

**Swanson™**

# Flexible Finger Joint Implant

**Operative technique**



# Swanson

## Flexible Finger Joint Implant

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This publication sets forth detailed recommended procedures for using Stryker devices and instruments. It offers guidance that you should heed, but, as with any such technical guide, each surgeon must consider the particular needs of each patient and make appropriate adjustments when and as required.

### **Important**

- The patient should be advised that the device cannot and does not replicate a normal healthy bone, that the device can break or become damaged as a result of strenuous activity or trauma and that the device has a finite expected service life.
- Removal or revision of the device may be required sometime in the future.
- Cleaning and sterilization information is provided in the applicable instructions for use.
- Non-sterile devices, including implants and instruments, must be cleaned and sterilized prior to use, in accordance with validated methods.
- Devices that are able to be disassembled should be disassembled prior to point-of-use processing. Additionally, devices with movable components that do not facilitate disassembly should be manually articulated during the point-of-use processing step in order to evacuate additional soils.
- Please remember that the compatibility of different product systems has not been tested unless specified otherwise in the product labeling.
- Consult Instructions for Use (<https://ifu.wright.com>) for a complete list of potential adverse effects and adverse events, contraindications, warnings and precautions.
- The surgeon must advise patients of surgical risks, and make them aware of adverse effects and alternative treatments.
- An implant whose packaging is open or damaged or whose expiration date has passed must not be used. Every precaution must be taken to ensure sterility when opening the packaging of the implant and during implantation.

# Introduction

## Device description

### Flexible implant

The Swanson Finger Joint Implant is a flexible intramedullary-stemmed, one-piece implant developed as an adjunct to resection arthroplasty to help restore function to hands disabled by rheumatoid, degenerative or traumatic arthritis. The midsection of the load-distributing flexible hinge has been designed to help maintain proper joint space and alignment with good lateral stability and minimal flexion-extension restriction. The implant is not fixed to bone and becomes stabilized by the encapsulation process. It acts as a dynamic spacer, internal mold and flexible hinge. The Swanson Finger Joint Implant is available in 11 sizes to adequately meet various anatomical requirements. A color-coded sizing set (supplied non-sterile and not suitable for implantation) is available for proper size determination during surgery.

### Grommets

The Swanson Finger Joint Grommets are thin bone liners designed for use at the metacarpophalangeal joint level. The press-fit encircling grommet is fabricated from unalloyed titanium and its shape conforms to the contours of the implant midsection and stem junctions.

The use of grommets to enhance implant durability is especially indicated in severe cases of rheumatoid arthritis where irregular and sharp bony edges can initiate tears in the implant midsection.

Grommets are available in 7 sizes corresponding to sizes 3 to 9 of the Swanson Finger Joint Implant. The outer surface of each grommet is marked with a numeral, indicating the size of finger joint implant the grommet fits, as well as the letters "P" or "D", indicating whether it is a proximal or distal grommet.



## Rationale

### Flexible implant

The Swanson Finger Joint implant can be used with resection arthroplasty of the metacarpophalangeal and proximal interphalangeal (PIP). Insertion of the finger joint implant at two consecutive joint levels is not recommended (e.g., MP and PIP joint levels).

The flexible implant resection arthroplasty method is based on the following concept: "Joint Resection + Implant + Encapsulation = Functional Joint."

The implant acts as a dynamic spacer to maintain internal alignment and spacing of the reconstructed joint and as an internal mold that supports the capsuloligamentous system developing around the implant while early guided motion is started. The implant becomes stabilized by this "encapsulation process," and no permanent fixation is required. Joint stability is achieved from reconstruction of the ligamentous and musculotendinous systems.

Because the implant is not fixed to bone, the compressive loading forces are distributed to the resected end of the bone and cortical shaft. This is designed to promote favorable bone remodeling processes as evidenced by maintenance of bone length, preserved shape of the amputated bone end, cortical thickening, and new bone formation next to the implant midsection and intramedullary stems.

The slight movement of the implant stems is designed to allow distribution of forces over a broader section and allows the flexible hinge to find a position with respect to the axis of rotation of the joint.

### Grommets

The unattached, press-fit grommets are designed to protect the implant midsection by lessening abrasion, wear and cutting by bone. Use of encircling grommets does not alter the function of the implant, patient indications and contraindications, nor reduce the need for careful attention to the arthroplasty technique.

# Indications, Contraindications & Precautions

Prior to the use of the system, the surgeon should refer to the package insert for complete warnings, precautions, indications, contraindications and adverse effects. Package inserts are also available by contacting the manufacturer. Contact information can be found on the back of this surgical technique and the package insert is available on the website listed.

