

# Servo Drive Test Bench for Machine Controls

## Technical data

- dSpace measurement environment
- Regenerative converter setup with two power output modules
- Three servo drives (2x PMSM, 1x IM) are available for a variable experiment setup

	DSC 100	DSD 100	DA 100 (IM)
Rated power	10 kW	10.3 kW	11 kW
Peak power	26.4 kW	33.1 kW	30 kW
Rated speed	2000 rpm	2000 rpm	3000 rpm
Peak speed	2500 rpm	4500 rpm	8000 rpm
Rated torque	35 Nm	49 Nm	35 Nm
Peak torque	96 Nm	158 Nm	96 Nm



## Equipment

- Converter: Baumüller BUC 624 / BUS 624
- Controls: dSPACE DS 1103
- Rapid-control-prototyping system:
  - Free controller structure configuration
  - Customizable user interfaces
  - Centralized measurement data acquisition



### Integrated Measurement capabilities

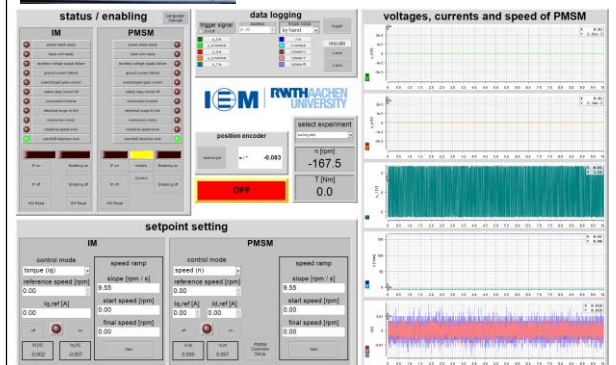
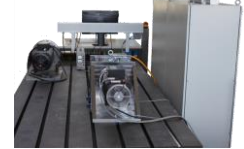
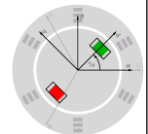
Torque	HBM T22, rated torque 200 Nm, accuracy class 0.5
Speed	All servo machines are equipped with integrated speed encoders
Current	2 phases per power unit PWM-synchronous measurement
Voltage	3x differential probe 1:100

### Supplementary measurements available

e.g. Power	Yokogawa WT3000, WT1800
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## Current application/ Opportunities

- Part of the laboratory exercise "Electrical Power Engineering"
  - Dynamic behavior of synchronous machines
- Measurements for
  - Theses
  - Student and research projects



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