



V-STRUM 1050 DIE **V-STRUM 1050**

Press information

September 2022



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1. Introduction

In 2002 the V-Strom 1000 was released as a new generation of adventure bike, with the 'V' denoting its versatile nature, and German word 'Strom' suggesting the flow of power it delivered. Its liquid-cooled four-stroke 90° V-twin DOHC engine with four valves per cylinder paired with a lightweight aluminium twin-spar frame soon earned it popularity as a highly versatile machine. It was powerful, agile, reliable, comfortable, and fun. There were few boundaries it could not cross, handling everything from regular to rough conditions with ease, no matter where or how far the rider wished to journey, with the distinctive rumble of its V-twin engine adding an extra treat.



The first generation V-Strom 1000

It was a resounding success and developed a strong reputation, off the back of which Suzuki released the V-Strom 650 in 2004. Again powered by a 90° V-twin, it delivered similar benefits and performance in a more compact and affordable package, offering a broader spectrum of riders Suzuki's adventure bike experience. It was another hit, and has remained ever-popular over the years.



First generation V-Strom 650

1. Introduction

Suzuki continued to evolve the V-Strom 1000 in successive years, and sales of the first generation totalled approximately 50,000 units by the time the completely-redesigned generation launched in 2013. Notable changes to the engine included increasing displacement from 996cc to 1037cc and adopting dual plug heads, lightweight forged pistons, and 10-hole fuel injectors. The second generation V-Strom 1000 also introduced the Suzuki Clutch Assist System, ABS, and new electronic controls that delivered the first application of a traction control system on a Suzuki motorcycle. These features combined with a lighter-yet-stronger chassis to greatly advance performance as an all-round adventure tourer. Its distinctive styling featured a prominent beak that paid homage to design DNA inherited from Suzuki's legendary DR-Z desert racer and the commercial dual-sport model it inspired, the 1988 DR-BIG, the DR750S. The second generation went on to sell more than 35,000 units.



Second generation V-Strom 1000

In 2017, the V-Strom 250 joined the family as Suzuki continued to expand the appeal of the V-Strom series to a yet wider range of riders with different experience levels and needs.



V-Strom 250

1. Introduction

The third-generation V-Strom 1050 and 1050XT hit the market in 2020, as new variants of the top-end model, designed to further enhance its adventure touring potential. The engine was updated to deliver yet stronger, more linear torque in the mid-rpm range and greater power in the high-rpm range, all while complying with Euro 5 emissions standards. The XT also adopted the most advanced electronic controls of the Suzuki Intelligent Ride System (SIRS), which made it more controllable, more predictable, and easier to operate. Its prominent beak was updated to present a sharper, more modern and aggressive look that remained true to its design heritage. To date, sales of the third generation have totalled approximately 15,000 units.



Third generation V-Strom 1050XT and V-Strom 1050

Suzuki now introduces the V-Strom 1050DE and 1050 as new iterations of its flagship adventure model, which offer riders an even greater range of long-distance adventure touring possibilities. The V-Strom 1050DE is a new offering packed with distinctive features aimed specifically at enhancing its ability to more confidently negotiate gravel and the other unpaved surfaces: country roads, green lanes, and trails. The new V-Strom 1050 carries over all the strengths of the previous model, while adopting new and updated features that further heighten riding pleasure, comfort, and utility.



2. Product concept

The Master of Adventure

For wherever your journey takes you



The product concept for the new V-Strom 1050DE and 1050 is: The Master of Adventure – for wherever your journey takes you.

It conveys the efforts made to further enhance a machine that has already earned a solid reputation as a highly-capable adventure bike, that enables riders to escape into the great outdoors and explore. It conveys the commitment to satisfy the needs of even more riders who want a tough, reliable machine to take them wherever they want to go, no matter how far or on what terrain. And with both the 1050DE and 1050, Suzuki offers a choice in specification to better match different rider's preferences.

The V-Strom 1050DE and V-Strom 1050 are both equipped with all the current technology, performance, utility and advanced electronic features found on the 2020 V-Strom 1050XT. That includes the full complement of advanced electronic control systems that comprise the Suzuki Intelligent Ride System.



2. Product concept

The V-Strom 1050DE introduces features aimed at improving performance on unpaved surfaces. These include the adoption of a 21-inch front wheel with a semi-block pattern tyre. In conjunction, it gains a longer rake and wheelbase to enhance controllability on gravel and dirt, a longer suspension stroke to better absorb bumps on rough surfaces, as well as wider handlebars, wider steel footpegs, an aluminium sump guard, and engine bars. It also introduces a new gravel (G) mode to the traction control system and the ability to switch off the rear ABS. The V-Strom 1050 is designed with more attention to maximising comfort and performance for long-distance adventure touring, primarily on paved surfaces. It has cast aluminium wheels with a 19-inch front and 17-inch rear, and a large touring windscreen with handy quick-release height adjustment.

Key differences

		V-Strom 1050DE	V-Strom 1050
Chassis	Handlebars	Tapered aluminium (40mm wider)	Tapered aluminium
	Footpegs	Steel (rubber-covered)	Aluminium (rubber-covered)
	Seat	Solid mount for greater strength	Height adjustable (+ 20mm)
	Engine bars	Standard equipment	Genuine accessory
	Front tyre	90/90-21M/C 54H tube type	110/80R19M/C 59V tubeless
	Rear tyre	150/70R17M/C 69H tubeless	150/70R17M/C 69V tubeless
	Front suspension stroke	170mm	160mm
	Rear wheel travel	169mm	160mm
	Screen	Smoke-finish short screen	Quick-release height adjustment
	Ground clearance	190mm	165mm
	Sump guard	Aluminium	Plastic
SIRS	Traction control	Four modes + off	Three modes + off
	Rear ABS cancel function	✓	✗

2. Product concept

Key product features

Engine features:

- Proven 1037cc V-twin engine features distinctive deep rumble in the low-rpm range, strong and linear torque in the mid-rpm range, and maximum power in the high-rpm range.
- Suzuki Dual Spark Technology helps maximise combustion efficiency.
- Hollow sodium-filled exhaust valves to help reduce temperature in the combustion chamber. **NEW**
- The updated six-speed transmission makes for smoother shifting and improved controllability. **UPDATE**
- Suzuki Clutch Assist System (SCAS) enables a light clutch lever operation that helps reduce fatigue on long rides and contributes to smoother shifting.

V-Strom 1050DE only features:

- A new, stronger drive chain with sturdier links and pins. **NEW**

Suzuki Intelligent Ride System (SIRS) features:

- Suzuki Drive Mode Selector (SDMS) offers a selection of three different power output modes to better support the rider in differing conditions, on different surfaces, or to suit their personal preference.
- Suzuki Traction Control System (STCS) with three modes, plus off, enables greater control in diverse riding conditions.
- A ride-by-wire electronic throttle control system delivers a throttle action that responds faithfully to the rider's input. An updated, slightly stiffer grip action when opening the throttle delivers greater controllability and an even more natural feel. **UPDATE**
- A bi-directional quickshifter (with on/off settings) provides quicker, smoother, more assured shifting without operating the clutch lever. **NEW**
- The cruise control system is updated to allow a broader range of speed and gear settings. **UPDATE**
- Motion Track Brake System allows ABS activation when the bike is leaning into a corner.
- Hill Hold Control System helps ensure smoother restarts after stopping on an incline.
- Slope Dependent Control System provides more stable braking when travelling downhill.
- Load Dependent Control System supports optimal braking when carrying a load.
- The Suzuki Easy Start System starts the engine with one quick press of the starter button.
- Suzuki's Low RPM Assist function helps maintain engine idle speed for smoother and easier starts.

