# THANE MOTORCYCLES CLUB

## MOTORCYCLE RIDING GEAR KNOWLEDGE GUIDE

A head-to-toe reference for protection, standards, rider types, brand discovery and purchase priorities.

**Core rule: buy certified protection that fits and stays in place. Comfort, ventilation and weather management matter because gear only protects properly when you wear it.**

***This is a general guide to help you understand the topic, not an official or legal document.***

## Complete rider: head-to-toe overview

The following illustration is a visual orientation guide. Treat its labels as an overview, not as a certification claim for any product.



### Important Points:

- Safety gears provide Impact protection which reduces injury;
- Abrasive-resistant material helps resist sliding on road surfaces.
- While buying check the safety standard, class/level, product labeling, certifications of the gear.
- Gears should fit neatly: armour should cover the joint in riding posture and not rotate or slide away.
- **No gear makes riding risk-free. Speed, visibility, training, tyre condition and judgement remain important.**

## 1. Safety standards: quick reference

| Marking / standard | What it covers | How to interpret it |
|---|---|---|
| **UN Regulation No. 22.06 (ECE 22.06)** | Helmets and Visors | Look for the genuine approval label on the helmet/strap and the correct helmet type. |
| **DOT FMVSS No. 218** | Helmets sold for the US market | DOT is a US regulatory standard. |
| **ISI / BIS IS 4151** | Helmets sold in India | Check the genuine ISI mark and applicable BIS licence details. |
| **Snell (e.g. M2020/M2025, where applicable)** | Voluntary helmet certification programme | An additional testing programme; confirm the exact model and current Snell list. Not every racing helmet is automatically Snell-certified. |
| **EN 17092 (A, AA, AAA, B, C)** | Garments certification e.g. jacket/pants etc.) | Garment class indicates the garment's tested protective performance/use category. AAA is generally the most demanding class; B is abrasion-focused without impact protectors; C is an armour-holding garment. Check the garment label and intended use. |
| **EN 1621-1** | Shoulder, elbow, knee certification | Level 1 and Level 2 are impact-transmission performance levels; |
| **EN 1621-2** | Back protection Certification | Level 1 or Level 2 rating applies to the protector. |
| **EN 13594** | Gloves Protection Certification | Glove protection includes knuckle armour, palm protection etc. |
| **EN 13634** | Footwear Protection Certification | Coverage height, abrasion/cut resistance, transverse rigidity and impact protection are key considerations. |

# 2. Helmet — head protection




## Main helmet types

| Type | Strengths | Trade-offs / best fit |
|---|---|---|
| **Full-face** | Chin bar and face coverage; usually the strongest all-round road choice | Touring, commuting, sport riding and most road use; Check for perfect fit, ventilation and noise levels. |
| **Modular / flip-up** | Convenient for stops, glasses and touring | Heavier and mechanically more complex; check whether it is approved for riding with chin bar closed only or also open (P/J marking). |
| **Adventure / dual-sport** | Peak and often broad visor/goggle compatibility | Can catch wind at speed; choose based on highway stability and actual certification. |
| **Open-face / jet** | Airflow, easy communication and visibility | No chin-bar protection; not the preferred choice when maximum face protection is the priority. |
| **Off-road / motocross** | Peak, ventilation and goggles for dirt riding | Typically requires goggles; not all are designed or approved for high-speed road use. |
| **Half helmet** | Light and open | Very limited coverage; poor choice when prioritising protection. |

### Helmet buying checklist

- **Prefer a correctly approved full-face helmet for road touring;** confirm current UN ECE 22.06, genuine BIS/ISI compliance for India, or other relevant authentic certification.
- **Try it on for 10–15 minutes. It should be snug all around without pressure points; cheeks should be held firmly, and the helmet should not rotate independently of your head.**
- **Fastener: secure and easy to use with gloves.** Double-D rings are common in sport helmets; micrometric systems can be convenient on touring/modular models when properly approved.
- **Visor: optical clarity, secure locking, replaceability and anti-fog compatibility matter.**

- **A Pinlock-ready visor is useful for cold or wet touring.**
- **Replace after a significant impact,** even if damage is not obvious. Follow the manufacturer's age, care and replacement guidance; inspect straps, shell and EPS regularly.

**Do not buy a helmet based only on shell graphics, weight claims, a celebrity endorsement or a shop's claim that it is "racing quality." Certification, fit and genuine origin come first**.

