



Bhagyanagar Gas Ltd.
BHAGYANAGAR
GAS LIMITED

**Tender for Procurement of Portable LEL Detectors for
03 GA's of BGL at Hyderabad, Vijayawada and
Kakinada.**

VOLUME
II OF II

Bid Document No. BGL/417/2018-19



Bhagyanagar Gas Ltd.

BHAGYANAGAR GAS LIMITED

(A JOINT VENTURE OF HPCL & GAIL)

BID DOCUMENT FOR

**TENDER FOR PROCUREMENT OF PORTABLE LEL
DETECTORS 03 GA's OF BGL AT HYDERABD,
VIJAYAWADA AND KAKINADA.**

**UNDER LIMITED DOMESTIC
COMPETITIVE BIDDING**

Bid Document No.: BGL/417/2018-19

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SECTION – 7

SCOPE OF SUPPLY & SPECIAL CONDITIONS OF CONTRACT (SCC)

1.0 SCOPE

The intent of this specification is to define the requirements of **9 No's of IR based Portable Gas Detectors for Bhagyanagar Gas Ltd., Hyderabad.** Scope of work includes the supply of Portable pocket Digital Multi Gas Detectors for the **detection of Methane, Oxygen** mainly and work environment monitoring shall be handy. The size of the detector shall be such that person can easily carry in the pocket too. The detector shall be light weight. The detector shall be supplied with manual and other necessary accessories.

2.0 STANDARDS

- 2.1 In general the equipment covered by this specification shall, unless otherwise specified, be in line with the requirement of any of the latest applicable standards of
- Bureau of Indian Standards
 - British Standard Institution
 - American Standard Institution
 - International Electro Technical Commission
- 2.2 Wherever the requirements in this specification are in conflict with any of the above Standards, the requirements under this specification shall be binding.

3.0 GENERAL REQUIREMENTS:-

3.1. Basic Particulars for Design:

Operating temperature: -40°C to +50°C (-4°F to +122°F)

Operating humidity: 10% to 95% relative humidity (non-condensing)

Detection range: 0 – 50 ppm (minimum) (1 ppm increments)

Protection: Rugged, IP-66/67 highly water-resistant design. Built-in concussion proof boot

Sensor type: The detector shall utilize a dual compensating optics to detect hydrocarbon gasses in various concentration ranges through the means of an infrared absorption principle. The detector shall operate from a range of 0 – 100% LEL Methane as standard with the capability of calibration to other hydrocarbon gasses. The certified accuracy shall be < +/- 1% LEL. The certified repeatability shall be < +/- 2% LEL.

Calibration: Auto zero, set span, and span sensor

Backlight: Low light (auto and on demand); alarm condition (auto)

Full function self-test:- Verifies integrity of sensor, circuitry and battery; audible/visual alarms

Indicators and Alarms:

Clearly advises alarm levels both visually and audibly
Visual alarm: Flashing
Audible alarm: High-output, pulsing 95 dB at 10 in / 0.25 m (typical)
Confidence beep: Every 5 seconds (field-selectable on/off)
Other: Low battery; off warning; sensor fail
Vibrator Alarm Standard: Vibrates in sync with audible and visual alarms
Peak value displayed on command (in ppm or % vol) LOW, HIGH, TWA and STEL alarms with adjustable set points.

3.2 CONTINUOUS LCD DISPLAY:

Alphanumeric gas readout and status display advises: Gas ppm or %
Continuously displays gas concentration present TWA and STEL ppm or %
Records and displays on demand Peak ppm or %
Records and displays peak (maximum) exposure to gas on demand
Set points Displayed on activation (auto) and on demand in ppm or % .

3.3 TESTS:

Full function self-test: Full function self-test on activation

(auto) Battery: Continuous (auto)

Alarm conditions:

TWA alarm, STEL alarm, low alarm, high alarm, sensor alarm, low battery alarm, confidence beep, automatic shutdown alarm.

Audible alarm: 95 dB at 0.3 m (1 ft.) typical

Visual alarm: Red light-emitting diode (LED)

Display: Alpha-numeric liquid crystal display (LCD)

Backlight: Automatically activates for 3 seconds whenever there is insufficient light to view the display and during alarm conditions. Any pushbutton reactivates the backlight for 6 seconds.

Self-test: Initiated upon activation

Battery test: Every 0.5 seconds

Battery: Rechargeable Lion Battery-18Hr runtime and 6Hrs charge time.

3.4 APPROVALS:

Classified by UL to both U.S. and Canadian Standards as Intrinsically Safe for Class I, Division 1, Group A, B, C, D.

Certificates:-

A) Equipment must be certified by CE / UL for intrinsic safety class 1, Group A, B, C and D hazardous location.

B) Equipment must be certified by Chief Controller of Explosives, Nagpur.

C) Party has to provide the authorized Indian Distributor certificate from the parent company, in case the meter is imported.

3.5 Warranty Period

02 years complete warranty for instrument including battery charging kit from the date of acceptance. Further, 02 years for all sensors from the date of acceptance.

