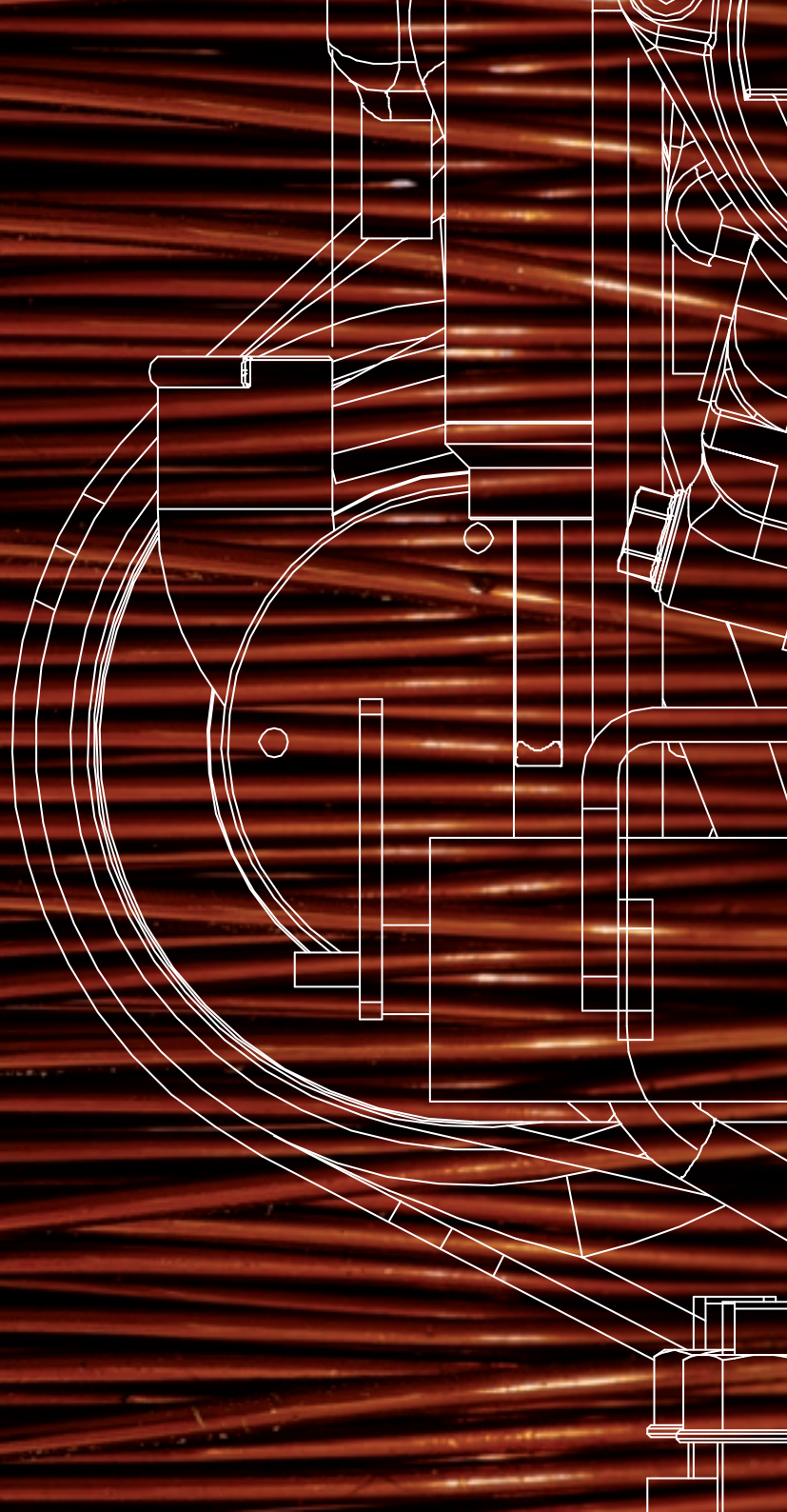


POWER GENERATION

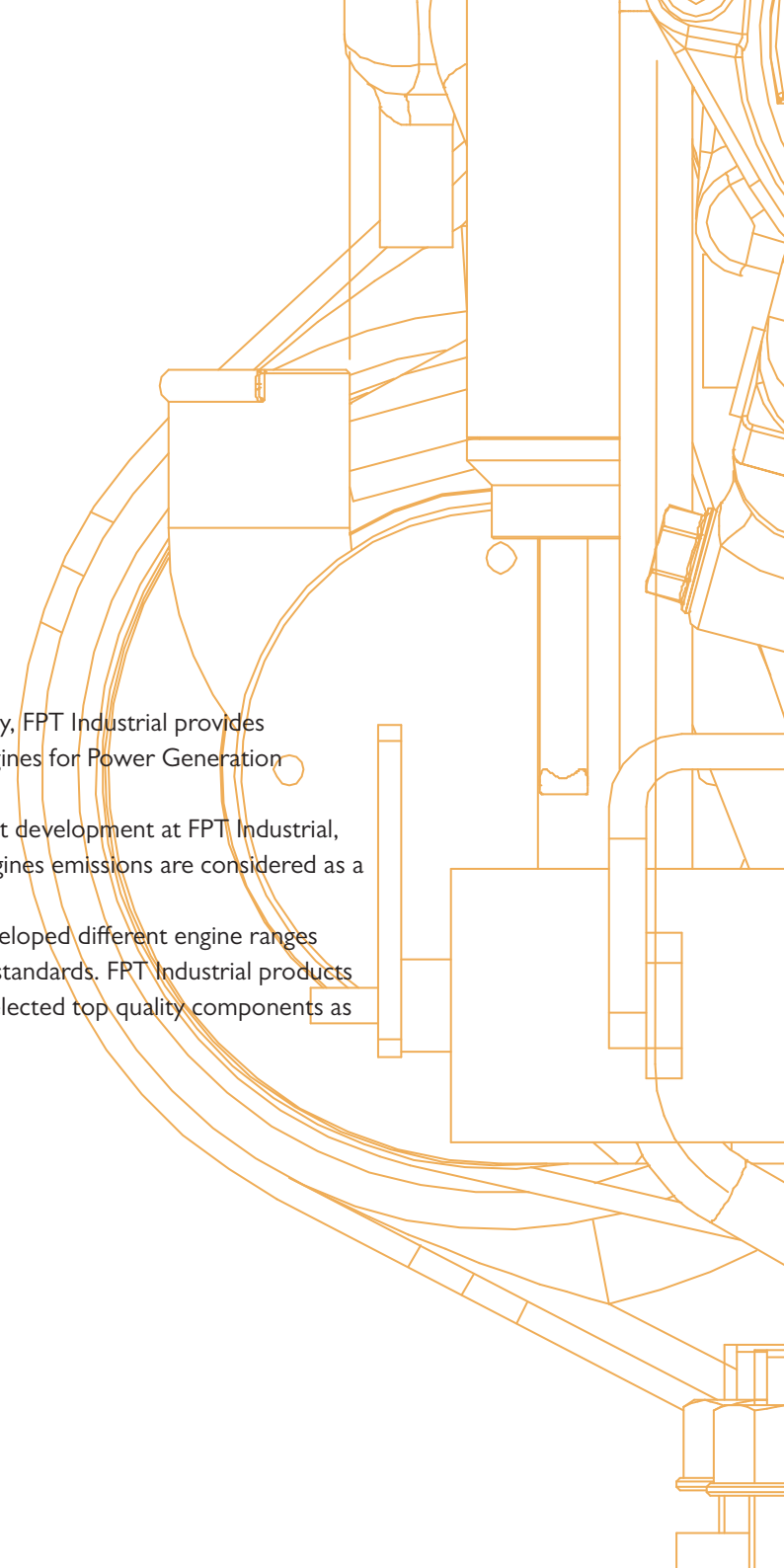


THE ENERGY OF INNOVATION

Wherever energy has to be delivered quickly and reliably, FPT Industrial provides the optimal answer with its state-of-the-art range of engines for Power Generation applications.

Sustainability is one of the primary drivers of product development at FPT Industrial, where the increasingly stringent standards for Diesel engines emissions are considered as a challenge to continuous improvement.

To fulfill market requirements, FPT Industrial has developed different engine ranges respectively compliant with most demanding emissions standards. FPT Industrial products offer functional layouts, hi-tech contents and carefully selected top quality components as well.



FPT Industrial offers superior technology and outstanding advantages



PERFORMANCE

Excellent transient load response
High performance guaranteed in all conditions
High engine power density

RESPECT FOR THE ENVIRONMENT

Compliance with the most stringent emissions legislations
Low noise levels

RUNNING COSTS REDUCTION

Low oil and fuel consumption
Best in class maintenance intervals
Low running costs in continuous operating power

FLEXIBILITY

Availability of a wide range of options to create tailor-made products
Compact engine layout
Availability of cold starting accessories



FPT

POWERTRAIN TECHNOLOGIES



Diesel engines for Power Generation application

MODEL	CYLINDER ARRANGEMENT AIR INTAKE EXHAUST SYSTEM	INJECTION SYSTEM	DISPLACEMENT LITERS	STAND-BY POWER OUTPUT [kWm]		EMISSIONS	PRIME POWER OUTPUT [kWm]	
				1500 RPM	1800 RPM		1500 RPM	1800 RPM
				S8000 AM1	3L/NA		M	2,9
F32 AM1A	4L / NA	M	3,2	31,5	—	UR ¹	29	—
F32 SM1A	4L / TC	M	3,2	41,5	—	UR ¹	38	—
F32 TM1A	4L / TAA	M	3,2	51,5	—	UR ¹	47	—
F32 SM1F	4L / TC / I-EGR	M	3,2	31,5	—	Stage IIIA	29	—
F32 SM1X	4L / TC / I-EGR	M	3,2	—	46,5	Tier 3	—	42
F32 TM1X	4L / TAA / I-EGR	M	3,2	—	56,5	Tier 3	—	52
N45 AM2	4L / NA	M	4,5	50	—	UR	45	—
N45 SM3	4L / TC	M	4,5	81	87	UR	73	79
N45 TM3	4L / TAA	M	4,5	118	—	UR	107	—
N45 AM1A	4L / NA	M	4,5	46	—	UR ¹	42	—
N45 SM1A	4L / TC	M	4,5	59	65	UR ¹	53	59
N45 SM2A	4L / TC	M	4,5	73	—	UR ¹	66	—
N45 TM1A	4L / TAA	M	4,5	85	95	UR ¹	78	87
N45 TM2A	4L / TAA	M	4,5	96	107	UR ¹	88	98
N45 SM1F	4L / TC / I-EGR	M	4,5	60	—	Stage IIIA	55	—
N45 TE1F	4L / TAA / I-EGR	ECR	4,5	80	—	Stage IIIA	73	—
N45 TE2F	4L / TAA / I-EGR	ECR	4,5	98	—	Stage IIIA	89	—
N45 SM1X	4L / TC / I-EGR	M	4,5	—	57	Tier 3	—	53
N45 SM2X	4L / TC / I-EGR	M	4,5	—	67	Tier 3	—	61
N45 TM2X	4L / TAA / I-EGR	M	4,5	—	95	Tier 3	—	87
N67 SM1	6L / TC	M	6,7	121	138	UR	110	125
N67 TM4	6L / TAA	M	6,7	165	—	UR	150	—
N67 TM7	6L / TAA	M	6,7	194	—	UR	176	—
N67 250kVA*	6L / TAA	ECR	6,7	234	246	UR	212	221
N67 TM2A	6L / TAA	M	6,7	126	141	UR ¹	114	128
N67 TM3A	6L / TAA	M	6,7	152	165	UR ¹	138	149
N67 TE2A	6L / TAA	ECR	6,7	193	215	UR ¹	175	195
N67 TM1F	6L / TAA / I-EGR	M	6,7	125	—	Stage IIIA	114	—
N67 TE1F	6L / TAA / I-EGR	ECR	6,7	145	—	Stage IIIA	132	—
N67 TE2F	6L / TAA / I-EGR	ECR	6,7	165	—	Stage IIIA	150	—
N67 TE3F	6L / TAA / I-EGR	ECR	6,7	194	—	Stage IIIA	175	—
N67 TM1X	6L / TAA / I-EGR	M	6,7	—	141	Tier 3	—	128
N67 TE1X	6L / TAA / I-EGR	ECR	6,7	—	165	Tier 3	—	150
N67 TE2X	6L / TAA / I-EGR	ECR	6,7	—	200	Tier 3	—	182



