

HKS HIPERMAX **MAX IV** SERIES

— 究極のストリートダンパーを求めて —



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1 . The Ultimate Street Damper

- What do you picture when you hear the term “street damper”? You may think of “comfort” or “low cost” but in the tuning industry, particularly amongst sports car users some would associate it with negative factors such as “too soft” “cheap” or “low performance”
- There is a tendency to associate high cost, features and performance with racing dampers and low cost, low performance basic features with street dampers.

Therefore

Racing Damper



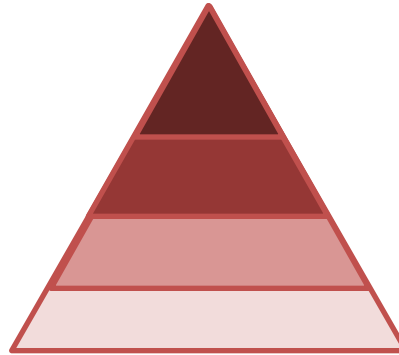
Sports Damper



Street Damper



Stock Damper



Such a hierarchy tends to exist. Some major manufacturers who simply sold dampers labelled “xx% more dampening force than stock” also contribute to this

However racing dampers which only need to produce better lap times on an extremely flat racing circuit. Street dampers must be able to cope with the demands of many different surfaces, balance ride comfort with stable handling and also be durable enough to last. This means that by nature street dampers should be high performance.

MAX IV the new damper from HKS returns to the core of tuning, the street. Much research and development has taken place to determine what it required and necessary for street driving.

Advanced shock absorption system built on the MAX IV concept captures the bumps on the road to give a supple yet stable ride. MAX IV aims for a high level balance of comfort with sporty handling. This is what we see as the “Ultimate Street Damper”



2. 4th Generation Damper. Evolution from M1

- In 2010, HKS release a new damper. Named “HIPERMAX M1”, this became the critical product which would determine the direction of development for future HKS dampers. It tested the possibility of a high level balance of comfort and sporty handling as well as “M Shaft” aluminium brackets. The M1 feed back allowed the evolution towards the “MAX IV Concept” and the product HIPERMAX MAX IV
- Previous versions of HIPERMAX dampers have responded in advance to the needs of users of the time.

1st Generation HIPERMAX Base valve structure. Fully assembled package

2nd Generation HIPERMAX II, Pro 30 step dampening force adjustment. Long Warranty

3rd Generation HIPERMAX III, III Sport . . . Shock body length adjustment. Rubber upper mount

(HIPERMAX M1)

4th Generation MAX IV MAX IV CONCEPT

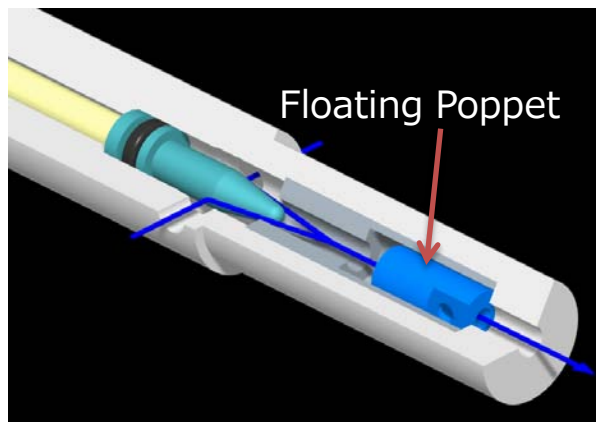
- Some features such as 30 level dampening adjustment and base valve structure have evolved to either become the norm or have been forgotten over time. 15 years from the release of the original HIPERMAX, development has continued to realise the “MAX IV Concept”. Revision of each part has further improved product quality and durability and is reborn as the new 4th generation HKS HIPERMAX

3-1. MAX IV Concept

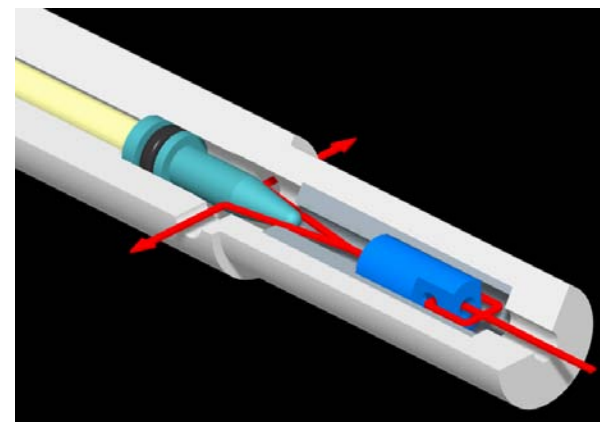
- Each vehicle setup is tailored to the specific vehicle adjusting many tens of parts. Setup is performed without any preconceptions to allow for free thinking approach to achieve the perfect setup.
- The core of the MAX IV design is the balance of comfort and sporty handling. However a twist of the dial can allow for active sports driving. Combining VPS and M4P allows effective use of the dial adjustment giving compatibility for a wide range of driving circumstances. This is the "MAX IV Concept"

① **NEW Structure: Variable Port System (VPS)**

This is a new damper structure used for MAX IV. The floating poppet moves inside the damper shaft to change the port between compression and extension giving optimal dampening in each direction. By setting the low speed extension dampening much higher than the compression rate, a stable ride where the driver feels connected to the road without discomfort is achieved.



