PENSKE

RACING SHOCKS®

Product Catalog

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Shock Series

Type of Racing

"For Those Who Demand The Very Best!"

Located in Reading, Pennsylvania, Penske Racing Shocks has been serving the racing industry for over fifteen years. Using the technology first developed for Indy Car, Penske Racing Shocks engineers have designed shock absorbers for all other forms of racing. Every shock is built for quality, simplicity, repeatability, and high performance. All of our racing shocks are assembled to your specifications.

Penske Racing Shocks were successfully developed and tested in 1985. Since then, cars equipped with our dampers have won many races and Point Championships, nationally and internationally. Penske Racing Shocks have been successful in Formula One, NASCAR, IRL, CHAMP Car, GARRS, ALMS, Trans Am, DIRT, WoO, USAC, USAR, NHRA, IHRA , AMA, and Formula USA to name a few. Additionally, the International Race of Champions (IROC), the Barber Dodge Pro Series and the SCCA Spec Racer Ford Series have all chosen Penske Racing Shocks as the shock of choice to run in their competition series, proving their dependability and repeatability.

We design and manufacture each part of a Penske Racing Shock from the finest materials available. Each part is designed to combine maximum strength with the lightest possible weight.

Penske Racing Shocks are completely owner rebuildable and serviceable. They can easily be revalved in a matter of minutes. Should any part of a Penske Racing Shock become damaged, that part can be replaced by the owner rather than requiring complete replacement of the shock.

Compression and rebound damping is achieved by fluid being forced through a series of high quality valve washers. You can change the damping forces by simply changing the valve shims. The double, triple, and 4-way adjustable shocks permit you to fine tune your valving requirements externally. The compression adjustments are controlled by the knobs on the reservoirs. The rebound adjustment is located at the eyelet. These adjustments are easily accessible without removing the shock from the car or motorcycle.

Many teams require a custom shock design that complies with the ever changing technology of today's race cars. We are in the position to offer many custom shock designs and ideas, offering the ultimate in light weight and packaging unique to your team only. Our engineering staff has outfitted many Formula 1 and Sports Car/GT cars with an original design such as mono-shocks and four-way adjustable units outfitted with titanium components and aerospace materials that compliment the packaging and exceed all handling expectations.

Compare all these features to any other shock and you'll find that Penske Racing Shocks are the best shocks available to the serious racer.

General Information

Penske Racing Shocks Companies

MAIN OFFICE

NORTHEAST
150 Franklin St.
P.O. Box 1056
Reading, PA 19603
(610) 375-6180
(610) 375-6190 Fax

SOUTHEAST
771-28 Fentress Blvd.
P.O. Box 11586
Daytona Beach, FL 32120
(386) 274-5336
(386) 274-5442 Fax

MIDWEST
12666 US-12
P.O. Box 666
Brooklyn, MI 49230
(517) 592-6681
(517) 592-3696 Fax

CANADA
360 York Road,
RR #4
N.O.T.L., Ont. L0S-1-J0
(905) 684-7418
(905) 684-1774 Fax

Hours: Monday - Friday 8:30 am-5:00 pm

www.penskeshocks.com

ORDERING

When placing your order, please have as much information on hand as possible. If you are having problems with your order, our qualified sales and technical personnel are trained to offer assistance. Our personnel will need the following information:

1) Type of racing.
2) Type of car or motorcycle.
3) Race track(s).
4) Spring rates.
5) Motion ratios.
6) Any information on the shock you currently use.
7) How the car or motorcycle is handling at the present time.

Orders may be mailed, phoned or faxed to Penske Racing Shocks, or contact your local distributor or dealer.

METHODS OF PAYMENT

We accept MasterCard, Visa, Discover, and American Express credits cards and will ship UPS-COD if requested. Wire Transfers are also accepted. For information on wire transfers or for any other forms of payment, please call. The prices listed are those in effect at the time of publication and are subject to change without notice. Please contact our sales department for current prices. We will be pleased to furnish quotes either by mail, phone or fax.

SHIPPING

We pride ourselves in our fast delivery service. The standard shipping procedure is via United Parcel Service or Federal Express. Freight charges will be added to your invoice.

INTERNATIONAL ORDERS

All international orders are payable in U.S. Dollars only. Orders must be paid in advance. All orders will be shipped by air; freight, duties, and taxes collect.

REPAIR/SERVICE

Please direct all repairs to Penske Racing Shocks Service Department. Before returning any shocks and or parts, please contact Penske Racing Shocks. All shocks to be serviced must be clean and the springs and bushings removed. To avoid delays, please be sure to include:

1) Returnee's name
2) Shipping address
3) Phone number / Fax number
4) Repair instructions
5) Individual's name with whom you spoke

CUSTOM ORDERS

We provide many custom programs and items for all forms of racing. Our engineering staff will be able to assist you with your design specifications. All custom orders will require a deposit. When ordering custom parts, please ask for a price quote and estimated delivery date.

WARRANTY

Penske Racing Shocks makes no Warranties whatsoever, express or implied, oral or written, to the purchaser. Penske Racing Shocks specifically makes no warranty of merchantability, express or implied, nor any warranty of fitness for any particular purpose with respect to racing shock absorbers and related parts manufactured, fabricated and/or sold by Penske Racing Shocks.

Authorized Penske Racing Shocks Worldwide Distributors

PRS - AUSTRALIA
NTT Racing
618 8362 2113
618 8362 8811 Fax
prs@nttyres.com.au

PRS - U.K./EUROPE
SPA Design
44 (0) 1827 300150
44 (0) 1827 300151 Fax
www.spa-uk.co.uk

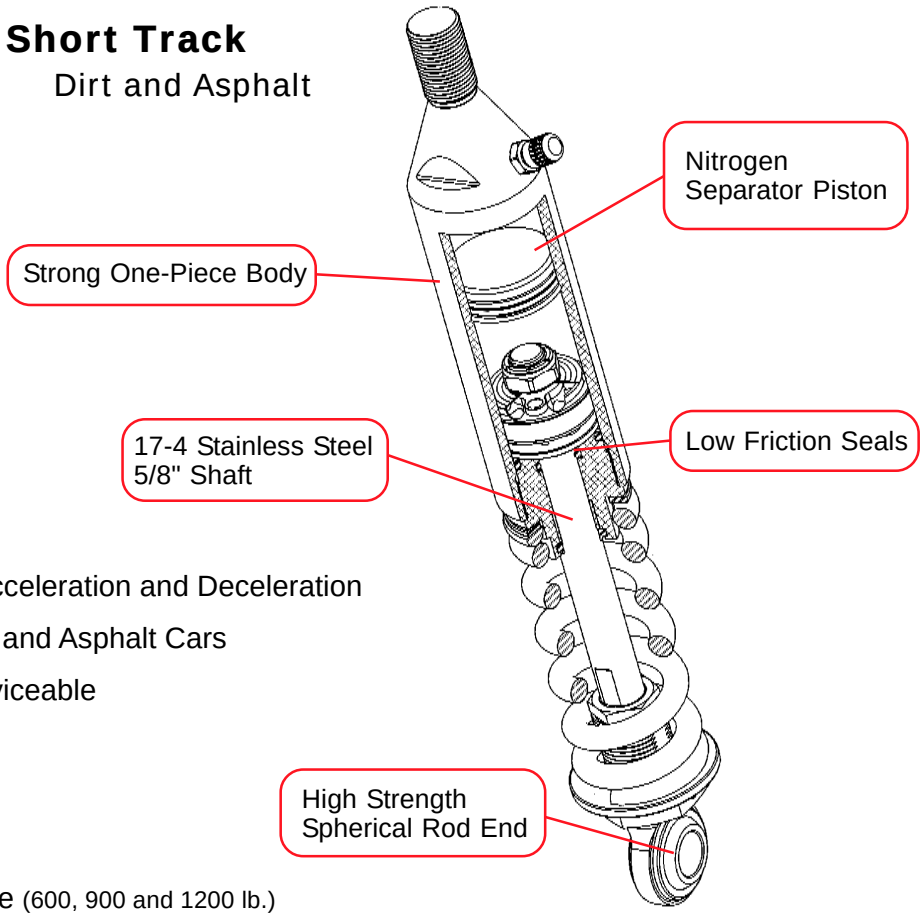
PRS - SOUTH AMERICA
Saenz Hnos.
54 11 4485 3028
54 11 4669 0956 Fax
www.saenzperformance.com

PENSKE RACING SHOCKS®

MADE IN THE U.S.A.

7000 Series
Hydraulic Tracking Damper

- **Short Track**
  Dirt and Asphalt



- Damps Oscillation Under Acceleration and Deceleration
- Available for Most Oval Dirt and Asphalt Cars
- Owner Revalvable and Serviceable
- Advanced Technology
- CNC Machined Aluminum
- Lightweight
- HYPERCO® Spring Available (600, 900 and 1200 lb.)

7000 Series - Specifications

Type	Shock Series	Extended Length	Compressed Length	Shaft Travel	Spherical Bearing	Weight
HTD	7000	13.75"	12.5"	1.25" *	.625" or .750"	2.5 lbs.

* Can set to customer's specifications

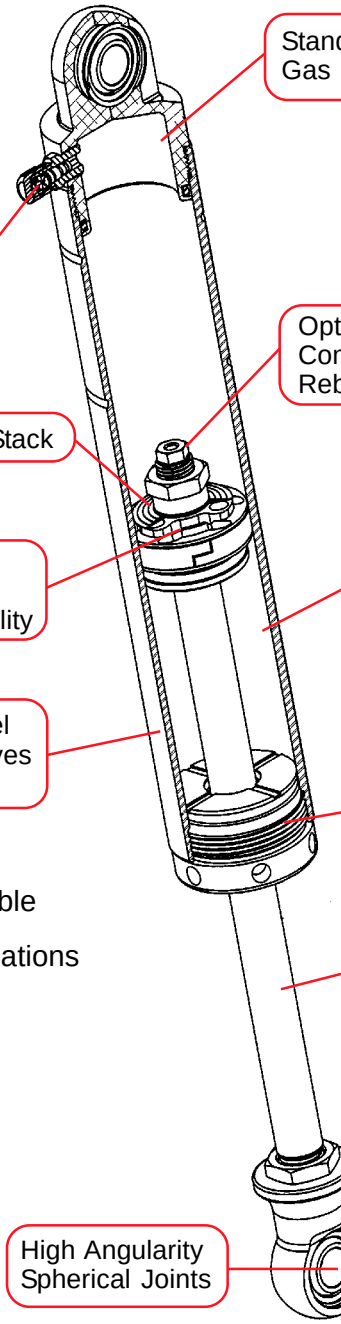
Remote Adjuster

- **Short Track**
  Dirt and Asphalt

- Cable Available in any Length
- Capability of Making Adjustments from the Cockpit
- Adjusts Compression, Rebound or Both Simultaneously (with Open Jet)
- Built to Customer's Specifications
- Use During Practice for Car Setup or During the Race to Accommodate Changing Track Conditions
- Can Disconnect from the Shock in Just a Few Seconds

7100 Series
Steel Body Damper

- **Short Track**
  Dirt and Asphalt
- **Sportscar**



Standard Emulsion Gas Reservoir

Available with a Valve or Sealed

Option of Open, Compression or Rebound Jet

Tunable Valve Stack

Unique Piston Designs for Greater Versatility

1.72" Bore for Maximum Performance

Zinc-Plated Steel Body with Grooves for Coilover Kit

Low Friction Threaded Bearing

17-4 Stainless Steel 5/8" Shaft

Sweep Adjuster Available *(see page 17)*

High Angularity Spherical Joints

Accepts Remote Adjuster *(see page 1)*

- Owner Rebuildable and Revalvable
- Assembled to Customer Specifications
- 5”, 6", 7”, 8” and 9” Lengths
- All CNC Machined Parts
- Provisions for Coilover Kit
- Consistent Performance
- Personalized Setups

