FPT

MARINE

# PLEASURE

Power you trust

FPT

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# PLEASURE

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# ABOUT FPT



FPT is a brand of Iveco Group, dedicated to the design, production, and sale of powertrains and solutions for on- and off-road vehicles, as well as marine and power generation applications.

At FPT, sustainability is a common underlying commitment, through the entire product development and as a corporate approach.

The extensive product offering includes six engine ranges with power outputs from 30 hp to over 1,000 hp, transmissions with torque up to 500 Nm and front and rear axles from 2.45 to 32 tonnes GAW (Gross Axle Weight).

FPT offers the most complete range of natural gas engines for on- and off-road applications on the market, with power outputs ranging from 50 to 520 hp.

A dedicated ePowertrain division is accelerating the path towards net zero mobility with electric drivelines, battery packs, and battery management systems.

This extensive offering and its strong focus on R&D makes FPT a world leader in industrial powertrain solutions.

We are proud to be a Company driven by sustainability and innovation, one which builds Customer advantage through continuous research and improvement and creates value by leveraging this advantage.

# THE WAVE OF INNOVATION

# Superior Technology & Outstanding Advantages

With over 60 years of purpose-built marine heritage, FPT delivers advanced propulsion solutions for vessels worldwide, combining deep engineering expertise with fully integrated in-house development and manufacturing, from base engine to complete and tailored marine applications.

Designed to power boats from 8 to 24 meters, the FPT marine engine line-up ensures reliable performance across both pleasure and commercial applications. Each solution is specifically engineered and configured to meet the requirements of a wide range of vessel types, from recreational boating to light, medium, and heavy-duty operations.

Spanning displacements from 3 to 15.9 liters, the F1, NEF, and CURSOR engine families deliver high torque at low speeds, ensuring outstanding efficiency, durability, and consistent performance in all sea conditions.

Thanks to a class-leading power-to-weight ratio, FPT engines combine superior propulsion performance with a compact and lightweight design, optimizing onboard space, simplifying installation, and reducing overall operating impact.

A strong focus on sustainability further enhances the onboard experience, with reduced emissions, low noise, and minimal vibration ensuring both environmental responsibility and superior comfort at sea.

**Performance**

- Class-leading power-to-weight ratio for superior propulsion efficiency.
- High torque at low speeds for optimal performance.
- Reduced noise and vibration for enhanced onboard comfort.

**Reliability**

- Reliable performance for vessels from 8 to 24 meters, ensuring peace of mind at sea.
- Proven long-block architecture shared with high-volume on-road and off-road applications.
- Trusted worldwide by thousands of customers for maximum uptime.

**Low Operating Costs**

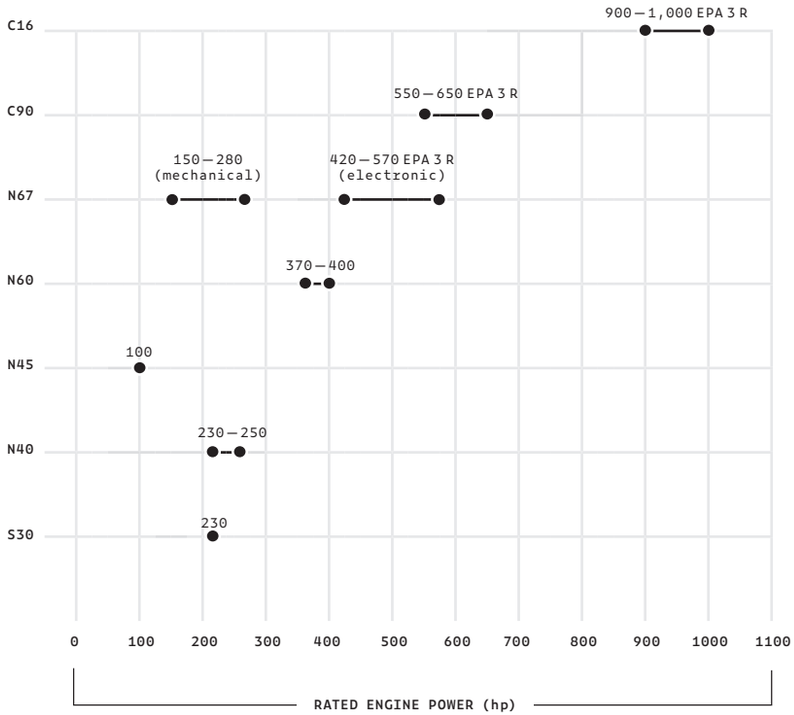
- Optimized fuel efficiency and extended maintenance intervals for reduced Total Cost of Ownership.
- Proactive Assistance and Connected Solutions to maximize uptime and operational efficiency.

