

2018 BMW i3

Small car



2017 BMW i3 shown

CRASHWORTHINESS

Small overlap front

Driver-side

G

Passenger-side

not rated

Moderate overlap front

G

Side

G

Roof strength

G

Head restraints & seats

A

CRASH AVOIDANCE & MITIGATION

Front crash prevention



ADVANCED
with optional
equipment

CHILD SEAT ANCHORS (LATCH)
EASE OF USE

A

Check for NHTSA recalls ⓘ

The photos and videos shown here may be of a different model, model year or body type from the one selected. The ratings of one vehicle often apply to other models if they are built on the same platform. In addition, a test of a vehicle from one model year may apply to earlier or later model years if the vehicle hasn't been significantly redesigned.



Small overlap front: — Driver-side —

Action shot taken during the small overlap frontal crash test.



Small overlap front: — Driver-side —

The dummy's position in relation to the door frame, steering wheel, and instrument panel after the crash test indicates that the driver's survival space was maintained very well.



Small overlap front: — Driver-side —

The seat belt and airbags worked well together to keep the head from coming close to any stiff structure or outside objects that could cause injury. Deceleration was so gradual in this test that the dummy's head never quite reached the frontal airbag.



Small overlap front: — Driver-side —

The driver's space was maintained well, and risk of injuries to the dummy's legs and feet was low.



Moderate overlap front —

Action shot taken during the moderate overlap frontal crash test.



Moderate overlap front —

The dummy's position in relation to the steering wheel and instrument panel after the crash test indicates that the driver's survival space was maintained very well.



Moderate overlap front —

Smearred greasepaint indicates where the dummy's head contacted the side curtain airbag during rebound.



Moderate overlap front —

The driver's space was maintained well, and risk of injuries to the dummy's legs and feet was low.



Side impact —

View of the vehicle just after the crash test.



Side impact —

View of the vehicle after the crash with the front door removed, showing the side airbags and damage to the occupant compartment.



Side impact —

Smeared greasepaint shows where the driver dummy's head was protected from being hit by hard structures by the side airbags.



Side impact —

Smeared greasepaint shows where the rear passenger dummy's head was protected by the side airbag.



2017 BMW i3 driver-side small overlap test

Applies to 2017-18 models



2017 BMW i3 moderate overlap test

Applies to 2017-18 models



2017 BMW i3 side test

Applies to 2017-18 models

Other model years

Model year	Small overlap front		Moderate overlap front	Side	Roof strength	Head restraints & seats	Front crash prevention	Headlights	LATCH ease of use
	Driver	Passenger							
2018	G	not rated	G	G	G	A	 ADVANCED	not rated	A
2017	G	not rated	G	G	G	A	 ADVANCED	A	A

Small overlap front: Driver-side

TEST DETAILS

Applies to 2017-18 models

Overall evaluation	G
Structure and safety cage	G
Injury measures	
Head/neck	G
Chest	G
Hip/thigh	G
Lower leg/foot	G
Restraints and dummy kinematics	G

Important: Frontal crash test ratings should be compared only among vehicles of similar weight.

The BMW i3 was introduced in the 2014 model year. The car is a plug-in battery-electric vehicle with an optional 2-cylinder gasoline engine "range extender" to assist in charging the battery. The EPA city and highway values listed below are based on a comparison of the energy content of a kWh of electricity vs. a gallon of gasoline. The battery capacity and weight of the car were increased beginning with the 2017 model year.

Structure

The driver space was maintained well, with maximum intrusion of the lower interior of 6 cm at the lower hinge pillar. Upper interior intrusion measured 3-4 cm at the hinge pillar and instrument panel.

Injury measures

Measures taken from the dummy indicate a low risk of any significant injuries in a crash of this severity.

Restraints and dummy kinematics

The dummy's movement was well controlled. Because the car was deflected off the barrier and decelerated more gradually than is typical in this test, the dummy's head moved toward the inflated frontal airbag but never reached it before the head began to rebound. The side curtain airbag deployed and has sufficient forward coverage to protect the head from contact with side structure and outside objects. The side torso airbag also deployed.

