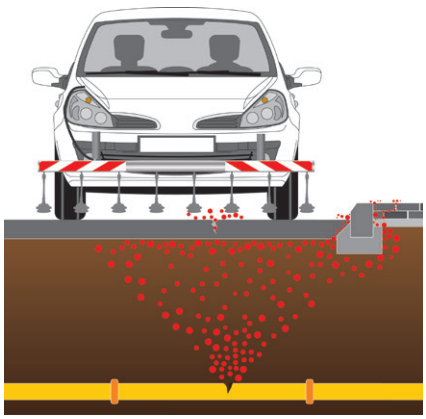
GasCar

Laser-Gas detection vehicle for fast and effective pipeline network monitoring of underground pipelines in road areas

- Selective measurement of Methane, no cross sensitivity on diesel or gasoline engine exhaust, LPG, propane, butane and other hydro carbons as occur in oil or gasoline laugh
- High accuracy in a wide measurement range of 1 to more than 40.000 ppm
- No adjustment of the sensor system is necessary due to the long time stability and accuracy of the laser sensor.
- Very fast reaction time of 2 to 3 seconds; reading after the gas was sucked into the suction bar
- Automatic cleaning of the suction system by air purging with compressed air
- Automatic functional system test controlled by the control unit

PICTURES OF APPLICATION



GasCar

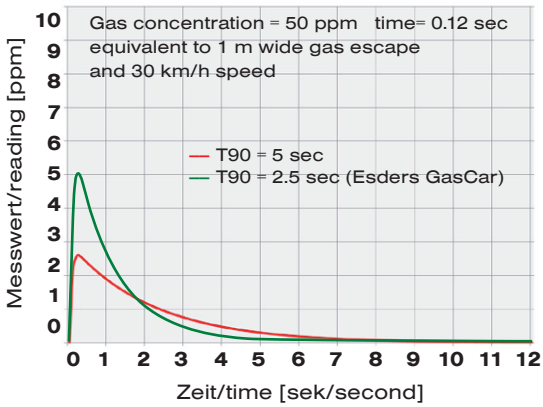
In conjunction with a vehicle of the client's choice, the EGC (Esders GasCar) system unit can operate as a high-performance gas detection vehicle. EGC Sampling unit

The EGC sampling unit's bell probe system is mounted to the front of the vehicle and consists of a two-part stainless steel intake bar with a total of 8 bell probes. Additionally to the bell probes there are tube probes included which offer advantages at bad road conditions.

Each probe is mounted using a quick coupler and is equipped with an effective dust filter. The quick coupler enables each sensor unit to be exchanged or cleaned very quickly. A high-performance pump conveys the gas sample to the sensor unit. The pump's power output is documented and monitored and the user is informed of any drops in its output. The pump's power output is regulated depending on the vehicle's driving speed and the gas sample is taken in optimally without needlessly diluting the leakage gas with the ambient air. A partial flow is siphoned off from this gas sample and fed to the sensor unit via a hydrophobic filter.

High sensitive methane detection

The EGC sensor unit uses a laser diode sensor to determine whether the sample contains traces of methane. It has a detection limit of 1 ppm and a reaction time of 2 to 3 seconds (reading after the gas was sucked into the suction bar. This technology is employed by a laser diode sensor, ensuring the selective detection of methane with high sensitivity and resolution. No adjustment of the sensor system is necessary due to the long time stability and accuracy of the laser sensor. The system is offered with a 3 year warranty period.



A major factor in the detection of gas is the right balance between the flow of the suction pump and driving speed of the gas detection vehicle. At high pump flow and low speed, low gas concentrations are diluted unnecessary and the alert threshold is not reached eventually. If the suction flow at a higher speed however is too low, the gas amount drawn from a limited gas expansion can be too small and also lead to levels below the alert level. For this reason, the pump flow of the Esders GasCar system is controlled proportional to the driving speed.

TECHNICAL DATA

Visualisation and operation	Windows tablet or laptop
Power supply	12 Volt DC
Detectable gases	Only Methane, CH_4
Measurement range	0 bis ≥ 40.000 ppm with high accuracy
Cross sensitivity	No known cross sensitivity
Sampling pump	Automatic adjusted flow amount between 700 and 1,600 l/hour
Weight	12 kg without display unit
Dimensions	370 mm x 290 mm x 500 mm (B x H x T)
Data interface	USB
Operating temperature	Outside car: -20 °C to +50 °C, Inside car: 0 to +50 °C

Technical specifications subject to change! Status 2020/06

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