



spektra
XION

Cartridge Machine

USER MANUAL



2018

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MACHINE OVERVIEW

THE SPEKTRA XION

Changing Tattooing
Forever

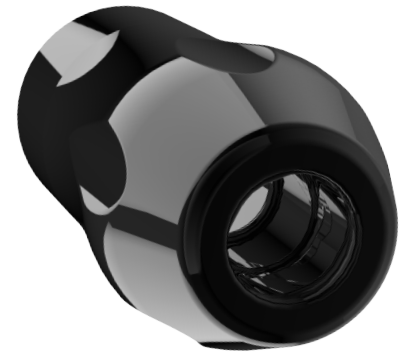
The first pen-style machine providing artists full control of parameters that unleash their creative vision. Compatible with most power supplies on the market, the Spektra Xion is a one tool solution for all your tattooing needs.



THE GRIP



Spektra Xion Grip



Autoclavable Ergonomic Grip Design

Compatible with most membrane needle cartridges on the market

THE GRIP

Allowing artists full control of the machine never possible before, the Spektra Xion offers an ergonomic grip design. The standard Grip

tapers from 32mm to 25mm. Other grip options may be available. The Grip is crafted from a solid rod of 6061 T6 aircraft-grade aluminum. This

polished and anodized grip is safe to be sterilized under steam, in an autoclave or sprayed with cold sanitation solutions.

THE BODY



Spektra Xion Body



THE BODY

The Body is the core of the machine where the reciprocating and give systems are housed. Constructed from a solid rod of 6061 T6 aircraft-grade aluminum, this module should be sanitized by wiping it with cold sterilization solutions only. **Caution: Do not introduce liquids inside the system.**



Body Isometric View

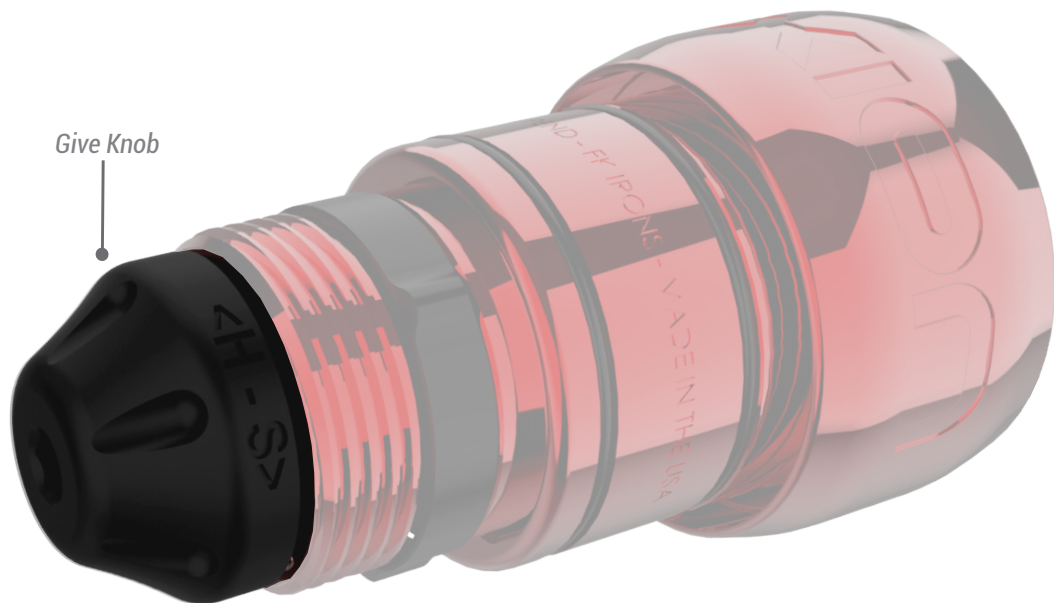


Body Posterior View

THE GIVE KNOB



Spektra Xion Give Knob



GIVE KNOB

This dial, located at the tip of the body, adjusts your needle strike from hard to soft. Note that this mechanism only spins about one turn (270° or about 11 clicks) generating give travel of the driving element (see page 8 for information on sanitizing).