MODEL	CYLINDER ARRANGEMENT AIR INTAKE EXHAUST SYSTEM	INJECTION SYSTEM	DISPLACEMENT Litres	STAND-BY POWER OUTPUT [kWm]		EMISSIONS	PRIME POWER OUTPUT [kWm]	
				1500 RPM	1800 RPM		1500 RPM	1800 RPM
				C87 TE3	6L / TAA		ECR	8,7
C87 TE4	6L / TAA	ECR	8,7	299	333	UR	275	306
C87 TE1D	6L / TAA	ECR	8,7	256	280	UR ¹ /Tier 3	232	254
C87 TE1F	6L / TAA	ECR	8,7	195	—	Stage IIIA	177	—
C87 TE3F	6L / TAA	ECR	8,7	256	—	Stage IIIA	232	—
C87 TE4F*	6L / TAA / I-EGR	ECR	8,7	278	316	Stage IIIA/Tier 3	250	284
C10 TE1D	6L / TAA	EUI	10,3	290	317	UR ¹ /Tier 3	264	287
C10 TE1F	6L / TAA / I-EGR	EUI	10,3	290	—	Stage IIIA	263	—
CR13 TE6W	6L / TAA	ECR	12,9	414	454	UR	371	400
CR13 TE7W	6L / TAA	ECR	12,9	459	474	UR	425	428
C13 TE2A	6L / TAA	EUI	12,9	330	360	UR ¹	300	327
C13 TE3A	6L / TAA	EUI	12,9	387	398	UR ¹	352	360
C13 TE3X	6L / TAA	EUI	12,9	—	371	Tier 3	—	337
C13 TE1F	6L / TAA / I-EGR	EUI	12,9	327	—	Stage IIIA	296	—
C13 TE2F	6L / TAA / I-EGR	EUI	12,9	377	—	Stage IIIA	342	—
C13 TE2F	6L / TAA / I-EGR	EUI	12,9	377	—	Stage IIIA	342	—
CR16 TE1W	6L / TAA	ECR	15,9	557	578	UR	505	523

LEGEND

ARRANGEMENT

L In line

AIR INTAKE

NA Naturally Aspirated
TAA Turbocharged Aftercooler
TC Turbocharged

EXHAUST SYSTEM

I-EGR Internal Exhaust Gas Recirculation

INJECTION SYSTEM

M Mechanical
ECR Electronic Common Rail
EUI Electronic Unit Injector

UR

UR¹ Previously EU Stage II

* Available from 2nd Half 2017







THE ENERGY OF INNOVATION

Developed with customer needs in mind, FPT Industrial's S8000 G-Drive range answers demands for reduced complexity, ideal for remote locations and ensures high power output levels at a lower cost of ownership.

Engineered to FPT's renowned reliability levels these engines also feature best in class maintenance intervals. The S8000 G-Drive is designed for all emergency and prime power applications that do not require compliance to emission regulation.

S8000



DIESEL GENERATOR DRIVE FOR POWER GENERATION APPLICATION

MODEL	CYLINDER ARRANGEMENT AIR INTAKE EXHAUST SYSTEM	INJECTION SYSTEM	DISPLACEMENT LITERS	STAND-BY POWER OUTPUT [kWm]		EMISSIONS	PRIME POWER OUTPUT [kWm]	
				1500 RPM	1800 RPM		1500 RPM	1800 RPM
S8000 AM1	3L/NA	M	2,9	31	34	UR	28	33

LEGEND

ARRANGEMENT

L In line

INJECTION SYSTEM

M Mechanical

UR Unregulated

AIR INTAKE

NA Naturally Aspirated

Features

PERFORMANCE

Class G2 of ISO 8528 standard certification of excellent performance related to load acceptance.

MECHANICAL INJECTION SYSTEM WITH ELECTRONIC GOVERNOR

Based on simple and proven mechanical rotary pump, S8000 engine has a direct fuel injection system which is state-of-the-art for accurate fuel delivery. Electronic speed governor delivered as standard in order to be best in class in load acceptance and frequency stability.

ENGINE DESIGN

Compact 3 Cylinder in-line with big unit displacement and long stroke.

SPECIFIC FEATURES

Lean lay-out; starting temperature without auxiliaries down to -5° (with heat greater down to -12°). Tropicalized radiator delivered as standard in order to work in harsh conditions (up to 65°).

AIR HANDLING

S8000 engine is available in naturally aspirated version with cooling package rack mounted on engine (non fix on frame is required).

600H OIL INTERVAL CHANGE

Optimum engine design in terms of mechanical clearances, piston rings, engine oil system calculation and optimized engine structure to limit cylinder liners deformation.

COMPONENT INTEGRATION

Integrated CCV (Closed Crankcase Ventilation) system and engine design oriented to high component integration. Oil and water pumps are fully integrated in the block.

DUAL SPEED MODE

Possibility to switch from 1.500 rpm to 1.800 rpm (50Hz/60Hz).

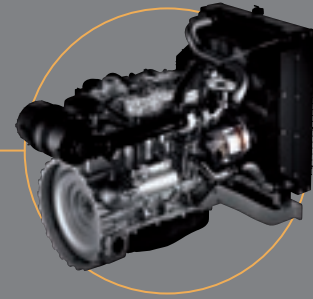
Benefits

- ✓ **100% TRANSCIENT LOAD RESPONSE FOR ANY STAND-BY AND PRIME APPLICATION**
- ✓ **SIMPLE AND EASY TO INSTALL SOLUTION PICK-UP FREE**
- ✓ **COMPACT PACKAGING AND INSTALLATION FOOTPRINT**
- ✓ **HIGH PERFORMANCE GUARANTEED IN ALL CONDITIONS**
- ✓ **HIGH POWER DENSITY SIMPLE AND EASY TO INSTALL SOLUTION**
- ✓ **REDUCED MAINTENANCE NEEDS AND OPERATING COST**
- ✓ **LEAKAGE PREVENTION**
- ✓ **PRODUCT FLEXIBILITY BASED ON MARKET REQUEST**



The F₅ Series

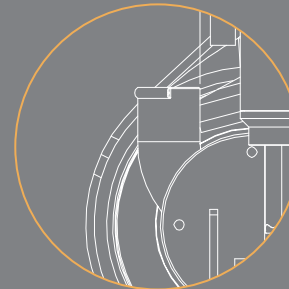
F32 AM



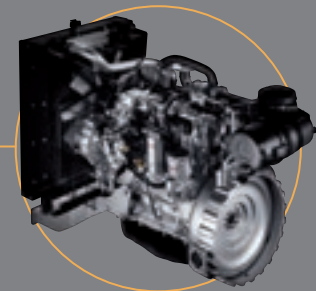
Featured by customer oriented design, the F₅ Series stands out for low operating costs and extremely easy maintenance thanks to single side servicing.

These benefits are combined with excellent performance, which allows the engines to be used for the most demanding missions (high engine inclination, cold starting at temperatures down to -25°C).

F32 SM



F32 TM



MODEL	CYLINDER ARRANGEMENT AND INTAKE EXHAUST SYSTEM	INJECTION SYSTEM	DISPLACEMENT LITERS	STAND-BY POWER OUTPUT [kWm]		EMISSIONS	PRIME POWER OUTPUT [kWm]	
				1500 RPM	1800 RPM		1500 RPM	1800 RPM
F32 AM1A	4L / NA	M	3,2	31,5	—	UR ¹	29	—
F32 SM1A	4L / TC	M	3,2	41,5	—	UR ¹	38	—
F32 TM1A	4L / TAA	M	3,2	51,5	—	UR ¹	47	—
F32 SM1F	4L / TC / I-EGR	M	3,2	31,5	—	Stage IIIA	29	—
F32 SM1X	4L / TC / I-EGR	M	3,2	—	46,5	Tier 3	—	42
F32 TM1X	4L / TAA / I-EGR	M	3,2	—	56,5	Tier 3	—	52

