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THE INSTRUMENT PEOPLE

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OUR MISSION IS
SINGULARLY DEDICATED
TO THE DESIGN,
PRODUCTION AND SERVICE
OF THE WORLD'S FINEST
SURGICAL INSTRUMENTS.

OUR STEADFAST
COMMITMENT TO THE
SURGICAL COMMUNITY
PROVIDES INNOVATION AND
QUALITY WITHIN A
UNIQUELY COST-EFFECTIVE
DELIVERY SYSTEM.

JARIT... THE INSTRUMENT PEOPLE

JARIT IS INSTRUMENTS... For more than 30 years JARIT has provided its customers quality, innovation and integrity in surgical instrumentation. With corporate headquarters in Hawthorne, New York and operation headquarters in Tuttlingen, Germany, JARIT has been able to offer its customers the combination of American ingenuity and German excellence.

JARIT IS COMMITMENT... We are committed to deliver high quality surgical instruments in today's intense health care cost environment. In addition, JARIT is committed to identifying new and innovative technology. JARIT is committed to education by providing our customers experienced operating room specialists to support the training and development needs of the operating room and central service departments. JARIT has a steadfast commitment to the satisfaction of each of our customer's needs.

JARIT IS SERVICE... The Hawthorne, New York distribution center maintains the industry's most comprehensive inventory to guarantee our 99% fill rate. JARIT service starts with our Regional Managers and Specialty Medical Device Dealers who provide technical and clinical support for both the operating room and the central service departments. The JARIT Custom Inventory Management Services (CIMS) program provides our customers value-added services for the day-to-day successful management of all instrument needs.

JARIT IS QUALITY... All instruments are manufactured from the highest-grade surgical stainless steel, which is ground, polished and sharpened to perfection. All JARIT instruments are 100% inspected for smoothness, ergonomics and the "feel" that surgeons demand of a surgical instrument.

JARIT IS INNOVATION... The product development team has introduced new and innovative instruments in collaboration with leading surgeons around the world. This development effort has resulted in making JARIT a leader in laparoscopic surgical instruments and general instrumentation.

JARIT IS VALUE... Our customer is the most valuable asset to JARIT. We value your trust in JARIT, and we understand the investment a hospital makes when purchasing instruments. We are committed to meet both the clinical and financial needs of the hospital, recognizing the cost containment pressures our customers face today.



GUARANTEE/WARRANTY

All JARIT Instruments are unconditionally guaranteed against defects in material and workmanship. JARIT will, at its option and without charge, either repair or replace any instrument which JARIT determines to be defective in material or workmanship when used for its intended surgical purpose.

All instruments sold by JARIT are warranted only to the original purchaser and only against defects in workmanship or materials which under the intended use render such instruments inoperable.

All JARIT CARB-BITE and JARIT CARB-EDGE instruments are further warranted for a period of three (3) years under normal use. Should any adjustment become necessary during this warranty period, CARB-EDGE Scissors will be resharpened, and CARB-BITE Needle Holder jaw inserts will be replaced, without charge.

All JARIT SUPERCUT Scissors are further warranted for a period of one year under normal use. Should any resharpening become necessary during this warranty period, JARIT will provide this service without charge. A nominal charge will be made for sharpening after expiration of this warranty. JARIT SUPERCUT Scissors will be date-stamped for control.

The autoclavable feature of the Autoclavable Laparoscope is covered under a special one (1) year limited warranty.

This Guarantee/Warranty shall be void in the event any JARIT instrument is used for purposes other than as originally intended, is not maintained or cleaned properly, is damaged as a result of misuse or accident, or is repaired or altered by unauthorized persons.

The above is a limited warranty, and it is the only warranty made by JARIT. JARIT makes no other warranty, express or implied, including any warranty of merchantability and fitness for a particular purpose, as well as any express or implied warranty to patients. JARIT shall have no liability for consequential, exemplary or incidental damages even if it is aware of the possibility of such damages. No warranty or guarantee may be created by any act or statement nor may this warranty be modified in any way, except as a result of a writing signed by an officer of JARIT. These limitations on the creation or modification of this warranty may not be waived or modified orally or by any conduct. The stated express warranty is in lieu of all liabilities or obligations of JARIT arising out of, or in connection with, the delivery, use or performance of any JARIT instrument. JARIT neither assumes nor authorizes any representative or other person to assume for it any other liability in connection with JARIT'S products.

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JARIT®

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P.E.E.R.™

ROTO-CAM™

ROTO-LOK™



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Every hospital owns many thousands of dollars worth of surgical instruments. The care and maintenance that these instruments receive is critical to their performance during surgery and to the cost containment efforts of the hospital. With consistent and proper technique during the use, care, and handling of these surgical instruments, the hospital can expect several years of use from its investment in these quality products.

MANUFACTURE

Metallurgical research has enabled instrument makers to produce accurate, long-lasting surgical instruments. The steel used in most O.R. instruments is a 400 series alloy which has several useful properties. It can be brought to a very sharp cutting edge and will hold this edge through continuous use. In addition, the high tensile strength enables it to maintain precisely set jaw approximations. The metal is often referred to as stainless because of its corrosion resistance qualities. A chromium content ranging from 11.5% to 18% gives the steel some of its stainless characteristics. During manufacturing, a surface layer of chromium oxide begins to develop on the instrument and provides the instrument with corrosion resistance properties. Through routine hospital use and exposure to the air this oxidation process continues, effectively maintaining and even building up a barrier to most stains and corrosive elements.

INSPECTION OF ALL INSTRUMENTS

All JARIT instruments are carefully inspected before shipment. Because damage may occur during transit, the instruments should be thoroughly inspected upon receipt. All instruments must be inspected prior to use.

Indications for Use: JARIT surgical instruments are designed to perform a specific function, such as cutting, grasping, clamping, dissecting, probing, retracting, draining, aspirating, suturing, or ligating. For use by, or as directed by, a surgeon. Instruments should be used only for the purpose for which they are designed. The proper surgical technique for the use of instruments is the responsibility of the surgeon.

Handling and Operating Instruments:

JARIT instruments should be handled and operated by personnel completely familiar with their use, assembly and disassembly. Before a new instrument is used and prior to each surgical procedure the instrument must be decontaminated, lubricated and sterilized as described below. Handle the instrument with care. The instrument must be inspected to assure proper functioning prior to each use with particular attention paid to the condition of all moving parts, tips, box locks, ratchets and cutting edges. Each instrument with a screw must be inspected before and after use to ensure that the screws do not move when operating the instrument. Screws can loosen and back out of an instrument as a result of normal operation and/or the vibration during ultrasonic cleaning. Failure to make a complete inspection to

assure the proper operation and function of the instrument may result in unsatisfactory performance, perhaps because a part is missing. Do not use if the instrument does not appear to be functioning properly. Use of an instrument for a task other than that for which it is intended could result in a damaged or broken instrument, or one which provides an unsatisfactory performance. In order to insure JARIT warranties and guarantees, instruments in need of repair should be sent to JARIT.

Precautions: After cleaning, especially ultrasonic cleaning, check screws on instruments because the vibration from the ultrasonic cleaning may cause them to loosen or fall out.

For electrosurgical instruments, use the least amount of power appropriate for the application. For electrosurgical cables, disconnect from the generator or instrument by grasping the connector only. Do not pull the cable by the cord. Do not use instrument or cable if insulation is not fully intact.

JARIT surgical instruments are supplied non-sterile and must be cleaned, lubricated and sterilized prior to use according to hospital protocol and the procedures outlined in this document. Failure to follow these procedures will invalidate the instrument's warranty and can cause the instrument to fail.

Inappropriate use of instruments will lead to damage that is usually not repairable; for example, a hemostat that is used to clamp tubing can become misaligned and quickly break.



As with any decontamination procedure, personnel should follow accepted guidelines for hand washing, the use of protective attire, etc. as recommended by A.A.M.I. Standards and Recommended Practice, “Comprehensive Guide to Steam Sterilization and Sterility Assurance in Health Care Facilities”, ANSI/AAMI ST79:2006. Disinfection or sterilization cannot be accomplished without first thoroughly cleaning medical devices/equipment.

I. SURGICAL INSTRUMENT CARE AND HANDLING

CAUTION

Always consult the package insert and/or instructions for use that accompany the surgical instrument/device for any specific information that is important to properly process that particular item. A variety of these package inserts/instructions for use are included in the back of this catalog and can be found at:

www.Integra-LS.com/JARIT.

DECONTAMINATION is a two step process.

First step - thorough cleaning and rinsing.

Second step - sterilization or disinfection.

A. MANUAL DECONTAMINATION

PRECLEANING: Remove gross debris from surgical instruments with a lap sponge and sterile water routinely during the procedure to prevent drying on of blood and body fluids, etc. It is important to rinse instruments that have been exposed to blood and saline solution before these substances dry. Blood and body fluids as well as saline solutions are highly corrosive. In addition, blood can produce a stain that is difficult to remove.

PREPARING THE INSTRUMENTS FOR TRANSPORT TO DECONTAMINATION:

Maintain moisture: Immediately after the surgical procedure, place the instruments into an instrument tray and cover with a towel moistened with sterile water. Foam, spray or gel products, specifically intended for use with surgical instruments, are available to keep the soil moist. Transport tray of soiled instruments in an impervious plastic bag or container to the decontamination environment (keep the outside of the containment clean).

CLEANING: To prevent the formation of biofilm, cleaning should occur as soon as possible after instrumentation is used. Biofilm is an accumulation of a biomass of bacteria and extracellular material that tightly adheres itself to the surface of the instruments. It cannot be easily removed, and protects microorganisms from being easily removed by ordinary cleaning/decontamination methods used in hospitals. It is particularly problematic in lumened medical devices.

Step 1. Pre-Rinse, as necessary with tap water:

Step 2. Enzymatic Soak: Prepare the enzymatic solution and use per enzyme manufacturer's recommendations, paying special attention to instructions for correct dilution, temperature and soak time. Immerse fully opened and/or disassembled instruments in an enzymatic solution, specific for use with surgical instruments. Immerse lumens and flush air from them by filling the lumens with enzymatic solution for full contact with the inner surface during the soak time.

Step 3. Rinse: Remove instruments from the enzymatic soak after the time period recommended by the enzymatic manufacturer and rinse thoroughly with tap water. Flush lumens until the rinse water runs clear.

Step 4. Cleaning Instruments: Choose a cleaning solution appropriate for surgical instruments and follow the manufacturer's instructions for use. The use of neutral pH detergents is vital to the maintenance of surgical instruments. Contact with acidic or alkaline solution will remove the instruments' protective barrier of chromium oxide, often leading to corrosion, pitting, and breakage. You may find that depending on the type of soil, a detergent that is a little more or less acid or alkaline may be more appropriate. The ideal cleaning agent is nonabrasive, low-foaming and free-rinsing. Using a small, clean, hand-held brush, remove soil from all surfaces of the instrument while fully immersed in the solution. During manual cleaning, never use steel wool, wire brushes, scalpel blades or highly abrasive detergent or cleansers to remove soil from surgical instruments. These will damage the instruments' protective surface and lead to corrosion. Use a clean soft bristled brush to clean instruments with an accessible channel. Remove the soil from the ratchets, jaws, tips, box locks, and/or hinge mechanism. The box lock and hinge portion of an instrument must be thoroughly cleaned after each use. A build-up of soil, debris, lubricants, etc. in these areas, will make it difficult to use the instrument and eventually irreparably damage it. Vigorously flush channels with the cleaning solution. Deionized water is recommended and preferred because it is free of the many compounds which exist in ordinary tap water. These substances, alone, cause stains and when tap water is combined with some detergents it will form insoluble deposits on the instruments. Manual cleaning should remove all visible residue. It is essential to keep the box locks and hinges open during any manual or automated cleaning process.

Step 5. Rinse: Thoroughly rinse instruments by immersing in tap water and wiping with a clean, soft cloth. Flush lumens until water runs clear.

Step 6. Ultrasonic Cleaning and Rinsing: Follow the recommendations of the ultrasonic manufacturer regarding cycle times, detergents, proper placement of the instrument tray, and conditioning ("degassing") of the cleaning solution, etc. Use an ultrasonic cleaner to remove soil from hard to reach surfaces such as grooves, crevices, lumens, instruments with moving parts, etc., after gross soil has been removed by previous cleaning process. Open or disassemble instruments as appropriate. Place instruments in a mesh bottom stainless steel instrument tray. Place the tray into the ultrasonic cleaner. Flush air out of lumens by filling them with the ultrasonic cleaning solution (under the solution level in the chamber) for effective removal of soil from that inner surface, by the ultrasonic activity. After ultrasonic cleaning and rinsing, check screws on instruments because the vibration from the ultrasonic cleaning may cause them to loosen or fall out.

Step 7. FINAL RINSE should be with "treated water". Softened or deionized water should be used for the final rinse to better remove detergents, etc.

- Softening water removes calcium and magnesium ions that cause water to be hard. Iron ions may also be removed by this treatment.
- Deionization removes ionized salts and particles from the water. Excessively hard water can spot or stain instruments and excessive chlorine in water can cause pitting of the instrument.
- Deionized water is preferred for the final rinse.

Step 8. Decontaminate Clean Instruments: Once instruments have been cleaned they must be rendered safe for handling, inspection and assembly. They may be decontaminated using the steam sterilization parameters for unwrapped items, found in this document or disinfected following the instructions from the disinfectant manufacturer.

Step 9. Visual Inspection and Instrument Set Assembly: Visually inspect the instrument for cleanliness and to ensure all parts are in proper working order; as the set is assembled. Inspection is a vital part of proper care and maintenance. Instruments in need of repair will not perform accurately in surgery and breakage is likely to occur. **DO NOT USE** damaged instruments. Worn ratchets, loose box locks and misaligned jaws can be repaired at a fraction of the cost of new instruments. Contact your local representative for information regarding a cost-effective instrument repair program.

Step 10. Lubricate: The use of an instrument lubricant, that is compatible with the method of sterilization to be used, is

recommended before instruments are sterilized. Be certain that the instrument lubricant is diluted and maintained properly, according to the manufacturer's instructions. This type of lubricant is referred to as "instrument milk" and is usually applied by spraying into the box locks and moving parts or by dipping the opened instruments into a solution. Lubricants that are too concentrated or too heavily applied will result in slippery instruments that will also be mistaken as wet after sterilization. After thoroughly cleaning instruments, proper application of lubricants to joints will keep them moving freely and aid in protecting the surface from mineral deposits. Note that ultrasonic cleaners remove all lubrication; therefore this maintenance procedure should be done routinely after ultrasonic cleaning and before sterilization. Proper lubrication is an integral step in maintaining the long-life of the surgical instrument. Lubrication will prevent the friction of metal on metal and preserve the smooth function of the instrument thus avoiding corrosion by friction. Furthermore, routine use of lubricating agents, on thoroughly clean instruments, will prevent hinged and other movable parts from sticking. Lubrication will aid in protecting the entire instrument surface from mineral deposits.

Step 11. Drying: Before instruments are wrapped for sterilization or storage, they must be thoroughly dry. If a set of instruments is wet when wrapped for sterilization it is likely to come out of the sterilizer wet. "Wet Packs" are not suitable for use after sterilization because they may be easily contaminated when handled. In addition, remaining moisture, particularly in box locks and hinges, may result in corrosion that will weaken the instrument and lead to breakage during use.

B. MECHANICAL DECONTAMINATION

General surgical instrumentation may be processed in a washer sterilizer or washer decontaminator/disinfector. Some of these processes include an enzyme application phase and a lubrication phase that is designed into the cycle. Follow the manufacturer's specifications when using automatic washer-sterilizers or washer decontaminators/disinfectors. They usually require the use of a low foaming, free rinsing detergent with a neutral pH (7.0). A high-foaming detergent may clean effectively but will often leave residual deposits on the instruments and do harm to mechanical washers. Automated washer sterilizers and washer decontaminator/disinfectors usually have adjustable wash and rinse times. Some washers enable the user to customize extra cycles to process heavily soiled surgical instruments more effectively.

Check with a Technical Service representative at 1-800-431-1123 for questions regarding processing delicate, complex and/or multipart instruments by this method.



C. PREPARING INSTRUMENTATION FOR STERILIZATION

Prepare instrument sets for sterilization using a wrapper, pouch or rigid sterilization container that is appropriate for the method of sterilization to be used. The Association for the Advancement of Medical Instrumentation (AAMI) and individual sterilizer manufacturers, as well as medical device manufacturers, provide guidance for the proper preparation of surgical instrument trays for sterilization. Some sterilizer manufacturers can also provide information regarding wet pack problem solving. See also, *Sterilization for the Healthcare Facility, 2nd Edition, Reichert, M.; Young, J., "Wet Pack Problem Solving", Lee, S. (Frederick, MD: Aspen, 1997).*

D. TERMINAL STEAM STERILIZATION

After following the decontamination recommendations, reusable instruments are ready for sterilization. Independent laboratory testing, conducted according to the F.D.A. (21 CFR PART 58) and Good Laboratory Practice Regulations (G.L.P.), has validated steam sterilization as an effective process for reusable instruments. See also, AAMI Standards and Recommended Practice, *"Comprehensive Guide to Steam Sterilization and Sterility Assurance in Health Care Facilities", ANSI/AAMI ST79:2006.* AAMI standards recommend that the sterilizer manufacturer's written instructions for minimum cycle parameters should also be followed. Steam sterilization of lumened instruments requires that they be flushed with sterile water just prior to wrapping and sterilization. The water generates steam within the lumen to move air out. Air is the greatest enemy to steam sterilization, preventing steam contact if not eliminated.

Medical device manufacturer's exposure times to sterilization temperature may need to be longer than the minimum indicated by the sterilizer manufacturer but must never be shorter.

Below are the recommended sterilization parameters:

Sterilizer	Exposure Temperature	Exposure Time	Minimum Dry Time
Pre-vacuum (wrapped)	121° C (250° F)	20 min	20 min
	132° C (270° F)	4 min	20 min
	134° C (273° F)	3 min	15 min
Pre-vacuum (unwrapped)	132° C (270° F)	4 min	
Gravity Steam (wrapped)	132° C (270° F)	18 min	

For additional information and inservicing assistance regarding instrument care and handling, contact your local JARIT representative, or call JARIT Technical Service Department at 1-800-431-1123.

As with any decontamination procedure, personnel should follow accepted guidelines for hand washing, the use of protective attire, etc. as recommended by A.A.M.I. Standards and Recommended Practice, “Comprehensive Guide to Steam Sterilization and Sterility Assurance in Health Care Facilities”, ANSI/AAMI ST79:2006. Disinfection or sterilization cannot be accomplished without first thoroughly cleaning medical devices/equipment.

II. RIGID ENDOSCOPE CARE AND HANDLING

WARNING

Consult individual national infection control/prevention protocols for specific guidance regarding processing medical devices with suspected exposure to Creutzfeldt-Jakob Disease (CJD).

DECONTAMINATION is a two step process:

- First step** - thorough cleaning and rinsing.
- Second step** - sterilization or disinfection.

A. MANUAL DECONTAMINATION

PRECLEANING: When the rigid endoscope exits the body, remove gross debris using a surgical sponge dampened with sterile water, so that it does not dry on the device. As with any other surgical instrument, blood and body fluids, as well as saline, are highly corrosive and can damage instrument surfaces if they are not treated properly.

PREPARING THE ENDOSCOPE FOR TRANSPORT TO DECONTAMINATION:

Maintain moisture: Place the endoscope into an instrument tray and cover with a surgical towel moistened with sterile water. Transport tray with the soiled endoscope in an impervious plastic bag or covered container to the decontamination environment (keep the outside of the containment clean).

CLEANING: To prevent the formation of biofilm, cleaning should occur as soon as possible after instrumentation is used. Biofilm is an accumulation of a biomass of bacteria and extracellular material that tightly adheres itself to the surface of the instruments. It cannot be easily removed, and protects microorganisms from being easily removed by ordinary cleaning/decontamination methods used in hospitals. It is particularly problematic in lumened medical devices.

DO NOT immerse the endoscope in any solution, including sterile water for more than 30 minutes.

Step 1. Pre-Rinse, as necessary with tap water:

Step 2. Enzymatic Soak: Prepare the solution and use per enzyme manufacturer's recommendations, paying special attention to instructions for correct dilution, temperature and soak time. Immerse the rigid endoscope in an enzymatic

solution, specific for use with this type of medical device. Flush air from the rigid endoscope with enzymatic solution, while immersed, for full contact with the inner surface during the soak time.

Step 3. Rinse: Remove the endoscope from the enzymatic soak after the time period recommended by the enzymatic manufacturer and copiously rinse with tap water until it runs clear.

Step 4. Clean Endoscopes: Use a small clean soft-bristled brush, to clean the optical portions of the scope while immersed in a neutral pH cleaning solution. Clean the shaft of the scope by wiping with a soft cloth, such as a disposable lap sponge. Clean the distal window, eyepiece window and fiber end of the light post with a cotton tip, non-plastic applicator (or soft cloth) moistened with 70% isopropyl alcohol. Never use sharp instruments to remove soil.

Step 5. Rinse: Thoroughly rinse the rigid endoscope by immersing it in clean tap water and wiping with a clean, soft cloth. Flush the endoscope until water runs clear. Be certain the distal window, eyepiece window and fiber end of the light post are rinsed well so that visualization is clear.

Step 6. FINAL RINSE should be with “treated water”. Softened or deionized water should be used for the final rinse to better remove detergents etc.

- Softening water removes calcium and magnesium ions that cause water to be hard. Iron ions may also be removed.
- Deionization removes ionized salts and particles from the water. Excessively hard water can spot or stain endoscope and excessive chlorine in water can cause pitting.
- Deionized water is preferred for the final rinse.

Step 7. Visual Inspection: Visually inspect the endoscope for cleanliness. Inspect the lens for visual clarity. Check the image quality by holding the scope up to the light. Look through the lens to see if it is clear, and for any distortions, defects, residue or fingerprints. Inspect the entire scope for rough surfaces, sharp edges or other signs of damage that require repair before use.



DECONTAMINATION AND STERILIZATION PROCEDURES

Step 8. Dry: Endoscopes must be thoroughly dried with a soft cloth before sterilization or storage. Remaining moisture may result in corrosion. Gentle medical grade compressed air may be used to dry the lumen.

B. MECHANICAL DECONTAMINATION

Only use mechanical washing/decontamination equipment programs, and solutions that are designed and recommended by the washer manufacturer as safe and effective for processing rigid endoscopes. The risk of damage to the endoscope with mechanical cleaning methods can be much higher than cleaning the instruments by hand. Only thermal-neutral processes should be used, and they must process in a neutral pH environment (e.g. enzymatic cleaning solutions). The temperature should not exceed 93°C (199.4°F). The mechanical washer must be equipped with fixtures that secure the instruments so they are not damaged during the washing cycle.

Instruments with channels or stopcocks need to be attached to the corresponding rinsing connections provided with the washing equipment. It is important that all inner and outer surfaces of the instrument are cleaned and rinsed. Any residue on the fiberoptic surfaces can cause damage and reduce light transmission

C. NON-AUTOCCLAVABLE SCOPE STERILIZATION

Disinfection or sterilization cannot be accomplished without first thoroughly cleaning medical devices/equipment.

- **DO NOT** steam sterilize the non-autoclavable scope.
- **DO NOT** dry heat sterilize the non-autoclavable scope.

JARIT non-autoclavable scopes are ready for Ethylene Oxide (EO) sterilization or high level disinfection, after following the cleaning method described.

- **The endoscope must be thoroughly dry before EO sterilization** to avoid the formation of a harmful byproduct (ethylene glycol) that may not be removed by aeration. The pressure should not exceed 22 psi and the temperature should not exceed 60°C (140°F). See also, AAMI Standards and Recommended Practices, "*Ethylene Oxide Sterilization in Health Care Facilities*", ANSI/AAMI ST41:1999. AAMI standards recommend that the sterilizer manufacturer's written instructions for minimum cycle parameters should also be followed.

- **The endoscope must be thoroughly dry before high level disinfection**, so not to dilute the disinfecting solution below appropriate "use dilution". Follow the procedures for using the cold disinfecting solution as recommended by the manufacturer of the product.
- **DO NOT allow the scope to exceed 30 consecutive minutes in any solution**, including sterile water. Extended exposure to liquids can damage the endoscope.

D. AUTOCLAVABLE SCOPE USING STEAM STERILIZATION

After following the above cleaning method, JARIT autoclavable scopes are ready for steam sterilization. Independent laboratory testing, conducted according to the F.D.A. (21 CFR PART 58) and Good Laboratory Practice Regulations (G.L.P.), has validated steam sterilization as an effective sterilization process for JARIT reusable autoclavable scopes. The pressure should not exceed 30 psi and the temperature should not exceed 134°C (273°F) for a maximum of 5 minutes and 121°C (250°F) for a maximum of 20 minutes. The wrapped scopes were validated to be sterile at a 20 minute, 121°C (250°F) gravity cycle.

The unwrapped instruments were validated to be sterile using a 3 minute, 132°C (270°F) gravity cycle and a 4 minute, 132°C (270°F) pre-vacuum cycle.

See also, AAMI Standards and Recommended Practices, "*Comprehensive Guide to Steam Sterilization and Sterility Assurance in Health Care Facilities*", ANSI/AAMI ST79:2006. AAMI standards recommend that the sterilizer manufacturer's written instructions for cycle parameters should also be followed.

Medical Device manufacturer's exposure times to sterilization temperature may need to be longer than the minimum indicated by the sterilizer manufacturer but must never be shorter.

After sterilization, the scope must be allowed to cool at room temperature. **DO NOT** attempt to accelerate the normal cooling process to prevent damage to the endoscope.

For additional information and inservicing assistance regarding instrument care and handling, contact your local JARIT representative, or call JARIT Technical Service Department at 1-800-431-1123.

Improper, ineffective, and insufficient maintenance can greatly reduce the life of an instrument and will invalidate the instrument's warranty. We cannot make any statement about how long an instrument will last. Designed and crafted to exacting specifications, instruments will perform for a reasonable number of years when the following steps are observed:

Protect Instruments: The most effective method of dealing with instrument problems is to prevent them from occurring. The use of "treated water", careful preliminary cleaning, the use of neutralized pH solutions, adherence to manufacturer's instructions, and visual inspection, will help to keep instruments performing accurately and cosmetically free of troublesome stains. It is important to act quickly should a problem arise. Delay will compound the problem and irreparable harm may result.

Certain compounds are highly corrosive to stainless steel and will cause serious damage despite the passivated protective surface. If instruments are inadvertently exposed to any of the following substances, they should be rinsed immediately with copious amounts of water:

Instruments should never be exposed to:

Aqua regia	Hydrochloric acid	Sulfuric acid
Ferric chloride iodine	Iodine	

The following substances should be avoided whenever possible:

Aluminum chloride	Chlorinated lime	Saline
Barium chloride	Dakin's solution	Sodium hypochlorite
Bichloride of mercury	Mercury chloride	Stannous chloride
Calcium chloride	Potassium permanganate	
Carbolic acid	Potassium thiocyanate	

- Any kind of corrosion will lead to rust on steel. Because rust particles can be transferred from one instrument to another, corroding instruments should be removed from service to prevent the formation of rust on other instruments.
- Instruments must be sterilized in the open position or disassembled as appropriate. Steam will only sterilize the surface it can directly touch.
- Every effort should be made to protect sharp cutting edges and fine working tips during all maintenance procedures. Avoid loading retractors and other heavy items on top of delicate and hollow instruments.

Diagnosing Spots and Stains:

It is common for instruments to become stained or spotted despite the best efforts of the manufacturers and the hospital staff. In nearly all cases these problems are the result of minerals deposited upon the surfaces of the instruments, as well as insufficient cleaning. Adhering to proper technique during cleaning and sterilizing procedures will prevent most staining occurrences. However, they will sometimes arise very

suddenly and will not disappear on their own. The following identifies some of the various instrument-related problems hospitals may encounter:

- **Brown Stains:** Detergents containing polyphosphates may dissolve copper elements in the sterilizer. This results in copper being deposited on the instruments by an electrolytic reaction. The hospital may try a different detergent or check the quantities used. Usually a dull blue or brown stain is simply a build-up of oxidation on the surface. This film is harmless and will actually protect the instrument from serious corrosion.
- **Blue Stains:** Blue stains are usually the result of cold sterilization techniques. It is important to prepare the solution according to exact proportions and to change the solution when recommended. Serious corrosion may occur if the solution is used beyond the manufacturer's specified time limit. The use of distilled water and a rust inhibitor in the solution will help retard discoloration.
- **Black Stains:** Black stains may be the result of contact with ammonia. Many cleaning compounds contain ammonia and it will remain on the instruments unless they are well rinsed.
- **Light or Dark Spots:** Spots are often the result of condensation pooling and then drying on flat and concave instrument surfaces. The mineral content of the water remains on the instrument. Using "treated water" as the FINAL rinse will help to remove the minerals found in water that can cause these residual spots. It is also important to follow the sterilizer manufacturer's instructions for preparing instrument sets for sterilization. Standing instruments that have flat and concave surfaces "on edge" will enable the condensate to drain off and more readily dry, usually without spotting. An additional cause of spotting can be traced to the instrument wraps. During laundering procedures, it is vital that detergents are thoroughly rinsed out, and that the final rinse is prepared so that the wraps have a pH between 6.8 and 7.0. In addition, healthcare professionals should check the cleanliness of the sterilizer chamber. Steam can lift soil and poorly rinsed chamber cleaning detergents from the chamber walls and deposit them onto instruments and wrappers.
- **Rust Deposits:** It is very unlikely for surgical grade steel to rust. What appears to be rust is often residual organic matter in box locks or mineral deposits which have been baked onto the surface of the instrument. In localities where the water has a high iron content, for example, an iron deposit will result in a metallic film on the instrument. This may be prevented with the use of "treated water" for the FINAL rinse during cleaning procedures.
NOTE: The JARIT guarantee will not be applicable if the instruments are continually exposed to acidic solutions with a pH of 5 or lower; or alkaline solutions with a pH of 9 or higher.

For additional information and inservicing assistance regarding instrument care and handling, contact your local JARIT representative, or call JARIT Technical Service Department at 1-800-431-1123.



RETURNED GOODS POLICY

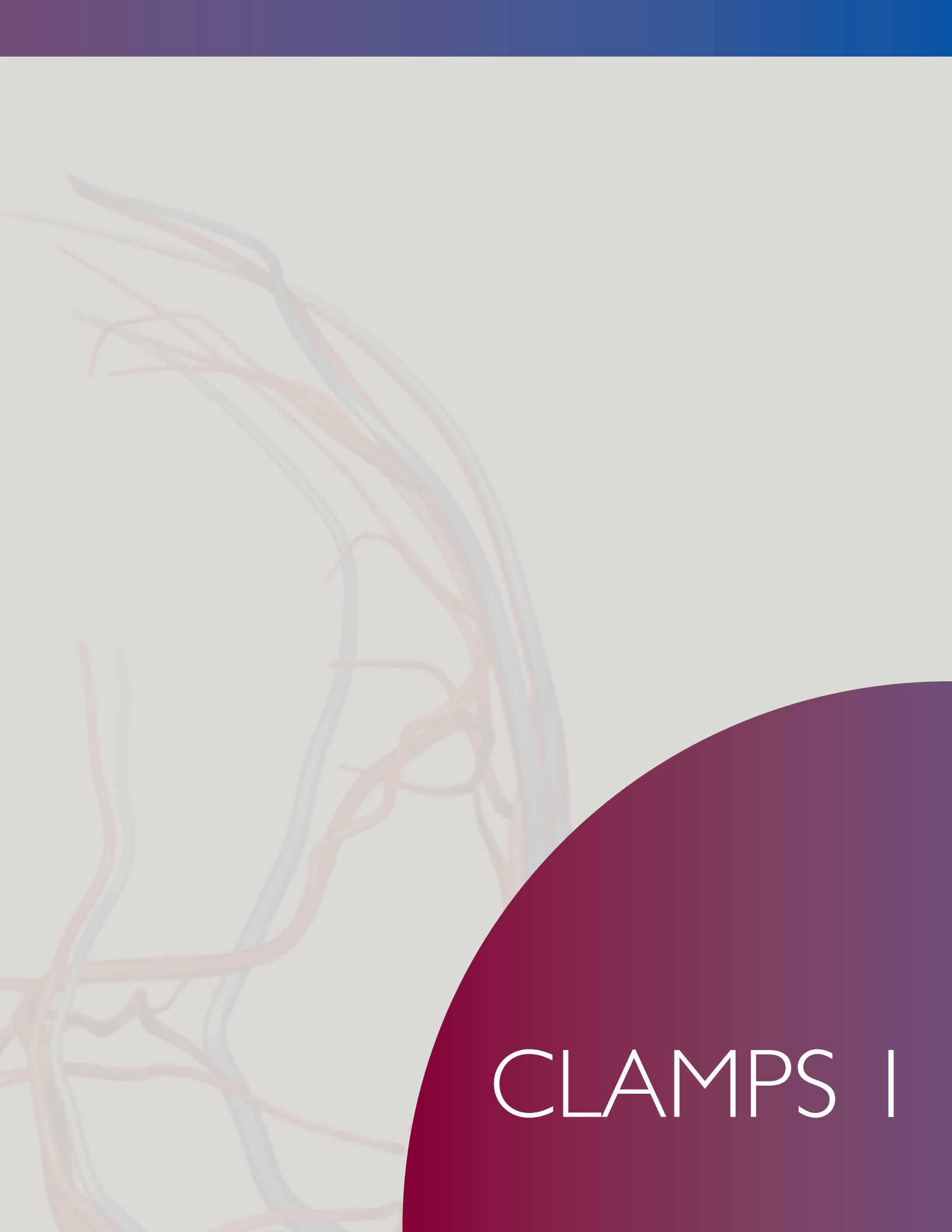
RETURNED GOODS POLICY

Products must be returned in unopened packages with manufacturer's seals intact to be accepted for replacement or credit unless returned due to a complaint of product defect. Determination of a product defect will be made by Integra. Products will not be accepted for replacement if they have been in the possession of the customer for more than 90 days.

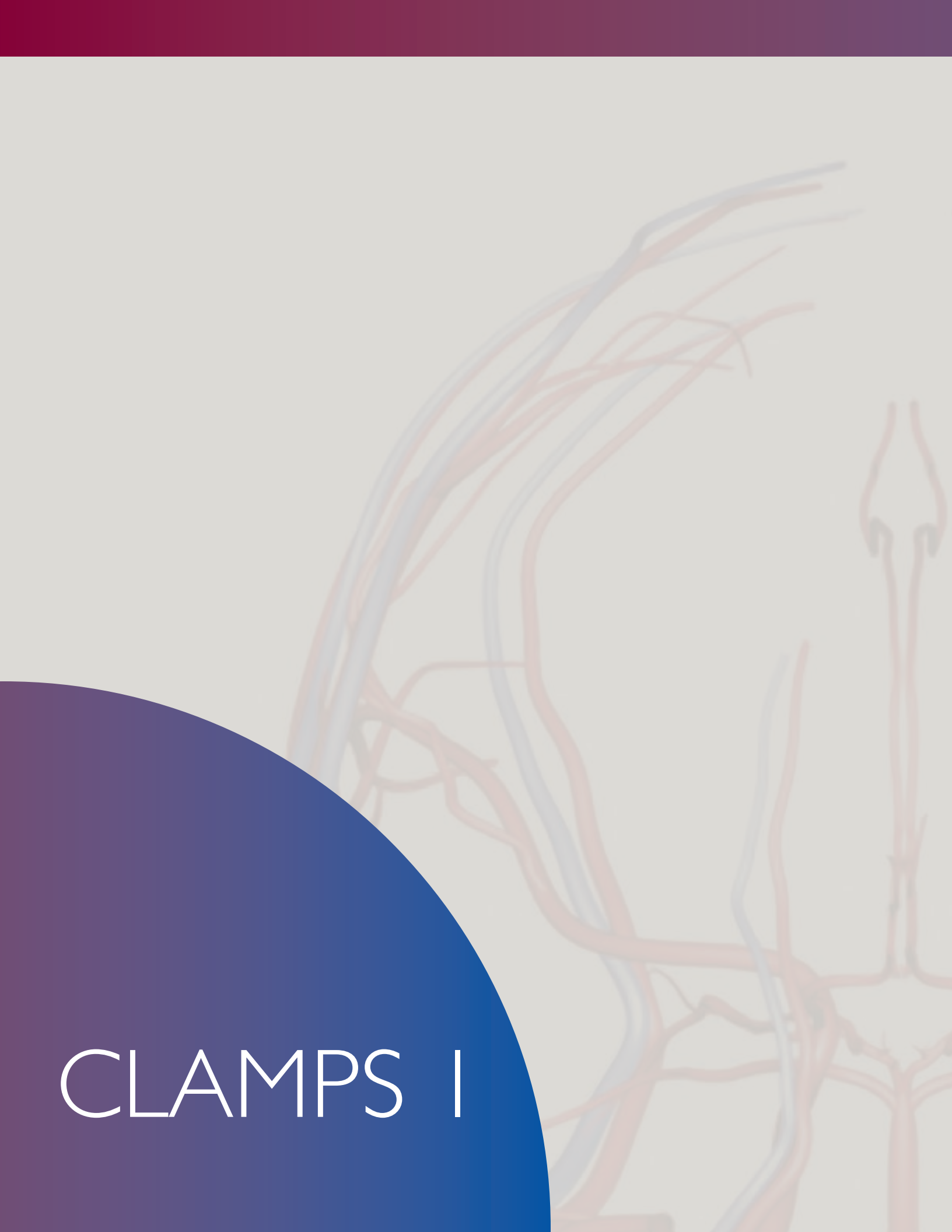
REPAIRS AND MAINTENANCE

Should your instruments require repair or maintenance, contact Integra for return authorization and address. Instruments returned to Integra for repair must have a statement testifying that each instrument has been thoroughly cleaned and sterilized. Failure to supply evidence of cleaning and disinfection will result in a cleaning charge and delayed processing of your instrument repair.

**PRODUCT INFORMATION DISCLOSURE
INTEGRA AND ITS SUBSIDIARIES ("INTEGRA")
AND MANUFACTURER EXCLUDE ALL
WARRANTIES, EXCEPT INTEGRA'S APPLICABLE
STANDARD WARRANTY WHETHER
EXPRESSED OR IMPLIED, INCLUDING BUT
NOT LIMITED TO, ANY IMPLIED WARRANTIES
OF MERCHANTABILITY OR FITNESS FOR A
PARTICULAR PURPOSE. NEITHER INTEGRA
NOR MANUFACTURER SHALL BE LIABLE
FOR ANY INCIDENTAL OR CONSEQUENTIAL
LOSS, DAMAGE, OR EXPENSE, DIRECTLY
OR INDIRECTLY ARISING FROM USE OF
THIS PRODUCT. NEITHER INTEGRA NOR
MANUFACTURER ASSUME NOR AUTHORIZE ANY
PERSON TO ASSUME FOR THEM ANY OTHER OR
ADDITIONAL LIABILITY OR RESPONSIBILITY IN
CONNECTION WITH THESE PRODUCTS.**



CLAMPS I

An anatomical illustration of the female reproductive system, including the uterus, fallopian tubes, and ovaries, rendered in a light, faded style. A large, solid blue circle is positioned in the lower-left corner, partially overlapping the anatomical drawing. The text "CLAMPS I" is written in white, uppercase letters within this blue circle.

CLAMPS I

DeBAKEY Aortic Aneurysm Clamps

- 320-280** 9 1/2" (24cm), DeBakey serrations, jaw length 3 3/8" (8.7cm)
320-282 10 5/8" (27cm), DeBakey serrations, jaw length 3 3/4" (9.6cm)
320-284 12" (30.5cm), 2 x 3 DeBakey serrations, jaw length 4 3/8" (11cm)
320-286 13 1/8" (33.5cm), 2 x 3 DeBakey serrations, jaw length 5 3/8" (13.6cm)

**COOLEY Aortic Aneurysm Clamp**

- 320-438** 10 1/2" (26.7cm), Cooley serrations, jaw length 3 3/4" (9.6cm)

**HOWARD-DeBAKEY Aortic Aneurysm Clamp**

- 320-288** 12 1/2" (31.7cm), curved shanks, curved jaws, jaw length 3 7/8" (10cm)

**ZANGER Abdominal Aorta Clamps**

- 320-292** 8 5/8" (21.9cm), DeBakey serrations, jaw length 2 5/8" (6.5cm)
320-293 10 1/8" (25.7cm), DeBakey serrations, jaw length 3 1/4" (8.5cm)
320-294 12" (30.5cm), 2 x 3 DeBakey serrations, jaw length 4 1/8" (10.5cm)



WYLIE Abdominal Aorta Clamps

320-291
320-290

9 1/2" (24cm), angled shanks, curved jaws, jaw length 2 3/4" (7cm)
10 1/2" (26.7cm), angled shanks, curved jaws, jaw length 3 1/8" (8cm)



WYLIE Hypogastric Clamp

320-289

9 1/2" (24.1cm), angled shanks, curved jaws, jaw length 2 3/4" (7cm)



CHERRY Supraceliac Clamp, 60° Handle, Double Curve

320-287

12 1/2" (31.7cm), angled shanks, curved jaws, jaw length 5 3/4" (14.5cm)



LEMOLE-STRONG Aorta Clamps

320-257
320-258

8 1/4" (21cm), straight shanks, jaw length 2" (5cm), depth 7/8" (2.2cm)
8 1/4" (21cm), angled shanks, jaw length 2" (5cm), depth 7/8" (2.2cm)



BAHNSON Aortic Clamp

320-263 9 1/8" (23.2cm), angled shanks, curved jaws, jaw length 2 3/4" (7cm)

**LAMBERT Abdominal Aortic Aneurysm Clamp**

320-266 9 1/4" (23.5cm), angled shanks, curved jaws, jaw length 2" (5cm)

**GRANT Abdominal Aortic Aneurysm Clamps ("Texas Twister") 2x3 DeBAKEY Jaws Serrations**

320-269 10" (25.5cm), jaw length 1 3/4" (5.5cm), 2" (5cm) beyond curve
320-264 10 1/2" (26.5cm), jaw length 2 5/8" (7cm), 2 1/2" (6.5cm) beyond curve



DeBAKEY Aorta Clamp 2x3 DeBAKEY Jaw Serrations

320-245 10 5/8" (27cm), jaw length 2 1/4" (5.7cm) beyond curve



JARIT Aortic Aneurysm Clamp, DeBAKEY Jaw Serrations

320-357 10 3/4" (27.3 cm), jaw length 2" (5cm), 2 1/4" (5.7cm) beyond curve



MORRIS Aorta Clamps 2x3 DeBAKEY Jaw Serrations

320-267 8 1/4" (21cm), curved shanks, angled jaws, jaw length 2 3/4" (6.7cm) wide jaws
320-259 8 1/2" (21.5cm), curved shanks, angled jaws, jaw length 3 3/4" (9.5cm) delicate jaws
320-268 11" (27.9cm), curved shanks, angled jaws, jaw length 3" (7.6cm), std jaws



COOLEY Iliac Clamps

320-494 8 5/8" (22cm), jaw length 2 1/2" (6.5cm)
320-495 10 1/4" (26cm), jaw length 2 1/2" (6.5cm)



COOLEY Aorta Clamps

- 320-243** 10 7/8" (27.6cm), jaw length 2 1/4" (5.5cm), depth 5/8" (1.5cm)
320-244 10 1/4" (26cm), jaw length 3" (7.5cm), depth 3/4" (1.7cm)

**OCHSNER Aorta Clamp**

- 320-242** 9 3/8" (24cm), angled shanks, jaw length 2 1/8" (5.4cm), depth 3/4" (1.9cm)

**DIETHRICH Aorta Clamp**

- 320-246** 8 1/4" (21cm), angled shanks, jaw length 2" (5cm), depth 5/8" (1.6cm)

**KAY Aorta Clamp**

- 320-247** 7 3/4" (20cm), angled shanks, jaw length 2 1/4" (5.5cm), depth 1 1/8" (3cm)



LAMBERT-KAY Aorta Clamp, Titanium

320-728TI 8" (20.3cm), jaw length 1 1/4" (3cm), depth 3/4" (2cm)



LAMBERT-KAY Aorta Clamp

320-248 7 3/4" (20cm), angled shanks, jaw length 2" (4.9cm), depth 3/4" (2cm)



WYLIE "J" Clamp

320-249 8 1/2" (21.5cm), curved shanks, jaw length 1 3/4" (4.5cm), depth 1 3/8" (3.5cm)



DeBAKEY Tangential Occlusion Clamps

320-320	7 7/8" (20cm), jaw length 1 5/8" (4cm), depth 1/2" (1.2cm)
320-322	9 7/8" (25cm), jaw length 2 1/8" (5.5cm), depth 3/4" (1.8cm)
320-324	10 1/4" (26cm), jaw length 2 1/2" (6.5cm), depth 3/4" (1.8cm)
320-326	10 3/8" (26.5cm), jaw length 2 5/8" (6.7cm), depth 3/4" (1.8cm)
320-328	10 5/8" (27cm), jaw length 3" (8cm), depth 3/4" (2cm)

**COOLEY Tangential Occlusion Clamps**

320-447	7 3/4" (19.7cm), jaw length 3/4" (1.9cm), depth 1/4" (6mm)
320-448	7 3/4" (19.7cm), jaw length 1" (2.5cm), depth 1/4" (7mm)
320-449	7 3/4" (19.7cm), jaw length 1 3/8" (3.5cm), depth 3/8" (10mm)



COOLEY Partial Occlusion Clamps

320-335	8" (20.3cm), jaw length 1" (2.7cm), depth 1/4" (7mm)
320-336	8 1/8" (20.6cm), jaw length 1 1/2" (4cm), depth 3/8" (8mm)
320-337	9" (22.9cm), jaw length 2" (5.2cm), depth 1/2" (1.2cm)
320-338	9 1/4" (23.5cm), jaw length 2 3/8" (6cm), depth 1/2" (1.2cm)
320-339	11" (27.9cm), jaw length 2 7/8" (7.2cm), depth 1/2" (1.2cm)



BECK Aorta Clamps

- 320-296** 8" (20.3cm), straight shanks, jaw length 1 1/4" (3cm), depth 1/4" (8mm)
- 320-297** 8 3/8" (21.3cm), straight shanks, jaw length 1 3/4" (4.5 cm), depth 3/8" (1 cm)
- 320-298** 8 1/2" (21.6cm), straight shanks, jaw length 2 5/8" (6.7cm), depth 3/8" (1 cm)



SATINSKY Vena Cava Clamps

- 320-390** 9 3/4" (24.5cm), jaw length 2" (5cm), depth 3/8" (1 cm), large
- 320-391** 9 3/4" (24cm), jaw length 1 5/8" (4cm), depth 3/8" (1 cm), medium
- 320-392** 9 3/4" (23.5cm), jaw length 1 3/8" (3.5cm), depth 1/4" (8mm), small



SATINSKY Vena Cava Clamps

- 310-204** 6 1/4" (15.9cm), cross-serrated, pediatric size
- 310-200** 9 1/4" (23.5cm), cross-serrated
- 310-202** 10 1/4" (26cm), cross-serrated, heavy



GLOVER Auricular Appendage Clamp

320-375 10 7/8" (27.5cm), jaw length 1 7/8" (4.7cm), depth 1/4" (7mm)



