



Spax Racing Shock Absorbers

Spax patented on car adjustable shock absorbers and have been supplying upgraded suspension to Manufacturers, Race Teams, Restorers and Enthusiasts since the 1960's. Our global network of OEM's, dealers and specialist mechanics supply on-car adjustable dampers to upgrade original equipment and help accurately tune suspension, allowing our customers to drive with increased confidence on the roads, and win on the track.

Aluminium or Steel TrakSPAX; Competition Coilover Dampers

TrakSPAX competition dampers provide proven performance, exceptional stroke to length ratio, ease of use and tremendous value. Our designers have produced a range of tarmac racing shock absorbers which are available in either Aircraft Grade Aluminium or Steel. TrakSPAX can be configured as either Single or Double Adjustable (Bump and Rebound settings), with quick and accurate on car adjustment and a customer specified Single Adjustable ratio which our technicians can alter on damper service / rebuild.

The Aircraft Grade Aluminium Bodied model gives excellent weight savings over traditional steel bodied dampers, although we retain Steel Body provision for those Historic Race Series where regulations demand authentic shocks.

Incorporating both the bump and rebound control into our valve block enabled us to produce a very compact damper and eliminated the need to accommodate the bump adjuster in an external canister. This design also provides extended amounts of stroke for relative damper length.

The positive pressure system used on the TrakSPAX allows the damper to operate more effectively than many of its high pressure gas competitors and each damper is individually calibrated for absolute performance on our in-house factory Dyno.

