Welcome

To the first edition of our new annual publication

At MAN Energy Solutions, we constantly invest in our products, facilities and services to provide our customers with what they need.

In the UK this has been mirrored by significant investments made over the past year at our Stockport and Colchester factories, in addition to further development of our VP185 engine.

In the following pages you will find examples of exactly what we do. So, if you have a need for Engines or Turbomachinery equipment across a wide spectrum of applications from rail traction to fast ferries, or from oil rigs to power plants, we feel sure MAN Energy Solutions UK will be able to provide you with exactly what you need.

All backed with an unrivalled engineering history spanning more than 250 years.

Specific contact details can be found on each page so please feel free to get in touch.

We look forward to hearing from you.

Richard Guest
Managing Director
MAN Energy Solutions UK Ltd
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MAN Energy Solutions
About the company

Operating across four sites - Aberdeen, Stockport, Colchester and Redhill - MAN Energy Solutions UK Ltd. is a subsidiary of MAN Energy Solutions SE, a global leader in transport-related engineering and part of the worldwide Volkswagen Group of Companies.

MAN Energy Solutions SE is the world market leader for large diesel engines for use in ships and power stations, and is one of the three leading suppliers of turbo machines.

The Company employs around 14,000 staff at more than 100 international sites with its Head Office in Augsburg, Germany.
The name **MAN** is derived from **Maschinenfabrik Augsburg and Nurnberg** - in English, machine factory/engineering works in Augsburg and Nuremburg.

The four UK sites employ some 250 staff and are the local representatives of the MAN PrimeServ network, the worldwide aftersales network operated by our parent company and the original equipment manufacturer of the VP185 high-speed engine. We are able to offer services to customers in the Marine, Power, Oil & Gas, Petro-chemical and Rail Traction markets.

**MAN PrimeServ offers UK support for the entire range of:**
- MAN Energy Solutions brands including:
  - B&W
  - Pielstick
  - Mirrlees Blackstone
  - Paxman
  - Ruston
  and
- the GHH, Borsig, Sulzer Turbo and Blohm & Voss brands of Turbomachinery

Today the brand name MAN and its familiar arch logo can be seen all over the world, whether it be on ocean liners, oil platforms, power plants or railway engines.

And yet, this 21st century global presence all started back in 1893 in a small town in southern Germany when a 35 year-old engineer - Rudolf Diesel - began to develop a revolutionary new engine. As time went on, this new “engine that powered the world” gained enormous popularity, so much so that a second workshop was built in Nuremberg to work alongside the first one in Augsburg.

As the global economy looks to become climate neutral by 2050, MAN not only wants to go along with this transition but is intent on making it a success for their customers with sustainable solutions.

In June 2018 the company underwent both a change of name and realignment: the name MAN Energy Solutions stands for the company’s new strategic and technological dawn and its transformation of energy into concrete benefits, both economic and social.

The new brand is characterised by brighter colours, a lighter font and a visual language with emphasis on collaboration. The new brand claim - “Future in the making” - is inherently forward looking, representing a promise to generate practical benefits and enable continuous development.

Just as Rudolf Diesel did in the 19th century, the company is once more taking on the great challenges of our age as MAN Energy Solutions. This is totally in keeping with the spirit of Rudolf Diesel and his motto: “to want is to be able”.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>1758</td>
<td>Foundation of the St. Antony Ironworks near Osterfeld in Germany - this business will later become the MAN Group</td>
</tr>
<tr>
<td>1832</td>
<td>The Vulcan Foundry opened in Newton-le-Willows - this business will later become Ruston</td>
</tr>
<tr>
<td>1837</td>
<td>The Stamford Engineering Company opened - this business will later become Blackstone</td>
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<tr>
<td>1840</td>
<td>The McOnie Brothers start an engineering company in Glasgow - this business will later become Mirrlees</td>
</tr>
<tr>
<td>1865</td>
<td>Davey, Paxman &amp; Davey start an engineering company in Colchester - this business will later become Paxman</td>
</tr>
<tr>
<td>1893</td>
<td>Rudolf Diesel begins to develop the world’s first Diesel engine - “the engine that powers the world”</td>
</tr>
<tr>
<td>1947</td>
<td>The Ruston RK product range is introduced</td>
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<tr>
<td>1950</td>
<td>The Mirrlees K and Blackstone E-Type product ranges are introduced</td>
</tr>
<tr>
<td>1994</td>
<td>The Paxman VP185 product range is introduced</td>
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<tr>
<td>2000</td>
<td>MAN Diesel acquires Mirrlees Blackstone, Paxman and Ruston Engines</td>
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<tr>
<td>2010</td>
<td>MAN Diesel merges with MAN Turbo to become MAN Diesel &amp; Turbo</td>
</tr>
<tr>
<td>2018</td>
<td>MAN Diesel &amp; Turbo changes its name to become MAN Energy Solutions</td>
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At MAN Energy Solutions UK, we recognise that our employees are our greatest asset. We work hard to help our people reach their potential and are fully committed to developing, rewarding and retaining our workforce.

