Avenis 125

Press information

October 2022

Contents

1. Introduction

The Avenis 125 achieves the fine balance of performance, sporty style, and practicality. It has a sporty, sophisticated presence, but remains comfortable, well-appointed, and fun to ride. On the move it is agile, with the ability to effortlessly manoeuvre through traffic. The ride is quiet, the suspension smooth, and the fuel economy impressive.

2. Product concept

The Urban Arrow

The product concept of the Urban Arrow meant sharp lines, aerodynamic efficiency, exciting acceleration performance, and sporty stance, as well as the efficiency, sophistication and practicality expected from an urban scooter.

Its performance attributes and proven reliability come from the Suzuki Eco Performance (SEP) engine, a compilation of cutting-edge Suzuki technologies. An advanced air-cooled engine design is coupled with a fuel injection system to achieve the best of both worlds: maximum power output with satisfying acceleration and optimum fuel economy combined with environmental performance that complies with Euro 5 emissions standards. Other features designed to provide the rider with greater control and stability include the Combined Brake System.

Features such as the use of compact, durable LEDs for the headlight, position lights and taillight enhance reliability and add to the Avenis' style, while the multifunction digital instrument panel provides all the information the rider needs.

On the utility side, the Avenis 125 features generous storage space under the seat, a pair of handy front compartments, a standard-equipment USB outlet for charging smartphones, the Suzuki Easy Start System, and a hinged tail-mounted fuel cap that provides easy refuelling.

Comfort is also a priority, and the Avenis 125's double-stitched two-tone seat is designed for comfort, but also features a richly textured material that provides a secure grip and allows quick movement when enjoying a sporty ride. The roomy floorboard enables the rider to maintain a comfortable riding position, while its cut-away design makes it easier to plant both feet firmly on the ground when stopped.

2. Product concept

Key product features

Styling design:

- Sharp, aggressive urban styling with sleek, edgy and dynamic body lines
- Stacked-lens body-mounted LED headlight is bright, compact, and power efficient
- Vertically-oriented LED position lights add a striking accent to the face
- Handlebar-mounted front turn signals are highly visible to approaching traffic and pedestrians while aiding the sleek design
- Upswept tail with independent LED rear combination lights
- Stylish cowling with floating meter visor
- Distinctive body graphics and black metallic-finish emblems add a sophisticated touch
- The lightweight muffler cover features a bold design and excellent heat shielding ability

Engine features:

- Advanced Suzuki Eco Performance (SEP) engine technology
- Simple, reliable, air-cooled SOHC engine design with a proven track record
    - *Over five million SEP engines in use worldwide*
- Combines prompt acceleration with low fuel consumption
- Excellent low and mid-range torque contributes to quick acceleration
- Compact and lightweight package contributes to fuel efficiency and better handling
- Optimisations throughout the engine deliver excellent combustion efficiency
- Low-friction engine design reduces friction loss for greater reliability and power efficiency
- Euro 5 compliant for environmentally responsible performance
- Excellent durability, long service life, low running cost, and easy to maintain

2. Product concept

Chassis features:

- Lightweight, rigid frame reduces weight and contributes to handling performance
- Suspension delivers solid road-holding performance and a comfortable ride
- Cast aluminium wheels are lightweight
- Dunlop D307 N tyres deliver excellent running performance and a smooth ride
- Suzuki's Combined Brake System supports well-balanced braking by distributing braking force to both the front and rear wheels when the left brake lever is operated
- Short wheelbase and light, slim design contribute to easier, more agile handling
- Ample ground clearance for leaning into corners and ably handling bumps in the road
- Sporty double-stitched two-tone seat affords rider and passenger plenty of room and comfort, while its richly textured surface provides a secure grip when riding
- Roomy floorboard helps the rider maintain a comfortable riding position
- Independent right and left aluminium grab bars
- Locking hinged tail-mounted fuel cap
- Lightweight front and rear fenders contribute to performance and sporty styling

Practical features:

- Multifunction digital instrument panel provides all the information the rider needs
- One-push Suzuki Easy Start System makes it easy to start the engine
- A handy USB outlet inside the covered left front storage compartment can be used to recharge smartphones
- Quick access right front storage compartment
- 21.5 litre underseat utility compartment is convenient for storing a variety of items
- Dual utility hooks are handy for carrying shopping bags and other items
- Rear brake lock enhances comfort and convenience by allowing the rider to remove both hands from the handlebars when stopped at a street light or in traffic
- Theft deterrent key system with seat opener function adds convenience and security
- Standard equipment centre and side stands offer greater parking flexibility