Tested vehicle specifications

Tested vehicle	2017 BMW i3 4-door
Weight	2,926 lbs.
Side airbags	front and rear head curtain airbags and front seat-mounted torso airbags
Wheelbase	101 in.
Length	158 in.
Width	70 in.
Engine	Electric motor with 33-kWh lithium-ion battery (without range extender)
EPA ratings	129 mpg city / 106 mpg highway

How this test is conducted

TECHNICAL MEASUREMENTS

Measures of occupant compartment intrusion on driver side

Test ID	CEN1627
Lower occupant compartment	
Lower hinge pillar max (cm)	7
Footrest (cm)	2
Left toepan (cm)	2
Brake pedal (cm)	3
Parking brake (cm)	
Rocker panel lateral average (cm)	2
Upper occupant compartment	
Steering column	0
Upper hinge pillar max (cm)	3
Upper dash (cm)	4
Lower instrument panel (cm)	3

Driver injury measures

Test ID	CEN1627
Head	
HIC-15	47
Peak gs at hard contact	no contact
Neck	
Tension (kN)	0.6
Extension bending moment (Nm)	9
Maximum Nij	0.15
Chest maximum compression (mm)	
	27
Femur (kN)	
Left	1.0
Right	0.4
Knee displacement (mm)	

Left	2
Right	1
Knee-thigh-hip injury risk (%)	
Left	0
Right	0
Maximum tibia index	
Left	0.77
Right	0.24
Tibia axial force (kN)	
Left	3.6
Right	1.2
Foot acceleration (g)	
Left	49
Right	100

Moderate overlap front

TEST DETAILS

Applies to 2017-18 models

Overall evaluation	G
Structure and safety cage	G
Injury measures	
Head/neck	G
Chest	G
Leg/foot, left	G
Leg/foot, right	G
Restraints and dummy kinematics	
	G

Important: Frontal crash test ratings should be compared only among vehicles of similar weight.

The BMW i3 was introduced in the 2014 model year. The car is a plug-in battery-electric vehicle with an optional 2-cylinder gasoline engine "range extender" to assist in charging the battery. The EPA city and highway values listed below are based on a comparison of the energy content of a kWh of electricity vs. a gallon of gasoline. The battery capacity and weight of the car were increased beginning with the 2017 model year.

Injury measures

Measures taken from the dummy indicate a low risk of any significant injuries in a crash of this severity.

Restraints and dummy kinematics

Dummy movement was well controlled. The driver side curtain airbag deployed during the crash. After the dummy moved forward into the frontal airbag, its head contacted the side curtain airbag.

Tested vehicle specifications

Tested vehicle	2017 BMW i3 4-door
Weight	2,915 lbs.
Side airbags	front and rear head curtain airbags and front seat-mounted torso airbags
Wheelbase	101 in.
Length	158 in.
Width	70 in.
Engine	Electric motor with 33-kWh lithium-ion battery (without range extender)

EPA ratings 129 mpg city / 106 mpg highway

How this test is conducted**TECHNICAL MEASUREMENTS**

Measures of occupant compartment intrusion on driver side

Test ID	CEF1610
Footwell intrusion	
Footrest (cm)	1
Left (cm)	1
Center (cm)	2
Right (cm)	1
Brake pedal (cm)	3
Instrument panel rearward movement	
Left (cm)	0
Right (cm)	0
Steering column movement	
Upward (cm)	-2
Rearward (cm)	-7
A-pillar rearward movement (cm)	0

Driver injury measures

Test ID	CEF1610
Head	
HIC-15	209
Peak gs at hard contact	no contact
Neck	
Tension (kN)	0.9
Extension bending moment (Nm)	13
Maximum Nij	0.23
Chest maximum compression (mm)	34
Legs	
Femur force - left (kN)	0.4
Femur force - right (kN)	0.9
Knee displacement - left (mm)	2
Knee displacement - right (mm)	3
Maximum tibia index - left	0.27
Maximum tibia index - right	0.42
Tibia axial force - left (kN)	2.1
Tibia axial force - right (kN)	2.2
Foot acceleration (g)	
Left	72
Right	64

Side**TEST DETAILS**

Applies to 2017-18 models

Overall evaluation



Structure and safety cage	G
Driver injury measures	
Head/neck	G
Torso	G
Pelvis/leg	G
Head protection	G
Rear passenger injury measures	
Head/neck	G
Torso	G
Pelvis/leg	G
Head protection	G

Side crash test ratings can be compared across vehicle categories.

The BMW i3 was introduced in the 2014 model year. The car is a plug-in battery-electric vehicle with an optional 2-cylinder gasoline engine "range extender" to assist in charging the battery. The EPA city and highway values listed below are based on a comparison of the energy content of a kWh of electricity vs. a gallon of gasoline. The battery capacity and weight of the car were increased beginning with the 2017 model year.

Injury measures

Driver — Measures taken from the dummy indicate a low risk of any significant injuries in a crash of this severity.

Passenger — Measures taken from the dummy indicate a low risk of any significant injuries in a crash of this severity.

Head protection

Driver — The dummy's head was protected from being hit by any hard structures, including the intruding barrier, by a side curtain airbag that deployed from the roof and a side airbag that deployed from the seat.