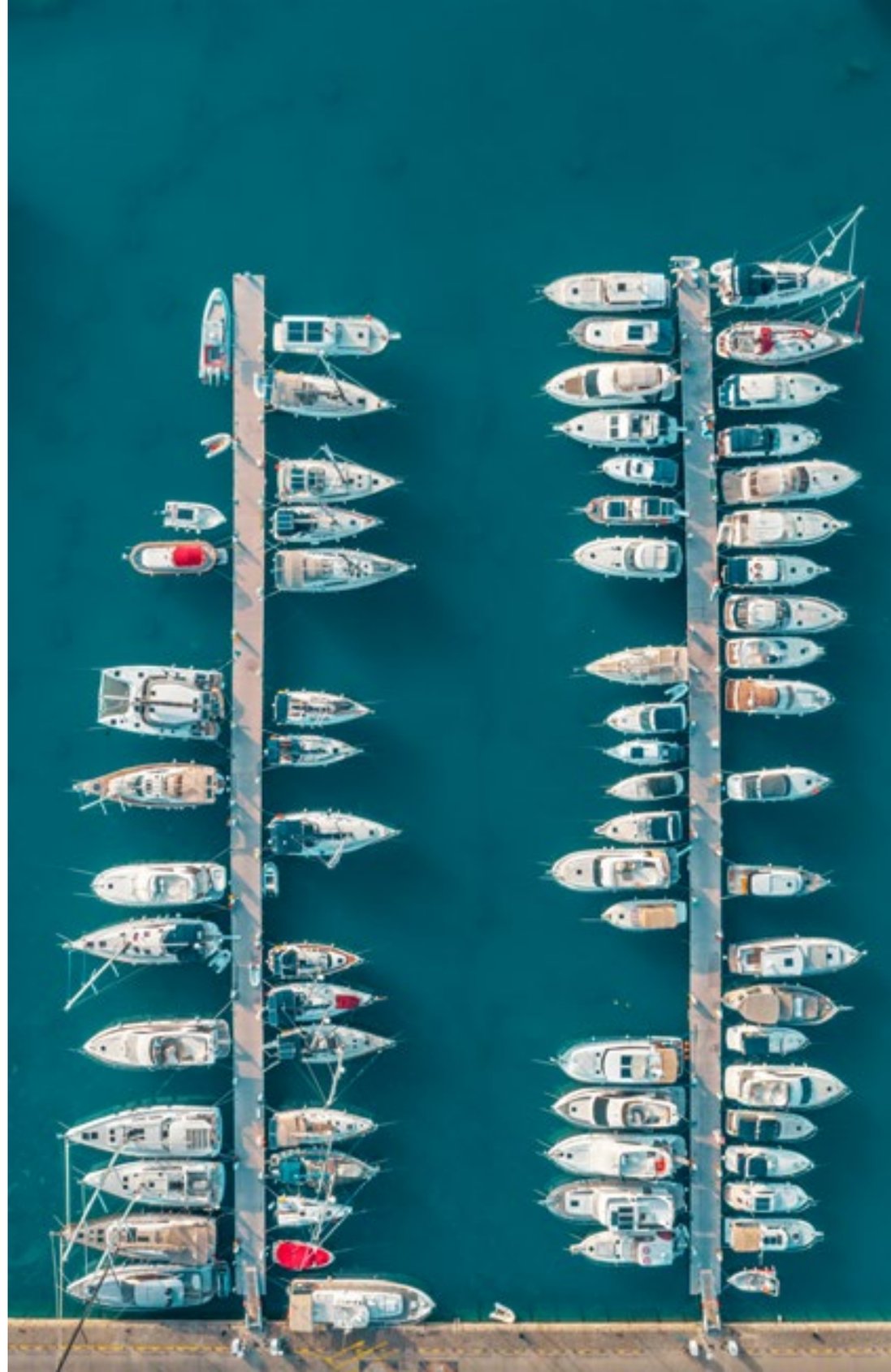
**Low Environmental Impact**

- Advanced injection solutions designed to reduce emissions and fuel consumption.
- Clean operation with compatibility for renewable HVO/XTL fuels, enabling up to 90% $CO_2$ reduction
- IMO Tier III compliance with advanced after-treatment systems.
- Modular hybrid propulsion solutions enabling low- and zero-emission operation.

# Marine Propulsion - Variable Speed Engines Portfolio Overview

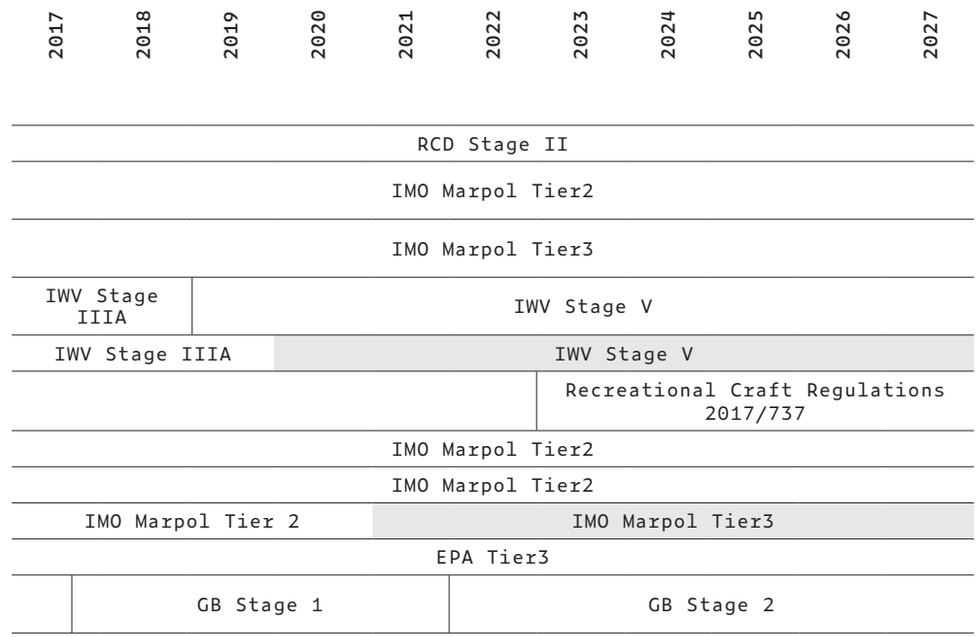
PLEASURE LINE-UP 100-1,000 hp



# Marine Pleasure Emissions Regulations

| Where | Emission Rules |
|---|---|
| EU Coasts | Vessel < 24 m |
| | Vessel ≥ 24 m<br>Not ECA area |
| | Vessel ≥ 24 m<br>ECA area |
| EU Inland Waterways | IWV Power < 300 kW |
| | IWV Power ≥ 300 kW |
| UK (England, Wales, Scotland, Northern Ireland) | UKCA RCR |
| Worldwide NECA (no ECA) | IMO ≥ 130 kW |
| Worldwide ECA areas | Vessel < 24 m |
| | Vessel ≥ 24 m |
| USA (Flagged vessel) | EPA |
| CHINA (Inland waterways and Coastal areas) | GB15097 |