# 3. Eyes, face, ears and neck

## Eye protection

- Road use: a clear, **scratch-resistant vi**sor with good optical quality is the baseline.
- **Anti-fog insert or treatment is useful in rain, cold mornings and Himalayan rides**; follow the helmet maker's compatibility instructions.
- **Adventure/off-road helmets may use goggles**. Choose a secure fit and suitable lens for changing light.
- Sunglasses are not a substitute for a secure motorcycle visor or suitable goggles; avoid dark lenses at night.



## Ear protection

Filtered or disposable riding earplugs are a strongly recommended comfort and hearing-health accessory for highway use. Insert them correctly and retain enough awareness to hear important traffic cues; do not use headphones that mask road sounds.



## Neck protection

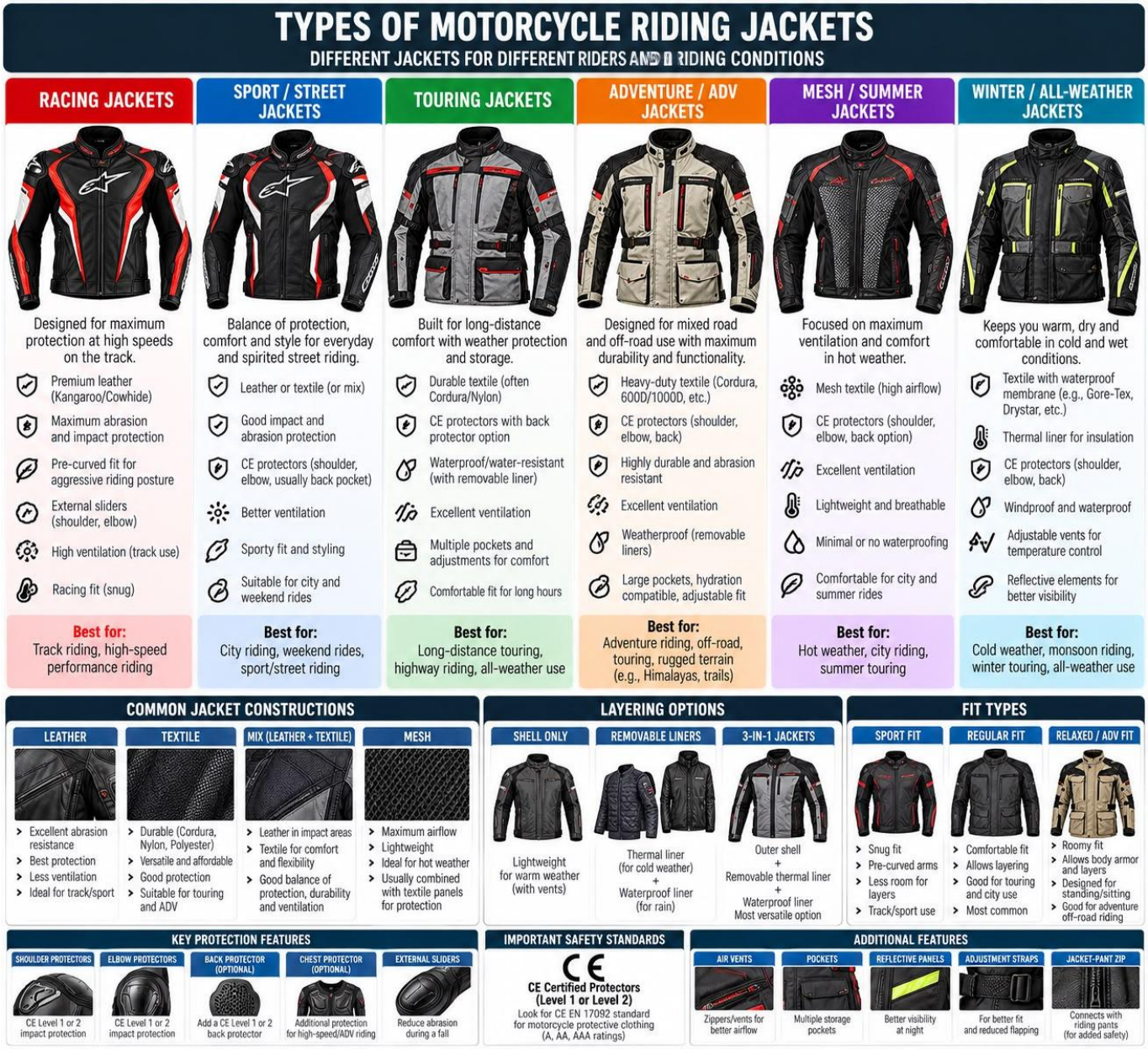
- **Neck tube / balaclava: useful for sun, dust, cold and sweat management; optional comfort gear, not certified crash protection.**
- Dedicated neck brace: specialist equipment for certain track or off-road disciplines. It is not a universal must-buy and must be compatible with the helmet, body armour and riding posture.
- Avoid assuming a neck brace prevents all neck injuries. Seek discipline-specific instruction and follow the maker's fit guidance.