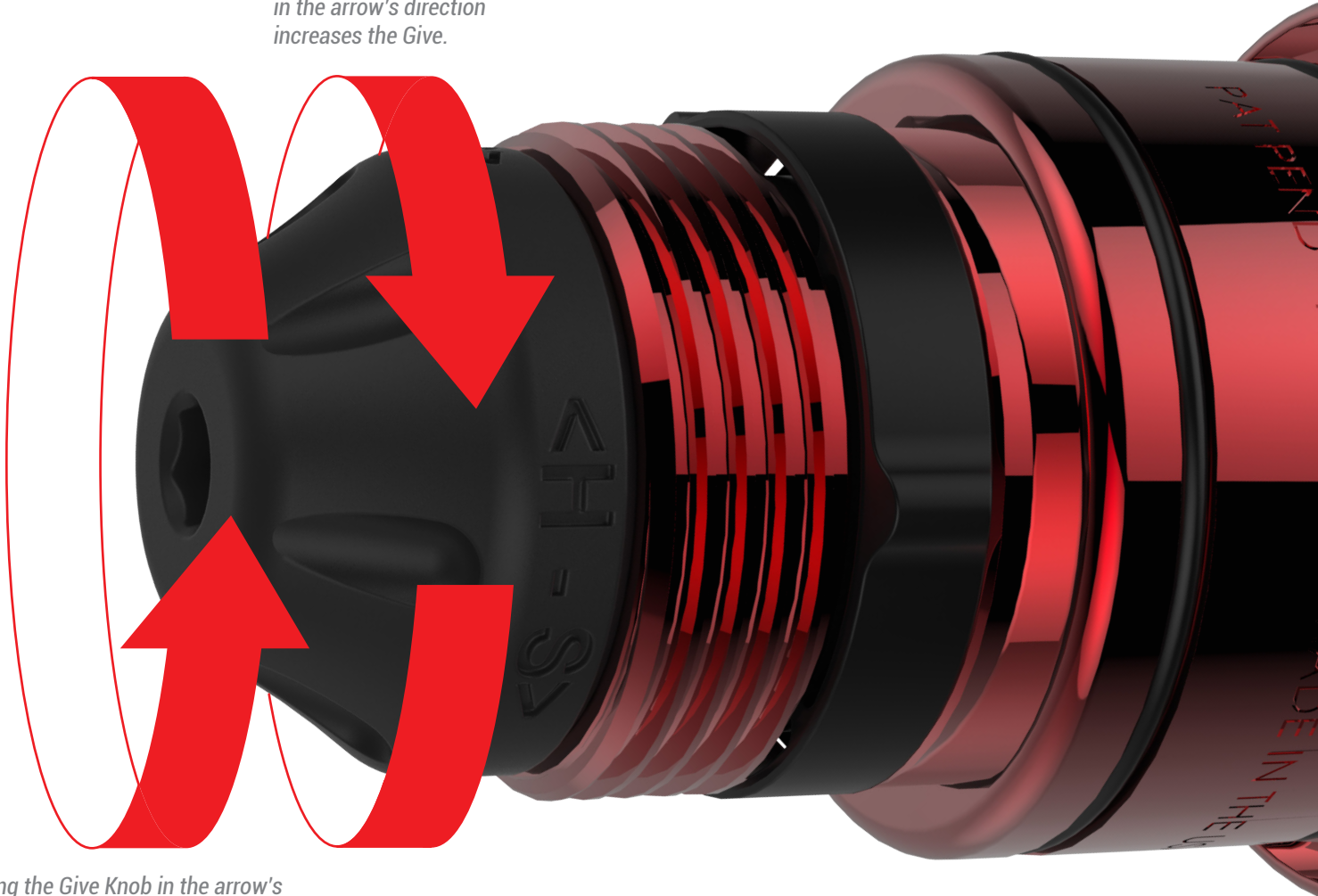
Give Knob Front View



Give Knob Side View

ADJUST THE GIVE

Turning the Give Knob in the arrow's direction increases the Give.