**Emission rules - details:**

**IWV Stage V** = Regulation (EU) 2016/1628
**IMO-Marpol** = ANNEX VI Technical Code 2008
**RCD II** = European Directive 2013/53/EC
**ECA** = IMO-Marpol Emission Controlled Area
**EPA** = 40CFR1042
**GB Stage2** = GB15097:2016
= Aftertreatment system (ATS) required

The International Maritime Organization (IMO) regulates exhaust emissions for diesel engines above 130kW (174 hp), with an exemption for engines used exclusively in emergency applications. The IMO Tier III regulation applies within NOx Emission Control Areas and is effective for vessels built after January 1, 2016, in North America and the US Caribbean Sea.

The Nonroad Mobile Machinery Directive rules exhaust emissions from diesel engines installed on inland waterway vessels operating in the European Union (EU). The Recreational Craft Directive regulates noise and exhaust emissions from propulsion engines on recreational craft operating within the EU.

The United States Environmental Protection Agency (EPA) regulates exhaust emissions from diesel engines installed on marine vessels flagged or registered in the United States.

In the People's Republic of China, the GB15097 National Standard aims to prevent and control air pollution from marine engines, thereby improving ambient air quality. It applies to marine engines installed on inland waterway vessels, coasters, sea-river-through ships, channel ships, and fishing boats.

The Recreational Craft Regulations (RCR) 2017/737 are UK laws that establish essential requirements for products before they can be placed on or put into service on the UK market, ensuring their safety. These regulations apply to recreational craft, personal watercraft, certain engines, and specified components.

The GB Type Approval Scheme is the automotive regulatory scheme applicable to manufacturers intending to market vehicles and components in Great Britain. It sets safety and environmental standards for new vehicles, parts, and equipment. This scheme is based on the retained EU legislation as of December 31, 2020, and subsequent UK legislation that amends or supplements the retained EU legislation.

# Marine Rating Classification

## Full load reference conditions

| | |
|---|---|
| **Reference** | **ISO 8665** |
| Ambient pressure (kPA): | 100 |
| Air inlet temperature (°C): | 25 |
| Relative humidity (%): | 30 |
| Fuel density (kg/dm³): | 0.835 |
| Fuel calorific value (kJ/kg): | 42700 |
| Fuel temperature (°C): | 40 |

## Variable speed Rating class

| | | Definition |
|---|---|---|
| A1 | Short range fast pleasure service | Limited to 10% of time<br>Cruising speed at engine rpm <90% of calibration rated speed<br>300 h/y |
| A2/B1 | Long range pleasure/commercial service | Limited to 10% of time<br>Cruising speed at engine rpm <90% of calibration rated speed<br>1000 h/y |
| B | Light duty | Limited to 10% of time<br>Cruising speed at engine rpm <90% of calibration rated speed<br>1500 h/y |
| C | Medium duty | Limited to 25% of time<br>Cruising speed at engine rpm <90% of calibration rated speed<br>3000 h/y |
| D | Heavy duty | up to 100% of time<br>unlimited h/y |

FPT Marine Pleasure Variable speed propulsion engines

# VARIABLE SPEED PROPULSION ENGINES

# Engines Specifications

| Engine model | Rating | hp | kW | rpm | Dimensions* (L**xWxH) (mm) | Dry Weight (kg) |
|---|---|---|---|---|---|---|
| S30 230 E | A1 | 230 | 169 | 4,000 | 780 x 776 x 755 | 330 |
| N40 250 E | A1 | 250 | 184 | 2,800 | 834 x 708 x 772 | 490 |
| N40 250 E | A2 | 230 | 169 | 2,800 | 834 x 708 x 772 | 490 |
| N45 100 | A1 | 100 | 74 | 2,800 | 811 x 700 x 836 | 450 |
| N60 400 E | A1 | 400 | 294 | 3,000 | 1,089 x 726 x 789 | 595 |
| N60 400 E | A2 | 370 | 272 | 3,000 | 1,089 x 726 x 789 | 595 |
| N67 150 | A1 | 150 | 110 | 2,800 | 1,052 x 705 x 910 | 530 |
| N67 220 | A1 | 220 | 162 | 2,800 | 1,072 x 749 x 800 | 605 |
| N67 280 | A1 | 280 | 206 | 2,800 | 1,072 x 749 x 800 | 605 |
| N67 450 N | A1 | 450 | 331 | 3,000 | 1,088 x 717 x 789 | 600 |
| N67 450 N | A2 | 420 | 309 | 3,000 | 1,088 x 717 x 789 | 600 |
| N67 550 | A1 | 550 | 404 | 3,200 | 1,089 x 828 x 824 | 721 |
| N67 550 | A2 | 500 | 368 | 3,200 | 1,089 x 828 x 824 | 721 |
| N67 570 EVO | A1 | 570 | 419 | 3,000 | 1,089 x 828 x 805 | 721 |
| N67 570 EV0 | A1 | 550 | 404 | 3,000 | 1,089 x 828 x 805 | 721 |
| N67 570 EV0 | A2 | 530 | 390 | 3,000 | 1,089 x 828 x 805 | 721 |
| C90 620 E | A1 | 620 | 456 | 2,530 | 1,312 x 863 x 973 | 940 |
| C90 620 E | A2 | 580 | 426 | 2,530 | 1,312 x 863 x 973 | 940 |
| C90 620 E | A2 | 550 | 404 | 2,530 | 1,312 x 863 x 973 | 940 |
| C90 650 E | A1 | 650 | 478 | 2,530 | 1,312 x 863 x 973 | 940 |
| C90 650 E | A2 | 605 | 445 | 2,530 | 1,312 x 863 x 973 | 940 |
| C90 650 EVO | A1 | 650 | 478 | 2,530 | 1,226 x 899 x 1,009 | 1,014 |
| C90 650 EVO | A2 | 625 | 460 | 2,530 | 1,226 x 899 x 1,009 | 1,014 |
| C16 1000 | A2 | 1,000 | 735 | 2,300 | 1,470 x 1,166 x 1,169 | 1,640 |
| C16 1000 | A2 | 940 | 691 | 2,450 | 1,470 x 1,166 x 1,169 | 1,640 |
| C16 1000 | B | 900 | 662 | 2,300 | 1,470 x 1,166 x 1,169 | 1,640 |