## Indications

### Metacarpophalangeal Joint Implant Arthroplasty

#### Rheumatoid or post-traumatic disabilities with:

- Fixed or Stiff MP Joints
- X-Ray Evidence of Joint Destruction or Subluxation
- Ulnar Drift, Noncorrectable By Surgery of Soft Tissues Alone
- Contracted Intrinsic and Extrinsic Musculature and Ligament System
- Associated Stiff Interphalangeal Joints

### PIP Joint Implant Arthroplasty

#### Rheumatoid, degenerative, or post-traumatic disabilities with:

- Destroyed or subluxated joints
- Stiffened joints in which a soft tissue release alone would be inadequate.

## Contraindications

- Infection
- Physiologically or psychologically inadequate patient
- Inadequate skin, bone or neurovascular status
- Irreparable tendon system
- Possibility for conservative treatment
- Growing patients with open epiphyses
- Patients with high levels of activity

#### Note:

**Each patient must be evaluated by the surgeon to determine the risks and benefits of surgery.**

## Precautions

One of the goals of implant surgery is to minimize production of wear particles. It can never be eliminated because all moving parts (e.g., implants which articulate against bone) wear to some degree. In an implant arthroplasty, clinically significant wear can result from normal biomechanical forces. Abnormal or excessive force will further increase clinically significant wear.

### Abnormal force loading may be caused by:

- Uncorrected Instability
- Oversized Implant
- Inadequate Soft Tissue Support
- Implant Malposition
- Excessive Motion
- Uncorrected or Recurrent Deformity
- Patient Misuse or Over activity
- Intraoperative Fixation

### Some preventive measures to consider to minimize the potential for complications:

- Follow Guidelines for Indications and Contraindications Provided Above
- Identify Prior Pathology
- Stabilize Collapse Deformities
- Bone Graft Pre-Existing Cysts
- Use a Properly Sized Implant
- Avoid K-Wires and Sutures Through the Implant

### If complications develop, possible corrective procedures include:

- Implant Removal
- Synovectomy
- Bone Grafting of Cysts
- Limited Intercarpal Fusion
- Replacement of the Implant
- Removal of the Implant with Fusion of the Joint

Clinical results depend on surgeon and technique, preoperative and post-operative care, the implant, patient pathology and daily activity. It is important that surgeons obtain appropriate informed consent and discuss the potential for complications with each patient prior to surgery. This may include a review of alternative, non-implant procedures such as soft tissue reconstruction or arthrodesis.

# Operative technique

## **Metacarpophalangeal Joint Implant Arthroplasty**

### **Incision and exposure**

A transverse skin incision is made on the dorsum of the hand over the necks of the metacarpals. The dissection is carried down through subcutaneous tissue to expose the extensor tendons. The dorsal veins, which lie between the metacarpal heads are carefully released by blunt longitudinal dissection and are retracted laterally. The extensor hood is exposed to the base of the proximal phalanx. Its radial portion is usually stretched out and the extensor tendon dislocated ulnarward. In the index finger, the incision is made between the extensor digitorum communis and the indicis proprius tendons. In the middle and ring fingers, a longitudinal incision is made in the extensor hood parallel to the extensor tendon on its ulnar aspect. In the little finger, the approach is made between the extensor communis and proprius tendons. The hood fibers and capsule are carefully dissected from the underlying synovium and retracted to the radial side. The joint is exposed and the head of the metacarpal is identified.

### **Resection of metacarpal head**

The neck of the metacarpal is exposed subperiosteally and cleanly transected with an air drill or motor saw, leaving part of the metaphyseal flare. Care should be taken to avoid splintering the bone. The head of the metacarpal is grasped and removed along with the hypertrophied synovial material. A pituitary rongeur has been found to be useful to remove further involved synovia of the joint cavity and surrounding tissues.

### **Soft tissue release**

A comprehensive soft tissue release procedure must be done at this stage to allow the base of the proximal phalanx to be loose enough to be displaced dorsally above the metacarpal. The ulnar collateral ligament is released from its phalangeal insertion in all fingers; if severely contracted, it can be excised along with a palmar plate when necessary.

At the level of all fingers, the radial collateral ligament insertions are preserved whenever possible. If it is necessary to detach this ligament, it should be reattached to the metacarpal or the base of the proximal phalanx. The important repair technique of this ligament will be described later.

# Operative technique

The ulnar intrinsic tendon is identified, pulled up into the wound with a blunt hook, and sectioned at the myotendinous junction if tight. However, the ulnar intrinsic of the index (first volar interosseous) normally applies a supinatory force to this digit and should be preserved to help avoid a postoperative pronation deformity tendency.

