Antennas for TV and DAB in upper VHF Band 174–240 MHz

Panel Antenna

174–230 MHz

KATHREIN

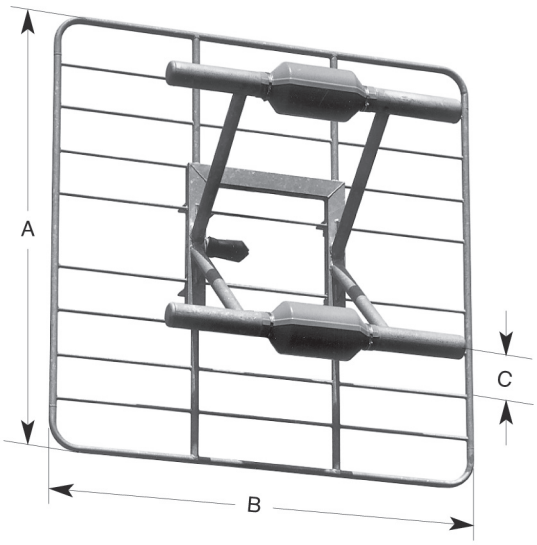
Polarization

H | V

- Especially suitable for square masts.

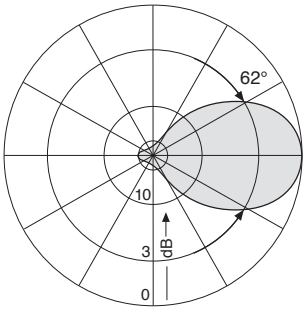
Order No.	600241 K523057	602036 K523058
Input	7-16 female	7/8" EIA flange
Max. power	2 kW	2.5 kW
Frequency range	174 – 230 MHz	
VSWR	< 1.08	
Gain (at mid-band)	8 dBd	
Impedance	50 Ω	
Polarization	Horizontal or vertical	
Weight	23 kg	
Wind load (at 160 km/h)		
Horizontal:	Frontal / lateral: 750 N / 315 N	
Vertical:	Frontal / lateral: 750 N / 375 N	
Max. wind velocity	240 km/h	

Material:	Hot-dip galvanized steel. Weather protection: Fiberglass.
Mounting:	By means of the pair of hot-dip galvanized steel clamps: 75310466 to pipes of 60–115 mm ∅ 75310465 to pipes of 115–210 mm ∅ (please order separately). Mounting dimensions upon request.
Grounding:	Via mounting parts.
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.
Scope of supply:	Antenna without mounting clamps.

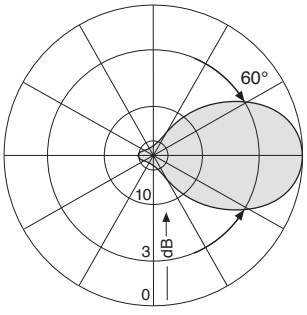


A: ~ 1300 mm
B: ~ 1300 mm
C: ~ 415 mm

Radiation Patterns (at mid-band)



in E-plane



in H-plane

Panel Antenna

174–240 MHz

KATHREIN

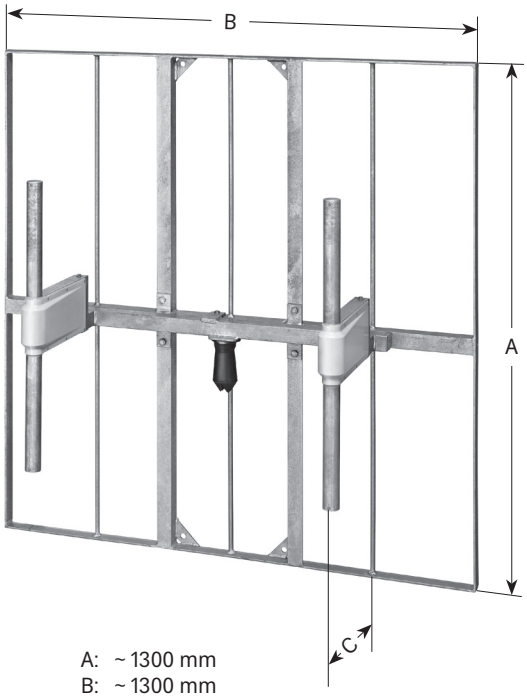
Polarization

V

- Especially suitable for square and round masts.

