

ENVIRO Diesel Smoke Meter is capable of measuring smoke opacity of diesel vehicle exhaust in % opacity & K-value with measurement of RPM & engine oil temperature by using both piezo and ripple sensors.

Salient Features	
• Measures diesel smoke opacity in % opacity and K value	
• Suitable for free acceleration test	
• RPM and engine oil temperature measurement	
• Operates on AC power supply	
• Automatic zero and span calibration	
• Measurement principle: partial flow, optics based on folded geometry	
• Built-in 24 column printer	
• Pass / fail indication and emission limit in print out	
• Print out with vehicle number, specification, operator name and test data	
• RS232C serial port for PC interfaces	
• Inbuilt heater to eliminate the moisture contents & provide accurate reading	



Standard accessories

- Smoke sampling hose : 1 no.
- RPM sensor clamp (6.35 mm dia) assembly : 1 no.
- Oil temperature probe : 2 no.
- Battery cable : 1 no.

Optional accessories

- Trolley
- Trolley for PC & smoke meter
- PC interfacing software

Technical Specifications		
Measurement parameters	Range	Resolution
Opacity	0 – 99.9 %	0.10 %
K-value	0 – 9.99 m ⁻¹	0.01 m ⁻¹
Linearity	± 0.1 m ⁻¹	
Repeatability	± 0.1 m ⁻¹	
Zero & span drift	± 0.1 m ⁻¹	
Response time – physical	< 0.4 seconds	
Response time – electrical	< 1 milli second	
Warm up time	< 3 minutes	
Engine RPM	200 - 9999 RPM	1 RPM
Oil temperature	0 - 150° C	1° C
Smoke measuring cell length	215 mm	
Printer	24 column	
Power supply	230V ± 10% AC single phase, 50Hz	
Power consumption	1200W	
Operating temperature	+ 0 ° C to + 55° C	

The Long Run Benefits only with IFI EXPORTS

Over 45 years of experience and continuous innovations make **IFI EXPORTS** Smoke Meter such a brilliant solution for you. They are exceptionally dependable and engineered to global practices like Six Sigma, TPM, TQM and Quality Circles. Added to the innumerable product advantages is the invaluable edge of service. A vast dealer network spanning India and the world ensures easy availability and prompt service. The fact is those who think long run, insist on **IFI EXPORTS** – the global service station solution company.

DELUXE FUEL INJECTION PUMP TEST BENCHES



International Fuel Injection Exports

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'DELUXE' GEW/SD-8/VSD, GEW/SD-8/BSO

- Drive : Variator Drive in VSD & Belt Drive in BSO Model.
- Main Motor : Dual Speed 5 H.P., 3 Phase, 415V, 50 Cycles in VSD & 3 H.P., 3 Phase, 415V, 50 Cycles in BSO.
- No. of Cylinders : 6, 8 Cylinders.
- Tachometer : Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
- Stroke Counter : 100-1200 Strokes (in steps of 100 strokes).
- Fuel Supply : By soundless gear pump.
- Fuel Pump Motor : 1 H.P., 3 Phase, 415V, 50 Cycles.
- Pressure gauge : 0-100 lbs/in² (0-7 kg/cm²) and 0-500 lbs/in² (0-35 kg/cm²).
- Speed range & Control : Infinitely variable in both direction by Variator drive or Belt drive. Speed range from 100 to 3000 R.P.M.
- Test Injectors : 6 or 8 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
- Phasing : Pressure phasing recorded on degree dial.
- Fuel Tank : 45-50 litre.

'SUPER DELUXE' GEW/SD-8/VSD ✓

- Drive : Variator Drive.
- Main Motor : 5 H.P., 3 Phase, 415V, 50 Cycles.
- No. of Cylinders : 6, 8 Cylinders.
- Tachometer : Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
- Stroke Counter : 100-1200 Strokes (in steps of 100 strokes).
- Fuel Supply : By soundless gear pump.
- Fuel Pump Motor : 1 H.P., 3 Phase, 415V, 50 Cycles.
- Pressure gauge : 0-100 lbs/in² (0-7 kg/cm²) and 0-500 lbs/in² (0-35 kg/cm²).
- Speed range & Control : Infinitely variable in both direction by Variator drive. Intermediate two speed gear box with neutral position. Speed range from 80 to 900 R.P.M. - 300 to 3200 R.P.M.
- Test Injectors : 6 or 8 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
- Phasing : Pressure phasing recorded on degree dial.
- Fuel Tank : 45-50 litre.



