

Products Catalog - Shoulder, Knee and Hip







As it starts its operations in 2005, in 2015 Razek completes 10 years of existence. Across this period, it became famous for offering a wide range of national solutions, both in electro-mechanical technology equipment, and in single-use products for different segments of Orthopedics - Shoulder, Knee, Hip, Fist, Ankle and ATM Arthroscopy Surgery, several minimally invasive approaches for spine surgery, materials for foot, hand surgery, as well as solutions for neurology and otorhinolaryngology.

The offered product line faced such growth, that required massive investment towards the construction of a new headquarters that would reflect the innovative philosophy of the company and the growth rate.

In the year of the tenth anniversary, the company presents to the market the first line of implantable materials, represented by an extensive range of clamping plates and cannulated screws and/or SnapOff screws for feet, in order to fill a huge gap in national manufacturing scenario.

The construction of the new headquarters, designed with the state-of-the-art engineering concepts and already in finishing stage, the significant expansion of the range of single-use products and release of the first line of implantable materials, mark these 10 years of outstanding service provided to the Brazilian medical community.

Renaldo Massini Junior CEO

## TRIPLET HD

The Triplet HD is a device designed to provide a complete solution for arthroscopic surgery, i.e. illuminate, capture and record images, as well as rotate a blade for arthroscopy by means of a motor. The equipment has a touchscreen display, through which the professional visualizes and performs all settings and functions thereof.



Voltage: 100 - 240 V~Image System: CCD 1/3"

Video output: connector DVI-D or BNC or Mini-DIN4
 Standard connection for image recording: A-type USB

• Compatible USB flash drive devices

File system: FAT32Resolution: up to 16GBImage format: 16:9Resolution: 1080 lines

• Minimum sensitivity: 0,1 Lux

• Led power: 75W

• Light intensity: 3.600 lumens

• Speed (oscillating mode)

• Min.: 500 rpm and max.: 3.000 rpm

• Speed (direct and reverse modes)

Min.: 500 rpm and max.: 8.000 rpm (shaver handpiece)
Min.: 500 rpm and max.: 10.000 rpm (mini shaver handpiece)

## SHAVER MIKRO MACHT

Shaver Mikro Macht equipment has the function of rotating a blade for arthroscopy by means of a motor. It is indicated for bone cutting, perforations, insertion, bone thinning in general, orthopedic procedures and debridement.



## **Technical Specifications**

• Voltage: 90 - 240 V~

Images are for illustration only



### **Shaver Handpiece**

- Speed (oscillating mode)
  - Min.: 500 rpm and max.: 3.000 rpm
- Speed (direct and reverse modes)
  - Min.: 500 rpm and max.: 8.000 rpm

#### **Imaging System**

The Imaging System, together with the Duet HD and Triplet HD, provides images in surgical endoscopic medical procedures and general diagnostics.

- 19" HD Display Medical Degree
- Resolution: 1280 x 1024 lines
- Analog and digital video input
- Has dual anti-reflective filter

## **DUET HD**

The Duet HD is an equipment designed to provide light and capture image in surgical endoscopic medical procedures and general diagnostics. The equipment has a touchscreen display, through which the professional visualizes and performs all settings and functions thereof.





Voltage: 100 - 240 V~Image System: CCD 1/3"

Video output: connector DVI-D or BNC or Mini-DIN4
Standard connection for image recording: A-type USB

• Compatible USB flash drive devices

File system: FAT32Resolution: up to 16GB

Image format: 16:9Resolution: 1080 linesMinimum sensitivity: 0,1 Lux

• Led power: 75W

• Light intensity: 3.600 lumens

## OSTEOMAX

Osteomax is a machine suitable for microshaving of tissue and bone thinning in general. It has a handpiece, which must be used with Razek Hip Microdebridment Cannula and Razek Microdebridement Cannula.



• Voltage: 100 - 240 V~, 50/60 Hz

Images are for illustration only

## Handpiece

• Speed (oscillating mode)

• Min.: 500 rpm and max.: 3.000 rpm

• Speed (direct and reverse modes)

• Min.: 500 rpm and max.: 8.000 rpm

# RAZEK IRRIGATION CANNULA, RZ TROCAR and RAZEK ARTHROSCOPY ENDOSCOPES

Razek Irrigation Cannula is intended for conducting and handling invasive surgical instruments, while the RZ Trocar allows conducting and handling of Razek Arthroscopy Endoscopes. Also, both allow irrigation and suction of fluid into the interior of cavity. Razek Arthroscopy Endoscopes are medical devices for viewing openings and joints during surgery and endoscopic diagnoses. These tools must be used in conjunction with the equipment Duet HD, Triplet HD or any other equipment intended for surgeries that require sharp images in order to perform the surgical procedure.