* Dimensions can be changed according to engine options.
** length at flywheel.

# THE F1 SERIES

**Engine model**
S30 (4 cyl., 3 L)

**Power range**
230 hp
169 kW



## Key Advantages

### Reliability

- Improved reliability derived from F1C engine applied many on road light commercial vehicles.
- Best-in-class maintenance intervals 600 hours.

### Versatility

- Wide range of accessories and options available.
- Sterndrive Bravo X available as an option.

### Lightness and Compactness

- High compactness, useful to fit in the tightest engine rooms.

### Efficiency

- High engine efficiency, vibrations and noise reduction thanks to innovative technologies and production processes.

### Emissions Standards

- Type approvals available.
- Compatibility with XTL / HVO fuels (EN 15940).

# S30 230 E

| | |
|---|---|
| Arrangement: | 4 Cyl. in line |
| Total Displacement (L): | 3.0 |
| Maximum Power (kW (hp) @ rpm): | 169 (230) @ 4,000 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | ($L^2$xWxH) 780 x 776 x 755 mm |
| Dry Weight | 330 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II |
|---|---|---|---|---|---|---|
| A1 | 169 | 230 | 4,000 | 259 | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail

# THE NEF SERIES


**Engine model**
N40 (4 cyl., 3.9 L)
N45 (4 cyl., 4.5 L)
N60 (6 cyl, 5.9 L)
N67 (6 cyl., 6.7 L)

**Power range**
From 100 to 570 hp
From 74 to 419 kW

**Peak Torque**
Up to 1,580 Nm



## Key Advantages

**Performance**

- N67 best-in-class power density with the minimum fuel consumption and exhaust gas emission.
- N67 torque fast response.

**Efficiency**

- Best-in-class fuel consumption.
- High engine efficiency, vibrations and noise reduction thanks to innovative technologies and production processes.

**Emissions Standards**

- Type approvals available.
- Improved environmental care complying with the most stringent emissions regulations.
- Compatibility with XTL / HVO fuels (EN 15940) – for electronic engines only.

**Reliability**

- Best-in-class maintenance intervals up to 600 hours.
- Proven reliability given by base engine, used in hundreds of thousands of on-road and off-road applications installed annually.
- Both base engine and marine dressing are made by FPT.
- Reduced maintenance and operating costs.

**Versatility**

- Wide range of accessories and options available.
- Available in heat exchanger and keel cooled configurations.
- Flexibility of use for various marine applications.
- Available with mechanical direct injection or electronic common rail version.

**Lightness and Compactness**

- Exceptional power output while maintaining a remarkably compact size.

# N40 250 E

| | |
|---|---|
| Arrangement: | 4 Cyl. in line |
| Total Displacement (L): | 3.9 |
| Maximum Power (kW (hp) @ rpm): | 184 (250) @ 2,800 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L**xWxH) 834 x 708 x 772 mm |
| Dry Weight | 490 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II |
|---|---|---|---|---|---|---|
| A1 | 184 | 250 | 2,800 | 219 | ● | ● |
| A2 | 169 | 230 | 2,800 | 217 | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail



# N45 100

| | |
|---|---|
| Arrangement: | 4 Cyl. in line |
| Total Displacement (L): | 4.5 |
| Maximum Power (kW (hp) @ rpm): | 74 (100) @ 2,800 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | NA |
| Valves per cylinder: | 2 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Mechanical |
| Injection System: | M |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 811 x 700 x 836 mm |
| Dry Weight | 450 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II |
|---|---|---|---|---|---|
| A1 | 74 | 100 | 2,800 | 260 | exempted |

**Air Handling**
NA Naturally Aspirated

**Injection System**
M Mechanical

# N60 400 E

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 5.9 |
| Maximum Power (kW (hp) @ rpm): | 294 (400) @ 3,000 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,089 x 726 x 789 mm |
| Dry Weight | 595 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II |
|---|---|---|---|---|---|---|
| A1 | 294 | 400 | 3,000 | 231 | ● | ● |
| A2 | 272 | 370 | 3,000 | 227 | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail



# N67 150

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 6.7 |
| Maximum Power (kW (hp) @ rpm): | 110 (150) @ 2,800 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | NA |
| Valves per cylinder: | 2 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Mechanical |
| Injection System: | M |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,052 x 705 x 910 mm |
| Dry Weight | 530 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II |
|---|---|---|---|---|---|
| A1 | 110 | 150 | 2,800 | 255 | exempted |

**Air Handling**
NA Naturally Aspirated

**Injection System**
M Mechanical

# N67 220

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 6.7 |
| Maximum Power (kW (hp) @ rpm): | 162 (220) @ 2,800 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TC |
| Valves per cylinder: | 2 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Mechanical |
| Injection System: | M |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,072 x 749 x 800 mm |
| Dry Weight | 605 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) |
|---|---|---|---|---|
| A1 | 162 | 220 | 2,800 | 241 |

