



# Digital TV Solutions

DTV in VHF/UHF



BROADCAST

**KATHREIN**

**KATHREIN**

## Information about KATHREIN Broadcast

As of 1st June 2019, KATHREIN SE's (formerly KATHREIN-Werke KG) business unit "BROADCAST" will be transferred to KATHREIN Broadcast GmbH (limited liability company).

From 1st June 2019, the new company data are:

**KATHREIN Broadcast GmbH**  
**Ing.-Anton-Kathrein-Str. 1, 3, 5, 7**  
**83101 Rohrdorf, Germany**  
**Tax Payer's ID No.: 156/117/31113**  
**VAT Reg. No.: DE 323 189 785**  
**Commercial Register Traunstein: HRB 27745**



Berlin Broadcast Tower  
Berlin Alexanderplatz, Germany

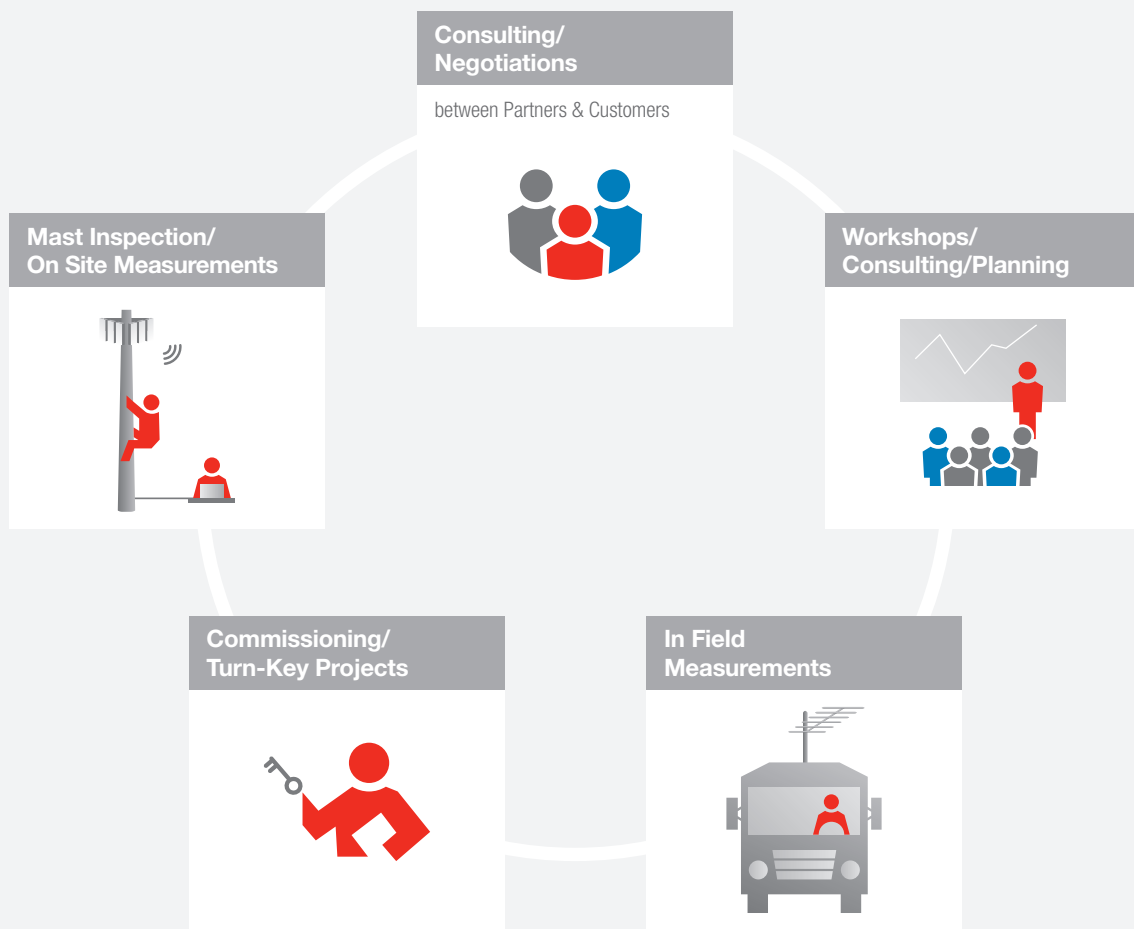
### Why choose a Kathrein DTT antenna system?

Kathrein and its portfolio stand for unique experience, individual solutions and reliable performance.

