

Smart Power Bench

power bench for bike diagnostics and tuning

• SMART POWER BENCH (SPB) nd Generation (with gearbox)

- The station may only be operated by a trained person
- Simulates engine load equivalent to road test - **Gear 1**
- Simulates double load for comfortable tuning measurements (VE maps) - **Gear 2**
- Provides measurements for both power and torque curves - **Gear 1**
- Facilitates measurement of VE maps for engine tuning
- Provides the opportunity to carry out engine diagnostics whilst under load
- Utilises built-in fan for engine & rear tyre cooling
- Embedded protection of rear tyre

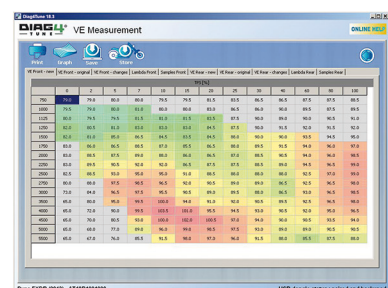
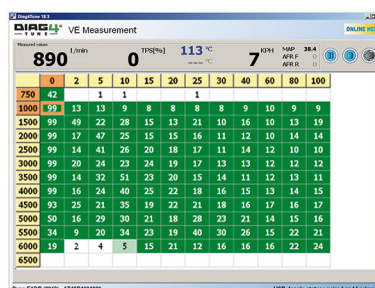
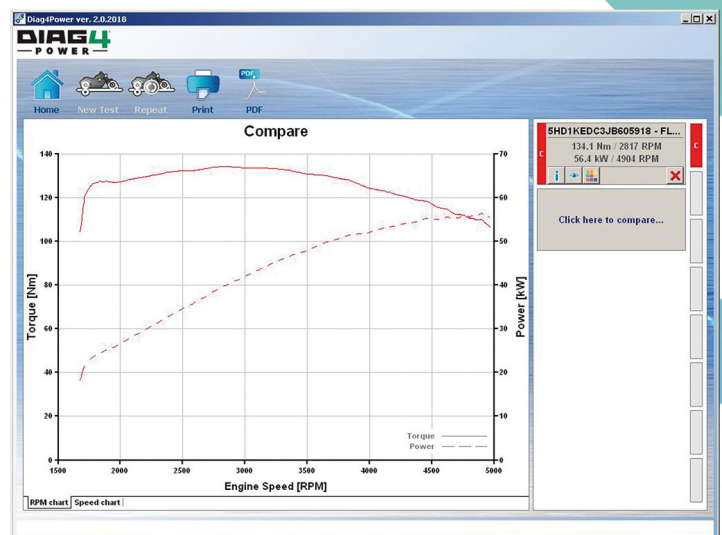
SPB is an ideal tool for motorcycle specialists who carry out bike repairs and servicing, ECU diagnostics and especially engine tuning.

SPB gives you more than basic measuring capabilities.

It is able to simulate the engine load without the hazards associated with road tests, under both stable and dynamic conditions. Utilising a large roller with high moment of inertia & specially adapted fan assembly is equivalent to the motorcycle and rider mass and drag caused by air flow.

SPB is designed to complement the range of equipment available in the **DIAG4BIKE** family and is especially well suited for the tuning of Harley-Davidson engines.

DIAG4POWER is our new software program allowing full control of measurements with **SMART POWER BENCH**.



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• SPB specifications

- Weight : 550 kg
- Dimensions: 2,8m x 0,5m x 1m (W x H x D), 110" x 20" x 40"
- Roller diameter: 450 mm, 18"
- Mass moment of inertia of the system: ~12 kgm² (see label on SPB) - **Gear 1**
- Measurement range of engine power: 10 – 250 kW
- At load, power input of the fan is mainly given by the built-in load fan, and is dependent on the engaged gear of the station (the following data is for illustration only):

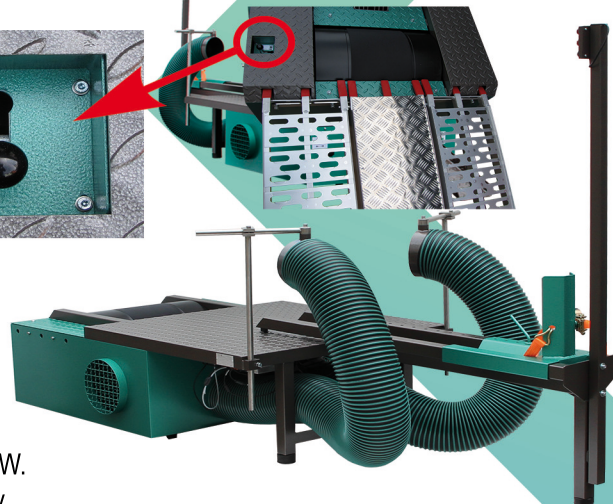
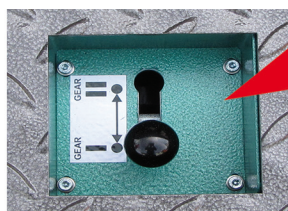
Gear 1

