

TRIKKE™ PROFESSIONAL
MOBILITY

VEHICLE SELECTION GUIDE



1. THE FOUNDATIONAL ARCHITECTURE (common to all models)

Before selecting specific battery or tire packages, it is essential to note that every vehicle in the TRIKKE Professional lineup is built upon the exact same rugged, heavy-duty industrial platform. This shared mechanical foundation ensures identical baseline dimensions, accommodates the same rider size variations, and delivers consistent structural durability across the entire fleet:

- **Chassis & Frame Construction:** Lightweight, high-strength Aluminum Alloy frame treated with an ultra-durable Epoxy Paint finish and assembled entirely with rustproof hardware.
- **Patented Driving Mechanics:** Proprietary TRIKKE Cambering Vehicle Technology, providing unmatched stability, lean-to-steer carving control, and an intuitive upright riding stance.
- **All-Wheel Controllability:** True 3WD (All-Wheel Drive) configuration natively active on all models except for the entry-level 2WD variant.
- **Suspension & Handling:** Premium Full Suspension system featuring a front fork with an internal spring/oil damper paired with independent dual rear trailing arms controlled by coilspring over oil shocks.
- **Cockpit Comfort:** Adjustable handlebar stem providing 100mm of vertical travel to easily fit operators of various heights.
- **Safety & Stopping Power:** Complete road-ready lighting system, high-decibel traffic horn, and heavy-duty dual Hydraulic Disc Brakes.
- **Auxiliary Output:** Integrated 12V accessories line to natively power tactical gear, charging ports, and auxiliary components.
- **Portability:** Fully foldable frame geometry allowing quick breakdown for rapid vehicle transport or compact storage.

2. STRATEGIC FLEET SELECTION MATRIX

Use this matrix to align an agency's localized terrain, budget, and performance needs with the appropriate model trim.

Vehicle Model	Drivetrain Layout	Governed / Max Speed / Range	Rated Payload Capacity	Primary Operational Environment	Baseline Equipment Package
Defender 48V 2WD	2WD (Dual Rear)	8–12 mph / 20 mph 20-mile range	250 lbs (Rider + Gear)	Indoor Facilities, Malls, Airports, Level Asphalt	SECURITY Trim: Single headlight, single rear brake line, streamlined wiring.
Defender 48V 3WD	3WD (All-Wheel)	8–12 mph / 20 mph 20-mile range	250 lbs (Rider + Gear)	Closed Campus, Parking Decks, Mixed Flat/Mild Hills	SECURITY Trim: Single headlight, 3WD torque delivery, modular accessory ports.
Defender 60V 2WD	2WD (Dual Rear)	8–12 mph / 25 mph 25-mile range	250 lbs (Rider + Gear)	Closed Campus, Parking Decks, Mixed Flat/Moderate Inclines	SECURITY Trim: Single headlight, single rear brake line, streamlined wiring.
Positron 60V	3WD (All-Wheel)	8–12 mph / 25 mph 25-mile range	300 lbs (Rider + Gear)	High-Visibility Patrols, Moderate Inclines, Parking Ramps	POLICE Trim: 3-Tone Siren, flashing array, backlit placard, dual headlights.
Positron 72V Elite	3WD (All-Wheel)	Up to 30 mph 30-mile range	300 lbs (Rider + Gear)	Full-Duty Law Enforcement, Steep Topography, Public Streets	POLICE Trim: 3-Tone Siren, high-capacity battery, dual headlights, gear bag.
Positron 72V XL	3WD (All-Wheel)	Up to 40 mph 35-mile range	350 lbs (Rider + Gear)	Tactical Street Patrol, Broken Pavement, Unpaved/Rough Roads	POLICE Trim: Upgraded wide-track front fork/swingarms, wide low-PSI tires.

3. ENVIRONMENTAL & INFRASTRUCTURE LOGISTICS

Topography & Grade Suitability

- **Level Ground & Covered Footprints:** Ideal for any model in the lineup. For strictly indoor environments (airports, logistics hubs), recommend the Defender 48V 2WD for maximum powertrain simplicity, dual rear-motor efficiency, and simplified wiring.
- **Elevated Topography & Parking Structures:** Any environment with steep street inclines or structural vehicle ramps requires the high-torque performance of the 60V or 72V 3WD platforms. The 48V 2WD torque curves are optimized strictly for operation under 15 mph on flat ground.
- **Operator Payload Boundaries:**
 - Up to 250 lbs: Defender 48V 2WD / Defender 48V 3WD.
 - Up to 300 lbs: Positron 60V / Positron 72V Elite.
 - Up to 350 lbs: Positron 72V XL (Engineered with upgraded heavy-duty front suspension ◦ forks and heavy-duty structural trailing arms).

Shift Management & Charging Infrastructure

- **Intermittent Shifts with Scheduled Downtime:** Standard 48V and 60V battery capacities are fully sufficient if vehicles can be plugged into a charging station during operator breaks or between shifts.
- **Continuous / Back-to-Back Shifts (The Swap-and-Go Advantage):** For high-tempo deployments where vehicles cannot face charging downtime, TRIKKE offers a distinct tactical advantage. The modular battery design allows an operator to hot-swap a depleted battery with a fresh one in under one minute, leaving the removed battery connected to the station charger while the vehicle immediately returns to service.
- **The 72V Range Alternative:** Advise clients that the high-voltage 72V architecture inherently stores a massive native energy reserve. In many field applications, selecting a 72V model can reduce or completely eliminate the operational necessity and secondary capital expense of managing spare battery pools.

4. CHASSIS COMFORT & TIRE SELECTION GUIDE

Critical Performance Notice

Maintaining designated tire pressure is essential across all pneumatic models. Proper inflation ensures optimal vehicle range, protects baseline performance, and prevents excessive load or thermal strain on the electrical drive system.

