

PACCAR PX-4 engines



The 3.8 litre Euro 6 PACCAR PX-4 engine uses common rail technology, a fixed geometry turbo and advanced controls for maximum efficiency.

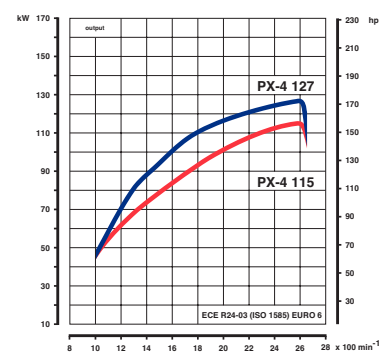
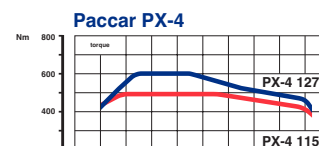
| Engine | Output - kW (hp) | Torque - Nm |
|----------|------------------------|------------------------|
| PX-4 115 | 115 (156) ¹ | 500 at 1200 - 1900 rpm |
| PX-4 127 | 127 (172) ¹ | 600 at 1300 - 1700 rpm |

¹ at rated engine speed 2600 rpm

General information

Four-cylinder in-line turbocharged diesel engine with intercooling. Ultra clean combustion with Exhaust Gas Recirculation (EGR), Diesel Particulate Filter (DPF) and Selective Catalytic Reduction (SCR) aftertreatment for Euro 6 emission levels.

| | |
|---------------------|--------------|
| Bore x stroke | 102 x 115 mm |
| Piston displacement | 3.8 litres |
| Compression ratio | 17.3 to 1 |



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Main construction

| | |
|----------------|--|
| Cylinder block | cast iron stiffened ladder frame, contoured and deep skirted with cylinder bores direct in the block |
| Cylinder | head one-piece cast iron cross-flow type cylinder head composite valve cover |
| Valves | four valves per cylinder |
| Pistons | aluminium alloy pistons, Ni-resist with symmetrical re-entrant combustion chamber; gallery cooled |
| Piston rings | 2 compression rings; 1 scraper ring |
| Crankshaft | cast alloy steel with balance weights; supported in 5 bearings |
| Cam shaft | steel forged and induction hardened supported in 4 bearings; driven from the timing gears (single plain train at the rear of the engine) |
| Oil sump | 17 litres composite oil sump, closed crankcase ventilation with impactor |

Fuel injection and induction

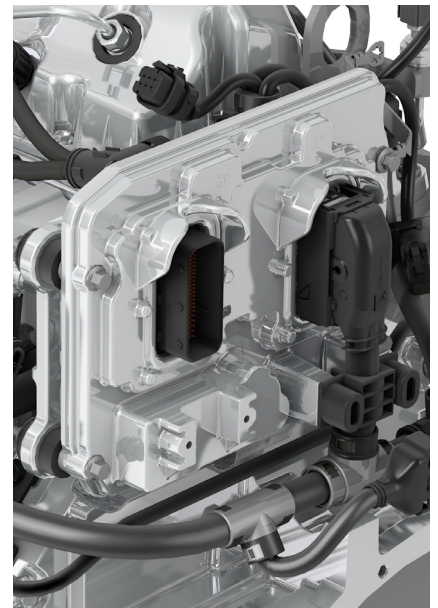
| | |
|--------------------|---|
| Fuel injection | Common Rail (CR) injection system |
| Injectors | electronically controlled |
| Injection timing | variable start and duration, electronically controlled |
| Injection pressure | max. 1800 bar |
| Fuel injection | start and duration, as well as the injection pressure, are controlled by the engine mounted electronic control module |
| Induction | turbocharged with charge cooling (intercooling) |
| Turbocharger | fixed geometry turbo |
| Emission control | exhaust gas recirculation (EGR) |

Lubrication

| | |
|------------|---|
| Oil filter | full-flow oil filter with replaceable element |
| Oil cooler | coolant-to-oil plate type heat exchanger |
| Oil pump | concentric oil pump, driven by crankshaft |

Cooling system

| | |
|------------|--|
| Pump | belt driven centrifugal pump |
| Thermostat | single wax type in cylinder head |
| Fan drive | crankshaft driven with temperature controlled viscous coupling |
| Expansion | tank translucent tank (for visual level check) behind the front grille panel |



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Auxiliaries and exhaust brake

| | |
|---------------|---|
| Compressor | driven from rear timing gears |
| Alternator | poly-V-belt driven at engine front |
| Steering pump | driven from timing gears (via compressor) |
| Exhaust brake | electronically controlled throttle valve |

City distribution

The 4 cylinder PX-4 engines are suitable for frequent stop distribution trucks up to 7.5 tonnes.

They are available with outputs up to 172 hp with a high maximum torque of 600 Nm.

The engines have composite oil sumps to save weight and reduce noise. The engine mounts isolate engine vibrations from chassis and cab. Efficient fans provide high cooling air flow against a low power demand.

The engines feature a fast transient response and general driveability. The availability of more torque at a low engine speed results in better drive-off characteristics.

Performance

All PACCAR PX-4 engines deliver excellent torque at low engine speeds resulting in easy and comfortable driving, even in dense traffic without frequent gear changes. The characteristics make the PX-4 engines pre-eminently suitable for tough inner-city distribution jobs.

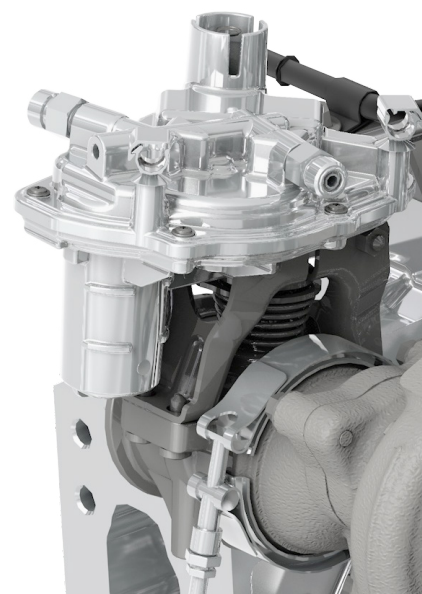
The standard exhaust brake delivers up to 90 kW braking power.

Fuel efficiency

A well-controlled combustion process together with additional technology to achieve the ultra-low Euro 6 emission values. The highly efficient combustion results in an excellent fuel economy as another leading edge of the PACCAR PX-4 engines.

Environment

PACCAR PX-4 engines use the proven PACCAR technology for exhaust gas aftertreatment, consisting of a Diesel Particulate Filter (DPF) and a Selective Catalytic Reducer (SCR) with airless AdBlue injection. The neatly packed aftertreatment unit is placed at the right-hand side of the chassis.



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Legend:

- | | |
|------------------------------|----------------------------------|
| 1. CCV cover | 8. Poly-V-belt auxiliary drive |
| 2. Exhaust manifold | 9. Crank shaft |
| 3. Exhaust brake | 10. Alternator |
| 4. Turbo with fixed geometry | 11. Air conditioning compressor |
| 5. Starter engine | 12. Water pump |
| 6. Engine block | 13. Closed Crankcase Ventilation |
| 7. Oil sump | 14. ECU |