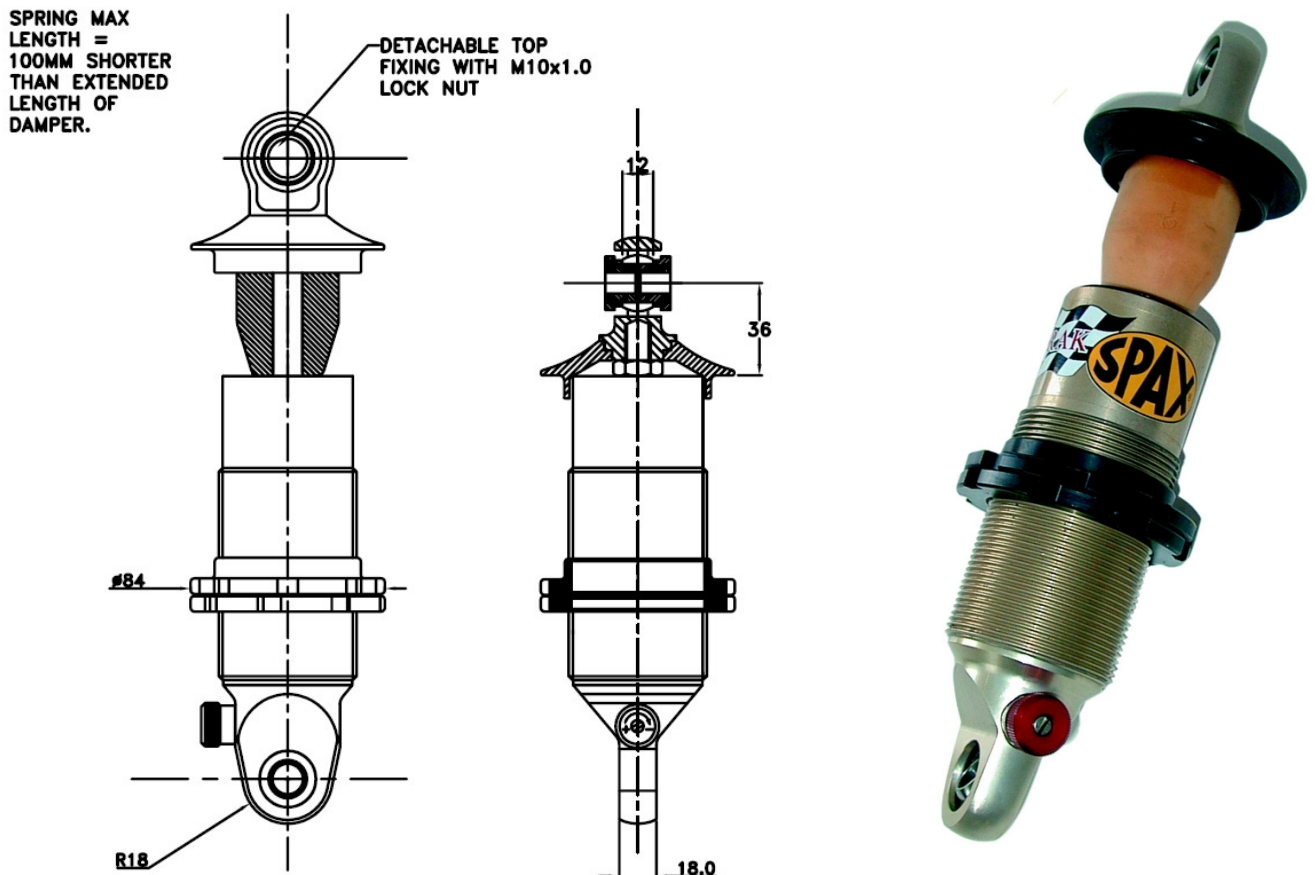




Aluminium TrakSPAX

The Aluminium TrakSPAX range is split into two family groups: the Single adjustable and the Double adjustable (SA and DA).

The Single Adjustable (SA) Aluminium TrakSPAX Damper has a single body mounted adjuster knob with 28 Points of adjustment, which alters both the bump and rebound damping together. The bump to rebound ratio (chosen by the Customer), can be altered by factory technicians when the shocks are serviced / rebuilt.



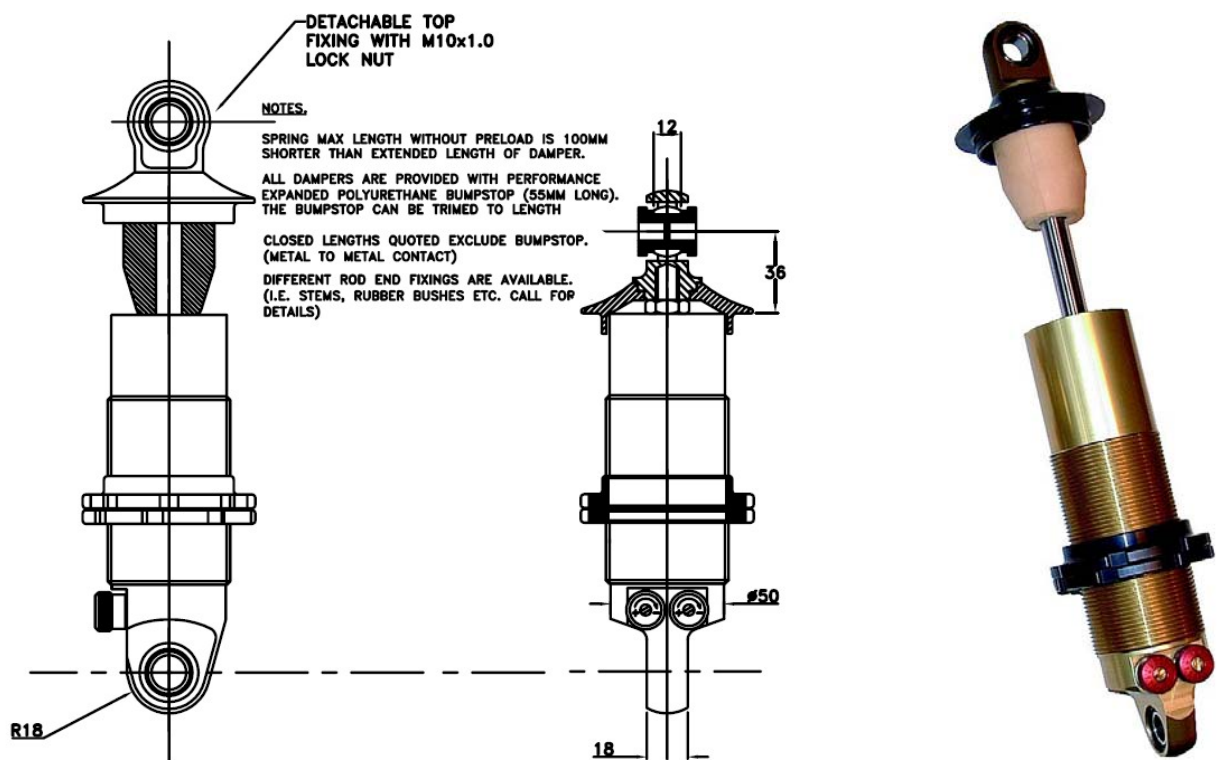
	Feature	Benefit
✓	On Car 28 Stage damping Adjustment (Bump & Rebound)	Precise Suspension Tuning to Suit Driving Styles & Track Conditions
✓	CNC Machined Aircraft Grade Aluminium Body	Ultra Light Weight Improves Unsprung Weight and Handling
✓	Individually Hand Built & Calibrated	Ultimate Performance, Quality & Consistency
✓	Fully Computer Dyno Tested	Quality and Performance Assurance
✓	Exceptionally High Stroke to Length Ratio	Greater Flexibility of Fitting Locations & of Ride Height
✓	Proven Low Stiction Seal System	Long Damper Life Without Leakage and Improved Low Speed Damper Performance.
✓	Adjustable spring platform heights	Easy On-Car Ride Height and Corner Weight Adjustment
✓	Can be fitted upside down	Allows Lower Un-Damped Mass