**Air Handling**
TC Turbocharged

**Injection System**
M Mechanical



# N67 280

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 6.7 |
| Maximum Power (kW (hp) @ rpm): | 206 (280) @ 2,800 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 2 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Mechanical |
| Injection System: | M |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,072 x 749 x 800 mm |
| Dry Weight | 605 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II |
|---|---|---|---|---|---|
| A1 | 206 | 280 | 2,800 | 240 | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
M Mechanical

# N67 450 N

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 6.7 |
| Maximum Power (kW (hp) @ rpm): | 331 (450) @ 3,000 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,088 x 717 x 789 mm |
| Dry Weight | 600 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II | EPA Tier 3 Recreational | China GB II (GB15097-2016) |
|---|---|---|---|---|---|---|---|---|
| A1 | 331 | 450 | 3,000 | 229 | ● | ● | ● | – |
| A2 | 309 | 420 | 3,000 | 228 | ● | ● | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail



# N67 550

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 6.7 |
| Maximum Power (kW (hp) @ rpm): | 404 (550) @ 3,200 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,089 x 828 x 824 mm |
| Dry Weight | 721 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II | EPA Tier 3 Recreational | China GB II (GB15097-2016) |
|---|---|---|---|---|---|---|---|---|
| A1 | 404 | 550 | 3,200 | 225 | ● | ● | ● | – |
| A2 | 368 | 500 | 3,200 | 231 | ● | ● | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail

# N67 570 EVO

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 6.7 |
| Maximum Power (kW (hp) @ rpm): | 419 (570) @ 3,000 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | ($L^2$xWxH) 1,088 x 828 x 805 mm |
| Dry Weight | 721 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II | EPA Tier 3 Recreational |
|---|---|---|---|---|---|---|---|
| A1 | 419 | 570 | 3,000 | 223 | ● | ● | ● |
| A1 | 404 | 550 | 3,000 | 227 | ● | ● | ● |
| A2 | 390 | 530 | 3,000 | 225 | ● | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail

# THE CURSOR SERIES


**Engine model**
C90 (6 cyl., 8.7 L)
C16 (6 cyl., 15.9 L)

**Power range**
From 550 to 1,000 hp
From 404 to 735 kW

**Peak Torque**
Up to 3,510 Nm



## Key Advantages

**Performance**

- Top-class performance, leader for peak power and torque fast response.
- CURSOR 9 best-in-class in peak power.
- C90 650 EVO supercharged to reach the best response time and best planing performances.
- CURSOR 16 Guinness World Record holder for the fastest diesel on water at 277.5 km/h.

**Versatility**

- Wide range of accessories and options available.

**Emissions Standards**

- Type approvals available.
- Compatibility with XTL / HVO fuels (EN 15940).

**Reliability**

- High maintenance intervals up to 600 hours.
- Both base engine and marine dressing are made by FPT.
- Reduced maintenance and operating costs.

**Efficiency**

- CURSOR 9 best-in-class fuel consumption.
- Low fuel consumption if compared with direct competitors.

**Lightness and Compactness**

- CURSOR 9 the lightest of its category.
- CURSOR 16 compactness and lightness of a 13L with the durability of a 16L.

# C90 620 E

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 8.7 |
| Max Power (kW (hp) @ rpm): | 456 (620) @ 2,530 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,312 x 863 x 973 mm |
| Dry Weight | 940 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II | EPA Tier 3 Recreational | China GB II (GB15097-2016) |
|---|---|---|---|---|---|---|---|---|
| A1 | 456 | 620 | 2,530 | 228 | ● | ● | ● | - |
| A2 | 426 | 580 | 2,530 | 225 | ● | ● | ● | - |
| A2 | 404 | 550 | 2,530 | 224 | ● | ● | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail



# C90 650 E

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 8.7 |
| Maximum Power (kW (hp) @ rpm): | 478 (650) @ 2,530 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,312 x 863 x 973 mm |
| Dry Weight | 940 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II | EPA Tier 3 Recreational |
|---|---|---|---|---|---|---|---|
| A1 | 478 | 650 | 2,530 | 227 | ● | ● | ● |
| A2 | 445 | 605 | 2,530 | 232 | ● | | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail

# C90 650 EVO

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 8.7 |
| Max Continuous Power (kW (hp) @ rpm): | 478 (650) @ 2,530 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA + supercharger |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,226 x 899 x 1,009 mm |
| Dry Weight | 1,014 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II | EPA Tier 3 Recreational |
|---|---|---|---|---|---|---|---|
| A1 | 478 | 650 | 2,530 | 227 | ● | ● | ● |
| A2 | 460 | 625 | 2,530 | 229 | ● | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail



# C16 1000

| | |
|---|---|
| Arrangement: | 6 Cyl. in line |
| Total Displacement (L): | 15.9 |
| Maximum Power (kW (hp) @ rpm): | 735 (1,000) @ 2,300 |
| Thermodynamic cycle: | Diesel 4 stroke |
| Air handling: | TCA |
| Valves per cylinder: | 4 |
| Cooling System: | Liquid |
| Direction of Rotation (viewed facing flywheel): | Counterclockwise |
| Engine management: | Electronic |
| Injection System: | CR |

## WEIGHT AND DIMENSIONS

| | |
|---|---|
| Dimensions[1] | (L[2]xWxH) 1,470 x 1,166 x 1,169 mm |
| Dry Weight | 1,640 Kg |

[1] Dimensions can be changed according to engine options
[2] Length at flywheel

| Rating | kW | hp | rpm | g/kWh (Rated Speed) | IMO II | RCD II | EPA Tier 3 Recreational | China GB II (GB15097-2016) |
|---|---|---|---|---|---|---|---|---|
| A2 | 735 | 1,000 | 2,300 | 228 | ● | ● | ● | ● |
| A2 | 691 | 940 | 2,450 | 234 | ● | - | - | - |
| B | 662 | 900 | 2,300 | 231 | ● | ● | ● | ● |