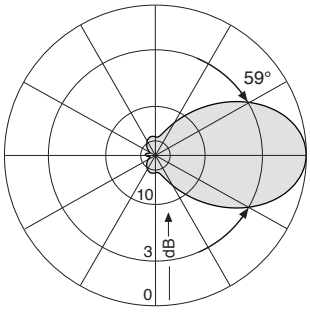
Order No.	75010350	75010352
Input	7-16 female	13-30 female
Max. power	2 kW	4 kW
Frequency range	174 – 240 MHz	
VSWR	174 – 230 MHz: < 1.15 230 – 240 MHz: < 1.2	
Gain (at mid-band)	8 dBd	
Impedance	50 Ω	
Polarization	Vertical	
Weight	35 kg	
Wind load (at 160 km/h)	Frontal: 500 N Lateral: 690 N	
Max. wind velocity	240 km/h	

Material:	Hot-dip galvanized steel. Weather protection: Fiberglass.
Mounting:	Mounting hardware and mounting dimensions upon request.
Grounding:	Via mounting parts.
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.
Scope of supply:	Antenna without mounting clamps.
Special features:	The antenna is shipped dismounted.

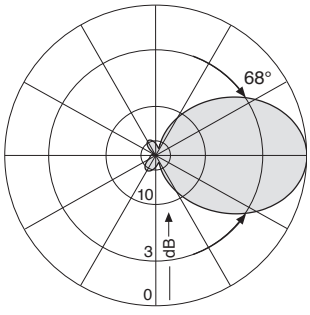


A: ~ 1300 mm
B: ~ 1300 mm
C: ~ 400 mm

Radiation Patterns (at mid-band)



Horizontal Radiation Pattern



Vertical Radiation Pattern

Panel Antenna

174...240 MHz

KATHREIN

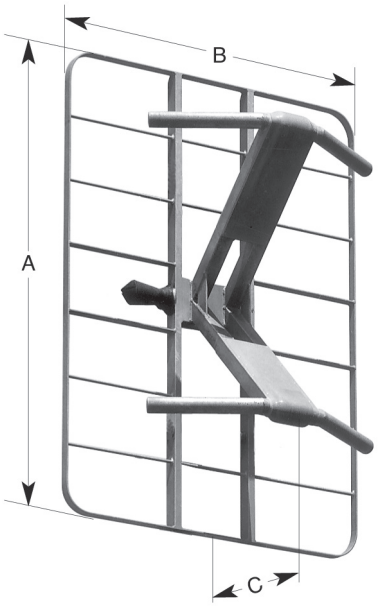
Polarization

H

- Especially suitable for triangular and round masts.

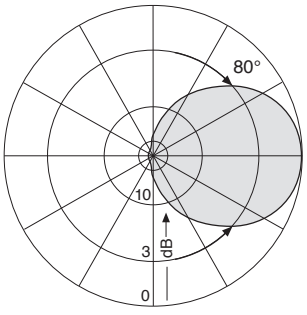
Order No.	**601157** K5234517	**601835** K5234527
Input	7-16 female	
Max. power	2 kW	
Frequency range	174 – 202 MHz	202 – 240 MHz
VSWR	< 1.15	
Gain (at mid-band)	7 dBd	
Impedance	50 Ω	
Polarization	Horizontal	
Weight	20 kg	
Wind load (at 160 km/h)	Frontal: 375 N Lateral: 375 N	
Max. wind velocity	240 km/h	

Material:	Hot-dip galvanized steel. Weather protection: Fiberglass.
Mounting:	By means of the pair of hot-dip galvanized steel clamps: 75310466 to pipes of 60–115 mm ⌀ 75310465 to pipes of 115–210 mm ⌀ (please order separately). Further mounting hardware and mounting dimensions upon request.
Grounding:	Via mounting parts.
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.
Scope of supply:	Antenna without mounting clamps.

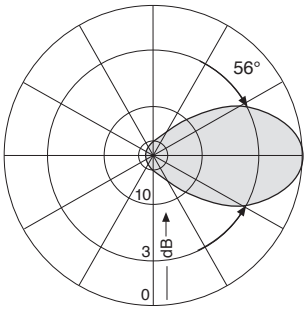


A: ~ 1200 mm
B: ~ 860 mm
C: ~ 405 mm

Radiation Patterns (at mid-band)



Horizontal Radiation Pattern



Vertical Radiation Pattern

Panel Antenna

174–230 MHz

KATHREIN

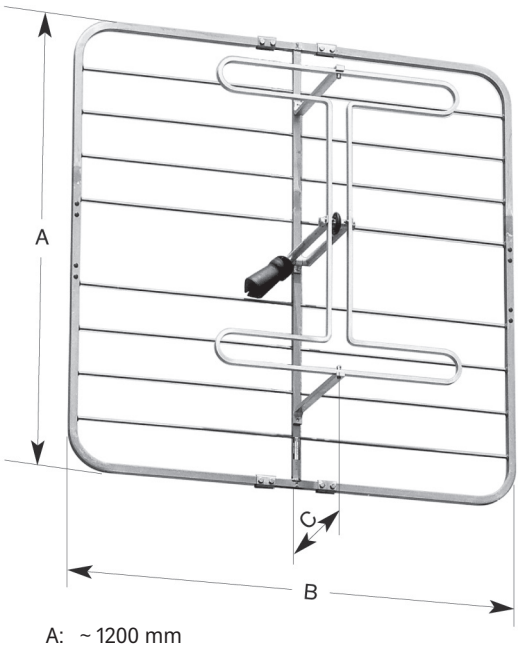
Polarization

H | V

- Light weight panel of weather-resistant aluminum.

