Connecting Solutions for Commercial and Industrial Vehicles

Aftertreatment & Emission Systems
Air Intake & Induction Systems
Coolant & Fluid Hose Connections
Tank Fastening Connections
Steering & Driveline Systems
Oetiker is a family-owned company headquartered in Horgen, Switzerland. Our international network of production and sales locations enables us to deliver reliable connections to our customers quickly and efficiently.

Proven for over 75 years

Oetiker’s heritage of excellence inspires us every day to continue to earn our position as the market leader for connecting solutions. Each year, we design, test and manufacture almost 2 billion clamps and related products in 14 manufacturing facilities. Our quality is confirmed on more than 90 million vehicles manufactured annually.

360° Solution Approach

Oetiker has established a 360° Solution Approach and commitment with OEM and Tier suppliers around the world. Our capabilities span the spectrum from concept to prototyping and testing through assembly. We also provide follow-up maintenance, services and training. Our engineers and support teams are driven to provide connecting solutions that meet the most challenging vehicle specifications.
We believe every customer connection is critical – within trucks, buses and construction equipment to specialty and off-road vehicles. Technology and regulations are changing rapidly. Our products are developed to comply with the latest requirements and emission standards.

Engineered for Reliability

High pressure and high temperature, coupled with increasing demands for higher performance, make reliable connections a critical priority for the commercial and industrial market. Oetiker is recognized worldwide for delivering reliability today, and for proactively offering innovative connections for reliability tomorrow.

Our products offer unique assembly and performance characteristics to:

- Eliminate coolant leakage
- Improve emission sealing and durability
- Increase assembly efficiency and ergonomics
Engineered Connecting Solutions for Commercial and Industrial Vehicles

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Exhaust Aftertreatment Systems

Applications such as Exhaust Gas Recirculation Coolers, Turbo Connections and Engine Brakes have extreme temperature requirements. Our connecting solutions offer multiple variants and use alternate grades of stainless steel to ensure long-term sealing and optimize ease of assembly in restricted spaces.

We design and produce V-Profile clamps, in diameters up to 1000 mm, for both discrete DOC/DPF/SCR units as well as next generation integrated units. We develop products to suit your individual needs, customized to optimize performance, installation, and longevity.

Engine Exhaust Connections

Applications such as Exhaust Gas Recirculation Coolers, Turbo Connections and Engine Brakes have extreme temperature requirements. Our connecting solutions offer multiple variants and use alternate grades of stainless steel to ensure long-term sealing and optimize ease of assembly in restricted spaces.

We are ready for tomorrow’s stringent emissions regulations with superior high vibration, stress and temperature performance. Oetiker’s unique low-friction trunnion clamp design offers low torque installation for industry leading performance and ergonomics.

Heavy Duty V-Profile Clamp 28C

- Stronger Sealing Capability
  - 25% increased sealing capability compared to conventional V-Profile clamp designs.
  - Low friction bolt and solid trunnion eliminates torque losses, increases axial loads and gasket sealing for greater mechanical efficiency.
  - V-Profile design engineered to suit specific profile geometry for optimum axial load distribution.

- Improved Ergonomics
  - Low torque installation with high axial load.
  - Clamp opens fully and closes easily with visible Quick-lock latching mechanism.

High Performance V-Profile Clamp 280

- Superior Sealing Capability
  - Unique bolt and washer design delivers high-performance V-Profile clamp sealing.
  - Solid trunnion option generates stronger sealing capability compared to Quick-lock trunnion.

- Various materials available to support heat resistance requirements.

- Durability
  - Prevailing torque thread supports vibration resistance.

Typical High Load/Low Torque Performance

- Standard Solid trunnion V-Profile clamp
- High performance Quick-lock V-Profile clamp
- Standard Quick-lock V-Profile clamp
- Conventional Force Seal® V-Profile clamp

![Graph of typical high load/low torque performance](Graph)
Diesel Particulate Filter (DPF)
Oetiker engineering adapts material, hardware and mounting systems to ensure compatibility with a variety of exhaust aftertreatment systems on next generation vehicles. Our customized strap designs meet OEM requirements.

Exhaust Gas Recirculation Cooler (EGR Cooler)
EGR Coolers require high heat and high strength solutions. Oetiker produces straps based on customer specifications to meet technical requirements. We also offer a variety of articulating and mounting options.