LEGEND

ARRANGEMENT

L In line

AIR INTAKE

NA Naturally Aspirated
TAA Turbocharged Aftercooler
TC Turbocharged

EXHAUST SYSTEM

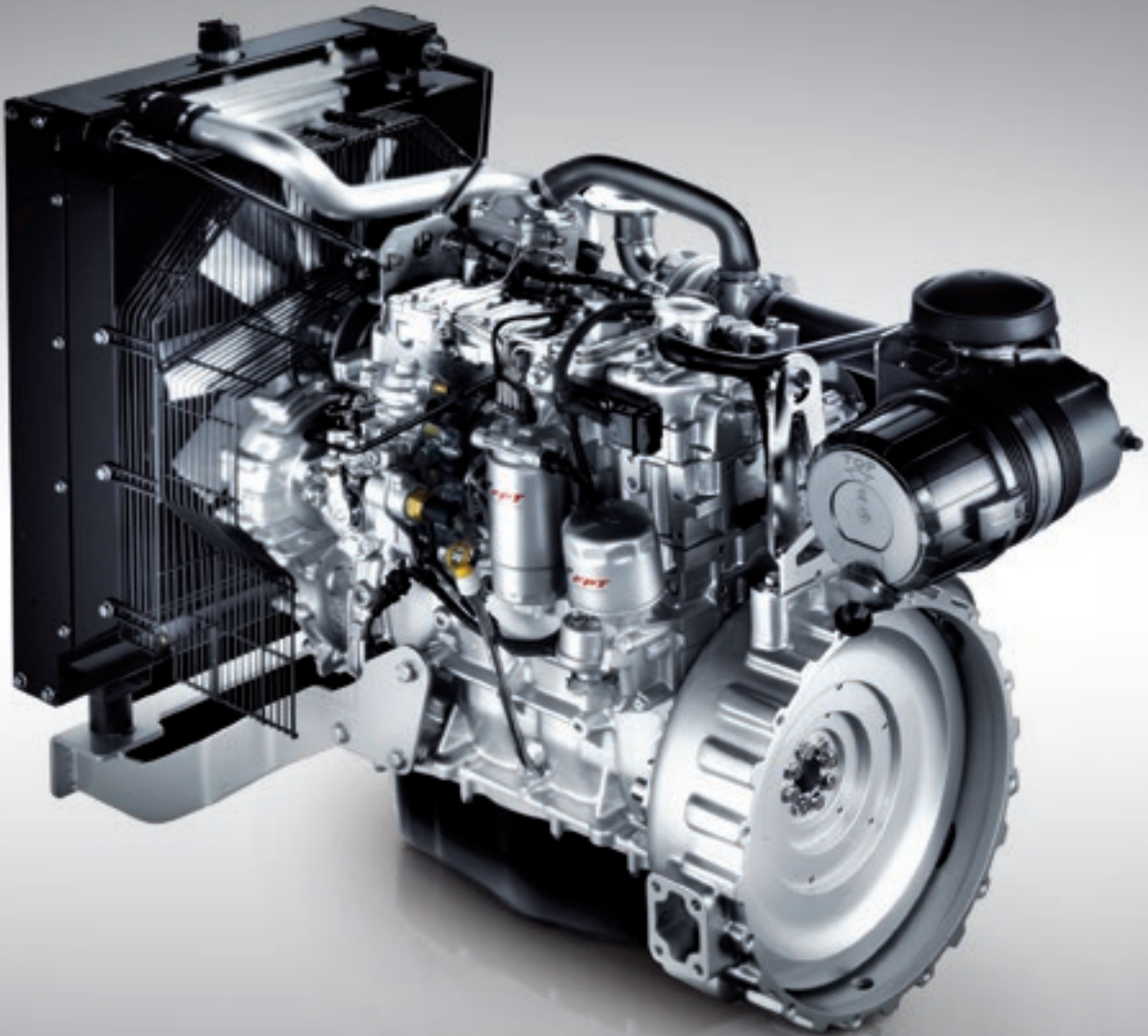
I-EGR Internal Exhaust Gas Recirculation

INJECTION SYSTEM

M Mechanical

UR

UR¹ Unregulated
Previously EU Stage II





Features

PERFORMANCE

Class G2 of ISO 8528 standard certification of excellent performance related to load acceptance.

MECHANICAL INJECTION SYSTEM

Based on simple and proven mechanical rotary pump, F5 engines have a direct fuel injection system which is state-of-the-art for accurate fuel delivery. The mechanical pump is the best trade-off between performance and easy engine installation.

ENGINE DESIGN

Camshaft in crankcase, suspended oil pan, balancer counterweights incorporated in crankshaft webs.

SPECIFIC FEATURES

Lean layout; starting temperature without auxiliaries down to -10°C (with grid heater down to -25°).
Most demanding emissions performance achieved without external EGR, VGT or electronics.

AIR HANDLING

F5 Series engines are available in naturally aspirated, turbocharged and turbocharged with aftercooler versions, in order to reach the highest engine performance in terms of load acceptance and fuel consumption.
These features allow final users to optimize their engine installation & final genset performance.

600H OIL INTERVAL CHANGE

Optimum engine design in terms of mechanical clearances, piston rings, engine oil system calculation and optimized engine structure to limit cylinder liners deformation.

COMPONENT INTEGRATION

Integrated CCV (Closed Crankcase Ventilation) system and engine design oriented to high component integration. Water-oil cooler, oil and water pumps with by-pass are fully integrated in the block.

SERVICEABILITY & MAINTAINABILITY

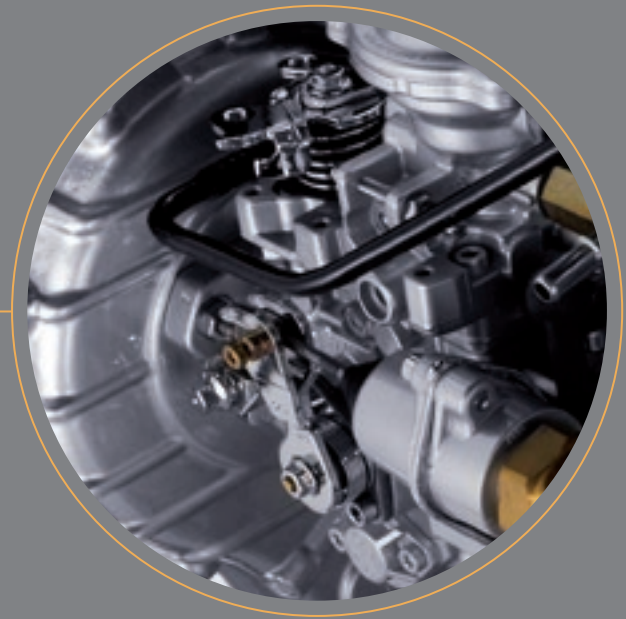
One side (left) engine maintenance layout and worldwide service network.

OPTION LIST

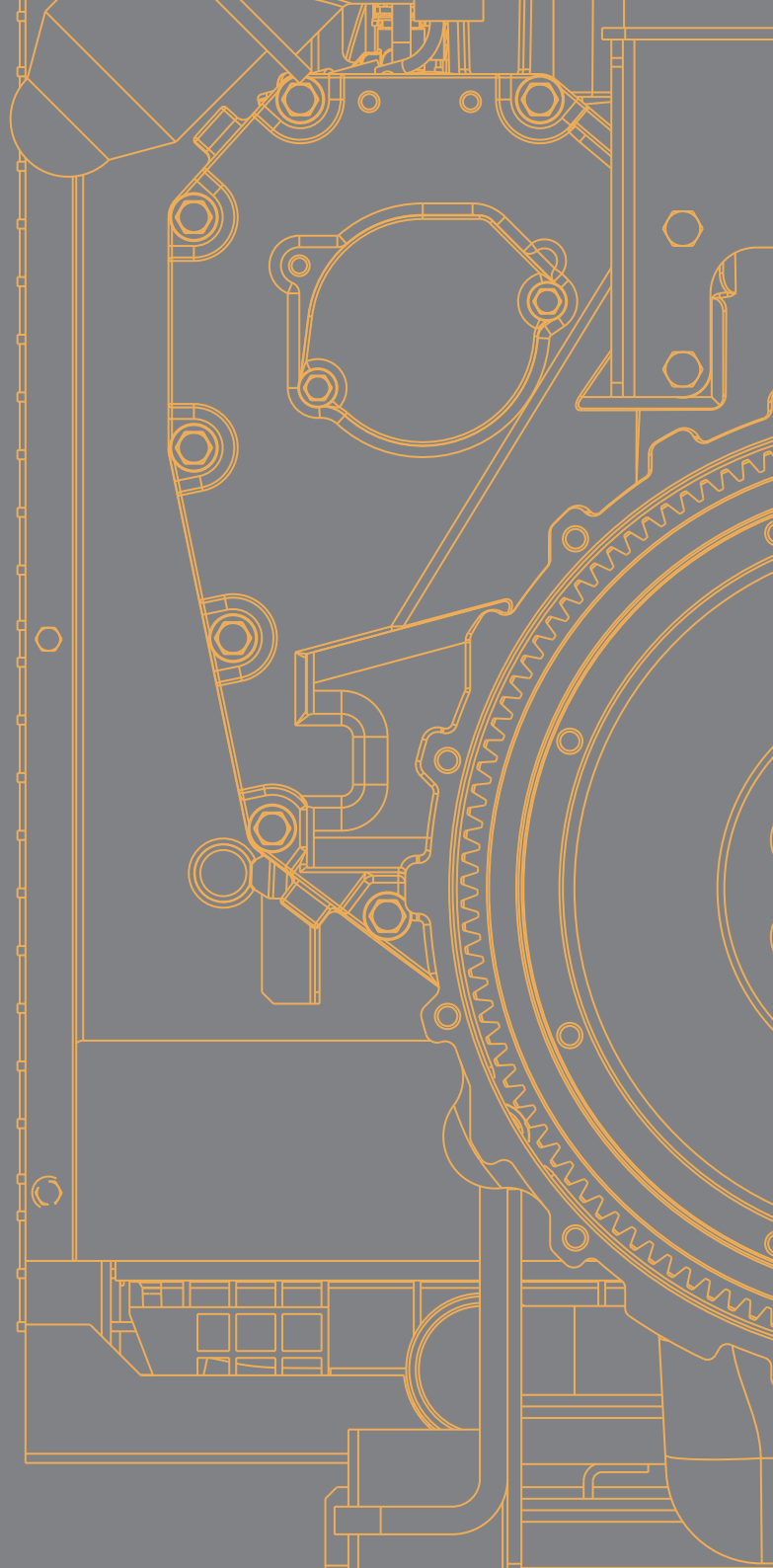
Options for electronic speed governor; hot part guards, water jacket heater, alarm senders, oil drain systems, front radiator guard.

Benefits

- ✓ **EXCELLENT TRANSIENT LOAD RESPONSE FOR SEVERAL POWER GENERATION APPLICATIONS**
- ✓ **SIMPLE AND EASY TO INSTALL SOLUTION, CONSISTENT WITH STANDARD AND ALTERNATIVE FUELS**
- ✓ **VIBRATION & NOISE REDUCTION**
- ✓ **HIGH PERFORMANCE GUARANTEED IN ALL CONDITIONS**
- ✓ **HIGH ENGINE POWER DENSITY WITH THE SHORTEST LOAD RESPONSE TIME**
- ✓ **REDUCED MAINTENANCE NEEDS AND OPERATING COST**
- ✓ **LEAKAGE PREVENTION**
- ✓ **QUICK SERVICE SUPPORT AND EASY MAINTENANCE**
- ✓ **CUSTOMER ORIENTATION AND SPECIFIC ENGINE ARCHITECTURE BASED ON APPLICATION TYPE**



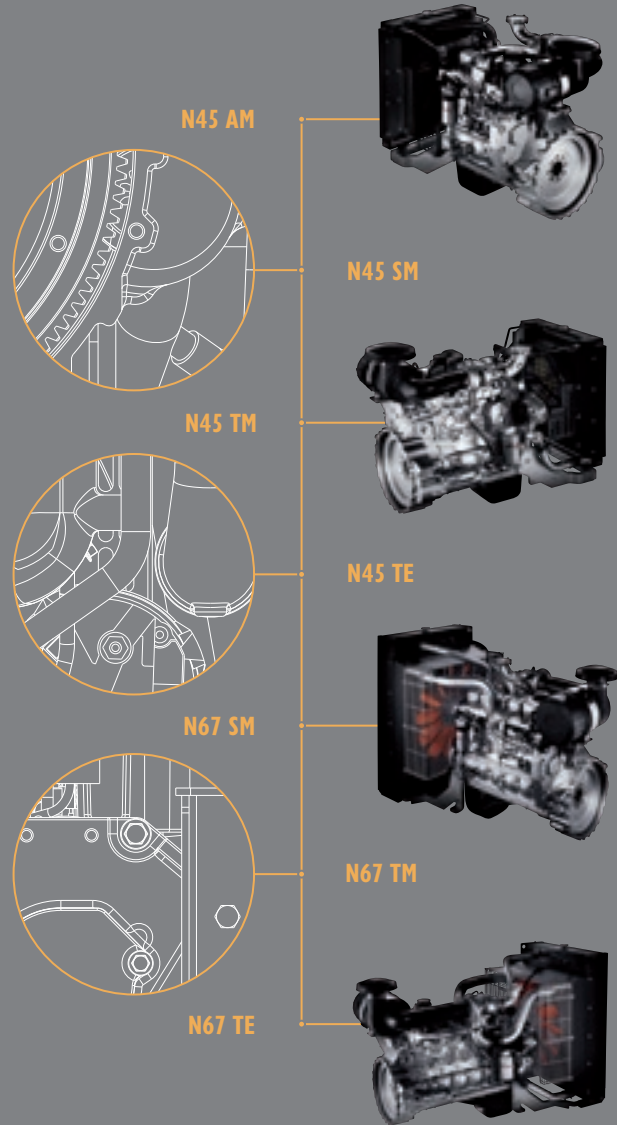
THE NEF SERIES



The NEF Series

Developed to satisfy the most demanding customer requirements, the NEF Series is the evidence of FPT Industrial technological excellence.

