

**HONDA**

---

# Press Information

**ZUR SOFORTIGEN VERÖFFENTLICHUNG**

11.November 2012

**SH150i Press Pack**



Press release date:

Model updates: A brand new design from the wheels up, featuring a 17% more fuel efficient engine – incorporating Idling Stop – plus the first Honda scooter to feature 16-inch wheels, a flat floor and under seat storage for a full-face helmet. ABS added as an option.

**Contents:**

**1 Introduction**

**2 Model Overview**

**3 Key Features**

## **4 Colour Options**

## **5 Accessories**

## **6 Technical Specifications**

### **1. Introduction**

Honda's SH scooter family, which began in 1984 with the humble SH50, has today become a brand in its own right, having sold over a million units in Europe. The original four-stroke SH150, introduced in 2001, was intended initially for global consumption by Honda, and found instant success in Europe, particularly Italy, thanks to its combination of engine performance, frugal nature and nimble, sure-footed handling and stability from its large diameter 16-inch wheels.

Ever evolving – the 2005 SH150i featured PGM-FI fuel injection – over the last decade the SH has come to represent the ultimate in urban transport for hundreds of thousands of people. And the knowledge gained by Honda, in producing a machine so useful to so many for so long, has created a scooter with the perfect balance of everything needed: style, reliability, economy and downright usability. Everyday it transports people to work, college, the shops or simply wherever they need to be. In doing so it's woven itself into the very fabric of life, and become an indispensable tool for living.

### **2. Model Overview**

When setting out to design the next-generation of SH150i Honda's engineers faced one interesting problem: the existing model. Its formula was so well proven – and so successful – that genuine improvement could possibly present a challenge. This was to be a brand new model, with production continuing in Honda's Atessa facility in Italy, and three key goals were posted by the development team from the outset:

- 1) Improved, best-in-class fuel economy and environmental performance.
- 2) A high-quality design, both stylish and functional, with a distinct visual identity giving increased pride of ownership.
- 3) An equipment level and specification that moves up a notch, at a very affordable price point.

Heart of the new SH150i is its brand new engine known as "eSP" (enhanced Smart Power); built from the ground up with low-friction technology, and featuring Idling Stop, it delivers an incredible 17% more fuel efficiency in direct comparison to the previous model.

Re-programmed PGM-FI fuel injection and improved combustion also provide plenty of real-world power and torque, in the rev-range most used in the cut-and-thrust of urban riding.

A completely revised chassis – with trademark 16-inch wheels – delivers enhanced handling and stability while ABS is now an option instead of the stock CBS (Combined Brake System) brakes. Fresh off the drawing board the SH150i's bodywork possesses a strong, and highly individual, personality – yet is still slim enough to wriggle through the tightest of traffic – and will now store a full-face helmet under the seat.

In all, 20 patents are pending between the SH150i's engine and chassis, testament to how much new thinking has gone into the design, and also to how important this scooter is.

Not just to Honda, but to the people that will ultimately ride it.

'King of the European Commuters: the SH150i'

### **3. Key Features**

#### **3.1 Styling**

The SH150i's flowing lines are a subtle, yet substantial, evolution. The theme followed by Honda's design engineers was 'functional beauty = human-friendly, comfortable form'. In other words, it had to look good, but also had to work, while retaining the distinctive SH appearance..

A very natural riding position, with excellent weather protection from the upright front portion of the body, ensures comfort for the rider, and the flat floor gives a wide degree of freedom for foot placement. Many journeys around town involve a pillion, and there is plenty of room for two on the SH150i; retractable aluminium pillion footplates tuck away when not in use, and provide a stable platform – especially under braking – when needed for a passenger. The flat seat provides plenty of support and room to move around, and the carefully contoured shape, plus slim floor, makes reaching the ground easy. Seat height is 800mm.

From front to back the style is simple, yet elegant, giving the SH150i a unique presence very much its own. Its expressive new 'face' has been formed through the use of a distinctive, and compact, four-lens headlight unit – with the radiator now an integral part of

the engine (rather than being mounted up front) the design team had more freedom within which to work.

