

## TBH-R1

### Tactical Ballistic Helmet

The Gentex® TBH-R1 Tactical Ballistic Helmet provides best-in-class protection, featuring a durable, structural design that resists handgun and frag threats, as well as 7.62 x 51 NATO M80 Balls. Two impact liner options, combined with the Low Profile Occ-Dial offer a stable, secure helmet system. Available in low, mid, and high cuts, this scalable design allows easy integration with Ops-Core® total headborne system solutions including eye, face, and respiratory protection.

### SPECIFICATIONS

Gentex Performance Specification for Tactical Ballistic Helmet R1: PS-1378, including portions of:

- *Modified and Abbreviated US Army Advanced Combat Helmet AR/PD 10-02*
- *NIJ Standard 0108.01 Ballistic Materials Level IIIA Threats Tested in Accordance with NIJ 0106.01*
- *NIJ Draft Specification for Ballistic Materials, Level RF-1 Tested in Accordance with NIJ 0106.01*

#### Small Arms Protection

Projectile	Min. Resistance to Penetration (ft/s)	Min. Resistance to Penetration (m/s)
7.62x51 NATO M80 Ball, 150gr (9.7g)	2,400 (+50/-0)	732 (+15/-0)

#### Handgun Protection

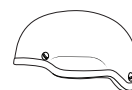
Projectile	Min. Resistance to Penetration (ft/s)	Min. Resistance to Penetration (m/s)	Max. Back Face Deformation (in/mm)
9mm FMJ RN, 124gr	1,470 (+50/-0)	448 (+15/-0)	< 1.00 in/25.4mm (front/back) < 0.63 in/16.0mm (sides/crown)
.44 Mag 240g SWGC	1,430	436	N/A
9mm x 18mm SJLC, 105gr	1,017	310	N/A
7.62mm x 25mm SJLC, 86gr	1,475	450	N/A
.40 Cal S&W, GDHP 180gr	1,025	312	N/A
.44 Mag JHP, 240gr	1,430	436	N/A



TBH-R1 (Low Cut Mission Configured)



High Cut



Mid Cut



Low Cut

#### Color Options

Helmet Shell:



Retention Systems:



#### Fragmentation Protection

Projectile	Minimum V50 (ft/s)	Minimum V50 (m/s)
2-grain RCC	6,090	1,856
4-grain RCC	5,040	1,536
16-grain RCC	3,590	1,094
64-grain RCC	2,540	774
17-grain (1.1g) FSP	3,280	1,000

Minimum 45% increase above ACH requirements per AR/PD 10-02.  
Actual performance significantly higher.

(Continued on back)

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**Blunt Impact Protection:** <150 G's at 10 ft/s per GL/PD 09-04

**Compression Testing:** Top-Bottom = .020" (0.51 mm) Max @ 400 lbs (181.44 kg), Side-Side = .125" (3.18 mm) Max @ 300 lbs (136.08 kg) per GL/PD 09-04

**Environmental Resistance:** Temperature Storage and Operating at Ambient, Cold -60° F (-51° C), and Hot +130° F (54° C), Temperature Shock, Flame Resistance, Altitude, Vibration, Seawater, Field Agent Resistance, and Weatherometer per GL/PD 09-04

**Shell Construction:** Two-Stage Non Slit

**Areal Density:** 2.32 lbs./ft<sup>2</sup> (113.27g/dm<sup>2</sup>)

**Shell Thickness:** 0.450" (11.43 mm)

**Shell Geometry (Curvature):** US Army ACH

**Cut Styles (Side Protection):** Low Cut (Standard Cut), Mid Cut, High Cut

**Available Sizes:** Small (S), Medium (M), Large (L), X-Large (XL)

### Shell Sizing & Square Coverage

Head Size (Circumference)	Small	Medium	Large	X-Large
	Up to 21 ¼ in (538 mm)	21 ¼ in – 22 ½ in (538 mm – 573 mm)	22 ½ - 23 ½ in (573 mm – 597 mm)	23 ½ and over (597 mm and over)
Low Cut	152.52 in <sup>2</sup> (984 cm <sup>2</sup> )	163.22 in <sup>2</sup> (1053 cm <sup>2</sup> )	173.60 in <sup>2</sup> (1120 cm <sup>2</sup> )	190.65 in <sup>2</sup> (1230 cm <sup>2</sup> )
Mid Cut	152.21 in <sup>2</sup> (982 cm <sup>2</sup> )	157.48 in <sup>2</sup> (1016 cm <sup>2</sup> )	167.25 in <sup>2</sup> (1079 cm <sup>2</sup> )	179.96 in <sup>2</sup> (1161 cm <sup>2</sup> )
High Cut	137.95 in <sup>2</sup> (890 cm <sup>2</sup> )	146.01 in <sup>2</sup> (942 cm <sup>2</sup> )	156.86 in <sup>2</sup> (1012 cm <sup>2</sup> )	164.30 in <sup>2</sup> (1060 cm <sup>2</sup> )

### Shell Weights

Shell Weight (Shell with Paint & Edge Band)	Small	Medium	Large	X-Large
Low Cut	2.44 lbs. (1105 g)	2.56 lbs. (1163 g)	2.70 lbs. (1226 g)	2.90 lbs. (1316 g)
Mid Cut	2.35 lbs. (1064 g)	2.48 lbs. (1123 g)	2.56 lbs. (1163 g)	2.79 lbs. (1266 g)
High Cut	2.12 lbs. (961 g)	2.27 lbs. (1028 g)	2.37 lbs. (1073 g)	2.60 lbs. (1181 g)

### System Weights (Size Large)

Suspension/Retention Option	Low Cut	Mid Cut	High Cut
Ops-Core Lux Pux / Universal Occ-Dial Fitband	3.56 lbs. (1613 g)	3.48 lbs. (1579 g)	3.29 lbs. (1491 g)
Ops-Core 360 Liner / Universal Occ-Dial Fitband	3.58 lbs. (1625 g)	3.51 lbs. (1591 g)	3.31 lbs. (1503 g)

Note: All measurements are +/- 3% tolerance

### Contact Us

Gentex Corporation is dedicated to enhancing personal protection and situational awareness for global defense forces, emergency responders, and industrial personnel operating in high performance environments. To learn more about the Gentex TBH-R1 Helmet System, contact Customer Service at [sales@gentexcorp.com](mailto:sales@gentexcorp.com). Like us at [facebook.com/Gentexcorp](https://www.facebook.com/Gentexcorp) or follow us on Twitter @Gentex\_Corp.

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