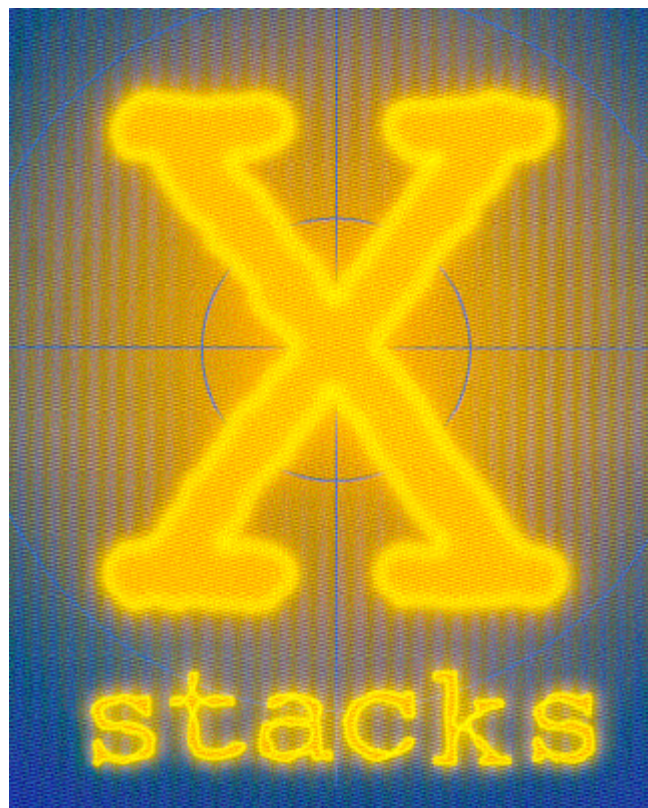
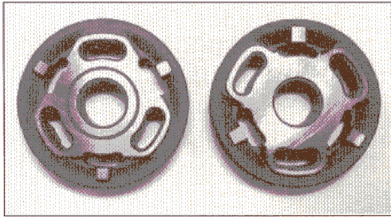


# *The ultimate choice*

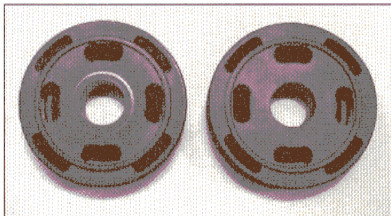
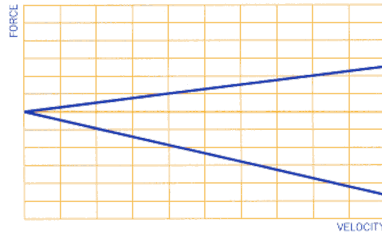


**Unlocking the mysteries of  
Öhlins shock tuning**

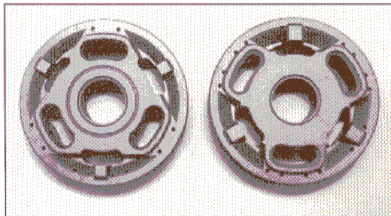
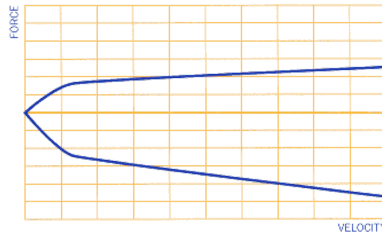
Öhlins offers a wide variety of pistons, shims, needles and valves to choose from to help you manipulate the damping characteristics of the shock to suit your particular needs. All of Öhlins components are precision engineered to the highest standards in the industry, resulting in consistent performance, traction and control.



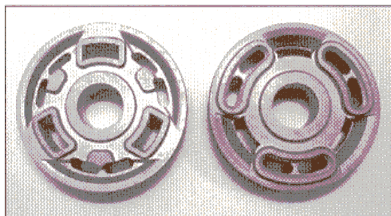
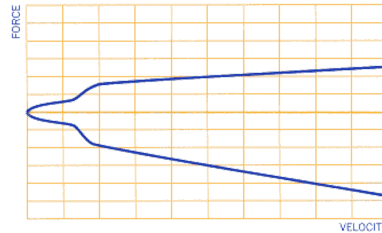
Standard piston 5114-24



