New perspectives

TÜV Rheinland Korea
Engine for a modern society

- TÜV Rheinland was founded as part of the German Steam Boiler Association. A company with a clear mission: to make new technologies controllable.

- Since then TÜV Rheinland has evolved alongside industrial progress: from steam engines, to electrification, to the digitization of everyday life.

- To be the world’s best independent provider of technical services for testing, inspecting, certifying, qualifying and training industrial plants, vehicles, products, people, processes and projects.
Milestones of a long tradition

TÜV Rheinland – originator of many TIC services
20,450 EMPLOYEES

Hand in hand with specialists, auditors, examiners, engineers – the qualifications of our employees are as diverse as our tasks.
German at heart – global in mind.

56 COUNTRIES
600 ACCREDITATIONS
80 countries/accreditations by authorities for Market Access Service

>500 LOCATIONS
227 LABORATORIES
International Presence

Regions/Countries

**GERMANY**
Active since 1872

**TEST FACILITIES**
About 220 car inspection centers in all federal states

**EUROPE**
Active since 1970
- Austria
- Belgium
- Bulgaria
- Czech Republic
- France
- Hungary
- Italy
- Latvia
- Luxembourg
- Netherlands
- Poland
- Portugal
- Romania
- Russian Federation
- Serbia
- Slovakia
- Spain
- Sweden
- Switzerland
- United Kingdom

**ASIA, PACIFIC**
Active since 1978
- Australia
- Greater China
  - Mainland China
  - Hongkong
  - Taiwan
- Indonesia
- Japan
- Kazakhstan
- Malaysia
- Philippines
- Singapore
- South Korea
- Thailand
- Vietnam

**AMERICA**
Active since 1983
- Argentina
- Brazil
- Canada
- Chile
- Colombia
- Mexico
- Peru
- USA

**CAR INSPECTION CENTERS**
In Chile (18)

**INDIA, MIDDLE EAST, AFRICA**
Active since 2010
- Algeria
- Armenia
- Bangladesh
- Egypt
- India
- Kuwait
- Lebanon
- Morocco
- Oman
- Qatar
- Saudi Arabia
- South Africa
- Tunisia
- Turkey
- United Arab Emirates

Statistics in 2019
Figures 2018

1,998 Revenue in € millions

Revenue Germany/International (in € millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Germany</th>
<th>International</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>1,109</td>
<td>889</td>
<td>1,998</td>
</tr>
<tr>
<td>2017</td>
<td>1,077</td>
<td>895</td>
<td>1,972</td>
</tr>
</tbody>
</table>

Consolidated data (according to IFRS)

Revenue per Business Stream (in %)

- Products: 25%
- Industrial Services: 24%
- Mobility: 24%
- Academy & Life Care: 11%
- Systems: 10%
- Digital Transformation & Cybersecurity: 6%

Unconsolidated data
We ensure quality & safety

INDUSTRIAL SERVICES
- Pressure Equipment
- Lifting Equipment & Machinery
- Electrical Engineering & Automation
- Industrial Inspection
- Infrastructure & Civil Engineering
- Energy & Environment
- Project Management
- Materials Testing & NDT

MOBILITY
- Periodical Technical Inspection
- Driver’s License
- Car Services & Appraisal
- Engineering & Type Approval
- Rail

PRODUCTS
- Softlines
- Hardlines
- Electrical
- Commercial
- Medical
- Solar

ACADEMY & LIFE CARE
- Occupational Health & Safety
- Training & HR Development
- Labour Market Services & Private Schools

DIGITAL TRANSFORMATION & CYBERSECURITY
- Cybersecurity
- Digital Transformation

SYSTEMS
- Certification of Management Systems
- Customized Services
- Government Inspections & International Trade

6 Business Streams
27 Business Fields
TÜV Rheinland Korea

TÜV Rheinland Korea was the first foreign certification body in Korea, founded in 1987. A reliable partner for domestic companies, it provides testing and certification services according to various international testing standards and supports domestic firms to enter the global market.
**TÜV Rheinland Korea**