Passenger — The dummy's head was protected from being hit by any hard structures, including the intruding barrier, by a side curtain airbag that deployed from the roof.

Tested vehicle specifications

Tested vehicle	2017 BMW i3 4-door
Weight	2,906 lbs.
Side airbags	standard front and rear head curtain airbags and standard front seat-mounted torso airbags
Wheelbase	101 in.
Length	158 in.
Width	70 in.
Engine	Electric motor with 33-kWh lithium-ion battery (without range extender)
EPA ratings	129 mpg city / 106 mpg highway

How this test is conducted

TECHNICAL MEASUREMENTS

Measures of occupant compartment intrusion on driver side

Test ID	CES1614
B-pillar to longitudinal centerline of driver's seat (cm)	-16.0
Negative numbers indicate the amount by which the crush stopped short of the seat centerline.	

Driver injury measures

Test ID	CES1614
Head HIC-15	264
Neck	
Tension (kN)	1.7
Compression (kN)	0.2
Shoulder	
Lateral deflection (mm)	24
Lateral force (kN)	1.2
Torso	
Maximum deflection (mm)	36
Average deflection (mm)	32
Maximum deflection rate (m/s)	4.31
Maximum viscous criterion (m/s)	0.53
Pelvis	
Iliac force (kN)	1.4
Acetabulum force (kN)	2.6
Combined force (kN)	4.0
Left femur	
L-M force (kN)	1.3
L-M moment (Nm)	105
A-P moment (Nm)	22

Passenger injury measures

Test ID	CES1614
Head HIC-15	319
Neck	
Tension (kN)	0.4
Compression (kN)	0.4
Shoulder	
Lateral deflection (mm)	45
Lateral force (kN)	1.8
Torso	
Maximum deflection (mm)	39
Average deflection (mm)	24
Maximum deflection rate (m/s)	3.74
Maximum viscous criterion (m/s)	0.78
Pelvis	
Iliac force (kN)	2.8
Acetabulum force (kN)	1.7
Combined force (kN)	4.2
Left femur	
L-M force (kN)	0.9
L-M moment (Nm)	102
A-P moment (Nm)	54

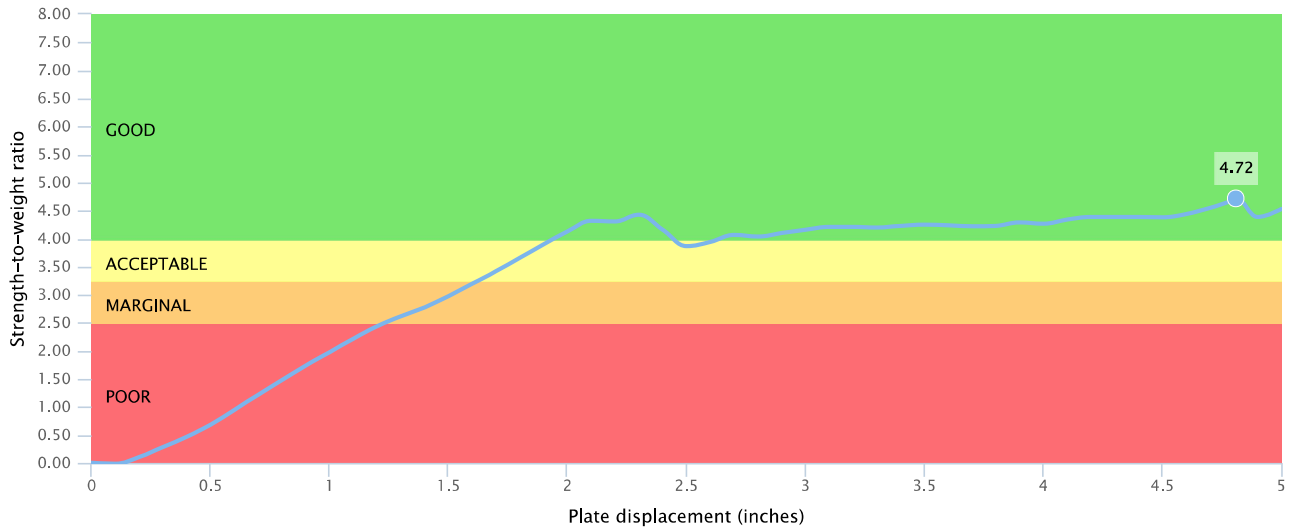
Roof strength

TEST DETAILS

Applies to 2017-18 models

Overall evaluation	G
Curb weight	2,920 lbs
Peak force	13,772 lbs
Strength-to-weight ratio	4.72
Tested vehicle	2017 BMW i3 4-door

Roof strength test ratings can be compared across vehicle categories.



