Engineered Pumps: Applications such as power generation desalination, petrochemical, cooling water, freshwater and seawater.

Cooling Water Systems: Bespoke design, equipment supply and services required to meet all site operating requirements.

Fluid Power: Designing, manufacturing, commissioning and maintaining application critical hydraulic and lubrication systems.

Spares: OEM manufactured spare parts, supplied and, if required, fitted to suit outage schedules, with warranty options available.

Rotating Equipment Repair & Services: Inspection, REDU®, installation and commissioning for a variety of industrial equipment, either on-site or workshop.

Surface Engineering: Specialists in shot-blasting, Xylan, Epoxy coatings, Everslik and phosphate for foodsafe, marine & subsea applications.

Hydro-Renewables: Pump-as-Turbine installations for mini & micro generation opportunities with bespoke control philosophies as per site requirements.

Mechanical Seals: Designed and fabricated from our HQ. Our seals can be retro-fitted to any pump type, and come fitted to our pumps as standard.
Engineered Pumps

- With over 100 years industry experience, coupled with our own foundry and high tech R&D department, Torishima have the scope to develop and produce a range of pumps for a host of industries.

- Utilising our global manufacturing network, TSSE are a market leading OEM in the high-efficiency pump industry. We supply amongst others, the following crucial global markets:
  - Water & Wastewater, Irrigation & Drainage, Power, Oil & Gas, and Seawater Desalination

- Amongst Torishima’s vast standard range are the following:
  - End-Suction, Double-Suction, Multi-Stage
  - We also supply many specialize designs based on the customer and site requirements, all fitted with our own Mechanical Seals

https://www.torishima.co.jp/en/product/structure/

Product Catalogue:

Rotating Equipment Repair & Services

- Workshop Overhaul & Repair
  - From our European HQ, we routinely perform inspections and overhauls on an extensive range of rotating equipment covering a large range of OEM’s.
  - We also carry out a root cause diagnostic to identify the actual fault and propose a technical solution.

- Condition Monitoring & Dynamic Balancing
  - We believe maintenance strategies should be pro-active rather than reactive, and as a result champion the use of condition monitoring. By regularly recording and analyzing operational data, we can assess the health of your machine and plan a maintenance timeline accordingly.
  - A variety of the latest techniques including; Oil Debris Analysis, Vibration Analysis, Laser Alignment, Thermal Imaging, Thermometric Pump Testing & Dynamic Balancing

https://www.torishimaservice.co.uk/mechanical/default.aspx
Field Service

• Available on a 24hr call out basis to travel as required
• TSSE have a host of highly qualified personnel who have travelled the globe for a variety of industrial tasks.
• We routinely travel for installations, inspections, overhauls, condition monitoring and spares replacements.
• As part of Torishima’s global network, TSSE are responsible for all field service work in Europe, Africa and South America.
• Field Service work can be carried out on a host of rotating equipment, not just Torishima pumps. Our staff are trained and experienced with the kit of a host of OEMs.
• **Re-Engineered Design Upgrade**

• Following a root cause analysis, rather than simply replace components with like-for-like replacements, we implement our REDU process.

• This often causes an improvement in machine efficiency and lifespan as a result of our engineering capability, to both improve upon the existing design and overcome any fault conditions.

• Proven method of reducing OPEX and CAPEX costs
Cooling Water Systems

- TSSE Centre of Excellence specialising in the provision of bespoke Engineered Cooling Water System (CWS) design, equipment supply and services required to meet all Site Operational Requirements
- Industry leading modularised Specification and procurement of equipment working in conjunction with best in class supply chain partners
- Utilisation of latest 3D design software and Design for Manufacture techniques in the provision of plant layout, manufactured components and control philosophy
- Crystallisation of Clients conceptual design in order to provide “Real World” Technological Solutions
- Best in class Project Management from Concept through to Operational Site Commissioning
- TSSE can provide full installation and commissioning support at all stages of a project giving a full through life project support

https://www.torishimaservice.co.uk/cooling_systems/default.aspx

Torishima Service Solutions Europe Ltd.
Surface Engineering & Specialized Coatings

• As leading providers in integrated surface preparation and coatings services, our experience allows us to accurately define a customised solution to best match the customer requirement.

• Within our plethora of highly qualified personnel, we have experience in the following industries;
  • Oil & Gas, Construction, Rail & Transport, Food & Beverage, Water Industry, Ministry of Defence.

