- Construction of Brake dynamometer has to be based on support frame, on which are build all the mechanical parts of test system, supporting frame carried the load on foundations of test room using footings, there should be not needed special foundations different than industrial floor. This support frame has to be provided by Contractor.

Contractor will provide one complete set of fixtures for disc brake assembly of pointed passenger car allowing to carry out the tests of system according to Appendix 5.

4. Purpose and functions of the Brake dynamometer.

The main function of the Brake dynamometer is the simulation of the vehicle braking process like in the day to day operation, in a laboratory conditions on an real front or rear break. To achieve this the test stand must be capable of, among others, simulate the inertia of the car through reduced onto axis of the brake which is the equivalent of the mass.

In electrical simulation the electric motor is used to add or absorb power to represent inertia effects. For instance, when greater inertia is required to simulate a specific vehicle, the motor is used to add power to the system. In combination with the flywheels this functionality shall allow to set and simulate the inertia in a range of at least 5 kgm² - 240 kgm² without discrete increments. The accuracy of this simulation shall not exceed 0.5% for brake applications up to 0.8 g

Brake dynamometer must enable reproduction of the fixing of the tested brake as in the car - using as many original parts as possible. The Brake dynamometer must be able to perform functional and performance tests on drum and disc brakes in the scope of the friction properties of: linings, brake drums and brake discs. The drive of the Brake dynamometer should be an electric motor - situated in the axis of the tested brake.

Brake dynamometer has to be capable to run at least the following procedures without limitations:

- OPEL: GMW 14925; GMW 14935;
- FIAT: 7.H2000; 7.H4020; 7.H4030;
- Brembo: 63.01 & 63.02 & 63.04;
- Bosch: 204Y81082 & 204Y81043;
- International: SAEJ2522; AMS high speed fade; JASO C406; ISO 26867;

Provided BOSMALs ownership of the above mentioned international procedures or permission to run above mentioned OEM & tier 1 supplier's procedures, the Contractor should release the access to the specific software modules included in the Brake dynamometer software with appropriate machine program and report template for at least each of above mentioned procedures.

The Brake dynamometer has to be capable of at least following braking profiles:

- braking with constant torque;
- braking with constant pressure;
- dragging - braking with simultaneous driving;
- deceleration control mode - the possibility to change deceleration during the brake application;
- trigonometric functions as input/setpoint signal for above;