TEIN
For Your Driving Pleasure

Product Specifications

OE Shape

EnduraPro and EnduraPro PLUS are high-performance OE-shape shock absorbers. Designed to use with the vehicle's original (OE) spring and upper mount, their lower spring seat is shaped identical to the OE shock absorber. In addition to replacing worn or leaking OE dampers, these products are excellent to improve specs like ride quality or handling without changing your ride height. You can also use them with low down springs.

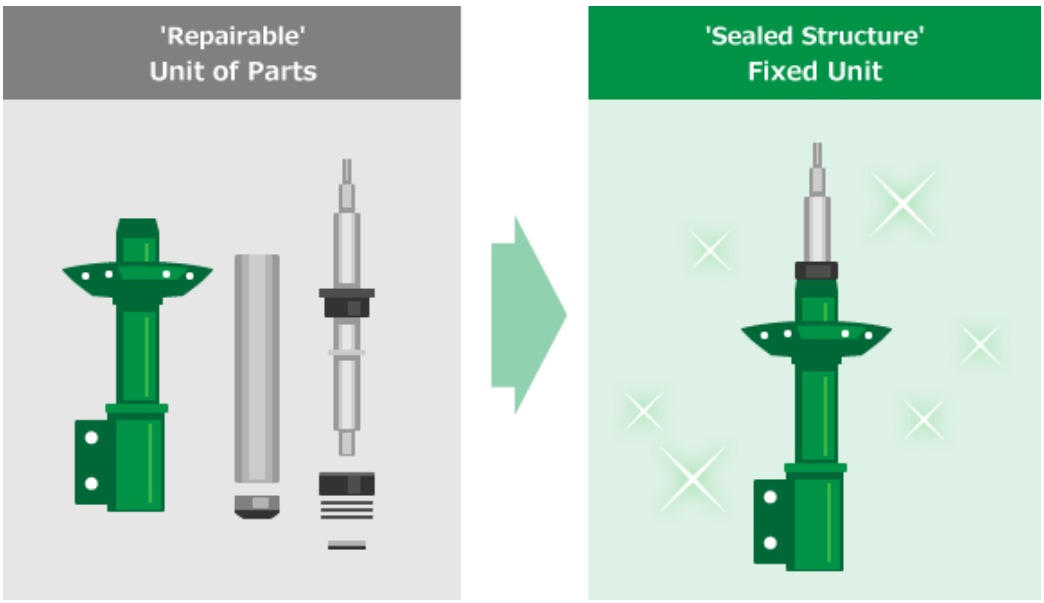
Available per Piece


Because EnduraPro and EnduraPro PLUS can be purchased per 1 shock absorber, you can limit the cost for replacing worn or damaged dampers.

High Durability and Superior Quality

Sealed Structure

A "sealed structure", attained by a new production formula, combines high quality with reduced cost.

