

# assi<sup>®</sup>

- Nerve & Tendon Cutting Sets
- Arteriotomy Set



**ASSI.NHS2**  
Nerve and Tendon  
Cutting Sets 13  
piece set



**ASSI.NHS1**  
Nerve and Tendon  
Cutting Sets  
8 piece set



**ASSI.ART1**  
Arteriotomy Set



**assi<sup>®</sup>**  <sup>TM</sup>

ACCURATE SURGICAL & SCIENTIFIC INSTRUMENTS<sup>®</sup>

*For diamond perfect performance<sup>™</sup>*

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# Nerve and Tendon Cutting Sets

**ASSI.NHS2**  
NERVE AND TENDON  
CUTTING SETS  
13 PIECE SET



**COMPLETE SET OF NERVE AND TENDON HOLDING FORCEPS INCLUDES:**

- 5 new small-diameter nerve holding forceps for surgery of the small digits.
- 6 nerve and tendon forceps for surgery of the large digits and wrist.
- Blade holder.
- Large sterilization box.

**ASSI.NHS2 Complete set consists of:**

| CAT. NO.         | DESCRIPTION  | NERVE DIA. |
|------------------|--|------------|
| (A) ASSI.NHF0.5  | 1 Holding Forceps  | 0.5mm      |
| (B) ASSI.NHF1    | 1 Holding Forceps  | 1mm        |
| (C) ASSI.NHF1.5  | 1 Holding Forceps  | 1.5mm      |
| (D) ASSI.NHF2    | 1 Holding Forceps  | 2mm        |
| (E) ASSI.NHF2.5  | 1 Holding Forceps  | 2.5mm      |
| (F) ASSI.NHF3    | 1 Holding Forceps  | 3mm        |
| (G) ASSI.NHF3.5  | 1 Holding Forceps  | 3.5mm      |
| (H) ASSI.NHF4    | 1 Holding Forceps  | 4mm        |
| (I) ASSI.NHF5    | 1 Holding Forceps  | 5mm        |
| (J) ASSI.NHF6    | 1 Holding Forceps  | 6mm        |
| (K) ASSI.NHF7    | 1 Holding Forceps  | 7mm        |
| (L) ASSI.BHS12   | 1 Blade Holder, straight, 12cm                               |            |
| (M) ASSI.ICN1220 | 1 Sterilization Box, 12 x 20cm                               |            |
| **ASSI.CBS35     | * 2 Individual Straight Blades, 35mm sterile (complimentary) |            |

\* We recommend that you order 1 pkg. ASSI.CBS35 (10 straight blades), with initial purchase of the set.

\*\* Not shown. (Illustrated on page 4 & 8.) Replacement parts sold separately. (See page 4.)



# Nerve and Tendon Cutting Sets

**STANDARD SET OF NERVE AND TENDON HOLDING FORCEPS INCLUDES:**

- 6 nerve and tendon forceps for surgery of the large digits and wrist.
- Blade holder.
- Large sterilization box.

**ASSI.NHS1**  
NERVE AND TENDON  
CUTTING SETS  
8 PIECE SET



**ASSI.NHS1 Standard set consists of:**

| CAT. NO.                        | DESCRIPTION                                  | NERVE DIA. |
|---------------------------------|--|------------|
| (A) ASSI.NHF2                   | 1 Holding Forceps                            | 2mm        |
| (B) ASSI.NHF3                   | 1 Holding Forceps                            | 3mm        |
| (C) ASSI.NHF4                   | 1 Holding Forceps                            | 4mm        |
| (D) ASSI.NHF5                   | 1 Holding Forceps                            | 5mm        |
| (E) ASSI.NHF6                   | 1 Holding Forceps                            | 6mm        |
| (F) ASSI.NHF7                   | 1 Holding Forceps                            | 7mm        |
| (G) ASSI.BHS12                  | 1 Blade Holder, straight, 12cm               |            |
| (H) ASSI.ICN913                 | 1 Sterilization Box, 9 x 13cm                |            |
| **ASSI.CBS35<br>(complimentary) | * 2 Individual Straight Blades, 35mm sterile |            |

\*\* We recommend that you order 1 pkg. ASSI.CBS35 (10 straight blades), with initial purchase of the set.

\*\* Not shown. (Illustrated on page 4 & 8.) Replacement parts sold separately. (See page 4.)



