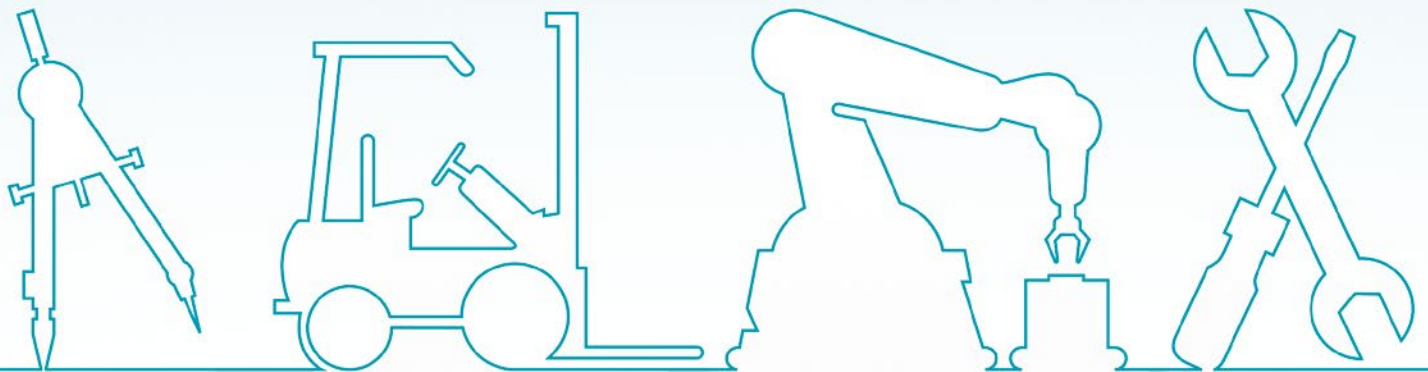


Service PLUS

ENHANCED SOLUTIONS
FOR THE ENTIRE VALUE CHAIN



Not Just Service but Service PLUS

Knowing our customers' needs and meeting them is key to the customer service philosophy of Trelleborg Sealing Solutions. Service PLUS is our "total solution" program, offering customers a variety of enhanced services to assist every step of the business process.

