



Technical Data:

<i>Temperature</i>	$T_{liq} = 20 \text{ }^{\circ}\text{C}$	Measuring technique: <ul style="list-style-type: none"> • Laser Diffraction • High-Speed-Camera
<i>Pressure</i>	atmospheric	
<i>Massflow</i>	Liquid: 500 – 1000 kg/h Gas: 1 – 400 kg/h	
<i>Fluid-viscosity (liquid)</i>	1 – 1000 mPa s	

The Burner Test Rig (BTR) is used for the experimental investigation of the spray quality of gas assisted nozzles applying optical measuring techniques. Spray quality is detected as a function of fluid properties (viscosity and surface tension), operating conditions of the nozzle (GLR – Gas to Liquid Ratio, gas- / liquid-velocity) and nozzle geometry. The test rig offers the possibility to atomize pure liquids featuring viscosities up to 1000 mPa·s.

The experiments performed at BTR are focused on the optimization and development of technical burner nozzles. Additionally basic research concerning physical phenomena occurring during the atomization process, e.g. primary instabilities and breakup regime as function of operating conditions can be performed.

Link: [Working Group: Liquid Fuels / Atomization](http://itc.kit.edu) (itc.kit.edu)