



COMPLETE RANGE OF TRANSFORMER PRODUCTS AND SERVICES



Full lifecycle support from a leader in
energy management solutions

BRUSH Transformer solutions:



Efficient
by design



Bespoke



Asset life
extension



Full lifecycle
support

THE NAME BEHIND THE POWER

Building on our heritage

BRUSH Group has a long and rich history of serving customers across the power management landscape as an OEM of **power distribution** products, systems and solutions, with roots dating back to 1876.

Today, we utilise latest technologies and maximise production techniques to manufacture **products that deliver on performance, reliability, and efficiency – time after time.** Our Transformer range continues to be designed and built in the **UK** by our engineering experts, using quality materials and to our exacting standards.

End-to-end solutions

We provide **agile** and **adaptive** engineering solutions and products, including consultancy services, design and project management as well as **award-winning** product technology, to a wide range of projects through our combined expertise and industry knowledge.

From bespoke design and build, authorising, consultancy, sustainable solutions, fully accredited ICP generation connections, as well as maintenance and retrofits, our end-to-end engineering solutions are efficiently delivered, cost-effective, and support project delivery at every stage.

THE PATH TO A SUSTAINABLE FUTURE

We are **committed** to supporting the global effort for industrial decarbonisation and sustainable development, and have ambitious objectives to achieve our target of **net zero** greenhouse gas emissions by 2050.



The complete solution

We pride ourselves on offering the complete transformer solution. From design to maintenance, we provide a **tailored approach** to fit your specific requirements. Whether your equipment was manufactured by BRUSH or another OEM, our commitment continues with ongoing test and maintenance services from our team of **expert engineers**, fully supporting your transformers throughout their lifecycle.

DESIGN

MANUFACTURE

TEST

MAINTAIN

Safety as standard

The safety of our colleagues, customers and those that we work alongside, is always our first priority. Adopting safe working practices at all times, before work begins our engineers undertake:

- Method statements
- Risk assessments in accordance with ISO 45001 accreditation
- Site quality plans for every site contract



SERVICE 24

Through SERVICE24 our clients have 24/7 access to our team of expert, UK-based, engineers.

Working proactively to find a solution, whether it is sourcing spares from our UK-held stock, or undertaking essential maintenance, our team are on hand to help – 24/7.

Contact the SERVICE24 team:

E: transformerservice@brush.eu

T: +(44) 01509 611411



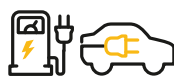
Sectors we support



Infrastructure



Renewables



Transport



Healthcare



Commercial



Industry



Utilities

A proven track record

With a proven track record of designing and manufacturing innovative solutions for the energy landscape, our solutions combine our hard-earned experience with our in-house expertise, enabling us to build an enviable reputation as a **leading manufacturer** of power transformers.

Power transformers

- 6.6 kV, 11kV, 33kV, 66kV and 132kV
- Station service transformers
- Generator transformers
- Auto transformers

Where required, we are also able to supply transformers with alternative cooling systems such as forced air cooled/forced oil cooled and water cooled using heat exchangers.

Special transformers

- Current limiting series reactors
- Rectifier transformers 12, 24 & 36 pulse
- Transformers with dual secondary
- Trackside transformers
- System Inter-tie transformers
- Auto transformers for railway applications

Quality by design

Designed and modelled using latest 3D software and utilising advanced CAD technology, our transformer designs utilise a fully integrated collection of software modules capable of the generation and solution of electrostatic and electromagnetic finite element models. All fabrication designs are subjected to stress analysis and all structural components are stress analysed using ANSYS software. All our transformer tanks are designed to withstand full vacuum.

Fully compliant

We supply transformers with Tier 2 efficiency to DNOs within a framework agreement.

Our transformers are EU directive compliant, aimed at reducing the amount of energy unnecessarily wasted through transformer losses.

Transformers with CER rating are compliant also at intermediate power rating.



