

## Reference list for GTM Standard Machines

### International projects

**INMETRO**  
**Instituto Nacionalde Metrologia**  
**Normalização e Qualidade Industrial**  
Xerém - Rio de Janeiro  
Brasil

Force Standard Machine 110 kN / 1100 kN  
Torque Standard Machine 3000 Nm

**INTI**  
**Instituto Nacional de Tecnologia Industrial**  
San Martin  
Argentina

Force Standard Machine 110 kN

**KIM LIPI**  
**National Institute**  
Jakarta  
Indonesia

Force Standard Machine 20 kN  
Force Standard Machine 5000 kN  
Torque Standard Machine 2000 Nm

**NIMT**  
**National Institute of Metrology**  
Bangkok  
Thailand

Torque Standard Machine 1000 Nm

**NIS**  
**National Institute for Standards**  
El-Haram El-Giza  
Egypt

Force Standard Machine 50 kN  
Force Standard Machine 500 kN  
Force Standard Machine 5000 kN

**NPL**  
**National Physical Laboratory**  
New Delhi  
India

Force Standard 100 kN / 1MN

**Precision Measurement Equipment Lab.**  
**RSADF**  
Jeddah  
Saudi-Arabia

100kN Force Standard Machine

**QCC**  
Abu Dhabi

Torque Standard Machine 1000 Nm  
Force Standard Machine 5000 kN

**Sartorius**  
Beijing  
China

Mass Standard Machine 5 t  
Mass Standard Machine 200 t

**SPRING (PSB)**  
**National Metrology Centre**  
Singapore

Force Standard Machine 50 kN / 2 MN

**VMI**  
**Vietnam Metrology Institute**  
Hao Lac  
Vietnam

Force Standard Machine 100 kN / 1 MN

**Turkmenstandartlary**  
Ashgabat  
Turkmenistan

Force Standard Machine 100 kN  
Force Standard Machine 3000 kN

## Reference list for GTM Standard Machines

### European projects

#### **EAM (METAS)**

##### **Eidgenössisches Amt für Messwesen**

Wabern  
Switzerland

Force Standard Machine 200 N  
Force Standard Machine 5,5 kN  
Force Standard Machine 110 kN  
Torque Standard Machine 1000 Nm

#### **E.I.M.**

##### **Hellenic Institute of Metrology**

Thessaloniki  
Greece

Force Standard Machine 100 kN  
Force Standard Machine 1000 kN  
Force Standard Machine 5000 kN  
Force Standard Machine 100kN / 1000 kN

#### **Force Technology**

Copenhagen  
Denmark

Force Standard Machine 100 kN  
Force Standard Machine 2 MN

#### **General Directorate of Metrology**

Tirana  
Albania

Force Standard Machine 100 kN

#### **IPQ**

##### **Instituto Português da Qualidade**

Monte de Caparica  
Portugal

Force Standard Machine 5 kN  
Force Standard Machine 100 kN / 1MN

#### **Marmara Research Centre**

##### **National Metrology Institute**

Gebze-Kokaeli  
Turkey

Force Standard Machine 11 kN  
Force Standard Machine 110 kN / 1100 kN

#### **Revere Transducers Europe**

Breda  
Netherlands

Mass Standard Machine 280 kg re-building  
Mass Standard Machine 2800 kg /  
60000 kg re-building

#### **Swedish National Testing and Research Institute**

Boras  
Sweden

Force Standard Machine 100 kN / 1MN  
re-building

#### **TEDEA-Huntleigh Europe Limited**

Cardiff  
Great Britain

Mass Standard Machine 100.000 kg

#### **Tractel S.A.**

Romilly-sur-Seine  
France

Force Standard Machine 500 kN

#### **University Zagreb**

Croatia

Force Standard Machine 500 kN

## Reference list for GTM Standard Machines

### German projects

#### **BAM**

**Bundesanstalt für Materialforschung  
und Prüfung**

Berlin  
Germany

Force Standard Machine 550 N  
Force Standard Machine 2200 N

#### **Kistler Instrumente GmbH (Dr. Staiger Mohilo + Co GmbH)**

Lorch  
Germany

Torque Standard Machine 3000 Nm  
Torque Standard Machine 5000 Nm  
Torque Standard Machine 100 kNm

#### **Fraunhofer-Institut für Betriebsfestigkeit (LBF)**

Darmstadt  
Germany

Force Standard Machine 1,1 MN

#### **HBM - HOTTINGER BALDWIN MESSTECHNIK GmbH**

Darmstadt  
Germany

Force Standard Machine 200 N  
Force Standard Machine 1000 kn re-building  
Force Standard Machine 5000 kN  
Torque Standard Machine 25000 Nm

#### **MPA**

Dortmund  
Germany

Force Standard Machine 25 kN

#### **PTB**

**Physikalisch-Technische Bundesanstalt**  
Braunschweig  
Germany

Force Standard Machine 100 N  
Force Standard Machine 200 N  
Force Standard Machine 2 kN  
Force Standard Machine 20 kN  
Force Standard Machine 100 kN  
Force Standard Machine 200 kN  
Force Standard Machine 1 MN re-building  
Force Standard Machine 2 MN re-building  
Weighing system 300 kg  
Weighing system 3000 kg  
Weighing system 30000 kg  
Torque Standard Machine 1,1 MNm

#### **Siemens AG**

Fürth  
Germany

Mass Standard Machine 280 kg  
Mass Standard Machine 2800 kg / 60000 kg

#### **Staatliche Materialprüfungsanstalt**

Darmstadt  
Germany

Force Standard Machine 110 N  
Force Standard Machine 550 N  
Force Standard Machine 5,5 kN