V-Strom 1050DE only features:

- Adds a new G (gravel) mode to STCS, designed to help riders better negotiate unpaved and loose surface roads. **NEW**
- Riders have the ability to switch off rear ABS for improved performance on gravel. **NEW**

2. Product concept

Chassis features:

- The tried and tested twin-spar aluminium frame gets updated seat rails that better support the input load from unpaved surfaces. **UPDATE**
- Fully-adjustable KYB inverted front forks deliver a smooth, controlled ride.
- Adjustable link-type rear suspension contributes to agility and stability.
- Four-piston, radially-mounted front brake calipers mate with twin 310mm floating discs to provide sure stopping power.

V-Strom 1050DE only features:

- Revised chassis geometry with a longer rake and wheelbase to improve stability and controllability when riding on unpaved surfaces, and to increase ground clearance. **NEW**
- Extended suspension stroke improves performance on unpaved roads. **UPDATE**
- Wire-spoked wheels, including a 21-inch front. **NEW**
- Dunlop TRAILMAX MIXTOUR adventure tyres with semi-block pattern. **NEW**
- Longer aluminium swingarm with enhanced torsional rigidity to support the increased suspension travel and longer wheelbase. **NEW**
- Wider, tapered handlebars use thicker tubing and a softer grade aluminium. **NEW**
- Solid-mount rider seat designed to better stand up to input load when riding on unpaved surfaces. **NEW**
- Wider steel footpegs for better support when standing while riding. **NEW**
- Smaller, smoke-finish screen designed to improve visibility off road. **NEW**
- New front fender with three-piece construction, for improved durability. **NEW**
- Tough aluminium sump guard. **NEW**
- New side and centre stands to match the new geometry's taller ground clearance. **NEW**
- Standard equipment engine bars.

V-Strom 1050 only features:

- Aluminium tapered handlebars designed to perform optimally on pavement or on flat dirt.
- 10-spoke cast aluminium wheels shod with Bridgestone Battlax Adventure A41 tyres.
- Equipped with a height-adjustable windscreen that helps reduce fatigue on long rides.
- Split rider and pillion seat design achieves a comfortable upright riding position that reduces fatigue, even when touring for long distances.
- Height-adjustable seat can be raised 20mm.
- Aluminium footpegs achieve balance of performance and comfort on long rides.
- Plastic engine cover.

2. Product concept

Electric equipment features:

- New 5-inch colour TFT multi-function instrument panel features a clearly legible display of a rich variety of information. **NEW**
- Vertically-stacked LED headlights and compact LED position lights, turn signals, and taillight.
- A USB port built into the left side of the dash supplies power for recharging smartphones, and a 12V DC outlet under the seat can charge or power a variety of devices.

Styling features:

- The design aims to execute a modern interpretation of Suzuki's legendary DR-Z Paris-Dakar racer, with straighter, sharper lines, including for the prominent beak design that strongly reflects Suzuki's distinctive design DNA, achieving a more aggressive look.
- The V-Strom 1050DE further emphasises the model's tough look with its front fender, aluminium engine protector, and engine bars. **NEW**
- The colour options combine gloss and matt finishes to give the V-Strom 1050 a sophisticated look of high quality. **NEW**
- Decals and graphics designed to express speed and a sense of forward motion. **NEW**

2. Product concept



V- Strom 1050DE



V-Strom 1050

3. Styling design

The V-Strom 1050DE and 1050 design concept was: Design is in our DNA.

Suzuki has always strived to create unique styling expressions that stay true to our design ethos. One such example is the 'beak', first introduced to the world in 1988 on the DR-Z 800 desert racer. It represented a radical new expression and a worthy reflection of the Suzuki design DNA we continue to treasure and evolve within our design department. That is the spirit behind *Design is in our DNA* as the design concept for the V-STROM 1050 and 1050DE.

The design of the V-Strom 1050DE and 1050 remains true to this design DNA, even as it aims to further refine its modern interpretation of the legendary DR-Z racer.



3. Styling design

Attractive two-tone body colours

The colour lineup for the V-Strom 1050DE and 1050 feature attractive colour combinations including a mix of gloss-against-matt finishes to lend a modern appeal.

The V-Strom 1050 offers a selection of four two-tone body colours, with coordinated wheel colours to match each selection.

The V-Strom 1050DE offers a selection of three two-tone body colours. The wheel and seat colours are coordinated to match, two paying homage to the liveries of the DR Big and DR-Z racers of the past.



4. Engine

Introduction



V-twin engine

The new V-Strom 1050DE and 1050 are powered by the latest iteration of Suzuki's distinctive, liquid-cooled, four-stroke, 90° V-twin DOHC engine. The product of many years of development by a dedicated team of passionate engineers, this engine has long-enjoyed a reputation for delivering power, reliability, and pure riding pleasure.

Notable changes to make the engine even more comfortable and easier to control include the introduction of a bi-directional quickshifter and an update to the transmission. These combine to deliver smoother, easier shifting and greater riding fun, with a more linear shift feel when going through the gears.

The V-twin engine produces an unmistakable deep rumble in the low-rpm range, strong, linear torque in the mid-rpm range, and a free-revving nature that maximises power output in the high-rpm range, all while complying with Euro 5 emissions standards.

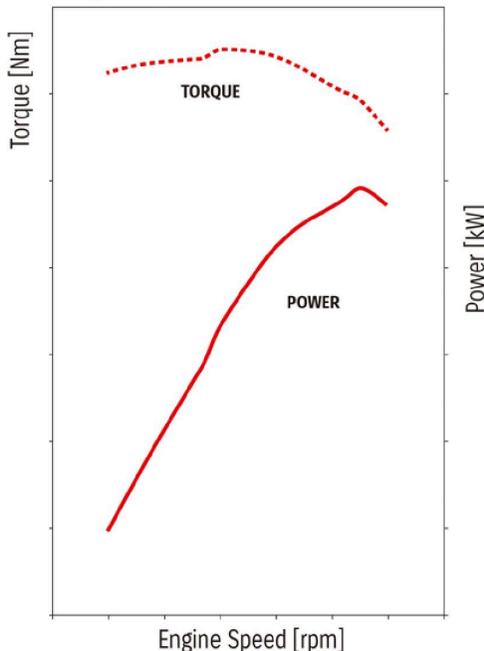
4. Engine

The 90° V-twin engine remains a perfect fit for the V-Strom 1050DE and 1050, with a design that provides perfect primary balance, with each of the two cylinders cancelling out the vibration of the other. This eliminates the need for any balancer shafts, preventing the mechanical loss associated with them, and this connects to improving thermal efficiency for higher power output.

The layout of the V-twin engine allows for a slimmer chassis design with a lower centre of gravity, and this contributes to nimbler handling and greater manoeuvrability. Because each cylinder is independent, each can be optimised to facilitate the use of dual-plug heads, improving combustion efficiency and power output, while contributing to lower fuel consumption.