**Simplified
stock
replenishment**

**Component
assembly
services**

**Minimum
production
time of 24
hours**

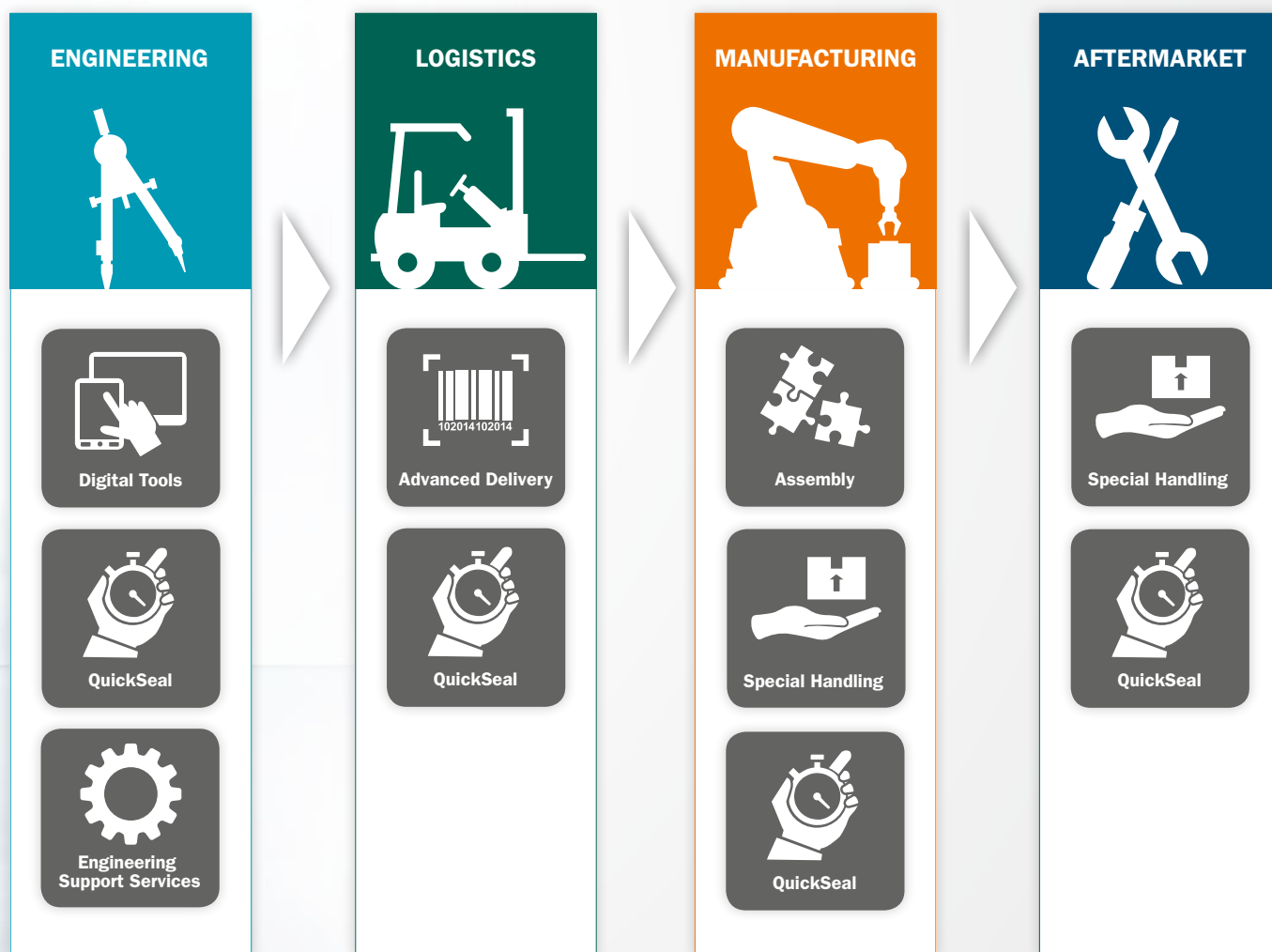
**Individual
packaging
solutions**

INDIVIDUALLY TAILORED

The needs of every customer are different and the way Service PLUS operates recognizes that. Our Service PLUS team works with you to study the different aspects of our current supply model, then suggests Service PLUS options that could improve our service to you.

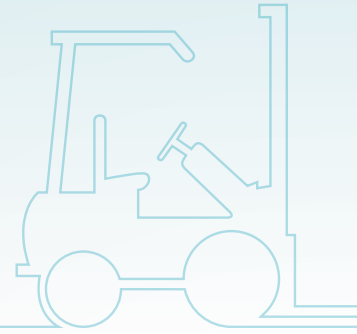
SOLUTIONS FOR THE ENTIRE SUPPLY CHAIN

Service PLUS solutions simplify the workflow in every part of your supply chain. Trelleborg's added-value services are designed to expand our relationships with our customers, helping simplify procurement, manufacturing, assembly and logistics. This can ultimately reduce process costs and throughput time for our customers.