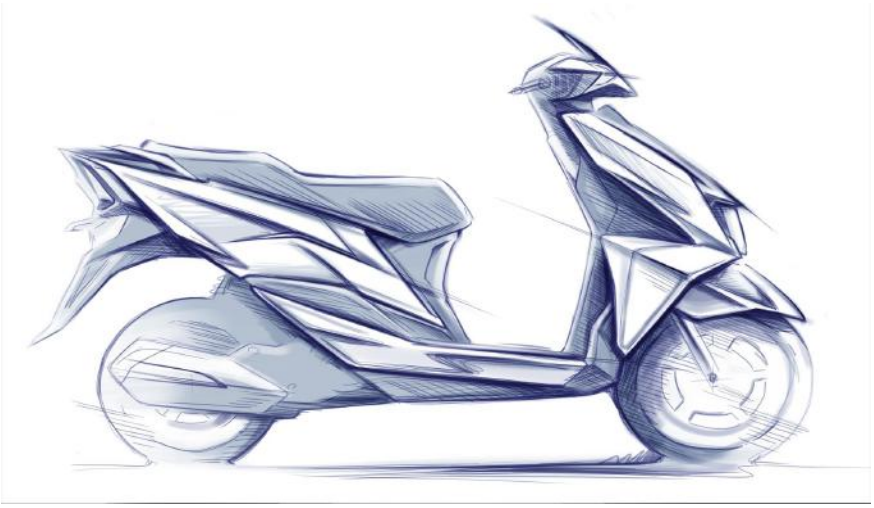
3. Styling design

The Avenis 125 design concept was: Spirited chic

The concept serves to conjure up images of sharp, aerodynamically efficient lines and advanced engineering. The Avenis 125 was designed from the ground up to evoke this visual sense of speed, dynamism, and controllable agility.

Underneath it is a practical, fuel-efficient town scooter that is ideal for commuting, shopping, and manoeuvring through city traffic. But its style draws on Suzuki's sportbike heritage, with futuristic body lines and front and side cowling accents that accentuate its performance credentials. From its striking front end to its sleek, upswept tail, the Avenis 125 is designed to appeal to people who want to experience the joy and exhilaration of two-wheeled urban freedom served up with a sporty sense of style and sophistication.

With its sportbike-inspired look, its sleek, aggressive, urban lines are evident in every detail, with edgy, dynamically contoured body lines, attractive contrasting colour accents, and black metallic-finish badging.



3. Styling design

Stylish meter visor

A tinted meter visor floats slightly above the handlebar cowling, enhancing the sharp styling of the front end.

Distinctive body graphics and black metallic-finish emblems

The high-quality, black metallic-finish Avenis logo on the side panels add flair and a sophisticated touch to the body design. The graphics on the sides of the front cowl highlight the scooter's aggressive attitude.

Edgy muffler cover design

The edgy shape and bold design of the resin muffler cover conveys the image of a sports bike. The cover itself is lightweight and features excellent heat shielding ability.

4. Engine

Introduction

The Avenis 125 excels as an environmentally responsible scooter. Developed to comply with the stringent Euro 5 emissions standards, the Avenis 125 achieves outstanding fuel efficiency of 148.67mpg and CO_2 emissions of a mere 44g/km in WMTC mode testing.

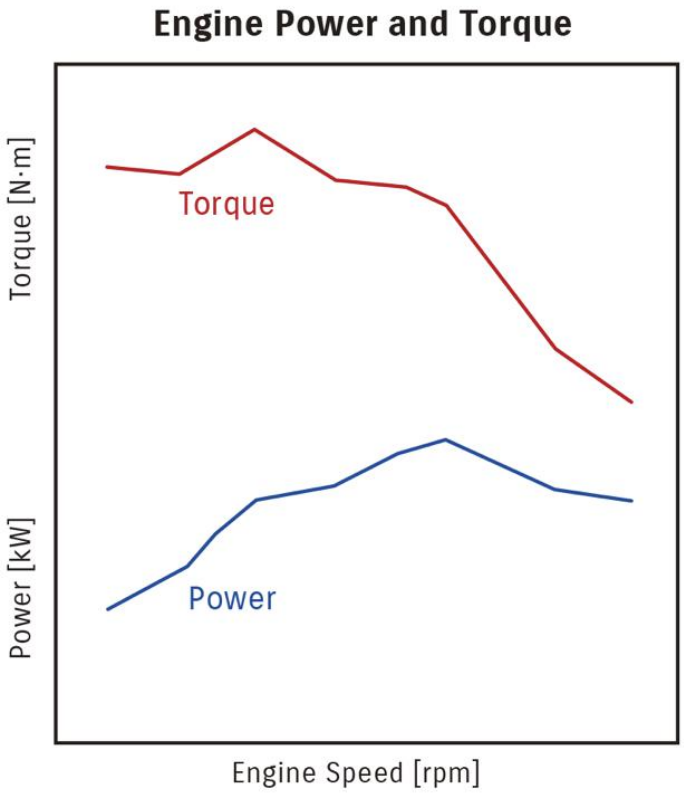
The engine's single-cylinder, air-cooled design makes it a reliable powerplant that is easy to maintain and economical to run. Moreover, it is compact and lightweight, a feature that also contributes to agile handling.

