BORN OF A RACING GENE

TVS Racing

40 years of racing heritage forms the essence of every Apache.
In 2007 fast racing DNA manifested itself into the TVS Apache RR, the moniker standing for Racing Throttle Response. That badge and those machines set alight the tracks of not only India, but the world. The RR name has become a moniker on the top step of the podium and with that legacy, comes pride.

THE EVOLUTION OF PURITAN TO PLAY

The TVS Apache RR 310 is the Ultimate Track Weapon. Crafted meticulously to shatter lap records and take the chequered flag. The TVS Apache RTR 310 keeps that essence of performance but strips everything else away to give you the naked sport that’s engineered for play. The power, the riding dynamics, the tech, all geared to let you truly express yourself with performance.
ENTER THE WORLD OF THE FREESTYLER

This is more than just a performance motorcycle. This is your gateway into the world of the freestyler. The TVS Apache RTR 310 has been designed to be the ultimate form of expression. It is engineered with precision to let you perform in your own way. It’s brimming with the latest tech to give you the freedom to freestyle.
The blueprint served as our canvas, and every line of design was conceived to let you play outside the lines. The cyborg was the design inspiration behind the TVS Apache RR 310. The fusion of man and machine to make them one. An aggressive stance with a raked high tail and forward weight bias give it a menacing look. The flowing lines blending into sharp flared contours, is designed to make an impression while giving you free flowing performance.
DYNAMIC TWIN LED HEAD LAMP

The imposing gaze of the freestyle will have all eyes on you. The split design is inspired by the cyborg, making an imposing presence. The brightest in the segment, the headlamp is intelligent too. The smart control automatically adjusts throw and brightness based on the speed of the vehicle to provide the best visibility. The smart DRL automatically turns on/off based on ambient light conditions. While the brightness can also be manually controlled through the cluster menu.

DYNAMIC TWIN TAIL LAMP

The twin strip tail lamp has a free-flowing design that cannot be missed. The dynamic tail lamp adapts to the intensity of braking, flashing red during rapid deceleration to warn those behind.

8-SPOKE DUAL-COLOURED ALLOYS

Dual-coloured for a double take. The all-new alloys are styled to get a reaction, mirroring the dual colour scheme of the freestyle machine.
POWER TO THE FREESTYLER

UNIQUE REVERSE INCLINED DOHC ENGINE

The freestyler’s 312.2 cc engine has a unique design. It provides a compact engine layout resulting in mass centralization. While the forged aluminium pistons are 5% lighter.

The engine produces a maximum power of 35.6 PS at 9,700 rpm while putting out a maximum torque of 28.7 Nm at 6,650 rpm. The engine is tuned to deliver higher peak torque across the powerband.

ENGINE COOLANT JACKET OPTIMIZATION

The cylinder head is designed to have best-in-class heat management. This again allows for better performance and higher revving.
6-SPEED GEARBOX WITH BI-DIRECTIONAL QUICKSHIFTER

The bottom mounted shift-lever and gears with negative back rack angle machined in all the gears lug to lug. This allows ease of engagement of gear and no slippage at higher speeds for precision shifts and quick launches.

When it comes to performance, time is everything. The quick-shifter takes milliseconds with every gear shift. Ignition is cut by milliseconds, this action unloads the gearbox which allows to change the gear without using the clutch nor cutting the fuel.

CRUISE CONTROL

Make those long distances seem shorter. With cruise control, the rider can engage the system and the Apache RTR 310 will maintain that set speed without any throttle or clutch input.

LIQUID-COOLED TECHNOLOGY

The Apache RTR 310 has 23 rows of tubes for optimized cooling efficiency keeping the high revving engine at optimum temperature delivering maximum performance.

RACE-TUNED SLIPPER CLUTCH

The slipper clutch allows for rapid downshifts that prevent rear wheel hopping, allowing for better braking and more precise cornering. The assist function tightly binds the clutch plates during acceleration, to provide enhanced torque carrying capacity with reduced clutch operating force.