Fastening solutions must be tailored to the newest emission systems. Oetiker engineers deliver customized solutions that are adapted to meet the unique needs of our customers, while optimizing cost and performance.
Charged Air Connections

Charged air systems need solutions for fast assembly, leak-proof connections and guaranteed reliability. The growing Oetiker product portfolio meets these requirements, offering high radial loads, 360° sealing and fast and simple installation.

Turbocharger

Turbocharger connections require robust and reliable connections. For these applications, Oetiker’s V-Profile clamp portfolio assures efficient assembly and reliable connections of the housing, air and exhaust interfaces.

Outstanding Clamping Performance

- High and permanent compression rates deliver outstanding expansion resistance.
- ToothLock® technology delivers high and permanent radial load with no vibration relaxation for secure high pressure connection.
- StepLess® design provides uniform 360° radial load for an excellent seal.

Assembly-friendly and Reliable

- Designed for fast, efficient installation with process monitoring capability.
- Lightweight design supports weight reduction initiatives.

Improved Ergonomics

- Low torque installation with high axial load.
- Clamp opens fully and closes easily with visible Quick-lock latching mechanism.

Strong Sealing Capability

- 25% increased sealing capability compared to conventional V-Profile clamp designs.
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Heavy Duty V-Profile Clamp

ToothLock® Ear Clamp

Powertrain Applications

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Coolant Hose Connections

Hose assemblies utilizing “T” Connections and Quick-Connects are well-suited for using Oetiker’s products. The high radial load and uniform compression of the Multi-Crimp Ring provides robust, leak-free connections.

Radiator Hose Connections

Large diameter coolant connections are subject to thermal cycling and increasing pressures. Our Self-Tensioning StepLess® Screw Clamps maintain constant tension throughout extremely low to very high temperatures. This product is designed for advanced sealing hose technologies, particularly for silicone hoses.

Oetiker engineering is keeping pace with high-demand thermal management requirements. We offer application specific solutions for an increasing number of connections, all delivering superior sealing integrity and assembly efficiency.

Multi Crimp Ring

15C

High Radial Load and Uniform Sealing Performance
- Smooth band is uniformly swaged around circumference for ultimate strength and sealing performance.
- Reliable in high compression and high temperature applications.
- Smooth appearance and low clearance design.

Self Tensioning StepLess® Screw Clamp

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Durable Sealing over Wide Temperature Range
- Constant tension for excellent cold temperature sealing.
- Consistent radial load over temperature cycle ranging from −40°C to +120°C.
- StepLess® design for a smooth inner circumference and uniform 360º seal.

Evenly distributed radial load for exceptional uniform sealing.
With an increasing number of connections, sealing integrity and assembly efficiency are paramount. We offer a number of application specific solutions to improve assembly efficiency.

**Fuel, DEF and Oil Line Connections**

For small diameter hoses, stainless steel StepLess® Ear Clamps ensure a vibration resistant seal with superior reliability and excellent corrosion resistance. The Oetiker ear design provides fast and easy installation.

**Evenly distributed radial load for uniform sealing.**

**Multi Crimp Ring**

High Radial Load and Uniform Sealing Performance
- Smooth band is uniformly swaged around circumference for ultimate strength and sealing performance.
- Reliable in high compression and high temperature applications.
- Smooth appearance and low clearance design.

**Assembly-Friendly and Reliable**
- Designed for fast, efficient installation with process monitoring capability.

**StepLess® Ear Clamp**

360° Sealing Capability
- Narrow band and StepLess® inner circumference provide a concentrated 360° seal.
- Quick closing tamper-proof design.
- Lightweight design supports weight reduction initiatives.

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**Worm Drive Clamp Comparison**

- The Oetiker StepLess® design provides a smooth, uniform, 360° seal, eliminating steps and gaps. This feature allows advanced sealing properties, especially with soft or thin wall hoses.

**StepLess® Design**

The Oetiker StepLess® design provides a smooth, uniform, 360° seal, eliminating steps and gaps. This feature allows advanced sealing properties, especially with soft or thin wall hoses.
Fuel Tanks

We offer straps that provide a flawless fit and meet functional requirements for any fuel tank’s shape or size. Our ability to provide full support from concept to installation has made Oetiker a preferred partner for many leading OEM's and Tier 1 suppliers.