7100 Series - Specifications

Type	Shock Series	Extended Length	Compressed Length	Shaft Travel	Spherical Bearing	Weight
Steel Body	7105	15.75"	10.75"	5"	.5", .625" w	3.25 lbs.
Steel Body	7106	17.75"	11.75"	6"	.5", .625" w	3.50 lbs.
Steel Body	7107	19.75"	12.75"	7"	.5", .625" w	3.75 lbs.
Steel Body	7108	21.75"	13.75"	8"	.5", .625" w	4.00 lbs.
Steel Body	7109	23.75"	14.75"	9"	.5", .625" w	4.25 lbs.
Steel Body Single Adjustable	710_-SA	+ .25"	+ .25"	5", 7", 8", 9"	.5", .625" w	Same as above weights

7300 Series Damper

- **Stock Cars**
- **Short Track**
  Asphalt

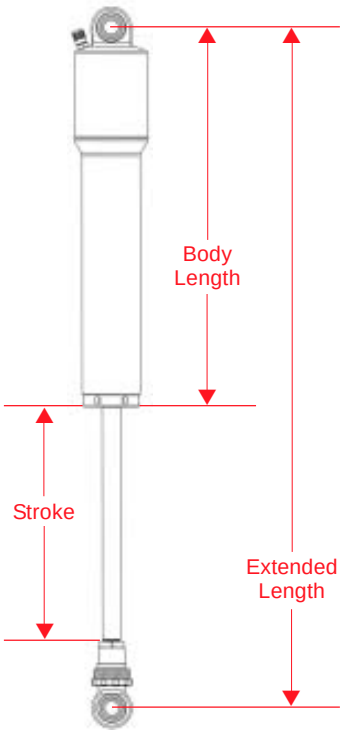
The 7300 Series damper is the damper of choice in all levels of professional stock car racing. The 7300 has also been adapted to some modified racing that uses coil-over shock absorbers. The 7300 is a simple, high-performance shock absorber that can be internally configured easily for any track and can be tuned externally with a single shaft adjuster. This shaft adjuster can affect compression, rebound, or both depending on the type of jet used. The 7300 also features a head valve piston that was born out of the desire to run lower gas pressures for grip and reduce “fade” while maintaining performance of the shock. The head valve, depending on its build, can optimize the response time of the damper and allow the use of extremely low pressures to be used for reduction in friction and increased in grip and driver feel without the danger of cavitation. The reservoir in the 7300 is generous for good consistency over a large temperature range and features a reservoir piston that has been designed for low friction and maximum volume. A strong 2-piece body completes the design to maximize strength and minimize weight. This coupled with a strong chrome-moly shaft that is hard chromed, makes the 7300 a durable, high-performance damper with a proven track record of championships.

- Owner Rebuildable and Revalvable
- Assembled to Customer Specifications
- 8” and 9” Lengths (Smooth Body)
- 5", 6", 7”, 8” and 9” Lengths (Coilover Body)
- Adjuster Option
  (Open, Compression, or Rebound)
- All CNC Machined Parts
- Consistent Performance

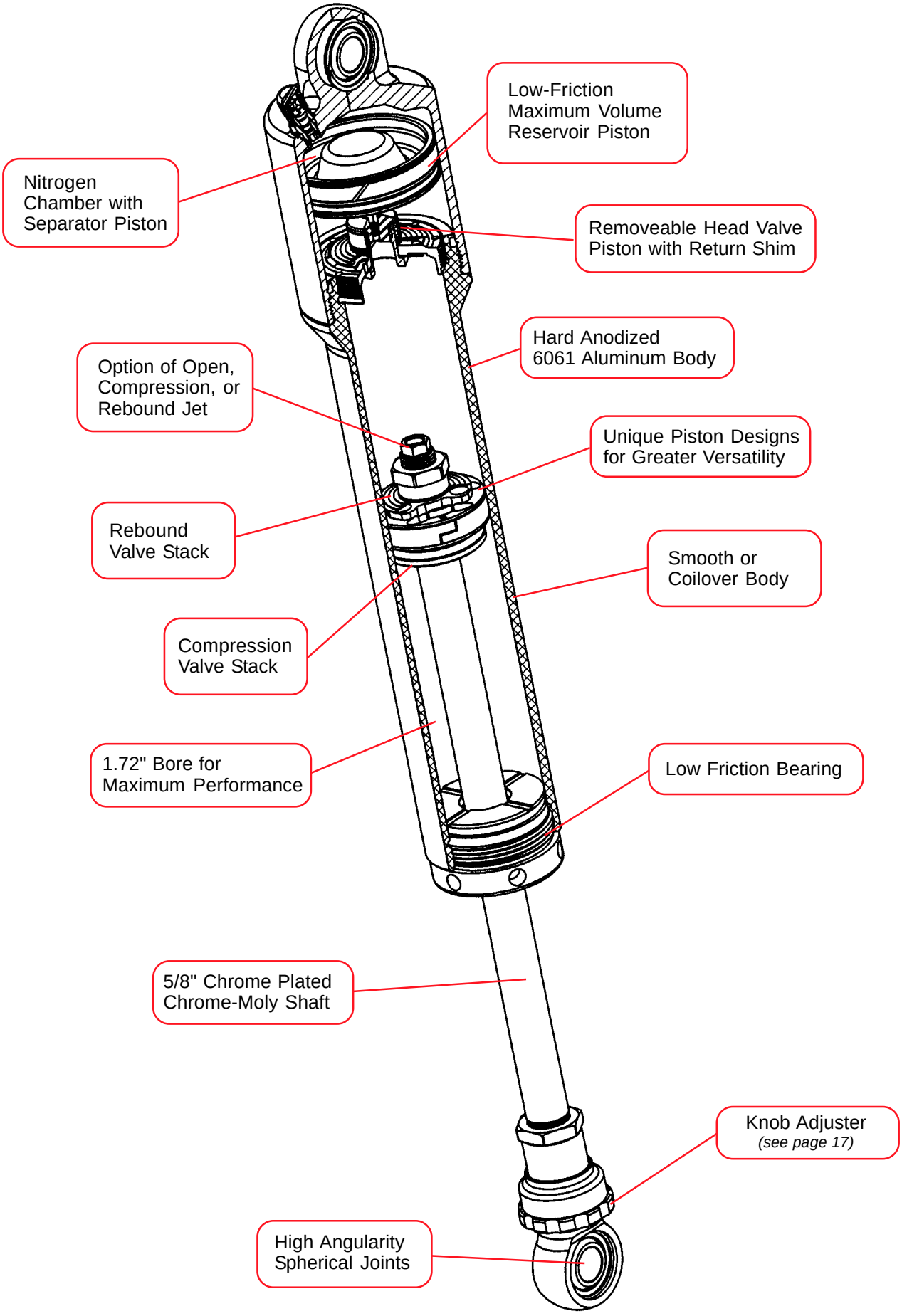
7300 Series - Specifications

Type	Extended Length	Stroke	Body Length
5" Coilover Body with Head Valve (Sweep Adjuster)	15.84"	4"	9.98"
6" Coilover Body with Head Valve (Sweep Adjuster)	17.84"	5"	10.98"
7" Coilover Body with Head Valve (Sweep Adjuster)	19.84"	6"	11.98"
8" Coilover Body with Head Valve (Sweep Adjuster)	21.84"	7"	12.98"
9" Coilover Body with Head Valve (Sweep Adjuster)	23.84"	8"	13.98"
7" Smooth Body Non-Head Valve (Knob Adjuster)	21.34"	7"	11.98"
8" Smooth Body Non-Head Valve (Knob Adjuster)	23.34"	8"	12.98"
9" Smooth Body Non-Head Valve (Knob Adjuster)	25.34"	9"	13.98"
7" Smooth Body with Head Valve (Knob Adjuster)	20.34"	6"	11.98"
8" Smooth Body with Head Valve (Knob Adjuster)	22.34"	7"	12.98"
9" Smooth Body with Head Valve (Knob Adjuster)	24.34"	8"	13.98"

*Also available in Non-Adjustable



7300 Series - Features



7500 Series Damper

- **Short Track**
  Dirt and Asphalt
- **Sportscar**
- **Drag Racing**

The 7500 Series has come into the short track market and some OEM road car markets among others as a quality, inexpensive damper that is quite universal in the types of applications in which it can be utilized. The design features a separator piston in the reservoir which has been proven to maintain damper performance and improve response, as well as a single shaft adjuster if desired. The 7500 is available in both coil-over and non coil-over style in all body lengths. There are also several options for body cap style which allows its use in many regulated spec series that require a sealed shock. Due to its design, the 7500 can be made to fit many applications simply by changing its modular body cap and eyelets.

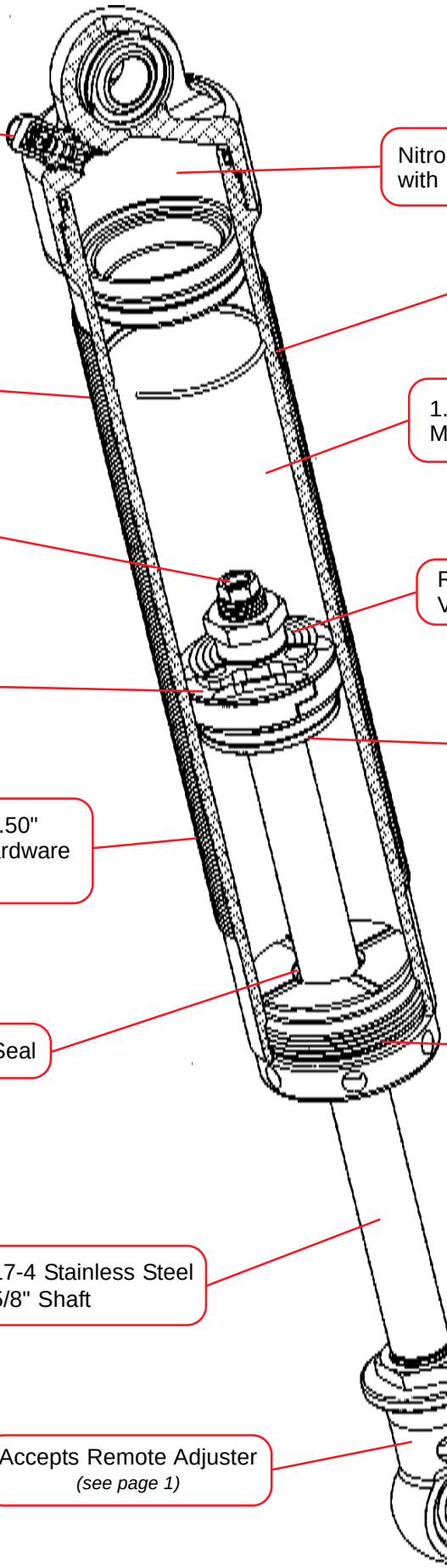
Currently, the 7500 is being used in all forms of Short Track Racing (NASCAR Weekly Racing Series, USAC Sprints and Midgets, Asphalt and Dirt Late Models and Modifieds), Sports Car Racing (SCCA and GARRS), Drag Racing (NHRA and IHRA), and High Performance Aftermarket Street Cars.