REYNOLDS Clamps

- 320-483** 50° 7" (18cm), angled shanks, jaw length 1 1/8" (3cm), depth 1/8" (5mm), small
- 320-484** 50° 7" (18cm), angled shanks, jaw length 1 3/8" (3.5cm), depth 1/4" (7mm), large
- 320-485** 85° 6 1/2" (16.5cm), angled shanks, jaw length 1 1/8" (3cm), depth 1/8" (5mm), small
- 320-486** 85° 6 1/2" (16.5cm), angled shanks, jaw length 1 3/8" (3.5mm), depth 1/4" (7mm), large



HARKEN Auricle Clamps

320-380	9 7/8" (25cm), No. 1 curve
320-381	9 1/2" (24cm), No. 2 curve
320-382	9 1/2" (24cm), No. 3 curve
320-383	9 1/2" (24cm), No. 4 curve

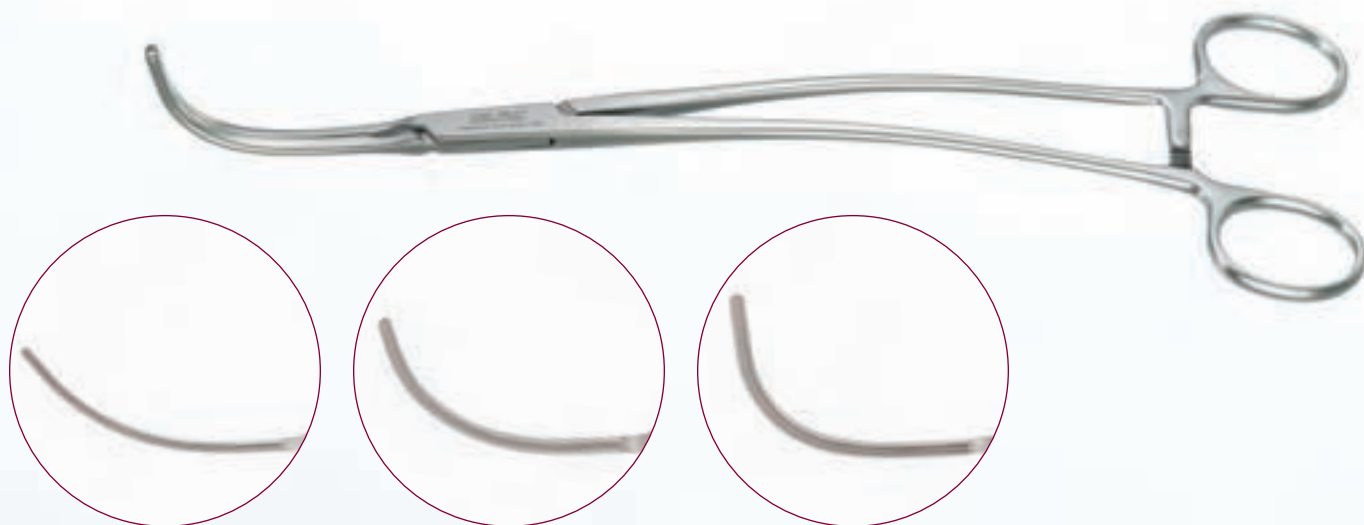
**GLOVER Clamps**

320-370	8 1/4" (21cm), straight shanks, spoon-shaped jaws, jaw length 1 1/2" (4cm)
320-372	10 1/4" (26cm), straight shanks, spoon-shaped jaws, jaw length 2 1/8" (5.5cm)
320-360	8 1/4" (21cm), straight shanks, standard curve, jaw length 1 3/4" (4.5cm)
320-361	9 1/2" (24cm), straight shanks, extra long curve, jaw length 2 1/4" (5.7cm)
320-362	7 1/4" (18.5cm), straight shanks, acutely curved, jaw length 1 5/8" (4cm),
320-363	8 3/4" (22cm), straight shanks, extra long acute curve, jaw length 2 1/8" (5.3cm)



DeBAKEY-BAHNSON Clamps

- 320-275** 10 7/8" (27.6cm), jaw length 3" (7.6cm), light curve
320-276 11 3/8" (28.9cm), jaw length 2 1/2" (6.4cm), medium curve
320-277 10 5/8" (27cm), jaw length 2 3/8" (6cm), acute curve



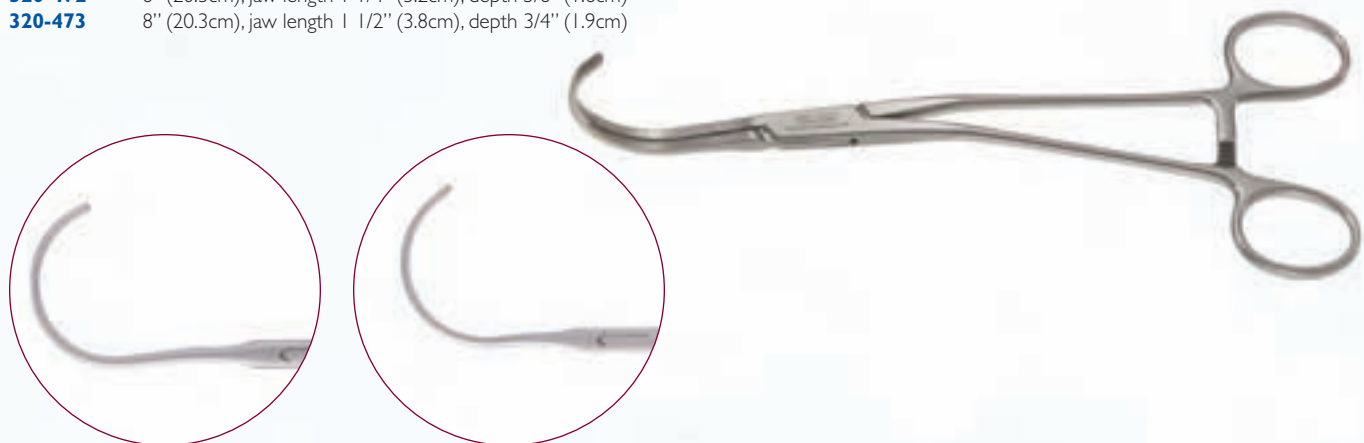
DeBAKEY Vascular Clamps

- 320-270** 9 5/8" (24.5cm), curved shanks, curved jaws, jaw length 2 3/4" (7.2cm)
320-272 10 3/8" (26.5cm), curved shanks, fully curved jaws, jaw length 4 3/8" (11.1cm)



COOLEY Multipurpose Clamps

- 320-472** 8" (20.3cm), jaw length 1 1/4" (3.2cm), depth 5/8" (1.6cm)
320-473 8" (20.3cm), jaw length 1 1/2" (3.8cm), depth 3/4" (1.9cm)

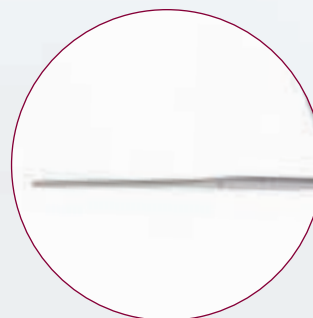


DeBAKEY Multi-Purpose Clamps, 60° Angle

320-302	8" (20.5cm), jaw length 2 1/8" (5.5cm)
320-304	9 3/8" (24cm), jaw length 2 3/4" (7cm)
320-300	9 7/8" (25cm), jaw length 1 5/8" (4cm)
320-306	12" (30.5cm), jaw length 4" (10cm)

**LELAND JONES Peripheral Vascular Clamps**

320-215	7 5/8" (19.5cm), straight jaws, jaw length 2 3/4" (7cm)
320-216	7 5/8" (19.5cm), 15° angle jaws, jaw length 2 3/4" (7cm)
320-217	7 1/2" (19cm), 30° angle jaws, jaw length 2 3/4" (7cm)



COOLEY Peripheral Vascular Clamps

320-209	6 1/4" (15.9cm), straight shanks, straight jaws, jaw length 1 3/4" (4.5cm)
320-210	6 1/2" (16.5cm), curved shanks, 55° angle jaws, jaw length 1 1/4" (3.2cm)
320-211	6 3/4" (17.1cm), curved shanks, 55° angle jaws, jaw length 1 1/2" (3.8cm)
320-212	7 1/4" (18.4cm), curved shanks, 55° angle jaws, jaw length 2 3/8" (6cm)
320-213	7" (17.8cm), curved shanks, 45° angle jaws, jaw length 1 3/4" (4.5cm)
320-214	6 3/8" (16.2cm), straight shanks, curved jaws, jaw length 1 1/4" (3cm)



DeBAKEY Peripheral Vascular Clamps

- 320-250** 7 1/2" (19cm), curved shanks, angled jaws, jaw length 3 1/8" (8cm)
320-255 7 7/8" (20cm), curved shanks, curved jaws, jaw length 3 1/2" (9cm), S-shape



DeBAKEY Aortic Exclusion Clamp

- 320-260** 7 1/2" (19cm), curved shanks, curved jaws, jaw length 3 3/4" (9.4cm), S-shape



DeBAKEY Peripheral Vascular Clamp

- 320-265** 6 1/4" (16cm), straight shanks, curved jaws, jaw length 2 1/4" (5.6cm)



BAINBRIDGE Clamps, Longitudinal Serrations

- 105-300** 6" (15.2cm), straight jaws, jaw length 1 3/4" (4.5cm)
- 105-302** 6" (15.2cm), curved jaws, jaw length 1 3/4" (4.5cm)
- 105-304** 7 1/4" (18.4cm), straight jaws, jaw length 2 1/2" (6.5cm)
- 105-306** 7 1/4" (18.4cm), curved jaws, jaw length 2 1/2" (6.5cm)



DeBAKEY-BAINBRIDGE Clamps, DeBaKey Serrations

- 320-228** 7 7/8" (20cm), straight jaws, jaw length 2 3/8" (6cm), delicate
- 320-229** 7 7/8" (20cm), curved jaws, jaw length 2 3/8" (6cm), delicate



DeBAKEY Bulldog Clamps, Ring Handle

320-180	5 1/8" (13cm), straight shanks, straight jaws, jaw length 1 3/4" (4.4cm)
320-182	5" (12.7cm), straight shanks, curved jaws, jaw length 1 3/4" (4.4cm)
320-185	4 3/4" (12.1cm), curved shanks, 45° angle jaws, jaw length 1 1/2" (3.8cm)
320-187	4" (10.2cm), straight shanks, 90° angle jaws, jaw length 1 1/2" (3.8cm)
320-190	5" (12.7cm), curved shanks, curved jaws, jaw length 1 3/4" (4.4cm), S-shape



DeBAKEY Coarctation Clamps

- 320-230** 8 5/8" (22cm), straight shanks, straight jaws, jaw length 2 1/8" (5.5cm)
320-231 8 5/8" (22cm), angled shanks, straight jaws, jaw length 2 1/8" (5.5cm)



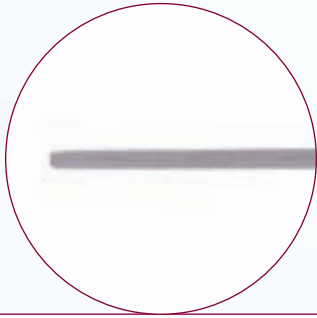
GLOVER Coarctation Clamps

- 320-238** 8 5/8" (22cm), straight shanks, straight jaws, jaw length 2 5/8" (6.8cm)
320-239 8 5/8" (22cm), angled shanks, straight jaws, jaw length 2 5/8" (6.8cm)
320-240 10 1/8" (25.7cm), straight shanks, straight jaws, jaw length 3" (7.5cm)
320-241 10 1/8" (25.7cm), angled shanks, straight jaws, jaw length 3" (7.5cm)



COOLEY Coarctation Clamps

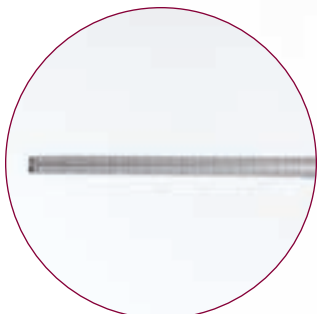
- 320-397** 8 3/4" (22.2cm), straight shanks, straight jaws, jaw length 2 1/4" (5.5cm)
320-398 8 3/4" (22.2cm), angled shanks, straight jaws, jaw length 2 1/4" (5.5cm)
320-399 9 1/4" (23.5cm), angled shanks, straight jaws, jaw length 2 3/4" (7cm)

**CRAFOORD Coarctation Clamp**

- 310-214** 9 3/4" (24.8cm), longitudinal serrations

**COOLEY Patent Ductus Clamps**

- 320-395** 8 3/4" (22.2cm), straight shanks, straight jaws, jaw length 2 1/4" (6cm)
320-396 8 3/4" (22.2cm), angled shanks, straight jaws, jaw length 2 1/4" (6cm)



DeBAKEY Patent Ductus Clamps

- 320-233** 7 5/8" (19.5cm), straight shanks, straight jaws, jaw length 1 5/8" (4.2cm)
320-234 7 5/8" (19.5cm), angled shanks, straight jaws, jaw length 1 5/8" (4.2cm)



GLOVER Patent Ductus Clamps

- 320-235** 8" (20.5cm), straight shanks, straight jaws, jaw length 1 1/4" (3cm)
320-236 8" (20.5cm), angled shanks, straight jaws, jaw length 1 1/4" (3cm)



GREGORY Profunda Clamps

- 320-218** 5" (12.8cm), jaw length 1 1/2" (4cm), delicate
320-220 6" (15.2cm), jaw length 2" (5cm)
320-221 7 3/8" (18.7cm), jaw length 2 3/8" (6cm)
320-222 7 3/4" (19.7cm), jaw length 2 3/4" (7cm)

**DALE Femoral-Popliteal Clamps**

- 320-225** 7" (17.8cm), depth 1/2" (1.3cm), small
320-226 7 1/8" (18.1cm), depth 3/4" (1.9cm), medium
320-227 7" (17.8cm), depth 1" (2.5cm), large



RENAL Artery Clamps

320-480	7 1/4" (18.5cm), jaw length 2 1/4" (5.8cm)
320-481	7 3/4" (19.5cm), jaw length 2 5/8" (6.5cm)
320-482	10 3/4" (27.3cm), jaw length 3 1/2" (9cm)



HENLY Vascular Clamp

320-262	8" (20.3cm), double angled jaws, jaw length 3 1/2" (8.9cm)
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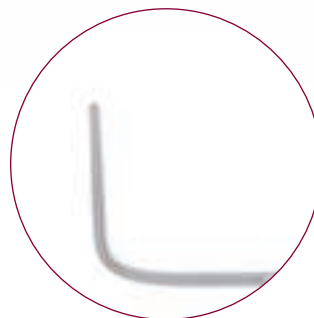


DEMOS Tibial Artery Clamp

320-223 8 1/2" (21.6cm), jaw length 1 1/2" (3.8cm), perpendicular ring handles

**DeBAKEY Multi-Purpose Clamps, 90° angle**

320-312 7" (18cm), jaw length 2 1/8" (5.5cm)
320-314 8 1/2" (21.5cm), jaw length 2 3/4" (7cm)
320-310 9" (23cm), jaw length 1 5/8" (4cm)
320-316 10 7/8" (27.5cm), jaw length 4" (10cm)



LEE Right Angle and Bronchus Clamps

320-200

9" (23cm), right angle clamp, jaw length 1 3/8" (3.3cm) beyond angle

320-205

9 3/4" (25cm), bronchus clamp, jaw length 1 3/8" (3.3cm) beyond angle



SAROT Bronchus Clamps

305-450

9" (22.9cm), jaw length 1 1/2" (3.8cm), right

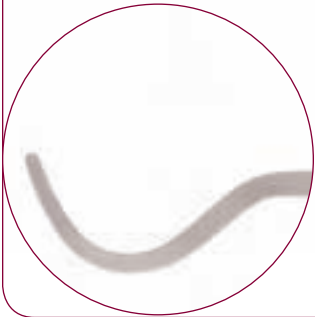
305-451

9" (22.9cm), jaw length 1 1/2" (3.8cm), left



HARKEN Auricle Clamps

- 310-190** 9 1/2" (24.1 cm), cross-serrated, No. 1 curve
310-191 9 1/2" (24.1 cm), cross-serrated, No. 2 curve
310-192 9 1/2" (24.1 cm), cross-serrated, No. 3 curve
310-193 9 1/2" (24.1 cm), cross-serrated, No. 4 curve

**STILLE Vessel Clamp**

- 475-500** 9" (22.9 cm), horizontal serrations

**MAYO (GUYON) Vessel Clamp**

- 475-505** 9 1/4" (23.5 cm), horizontal serrations



HERRICK Kidney Clamp

475-510

9 1/2" (24.1 cm), longitudinal serrations



WERTHEIM Pedicle Clamp

475-520

10" (25.4 cm), horizontal serrations



WERTHEIM-CULLEN Pedicle Clamp

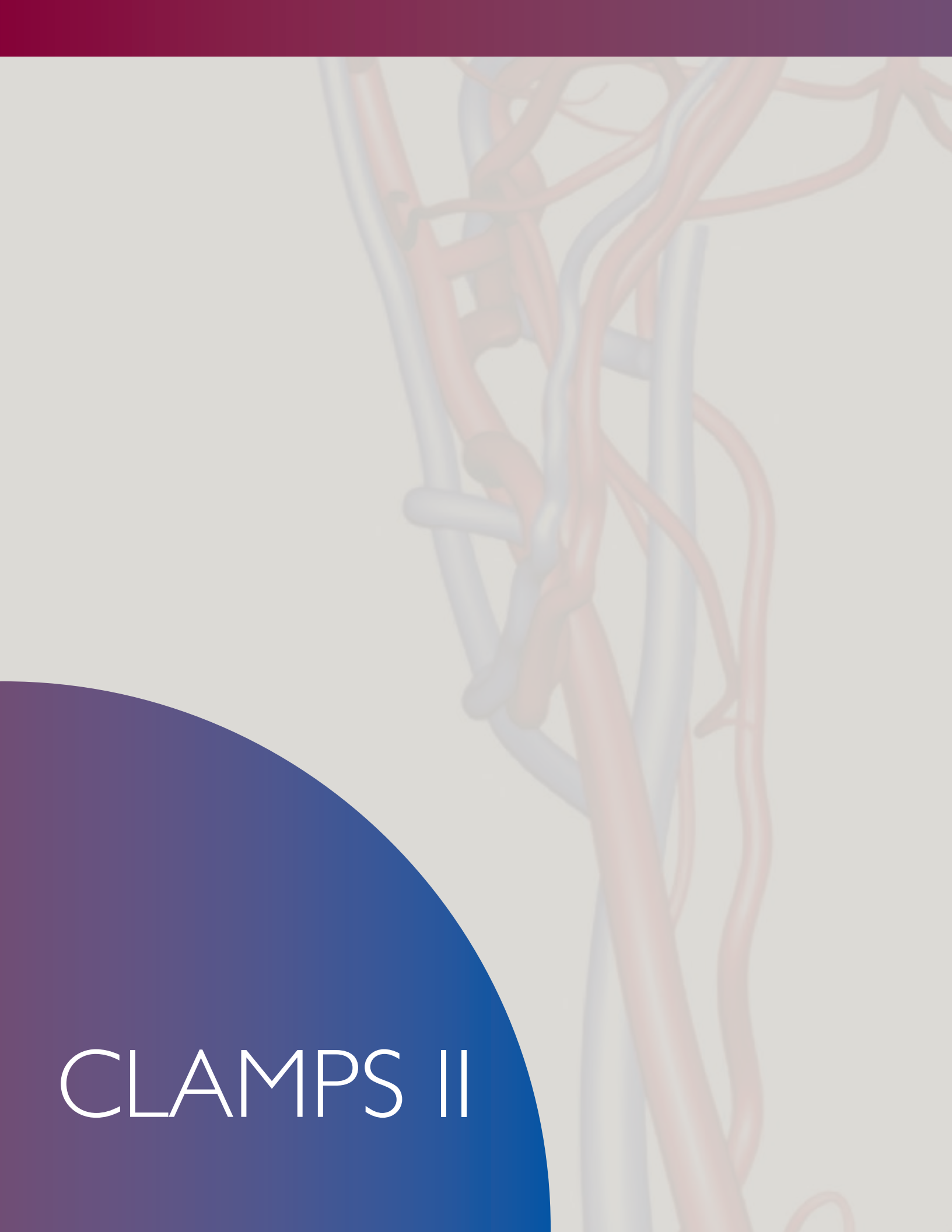
475-525

8 1/4" (21 cm), longitudinal serrations





CLAMPS II



CLAMPS II

OCHSNER Forceps

105-235 4 1/2" (11.4cm), horizontal serrations, 90° angle, very fine tips



BAINBRIDGE Forceps

105-300 6" (15.2cm), longitudinal serrations, straight jaws
105-302 6" (15.2cm), longitudinal serrations, curved jaws



MIXTER Pediatric Forceps

140-216 5 1/4" (13.3cm), curved
140-217 5 1/8" (13cm), right angle



MIXTER Forceps, Petit-Point, Right Angle

140-218 5 1/4" (13.3cm)



GEMINI Clamp

140-329

5 1/2" (14cm)



JARIT Vascular Forceps, Finely Serrated Jaws

320-630

5 1/2" (14cm), straight

320-631

5 1/2" (14cm), curved

320-632

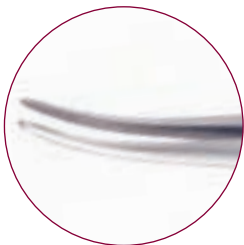
5 1/3" (13.5cm), full curve

320-633

5 1/2" (14cm), straight, 1x2 teeth

320-634

5 1/2" (14cm), curved, 1x2 teeth

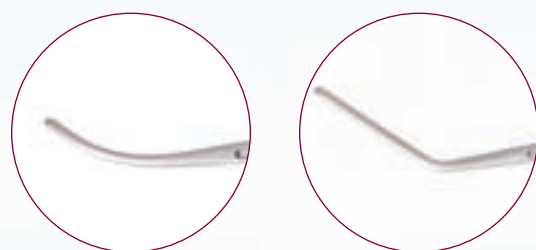


BAILEY Forceps, Very Fine Tips

- 320-650** 7" (17.8cm), 30° angle
320-651 7" (17.8cm), 60° angle
320-652 7" (17.8cm), 90° angle

**GREGORY Miniature Vascular Clamps, Curved Shanks, Ring Handle, Extra Light**

- 320-193** 4 3/8" (11cm), curved shanks, curved jaws, S-shaped
320-194 4 3/4" (12.2cm), curved shanks, 45° angle jaws
320-192 4 3/4" (12.2cm), straight shanks, 45° angle jaws, delicate

**SELMAN Peripheral Blood Vessel Forceps, Cooley Serrations**

- 320-195** 4 3/4" (12.1cm), straight jaws, jaw length 1/2" (1.3cm)
320-196 5 1/4" (13.3cm), straight jaws, jaw length 1" (2.5cm)
320-197 4 3/4" (12.1cm), angled jaws, jaw length 1/2" (1.3cm)
320-198 5 1/4" (13.3cm), angled jaws, jaw length 1" (2.5cm)



DeBAKEY Multi-Purpose Clamps, Jaw Length 1 3/8" (3.5cm)

- 320-460** 6 1/2" (16.5cm), 30° angle
- 320-461** 6" (15.2cm), 60° angle
- 320-462** 5 1/2" (14cm), 90° angle



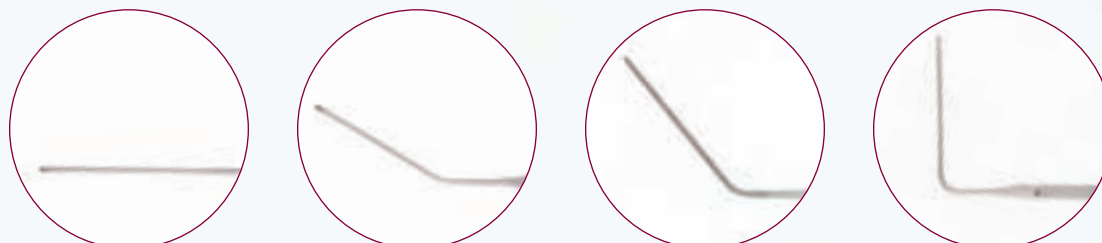
COOLEY Multi-Purpose Clamps, Jaw Length 1 3/8" (3.5cm)

- 320-450** 6 1/2" (16.5cm), 30° angle
- 320-451** 6" (15.2cm), 60° angle
- 320-452** 5 1/2" (14cm), 90° angle



CASTANEDA Multi-Purpose Clamps, Jaw Length 1 3/8" (3.5cm)

- 320-600** 4 7/8" (12.4cm), curved shanks
- 320-601** 5" (12.7cm), 30° angle
- 320-602** 4 7/8" (12.4cm), 50° angle
- 320-603** 4 1/4" (10.8cm), 90° angle



COOLEY Pediatric Multi-Purpose Clamps, 90° Angle

- 320-416** 4 1/2" (11.4cm), jaw length 3/4" (1.9cm)
320-417 4 1/2" (11.4cm), jaw length 1" (2.5cm)
320-418 4 1/2" (11.4cm), jaw length 1 3/8" (3.5cm)

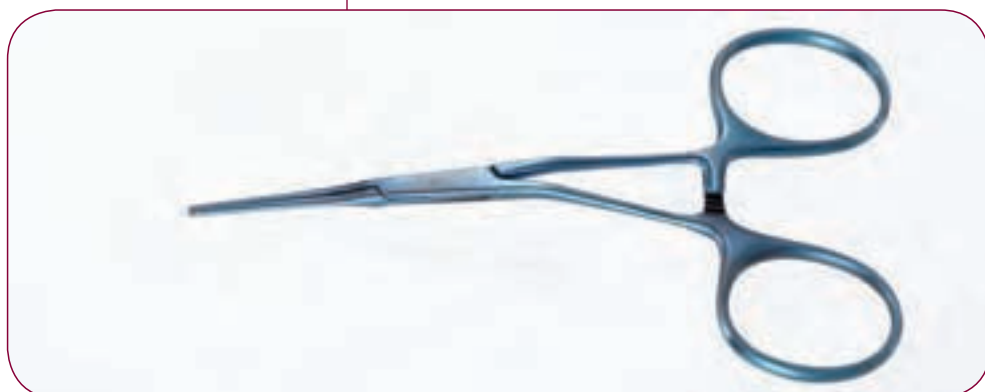
**DARDIK Multi-Purpose Clamps - "D" CLAMP**

- 320-800** 5 7/8" (15 cm), jaw length 1" (2.7cm), straight
320-801 5 7/8" (15 cm), jaw length 1 1/4" (3cm), 15° angle
320-802 5 7/8" (15 cm), jaw length 1 1/4" (3cm), 30° angle
320-803 5 7/8" (15 cm), jaw length 1 1/4" (3cm), 45° angle
320-804 5 1/2" (14 cm), jaw length 1 1/4" (3cm), 90° angle
320-810 6 3/4" (17 cm), jaw length 1 1/2" (4cm), straight
320-811 6 3/4" (17 cm), jaw length 1 1/2" (4cm), 15° angle
320-812 6 3/4" (17 cm), jaw length 1 1/2" (4cm), 30° angle
320-813 6 3/4" (17 cm), jaw length 1 1/2" (4cm), 45° angle
320-814 6 1/3" (16 cm), jaw length 1 1/2" (4cm), 90° angle



MICRO CLAMPS, Pediatric, DeBakey Serrations, Titanium

- 320-700TI** 4 3/4" (12.1cm), straight shanks, jaw length 1 1/4" (3.2cm)
- 320-701TI** 4 3/4" (12.1cm), curved shanks, jaw length 1 1/4" (3.2cm)
- 320-702TI** 4 1/4" (10.8cm), angled shanks, jaw length 7/8" (2.2cm)
- 320-708TI** 4 5/8" (11.7cm), acutely angled shanks, jaw length 1 1/4" (3.2cm)



MICRO CLAMPS, Pediatric, DeBakey Serrations, Titanium

320-703TI	4 1/4" (10.8cm), straight shanks, .45° angled jaw, jaw length 1" (2.5cm)
320-709TI	4 1/2" (11.4cm), straight shanks, 45° angled jaw, jaw length 1 1/4" (3.2cm)
320-704TI	4 1/8" (10.5cm), straight shanks, .60° angled jaw, jaw length 7/8" (2.2cm)
320-710TI	4 1/4" (10.8cm), straight shanks, 60° angled jaw, jaw length 1 1/4" (3.2cm)



MICRO CLAMPS, Pediatric, DeBakey Serrations, Titanium

- 320-706TI** 4 1/8" (10.5cm), straight shanks, jaw length 1/2" (1.3cm), depth 1/4" (6mm)
- 320-705TI** 4 1/8" (10.5cm), slightly angled shanks, jaw length 1/2" (1.3cm), depth 1/4" (6mm)
- 320-711TI** 4 3/8" (11.1cm), curved shanks, jaw length 7/8" (2.2cm), depth 1/4" (6mm)



MICRO CLAMPS, Pediatric, DeBakey Serrations, Titanium

- 320-707TI** 4 1/8" (10.5cm), slightly angled shanks, jaw length 5/8" (1.6cm), depth 3/8" (1cm)
320-712TI 4 3/8" (11.1cm), slightly angled shanks, jaw length 3/4" (2cm), depth 3/8" (1cm)
320-713TI 4 5/8" (11.7cm), straight shanks, spoon-shaped jaw length 1" (2.5cm), depth 1/4" (6mm)



DeBAKEY Patent Ductus Clamps, Delicate

- 320-199** 6" (15.2cm), straight shanks, jaw length 1" (2.5cm), 2.5mm tips
320-453 6 3/4" (17.1cm), straight shanks, jaw length 2" (5.2cm), 2mm tips
320-454 6 3/8" (16.2cm), angled shanks, jaw length 1 7/8" (4.7cm), 2mm tips



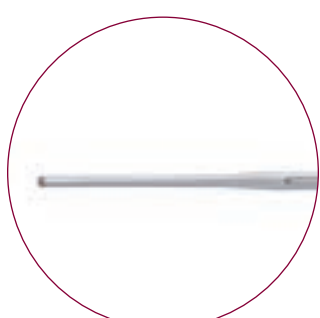
COOLEY Patent Ductus Clamps

- 320-400** 6 3/4" (17cm), straight shanks, straight jaws, jaw length 1 1/8" (3cm)
320-401 6 1/4" (16cm), angled shanks, straight jaws, jaw length 1 1/8" (3cm)



DeBAKEY Coarctation Clamps, Delicate, 2mm Tips

- 320-455** 7" (17.8cm), straight shanks, straight jaws, jaw length 1 3/8" (6cm)
320-456 7" (17.8cm), angled shanks, straight jaws, jaw length 1 3/8" (6cm)
320-457 7" (17.8cm), straight shanks, spoon-shaped jaws, jaw length 1 3/4" (4.4cm)



COOLEY Coarctation Clamps

- 320-405** 6 1/4" (16cm), angled shanks, straight jaws, jaw length 1 1/8" (3cm)
320-403 6 7/8" (17.5cm), straight shanks, straight jaws, jaw length 1 3/4" (4.5cm)
320-406 6 3/4" (17cm), straight shanks, curved jaws, jaw length 1 3/4" (4.4cm)
320-410 7" (18cm), straight shanks, spoon-shaped jaws, jaw length 2 3/8" (6cm)



COOLEY Pediatric Clamps

- 320-411** 5 1/2" (14cm), straight shanks, straight jaws, jaw length 1 1/8" (3cm)
320-412 5 1/4" (13.3cm), straight shanks, angled jaws, jaw length 1 1/8" (3cm)
320-413 5 1/4" (13.3cm), angled shanks, straight jaws, jaw length 1 1/8" (3cm)
320-414 5 1/2" (14cm), straight shanks, spoon-shape jaws, jaw length 1 1/8" (3cm)

**DeBAKEY Peripheral Vascular Clamp**

- 320-265** 6 1/4" (16cm), curved jaws, jaw length 3/4" (4.4cm)

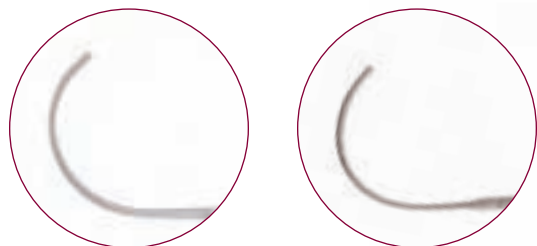
**BECK Vessel Clamps**

- 320-470** 6" (15.2cm), straight shanks, jaw length 1" (2.5cm), depth 3/8" (1cm)
320-471 6" (15.2cm), straight shanks, jaw length 1 1/8" (3cm), depth 3/8" (1cm)



MULTI-PURPOSE CLAMPS, Cooley Serrations, Angled Shanks

- 320-475** 6 1/2" (16.5cm), jaw length 1 1/2" (3.8cm), depth 5/8" (1.5cm)
320-476 6 1/2" (16.5cm), jaw length, 2" (5cm), depth 3/4" (2cm)



KITZMILLER Clamps, Cooley Serrations, Jaw Length 1 1/8" (3cm), Stainless Steel

- 320-540** 5 1/4" (13.3cm), left angled
320-542 5 1/4" (13.3cm), right angled



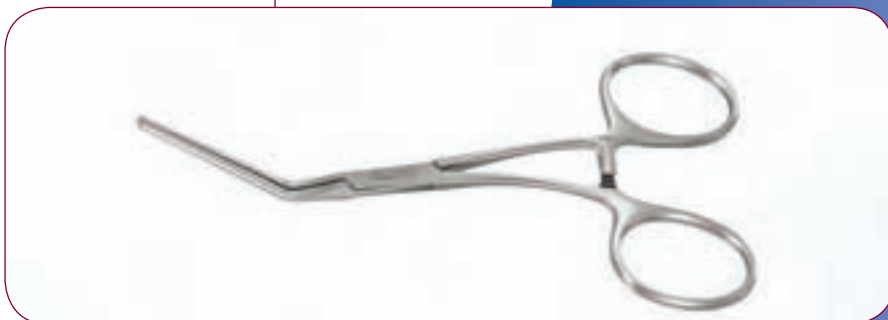
KITZMILLER Micro Clamps, DeBakey Serrations, Jaw Length 7/8" (2.3cm), Titanium

- 320-540TI** 4 1/4" (10.8cm), left angled
320-542TI 4 1/4" (10.8cm), right angled



COOLEY Neonatal Vascular Clamps

320-500	5 1/8" (13cm), straight shanks, straight jaws, jaw length 1 1/2" (3.8cm)
320-501	5 1/8" (13cm), angled shanks, straight jaws, jaw length 1 5/8" (4.2cm)
320-502	5 1/8" (13cm), curved shanks, angled jaws, jaw length 1 5/8" (4.2cm)
320-503	5 1/8" (13cm), straight shanks, curved jaws, jaw length 1 5/8" (4.2cm)
320-504	5 1/8" (13cm), curved shanks, jaw length 3/4" (2cm), depth 1/4" (5mm)
320-505	5 1/8" (13cm), jaw length 1 1/2" (3.8cm), carotid clamp



CALMAN Carotid Closure Clamp

320-520

4 7/8" (12.4cm), jaw length 1 1/4" (3.2cm), depth 1/4" (7mm)



THOMPSON Carotid Closure Clamp

320-525

6" (15.2cm), jaw length 1" (2.5cm), depth 1/8" (4mm)



EXAMPLE Clamp

320-530

6 1/4" (15.9cm), jaw length 1 3/8" (3.5cm), depth 3/8" (9mm)



KARTCHNER Internal Carotid Clamp

320-535

6 1/2" (16.5cm), jaw length 2" (5cm)



GREGORY Profunda Clamp

320-218 5" (12.8cm), jaw length 1 1/2" (4cm), delicate

**BECK Miniature Aorta Clamp**

320-487 5 1/2" (14cm), jaw length 1" (3cm), depth 1/4" (6mm)

**SUBRAMANIAN Miniature Aorta Clamp**

320-490 5 1/2" (14cm), jaw length 1 1/8" (3cm) beyond curve



COOLEY-SATINSKY Clamp

320-415 5 1/2" (14cm), jaw length 3/4" (2cm), depth 1/4" (5mm)



COOLEY Pediatric Vascular Clamps

320-506 5 1/4" (13.3cm), curved shanks, jaw length 5/8" (1.6cm), depth 1/4" (5mm)

320-507 5 1/4" (13.3cm), curved shanks, jaw length 1/2" (1.2cm), depth 1/4" (5mm)

320-508 5 1/4" (13.3cm), curved shanks, jaw length 1/3" (8mm), depth 1/4" (5mm)



COOLEY Vascular Clamps, 90° Angle

320-440 6 1/2" (16.5cm), jaw length 1 1/8" (2.7cm), depth 3/8" (1cm)

320-441 6 1/2" (16.5cm), jaw length 1 1/4" (3.4cm), depth 1/4" (7mm)

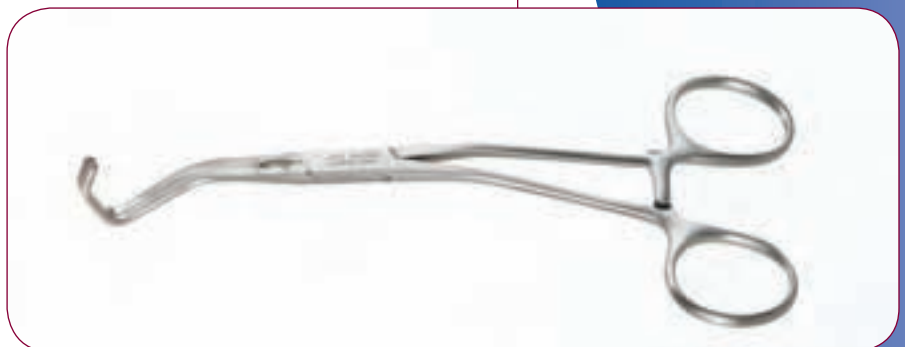


REYNOLDS Clamps, 85° Angle

- 320-485** 6 1/4" (15.9cm), jaw length 1" (2.6cm), depth 1/4" (5mm)
320-486 6 1/4" (15.9cm), jaw length 1 1/8" (3cm), depth 1/4" (6mm)

**ANASTOMOSIS Clamps**

- 320-420** 6 3/4" (17cm), angled shanks, jaw length 7/8" (2.3cm), depth 3/8" (1cm), DeBakey serrations
320-422 6 1/2" (16.5cm), angled shanks, jaws angled left, jaw length 3/4" (2cm), depth 3/8" (1cm), Cooley serrations



JARIT Anastomosis Clamp

320-425 6 3/4" (17cm), jaw length 1 5/8" (2.5cm), depth 3/8" (1cm), Cooley serrations



CASTANEDA Anastomosis Clamps

320-610 5 3/4" (14.6cm), jaw length 5/8" (1.5cm), depth 1/4" (5mm)

320-611 6" (15.2cm), jaw length 6/8" (1.8cm), depth 1/4" (6mm)

320-612 6 1/8" (15.6cm), jaw length 7/8" (2.1cm), depth 1/3" (7mm)



DERRA Anastomosis Clamps

320-430 6 3/4" (17cm), jaw length 3/4" (1.9cm), depth 3/8" (1cm), small

320-431 6 3/4" (17cm), jaw length 1" (2.5cm), depth 1/2" (1.3cm), medium

320-432 6 3/4" (17cm), jaw length 1 1/4" (3.3cm), depth 5/8" (1.5cm), large



COOLEY-DERRA Anastomosis Clamps

- 320-435** 6 1/2" (16.5cm), jaw length 5/8" (1.7 cm), depth 1/4" (8mm), small
320-436 6 1/2" (16.5cm), jaw length 7/8" (2.2cm), depth 3/8" (1cm), medium
320-437 6 1/2" (16.5cm), jaw length 1 1/8" (3cm), depth 1/2" (1.3cm), large

**DERRA Partial Occlusion Clamps**

- 320-433** 4 1/2" (11.4cm), angled shanks, jaw length 3/8" (1cm), short, small curve
320-463 4 3/8" (11.1cm), angled shanks, jaw length 5/8" (1.6cm), short, medium curve
320-464 4 1/2" (11.4cm), angled shanks, jaw length 1 1/8" (2.8cm), short, large curve
320-465 5 1/2" (14cm), curved shanks, jaw length 3/4" (1.7cm), small curve
320-466 5 1/2" (14cm), curved shanks, jaw length 7/8" (2.2cm), medium curve
320-467 5 3/4" (14.6cm), curved shanks, jaw length 1" (2.5cm), large curve

**CASTANEDA Partial Occlusion Clamp**

- 320-604** 4 7/8" (12.4cm), jaw length 7/8" (2.4cm), depth 1/3" (8mm), spoon-shape







SCISSORS

A stylized anatomical illustration of a human torso, showing the ribcage and internal organs in a light, translucent style. A large, solid blue circle is positioned in the lower-left corner, partially overlapping the torso. The word "SCISSORS" is written in white, uppercase letters within this blue circle.

