

The ultimate tuning



The ultimate choice.
The choice is simple.
When you are riding.
Which fits which.
All the champions.
A desire to win.



The ultimate choice

Improving your bike's suspension does more for overall performance than increasing your engine's horsepower. You will feel the difference in the first corner!

With a real world-class suspension you get better traction and handling. You can ride faster, more safely and in comfort.

Just ask any of the more than 80 world champions who won their titles on Öhlins shock absorbers. We guarantee they will agree. Good traction and handling are more important than extra horsepower that can only be used when you are aimed "straight ahead"!

Keep the balance

All our tests have shown fitting Öhlins shock absorbers to your bike will improve handling, but for the best results you have to do something with the front end as well.

The reason for this is quite simple. For the ultimate in suspension improvements, the front and rear of your bike must match!

When changing suspension components it is essential that you do not alter your bike's suspension geometry. This applies particularly to your bike's loaded ride height front and rear.

The ride height affects the weight distribution. The weight distribution the angle of the front fork. And the front fork angle affects the steering.

This can happen

If you fit a new shock absorber, with a fresh spring, your bike will almost certainly end up front-heavy if you have a worn front fork.

A high rear end a low front will give the front forks a steep angle. This results in a quick and slightly nervous steering, especially when braking hard. You may also feel a tendency of the bike to oversteer (the rear wheel loses traction first and the rear end breaks loose). This is not a good combination!

If you only fit new front fork springs

the result will be the opposite. A high front ride height will give a flat fork angle and slow, inaccurate steering. You may also feel understeer (the front wheel loses traction first and the front end "push" in corners). Again, not a good combination, but slightly better, at least at high speeds!

It is wise to check

Most bikes have front forks that will match the Öhlins shock absorbers perfectly. But if Öhlins front fork springs are available for your bike, this should be taken as a recommendation to please switch to new Öhlins springs.

On a few bikes a switch is absolutely necessary! Your Öhlins dealer will know which models require Öhlins fork springs.

It is important to remember that European superbike champion Anders Anderson and the rest of our test riders always test on brand-new bikes. If your bike is a couple of years old, it is wise to check that your bike's front fork and fork springs are still up to their original standards of handling and performance.

And please, do not forget the oil! Öhlins new front fork oil is available in three different viscosity especially formulated for conventional and cartridge front forks.

Öhlins new front fork oil radically reduces friction (essential on forks with large sweep areas) and will not fade even under the hardest use.

Winning concept

All Öhlins shock absorbers are based on Öhlins successful application of the "de Carbon" concept. The de Carbon concept means that the damping oil is placed under pressure by gas and separated from the gas by a floating piston.

This concept has many advantages. It prevents the risk of cavitation, which happens when the oil can not move "fast enough" and becomes hard as a rock (compare with an unsuccessful dive into water).

It offers better cooling, especially if the shock absorber has an external reservoir (the external reservoir is in fact an extension of the shock absorber and more oil, larger cooling areas improve performance and durability). Gives more consistent damping, regardless of the shock absorber's working temperature. And it makes the shock absorber last longer.

But there are two exceptions. Öhlins Type 36 and some extremely short models of Type 46 are emulsion type of shock absorbers (oil and gas mixed in the shock absorber), see "Two concepts three types".

More than 300 models

Öhlins manufactures more than 300 different shock absorber models, each model tailor-made for one specific bike.

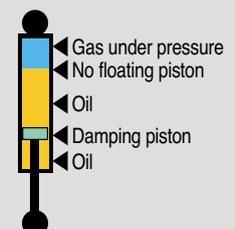
The basic set-up of each shock absorber model, both the design of the shim stacks and the calibration of the adjusters, is tested both on road and track. They are the results of true tests with your bike and not guesswork!

All Öhlins shock absorbers have one or several adjusters. The minimum is adjustable spring and the maximum number of adjusters you will find on the top-of-the-line models of Öhlins Type 36PRCLB, 46PRCLB and 46HRCLS.

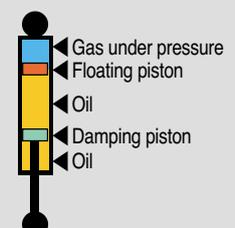
These shock absorbers feature a double-acting rebound/compression damping adjuster in the piston shaft, an independent compression damping adjuster in the external reser- ➔

Two concepts three types

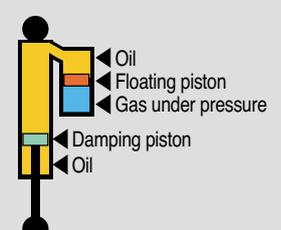
Emulsion type



Internal reservoir



External reservoir piggyback or on hose



The choice is simple

Choosing an Öhlins shock absorber is simple... because we have made the choice for you!

