VEHICLE EXHAUST GAS ANALYSIS

We *care* about the environment

OPACITY TRANSDUCER

FOR DIESEL VEHICLES:

DIESEL-SOOT-TESTER

OPTRANS 1600

- OPACITY 0 ... 100%
- ABSORPTION COEFFICIENT 0 ... 9,99 m^{-1}
- HAND MONITOR with REMOTE CONTROL
- IR PRINTER INTERFACE
- RS 232
- 1,4 m SAMPLE LINE

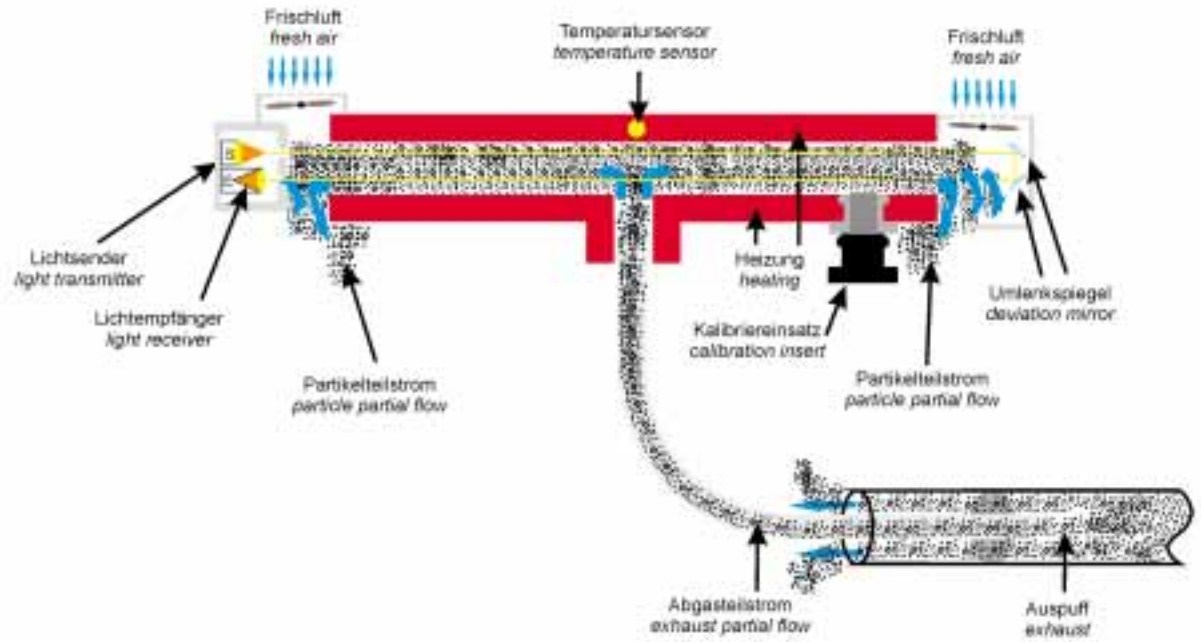
OPTRANS 1600
STAND ALONE UNIT

MRU AIRfair
EMISSION MONITORING SYSTEMS

DIESEL SOOT TESTER OPTRANS 1600

The Diesel soot tester Optrans 1600 is a smoke density measuring device and is based on the principle of absorbance photometric. It allows a continuous smoke density measurement of all performance class Diesel engines.

FUNCTIONAL PRINCIPLE



Diesel exhaust gases are extracted from the failpipe by means of an exhaust probe and are leaded to the light absorbance measuring cell of the Optrans 1600.

The exhaust gas escapes at both ends of the measuring cell. Inside the measuring cell the soot particles contained in the exhaust gas leads to a light absorbance.

A micro processor controlled analysis unit detects the remaining brightness and calculates the exhaust opacity in % and the absorption coefficient 0 … 9,99 m^{-1}.

Two venting fans, each located at the ends of the measuring cell, suck fresh air and vent the light emitter and the light detector, for keeping the optical lenses free of soot particles.

TECHNICAL DESCRIPTION

Suitable for control measurements, inspection and diagnosis of Diesel exhaust gases of all cars, buses, trucks, locomotives etc. equipped with Diesel engines, under engine load or idle mode. Continuous opacity measurement is based on the absorption photometry principle, with:

- Self-check programme for all functions
- Test point heating
- Menu-guided operation
- External operation module with LCD display
- Measuring data display and printer option
- Including 5,0 m RS 232 connection cable
- Power connection cable
- Car exhaust gas sampling probe, flexible length approx. 350 mm
- Fixing device
- Gas sampling tube
- Measuring range : 0 … 100 % opacity
- Absorption coefficient : 0 … 9,99 m^{-1}
- In a robust black steel sheet case with feet and transport case

OPTRANS 1600 CE

OPTRANS 1600

The Optrans 1600 can be used as stand alone measuring unit with the remote control unit (with the possibility to document measuring data with date and time) or in connection with an electronic MRU exhaust gas tester like DELTA 1600 S series (handheld analyzer for $CO/CO_2/HC/NO/O_2$) or the DELTA 1600 L series (compact exhaust gas tester for stationary or portable use).

STANDARD EQUIPMENT FOR STAND-ALONE TESTER

1. Rugged, real leather transport case with compartiments for accesoiries
2. Optrans 1600
3. Flexible probe, length approx. 350 mm
4. 1,4 m Viton gas sampling line
5. Operation terminal with LCD display and data transmission cable
6. 12/24V battery connection cable *)
7. IR printer

*) 230V mains connection cable (for 230V models)

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OPTRANS 1600 TECHNICAL DESCRIPTION

Sample extraction	partial stream technique
Measuring principle	absorption photometry
Physical path length	174 mm
Optical path length	364 mm
Inner diameter of the measuring cell	20 mm
Measuring range opacity	0 – 100 %
Measuring range absorption coefficient	0 ... 9,99 m^{-1}
Collimation	3°
Source light	green LED 560 nm
Detector	Gallium Arsenide
Response time	1 msec
Opacity	
Accuracy	+/- 2 % relative
Resolution	0,1 %
RS 232 interface	3600 Baud
Working environmental conditions	
Ambient temperature	+ 5° C to + 45° C
Humidity	0 – 95 % non condensing
Storage temperature	- 32° C to + 50° C
Power supply (models)	12 / 24 Vdc, 160 W or 115 Vac, 50 ... 60 Hz, 160 W or 230 Vac, 50 ... 60 Hz, 160 W
Dimensions	380 x 300 x 110 mm (W x H x D)
Weight	4,5 kg
Certification	PTB

OPTIONS:

- ▶ Infrared thermo printer
- ▶ Rugged, real leather transport case
- ▶ Mains power supply converter for 12/24V model
- ▶ Connection and data transfer to exhaust gas analyzer DELTA 1600 S
- ▶ Connection and data transfer to exhaust gas analyzer DELTA 1600 L

DELTA 1600 S *
HANDHELD MONITOR for exhaust gases of motor vehicles with battery operation - CO · HC · CO_2 · NO · O_2
Weight: approx. 1.000 gr

DELTA 1600 L *
COMPACT INSTRUMENT for stationary and portable applications - CO · HC · CO_2 · NO · O_2 · Stationary and portable
Weight: approx. 10 kg

* please order separate catalogue

Dealer's stamp

MRU AIR fair
EMISSION MONITORING SYSTEMS

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