- Owner Rebuildable and Revalvable
- Adjuster Option (Open, Comp., or Rebound)
- Assembled to Customer Specifications
- 5”, 6”, 7”, 8” and 9” Lengths
  (shorter lengths available, please call for more information)
- All CNC Machined Parts
- Provisions for Coilover Kit (Smooth Body)
- Consistent Performance
- NASCAR Approved
- Personalized Setups
- Lightweight

7500 Series - Specifications

Type	Smooth Body Shock Series	Coilover Body Shock Series	Extended Length	Compressed Length	Shaft Travel	Spherical Bearing	Weight
Aluminum Body	7505	7545	15.883"	11.178"	4.705"	.5", .625" w	2 lbs. 3 oz.
Aluminum Body	7506	7546	17.816"	12.236"	5.580"	.5", .625" w	2 lbs. 8 oz.
Aluminum Body	7507	7547	20.024"	13.444"	6.580"	.5", .625" w	2 lbs. 14 oz.
Aluminum Body	7508	7548	21.957"	14.502"	7.455"	.5", .625" w	3 lbs. 2 oz.
Aluminum Body	7509	7549	24.166"	15.711"	8.455"	.5", .625" w	3 lbs. 8 oz.
Aluminum Body Single Adjustable	750_-SA	754_-SA	+.25"	+ .25"	5", 6", 7", 8" 9"	.5", .625" w	Same as above weights

7500 Series - Features



Available with a Valve or Sealed

Nitrogen Chamber with Separator Piston

6061 Hard Anodized Aluminum Body

Coilover or Smooth Body

1.72" Bore for Maximum Performance

Option of Open, Compression or Rebound Jet

Rebound Valve Stack

Unique Piston Designs for Greater Versatility

Compression Valve Stack

2.25" or 2.50" Spring Hardware Available

Low Friction Shaft Seal

Threaded Bearing for Ease of Servicing and Rebuilding

17-4 Stainless Steel 5/8" Shaft

Sweep Adjuster
(see page 17)

Accepts Remote Adjuster
(see page 1)

High Angularity Spherical Joints

7600 Series Damper

- **Short Track**
  Dirt and Asphalt
- **Formula Vee** (Front Shock)

The 7600 damper takes the 7500 concept and goes a step further in size and weight reduction. By going to a 1.562 bore diameter body and reducing the shaft diameter to Ø.500, the overall damper weight is reduced and packaging in some chassis applications becomes possible. The 7600 design features all the same attributes of the 7500, namely a gas separator piston, lightweight body, and single-adjustability. The 7600 can also accept a remote cockpit adjuster eyelet if desired. A wide variety of pistons and body lengths are available for this damper as well which makes it able to be used in different forms of racing. It currently features a smooth body for non coilover applications only.

Currently, the 7600 is being used with success in numerous short track markets (World of Outlaws, USAC Sprints, All-Star Sprints, and Mini Sprints) and Formula Vee Sportscars.

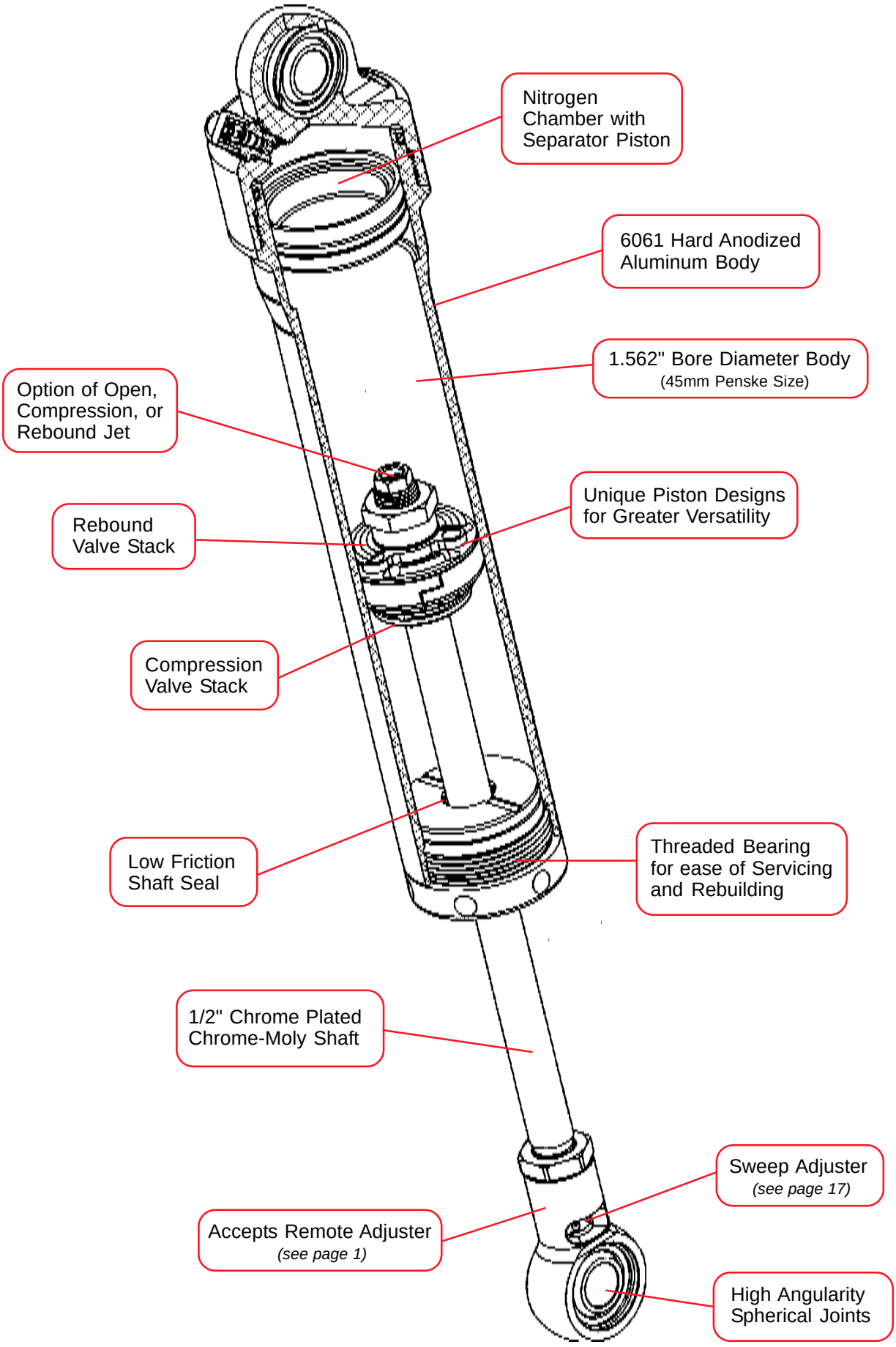
- Owner Rebuildable and Revalvable
- Adjuster Option (Open, Comp. or Rebound)
- Assembled to Customer Specifications
- 3", 6" and 8" Lengths
- All CNC Machined Parts
- Consistent Performance
- Personalized Setups
- Lightweight

7600 Series - Specifications

Type	Shock Series	Extended Length	Compressed Length	Shaft Travel	Spherical Bearing	Weight
Aluminum Small Body	7603	13.2" *	10.0"	3.2"	.5", .625" w	2 lbs.
Aluminum Small Body	7606	18.25"	12.25"	6"	.5", .625" w	2 lbs. 2 oz.
Aluminum Small Body	7608	22.25"	14.5"	8"	.5", .625" w	2 lbs. 4 oz.
7600 Series Single Adjustable	760_-SA	+.25"	+ .25"	3", 6", 8"	.5", .625" w	Same as above weights