Turning the Give Knob in the arrow's direction decreases the Give or locks it completely. Always back one click from maximum settings.

ADJUSTING THE GIVE

Remove the Grip by turning counter clockwise until it comes off completely. An "<H" and "S>" (Hard / Soft) indicates the direction of rotation to achieve a

softer or harder strike. When adjusting the Give, gently press inwards while turning the Give Knob Dial. This will ensure that you are clicked into a setting and never in between "clicks".

You should always notice a slight radial play once a setting has been selected. Always ensure that you are "clicked-in" to avoid interference between Give Knob and Hex Drive Pin.

REPLACING THE GIVE KNOB



1

Using a plastic prying tool, pry gently and pull out Give Knob.

2

At this stage, you can also sanitize the Hex Drive Pin by wiping it with cold sterilization. Avoid fluids from entering the housing.

HOW TO REMOVE THE GIVE KNOB

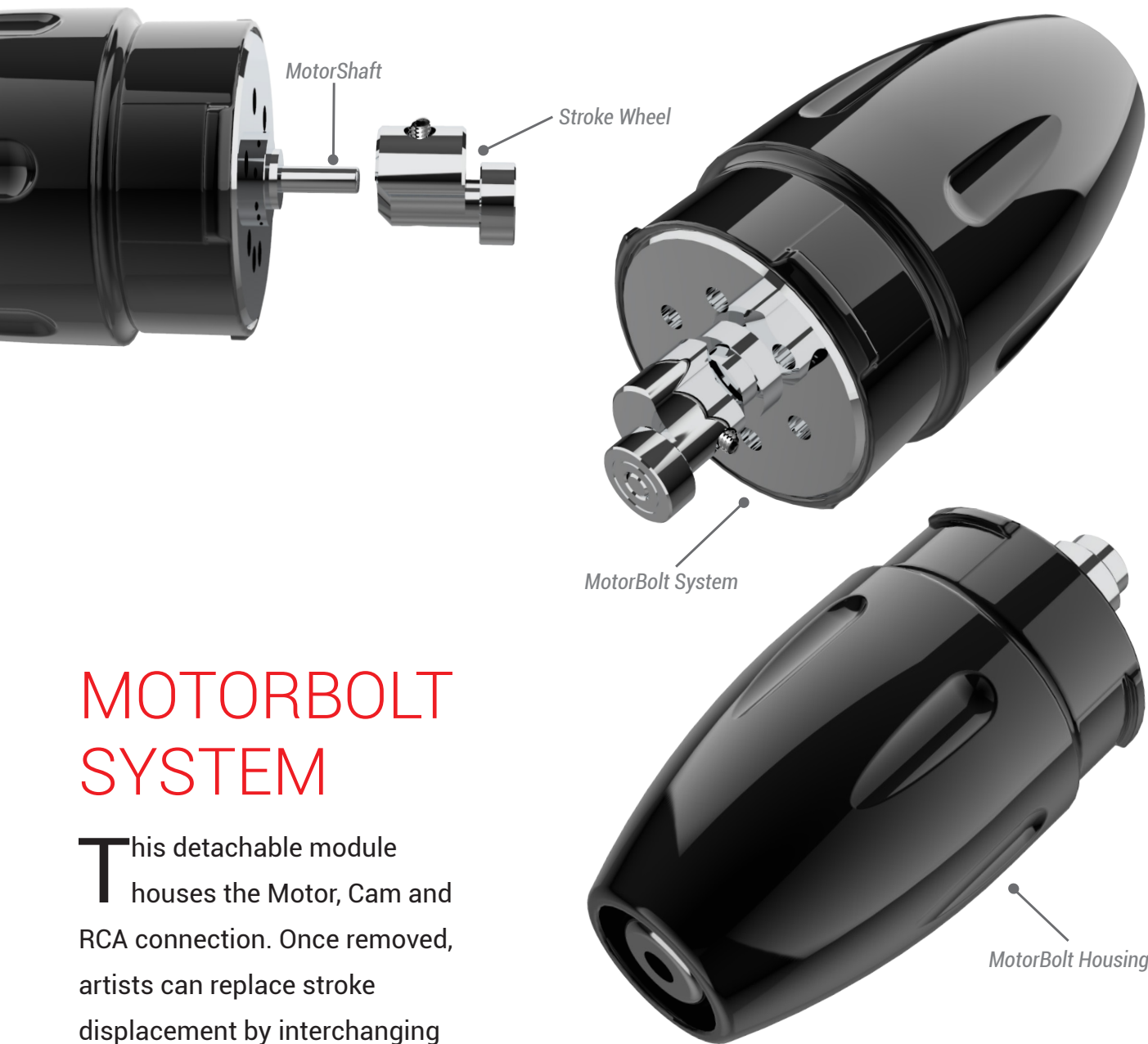
To remove the Give Knob, use a plastic wedge and carefully insert in between the Give Knob and Body to gently pry open. **DO NOT use metallic tools!** To replace the Give Knob,