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## 4 PERIPHERAL NERVES & TENDONS

### REPLACEMENT PARTS

Select the proper size of the holding forceps to avoid pinching of the nerve or tendon.



|                    |                   |      |       |
|--------------------|-------------------|------|-------|
| <b>ASSI.NHF0.5</b> | 1 holding forceps | dia. | 0.5mm |
| <b>ASSI.NHF1</b>   | 1 holding forceps | dia. | 1.0mm |
| <b>ASSI.NHF1.5</b> | 1 holding forceps | dia. | 1.5mm |



|                    |                   |      |       |
|--------------------|-------------------|------|-------|
| <b>ASSI.NHF2</b>   | 1 holding forceps | dia. | 2.0mm |
| <b>ASSI.NHF2.5</b> | 1 holding forceps | dia. | 2.5mm |
| <b>ASSI.NHF3</b>   | 1 holding forceps | dia. | 3.0mm |
| <b>ASSI.NHF3.5</b> | 1 holding forceps | dia. | 3.5mm |
| <b>ASSI.NHF4</b>   | 1 holding forceps | dia. | 4.0mm |
| <b>ASSI.NHF5</b>   | 1 holding forceps | dia. | 5.0mm |
| <b>ASSI.NHF6</b>   | 1 holding forceps | dia. | 6.0mm |
| <b>ASSI.NHF7</b>   | 1 holding forceps | dia. | 7.0mm |



**ASSI.BHS12** 1 blade holder, straight, 12cm, with spring



**ASSI.ICN913** 1 sterilization box 9 x 13cm holds 6 nerve forceps and 1 blade holder

**ASSI.ICN1220** 1 sterilization box 12 x 20cm holds 12 nerve forceps and 1 blade holder



**ASSI.CBS35** 1 pkg. straight blades, 10 per pkg. 35mm sterile, pack



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Figure 1:  
Scanning electron microscopic picture of a resection by technique described below, of a non-fixated human flexor tendon.



Figure 2:  
The Holding Forceps is a sensitive handling instrument for the tendon stumps at suturing.

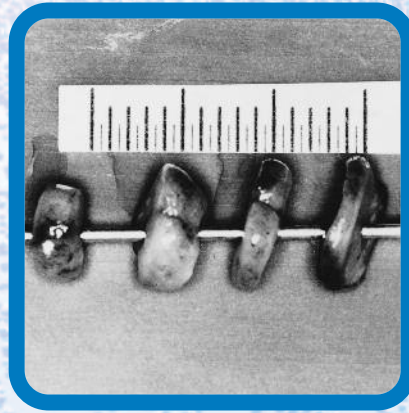


Figure 3:  
Resected slices of a median nerve at a secondary suturing. Using the Holding Forceps, slices as thin as 1mm can be cut easily.

In reconstruction of peripheral nerves and tendons, the exact fascicular coaptation is one of several important factors upon which, to a certain degree we can have a direct influence.

A straight and even-cut surface of the nerve stumps greatly facilitates the exact fascicular coaptation. The Holding Forceps were developed to trim nerve stumps smoothly with a blade, without additional trauma by the holding device and with a minimal loss of substance. This is due to the eccentrically placed guide slot. In addition, the simple design facilitates application in cases of difficult surgical exposure.

Scanning electron microscopic comparison of stumps of the human sural nerve, cut by a serrated blade scissors, and by the method applied here, have shown that the anatomical changes of the cut surface are less evident by using a sharp blade than by using a serrated blade scissors (J. Smahel: The Surgical Cut-Surface of Peripheral Nerves, International Journal for Microsurgery, 2:187, 1980). By this technique, smooth and straight surface-cuts can be achieved, especially on larger nerves, which also facilitates assessment of the fascicular topography.

For trimming of small single fascicles or small groups of fascicles, the use of serrated scissors is recommended. Clinical and laboratory experience has shown that this instrument facilitates the dissection and/or the trimming of other cylindrical anatomical structures. The goal is to obtain a smooth surface for tendons, fallopian tubes, vas deferens, vessels, etc. This instrument has also proved its usefulness especially in hand surgery, at trimming the tendon stumps. Not only can extraordinarily smooth tendon surfaces be cut, but the instrument also permits the gentle handling of the stumps for suturing (Fig. 1 and Fig. 2). Using the Holding Forceps, slices as thin as 1mm can easily be cut (Fig. 3).

Using Holding Forceps with blade in guide slot: an oscillating movement under slight pressure and constant rinsing results in a straight, smooth resection of the nerve end (Fig.4).

Insert blade carefully into guide slot to avoid damage to its cutting edge (Fig. 5).

Clean the guide slot under running water, with the back of the used blade. Avoid spreading and distorting the guide slot. Don't use blades that are too thick. ASSI.CBS35 blade is recommended.

Use ASSI.SAS15T serrated blade scissors to trim single fascicles or small groups of fascicles.