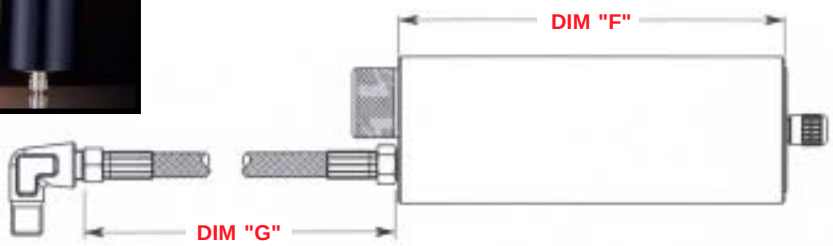
*Can droop to customer's specifications

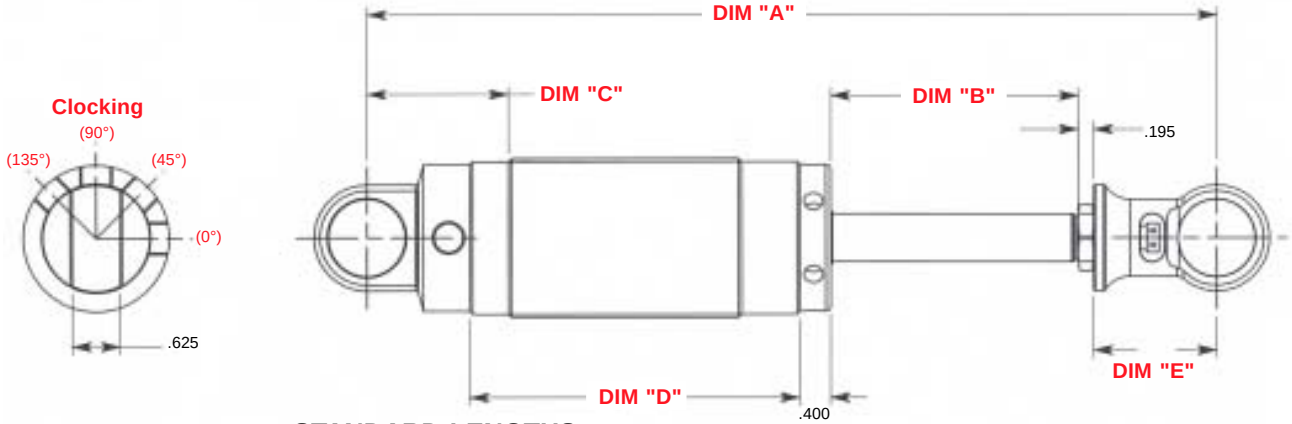
7600 Series - Features



8100 Series Damper

- **Sportscar**
- **Drag Racing**
- **Short Track**
  Dirt and Asphalt





STANDARD LENGTHS

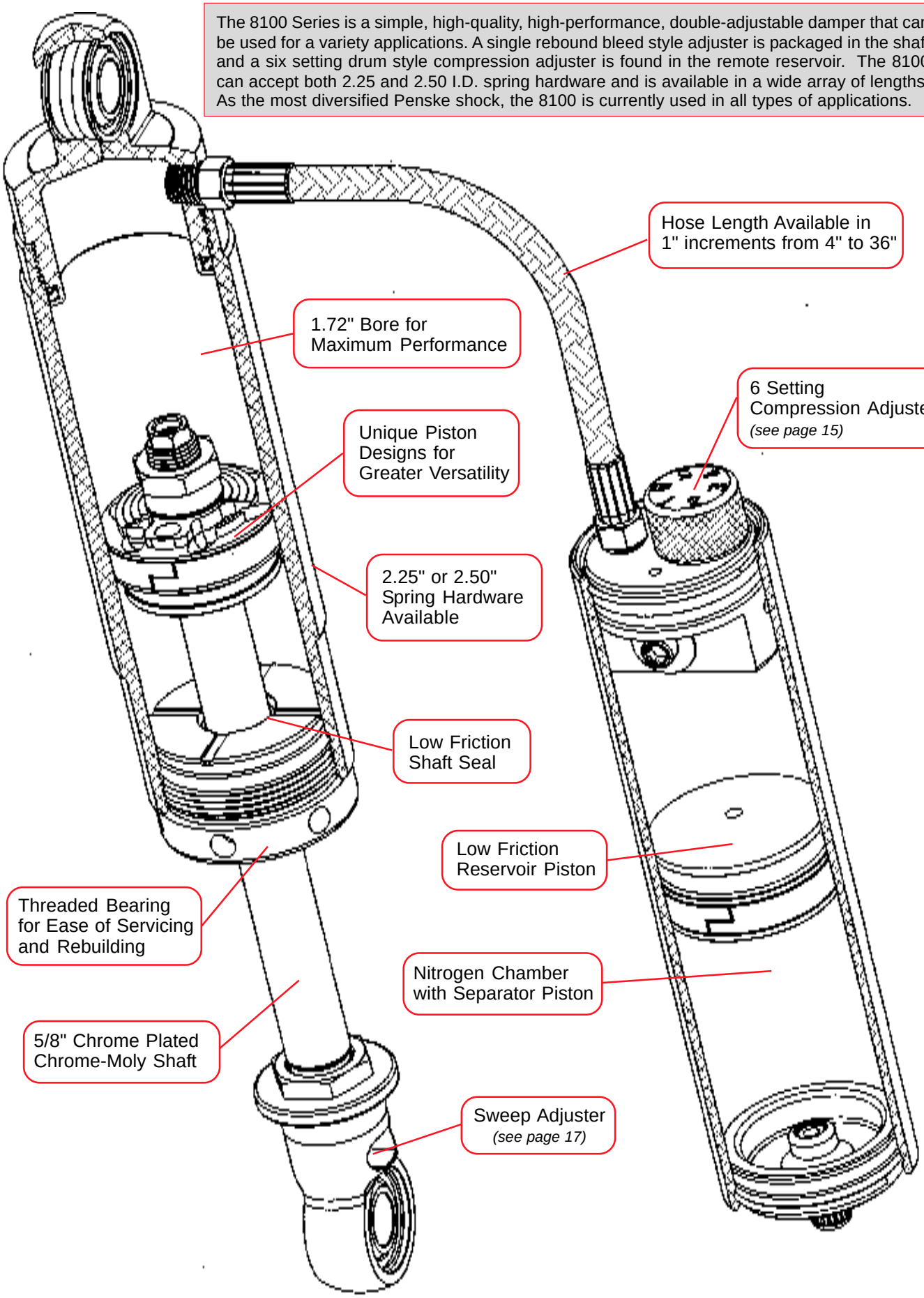
DIM "A" Open Length	DIM "B" Stroke	DIM "C" Body Cap Length	DIM "D" Body Length	DIM "E" Eyelet Length	(.400 + .195)
10.0"	2.20"	1.34"	4.275"	1.60"	0.595"
10.5"	2.45"	1.34"	4.525"	1.60"	0.595"
11.0"	2.70"	1.34"	4.775"	1.60"	0.595"
11.5"	2.95"	1.34"	5.025"	1.60"	0.595"
12.0"	3.20"	1.34"	5.275"	1.60"	0.595"
12.5"	3.45"	1.34"	5.525"	1.60"	0.595"
13.0"	3.70"	1.34"	5.775"	1.60"	0.595"
13.5"	3.95"	1.34"	6.025"	1.60"	0.595"
14.0"	4.20"	1.34"	6.275"	1.60"	0.595"
14.5"	4.45"	1.34"	6.525"	1.60"	0.595"
15.0"	4.70"	1.34"	6.775"	1.60"	0.595"
15.5"	4.95"	1.34"	7.025"	1.60"	0.595"
16.0"	5.20"	1.34"	7.275"	1.60"	0.595"
17.5"	5.95"	1.34"	8.025"	1.60"	0.595"
18.0"	6.20"	1.34"	8.275"	1.60"	0.595"
20.0"	7.20"	1.34"	9.400"	1.60"	0.595"
22.0"	8.20"	1.34"	10.400"	1.60"	0.595"
24.0"	9.20"	1.34"	11.400"	1.60"	0.595"

OPTIONS

DIM "C"	Body Cap
1.34"	(STD)
1.59"	(+.250)
1.84"	(+.500)
2.09"	(+.750)
2.34"	(+1.000)
DIM "E"	Eyelet
1.6"	(STD)
2.0"	(+.400)
2.3"	(+.700)
DIM "F"	Reservoir Body
5.5" or 7.0"	
DIM "G"	Hose
4" Through 36"	

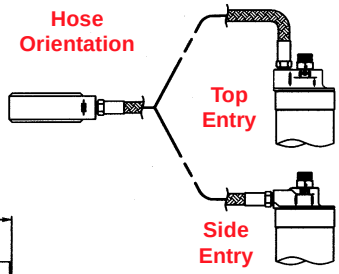
8100 Series - Features

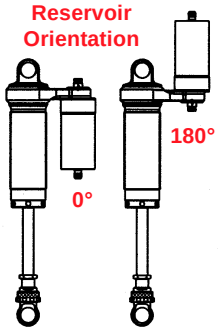
The 8100 Series is a simple, high-quality, high-performance, double-adjustable damper that can be used for a variety applications. A single rebound bleed style adjuster is packaged in the shaft and a six setting drum style compression adjuster is found in the remote reservoir. The 8100 can accept both 2.25 and 2.50 I.D. spring hardware and is available in a wide array of lengths. As the most diversified Penske shock, the 8100 is currently used in all types of applications.

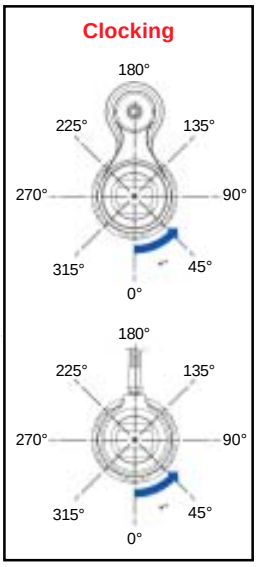


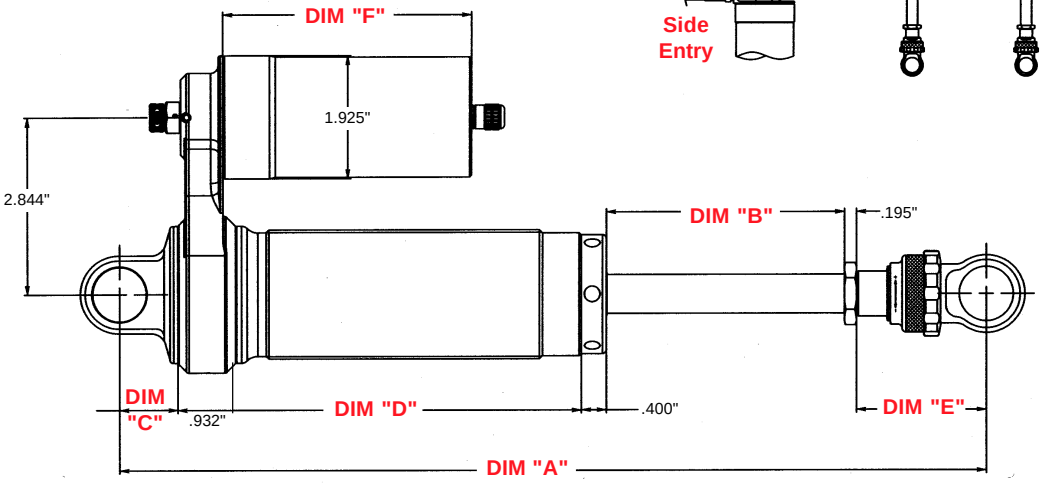
8760 Series Damper

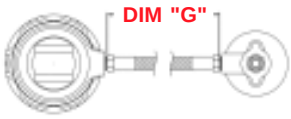
- **Sportscar**
- **Open Wheel**











STANDARD LENGTHS

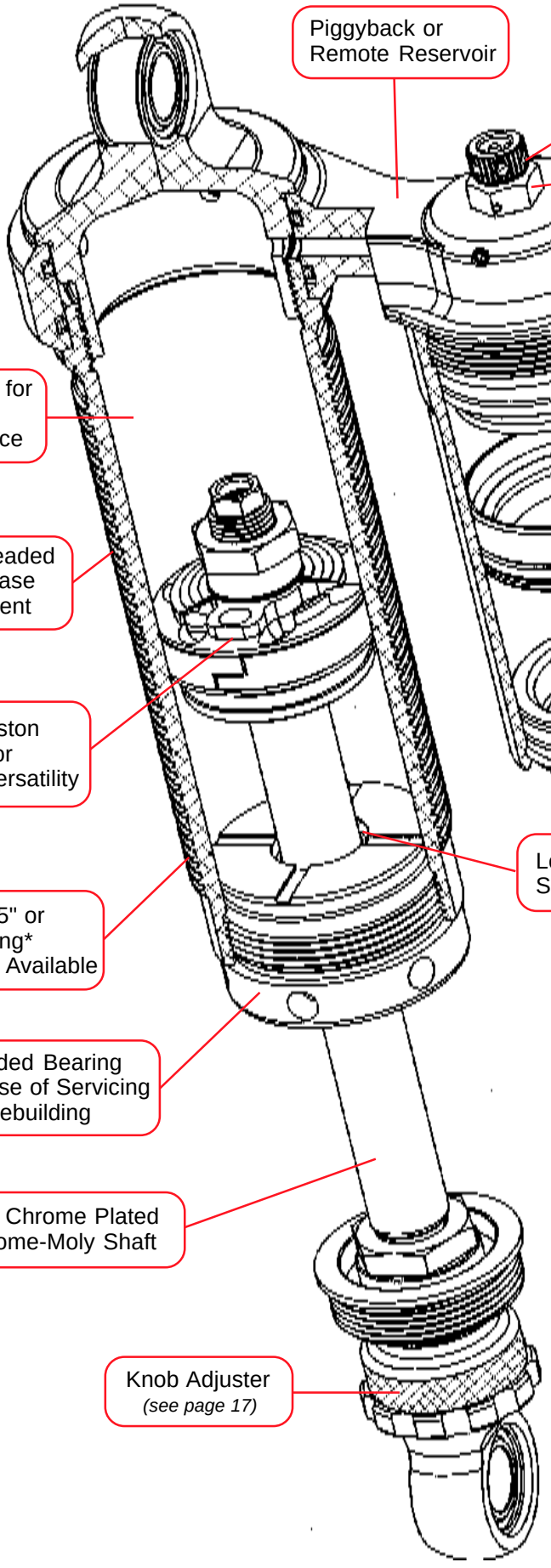
DIM "A" Open Length	DIM "B" Stroke	DIM "C" Body Cap Length	DIM "D" Body Length	DIM "E" Eyelet Length	(.195+.400+.932)
10.0"	1.850"	0.955"	3.565"	2.100"	1.527"
10.5"	2.100"	0.955"	3.815"	2.100"	1.527"
11.0"	2.350"	0.955"	4.065"	2.100"	1.527"
11.5"	2.600"	0.955"	4.315"	2.100"	1.527"
12.0"	2.850"	0.955"	4.565"	2.100"	1.527"
12.5"	3.100"	0.955"	4.815"	2.100"	1.527"
13.0"	3.350"	0.955"	5.065"	2.100"	1.527"
13.5" *	3.600"	0.955"	5.315"	2.100"	1.527"
14.0"	6.850"	0.955"	5.565"	2.100"	1.527"
14.5"	4.100"	0.955"	5.815"	2.100"	1.527"
15.0"	4.350"	0.955"	6.065"	2.100"	1.527"
15.5"	4.600"	0.955"	6.315"	2.100"	1.527"
16.0"	4.850"	0.955"	6.565"	2.100"	1.527"
18.0"	5.850"	0.955"	7.565"	2.100"	1.527"
20.0"	6.850"	0.955"	8.565"	2.100"	1.527"
22.0"	7.850"	0.955"	9.565"	2.100"	1.527"
24.0"	8.850"	0.955"	10.565"	2.100"	1.527"

