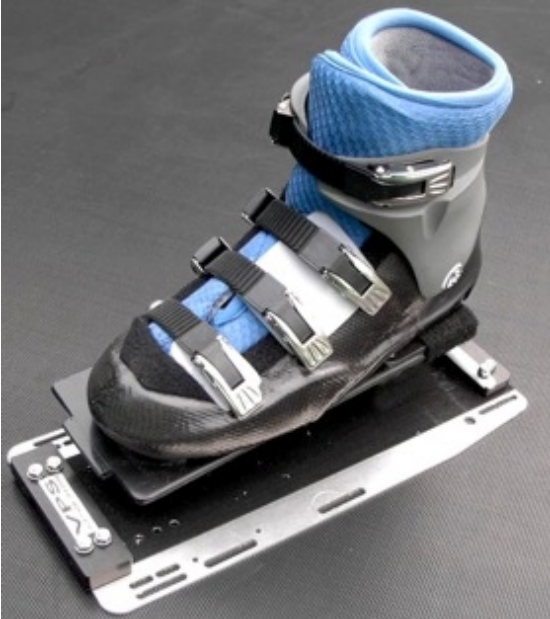




**Fluid Motion REVO Single Boot**  
Binding Installation Manual

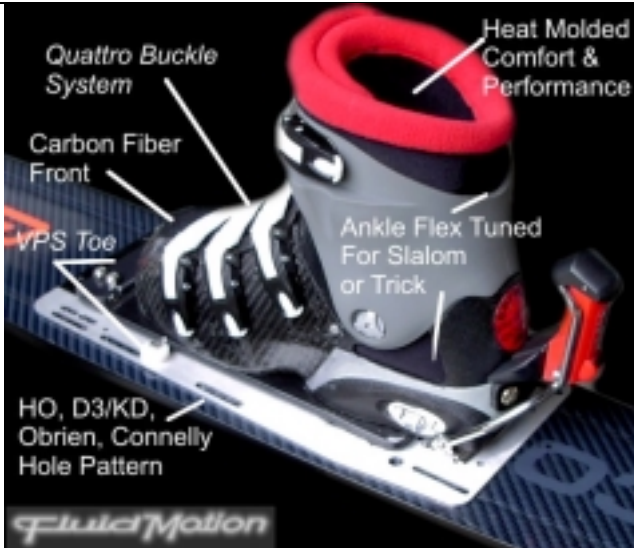
Revision Date: March 2007



**REVO TypeR: Toe Block/Heel Bar**



**REVO TypeS: Toe Clamp/Silvretta Release**



**REVO TypeRS :Toe Block/Silvretta Release**

**The following parts are included with your binding kit:**

Toe buckle assembly (Type S), Power toe Block (Type R/RS) sole plate (Type R/RS), aluminium mounting plate, Silvretta release assembly (Type S/RS), Rear Release assembly (Type R), buckle or lace-up boot with boot liner, spare Velcro, 8-32 SS fasteners and washers.

**▲ Please review all warnings and disclaimers contained at the end of this document.**

**PLEASE HAVE QUALIFIED PERSONNEL INSTALL THESE BINDINGS. THESE INSTRUCTIONS ARE INTENDED FOR QUALIFIED PERSONNEL who are familiar with water ski construction, marine hardware, water-ski binding systems, ski inserts, epoxies and adhesives, shop tools and supplies.**

**WARNING - HIGH PERFORMANCE BINDING:  
FOR USE BY EXPERIENCED SKIERS ONLY.**

### **ASSUMPTION OF RISKS**

I understand that water-skiing, wakeboarding and towed water sports involve risks, dangers and hazards, and that injuries are a common and ordinary occurrence of the sports. I understand that this Fluid Motion boot/binding system ("*System*") may or may not release in a fall, which could result in injury to the ankle, knee, leg or other parts of the body. I understand that use of the System is no guarantee that I will not be injured. I **FREELY ACCEPT AND ASSUME ALL RISKS, DANGERS AND HAZARDS ASSOCIATED WITH USE OF THE SYSTEM.** To reduce your risk of injury, follow these guidelines:

System must be installed by a qualified technician that is familiar with high performance towed water sports equipment and should be properly fitted for a single user and must not be used by others for whom it was not properly fitted.