Please select your Single Adjustable Aluminium TrakSPAX from the options given below:-

Part Number	Open Length inches	Closed Length inches	Stroke inches	Spring Thread inches	Open Length mm	Closed Length mm	Stroke mm	Spring Thread mm	Max. Spring Length inches	Price each incl. VAT
SA70/900	9.00	7.00	2.00	2.56	229	178	51	65	5	374.99
SA70/950	9.50	7.00	2.50	2.56	241	178	64	65	6	374.99
SA75/975	9.75	7.50	2.25	2.56	248	191	57	65	6	374.99
SA75/102	10.25	7.50	2.75	2.95	260	191	70	75	6	374.99
SA75/105	10.50	7.50	3.00	2.95	267	191	76	75	7	374.99
SA80/110	11.00	8.00	3.00	2.95	279	203	76	75	7	374.99
SA80/115	11.50	8.00	3.50	3.35	292	203	89	85	8	374.99
SA90/117	11.75	9.00	2.75	3.35	298	229	70	85	8	374.99
SA90/120	12.00	9.00	3.00	3.35	305	229	76	85	8	374.99
SA90/122	12.25	9.00	3.25	3.74	311	229	83	95	8	374.99
SA90/125	12.50	9.00	3.50	3.74	318	229	89	95	9	374.99
SA90/127	12.75	9.00	3.75	3.74	324	229	95	95	9	374.99
SA90/130	13.00	9.00	4.00	3.74	330	229	102	95	9	374.99
SA90/132	13.25	9.00	4.25	3.74	337	229	108	95	9	374.99
SA90/135	13.50	9.00	4.50	3.74	343	229	114	95	10	374.99
SA100/137	13.75	10.00	3.75	3.74	349	254	95	95	10	374.99
SA100/140	14.00	10.00	4.00	3.74	356	254	102	95	10	374.99
SA100/142	14.25	10.00	4.25	4.13	362	254	108	105	10	374.99
SA100/145	14.50	10.00	4.50	4.13	368	254	114	105	11	374.99
SA100/150	15.00	10.00	5.00	4.13	381	254	127	105	11	374.99
SA100/155	15.50	10.00	5.50	4.13	394	254	140	105	12	374.99
SA120/155	15.50	12.00	3.50	4.72	394	305	89	120	12	374.99
SA120/160	16.00	12.00	4.00	4.72	406	305	102	120	12	374.99
SA120/165	16.50	12.00	4.50	4.72	419	305	114	120	13	374.99
SA120/170	17.00	12.00	5.00	4.72	432	305	127	120	13	374.99
SA120/175	17.50	12.00	5.50	4.72	445	305	140	120	14	374.99
SA120/180	18.00	12.00	6.00	4.72	457	305	152	120	14	374.99
SA120/185	18.50	12.00	6.50	4.72	470	305	165	120	15	374.99
SA120/190	19.00	12.00	7.00	4.72	483	305	178	120	15	374.99
SA120/195	19.50	12.00	7.50	4.72	495	305	191	120	16	374.99