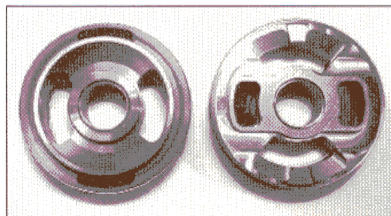
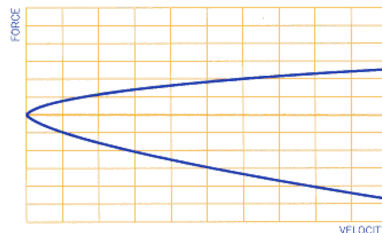
Double digressive piston 5113-01



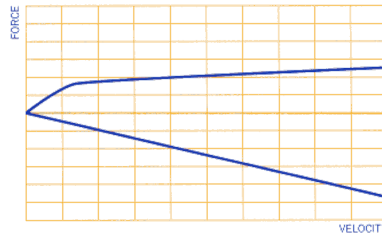
Hi-frequency piston 5112-01



MX piston 3166-01



2-port digressive / linear piston 5854-01



# Introduction

## X Stacks with preload or negative preload (gap)

When preloading X-Stacks, the ring shim, centering shim and/or spacer shim should be placed between the two sealing shims.

38mm diameter ring shims with, for example a CX35 stack.

The new stack should be identified as below:

Ring shim	Centering shim	Spacer shim	Preload	Stack No.
1130-02 (0.30)	0525-34 (0.25)	0525-20 (0.25)	-0.20	CX35A
1130-02 (0.30)	0525-34 (0.25)	0520-20 (0.20)	-0.15	CX35B
1130-02 (0.30)	0525-34 (0.25)	1115-20 (0.15)	-0.10	CX35C
1130-02 (0.30)	0525-34 (0.25)	1110-20 (0.10)	-0.05	CX35D
1120-02 (0.20)	1115-34 (0.15)	-	0.05	CX35E
1125-02 (0.25)	1115-34 (0.15)	-	0.10	CX35F
1130-02 (0.30)	1115-34 (0.15)	-	0.15	CX35G
5938-02 (0.38)	1115-34 (0.15)	-	0.23	CX35H

36mm diameter ring shims with, for example a RX35 stack.

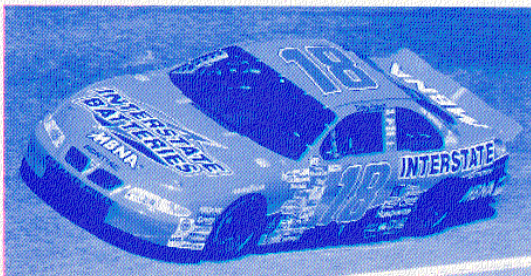
The new stack should be identified as below:

Ring shim	Centering shim	Spacer shim	Preload	Stack No.
1130-03 (0.30)	0525-34 (0.25)	0525-20 (0.25)	-0.20	RX35A
1130-03 (0.30)	0525-34 (0.25)	0520-20 (0.20)	-0.15	RX35B
1130-03 (0.30)	0525-34 (0.25)	1115-20 (0.15)	-0.10	RX35C
1130-03 (0.30)	0525-34 (0.25)	0610-20 (0.10)	-0.05	RX35D
1120-03 (0.20)	1115-34 (0.15)	-	0.05	RX35E
1125-03 (0.25)	1115-34 (0.15)	-	0.10	RX35F
1130-03 (0.30)	1115-34 (0.15)	-	0.15	RX35G
5938-03 (0.38)	1115-34 (0.15)	-	0.23	RX35H

40mm diameter ring shims with, for example a CX20 stack.

The new stack should be identified as below:

Ring shim	Centering shim	Spacer shim	Preload	Stack No.
1130-07 (0.30)	0525-36 (0.25)	0525-20 (0.25)	-0.20	CX20A
1130-07 (0.30)	0525-36 (0.25)	0520-20 (0.20)	-0.15	CX20B
1130-07 (0.30)	0525-36 (0.25)	1115-20 (0.15)	-0.10	CX20C
1130-07 (0.30)	0525-36 (0.25)	0610-20 (0.10)	-0.05	CX20D
1120-07 (0.20)	1115-36 (0.15)	-	0.05	CX20E
1125-07 (0.25)	1115-36 (0.15)	-	0.10	CX20F
1130-07 (0.30)	1115-36 (0.15)	-	0.15	CX20G
5938-07 (0.38)	1115-36 (0.15)	-	0.23	CX20H



With over 200 shims of varying thickness and diameters, Öhlins shim stack system offers the shock tuner endless possibilities for fine tuning the damping of a shock absorber. While this is great for the advanced tuner, it is sometimes confusing for those just introduced to Öhlins shocks.