# 4. Jacket — abrasion protection and upper-body armour

## Common jacket constructions

| Type | Best use | What to check |
|---|---|---|
| **Mesh / hot-weather textile jacker** | Indian summer and city riding | Preferred for Indian summers and most widely used due to better breathability. |
| **Three-/four-season/touring jacket** | Long highway days, mixed weather | Used to long touring riders can handle multiple weathers winters/summers/rains. Should have removable thermal/waterproof layers or a reliable membrane, adjustment and reflective details. |
| **Leather sport jacket / race suit** | Sport riding and track use | Track race essential riding gear. systems. |
| **Waterproof textile/Rain liners** | Monsoon and wet touring | Whether waterproofing is a membrane, liner or outer layer. |
| **Casual / urban protective jacket** | Daily commute and short rides | Actual garment class and armour—not just denim/canvas appearance. |




## Garment certification classes in practical terms

- **AAA: highest class** in EN 17092 for the tested garment, generally suited to higher-risk use; can be heavier, hotter or less comfortable.
- **AA: a common all-round road-touring target balancing protection and practicality**.
- A: lower protective requirement than AA/AAA; can be a reasonable urban-oriented compromise when genuinely certified and properly armoured.
- B: abrasion protection without included impact protectors; requires separate compatible impact protection where needed.
- C: an armour-holding garment intended to be worn with other garments; not a standalone abrasion-resistant outer layer.

### Armour: what the levels mean

- CE Level 1 armour generally meets a less demanding impact-transmission threshold than Level 2.
- **Level 2 is a sensible target for shoulder, elbow, knee and back protection where fit and comfort allow.**
- Check that **shoulder and elbow protectors remain over the joints when reaching the handlebars**; a high rating is less useful if the protector moves.
- A jacket's included back pad may be only a basic foam comfort pad. Check whether it is a certified EN 1621-2 back protector.
- Chest protection is an additional option, especially for track or some adventure/off-road use; compatibility and fit matter.

## 5. Gloves — hands, palms and wrists

### Types

| Glove Type | Primary Use Case | Key Benefit | Trade-off |
|---|---|---|---|
| **Short Cuff** | City commuting & hot weather | Lightweight & easy to use | Leaves the wrist exposed |
| **Gauntlet** | Track racing & long touring | Maximum impact & slide protection | Can be bulky and hot to wear |
| **Waterproof** | Rainy and freezing weather | Completely weather-sealed | Reduces tactile handlebar feedback |
| **Off-Road** | Motocross, trail, & dirt riding | Extreme grip, feel, & airflow | Not safe for high-speed street slides |

- Short-cuff urban gloves: convenient in heat and traffic but provide less wrist/forearm coverage.
- Long-cuff touring gloves: useful for highway touring and rain/cold; overlap the jacket sleeve to reduce gaps.
- Sport / gauntlet gloves: reinforced palm, wrist retention and often scaphoid protection; appropriate for fast road and track use.
- Waterproof insulated gloves: useful for cold or wet touring but may reduce tactile feel and increase bulk.
- Off-road gloves: lightweight and flexible, often prioritizing control feel; many offer less road-slide protection than road-specific gloves.

### What matters

- Look for a motorcycle glove certified to EN 13594 where available, with robust palm construction, secure wrist retention, reinforced seams and abrasion-resistant materials.
- Knuckle armour is useful but does not alone make a glove safe. Palm sliders and scaphoid-area reinforcement are valuable features.
- Test the throttle, brake and clutch with the gloves on. They should not bunch up or restrict control.
- **Choose waterproofing and insulation according to the route and season.** A waterproof glove that fits poorly can be worse in practice than a well-fitting glove plus rain over-glove.




## 6. Torso, chest and back protection

- Shoulder and elbow protectors: typically required in a protective jacket; check their EN 1621-1 marking and level.
- Back protector: choose a properly certified EN 1621-2 protector that fits the pocket and covers the intended area. A separate full-length protector may offer better coverage than a short insert.
- Chest protector: **optional for many road riders**, more common in track/off-road setups. Check EN 1621-3 where applicable.
- Body armour shirt: useful for some off-road disciplines or under compatible outer layers, but do not assume it has the abrasion protection of a certified motorcycle jacket.

