

SUSPENSION ENGINEERING



SUSPENSION SOLUTIONS FOR CHAMPIONS

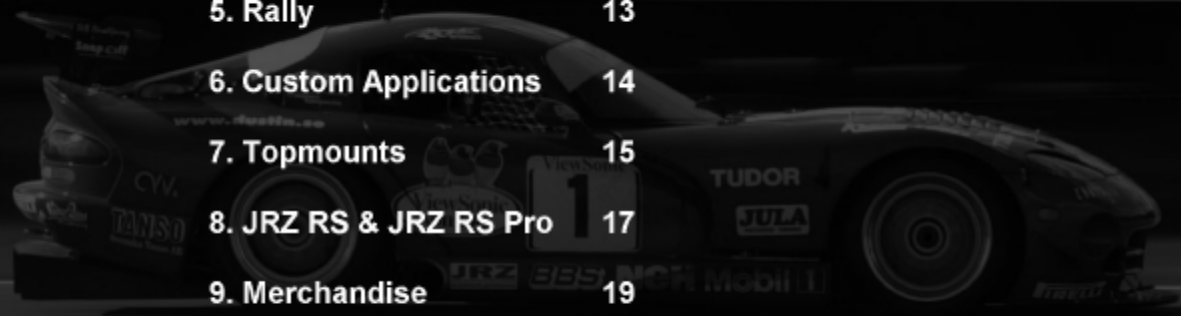
*...The road
to Victory...*



www.JRZsuspension.com

Since the start of the company, JRZ Suspension Engineering is leading the way in suspension design and development for the modern race, rally and high performance road car. JRZ Suspension systems offer the best possible solution for each application in single, double, triple and quadruple adjustable struts and dampers.

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1. People

Jan Zuijdijk

JRZ Suspension Engineering was founded in 1995 by Jan Zuijdijk, where he designed a damper utilizing all his experience he gained since the early sixties.

Jan Zuijdijk worked very close with people like, Carl Godin de Beaufort, Ludovico Scarfiotti, Lorenzo Bandini, Colin Chapman, Emerson Fittipaldi en Jo Siffert. Jan Zuijdijk moved to the USA. Morris Nunn became one of his customers. Morris Nunn has won many races with Pat Patrick Racing in the Indycar-Series. Because of Jan Zuijdijk's renewing involvements, Morris Nunn could celebrate many victories. In the late eighties he worked very closely with Emerson Fittipaldi, where the Indy 500 victory could be captured.

After 20 years of experience in the USA, Jan Zuijdijk decides to move back to Holland. He worked as a consultant for Nissan Europe. In 1994 Jan Zuijdijk designed a new type of shock absorber for Nissan. Nissan was impressed after testing the shockabsorber in Spain where they decided to place a big order, resulting in JRZ Suspension's establishment in 1995.

The performance of the JRZ Suspension shockabsorbers was not kept unnoticed by leading race teams all over the world. Championships were won in many categories of racing like Trans-am, Formula 3, FIA GT, Porsche GT3 Cup, ALMS, World Challenge, etc.



Erik Ras



Since 2000 Erik Ras represents JRZ Suspension. His career started with an internship in 1998 followed by a graduation assignment in 2000 for the University of Automotive Engineering. From the first day he stepped into JRZ Suspension's headquarters he immediately fell in love with the company, which was recognized by Jan Zuijdijk. Jan Zuijdijk saw that Erik delivered a great job while he was performing his internship and graduation. After he finished his school Jan Zuijdijk offered Erik Ras a full time job at JRZ Suspension. Since that time he is doing the sales, customer and trackside support, which gave him the new face of JRZ Suspension. Besides this he is also involved in the development of new products.

2. Factory

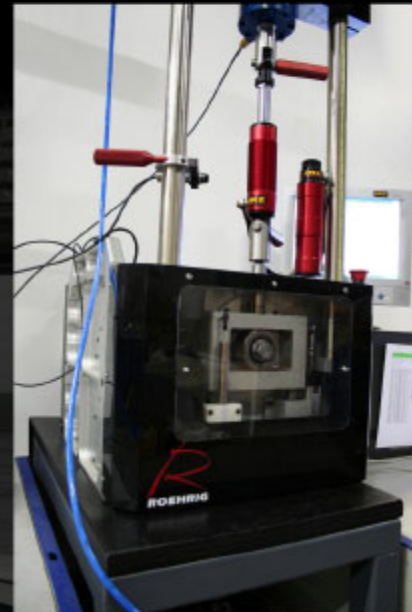
In 2003 Jan Zuidijk found the right partner to secure JRZ Suspension's continuity and quality to make the growth possible JRZ Suspension had created.

