

## TACTICAL VESTS

### High Coverage Assault Vest

State-of-the-art, high coverage assault safety vests are designed for military and tactical law enforcement personnel that demand the highest protection.

- Maximum Mobility and adaptability
- Collar Protection (detachable)
- Groin Ballistic Protection (detachable)
- Upper Arm Ballistic Protection (detachable)
- Unique webbing & loop system for utility pouches

#### Ballistic Protection

##### Level III

- 7.62 x 39mm (MSC, AK47)
- 7.62 x 51 mm NATO Ball FMJ (M80)
- 7.62 x 54 mm Dragunov
- 5.56 x 45 mm (M193, L2A1)

##### Level III+

- 7.62 x 39mm (HSC, AK 47)
- 5.56 INSAS
- 5.56 x 45 mm (M193, SS109)

##### Level IV

- .30 Cal M2 AP



### unmatched quality and commitment...

As an enterprise of national standing and repute, the SM Group is well known for high quality and technology driven products. We deploy cutting-edge technologies and manufacturing processes, built on strong foundation of quality processes (ISO 9001:2000), to meet both standard and customized demands of its patrons, worldwide.

Since these products are required to "protect those who protect us", not even a minor compromise at any stage, especially during comprehensive inspections and quality checks, is permissible. Special tests are conducted by highly qualified personnel to aid in material characterization and evaluation, process development, design and quality control.

SM Carapace products undergo rigorous testing and detailed evaluations at internationally accredited labs like TBRL (India), Honeywell (USA), HP White (USA) etc.

# Solutions

## Proven Performance In Demanding Armor applications

maximum safety along with minimum weight. Available as soft vests upto NIJ IIIA, these can be easily upgraded to provide protection upto NIJ III using CaraPRO Polyethylene inserts. Advanced ceramic composite inserts, CaraSTOP, can enhance protection up to NIJ IV.

We can, however, design and produce any protective system compliant with any special customer requirement:

### EXECUTIVE VEST IIIA ( External )

This vest has been especially designed to provide Level II/ IIIA protection while maintaining its elegant fashion look as a "harmless" waist coat. It is a unique armour vest designed as a discrete overt armour vest, providing full front, back and side ballistic protection. This waistcoat incorporates CaraFlex lightweight and bendable armour which can be worn as part of a suit for business meetings, public shows, late nights, bodyguards etc.



#### Weight:

**2 Kg to 2.5 Kg for medium size**

- Adjustable back closing design
- Front to back wrap around ballistic protection
- Fixed ballistic shoulders

### RAKSHAK ( Classic Cover & Neck Vest )

This is a classic model designed to answer the basic needs of every soldier/police. The vest provides protection for the upper body (front and back) with options for add-on protection on sides, neck and groin. Available in standard protection level of NIJ IIA and IIIA, comfort and mobility is ensured. When required i.e. in scenarios of increased threat, inserts can be added to provide enhanced protection from deadlier threats like 7.62 SLR, AK-47, 5.56 INSAS etc.

#### Weight:

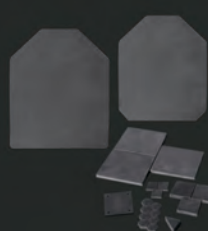
**1.7 Kg to 2.5 Kg for medium size**

- » Front to back wrap around ballistic protection
- » Optional Neck & Groin protection



## Our Products

## Our Pride



B,C & SiC Ceramic



Ballistic Vests & Helmets



Hard Armour Plates



Tank & Artillery Ammunitions



Green Packaging



ISO 9001:2008 CERTIFIED

**SM Pulp Packaging:** Pioneering the field of vacuum formed molded products

**SM Carapace Armor:** Providing protection solutions to those who protect us

**SM Engineers & Consultants:** Providing turn-key project solutions

## CARAPACE

### SM Carapace Armor

SM House, Building No. 9, Panchsheel Community Centre, New Delhi-110017

PH: +91-11-26495075 FAX: +91-11-26262129 E-MAIL: contact@smgroupindia.com

WEBSITE: www.smgroupindia.com | www.smcarapace.com

## CARAPACE

## CARAPACE PROTECTION



ISO 9001:2008 CERTIFIED



**YODHA :  
Combat/ Commando Vest**

Unique, robust and wear-resistant model designed to provide Commandos, Military Soldiers, Police Officers and Special Forces extra attachments / compartments, pouches and pockets to enhance their combat potential, without jeopardizing their freedom of movement. These are designed with polyethylene inserts to provide protection upto NIJ Level III and light weight ceramic composites made from Boron Carbide for enhanced protection upto NIJ Level III+/IV from threats like 7.62SLR, AK-47 HSC, 5.56 INSAS, SS109 etc.

**Design Features:**

- Heavy duty fabric
- Specially designed magazine fasteners
- Dual flap closing option at pockets for operational aid
- Both right and left hand radio holders
- Anti-slip shoulder attachments
- Unique webbing & loop system for multipurpose pocket at back.

**Ballistic Protection and Weight:**

- Level III:** 4.5 Kg to 5.0 Kg
- 7.62 x 39mm (MSC, AK47)
  - 7.62 x 51 mm NATO Ball FMJ (M80)
  - 7.62 x 54 mm Dragunov
  - 5.56 x 45 mm (M193, L2A1)
- Level III+:** 5.0 Kg to 5.5 Kg
- 7.62 x 39mm (HSC, AK 47)
  - 5.56 INSAS
  - 5.56 x 45 mm (M193,SS109)
- Level IV:** 6.0 Kg to 6.5 Kg
- .30 Cal M2 AP



**NIRBHAY :  
Anti Terror/ Peacekeeping Forces  
/Counter Insurgency Forces Jacket**

These are strong and robust vests with full torso (including neck) protection and having extended parts going down to the pelvis in order to secure the loins. These are specially tailored to cater to the needs of those involved in counter insurgency, low-intensity conflicts and combating/anti-terrorist operations. These are provided with the standard Level III polyethylene inserts but special ceramic inserts are used to provide enhanced protection against lethal armor piercing rounds such as AK47 AP, when required. The vest comes with or without shoulders protectors.

