

TA-SCOPE

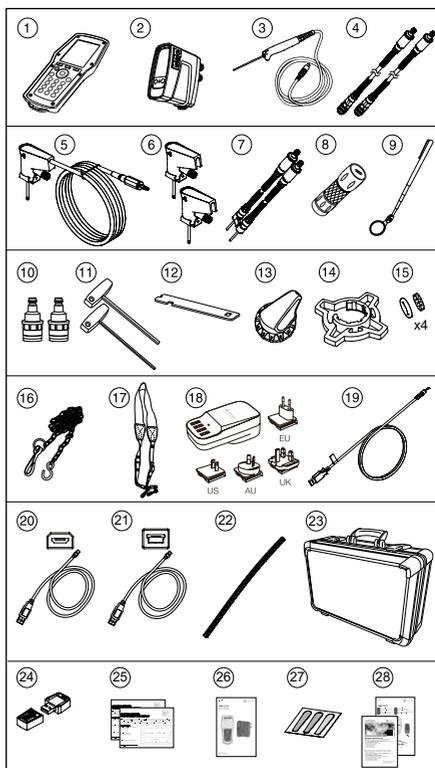
Quick Guide



Welcome to your new TA-SCOPE

Instrument and measuring equipment

- 1 Handheld unit (Hh)
- 2 Dp Sensor unit (DpS-Visio)
- 3 Digital Temperature Sensor (DTS)
- 4 Measuring hoses, 20 in., red/blue
- 5 Safety pressure and temperature probe (SPTP)
- 6 Safety pressure probes (SPP)
- 7 Measuring hoses with twin needle, 6 in.
- 8 Flashlight
- 9 Mirror
- 10 Chucks for older valves, red/blue
- 11 Allen Keys 3 mm/5 mm
- 12 Spanner for measuring points on older valves
- 13 Presetting tool TBV-C,-CM, (-CMP)
- 14 Grip tool for setting wheel
TA-COMPACTP/-DP and TA-Modulator
(DN 15-32)
- 15 Spare filters and O-rings for hoses
(4 pcs)
- 16 Chain for mounting
- 17 Neckstrap
- 18 Multi-charger for Handheld and
Dp Sensor(s) (EU, UK, US, AU/NZ)
- 19 USB charging cable;
Hh - Multi-charger
- 20 USB-cable for connection;
Hh - DpS-Visio /
PC - DpS-Visio /
DpS-Visio - Multi-charger
- 21 USB-cable for connection;
Hh - PC
- 22 Cable wrapping
- 23 Case
- 24 USB stick with manual and HySelect
software
- 25 Calibration certificates for DpS-Visio,
DTS and SPTP
- 26 Quick Guide
- 27 SPTP/SPP stickers
- 28 TA-SCOPE Portal/ Guarantee/Service/
Calibration form



CAUTION! Read the user manual before using the product.

Handheld

The display is divided into three areas, the Information bar, the Main display and the Function keys.



Information bar

Icons on the Information bar display details of battery status, connection type and intensity.

	Battery status bar
	Charging of battery
	Battery symbol
	Handheld
	Dp sensor DpS-Visio
	Dp sensor (older version)
	Wireless communication
	Intensity of wireless signal
	Wireless signal set to Off
	Connection by cable

Main display

Instructions on how to carry out hydronic functions are shown on the Main display.

Function keys

The three top keys on the keypad are used for selecting options shown in the lower part of the Main display. The options vary depending on which menu is currently shown.

Keypad

The keypad has alphanumeric keys. Select a letter by repeatedly pressing the key until the desired letter appears. Prolonged press enters a digit.

Press function key **“Language”** to select desired language.

	Function key <i>Options depend on text in display</i>
	On/Off
	Flow adjustment (Computer method) <i>Short cut button</i>
	Return/Escape
	Enter
	Navigation up/down
	Navigation right/left
	Alphanumeric <i>0-9, A-Z plus symbols</i>

DpS-Visio

The display is divided into three areas, the Information bar, the Main display and the Function keys.



Note! Never leave water in the Dp sensor unit when risk of freezing exists (i.e., in the car during winter).



LED for battery status

Information bar

Icons on the Information bar display details of battery status, connection type and intensity.

Main display

Shows status and measurement, see page 5, 6 and 8.