A growing company needs to expand and invest ever more in parts and components in order to be responsive to the increasing demands and orders of our customers.

Manufacturing damper parts in house would mean heavy investments in machines and material. At the same time, JRZ Suspension needed to spend time and money in the development in new and advanced product. A successful combination was found in the merging of JRZ Suspension engineering with VOVU, a modern machining company using the most advanced machining equipment available. This merger brought together two companies, JRZ Suspension specializing in design and manufacturing of high quality suspension components and VOVU machining company specializing in high quality parts machining.

This merger offered tremendous advantages for both companies:

- Damper manufacturing and parts supply are located under one roof
- Parts production planning is much easier because of short lines of communication.
- Quality control, using the most advanced measuring equipment available in house
- Parts machining responsive to the production requirements of the order position
- Modern inventory control and ordering system
- Integrated parts, order and book keeping administration
- Integrated, leaner management structure



3. Product design

The JRZ damper is a race proven winning design, incorporating many years of experience in gas hydraulic damper and suspension design, applied to race cars ranging from F1, Indycars, Grand Turismo, Trans Am to all kinds of racing and other applications, combined with a thorough knowledge of vehicle dynamics of modern race cars.

Most modern racing applications call for effective damping control at very small suspension travels in combination with higher frequencies, which results in fairly low suspension velocities, indicating that the most important part of the damping characteristic is in the low piston velocity range, and this is exactly what the experience has taught us, a small change at low piston velocity has a greater effect on car handling than adjusting the mid velocity range, and with this experience in mind JRZ has created a unique design incorporating the essential features to achieve maximal damping control and effective car handling.

There is a trend to minimize the size and physical dimensions of gas hydraulic dampers in the racing industry, which is fine for packaging reasons, but a damper is still a reactive device and can not exert a damping force without being moved, especially dampers of the single tube design will suffer, because there is no sufficient room for gas volume large enough to accept the pistonrod and the simultaneous increase in gaspressure as a result of rising temperatures.



Design features incorporated in the JRZ damper are:

- Large 22 mm pistonrod
- Extruded high strength aluminium body with 44 mm internal diameter
- Unique valving system
- External fluid gas reservoir
- Adjustable compression valving system
- Adjustable bleed through use of exactly measured orifices
- High flow return valve for quick filling of working cylinder
- Large 44 mm piston, with a large diameter non preloaded deflective disc valve system

Pistonrod

The diameter and size of the pistonrod has evolved as a response to ever decreasing suspension travels. In order to create an effective damping characteristic responding to very low velocities, it is necessary to displace fluid, since the suspension travels are so small in modern race car applications, the JRZ design compensates for the lost travel by increasing the cross section and thus the displacement. In single tube damper designs the pistonrod size and displacement are restricted because of:

- A large displacement of fluid could not be accepted by the gas volume without a dramatic increase in back pressure and make the damper feel very harsh over bumps
- A large piston rod diameter would make it difficult to achieve an acceptable damping characteristic.

The JRZ damper design, because of its different design philosophy utilizes the gas pressure available in the external reservoir as an adjustable medium to assist in supporting the chassis, without increasing the springrate, which in fact offers the possibility to keep the natural frequency lower at the small suspension travel required in modern race cars.



Damperbody

JRZ uses a damperbody of high strength aluminium, formed by extrusion, which calibrates the inside diameter to an exact size and results in a very smooth surface finish. The outside is machined to accept adjustable springplatforms and the lower attachment forms one piece with the body. The lower end of the damperbody is connected to the external reservoir with a high pressure fluid hose.



External reservoir

The external reservoir contains the gas volume and fluid reserve separated by a floating divider piston riding on a teflon pistonband for smooth operation. The top of the external reservoir houses the adjustable blow-off valving system, the adjustable bleed and the non return valve responsible for the flow of fluid back to the working cylinder, during the rebound stroke. The blow-off valve seat is tuned to the larger than usual piston rod diameter and responds to the smallest movements of the piston rod. The blow-off valve is spring loaded with belleville washers, allowing the compression forces to be adjusted over a broad range with less than a full turn of the adjuster, offering 16 adjustment positions. The adjustable bleed is located inside the hollow shaft of the blow-off adjuster and can be adjusted to 6 positions. Each position closing of an orifice, starting with size 0.4 mm increasing in increments of 0.1 mm in size with each click of adjustment. This feature is a very effective tuning tool for the set up engineer, experience shows that one tenth of a difference in orifice size can change the handling of a car considerably.

