

Section: ADVERTISEMENT

# ARCTIC METROLOGY



Centre for Metrology and Accreditation - MIKES

MIKES-Kajaani, Tehdaskatu 15, Puristamo 9P19, FI-87100 Kajaani, FINLAND



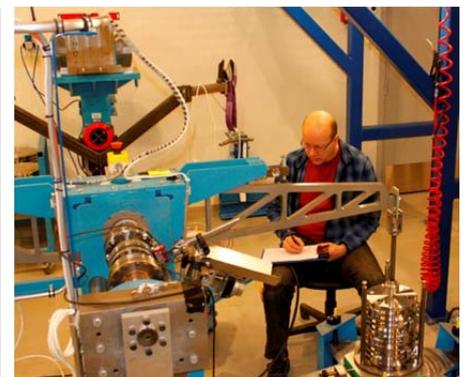
Staff of MIKES-Kajaani (from left): Sauli Kilponen, Petri Koponen, Kari Kyllönen, Jani Korhonen, Timo Nissilä and Aimo Pusa. Second from right Dr. Rainer Engel from the PTB Germany.

MIKES-Kajaani, the world's northernmost national standards laboratory located near the Arctic Circle, has integrated well to the local research community, and serves both national and international customers with calibrations and special services. Premises in the newly designed, renovated building have proper temperature, vibration and humidity control as well as precisely determined g-values. The group running the facility is built up from eight local experts. Force, torque and heavy masses are in full service and serve industry in its calibration needs. The assembled three different water flow calibration rigs are also in service.

MIKES is a partner in a joint research centre CEMIS (Centre for Measurement and Information Systems; the umbrella organisation of measurement technology in Kajaani) together with the Universities of Oulu and Jyväskylä, Kajaani University of Applied Sciences, and VTT Technical Research Centre of Finland. CEMIS specialises in research and training in the field of measurement and information systems. In this cooperation, MIKES has been active in applied research varying from optical emission based measurement methods of heavy metals in water to ski base topography measurements. New thinking of reliable measurement results is implemented in every project. MIKES-Kajaani is also participating in a European metrology research project (EMRP) aiming for better measurements of larger forces.

Calibration services at MIKES-Kajaani.

Unit	Range	Relative uncertainty (k=2)	Remarks
Force	1 N – 1.1 MN	$2 \cdot 10^{-5} - 1 \cdot 10^{-4}$	8 devices
Torque	0.1 N·m – 20 kN·m	$2 \cdot 10^{-5} - 5 \cdot 10^{-4}$	7 devices
Mass	50 kg – 2000 kg	$2 \cdot 10^{-6}$	3 devices
Water flow	0.2 l/s – 750 l/s	0.03 % - 0.5 %	Gravimetric or Reference
Consistency	0 – 12 %	0.2 %	Flow rate 0.5 m/s – 4.0 m/s (consistency dependent)



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