Based on your bike's performance, its price and space available we have designed a shock that we think suits it, both when it comes to price and performance.

Start by finding out which shock absorber fits your bike, see "Which fits which".

With the help of Öhlins new type system you can identify which type of shock absorber it is and see what kind of adjustment features it has.

Here are the keys:

Type

36, 46

Piston diameter in mm.

E

Emulsion type of shock absorber.

D

De Carbon type of shock absorber with internal reservoir in the main body.

P

De Carbon type of shock absorber with external "piggy back" reservoir.

H

De Carbon type of shock absorber

with hose mounted external reservoir.

W

Shock absorber delivered without spring.

K

Emulsion type of shock absorber for cruiser bikes.

Q

Progressive damping shock absorber with two pistons.

Features

C

Adjustable compression damping.

Adjuster wheel on the reservoir.

R

Adjustable rebound damping. Adjuster wheel on the piston shaft above the end eye.

S

Hose mounted hydraulic spring preload adjuster.

B

Integrated hydraulic spring preload adjuster.

Adjuster wheel on the adjuster.

L

Adjustable length.

Adjuster nuts above the end eye.

Type 36

36E



36D



New!

36K



Type 36P

36P



36PR



36PRCLB



Type 36H

36H



Type 46

46ER/DR



Type 46P

46ERS
46DRS/DRLS



46PRCW



46PRC
46PRCQ



46PRCL



46PRCLB



46PRCS



46PRCLS
Vertical



46PRCLS
Horizontal



Type 46H

46HR



46HRC



46HRCS



46HRCL



46HRCLS



Steering dampers

Street & RR



- ✓ Unique design.
- ✓ Oil under pressure avoids the problem of free play.
- ✓ Adjustable in 16 clicks.
- ✓ Available in four lengths / strokes.
- ✓ Can be mounted on the outside, on the inside of the fork leg and across the frame, behind the triple clamp.
- ✓ Kits are available to certain bikes.

MX & Enduro



- ✓ Mounted directly on the fork crown.
- ✓ Three damping systems.
- ✓ Base damping, in 16 steps.
- ✓ High speed damping, "cuts in" when the wheel is turned sharply.
- ✓ Side-sweep control, gives desired damping in sector 34 - 90°.
- ✓ Weld on tower.
- ✓ Fits almost every bike!

Front fork springs

Street, RR, MX & Enduro



- ✓ Designed to improve the performance of your standard front fork
- ✓ Give the right balance between your front fork and the shock absorber.
- ✓ Approximately 10% harder than the standard springs.
- ✓ Several rates to choose from for MX and Enduro bikes.
- ✓ Adds the final touch to your tuning.

Front forks

MX & Enduro racing



- ✓ Upside down (USD), cartridge type design.
- ✓ 46 mm inner steel legs with polished titanium nitride surface for lowest possible friction.
- ✓ External rebound-, compression damping adjusters.
- ✓ Fits straight on to the standard triple crowns.
- ✓ Available to the most popular MX and Enduro bikes.

Road & Track



New!

Superbike & RR



- ✓ Used by many top championship teams and riders, including champion Carl Fogarty.
- ✓ USD, cartridge type design.
- ✓ 46 mm inner steel legs with titanium nitride surface for lowest possible friction.
- ✓ External rebound-, compression damping and spring preload adjusters.
- ✓ **New!** Öhlins R&T fork. Same design as the S&R fork, but with seals that stand both road and track.
- ✓ 43 mm steel legs with titanium nitride surface.

Front fork fluids



- ✓ High performance fluid in three viscosity for all types of forks.
- ✓ Radically reduces friction.
- ✓ Essential on forks with large sweep areas.

voir, adjustable length and a clever little hydraulic adjuster for the spring preload.

Your own set-up

You can fine-tune the shock absorber with the adjusters.

You optimise it for your weight, your riding style and the road conditions. Compensate for extra load or a passenger with the spring adjuster. This means that you keep the balance that your bike was designed with.

If the shock absorbers bottom when you are riding with a heavy load on rough road, the trick is not to increase spring preload. That might cause your bike to ride high in the rear and have a negative effect on the steering, see "This can happen".

