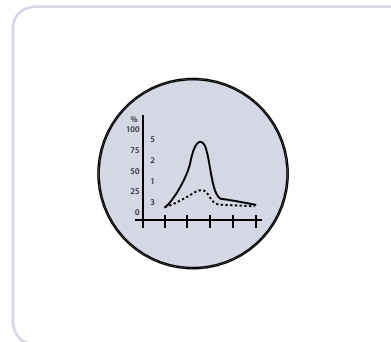
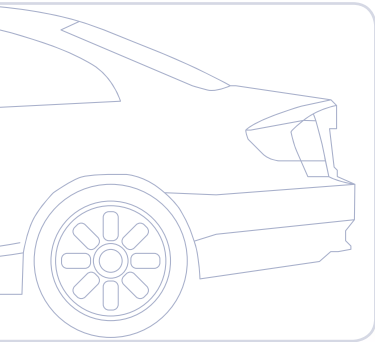




# AVL EMISSION TESTER SERIES 4000

FOR PETROL AND DIESEL ENGINES

FUTURE SOLUTIONS FOR TODAY



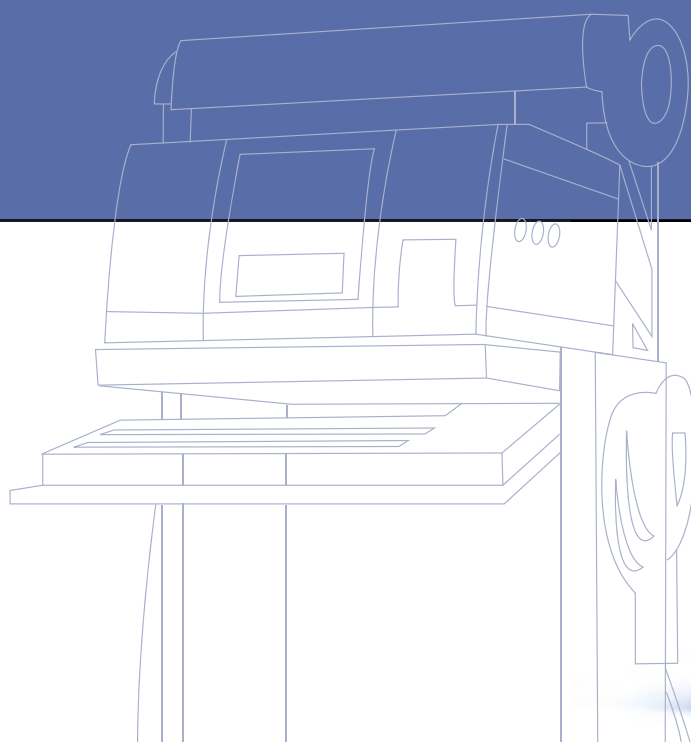
## Accessories

	DiCom	DiGas	DiSmoke	DiGas light
<b>AVL DiSpeed 492</b>				
Id.No. VM-492-BASE-TYP-INT-01	o	o	o	o
<b>AVL DiSpeed 492 + Bike</b>				
Id.No. VM-492-BASE-TYP-INT-02	o	o	o	o
<b>AVL E0BD</b>				
Id.No. on request (country-specific)	o	o	o	o
<b>„Diagnose Plus“ Software</b>				
<b>AVL Diagn. Plus for AVL DiCom 4000</b>				
Id.No. TD4000CDPA.01	o	-	-	-
<b>AVL Diagn. Plus for AVL DiGas 4000</b>				
Id.No. TD4000GDPA.01	-	o	-	-
<b>AVL Diagn. Plus for AVL DiSmoke 4000</b>				
Id.No. TD4000SDPA.01	-	-	o	-
<b>„Emission Expert“ Software</b>				
<b>AVL Emission Expert for AVL DiCom 4000</b>				
Id.No. TD4000CADA.01	o	-	-	-
<b>AVL Emission Expert for AVL DiGas 4000</b>				
Id.No. TD4000GADA.01	-	o	-	-
<b>AVL Emission Expert for AVL DiSmoke 4000</b>				
Id.No. TD4000CADA.01	-	-	o	-

