



# Service Solutions

MAN PrimeServ



Turbomachinery &  
Power Generation

# Service with passion



**We're ready to serve you. Armed with decades of experience in servicing turbomachinery around the world, MAN PrimeServ provides comprehensive OEM service solutions for a wide range of industries and applications. We're closer than you think. In more than 100 service centers worldwide, our specialists are ready to supply the right spare parts, reduce downtime through expert maintenance and repairs, and provide comprehensive remote or on-site operational support.**

The goal is straightforward: To keep your machinery up-to-date, and at optimal levels of reliability, availability, and economic efficiency – the foundation for helping you push further towards environmental sustainability and decarbonization. To get there, we support you with a comprehensive service portfolio. Omnicare is our expert one-stop turbomachinery service for streamlining your maintenance operations for MAN and non-MAN equipment. Our latest digital availability solutions combine remote monitoring with live data analysis and rapid response expert assistance for unmatched equipment efficiency and availability. And to make sure that your staff is ready for anything, we offer expert training and share our expertise in a comprehensive MAN PrimeServ Academies curriculum at training locations worldwide.



# Worldwide service

# 100

Service centers worldwide

**We offer upgrade services to bring rotating equipment already in service up to the very latest standards of performance and efficiency.**

Represented in all key markets, with a network of more than 100 service centers, and with skilled field service managers at the ready to provide first-class technical support, MAN PrimeServ is fully primed to provide 24/7 service, wherever you are. Offering reliable technical support when you need it most, in varied industries and applications, our service solutions include OEM spare parts, machinery maintenance and repairs, customized service agreements and individual consulting.

cutting edge digital technology we're able to hike performance and minimize downtimes, while our remote connections enable live data analysis, ensuring quick, effective solutions.

**For more information please visit**  
[www.man-es.com/primeserv](http://www.man-es.com/primeserv)

For existing equipment our holistic modernization solutions keep your turbomachinery up-to-date and at optimal levels of reliability, availability and economic efficiency. Through





# Embracing the future

## Respecting the environment

Caring about the environment is taking care of business. Our service provision is backed by technologies developed to reduce emissions and increase the efficiency of your equipment. We'll implement upgrade solutions that put your operation right where the emissions standards of environmental regulations need you to be.

### The road to decarbonization

We're fully committed to helping reduce the carbon footprint of the industries we serve. All of our future lies in efficient technologies and the responsible use of natural resources. Flexible gas power plants will be needed to complement developing renewable energies, while LNG will become the fuel of the future in the shipping industry. Whatever industry you're in, or whatever equipment you own, we're here to help you down the road to decarbonization.





# Your goals, our service

## Turbomachinery Power Generation

Our premium after-sales service has its priorities straight: we put all our expertise behind making sure that your turbomachinery contributes to the profitability of your business – by always running at peak efficiency, performance and maximum reliability.

We design our service solutions to suit your specific industrial application and provide technical service, individual consulting, operational support, contemporary modernization solutions, and comprehensive service agreements for your industrial compressors, steam turbines and expanders or gas turbines.







# Right part, right time

**Tools and spare parts  
related services**

**MAN PrimeServ OEM turbomachinery spare parts include:**

- **Consumables**  
Spare parts that need to be replaced regularly during routine maintenance work, such as filter elements and gaskets.
- **Security Spare Parts**  
Components required for fast re-commissioning in cases of unit malfunction, such as transmitters, valves and controllers.
- **Capital Spare Parts**  
Major components and modules required to ensure unit availability is quickly restored after maintenance or breakdown, such as rotors, backup machines and gear parts.
- **Service Kits**  
Sets of spare parts logically compiled for performing service tasks such as inspection and assembly work.



# OEM competence


## Spare parts you can trust

**Your MAN turbomachinery plays a key role in making sure you can work at the highest level of efficiency and without interruption. Be good to your machines.**

That means using only spare parts designed and manufactured to the highest OEM standards. It also means having access to these parts in a fashion that effectively supports all your maintenance operations. That's why plant owners worldwide prefer MAN PrimeServ as the single source for the supply of MAN Energy Solutions gas turbine, steam turbine and compressor components. MAN PrimeServ uses the very latest in technology and ongoing materials research to advance parts quality and provide expert repair work and modification.