Function keys

Arrow button

- Press button to start measurement or change settings

On/Off button

- Long press for switching unit on or off
- Short press for display on or off

Navigate button

- Jump between menus

Connections for cables



Handheld connections

- 1 Charger
- 2 USB to PC
- 3 Temperature probe (SPTP or DTS)
- 4 USB to Dp Sensor

DpS-Visio connections

- 1 Temperature probe 1 (SPTP or DTS)
- 2 Temperature probe 2 (SPTP or DTS)
- 3 Charger and USB to Handheld



DpS-Visio – Main screen sequences



Navigate button

Short press: Browse between menus described here
Long press: Entering setting menu (see page 6)



Home

DpS-Visio type (5 or 10 bar)

Software version number

Battery level

Logging progress (Replaced by  when a logging is waiting to start)



Logging

Logging progress (Replaced by  when a logging is waiting to start)

Progress in time / Total logging time

Time-step

Last logged values

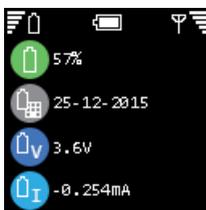


Info

Software version number

Wireless software version number

Serial number



Battery

Battery level

Battery installation date

Battery voltage

Battery current (+ when charging)



Calibration

Dp range

Date of last factory calibration

Date of next recommended factory calibration

DpS-Visio – Settings menu

In the settings menu, customised adjustments of the DpS-Visio and information representation are managed.



Long press to open settings menu
Long press to close settings menu
Short press - jump to next screen



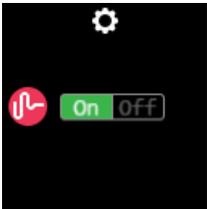
Arrow button to change settings



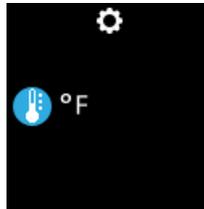
Settings are open



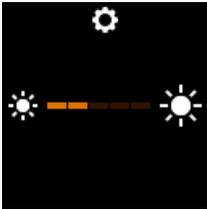
Change Dp measuring unit



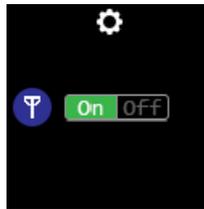
Toggle Dp filtering on/off



Change temperature unit



Change display brightness level



Toggle radio on/off



Change time to display auto off



Long press  to close settings menu

Quick measure – Handheld + DpS-Visio

Measure flow



Warning! Beware of hot fluid in the valve. Always follow the sequence described in the manual when connecting and disconnecting the measuring equipment.



Warning! The surface on the Dp sensor unit can be hot while measuring on hot media. Always use suitable safety equipment.

1. Turn the handheld (Hh) and the Dp sensor (DpS-Visio) on.
2. Connect measuring equipment.



3. Hh: Navigate to **Quick Measure** in the main menu and press enter.
4. Hh: Navigate to **Measure Flow** and press enter.

Water temperature over 125°F (52°C) can cause severe burns instantly or death from scalds. Always consider the risks of injury from hot water before starting any measurement on a heating system and follow relevant local legislation, regulations, standards and good industry practice for working with pressurised hot water systems. Always use appropriate personal safety equipment when working on a heating system. Examples of appropriate safety equipment include (but are not limited to) a face shield, heat resistant rubber gloves and boots and a long sleeved apron (long enough to cover the tops of the boots). Always wear your boots inside your trouser legs to prevent/minimise any hot water flowing into your boots. IMI Hydronic Engineering will not take any responsibility for injury howsoever caused by hot water during measurement.

5.

09:27:59
Measure flow

Flow: -- USGPM

Dp: -- ft H2O

Temp: -- °F

5:1 40 USGPM -- %

5:2 STAD 3/4"

5:3 3.98 turns Cv = 6.54

5:4 Water

Options Units Measure

- 5:1 Input the given Design Flow for the terminal.
- 5:2 Define valve.
- 5:3 Input Valve Opening.
- 5:4 Define fluid.

6. Hh: Press function key **Measure** to start measuring.
(The DpS-Visio will automatically calibrate and then go to measuring mode.)

Quick measure – DpS-Visio

Measure differential pressure and temperature



Short press or long* press



Double press



By-pass valve opening



Measurement without flushing and calibration



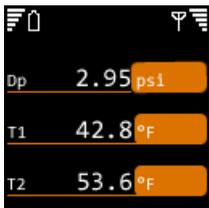
Flushing and calibration



By-pass valve closing



Brings back to main screen sequence



Measurement

*) Keeping  pressed from the start keeps the calibration sequence in flushing phase. Flushing phase is ended by releasing .

PC communication

Transfer of data

HySelect software is available on the USB stick. Connect TA-SCOPE to your PC to transfer data, e.g., hydronic networks and collected system information to and from the HySelect software.

Use the USB-cable to connect the Handheld to a PC and the HySelect software will automatically connect to TA-SCOPE. Simply follow the instructions on the PC.

Software upgrade

When a new version of the TA-SCOPE software is available, HySelect will automatically suggest an upgrade. Simply connect your TA-SCOPE and follow the instructions on the PC.



