



## G-FORCE™ TENODESIS SCREW

150847-1

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*Attention Operating Surgeon*  
**IMPORTANT MEDICAL INFORMATION**

**WRIGHT MEDICAL  
G-FORCE™ TENODESIS SCREW  
(150847-1)**

**OUTLINE:**

DEFINITIONS

GENERAL PRODUCT INFORMATION

- A. PATIENT SELECTION
- B. INDICATIONS
- C. CONTRAINDICATIONS
- D. POTENTIAL COMPLICATIONS AND ADVERSE REACTIONS
- E. WARNINGS AND PRECAUTIONS
- F. HANDLING & STERILIZATION
- G. STORAGE CONDITIONS

**DEFINITIONS**

Symbols and abbreviations may be used on the package label. The following table provides the definition of these symbols and abbreviations.

Table 1. Definitions of Symbols and Abbreviations

Symbol	Definition
	Batch code
	Catalog number
	Do not re-use
	Caution, consult accompanying documents
	Consult operating instructions
	Use by
	Temperature limitation
	Keep dry
	Keep away from sunlight
	Date of manufacture

	Manufacturer
	Authorized EC Representative in the European Community
	Sterilized using ethylene oxide
	Sterilized using radiation
	Sterilized using gas plasma
	Sterilized using aseptic processing techniques
	For prescription use only
<b>Abbreviation</b>	<b>Material</b>
PEEK	Poly(ether-ether ketone)

## GENERAL PRODUCT INFORMATION

Through the advancement of internal fixation devices, the surgeon has been provided a means of aiding in soft tissue reattachment procedures. While the implants used are largely successful in attaining these goals, it must be recognized that no implant can be expected to withstand the activity levels and loads as would normal, healthy soft tissue after complete union occurs.

Each patient must be evaluated by the surgeon to determine the risk/benefit relationship.

In using soft tissue fixation implants, the surgeon should be aware of the following:

- **The correct selection and sizing of the implant is extremely important.** Selection of the proper size, shape, and design of the implant increases the potential for success. The implants require careful seating and adequate bone support.
- **In selecting patients for surgery, the following factors can be critical to the eventual success of the procedure:**
  1. **Patient's occupation or activity.** If the patient is involved in an occupation or activity which includes substantial lifting or muscle strain, the resultant forces can cause failure of the fixation, the device, or both. The implant will not restore function to the level expected with normal healthy bone, and the patient should not have unrealistic functional expectations.
  2. **Condition of senility, mental illness or alcoholism.** These conditions, among others, may cause the patient to ignore certain necessary limitations and precautions in the use of the implant, leading to failure or other complications.
  3. **Foreign body sensitivity.** Where material sensitivity is suspected, appropriate tests should be made prior to material selection or implantation.

## DESCRIPTION

The G-FORCE™ Tenodesis Screws are interference fixation screws for use in soft tissue reattachment procedures. The implants are available in various diameters and lengths and all are manufactured from PEEK-OPTIMA: a radiolucent, biocompatible polymer. Implants are intended for single-use only.

## A. PATIENT SELECTION

Use of internal fixation devices requires consideration of the following general indications:

- Good condition of the patient
- Good neurovascular status
- Adequate skin coverage
- Possibility of a functional musculotendinous system
- Adequate bone stock to receive implant
- Availability of post-operative therapy
- Cooperative patient

## B. INDICATIONS

Indications for the G-FORCE™ Tenodesis Screw include use in soft tissue reattachment procedures in the shoulder, foot/ankle, knee, elbow and wrist/hand where the sizes offered are patient appropriate. Specific indications include the following:

**Shoulder:** Rotator Cuff Repairs, Bankart Repair, SLAP Lesion Repair, Biceps Tenodesis, Acromio-Clavicular Separation Repair, Deltoid Repair, Capsule Shift or Capsulolabral Reconstruction.

**Foot/Ankle:** Lateral Stabilization, Medial Stabilization, Achilles Tendon Repair, Hallux Valgus Reconstruction, Midfoot Reconstruction, Metatarsal Ligament Repair, Flexor Hallucis Longus for Achilles Tendon Reconstruction and tendon transfers in the foot and ankle.