Performance tested

Continuing to make **significant investment** in our transformer manufacturing capabilities reflects our commitment to delivering **world-class** energy management solutions, enabling us to meet the growing demand for transformers as the UK accelerates towards net zero.

Both IEC (BSEN) and ENA compliant, our **purpose-built test facility** enables us to offer the most comprehensive suite of routine and type tests for transformers up to 170kV for both new builds and retrofit units.

Our testing capabilities include:

- Winding resistance
- CT tests
- Core and frame insulation
- Capacitance and insulation power factor
- Short-circuit impedance
- Load loss / no-load loss, applied voltage
- NVD bushing capacitance
- Impulse test
- Temperature rise test
- Hot spot measurement
- SFRA
- RSO
- Tank vibrations
- Sound levels



Support when you need it

Focused on maintaining the efficiency of critical infrastructure, our **customised solutions** are designed to meet the specific needs of each project. And, as you would expect from a leader in transformer solutions, our **expert team** are on hand to deliver a comprehensive range of services, including installation, servicing, repair and maintenance, refurbishments, spares, modifications, and replacements.

Installation



From complete installation to overseeing testing and commissioning - our solutions are tailored to your needs. Able to undertake all aspects of equipment installations, our expert team have experience in the supply and installation of power transformers and tapchangers for various applications and locations, including for land-based industrial facilities and within marine, oil and gas (onshore and offshore) sectors.

Commissioning



To complement our market leading position for supplying and installing transformers, we provide highly qualified and competent commissioning engineers who undertake complete electrical testing and commissioning of transformers and ancillary equipment.

OEM spares



We offer an extensive range of spare parts and components for both BRUSH and non-BRUSH transformers and tapchangers including current and discontinued product lines, supported directly by us or through approved third parties.

Relocations



We provide a full turnkey solution for offsite and onsite relocations. Managing the project from start to finish, our experienced engineers are able to reposition the transformer as per site requirements and take care of all associated tasks including oil handling operations, disassembly, lifting operations, logistics, reassembly, and commissioning.



De-tank and inspection

In the event of a faulted or aging transformer, our specialist team conducts low voltage testing, de-tanking, inspection, and investigation services to determine future operational capacity at our state-of-the-art transformer manufacturing facility in Leicestershire. A comprehensive report is compiled, and the asset returned.



Tapchanger retrofits

Retrofitted On-Load Tapchangers (OLTC) offer a solution to faulted or discontinued legacy tapchangers without the cost and lead times of a replacement transformer. Upgrading legacy On-Load Tapchangers to a modern unit can allow for reverse power flow to the network, allowing for legacy transformer compatibility to renewable projects and reducing the carbon footprint of the transformer, ensuring its future service.



Maintenance

Customised support and maintenance programmes including:

On site condition assessment testing – for units that have been in operation for extended periods.

Inspections – a structured and bespoke inspection scheme tailored to meet operational needs and minimise equipment outage. Available for both BRUSH and third-party equipment.

CASE STUDY: 30/60MVA cooler bank retrofit

Overview

With the existing cooler bank displaying severe corrosion as well as leaks and non-operational fans due to the constantly changing environments transformers must endure, the customer had a requirement to find a cost-effective solution that would extend the life of the existing transformer whilst minimising downtime.

Solution

BRUSH Transformers worked with the client to perform a cooler bank retrofit, preventing the release of oil into the environment and ensuring the rated load of the transformer was kept achievable, ultimately avoiding transformer failure. The utilisation of C5-H-M paint and galvanised components ensured that the customer was able to attain the full capacity of the transformer rating along with ensuring future operation.



The results

The solution was delivered by our expert team of engineers who designed, manufactured and performed the retrofit. The customer can now be confident of a reduced risk of further oil leaks and overheating issues, resulting in improved safety and efficiency.



TRUST. WELL EARNED.

More information

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**FOR MORE
INFORMATION**

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