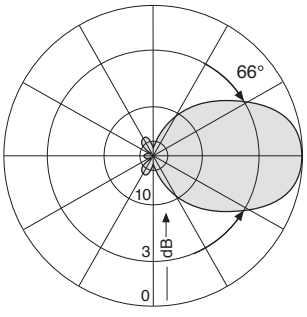
Order No.	600256 K523157
Input	7-16 female
Max. power	1 kW
Frequency range	174 – 230 MHz
VSWR	< 1.15
Gain (at mid-band)	7.5 dBd
Impedance	50 Ω
Polarization	Horizontal or vertical by conversion of two clamps
Weight	7 kg
Wind load (at 160 km/h)	
Horizontal:	Frontal / lateral: 440 N / 250 N
Vertical:	Frontal / lateral: 440 N / 350 N
Max. wind velocity	
Horizontal:	225 km/h
Vertical:	200 km/h

Material:	Weather-resistant aluminum.
Mounting:	To pipes of 60 – 115 mm ∅ by means of mounting clamps, supplied.
Grounding:	Via mounting parts.
Special features:	The antenna will be shipped dismounted.

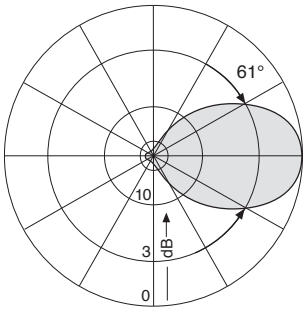


A: ~ 1200 mm
B: ~ 1200 mm
C: ~ 360 mm

Radiation Patterns (at mid-band)



in E-plane



in H-plane

Panel Antenna

174–240 MHz

KATHREIN

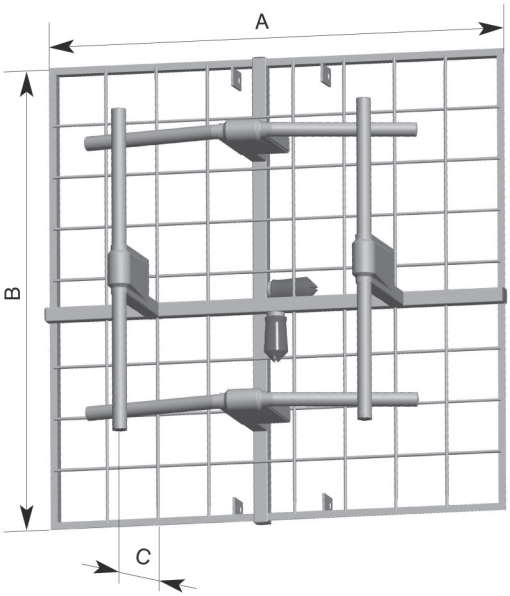
Polarization

H V X

- Dual-polarized antenna (horizontal/vertical).
- Optionally circular or slant polarization.
- For TV and DAB in one system.

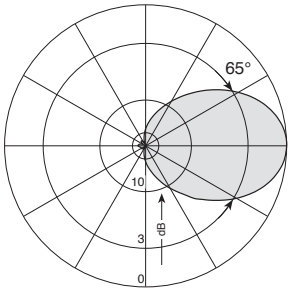
Order No.	75010085
Input	2 x 7-16 female
Max. power	2 kW per input
Frequency range for vertical polarization	174 – 223 MHz 174 – 240 MHz
VSWR	< 1.2 (linear polarization) < 1.1 (circular polarization)
Gain (at mid-band)	7.5 dBd
Impedance	50 Ω
Polarization	Linear: horizontal, vertical, slant circular
Weight	35 kg
Wind load (at 160 km/h)	Frontal: 850 N Lateral: 720 N
Max. wind velocity	225 km/h

Material:	Hot-dip galvanized steel. Radome: Fiberglass.
Mounting:	Using M16 screws (supplied) to suitable attachment construction. Mounting dimensions upon request.
Grounding:	Via mounting parts.
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.
Scope of supply:	Antenna supplied without clamps.

