SCANNA

### Marine solution

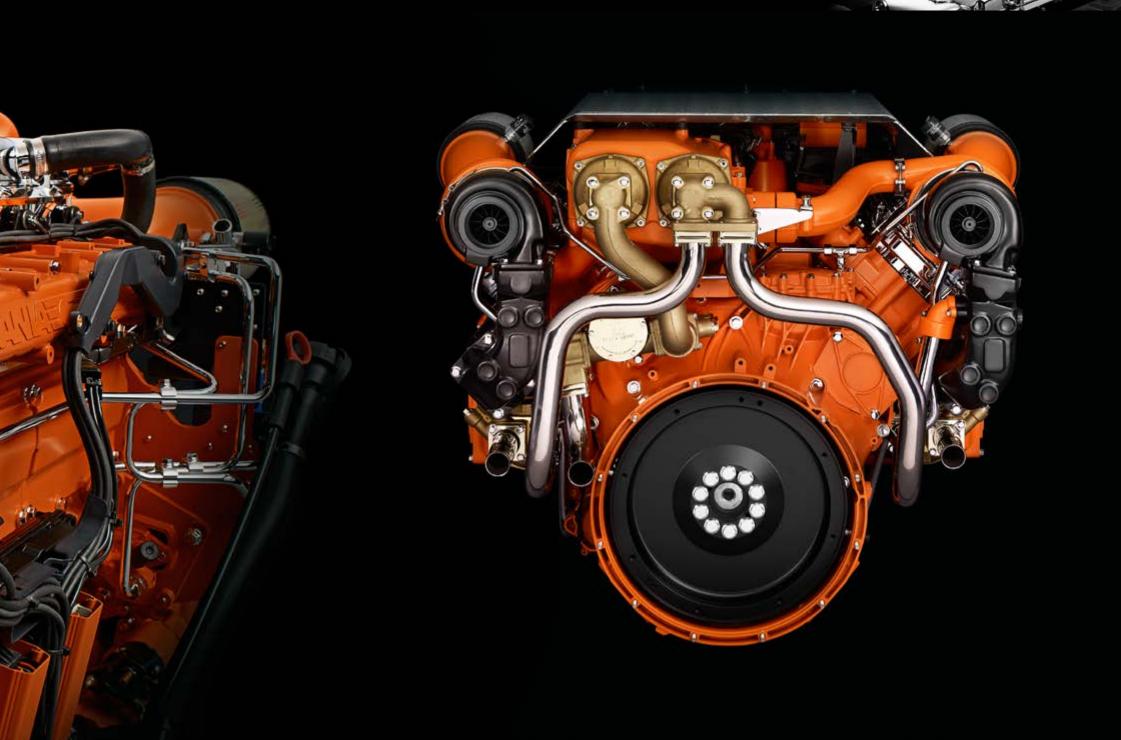
## Power with a purpose.

Power is nothing unless it is accompanied by the corresponding level of dependability, fuel efficiency, emission control and operating economy. Having this in mind, our engineers set out to design the new Scania marine engine platform. The result: a complete range of 9-, 13- and 16-litre benchmark engines for both propulsion and auxiliary applications. Every one of them powered for performance, safety and uptime. Together with optimised transmissions, instrumentation and cooling systems, our new engines are the backbone of the Scania marine solution.

On top of this, professional advice and application support are always part of the deal. Just as overnight spare parts delivery and our world-wide service network.

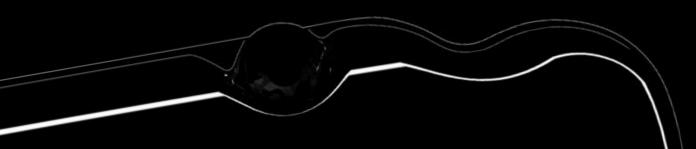
What is your purpose? Cruise forward and start exploring the unlimited possibilities of the Scania marine solution.





