

SILVERRINGTM

MEASURING • INSTRUCTIONS

VERSION 3

Silver Ring Splint

C O M P A N Y

www.SilverRingSplint.com

TABLE OF CONTENTS

- Introduction
- SilverRingTM Swan Neck Splint for Hyperextension less than 20°
- SilverRingTM Lateral Support Splint for Lateral Deviation less than 20°
- SilverRingTM Boutonniere Splint for Hyperextension greater than 20°
- SilverRingTM Boutonniere Splint for Flexion Contractures less than 25°
- SilverRingTM Boutonniere Splint for Deviation less than 25°
- SilverRingTM Boutonniere Lateral Support Splint for Hyperextension or Flexion with Lateral Deviation
- SilverRing™ Realignment Splint for Flexion or Deviation when extra length is needed
- SilverRingTM MCP Splint for Hyperextension of MCP joint when there is Active Flexion at the MCP and Abduction at the CMC Joint
- SilverRingTM Stable Thumb Splint with PVX for Hyperextension of the MCP Joint with CMC Joint Involvement
- SilverRingTM Stable Thumb Splint for Flexion of MCP Joint which is Passively Correctable to Neutral
- SilverRing™ Spiral Splint for Thumb IP Hyperextension or Trigger Thumb
- SilverRingTM Dorsal Extension Splint for Flexion or Deviation greater than 25°
- SilverRingTM Trigger Splint for Recurring Flexor Tenosynovitis of Index-Little Fingers
- SilverRing™ EDS Splint for Hyperextension of MP Joints
- SilverRingTM Pulley Ring Splint for Bowstringing of A-2 Pulley 16
- SilverRing™ Buddy Ring Splint to Adduct or Abduct Fingers
- SilverRingTM 2½ Buddy Ring Splint for Adduction of Fingers, Prevent Scissoring or Aligns and Supports MP Joints
- Useful Tips 18 - 20
- Pictures of Typical Finger Deformities 21 - 22
 - **Ordering Instructions**

SILVERRINGTM EZ-SIZER



Sizing has never been easier!

The SilverRing™ EZ-Sizer allows you to measure for SilverRing™ splints with ease and accuracy. Designed to match the patented elliptical shape of our splints, this specialized measuring tool ensures a perfect fit. The individual EZ-Sizers fit conveniently into the Holders to form "splints", allowing you to visualize how the complete splints will conform to your patients' fingers.

Each SilverRing™ Measuring Kit consists of 56 large and small EZ-Sizers, 2 Swan Neck Holders, 1 Boutonniere Holder and 1 set of Round Ringsizers (not pictured).



SILVERRINGTM SWAN NECK (SN)

Hyperextension less than 20°

Choose proximal and distal EZ-Sizers that fit, when angled at 45° from the volar crease, as shown in the pictures.





2 Remove the EZ-Sizers from the cord and place them in the SN Holder to form a "splint".





3 Slide the "splint" onto the finger.



4 Change the sizes as needed until the "splint" fit is comfortably snug.

This splint can be worn on the PIP, DIP or Thumb IP joints. Use the same measuring steps for each joint. For the DIP or Thumb IP joints, the distal ring should rest on the nail, not on the nail bed.







SPLINT ADJUSTMENTS AND FITTING:

- To loosen the fit, decrease the angle between the rings by pushing the rings together.
- To tighten the fit, spread the rings further apart.



$\begin{array}{l} SILVERRING^{TM} \ LATERAL \\ SUPPORT \ SPLINT \ (LS) \end{array}$

Lateral Deviation less than 20°

Choose proximal and distal EZ-Sizers that fit, when angled at 45° from the volar crease, as shown in the pictures.





Remove the EZ-Sizers from the cord and place them in the SN Holder to form a "splint".





3 Slide the "splint" onto the finger.



4 Change the sizes as needed until the "splint" fit is comfortably snug. Specify the side for the lateral support (radial, ulnar or both). Support goes on the side opposite the direction the finger deviates. If the finger is bilaterally unstable, request a splint with support on both sides.

Note: LS splint is not appropriate for enlarged joints, joints with Heberden's or Bouchard's Nodes or when deviation cannot be passively corrected to neutral.

This splint can be worn on the PIP or DIP joints, but is rarely used on the thumb IP joint due to the joint shape. Use the same measuring steps for each joint. For the DIP or thumb IP joints, the distal ring should rest on the nail, not on the nail bed.