Across these two pages, you will see just a small section of our current workforce, detailing their individual specialities and each one playing a crucial part in MAN Energy Solutions’ commitment to provide world-class customer service.

Please feel free to contact any of them to discuss any way in which our team can help your team.

**Meet the team**

**Daniel Ludick**  
Daniel is Workshop Supervisor for the Turbo Division of MAN-ES UK based in Stockport and was instrumental in its relocation from Teesside. Establishing this new facility continues to be a welcome challenge for Daniel who started his career as an Apprentice in South Africa and has over 34 years Workshop and Field Service experience. In 1997, he moved to the UK with MAN as a Field Service Engineer, working both on and offshore and has also experienced life down-under with MAN Australia. Although based in Sydney, Daniel had the opportunity to work throughout Australia, China and New Zealand. Now settled back in the UK with his family, Daniel enjoys the diversity, challenges and opportunities his role within the company brings.

*daniel.ludick@man-es.com*

**Ana Mitoi**  
One of the newest members of the UK team, Ana joined MAN Energy Solutions in June 2018 as Head of Health, Safety & Environment, supporting all four locations from a HSE perspective.  

With more than twelve years’ experience in the heavy manufacturing, automotive and aerospace industries, Ana’s role is to develop a uniform HSE standard and Behaviour & Culture Change Program to each of our UK locations. Over the next few months her main priority will be to set strategy, systems and standards that empower employees, customers, contactors and visitors alike and encourage them not to “look the other way” when passing by a HSE issue.

*ana.mitoi@man-es.com*

**Andrea Boscoscuro**  
As one of the Company’s Sales and Contracts Managers, Andrea is dedicated to the UK PrimeServ Turbo Process Industry & Power market and benefits from a global working background.

After starting his professional career in Italy as a Project Engineer for MAN Energy Solutions, he then moved to Germany to work in the headquarters of the Turbo division. Following a return to Italy, he permanently moved to the UK at the beginning 2014 to work in the Oil & Gas market as Projects and Contracts Manager (out of Aberdeen). From living and working in Italy, Germany and the UK with his family, Andrea’s role in the company is diverse and challenging but one that he is facing head-on with great enthusiasm.

*andrea.boscoscuro@man-es.com*

**Ranjana Medagoda**  
Responsible for IT systems and infrastructure at the UK’s four sites, Ranjana (known as Ranj) is MAN-ES UK’s IT Manager.

Alongside her team, her role comprises of supporting existing systems, developing new ideas, meeting the demands of the UK business, whilst adhering with central MAN-ES IT policies to maintain standard platforms and frameworks. Ranj has worked in the IT Industry since graduating with a MSc. in Computer Science. She has been at MAN-ES UK for 22 years and seen the business through many changes. Outside of work, her life revolves around her extensive family but she manages to find time for walking, cooking and reading.

*ranjana.medagoda@man-es.com*

**Our people:**

Across these two pages, you will see just a small section of our current workforce, detailing their individual specialities and each one playing a crucial part in MAN Energy Solutions’ commitment to provide world-class customer service.
Luiz Cunha

Luiz’s journey at MAN started shortly after completing his BBA graduation in 2015 when he worked as a Strategic Buyer for the company’s Truck and Bus division in Brazil.

In 2017 he moved to the UK and joined the Logistics team of MAN Energy Solutions. His function as a Supply Chain Co-ordinator is mainly concerned with the management, development and performance of suppliers to meet the business and customer requirements. Luiz is passionate about music and he enjoys spending his spare time playing his guitar. He also loves to travel with his wife, and, like most Brazilians, likes to play football with friends at the weekends.

luiz.cunha@man-es.com

Jade Bakewell

Jade is the Senior Change Engineer for MAN-ES UK. Working with all four sites, she is responsible for the company’s Business Improvement Projects.