Engine type	Four-stroke DOHC V-twin
Cooling system	Liquid-cooled
Displacement	1037cc
Bore x stroke	100mm x 66mm
Maximum output	107PS (79kW) / 8,500rpm
Maximum torque	100Nm / 6,000rpm
Emissions level	Euro 5
Fuel consumption	54.2mpg
CO ₂	120 g/km

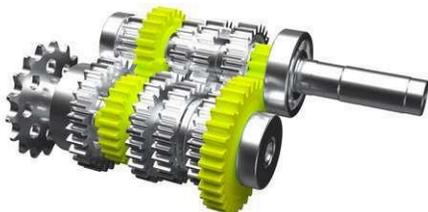
Engine performance curve



4. Engine

Transmission **UPDATE**

The updated six-speed transmission adopts a high-g geared first and sixth gears that make shifting into second, and from there through fifth gears, smoother and delivers greater excitement of more powerful performance when accelerating. The updated gear ratios also combine well with the operation of the new bi-directional quickshifter.



Previous transmission



New transmission

Gear reduction ratio

		Previous model	New model
Reduction ratio	Primary	1.838 (57/31)	1.838 (57/31)
	Final	2.411 (41/17)	2.647 (45/17)
Gear ratio	First	3.000 (36/12)	2.666 (32/12)
	Second	1.933 (29/15)	1.933 (29/15)
	Third	1.500 (27/18)	1.500 (27/18)
	Fourth	1.227 (27/22)	1.227 (27/22)
	Fifth	1.086 (25/23)	1.086 (25/23)
	Sixth	1.000 (24/24)	0.913 (21/23)

4. Engine

Sodium-filled exhaust valves **NEW**

The V-Strom 1050DE and 1050 are the first Suzuki motorcycles to employ hollow, sodium-filled exhaust valves, which help reduce temperature in the combustion chamber, not only resulting in better loading efficiency and a better feeling, but also contribute to improving durability.



Valves

Dual spark technology

Suzuki's Dual Spark Technology utilises two iridium spark plugs per cylinder. The primary spark plug, positioned in the centre of the combustion chamber, fires throughout the engine's rpm range, while the secondary plug helps improve combustion efficiency at low rpm and contributes to smooth power delivery. Other benefits of this system include lower fuel consumption, lower emissions, more linear throttle response, easier engine start-up, and a more stable idle.



4. Engine

Cam profiles and timing

Optimised exhaust and intake cam profiles combine with cam timing to provide combustion efficiency that contributes to high power output, low fuel consumption and Euro 5 emissions standard compliance.

Pistons

The V-twin engine uses highly-rigid, lightweight, forged pistons engineered using FEM (Finite Element Method) analysis. The heads are anodised and conical machining inside the wrist pin holes transfer load and mitigate stress transferred to the crowns. Both these treatments contribute to enhanced durability.



Suzuki Composite Electrochemical Material (SCEM)

The bores inside the aluminium die-cast cylinders are plated using Suzuki's SCEM process. Originally developed for racing and proven on the track, SCEM promotes better heat dissipation, reduces friction and achieves a consistent wear resistant seal on the piston rings for greater durability.

Ride-by-wire electronic throttle bodies

Each of the two cylinders is fed by independent 49mm large bore, electronic-controlled throttle bodies. The butterfly valve of each throttle body is opened and closed independently to achieve more precise throttle control and help ensure more stable idling.



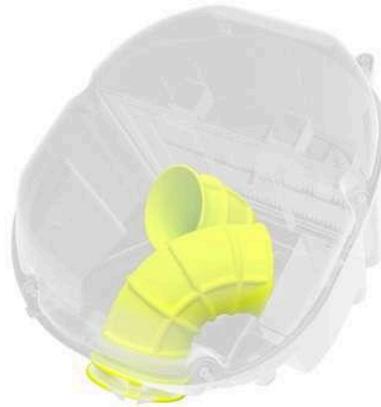
4. Engine

Fuel injectors

10-hole, long-nosed fuel injectors improve fuel atomisation for better combustion efficiency and lower fuel consumption.

Air box

The elongated intake pipe for the air box contributes to increasing torque production at low rpm and helps achieve the V-twin engine's unique power output characteristics.



Exhaust system

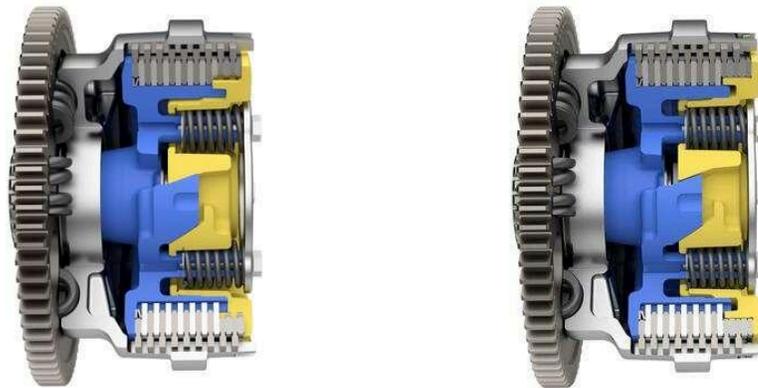
The two-into-one exhaust system is designed to produce an exciting note, while the large-volume, high-efficiency catalytic converter inside the collector helps limit emissions to a level that satisfies Euro 5 standards, while at the same time maximising power output and overall performance.

4. Engine

Suzuki Clutch Assist System (SCAS)

The slipper clutch partially disengages when downshifting to decelerate to mitigate the effect of engine braking. By helping to prevent the rear tyre from hopping and providing smoother deceleration, this function enables the rider to shift down with greater confidence and maintain better control. The assist function leverages precision-engineered ramps to force the clutch boss and pressure plate together and efficiently transfer torque to the rear wheel under acceleration, all while using softer clutch springs. The resulting benefit is the realisation of a lighter clutch lever operation.

These assist and slipper functions work harmoniously with the new bi-directional quickshifter to deliver an additional benefit by bringing the advantages of SCAS to clutch-free upshifting and downshifting.

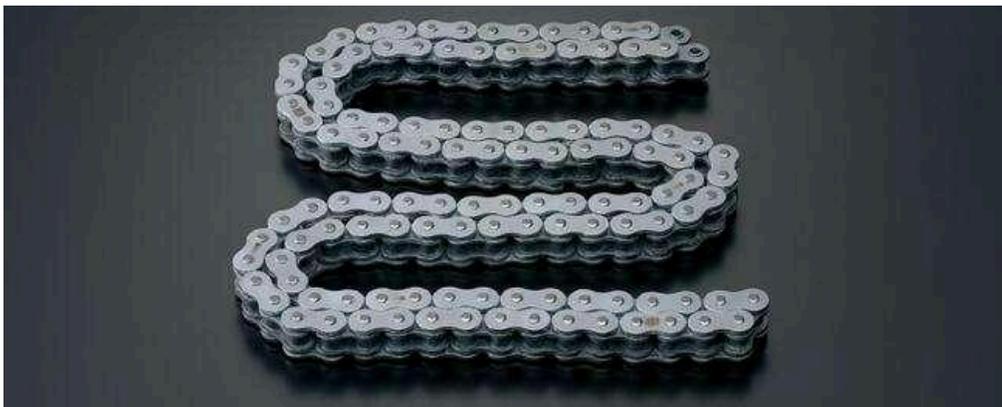


← ← Assist function

Slipper function → →

Drive chain (V-Strom 1050DE only) **NEW**

To achieve greater durability when riding on gravel roads and trails the V-Strom 1050DE adopts a stronger drive chain with sturdier links and larger diameter pins, as well as a dedicated new shift lever.



