Spine

Imaging and Instrumentation



Arthrex®

Helping Surgeons Treat Their Patients Better®

Since its inception, Arthrex has been committed to one mission: Helping Surgeons Treat Their Patients Better. We are strategically focused on constant product innovation through scientific research, surgeon collaboration, and medical education to make less invasive surgical procedures simple, safer, and more reproducible. Each year, we develop more than 1,000 new innovative products and procedures to advance minimally invasive orthopedics worldwide.

Arthrex has always remained a privately held company, which allows for the rapid evaluation of new technologies and ideas and the freedom to develop products and techniques that truly make a difference. Our experienced team of dedicated professionals represents a shared passion and commitment to delivering uncompromising quality to the health care providers who use our products and the millions of patients whose lives we impact.

The medical significance of our contributions serves as our primary benchmark of success and will continue into the future as the legacy of Arthrex.

Introduction to Endoscopic Approaches in Spine

As a global leader in sports medicine and surgical education, Arthrex continually strives to provide surgeons and patients with groundbreaking ultra–minimally-invasive and motion-preserving procedures.

Innovation in the medical device industry is largely driven by manufacturers. As a privately held company, we are uniquely positioned to rapidly develop new technologies and advance truly minimally invasive procedures that prioritize surgeon needs and patient outcomes.

Limited nonpermanent options for back pain mean patients must often undergo frequent treatments and invasive procedures that result in limited motion, damage to soft-tissue anatomies, and unsightly scars.

Put simply, there is a gap in today's continuum of care between conservative treatment and maximally invasive surgical procedures.

Arthrex seeks to bridge that gap by leveraging our more than 40 years of expertise in orthopedics in the spine space, with endoscopic surgical approaches and orthobiologic innovations designed to help spare soft tissue, preserve motion, and provide the best possible outcomes for patients.

World-class medical education offerings for health care professionals and administrators help make less-invasive surgery simpler, safer, and more reproducible. Our endoscopic spine-specific surgical curriculum pathway includes individualized and expert faculty instruction and immersive, hands-on training in our dedicated spine lab as well as practice support, all designed to set surgeons and facilities up for success in endoscopic approaches to the spine.

We develop our products and procedures with an unwavering dedication to constant innovation, unmatched provider education, and world-class scientific research. Together, we can expand your treatment offerings, maximize your practice efficiency, and help make active lifestyles a reality for millions of patients.

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SPINE ENDOSCOPE CASE
4K

Synergy Integration, Imaging, and Image Management

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Integration

Synergy Matrix™ Video Integration





The Synergy Matrix system was the world's first OR integration platform capable of supporting the 4K video signal produced by the Synergy Vision™ and Synergy*ID*™ camera systems and distributing it to multiple displays within the OR. The next-generation platform expands on the success of the Synergy Matrix integration system with the inclusion of an integrated touch panel that provides improved system performance, reliability, and overall user experience.

Please direct questions or requests for customized Synergy Matrix integration quotes to SynergyIntegration@arthrex.com.

Synergy Matrix software license	AR-3200-1052
Synergy Matrix Core software license	AR-3200-1053

Key Features and Benefits

- Newly redesigned user interface is available on a touchscreen in every integrated OR
- Programmable room presets allow for quick routing and configuration of a room's audio and video sources to destinations. As an example, a room preset can be set for endoscopic procedures so that with the touch of a button, the room automatically routes the configured sources to the desired displays in the room.
- Robust room-to-room communication and source sharing gives users more control over which outside rooms have viewing capabilities of their internal sources. Shared sources can be granted permission for a specific time range or removed from sharing by the source owner as needed.
- Room camera control allows users to modify the pan, tilt, and zoom settings for the room camera. In addition, room camera settings can be saved as a preset to allow for quick configuration of a room camera's position. For example, a room camera preset can be set for privacy so that with the touch of a button, the room camera's position automatically adjusts away from the patient's location.
- Improved remote support and proactive system monitoring allow for integrated rooms to be upgraded and serviced independently
- Equipped with the latest in 4K imaging and integration technology, the Synergy Matrix system is a state-of-the-art video-over-IP solution that can lower the cost of ownership and positively impact OR workflow
- Room-to-room connectivity supports sharing video and audio sources across integrated ORs, conference rooms, pathology labs, and observation rooms
- The Synergy Matrix system provides more capabilities at a fraction of the footprint required in the OR, thereby saving valuable OR space

Synergy Matrix™ Core

The Synergy Matrix Core system provides in-room 4K video and audio integration while simplifying the installation process and focusing on key functionality. The value-driven platform uses the same touch panel controller as the Synergy Matrix system but with a simplified user interface, providing both uniformity and familiarity for the OR staff, while featuring intuitive and easy-to-use functionality.

The Synergy Matrix Core system uses an all-in-one switch assembly installed in each integrated room, allowing for true 4K video and audio routing without requiring cable pulls to a centralized IT closet and operating completely independent of the facility's network.

Synergy.net™ Data Integration Software



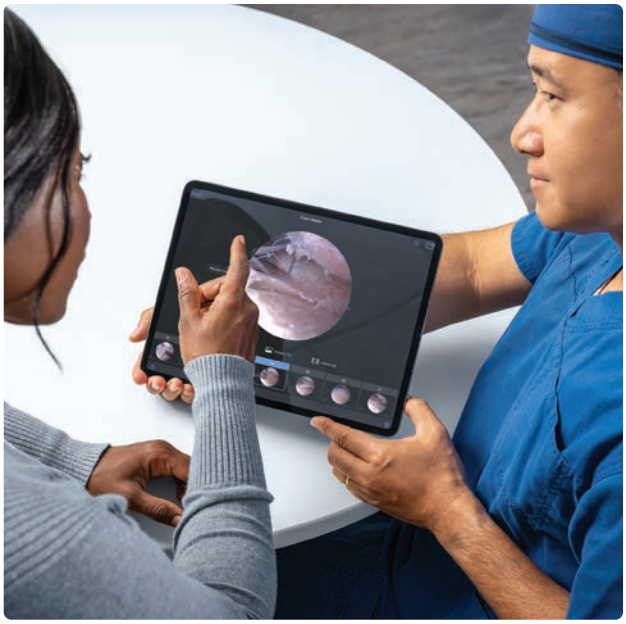
Synergy.net data integration software brings connectivity to your OR by integrating seamlessly with your hospital network to connect to your EHR, PACS, worklists, and surgeon preferences.

Synergy.net software allows for all surgeon and procedure settings to sync to each OR, creating a consistent and reliable experience. Intraoperative media can be sent to different destinations, whether you are inputting data to an EHR record or PACS or pushing data to the SurgeonVault cloud-based surgeon communication tool.

Synergy.net management software HL7	AR-3200-1034
Synergy.net HL7 software single license	AR-3200-1047
Synergy.net pairing license key	AR-3200-1067

- Interfaces with EHRs and other HL7-based systems
- Provides a single database for all cases captured by all Synergy devices
- Improves DICOM capabilities, which includes transfer of video to a PACS
- Offers network printing from any Synergy device

SurgeonVault® Application



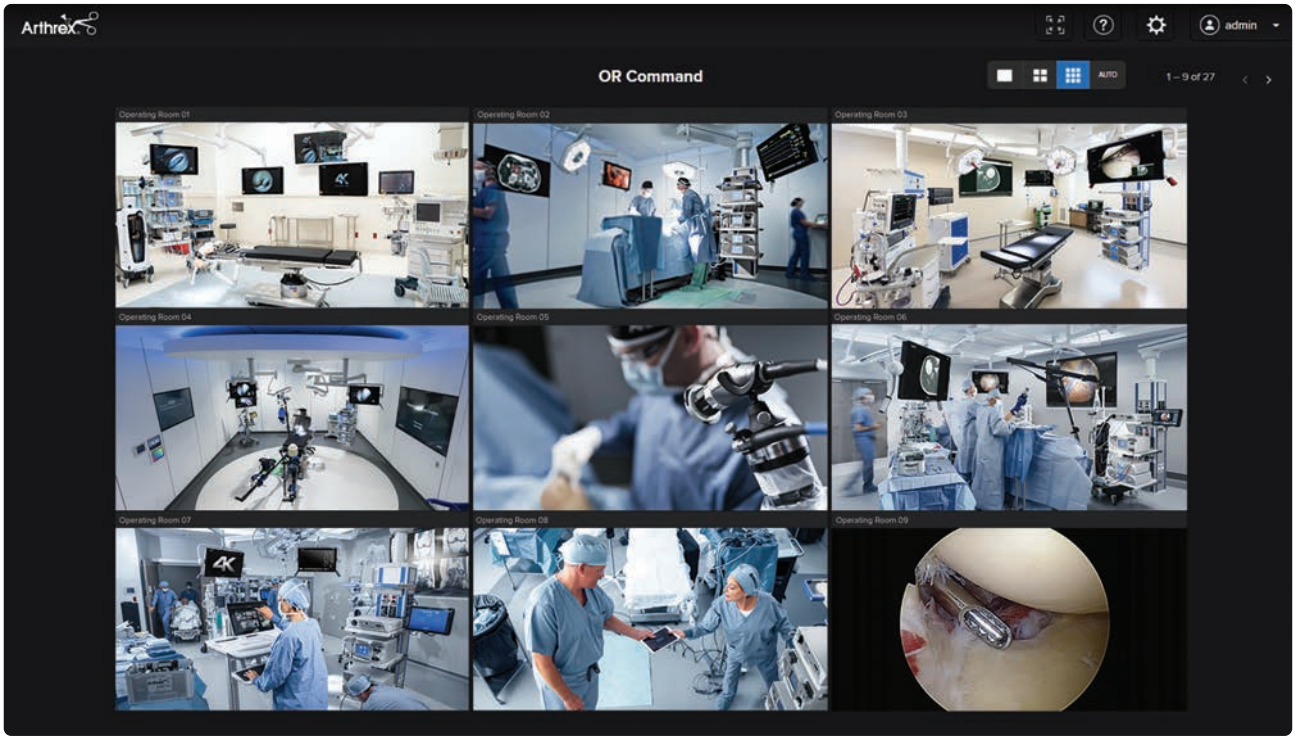
The SurgeonVault secure cloud-based surgical communication application provides surgeons with access to their data at any time and allows them to distribute surgical videos and stills and other selected content directly to their patients.

Key Features and Benefits

- Improved surgeon-patient communication
  - Surgeons can quickly and easily share case and library content to meet their patients' needs
  - Patients receive access to a secure, multimedia-rich patient portal rather than traditional static content
  - Improved communication to patients may improve patient satisfaction scores
- User friendly interface with templates and library content for quick, easy surgeon onboarding
- Surgeons can access the SurgeonVault app via any iOS device or web browser
- Latest encryption technology ensures content remains private and secure for patients and surgeons

SurgeonVault single-user license: 1-year term	SVSIN-1YR
SurgeonVault enterprise license unlimited users: 1-year term	SVENT-1YR

Synergy OR Command™ Room Status



A powerful tool for maximizing OR efficiency and workflow, Synergy OR Command room status provides surgeons and staff with a centralized dashboard view of simultaneous video streams across all operating rooms. Authorized users can access Synergy OR Command room status through a networked browser or smart device. Benefits of Synergy OR Command room status include adaptive scheduling, minimized downtime, accelerated surgeon workflows, and real-time information for decision-makers. Whether viewing the user interface on a computer, tablet, or dedicated wall display in an OR corridor, Synergy OR Command room status provides the efficiency needed in today's busy OR.

Key Features and Benefits

- Improve workflow efficiencies with OR visibility
- Kiosk Mode for dedicated displays
- Privacy Mode allows staff to mute video feeds
- Configurable dashboard layout options
- OR turnover status
- Room camera control
- Scope view from Synergy camera consoles

Synergy OR command room status	AR-3200-1044

Synergy Imaging and Imaging Management

Synergy 4K Imaging Platforms



(a) (b)

Experience the Synergy Vision™ imaging system, an all-in-one option featuring high dynamic range (HDR) 4K visualization with wide-view imaging and fluorescence while supporting the NanoNeedle Scope and video integration.

Key Features and Benefits

The Synergy Vision imaging system was designed with the latest technology to deliver optimal and revolutionary results.

- Nano Vision™ Functionality: The NanoNeedle Scope integrates directly to the Synergy Vision console as either a primary or secondary view allowing for a simultaneous 4K and Nano visualization on the same screen.
- Synergy Vision Connect™ Console: Allowing for 6 inputs and 4 outputs, the Synergy Vision Connect system offers built-in OR integration capabilities for in-room switching and routing.
- HDR: The Synergy Vision imaging system offers HDR for enhanced contrast of surgical anatomy and ideal visualization.
- Fluorescence Imaging: Switch to fluorescence 4K imaging with the touch of a button. Easily toggle through different modes and colors, depending on the fluorescence application and individual surgeon preference.

Synergy Tablet Controller

Our unique and innovative “tablet” interface allows users to remotely and efficiently enter patient information, surgeon preferences, and image management settings once. The Synergy tablet controller may help reduce cost, shorten OR times, and increase efficiency.

Synergy 4K Consoles	
Synergy^{UP}™ 4K console	AR-3200-0025
Synergy Vision console	AR-3200-0026
Synergy Vision Connect console **(a)**	AR-3200-0027
Synergy Vision tablet **(b)**	AR-3200-1016
Synergy digital documentation tablet	AR-3200-1021



The camera console comes with base software to manage 4K image and video capture, printing, and USB export. Additional software modules are offered to better address customer's individual needs. By offering software modules focused on functionality, facilities can select the features that best serve their unique needs.

Synergy Software Modules	
Premium bundle	AR-3200-1091
Data management module	AR-3200-1092
Workflow support module	AR-3200-1093
Clinical enhancement module	AR-3200-1094

Base Module Features

- Still image capture and video recording
- Print still images
- 4K image display
- Export to USB

Data Management Module Features

- Export media to DICOM or network folders
- Synergy.net™ pairing license

Workflow Support Module Features

- Network-based system allows live video streaming to any authorized remote viewer
- Export images to the Synergy Surgeon App™ software:
  - Review and edit still images and videos
  - Annotate on stills
  - Create presentations and postoperative reports for patients
- Heads-up display
- Capture images from a secondary device
- Surgical preparation checklist
- 4K video capture

Clinical Enhancement Modules Features

- Augmented reality overlay to enhance spectral and textural changes in the surgical image
- Enhance or reduce the color red in live image to improve visualization
- Consistent illumination across the entire image with highlight feature

Premium Bundle

- Comprehensive bundle that includes all Synergy software features

Synergy Accessories

Synergy System Integration Cable Kit	AR-3200-1040
Input/output 1080p video signal converter	AR-3210-1005
C-mount HD optical zoom coupler	AR-3210-0006
C-mount right angle coupler	AR-3210-0009
C-mount optical non-zoom coupler	AR-3210-0012
4K wireless transmitter, broadata	LBW-5-H2-12G-T-A
4K wireless receiver, broadata	LBW-5-H2-12G-R-A
Synergy laser light source	AR-3200-1018

UHD 4K Monitors



(a)

- 27 in, 32 in, and 55 in UHD 4K display options available
- Versatile multiformat signal support
- With and without Synergy Matrix™ video integration enabled

Monitors

4K HDR 12G SDI display, 32 in **(a)**	AR-3250-3212
Mini LED surgical display, 27 in	27HQ710S
55 in 4K medical grade display, w/ decoder	K9352362
55 in 4K medical grade display, 12G version	K9352361
55 in 4K medical grade display, non-MNA version	K9352360
55 in 4K medical grade display, 12G-SDI, HDR	55MH5K-C

Monitor Covers

Protection cover for 32 in monitor, black	703459-15
Protection cover for 27 in monitor, black	703458-15
Protection cover for 55 in monitor, black	7-004770-00
Tablet cover for UHD4, black	703510-15

4K and HD Camera Heads



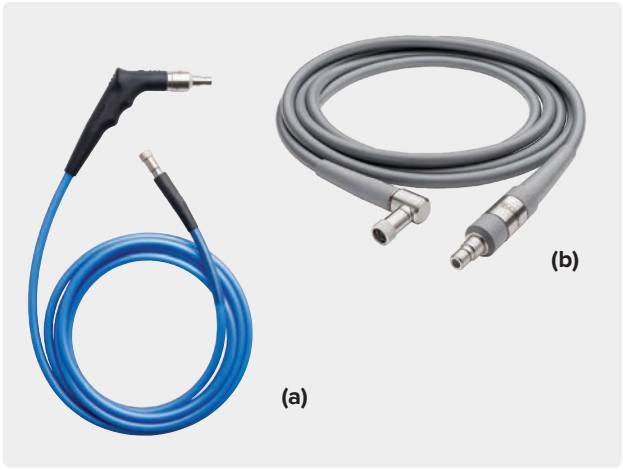
(b)

The Synergy Vision™ imaging system supports two camera heads. With unique features and benefits for each style, these camera heads were designed for both orthopedic and endoscopic procedures. The picture produced by all of the Synergy camera heads increases depth perception and creates more precise color reproduction. All of these camera heads carry the industry-leading standard autoclavable warranty while maintaining a comfortable and ergonomic design.

Camera Heads

4K Synergy$^{UHD4™}$ camera head, broadband, autoclavable	AR-3210-0029
4K Synergy^{UHD4} C-mount camera head, broadband, autoclavable	AR-3210-0030
4K Synergy^{UHD4} ultra camera head, autoclavable	AR-3210-0031
4K Synergy^{UHD4} ultra C-mount camera head, autoclavable	AR-3210-0032
Synergy^{ID} 4MOS camera head	AR-3210-0033
Synergy Visionary™ camera head, 4K, C-mount, autoclavable	AR-3210-0034
Synergy Vision camera head, 4K, C-mount, autoclavable **(b)**	AR-3210-0035
Synergy Vision C-mount camera head, 0°, autoclavable	AR-3210-0036

Light Guides



Arthrex light guides are made from hundreds of high-quality fibers. Instead of gluing fibers, we fuse ours at the proximal end to maximize light transmission. The unique handle increases durability and prevents accidental removal of the light guide. Additionally, our transparent casing makes it easier to monitor when to replace light guides.

Light guide cable, blue, 5 mm × 2.7 m **(a)**	AR-3240-5027
Light guide cable, grey, 5 mm × 2.7 m	AR-3240-5028
Light guide cable, blue, 3.5 mm × 2.7 m	AR-3240-3527
Light guide cable, blue, 5 mm × 4 m	AR-3240-5040
Light guide cable, grey, 5 mm × 2.7 m, 90° distal end **(b)**	SS9-GYW50W108
Light cable, wolf style, blue, 5 mm × 275 cm	FTIMG26203TB
Light cable, wolf style, blue, 3.5 mm × 275 cm	FTIMG26206TB

Camera Case



Tray for camera head	AR-3106C

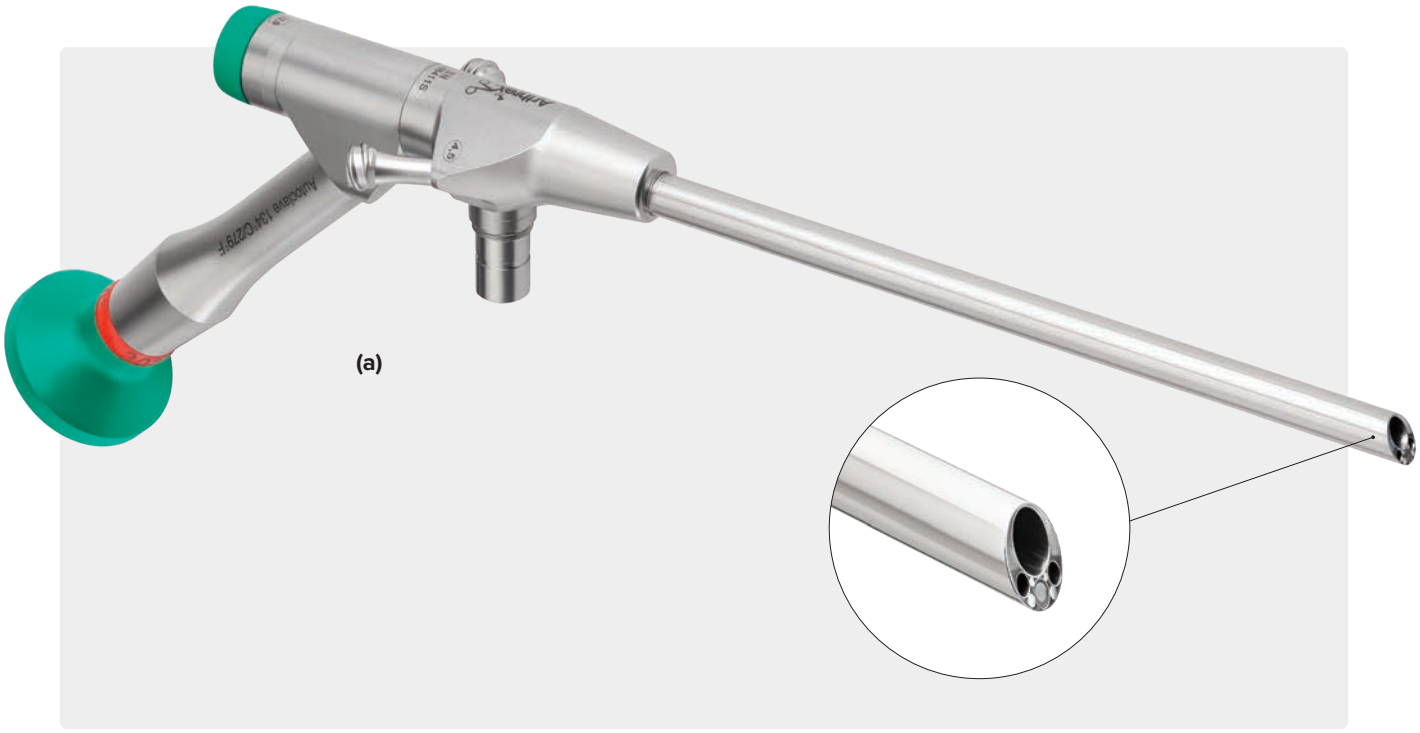
Spine Endoscopes

Designed for a uniportal approach, these spine-specific working channel endoscopes can be used through an incision between 7.5 mm and 11 mm, minimizing soft-tissue disruption.

Unlike microscopes, loops, and exoscopes, which are placed outside the body, endoscopes provide tissue-level visualization.

Features and benefits

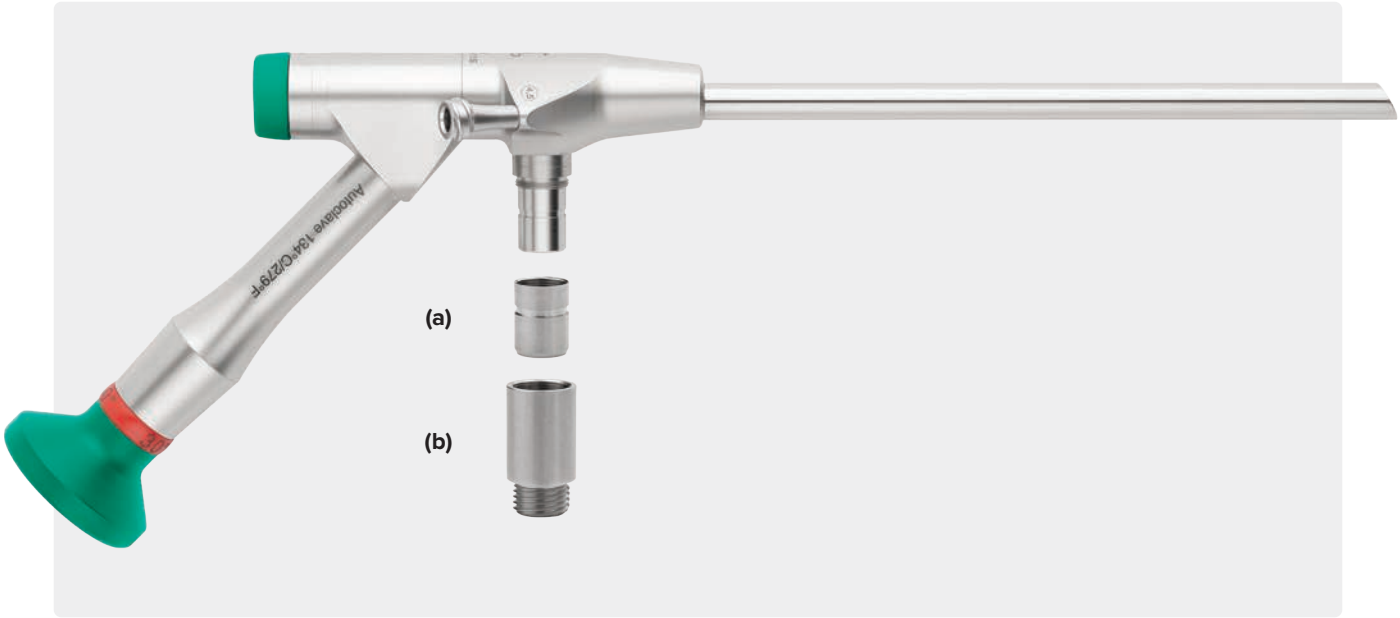
- Can be used in conjunction with depth stop (see page 78) and cannula holder (AR-S3420-CH), providing an ergonomic solution
- Integrated irrigation for a clear surgical field
- Camera tip reaches level of tissue for direct visualization
- Flexible for use with multiple visualization platforms



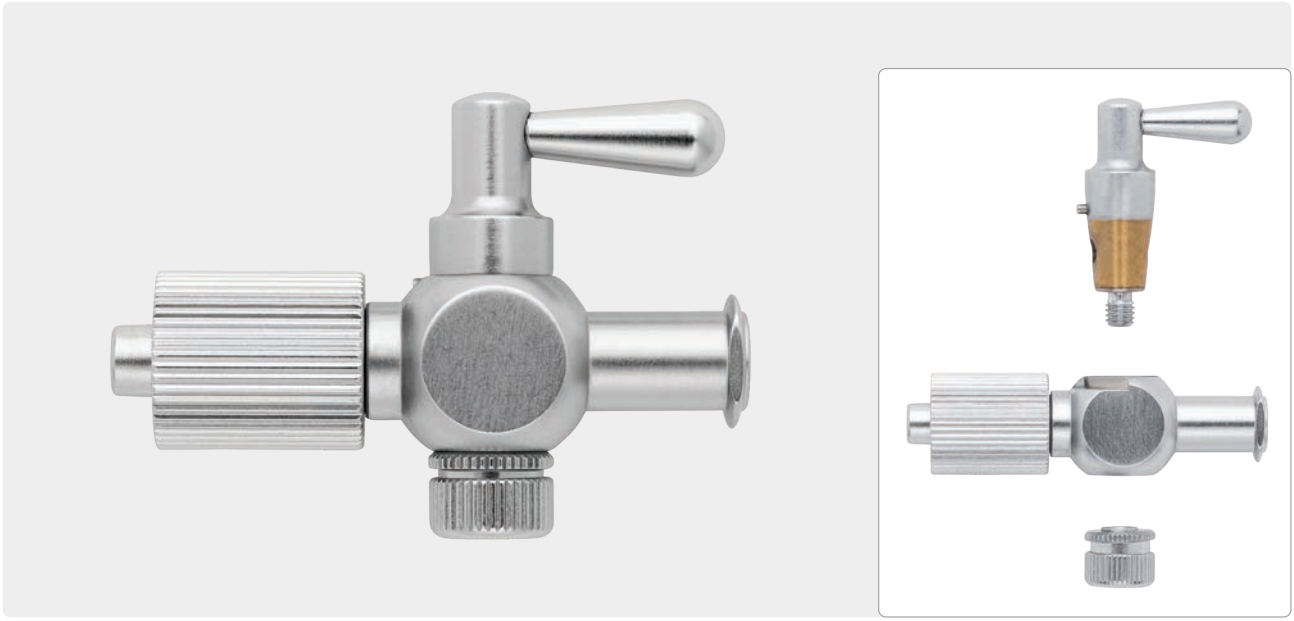
(a)

Spine endoscope, 6.3 mm × 130 mm, 15°	AR-S3350-6315-130
Spine endoscope, 6.3 mm × 130 mm, 30°	AR-S3350-6330-130
Spine endoscope, 6.3 mm × 181 mm, 15°	AR-S3350-6315-181
Spine endoscope, 6.3 mm × 181 mm, 30°	AR-S3350-6330-181
Spine endoscope, 6.3 mm × 215 mm, 30°	AR-S3350-6330-215
Spine endoscope, 7 mm × 130 mm, 15°	AR-S3350-7015-130
Spine endoscope, 7 mm × 130 mm, 30° **(a)**	AR-S3350-7030-130
Spine endoscope, 7 mm × 181 mm, 15°	AR-S3350-7015-181
Spine endoscope, 7 mm × 181 mm, 30°	AR-S3350-7030-181
Spine endoscope, 7 mm × 215 mm, 30°	AR-S3350-7030-215
Spine endoscope, 10 mm × 139 mm, 15°	AR-S3350-1015-139

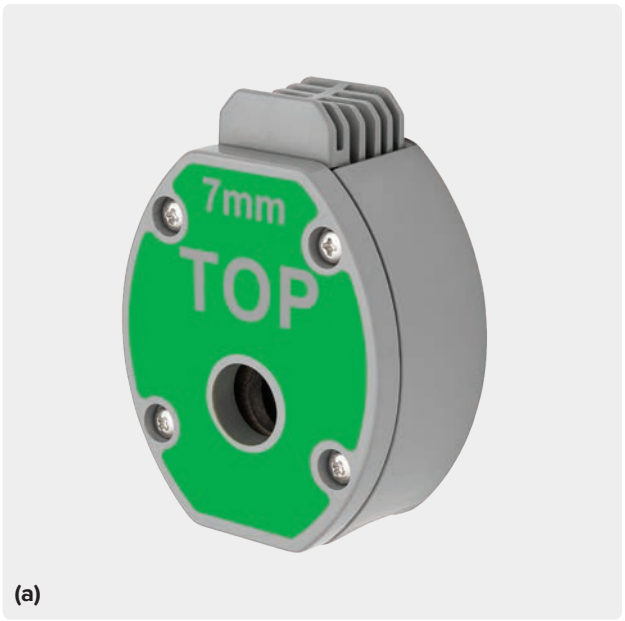
Scope compatibility guide: 6.3 mm 7 mm 10 mm



Wolf adapter for spine endoscope **(a)**	8300042617
Storz adapter for spine endoscope **(b)**	89542801



Stopcock	AR-S3350-000-001



(a)

Depth Stops

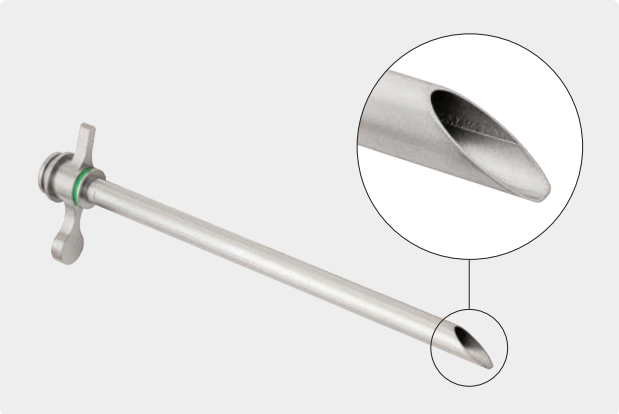
Spine endoscope disposable depth stop, 6.3 mm	AR-S3350-063-DS-S
Spine endoscope disposable depth stop, 7 mm **(a)**	AR-S3350-063-DS-S
Spine endoscope disposable depth stop, 10 mm	AR-S3350-100-DS-S



Spine endoscope passport dam	AR-S3355-12-13-S

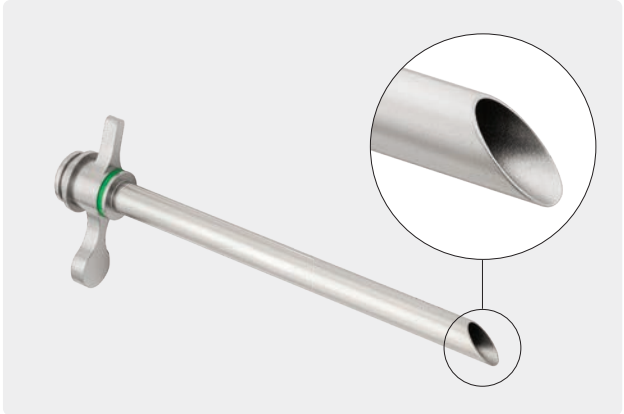
Scope compatibility guide: 6.3 mm 7 mm 10 mm

Cannulas



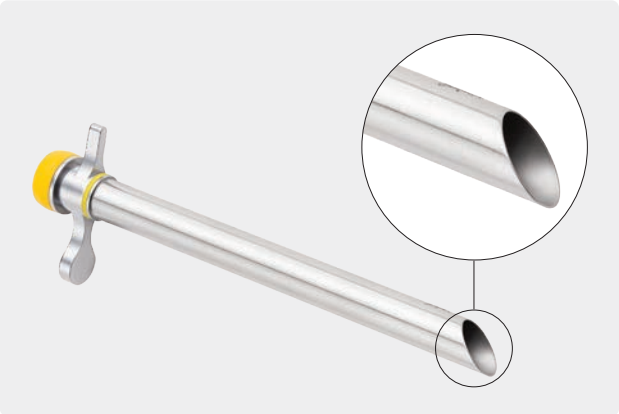
Oblique Window, 30°

Cannula w/ oblique window, 7.5 × 125 mm, 30°	AR-S3420-075-12530
Cannula w/ oblique window, 7.5 × 155 mm, 30°	AR-S3420-075-15530
Cannula w/ oblique window, 7.5 × 178 mm, 30°	AR-S3420-075-17830
Cannula w/ oblique window, 7.5 × 212 mm, 30°	AR-S3420-075-21230
Cannula w/ oblique window, 8.0 × 125 mm, 30°	AR-S3420-080-12530
Cannula w/ oblique window, 8.0 × 155 mm, 30°	AR-S3420-080-15530
Cannula w/ oblique window, 8.0 × 178 mm, 30°	AR-S3420-080-17830
Cannula w/ oblique window, 8.0 × 212 mm, 30°	AR-S3420-080-21230
Cannula w/ oblique window, 11 × 134 mm, 30°	AR-S3420-110-13430