place it in position ensuring the hex orifice matches the Hex Drive Pin. Apply slight pressure until it clicks into place. Rotate in both directions to ensure proper functionality.

THE MOTORBOLT SYSTEM



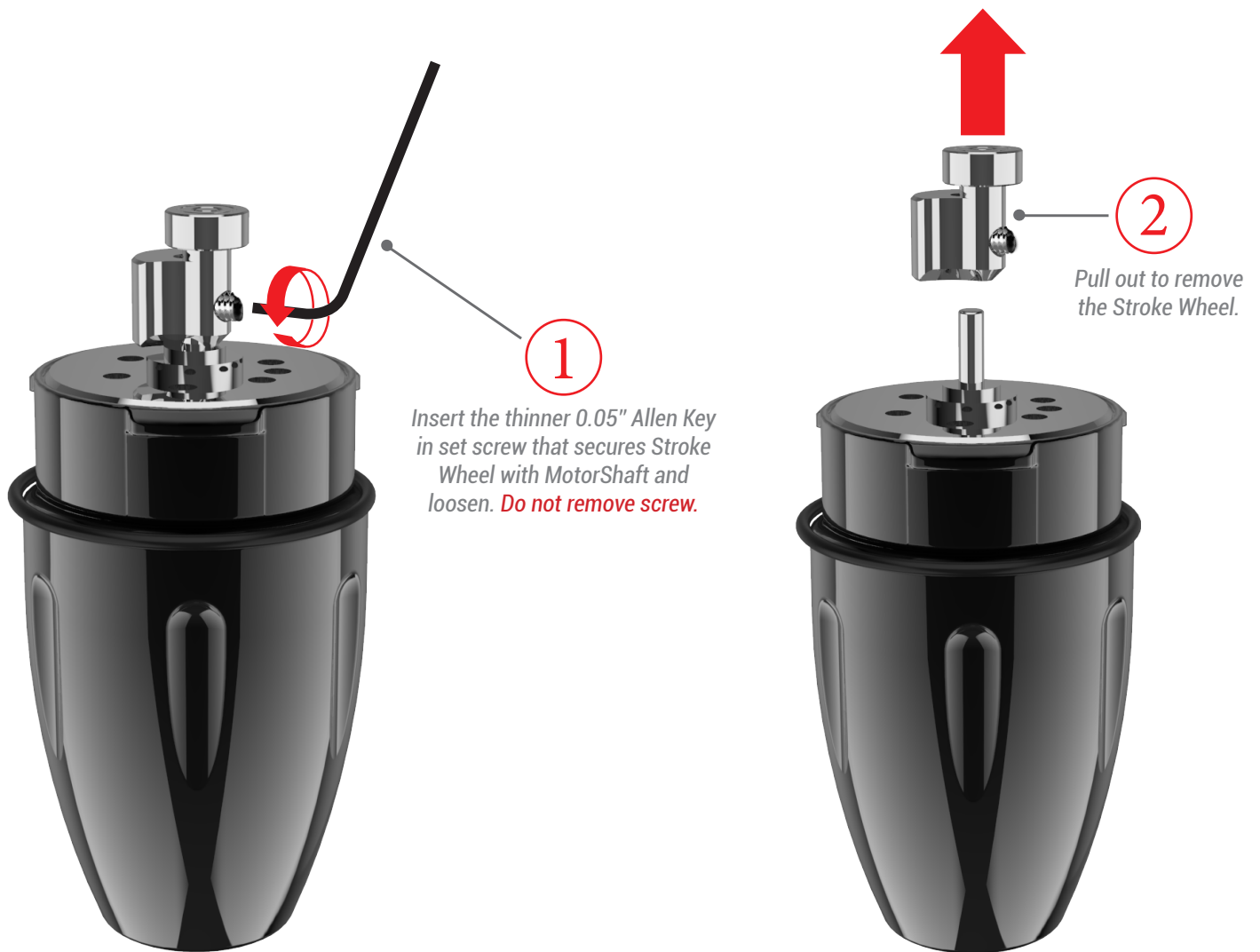
Spektra Xion MotorBolt System



MOTORBOLT SYSTEM

This detachable module houses the Motor, Cam and RCA connection. Once removed, artists can replace stroke displacement by interchanging the provided Stroke Wheels.

CHANGING THE STROKE WHEEL



CHANGING STROKE WHEELS

Remove the MotorBolt by pushing in while turning it counter clockwise and pulling out.

Replacing Stroke:

Use the tools enclosed in the Xion box:

1-Insert 0.05" Allen Key in

the screw that secures Stroke Wheel with MotorShaft and loosen (DO NOT REMOVE). Pull up to remove the StrokeWheel.

2-Locate the spare Stroke Wheel located in the box and ensure that the screw is loose enough to allow the shaft to

slide into the Stroke Wheel. Ensure that the Stroke Wheel tops off with stop washer located around the shaft. This avoids the stroke from colliding with the internal parts of the body when re-attaching the MotorBolt.

DETACHING THE MOTORBOLT



DETACHING THE MOTORBOLT

To detach your MotorBolt, ensure you have a firm grip on the Body and Grip. Turn the MotorBolt counter clockwise and pull out.

To attach the motor, push in while ensuring the Stroke Wheel is engaged with the internal