From implementing Visual Management Systems to Business-wide Rebranding, Jade leads and participates in a variety of projects key to enhancing Business Performance in line with the Company Strategy and objectives. She began her career as a Mechanical Engineering Apprentice in the Midlands before progressing to manage Key Customer Accounts & Process Improvements prior to taking her role with MAN-ES UK in 2017. In her spare time, Jade enjoys hosting friends and family at her home but she especially likes to bake celebration cakes and confectionery to share.

jade.bakewell@man-es.com

Phil Channon

Phil first joined the Paxman company in Colchester as an Apprentice in 1976.

His previous roles in the intervening forty-three years have included work in the Research & Development Department, as a Service Engineer, a Special Projects Engineer and as a Service Manager, all of which have provided him with a solid background for his current role as Technical Sales Manager.

Throughout most of these varied roles, extensive travel has been a fundamental part of the job, and whilst Phil admits this is always interesting, it can also have its moments!

When not working, he races sailboats to clear his mind.

phil.channon@man-es.com

Sophie Williamson

One of MAN ES’s current band of Apprentices, Sophie joined MAN in August 2015 as a Craft Apprentice shortly after leaving high school.

She has since attended a local college in Colchester where she achieved Level 3 City & Guilds in Mechanical Engineering and is currently working towards an NVQ work placement. Sophie has spent most of her Apprenticeship in the Overhaul Facility working on a range of engines. As part of her rotations, she has also worked in the Engineering Department producing 3D models and drawings. When she finishes her Craft Apprenticeship in 2019, Sophie would like to continue studying and start her HNC, the first steps on her journey to become a Technical Design Engineer.

sophie.williamson@man-es.com

Jamie Edge

Prior to joining MAN ES in 2018, Jamie spent ten years in the Merchant Navy as an Engineering Officer, three years working on oil tankers and a further seven years on nuclear fuel carriers.

As a member of our highly skilled PrimeServ Field Service engineering team, Jamie’s role is to repair and maintain MAN products both at home and across the world.

Throughout 2019 he plans to increase his product knowledge further with continuous detailed training on the UK range of Legacy engines in addition to spending time in the company’s global Headquarters in Augsburg, Germany.

jamie.edge@man-es.com

Calum Barr

As Regional Manager for Scotland and Asia Pacific, Calum’s responsibilities include contribution to the order intake through sales of spares, service and overhaul for VP185 and UK Legacy engines.

His key accounts include customers from the energy, ferry, naval, power and rail markets. Prior to joining MAN in early 2018, Calum worked in new turbo-compressors package sales and aftermarket for screw compressor packages, lived in New Zealand, was an Engineer Officer in the Royal Navy and he holds a Bachelor of Mechanical Engineering (Honours) degree from the University of Southampton. He works largely from home in Glasgow and in his spare time, he enjoys the eclectic music scene the city has to offer.

calum.barr@man-es.com
What we do:

Marine

MAN system expertise

For decades, MAN has innovated marine technology in fields such as:
- Dual fuel and gas supply
- Propulsion
- Exhaust after-treatment
- Battery hybrid solutions

Building on our unique portfolio of technologies and services, we offer integrated system solutions that raise the efficiency, sustainability and profitability of the marine industries.

MAN Energy Solutions unites comprehensive technologies and competencies under one banner including high and medium speed engines and gensets, injection systems, turbochargers, control and after-treatment systems, as well as complete mechanical and electrical power and propulsion trains.

Contact details:
Mathew Hinton
Sales & Customer Support Director
mathew.hinton@man-es.com
Our expertise enables your visions to succeed

Navy & Coast Guard

LNG

Cruise

Offshore

Tanker

Tugs
What we do:

Sustainable energy solutions

MAN solutions for decarbonisation

MAN promotes sustainable power solutions from a single source, providing extensive experience in working with conventional power plants (including engine combined cycle and combined heat and power) plus the expertise to integrate various technologies to supply efficient energy solutions into an Engineering Procurement & Construction (EPC) scheme.

Hybrid power solutions combine renewable energy sources, thermal power generation (engine, gas or steam turbine based) and energy storage systems in a microgrid. Storing surplus power and utilising it to make wind and solar power systems more reliable.

Power plants sometimes produce surplus energy which cannot be consumed immediately. MAN supports a variety of energy storage technologies, including battery energy storage systems, electrothermal energy storage, liquid air energy storage or compressed air energy storage.

One way to store surplus energy over long periods of time is to convert it into gas or liquid e-fuels. The innovative MAN P2X solution converts electricity from renewables into synthetic fuels. It has a wide range of applications in the mobility, heat and electricity sectors.