In some patients who have demonstrated evidence of a flexor synovitis, the flexor sheath can be incised longitudinally in its dorsal aspect. The long flexor tendons can be identified and pulled up gently into the wound with a blunt hook. The degree of involvement of the flexor tendons can be evaluated. In some cases, a partial synovectomy and tendon sheath release or an injection of corticosteroids is done through this incision.

The tendon of the abductor digiti minimi is exposed on the ulnar aspect of the fifth metacarpophalangeal joint, pulled into the wound with a blunt hook, and sectioned. Care should be taken to avoid the ulnar tendon, which will eventually reattach, but in a lengthened state. The tendon of the flexor digiti minimi is preserved because of its importance to obtain flexion at the metacarpophalangeal joint of the little finger. Furthermore, it is not an important ulnar deviator.

## **Bone resection and preparation**

The base of the proximal phalanx is resected including marginal osteophytes which might interfere with the implant. All cartilage is removed from the base of the proximal phalanx because it is believed that progressive cartilage degeneration can eventually result in recurrent synovitis.





# Operative technique

The intramedullary canal of the metacarpal is prepared in a rectangular fashion with a rasp, curet, broach, and air drill with a special bur (Figure A). These burs have a smooth leader point, which helps keep them in the canal and prevents inadvertent perforation through the cortex. The occasional construction in the intramedullary canal of the proximal third of the metacarpal can be enlarged with the bur. The intramedullary canal of the ring metacarpal is frequently quite small and requires careful preparation (Figure B and C). Care should be taken to avoid too much reaming of the canals, especially in patients with thin bones.

A trial fit is made with the appropriate color-coded sizers. The implant stem should fit well down into the canal so that the transverse midsection of the implant abuts against the bone end. The end of the implant stem must not abut the end of the intramedullary canal and the stem must be appropriately shortened. The largest implant possible should be used. Implants of sizes 4 through 9 are generally used (Figure D).

A rectangular hole is then made in the base of the proximal phalanx with an osteotome, knife, broach, or air drill. The intramedullary canal is reamed in the same fashion as the metacarpal to receive the distal stem of the implant selected for the metacarpal.

**Figure 1** | Any sharp points or rough surfaces on the bone ends should be made completely smooth. Using the color coded sizers, proper fit of the implant is verified. With the joint extension, there should be no impingement of its midsection. If there is, soft tissue release or bone resection has not been adequate.

**| Figure 2**

In the index and middle fingers, the intramedullary canal is reamed in a rectangular shape, which is positioned high on the dorsal ulnar side of the base of the proximal phalanx and low on its radial palmar side. This proper rectangular and axial configuration of the canal stabilizes the implant stems and helps maintain a slight supination of the digit to prevent postoperative pronation deformity. Contrarily, in the little finger, a position of slight pronation is desired and the intramedullary rectangle is positioned high on the dorsoradial side and low on the ulnar palmar side.



**Figure A**  
**64800100**  
Awl

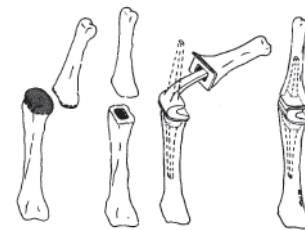


**Figure B & C**  
**257070XD**  
Finger joint rasp - Distal

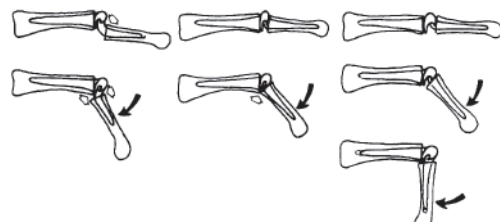
**257070XP**  
Finger joint rasp - Proximal



**Figure D**  
**48100XX**  
Finger joint sizer



**Figure 1**  
Bone resection and grommet fitting at MP joint



**Figure 2**  
Joint relationship and space concept



# Operative technique

In patients selected to receive Swanson grommets, the implant sizer is removed and the bone canals are prepared to allow a press-fit of the appropriate sized grommet. The resected surfaces of the metacarpal and proximal phalanx are shaped (Figure E) to obtain a precise fit of the grommet sleeve and of its slightly curvilinear flanges against the resected bone ends so that contact with overlying soft tissues is avoided. Both surfaces are prepared and smoothed with a diamond bur or other appropriate fine burs.