5. Suzuki Intelligent Ride System (SIRS)

Introduction

The Suzuki Intelligent Ride System (SIRS) features a collection of advanced electronic rider assist systems. The rider can freely choose the settings for each system to best suit their level of skill, experience, and preferences, and to optimise performance characteristics for the riding conditions and road surface at any given moment.

These settings, in turn, help make the V-Strom 1050DE and 1050 more controllable, predictable, and easier to operate. With each system designed and thoroughly tested to operate the way the rider expects, SIRS helps create a more exciting riding experience that inspires confidence and frees riders to concentrate on enjoying their adventures.

The collection of advanced SIRS electronic systems includes the Suzuki Drive Mode Selector (SDMS), Suzuki Traction Control System (STSC), cruise control, ride-by-wire electronic throttle system, bi-directional quickshifter, Suzuki Easy Start System, low RPM assist, combined brake system, Motion Track Brake System, slope-dependent control system, load dependent-control system, and a hill hold function.



5. Suzuki Intelligent Ride System (SIRS)

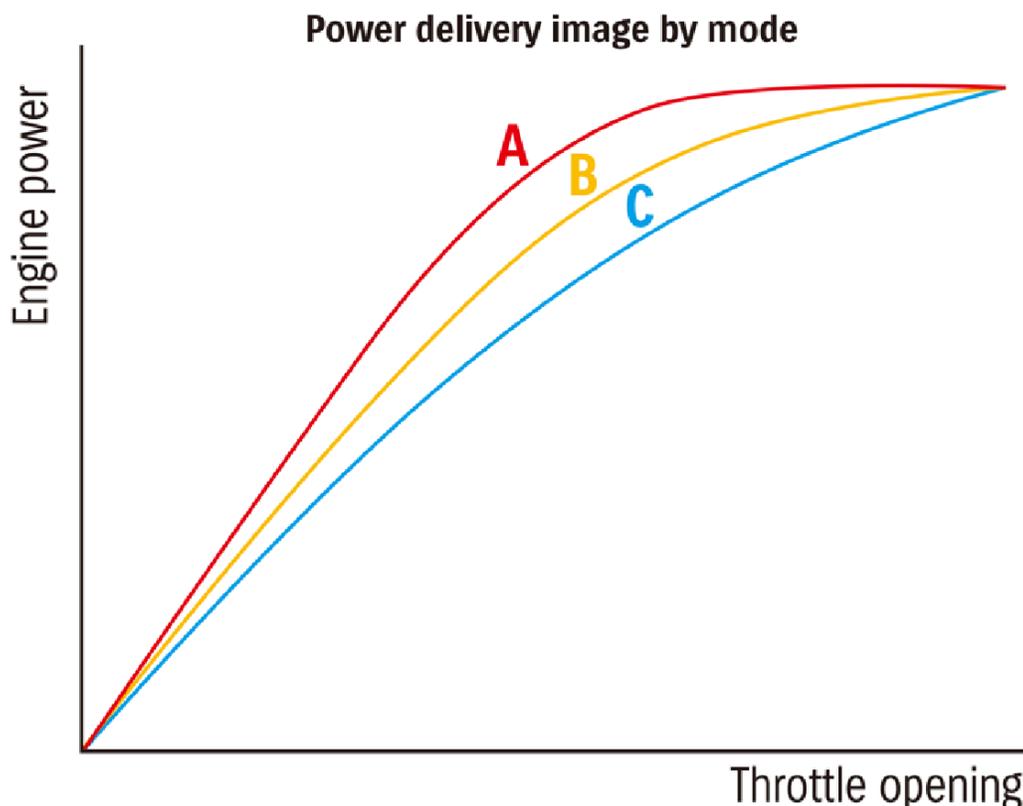
Suzuki Drive Mode Selector (SDMS)

SDMS fully leverages Suzuki's electronic throttle control system to offer a choice between three modes that deliver different power output characteristics, to match the conditions of the surface or preferred riding style. The settings for each mode were tuned and thoroughly tested to maximise the bike's capabilities, to build in the flexibility to adapt well to changing weather, road, and riding conditions, and to make the overall riding experience more enjoyable.

Mode A (Active) provides the sharpest throttle response at low to mid-range speeds and reaches the top of its power curve at lower rpm. Settings for torque characteristics are tuned to deliver exciting acceleration and fully-leverage the V-twin engine's power. It is well-suited for enjoying aggressive runs on winding road surfaces in good weather.

Mode B (Basic) reaches the same level of maximum output, but features a more linear delivery, with softer throttle response at low to mid-range speeds, making it an ideal setting for touring and a good fit for a wide range of riding styles and road conditions.

Mode C (Comfort) provides the softest throttle response and more gentle torque characteristics, while delivering power in a linear fashion that eventually reaches the same level of maximum power output at high rpm. The gentler throttle response and limited torque production at low through mid-range speeds makes the setting ideal when riding on wet or otherwise slippery surfaces.



5. Suzuki Intelligent Ride System (SIRS)

Suzuki Traction Control System (STCS)

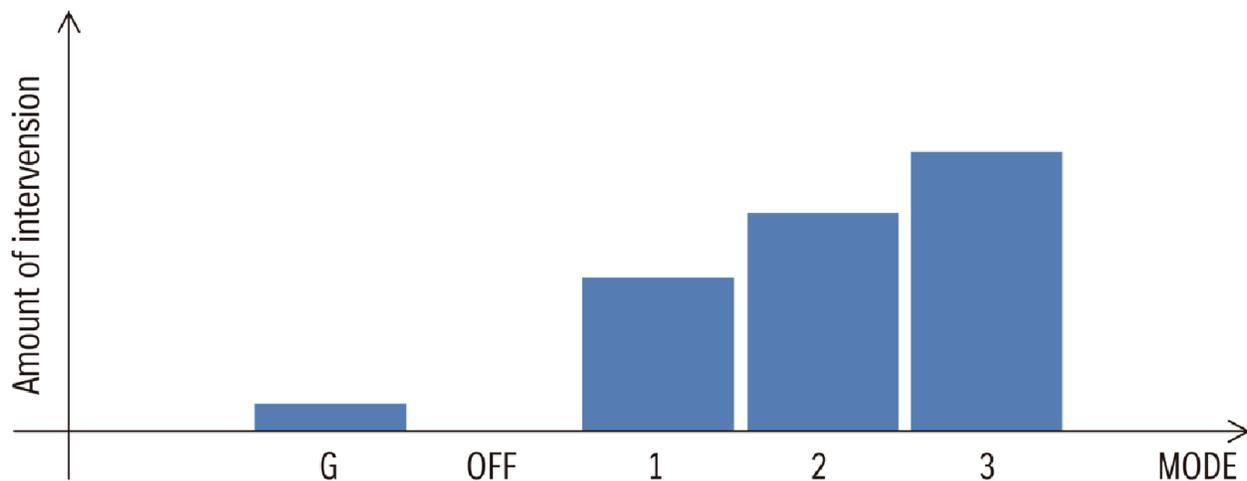
STCS enables the rider to better control the bike in diverse and varying conditions, whether riding alone or with a passenger, carrying a load of gear, or riding in inclement weather. STCS not only reduces stress and fatigue but, by giving the rider greater control over the bike's behaviour, it instils greater confidence regardless of their level of experience.