Double Adjustable (DA) Aluminium TrakSPAX Dampers have two easily accessible body mounted adjuster knobs allowing 784 combinations for damping forces (28 for each of Bump and Rebound). Bump and rebound adjustments are 100% independent of each other, giving a significant performance and set-up advantages over many other so called double adjustable dampers (where bump and rebound adjustment are not truly independent).

Our 'valve block' design allows for production of a compact damper and has eliminated the need to accommodate the bump adjuster in an external canister, this compact design allows the damper to have excellent amounts of stroke for relative damper length.



Please select your Double Adjustable Aluminium TrakSPAX from the options below:-

Part Number	Open Length inches	Closed Length inches	Stroke inches	Spring Thread inches	Open Length mm	Closed Length mm	Stroke mm	Spring Thread mm	Max. Spring Length inches	Price each incl. VAT
DA75/975	9.75	7.50	2.25	2.56	248	191	57	65	6	429.98
DA80/107	10.75	8.00	2.75	2.95	273	203	70	75	7	429.98
DA80/110	11.00	8.00	3.00	2.95	279	203	76	75	7	429.98
DA90/120	12.00	9.00	3.00	3.35	305	229	76	85	8	429.98
DA90/122	12.25	9.00	3.25	3.74	311	229	83	95	8	429.98
DA90/127	12.75	9.00	3.75	3.74	324	229	95	95	9	429.98
DA100/137	13.75	10.00	3.75	3.74	349	254	95	95	10	429.98
DA100/140	14.00	10.00	4.00	3.74	356	254	102	95	10	429.98
DA100/142	14.25	10.00	4.25	4.13	362	254	108	105	10	429.98
DA100/145	14.50	10.00	4.50	4.13	368	254	114	105	11	429.98
DA100/150	15.00	10.00	5.00	4.13	381	254	127	105	11	429.98
DA120/155	15.50	12.00	3.50	4.72	394	305	89	120	12	429.98
DA120/160	16.00	12.00	4.00	4.72	406	305	102	120	12	429.98
DA120/165	16.50	12.00	4.50	4.72	419	305	114	120	13	429.98
DA120/170	17.00	12.00	5.00	4.72	432	305	127	120	13	429.98
DA120/175	17.50	12.00	5.50	4.72	445	305	140	120	14	429.98
DA120/180	18.00	12.00	6.00	4.72	457	305	152	120	14	429.98
DA120/185	18.50	12.00	6.50	4.72	470	305	165	120	15	429.98
DA120/190	19.00	12.00	7.00	4.72	483	305	178	120	15	429.98

Double Adjustable Steel TrakSPAX

Our Aluminium TrakSPAX offer customers the best quality race prepared adjustable competition set-up available from Spax. Honed with years of racing pedigree TrakSPAX has become synonymous with a precise, tuned, suspension configuration. The modern TrakSPAX are the ideal, cost effective, solution for track use, however it became evident that many customers require Steel bodied dampers to meet historic race regulations. It is also evident that those customers with older cars require a wide range of damper body sizes and end fitment options. As a result, SPAX produce ALL STEEL Double Adjustable TrakSPAX competition dampers.

All steel TrakSPAX have two easily accessible adjuster knobs mounted on the lower body. These allow quick, accurate, 100% independent bump and rebound adjustment. All the internal components are common to the race proven Aluminium TrakSPAX range with all the latest developments. Incorporating both bump and rebound control within the 'valve block' has allowed SPAX to produce a very compact damper eliminating the need for an external canister.