The piston

The piston is designed to operate with non preloaded valves, made from hard anodized 7075 aluminium. The JRZ Suspension design philosophy using non preloaded valves is based upon the observation that deflective discs or shimms as they are known, have a very steep progressive spring rate. When used on a tapered piston of 3 degrees as is common in other design dampers, the preloaded disc will resist the initial opening of the valves and let the damper build up force equal to the preload before opening and releasing fluid, resulting in a harsh feel to the chassis which has to be compensated for by using larger bleeds, the fact remains however that the spring rate increase beyond the preload is very progressive. JRZ utilizes a non preloaded valve stack of deflective discs, which is carefully build up in two phases.



Rebound Valving

The rebound valving stack is built up in two phases. The primary stack consists of a main disc diameter 34 mm and supported by discs, decreasing in diameter according to the damper force requirements and is responsible for the initial opening of the valves and therefore the low velocity area of the damping characteristic in combination with the adjustable orifices in the piston rod. The secondary or support stack is separated by a small shim of 0.15 mm from the primary and starts with a 32 mm disc decreasing to 20 mm. The secondary stack restricts the opening of the primary valve stack so that the mid velocity damping force can be increased or decreased by changing the composition of the stack.



Adjustable Orifices

In addition to this valving system, there is a fluid passage from the part of the cylinder above the piston through the hollow piston rod, releasing fluid into the cylinder below the piston through orifices, which can be closed one by one by turning the adjuster wheel and shaft running through the hollow piston rod. Closing off pre-measured orifices is a secure way of keeping the adjustments even between dampers left and right, and is easy to measure the bleed by knowing the number of orifices which are open or closed.



Compression Valving

The compression valve stack is build similar to the rebound stack and initiates the build up of compression damping forces. Important is the transition from free flow through the orifices and opening of the compression valve, this should be as smooth as possible. In compression the piston rod displaces an amount of fluid equal to the volume of the rod, which has to be absorbed by the reservoir. At the same time the cylinder space above the piston has to be filled with fluid, setting into motion a complex series of events inside the damper.

When the damper moves in compression, the piston rod starts to displace fluid, the compression stack builds up force, while resisting opening, and a small amount of fluid starts flowing from below the piston through the orifices to the upper part of the cylinder. With increasing velocity, the compression stack opens, filling the upper part of the cylinder with fluid, while at the same time the compression valving system starts working on controlled release of the displaced fluid into the reservoir, by flowing a small amount through the adjustable orifices and with increasing velocity let it blow-off through the blow-off valve. The gas pressure in the gas volume behind the divider piston continuously pressurizes the system. For a gas pressurized system with external reservoir, having a valving system in between the divider piston and the damper body, to work properly, it is necessary to have a certain equilibrium between the compression valving stack and the blow off valve, because the compression stack has a strong influence on the damping force range of the blow off system.



Gas Pressure

The gas pressure in other designs is often used to keep the fluid compressed and prevents the damping from falling apart. The gas pressure in the JRZ Suspension design serves also a different function. The volume is selected in a way that the fluctuating gas volume and the temperature have little effect on the increase in pressure.

The piston rod completely compressed might increase the pressure by 5% or one bar at an initial pressure of 20 bar. The gas pressure in the reservoir working against the cross section of the piston rod results in an added lifting force of:

$$F = P \times A_{rod}$$

With:

- F = lifting force [kg]
- P = Pressure inside the canister [bar]
- Arod = Surface piston rod [cm²]