Images are for illustration only



#### **Razek Irrigation Cannula**

Diameter: 4,0 mmLength: 150 mm

#### **RZ** Trocar

Length: 175 mmAngle: 30°

• Blunt with rhombus-shaped tip

### **Razek Arthroscopy Endoscopes**

Diameter: 4,0 mmLength: 175 mmAngle: 30°

#### **Razek Sterilization Case**



## RZFLOW ASPIRATION CANNULA

The RZFlow Aspiration Cannula is a device designed to provide simultaneous aspiration, improving intra-articular flow, providing a clear view and facilitating instrumentation manipulation in arthroscopic surgical procedures.

RZ Trocar is not part of the product.



#### Models

- RZFlow Aspiration Cannula 5,8 mm x 113 mm
   Aspiration cannula with a length of 113 mm for trocar with outer diameter between 5,5 and 5,8 mm.
- RZFlow Aspiration Cannula 5,8 mm x 134 mm
   Aspiration cannula with a length of 134 mm for trocar with outer diameter between 5,5 and 5,8 mm.
- RZFlow Aspiration Cannula 5,8 mm x 123 mm Aspiration cannula with a length of 123 mm for trocar with outer diameter between 5,5 and 5,8 mm.
- RZFlow Aspiration Cannula 6,3 mm x 113 mm

Aspiration cannula with a length of 113 mm for trocar with outer diameter between 5,8 and 6,3 mm.

- RZFlow Aspiration Cannula 6,3 mm x 134 mm
   Aspiration cannula with a length of 134 mm for trocar with outer diameter between 5,8 and 6,3 mm.
- RZFlow Aspiration Cannula 6,3 mm x 123 mm Aspiration cannula with a length of 123 mm for trocar with outer diameter between 5,8 and 6,3 mm.
- RZFlow Aspiration Cannula 6,3 mm x 81 mm
   Aspiration cannula with a length of 81 mm for trocar with outer diameter between 5,8 and 6,3 mm.

## SHOULDER ARTHROSCOPY INSTRUMENTS

## **Razek Arthroscopy Instruments**

Razek Arthroscopy Instruments provide the surgeon with the necessary tools to perform arthroscopic surgical procedures.



- R052 Bird beak, straight tip
- R054 Bird beak, up 30° tip
- R056 Bird beak, straight tip, curved left 30°

- R058 Bird beak, straight tip, curved right 30°
- R060 Suture cutter, straight tip
- R061 Shoulder grasper
- R059 Grasper, straight tip, loose body without serrated

## KNEE ARTHROSCOPY INSTRUMENTS



- R001 Punch, straight tip, 2,6 mm bite width
- R002 Punch, up 15° tip, 2,6 mm bite width
- R003 Punch, straight tip, 3,6 mm bite width
- R005 Punch, up 15° tip, 3,6 mm bite width

- R007 Punch, up 15° tip, 3,6 mm bite width, curved left 15°
- $\bullet$  R009 Punch, up 15° tip, 3,6 mm bite width, curved right 15°
- R019 Grasper, straight tip, 3,4 mm bite width, alligator
- R036 Punch, straight tip, 0,8 mm bite width

## RAZEK FORCE

The Razek Force is used mainly to perforate and insert pins and rods. The Razek Force is a pneumatic device.



**Technical Specifications** 

- Minimum speed: 400 rpm
- Maximum speed: 800 rpm
- Cannulated up to 4 mm
- Socket: type AO
- Autoclavable
- Chuck capacity: 0 4,0 mm
- Required pressure: 80 120 psi or 5,5 8,3 Kg/cm<sup>2</sup>
- Required flow: 340 L/min or 12 cubic feet/min

- Type of gas: N<sub>2</sub> or dry compressed air
- Handpiece weight: 1,3 kg (with mandrel)
- Accessories: sterilization case (optional) chuck and chuck key pressure regulator lubricant (optional)

## RAZEK FULL PRO

Razek Full Pro is intended for perforate, insert pins and rods, cut bones, among others. This equipment, together with its accessories, allows the use of drills with Hudson plug (Reamer), drill bits (Chuck) or Kirschen/Steinmann wire (Wire Pass).