Diesel Exhaust Fluid (DEF) Tanks

Oetiker’s fastening solutions can meet most mechanical and aesthetic requirements in aftertreatment systems for Diesel Exhaust Fluid tanks. We offer products that are compatible with polymer or metallic materials.

Compressed Air Vessels

We offer a variety of band material options and connector styles, all exceeding typical vibration and load requirements for Compressed Air Vessels.

Oetiker’s large offering of standardized and custom strap products demonstrates our commitment to consult and collaborate with customers on materials and components, to deliver the right solution for any application.

Heavy Duty Straps

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Custom Engineered
- Materials, coatings and liners are selected to meet technical and assembly requirements.
- Hardware options including bolts, loop and bracket attachments are selected to suit customer needs
- Proprietary fatigue resistant welds for stainless bands.
- Clinch rivet for pre-coated steel bands.

Performance
- Strap design offers flexibility, durability and consistent mechanical performance, all exceeding vehicle design criteria.
Oetiker has a heritage of commitment to support advancement in drivetrain connection options.

**Driveshaft Connections**
Oetiker has always been a leader in developing clamp products for drivetrain systems. Today we offer connecting options for the most advanced boot materials and designs.

**Steering System Connections**
A reliable and precise steering system is essential to any vehicle as technology continues to advance. Oetiker products support advances in steering technology with durable and secure connections for rack and pinion, telescoping systems and steering fluid return lines.

**Steer rack & pinion**
- Reliable connection for rack and pinion systems.
- Designed for fast, efficient installation with process monitoring tracking capability.

**Telescoping systems**
- Lightweight design supports weight reduction initiatives.

**Steering fluid return lines**
- StepLess® design provides uniform 360° seal.
- Designed for fast, efficient installation with process monitoring tracking capability.

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**360° Sealing Capability**
- Narrow band and StepLess® inner circumference provides a concentrated 360° seal.
- Quick closing tamper-proof design.
- Lightweight design supports weight reduction initiatives.

**Assembly-Friendly and Reliable**
- Designed for fast, efficient installation with process monitoring tracking capability.
- Lightweight design supports weight reduction initiatives.

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**Outstanding Clamping Performance**
- High and permanent compression rates and low profile configuration were designed specifically for rotating shafts.
- ToothLock® technology delivers high and permanent radial load with vibration relaxation.
- StepLess® design provides uniform 360° seal.

**Assembly-friendly and Reliable**
- Designed for fast, efficient installation with process monitoring tracking capability.
- Lightweight design supports weight reduction initiatives.

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**StepLess® Ear Clamp**
- Designed for fast, efficient installation with process monitoring tracking capability.
- Evenly distributed radial load for uniform sealing.

**ToothLock® Low Profile Clamp**
- High radial load due to ToothLock® feature for exceptional sealing requirements.
- Evenly distributed radial load for uniform sealing.
Oetiker offers a range of assembly tools for the efficient and reliable installation of our clamp products. We have a complete portfolio of options from hand installation pincers to calibrated electromechanical systems with process-data tracking capability.

Clamp Installation Videos
Install clamps quickly and easily

www.oetiker.com

ASSEMBLY SOLUTIONS & PINCERS

Hand Installation Tools
Manual Assembly Tools for installation of the complete range of Oetiker products.
- Quick and easy installation
- Exponential gain of mechanical advantage
- Secure grip and comfort
- Reduced fatigue and risk of repetitive injury

For assembly of Ear Clamps, Low Profile Clamps, Multi Crimp Rings (MCR)
- Flexible cordless design
- Process reliable
- Closure verification
- Ergonomic design

Pneumatic Pincers
For assembly of Ear Clamps and Low Profile Clamps.
- Highly efficient
- Process reliable
- Closure verification
- Ergonomic pistol grip (optional)

Swaging Tools
For installation of Multi Crimp Rings (MCR)
- Available interlocking swaging segments guarantee uninterrupted 360° compression
- Fully reliable assembly process
- Electronic process data tracking capability

Please consult an Oetiker representative or visit www.oetiker.com for a complete range of assembly tool options.