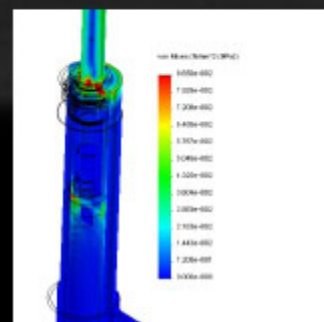
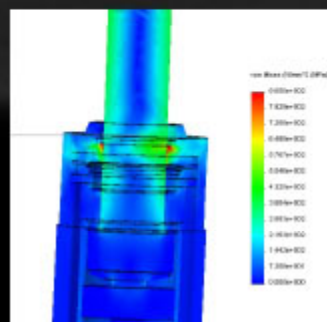
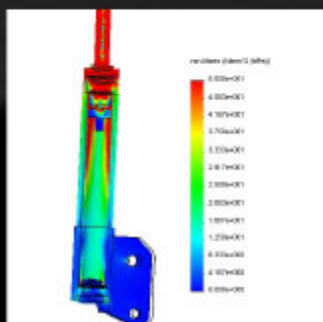
So the lifting force with 18 bar in the canister will be:

$$F = 18 \times 3,80 = 68,4 \text{ kg per corner of the car}$$

The lifting force is always there over the total length of the travel, offering support over the total stroke without adding to the spring rate. Because the JRZ Suspension damper design does not rely on high gas pressure to generate compression forces, it can be very flexible. The gas pressure could be lowered to 4 bar and the damper will still operate at peak performance.

This is the fundamental difference between a single tube design, which relies on the back pressure of the gas charge, to generate compression damping forces and keep the damper operating properly. The JRZ Suspension design operates in rebound as a single tube damper, utilizing a large piston area of 44 mm, large diameter deflative discs for smooth operation and adjustable orifices. In compression however, the JRZ Suspension damper uses design and adjustability features of early twin tube designs, with the benefit, but not relying, on a high pressure gas charge.

To the race car engineer it means greater flexibility, better power down conditions, improved traction and higher lateral G-forces and a controlled but not over dampened chassis.



4. Race Applications

The JRZ racing dampers allow the driver to get the car tuned to their preference. Each adjustment makes a significant change in the damper's characteristic. Every damper is tested and matched on the dyno prior to shipping. All JRZ Suspension dampers are made with the highest quality aerospace materials and manufactured to the highest aerospace standards. The JRZ Suspension race dampers are available as a custom set of dampers or a complete kit with all mounting hardware, top plates and springs included.

Single Adjustable features

- Minimum weight and size
- Precise and accurate 15 positions rebound adjustment
- Oil and gas pressure are separated by a divider piston which makes the damper mountable either upright or upside-down
- Gas pressure is adjusted via schraeder valve and can be set between 100 and 350 psi

Double Adjustable

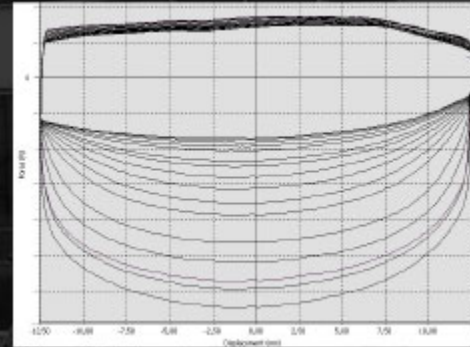
- Same features as single adjustable
- The oil and gas are separated in an external reservoir which can be mounted in a piggyback setup or connected with swivel hoses to suit the vehicles packaging requirements
- Precise and accurate 16 positions compression adjustment

Triple Adjustable

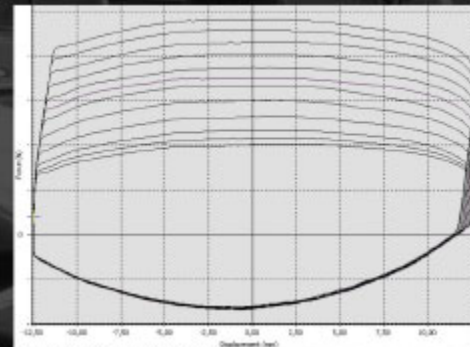
- Same features as the double adjustable
- Precise and accurate 16 position high speed compression and 6 position low speed compression adjustment

Quadruple Adjustable

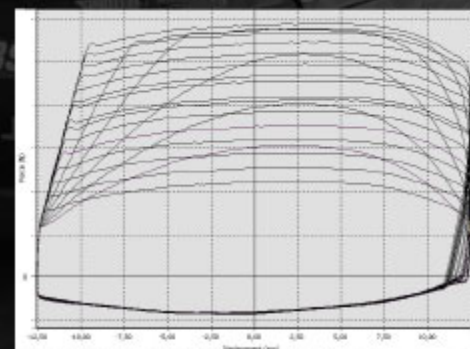
- The same features as the triple adjustable
- Precise and accurate 16 position high speed rebound adjustment and 8 position low speed rebound adjustment