Technical Specifications

Minimum speed: 100 rpmMaximum speed: 1.000 rpm

• Cannulated up to 4 mm

Images are for illustration only

• Accessories: Reamer 14:1

Pro Chuck 10 Pro Chuck 1:1 Wire Pass

## INSTRUMENTAL SET FOR HIP ARTHROSCOPY

The Instrumental Set for Hip Arthroscopy provides the viewing of gaps and cavities during hip arthroscopic surgical procedures.

The surgical set consists of endoscopes with different angles and accessories such as guide and perforation instruments with different sizes and formats to meet the professional's needs. Each model was developed for a specific application.

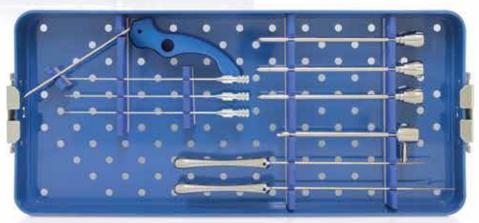


## **INSTRUMENTS**



Access trocar
2 trocars - 175 mm
Nitinol wire guide
Guide Cannula 4 mm
Guide Cannula 5,5 mm
Endoscope 175 mm / 30° / 4,0 mm
Endoscope 175 mm / 70° / 4,0 mm

Angled guide
Access needle
Blunt access cannula
Oblique access cannula
Perforating access cannula
Access guide
Short probe
Long probe





Straight Ice pick Ice pick 30° Ice pick 45° Suture Hook Short knot pusher Long knot pusher 1 cut banana knife 2 cut banana knife

Bird beak, straight tip Bird beak, up 30° tip Bird beak, straight tip, curved right 30° Grasper, straight tip, 3,4 mm bite width, loose body

Punch, straight tip, 3,6 mm bite width Bird beak, straight tip, curved left 30°



## RAZEK HIP MICRODEBRIDMENT CANNULA

The Razek Hip Microdebridement Cannula has the function of performing soft tissue, cartilage and bone microdebridement in hip arthroscopic surgical procedures. It has full length cannulation for guided insertion.



- Models: straight (inner and outer angled available only for AMC model)
- Cannulated Blade (straight)
- Sterilization: gamma ray
- Sterilization expires in: 3 years
- Single-use product

## RAZEK HIP ABLATOR

Razek Hip Ablator is used in arthroscopic procedures. It is indicated for ablation and tissue clotting in the hip. It has a flexible tip which enables the direction control.



- Sterilization: ethylene oxide
- Sterilization expires in: 2 years
- Single-use product

## **TCASys**

The TCASys function is to enable the osteochondral autologous transplantation (Mosaicplasty), where osteochondral grafts are extracted from a healthy area to be transferred to an area in need of graft.



- Sterilization: gamma ray
- Sterilization expires in: 3 years
- Single-use product

Images are for illustration only

## Models

• TCASys 4
It has Ø 4 mm and must be used in lesions smaller than 4 mm diameter

- TCASys 6
- It has  $\emptyset$  6 mm and must be used in lesions smaller than 6 mm diameter
- TCASys 8
- It has  $\emptyset$  8 mm and must be used in lesions smaller than 8 mm diameter
- TCASys 10

It has  $\varnothing$  10 mm and must be used in lesions smaller than 10 mm diameter

## MicroFT

The MicroFT aims to provide the surgeon with the necessary tool for the treatment of cartilage injuries in joints with surgical microfracture technique. Promotes perforations of  $\emptyset$  1 mm with up to 9 mm depth.



- Sterilization: gamma ray
- Sterilization expires in: 3 years
- Single-use product

Images are for illustration only

- MicroFT 0° It has 0° guidewire
- MicroFT 30° It has 30° guidewire

## RAZEK PULSE and CANNULA SET RZ PULSE

The Razek Pulse and the Cannula Set RZ Pulse were designed to be used together in orthopedic surgeries and wound healing. In orthopedic surgeries, the jet from these products penetrates the bone, removing blood and residue. In wound healing, they facilitate the removal of necrosed tissue, bacteria and foreign materials from the wound.