OPTIONS

DIM "C"	Body Cap
.955"	(STD)
1.205"	(+.250)
1.455"	(+.500)
1.955"	(+1.000)
DIM "E"	Eyelet
2.100"	(STD)
2.300"	(+.200)
2.600"	(+.500)
DIM "F"	Reservoir Body
4.0", 5.0" or 6.0"	
DIM "G"	Hose
4" Through 36"	

** 13.5" (DIM "D") maximum for 2.00" I.D. Spring*

8760 Series - Features



Piggyback or Remote Reservoir

25 Click Low Speed Adjustments *(see page 15)*

17 Click High Speed Adjustments *(see page 15)*

1.72" Bore for Maximum Performance

Low Friction Reservoir Piston

Acme Threaded Body for Ease of Adjustment

Nitrogen Chamber with Separator Piston

Unique Piston Designs for Greater Versatility

Low Friction Shaft Seal

2.00", 2.25" or 2.50" Spring* Hardware Available

Threaded Bearing for Ease of Servicing and Rebuilding

5/8" Chrome Plated Chrome-Moly Shaft

Knob Adjuster *(see page 17)*

Perhaps the most universal Penske shock available, the 8760 damper is used in a wide variety of professional racing applications. In its standard configuration, the 8760 is a triple-adjustable, coil-over damper. It features a clicker style rebound bleed adjuster in the shaft as well as a high and low speed compression adjuster in the canister that works off preloaded shims and a central needle bypass. The reservoir is available in either remote or piggyback style. All aluminum body components combine for a lightweight high performance damper that can be configured in a variety of ways due to its modular design. It is available in a large array of body, eyelet, body cap, and reservoir lengths which makes custom installations possible. Both 45mm and 55mm bodies are available as well as 2.00", 2.25", and 2.50" spring hardware. The 8760 is currently used in Champ Car, IRL, Trans Am, Toyota Atlantic, Sportscars, GARRS and ALMS Series among others.

8770 Series Damper

- **Sportscar**
- **Open Wheel**

8770 Main Design Features

True 4-way design

Ø 9/16” shaft for reduced friction and weight

Piggyback layout for packaging advantages

Extensive Adjustability

Low-Friction seal selection

Easy bleeding with 3 bleed access ports

Modular design for extensive versatility of radial reservoir and adjuster positions

Ability to be offered with a Penske dual-bleed shaft if desired

Ability to be offered with a Penske single-adjustable shaft if desired

Offered in all body lengths in stock

Also Available in Single Adjustable or Dual Bleed Adjustable Options

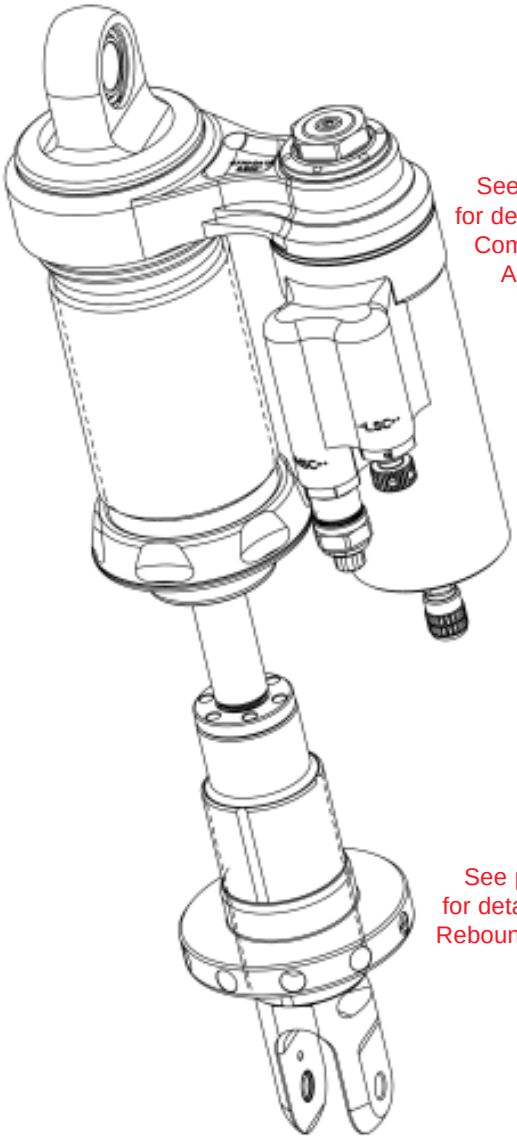
The 8770 damper is the latest product line introduced by Penske Racing Shocks. The need for a “true 4-way” damper presented itself over the last several racing seasons as teams requested more adjustment from their dampers because of limited testing sessions during race weekends.

Developing a 4-way adjustable damper was the obvious solution although not new technology to Penske Racing Shocks.

The first 4-way damper from the Penske Racing Shocks drawing office was designed and competed with in Formula One during the 1990 season with a win in its first race. Since then, the true 4-way design was upgraded and repackaged to be reintroduced in a new configuration in 1996. This design again enjoyed success in the form of 2 World Drivers’ and 1 Constructors’ Championships as well as 33 grand prix wins from 1996 to 2003. All in all, the Penske 4-way design has been a performance advantage on grand prix cars that won over 75 races from 1990 to the present.

The 8770 damper is the latest evolution of this true 4-way, which is destined to again enjoy success in motorsport. Other 4-way dampers exist from various manufacturers, but many have 3 compression adjusters and a single rebound adjuster. By offering high and low-speed compression and rebound, the 8770 offers the most versatility with external adjustment which reduces the need for revalves. Having 4 clearly defined adjusters, 2 affecting bleed and 2 affecting high-speed forces, chassis tuning becomes more simplified to the end user. The bleed adjusters target low-speed transient movements (pitch, roll, heave, and warp) of the chassis (sprung mass) within the 4 wheels while the high-speed adjusters tune the transmission of external road inputs into the chassis.

The 8770 is based on proven technology that gives considerable range of adjustment and winning performance in a compact, lightweight package for the serious racing team.



See page 16 for details on the Compression Adjuster

See page 18 for details on the Rebound Adjuster

Same Specifications as 8760 Shock (see page 11)

High Performance Aftermarket Dampers

Penske Racing Shocks recently began designing and producing custom dampers for use on some of today's highest performing sports cars. Using the same technology and materials proven on the race track, new designs for the road are now available for such vehicles as:

Dodge Viper

Dodge Viper
Cadillac
Chevrolet Camaro
Chevrolet Corvette
Ferrari
Panoz
Porsche

Please call for additional information pertaining to specific models.

Chevrolet Corvette

Cadillac

Spec Damper

Spec dampers come in non-adjustable, single, double and triple adjustable configurations.

Having its beginnings in the IROC series, spec damper projects have grown considerably for Penske Racing Shocks over the years and have been applied with success and customer satisfaction to a diverse collection of series and cars. From SCCA Spec Racer Fords to the Barber Dodge levels of school and pro cars, Penske has outfitted many customers to achieve their desired performance and price requirements. Because of the level of quality and performance that comes with any Penske shock, a level playing ground is certain in the respective series. As repeatability and consistency between dampers is guaranteed due to our strict demands and standards. Current spec damper customers include:

Barber Dodge Pro Series
Skip Barber Racing School
IROC
Panoz Esperante Woman's Pro Series
NASCAR (Daytona/Talladega)

SCCA Spec Racer Ford
Stock Car Racing Experience
Monster Racing Excitement
Racing Experience, Inc.

Weight Jacker

- .250" of Total Travel
- 20 Clicks of Adjustment
- Available for 2.00" and 2.25" ID Springs
- Low Internal Operation Pressures
- High Load Capacity
- Compatible with other Manufacturer's shocks

Compression Adjuster Options

8100 Series

From Sports Car to Short Track Oval racing, the 8100 Series adjuster offers a wide range of compression adjustment for the serious racer. The method in which the Penske 8100 adjusts compression forces is simple. When the damper is put into a compression condition, the fluid being displaced by the shaft entering the body must pass through the compression adjuster drum and the selected orifice located in the remote reservoir. As the knob is rotated, a drum inside the compression adjuster is rotated, aligning the chosen orifice within the direct flow of oil into the remote reservoir. The adjustment knob is numbered, from one to six. By clicking to the number one position, the adjuster is set at full soft (utilizing the largest hole in the compression adjuster drum). The number six position on the knob denotes a full hard setting (oil flow is greatly restricted). This method of adjusting compression damping is ideal for most forms of racing, especially those having higher shaft speeds and displacements. The orifices make every adjustment have a noticeable "feel" and have increased the range of adjustment. At higher shaft velocities, oil passing through the orifice in the compression adjuster drum reaches a maximum flow rate because of the viscosity of the oil and the hole diameter. At this point any additional oil flow is metered through a blow off valve which bypasses the drum completely to insure a linear adjustment range.

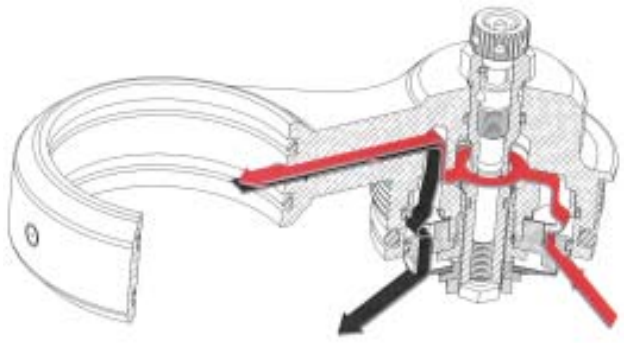
Rebound Flow Path

Compression Flow Path

8760 Series

The 8760 Series compression adjuster is the ultimate tuning tool for the professional race team. The 8760 Series adjuster offers separate adjusters for both high and low speed shaft movements. The high speed adjuster controls larger track inconsistencies that may disrupt the car, while the low speed adjuster controls slow shaft movements such as body roll, corner entry and exit.

When the damper is being compressed, the fluid is displaced into the adjuster and passes through a piston in the adjuster. When manipulating the high speed adjuster, the secondary valve shims are preloaded, giving different compression forces. The low speed adjustment meters the fluid and bypasses the piston in the adjuster, providing an adjustable combination of bleed and shim controlled damping. Rebound flow occurs through two (2) check valves.



Rebound Flow Path

Compression Flow Path

In effect, the combination of spring loaded adjustments will offer the ultimate tuning combination.

In addition to the standard 8760 adjuster position, that has a more linear flow characteristic, the new Digressive CD Piston allows greater separation between high and low speed adjustments (i.e., less crossover) and has a more digressive characteristic for bumps and curbs. This digressive adjuster also uses a shim return to enhance response. Please inquire about both types when ordering.