SPLINT ADJUSTMENTS AND FITTING:

- To loosen the fit, decrease the angle between the rings by pushing the rings together.
- To tighten the fit, spread the rings further apart.



SILVERRINGTM BOUTONNIERE SPLINT (BT)

Hyperextension greater than 20° (spacer worn under the joint)

Choose proximal and distal EZ-Sizers that fit when angled as shown in the pictures. Leave a space (8 – 10mm) between the EZ-Sizers for the BT spacer.





2 Remove the EZ-Sizers from the cord and place them in the BT Holder to form a "splint".



3 One side of the BT Holder has 2 slots which position the proximal ring at either 15° or 30°. Choose the 15° slot for proximal EZ-Sizer when splinting the DIP or thumb IP joints or when a shorter splint is needed.



4 Slide the "splint" onto the finger. The spacer is worn under the joint. Change the sizes as needed until the "splint" fit is comfortably snug.



This splint can be worn on the PIP, DIP or Thumb IP joints. Use the same measuring steps for each joint. For the DIP or Thumb IP joints, the distal ring should rest on the nail, not on the nail bed. If the BT splint is too long, consider using the SN splint.







SPLINT ADJUSTMENTS AND FITTING:

- The BT splint is shipped with both rings at 30°. If using the 15° slot for measuring, adjust the angle of the ring when the splint is received.
- To loosen the fit, decrease the angle between the rings by pushing the rings together.
- To tighten the fit, spread the two rings further apart.



SilverRing $^{\text{tm}}$ Boutonniere Splint (bt)

Flexion Contractures less than 25° (spacer worn on top of the joint)

Note: Do not flex the finger when wearing the EZ-Sizer as it may weaken or break.

Choose proximal and distal EZ-Sizers that fit when angled as shown in the pictures. Leave a space (8 – 10mm) between the EZ-Sizers for the BT spacer.





Remove the EZ-Sizers from the cord and place them in the BT Holder to form a "splint".



One side of the BT Holder has 2 slots which position the proximal ring at either 15° or 30°. Choose the 15° slot for the proximal EZ-Sizer when splinting the DIP or thumb IP joints or when a shorter splint is needed to avoid interfering with an adjacent joint.



A Slide the "splint" onto the finger. The spacer is worn on top of the joint. Splints may be rotated on the finger when sliding into place. Change the sizes as needed until the "splint" fit is comfortably snug.



Note: Sizes may need to be increased to accommodate non-reducible contractures.

This splint can be worn on the PIP, DIP or Thumb IP joints. Use the same measuring steps for each joint.







SPLINT ADJUSTMENTS AND FITTING:

- The BT splint is shipped with both rings at 30°. If using the 15° slot for measuring, adjust the angle of the ring when the splint is received.
- To loosen the fit, decrease the angle between the rings by pushing the rings together.
- To tighten the fit, spread the two rings further apart.



SILVERRINGTM BOUTONNIERE SPLINT (BT)

Deviation less than 25° (spacer worn on the side of the joint)

Choose proximal and distal EZ-Sizers that fit when angled as shown in the pictures. Leave a space (8 – 10mm) between the EZ-Sizers for the BT spacer.





Remove the EZ-Sizers from the cord and place them in the BT Holder to form a "splint".



3 One side of the BT Holder has 2 slots which position the proximal ring at either 15° or 30°. Choose the 15° slot for proximal EZ-Sizer when splinting the DIP or thumb IP joints or when a shorter splint is needed to avoid interfering with an adjacent joint.



4 Slide the "splint" onto the finger. The spacer is worn on the side of the joint. Splints may be rotated on the finger when sliding into place. Change the sizes as needed until the "splint" fit is comfortably snug.



Note: Sizes may need to be increased to accommodate non-reducible contractures.

This splint can be worn on the PIP, DIP or Thumb IP joints. Use the same measuring steps for each joint.







SPLINT ADJUSTMENTS AND FITTING:

- The BT splint is shipped with both rings at 30°. If using the 15° slot for measuring, adjust the angle of the ring when the splint is received.
- The "spacer" is worn on the side of the joint opposite the direction of deviation.
- To loosen the fit, decrease the angle between the rings by pushing the rings together.
- To tighten the fit, spread the two rings further apart.



SILVERRINGTM BOUTONNIERE LATERAL SUPPORT SPLINT (BLS)

Hyperextension or Flexion with Lateral Deviation

- Measure the same as for BT splint.
- 2 Specify if the spacer is worn on the dorsal or volar surface of the joint.
- 3 Specify the side for the lateral support (radial, ulnar or both).
- 4 Specify the direction of deviation of the finger.