#### Razek Pulse

- Pneumatic equipment
- Required pressure: 80 100 psi or 5 7 Kgf/cm<sup>2</sup>
- Required flow: 340 L/min or 12 cubic feet/min
- Type of gas: N<sub>2</sub> or dry filtrate air line
- Accessories: sterilization lid pressure regulator (optional) sterilization case (optional)

#### Models of Cannula Set RZ Pulse

- Cannula Set Razek Pulse Short (equipped with 110 mm injector tube)
- Cannula Set Razek Pulse Long (equipped with 250 mm injector tube)
- Cannula Set Razek Pulse Short with Protector (equipped with 110 mm injector tube and splash guard)
- Cannula Set Razek Pulse Long with Protector (equipped with 250 mm injector tube and splash guard)

## RAZEK PULSE PRO

Razek Pulse Pro is used in orthopedic surgeries and wound healing. In orthopedic surgeries, the jet from these products penetrates the bone, removing blood and residue. In wound healing, they facilitate the removal of necrosed tissue, bacteria and foreign materials from the wound.



- Sterilization: ethylene oxide
- Sterilization expires in: 2 years
- Dual function: washing and aspiration
- Single-use product
- Accessories: short cannula (equipped with 90 mm injector tube

and splash guard)

long cannula (equipped with 200 mm injector tube)

## RAZEK MICRODEBRIDEMENT CANNULA

The Razek Microdebridement Cannula is used to perform soft tissue, cartilage and bone microdebridement in arthroscopic procedures. These cannulas are supplied sterile in the following models:





Aggressive Meniscus Cutter - AMC (2,0/3,5 mm)(2,4/4,5 mm) (2,9/5,5 mm)



Incisive - INC (2,0/3,5 mm) (2,4/4,5 mm) (2,9/5,5 mm)



Aggressive Complete Profile - AFR (2.0/3.5 mm)(2,4/4,5 mm) (2,9/5,5 mm)



Resector Complete Profile - FRR (2,0/3,5 mm) (2,4/4,5 mm) (2,9/5,5 mm)



Incisive Complete Cutter - FRI (2,0/3,5 mm) (2,4/4,5 mm) (2,9/5,5 mm)



Meniscus Cutter -  $\mathbf{MC}$ (2,0/3,5 mm) (2,4/4,5 mm) (2,9/5,5 mm)



Double Meniscus Cutter - DMC (2,0/3,5 mm) (2,4/4,5 mm) (2,9/5,5 mm)



Round Drill Bit - RB (2,4/4,5 mm) (2,9/5,5 mm)



Oval Drill Bit - OB (2,4/4,5 mm) (2,9/5,5 mm)



Tapered Drill Bit - TB (2,4/4,5 mm) (2,9/5,5 mm)

## Sockets























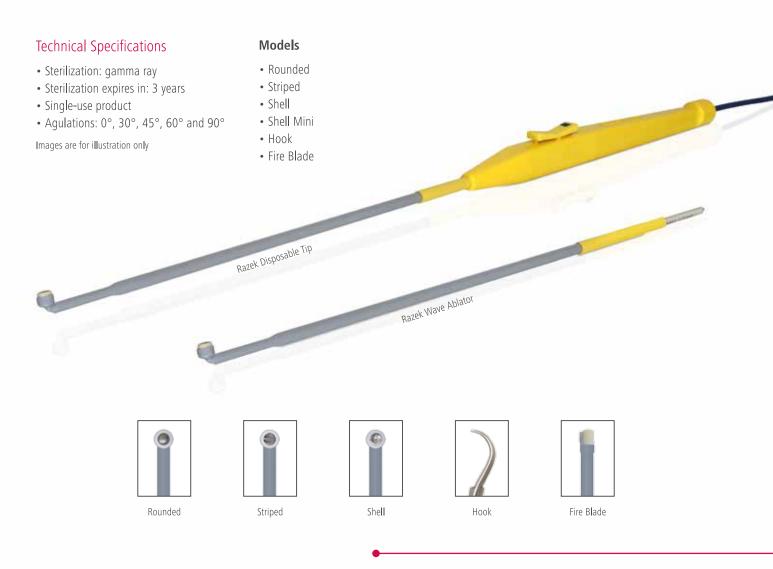
**Technical Specifications** 

- Sterilization: gamma ray
- Sterilization expires in: 3 years
- Single-use product

## RAZEK WAVE ABLATOR and RAZEK DISPOSABLE TIP

The families of ablators manufactured by Razek are used in monopolar arthroscopic surgical procedures. They are indicated for ablation, coagulation and tissue cutting.