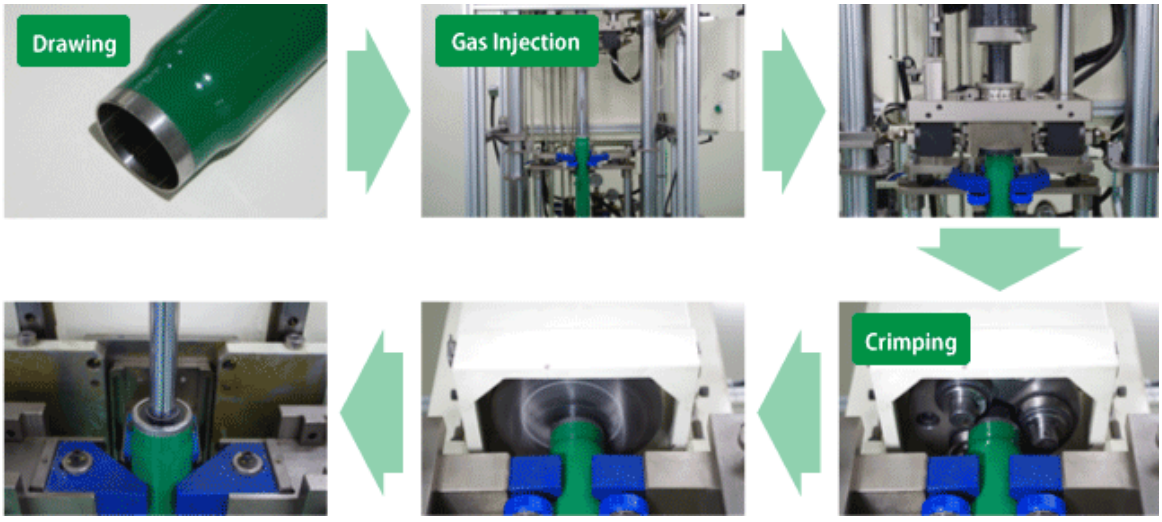


About the Sealed Structure

The top end of the shell pipe is narrowed, oil and gas are injected, and the whole unit is sealed by crimping the metal.

This new approach massively shortens the production process. As a result, we have succeeded in vastly cutting production cost.

Partial Production Process of EnduraPro and EnduraPro PLUS



High Strength and Durability

Fortified Installation Points

Example: Thickness comparison of front installation bracket for Honda Jazz/Fit GP5

For strut-type suspensions a thickness increase improves the strength and durability of the bracket attaching to the vehicle (steering knuckle) compared to OE shock absorbers. This higher rigidity of the knuckle's support also improves steering feel and makes the ride feel more

OE

EnduraPro

stable. Please note that the thickness increase varies per vehicle model.

Fortified Shell Case with Large Oil Capacity

The shell case, the key part of the shock absorber, is made of a high-strength material with tensile strength around 150% of the OE shell case. Weight increase is curbed by keeping the thickness of the cylinder wall the same. A bigger shell case diameter expands its oil capacity, for improved durability as well as a long-term stable damping force performance.

Example: Comparisons for the Honda Jazz/Fit (GP5)

Shell Case Tensile Strength

	OE	EnduraPro
Tensile Strength (Mpa)	340	510

Shell Case Diameter

	OE	EnduraPro
Front Shock Absorbers	φ45	φ55
Rear Shock Absorbers	φ45	φ50.8

Please note: tensile strength and diameter of shell case vary per vehicle model.

High-Performance Damper Oil

Exhibiting a stable viscosity in a broad temperature range, the high-performance damper oil sustains smooth strokes and a reliable damping force under all kinds of circumstances. It has excellent anti-foaming properties that protect it from cavitation (bubble-forming), and is resistant to overheating, so that it works noiselessly even on rough roads. The damper oil keeps up its superior performance long-term, because it is also resistant to deterioration over time.