Available in 4 and 6 cylinders, with mechanical or Common Rail injection system, the NEF Series stands out for reliability and reduced fuel consumption.



MODEL	CYLINDER ARRANGEMENT AND INTAKE EXHAUST SYSTEM	INJECTION SYSTEM	DISPLACEMENT LITERS	STAND-BY POWER OUTPUT [kWm]		EMISSIONS	PRIME POWER OUTPUT [kWm]	
				1500 RPM	1800 RPM		1500 RPM	1800 RPM
N45 AM2	4L / NA	M	4,5	50	—	UR	45	—
N45 SM3	4L / TC	M	4,5	81	87	UR	73	79
N45 TM3	4L / TAA	M	4,5	118	—	UR	107	—
N45 AM1A	4L / NA	M	4,5	46	—	UR ¹	42	—
N45 SM1A	4L / TC	M	4,5	59	65	UR ¹	53	59
N45 SM2A	4L / TC	M	4,5	73	—	UR ¹	66	—
N45 TM1A	4L / TAA	M	4,5	85	95	UR ¹	78	87
N45 TM2A	4L / TAA	M	4,5	96	107	UR ¹	88	98
N45 SM1F	4L / TC / I-EGR	M	4,5	60	—	Stage IIIA	55	—
N45 TE1F	4L / TAA / I-EGR	ECR	4,5	80	—	Stage IIIA	73	—
N45 TE2F	4L / TAA / I-EGR	ECR	4,5	98	—	Stage IIIA	89	—
N45 SM1X	4L / TC / I-EGR	M	4,5	—	57	Tier 3	—	53
N45 SM2X	4L / TC / I-EGR	M	4,5	—	67	Tier 3	—	61
N45 TM2X	4L / TAA / I-EGR	M	4,5	—	95	Tier 3	—	87

LEGEND

ARRANGEMENT

L In line

AIR INTAKE

NA Naturally Aspirated
TAA Turbocharged Aftercooler
TC Turbocharged

EXHAUST SYSTEM

I-EGR Internal Exhaust Gas Recirculation

INJECTION SYSTEM

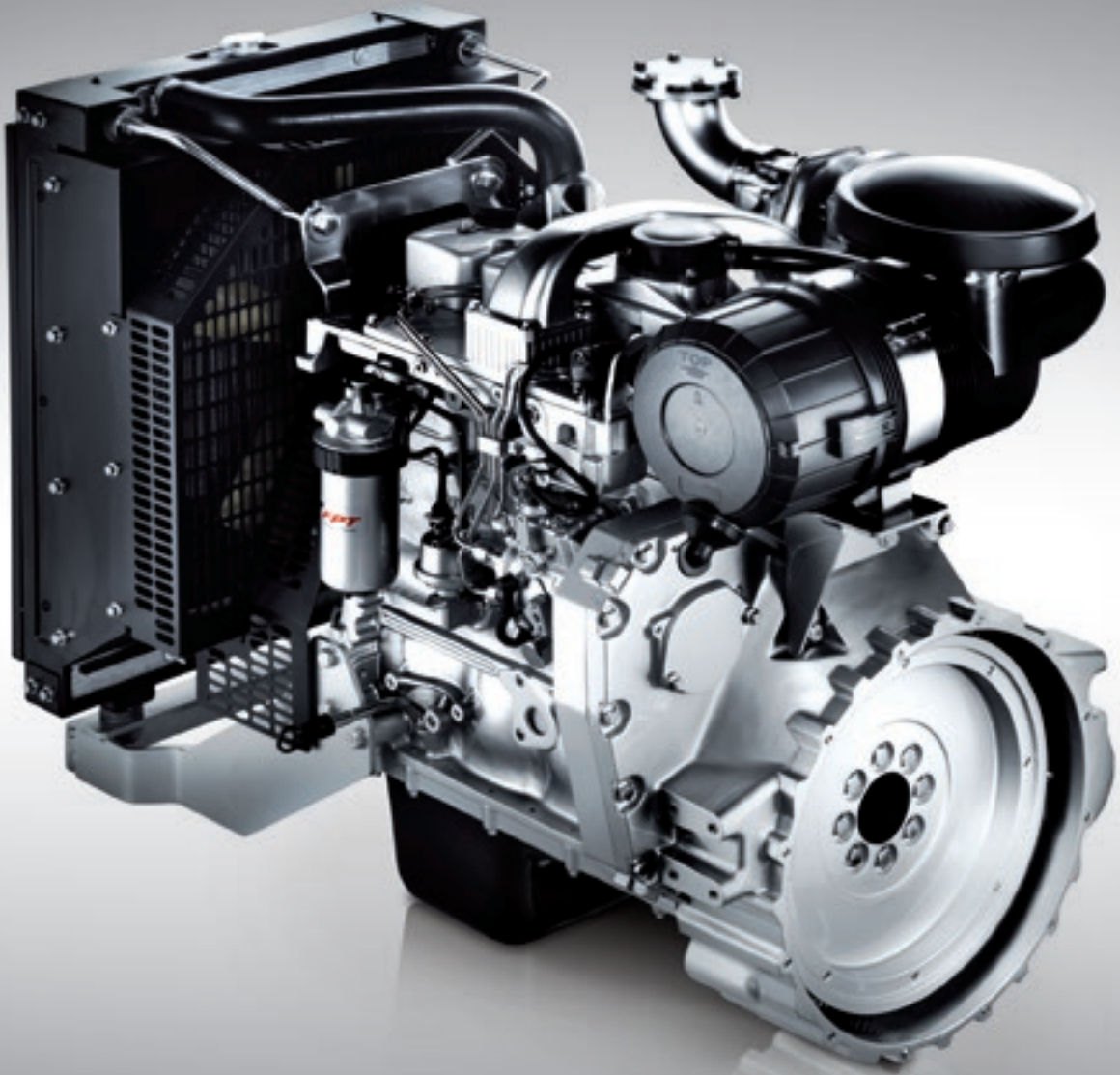
M Mechanical
ECR Electronic Common Rail

UR

Unregulated

UR¹

Previously EU Stage II



MODEL	CYLINDER ARRANGEMENT AIR INTAKE EXHAUST SYSTEM	INJECTION SYSTEM	DISPLACEMENT LITERS	STAND-BY POWER OUTPUT [kWm]		EMISSIONS	PRIME POWER OUTPUT [kWm]	
				1500 RPM	1800 RPM		1500 RPM	1800 RPM
				N67 SM1	6L / TC		M	6,7
N67 TM4	6L / TAA	M	6,7	165	–	UR	150	–
N67 TM7	6L / TAA	M	6,7	194	–	UR	176	–
N67 250kVA*	6L / TAA	ECR	6,7	234	246	UR	212	221
N67 TM2A	6L / TAA	M	6,7	126	141	UR ¹	114	128
N67 TM3A	6L / TAA	M	6,7	152	165	UR ¹	138	149
N67 TE2A	6L / TAA	ECR	6,7	193	215	UR ¹	175	195
N67 TM1F	6L / TAA / I-EGR	M	6,7	125	–	Stage IIIA	114	–
N67 TE1F	6L / TAA / I-EGR	ECR	6,7	145	–	Stage IIIA	132	–
N67 TE2F	6L / TAA / I-EGR	ECR	6,7	165	–	Stage IIIA	150	–
N67 TE3F	6L / TAA / I-EGR	ECR	6,7	194	–	Stage IIIA	175	–
N67 TM1X	6L / TAA / I-EGR	M	6,7	–	141	Tier 3	–	128
N67 TE1X	6L / TAA / I-EGR	ECR	6,7	–	165	Tier 3	–	150
N67 TE2X	6L / TAA / I-EGR	ECR	6,7	–	200	Tier 3	–	182

LEGEND

ARRANGEMENT

L In line

AIR INTAKE

NA Naturally Aspirated
TAA Turbocharged Aftercooler
TC Turbocharged

EXHAUST SYSTEM

I-EGR Internal Exhaust Gas Recirculation

INJECTION SYSTEM

M Mechanical
ECR Electronic Common Rail

UR

UR¹ Previously EU Stage II

*

Available from 2nd Half 2017

Mechanical Engines – Features

PERFORMANCE

Class G2 of ISO 8528 standard certification of excellent performance related to load acceptance.

INJECTION SYSTEM

Mechanical rotary pump, easy to maintain, is the core of the NEF mechanical engine series. The system, is based on direct fuel injection for accurate fuel delivery and is adaptive with standard and alternative fuels. The NEF mechanical injection system is the best trade-off between product cost effectiveness and performance.

DUAL SPEED MODE

Possibility to switch from 1500 rpm to 1800 rpm (only one homologation engine rate).

SPECIFIC FEATURES

Minimum cold starting temperature without auxiliaries down to -10°C (with grid heater down to -25°).
Tier 3 and Stage IIIA performances achieved without external EGR or VGT.

AIR HANDLING

NEF Series engines are available in naturally aspirated, turbocharged and turbocharged with aftercooler versions in order to reach the highest engine performance in terms of load acceptance & fuel consumption. These features allow final users to optimize their engine installation & final genset performance.

UP TO 800H OIL INTERVAL CHANGE

NEF Series adopts combustion chambers optimized to reduce oil dilution and are designed with an optimum engine design in terms of mechanical clearances, piston rings and engine oil system calculation.

SERVICEABILITY & MAINTAINABILITY

Worldwide service network. Engines featured with a proven mechanical injection system without electronic interfaces and without external EGR.

COMPONENT INTEGRATION

Integrated CCV (Closed Crankcase Ventilation) system and engine design oriented to high component integration. Water-oil cooler, oil and water pumps are completely integrated in the engine block.

