The EM200 plus-E is an electronic multigas instrument with internal sampling pump. It precisely determines CO and NOx content in undiluted exhaust gases of Diesel engines. The internal ambient pressure sensor allows the immediate use without preceding calibration in underground mines.

## **Benefits**

### Shock and impact proof housing

The EM200 plus-E has an impact and shockproof body.

Easy handling and an excellent technology allow precise and fast results of measurement. The high power battery affords high operating time of typically 10 hours



## Precise measurement of CO and NOx content in exhaust gases from diesel engines

One multigas analysis instrument to be used for precise testing of diesel engines in underground mining applications: regulation compliance (in some countries maximum emissions from engines are regulated to be able to set ventilation rates), health risk (a build up of these gases can be dangerous to individuals; CO, NO and NO2 have regulated exposure concentrations), operating costs (increases in CO/NOx output can indicate a problem with the engine or the scrubbers resulting in reduced fuel efficiency), reduce downtime (using these values as pre-indicator for engine breakdowns can enable preventive maintenance instead of reactive measures and loss of production).

#### **Documentation**

Saved data can be locally documented or transferred to the PC.

### High precision measurement in all different depths

An internal pressure sensor automatically compensates ambient pressure influences in different depths. Therefore, engines do not have to go to the workshop as a "fixed" testing area. The EM200plus-E comes to the engine. No matter where it is located: 4,000 m below or 4,000 m above sea level.

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# **Accessories**



Vehicle exhaust probe For measuring exhaust gases.

Fabric tube, per meter

Plug-in charger 100 – 240 V



Consumables set 2 Incl. 10 filter discs and 20 fleece filters



**Infrared printer MSI IR3** 



Printer paper Packing unit 5 rolls

## **Technical Data**

Display	High resolution colour touchscreen			
Interface	USB for PC interface, infrared for printer, no multifunction jack for additional instruments			
Operating Temperature	-5 °C +40 °C			
Storage Temperature	-20 °C +50 °C			
Power Supply	Internal: high power battery, 4.8 V 2,000 mAh, indication of state of charge			
Operating time	Up to 10 h			
Gas extraction	Membrane pump for gas sampling			
Gas processing	Integrated gas conditioning cartridge with condensate trap and particle filter			
Weight	1,100g			
Dimensions	195 mm x 165 mm x 75 mm (H x W x D)			

Display	Principle of measurement	Measuring range	Resolution	Accuracy	
CO, carbon monoxide	Elchem. sensor	0 8,000 ppm	1 ppm	0 200 ppm:	± 10 ppm or 10 % of MV <sup>3</sup>
				200 2,000 ppm:	± 20 ppm or 5 % of MV <sup>3</sup>
				2,000 8,000 ppm:	± 100 ppm or 10 % of MV <sup>3</sup>
NO, nitric oxide	Elchem. sensor	0 2,000 ppm	1 ppm	0 600 ppm:	± 10 ppm or 5 % of MV <sup>3</sup>
NO2, nitrogen dioxide	Elchem. sensor	0 200 ppm	1 ppm	0 100 ppm:	± 5 ppm or 5 % of MV³
NOx, oxides of nitrogen	Elchem. sensor	0 up to 2,000 ppm	1 ppm		
Barometer	Piezo-resistive	800 1,700 hPa	1 hPa		