



Marine and  
power

# Retrofit for the future

MAN PrimeServ

**PrimeServ Turbocharger  
& Exhaust Gas Treatment**  
For cleaner, efficient  
and profitable operation



# Clean and more efficient operation

**The outcome is increased  
performance**

We have a responsibility to be more environmentally aware, but this means your aging engines might not be up to code. Reducing CO<sub>2</sub> emissions not only makes environmental sense, but economic sense too. More efficient technologies mean less waste and more output, less fuel consumption and more savings on your balance sheet.



#### **Fuel savings**

Fuel consumption is possibly one of your biggest expenses. A turbocharger retrofit can increase your engines' efficiency, reducing OPEX.



#### **Performance and efficiency**

The MAN PrimeServ Turbocharger retrofit applies the latest technological developments to engines in service, bringing them up to current standards to meet modern emission level requirements and lower running costs. Older engine models can be upgraded to have their emissions reduced and made compliant to new regulations, using a variety of retrofit and design innovations. Reducing black smoke is another added benefit. Improvements to environmental controls also improve output values and vessel and plant engines can be restored to optimum working condition.



#### **Environmental friendliness**

The stakes are higher than ever before. Optimizing efficiency and reducing emissions, the MAN PrimeServ retrofit offers strong options for achieving greener operation. Therefore, MAN PrimeServ's smart processes and supreme technology are not only a step towards reducing costs but also an investment in the future of the planet.



#### **Lifecycle extension**

A MAN Prime Serv Turbocharger retrofit can enhance engine lifetime, increase the time between overhauls and general reliability, thereby extending the useful life of your engines by reducing wear on all heat-related engine and turbocharger parts.

# Flexible system solutions

**Any engine, any turbo-  
charger, any brand,  
anywhere**

Achieving improved performance – the environmentally conscious way. That's the promise of the MAN PrimeServ Turbocharger retrofit. Our engineers are continuously developing innovative ways to make engines work better, longer and greener. And as global challenges require global solutions MAN PrimeServ retrofit offers a worldwide service to provide the ideal answer, whatever the location or the specific circumstances.



**Power & efficiency**

In a multi-layered effort involving MAN experts from all around the world, we retrofitted turbochargers on the engines at Triumph Power's power plant in Kenya. Improving the site's efficiency, the success of this continent-spanning project shows what is possible when effective communication, cooperation and inspired expertise come together.

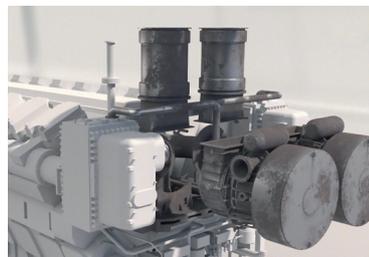
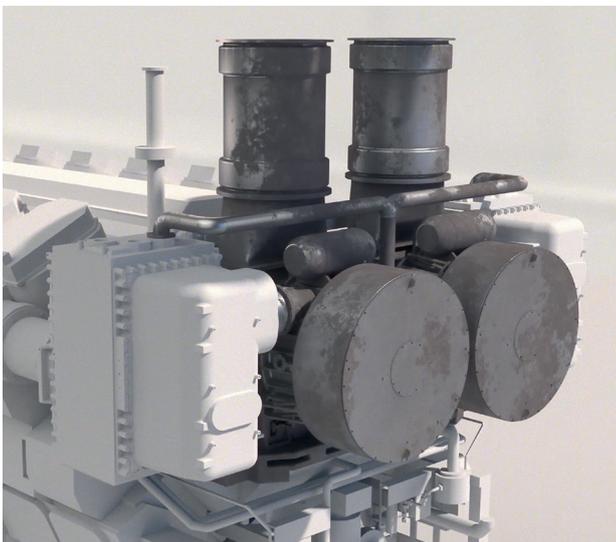


