

Brava 1.8 16v

Technical Specification

Engine

Main features

No. of cylinders	4 in line
Position	front transverse
Cycle-stroke	Otto-4
Bore x stroke	82 x 82.7 mm
Displacement	1747 cc
Compression ratio	10.3 : 1
Max. power output - EC	113 bhp (83 kW)
at rpm	5800
Peak torque - EC	15.7 kgm (154 Nm)
at rpm	4400
Fuel required	unleaded petrol min.95 octane (RON)

Structure

Model	182A2.000
Cylinder spacing	90 mm
Main bearings	5
Cylinder block	cast iron
Cylinder head	light alloy

Timing gear

Number of valves and position	in 47° Vee, with 4 valves per cylinder
Timing	DOHC with hydraulic tappets
Timing control	toothed belt
Valve gear timing	with tappet play 0.45 mm
- Inlet	{ opens 0° BTDC closes 27° ABDC
- Exhaust	{ opens 29° BBDC closes 2° ATDC

Ignition

Fire order	electronic static, combined with injection
Automatic advance	1-3-4-2
Spark plugs	governed by electronic control unit
	NGK BKR 6EKC
	Golden Lodge 2HLDR
	Champion RC7BMC

Fuel feed

Type	MPI Hitachi electronic phased sequential injection
Petrol pump	electric
Air filter	dry-type, with paper cartridge
Injection pressure	3 bar

Emission control

three-way catalytic converter and lambda probe

Lubrication

Type	forced-feed with geared pump and pressure relief valve
Oil filter	cartridge type, total flow

Cooling

Type	liquid cooling, with centrifugal pump, radiator and supplementary expansion tank
Control	with "controlled by-pass" thermostat on secondary circuit
Fan	electric with engagement governed by engine control unit

Transmission

Drive	to front wheels
Clutch	dry, single plate, with disc engagement spring, mechanical control and contact bearing
Diameter of driven plate	215 mm
Clutch lining dimensions (OD x ID)	215 x 145 mm
Gearbox	5 speeds
Transmission ratios	1st 3.909 : 1
	2nd 2.238 : 1
	3rd 1.520 : 1
	4th 1.156 : 1
	5th 0.971 : 1
	Reverse 3.909 : 1
Differential assembly	in gearbox
Final drive	cylindrical, helical
	ratio (no. of teeth) 3.353 : 1 (17/57)

Chassis

Braking system	front discs with floating calipers; rear drums, with self-centring shoes and automatic wear adjustment. Pedal control, with vacuum servo, split-line diagonally linked hydraulic circuits, and brake regulator on rear brake hydraulic circuit. 4-channel, 4-sensor ABS on request
Front discs (ventilated)	
– diameter	257 mm
– total lining area	172 cm ²
Rear drums	
– diameter	203 mm
– linings: width x length	38 x 165 mm
– total lining area	248 cm ²
Parking brake	acting on rear wheels with manual control and engagement telltale on facia
Front suspension	independent wheel MacPherson struts, with transverse lower wishbones anchored to an auxiliary cross member, offset coil springs and anti-roll bar
Flexibility at the wheel	0.51 mm/kg
Wheel wobble	70 mm
	85 mm
Dampers	hydraulic, telescoping, dual action
Front wheel geometry unladen:	
– camber	-7' ± 30'
– caster	2°50' ± 30'
– toe-in	- 1 to + 1 mm
Rear suspension	independent wheel, with trailing arms anchored to an auxiliary cross member, coil springs and anti-roll bar
Flexibility at the wheel	0.53 mm/kg
Wheel wobble	80 mm
	110 mm
Dampers	gas with vulcanised bushes
Rear wheel geometry unladen:	
– camber	-1° ± 30'
– toe-in	-2,5 to +1,5 mm
Steering	rack and pinion with power steering
Steering column	collapsible, energy absorbing with angular adjustment
Turning circle	10.4 m
Steering wheel turns (lock to lock)	3

Wheels

Rims	6 J x 14"-43, in light alloy
Tyres	185/60 R 14 82H

Inflation pressure

- front	2.2 bar	2.3* bar
- rear	2.2 bar	2.5* bar

(*) at constant high speed fully laden

Mini spare wheel

Rim	4 B x 14"-43
Tyre	105/70 R 14 84M
Inflation pressure	4.2 bar
Max. speed permissible	80 km/h

Electrical equipment

Voltage	12 V
Alternator: DC supply	75 A (85 A with climate control)
Starter motor	1.4 kW
Battery: capacity	50 Ah

Weights

Kerb weight (DIN) (*)	1130 kg
Distribution { front	61.1%
{ rear	38.9%

Weight fully laden

Distribution { front	900 kg
{ rear	900 kg
{ total	1680 kg
Max. payload (including driver)	500 kg
Max. load towable	1200 kg
No. of seats	5

(*) Car ready for the road (full fuel tank, liquids, spare wheel and accessories)

Performance

Top speed	190 km/h (in 5th)
Speed with engine at 1,000 rpm	27.3 km/h (in 4th)
	32.5 km/h (in 5th)
Weight/power ratio { kg/bhp-EC	10
{ kg/kW-EC	13.6

Max. gradient negotiable (fully laden)	40%
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Acceleration (2 adults + 20 kg) (secs.)

- 0 to 100 km/h	10.3
- 0 to 1000 m	32

Pick-up from 40 km/h (2 adults + 20 kg) (secs.)