Note: BLS splint is not appropriate for enlarged joints, joints with Heberden's or Bouchard's Nodes or when deviation cannot be passively corrected to neutral.

This splint can be worn on the PIP but is rarely used for DIP (because the distal phalanx is too short and frequently has nodules around the joint) or Thumb IP joints (because of the shape of the joint). Use the same measuring steps for each joint. For the DIP or thumb IP joints, the distal ring should rest on the nail, not on the nail bed.



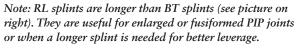




$SILVERRING^{\text{tm}}REALIGNMENT$ SPLINT (RL)

Flexion or Deviation when extra length is needed

RL splints are measured the same way as BT splints.





RL splints are not used for DIP or thumb IP joints.

BT

RL



SILVERRINGTM THUMB MC SPLINT (MCP)

Hyperextension of MCP Joint with Active Flexion at the MCP and Abduction at the CMC Joint

Provide three measurements for this splint. Start by marking the MCP joint (z), the CMC joint (x) and half way between the MCP and CMC (y).



2 For length of proximal ring, choose an EZ-Sizer that sits about 5mm distal to the MP volar crease and clears the mark at (y) when angled back.



For width of proximal ring, choose an EZ-Sizer that, when angled back past the MCP joint, touches the sides of the thumb. Note, the dorsal lip of this EZ-Sizer will often land approximately midway between the mark at (y) and the MCP joint (z).



Touches side to side

Note: It is not uncommon for the proximal length and width measurements to have a difference of 2-10 sizes, e.g. 26.0 x 24.0 or 32.0 x 22.0. Refer to the example on the order form to see how to write all the measurements for ordering.

4 For distal ring size, rotate the EZ-Sizer sideways. Find the smallest size that barely slides over the joint. To verify the smallest size, try the next size down, which should not be able to slide over the joint. When ordering, <u>order one full size larger</u> than the smallest size that just slides over the joint. See example.



Sideways over IP joint

Example: If a size 8.5 cannot get over the joint and a size 9 can barely slide over the joint, order a size 10. Once the silver splint is received, the distal ring angle may need to be adjusted during fitting.

Note: While fitting a patient if there are any questions about which thumb splint to use (e.g. ST or MCP) and if options like the PVX or bracelet should be added, please feel free to call us at 800-311-7028 for assistance.

MCP OPTIONS:

- (a) Proximal Volar Extension (PVX) is used to stabilize under the head of the metacarpal joint to reduce hyperextension. No measurement is needed. PVX can be manually adjusted to fit the curvature of the palm. Use when there is more than 15° hyperextension.
- (b) Bracelet is used to keep the splint from sliding distal with normal use. No measurement is needed. Once the splint fits the bracelet may be adjusted for length.
- (c) Proximal Radial Extension and (d) Ulnar Lateral Support can be added to correct MCP deviation. (c) and (d) are always ordered together.
- 'S' Hook can replace the bracelet lobster claw clasp for people with fine motor limitations.











SILVERRINGTM STABLE THUMB SPLINT (ST) WITH PVX Hyperextension of the MCP Joint with CMC Joint Involvement

Choose the smallest Round Ringsizer that is snug when it slides over the IP joint.



A bracelet is included with the splint. The length can be adjusted by a local jeweler or returned to us for adjustments.



3 Proximal Volar Extension (PVX) is used to stabilize under the head of the metacarpal joint to reduce hyperextension. No measurement is needed. PVX can be manually adjusted to fit the curvature of the palm.



STABLE THUMB OPTIONS:

'S' Hook can replace the bracelet lobster claw clasp for people with fine motor limitations.

Choose from 3 different dorsal plate styles: Regular, Long and 3D. Please visit website for examples.



SILVERRINGTM STABLE THUMB SPLINT (ST)

Flexion of MCP Joint which is Passively Correctable to Neutral

Measure the same as above. A bracelet is included with the splint. The length can be adjusted by a local jeweler or returned to us for adjustments.



STABLE THUMB OPTIONS:

'S' Hook can replace the bracelet lobster claw clasp for people with fine motor limitations.

Choose from 3 different dorsal plate styles: Regular, Long and 3D. Please visit website for examples.