# Turbocharger retrofit in record time

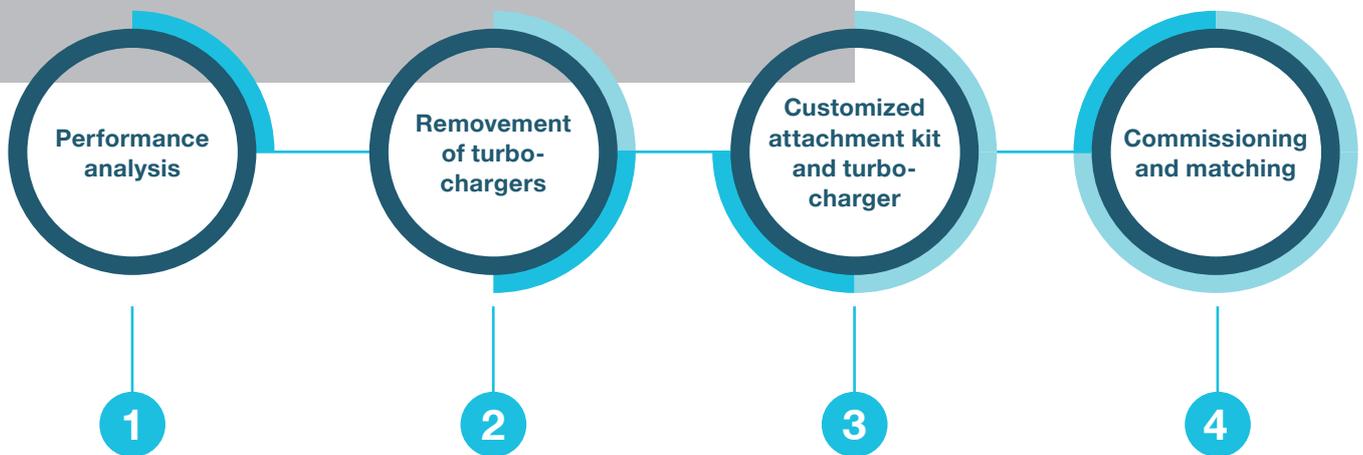
## How it works in practice

The benefits of a retrofit are clear: less downtime, better cost efficiency, and fewer human resources needed to maintain your engines. Retrofitting an existing engine with the latest MAN turbocharger technology is an effective method of extending its useful life while also improving its performance, economics and environmental impact.

## Old



Turbocharger retrofits are available for all turbocharger brands on all kinds of engines. After every customer enquiry, retrofit projects are planned in Germany before a team goes on site.

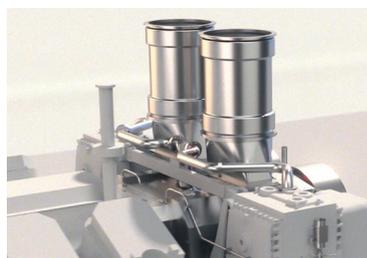


MAN PrimeServ engineers run a geometric and performance analysis of the existing system to develop a customized retrofit solution.

MAN PrimeServ technicians install a tailor-made attachment kit, designed specifically for your engine.

A thermodynamically optimized MAN turbocharger is fitted to your engine.