# The Scania marine solution. Because perfection pays.

After more than a century's experience of designing and building state-of-theart diesel engines for the toughest applications, we know one thing for certain: everything starts with your needs. Therefore, industry-leading expertise and professional advice is always part of our offer. Starting out from your ambitions, we assist you in creating tailored marine solutions where every detail is made to match your demands of long-term profitability and performance.





## **POWER AT WORK** Propulsion and auxiliary Transmissions Instrumentation **Cooling systems** m (x 2.2.

#### The benefits of completeness.

From the very first drawings and throughout the vessel's service life, Scania stands by your side. Providing committed application support in conjunction with proven Scania quality and performance, we help you safeguard operational efficiency and economy. The concept of a complete solution, along with the smart design and compact dimensions of our new engines, facilitates modern boat design. In addition, enhanced logistics and less administration contribute to higher productivity.

#### Expert tools for perfect customisation.

In the long run, quality always pays. By offering a wide range of ratings regarding engines for propulsion and auxiliary, in combination with numerous options of transmissions, cooling systems, typeapproved instrumentation and additional equipment, there are almost endless possibilities to create optimised solutions. Solutions built from proven Scania technologies and industry-leading quality standards.

#### Your new business platform.

The heart of the Scania marine solution, the 9-, 13- and 16-litre marine engines, handle every challenge with confidence – from propelling fast, planing off-shore SAR crafts, to pushing heavy barges upstream crowded rivers. And naturally, there are plenty of options for heavy-duty auxiliary use. Improved combustion, upgraded engine management system, totally new engine architecture and excellent emission control mean outstanding operating economy. A solid business platform for years to come.



#### Powered for heavy duty work.

When powered by Scania, you can expect instant response, uncompromising torque at low revs and relentless performance at any speed. Allowing high average load factors, the Scania engine is the natural choice for heavy duty operation in rough conditions. If you can't afford to lose time, you've got everything to gain with a Scania engine.

#### Always ready for action.

Scania's outstanding track record of uptime and reliability evolves from proven technologies, state-of-the-art engineering and industryleading product quality. Thanks to extreme durability and long service life, Scania's marine engines contribute to safe operation and low operating costs for demanding applications like patrol crafts, sea rescue vessels, pilot boats and wind farm support vessels.



### Scania power for planing vessels.

It is no secret that saving weight is the straightest way to reduce fuel consumption and increase performance of any planing vessel. Thanks to the unrivalled power-to-weight ratio and compact dimensions of the new Scania marine engines, completely new possibilities for boat designers are created, and new standards are set for demanding operators who seek to boost their operational efficiency and profitability. Scania marine engines – the new light-weight champions of the world.



#### Absolutely adaptable.

Our engines feature a flat power curve before the engine speed reaches its maximum. This makes it easier for boat designers to match engine and propeller for the best operating economy. Repowering is also simplified and in many cases it is even possible to keep the existing transmission and propeller.



#### More power. Less fuel.

LEGACY

Pushing a displacement hull through the water is a tough job, especially when fighting upstream or against the waves. Therefore, every part of the propulsion system must be optimised in order to keep fuel consumption as low as possible. The Scania marine engines are renowned for industry-leading fuel efficiency irrespective of emission standard, and a given choice for anyone who seeks to optimise fuel economy without compromising performance.

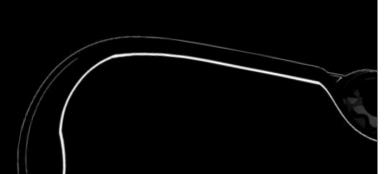
#### Always available.

With proven uptime and dependability, Scania is the given choice for barges, fishing boats, pushers, tugs and similar applications. Providing long service intervals, high parts availability and easy servicing for a single technician, our engines contribute to minimise downtime and lower the costs for service and maintenance. If you know one Scania engine, you know them all. And with a global network of Scania workshops, expert advice and Scania parts are never far away.