The rider can select from three modes or turn the system off. The higher the number, the faster the control takes effect and the more proactive the system is in limiting wheel spin. The system is programmed to continuously monitor front and rear wheel speed, engine RPM, throttle position, and gear position. It is designed to immediately limit power and help prevent slipping when an imminent loss of traction is detected by retarding the ignition timing and limiting the throttle opening.

V-Strom 1050DE only

G (Gravel) mode **NEW**

In addition to the three modes (plus off) of STCS, the V-Strom 1050DE introduces a gravel mode that retards ignition timing to help the rider better negotiate gravel roads by allowing some rear wheel slip. This is enabled by continuing to deliver power to the rear wheel without interruption, and suppressing it only enough to help prevent excessive wheel spin. As a result, the bike remains controllable and the rider still gets the consistent power output they want.



5. Suzuki Intelligent Ride System (SIRS)

Cruise control **UPDATE**

Cruise control is a convenient system that allows the rider to maintain a set speed without operating the throttle. This helps reduce fatigue when touring long distances, particularly when travelling at constant speeds. Once the SET mark appears on the colour TFT screen, the rider can easily adjust the speed setting upward or downward using the plus and minus buttons on the left handlebar. Updated settings for the new V-Strom 1050DE and 1050 allow the speed to be set when riding in second gear or higher at engine speeds between 2,000rpm and 7,000rpm, which translates to vehicle speeds of roughly 15mph to 100mph. The handy resume function re-engages the system and accelerates to the most recent speed setting after cancelling.

Ride-by-wire electronic throttle system **UPDATE**

Suzuki's electronic throttle control system takes advantage of the 32-bit ECM to control the action of the throttle valves and make it possible for settings to more finely control the relationship between throttle action and engine output characteristics, delivering a throttle action that responds faithfully to the rider's intention across the range of mode settings. It also allows for the introduction of the other advanced systems of SIRS, which enhance the riding experience.

Throttle grip action is set slightly stiffer on the new V-Strom, particularly when first opening the throttle. This improves controllability with a more natural feel and a faithful response, particularly when riding on gravel roads.

Bi-directional quickshifter **NEW**

The bi-directional quickshifter enables the rider to shift up or down without operating the clutch lever. When activated, the system automatically interrupts power delivery when accelerating and maintaining steady speed just long enough to unload the transmission gear dogs, thereby producing a smoother ride and almost uninterrupted acceleration when the rider shifts up. When decelerating the system automatically opens the throttle valves just enough to increase rpm and match engine speed to the next-lower gear ratio without manually blipping the throttle or using the clutch. This hands-free automatic blipping function combines seamlessly with engine braking. In addition, the ECM is programmed to control the electronic throttle valves and ignition timing to match the engine's operating speed and enable smooth shifting at any RPM.

Suzuki Easy Start System

The easy start system lets the rider start the motorcycle with one quick press of the starter button with no need to pull in the clutch lever when the transmission is in neutral, and the starter motor automatically disengages the instant the engine fires up.

5. Suzuki Intelligent Ride System (SIRS)

Low RPM assist

If engine revs drop below idle speed as the rider releases the clutch lever to launch from a standing start, or when riding at low speeds, Throttle-body Integrated Idle Speed Control (TI-ISC) seamlessly boosts rpm just enough to compensate and maintain idle speed. This benefits the rider by suppressing engine stalls and helping ensure better control and operation in stop-and-go traffic. The low RPM assist also works in harmony with the Suzuki Clutch Assist System (SCAS) to make pulling away from a standing start even smoother and easier.

Combined brake system

The combined brake system provides braking power to the both front and rear brakes by simply operating the front brake lever.

Motion Track Brake System

This system enhances control by allowing ABS activation not only when travelling in a straight line, but also when the bike is leaning into a corner. The ABS unit's ECU determines when intervention is called for by monitoring input from the front and rear wheel speed sensors along with vehicle posture data from the IMU. Then, the ABS unit's hydraulic unit controls brake pressure in response to the received data. By reducing the impact of sudden braking force, the bike is less likely to stand upright or lose traction, and instead maintains its radius and lean angle to better trace the rider's intended line through the corner. Even if the rider panics and brakes heavily in a corner, the system assists in maintaining stability while slowing or stopping the machine.

In addition, the Motion Track Brake System has been optimised for the larger front wheel, different chassis geometry, and increased suspension travel on the V-Strom 1050DE.

Two-mode ABS

This system allows the rider to select between two levels of ABS intervention. Mode one provides minimal intervention, while mode two intervenes more proactively.

Rear ABS off NEW

The V-Strom 1050DE adds the ability to switch off the rear ABS for improved performance on gravel and other unpaved surfaces.

5. Suzuki Intelligent Ride System (SIRS)

Slope-dependent control system

This system prevents rear wheel lift when braking while travelling downhill. The ABS unit uses input from the IMU to monitor the bike's posture and, when the rider applies the brakes, the ABS's hydraulic unit controls brake pressure to deliver the optimum setting to match the angle of inclination. Because it continually adjusts the amount of rear lift control to match the current angle of the slope, the system helps provide more stable braking.

Load-dependent control system

Given the same amount of input on the brake lever or pedal, the braking distance will normally be longer when riding in tandem or carrying a large amount of luggage. In such a case, the system automatically increases braking pressure to compensate for the added load and shorten the braking distance to bring it closer to that of when riding solo or without luggage.

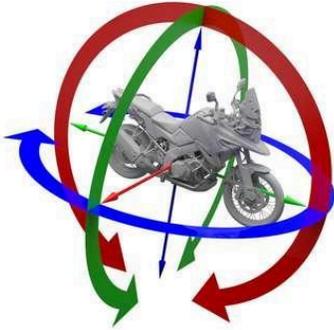
Conversely, when changing back to solo riding after letting a passenger off, or when luggage that was being carried is unloaded, the ABS unit recognises the change and returns the brake pressure compensation back to match the new load conditions.

Hill hold control

The system uses input from the IMU, which constantly monitors the bike's posture, to automatically engage the rear brake for 30 seconds once the motorcycle comes to a stop facing uphill on an incline and remains in gear with the side stand stowed, even if the rider releases the brake lever or pedal. This helps ensure a smoother restart free of worries that the bike will roll backward. Hill hold can be disengaged either by quickly squeezing the front brake lever twice or accelerating to pull away from a standing start. An 'H' mark lights on the instrument cluster when the system is engaged, and flashes when the system is disengaged.

5. Suzuki Intelligent Ride System (SIRS) Inertial Measurement Unit (IMU)

Combining accelerometers and gyroscopes in a single compact package, the six-axis IMU, supplied by Bosch, measures angular rate and acceleration to constantly monitor pitch, roll, and yaw movement. This helps enable a number of the advanced electronic features found on the new V-Strom 1050DE and 1050, including the Motion Track Brake System, cruise control, slope-dependent control and hill hold functions, which all employ data provided by the IMU.