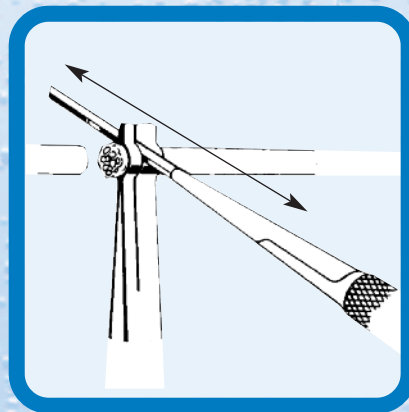


Figure 4:

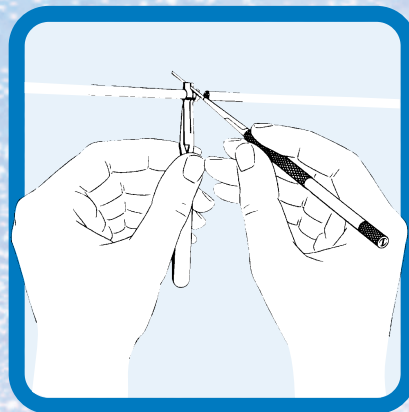


Figure 5:



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# Arteriotomy Set

For End-to-Side Microvascular Anastomosis.



REPLACEMENT PARTS

| Catalog No.           | Description   |
|-----------------------|---|
| <b>ASSI® ART1</b>     | Arteriotomy Set<br>(consists of 3 clamps, blade holder and sterilization box)                             |
| <b>A ASSI.ART12</b>   | Arteriotomy Clamp tip dia. 1.2mm  |
| <b>B ASSI.ART18</b>   | Arteriotomy Clamp tip dia. 1.8mm  |
| <b>C ASSI.ART24</b>   | Arteriotomy Clamp tip dia. 2.4mm  |
| <b>D ASSI.BHS12</b>   | Blade Holder, straight, 12cm  |
| <b>E ASSI.ICN913</b>  | Sterilization Box, 9 x 13cm   |
| <b>** ASSI.CBS303</b> | * 1 Pack of 10 Cutting Blades, 30mm (not shown)<br>straight, tapered point, sterile (not included in set) |

\* We recommend that you order 1 pack CBS303 with initial purchase of the set.

\*\* Not shown. (illustrated on page 8.) Replacement parts sold separately. (See page 4 & 8.)



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# “The Perfect Arteriotomy”

## The Perfect Hole

A good arteriotomy is essential for a good end-to-side anastomosis. It should be elliptical and clean-cut, with even, steeply sloping edges.

Such a hole has no irregular ragged spots to weaken the wall and attract thrombosis.

With such a hole, one can see the edges clearly, place the needle accurately, and tie sutures that hold strongly.

Such a hole is hard to make. Scissors just won't cut it.

## Why Scissors Won't Cut It

The thick wall of a big vessel is tough and slippery. It has two layers which can effectively separate, especially in older patients.

Scissors don't just cut vessel wall. They squeeze it ... shear it ... push it away ... then they cut it. Their action is unpredictable. Sometimes it's alarming. Sometimes it's truly dangerous.

To make even a single scissor cut that goes just the right distance is difficult. To make two cuts that meet exactly is more difficult. Worst of all, scissors can separate the vessel wall into its two layers, cutting only the outer one and squeezing the inner one, uncut, into the lumen.

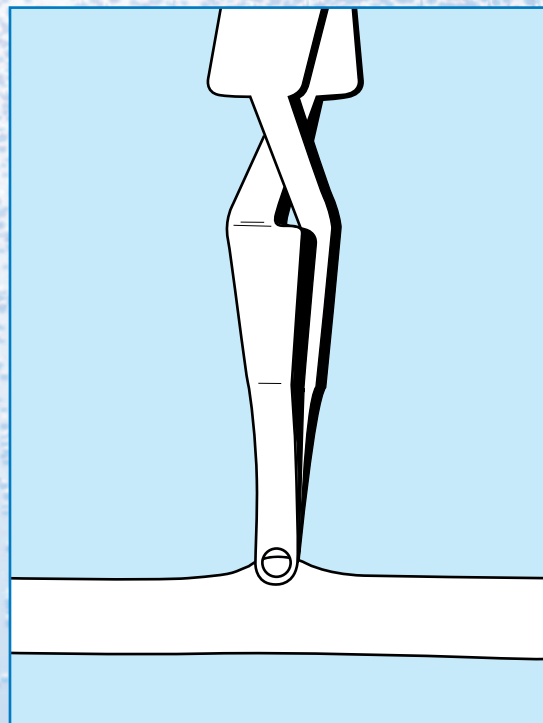


Figure 1

## The Arteriotomy Clamp

The Arteriotomy Clamp has been developed to overcome these difficulties. It enables the surgeon to make an arteriotomy with the instrument that cuts a vessel best—the knife. The arteriotomy clamp picks up and holds fast the piece of vessel wall that is to be excised (See fig. 1). Then, with a single curving sweep of a straight knife blade, held close against the clamp tip, the ellipse is excised (See fig. 2). The result: a perfect arteriotomy—every time.