**Design Features:**

- Light weight, high strength fabric
- Multiple pockets for magazines and grenades
- Pull-down removable ballistic groin protector



**Ballistic Protection and Weight:**

- Level III:** 4.8 Kg to 5.8 Kg
- 7.62 x 39mm (MSC, AK47)
  - 7.62 x 51 mm NATO Ball FMJ (M80)
  - 7.62 x 54 mm Dragunov
  - 5.56 x 45 mm (M193, L2A1)
- Level III+:** 6.0 Kg to 7.0 Kg
- 7.62 x 39mm (HSC, AK 47)
  - 5.56 INSAS
  - 5.56 x 45 mm (M193,SS109)
- Level IV:** 7.1 Kg to 7.5 Kg
- .30 Cal M2 AP

**NIRBHAY-SP :  
Offers Critical Side  
Hard Armour Protection**

This vest is an enhancement over NIRBHAY, offering critical Side Protection with Hard Armor Panels. The S-HAPs are specially designed to offer complete side protection to the rib cage from fire power of deadly weapons like AK47 without hindering arm movement.

It also combines most of the utility features of the YODHA making it ideal for current combat situations. Provisions can be made for add-on HAP protection for Neck and Groin.



**Side Protection- HAP**

- Weight:**  
0.6 Kg to 1.0 Kg
- Size:**  
6" x 8" and 8" x 8"



**Personal Armour**

SM Carapace Armor provides customised protective solutions covering the entire range of threats and caters to the requirements of various categories of users. We use a variety of ballistic materials including Woven Aramids (Kevlar, Twaron etc.), Shield Aramids (Gold Flex, Gold Shield) and High Performance Polyethylene (Spectra Shield, Dyneema etc.) to make the soft and hard ballistic components for these vests.

Each is specially designed, along with the choice of ballistic material, to provide

**UNDERCOVER VEST ( Concealable )**

Undercover inner wear vest provides enhanced safety, whilst still being the lightest and most flexible vest of its kind. Its special design offers copious front, back and side protection with butt-fit. It has adjustable sides and shoulder with Velcro fasteners and elastic bands which provide snug-fit and keep it completely hidden under any civilian clothing. Available in NIJ Level II/ IIIA, it is ideal for VIP 'S, Entrepreneur, politicians and security persons.



**Ballistic Protection NIJ II and IIIA**

- Bullet Type:**
- .22 Caliber LR
  - .380 ACP FMJ
  - 357 Mag JSP
  - 9mm FMJ
  - 44 Mag

**Available in various sizes  
(S, M, L, XL)**

**Salient features:**

- Optimum weight as per functional requirement
- Water proof and UV resistant long lasting fabric
- Special inner fabric for sweat & body heat absorbency
- Removable ballistic panels sealed in a water proof PVC bag
- Easy to put on and take off
- Washable outer covers
- Ergonomic designs

**Weight:**

- 1 Kg to 1.5 Kg for medium size**
- Four point adjustable design
  - Upgradable to NIJ III, III+ and IV for protection from AK47 etc.

**RAP-i-d-OFF**

**The Most Advanced Protective Vest**

It's one of the most advanced and novel concept which allows for "Rapid doffing" of the vests enhancing the comfort and mobility of the soldiers, keeping the safety intact. It's innovatory "RAP-i-d-OFF" system dis-integrates the jacket at the pull of a string with all parts falling apart. The wearer is released off the jacket at the split of a second.

This feature when combined with the utility of tactical vests makes it the most sought-after jacket in the world.



**Ballistic Standards : NIJ-0101.04**

Armor Type	Test Round	Test Bullet	Bullet Weight	Reference Velocity (±30 ft/s)	Hits Per Armor Part at 0° Angle of Incidence	BFS Depth Maximum
I	1	.22 caliber LR LRN	2.6 g 40 gr.	329 m/s (1080 ft/s)	4	44 mm (1.73 in)
	2	.380 ACP FMJ RN	6.2 g 95 gr.	322 m/s (1055 ft/s)	4	44 mm (1.73 in)
IIA	1	9mm FMJ RN	8.0 g 124 gr	341 m/s (1120 ft/s)	4	44 mm (1.73 in)
	2	40 S&W FMJ	11.7 g 180 gr.	322 m/s (1055 ft/s)	4	44 mm (1.73 in)
II	1	9mm FMJ RN	8.0 g 124 gr	367 m/s (1205 ft/s)	4	44 mm (1.73 in)
	2	357 Mag JSP	10.2 g 158 gr.	436 m/s (1430 ft/s)	4	44 mm (1.73 in)
IIIA	1	9mm FMJ RN	8.2 g 124 gr.	436 m/s (1430 ft/s)	4	44 mm (1.73 in)
	2	44 Mag JHP	15.6 g 240 gr.	436 m/s (1430 ft/s)	4	44 mm (1.73 in)
III	1	7.62mm NATO FMJ	9.6 g 148 gr.	838 m/s (2780 ft/s)	6	44 mm (1.73 in)
IV	1	.30 caliber M2 AP	10.8 g 166 gr.	869 m/s (2880 ft/s)	1	44 mm (1.73 in)

For detailed ballistic test standards, international standards and other information, please visit our website:-  
[www.smcarapace.com](http://www.smcarapace.com)