THROTTLE-BY-WIRE

A flick of the wrist now delivers precise performance like never before. The state-of-the-art Electronic Throttle Control (ETC) consisting of electronic throttle grip, electronic throttle body (ETB) and electronic control unit (ECU).

GLIDE THROUGH TECHNOLOGY

This first-in-segment feature allows for the performance machine to start moving with the slow release of the clutch and no throttle operation. Without the need to synchronise the throttle and clutch lever, engine stalling is eliminated.
THE FREESTYLER FRAME

The Hyperspec trellis frame with a light aluminium sub-frame is the spine of the Freestyler. It is designed to provide excellent dynamic response at higher speeds and ease of manoeuvrability.

THE DYNAMICS OF THE FREESTYLER

The rider triangle is optimized for better load distribution on the shoulder to give excellent steering control and good lower back comfort so you can keep freestyling all day long.

FREESTYLE ERGONOMICS
RESPONSIVE KAYABA SUSPENSION

Honed and tuned by the experts from KYB, the Mono-tube with monotube floating piston technology has hydraulic stepper with check valves. Providing precise damping and smooth dynamic response to achieve best-in-class lateral acceleration and cornering speeds.

SUPERIOR MICHELIN ROAD 5 TYRES

The TVS Apache RTR 310 is equipped with Michelin Road 5 tyres. Engineered with next-gen compounds and featuring Michelin’s patented ActiGrip technology, these tyres provide superior grip for cornering and offer a premium ride feel.

SPORTY STEEL TAPERED HANDLEBARS

Designed with performance focused ergonomics in mind, the tapered handlebars give the rider precise control and feedback.

RACE-TUNED LINEAR STABILITY CONTROL

REAR WHEEL LIFT-OFF PROTECTION
During intense braking, the system keeps the rear wheel on the ground and significantly reduces the risk of a rollover.

LINEAR TRACTION CONTROL
Prevents the rear wheel from spinning during acceleration in slippery conditions and surfaces.

DUAL-CHANNEL ABS
The ABS prevents wheel lock. The setting of the ABS changes as per ride modes.

CRUISE CONTROL
With cruise control, the Apache RTR 310 will maintain a set speed without any throttle or clutch input. It allows two levels of upshifting and downshifting when cruise control is enabled.

ADJUSTABLE HAND LEVERS
Set how you want to freestyle. The adjustable levers offer 4 levels of adjustment for increased accessibility for diverse riding styles.
5 RIDE MODES

The TVS Apache RTR 310 is equipped with 5 ride modes to help the freestyler adapt and perform in any condition.

SPORT MODE
The engine on sport mode is calibrated to deliver maximum acceleration across all operating conditions, while the race mapped fuel injection provides a consistent delivery of power. The engine also enables smooth deceleration for optimized engine braking.

TRACK MODE
The complete power of the Apache RTR 310 is at the disposal of the rider’s wrist. The ride-by-wire throttle provides an instant delivery of power on the straights. With minimal ABS interference the freestyler can truly test the limits of performance.

URBAN MODE
Tame the streets with the freestyler. The power delivery is tuned to provide quick bursts of acceleration. The dual-channel ABS is primed for a quick response with a mild pulsation feel.

RAIN MODE
Let rain, never interfere with play. The engine in rain mode limits the speed to 135km/h in treacherous conditions but provides linear acceleration for plenty of grunt. The ABS comes into its own in rain mode, with strong lever pulsation and rear lift protection to prevent aquaplaning.

SUPERMOTO MODE
Prior to the freestyler, the all-new Supermoto mode disengages the rear ABS while maximising the power. The perfect recipe to keep you drifting with style.

THE TECHNOLOGY BEHIND THE FREESTYLER
MULTI-INFORMATION RACE COMPUTER

The digital face of the freestyle. The horizontal 5” TFT race computer enhances the riding experience. With unique themes for every ride mode, day and night mode and adaptive brightness. The cluster is also the control hub of the performance machine. Enabling you to change and tune settings like the traction control, cruise control, headlamp brightness and even music for your Bluetooth device.