# 7. Trousers — protect hips, knees and legs

### Types

| Type | Suitable use | Key considerations |
|---|---|---|
| **Motorcycle riding jeans** | City, casual rides and weekend use | Look for an EN 17092 class and armour; single-layer protective denim or lined jeans may differ substantially in heat and comfort. |
| **Textile touring trousers** | Highway touring and mixed weather | Abrasion class, knee/hip armour, adjustability, ventilation, connection zip and waterproof/thermal layers. |
| **Leather trousers / one-piece suit** | Sport riding and track days | Abrasion resistance, seam construction, knee sliders, joint articulation and fit in riding posture. |
| **Adventure trousers** | Touring with occasional dirt-road riding | Abrasion-rated construction, impact armour, mobility, ventilation and reinforced seat/knees. |
| **Over-trousers / rain pants /rain liners** | Weather layer over protective gear | Useful in rain, but usually not a substitute for certified abrasion-resistant riding trousers. |

## Knee and hip armour

- Look for knee protectors meeting EN 1621-1; Level 2 generally transmits less force than Level 1 under the standard test.
- Knee armour should remain centred over the knee when seated on the bike, not just while standing in a shop.
- Hip armour is worth prioritising for touring; confirm that the trousers include it or have compatible pockets.
- A riding jean with armour can be a good casual option, but check the garment's class and coverage instead of judging by the word “aramid” alone.
- **AVOID KNEE GUARDS; They tend to slip during fall.**




# 8. Boots and riding shoes — ankle, foot and shin protection

## Main categories

| Type | Best suited for | Trade-offs |
|---|---|---|
| **Race boots** | Track and aggressive sport riding | High protection, sliders and bracing; can be stiff and less walkable. |
| **Road-touring boots** | Long highway days, paved mountain roads and all-weather touring | Good balance of ankle/shin protection, weather resistance and walking comfort. |
| **Adventure boots** | Mixed on-road/off-road riding and standing on pegs | Often more rigid and supportive; bulkier for walking and not necessary for every road tourer. |
| **Motorcycle riding shoes** | City and casual short rides | More walkable, but typically less shin coverage and lower overall coverage than tall boots. |
| **Motocross/off-road boots** | Dirt, enduro and off-road riding | Very rigid; poor everyday walkability. |




## Boot standard and features

- Look for motorcycle footwear certified to EN 13634 and inspect the exact marking, height/coverage and protection features.
- **Useful features include ankle impact protection, heel/toe reinforcement**, a crush-resistant or transverse-rigidity design, abrasion-resistant construction and secure closure.
- **Waterproofing is valuable for long tours, but check the membrane and cuff design; water can enter from the top even if the boot itself is waterproof.**
- **Sole grip, gear-shift reinforcement, heel hold, walking comfort and compatibility with your foot shape matter on long days.**
- **Regular sneakers or fashion boots are not substitutes for motorcycle-specific protective footwear.**

### Touring-specific practical note

**For long highway and Himalayan trips without serious off-roading, prioritise a certified road-touring** boot with strong ankle/shin coverage, waterproofing and a comfortable walking gait**. An ADV boot is not automatically the right choice simply because the destination is Ladakh or Spiti**; choose for the actual riding surface and activity.

A boot certification claim should be verified on the actual product. Do not assume a model is certified because a retailer says “touring boot” or because it has a tall shaft.

## 9. Weather, visibility and comfort layers

- Base layers: moisture-wicking, seamless where possible, and comfortable under armour; not crash protection.
- Rain suit: useful as an outer layer over protective gear. Check fit at speed and ensure it does not flap or obstruct controls.
- Thermal layers: allow warmth without compressing armour or restricting movement.
- Cooling vest / hydration: useful for hot-weather touring, but manage hydration and heat exposure; neither replaces breaks.
- Reflective panels / high-visibility layers: improve conspicuity in some conditions; they cannot guarantee that drivers will see you.
- Earplugs: strongly recommended for highway comfort and hearing protection.
- Neck tube, balaclava, waterproof socks and glove liners: useful comfort aids, but do not count as crash armour.

## 10. Gear priorities: essential vs secondary

### Essential protective equipment

1. Correctly approved, well-fitting helmet with secure retention.
2. Motorcycle-specific jacket with verified abrasion protection and shoulder/elbow armour.
3. Motorcycle gloves with secure retention and palm protection.
4. Motorcycle-specific trousers or riding jeans with verified abrasion protection and knee armour; hip armour is strongly recommended.
5. Motorcycle-specific footwear with ankle protection; for highway touring, tall certified boots are preferable to low casual shoes.
6. Eye protection: visor or suitable goggles, plus a clear option for night riding.
7. Weather layer appropriate to the route, especially rain protection for monsoon or Himalayan touring.

