

## Performance Test Turbo Charger

### System for automatic testing of turbo chargers

Downsizing" for combustion engines increased demands on the turbocharger as an essential element in the automotive industry.

As a result, turbocharger manufacturers face an increased intensity when it comes to quality inspections.

#### Objective of this project:

Develop a cold gas test stand for exhaust turbochargers integrated into the automatic production line.

#### Short description:

In this cold gas test, the combustion engine is simulated, and the quality of the turbocharger is assessed by critical characteristics.

The test should be fully-automated and integrated in the assembly line.

#### Conditions:

- Flexibility (two article variants)
- Usability under production conditions
- Compact size
- Short cycle time

**Cycle time: 30 sec**

#### Tasks:

- Article handling (final mounted turbocharger)
- Simulation of the lubricant circuit
- Simulation of the exhaust gas flow
- Control of the turbocharger
- Leak test
- Oil cleaning (vacuum)
- Performance test and real-time measurement of the relevant values
- Preparation and evaluation of the real-time collected measured values