Öhlins new X-Stacks were designed to simplify the tuning process without restricting the possibility of fine tuning to your own requirements. Each of the new standard X-Stacks are comprised of six shims with an easy-to-follow progression of both thickness and diameters, enabling the forces generated to increase in even, incremental steps. Every shock tuner, driver and crew chief will appreciate the benefits of working with this simple, progressive valving system.

All of Öhlins X-Stacks are based on using two of the same sized sealing shims, allowing for easy applications of Öhlins ring shims to alter the preload of any stack. Utilizing ring shims with centering shims of a different thickness, the preload of any stack can be adjusted to suit the needs of each and every racetrack.

Perhaps the greatest advantage of the new Öhlins X-Stacks is the easy-to-understand identification system. Each stack is identified first as a compression (CX) or a rebound (RX) stack with a corresponding number (ie. RX35) - the higher the number, the stiffer the stack. Preloaded X-Stacks using ring shims are identified by an additional letter suffix (ie. RX35G). Use the chart on the left to determine which letter corresponds to the different preloads available.

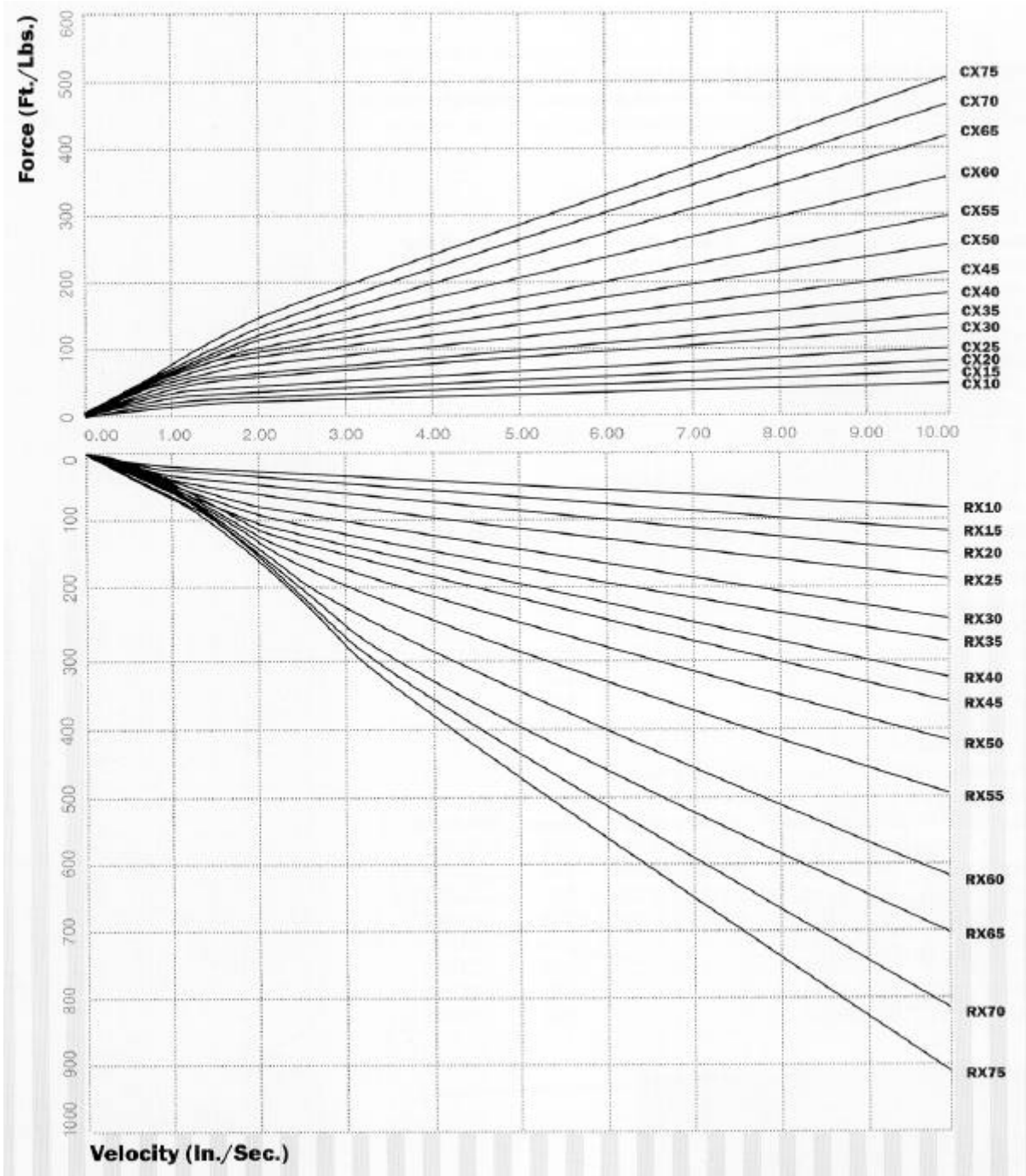
We sincerely thank you for your interest in Öhlins shock absorbers and hope that our new X-Stacks help you to unlock the mysteries of Öhlins shock tuning.

