



The outstanding result of a user-friendly development

Innovative Compact Measuring System T.O.K.A. 1200: Not only for equipping tank trucks in the mineral oil and fuel industry

- Designed for rough operating conditions:
- volume measurements with proven oval wheel meters as the measuring element
 - extremely robust construction
 - maximum accuracy and reliability
 - low installation costs
 - modern concept based on years of experience

Measuring Principle and System Design

The new compact measuring system from Bopp & Reuther Messtechnik uses the legendary metrological characteristics of the oval wheel meter as the measuring element for precise volume measurements. This innovative concept combines all the important practical and economical-relevant experiences from the industrial sector which are used to support users on a daily basis.

The system consists of the following modularly arranged main elements:

- easily accessible and easy-to-clean filter/gas measurement protector with high separation capability. A bar magnet protects the whole system against ferritic elements.
- precise oval wheel meter measuring unit with optimized smooth-running bearing, patented electronic pick-up system and integrated temperature sensor for temperature compensation
- fully integrated pneumatic valve block with up to 4 standard connections for all possible requirements
- modern electronic control: Temperature volume conversion device (TWM 2084 from Hectronic) and diagnosis box

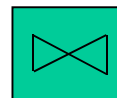
The entire measuring system fulfils the highest requirements with regard to official calibration measurements and is fully manipulation proof due to the new concept. It is extremely simple to integrate it into tank trucks and its user and industry-friendly design is highly impressive.

T.O.K.A. 1200 underlines the term "compact"

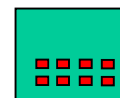


Accessories:

Solenoid valve box



Control unit



Temperature volume conversion device



Technical Data

Accuracy	<± 0.2% of rate
Repeatability	+/- 0.02% of rate
Medium temperature	-20°C to +80°C
Ambient temperature	-10°C to +70°C
Process connections	Input: Flange DN80/PN10 Output: 4 (optional DN80 or DN50)
Electrical connections	Supply 24 VDC
Materials	Wetted parts: Copper-free aluminium alloy, thus suitable for biodiesel O-rings: FKM Bearing: 1.4571, carbon graphite, rolling bearing steel ~90 kg incl. 4 x valve block
Weight	
Degree of protection	IP 65 (electronic housing and sensor cover)
Ex-protection	EEx ib IIC T6 according to ATEX 100, EExd on request
EC conformity	EMC Directive 89/336/EEC, 92/3/EEC, 93/68 EEC, EN 50081-1, EN 50082-2, DGRL, ATEX 100
Calibration certification	Germany: 5.241 / 05.60 EG-Zulassung: DE-07-MI005-PTP 014 / 015

Measuring Ranges

Viscosity range	0.3 – 20 mPa.s
Flow range	80 – 1200 l/min
Especially suitable for	Fuel oil, mineral oils, diesel, biodiesel, petrol
Version for official calibration measurements in the following countries	Germany, Croatia other countries in preparation

The Advantages of T.O.K.A. 1200

... based on the proven oval wheel measuring principle for volume measurements

- maximum accuracy
- long service life and reliability
- long-term stability and exceptional robustness
- simple installation / deinstallation using standard tools, thus extremely user-friendly concept
- easy-to-clean and complete drainage (with external pump) possible when changing products
- very low pressure loss
- with integrated 4-fold valve block for full/empty hose drainage
- lightweight and extremely compact dimensions
- fully automatic deaerating

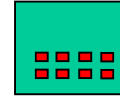
Main Dimensions

Solenoid valve box



230x200x115 mm
(HxWxD)

Control unit



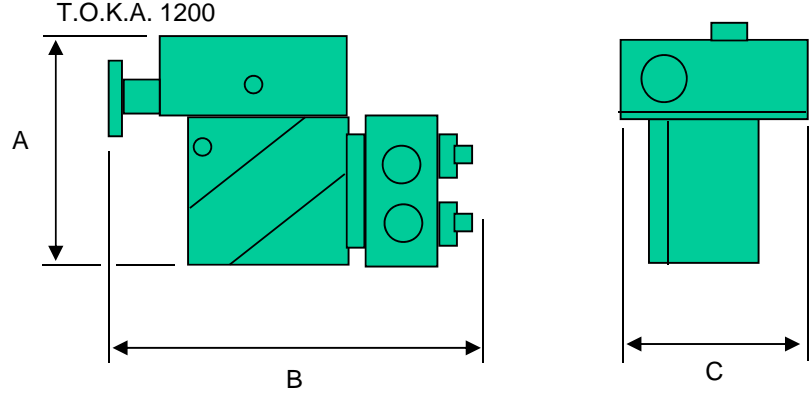
300x300x180 mm
(HxWxD)

Temperature volume conversion device



TWM 2084 A3

280x260x120 mm
(HxWxD)



A	600 mm
B	770 mm
C	445 mm

Modular Concept at a Glance

... combined with a modern electronic control in a flexible concept

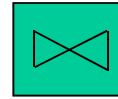
- can be combined with various temperature volume conversion devices (e.g. TWM 2084 from Hectronic, Bartec....)
- easy-to-read local indicator in ideal reading and operating position
- control unit with functional display
- impressive modular concept due to the high level of flexibility and appealing design
- simple operation
- manipulation proof
- high quality standard

Modern electronics, highly accessible and easy-to-operate

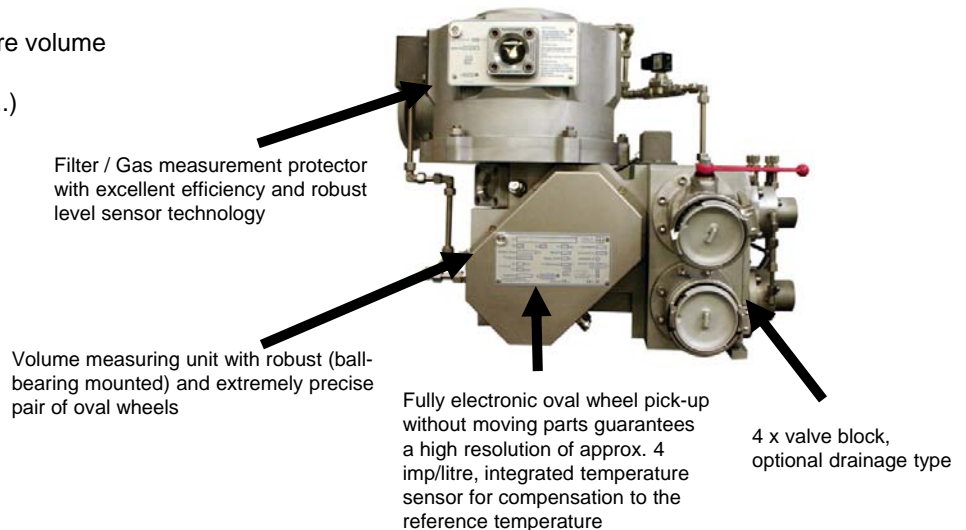
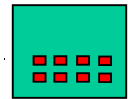
Temperature volume conversion device



Solenoid valve box



Control unit



Just contact us !

Subject to technical changes

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