Though being introduced into the UK for the first time, the engine can boast a proven track record of performance and reliability, already powering well over five million Suzuki scooters in Asian and Latin American markets since 2007.

Suzuki Eco Performance (SEP) is the forward-looking engine development concept behind the creation of the powerplant for the new Avenis 125. The resulting engine features an outstanding level of environmentally responsible performance, both in terms of low fuel consumption and low emissions, while also achieving the seemingly contradictory feature of dynamic performance, with powerful acceleration delivering immediate response when pulling away from a standing start with peak horsepower of 8.7PS and maximum torque of 10Nm delivered at low rpm.

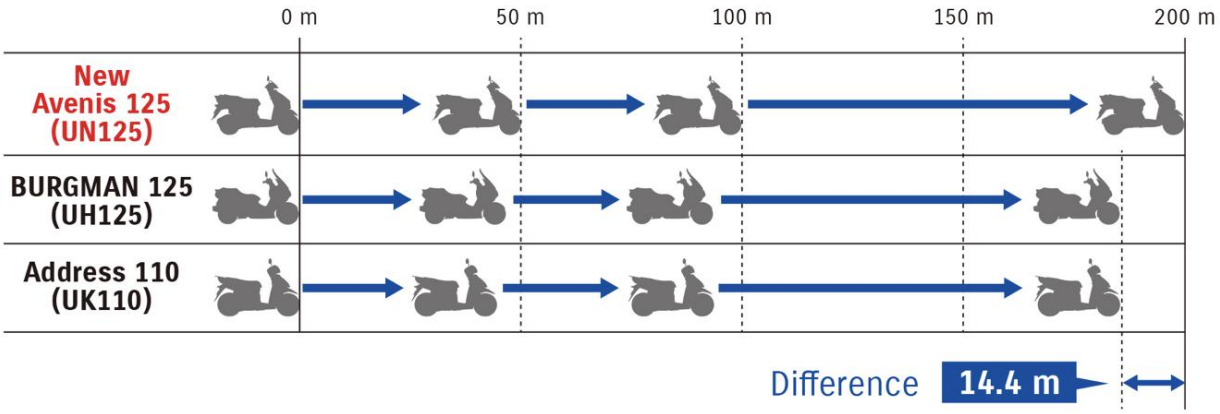
4. Engine

Displacement	124cc
Engine type	Four-stroke, single-cylinder, air-cooled, SOHC
Bore x Stroke	52.5mm x 57.4mm
Maximum power	8.7PS (6.4 kW) / 6,750 rpm
Maximum torque	10Nm / 5,500 rpm
Fuel consumption (WMTC)*	148.67mpg
CO_2 emissions (WMTC)*	44 g/km
Emissions level	Euro 5



4. Engine

Acceleration test comparison



CO_2 emissions and fuel consumption comparison

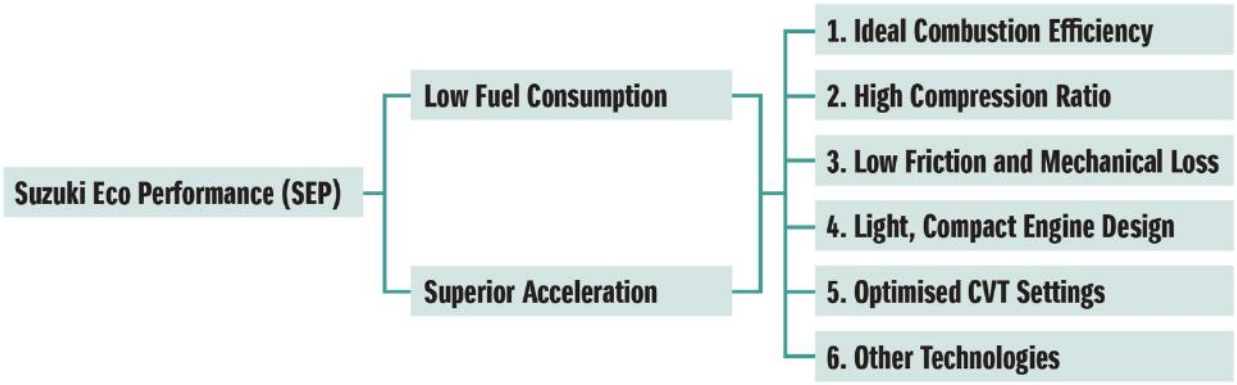
European specification		CO_2 emissions	Fuel consumption
		g/km	mpg
New model	Avenis 125	44	148.67
Previous models	Address 110	49	134.46
	Burgman 125	68	94.06
	Burgman 200	75	88.41