• Surface preparation methods we use include;
  • Grit Shot-Blasting, Hand Preparation, Power Tools, Hydro-Blasting & Abrasive Blast Cleaning

• Coating methods we use include;
  • Phosphating, Xylan, Epoxy & Everslik

• Our NACE qualified coating inspectors can provide independent third-party inspections, failure analysis, coatings surveys, consultancy and quality control.

https://www.torishimaservice.co.uk/coatings/default.aspx
Fluid Power

- Our engineering capabilities cover consulting, project management, design, manufacturing, and commissioning of complex hydraulic and control systems, including:
  - Hydraulic Power Units (HPUs)
  - Flushing & Testing Rigs
  - Control Panels
  - Lubrication Systems
- We have a proven track record of delivering high quality hydraulic systems on time and on budget.
- Torishima Fluid Power is registered with the National Fluid Power Centre as an ‘Advisory & Strategic Planning Group’.

https://www.torishimaservice.co.uk/fluid_power/default.aspx
Hydro-Renewables

• TSSE have designed, installed and commissioned several Pump-As-Turbine (PaT) applications for a host of customers in the UK, helping them reduce their carbon footprint.

• TSSE are equipped to carry out an initial feasibility study and carry the project through to final install, generation and a lifetime of operation with innovative financial models to suit the customers needs.

• Bespoke control philosophy created for each site requirement, unique processes require unique solutions.

• Specialising in hydro applications offering attractive payback periods, TSSE can turn previously untapped water power into;
  • Lower energy costs
  • Reduced carbon footprint
Pump Spares

- The spares division is the focal point for the supply of Torishima OEM Spare Parts
- TSSE provide the spares for all Torishima installed equipment within Europe, Africa & Latin America.
- Torishima’s spares parts service is available to meet our customer’s exact quality and certification requirements.
- The Torishima original spare parts service has been designed to compliment and support our highly integrated service capability by allowing us to restore our customer’s equipment back to as new condition.

https://www.torishimaservice.co.uk/pump_spares/default.aspx
Mechanical Seals

- Established in 1949, Torishima have supplied OEMs with seals for decades as both designers and manufacturers from our HQ in Japan

- All of our own range of pumps come with Tori-Seals as standard
  - we understand the crucial relationship between pump and seal, and design accordingly

- Tori-Seals Scope:
  - can be retro-fitted on a built to order basis for any pump.
  - material and design can be improved to better suit the requirement of the application
  - Design conversion from gland packing to a seal
  - Seal repairs and refurbishment

- Tori-Seals Product Catalogue
As all assets will eventually show signs of deterioration, we have developed an Asset Care Program which we tailor uniquely to each customer’s needs based on their existing maintenance strategies.

**Our Asset Care Program**

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**Reactive**
- Run to Failure
  - Repair as needed

**Proactive**
- Preventative Maintenance
  - Simple calendar driven PM tasks
  - Limited use of CMMS

**Predictive Maintenance**
- Active RCM
  - CMMS
  - Condition Monitoring

**High Performance Maintenance**
- Principle Centred Maintenance
  - CBM + RCA
  - Benchmarking
  - Defect Elimination

**Tools and Processes**
- Fire-fighting
- Repair parts & inventory
- Rewards crisis management
- "Forever fixing"

**Types of FEATURES**
- Invasive PMs
- Overhaul driven
- Many work orders
- Fewer crises
- Still fixing

**Recognises value of maintenance**
- Flavour-of-the-day
- Lacks continuous improvement focus

**Strategic focus**
- Eliminate defects
- Sense of ownership
- Maximise reliability
- ‘Fixed forever’
- Rewards proactivity

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Torishima Service Solutions Europe Ltd.
Our Facilities: United Kingdom

• 30 Colliery Rd, Clyde Gateway Business Park, London Rd, Glasgow, G32 8SL
• Unit 5 Berrington Rd, Sydenham Industrial Estate, Royal Leamington Spa, Warwickshire, CV31 1NB
• 4 Admiral Way, Regus House, Doxford International Business Park, Sunderland, Tyne & Wear, SR3 3XW

• To arrange a visit to either facility, please get in contact via our website or the contact us section.
Our Facilities: Clyde Gateway

- 27,500 sq ft.
- 15t Cranage
- Parts Manufacturing
- Pump Packaging & Testing
- API Seals Supply
- Specialist Coatings
- Engineering Design
- Condition Monitoring
- Cooling Water System Skid Fabrication
- Rotating Equipment Overhaul & Upgrade
- To arrange a visit, please get in contact via our website or the contact us section

Torishima Service Solutions Europe Ltd.
Our Facilities: Leamington Spa

- 6,400 sq ft
- Fabrication, assembly and testing
- Hydraulics and lubrication systems
- Engineering design and simulation
- Aftermarket care: service and parts
- Water hydraulics
- Pump Repair

To arrange a visit, please get in contact via our website or the contact us section
Our Facilities: Sunderland

- North East England Sales Office
- Fabrication, assembly and testing
- Hydraulic & Lubrication Systems
- Engineering Design & Simulation
- Aftermarket servicing and parts
- Parts Manufacturing
- Pump Packaging & Testing
- API Seals Supply
- Specialist Coatings
- Engineering Design
- Condition Monitoring
- Cooling Water System Skid Fabrication
- Rotating Equipment Overhaul & Upgrade
- Water Hydraulics
Our Global Network
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