Inspect ski, fins and bindings for loose screws, wear, cracks, delaminating or tearing.

Check bindings and fins prior to each use to ensure they are functioning properly before you ski.

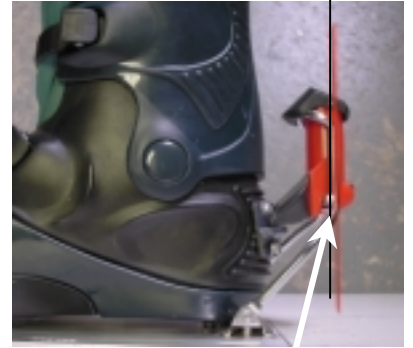
The faster you ski, the greater your risk of injury. Exercise additional caution when riding at competitive speeds. Beginners should be towed at slower speeds that allow for good control and stability.

Water-ski instruction is recommended before use. Instruction will teach general safety guidelines and proper riding techniques, thereby reducing your risk of injury.

**Under NO circumstances should these bindings be used for the jump event.**

# Installation

1. Mark a centre line on the ski to ensure the plates are aligned correctly. Measure the desired location of the front boot heel or other reference and mark this point on the ski with a “Sharpee” or similar felt tip marker.
2. Mount plate so the reference point on the boot is on the desired mark.
3. Use at least six screws to mount the plate, preferably 8 (4 front, 4 rear). Additional screws may be used for added security.
4. **(RS & S)** The Chrome bar of the Silvretta release unit should be about 5-10 degrees off vertical (toward back of ski) as shown. If the bar is leaning back too far, the release unit is difficult to clamp in and prone to pre-release. If too far forward, the clamping pressure on the heel is weak, and the release settings will not be accurate.
5. **(S only)** The TOE PIECE BUCKLE is set before inserting the boot. Loosen the buckle to grab more of the boot toe and insert the boot deeper into the toe piece. Tighten the buckle to have less of the boot in the toe piece clamp. The buckle strap should be tight to the top of the boot. If the boot is inserted too far into the toe piece, it may impede the release of the boot.
6. **All boots** - TEST the release settings before on-water use.



Location of tension adjustment screw

## S and RS Release Tension Settings

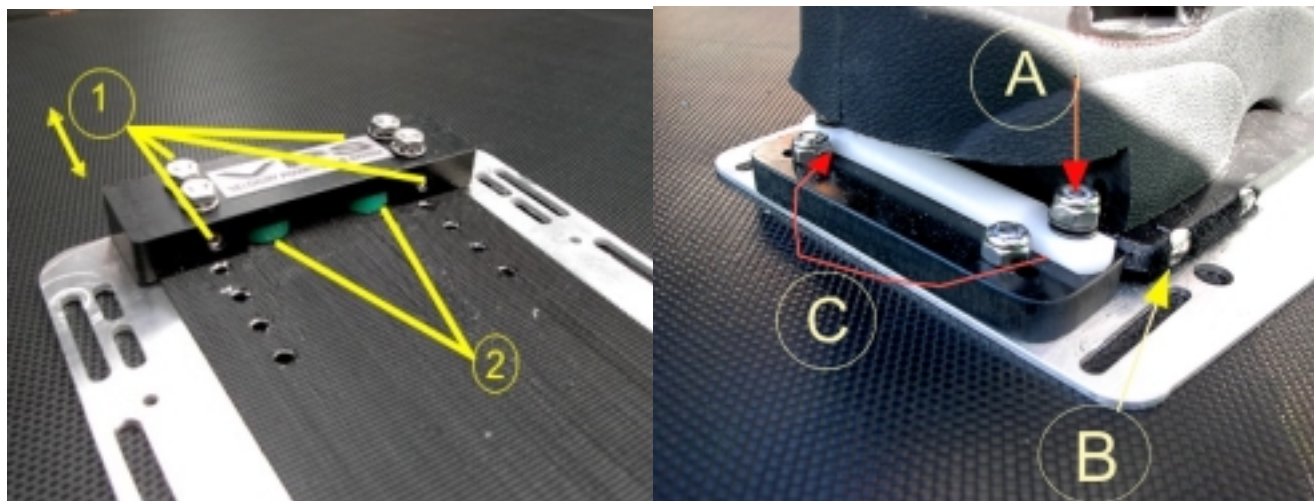
We suggest you test for release settings suitable for 1. The LEVEL of experience you have as a skier, 2. THE FIT you receive from your boots and 3. THE WEIGHT of your body. A setting of 4 to 5 (minimum) will be normal for most skiers.