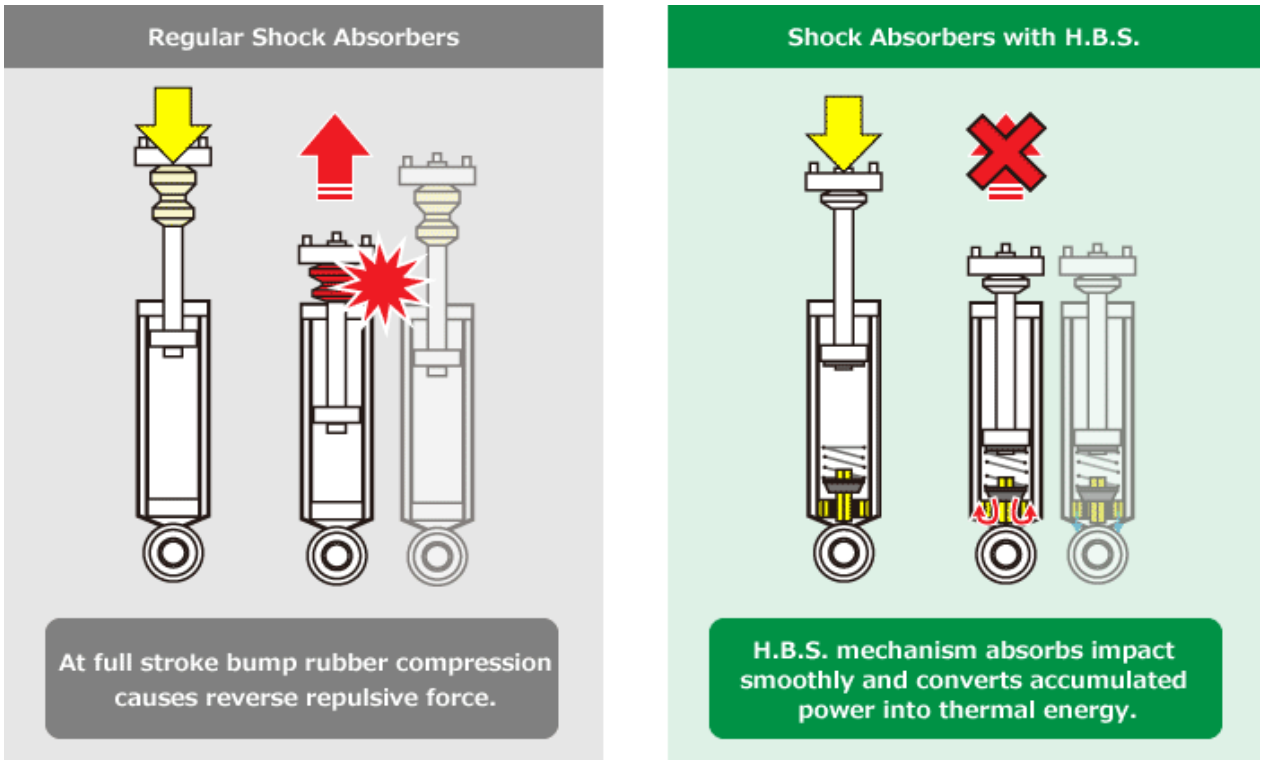
Rustproof Surface Treatment

The shell case's bright TEIN-green powder paint coating excels in strength and durability, while our coating technique is eco-friendly and without organic solvents. After pre-treatment, TEIN's patented 2-Layer, 1-Bake powder coating method with corrosion-proofing paint is used for superior durability and rust protection.* Outstandingly corrosion-resistant, EnduraPro and EnduraPro PLUS can safely be used in regions with heavy snowfall or coastal areas, etc.
* Japanese patent number 4347712

Hydraulic Bump Stopper (H.B.S.)

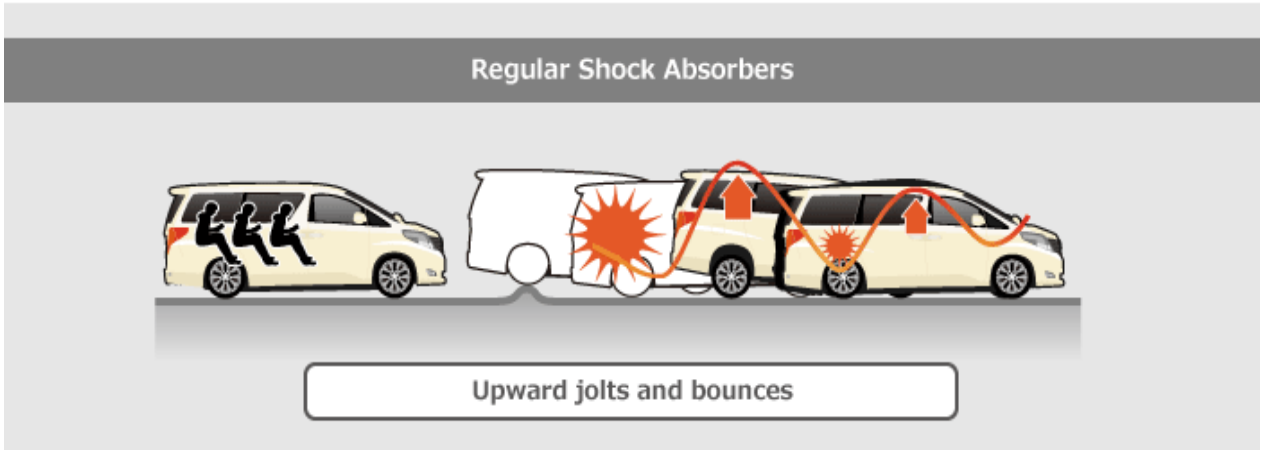
More comfort and higher durability at maximum passenger and cargo load.