**The clamp is a precision-made cross-action forceps with a heavy closing pressure and a tapered, rounded, fenestrated tip. The hole in the tip is important—the tissue that is picked up squeezes into it and can't slip out.** There are three sizes of clamps, with tips 1.2, 1.8, and 2.4 mm in diameter. With each clamp, holes of varying size can be cut, depending on the depth of tissue that is picked up. Using the set of three clamps, holes can be cut with mean diameter ranging all the way from 1 to 5mm.

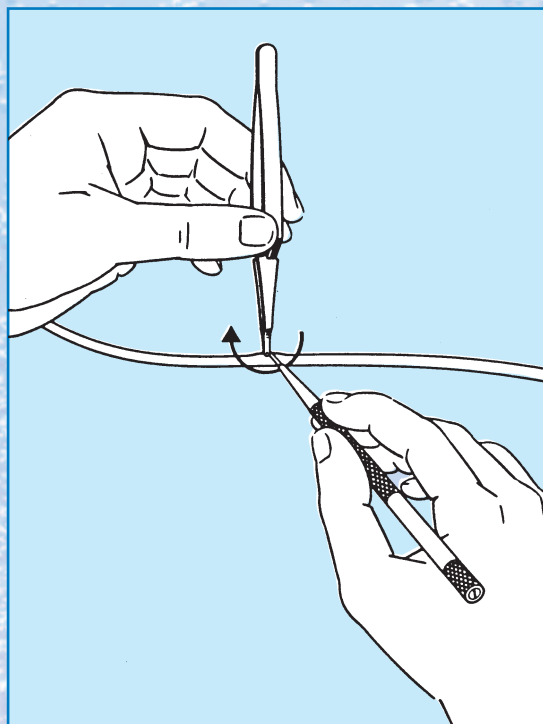


Figure 2

DRAWINGS ARE NOT ACTUAL SIZE



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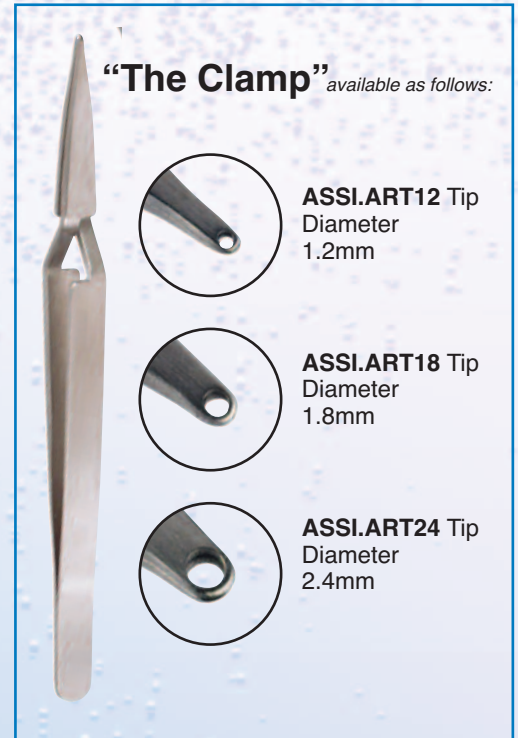
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# Using “The Clamp”

- (1) Mobilize the vessel so that it can be rotated freely.
- (2) Apply occluding clamps, keeping the vessel at its natural state of resting tension.
- (3) Empty the occluded segment by finger pressure while momentarily releasing one clamp.
- (4) Remove adventitia thoroughly and widely around the planned arteriotomy site.
- (5) Rotate the vessel so that the site of arteriotomy is seen in clear profile.
- (6) In order to determine the appropriate Arteriotomy Clamp, have the small vessel in view with the end prepared and dilated.
- (7) With an Arteriotomy Clamp of appropriate size, carefully pick up a piece of the vessel wall that is half as long and half as wide as the desired arteriotomy.\*
- (8) With a CBS30 blade held in metal-to-metal contact with the clamp tip, cut around the tip with a steady sweeping action.

**Caution:** With practice, the resulting size of the arteriotomy is highly predictable. However, we strongly recommend a brief initial practice period on canine or fresh cadaver vessels. These vessels should be stretched out to their natural length and tension to simulate real conditions. Remember that the arteriotomy will be twice as long and twice as wide as the piece which is picked up and excised.

*\*Note that because of the pressure which the tip of the clamp exerts, this step is irreversible.*



## BLADE HOLDER



ASSI.BHS12 BLADE HOLDER, 12cm

## DISPOSABLE BLADES, Sterile



**ASSI.CBS303**  
straight, 30mm  
(for Arteriotomy Set) . . . . . pk. of 10



**ASSI.CBS35**  
straight, 35mm  
(for Nerve Set) . . . . . pk. of 10



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