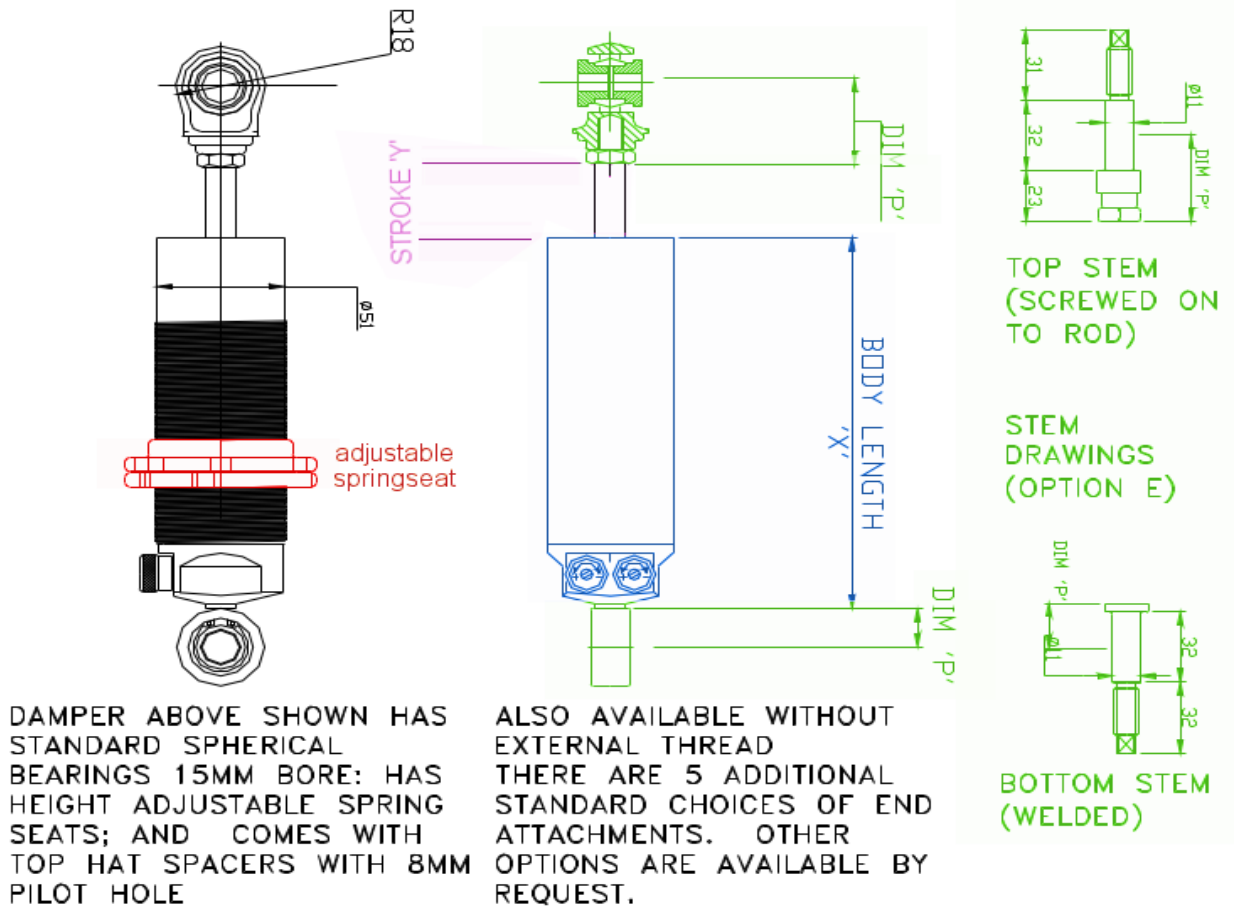
The Positive pressure system used on all current generation TrakSPAX dampers allows the shocks to operate without gas pressure. The absence of gas pressure has the following advantages over high gas pressured mono tubes:

- ◆ Increased sensitivity of the shock absorber (decreases the force required to initiate piston movements).
- ◆ Allows the use of stiffer springs due to zero nose force.
- ◆ Does not affect the ride height due to gas pressure.
- ◆ Is historic race regulation friendly (steel body, no remote canister)