SMARTXCONNECT

The TVS Connect App links your smartphone to the TVS Apache RTR 310. The cutting-edge Bluetooth connected app offers up a range of telemetry data. The app displays a detailed race analysis which includes statistics like distance covered, gear shifting points, best lap record, G-Force, interactive tour map plot, ride pattern analysis, and much more.

VOICE ASSIST

Stream your voice control. This function provides handlebar control over a variety of functions. Access phone calls, control music, geo-fence, and voice control of basic vehicle configurations.

NAVIGATION

Precise navigation with easy-to-read, clear, trackable directions from your Google Maps account.

RACE TELEMETRY

Through the course of the race, the SmartXConnect app records a million of race parameters, and the racer can easily and through the telemetry and app download specific data. The app also summarizes essential data at the end of every race session.

TELEPHONY

Accept or reject calls on-the-go with the control panel, and dial for incoming calls, SMS notification, and audio calls.

DIGI DOCS

All important features of the Apache RTR 310’s data storing and transferring images and documents from the TVS Connect App to your phone. You can keep notes and store up to 51 documents like BC card, driving license etc. on your cluster.

CRASH ALERT

This unique safety feature is triggered when the machine senses a fall. The system sends an alert via SMS and notifies the rider’s emergency contacts, with the crash location within 180 seconds.

MUSIC PLAYBACK

Cycle through your favorite Freestyle playlist using the toggle switches with the track name being displayed on the TFT screen.

GO PRO CONTROL

Record your Freestyle ride experience on the Apache RTR 310 with ease. Pair your GoPro with the free app and control the camera from the toggle switches.
The TVS Apache RTR 310 is available in a build to order format. This is India’s first factory built customisation platform. Choose the freestyler kit that suits your style, so your performance machine can freestyle in your signature style.

**SEANG BLUE COLOUR**
Let the style of your machine reflect 40 years of TVS Racing heritage. The unique race inspired decals paired with the iconic blue, white and red will make your machine stand out.

**DYNAMIC KIT**
When agility is the name of the game, this kit has all that you need to make your freestyler nimble.

**DYNAMIC PRO KIT**
If you are looking to push the limits of freestyle, the kit has what it takes to dial up the handling characteristics and comfort of the Apache RTR 310.
**DYNAMIC KIT**

**FULLY ADJUSTABLE FRONT AND REAR SUSPENSION**
The TVS Apache RTR 310 allows you to set-up the machine to suit your riding style. The front suspension features fully adjustable preload, compression and rebound damping. While the rear suspension has fully adjustable preload and rebound damping. This allows the Freestyler to be tuned to perform on any riding surface.

**TYRE PRESSURE MONITORING SYSTEM**
The sensor constantly monitors the front and rear tyre pressure and displays on the cluster and TVS Connect App. If the tyre pressure is above or below the recommended limit, it gives out a warning to the rider.

**BRASS COATED CHAIN**
Styled to stand out, make heads turn with the unique brass coated chain. The rustproof design also aids in performance.

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**DYNAMIC PRO KIT**

**RACE-TUNED DYNAMIC STABILITY CONTROL**
The first-in-class technology optimises braking even while cornering. The advanced system uses a 6D inertial measurement unit to constantly calculate the position of the bike, the power to the rear wheel, the lean angle, the braking and cornering forces at play. The system adjusts braking and power input to assist riders during critical low-grip situations and counters righting up when braking in bends.

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**CORNERING ABS**
The 4D sensor calculates the lean angle of the bike and modulates braking force between the front and rear brake.

**CORNERING TRACTION CONTROL**
While throttling out of a corner, the system regulates the torque from the engine to prevent wheel spin.

**CORNERING CRUISE CONTROL**
When cornering, speed is automatically reduced by the system to ensure a comfortable lean angle, and the most stable possible ride. After exiting the corner the speed climbs back up to the initial speed set by the cruise control.

**WHEELIE CONTROL**
Keep the front wheel firmly on the track. The wheelie control calculates the torque request depending on pitch rate, pitch angle, and wheel acceleration to prevent wheel lift.