SCISSORS

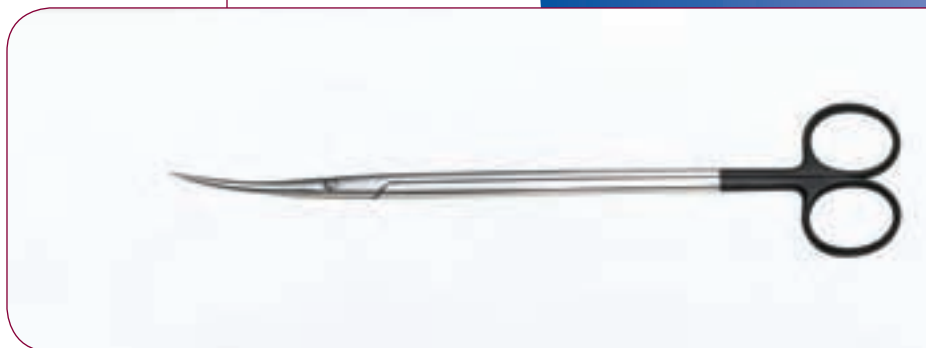
LILLEHEI-POTTS Scissors, 7" (17.8cm)

- 100-240** Straight blades, blunt tips
- 100-241** Curved blades, blunt tips
- 100-242** Straight blades, sharp tips
- 100-243** Curved blades, sharp tips
- 100-244** Straight blades, tenotomy tips
- 100-245** Curved blades, tenotomy tips



LILLEHEI-POTTS Scissors, 9" (22.9cm), SUPERCUT

- 102-305** Curved blades, sharp tips
- 102-306** Curved blades, blunt tips
- 102-307** Curved blades, tenotomy tips



REYNOLDS Scissors, Narrow Tip, Curved

- 100-295** 5 1/2" (14cm), plain edge, very narrow tips
- 100-296** 5 1/2" (14cm), serrated edge, very narrow tips
- 100-297** 7" (17.8cm), plain edge, narrow tips
- 100-298** 7" (17.8cm), serrated edge, narrow tips



JAMISON-METZENBAUM Scissors, Narrow Tip, Curved

- 100-300** 6" (15.2cm)
- 100-302** 7" (17.8cm)
- 100-304** 8" (20.3cm)
- 100-306** 9" (22.9cm)



METZENBAUM (LAHEY) Scissors, CARB-EDGE

- 101-251** 5 3/4" (14.6cm), curved



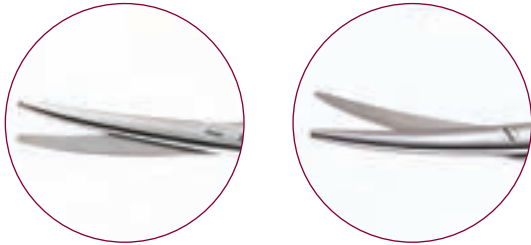
METZENBAUM Scissors, CARB-EDGE

- 101-258** 7" (17.8cm), curved, blunt/blunt tips
- 101-259** 7" (17.8cm), curved, delicate, sharp/sharp tips
- 101-260** 7" (17.8cm), straight, delicate, blunt/blunt tips
- 101-261** 7" (17.8cm), curved, delicate, blunt/blunt tips
- 101-265** 8" (20.3cm), curved, blunt/blunt tips



DISSECTING Scissors, "Flatback" SUPERCUT

102-120	5 3/4" (14.6cm), curved
102-122	7" (17.8cm), curved
102-310	7" (17.8cm), curved, delicate
102-311	8" (20cm), curved, delicate
102-125	9" (22.9cm), curved
102-126	10" (25.4cm), curved
102-128	11" (27.9cm), curved
102-129	12" (30.5cm), curved
102-127	14" (35.6cm), curved
102-245	5" (12.7cm), curved



METZENBAUM (NELSON) Scissors

305-100	9" (22.9cm), straight
305-101	9" (22.9cm), curved
305-105	11" (27.9cm), straight
305-106	11" (27.9cm), curved
305-110	14 1/2" (36.8cm), curved



METZENBAUM (NELSON) Scissors, CARB-EDGE

101-266	9" (22.9cm), straight, blunt tips
101-267	9" (22.9cm), curved, blunt tips
101-275	9" (22.9cm), straight, delicate tips
101-276	9" (22.9cm), curved, delicate tips
101-278	9" (22.9cm), straight, sharp tips
101-279	9" (22.9cm), curved, sharp tips
101-269	10" (25.4cm), curved, blunt tips
101-270	11" (27.9cm), curved, blunt tips
101-272	12" (30.5cm), curved, blunt tips
101-256	14" (35.6cm), curved, blunt tips



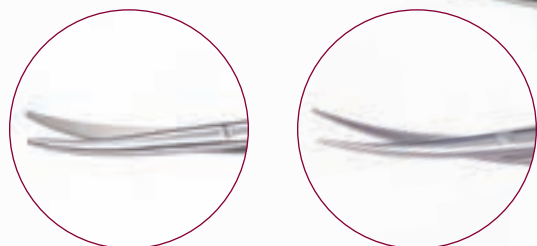
DEMARTEL Vascular Scissors, Curved

310-302

6 7/8" (17.5cm), blunt tips

310-303

6 7/8" (17.5cm), sharp tips



JARIT Endarterectomy Scissors, SUPERCUT

102-315

6 3/4" (17.1cm), curved



JARIT Endarterectomy Scissors

310-330

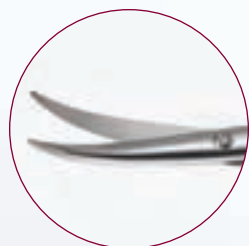
6 3/4" (17.1cm), curved



DeBAKEY Endarterectomy Scissors

310-349

7" (17.8cm), full curve



REYNOLDS, Petit-Point Scissors, SUPERCUT

102-245 5" (12.7cm), curved, tenotomy tips



REYNOLDS, Petit-Point Scissors, CARB-EDGE

101-255 5" (12.7cm), curved, one blade serrated



JAMISON Scissors, SUPERCUT

102-300 5 1/2" (14cm), curved

102-302 7" (17.8cm), curved



JARIT DISSECTING Scissors, Tenotomy Tips, SUPERCUT

102-313 7" (17.8cm), curved



LINCOLN Scissors

310-369 6 3/4" (17.1cm), straight
310-370 6 3/4" (17.1cm), curved
310-367 10" (25.4cm), straight
310-368 10" (25.4cm), curved



MAYO Scissors, SUPERCUT

102-115 9" (22.9cm), straight
102-116 9" (22.9cm), curved
102-113 10" (25.4cm), straight
102-118 11" (27.9cm), curved
102-114 12" (30.5cm), straight



MAYO-HARRINGTON Scissors, CARB-EDGE

101-225 9" (22.9cm), straight
101-226 9" (22.9cm), curved
101-230 14" (35.6cm), straight
101-232 14" (35.6cm), curved



MAYO-HARRINGTON Scissors

- 305-140** 9" (22.9cm), straight
- 305-141** 9" (22.9cm), curved
- 305-145** 11" (27.9cm), straight
- 305-146** 11" (27.9cm), curved



JORGENSEN Scissors

- 305-120** 8 3/4" (22.2cm), curved



SATINSKY Scissors

- 310-300** 9 3/4" (24.8cm), curved shanks, acutely curved tips



COOLEY Scissors

305-125 7 1/2" (19.1cm), curved



WILLAUER Scissors

305-130 10" (25.4cm), straight
305-131 10" (25.4cm), curved
305-135 12" (30.5cm), straight
305-136 12" (30.5cm), curved



POTTS-SMITH Dissecting Scissors, Curved

310-290 5 1/2" (14cm)
310-291 7 1/2" (19.1cm)
310-292 9" (22.9cm)



CHURCH Scissors, 7" (17.8cm)

310-375 Straight
310-376 Curved



MATTOX-POTTS Scissors

310-304 5 1/2" (14cm), 45° angle, 22mm blades



JARIT Peripheral Vascular Scissors, 5" (12.7cm), 16.5mm Blades

310-355 25° angle
310-356 45° angle
310-357 60° angle
310-358 90° angle



DeBAKEY-POTTS Scissors, 6 3/4" (17.1cm), 23mm Blades

310-332 25° angle
310-333 45° angle
310-334 60° angle



POTTS-SMITH Scissors, SUPERCUT, 7" (17.8cm), 21mm Blades

- 102-320** 25° angle
- 102-321** 45° angle
- 102-322** 60° angle



POTTS-SMITH Scissors, 7" (17.8cm), 22mm Blades

- 310-310** 25° angle
- 310-315** 45° angle
- 310-320** 60° angle



DeBAKEY Scissors, 23mm Blades

- 310-340** 7" (17.8cm), 25° angle
- 310-341** 7" (17.8cm), 45° angle
- 310-342** 7" (17.8cm), 60° angle
- 310-343** 9" (22.9cm), 25° angle
- 310-344** 9" (22.9cm), 45° angle
- 310-345** 9" (22.9cm), 60° angle



DIETRICH Coronary Artery Scissors, SUPERCUT, 7" (17.8cm), 13.5mm Blades

102-350	25° angle
102-351	45° angle
102-352	60° angle
102-353	90° angle
102-354	125° angle



DIETRICH Coronary Artery Scissors, 7" (17.8cm), 12mm Blades

310-350	25° angle
310-351	45° angle
310-352	60° angle
310-353	90° angle
310-354	125° angle



DIETRICH Coronary Artery Scissors, 7" (17.8cm), 14mm Blades

311-350	25° angle
311-351	45° angle
311-352	60° angle
311-353	90° angle
311-354	120° angle



DIETRICH Circumflex Artery Scissors, SUPERCUT, 7" (17.8cm), 13.5mm Blades

102-360

130° angle, with stabilizing bar



DIETRICH Circumflex Artery Scissors, 7" (17.8cm), 13.5mm Blades

310-360

130° angle, with stabilizing bar



FAVALARO Scissors, SUPERCUT, 6 3/4" (17.1cm), 13.5mm Blades

102-374

125° angle, curved shanks



FAVALARO Coronary Scissors, 6 3/4" (17.1cm), 13.5mm Blades

310-374

130° angle, curved shanks



KARMODY In-Situ Valve Scissors

310-535 6 1/4" (15.9cm) shaft, serrated blades, blunt tips



VALVE Leaflet Excision Scissors

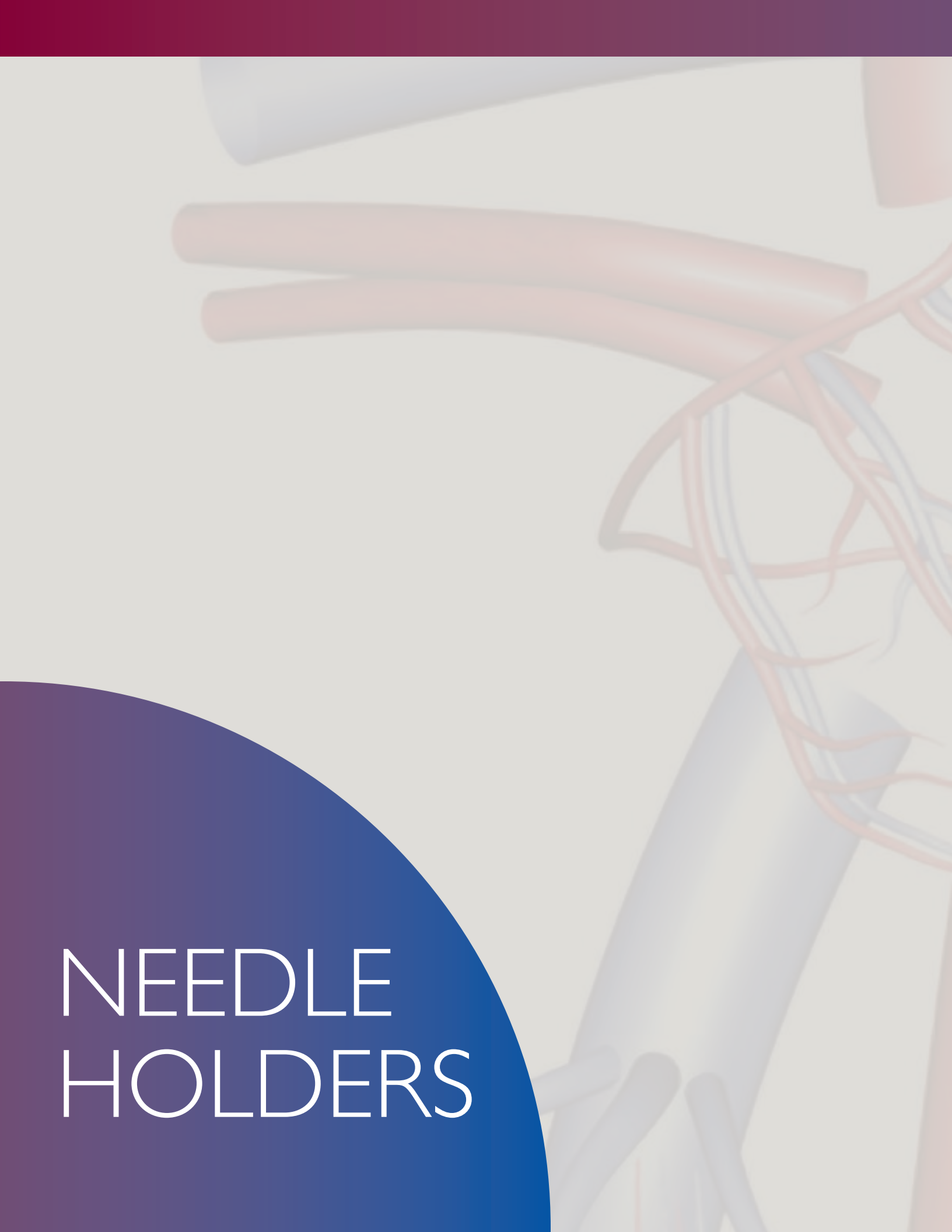
310-540 4 1/4" (10.8cm), 45° angle up







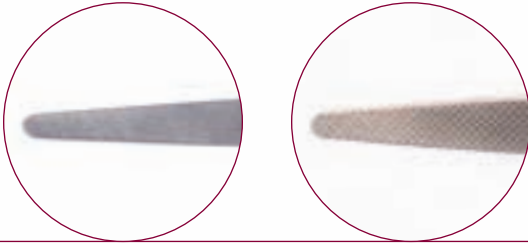
NEEDLE HOLDERS

An anatomical illustration of a hand and forearm, rendered in a light, semi-transparent style. The hand is positioned at the top right, with fingers slightly curled. The forearm extends downwards and to the left. The illustration shows the bones, muscles, and nerves in a simplified manner. A large, solid blue circle is overlaid on the lower left portion of the image, partially covering the forearm. Inside this blue circle, the words "NEEDLE HOLDERS" are written in a white, sans-serif font, stacked in two lines.

NEEDLE HOLDERS

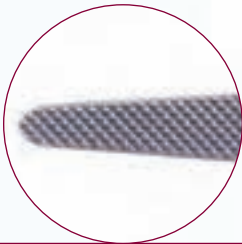
WEBSTER Needle Holders, CARB-BITE Jaws

- 121-118** 4 1/2" (11.4cm), smooth
121-119 4 1/2" (11.4cm), serrated, 3,600 teeth per square inch



CRILE-WOOD Needle Holders, 4,000 Teeth Per Square Inch, Straight, CARB-BITE Jaws

- 121-130** 6" (15.2cm)
121-131 7" (17.8cm)
121-132 8" (20.3cm)
121-133 9" (22.8cm)
121-134 10 1/4" (26cm)
121-129 12" (30.5cm)
121-128 14" (35.6cm)



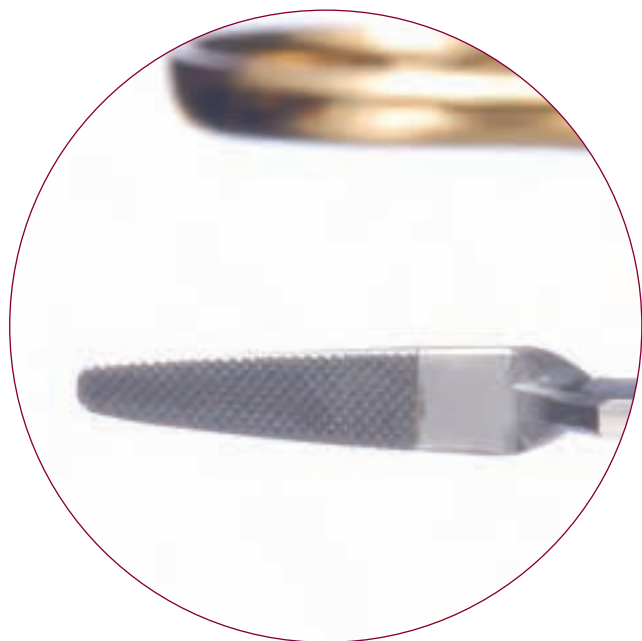
MAYO-HEGAR Needle Holders, 2,500 Teeth Per Square Inch, CARB-BITE Jaws

- 121-135** 6" (15.2cm)
121-140 7" (17.8cm)
121-145 8" (20.3cm)
121-146 9" (22.8cm)
121-142 10" (25.4cm)
121-143 11" (27.9cm)
121-147 12" (30.5cm)
121-144 14" (35.6cm)



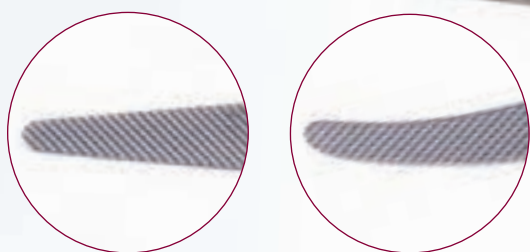
FELL Needle Holders, 15mm CARB-BITE Jaws, 2 mm Tips

I21-270	4 3/4" (12.1cm)
I21-271	6" (15cm)
I21-272	7" (17.8 cm)
I21-273	8" (20.3cm)
I21-274	8 1/2" (21.6cm)



JULIAN Needle Holders, 4,000 Teeth Per Square Inch, CARB-BITE Jaws

I21-206	8 1/4" (21cm), straight
I21-207	8 1/4" (21cm), curved



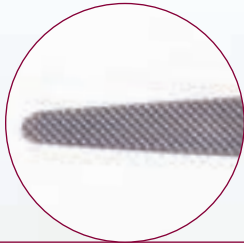
DeBAKEY Vascular Needle Holders, 7,000 Teeth Per Square Inch, Extra Light, CARB-BITE Jaws

I21-184	6" (15.2cm)
I21-185	7" (17.8cm)
I21-186	8" (20.3cm)
I21-187	9" (22.8cm)
I21-188	10 1/2" (26.7cm)
I21-189	12" (30.5cm)



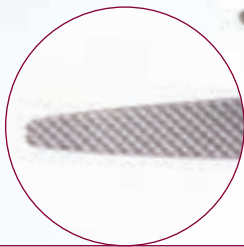
JARIT Vascular Needle Holders, 4,000 Teeth Per Square Inch, CARB-BITE, Slender Jaws

I21-211	6" (15.2cm)
I21-212	7" (17.8cm)
I21-213	8" (20.3cm)
I21-214	9" (22.8cm)
I21-215	10" (25.4cm)



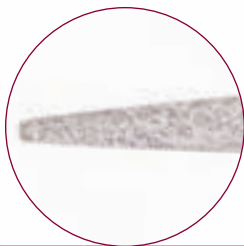
SAROT Needle Holders, CARB-BITE Jaws

I21-197	6" (15.2cm), 4000 teeth per square inch, delicate
I21-198	6 5/8" (16.8cm), 4000 teeth per square inch, delicate
I21-200	7 1/8" (18.1cm), 2,500 teeth per square inch
I21-205	10 1/8" (25.7cm), 2,500 teeth per square inch



MICROVASCULAR Needle Holders, Titanium, STARDUST, Straight

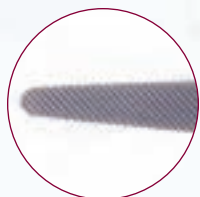
I24-100TI	7 1/8" (18.1cm)
I24-101TI	8 5/8" (21.9cm)
I24-102TI	10" (25.4cm)



MASSON Needle Holder, CARB-BITE Jaws

121-180

10 1/2" (26.7cm), 2,500 teeth per square inch



STRATTE Valve Needle Holders, Double Curved, 2,500 Teeth Per Square Inch, CARB-BITE Jaws

121-195

9" (22.8cm)

121-196

10" (25.4cm), delicate tip



FINOCHETTO Needle Holder, Angled CARB-BITE Jaws

121-192 10 1/2" (26.7cm), 2,500 teeth per square inch



DeBAKEY Needle Holder, Extra Light CARB-BITE Jaws

121-193 9" (22.8cm), curved, 4,000 teeth per square inch



MICRO Needle Holders, STARDUST, Curved, 1.2mm Tips

277-401 5" (12.7cm)
277-403 5 3/4" (14.6 cm)
277-406 6 1/4" (15.9cm)
277-409 7 1/4" (18.4cm)
277-413 8 3/4" (22.2cm)
277-415 10" (25.4cm)



"LOW-RYDER" Needle Holders, Straight, STARDUST, 1.2mm Tips

277-405	6 1/4" (15.9cm)
277-408	7 1/4" (18.4cm)
277-412	8 3/4" (22.2cm)



RICHARDS Micro Needle Holders, Titanium, STARDUST, Extra Fine, Straight, 1mm Tips

124-105TI	6 1/4" (15.9cm)
124-106TI	7" (17.8cm)



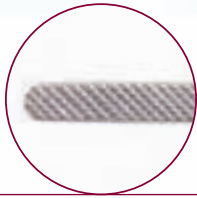
PETIT-POINT RYDER Needle Holders, 12 mm CARB-BITE Jaws, 1mm Tips

121-171	5" (12.7), smooth
121-173	6" (15.2cm), smooth
121-175	7" (17.8cm), smooth
121-179	8" (20.3cm), smooth
121-178	9" (22.8cm), smooth



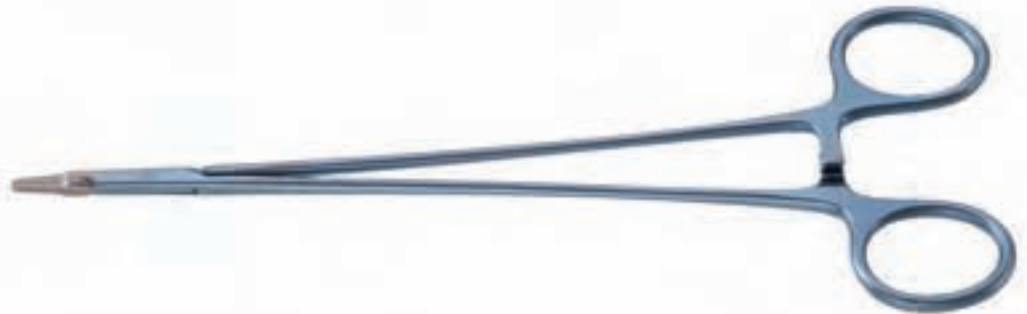
PETIT-POINT RYDER Needle Holders, 4,000 Teeth Per Square Inch, 12mm CARB-BITE Jaws, 1mm Tips

- I21-170** 5" (12.7), serrated
- I21-172** 6" (15.2cm), serrated
- I21-174** 7" (17.8cm), serrated
- I21-176** 8" (20.3cm), serrated
- I21-177** 9" (22.8cm), serrated



RYDER Needle Holders, Titanium, Straight, STARDUST, 1.65mm Tips

- I24-108TI** 6" (15.2cm)
- I24-109TI** 6 3/4" (17.1cm)
- I24-110TI** 7 1/2" (19.1cm)



RYDER CARB-BITE Needle Holders, Titanium, Straight, 1.65mm Tips

- I21-161TI** 6" (15.2cm)
- I21-162TI** 6 3/4" (17.1cm)
- I21-163TI** 7 1/2" (19.1cm)



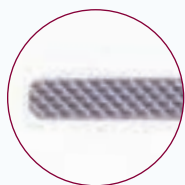
HUFNAGEL-RYDER Needle Holder, 12mm CARB-BITE Jaws, 1.65mm Tips

- I21-166** 9" (22.8cm), 4,000 teeth per square inch



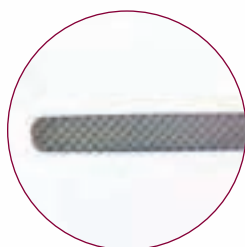
RYDER Needle Holders, 4,000 Teeth Per Square Inch, 15mm CARB-BITE Jaws, 1.65mm Tips

121-160	5" (12.7)
121-161	6" (15.2cm)
121-162	7" (17.8cm)
121-163	8" (20.3cm)
121-164	9" (22.8cm)
121-165	10" (25.4cm)



JARIT Intracardiac Needle Holders, 4,000 Teeth Per Square Inch, 15 mm CARB-BITE Jaws, 2mm Tips

121-216	7" (17.8cm)
121-217	8" (20.3cm)
121-218	9" (22.8cm)
121-219	10 1/4" (26cm)



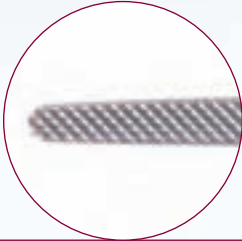
MICRO Needle Holders, STARDUST, Straight, 1.2mm Tips

277-400	5" (12.7cm)
277-402	5 3/4" (14.6 cm)
277-404	6 1/4" (15.9cm)
277-407	7 1/4" (18.4cm)
277-410	7 1/4" (18.4cm), left handed
277-411	8 3/4" (22.2cm)
277-414	10" (25.4cm)



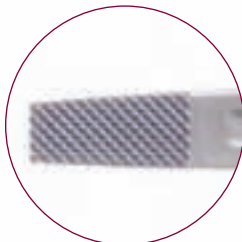
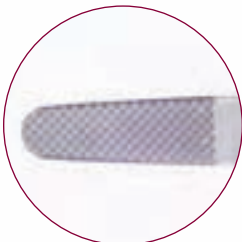
DIETRICH Microvascular Needle Holders, 7,000 Teeth Per Square Inch, CARB-BITE, 1.2mm Tips

- 121-181** 7" (17.8cm)
- 121-182** 8" (20.3cm)
- 121-183** 9" (22.8cm)



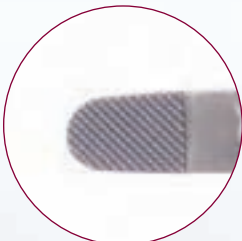
JARIT Wire Twister, CARB-BITE Jaws

- 121-257** 6" (15.2cm), short delicate jaws
- 121-258** 6" (15.2cm), short blunt jaws



JARIT Sternal Needle Holder and Wire Twisters, 2,500 Teeth Per Square Inch, CARB-BITE

- 121-250** 5" (12.7cm)
- 121-255** 7" (17.8cm)



JARIT Sternal Needle Holder and Wire Twister, CARB-BITE, 6mm Tips

- 121-260** 7 3/4" (19.7cm), heavy duty



COOLEY-BAUMGARTEN Sternal Needle Holder and Wire Twister, **CARB-BITE**

121-265

8" (20.3cm), heavy duty, blunt jaws, textured tip



ADDITIONAL INFORMATION

We offer many different jaw surfaces which provide maximum gripping power for all suture sizes: Smooth, 1800, 2500, 4000, and 7000 teeth per square inch, **CARB-BITE** and **STARDUST**.

A unique metallurgical process bonds tungsten carbide particles to the jaws of our **STARDUST** needle holders. The jaw surfaces are lightly textured for secure handling of delicate and micro suture needles. Extra hardness assures durability and firm grip without damaging needles. These hand-crafted needle holders are light weight and superbly balanced. **STARDUST** jaws are warranted for a period of 1 year under normal use. The **STARDUST** surface will be restored during warranty period without charge.

All JARIT **CARB-BITE** and **CARB-EDGE** instruments are warranted for a period of 3 years under normal use. **CARB-BITE** needle holder jaw inserts will be replaced and **CARB-EDGE** scissors will be sharpened during the warranty period without charge.



FORCEPS



FORCEPS

DeBAKEY-DIETRICH Vascular Tissue Forceps, Straight, Micro Fine Serrations, 1mm Tips

320-050	6" (15.2cm)
320-051	7 3/4" (19.7cm)
320-052	9 1/2" (24.1cm)



DeBAKEY-DIETRICH Coronary Artery Forceps, Straight, Micro Fine Serrations, 1.5mm Tips

320-113	6" (15.2cm)
320-114	7 3/4" (19.7cm)
320-115	9 1/2" (24.1cm)
320-099	12" (30.5cm)



DeBAKEY Forceps, Titanium, Straight, 1.8mm Tips

320-111Ti	7 1/8" (18.1cm)
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DeBAKEY Forceps, 2mm Tips

- 320-110** 6" (15.2cm), straight
- 320-111** 7 3/4" (19.7cm), straight
- 320-112** 9 1/2" (24.1cm), straight
- 320-109** 12" (30.5cm), straight
- 320-108** 14" (35.6cm), straight
- 320-105** 6" (15.2cm), angled
- 320-106** 7 3/4" (19.7cm), angled
- 320-107** 9 1/2" (24.1cm), angled



COOLEY Forceps, Straight, 2mm Tips

- 320-116** 6" (15.2cm)
- 320-117** 8" (20.3cm)
- 320-118** 9 1/2" (24.1cm)



DeBAKEY Forceps, Titanium, Straight, 2mm Tips

- 320-084TI** 7 3/4" (19.7 cm)
- 320-085TI** 9 1/2" (24.1 cm)



DeBAKEY Forceps, Titanium, Straight, 2.5mm Tips

- 320-083TI** 6" (15.2cm)



DeBAKEY Forceps, Straight, 2.7mm Tips

320-100	6" (15.2cm)
320-101	7 3/4" (19.7cm)
320-102	9 1/2" (24.1cm)
320-103	12" (30.5cm)
320-104	14" (35.6cm)



DeBAKEY Forceps, Straight, 3.2mm Tips

320-070	6" (15.2cm)
320-071	7 3/4" (19.7cm)
320-072	9 1/2" (24.1cm)
320-073	12" (30.5cm)
320-074	14" (35.6cm)



ADDITIONAL INFORMATION

Tip width is measured 1mm from the tip of the instrument. Our forceps come in 1mm, 1.2mm, 1.5mm, 1.8mm, 2mm, 2.7mm, and 3.2mm tip widths.

The most prevalent jaw types are as follows:

- **STARDUST** tungsten carbide particle surface
- **CARB-BITE** tungsten carbide inserts
- **DeBakey** jaws have a 1 x 2 rows of microscopic teeth
- **Cooley** jaws have two opposing rows of semi rounded microscopic teeth
- **Platform** tips for suturing
- The 1.5mm **Ring Tip** forceps are designed for larger vessels such as the saphenous vein, femoral arteries and other 1-3 mm sized vessels. The sizing pertains to the outer diameter of the ring.

GERALD Forceps, Straight, Narrow Tips, 1 x 2 Teeth

285-125	7" (17.8cm)
285-127	7 1/2" (19.1cm)
285-129	9 1/4" (23.5cm)



GERALD Forceps, CARB-BITE, Straight, 1 x 2 Teeth

122-570	7" (17.8cm), Delicate Tips
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POTTS-SMITH Dressing Forceps, Serrated Tips

130-350	7" (17.8cm)
130-355	8 1/4" (21cm)
130-360	9 1/2" (24.1cm)
130-367	10 1/4" (26cm)
130-365	12" (30.5cm)



POTTS-SMITH Tissue Forceps, 1 x 2 Teeth, Serrated Tips

130-352	7" (17.8cm)
130-357	8 1/4" (21cm)
130-362	9 1/2" (24.1cm)
130-368	10 1/4" (26cm)
130-366	12" (30.5cm)



POTTS-SMITH Needle Forceps, CARB-BITE Tips

130-353	7" (17.8cm)
130-358	8 1/4" (21cm)
130-363	9 1/2" (24.1cm)
130-369	10 1/4" (26cm)



CUSHING Forceps, Semi-Sharp Dissecting End

130-445	8" (20.3cm), serrated
130-446	8" (20.3cm), 1 x 2 teeth, cross-serrated



CUSHING Tissue Forceps Titanium, Sharp Dissecting End, Gutsch Handle

130-425TI 7" (17.8cm), delicate 1.2mm serrated tips



CUSHING Forceps, Sharp Dissecting End, Gutsch Handle

130-425 7" (17.8cm), serrated

130-430 7" (17.8cm), 1 x 2 teeth

130-435 7" (17.8cm), 1 x 2 teeth, serrated



CUSHING Forceps, Semi-Sharp Dissecting End, Gutsch Handle, CARB-BITE Tips

122-530 7" (17.8cm), standard tips

122-535 7" (17.8cm), delicate tips

130-417 7" (17.8cm), angled



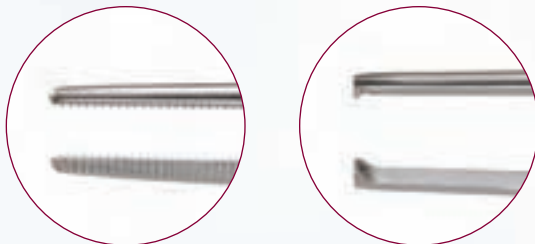
CUSHING Dressing Forceps, Square Dissecting End, Bayonet Handle

- I30-410** 7 1/4" (18.4cm), serrated tips
- I30-420** 7 3/4" (19.7cm), serrated tips
- I30-415** 7 1/4" (18.4cm), 1 x 2 teeth
- I30-421** 7 3/4" (19.7cm), 1 x 2 teeth
- I30-418** 7 3/4" (19.7cm), CARB-BITE tips



CUSHING Forceps, Square Dissecting End

- I30-400** 7" (17.8cm), serrated
- I30-405** 7" (17.8cm), 1 x 2 teeth



BROWN Tissue Forceps, 8 x 8 Teeth

- I30-265** 6" (15.2cm)
- I30-266** 8" (20.3cm)
- I30-267** 10" (25.4cm)



WHEELER-Type Plaque and Vessel Forceps, **CARDIO-GRIP** Tips

130-296	5 1/2" (14cm)
130-297	7 1/4" (18.4cm)
130-298	8 3/4" (22.2cm)



DeBAKEY Needle Forceps, **CARB-BITE**, 2 x 4 Teeth, 1.5mm Tips

122-541	6" (15.2cm)
122-543	7 3/4" (19.7cm)
122-545	9 1/2" (24.1cm)



SKINNER Needle Forceps, 9" (22.9cm), **CARB-BITE**, 1 x 2 Teeth

122-600	Standard tips
122-601	Delicate tips
122-602	Micro tips



DeBAKEY Needle Forceps, CARB-BITE, 2 x 4 Teeth, 2.0mm Tips

- I22-540** 6" (15.2cm)
- I22-542** 7 3/4" (19.7cm)
- I22-544** 9 1/2 (24.1cm)



SEMKEN Needle Forceps, 6" (15.2cm), CARB-BITE, 1 x 2 Teeth

- I22-590** Standard 1.5mm tips
- I22-591** Delicate 1mm tips



BONNEY Forceps, CARB-BITE Tips

- I22-520** 6 3/4" (17.1cm), 1 x 2 teeth



FERRIS-SMITH Forceps, CARB-BITE Tips

- I22-550** 6 3/4" (17.1cm), 1 x 2 teeth



NELSON Tissue Forceps, 6 x 7 Teeth

I30-370	6" (15.2cm)
I30-375	7" (17.8cm)
I30-380	9" (22.9cm)



SELMAN Tissue Forceps, Round Cup With Teeth

I35-252	6" (15.2cm)
I35-253	8" (20.3cm)
I35-254	10" (25.4cm)



RUSSIAN Tissue Forceps

I30-390	6" (15.2cm)
I30-392	8" (20.3cm)
I30-395	10" (25.4cm)
I30-394	12" (30.5cm)
I30-396	14" (35.6cm)



SINGLEY Tissue Forceps

135-250 9" (22.9cm)
135-248 14" (35.6cm)



WANGSTEEN Tissue Forceps, CARB-BITE Tips

135-256 6" (15.2cm)
135-257 9" (22.9cm)
135-258 10" (25.4cm)



REUL Coronary Tissue Forceps, Delicate, CARB-BITE, 1.8mm Tips

130-437 8" (20.3cm)



EVANS Tissue Forceps, CARB-BITE Tips

130-383 10" (25.4cm)







MICRO



MICRO

DENNIS Micro Scissors, Round Handle, Double-Action, 7 1/4" (18.4cm), 8mm Blades**277-058**

Straight blades

277-059

Curved blades

**JACOBSON Scissors, Bayonet Handle, 7 1/4" (18.4cm)****277-135**

Straight, 8mm micro blade

277-136

Curved, 8mm micro blade



JACOBSON Micro Scissors, Round Handle, Micro Fine 9mm Blades

- 277-335** 6 3/4" (17.1cm), 25° angle
- 277-336** 6 3/4" (17.1cm), 45° angle
- 277-337** 6 3/4" (17.1cm), 60° angle
- 277-338** 6 1/2" (16.5cm), 90° angle
- 277-339** 6 1/2" (16.5cm), 125° angle



JACOBSON Micro Scissors, Flat Handle, Micro Fine 9mm Blades

- 277-330** 6 1/2" (16.5cm), 25° angle
- 277-331** 6 1/2" (16.5cm), 45° angle
- 277-332** 6 1/2" (16.5cm), 60° angle
- 277-333** 6 1/4" (15.9cm), 90° angle
- 277-334** 6 1/4" (15.9cm), 125° angle



YOU-POTTS Scissors, Fine 10mm Blades

- 310-305** 7 1/4" (18.4cm), 45° angle
310-306 7" (17.8cm), 90° angle
310-307 7" (17.8cm), 120° angle

**JACOBSON Micro Scissors, Flat Handle, 6 7/8" (17.5cm), 12mm Blades**

- 277-123** Straight blades, blunt tips
277-124 Curved blades, blunt tips

**JACOBSON Scissors, Bayonet Handle, 7 1/4" (18.4cm)**

- 277-130** Straight, regular 12mm blade
277-131 Curved, regular 12mm blade
277-132 Angled on edge, 8.3mm blade



JARIT Microsurgical Scissors, Flat Handle, 6 7/8" (17.5cm), 14.5mm Blades

- 277-120** Straight blades
- 277-121** Curved blades
- 277-122** Angled on edge



VALVE Leaflet Excision Scissors, 45° Angled on Flat, 4 1/4" (10.8cm)

310-540



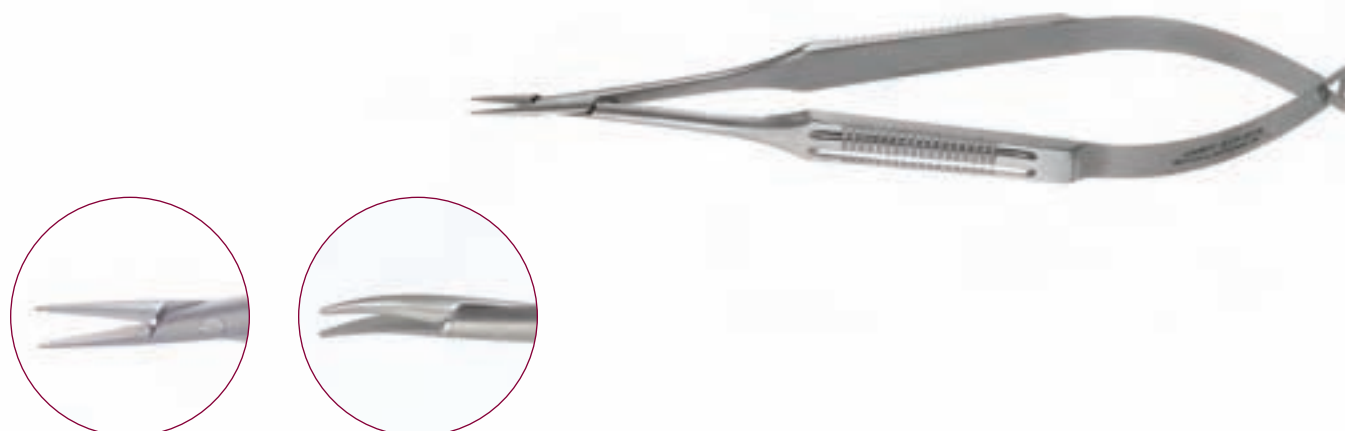
POTTS Finger Arteriotomy Scissors, 45° Angled to Side, 5 1/2" (14cm), 13mm Blades

310-542



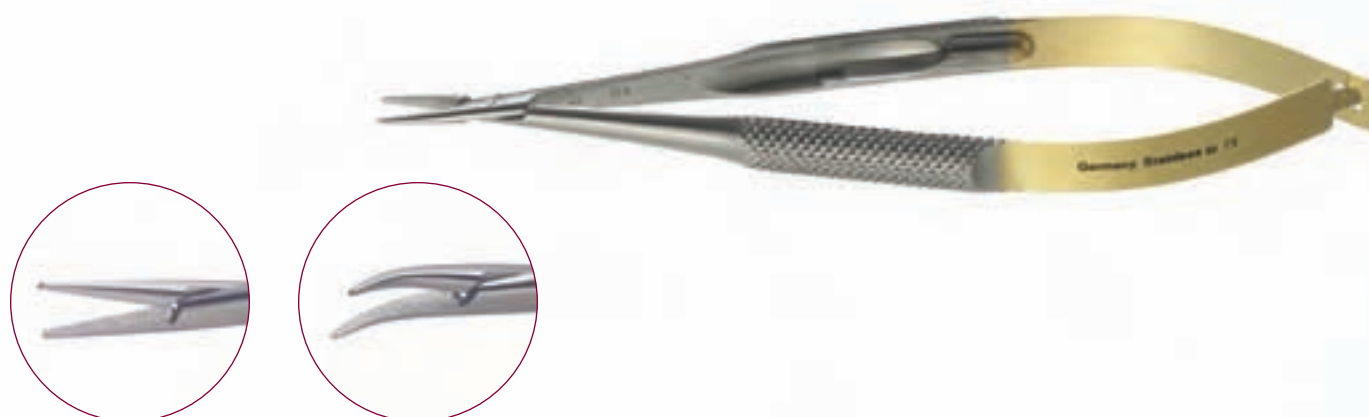
JARIT Microsurgical Needle Holders, Extra Wide Flat Handle, Without Catch, Smooth Jaws, .5mm Micro Tip, 5 3/4" (14.6cm)

- 277-075** Straight jaws
277-076 Curved jaws



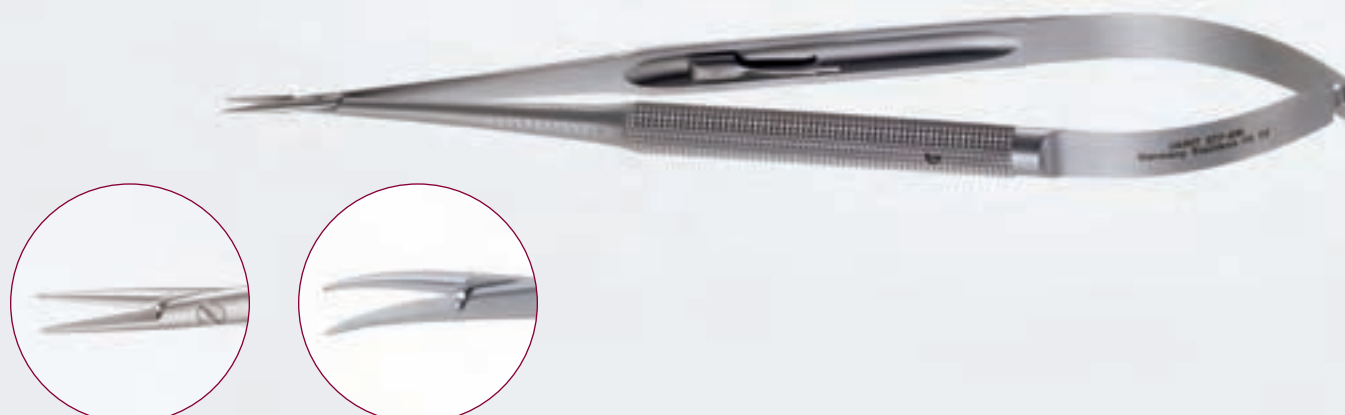
CASTROVIEJO Micro STARDUST Needle Holders, Round Handle, .7mm Micro Tip, 4 3/4" (12.1 cm)

- 278-220** Straight jaws, with catch
278-221 Curved jaws, with catch
278-222 Straight jaws, without catch
278-223 Curved jaws, without catch



JARIT Microsurgical Needle Holders, Round Handle, Smooth Jaws, .7mm Micro Tip, 7" (17.8cm)

- 277-091** Straight jaws, with catch
277-090 Straight jaws, without catch
277-095 Curved jaws, with catch
277-094 Curved jaws, without catch



JACOBSON Needle Holders, Flat Serrated Handle, Smooth Jaws, .8mm Micro Tip, 6 7/8" (17.5cm)

277-141

Straight jaws, with catch

277-140

Straight jaws, without catch



JARIT Micro STARDUST Needle Holder, Titanium, Low Profile Box Lock, .8mm Micro Tip

278-080TI

7" (17.8cm), flat handles, straight jaws, with catch

278-082TI

8 1/4" (21cm), flat handles, straight jaws, with catch



JARIT Micro STARDUST Needle Holder, Titanium, Low Profile Box Lock, .8mm Micro Tip

278-141TI

4 3/4" (12.1cm), straight jaws, with catch

278-093TI

7 1/8" (18.1cm), straight jaws, with catch

278-095TI

7 7/8" (20cm), straight jaws, with catch

278-097TI

9 7/8" (25.1cm), straight jaws, with catch

278-140TI

4 3/4" (12.1cm), straight jaws, without catch

278-142TI

4 3/4" (12.1cm), curved jaws, without catch



JARIT Micro STARDUST Needle Holder, Titanium, Round Handle, Low Profile Box Lock, .8mm Micro Tip

278-108TI

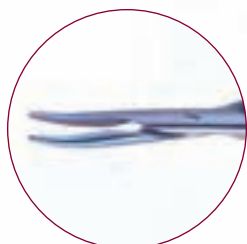
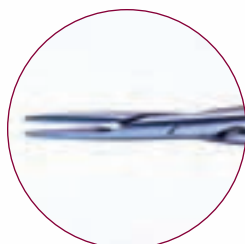
5 3/4" (14.6cm), straight jaws, with catch

278-111TI

7" (18cm), straight jaws, with catch

278-113TI

7 7/8" (20cm), straight jaws, with catch



JARIT Microsurgical Needle Holders, Round Handle, Smooth Jaws, .9mm Micro Tip, 7" (17.8cm)

- 277-093** Straight jaws, with catch
277-092 Straight jaws, without catch
277-097 Curved jaws, with catch
277-096 Curved jaws, without catch



CASTROVIEJO Needle Holders, Flat Serrated Handle, Smooth Jaws, Delicate 1.5mm Tip, 5 1/2" (14cm)

- 355-405** Straight jaws, with catch
355-404 Curved jaws, with catch
355-405NL Straight jaws, without catch
355-404NL Curved jaws, without catch



CASTROVIEJO Needle Holders, Flat Serrated Handle, Smooth Jaws, 1mm Micro Tip, 5 1/2" (14cm)

- 355-406** straight jaws, with catch
355-407 curved jaws, with catch
355-406NL straight jaws, without catch
355-407NL curved jaws, without catch



JACOBSON Needle Holders, Flat Serrated Handle, Delicate 1mm STARDUST Tip

- 278-125** 6 3/4" (17.1 cm), straight jaws
278-125NL 6 3/4" (17.1 cm), straight jaws, without catch
278-126 6 3/4" (17.1 cm), curved jaws
278-126NL 6 3/4" (17.1 cm), curved jaws, without catch



JARIT Microsurgical Needle Holders, Round Handle, Smooth Jaws, 1mm Micro Tip, 5 3/4" (14cm)

- 277-072** Straight jaws, with catch
- 277-070** Straight jaws, without catch
- 277-073** Curved jaws, with catch
- 277-071** Curved jaws, without catch



JARIT Needle Holder, Round Handle, 1mm Micro STARDUST Tip

- 278-110** 7" (17.8cm), straight jaws, without catch
- 278-111** 7" (17.8cm), straight jaws, with catch
- 278-116** 7" (17.8cm), curved jaws, without catch
- 278-117** 7" (17.8cm), curved jaws, with catch
- 278-112** 8" (20.3cm), straight jaws, without catch
- 278-113** 8" (20.3cm), straight jaws, with catch
- 278-118** 8" (20.3cm), curved jaws, without catch
- 278-119** 8" (20.3cm), curved jaws, with catch
- 278-114** 9" (22.9cm), straight jaws, without catch
- 278-115** 9" (22.9cm), straight jaws, with catch
- 278-120** 9" (22.9cm), curved jaws, without catch
- 278-121** 9" (22.9cm), curved jaws, with catch



CASTROVIEJO Micro STARDUST Needle Holders, With Catch, Straight Jaws, Delicate 1.3mm Tip

- 278-040** 5 3/4" Round handle
- 278-050** 5 1/2" Flat handle



**CASTROVIEJO Needle Holders, Flat Serrated Handle,
Straight Jaws, Delicate 1.3mm CARB-BITE Tip, 5 1/2" (14cm)**

- 355-412** Smooth jaws, with catch
355-413 Serrated jaws, with catch
355-412NL Smooth jaws, without catch
355-413NL Serrated jaws, without catch



**JARIT Microsurgical Needle Holders, Flat Serrated Handle,
Straight Jaws, Delicate 1.3mm CARB-BITE Tip, 7" (17.8cm)**

- 121-228** Smooth jaws, with catch
121-228NL Smooth jaws, without catch
121-229 Serrated jaws, with catch
121-229NL Serrated jaws, without catch



**JARIT Microsurgical Needle Holders, Flat Serrated Handle,
Straight Jaws, Delicate 1.3mm CARB-BITE Tip, 8 1/4" (21cm)**

- 121-230** Smooth jaws, with catch
121-230NL Smooth jaws, without catch
121-231 Serrated jaws, with catch
121-231NL Serrated jaws, without catch



JACOBSON Needle Holder, Flat Serrated Handle, Delicate 1.3mm STARDUST Tip

- 278-180** 7 1/4" (18.4cm), straight jaws
- 278-182** 7 1/4" (18.4cm), straight jaws
- 278-181** 8 1/4" (21cm), curved jaws
- 278-183** 8 1/4" (21cm), straight jaws
- 278-184** 8 1/4" (21cm), straight jaws
- 278-185** 8 1/4" (21cm), curved jaws
- 278-186** 9 1/2" (24.1cm), straight jaws



JARIT Needle Holder, Round Handle, Straight Jaws, Delicate 1.3mm STARDUST Tip

- 278-095** 8" (20.3cm), with catch



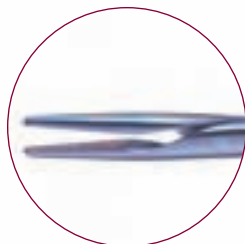
JARIT Needle Holder, Round Handle, Curved Jaws, Delicate 1.3mm STARDUST Tip

- 278-101** 7" (17.8cm), with catch
- 278-100** 7" (17.8cm), without catch
- 278-103** 8 1/4" (21cm), with catch
- 278-102** 8 1/4" (21cm), without catch
- 278-105** 9" (22.9cm), curved jaws, with catch
- 278-104** 9" (22.9cm), curved jaws, without catch



JARIT Micro STARDUST Needle Holder, Titanium, Round Handle, With Catch, Low Profile Box Lock, Delicate 1.3mm Tip

- 278-143TI** 4 3/4" (12.1cm), curved jaws
- 278-145TI** 6" (15.2cm), straight jaws
- 278-147TI** 6" (15.2cm), curved jaws
- 278-069TI** 7 1/4" (18.4cm), straight jaws
- 278-071TI** 7 1/4" (18.4cm), curved jaws
- 278-078TI** 8" (20.3cm), curved jaws



JARIT Micro STARDUST Needle Holder, Titanium, Round Handle, Without Catch, Low Profile Box Lock, Delicate 1.3mm Tip

- 278-144TI** 6" (15.2cm), straight jaws
- 278-146TI** 6" (15.2cm), curved jaws
- 278-070TI** 7 1/4" (18.4cm), straight jaws
- 278-072TI** 7 1/4" (18.4cm), curved jaws
- 278-077TI** 8" (20.3cm), straight jaws
- 278-079TI** 8" (20.3cm), curved jaws



JACOBSON STARDUST Needle Holder, Round Handle, With Catch, Low Profile Box Lock, Heavy Style, 1.2mm Tip

- 278-060** 6 1/8" (15.6cm), straight jaws
- 278-061** 6 1/8" (15.6cm), straight jaws
- 278-062** 6 1/8" (15.6cm), curved jaws
- 278-063** 6 1/8" (15.6cm), curved jaws



JACOBSON STARDUST Needle Holder, Round Handle, With Catch, Low Profile Box Lock, Heavy Style, 2mm Tip

- 278-130** 7 1/2" (19.1cm), straight jaws
- 278-131** 7 1/2" (19.1cm), curved jaws
- 278-132** 9" (22.9cm), straight jaws
- 278-133** 9" (22.9cm), curved jaws
- 278-134** 10" (25.4cm), straight jaws
- 278-135** 10" (25.4cm), curved jaws



**JACOBSON STARDUST Needle Holder, Round Handle,
Without Catch, Low Profile Box Lock, Heavy Style, 2mm Tip**

- 278-131NL** 7 1/2" (19.1cm), curved jaws
- 278-130NL** 7 1/2" (19.1cm), straight jaws
- 278-133NL** 9" (22.9cm), curved jaws
- 278-132NL** 9" (22.9cm), straight jaws
- 278-135NL** 10" (25.4cm), curved jaws
- 278-134NL** 10" (25.4cm), straight jaws