Controller Area Network (CAN bus)

The V-Strom 1050DE and 1050's robust CAN bus enables its various sensors and microcontrollers to communicate with each other. Its capabilities are what make it possible to include advanced systems such as the Motion Track Brake System, cruise control, slope and load-dependent control, and hill hold.

Engine Control Module (ECM) **UPDATE**

A 32-bit ECM provides optimal engine management that contributes to the operation and optimisation of several critical systems, including those to comply with Euro 5 emissions standards.

ABS unit **UPDATE**

The V-Strom 1050DE and 1050 are equipped with a new anti-lock brake system (ABS) unit from Bosch that is even more compact and lighter in weight than the unit it replaces.



6. Chassis

Introduction

The compact, lightweight chassis is engineered to maximise agility, comfort, and utility. Every aspect reflects a focus on great handling and control in a wide range of real-world riding conditions, on supporting the performance from the V-twin engine, and on minimising fatigue, whether riding long distances on paved roads or heading down trails with rougher surfaces.

For the latest model, Suzuki has evolved the proven chassis architecture and optimised the package for the V-Strom 1050DE and V-Strom 1050. Specifically, the V-Strom 1050 retains its great all-round adventure touring setting with a focus more on comfort and riding pleasure for long-distance on-road outings. In contrast, the V-STROM 1050DE aims to provide even better performance and control for those who wish to spend more of their time exploring away from the highway and tackling gravel and dirt trails.



6. Chassis

Twin-spar aluminium frame **UPDATE**

In 1983 Suzuki became the first manufacturer to mass-produce a motorcycle with an all-aluminium frame. Work on developing the best performing frames has continued throughout the subsequent decades, to the extent that aluminium frames have become an integral part of the company's engineering DNA.

The challenge continues with the twin-spar aluminium alloy frame for the V-Strom 1050DE and 1050. It incorporates aluminium castings along with extruded aluminium sections that lend the right amount of suppleness and strength to an overall rigid alloy frame structure. While more costly and demanding to fabricate, extruded aluminium sections allow for the use of thinner material while maintaining a high level of strength. The result is a lighter, stronger frame that handles brilliantly and is easier to manoeuvre, delivers excellent straight-line stability, and boasts proven reliability.

The frame's updated seat rails add battery and rear fender mounting brackets that better support the input load from unpaved surfaces.



V-Strom 1050 frame



V-Strom 1050DE frame

6. Chassis

Radially-mounted front brake calipers

Tokico radially-mounted, monobloc, four-piston front brake calipers are mated to 310mm diameter floating discs to provide sure stopping power and controllable braking performance. The rear brake has a 260mm diameter disc and uses a single-piston, pin-slide caliper.



Four-piston front caliper



Single-piston rear caliper

Optimised front and rear suspension **UPDATE**

Fully-adjustable KYB inverted front forks with 43mm diameter inner tubes deliver a smooth, controllable ride. They feature stable damping characteristics that make them suitable for sports riding and adventure touring. The spring preload and compression/rebound damping can be adjusted, allowing the suspension to be set to best match the rider's preference or the usage conditions.

The link-type mono-shock KYB rear suspension contributes to agility and stability. In addition to adjustable damping force and spring preload, the rear suspension's preload can be adjusted by simply turning the dial by hand. This is particularly beneficial when preparing to ride tandem or carry a load.



Front suspension



Rear suspension

6. Chassis

Mirrors

The mirrors complement the V-Strom 1050DE and 1050's tough look with a design that also provides an excellent view of following traffic.



Centre stand

Both the V-Strom 1050DE and V-Strom 1050 feature a centre stand as original equipment, ensuring practicality comes as standard. Its inclusion makes for easier lubrication of the chain and other general maintenance and cleaning, plus ensures more stability when parking on uneven or soft surfaces, such as gravel or wet grass.

A design that expresses toughness and sophistication

Everything from the protruding beak design and the screen that rises above it, to the tapered aluminium handlebars, engine protector and engine bars* speak of robustness and reliability, as does the aggressive look of the styling. Further accents that heighten the dynamism of the Suzuki adventure bike design and lend an added sense of sophistication include the bronze-coloured cylinder head, magneto cover, water pump case and clutch covers set on the blacked-out engine.

*Standard equipment on the V-Strom 1050DE, and available as a genuine accessory on the V-Strom 1050.