- Unique experience:
  - Worldwide unique installed base and broadcast know-how built over more than 60 years
  - Over 7200 systems installed since beginning of records in 1976
  - Trusted partner of more than 1500 broadcasters in more than 140 countries
- Individual solutions:
  - Tailor-made solutions for the most specific demands
  - Plug and Play family concept as well as customised panel antenna systems
  - Project engineering capabilities to match the most demanding pattern and mechanical requirements
  - Service support across the entire antenna life time
- Reliable Performance:
  - Solutions that withstand even the most challenging environmental conditions
  - Highest quality standard made for highest reliability
  - Proactive antenna performance monitoring
  - Supports all digital transmitting standards

## More than just Antennas – Kathrein Services

### > Kathrein guides your project



#### Why go with Kathrein services?

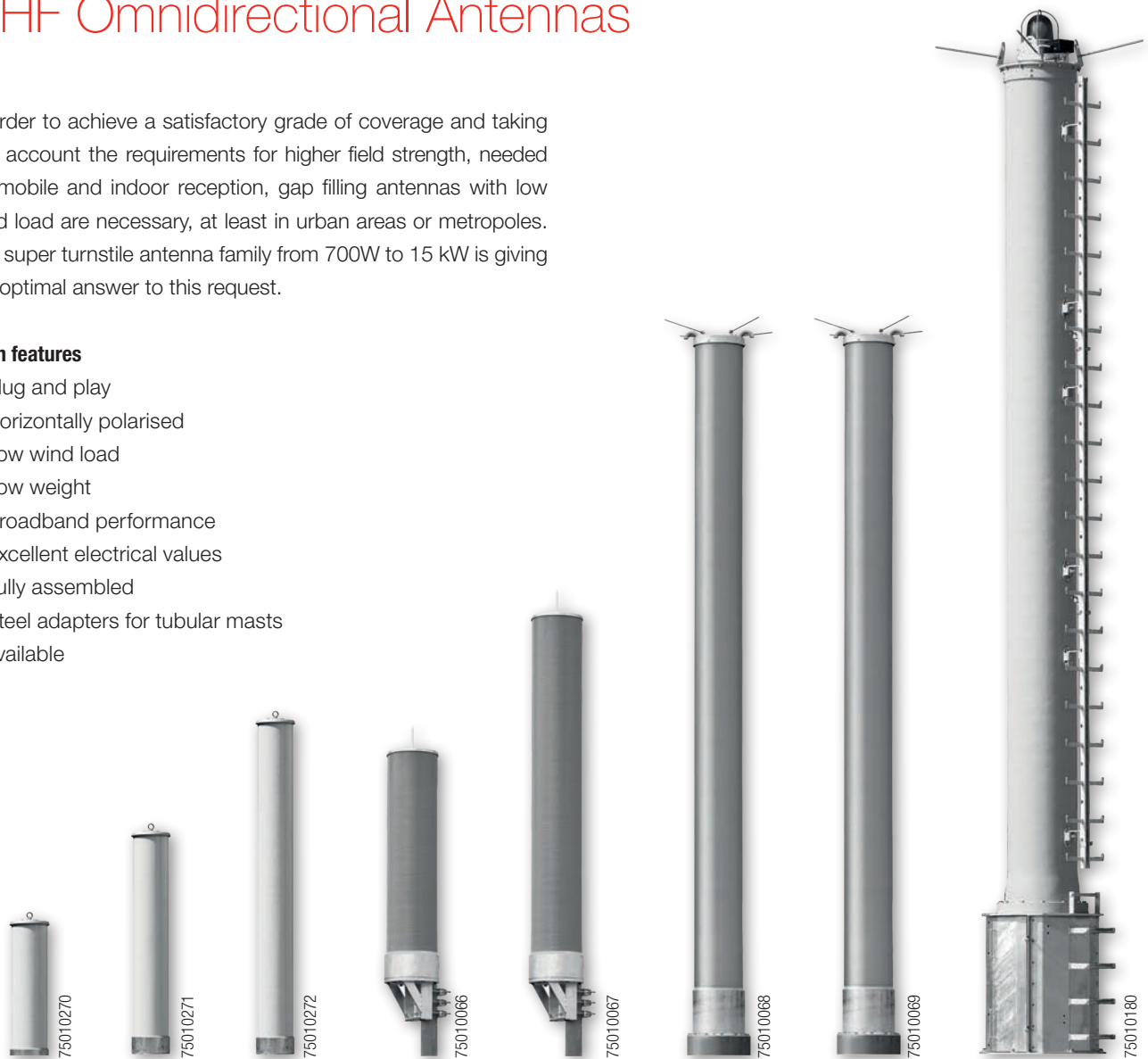
- Decades of expertise as turn-key project managing team
- Long-term partners for rigging and transmitter technologies
- Kathrein commissioning, mast inspections and measurements on site
- Kathrein consulting, planning and training
- Measurements in the field possible (Kathrein spectral measurement equipment)
- Negotiations with all project parties