## Caution:

**Fitting of the grommet requires a precise press fit. It must be accurately centered, otherwise it may impinge the intramedullary canal on one side and could cause bone absorption. Unless the shoulders of the grommet can be fitted into metaphyseal bone, rotation of the grommet could occur. In certain cases of severe metacarpophalangeal joint dislocation, more bone must be removed to obtain joint reduction and the implant should probably be used without the grommet. Occasionally, grommets are not used in the 5th MP joint and should not be used in arthritis mutilans.**

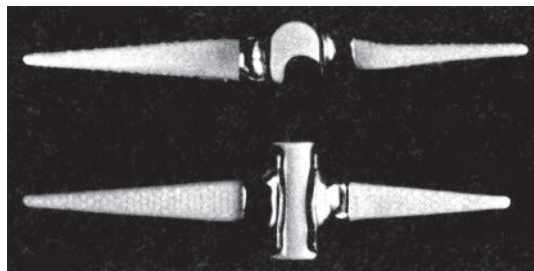
The grommet size corresponds to the implant size.

| **Figure 3** The fitting must be exact with regard to centering and rotation. Minimal additional bone shaping is usually needed (Figure E). Trial seating of the grommet is done by gentle pressure with the Grommet Seater or a flat instrument held against the exposed surface of the grommet with care to avoid bending or distorting the grommet. The grommet shoulders are seated directly against resected bone and must not protrude. If too loose, the next larger size is selected. When necessary, using a grommet one size larger than the flexible implant is permissible but a grommet smaller than the implant is never used. The implant/grommet fitting should be observed in flexion and extension.

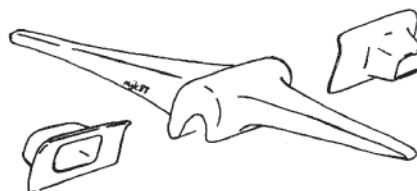
The implant must slide into the grommet and not be impinged by a too narrow joint space or an uncorrected palmar subluxation. The principal of the flexible hinge as a joint spacer must be respected.



**Figure E**  
**61370000**  
Bone rasp



**Figure 3: (B)**  
Encircling finger grommets and flexible finger hinge



**Figure 3: (A)**

# Operative technique

## Soft tissue reconstruction

Soft tissue reconstruction is a critical step of the operative procedure. Proper balance of all the following structures must be attained: collateral ligaments, palmar plate, capsule, intrinsic tendons, flexor, and extensor mechanism.

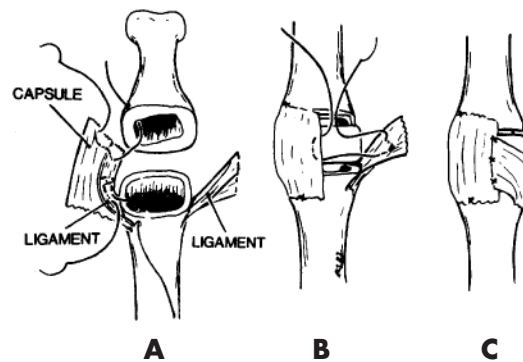
Rheumatoid patients often present an inadequate first dorsal interosseous muscle or have a tendency for pronation deformity of the index finger and occasionally the middle finger, which can interfere with the pinch and grasp mechanism.

Reconstruction of the radial collateral ligament is important to correct the lateral and rotatory alignment and to improve lateral stability for pinch. The goal of the procedure is to place the index and middle fingers in a position of slight supination and abduction. This procedure can occasionally be indicated for the ring finger. However, it is never carried out for the little finger, as it would place this digit in supination, which would interfere with flexion of the adjacent digits. A neutral position or slight pronation is preferred.

Reefing of the preserved radial collateral ligament of the index, middle, and occasionally, ring fingers, is done by passing a 3-0 Dacron suture through a 0.5 mm drill hole made in the dorsal radial side of the cut end of the metacarpal. The radial collateral ligament can require reattachment to bone proximally (metacarpal) or distally (base of proximal phalanx) or to both areas according to how much bone has been removed. The radial capsule, which has been preserved, is also included in this repair.

### | Figure 4

An additional small drill hole can be made in the dorsal ulnar side of the cut end of the metacarpal to secure the radial capsule with a 4-0 Dexon suture. However it is preferred to suture the ulnar edge of the capsule to the ulnar collateral ligament to bring the repaired capsule well ulnarward over the joint. The sutures are placed before the implant is inserted and are tied as the finger is held in slight supination and abduction. Note that the first dorsal interosseous muscle fibers become dorsally relocated with this repair.