# Maximizing performance

**Improving and optimizing your turbomachinery**

What's our goal? The same as yours: to keep your turbomachinery working efficiently and at peak performance for as long as possible. To get there, we'll do whatever it takes.

Experts in the MAN PrimeServ global network of service centers cover everything from individual component repairs and refurbishments to full overhauls, testing and inspections, or complex repairs when the unexpected occurs. We'll thoroughly examine all machines and their components to realize the full potential of your compressors and turbines. After performing detailed engineering

studies, we will develop and implement the right strategy to increase efficiency, reduce emissions, improve availability, and extend the service life of your equipment. Our experts are available for in-depth technical consultancy services to provide answers to operational questions and help you examine the economic performance of your processes.



# Case studies

## Chemical industry



Plant location = ●



This project is the first Turn-Key-Overhaul for a major customer with a complete overhaul of a Oberhausen steam turbine. The overhaul was performed in close collaboration between the technical support team in Shanghai and the client. The planning started already one year before the job started.

**Client**  
Chemical company

**Work scope**  
Complete steam turbine overhaul





# Tailor-made maintenance

**Technical support  
and problem solving**

Our tailor-made maintenance concepts give you the very best in technical assistance from experienced engineers who use tried-and-true OEM-standard problem solving methodologies.

Our experts have the support of a global network of OEM specialists that have seen it all, and can handle any technical issue, no matter the scope.

- Maintenance and modernization solutions
- Operational optimizations
- Engineering studies
- Spare parts recommendations
- Root cause analyses

## **Your benefits**

- OEM competence
- Customized services
- Technical expertise
- Comprehensive approach





#### Engineering studies

Our detailed engineering studies help us examine your processes and machinery faster and more effectively in search of improvement potential. In our experience, many production facilities fail to exploit their full potential.

#### The engineering studies at MAN PrimeServ are focused on:

- customer-based technical, commercial and logistics advice
- basic and detailed engineering studies of conversions, updates and implementations
- comprehensive database information and documentation
- extensive expertise in virtually all industrial processes.

#### Optimized processing

As an MAN PrimeServ customer you're assured optimal processing of your service, including the management of environmental regulations and improved on-time spare parts delivery. We are further expanding service-specific procurement and workshop resources and are implementing an independent planning process for fabrication and assembly. Doing business with us adds value to your business.

#### Operational maintenance concepts

We will help you identify maintenance improvement potential and apply the right strategy to generate savings while increasing efficiency. Along with in-depth technical consultancy, we also offer you relevant logistical and commercial support for planned changes, modernization measures and help with current operational questions – all in order to help you improve your budget planning and achieve transparency in your maintenance.



# Reliable, up-to-date and efficient

## Keeping downtime to a minimum

We're focused on helping you achieve the best in cost-effective operation, keeping downtime to a minimum, improving efficiency and reducing running costs, with particular emphasis on emissions and their effective reduction. Our modernization services are key to achieving these goals. MAN PrimeServ experts harness the latest technology and research results to enhance your machinery's capabilities or adapt it to new and changing operational situations. We also offer a guiding hand in re-commissioning existing individual machines or a complete train. If you want to relocate equipment, we can take charge of the entire process or provide consulting services in the event you undertake the relocation yourself.





# Case studies

## Energy industry



Plant location = ●



The customer has a solar thermal power plant near Alicante, Spain. The machine train consists of a HP back pressure turbine (DG063/060), a LP condensing turbine (DK125/350), a RENK transmission and a generator.

During the planned overhaul both turbines were overhauled. Due to the condition of the HP turbine, the damaged parts were sent to the PrimeServ workshop in Oberhausen. In the record lead time of only 14 days all components could be repaired and longer downtimes could be avoided for the customer.