The release tension will vary dependent on the set-up. Just a small amount of turning on the adjustment screw will make substantial changes to the release tension at the lowest levels in between 4 and 5. Always start testing with a very low setting and work upward to a firmly held but comfortable release setting.

**A setting of over 5 potentially overloads the capacity of the boots or plate and damage may occur to the boots and/or plate.** We suggest you wet the release unit with lake water when testing to ensure accurate function.


See the “Self-Testing” Release Settings section later in this document.

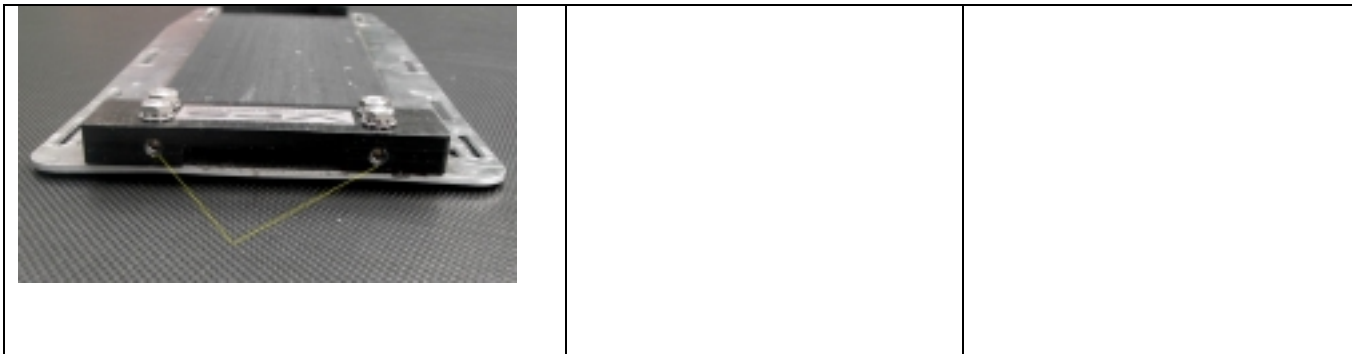
## REVO Type R Release Settings



The **Revolution Binding** is a stable plate system that does not require a high heel holding force to be effective. The boot will rock slightly on the binding plate and this is a normal function. Under load during skiing the wide baseplate of the Revolution binding provides increased stability over conventional boots, while still allowing the skier freedom to lever out over the ski in the pull.