Contact details:

Simon Williams
Sales & Business Development Manager
simon.williams@man-es.com
Reliable, compact and environmentally friendly

MAN’s State of the Art Compressor Systems

The oil and gas industry is facing a number of major challenges; operators need to focus on ways of reducing life cycle cost, increasing operating efficiency, and minimising damage to the environment. MAN Energy Solutions has been developing its Turbomachinery range of products and services with this in mind.

One of these is the High-Speed, Oil-Free, Integrated Motor (HOFIM™) Compressor; with its high speed motor directly coupled to the centrifugal compressor(s), running on Active Magnetic Bearings (AMBs), and completely hermetically sealed, this technology meets all of these requirements.

Furthermore, it is ideally suited for upstream offshore projects in remote locations, both subsea and topsides applications.

HOFIM™ has no lube oil system, no seal gas system, no gearbox and no couplings, so it is compact, light, and clean with zero emissions. It is also simple, with far less auxiliary equipment, substantially increasing reliability. Furthermore, this technology is ideal for remote control and monitoring, since it is fully digital. This is an absolute requirement for subsea applications, such as Equinor’s Asgard (in successful 24/7 operation for over 3 years), and a huge benefit for topsides projects such as Aker BP’s Ivar Aasen platform, which will also be fully remotely controlled.

Contact details:
Alastair MacLauchlan
Head of Sales (Turbomachinery)
alastair.maclauchlan@man-es.com
What we do:

The VP185

Proven class-beating performance for marine and rail applications
The MAN VP185 is a compact, medium and high-speed diesel engine which offers proven class-beating performance and reliability.

The water-cooled or jacketed exhaust system helps to maintain a low engine compartment temperature whilst the two-stage turbocharging arrangement provides a wide torque curve.

Benefits at a glance:
- High reliability
- High operating efficiency across the full power range
- High power-to-weight/power density ratios
- Low acoustic and thermal signatures
- Minimal derating to adverse site conditions
- Long periods between maintenance intervals
- Engine rating speed flexibility

General:
- Engine cycle: Four-Stroke
- 12VP185 delivering up to 2,700 kWb
- 18VP185 delivering up to 4,100 kWb
- Bore: 185mm - Stroke: 196mm
- Swept volume per cyl: 5.269dm
What we do: Comprehensive solutions

MAN Spare Parts and Engine Overhauls

**MAN Spare Parts**

PrimeServ maintains a large inventory of parts in our Stockport Warehouse covering engines manufactured since the 1960s which are still providing good service today.

Our service technicians are ready to attend site, solving in-service issues and delivering invaluable technical assistance.

Our Colchester facility is fully-equipped to carry out full or partial engine overhauls backed up by a load test to original build specification. Recent investment at both locations allows us to provide a more efficient overhaul of equipment as part of our service exchange programme, thereby giving a cost effective solution to extend component life.

**Service Agreements**

To fully meet customer demands for trouble-free running, we now offer Long Term Service Agreements whereby the engine(s) and related equipment are looked after under contract for a specific period of time.

These contracts provide peace of mind that the OEM will manage the maintenance, according to an agreed schedule, delivering parts just in time and backed up by technical support, for a fixed monthly fee. Where the equipment is critical to revenue generation, this type of contract has proved extremely popular.
Retrofit and Modernisation Solutions for:

**Marine Engines & Systems**
- Two-stroke
- Four-stroke
- GenSets
- Turbocharger
- Propeller & Aft Ships

**Power Generation**
- Diesel Engines
- Gas & Dual-Fuel
- Steam Turbines
- Gas Turbines
- Turbocharger

**Compressors & Turbines**
- Industrial Compressors
- Steam Turbines & Expanders
- Gas Turbines

Contact details:
**Engine Enquiries**
tim.lewis@man-es.com

**Turbomachinery Enquiries**
derek.wendel@man-es.com
What we do: Service with passion

MAN PrimeServ
MAN PrimeServ offers aftersales support for the family of UK manufactured medium-speed and high-speed four-stroke engines and Turbomachinery.

Our role is to provide spare parts, on-site service and in-factory overhaul for customers who desire optimum performance from their assets.

Genuine OEM spares fitted by professionally trained staff and testing of engines to original specifications provides reassurance for trouble free operation.