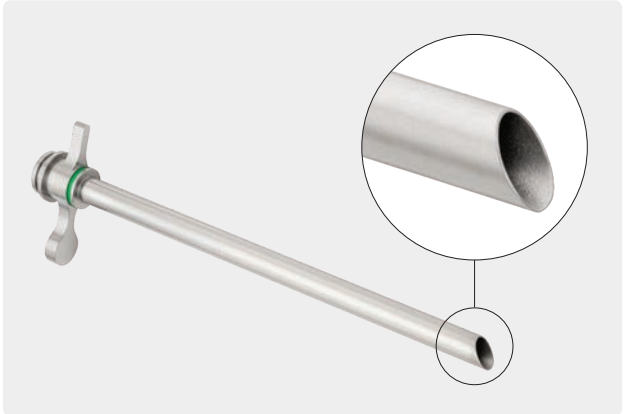
Oblique Window, 40°

Cannula w/ oblique window, 7.5 × 125 mm, 40°	AR-S3420-075-12540
Cannula w/ oblique window, 7.5 × 155 mm, 40°	AR-S3420-075-15540
Cannula w/ oblique window, 7.5 × 178 mm, 40°	AR-S3420-075-17840
Cannula w/ oblique window, 7.5 × 212 mm, 40°	AR-S3420-075-21240
Cannula w/ oblique window, 8.0 × 125 mm, 40°	AR-S3420-080-12540
Cannula w/ oblique window, 8.0 × 155 mm, 40°	AR-S3420-080-15540
Cannula w/ oblique window, 8.0 × 178 mm, 40°	AR-S3420-080-17840
Cannula w/ oblique window, 8.0 × 212 mm, 40°	AR-S3420-080-21240
Cannula w/ oblique window, 11 × 134 mm, 40°	AR-S3420-110-13440



Oblique Window

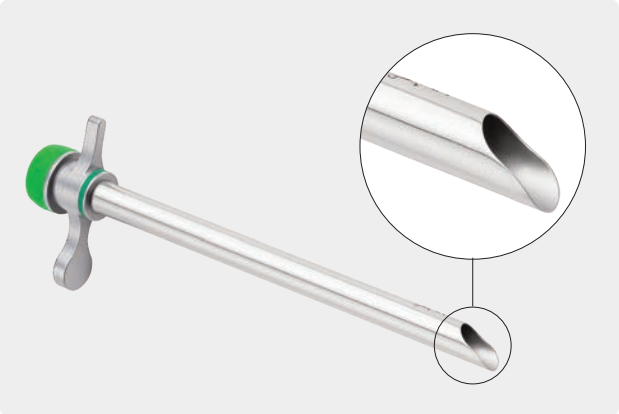
Cannula w/ oblique window, 7.5 × 178 mm	AR-S3420-075-178
Cannula w/ oblique window, 8.0 × 125 mm	AR-S3420-080-125
Cannula w/ oblique window, 8.0 × 178 mm	AR-S3420-080-178
Cannula w/ oblique window, 11 × 134 mm	AR-S3420-110-134



Oblique Window, 55°

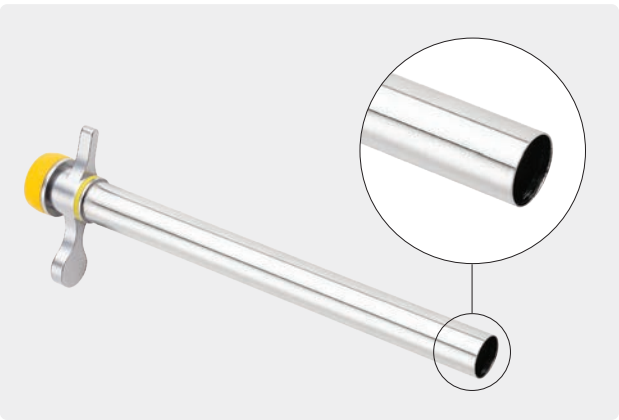
Cannula w/ oblique window, 7.5 × 125 mm, 55°	AR-S3420-075-12555
Cannula w/ oblique window, 7.5 × 155 mm, 55°	AR-S3420-075-15555
Cannula w/ oblique window, 7.5 × 178 mm, 55°	AR-S3420-075-17855
Cannula w/ oblique window, 7.5 × 212 mm, 55°	AR-S3420-075-21255
Cannula w/ oblique window, 8.0 × 125 mm, 55°	AR-S3420-080-12555
Cannula w/ oblique window, 8.0 × 155 mm, 55°	AR-S3420-080-15555
Cannula w/ oblique window, 8.0 × 178 mm, 55°	AR-S3420-080-17855
Cannula w/ oblique window, 8.0 × 212 mm, 55°	AR-S3420-080-21255
Cannula w/ oblique window, 11 × 134 mm, 55°	AR-S3420-110-13455

Scope compatibility guide: 6.3 mm 7 mm 10 mm



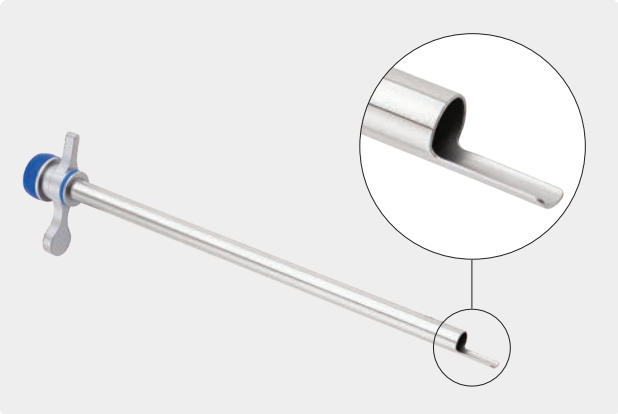
Elevator Tip

Cannula w/ elevator tip, 7.5 × 125 mm	AR-S3420-075-125ET
Cannula w/ elevator tip, 7.5 × 155 mm	AR-S3420-075-155ET
Cannula w/ elevator tip, 7.5 × 178 mm	AR-S3420-075-178ET
Cannula w/ elevator tip, 7.5 × 212 mm	AR-S3420-075-212ET
Cannula w/ elevator tip, 8.0 × 125 mm	AR-S3420-080-125ET
Cannula w/ elevator tip, 8.0 × 155 mm	AR-S3420-080-155ET
Cannula w/ elevator tip, 8.0 × 178 mm	AR-S3420-080-178ET
Cannula w/ elevator tip, 8.0 × 212 mm	AR-S3420-080-212ET
Cannula w/ elevator tip, 11 × 134 mm	AR-S3420-110-134ET



Flat Tip

Cannula w/ flat tip, 7.5 × 125 mm	AR-S3420-075-125FT
Cannula w/ flat tip, 8.0 × 125 mm	AR-S3420-080-125FT
Cannula w/ flat tip, 11 × 134 mm	AR-S3420-110-134FT



Open Tip

Cannula w/ open tip, 7.5 × 178 mm	AR-S3420-075-178OT
Cannula w/ open tip, 7.5 × 212 mm	AR-S3420-075-212OT
Cannula w/ open tip, 8.0 × 178 mm	AR-S3420-080-178OT
Cannula w/ open tip, 8.0 × 212 mm	AR-S3420-080-212OT

Scope compatibility guide: 6.3 mm 7 mm 10 mm

Synergy Video Cart



Requires AR-3260-1012 for dual-monitor setup

The video cart features a modular shelf design to conform to any setup need. The power cords are prewired and cable management can be accomplished on either side of the cart. Large wheels and handles on each side of the cart ensure ease of movement throughout the OR.

The main monitor boom arm allows the monitor 20 in of reach and 12 in of vertical adjustment. Arm tension is adjustable to hold 19 in to 32 in monitors, and an easy-access handle and locking position facilitate cart movement. Mounted in the middle rear of the top shelf, the secondary arm is easily accessible by OR staff.

The monitor stand includes the cart with transformer, 5 shelves, 1 foot pedal holder, 1 secondary arm, and a main monitor boom arm.

Component shelf for video cart	AR-3260-1000
Drawer for video cart	AR-3260-1001
D & E tank holder for video cart	AR-3260-1004
Foot switch bracket, SP-920-2 for video cart	AR-3260-1005
Foot switch bracket, AR-8310SP and AR-8315 for video cart	AR-3260-1006
Foot switch bracket, AR-8315C for video cart	AR-3260-1007
Foot switch bracket, AR-6483 and AR-9800 for video cart	AR-3260-1008
Foot switch bracket, AR-8310 for video cart	AR-3260-1009
Pole pump mount for video cart	AR-3260-1010
Synergy camera cup for video cart	AR-3260-1011
Dual-monitor assembly for video cart	AR-3260-1012
Pump pullout shelf for video cart	AR-3260-1015
Cart handle (spare part)	AR-3260-1017
Monitor handle (spare part)	AR-3260-1018
Rear door, right, for video cart (spare part)	AR-3260-1019
Rear door, left, for video cart (spare part)	AR-3260-1020
Monitor boom arm for video cart (spare part)	AR-3260-1021
Secondary arm for video cart (spare part)	AR-3260-1022
IV bag hanger, 4 bag, for video cart	AR-3260-1023
Dual-yoke CO2 switching valve w/ hardware	AR-3260-1026
Hardware Kit for dual-yoke switching valve (spare part)	AR-3260-1027

Patch panel (spare part)	AR-3260-1029
3-pack paint (l gray, d gray, black)	AR-3260-1036
Housing, transformer (spare part)	AR-3260-1037
Monitor dock (spare part)	AR-3260-1038
Top shelf for video cart, CCU length (spare part)	AR-3260-1039
Shelf component screws (spare part)	AR-3260-1052
Door magnet, qty. 1 (spare part)	AR-3260-1053
Channel nut screws, qty. 6 (spare part)	AR-3260-1054
Mushrooms, qty. 2 (spare part)	AR-3260-1055
Grommets, assorted (spare part)	AR-3260-1056
Hinges, qty. 2 (spare part)	AR-3260-1057
Synergy video cart w/ boom, 120V	AR-3260-0001
US bed rail for video cart	AR-3260-1014
Casters for video cart (spare part)	AR-3260-1024
Casters Kit, 4, for video cart (spare part)	AR-3260-1025
Power cord, US	AR-3260-1040
Transformer 120V (spare part)	AR-3260-1050

55 in Monitor Cart

Monitor cart, 55 in	TP.5112.999
55 in medical display, 4K, 12G-SDI, HDR	55MH5K-W
Monitor, 4K, 55 in, MDSC-8255 12G, BARCO **(a)**	K9352361



(a)

Console Cart

This cart can be used to hold additional consoles including the Synergy Vision™, Synergy ElectroSurgery, Synergy[Resection™], and Primado2 systems.

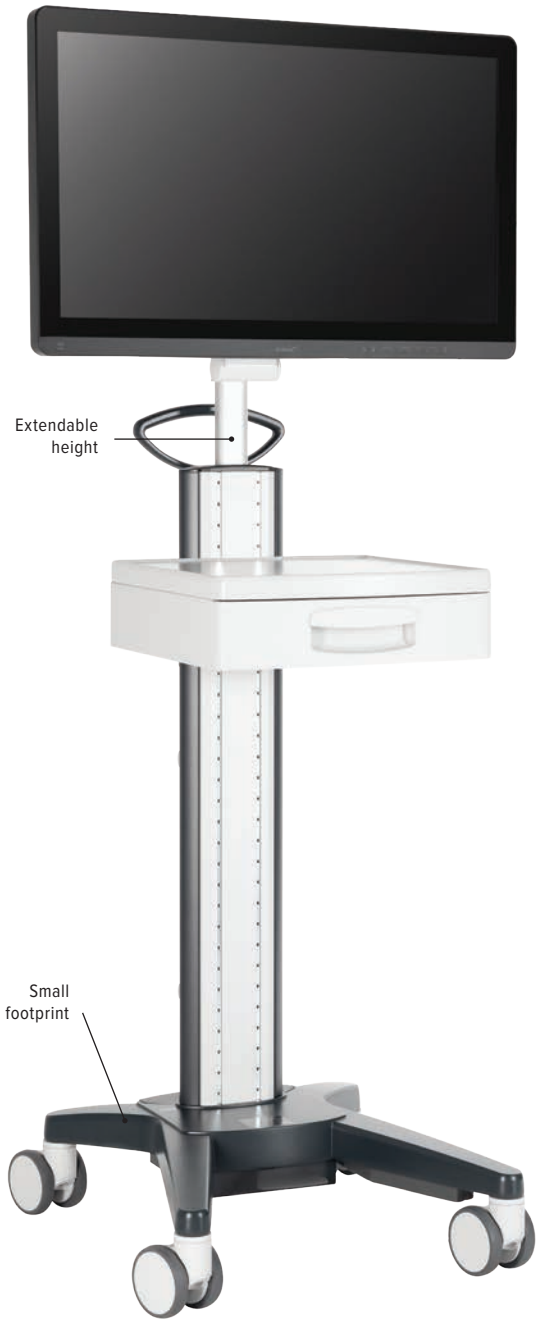
Console cart	AR-6481



Secondary Monitor Stand

- Small footprint
- Adjustable monitor height
- Large casters for ease of mobility
- Locking casters
- Dimensions: 22 in (w) × 57.5 in (h) × 23 in (l)

Secondary monitor stand	TP.5121.999
Monitor stand shelf w/ hardware	NT.4100.991
Monitor stand drawer w/ hardware	NT.4104.903
Monitor stand cable channel	NT.4115.806





NanoNeedle™ Visualization System

The NanoNeedle visualization system is a medical-grade, 3-in-1, chip-on-tip disposable camera system. With an intuitive tablet control unit, the system features the latest technologies in 1 mm imaging sensors, LED lighting, image management, and OR integration. A network-based system allows for bidirectional communication to your facility EHR, PACS, Synergy Surgeon™ app, and SurgeonVault® system.

NanoNeedle Scope and Synergy Vision™ Console Specifications

- Medical-grade camera control unit and camera card edge
- 13 inch, 3-in-1 camera control unit
- Network capabilities to connect to facility's EHR, PACS, and Synergy Surgeon app
- Built-in microphone for video dictation
- HDMI output to extend the video signal to in-room displays and integration systems
- Printing capabilities and brightness adjustment

NanoNeedle Scope 1.0

- 400 × 400 resolution with 120° field of view
- 5-50 mm depth of field
- 125 mm, 180 mm, and 250 mm lengths
- Compatible with NanoScope™ console and Synergy Vision console

NanoNeedle Scope 2.0*

- 720 × 720 resolution with 120° field of view
- 5-50 mm depth of field
- 125 mm, 180 mm, and 250 mm lengths
- Compatible with Synergy Vision console

Economic Impact

Nano arthroscopy is a cost-effective alternative to standard arthroscopy. A single-use camera component eliminates procedure delays due to equipment cleaning, processing, and sterilization without costly maintenance, repairs, or upgrades related to traditional video stacks. The minimally invasive approach and unlimited access to joint spaces make the Nano Arthroscopy System the instrument of choice for less invasive arthroscopic procedures.

Tablet Control Unit Components (a)

- 13 in HD monitor
- Handpiece connector
- Microphone
- Ethernet, USB, and HDMI ports

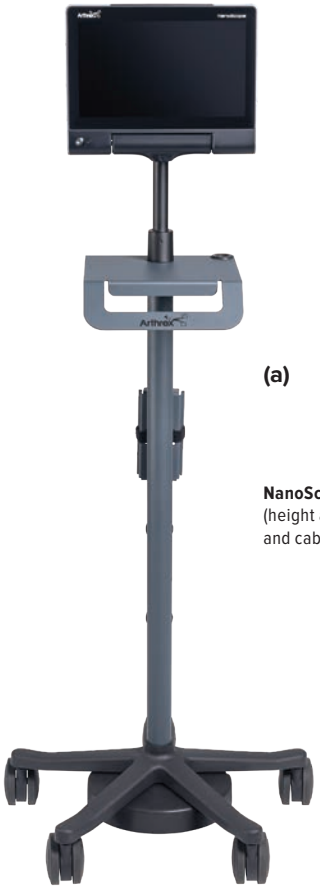
NanoNeedle Scope Standard Lengths

- 125 mm
- 180 mm
- 250 mm



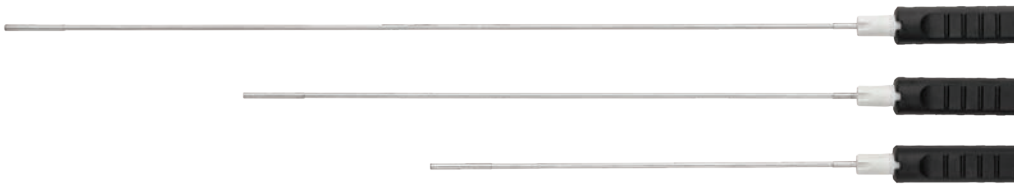
Synergy Vision™ console	AR-3200-0026
Synergy Vision connect console	AR-3200-0027
NanoNeedle™ scope, 125 mm, single use	AR-3210-0043
NanoNeedle scope, 180 mm, single use	AR-3210-0044
NanoNeedle scope, 250 mm, single use	AR-3210-0045
NanoNeedle scope 2.0, 125 mm, single use	AR-3210-0070
NanoNeedle scope 2.0, 180 mm, single use	AR-3210-0071
NanoNeedle scope 2.0, 250 mm, single use	AR-3210-0072
NanoScope™ tablet control unit	AR-3200-0030
Mobile cart **(a)**	AR-3502-CRT
NanoScope console battery supply replacement	150-0024-00-A
Monitor secondary stand	TP.5121.999
Monitor shelf w/ hardware	NT.4100.991
27 in LG display for secondary cart	27HQ710S
NanoScope probe	AR-10100N
Graduated black probe, reusable, 2.5 mm tip	AR-5007

NanoNeedle Scope Diagnostic Sheath Kit, 125 mm	AR-3210-0050
NanoNeedle Scope High-Flow Operative Sheath Kit, 125 mm	AR-3210-0051
NanoNeedle Scope Diagnostic Sheath Kit, 180 mm	AR-3210-0054
NanoNeedle Scope High-Flow Operative Sheath Kit, 180 mm	AR-3210-0055
NanoNeedle Scope (High-Flow Access) Sheath Kit, 125 mm	AR-3210-0053
NanoNeedle Scope (Diagnostic Access) Sheath Kit, 180 mm	AR-3210-0056
NanoNeedle Scope (High-Flow Access) Sheath Kit, 180 mm	AR-3210-0057
NanoNeedle Diagnostic Sheath Kit, 250 mm	AR-3210-0064
NanoNeedle High-Flow Operative Sheath Kit, 250 mm	AR-3210-0065



(a)

NanoScope Console Cart
(height adjustable with power supply and cable-management features)



NanoNeedle 2.0
NanoNeedle Scope

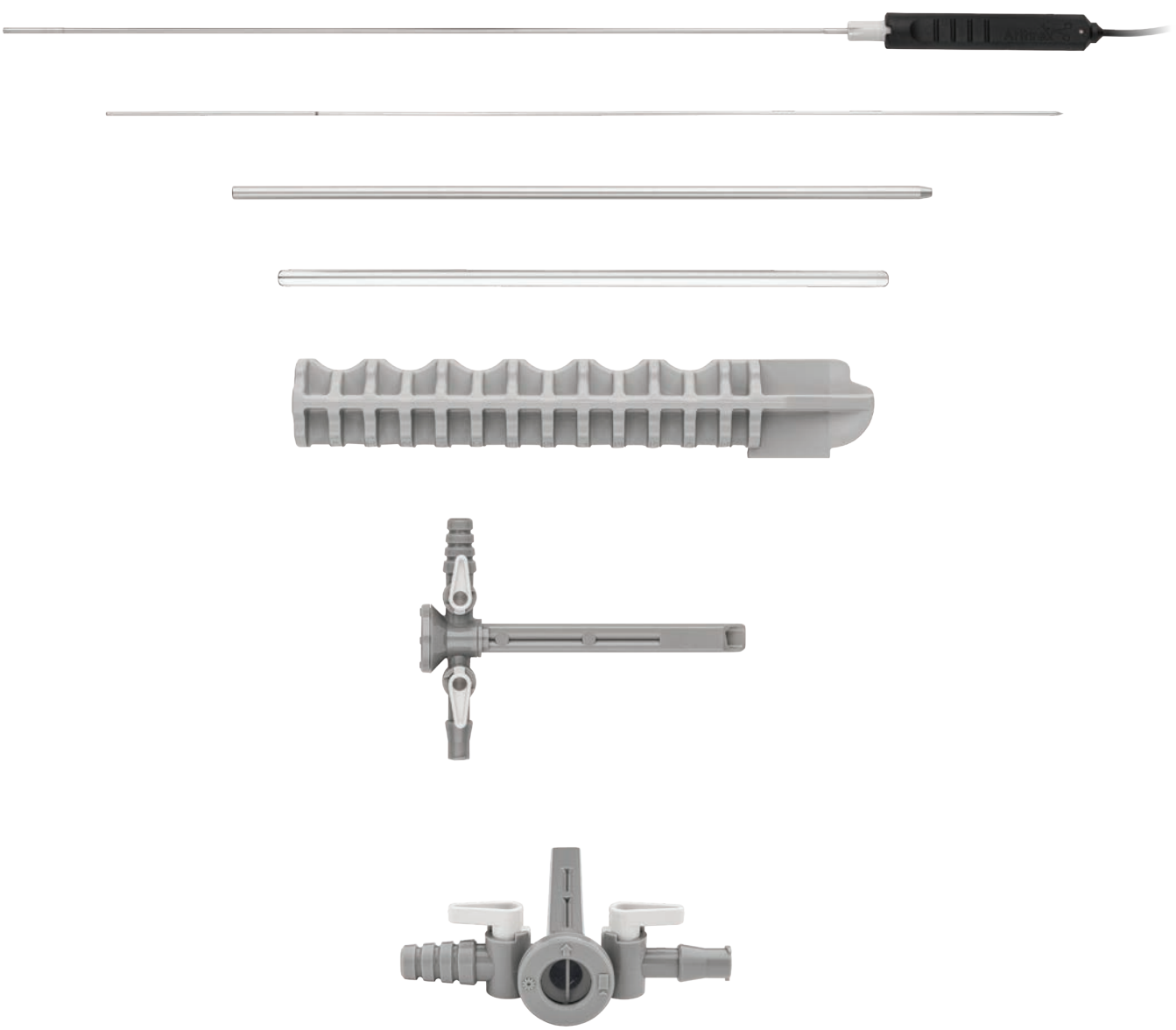


Spine NanoCannula Kit

- Dual-lumen cannula
- Side-by-side use of NanoScope™ probe and instrumentation
- 7 mm outer diameter
- 2.8 mm working channel

Spine NanoCannula Kit	AR-3210-0045-0010

NanoScope camera not included.




SKYTRON
GS70H SALUS

Fluid Management

30	The Suctioner® Surgical Suction Mat
30	The EcoSuctioner® Surgical Suction Mat
31	The SuctionBlu™ Mat
31	The Surgical Mat™ and The Mini Mat™ Surgical Mats
32	EcoDri-Safe™ Absorbent Rolls
32	Dri-Safe® Absorbent Pads
33	Fluid Diamond® Floor Aspirator
34	Office Suction Pump and Disposable Canister
35	Suction Tubing
35	Irrigation Tubing

Trademarks are the property of their respective owners.

The Suctioner® Surgical Suction Mat



This disposable surgical mat combines the absorbency of the poly-backed Dri-Safe® pad and the nonslip, anti-fatigue memory foam construction of The Surgical Mat™ with powerful, quiet, and continuous suction capability. These features are designed to support a drier, safer, cleaner OR. The Suctioner mat has graduated slots to move fluid toward lateral suction tubes.

It easily attaches to any OR vacuum source in seconds and efficiently manages unwanted fluids, keeping them off the OR floor. The mat's antimicrobial properties also aid in reducing the risk of cross-contamination. This latex-free surgical mat is ideal for all surgical procedures.

The Suctioner Surgical Mat, 22 in × 35 in (comfort mat), 35 in × 56 in (total), blue, qty. 8	USA-X10

The EcoSuctioner® Surgical Suction Mat



- All-in-one ergonomic suction mat that allows two people to stand comfortably during a procedure
- Designed with directional grooves for improved quiet, continual suction; attaches to any suction source
- Large, rugged absorbent mat included on underside creates more nonslip surface in OR
- Lightweight suction mat, weighs 0.79 kg, allowing for quick and easy setup and removal
- Reduces laundry on the floor

The EcoSuctioner Surgical Mat, 28 in × 40 in (comfort mat), 35 in × 56 in (total), green, qty. 8	USA-XG8

The Suctioner, Dri-Safe, The Surgical Mat, and The EcoSuctioner are trademarks of Flagship Surgical, LLC.

The SuctionBlu™ Mat



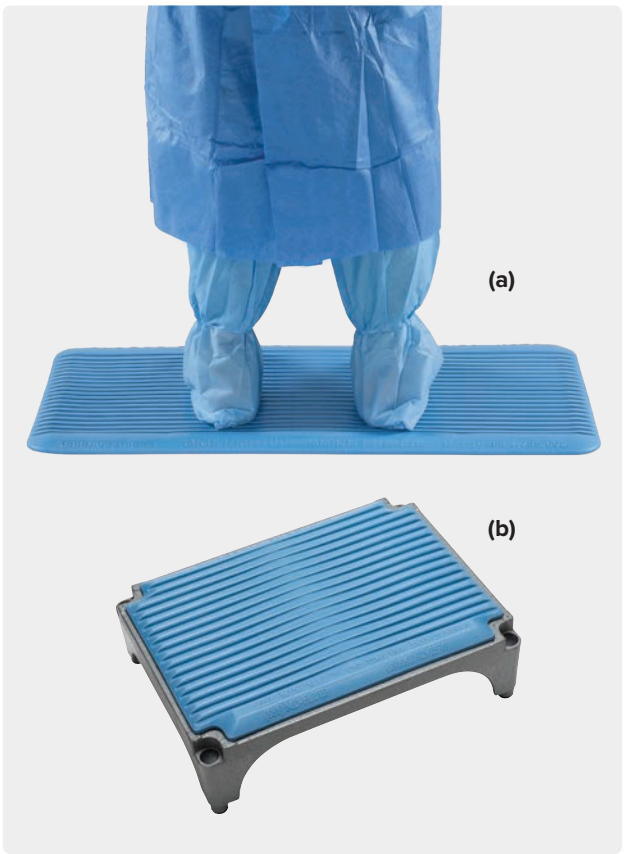
The SuctionBlu disposable surgical mat combines the absorbency of the poly-backed Dri-Safe® pad and the nonslip, anti-fatigue memory foam construction of The EcoSuctioner® mat with powerful, quiet, continuous suction capability. These features are designed to create a drier, safer, and cleaner operating room.

The graduated slots on The SuctionBlu mat use gravity to direct fluids toward the suction tube. The SuctionBlu mat easily attaches to any OR vacuum source in seconds and efficiently manages unwanted fluids, keeping them off the floor.

The SuctionBlu mat is a smaller, more economical version of The EcoSuctioner mat but larger than The Suctioner® mat.

The SuctionBlu Surgical Mat, 36 in × 56 in, blue	USA-XBL

The Surgical Mat™ and The Mini Mat™ Surgical Mats



The Surgical Mat and The Mini Mat surgical mats were designed to address three OR issues: comfort, safety, and fluid buildup. Both mats are constructed of a resilient memory foam material that provides relief and support when standing on hard concrete floors and steel step stools. The mats feature a nonslip molded foam design and custom tapered fluid channels to keep the surgical team's feet dry and reduce the risk of tracking body fluids across the OR. The Surgical Mat and The Mini Mat surgical mats are latex-free and ideal for all surgical procedures.

The Surgical Mat Surgical Mat, 20 in × 39 in, blue, qty. 10 **(a)**	USA-010
The Mini Mat Surgical Mat, 13 in × 17 in, blue, qty. 10 **(b)**	USA-A10

The Suctioner, Dri-Safe, The Surgical Mat, and The EcoSuctioner are trademarks of Flagship Surgical, LLC.

EcoDri-Safe™ Absorbent Rolls



Containing fluids and streamlining clean-up procedures has never been easier than with the new EcoDri-Safe absorbent rolls. The 28 in × 100 ft rolls are perforated every 20 inches to create 60 easy-to-tear-off 20 in × 28 in floor mats on every roll.

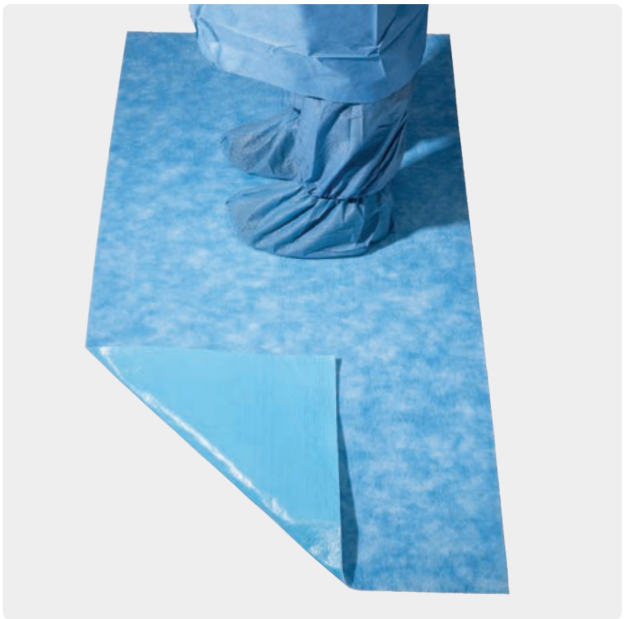
EcoDri-Safe absorbent rolls are ideal wherever fluid containment can be an issue:

- Operating rooms
- Scrub sinks
- Laboratory stations
- Central processing
- Emergency rooms
- Procedure rooms

EcoDri-Safe non—poly-backed, 100 ft × 28 in, 20 in × 28 in, 60 sheets per roll	USA-ECO100
EcoDri-Safe poly-backed, 100 ft × 28 in, 20 in × 28 in, 60 sheets per roll	USA-ECO100PLY
EcoDri-Safe dispensing cart	USA-ECODISP

EcoDri-Safe is a trademark of Flagship Surgical, LLC.

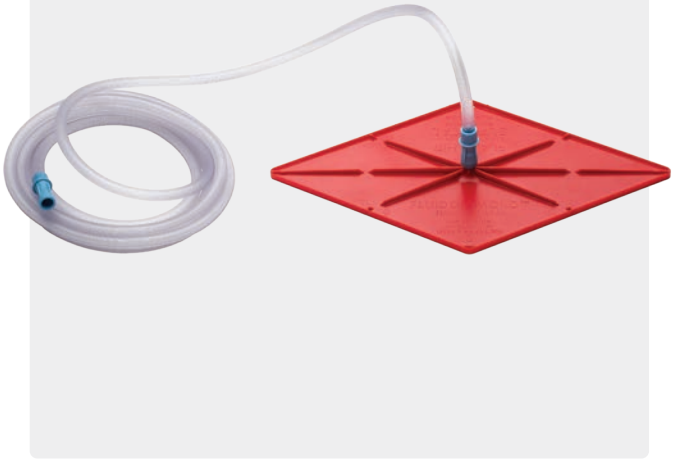
Dri-Safe® Absorbent Pads



- Super absorbent, economical, disposable floor pads that eliminate expensive laundry costs
- Use wherever fluids buildup, including OR floors, in front of scrub sinks, lab station floors, etc
- Dri-Safe pads help prevent slips and falls and the transmission of harmful contaminants to health care providers
- Impermeable poly-backing option promotes safety, keeps the pads firmly in place, and locks in fluids

Dri-Safe absorbent pad, 28 in × 40 in, blue, qty. 20	USA-B28X40
Dri-Safe absorbent pad, 28 in × 40 in, blue, poly-backing, qty. 20	USA-B28X40PLY
Dri-Safe absorbent pad, 30 in × 56 in, blue, qty. 15	USA-B30X56
Dri-Safe absorbent pad, 30 in × 56 in, blue, poly-backing, qty. 15	USA-B30X56PLY

Fluid Diamond® Floor Aspirator



- Fast, effective fluid collection
- Powerful suction action keeps floors dry and reduces the potential for slipping or falling
- Eliminates the need for slippery, costly towels and blankets on the OR floor to absorb fluids
- Designed with quieting pad and anti–floor-sticking technology
- Attaches to any surgical suction source
- Includes easily attachable suction tubing

Fluid Diamond floor aspirator, qty. 30	USA-FDX

Fluid Diamond is a trademark of Flagship Surgical, LLC.

Office Suction Pump and Disposable Canister



A medical suctioning device and solution with minimal noise, the office suction pump produces a maximum vacuum of 560 mmHg for use with Nano arthroscopy. Additionally, the 800 cc disposable collection cannister is designed for convenient and reliable aspiration of waste.

- Works with the 2.26 and 3.3 high-flow NanoScope™ sheaths
- New antibacterial filter design helps prevent contamination
- High-quality vacuum regulator and antivibration vacuum gauge setting
- Oilless, permanent lubrication
- Collection bottle with overflow protection
- Superior performance and reliability for continuous operation design
- Easy to carry and easy to clean

Vacuum pump	18600
Canister Kit	22330
Canister Kit (12-pack)	22330-12

Suction Tubing



Multiport suction tubing, 2 port	AR-S1002
Multiport suction tubing, 4 port	AR-S1004



Suction tubing, 3 ft	AR-S6203-S
Suction tubing, 10 ft	AR-S6210-S

Irrigation Tubing



(a) **(b)**

Gravity tubing is compatible with all arthroscopic and endoscopic sheaths and cannulas and can maintain proper distention even in complicated surgical cases that demand high flow.