**JACOBSON STARDUST Needle Holder, Titanium, Round Handle,
Low Profile Box Lock, Heavy Style, 2mm Tip**

- 278-171TI** 7 1/8" (18.1cm), straight jaws, with catch
- 278-172TI** 7 1/8" (18.1cm), curved jaws, with catch
- 278-173TI** 7 1/8" (18.1cm), straight jaws, without catch
- 278-174TI** 7 1/8" (18.1cm), curved jaws, without catch



COOLEY Vascular Tissue Forceps, Delicate 1mm Cross-Serrated Tips**320-119** 7 7/8" (20cm)**DeBAKEY-DIETRICH Vascular Tissue Forceps, Straight, Delicate 1mm Tips**

320-050 6" (15.2cm)
320-051 7 3/4" (19.7cm)
320-052 9 1/2" (24.1cm)

**DeBAKEY-DIETRICH Coronary Artery Forceps, Titanium, Delicate 1.3mm Tips**

320-113TI 6 1/8" (15.6cm)
320-114TI 7 1/8" (18.1cm)
320-115TI 8 1/4" (21cm)

**DeBAKEY Forceps, Titanium, 1.5mm Tips**

320-080TI 6" (15.2cm)
320-081TI 7 3/4" (19.7cm)
320-082TI 9 1/2" (24.1cm)



DeBAKEY-DIETRICH Coronary Artery Forceps, 1.5mm Tips

320-113	6" (15.2cm)
320-114	7 3/4" (19.7cm)
320-115	9 1/2" (24.1cm)
320-099	11 7/8" (30.2cm)



DeBakey Forceps, Titanium, Round Handle, 1.8mm Tips

320-111TI	7 1/8" (18.1cm)
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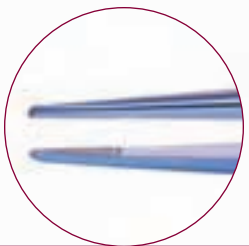
RHOTON-Type Suture Tying Forceps, Round Handle, Delicate, 1mm Platform Tips

277-049	7 1/8" (18cm), straight
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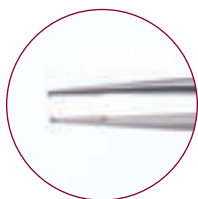
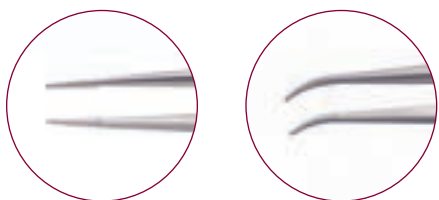
JARIT Micro Forceps, Titanium, Round Handle, STARDUST Platform Tips

279-093TI	7 1/8" (18.1cm), straight
279-094TI	7 1/8" (18.1cm), curved
279-097TI	8 1/4" (21cm), straight
279-098TI	10" (25.4cm), straight



JARIT Microsurgical Forceps, Round Handle, With Platform Tips, 7 1/8" (18.4cm)

- 277-040** 7 1/4" (18.4cm) straight, 0.5mm micro tip
- 277-044** 7 1/8" (18cm) curved, 0.5mm micro tip
- 277-042** 7 1/8" (18cm) straight, 1mm delicate tip
- 277-046** 7 1/8" (18cm) curved, 1mm delicate tip
- 277-041** 7 1/8" (18cm) straight, 0.5mm micro tip, 1 x 2 teeth
- 277-045** 7" (17.8cm) curved, 0.5mm micro tip, 1 x 2 teeth
- 277-043** 7 1/8" (18cm) straight, 1mm delicate tip, 1 x 2 teeth
- 277-047** 7 1/8" (18cm) curved, 1mm delicate tip, 1 x 2 teeth

**JARIT Micro Suture Tying Forceps, Round Handle, With .5mm Micro Platform Tips**

- 277-080** 6" (15.2cm), straight
- 277-081** 6" (15.2cm), curved



JARIT Micro Forceps, Round Handle, .8mm Micro DeBakey Tips

279-149 7 1/8" (18.1cm)



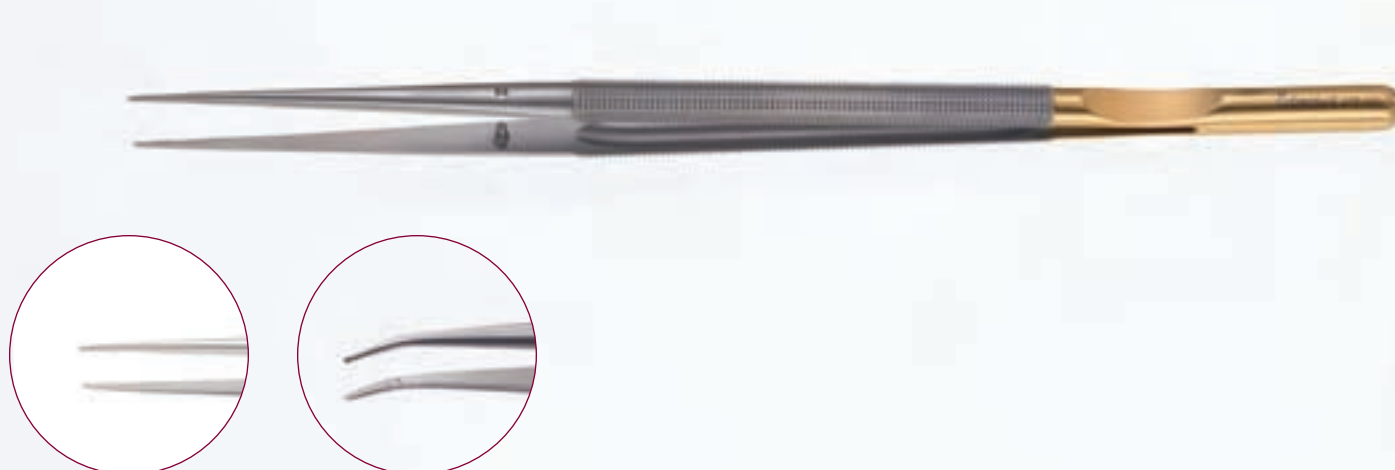
JARIT Micro Forceps, Round Handle, Delicate 1mm STARDUST Platform Tips

279-100 7 1/4" (18.4cm), straight
279-105 7 1/8" (18cm), curved
279-150 7" (17.8cm), 1x2 teeth
279-101 8 1/4" (21cm), straight
279-106 8 1/4" (21cm), curved
279-102 9" (22.9cm), straight
279-107 9" (22.9cm), curved



DENNIS Micro Forceps, With Counter Balance, Round Handle, Delicate 1mm STARDUST Platform Tips

279-158 7 1/8" (18.1 cm), straight
279-159 7 1/8" (18.1 cm), curved
279-125 8 3/8" (21.3cm), straight



MILLS Coronary Mammary Tissue Forceps**310-528** 7 1/8" (18.1cm), 1mm ring tip**JARIT Micro Ring Forceps, Delicate 1mm STARDUST Ring Tips**

279-110 7 1/4" (18.4cm), straight
279-130 7 1/8" (18.1cm), curved
279-111 8 1/4" (21cm), straight
279-131 8 1/4" (21cm), curved
279-112 9" (22.9cm), straight

**JARIT Micro Ring Forceps, Titanium, STARDUST Tips**

279-083TI 6" (15.2cm), 1mm ring tips
279-088TI 6" (15.2cm), 2mm ring tips
279-084TI 7 1/8" (18.1cm), 1mm ring tips
279-089TI 7 1/8" (18.1cm), 2mm ring tips



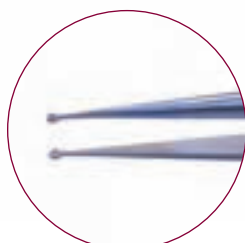
DENNIS Micro Ring Forceps, With Counter Balance, Round Handle, 1mm STARDUST Tips

- 279-113** 6" (15.2cm), straight
- 279-114** 6" (15.2cm), curved
- 279-115** 7 3/8" (18.7cm), straight
- 279-116** 7 3/8" (18.7cm), curved
- 279-117** 8 1/4" (21cm), straight
- 279-118** 8 1/4" (21cm), curved
- 279-119** 9 1/8" (23cm), straight
- 279-120** 9 1/8" (23cm), curved
- 279-121** 9 7/8" (25.1cm), straight
- 279-122** 9 7/8" (25.1cm), curved



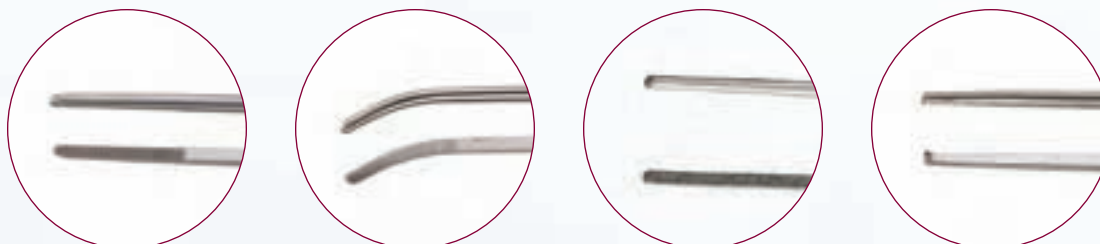
DENNIS Micro Ring Forceps, Titanium, With Counter Balance, Round Handle, Straight, 1mm STARDUST Tips

- 279-110TI** 7 1/8" (18.1cm)
- 279-111TI** 8 1/8" (20.1cm)
- 279-112TI** 9 1/8" (23cm)



BROLI-ADSON Forceps, 1.2 mm Tips

- 130-246** 5 1/8" (13cm), straight, serrated tips
- 130-247** 5 1/8" (13cm), curved, serrated tips
- 130-248** 5 1/8" (13cm), straight, STARDUST tips
- 130-249** 5 1/8" (13cm), straight, 1x2 teeth

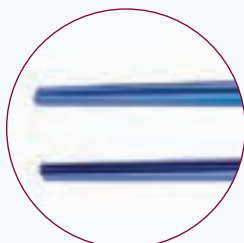


GERALD STARDUST Forceps, Titanium, Delicate 1mm Platform Tips

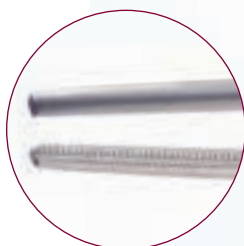
279-150TI 7" (17.8cm)
279-151TI 8 1/4" (21cm)

**GERALD Forceps, Titanium, Delicate 1mm DeBakey Tips**

285-131TI 7" (17.8cm)
285-132TI 8 1/4" (21cm)

**GERALD Forceps, Delicate 1.2mm DeBakey Tips**

285-126 7" (17.8cm)
285-132 7 7/8" (20cm)
285-130 9 1/2" (24.1cm)

**GERALD Forceps, Delicate 1.3mm Tips**

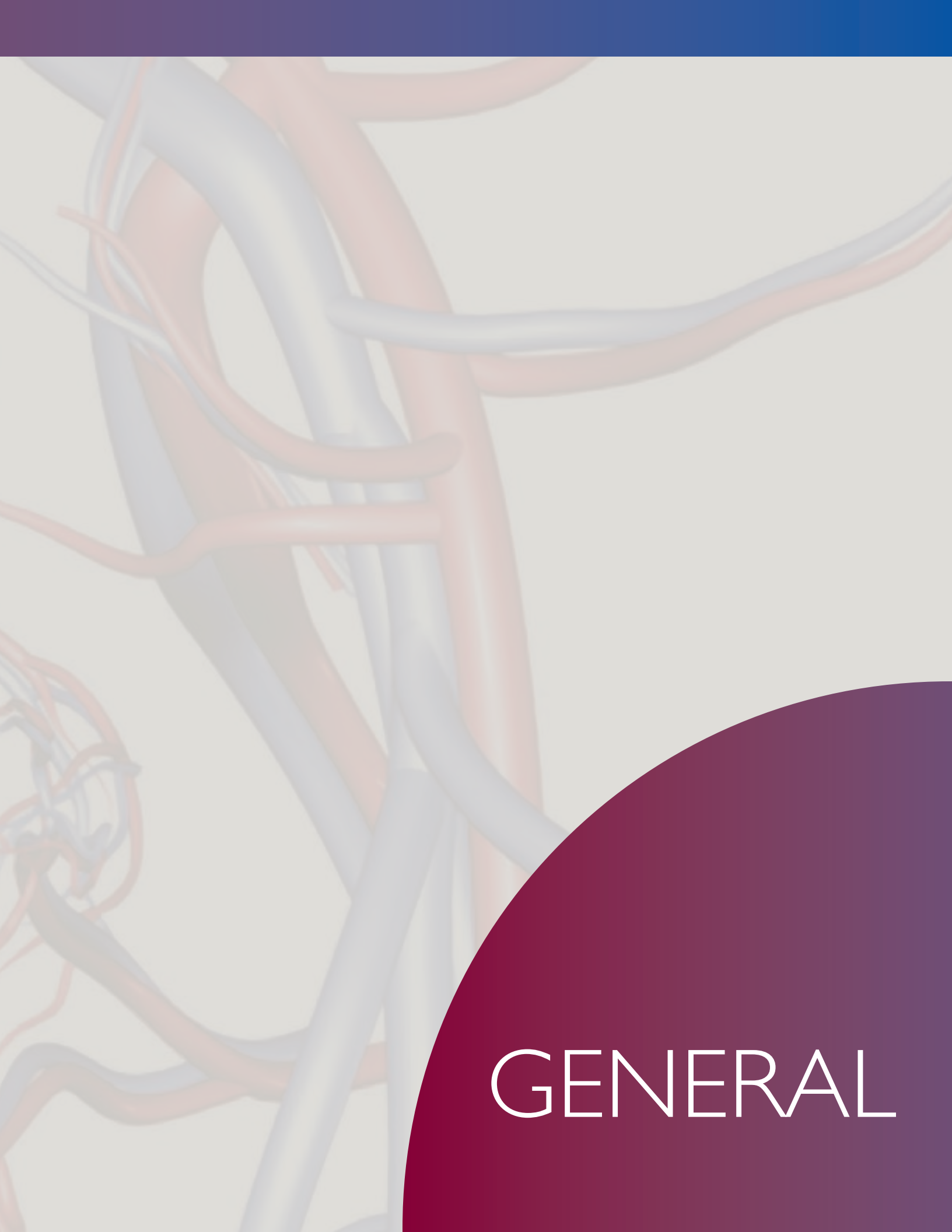
285-120 6 7/8" (17.5cm), serrated tips
285-128 9 1/4" (23.5cm), serrated tips
285-135 9 7/8" (25cm), cross-serrated tips



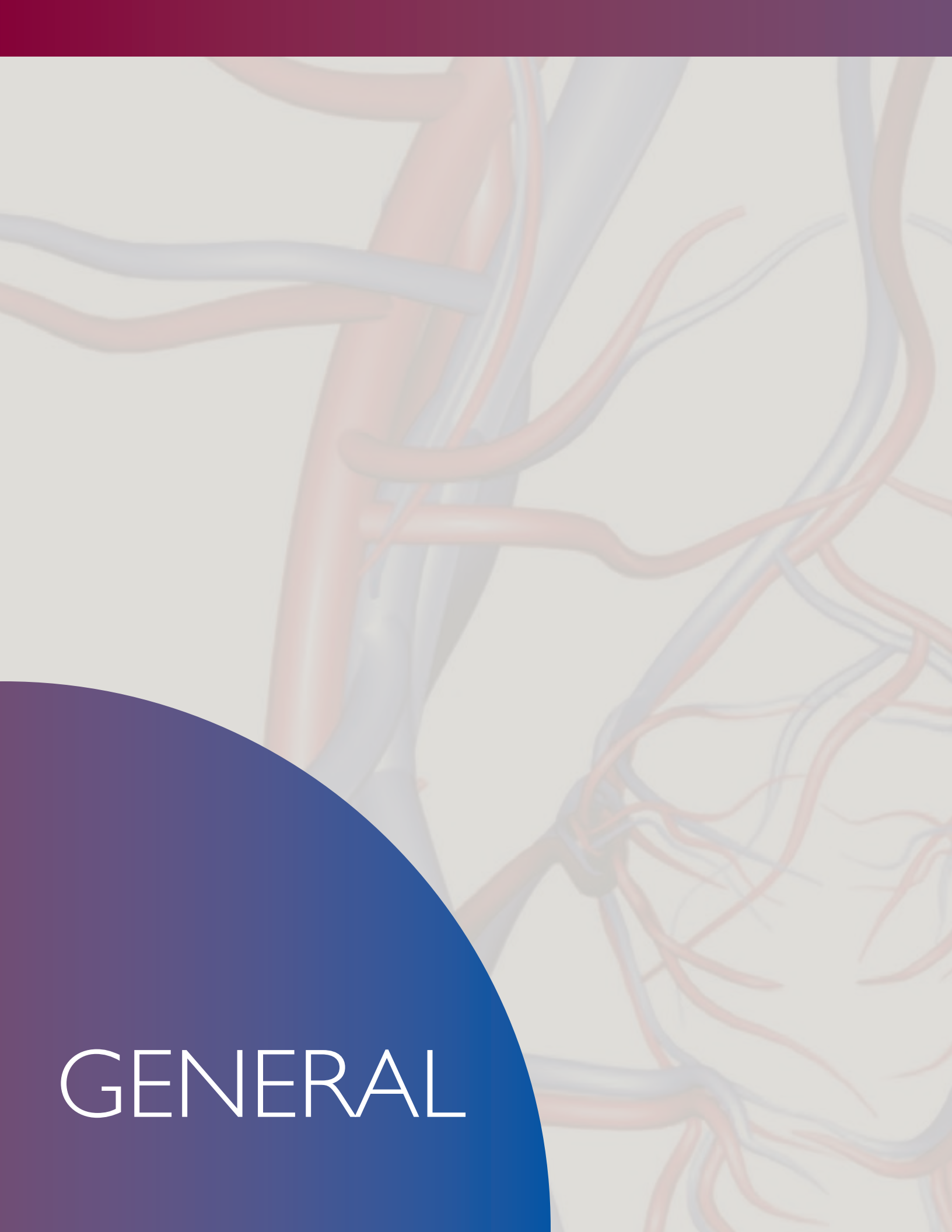
CUSHING Tissue Forceps, Titanium, Semi-Sharp Dissecting End, Gutsch Handle

I30-425TI 7" (17.8cm), delicate 1.2mm serrated tips





GENERAL

An anatomical illustration of a complex network of blood vessels and nerves. The vessels are depicted in shades of red and pink, while the nerves are shown in light blue and grey. The network is dense and branching, with a large, thick vessel running vertically on the left side. The background is a light beige color. A dark blue curved shape is in the bottom left corner, containing the word 'GENERAL' in white capital letters.

GENERAL

PETIT-POINT Mosquito Forceps

105-090	3 7/8" (9.8cm), straight
105-095	4 3/4" (12.1cm), straight
105-098	6" (15.2cm), straight
285-107	7 1/8" (18.1cm), straight
105-091	3 7/8" (9.8cm), curved
105-096	4 3/4" (12.1cm), curved
105-099	6" (15.2cm), curved
285-108	7 1/8" (18.1cm), curved



JACOBSON Hemostatic Forcep, Very Delicate, Serrated Jaws, 7 1/2" (19.1cm)

105-092	Slightly curved
105-093	Fully curved



OCHSNER Forceps, Partial Jaw Serrations

105-235	4 1/2" (11.4cm), serrated jaws, 90° angle, very fine tips
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BAINBRIDGE Forceps, Longitudinal Serrations

- 105-300** 6" (15.2cm), straight
- 105-304** 7 1/4" (18.4cm), straight
- 105-302** 6" (15.2cm), curved
- 105-306** 7 1/4" (18.4cm), curved



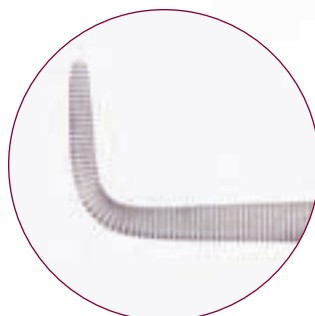
BAINBRIDGE Forceps, DeBakey Serrations

- 320-228** 7 7/8" (20cm), straight, delicate, 6cm jaws
- 320-229** 7 1/4" (18.4cm), curved, delicate, 6cm jaws



COLLER Forceps, 9 1/2" (24.1cm), Full Horizontal Serrations

- 105-330** Slight curve
- 105-331** Strong curve
- 105-332** Right angle



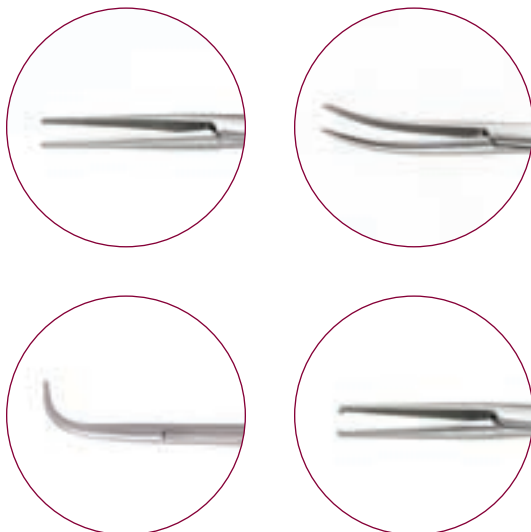
STOREY Forceps 8 3/4" (22.2mm), Cross Serrations

- 105-340** Slight curve
- 105-341** Strong curve
- 105-342** Right angle



JARIT Vascular Forceps, Serrated Jaws

- 320-630** 5 1/2" (14cm), straight
- 320-635** 6 1/2" (16.5cm), straight
- 320-640** 7 1/4" (18.4cm), straight
- 320-631** 5 1/2" (14cm), curved
- 320-636** 6 1/2" (16.5cm), curved
- 320-641** 7 1/4" (18.4cm), curved
- 320-632** 5 1/3" (13.5cm), full curve
- 320-637** 6 1/4" (15.9cm), full curve
- 320-642** 7" (17.8cm), full curve
- 320-633** 5 1/2" (14cm), straight, 1x2 teeth
- 320-638** 6 3/8" (16.2cm), straight, 1x2 teeth
- 320-643** 7" (17.8cm), straight, 1x2 teeth
- 320-634** 5 1/2" (14cm), curved, 1x2 teeth
- 320-639** 6 3/8" (16.2cm), curved, 1x2 teeth
- 320-644** 7" (17.8cm), curved, 1x2 teeth



BAILEY Forceps, Very Fine Jaw, 7" (17.8cm), Full Jaw Serrations

320-650	30° angle
320-651	60° angle
320-652	90° angle



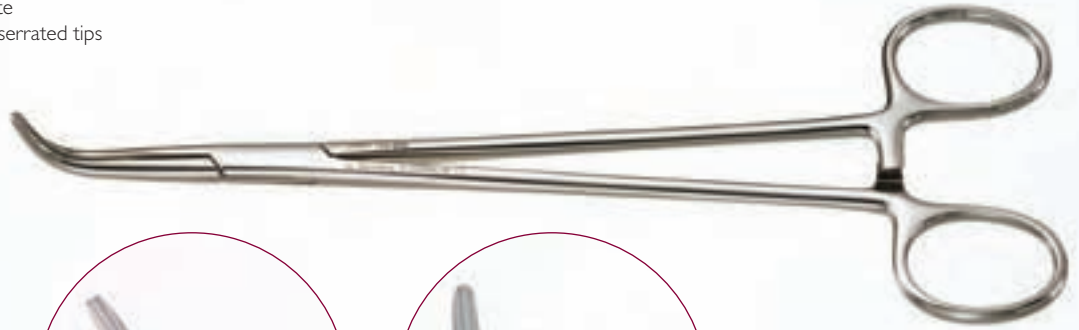
BABCOCK Tissue Forceps

135-181	6 1/4" (15.9cm), jaw width 7.5mm
135-185	7 1/4" (18.4cm), jaw width 11mm
135-190	8" (20.3cm), jaw width 11mm
135-195	9 1/2" (24.1cm), jaw width 11mm
135-196	12" (30.5cm), jaw width 11mm
135-194	14" (35.6cm), jaw width 11.3mm



LAHEY Gall Duct Forceps

- I40-205** 7 1/2" (19.1cm)
I40-206 7 1/2" (19.1cm), delicate
I40-228 7 1/2" (19.1cm), cross serrated tips

**LAHEY Thoracic Forceps**

- 305-370** 9" (22.9cm), full curved
305-372 9" (22.9cm), full curved, delicate
305-373 8 5/8" (21.9cm), 90° angle, delicate

**DIETRICH Clamps, Right Angle**

- I40-232** 4 3/4" (12.1cm)
I40-233 5 5/8" (14.3cm)
I40-234 7" (17.8cm)



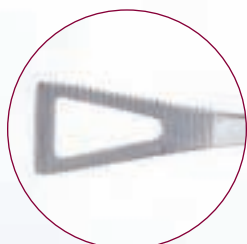
GEMINI Clamps

I40-329	5 1/2" (14cm)
I40-330	7" (17.8cm)
I40-331	8" (20.3cm)
I40-332	9" (22.9cm)
I40-333	11" (27.9cm)
I40-335	14" (35.6cm)



PENNINGTON Tissue Forceps

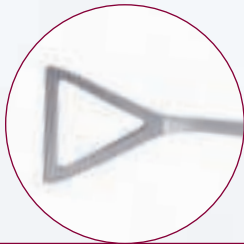
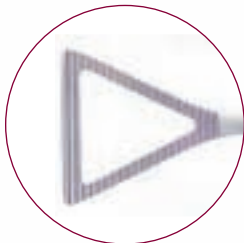
305-200	8" (20.3cm), jaw width 7/16" (11mm)
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COLLINS Tissue Forceps

305-205	9" (22.9cm), jaw width 1" (2.5cm)
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DUVAL Lung Forceps**305-210** 8" (20.3cm), jaw width 1" (2.5cm)**305-215** 9" (22.9cm), jaw width 1" (2.5cm)**LOVELACE Lung Forceps****305-220** 7 1/4" (18.4cm), jaw width 1" (2.5cm)**ALLIS-WILLAUER Tissue Forceps, 5 x 6 teeth****305-230** 10" (25.4cm)**305-231** 11 1/4" (28.6cm)**305-233** 14" (35.6cm)

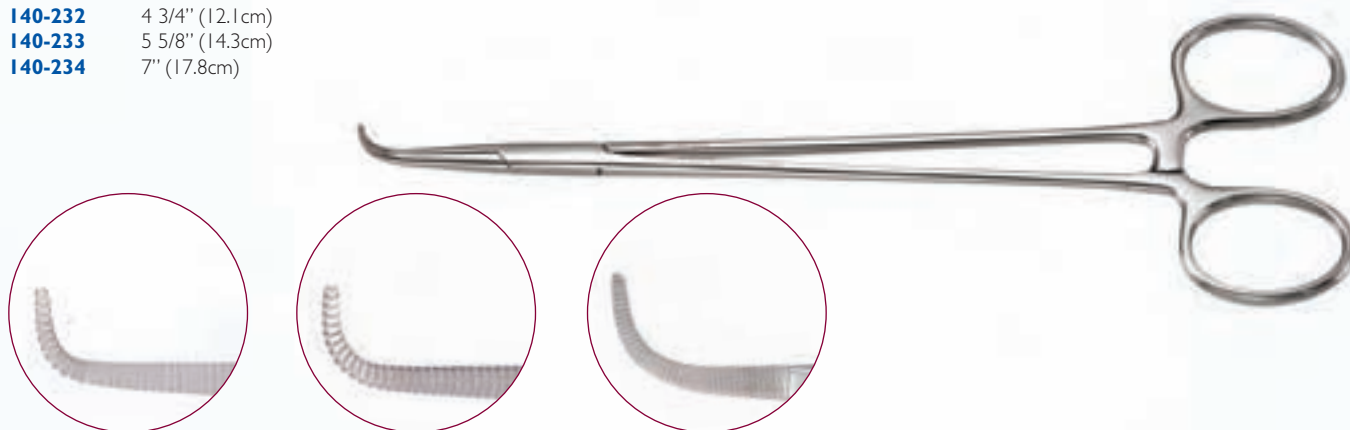
KANTROWITZ Thoracic Forceps

305-294	6" (15.2cm)
305-295	7 1/2" (19.1cm)
305-296	9 1/2" (24.1cm)
305-297	10 1/2" (26.7cm)



DIETRICH Clamps, Right Angle

140-232	4 3/4" (12.1cm)
140-233	5 5/8" (14.3cm)
140-234	7" (17.8cm)



MEEKER Forceps, Right Angle, Delicate Tip

140-231	7" (17.8cm)
305-300	11" (27.9cm)



JONES Thoracic Clamp

305-431	9" (22.9cm)
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LAWRENCE Forceps, Strong Curve

305-305 7 1/4" (18.4cm)
305-306 11" (27.9cm)



BRIDGE Forceps

305-308 7 1/2" (19.1cm), curved
305-309 11" (27.9cm), straight
305-310 11" (27.9cm), curved



JULIAN Thoracic Artery Forceps

305-320 9 1/4" (23.5cm), slightly curved



WOODWARD Thoracic Artery Forceps

305-325 8 3/4" (22.2cm), slightly curved



JARIT Mosquito Forceps

- 305-330** 7 1/4" (18.4cm), straight
- 305-332** 7 1/4" (18.4cm), curved
- 305-337** 9 1/4" (23.5cm), curved



MIXTER Forceps, Pediatric

- 140-216** 5 1/4" (13.3cm), curved
- 140-217** 5 1/4" (13.3cm), right angle



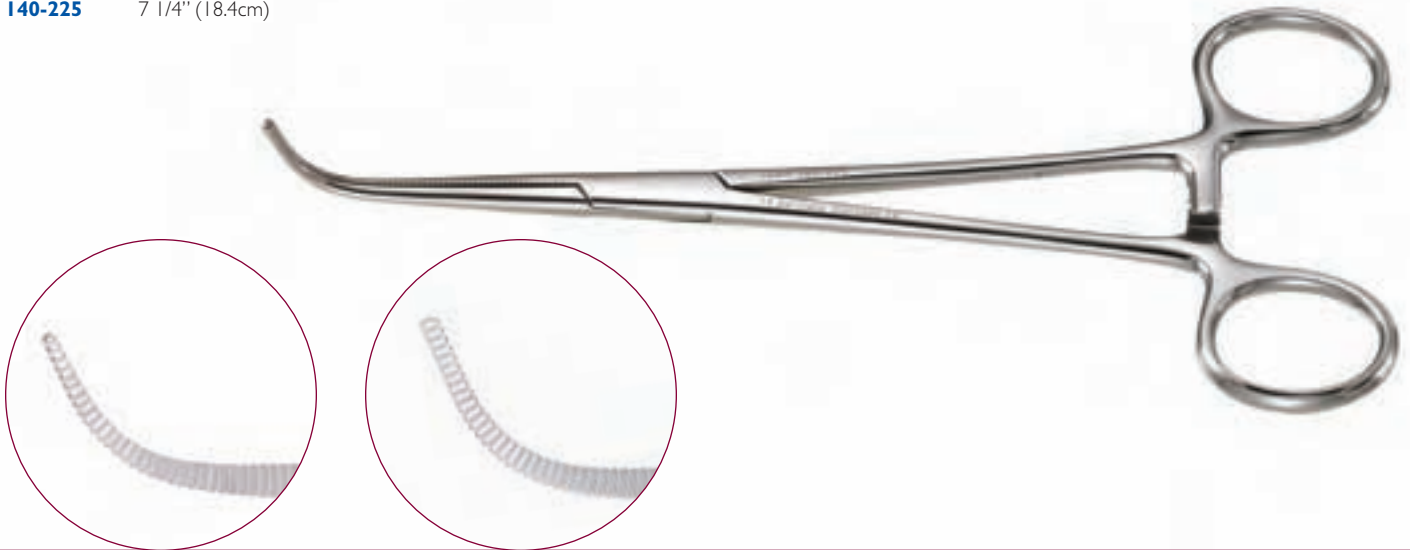
MIXTER Forceps, Petit-Point, Right Angle

- 140-218** 5 1/4" (13.3cm), partial jaw serrations
- 140-223** 7 1/4" (18.4cm), full jaw serrations



MIXTER Forceps, Full Horizontal Serrations

140-224 6 1/2" (16.5cm)
140-225 7 1/4" (18.4cm)

**MIXTER Forceps, Partial Horizontal Serrations**

140-226 8 1/4" (21cm)
140-230 9" (22.9cm)

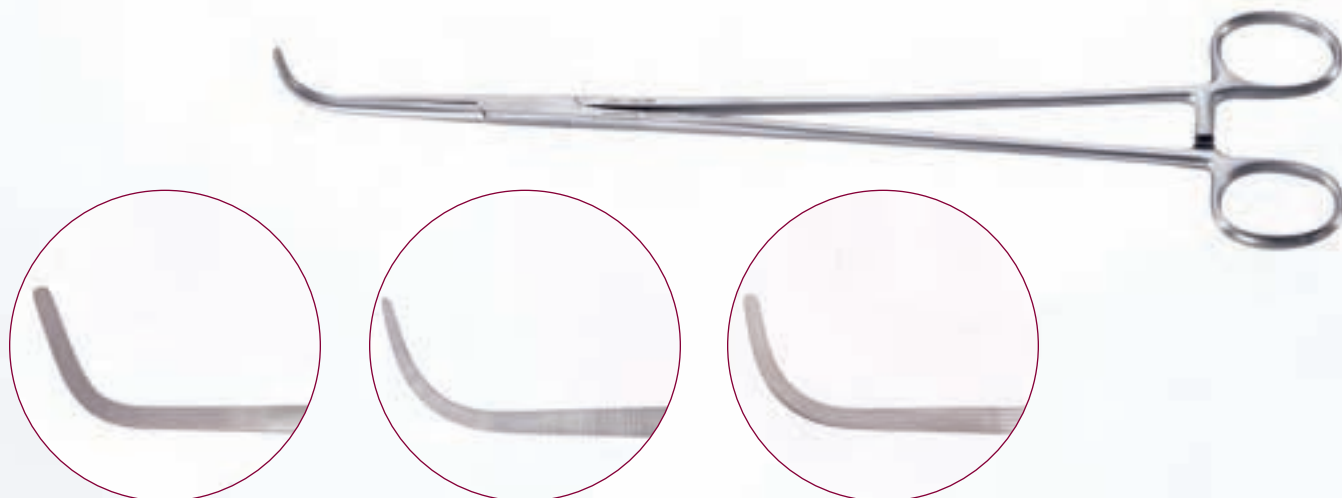
**MIXTER Forceps, Delicate, Longitudinal Serrations, Cross-Serrated Tip**

305-388 8 1/2" (21.6cm)
305-389 10 1/2" (26.7cm)



MIXTER Forceps

- 305-380** 10 1/2" (26.7cm), longitudinal serrations, full curve
- 305-386** 10 3/4" (27.3cm), horizontal serrations
- 305-385** 10 3/4" (27.3cm), longitudinal serrations, cross-serrated tip



ADSON Hemostatic Forceps, Fine Tips

- 285-105** 7 1/2" (19.1cm), straight
- 285-103** 8 1/2" (21.6cm), straight
- 285-106** 7 1/2" (19.1cm), curved
- 285-104** 8 1/2" (21.6cm), curved



SCHNIDT Tonsil Forceps, 1/2 Jaw Serrations

- 450-310** 7 1/2" (19.1cm) half curved, closed rings



HEISS Artery Forceps, 8" (20.3cm)

- 305-350 Straight
- 305-351 Half curved
- 305-352 Full curved



VANDERBILT UNIVERSITY Vessel Clamp

- 305-355 8 3/4" (22.2cm)



BENGOLEA Forceps

- 305-359 8 1/2" (21.6cm)



JARIT-CRAFOORD (COLLER) Forceps

- 305-360 7 1/4" (18.4cm)
- 305-362 9 1/2" (24.1cm)



SAROT Artery Forceps

305-363	7 3/4" (19.7cm)
305-365	9 1/2" (24.1cm)
305-366	14" (35.6cm)



DeBAKEY-COLLIER Artery Forceps

305-367	8" (20.3cm), horizontal serrations
305-369	14" (35.6cm), horizontal serrations



HARRINGTON Forceps, Right Angled

305-390	11 1/2" (29.2cm), heavy
305-395	12 1/2" (31.8cm)
305-396	14" (35.6cm), light



CARMALT Forceps, Cross-Serrated Tips

- 305-368** 10" (25.4cm), jaw length 2" (4.9cm)
305-397 12" (30.5cm), jaw length 2 3/4" (7cm)



ROCHESTER-PEAN Forceps

- 305-398** 12" (30.5cm), jaw length 3 1/2" (8.9cm)
305-399 14" (35.6cm), jaw length 4 1/3" (10.9cm)



RUMEL Dissecting Forceps, 9" (22.9cm)

- 305-400** "A" curve
305-401 "B" curve
305-402 "C" curve
305-403 "D" curve



DeBAKEY-SEMB Ligature Carrier

320-274 9 7/8" (25cm), jaw length 2 1/4" (5.7cm), length of serrations 5/8" (1.5cm)



SEMB Ligature Carrying Forceps

305-441 9" (22.9cm)



DeBAKEY Thoracic Dissecting Forceps

305-405 8 1/4" (21cm), "C" curve
305-406 8 1/4" (21cm), "D" curve
305-407 8 3/4" (22.2cm), "C" curve
305-408 8 1/4" (21cm), "D" curve



ADSON Dura Hooks, 8" (20.3cm)

285-225

Sharp

285-227

Blunt



DANDY Nerve Hook, 9" (22.9cm)

285-230

Blunt



BLUNT Hooks, 7" (17.8cm)

310-532

2mm round tip

310-533

3mm ball tip



BALL Nerve Hooks

- 310-545** 7 1/4" (18.4cm), 10mm angled tip
310-544 7 3/4" (19.7cm), 25mm angled tip



SMITHWICK Sympathectomy Hook and Dissector

- 285-315** 12 1/4" (31.1cm)



PENFIELD Dissector No. 4, Slightly Curved

- 285-368** 8" (20.3cm), light



FREER Double-Ended Elevators, Sharp-Blunt Blades, 7 3/4" (19.7cm)

- 285-379** 6.5mm blades
285-380 4.5mm blades



LEMMON Intima Dissectors, 6 1/2" (16.5cm)

- 310-480** Slight curve
310-481 Medium curve
310-482 Full curve

**OLIVECRONA Double-Ended Dissectors**

- 310-485** 7 1/4" (18.4cm), delicate
310-486 9 1/2" (24.1cm), delicate
310-487 7 3/4" (19.7cm), heavy
310-488 9 1/2" (24.1cm), heavy

**MILLS Endarterectomy Spatula, 6 7/8" (17.5cm)**

- 310-547** 1.8mm blade



JARIT Plaque Retrievers

- 310-551** Mini: 6 1/2" (16.5cm), curved jaws 2" (5.1cm)
310-550 Short: 7 1/4" (18.4cm), angled jaws 1 1/16" (2.8cm)
310-549 Long: 7 1/2" (19.1cm), angled jaws 1 1/2" (3.8cm)



JAVID Carotid Artery Bypass Clamps

- 320-550** 6 3/4" (17cm), 4mm ring
320-555 7 1/2" (19cm), 6mm ring



NORRIS Sponge Holding Forceps

- 295-295** 13" (33cm) overall length, straight distal portion 6 1/4" (15.9cm)



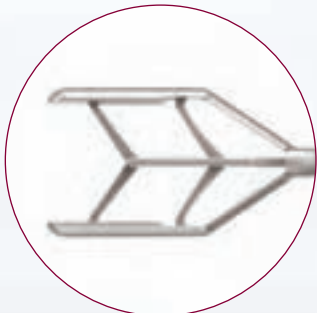
MEDIASTINAL Dissection Forceps

295-296 12" (30.4cm) overall length, distal portion 7 1/2" (19.1cm)



TUBBS Mitral Valve Dilator

310-520 Maximum blade opening 1 3/4" (4.5cm)



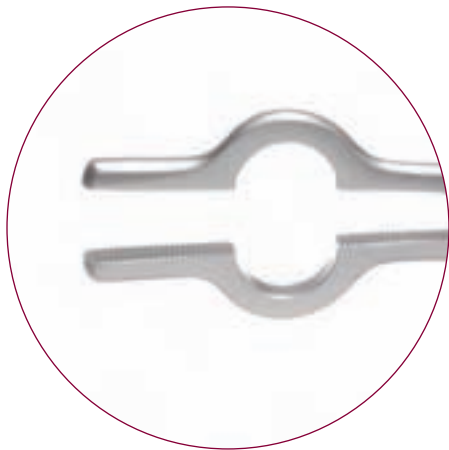
BAILEY Aortic Valve Rongeur

310-522 4 1/2" (11.4cm) shaft, straight, 3mm bite



COOLEY Vena Cava Catheter Clamps

320-560	Child size, 7 3/8" (18.7cm), 24 Fr
320-562	Child size, 7 3/8" (18.7cm), 26 Fr
320-564	Adult size, 8" (20.3cm), 28 Fr
320-566	Adult size, 8" (20.3cm), 30 Fr
320-568	Adult size, 8" (20.3cm), 32 Fr
320-570	Adult size, 8" (20.3cm), 34 Fr
320-572	Adult size, 8" (20.3cm), 36 Fr



JARIT Chest Tube Passer

- 320-620** 9 3/4" (24.8 cm), without ratchet
320-621 9 3/4" (24.8 cm), with ratchet
320-622 14" (35.6 cm), without ratchet

**PRESBYTERIAN HOSPITAL Tube Occluding Forceps**

- 110-150** 6 1/2" (16.5cm)

**JARIT Tube Occluding Forceps**

- 110-154** 5 1/2" (14cm), beveled edges, delicate jaws with smooth inner surfaces



JARIT (VORSE) Tube Occluding Forceps

- 110-155** 5 1/2" (14cm)
- 110-157** 7 1/4" (18.4cm)
- 110-159** 8" (20.3cm), heavy jaw



JARIT Tube Occluding Forceps, With U-Shaped Guard

- 110-160** 5 1/2" (14cm)
- 110-161** 7 1/4" (18.4cm)
- 110-162** 8" (20.3cm), heavy jaw



SAFETY BLADE REMOVER

110-164



RUMEL Tourniquets

- 305-498** Obturator only, adult size, (crochet hook)
305-499 Obturator only, child size, (crochet hook)
305-500 Adult size, 12" (30.5cm)
305-501 Child size, 8 1/4" (21cm)

**CASTANEDA Suture Tag Forceps, 3 3/4" (9.5cm),
Numbered for Identification, Smooth Jaws**

- 320-615** No. 1
320-616 No. 2
320-617 No. 3
320-618 No. 4

**Gregory Stay Suture Clamps, 4 3/4" (12.1cm), Smooth Jaws (for tricuspid valve)**

- 320-625** 5/8" (1.6cm) gold band
320-626 3/4" (1.9cm) gold band
320-627 1 5/8" (4.1cm) gold band



STOPCOCK, Female to Male LUER Lock Tip, Female LUER Lock Right-Side Connection

310-377



LUER LOCK ADAPTER

310-378

For 1/8" tubing, male luer lock to hose end



STONEY Heparin Injector

310-379

1 7/8" (4.8cm)



DeBAKEY Heparin Cannula

310-382

6 1/4" (15.9cm), malleable, 5mm tip



HEPARIN Flushing Needle

310-383 2" (5.1cm), malleable, 3mm tip



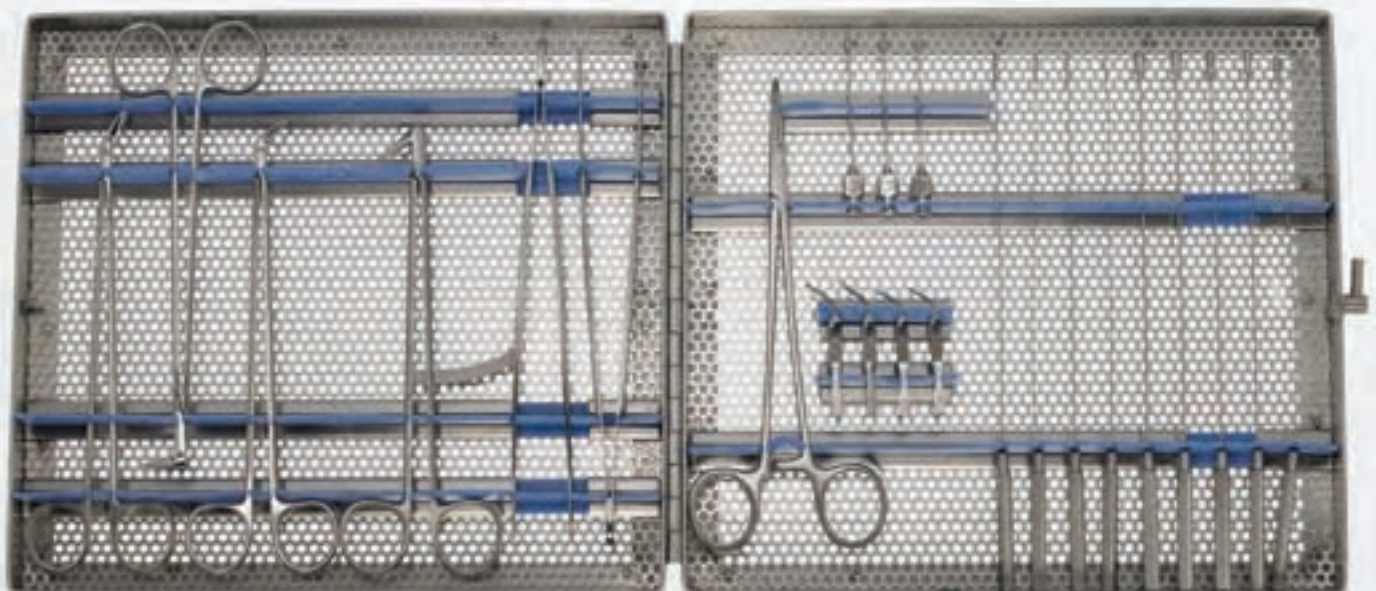
DeBAKEY Heparin Cannula

310-384 2 1/8" (5.4cm), malleable, 2.7mm tip



DIETRICH Coronary Artery Bypass Kit

- 310-380** DIETRICH Coronary Artery Bypass Kit Includes:
- 310-350** Coronary Artery Scissors, 7" (17.8cm), 25° angle
- 310-351** Coronary Artery Scissors, 7" (17.8cm), 45° angle
- 310-352** Coronary Artery Scissors, 7" (17.8cm), 60° angle
- 310-353** Coronary Artery Scissors, 7" (17.8cm), 90° angle
- 310-360** Circumflex Artery Scissors, 7" (17.8cm), 130° angle
- 140-330** Gemini Clamp, 7" (17.8cm)
- 320-114** DeBakey-Diethrich Coronary Artery Forceps, 7.75" (19.7cm)
- 320-170** Diethrich Micro-Coronary Bulldog Clamps, 8mm
- 320-172** Diethrich Micro-Coronary Bulldog Clamps, 12mm
- 310-383** Heparin Flushing Needles, 2" (5.1cm)
- 310-385** Set of 9 Garrett Vascular Dilators, 8.25" (21cm)
- 310-381** Sterilizing case



