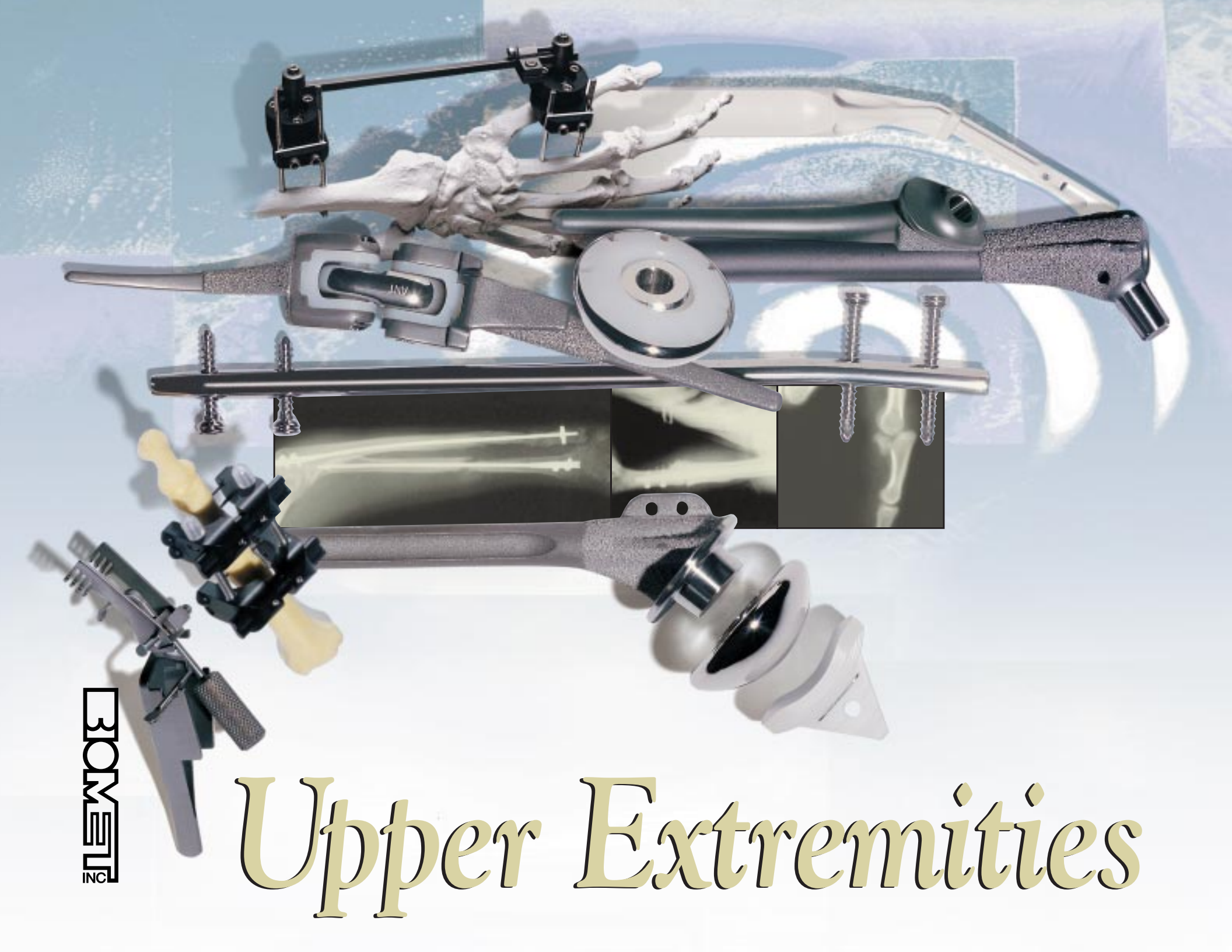
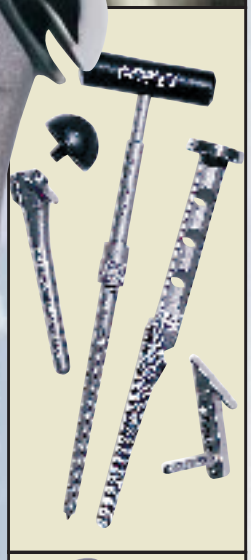


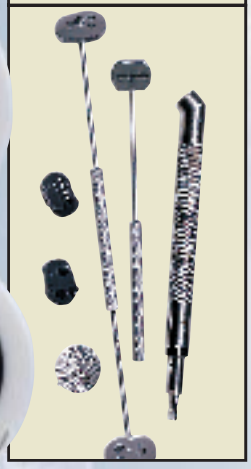
BIOMET INC

Upper Extremities

Upper Extremities Introduction

Bio-Modular® Shoulder System





HUMERAL STEMS

- Ream, broach, and trial surgical technique
- Forged titanium alloy with proximal porous coating
- Reverse Morse taper allows unobstructed exposure for glenoid procedures
- Tapered stem geometry allows for better lateralization of the tuberosities, ensuring superior rotator cuff function
- Sizes: 6mm–15mm diameters in 1mm increments
- 190mm length stems to address complex fractures and revisions (available in 7, 9, 11, and 13mm diameters)
- Lateral fin with suture holes
- 55° neck resection angle