- o 10 kW at 100 km/h (60 MPH)
- o 30 kW at 150 km/h (90 MPH)
- o 70 kW at 200 km/h (120 MPH)

Gear 2

- o 10 kW at 50 km/h (30 MPH)
- o 30 kW at 75 km/h (45 MPH)
- o 70 kW at 100 km/h (60 MPH)

- Maximum driving speed (peripheral speed of the roller):
 - o Gear 1: 225 km/h, 140 MPH
 - o Gear 2: 110 km/h, 68 MPH
- Connection to PC: RS 232 or USB
- Required PC operation system: W7, W8, W10
- Power supply of the station: 230V AC or 12V DC with power of 24 W.
Power supply can therefore be provided from a 12V vehicle battery.
- The operating temperature range of the station: +10 to +40 °C
- Cooling of rear tire: provided automatically by the built-in fan
- Temperature measurement of the rear tire: IR measurement
- Remote control: IR (infra red)
- Measuring ambient air pressure: 870 to 1100 hPa (at sea level)



Reference
CCE: 888128
ATAL: AT531 4098

• Notable features of SPB

- Fast & Simple installation without the need for building works or anchorage
- Intuitive usage and simple maintenance
- Cost effective high quality solution produced 100% in Europe (product of the Czech Republic)
- Approved for P&T measuring according to DIN 70020 and ECE-85-R standards (Germany)



Smart Power Bench

• Standard accessories

Intake air temperature sensor



-9°C to 70°C

Contactless infrared thermometer



0°C to 200°C
measuring engine temperature
measuring tire temperature

Software Diag4Power



Ignition sensor SPB



Speed Measurement



Footer adapter



Clampingstraps for motorcycle



Wireless infrared remote controller

• Option



Trolley with PC for SPB

Kit includes:

- Trolley
- Industrial box PC with OS
- Monitor 21.5" with Touchscreen *)
- Ink color printer
- Keyboard and mouse

*) Trolley with PC for SPB without Touchscreen

Reference

ATAL: AT857 5016 ; ATAL: AT857 5015 *)

Diagnostic and Tuning System DIAG4BIKE for H-D[®]

It allows to read the engine parameters for power and torque
measurement directly from the H-D[®] diagnostic connector
(engine speed and temperature, TPS position, VIN number)



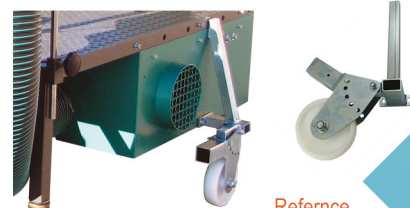
Additional motorcycle cooling

This powerful Axial Fan is useful equipment for additional engine cooling while using the Smart Power Bench. The fan is equipped with two power levels. Power levels are switchable between level 1, level 2 and auto. The Auto level is dedicated for Tuning Measurements (VE maps measurement). The Smart Power Bench automatically controls the power level of the fan dependent on engine temperature.

Reference
ATAL: AT131 4002

- Level 1** - Electric Power 0.5 kW, Airflow 4 700 m3/h, Air speed 26 km/h
- Level 2** - Electric Power 2 kW, Airflow 11 000 m3/h, Air speed 60 km/h

Transport wheels for SPB



Reference
ATAL: AT533 4074

Exhaust gas extractor

This powerful Radial Fan is designed for extraction of exhaust gases from motorcycles during power tests and during tuning measurements. The fan is equipped with adapters for one side and two side motorcycle exhaust pipe configurations. The fan output is connected to the hose diameter of 305 mm with a length of 3 m. Electric Power 3 kW, Airflow 6000 m3/h



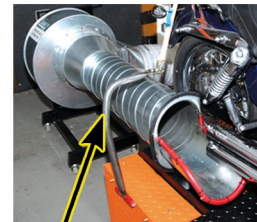
Reference
ATAL: AT131 4001



a) One side exhaust pipe
– diameter 250 mm



b) Duo sides exhaust pipe
– diameter 2x200 mm



c) Yoke