GARRETT Vascular Dilators

310-385 8 1/4" (21cm), set of 9, with holder

Garrett Dilator, 8 1/4" (21cm)

310-386 1.0 mm size
310-387 1.5mm size
310-388 2.0mm size
310-389 2.5mm size
310-390 3.0mm size
310-391 3.5mm size
310-392 4.0mm size
310-393 4.5mm size
310-394 5.0mm size

310-395 5 1/2" (14cm), set of 9, with holder

Garrett Dilator, 5 1/2" (14cm)

310-396 1.0 mm size
310-397 1.5mm size
310-398 2.0mm size
310-399 2.5mm size
310-400 3.0mm size
310-401 3.5mm size
310-402 4.0mm size
310-403 4.5mm size
310-404 5.0mm size



COOLEY Vascular Dilators, malleable silver shaft**310-410** 5 1/8" (13cm), set of 6**COOLEY Dilator, 5 1/8" (13cm)**

310-411 0.5 mm size
310-412 1.0 mm size
310-413 1.5mm size
310-414 2.0mm size
310-415 2.5mm size
310-416 3.0mm size

**DeBAKEY Vascular Dilators****310-450** 7 1/2" (19.1cm), set of 12**DeBAKEY Vascular Dilators, 7 1/2" (19.1cm)**

310-451 1.0 mm size
310-452 1.5mm size
310-453 2.0mm size
310-454 2.5mm size
310-455 3.0mm size
310-456 4.0mm size
310-457 5.0mm size
310-458 6.0mm size
310-459 7.0mm size
310-460 8.0mm size
310-461 9.0mm size
310-462 10mm size



DeBAKEY Dilator Sterilizing Case

310-465

(Not Included with Set)



GARRETT Dilator Holders

310-406

8 1/4" (21cm)

310-407

5 1/2" (14cm)



NABATOFF Vein Stripper

160-120

Complete set in stainless steel sterilizing case



CRAWFORD-COOLEY Graft Tuner

310-570

18" (45.7cm), light curve, 12mm inside diameter



DARDIK Vascular Tuner

310-576

25 1/8" (64cm) 12mm Inner Diameter; 14mm Outer Diameter

310-575

19 5/8" (50cm) 8mm Inner Diameter; 10mm Outer Diameter

(310-575 Shown Disassembled; Please refer to Spare Parts section for individual parts)



DeBAKEY Femoral Bypass Tuner

310-580

20 3/4" (52.5cm), malleable stainless steel shaft



SUNDT External (Loop) Shunt, Original Design, Fully Spring Reinforced, Total Length 11 3/4" (30cm)

NL850-5070 3.0mm x 4.0mm

NL850-5071 3.0mm x 5.0mm

SUNDT External (Loop) Shunt, With 1 cm Non-Reinforced Center Segment, Total Length 11 3/4" (30cm)

NL850-5076 3.0mm x 4.0mm

NL850-5077 3.0mm x 5.0mm



SERREFINE Forceps

105-260	1 1/2" (3.8cm), straight
105-262	2 1/2" (6.4cm), straight
105-261	1 1/2" (3.8cm), curved
105-263	2 1/2" (6.4cm), curved



BULLDOG Clamp Applier, 9" (22.9cm)

310-430



JOHN HOPKINS Bulldog Clamps

310-431	1 1/2" (3.8cm), straight
310-432	2" (5.1cm), straight
310-433	2 1/4" (5.7cm), straight
310-436	3" (7.6cm), straight
310-440	1 1/2" (3.8cm), curved
310-441	2" (5.1cm), curved
310-442	2 1/4" (5.7cm), curved
310-445	3" (7.6cm), curved



GLOVER Bulldog Clamps, Adjusting Screw to Regulate Tension, DeBakey Serrations

320-120	5cm, jaw length 1.8cm, straight
320-125	6.5cm, jaw length 3.2cm, straight
320-130	8.4cm, jaw length 4.5cm, straight
320-135	12cm, jaw length 6cm, straight
320-122	5cm, jaw length 1.8cm, curved
320-127	6.5cm, jaw length 3.2cm, curved
320-132	8.4cm, jaw length 4.5cm, curved
320-137	12cm, jaw length 6cm, curved



GLOVER Bulldog Clamp, Adjusting Screw to Regulate Tension, DeBakey Serrations**320-148**

5.1cm, jaw length 3.1cm, 90° jaws

**COOLEY Bulldog Clamps, Adjusting Screw to Regulate Tension, Cooley Serrations****320-140**

5.1cm, jaw length 2cm, straight

320-142

6.7cm, jaw length 3cm, straight

320-144

8.6cm, jaw length 4.7cm, straight

320-146

13.3cm, jaw length 6cm, straight

320-141

4.4cm, jaw length 1.8cm, curved

320-143

6.4cm, jaw length 2.4cm, curved

320-145

7.6cm, jaw length 4cm, curved

320-147

12.4cm, jaw length 5.2cm, curved



DeBAKEY Cross-Action Bulldog Clamps, Tension 2.7kg, DeBakey Serrations

320-150	7.5cm, straight, jaw length 2cm
320-155	8.5cm, straight, jaw length 3cm
320-160	10.5cm, straight, jaw length 4.5cm
320-165	12cm, straight, jaw length 6.5cm
320-152	7.5cm, curved, jaw length 2cm
320-157	8.5cm, curved, jaw length 3cm
320-162	10.5cm, curved, jaw length 4.5cm
320-167	12cm, curved, jaw length 6.5cm



GREGORY Cross-Action "Soft" Bulldog Clamps, Tension 1.5kg, DeBakey Serrations

320-065	Right angle, short, 4 1/4" (10.7cm), jaw length 1 15/16" (5cm)
320-179	Right angle, long, 4 1/2" (11.4cm), jaw length 2 1/8" (5.4cm)
320-066	Straight, short, 3 1/2" (8.9cm), jaw length 1 3/16" (3cm)
320-067	Straight, long, 4" (10.2cm), jaw length 1 3/4" (4.5cm)
320-068	Curved body with right angle tip, long, 4 5/8" (11.7cm), jaw length 3" (7.6cm)



WELDON Miniature Bulldog Clamps, 3.4cm, Jaw Length 13mm, Fine Serrated Jaws

- 320-168** Straight
320-169 Curved

**JACOBSON Micro-Coronary Bulldog Clamps, 4.8cm, Jaw Length 21mm, Fine Serrated Jaws**

- 320-177** Straight
320-178 Curved

**DIETRICH Micro-Coronary Bulldog Clamps, Tension 55gms, Fine Serrated Jaws**

- 320-170** 5.2cm length, 10mm angled jaws
320-171 5.2cm length, 10mm straight jaws
320-172 5.4cm length, 12mm angled jaws
320-173 5.6cm length, 12mm straight jaws
320-174 6.0cm length, 20mm angled jaws
320-175 6.4cm length, 20mm straight jaws



DIETRICH Micro-Coronary Bulldog Clamps, Strong Tension 180gms, Fine Serrated Jaws

- 320-172ST** 4.4cm length, 10mm angled jaws
320-175ST 4.4cm length, 10mm straight jaws



SENN Retractors, 6 1/4" (15.9cm), Double-Ended, Solid Blade 3/4" x 1/4" (19 x 6.3mm)

- 190-110** 3 sharp prongs, 8mm wide
190-112 3 blunt prongs, 8 mm wide



U.S. ARMY-NAVY Retractors

- 200-105** 8 1/4" (21cm), double-ended, blades 5/8" (1.5cm) wide, set of 2



LAHEY Thyroid Retractor

- 200-134** 8" (20.3cm), blade 1" x 1/4" wide (25 x 7mm)



CUSHING Vein Retractor, Blade 3/8" x 7/16" (9.5 x 11mm)

200-135	9" (22.9cm)
200-136	11" (27.9cm)
200-137	14" (35.6cm)

**LOVE Nerve Root Retractor, 7mm Blade, 7 3/4" (19.7cm)**

285-420	Straight
285-421	45° angle
285-422	90° angle

**RICHARDSON Retractors, Loop Handle, 9 1/2" (24.1cm)**

202-155	Blade 3/4" wide x 1" deep (1.9 x 2.5cm)
202-156	Blade 1" wide x 1 1/4" deep (2.5 x 3.2cm)
202-157	Blade 1 1/2" wide x 1 1/2" deep (3.8 x 3.8cm)

**RICHARDSON Appendectomy Retractor, Loop Handle, 9 1/4" (23.5cm)**

202-160	Blade 3/4" wide x 2" deep (1.9 x 5.1cm)
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**ALM Retractor**

205-100	2 3/4" (7cm), spread 2" (5.1cm)
205-105	4" (10.2cm), spread 2 1/2" (6.4cm)



JARIT Cross Action Retractors, 4" (10.2cm), Spread 1" (2.5cm)

205-110

Sharp prongs

205-111

Bunt prongs



JARIT Spring Wire Retractors

205-136

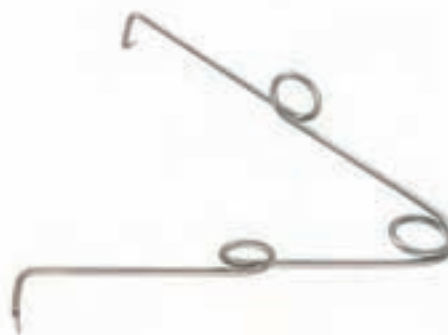
Style 1: 3" (7.6cm)

205-137

Style 2: 3 1/2" (8.9cm)

205-138

Style 3: 4 1/2" (11.4cm)

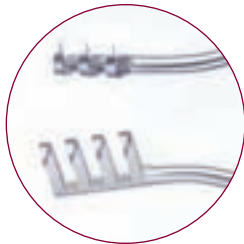


GELPI Perineal Retractors

205-123	3 1/2" (8.9cm)
205-124	4 1/2" (11.4cm)
205-125	5 1/2" (14cm)
205-120	7 1/2" (19.1cm)

**WEITLANER Retractors**

205-140	4 1/2" (11.4cm), 2 x 3 sharp prongs, 15mm deep
205-141	4 1/2" (11.4cm), 2 x 3 blunt prongs, 15mm deep
205-150	5 1/2" (14cm), 3 x 4 sharp prongs, 17mm deep
205-151	5 1/2" (14cm), 3 x 4 blunt prongs, 17mm deep
205-155	6 1/2" (16.5cm), 3 x 4 sharp prongs, 18mm deep
205-156	6 1/2" (16.5cm), 3 x 4 blunt prongs, 18mm deep
205-160	8" (20.3cm), 3 x 4 sharp prongs, 20mm deep
205-161	8" (20.3cm), 3 x 4 blunt prongs, 20mm deep
205-165	9 1/2" (24.1cm), 3 x 4 sharp prongs, 27mm deep
205-166	9 1/2" (24.1cm), 3 x 4 blunt prongs, 27mm deep



WEITLANER Retractors, Hinged Blades

- 205-175** 5 1/2" (14cm), 3 x 4 sharp prongs, 17mm deep
- 205-176** 5 1/2" (14cm), 3 x 4 blunt prongs, 17mm deep
- 205-180** 6 1/4" (15.9cm), 3 x 4 sharp prongs, 18mm deep
- 205-181** 6 1/4" (15.9cm), 3 x 4 blunt prongs, 18mm deep
- 205-190** 8" (20.3cm), 3 x 4 sharp prongs, 20mm deep



ADSON Cerebellar Retractors, 7 1/2" (19.1cm)

- 205-200** 4 x 4 sharp prongs, 22mm deep
- 205-201** 4 x 4 blunt prongs, 22mm deep



ADSON Cerebellar Retractors, 7 1/4" (18.4cm), Angled

- 205-205** 4 x 4 sharp prongs, 22mm deep
- 205-206** 4 x 4 blunt prongs, 22mm deep



ANDERSON-ADSON Scalp Retractor

290-122 7 3/4" (19.7cm), angled arms 4 x 4 sharp prongs, 16mm deep

**BECKMAN Laminectomy Retractors**

205-209 9 1/2" (24.1cm), 3 x 4 sharp prongs, 1 1/8" deep (2.8cm)

205-210 12 3/8" (31.4cm), 4 x 4 sharp prongs, 5/8" deep (1.6cm)

**BECKMAN-ADSON Laminectomy Retractors, 12" (30.5cm)**

205-220 4 x 4 sharp prongs, 1" x 1" deep (2.5 x 2.5cm)

205-221 4 x 4 blunt prongs, 1" x 1" deep (2.5 x 2.5cm)

205-225 4 x 4 sharp prongs, 1" x 1 3/4" deep (4.5 x 2.5cm)

205-226 4 x 4 blunt prongs, 1" x 1 3/4" deep (4.5 x 2.5cm)



HENLY Retractor, 6 1/2" (16.5cm), Improved Pattern

- 205-530** Complete set includes frame with interchangeable lateral and center blades
205-532 1 pair lateral blades, blunt, 7/8" wide x 1" deep (2.2 x 2.5cm)
205-534 1 pair lateral blades, blunt, 7/8" wide x 2" deep (2.2 x 5.1cm)
205-536 1 pair lateral blades, blunt, 7/8" wide x 3" deep (2.2 x 7.6cm)
205-540 1 center blade, 5/8 wide x 3/8" deep (1.6 x 1.9cm)
205-542 1 center blade, 5/8 wide x 3/8" deep (1.6 x 1.9cm)
205-544 1 center blade, 5/8 wide x 3/8" deep (1.6 x 1.9cm)



HENLY Retractor, 6 1/2" (16.5cm), Original Pattern

- 205-550** Complete set includes frame with interchangeable center blades
205-540 5/8" wide x 3/4" deep (1.6 x 1.9cm)
205-542 5/8" wide x 1" deep (1.6 x 2.5cm)
205-544 5/8" wide x 1 1/4" deep (1.6 x 3.2cm)



ANDREWS-PYNCHON Suction Tube, 9 3/8" (23.8cm)**170-115****YANKAUER Suction Tube****170-118** 8 1/4" (21 cm), pediatric**170-120** 11 1/2" (29.2 cm)

COOLEY Graft Suction Tube

310-103 13" (33cm), 8mm wide tip



COOLEY Vascular Suction Tube

310-105 11 1/2" (29.2cm), 6mm wide tip



COOLEY Intracardiac Suction Tube

310-108 11 1/4" (28.6cm), detachable 9mm wide tip



COOLEY Sump-Suction Tubes, 13" (33cm), Entire Tube Removable From Handle, 7.5mm Wide Tip

310-110 30° angle
310-112 90° angle



FRAZIER Suction Tubes, 7" (17.8cm), Angled, Working Length 4 1/4" (10.8cm)

285-450	6 French
285-451	7 French
285-452	8 French
285-453	9 French
285-454	10 French
285-455	11 French
285-456	12 French
285-457	14 French
285-458	15 French

**FRAZIER Suction Tubes, 7" (17.8cm), Straight, Working Length 5 1/4" (13.3cm)**

285-460	6 French
285-461	7 French
285-462	8 French
285-463	9 French
285-464	10 French
285-465	11 French
285-466	12 French

**FRAZIER Suction Tubes, 9" (22.9cm), Working Length 6 3/4" (17.1cm)**

285-470	6 French
285-471	7 French
285-472	8 French
285-473	9 French
285-474	10 French
285-475	11 French
285-476	12 French



FRAZIER Suction Tubes, 7 1/2" (19.1cm), Angled, Working Length 6" (15.2cm)

285-477	7 French
285-478	9 French
285-479	11 French



BARON Suction Tubes, 6 1/2" (16.5cm), Angled, Working Length 4" (10.2cm)

285-480	3 French
285-482	5 French
285-484	7 French



ADSON Suction Tubes, 12 French

285-490	5" (12.7cm)
285-492	8" (20.3cm)



Laryngeal Mirrors, Threaded Handle

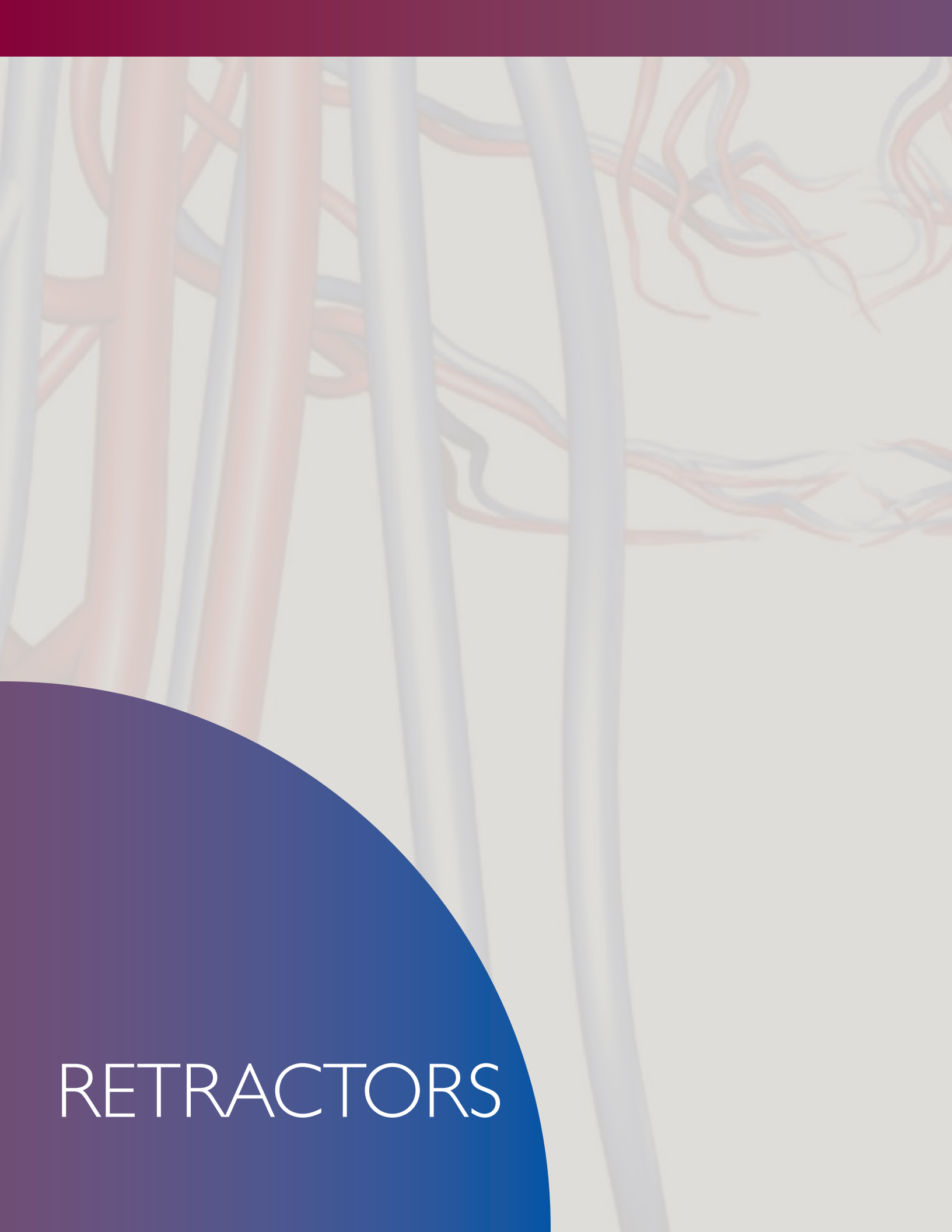
460-100	#00: 12mm diameter; 7 3/4" (19.7cm)
460-101	#0: 14mm diameter; 7 3/4" (19.7cm)
460-102	#1: 16mm diameter; 7 3/4" (19.7cm)
460-103	#2: 18mm diameter; 7 7/8" (20cm)
460-104	#3: 20mm diameter; 8" (20.3cm)
460-105	#4: 22mm diameter; 8" (20.3cm)
460-106	#5: 24mm diameter; 8 1/4" (21cm)
460-107	#6: 26mm diameter; 8 1/4" (21cm)
460-108	#7: 28mm diameter; 8 5/8" (21.9cm)
460-109	#8: 30mm diameter; 8 5/8" (21.9cm)







RETRACTORS

The background features a series of vertical, slightly wavy lines in shades of light blue and grey. A large, solid blue circle is positioned in the bottom-left corner, partially overlapping the text.

RETRACTORS

GARRETT Peripheral Vascular, Self-Retaining Retractor

205-560	Retractor set: retractor body and 3 pairs of (6) detachable blades
205-561	Garrett retractor body only
205-562	Small blades, width 1 1/2" (3.8cm), depth 1 1/4" (3.2cm), pair
205-563	Medium blades, width 1 1/2" (3.8cm), depth 2 1/4" (5.7cm), pair
205-564	Large blades, width 1 1/2" (3.8cm), depth 3 1/4" (8.3cm), pair



DARLING Popliteal Retractors, Self-Retaining

205-260

Left: Total opening 3 3/4" (9.5cm), overall length 6 1/2" (16.5cm)
Short blade, width 1" (2.5cm), depth 2 1/8" (5.4cm), Left
Long blade, width 1 1/2" (3.8cm), depth 3" (7.6cm), Left

205-261

Right: Total opening 3 3/4" (9.5cm), overall length 6 1/2" (16.5cm)
Short blade, width 1" (2.5cm), depth 2 1/8" (5.4cm), Right
Long blade, width 1 1/2" (3.8cm), depth 3" (7.6cm), Right



OCHSNER Vascular Retractor, Self-Retaining, Swivel Blades, Flexible Arms

205-570

Total opening 5 1/2" (14cm), total length 8" (20.3cm)
Arm length: 3 1/4" (8.3cm)
Blades: width 1" (2.5cm), depth 2" (5.1cm)



PARSONNET Epicardial Retractor, 3 x 3 Sharp Prongs

310-505	1 7/8" (4.8cm)
310-506	1 1/2" (3.8cm)
310-507	1 1/4" (3.2cm)
310-508	1" (2.5cm)



DAVIDSON Scapula Retractors

300-450	Small, blade width 3" (7.6cm), depth 2" (5.1cm)
300-451	Large, blade width 3" (7.6cm), depth 3 1/2" (8.9cm)



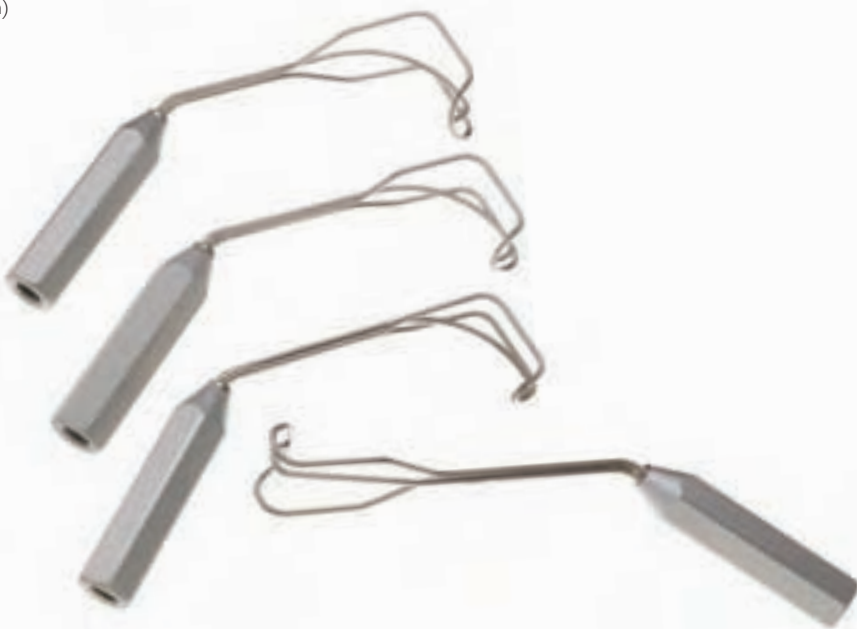
ROSS Aortic Valve Retractors, 10" (25.4cm)

310-140	No. 1 blade: 5/8" x 5/8" (1.5cm x 1.6cm)
310-141	No. 2 blade: 1/2" x 7/8" (1.3cm x 2.3cm)
310-142	No. 3 blade: 3/4" x 1" (1.8cm x 2.5cm)
310-143	No. 4 blade: 1/2" x 1 1/8" (1.3cm x 2.9cm)
310-144	No. 5 blade: 1 1/8" x 1 1/8" (2.9cm x 2.9cm)
310-145	No. 6 blade: 1 3/8" x 3/4" (3.5cm x 2.1cm)



COOLEY Atrial Valve Retractors

- 310-150** Right, width 7/8" (2.2cm), depth 1 7/8" (4.8cm)
- 310-151** Right, width 1 1/2" (3.8cm), depth 2" (4.8cm)
- 310-152** Right, width 2" (4.8cm), depth 1 3/4" (4.5cm)
- 310-155** Left, width 2" (5.1cm), depth 1" (2.5cm)



ALLISON Lung Retractors

- 310-420** Large, 12 1/2" (32cm), 2 1/8" wide (5.4cm)
- 310-424** Small, 10 1/4" (26cm), 1 1/2" wide (3.8cm)



DESMARRES-Type Valve Retractors, 7 1/4" (18.4cm), Malleable

- 310-490** 4mm wide
- 310-491** 6mm wide
- 310-492** 8mm wide
- 310-493** 10mm wide
- 310-494** 12mm wide
- 310-495** 15mm wide



CRAWFORD Aortic Retractors, 7 7/8" (20cm)

- 310-500** Small, blade width 1/2" (1.5cm), depth 5/8" (1.8cm)
- 310-502** Large, blade width 7/8" (2.2cm), depth 1" (2.4cm)



JARITRAK IMA Set

- Includes the following parts which can be ordered separately:
- 206-104** Table Clamp, with Vertical Post
 - 206-160** Horizontal Solid Bar
 - 206-168** Post Clamp
 - 206-170** IMA Cross Bar
 - 206-250** IMA Retractor Blade with Clamp Assembly, (two pieces)
 - 206-252** Sterilization Case
 - 206-182**



JARITRAK Abdominal Aortic Aneurysm Set

- Includes the following parts which can be ordered separately:
- 206-100** Small Oval Ring, 8 1/2 x 12"
 - 206-124** Medium Oval Ring, 10 1/2 x 15"
 - 206-128** Large Oval Ring, 12 1/2 x 16 1/2"
 - 206-132** Table Clamp with Vertical Post (shown above)
 - 206-160** Horizontal Solid Bar (shown above)
 - 206-168** Post Clamp
 - 206-170** Tilting Blade Clamp, set of 4 (not shown)
 - 206-174** Small Kelly Blade, 2" x 3"
 - 206-200** Medium Kelly Blade, 2" x 4"
 - 206-202** Medium Malleable Blade, 2" x 6"
 - 206-212** Small Balfour Blade, 3" x 2 1/2"
 - 206-226** Sterilization Case (pictured above)
 - 206-180**



FAVALORO-MORSE Sternal Retractor

300-253

Spread: 9" (22.9cm)
Arm Length: 6" (15.2cm)
Blades: 1 1/8" x 1 1/2" deep (3cm x 4cm)



MORSE Sternal Retractors

300-250

Child size, spread: 6" (15.5cm), arm length: 4 7/8" (12.4cm), blades: 7/8" x 3/4" deep (2.2cm x 1.8cm)

300-251

Adult size, spread: 9" (23cm), arm length: 5 3/4" (14.7cm), blades: 1 1/8" x 1" deep (2.9cm x 2.4cm)



ANKENEY Sternal Retractor, Adult, Six Swivel Blades, with Suture Holding Springs

300-165

Spread: 7 3/4" (19.7cm)

Arm length: 13 1/2" (34.3cm)

Blades: 1 3/8" x 1 3/8" deep (3.5cm x 3.5cm)

300-166

Set of six deep blades: 1 3/8" x 2" deep (3.5cm x 5.1cm)



ANKENEY Sternal Retractor, Child, Aluminum Arms with Stainless Steel Rack

300-160

Spread: 4 3/4" (12cm)

Arm length: 4 1/2" (11.4cm)

Blades: 3/4" x 1" deep (1.9cm x 2.5cm)



COOLEY Sternal Retractors

- 300-260** Child size, spread: 5 1/4" (13.3cm), arm length: 4 1/2" (11.4cm), blades: 1 3/4" x 1" deep (4.5cm x 2.7cm)
300-261 Adult size, spread: 6 1/2" (16.5cm), arm length: 5 1/2" (13.9cm), blades: 1 1/2" x 2" deep (3.9cm x 5.1cm)
300-262 Extra large, spread: 7 1/4" (18.5cm), arm length: 6" (15.5cm), blades: 4" x 1 1/8" deep (10.2cm x 3cm)



COOLEY Pediatric Sternal Retractors, Arms and Blades Aluminum, Ratchet Bar Stainless Steel

- 320-515** Spread: 2 3/4" (7cm), arm length: 2 1/4" (5.6cm), blades: 5/8" x 5/8" deep (1.6cm x 1.6cm)
320-516 Spread: 3 1/2" (8.9cm), arm length: 3" (7.6cm), blades: 3/4" x 3/4" deep (1.8cm x 1.8cm), with teeth
320-514 Spread: 3 3/4" (9.6cm), arm length: 3" (7.8cm), blades: 1 1/8" x 7/8" deep (2.9cm x 2cm)



COOLEY Neonatal Sternal Retractor, Arms and Blades Aluminum, Ratchet Bar Stainless Steel

320-510

Spread: 2 3/4" (7cm), arm length: 2 1/8" (5.5cm), blades: 5/8" x 1/2" deep (1.7cm x 1.4 cm)



CASTANEDA Sternal Retractor, Arms and Blades Aluminum, Ratchet Bar Stainless Steel

300-190

Newborn size, spread: 2 1/2" (6.5cm), arm length: 2 1/8" (5.4cm), blades: 1 1/4" x 1/2" deep (3.3cm x 1.3cm)

300-192

Infant size, spread: 3 1/2" (8.8cm), arm length: 3 1/8" (7.9cm), blades: 1 3/4" x 5/8" deep (4.5cm x 1.7cm)

300-194

Child size, spread: 4 1/8" (10.5cm), arm length: 5" (12.8cm), blades: 2 3/8" x 7/8" deep (6cm x 2.2cm)



HIMMELSTEIN Sternal Retractor

300-205

Spread: 7 1/4" (18.5cm)
Arm length: 5 3/4" (14.7cm)
Blades: 1 3/8" x 1 1/8" deep (3.5cm x 3cm)



HARKEN Rib Spreader and Scapula Retractor, 2 Pair of Blades

300-185

Spread: 11" (28cm)
Arm length: 8 1/2" (21.5cm)
Fixed blades: 2 1/2" x 2" deep (6.4cm x 5.3cm)
Scapula blades: 2" x 2" deep (4.9cm x 5.1cm)



BURFORD Rib Spreader, 2 Pair of Interchangeable Blades

300-175

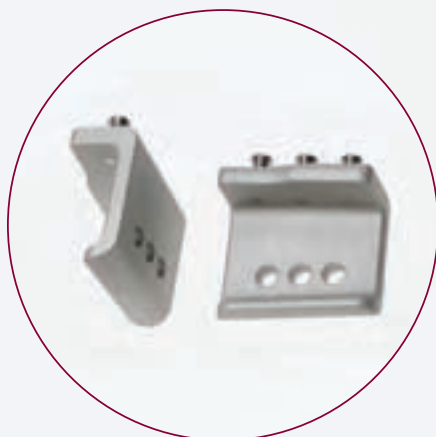
Spread: 8" (20.5cm)
 Arm length: 7 3/4" (19.5cm)
 Small blades: 2 1/2" x 2" deep (6.4cm x 5cm)
 Large blades: 2 1/2" x 3 1/8" deep (6.4cm x 8cm)



BURFORD Rib Spreader, 2 Pair of Interchangeable Blades, Arms and Blades Aluminum, Ratchet Bar Stainless Steel

300-180

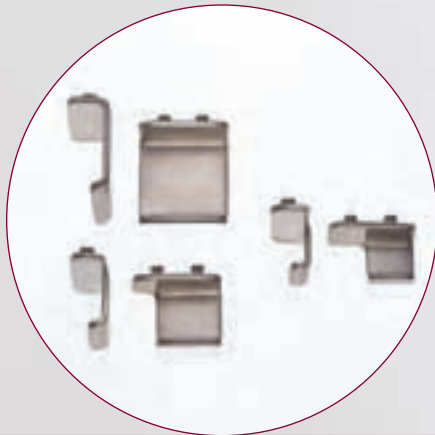
Spread: 7" (17.8cm)
 Arm length: 7 3/4" (19.5cm)
 Small blades: 2 3/8" x 2 1/8" deep (6.2cm x 5.3cm)
 Large blades: 2 3/8" x 2 7/8" deep (6.2cm x 7.3cm)



BURFORD-FINOCHIETTO Rib Spreader, Child Size, 2 Pair of Blades

300-183

Spread: 6 1/4" (16cm)
 Arm Length: 4 1/8" (10.5cm)
 Blades: 7/8" x 1" deep (2.3cm x 2.5cm)
 Blades: 1 1/4" x 1 3/8" deep (3.3cm x 3.5cm)
 Blades: 1 5/8" x 1 3/8" deep (4.3cm x 3.5cm)
 Blades: 1 3/4" x 2" deep (4.5cm x 5cm)



FINOCHIETTO Rib Spreaders, Curved Arms

300-100

Child size, spread: 5 3/8" (13.8cm), arm length: 5 1/4" (13.5cm), blades: 1 3/4" x 1 5/8" deep (4.4cm x 4.3cm)

300-105

Adult size, medium, spread: 7 7/8" (20cm), arm length: 7 1/4" (18.4cm), blades: 2 1/2" x 2 1/8" deep (6.6cm x 5.5cm)

300-115

Adult size, large, spread: 7 7/8" (20cm), arm length: 7 1/4" (18.4cm), blades: 2 1/2" x 2 7/8" deep (6.6cm x 7.3cm)



FINOCHIETTO Rib Spreaders, Curved Arms

300-100

Child size, spread: 5 3/8" (13.8cm)
Arm length: 5 1/4" (13.5cm),
Blades: 1 3/4" x 1 5/8" deep (4.4cm x 4.3cm)



FINOCHIETTO Infant Rib Spreader

300-200

Spread: 3 1/4" (8.3cm)
Arm length: 2 3/4" (7cm), Straight Arms
Blades: 3/4" x 3/4" deep (1.9cm x 1.9cm)

300-202

Spread: 2 3/4" (6.9cm)
Arm length: 2 1/4" (5.6cm), Curved Arms
Blades: 3/4" x 7/8" deep (2.1cm x 2.2cm)



FINOCHIETTO Infant Rib Spreader-Approximator

300-225

Spread: 3" (7.5cm) Arm length: 2 3/8" (6cm) Blades: 3/4" x 7/8" deep (2cm x 2.2cm)



BAILEY-FINOCHIETTO Pediatric Rib Spreader, Arms and Blades Aluminum, Ratchet Bar Stainless Steel

320-518

Spread: 2 1/2" (6.5cm), arm length: 2 1/8" (5.5cm), blades: 5/8" x 5/8" deep (1.5cm x 1.5cm)



BAILEY-FINOCHIETTO Pediatric Rib Spreader, Titanium

320-517TI Spread: 2 7/8" (7.2cm), arm length: 2 1/4" (5.9cm), blades: 3/4" x 3/4" deep (2cm x 2cm)



HAIGHT-FINOCHIETTO Pediatric Rib Spreader, Arms and Blades Aluminum, Ratchet Bar Stainless Steel

300-213 Spread: 3 1/2" (9cm)
Arm length: 3 1/8" (8cm)
Blades: 1 1/8" x 1 3/8" deep (3cm x 3.5cm)



HAIGHT Pediatric Rib Spreaders

300-210

Spread: 4 3/4" (12cm), arm length: 2 1/2" (6.4cm), blades: 1 1/8" x 1 3/8" deep (3cm x 3.5cm)

300-211

Spread: 4 3/4" (12cm), arm length: 3 1/2" (9cm), blades: 1 3/16" x 1 3/8" deep (3cm x 3.5cm)



TUFFIER Rib Spreaders

300-150

Roughened blades, spread: 6 3/4" (17.2cm), arm length: 4 1/4" (10.8cm), blades: 1 3/4" x 2" deep (4.4cm x 5.1cm)

300-151

Grooved blades, spread: 6 7/8" (17.5cm), arm length: 4 1/4" (10.8cm), blades: 1 3/4" x 2" deep (4.4cm x 5.1cm)



BAILEY Rib Contractor, 8" (20cm), Adult

300-230



BAILEY Rib Contractor, 6 1/4" (16cm), Pediatric

300-231



BAILEY-GIBBON Rib Contractor, 8" (20.5cm), Adult

300-235



LEMMON Sternal Approximator, 7" (18cm), Adult

300-238



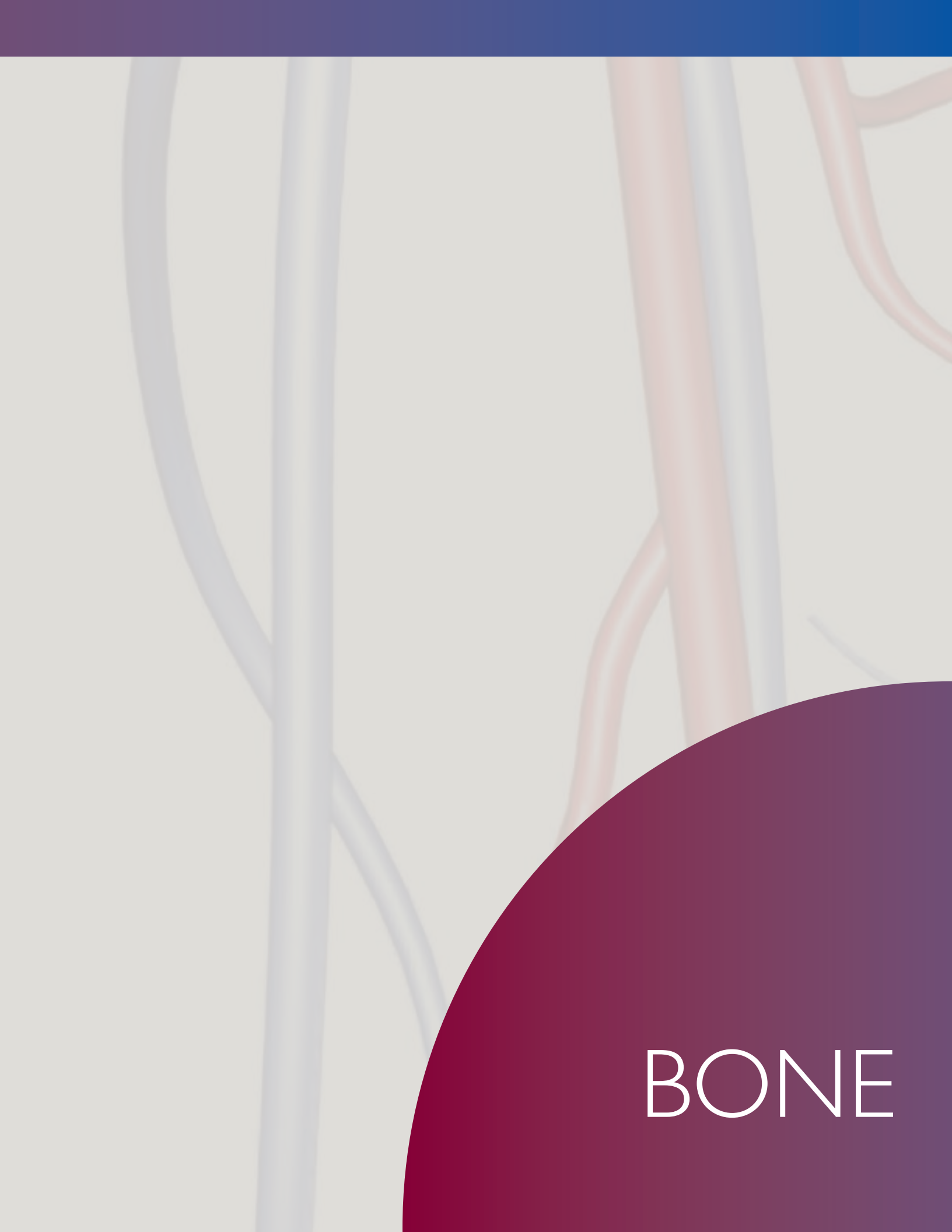
CardioVascular - RETRACTOR GUIDE

ALL DIMENSIONS ARE APPROXIMATE

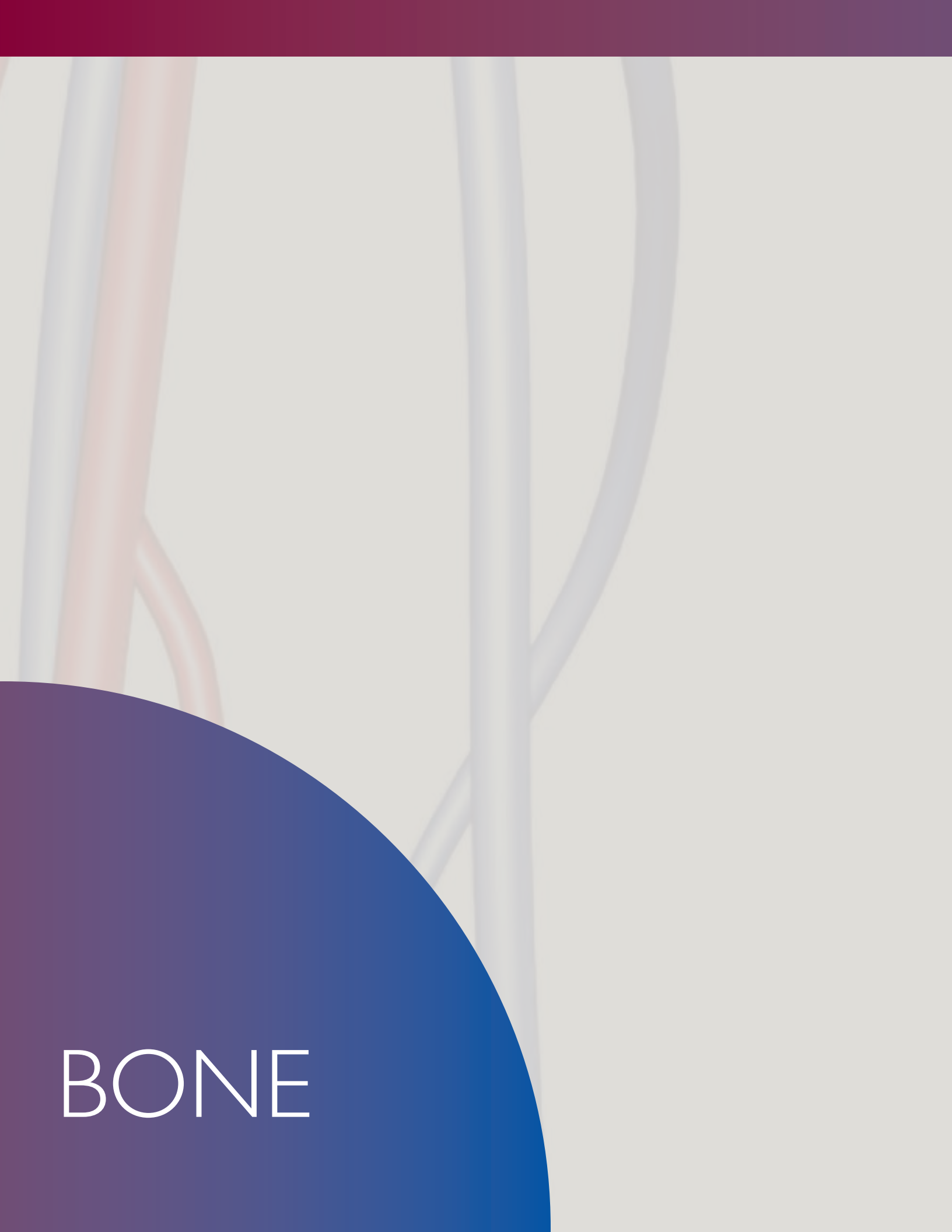
Cat#		Blade Style	
NEWBORN			
Castaneda	300-190	Aluminum body and frame	Sternal, Single, Fixed
Castaneda	300-192	Aluminum body and frame	Sternal, Single, Fixed
Cooley	320-510	Aluminum arms and blades, Stainless Steel ratchet bar	Sternal, Single, Fixed
Bailey-Finochietto	320-518	Aluminum body and frame	Rib, Single, Fixed
Bailey-Finochietto	320-517TI	Titanium	Rib, Single, Fixed
INFANT TO YOUNG CHILDREN			
Cooley	320-515	Aluminum arms and blades, Stainless Steel ratchet bar	Sternal, Single, Fixed
Cooley	320-516	Aluminum arms and blades, Stainless Steel ratchet bar	Sternal, Single, Fixed, with Teeth
Cooley	320-514	Aluminum arms and blades, Stainless Steel ratchet bar	Sternal, Single, Fixed
Castaneda	300-194	Aluminum body and frame	Sternal, Single, Fixed
Finochietto	300-225		Rib, Single, Fixed, with Rib Approximator
Finochietto	300-200		Rib, Single, Fixed, Straight Arms
Haight-Finochietto	300-213	Aluminum arms and blades, Stainless Steel ratchet bar	Rib, Single, Fixed
Finochietto	300-202		Rib, Single, Fixed, Curved Arms
Haight	300-210		Rib, Single, Fixed
Haight	300-211		Rib, Single, Fixed
OLDER CHILD 6-10 YEARS			
Ankeney	300-160		Sternal, 4 Swivel Blades
Cooley	300-260		Sternal, Single, Fixed
Morse	300-250		Sternal, 4 Swivel Blades
Cooley	300-261		Sternal, Single, Fixed
Finochietto	300-100		Rib, Single, Fixed, Curved Arms
Burford	300-183		Rib, Single, Interchangeable
Tuffier	300-151		Rib, Single, Fixed, Grooved Blades
Tuffier	300-150		Rib, Single, Fixed, Roughened Blades
ADULT			
Ankeney	300-165		Sternal, 6 Swivel Blades
Blades	300-166		
Himmelstein	300-205		Sternal, Single, Swivel Blades
Cooley	300-262		Sternal, Fixed
Morse	300-251		Sternal, 4 Swivel Blades
Favaloro-Morse	300-253		Sternal, 4 Swivel Blades
Burford	300-180	Aluminum arms and blades, Stainless Steel ratchet bar	Rib, Single, Interchangeable
Small Blades			
Large Blades			
Finochetto-Medium	300-105		Rib, Single, Fixed, Medium, Curved Arms
Finochetto	300-115		Rib, Single, Fixed, Large, Curved Arms
Buford	300-175		Rib, Single, Interchangeable
Small Blades			
Large Blades			
Harken	300-185		Rib, Single, Fixed, with Scapula Blades
Fixed Blades			
Scapula Blades			

Maximum Spread	Blade Width	Blade Depth	Arm Length	Page #
2 1/2" (6.5cm)	1 1/4" (3.3cm)	1/2" (1.3cm)	2 1/8" (5.4cm)	177
2 1/2" (8.8cm)	1 3/4" (4.5cm)	5/8" (1.7cm)	3 1/8" (7.9cm)	177
2 3/4" (7cm)	1 1/16" (1.7cm)	1/2" (1.4cm)	2 1/8" (5.5cm)	177
2 1/2" (6.5cm)	1/2" (1.5cm)	1/2" (1.5cm)	2 1/8" (5.5cm)	182
2 7/8" (7.2cm)	3/4" (2cm)	3/4" (2cm)	2 1/4" (5.9cm)	183
3 3/8" (8.7cm)	5/8" (1.6cm)	5/8" (1.6cm)	2 1/4" (5.6cm)	176
3 1/2" (8.9cm)	3/4" (1.9cm)	3/4" (1.9cm)	3" (7.6cm)	176
3 3/4" (9.6cm)	1 1/8" (2.9cm)	7/8" (2cm)	3" (7.8cm)	176
4 1/8" (10.5cm)	2 3/8" (6cm)	7/8" (2.2cm)	5" (12.8cm)	177
3" (7.5cm)	3/4" (2cm)	7/8" (2.2cm)	2 3/8" (6cm)	182
3 1/4" (8.3cm)	3/4" (1.9cm)	3/4" (1.9cm)	2 3/4" (7cm)	181
3 1/2" (9cm)	1 3/16" (3cm)	1 3/8" (3.5cm)	3 1/8" (8cm)	183
3 3/4" (6.9cm)	3/4" (2.1cm)	7/8" (2.2cm)	2 1/4" (5.6cm)	181
4 3/4" (12cm)	1 3/16" (3cm)	1 3/8" (3.5cm)	2 1/2" (6.4cm)	184
4 3/4" (12cm)	1 3/16" (3cm)	1 3/8" (3.5cm)	3 1/2" (9cm)	184
4 3/4" (12cm)	3/4" (1.9cm)	1" (2.5cm)	4 1/2" (11.4cm)	175
5 1/4" (13.3cm)	1 3/4" (4.5cm)	1" (2.7cm)	4 1/2" (11.4cm)	176
6" (15.5cm)	7/8" (2.2cm)	5/8" (1.8cm)	4 7/8" (12.4cm)	174
6 1/2" (16.5cm)	1 1/2" (3.9cm)	2" (5.1cm)	5 1/2" (13.9cm)	176
5 1/2" (13.8cm)	1 3/4" (4.4cm)	1 3/4" (4.3cm)	5 1/4" (13.5cm)	179
6 1/4" (16cm)	1" (2.3cm)	1" (2.5cm)	4 1/8" (10.5cm)	180
	1 1/4" (3.3cm)	1 3/8" (3.5cm)		
	1 3/4" (4.3cm)	1 3/8" (3.5cm)		
	1 3/4" (4.3cm)	2" (5cm)		
6 7/8" (17.4cm)	1 3/4" (4.4cm)	2" (5.1cm)	4 1/4" (10.8cm)	184
6 7/8" (17.4cm)	1 3/4" (4.4cm)	2" (5.1cm)	4 1/4" (10.8cm)	184
7" (19.7cm)	1 3/8" (3.5cm)	1 3/8" (3.5cm)	13" (33cm)	175
	1 3/8" (3.5cm)	2" (5.2cm)		175
7 1/4" (18.5cm)	1 3/8" (3.5cm)	1 1/8" (3cm)	5 3/4" (14.7cm)	178
7 1/4" (18.5cm)	4" (10.2cm)	1 1/8" (3cm)	6" (15.5cm)	176
9" (23cm)	1 1/8" (2.9cm)	1" (2.4cm)	5 3/4" (14.7cm)	174
9" (23cm)	1 1/8" (3cm)	1 1/2" (4cm)	6" (15.2cm)	174
7" (17.5cm)			7 5/8" (19.5cm)	179
	2 1/2" (6.2cm)	2" (5.3cm)		
	2 1/2" (6.2cm)	2 7/8" (7.3cm)		
7 7/8" (20cm)	2 5/8" (6.6cm)	2 1/8" (5.5cm)	7 1/4" (18.4cm)	180
7 7/8" (20cm)	2 5/8" (6.6cm)	2 7/8" (7.3cm)	7 1/4" (18.4cm)	180
8" (20.5cm)			7 5/8" (19.5cm)	179
	2 1/2" (6.4cm)	2" (5cm)		
	2 1/2" (6.4cm)	3 1/8" (8cm)		
11" (28cm)			8 1/2" (21.5cm)	178
	2 1/2" (6.4cm)	2" (5.3cm)		
	2" (4.9cm)	2" (5.1cm)		





BONE

An anatomical illustration of the human skeletal system, specifically focusing on the spine and ribcage. The spine is shown in a light gray color, and the ribs are shown in a light blue color. A large, dark blue, semi-circular shape is positioned in the lower-left corner, partially obscuring the lower part of the spine and ribcage. The word "BONE" is written in white, uppercase letters within this dark blue shape.