Instead you should increase compression damping with the adjuster in the external reservoir. This adjuster increases compression damping without changing rebound damping, see "When you are riding".

The double-acting rebound/compression damping adjuster in the piston shaft modifies the damping at a ratio of approximately 90% rebound, 10% compression. 10% effect on compression may seem like very little but feels like a lot.

Remember that the spring absorbs most of the load transferred during a compression stroke. And you need the 90% on rebound to stop the spring from extending too fast during the rebound stroke!

Riding flat out

Too much compression damping will give you a harsh ride as your bike "jumps" along the road.

With too much rebound damping your bike will have difficulties with several bumps in a row. The suspension will not extend fast enough between bumps, your bike will ride lower and lower and eventually the suspension will bottom.

By changing the length of the shock absorber you can effect the sensitivity of the steering without effecting anything else.

For flat-out race track performance, adjust your bike lower at the rear end. A nice amount of understeer makes you a lot happier than a lot of oversteer, especially if you end up in a corner a bit too fast!

Learning how to use the adjusters will take time but you will quickly appreciate them once you know the tricks. Even Valentino Rossi, Loris Capirossi and Carl Fogarty sometimes need a specialist!

Your own internal set-up is also possible. The Öhlins shock absorber is not a "disposable" shock absorber but one you can take apart, reshim, readjust and overhaul.

Precision is the difference

All Öhlins shock absorbers are designed to win races.

The ones you can buy are exactly the same as the ones we sell to top teams and riders. The set-up might be different and by all means there are prototypes around. Progress can not be stopped!

The concept of all Öhlins products is not a secret, it is precision. Precision gives superior control of the damping oil and is the key to our success. Precision also results in quality, a quality you can both see and feel.

For the ultimate in performance, Öhlins is the ultimate choice. □



When you are riding

To show you what is happening in a Öhlins shock absorber when you are riding we have chosen a type with a double-acting rebound/compression damping adjuster in the piston shaft and an independent compression damping adjuster in the external reservoir.

The principle illustrated here is the same for all types of Öhlins shock absorbers. Just disregard the adjusters that your shock absorber does not have and you can still understand how it works!

On a smooth road

When you are riding on a smooth road and the shock absorber is compressed slowly and only a little (low shaft speed and short stroke) the damping oil is forced only through the double-acting rebound/compression adjuster in the piston shaft, fig 1 flow 3.

The oil displaced by the piston shaft is forced through the independent compression damping adjuster out into the external reservoir, fig 2 flow 3.

The floating piston in the reservoir is forced to move, compressing the gas behind it further.

When the shock absorber extends the pressure behind the floating piston will force the oil through a one-way valve, past the compression adjuster and back into the shock absorber body, fig 3 flow 1 and 2.

The oil under the piston returns through the double-acting rebound/compression adjuster in the piston shaft, fig 4 flow 3.

Hitting a big bump

When you hit a big bump the shock absorber is compressed quickly and almost totally (high shaft speed and long stroke).

The oil can not be forced "fast enough" through just the valve in the piston shaft. The pressure in the shock absorber increases and opens the shim stack (thin steel washers stacked as a pyramid) covering the compression orifices in the piston, fig 1 flow 2.

Also, oil displaced by the piston shaft can not be forced "fast enough" through just the valve in the reservoir. The pressure increases and a shim stack, parallel to the valve, opens, fig 2 flow 1 and 2.

The floating piston is forced to move compressing the gas.

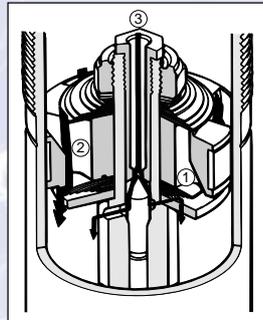
When the shock absorber extends, the floating piston will force the oil through the one-way valve back into the shock absorber body, fig 3 flow 1 and 2.

The pressure is still high in the shock absorber and the flow can not be forced "fast enough" through just the valve in the piston shaft. The shim stack covering the rebound orifices in the piston opens and the oil returns, fig 4 flow 1.

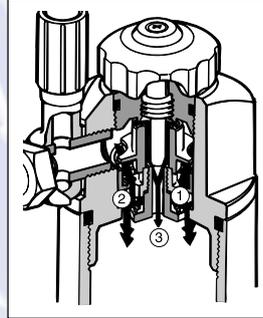
All are tailor made

By changing the quantity, diameter, and thickness of the shims in the stacks and by using different jets in the valves, your Öhlins shock absorber is tailor-made for your bike. □

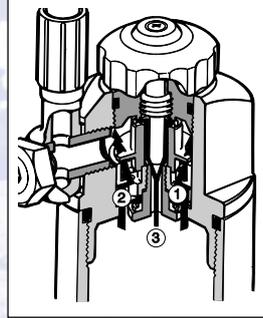
1.