4. Engine

Engineering to optimise combustion efficiency, performance and acceleration

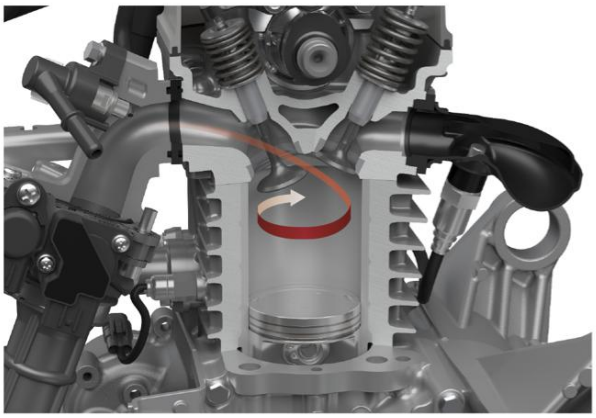
The engine's development is aimed at realising optimum combustion efficiency and a relatively high compression ratio, while at the same time reducing friction loss, minimising weight and noise, and optimising the CVT settings to put maximum power to the road in an efficient manner.

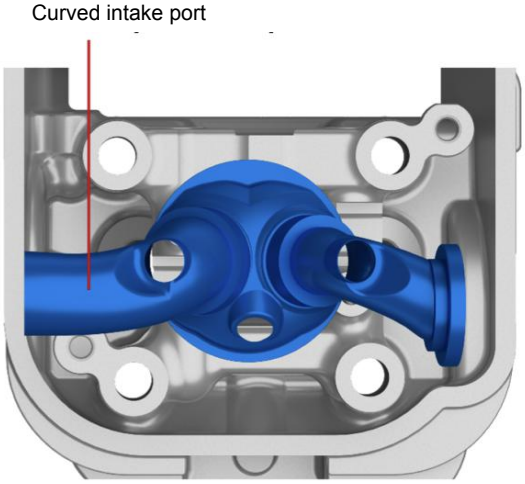
Suzuki Eco Performance (SEP) is the development concept behind a new generation of engines proposed by Suzuki that combine both high fuel efficiency and excellent acceleration performance. The engine in the new Avenis 125 was developed based on the SEP concept.



Ideal combustion efficiency

Optimisation of the intake port's shape maximises the flow velocity of the air-fuel mixture entering the combustion chamber. It combines with a chamber designed using analytic technology to generate a swirl flow that effectively disperses the mixture and controls combustion speed. The overall result is lean burning and excellent combustion efficiency that contribute both to enhancing performance and meeting Euro 5 emissions standards.





4. Engine

Suzuki ‘M-Squish’ combustion chamber

One feature of the combustion chamber shape is its M-shaped squish area, which generates squish flow within the chamber. In conjunction with the curved intake port, this creates ideal combustion conditions by leveraging the synergistic effect of the squish flow and the swirl flow of the air-fuel mixture entering the chamber.

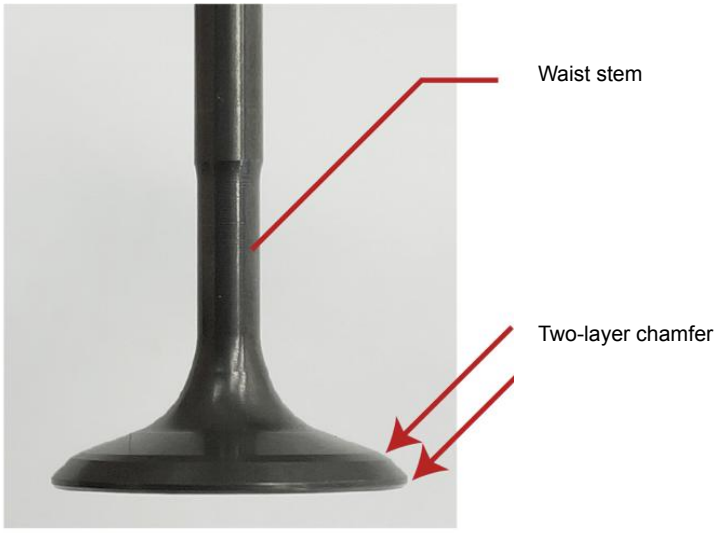
Electronic fuel injection

The adoption of electronic fuel injection contributes to the Avenis 125’s excellent combustion efficiency and helps achieve Euro 5 compliance.