**Table 1:** The force required to release is set by the following adjustments

Adjustment – As Shown in Above Photos	Higher Release Setting	Lower Release Setting
MCU Disc Springs (2) under Power Toe Block. Underside of toe block is shown inset. 	Higher Rate or stiffer compound may be installed.	Remove one disc or replace one or both discs with a softer compound. Note: The center hole diameter of the discs may also be increased.
Release Bar Nuts (A)	Tighten down – Do not exceed torque of full spring compression/contact plus ¼ turn.	Must be snug but no tight
Velcro (B)	Additional Velcro – Maximum 4”x plate width.	Less Velcro. Minimum 1” across width of base plate is required.
Release Bar (C)	Remove the bar and flip it 180 to use the non-machined edge for the highest holding force. <b>For PRO Trick only.</b>	Stock position has a slight bevel to aid in release.
Power Toe Block Adjustment (1) above and as shown inset. Small adjustments are permissible.	Loosen the four securing nuts and use the four set-screws (1) to adjust the Power Toe Block Closer to Heel. If the block is set too far back, step-in is not possible or very difficult to do.  If the block is set too far forward, inadvertent release from the toe may occur.	Move Power Toe Block further from heel block. <b>Note there MUST BE at least 1/8” of the plate tonque inserted into the toe block receptor during skiing.</b>



**NOTES:**

**(1)** Small adjustments to the position of the Power Toe Block are permissible. **(2)** Hard or Soft compound springs may be ordered from Fluid Motion. The Power Toe Block should be restored to the original position. Scribe plate before block removal or use a caliper to measure position on the plate. **(A)** The tightness of the NYLOC nuts that fasten the release bar and base to the plate, which provide compression on the spring washers. The tighter the nuts, the higher the release force becomes. **(B)** The boots are normally shipped with a small 2x4" section installed. Additional 2" by 4" pieces may be added to increase the release force. **(C)** The release bar may be reversed to use the more abrupt edge. This setting will provide the highest release forces. **Always test for release after making any adjustment. Also it is VERY important that the attachment of the plate to the ski at the heel of the plate is secure. If there is any question as to the strength of the inserts or screws, use additional screws and/or two-sided tape under the plate at this location.**

For hand tricks & pros only. The Revo has optional non-release clips to fix the rear of the sole plate to the mounting plate. Swing in for non-release fixed binding mode and swing out for release mode.



## Self-Testing Release Settings

**▲ Be sure to take a minute to twist and work the boots into the hook pad when first placing the boots on the plate/ski. Wet the binding mechanisms with lake water for accurate release testing.**

To test release settings: remove the fin (for slalom) from the ski or support the rear of the ski with a block and buckle yourself into the boot. Block the tip and tail – I use a large sofa to hold the back of the ski or have friend hold the ski's tail down.

Using a chair or large sofa to stabilize yourself, you should be able to release comfortably in a simulated “out-the front fall” by walking out over the front of the ski in an authoritative and forceful movement. **BE MINDFUL OF THE RELEASE UNIT of the Type S/ RS THAT CAN SNAP BACK WITH A HARD AND RAPID MOVEMENT.**

The amount of heel retention force is up to the user. Too high a force and the design limit of the boots, boot buckles, and inserts on the ski are exceeded and it hurts.

IT DOES NOT TAKE MUCH TO EXCEED THE LIMITS OF IN-LINE BOOTS!!! Also keep in mind that standard rubber bindings have fairly low heel retention force (30-70lbs) with a toe strap being the lowest (zero).

We have found the maximum heel retention force, before the boots and lower legs are overloaded is APPROXIMATELY ½ body weight to a MAXIMUM in the range of 65-75 lbs. If the heel retention force is any higher, the boots deform, buckles are susceptible to breakage and the lower legs are exposed to injury. THESE ARE OUR OBSERVATIONS FOR YOUR INFORMATION AND NOT A RECOMMENDATION. We recommend you visit a ski pro-shop that specializes in binding adjustment to verify your settings.

## On-Water Testing

**▲ Similar to conventional “rubber” boots, skiing in lower temperatures may require lower release settings. Always test the boots at lake temperature. Skiing in higher temperatures may require higher settings.**

To test your installation first start skiing at 4 mph LOWER than normal and ski outside of the course (free ski). Inspect bindings before and after every use. Graduate to higher speeds and the slalom course after a few successful sets to “dial-in”.