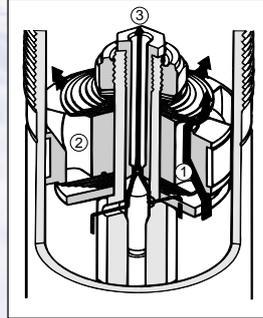
2.



3.



4.



Which fits which

There are tailor-made Öhlins shock absorbers available for the bikes in the list below.

Under "Type" you can see which shock fits your bike and if there is an "X" under "FF" there is also front fork springs available for it.

Brand, model Year Type FF

Street, RR & Off road

Brand, model	Year	Type	FF
APRILIA			
RS 250	1997	46HRCS	
RSV 1000 Mille	99	46PRCLS	
RSV 1000 SL Falco	2000	46PRC	
BIMOTA			
500 Vdue	97-98	46PRCL	
YB 9 Racing	97	46HRCL	
YB 4	88-92	46HRCLS	
YB 6/8/Dieci	88-94	46HRCLS	
DB 2/4	93-94	46HRCL	
SB 6/7	1994	46HRCL	
SB8R	99	46HRCL	
BMW			
R 50/5	73-	36P*	
R 60/5/6	73-	36P*	
F 650 Funduro	94-99	46DRS	
F 650 Funduro	94-99	46HRCS	
F 650 ST	97-99	46DRS	
R 75/6	73-	36P*	
K 75 (Not ABS)	84-95	46PRC	X
K 75 (ABS)	94-95	46HRCS	X
R 80 RT	77-84	36P*	
R 80/100 RT/RS	85-93	46HRCL	
R 80 G/S	81-88	46PRC	
R 80 GS	89-94	46DRS	
R 80/100 R	92-95	46DRS	
R 90/6/S	73-	36P*	
R 100/CS/RT/S	73-	36P*	
R 100 GS, PD	87-94	46DRS	
K 100 (ABS)	88-89	46HRCS	
K 100 RS	84-89	46PRC	X
K 100 RS	90-91	46HRCS	
K 100 RS (ABS)	90-93	46HRCS	
K 100 RT, LT	84-91	46PRC	X
K 100 RT, LT(ABS)	88-91	46HRCS	X
K 1	89-93	46HRCS	
K 1100 LT	92-93	46HRCS	
K 1100 RS	1993	46HRCS	
K 1100 LT/SE/RS	94-00	46PRCS	
K 1200 RS, front	97-00	36D	
K 1200 RS, rear	97-00	46HRCLS	
R 850/1100 R, front	96-00	46ER	
R 850/1100 R, rear	96-00	46DRLS	
R 1100 GS, front	94-00	46ER	
R 1100 GS, rear	94-00	46DRS	
R 1100 RS, front	93-00	46ER	
R 1100 RS, rear	93-00	46DR	
R 1100 RT, front	96-00	46ER	
R 1100 RT, rear	96-00	46DRLS	
R 1100 S, front	99-00	36PR	
R 1100 S, rear	99-00	46PRCS	
R 1200 C, front	98-00	36D	
R 1200 C, rear	98-00	46PRC	
DUCATI			
500 Pantah	78-84	36P*	
502	94-98	46PRC	
600 / 750 Monster	94-99	46HRC	
750 F1	86-88	46HRCS	
Montjuich	All	46HRCLS	
Santa Monica	All	46HRCLS	
851 / 888	89-93	46HRC	
851 / 888 (Racing)	89-93	46HRCL	
851 Biposto	90-93	46HRC	
851 (Racing)	89-93	46HRC	
888 S/B (Racing)	93-94	46HRCLS	
900 SD, Darmah,	78-84	36P*	
SS, Replica			
900 SS/SL	89-99	46PRCL	X
900 Monster	94-99	46HRC	
748/916/996	94-99	46PRC	X
748/916/996	94-99	46PRC	X
(Privaterr Racing)			
748/916/996 Biposto	95-99	46PRC	X
ST2/ST4	97-99	46HRCS	X
HARLEY-DAVIDSON			
XLH 883/1200	All	36E*	
FLHRC-1	1998	36K*	
HARRIS			
Magnum II	All	46HRC	
Magnum 4	1993	46HRC	
HONDA			
RS 125 R	92-93	46HRCL	
RS 125 R	95-97	46PRCL	
RS 250 R	90-94	46PRCL	
RS 250 R	95-97	46PRCL	
XR 250	88-95	46HRC	
FEZ 250 Foursight	98-99	36E	
NSR 250 R/RK	90-91	46HRCL	



