



**Low DP Sensor: TPS-200KPA.BOX**

**High DP Sensor: TPS-1000KPA.BOX**

**Two DP Sensor: TPS-200-1000KPA.BOX**

## Hydraulic Balancing Debugging Instrument

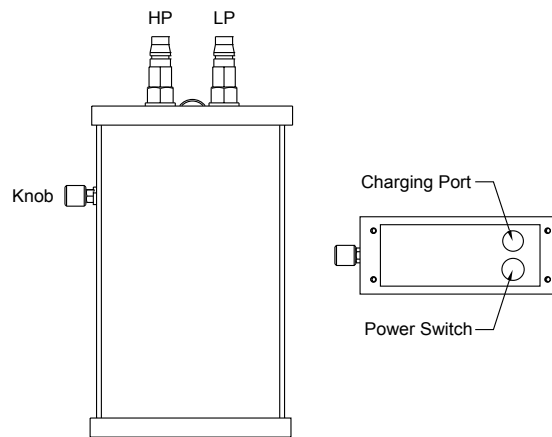
TPS is a debugging instrument for measuring and documenting of differential pressure, flow, temperature and power consumption in hydronic systems. It connects to the handset APP software via bluetooth which could debug faster and more economical.

### TPS-DP Sensor Technical Parameters

<b>Max. Permissible Pressure</b>	1000kPa
	TPS-200KPA.BOX: 0~200kPa
<b>DP Measurement Range</b>	TPS-1000KPA.BOX: 0~1000kPa
	TPS-200-1000KPA.BOX:0~200kPa or 0~1000kPa
<b>Pressure Range during Flow measurement (Recommended Value)</b>	TPS-200KPA.BOX: 3~200kPa
	TPS-1000KPA.BOX: 3~1000kPa
<b>Medium Temperature</b>	-20~120°C
<b>Measurement Deviation</b>	DP Sensor: ≤0.25%
	Flow: DP Deviation+ Valve Deviation
	Temperature: ≤1°C
<b>Battery Capacity</b>	3000mA
<b>Operating Time</b>	>20 h
<b>Charge Time</b>	6 h
<b>Protection Level</b>	IP64
<b>Ambient Temperature</b>	Operating and Charging Status: 0~40°C
	Storage Status: -20~60°C (Do not leave water in the sensor when there is a risk of freezing)
<b>Ambient Humidity</b>	Max. 90%RH
<b>Charger</b>	Output Voltage: 12.6V DC
	Output Current: 500mA
<b>Applicable System</b>	Android
<b>Dimension</b>	L*W*H=470*355*150mm

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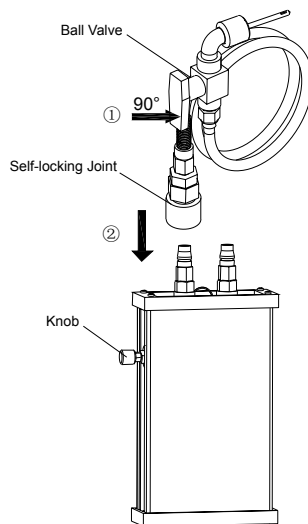
## DP Sensor Panel



- HP : Connect the measuring hose (red) to high pressure end of DP sensor.
- LP : Connect the measuring hose (blue) to low pressure end of DP sensor.
- Knob: Tighten the knob clockwise, unscrew it anti-clockwise
- Charging port: Charge up the DP sensor
- Power switch: Self- return button power switch, press to power on the DP sensor and the power indicator light is lit. Press again to power off the DP sensor and the power indicator light is off.

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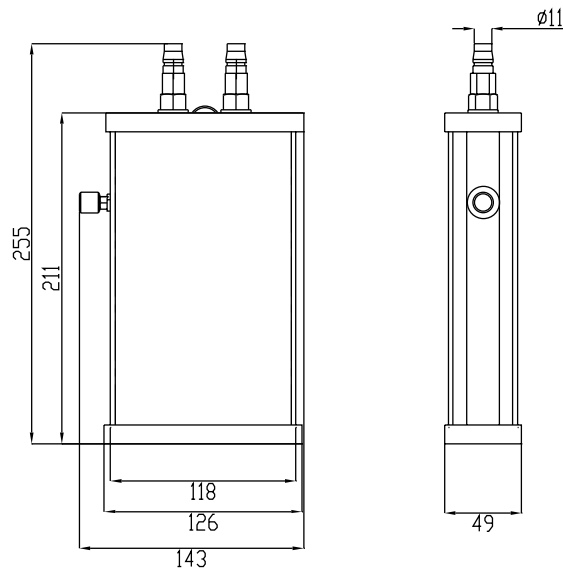
## Operation Instruction



1. Please rotate the ball valve 90 degrees before installing. Now the ball valve switch is perpendicular to the measuring hose and the valve is closed.
2. Insert the measuring needle into testing point of static balancing valve, connect the self-locking joint to the HP end and LP end. Red hose connect to HP end and Blue hose connect to LP end. (Notice: the HP and LP are not allowed to be inversely connected)
3. Press the power switch of DP sensor, the power indicator light is lit.
4. Open the APP software, click (connect) to connect the Bluetooth module.
5. Rotate the knob anticlockwise.
6. Observe the display data on handheld unit, click (calibrate) to zero.
7. Rotate the knob clockwise.
8. Rotate the ball valve to parallel to the measuring hose. (Open)
9. Input relevant parameters in formula bar.
10. Click data storage to record the value after debugging.
11. After recorded, rotate the knob anticlockwise.
12. Rotate the ball valve to perpendicular to the measuring hose, close the ball valve.
13. Disconnect the self-locking joint and pull out the measuring needle from testing point of static balancing valve
14. Shut off the power switch of DP sensor, the power indicator light is off.