## UHF Omnidirectional Antennas

In order to achieve a satisfactory grade of coverage and taking into account the requirements for higher field strength, needed for mobile and indoor reception, gap filling antennas with low wind load are necessary, at least in urban areas or metropolises. Our super turnstile antenna family from 700W to 15 kW is giving the optimal answer to this request.

### Main features

- Plug and play
- Horizontally polarised
- Low wind load
- Low weight
- Broadband performance
- Excellent electrical values
- Fully assembled
- Steel adapters for tubular masts available

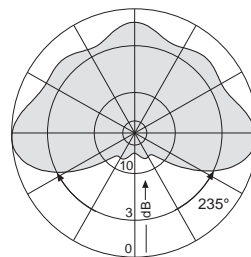
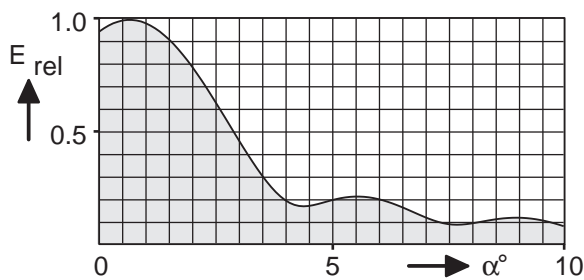


Order No.	75010270	75010271	75010272	75010066	75010067	75010068	75010069	75010180
<b>Input</b>	7-16 female			1 5/8" EIA flange			3 1/8" EIA flange	
<b>Max. power [W]</b>	600	1		2.5	5		7.5	15
<b>Frequency range [MHz]</b>	470-862							
<b>VSWR</b>	≤ 1.2	≤ 1.2	≤ 1.15	≤ 1.1	≤ 1.1	≤ 1.1	≤ 1.1	≤ 1.1
<b>Gain (at mid-band) [dBd]</b>	2.0	4.5	7.5	5.0	8.0	11.0		12.0
<b>Radome diameter [mm]</b>	230			330			520	
<b>Height [m]</b>	0.8	1.3	2.2	1.4	2.4	4.8	4.8	7.5
<b>Weight [kg]</b>	13	16	24	45	70	140	145	650
<b>Wind load (at 160 km/h) [N]</b>	110	195	350	330	590	1,200		4,500
<b>Max. wind velocity [km/h]</b>	240							

## New Plug and Play

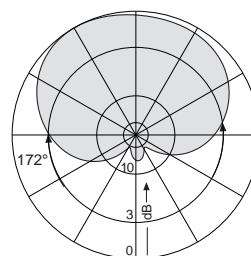
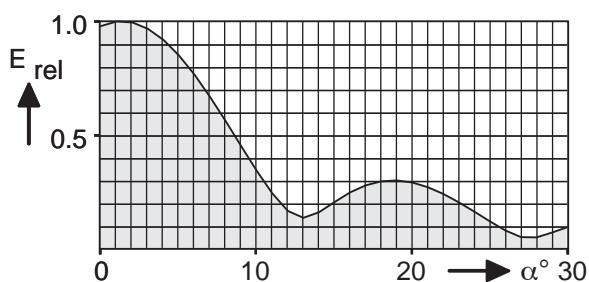
### > UHF Pylon 75010421

<b>Order No.</b>	<b>75010421</b>
<b>Input</b>	6 1/8" EIA flange
<b>Max Power [kW]</b>	60
<b>Frequency range [MHz]</b>	470-698
<b>VSWR</b>	< 1.1 (typical)
<b>Gain [dBd]</b>	15