6. Chassis

Optimisations specific to the V-Strom 1050DE

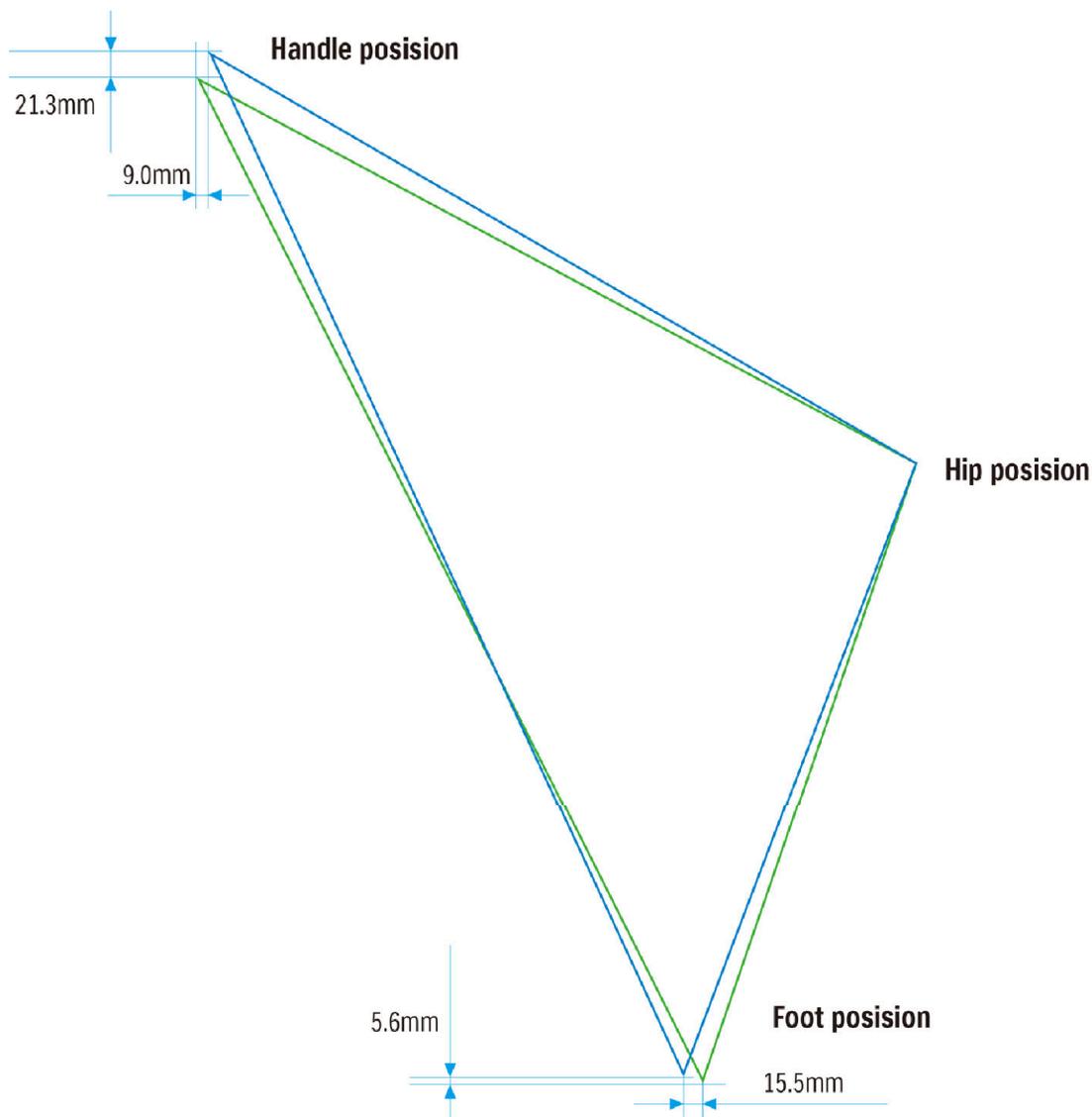
Chassis geometry (dimensions) **NEW**

The V-Strom 1050DE gets its own revised chassis geometry with a longer wheelbase, longer rake, more ground clearance, and a wider handlebar grip. The purpose is to improve stability and controllability when riding on unpaved surfaces and to provide a comfortable riding position that effectively distributes weight to the front and rear. Specifically, the V-Strom 1050DE adopts a longer swingarm to offset the larger front wheel and lengthened front suspension, and thereby retain the same level of stability and nimble handling as on the V-Strom 1050.

Key

V-Strom 1050 DE

V-Strom 1050



6. Chassis

Tuned suspension with longer travel **UPDATE**

The front and rear suspension spring rate, valve, and piston settings were tuned for the V-Strom 1050DE to maximise performance and comfort when riding on loose surfaces. Updates to the front and rear suspension also result in a longer, 170mm front fork suspension stroke and an extended 169mm of rear wheel travel.

Wire-spoked wheels and semi-block pattern tyres **UPDATE**

The V-Strom 1050DE rides on wire-spoked wheels and adopts a 21-inch aluminium front rim for greater stability and better control when traversing gravel roads and trails. It uses a 17-inch rear wheel featuring a new design and construction. The 90/90-21 Dunlop TRAILMAX MIXTOUR tyre on the front and 150/70R17 Dunlop TRAILMAX MIXTOUR tyre on the rear feature a semi-block pattern and an internal structure that is designed exclusively for the V-Strom 1050DE. These new adventure tyres are built to provide solid performance on the road, as well as good grip and agile handling when exploring away from the highway.



6. Chassis

Aluminium swingarm **NEW**

The V-Strom 1050DE adopts a new, longer version of the proven, rugged and light swingarm found in the V- Strom 1050. While retaining the same level of vertical and lateral rigidity that provides nimble handling, it also increases torsional rigidity by approximately 10% to support straight line stability in keeping with the model's chassis geometry and longer wheelbase.



V-Strom 1050DE swingarm

Wider handlebars **NEW**

The V-Strom 1050DE gets new, wider (40mm) tapered handlebars made from thicker tubing and a softer grade aluminium than the V-Strom 1050. This allows more flex when riding on unpaved surfaces and better shock absorption for greater comfort. In addition, the wider grip and positioning provide greater control, particularly when standing, to negotiate rough surfaces.



6. Chassis

Seat designed for performance and comfort **NEW**

The V-Strom 1050DE seat features a fixed-height design with a new bottom shape that not only reduces weight by 706g (37%), it also achieves greater rigidity. This durable new seat better stands up to input load when riding on unpaved surfaces, as well as to weight shifts as the rider changes position.



Footpegs **NEW**

The V-Strom 1050DE is fitted with wider, tougher steel footpegs designed to offer greater stability when standing on the pegs while riding. The lean angle sensors (hero blobs) are also lengthened to compensate for the increased size of the front wheel.



6. Chassis

Screen **NEW**

A smaller, smoke-tinted screen on the V-Strom 1050DE is designed to maximise visibility when adventuring down trails and on gravel roads. While 80mm shorter and slightly narrower than the V-Strom 1050 screen, it has been thoroughly tested to assure comfort for the rider and prevent buffeting.

Front fender **NEW**

The V-Strom 1050DE adopts a new three-piece front fender construction, which employs a pair of vertical skirt sections that establish a hollow space between them and the centre section where they overlap. This structure forms a stronger, more rigid mount to the forks that is better capable of withstanding the forces applied when riding on gravel roads and other unpaved surfaces. An added aesthetic benefit of this construction is that it allows the vertical skirt sections to be colour matched to the body parts.



6. Chassis

Accessory bar

By helping protect the frame and other vulnerable parts in the event the bike is dropped, the standard-fit engine bar lends the rider greater confidence when riding on gravel or dirt. It is also useful for mounting the genuine accessory fog lamp set or other accessories.



Aluminium engine protector and dedicated stands **NEW**

V-Strom 1050DE adopts a rugged aluminium engine sump guard protector to match its tough image, as well as new side and centre stands designed to match the taller ground clearance of the V-Strom 1050DE's revised chassis geometry.



6. Chassis

Optimisations Specific to the V-STROM 1050

Aluminium tapered handlebars

The V-Strom 1050 continues to use the proven aluminium tapered handlebars of its predecessor. They are shaped to be comfortable over long tours and on sportier road rides.



Cast aluminium wheels and adventure tyres

The V-Strom 1050 rides on 10-spoke, cast aluminium wheels shod with Bridgestone Battlax Adventure A41 radial tyres. The 110/80R19 front and 150/70R17 rear tyres contribute to agile handling and positive grip, while providing a smooth ride and greater comfort when touring for long distances.



6. Chassis

Seats designed for comfort and performance

The rider and pillion seats are designed to achieve a comfortable upright riding position that reduces fatigue, even when touring for long distances. The height of the V-Strom 1050 rider seat can be adjusted upward by up to 20mm. Adjustment is performed using the included tool and the height riser stored beneath the pillion seat.



Height-adjustable windscreen

The height-adjustable windscreen for the V-Strom 1050 helps reduce fatigue on long rides by cutting wind noise and preventing buffeting. With its shape and size defined by extensive wind tunnel testing, the screen can be adjusted by hand using a quick release handle toward the front to choose from one of 11 positions that cover a 50mm vertical range.



6. Chassis

Footpegs

The V-Strom 1050 is fitted with rubber-covered aluminium footpegs that provide comfort when touring for long distances.



Under cover

The V-Strom 1050 uses a sculpted plastic engine cover to match its dynamic look.



7. Electric equipment

5-inch colour TFT display

A new 5-inch, full-colour TFT multi-function instrument panel features a clearly legible display of a rich variety of information. Not only does it keep the rider aware of all the bike's systems and settings, it also supplies critical real-time operating status information. The look is one of high quality.