ENGINE DESIGN

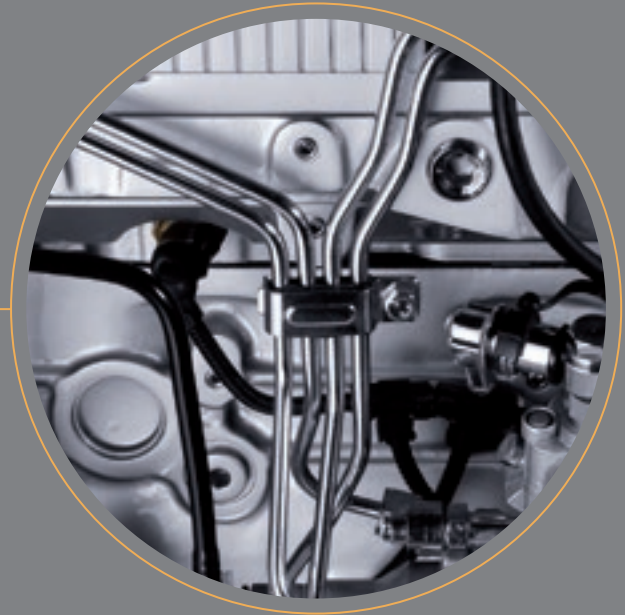
Balancer counterweights incorporated in crankshaft webs, rear gear train layout, camshaft in crankcase, suspended oil pan, ladder frame cylinder block.

OPTION LIST

Options for electronic speed governor; hot part guards, water jacket heater, alarm senders, oil drain systems, front radiator guard.

Benefits

- ✓ **EXCELLENT TRANSIENT LOAD RESPONSE FOR SEVERAL POWER GENERATION APPLICATIONS**
- ✓ **RELIABLE AND COST EFFECTIVE SOLUTION, CONSISTENT WITH STANDARD AND ALTERNATIVE FUELS**
- ✓ **ENGINE ADAPTABLE TO MARKET REQUEST**
- ✓ **HIGH PERFORMANCE GUARANTEED IN ALL CONDITIONS**
- ✓ **HIGH ENGINE POWER DENSITY WITH THE SHORTEST LOAD RESPONSE TIME**
- ✓ **REDUCED MAINTENANCE NEEDS AND OPERATING COST**
- ✓ **QUICK SERVICE SUPPORT AND EASY MAINTENANCE**
- ✓ **LEAKAGE PREVENTION**
- ✓ **VIBRATION AND NOISE REDUCTION ENGINE STRUCTURAL STIFFNESS**
- ✓ **CUSTOMER ORIENTATION AND SPECIFIC ENGINE BASED ON APPLICATION TYPE**



Electronic Engines – Features

PERFORMANCE

Class G₃ of ISO 8528 standard certification of excellent performance related to load acceptance

INJECTION SYSTEM

Accurate fuel delivery, provided by a very compact direct injection 2nd generation Common Rail @ 1.600 bar to achieve top performance in terms of load response and top power with the minimum fuel consumption.

DUAL SPEED MODE

Possibility to switch from 1500 rpm to 1800 rpm. User friendly thanks to interface card.

SPECIFIC FEATURES

Lean layout; starting temperature without auxiliaries down to -10°C (with grid heater down to -25°). Demanding emissions performances achieved without external EGR or VGT.

AIR HANDLING

NEF Series engines are available in naturally aspirated, turbocharged and turbocharged with aftercooler versions in order to reach highest engine performance in terms of load acceptance & fuel consumption. These features allow final users to optimize their engine installation & final genset performance.

600H OIL INTERVAL CHANGE

NEF Series adopts combustion chambers and high pressure injection system optimized to reduce oil dilution. Optimum engine design in terms of mechanical clearances, piston rings and oil system calculation.

SERVICEABILITY & MAINTAINABILITY

Engine ECU (Electronic Control Unit) with CAN-BUS control & monitoring interfaces may be used for advanced real time diagnosis.

ENGINE DESIGN

Multiple injections, balancer counterweights incorporated in crankshaft webs, rear gear train layout, camshaft in crankcase, suspended oil pan, ladder frame cylinder block.

COMPONENT INTEGRATION

Integrated CCV (Closed Crankcase Ventilation) system and engine design oriented to high component integration. Water-oil cooler, oil and water pumps are completely integrated in the engine block.

OPTION LIST

Options for hot part guards, water jacket heater, alarm senders, oil drain systems, front radiator guard.

Benefits

- ✓ EXCELLENT TRANSIENT LOAD RESPONSE FOR SEVERAL POWER GENERATION APPLICATIONS
- ✓ FLAT TORQUE AND HIGH ENGINE THERMODYNAMIC PERFORMANCE WITH LOW FUEL CONSUMPTION
- ✓ ENGINE ADAPTABLE TO MARKET REQUEST
- ✓ HIGH PERFORMANCE GUARANTEED IN ALL CONDITIONS
- ✓ HIGH ENGINE POWER DENSITY WITH THE SHORTEST LOAD RESPONSE TIME
- ✓ REDUCED MAINTENANCE NEEDS AND OPERATING COST
- ✓ QUICK SERVICE SUPPORT AND EASY MAINTENANCE
- ✓ VIBRATION & NOISE REDUCTION
- ✓ LEAKAGE PREVENTION
- ✓ CUSTOMER ORIENTATION AND SPECIFIC ENGINE BASED ON APPLICATION TYPE





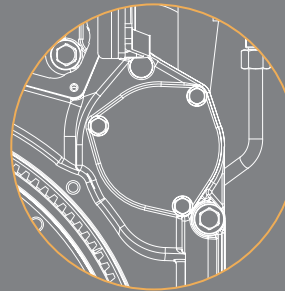
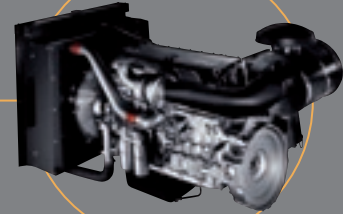


The Cursor Series

If you are looking for top power, fast load response and high power density together with low fuel consumption, **CURSOR Series** is the best choice you can get.

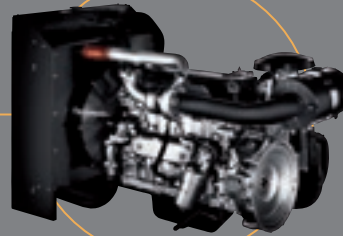
Characterized by outstanding performance, the **CURSOR Series** is dedicated to stationary applications from 195 to 490 kW. Superb performance is just one of the benefits of these engines: high reliability, long maintenance intervals, which means extremely low operating cost, are the core values of the range.

C87 TE



C10 TE

C13 TE



MODEL	CYLINDER ARRANGEMENT AIR INTAKE EXHAUST SYSTEM	INJECTION SYSTEM	DISPLACEMENT LITERS	STAND-BY POWER OUTPUT [kWm]		EMISSIONS	PRIME POWER OUTPUT [kWm]	
				1500 RPM	1800 RPM		1500 RPM	1800 RPM
C87 TE3	6L / TAA	ECR	8,7	249	271	UR	229	249
C87 TE4	6L / TAA	ECR	8,7	299	333	UR	275	306
C87 TE1D	6L / TAA	ECR	8,7	256	280	UR ¹ /Tier 3	232	254
C87 TE1F	6L / TAA	ECR	8,7	195	—	Stage IIIA	177	—
C87 TE3F	6L / TAA	ECR	8,7	256	—	Stage IIIA	232	—
C87 TE4F*	6L / TAA / I-EGR	ECR	8,7	278	316	Stage IIIA/Tier 3	250	284
C10 TE1D	6L / TAA	EUI	10,3	290	317	UR ¹ /Tier 3	264	287
C10 TE1F	6L / TAA / I-EGR	EUI	10,3	290	—	Stage IIIA	263	—
CR13 TE6W	6L / TAA	ECR	12,9	414	454	UR	371	400
CR13 TE7W	6L / TAA	ECR	12,9	459	474	UR	425	428
C13 TE2A	6L / TAA	EUI	12,9	330	360	UR ¹	300	327
C13 TE3A	6L / TAA	EUI	12,9	387	398	UR ¹	352	360
C13 TE3X	6L / TAA	EUI	12,9	—	371	Tier 3	—	337
C13 TE1F	6L / TAA / I-EGR	EUI	12,9	327	—	Stage IIIA	296	—
C13 TE2F	6L / TAA / I-EGR	EUI	12,9	377	—	Stage IIIA	342	—
C13 TE2F	6L / TAA / I-EGR	EUI	12,9	377	—	Stage IIIA	342	—
CR16 TE1W	6L / TAA	ECR	15,9	557	578	UR	505	523

LEGEND

ARRANGEMENT

L In line

AIR INTAKE

TAA Turbocharged Aftercooler

EXHAUST SYSTEM

I-EGR Internal Exhaust Gas Recirculation

INJECTION SYSTEM

ECR Electronic Common Rail

EUI Electronic Unit Injector

UR

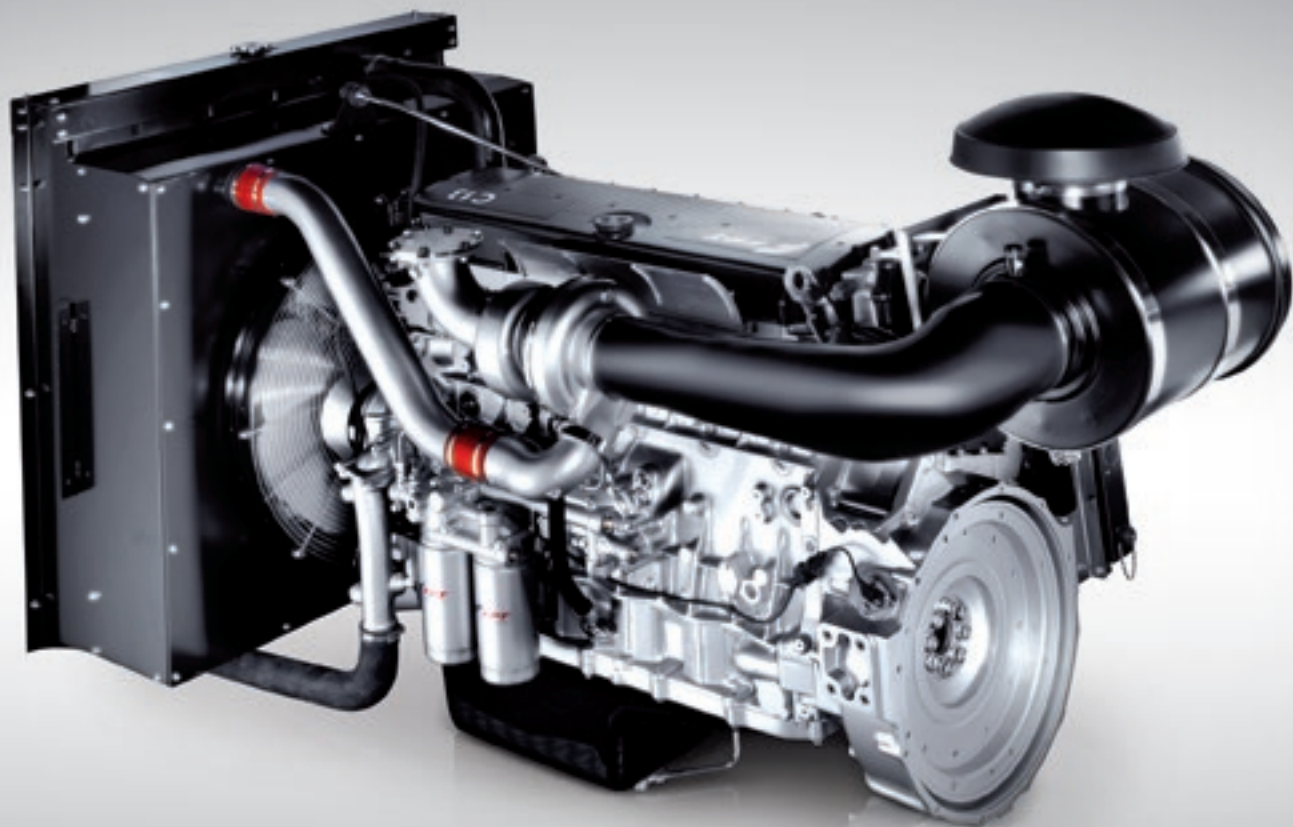
Unregulated

UR¹

Previously EU Stage II

*

Available from 2nd Half 2017





Features

PERFORMANCE

Class G₃ of ISO 8528 standard certification of excellent performance related to load response.