**Air Handling**
TCA Turbocharged with aftercooler

**Injection System**
CR Common Rail

FPT Marine Pleasure Engine Options and Integrated control & monitoring system

# ENGINE OPTIONS AND INTEGRATED CONTROL & MONITORING SYSTEM

# MARINE ENGINE OPTIONS



## FPT offers a whole range of options to complete your engine:

**Elastic Mountings**

**Electrical system**
- Electrical configuration 12V or 24V
- Insulated poles electrical system
- Uprated Alternators

**Power Take-Off**
- Front PTO
- Rear PTO

**Monitoring&Control**
- Gauges and sensors
- Digital and analog panels
- Electronic throttle levers and joystick
- Multi-function panels
- Water cooled or dry exhaust pipes
- Gearboxes
- Emission and Class type approvals engine certification with various classification societies

Please contact your local distributor on our locator at fptindustrial.com to get more information.

# RED HORIZON



## Key Features

Red Horizon is the FPT marine integrated electronic control and monitoring system developed in partnership with ZF and Simrad Yachting, a Navico Group brand.

Conceived as the perfect connection between pilot and engine, Red Horizon is a combination of high-tech contents and style that culminates in unmatchable performance, excellent manoeuvrability and mooring.

Characterized by a skillful and inimitable mix of high-tech contents and style, Red Horizon guarantees:

- Full navigation control and safety.
- Optimal driving comfort.
- Easy handling and harbouring.

### Control and Monitoring Systems

FPT elevates marine propulsion and manoeuvring with an integrated system that combines ZF's renowned SmartCommand electronic propulsion controls and JMS manoeuvring systems with our common rail engines.

This sophisticated system prioritizes user experience, placing intuitive control at the operator's fingertips.

Customized Multi Function Displays, built upon Simrad technology, excel in engine monitoring, providing a comprehensive overview of the vessel's operation through seamless integration with various onboard devices.

# FPT MONITORING SYSTEMS
## Key Features

- Based on Simrad technology, the Multi Function Display (MFD) of NSX Series has been customized to match with FPT marine common rail engines. The NSX panels provide more than an engine monitoring visualization, thanks to the potential integration with many other vessel devices:
  - Radar
  - Autopilot
  - Camera /Thermal camera
  - Echosounder
  - Trip data statistics
  - Audio Control
- **7", 9"and 12" displays** are available with SolarMax HD IPS technology optimized for viewing from all angles and in bright sunlight. Their size allows best use of dash and screen space, allowing larger displays in smaller places while also providing a streamlined and attractive options for mounting.
- **Simrad Companion App** is avaialble to access marine data, operating manual and information anywhere. It is compatible with smartphones and tablets and available for Android and iOS.
- **Compatibility:**
  - NEF Family: N40, N60, N67 450 N, N67 550, N67 570 EVO
  - Cursor Family: C90 170, C90 410, C90 650 E, C90 620 E, C90 650 EVO, C16 600, C16 1000

# FPT PREMIUM CONTROL
## Key Features

- FPT takes control systems to the next level by integrating ZF advanced electronic propulsion controls (SmartCommand) and maneuvering systems (JMS), specifically designed to work seamlessly with our engines. This ensures optimal performance and efficiency.
  The FPT Premium Controls, featuring the innovative and compact 5200 control head, integrate the latest CAN bus technology. This user-friendly design enhances comfort and safety through different control modes.
- **Visual indicators** on the control head help to easily locate the neutral detent position; 2-color LED's indicate which control head is in command and whether the corresponding transmission is engaged.
- FPT Premium Controls offer customizable special features to optimize the maneuverability for docking and trolling.
  Advanced control modes include:

  ✓ **CRUISE**
  ✓ **EASIDOCK**
  ✓ **AUTOTROLL**
  ✓ **WARM UP**
  ✓ **ONE LEVER**



# FPT PREMIUM JOYSTICK
## Key Features

- FPT adopts ZF manoeuvring systems (JMS) specifically suited for our engines. This ensures optimal engine and system performance for efficient vessel operation. The FPT Premium Joystick provides **simple and intuitive boat** control during manoeuvres and allows captains to confidently navigate even complex docking situations.
- Standard control heads can make maneuvers like sideways docking, 360° spot turns and precise low-speed control a struggle. However, with FPT Premium Joystick, these complex operations become effortless.
- The system also controls the throttle of the engines and shifts the transmissions with automatically controlled trolling valves to deliver the needed precise speed and responsiveness **for smooth manoeuvring and easy docking even in tight spaces.**
- Thanks to an integrated electronic compass, the FPT Premium Joystick **keeps the vessel going in the selected direction.**
- Ready to work with an additional **iAnchor kit, to automatically maintain the position of vessel** against wind and current.

**We innovate constantly.
We look for the best technologies to offer reliable, efficient and performing solutions.
For every mission, and every journey.**




# YOU ASK FOR THE BEST. WE MAKE IT HAPPEN.

When the market becomes increasingly challenging, it is essential to have reliable partners.

We collaborate closely with you to provide tailor-made solutions, maximizing engine performance and durability. We are committed to doing everything possible to support you and your business.

# Extended Warranty.
# Everyday closer to your needs.

On top of the Base Warranty, it is possible to submit our Extended Warranty program, that covers all required FPT Genuine parts along with any repairs carried out by highly qualified technicians.

The FPT Extended Warranty guarantees:

- Customizable offer according to your needs.
- Avoid unexpected repair costs during your chosen operation period with our transparent FPT product warranties.
- Assistance performed by FPT qualified technicians.
- Optimal Product performance thanks to FPT Genuine Parts.