Gravity Tubing	
2-spike tubing	AR-6412
4-spike tubing	AR-6414
Y-Inflow tubing, 7 mm **(a)**	AR-6200
Extension tubing, 6 ft **(b)**	AR-6220


Arthrex

High-Speed Drill System

38	Primado2 Control Unit
39	Foot Control
40	Slim Motor Series
41	Slim Attachment Hub, 300 Series
41	Slim Tube, 300 Series
42	Slim Tube Accessories
42	Super Slim Handpiece, 200 Series
43	Standard Attachment, 300 Series
44	Standard Attachment Accessories
44	Metal Cutting Handpiece
45	Endoscopic Burs
46	MIS Burs
47	Open Burs
48	Metal Cutting
49	Lubrication

Primado2 Control Unit



Primado2 Control Unit
P200-CU-120
Power supply: AC 120 V 50/60 Hz
Dimension: 278 mm (w) × 268 mm **(d)** × 160 mm **(h)**
Weight: 6.9 kg

- Compact design for easy setup
- Extensive options can be set up individually
- Main panel features simple, user-friendly operation

Home Screen:
- Speed control
- Irrigation control
- Reverse rotation control
- Priming control
- Foot control setting displayed

Setting Options

Control unit:
- Brightness
- Volume
- Language settings (6 languages available)
- Displays rotation speed of engaged motor/attachment

For Motor:
- Acceleration adjustment
- Brake adjustment
- Torque adjustment
- Oscillation adjustment (wire-pin driver only)

Foot Control



Primado2 Single Foot Control
FC-73
1 pedal with 1 function button

› Open pedal design enables precise and easy control

› Each button can be set to a specific function per operator preference

Function Options

› Foot control ON/OFF

› A ← → B control (switching between motors)

› Speed control (Min. 30% → default → Max. 100%)

› Reverse rotation mode

› Irrigation ON/OFF

› Flush (continuous 100% irrigation when pressed)

› Disable

› Variable speed control

› IP rating: IPX8

Slim Motor Series

› Compact and lightweight design prevents surgeon fatigue during procedures

› A variety of attachments are available

› Quick joint allows for an easy attachment-motor connection

Primado2 Slim Motor Foot control only	P200-SMH	
Primado2 Slim Motor, short Foot control only	P200-SMH-S	
Primado2 Slim Motor HS Hand control only	P200-SMH-HS	

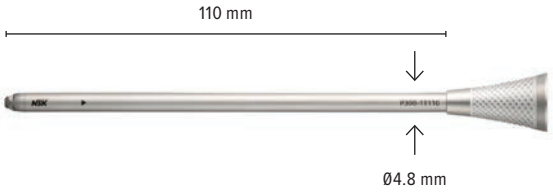
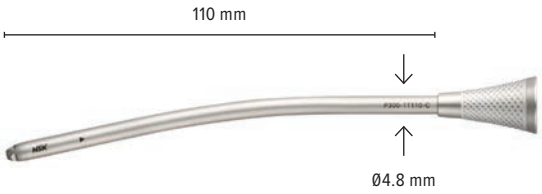
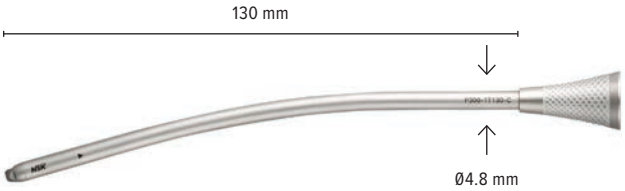
Slim Attachment Hub, 300 Series

Connects 300 series Slim Tube to Slim Motor series

Slim Attachment Hub, straight	P300-1AHS	
Slim Attachment Hub, angled	P300-1AHA	

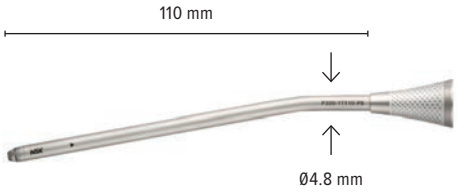
Slim Tube, 300 Series

- Connects to Slim Motor series using the Slim Attachment Hub
- Ideal for MIS spine procedures

Slim Tube 110 MIS	P300-1T110	
Slim Tube 130 MIS	P300-1T130	
Slim Tube 110/C MIS	P300-1T110-C	
Slim Tube 130/C MIS	P300-1T130-C	

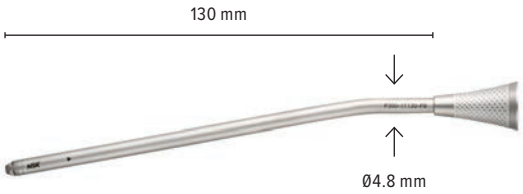
Slim Tube 110/PB
MIS

P300-1T110-PB



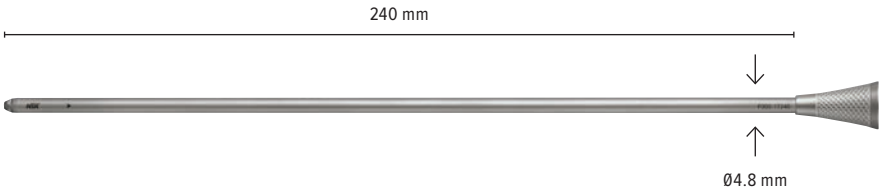
Slim Tube 130/PB
MIS

P300-1T130-PB



Slim Tube 240
Endoscopic

P300-1T240



Slim Tube Accessories

Slim Tube Beak **(b)**	P300-1T-B*
Slim Tube Hood **(a)**	P300-1T-H*
Irrigation Nozzle for 155 **(c)**	P200-IN-1A155
Irrigation Nozzle for 175	P200-IN-1A175

*Cannot be used with the irrigation nozzle.







Super Slim Handpiece, 200 Series

- Designed for endoscopic spine surgery
- Connects directly to Slim Motor series

Super Slim Handpiece 200 SPL/L
Endoscopic

P200-RA330-L

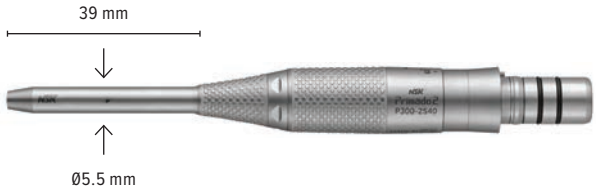
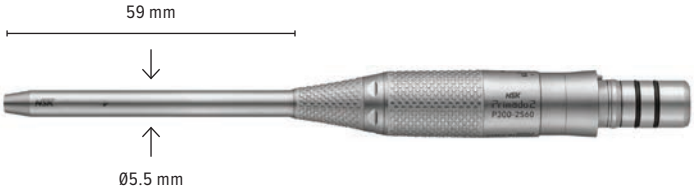
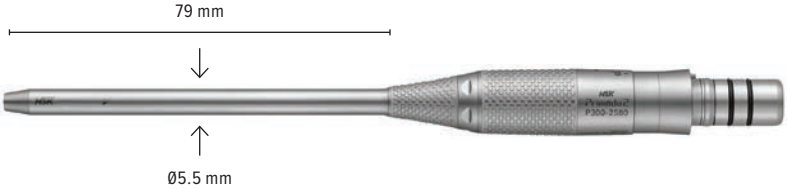
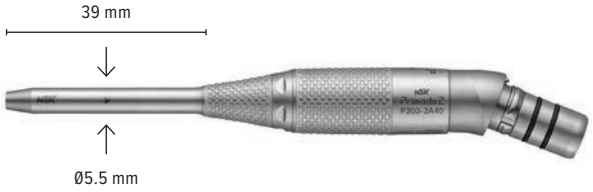
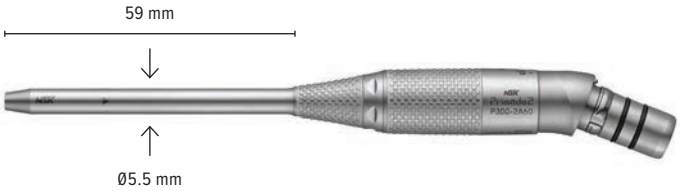
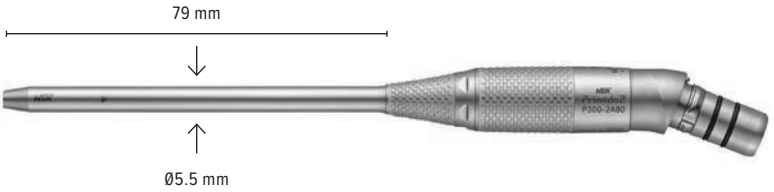


Scope compatibility guide: 10 mm 6.3 mm 7 mm

Standard Attachment, 300 Series

› Connects directly to Slim Motor series

› Ideal for open spine procedures

STD Attachment 40/Straight Open	P300-2S40	
STD Attachment 60/Straight Open	P300-2S60	
STD Attachment 80/Straight Open	P300-2S80	
STD Attachment 40/Angled Open	P300-2A40	
STD Attachment 60/Angled Open	P300-2A60	
STD Attachment 80/Angled Open	P300-2A80	

Standard Attachment Accessories



Irrigation Nozzle (extra short)	PD-IN-2ES
Irrigation Nozzle (medium)	PD-IN-2M
Irrigation Nozzle (short)	PD-IN-2S
Irrigation Nozzle (long)	PD-IN-2L

Metal Cutting Handpiece



Metal Cutting Handpiece 200	P200-3MC

Endoscopic Burs

Super Slim Handpiece 200



Diamond Bur

Head Size (mm)	Item Number
2.0	PDS-1D330-20
2.5	PDS-1D330-25
3.0	PDS-1D330-30
3.5	PDS-1D330-35



Coarse Diamond Bur

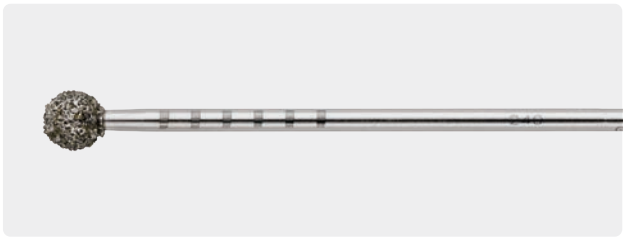
Head Size (mm)	Item Number
2.0	PDS-1CD330-20
2.5	PDS-1CD330-25
3.0	PDS-1CD330-30
3.5	PDS-1CD330-35

Slim Tube 240



R Diamond Bur

Head Size (mm)	Item Number
3.0	PDS-1RD240-30
4.0	PDS-1RD240-40
5.0	PDS-1RD240-50



R Coarse Diamond Bur

Head Size (mm)	Item Number
3.0	PDS-1RCD240-30
4.0	PDS-1RCD240-40
5.0	PDS-1RCD240-50



R Fluted Bur

Head Size (mm)	Item Number
4.0	PDS-1RF240-40

Scope compatibility guide: 10 mm 6.3 mm 7 mm

MIS Burs

Compatible with the 110 mm or 130 mm attachments.



R Diamond Bur

	Length	
Head Size (mm)	110	130
2.0	PDS-1RD110-20	PDS-1RD130-20
3.0	PDS-1RD110-30	PDS-1RD130-30
4.0	PDS-1RD110-40	PDS-1RD130-40



R Coarse Diamond Bur

	Length	
Head Size (mm)	110	130
2.0	PDS-1RCD110-20	PDS-1RCD130-20
3.0	PDS-1RCD110-30	PDS-1RCD130-30
4.0	PDS-1RCD110-40	PDS-1RCD130-40
5.0	PDS-1RCD110-50	PDS-1RCD130-50



MH Diamond Bur

	Length	
Head Size (mm)	110	130
2.0	PDS-1MHD110-20	PDS-1MHD130-20
3.0	PDS-1MHD110-30	PDS-1MHD130-30
4.0	PDS-1MHD110-40	PDS-1MHD130-40



MH Coarse Diamond Bur

	Length	
Head Size (mm)	110	130
3.0	PDS-1MHCD110-30	PDS-1MHCD130-30
4.0	PDS-1MHCD110-40	PDS-1MHCD130-40



R Fluted Bur

	Length	
Head Size (mm)	110	130
3.0	PDS-1RF110-30	PDS-1RF130-30
4.0	PDS-1RF110-40	PDS-1RF130-40



MH Fluted Bur

	Length	
Head Size (mm)	110	130
2.5	PDS-1MHF110-25	PDS-1MHF130-25
3.0	PDS-1MHF110-30	PDS-1MHF130-30

Open Burs

› Compatible with 300 series standard attachments

› Universal length burs can be used with all standard attachments



R Diamond Bur

Head Size (mm)	Item Number
3.0	PDS-2RDUL-30
4.0	PDS-2RDUL-40
5.0	PDS-2RDUL-50
6.0	PDS-2RDUL-60



R Coarse Diamond Bur

Head Size (mm)	Item Number
3.0	PDS-2RCDUL-30
4.0	PDS-2RCDUL-40
5.0	PDS-2RCDUL-50
6.0	PDS-2RCDUL-60
7.0	PDS-2RCDUL-70



R Extra Coarse Diamond Bur

Head Size (mm)	Item Number
4.0	PDS-2RECDUL-40
5.0	PDS-2RECDUL-50
6.0	PDS-2RECDUL-60
7.0	PDS-2RECDUL-70



R Super Coarse Diamond Bur

Head Size (mm)	Item Number
3.0	PDS-2RSCDUL-30
4.0	PDS-2RSCDUL-40
5.0	PDS-2RSCDUL-50
6.0	PDS-2RSCDUL-60



MH Coarse Diamond Bur

Head Size (mm)	Item Number
2.0	PDS-2MHCDUL-20
3.0	PDS-2MHCDUL-30
4.0	PDS-2MHCDUL-40



Barrel Diamond Bur

Head Size (mm)	Item Number
3.0	PDS-2BCDUL-30
5.0	PDS-2BCDUL-50



MH Fluted Bur

Head Size (mm)	Item Number
1.8	PDS-2MHFUL-18
2.2	PDS-2MHFUL-22
3.0	PDS-2MHFUL-30



R Fluted Bur

Head Size (mm)	Item Number
3.0	PDS-2RFUL-30
4.0	PDS-2RFUL-40
5.0	PDS-2RFUL-50
6.0	PDS-2RFUL-60

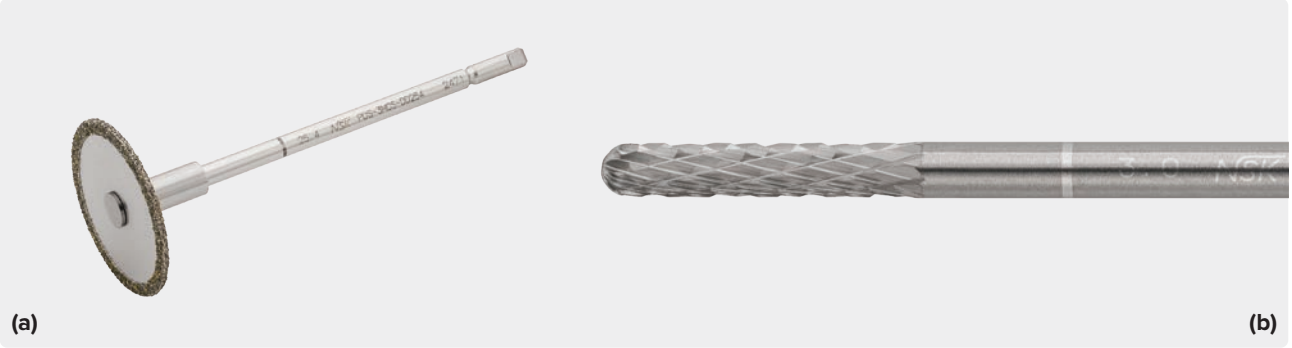


QuadEdge Bur

Head Size (mm)	Item Number
3.0	PDS-2QEUL-30
4.0	PDS-2QEUL-40
5.0	PDS-2QEUL-50
6.0	PDS-2QEUL-60

Metal Cutting

Compatible with metal cutting handpiece.



(a) **(b)**

Metal Cutting Carbide Bur, 1.6 mm	PDS-3MCS-CB16
Metal Cutting Carbide Bur, 3.0 mm **(b)**	PDS-3MCS-CB30
Metal Cutting Diamond Disc, 25.4 mm **(a)**	PDS-3MCS-DD254

Lubrication

Required for proper device maintenance.



PANA Spray Plus	Z182600



EZ Spray Adaptor	PD-EZ-M

Spray is not included



Spray Adaptor for Slim	P200-EZ-SM



Slim Motor Series:
Each attachment

Spray Adaptor for Slim:
(P200-EZ-SM)



EZ Spray Adaptor


Arthrex

Synergy[Resection™] System

52 Synergy[Resection™] Console

53 Handpieces

54 Footswitches

55 Endoscopic-Length Shaver Burs

56 Endoscopic-Length Shaver Blades

57 Bur Accessories

Synergy[Resection™] Console



This versatile Synergy[Resection] system was designed for multiple orthopedic procedures and operates like two consoles in one chassis. It can simultaneously operate two accessory handpieces completely independent of each other. Operators can also use 1 or 2 foot pedals to control each of the accessory handpieces. Shaver handpieces offer 3 oscillating modes depending on the application or surgeon's preference: standard, efficient, or aggressive.

Integration of the Synergy[Resection] console with a Synergy video management system enables the heads-up display feature and allows for easy visibility of the shaver system settings on the monitor.

- Multifunctional shaver system
- Operation of 2 handpieces simultaneously
- Automatic detection of handpiece
- Control via 1 or 2 foot pedals
- Three different oscillating modes: standard, efficient, aggressive
- Large and small hub: OSC: 3000 rpm max
- Large hub: FWD/REV: 8000 rpm max

Synergy[Resection] console	AR-8305

Handpieces



Hand Control **(a)**

- Multifunction buttons
  - Change speed
  - Change direction
  - Turn on/off



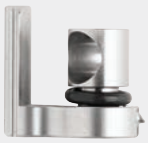
Hand Control (backhand) **(b)**

- Multifunction buttons
  - Change speed
  - Change direction
  - Turn on/off
  - Suction opposite from button controls



Foot Control **(c)**

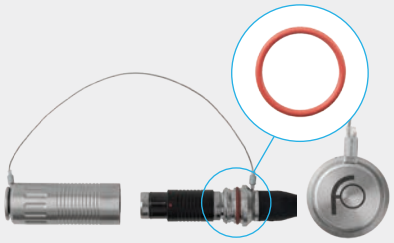
- Lightweight
- Control via footswitch



(d)



(e)



(f)



(g)

The unique double-sealed shaver handpieces are robust and reliable and come with or without hand-control options. These high-torque handpieces feature a snap-lock collet that accepts a variety of arthroscopic and endoscopic burs, making them among the most versatile handpieces available. With high-performance motors and constructed of cutting-edge materials, Synergy[Resection™] shaver handpieces are a great addition to the OR.

Hand-Control Shaver Handpieces

Featuring ergonomic multifunction buttons that place control of speed and direction at your fingertips, the hand-control shaver handpieces are available in standard and backhand models.

Foot-Control Shaver Handpiece

With the same, high-performance features as our hand-operated handpieces, the footswitch shaver handpiece provides another option for control.

Shaver handpiece, hand control **(a)**	AR-8332H
Shaver handpiece, hand control, backhand **(b)**	AR-8332RH
Shaver handpiece, footswitch control **(c)**	AR-8330F
Replacement valve assembly for AR-8330F, AR-8330H, AR-8330RH, AR-8332H, and AR-8332RH handpieces **(d)**	AR-8330V
Replacement O-rings for AR-8330V valve assembly (pack of 10) **(e)**	AR-8330VO
Replacement O-rings for F-style soaker cap (pack of 5) **(f)**	AR-8330FO
Replacement O-rings for T-style soaker cap (pack of 5) **(g)**	AR-8330TO

Footswitch

The Synergy[Resection™] single pedal footswitch features a directional button to adjust the handpiece's orientation, with the active mode shown on the console. The footswitch can be toggled between gas pedal and standard modes.

Synergy[Resection] single pedal footswitch	AR-S8311



Endoscopic-Length Shaver Burs

	Description	Product Description	Item Number
	**Fluted Oval** Designed for side and end cutting; allows for aggressive bone resection	2.5 mm × 280 mm oval bur, retractable	AR-SOV-R25-280
		2.5 mm × 330 mm oval bur, retractable	AR-SOV-R25-330
		3 mm × 280 mm oval bur, retractable	AR-SOV-R30-280
		3 mm × 330 mm oval bur, retractable	AR-SOV-R30-330
		5 mm × 280 mm oval bur, retractable	AR-SOV-R50-280
	**Coarse Diamond Oval** Designed for side and end cutting; allows for rapid, controlled bone resection	2.5 mm × 280 mm coarse diamond oval bur, retractable	AR-SOV-R25-280CD
		2.5 mm × 330 mm coarse diamond oval bur, retractable	AR-SOV-R25-330CD
		3 mm × 280 mm coarse diamond oval bur, retractable	AR-SOV-R30-280CD
		3 mm × 330 mm coarse diamond oval bur, retractable	AR-SOV-R30-330CD
		5 mm × 280 mm coarse diamond oval bur, retractable	AR-SOV-R50-280CD
	**Extra-Coarse Diamond Oval** Designed for side cutting; allows for aggressive, controlled bone resection	3 mm × 280 mm extra-coarse diamond oval bur, retractable	AR-SOV-R30-280XD
		3 mm × 330 mm extra-coarse diamond oval bur, retractable	AR-SOV-R30-330XD
		5 mm × 280 mm extra-coarse diamond oval bur, retractable	AR-SOV-R50-280XD
	**Match Head** Designed for side cutting, allows for controlled bone resection	3 mm × 130 mm match-head bur	AR-SMH-30-130
		3 mm × 280 mm match-head bur	AR-SMH-30-280
		3 mm × 330 mm match-head bur	AR-SMH-30-330
	**Diamond Match Head** Designed for side and end cutting; allows for controlled bone resection	3 mm × 130 mm diamond match-head bur	AR-SMH-30-130D
		3 mm × 280 mm diamond match-head bur	AR-SMH-30-280D
		3 mm × 330 mm diamond match-head bur	AR-SMH-30-330D

Scope compatibility guide: 6.3 mm 7 mm 10 mm

	Description	Product Description	Item Number
	**Coarse Diamond Match Head** Designed for side and end cutting; allows for rapid, controlled bone resection	3 mm × 130 mm coarse diamond match-head bur	AR-SMH-30-130D
		3 mm × 280 mm coarse diamond match-head bur	AR-SMH-30-280CD
		3 mm × 330 mm coarse diamond match-head bur	AR-SMH-30-330CD

Endoscopic-Length Shaver Blades

	Description	Product Description	Item Number
	**Slotted Whisker Blade** Designed for controlled soft-tissue resection; take caution when using in close proximity to neurological structures	3.5 mm × 280 mm slotted whisker	AR-SSW-35-280
		3.5 mm × 330 mm slotted whisker	AR-SSW-35-330
	**Fenestrated Whisker Blade** Designed for delicate, controlled soft-tissue resection in close proximity to neurological structures	3.5 mm × 280 mm fenestrated whisker	AR-SFW-35-280
		3.5 mm × 330 mm fenestrated whisker	AR-SFW-35-330

Scope compatibility guide: 6.3 mm 7 mm 10 mm

Bur Accessories

Eccentric bur cam	AR-S3350-100-CAM



Scope compatibility guide: 6.3 mm 7 mm 10 mm


Arthrex
Arthrex

Synergy ElectroSurgery System

60 Synergy ElectroSurgery Generator

61 FlexTip RF Probes

61 Adapters

Synergy ElectroSurgery Generator

The Synergy ElectroSurgery system was developed specifically for endoscopic spine procedures. High-frequency currents (4 MHz) allow for precise tissue resection and ablation to help avoid critical neurological structures.



(a)



(b)



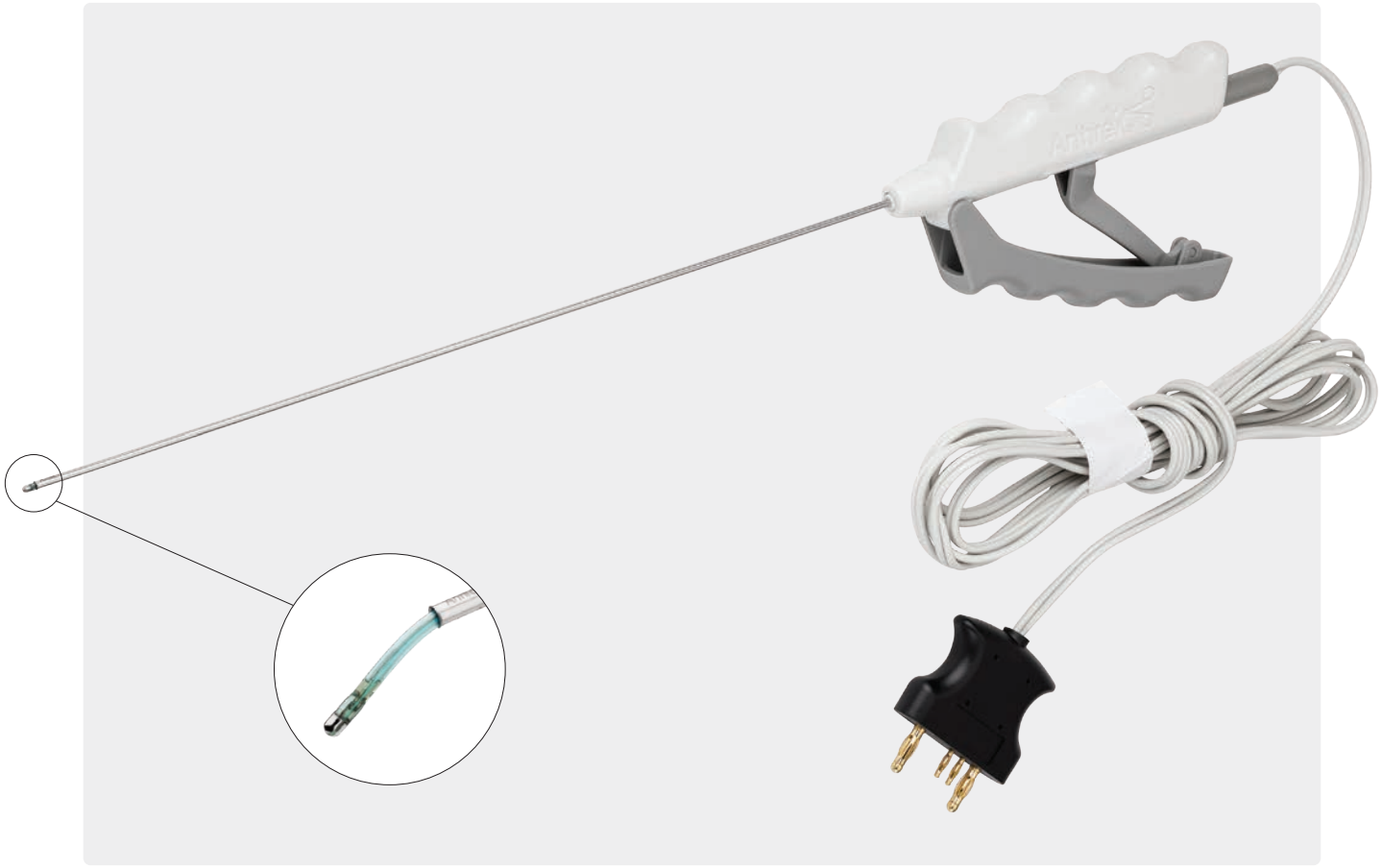
(c)

Synergy ElectroSurgery console **(a)**	AR-S9800
Synergy ElectroSurgery footswitch w/ handle **(c)**	AR-S9800-F1
Synergy ElectroSurgery footswitch **(b)**	AR-S9800-F2

Synergy ElectroSurgery

FlexTip RF Probes

FlexTip RF probes feature an articulating tip and an ergonomic WishBone™ handle.



FlexTip RF probe, 28 cm	AR-S9805-0028
FlexTip RF probe, 35 cm	AR-S9805-0035

Adapters



FlexTip probe adapter, Joimax	AR-S9805-010-J


Arthrex
Arthrex

Endoscopic Instruments

64	Hand Instruments
65	Endoscopic Spine Access Kit
66	Needles and Guidewires
67	Dilators
68	Single-Step Dilators
69	Cannulas
71	Punches
72	Forceps
73	Graspers
73	Scissors
74	Manual Instruments
75	Kerrisons
76	Suction Kerrison
77	Rasps and Trephines
77	Rod Pushers
78	Miscellaneous Instruments and Accessories
79	Instrument Cases
80	Aesculap Rigid Containers

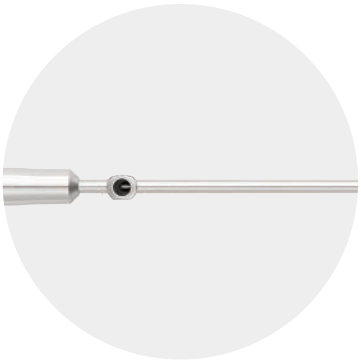
Hand Instruments



Pistol Grip
Tried and tested, these pistol grip instruments feature comfortable, ergonomic loop handles for simple and precise control in a wide range of different hand positions and tissue resection procedures.



WishBone™ Grip
Pioneered by Arthrex nearly 3 decades ago to prioritize surgeon comfort and ergonomics, this series of endoscopic instruments features superior feel and improved ergonomics that facilitate inverted and retrograde usage with either hand. Designed specifically for endoscopic procedures, this product line includes a comprehensive variety of tip styles, angles, sizes, and shaft diameters. Ceramic coating increases durability and life span, while silicone coating on the handle allows for increased comfort and control.



FlushPort
The unique FlushPort connection design allows for easy and efficient instrument cleaning particularly of the inner lumen. The familiar Luer-lock connector offers the possibility of a simple connection of the instruments to, for example, the rinsing port of a washer-disinfector. The instruments come with an attached silicone cap; a metal cap is available to close the Luer lock during standard use, according to user preference.



Luer Lock Cap (sold separately)
Closes the hand instrument's Luer-lock FlushPort connection during use. It is recommended to purchase 1 cap per hand instrument.

FlushPort Luer lock cap, for use with FlushPort hand instruments, reusable	AR-150301F



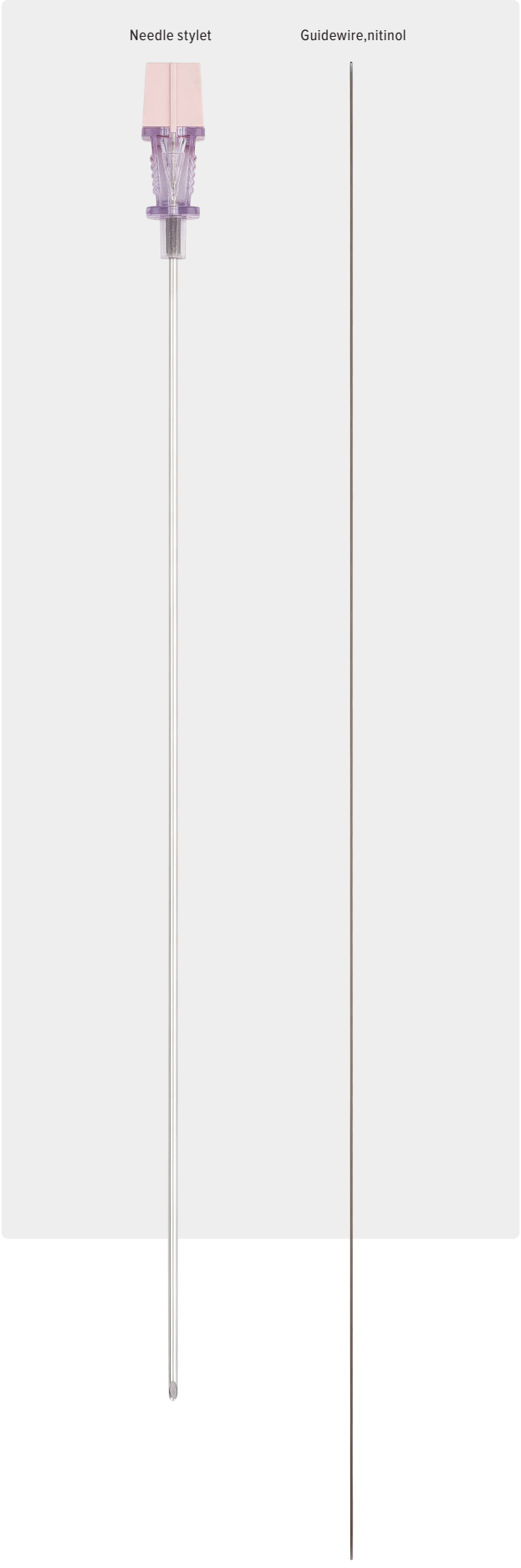
Endoscopic Spine Access Kit

Sterile disposable kit includes all equipment necessary for initial access, conveniently contained in one package.

