Why KONI?

KONI has been in business for over 150 years, involved in automobile dampers since 1932 and has produced adjustable telescopic dampers since 1945. In addition, though known best for cars, KONI also builds shocks for trucks, buses, RVs and railway rolling stock. What this adds up to is well-earned design and manufacturing experience.

As the maker of the industry’s very first adjustable shock absorber, electronic drag racing shocks, and today’s patented FSD (Frequency Selective Damping) street shocks, KONI has long demonstrated that product improvement means product innovation.

As a niche maker of high-performance shocks, KONI is small enough to interact with its customers on a regular basis, even having a Tech Line staffed every working day with KONI technicians, many of whom are car enthusiasts just like you. What this means is that you receive the personal attention missing in most product businesses today.

The ITT Connection

Since 1972 KONI has been part of the global engineering and manufacturing company called ITT, with 40,000 employees worldwide and 2009 sales of $11 billion. They are the world’s premier supplier of fluid pumps, a supplier of sophisticated electronics to military defense and a producer of electronic components for telecommunications, including aerospace and industrial and a maker of motion and flow control products for industrial, marine, leisure and transportation markets.

KONI is part of Motion and Flow Control and is probably the best-known retail brand of all the group’s products. Its nice to know that a small damper manufacturer has the resources and technology of a large company like ITT behind it.

Welcome to the KONI shock family!
FSD Shocks
FSD/Eibach Kits

KONI’s latest technology accomplishes the task that has eluded most shock makers until now - great handling + excellent ride quality:

1. Improved handling, no ride quality compromise
2. Superior ride quality
3. Patented parallel-valve design

- Excellent ride quality on all road surfaces
- Available for most newer cars - more coming
- Pair with Eibach springs for 1"-1.5" lowering on many cars
- Gold metallic finish shocks
- Dark metallic gray springs in FSD/Eibach kits
- Less expensive than electronic systems
- Lifetime Warranty
Coil-over Kits

You say you’re serious about handling, the type of person who wants maximum suspension tuning capability? Here’s what our Coil-over Kits can do for you:

- Threaded shock bodies enable up to .8”-2.6” of lowering, depending on vehicle application
- Lowering can be corner-specific, for weight jacking
- External rebound-damping adjustable on most cars
- Plated shock bodies, gray metallic springs and red anodized alloy spring seats
- Lifetime Warranty
Sports Shocks

Why the industry’s first adjustable shock absorbers are still the best:

1. World renowned handling performance
2. Excellent choice for multi use cars (Street, Autocross, Track, etc.)
3. Best KONI shock for all lowering springs
4. Some applications servicable for custom setups
5. Streetable ride quality
6. Lifetime Warranty
Sport Kits  
Sport Spring Kits

If a hot new look is what you’re after, check out our Sport kits using our adjustable Sport shocks. Here’s what you get:

- Sport kits combine Sport springs and Sport shocks, resulting in modest lowering and improved handling, with good ride quality
- External rebound damping adjustment on most cars
- Sport springs are also available separately
- Lifetime Warranty
STR.T—Street Shocks

Are you ready for the road? For curves? For adrenalin? KONI STR.T is the answer.

- Entry level performance shock absorber
- Compliments lower springs
- Perfect OE replacement or vehicle improvement
- Non-adjustable
- Lifetime Warranty
Special Shocks
Classic Shocks

The shocks that started it all for KONI are still a standard of performance worldwide:

- Broad applications, including older cars
- Rebound adjustable off-the-vehicle
- Red finish (Specials)
- Black or red with “wing” logo (Classics)
- Lifetime Warranty

Heavy Track/SPX Shocks/RAID

If you own a light truck or SUV, Heavy Track has the performance you need:

- KONI Special technology, up-sized
- Improved ride/handling
- Rebound adjustable off-the-vehicle
- Mono-tube and Twin-tube design based on vehicle
- RAID dampers are larger in diameter for heat dissipation and durability. RAID offers a more robust solution to extreme off-road suspensions
- Lifetime Warranty
28 Series*

If you’re interested in the double adjustable shock absorber with a distinguished racing heritage in F1, CART, Grand-Am and many other race organizations worldwide, the 28 Series is for you.

