TA-SCOPE

BALANCING

MEASURING INSTRUMENTS

BALANCING INSTRUMENT

TA-SCOPE is a tough, effective balancing instrument for measuring and documenting of differential pressure, flow, temperature and power in hydronic systems. Robust, accurate and easy-to-use, TA-SCOPE delivers quicker, more cost-efficient balancing and enables rapid troubleshooting. TA-SCOPE links effortlessly to the TA-Select PC software gaining the maximum benefit from recorded data and enabling professional report writing and automatic software upgrades.

USER-FRIENDLY DESIGN
Ergonomic and custom designed user-interface ensures easy and more comfortable balancing.

INTERACTIVE SOFTWARE
Step by step software wizards for measuring, balancing and trouble shooting ensure a fast commissioning process.

WIRELESS COMMUNICATION
For reliable balancing, a fully charged TA-SCOPE provides three days of power-efficient wireless performance.

we knowhow

TECHNICAL DESCRIPTION

TA-SCOPE is a balancing instrument for measuring and documenting of differential pressure (Δp), flow, temperature and power in hydronic systems.

TA-SCOPE consists of two main components:
Handheld unit – computer-based unit programmed with the TA valve characteristics. Straightforward functions with easy-to-follow instructions on the colour display.
Differential Pressure Sensor unit – the Dp Sensor communicates wirelessly with the Handheld unit and has LED indicators for indicating communication status and battery capacity. The units can optionally be connected via cable.
TA-SCOPE automatically demands calibration when needed. The design of the sensor unit and a short flow-through during calibration eliminate measurement errors caused by insufficient venting of the measuring device.

Measurement range:
Total pressure: max. 2 500 kPa
Differential pressure: 0-200 kPa
Recommended pressure range during flow measurements: 3-200 kPa
Temperature liquid medium measurement: -20-120°C

Measurement deviation:
Differential pressure: 0.1 kPa or 1% of reading, whichever is the highest
Flow: as for differential pressure + valve deviation
Temperature: <0.2°C

Battery capacity, operating and charge times:
Handheld unit:
- battery capacity: 4 400 mAh
- battery operating time (with backlight on): 20 h
- battery charge time to full capacity: 5 h

Dp Sensor unit:
- battery capacity: 1 100 mAh
- battery operating time (continuous measurements): 20 h
- battery charge time to full capacity: 1 h

Ambient temperature for the instrument:
During operation and charging: 0-40°C
During storage*: -20-60°C
*) Do not leave water in the sensor when there is a risk of freezing.

Humidity
Ambient humidity: max. 90%RH

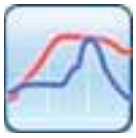
HYDRONIC FUNCTIONS

Quick Measure
Straightforward function to measure flow, differential pressure (Δp), temperature and power. To be used when only one or a few valves are of interest. The function does not require any predefinition of network or module.

Hydronic Networks
Complex networks created in TA-Select are easily downloaded to TA-SCOPE. Use a network for measuring and balancing at any time; during commission, for control and inspection. All hydronic functions can be applied to a selected valve from a Hydronic Network.

Balancing
The powerful TA balance method for hydronic systems. Measuring all valves in a module and calculating the correct valve openings to attain design flow.

Troubleshooting
Software wizards take you step-by-step through the process of locating and diagnosing problems and errors in hydronic systems, e.g., Dp (Δp) analysis.



Data Logging
Measurement during a predetermined period of time to analyse any fluctuations in flow, differential pressure (Δp), temperature and power. The logged data is stored and listed or displayed as a graph, both in TA-SCOPE and TA-Select.

SUPPORT FUNCTIONS

Fluid
Settings of fluid in the system to be explored and diagnosed. Water is the most common fluid in hydronic systems but water with various additives can also be handled by TA-SCOPE.

Hydronic calculator
Perform calculations based on the relationship between flow, differential pressure (Δp), Kv-value, power and differential temperature (ΔT). The function also gives guidance in selecting pipes and valves when designing hydronic systems and enables unit conversions.

Settings
Manage adjustments regarding the instrument and appearance of information from the Settings function.

Information
Displays information like software version, last calibration and battery details on Handheld, Dp Sensor and also Temperature Sensor when connected.