The side view features a dynamic line that builds progressively in a ridgeline to the rear, underlined with a bright, 3D engraved logo that perfectly accentuates the SH150i's quality and intent. The rear central stoplight, with split dual surface-emitting taillight, adds both individual character and enhanced visibility.

As laid out in the engineers' brief, form had to be integrated with function, and to that end the small details that make life easier were just as important. A front glove box, mounted on the left, provides a useful, easy-to-get-at storage area while an all-important utility hook secures bags safely.

The speedometer is a large, highly visible dial, with a needle that sweeps through its entire arc when the ignition is switched on. Analogue meters are also used for both fuel and temperature gauges, for easy at-a-glance checking.

A pair of helmet holders are placed either side at the front of the main under-seat storage area, which can now accommodate a full face helmet. The large rear carrier – made of super-tough resin – is ready for installation of the optional top box (it will also work with the box from the previous model). The fuel tank holds 7.5 litres, giving class-leading range when combined with the improved fuel efficiency of the new engine.

### 3.2 Chassis

To give greater carrying capacity – enough for a full-face helmet – without adding bulk to the body the SH150i's high-tensile tubular steel frame uses a central 'truss' section, tying the under frame and rear frame together neatly. It replaces the conventional reinforced gusset plate used on the previous design, and contributes to the 1kg reduction in frame weight compared to the previous model.

Optimised for rigidity and durability, the frame's strength is complemented by new, lightweight aluminium die-cast wheels, featuring 10 ultrathin spokes (rather than five) and tubeless tyres. Always key to the SH150i's sure-footed handling ability and stability on a variety of road surfaces, wheel diameter remains 16-inch; wheelbase is a compact 1340mm.

The preload adjustment range of the rear shock has increased from three settings to five, giving the rider a greater choice for fine-tuning, especially when carrying a passenger. The

telescopic front forks, with 100mm of travel, ensure excellent road holding and are tuned to give a compliant, yet controlled, ride.

A key addition to the new machine is the availability of ABS (Antilock Brake System) as an option for the SH150i's front and rear 240mm discs, instead of the CBS (Combined Brake System) fitted as standard. This enhances safety and confidence in wet or slippery conditions, and adds real value and benefit for the owner.

### 3.3 Engine

Development of Honda's next-generation four-stroke, liquid-cooled 2-valve engine (known as "eSP": enhanced Smart Power and also used in the latest PCX125i) revolved around making a highly durable power unit that would be physically smaller and more economical to produce, yet also feature improved performance and, via greatly enhanced fuel efficiency, present a positive environmental message. It also needed to make good power where scooter riders need it most – in the low to mid-range area – and be quieter in operation.

Mass centralisation played a key role. The radiator, rather than being mounted at the front of the machine, has been built into the engine itself for a much simpler, lighter (saving nearly 1kg in weight) and more efficient layout. The electronically controlled ACG starter not only starts the engine but also generates electricity, doing away with a conventional system's motor and gears. Further consolidation within the engine produced a net reduction of parts by 20%, saving both weight and production costs.

A key fuel-saving technology is Idling Stop. It's operated via a switch on the right handlebar and, when enabled, automatically stops the engine running after three seconds at idle, and re-starts it instantly when the throttle grip is twisted. It's seamless in use, thanks to a swing-back system that returns the crank to its position before air intake, and a decompression mechanism that negates cranking resistance due to compression.

The engine's compact combustion chamber, fed fuel/air mixture precisely by revised PGM-FI fuel injection, matches burning velocity and cooling performance, perfectly tailoring torque characteristics to suit urban riding conditions. The air intake port is extremely smooth, further assisting gas flow, and optimised ignition timing combines with the water jacket and radiator's efficient cooling of the combustion chamber to improve 'knocking' resistance.