› Bump and rebound adjusters with 8 repeatable positions each
› Race proven seal and guide design
› Small size and low weight
› Uses 2", 2 1/4" or 2 1/2" ID Spring
› Re-buildable with custom length and valve options
› No Warranty

Race Series Shocks and Struts

Serious performance shocks for serious drivers.

› Single and double adjustable racing dampers
› Shortened body length for increased travel with coil-over springs
› Designed to work with coil-over sleeves
› No Warranty

*Recommended for track/limited street use. Additional suspension components could be needed, please contact KONI before ordering.
**Product Selection**

KONI has a broad selection of products/technologies. This matrix helps explain the part numbering system and product features – the part number prefixes are on the top, product features are on the left.

| CONSTRUCTION TYPE | 1100 | 1105 | 2100 | 26 | 30 | 60 | 62 | 86 | 87 | 90 | 1019 | 2010 | 2040 | 2041 | 2042 | 2056 | 3010 | 3012 | 3020 | 4024 | 5010 | 5012 | 5020 | 5040 | 6510 | 6540 | 6841 | 7170 | 8740 | 8742 | 8750 |
|-------------------|------|------|------|---|---|---|---|---|---|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Non-Adjustable    | X    | X    | X    | X | X | X | X | X | X | X | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| Adjusted          | X    | X    | X    | X | X | X | X | X | X | X | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| FSD               | X    | X    | X    | X | X | X | X | X | X | X | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    |
| Eibach Springs    | X    | X    | X    | X | X | X | X | X | X | X | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    |

**ADJUSTMENT FEATURE**

| Externally Adjustable | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Standard Adjustable   | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

**BODY STYLE**

| McPherson Strut Cartridge | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| McPherson Strut Complete Housing | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

* Some chrome body dampers from 1150 kits may not be gas charged
** Construction Type, Adjustment Feature & Body Style are dependent on vehicle type
Adjustment Procedures

SERIES 8010, 8041, 8210, 8241, 8610, 8641, 8710, 8741, 8742
1. Take the adjustment knob which is supplied and fit it to the top of the damper
2. To adjust the damping force, the knob has to be turned in the direction of the arrow for increased damping and to decrease in the opposite direction. If you feel resistance do not use force, as the damper is in its end position
3. After adjustment remove the adjusting knob in order to prevent possible damage of the bonnet

WARNING: Adjust both left and right dampers identically. Failure to do so may lead to unstable handling and uneven tyre tread wear.

SERIES 26, 30
1. Remove the plastic dust cover to expose the adjusting knob (fig. 2)
2. Depress the knob fully, and hold it in that position while adjusting (fig. 1 & 2).
3. The adjusting device has been provided with a number of distinct stops (clicks), each of which marks an adjustment position (fig. 4).
4. To increase rebound-damping, turn the piston rod one or more clicks to the right (clockwise), and release the adjusting knob. DO NOT USE FORCE! Make sure that the adjusting knob springs fully back into position.

NOTE: 26 Series range limited to 2 clicks, 30 Series range limited to 3 clicks.

WARNING: Adjust both left and right dampers identically. Failure to do so may lead to unstable handling and uneven tyre tread wear.

SERIES 80, 82, 86, 87, 88, 90, 8040, 8940, 8740
1. Fully compress the shock absorber, at the same time turning the dust cover or piston rod slowly to the left (counter-clockwise), until it is felt that the cams of the adjusting nut engage in the recesses of the foot valve assembly (fig. 1).

NOTE: Some shock absorbers include a bump rubber concealed under the dust cover and this must be removed prior to adjusting. Don’t forget to re-install.
2. Keeping the shock absorber compressed make 1 full turn (360°) to the right (clockwise). The total range is about 5 half turns (fig. 2).
3. Extend the shock absorber vertically for at least 1 cm without turning in order to disengage the adjusting mechanism. The dust cap or piston rod may now be turned freely.

WARNING: Adjust both left and right dampers identically. Failure to do so may lead to unstable handling and uneven tyre tread wear.

SERIES 8042, 8242, 8742 Rebound/Compression

Adjustable Rebound Adjustment
Insert a pin into the slotted adjuster located at the top eye (see figure). Moving the pin from left to right (counter-clockwise) will cause forces to increase. From the minimum or factory position, there are 12 possible sweeps of adjustment (1 sweep=1/4 turn).