<table>
<thead>
<tr>
<th><strong>Representative</strong></th>
<th><strong>Carsten Lienemann</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director &amp; CEO</strong></td>
<td><strong>Foundation</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Apr. 1987</strong></td>
</tr>
<tr>
<td><strong>Business Industry</strong></td>
<td><strong>Testing, Inspection &amp; Certification Services</strong></td>
</tr>
<tr>
<td><strong>Staff</strong></td>
<td><strong>150 employees</strong></td>
</tr>
<tr>
<td><strong>Locations</strong></td>
<td><strong>Seoul (Head Office), Daegu, Gyeongsan and Changwon</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Seoul</strong>: Safety, Energy Efficiency, Photobiological safety, Telecommunication <strong>Gyeongsan</strong>: Photovoltaic Systems <strong>Changwon</strong>: Energy Efficiency</td>
</tr>
<tr>
<td><strong>Laboratories</strong></td>
<td><strong>Industrial Services, Mobility, Products, Systems, Digital Transformation &amp; Cybersecurity</strong></td>
</tr>
<tr>
<td><strong>Main Business</strong></td>
<td><strong>Test, inspection and certification of electrical devices, household goods, cars &amp; components, rail systems, industrial applications, medical equipment and renewable energy systems</strong></td>
</tr>
</tbody>
</table>
TÜV Rheinland Korea - successful growth

Revenue (Bil. KRW)

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>20.8</td>
</tr>
<tr>
<td>2015</td>
<td>29.7</td>
</tr>
<tr>
<td>2018</td>
<td>33.5</td>
</tr>
</tbody>
</table>

Employees

<table>
<thead>
<tr>
<th>Year</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>96</td>
</tr>
<tr>
<td>2015</td>
<td>113</td>
</tr>
<tr>
<td>2018</td>
<td>145</td>
</tr>
</tbody>
</table>
TÜV Rheinland Korea History

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>TÜV Rheinland Korea established (First foreign certification body in Korea)</td>
</tr>
<tr>
<td>1989</td>
<td>Received authorization for certification on European Car Standard (First in Korea)</td>
</tr>
<tr>
<td>1992</td>
<td>Safety Laboratory established*</td>
</tr>
<tr>
<td>1998</td>
<td>Daegu office opened Ergonomics Laboratory established*</td>
</tr>
<tr>
<td>2001</td>
<td>Received CBTL(Certification Body Testing Laboratory) status Bluetooth &amp; Telecom Laboratory established*</td>
</tr>
<tr>
<td>2003</td>
<td>Received BQTF(Bluetooth Qualification Test Facility) status first in Korea</td>
</tr>
<tr>
<td>2004</td>
<td>Changwon office opened ZigBee Laboratory established</td>
</tr>
<tr>
<td>2006</td>
<td>TCO Laboratory established*</td>
</tr>
<tr>
<td>2007</td>
<td>Laser Laboratory</td>
</tr>
<tr>
<td>2008</td>
<td>Lab expansion for luminaries &amp; white goods CNG / LPG vehicle components</td>
</tr>
<tr>
<td>2009</td>
<td>Authorization for Taiwan Type Approval CTIA authorization for Bluetooth laboratory</td>
</tr>
<tr>
<td>2010</td>
<td>Wi-Fi Laboratory established* and service launched</td>
</tr>
<tr>
<td>2012</td>
<td>Opened PV Test Center in Yeungnam University Achieved ISO9001 certification Designated as a LED lighting test lab by IECEE/CB Pre-Shipment Inspection(PSI), WPC test</td>
</tr>
<tr>
<td>2013</td>
<td>Expanded Wi-Fi test scope (VHT, PMF etc.) Launched the battery team Registered the REACH / K-REACH Consulting service on COMPASS</td>
</tr>
<tr>
<td>2014</td>
<td>Total number of Wi-Fi chambers expanded to 5 NFC &amp; PMA (Power Matters Alliance) service launched Opened Energy Efficiency Lab in Changwon Received CBTL for PV test center</td>
</tr>
<tr>
<td>2015</td>
<td>Expanded Bluetooth test equipment Expanded Energy Efficiency testing scope (Refrigerator &amp; Washing machine)</td>
</tr>
<tr>
<td>2016</td>
<td>LoRa® certification program, EEL is KOLAS accredited Photovoltaic Testing Laboratory is designated as a KS certification performance testing agency</td>
</tr>
<tr>
<td>2017</td>
<td>30th anniversary Opened Photobiological safety testing lab GSO Notified Body (NB) for low voltage electrical equipment and appliances</td>
</tr>
<tr>
<td>2018</td>
<td>Relocation and expansion of Seoul HQ and test center to double floor space Wireless/IoT lab : Thread testing service launched</td>
</tr>
</tbody>
</table>

* accredited by DAkkS according to EN ISO/IEC 17025
Industrial Services
Industrial Services

Pressure Equipment

As a Notified Body for the European Pressure Equipment Directive (PED) 2014/68/EU, we review and certify all elements and procedures in connection with the certification process. Moreover, we are accredited by the American Society of Mechanical Engineers (ASME) as an authorized inspection agency.