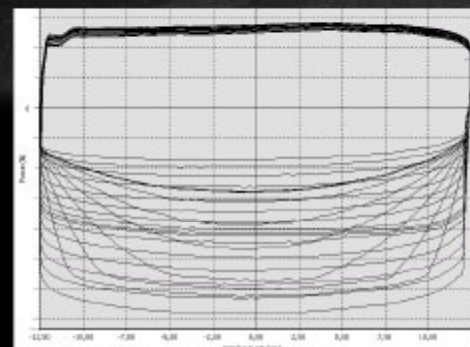
Rebound adjustment



Compression adjustment



High and low speed compression adjustment



High and low speed rebound adjustment



JRZ Race Applications							
Make	Model	Car Type	Year	Single	Double	Triple	Quadruple
BMW	3-serie (non coil over)	E36	91-98	N/A	11012036K	12012036K	13012036K
	3-serie (coil over)	E36	91-98	N/A	11112036K	12112036K	13112036K
	3-serie (non coil over)	E46	98-05	N/A	11012046K	12012046K	13012046K
	3-serie (coil over)	E46	98-05	N/A	11112046K	12112046K	13112046K
	3-serie (non coil over)	E90	05-	N/A	11012090K	12012090K	13012090K
	3-serie (coil over)	E90	05-	N/A	11112090K	12112090K	13112090K
Honda	NSX		90-05	N/A	11004030K	12004030K	13004030K
	S2000		99-	N/A	11004200K	12004200K	13004200K
Lotus	Elise	mk1/mk2	96-	10003020K	11003020K	12003020K	13003020K
	Exige		00-	10003030K	11003030K	12003030K	13003030K
	111R		05-07	10003040K	11003040K	12003040K	13003040K
Mini	R53/R55	Mk1	01-08	N/A	11036010K	12036010K	13036010K
Mitsubishi	Lancer	Evo 7/8/9	01-07	N/A	11006010K	12006010K	13006010K
	Lancer	Evo 10	08-	N/A	11006020K	12006020K	13006020K
Nissan	350Z		03-08	N/A	11007350K	12007350K	13007350K
	370Z		09-	N/A	11007370K	12007370K	13007370K
	Skyline	R33/R34 GTR	93-04	N/A	11007030K	12007030K	13007030K
	GTR	R35	08-	N/A	11007035K	12007035K	13007035K
Porsche	993	C2	94-98	N/A	11001993K	12001993K	13001993K
		C4	94-98	N/A	11101993K	12101993K	13101993K
		Turbo	94-98	N/A	11201993K	12201993K	13201993K
		Carrera	94-98	N/A	11301993K	12301993K	13301993K
	996	C2	98-04	N/A	11001996K	12001996K	13001996K
		C4	98-04	N/A	11101996K	12101996K	13101996K
		GT3	98-04	N/A	11201996K	12201996K	13201996K
		GT3 RS	98-04	N/A	11301996K	12301996K	13301996K
		GT2	98-04	N/A	11401996K	12401996K	13401996K
	997	C2	05-	N/A	11001997K	12001997K	13001997K
		C4	05-	N/A	11101997K	12101997K	13101997K
		GT3	05-	N/A	11201997K	12201997K	13201997K
		GT3 RS	05-	N/A	11301997K	12301997K	13301997K
		GT2	05-	N/A	11401997K	12401997K	13401997K
	Boxter	986	96-03	N/A	11001986K	12001986K	13001986K
	Boxter	987	04-	N/A	11001987K	12001987K	13001987K
	Cayman	987	06-	N/A	11101987K	12101987K	13101987K
Subaru	Impreza WRX STi	GC8	92-01	N/A	11010009K	12010009K	13010009K
	Impreza WRX STi	GDA/GDB/GDC/GDD/GDE	01-04	N/A	11010010K	12010010K	13010010K
	Impreza WRX STi	GDF/GDG	05/06	N/A	11010011K	12010011K	13010011K
	Impreza WRX STi	GE (N14)	07-	N/A	11010030K	12010030K	13010030K



5. Rally

For the special requirements of the demanding Rallye sport, JRZ Suspension developed new high strength adjustable McPherson struts and dampers. The JRZ Suspension McPherson rally strut is designed following the general preferred idea of using the damper body for taking up the heavy side loads encountered by rally cars for stability in cornering.

In addition the JRZ Suspension strut uses the large displacement piston rod to generate a wide adjustment range in compression forces.