**MAN PrimeServ’s aim is to provide:**
- Prompt delivery of high-demand OEM spare parts
- Fast, reliable and competent customer support
- Individually tailored O&M contracts
- Ongoing training and qualification of operators and maintenance staff
- Global service, 24 hours a day, 365 days a year

Contact details:
**Engine Enquiries**
richard.roberts@man-es.com
**Turbomachinery Enquiries**
derek.wendel@man-es.com
What we do: Academy and Training

The Stockport MAN PrimeServ Academy is the product Academy for a range of MAN-ES UK four-stroke engines including K Major, VP185, Ruston RK270 and the Paxman Valenta RP200.

Offering standard and advanced practical and theory courses, the engine hall is fully equipped with replicas of the named engine types along with all the special tools required for servicing. Engine courses are programmed throughout the year, although tailored training can also be offered.

Contact details:
primeserv.academy-sto@man-es.com

MAN’s PrimeServ training service is a valuable investment for your business. It improves the skills of your employees and enhances the performance of your engines by making them run longer, more efficiently and more reliably.
MAN Energy Solutions UK also operates a series of Apprenticeship schemes in order to develop the workforce of the future. If anyone would like more information on these schemes or a copy of our separate 12-page brochure please contact us.

Contact details:
Andrea Haughton
Head of Human Resources
andrea.haughton@man-es.com
What we do: Turbo Machinery

High quality and speed of servicing go hand in hand, which is why MAN Energy Solutions always use genuine spare parts, many of which are held in stock for a fast response.

We also have all the specialist tooling required to ensure that all work is completed as efficiently as possible.

Whether working on site or at our dedicated overhaul facility in Stockport, our technicians cover all aspects of Turbomachinery service and overhaul including:
- Cartridge replacement and overhaul
- Cleaning and balancing
- Measuring and non-destructive testing
- Turbine reblading
- Technical support
- API 687 Phase 1 Inspections
- Seal strip repairs
- Application of coating technology
- Critical equipment storage
- Large scale machining

Contact details:
New Equipment Sales
alastair.maclauchlan@man-es.com
Aftersales Enquiries
derek.wendel@man-es.com
Products and Applications

A wide-ranging product portfolio for various industrial applications from Oil and Gas to Process Industries.

- Upstream (Production)
- Midstream (Transportation)
- Downstream (Processing)
- Industrial Products
- Industrial Gases
- Industrial Power Generation

Products
- Compressors
- Steam Turbines
- Expanders
- Machinery Trains
- Gas Turbines
Where we are:

Worldwide service

We offer retrofitting and upgrade services to bring engines and turbochargers already in service up to the very latest standards of performance and efficiency.

Using the latest digital technology, we enable you to maximize the performance and availability of your MAN equipment by accessing real-time data analysis, remote support and rapid solutions. We also offer an extensive range of training courses at MAN PrimeServ Academies around the world.

Our service does not vary according to location. We know that a vessel may be built in Asia, operated in Europe for ten years and then move to Africa for the next ten years. That does not alter our focus on dedicated training, fast delivery of strategic spare parts, a comprehensive approach, or our tailored maintenance contracts.

For more information please visit www.man-es.com/primeserv
100 Service Centres Worldwide

MAN PrimeServ
We’re full of energy - just like our new name

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https://uk.man-es.com

MAN Energy Solutions Stockport provides Head Office services and full aftermarket support for its range of products in the UK and the necessary assistance (8,360 sq. m. Warehouse, Engine and Turbo Workshops and training Academy) for the Legacy brands of Mirrlees Blackstone, Ruston and Paxman worldwide.

MAN Energy Solutions Colchester is the Company’s overhaul and VP185 new engine build facility. It also provides production and test training for the VP185 engine in conjunction with the Stockport Academy.

MAN Energy Solutions Aberdeen provides a full range of PrimeServ parts and Field Service for MAN Energy Solutions and third party equipment in the UK and Ireland, however largely focused towards the offshore sector of the UK North Sea.

MAN Energy Solutions Redhill (nr. London) location is the New Equipment Sales office for Turbo Products within MAN Energy Solutions UK Ltd. The New Equipment Sales team supports clients during early phases of projects (pre-Feed and Feed) with Turbomachinery selections and budget quotes in the upstream, midstream, downstream and power sectors.

All data provided in this document is non-binding. This data serves informational purposes only and is not guaranteed in any way. Depending on the subsequent specific individual projects, the relevant data may be subject to changes and will be assessed and determined individually for each project. This will depend on the particular characteristics of each individual project, especially specific site and operational conditions.
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