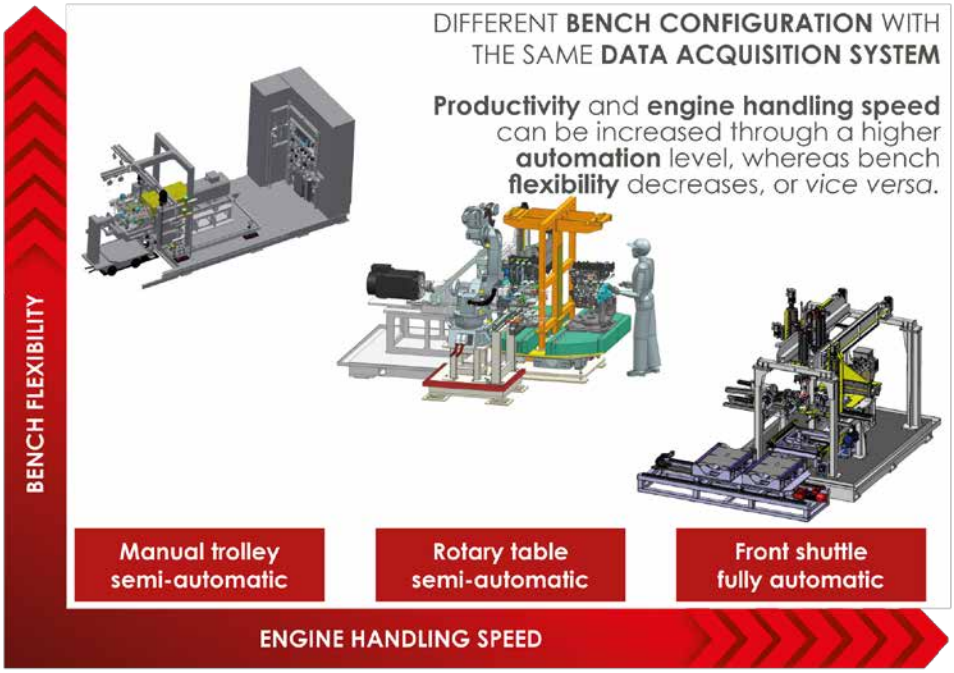
# ENGINE COLD TEST BENCHES

## AUTOMOTIVE POWERTRAIN

Cold testing is a set of procedures required to test the dynamic, electrical or fluids performances of the engine without being started. Such procedures are needed to verify the proper execution of the engine assembly process by attesting its conformity with the next assembly steps.

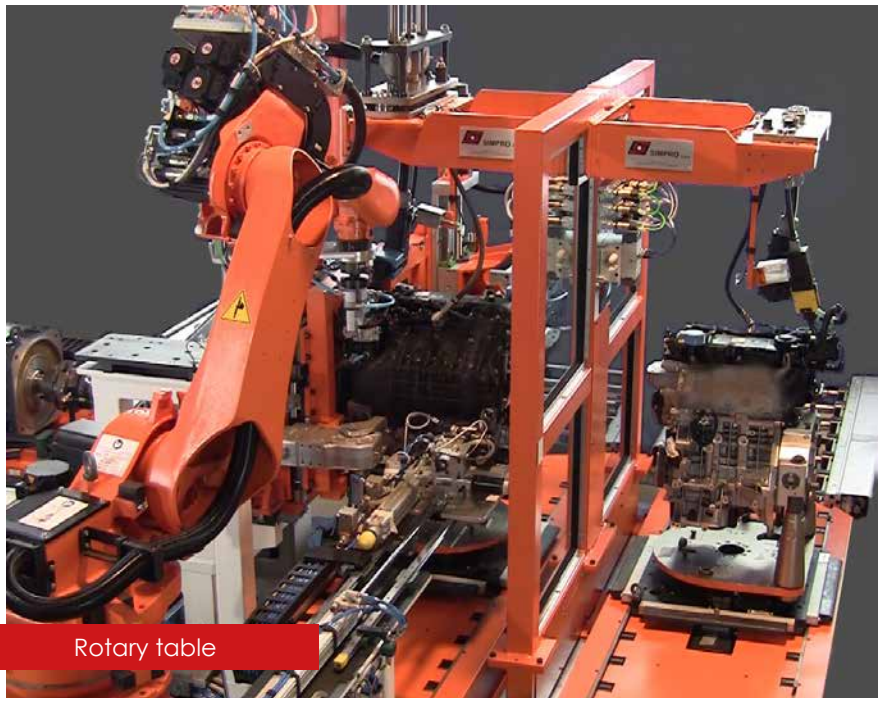
The short duration of the cold test (about two minutes) allows a considerable reduction of the production time and a consequent increase in performance and productivity. In so doing, the total costs of the production chain are reduced accordingly.

Since 2014, cold test benches are developed with BAUER Test Control Software (PCS).



# COLD TEST

Manual trolley



Rotary table

Front shuttle

## MEASUREMENTS

- Engine speed & general considerations;
- Measurements angle base;
- Cold measurements;
- Starting torque;
- Mechanical considerations on torque;
- Torque at different speed values
- Different sensor tests (plausibility check);
- Different sensor test modes;
- Different sensors, crank and cam sensors;
- Inlet manifold pressure;
- Outlet manifold pressure;
- Oil pressure;
- Oil temperature;
- General considerations on mechanical tests;
- Compression balance test;
- Blow-by pressure test;
- Diesel Common Rail system test;
- Diesel Common Rail injector test;
- Gasoline MP injection system test;
- Gasoline injector test;
- Ignition system test;
- Ignition coil & spark plug test;
- General considerations on turbo test;
- Turbo test pressure;
- Turbo NVH;
- Turbo speed;
- Swirl PDA actuator test;
- Throttle actuator test;
- EGR actuator test;
- Variable valve timing test;
- Multi-Air actuator test.