SILVERRINGTM SPIRAL SPLINT (SP)

Thumb IP Hyperextension or Trigger Thumb

Choose an EZ-Sizer that, when rotated on its side, is snug when it slides over the IP joint.



Sideways over IP joint

2 Measure the length from mid-phalanx to mid-phalanx.



Mid-phalanx

The spiral splint can be worn to block hyperextension and provide mild medial/lateral stability to the joint.



The spiral splint can be worn for trigger thumb by positioning the center band to cross diagonally over the dorsal surface of the IP joint.



SPLINT ADJUSTMENTS AND FITTING:

- Splints can be adjusted for circumferential fit by either tightening or opening the spiral.
- Splint length can be adjusted by spreading the ends apart or squeezing the ends towards each other.



$\underline{S}ILVERRING^{TM}$ DORSAL EXTENSION SPLINT (DOE)

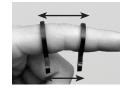
Flexion or Deviation greater than 25°

SPECIAL ORDER SPLINT

Choose Round Ringsizers that, when positioned straight, fit proximal and distal to the joint at the mid-phalanx.



Measure the lengths from the proximal edge of proximal Ringsizer to distal edge of the distal Ringsizer on both dorsal and volar surfaces.



3 Measure the length from the proximal edge of proximal Ringsizer to the center of the joint.



4 Measure degree of contracture.



5 Specify band width: 3 or 4mm. (Actual size shown)





3*mm*

Deviation Deformity with bar worn on the side of the joint (shown left) Flexion Deformity with bar worn on top of the joint (shown right)





SPLINT ADJUSTMENTS AND FITTING:

• Splint can be adjusted to accommodate a contracture by bending the bar which connects the two rings.



SILVERRINGTM TRIGGER SPLINT (TR)

Recurring Flexor Tenosynovitis of Index-Little Fingers

Choose a Round Ringsizer that fits at the base of the finger (MP crease).



2 Measure the length from the proximal palmer crease to the base of finger (MP crease).



3 Measure the length from the base of the finger (MP crease) to within 5 – 8mm proximal to the PIP volar crease.



The "dorsal pad" on the splint helps distribute the pressure on the dorsal surface of the finger.





SILVERRINGTM EDS SPLINT (EDS)

Hyperextension of MP Joints

SPECIAL ORDER SPLINT

Choose a Round Ringsizer that slides easily over the PIP joint and can be positioned at the base of the finger.



With the Ringsizer still in place, measure the length from distal palmer crease to the distal edge of the Ringsizer.



With the Ringsizer still in place and with the finger in slight flexion, measure the length from the center of the MCP joint to the distal edge of the Ringsizer and add 2cm to that measurement.









SILVERRINGTM PULLEY RING SPLINT (P)

Bowstringing of A-2 Pulley

Choose a Round Ringsizer that fits at the base of the finger (MP crease).



2 Specify band width: 4, 6 or 10mm.

> Note: Wider band widths are tighter going over the joint. Splint will not be effective if the PIP joint is enlarged.

(Actual size shown)











SILVERRINGTM BUDDY RING SPLINT (BR)

Adduct Fingers (full offset), Abduct Fingers (no offset)

Choose Round Ringsizers that fit at the base of the fingers (MP crease) which are being splinted.



2 Specify band width: 3, 4 or 6mm.

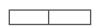
(Actual size shown)

3mm 4mm 6mm



3 Specify: no offset, half offset or full offset.

Note: The combination of band width and offset will determine the "total length" and weight of the splint. Make sure the "total length" does not limit flexion at the adjacent joint.







No offset

1/2 offset

Full offset



SILVERRINGTM 21/2 BUDDY RING **SPLINT** (2½ BR)

Adduction of Fingers, Prevent Scissoring or Aligns and Supports MP Joints

Choose Round Ringsizers that fit at the base of the three adjacent fingers being splinted: index, middle and ring fingers or middle, ring and little fingers.



(Actual size shown)

2 Specify band width: 3 or 4mm.



3mm 4mm

Note: The half ring can be worn under the finger to correct an extension lag or on top of the finger to act as a PIP extension assist. It is most frequently used to prevent abduction or scissoring of fingers.









USEFIII. TIPS

Choosing a size:

There is variability in finger size from morning to afternoon, day to day, season to season and with activity level. You are choosing an average size that will fit well most of the time. Note that when people use splints consistently, their edema may decrease.