In the test, the strength of the roof is determined by pushing a metal plate against one side of it at a slow but constant speed. The force applied relative to the vehicle's weight is known as the strength-to-weight ratio. This graph shows how the ratio varied as the test of this vehicle progressed. The peak strength-to-weight ratio recorded at any time before the roof is crushed 5 inches is the key measurement of roof strength.

A good rating requires a strength-to-weight ratio of at least 4. In other words, the roof must withstand a force of at least 4 times the vehicle's weight before the plate crushes the roof by 5 inches. For an acceptable rating, the minimum required strength-to-weight ratio is 3.25. For a marginal rating, it is 2.5. Anything lower than that is poor.

How this test is conducted

Head restraints & seats Manual cloth seat

TEST DETAILS

Applies to 2017-18 models

Overall evaluation	A
Dynamic rating	A
Seat/head restraint geometry	G

Important: Ratings for head restraints & seats should be compared only among vehicles of similar weight.

Seat type

Manual cloth seat

How this test is conducted

TECHNICAL MEASUREMENTS

Seat type	Manual cloth seat
Geometry	
Backset (mm)	15
Distance below top of head (mm)	-4
Seat design parameters	
Pass/fail	Fail
Max T1 acceleration (g)	13.3
Head contact time (ms)	76
Force rating	1
Neck forces	
Max neck shear force (N)	5
Max neck tension (N)	561

Front crash prevention

DETAILS

Applies to 2017-18 models


System details

- ▶ optional Frontal Collision Warning with City Collision Mitigation

Package name

- ▶ optional Technology + Driving Assistant Package

Overall evaluation



ADVANCED
with optional
equipment
3 points total

Forward collision warning

This system meets the National Highway Traffic Safety Administration's criteria for forward collision warning. **1 point**

Low-speed autobrake

In the 12 mph IIHS test, impact speed was reduced by 9 mph. **1 point**

High-speed autobrake

In the 25 mph IIHS test, impact speed was reduced by 7 mph. **1 point**

Tested vehicle

2017 BMW i3 4-door

How this rating is determined

Child seat anchors (LATCH) ease of use base — cloth seats

DETAILS

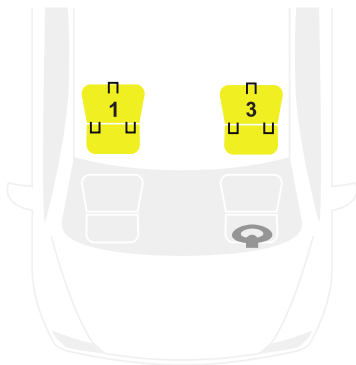
Applies to 2017-18 models

Overall evaluation **A**

How this rating is determined

Vehicle trim base
 Seat type cloth

This vehicle has 2 rear seating positions with complete child seat attachment (LATCH) hardware.



Good
Acceptable
Marginal
Poor
<input type="checkbox"/> Seating positions that rely on borrowed lower anchors or have only a tether anchor available are not rated.
Tether anchor
Lower anchors
Lower anchor(s) can be borrowed from adjacent position(s)
No hardware available

Details by seating position

1	Tether anchor
easy-to-find location	
other hardware could be confused for anchor	
	Lower anchors
not too deep in seat	
not too much force needed to attach	
difficult to maneuver around anchors	
3	Tether anchor
easy-to-find location	
other hardware could be confused for anchor	
	Lower anchors
not too deep in seat	
not too much force needed to attach	

difficult to maneuver around anchors

TECHNICAL MEASUREMENTS

Seat position 21 **3**

Lower anchor A	
Open access rated	Yes
Depth	Visible
Force (lbs)	0
Clearance angle (degrees)	46
Lower anchor B	
Open access rated	Yes
Depth	Visible
Force (lbs)	0
Clearance angle (degrees)	46
Tether anchor	
Location	Middle seatback
Confusing hardware present	Yes
Has contrasting label within 3 inches of tether anchor	No

Seat position 23 **1**

Lower anchor A	
Open access rated	Yes
Depth	Visible
Force (lbs)	0
Clearance angle (degrees)	44
Lower anchor B	
Open access rated	Yes
Depth	Visible
Force (lbs)	0
Clearance angle (degrees)	46
Tether anchor	
Location	Middle seatback
Confusing hardware present	Yes
Has contrasting label within 3 inches of tether anchor	No

Other safety features

Side airbags: front and rear head curtain airbags and front seat-mounted torso airbags

Rollover sensor: designed to deploy the side curtain airbags in the event of an impending rollover

Driver and front passenger knee airbags: separate airbags in the lower instrument panel designed to minimize knee injuries in frontal crashes

Electronic stability control

Antilock brakes

Programmable daytime running lights

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