Extension

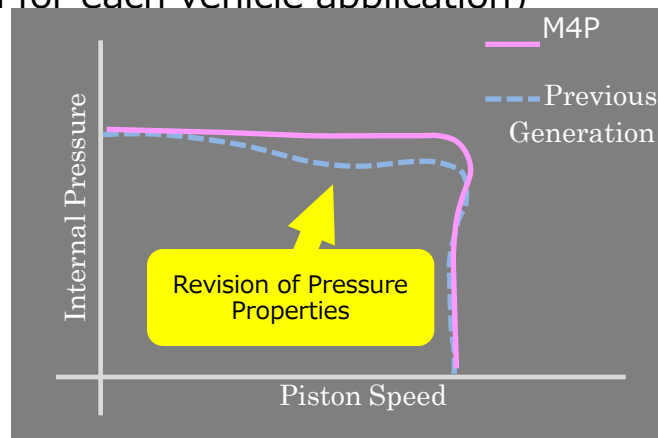


Compression

② NEW Piston MAX 4 Piston (M4P)

A new piston evolved from the previous generation (HDP/HLP) pistons. An all new design which looked not only at dampening but also at compression/extension balance, internal pressure, frequency response and friction. This piston forms the base of the new generation of dampers.

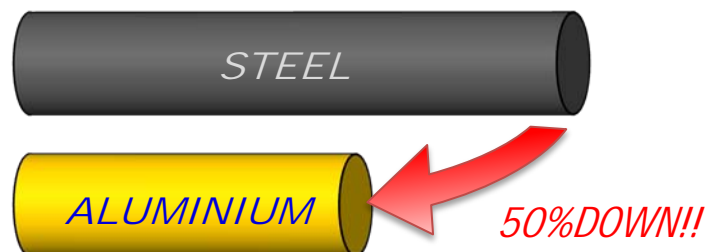
(Optimal piston is used for each vehicle application)



③ Lightweight Aluminium Bracket

Aluminium is used for the lower brackets. Aluminium had previously been used in ranges such as MAX III Super Sport and M1 and will be used for MAX IV. Weight is reduced 40-50% over previous steel brackets helping to reduce unsprung weight

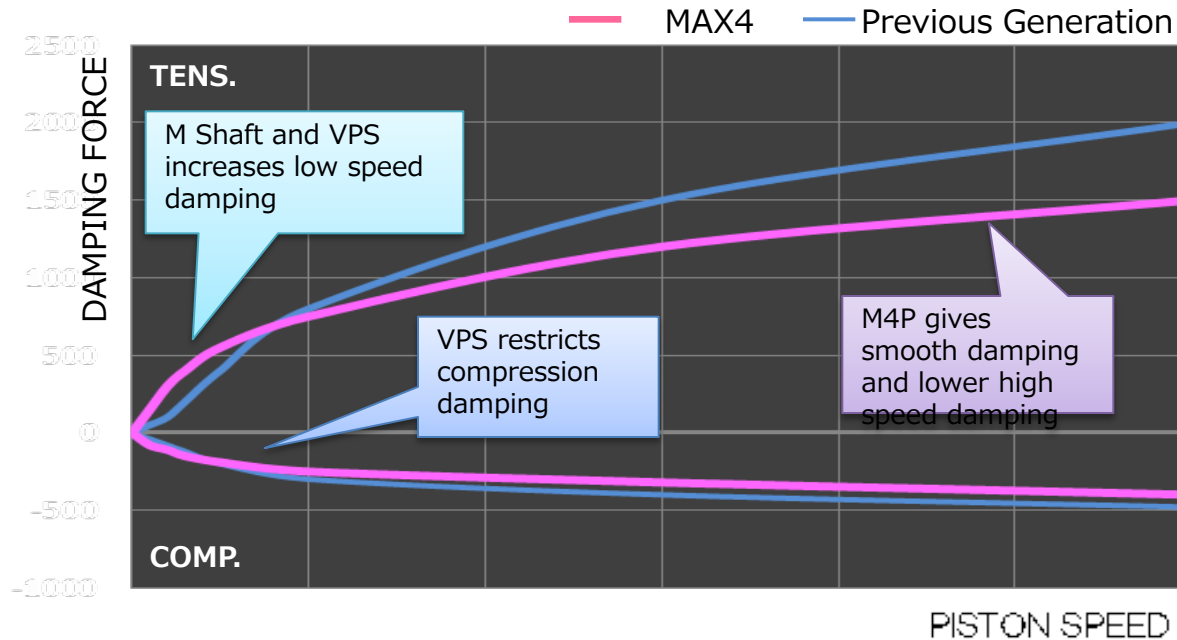
Bracket Weight Comparison



3-3. MAX IV Concept

④ M Shaft

The M Shaft was introduced for the flagship HIPERMAX M1 range and will become the standard for future damper development. By adopting a larger diameter shaft than previous versions, optimisation of oil pressure is possible allowing proper dampening to occur from the moment the shaft moves. Combined with proper valve settings, a supple but stable ride is made possible