o optional      - not supported

## Trolley

	DiCom	DiGas	DiSmoke	DiGas light
<b>Trolley</b>				
Id.No. BG7018	o	o	o	o
<b>Keyboard/printer insert for trolley</b>				
Id.No. BG7020	o	o	o	o
<b>Paper insert for trolley</b>				
Id.No. BG7021	o	o	o	o
<b>External printer</b>				
Id.No. GY0460	o	o	o	o
<b>Voltage transformer</b>				
Id.No. GH0470	o	o	o	o
<b>Keyboard German/English</b>				
Id.No. GY0369/GY0413	o	o	o	o
<b>AVL DiControl cable remote control</b>				
Id.No. V4000RC-01	o	o	o	-
<b>Infrared remote control</b>				
Id.No. B02313	o	o	o	-
<b>Adapter for exhaust tail pipes above cabin</b>				
Id.No. B02136	o	-	o	-
<b>Calibration filter 30 %/50 %/75 %</b>				
Id.No. B07023/B07017/B07024	o	-	o	-

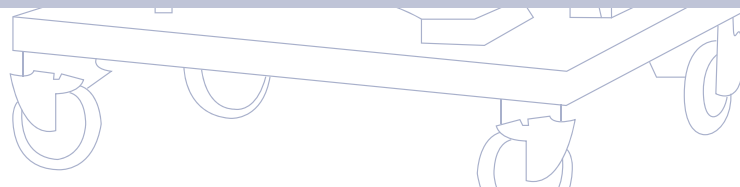


**AVL Emission Tester Serie 4000**



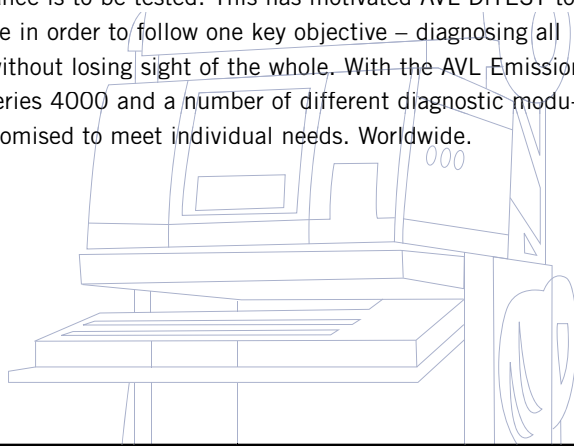
## AVL and AVL DiTEST A Supreme Combination of Technical Flexibility with Future-Oriented Perspectives.

The philosophy of AVL- looking at the world of automobiles in its entirety – perfect development of vehicles while safeguarding faultless daily use. In keeping with our principle, AVL DiTEST is up to the challenge of providing workshops and testing centres with high-tech diagnostic systems on the cutting edge of technical standards. The result – optimum performance with individual service based on pioneering AVL technology. Our know-how accumulated over more than 50 years of passion for technology ensures unsurpassed precision.



# INTELLIGENCE WITH POWER WILL GET YOU AHEAD.

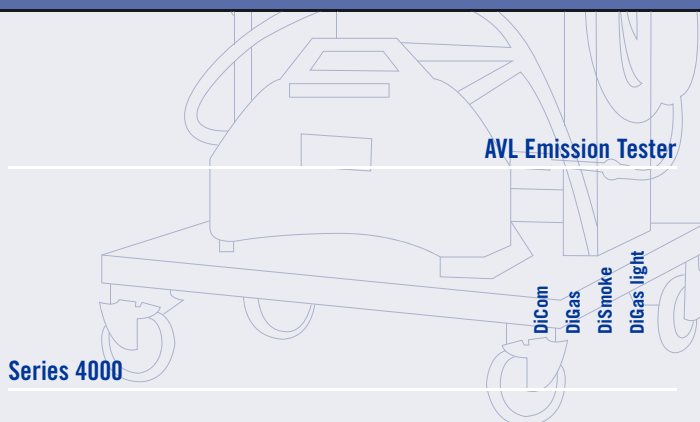
Vehicles are a challenge, and in particular so if their emission performance is to be tested. This has motivated AVL DiTEST to specialise in order to follow one key objective – diagnosing all details without losing sight of the whole. With the AVL Emission Tester Series 4000 and a number of different diagnostic modules. Customised to meet individual needs. Worldwide.



## Simple and complex. Your advantages.

- Products homologated by leading vehicle manufacturers, e.g. BMW, Man, Peugeot, Porsche, Smart, ...
- Recommended by top testing organisations worldwide, such as CENTRE CONTROLE TECHNIQUE, DEKRA, GOCA, ITV, TÜV, ...
- Network-compatible according to asanetwork, BMW, AUPlus, Giegnet France, isotec, MOT UK, ...
- User guidance for optimum application
- Complete range of engine speed measurement techniques, including AVL DiSpeed 492, clamp-on transducer, inductive trigger sensor, optical and TDC transducer, Flywheel, terminal W, ...

