Mobile Measurement and Control Cabinet

**Overview**

- Universal use at all test benches
- All common measurement tools
- EMC-compliant design
- Workstation with necessary software
- Pre-configured measurement templates
  - temperature measurements
  - vibration analysis
  - detection of characteristic diagrams
- Simple wiring
- Short changeover times between test benches

**Equipment**

- Rapid Control Prototyping System:
  - dSPACE DS1006 QuadCore Controller Board
- National Instruments PXIe data collection system
- Yokogawa WT3000 Power Analyzer
- Adjustable low-pass filter bench (4th order)
- Dell Precision Workstation
- 3 channel high voltage-differential probes
- Conditioning for current transformer up to 1000 A
- Test bench-networking via CAN bus

**Application**

- Control of frequency converters via PWM-signal
- Controller design in Matlab/Simulink
- Automatic detection of characteristic diagrams
- Data collection of all common measured quantities at motor test bench

**Measurement and control capabilities**

<table>
<thead>
<tr>
<th>Control</th>
<th>MTS load unit</th>
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<tbody>
<tr>
<td>Rotary encoder</td>
<td>Hall Sensor, Inc. Encoder, SSI, Resolver, EnDat</td>
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<tr>
<td>Interfaces</td>
<td>32 digital I/Os, 32 A/D, 32 D/A</td>
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<td>Performance maps</td>
<td>Yokogawa WT 3000</td>
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<tr>
<td>Temperature detection</td>
<td>32 thermal elements 20 RTD's</td>
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<tr>
<td>Acceleration</td>
<td>16 synchronous analog input up to 204.8 kS/s</td>
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