Care and storage recommendations

- TA-SCOPE can be cleansed with a dampened cloth and a lenient cleaning-agent.
- Change filter in the hoses regularly.
- Never leave water in the Dp Sensor when risk of freezing exists (i.e., in a car during winter)!
- Do not expose to extreme temperatures, the battery may explode if disposed of in fire.
- Storage above 140° F is not allowed.
- Other usage than specified in this manual may cause damage to the unit or user.



Warning! Do not open the instrument. This can damage the instrument and void your guarantee! See user manual for further information.

Calibration/Service

The instrument (Dp sensors, temperature sensors) has been calibrated before delivery. IMI Hydronic Engineering recommend a yearly calibration and service. (See Guarantee/Calibration/Service form).

Contact your local sales office for more information.

Batteries

Capacity and charging

Upon delivery the TA-SCOPE is partly charged and prepared to start balancing immediately. The Information bar on the Handheld displays the battery status for both Handheld and DpS-Visio whenever communication is established.

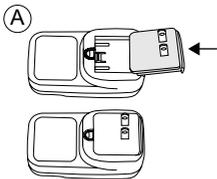
The Handheld and Dp sensor(s) can be charged at the same time through the multi-charger. The TA-SCOPE is delivered with one multi-charger and 2 charging cables.

Handheld is charged with a special charging cable. DpS-Visio with the same cable as used for communication with handheld (Hh) and PC.



Charging – Operation instruction

(Choose the correct plug (fig A).)



1. Connect the multi-charger to the wall socket. Wait for the indicator to show green colour.
2. Plug the device(s) into the USB port(s).



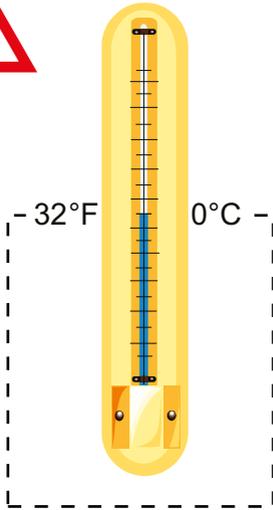
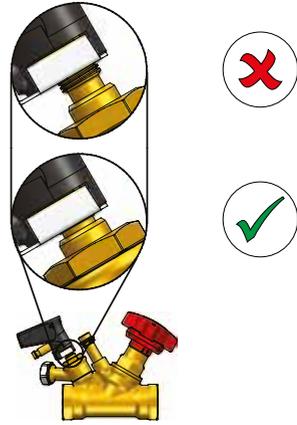
Warning! The supplied multi-charger from IMI Hydronic Engineering must be used!



CAUTION! (Multi-charger)

1. Do not bend the blade or pins of the plug.
2. If there are any strange sound, smoke or odor, pull of the cable(s) immediately.
3. Do not disassemble. (it may cause fire or electric shock).
4. Do not put any sharp objects into the venting hole. (it may cause fire or electric shock).
5. Ensure to plug the multi-charger firmly.
6. Ensure not to use damaged cable(s). (it may cause fire or electric shock).
7. Ensure not to place the multi-charger on a bed, bag or inside a closet that is not good for ventilation.
8. Always wipe off the multi-charger with a soft fabric, not water mop. (water may cause electric shock).
9. Keep the power plug and outlet clean. (dirt may cause a short circuit and fire).
10. Keep the product out of reach of children.

SPP/SPTP



Technical specification

Measurement range

Total pressure

-TA-SCOPE	max. 232 psi
-TA-SCOPE HP	max. 362 psi

Differential pressure

-TA-SCOPE	0 - 72.5 psi
-TA-SCOPE HP	0 - 145 psi

Recommended pressure range during flow measurements

-TA-SCOPE	0.02 - 72.5 psi
-TA-SCOPE HP	0.5 - 145 psi
Temperature liquid medium measurement	-4 - +248°F

Measurement deviation

Differential pressure

- TA-SCOPE	0.015 psi or 1% of reading, whichever is the highest
- TA-SCOPE HP	0.029 psi or 1% of reading, whichever is the highest
Flow	as for differential pressure + valve deviation
Temperature	<0.36°F

Ambient temperature

During operation	+32 - +104°F
During charging	+32 - +104°F
During storage *	-4 - +150°F

**) Do not leave water in the sensor when there is a risk of freezing*

Humidity

Ambient humidity	max. 90%RH
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Sealing

Handheld unit (in wireless mode)	IP 64
Dp sensor unit DpS-Visio (in wireless mode)	IP 64
Safety pressure and temperature probe	IP 65
Digital temperature sensor	IP 65

IP6X = dust tight

IPX4 = protected against splashing water

IPX5 = protected against water jets

Multi-charger

Input voltage	100-240 VAC
Input frequency	50-60 Hz
Output voltage	5 VDC
Output current	6800 mA
Connectors	EU, UK, US, AU/NZ

Technical specifications valid at an altitude of max. 6560 ft.

We reserve the right to introduce technical alterations without prior notice.

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