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'SUPER DELUXE' GEW/SD-8/HSD

Drive : Hydraulic Transmission (Imported Only).
 Main Motor : 7.5 H.P., 3 Phase, 415V, 50 Cycles.
 Common motor for Drive & Fuel pump.
 No. of Cylinders : 6, 8 Cylinders.
 Tachometer : Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
 Stroke Counter : 100-1200 Strokes (in steps of 100 strokes).
 Fuel Supply : By soundless gear pump.
 Pressure gauge : 0-100 lbs/in² (0-7 kg/cm²) and 0-500 lbs/in² (0-35 kg/cm²).
 Speed range & Control : Infinitely variable in both direction by hydraulic drive. Intermediate two speed gear box with neutral position. Speed range from 0 to 900 R.P.M. - 0 to 3000 R.P.M.
 Test Injectors : 6 or 8 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
 Phasing : Pressure phasing recorded on degree dial.
 Fuel Tank : 45-50 litre.

'SUPER DELUXE' GEW/SD-12/VSD

Drive : Variator Drive.
 Main Motor : 10 H.P., 3 Phase, 415V, 50 Cycles.
 No. of Cylinders : 12 Cylinders.
 Tachometer : Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
 Stroke Counter : 100-1200 Strokes (in steps of 100 strokes).
 Fuel Supply : By soundless gear pump.
 Fuel Pump Motor : 1 H.P., 3 Phase, 415V, 50 Cycles.
 Pressure & Vacuum gauge : 0-100 lbs/in² (0-7 kg/cm²), 0-500 lbs/in² (0-35 kg/cm²), 0-200 lbs/in² (0-14kg/cm²) and 0-30 in/Hg (0-760mm/Hg).
 Speed range & Control : Infinitely variable in both direction by Variator drive. Intermediate two speed gear box with neutral position. Speed range from 80 to 900 R.P.M. - 300 to 3200 R.P.M.
 Test Injectors : 12 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
 Phasing : Pressure Phasing recorded on degree dial.
 Fuel Tank : 50-55 litre.



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'STANDARD' GEW/SD-8/VSD

Drive	: Variator Drive.
Main Motor	: Dual Speed 5 H.P., 3 Phase, 415V, 50 Cycles.
No. of Cylinders	: 6, 8 Cylinders.
Tachometer	: Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
Stroke Counter	: 100-1200 Strokes (in steps of 100 strokes).
Fuel Supply	: By soundless gear pump.
Fuel Pump Motor	: 1 H.P., 3 Phase, 415V, 50 Cycles.
Pressure Gauge	: 0-100 lbs/in ² (0-7 kg/cm ²) and 0-500 lbs/in ² (0-35 kg/cm ²).
Speed Range & Control	: Infinitely variable in both direction by Variator drive. Speed range from 100 to 3000 R.P.M.
Test Injectors	: 6 or 8 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
Phasing	: Pressure phasing recorded on degree dial.
Fuel Tank	: 45-50 litre.

'ELECTRONIC STANDARD' GEW/SD-8/E-2

Drive	: Belt Drive (Expandable Pulley System with two Variable Belts).
Main Motor	: 3 H.P., 3 Phase, 415V, 50 Cycles.
No. of Cylinders	: 6, 8 Cylinders.
Tachometer	: Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
Stroke Counter	: 100-1200 Strokes (in steps of 100 strokes).
Fuel Supply	: By soundless gear pump.
Fuel Pump Motor	: 1 H.P., 3 Phase, 415V, 50 Cycles.
Pressure Gauge	: 0-100 lbs/in ² (0-7 kg/cm ²) and 0-500 lbs/in ² (0-35kg/cm ²).
Speed range & control	: 100-3000 R.P.M. in both Directions CW & ACW controlled by hand wheel on both right & left side.
Test Injectors	: 6 or 8 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
Phasing	: Pressure phasing recorded on degree dial.
Fuel Tank	: 45-50 litre.



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STANDARD GEW/SD-6/H-1

Drive : Belt Drive (Expandable Pulley System with two Variable Belts).
 Main Motor : 3 H.P., 3 Phase, 415V, 50 Cycles.
 No. of Cylinders : 6, 8 Cylinders.
 Tachometer : Dial Type 5" Dia 0-3000 R.P.M. CW & ACW. Cable Drive.
 Stroke Counter : Mechanical per 100 strokes single counting.
 Fuel Supply : By soundless gear pump.
 Fuel Pump Motor : 1 H.P., 3 Phase, 415V, 50 Cycles.
 Pressure Gauge : 0-100 lbs/in² (0-7 kg/cm²) and 0-500 lbs/in² (0-35 kg/cm²).
 Speed range & Control : 100-3000 R.P.M. in both Directions CW & ACW controlled by hand wheel on both right & left side.
 Test Injectors : 6 or 8 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
 Phasing : Pressure phasing recorded on degree dial.
 Fuel Tank : 45-50 litre.