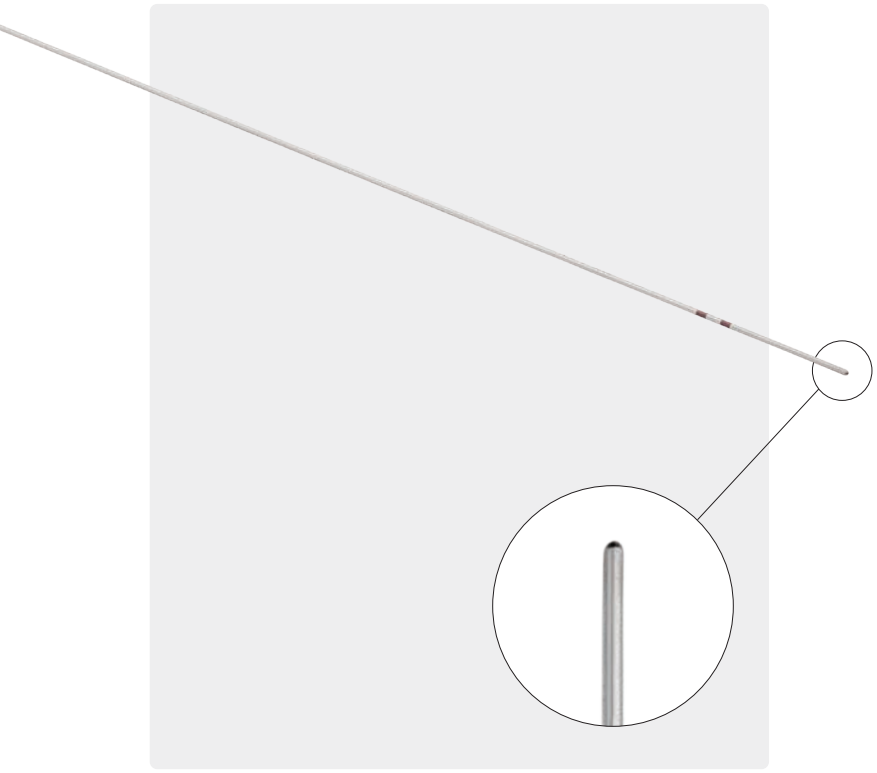
Cannula Insertion Recommendations

1. Insert calibrated needle stylet
2. Remove stylet and insert guidewire through needle
3. Remove the needle, keeping guidewire in place
4. Insert serial dilator(s)/switching stick to the desired diameter
5. Insert cannula over serial dilator(s)
6. Remove guidewire and serial dilator(s)

Spine Access Disposable Kit	AR-S4000K-S



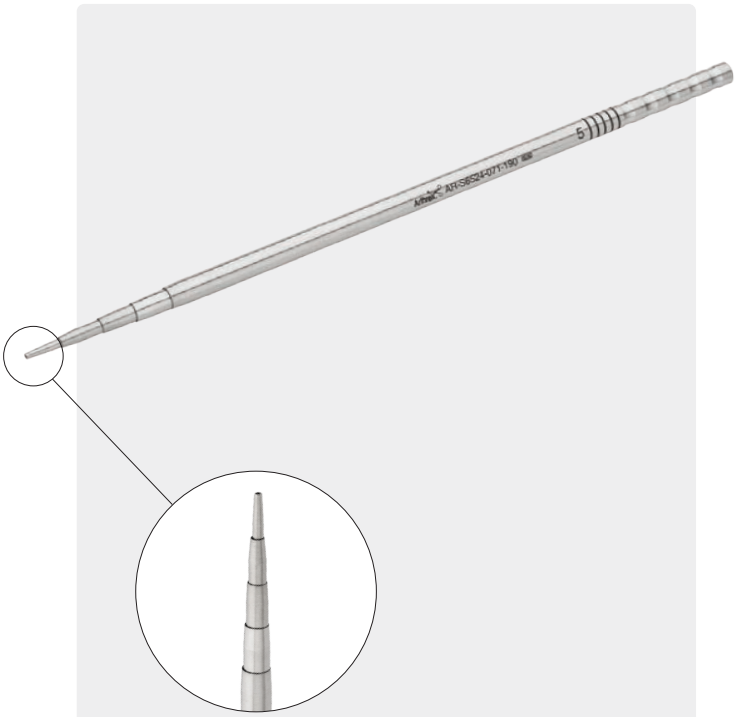
Needles and Guidewires



Guidewire, 0.7 mm × 400 mm	AR-S4000-007-400
Guidewire, nitinol, 0.8 mm × 400 mm	AR-S4000-008-400
Distension needle w/ stylet, 17 ga × 7 in	AR-1369N-1



Dilators



Conical dilators are ideal for step dilations during endoscopic and MIS procedures.

6-Step Series	
Dilator, 2.5 mm × 230 mm **(a)**	AR-S6524-025-230
Dilator, 4.1 mm × 220 mm **(b)**	AR-S6524-041-220
Dilator, 5.1 mm × 210 mm **(c)**	AR-S6524-051-210
Dilator, 6 mm × 200 mm **(d)**	AR-S6524-060-200
Dilator, 7 mm × 190 mm **(e)**	AR-S6524-071-190
Dilator, 10.1 mm × 160 mm **(f)**	AR-S6524-101-160

4-Step Series	
Dilator, 3 mm × 230 mm	AR-S6524-030-230
Dilator, 6 mm × 210 mm	AR-S6524-060-210
Dilator, 7 mm × 190 mm	AR-S6524-070-190
Dilator, 10.1 mm × 170 mm	AR-S6524-101-170

3-Step Series XL	
Dilator, 3 mm × 250 mm	AR-S6524-030-250
Dilator, 6 mm × 235 mm	AR-S6524-060-235
Dilator, 7 mm × 220 mm	AR-S6524-070-220

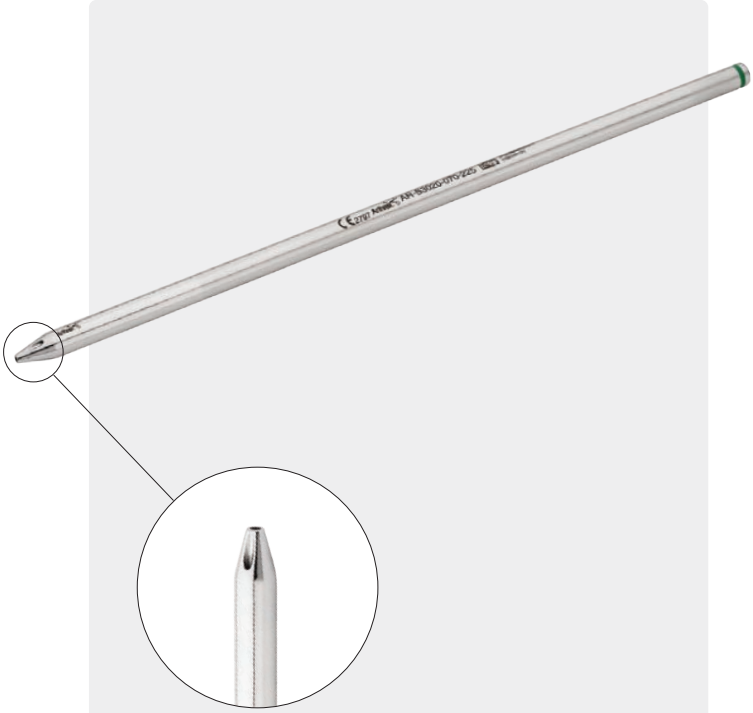
Miscellaneous	
Dilator, curved, 2.5 mm × 230 mm	AR-S6524-025-230C
Dilator, 4 mm × 230 mm	AR-S6524-040-230
Dilator, 5 mm × 230 mm	AR-S6524-050-230



Scope compatibility guide: 6.3 mm 7 mm 10 mm

Single-Step Dilators





Switching sticks are two-channel dilators that allow for single-step dilation.

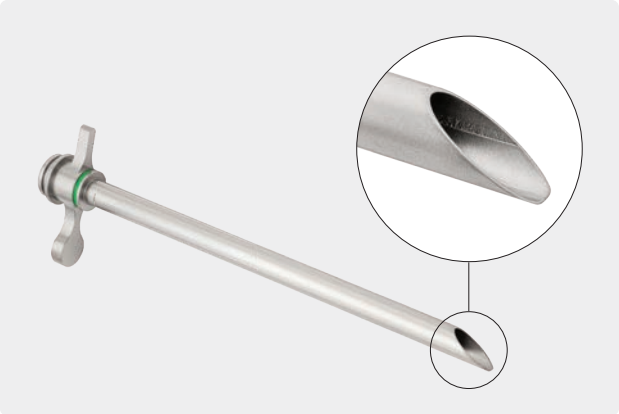
Switching stick, 6.3 mm × 225 mm **(a)**	AR-S3020-063-225
Switching stick, 6.3 mm × 245 mm	AR-S3020-063-245
Switching stick, 7 mm × 225 mm **(b)**	AR-S3020-070-225
Switching stick, 7 mm × 245 mm	AR-S3020-070-245
Switching stick, 10 mm × 185 mm **(c)**	AR-S3020-100-185

One-step dilators are one channel dilators that allow for single step dilation.

One-step dilator, 6.3 mm × 225 mm	AR-S3025-063-225
One-step dilator, 6.3 mm × 265 mm	AR-S3025-063-265
One-step dilator, 7 mm × 225 mm	AR-S3025-070-225
One-step dilator, 7 mm × 265 mm	AR-S3025-070-265
One-step dilator, 10 mm × 185 mm	AR-S3025-100-185

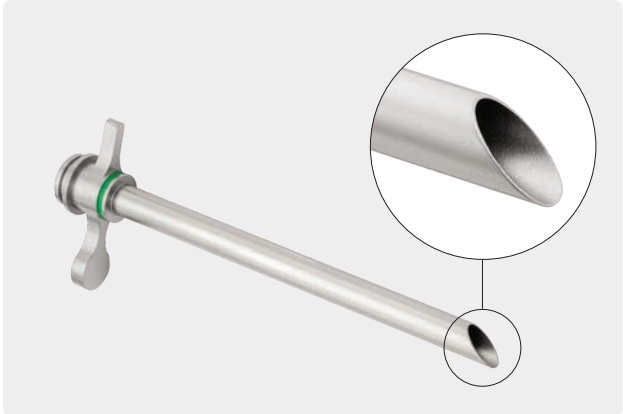
Scope compatibility guide: 6.3 mm 7 mm 10 mm

Cannulas



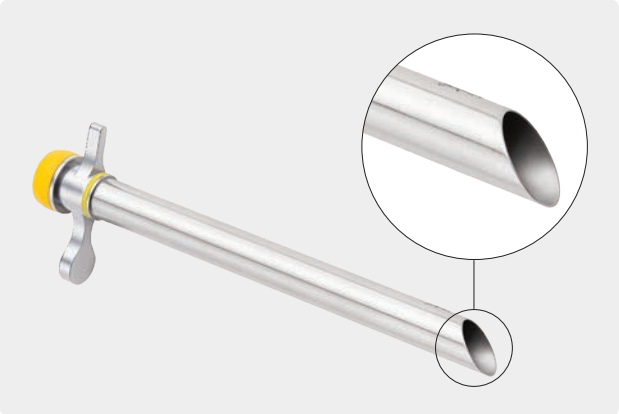
Oblique Window, 30°

Cannula w/ oblique window, 7.5 × 125 mm, 30°	AR-S3420-075-12530
Cannula w/ oblique window, 7.5 × 155 mm, 30°	AR-S3420-075-15530
Cannula w/ oblique window, 7.5 × 178 mm, 30°	AR-S3420-075-17830
Cannula w/ oblique window, 7.5 × 212 mm, 30°	AR-S3420-075-21230
Cannula w/ oblique window, 8.0 × 125 mm, 30°	AR-S3420-080-12530
Cannula w/ oblique window, 8.0 × 155 mm, 30°	AR-S3420-080-15530
Cannula w/ oblique window, 8.0 × 178 mm, 30°	AR-S3420-080-17830
Cannula w/ oblique window, 8.0 × 212 mm, 30°	AR-S3420-080-21230
Cannula w/ oblique window, 11 × 134 mm, 30°	AR-S3420-110-13430



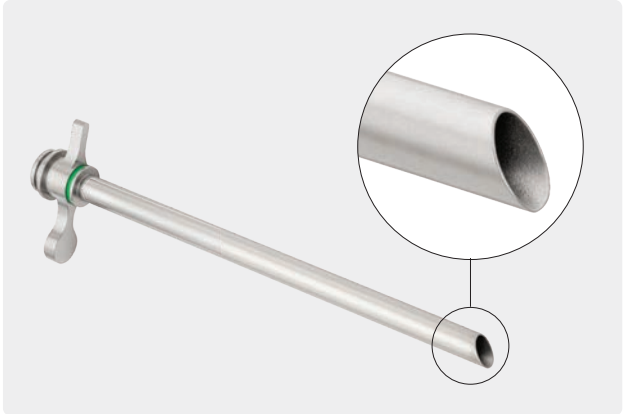
Oblique Window, 40°

Cannula w/ oblique window, 7.5 × 125 mm, 40°	AR-S3420-075-12540
Cannula w/ oblique window, 7.5 × 155 mm, 40°	AR-S3420-075-15540
Cannula w/ oblique window, 7.5 × 178 mm, 40°	AR-S3420-075-17840
Cannula w/ oblique window, 7.5 × 212 mm, 40°	AR-S3420-075-21240
Cannula w/ oblique window, 8.0 × 125 mm, 40°	AR-S3420-080-12540
Cannula w/ oblique window, 8.0 × 155 mm, 40°	AR-S3420-080-15540
Cannula w/ oblique window, 8.0 × 178 mm, 40°	AR-S3420-080-17840
Cannula w/ oblique window, 8.0 × 212 mm, 40°	AR-S3420-080-21240
Cannula w/ oblique window, 11 × 134 mm, 40°	AR-S3420-110-13440



Oblique Window

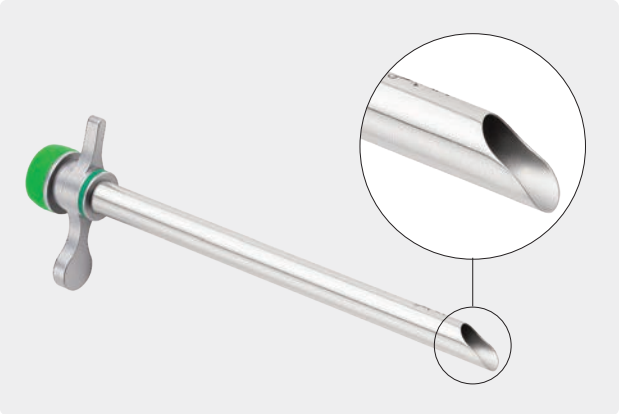
Cannula w/ oblique window, 7.5 × 178 mm	AR-S3420-075-178
Cannula w/ oblique window, 8.0 × 125 mm	AR-S3420-080-125
Cannula w/ oblique window, 8.0 × 178 mm	AR-S3420-080-178
Cannula w/ oblique window, 11 × 134 mm	AR-S3420-110-134



Oblique Window, 55°

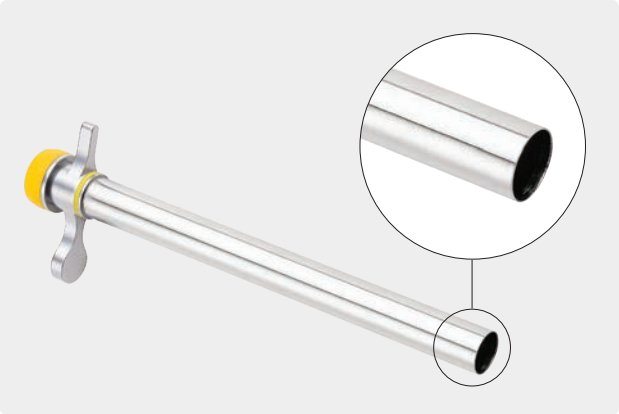
Cannula w/ oblique window, 7.5 × 125 mm, 55°	AR-S3420-075-12555
Cannula w/ oblique window, 7.5 × 155 mm, 55°	AR-S3420-075-15555
Cannula w/ oblique window, 7.5 × 178 mm, 55°	AR-S3420-075-17855
Cannula w/ oblique window, 7.5 × 212 mm, 55°	AR-S3420-075-21255
Cannula w/ oblique window, 8.0 × 125 mm, 55°	AR-S3420-080-12555
Cannula w/ oblique window, 8.0 × 155 mm, 55°	AR-S3420-080-15555
Cannula w/ oblique window, 8.0 × 178 mm, 55°	AR-S3420-080-17855
Cannula w/ oblique window, 8.0 × 212 mm, 55°	AR-S3420-080-21255
Cannula w/ oblique window, 11 × 134 mm, 55°	AR-S3420-110-13455

Scope compatibility guide: 6.3 mm 7 mm 10 mm



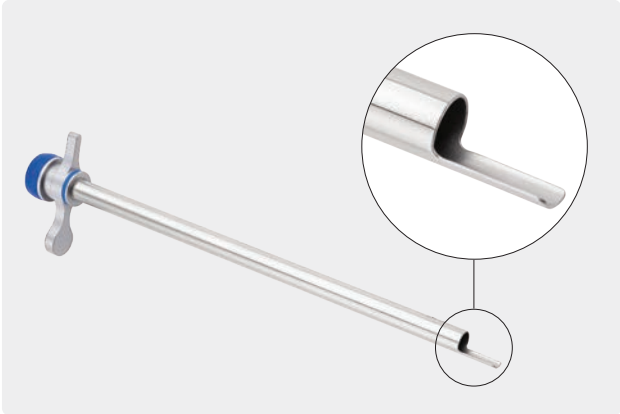
Elevator Tip

Cannula w/ elevator tip, 7.5 × 125 mm	AR-S3420-075-125ET
Cannula w/ elevator tip, 7.5 × 155 mm	AR-S3420-075-155ET
Cannula w/ elevator tip, 7.5 × 178 mm	AR-S3420-075-178ET
Cannula w/ elevator tip, 7.5 × 212 mm	AR-S3420-075-212ET
Cannula w/ elevator tip, 8.0 × 125 mm	AR-S3420-080-125ET
Cannula w/ elevator tip, 8.0 × 155 mm	AR-S3420-080-155ET
Cannula w/ elevator tip, 8.0 × 178 mm	AR-S3420-080-178ET
Cannula w/ elevator tip, 8.0 × 212 mm	AR-S3420-080-212ET
Cannula w/ elevator tip, 11 × 134 mm	AR-S3420-110-134ET



Flat Tip

Cannula w/ flat tip, 7.5 × 125 mm	AR-S3420-075-125FT
Cannula w/ flat tip, 8.0 × 125 mm	AR-S3420-080-125FT
Cannula w/ flat tip, 11 × 134 mm	AR-S3420-110-134FT



Open Tip

Cannula w/ open tip, 7.5 × 178 mm	AR-S3420-075-178OT
Cannula w/ open tip, 7.5 × 212 mm	AR-S3420-075-212OT
Cannula w/ open tip, 8.0 × 178 mm	AR-S3420-080-178OT
Cannula w/ open tip, 8.0 × 212 mm	AR-S3420-080-212OT

Scope compatibility guide: 6.3 mm 7 mm 10 mm

Punches



(a)

Duckling Punches

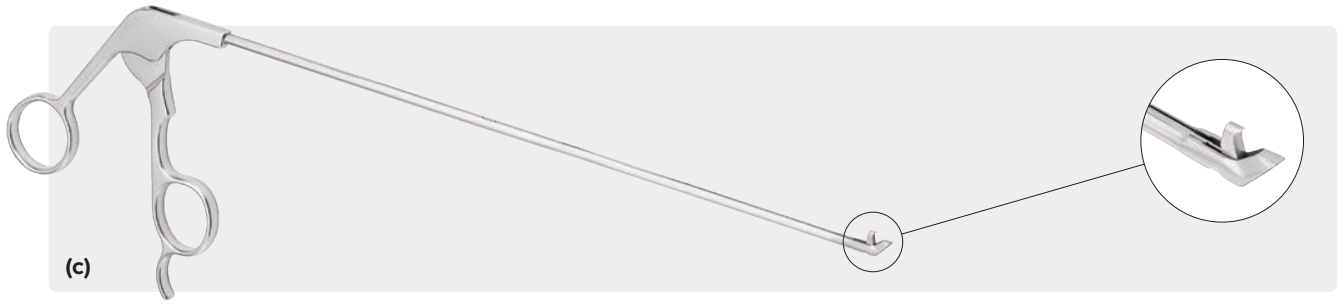
Duckling punch, 2.5 mm × 330 mm	AR-S7111-025-330
Duckling punch, 2.5 mm × 330 mm, WishBone™ handle	AR-S7111-025-330W
Duckling punch, 3.5 mm × 330 mm **(a)**	AR-S7111-035-330
Duckling punch, 3.5 mm × 330 mm, WishBone handle	AR-S7111-035-330W



(b)

Scissor Punches

Scissor punch, 2 mm × 260 mm	AR-S7116-020-260
Scissor punch, 2 mm × 260 mm, WishBone handle	AR-S7116-020-260W
Scissor punch, 2.5 mm × 260 mm	AR-S7116-025-260
Scissor punch, 2.5 mm × 260 mm, WishBone handle	AR-S7116-025-260W
Scissor punch, 2.5 mm × 330 mm	AR-S7116-025-330
Scissor punch, 2.5 mm × 330 mm, WishBone handle	AR-S7116-025-330W
Scissor punch, 4 mm × 260 mm **(b)**	AR-S7116-040-260
Scissor punch, 4 mm × 260 mm, WishBone handle	AR-S7116-040-260W



(c)

Up-Angle Scissor Punches

Scissor punch, up angle, 2.5 mm × 330 mm	AR-S7116-025U-330
Scissor punch, up angle, 2.5 mm × 330 mm, WishBone handle	AR-S7116-025U-330W
Scissor punch, up angle, 3.5 mm × 260 mm **(c)**	AR-S7116-035U-260
Scissor punch, up angle, 3.5 mm × 260 mm, WishBone handle	AR-S7116-035U-260W

Scope compatibility guide: 6.3 mm 7 mm 10 mm

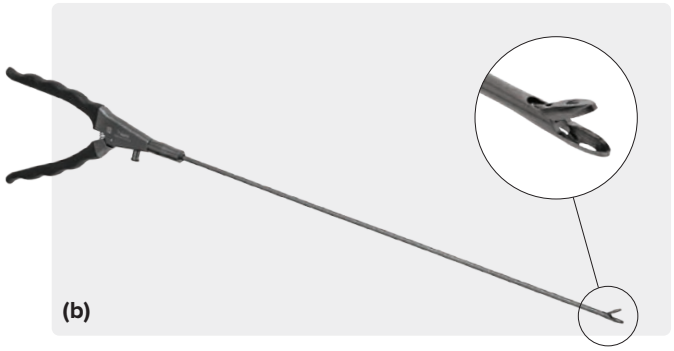
Forceps



(a)

Cup Forceps

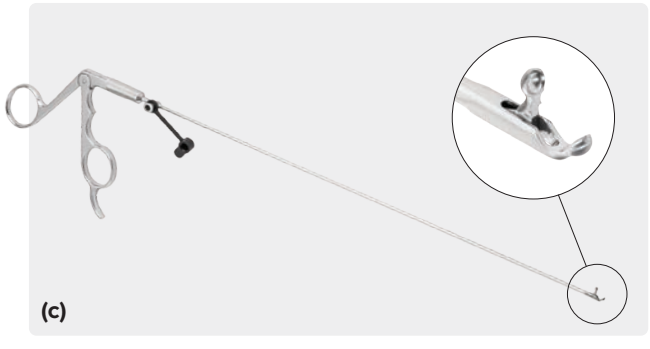
Cup forceps, 2.5 mm × 260 mm	AR-S7110-025-260
Cup forceps, 2.5 mm × 260 mm, WishBone™ handle	AR-S7110-025-260W
Cup forceps, 2.5 mm × 330 mm	AR-S7110-025-330
Cup forceps, 2.5 mm × 330 mm, WishBone handle	AR-S7110-025-330W
Cup forceps, 3 mm × 330 mm	AR-S7110-030-330
Cup forceps, 3 mm × 330 mm, WishBone handle	AR-S7110-030-330W
Cup forceps, 3.5 mm × 260 mm	AR-S7110-035-260
Cup forceps, 3.5 mm × 260 mm, WishBone handle	AR-S7110-035-260W
Cup forceps, 3.5 mm × 330 mm **(a)**	AR-S7110-035-330
Cup forceps, 3.5 mm × 330 mm, WishBone handle	AR-S7110-035-330W
Cup forceps, 4 mm × 260 mm	AR-S7110-040-260
Cup forceps, 4 mm × 260 mm, WishBone handle	AR-S7110-040-260W
Cup forceps, 4 mm × 330 mm	AR-S7110-040-330
Cup forceps, 4 mm × 330 mm, WishBone handle	AR-S7110-040-330W



(b)

Blakesley Forceps

Blakesley forceps, 3.5 mm × 330 mm	AR-S7118-035-330
Blakesley forceps, 3.5 mm × 330 mm, WishBone handle **(b)**	AR-S7118-035-330W



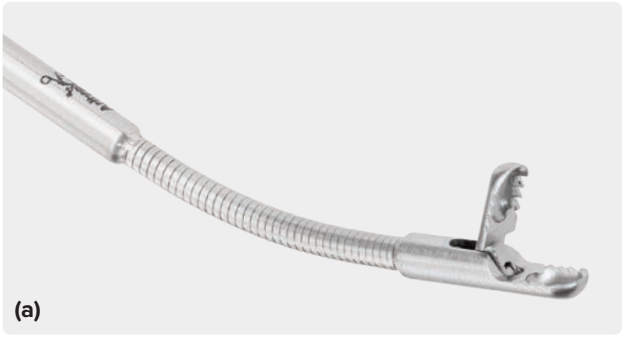
(c)

Cup Forceps, Up Angled

Cup forceps, up angle, 2 mm × 330 mm	AR-S7110-020U-330
Cup forceps, up angle, 2 mm × 330 mm, WishBone handle	AR-S7110-020U-330W
Cup forceps, up angle, 2.5 mm × 330 mm **(c)**	AR-S7110-025U-330
Cup forceps, up angle, 2.5 mm × 330 mm, WishBone handle	AR-S7110-025U-330W

Scope compatibility guide: 6.3 mm 7 mm 10 mm

Graspers



(a)



(b)

	Cup grasper, serrations, 2 mm × 330 mm cup	AR-S7121-020-330
	Grasper, serrations, 2 mm × 330 mm, WishBone™ handle	AR-S7121-020-330W
	Cup grasper, teeth, 2.5 mm × 330 mm	AR-S7120-025-330
	Cup grasper, teeth, 2.5 mm × 330 mm, WishBone handle	AR-S7120-025-330W
	Cup grasper, semi-flexible, teeth, 2.5 mm × 330 mm cup **(a)**	AR-S7125-025F-330
	Grasper, semi-flexible, teeth, 2.5 mm × 330 mm, WishBone handle	AR-S7125-025F-330W
	Cup grasper, semi-flexible, 3 mm × 260 mm	AR-S7125-030F-260
	Cup grasper, semi-flexible, 3 mm × 260 mm, WishBone handle	AR-S7125-030F-260W
	Cup grasper, semi-flexible, 3 mm × 330 mm **(b)**	AR-S7125-030F-330
	Cup grasper, semi-flexible, 3 mm × 330 mm, WishBone handle	AR-S7125-030F-330W

Scissors

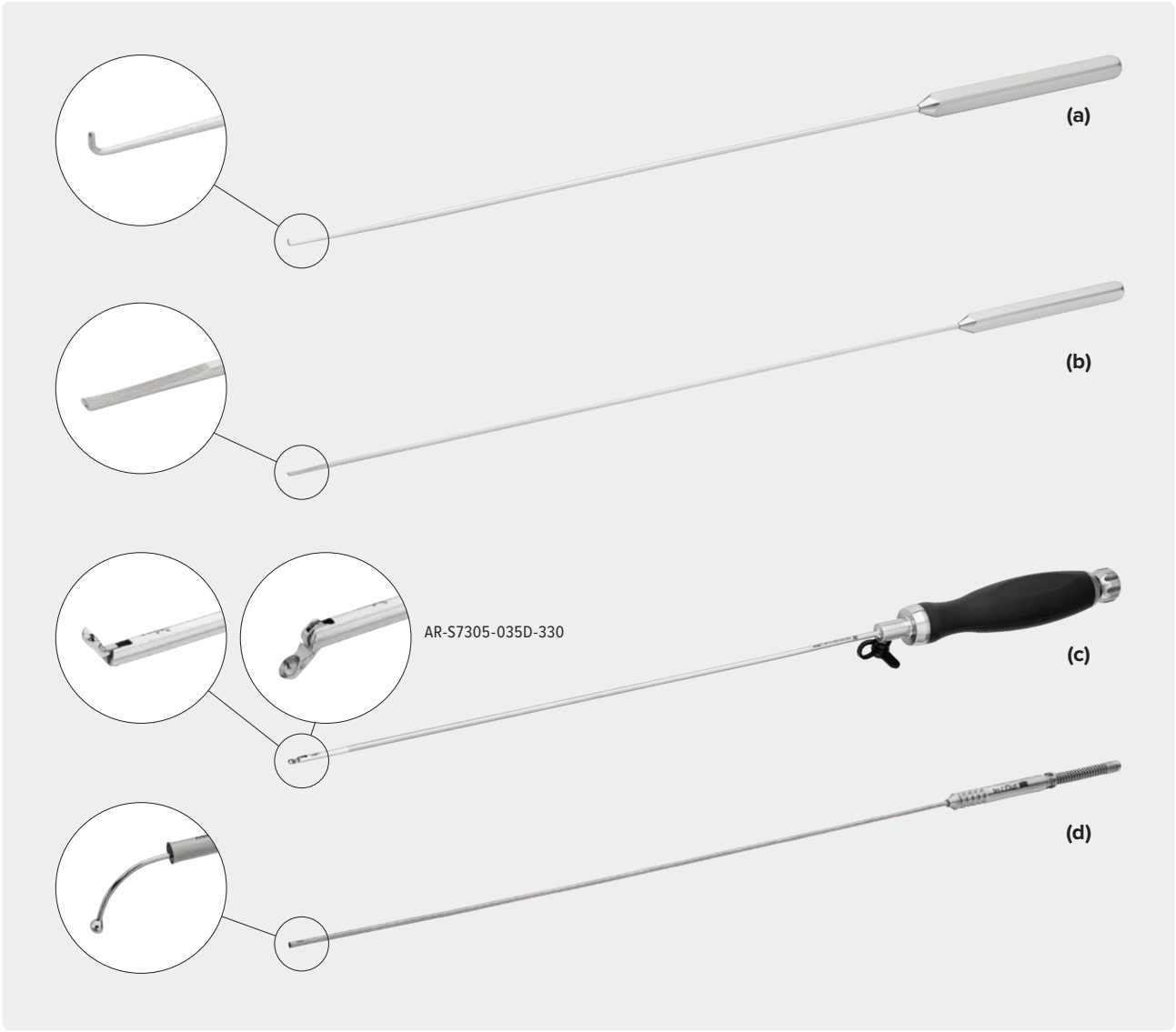


(c)

	Hook scissors, 2.5 mm × 260 mm **(c)**	AR-S7115-025-260
	Hook scissors, 2.5 mm × 260 mm, WishBone handle	AR-S7115-025-260W
	Hook scissors, 2.5 mm × 330 mm	AR-S7115-025-330
	Hook Scissors, 2.5 mm × 330 mm, WishBone handle	AR-S7115-025-330W

Scope compatibility guide: 6.3 mm 7 mm 10 mm

Manual Instruments



■■■	Hook probe, 2.5 × 260 mm **(a)**	AR-S10030-025-260
■■■	Hook probe, 2.5 × 310 mm	AR-S10030-025-310
■■■	Bone awl, 3.0 × 310 mm	AR-S7324-030-310
■■■	Osteotome, V cut, 3.0 × 310 mm	AR-S7323-030V-310
■■■	Blunt dissector, 2.5 × 310 mm **(b)**	AR-S1342-025-310
■■■	Osteotome, 3.0 × 260 mm	AR-S1342-030-260
■■■	Osteotome, 3.0 × 310 mm	AR-S7323-030-310
■■■	Bone curette, 2.0 × 260 mm	AR-S7305-020-260
■■■	Bone curette, 3.5 × 330 mm **(c)**	AR-S7305-035-330
■■■	Bone curette down biting, 3.5 × 330 mm	AR-S7305-035D-330
	Kerrison/ball-tip probe, handle	AR-S7400-000-000H
	Kerrison/ball-tip probe, WishBone handle	AR-S7400-000-000W
■■■	Ball-tip probe shaft, flexible, 1.8 × 330 mm **(d)**	AR-S7405-018-330
■■■	Ball-tip probe shaft, flexible, 2.4 × 330 mm	AR-S7405-024-330
■■■	Probe, articulating, 3.0 × 330 mm	AR-S7310-030-330

Scope compatibility guide: ■ 6.3 mm ■ 7 mm ■ 10 mm

Kerrisons





	Kerrison/ball-tip probe, handle	AR-S7400-000-000H
	Kerrison/ball-tip probe, WishBone™ handle	AR-S7400-000-000W
	Kerrison, 2.5 × 260 mm, 40°	AR-S7440-025-260
	Kerrison, 2.5 × 360 mm, 40°	AR-S7440-025-360
	Kerrison, 3.5 × 260 mm, 40°	AR-S7440-035-260
	Kerrison, 3.5 × 360 mm, 40°	AR-S7440-035-360
	Kerrison, 4.0 × 260 mm, 40° **(a)**	AR-S7440-040-260
	Kerrison, 4.0 × 360 mm, 40°	AR-S7440-040-360
	Kerrison, up angle, 4.0 × 260 mm, 40°	AR-S7440-040U-260
	Kerrison, 5.0 × 260 mm, 40°	AR-S7440-050-260
	Kerrison, 6.0 × 260 mm, 40°	AR-S7440-060-260
	Kerrison, 3.0 × 260 mm, 40°	AR-S7490-030-260
	Kerrison, 3.5 × 360 mm, 90° **(b)**	AR-S7490-035-360
	Kerrison, 4.0 × 260 mm, 90°	AR-S7490-040-260
	Kerrison, 4.0 × 360 mm, 90°	AR-S7490-040-360
	Kerrison, 5.0 × 260 mm, 90°	AR-S7490-050-260
	Kerrison, 6.0 × 260 mm, 90°	AR-S7490-060-260



Scope compatibility guide: 6.3 mm 7 mm 10 mm

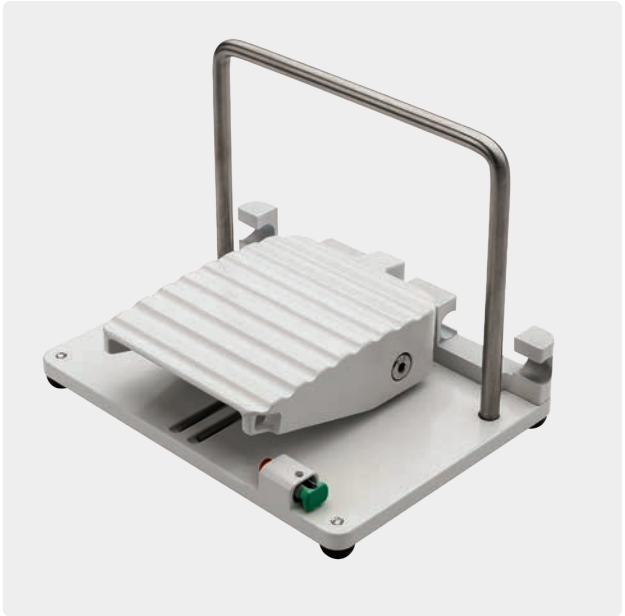
Suction Kerrison

This device is designed to enhance workflows and improve efficiency by combining the reliability of a Kerrison with suction for soft-tissue removal. For posterior or lateral surgeries, ergonomic options include either WishBone™ or pistol-grip handles.