Advanced Delivery



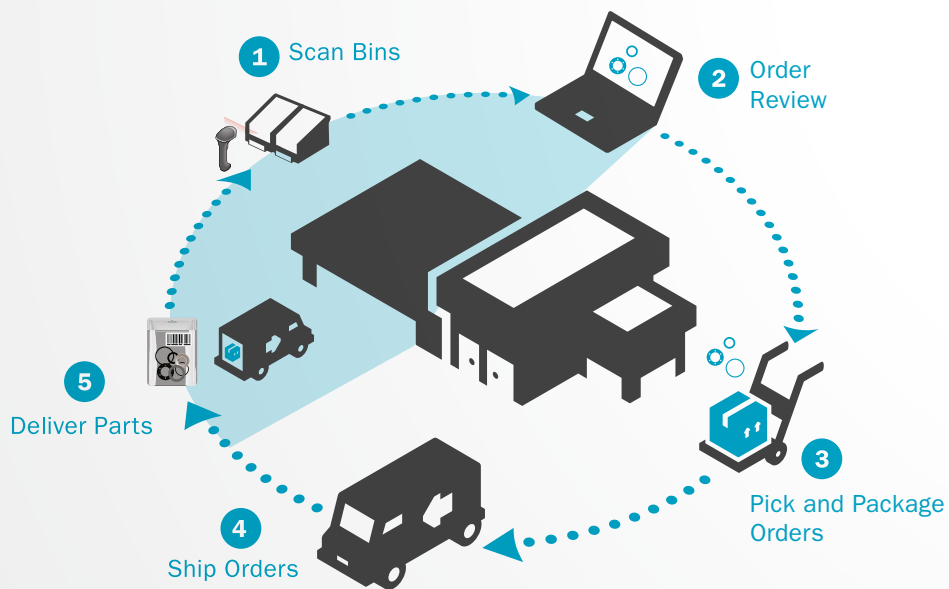
ENGINEERING
LOGISTICS
MANUFACTURING
AFTERMARKET

Advanced Delivery comprises various services designed to simplify your stock replenishment process by managing your different vendors and stock levels – be it through a Kanban system or complete C-Part Management.

KANBAN PROCESS WITH SEALSCAN

With SealScan, managing your stock has never been easier. Generate orders for replenishment of stock automatically and have items delivered

directly to your production line by simply scanning dedicated barcodes using the SealScan app on a variety of iOS devices.



SealScan reduces administration work, costs and lead time by automating your Kanban system.

FIELD STOCK LOCATION

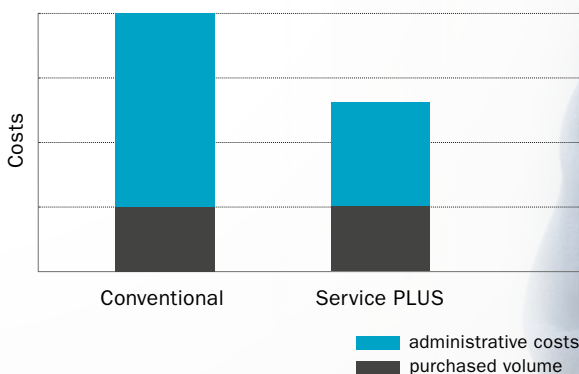
Trelleborg Sealing Solutions offers a variety of Field Stock Locations – or satellite warehouses – worldwide. These local warehouses ensure that the product you require reaches you as soon as possible by avoiding long transport routes and multiple logistic partners.

Trelleborg's Field Stock Locations operate around the clock, 365 days a year for “On-Demand” and “Scheduled Route” services. On-Demand deliveries are available as fast as in one hour. In addition, our Field Stock Locations offer multiple service levels to match your logistic requirements.

No matter if you are looking for simple delivery services, complete inventory management, or something in between, Trelleborg Sealing Solutions has the service for you.

Service Level 1	Service Level 2	Service Level 3
Cross Dock	Inventory Management	Inventory Management
		Special Handling
		Packaging
		Labelling

C-PART MANAGEMENT



Reduce administrative and direct purchasing costs and increase your working capital by transferring your C-Part Management to Trelleborg Sealing Solutions. A reduced number of vendors simplifies your purchasing process and ensures your focus is on your strategic purchasing activities.





Special Handling

ENGINEERING
LOGISTICS
MANUFACTURING
AFTERMARKET

Special Handling bundles an assortment of individual packaging solutions together with additional services that optimize the mounting and handling of seals.