How the H.B.S. Mechanism Works

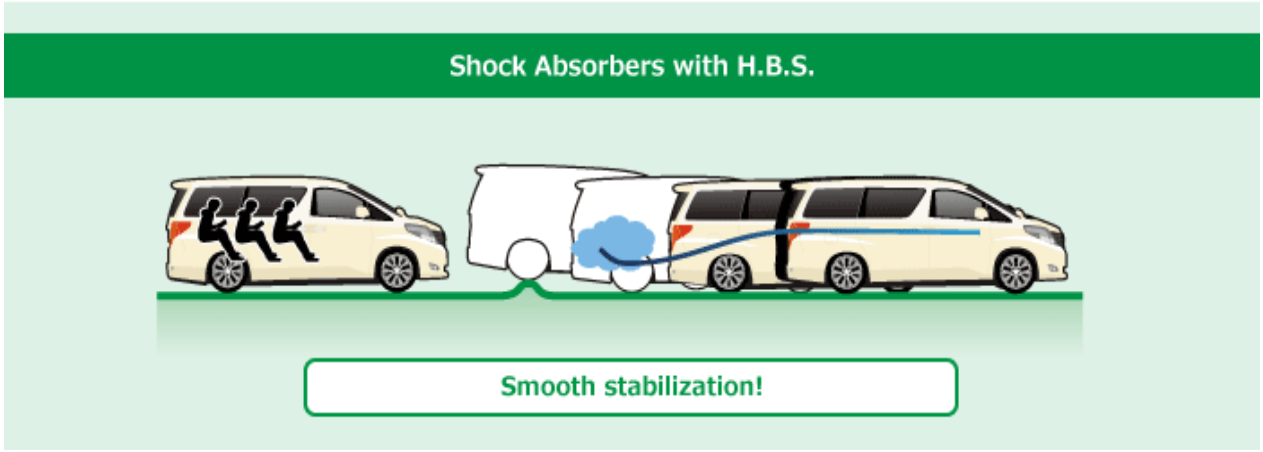


When regular shock absorbers fully stroke, their bump rubbers are compressed. The energy that is generated by that escapes as a repulsive force, which can disturb the vehicle's behavior. Furthermore, repeated full strokes can damage the damper.

In the same situation EnduraPro and EnduraPro PLUS, featuring H.B.S., internally convert the impact of the stroke to thermal energy (heat) and absorb it, strongly reducing the impact that disturbs the vehicle's behavior. With less damage to the dampers, H.B.S. also contributes to their durability.