Evaluating the fit of a splint:

Hold the finger in extension and gently push one side of the splint against the finger. Look on the other side of the finger to see if there is space between the ring and the finger. Normally there should be minimal or no space, however, if the joint is enlarged or has a contracture, there may be some space. It is normal to see space all around when the finger is flexed.

3 Adjusting splints:

Sterling silver and gold are both malleable and durable. Small adjustments will not damage the splints. The rings can be gently spread apart or squeezed together to tighten or loosen the fit of the splint on the finger. Generally, one can increase or decrease the fit of the splint by ½ a size with this adjustment.

4 Over-adjusting splints:

Frequent repetitive bending of the splint will gradually work-harden the metal and ultimately cause it to break. If one needs to frequently adjust the splint due to changes in edema or seasonal changes, having a second set of splints may be desirable. Shifting splints to different fingers on either hand may reduce the need to order all new sizes.

5 Splints that are too tight or too loose:

If a splint cannot be made to fit by adjusting the angle of the rings as described in #4 above, the overall splint size should be increased or decreased by at least a whole size.

6 How tight should splints be?

DIP splints should be very snug since they can be scraped off during functional activities. PIP and thumb IP splints should be comfortably snug. These are general guidelines; there are always exceptions.

7 Indentations:

Individuals have indentations from wearing glasses, socks, watches and splints. The indentations from wearing splints are normal and useful for keeping splints in place. This helps reduce the likelihood that splints will be lost. It is important, however, that an indentation does not develop into a pressure sore. Some splints, such as the SilverRing™ Boutonniere Splint, may need to be shifted slightly from side to side while wearing so that the "spacer" is not always in the same spot.

8 Wearing time:

When splinting mild, reducible deformities, many individuals wear their splints twenty-four hours a day because of the increased comfort, support and protection they provide. Individuals with fragile skin or flexion deformities may require a "wearing schedule" specified by the therapist to suit individual needs and tolerances.

9 Wearing splints at night:

Since fingers tend to swell at night, it is not advisable to wear splints at night until one knows how the fingers respond. The type of splint, the severity of the deformity and individual preferences will determine whether splints are worn at night. It is generally not advisable to wear splints for flexion deformities overnight.

Choosing double extra-strength splints (XXS):

For hands requiring a heavier duty splint, we offer a double extra strength (XXS) splint. Since this splint is not adjustable, confirm the fit in extra strength (XS) and adjust the angles of the rings (if necessary). Return this splint and request us to duplicate the angles in XXS. SPECIAL ORDER **SPLINT**

Correcting lateral deviation with the SilverRing™ Lateral Support Splint:

The SilverRing[™] Lateral Support Splint can be used to correct lateral deviation if the joint can be passively corrected and is not enlarged. It allows full flexion and is a good choice for early osteoarthritis, before there are significant joint changes. It will not be effective on failed arthroplasties because of the enlarged joint, if there are Bouchard's or Heberden's Nodes or if the joint is fusiform shaped.

Understanding where the lateral support goes:

Three points of contact are needed to correct deviation. The lateral support is the center point (the fulcrum) and goes on the side of the joint opposite the direction of deviation. For example, if the end of the finger is deviating in an ulnar direction, the support goes on the radial border of the joint.

USEFUL TIPS (continued)

- **13** Correcting lateral deviation with the SilverRing™ Boutonniere Splint: The SilverRing™ Boutonniere Splint gives a stronger corrective force than the SilverRing™ Lateral Support splint because the splint is longer. It will accommodate Nodes or an enlarged joint, however it limits full flexion. It is an excellent choice for the DIP joint when there are significant joint changes and when the lack of full flexion is not an issue.
- Correcting PIP joint hyperextension greater than 20° with the SilverRing™ Boutonniere Splint:

When using the SilverRing™ Boutonniere Splint to limit hyperextension, the "spacer" positions the rings farther apart which increases the length of the splint. This extra length allows the splint to fit around an enlarged joint and/or be positioned to avoid Bouchard's Nodes. It is also a good choice if there is limited ROM because it is easier to get on and off or if there is "bulging" on the volar aspect of the joint when the finger is extended.

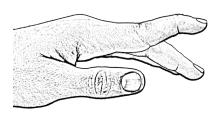
Understanding the proximal volar extension (PVX) and why it is needed:

When splinting the MCP joint, the web space prevents thumb splints from going far enough proximal to support the joint. The PVX curves along the volar aspect of the thumb to support under the head of the metacarpal joint and gives better alignment at the CMC joint. It can be adjusted by bending it in or out to fit the contour of the volar surface of the thumb for an exact fit. Use when there is more than 15° of hyperextension.