The Razek Disposable Tip dispenses electrosurgical pen, as it's already part of the product.



### Razek Electrode

It is equipped with a hose that must be connected to a standard hospital suction equipment to remove bubbles from the surgery area or must be connected to an irrigation fluid container.

## INSTRUMENTAL KIT FOR MENISCUS SUTURE

The Instrumental Kit for Meniscus Suture consists in several tools that helps to perform the suture, avoiding the removal of the meniscus. Each item was developed for a specific purpose during surgery.

Images are for illustration only





### Plast Suture Sterile Polyester Braided Suture with Needle

The Polyester Surgical Thread allows an easier passage through tissues, thus causing lesser lesion. Its green color provides good visibility during the surgical procedure. In addition, it is a braid, does not loose fragments.





## RZ TUNNELING BURR

The RZ Tunneling Burr Cutter has the scope to provide transosseous tunnels in tibia and femur in arthroscopic surgical procedures for knee anterior or posterior cruciate ligament reconstruction.

### **Technical Specifications**

- Sterilization: gamma ray
- Sterilization expires in: 3 years
- Single-use product

Images are for illustration only

### Models

- RZ Tunneling Burr RZ 6
- RZ Tunneling Burr RZ 6,5
- RZ Tunneling Burr 7
- RZ Tunneling Burr 7,5
- RZ Tunneling Burr 8
- RZ Tunneling Burr 8,5
- RZ Tunneling Burr 9
- RZ Tunneling Burr 9,5
- RZ Tunneling Burr 10
- RZ Tunneling Burr 10,5
- RZ Tunneling Burr 11
- RZ Tunneling Burr 11,5
- RZ Tunneling Burr 12
- RZ Tunneling Burr 13





## ARTHROCUT RAZEK

Arthrocut Razek family is intended to provide the surgeon with the necessary tools to cut tissue in arthroscopic surgical procedures.

### **Technical Specifications**

- Sterilization: gamma ray
- Sterilization expires in: 3 years
- · Single-use product

Images are for illustration only

- Arthrocut Banana 220
- Arthrocut Crescent 170
- Arthrocut Hook 220

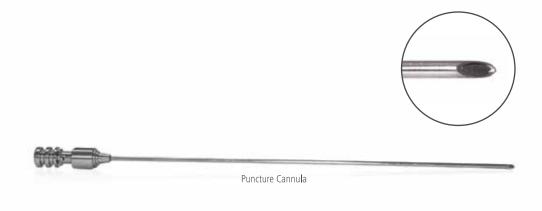
## PUNCTURE CANNULA

Puncture Cannula aims to provide the surgeon the tools to perform the drilling and assist in conducting instruments in a direction predetermined by the surgeon in arthroscopic surgical procedures.

## **Technical Specifications**

- Sterilization: gamma ray
- Sterilization expires in: 3 years
- Single-use product