### > Cavity Slot Antenna 75010402

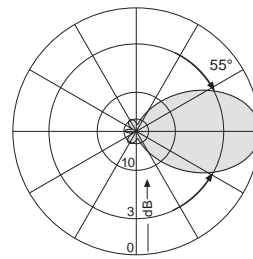
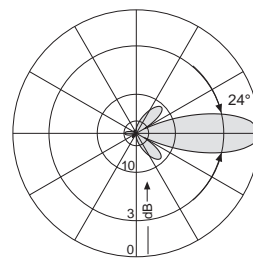
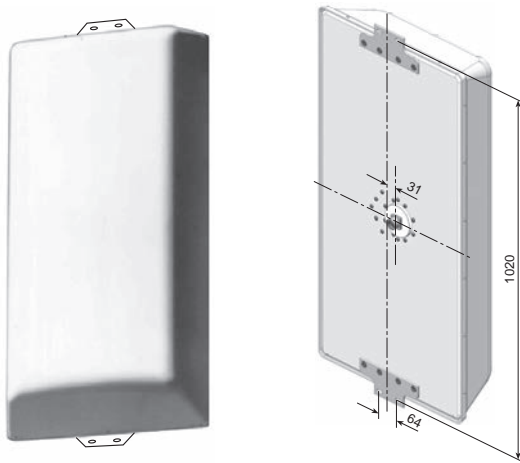
<b>Order No.</b>	<b>75010402</b>
<b>Input</b>	1 5/8" EIA flange
<b>Max. Power [kW]</b>	5 (at 40 °C ambient temperature)
<b>Frequency range [MHz]</b>	470 - 790
<b>VSWR</b>	$\leq 1.18$ , $\leq 1.1$ in one channel after fine matching (fine matcher to be ordered separately)
<b>Gain (at 650 MHz) [dBd]</b>	10



## UHF Antenna Panels for Circular/ Elliptical and Slant Polarisation

### > All Purpose Panel

Series 75010210, -211, -212, -213



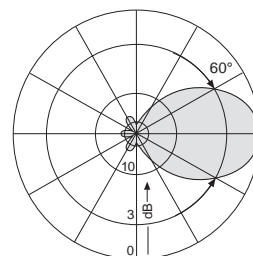
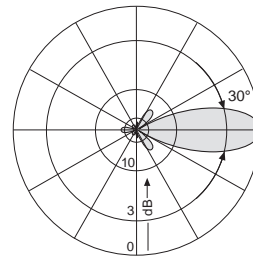
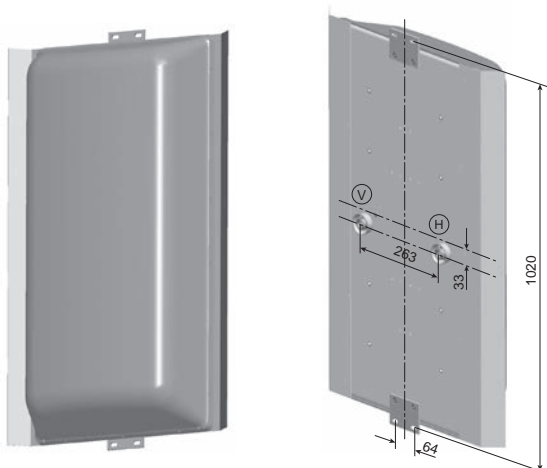
### FEATURES

- Broadband
- Omnidirectional diagrams for square masts  $\leq 660\text{mm}$

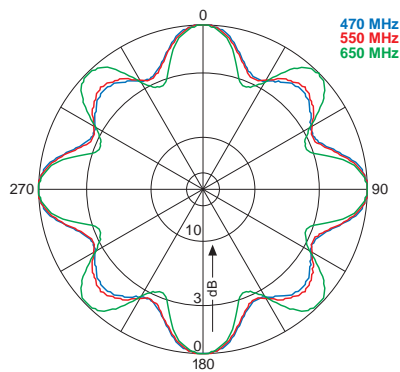
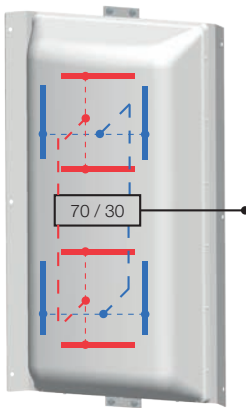
### > Circular, Elliptical Antenna

Series 75010300 and -301

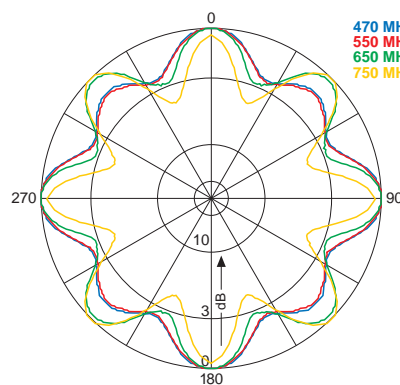
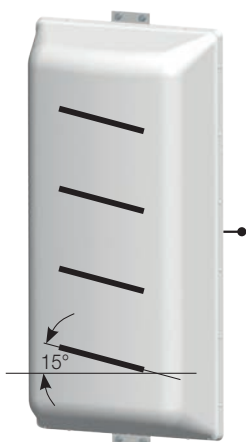
The Kathrein Broadcast Division has extended the product range of UHF antenna panels to new types of circular/elliptical and slant polarisation. During the development, special attention was paid to the production.



