

Mobile TFD Broadband Antennas

R&S[®] HD 420, R&S[®] HD 421

1.5 MHz to 30 MHz

For skywave transmission over short, medium and global distances

Brief description

The TFD (terminated folded dipole) antenna operates as a loop antenna on which travelling waves are generated by means of a termination. A tuning unit is not required to attain the specified VSWR. The antenna is configured as an inverted V so that only one antenna support is needed.

Where space is limited, the length of the antenna can be reduced considerably by using two lateral 4 m masts.

Signals are fed in at the highest point in the middle of the antenna via a transformer. Corresponding to its geometry, the TFD antenna radiates horizontally polarized waves and is thus suitable for transmission of skywaves over any distance.

Specifications

Frequency range	1.5 MHz to 30 MHz
Polarization	horizontal
Nominal impedance	50 Ω
VSWR	≤3 typ.
Max. input power	
R&S HD 420	400 W
R&S HD 421	1 kW
Connector	N female
Operating temperature range	−40°C to +55°C
Dimensions	
Length	approx. 90 m approx. 30 m with 2 × R&S KM420A2
Recommended height of feedpoint	approx. 10 m
Mechanical interface	for R&S KM420A1 and for 10 m tower from Geroh
Max. wind speed	180 km/h (without ice deposit) with R&S KM420A1 and 2 × R&S KM420A2
Weight (without mast)	
R&S HD 420	13 kg
R&S HD 421	17 kg



Photo 43262-1

Special features

- ◆ Broadband operation
- ◆ No tuning unit required
- ◆ Coverage of any distance
- ◆ Omnidirectional coverage through high-angle radiation (NVIS)
- ◆ Quick assembly/disassembly (approx. 30 min)
- ◆ Extremely favourable price
- ◆ Suitable for stationary use

Ordering information

Mobile TFD Broadband Antenna	R&S HD 420	4053.2503.02
Mobile TFD Broadband Antenna	R&S HD 421	4053.3500.02
Recommended extras		
Tilttable Mast 10 m	R&S KM420A1	4054.1023.00
Tilttable Mast 4 m	R&S KM420A2	4054.1423.00