Our FPT Extended Warranty is made with the aim to be closer to you in your everyday activities. You can customize it according to your needs and extend it up to five years. To request a quotation please contact your FPT Dealer of reference.

| | OPERATING HOURS | COVERAGE | DURATION |
|---|---|---|---|
|  | Max. limit depending on rating<br>☐ Short Range Pleasure up to 1,500 hrs<br>☐ Long Range Pleasure up to 5,000 hrs | ☐ BRONZE Engine Major components only*<br>☐ SILVER Complete Engine | ☐ Up to 5 Years |

* List of major components: cylinder head; cylinder block; crankshaft; camshaft; connecting road; pistons; timing gears; flywheel; flywheel housing; oil pump; exhaust manifold; engine control unit.



# Proactive Assistance.
# Your direct connection to the Control Room.

Ensuring optimal engine performance and smooth operations has never been easier, thanks to our Telematic systems, we will take care of you. Installing the Telematic Kit on your engine you will allow FPT Control Room to analyze your engine data in real-time. Through this advanced system, we can promptly detect any action that will maximize the performances of your vessel.

Our dedicated team is always ready to provide prompt assitance and support. With this proactive approach, we can address any potential issues, ensuring that your engine performs at its best.

Experience the convenience of enhanced engine performance and the peace of mind that comes with our close monitoring and support.

- Engine Status monitoring.
- Maximize uptime thanks to the prompt activation of the FPT local Service Point, which is informed about the issue before leaving the Workshop supported by the remote pre-diagnosis.
- Engine diagnostics and repair based on FPT technical know-how and field experience.
- Monitor the performances of individual boat or fleet in real time, with periodic reports tailored to your mission.
- Total Cost of Ownership (TCO) reduction by optimizing engine performance, fuel consumption and by reducing up to 60% the Maintenance & Repair downtime.

# Genuine Parts.
# Original is better.

Our Genuine Parts are manufactured with the same rigorous procedures and premium materials as your FPT engine. They ensure:

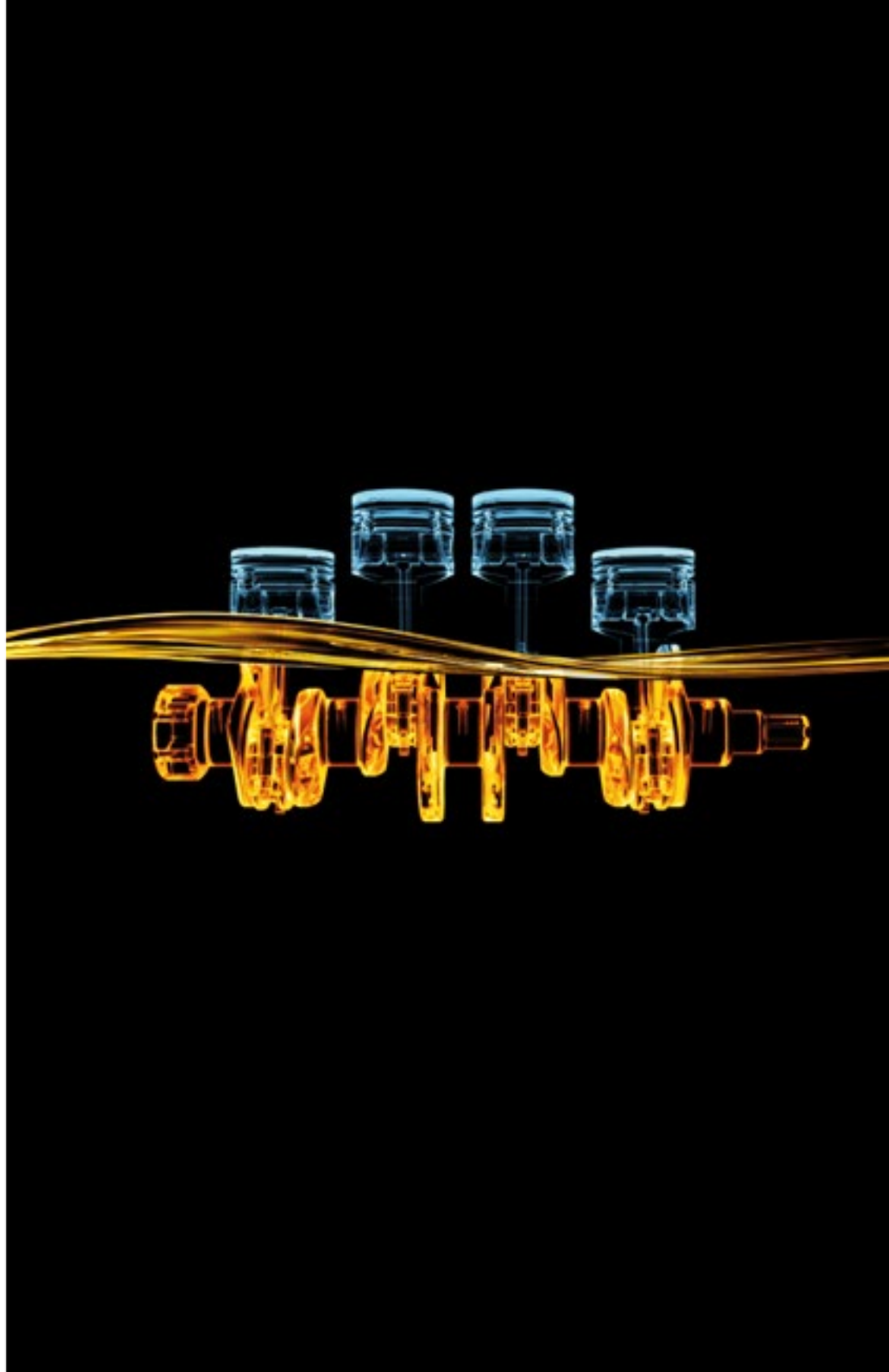
- **Total Compatibility:** guaranteed to perfectly fit with your engine.
- **Optimized Service Life:** exceptional durability without compromising engine performance.
- **Guaranteed Operation:** assured to achieve optimal engine output.