4. Engine

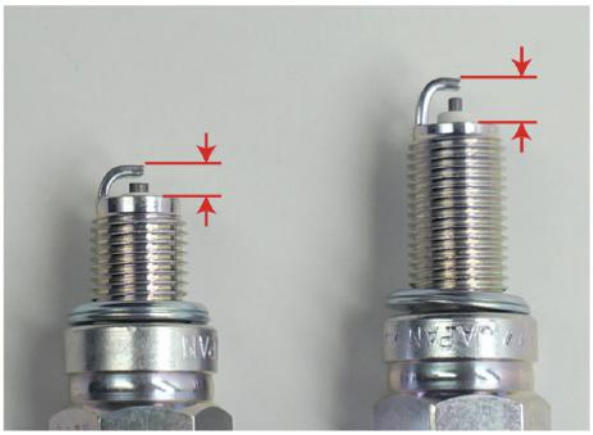
Optimised intake valve shape

The design of the intake valve, with its two-layer chamfer and waist stem, further contributes to the overall efficiency of the intake system.



High-ignition nickel spark plug

The use of a spark plug with a thin, protruding electrode allows ignition at the centre of the combustion chamber, achieving maximum combustion efficiency. In addition, positioning the plug close to the cooling fan makes it possible to moderate the temperature area around the plug, resulting in ideal combustion.

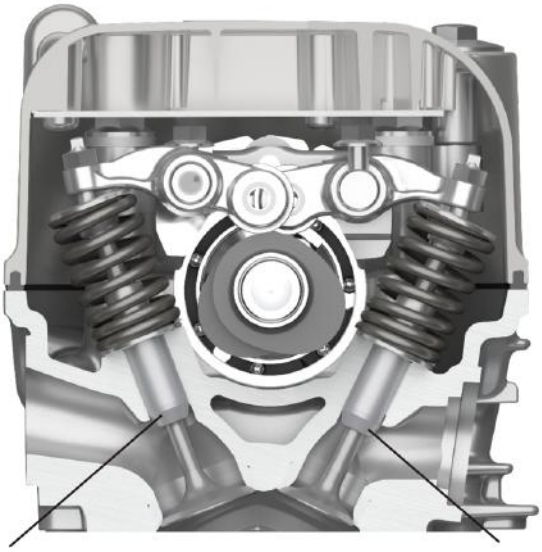


4. Engine

High compression ratio

All aspects of the engine design are geared to achieving a high compression ratio that results in low fuel consumption and powerful engine output. This ranges from the application of a relatively long stroke to optimisation of the combustion chamber shape, which, as described above, adopts an M-shaped squish area and curved intake port.

Upright positioning of the intake valve and a relatively narrow angle between the valves contributes to intake efficiency and aids the engine's high compression ratio. The design of the intake valve, with its two-layer chamfer and waist stem, further contributes to the overall efficiency of the intake system.



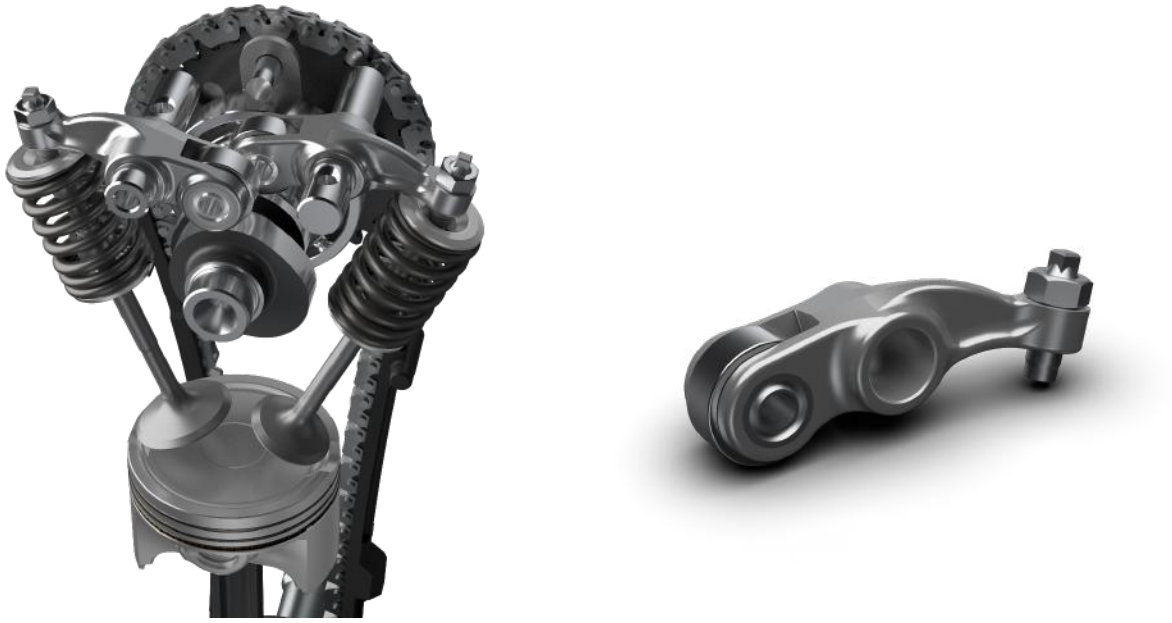
Intake valve Exhaust valve

Low friction and mechanical loss

Measures to reduce friction and mechanical loss to achieve greater reliability and produce power at high rpm include an optimised piston skirt and piston pin design, as well as the use of low-tensile piston rings, a low-friction cylinder wall treatment, roller rocker arms, and low-friction components in the oil pump.