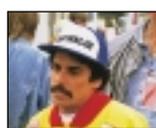
Brand, model	Year	Type	FF	Brand, model	Year	Type	FF	Brand, model	Year	Type	FF	Brand, model	Year	Type	FF
Bros / Hawk	88-89	46HRC		ZRX 1100	97-99	36P/36PRCLB*	X	Trophy 900/1200	94-95	46ERS		XS 1100S	78-84	36P*	
XR 400 R	96-00	46PRC		ZEPHYR 1100	92-96	36P/36PRCLB*	X	Trophy 900/1200	96-99	46ERS	X	FJ 1100	84-85	46ERS	
CB 400 Superfour	92-93	36P/36PRCLB		ZZ-R 1100	90-99	46HRCS	X	Super III	94-95		X	FJ 1200	86-90	46ERS	
CBR 600 F	87-90	46HRC		MOTO GUZZI				Tiger	93-99	46HRC	X	FJ 1200(ABS)	91-93	46ERS	X
CBR 600 F2	91-94	46HRC	X	850 Le Mans I-II	81-86	36P*		Speed Triple	94-98	46HRCS		XJR 1200/1300	95-00	36P/36PRCLB*	X
CBR 600 F3	95-96	46HRC	X	850 Le Mans III		36P*		595 Daytona/	97-99	46HRCLS	X	XJR 1200 (Racing)	95-00	36P/36PRCLB*	
CBR 600 Racing	97-99	46HRC	X	850 T5		36P*		Speed Triple				V-MAX	All	36P/36PRCLB*/36K*	
600 Hornet	98-99	46HRC	X	1000 Le Mans		36P*		Daytona	1993		X				
XR 600	88-90	46HRC		1000 SP II		36P*		Daytona	94-98	46HRCS					
XR 600 R	91-97	46PRC		SUZUKI				YAMAHA				MX & Enduro racing			
XL 600V Transalp	88-90	46ER		RGV 250	89-93	46HRC		TZ 125	1994	46PRC		HONDA			
XL 600V Transalp	91-96	46DR		RGV 250	1997	46PRCLS		TZ 125	1995	46PRC		CR 80	90-97	46HRC	
XL 650R	2000	46PRC		GS 250 S	1992	36P*		TZ 125	1996	46PRC		CR 125	94-00	46PRC	X
NX 650 Dominator	88-97	46DR		GS 400/L80	-84	36E*		YP 250 Majesty	98-00	36E		CR 250	93-00	46PRC	X
CB 750 Seventiffty	92-94	36P*		GSX 400E/F	77-84	36E*		TZ 250	92-95	46PRC		XR 250	88-99	46HRC	
CB 750F	80-84	36P*		GSX 400 S	1993	36P*		TZR 250R	91-93	46HRC		XR 400 R	96-00	46PRC	
CB 750KZ	79-84	36P*		IMPULS 400	94-96	36P/36PRCLB*		TZ 250	1995	46PRC		CR 500	91-98	46PRC	X
XR V 750	95-96	46HRCS		GS 500E	78-83	36E*		TZ 250	1997	46PRC		XR 600	88-90	46HRC	
VFR 750F	1986	46HRC		RG 500 Gamma	85-86	46HRCLS		TZR 250 (Japan)	89-90	46HRCL		XR 600 R	91-98	46PRC	
VFR 750 F	90-97	46HRCS	X	GSX 600 F	88-90	46HRC		TT 350	86-93	46HR		HUSABERG			
VFR 750R (RC30)	88-92	46HRC	X	GSX 600 F	98-99	46HRCS/46ERS	X	RD 350	79-82	46DR		Enduro	89-96	46PRC	
RC 30 (Racing)	88-92	46HRC	X	GSX-R 600	1992	46HRC		RD 350LC	83-88	46ER		Enduro	99	46PRCQ	
RC 45	94-97	46HRC/46HRC		GSX 600 R	97-99	46PRCLS	X	SRX 400	1990	46HRCL		MX	95-96	46PRC	
VFR 800 FI	98-99	46HRCS	X	RF 600 R	93-94	46HRC	X	SRX 400	-89	36P*		HUSQVARNA			