TA-SCOPE

Version*		Manual language	TA No	EAN
AT		DE	52 199-006	7318793982605
AU/NZ		EN	52 199-023	
BE		FR, NL	52 199-024	
CEE	Central Eastern Europe	CS	52 199-010	7318793982803
CEE	Central Eastern Europe	PL	52 199-011	7318793984609
CEE	Central Eastern Europe	RU	52 199-012	7318793984708
CEE	Central Eastern Europe	HU	52 199-013	7318793984807
CEE	Central Eastern Europe	EN	52 199-025	
CH		DE, FR, IT	52 199-022	7318793985309
zh-CN		zh-CN	52 199-020	7318793985101
DK		DA	52 199-003	7318793984104
ES		ES	52 199-009	7318793984500
FI		FI	52 199-005	7318793984302
FR		FR	52 199-007	7318793982704
GB	Specific for Great Britain	EN	52 199-015	7318793985002
INT	International version	EN	52 199-002	7318793982506
IT		IT	52 199-021	7318793985200
JP		JA	52 199-016	
LAM	Latin America	PT, ES	52 199-018	
MEA	Middle East	EN	52 199-017	
NL		NL	52 199-008	7318793984401
NO		NO	52 199-004	7318793984203
SAS	South Asia	EN	52 199-019	
SE		SV	52 199-001	7318793982407
US		EN	52 199-014	7318793984906

*) Version = Market related product range. All instrument versions include all of the above languages.

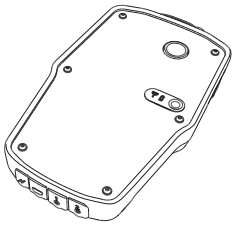
Case contents:

- Handheld unit (Hh)
- Dp Sensor unit (DpS)
- Digital Temperature Sensor (DTS)
- Measuring hose, 400 mm red
- Measuring hose, 400 mm blue
- Measuring needles
- Measuring hoses with twin needle, 150 mm
- Flashlight
- Mirror
- Chucks for older valves, red/blue
- Allen Keys 3 mm/5 mm
- Spanner for measuring points on older valves
- Presetting tool TBV-C/TBV-CM/TBV-CMP
- Spare filters
- Chain for mounting
- Neckstrap
- USB-cables for connection; Hh – DpS and Hh – PC
- Charger for Handheld and Dp Sensor
- Case
- TA-Select Software
- User manual
- Calibration certificates for DpS and DTS
- Quick Guide
- Guarantee/Return form

ADDITIONAL EQUIPMENT

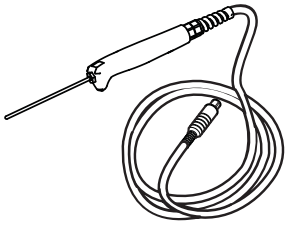
Dp sensor unit (DpS)

The handheld unit (Hh) can communicate with several Dp sensor units (DpS). Establish communication by connecting the cable (included in the TA-SCOPE case) between the handheld unit and the Dp sensor unit.



TA No	EAN
52 199-931	7318793983404

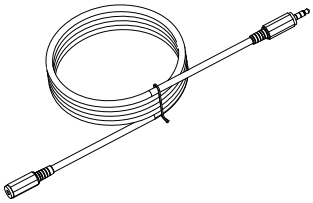
Digital temperature sensor (DTS)



TA No	EAN
52 199-941	7318793983503

ACCESSORIES

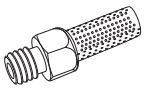
Extension cable for digital temperatur sensor



TA No	EAN	
52 199-994	7318793985408	5 m

Filter

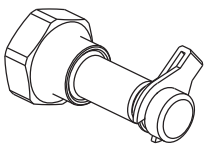
Spare part



TA No	EAN
309 206-01	7318793741301

Measuring nipple

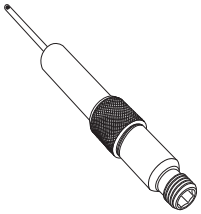
Thread connections G1/2 and G3/4



TA No	EAN	
52 197-303	7318793536808	G1/2
52 197-304	7318793536907	G3/4

Measuring nipple

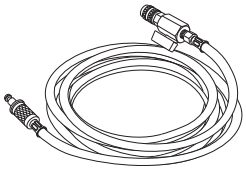
Extension 60 mm
Can be installed without draining of the system.



TA No	EAN
52 179-006	7318792812804

Measuring hose

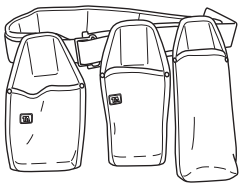
Extension with shut-off valve



TA No	EAN	Length	
52 199-997	7318793817709	3 m	Red
52 199-998	7318793817808	3 m	Blue

Belt

With instrument pockets



TA No	EAN	Size	Length
52 199-991	7318793983602	M/L	~ 1,25 m
52 199-992	7318793983701	L/XL	~ 1,51 m
52 199-993	7318793983800	Extra pocket for accessories	

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