



RDMOTION



Main benefits:

- ✓ Accurate load and thermal condition control
- ✓ Variable lubrication regimes
- ✓ Material tests compliant with relevant standards
- ✓ Unrivalled cost-effectiveness
- ✓ Our expertise at your complete disposal

The MTP line - Plastic & composite gear & tribological testing

The MTP line is a series of multifunctional power transmission and tribological testing devices, which enable comprehensive testing and characterization of polymer and composite materials in cylindrical gears and other frictional contact applications.

Plastic gear testing

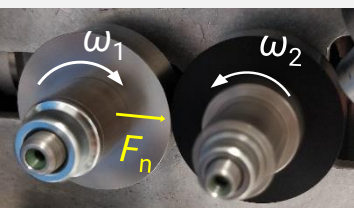
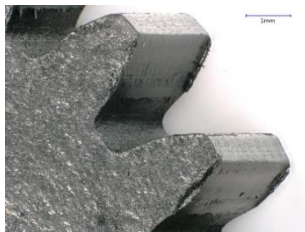
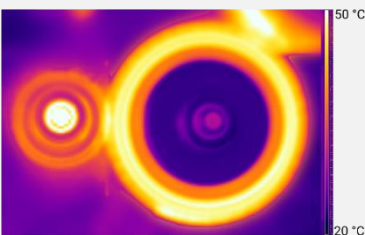
- Spur and helical gear tests in line with relevant standards and guidelines
- Temperature-dependent S-N curve (root/contact fatigue) and wear characterization
- Adaptable center distance for variable gear sample sizes
- Dry running, grease or oil lubricated conditions
- Testing using custom load spectrum signals
- Gear efficiency testing

Tribotesting

- Twin-disc tribological testing module available
- COF and wear characterization
- Active control of slide-to-roll ratio
- Active sample temperature control
- Accurate simulation of gear meshing or sliding bearing contact conditions

Custom DAQ and control software

- DAQ + control software included
- Quick setup
- Intuitive user interface
- Automated data export for further analysis



[Preorder inquiry](#)

[Remote lab access](#)



Variants and specifications

Parameter / Device	MTP-5	MTP-10
Torque range - brake side	0.3-5 Nm	0.3-10 Nm
Torque range - drive side	0.3-5 Nm	0.3-5 Nm ⁽¹⁾
Rotational speed - drive side	300-4400 rpm	
Rotational speed - brake side	300-4400 rpm	300-2700 rpm ⁽²⁾
Sample temperature control	40-120 °C ⁽³⁾	
Ambient temperature measurements	0-120 °C	
Center distance variation	28 - 70 mm	
Ambient humidity measurements	0-100 %	
Sizes (H x W x D)	1750 x 610 x 950 mm	1800 x 720 x 1010 mm



- (1) Torque on drive side can be increased to 10Nm at request.
- (2) With possibility to increase rated speed at request
- (3) Upper range expandable to 160 °C or more if requested. To achieve temperatures below 40 °C, an inlet for conditioned air supply is provided on the device. Additional -40 °C module available

Highly configurable system with various available modules

- ✓ Base model with module for gear testing in dry and grease lubrication plus:
 - Twin-disk testing module
 - Oil lubrication module
 - NVH module
 - Surrounding medium temperature control
 - 40 °C sample temperature control

Preorder inquiry


Remote lab access

Notable successful cooperations



RD Motion, d.o.o.
Vojkova cesta 63
1000 Ljubljana
Slovenia

dr. Borut Černe

 borut.cerne@rdmotion.com

dr. Damijan Zorko

 damijan.zorko@rdmotion.com

www.rdmotion.com

Together we shape the future of lightweight power transmissions

RD Motion provides innovative solutions in the field of material testing. We are specialized in power transmissions R&D polymer testing and analysis. Our team consists of highly skilled experts from the fields of mechanical engineering, mechatronics and software engineering, with more than 10 years of experience. For more information visit us at www.rdmotion.com.

RD Motion's MTP system is an innovative testing device developed for specialists in the fields of power transmissions, polymers and tribology. This modular built and customizable device enables the acquisition of all relevant engineering material properties in one place. The testing device is accompanied with IoT-based software for test control and data acquisition, which enables live remote monitoring of ongoing tests.