The Grimm 7811 multi-purpose nebulizer is a ready-to-use aerosol generator with two integrated pumps to provide air for atomizing particles and an optional dilution and drying of the raw aerosol.

Both flow rates can be independently controlled, the dilution air flow can be monitored by an integrated flowmeter.

A diffusion dryer column is located at the front of the instrument for easy maintenance and regeneration of the silica gel.

For convenience, up to six nebulizers can be stored inside the removable cover on the instruments backside.

**SPECIFICATIONS**

- **Particle generation method**: nebulizer
- **Particle concentration**: dependent on material (e.g. DEHS > 10^7 p/cm³)
- **Outlet aerosol flow rate**: nebulizer: ~ 2.5 - 7.0 L/min; dryer: ~ 7.5 - 17 L/min
- **Power supply**: 100 – 240 VAC / 50 – 60 Hz / 1.7 A
- **Air supply**: two integrated pumps (two controllable flows)
- **Maximum altitude**: 2000 m (6500 ft)
- **Ambient temperature**: 0 – 40°C (32 – 104°F)
- **Ambient humidity**: 0 – 90% RH, non-condensing
- **Size (h x w x d)**: 32.5 x 31 x 28 cm (12.8 x 12.2 x 11 in)
- **Weight**: 11 kg (24.3 lbs)

**APPLICATIONS**

- Instrument calibration and testing
- Filter efficiency testing
- Inhalation and toxicology studies
- Multi-purpose test aerosol generation

**FEATURES**

- Generation of aerosols from all kinds of liquids, suspensions and solutions e.g. NaCl, DEHS, PSL
- Integrated pumps
- No compressed air needed
- Independently controllable flows (nebulizer flow and dry air flow)
- Suitable for small liquid volumes
The Grimm 7860 WOₓ generator is a ready-to-use instrument to produce well-defined aerosol particles in the size range between 1.2 – 20 nm. Its principle of operation is based on the sublimation of tungsten oxide. Heated tungsten reacts in dry, clean air to several oxides and nitrates. A heating cell around a WOₓ coil provides a temperature of approximately 900°C – the sublimation temperature of WO₃. Tungsten oxide sublimates into a controlled fraction of the carrier gas and is immediately diluted when exiting the heated zone by a flow of purified air. (Reischl et al. 1997, Ankilov et al. 2002, Steiner 2006).

By means of three adjustable flows (WOₓ air, carrier air, dilution air) and a variable heating source, the mean particle diameter and output number concentration of the aerosols can be controlled.

The generator operates with an external compressed air supply (2 – 6 bar). An automatically operating security valve secures the instrument in the case of accidental overpressure.

The unit is designed in accordance with the German VDI Standard 3491.

**SPECIFICATIONS**

- **particle size range**: 1.2 – 20 nm
- **particle concentration**: variable up to $10^7$ p/cm³
- **outlet aerosol flow rate**: ~ 0.03 - 33 L/min
- **material**: tungsten oxide
- **power supply**: 85 – 264 VAC / 47 – 440 Hz
- **max. 1 A (RMS by 110 VAC)**
- **air supply**: external compressed air (2 – 6 bar; oil and particle free)
- **cleaning system**: integrated
- **size (h x w x d)**: 22 x 17.7 x 27 cm (8.7 x 7 x 10.6 in)
- **weight**: 7.5 kg (16.5 lbs)

**APPLICATIONS**

- fine filter efficiency test
- inhalation and toxicology studies
- mixing and coating processes (e.g. for ceramic technology)
- determination of the detection limits and efficiency of condensation particle counters

**FEATURES**

- particle size range 1.2 - 20 nm
- well-defined aerosol material (WOₓ)
- controllable mean particle diameter
- controllable particle number concentration
- external compressed air supply (2 – 6 bar)
- integrated cleaning system