STANDARD ACCESSORIES & ATTACHMENTS:

- One Set mounting brackets and quick action clamp assembly for inline (Camshaft) pumps.
- 6,8,12 High pressure pipes with M12 x 1.5 & M14 x 1.5 union nuts.
- 6,8,12 High pressure pipes with M14 x 1.5 union nuts both ends.
- One Set Graduated Glass test tubes.
- One Flange type bracket for pump mounting.
- One Phasing bar.
- One Machine lamp.
- Set of perforated trays for keeping tools.
- Backlash free flexible coupling.
- Wooden drawer for keeping hand tools.
- Digital Electronic Volt meter.
- Flexible pipes for pump connection.

Note: Above mentioned accessories are provided with every model.

SPECIAL ACCESSORIES & ATTACHMENTS:

- Driving attachments for rotary CAV & DPA pumps. (Bearing type with adjustable height)
- Cam box for single cylinder pump.
- DC Power supply both 12V & 24V.
- Heating with digital electronic temp controller with automatic cut off set at 40°C ± 5°C.
- Dial gauge with stand for rack travel checking.
- Nozzle injector Tester.
- Lapping Motor with Drill Chuck & Stone.
- Swiveling Vice for Inline and Rotary Fuel Injection pumps.

Note: Above mentioned accessories can ordered separately at extra cost.

DIMENSIONS & WEIGHTS

MODEL	L (mm)	W (mm)	H (mm)	GROSS WEIGHT (in Kg.) with Pkg.
GEW/SD-8/VSD, BSD, HSD	1730	1170	1780	0850 approx.
GEW/SD-12/VSD, BSD	1950	1200	1780	1000 approx.
GEW/SD-8/VSD (STANDARD)	1730	1120	1780	0800 approx.
GEW/SD-8/E-2	1730	1120	1780	0750 approx.
GEW/800M, 800H	1600	0890	1780	0850 approx.
GEW/SD-6/H-1	1730	0840	1900	0650 approx.

Warranty: The products offered are covered by warranty for 12 months against manufacturing defects only. (However electricals and Gear Pump are not covered under warranty).

Note: As we endeavour modern technical improvements from time hence we reserve the right to amend and alter the design and specifications. Accessories shown in the Photographs may not be part of Standard Accessories. Special Voltage like Single phase, 220V, 50 Cycles or 3Ph, 220Volts, 60 Cycles or 3Ph, 380 Volts, 60 Cycles can be provided at request.

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'ELECTRONIC STANDARD' GEW/SD-12/BSD

Drive	: Belt Drive (Expandable Pulley System with two Variable Belts).
Main Motor	: 7.5 H.P., 3 Phase, 415V, 50 Cycles.
No. of Cylinders	: 12 Cylinders.
Tachometer	: Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
Stroke Counter	: 100-1200 Strokes (in steps of 100 strokes).
Fuel Supply	: By soundless gear pump.
Fuel Pump Motor	: 1 H.P., 3 Phase, 415V, 50 Cycles.
Pressure Gauge	: 0-100 lbs/in ² (0-7 kg/cm ²) and 0-500 lbs/in ² (0-35 kg/cm ²).
Speed range & control	: 100-3000 R.P.M. in both Directions CW & ACW controlled by hand wheel on both right & left side.
Test Injectors	: 12 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
Phasing	: Pressure Phasing recorded on degree dial.
Fuel Tank	: 50-55 litre.

'ELECTRONIC STANDARD' GEW/800M, 'SUPER DELUXE' GEW/800H

Drive	: Variator Drive in 800H & Belt Drive in 800M.
Main Motor	: Dual Speed 5 H.P., 3 Phase, 415V, 50 Cycles in 800H & 5 H.P., 3 Phase, 415V, 50 Cycles in 800M.
No. of Cylinders	: 6, 8 Cylinders.
Tachometer	: Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
Stroke Counter	: 100-1200 Strokes (in steps of 100 strokes).
Fuel Supply	: By soundless gear pump.
Fuel Pump Motor	: 1 H.P., 3 Phase, 415V, 50 Cycles.
Pressure gauge	: 0-100 lbs/in ² (0-7 kg/cm ²) and 0-500 lbs/in ² (0-35 kg/cm ²).
Speed range & Control	: Infinitely variable in both direction by Variator drive or Belt drive. Speed range from 100 to 3000 R.P.M.
Test Injectors	: 6 or 8 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
Phasing	: Pressure phasing recorded on degree dial.
Fuel Tank	: 45-50 litre.