INJECTION SYSTEM

Accurate fuel delivery to achieve top performance in terms of load response and top power with low fuel consumption:

- C87 with very compact 2nd generation Common Rail System;
 - C10 with electronic controlled unit injectors;
 - C13 with electronic controlled unit injectors and heavy duty Common Rail system.
-

DUAL SPEED MODE

Possibility to switch from 1500 rpm to 1800 rpm. User friendly thanks to interface card.

SPECIFIC FEATURES

Minimum cold starting temperature without auxiliaries down to -10°C (with grid heater down to -25°).

Most demanding emissions performance achieved without external EGR or VGT.

AIR HANDLING

Turbocharged with air-to-air charge cooled air system with 4 valves per cylinder to increase engine efficiency thanks to the optimization of thermodynamic performance in terms of load response & fuel consumption.

600H OIL INTERVAL CHANGE

CURSOR Series adopts combustion chambers and high pressure injection system optimized to reduce oil dilution. Optimum engine design in terms of mechanical clearances, piston rings and oil system calculation.

SERVICEABILITY & MAINTAINABILITY

Worldwide service network. Engine ECU (Electronic Control Unit) with CAN-BUS control & monitoring interfaces may be used for advanced real time diagnosis.

ENGINE DESIGN

Multiple injections, balancer counterweights incorporated in crankshaft webs, rear geartrain layout, camshaft in crankcase, suspended oil pan, ladder frame cylinder block.

COMPONENT INTEGRATION

Integrated CCV (Closed Crankcase Ventilation) system and engine design oriented to high component integration. Water-oil cooler, oil and water pumps are completely integrated in the engine block.

OPTION LIST

Options for hot part guards, water jacket heater, alarm senders, oil drain systems, front radiator guard.

Benefits

- ✓ EXCELLENT TRANSIENT LOAD RESPONSE FOR SEVERAL POWER GENERATION APPLICATIONS
- ✓ HIGH ENGINE THERMODYNAMIC PERFORMANCE WITH LOW FUEL CONSUMPTION
- ✓ ENGINE ADAPTABLE TO MARKET REQUEST
- ✓ HIGH PERFORMANCE GUARANTEED IN ALL CONDITIONS
- ✓ HIGH ENGINE POWER DENSITY WITH THE SHORTEST LOAD RESPONSE TIME
- ✓ REDUCED MAINTENANCE NEEDS AND OPERATING COST
- ✓ QUICK SERVICE SUPPORT AND EASY MAINTENANCE
- ✓ VIBRATION & NOISE REDUCTION ENGINE STRUCTURAL STIFFNESS
- ✓ LEAKAGE PREVENTION
- ✓ CUSTOMER ORIENTATION AND SPECIFIC ENGINE ARCHITECTURE BASED ON APPLICATION TYPE



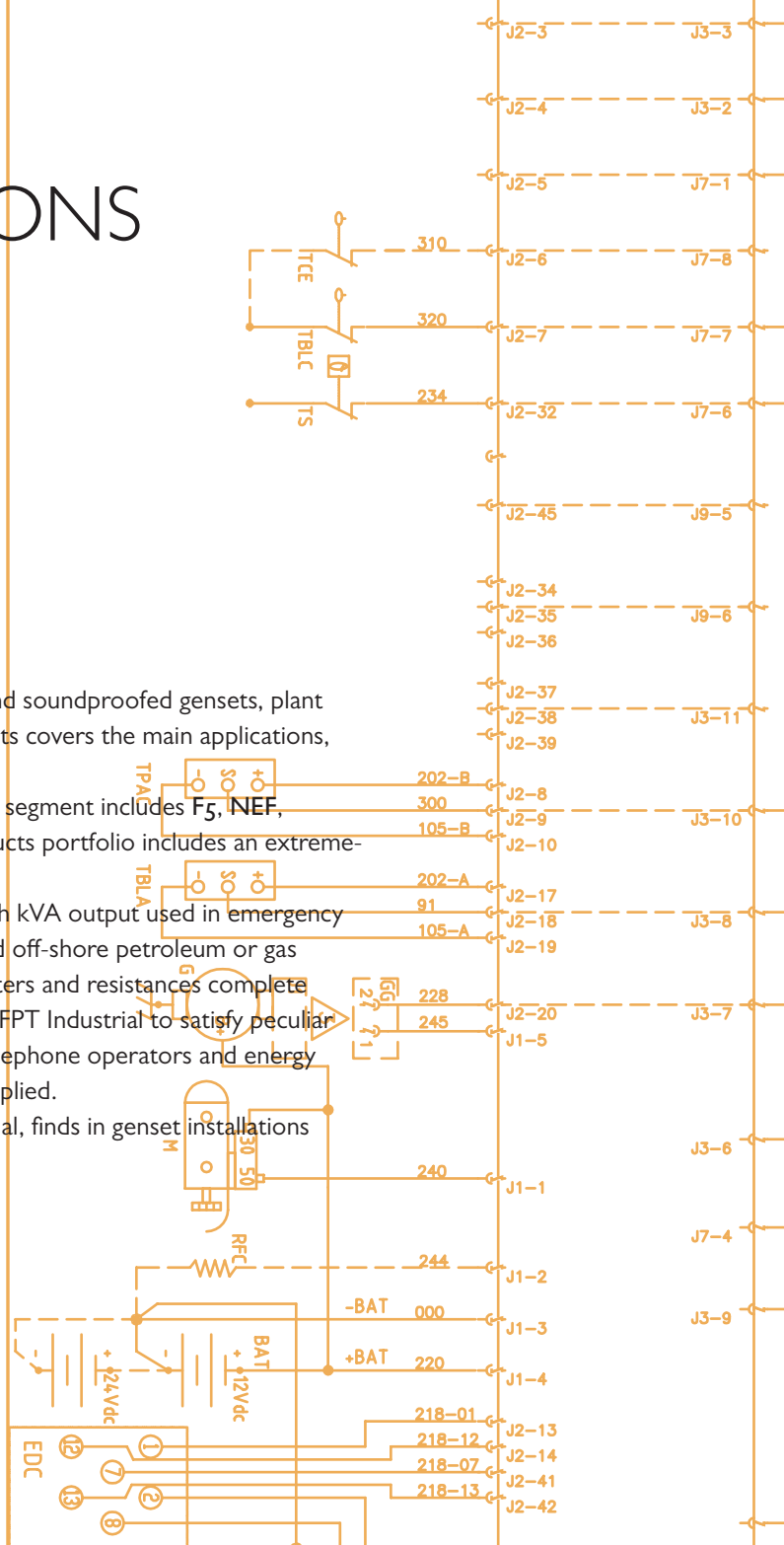
ENERGY SOLUTIONS POWERED BY FPT INDUSTRIAL

FPT Industrial Power Generation offer includes open and soundproofed gensets, plant and after-sale services. The range of standard power sets covers the main applications, such as emergency services and self-generation.

FPT Industrial engines line-up for Power Generation segment includes **F5**, **NEF**, and **CURSOR** series ranging from 30 to 500 kVA. Products portfolio includes an extremely wide offer of customized configurations.

Power sets in containers are available to provide high kVA output used in emergency installations and to generate electricity for on-shore and off-shore petroleum or gas platforms. Low voltage distribution panels, specific shelters and resistances complete the product mix. A strong customer orientation allows FPT Industrial to satisfy peculiar requirements of contractors, such as Armed Forces, telephone operators and energy distributors, with products tailor-made and turnkey supplied.

Environmental respect, top priority for FPT Industrial, finds in genset installations the perfect match with outstanding performance.



Open gensets

from 30 to 500 kVA

MODEL	POWER kVA ¹			
	50 Hz		60 Hz	
	PRIME	STAND-BY	PRIME	STAND-BY
GE F3230MA	30	33	—	—
GE F3240MA	40	44	—	—
GE F3250MA	50	55	—	—
GE NEF45MA	45	50	—	—
GENEF50M	50	55	—	—
GE NEF60MA	60	66	66	73
GE NEF75MA	75	82	—	—
GENEF80M	80	88	—	—
GE NEF85MA	85	94	100	110
GE NEF100MA	100	110	110	121
GENEF120M	120	132	—	—
GENEF125M	125	138	138	160
GENEF130MA	130	143	145	160
GENEF160MA	160	176	170	187
GENEF170M	170	187	—	—
GENEF200EA	200	220	225	248
GENEF200M	200	220	—	—
GECURSOR250ED	250	275	270	297
GECURSOR300ED	300	330	330	363
GECURSOR350EA	350	385	380	418
GECURSOR400EA	400	440	420	462
GECURSOR500E**	500*	550*	510*	560*

LEGEND

AIR INTAKE

NA	Naturally Aspirated
TC	Turbocharged
TAA	Turbocharged Aftercooler

INJECTION SYSTEM

M	Mechanical Injection
ECR	Electronic Common Rail
EUI	Electronic Unit Injector

GLOSSARY

PRIME POWER

Maximum power available with varying loads for an unlimited number of hours. The average power output during a 24 h period of operation must not exceed 80% of the declared prime power between the prescribed maintenance intervals and at standard environmental conditions. A 10% overload is permissible for 1 hour every 12 hours of operation.

STAND-BY POWER

Maximum power available for a period of 500 hours/year with a mean load factor of 90% of declared stand-by power. No kind of overload is allowable for this use.