**Client**  
Energy industry

**Work scope**  
Back pressure- and condensing turbines





# Modernize it

## Tailer-made to fit your needs

Tailor-made to fit the requirements of your company, MAN PrimeServ's modernization solutions help improve the functionality and operational safety of your turbomachinery, extending its lifetime through long-term technical support and spare parts availability, essentially enhancing its capabilities, without having to change its configuration.

After a detailed engineering study, we can also redesign or modify existing equipment to adapt its power output and to improve efficiency. To do so, we'll install new parts that are designed to match the new operational requirements. The result: more efficiency, reduced energy consumption and emissions, and better maintenance intervals.

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### Your benefits

- Comprehensive modernization
- Efficiency improvement
- High reliability & availability
- Increased service life



# Agreements that put you in control

**Your turbomachinery  
in good hands**

**MAN PrimeServ offers a wide range of service and spare parts agreements for all your turbomachinery.**

Our service solutions are flexible and designed to be tailored to fit your individual demands and expectations – putting you in full control of your maintenance costs right from the start.

Once your equipment is in the expert hands of MAN PrimeServ you can focus on your core business, knowing that your equipment is in the best care possible.





# Agreements that fit your needs

## From long-term to customized

**Our service agreements are based on a flexible modular concept that allows you to create the agreement that covers everything that's important to you, at a cost that works for you.**

The result is always an agreement that will sustain the performance and reliability of your equipment and lets you see right from the start what you're going to spend on service and maintenance down the road. You determine the scope of services included, how responsibilities and risks are shared, the response times you need, and the contract's duration. With a Long Term Service Agreement (LTSA), MAN PrimeServ enhances its support role in the logistics planning and maintenance of your turbomachinery. These modular total-peace-of-mind agreements may include:

- Scheduled and unscheduled maintenance
- Delivery of parts
- Remote condition monitoring
- 24/7 support

- Operations & maintenance support
- Customer training
- Simplified order processing
- Project management

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#### Your benefits

- Exclusive partnership
- Individual agreements
- Advanced planning of costs
- Complete peace of mind



# Digital efficiency

## Transforming maintenance

Our digital solutions make our maintenance services for reducing downtime and improving efficiency more effective than ever.

Through secure data connections, our systems collect live data from your machines, analyze it, and flag inconsistencies to our technical team specialists. These experts examine the data and use the insights gathered to provide your teams with instant downtime prevention assistance, trouble-shooting, and recommendations for improving efficiency.

The systems and processes give you unprecedented real-time access to our expertise and create efficiencies for everyone – it's better results, faster, with less resources consumed at both ends of the maintenance process.





# Digital service solutions

**PrimeServ Assist**

PrimeServ Assist is the next step in the evolution of secure remote equipment monitoring. We track your machine data in near real-time to improve your equipment's availability, safety and performance.

Using a 24/7 near real-time data stream from your machines, our algorithms scan and analyze your data to detect anomalies that could indicate machinery availability, safety or performance issues. MAN ES experts in Remote Operation Centers monitor, evaluate and support your on-site and office staff with ad-hoc safety and availability notifications, pro-active maintenance and performance optimization advice, and instant technical support.



# Support when you need it

## Your TechLine specialist

You're in a high-stakes business. Chances are that when you need help, you need it right away. Not just any help. You need an experienced trained professional at your side. A specialist who knows your turbomachinery, understands your problem, and doesn't let go until it's solved – a TechLine specialist.

### Skilled experts

Why do you need TechLine? Because you can't afford to lose even an hour of machine uptime. When you're faced with a serious issue that is affecting your productivity, you need the best help possible, and you need it fast. Whatever the issue may be, your TechLine expert has the training, the knowledge and the commitment to get it taken care of. You get answers, you get hands-on problem solving, and you will stay productive.

### Instant support

When you make a TechLine call, your first contact is always with a qualified professional – right from the start. No messages, no tedious issue documentation to be forwarded for a later callback. Your service engineer will get straight down to business and

begin to resolve your issue with you – and if he can't do it by himself, a worldwide team of machine specialists is ready to jump in and help.