**Figure 4**

Measures to correct pronation deformity of index finger. Proper rectangular and axial reaming of intramedullary canal is necessary to stabilize stems and maintain slight supination. Axis of rectangle is placed high on dorsoulnar side of base of proximal phalanx and low on its radiopalmar side. Collateral ligaments and related structures are sutured with 3-0 Dacron to the dorsoradial aspect of metacarpal end through a small drill hole. (A)

Preserved radial capsule is included in this repair. Preferably, the ulnar collateral ligament is sutured to the radial capsule. (B & C)

# Operative technique

If the radial collateral ligament has been released from the base of the proximal phalanx it should be reattached in a manner similar to that described above. If the radial collateral ligament is inadequate, a portion of the palmar plate is used to reconstruct this ligament. A distally-based flap made of the medial half of the palmar plate is prepared and sutured in position through a drill hole made in the dorsoradial aspect of the cut end of the metacarpal, similarly as described above.

It is important to meticulously evaluate and correct the balance of the capsuloligamentous and musculotendinous structures..

## **Implant insertion**

The wound is thoroughly irrigated. The proximal grommet is press-fit into the metacarpal and the distal grommet into the proximal phalanx following the procedure described for trial insertion. Both grommets are firmly seated against the resected bone by gentle pressure, taking care to avoid deforming the grommet. The flexible implant is then inserted using blunt instruments and a “no-touch” technique. First, the implant is inserted into the intramedullary canal of the metacarpal, and then, by slight traction on the finger, the joint is distracted and the implant is flexed so that the distal stem can easily be inserted into the proximal phalanx. With the joint in extension, there should be no impingement of the implant. If there is, soft tissue release or bone resection has been inadequate.

## **Note:**

**Handling of the implant should be done with blunt instruments to avoid surface trauma or contamination with foreign bodies. Reshaping of the implant should be avoided because it can compromise or destroy the functional integrity and the functionality of the implant.**

# Operative technique

## **Extensor hood reefing**

The radial portion of the sagittal fibers of each extensor hood mechanism is reefed in an overlapping fashion so that the extensor tendon is brought slightly to the radial side of the center of the joint. Three to five 4-0 Dexon sutures with a buried-knot technique are used. In the index and middle fingers, it is most important not to over-correct the position of the extensor tendon too far radially to avoid deforming forces in favor of pronation. In certain cases of severe or long-standing flexion deformity, the extensor tendons may become stretched, and an extensor tendon lag may persist if not corrected. In these cases, the extensor tendon should be reefed not only transversely as described, but also longitudinally. Occasionally, the extensor tendon is tenodesed to the dorsal base of the proximal phalanx through small drill holes. Balance of the extensor mechanism is essential. The juncturae tendinae which have been divided during the release of the extensor tendons are meticulously re-approximated with 4-0 Dexon sutures using inverted knots. This is done to further balance the extensor mechanism and provide all possible extensor power.

## **Closure, dressing, postoperative care & bracing**

Closure, dressing, postoperative care and bracing are the responsibility of the surgeon.

## **Explant information**

If removal of the implant is required due to medical reasons the surgeon should contact the manufacturer using the contact information located on the back cover of this surgical technique to receive instruction for returning the explanted device to the manufacturer.

# Operative technique

## PIP Joint Implant Arthroplasty

### Note:

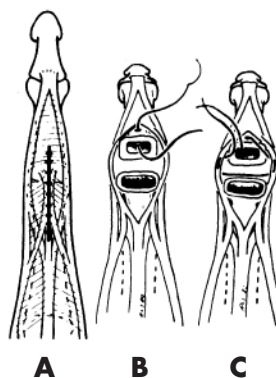
Grommets are not used in PIP joints.

### Incision

A "C"-shaped incision is made over the dorsum of the joint so that the skin suture line does not lie directly over the tendon repair. In the little and index fingers, the incision is placed away from the presenting surface. The dorsal veins are respected. If associated flexor tendon surgery is also indicated, a mid-lateral incision or palmar incision is used. This allows accessibility to both the joint and the tendon.

### Exposure

The extensor mechanism is exposed by sharp and blunt dissection, avoiding injury to its surface. The central tendon is identified and incised longitudinally in a proximal fashion from its insertion at the base of the middle phalanx through the distal two-thirds of the proximal phalanx. | **Figure 5** In flexible deformities of the PIP joint, the extensor mechanism can be gently dislocated palmarward as the joint is flexed without disturbing the insertion of each half of the central tendon into the middle phalanx. However, in hypertrophic osteoarthritic joints, it may be necessary to section this attachment of the central tendon to excise bony spurs.