INDIVIDUAL PACKAGING SOLUTIONS

SINGLE/BULK BAG & TAG

Individually bagged and tagged seals or sets in printable bags



KITTING

Ready to sell “aftermarket kits” – sets of individually packed seals in printable bags or boxes



SKIN TOP PACKAGING

Individual items or kits shrink-wrapped to printable cardboard backing



BLISTER & CLAM SHELL PACKAGING

Robust & effective packaging solution in recyclable polyethylene terephthalate (PET) materials



TUBES

Reusable transparent plastic tubes – easy to store or use in automated environments



	Single / Bulk Bag & Tag	Kitting	Skin Top Packaging	Blister & Clam Shell Packaging	Tubes
Printable/customizable packaging	•	•	•		
Customizable seal assortments	•	•	•		
Use in automated environments					•
Packaging resistant to environmental conditions (like dust and water)	•		•	•	•
Easy to store and stack packaging		•		•	•



OPTIMIZED PART IDENTIFICATION, ASSEMBLY AND QUALITY ASSURANCE

SPECIAL MARKING

Individual marking and engraving for easy item recognition and tracking



SURFACE TREATMENT

Coating and surface modifications for elastomer or plastic products to optimize assembly and application



AUTOMATED INSPECTION

Fully automated and highly flexible visual inspection of seal dimensions and surface properties



Special Marking

- Product traceability
- Easy product identification in the production environment
- Automated robotic recognition in safety critical applications

Surface Treatment

- Permanent reduction of friction and wear
- Reduced forces in automatic assembly machines
- Automated separation and handling in production