### Get TechLine

Invest in some peace of mind. Call your MAN representative to discuss your options and what will work best for you.

Or send us a note via email to [techline@man-es.com](mailto:techline@man-es.com).

If you want to learn more right now, there's more information available online at [www.man-es.com](http://www.man-es.com).

**24/7 TechLine:**  
P + 49 208 692 9000





# Ultimate on-site support

**With you when  
you need us**

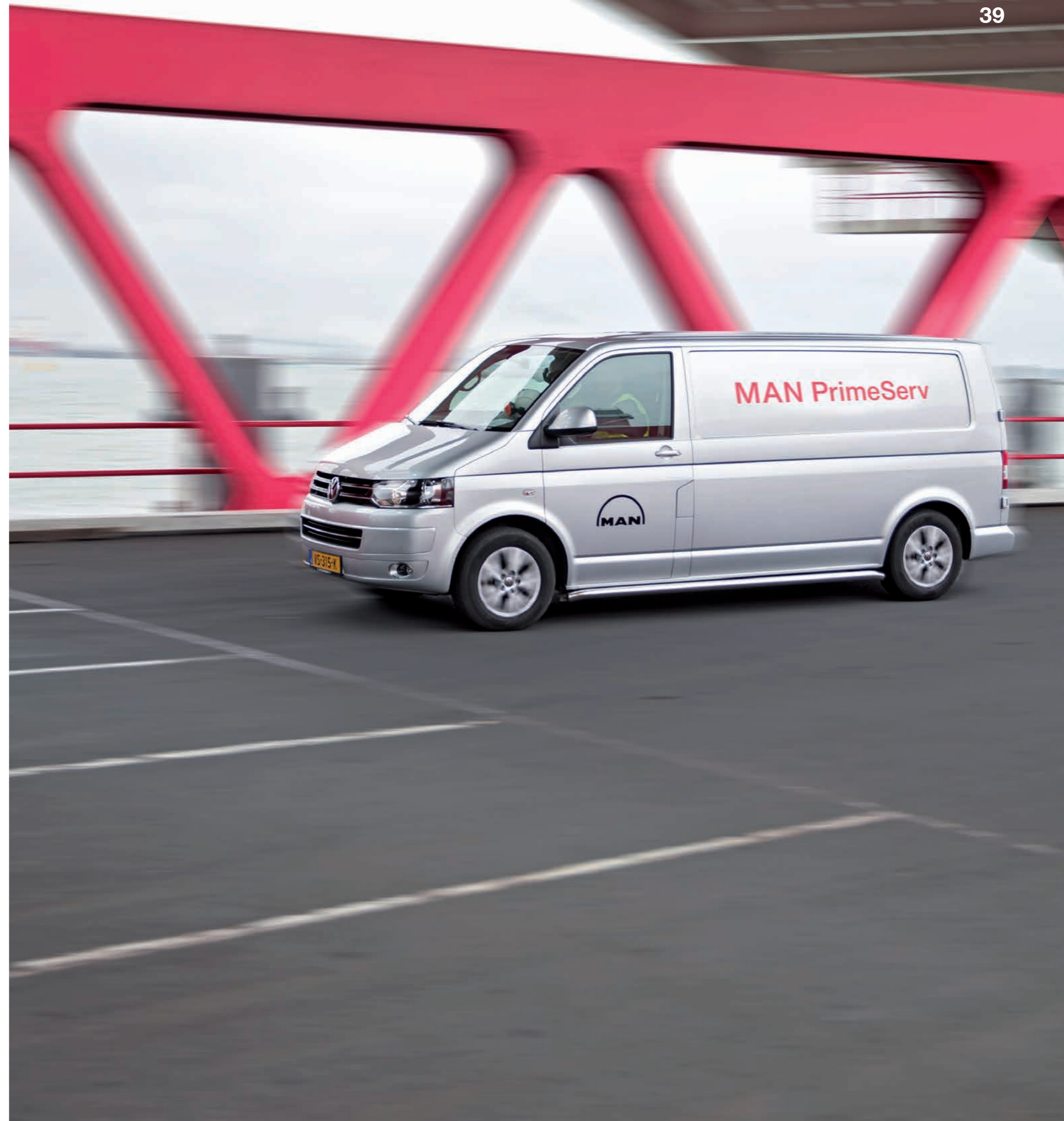
**Whether in need of urgent recovery support or on-site expertise for maintenance, repair, commissioning, overhaul issues, MAN PrimeServ teams will be at your side when you need them most.**