> **Elliptical Antenna**  
Series 75010325



> **Slant Antenna**  
Series 75010329



**FEATURES**

- Single input and integrated power splitter enable compact design of antenna systems with simple distribution network
- Internally set power division for elliptical polarisation with a power ratio of 70% H and 30% V
- Building block for antenna systems with excellent omnidirectional radiation patterns and VSWR in the range 470–654 MHz

**FEATURES**

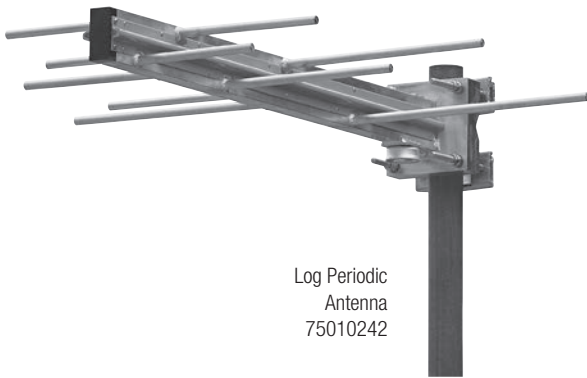
- 15° inclined dipole systems built in an upright antenna housing allow compact design of antenna systems (panels need not be mounted twisted!)
- Slant polarisation with a polarisation ratio (field vector) 80% H and 20% V
- Component for antenna systems with good omnidirectional radiation patterns and VSWR in the range 470–806 MHz



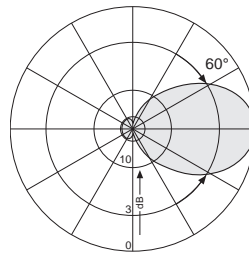
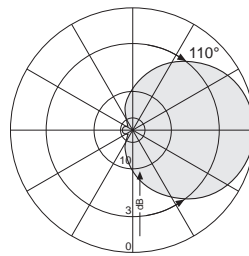
## VHF Broadband Antennas

### > Log Periodic Antenna

75010242



Log Periodic  
Antenna  
75010242

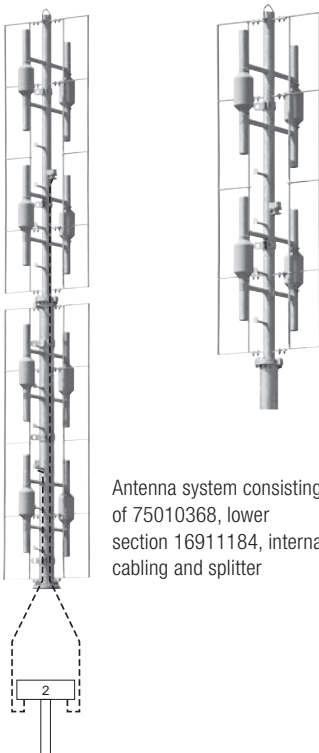


#### FEATURES

- Vertical or horizontal polarisation
- Directional HRP
- Low wind load
- Material of radiator: Hot-dip galvanised steel
- Ideal for transmission along highways, rail-ways or to small towns
- Suitable also as component for systems with orthogonal/mixed polarisation

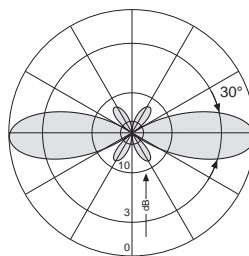
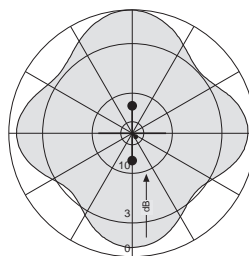
### > For Top-mount

75010365, 366, 367, 368, 75919999, 75920058 and 75919936



Omnidirectional  
transmitting antenna  
for top-mount  
installation Type  
75010365