The extended adjustment range in compression as well as rebound forces eliminating the need for frequent revalving of the struts and damper

JRZ Suspension rally Features

- Billet machined, TIG welded and nickel plated McPherson struts front and rear
- Upside down mounting for gravel use
- Spring rates can be changed without revalving
- External canisters
- Spherical bearing upper mounts
- Billet machined camber adjustable topmounts
- Complete bolt on kit with springs and all necessary hardware

Benefits

- Large range of adjustment for gravel and tarmac
- Maintain the stability and power down characteristics of the original car with sharper turn in and transition response
- Legendary JRZ customer support with on call engineering

Design and Testing

- Valving and setup designed to enhance on gravel performance
- Tested extensively on gravel, developing settings for optimal ride quality and driveability
- Rally baseline setups developed with professional rally drivers



6. Custom applications

JRZ Suspension offers high performance suspension solutions to car tuners specializing in specific car make or models. Responding to those specific requirements, JRZ Suspension will design a product fitting the application and damping characteristic specified by the car tuner.

Due to the unique production procedure, custom build struts and dampers can be supplied in any quantity or series. Custom build products can be supplied under the tuners own label and logo with the addition, by JRZ Suspension.

JRZ Suspension will assist the customer with technical assistance, tuning the damping characteristic for the specific car application.

Make	Model	Make	Model
Alfa Romeo	155/145/146	Lola	Indy Light '97
	155 V6 TI		SR1/SR2
	156	Lotus	Elise
	Giulia		Elan
Audi	S4		Esprit
	S6	Mazda	RX-7 1st 2nd 3rd generation
BMW	M3 E30		626
	328i Group N	McLaren	M8 Can Am
	M3 328i without roll bar		F1
	M3 FISA 2000 92/94	Mercedes	E420
	318is SCCA GT3		CLK AMG Black Edition
	E40/E46/E39	Mitsubishi	Pajero (4x4)
	840/850CSI/E31		Lancer EVO 5
Chevrolet	Camaro		Lancer EVO 6
	Corvette 98 C12	Circle Track	Nascar
	Corvette C4		Bush Cars
	Corvette C5	Nissan	Micra Race/Rally
	Trans Am		Sunny
	Street		Primera
	C7 GT1		Skyline R32/R33/R34
Dallara	F3 97 Elise	Panoz	GT1 School Car
	F3 94	Peugeot	106
	F3 99		206
Dodge	Viper GTS 97		306
	Viper GTS 98		309 Rally
Electric car	Pininfarina	Porsche	904
Ferrari	F323/308/309GT4		908
	F355/348		914
	GT F355		916
	F40		911 GT1/930/935/964/965
	F50		911 986/993/996/996 GTR3R/997
	GT4		928 S2/S4
	F550 Maranello		924/944
	333/333 SP		962
	458GT/458GTA		968 Turbo
Ford	Cosworth Race	Renault	Clio Williams
	Escort		Clio
	Fiesta		Megane
	Mustang Shelby GT500	Rover	Mini conversion kit
	Focus	Salcen	All models
Formule	Ford	Saturn	Saturn
	Renault	Subaru	Impreza all models
	3/3000	Sunbeam	Tiger Classic
Harrier	GT1	Toyota	Supra
Holden	Commodore		Carina
Honda/Accura	NSX	TVR	Tuscan
	Prelude	Venturi	260
	Integra Type R	Volvo	V40 Race/Street
	S2000		850 Street
	Civic race	VW	600
Lada	Samara Race/Rally		Golf 1/2/3/4
Lexus	400		Corrado
	IS300		Scirocco



7. Topmounts

JRZ Suspension Top mounting plates (also known as camber plates) are designed with the specific needs of each application in mind. Our development process considers the necessary camber and caster adjustments as well as the necessary strength and stiffness for each application. Studs are pressed in for ease of installation and maintenance. JRZ Suspension top mounting plates use grade 12.9 chrome plated hardware. Used in every JRZ Suspension top mounting plate is an aerospace spec metric PTFE coated spherical bearing. Quality bearings dramatically reduce noise and deliver suspension loads smoothly to the chassis for maximum performance. JRZ Suspension top mounting plates are made with the highest quality aerospace materials and manufactured to the highest aerospace standards.