Any questions – please call the number below or write [pjager@jageng.com](mailto:pjager@jageng.com). No binding system can protect you from injury in every situation encountered on the water. By following certain rules you can minimize risks. Some tips are: 1. Make sure your ski and fin settings are well tuned. 2. Do not advance to the next speed or line increment unless you are skiing well within the limits afforded by your conditioning, ability and equipment tuning. 3. Always start at lower speeds and longer lines when testing new settings or equipment. 4. Ski smart and in-control, and do not impact fixed objects including gate balls, turn balls and other hazards.

## Warranty

The following items are warranted for 90 days: Rear release unit & plate, aluminium toe clamp and toe piece, Boot Liners.

The boot shells are in-line skate boots, adapted for slalom use, and as such void the manufacturer's warranty, therefore Jagersport does not warrant the boots or buckles.

Fluid Motion systems are designed to be fault tolerant, but there is no substitute for safe skiing. Shutdown your run if you are late, narrow or encounter excessive slack line. Do not impact fixed objects such as turn balls, or gate balls. Consult a professional regarding ski tuning. A properly tuned ski is also a safe ski, and crashes are very

infrequent – for example when was the last time you witnessed the top slalom skier take a header! We cannot recall any.

In no event shall Jagersport.com be liable for incidental or consequential damages, shipping or remounting costs. Shipment charges are the responsibility of the customer.



Revision Date: 1Q 2005

## BOOT MOLDING Instructions

**Universal Liner & Shell Height Adjustment** The height of the boot shell and liner is based on personal preference and use factors. Advanced short line slalom users will look to lower the boot shell cuff and trim the boot shell lower at the back to allow the ski to be moved ahead at the second wake. If you are experiencing ankle difficulties, a higher boot cuff is desirable until the ankle is fully healed (sometimes 1-2 years).

Trick users often want a higher boot than for slalom, for stabilizing manoeuvres and generating power into the wake. The stock height is recommended for trick skiing.

If modifying be sure to leave at least 1-1.5" of liner above the boot shell's final height. The liner should be marked while in the boot, and then trimmed with scissors or a knife during the molding process, ideally while the liner is hot. You can also trim after molding as well. The boot shell can be trimmed with very sharp & heavy duty scissors or tin snips. In both cases make a line first then cut to the line.

The top edge of the Universal liner should be loop sewn by machine or by hand. A fabric/fleece border may also be sewn on. A trimmed edge may be left as is without detriment to performance or durability

## Universal Liner Heat Molding

The liners may be heat molded more than once. The liner can expand 6-8 sizes or "soak-up" about 1-2 sizes. If the boot feels too large, an insert kit can be ordered to take up space in the boot bottom with the same Ultralon EVA foam. If a boot shell is very tight, order a liner several sizes too small and heat mold upward to stretch the foam thin.

Before using an oven at home for molding, you may want to contact ski boot shops as they have ovens and equipment dedicated for boot fitment. Some shops have heaters with pipes that can mold the liner and the shell together. Heating the liner and boot shell by injecting air at no more than **250 DegF**, then inserting the foot is an effective method to achieve the custom fit.

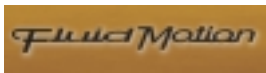
If this is not an option, the entire liner (removed from shell of course) can be molded at home in a suitable convection oven. Because of variables in the process we offer no warranty or guarantees as to the outcome of this method. Do so **AT YOUR OWN RISK. Beware of a fire hazard - Use caution, the liner must NOT TOUCH or come close to the oven heating elements.** Mold in a well-ventilated area, since the glue used may emit some vapour.

The oven **MUST BE PRE-HEATED to 250 DegF**. A FAN driven convection oven is strongly suggested, or carefully heat turning over repeatedly in a PRE-HEATED regular oven, on a double formed cookie sheet at no more than **250 DegF**. Use a thermometer for confirmation of temperature if possible. A temporary plastic tongue is an option – see step #4.