CB 900	79-84	36P/36PRCLB	X	GSF 600 Bandit	95-99	46HRC	X	SRX 400	80-84	36E*		125 CR/WR	93-00	46PRC	X
CBR 900 RR	92-99	46HRC	X	XF 650 Freewind	1997	46HRCS		XJ 400	77-84	36E*		250/360 CR/WR	93-96	46PRC	X
CBR 900 RR	2000	46PRCLS	X	DR 650 R/SE	90-95	46ER		XS 400/SE	91-	36P/36PRCLB*		Enduro 4-Stroke	1992	46PRC	
CB 1000 BIG	93-97	36P/36PRCLB	X	DR 650 SE	96-99	46PRCL		XJR 400	All	36E/36P*		610 TC	1992	46PRC	
CBR 1000F	87-88	46ERS		GS 650E/L	80-82	36E*		All	36E/36P*			4-STROKE	93-00	46PRC	
CBR 1000F	89-99	46HRCS		SV 650	1999	46HRCL	X	RD 500LC	84-86	46HRC		KAWASAKI			
VF 1000F	1984	46DRS		DR 750 BIG	88-89	46ER		XJ 550	80-84	36E*		KX 60	90-98	36H	
CBR 1100 XX	97-99	46HRCS	X	GS 750E/L	77-81	36P/36PRCLB*		FZR 600	89-93	46HRCL	X	KX 65	2000		
CBX 1000	78-81	36P*		GS 750E/S	79-84	36P/36PRCLB*		FZR 600 R	1994	46HRCL	X	KX 80/100	97-99	46PRC	
VTR 1000 F	97-99	46HRCS	X	GSX 750 (Nakend)	98-99	36P/36PRCLB*	X	FZR 600 R	95-96	46HRCL		KX 125	92-00	46PRC	X
XL 1000 V Varadero	1999	46HRCS		GSX 750ES/EF	83-	46ERS		FZR 600 R	94-95	46HRCL		KX 250	95-00	46PRC	X
X4	99-00	36K*		GSX 750F	89-92	46ERS		(Racing)				KDX 250	91-94	46PRC	
VTR 1000SP1	2000	46PRCLS		GSX 750 F	98-99	46HRCS/46ERS	X	YZF 600	96-97	46HRCL	X	KLX 250/300	97-98	46PRC	X
X11	2000	46DRS		GSX-R 750	85-87	46HRC		YZF 600 (Racing)	96-99	46HRCL		KX 500	89-99	46PRC	
CB 1100F	82-85	36P*		GSX-R 750W	88-95	46HRCL	X	R6	99-00	46PRCLS	X	KLX 650 R	93-99	46PRC	
CB 1100R	81-84	36P*		GSX-R 750	96-00	46HRCLS/PRCLS	X	XT 600 Z Tenere	84-90	46DR		KTM			
KAWASAKI				DR 800 Big	90-96	46ER		XT 600 E/K	90-97	46DR		125 SX	95-96	46PRC	
ZXR 400	91-93	46HRC		GS 850/L	77-83	36P*		XJ 600 Diversion	91-00	46HRC	X	125 EXC	95-96	46PRC	
Z 400J	80-85	36P/36PRCLB*		RF 900 R	94-96	46HRCS	X	SRX 600	1990	46HRCL		125 SX	98-99	46PRCQ	
ZRX 400	94-96	36P/36PRCLB*		GS 1000	79-82	36P*		SRX 600	-89	36P*		250/300	1994	46PRC	
ZEPHYR 400/750	91-96	36P/36PRCLB*		GS 1000E/S/HL	79-82	36P/36PRCLB*		XS 650/SE	75-84	36E*		250/300 SX/EXC	1995	46PRC	
ER-5	97-99	36P*		GS 1000G	79-82	36P*		1996 46HRCL				250/360 SX/EXC	1996	46PRC	
Z 500/GP	80-85	36P/36PRCLB*		TL 1000 S	97-99	46HRCW	X	TT 600	83-93	46HRC		250 SX	98-99	46PRCQ	
KLE 500	91-99	46DR		TL 1000 R	98-99	46PRC		TT 600S (Belgarda)	93-96	46HRC		380 SX	98-99	46PRCQ	
