Bravo 2.0 20v

Technical Specification

Engine

Main features			
No. of cylinders			5 in line
Position			front transverse
Cycle-stroke			Otto-4
Bore x stroke			82 x 75.65 mm
Displacement			1998 cc
Compression ratio			10 : 1
Max. power output - EC			147 bhp (108 kW)
at rpm			6100
Peak torque - EC			19 kgm (186 Nm)
at rpm			4500
Fuel required			unleaded petrol min.95 octane (RON)
Structure			
Model			182A1.000
Cylinder spacing			90 mm
Main bearings			6
Cylinder block			cast iron, with counter-rotating balancer shaft
Cylinder head			light alloy
Timing gear			
Number of valves and position			in 47° Vee, with 4 valves per cylinder
Timing			DOHC
Timing control			toothed belt
Valve gear timing			with tappet play 0.45 mm
			with variable valve timing cut-in
– Inlet	opens	9° BTDC	9° BTDC
	closes	49° ABDC	31° ABDC
– Exhaust	opens	27° BBDC	27° BBDC
	closes	2° ATDC	2° ATDC
Ignition			electronic static, combined with injection, single coil on each spark plug and active knock control
Fire order			1-2-4-5-3
Automatic advance			7°
Spark plugs			Champion RC7BMC
Fuel feed			
Type			Motronic M2.10.4 MPI electronic phased sequential injection, with hot film air flow meter, combined with ignition
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 water-oil heat exchanger on pump body
Oil filter			cartridge type, total flow
Cooling			
Type			liquid cooling, with radiator, centrifugal pump and supplementary expansion tank
Control			with "controlled by-pass" thermostat
Fan			electric, with engagement governed by thermostat on radiator

Transmission

Drive		to front wheels
Clutch		dry, single plate, with disc engagement spring, hydraulic control and contact bearing
Diameter of driven plate		230 mm
Clutch lining dimensions (OD x ID)		230 x 155 mm
Gearbox		5 speeds
Transmission ratios	1st	3.545 : 1
	2nd	2.238 : 1
	3rd	1.520 : 1
	4th	1.156 : 1
	5th	0.946 : 1
	Reverse	3.909 : 1
Differential assembly		in gearbox
Final drive	type	cylindrical, helical
	ratio (no. of teeth)	3.562 : 1 (16/57)

Chassis

Braking system		discs front and rear with floating calipers. Self-ventilated front discs. Pedal control, with Tandem 7" + 8" vacuum servo, split-line diagonally linked hydraulic circuits, and brake regulator on rear brake hydraulic circuit. 4 channel, 4-sensor ABS incorporated
Front discs (self-ventilated)		
– diameter		284 mm
– total lining area		200 cm^2
Rear discs		
– diameter		240 mm
– total lining area		84 cm^2
Parking brake		acting on rear wheels with manual control and mechanical transmission
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		0.45 mm/kg
Wheel wobble	upper	70 mm
	lower	85 mm
Dampers		hydraulic, telescoping, dual action
Front wheel geometry unladen:		
– camber		-33' ± 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		0.49 mm/kg
Wheel wobble	upper	70 mm
	lower	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		10.8 m
Steering wheel turns (lock to lock)		2.9

Wheels		
Rims	6 J x 15"-49, in light alloy	
Tyres	195/55 R 15 84V	
Inflation pressure		
– front	2.5 bar	2.7* bar
– rear	2.2 bar	2.4* bar
(*) at constant high speed fully laden		
Mini spare wheel		
Rim	4 B x 15"-35	
Tyre	115/70 15 90M	
Inflation pressure	4.2 bar	
Max. speed permissible	80 km/h	

Electrical equipment

Voltage	12 V
Alternator: DC supply	85 A
Starter motor	1.4 kW
Battery: capacity	50 Ah

Weights

Kerb weight (DIN) (*)		1190 kg
Distribution	front	65.5%
	rear	34.5%
Weight fully laden		
Distribution	front	970 kg
	rear	900 kg
	total	1690 kg
Max. payload (including driver)		500 kg
Max. load towable		1300 kg
No. of seats		5