BONE

JARIT UTILITY SHEARS, 7" (17.8cm)

100-540	Black handles
100-541	Red handles
100-542	Orange handles
100-543	Blue handles
100-544	Purple handles
100-545	Green handles
100-546	Yellow handles

**SAFETY BLADE REMOVER**

110-164	Safety Blade Remover
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JARIT-RUSKIN Rongeurs, 6" (15.2cm)

- 230-195** Straight, 2mm bite
- 230-196** Curved, 2mm bite
- 230-197** Full curve, 3mm bite
- 230-200** Curved, 4mm bite



RUSKIN Rongeurs, 7 1/4" (18.4cm)

- 230-210** Straight, 5mm bite
- 230-211** Curved, 5mm bite
- 230-214** Straight, 6mm bite
- 230-215** Curved, 6mm bite



RUSKIN-JAY Rongeur, 8" (20.3cm)

- 230-216** Heavy duty, curved, 6mm bite



RUSKIN Angular Duckbill Rongeur**230-218**

6mm bite

**STILLE-LUER Rongeurs, 10mm bite****230-230**

8 1/2" (21.6cm), straight

230-231

8 1/2" (21.6cm), curved

230-235

10 1/2" (26.7cm), straight

230-236

10 1/2" (26.7cm), curved

**STILLE-LUER Angular Duckbill Rongeur****230-240**

6mm bite



STILLE-LUER-ECHLIN Angular Duckbill Rongeur 9" (22.9cm)

230-250

6mm bite



LEKSELL Rongeurs, 9" (22.9cm)

230-260

3mm bite

230-262

5mm bite

230-261

8mm bite



ECHLIN Angular Duckbill Rongeurs, 9" (22.9cm)

230-245

2mm bite

230-246

3mm bite

230-247

4mm bite



DALE Thoracic Rongeur, 14" (36.8cm), 3mm bite**230-280****SAUERBRUCH Rib Rongeurs, 11 1/2" (29.2cm), Square Bite****230-275**

5/8" (1.6cm) wide jaw

230-276

3/4" (1.9cm) wide jaw

**STILLE-LISTON Bone Cutting Forceps, 10 1/2" (26.7cm)****230-320**

Straight

230-321

Up-angled



STILLE-HORSLEY Bone Cutting Forceps

230-325

10" (25.4cm), S-shaped



SAUERBRUCH Rib Shears, 10 1/2" (26.7cm)

300-304



STILLE-GIERTZ Rib Shears, 10" (25.4cm)**300-305****BETHUNE Rib Shears, 14" (35.6cm), Slightly Curved Handles****300-310****BETHUNE-CORYLLOS Rib Shears, Slightly Curved Handles****300-315**

14" (35.6cm), left

300-316

14" (35.6cm), right



RUSKIN-LISTON Bone Cutting Forceps, 7 1/4" (18.4cm)

- 230-305** Straight
- 230-306** Up-angled



LISTON Bone Cutting Forceps

- 230-330** 5 1/2" (14cm), straight
- 230-340** 5 1/2" (14cm), up-angled
- 230-341** 6 1/2" (16.5cm), up-angled
- 230-331** 6 1/2" (16.5cm), straight
- 230-332** 7 1/2" (19.1cm), straight
- 230-342** 7 1/2" (19.1cm), up-angled



RUSKIN-LISTON Bone Splitting Forceps, 7 1/4" (18.4cm)

- 230-310** Straight, narrow jaws
- 230-311** Up-angled, narrow jaws



DOYEN Rasps, 6 1/2" (16.5cm)

- 300-405** Small, left
300-407 Small, right
300-400 Large, left
300-402 Large, right

**MATSON Rib Stripper and Elevator**

- 300-411** 8 3/4" (22.2cm)

**MATSON-ALEXANDER Rib Stripper**

- 300-410** 8 3/4" (22.2cm)

**ALEXANDER-FARABEUF Periosteotome**

- 300-415** 8 1/4" (21cm)



ALEXANDER Periosteotome

300-416

6" (15.2cm), pediatric size



LEBSCHE Sternal Chisel

300-425

10" (25.4cm)



JARIT Wire Pulling Forceps, Maximum Capacity 1mm

275-140

6 1/2" (16.5cm)



JARIT Wire Cutters, Up-Angled, CARB-EDGED Jaws**275-510** 7" (17.8cm), maximum capacity .067" (1.7mm)**JARIT Wire Cutter, Side Cutting, CARB-EDGE Jaws****275-530** 7" (17.8cm), maximum capacity .059" (1.5mm)**WIRE Suture Scissors, CARB-EDGE Jaws, 4 3/4" (12.1cm)****101-350** Angled, for cutting suture and wire (26 gauge and smaller)





SPARE
PARTS

For Product #	Part #	Description	Unit
170-118	170-119	Tips	pkg of 12
170-120	170-121	Tips	pkg of 12
205-120	205-SPS-120	Spring and Screw	1 each
205-123	205-SPS-123	Spring and Screw	1 each
205-124	205-SPS-124	Spring and Screw	1 each
205-140	205-SPS-123	Spring and Screw	1 each
205-141	205-SPS-123	Spring and Screw	1 each
205-150	205-SPS-124	Spring and Screw	1 each
205-151	205-SPS-124	Spring and Screw	1 each
205-155	205-SPS-120	Spring and Screw	1 each
205-156	205-SPS-120	Spring and Screw	1 each
205-160	205-SPS-120	Spring and Screw	1 each
205-161	205-SPS-120	Spring and Screw	1 each
205-226	205-SPS-226	Spring and Screw	1 each
205-530	205-FRM-530	Frame Only	1 each
205-560	205-561	Garrett Retractor Body Only	1 each
205-560	205-562	Blade width 1 1/2", depth 1 1/4"	1 pair
205-560	205-563	Blade width 1 1/2", depth 2 1/4"	1 pair
205-560	205-564	Blade width 1 1/2", depth 3 1/4"	1 pair
230-196	230-SPS-196	Spring and Screw	1 each
230-210	230-SPS-210	Spring and Screw	1 each
230-211	230-SPS-211	Spring and Screw	1 each
230-214	230-SPS-214	Spring and Screw	1 each
230-215	230-SPS-215	Spring and Screw	1 each
230-218	230-SPS-218	Spring and Screw	1 each
230-236	230-SPS-236	Spring and Screw	1 each
230-246	230-SPS-246	Spring and Screw	1 each
230-300	230-SPS-300	Spring and Screw	1 each
230-305	230-SPS-305	Spring and Screw	1 each

For Product #	Part #	Description	Unit
230-306	230-SPS-306	Spring and Screw	1 each
285-450	285-STY-450	Stylet	pkg of 3
285-463	285-STY-463	Stylet	pkg of 3
285-464	285-STY-464	Stylet	pkg of 3
285-484	285-STY-484	Stylet	1 each
300-100	300-HDG-100	Handle with Gear	1 each
300-105	300-HDS-105	Handle Screws	1 each
300-150	300-TSG-150	Thumbscrew and Gear	1 each
300-151	300-TSG-151	Thumbscrew and Gear	1 each
300-165	300-166	Blade width 1 3/8" (3.5cm), depth 2" (5.2cm)	1 set
300-175	300-BLD-175	Set of 4 Blades (2 small, 2 large)	1 set
300-175	300-HDG-175	Handle with Gear	1 each
300-175	300-LBL-175IR	Individual Large Blade, Right	1 each
300-175	300-LBL-175IL	Individual Large Blade, Left	1 each
300-175	300-SBL-175IR	Individual Small Blade, Right	1 each
300-175	300-SBL-175IL	Individual Small Blade, Left	1 each
300-175	300-LBL-175	Large Blades	1 pair
300-175	300-SBL-175	Small Blades	1 pair
300-175	300-SLB-175	Slide Bar Lock	1 each
300-175	300-KLS-175	Knurled Lock Screw	1 pair
300-180	300-SBL-180	Small Blades	1 pair
300-180	300-SBL-180IL	Individual Small Blade, Left	1 each
300-180	300-SBL-180IR	Individual Small Blade, Right	1 each
300-180	300-LBL-180IL	Individual Large Blade, Left	1 each
300-180	300-LBL-180IR	Individual Large Blade, Right	1 each
300-180	300-IBL-180	Large Blades	1 pair
300-185	300-BLS-185	Scapula Blades	1 pair
300-205	300-BLD-205	Blade width 1 3/8" (3.5cm), depth 1 1/8" (2.9cm)	1 pair
300-205	300-THS-205	Thumbscrew	1 pair

CardioVascular - SUGGESTED SETS

For Product #	Part #	Description	Unit
300-211	300-THC-211	Thumbscrew Assembly	1 each
300-235	300-SGA-235	Screw and Gear Assembly	1 each
300-251	300-BLS-251	Set of 4 Blades	1 set
300-253	300-BLG-253	Set of 4 Blades	1 set
300-261	300-HDG-261	Handle with Gear	1 each
300-310	300-SPS-310	Spring and Screw	1 each
305-500	305-498	Obturator, Adult Size (Crochet Hook)	1 each
305-501	305-499	Obturator, Child Size (Crochet Hook)	1 each
310-105	310-TIP-105	Tip	1 each
310-105	310-TIP-105	Tips	pkg of 12
310-108	310-TIP-108	Tips	pkg of 12
310-110	310-SFT-110	Shaft	1 each
310-110	310-TIP-110	Tips	pkg of 12
310-112	310-TIP-112	Tips	pkg of 12
310-112	310-THS-112	Thumbscrew	pkg of 2
310-112	310-THS-112	Thumbscrew	pkg of 2
310-575	310-SLE-575	Sleeve	1 each
310-575	310-OBT-575	Obturator	1 each
310-575	310-SCR-575	Screw	1 each
310-575	310-BDC-575	Bulldog Clamp	1 each
310-575	310-HDL-575	Handle for 310-575	1 each
310-576	310-SLE-576	Sleeve	1 each
310-576	310-OBT-576	Obturator	1 each
310-576	310-SCR-576	Screw	1 each
310-576	310-BDC-576	Bulldog Clamp	1 each
310-576	310-HDL-576	Handle for 310-576	1 each

The background features a light beige field with several thin, wavy, vertical lines in shades of light blue and light red. These lines are slightly curved and overlap each other. In the bottom right corner, there is a large, solid purple circle that partially overlaps the wavy lines.

SUGGESTED SETS

CAROTID TRAY

Clamps

117-240	WEINSTEIN INSTRUMENT HOLDER	1
105-118	PETIT-POINT CRILE, STR, 5-1/2"	6
105-119	PETIT-POINT CRILE, CVD, 5-1/2"	6
105-235	OCHSNER FCPS, 90° VERY FINE, 4-1/2"	2
106-100	HALSTEAD FCPS, STR, 5"	6
106-102	HALSTEAD FCPS, CVD, 5"	6
106-130	KELLY FCPS, STR, 5-1/2"	2
106-131	KELLY FCPS, CVD, 5-1/2"	2
106-171	R-PEAN FCPS, CVD, 6-1/4"	2
111-100	BACKHAUS FCPS, 3-1/2"	6
135-100	ALLIS TISS FCPS, 4X5 TEETH, 6"	2
140-206	LAHEY GALL DUCT FCPS, DEL, 7-1/2"	2
140-223	PETIT-POINT MIXTER FCPS, 7-1/4"	2
140-330	GEMINI CLAMP, 7"	1
320-180	DEBAKEY RING HNDL BD, STR, 5-1/8"	2
320-182	DEBAKEY RING HNDL BD, CVD, 5"	2
320-185	DEBAKEY BULLDOG, 45° 4-3/4"	2
320-187	DEBAKEY BULLDOG, 90° 4"	2
320-218	PROFUNDA CLMP, DEL, 5-3/8"	2
320-220	PROFUNDA CLMP, 6"	2
320-250	DEBAKEY PV CLMP, ANG, 7"	4
320-430	DERRA ANAST CLMP, SM, 6-1/2"	1
320-431	DERRA ANAST CLMP, MED, 6-1/2"	1
320-432	DERRA ANAST CLMP, LG, 6-1/2"	1
320-500	COOLEY NEO CLMP, STR/STR, 5"	1
320-503	COOLEY NEO CLMP STR/CVD, 5"	1
320-504	COOLEY NEO ANASTOMOSIS CLMP	1
320-505	COOLEY NEO CAROTID CLMP, 5"	1
320-550	JAVID CAROTID ARTERY CLMP, 61/4"	1
320-555	JAVID CAROTID ARTERY CLMP, 71/8"	1
320-602	CASTANEDA M-P CLMP, 50° 4-7/8"	1

Scissors

100-302	JAMISON-METZ SCS, CVD, 7"	1
101-220	CARB-EDGE MAYO SCS, STR, 6-3/4"	1
101-258	CARB-EDGE METZ SCS, CVD 7"	1
101-300	CARB-EDGE IRIS SCS, STR, 4-1/2"	1
101-301	CARB-EDGE IRIS SCS, CVD, 4-1/2"	1
102-122	SUPERCUT METZ SCS, CVD, 7"	1
102-310	SUPERCUT METZ SCS, DEL, CVD, 7"	1
310-291	POTTS-SMITH DISS SCS, CVD, 7-1/2"	1
310-310	POTTS-SMITH SCS, 25° 7"	1
310-320	POTTS-SMITH SCS, 60° 7"	1
310-351	DIETHRICH C-ARTERY SCS, 45° 7"	1
310-352	DIETHRICH C-ARTERY SCS, 60° 7"	1
310-356	DIETHRICH C-ARTERY SCS, 45° 5"	1

Needle Holders

121-130	CARB-BITE CRILE-WOOD NH, 6"	1
121-140	CARB-BITE MAYO-HEGAR NH, 7"	2
121-162	CARB-BITE RYDER NH, 7"	2
121-213	CARB-BITE VASCULAR NH, 8"	1
121-228	CARB-BITE MICRO NH, SMOOTH, 7"	1
278-093	STARDUST DNH, STR W/CATCH, 7"	1

Forceps

122-535	JARIT CUSHING NF, DEL, 7"	1
130-234	ADSON TISS FCPS, 1X2T, 4-3/4"	2
130-289	FERRIS-SMITH FCPS, 1X2T, 6-3/4"	1
130-297	CARDIO-GRIP PLAQUE FCPS, 7-1/4"	1
285-126	CARDIO-GRIP GERALD FCPS, 7"	2
320-100	DEBAKEY TISS FCPS, 2.7MM, 6"	2
320-101	DEBAKEY TISS FCPS, 2.7MM, 7-3/4"	2
320-110	DEBAKEY TISS FCPS, 2MM, 6"	2
320-111	DEBAKEY TISS FCPS, 2MM, 7-3/4"	2
320-113	DEBAKEY TISS FCPS, 1.5MM, 6"	2
320-114	DEBAKEY TISS FCPS, 1.5MM 7-3/4"	2
320-119	COOLEY TISS FCPS, 1MM, 7-7/8"	1
279-115	DENNIS MICRO STDST FCPS, IMM RING TIPS, 7-1/4"	2

CAROTID TRAY cont'd

Retractors

190-110	SENN RETR, SHARP, 6-1/4"	2
200-105	US ARMY RETR, SET OF 2, 8-1/2"	2
200-135	CUSHING VEIN RETR, 9"	2
200-292	VOLKMAN RETR, 4PRG, SHP, 8-3/4"	2
202-160	RICHARDSON RETR, LOOP-HNDL	2
205-151	WEITLANER RETR, BLUNT, 5-1/2"	2
205-156	WEITLANER RETR, BLUNT, 6-1/2"	2
205-550	HENLY RETRACTOR SET, ORIGINAL STYLE	1

Miscellaneous

110-165	#3 KNIFE HANDLE	1
110-169	#7 KNIFE HANDLE	2
285-230	DANDY NERVE HOOK, BLUNT, 9"	1
285-380	FREER D/E ELEV, 4.5MM, 7-3/4"	1
285-453	FRAZIER SUCT TUBE, 9FR, 7"	2
305-498	RUMEL OBTURATOR, ADULT	1
310-383	HEPARIN FLUSHING NEEDLE	2
310-385	GARRETT DILATOR, SET OF 9, 8-1/4"	1
310-547	MILLS ENDARTARECTOMY SPAT 6-7/8	1
320-132	GLOVER BULLDOG, CVD, 8.4CM	2
320-142	COOLEY BULLDOG, STR, 6.7CM	2
320-177	JACOBSON BD CLMP, STR, 1-7/8"	2
320-178	JACOBSON BD CLMP, CVD, 1-7/8"	2

NL850-5070	SUNDT EXTERNAL (LOOP) SPRING REINFORCED, 30CM, 3.0MM x 4.0MM
NL850-5071	SUNDT EXTERNAL (LOOP) SPRING REINFORCED, 30CM, 3.0MM x 5.0MM
NL850-5076	SUNDT EXTERNAL (LOOP) NON-REINFORCED, 30CM, 3.0MM x 5.0MM
NL850-5077	SUNDT EXTERNAL (LOOP) NON-REINFORCED, 30CM, 3.0MM x 4.0MM

THORACOTOMY RETRACTOR TRAY

Bottom of Pan

200-105	US ARMY RETR, SET OF 2, 8-1/2"	2
200-135	CUSHING VEIN RETR, 9"	2
200-176	HARRINGTON RETR, LAMB-HNDL	1
200-202	DEAVER RETR, 1X12"	2
200-206	DEAVER RETR, 2X12"	2
200-207	DEAVER RETR, 3X12"	1
200-222	RIBBON RETR, 1-1/4X13"	1
200-223	RIBBON RETR, 1-1/2X13"	1
200-225	RIBBON RETR, 2X13"	1
200-272	VOLKMAN RETR, 4PRG, SHRP, 8"	2
200-298	VOLKMAN RETR, 6PRG, BLNT, 8-3/4"	2
200-318	OLLIER RETR, 4PRG, 9"	2
230-230	STILLE-LUER RONG, STR, 8-1/2"	1
230-231	STILLE-LUER RONG, CVD, 8-1/2"	1
300-230	BAILEY RIB CONTRACTOR, ADULT	1
300-231	BAILEY RIB CONTRACTOR, CHILD	1
300-305	STILLE-GIERTZ RIB SHEARS, 10"	1
300-405	DOYEN RASPATORY, SML, LFT, 6-1/2"	1
300-407	DOYEN RASPATORY, SM., RT, 6-1/2"	1
300-410	MATSON-ALEXANDER RIB STRIPPER	1
300-411	MATSON RIB STRIPPER, 8-3/4"	1
300-450	DAVIDSON SCAPULA RETR, 3X2"	1
300-451	DAVIDSON SCAPULA RETR, 3X3-1/2"	1
310-420	ALLISON LUNG RETRACTOR, LGE	1

Rib Spreaders

300-105	FINO RIB SPREADER, MED, 8"	1
300-150	TUFFIER RIB SPREADER, SCORED	1
300-175	BURFORD RIB SPREADER, 8"	1
300-185	HARKEN RIB SPREADER, 10"	1

RIB SET

Bottom of Pan

230-211	RUSKIN RONG, CVD, 5MM, 7-1/4"	1
230-240	STILLE-LUER DUCKBILL RONG, 9"	1
230-261	LEKSELL RONG, SLIGHT-CVD, 8MM, 9"	1
230-276	SAUERBRUCH RONG, STR, 11-1/2"	1
230-321	STILLE-LISTON FCPS, ANG, 10-1/2"	1
300-230	BAILEY RIB CONTRACTOR, ADULT	1
300-235	BAILEY-GIBBON RIB CONTRACTOR	1
300-304	SAUERBRUCH RIB SHEARS, 10-1/2"	1
300-305	STILLE-GIERTZ RIB SHEARS, 10"	1
300-310	BETHUNE RIB SHEARS, 14"	1
300-451	DAVIDSON SCAPULA RETR, 3X3-1/2"	1
305-210	DUVAL LUNG FCPS, 7-3/4"	1
310-420	ALLISON LUNG RETR, LARGE	1

Rib Spreaders

300-105	FINO RIB SPREADER, MED, 8"	1
300-150	TUFFIER RIB SPREADER, SCORED	1
300-175	BURFORD RIB SPREADER, 8"	1

Rolled Towel

135-150	COLLINS TISS FCPS, 1/2" JAW, 7-3/4"	2
135-155	COLLINS TISS FCPS, 1" JAW, 7-3/4"	2
250-492	LANGENBECK ELEVATOR, WIDE, 8"	1
300-400	DOYEN RASPATORY, LGE, LT, 6 1/2"	1
300-402	DOYEN RASPATORY, LGE, RT, 6 1/2"	1
300-411	MATSON RIB STRIPPER. 8-3/4"	1
300-415	ALEXANDER-FARABEU RASPATORY	1

THORACIC LONG INSTRUMENTS SET

Bottom of Pan

101-232	CARB-EDGE MAYO SCS, CVD, 14"	1
200-137	CUSHING VEIN RETR, 14"	2
130-396	RUSSIAN TISS FCPS, 14"	1
320-108	DEBAKEY TISS FCPS, 2MM, 14"	2
285-315	SMITHWICK HOOK, 12-1/4"	1
305-395	HARRINGTON FCPS, RT ANG, 12-1/2"	1
170-117	YANKAUER SUCTION TUBE, 15"	1

On Stringer

117-250	INSTRUMENT HOLDER, 6X2-1/2"	
121-188	CARB-BITE DEBAKEY NH, 10-1/2"	2
121-189	CARB-BITE DEBAKEY NH, 12"	2
135-190	BABCOCK TISS FCPS, 8"	4
135-195	BABCOCK TISS FCPS, 9-1/2"	4
135-261	PEAN INT FCPS, CVD, 10"	2
135-350	DOYEN INT FCPS, STR, 9"	1
135-355	DOYEN INT FCPS, CVD, 9"	1
305-230	ALLIS-WILLAUER FCPS, 10"	2
305-309	BRIDGE DEEP SURG FCPS, STR, 11"	4
305-310	BRIDGE DEEP SURG FCPS, CVD, 11"	6
305-386	MIXTER FCPS, LONG SERR, 10-3/4"	1
305-398	ROCHESTER-PEAN FCPS, CVD, 12"	2
305-451	SAROT BRONCHUS CLMP, LEFT, 9"	2
320-270	DEBAKEY VASC CLMP, CVD, 9-5/8"	1
320-277	DEB-BAHNSON CLMP, ACUTE, 10-5/8"	2
320-304	DEBAKEY MULTI CLAMP, 60° 9-1/2"	2
320-328	DEBAKEY TANGENT OCCL CLMP, 11"	1
320-390	SATINSKY VENA CAVA CLAMP, LGE	1

VALVE TRAY

Clamps

106-120	CRILE FCPS, STR, 5-1/2"	6
110-100	BACKHAUS FCPS, 3-1/2"	8
135-100	ALLIS TISS FCPS, 4X5 TEETH, 6"	4
135-110	ALLIS TISS FCPS, 5X6 TEETH, 7-1/2"	4
305-297	KANTROWITZ FCPS, 10-1/4"	1
450-205	WHITE TONSIL FCPS, 9"	2
305-310	BRIDGE FCPS, CVD, 11"	1
450-310	SCHNIDT FCPS, 7-1/2"	2
305-230	ALLIS-WILLAUER FCPS, 10"	

Scissors

101-226	MAYO-HARRINGTON SCS, CVD, 9"	1
305-106	NELSON SCS, CVD, 11"	1
305-120	JORGENSEN SCS, CVD, 8-3/4"	1
310-300	SATINSKY SCS, 9-3/4"	1
140-320	THOREK SCS, 7-1/2"	1

Needle Holders

121-133	CARB-BITE CRILE-WOOD NH, 9"	2
121-180	CARB-BITE MASSON NH, 10-1/2"	1
121-188	CARB-BITE DEBAKEY NH, 10-1/2"	1
121-206	CARB-BITE JULIAN NH, 8-1/4"	1
121-195	CARB-BITE STRATTE NH, 9"	1
121-196	CARB-BITE STRATTE NH, 10"	1
121-205	CARB-BITE SAROT NH, 10-1/2"	1

Forceps

320-103	DEBAKEY TISS FCPS, 2.7MM, 12"	1
320-109	DEBAKEY TISS FCPS, 2MM, 12"	2
320-112	DEBAKEY TISS FCPS, 2MM, 9-1/2"	2
130-267	BROWN TISS FCPS, 10"	2
130-395	RUSSIAN TISS FCPS, 10"	2

Retractors

310-141	ROSS AORTIC VALVE RETR, SIZE 2	1
310-142	ROSS AORTIC VALVE RETR, SIZE 3	1
310-143	ROSS AORTIC VALVE RETR, SIZE 4	1
310-144	ROSS AORTIC VALVE RETR, SIZE 5	1
310-150	COOLEY ATRIAL RETR, SM, RT	1
310-151	COOLEY ATRIAL RETR, MED, RT	1
310-152	COOLEY ATRIAL RETR, LG, RT	1
310-155	COOLEY ATRIAL RETR, LG LT	1
200-140	SAUERBRUCH RETR, 1-3/4X5/8" 9"	1
200-142	SAUERBRUCH RETR, 2-1/2X7/8" 9"	1
200-143	SAUERBRUCH RETR, 2-7/8X3/4" 9"	1
310-500	CRAWFORD AORTIC RETR, SM, 8"	1
310-502	CRAWFORD AORTIC RETR, LG, 8"	1
200-272	VOLKMAN RETR, 4PRG, SHARP, 8"	2

Miscellaneous

110-171	#3 KNIFE HANDLE, LONG	1
170-120	YANKAUER SUCTION TUBE	1
230-097	BLUMENTHAL RONG, 6"	1
230-205	BEYER RONG, 3MM, 7"	1
280-405	CUSHING RONG, STR, 2X10MM	1
280-406	CUSHING RONG, UP-ANG, 2X10MM	1
280-425	SPURLING RONG, STR, 4X10MM STR	1
280-426	SPURLING RONG, UP-ANG, 4X10MM	1
280-427	SPURLING RONG, DN-ANG, 4X10MM	1
285-227	ADSON DURA HOOK, BLUNT, 8"	1
285-315	SMITHWICK HOOK, 12-1/4"	1
310-522	BAILEY VALVE RONG, STR, 4-1/2"	1
460-103	LARYNGEAL MIRROR, #2	1
460-104	LARYNGEAL MIRROR, #3	1
460-105	LARYNGEAL MIRROR, #4	1

BASIC OPEN HEART

Clamps

105-220	OCHSNER FCPS, STR, 8"	2
106-102	HALSTEAD FCPS, CVD, 5"	6
106-141	CRILE FCPS, CVD, 6-1/4"	6
106-171	R-PEAN FCPS, CVD, 6-1/4"	4
111-100	BACKHAUS FCPS, 3-1/2"	4
111-102	BACKHAUS FCPS, 5-1/4"	6
116-107	FOERSTER FCPS, STR, 9-1/2"	2
135-125	THOMS-ALLIS TISS FCPS, 8"	2
135-271	PEAN INT FCPS, LONG SERR, CVD, 8"	2
140-231	MEEKER CLMP, 7"	2
140-332	GEMINI CLMP, 9"	1
305-355	VANDERBILT UNIV CLMP, CVD, 8-3/4"	2
305-372	LAHEY FCPS, DEL, CVD, 9"	2
305-386	MIXTER FCPS, LONG SERR, 10-3/4"	2
320-185	DEBAKEY BULLDOG, 45° 4-3/4"	3
320-190	DEBAKEY BULLDOG, S-CVD, 5"	2
320-210	COOLEY PV CLAMP, ANG, 6-1/2"	2
320-228	DEBAKEY-BAINBRIDGE, STR, 7-7/8"	1
320-229	DEBAKEY-BAINBRIDGE, CVD, 7 1/4"	1
320-231	DEBAKEY COARC CLMP, ANG, 9"	1
320-234	DEBAKEY PATENT DUCT, ANG, 8"	2
320-241	GLOVER COARCT CLMP, ANG, 10-1/8"	1
320-248	LAMBERT-KAY AORTA CLMP, 8"	1
320-272	DEBAKEY VASC CLMP, CVD, 10"	1
320-287	CHERRY SUPRACELIAC, S-CVD 12-1/2"	1
320-320	DEBAKEY TANGENT OCCL, 7-3/4"	1
320-326	DEBAKEY TANGENT OCCL, 10"	2
320-392	SATINSKY VENA CAVA CLMP, SM	3
320-398	COOLEY COARCT CLMP, ANG, 8-3/4"	2
320-415	COOLEY-SATINSKY CLMP, 5-1/2"	4
320-420	COOLEY ANAST CLMP, STD, 6-1/2"	2
320-425	ANASTOMOSIS CLMP, 6-1/2"	1
320-436	COOLEY-DERRA ANAST, MED, 6-1/2"	1
320-437	COOLEY-DERRA ANAST, LG, 6-1/2" LG	1
320-476	COOLEY ACUTE CVD, LG, 6-1/2"	1
475-505	MAYO-GUYON VESSEL CLMP, 9-1/4"	1

Scissors

100-242	LILLEHEI-POTTS SCS, STR, S/S, 7"	1
100-243	LELLEHEI-POTTS SCS, CVD, S/S, 7"	1
101-220	CARB-EDGE MAYO SCS, STR, 6-3/4"	1
101-222	CARB-EDGE MAYO SCS, CVD, 6-3/4"	1
101-258	CARB-EDGE METZ SCS, CVD, 7"	1
101-259	CARB-EDGE METZ SCS, CVD, S/S, 7"	1
102-122	SUPERCUT METZ SCS, CVD, 7"	1
102-125	SUPERCUT METZ SCS, CVD, DEL, 9"	1
102-302	SUPERCUT JAMISON SCS, CVD, 7"	1
310-305	YOU-POTTS SCS, 45° 7-1/4"	1
310-310	POTTS-SMITH SCS, 25° 7"	1
277-058	DBL ACTION MICRO SCS, 7-1/4"	1

Needle Holders

120-131	CRILE-WOOD NH, 7"	2
120-132	CRILE-WOOD NH, 8"	4
121-131	CARB-BITE CRILE-WOOD NH, 7"	2
121-133	CARB-BITE CRILE-WOOD NH, 9"	2
121-140	CARB-BITE MAYO-HEGAR NH, 7"	1
121-145	CARB-BITE MAYO-HEGAR NH, 8"	2
121-146	CARB-BITE MAYO-HEGAR NH, 9"	1
121-255	CARB-BITE WIRETWISTER AND NH, 7"	2
121-260	CARB-BITE STERNAL NH, 7-3/4"	2
121-265	COOLEY-BAUMGARTEN NH, 7-3/4"	1
275-140	JARIT WIRE PULLING FCPS, 6-1/2"	1

BASIC OPEN HEART cont'd

Forceps

130-234	ADSON TISS FCPS, 1X2 TEETH, 4-3/4"	2
130-246	BROLI-ADSON FCPS, STR, 6"	1
130-248	BROLI-ADSON FCPS, CVD, 6"	1
130-293	BONNEY TISS FCPS, 1X2T, 6-3/4"	2
130-353	CARB-BITE POTTS-SMITH FCPS, 7"	2
279-110	STARDUST FCPS, IMM RING, 7"	2
285-105	ADSON FCPS, STR, 7-1/2"	2
285-106	ADSON FCPS, CVD, 7-1/2"	2
320-101	DEBAKEY TISS FCPS, 2,7MM, 7-3/4"	2
320-111	DEBAKEY TISS FCPS, 2MM, 7-3/4"	2
320-112	DEBAKEY TISS FCPS, 2MM, 9-1/2"	2
320-114	DEBAKEY TISS FCPS,, 1.5MM. 7-3/4"	2

Retractors

189-110	SENN RETR, SHARP, 6-1/4"	2
200-105	US ARMY RETR, SET OF 2, 8-1/2"	1
200-122	PARKER RETR, SET OF 2, 7"	2
200-135	CUSHING VEIN RETR, 9"	2
200-151	RICHARDSON-EASTMAN RETR, SM	1
200-152	RICHARDSON-EASTMAN RETR, LG	1
200-198	DEAVER RETR. 3/8X7"	1
204-155	WEITLANER RETR, SHARP, 6-1/2"	2
300-165	ANKENEY STERNAL RETR, ADULT	1
310-505	PARSONNET EPICARDIAL RETR	1

Miscellaneous

100-540	JARIT UTILITY SHEARS, 7"	1
110-157	JARIT TUBE OCCL FCPS, 7-1/4"	2
110-161	JARIT TUBE FCPS W/GUARD, 7-1/4"	1
110-165	#3 KNIFE HANDLE	2
110-169	#7 KNIFE HANDLE	1
170-118	YANKAUER SUCT TUBE, PEDIATRIC	1
275-510	CARB-EDGE D/A WIRE CUTTER, 7"	1
285-225	ADSON DURA HOOK, SHARP, 8"	1
285-456	FRAZIER SUCT TUBE, 12FR, 7"	1
305-499	RUMEL OBTURATOR, CHILD	4
310-384	DEBAKEY HEPARIN CANNULA	1
310-386	GARRETT DILATOR, 1.0MM	1
310-387	GARRETT DILATOR, 1.5MM	1
310-388	GARRETT DILATOR, 2.0MM	1
360-260	JARIT STEEL RULE, 6"	1
385-082	BARON SUCT TUBE, 5FR	1
320-620	CHEST TUBE PASSER, 9 3/4"	1

PEDIATRIC OPEN HEART

Clamps

105-088	JACOBSON PETIT MOSQ, STR, 5" STR	1
105-089	JACOBSON PETIT MOSQ, CVD, 5"	2
140-218	PETIT-POINT MIXTER FCPS, 5-1/4"	1
285-108	PETIT-POINT MOSQUITO, CVD, 7-1/8"	1
320-180	DEBAKEY BULLDOG, STR, 5-1/8"	1
320-190	DEBAKEY BULLDOG, S-CVD, 5"	1
320-250	DEBAKEY PV CLMP, ANG, 7"	1
320-435	COOLEY-DERRA ANAST, SM, 6-1/2"	1
320-436	COOLEY-DERRA ANAST, MED, 6-1/2"	1
320-437	COOLEY-DERRA ANAST, LG, 6-1/2"	1
320-475	COOLEY ACUTE CVD, MED, 6-1/2"	1
320-600	CASTANEDA M-P CLMP, STR, 4-7/8"	1
320-601	CASTANEDA M-P CLMP, 30° 5"	1
320-602	CASTANEDA M-P CLMP, 50° 4-7/8"	1
320-604	CASTANEDA PART OCC CLMP, 4-7/8"	1
320-610	CASTANEDA ANAST CLMP, 5-3/4"	1
320-611	CASTANEDA ANAST CLMP, 6"	1
320-612	CASTANEDA ANAST CLMP, 6-1/8"	1

Scissors

100-304	JAMISON-METZ SCS, CVD, 8"	1
100-306	JAMISON-METZ SCS,, CVD, 9"	1
125-170	WIRE SUTURE SCS, ANG. 4-3/4"	1
310-351	DIETHRICH C-ARTERY SCS, 45° 7"	1
310-360	DIETHRICH CIRCUMFLEX ART SCS 7"	1

Needle Holders

121-229	CARB-BITE MICRO NH, 7"	2
121-231	CARB-BITE MICRO NH, 8-1/2"	1
121-258	CARB-BITE WIRE TWISTER, 6"	1

Forceps

320-114TI	DEBAKEY TISS FCPS, IMM, 7-1/8"	2
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Retractors

300-190	CASTANEDA RIB SPREAD, NEWBORN	1
300-192	CASTANEDA RIB SPREAD, INFANT	1

Miscellaneous

110-191	#3 KNIFE HANDLE, ROUND, 6"	1
285-227	ADSON DURA HOOK, BLUNT, 8"	1
310-396	GARRETT DILATOR, 1.0MM, 5-1/2"	1
410-150	JOSEPH SKIN HOOKS	2

MAJOR VASCULAR SET

Clamps

117-244	WEINSTEIN INSTRUMENT HLDER, 10"	2
105-235	OCHSNER FCPS 90° VERY FINE, 4-1/2	1
305-441	SEMB LIGATURE CARRYING FCPS, 9"	1
320-179	GREGORY CARTOID BD CLMP, 4-1/4"	1
320-180	DEBAKEY BULLDOG, STR, 5-1/8"	2
320-185	DEBAKEY BULLDOG, 45° 4-3/4"	2
320-220	GREGORY PROFUNDA CLMP, 6"	2
320-221	GREGORY PROFUNDA CLMP, 7-3/8"	2
320-238	GLOVER COARCT CLMP, STR, 8-3/4"	2
320-239	GLOVER COARCT CLMP, ANG, 8-3/4"	2
320-250	DEBAKEY PV CLMP, ANG, 7"	2
320-282	DEBAKEY AORTA ANEUR CLMP, 10-1/2"	1
320-304	DEBAKEY MP CLMP 60° 9-1/2"	1
320-390	SATINSKY VENA CAVA CLMP, LG	1
320-391	SATINSKY VENA CAVA CLMP, MED	1
320-392	SATINSKY VENA CAVA CLMP, SM	1
320-420	COOLEY ANAST CLMP, STD, 6-1/2"	2
320-430	DERRA ANAST CLMP, SM, 6-1/2"	1
320-436	COOLEY-DERRA ANAST CLMP, 6 1/2"	1
450-310	SCHNIDT FCPS, 7-1/2"	2

Scissors

101-258	CARB-EDGE METZ SCS, CVD, 7"	1
101-276	CARB-EDGE METZ SCS, CVD, DEL, 9"	1
102-125	SUPERCUT METZ SCS, CVD, DEL, 9"	1
102-310	SUPERCUT METZ SCS, CVD, DEL, 7"	1
310-315	POTTS-SMITH SCS, 45° 7"	2
310-351	DIETRICH C-ARTERY SCS, 45° 7"	1

Needle Holders

121-133	CARB-BITE CRILE-WOOD NH, 9"	2
121-147	CARB-BITE MAYO-HEGAR NH, 12"	1
121-162	CARB-BITE RYDER NH, 7"	2
121-187	CARB-BITE DEBAKEY NH, 9"	2
121-188	CARB-BITE DEBAKEY NH, 10-1/2"	1
121-213	CARB-BITE VASCULAR NH, 8"	1
121-214	CARB-BITE VASCULAR NH, 9"	1

Forceps

320-101	DEBAKEY TISS FCPS, 2.7MM, 7-3/4"	2
320-102	DEBAKEY TISS FCPS, 2.7MM, 9-1/2"	2
320-103	DEBAKEY TISS FCPS, 2.7MM, 12"	2
320-109	DEBAKEY TISS FCPS, 2MM, 12"	2
320-111	DEBAKEY TISS FCPS, 2MM 7-3/4"	2
320-112	DEBAKEY TISS FCPS, 2MM, 9-1/2"	2

Retractors

205-155	WEITLANER RETR, SHARP, 6-1/2"	2
205-156	WEITLANER RETR, BLUNT, 6-1/2"	2
205-260	DARLING POPLITEAL RETR, LT	1
205-261	DARLING POPLITEAL RETR, RT	1

Miscellaneous

170-115	ANDREWS-PYNCHON SUCT TUBE	1
200-135	CUSHING VEIN RETR, 9"	1
285-225	ADSON DURA HOOK, SHARP, 8"	1
285-230	DANDY NERVE HOOK, BLUNT, 9"	1
285-368	PENFIELD DISSECTOR NO4, 8-1/2"	1
285-380	FREER D/E ELEV 4.5MM, 7-3/4"	1
285-454	FRAZIER SUCT TUBE, 10FR	1
305-499	RUMEL OBTURATOR, CHILD	1
310-379	STONE HEPARIN INJECTOR	1
310-383	HEPARIN FLUSHING NEEDLE	2
320-122	GLOVER BULLDOG, CVD, 5CM	1
320-155	DEBAKEY BULLDOG, STR, 8.5CM	1
320-157	DEBAKEY BULLDOG, CVD, 8.5CM	1

AAA - TAA TRAY

Clamps

105-089	JACOBSON PETIT PT MOSQ, CVD, 5"	2
106-102	HALSTEAD FCPS, CVD, 5"	4
106-120	CRILE FCPS, STR, 5-1/2"	4
106-121	CRILE FCPS, CVD, 5-1/2"	4
106-171	R-PEAN FCPS, CVD, 6-1/4"	2
106-181	R-PEAN FCPS, CVD, 7-1/4"	4
106-220	OCHSNER FCPS, STR, 8"	2
110-102	BACKHAUS FCPS, 5-1/4"	2
110-120	EDNA TOWEL FCPS, 5-1/2"	4
116-107	FOERSTER FCP 9-1/2 STR MATTE	2
135-100	ALLIS TISS FCPS, 4X5 TEETH, 6"	4
140-332	GEMINI CLMP, 9"	2
140-333	GEMINI CLMP, 11"	2
305-200	PENNINGTON FCPS, 8"	2
305-210	DUVAL LUNG FCPS, 7-3/4"	2
305-230	ALLIS-WILLAUER FCPS, 10"	2
305-295	KANTROWITZ THORACIC FCPS, 7-1/2"	2
305-310	BRIDGE FCPS, CVD, 11"	2
305-386	MIXTER FCPS, LONG SERR, 10-3/4"	1
305-395	HARRINGTON FCPS, RT ANG, 12-1/2"	1
320-215	LELAND-JONES PV CLMP, STR, 7-1/2"	1
320-274	DEBAKEY-SEMB LIGATURE CARRIER	1
320-282	DEBAKEY AORTA ANEUR CLMP, 10-1/2"	1
320-284	DEBAKEY AORTA ANEUR CLMP, 12"	1
320-322	DEBAKEY TANGENT OCCL, 9-3/4"	1
320-390	SATINSKY VENA CAVA CLMP, LG	1
320-391	SATINSKY VENA CAVA CLMP, MED	1
320-392	SATINSKY VENA CAVA CLMP, SM	1
320-430	DERRA ANAST CLMP, SM, 6-1/2"	1
320-431	DERRA ANAST CLMP, MED, 6-1/2"	1
320-432	DERRA ANAST CLMP, LG, 6-1/2"	1
320-483	REYNOLDS CLMP, SM, 50° 6-3/4"	2
320-602	CASTANEDA M-P CLMP, 50° 4-7/8"	1
320-625	GREGORY STAY SUTURE, 5/8" TIP, 4-3/4"	1
450-310	SCHNIDT FCPS, 7-1/2"	2

Scissors

100-131	OPERATING SCSSTR, B/B, 5-1/2"	1
100-304	JAMISON-METZ SCS, CVD, 8"	1
101-222	CARB-EDGE MAYO SCS, CVD, 6-3/4"	1
101-226	CARB-EDGE M-HARRINGT SCS, CVD, 9"	1
101-258	CARB-EDGE METZ SCS, CVD, 7"	2
101-276	CARB-EDGE METZ SCS, CVD, DEL, 9"	1
102-129	SUPERCUT METZ SCS, CVD, 12"	1

Needle Holders

121-140	CARB-BITE MAYO-HEGAR NH, 7"	1
121-145	CARB-BITE MAYO-HEGAR NH, 8"	1
121-205	CARB-BITE SAROT NH, 10-1/2"	2
121-214	CARB-BITE VASCULAR NH, 9"	2
121-215	CARB-BITE VASCULAR NH, 10"	1
121-229	CARB-BITE MICRO NH, 7"	1
121-231	CARB-BITE MICRO NH, 8-1/2"	1