Compression Adjuster Options

8770 Series

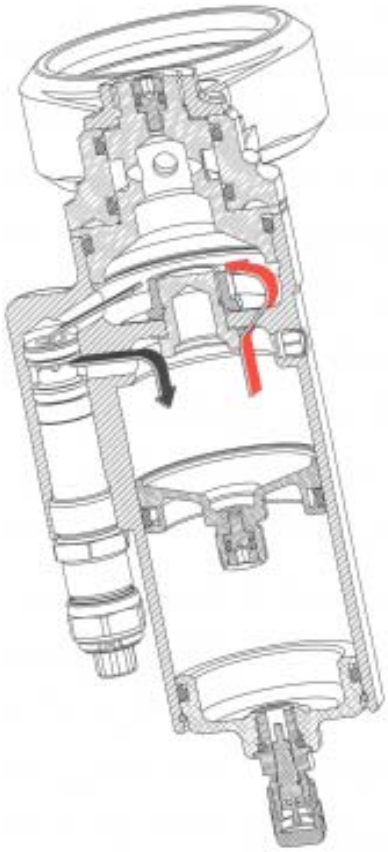
High-Speed Compression Adjuster
(65 clicks of adjustment – 3+ in/sec dyno curve range)

The High-Speed Compression (HSC) adjuster consists of a spring loaded poppet valve using quick responding, low inertia titanium coil springs. The use of the titanium material provides a large range of adjustment for any main damper piston choice with a short free length spring, which in turn reduces the adjuster size. Dupont Vespel spring guides help eliminate friction and improve response as well. The poppet valve is titanium as well with titanium nitride coating for good wear resistance and friction properties. The High-Speed Compression adjuster is easily distinguished on the reservoir body by its gold color and bondus wrench access. The adjuster increases damping when turned clockwise.

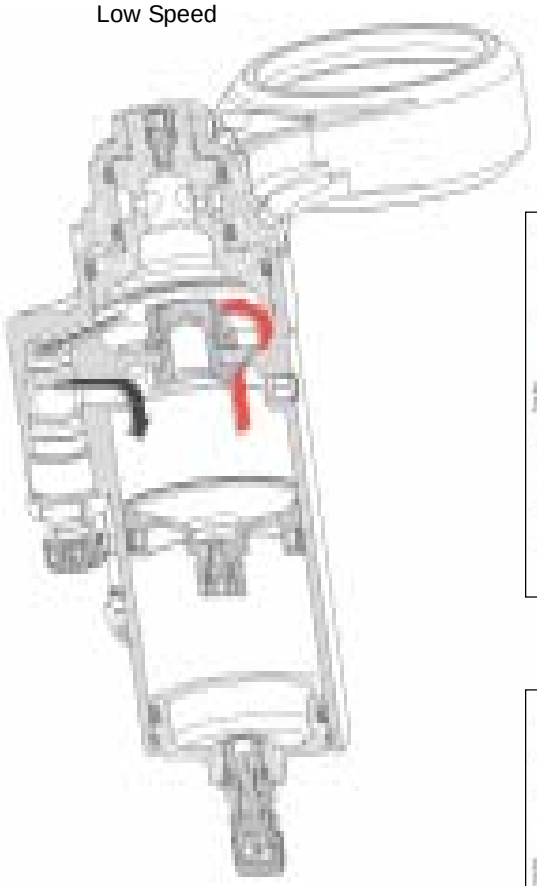
Low-Speed Compression Adjuster
(35 clicks of adjustment – 0 to 2 in/sec dyno curve range)

The Low-Speed Compression (LSC) adjuster consists of a tapered needle/seat arrangement. It is a simple bleed bypass past the high-speed compression adjuster to offer an extensive range of manipulation of the low-speed area or “nose” region of the compression dyno curve. The adjuster maintains its independence from the high-speed adjuster well as minimal “crossover” exists when making adjustments. The Low-Speed Compression adjuster is easily distinguished on the reservoir body by its silver color and knurled texture for easy manipulation with the fingers. The adjuster increases damping when turned clockwise.

High Speed



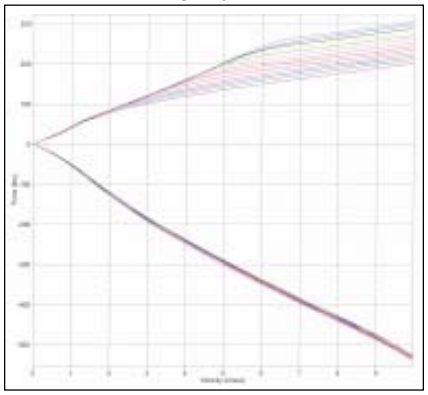
Low Speed



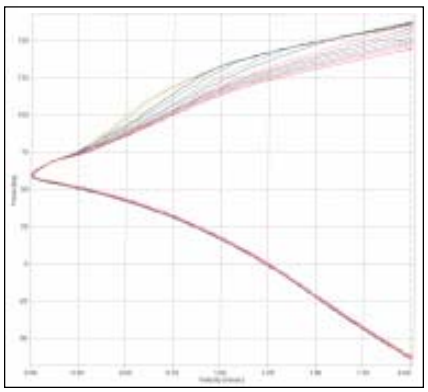
Rebound Flow Path

Compression Flow Path

High Speed



Low Speed

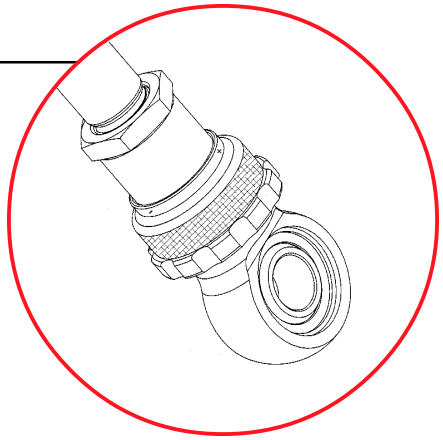


Shaft Adjuster Options

The adjuster is located at the base of the adjustable platform. During the compression or rebound stage of the shock movement, fluid is forced through two ports in the main shaft. Inside the main shaft is a needle and jet assembly, which adjusts the amount of fluid passing through the jet. By turning in the adjuster (clockwise), the needle is forced up into the jet, restricting the fluid, causing firmer damping forces. In reverse, by turning the adjuster out (counter clockwise), more oil is allowed to pass through the jet causing lighter damping forces. The adjustment assembly, is a timed control for the shims located on the main piston to work.

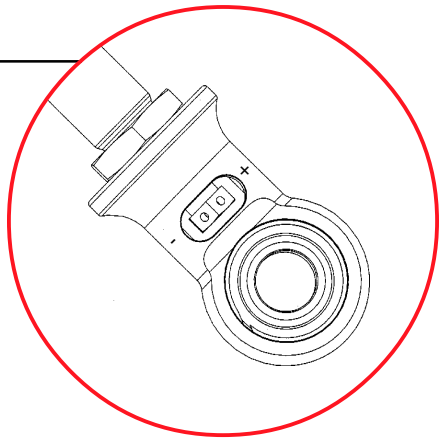
Knob Adjuster

- 35 Clicks of Adjustment
- Adjusts by hand



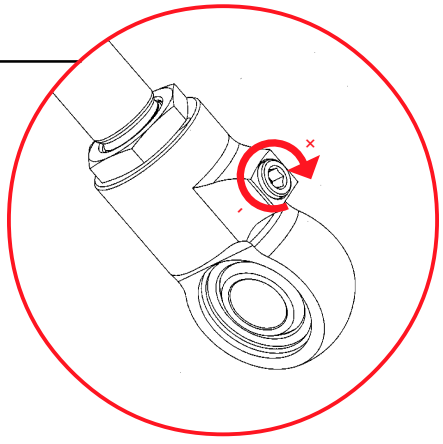
Sweep Adjuster

- 18 Sweeps of Adjustment
- Use a 9/16" Dowel Pin to Make Adjustments
- Available in 0° (shown) or 90°



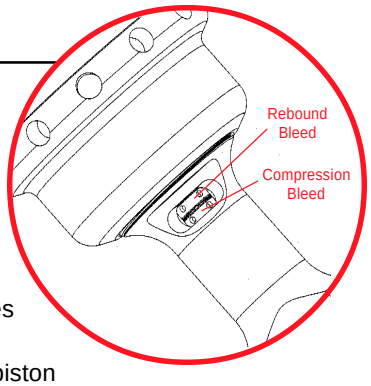
Clicker Adjuster

- 52 Clicks of Adjustment
- Use a 9/64" Bondus to Make Adjustments



Shaft Adjuster Options

Dual Bleed Adjuster

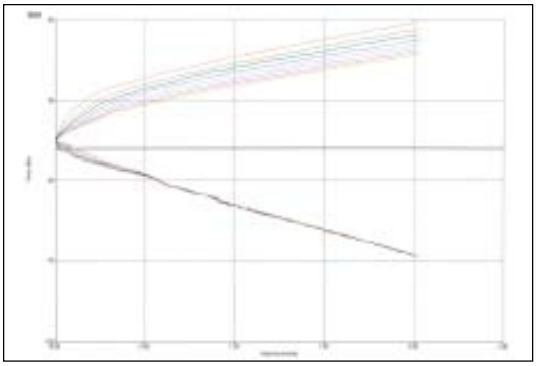


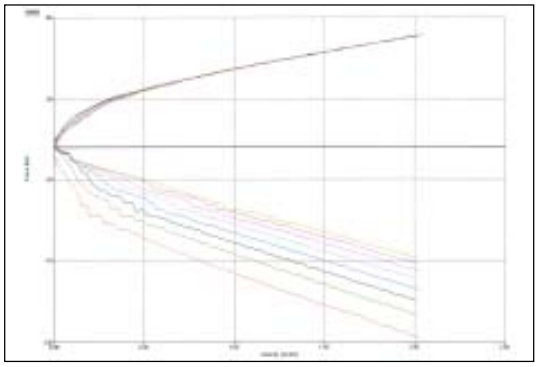
The dual bleed assembly is a very powerful adjustment system which fits completely within the main shaft, making it a very light and compact addition to the damper.

The dual bleed adjuster allows independent adjustment of the amount of bleed past the main piston in both rebound and compression. The design incorporates two poppet valves sprung against each other to control the oil flow path through the assembly. This makes the assembly very responsive at high frequencies and insures complete separation between the two adjusters.

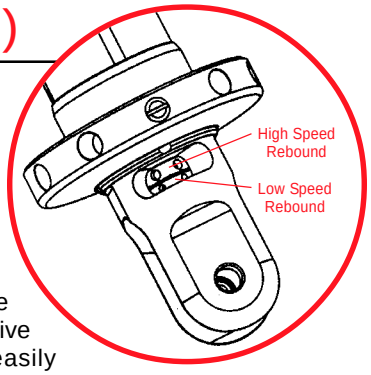
The flow rate through the assembly at full soft is equivalent to a Ø.070" bleed hole in the piston (in both directions) which provides for a very good adjustment range at very low shaft velocities.

This adjuster has been proven as a very powerful adjuster to affect critical aspects of chassis handling and driver comfort. Because this adjustment is packaged in the shaft, its response is extremely good even at high frequencies. Although its adjustment range is somewhat narrow, it does effect the most crucial area of the velocity range for handling.





