

STMT 2.1: 900 MHz Manual Three-Stub Tuner, R9 Waveguide

Basic Description

The STMT 900 MHz Manual Three-Stub Tuner serves for impedance matching and, in connection with a water-load, for realization of reflection coefficients in wide range of the Smith Chart in all subbands of the 900 MHz ISM band. Based on the R9 (WR975) waveguide, the tuner basic design is derived from the HOMER-Series STHT 900-MHz STOLPA Autotuner, with stepper motors substituted by mechanical wheel-and-crank drives. Dials and locking levers serve for repeatable settings.

Although the STMT is equipped with a water-cooling system, in most situations, cooling is not actually necessary.



Specifications

Electrical	
Waveguide type	R9 (WR975)
Flange type	IEC
Frequency range	890 – 930 MHz
Maximum working power	100 kW
Max tuning stub travel	70 mm
Tuning range ¹	VSWR < 10:1
Mechanical	
Mass	20.2 kg
Length	456.6 mm
Width	336.6 mm
Height	416.6 mm
Surface finish	E-CLPS 4600

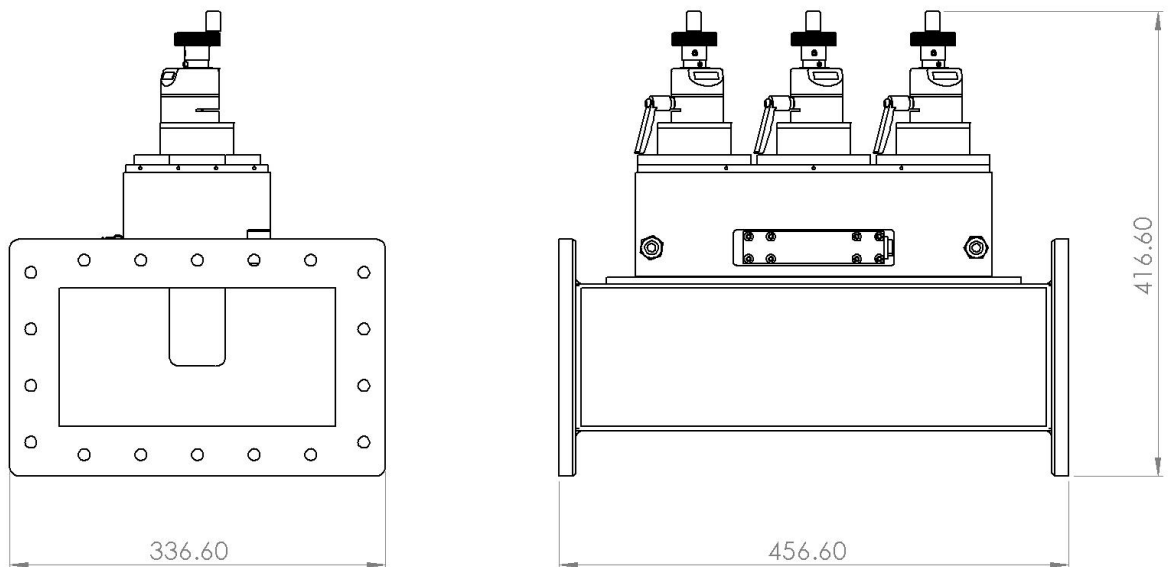
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¹ Regardless of reflection coefficient phase. For certain phases, matchable VSWR can be higher.

Specifications - Continued

Other	
Cooling water flow rate ²	5 liters/minute
Cooling water temperature	+15 to +25 °C
Pressure drop at the specified water flow rate	< 50 kPa
Maximum working pressure	500 kPa
Water inlet/outlet connector ³	SMC KPH12-03
Water hose	SMC TU 1208 Polyurethane
Operating temperature range	+5 to +55 °C
Storage temperature range	-10 to +125 °C

Basic Dimensions (in millimeters)



² In most situations, cooling is not actually necessary. The flow rate serves more or less for pressure drop estimation.

³ See e.g. www.smc.eu