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

Performance

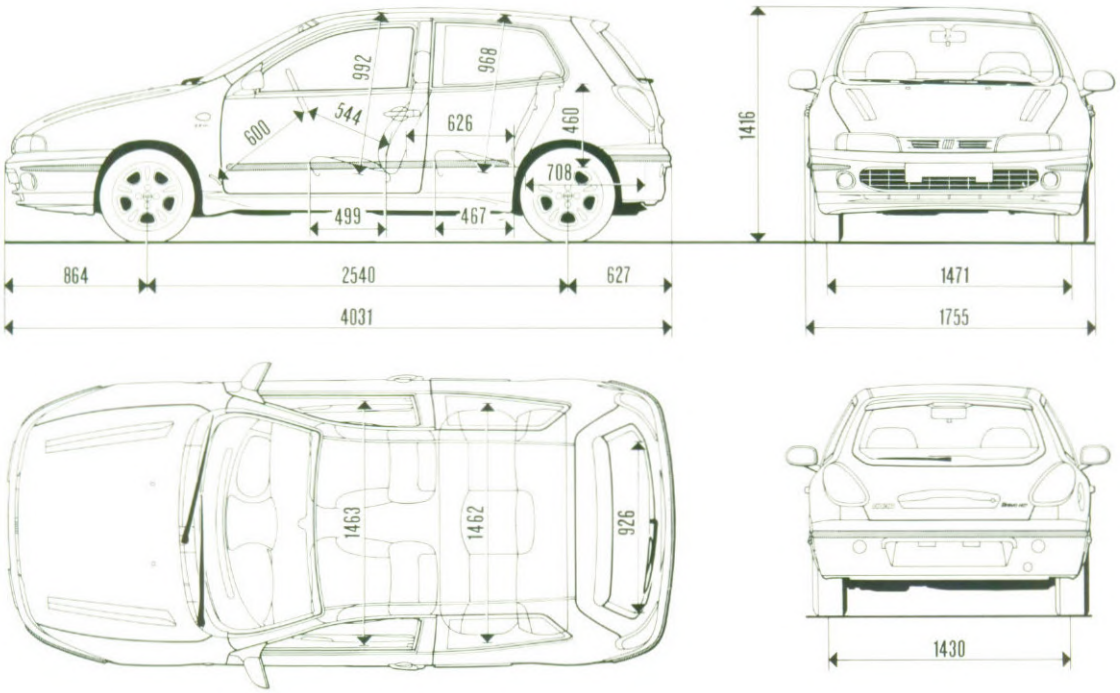
Top speed		210 km/h
Speed with engine at 1,000 rpm		26.5 km/h (in 4th) 32.3 km/h (in 5th)
Weight/power ratio	kg/bhp-EC	8.1
	kg/kW-EC	11
Max. gradient negotiable (fully laden)		43%
Acceleration (2 adults + 20 kg) (secs.)		
– 0 to 100 km/h		8.5
– 0 to 1000 m		29.8
Pick-up from 40 km/h (2 adults + 20 kg) (secs.)		
– over 1000 m		31.5 (in 4th)
Conventional fuel consumption (l/100 km)		
– at 90 km/h		7.1
– at 120 km/h		8.7
– urban cycle		11.0
– ECE average		8.9

Supplies

	dm^3 (litres)	kg
Fuel tank	60	–
including a reserve of:	7	–
Radiator, engine, expansion tank and heating system fluid	7.4 (7.3 with clim.contr.)	–
Engine sump and filter oil	5.0	4.45
Total engine sump, filter and circuit oil	5.5	4.9
Gearbox and differential oil	1.98	1.8
Steering and power steering oil	–	1
Braking circuit oil	0.54	–
Screenwasher bottle (front and rear)	2.5 to 5 (6.4 with headlight washers)	

Bravo 2.0 HGT dimensions

* unladen



Luggage capacity (VDA): 280 to 1030 dm³

Engine curves (EC)