



## WELL TESTING TOOLS

- SLICK-LINE UNITS
- MOBILE TESTING UNITS
- SOFTWARE
- INSPECTION AND CALIBRATION TOOLS FOR EQUIPMENT TESTING
- DOWNHOLE GAUGE SYSTEMS

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## WELLHEAD MONITORING SYSTEM

SiamMaster-mini GSM-i  
with wireless sensors and  
smartphone



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## Wellhead monitoring System SiamMaster-mini GSM - I with wireless sensors and smartphone

### General Concept

- The set is based on the wireless sensors and smartphone\*;
- Smartphone intended for the data collection, visualization and storage (fluid level data, pressure records, dynamometering charts and graphs etc.);
- All sensors have its own built in battery, do not have any keyboards and screens;
- Smartphone has IP68 protection;
- Sensors power supply: LiOn batteries with the possibility to be charged from external power supply or car power network;
- Full charge period not more than 7 hours.

### Operational Advantage

- Intuitive interface of Android I-Services app gives the user advantage in a fast sensors adjustment and survey performance;
- Wireless connection between transducers and terminal leads to a higher reliability and effectiveness of the operations, as well as it improves HSE;
- The wide operating range allows to control and monitor the measurements on the smartphone screen at a distance (up to 50 meters), including the ability to carry out multiple repeated measurements, i.e. perform measurements from vehicle during bad weather;
- An installation time of dynamometer sensor unit is significantly reduced due to a small size of device and a controlled tightening torque screw for easy polished rod installation.
- GSM/ WiFi interfaces of smartphone provides data transfer to a remote computer through email, messengers or other interfaces immediately after record of the measurements.
- The user interface of the transducers is very simple: it indicates accumulator charge only. Measurements scheduling, initiation, visualization and storage is remote and performed by a smartphone. Data transfer is wireless.
- Smartphone memory allow to store huge amount of a measured data (depends on the internal memory space) and further transfer to a database or email or another app.
- The scalability of the set allow user to combine several sensors in a single set i.e. to use only echometering sensors or dynamometering sensors or exclude smartphone from the delivery set at all.\*\*

\* Only sensors order is available;

\*\* We provide smartphones tested on compatibility with sensors i.e. using not tested smartphones may neglect the advantage of scalability;

### Basic features

- Wireless sensors connection;
- Initial load for the dynamometer unit is set up very easy by means of controlled tightening torque screw instead of light-emitting diodes;
- Android based I-Service software package;

### Distinct features

- Connection between tools in unit is safe and jam free, long operating range up to 50 meters.
- The radiochannel power consumption is considerably less than that of Bluetooth and increases battery life.
- Indicator operating temperature range is from  $-40^{\circ}\text{C}$ .
- The battery may be recharged at a temperature below zero ( $-20^{\circ}\text{C}$  and higher)

### Specifications

Range of controlled fluid level	20-3000 (6000)m (65,62- 19685 ft)
— resolution	0,03 % FS
Range of controlled pressure	0-100 kgf/cm <sup>2</sup> (0-1422 psi)
Max controlled load on polished rod	15000 kgf
— polished rod diameter	16-39 mm (0,63 – 1,54 inches)
— rod stroke	0,5-10 m
Stroke rate	0,4-15 SPM
Resolution while controlling the load	10 kgf (0,7 psi)
Memory capacity	
— for alphanumeric records	>1000
— for charts	>1000
Temperature range	$-40^{\circ}\text{C}$ to $+50^{\circ}\text{C}$ ( $-40\text{F}$ to $+122\text{F}$ )
Echometer sensors battery life time	35 hours
Dynamometer sensors battery life time	2160 hours
Battery charging time	7 hours
Explosion protection/ Ingress Protection	1 Ex ib IIB T3 X / IP54



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