Key Features and Benefits

	<i>Feature</i>	<i>Benefit</i>
✓	100% Independent Bump & Rebound Adjustment (DA)	Optimum Damper Settings are Easier & Quicker to Obtain: Precise Suspension Tuning to Suit Driving Styles & Track Conditions
✓	Individually Hand Built & Calibrated	Ultimate Performance, Quality & Consistency
✓	Fully Computer Dyno Tested	Quality and Performance Assurance
✓	Fully Rebuild able by SPAX Technicians	Long and Economic Life
✓	Free calibration/ inspection service.	Peak Performance Guaranteed
✓	Exceptionally High Stroke to Length Ratio	Greater Flexibility of Fitting Locations & of Ride Height
✓	Induction hardened, ground and super finished piston rod	Long Damper Life
✓	Proven Low Stiction Seal System	Minimises Leakage and Improves Low Speed Damper Performance.
✓	High Quality 15mm Spherical Bearings or a Choice of Top / Bottom Fixings	Fits Widest Variety of Cars
✓	Adjustable Spring Platform Heights	Easy Ride Height and Corner Weight Adjustment
✓	Can be Fitted Upside-Down	Allows Lower Un-Damped Mass

Steel TrakSPAX Configuration



Designing a damper to create your TrakSPAX part number *(Please refer to drawing on page 2)*

There are 4 simple stages to designing your own steel racing damper. Please follow these stages in order, if you are looking to replace your existing shock absorber then you may find it useful to have it, off the car to take measurements, when specifying this up-rated, adjustable, replacement.

Stage 1:
Choose the top and bottom fixings required to fit the dampers to the car. The selections will form the second part of your TrakSPAX Part Number but this is the first decision to be made in specifying the part.

Stage 1 Part Number	Description	Length	Bore	Dim 'P'	
				Top	Bottom
A	Bonded Bush 10	25.4 mm (1")	9.6 mm (3/8")	32.0 mm	14.5 mm
B	Bonded Bush 14	31.8mm (1 1/4")	11.2 mm (7/16")	32.0 mm	14.5 mm
C	Bonded Bush 18	31.8mm (1 1/4")	12.8 mm (1/2")	32.0 mm	14.5 mm
D*	Spherical Bearing	12 mm	12.8 mm (1/2")	36.0 mm	17.5 mm
E	Stem (standard)	see Configuration Drawing on Page 2		39.0 mm	20.0 mm
F	Silent block Bush	28.0 mm	16 mm	39.0 mm	21.0 mm

*Note: option D (Spherical Bearings) are supplied with top hat spacers and fitted with a 15mm internal diameter bearing fitted with a removable 1/2" (12.7mm) sleeve. The top hats, when fitted, will make the damper 25.5mm wide and have an 8mm pilot hole that can be drilled to fit your fixing bolt.

Stage 2:
Select the body and stroke lengths you require

Part No.	Dim (X) (mm)	Stroke (Y) (mm)	Max Spring Length (Inches)	Damper size if fitted with DD Fixings mm (inch dims are approx.)			
				Closed Excl. Bump rubber		Open	
DAS900	128	48	4 ½"	181	7 ¼"	229	9"
DAS950	135	55	5"	188	7 ½"	243	9 ½"
DAS100	141	61	5 ½"	195	7 ¾"	255	10"
DAS105	146	66	6"	200	8"	265	10 ½"
DAS110	154	71	6 ½"	208	8 ¼"	278	11"
DAS115	161	76	7 "	215	8 ½"	290	11 ½"
DAS120	166	86	7 ½"	220	8 ¾"	305	12"
DAS125	171	91	8 "	225	9"	315	12 ½"
DAS130	176	96	8 ½"	230	9"	325	13"
DAS135	186	106	9 "	240	9 ½"	345	13 ½"
DAS140	192	111	9 "	246	9 ¾"	356	14"
DAS145	199	116	10 "	253	10"	368	14 ½"
DAS150	206	126	10 ½"	260	10 ¼"	385	15"
DAS160	218	136	11 "	272	10 ¾"	407	16"
DAS170	231	151	12 ½"	285	11 ¼"	435	17"
DAS180	241	161	13 ½"	294	11 ¾"	455	18"
DAS190	256	176	15 ½"	310	12 ¼"	485	19"