- Öhlins USA, Inc.

the ultimate choice



# Standard X-stacks



All of the above curves are the result of using a WCJ shock with a standard piston (5114-24), without the base valve and with the rebound adjuster set at 10 clicks.

# Standard X-stacks

## Compression

<b>CX10</b>	<b>CX15</b>	<b>CX20</b>	<b>CX25</b>	<b>CX30</b>	<b>CX35</b>	<b>CX40</b>
.10-38	.10-38	.15-38	.15-38	.20-38	.20-38	.25-38
.10-38	.10-38	.15-38	.15-38	.20-38	.20-38	.25-38
.10-34	.10-34	.15-34	.15-34	.20-34	.20-34	.25-34
.10-30	.15-30	.15-30	.20-30	.20-30	.25-30	.25-30
.10-26	.15-26	.15-26	.20-26	.20-26	.25-26	.25-26
.38-20	.38-20	.38-20	.38-20	.38-20	.38-20	.38-20

<b>CX45</b>	<b>CX50</b>	<b>CX55</b>	<b>CX60</b>	<b>CX65</b>	<b>CX70</b>	<b>CX75</b>
.25-38	.30-38	.30-38	.30-38	.38-38	.38-38	.38-38
.25-38	.30-38	.30-38	.38-34	.38-38	.38-38	.38-38
.25-34	.30-34	.30-34	.38-34	.38-34	.38-34	.38-34
.30-30	.30-30	.38-30	.38-30	.38-30	.38-30	.38-30
.30-26	.30-26	.38-26	.38-26	.38-26	.38-26	.38-26
.38-20	.38-20	.38-20	.38-22	.38-20	.38-21	.38-21