Suction Kerrison case	AR-S1000-C7
Suction Kerrison, pistol-grip handle	AR-S7500-000-000H
Suction Kerrison, WishBone handle	AR-S7500-000-000W
Suction Kerrison, 3 mm × 260 mm	AR-S7510-030-260
Suction Kerrison, 4 mm × 260 mm	AR-S7510-040-260
Suction Kerrison, 5 mm × 260 mm	AR-S7510-050-260
Suction Kerrison, 3 mm × 260 mm	AR-S7563-030-260
Suction Kerrison, 3 mm × 360 mm	AR-S7563-030-360
Suction Kerrison, 3 mm × 260 mm	AR-S7570-030-260
Suction Kerrison, 3 mm × 360 mm	AR-S7570-030-360
Suction Kerrison, 4 mm × 260 mm	AR-S7570-040-260
Suction Kerrison, 4 mm × 360 mm	AR-S7570-040-360

Suction Kerrison, disposable, 3 mm × 260 mm	AR-S7500-030-260-S
Suction Kerrison, disposable, 3 mm × 360 mm	AR-S7500-030-360-S
Suction Kerrison, disposable, 4 mm × 260 mm	AR-S7500-040-260-S
Suction Kerrison, disposable, 4 mm × 360 mm	AR-S7500-040-360-S
Suction Kerrison, disposable, 5 mm × 260 mm	AR-S7500-050-260-S



Suction foot pedal	AR-S7500-F



Suction tubing, 3 ft	AR-S6203-S
Suction tubing, 10 ft	AR-S6210-S

Scope compatibility guide: 6.3 mm 7 mm 10 mm

Rasps and Trephines

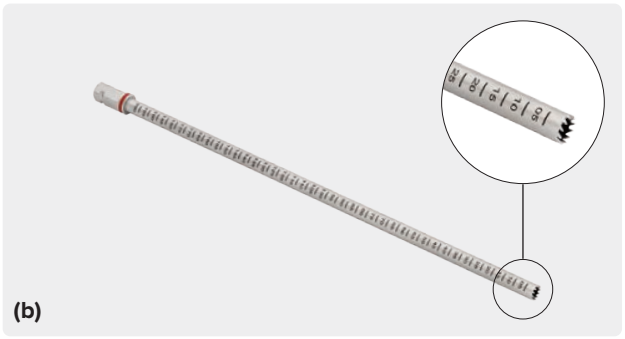


Trephine handle	AR-S7700-000-000H



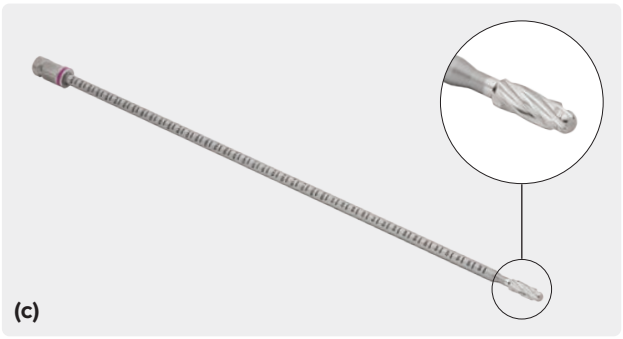
(a)

Trephine protection tube, 6.0 × 160 mm	AR-S7700-060-160
Trephine protection tube, 7.5 × 160 mm **(a)**	AR-S7700-075-160
Trephine protection tube, 8.5 × 160 mm	AR-S7700-085-160



(b)

Trephine, 3.55 × 350 mm	AR-S7705-035-350
Trephine, 5.1 × 225 mm	AR-S7705-051-225
Trephine, 6.6 × 225 mm **(b)**	AR-S7705-066-225
Trephine, 7.6 × 225 mm	AR-S7705-076-225



(c)

Rasp, 5.1 × 260 mm **(c)**	AR-S7715-051-260
Rasp, 6.6 × 260 mm	AR-S7715-066-260
Rasp, 7.6 × 260 mm	AR-S7715-076-260
Rasp, 8.8 × 260 mm	AR-S7715-088-260

Rod Pushers



(d)

Rod pusher, 2.5 mm	AR-S6524-025-230P
Rod pusher, 4.0 mm **(d)**	AR-S6524-040-230P
Rod pusher, 5.0 mm	AR-S6524-050-230P

Trephine/Rasp compatibility: 3.55 mm 5.1 mm 6.6 mm 7.6 mm 8.8 mm

Miscellaneous Instruments and Accessories



Mallet	AR-S4100-100-000



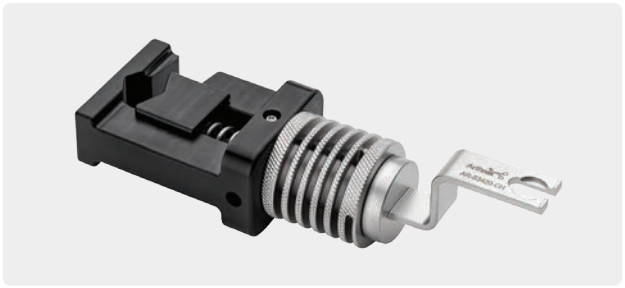
Extracting forceps	AR-S4100-200-100



Dilator holder	ML-0057



Rod removal forceps	AR-S4100-200-200



Cannula holder	AR-S3420-CH



Spine endoscope disposable depth stop, 6.3 mm	AR-S3350-063-DS-S
Spine endoscope disposable depth stop, 7.0 mm	AR-S3350-070-DS-S
Spine endoscope disposable depth stop, 10 mm	AR-S3350-100-DS-S



Spine endoscope passport dam	AR-S3355-12-13-S

Scope compatibility guide: 6.3 mm 7 mm 10 mm

Instrument Cases

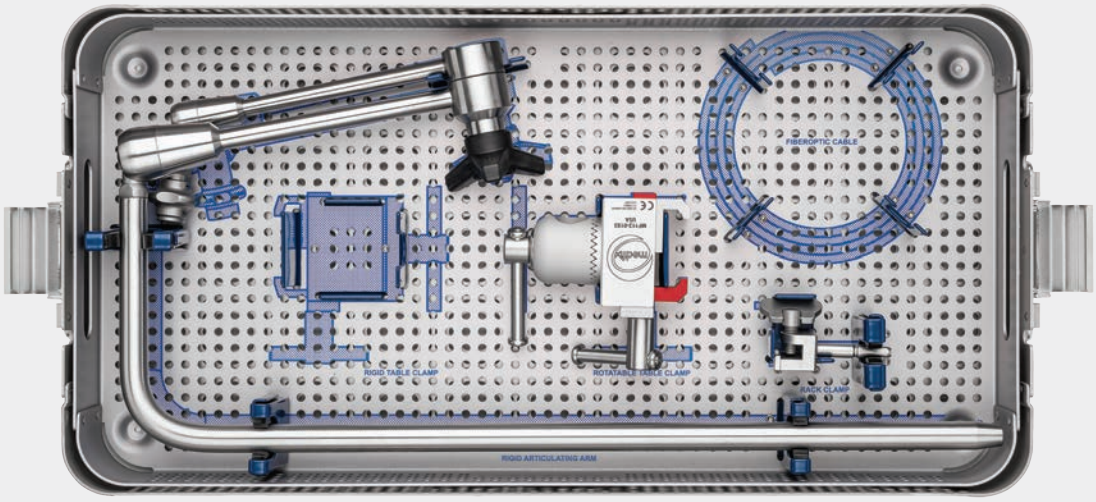


(a)



(b)

Spine endoscopic case, large **(a)**	AR-S1000-C1
Spine endoscopic case, small	AR-S1000-C2
Spine endoscope case **(b)**	AR-S1000-C3
Spine endoscope accessory case	AR-S1000-C3-1
Spine endoscopic Trimano arm case	AR-S1000-C4
Endoscopic spine case pin mat	AR-S1000-C4-PM
Spine endoscope case, XL	AR-S1000-C6
Suction Kerrison case	AR-S1000-C7



(c)

Spine Endoscopic Trimano Arm Set **(c)**	AR-S1000-C4S*
Medfix® Rigid Arm, 400 mm length arm, L-column, w/ square QC	MF112-0150
Medfix Table Clamp for Rigid Arm, rotatable	MF112-0153
Medfix Rack Clamp, square QC fitting for rigid arm	MF112-0152
Medfix Vision Articulating Arm Set Insert	MFV-1000-INSERT
Spine Endoscopic Trimano Arm Case	AR-S1000-C4

*Includes all items in this list

Aesculap Rigid Containers



Rigid sterile container ½, 90 mm H	AR-S1000-JK340S
Rigid sterile container ½, 120 mm H	AR-S1000-JK341S
Rigid sterile container ½, 135 mm H	AR-S1000-JK342S
Rigid sterile container ½, 187 mm H	AR-S1000-JK344S
Rigid sterile container 1⁄1, 90 mm H	AR-S1000-JK440S
Rigid sterile container 1⁄1, 120 mm H	AR-S1000-JK441S
Rigid sterile container 1⁄1, 135 mm H	AR-S1000-JK442S
Rigid sterile container 1⁄1, 187 mm H	AR-S1000-JK444S
Rigid sterile container 1⁄1, 247 mm H **(a)**	AR-S1000-JK446S
Rigid sterile container ¾, 90 mm H	AR-S1000-JK740S
Rigid sterile container ¾, 120 mm H **(b)**	AR-S1000-JK741S
Rigid sterile container ¾, 135 mm H	AR-S1000-JK742S
Rigid sterile container ¾, 187 mm H	AR-S1000-JK744S

All sets include base and lid.


Arthrex
GRAFT GUNNAR-S 1500-100
x 18 mm

Bone Repair

84	ArthroCell™ Viable Bone Matrix
86	ArthroCell Plus™ Viable Bone Matrix
87	AlloSync™ Expand Demineralized Cortical Fibers
88	AlloSync™ Pure Demineralized Bone Matrix
90	AlloSync™ Putty, Gel, and Paste
92	AlloSync™ Demineralized Cancellous Sponges, Chips, and Cortical Fibers
93	AlloSync™ Cancellous Chips, Cubes, and Cancellous Crush
94	BioSurge™ Cell and Bone Graft Processing System
95	BoneSync™ BioActive Synthetic Bone Void Filler
96	BoneSync™ Putty and Strips
100	OsteoAuger™ Bone Graft Harvesting System
101	BioXpress™ Graft Delivery Device
102	GraftNet™ Autologous Tissue Collector
103	GraftNet™ XL Bone Collection Device
104	Graft Gun Delivery System

ArthroCell™ Viable Bone Matrix






ArthroCell allograft is a moldable cellular allogenic bone matrix intended for use in bone defects and remodeling for a variety of orthopedic applications.

- ArthroCell allograft is an HCT/P allogenic bone scaffold
- Final product is moldable for optimal handling (Figure 1)
- Cell viability and function are preserved using a novel cryoprotectant that is DMSO-free and does not require decanting prior to use
- Product shelf life is 2 years from date of processing when stored at -65 ˚C or colder
- Preparation time on back table is less than 20 minutes. ArthroCell allograft has a 4-hour working window for implantation after thaw without loss of cell viability.[1]
- ArthroCell allograft is a nonimmunogenic alternative to autograft with a history of clinical safety
- Donors processed for ArthroCell allograft undergo rigorous screening, testing, and culturing that meet FDA and American Association of Tissue Banks (AATB) guidelines

ArthroCell allograft provides the essential elements for optimal bone repair

- An osteoconductive, 3-dimensional scaffold with cortical and cancellous components[2]
- A demineralized bone component with osteoinductive potential, which provides exposure of signaling molecules and bone morphogenetic proteins[3]
- Cells to support osteogenic healing processes[4-6]



Figure 1. ArthroCell allograft components.

ArthroCell viable bone matrix, 2.5 cc	ABS-2009-02
ArthroCell viable bone matrix, 5 cc	ABS-2009-05
ArthroCell viable bone matrix, 10 cc	ABS-2009-10
Mixing delivery syringe, 14 cc	ABS-2000

The mixing syringe must be ordered for each graft size.

Mesenchymal stem cells (MSCs) are a type of adult stem cell present in ArthroCell allograft that have the ability to self-renew and differentiate into bone, cartilage, fat, muscle, or tendon.[7]

- MSCs are the osteogenic cells required for bone repair, remodeling, and maturation
- MSCs can differentiate into osteoblasts that subsequently make new bone
- MSCs do not stimulate allogenic rejection and are not eliminated by the host immune system[8]

ArthroCell



ArthroCell allograft cellular advantage

- Cellular component is recovered from donors aged 15 to 55 years, frozen, and packaged within 120 hours postmortem
- Cells are recovered from the vertebral body region, an area known to be rich in MSCs[9]
- Cells are preserved in a novel cryoprotectant to preserve cellular identity after thaw:
  - DMSO-free
  - Nontoxic
  - Decanting not required prior to use
- Additional cell population includes MSCs and osteoprogenitor cells. Flow cytometry analysis demonstrates high expression of SSEA-4, a marker for pluripotent cells and MSCs.[9]

Donor tissue processing

- ArthroCell allograft is processed at Vivex Biomedical, Inc. in an aseptic manner in Class 100 clean rooms using proprietary procedures and screening criteria that meet the requirements of the AATB
- ArthroCell allograft is collected from donors who have been screened by licensed laboratories and physicians following a process that meets FDA and AATB requirements for testing
- Donor testing includes nucleic acid and/or antibody tests for the following pathogens:
  - HIV-1 and -2
  - Hepatitis B and C
  - Human T-lymphocyte virus
  - Syphilis rapid plasma screen
  - T. pallidum IgG screen
  - Cytomegalovirus (CMV) antibody (IgG and IgM)

Donor screening

- Medical and social history review
- Physical examination
- Medical record evaluation, including autopsy (if performed)
- Licensed physician review of donor record
- Mixed lymphocyte reaction (MLR) assay:
  - MSCs are known to be immune-privileged cells that do not elicit an immune response.[8] To ensure complete safety of the cell component, an MLR assay was performed to assess the potential for activation of T-cell proliferation on samples of ArthroCell allograft along with positive and negative controls.[10]
  - Stimulation indices for the test samples were near or below that for the negative control, while positive controls performed as expected and demonstrated a robust response. ArthroCell allograft therefore does not stimulate an immune response (Figure 2).

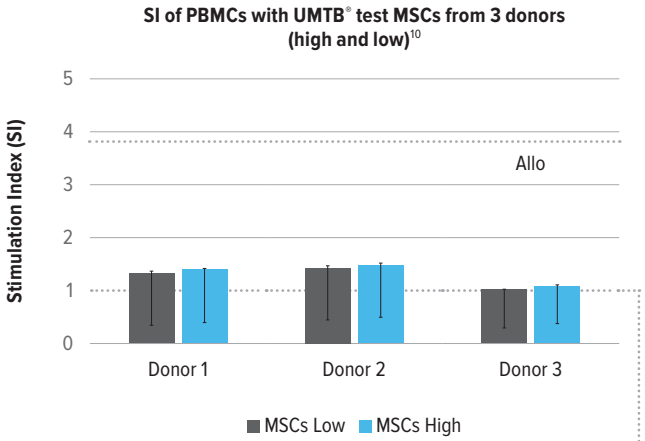


Figure 2. Stimulation index calculated from BrdU ELISA ABS450 relative to PBMCs. Dotted line at SI 3.84 represents response of positive 2-way allogeneic MLR response. Dotted line at 1.00 represents response of the negative control. Stimulation indices for test samples range from 1.02 to 1.35.

UMTB = University of Miami Tissue Bank

Peripheral blood mononuclear cells (PBMCs) only

ArthroCell

ArthroCell Plus™ Viable Bone Matrix

ArthroCell Plus is a next-generation viable bone graft that extends our current offerings. It is delivered in a premixed syringe, with size offerings of 1 cc, 2.5 cc, 5 cc, and 10 cc. In addition to its composition, ArthroCell Plus grafts contain the same novel cryoprotectant as our current ArthroCell graft offering, providing a product with minimal preparation time.

- Osteogenic, osteoconductive, and osteoinductive potential
- Final product is moldable for ease of use and optimal handling
- Novel cryoprotectant (DMSO-free) and noncytotoxic
- Convenient—can be stored in a cryogenic freezer (-65 ˚C) for up to 2 years

ArthroCell Plus allograft, 1 cc	ABS-2090-01
ArthroCell Plus allograft, 2.5 cc	ABS-2090-02
ArthroCell Plus allograft, 5 cc	ABS-2090-05
ArthroCell Plus allograft, 10 cc	ABS-2090-10



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10. Vivex Biomedical, Inc. Data on file. Miami, FL.

ArthroCell Plus™

AlloSync™ Expand Demineralized Cortical Fibers



Features and Benefits

- Comprised of 100% demineralized cortical bone fibers
- Provides a scaffold for cellular attachment and proliferation
- Graft will expand and improve fill during hydration
- Sterile to device-grade standards (10^{-6} SAL)
- Ambient temperature storage

The unique geometry of AlloSync Expand fibers is ideal for intraoperative handling and controlled expansion into bone voids. AlloSync Expand fibers come preloaded in a syringe that allows for consistent hydration of the graft with biologic fluids, such as bone marrow aspirate (BMA).

100% Demineralized Bone Fibers

- No added fillers for maximum demineralized bone content and osteoinductive potential
- Specific fiber geometry provides exceptional handling and controlled expansion
- Lyophilized fibers extend shelf life while preserving the osteoinductive potential

Expands to Fill Gaps

- Wicks blood, bone marrow, and other physiological fluids that allow the graft to expand and improve fill

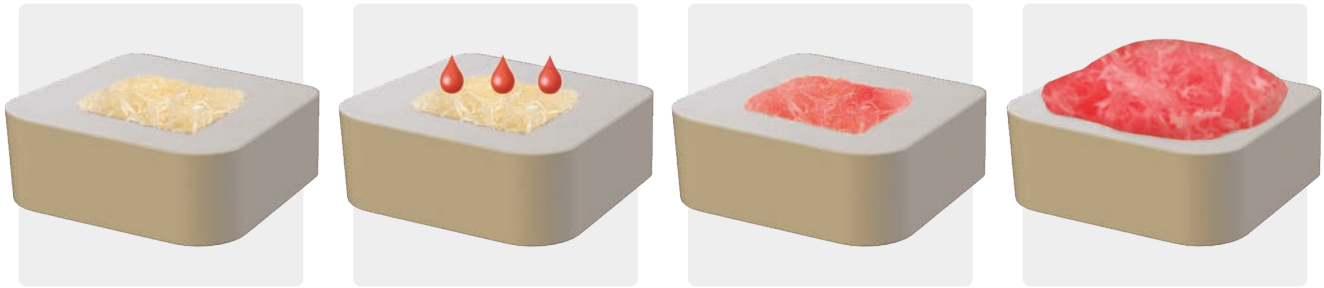
Cellular Highways

- Fibers have demonstrated superior bone-forming capacity compared to standard particulate demineralized bone[1]
- Entangled fibers create a 3D interconnected matrix to promote cell migration and fusion

Simplicity of Hydration

- Luer lock portal delivers a simple yet thorough hydration process
- Flexibility to select various hydration fluids

AlloSync Expand fibers, 1 cc	ABS-2017-01
AlloSync Expand fibers, 2.5 cc	ABS-2017-02
AlloSync Expand fibers, 5 cc	ABS-2017-05
AlloSync Expand fibers, 10 cc	ABS-2017-10



ALLOSYNC

AlloSync™ Pure Demineralized Bone Matrix





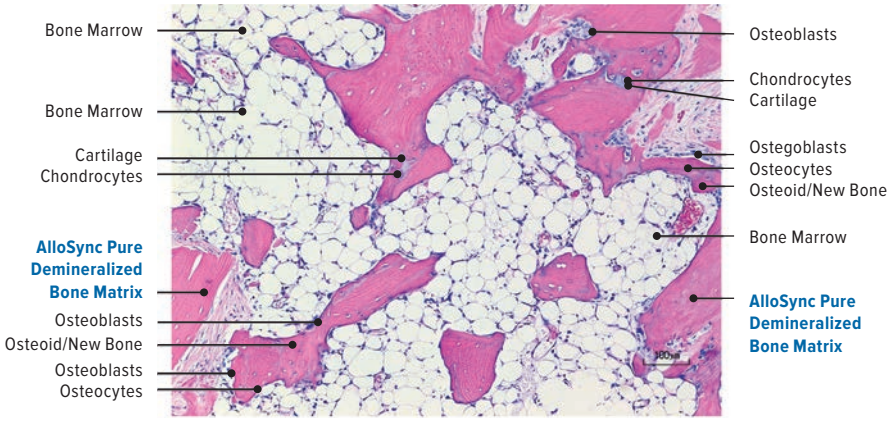




AlloSync Pure osteoinductive demineralized bone matrix (DBM) is derived from 100% human allograft bone with no extrinsic carriers. When prepared, AlloSync Pure DBM resists irrigation and can be used in a fluid environment. The clinician can control the handling properties of AlloSync Pure bone matrix, which includes decreasing the viscosity for injectable applications or increasing the viscosity to add autograft and/or allograft. The proprietary rice-shape fiber technology used to process AlloSync Pure bone matrix increases the osteoinduction and osteoconductive surface area to accelerate cellular ingrowth.[1]

Features and Benefits

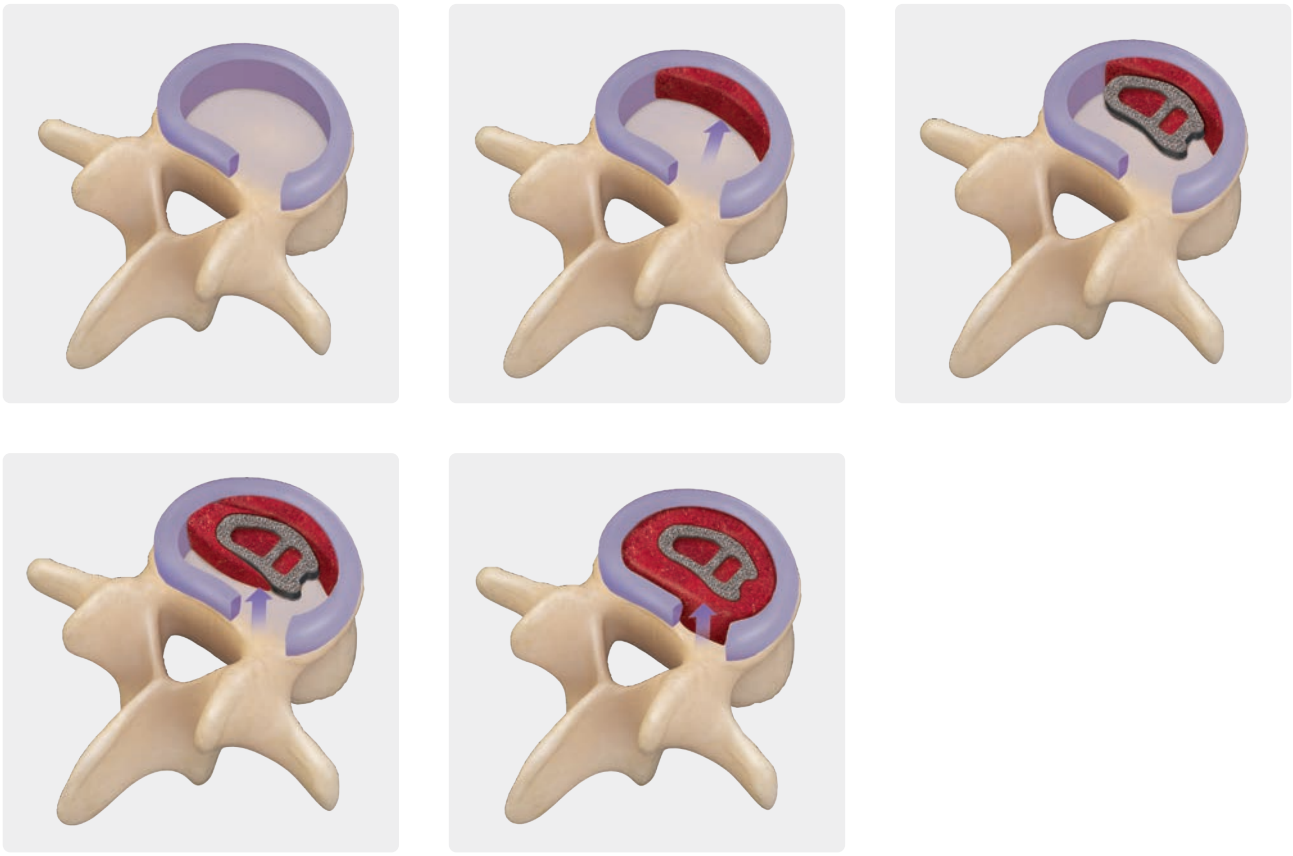
- Derived from 100% human allograft bone without any extrinsic carriers
- Post-sterilization, every lot is tested in vivo to ensure osteoinductivity
- Demineralization process preserves native bone morphogenetic proteins (BMPs) and growth factors
- Resists irrigation
- Histologically proven to contain all five elements of bone formation, including new bone, bone marrow, osteocytes, chondrocytes, and cartilage postimplantation at 28 days[2]
- May be hydrated with BMA, platelet-rich plasma (PRP), blood, saline, or other cellular components
- Sterile to device grade standards (10^{-6}) and stored at ambient temperature
- Provided in a ready-to-use mixing jar
- 5-year shelf life



AlloSync Pure DBM histology

ALLOSYNC PURE

AlloSync Pure demineralized bone matrix (DBM) is ideal for use in an aqueous environment, such as during endoscopic fusion.



AlloSync Pure DBM, 1 cc	ABS-2010-01
AlloSync Pure DBM, 2.5 cc	ABS-2010-02
AlloSync Pure DBM, 5 cc	ABS-2010-05
AlloSync Pure DBM, 10 cc	ABS-2010-10

ALLOSYNC PURE

AlloSync™ Putty, Gel, and Paste

AlloSync gel, putty, and paste provide customizable consistencies



Comparison of Two DBMs



RPM Carrier



Glycerol Carrier

AlloSync Bone Products May Provide Osteoinductive and Osteoconductive Properties

- Osteoinduction—signaling molecules such as bone morphogenetic proteins (BMPs) that aid in cell differentiation down osteoblastic pathways
- Osteoconduction—scaffolding from DBM particles for osteoblasts to form new bone
- Every lot of DBM is tested for osteoinductive potential, using either an in vitro assay or in vivo model
- Additional scaffolding properties are provided with the addition of cancellous bone chips

Superior Handling Characteristics via the Reverse-Phase Medium (RPM) Carrier

- RPM is an inert, biocompatible copolymer consisting of polypropylene oxide and polyethylene oxide
- Material is flowable at room temperature and thickens to become more viscous at body temperature
- RPM allows the DBM graft to be moldable and packed into any defect size or shape
- AlloSync bone products will resist irrigation and can be used in a fluid environment without the fear of graft migration, unlike some other DBMs

AlloSync Bone Products Offer Ease of Use and Terminal Sterility

- Provided as a ready-to-use, off-the-shelf product that requires no thawing or premixing preparation
- Terminal sterilization using electron beam results in a sterility assurance level (SAL) of 10^{-6}; process is not harmful to the DBM or its bioactivity
- Room-temperature storage

AlloSync DBM Putty	
Putty, 1 cc	ABS-2012-01
Putty, 2.55 cc	ABS-2012-02
Putty, 5 cc	ABS-2012-05
Putty, 10 cc	ABS-2012-10

AlloSync DBM Gel	
Gel, 1 cc	ABS-2013-01
Gel, 5 cc	ABS-2013-05
Gel, 10 cc	ABS-2013-10

AlloSync CB DBM Putty	
Putty, 5 cc	ABS-2014-05
Putty, 10 cc	ABS-2014-10

AlloSync CB DBM Paste	
Paste, 1 cc	ABS-2015-01
Paste, 3 cc	ABS-2015-03
Paste, 8 cc	ABS-2015-08

ALLOSYNC

Promoting Bone Regeneration[3]

An AlloSync DBM equivalent product (same DBM/RPM ratio) was evaluated in a skeletally mature sheep model. Species-specific DBM was compared to an empty control and autograft. Transcortical defect holes were created in the tibial and metatarsal diaphysis; histology was assessed at 4, 8, and 16 weeks for bone regeneration and graft incorporation. Bone formation was either delayed or unable to bridge the gap within the empty control. The AlloSync equivalent product was able to provide a scaffold and induce osseous bridging across the defect site similar to autograft. This study indicates that AlloSync allograft bone is an effective bone grafting material.

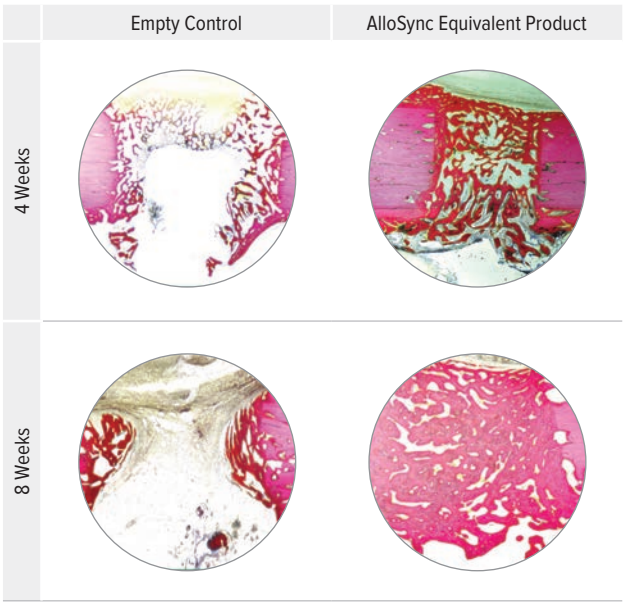


Figure 3.

AlloSync™ Demineralized Cancellous Sponges, Chips, and Cortical Fibers

Cancellous Sponges

- Poststerilization every lot is tested in vivo to ensure osteoinductivity
- Demineralized cancellous matrix is comprised of 100% cancellous bone
- Maintains natural bone architecture with interconnected porosity
- Provides optimal scaffold for cellular attachment and proliferation
- Contains exposed natural growth factors with verified osteoinductivity
- Naturally absorbs and retains bioactive fluids like PRP and concentrated BMA
  - After rehydration, the product is compressible like a sponge, allowing for flexibility to fit in and around different types of bone defects

Osteoinductivity Testing[2]

- The AlloSync demineralized sponge was tested in an intramuscular nude rat bioassay via histological evaluations
- After 28 days, the following findings were observed within the AlloSync demineralized sponge group (Figure 4):
  - The porous osteoconductive trabecular bone structure of the implant was maintained and found to be evident within the histological sections
  - Osteoblast-like cells were found lining the trabecular bone network
  - Cellular infiltration and neovascularization were apparent along the edges of the implant but also could be observed throughout the interior portion of the implant



AlloSync Demineralized Cortical Fibers

- New form of 100% DBM offering excellent handling characteristics without the need for an additional carrier
- Osteoconductive and verified osteoinductive properties
  - Demineralized cortical fibers provide an optimal scaffold for cellular attachment and proliferation
- Customizable hydration: naturally wicks up bioactive fluids such as PRP and BMA
  - Sterile to device-grade standards (10^{-6}) and stored at ambient temperature

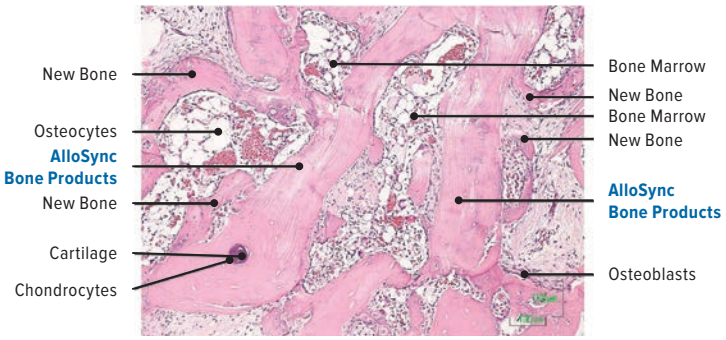


Figure 4. Shows AlloSync sponge histology with all five components of bone growth.

AlloSync Demineralized Cubes	
Cube, 8 mm × 8 mm × 8 mm **(a)**	ABS-2005-01
Cube, 10 mm × 10 mm × 10 mm	ABS-2005-02
Cube, 12 mm × 12 mm × 12 mm	ABS-2005-03

AlloSync Demineralized Strips	
Strip, 10 mm × 10 mm × 3 mm **(b)**	ABS-2006-01
Strip, 15 mm × 40 mm × 3 mm	ABS-2006-02
Strip, 26 mm × 19 mm × 7 mm	ABS-2006-03
Strip, 10 mm × 20 mm × 7 mm	ABS-2006-04
Strip, 50 mm × 10 mm × 7 mm	ABS-2006-05
Strip, 50 mm × 20 mm × 7 mm	ABS-2006-06

AlloSync Demineralized Chips	
Chips (1 mm–4 mm), 1 cc **(c)**	ABS-2007-01
Chips (1 mm–4 mm), 2.5 cc	ABS-2007-02
Chips (1 mm–4 mm), 5 cc	ABS-2007-03
Chips (1 mm–4 mm), 10 cc	ABS-2007-04

AlloSync Demineralized Cortical Fibers	
Fibers, 1 cc **(d)**	ABS-2008-01
Fibers, 2.5 cc	ABS-2008-02
Fibers, 5 cc	ABS-2008-03
Fibers, 10 cc	ABS-2008-04

AlloSync™ Cancellous Chips, Cubes, and Cancellous Crush



AlloSync cancellous cubes, chips, and cancellous crush are mineralized, and provide an osteoconductive scaffold for bone ingrowth and allow for remodeling with the patient's own bone. AlloSync cancellous bone grafts are mineralized in multiple sizes and quantities.