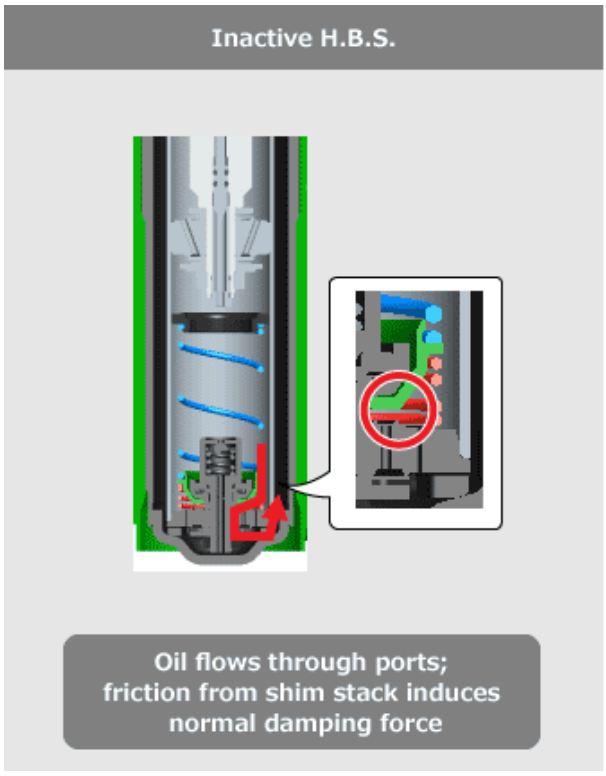


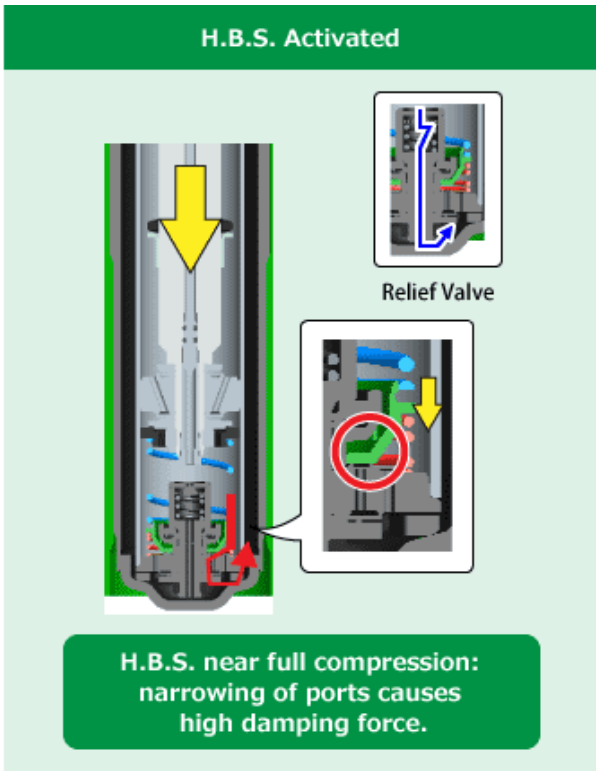
Driving over a bump, the vehicle jolts and bounces. It takes a while to regain control.



The vehicle smoothly processes the impact, does not bounce, and its behavior swiftly stabilizes.

The Hydraulic Bump Stopper (H.B.S.) Mechanism





In shock absorbers with inactive or no H.B.S., the operative valve (green) floats, and oil flows freely through the base valve ports. Resistance to the flow from the shim stack then, causes damping

force.

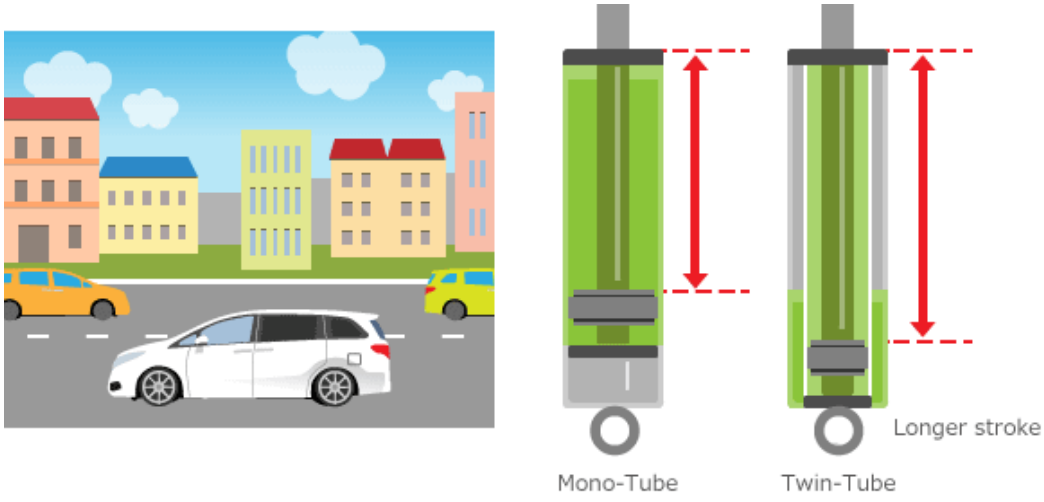
Near full compression, when the piston rod strokes beyond a predetermined point, the operative valve is pushed down and activates H.B.S.: the base valve ports are narrowed, blocking the oil flow. This results in high damping force.

A relief valve serves to suppress sudden damping force increase, when the pressure in the cylinder exceeds its regular level.

The setup of the H.B.S. mechanism is optimized per vehicle model, with the right activation point and damping force.