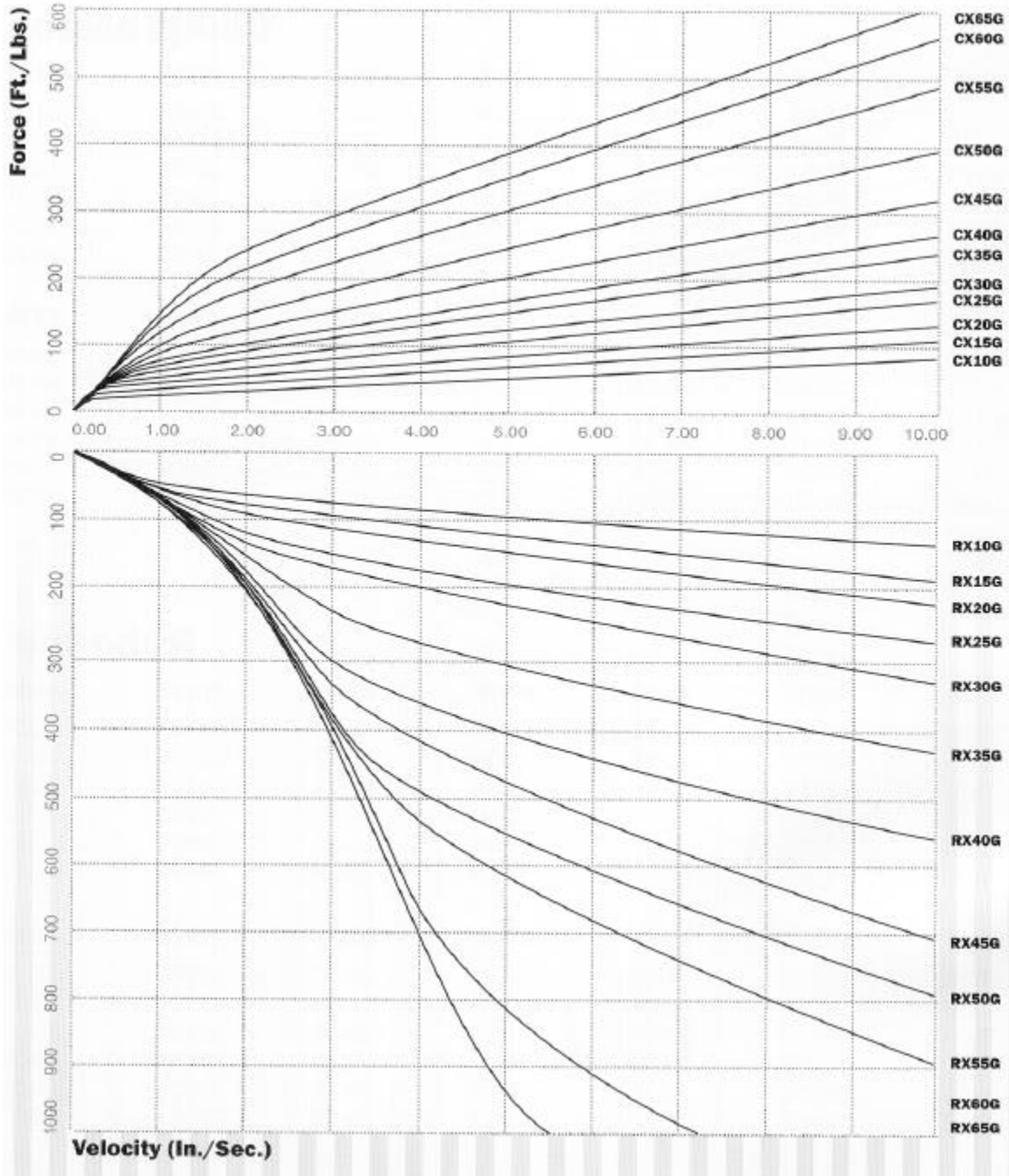
## Rebound

<b>RX10</b>	<b>RX15</b>	<b>RX20</b>	<b>RX25</b>	<b>RX30</b>	<b>RX35</b>	<b>RX40</b>
.10-36	.10-36	.15-36	.15-36	.20-36	.20-36	.25-36
.10-36	.10-36	.15-36	.15-36	.20-36	.20-36	.25-36
.10-34	.10-34	.15-34	.15-34	.20-34	.20-34	.25-34
.10-30	.15-30	.15-30	.20-30	.20-30	.25-30	.25-30
.10-26	.15-26	.15-26	.20-26	.20-26	.25-26	.25-26
.38-22	.38-22	.38-22	.38-22	.38-22	.38-22	.38-22

<b>RX45</b>	<b>RX50</b>	<b>RX55</b>	<b>RX60</b>	<b>RX65</b>	<b>RX70</b>	<b>RX75</b>
.25-36	.30-36	.30-36	.38-36	.38-36	.38-36	.38-36
.25-36	.30-36	.30-36	.38-36	.38-36	.38-36	.38-36
.25-34	.30-34	.30-34	.38-34	.38-34	.38-34	.38-34
.30-30	.30-30	.38-30	.38-30	.38-30	.38-30	.38-30
.30-26	.30-26	.38-26	.38-26	.38-26	.38-26	.38-26
.38-22	.38-22	.38-22	.38-22	.38-23	.38-24	.38-25

**VERY IMPORTANT**—When using an MX piston, the sealing shim must be a .40mm diameter shim. For example: a CX10 – MX build would have a .10-40 as the sealing shim, rather than a .10-38.

