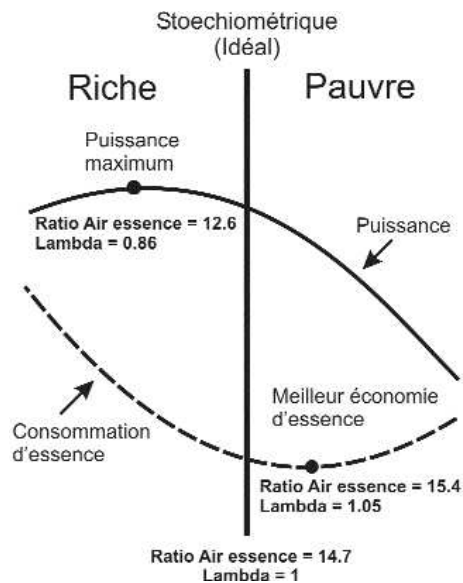


LAMBDA SYSTEM

The Lambda sensor is an oxygen sensor. This sensor provide a voltage which represent the oxygen rate in the exhaust gas. Today many engines are adjusted through a lambda measurement to know the air/fuel ratio and so optimise the carburation.



The ideal lambda measure is 1. An "economical" engine will provide a lambda of 1.05 to 1.3. An engine which is adjusted to a high power will provide a lambda of 0.8 to 0.95 (it depends on the type of engine).

The advantage of this rapid and accurate system is to maximize the output of the engine by controlling the lambda.

Attention. The FUCHS Lambda System is not a 3 coloured tool (lean/ideal/rich) but a accurate and reliable equipment for the technician.

The system enables the optimisation of engines according to the required features. That's why FUCHS recommend wide band sensors which provides reliable and repetable signals. This type of sensor with an appropriated conditioning measure an AFR from 12 to 18.

To adjust the lambda, the FUCHS company proposes 2 solutions:

- The first one works together with the dynamometer via the S.U. (Sensor Unit) and enables a comparison power/AFR.
- The second one is a lambda sensor connected to a display. This solution enables only a autonomous use.

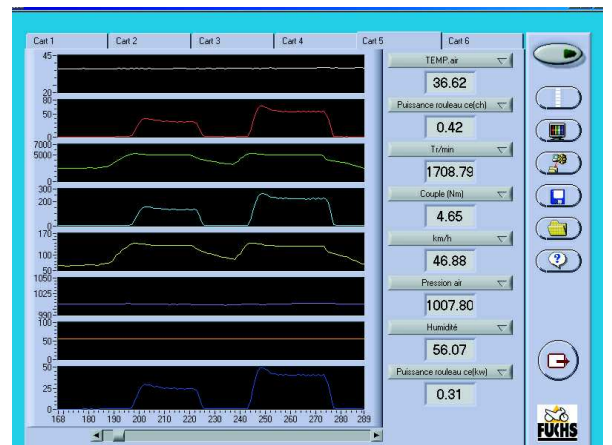
LAMBDA SYSTEM



The system linked to the dyno consists in a proportional lambda sensor, a conditioner, a connection pipe in the exhaust system and 5 meters of cable. It also contains the KHEOPS module of lambda management. This system allows to visualize AFR and power on the same curve.

During the test, the operator has the possibility to see in real time the AFR as well as others datas coming from the different sensors connected at the same time (MSU option).

The customer can see the carburetion of the bike and modify, if necessary, the elements to be optimised.



The **autonomous solution** allows to realize a lambda measurement in real time without needing a dynamometer.

This accessory includes a lambda proportional sensor, a conditioner and an analogic screener.

This solution has a double interest:

- The system is a few bulky and can be transported very easily on very various sites (trips, circuits...).
- This equipment is much cheaper than a gas analyser and instantly answers (that's not the case of a gas analyser).