8770 Shaft Adjuster (Available for IRL and CHAMP Cars, all other applications are special order only.)



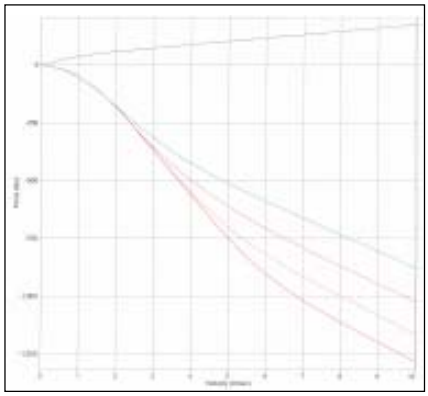
High-Speed Rebound Adjuster
(12 clicks of adjustment – 3+ in/sec dyno curve range)

The High-Speed Rebound(HSR) adjuster consists of a preload-able cage arrangement that engages the base shim of the rebound stack to prevent the amount at which it opens when fluid flows through the main damper piston. This can be tuned with different shims to achieve any number of curve shapes or any amount of range. The 12 steps of adjustment are very linear and have a positive detent feel. The High-Speed Rebound adjuster is easily distinguished by its gold color (used to designate both "high-speed" adjusters), radial adjustment pin holes, and its position on the end of the shaft. It also is distinguished with larger Ø.094 pin holes. Again, rebound damping is increased by turning the adjuster clockwise.

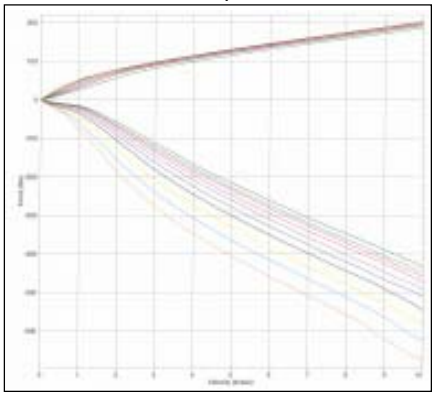
Low-Speed Rebound Adjuster
(55 clicks of adjustment – 0-2 in/sec dyno curve range)

The Low-Speed Rebound (LSR) adjuster consists of a needle/seat arrangement similar to the low-speed compression adjuster to allow flow to bypass the main piston. The LSR also manipulates the low-speed "nose" profile of the rebound curve. The Low-Speed Rebound adjuster is distinguished by its silver color and smaller Ø.062 radial holes and is found adjacent to the high-speed rebound knob. Low-speed rebound damping, as with the other adjusters, is increased by turning the adjuster clockwise.

High Speed



Low Speed



8900 Series Motorcycle Damper

Compare the following features to any other shock and you'll find that Penske Shocks are the best shocks available to the serious racer.

- The 8900 Series shock is completely **owner rebuildable** and **revalvable** if desired, resulting in fewer costly and timely service calls to the shop.
- Remote/Integral reservoir contains **increased** nitrogen volume for more consistent damping over a long race. **A floating piston** separates the nitrogen from the oil, rather than a bladder type device that can fail.
- Fully CNC machined 7075-T6 aluminum construction. Hard anodized finish, making the unit both **light weight** and **strong**.
- **Heavy duty** 5/8" diameter chrome plated chrome-moly shaft.
- **High quality** spring steel valve shims make up the main piston valving, which can be changed by the owner to **customize** the damping characteristics of the shock.
- Adjustable spring pre-load.
- The **best** spring available - matched to your weight.
- 35 click rebound adjuster for **extra fine** rebound settings.
- **Low friction / stiction** shaft bearing and high quality seals and wiper to keep out dirt.
- Adjustable length eyelet, **maximize** rear ride height without removing the shock from the motorcycle.

Shocks available for many popular applications.

BUELL **H-D** **KAWASAKI** **YAMAHA**

DUCATI **HONDA** **SUZUKI**

Please call for additional information pertaining to specific models.

Three Options are Available for Compression Adjustment

8100

6 click range. Proven performance.

(See page 15 for additional information)

8660

20 click range. Step-up to a smoother ride.

8760

Independent high and low speed compression adjustment.

(See page 15 for addtional information)

Fork Piston Kit

Available for any 20mm Cartridge Fork

Special Projects and Engineering

Penske Racing Shocks offers a very unique service of custom design and manufacturing for applications that are of a specialized nature. We provide custom designs for every aspect of modern dampers.

We will assign a project engineer to manage the complete design. Our engineering staff will work with you from the conception, detail design and manufacturing through the final assembly of the dampers. Special arrangements can also be made to attend track testing.

Penske Racing Shocks has a standard confidentiality agreement that can be exercised if needed. Please call for information, terms, and conditions for special projects and engineering.

Daimler-Chrysler Corporation
Ford Motor Company
General Motors
Harley-Davidson Inc.
Jordan Grand Prix
McLaren International
Medical Advancements
Military Applications
Panoz Motorsports
Renault F1
Williams Grand Prix Engineering

Services

SHOCK SERVICE
Complete shock service including a complete oil change, replacement of all o-rings and seals, a thorough inspection of all the adjusters and a dyno check.

SHOCK REBUILD SERVICE
Complete shock rebuilding service includes an initial estimation of damaged parts to be replaced. The customer will be advised of the price before any service is done. A complete oil change is performed, replacement of all o-rings and seals and a thorough inspection of all adjusters and a dyno check.

SHOCK REVALVE SERVICE
Revalving service includes replacement of existing shim stacks with new ones. Our technicians are available to offer recommendations for certain tracks and handling characteristics that are needed.

SHOCK CLASSES
Individualized seminars are conducted at Penske Racing Shocks and customized to meet your specific needs. Classes may include instructions on assembling/disassembling, revalving, and servicing of your shocks. We will also evaluate track setups for your car and dyno information.

SHOCK DYNO SERVICE
The dyno service is an excellent way of tracking any inconsistencies in a shock which may arise from exhausted parts or improperly maintained shocks. The dyno service is also useful when looking for the ideal track setup, where the shocks can be dyno tested before and after a revalve service showing their new characteristics. Every customer will receive a personalized dyno sheet showing the shock's characteristics throughout the adjustment range.

SHOCK TESTING SERVICE
Contract one of our technical representatives for advice, support, and service of your shocks at your track test.

Accessories

Shock Oil


High psi Inflation Unit


Valve Kits


Body Clamp


Overflow Ring


Bump Rubbers


Piston Kits


Shaft Bearing Wrenches

PART NO.	DESCRIPTION
AC-OIL25Q	Oil, Litre, 2.5 Weight
AC-OIL50Q	Oil, Litre, 5.0 Weight
BR-28	Bump Rubber, 28 gram, (Red)
BR-32	Bump Rubber, 32 gram, (Yellow)
BR-38	Bump Rubber, 38 gram, (Black)
IU-08	Inflation Valve, T-Handle
KT-VW	Shim Kit (AA, A-F) and Seals (8 ea)
KT-VW625	Shim Kit (AA, A-E) .625 ID (560 Total)
KT-SHIMS	Standard Shim Kit (560 Total)
KT-STVW	Shim Kit (A-E) and Seals (4 ea)
KT-VWVDP	VDP Shim Kit
KT-73RBCV	Rebound Control Valve Kit (4)
KT-75CO_*	Coilover Kit, (5" or 7")
KT-DLPI5	Digressive /Linear Piston Kit, (4)
KT-DDPI5	Double Digressive Piston Kit, (4)
KT-DLDDPI5	D/L & D/D Piston Kit, (4 ea)
KT-PIBLOWOFF	Digressive Blowoff Piston Kit (4) w/shims
KT-VB55	Variable Bleed Piston Kit (4) w/jets
KT-VDPPI5	VDP Piston Kit (4) w/shims
KT-VDPLPI5	VDP / Linear Piston Kit (4) w/shims
TL-45RNG	Overflow Ring, 45mm
TL-55RNG	Overflow Ring, 55mm
TL-73BDWRENCH	Body Wrench
TL-73BDSLEEVE	Body Sleeve, 55mm
TL-73INS	Base Valve Installation Tool
TL-76W	8760 Bearing Wrench
TL-75INFL	Short Track Inflation Tool, Sealed
TL-COMPUNIT IU-08 IU-16	Complete Inflation Unit T-Handle Gauge
TL-BDCL	Body Clamp
TL-SHP	Shaft End Plug
TL-STRNG	Steel Body Overflow Ring

*** Incomplete Part Number**

Apparel


Denim Shirt


Sweatshirt


Red and White Polo Shirts

T-Shirt

Hat

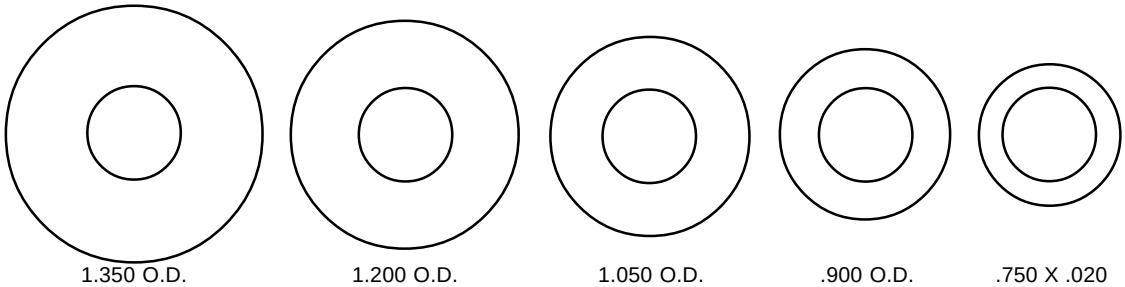
PART NO.	DESCRIPTION
AP-APRON	Apron
AP-ATS___*	Ash T-Shirt (SM, MD, LG, XL, 2XL, 3XL)
AP-BHAT	Black Hat (FlexFit)
AP-WPOLO___*	White Polo Shirt (SM, MD, LG, XL, 2XL)
AP-RPOLO___*	Red Polo Shirt (SM, MD, LG, XL, 2XL)
AP-GSS___*	Sweatshirt (MD, LG, XL, 2XL)
AP-DEN___*	Blue Denim Shirt (SM, MD, LG, XL, 2XL)

*** Incomplete Part Number**

Valving & Valve Stacks

When referring to shock valving, (ex: A/B), (A) refers to the compression valve stack and (B) refers to the rebound valve stack.