⑤ PNE Coating

PNE coating which is proven with the S-Style range is used on the cylinder and brackets. This is over 5 times more durable than previous galvanising methods helping to prevent seizure through corrosion. A smoother surface and reduced friction also allows for easier adjustment using the outer threads.

⑥ **2 Year 40,000km Warranty**

HKS dampers carry a competition beating 2 year 40,000km warranty. This is made possible due to the absolute confidence in the durability of this product. Testing has been performed under many different conditions to ensure the quality and durability of this product.

【Other Features】

- Rubber Upper Mount
- Shock-Body Length Adjustable
- 30 Step Damping Force Adjustment
- Inverted Strut Structure

4. MAX IV RS

HKS HIPERMAX MAX IV RS

- Flagship model combining all of HKS' Suspension technology
- 3 way damping adjustment (Extension 1 way + Compression 2 way (Hi/Lo)) to cope with a wide range of circumstances
- Not just "stiffen" but control the vehicle by allowing the suspension to move. Circuit performance and easy of use on the street are combined at the highest level
- Remote reservoirs employed so that large gas chamber can be used whilst securing sufficient suspension stroke

【Main Features】

- **MAX IV Concept**
Each vehicle application tailored to balance sports handling and comfort
- **NEW Piston**
New generation piston which improved response and pressure properties
- **Inverted Strut Structure**
Increased strut strength allows for more stability during driving
- **PNE Coating**
5x more durable compared with traditional galvanising. Prevents seizures around the threads
- **M Shaft**
Proper damping for even the smallest stroke give supple yet stable ride
- **Shock Body length Adjustment**
Adjust ride height and damper stroke independently
- **Lightweight Aluminium Bracket**
40-50% lighter than steel reducing unsprung weight (some applications excluded)
- **3 WAY damping force adjustment**
Adjust to suit any location or use.
- **Pillow Ball Upper Mount**
Improve vehicle response with more direct handling



5. MAX IV GT



Forming the core of the MAX IV range combining sporty handling and comfort. The ultimate street damper

【Main Features】

- **MAX IV Concept**
Each vehicle application tailored to balance sports handling and comfort
- **NEW Piston**
New generation piston which improved response and pressure properties
- **New Structure Variable Port System (VPS)**
Changes the port during compression and extension to optimise damping in each direction
- **Inverted Strut Structure**
Increased strut strength allows for more stability during driving
- **PNE Coating**
5x more durable compared with traditional galvanising. Prevents seizures around the threads
- **M Shaft**
Proper damping for even the smallest stroke give supple yet stable ride
- **Shock Body length Adjustment**
Adjust ride height and damper stroke independently
- **2 Year 40,000km Warranty**
Absolute durability gained from testing over many tests under multiple conditions
- **Lightweight Aluminium Bracket**
40-50% lighter than steel reducing unsprung weight (some applications excluded)
- **30 Step Damping Force Adjustment**
Adjust to suit driver needs and conditions
- **Rubber Upper Mount**
High strength rubber upper mount reduced road noise and provides stability whilst driving



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6. MAX IV SS



- The basic model MAX IV which pursues only the essential parts
- Combines light weight design with slightly lower stance and the MAX IV Concept of sporty yet comfortable. Conventional ride height adjustment system
- Rubber upper mounts for conventional dampers, stock upper mounts are reused for inverted strut type. Low cost offering great value for money

【Main Features】

■ MAX IV Concept

Each vehicle application tailored to balance sports handling and comfort

■ NEW Piston

New generation piston which improved response and pressure properties

■ New Structure Variable Port System (VPS)

Changes the port during compression and extension to optimise damping in each direction

■ Inverted Strut Structure

Increased strut strength allows for more stability during driving

■ PNE Coating

5x more durable compared with traditional galvanising. Prevents seizures around the threads

■ M Shaft

Proper damping for even the smallest stroke give supple yet stable ride

■ 2 Year 40,000km Warranty

Absolute durability gained from testing over many tests under multiple conditions

■ 30 Step Damping Force Adjustment

Adjust to suit driver needs and conditions

■ Rubber Upper Mount

High strength rubber upper mount reduced road noise and provides stability whilst driving