Images are for illustration only



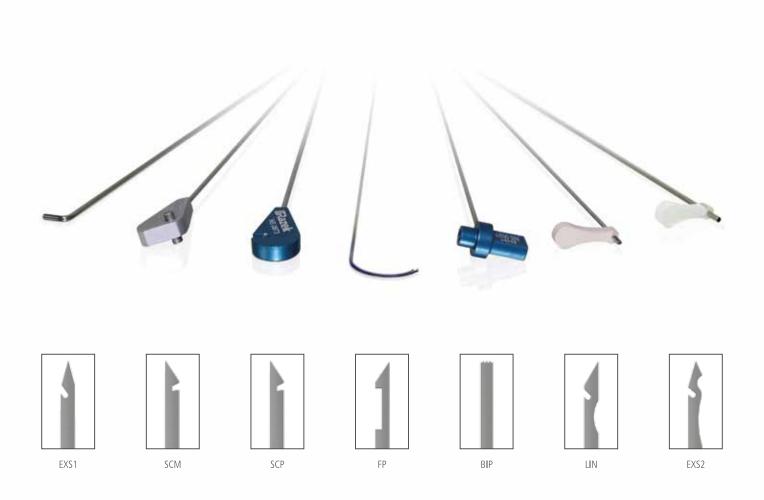
Wire Guide

- Puncture Cannula 1,0 1,5 69,5
   This model contains: 1 Puncture Cannula of 69,5 mm lenght
   1 Nitinol Wire Guide Ø 1,0 mm
- Puncture Cannula 1,0 1,7 150
   This model contains: 1 Puncture Cannula of 150 mm lenght
   1 Nitinol Wire Guide Ø 1,0 mm
- Puncture Cannula 1,0 1,7 180
   This model contains: 1 Puncture Cannula of 180 mm lenght
   1 Nitinol Wire Guide Ø 1,0 mm
- Puncture Cannula 1,0 1,7 220
   This model contains: 1 Puncture Cannula of 220 mm lenght
   1 Nitinol Wire Guide Ø 1,0 mm
- Puncture Cannula 1,3 2,0 150
   This model contains: 1 Puncture Cannula of 150 mm lenght
   1 Nitinol Wire Guide Ø 1,3 mm

- Puncture Cannula 1,3 2,0 180
   This model contains: 1 Puncture Cannula of 180 mm lenght
   1 Nitinol Wire Guide Ø 1,3 mm
- Puncture Cannula 1,3 2,0 220
   This model contains: 1 Puncture Cannula of 220 mm lenght
   1 Nitinol Wire Guide Ø 1,3 mm
- Puncture Cannula 1,5 2,2 150
   This model contains: 1 Puncture Cannula of 150 mm lenght
   1 Nitinol Wire Guide Ø 1,5 mm
- Puncture Cannula 1,5 2,2 180
   This model contains: 1 Puncture Cannula of 180 mm lenght
   1 Nitinol Wire Guide Ø 1,5mm
- Puncture Cannula 1,5 2,2 220
   This model contains: 1 Puncture Cannula of 220 mm lenght
   1 Nitinol Wire Guide Ø 1,5 mm

## SUTURE PASSER HOOK

The Suture Passer Hook allows handling the suture through soft tissue during arthroscopic procedures.



**Technical Specifications** 

- Sterilization: gamma ray
- Sterilization expires in: 3 years
- Single-use product

Images are for illustration only

- Suture Passer Hook EXS1
- Suture Passer Hook SCM
- Suture Passer Hook SCP
- Suture Passer Hook FP
- Suture Passer Hook BIP
- Suture Passer Hook LIN
- Suture Passer Hook EXS2

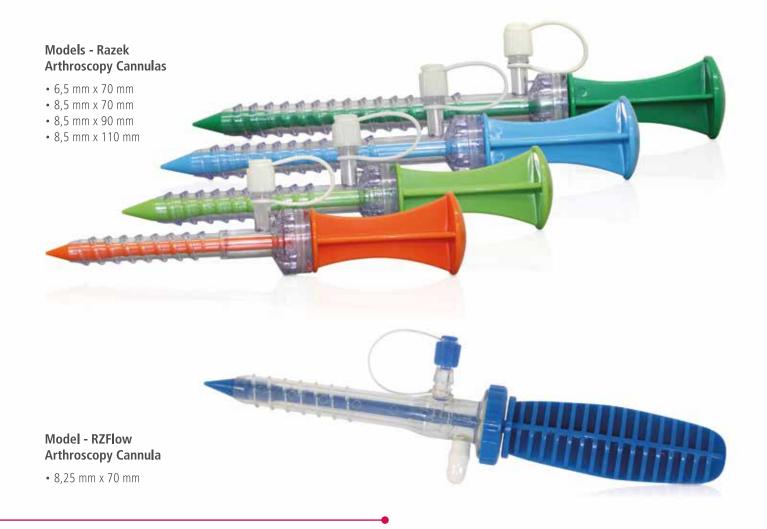
## RAZEK ARTHROSCOPY CANNULAS and RZFlow ARTHROSCOPY CANNULA

The Razek Arthroscopy Cannulas and RZFlow Arthroscopy Cannula are devices designed to allow insertion or removal of instruments in arthroscopic surgical procedures. RZFlow Arthroscopy Cannula has overflow system.