Automated Inspection

- Additional quality assurance for specific requirements



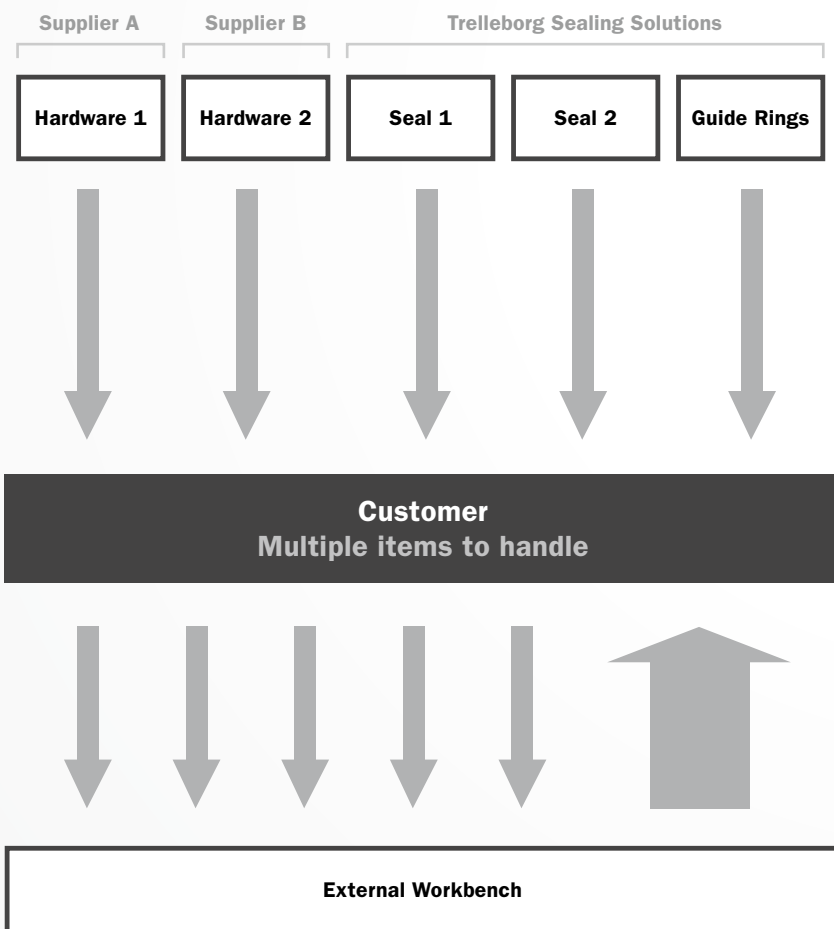


- ENGINEERING
- LOGISTICS
- MANUFACTURING**
- AFTERMARKET

Assembly

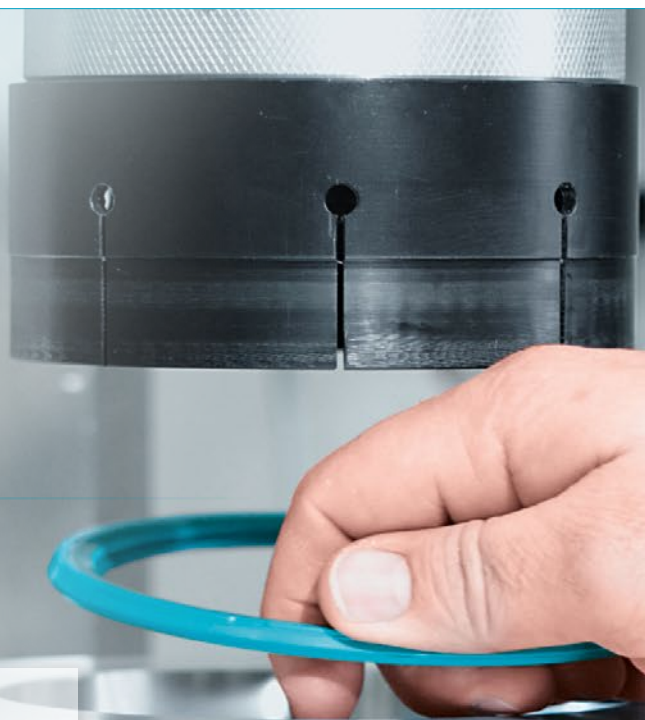
Trelleborg Sealing Solutions offers a number of assembly-related operations connected to our sealing solutions. With Service PLUS Assembly Services, Trelleborg Sealing Solutions aims to simplify your value chain by delivering “ready-to-use” assembled components, taking over the pre-assembly steps of various items, even from other suppliers.

COMMON ASSEMBLY PROCESS



The typical assembly process requires individual handling and logistics for multiple **different components** by various suppliers, including:

- Purchasing
- Procurement
- Receiving inspection
- Warehouse management
- Distribution to external workbench



ASSEMBLY PROCESS WITH SERVICE PLUS

Trelleborg Sealing Solutions

Hardware 1 | Hardware 2 | Seal 1 | Seal 2 | Guide Rings

Service PLUS Assembly



Customer
One item to handle



Single elements
A variety of single components ready to be assembled.



Assembly process
Assembly of components performed by experts.



Assembled part
A complete and checked assembly ready to be installed by the customer.

By using Trelleborg's Assembly Services, our customers take care of logistics and handling for **only one item**, instead of multiple individual components.

Service PLUS Assembly Services offer a wide variety of benefits for your business, including:

- Simplified restocking
- Reduced number of suppliers
- Components delivered directly to the production line
- Assembly performed by experts, providing increased security against damage to single components
- Decreased quality costs



ENGINEERING

LOGISTICS

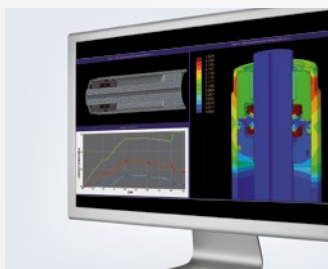
MANUFACTURING

AFTERMARKET

Engineering Support Services

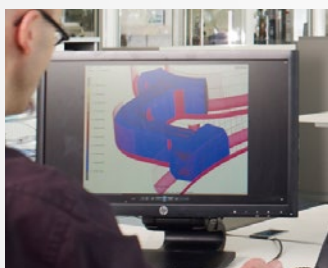
In addition to a wide range of products for a variety of industries and applications, Trelleborg Sealing Solutions offers world-class engineering solutions and supporting services. From extensive design and compound competence, to ample product testing, Trelleborg provides expert support for your engineering needs.