# Preloaded X-stacks



All of the above curves are the result of using a WCJ shock with a standard piston (5114-24), without the base valve and with the rebound adjuster set at 10 clicks.

# Preloaded X-stacks

# Compression

<b>CX10G</b>	<b>CX15G</b>	<b>CX20G</b>	<b>CX25G</b>	<b>CX30G</b>	<b>CX35G</b>	<b>CX40G</b>
.10-38	.10-38	.15-35	.15-38	.20-38	.20-38	.25-38
.15-34	.15-34	.15-34	.15-34	.15-34	.15-34	.15-34
1130-02	1130-02	1130-02	1130-02	1130-02	1130-02	1130-02
.10-38	.10-38	.15-38	.15-38	.20-38	.20-38	.25-38
.10-34	.10-34	.15-34	.15-34	.20-34	.20-34	.25-34
.10-30	.15-30	.15-30	.20-30	.20-30	.25-30	.25-30
.10-26	.15-26	.15-26	.20-26	.20-26	.25-26	.25-26
.38-20	.38-20	.38-20	.38-20	.38-20	.38-20	.38-20
<b>CX45G</b>	<b>CX50G</b>	<b>CX55G</b>	<b>CX60G</b>	<b>CX65G</b>	<b>CX70G</b>	<b>CX75G</b>
.25-38	.30-38	.30-38	.38-38	.38-38	.38-38	.38-38
.15-34	.15-34	.15-34	.15-34	.15-34	.15-34	.15-34
1130-02	1130-02	1130-02	1130-02	1130-02	1130-02	1130-02
.25-38	.30-38	.30-38	.38-38	.38-38	.38-38	.38-38
.25-34	.30-34	.30-34	.38-34	.38-34	.38-34	.38-34
.30-30	.30-30	.38-30	.38-30	.38-30	.38-30	.38-30
.30-26	.30-26	.38-26	.38-26	.38-26	.38-26	.38-26
.38-20	.38-20	.38-20	.38-20	.38-21	.38-22	.38-23

# Rebound

<b>RX10G</b>	<b>RX15G</b>	<b>RX20G</b>	<b>RX25G</b>	<b>RX30G</b>	<b>RX35G</b>	<b>RX40G</b>
.10-36	.10-36	.15-36	.15-36	.20-36	.20-36	.25-36
.15-34	.15-34	.15-34	.15-34	.15-34	.15-34	.15-34
1130-03	1130-03	1130-03	1130-03	1130-03	1130-03	1130-03
.10-36	.10-36	.15-36	.15-36	.20-36	.20-36	.25-36
.10-34	.10-34	.15-34	.15-34	.20-34	.20-34	.25-34
.10-30	.15-30	.15-30	.20-30	.20-30	.25-30	.25-30
.10-26	.15-26	.15-26	.20-26	.20-26	.25-26	.25-26
.38-22	.38-22	.38-22	.38-22	.38-22	.38-22	.38-22
<b>RX45G</b>	<b>RX50G</b>	<b>RX55G</b>	<b>RX60G</b>	<b>RX65G</b>	<b>RX70G</b>	<b>RX75G</b>
.25-36	.30-36	.30-36	.38-36	.38-36	.38-36	.38-36
.15-34	.15-34	.15-34	.15-34	.15-34	.15-34	.15-34
1130-03	1130-03	1130-03	1130-03	1130-03	1130-03	1130-03
.25-36	.30-36	.30-36	.38-36	.38-36	.38-36	.38-36
.25-34	.30-34	.30-34	.38-34	.38-34	.38-34	.38-34
.30-30	.30-30	.38-30	.38-30	.38-30	.38-30	.38-30
.30-26	.30-26	.38-26	.38-26	.38-26	.38-26	.38-26
.38-22	.38-22	.38-22	.38-22	.38-23	.38-24	.38-25

**VERY IMPORTANT**—When using an MX piston, the sealing shim must be a .40mm diameter shim. For example: a CX10G – MX build would have a .10-40 as the sealing shim, rather than a .10-38.

Authorized Dealer

# *Naake Motorsports*

**Suspension Specialists**

2300 Central Avenue  
Roseville, California 95747  
(916) 771-0109 Phone  
(916) 771-5201 Fax  
Email: [info@naake.com](mailto:info@naake.com)  
[www.naake.com](http://www.naake.com)