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'ELECTRONIC STANDARD' GEW/SD-12/BS

Drive	: Belt Drive (Expandable Pulley System with two Variable Belts).
Main Motor	: 7.5 H.P., 3 Phase, 415V, 50 Cycles.
No. of Cylinders	: 12 Cylinders.
Tachometer	: Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
Stroke Counter	: 100-1200 Strokes (in steps of 100 strokes).
Fuel Supply	: By soundless gear pump.
Fuel Pump Motor	: 1 H.P., 3 Phase, 415V, 50 Cycles.
Pressure Gauge	: 0-100 lbs/in ² (0-7 kg/cm ²) and 0-500 lbs/in ² (0-35 kg/cm ²).
Speed range & control	: 100-3000 R.P.M. in both Directions CW & ACW controlled by hand wheel on both right & left side.
Test Injectors	: 12 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
Phasing	: Pressure Phasing recorded on degree dial.
Fuel Tank	: 50-55 litre.

'SUPER DELUXE' GEW/SD-12/VSD

Drive	: Variator Drive.
Main Motor	: 10 H.P., 3 Phase, 415V, 50 Cycles.
No. of Cylinders	: 12 Cylinders.
Tachometer	: Electronic Digital 0-9999 R.P.M. with the accuracy of ± 1 R.P.M.
Stroke Counter	: 100-1200 Strokes (in steps of 100 strokes).
Fuel Supply	: By soundless gear pump.
Fuel Pump Motor	: 1 H.P., 3 Phase, 415V, 50 Cycles.
Pressure & Vacuum gauge	: 0-100 lbs/in ² (0-7 kg/cm ²), 0-500 lbs/in ² (0-35 kg/cm ²), 0-200 lbs/in ² (0-14kg/cm ²) and 0-30 In/Hg (0-760mm/Hg).
Speed range & Control	: Infinitely variable in both direction by Variator drive. Intermediate two speed gear box with neutral position. Speed range from 80 to 900 R.P.M. - 300 to 3200 R.P.M.
Test Injectors	: 12 Nos. Fitted with Calibrating Nozzle set at a standard pressure.
Phasing	: Pressure Phasing recorded on degree dial.
Fuel Tank	: 50-55 litre.



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STANDARD ACCESSORIES & ATTACHMENTS:

- One Set mounting brackets and quick action clamp assembly for inline (Camshaft) pumps.
- 6,8,12 High pressure pipes with M12 x 1.5 & M14 x 1.5 union nuts.
- 6,8,12 High pressure pipes with M14 x 1.5 union nuts both ends.
- One Set Graduated Glass test tubes.
- One Flange type bracket for pump mounting.
- One Phasing bar.
- One Machine lamp.
- Set of perforated trays for keeping tools.
- Backlash free flexible coupling.
- Wooden drawer for keeping hand tools.
- Digital Electronic Volt meter.
- Flexible pipes for pump connection.

Note: Above mentioned accessories are provided with every model.

SPECIAL ACCESSORIES & ATTACHMENTS:

We can provide below features on extra cost

- Driving attachments for rotary CAV & DPA pumps. (Bearing type with adjustable height)
- Cam box for single cylinder pump.
- DC Power supply both 12V & 24V.
- Heating with digital electronic temp controller with automatic cut off set at 40°C ± 5°C.
- Dial gauge with stand for rack travel checking.
- Nozzle Injector Testor.
- Lapping Motor with Drill Chuck & Stone.
- Swiveling Vice for Inline and Rotary Fuel Injection pumps.

Note: Above mentioned accessories can ordered separately at extra cost.

DIMENSIONS & WEIGHTS

MODEL	L (mm)	W (mm)	H (mm)	GROSS WEIGHT (In Kg.) with Pkg.
GEW/SD-8/VSD, BSD, HSD	1730	1170	1780	0850 approx.
GEW/SD-12/VSD, BSD	1950	1200	1780	1000 approx.
GEW/SD-8/VSD (STANDARD)	1730	1120	1780	0800 approx.
GEW/SD-8/E-2	1730	1120	1780	0750 approx.
GEW/800M, 800H	1600	0890	1780	0850 approx.
GEW/SD-6/H-1	1730	0840	1900	0650 approx.

Warranty: The products offered are covered by warranty for 12 months against manufacturing defects only. (However electricals and Gear Pump are not covered under warranty).

Note: As we endeavour modern technical improvements from time hence we reserve the right to amend and alter the design and specifications. Accessories shown in the Photographs may not be part of Standard Accessories. Special Voltage like Single phase, 220V, 50 Cycles or 3Ph, 220Volts, 60 Cycles or 3Ph, 380 Volts, 60 Cycles can be provided at request.

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