ENGINEERING SOLUTIONS



FEA AND SIMULATION

- Execution of the latest 3D-Finite Element Analysis, based on Trelleborg Sealing Solutions material models
- Simulation of non-linear behavior and contact analysis in 2D and 3D
- Viscoelasticity, stress relaxation, creep, heat transfer and thermal stress analysis



CAD

- Creation and central administration of drawings and technical data



ENGINEERING AND DESIGN EXPERTISE

- Application Engineers along with a multitude of international development teams contribute their wide experience, market and applications knowledge to your design process



**TESTING CAPABILITIES:
MATERIAL & PRODUCT**

- In-house execution of standard, as well as individual, tests for hydraulic, rotary and special applications



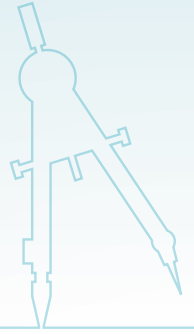
**CUSTOMER-SPECIFIC
PRODUCT DEVELOPMENT**

- Development of individual solutions to match customer requirements
- International cooperation between manufacturing, sales and development



DESIGN & COMPOUND COMPETENCE

- Development of new solutions or adaption of existing products to an application.
- Material development expertise in all our proprietary and applied materials
- Capability of producing prototypes and samples in a short time by means of a 3D printer



QuickSeal

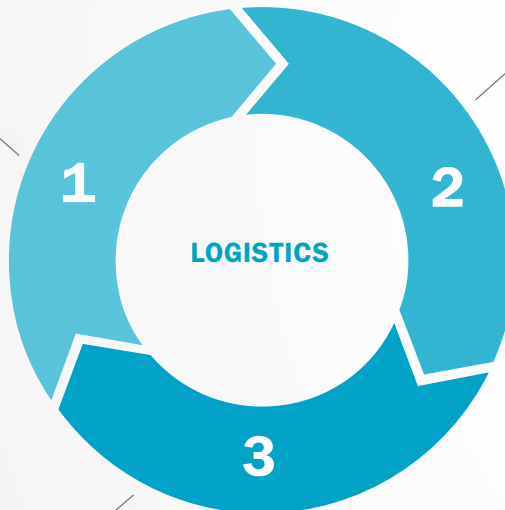
- ENGINEERING
- LOGISTICS
- MANUFACTURING
- AFTERMARKET

QuickSeal covers your short-notice needs for sealing solutions – be it a prototype, functional sample or a small batch. This service provides, for instance, machined or molded seals, as well as standard and customized products to suit your requirements and specifications. With QuickSeal, your entire value chain benefits from fast track manufacturing of seals.

SOLUTIONS ALONG THE ENTIRE VALUE CHAIN

1 ENGINEERING

- Small series
- Functional samples for testing
- Flexibility in compound and design selection



2 MANUFACTURING

- Small and medium series
- Earliest availability in one day
- Transfer from machined to molded products
- Services for short-notice requirements

3 AFTERMARKET

- Small series
- Flexibility in compound and design selection
- Services for short-notice requirements
- Earliest availability in one day

With Trelleborg's QuickSeal service, manufacturing can be as fast as one day, depending on the material and production method required.



MACHINED SEALS

Machined seals are available as part of Trelleborg's QuickSeal service. Rotationally symmetric profiles can be machined on short-notice in a wide variety of materials.