element. ***Do not apply force until you feel your Stroke Wheel has engaged with the internal element.***

If needed, rotate the motor slightly until the stroke finds its course. When this happens, note that the motor is almost

all the way in, topping off with the O-Ring around it and the rim of the body's opening.

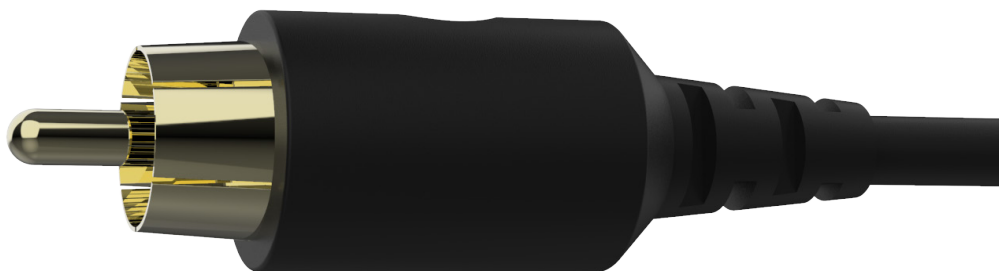
Before securing the MotorBolt, re-attach by pushing in with pressure and twisting the motor 1/8 of a turn to lock the MotorBolt.

RCA CONNECTION



RCA CONNECTION

This connecting terminal is compatible with most RCA cables on the market. For consistent connection and machine longevity, premium RCA cables are preferred.



Gold-Plated Premium Darklab Straight RCA Cord

CONNECTING YOUR MACHINE



1 Plug the RCA cord into the Xion RCA connector.



Best connection



Improper connection

HOW TO CONNECT YOUR MACHINE

Insert the RCA into the back of the MotorBolt and connect to a Power Supply. Most of the RCA Connector jack is concealed by the MotorBolt housing.

Notice that most tattoo power supplies will take 1/4" mono jacks. However, if your

unit uses 1/8" or 3.5mm jack (similar to headphone jacks), you will need to use a reduction from 1/4" female to 3.5mm jack or use a cable that goes from the male RCA to 3.5mm male jack. Check our website for alternate cable options.