Understanding the 15° and 30° slots in the Boutonniere Holder: Using the 15° slot in the Boutonniere Holder makes the splint shorter and using the 30° slot makes the splint longer. When the SilverRing™ Boutonniere Splint is too long, the proximal ring rests too close to the volar crease of the adjacent joint. To prevent this, generally use the 15° slot for the proximal ring measurement of a PIP joint. Always use the 15° slot for the proximal ring of a DIP joint. Use the 30° slot for the proximal ring when a longer splint is needed.

There are always exceptions! The information throughout this booklet is a basic guideline. Please call or e-mail for more technical advice.

Typical Finger Deformities



Swan Neck Deformity: Use SN or, if hyperextension is greater than 20° or to avoid nodes, use BT



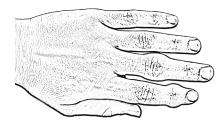
Lateral Deviation (DIP) with Heberden's Nodes: Use BT



Lateral Deviation (PIP): Use LS or, if the joint is enlarged or has nodes, use BT



Thumb IP Deviation: Use BT or, if the proximal phalanx is the same diameter as the joint, use LS



Fusiform Shaped Joints (PIP): Use BT or RL

TYPICAL FINGER DEFORMITIES (continued)



Hyperextension of Thumb MCP: If there is active flexion at the MCP joint and abduction at the CMC joint, use MCP with PVX or, if MCP joint flexion is limited or the thumb is adducted, use ST with PVX



Hyperextension of Thumb IP: Use SN or, if the MCP joint cannot be extended to neutral, use BT



Hyperflexion of the Thumb MCP Joint: If joint can be passively extended to

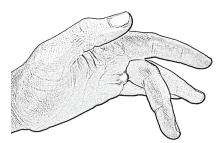
neutral, use ST and/or BT on IP joint



MP Joint: If there is rotation and/or hyperextension at the MP joint, use 2 ½ BR



Scissoring of the Fingers at the MP Joints: Use 2 ½ BR



Recurring tenosynovitis in the palm: Use Trigger Splint

Order Today

Measurements should be taken by a trained medical professional who is familiar with splinting such as an Occupational Therapist (OT), Physical Therapist (PT), or Certified Hand Therapist (CHT).

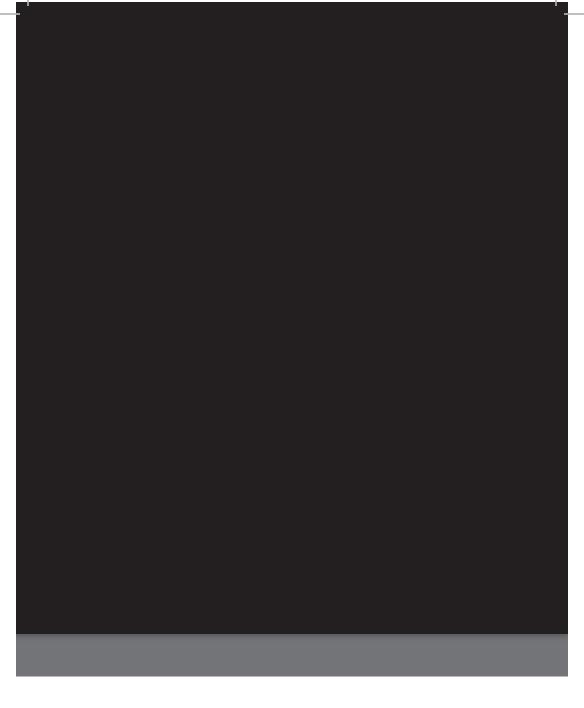
> To Order by Telephone: 800.311.7028 or 434.971.4052

> To Order by Fax: 888.456.8828 or 434.971.8828

To Order by Mail: Silver Ring Splint Company P.O. Box 2856 Charlottesville, VA 22902-2856 USA

To Contact Us by E-mail: customerservice@SilverRingSplint.com

SilverRing[™] and SIRIS[™] are trademarks of the Silver Ring Splint Company.



Silver Ring Splint

C O M P A N Y

PHONE: 800.311.7028 or 434.971.4052 | FAX: 888.456.8828 or 434.971.8828

P.O. Box 2856 | Charlottesville, VA 22902-2856 USA

Copyright ©2014, 2012 Silver Ring Splint Company