Antenna system consisting  
of 75010368, lower  
section 16911184, internal  
cabling and splitter

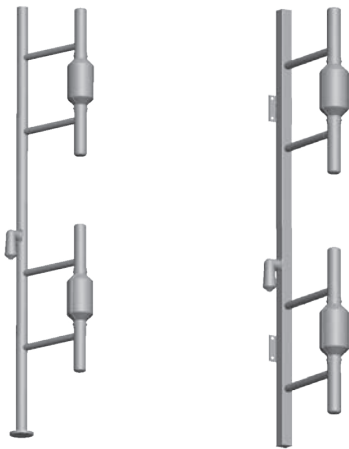


#### FEATURES

- Vertical polarisation
- Omnidirectional horizontal radiation pattern
- High power capacity
- Material of radiator, support tube and isolation grids: hot-dip galvanised steel
- Two elements may be stacked for higher gain:
  - Consists of types 16911184 (lower half) and 75010365...368 (upper half), power splitter and cabling
  - Half antenna operation is possible

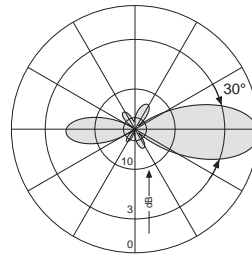
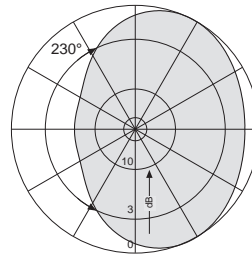
## > Dipole Antennas

75010290, 295, 291, 296, 292, 297



For mounting at the top of masts

For side-mounting to masts

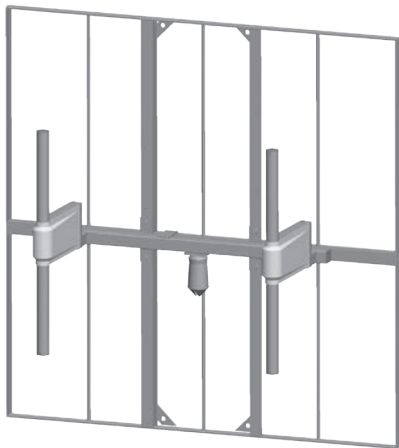


### FEATURES

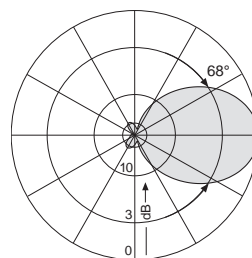
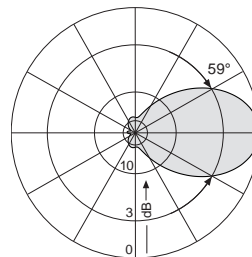
- Vertical polarisation
- Quasi-omnidirectional HRP, dependent on mast
- High power capacity
- Material of radiator: hot-dip galvanised steel
- Quick setup, simple installation

## > Panel Antennas

75010350, 351 and 352



Antenna panel 75010350

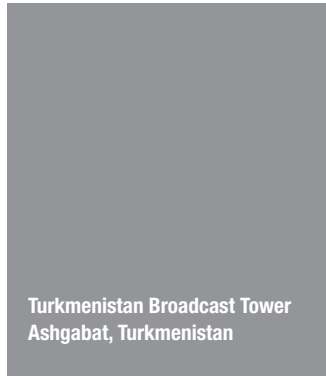


### FEATURES

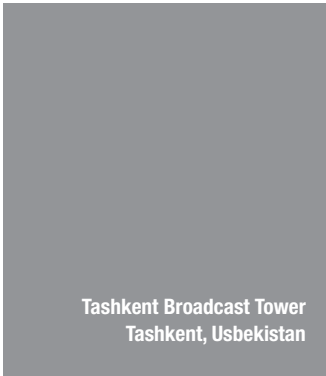
- Vertical polarisation
- Excellent try omni-directional HRP (dents < 3 dB) or customised HRP
- Particularly suitable for square or round masts
- Material of radiator and reflector: hot-dip galvanised steel
- Building block for classic panel antenna systems

## References

Kathrein has references for UHF and VHF Antenna system in more than 140 countries world wide.



Turkmenistan Broadcast Tower  
Ashgabat, Turkmenistan



Tashkent Broadcast Tower  
Tashkent, Usbekistan



Digital TV Tower  
Brasilia, Brazil



Find all references listed by categories at our website:  
[www.kathrein-bca.com](http://www.kathrein-bca.com)

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