- over 1000 m	35.3 (in 4th)
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Conventional fuel consumption (l/100 km)

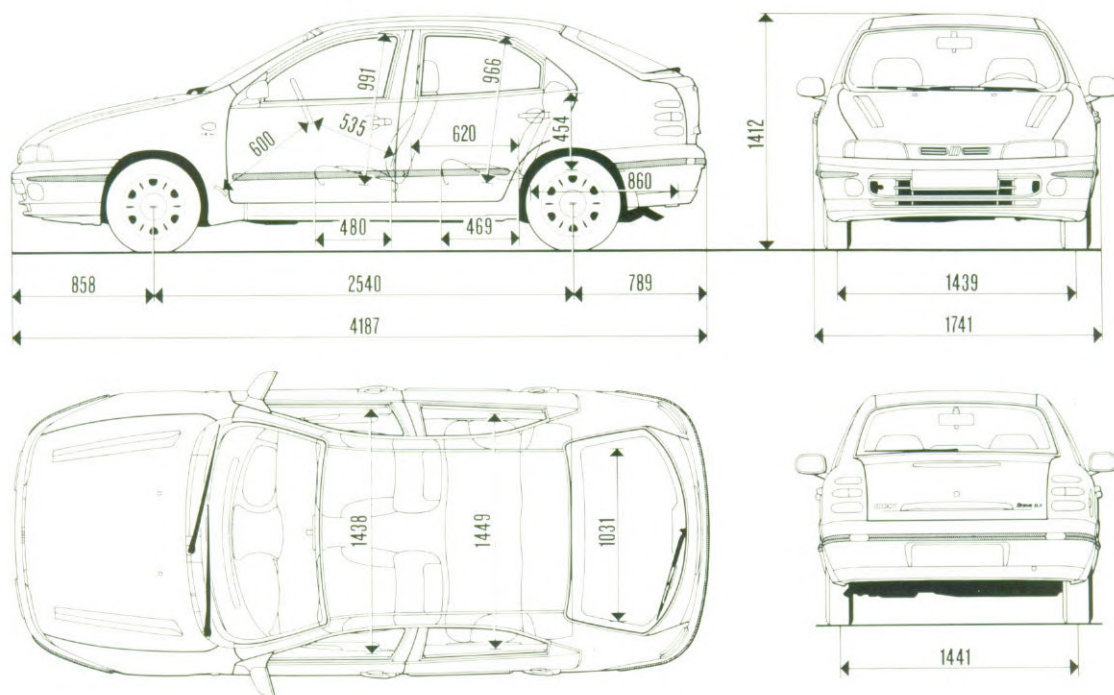
- at 90 km/h	5.9
- at 120 km/h	7.6
- urban cycle	9.9
- ECE average	7.8

Supplies

	dm ³ (litres)	kg
Fuel tank	60	-
including a reserve of:	7	-
Radiator, engine, expansion tank and heating system fluid	6.7 (6.2 with clim.contr.)	-
Engine sump and filter oil	4.3	3.9
Total engine sump, filter and circuit oil	4.9	4.4
Gearbox and differential oil	-	1.8
Steering and power steering oil	-	0.8
Braking circuit oil	0.40 (0.45 with ABS)	-
Screenwasher bottle (front and rear)	2.5 to 5 (6.4 with headlight washers)	-

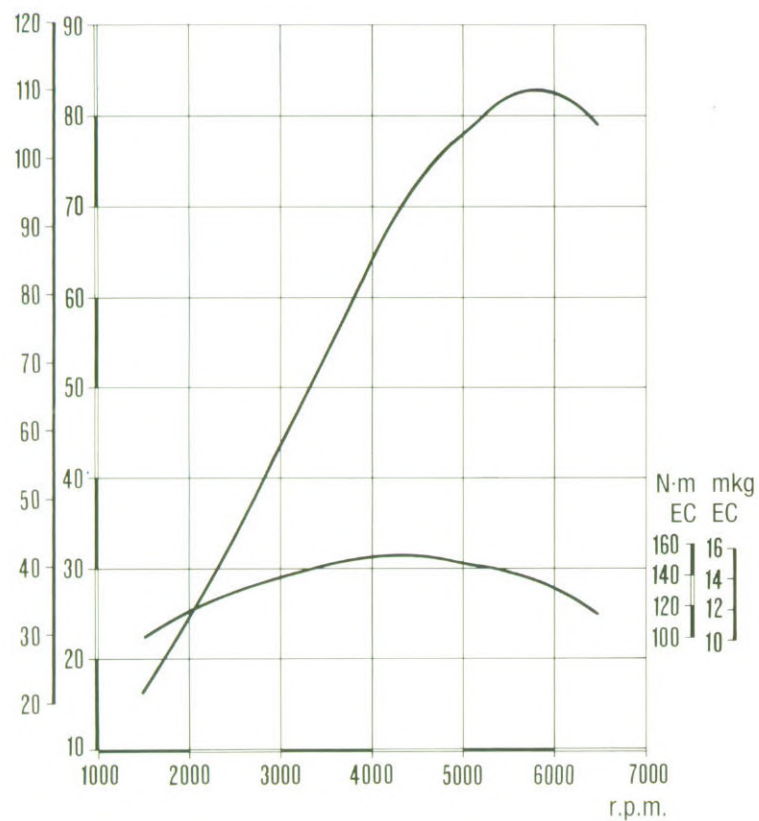
Brava 1.8 ELX dimensions

* unladen



Luggage capacity (VDA): 380 to 1165 dm³

bhp kW
EC EC



Engine curves (EC)