Our ideas cut across all boundaries. With experience, know-how and a passion for uncompromising analytic precision.



### Series 4000

CO, CO <sub>2</sub> , HC, O <sub>2</sub>	• • – •
K value, opacity	• – • –
Engine speed, oil temperature	• • • •
Determination of acceleration time	• – • –
Ignition angle, dwell angle	° ° – –
Fuel feed start	° – ° –
Petrol EOBD	° ° – °
Diesel EOBD	° – ° –
Menu-supported user guide	• • • •
Diagnosis Plus	° ° ° –
Emission Expert	° ° ° –
Easy maintenance	• • • •
Software update with memory card	• • • •
Vehicle database	* * * *



### Series 4000

Engine speed measurement with inductive trigger sensor or clamp-on transducer	• • • •
Engine speed measurement with AVL DiSpeed 492	° ° ° °
Variety of engine speed measurement models (optical measurement methods, OEM-specific, digital, analog sensors and W terminal)	° ° ° –
Trolley	° ° ° °
External keyboard	° ° ° °
Internal printer	• • • •
External printer	° ° ° °
IR remote control	° ° ° –
Cable remote control with display	° ° ° –
NOx option	° ° – °
Petrol module	• • ° •
Diesel module	• ° • –

° optional    • standard    – not supported    \*country-specific

Further accessoires on request

# INCOMPARABLE STANDARDS IN EMISSION MEASUREMENT TECHNOLOGY.

This generation of AVL DiTEST instruments is designed for all-round performance without any compromise. What counts is perfection and developments that go beyond current requirements. By systematically responding to customer requests, AVL DiTEST has built up a leading position in the market of emission diagnosis systems.

## AVL DiGas 4000

4-/5-gas tester for emission analysis and diagnosis of petrol engines

- High precision and long-term stability of measurement technology
- Minimum maintenance requirements, once-a-year calibration
- EOBD / OBD-2
- Can be upgraded to AVL DiCom 4000
- "Emission Expert" and "Diagnose Plus"



AVL DiGas 4000

## As Light as possible.

The Light series combines proven AVL DiTEST quality with compact design build. AVL DiGas 4000 Light is precisely tailor made to meet all needs of emission testing.

## AVL DiGas 4000 Light

4- and 5-gas tester for emission measurement of petrol engines.

- Compact, stationary and mobile petrol emission tester
- Incorporates superior measurement technology of AVL DiGas 4000



AVL DiGas 4000 Light

## AVL DiSmoke 4000

Opacimeter for smoke measurement and diagnosis of diesel engines

- High accuracy
- Patented linearity test
- Compact, light-weight opacity measuring chamber requiring minimal maintenance
- Short warm-up time
- Just one probe for all exhaust pipe diameters (passenger cars, trucks)
- Adapter for attachment to exhaust pipes above truck cabin
- Quick response time thanks to tiny diesel measurement chamber
- Can be upgraded to AVL DiCom 4000
- "Emission Expert" and "Diagnose Plus"



AVL DiSmoke 4000

## AVL DiCom 4000

Combined emission tester for emission analysis and diagnosis of petrol and diesel engines.

- Compact combined instrument
- Combines technical functions of AVL DiGas 4000 and AVL DiSmoke 4000
- Cost advantage due to combination of AVL DiGas 4000 and AVL DiSmoke 4000



AVL DiCom 4000



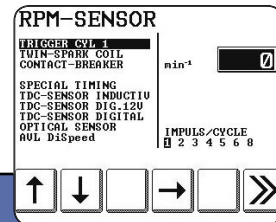
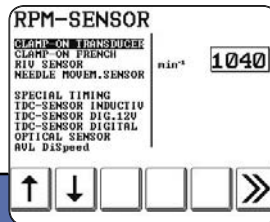
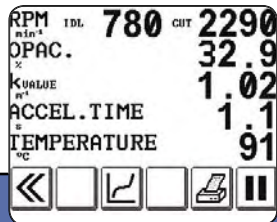
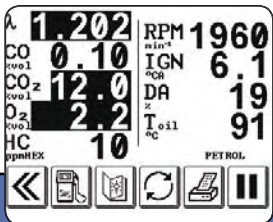
### AVL DiOBD 800

OBD-information for easy diagnostics and short test procedure.