Piston and rings

4. Engine



SOHC 2-valve engine with rocker arms

Cylinder

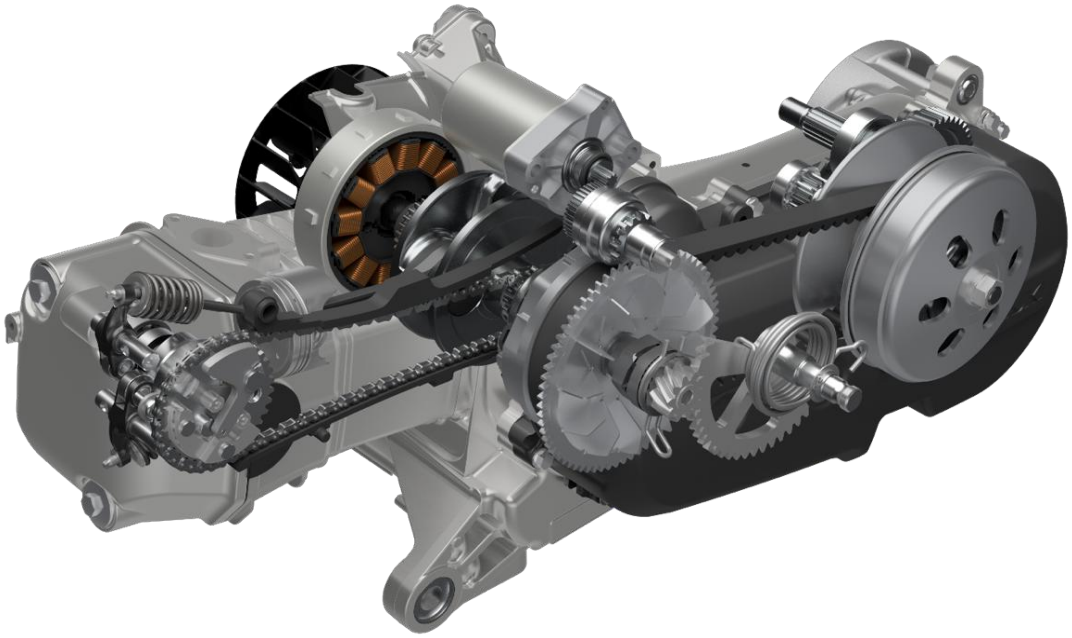
4. Engine

Light, compact engine design

A dedicated effort by Suzuki engineers to minimise the weight of every part possible combines with the engine's reliable single-cylinder, air-cooled design to produce a light and compact powerplant that weighs just 32.9kg. The resulting benefits not only include greater fuel efficiency, increased performance and more powerful acceleration, but they also contribute to agile handling and greater flexibility in styling design.

Optimised CVT settings

The CVT is optimised to provide satisfying acceleration at low rpm, without having to open the throttle excessively, while its settings are also effective in limiting fuel consumption.



4. Engine

Other components that contribute to fuel economy, low emissions and durability

- The efficient cooling path of the cylinder head and use of a small cooling fan improve heat dissipation
- An oil filter function integrated within the engine shortens the oil path and uses a smaller volume of oil, thereby contributing to reduced mechanical loss related to the oil pump
- The starter motor gears are only engaged when starting the engine, and this reduces power loss when riding
- An electrical switch that controls ignition timing contributes to smooth power production from low to high rpm, as well as low fuel consumption
- The use of a silent cam chain contributes to a reduction in mechanical noise
- A catalytic converter fitted inside the exhaust system helps achieve Euro 5 compliance

5. Chassis

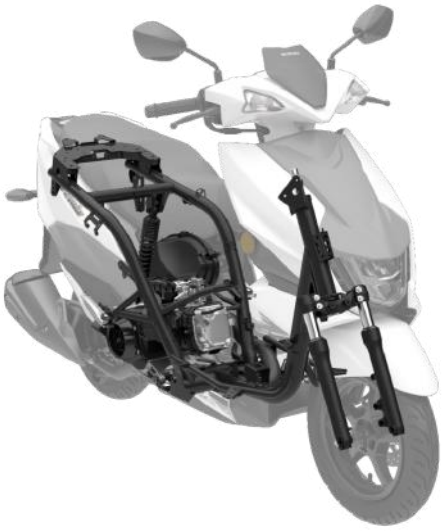
Introduction

With a chassis engineered to provide agile handling and comfort, the Avenis 125 is engineered to maximise the potential of its SEP engine. This called for creating a highly agile package that is manoeuvrable, easy to use and comfortable to ride. Everything, from the design of the frame and selection of wheels and tyres to optimising suspension performance, and including the Combined Brake System, is geared toward achieving this goal. Straight-line and cornering stability are excellent, tall ground clearance enables the rider to lean easier into turns, and the Avenis 125 proves its ability to excel in any urban riding situation.