3.6 Documents required:

Along with offer:

I. Catalogue & detailed data sheets with model no., type, ordering codes etc.

After Placement of Order:

- a) Calibration and traceability certificate.
- b) Instruction, maintenance, service, troubleshooting & operating manuals in soft & hard copy.
- c) Detailed data sheets with model no., type, special instructions like standard operating procedure w.r.t installation and operation (if any) from OEM etc.

3.7 Payment terms:-

100% payment after submission of invoice along with Test certificates/Reports.

3.8 PRICE REDUCTION SCHEDULE:

Supplier shall deliver the material within the time period stipulated in the Delivery Schedule.

In case of delay in supply, Prices will be reduced @ ½ % per week or part thereof calculated over delayed delivery value, subject to maximum 5.0% of the total order value of the delayed items. The value referred in PRS Clause is excluding taxes & duties.

3.9 Delivery Period:

The items shall be delivered within 12 weeks from the date of issue of PO/FOA.

3.9 Freight:

Vendor to arrange shipment and transit insurance and vendor has to pay the transit charges at actual.

4.0 Delivery Location:

BGL HO, Hyderabad.



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SECTION – 8

TECHNICAL SPECIFICATIONS

Specification for LEL Detector

(1) The equipment must be light in weight (not more than 400 grams), easy to carry and ultra compact with high visibility and impact resistant.

(2) Sensors:-

The LEL detector having in built pump should be supplied with LEL and Oxygen sensor duly calibrated along with calibration certificate. LEL Sensor must be over-range protected. Equipment must be capable to display all gases being monitored simultaneously. Equipments shall be calibrated on methane gas for LEL measurement.

(3) Battery:-

The equipment should be provided with rechargeable lithium ion / Nickel cadmium battery with battery charger working on 220-240 V AC supply. The system should give a battery backup at least 08 hours under non alarming condition. Equipment / charger shall have the facility to indicate the whether the equipment is charging or not.

(4) Measuring range:-

For combustible gases - 0 to 100% LEL in 1% LEL increment. And for Oxygen, range should be minimum - 0 to 25 % of volume in 0.1 % increment.

(5) Climate:-

- A) Equipment should work in the humidity range of 15-95% typical
- B) Equipment should work in the temperature range -20 Degree Centigrade to 50 Degree Centigrade.
- C) Equipment must be IP66/67 certified for dust and water ingress.
- D) Equipment should have Radio Frequency Interference protection duly certified. Certificate of the same to be submitted.
- E) Equipment must be supplied with external environmentally sealed keypad.

(6) Remote sampling:-

The instrument should have build-in pump for remote sampling. Pump should be operated by the same battery of equipment. The remote sampling should be able to draw the sample from min 20 feet.

(7) Technical details:-

- A) The instrument should have audio (Min 90 dB) and visual alarm system.
- B) Equipment must be having motorized sampling pump which shall draw power from the equipment itself.
- C) Equipment must be capable to give real and longtime display.

(8) Certificates:-

- A) Equipment must be certified by CE / UL for intrinsic safety class 1, Group A, B, C and D hazardous location.
- B) Equipment must be certified by Chief Controller of Explosives, Nagpur.
- C) Party has to provide the authorized Indian Distributor certificate from the parent Company, in case the meter is imported.
- D) Party has to supply the import document along with bill of entry for imported equipment.
- E) Equipment and battery should be of the manufacturing lot within six month of date of delivery.

(9) Accessories:-

- A) Equipment must be supplied with carrying case.



- B) Equipment must be supplied with calibration cup adaptor with tubing.
- C) Each equipment must be supplied with the required tool kit for any maintenance.
- D) Each equipment must be supplied with instruction manual (O&M) and training CD.

(10) Guarantee / Warrantee:-

Guarantee / Warrantee for the equipment including sensor & battery pack should be minimum for 2 years.

(11) Read Out:

Display of the reading must be through LCD screen. Equipment must be having the facility of backlight.

(12) Alarms:

Equipment must have the facility of two levels of high / low alarms for LEL measurement. Two levels of High/low alarms for oxygen measurement. Equipment must have an additional alarm of sensor failure.

(13) Accuracy:

Combustible +/- 2% LEL for 0-50% LEL
+/- 3% LEL for 50-100% LEL;
Oxygen +/- 0.3%

(14) Equipment should have facility to display the pump ON condition.



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SECTION – 9

SCHEDULE OF RATES (SOR)



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Item: Procurement of Portable LEL Detectors for 03 GA's of BGL at Hyderabad, Vijayawada and Kakinada.

A Supply of IR type Portable LEL Detectors							
Item No	Description of items	UoM	Quantity (A)	Unit Price in Rs. (B)	Freight, P& F, transit insurance in INR, (i)	GST @ --- %	Total FOT price incl. of all taxes, duties& GST (in Rs.) (C=AXB)
A.1	Supply of IR type Portable LEL Detectors (Sampling Version) with Standard Accessories as per the specification mentioned in the scope of Supply.	Nos	9				

Sign & Seal of Bidder