GPZ 600R	85-87	46ERS		GSX 1100	81-82	36P*		TT 600R	98-99	46HRC		440/500/550	92-95	46PRC	
ZZ-R 600	90-95	46HRC	X	GSX 1100	79-83	36P/36PRCLB*		XTZ 660	91-98	46PRC		550 M/XC	1996	46PRC	
ZX-6 R	95-97	46HRC	X	GSX 1100 Katana	81-83	36P/36PRCLB*		SZR 660	96-97	46HRCL		600 LC 4	88-92	46PRC	
ZX-6 R	98-99	46PRCS	X	GSX 1100ES/EF	84-87	46ERS		FZS 600 Fazer	1998	46HRC	X	620 SX/SC	1996	46PRC	
ZX-6 R	2000	46PRCLS	X	GSX 1100F	88-93	46ERS		FZ 750	85-91	46HRC		LC 4	93-95	46PRC	
KL 650 Tengai	89-94	46DR		GSX-R 1100	86-88	46HRC		FZR 750	87-88	46HRC		SUZUKI			
KLX 650 R	93-99	46PRC		GSX-R 1100	1989	46HRC	X	FZR 750R	89-91	46HRCS		RM 125	93-00	46PRC	X
Z 750GP	82-86	36P/36PRCLB*		GSX-R 1100	90-92	46HRC	X	YZF 750 R/SP	93-94	46HRCL	X	DR 350	90-99	46HRC	X
Z 750L/Sport	82-85	36P/36PRCLB*		GSX-R 1100W	93-94	46HRC	X	(Street)				DR Z400	2000	46PRC	
GPZ 750	83-84	46ERS		GSX-R 1100W	1995	46HRC	X	YZF 750 SP	93-97	46HRCLS		YAMAHA			
GPX 750R	87-88	46ERS	X	GSX-R 1100W	96-98	46HRC		(Racing)				PW 50	36E		
ZXR 750	89-90	46HRC	X	GSF 1200 Bandit	96-99	46HRCS	X	R7	95-97	46HRC		YZ 80	93-99	46PRC	
ZXR 750	91-95	46HRC		GSF 1200 Bandit	97-99	46HRCS	X	YZF 750 R	99-00	46PRCLS		YZ 125	94-00	46PRC	X
ZXR 750 R	91-94	46HRC		(ABS)				XTZ 750	89-95	46DR		YZ 250	94-00	46PRC	X
ZX-7R	96-99	46HRCLS	X	GSX 1300 R	99	46PRCLS	X	Supertenere				TY 250 Z	93-94	46HRC	
GPZ 900 R	All	46ERS/46HRCLS	X	RE-5	75-77	36P/36PRCLB*		TDM 850	91-00	46PRC		TT 350	86-93	46HR	
ZX 9 R	94-97	46HRCS	X	TRIUMPH				TRX 850	96-00	46HRCLS	X	YZ 400 F	98-99	46PRC	X
ZX 9 R	98-00	46PRCLS	X	Trident 750/900	1993	46ERS	X	XJ 900 S Diversion	95-00	46ERS	X	YZ 426	2000	46PRC	X
Z 900	73-76	36P/36PRCLB*		Trident 750/900	94-98	46ERS		XJ 900	83-93	36P*		TT 600	83-93	46HRC	
Z 1000	77-84	36P/36PRCLB*		Sprint	1993	46ERS	X	FZR 1000	87-88	46HRC		TT 600S (Belgarda)	93-96	46HRC	
GPZ 1000RX	86-87	46ERS		Sprint	94-98	46ERS		FZR 1000	89-93	46HRC	X	TT 600 R	98-99	46HRC	
ZX 10	88-89	46ERS		Sprint ST	99	46PRCS		FZR 1000	94-95	46HRC					
GPZ 1100	83-84	46HRCS		Thunderbird	95-99	46ERS		YZF 1000	96-00	46HRCL/46HRCLS	X				
GPZ 1100, (ABS)	95-96	46HRCS	X	Thunderbird Sport	95-99	46ERS		YZF-R1	98-00	46PRCLS	X				
Z 1100	80-85	36P/36PRCLB*		Thunderbird Sport	98-99	46HRCS	X	GTS, front	93-99	46HRC					
				Trophy 900/1200	1993	46ERS	X	GTS, rear	93-99	46ERS					