5. Chassis

Lightweight and rigid pipe frame

The product of repeated simulations that employed CAE technology, the underbone frame is built using large-diameter, thin, round pipe. Designed to minimise weight while maximising rigidity, this frame contributes to the Avenis 125's outstanding fuel efficiency as well as to providing excellent straight-line stability and positive cornering performance.



Suspension

The semi-soft front suspension settings provide a smooth and comfortable ride, with the spring rate and operation of the telescopic front forks optimised for the front wheel weight distribution of the Avenis 125. Both the forks and rear suspension are finely tuned to deliver solid road-holding performance, agile handling, and a plush ride.

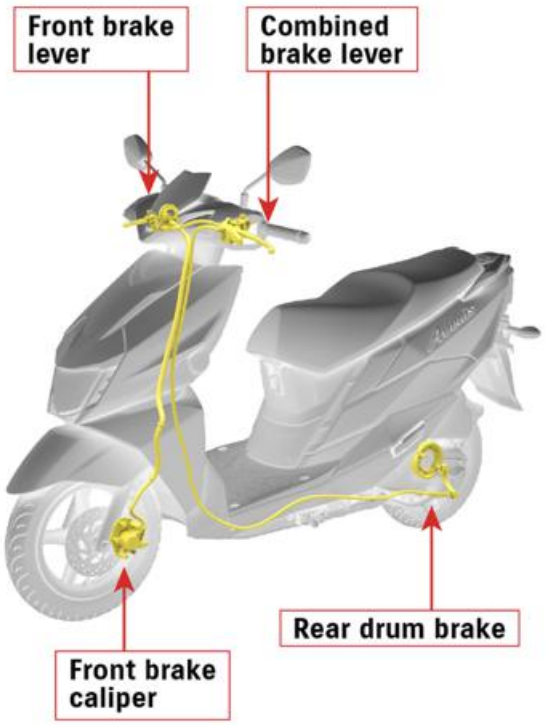
5. Chassis

Cast aluminium wheels and Dunlop tyres

The cast aluminium wheels are shod with tubeless Dunlop D307 N tyres. These combine with tuned suspension settings to deliver superior running performance, positive grip on wet surfaces, and a smooth ride. The rear wheel can also be removed without removing the muffler. This improves serviceability.

Combined Brake System

Suzuki's Combined Brake System supports well-balanced braking by distributing braking force to both the front and rear wheels when the left brake lever is operated. Stable stopping power is provided by a 190mm diameter disc brake in the front and a 120mm drum brake in the rear.



5. Chassis

Short wheelbase and light, slim design

The Avenis 125's short wheelbase contributes to ease of manoeuvrability and works in conjunction with the light, slim design to offer easier, more nimble handling on city streets.

Plenty of ground clearance

The Avenis 125 handles speed bumps and other bumps in the road with ease thanks to its ample ground clearance of 160mm. And it does this while combining with a seat shape that helps make it easy to place both feet on the ground.

5. Chassis

Fuel tank supports a long riding range

The 5.2 litre fuel tank works in conjunction with the fuel-efficient engine to achieve a riding range of approximately 170 miles.

Sporty two-tone seat

The sporty two-tone seat with attractive red stitching is firm yet comfortable, with ample padding and a richly textured surface that provides a secure grip when riding, even when making quick movements. In addition, its carefully crafted shape makes it easy for the rider to put both feet on the ground when stopped.

Roomy floorboard with cutaway design

The wide floorboard enables riders of varying builds to maintain a comfortable riding position. The convenient cut-away design makes it easy to place both feet firmly on the ground when stopped.

5. Chassis

Stylish grab bars and aluminium pillion rider footrests

Independent right and left aluminium grab bars, featuring a stylish, edgy design, combine with aluminium footrests to help enhance pillion rider comfort.


Hinged tail-mounted fuel cap

Situated behind the seat, the hinged fuel cap design facilitates easy refuelling; there is no need to open the seat and there is no risk of spillages on the floorboard or bags and other items that might be hanging from the carrying hooks. Its attractive nature also transforms this functional part into a stylish accent.


Stylish, lightweight front and rear fenders

A lightweight front fender contributes to steering ease. At the rear, a hugger-type inner fender enhances sport styling and improves splash protection.


5. Chassis

Underseat storage

The underseat compartment features a capacity of 21.5 litres and provides convenient space to store items and protect them from the elements.

Two underseat hooks

Two individual hooks at the front of the underseat utility compartment make it easy to hang two helmets when parking by opening the seat, attaching the helmet straps and then closing the seat. The hooks are thick and strong.