## Up and running again

Offering the best support when the unforeseeable happens, we're on-hand to get you back in control, and fast. Taking full advantage of our worldwide network, quick and effective response from our team delivers anything from technical support to complex repairs in the case of unexpected damage.

As an OEM, no one is better equipped to return your machinery to its original functional capabilities. By renewing, replacing or repairing worn or damaged parts, MAN PrimeServ recovery engineers ensure the quick, efficient

and cost-effective restoration of your operations. Whether through our global field service for on-site support or via our service center network, MAN PrimeServ uses its dedicated processes, equipment and personnel, in conjunction with technical support from our HQ-based engineering departments, to quickly turn breakdowns and downtime into a thing of the past.





# Case studies

## Chemical industry



Plant location = ●



**MAN Energy Solutions managed to defend the top position as a turbomachinery supplier against strong competitors.**

**Client**  
Chemical industry

**Work scope**  
Major overhaul



# We're on our way

## Expert field service

When you need help, you need it now. We can mobilize a team of experts at a moment's notice. For inspections, commissioning, overhauls or repairs, we offer two service provision options – we can either send a full team to take care of everything, or just provide supervisory staff to guide your own employees or subcontractors. When we come with the complete team, you take full advantage of our OEM expertise, competence and resources, including meticulous planning, qualified staff, spare parts, special tools and assembly equipment – it's the ultimate in efficient on-time execution and keeps the cost of downtime to a minimum.

Our field service teams work closely with our remote support specialists to localize, identify and isolate equipment discrepancies, and will quickly restore unit availability. Once you're back to normal, we'll process what we've learned and share our advice on corrective maintenance measure to help you get more out of your machines, reduce downtime and lower costs by operating more efficiently.

- Maintenance & repair for compressors and ancillary systems
- Inspection and revision
- Condition-based repair
- Evaluation of remaining lifetime potential
- Testing facilities
- Accredited material testing laboratory
- Advanced maintenance, repair and analysis technology

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### Your benefits

- Comprehensive support
- Tailor-made concepts
- Advanced technologies
- Global networks



# One-stop service

## PrimeServ Omnicare

**You as an operator need a trusted partner who takes care of all your rotating equipment. We are ready to be that partner.**

### Meet PrimeServ Omnicare – your one-stop service partner

To you, as an MAN Energy Solutions customer, this means that you may use our services for your entire fleet – including turbomachinery or other rotating equipment from any other OEM.

This business is not at all new to the company. MAN Energy Solutions has successfully represented and serviced a variety of its own brands like GHH, Borsig, and Sulzer for decades. In addition to that, MAN Energy

Solutions has proven its multi-vendor service expertise in many projects with excellent references.

Finally, you can profit from the operational and cost benefits of using a single supplier for all the services that help you ensure the availability and efficiency of your entire fleet.





# Case studies

## Energy industry



Plant location = ●



At a power plant in London a generator steam turbine from MAN Energy Solutions is in use.

During an inspection the guide vanes 1-5 showed damages.

MAN Energy Solutions has been qualified for the repair service against strong local competition.