To make the most of the engine's mass centralisation, reduction in individual parts and

Idling Stop, a whole host of low-friction technologies have been employed internally;

- An offset cylinder reduces friction caused by contact between the piston and cylinder. Piston weight has been reduced through the use of CAE (Computer Aided Engineering)

- The cylinder sleeve uses minute splines on its outer surface to reduce oil consumption and improve cooling.

- A shell-type needle bearing is used for the rocker arm shaft, reducing friction, while smaller, lighter rollers work in conjunction with an optimized cam profile and valve spring load.

- The high-cooling radiator core is more efficient, allowing the use of a smaller, lighter cooling fan on the back of the radiator, reducing frictional losses.

- Internal modifications to the transmission case have lowered oil agitation losses, and oil capacity has been reduced by 36% compared to the current 150cc model.

- Rolling resistance within the transmission unit has been reduced by the use of three main bearings, all exclusively designed to deal with the loads they receive individually.

#### **4. Colour Options**

Pearl Nightstar Black

Pearl Cool White

Moondust Silver Metallic

Pearl Sienna Red

#### **5. Accessories**

While designing the SH150i, accessories were included from the start to produce a cohesive look. Available as optional extras are a top box, with styling cues taken from the frontal signature, and windshield/knuckle visor, which provide extra weather protection. All fully complement the bodywork's flowing silhouette.

## 6. Technical Specifications

### ENGINE

Type: Liquid-cooled 4-stroke SOHC single

Displacement: 153cm<sup>3</sup>

Bore x Stroke: 58 x 57.9mm

Compression Ratio: 11:1

Max. Power Output: 11.0kW/8,250rpm (95/1/EC)

Max. Torque: 14Nm/6,500rpm (95/1/EC)

Idling Speed: 1,700min<sup>-1</sup>

Oil Capacity: 0.9 litre

### FUEL SYSTEM

Carburation: PGM-FI electronic fuel injection

Fuel Tank Capacity: 7.5 litres

Fuel Consumption: 42.0 km/L (without Idling Stop, WMTC mode) 43.8 km/L (with Idling Stop, WMTC mode)

### ELECTRICAL SYSTEM

Ignition System: Digital transistorised with electronic advance

Ignition Timing: 12° BTDC (idle) ~ 65° BTDC (8,500min<sup>-1</sup>)

Sparkplug Type: CPR7EA-9 (NGK)

Starter: Electric

Battery Capacity: 12V/5AH

ACG Output: 343W

## DRIVETRAIN

Clutch Type: Automatic; centrifugal

Transmission Type: V-Matic

Belt Converter Ratios: 2.68 ~ 0.82

Final Drive: V-belt

## FRAME

Type: Underbone; steel tube

## CHASSIS

Dimensions: (LxWxH) 2,030 x 740 x 1,150mm

Wheelbase: 1,340mm



Caster Angle: 26°

Trail: 85mm

Seat Height: 799mm

Ground Clearance: 145mm

Kerb Weight: 134kg (F: 51kg; R: 83kg)/

ABS version 135kg (F: 52kg; R: 83kg)

## SUSPENSION

Type: Front: 33mm telescopic fork, 89mm axle travel

Rear: Dual-damper unit swingarm, 83mm axle travel

## WHEELS

Type: Front: U-section 10 spoke cast aluminum

Rear: U-section 10 spoke cast aluminium

Tyres: Front: 100/80-16 (50P)

Rear: 120/80-16 (60P)

## BRAKES

Type: Front: 240 mm x 4mm disk piston caliper (CBS) / two piston caliper (ABS)

Rear: 240mm x 5 mm Disk single piston caliper

All specifications are provisional and subject to change without notice.

# Please note that the figures provided are results obtained by Honda under standardised testing conditions prescribed by WMTC. Tests are conducted on a rolling road using a

standard version of the vehicle with only one rider and no additional optional equipment. Actual fuel consumption may vary depending on how you ride, how you maintain your vehicle, weather, road conditions, tire pressure, installation of accessories, cargo, rider and passenger weight, and other factors.