**Knee:** Anterior Cruciate Ligament Repair, Medial Collateral Ligament Repair, Lateral Collateral Ligament Repair, Patellar Tendon Repair, Posterior Oblique Ligament Repair, Iliotibial Band Tenodesis.

**Elbow:** Biceps Tendon Reattachment, Ulnar or Radial Collateral Ligament Reconstruction.

**Wrist/Hand:** Scapholunate Ligament Reconstruction, Ulnar/Radial Collateral Ligament Reconstruction, Carpometacarpal Joint Arthroplasty, Carpal Ligament Repair/Reconstruction and tendon transfers in the wrist and hand.

## **PERFORMANCE**

Misuse of the device or patient noncompliance may adversely affect performance. In no case will this system replace a healthy bone structure.

## **C. CONTRAINDICATIONS**

### **Absolute contraindications include:**

- Physiologically or psychologically inadequate patient
- Possibility for conservative treatment
- Failure to obtain patient's consent

### **Conditions presenting increased risk of failure include:**

- Active Infection
- Inadequate skin, bone, or neurovascular status
- Irreparable tendon system
- Growing patients with open epiphyses
- Patients with high levels of activity
- Fevers and elevated or abnormal white blood cell count
- Obesity

Contraindications may be relative or absolute and are left to the discretion of the surgeon.

#### **D. POTENTIAL COMPLICATIONS AND ADVERSE REACTIONS**

In any surgical procedure, the potential for complications exists. The risks and complications with these implants include:

- Infected, painful, swollen or inflamed implantation site
- Bending, fracture, loosening, dislocation and migration of the implant may occur as a result of excessive activity, trauma or load bearing and may require revision surgery
- Bone resorption or over-production
- Allergic reaction(s) or inflammatory response(s) to implant material(s)
- Migration of particle wear debris possibly resulting in a bodily response
- Necrosis of the bone or tissue
- Nonunion or delayed union
- Embolism

#### **E. WARNINGS AND PRECAUTIONS**

Following the instructions for use provided in product literature can minimize the potential for complications or adverse reactions with any implant.

It is the responsibility of each surgeon using implants to consider the clinical and medical status of each patient and to be knowledgeable about all aspects of implant procedure and the potential complications that may occur. The benefits derived from implant surgery may not meet the patient's expectations or may deteriorate with time, necessitating revision surgery to replace the implant or to carry out alternative procedures. Revision surgeries with implants are common. The patient's mental status must also be considered. Willingness and/or ability

to follow post-operative instructions may also impact the surgical outcome. Surgeons must balance many considerations to achieve the best result in individual patients.

**IF EXCESSIVE LOADING CANNOT BE PREVENTED, AN IMPLANT SHOULD NOT BE USED.**

The main goal of surgery with this implant is to establish soft tissue to bone union. Abnormal or excessive forces could lead to delayed union, non-union, or failure of the implant.

Abnormal force loading and subsequent wear may be caused by:

- Uncorrected instability
- Improperly sized implant
- Inadequate soft tissue support
- Implant malposition
- Excessive motion
- Uncorrected or recurrent deformity
- Patient misuse or overactivity

Proper fixation at the time of surgery is critical to the success of the procedure. Bone stock must be adequate to support the device.

Some preventative measures to consider minimizing the potential for complications:

- Follow guidelines for indications and contraindications
- Identify prior pathology
- Stabilize collapse deformities
- Bone graft pre-existing cysts

- Use a properly sized implant
- Avoid K-wires and sutures through the implant

Avoid flawing implant surfaces or excessive bending to minimize the potential for early fatigue failure.

If complications develop, possible corrective procedures include:

- Implant removal
- Bone grafting of cysts
- Replacement of the implant

Clinical results depend on surgeon and technique, pre-operative 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.

### **Recommendations Regarding Device Fragments**

- Use medical devices in accordance with their labeled indications and Wright Medical Technology's instructions for use, especially during insertion and removal.
- Inspect devices **prior to use** for damage during shipment or storage or any out-of-box defects that might increase the likelihood of fragmentation during a procedure.
- Inspect devices **immediately upon removal from the patient** for any signs of breakage or fragmentation.
- If the device is damaged, retain it to assist with Wright Medical Technology's analysis of the event.

