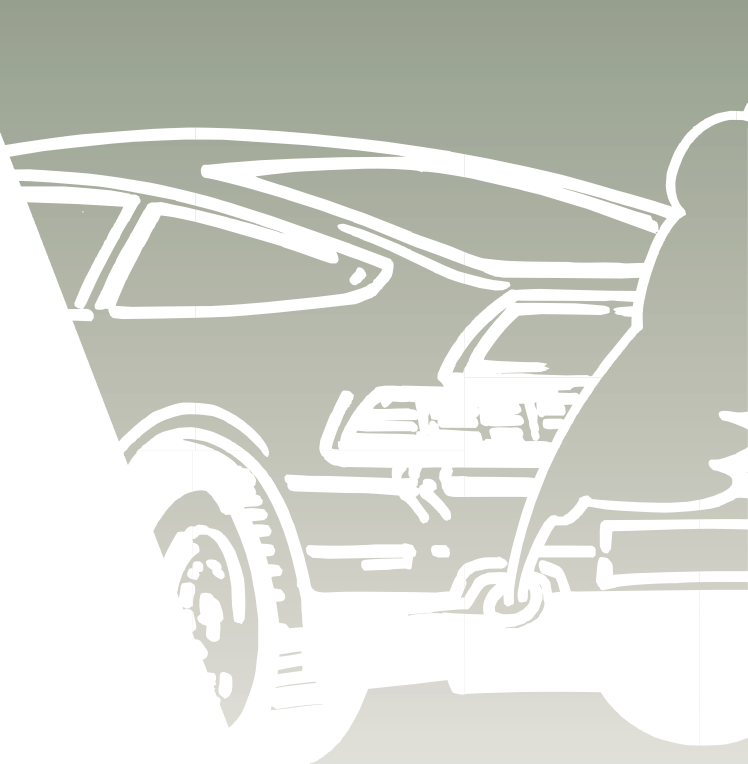




**MOBILE EXHAUST MONITORING**

We *care* about the environment

# MOBILE EXHAUST MONITORING SYSTEM FOR ALL GASOLINE-ENGINES



**DELTA 1600 S**

O<sub>2</sub>

NO<sub>(X)</sub>

CO

HC

EXCESS AIR

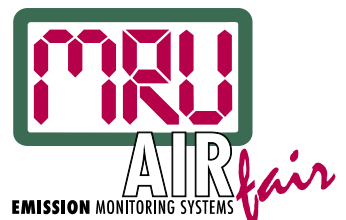
RS 232

PRINTER INTERFACE

MEMORY

RECHARG. BATTERY USE

110 - 240 VOLT USE





# HIGH TECH WITH MOST COMPACT DIMENSIONS DELTA 1600 S.

The DELTA 1600 S is the smallest and lightest measuring instrument for exhaust gases of motor vehicles with gasoline engines. An ideal handheld measuring unit for quick and easy exhaust monitoring for all cars, buses, trucks, motorcycles etc.. The DELTA 1600 S has been developed and designed for measuring “on the road”, without the need of mains power supply.

## HANDHELD MEASURING UNIT DELTA 1600 S

- A high-end product from MRU.
- With continuous analysis of all gas components and indication of all analysed data.
- All functions are microprocessor controlled, all internal parts are SMD, which make small dimensions and low weight possible.
- Self-check program after switch on of the instrument.
- Measurement readiness is signalled in the display.
- Logical and menu-guided user software.
- 4 analysis data are indicated in the well legible LCD display simultaneously.
- Analysed data can be transmitted via RS 232 interface to a PC.
- Transmission of the analysed data to an external infrared printer.
- NiCd-battery powered analyzer.
- Compactness, low weight and easy handling allow versatile applications.
- An important contribution to emission reduction of motor vehicles.

IR printer interface

Large, illuminated, well legible LCD display

Gas inlet with condensate box and micro filter

Logically structured, menu-guided software

RS 232 interface for data transmission

Flexible, handy gas sampling probe

Attached NiCd battery

## For diesel exhaust: OPTRANS 1600

The MRU opacimeter “OPTRANS 1600” is controlled via RS 232 interface of DELTA 1600S.

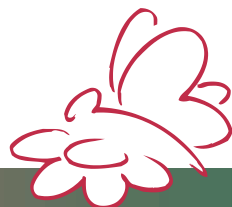


Function and indication of the diesel exhaust opacity by means of a supplementary menu of the DELTA 1600 S. All other functions like e.g. printing and storing are also possible.

## FUNCTIONAL PRINCIPLE:

The functional principle is based on the “non-dispersive infrared absorption measuring principle”. Selective measuring of CO-CO<sub>2</sub>-HC is achieved through narrow band pass filters, which allow to keep the complete measuring technique within most compact dimensions. O<sub>2</sub> and NO measurement is based on electro-chemical sensors. An integrated membrane pump samples the exhaust gas into the heated gas cell. A micro-processor determines concentration of the exhaust and indicates the values on a large, illuminated display.





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## DESCRIPTION:

### Handheld exhaust monitoring unit DELTA 1600 S

for gasoline engines, CO, CO<sub>2</sub> and HC analysis, with gas sampling probe, flexible length 400 mm, and gas sampling hose, length 1,5 m VITON material, including shoulder strap and protective leather case with permanent magnet, with 12V NiCd battery for autonomously power operation.

MRU-No. 160200

### Options and accessories:

O <sub>2</sub> meas. system	0 to 22,0%	res. 0,01%	MRU-No. 55998
NO <sub>(x)</sub> meas. system	0 to 5.000ppm	res. 1ppm	MRU-No. 55996
230V/115V mains power supply			MRU-No. 56836
24V adapter power supply (for trucks)			MRU-No. 58077
IR-thermoprinter			MRU-No. 55425
RS 232 PC connection cable, length 3,0m			MRU-No. 58008
Gas sample line, VITON material, per meter			MRU-No. 56141
Transportation case			MRU-No. 55715
Opacity Transducer OpTrans 1600 (12V/24V, 115V, 230V)			on request



High quality leather protective cover with shoulder strap and permanent magnet (rubber protected).



Well legible print-out via IR thermoprinter

## TECHNICAL DATA:

CO	- standard -	0 to 10,00%	0,01% resolution
HC	- standard -	0 to 20.000ppm	1ppm resolution
CO <sub>2</sub>	- option -	0 to 16,0%	0,1% resolution
NO	- option -	0 to 5.000ppm	1ppm resolution
O <sub>2</sub>	- option -	0 to 22,0%	0,01% resolution

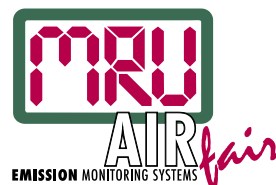
incl. excess air calculation by means of Brettschneider formula

Accuracy	according to OIML class 2
Condensate disposal	manually
Computer interface	RS 232
IR Interface	IR thermoprinter with thermo paper
Power supply	12V NiCd battery for motor vehicles and cable for cigar jack - standard -
Gas sampling probe	flexible, up to 400mm insertion depth
Gas sampling hose	length approx. 1,5m, VITON material
Exhaust gas temperature	up to +500°C
Operating temperature	+5°C up to +40°C
Dimensions	100 x 210 x 50 (w/h/d) without case 140 x 225 x 65 (w/h/d) with case
Weight	approx. 2.000 g with battery and case



Transportation case

Dealers stamp



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