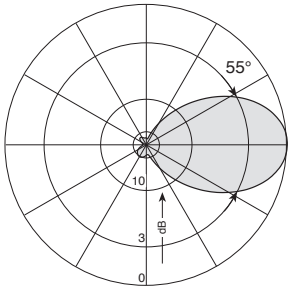


A: ~ 1300 mm
B: ~ 1300 mm
C: ~ 465 mm

Radiation Patterns for horizontal polarization
(at mid-band)

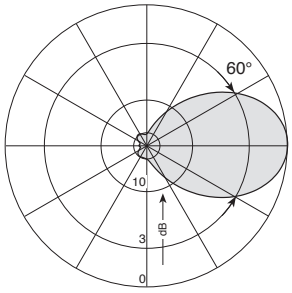


E-plane
Horizontal Radiation Pattern

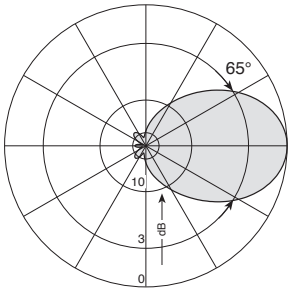


H-plane
Vertical Radiation Pattern

Radiation Patterns for vertical polarization
(at mid-band)



H-plane
Horizontal Radiation Pattern



E-plane
Vertical Radiation Pattern

Yagi Antenna

174...230 MHz

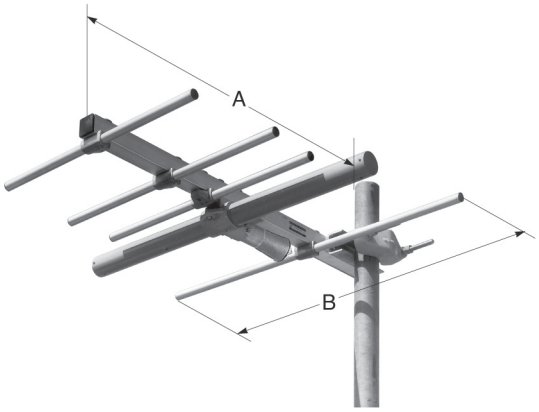
KATHREIN

Polarization

H

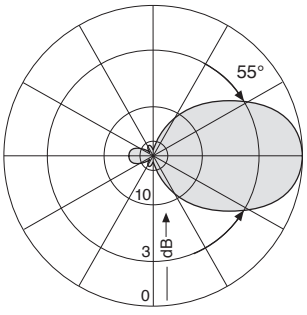
- For low power transmitting antennas or Rx applications.

Order No.	**600265** K5240517	**600267** K5240527
Input	7-16 female	
Max. power	100 W	400 W
Frequency range	174 – 202 MHz	202 – 230 MHz
VSWR	< 1.15	
Gain (at mid-band)	6 dBd	
Impedance	50 Ω	
Polarization	Horizontal	
Weight	5 kg	
Wind load (at 160 km/h)		
Frontal:	115 N	100 N
Lateral:	100 N	90 N
Max. wind velocity	225 km/h	
Dimensions (approx.) A	930 mm	810 mm
B	885 mm	765 mm

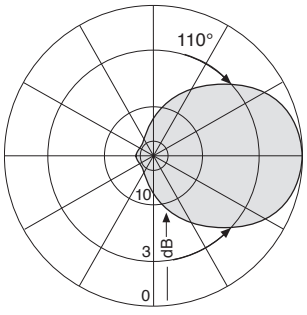


Material:	Weather-proof aluminum. Radiator in fiberglass radome.
Mounting:	To pipes of 60–115 mm ⌀ by means of mounting clamps, supplied.
Grounding:	Via mounting parts.
Special features:	The antenna is shipped dismounted.

Radiation Patterns (at mid-band)



Horizontal Radiation Pattern



Vertical Radiation Pattern

Yagi Antenna

174...242 MHz

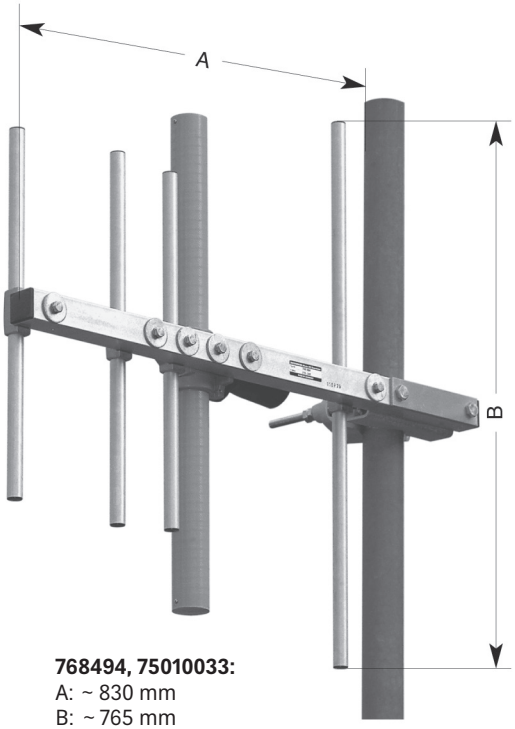
Polarization

V

- For low power transmitting antennas or Rx applications.