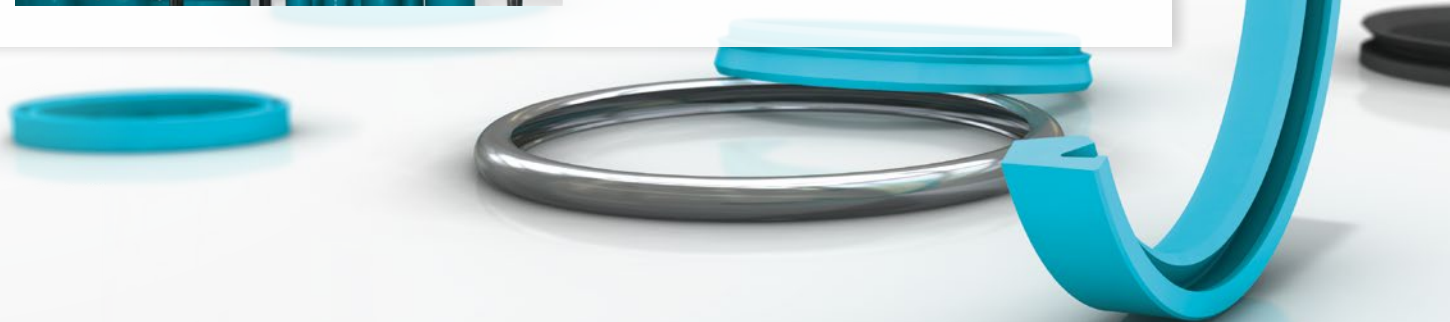
MOLDED SEALS

Trelleborg Sealing Solution provides expedite services for molded seals. This service covers all of your short-term requirements with existing parts – standard or customized products.



VARIETY OF MATERIALS

A wide variety of materials are eligible for expedite manufacturing with QuickSeal. Various semi-finished products are available either in standard or in one of Trelleborg's proprietary materials. Additionally, FDA and NORSOK M-710 approved compounds are in stock.





Digital Tools

ENGINEERING

LOGISTICS

MANUFACTURING

AFTERMARKET

Trelleborg Sealing Solutions is constantly developing innovative new digital tools, apps and services to make the working lives of engineers easier. From product selection and configuration tools to CAD support and engineering calculators, the ever expanding range of digitals tools aims to help customers work smarter rather than harder.



O-RING CALCULATOR [WEBSITE](#) [MOBILE APP](#)

The web-based O-Ring Calculator enables design engineers to quickly calculate all relevant parameters of an O-Ring installation. The mobile app O-Ring Selector provides O-Ring and housing dimensions in both metric and inch, based on ISO and other standards.



INSTALLATION INSTRUCTIONS [MOBILE APP](#) [WEBSITE](#)

This app demonstrates the correct installation techniques for a broad range of seals. It features a combination of film, animation and supporting documentation to give as close an experience to having the expert install the seals right in front of you as possible.



SEALING SOLUTIONS CONFIGURATOR [WEBSITE](#)

This tool provides you with the best suitable sealing solution for your application. Just select the type of industry, the equipment and the application you're working on. Then enter the operating parameters and we'll provide you with recommended sealing solutions.



ISO FITS & TOLERANCES [MOBILE APP](#) [WEBSITE](#)

This app provides the complete ISO fits definition with all relevant values, including the type of fit. Gives tolerances for all commonly used ISO classes. It is much quicker and more convenient than using printed tables.



MECHANICAL ENGINEERING FORMULA CALCULATOR [MOBILE APP](#)

This mobile app features a broad range of commonly used formulas from mathematics, physics and mechanical engineering. With 244 interactive formulas from 16 categories, it is a comprehensive calculation tool for engineers and students of engineering.



AREA & VOLUME CALCULATOR [MOBILE APP](#) [WEBSITE](#)

Area & Volume Calculator contains over 80 different geometrical shapes and calculates area, volume and weight. Weight calculation for volumes is based on a selection of more than 1,500 materials (metals, liquids, gases, etc.).



