

14. Technical Data AVL 437C

Compliance Standard : MoRTH Specifications
(MoRTH/CMVR/TAP-115/116,)
issue No. 2, Part VIII.

Other Standard : ECE-R24 and ISO 3173

Approval : A.R.A.I. Pune.

Results compatibility : Measurement results are fully compatible
with Hatridge Smoke Units (HSU).

Range/Accuracy/Resolution :

	OPACITY	ABSORPTION	RPM	Oil Temp.
•Measuring Range	0—100%	0—99.99 m ⁻¹	400-6000 1/min	0-150°C
•Accuracy & Repeatability	± 1% of full scale	Better than ± 0.1 m ⁻¹	±10	±2°C
•Resolution	0.1%	0.01 m ⁻¹	±1	±1°C

Application : For Free-acceleration test only.

Calibration : Automatic (self-calibration immediately after
switch-on or at the press of a key).

Display : Digital
• Standard : LED (7 segment), 4x15 (mm)
• Optional : LCD

Alarming Signal : Equipment is not working.
• Voltage : LED lights up when Battery supply is less
than 11.5 V or Defective Voltage supply,
to equipment's integral supply unit.
• Temperature : LED lights up when Temperature of
measuring chamber is below 70°C.

Linearity check : 48.4%-53.1% / 1.54m⁻¹-1.76m⁻¹ of measure-
ment range (Manual).

Probes : Set of probes of Three different size
(10,16, & 27 mm internal diameter),
to cater all size of exhaust pipe.

Hose Pipes:

	<i>Material</i>	<i>Length</i>
• Standard	Rubber	4.0 meter
• Optional	Rubber	2.5 / 5.0 meter

Smoke Inlet : Through a control Valve.

Smoke temperature at entrance : 250°C (maximum)

Measuring Chamber:

• Length	:	430 ± 5 mm
• Heating	:	Thermostatically controlled. NOT POSSIBLE FROM BATTERY OPERATION.
• Heating time	:	20 min (max.) at 220 V Supply.
• Operating Temperature	:	90°C

Light Source : Halogen Lamp, 12 V / 5W
(Color Temperature: 3000 ± 150 K)

Sensor : Selenium Photocell
(Size –Ø45 mm)

Built-in Printer : Dot matrix printer, 24 column

Built-in RTC : Prints Real Date and Time on Print out.

Power supply : 190...240 V AC, 50...60 Hz, 2.5 A
or 11.5...36 V DC

Ambient Operating Conditions:

• Temperature	:	0 — 50° C
• Humidity	:	90% at 50°C (non-condensing)

Trolley : Optional (Small)

Dimension	:	width x height x depth
Basic Unit 437C	:	600 x 260 x 370 (mm)
RPM Module	:	93 x 140 x 33 mm
DiSpeed490	:	277x 48 x 184 mm

Weight:

• Unit	:	24 Kg
• RPM Module	:	0.45 Kg
• DiSpeed490	:	1.18 Kg
• Hose pipe (4 m) + Probes	:	8 Kg

Operating Unit:	
• Standard	: On Front Panel
• Optional	: LED/LCD Remote (with 5 m connecting cable)
Power consumption:	
• Overall equipment	: 600 W
• Measuring chamber heating	: 500 W (at 220 V)
Storage temperature	: -30°C to +65°C
Protection Type	: IP 52
Computer Interfacing	: Data communication to a Computer or Terminal or other Compatible devices is possible through built-in SERIAL IN/OUT SOCKET. (RS-232 Interface)
	: Start of operation and its remote controlling is also possible via Computer or Terminal or other Compatible devices.
	: Computerised System (As per Annexure-1)
Analog output for recorder BNC connector ANALOG OUT	: 0 V corresponds to 100% opacity. 0.95...1.4 V corresponds to 0% opacity (According to contents of soot in the smoke) (NOT TO BE USED AS AN INDICATION OF SMOKE VALUE)
Software	: Ver 7.05 (Used for Impact Printer). Meets the requirement of (MoRTH/CMVR/TAP-115/116,) issue No. 2, Part VIII. i) Bandwidth of 0.25m ⁻¹ or 25% for free acceleration. ii) Real time check feature in print out.