Readouts include:

- Speedometer
- Tachometer
- Riding range
- Cruise control setting
- Cruise control resume speed
- Hill hold control setting
- Odometer
- Dual trip meter
- Gear position
- Water temperature
- Ambient temperature
- Freeze indicator
- Engine rpm indicator
- Average fuel consumption (one and two)
- Instant fuel consumption
- SDMS mode
- ABS mode
- ABS rear off (1050DE only)
- Traction control mode
- Quickshifter (on/off)
- Fuel gauge
- 12-hour clock
- Voltmeter
- Service reminder



The display now adds a function to display pop-up large alerts and warnings. The tachometer also serves as a programmable engine rpm indicator. It blinks when the engine speed reaches the preset rpm entered by the rider. It can be set in 250rpm increments within a range from 4000rpm to 9250rpm.

LED indicators flanking the display include the left and right turn signal indicator, malfunction indication light, neutral indicator, master warning indicator, high-beam indicator, traction control indicator, low oil pressure warning indicator, ABS indicator, low voltage warning indicator, and coolant temperature warning indicator. All are designed for easy recognition.

7. Electric equipment

LED lighting

Vertically stacked LED headlights provide the rider with a clear view, with compact LED position lights, LED turn signals, and an LED taillight ensuring clear visibility.

USB port and 12V DC outlet

A USB port built into the left side of the dash cluster supplies power for recharging smartphones. There is also a 12V DC outlet under the seat.

Handlebar switches designed for intuitive operation

The ergonomic switch layout maximises operating ease and efficiency, allowing the rider to access controls while remaining focused on the road ahead. Selecting modes and making settings and adjustments for each of the advanced electronic control systems of SIRS simply involves operating the MODE and UP/DOWN switches - which also recognise long and short presses - on the left handlebar. While this is also true for the cruise control settings, the cruise control function is engaged or resumed using a dedicated button on the right handlebar.



8. Genuine accessories

More than 30 items are available for the new V-Strom 1050DE and 1050, the lineup designed to further expand the rider's world of adventure touring by enhancing comfort, utility, protection and looks. Included in the collection is a full suite of top and side cases in a variety of sizes, materials, and colours to suit the rider's needs and preferences.



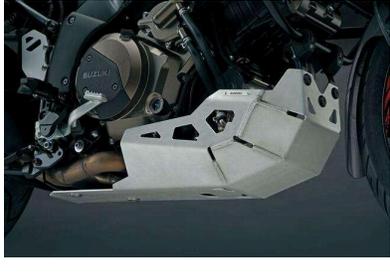
8. Genuine accessories

		
<p>Low seat Replaces the original-equipment seat with one that is 30mm lower.</p>	<p>Heated grips Heats the entire surface of the grips and offers three different levels.</p>	<p>Screen adjust kit (DE only) Allows adjustment of the high screen to different height positions, extendable up to 50mm/11 different positions.</p>
		
<p>High screen (DE only) Designed to offer a higher level of wind protection. 80mm taller than the standard screen.</p>	<p>Aluminium top case (38L) Available in silver or black with embossed Suzuki logo.</p>	<p>Top case carrier Designed for installing aluminium top case.</p>
		
<p>Aluminium side cases (37L each) Available in silver or black with embossed Suzuki logo.</p>	<p>Side case bracket Required for installation of aluminium side case set.</p>	<p>Tank bag (large) Made of durable nylon with volume expandable from 11L to 15L.</p>

8. Genuine accessories

		
<p>Ring for tank bag Required for installing tank bag.</p>	<p>Mirror extension Mirrors can be raised 51mm higher than standard and are adjustable up to 40 mm sideways.</p>	<p>LED fog lamp Bright LED fog lamps, attached to the accessory bar.</p>
		
<p>Fuel tank pad For tank cover scratch protection, featuring V STROM logo.</p>	<p>Tank protection foil (transparent) Protects against tank scratches.</p>	<p>Side cover protection foil Protects side frame cover from scratches.</p>
		
<p>Heel plate protection foil Protects heel plate from scratches.</p>	<p>Frame cover protection sticker Protects frame cover from scratches.</p>	<p>Large footrest Adjustable up to 10mm forwards and backwards. Three positions with height up to 20mm.</p>

8. Genuine accessories

		
<p>Plastic top case (35L) Plastic 35L top case.</p>	<p>Top case carrier set Designed for installing plastic top case (35L).</p>	<p>Plastic side case set Plastic side cases with capacity 26L (right) and 29L (left).</p>
		
<p>Side case lower bracket Required for installing plastic side case set.</p>	<p>Cushion pad for top case (35L) Improves riding comfort for the passenger.</p>	<p>Plastic top case (56L) Plastic top case with embossed S logo.</p>
		
<p>Top case carrier set Designed for installing plastic top case (56L).</p>	<p>Engine bar (1050 only) Black powder coated bar.</p>	<p>Aluminium skid plate Tougher skid plate, available in silver or black.</p>

8. Genuine accessories

		
<p>Rim decals (1050 only) Decals to provide another look. Available in two colours.</p>	<p>Sticker set SUZUKI For front forks</p>	



9. Colour lineup V-Strom 1050DE



CD8 (Champion Yellow No. 2/Metallic Matt Sword Silver)



JWN (Pearl Vigor Blue/Pearl Brilliant White)



KGL (Glass Sparkle Black/Metallic Matt Black No.2)

**9. Colour lineup
V-Strom 1050**



CGG (Metallic Reflective Blue/Metallic Matt Black No. 2)



CB8 (Glass Matt Mechanical Grey/Metallic Matt Black No. 2)



BNR (Candy Daring Red/Metallic Matt Black No. 2)



KGL (Glass Sparkle Black/Metallic Matt Black No. 2)

10. Specification

	V-Strom 1050DE	V-Strom 1050
Overall length	2,390mm (94.1in)	2,265mm (89.2in)
Overall width	960mm (37.8in)	940mm (37in)
Overall height	1,505mm (59.3in)	1,515mm (59.6in)
Wheelbase	1,595mm (59.3in)	1,555mm (61.2in)
Ground clearance	190mm (7.5in)	165mm (6.5in)
Seat height	880mm (34.6in)	855mm (33.7in)
Kerb weight	252kg (554lbs)	242kg (534lbs)
Engine type	Four-stroke, liquid-cooled, DOHC 90° V-twin	
Bore x stroke	100mm x 66mm	
Engine displacement	1037cc	
Peak power	107PS (79kW) / 8,500rpm	
Peak torque	100Nm / 6,000rpm	
Compression ratio	11.5 : 1	
Fuel system	Fuel injection	
Starter system	Electric	
Lubrication system	Wet sump	
Transmission	Six-speed constant mesh	
Suspension - front	Inverted telescopic, coil spring, oil damped	
Suspension - rear	Link type, coil spring, oil damped	
Rake / trail	27° / 126mm	25° / 110mm
Brakes - front	Disc, twin	
Brakes - rear	Disc	
Tyres - front	90/90-21M/C 54H tubed	110/80R19M/C 59V tubeless
Tyres - rear	150/70R17M/C 69H tubeless	150/70R17M/C 69V tubeless
Ignition system	Electronic ignition (transistorised)	
Fuel tank capacity	20 litres (/ 4.4 Imperial gallons)	
Fuel efficiency / range	54.2mpg / 238 miles	
CO ₂	120 g/km	
Emissions standard	Euro 5	
Oil capacity (overhaul)	3.5 litres	



ENDS