Stage 3:
Select the spring seat fixings you require

Part Number	Spring Seat ID	
0	No spring seats required	
2	Fittings for 2.25" ID spring	
3	Fittings for 61mm ID spring	£15 chargeable option
4	Fittings for 2.5" ID spring	£15 chargeable option

Stage 4:
Select Colour Option

Stage 4 Part Number	Optional Extras	Standard Specification	
B	<i>Powder Coated in Yellow</i>	Powder Coated in Silver	£15 chargeable option
I	<i>Powder Coated in Black</i>	Powder Coated in Silver	£15 chargeable option
J	<i>Powder Coated in Red</i>	Powder Coated in Silver	£15 chargeable option

For Standard Single Adjustable TrakSPAX the price is £322.49, Inc VAT, per Damper
For Standard Double Adjustable TrakSPAX the price is £374.99, Inc VAT, per Damper
Plus a delivery charge.

The lead time is usually two weeks from confirmation of your order & payment

Now build up the part number based on the selections made in designing your TrakSPAX Damper

Body / Stroke Lengths	Top fixing	Bottom fixing	Spring ID Size	Colour
Stage 2 Choice	Stage 1 Choice	Stage 1 Choice	Stage 3 Choice	Stage 4 Choice

Example; if given a TrakSPAX Part Number **DAS120DD2B** we would build a Damper according to the specification below;

Stage 2 Part Number	Stage 1 TOP Part Number	Stage 1 BOTTOM Part Number	Stage 3 Part Number	Stage 4 Part Number
DAS120	D	D	2	B
Damper with Body Length = 166mm and Stroke Length = 86mm	Damper with Spherical Bearing type Top Fixing "P" Dim to measure open / closed lengths = 36mm (per drawing on page 2)	Damper with Spherical Bearing type Bottom Fixing "P" Dim to measure open / closed lengths = 17.5mm (per Stage 1 Table)	Damper fitted with top and bottom spring seats and caps for 2.25" ID Springs (per Stage 3 table)	Damper powder coated in Yellow, not silver (per Stage 4 table)

The standard for specifying dampers is to quote open and closed lengths and measure from the centre of the top fixing to the centre of the bottom fixing as fitted to car, hence our quoting "Dim P" lengths.

The above example would give a damper with a closed length (metal to metal no bumpstop fitted) of "X (Body Length) + P (Top fixing) + P (Bottom Fixing) = 166 + 36 + 17.5 = 219.5 mm"

And an Open length (fully extended) of "Closed length + Stroke (Y) = 219.5 + 86 = 305.5 mm"

Valving

Double adjustable (DA)

This range offers a very large range of adjustment and is suitable for most applications. We will valve TrakSPAX dampers using you corner weight and motion ratio information

Single Adjustable (SA)

As standard TrakSPAX are supplied as Double Adjustable - 100% independent Adjustment of Bump and Rebound. Some race series do not allow Double Adjustment and, on request, we can supply TrakSPAX dampers with Single Adjustment, setting valving with ratios of 1:1, 2:1, 3:1, 4:1, 5:1 and 6:1.

The majority of customers use the 3:1 setting and this is ideal for most track applications.

TrakSPAX After Sales Service.

TrakSPAX have been designed to be easily serviced, re-valved and repaired. We offer both standard turn around and a 3 day express service tailored to suit all time constraints and budgets

TrakSPAX FREE Inspection and Calibration Service

Within 1 year of purchase, the Customer will be entitled to **one free inspection and calibration service** on each damper purchased.

This will be a full inspection;

- We will check the damper's performance & physical condition;
- We will Dyno test the damper;

If required, we will re-calibrate the damper to its original settings;

- We will prepare (if required) a free written quote outlining any repairs or repair options required.

We require that the dampers be sent (with a rebuild voucher) to SPAX Performance Ltd, carriage paid. The dampers must be fully cleaned, springs removed, and separated from all other suspension components.

If we are required to carry out this work, an additional charge will be payable.

We will return of the dampers free of charge within mainland U.K. Our export sales team will be pleased to advise other carriage costs.