AVL DiOBD 800

- EOBD/OBD-2 protocol standards
- CANbus protocol standards
- Automatic EOBD/OBD-2 protocol recognition
- Individual use of all nine test modes: indication of actual values, reading and deletion of fault codes, special vehicle information queries, ...



We go for in-depth analysis. With “Emission Expert” and “Diagnose Plus” software.

### AVL DiSpeed 492

Future oriented engine speed measurement for cars and trucks.

- Speed measurement for stationary and dynamic speed measurement
- For petrol and diesel engines (best coverage)
- Setting of cylinder numbers not required
- Easy mounting thanks to integrated permanent magnet
- Automatic self-calibration and function monitoring
- Unique direct signal pick-up
- Can be connected to all exhaust gas testers
- Future-proof as the device operates independently from any electric engine signals



#### Diagnose Plus

- EOBD/OBD-2 diagnostic functions and petrol testing functions for testing/evaluating the ignition system, λ-sensor and catalytic converter
- EOBD diagnostic functions and diesel testing functions for testing/evaluating injection pumps and for opacity curve visualisation



#### Emission Expert

- Guided diagnostic procedure
- Measurement and evaluation of emission concentration and λ-sensor voltage of petrol engines
- Measurement and evaluation of opacity curve of diesel engines



AVL DiSpeed 492

## Technical data

Display	High-resolution LC display, graphics capability with background lighting
Printer	Internal stylus printer
Keyboard	Internal function keys, socket for PC keyboard
Interface	RS 232, PCMCIA
Operating temperature	5-45 °C
Operating voltage	230 V AC $\pm$ 10 % / 110 V AC $\pm$ 10 %
Power consumption DiCom, DiGas, DiSmoke, DiGas Light	150 VA, 90 VA, 90 VA, 90 VA
Standards/approvals	OIML R99, ISO 3930, ECR R 24, IEC 801-1/2/3/4, national approvals
Dimensions DiCom, DiGas, DiSmoke (W x H x D)	432 x 230 x 470 mm
Dimensions DiGas Light (W x H x D)	355 x 216 x 370 mm
Weight DiCom, DiGas, DiSmoke, DiGas light	17,7 kp, 16,0 kp, 11,0 kp, 12,0 kp
Opacity Chamber	
Dimensions (W X H X D)	395 x 285 x 136 mm
Weight	3,5 kp

# AVL EMISSION TESTER SERIES 4000

FOR PETROL AND DIESEL ENGINES

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## Measurements

AVL DiCom 4000/AVL DiGas 4000/AVL DiGas 4000 Light	Measurement range:	Resolution:
CO	0-10 % Vol.	0,01 % Vol.
CO <sub>2</sub>	0-20 % Vol.	0,1 % Vol.
HC	0-20.000 ppm Vol.	1 ppm
NO <sub>x</sub>	0-5.000 ppm Vol.	1 ppm
O <sub>2</sub>	0-25 % Vol.	0,01 % Vol.
$\lambda$ -calculation	0-9.999	0,001
$\lambda$ -sensor voltage*	0-5,0 V	0,04 V
Engine speed	250-9.990 rpm/min	10 rpm
Oil temperature	0-150 °C	1 °C
Ignition angle TDC sensor	- 60-100 °c.a.	0,1 °c.a.
Ignition angle stroboscope	0-60 °c.a.	0,1 °c.a.
Dwell angle*	0-100 %	1,0 %

### AVL DiSmoke 4000/AVL DiCom 4000

Opacity	0-100 %	0,1 %
Absorption (K value)	0-99,99 m <sup>-1</sup>	0,01 m <sup>-1</sup>
Acceleration time	0-5 s	0,05 s
Engine speed	250-9.990 rpm/min	10 rpm
Oil temperature	0-150 °C	1 °C
Ignition angle TDC sensor	- 60-100 °c.a.	0,1 °c.a.
Ignition angle stroboscope	0-60 °c.a.	0,1 °c.a.

\*Except: AVL DiGas 4000 Light

### Herausgeber/Published by:

AVL DiTEST Fahrzeugdiagnose GmbH, Alte Poststraße 152, A-8020 Graz, AUSTRIA  
Tel. +43 316 7870, Fax +43 316 7871460, www.avlditest.com

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