pipes of 60 – 115 mm diameter by means of mounting clamps, supplied.
Mounting dimensions upon request.
Attention: Antenna may not be installed with vertical polarization.
- Grounding:** Via mounting parts.
- Combinations:** Several antennas can be combined to increase the gain and to produce radiation patterns with very high side-lobe suppressions.

Radiation Patterns (at mid-band)



Half-wave Dipole

87.5 ... 108 MHz

750 112

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- Omnidirectional gain antenna with preferred direction of radiation.
- Mounting to pipes.
- Vertically polarized.
- Gain 2 dB.
- Adjustable dipole-length.

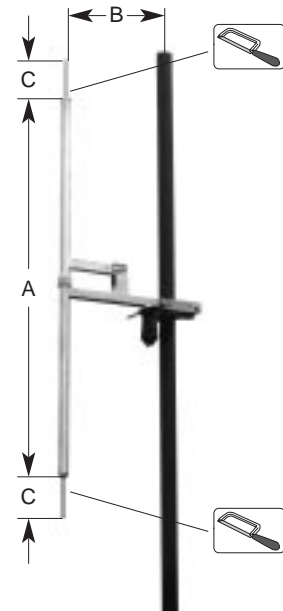
Type No.	750 112					
Input	7-16 female					
Frequency range	87.5–90	90–93.5	93.5–97	97–101	101–105	105–108
Length C/mm	140	110	85	60	35	0
VSWR	< 1.3					
Gain (ref. $\lambda/2$ -dipole)	2 dB at mid-band					
Impedance	50 Ω					
Polarization	Vertical					
Max. power	1 kW					
Wind load (at 160 km/h)	frontal: 74 N lateral: 125 N					
Weight	9 kg					
Max. wind velocity	225 km/h					
Packing size	1800 x 930 x 107 mm					

Material: Hot-dip galvanized steel.
Dipole-extension: Weather-proof aluminum.

Mounting: To pipes of 60 – 115 mm diameter by means of mounting clamp, supplied.

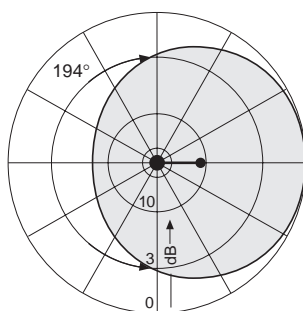
Preferred direction: Mast to radiator (see diagram).

Grounding: Via mounting parts.

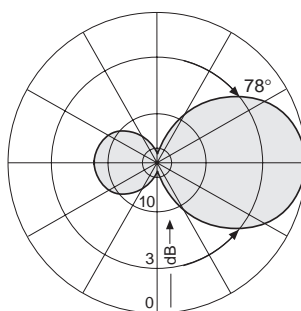


A: 1350 mm / B: 450 mm
C: see table

Radiation Patterns (at mid-band)



in H-plane
Horizontal Radiation Pattern



in E-plane
Vertical Radiation Pattern

Broadband Dipole for Tubular Mast

87.5 – 108 MHz

762 943, 763 715

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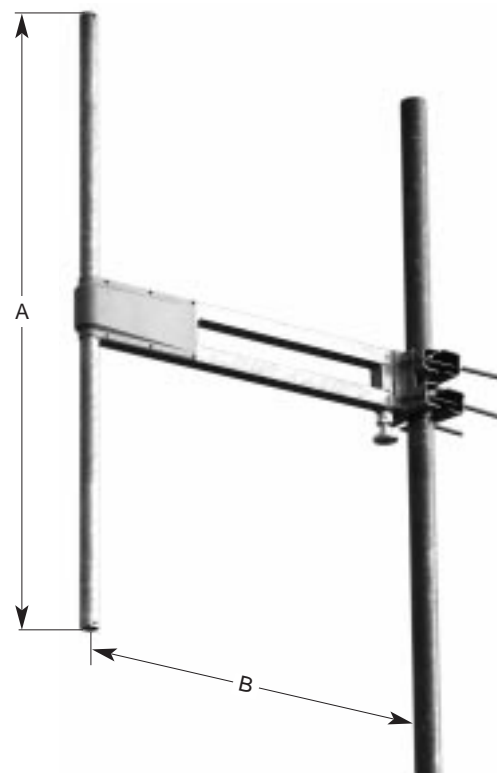
- Omnidirectional propagation with preferred direction.
- Mounting to pipes.
- Vertically polarized.
- 2 dB gain.

Type No.	762 943	763 715
Input	7-16 female connector	7/8" EIA-flange
Max. power	3 kW	5 kW
	(at 40 °C ambient temperature)	
Frequency range	87.5 – 108 MHz	
VSWR	$s < 1.3$	
Gain (ref. $\lambda/2$ -dipole)	2 dB at mid-band	
Impedance	50 Ω	
Polarization	Vertical	
Wind load (at 160 km/h)	frontal: 74 N lateral: 250 N	
Weight	13 kg	
Max. Wind velocity	225 km/h	
Packing	154 x 117 x 19 cm	

Material: Hot-dip galvanized steel.
Weather protection: fiberglass cover.

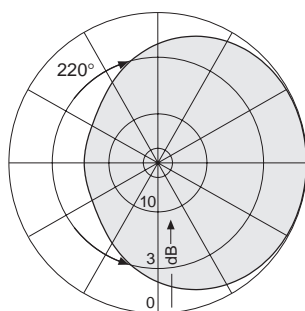
Mounting: To pipes of 60 – 125 mm diameter by means of mounting clamp, supplied.

Grounding: Via mounting parts.

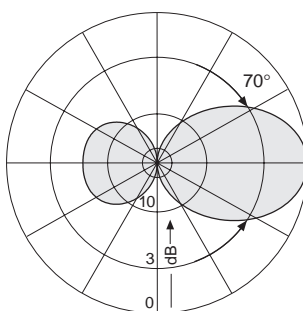


A: 1380 mm / B: 830 mm

Radiation Patterns (at mid-band)



in H-plane
Horizontal Radiation Pattern



in E-plane
Vertical Radiation Pattern