- Carefully consider and discuss with the patient (if possible) the risks and benefits of retrieving vs. leaving the fragment in the patient.
- Advise the patient of the nature and safety of unretrieved device fragments including the following information:
  - a. The material composition of the fragment (if known);
  - b. The size of the fragment (if known);
  - c. The location of the fragment;
  - d. The potential mechanisms for injury, e.g., migration, infection;
  - e. Procedures or treatments that should be avoided such as MRI exams in the case of metallic fragments. This may help to reduce the possibility of a serious injury from the fragment.

### **Concerning Magnetic Resonance Environments**

The devices described in this package insert have not been evaluated for safety and compatibility in the MR environment. The devices described in this package insert have not been tested for heating or migration in the MR environment.

## **F. HANDLING AND STERILIZATION**

### **IMPLANTS**

The implants in this system are provided sterile. Implants in sterile packaging should be inspected to ensure that the packaging has not been damaged or previously opened. The implants should be opened using aseptic OR technique; they should only be opened after the correct size has been determined.

This product is for single use only. An implant should never be re-sterilized after contact with body tissues or fluids.

Devices labeled for single-use only should never be reused. Reuse of these devices may potentially result in serious patient harm. Examples of hazards related to the reuse of these devices include, but are not limited to: significant degradation in device performance, cross-infection, and contamination.

## INSTRUMENTS

Surgical instruments (and non-sterile implants) should be cleaned and sterilized according to the following parameters:

### Cleaning

1. **Disassemble** all components as per manufacturer instructions (if appropriate).
2. **Rinse** with cold tap water to remove gross contamination.
3. **Bathe** in an enzymatic detergent solution prepared per manufacturer directions for 5 minutes.
4. **Scrub** thoroughly with a soft brush and/or pipe cleaner; repeatedly flush any very narrow lumens with enzymatic detergent solution using a syringe.
5. **Rinse** with cold tap water for a minimum of one minute; use a syringe to repeatedly flush any very narrow lumens.
6. **Bathe** in a detergent solution prepared per manufacturer directions for 5 minutes.
7. **Scrub** thoroughly with a soft brush and/or pipe cleaner; repeatedly flush any very narrow lumens with detergent solution using a syringe.
8. **Rinse** thoroughly /flush with deionized / reverse osmosis (RO/DI) water.
9. **Sonicate** for a minimum of 10 minutes in an enzymatic detergent solution prepared per manufacturer directions.
10. **Rinse** thoroughly /flush with RO/DI water.
11. **Dry** with a clean, soft, absorbent, disposable cloth.

12. **Visually inspect** for cleanliness. All visible surfaces, internal and external, should be visually inspected. If necessary re-clean until it is visibly clean.

**Note:** Brushes (i.e. pipe cleaners) could be used for cleaning most lumens, however, the use of a syringe to flush narrow lumens with diameters less than or equal to 0.041 inches is recommended.

### **Sterilization**

The minimum recommended steam sterilization conditions for Wright reusable instruments (and non-sterile implants) are as follows:

1. Double wrap the component in an FDA-cleared CSR wrap or similar type non-woven medical grade wrapping material.
2. Autoclave according to the following parameters:

<b>Steam Sterilization</b>		
<b>Cycle Type</b>	<b>Parameter</b>	<b>Minimum Set Point</b>
Prevacuum 270 °F (132 °C)	Exposure Temperature	270 °F (132 °C)
	Exposure Time	4 minutes
	Dry Time	20 minutes

3. After sterilization, remove the component from its wrapping using accepted sterile technique with powder-free gloves. Ensure that implants are at room temperature prior to implantation. Avoid contact with hard objects that may cause damage.

These recommendations are consistent with AAMI ST79 Table 5 guidelines and have been developed and tested using specific equipment. Due to variations in environment and equipment, it must be demonstrated that these recommendations produce sterility in your environment. If processing conditions, wrapping materials, or equipment changes occur, the effectiveness of the sterilization process must be demonstrated.

For additional information see Wright's "Cleaning and Handling of Wright Medical Instruments".

## **G. STORAGE CONDITIONS**

All implants must be stored in a clean, dry environment and be protected from sunlight and extremes in temperature.

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