**Client**  
Energy industry

**Work scope**  
Steam turbine





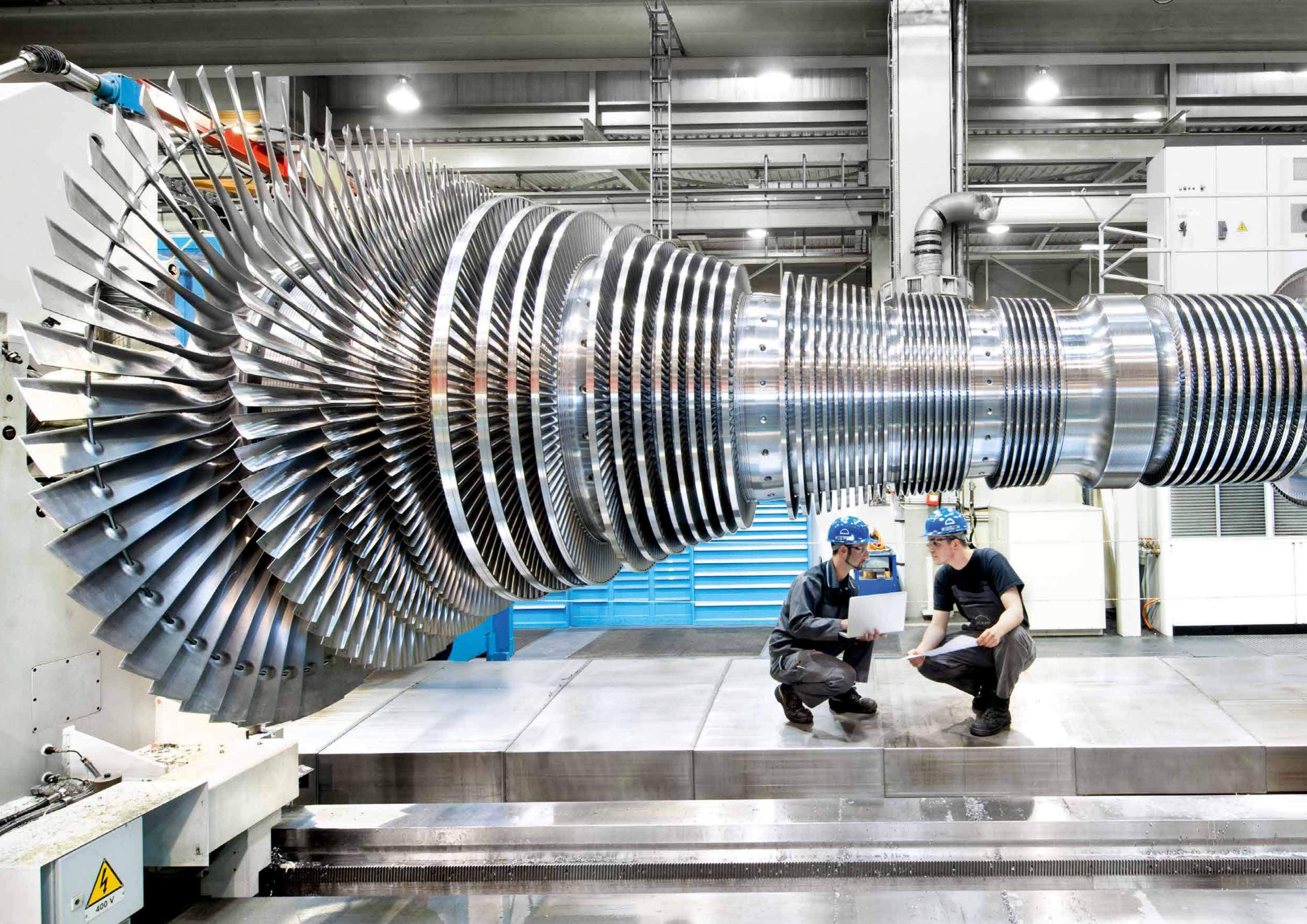
# Professional qualification

**MAN PrimeServ  
academies**

Your business performance is only as good as your people and their qualifications. Properly training your technical personnel is essential to the safe and efficient operation of your business. The PrimeServ Academy Network will equip your staff with rock-solid professional qualifications in machine operation, maintenance, and troubleshooting.

At our 12 academies in Europe, North and South America and Asia, students receive hands-on instruction on full-scale machinery and simulators. We recreate real-life situations so that participants can relate what they learn to their own working environment. The professionals we train come back to you with the best technical know-how available.







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