JRZ Topmounts Applications							
Make	Model	Car Type	Year	JRZ RS Front	JRZ RS Rear	Race Front	Race Rear
BMW	3-serie (non coil over)	E36	91-98	50600303B	50600302B	50600303R	50600302R
	3-serie (coil over)	E36	91-98	50600303B	50600302B	50600303R	50600302R
	3-serie (non coil over)	E46	98-05	N/A	N/A	N/A	N/A
	3-serie (coil over)	E46	98-05	N/A	N/A	N/A	N/A
	3-serie (non coil over)	E90	05-	N/A	N/A	N/A	N/A
	3-serie (coil over)	E90	05-	N/A	N/A	N/A	N/A
Honda	NSX		90-05	50600602B	N/A	50600602R	N/A
	S2000		99-	50600603B	N/A	50600603R	N/A
Lotus	Elise	mk1/mk2	96-	N/A	N/A	N/A	N/A
	Exige		00-	N/A	N/A	N/A	N/A
	111R		05-07	N/A	N/A	N/A	N/A
Mini	R53/R55	Mk1	01-08	50600901B	50600604B	50600901R	50600604R
Mitsubishi	Lancer	Evo 7/8/9	01-07	50600105B	50600108B	50600105R	50600108R
	Lancer	Evo 10	08-	50600107B	50600108B	50600107R	50600108R
Nissan	350Z		03-08	N/A	N/A	N/A	N/A
	370Z		09-	N/A	N/A	N/A	N/A
	Skyline	R33/R34 GTR	93-04	N/A	50600703B	N/A	50600703R
	GTR	R35	08-	50600702B	50600702B	50600702R	50600702R
	993	C2	94-98	50400105B	50400105B	50400105R	50400105R
Porsche	993	C4	94-98	50400105B	50400105B	50400105R	50400105R
		Turbo	94-98	50400105B	50400105B	50400105R	50400105R
		Carrera	94-98	50400105B	50400105B	50400105R	50400105R
			94-98	50400105B	50400105B	50400105R	50400105R
	996	C2	98-04	50400103B	50400109B	50400103R	50400109R
		C4	98-04	50400106B	50400109B	50400106R	50400109R
		GT3	98-04	50400103B	50400109B	50400103R	50400109R
		GT3 RS	98-04	50400103B	50400109B	50400103R	50400109R
		GT2	98-04	50400103B	50400109B	50400103R	50400109R
			98-04	50400103B	50400109B	50400103R	50400109R
	997	C2	05-	50400104B	50400109B	50400104R	50400109R
		C4	05-	50400106B	50400109B	50400106R	50400109R
		GT3	05-	50400104B	50400109B	50400104R	50400109R
		GT3 RS	05-	50400104B	50400109B	50400104R	50400109R
		GT2	05-	50400104B	50400109B	50400104R	50400109R
			05-	50400104B	50400109B	50400104R	50400109R
	Boxter	986	96-03	50400103B	50400110B	50400103R	50400110R
	Boxter	987	04-	50400104B	50400110B	50400104R	50400110R
	Cayman	987	06-	50400104B	50400110B	50400104R	50400110R
Subaru	Impreza WRX STi	GC8	92-01	50600205B	50600204B	50600205R	50600204R
	Impreza WRX STi	GDA/GDB/GDC/GDD/GDE	01-04	50600203B	50600207B	50600203R	50600207R
	Impreza WRX STi	GDF/GDG	05/06	50600203B	50600207B	50600203R	50600207R
	Impreza WRX STi	GE (N14)	07-	50600208B	50600605B	50600208R	50600605R



8. JRZ RS & JRZ RS Pro

Using our race winning technology, the JRZ RS and JRZ RS Pro is designed for the performance enthusiast who will be driving on the street and on the track. The JRZ RS and JRZ RS Pro has solid support for roll and pitch with a smooth high speed compression blow-off and rebound to make the ride smooth. Each adjustment makes a significant change in the damper's characteristics, allowing the driver to get the car tuned to his preference. Every JRZ RS and JRZ RS Pro damper is tested and matched on the dyno prior to shipping. As with all JRZ Suspensions, the JRZ RS and JRZ RS Pro is made with the highest quality aerospace materials and manufactured to the highest aerospace standards. JRZ RS and JRZ RS Pro dampers are available as a set of dampers or a complete kit with all mounting hardware, top plates, and springs included.