#### Ready to take on any challenge.

The outstanding product quality, durability and long service intervals make Scania's engine platform fit for any challenge. And thanks to the modular product system and the adaptability to different demands there is a Scania solution for every work boat application.



### Scania power for displacement vessels.

Scania's solid record of outstanding fuel economy, proven reliability and high uptime vouches for unequalled operating economy for displacement vessels. Furthermore, the prompt engine response and uncompromising low-rev performance enhances acceleration and simplifies manoeuvring. So, if you really want to push the limits of endurance and productivity, go for nothing less than engines from Scania. The masters of operating economy.

## Scania power for auxiliary applications.

Featuring proven reliability, fuel efficiency and operating economy, the new diesel engines from Scania are the ideal power plants for gensets producing both emergency power and harbour electricity. For other heavy-duty auxiliary use, like for instance water pumps, fire fighting equipment and cranes, the Scania marine engines are equally perfect.

Compact design, unlimited adaptability and standard interfaces allow easy installation and seamless integration irrespective of application. Power at work, from day one.

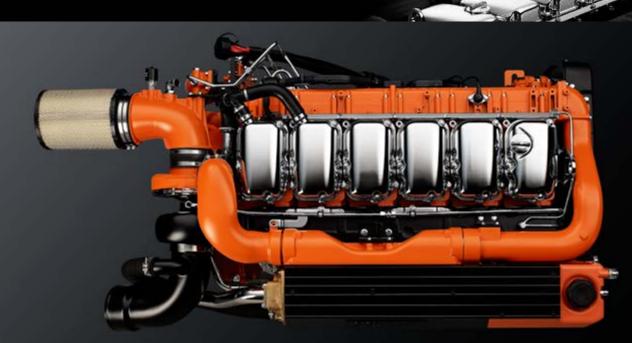


#### Exceptional step-load handling.

Scania-powered emergency sets are always ready to meet the toughest requirements. Whatever the cause of power loss, the Scania unit will respond instantly. Our engines are designed to handle high load variations effectively, with a minimum of recovery time.

#### Optimised solutions for diesel electric propulsion.

In any modern diesel electric propulsion system every single part plays a crucial role. And everything starts with the diesel-fuelled generator engines. With multi-set installations of Scania units you reap all the benefits of our vast experience: a perfectly optimised solution that delivers proven reliability and redundancy together with class-leading environmental performance and fuel economy. On top of this, our modular product system contributes to simplified parts management and low costs for maintenance.





#### Less input. More output.

Irrespective of size and number of cylinders, the new engines from Scania deliver an unparalleled combination of cutting-edge fuel efficiency and extraordinary power resources. The result? More than sufficient power output and low operational costs.



#### Trusted and type approved.

Scania's marine engines have demonstrated their dependability in the harshest environments and on the roughest waters. Our engines, as well as the electrical systems and instrumentation within the Scania marine solution, are all type-approved by the leading classification associations. When choosing Scania, trust and commitment is not only a part of the deal, it is part of the brand.

## A closer look at the Scania marine solution.

Deriving from our vast marine experience and knowledge of your business, the Scania marine solution forms a complete concept of dedicated application support and type-approved products. Providing industry-leading quality all the way, the Scania marine solution offers almost unlimited possibilities to meet the toughest demands of reliability, performance and operating economy.

Propulsion or auxiliary? Fast patrol craft or heavy river barges? Whatever you seek, the answer remains the same. The Scania marine solution.



#### Propulsion

The Scania marine engines for propulsion deliver massive power, impressive torque and outstanding fuel efficiency for dependable and cost-efficient operation.

#### Professional guidance and specifications

Based on close co-operation between Scania's application engineer and the customer, the pre-installation phase paves the way to cost-efficient production and optimised end-products.

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#### Auxiliary

The Scania marine engines for auxiliary applications deliver reliable power supply with outstanding fuel economy and low emissions.

#### Transmission

Being a vital component of the powertrain, an optimised factory-fitted transmission contributes to overall performance and economy. The units, manufactured by ZF and Twin Disc, are carefully matched to our engines.