Order No.	75010028	75010033	768494
Input	7-16 female		
Max. power	400 W		
Frequency range	174 – 202 MHz	202 – 230 MHz	215 – 242 MHz
VSWR	< 1.2		
Gain (at mid-band)	6 dBd		
Impedance	50 Ω		
Polarization	Vertical		
Weight	5 kg		
Wind load (at 160 km/h)			
Frontal:	115 N	100 N	
Lateral:	200 N	150 N	
Max. wind velocity	225 km/h		

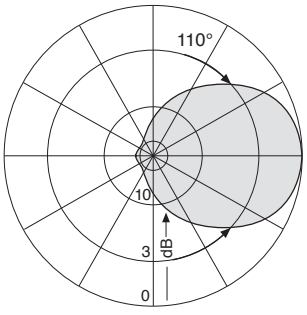
Material:	Weather-resistant aluminum. Radiator in fiberglass radome.
Mounting:	To pipes of 60–115 mm ⌀ by means of mounting clamps, supplied.
Grounding:	Via mounting parts.
Special features:	The antenna will be shipped dismounted.



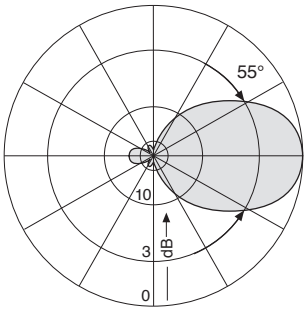
768494, 75010033:
A: ~ 830 mm
B: ~ 765 mm

75010028:
A: ~ 930 mm
B: ~ 882 mm

Radiation Patterns (at mid-band)



Horizontal Radiation Pattern



Vertical Radiation Pattern

Log.-Per. Antenna

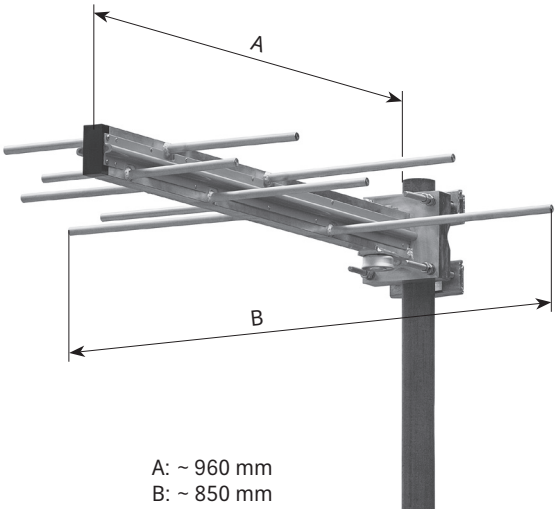
174–240 MHz

KATHREIN

Polarization

H | V

- Logarithmic-periodic broadband directional antenna.

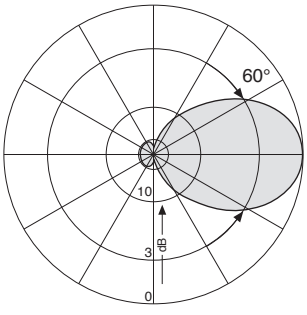


A: ~ 960 mm
B: ~ 850 mm

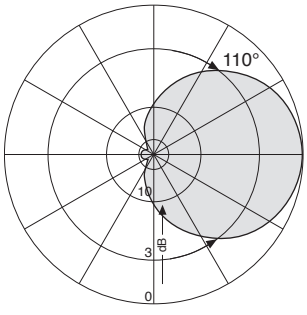
Order No.	75010242
Input	7-16 female
Max. power	2 kW
Frequency range	174 – 240 MHz
VSWR	174 – 230 MHz: ≤ 1.25 230 – 240 MHz: ≤ 1.3
Gain (at mid-band)	5 dBd
Impedance	50 Ω
Polarization	Horizontal or vertical
Weight	10 kg
Wind load (at 160 km/h)	Frontal: 100 N Lateral: 190 N
Max. wind velocity	225 km/h

Material:	Hot-dip galvanized steel.
Mounting:	To pipes of 40–95 mm diameter by means of mounting clamps, supplied.
Grounding:	Via mounting parts.

