



## **THE TEST STAND MZRS-1 FOR UNIAXIAL TENSION-COMPRESSION WITH TORSION**

### **Description**

The stand MZRS-1 has been designed for fatigue tests of specimens made of structural materials under cyclic and random tension-compression with torsion. The stand generates histories with zero or non-zero mean values. The test results can be used for determination of fatigue characteristics of materials (Wöhler, Coffin-Manson, Haigh and others diagrams) under tension-compression, torsion or any combination of those loads. The stand is equipped with a two-channel digital control system DARTEC 9040, so fatigue tests can be performed under controlled loading, strain or displacement. The control system allows to save measurement data with sampling frequency 10kHz and DARTEC 9640 includes standard PID controller.

### **Technical data**

- range of axial loading force  $\pm 50$  kN
- maximum stroke of axial servo-motor  $\pm 150$  mm
- range of torsional moment  $\pm 600$  Nm
- range of total torsional angle  $\pm 3^\circ$
- maximum frequency of loading 20 Hz
- maximum pressure in the hydraulic system 16 MPa
- maximum linear dimension of tested element 1100 mm
- power 3.5 kW
- supply 400V/50Hz

