

## Automotive Pump Test Rig

Dynaspede offers unparalleled solutions in application areas of testing... like motors, pumps, generators, engines, axles, gearboxes, clutches, transmission belts and more... We are well equipped to handle operations demanding synergic combination of mechanical, electrical and electronic expertise. Test and measuring for real life verification/ validation of CAE designs are offered for implementation



The **PC based test rig** is a self-contained system specially designed for production line testing of automotive pumps. The main features include:

- **Pneumatic actuated clamps** for automatic clamping of pumps.
- **High speed motor** rated to drive test pumps up to speeds of 5000 rpm.
- **Oil filtration cum circulation system** with temperature control up to 100°C.
- **Motorized valve** at the outlet line to simulate back pressure .
- Necessary transducers for monitoring **drive speed, frictional torque, oil discharge pressure, oil discharge flow rate** and **temperature** measurements.
- A rig mounted fully automated **PC based control panel and operator station...** for digital control and automatic sequencing of the test bench operation, with data logging of critical parameters for each pump under test.
- PC allows **online recording and retrieval of stored data in graphical and tabular forms** for production analysis.
- All necessary **safety interlocks**

The test rig is designed to perform the following tests to automatically validate the pumps with pass/ fail result:

- **Minimum speed for oil discharge**
- **Performance at specific speeds**
- **Pressure relief valve test.**
- **H-Q characteristic plot at various speeds**



# Dynaspede COMPONENTS TO SOLUTIONS...

## SYSTEM COMPONENTS

- ◆ **DRIVES**  
An unmatched range of electronic Drives ... from simple eddy current drives to hi-performance digital drive systems and point-to-point servo systems.
- ◆ **DYNAMOMETERS**  
A wide variety of dynamometers to match specific application requirements ... Eddy current; Magnetic particle; AC motoring; Pneumatic; Tandem...
- ◆ **TRANSMISSIONS**  
High performance Planetary / helical gearboxes or combinational gear systems and high precision, low back-lash gearheads.
- ◆ **TRANSDUCERS**  
For speed, torque, tension, force and vibration, shock measurements.
- ◆ **ELECTRONICS & SOFTWARE**  
Distributed and integrated control systems from analogue to digital designs & manufacture including DSP based controls with third party PCs / PLCs and custom built software.

## TEST BENCHES

### TEST RIG FOR PRIME MOVERS

- ◆ Engines
- ◆ Automobile motors
- ◆ Appliance motors
- ◆ Industrial motors
- ◆ Actuators

### TRANSMISSION TEST RIGS

- ◆ Gear units
- ◆ Axles
- ◆ Shafts
- ◆ Belts
- ◆ Chains

### INERTIA DYNAMOMETERS

- ◆ Brakes
- ◆ Clutches

### CUSTOM-BUILT TEST STANDS

- ◆ Pumps
- ◆ Generators
- ◆ Bearings
- ◆ Burst tests

### CONCEPT MACHINES

- ◆ Measurement of mass properties

## MACHINE/ PROCESS AUTOMATION

- ◆ Customised control systems
- ◆ MIS

For details and assistance contact:



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