Compression Adjustment
Insert a screwdriver into the lower adjustment device (see figure). Turning the screwdriver clockwise will cause forces to increase. From the minimum or factory position, there are 12 possible clicks of adjustment.

WARNING: Adjust both left and right dampers identically. Failure to do so may lead to handling and uneven
For normal use on the road, the new strut dampers must be fitted straight from the box. (Original adjustment). In all other cases see enclosed adjustment instructions.

1. **ATTENTION:** In case of adjustable attachments mark off their position first before unscrewing the nuts to obtain correct adjustment of wheel camber and caster angles after fitting. Remove the complete suspension unit from the car. Compress the spring with coil spring clamps. Remove the fixing parts, bump rubber, dust cover (if any), spring, etc., keeping in mind the correct sequence and position for refitting.

   > The parts (drawn in dotted lines) could be absent or of a different shape.

2. Punch in the exact center of the base of the damper housing. First drill a pilot hole of 3 mm diameter and then drill to ø 14 mm (fig. a). Drain oil.

3. Saw off (depth 1.5-2 mm) the original damper housing, as shown with dotted lines in fig. b for the several types I + II. The cut must made at highest point on the strut housing where the overall diameter is maintained. If the shock absorber interior cannot be removed by hand, use a light hammer. Remove all the inner parts. Beware of outstreaming oil.

4. Smooth the drilled hole on both sides. File off the nail W and clean the inside of the damper housing (fig. c).

5. Fit the rubber protection cover R on the strut damper (fig. e-II) and slide the latter into the housing.

6. Fit now plate X - if supplied- with its profiled side directed to the bottom, then the locking ring and the bolt (fig. d).

7. Draw the strut damper deeper into the original housing by tightening the bolt with a torque of 85 Nm (63 ft.lbs) and fit the rubber protection cover as per fig. e-II.

8. De-aerate the strut damper with piston rod by fully extending and compressing it several times.

9. Keep the piston rod extended as much as possible and place plastic collar Y -if supplied- between the damper body and the bump rubber (fig. e).

10. Fit the suspension unit in reverse order of dismantling. Renew the bump rubber, dust cover etc. in case of damage.

11. Tighten the fixing nut Z home as far as stop (bush or pin collar) using the torque setting prescribed in the table (fig. f) and release the spring.

   **ATTENTION:** To avoid any unwanted adjustment of the strut damper never use a pneumatic or electric impact wrench.

Check and set wheel alignment after fitting.

---

### Table: Nut Torque Settings

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DYNO TESTING

All KONI dampers are dynamometer tested when they are manufactured, however, racing dampers should be dyno tested periodically to ensure optimum performance. KONI offers dyno services utilizing the latest technology in computer operated multi- and single speed dynos.

REBUILD

KONI dampers, in most cases, are fully rebuildable. Vintage street and racing shocks can be refurbished to like-new condition including paint and decals.

REVALVE

In cases where the original KONI valving may not be optimal for modified vehicles, the valving may be altered to match upgraded suspension requirements. KONI has developed specific valvings for motorsports applications including autocross, drag racing, oval track racing and road course racing.

SPECIAL APPLICATION CONVERSIONS

The KONI Service Center can perform a variety of special modifications including shortened and extended lengths, double and external adjustability and special mounting configurations. Contact the KONI Service Center with your special requirements.

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NON-REBUILDABLE KONI DAMPERS

Although most KONI dampers are rebuildable and revalvable, certain KONI dampers due to their unique configuration are sealed for life. Shocks which are not readily rebuildable include series: 25, 26, 2615, 30, 76, 7610 and some 8640 and 8641.
KONI Racing

A number one brand in professional motorsport

KONI equipped cars have been successful in professional racing around the globe for more than fifty years. Our achievements include 14 world championships, nearly 250 Formula One victories, over 10 Le Mans 24-hour wins and countless Champ car, IRL, GT and Touring car championships. KONI’s research engineers benefit directly from the brand’s experiences in the world of Motorsports. So in the end, the real winner is YOU.