Forceps

130-234	ADSON TISS FCPS, 1X2 TEETH, 4-3/4"	2
130-290	FERRIS-SMITH FCPS, 2X3 TEETH, 6-3/4"	1
130-390	RUSSIAN TISS FCPS, 6"	1
130-392	RUSSIAN TISS FCPS, 8"	1
130-395	RUSSIAN TISS FCPS, 10"	1
285-120	GERALD DRESS FCPS, STR, SERR, 7"	2
320-103	DEBAKEY TISS FCPS, 2.7MM, 12"	2
320-115	DEBAKEY TISS FCPS, 1.5MM, 9-1/2"	2

Retractors

200-135	CUSHING VEIN RETR, 9"	2
200-150	RICHARDSON-EASTMAN RETR, SET/2	1
200-201	DEAVER RETR, 7/8X8-1/2"	1
200-221	RIBBON RETR, 1X13"	1
205-210	BECKMAN THYROID RETR, 12-3/8"	1
205-221	BECKMAN-ADSON RETR, BLUNT	1
300-450	DAVIDSON SCAPULA RETR, 3X2"	1
300-451	DAVIDSON SCAPULA RETR, 3X3-1/2"	1
310-420	ALLISON LUNG RETRACTOR, LG	2

AAA- TAA TRAY^{cont'd}

Miscellaneous

110-165	#3 KNIFE HANDLE	
110-170	#3 KNIFE HANDLE, LONG	
117-365	MEDICINE CUP GRADUATED, 2 OZ.	
170-120	YANKAUER SUCTION TIP	
180-222	PROBE, D/E, 4-1/2"	
285-456	FRAZIER SUCT TUBE, 12FR	
300-105	FINO RIB SPREADER, MED, 8"	
300-150	TUFFIER RIB SPREADER, SCORED	
300-175	BURFORD RIB SPREADER, 8"	
300-235	BAILEY-GIBBON RIB CONTRACTOR	
300-400	DOYEN RASPATORY, LGE, LT, 6-1/2"	
300-402	DOYEN RASPATORY, LGE, RT, 6-1/2"	
300-411	MATSON RIB STRIPPER, 8-3/4"	
300-415	ALEXANDER-FARABEU RASPATORY	
305-498	RUMEL OBTURATOR, ADULT	
310-385	GARRETT DILATOR, SET OF 9, 8-1/4"	
505-402	SIMS UTERINE SCS, STR, B/B, 8"	

FEM - POP SET

Clamps

117-246	WEINSTEIN INSTRUMENT HLDR, 12"	1
105-089	JACOBSON PETIT PT MOSQ, CVD, 5"	2
106-100	HALSTEAD FCPS, STR, 5"	6
106-102	HALSTEAD FCPS, CVD, 5"	6
106-130	KELLY FCPS, STR, 5-1/2"	2
106-131	KELLY FCPS, CVD, 5-1/2"	2
106-171	R-PEAN FCPS, CVD, 6-1/4"	4
110-102	BACKHAUS FCPS, 5-1/4"	4
110-120	EDNA TOWEL FCPS, 5-1/2"	4
116-107	FOERSTER FCP, STR, 9-1/2"	2
135-100	ALLIS TISS FCPS, 4X5 TEETH, 6"	2
140-223	PETIT-POINT MIXTER FCPS, 7-1/4"	1
305-295	KANTROWITZ THORACIC FCPS, 7-1/2"	2
320-142	COOLEY BULLDOG, STR, 6.7CM	1
320-143	COOLEY BULLDOG, CVD, 6.4CM	1
320-144	COOLEY BULLDOG, STR, 8.6CM	1
320-145	COOLEY BULLDOG, CVD, 7.6CM	1
320-180	DEBAKEY BULLDOG, STR, 5-1/8"	1
320-185	DEBAKEY BULLDOG, 45° 4-3/4"	1
320-209	COOLEY PV CLMP, STR, 6-3/4"	1
320-220	GREGORY PROFUNDA CLMP, 6"	2
320-221	GREGORY PROFUNDA CLMP, 7-3/8"	1
320-228	DEBAKEY BAINBRIDGE, STR, 7-7/8"	2
320-229	DEBAKEY BAINBRIDGE, CVD, 7-1/4"	2
320-239	GLOVER COARCT CLMP, ANG, 8-3/4"	2
320-250	DEBAKEY PV CLMP, ANG, 7"	2
320-265	DEBAKEY PV CLMP, CVD, 6"	1
320-282	DEBAKEY AORTA ANEUR CLMP, 10-1/2"	1
320-284	DEBAKEY AORTA ANEUR CLMP, 12"	1
320-420	COOLEY ANAST CLMP, STD, 6-1/2"	1
320-425	JARIT ANASTOMOSIS CLMP, 6-1/2"	1
320-445	COOLEY VASC CLMP, SM, 60° 6-1/2"	1
320-460	DEBAKEY M-P CLMP, 30° 6-1/2"	2
320-483	REYNOLDS CLMP, SM, 50° 6-3/4"	2
320-485	REYNOLDS CLMP, SM, 85° 6-1/4"	2
450-310	SCHNIDT FCPS, 7-1/2"	2

Scissors

100-210	MAYO SCS, STR, BEVEL BLADE, 6-3/4"	1
102-125	SUPERCUT METZ SCS, CVD, DEL, 9"	1
102-310	SUPERCUT METZ SCS, CVD, DEL, 7"	2
310-310	POTTS-SMITH SCS, 25° 7"	1
310-315	POTTS-SMITH SCS, 45° 7"	1
310-320	POTTS-SMITH SCS, 60° 7"	1
310-351	DIETHRICH C-ARTERY SCS, 45° 7"	1

Needle Holders

121-121	CARB-BITE HALSEY NH, 5"	2
121-140	CARB-BITE MAYO-HEGAR NH, 7"	2
121-162	CARB-BITE RYDER NH, 7"	2
121-185	CARB-BITE DEBAKEY NH, 7"	2
121-186	CARB-BITE DEBAKEY NH, 8"	2
121-187	CARB-BITE DEBAKEY NH, 9"	1
121-229	CARB-BITE MICRO NH, 7"	1
355-413	CARB-BITE CASTROVIEJO NH, 5-1/2"	1
277-407	STARDUST MICRO NH, 7-1/4"	1

Forceps

122-530	JARIT CUSHING NF, 7"	2
130-394	RUSSIAN TISSUE FCPS 12"	2
130-234	ADSON TISS FCPS, 1X2 TEETH, 4-3/4"	2
285-126	CARDIO-GRIP GERALD FCPS, 7"	2
320-101	DEBAKEY TISS FCPS, 2.7MM, 7-3/4"	2
320-111	DEBAKEY TISS FCPS, 2MM, 7-3/4"	2
320-112	DEBAKEY TISS FCPS, 2MM, 9-1/2"	2
320-109	DEBAKEY TISS FCPS, 2MM, 12"	1
310-528	MILLS CORONARY TISS FCPS, 7-1/8"	1

FEM - POP SET^{cont'd}

Retractors

200-105	US ARMY RETR, SET OF 2, 8-1/2"	2
200-135	CUSHING VEIN RETR, 9"	1
200-166	KELLY RETR LAMB-HNDL, 2X2-1/2"	1
200-167	KELLY RETR LAMB-HNDL, 2-1/2X3"	1
205-201	ADSON CEREBELLAR RETR, 7 1/2"	2
205-530	HENLY RETRACTOR SET, IMPROVED	1
205-160	WEITLANER RETR, SHARP, 8"	2
205-155	WEITLANER RETR, SHARP, 6-1/2"	2
205-260	DARLING POPLITEAL RETR, LEFT	1
205-261	DARLING POPLITEAL RETR, RIGHT	1
205-570	OCHSNER VASC S/R RETR	1

Miscellaneous

110-165	#3 KNIFE HANDLE	2
110-169	#7 KNIFE HANDLE	1
170-115	ANDREWS-PYNCHON SUCT TUBE	1
285-230	DANDY NERVE HOOK, BLUNT, 9"	1
285-330	HOEN DURA SEPARATOR, 45° 6"	1
285-454	FRAZIER SUCT TUBE, 10FR	1
305-498	RUMEL OBTURATOR, ADULT	1
310-395	GARRETT DILATOR, SET OF 9, 5-1/2"	1
320-120	GLOVER BULLDOG, STR, 5CM	1
320-122	GLOVER BULLDOG, CVD, 5CM	1
320-174	DIETHRICH BULLDOG, ANG, 6CM	2
320-177	JACOBSON BULLDOG, CVD, 4.8CM	1
320-178	JACOBSON BULLDOG, CVD, 4.8CM	1
285-380	FREER D/E ELEV, 4.5MM, 7-3/4"	1
170-124	ANTHONY SUCTION TUBE, 10"	1
310-383	HEPARIN FLUSHING NEEDLE	2

MICRO TRAY

Scissors

100-295	REYNOLDS SCS, PLAIN EDGE, 5-1/2"	1
102-302	SUPERCUT JAMISON SCS, CVD, 7"	1
310-305	YOU-POTTS SCS, 45° 7-1/4"	1
310-307	YOU-POTTS SCS, 120° 7"	1
310-350	DIETHRICH C-ARTERY SCS, 25° 7"	1
310-351	DIETHRICH C-ARTERY SCS, 45° 7"	1
310-352	DIETHRICH C-ARTERY SCS, 60° 7"	1
310-353	DIETHRICH C-ARTERY SCS, 90° 7"	1
310-354	DIETHRICH C-ARTERY SCS, 120° 7"	1
311-352	DIETHRICH C/A SCS, X-DEL, 60° 7"	1
311-353	DIETHRICH C/A SCS, X-DEL, 90° 7"	1
311-354	DIETHRICH C/A SCS, X-DEL, 120° 7"	1
415-145	LITTLER SUTURE CARRY SCS, 4-3/4"	1

Needle Holders

278-093	STARDUST NH, STR, W/CATCH, 7"	1
278-095	STARDUST NH, STR, W/CATCH, 8-1/4"	1
278-097	STARDUST NH, STR, W/CATCH, 9"	1
278-097TI	STARDUST NH, STR, W/CATCH 9-7/8"	1
278-125	JACOBSON NH, FLAT HNDL, 6-3/4"	1
355-413	CARB-BITE CASTROVIEJO NH, 5-1/2"	1

Forceps

279-106	STARDUST FCPS, CVD, W/PLAT, 8-1/4"	2
279-110	STARDUST FCPS, STR, RING TIPS, 7"	2
279-112TI	STRDUST FCPS, STR, RING TIPS, 9"	2
279-125	DENNIS FCPS, STR, 8-1/4"	2
285-126	GERALD FCPS, IMM, 7"	2
320-051	DEBAKEY TISS FCPS, IMM, 7-3/4"	2
320-114TI	DEBAKEY TISS FCPS, 7-1/8"	2
320-115	DEBAKEY TISS FCPS, 9-1/2"	2

Miscellaneous

205-136	SPRING WIRE RETR, STYLE 1, 3"	1
277-202	JACOBSON VESSEL PROBE, 7-1/4"	1
285-227	ADSON DURA HOOK, BLUNT, 8"	1
285-230	DANDY NERVE HOOK, BLUNT, 9"	1
310-383	HEPARIN FLUSHING NEEDLE	1
310-396	GARRETT DILATOR, 1.0MM, 5-1/2"	1
310-397	GARRETT DILATOR, 1.5MM, 5-1/2"	1

AV FISTULA / VASCULAR ACCESS

Clamps

105-089	JACOBSON PETIT PT MOSQ, CVD, 5"	4
105-235	OCHSNER FCPS 90° VERY FINE, 4 1/2"	2
106-100	HALSTEAD FCPS, STR, 5"	4
106-102	HALSTEAD FCPS, CVD, 5"	4
106-120	CRILE FCPS, STR, 5-1/2"	4
106-121	CRILE FCPS, CVD, 5-1/2"	2
106-171	R-PEAN FCPS, CVD, 6-1/4"	2
110-120	EDNA TOWEL FCPS, 5-1/2"	4
116-107	FOERSTER FCP, STR, 9-1/2"	2
135-100	ALLIS TISS FCPS, 4X5 TEETH, 6"	2
140-218	PETIT-POINT MIXTER FCPS, 5-1/4"	2
140-329	GEMINI CLMP, 5-1/2"	2
320-182	DEBAKEY BULLDOG, CVD, 5"	2
320-185	DEBAKEY BULLDOG, 45° 4-3/4"	2
320-192	AV FISTULA CLMP, 50° ANG, 4-1/2"	1
320-218	PROFUNDA CLMP, X-DEL, 5-3/8"	1
320-220	GREGORY PROFUNDA CLMP, 6"	1
320-420	COOLEY ANAST CLMP, STD, 6-1/2"	2
320-445	COOLEY VASC CLMP, SM, 60° 6-1/2"	2
320-615	CASTANEDA SUTURE TAG #1, 3-3/4"	4
320-625	GREGORY STAY SUTURE, 5/8" TIP, 4-3/4"	4

Scissors

100-125	OPERATING SCS, STR, S/B, 4-1/2"	1
100-130	OPERATING SCS, STR, S/B, 5-1/2"	1
100-300	JAMISON-METZ SCS, CVD, 6"	1
101-251	CARB-EDGE LAHEY SCS, CVD, 5-3/4"	1
102-245	SUPERCUT REYNOLDS SCS, 5"	1
310-356	DIETHRICH C-ARTERY SCS, 45° 5"	1
310-356	DIETHRICH C-ARTERY SCS, 45° 5"	1
360-139	STEVENS TENOTOMY SCS, CVD, 4-1/2"	1

Needle Holders

121-130	CARB-BITE CRILE-WOOD NH, 6"	1
121-161	CARB-BITE RYDER NH, 6"	1
121-172	CARB-BITE PETIT-RYDER NH, 6"	1
278-093	STARDUST NH, STR, W/CATCH, 7"	1

Forceps

130-245	ADSON TISS FCPS, 1X2 TEETH, 4-3/4"	2
279-100	STARDUST FCPS, STR, W/PLAT 7"	2
285-120	GERALD DRESS FCPS, STR, 7"	2
320-110	DEBAKEY TISS FCPS, 2MM, 6"	2
320-111	DEBAKEY TISS FCPS, 2MM, 7-3/4"	2

Retractors

200-105	US ARMY RETR, SET OF 2, 8-1/2"	2
200-135	CUSHING VEIN RETR, 9"	2
205-151	WEITLANER RETR, BLUNT, 5-1/2"	2

Miscellaneous

110-165	#3 KNIFE HANDLE	2
117-360	IODINE CUP, 6 OZ.	1
117-365	MEDICINE CUP, GRADUATED, 2 OZ.	2
205-136	SPRING WIRE RETR, STYLE 1, 3"	2
277-236	KRAYENBUEHL HOOK, LG, 7-1/4"	1
285-453	FRAZIER SUCTION TUBE 7 ANG 9FR	1
310-383	HEPARIN FLUSHING NEEDLE	1
310-385	GARRETT DILATOR, SET OF 9, 8-1/4"	1
320-160	DEBAKEY BULLDOG, STR, 10.5CM	2
320-178	JACOBSON BULLDOG, CVD, 4.8CM	2
410-150	JOSEPH SKIN HOOKS, 6-1/4"	2





SUTURE GUIDE

CardioVascular - SUTURE GUIDE

Product	Insert	Suture Size		Tip Width	0	2-0	3-0	4-0	5-0	6-0	7-0	8-0	9-0	10-0
		Teeth Per Square Inch												
I21-097	TC	4000						•	•					
I21-100	TC	4000						•	•	•				
I21-105	TC	4000			•		•	•						
I21-106	TC	2500			•		•	•						
I21-115	TC	7000								•	•	•		
I21-116	TC	Smooth								•	•	•		
I21-118	TC	Smooth							•	•				
I21-119	TC	3600							•	•				
I21-120	TC	Smooth						•	•					
I21-121	TC	4000						•	•					
I21-125	TC	4000			•		•	•						
I21-126	TC	4000						•	•	•				
I21-127	TC	4000						•	•	•				
I21-128	TC	4000						•	•					
I21-129	TC	4000						•	•					
I21-130	TC	4000						•	•	•				
I21-131	TC	4000						•	•	•				
I21-132	TC	4000						•	•	•				
I21-133	TC	4000						•	•	•				
I21-134	TC	4000						•	•	•				
I21-135	TC	2500			•		•	•						
I21-140	TC	2500			•		•	•						
I21-142	TC	2500			•		•	•						
I21-143	TC	2500			•		•	•						
I21-144	TC	2500			•		•	•						
I21-145	TC	2500			•		•	•						
I21-146	TC	2500			•		•	•						
I21-147	TC	2500			•		•	•						
I21-148	TC	7000								•	•			
I21-149	TC	Smooth									•			
I21-150	TC	4000						•	•	•				
I21-155	TC	4000						•	•	•				
I21-160	TC	4000	1.65mm					•	•	•				
I21-161	TC	4000	1.65mm					•	•	•				
I21-161TI	TC													
I21-162	TC	4000	1.65mm					•	•	•				
I21-162TI	TC													
I21-163	TC	4000	1.65mm					•	•	•				
I21-163TI	TC													
I21-164	TC	4000	1.65mm					•	•	•				
I21-165	TC	4000	1.65mm					•	•	•				
I21-166	TC	4000	1.65mm					•	•	•				
I21-170	TC	7000	1mm						•	•	•			
I21-171	TC	Smooth	1mm						•	•	•			
I21-172	TC	7000	1mm						•	•	•			
I21-173	TC	Smooth	1mm						•	•	•			
I21-174	TC	7000	1mm						•	•	•			
I21-175	TC	Smooth	1mm						•	•	•			
I21-176	TC	7000	1mm						•	•	•			
I21-177	TC	7000	1mm						•	•	•			
I21-178	TC	Smooth	1mm						•	•	•			
I21-179	TC	Smooth	1mm						•	•	•			
I21-180	TC	2500			•		•	•		•	•			
I21-181	TC	7000								•	•			
I21-182	TC	7000								•	•			
I21-183	TC	7000								•	•			
I21-184	TC	7000							•	•	•			
I21-185	TC	7000							•	•	•			
I21-186	TC	7000							•	•	•			
I21-187	TC	7000							•	•	•			
I21-188	TC	7000							•	•	•			

Product	Insert	Suture Size		Tip Width	0	2-0	3-0	4-0	5-0	6-0	7-0	8-0	9-0	10-0
		Teeth Per Square Inch												
121-189	TC	7000												
121-192	TC	2500												
121-193	TC	4000												
121-195	TC	2500												
121-196	TC	2500												
121-197	TC	4000												
121-198	TC	4000												
121-200	TC	2500												
121-205	TC	2500												
121-206	TC	4000												
121-207	TC	4000												
121-209	TC	2500												
121-210	TC	2500												
121-211	TC	4000												
121-212	TC	4000												
121-213	TC	4000												
121-214	TC	4000												
121-215	TC	4000												
121-216	TC	4000		2mm										
121-217	TC	4000		2mm										
121-218	TC	4000		2mm										
121-219	TC	4000		2mm										
121-220	TC	2500												
121-228	TC	Smooth		1.3mm										
121-228NL	TC	Smooth		1.3mm										
121-229	TC	7000		1.3mm										
121-229NL	TC	7000		1.3mm										
121-230	TC	Smooth		1.5mm										
121-230NL	TC	Smooth		1.5mm										
121-231	TC	7000		1.5mm										
121-231NL	TC	7000		1.5mm										
121-250	TC													
121-255	TC													
121-257	TC													
121-258	TC													
121-260	TC													
121-265	TC													
121-270	TC	4000		2mm										
121-271	TC	4000		2mm										
121-272	TC	4000		2mm										
121-273	TC	4000		2mm										
121-274	TC	4000		2mm										
124-100TI	Stardust													
124-101TI	Stardust													
124-102TI	Stardust													
124-105TI	Stardust			1mm										
124-106TI	Stardust			1mm										
124-108TI	Stardust			1.65mm										
124-109TI	Stardust			1.65mm										
124-110TI	Stardust			1.65mm										
277-070	Smooth			1mm										
277-071	Smooth			1mm										
277-072	Smooth			1mm										
277-073	Smooth			1mm										
277-075	Smooth			.5mm										
277-076	Smooth			.5mm										
277-090	Smooth			.7mm										
277-091	Smooth			.7mm										
277-092	Smooth			.9mm										
277-093	Smooth			.9mm										
277-094	Smooth			.7mm										

Product	Insert	Suture Size Teeth Per Square Inch	Tip Width	0	2-0	3-0	4-0	5-0	6-0	7-0	8-0	9-0	10-0
277-095	Smooth		.7mm										
277-096	Smooth		.9mm										
277-097	Smooth		.9mm										
277-140	Smooth		.8mm										
277-141	Smooth		.8mm										
277-400	Stardust		1.2mm										
277-401	Stardust		1.2mm										
277-402	Stardust		1.2mm										
277-403	Stardust		1.2mm										
277-404	Stardust		1.2mm										
277-405	Stardust		1.2mm										
277-406	Stardust		1.2mm										
277-407	Stardust		1.2mm										
277-408	Stardust		1.2mm										
277-409	Stardust		1.2mm										
277-410	Stardust		1.2mm										
277-411	Stardust		1.2mm										
277-412	Stardust		1.2mm										
277-413	Stardust		1.2mm										
277-414	Stardust		1.2mm										
277-415	Stardust		1.2mm										
278-040	Stardust		1.3mm										
278-050	Stardust		1.3mm										
278-060	Stardust		1.2mm										
278-061	Stardust		1.2mm										
278-062	Stardust		1.2mm										
278-063	Stardust		1.2mm										
278-069TI	Stardust		.8mm										
279-069TI	Stardust		1.3mm										
278-070TI	Stardust		1.3mm										
278-071TI	Stardust		1.3mm										
278-072TI	Stardust		1.3mm										
278-077TI	Stardust		1.3mm										
278-078TI	Stardust		1.3mm										
278-079TI	Stardust		1.3mm										
278-080TI	Stardust		1mm										
278-082TI	Stardust		1mm										
278-092	Stardust		1.3mm										
278-093	Stardust		1.3mm										
278-093TI	Stardust		.8mm										
278-093TI	Stardust		1.3mm										
278-094	Stardust		1.3mm										
278-095	Stardust		1.3mm										
278-095TI	Stardust		.8mm										
278-095TI	Stardust		1.3mm										
278-096	Stardust		1.3mm										
278-097	Stardust		1.3mm										
278-097TI	Stardust		.8mm										
278-100	Stardust		1.3mm										
278-101	Stardust		1.3mm										
278-102	Stardust		1.3mm										
278-103	Stardust		1.3mm										
278-104	Stardust		1.3mm										
278-105	Stardust		1.3mm										
278-108TI	Stardust		.8mm										
278-110	Stardust		1mm										
278-111	Stardust		1mm										
278-111TI	Stardust		.8mm										
278-112	Stardust		1mm										
278-113	Stardust		1mm										
278-113TI	Stardust		.8mm										

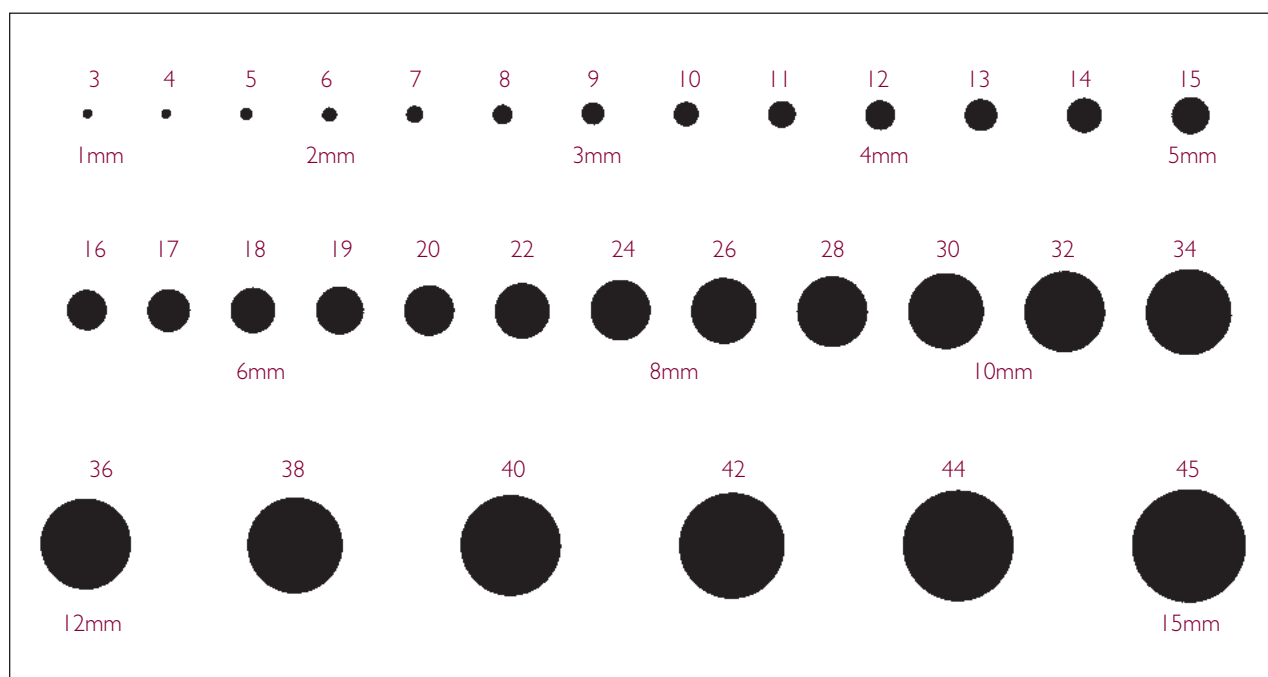
Product	Insert	Suture Size		Tip Width	0	2-0	3-0	4-0	5-0	6-0	7-0	8-0	9-0	10-0
		Teeth Per Square Inch												
278-114		Stardust		1mm						•	•			
278-115		Stardust		1mm						•	•			
278-116		Stardust		1mm						•	•			
278-117		Stardust		1mm						•	•			
278-118		Stardust		1mm						•	•			
278-119		Stardust		1mm						•	•			
278-120		Stardust		1mm						•	•			
278-121		Stardust		1mm						•	•			
278-125		Stardust		2mm		•	•	•						
278-125NL		Stardust		2mm		•	•	•						
278-126		Stardust		2mm		•	•	•						
278-126NL		Stardust		2mm		•	•	•						
278-130		Stardust		2mm		•	•	•						
278-130NL		Stardust		2mm		•	•	•						
278-131		Stardust		2mm		•	•	•						
278-131NL		Stardust		2mm		•	•	•						
278-132		Stardust		2mm		•	•	•						
278-132NL		Stardust		2mm		•	•	•						
278-133		Stardust		2mm		•	•	•						
278-133NL		Stardust		2mm		•	•	•						
278-134		Stardust		2mm		•	•	•						
278-134NL		Stardust		2mm		•	•	•						
278-135		Stardust		2mm		•	•	•						
278-135NL		Stardust		2mm		•	•	•						
278-140TI		Stardust		.8mm							•	•		
278-141TI		Stardust		.8mm							•	•		
278-142TI		Stardust		.8mm							•	•		
278-143TI		Stardust		.8mm							•	•		
278-144TI		Stardust		1.3mm					•	•				
278-145TI		Stardust		1.3mm					•	•				
278-146TI		Stardust		1.3mm					•	•				
278-147TI		Stardust		1.3mm					•	•				
278-171TI		Stardust		2mm		•	•	•						
278-172TI		Stardust		2mm		•	•	•						
278-173TI		Stardust		2mm		•	•	•						
278-174TI		Stardust		2mm		•	•	•						
278-180		Stardust		1.3mm					•	•				
278-181		Stardust		1.3mm					•	•				
278-182		Stardust		1.3mm					•	•				
278-183		Stardust		1.3mm					•	•				
278-184		Stardust		1.3mm					•	•				
278-185		Stardust		1.3mm					•	•				
278-186		Stardust		1.3mm					•	•				
278-220		Stardust		.7mm							•	•	•	
278-221		Stardust		.7mm							•	•	•	
278-222		Stardust		.7mm							•	•	•	
278-223		Stardust		.7mm							•	•	•	
355-404		Smooth		1.5mm					•	•				
355-404NL		Smooth		1.5mm					•	•				
355-405		Smooth		1.5mm					•	•				
355-405NL		Smooth		1.5mm					•	•				
355-406		Smooth		1mm						•	•	•		
355-406NL		Smooth		1mm						•	•	•		
355-407		Smooth		1mm						•	•	•		
355-407NL		Smooth		1mm						•	•	•		
355-412 TC		Smooth		1.3mm						•	•	•		
355-412NL TC		Smooth		1.3mm						•	•	•		
355-413 TC		7000		1.3mm						•	•	•		
355-413NL TC		7000		1.3mm						•	•	•		

Standard French Gauge

The standard French is used to measure diameters of all bougies, catheters, sounds, suction tubes and uterine dilators.

French Scale

3 French = 1.0mm	10 French = 3.3mm	17 French = 5.7mm	28 French = 9.3mm
4 French = 1.3mm	11 French = 3.7mm	18 French = 6.0mm	30 French = 10.0mm
5 French = 1.7mm	12 French = 4.0mm	19 French = 6.3mm	32 French = 10.6mm
6 French = 2.0mm	13 French = 4.3mm	20 French = 6.7mm	34 French = 11.3mm
7 French = 2.3mm	14 French = 4.7mm	22 French = 7.3mm	
8 French = 2.7mm	15 French = 5.0mm	24 French = 8.0mm	
9 French = 3.0mm	16 French = 5.3mm	26 French = 8.7mm	



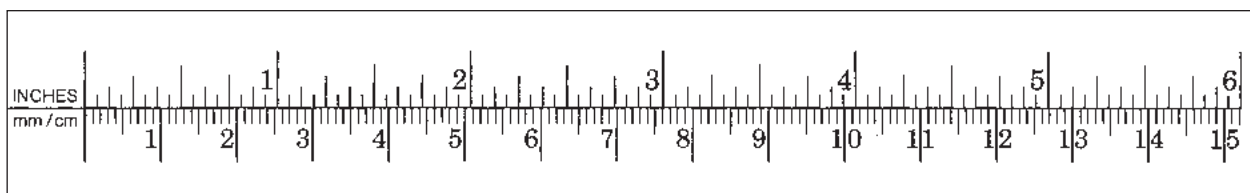
Gauge Chart

Gauge	O.D. (Inch)	I.D. (Inch)
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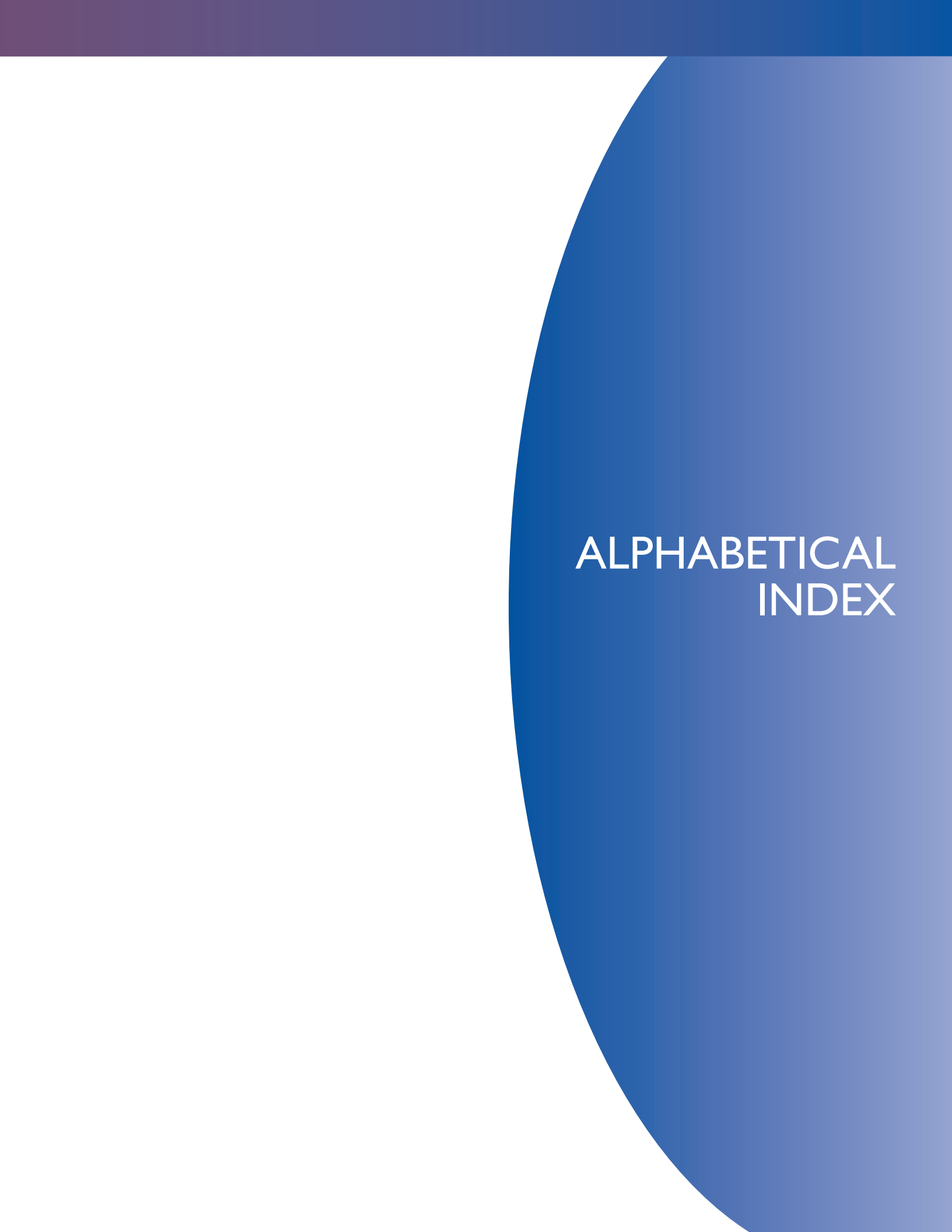
33	.008	.004
32	.009	.004
31	.010	.005
30	.012	.006
29	.013	.007
28	.014	.007
27	.016	.008
26	.018	.010
25	.020	.010
24	.022	.012
23	.025	.013
22	.028	.016
21	.032	.020
20	.035	.023
19	.042	.027
18	.050	.033
17	.059	.041
16	.065	.047
15	.072	.054
14	.083	.083
13	.095	.071
12	.109	.085
11	.120	.094
10	.134	.106
9	.148	.118
8	.165	.135
7	.180	.150
6	.203	.173

Length Conversions

Multiply	By	To Obtain
Millimeters (mm)	0.1	Centimeters (cm)
Millimeters (mm)	0.03937	Inches (")
Centimeters (cm)	0.3937	Inches (")
Centimeters (cm)	10	Millimeters (mm)
Inches (")	25.4	Millimeters (mm)
Inches (")	2.540	Centimeters (cm)







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A

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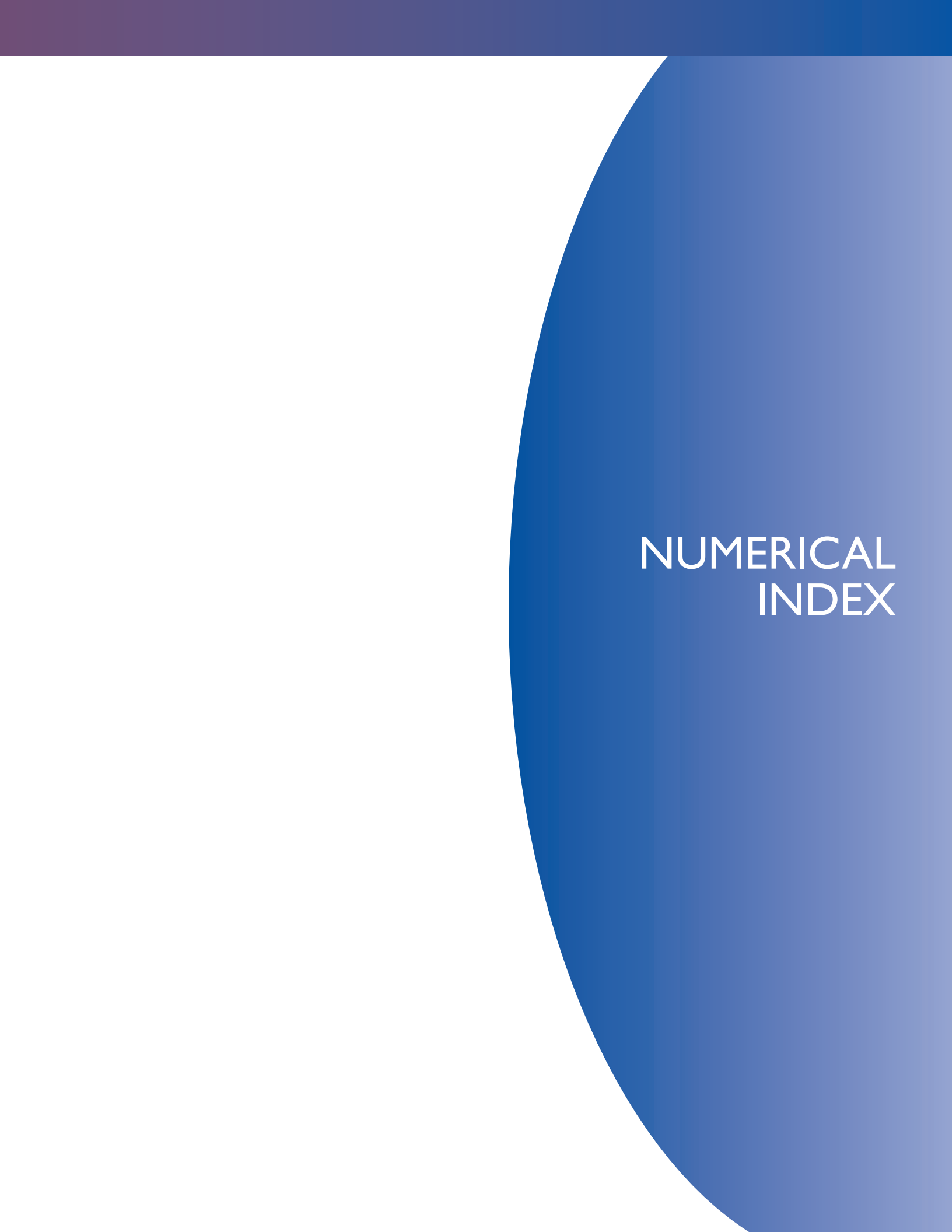
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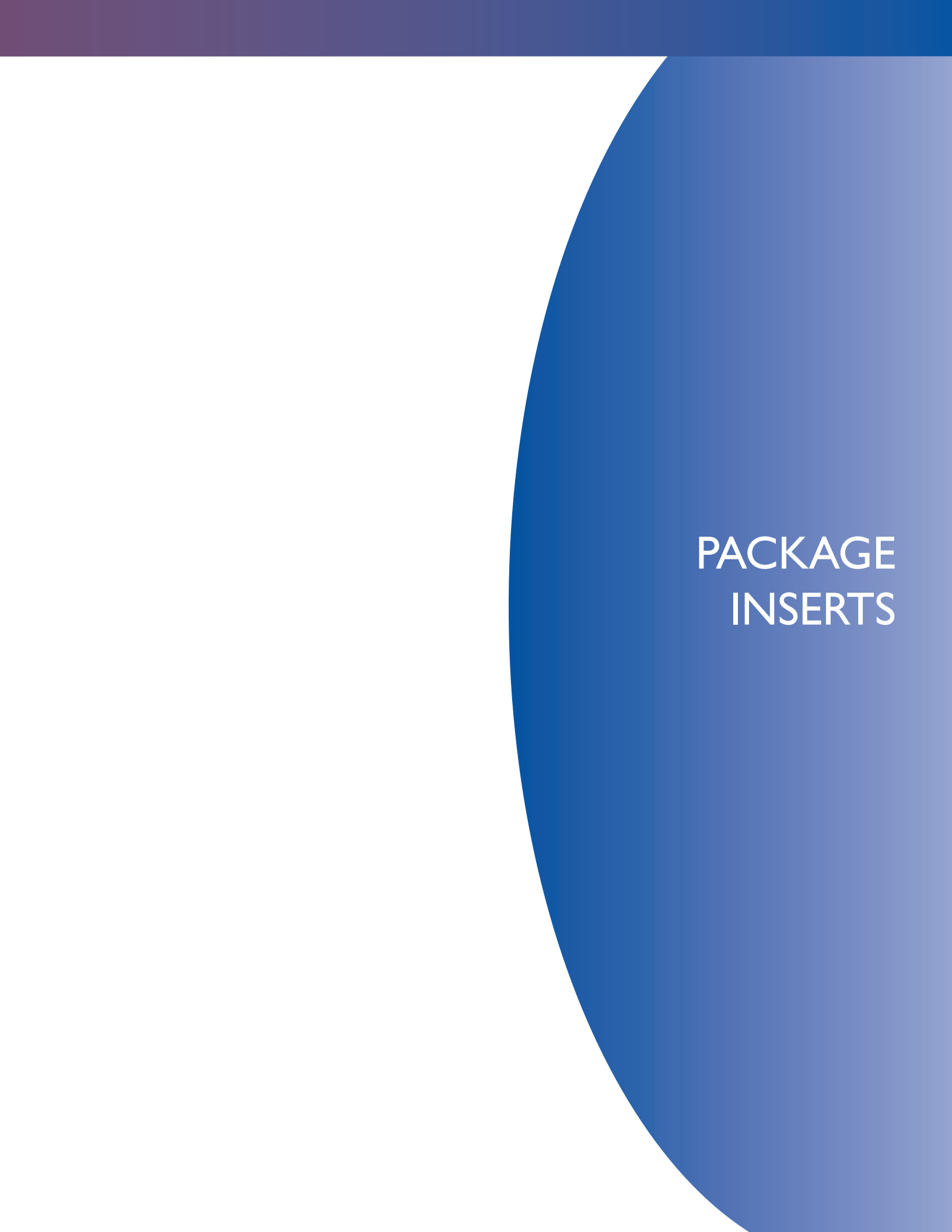
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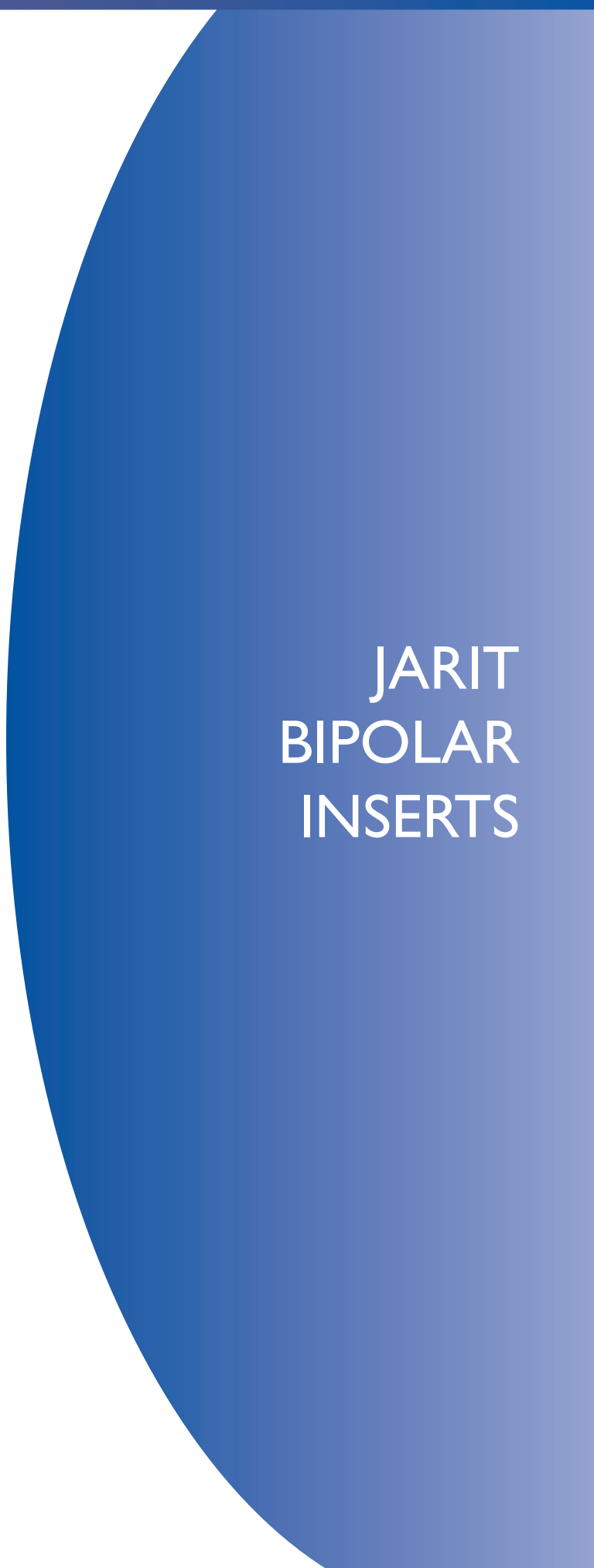
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PACKAGE INSERTS

The logo features a large, stylized letter 'J' that curves from the top left towards the bottom right. The 'J' is filled with a blue-to-white gradient, with the blue being more prominent on the right side. The text 'JARIT BIPOLAR INSERTS' is positioned within the blue portion of the 'J'.

JARIT BIPOLAR INSERTS

ENGLISH
JARIT BIPOLAR FORCEPS IMPORTANT
INFORMATION - PLEASE READ BEFORE USE!
CAUTION

Please read all information contained in this insert. The use of an instrument for a task other than that for which it is intended, as well as improper, ineffective and insufficient maintenance can greatly reduce the life of an instrument and will invalidate the instrument's warranty. Incorrect handling and care as well as misuse can lead to premature wear or can cause hazards to patients and users.

HOW SUPPLIED

JARIT BIPOLAR FORCEPS are supplied non-sterile and must be cleaned and sterilized prior to use according to hospital protocol and the procedures outlined in this document. Failure to follow these procedures will invalidate the instrument's warranty and can cause the instrument to fail.

DESCRIPTION

Bipolar Forceps are intended for use in general surgical procedures. The device is connected through a suitable bipolar cable with the bipolar output of an electrosurgical generator. Coagulation is achieved using electrosurgical energy generated by the electrosurgical generator unit and activated by a footswitch. The use of an instrument for a task other than for which it is intended, as well as improper, ineffective, and insufficient maintenance can greatly reduce the life of an instrument and will invalidate the instrument's warranty.

INDICATIONS FOR USE

Bipolar Forceps are designed to grasp, manipulate and coagulate selected tissue. It is to be connected through a suitable bipolar cable with the bipolar output of an electrosurgical generator. Bipolar Forceps must only be used with bipolar coagulation current. The Bipolar Forceps has not been shown to be effective for tubal sterilization or tubal coagulation for sterilization procedures and should not be used for these procedures.

The maximum output of the generator shall not exceed 750 Vp.

Note: Electrosurgical instruments should be used only by individuals who are trained and licensed to use such devices. Examples of such training and experience include: Training through qualified residency program, surgical skills workshops, training programs offered by equipment manufacturers or preceptorship/surgical assistant training.