**Notice: when test high pressure, high temperature liquid medium, please put on heat-resistant gloves and any other necessary protectors to ensure the security of the testing process.**

## DP Sensor Dimension



## Interface Introduction



① Status Bar: the battery status is on the left. Time is in the middle. On the right, it shows the connecting status of device, Bluetooth connection status and device battery status. When the connection works, this icon will flicker.

② Title Bar: the software title is in the middle, right is setting button. Its functions include equipment search, help, update and so on.

Search: search for Bluetooth devices, paired and so on.

Help: provide operating instructions.

Update: interconnection state, update software if there is a new version.

About: check the version number of the program.

③ Display Bar: show current status of DP, Flow and temperature, connection status, current cycles, current KV value and Distortion Ratio.

④ Formula Bar: input basic testing parameters, including valve number, caliber choice, cycles setting, design flow, remark info. and so on.

⑤ Operation Bar: include calibrate, connect, data storage, view records and generate reports.

Calibrate: calibrate the zero drift of the instrument.

Connect: connect to the default paired device.

Data Storage: store the current measuring value.

View records: view the current records in the database.

Generate reports: generate xls spreadsheet and store in the SD card.

⑥ Menu Bar: include measure, data, settings and about.

Measure: turn to measuring interface

Data: view xls spreadsheet management.

Settings: set the normal operation information, such as project name, company selection and so on.

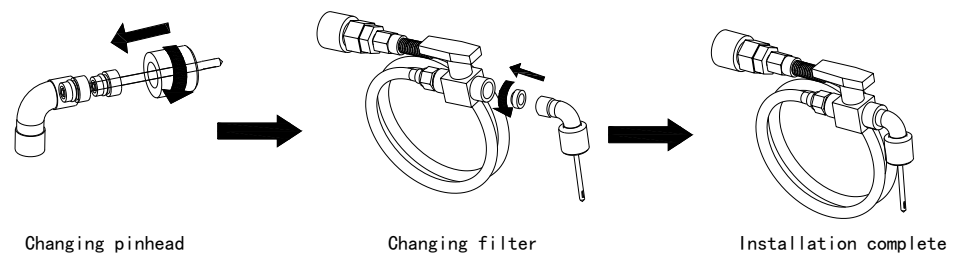
## Contents

TPS-200KPA.BOX Contents			
Item	QTY	Item	QTY
DP sensor TPS-200KPA	1	3*150 allen wrench	1
Handheld Unit(With charger)	1	5*200 allen wrench	1
Measuring hose with needle100mm, Red	1	8*350 allen wrench	1
Measuring hose with needle100mm, Blue	1	Utility knife	1
Standby filter	2	Flashlight	1
Standby needle	1	Awl	1
Charger for DP sensor	1	Case	1
Neck strap	1	Operation instruction	1

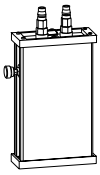
TPS-1000KPA.BOX Contents			
Item	QTY	Item	QTY
DP sensor TPS-1000KPA	1	3*150 allen wrench	1
Handheld Unit(Charger included)	1	5*200 allen wrench	1
Measuring hose with needle100mm, Red	1	8*350 allen wrench	1
Measuring hose with needle100mm, Blue	1	Utility knife	1
Standby filter	2	Flashlight	1
Standby needle	1	Awl	1
Charger for DP sensor	1	Case	1
Neck strap	1	Operation instruction	1

TPS-200-1000KPA.BOX Contents			
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Measuring hose with needle100mm, Blue	1	Flashlight	1
Standby filter	2	Awl	1
Standby needle	1	Case	1
Charger for DP sensor	1	Operation instruction	1
Neck strap	1	/	

## Parts Installation Instruction



## Accessories



### DP sensor (TPS)

Mainly used for measuring differential pressure, handheld unit can connect to the DP sensor by Bluetooth function.

#### Specifications

#### Article No

LP (0~200kPa)

TPS-200KPA

HP (0~1000kPa)

TPS-1000KPA

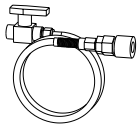


### Handheld Unit

With charger

#### Article No

TMOBILE-1



### Measuring hose

With shutoff valve

#### Length[mm]

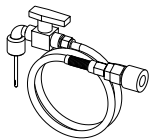
#### Article No

100 Red

TPS-001-R

100 Blue

TPS-001-B



### Measuring hose with needle, angle

With shutoff valve and measuring needle

#### Length [mm]

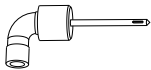
#### Article No

100 Red

TPS-002-R

100 Blue

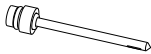
TPS-002-B



### Measuring needle, angle

#### Article No

TPS-003



### Pinhead

#### Article No

TPS-004



### Filter

Measuring hose parts

#### Article No

TPS-005



### Allen wrench

#### Specifications

#### Article No

3mm

TPS-006-3

5mm

TPS-006-5

8mm

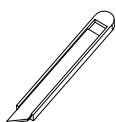
TPS-006-8



### Awl

#### Article No

TPS-007



### Utility knife

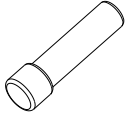
#### Article No

TPS-008

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**Accessories(cont.)**

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**Flashlight**

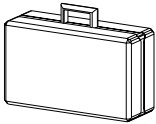
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**Article No**

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TPS-009

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**Case**

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**Dimension**

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**Article No**

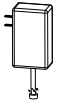
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470\*355\*150mm

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TPS-010

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**Charger**

For DP sensor and P/Temp sensor

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**Article No**

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TPS-011

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**Neck strap**

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**Article No**

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TPS-012

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