### Strongly recommended upgrades

- Certified back protector if the jacket's supplied insert is not a certified protector.
- Hip protectors if trousers do not include them.
- Level 2 armour at key joints when it fits correctly and remains in position.
- Earplugs for sustained highway riding.
- Reflective/high-visibility elements for night, rain and low-light conditions.
- A second glove setup or thermal/waterproof layers for changing weather.

### Secondary / non-essential accessories

- Bluetooth intercom: communication and navigation convenience, not crash protection.
- Action camera (GoPro/Insta360): recording and documentation, not protective equipment.
- TPMS: useful for monitoring tyre pressure; does not replace manual checks and tyre maintenance.
- Phone mount / dedicated navigation: convenience; mount securely and avoid distraction.
- Hydration pack, luggage, tank bag and tail bag: useful for touring logistics, not personal protection.
- Heated gear, cooling vest and premium base layers: comfort upgrades depending on climate.
- Decorative accessories, branded apparel and matching colour schemes: optional.

**“Non-essential” does not mean useless. TPMS, navigation and communication can improve touring convenience, but they should come after core protective gear in a limited budget.**

## 11. Brand directory: Indian and global

This is not an exclusive directory, not a ranking or blanket certification endorsement. A brand may sell both certified and non-certified products. Verify the exact item, standard, model year, size and local warranty before buying.

### Indian-market / Indian-origin brands and labels

| Category | Brands to investigate | Notes |
|---|---|---|
| **Helmets** | Axor, SMK, Steelbird, Vega, Studds | Compare the exact helmet's authentic approval, fit and model-specific documentation. Do not treat all models from a brand as equivalent. |
| **Jackets, trousers, gloves** | Rynox, Solace, ViaTerra, Raida, DSG, Royal Enfield, Viaterra (also written ViaTerra) | Broad range across commuting, touring and adventure categories; inspect garment class and individual armour certifications. |
| **Boots / riding footwear** | Solace, Raida, Orazo, Royal Enfield, ViaTerra | Verify EN 13634 certification on the exact model; marketing claims and construction vary. |
| **Luggage / touring accessories** | ViaTerra, Rynox, Guardian Gears, Carbonado, Bobo | Useful for touring storage and mounting accessories; not a substitute for protective equipment. |
| **Intercoms / electronics sold in India** | Sena, Cardo, BlueArmor and other local distributors | Check compatibility, weather resistance, warranty and helmet fit; electronics are secondary to protection. |

### Global brands

| Category | Brands to investigate | Typical positioning / notes |
|---|---|---|
| **Helmets** | Shoei, Arai, AGV, HJC, Schuberth, Bell, Nolan, LS2, Shark, Scorpion EXO | Range varies from touring to sport; verify the precise homologation and local authenticity. |
| **Jackets / trousers / suits** | Alpinestars, Dainese, REV'IT!, Klim, Rukka, Spidi, Held, IXS, Furygan, Oxford | Different lines target track, urban, touring and adventure; certification belongs to the product, not just the brand. |
| **Gloves** | Alpinestars, Dainese, REV'IT!, Held, Five, Knox, Racer, Furygan | Look for EN 13594, fit, palm reinforcement, retention and seam quality. |
| **Boots** | Alpinestars, Dainese, TCX, Forma, Sidi, Gaerne, Daytona, Stylmartin | Choose race, touring, adventure or urban footwear based on actual use and certification. |
| **Armour / airbags** | Dainese, Alpinestars, REV'IT!, Helite, Knox, SAS-TEC, Forcefield | Check protector standards, coverage, system compatibility, service needs and replacement costs. |
| **Intercoms / cameras** | Cardo, Sena, GoPro, Insta360, DJI | Convenience/recording equipment rather than core protective gear. |

## 13. How to inspect a product before buying

1. Find the sewn-in or attached label. Record the standard, class/level, manufacturer and model.
2. Ask for the product's Declaration of Conformity or other certification evidence where applicable; check that it matches the exact model and version.
3. Inspect armour markings and whether each protector is certified for its body area.
4. Try the item in riding posture: reach the bars, bend knees, operate controls and check armour placement.
5. Check closures, seams, stitching, zips, adjustment straps and whether the garment remains secure when moving.
6. For waterproof products, identify whether the waterproof layer is laminated, removable or worn as a separate over-layer.
7. Check local warranty, repairs, spare armour availability, replacement visors and boot sole/zip service options.
8. Avoid used helmets of unknown history. Be cautious with used protective gear if impact history, seam condition or armour integrity is uncertain.