## New



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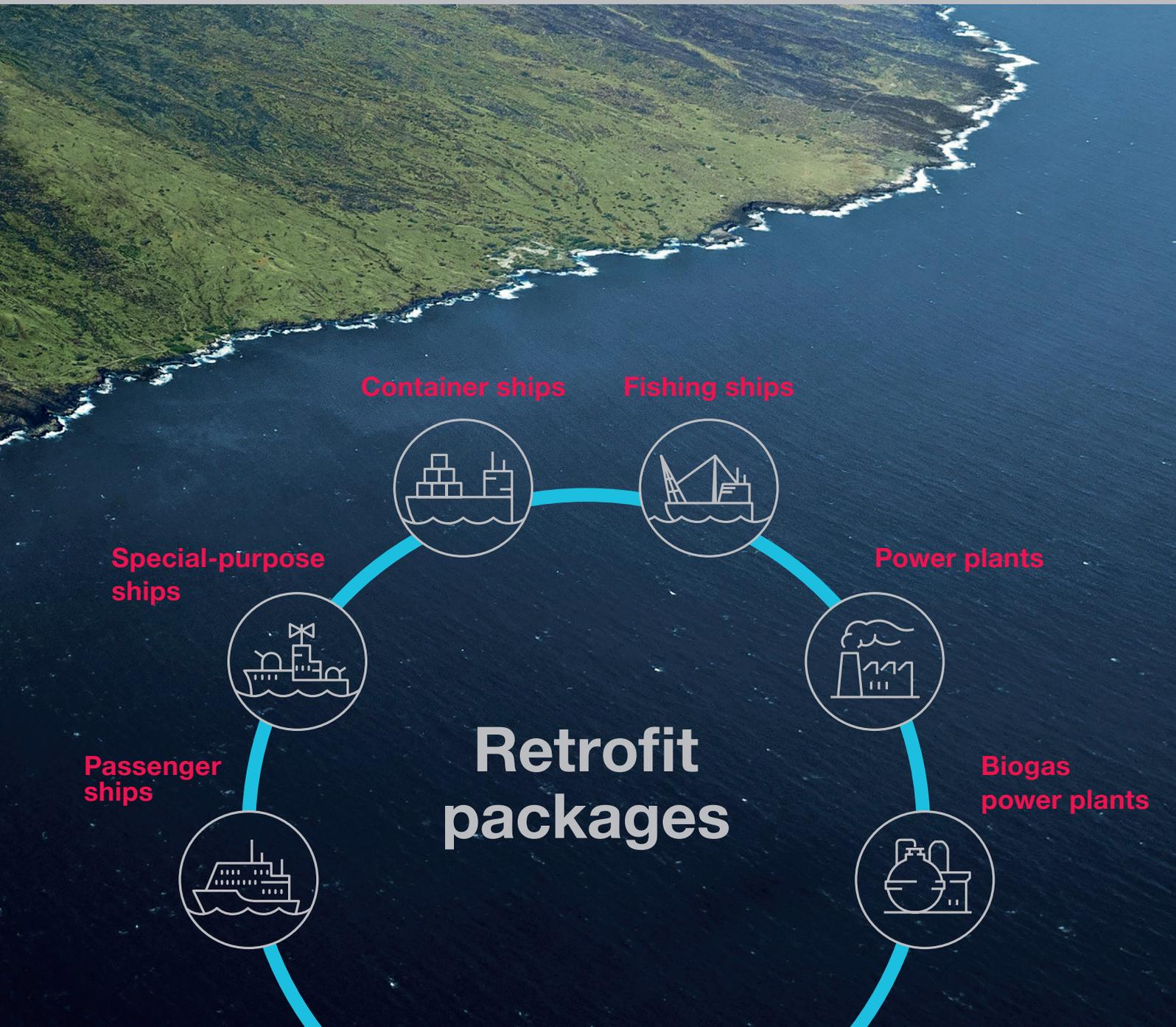
Up to **12% turbocharger efficiency gains**

**ROI in 2 years**

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# Any engine, any brand

## Your machinery in safe hands



Container ships

Fishing ships

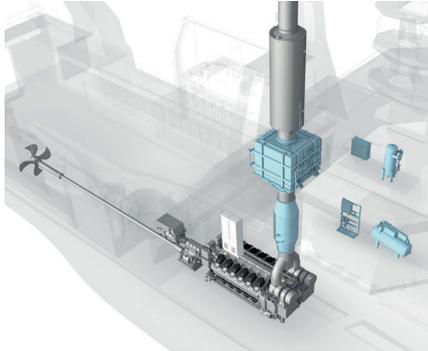
Special-purpose ships

Power plants

Passenger ships

Biogas power plants

### Retrofit packages



### Environmental friendliness

#### SCR

SCR technology (selective catalytic reduction) is capable of achieving NOx reduction rates of up to 90%. By inducing chemical reactions in exhaust gas, harmful substances are converted into ecologically harmless constituents. Available in 14 different sizes, SCR covers MAN's entire four-stroke medium speed range.



### Performance and efficiency

#### TCA

The TCA series redefines the proven technology of the successful NA series. Its integrated design makes installation and maintenance faster and easier than ever before. And with the advanced materials used, lifespan is far longer than ever before.



#### TCT

The TCT turbocharger is the best overall package for two-stroke engines. Shipowners, shipyards and engine builders will reap benefits such as outstanding performance, reduced noise levels and increased efficiency.



#### TCR

The new TCR turbochargers are designed to comply with the demands made on HFO, MDO, biofuel and gas engines. They cover the complete range of possible applications, like propulsion and stationary engines, GenSets as well as traction engines, all subject to the strictest size and weight requirements.

**SCR**  
**TCA**  
**TCT**  
**TCR**

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**MAN PrimeServ**  
offers turbocharger  
retrofits for diesel  
and gas engines from  
all manufacturers.