AlloSync cancellous cubes	
AlloSync cancellous cube, 15 cc	ABS-2900-15
AlloSync cancellous cube, 30 cc	ABS-2900-30

AlloSync cancellous chips	
AlloSync cancellous chips (1-4 mm), 5 cc	ABS-2901-05
AlloSync cancellous chips (1-4 mm), 15 cc	ABS-2901-15
AlloSync cancellous chips (1-4 mm), 30 cc	ABS-2901-30
AlloSync cancellous chips (4-10 mm), 5 cc	ABS-2910-05
AlloSync cancellous chips (4-10 mm), 15 cc	ABS-2910-15
AlloSync cancellous chips (4-10 mm), 30 cc	ABS-2910-30

AlloSync cancellous crush	
AlloSync cancellous crush, 5 cc	ABS-2905-05

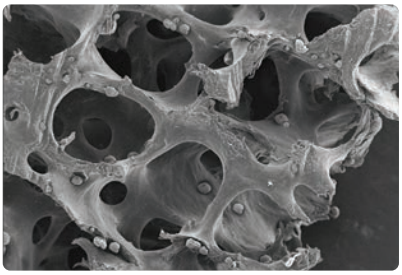
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BioSurge™ Cell and Bone Graft Processing Kit



The BioSurge kit combines the superior matrices of the AlloSync™ bone grafting solutions line with the Angel® system's proprietary technology to customize the preparation of concentrated platelet-rich plasma (cPRP) from bone marrow aspirate (BMA). Hydrated AlloSync bone grafts provide the optimal scaffold for cPRP from BMA, which is a rich source of platelets and nucleated progenitor cells.



Electron microscopy image showing several healthy cells attached to the AlloSync bone graft scaffold after hydration.



Hydrated AlloSync bone graft with Angel cPRP from BMA.



BioSurge system includes AlloSync and Angel system components

BioSurge I System, 2.5 cc AlloSync Pure DBM w/ Angel cPRP and BMA tray	ABS-2016-01
BioSurge II System, 5 cc AlloSync Pure DBM w/ Arthrex Angel cPRP and BMA tray	ABS-2016-02
BioSurge III System, 15 mm × 40 mm × 3 mm AlloSync DBM cancellous strip w/ Angel cPRP and BMA tray	ABS-2016-03
BioSurge V System, 12 mm × 3 mm AlloSync button disc w/ Angel cPRP and BMA tray	ABS-2016-05
BioSurge XI System, 10 cc AlloSync Pure w/ Angel® cPRP and BMA tray	ABS-2016-11
BioSurge XII System, 2.5 cc AlloSync cortical fibers	ABS-2016-12
BioSurge XIII System, 5 cc AlloSync cortical fibers	ABS-2016-13
BioSurge XIV System, 10 cc AlloSync cortical fibers	ABS-2016-14

BioSurge
Cell and Bone Graft Processing Kit

BoneSync™ BioActive Synthetic Bone Void Filler

BoneSync BioActive is a second-generation bone void filler that includes 45S5 bioglass and provides an osteoconductive and osteostimulative matrix.[1]

- Unique Composition: BoneSync BioActive bone void filler consists of carbonate apatite anorganic bone mineral, 45S5 bioactive glass, and type I collagen. It is developed to resemble the composition and pore structure of natural human bone.[2,3]
- Moldable Advantage: BoneSync BioActive filler is available in putty and strip versions to fit various application needs, as the graft can be combined with either autogenous bone marrow or autograft bone mixed with saline.

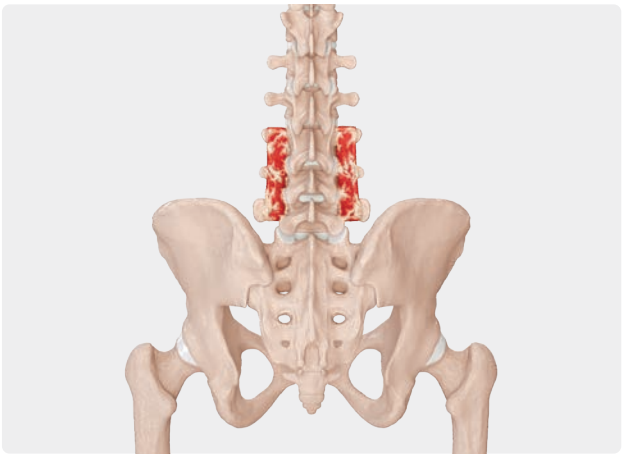


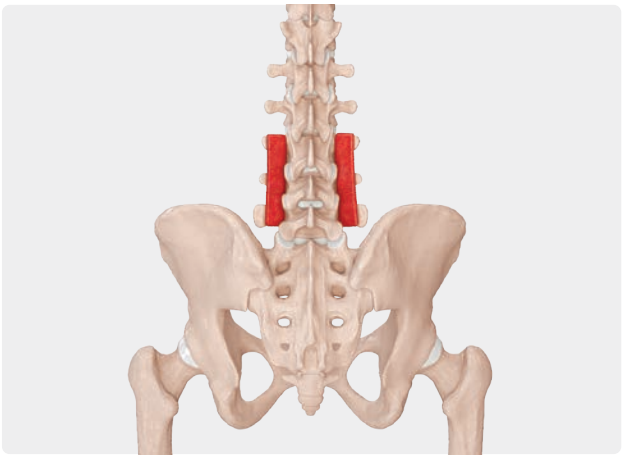
Strip

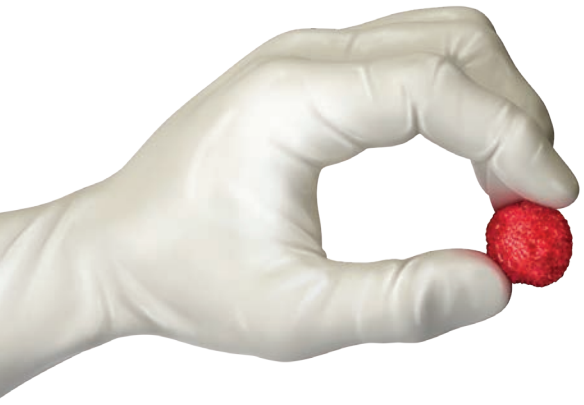
BoneSync BioActive matrix strip, 5 cc	ABS-3500-05
BoneSync BioActive matrix strip, 10 cc	ABS-3500-10
BoneSync BioActive matrix strip, 20 cc	ABS-3500-20
BoneSync BioActive matrix strip, 40 cc	ABS-3500-40

Putty

BoneSync BioActive matrix putty, 2.5 cc	ABS-3400-02
BoneSync BioActive matrix putty, 5 cc	ABS-3400-05
BoneSync BioActive matrix putty, 10 cc	ABS-3400-10
BoneSync BioActive matrix putty, 20 cc	ABS-3400-20

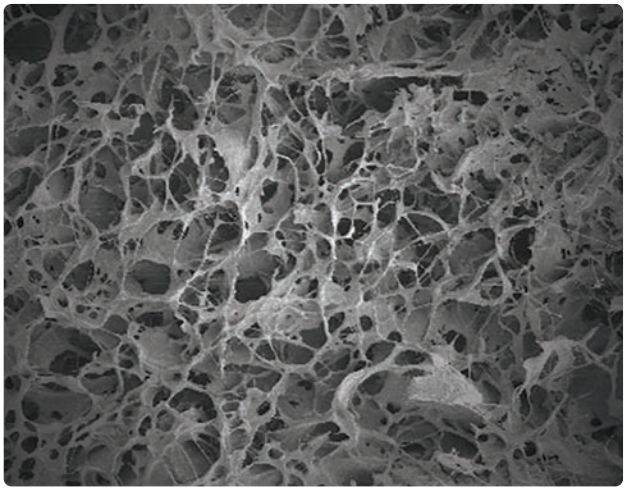




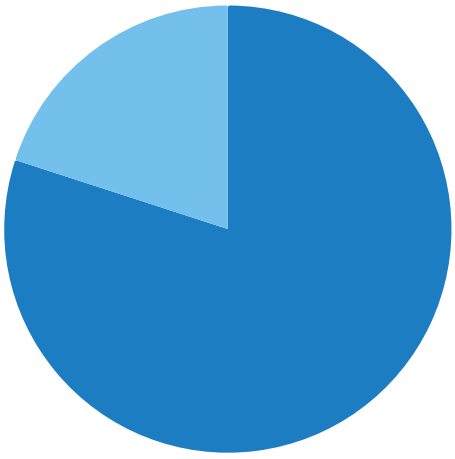


BONESYNC BIOACTIVE

BoneSync™ Putty and Strips







Advanced Engineering
The blend of 20% type I collagen and 80% highly purified beta-tricalcium phosphate (β-TCP) in BoneSync putty and strips provides an osteoconductive material for bone regeneration. It was developed to resemble the composition and pore structure of natural human bone.[4]

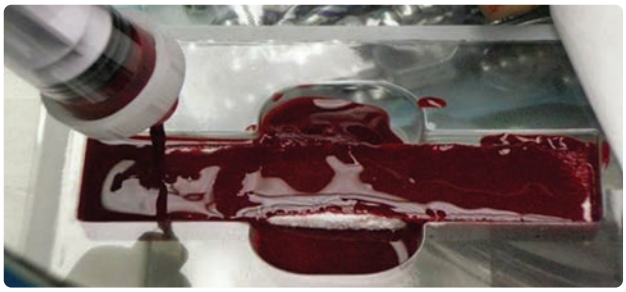
Engineered Collagen Matrix
Capitalizing on more than 20 years of development expertise, with collagen technologies that have been used in more than 10 million patients, the source of collagen found in BoneSync bone void filler is specifically engineered to optimize safety, handling, and performance. The scaffold in BoneSync putty and strips, processed from purified type I collagen, is a critical design element that allows for rapid fluid imbibition, cellular ingrowth, and controlled resorption.

Highly Purified β-TCP
The highly purified β-TCP component of the BoneSync putty and strips is designed for a resorption profile consistent with bone formation. The porous architecture is specifically engineered for osteoconductivity.[1]

Benefits of the Collagen-Engineered Matrix in Orthopedic Applications

- Specifically engineered to provide a scaffold with a porosity resembling natural bone
- Facilitates incorporation of cells in BMA and tissue cells during the healing process[5]
- The highly purified type I collagen in BoneSync bone void filler is the most abundant type of collagen found in bone
- Purification and biocompatibility minimize thepotential for immune response

BONESYNC



Fluid Retention
With an interconnected pore structure engineered for absorbing fluids, BoneSync putty and strips effectively retain BMA within the material.

Cell Binding
Higher densities of collagen provide greater protein-binding sites and have been associated with more effective incorporation of bioactive proteins.[1]

The collagen in BoneSync putty and strips facilitates the binding of bone-forming cells and proteins.

Diverse Configurations
BoneSync filler is offered in both putty and strip configurations to meet varying application needs and preferences. Each configuration benefits from purified biomaterials and advanced engineering while offering unique advantages to the surgeon.



Putty

Moldable putty has the cell-binding benefits of type I collagen and the volume and radiopacity of highly purified β-TCP granules.

Configuration Benefits
› Versatile with excellent handling

› Optimal for placement in irregularly shaped defects



Strip

Compression-resistant matrix combines the cell-binding benefits of cross-linked type I collagen with the volume and radiopacity of highly purified β-TCP granules.[1]

Configuration Benefits
› Excellent carrier for BMA

› Bends to conform to uneven surfaces

› Maintains postoperative graft volume

BONESYNC

Compression Resistance

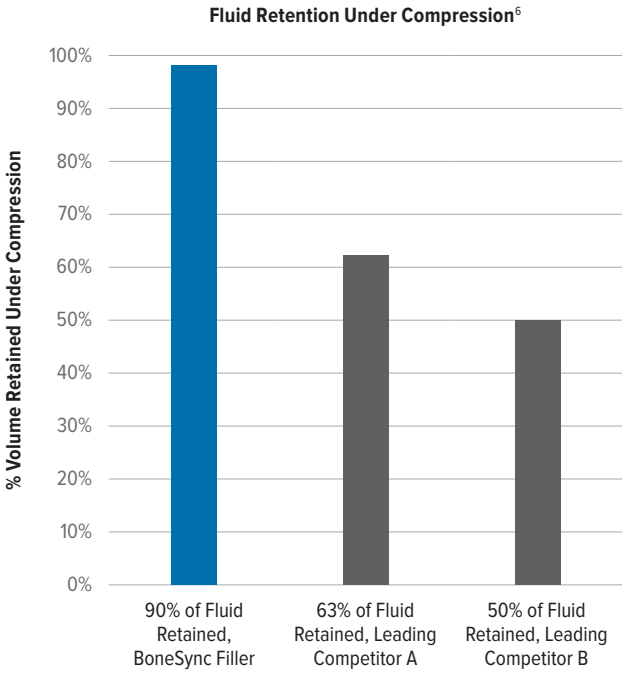
The framework of β-TCP and cross-linked type I collagen in BoneSync™ putty and strips resists compression and maintains the structure of the material.[5] This configuration has fixed dimensions but is also flexible, conforming to uneven surfaces, for various applications in the skeletal system.



- Retains BMA within the matrix, facilitating bone fusion
- Maintains graft volume under compression

Compression-Resistant Matrix

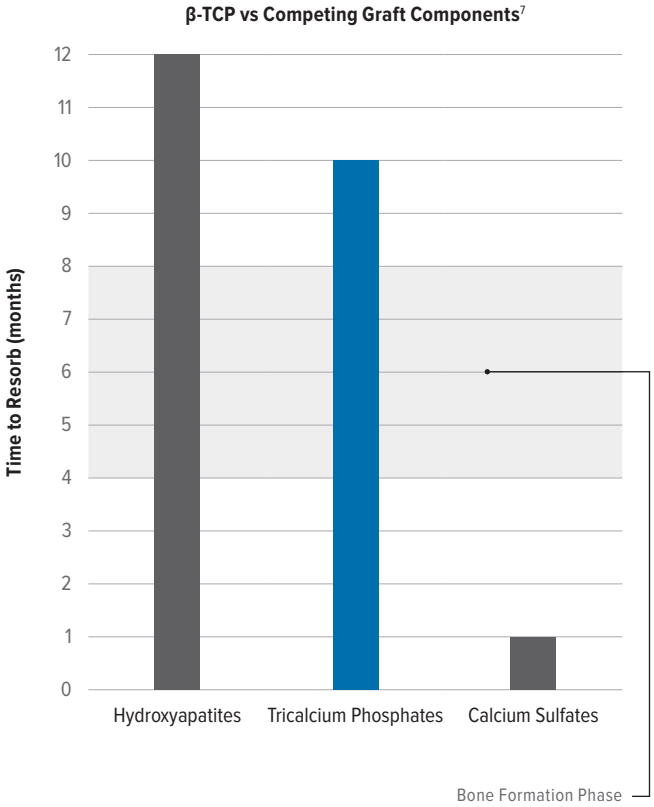
A matrix with compression resistance has an increased ability to retain BMA and its active cells.



Resorption Profile Consistent With the Formation of New Bone

The residence time of an osteoconductive strip is a crucial factor for bone healing. A relatively short resorption profile often results in limited or weak bone growth, while longer residence time often results in ineffective tissue incorporation.

The composition and microarchitecture of the β-TCP component of BoneSync putty and strips is engineered to support the replacement of the graft material by new bone.[7]



BoneSync Putty	
Putty, 2.5 cc	ABS-3202
Putty, 5 cc	ABS-3205
Putty, 10 cc	ABS-3210
Putty, 15 cc	ABS-3215

BoneSync Strips	
Strip, 10 cc	ABS-3310
Strip, 15 cc	ABS-3315

Clinical Evidence

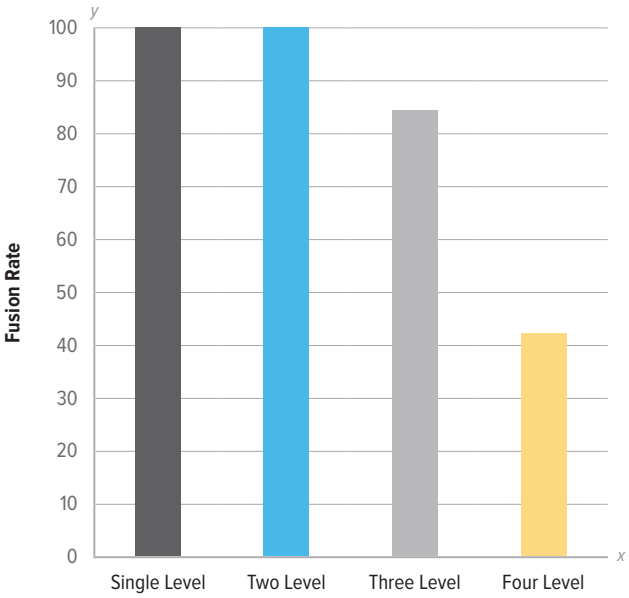
A BoneSync equivalent osteoconductive scaffold demonstrated fusion rate that was equivalent to autograft in a retrospective study on posterolateral lumbar fusion. This clinical study found 100% fusion in all single- and two-level lumbar spine fusion procedures, with an overall fusion rate of 90%. No significant differences were observed for the fusion scores in patients that received putty versus strip.[4]

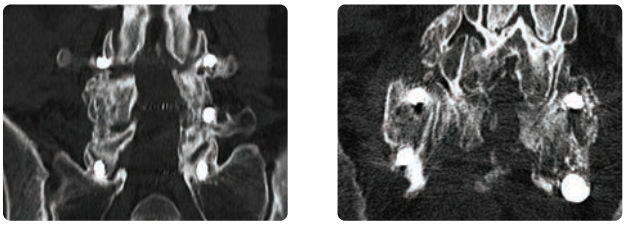
- Fusion rates for BoneSync equivalent scaffold were equivalent to autograft
- In cases of successful fusion, definitive, uninterrupted bridging of well-mineralized trabecular bone observed 12 months after surgery, as determined by an independent radiologist blinded to treatment
- BoneSync equivalent scaffold applied as indicated with BMA alone, no addition of autograft or allograft
- Spinal fusion comparisons performed in each patient individually; the BoneSync equivalent scaffold applied to the symptomatic side and autograft to the contralateral side

Clinical Performance – 90% Overall Fusion[4]

Fusion rates were equivalent to autograft, including the ability to achieve fusion in 100% of single- and two-level procedures.

Fusion Rates in Multilevel Procedures[4]



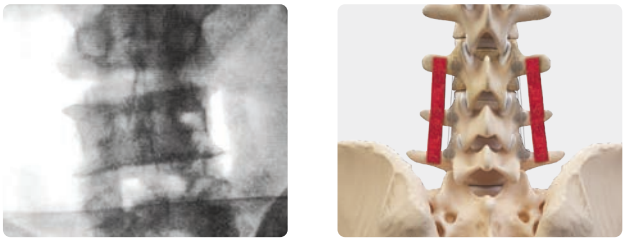


Representative radiographs from the referenced study.[4] CT scans from two patients at 12 months post-op.

Diverse Configurations

The β-TCP component of BoneSync filler is engineered with a porosity level that balances radiopacity, residence time, and structure. An extremely porous graft material will likely limit radiopacity and structure, while an extremely dense material will likely limit graft incorporation into natural tissue.

- Provides radiographic visualization of graft placement
- Indicates active resorption during healing

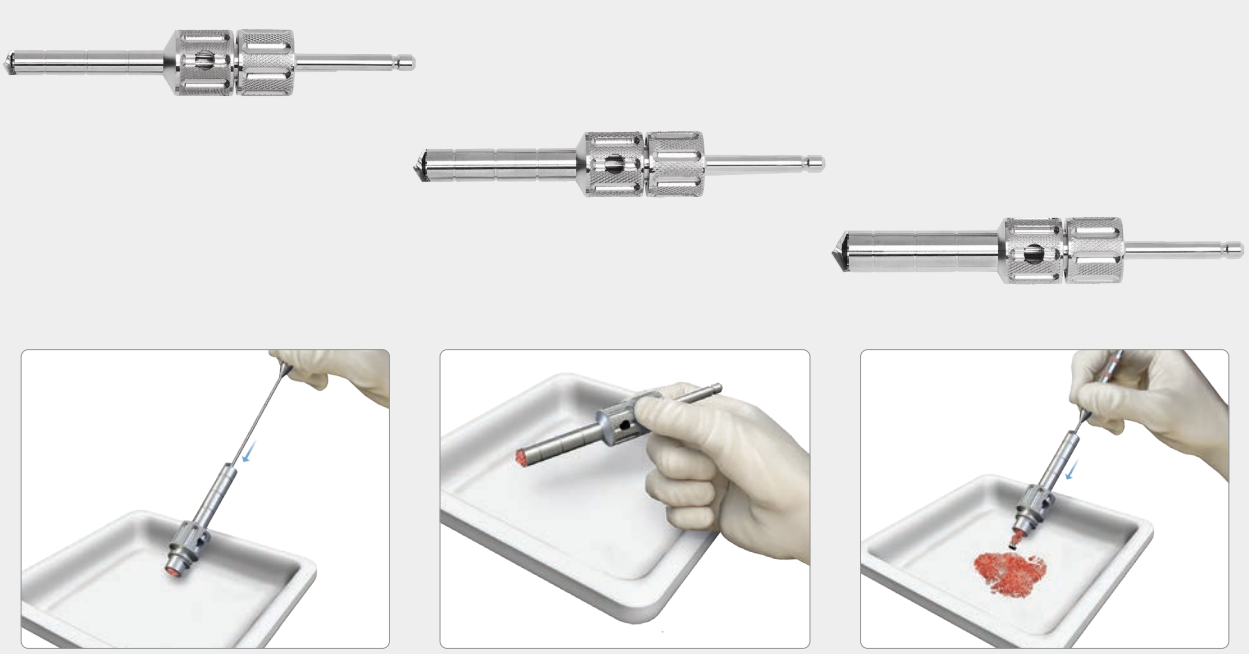


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6. SeaSpine. Data on file. Carlsbad, CA.
7. SeaSpine. Data on file. Carlsbad, CA.

BONESYNC

OsteoAuger™ Bone Graft Harvesting System



The OsteoAuger bone graft harvesting system allows for the quick and efficient recovery of morselized autogenous bone graft. Its simple design uses two separate compartments for the drill and morselized bone. This user-friendly design makes harvesting and reimplantation faster and more convenient.

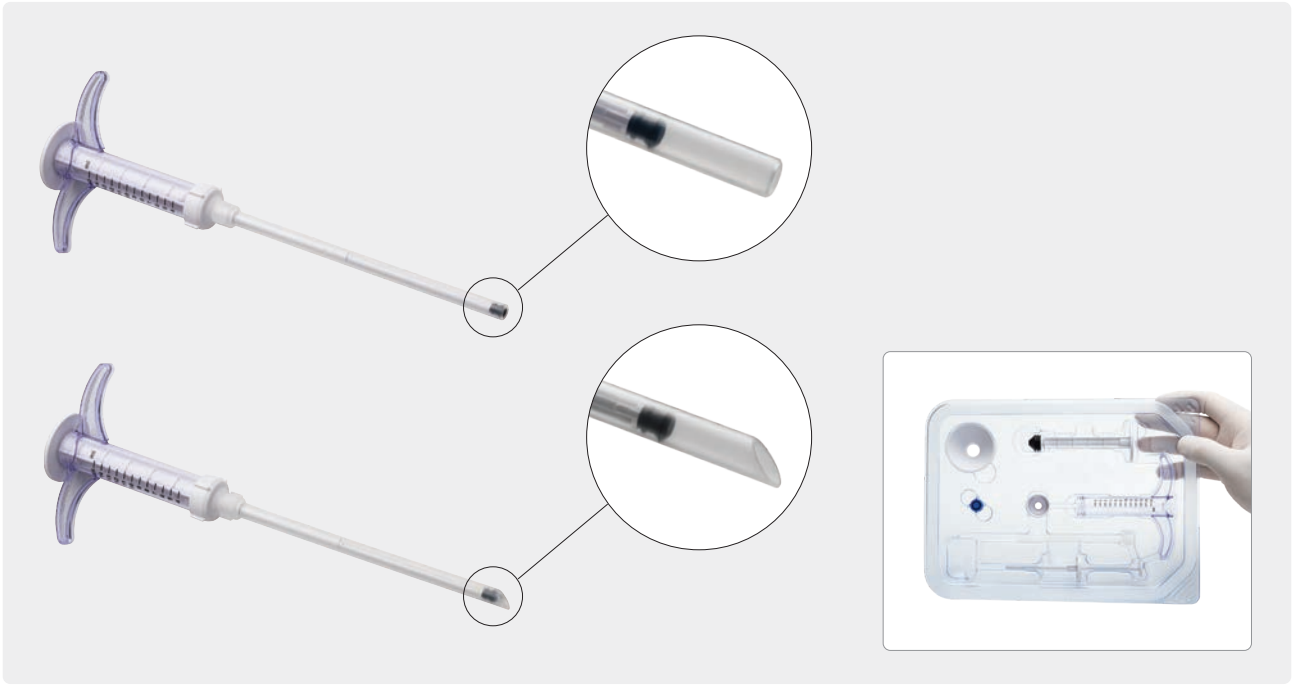
Features and Benefits

- Effective: Autograft bone has long been acknowledged as the gold standard graft for fusion
- Minimally Invasive: Small incision prevents patient discomfort and harvest site morbidity
- Precise: Three drill sizes allow predefined amounts of bone to be harvested
- Consistent: Morselizing tip on the disposable trephine allows for consistent autograft bone output



OsteoAuger Bone Graft Harvesting System, 6 mm	ABS-8000-06
OsteoAuger Bone Graft Harvesting System, 8 mm	ABS-8000-08
OsteoAuger Bone Graft Harvesting System, 10 mm	ABS-8000-10

BioXpress™ Graft Delivery Device



The BioXpress graft delivery device is designed for targeted delivery of hydrated allograft, autograft, or synthetic bone graft materials while maximizing material use.

Blunt-tip cannula, 10 cm	ABS-10053-10
Angled-tip cannula, 10 cm	ABS-10053-10-45
Blunt-tip cannula, 15 cm	ABS-10053-15
Angled-tip cannula, 15 cm	ABS-10053-15-45

Features and Benefits

- Dual plunger for loading the arthroscopic cannula with the graft and unloading into the desired location
- Targeted delivery with flat and tapered tips
- Ensures minimal material waste



BioXpress™

GraftNet™ Autologous Tissue Collector



The suction-activated GraftNet device is designed to collect autologous bone from the surgical site and can be used for a multitude of applications, including spine, cranial, orthopedic, oral, and maxillofacial. The small, inline device allows for maximum harvesting of autologous bone chips generated using a high-speed burr and collected through a connected suction tip, such as a Frazier suction tube. This recovered autologous bone is collected in an easily accessed, sterile filtered chamber. The GraftNet autologous tissue collector makes recovering and gaining access to autologous bone chips as simple as Resect and Collect.™

Features and Benefits

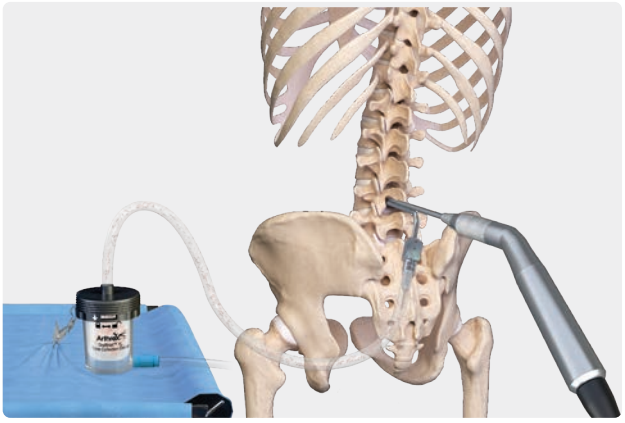
- Universal adapters make for easy attachment to common suction devices
- Maximize autologous bone collection
- Quickly access recovered tissue
- Increase opportunity for arthrodesis success with maximum autograft volume

GraftNet autologous tissue collector	ABS-1050



GraftNet™
AUTOLOGOUS TISSUE COLLECTOR

GraftNet™ XL Bone Collection Device





The GraftNet XL bone collection device is designed to collect a large volume of autologous bone for a multitude of applications, such as spinal fusion or craniotomy. When connected to suction, the device may be used to collect autologous bone from the surgical site using a high-speed bur. The GraftNet XL bone collection device makes gaining access to autograft bone as simple as Resect and Collect™.

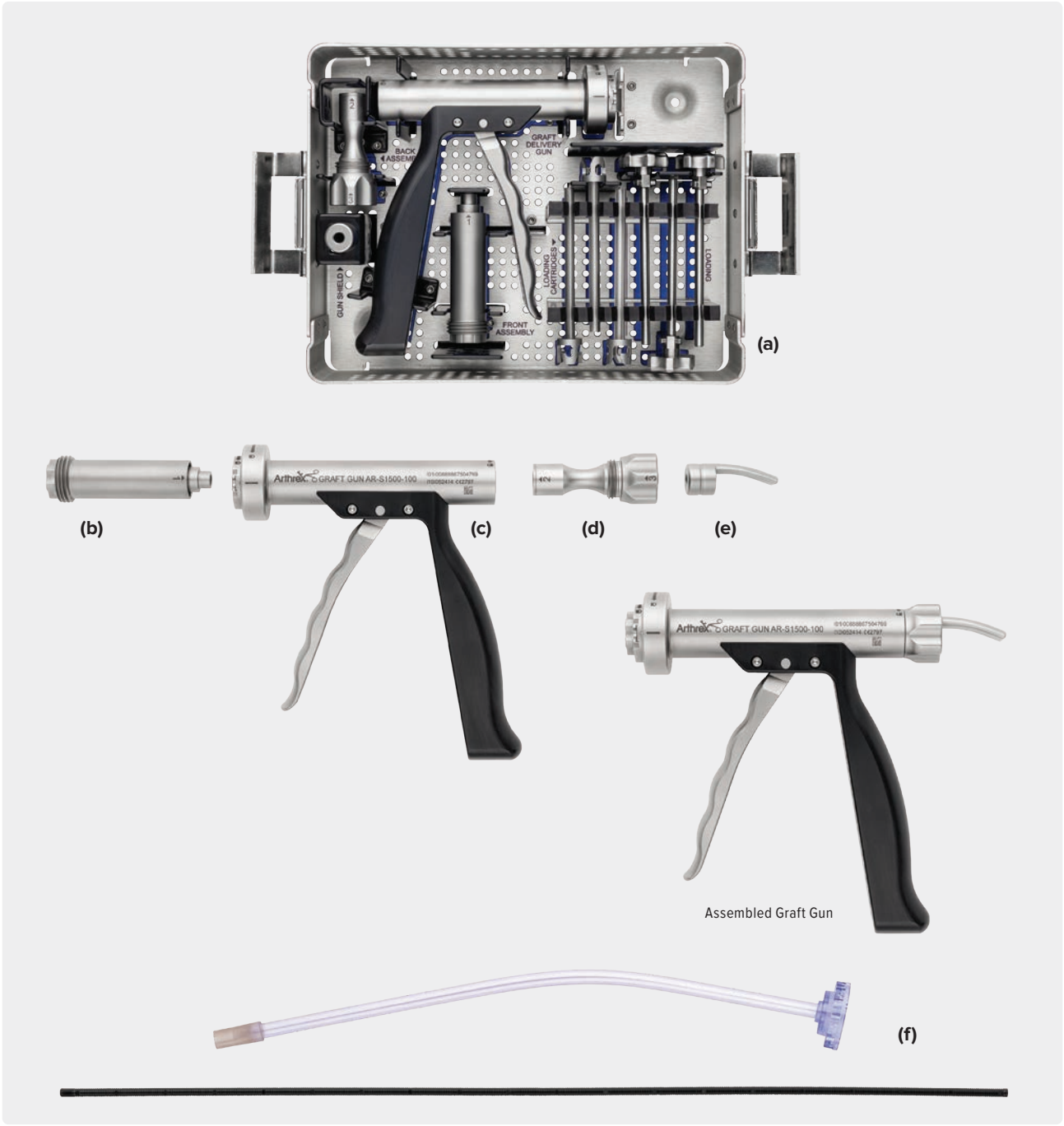
Features and Benefits

- Ergonomically designed lid with a lock-and-unlock feature to protect and provide easy access to the collected bone graft
- Universal adaptors at inflow and outflow make for easy assembly
- Drape clip and three-foot tubing improve sterile field workflow

GraftNet XL bone collection device	ABS-1052



Graft Gun Delivery System



Features and Benefits

- Delivers bone graft into the disc space during fusion procedures
- Easy delivery of any combination of autograft and allograft up to 100% autograft chips
- Designed to provide direct visibility for delivering bone graft through a decompression tube

Graft Gun Set	AR-S1000-C5S
› Graft gun case **(a)**	AR-S1000-C5
› Graft gun **(c)**	AR-S1500-100
› Graft loading device	AR-S1500-200
Graft gun set w/ rigid container	AR-S1000-C5S-A
Replacement Parts	
Graft gun front assembly **(b)**	AR-S1500-101
Graft gun back assembly **(d)**	AR-S1500-102
Graft gun shield **(e)**	AR-S1500-103
Disposables	
Graft Delivery Kit **(f)**	AR-S1510-001K-S


ARTHREX
angel
SYSTEM
PPP
OUT
mL
300
200
150
100
50
25
RBC
OUT
mL
400
300
200
150
100
50
25

Autologous Blood Products

108	Angel® cPRP and Bone Marrow Processing System
109	Potential BMA Recovery Sites Using the Vortex™ Needle
110	Vortex™ Threaded Recovery Needle
111	Vortex™ Threaded Recovery Needle With Angel® cPRP System
112	Angel® cPRP and Bone Marrow Processing System
113	Arthrex ACP® Double-Syringe System
114	ACP Max™ PRP System
115	Thrombinator™ System for Use With Arthrex PRP Systems
116	Viscous Delivery Systems

Angel® cPRP and Bone Marrow Processing System



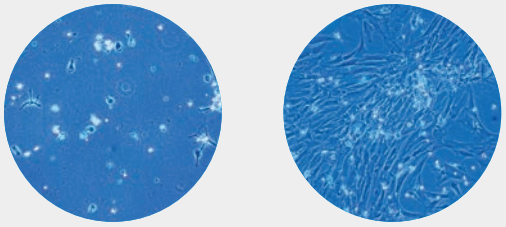


Angel cPRP From BMA Tray

Technology is what sets the Angel cPRP system apart from the competition. The Angel cPRP and bone marrow processing system uses proprietary sensor technology and one-button automation to deliver customized PRP concentrate. The Angel system is the only device that can provide PRP or cPRP from BMA with adjustable cellular levels. Bone marrow is a rich source of platelets, nucleated cells, and progenitor cells.

