# **Crash Tests**

## **New Car Safety**

### **BMW 1 SERIES**

2004 on

Front+side+head airbags

#### **Overall Evaluation**



## Overall score 33.37 out of 37 Variant: 116i 5 DR HATCH Eng: 2 litre.

Kerb weight: 1250 kg Category: SMALL CAR Vehicles built: 2004 Test by Euro NCAP

**Important note**: The European model was tested by Euro NCAP. Australasian specifications may vary and therefore models sold in Australasia might provide different levels of protection to those described on this page.

#### **Model History and Safety Features**

The tested model of BMW 1 Series was introduced in Australia during 2004.

Dual front airbags, side airbags and head-protecting inflatable side tubes are standard equipment. ABS brakes and electronic stability control are also standard. Advanced seat belt reminders are fitted to both front seats.

The front seat belt buckles are mounted on the seats and the upper anchorages are adjustable. These features improve the fit of the seat belt. Pre-tensioners are fitted to the front seat belts to reduce slack in the event of a crash. A three point seat belt is fitted to the centre rear seat. This provides better protection than a two point seat belt.

#### **OVERALL EVALUATION: 5 Stars**

The BMW 1SERIES(E) scored 13.77 out of 16 in the offset crash test. There was a slight risk of serious chest and leg injury for the driver and passenger.

The vehicle scored 15.6 out of 16 in the side impact crash test. There was a slight risk of serious chest injury for the driver. A further 2 points were scored in the optional pole test.

#### FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck 4pts, chest 2.84pts, upper legs 4pts, lower legs 2.93pts.

The passenger compartment held its shape very well in the offset crash test. The accelerator pedal moved rearwards by 53mm. The steering wheel hub moved forwards 1mm, upwards 18mm and sideways 12mm. The front ("A") pillar moved 28mm rearwards. The width of the driver's doorway shortened by 26mm. All doors remained closed during the crash. After the crash high manual effort was required to open the driver's door.

The airbag cushioned the head of the driver and contact was stable. Knee protection was good.

#### SIDE IMPACT CRASH TEST

Body region scores out of 4 points each: Head 4pts, chest 3.6pts, abdomen 4pts, pelvis 4pts.

The vehicle was eligible for an optional pole impact test, since it had head-protecting side airbags and scored four points for the head in the side impact test. The manufacturer decided to go ahead with the pole test and the vehicle earned a further two points.



#### INJURY MEASUREMENTS

Refer to the informatio sheet "How the test ar done"	at 64km/h (v4.1)		Side Impact Crash Test at 50km/h (v4.1)
11	Driver	Passn	Driver
Head HIC	170	161	88
Acceleration (g for 3ms)	35.9		29.7
Neck - Shear (kN)	0.53		-
Tension (kN)	1.18		-
Extension (Nm)	11.92	8.37	-
Chest Accln (g for 3ms)	-	-	-
Compression (mm)	30.1	22.16	
Viscous criterion (m/s)	0.14	0.05	0.32
Abdomen - Force (kN)	-	-	0.58
Pelvis - Force (kN)	-	-	2.18
Upper legs Force Left	1.13	0.41	
(kN) Righ	t 0.44	0.76	
Knee displ (mm) Left	0	C	
Righ	it 0	0.34	
Lower legs Force Left	3.3	1.83	
(kN) Righ	t 1.35	2.43	
Index (Upper/Low) Left	0.36/0.64	0.37/0.15	
Righ	t 0.35/0.41	0.43/0.33	

#### **Bonus points (maximum 5)**

Pole Test: 2 pts Seat belt reminders: 2 pts

#### **Modifiers - offset test scores**

Head No deduction
Chest No deduction
Upper leg Variable & conc. loading
Lower leg No deduction
Foot score Score 4 points

#### Modifiers - side impact test scores

Chest No deduction

#### Pedestrian rating (v4.1)

2.11 points out of 36.



Child head impacts 2.11pts; adult head impacts zero pts; upper leg zero pts and lower leg impacts zero pts.



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