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## Engine

### Engine

Engine type	M96/70	
No. of cylinders	6	
Bore	100 (3.94)	mm (in.)
Stroke	76.4 (3.01)	mm (in.)
Cubic capacity	3600 (219.7)	cm <sup>3</sup> (cu.in.)
Compression ratio	9.4 : 1	
Max. engine power as per 80/1269/EEC	309 (420)	kW (HP)
Net power as per SAE J1349	415	HP

Engine

## einordnung

at engine speed	6000	rpm
Max. torque as per 80/1269/EEC	560 (57.08)	Nm (ftlb.)
Net torque as per SAE J1349 at engine speed	415	ftlb.
Max. litre output	2700 to 4600	rpm
	85.8 (116.6) HP/l	kW/l (HP/l) (115.3)
Engine speed limitation by fuel cutoff at		
	6750	rpm
Idle speed	740 ± 40	rpm
Automatic transmission	740 ± 40	rpm
Engine weight as per DIN 70020 A, kg	Manual transmission 260* (572.7)	Automatic transmission 253 (557.27)

\* including ZMS (double-mass flywheel)

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## Engine design

### Engine design

Type	6-cylinder aluminium opposed-cylinder engine, water cooled, bi-Turbo
Crankcase	Vertically divided crankcase made from cast light alloy, separate cylinder housing
Cylinder housing	Cast light alloy with wet light alloy bushings inserted, Nikasil coating
Crankshaft	Forged, supported by 8 bearings
Crankshaft bearings	Plain bearings
Connecting rods	Forged
Con-rod bearings	Plain bearings
Piston	Pressed light alloy
Cylinder	Nikasil cylinder lining
Cylinder head	Light alloy
Camshaft housing	Aluminium alloy
Valve guide	Pressed in
Valve arrangement	2 inlet valves suspended in parallel V arrangement 2 exhaust valves suspended in parallel V arrangement
Valve control	Via flat-base tappets
Camshaft	From the crankshaft via a gear wheel to the intermediate shaft, and from there to the exhaust and inlet camshafts via one double chain each.

## einordnung

Camshaft adjustment	Porsche VarioCam Plus with 30° adjustment
Valve clearance	Hydraulic valve clearance compensation
Valve timing with 1 mm valve travel and zero clearance (kinetic clearance of the operating plunger taken into account, basic inlet camshaft setting early)	Inlet opens at 10° before TDC Inlet closes at 20° after BDC Outlet opens at 41° before BDC Outlet closes at 9° before TDC
Intake system	Tuned–intake system (plastic)

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## Engine cooling

### Engine cooling

Water cooling; 3 radiators ahead of the front wheels.  
(Additional radiator for Tiptronic vehicles)  
Two electric fans, controlled in three stages

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## Engine lubrication

### Engine lubrication

Type	Dry sump lubrication with separate canister
Oil cooling	Via oil–water heat exchanger
Oil filter	On pressure side behind oil pump
Oil pressure at n = 5000 rpm	Approx. 6.5 bar at 90° C
Oil pressure indicator	Oil pressure indicator light plus instrument
Oil consumption	Max. 1.0l/1000km

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## Engine control

### Engine control

Engine control module	Bosch ME 7.8
Ignition	DME, individual spark coils, knock control
Firing order	1–6–2–4–3–5