Twin-Tube System

Compared to the regular mono-tube system, twin-tube attains longer strokes with a smaller repulsive force, resulting in high ride comfort.



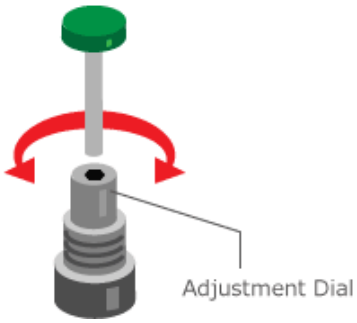
Roads may have all sorts of surface conditions. This calls for shock absorbers with ample stroke, that operate smoothly.

Thanks to flexible strokes, you can negotiate gaps and bumps steadily on rough roads, meaning a smooth ride at low speed and stability at high speed.

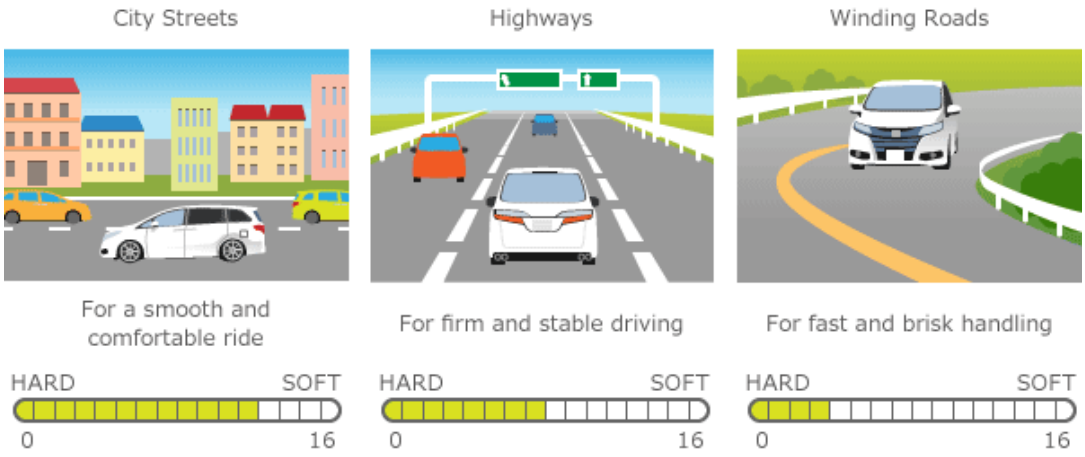
Damping Force Adjustment

***EnduraPro PLUS Only**

EnduraPro PLUS features 16-level damping force adjustment, for simultaneous adjustment of compression and rebound. Modify ride comfort and handling according to your preference, changing the properties of the shock absorber with the adjustment dial.



Adjust to Suit Driving Conditions

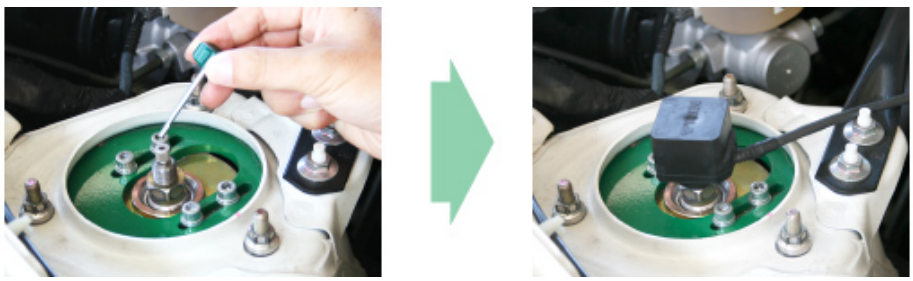


The above are examples; actual settings vary according to the vehicle's circumstances.

Compatible with EDFC Series (Optional)

***EnduraPro PLUS Only**

EnduraPro PLUS is compatible with the EDFC Series, which offer easy damping force adjustment from the driver's seat.*
* Some vehicle models excepted



EDFC motor instead of the adjustment dial

Please note: the example in the photos is not EnduraPro PLUS

Discover other performance suspension parts on our website.