1. Performance according to ISO 8528 conditions. Power factor 0,8
2. Dry weight with standard accessories (may change depending on alternator type)

UR	Unregulated
UR ¹	Previously EU Stage II
**	Available on 1st Half of 2017
*	Preliminary Data

OPEN RANGE – 30 TO 500 kVA ENGINE SPECIFICATION						DIMENSIONS (mm)			DRY WEIGHT ¹ (kg)
G-DRIVE	CYL/AIR INTAKE	INJECTION SYSTEM	DISPLACEMENT LITERS	EMISSIONS	L	W	H		
F32AM1A	4L / NA	M	3,2	UR ¹	1833	730	1416	590	
F32SM1A	4L / TC	M	3,2	UR ¹	1833	730	1416	635	
F32TM1A	4L / TAA	M	3,2	UR ¹	1833	730	1416	730	
N45AM1A	4L / NA	M	4,5	UR ¹	2300	730	1285	852	
N45AM2	4L / NA	M	4,5	UR	2300	730	1285	1000	
N45SM1A	4L / TC	M	4,5	UR ¹	2300	730	1322	886	
N45SM2A	4L / TC	M	4,5	UR ¹	2300	730	1322	902	
N45SM3	4L / TC	M	4,5	UR	2300	730	1475	1110	
N45TM1A	4L / TAA	M	4,5	UR ¹	2300	730	1475	1130	
N45TM2A	4L / TAA	M	4,5	UR ¹	2300	730	1475	1160	
N45TM3	4L / TAA	M	4,5	UR	2300	730	1475	1110	
N67SM1	6L / TC	M	6,7	UR	2800	780	1423	1300	
N67TM2A	6L / TAA	M	6,7	UR ¹	2800	780	1423	1315	
N67TM3A	6L / TAA	M	6,7	UR ¹	2800	780	1423	1440	
N67TM4	6L / TAA	M	6,7	UR	2800	780	1423	1440	
N67TE2A	6L / TAA	ECR	6,7	UR ¹	2800	780	1423	1570	
N67TM7	6L / TAA	M	6,7	UR	2800	780	1423	1440	
C87TE1D	6L / TAA	ECR	8,7	UR ¹	3020	1055	1690	1950	
C10TE1D	6L / TAA	EUI	10,3	UR ¹	3530	1100	1730	2500	
C13TE2A	6L / TAA	EUI	12,9	UR ¹	3530	1100	1730	2750	
C13TE3A	6L / TAA	EUI	12,9	UR ¹	3530	1285	1820	2800	
CR13TE7W	6L / TAA	ECR	12,9	UR	3530*	1286*	1820*	2800*	

Features

RELIABILITY

- Compact layout
- High quality level of components

CUSTOMIZATION

- Manual or automatic control panel
- 3P or 4P circuit breaker availability
- Automatic Transfer Switch (available as option)

MAINTENANCE & SERVICEABILITY

- Best in class for oil and filters change intervals (600 hours)
- Easy access for maintenance operations

ENVIRONMENTAL CARE

- Powered by low emissions engines

FLEXIBILITY

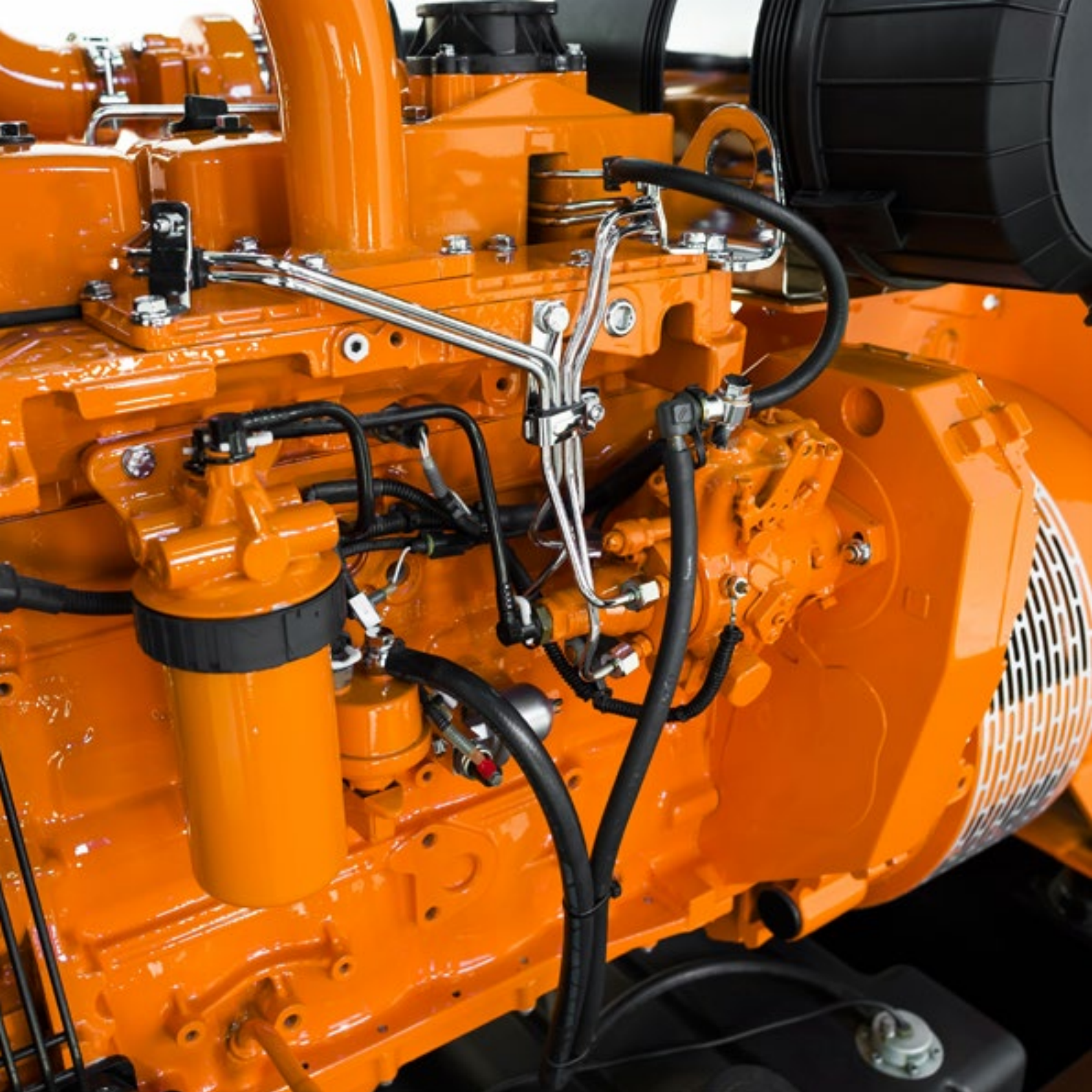
- Integrated Fuel Tank (F5 series: 80 lt; NEF series: 180 lt; CURSOR series: 500 lt)

AIR HANDLING

- Turbocharged with air-to-air charge cooled air system with 4 valves per cylinder to increase the engine efficiency by the optimization of thermodynamic performance in terms of load response & fuel consumption.

SAFETY

- Hot parts protection grids availability
-









FPT
POWERTRAIN TECHNOLOGIES

100 kVA

Soundproofed gensets

from 30 to 500 kVA

MODEL	POWER kVA ¹				STANDARDS SOUNDPROOFED RANGE – 30 TO 500 kVA ENGINE SPECIFICATION				
	50 Hz		60 Hz		G-DRIVE	CYL/AIR INTAKE	INJECTION SYSTEM	DISPLACEMENT LITERS	EMISSIONS
	PRIME	STAND-BY	PRIME	STAND-BY					
GS F3230	30	33	–	–	F32AM1A	4L/NA	M	3,2	UR ¹
GS F3240	40	44	–	–	F32SM1A	4L/TC	M	3,2	UR ¹
GS NEF45	45	50	–	–	N45AM1A	4L/NA	M	4,5	UR ¹
GS NEF50-ne	50	55	–	–	N45AM2	4L/NA	M	4,5	UR
GS NEF60	60	66	66	73	N45SM1A	4L/TC	M	4,5	UR ¹
GS NEF75	75	82	–	–	N45SM2A	4L/TC	M	4,5	UR ¹
GS NEF80-ne	80	88	100	110	N45SM3	4L/TC	M	4,5	UR
GS NEF85	85	94	100	110	N45TM1A	4L/TAA	M	4,5	UR ¹
GS NEF100	100	110	110	121	N45TM2A	4L/TAA	M	4,5	UR ¹
GS NEF120-ne	120	132	–	–	N45TM3	4L/TAA	M	4,5	UR
GS NEF125-ne	125	138	138	160	N67SM1	6L/TC	M	6,7	UR
GS NEF130	130	143	143	160	N67TM2A	6L/TAA	M	6,7	UR ¹
GS NEF160	160	176	170	187	N67TM3A	6L/TAA	M	6,7	UR ¹
GS NEF170-ne	170	187	–	–	N67TM4	6L/TAA	M	6,7	UR
GS NEF200-ne	200	220	–	–	N67TM7	6L/TAA	M	6,7	UR
GS NEF200	200	220	225	248	N67TE2A	6L/TAA	ECR	6,7	UR ¹
GS CURSOR250-ne	250	275	275	303	C87TE3	6L/TAA	ECR	8,7	UR
GS CURSOR250	250	275	270	297	C87TE1D	6L/TAA	ECR	8,7	UR ¹
GS CURSOR300-ne	300	330	330	363	C87TE4	6L/TAA	ECR	8,7	UR
GS CURSOR300	300	330	330	363	C10TE1D	6L/TAA	EUI	10,3	UR ¹
GS CURSOR350	350	385	380	418	C13TE2A	6L/TAA	EUI	12,9	UR ¹
GS CURSOR400	400	440	420	462	C13TE3A	6L/TAA	EUI	12,9	UR ¹
GS CURSOR500-ne	500	550	510	560	CR13TE7W	6L/TAA	ECR	12,9	UR

LEGEND

AIR INTAKE

NA	Naturally Aspirated
TC	Turbocharged
TAA	Turbocharged Aftercooler

INJECTION SYSTEM

M	Mechanical Injection
ECR	Electronic Common Rail
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1. Performance according to ISO 8528 conditions. Power factor 0,8

UR	Unregulated
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GLOSSARY

PRIME POWER

Maximum power available with varying loads for an unlimited number of hours. The average power output during a 24 h period of operation must not exceed 80% of the declared prime power between the prescribed maintenance intervals and at standard environmental conditions. A 10% overload is permissible for 1 hour every 12 hours of operation.

STAND-BY POWER

Maximum power available for a period of 500 hours/year with a mean load factor of 90% of declared stand-by power. No kind of overload is allowable for this use.

Features

TRANSPORTABILITY

Significant improvement in terms of maneuverability: thanks to dedicated slots in the lower part of the frame and lifting hooks on the top, it's possible to move the genset either by forklift or using a crane. The single lift hook, in rental version, contributes to further increase of handiness and safety transportation of the genset.