Standard Valve Stack



1.350 O.D. | 1.200 O.D. | 1.050 O.D. | .900 O.D. | .750 X .020

VALVE STACKS

.500 ID Part #	.625 ID Part #	Stack
VS-AA	**VS-AA6**	**AA**
VS-AAP	VS-AAP6	AA+
VS-AM	VS-AM6	A-
VS-A	**VS-A6**	**A**
VS-AP	VS-AP6	A+
VS-BM	VS-BM6	B-
VS-B	**VS-B6**	**B**
VS-BP	VS-BP6	B+
VS-CM	VS-CM6	C-
VS-C	**VS-6C**	**C**
VS-CP	VS-CP6	C+
VS-DM	VS-DM6	D-
VS-D	**VS-D6**	**D**
VS-DP	VS-DP6	D+
VS-EM	VS-EM6	E-
VS-E	**VS-E6**	**E**
VS-EP	VS-EP6	E+
VS-FM	VS-FM6	F-
VS-F	**VS-F6**	**F**

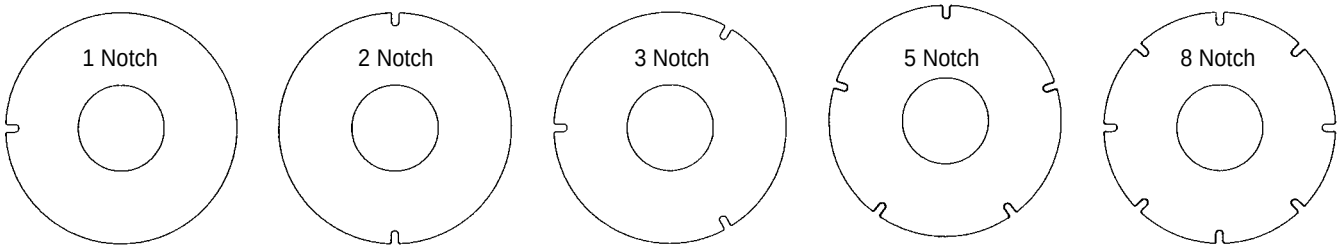
RING SHIMS

Part #	Size
VW-135010-1200	1.350 x .010
VW-135012-1200	1.350 x .012
VW-135020-1200	1.350 x .020
VW-147512-1350	1.475 x .012
VW-147520-1350	1.475 x .020

SHIMS

.500 ID Part #	.625 ID Part #	Size	.500 ID Part #	.625 ID Part #	Size
VW-75004	VW-75004-625	.750 X .004	VW-120010	VW-120010-625	1.200 X .010
VW-75006	VW-75006-625	.750 X .006	VW-120012	VW-120012-625	1.200 X .012
VW-75008	VW-75008-625	.750 X .008	VW-120015	VW-120015-625	1.200 X .015
VW-75010	VW-75010-625	.750 X .010	VW-120020	VW-120020-625	1.200 X .020
VW-75012	VW-75012-625	.750 X .012	VW-123504	N/A	1.235 X .004
VW-75015	VW-75015-625	.750 X .015	VW-123506	N/A	1.235 X .006
VW-75020	VW-75020-625	.750 X .020	VW-123508	N/A	1.235 X .008
VW-90004	VW-90004-625	.900 X .004	VW-123510	N/A	1.235 X .010
VW-90006	VW-90006-625	.900 X .006	VW-123512	N/A	1.235 X .012
VW-90008	VW-90008-625	.900 X .008	VW-123515	N/A	1.235 X .015
VW-90010	VW-90010-625	.900 X .010	VW-135004	VW-135004-625	1.350 X .004
VW-90012	VW-90012-625	.900 X .012	VW-135006	VW-135006-625	1.350 X .006
VW-90015	VW-90015-625	.900 X .015	VW-135008	VW-135008-625	1.350 X .008
VW-90020	N/A	.900 X .020	VW-135010	VW-135010-625	1.350 X .010
VW-105004	VW-105004-625	1.050 X .004	VW-135012	VW-135012-625	1.350 X .012
VW-105006	VW-105006-625	1.050 X .006	VW-135015	VW-135015-625	1.350 X .015
VW-105008	VW-105008-625	1.050 X .008	VW-135020	VW-135020-625	1.350 X .020
VW-105010	VW-105010-625	1.050 X .010	VW-147504	VW-147504-625	1.475 X .004
VW-105012	VW-105012-625	1.050 X .012	VW-147506	VW-147506-625	1.475 X .006
VW-105015	VW-105015-625	1.050 X .015	VW-147508	VW-147508-625	1.475 X .008
VW-105020	N/A	1.050 X .020	VW-147510	VW-147510-625	1.475 X .010
VW-120004	VW-120004-625	1.200 X .004	VW-147512	VW-147512-625	1.475 X .012
VW-120006	VW-120006-625	1.200 X .006	VW-147515	VW-147515-625	1.475 X .015
VW-120008	VW-120008-625	1.200 X .008	VW-147520	VW-147520-625	1.475 X .020

Bleed Shims (for VDP and Digressive Pistons)



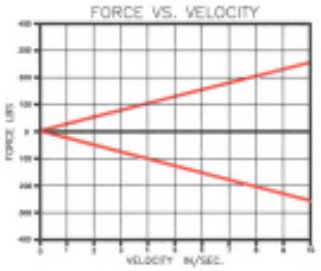
1.350 Diameter

.004	VW-135004-1N	.004	VW-135004-2N	.004	VW-135004-3N	.004	VW-135004-5N	.004	VW-135004-8N
.006	VW-135006-1N	.006	VW-135006-2N	.006	VW-135006-3N	.006	VW-135006-5N	.006	VW-135006-8N
.008	N/A	.008	VW-135008-2N	.008	VW-135008-3N	.008	VW-135008-5N	.008	VW-135008-8N

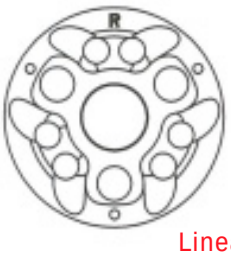
1.475 Diameter

.004	N/A	.004	VW-147504-2N	.004	N/A	.004	VW-147504-5N	.004	VW-147504-8N
.006	N/A	.006	VW-147506-2N	.006	N/A	.006	VW-147506-5N	.004	VW-147506-8N
.008	N/A	.008	VW-147508-2N	.008	N/A	.008	VW-147508-5N	.008	VW-147508-8N

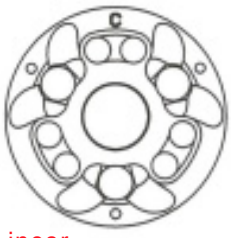
Pistons



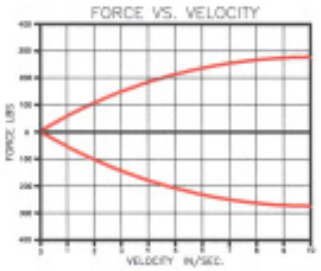
Compression Face

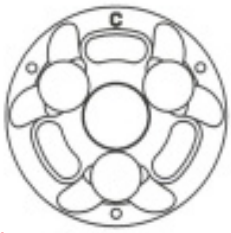


Rebound Face

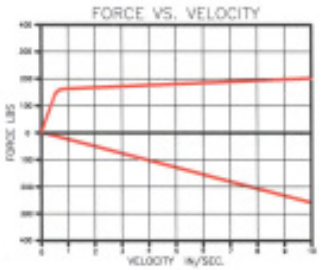


Linear/Linear

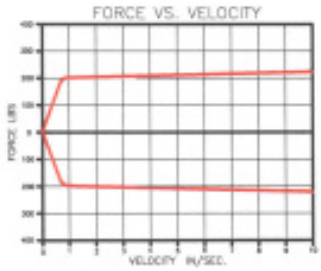




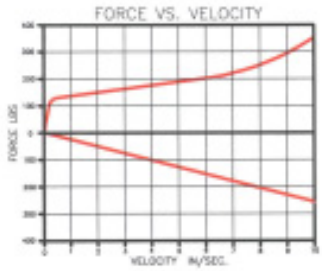
High Flow



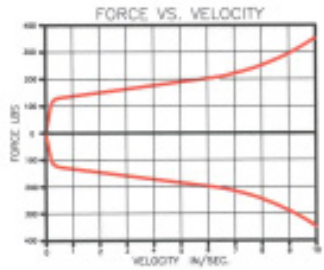
Digressive/Linear



Digressive/Digressive



Velocity Dependent/Linear

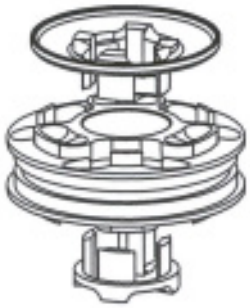


Velocity Dependent/Velocity Dependent

Digressive Blow Off

This two stage piston combines the low shaft speed characteristics of a linear piston with the blow off characteristic of a digressive piston at higher shaft speeds. Both parts of the curve are independently tunable.

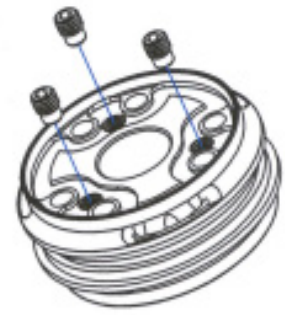
COMPRESSION

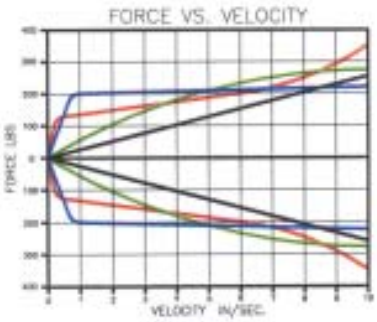


REBOUND

Variable Bleed

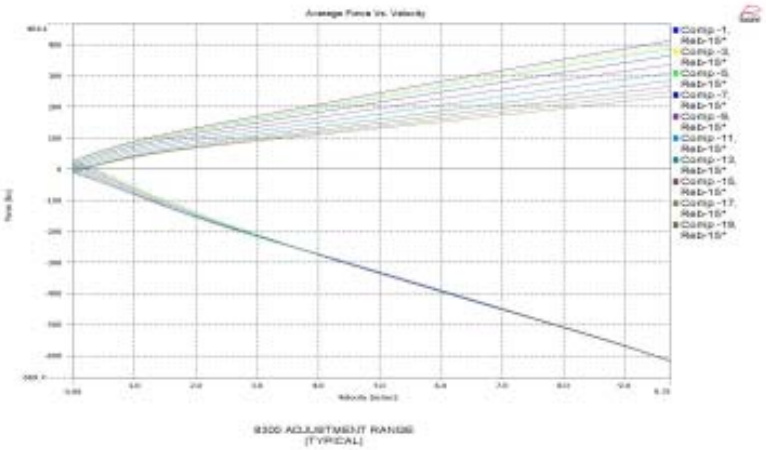
The Variable Bleed Piston offers the user more versatility than any other piston in our range. The piston can produce curves like those found on linear, digressive and VDP pistons and offers a very flexible way of controlling bleed.





8300 Series Shock (available in 2007)

- **Sportscar**
- **Motorcycle**
- **Drag Racing**
- **Short Track**
  Dirt and Asphalt
- **ATV**



Penske Racing Shocks announces the new 8300 series damper. Based on the ever popular and successful 8100 series, the 8300 provides new dimensions of adjustability and versatility to the professional racer and the high-end aftermarket customer.

Its modular design allows the use of piggybacks where remote versions are not desirable or feasible. A new coarse Acme thread body has been implemented for greater ease of spring preload adjustment and gives added durability in harsh environments.

The new compression adjuster features a new adjustable parabolic needle bleed bypass of a conventional shim stack and piston carried over from the 8760 and 8770 series dampers. This results in 16 clicks of adjustment with enhanced linear steps between settings. Additionally, the compression adjuster housing can be configured with a standard hose or an optional banjo fitting hose for added flexibility in installation.

As the latest offering from Penske Racing Shocks, the new 8300 Series damper sets the standard in entry-level, double-adjustable shock absorbers in terms of performance, quality, and value.

NEW PRODUCT

" For Those Who Demand The Very Best! "

Lightweight	**Dyno Tested**	**Single Adjustable**
Consistent Performance	**Owner Serviceable**	**Double Adjustable**
Built to Last	**Owner Revalvable**	**Triple Adjustable**
All Machined Parts	**Owner Rebuildable**	**4-Way Adjustable**
Aerospace Tolerances	**Track Support**	**Update at any Time**
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Completely Hand Built	**Extensive Manuals**	**Technical Phone Support**
No Castings	**Dealers Worldwide**	**Made in The U.S.A.**

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