**SLOPE DEPENDENT CONTROL**
The system estimates the slope angle and consideration of the axle weight change to enable a proper brake force distribution for two-wheelers.

**REAR WHEEL LIFT-OFF CONTROL**
During intense braking, the system keeps the rear wheel on the ground and significantly reduces the risk of a rollover.

**CLIMATIC CONTROL SEAT**
With three levels of heating and cooling options, the first-in-class climatic controlled seats, ensures ultimate comfort.
ACCESSORIZE YOUR FREESTYLER

From touring to styling to safety accessories, add on what suits your style.
FLAUNT YOUR FREESTYLE VIBE

Gear up with the latest Freestyler collection, inspired by the design of the TVS Apache RTR 210.
Every Apachean can register and be a part of the Apache Owners Group, a motorcycling community consisting of over 300,000 members. With chapters across the globe, the group embarks on motorcycling adventures of all kinds. From breakfast rides that satisfy your desire to hit the road to weekend rides that build the bond of biking brotherhood and marquee rides that take you to the remotest corners of the world.

Wheelies pop and jaws drop. The Apache Pro Performance is a series of stunt shows like no other. Featuring the most skilled riders in the country, known for breaking records as well as the laws of physics.

The Apache Racing Experience brings you closer to the racetrack than ever before. With mentorship from championship-winning riders from TVS Racing, this includes classroom sessions as well as training on the racetrack. This is the best arena to hone and perfect your racing skills. It is also the gateway to the prestigious TVS One Make Championship.
### SPECIFICATIONS

**Engine**
- Type: Single Cylinder, 4 Stroke, Fuel Injected, Liquid Cooled, Spark Ignited Engine
- Engine Capacity: 313.12 cc
- Maximum Power: Sport + Track and Supermono mode 35.6 PS (2650 engine rpm)
- Maximum Torque: Urban and Rain mode 27.1 PS (6600 engine rpm), Sport and Track mode 28.7 PS (6500 engine rpm)
- Bore: 80 mm
- Stroke: 62.1 mm
- Fuel Injection: Close Loop ECU system
- Throttle Control: Electronic throttle control
- Gear to Throttle ratio: 1:29
- Starting: Electric Start
- Max Speed: 150 mph (240 km/h)
- Ignition: Dynocontrolled - high energy magnetised ignition system
- Power to Weight Ratio: 0.16 kW/kg
- Compression Ratio: 12.1:1 or 14.1:1
- Cooling System: Liquid Cooled
- Chassis Size: Single-piece and single body design
- Gear Box: 6-speed with BI-Directional Gearshift

**Chassis and Suspension**
- Frame: Hybrid with Treff’s frame and Aluminium cast subframes, split chassis
- Front Suspension: 41 mm diameter USD fork
- Rear Suspension: One-side Aluminium swing arm directly
- Rigid monoshock, pre-load adjustable

**Fuel Tank Capacity**
- Full: 15 l or 0.5 L

**Dimensions**
- Height: 1164 ± 10 mm
- Length: 1941 ± 20 mm
- Width: 833 ± 5 mm
- Wheelbase: 1368 ± 12 mm
- Ground Clearance: 180 ± 5 mm (urban)
- Saddle Height: 800 ± 10 mm

**Electrical**
- Battery: 12V, 8AH MF Lead Acid
- Head Lamp: 12V LED Head Lamp
- Tail Lamp: LED 1W
- Instrument Cluster: 3” TFT screen connected cluster

**Wheel and Tyre**
- Rim Size (Front): 13 inches (H23)
- Rim Size (Rear): 13 inches (H23)
- Tyre Size (Front): 110/70-17 Tubeless – Michelin Road 4
- Tyre Size (Rear): 130/60-17

**Brake**
- Front: 300mm
- Rear: 240mm
- ABS: Dual Channel
- D.O.T. 5

**Weights**
- Kerb Weight: 165 Kg
- Max Payload: 180 Kg

**Performance**
- Max Speed: 150 Km/h
- Acceleration 0-200 km/h: 2.81 s
- O-90 km/h: 7.9 s