- Secure double adjustable 15 position compression and 9 position rebound. When using a McPherson strut you have 15 position compression adjustment
- Twin tube design
- No use of external reservoir for easy installation and the damper is allowed in a lot of club race racing classes
- High pressure nitrogen charge to support the car so lower spring rates can be used



The JRZ RS Pro takes the JRZ RS one step further by adding an external reservoir which makes this system very close to the race double adjustable damper. The JRZ RS Pro is a double adjustable monotube damper with remote reservoirs mounted on fixed hoses or in piggyback setup for simple installation. Piggyback JRZ RS Pro dampers are available in either a strut or a damper application. The JRZ RS Pro is designed for the performance enthusiast who will spend time on the street and on the track who demands crisper response and more chassis support than the JRZ RS.

- Secure and accurate double adjustable 12 position compression adjustment and 15 position rebound adjustment
- Mono tube design
- External reservoir (with high pressure hose or piggyback configuration)
- Gas pressure is adjusted via schraeder valve and can be set between 100 and 350 psi





JRZ RS & JRZ RS Pro Applications						
Make	Model	Car Type	Year	JRZ RS	JRZ RS Pro	
BMW	3-serie (non coil over)	E36	91-98	20012036K	30012036K	
	3-serie (coil over)	E36	91-98	20112036K	30112036K	
	3-serie (non coil over)	E46	98-05	20012046K	30012046K	
	3-serie (coil over)	E46	98-05	20112046K	30112046K	
	3-serie (non coil over)	E90	05-	20012090K	30012090K	
Honda	3-serie (coil over)	E90	05-	20112090K	30112090K	
	NSX		90-05	20004030K	30004030K	
Lotus	S2000		99-	20004200K	30004200K	
	Elise	mk1/mk2	96-	N/A	30004020K	
Mini	Exige		00-	N/A	30004030K	
	111R		05-07	N/A	30004040K	
Mini	R53/R55	Mk1	01-08	20036010K	30036010K	
Mitsubishi	Lancer	Evo 7/8/9	01-07	20006010K	30006010K	
	Lancer	Evo 10	08-	20006020K	30006020K	
Nissan	350Z		03-08	20007350K	30007350K	
	370Z		09-	20007370K	30007370K	
	Skyline	R33/R34 GTR	93-04	20007030K	30007030K	
	GTR	R35	08-	20007035K	30007035K	
Porsche	993	C2	94-98	20001993K	30001993K	
		C4	94-98	20101993K	30101993K	
		Turbo	94-98	20201993K	30201993K	
		Carrera	94-98	20301993K	30301993K	
	996	C2	98-04	20001996K	30001996K	
		C4	98-04	20101996K	30101996K	
		GT3	98-04	20201996K	30201996K	
		GT3 RS	98-04	20301996K	30301996K	
		GT2	98-04	20401996K	30401996K	
	997	C2	05-	20001997K	30001997K	
		C4	05-	20101997K	30101997K	
		GT3	05-	20201997K	30201997K	
		GT3 RS	05-	20301997K	30301997K	
		GT2	05-	20401997K	30401997K	
	Boxster	986	96-03	20001986K	30001986K	
Subaru	Boxster	987	04-	20001987K	30001987K	
	Cayman	987	06-	20101987K	30101987K	
	Impreza WRX STi	GC8	92-01	20010009K	30010009K	
	Impreza WRX STi	GDA/GDB/GDC/GDD/GDE	01-04	20010010K	30010010K	
	Impreza WRX STi	GDF/GDG	05/06	20010011K	30010011K	
	Impreza WRX STi	GE (N14)	07-	20010030K	30010030K	



9. Merchandise



<i>Merchandise</i>	
Black cap	99010100
White polo M	99020204
White polo L	99020205
White polo XL	99020206
Black polo M	99020104
Black polo L	99020105
Black polo XL	99020106
Jacket XL	99030106



10. Recent Victories



JRZ Suspension Victories

Year	Place	Race/Class	Team
2009	1,2,3	24h Daytona	TRG, Wright Motorsport
2008	Champion	Formula Truck	ABF Competições
2007	1,3	24h Daytona	Alegra Motorsport, TRG
2006	1	24h Daytona	T.P.C.
2006	Champion	T2 Run offs	Icy/Phoenix Racing Team
2006	Champion	World Challenge GT	K-Pax Racing
2006	Champion	South America F3	Luiz Razia
2005	Champion	T2 Run offs	Icy/Phoenix Racing Team
2004	Champion	Rolex Series	T.P.C.



JRZ

SUSPENSION ENGINEERING



SPECIALIST IN HIGH PERFORMANCE DAMPERS