Radiation Patterns (at mid-band)



in E-plane



in H-plane

Log.-Per. Antenna

174–230 MHz

KATHREIN

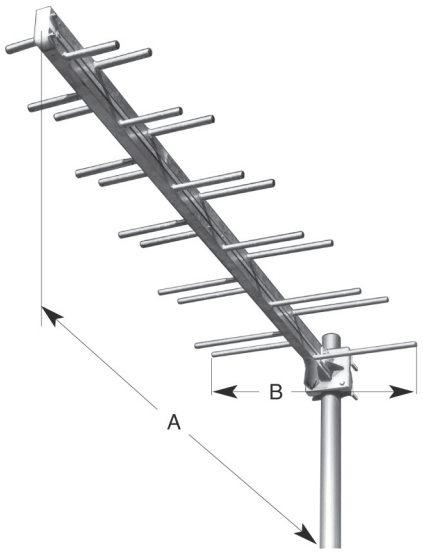
Polarization

H | **V**

- Logarithmic-periodic broadband directional antenna with high side-lobe suppression.

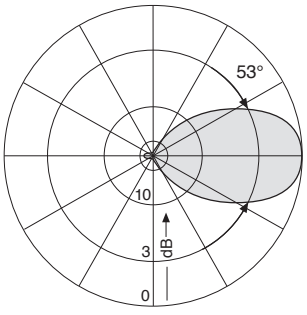
Order No.	**600234** K522257
Input	7-16 female
Max. power	1 kW
Frequency range	174 – 230 MHz
VSWR	< 1.2
Gain (at mid-band)	8.5 dBd
Impedance	50 Ω
Polarization	Horizontal or vertical
Side-lobe suppression	> 25 dB
Weight	27 kg
Wind load (at 160 km/h)	
Horizontal:	Frontal / lateral: 240 N / 525 N
Vertical:	Frontal / lateral: 240 N / 350 N
Max. wind velocity	225 km/h

Material:	Hot-dip galvanized steel.
Mounting:	To pipes of 60–115 mm ⌀ by means of mounting clamps, supplied.
Grounding:	Via mounting parts.

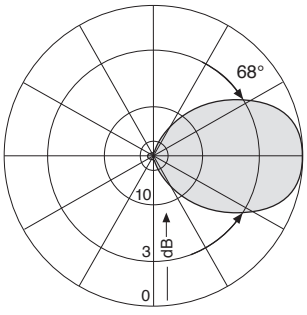


A: ~ 2300 mm
B: ~ 890 mm

Radiation Patterns (at mid-band)



in E-plane



in H-plane

Dipole Antenna

195–230 MHz

Polarization

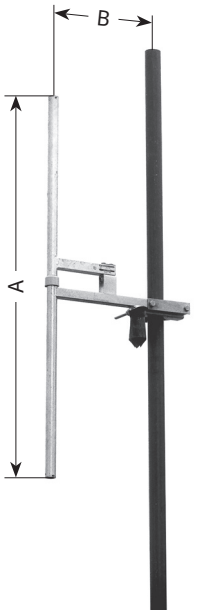
V

KATHREIN

- Omnidirectional antenna with preferred direction of radiation.
- Mounting to tubular masts.

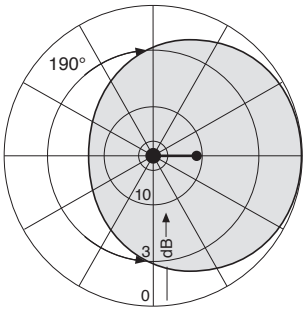
Order No.	774846
Input	7-16 female
Max. power	2 kW
Frequency range	195 – 230 MHz
VSWR	< 1.25
Gain (at mid-band)	2 dBd
Impedance	50 Ω
Polarization	Vertical
Weight	6 kg
Wind load (at 160 km/h)	Lateral: 90 N
Max. wind velocity	225 km/h

Material:	Hot-dip galvanized steel.
Mounting:	To pipes of 60–125 mm diameter by means of mounting clamp, supplied.
Grounding:	Via mounting parts.