5. Chassis

Covered front left compartment

The covered left-side front compartment is large enough to accommodate a large-screen smartphone.

Quick-access front right pocket

The inner pocket on the front right side offers storage space large enough to hold a 500ml beverage or some other small item the rider may want to keep close at hand.

Dual utility hooks

A pair of sturdy hooks let you hang various types of bags, including shopping bags, with greater convenience than accessing the underseat storage. The back hook can be locked to better secure items, and can be folded out of the way when not in use.

5. Chassis

Rear brake lock

A switch on the left brake lever enhances comfort and convenience by locking the rear wheel to keep the Avenis 125 in place when the rider stops.

Theft deterrent key system with seat opener function

The shutter concealing the ignition key hole can be opened quickly, using an easy-to-operate magnet mechanism coded to the owner's key and closed with a simple push of a button. Not only does this system help deter theft and tampering, it also includes a seat opener that eliminates the need to remove the key to access the underseat utility compartment.

OpenCentre and side stands are both standard equipment

The Avenis 125 is equipped with both centre and a side stands to offer the rider greater flexibility.

6. Electric equipment

Multifunction digital instrument panel

The digital instrument panel for the Avenis 125 features a compact LCD screen with a clean and intuitive layout that displays all the information the rider requires. The panel's LCD readouts include the speedometer, clock, current fuel consumption, average fuel consumption (x2), engine temperature, odometer, dual tripmeters, fuel gauge, battery voltage meter, and oil change interval reminder. LED indicators flanking the main screen include the turn signals, Eco Drive Indicator, master warning, high beam and malfunction. The Suzuki Eco Drive Indicator lights up when the scooter is being ridden in a fuel-efficient manner, offering instant feedback that can help riders learn techniques for maximising fuel economy.

Stacked-lens body-mounted LED headlight

The headlight is mounted low on the face of the Avenis 125 and features a new stacked lens design. The headlight assembly employs bright, long-lasting, low-power LED lights, with three low beam lights in the upper section and two high beam lights in the lower section providing improved forward visibility at night. Being body-mounted, the design also aids agile handling.

6. Electric equipment

Integrated LED position lights

Flanking the headlight are vertically-oriented LED position lights integrated into the assembly to add a striking accent and premium touch.

Upswept tail with independent LED rear combination lights

Upswept tail lines and high-mounted independent LED combination lights add to the sporty appearance. Mounted lower on the tail, the rear turn signals also take their cue from sportbike design.

Handlebar-mounted front turn signals

The front turn signals are integrated into the handlebars to make them highly visible to drivers and pedestrians approaching from the front or side.

6. Electric equipment

Suzuki Easy Start System

The system makes starting the engine as easy as one quick push of a button. There is no need to hold it down.

USB outlet included as standard equipment

In the covered front left compartment there is a USB outlet for charging smartphones. An attractive blue LED remains lit as long as the ignition is turned on, making the outlet easy to locate, especially at night or in dark conditions.

7. Genuine accessories

Knuckle covers

The knuckle covers complement the appearance of the Avenis 125 by adding stylish flair and providing a sportier look while also protecting from the elements during inclement weather.

8. Colour lineup

Pearl Mirage White / Metallic Matt Fibroin Gray (A8D)

Metallic Matt Fibroin Grey / Metallic Lush Green (CC8)

9. Specification

Overall length		1,895mm (74.6 in.)
Overall width		710mm (28 in.)
Overall height		1,175mm (46.3 in.)
Wheelbase		1,265mm (49.8 in.)
Ground clearance		160mm (6.3 in.)
Seat height		780mm (30.7 in.)
Kerb mass		107kg (235.9 lbs.)
Engine type		Four-stroke, single-cylinder, air-cooled, SOHC
Bore x stroke		52.5mm x 57.4mm (2.1 in. x 2.3 in.)
Engine displacement		124cc (7.6 cu. In.)
Peak power		8.7PS (6.4 kW) / 6,750 rpm
Peak torque		10Nm / 5,500 rpm
Compression ratio		10.3 : 1
Fuel system		Fuel injection
Starter system		Electric and kick
Lubrication system		Wet sump
Transmission		CVT
Suspension	Front	Telescopic, coil spring, oil damped
	Rear	Swingarm type, coil spring, oil damped
Rake / trail		26° / 89mm (3.5 in.)
Brakes	Front	Disc
	Rear	Drum
Tyres	Front	90/90-12, tubeless
	Rear	90/100-10, tubeless
Ignition system		Electronic ignition (transistorised)
Fuel tank capacity		5.2 litres
Fuel efficiency / range		148.67mpg / 170 miles
CO_2		44g/km
Emissions standard		Euro 5
Oil capacity (Overhaul)		0.8 litres

ENDS