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# Service is our mission

**Wherever you are,  
whatever the time**

**MAN PrimeServ is the dedicated  
MAN Energy Solutions service brand.**

**Via a network of over 100 service centers world-wide, MAN PrimeServ provides essential services where and when they are needed. At MAN PrimeServ, we understand that different customers need different solutions, tailored to individual requirements. This is more than just delivering best-in-class spare parts, upgrade solutions and technical assistance. It means working as your partner, every single step of the way.**

**Our range of services includes technical support, consulting and OEM spares, as well as maintenance, repair and individualized service plans like our PMC, Propeller Maintenance Concept.**

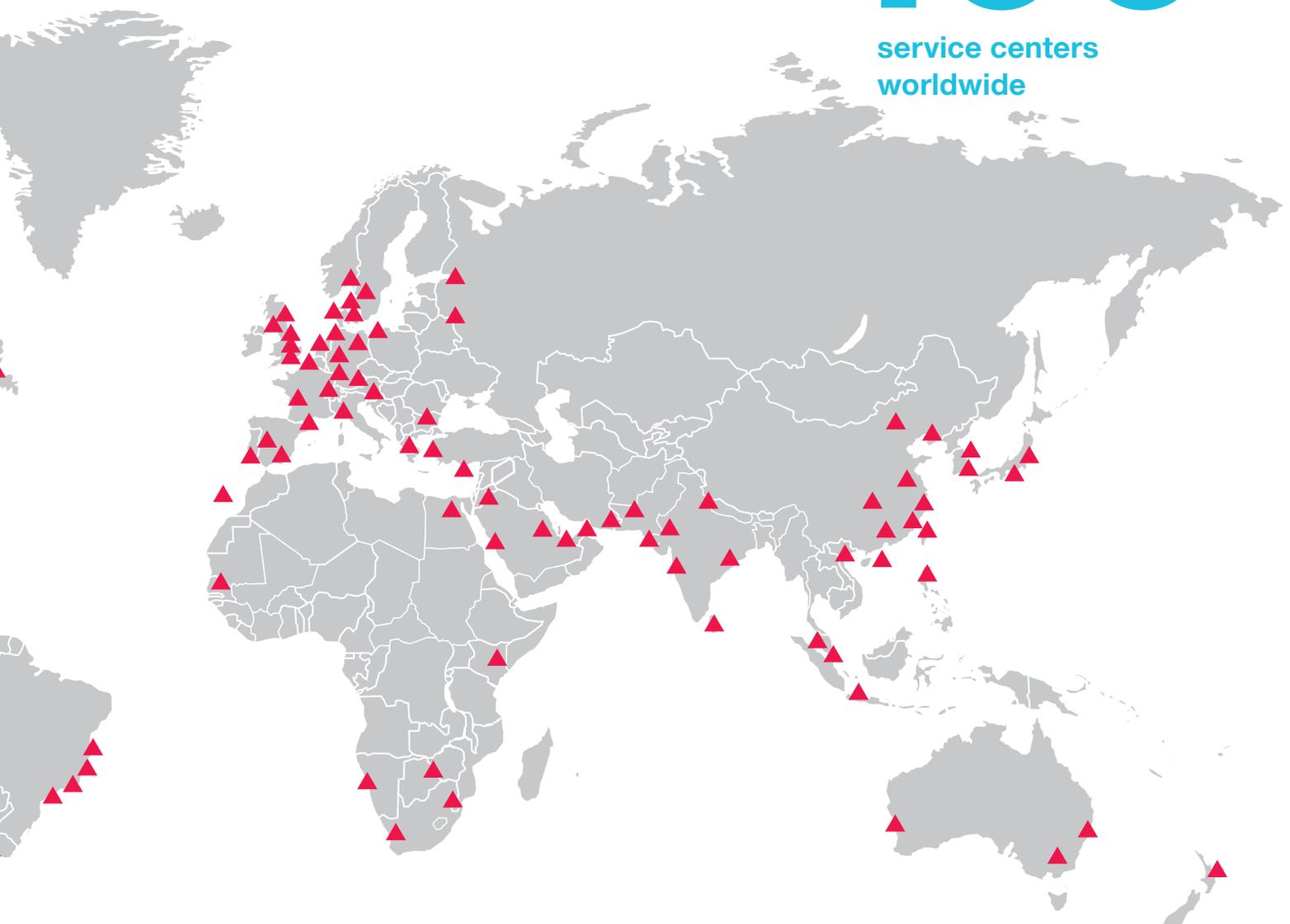
Using the latest digital technology, we enable you to maximize the performance and availability of your MAN equipment by accessing real-time data analysis, remote support and rapid solutions. We also offer an extensive range of training courses at MAN PrimeServ Academies around the world.

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



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Printed in Germany