**Figure 5**

Repair of the central tendon: **(A)** The central tendon is incised longitudinally from the base of the middle phalanx through the distal two third of the proximal phalanx.

**(B & C)** Following adequate bone preparation, a 1 mm drill hole is made in the base of the middle phalanx to receive a 3-0 Dacron suture for reinsertion of the halves of the central tendon.

# Operative technique

The tendon is later reattached to the bone with a 3-0 Dacron suture passed through a 0.5 mm drill hole made in the base of the middle phalanx. If the joint is contracted, the extensor mechanism cannot be readily dislocated and therefore, the head of the proximal phalanx is first excised by cutting it transversely at the neck with an air drill and then removing it piecemeal, or it can be removed with the burring tool of the air drill. The collateral ligaments are left intact when possible. If they are incised for joint exposure, they should be reattached to bone. | **Figure 6**

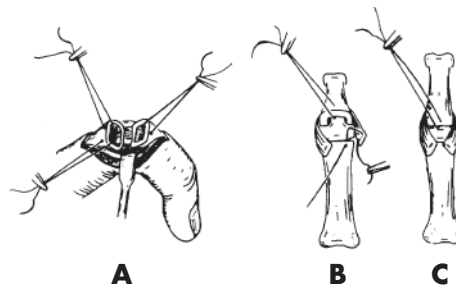
## Joint release

Adequate release of the joint is essential to the success of the procedure. If the joint is severely contracted, it may be released by removing bone from the proximal and middle phalanges. If this is inadequate, the palmar plate and collateral ligaments may be incised proximally or distally according to where more bone needs to be removed. When incised the collateral ligaments should be reattached with a 4-0 Dacron suture passed through a small drill hole made in the dorsal lateral aspect of the neck of the proximal phalanx and/or middle phalanx as indicated | **Figure 6** The sutures are placed prior to implant insertion. With the implant in position, they are tied with sufficient tension to obtain lateral stability and alignment and to allow passive motion of the joint from full extension to 70° flexion. In the presence of lateral deviation or instability, the collateral ligament should be repaired as described above. This procedure seems to limit flexion of the proximal interphalangeal joint slightly, but can be important in cases mentioned earlier.

## Bone preparation

After resecting the head of the proximal phalanx at the metaphyseal flare with a power saw or a side-cutting bur (Figure F and G), the intramedullary canal is prepared to receive the implant stem. It is first penetrated with a thin broach, then reamed into a rectangular shape with an air drill and leader point bur to accept the implant stem.

The base of the middle phalanx and intramedullary canal are prepared in a similar fashion. All cartilage is excised because it is believed that progressive cartilage degeneration can eventually result in recurrent synovitis (Figure H).



**Figure 6**

Repair of the collateral ligaments: **(A)** 4-0 Dacron sutures are placed in the dorsolateral aspect of the neck of the collateral ligament. A 3-0 Dacron suture is placed through the base of the middle phalanx for reconstruction of the central tendon. In implant arthroplasty, sutures are placed before implant insertion.

Reattachment of the collateral ligament. **(B & C)**



**Figure F**  
**64800100**  
Awl



**Figure G**  
**257070XP**  
Finger joint rasp - Proximal



**Figure H**  
**61370000**  
Bone rasp

# Operative technique

## Implant selection and insertion

Using the color-coded sizing set (Figure I), the largest acceptable implant is selected (size 0 through 3 and most often size 1). The midsection of the implant should seat well against the smoothed bone ends. With the joint in extension, there must be no impingement of the implant midsection by the bone ends. If surgeon is not satisfied with fit, there should be additional bone resection and/or soft tissue release. If necessary, the tips of the stems can be shortened. The cut end of the stem should be 1mm shorter than the reamed canal to allow adequate gliding and prevent buckling of the implant. The joint should flex and extend like a book would open and close; the middle phalanx should move around the end of the proximal phalanx with the center of rotation through the transverse axis of the implant midsection. | **Figure 2**

## Extensor mechanism in collapse deformities

Special consideration must be given to the extensor mechanism in collapse deformities of the digits. Simply stated, in swan-neck deformity the central tendon is relatively tight as compared to the tension of the lateral tendons, and in the boutonniere deformity the central tendon is relatively loose as compared to the tension of the lateral tendons. Readjust the tension of these collapse deformities. It should be noted that implant arthroplasty is seldom indicated in swan-neck deformity.