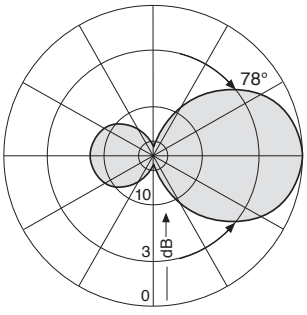


A: ~ 645 mm
B: ~ 440 mm

Radiation Patterns (at mid-band)
(Radiator mounted onto a slim steel tube, tower effects not considered)



Horizontal Radiation Pattern



Vertical Radiation Pattern

Dipole Antenna

174–240 MHz

Polarization

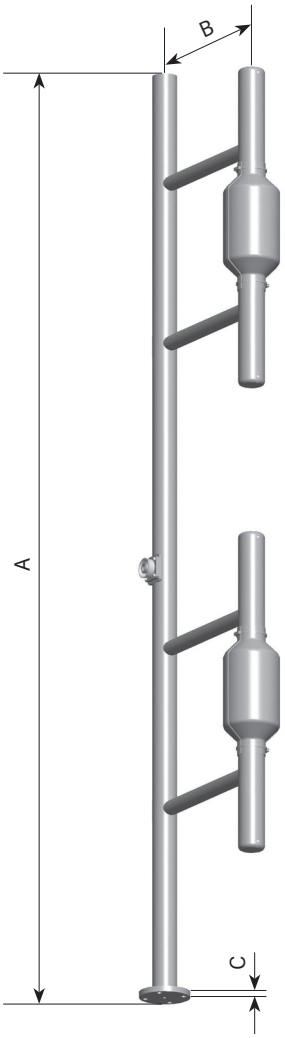
V

KATHREIN

- Hot-dip galvanized steel.
- Especially suitable for mounting at the top of masts.

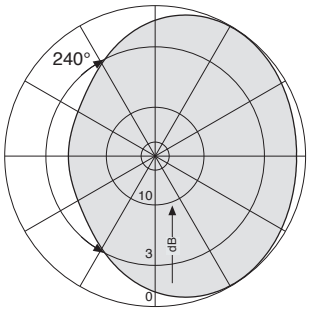
Order No.	75010290	75010291	75010292
Input	7-16 female	7⁄8″ EIA flange	1 5⁄8″ EIA flange
Max. power	2 kW	3 kW	5 kW
Frequency range	174 – 240 MHz		
VSWR	< 1.2		
Gain (at mid-band)	4.5 dBd		
Impedance	50 Ω		
Polarization	Vertical		
Weight	30 kg		
Wind load (at 160 km/h)	Frontal: 380 N Lateral: 460 N		
Max. wind velocity	240 km/h		

Material:	Hot-dip galvanized steel. Weather protection: Fiberglass.
Mounting:	On top of a suitable flange with at least 135 mm diameter (see draft).
Grounding:	Via mounting parts.
Ice protection:	Even under icy conditions the antenna is still functional due to the fiberglass covers for the feeding points.

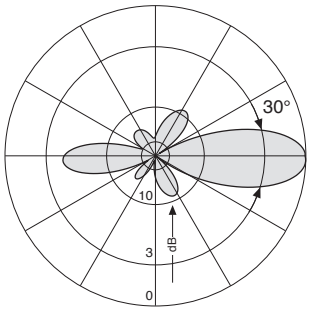


A: ~ 2537 mm
B: ~ 460 mm
C: ~ 15 mm

Radiation Patterns (at mid-band)



Horizontal Radiation Pattern



Vertical Radiation Pattern
1.5° electrical downtilt

Dipole Antenna

174–240 MHz

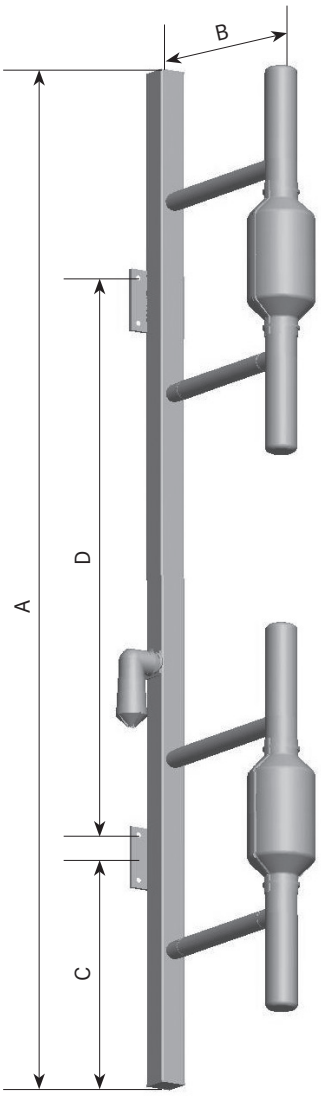
Polarization

V

- Hot-dip galvanized steel.
- For side-mounting to masts.