ADJUSTING NEEDLE DEPTH

ADJUSTING NEEDLE DEPTH

To adjust needle depth, hold the machine body and MotorBolt while turning the Grip. *A counter clockwise turn decreases depth, while a clockwise turn increases depth (also known as needle hang).*

Each time you turn the grip you can feel the tactile feedback of the ratcheting mechanism. Each “click” displaces your needle 0.2mm and allows you to set your needle precisely without involuntarily turning while tattooing.

Increases needle depth



Turning the Grip as shown increases needle depth.

Decreases needle depth



Turning the Grip as shown decreases needle depth.

ADDITIONAL INFORMATION

VOLTAGE PARAMETERS

While voltage is a parameter that will vary from artist to artist, this machine has been tested to operate at a minimum voltage of around 4 Volts with a maximum voltage of 9.5 Volts.

Depending on the type of needle configuration or brand you use, feel free to adjust the voltage to obtain the desired performance.

Note: Exceeding 10.2 Volts is not recommended.

ACCEPTED NEEDLES

Use cartridge needles with internal membrane. This will avoid accidental contamination inside your machine. Fluids such as ink, water or oil will void warranty of the device and may require replacement of internal parts.

MAINTENANCE

- Xion is sold pre-lubricated from factory and does not require internal lubrication.
- Prevent any type of external elements from entering the machine. This can disrupt the motion of the component and contaminate lubrication.
- The grip of the machine is autoclavable. Use only steam autoclaves at temperatures no higher than 270° Fahrenheit or 132.222° Celsius. Add a hint of ointment or PTFE grease around internal opening of grip or on stabilizing friction O-rings for optimal functionality after autoclaving. Refer to page 5 for additional information.
- Machine Body and MotorBolt can be sanitized from the outside with cold sterilization products.
- Never spray the surface directly to prevent fluids from entering the machine. Always use pads or disposable paper towels to apply sterilization products.
- The mechanism relies on a return spring. **DO NOT DISASSEMBLE MACHINE.**

WARRANTY

- All the housing components (Grip, Machine Body and MotorHousing) are covered by a lifetime warranty.
- Internal parts are subject to wear and tear. The motor is covered by a 1 year warranty from the date of purchase.
- Motor warranty is void if motor shows signs of being dropped, fluid contamination and/or motor shows signs of being tampered with in any way.

ADDITIONAL INFORMATION

BARRIER PROTECTING YOUR MACHINE

Although the grip is autoclavable, we strongly suggest the use of barrier products to protect your machine. For a visual demonstration of many barrier protection methods, please visit our YouTube channel at [YouTube.com/fkiron](https://www.youtube.com/fkiron)s.

HANDY TIPS

The following tips will help you get the most out of your Spektra Xion and avoid potential issues:

- Always secure your machine. Dropping the machine can cause damage to the magnets, bearings and brushes of the motor.
- To avoid contamination use only cartridges with membranes.
- Do not exceed the suggested voltage.
- Always use power supplies with at least 1Amp of current supply.
- Rinse your needle frequently to avoid pigment drying up and slowing down your cartridges. When rinsing your needle, ensure to dip only the tip of the cartridge to avoid back flow.
- Inspect your needles prior to use.
- Use only quality cables. A good connection will ensure consistent performance.
- Avoid scratching the surface of the embodiments.
- Use only FDA-approved cold sterilization solutions for disinfection.
- Do not lubricate machine unless instructed otherwise.
- Store your machine in a secure place.

SERVICING YOUR MACHINE

Just like any mechanical device subject to use, FK Irons strongly suggests that you service your product at least once a year to ensure that a proper diagnosis of all working parts is conducted. This safeguards the optimal condition of all working parts including internal machine clean up and fresh lubrication. Routine servicing will guarantee that your machine remains functioning like the very first day. Service is subject to fees.

For service inquiries, please contact service@fkiron.com.

For additional tips and tutorials, please visit [Youtube.com/fkiron](https://www.youtube.com/fkiron)s