**Figure I**  
**48100XX**  
Finger joint sizer

## Boutonniere deformity

In a boutonniere deformity, the central tendon has usually been relatively lengthened, and the lateral tendons displaced palmarward with the connecting fibers stretched out. Implant arthroplasty is carried out as indicated (Table II). The stretched out attachment of the central tendon is sutured with a 4-0 Dacron suturing their connecting fibers or over-lapping any redundant fibers. A residual hyperextension deformity of the distal joint can be corrected by lengthening or sectioning the lateral tendons over the middle phalanx distal to the triangular ligament.

## Swan-neck deformity

Flexor tendon synovitis is treated before joint reconstruction. In swan-neck deformity with combined involvement of the MP and PIP joints, both joints are repaired at the same stage. Hyperextension of the PIP joint is corrected through readjustment of the joint system. The tight central tendon is lengthened, and the lateral bands are relocated palmarward. At least 10° of flexion contracture should be obtained and associated deformities of contiguous joints should be treated. In mild flexible deformity in weak hands, dermadesis of the PIP joint is indicated. In severe cases of swan-neck deformity, fusion of the joint is preferred. Implant arthroplasty is rarely indicated.



# Operative technique

The type of postoperative care varies with the preoperative deformity and the surgical reconstruction.

There are three basic situations:

- (1) reconstruction of the stiff PIP joint,
- (2) reconstruction of the PIP joint with lateral deviation,
- (3) reconstruction of a boutonniere deformity.

## **Postoperative care**

Postoperative care is the responsibility of the medical professional.

## **Explant information**

If removal of the implant is required due to medical reasons, the surgeon should contact the manufacturer using the contact information located on the back cover of this surgical technique to receive instruction for returning the explanted device to the manufacturer.

# Ordering information

## Swanson instrumentation set - 2424 KIT 2/C



| Ref #             | Description  |
|-------------------|--|
| <b>1</b> 64800100 | Awl  |
| 25707001          | FINGR JNT RSP ST (SZ 2 - 9 PROX/DIST)<br>Lot of rasp |
|                   | <b>or can be ordered individually:</b>               |
| 2570702D          | FINGR JNT RSP (w/o Grom) SZ 2 DISTAL                 |
| 2570703D          | FINGR JNT RSP (w/o Grom) SZ 3 DISTAL                 |
| <b>2</b> 2570704D | FINGR JNT RSP (w/o Grom) SZ 4 DISTAL                 |
| 2570705D          | FINGR JNT RSP (w/o Grom) SZ 5 DISTAL                 |
| 2570706D          | FINGR JNT RSP (w/o Grom) SZ 6 DISTAL                 |
| 2570707D          | FINGR JNT RSP (w/o Grom) SZ 7 DISTAL                 |
| 2570708D          | FINGR JNT RSP (w/o Grom) SZ 8 DISTAL                 |
| 2570709D          | FINGR JNT RSP (w/o Grom) SZ 9 DISTAL                 |
| 4810000           | Color Code Set (SJO) (Silicone)<br>Lot of silicone   |
|                   | <b>or can be ordered individually:</b>               |
| 4810020           | FINGR. JNT SIZER 00                                  |
| 4810010           | FINGR. JNT SIZER 0                                   |
| 4810001           | FINGR. JNT SIZER 1                                   |
| <b>3</b> 4810002  | FINGR. JNT SIZER 2                                   |
| 4810003           | FINGR. JNT SIZER 3                                   |
| 4810004           | FINGR. JNT SIZER 4                                   |
| 4810005           | FINGR. JNT SIZER 5                                   |
| 4810006           | FINGR. JNT SIZER 6                                   |
| 4810007           | FINGR. JNT SIZER 7                                   |
| 4810008           | FINGR. JNT SIZER 8                                   |
| 4810009           | FINGR. JNT SIZER 9                                   |
| 2570702P          | FINGR JNT RSP (w/o Grom) SZ 2 PROX                   |
| 2570703P          | FINGR JNT RSP (w/o Grom) SZ 3 PROX                   |
| 2570704P          | FINGR JNT RSP (w/o Grom) SZ 4 PROX                   |
| <b>4</b> 2570705P | FINGR JNT RSP (w/o Grom) SZ 5 PROX                   |
| 2570706P          | FINGR JNT RSP (w/o Grom) SZ 6 PROX                   |
| 2570707P          | FINGR JNT RSP (w/o Grom) SZ 7 PROX                   |
| 2570708P          | FINGR JNT RSP (w/o Grom) SZ 8 PROX                   |
| 2570709P          | FINGR JNT RSP (w/o Grom) SZ 9 PROX                   |
| <b>5</b> 61370000 | BONE RSP   |
| <b>6</b> 24240000 | Sterilisation container Box                          |