### **Technical Specifications**

- Sterilization: ethylene oxide
- Sterilization expires in: 2 years
- Single-use product

Images are for illustration only



### **RZFlow Irrigation and Suction Flexible Cannula**

RZFlow Irrigation and Suction Flexible Cannula provides safe irrigation and aspiration adapting alongside the joint when moved.

#### Models

- RZFlow Irrigation and Suction Flexible Cannula Blunt Type
- RZFlow Irrigation and Suction Flexible Cannula Sharp Type

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## RZ PASS NITI and NYLON COMPRESSION HOOKS

Both RZ Pass Niti and Nylon Compression Hooks are devices that allow suture handling in arthroscopic procedures. The only difference between the products is the material of the internal thread: nitinol or nylon.

## **Technical Specifications**

- Sterilization: ethylene oxide
- Sterilization expires in: 2 years
- Single-use product

Images are for illustration only





- RZ Pass Niti Compression Hook 30° straight 2,8 mm
- RZ Pass Niti Compression Hook 90° straight 2,8 mm
- RZ Pass Niti Compression Hook 90° curved left 2,8 mm
- RZ Pass Niti Compression Hook 90° curved right 2,8 mm
- RZ Pass Niti Compression Hook 25° curved left 2,8 mm
- RZ Pass Niti Compression Hook 25° curved right 2,8 mm
- RZ Pass Niti Compression Hook 45° curved left 2,8 mm
- RZ Pass Niti Compression Hook 45° curved right 2,8 mm
- RZ Pass Niti Compression Hook crescent 2,8 mm
- RZ Pass Niti Compression Hook 30° straight 3,2 mm
- RZ Pass Niti Compression Hook 90° straight 3,2 mm
- RZ Pass Niti Compression Hook 90° curved left 3,2 mm
- RZ Pass Niti Compression Hook 90° curved right 3,2 mm
- RZ Pass Niti Compression Hook 25° curved left 3,2 mm
- RZ Pass Niti Compression Hook 25° curved right 3,2 mm
- RZ Pass Niti Compression Hook 45° curved left 3,2 mm
- RZ Pass Niti Compression Hook 45° curved right 3,2 mm
- RZ Pass Niti Compression Hook crescent 3,2 mm

- RZ Pass Nylon Compression Hook 30° straight 2,8 mm
- RZ Pass Nylon Compression Hook 90° straight 2,8 mm
- RZ Pass Nylon Compression Hook 90° curved left 2,8 mm
- RZ Pass Nylon Compression Hook 90° curved right 2,8 mm
- RZ Pass Nylon Compression Hook 25° curved left 2,8 mm
- RZ Pass Nylon Compression Hook 25° curved right 2,8 mm
- RZ Pass Nylon Compression Hook 45° curved left 2,8 mm
- $\bullet$  RZ Pass Nylon Compression Hook 45° curved right 2,8 mm
- RZ Pass Nylon Compression Hook crescent 2,8 mm
- RZ Pass Nylon Compression Hook 30° straight 3,2 mm
- RZ Pass Nylon Compression Hook 90° straight 3,2 mm
- RZ Pass Nylon Compression Hook 90° curved left 3,2 mm
- RZ Pass Nylon Compression Hook 90° curved right 3,2 mm
- RZ Pass Nylon Compression Hook 25° curved left 3,2 mm
- RZ Pass Nylon Compression Hook 25° curved right 3,2 mm
- RZ Pass Nylon Compression Hook 45° curved left 3,2 mm
- RZ Pass Nylon Compression Hook 45° curved right 3,2 mm
- RZ Pass Nylon Compression Hook crescent 3,2 mm

## RAZEK PUMP DISPOSABLE IRRIGATION SET

The Razek Pump Disposable Irrigation Set is a device designed to be used together with Razek Pump equipment in order to provide the distension and irrigation of the joint, improving visibility and handling of arthroscopic instruments during surgical procedures.



**Technical Specifications** 

- Sterilization: ethylene oxide
- Sterilization expires in: 2 years
- Single-use product

Images are for illustration only

- Razek Pump Disposable Irrigation Set Perforator type Has a perforator connector for serum bag type.
- Razek Pump Disposable Irrigation Set Connector type Has a safe lock connector for serum bottle type.