- Proprietary platelet sensor system
- Adjustable platelet concentrations
- Adjustable white blood cell (WBC) concentrations
- Programmable—can store up to 30 custom processing protocols
- Each processing kit can process 3 cycles of up to 180 mL on the same patient
- Flexible processing volume, 40 mL to 180 mL
- Closed system; delivers PRP, platelet-poor plasma (PPP), and red blood cells (RBCs) into separate, sterile compartments

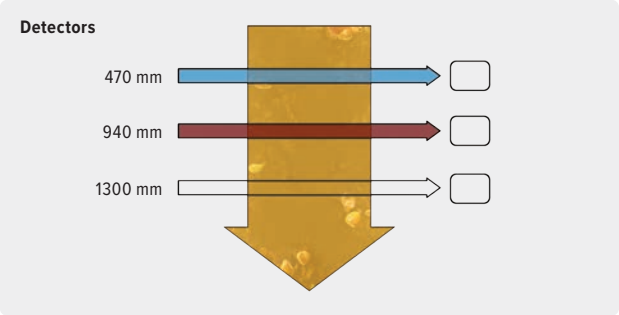
In vitro culture expansion of progenitor cells over 96 hours[1]



48 hours | 96 hours

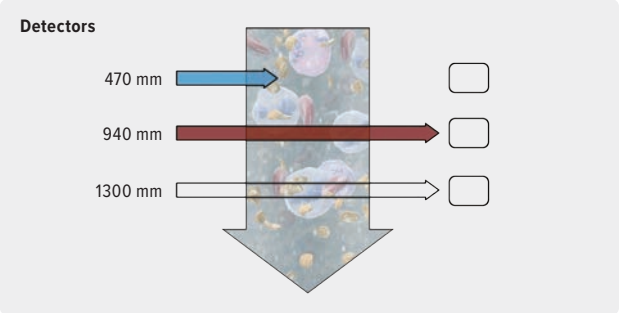
Reference

1. Arthrex, Inc. LA1-00036-EN_B. Naples, FL; 2018.



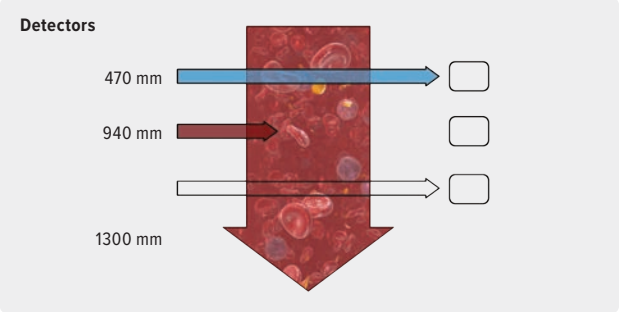
Plasma

When plasma is present, all three light beams pass through and contact the detector. The Angel device recognizes the presence of plasma and turns the valve to collect PPP. The PPP is deposited in the PPP collection reservoir.



Platelets and Nucleated Cells

When platelets and nucleated cells are present, the 470 nm wavelength of light is absorbed. The absence of the 470 nm beam on the detector alerts the Angel system to stop collecting PPP. The Angel system will then actuate the valve to collect PRP. The PRP is directed into the collection syringe on top of the unit.



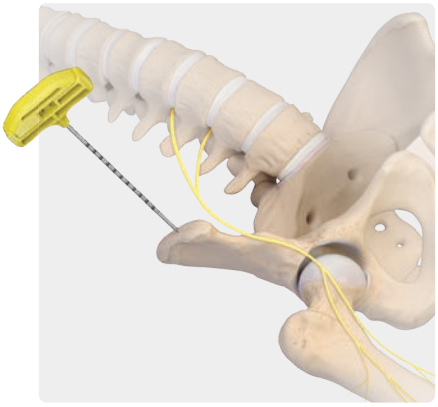
RBCs

The 940 nm wavelength is absorbed by RBCs. When the detector no longer detects the 940 nm beam, the Angel system will allow a percentage of RBCs to pass through into the PRP collection syringe. The percentage of RBCs collected in the PRP syringe is determined by the hematocrit (HCT) setting selected by the operator.

Potential BMA Recovery Sites Using the Vortex™ Needle



Bilateral Vertebral Body Harvest Technique



Anterior Superior Iliac Spine (ASIS) Harvest Technique



Posterior Superior Iliac Spine (PSIS) Harvest Technique

ARTHREX angel SYSTEM

Vortex™ Threaded Recovery Needle



Patent pending

The unique design of the Vortex threaded recovery needle for BMA recovery features a threaded tip and vent holes, allowing the user to easily and accurately reposition the tip of the needle within the bone for optimal aspiration volume.

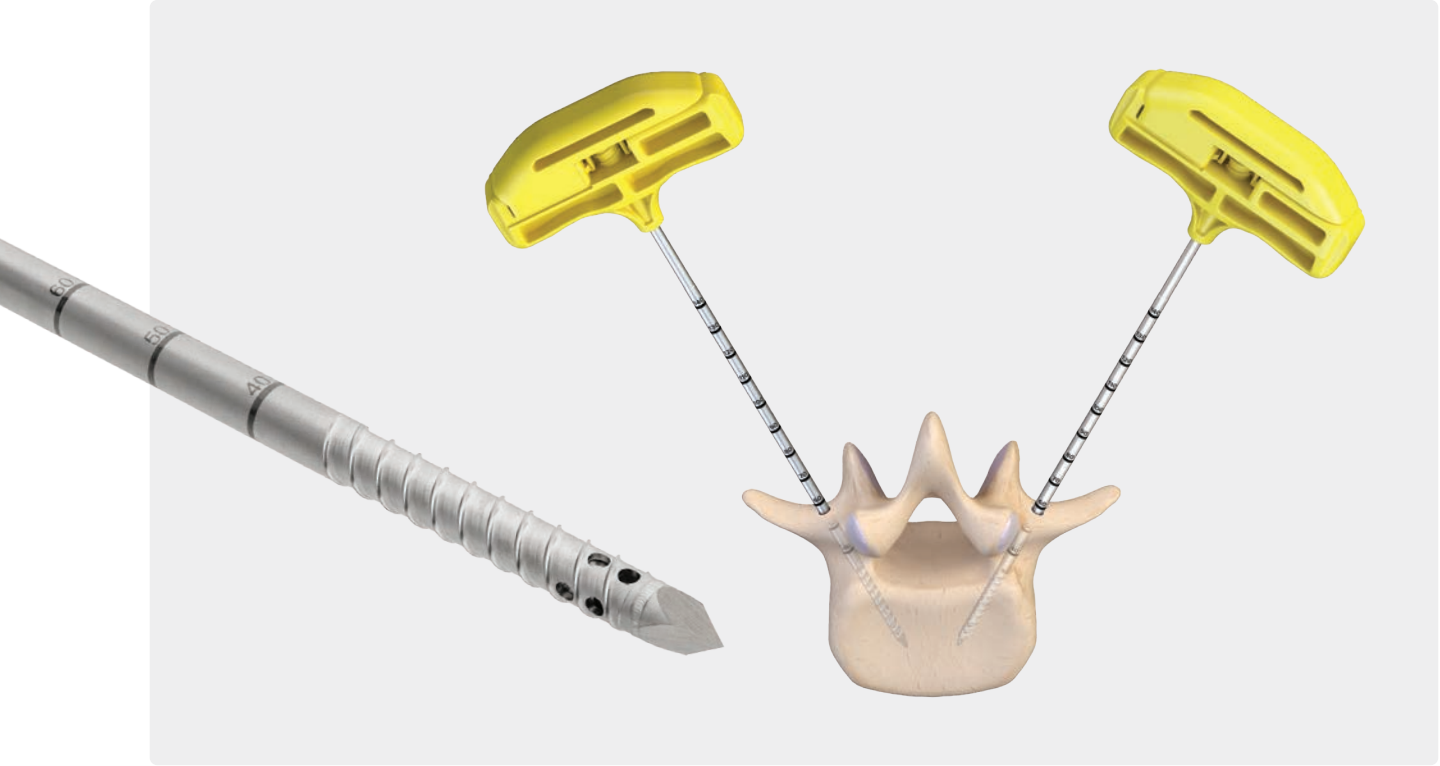
Designed for precise depth and directional control while aspirating bone marrow, the Vortex needle allows the user to maximize the concentration of osteoprogenitor cells recovered from the patient.[1]

Technical Pearls

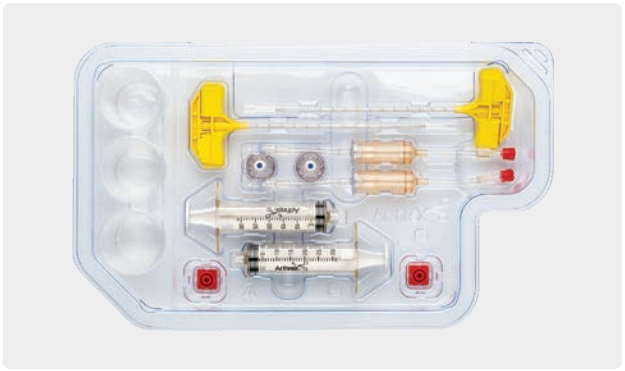
- To maximize the concentration of osteoprogenitor cells collected, it is recommended to change the depth of the needle after every aspiration of 2 cc of bone marrow. This is done by completing alternating ½ and 1½ turns of the needle.
- The use of a C-arm is recommended to assist with proper targeting

VORTEX
Threaded Bone Marrow Recovery Needle

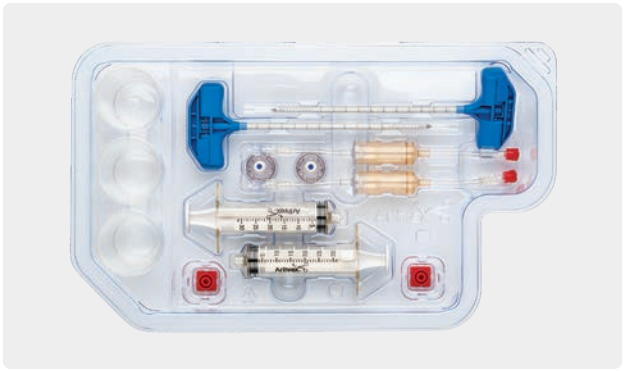
Vortex™ Threaded Recovery Needle With Angel® cPRP System



The Vortex needle can be ordered with the Angel cPRP processing kit for efficient aspiration from a wide array of orthopedic and spine applications such as a vertebral body, ASIS, or PSIS.



Aspiration Kit With Angel cPRP From BMA System, closed tip, 13 ga



Aspiration Kit With Angel cPRP System, closed tip, 8 ga

Vortex Threaded Recovery Needle	
Threaded BMA needle, 8 ga, closed tip	AR-1101TH-8CT
Threaded BMA needle, 8 ga, open tip	AR-1101TH-8OT
Threaded BMA needle, 13 ga, closed tip	AR-1101TH-13CT
Threaded BMA needle, 13 ga, open tip	AR-1101TH-13OT
Vortex Threaded Recovery Needle Kit	AR-1101THK-8
› Vortex threaded recovery needle, 8 ga, open tip › Prep tray › Syringe	
Vortex Threaded Recovery Needle Kit	AR-1101THK-13
› Vortex threaded recovery needle, 13 ga, open tip › Prep tray › Syringe	
Vortex needle power adapter	AR-1001-TH-PWR

Angel® System	
Angel BMA Processing Kit, 8 ga closed tip, w/o ACD-A	ABS-10062-TH8CT
Angel BMA Processing Kit, 8 ga open tip, w/o ACD-A	ABS-10062-TH8OT
Angel BMA Processing Kit, 13 ga closed tip, w/o ACD-A	ABS-10062-TH13CT
Angel BMA Processing Kit, 13 ga open tip, w/o ACD-A	ABS-10062-TH13OT
Angel BMA Processing Kit w/ Vortex threaded recovery needle, 8 ga closed tip, w/ ACD-A	ABS-10062K-TH8CTA
Angel BMA Processing Kit w/ Vortex threaded recovery needle, 8 ga open tip, w/ ACD-A	ABS-10062K-TH8OTA
Angel BMA Processing Kit w/ Vortex threaded recovery needle, 13 ga closed tip, w/ ACD-A	ABS-10062K-TH13CTA
Angel BMA Processing Kit w/ Vortex threaded recovery needle, 13 ga open tip, w/ ACD-A	ABS-10062K-TH13OTA

To order, please call Arthrex, Inc. at (800) 933-7001. Contact your local Arthrex representative for additional information.

Angel® cPRP and Bone Marrow Processing System



High-specificity 3ST light sensor technology

Advantages of 3-Sensor Technology (3ST)

- No syringe switching
- No manual steps to prepare PRP
- Delivers PRP, PPP, and RBCs into separate, sterile compartments
- Ability to modulate platelet, leukocyte, and RBC content
- Consistent PRP output

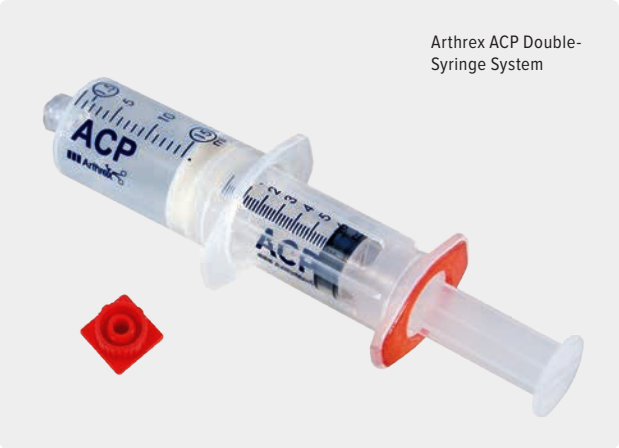
High-specificity 3ST light sensor technology and automated valve actuation are the foundation of the Angel cPRP system. The results of these features are the production of a high yield of PRP and PPP from whole blood.

Angel System Centrifuge	ABS-10060
Angel System Centrifuge, refurbished	ABS-10060R
Angel PRP Kit	ABS-10061T
Angel cPRP System w/ Aspiration Kit, w/ ACD-A	ABS-10062T
Angel cPRP Processing Set	ABS-10063
Arthrex Biologics Cart	ABS-10100

Reference

1. McLain RF, Boehm CA, Rufo-Smith C, Muschler GF. Transpedicular aspiration of osteoprogenitor cells from the vertebral body: progenitor cell concentrations affected by serial aspiration. *Spine J.* 2009;9(12):995-100.

Arthrex ACP® Double-Syringe System



Arthrex ACP Double-Syringe System



Rotor Set With Buckets

- The Arthrex ACP system allows for rapid and efficient concentration of platelets and growth factors from autologous blood for use at the treatment site
- The unique double-syringe design allows for convenient and safe handling, as the whole preparation process takes place in a closed system
- The Arthrex ACP system is affordable, easy to use, and has a quicker procedure time when compared to other PRP devices[1]
- White blood cells, specifically neutrophils, are NOT concentrated within the ACP system. These cells can be detrimental to the healing process due to release of degradative proteins and reactive oxygen species.[2,3]

Arthrex ACP double syringe w/ cap	ABS-10010S
Arthrex ACP Kit Series I	ABS-10011
Arthrex ACP Kit Series I w/ ACD-A	ABS-10011T
Arthrex ACP Kit Series II	ABS-10012



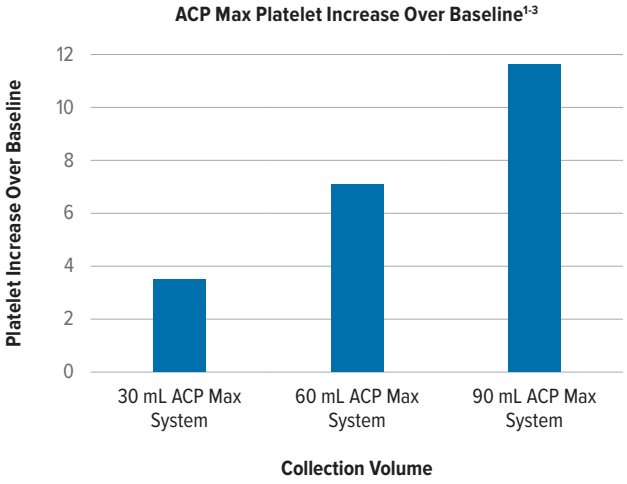
Arthrex ACP System Cart and Centrifuge

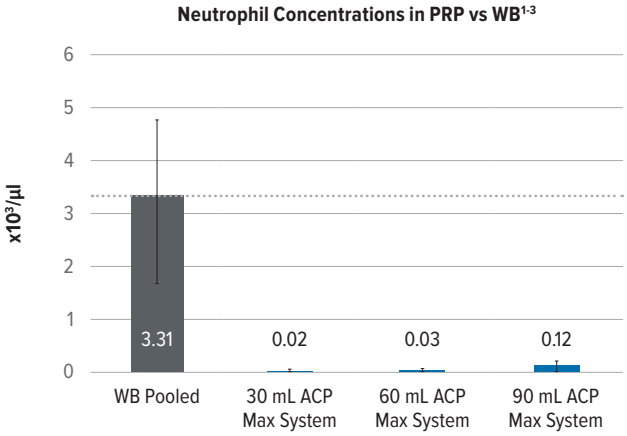
References

1. Arthrex, Inc. Data on file (APT-2470). Naples, FL; 2014.
2. Scott A, Khan KM, Roberts CR, Cook JL, Duronio V. What do we mean by the term "inflammation"? A contemporary basic science update for sports medicine. *Br J Sports Med.* 2004;38(3):372-380. doi:10.1136/bjsm.2004.011312
3. Jiang N, Tan NS, Ho B, Ding JL. Respiratory protein–generated reactive oxygen species as an antimicrobial strategy. *Nat Immunol.* 2007;8(10):1114-1122. doi:10.1038/ni1501

ACP Max™ PRP System

The ACP Max system allows for the efficient concentration of platelets from whole blood (WB) volumes of 30 mL, 60 mL, or 90 mL. The system's final output results in a neutrophil-poor PRP solution with up to 12× platelet concentration over baseline.[1-3]









ACP Max PRP System	ABS-10013
ACP Max PRP System (inner tray only)	ABS-10013-B
ACP Max PRP System w/ ACD-A	ABS-10015

References

1. Arthrex, Inc. Data on file (APT-5368). Naples, FL; 2021.
2. Arthrex, Inc. Data on file (APT-5535). Naples, FL; 2022.
3. Arthrex, Inc. Data on file (APT-5756). Naples, FL; 2022.

ACP MAX™

Thrombinator™ System for Use With Arthrex PRP Systems



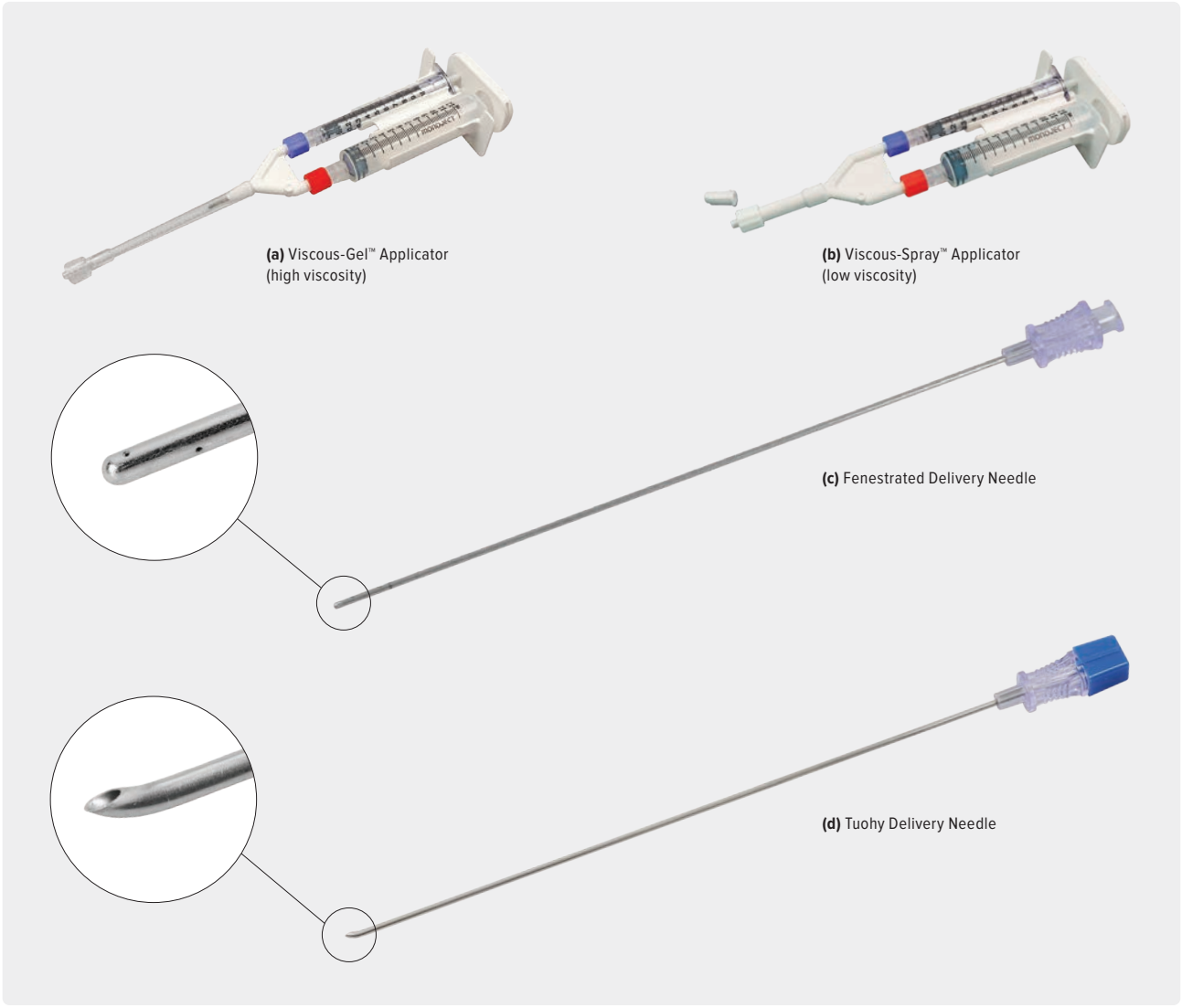
The Thrombinator system is designed to produce an autologous activation serum at the point of care. The serum produced by the Thrombinator system can be used to improve the handling of bone grafts. Autologous activation serum improves handling by activating platelets to produce a gel that serves as a binding agent for bone graft material. The Thrombinator process uses the principles of the clotting cascade to produce an activation serum without the use of harsh chemical reagents such as ethanol. The Thrombinator design eliminates the need for lengthy incubation times and heating requirements. Autologous activation serum can be produced in less than 20 minutes from peripheral whole blood (WB), PPP, or PRP.

- Rapid preparation (less than 20 minutes)
- Prepare from WB, PPP, or PRP
- Produces clot in as little as 15 seconds
- Centrifugation not required

Thrombinator System for use with the Arthrex PRP System	ABS-10080



Viscous Delivery Systems



(a) Viscous-Gel™ Applicator (high viscosity)

(b) Viscous-Spray™ Applicator (low viscosity)

(c) Fenestrated Delivery Needle

(d) Tuohy Delivery Needle

- Quick and simple to attach and detach
- Easy to fill—no need to disassemble
- 11:1 ratio allows homologous mixture of two fluids
- Use to provide a low- or high-viscosity fluid
- APRP from Arthrex PRP Systems can be mixed with allograft or autograft bone prior to application to an orthopedic surgical site as a spray, gel, or clot
- Extra long, blunt, fenestrated, and beveled delivery needles

Viscous-Gel™ applicator, high viscosity **(a)**	ABS-10050
Viscous-Spray™ applicator, low viscosity **(b)**	ABS-10051
Viscous-Spray II applicator, low viscosity	ABS-10052
Fenestrated delivery needle **(c)**	ABS-20000
Tuohy delivery needle **(d)**	ABS-21000
Cannula bending tool	AR-6650
Ratio applicator assembly, 11:1 ratio	SA-1001
Applicator assembly, 10 cc, 1:1 ratio	SA-3310
Dual cannula, 6 ga × 10 cm (4 in)	SA-3600
Dual cannula, 20 ga × 5 cm (2 in)	SA-3615
Dual cannula, 20 ga × 10 cm (4 in)	SA-3618
Dual cannula, 20 ga × 18 cm (7 in)	SA-3619

Dual cannula, semiflexible, endoscopic, 32 cm	SA-3650
Dual-spray tip	SA-3660
Blending connector w/ single spray	SA-3674
Applicator Procedure Kit, 11:1 ratio	SA-4400
Dual-Spray Procedure Kit, 11:1 ratio	SA-4460


Arthrex

Soft-Tissue Repair

120 Spine Scorpion™ Suture Passer

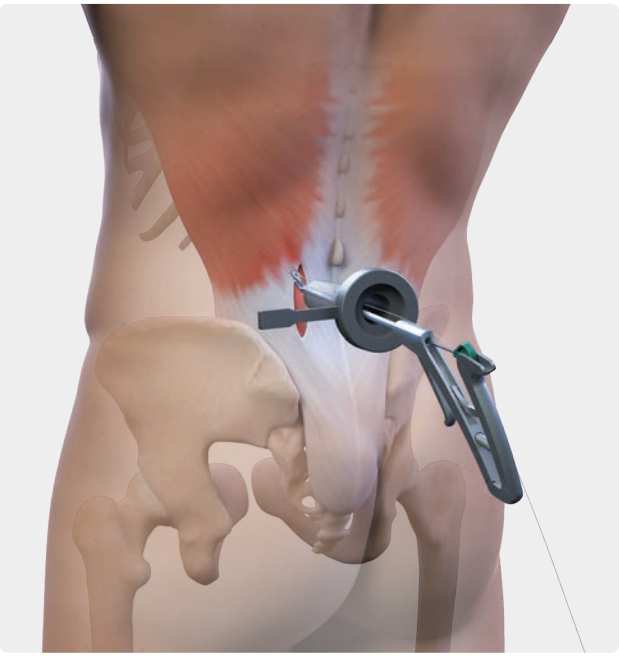
122 Arthrex Amnion™ Matrix

123 Biovance® Amniotic Membrane Allograft

124 CentaFlex™ Placental Matrix

125 Interfyl® Connective Tissue Matrix

Spine Scorpion™ Suture Passer



The Spine Scorpion suture passer draws on more than 20 years of experience in the minimally invasive suture market. Designed specifically for minimally invasive spine approaches, the Spine Scorpion suture passer removes the frustration associated with closing the fascia at the end of the case.

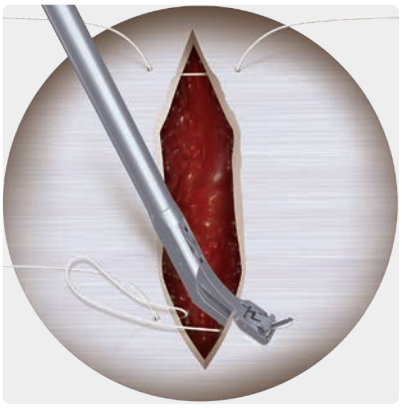
The Spine Scorpion suture passer is ideal for closing the fascia at the end of minimally invasive spine procedures. The low-profile design allows for easy access to the fascia, at all depths, for procedures done through either a tubular or mini open approach. The Spine Scorpion suture passer automatically passes and retrieves multiple types of suture, including 0 and 2-0 sutures.

Features and Benefits

- Can close fascia up to 75% faster[1]
- Efficient, consistent fascial closure at any depth
- Automatically and seamlessly passes and retrieves suture
- One-step suture loading
- Low-profile design for easy access through tubular or mini open approaches



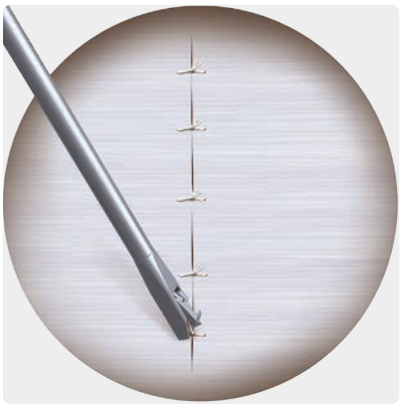
Spine Scorpion



Pass...



Tie...



Cut.

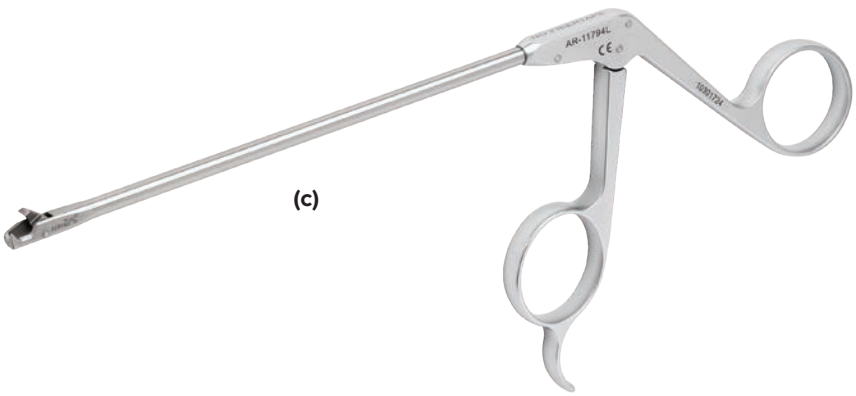


(e)

Spine Scorpion suture passer **(a)**	AR-13998C
SureFire® Scorpion needle **(b)**	AR-13991N
Suture cutter, 4.2 mm, open ended, left notch **(c)**	AR-11794L
Suture cutter, 4.2 mm × 220 mm, open ended, left notch	AR-16794L
Small knot pusher	AR-1296
Single-hole knot pusher	AR-1299
Knot pusher, closed end	AR-1305
Bayonetted knot pusher **(d)**	AR-S1296
Spine Scorpion Instrument Case	AR-13998CC
Spine Scorpion Instrument Set **(e)**	AR-13998CS
Spine Scorpion Set with Rigid Container	AR-13998CS-A



(d)



(c)

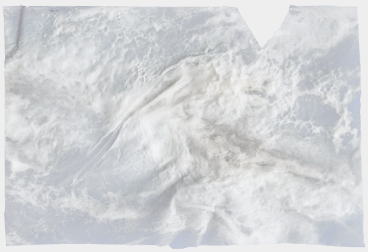
Reference

1. Arthrex, Inc. Data on file (APT-05722). Naples, FL; 2021.

Arthrex Amnion™ Matrix



Arthrex Amnion Matrix - Thin



Arthrex Amnion Matrix - Thick

Amniotic-derived tissues contain endogenous growth factors and cytokines[1-5] that maintain the natural properties of amnion. Arthrex Amnion matrix is an anatomical barrier that helps provide mechanical protection[5] while supporting tissue with nutrient-rich growth factors.[6-8]

- Amniotic membrane is a thin, semitransparent, and resilient membrane that lines the inner lining of the placenta
- Arthrex Amnion matrix provides essential biological and mechanical protection while helping to prevent adhesion[6]
- Just as amniotic tissue protects and cushions the fetus during development, Arthrex Amnion matrix helps provide the same support to damaged tissue[4]
- Arthrex Amnion matrix harnesses growth factors essential for signaling[4,7]

Arthrex Amnion Matrix-Thin	
2 cm × 2 cm	ABS-4100-022
2 cm × 3 cm	ABS-4100-023
3 cm x 3 cm	ABS-4100-033
4 cm × 4 cm	ABS-4100-044
4 cm × 6 cm	ABS-4100-046
4 cm x 8 cm	ABS-4100-048
7 cm × 7 cm	ABS-4100-077
2 cm x 12 cm	ABS-4100-212

Arthrex Amnion Matrix-Thick	
2 cm × 2 cm	ABS-4200-022
2 cm × 3 cm	ABS-4200-023
2 cm × 4 cm	ABS-4200-034
2 cm × 6 cm	ABS-4200-036
2 cm × 8 cm	ABS-4200-038
3 cm x 3 cm	ABS-4200-033
5.5 cm × 4 cm	ABS-4200-054



Arthrex AMNION Matrix

References

1. Jiang N, Tan NS, Ho B, Ding JL. Respiratory protein-generated reactive oxygen species as an antimicrobial strategy. *Nat Immunol.* 2007;8(10):1114-1122. doi:10.1038/ni1501
2. Coolen NA, Schouten KC, Middelkoop E, Ulrich MM. Comparison between human fetal and adult skin. *Arch Dermatol Res.* 2010;302(1):47-55. doi:10.1007/s00403-009-0989-82
3. Coolen NA, Schouten KC, Boekema BK, Middelkoop E, Ulrich MM. Wound healing in a fetal, adult, and scar tissue model: a comparative study. *Wound Repair Regen.* 2010;18(3):291-301. doi:10.1111/j.1524-475X.2010.00585.x
4. Tseng SC, Espana EM, Kawakita T, et al. How does amniotic membrane work? *Ocul Surg.* 2004;2(3):177-187. doi:10.1016/s1542-0124(12)70059-9
5. Riordan NH, George BA, Chandler TB, McKenna RW. Case report of non-healing surgical wound treated with dehydrated human amniotic membrane. *J Transl Med.* 2015;13:242. doi:10.1186/s12967-015-0608-8
6. Kim SS, Sohn SK, Lee KY, et al. Use of human amniotic membrane wrap in reducing perineural adhesions in a rabbit model of ulnar nerve neurorrhaphy. *J Hand Surg Eur.* 2010;35(3):214-219. doi:10.1177/1753193409352410
7. Delcroix GJ, Namin S, D'Ippolito G, Temple HT, Marshall R. Preserving the natural regenerative potential of amniotic membrane. Vivex Biomedical. Miami, FL.
8. Niknejad H, Peirovi H, Jorjani M, et al. Properties of the amniotic membrane for potential use in tissue engineering. *Eur Cell Mater.* 2008;15:88-89.