ADVERSE EVENTS

Adverse events reported while using bipolar electrosurgical devices include: Inadvertent activation with resultant tissue damage at the wrong site and/or equipment damage. Fires involving surgical drapes and other combustible materials have been reported. Alternate current pathways resulting in burns where the patient or physician or assistant is in contact with exposed metal. Explosions caused by electrosurgical sparking in a flammable gas environment (i.e., explosive anesthetic gases). Organ perforation. Sudden massive hemorrhage.

CAUTIONS & WARNINGS

Special safety precautions should be observed when using electrosurgical instruments. Electrosurgical instruments can pose a significant shock, burn or explosion hazard if used improperly, incorrectly or carelessly. Avoid touching or grounding electrosurgical instruments to non-insulated instruments, scopes, trocar sleeves, etc. All persons using such devices should be knowledgeable in the use and handling of laparoscopic instruments, coagulation equipment, their accessories and other related equipment.

Test all instruments, accessories and equipment prior to

each use. Written Standard Operating Procedures for the cleaning, sterilization, storage, inspection and maintenance of the instruments, accessories and equipment are recommended. Do not use in presence of flammable liquids or anesthetics. Electrosurgical generators used with these devices are designed to cause destruction of tissue and are inherently dangerous if operated improperly. Follow all safety precautions and instructions supplied by the manufacturer of the electrosurgical generator. The electrode tip must always be in full view before activating power. Apply power only when electrode tip is in full contact with the tissue selected for coagulation. Electrode tip must not come in contact with other metal instruments during use. Failure to observe these cautions and contraindications may result in injury, malfunction or other unanticipated occurrences or events for the operator, staff and/or the patient.

INITIAL USE OF NEW INSTRUMENTS

Every instrument must be cleaned and sterilized before it is used for the first time. The instrument was developed for sterilization by autoclave and has shown good results using this method.

INSPECTION AND FUNCTIONAL CHECK

It is very important to examine carefully each surgical instrument for breaks, cracks or malfunctions before use. It is especially essential to check areas such as blades, points, ends, stops and snaps as well as all movable parts. Do not use damaged instruments. Never attempt to make repairs yourself. Any repairs made by the customer may void the warranty. Service and repairs should be referred to trained qualified persons only. Refer questions about repair to the manufacturer or the biomedical engineering department or return to Integra LifeSciences for repair.

CLEANING AND MAINTENANCE

Every surgical instrument should be disinfected and thoroughly cleaned after each use. Proper cleaning, inspection and maintenance will help ensure correct function of the surgical instrument. Clean, inspect and test each instrument carefully. Sterilize all instruments before surgery. A good cleaning and maintenance procedure will extend the useful life of the instrument. Special attention must be paid to slots, stops, ends, hollow tubes and other highly inaccessible areas. Check insulation, cables and connectors for cuts, voids, cracks, tears, abrasions, etc. Do not use damaged instruments. Cleaning and rinsing must take place immediately after each use for best effect. Failure to clean promptly may result in adherent particles or dried secretions that may resist cleaning and complicate or resist future sterilization. Instruments must be completely cleaned and rinsed off of all foreign matter. Use warm water and a commercially available instrument pre-soak or cleaning agent. Enzymatic cleaners must be used to remove protein deposits. Follow the enzymatic cleaner's instructions; rinse thoroughly.

- Do not use corrosive cleaning agents (i.e., bleach). Cleaning solutions and rinses at or near a neutral pH (7.0) are best.
- Do not use abrasive cleaners.
- Only a soft bristle brush should be used.
- Can be disinfected in the washing machine up to 203°F (95°C).
- Rinse thoroughly with distilled water.
- Prepare for storage and/or sterilization.

After cleaning and rinsing, dry instruments completely and carefully with compressed air (including inside channels and highly inaccessible areas). Note: After cleaning and before sterilization, treat all instruments with a water soluble lubricant which is considered as being physiologically safe, especially their

JARIT BIPOLAR FORCEPS

blades, ends, stops, snaps and all movable parts.

REPAIRS AND MAINTENANCE

Should your instruments require repair or maintenance, contact Integra LifeSciences for return authorization and address. Instruments returned to Integra LifeSciences for repair must have a statement testifying that each instrument has been thoroughly cleaned and sterilized. Failure to supply evidence of cleaning and disinfection will result in a cleaning charge and delayed processing of your instrument repair. Products repaired by Integra LifeSciences are guaranteed for 90 days to be free of defects in workmanship and parts when used normally for their intended surgical purpose. Any workmanship or parts proving to be defective will be replaced or repaired, at Integra LifeSciences' discretion, at no charge to the customer.

STORAGE AND STERILIZATION

Instruments must be stored in a clean, dry, moisture free area.

The instruments should be stored individually in their shipping carton or in a protective tray with partitions. Protect tips with cloth, gauze or tubing if stored in drawers. Instruments and cables are reusable and meet AAMI standards for sterilization. Use steam autoclave sterilization. Thoroughly clean instruments of all debris, tissue and foreign matter prior to sterilization. Follow the sterilizer manufacturer's instructions for operation and loading of steam autoclaves. There must be direct steam exposure to all surfaces of the instruments being sterilized including the internal surface and tubes channels. Allow instrument to air cool to room temperature before use.

STANDARD STERILIZATION METHOD

Use steam autoclave sterilization only.

Bipolar Forceps (Unwrapped):

Sterilization Cycle	Temperature	Exposure Time	Min. Dry Time
Prevacuum, flash	270° F (132° C)	3 minutes	---

Other time and steam temperature cycles may also be used. However, user must validate any deviation from the recommended time and temperature. (**Note:** Contact the manufacturer of your steam autoclave to confirm appropriate temperatures and sterilization times.)

Caution: Autoclave temperatures should not exceed 279°F (137°C); handles, insulation or other non-metallic parts may be damaged.

Do not sterilize with hot air.

HANDLING

All surgical instruments must be handled with the greatest care when being transported, cleaned, treated, sterilized and stored. This is especially true for blades, fine points and other sensitive areas. Surgical instruments corrode and their functions are impaired if they come into contact with aggressive materials. The instruments must not be exposed to acids or other aggressive cleaning agents.

PRODUCT INFORMATION DISCLOSURE

INTEGRA AND MANUFACTURER EXCLUDE ALL WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEITHER INTEGRA NOR MANUFACTURER SHALL BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE, DIRECTLY OR INDIRECTLY ARISING FROM USE OF THIS PRODUCT. NEITHER INTEGRA NOR MANUFACTURER ASSUME NOR AUTHORIZE ANY PERSON TO ASSUME FOR THEM ANY OTHER OR ADDITIONAL LIABILITY OR RESPONSIBILITY IN CONNECTION WITH

THESE PRODUCTS.

RETURNED GOODS POLICY

Products must be returned in unopened packages with manufacturer's seals intact to be accepted for replacement or credit unless returned due to a complaint of product defect. Determination of a product defect will be made by Integra LifeSciences. Products will not be accepted for replacement if they have been in the possession of the customer for more than 90 days.



SYMBOLS USED ON LABELING

Manufacturer



Authorized Representative in the European Community



Catalog number



Lot number



See instructions for use



Consult instructions for use

Rx ONLY

US Federal Law restricts this device to sale by or on the order of a physician only.



Product complies with requirements of directive 93/42/EEC for medical devices

CAUTION

Federal (USA) law restricts this device to sale by or on the order of a physician.



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JL-000010 Rev I

The cover features a dark blue header bar at the top. A large, light blue curved shape on the right side frames the text. The text 'JARIT ENDOSCOPIC INSTRUMENTS' is written in white, uppercase letters, positioned within the light blue curved area.

JARIT
ENDOSCOPIC
INSTRUMENTS

JARIT ENDOSCOPIC INSTRUMENTS INDICATIONS FOR USE

For use by, or as directed by, a surgeon in endoscopic surgery. For use when a rigid endoscopic instrument for grasping, dissecting and/or other manipulation of soft tissue is determined to be appropriate by the surgeon. For those instruments with electrosurgical capability, current can be used for coagulation and/or cutting as determined necessary and appropriate by the surgeon.

CONTRAINDICATION

Instruments should not be used for anything other than their intended use.

Jarit endoscopic bipolar forceps are not intended for use with tubal ligation.

WARNING

Consult individual national infection control/prevention protocols for specific guidance regarding processing medical devices with suspected exposure to Creutzfeldt-Jakob Disease (CJD).

CAUTION

After cleaning, especially ultrasonic cleaning, check screws on instruments because the vibration from the ultrasonic cleaning may cause them to loosen or fall out.

For electrosurgical instruments, use the least amount of power appropriate for the application. For electrosurgical cables, disconnect from the generator or instrument by grasping the connector only. **Do not pull the cable by the cord. Do not use instrument or cable if insulation is not fully intact.**

JARIT surgical instruments are supplied non-sterile and must be cleaned, lubricated and sterilized prior to use according to hospital protocol and the procedures outlined in this document. Failure to follow these procedures will invalidate the instrument's warranty and can cause the instrument to fail.

Inappropriate use of instruments will lead to damage that is usually not repairable; for example, a hemostat that is used to clamp tubing can become misaligned and quickly break.

DIRECTIONS FOR JARIT DETACH® INSTRUMENTS

Step 1: Open handle. Depress button on top of handle and close handle fully. **Result:** The scissors insert (blades/draw-wire component) is released from the handle; the ball-end of the insert is now visible.



Step 2: Open the handle fully. (A slight resistance will be felt.) **Result:** The scissors insert is pushed out the end of the instrument.



Step 3: Pull the scissors insert out of the shaft of the

instrument. **Result:** The instrument is now detached in only two pieces with the blades automatically in the open position and ready for proper cleaning.



DIRECTIONS FOR RE-ATTACHING

Step 1: Be sure the blades of the scissors insert are in the CLOSED position. **Result:** The instrument will not re-attach with the blades open.



Step 2: Holding the scissors insert (jaw closed) in one hand and the handle (handle open) in the other hand, place the insert into the shaft and align the small knob with the arrow on the shaft. While holding the distal tip (in closed position) and the handle in the full open position, apply light pressure in the direction of the handle and press the button on the top of the handle. **Result:** The scissors insert will fall into place when it is properly aligned and the button pushed.



Step 3: Release the button and close the handle fully. (A slight clicking sound will be heard.) **Result:** The scissors insert has been re-engaged and the instrument is ready for use.



INSPECTION OF ALL INSTRUMENTS

All instruments are carefully inspected before shipment. Because damage may occur during transit, the instruments should be thoroughly inspected upon receipt. **All instruments must be inspected prior to use.**

Handling and Operating Instruments: Instruments should be handled and operated by personnel completely familiar with their use, assembly and disassembly. Before a new instrument is used and prior to each surgical procedure, the instrument must be decontaminated, lubricated and sterilized as described below. Handle the instrument with care. The instrument must be inspected to assure proper functioning prior to each use with particular attention paid to the condition of all moving parts, tips, box locks, ratchets and cutting edges. Each instrument with a screw must be inspected before and after use to ensure that the screws do not move when operating the instrument. Screws can loosen and back out of an instrument as a result of normal operation and/or the vibration during ultrasonic cleaning. Failure to make a complete inspection to assure the proper operation and function of the instrument may result in unsatisfactory

performance, perhaps because a part is missing. Do not use if the instrument does not appear to be functioning properly. Use of an instrument for a task other than that for which it is intended could result in a damaged or broken instrument, or one which provides an unsatisfactory performance. In order to insure warranties and guarantees, instruments in need of repair should be sent to Integra.

DECONTAMINATION AND STERILIZATION PROCEDURES

As with any decontamination procedure, personnel should follow accepted guidelines for hand washing, the use of protective attire, etc. as recommended by A.A.M.I. Standards and Recommended Practice, "Safe Handling and Biological Decontamination of Medical Devices in Health Care Facilities and in Non-Clinical Settings," ANSI/AAMI ST35:2003.

Decontamination is a two step process:

- 1) Thorough cleaning and rinsing.
- 2) Sterilization or disinfection.

A. MANUAL DECONTAMINATION

PRECLEANING: Remove gross debris from surgical instruments with a lap sponge and sterile water routinely during the procedure to prevent drying on of blood and body fluids, etc. It is important to rinse instruments that have been exposed to blood and saline solution before these substances dry. Blood and body fluids as well as saline solutions are highly corrosive. In addition, blood can produce a stain that is difficult to remove.

CLEANING: To prevent the formation of biofilm, cleaning should occur as soon as possible after instrumentation is used. Biofilm is an accumulation of a biomass of bacteria and extracellular material that tightly adheres itself to the surface of the instruments. It cannot be easily removed, and protects microorganisms from being easily removed by ordinary cleaning/decontamination methods used in hospitals. It is particularly problematic in lumened medical devices.

Step 1. Maintain moisture: Immediately after the surgical procedure, place the instruments in an instrument tray/container and cover with a towel moistened with sterile distilled water. Foam, spray or gel products, specifically intended for use with surgical instruments, are available to keep the soil moist. Transport tray of soiled instruments in an impervious plastic bag or container with a tight lid to the decontamination environment (keep the outside of the containment clean).

Step 2. Enzymatic Soak: Immerse fully opened and/or disassembled instruments in an enzymatic solution, specific for use with surgical instruments. Prepare the solution and use per enzyme manufacturer's recommendations, paying special attention to instructions for correct dilution, temperature and soak time. Flush air from lumens and fill them with enzymatic solution for full contact with this inner surface during the soak time.

Step 3. Rinse: Remove from enzymatic soak after the time period recommended by the enzymatic manufacturer and rinse thoroughly with tap water. Flush lumens until rinse water runs clear.

Step 4. Cleaning Instruments: Choose a cleaning solution appropriate for surgical instruments and follow the manufacturer's instructions for use. The use of neutral pH detergents is vital to the maintenance of surgical instruments. Contact with acidic or alkaline solution will remove the instruments' protective barrier of chromium oxide, often leading to corrosion, pitting, and breakage. You may find that depending on the type of soil, a detergent that is a little more or less acid or alkaline may be more appropriate. The ideal cleaning agent is nonabrasive, low-foaming and free-rinsing. Using a small clean hand-held brush, remove

soil from all surfaces of the instrument while fully immersed in the solution. During manual cleaning, never use steel wool, wire brushes, scalpel blades or highly abrasive detergent or cleansers to remove soil from surgical instruments. These will damage the instruments' protective surface and lead to corrosion. Use a clean soft bristled brush to clean instruments with an accessible channel. Remove the soil from the ratchets, jaws, tips, box locks, and/or hinge mechanism. The box lock and hinge portion of an instrument must be thoroughly cleaned after each use. A build-up of soil, debris, lubricants, etc. in these areas, will make it difficult to use the instrument and eventually irreparably damage it. Vigorously flush channels with the cleaning solution. Deionized water is recommended and preferred because it is free of the many compounds which exist in ordinary tap water. These substances, alone, cause stains and when tap water is combined with some detergents it will form insoluble deposits on the instruments. Manual cleaning should remove all visible residue. It is essential to keep the box locks and hinges open during any manual or automated cleaning process.

Step 5. Rinse: Thoroughly rinse instruments by immersing in tap water and wiping with a clean, soft cloth. Flush lumens until water runs clear.

Step 6. Ultrasonic Cleaning and Rinsing: Follow the recommendations of the ultrasonic manufacturer regarding cycle times, detergents, proper placement of the instrument tray, and conditioning ("degassing") of the cleaning solution, etc. Use an ultrasonic cleaner to remove soil from hard to reach surfaces such as grooves, crevices, lumens, instruments with moving parts, etc., after gross soil has been removed. Open or disassemble instruments as appropriate. Place instruments in a mesh bottom stainless steel instrument tray. Place the tray into the ultrasonic cleaner. Flush air out of lumens and fill them with the ultrasonic cleaning solution (under the solution level in the chamber) for effective removal of soil from that inner surface by the ultrasonic activity.

Step 7. FINAL RINSE should be with "treated water". Softened or deionized water should be used for the final rinse to better remove detergents etc. Softening water removes calcium and magnesium ions that cause water to be hard. Iron ions may also be removed by this treatment. Deionization removes ionized salts and particles from the water. Excessively hard water can spot or stain instruments and excessive chlorine in water can cause pitting of the instrument. Deionized water is preferred for the final rinse.

Step 8. Decontaminate Clean Instruments: Once instruments have been cleaned they must be rendered safe for handling, inspection and assembly. They may be steam sterilized without a wrapper or disinfected following the instructions from the instrument, sterilizer and disinfectant manufacturers.

Step 9. Visual Inspection and Instrument Set Assembly: Visually inspect the instrument for cleanliness and to ensure all parts are in proper working order, as the set is assembled. Inspection is a vital part of proper care and maintenance. Instruments in need of repair will not perform accurately in surgery and breakage is likely to occur. DO NOT USE damaged instruments. Worn ratchets, loose box locks and misaligned jaws can be repaired at a fraction of the cost of new instruments. Contact your local representative for information regarding a cost-effective instrument repair program.

Step 10. Lubricate: The use of an instrument lubricant, that is compatible with the method of sterilization to be used, is recommended before instruments are sterilized. Be certain that the instrument lubricant is diluted and maintained properly, according to the manufacturer's instructions. This type of lubricant is referred to as "instrument milk" and is usually applied by spraying into the box locks and moving parts or by dipping the opened instruments into a solution. Lubricants that are too concentrated or too heavily applied will result in slippery instruments that will also be mistaken as wet after sterilization. After thoroughly cleaning instruments, proper application of lubricants to joints will keep them moving

freely and aid in protecting the surface from mineral deposits. Note that ultrasonic cleaners remove all lubrication; therefore this maintenance procedure should be done routinely after ultrasonic cleaning and before sterilization. Proper lubrication is an integral step in maintaining the long-life of the surgical instrument. Lubrication will prevent the friction of metal on metal and preserve the smooth function of the instrument thus avoiding corrosion by friction. Furthermore, routine use of lubricating agents, on thoroughly clean instruments, will prevent hinged and other movable parts from sticking. Lubrication will aid in protecting the entire instrument surface from mineral deposits.

Step 11. Drying: Before instruments are wrapped for sterilization or storage, they must be thoroughly dry. If a set of instruments is wet when wrapped for sterilization it is likely to come out of the sterilizer wet. "Wet Packs" are not suitable for use after sterilization because they may be easily contaminated when handled. In addition, remaining moisture, particularly in box locks and hinges may result in corrosion that will weaken the instrument and lead to breakage during use. Prepare instrument sets for sterilization using a wrapper, pouch or rigid sterilization container that is appropriate for the method of sterilization to be used. The Association for the Advancement of Medical Instrumentation (AAMI) and individual sterilizer manufacturers provide guidance for the proper preparation of surgical instrument trays for sterilization. Some sterilizer manufacturers can also provide information regarding wet pack problem solving. See also, Sterilization for the Healthcare Facility, 2nd Edition, Reichert, M.; Young, J., "Wet Pack Problem Solving," Lee, S. (Frederick, MD: Aspen, 1997).

B. MECHANICAL DECONTAMINATION

General surgical instrumentation may be processed in a washer sterilizer or washer decontaminator/disinfector. Some of these processes include an enzyme application phase and a lubrication phase that is designed into the cycle.

Follow the manufacturer's specifications when using automatic washer-sterilizers or washer decontaminators/disinfectors. They usually require the use of a low foaming, free rinsing detergent with a neutral pH (7.0). A high-foaming detergent may clean effectively but will often leave residual deposits on the instruments and do harm to mechanical washers. Automated washer sterilizers and washer decontaminator/disinfectors usually have adjustable wash and rinse times. Some washers enable the user to customize extra cycles to process heavily soiled surgical instruments more effectively. Check with a Technical Service representative at 1-800-431-1123 for questions regarding processing delicate, complex and/or multipart instruments by this method.

C. TERMINAL STERILIZATION

After following the decontamination recommendations, reusable instruments are ready for sterilization. Independent laboratory testing, conducted according to the F.D.A. (21 CFR PART 58) and Good Laboratory Practice Regulations (G.L.P.), has validated steam sterilization as an effective process for reusable instruments. See also, AAMI Standards and Recommended Practices, "Steam Sterilization and Sterility Assurance in Health Care Facilities," ANSI/AAMI ST46:2002; "Flash Sterilization Steam Sterilization of Patient Care Items for Immediate Use, ANSI/AAMI ST37:3ed. AAMI standards recommend that the sterilizer manufacturer's written instructions for cycle parameters should also be followed. Steam sterilization of lumened instruments requires that they be flushed with sterile water just prior to wrapping and sterilization. The water generates steam within the lumen to move air out. Air is the greatest enemy to steam sterilization, preventing steam contact if not eliminated. Medical device manufacturer's exposure times to sterilization

temperature may need to be longer than the minimum indicated by the sterilizer manufacturer but must never be shorter.

Below are the recommended sterilization parameters:

Sterilizer	Exposure Temperature	Exposure Time	Minimum Dry Time
Pre-vacuum (wrapped)	121° C (250° F)	20 min	20 min
	132° C (270° F)	4 min	20 min
	134° C (273° F)	3 min	15 min
Pre-vacuum (unwrapped)	132° C (270° F)	4 min	
Gravity Steam (wrapped)	132° C (270° F)	18 min	

MAINTENANCE PROCEDURES

Improper, ineffective, and insufficient maintenance can greatly reduce the life of an instrument and will invalidate the instrument's warranty. We cannot make any statement about how long an instrument will last. Designed and crafted to exacting specifications, instruments will perform for a reasonable number of years when the following steps are observed:

Protect Instruments: The most effective method of dealing with instrument problems is to prevent them from occurring. The use of "treated water," careful preliminary cleaning, the use of neutralized pH solutions, adherence to manufacturer's instructions, and visual inspection, will help to keep instruments performing accurately and cosmetically free of troublesome stains. It is important to act quickly should a problem arise. Delay will compound the problem and irreparable harm may result.

- Certain compounds are highly corrosive to stainless steel and will cause serious damage despite the passivated protective surface. If instruments are inadvertently exposed to any of the following substances, they should be rinsed immediately with copious amounts of water.

Instruments should never be exposed to:

Aqua regia	Iodine
Ferric chloride	Sulfuric acid
Hydrochloric acid	

The following substances should be avoided whenever possible:

Aluminum chloride	Mercury chloride
Barium chloride	Potassium permanganate
Bichloride of mercury	Potassium thiocyanate
Calcium chloride	Saline
Carbolic acid	Sodium hypochlorite
Chlorinated lime	Stannous chloride
Dakin's solution	

- Any kind of corrosion will lead to rust on steel. Because rust particles can be transferred from one instrument to another, corroding instruments should be removed from service to prevent the formation of rust on other instruments.
- Instruments must be sterilized in the open position or disassembled as appropriate. Steam will only sterilize the surface it can directly touch.
- Every effort should be made to protect sharp cutting edges and fine working tips during all maintenance procedures. Avoid loading retractors and other heavy items on top of delicate and hollow instruments.

Diagnosing Spots and Stains: It is common for instruments to become stained or spotted despite the best efforts of the manufacturers and the hospital staff. In nearly all

cases these problems are the result of minerals deposited upon the surfaces of the instruments, as well as insufficient cleaning. Adhering to proper technique during cleaning and sterilizing procedures will prevent most staining occurrences. However, they will sometimes arise very suddenly and will not disappear on their own. The following identifies some of the various instrument-related problems hospitals may encounter.

Brown Stains: Detergents containing polyphosphates may dissolve copper elements in the sterilizer. This results in copper being deposited on the instruments by an electrolytic reaction. The hospital may try a different detergent or check the quantities used. Usually a dull blue or brown stain is simply a build-up of oxidation on the surface. This film is harmless and will actually protect the instrument from serious corrosion.

Blue Stains: Blue stains are usually the result of cold sterilization techniques. It is important to prepare the solution according to exact proportions and to change the solution when recommended. Serious corrosion may occur if the solution is used beyond the manufacturer's specified time limit. The use of distilled water and a rust inhibitor in the solution will help retard discoloration.

Black Stains: Black stains may be the result of contact with ammonia. Many cleaning compounds contain ammonia and it will remain on the instruments unless they are well rinsed.

Light or Dark Spots: Spots are often the result of condensation pooling and then drying on flat and concave instrument surfaces. The mineral content of the water remains on the instrument. Using "treated water" as the FINAL rinse will help to remove the minerals found in water that can cause these residual spots. It is also important to follow the sterilizer manufacturer's instructions for preparing instrument sets for sterilization. Standing instruments that have flat and concave surfaces "on edge" will enable the condensate to drain off and more readily dry, usually without spotting. An additional cause of spotting can be traced to the instrument wraps. During laundering procedures, it is vital that detergents are thoroughly rinsed out, and that the final rinse is prepared so that the wraps have a pH between 6.8 and 7.0. In addition, healthcare professionals should check the cleanliness of the sterilizer chamber. Steam can lift soil and poorly rinsed chamber cleaning detergents from the chamber walls and deposit them onto instruments and wrappers.

Rust Deposits: It is very unlikely for surgical grade steel to rust. What appears to be rust is often residual organic matter in box locks or mineral deposits which have been baked onto the surface of the instrument. In localities where the water has a high iron content, for example, an iron deposit will result in a metallic film on the instrument. This may be prevented with the use of "treated water" for the FINAL rinse during cleaning procedures.

The most effective method of dealing with instrument problems is to prevent them from occurring. The use of "treated water," careful preliminary cleaning, using neutralized pH solutions, following manufacturer's instructions, and visual inspection, will help to keep instruments performing accurately and cosmetically free of troublesome stains. It is important to act quickly should a problem arise. Delay will compound the problem and irreparable harm may result.

RETURNED GOODS POLICY

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SYMBOLS USED ON LABELING

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Catalog number



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See instructions for use



Consult instructions for use



Product complies with requirements of directive 93/42/EEC for medical devices



0124



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JL-00016 Rev I

The logo features a large, stylized letter 'J' in a dark blue color, which occupies the right half of the page. The background is split: the left half is white, and the right half is a gradient of blue, transitioning from a darker shade at the top to a lighter shade at the bottom.

JARIT INSTRUMENTS

INDICATIONS FOR USE

JARIT surgical instruments are designed to perform a specific function, such as cutting, grasping, clamping, dissecting, probing, retracting, draining, aspirating, suturing, or ligating. For use by, or as directed by, a surgeon. Instruments should be used only for the purpose for which they are designed. The proper surgical technique for the use of instruments is the responsibility of the surgeon.

CONTRAINDICATION

Instruments should not be used for anything other than their intended use.

WARNING

Consult individual national infection control/prevention protocols for specific guidance regarding processing medical devices with suspected exposure to Creutzfeldt-Jakob Disease (CJD).

CAUTION

After cleaning, especially ultrasonic cleaning, check screws on instruments because the vibration from the ultrasonic cleaning may cause them to loosen or fall out.

For electrosurgical instruments, use the least amount of power appropriate for the application. For electrosurgical cables, disconnect from the generator or instrument by grasping the connector only. **Do not pull the cable by the cord. Do not use instrument or cable if insulation is not fully intact.**

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DECONTAMINATION AND STERILIZATION PROCEDURES

As with any decontamination procedure, personnel should follow accepted guidelines for hand washing, the use of protective attire, etc. as recommended by A.A.M.I. Standards and Recommended Practice, "Safe Handling and Biological Decontamination of Medical Devices in Health Care Facilities and in Non-Clinical Settings", ANSI/AAMI ST35:2003.

Decontamination is a two step process:

- 1) Thorough cleaning and rinsing.
- 2) Sterilization or disinfection.

A. MANUAL DECONTAMINATION

PRECLEANING: Remove gross debris from surgical instruments with a lap sponge and sterile water routinely during the procedure to prevent drying on of blood and body fluids, etc. It is important to rinse instruments that have been exposed to blood and saline solution before these substances dry. Blood and body fluids as well as saline solutions are highly corrosive. In addition, blood can produce a stain that is difficult to remove.

CLEANING: To prevent the formation of biofilm, cleaning should occur as soon as possible after instrumentation is used. Biofilm is an accumulation of a biomass of bacteria and extracellular material that tightly adheres itself to the surface of the instruments. It cannot be easily removed, and protects microorganisms from being easily removed by ordinary cleaning/decontamination methods used in hospitals. It is particularly problematic in lumened medical devices.

Step 1. Maintain moisture: Immediately after the surgical procedure, place the instruments in an instrument tray/container and cover with a towel moistened with sterile distilled water. Foam, spray or gel products, specifically intended for use with surgical instruments, are available to keep the soil moist. Transport tray of soiled instruments in an impervious plastic bag or container with a tight lid to the decontamination environment (keep the outside of the containment clean).

Step 2. Enzymatic Soak: Immerse fully opened and/or disassembled instruments in an enzymatic solution, specific for use with surgical instruments. Prepare the solution and use per enzyme manufacturer's recommendations, paying special attention to instructions for correct dilution, temperature and soak time. Flush air from lumens and fill them with enzymatic solution for full contact with this inner surface during the soak time.

Step 3. Rinse: Remove from enzymatic soak after the time period recommended by the enzymatic manufacturer and rinse thoroughly with tap water. Flush lumens until rinse water runs clear.

Step 4. Cleaning Instruments: Choose a cleaning solution appropriate for surgical instruments and follow the manufacturer's instructions for use. The use of neutral pH detergents is vital to the maintenance of surgical instruments. Contact with acidic or alkaline solution will remove the instruments' protective barrier of chromium oxide, often leading to corrosion, pitting, and breakage. You may find that depending on the type of soil, a detergent that is a little more or less acid or alkaline may be more appropriate. The ideal cleaning agent is nonabrasive, low-foaming and free-rinsing. Using a small clean hand-held brush, remove soil from all surfaces of the instrument while fully immersed in the solution. During manual cleaning, never use steel wool, wire brushes, scalpel blades or highly abrasive detergent or cleansers to remove soil from surgical instruments. These will damage the instruments' protective surface and lead to corrosion. Use a clean soft bristled brush to

clean instruments with an accessible channel. Remove the soil from the ratchets, jaws, tips, box locks, and/or hinge mechanism. The box lock and hinge portion of an instrument must be thoroughly cleaned after each use. A build-up of soil, debris, lubricants, etc. in these areas, will make it difficult to use the instrument and eventually irreparably damage it. Vigorously flush channels with the cleaning solution. Deionized water is recommended and preferred because it is free of the many compounds which exist in ordinary tap water. These substances, alone, cause stains and when tap water is combined with some detergents it will form insoluble deposits on the instruments. Manual cleaning should remove all visible residue. It is essential to keep the box locks and hinges open during any manual or automated cleaning process.

Step 5. Rinse: Thoroughly rinse instruments by immersing in tap water and wiping with a clean, soft cloth. Flush lumens until water runs clear.

Step 6. Ultrasonic Cleaning and Rinsing: Follow the recommendations of the ultrasonic manufacturer regarding cycle times, detergents, proper placement of the instrument tray, and conditioning ("degassing") of the cleaning solution, etc. Use an ultrasonic cleaner to remove soil from hard to reach surfaces such as grooves, crevices, lumens, instruments with moving parts, etc., after gross soil has been removed. Open or disassemble instruments as appropriate. Place instruments in a mesh bottom stainless steel instrument tray. Place the tray into the ultrasonic cleaner. Flush air out of lumens and fill them with the ultrasonic cleaning solution (under the solution level in the chamber) for effective removal of soil from that inner surface by the ultrasonic activity.

Step 7. FINAL RINSE should be with "treated water". Softened or deionized water should be used for the final rinse to better remove detergents etc. Softening water removes calcium and magnesium ions that cause water to be hard. Iron ions may also be removed by this treatment. Deionization removes ionized salts and particles from the water. Excessively hard water can spot or stain instruments and excessive chlorine in water can cause pitting of the instrument. Deionized water is preferred for the final rinse.

Step 8. Decontaminate Clean Instruments: Once instruments have been cleaned they must be rendered safe for handling, inspection and assembly. They may be steam sterilized without a wrapper or disinfected following the instructions from the instrument, sterilizer and disinfectant manufacturers.

Step 9. Visual Inspection and Instrument Set Assembly: Visually inspect the instrument for cleanliness and to ensure all parts are in proper working order, as the set is assembled. Inspection is a vital part of proper care and maintenance. Instruments in need of repair will not perform accurately in surgery and breakage is likely to occur. DO NOT USE damaged instruments. Worn ratchets, loose box locks and misaligned jaws can be repaired at a fraction of the cost of new instruments. Contact your local representative for information regarding a cost-effective instrument repair program.

Step 10. Lubricate: The use of an instrument lubricant, that is compatible with the method of sterilization to be used, is recommended before instruments are sterilized. Be certain that the instrument lubricant is diluted and maintained properly, according to the manufacturer's instructions. This type of lubricant is referred to as "instrument milk" and is usually applied by spraying into the box locks and moving parts or by dipping the opened instruments into a solution. Lubricants that are too concentrated or too heavily applied will result in slippery instruments that will also be mistaken as wet after sterilization. After thoroughly cleaning instruments, proper application of lubricants to joints will keep them moving freely and aid in

protecting the surface from mineral deposits. Note that ultrasonic cleaners remove all lubrication; therefore this maintenance procedure should be done routinely after ultrasonic cleaning and before sterilization. Proper lubrication is an integral step in maintaining the long-life of the surgical instrument. Lubrication will prevent the friction of metal on metal and preserve the smooth function of the instrument thus avoiding corrosion by friction. Furthermore, routine use of lubricating agents, on thoroughly clean instruments, will prevent hinged and other movable parts from sticking. Lubrication will aid in protecting the entire instrument surface from mineral deposits.

Step 11. Drying: Before instruments are wrapped for sterilization or storage, they must be thoroughly dry. If a set of instruments is wet when wrapped for sterilization it is likely to come out of the sterilizer wet. "Wet Packs" are not suitable for use after sterilization because they may be easily contaminated when handled. In addition, remaining moisture, particularly in box locks and hinges may result in corrosion that will weaken the instrument and lead to breakage during use. Prepare instrument sets for sterilization using a wrapper, pouch or rigid sterilization container that is appropriate for the method of sterilization to be used. The Association for the Advancement of Medical Instrumentation (AAMI) and individual sterilizer manufacturers provide guidance for the proper preparation of surgical instrument trays for sterilization. Some sterilizer manufacturers can also provide information regarding wet pack problem solving. See also, *Sterilization for the Healthcare Facility*, 2nd Edition, Reichert, M.; Young, J., "Wet Pack Problem Solving", Lee, S. (Frederick, MD: Aspen, 1997).

B. MECHANICAL DECONTAMINATION

General surgical instrumentation may be processed in a washer sterilizer or washer decontaminator/disinfector. Some of these processes include an enzyme application phase and a lubrication phase that is designed into the cycle.

Follow the manufacturer's specifications when using automatic washer-sterilizers or washer decontaminators/disinfectors. They usually require the use of a low foaming, free rinsing detergent with a neutral pH (7.0). A high-foaming detergent may clean effectively but will often leave residual deposits on the instruments and do harm to mechanical washers. Automated washer sterilizers and washer decontaminator/disinfectors usually have adjustable wash and rinse times. Some washers enable the user to customize extra cycles to process heavily soiled surgical instruments more effectively. Check with a Technical Service representative at 1-800-431-1123 for questions regarding processing delicate, complex and/or multipart instruments by this method.

C. TERMINAL STERILIZATION

After following the decontamination recommendations, reusable instruments are ready for sterilization. Independent laboratory testing, conducted according to the F.D.A. (21 CFR PART 58) and Good Laboratory Practice Regulations (G.L.P.), has validated steam sterilization as an effective process for reusable instruments. See also, AAMI Standards and Recommended Practices, "Steam Sterilization and Sterility Assurance in Health Care Facilities", ANSI/AAMI ST46:2002; "Flash Sterilization Steam Sterilization of Patient Care Items for Immediate Use", ANSI/AAMI ST37:3ed. AAMI standards recommend that the sterilizer manufacturer's written instructions for cycle parameters should also be followed. Steam sterilization of lumened instruments requires that they be flushed with sterile water just prior to wrapping and sterilization. The water generates steam within the lumen to move air out. Air is the greatest enemy to steam sterilization, preventing steam contact if not eliminated. Medical device manufacturer's exposure times to sterilization temperature may need to be longer than the minimum indicated by the sterilizer manufacturer but must never be shorter.

Below are the recommended sterilization parameters:

Sterilizer	Exposure Temperature	Exposure Time	Minimum Dry Time
Pre-vacuum (wrapped)	121° C (250° F) 132° C (270° F) 134° C (273° F)	20 min 4 min 3 min	20 min 20 min 15 min
Pre-vacuum (unwrapped)	132° C (270° F)	4 min	
Gravity Steam (wrapped)	132° C (270° F)	18 min	

MAINTENANCE PROCEDURES

Improper, ineffective, and insufficient maintenance can greatly reduce the life of an instrument and will invalidate the instrument's warranty. We cannot make any statement about how long an instrument will last. Designed and crafted to exacting specifications, instruments will perform for a reasonable number of years when the following steps are observed:

Protect Instruments: The most effective method of dealing with instrument problems is to prevent them from occurring. The use of "treated water", careful preliminary cleaning, the use of neutralized pH solutions, adherence to manufacturer's instructions, and visual inspection, will help to keep instruments performing accurately and cosmetically free of troublesome stains. It is important to act quickly should a problem arise. Delay will compound the problem and irreparable harm may result.

- Certain compounds are highly corrosive to stainless steel and will cause serious damage despite the passivated protective surface. If instruments are inadvertently exposed to any of the following substances, they should be rinsed immediately with copious amounts of water.

Instruments should never be exposed to:

Aqua regia Iodine
 Ferric chloride Sulfuric acid
 Hydrochloric acid

The following substances should be avoided whenever possible:

Aluminum chloride Mercury chloride
 Barium chloride Potassium permanganate
 Bichloride of mercury Potassium thiocyanate
 Calcium chloride Saline
 Carboic acid Sodium hypochlorite
 Chlorinated lime Stannous chloride
 Dakin's solution

- Any kind of corrosion will lead to rust on steel. Because rust particles can be transferred from one instrument to another, corroding instruments should be removed from service to prevent the formation of rust on other instruments.
- Instruments must be sterilized in the open position or disassembled as appropriate. Steam will only sterilize the surface it can directly touch.
- Every effort should be made to protect sharp cutting edges and fine working tips during all maintenance procedures. Avoid loading retractors and other heavy items on top of delicate and hollow instruments.

Diagnosing Spots and Stains: It is common for instruments to become stained or spotted despite the best efforts of the manufacturers and the hospital staff. In nearly all cases these problems are the result of minerals deposited upon the surfaces of the instruments, as well as insufficient cleaning.

Adhering to proper technique during cleaning and sterilizing procedures will prevent most staining occurrences. However, they will sometimes arise very suddenly and will not disappear on their own. The following identifies some of the various instrument-related problems hospitals may encounter.

Brown Stains: Detergents containing polyphosphates may dissolve copper elements in the sterilizer. This results in copper being deposited on the instruments by an electrolytic reaction. The hospital may try a different detergent or check the quantities used. Usually a dull blue or brown stain is simply a build-up of oxidation on the surface. This film is harmless and will actually protect the instrument from serious corrosion.

Blue Stains: Blue stains are usually the result of cold sterilization techniques. It is important to prepare the solution according to exact proportions and to change the solution when recommended. Serious corrosion may occur if the solution is used beyond the manufacturer's specified time limit. The use of distilled water and a rust inhibitor in the solution will help retard discoloration.

Black Stains: Black stains may be the result of contact with ammonia. Many cleaning compounds contain ammonia and it will remain on the instruments unless they are well rinsed.

Light or Dark Spots: Spots are often the result of condensation pooling and then drying on flat and concave instrument surfaces. The mineral content of the water remains on the instrument. Using "treated water" as the FINAL rinse will help to remove the minerals found in water that can cause these residual spots. It is also important to follow the sterilizer manufacturer's instructions for preparing instrument sets for sterilization. Standing instruments that have flat and concave surfaces "on edge" will enable the condensate to drain off and more readily dry, usually without spotting. An additional cause of spotting can be traced to the instrument wraps. During laundering procedures, it is vital that detergents are thoroughly rinsed out, and that the final rinse is prepared so that the wraps have a pH between 6.8 and 7.0. In addition, healthcare professionals should check the cleanliness of the sterilizer chamber. Steam can lift soil and poorly rinsed chamber cleaning detergents from the chamber walls and deposit them onto instruments and wrappers.

Rust Deposits: It is very unlikely for surgical grade steel to rust. What appears to be rust is often residual organic matter in box locks or mineral deposits which have been baked onto the surface of the instrument. In localities where the water has a high iron content, for example, an iron deposit will result in a metallic film on the instrument. This may be prevented with the use of "treated water" for the FINAL rinse during cleaning procedures.

The most effective method of dealing with instrument problems is to prevent them from occurring. The use of "treated water", careful preliminary cleaning, using neutralized pH solutions, following manufacturer's instructions, and visual inspection, will help to keep instruments performing accurately and cosmetically free of troublesome stains. It is important to act quickly should a problem arise. Delay will compound the problem and irreparable harm may result.

RETURNED GOODS POLICY

Products must be returned in unopened packages with manufacturer's seals intact to be accepted for replacement or credit unless returned due to a complaint of product defect. Determination of a product defect will be made by Integra. Products will not be accepted for replacement if they have been in the possession of the customer for more than 90 days.

REPAIRS AND MAINTENANCE

Should your instruments require repair or maintenance, contact Integra for return authorization and address. Instruments returned to Integra for repair must have a statement testifying that each instrument has been thoroughly cleaned and sterilized. Failure to supply evidence of cleaning and disinfection will result in a cleaning charge and delayed processing of your instrument repair.

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SYMBOLS USED ON LABELING

	Manufacturer
	Authorized Representative in the European Community
	Catalog number
	Lot number
	See instructions for use
	Consult instructions for use
	Product complies with requirements of directive 93/42/EEC for medical devices



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JL-00032 Rev 0

JARIT
REUSABLE
RIGID
ENDOSCOPES

JARIT REUSABLE RIGID ENDOSCOPES

All JARIT instruments are carefully inspected before shipment. Because damage may occur during transit, the instruments should be thoroughly inspected upon receipt and prior to use. Before first use, all instruments must be thoroughly cleaned prior to sterilization or high level decontamination.

Indications for Use: For use by, or as directed by, a surgeon in endoscopic surgery.

Handling and Operating Scopes: JARIT scopes should be handled and operated by personnel completely familiar with their use. Prior to each surgical procedure, the scope should be cleaned and sterilized as stated in the "JARIT Reusable Rigid Endoscopes Recommended Cleaning Procedure" section. The scope should be inspected and operationally tested prior to use. A failure to make a complete inspection to assure the proper operation and function of the scope may result in unsatisfactory performance. **Do not use if the scope does not perform successfully.** Handle the scope with care, always grasping the eyepiece or body part. Do not allow other instruments to come into contact with the lens. Gently insert into and remove from cannulas. Endoscopes and attached light sources should not be used for more than four hours without a break. Prolonged use could increase the endoscope's surface temperature over the body temperature. Use of a scope for a task other than that for which it is intended could result in a damaged or broken scope. In order to insure the warranties and guarantees as stated below, scopes in need of repair must be sent to JARIT. Please contact JARIT Technical Services at 800-431-1123 for return authorization and address.

CAUTION: Federal law restricts this device to sale by or on the order of a physician.

Note: Scope is reusable, and packaged non-sterile.

JARIT REUSABLE RIGID ENDOSCOPES RECOMMENDED CLEANING PROCEDURE

As with any cleaning procedure, personnel should follow accepted guidelines for hand washing, attire, etc. as those recommended by AAMI Standards and Recommended Practices, "Good Hospital Practice: Handling and Biological Decontamination for Reusable Medical Devices (American National Standard)".

Removable parts, such as light guide connectors and adapters should be cleaned separately. Stopcocks should be in the open position.

CLEANING

STEP 1. Maintain Moisture: Immediately after use, place the scopes in a tray/container and cover with a towel moistened with sterile distilled water.

STEP 2. Enzymatic Soak: Immerse scopes in an approved enzymatic solution per enzyme manufacturer's recommendations. Make sure all bubbles escape any cavity by rotating or tipping the device.

STEP 3. Rinse: Remove from enzymatic soak after the time period recommended by the enzymatic manufacturer and rinse with tap water.

STEP 4. Clean Scopes: Using a small, soft-bristled, clean brush, clean the optical portions of the scope while immersed in the cleaning solution. Clean the shaft of the scope by wiping with a soft cloth such as a disposable lap sponge. Clean the distal window, eyepiece window and fiber end of the light post with a cotton tip, non-plastic applicator (or a soft cloth) moistened with 70% isopropyl alcohol. **DO NOT place in ultrasonic cleaner or washer-sterilizer.**

STEP 5. Rinse: Rinse the scope by immersing in demineralized water and wiping with clean, soft cloth.

STEP 6. Visual Inspection: Visually inspect the scope for cleanliness. Inspect the windows for any residue or fingerprints.

STEP 7. Dry: Scopes must be thoroughly dried. Remaining moisture may result in corrosion.

NON-AUTOCCLAVABLE SCOPE STERILIZATION

After following the above 7-step cleaning method, JARIT non-autoclavable scopes are ready for ETO sterilization or high level decontamination. **DO NOT steam sterilize the non-autoclavable scope.**

The following ETO parameters have been validated:

Gas: 6% Ethylene Oxide, 94% Carbon Dioxide
Chamber Pressure: 25 psi (1.7 bar)
Temperature: 131 °F (55 °C)
Exposure Time: 60 Minutes
Packaging: Standard sterilization bags made of paper laminate
Aeration Time: 24 hours at room temperature

For high level decontamination, follow the procedures as recommended by the manufacturer of the cold soak. **DO NOT** allow the scope to exceed 30 consecutive minutes in any solution, including sterile water.

AUTOCCLAVABLE SCOPE STERILIZATION

After following the above 7-step cleaning method, JARIT autoclavable scopes are ready for sterilization. Independent laboratory testing has validated steam sterilization as an effective sterilization process for JARIT reusable autoclavable scopes. Wrapped or containerized scopes were validated to be sterile at a 5 minute, 273 °F (134 °C) prevacuum cycle. As recommended by the AAMI Standards and Recommended Practices Volume 1, 1992, the sterilizer manufacturer's written instructions for cycle parameters should be followed. After sterilization, the scope must be allowed to cool at room temperature. **DO NOT** attempt to accelerate the normal cooling process.

RETURNED GOODS POLICY

Products must be returned in unopened packages with manufacturer's seals intact to be accepted for replacement or credit unless returned due to a complaint of product defect. Determination of a product defect will be made by JARIT. Products will not be accepted for replacement if they have been in the possession of the customer for more than 90 days.

REPAIRS AND MAINTENANCE

Should your instruments require repair or maintenance, contact Jarit for return authorization and address. Instruments returned to Jarit for repair must have a statement testifying that each instrument has been thoroughly cleaned and sterilized. Failure to supply evidence of cleaning and disinfection will result in a cleaning charge and delayed processing of your instrument repair.

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JARIT REUSABLE RIGID ENDOSCOPES

SYMBOLS USED ON LABELING



Manufacturer



Authorized Representative in the European Community



Catalog number



Lot number



See instructions for use



Consult instructions for use



Product complies with requirements of directive 93/42/EEC for medical devices

Rx ONLY

Federal (USA) law restricts this device to sale by or on the order of a physician or practitioner



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