# Антенный тюнер FK002H0

# R&S®FK002H0 ANTENNA TUNING UNIT (1 KW)

## 1.5 MHz to 30 MHz

## For stationary, land-mobile and shipboard applications

The R&S®FK002H0 is a standalone antenna tuning unit (ATU). It can match the impedance of a radiator to 50 Ω for every frequency from 1.5 MHz and 30 MHz.

The R&S®FK002H0 is powered and controlled by the R&S®GX002 junction unit.

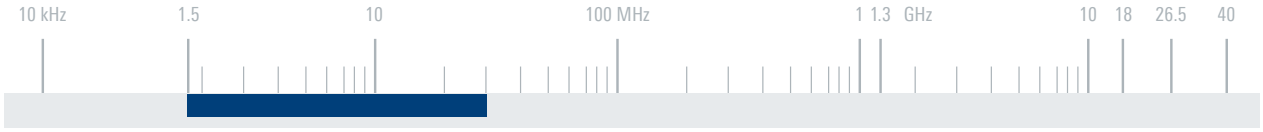
The R&S®FK002H0 can be operated under harsh environmental conditions and continuous 24-hour operation. The rugged, waterproof and dustproof construction of the R&S®FK002H0 allows its use in stationary, land-mobile and shipboard applications.

Together with the R&S®GX002, the R&S®FK002H0 is seamlessly integrable into the R&S®Series4100 radio systems. Furthermore, the R&S®FK002H0 can be controlled by a third-party system controller via LAN interface or it works fully automatically with a third-party transceiver when in autonomous mode.

For cooling, the R&S®FK002H0 is provided with a sophisticated internal air circulation system.

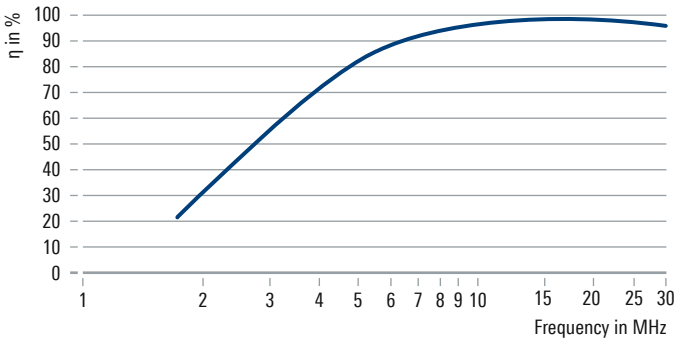
### Key facts

- High RF power at small antennas (1 kW RF power at rod antennas starting at 7 m)
- High efficiency (no resistive loading)
- HF-cable-only interface
- Cosite robust, fast tuning with low RF power (active tune) or zero RF power (silent tune)
- Transceiver-independent control interface and power supply (via R&S®GX002)
- Fully automatic operation possible (autonomous mode)

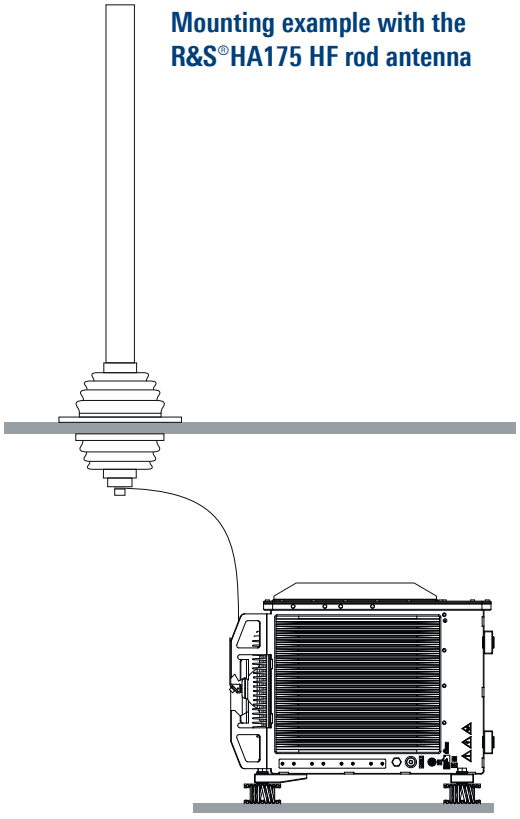



| Specifications | | |
|---|---|---|
| Frequency range | | 1.5 MHz to 30 MHz |
| Max. permissible RF input power | | 1 kW |
| Input impedance | | nom. 50 Ω |
| Permissible antennas | | monopole antennas with radiator length from 7 m to 12 m (e.g. R&S®HA175) |
| | | wire antennas with radiator length from 8 m to 30 m (e.g. R&S®AK503) |
| VSWR after tuning | | ≤ 1.8; typ. ≤ 1.3 |
| Tuning time | silent tune/bypass activation | < 35 ms |
| | active tune | < 25 s; typ. < 8 s |
| Tuning power | integrated antenna analyzer | ≤ 1 W |
| Efficiency | depends on frequency and connected antenna | 20 % to 90 % (typ.) |
| Power supply | via R&S®GX002 | max. 150 W |
| Protection class | | IPx6, waterproof, in line with IEC 60529 |
| Dimensions | L × W × H | approx. 0.45 m × 0.45 m × 0.58 m (17.7 in × 17.7 in × 22.8 in) |
| Weight | | approx. 54.5 kg (120.2 lb) |

## Typical efficiency for rod antenna at height of 7 m to 10 m




## Mounting example with the R&S®HA175 HF rod antenna



# Ordering information

| Ordering information | Type | Order No. |
|---|---|---|
| Antenna tuning unit (1 kW) | R&S®FK002H0 | 4105.8006.02 |
| **Recommended extras** | | |
| Junction unit | R&S®GX002 | 4106.0009.02 |
| HF rod antenna | R&S®HA175 | 0101.1101.02 |