#### Installation support and manuals

Throughout the building and installation process, Scania provides professional support as well as the installation manuals required to ensure correct configuration and trouble-free installation.

#### Installation review

Thorough inspection and on-water test runs conclude the installation process. When the installation complies with Scania's requirements, the Scania Installation Approval is signed by the Scania representative.

#### World-wide service network

Our global parts logistics network and more than 1,600 service workshops all over the world, vouches for outstanding availability and maximum uptime.



#### Instrumentation

A new generation of modular units for enhanced control. The entire system is type-approved and designed to deliver maximum on-board flexibility and total integration.



#### Ready for installation approval.

The Scania installation approval program is part of and concludes the installation process, including thorough inspection and participation at the sea trial. The purpose of the test runs is to make sure that the entire system performs according to specifications. Engine temperature, load at rated engine speed, boost pressure and boat speed are examples of parameters being measured with diagnostic tools. The results are collected, analysed and commented in the Scania installation report. When necessary Scania will help with suggestions to improve the installation. As soon as the installation complies with Scania's requirements for ideal performance, the installation approval is granted.

#### Scania application support.

When industry-leading experience meets tough customer demands and bright design ideas, great things happen. By taking part in your process as early as possible, the Scania application engineer is able to help you make things right from the beginning, thus contributing to smart solutions, cost-efficient installation and optimised end-products.

#### From design to installation.

Based on analysis of your needs, the Scania engineer suggests an optimised configuration including technical specifications. The final tailored solution, along with technical information, drawings and 3D models are all parts of our pre-installation package. The next stage, the installation, is supported by comprehensive installation manuals and continuous guidance of the Scania application engineer.





#### The ultimate uptime solution.

To most marine professionals, downtime is really bad news. And the longer the standstill, the harder it hits the bottom line. With this in mind, every part of the Scania marine solution is developed to maximise uptime. All the way from our engines and other hardware, to the dedication of the people who are standing by to support you all around the world. Irrespective if you need professional advice, roundthe-clock services or instant delivery of Scania parts.



#### Knowledge on demand.

Taking the right care of machinery and equipment is key to prevent unexpected downtime. Scania's maintenance programs, as well as technical documentation, manuals and education programs, are developed in order to strengthen your competitiveness.

#### Effective parts management.

Scania's parts logistics network is one of the most advanced and reliable in the world. The global system comprises a central hub, satellite warehouses on every continent and, of course, your local Scania representative. Delivering the right part, at the right time and in the right place is essential to maximise your uptime.

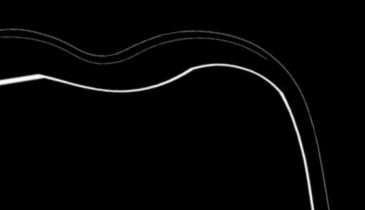
#### World wide service network.

With a network of more than 1,600 service workshops covering most of the world, professional services are never far away. A great share of our authorised workshops are ready and reachable 365 days a year, thus ensuring maximum uptime and excellent operating economy.



#### Instrumentation.

This is our new generation of type approved, modular instrumentation. Thanks to seamless integration with the Scania Engine Management System (EMS) and intuitive interfaces, it simplifies handling and keeping control of vital engine parameters that affects the overall operating economy.

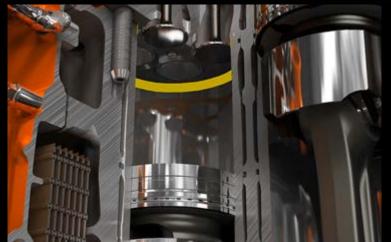


## Pure Scania. Down to the nanometer.

The Scania marine engines are 100 percent designed and built inhouse. Taking advantage of proven technologies as a basis for development, our engineers continue to break new ground while maintaining Scania's industryleading standards of dependability and quality. Today, this evolution has led to a pioneering leap towards cleaner, longer-lasting and more fuel-efficient engines, that deliver the uncompromising power and torque that you have come to expect from Scania.