## Steps for Oven Molding

1. Pre-heat oven to 250DegF. Use a DRY Sock, and then cover your foot in a plastic bag (like a kitchen or shopping bag)
2. Put the liner in the oven, on a double cookie sheet for 7-10 min, it will go real rubbery and lose its molded shape to look sort of like an oven mitt.
3. Immediately after removal from the oven, insert the foot into the liner and stretch out the liner in the toe area, carefully pulling but not too hard. You may also use your fingers to form a larger heel pocket, while stretching out the toe area. Then insert the foot and liner into the shell. You may also try putting the liner into the boot first, followed by the foot. Which method to use depends on the boot and liner used. Now shape and overlap the liner tightly, and buckle the boot, as quickly as possible. **If your foot feels uncomfortably hot, then remove, change your sock/check the temperature and try again.**
4. For extra toe room, cut the toes off of a few of spare socks, or old pair of mittens to make a toe cap or lap a small cloth in your toe area (to create a toe cap). Slide your foot into the boot/liner.
5. **OPTIONALLY - like most in-line boots, insert a make-shift plastic "tongue" to compress the liner under the buckles. We use a plastic tongue cut from a Rubber Maid bin top. The tongue is 5" long by about 2" wide.**
6. **Do up the buckles reasonably snug and flex forward to set the heel. Sit down or for a compressed foot bed, stand up and wait until formed and cooled (5-10 minutes). Unbuckle and you are done.**

The liner may be molded multiple times. If the liner has an outer layer of nylon, be careful that hot spots do not occur as this breaks down the glue and materials. If after molding the fit is tight in areas such as the toe, a heat gun may be used to soften and expand the plastic of the boot shell, to relieve pressure.



www.JagerSport.com  
(250) 724-1402

**RELEASE OF LIABILITY, WAIVER OF CLAIMS, AND INDEMNITY AGREEMENT**

**READ CAREFULLY:**

BY SIGNING THIS AGREEMENT, YOU WILL WAIVE CERTAIN LEGAL RIGHTS, INCLUDING THE RIGHT TO SUE

To: Fluid Motions Sports and Jager Engineering Inc.

In consideration of the use of the System, I hereby agree as follows:

To waive any and all claims that I have or may in the future against Fluid Motion Sports and Jager Engineering Inc. and all representatives, employees, directors or agents thereof (collectively the "**Releasees**") and to release the Releasees from any liability or loss, damages, injuries or expenses that I may suffer or that my next of kin may suffer as a result of or arising out of any aspect of my use of the System DUE TO ANY CAUSE WHATSOEVER INCLUDING NEGLIGENCE, BREACH OF CONTRACT OR WARRANTY ON THE PART OF THE RELEASEES with respect to the design, manufacture, selection, installation, maintenance or adjustment of the System or with respect to the provision of or the failure to provide any warnings, directions, instructions, or guidance as to use of the System.

TO HOLD HARMLESS AND INDEMNIFY THE RELEASEES from any loss, damage, injury or expense to any third party resulting from the use of the System.

This Agreement shall be binding upon my heirs, next of kin, executors, administrators, assigns and representatives, in the event of my death or incapacity.

This Agreement shall be governed by and interpreted in accordance with the laws of the Province of British Columbia, Canada. All proceedings involving parts to this Agreement shall be brought within the Province of British Columbia, Canada.

**I HAVE READ AND UNDERSTAND THIS AGREEMENT AND AGREE THAT BY SIGNING THIS AGREEMENT I AM WAIVING CERTAIN LEGAL RIGHTS WHICH I OR MY HEIRS, NEXT OF KIN, EXECUTORS, ADMINISTRATORS, ASSIGNS AND REPRESENTATIVES MAY HAVE AGAINST THE RELEASEES.**

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_.

Name (Print) \_\_\_\_\_

Signature \_\_\_\_\_

Witness Name

**Please FAX a signed copy of this release to Fax 1-866-734-3625**