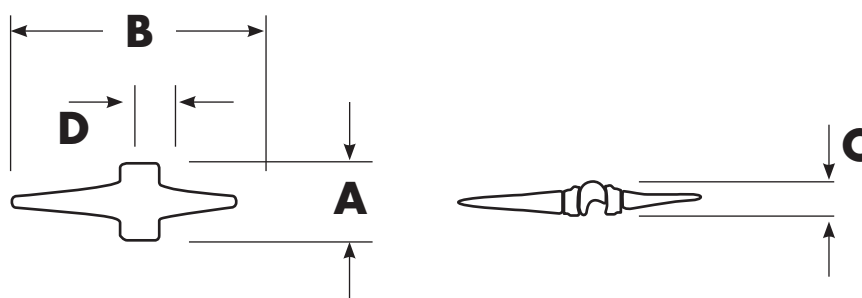
# Ordering information

## How supplied

The Swanson Flexible Finger Joint Implant has been sterilized and packaged as follows:

| Ref #     | Description   | Quantity     |
|-----------|---|--------------|
| 470-0020  | One each, Size 00   | 1 box        |
| 470-0010  | One each, Size 0  | 1 box        |
| 470-0001  | One each, Size 1  | 1 box        |
| 470-0002  | One each, Size 2  | 1 box        |
| G470-0003 | One each, Size 3 with Grommets  | 1 box        |
| G470-0004 | One each, Size 4 with Grommets  | 1 box        |
| G470-0005 | One each, Size 5 with Grommets  | 1 box        |
| G470-0006 | One each, Size 6 with Grommets  | 1 box        |
| G470-0007 | One each, Size 7 with Grommets  | 1 box        |
| G470-0008 | One each, Size 8 with Grommets  | 1 box        |
| G470-0009 | One each, Size 9 with Grommets  | 1 box        |
| 481-0000  | One each, Implant Size 00, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9. Numerically marked, color-coded (non-sterile) NOT FOR IMPLANTATION | 1 Sizing set |

## Typical dimensions



|   | 00   | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
|---|------|------|------|------|------|------|------|------|------|------|------|
| A | 8.2  | 9.8  | 12.1 | 12.5 | 13.2 | 13.9 | 15.1 | 15.6 | 16.4 | 17.3 | 18.6 |
| B | 25.6 | 29.9 | 32.8 | 38.6 | 42.4 | 49.8 | 56.9 | 62.1 | 69.0 | 75.4 | 81.9 |
| C | 3.3  | 4.1  | 4.8  | 5.6  | 6.4  | 7.1  | 8.1  | 8.4  | 9.1  | 9.4  | 9.9  |
| D | 3.4  | 3.9  | 5.1  | 5.3  | 5.6  | 5.7  | 6.0  | 5.8  | 6.7  | 6.8  | 7.2  |

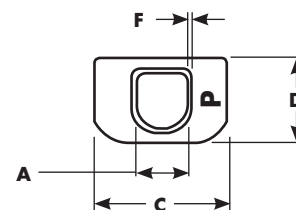
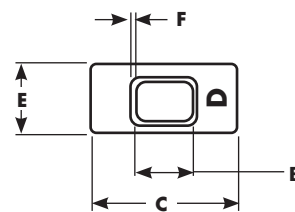
Millimeters

# Ordering information

## Typical dimensions

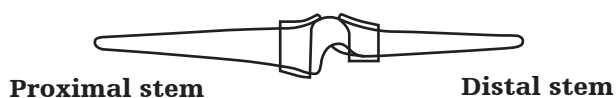
Swanson Finger Joint Grommet

| Dimension(mm) | A   | B   | C    | D    | E   | F   |
|---------------|-----|-----|------|------|-----|-----|
| Size 3        | 4.6 | 4.4 | 11.9 | 7.2  | 6.8 | 0.5 |
| Size 4        | 5.1 | 5.0 | 12.6 | 8.0  | 6.6 | 0.5 |
| Size 5        | 5.5 | 5.4 | 13.6 | 9.1  | 7.1 | 0.5 |
| Size 6        | 5.8 | 5.7 | 14.4 | 9.3  | 7.4 | 0.5 |
| Size 7        | 6.4 | 6.0 | 15.2 | 10.1 | 8.6 | 0.5 |
| Size 8        | 7.3 | 6.8 | 16.2 | 10.6 | 8.9 | 0.5 |
| Size 9        | 7.7 | 7.1 | 17.2 | 11.0 | 9.8 | 0.5 |



## Typical dimensions

of Swanson Grommet on Swanson Finger Joint Implant



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