#### Scania saver ring.

The Scania saver ring is a good example of our in-house developed technologies. Fitted inside the cylinder, the Scania saver ring removes soot and other residue from the upper part of the piston. A unique feature that reduces wear and extends engine life, thus contributing to Scania's renowned dependability and operating economy.



#### Scania centrifugal oil cleaner.

A proven and dependable solution for making oil filtration more effective, thus reducing wear and costs for maintenance. Combined with the recommended Scania oil, it contributes to the outstanding durability and service life that boat owners all over the world have come to associate with Scania.

#### Compact dimensions. Common footprint.

A Scania engine is compact and impressively streamlined by default, which facilitates both design and installation, and makes the engine more accessible for maintenance and repair. Since fittings and "footprint" are practically identical compared to the earlier Scania engine generation, repowering is quite easy.



#### Engineered for uptime.

Scania's unique modular engine design simplifies servicing and contributes to higher parts availability, minimum waste and simplified training of staff. If you know one Scania engine, you know them all.

In addition, a full 500 hours between oil changes and maintenance boosts uptime even further. The bottom line? Less worries and unbeatable operating economy.



#### Controlling fuel economy and emissions.

At Scania, we embrace every effort to reduce the effects on climate and environment. This is why emission control goes hand in hand with reduced fuel consumption without compromising power output and torque. Irrespective of engine size, you can rest assured of that every cubic millimetre of fuel is taken care of in the cleanest and most economical way possible.



## Made for the future. In action today.

With the arrival of our newest member of the family, the compact and responsive Scania 9-litre, and with power ratings peaking at a massive 1,000 hp on the 16-litre engine, the Scania marine engine platform covers a broad range of applications. And thanks to rational production under industry-leading quality standards, the availability of engines and parts is second to none. Starting out from the basic engines, we assist you in customising solutions regarding interfaces and additional equipment in accordance with your special needs and future demands. Tell us your ambitions; we will help you get ahead, and stay ahead.



5 in line

9.3 litres

IMO Tier II

IMO Tier II

199–323 kW

Scania EMS and PDE unit injectors 162–294 kW (220–400 hp)

Complies with EU Stage IIIA,

Complies with EU Stage IIIA\*,

9-litre engines

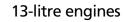
Configuration

Swept volume

Fuel injection control

Output range propulsion

Output range auxiliary



Configuration	6 in line	Configu
Swept volume	12.7 litres	Swept v
Fuel injection control	Scania EMS and PDE unit injectors	Fuel inje
Output range propulsion	184–496 kW (250–650 hp) Complies with US Tier 3, US IMO, CCNR II	Output
	162–249 kW (220–338 hp) Complies with IMO Tier II	
	294–551 kW (400–750 hp) Complies with EU Stage IIIA, US Tier 2, IMO Tier II	
Output range auxiliary	269–426 kW Complies with US Tier 3, US IMO	Output
	323–426 kW Complies with EU Stage IIIA*, US Tier 2, IMO Tier II	



#### 16-litre engines

Configuration	V8
Swept volume	16.4 litres
Fuel injection control	Scania EMS and PDE unit injectors
Output range propulsion	405–662 kW (550–900 hp) Complies with US Tier 3, US IMO, CCNR II
	221–331 kW (300–450 hp) Complies with IMO Tier II
	405–736 kW (550–1000 hp) Complies with EU Stage IIIA*, US Tier 2, IMO Tier II
Output range auxiliary	468–553 kW Complies with US Tier 3, US IMO
	430–596 kW Complies with EU Stage IIIA*, US Tier 2, IMO Tier II

#### \* Applies for propulsion applications according to the E2 test cycle.

Scania pursues an active policy of product development and improvement. For this reason the company reserves the right to change specifications without prior notice. Furthermore, due to national or EU legal requirements, some products and services may not be available in all local markets. For further information in these respects, please contact your local dealer or visit www.scania.com



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