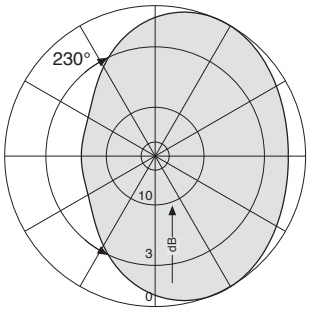
Order No.	75010295	75010296	75010297
Input	7-16 female	7/8" EIA flange	1 5/8" EIA flange
Max. power	2 kW	3 kW	5 kW
Frequency range	174 – 240 MHz		
VSWR	< 1.2		
Gain (at mid-band)	5.0 dBd		
Impedance	50 Ω		
Polarization	Vertical		
Weight	24 kg		
Wind load (at 160 km/h)	Frontal: 480 N Lateral: 540 N		
Max. wind velocity	240 km/h		

Material:	Hot-dip galvanized steel. Weather protection: Fiberglass.
Mounting:	Laterally using 8 screws M12x60 to suitable flange.
Grounding:	Via mounting parts.
Ice protection:	Even under icy conditions the antenna is still functional due to the fiberglass covers for the feeding points.

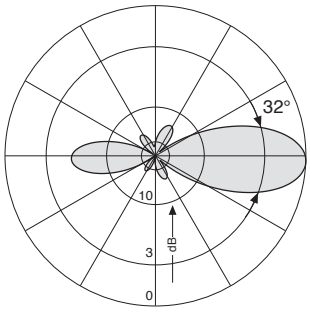


A: ~ 2326 mm
B: ~ 460 mm
C: ~ 520 mm
D: ~ 1280 mm

Radiation Patterns (at mid-band)
(Radiator mounted onto a slim steel tube, tower effects not considered)



Horizontal Radiation Pattern



Vertical Radiation Pattern
1.5° electrical downtilt

Omnidirectional Antenna 174–240 MHz

KATHREIN

Polarization V

- Omnidirectional antenna for top mounting.

Order No.	75010365	75010366	75010367	75010368
Input	7-16 female	7⁄8″ EIA flange	13-30 female	1⅝″ EIA flange
Max. power	2 kW	3 kW	5 kW	8 kW
Frequency range	174 – 240 MHz			
VSWR	< 1.2			
Gain (at mid-band)	4.5 dBd			
Impedance	50 Ω			
Polarization	Vertical			
Weight	80 kg			
Wind load (at 160 km/h)	1080 N			
Max. wind velocity	225 km/h			

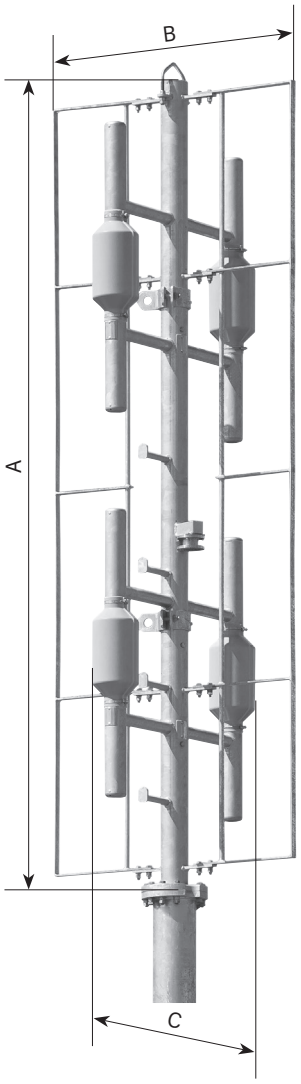
Material: Hot-dip galvanized steel.
Weather protection: Fiberglass.

Mounting: On top of a suitable flange.

Grounding: Via mounting parts.

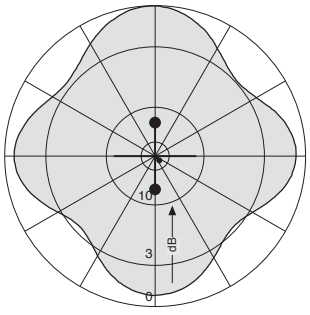
Ice protection: Even under icy conditions the antenna is still functional due to the fiberglass covers for the feeding points.

Note: Antenna may be mounted on top of Type 16911184 for higher gain.
For climbing in the antenna special climbing rungs and attachment points for climbing safety are provided.
Reflector grid and dipole parts must **not** be used for climbing!

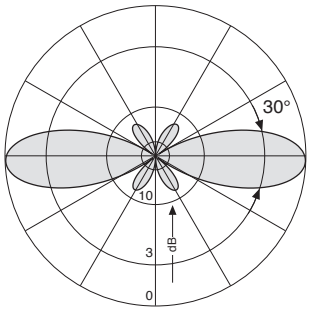


A: ~ 2625 mm
B: ~ 900 mm
C: ~ 870 mm

Radiation Patterns (at mid-band)



Horizontal Radiation Pattern



Vertical Radiation Pattern
Electrical downtilt: 2.0°