Biovance® Amniotic Membrane Allograft



Biovance human amniotic membrane allograft is derived from the placenta of a healthy, full-term pregnancy. Unlike other placenta-derived allografts, Biovance amniotic membrane is completely decellularized, devoid of cells, hormones, growth factors, cytokines, and other substances. Biovance amniotic membrane acts as a barrier membrane during the wound regeneration process and supports tissue growth. It contains key extracellular matrix proteins that allow for the migration of host cells to permeate the graft and promote tissue repair.

Features and Benefits

- Flexible to use across a wide variety of applications
- Biologic membrane supports the body's healing process
- Room temperature storage
- Non–side-specific
- Available in multiple sizes for a variety of surgical application needs
- 10-year shelf life

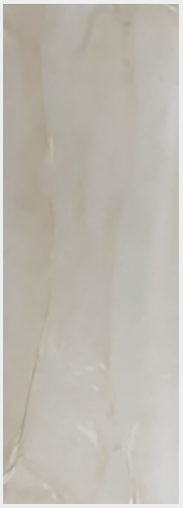
Applications

- Surgical covering
- Wrap or barrier
- Prevent scar-tissue adhesion to nerves

Biovance amniotic membrane, 1 cm × 2 cm	DHAM0012
Biovance amniotic membrane, 2 cm × 2 cm	DHAM0022
Biovance amniotic membrane, 2 cm × 3 cm	DHAM0023
Biovance amniotic membrane, 2 cm × 4 cm	DHAM0024
Biovance amniotic membrane, 3 cm × 3.5 cm	DHAM0035
Biovance amniotic membrane, 4 cm × 4 cm	DHAM0044
Biovance amniotic membrane, 5 cm × 5 cm	DHAM0055
Biovance amniotic membrane, 6 cm × 6 cm	DHAM0066

BIOVANCE®
Human Amniotic Membrane Allograft
A Celularity Innovation

CentaFlex™ Placental Matrix



CentaFlex decellularized human placental matrix allograft is derived from human umbilical cord. CentaFlex placental matrix has the strength to support repair, without the trade-off of an overly thick tissue. It serves as a cell-friendly structure to allow noninflammatory cell attachment, proliferation, and growth. CentaFlex placental matrix can be quickly hydrated with a sterile fluid for maximum flexibility and easy handling. Additionally, it is terminally sterile.

Features and Benefits

- Robust and strong to hold a suture
- Available in multiple sizes for a variety of surgical application needs
- Flexible to use across a wide variety of applications
- Non—side-specific
- Room temperature storage
- 10-year shelf life

Potential applications

- Surgical covering
- Wrap or barrier
- Prevent scar-tissue adhesion to nerves

CentaFlex placental matrix, 3 cm × 8 cm	HPM0038
CentaFlex placental matrix, 3 cm × 6 cm	HPM0036
CentaFlex placental matrix 3 cm × 4 cm	HPM0034
CentaFlex placental matrix, 2 cm × 3 cm	HPM0023
CentaFlex placental matrix, 3 cm × 3 cm	HPM0033
CentaFlex placental matrix, 2 cm × 2 cm	HPM0022
CentaFlex placental matrix, 0.5 cm × 4 cm	HPM0054

CentaFlex™ Human Placental Matrix

Interfyl® Connective Tissue Matrix



Interfyl connective tissue matrix is used to fill irregular spaces or soft-tissue deficits resulting from wounds, trauma, or surgery. Derived from the chorionic plate, Interfyl connective tissue matrix is suited for a variety of surgical applications when there is a need to replace or supplement damaged or inadequate integumental tissue. It is minimally manipulated and retains the fundamental structure and functional characteristics of connective tissue, and is available in particulate and flowable formulations.

Features and Benefits

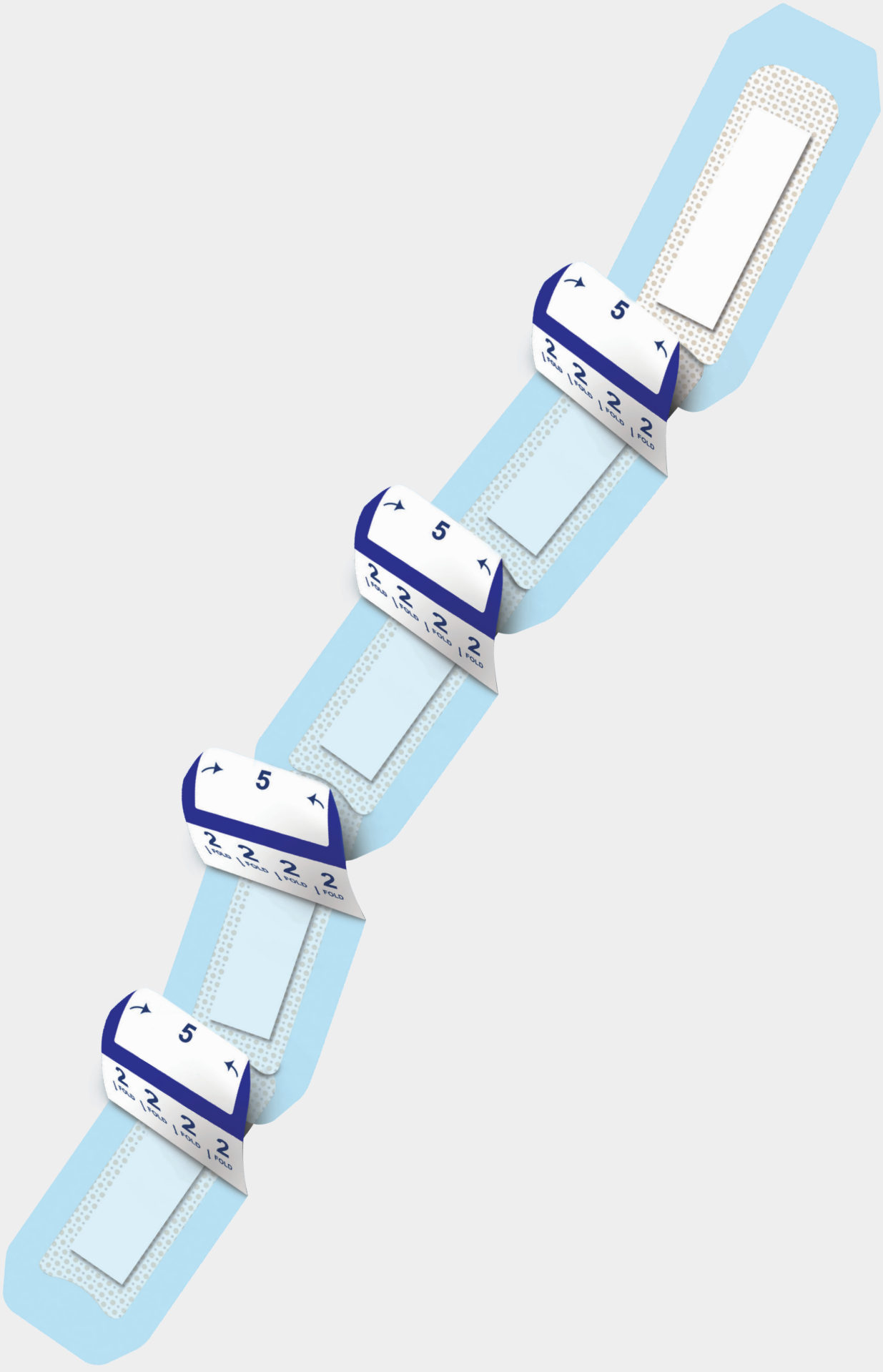
- Flowable and particulate formulations
- Conforms to irregular surfaces
- Room temperature storage
- 10-year shelf life

Potential applications

- Augmentation of deficient or inadequate soft tissue and treatment of deep dermal wounds
- Surgical wounds
- Soft-tissue voids as a result of tunneling wounds, fistula tracts, or dermal undermining, including those with exposed vital structures (bone, tendon, ligament, or nerve)

Interfyl tissue matrix, 50 mg particulate	HCTM050
Interfyl tissue matrix, 100 mg particulate	HCTM100
Interfyl tissue matrix, 0.3 mL flowable	HCTM030
Interfyl tissue matrix, 0.6 mL flowable	HCTM060
Interfyl tissue matrix, 1 mL flowable	HCTM010
Interfyl tissue matrix, 1.5 mL flowable	HCTM015

Interfyl®
Human Connective Tissue Matrix
A Celularity Innovation


5
2 FOLD
2 FOLD
2 FOLD
2 FOLD

Wound Care

128 JumpStart® Antimicrobial Wound Dressings

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132 JumpStart® ClearFit™ Dressing

133 JumpStart® FlexEFit™ Antibacterial Wound Dressing

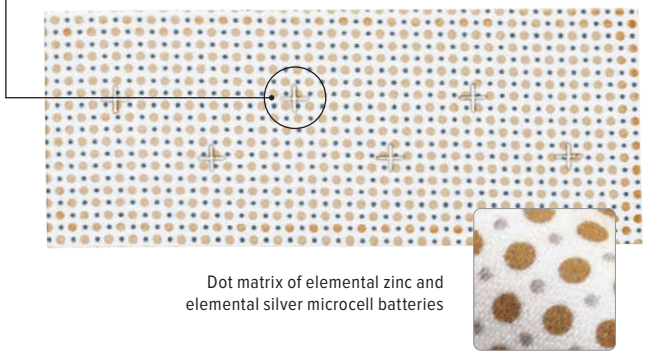
135 Energel® Wound Hydrogel

JumpStart® Antimicrobial Wound Dressings

JumpStart Dressings Powered by V.Dox™ Technology
JumpStart dressings are provided on an ultra-thin, lightweight, polyester substrate and contain laser-cut fenestrations to allow easy passage of wound exudate into the absorbent layer or a secondary dressing. The flexible design easily contours to the body. JumpStart dressings may be applied directly over sutures, staples, Steri-Strip™ wound closures, and liquid skin adhesives. The dot matrix pattern of embedded microcell batteries generate microcurrents on the dressing surface in the presence of a conductive medium, such as sterile saline, water-based gel, or wound exudate.

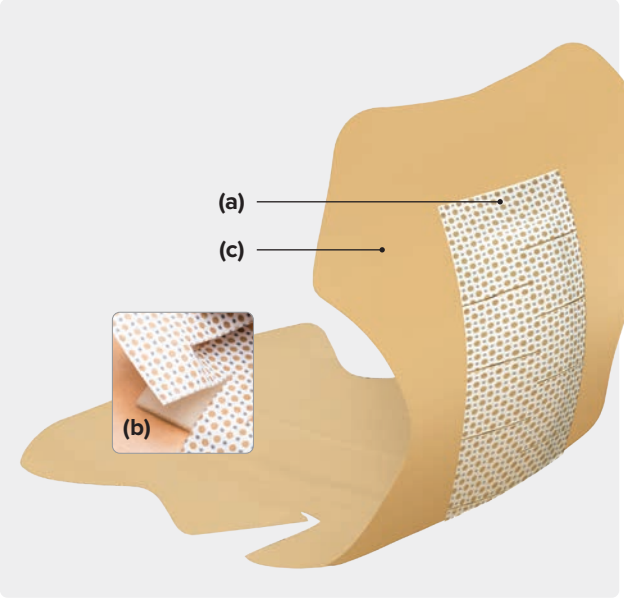
- Polyester substrate with embedded microcell batteries made of elemental silver and elemental zinc
- Fenestrations allow wound drainage to pass through dressing to absorbent layer
- Water resistant (may be left in place while showering)
- Omnidirectional stretch for enhanced mobility and comfort

JumpStart Contact Layer Dressing
- JumpStart's antimicrobial wound contact layer powered by V.Dox technology
- Polyester substrate with embedded microcell batteries made of elemental silver and elemental zinc
- Fenestrations allow wound drainage to pass through dressing to absorbent layer



Dot matrix of elemental zinc and elemental silver microcell batteries

JumpStart Composite Dressing
- JumpStart dressing wound contact layer powered by V.Dox technology **(a)**
- Highly absorbent middle layer **(b)**
- Adhesive dressing **(c)**



JumpStart Contact Layer Dressing

Dressing Size (in)	Qty/Box	Item Number
1 × 1, fenestrated	10	ABS-4001
1.5 × 8	10	ABS-4005
1.5 × 10	10	ABS-4006
2 × 2	10	ABS-4002
2 × 5	10	ABS-4025
3 × 3	10	ABS-4003
4 × 4	10	ABS-4004
8 × 8	1	ABS-4008
12 × 12	1	ABS-4012

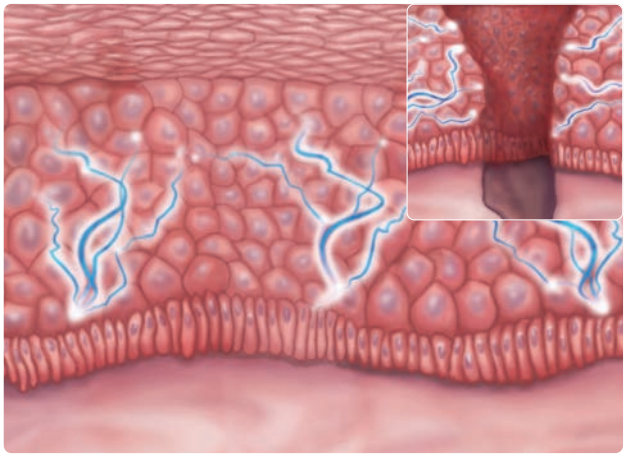
JumpStart Composite Dressing

Adhesive Size (in)	Dressing Size (in)	Qty/Box	Item Number
2.5 diameter	1 diameter	10	ABS-4054
4 diameter	1 diameter	10	ABS-4056
4 × 4	2 × 2	5	ABS-4053
5 × 6	1.5 × 5	5	ABS-4051
4.5 × 10	1.5 × 7	5	ABS-4052
6 × 11.5	2 × 9	5	ABS-4050
4.4 × 9.6	1.5 × 6.5	5	ABS-4057
4.2 × 7.5	1.4 × 4.5	5	ABS-4058

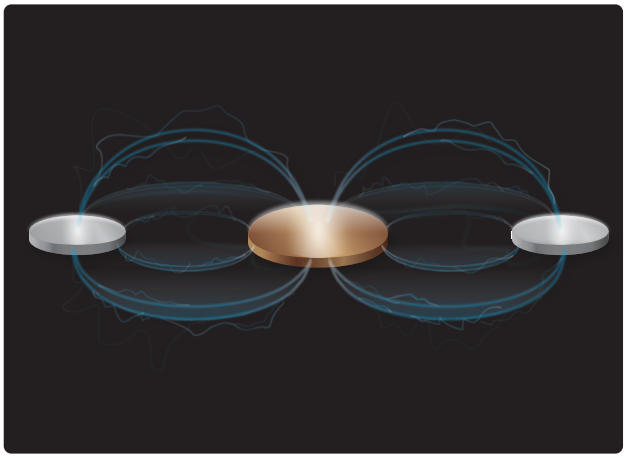
V·DOX TECHNOLOGY

JumpStart ANTIMICROBIAL WOUND DRESSING

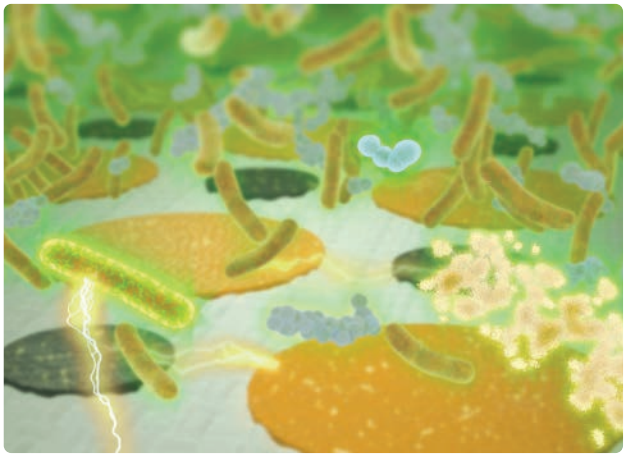
The Science of JumpStart® Wound Dressings



Inspired by the body
The skin naturally creates and uses electrical energy to promote healing. Electric fields in the skin create surface energy potential, known as transepithelial potential (TEP). When skin is wounded, a change in electric potential occurs, which drives the cell migration and wound healing process.



Powered by electricity
JumpStart antimicrobial wound dressings—powered by patented V.Dox™ technology—employ moisture-activated microcell batteries that wirelessly generate microcurrents designed to mimic the skin's electrical energy.



Energized by results
JumpStart dressings reduce the risk of infection by killing a broad spectrum of bacteria without antibiotics while supporting the body's natural healing process.

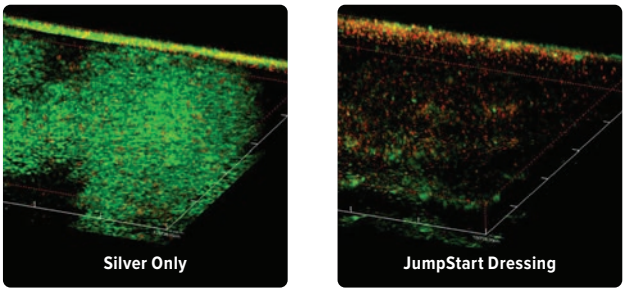
Published studies show JumpStart dressings reduce the risk of infection[1-5] and promote the healing process[6] to optimize outcomes.

V·DOX™ TECHNOLOGY

JumpStart® ANTIMICROBIAL WOUND DRESSING

Reduce risk of infection

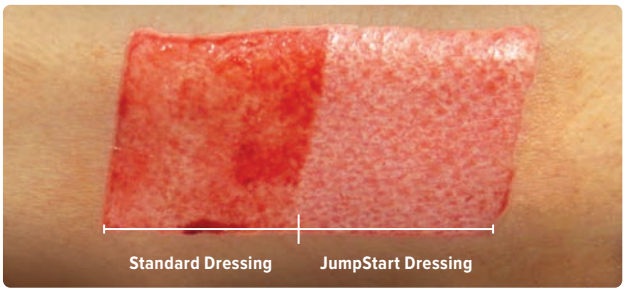
- Killed a broad spectrum of pathogens, including multidrug-resistant and biofilm-forming bacteria[1-3]
- Disrupted existing biofilm infection and prevented biofilm from forming in preclinical studies[4]
- Prevented bacterial growth, with sustained antimicrobial impact for up to 7 days[5]
- Demonstrated electricidal antimicrobial impact versus silver dressings[6]



Live/dead fluorescence staining demonstrated bacterial killing of *P. aeruginosa* within JumpStart antimicrobial wound dressing compared to a standard silver-based dressing at 24 hours. Green = alive, red = dead.

Promote healing

Improved re-epithelialization with JumpStart® dressings versus standard dressings.[6]



Prospective case series; skin graft harvest sites (N=13) demonstrated significantly greater re-epithelialization with JumpStart dressing (71.8%) vs control (46.9%) (P=.015).[6]

Not Just a Postoperative Dressing

Bioelectric dressings have demonstrated benefits when applied preoperatively, in addition to as part of routine postoperative care.

- When applied 2 hours before the development of an acute wound, bioelectric dressing can prevent biofilm formation[4]
- JumpStart dressing has been shown to be equally as effective in preventing bacteria formation as traditional skin preparation products[7]
- When used both pre- and postoperatively, JumpStart dressing can provide enhanced antibacterial protection to wound sites

Surgical site infections (SSI) occur in **1% to 2%** of all patients worldwide undergoing inpatient surgery[8-10]

SSIs affect **millions** of patients each year
US: 1.5 million[11]
Europe: 500,000[9]

SSIs increase annual treatment costs
US: +$3.5 to $10 billion[12]
Europe: +€1.5 to €19 billion[13]

SSIs prolong hospitalization
US: +9.7 days[12]
Europe: +6.5 days[13]

V·DOX™ TECHNOLOGY

JumpStart® ANTIMICROBIAL WOUND DRESSING

Evidence for Successful Use in Spine

- Retrospective hospital-registry study
- SSIs persist as a leading complication of spinal fusion surgery[14]
- The majority (57.5%) of infections studied were resistant to the prophylaxis administered during the procedure[14]
- There is an anatomic gradient in the microbiology of spinal fusion surgical site infection[14]
  - Gram-positive: cervical spine
  - Gram-negative: lumbar spine
- JumpStart® dressing kills and protects against both gram-positive and -negative bacteria[14]

3% estimated mortality rate with SSI[11]

75% of SSI-associated deaths are directly attributable to the infection[11]

50% of SSIs are preventable[8,9,15]



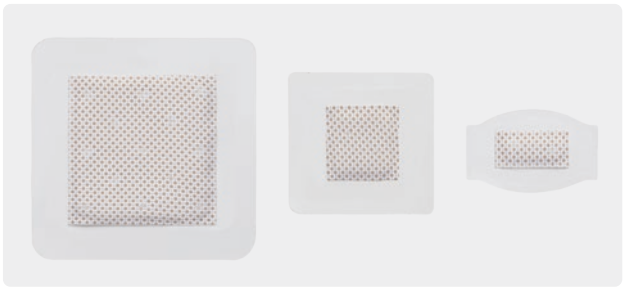
V·DOX TECHNOLOGY

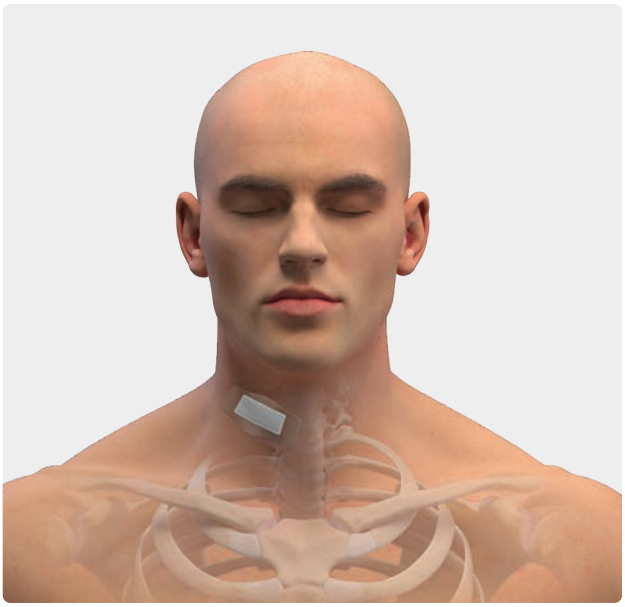
JumpStart® ANTIMICROBIAL WOUND DRESSING

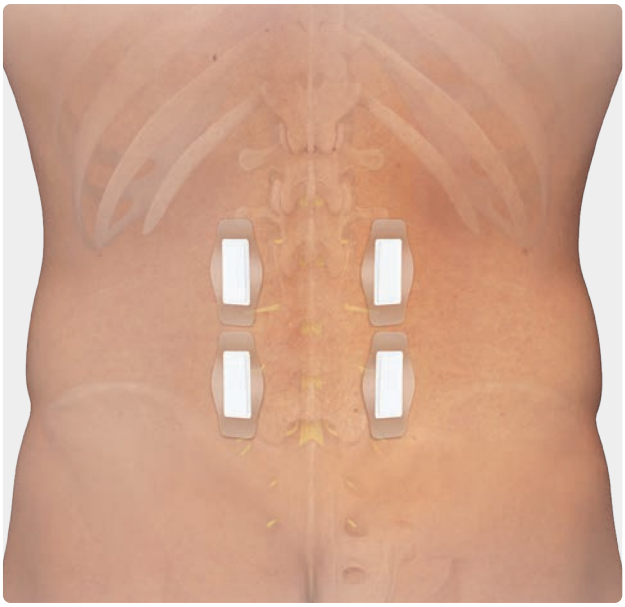
JumpStart® ClearFit™ Dressing

The JumpStart ClearFit dressing line features the unique V.Dox™ technology with a clear film adhesive for gentle dressing placement and removal.

JumpStart ClearFit dressing, 4 in × 4 in	ABS-4061
JumpStart ClearFit dressing, 6 in × 6 in	ABS-4062
JumpStart ClearFit dressing, 3.5 in × 2.25 in	ABS-4063







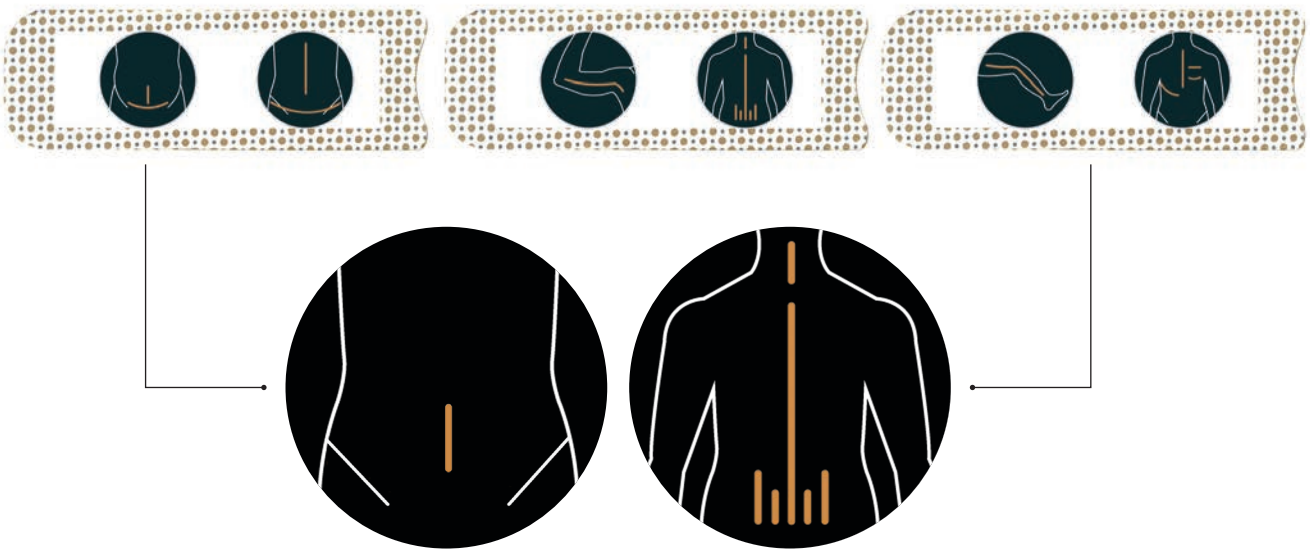
V·DOX TECHNOLOGY

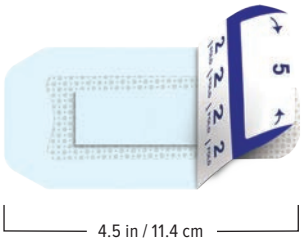
JumpStart ANTIMICROBIAL WOUND DRESSING

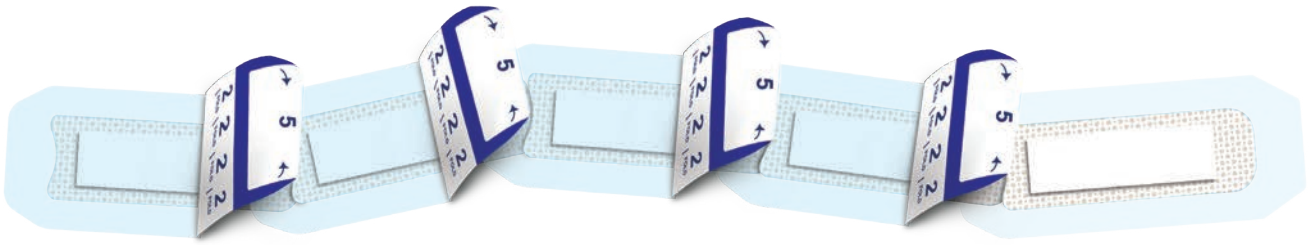
JumpStart® FlexEFit™ Antibacterial Wound Dressing

JumpStart FlexEFit Wound Dressing's Exclusive "Link and Build" Design

JumpStart FlexEFit antibacterial wound dressing employs a novel link and build design that enables it to be "built" during application to seamlessly cover incisions of virtually any length or curvature with just one product configuration.







Order a single product to meet postsurgical dressing needs.

V·DOX TECHNOLOGY

JumpStart® FlexEFit™

Description

- JumpStart® FlexEFit antibacterial wound dressing is designed with the flexibility to fit virtually any incision length or curvature
- The dressing is powered by patented V.Dox™ technology, the only nonantibiotic antibacterial technology inspired by the skin's natural electrical healing process
- Embedded microcell batteries in the dressing generate an electric field designed to mimic the skin's physiologic electric fields, which are essential for cell migration and healing

Antibacterial Impact

- Demonstrated antibacterial impact against a broad spectrum of bacteria, including multidrug-resistant and biofilm-forming bacteria[1-4]
- Designed to minimize infection risk and support the body's natural healing process

Features and Benefits

- Water resistant (may be left in place while showering)
- One-of-a-kind antimicrobial technology
- Link-and-build design
- 7-day wear time

Pad Dimensions	Adhesive Dimensions	Qty/Box	Item Number
1.5 in × 4.5 in	2.5 in × 6.3 in	5	ABS-4060-05
3.8 cm × 11.4 cm	6.3 cm × 16 cm	10	ABS-4060-10

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Energel® Wound Hydrogel



Use Energel wound hydrogel to activate JumpStart® dressing's microcell batteries:

- Sterile, water-soluble gel formulated to maintain a moist wound environment and provide moisture to a dry wound
- Double-packaged sterile for use in the operating room
- Optimally sized for single use (7.5 g)
- Maintains conductivity of JumpStart dressing for up to 7 days

Energel wound hydrogel	AGL-L075-10



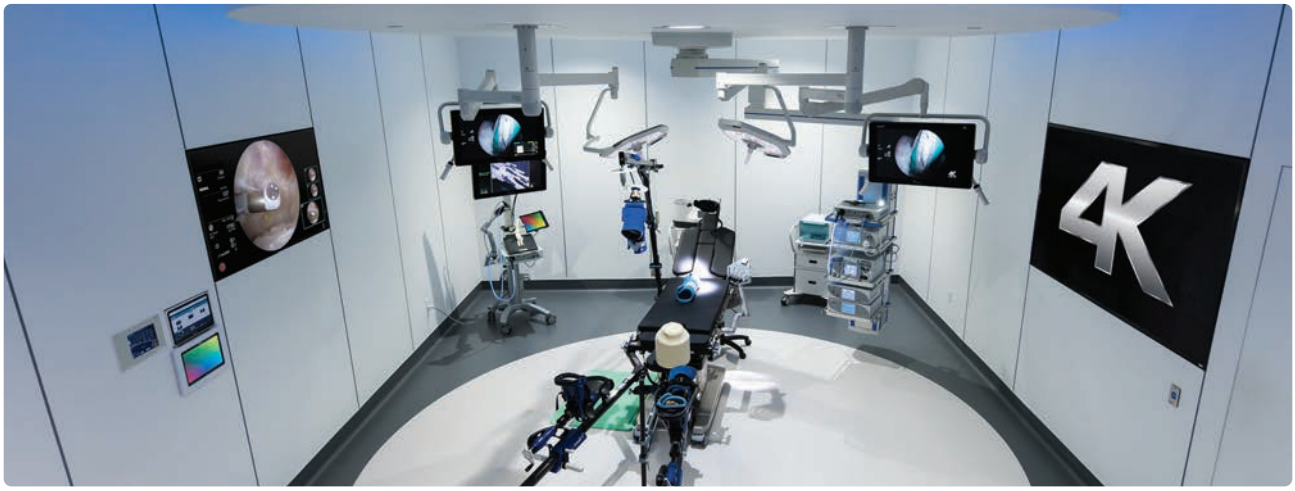
JumpStart FlexEFit® dressing applications are not limited to the examples shown.


SKYTRON
GS70H SALUS
Arthrex
SPINE ENDOSCOPE CASE
4K

Service and Support

138 | Service and Support

Service and Support



Service You Can Rely On
We understand that patients rely on you every day—and that you rely on your equipment. You have purchased the most innovative world-class imaging devices available, and you always expect them to be ready. As your strategic partner, you can rely on Arthrex to provide quality products and service to help surgeons treat their patients better.

Arthrex Armour Technology Protection Plans
Arthrex Armour offers customizable service plan levels to meet all your product and service needs.

Arthrex Armour Core Protection
Arthrex Armour Core Protection provides our baseline service level support billed as per-incident and is available on all serviceable Arthrex products. Prepaid per-incidents are also available for all scope product lines, Synergy*UHD4*™ consoles and camera heads, and Synergy*ID*™ consoles and camera heads. With prepaid per-incidents, you can better forecast your operational budget through a bulk purchase.

Arthrex Armour Premium Protection
This level of Arthrex Armour provides total protection against product issues and incidental damage. Multiple payment options make an Arthrex Armour Premium Protection plan a budget-friendly solution that guarantees peak equipment performance and helps ensure maximum uptime.

Arthrex Armour Titanium Protection
To resolve any possible technical challenges, Arthrex Armour Titanium Protection offers our most comprehensive service. Along with expert 24-hour remote technical support provided by our Technical Assistance Center, this tier features a trained Arthrex agency representative residing on location to provide immediate technical support. Layer this protection plan with Arthrex Armour Premium Protection to ensure the best service experience possible.

With Arthrex Armour Technology Protection you will
- Save money and insure against costly, unbudgeted repairs
- Reduce downtime with advance replacement products
- Guarantee in-house Arthrex-certified replacement parts
- Choose from flexible agreement and payment terms

Why Arthrex?
As the designer for the Arthrex family of products, we use high-quality, Arthrex-certified components to provide the highest standard of service designed to keep your equipment in excellent working condition over time. For maximum uptime and the highest quality performance, we are the logical choice for service replacements and after-sale care.

Contact Information
Please contact us at ServiceAgreements@arthrex.com with any questions or requests regarding our service offerings.

Warranty Policy
For all warranty information, including disclaimers, exclusions, terms, conditions, and related provisions, refer to the Arthrex U.S. Product Warranty section of the Arthrex, Inc., website found at www.arthrex.com/corporate/arthrex-us-product-warranty.

This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes.

Arthrex manufacturer, authorized representative, and importer information (Arthrex eIFUs)

US patent information

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arthrex.com

Spine