- PED (2014/68/EU)
- CPR (No 305/2011)
- SPVD (2009/105/EC)
- TPED (2010/35/EU)
- ASME certification
- AD 2000 Merkblätter

Functional Safety - ISO 26262

TÜV Rheinland offers functional safety services considering requirements of the worldwide relevant standards IEC 61508, IEC 61511, IEC 62061, ISO 26262 and others. A functional safety evaluation includes: SW, HW, Environmental factors, safety lifecycle management processes.

- Training
- Assessment/Certification
- Consultancy
- A-SPICE

Industrial Inspection

Industrial inspection services by TÜV Rheinland ensure the successful completion of your project. Our experts support you in all phases of a project and during asset operation: from vendor selection, expediting and pre-shipment inspection to supervision of loading and discharge, site supervision during construction and ultimately in-service inspection.

- Vendor Inspection
- Expediting
- Site-Supervision in Construction
- In-Service Inspections
Mobility

Engineering & Type Approval
TÜV Rheinland supports you obtain national and international approvals for your automotive systems and components. We offer individual approvals and can cover all your homologation and type testing needs.

- e-mark/E-Mark (Europe)
- INMETRO (Brazil)
- ARAI (Automotive Research Association of India)
- SNI (Indonesia)
- eCall consulting
- IATF 16949
- EV high voltage safety training

Rail
TÜV Rheinland is a TSI (2008/57/EC) certification body for all railway systems, as a representative notified body (NoBo) accredited by the European Union as well as a certification body for the International Railway Industry Standard (IRIS).

- ISA (Independent Safety Assessment)
- SIL certification
- Railway System & Product Certification
- TSI (Technical Specification for Interoperability)
- ISO/TS 22163 (IRIS, International Railway Industry Standard)
- RAMS (Reliability, Availability, Maintainability and Safety)
- Software assurance
- Risk Assessment and Railway Safety Management System
- LCC (Life Cycle Cost)
- Welding certification (EN 15085-2), etc.
Products
Products

For various products and target markets, we offer one-stop solutions

- Softlines (Toy, Textiles, Cosmetics, etc.)
- Hardlines (Personal Protect Equipment, Sports equipment, etc.)
- Electrical
- Commercial
- Medical
- Solar

- TÜV Rheinland Korea Test Center

Electrical Safety Lab

Communication Lab
Wi-Fi, Bluetooth SIG, CTIA, ZigBee, WPC, AirFuel, OpenADR, LoRa, etc.

Photovoltaic Lab
PV module test (IEC 61215, IEC 61730-1, 61730-2), Performance & Reliability Test, PV Power Plant Inspections, etc.

Energy Efficiency Lab
Energy efficiency test & Performance evaluation for Air Conditioners, Refrigerators and Dehumidifiers
Systems

Certification of Management Systems

- ISO 9001 (Quality Management)
- ISO 14001 (Environment Management)
- ISO 45001 (Occupational Health and Safety Assessment)
- IAFA 16949 (Quality Management in the Automotive Industry)
- ISO 50001 (Energy Management)
- ISO/TS 22163 (Quality Management in the Rail Industry)
- ISO 22301
- CSR (Corporate Social Responsibility)

Customized Services

- 2nd party auditing
- Supplier audit
- Mystery check
- Work contract audit
- Customized Audit Solutions

Government Inspections & International Trade

- Algeria: CoC (Certificate of Conformity)
- Botswana: Botswana Standard Import Inspection Regulation (SIIR)
- Egypt: Egypt Conformity Assessment GOEIC
- Ethiopia: Ethiopian CoC
- Iraq: Pre-Import Inspection, Testing & Certification Program of Goods into the Republic of Iraq (ICIGI)
- Kuwait: Kuwait Conformity Assurance Scheme (KUCAS)
- Libya: Certificate of Inspection
- Qatar: Verification of Conformity (VOC)
- Saudi Arabia: Certificate of Conformity (CoC)
- Worldwide: Commercial Inspections
Test mark and Certipedia - Building trust and credibility

Create greater clarity for companies, retailers and consumers. Around the world, systematic and convincing.

TEST MARK
- Every test mark carries an individual ID number and a QR code. Consumers can view the contents of test certificates online by entering the ID number, QR code or by carrying out a keyword search.

CERTIPEDIA
- The Certipedia database has over 350,000 entries. A comprehensible summary of the criteria used in the test is displayed next to the test mark.
TÜV Rheinland Korea’s Customers

TÜV Rheinland Korea has more than 8,000 clients.
Most Global Leaders in Korea benefit from TÜV Rheinland’s Services.

![List of customers logos](image-url)
Thank you!

TÜV Rheinland Korea

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Changwon, Gyeongsangnam-do
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