By choosing FPT Genuine Parts, you maintain the best conditions just like from the manufacturing plant, maximizing engine output and uptime.
Our network of Authorized Workshops features highly qualified technicians ready to expertly assist you in achieving peak engine efficiency.

## The perfect combination.

FPT Genuine Engine Oils are designed with Customer's missions in mind. Developed for exceptional performance under any condition, our lubricants deliver:

- **Enhanced Protection & Durability:** extended engine life and minimized downtime with superior wear and tear resistance.
- **Maximized Uptime & Fuel Efficiency:** our core focus is keeping your equipment running strong. FPT Fluids has been developed to guarantee the highest level of cleanliness, protection and efficiency, resulting in:
  - +87% cleaner pistons and +68% better top ring protection.
  - +41% Cylinder Wear protection.
  - +20% improved Soot Handling and Sludge Control.
  - -20% in Total Cost of Ownership (TCO).
  - Reduced fuel and oil consumption for a greener future.C16 600, C16 1000



# You need help?
# We are here for you.

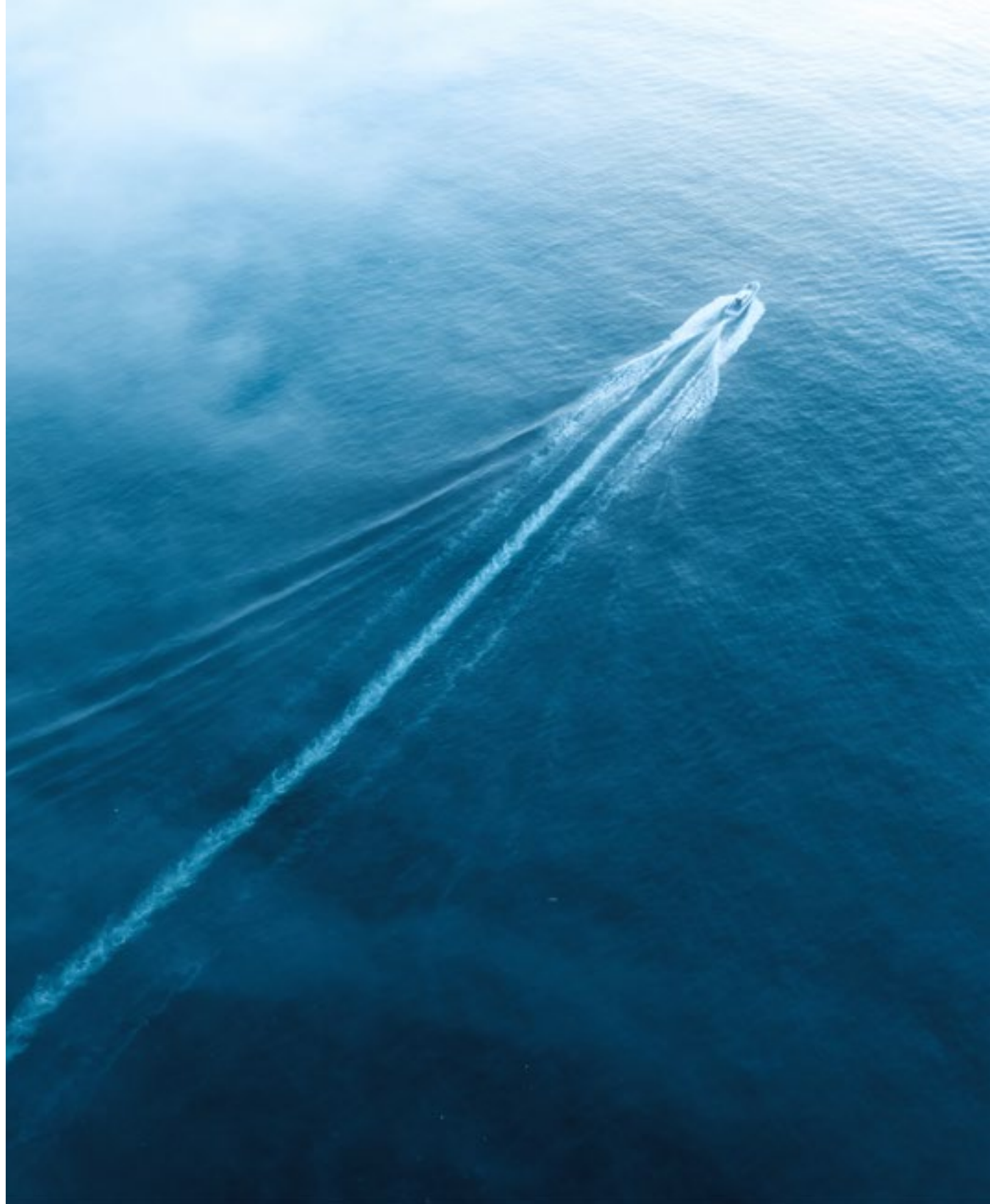
Because you never stop, neither do we.

Our Customer Contact Centre is active 24/7, to assist you and to activate our local support network.

For any issue or need, our technical and expert support service is ready to help you anytime, anywhere.

If you need technical support or assistance on-site, you can always rely on more than 70 dealers global network and over 900 Service points.

Discover our global dealers' network:



## NOTES

Contact us:

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fptindustrial.com