MAINTENANCE

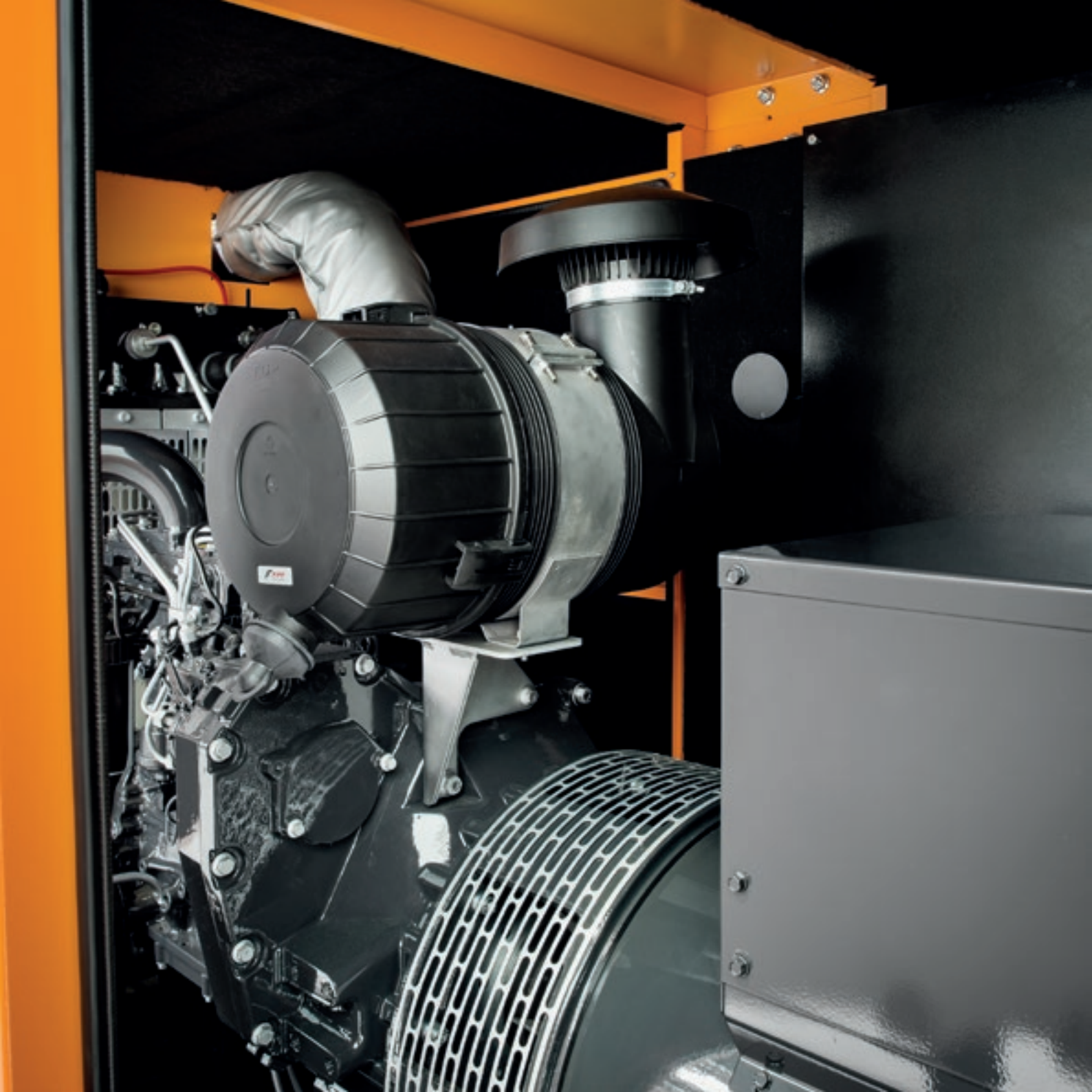
Low maintenance needs and running costs are ensured by best-in-class oil change interval of up to 800h.
All day maintenance requirements can be easily performed thanks to wide doors giving full access to the engine and other components.

REFUELING OPERATIONS

Thanks to the external fuel tank filler cap, it has been ensured an easy way to fill up the fuel tank; available upon request is the possibility to refuel from an external fuel tank through by-pass fuel lines. The fuel tank is integrated in the sub-base and it is equipped with two level indicators: a visual type directly on the tank and an electrical one with info displayed on the control panel.

VIBRATIONS AND NOISE REDUCTION

Thanks to sound-absorbing fireproof panels, low noise levels are ensured and environmental impact is reduced; sound level is in line with market requirements (70dbA @ 7 m).
Special anti-vibration supports anchor the genset to the base frame, minimizing vibrations and helping to reduce energy transfer to building structures and leading genset components to a longer life.





FPPT
POWERTRAIN TECHNOLOGIES
100 kVA

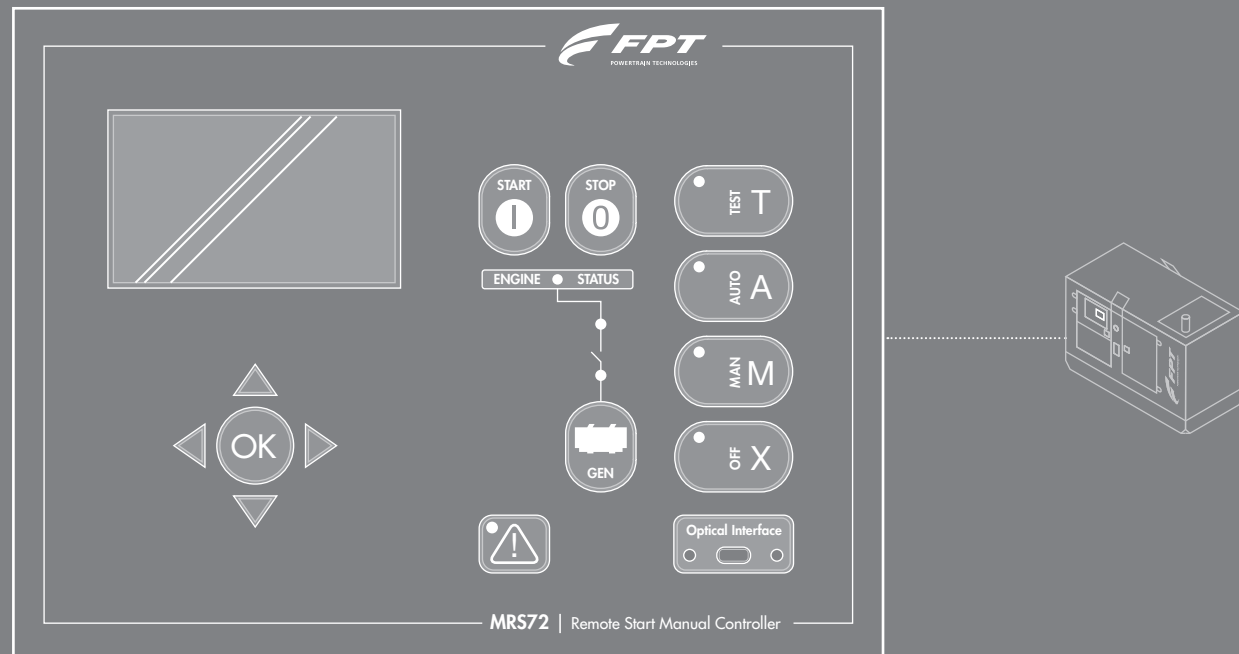




MRS72

Manual Control Panel with Remote Start

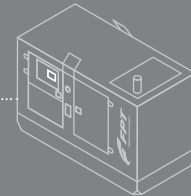
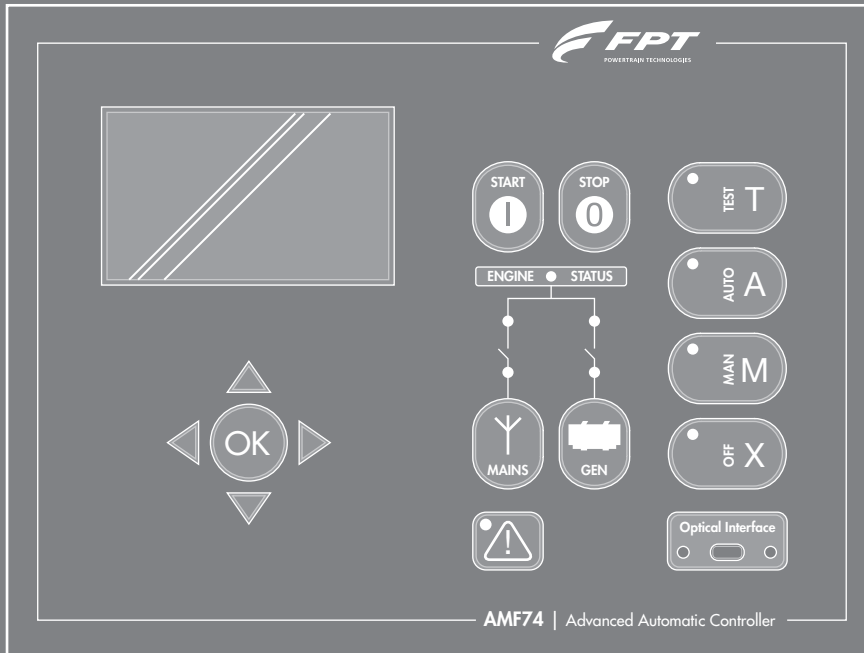
- Start up and shut down keys through an external signal;
- Engine and alternator parameters monitoring;
- “Manual” and “Super-manual” operational modes;
- Storage of last 250 events;
- Multilingual diagnostic software (Italian, English, French and Spanish);
- PC and/or on site (through optical key) programming;
- Battery charger to ensure correct battery efficiency and command/control system alimentation (optional).



AMF74

Automatic Control Panel

- Automatic start up when the voltage of the main electrical network changes from a predefined value (programmable);
- Automatic insertion as main source of electrical energy as the working parameters are reached;
- Automatic disengagement once the nominal voltage of the main electrical network is reached;
- Programmable slow shut down to allow the engine cooling gradually;
- Engine and alternator parameters monitoring;
- "Manual", "Automatic", "Test" and "Super-manual" operational modes;
- Storage of last 250 events;
- Multilingual diagnostic software (Italian, English, French and Spanish);
- PC and/or on site (through optical key) programming;
- Maintenance program indicating the routine maintenance to be performed;
- Battery charger to ensure correct battery efficiency and command/control system alimentation (optional).







powered by FPT Industrial

Located in France, at Fécamp, 2HE is an FPT Industrial company offering a wide range of tailored power generation solutions aimed to satisfy customers with specific



needs, such as Armies, oil and gas companies, energy providers, nuclear power stations and hospitals. 2HE offer includes “turnkey” supply, engineering support, production and installation, together with assistance service and customer training.

The company portfolio is enriched by special products like 400 Hz units for airport applications, gensets in containers up to 6 MWatt, specific shelters, energy systems for off-shore installations, resistances and low voltage distribution panels (specifically designed for nautical and nuclear applications).

Thanks to its proven expertise to manage complex project from blank sheet up to maintenance and service activity worldwide, 2HE is a reference in the highly specialized power generation segment.



LEGEND

● Plant

○ R&D

⦿ Plant + R&D

All the pictures, drawings illustrations and descriptions contained in this brochure are based on product information available to FPT Industrial at the time of printing (31/01/2017).

Some of the engine line-ups may refer to a specific market configuration which may not be present or offered for sale available in all other markets. The colors featured in this brochure may differ from the originals.

FPT Industrial reserves the right to introduce any modifications, at any time and without any prior advance notice, to design, material, components equipment and/or technical specifications.

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