Front fork springs with different rate are available to most MX- and Enduro models.
* = These shocks are delivered as pairs.

All the champions



G. Moiseev



C. Lavado



C. Fogarty



N. Mansell



T. Mäkinen



P. Carpentier



A. Zanardi



A desire to win

created a shock

Back in the 70's a motocross bike had more engine power than the suspension could handle.

Kenth Öhlin, a successful motocross rider, realised that the key to better performance was longer wheel-travel. But he found a hang-up! There was not a shock absorber around that could do the job.

At that time Kenth was working at his father's machine shop overhauling fellow riders shock absorbers. He saw what was on the market and soon knew what was needed.

With a desire to win he started developing his own shock absorbers. Kenth combined utmost precision and thoroughness in design and manufacturing with the best quality material available.

The Öhlins shock absorbers were an instant success. In 1976 Öhlins Racing AB was established. Two years later Öhlins won its first World Championship title.

that conquered the two wheel world.

Today Öhlins Racing AB has a firm grip on the market for high performance/quality motorcycle shock absorbers.

More than 80 World Championship titles proves the unique and outstanding performance of the Öhlins shock absorbers.

In 1987 Yamaha Motor Co., Ltd. bought the majority of shares in Öhlins Racing AB, which acts as an independent company with its own identity in the Yamaha group.

Some of Öhlins Racing AB motorcycle OEM customers are Yamaha, Ducati, Bimota and Gas-Gas.

At present, more than 100 persons are employed in the company of which almost a third work within the research and development sector (R&D).

Racing service and support is a major activity. Öhlins race-trucks are present at most World Champion-

ship events in Motocross, Enduro, Superbike, and Road Racing, while the distributors are adding to the worldwide racing coverage.

Went on to four

The step from two to four wheels lay close at hand. Some of Öhlins motorcycle shock absorbers could be converted to car applications ... and they were!

One of the first car projects was designing a shock for Japanese Gymkhana racing (slalom racing on secluded streets with saloon cars).

The group that did the job was soon made permanent and one of their first single seater projects was with the Modena-Lam-borghini Formula 1 team.

The brief F 1 project (Lam-borghini withdrew from F 1) led to a contract with the Newman-Haas Indycar team in the USA and started a very successful cooperating that still lasts.

In 1992 Michael Andretti won the first major race in a car equipped with Öhlins shock absorbers and a year later Nigel Mansell clinched the

Indycar title.

Several development projects are now running. With Volvo, Audi, Peugeot, Vauxhall, BMW in touring car racing, with Mitsubishi, Toyota in rally and in several singleseater Formulas.

In the states Öhlins USA Inc. is marketing car shock absorbers for CART, NASCAR and different "stock car" classes. The results speak for themselves!

and is already in the future.

The future is very much a part of Öhlins Racing AB everyday life.

R&D projects concerning suspension and vehicle dynamics are run in-house but also in cooperation with other research units and on a consultant basis for motorcycle, car, truck and bus manufacturers around the world.

One of the technical breakthroughs for Öhlins Racing AB was the invention of the Computerised Electronic Suspension System (C.E.S.).

Öhlins C.E.S. is a semi-active sus-

pension system that uses computer technology to continuously give commands to the shock absorber. In short, it gives a passenger car the road holding of a sports car and the comfort of a limousine!

The C.E.S. system is now ready for launch and will be marketed through the US shock absorber manufacturer Monroe in cooperation with Öhlins.

Öhlins R&D Centre in Jönköping has a number of unique measuring, data-collecting and simulating equipment for the research in future suspension systems.

One is the road/racetrack simulator (four poster rig) that is now being modified to take into account the effects that wings and under body has on the suspension of a race car.

Precision makes the difference.

The concept of the Öhlins shock absorber is not a secret, it is precision.

Precision that gives superior control of the damping oil, making the Öhlins shock absorber a superior product!

Precision is a key word at Öhlins Racing AB. It ends up in quality, a quality you can see and feel.

Öhlins Racing AB uses only the best material available, but what really makes the difference is how these materials are being used.

Experience with close tolerances, surface treatment and painstaking engineering work, with low friction seals and scrapers, all contribute to the superior quality and performance.

Production is a craft at Öhlins Racing AB and several quality checks are done between operations. At the end of the assembly line the complete shock is tested, including both the compression and the rebound functions. It is then shipped to a consumer, who chose "the ultimate tuning kit" resulting in traction, handling, comfort and safety.

The Öhlins shock absorber, created with a desire to win.



Öhlins Racing AB, Box 722, S-194 27 Upplands Väsby, Sweden
Phone +46 8 590 025 00, Fax +46 8 590 025 80, E-mail info@ohlins.se, www.ohlins.com