The SDI® 1.9 Industrial Engine
Drive for your ideas.
The SDI® 1.9 Industrial Engine

Volkswagen’s tried-and-trusted SDI® technology – implemented with huge success in VW cars – gives the SDI® 1.9 Industrial Engine distinct and definite advantages.

Thanks to optimum use of fuel, this in-line, 4-cylinder, water-cooled diesel engine guarantees exceptionally low fuel consumption and running costs matched by very high power density. Fully electronic, state-of-the-art fuel injection ensures low emission levels. What’s more, the SDI® packs it all into extremely compact dimensions. Valve timing by means of a single overhead camshaft makes for sure, simple maintenance.

The performance capabilities of the SDI® 1.9 Industrial Engine are reflected in its specifications.

Volkswagen Industrial Engines

The advantages are crystal-clear: engine technology proven a million times over. All Volkswagen industrial engines are powered by the experience, innovative prowess and R&D strength of one of the world’s largest diesel engine manufacturers.

Whether it’s reliability, quality, technical standards, cost efficiency or environmental sensitivity – the result is a keen cutting edge across the board.

What else would you expect from the Volkswagens among industrial engines?
The SDI® 1.9 Industrial Engine in detail

- **Capacity**: 1,896 cm³
- **Bore / stroke**: 79.5 mm / 95.5 mm
- **Output (89/491/EWG)**: 44 kW at 3,600 rpm
- **Max. torque (89/491/EWG)**: 130 Nm at 2,200 rpm
- **Compression ratio**: 19.5 : 1
- **Weight (dry)**: 150 kg
- **Spec. fuel consumption (at greatest efficiency)**: 224 g/kWh
- **Crankcase**: Cast iron
- **Cylinder head**: Aluminium alloy
- **Crankshaft**: Steel, die forged

### Injection system
- Direct injection with Bosch electronic VP37 distributor type pump
- **Control unit**: Bosch EDC 15 V+
- **Injector**: Dual spring system with 5 hole nozzle

### Engine electrical equipment
- **Alternator**: 12 V / 90 A
- **Starter**: 12 V / 1.8 kW
- **Glow plugs**: 12 V

### Fuel
- Diesel according to DIN EN 590, minimum cetane number > 49

### Lubrication system
- Pressure lubrication system, chain driven oil pump, full flow oil filter
- **Oil cooler**: Oil / water heat exchange
- **Oil pressure (at 2,000 rpm and 80 °C / 176 F)**: min. 2.0 bar
- **Oil consumption**: 0.05 – 0.1 l/h
- **Oil filter**: Vertical, with filter cartridge

### Cooling system
- Sealed cooling system
  (overpressure system with separate expansion tank and excess pressure valve)

### Permitted engine operating data
- **Max. permitted drive take-off from crankshaft**: 50 Nm
- **At belt pulley end**: 50 Nm
- **Min. permitted cold start temperature**: −24 °C / −11.2 F
- **Max. permitted engine oil temp. (in sump)**: 130 °C / 266 F
- **Max. permitted coolant temp. (outlet)**: 105 °C / 221 F
- **Upper idling speed (engine not under load)**: 4,000 rpm
- **Lower idling speed**: 900 rpm

### Installation position
- **Standard inclination**: 15° to right
  (viewed from flywheel)