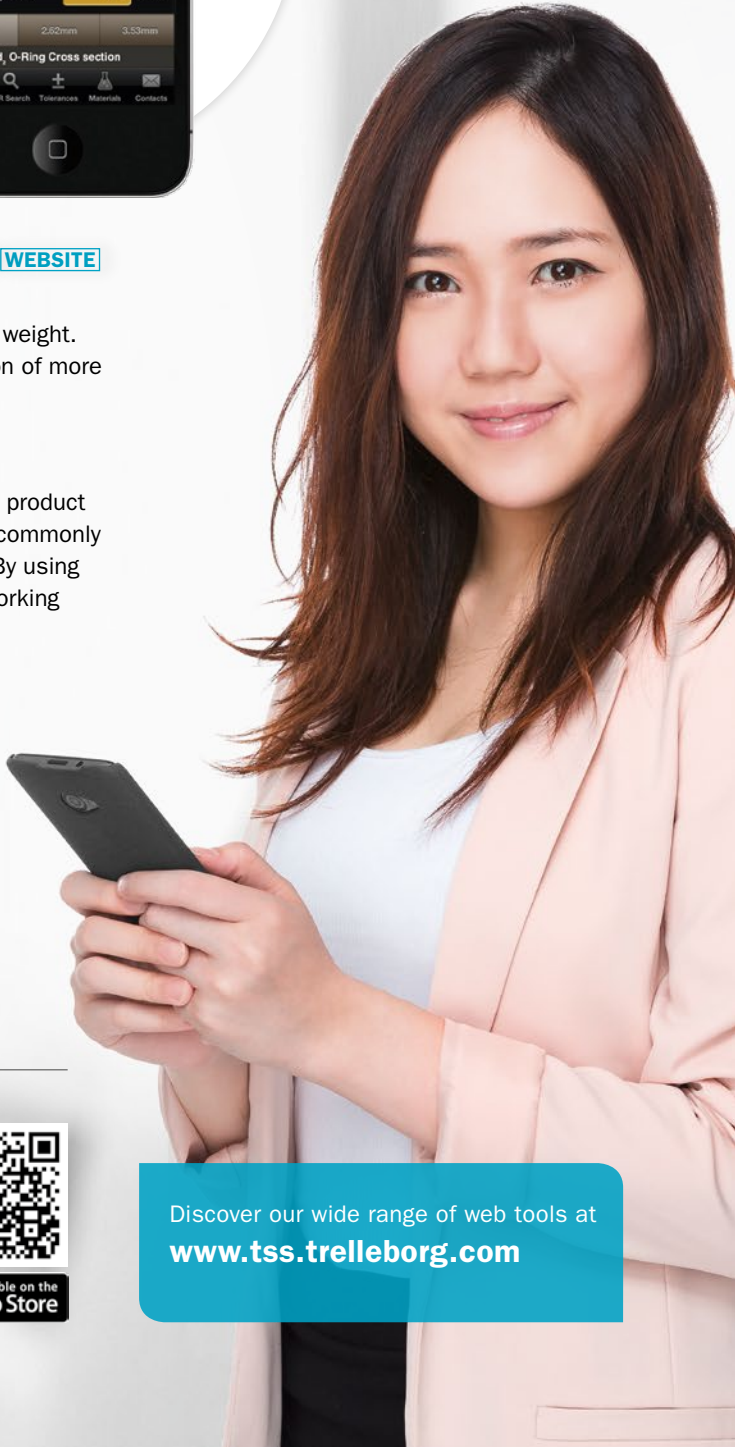
CAD SERVICE [WEBSITE](#)

Provides CAD drawings of the entire standard catalog product portfolio. Drawings are available in 2D and 3D, in all commonly used file formats and for all common CAD systems. By using the CAD service, design engineers save time when working with Trelleborg seals.



ELECTRONIC CATALOG [WEBSITE](#)

The Electronic Catalog provides detailed information on standard products, such as article numbers, dimensions, seal capabilities, installation drawings and product images. Includes related material data and information on stock availability. Has a convenient product comparison function including the type of fit, as well as graphs illustrating classes by bore and shaft.



DISCOVER ALL OUR MOBILE APPS

This is just a selection of the online apps and tools available from Trelleborg Sealing Solutions. Scan the QR code or search for "Trelleborg Sealing Solutions" in your app store.



Discover our wide range of web tools at www.tss.trelleborg.com

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AFRICA, CENTRAL ASIA AND MIDDLE EAST

Details available at www.tss.trelleborg.com



Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative engineered solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has local presence in over 40 countries around the world.

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