Option A: Standard Air-Inflated Tires (65/85-6)

- **Width Profile:** 65mm Standard Track.
- **Pressure Target:** High pressure operating range of 50–60 PSI.
- **Terrain Target:** Mixed outdoor surfaces, standard city sidewalks, and uniform streets.
- **Maintenance Profile:** Routine Maintenance Required. Requires manual tire pressure monitoring and inflation adjustments every 3 weeks to preserve range and tracking profiles, along with the standard field necessity to occasionally fix or patch flats.
- **Financial Analysis:** Baseline factory cost. Provides excellent pneumatic shock cushioning.

Option B: Airless Semi-Solid Tires (65/75-5.2)

- **Width Profile:** 65mm Standard Track.
- **Engineering Design:** Features advanced hollow chambers construction to mimic pneumatic compliance without using an inner tube.
- **Terrain Target:** Highly optimized for indoor polished floors, smooth structural concrete, malls, airports, and pristine municipal asphalt.
- **Maintenance Profile:** Zero Maintenance. 100% flat-proof configuration. Completely eliminates air pressure compliance checks, shop pumps, or downtime from punctures.
- **Financial Analysis:** Reflects a **35% higher initial cost for the tires only** (not the complete vehicle), which yields a service lifespan **3x longer** than pneumatic air tires, lowering the fleet's long-term total cost of ownership.

Option C: XL Low-Pressure Air Tires (85/65-6)

- **Width Profile:** 85mm Wide Track.
 - **Pressure Target:** Must be kept carefully inflated within a specialized range of 25–35 PSI to maintain the wide contact patch and maximum mechanical compliance.
 - **Terrain Target:** Heavily broken urban pavement, unpaved transitions, gravel, cobblestone, or rough tactical environments. Standard equipment on the Positron 72V XL.
- Maintenance Profile:** Routine Maintenance Required. Routine pressure tracking checks are recommended to maintain low-PSI performance guidelines and address potential puncture flats.
- **Financial Analysis:** Premium wide-track component cost. Natively handles severe terrain irregularities by absorbing high-frequency vibrations before they reach the rider deck.

5. STANDARD APPLICATION PACKAGES & UPGRADE MODULARITY

POLICE Specification Trim

(Standard configuration on Positron 60V, 72V Elite, and 72V XL)

- **Audio Alerts:** Integrated heavy-duty 3-tone tactical siren system.
Visual Warning Array: High-visibility emergency flashing lights (5-light or 7-light structural configurations) plus a forward-facing, high-visibility "POLICE" backlit placard mounted directly to the handlebar.
- **Forward Illumination:** Dual high-output LED headlights.
- **Cockpit Ergonomics:** Dual handlebar rearview mirrors, heavy-duty tactical gear bag, and a rugged smartphone holder featuring an integrated USB charging port tied directly to the main vehicle battery.

SECURITY Specification Trim

(Standard configuration on Defender 48V 2WD, 48V 3WD and 60V 2WD).

- **Chassis Electrics:** Streamlined electrical layout featuring a single high-output LED headlight. Bypasses the 3-tone siren, tactical gear bag, rear mirrors, phone charger, backlit handlebar placard, and emergency flashing light bars.
- **Braking Control:** Optimized single-line mechanical braking configuration that activates both rear wheels simultaneously (on 2WD variants).
- **Modularity Upgrades:** All items included in the POLICE package are fully cross-compatible with the Defender frames and can be added to any Security order as optional, custom-priced factory upgrades.

Optional Fleet Accessories (All Models)

The following utility and tactical accessories can be specified and integrated onto any trim level at an additional line-item cost:

- Water bottle holders, helmet lock, cargo box, utility trailer
- **Integrated Tactical Weapon & Armor Mounts:** Applied via the front structure V-Bar.

6. REVOLUTIONARY TACTICAL UPGRADE: THE V-BAR

All third-generation (V3 Generation) TRIKKE Positron models now feature a factory-installed **VBar**— a rugged bash bar and structural crash guard mounted to the front of the main front structure. The V-Bar serves two critical functions for tactical law enforcement deployments:

1. **Visual Branding Area:** Features dual side plates with designated flat surface areas engineered explicitly for custom agency identification graphics and stickers.
2. **Tactical Accessory Integration:** The back end of the V-Bar (positioned behind the battery, directly between the rider and the battery pack) features integrated mounting hardpoints. These brackets are engineered to securely hold and deploy high-grade tactical hardware, including:
 - An integrated quick-release **Class III Custom Ballistic Shield. (manufactured by ADS)**
 - **A Blac-Rac tactical rifle lock** (manufactured by Setina)

7. AGENCY CUSTOMIZATION DETAILS

Sales representatives must secure confirmation from the purchasing agency regarding the following three visual and legislative criteria before submitting the build order to production:

1. **Chassis Paint Selection:** Specify the exact fleet color match required by the department or security company.
2. **Emergency Light (EMG) Color Profiles:** Code specifications must comply with state or regional vehicle illumination statutes:
 - **Red-Blue** or **Blue-Blue** (Standard Law Enforcement / Sheriff Municipal use)
 - **Blue-Green** or **Amber-Green** (Private Contract Security / Industrial Complexes / Park Rangers)
 - **White-Blue** or **White-Red** (Tactical Units / Specialized Services)
 - **White-Amber** (Traffic Auxiliary / Code Enforcement / Parking Management)
3. **Custom Agency Decals & Branding Location:** High-durability identification graphics and department emblems can be requested for factory application. Graphics are strictly limited to the following four structural positions:
 - **Handlebar Front Plate**
 - **Main Front Structure**
 - **V-Bar Side Plates**
 - **Chassis Trailing Arms (Frame)**



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