# On Road
## Light Commercial Vehicles
## F1A

# S23 ENT
## 100 kW (136 HP) @ 3600 rpm
## Euro 5 / Euro 5+

## SPECIFICATIONS

| | | |
|---|---|---|
| Thermodynamic Cycle | | Diesel 4 stroke |
| Air Handling | | TCA |
| Bore x Stroke | millimeters | 88 x 94 |
| Total Displacement | liters | 2.3 |
| Valves per cylinder | number | 4 |
| Cooling System | | liquid |
| Direction of Rotation | viewed facing flywheel | CCW |
| Compression ratio | | 16.2:1 |
| Injection System | | ECR |
| Arrangement | | 4L |

### PERFORMANCES

| | | | |
|---|---|---|---|
| Peak power | kW (HP) @ rpm | | 100 ( 136 ) @ 3600 |
| Peak torque | Nm (kgm) @ rpm | | 350 (36) @ 1500 |
| High idle speed | rpm | | 4600 |
| Low idle speed | rpm | | ±800 |
| Minimum starting temperature without auxiliaries | | °C | -25° |
| Oil and oil filter maintenance interval for replacement | | kilometer | - |

## STANDARD CONFIGURATION

| | | | |
|---|---|---|---|
| Flywheel housing | type | | n.a. |
| Flywheel size | inch | | 10" 1/2 dual mass |
| Intake manifold location | | | engine front direction / left side |
| Exhaust manifold location | | | middle high / right side / back |
| Turbocharger | | | Variable Geometry Turbocharger |
| Turbocharger location | | | center / right side |
| Fan transmission ratio | | | n.a. |
| Distance between fan - crankshaft centers | | millimeters | X=-19 Y=165 |
| Fuel filter | | number | included in pressure regulator |
| Oil filter | | number | single cartridge - left side |
| Oil sump | | | suspended sheet steel |
| Oil vapours blow-by circuit | | | close case ventilation |
| Oil heat exchanger | | | integrated into the block |
| Oil filler | | | on valve cover |
| Starter | | | 12 V - 2.5kW |
| Alternator | | | 12 V (110 A - 140 A) |
| Engine stop device | | | by electronic control unit |
| Wiring harness | | | interface wiring loom with accessories |
| Painting color | | | n.a. |
| Air compressor | | | - |
| Hydraulic steering pump | | liters-minute | - |
| Maximum torque available from crankshaft pulley | | newton-meter | - |

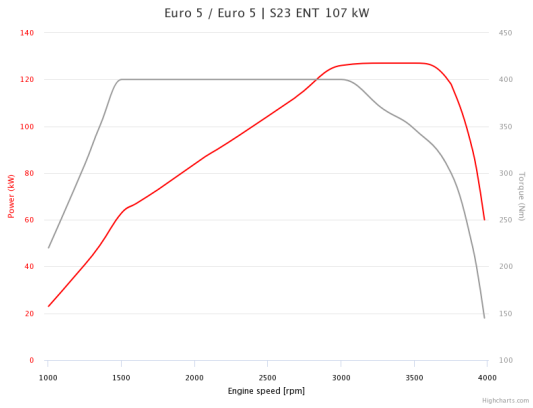
## WEIGHT AND DIMENSIONS

| | | |
|---|---|---|
| Dimensions | LxWxH (mm) | 689 x 576 x 829 |
| Dry Weight | Kg | 222 |

DIMENSIONS CAN BE CHANGED ACCORDING TO ENGINE OPTIONS

IMAGES SHOWN ARE FOR ILLUSTRATION PURPOSE ONLY

## POWER & TORQUE




## NOT INCLUDED IN STANDARD CONFIGURATION

| | | |
|---|---|---|
| Power Take Off (PTO) | | - |
| PTO - transmission ratio | | n.a. |
| PTO - maximum available torque | | - - - |
| Battery - minimum capacity recommended | Ah | 105 Ah (12V) |
| Battery - minimum cold cranking capacity recommended | Ah | 12 V - 800 Ah |

### LEGEND

**Arrangement**
L (in line)
V (90° "V" configuration)

**Air Handling**
TCA (Turbocharged with aftercooler)
TC (Turbocharged)
NA (Naturally Aspirated)

**Turbocharger**
WG (Wastegate)
VGT (Variable Geometry Turbocharger)
TST (Twin Stage Turbocharge)

**Injection System**
M (Mechanical)
ECR (Electronic Common Rail)
EUI (Electronic Unit Injector)
MPI (Multi Point Injection)

**Emission standard**
EEV (Enhanced Environmentally friendly Vehicle)

**Exhaust System**
EGR (Exhaust Gas Recirculation)
SCR (Selective Catalytic Reduction)

**FOR INFORMATION ON THE AVAILABLE RATINGS NOT LISTED IN THIS DOCUMENT PLEASE CONTACT THE FPT INDUSTRIAL SALES NETWORK OR VISIT OUR SITE WWW.FPTINDUSTRIAL.COM**

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FPT POWERTRAIN TECHNOLOGIES

ON ROAD

## AFTER TREATMENT SYSTEM

-

ON ROAD

### LEGEND

| Arrangement | Air Handling | Turbocharger | Injection System | Exhaust System |
|---|---|---|---|---|
| L (in line) | TCA (Turbocharged with aftercooler) | WG (Wastegate) | M (Mechanical) | EGR (Exhaust Gas Recirculation) |
| V (90° "V" configuration) | TC (Turbocharged) | VGT (Variable Geometry Turbocharger) | ECR (Electronic Common Rail) | SCR (Selective Catalytic Reduction) |
| | NA (Naturally Aspirated) | | EUI (Electronic Unit Injector) | |
| | | TST (Twin Stage Turbocharge) | MPI (Multi Point Injection) | |

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