MODULAR HEADS

- Cobalt chrome alloy
- Thirteen head sizes to address most shoulder complications
- Four spherical diameters to ensure accurate fit: 40, 44, 48, and 54mm
- Seven neck lengths to allow proper soft tissue tensioning: 15, 17, 19, 20, 22, 24, and 27mm
- Male Morse taper
- Any head can be used with any glenoid
- Offset head with 4mm offset post and 8 head positions*
- Bi-Polar head option

GLENOIDS

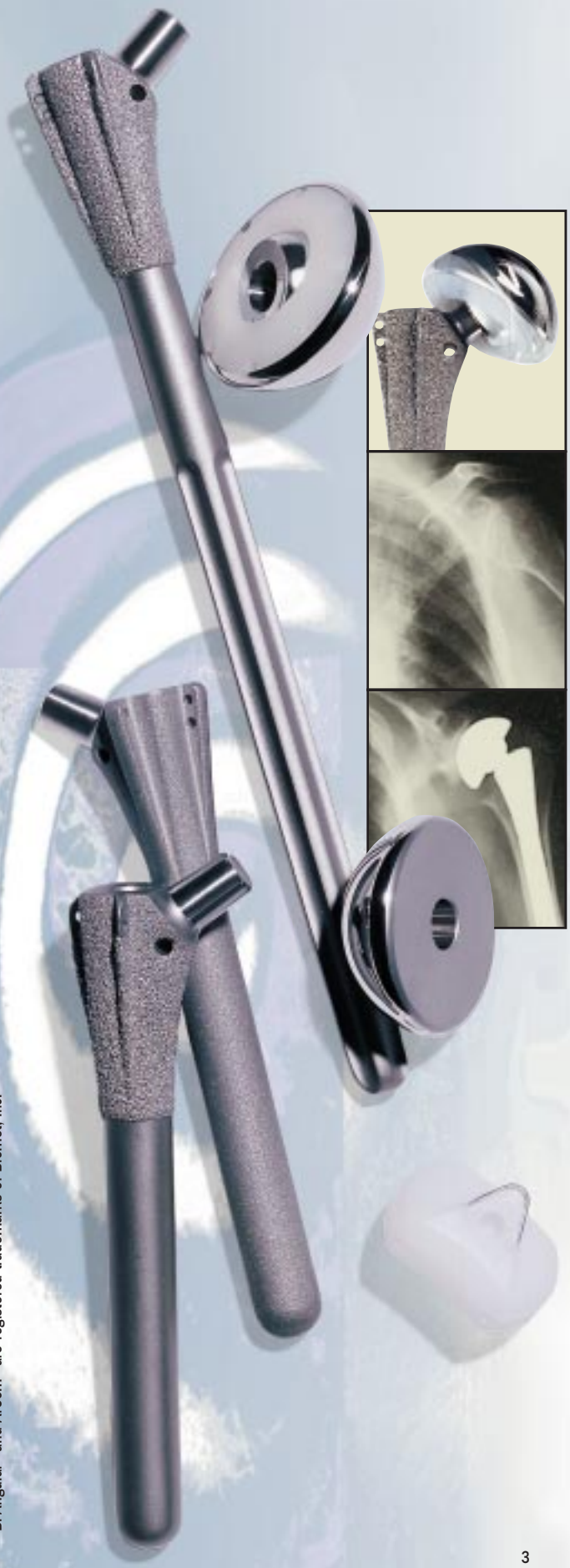
- All-poly keeled and pegged and porous screw fixed options
- Three sizes: small, medium and large
- Two thicknesses: 4 and 7mm
- Three-pegged option (4mm thickness only)
- Direct compression molded ArCom® polyethylene
- Anatomically shaped
- Variable glenohumeral mismatch to allow for natural translation
- Any glenoid can be used with any head

Designed in conjunction with Russell F. Warren, M.D., at the Hospital for Special Surgery, New York, New York, and David M. Dines, M.D., at the Hospital for Special Surgery, New York, New York, and Long Island Jewish Medical Center, New Hyde Park, New York.

U.S. Pat. No. 4,865,605

*510(k) pending

Bi-Angular®/Bi-Polar Shoulder System



HUMERAL STEMS

- Ream and trial surgical technique
- Forged titanium alloy with proximal porous coating
- Non-collared
- Cobalt chrome alloy cemented stem option
- Sizes: 6.5mm–14mm diameters in 1.5mm increments
- 205mm long stems available for complex fractures and revisions (8, 9.5, and 11mm diameters)
- Anterior, posterior, and lateral fins with suture holes
- Medial hole allows retroversion control during insertion
- 55° neck resection angle

MODULAR HEADS

Standard Heads

- Cobalt chrome alloy
- Four diameters: 40, 44, 48, and 52mm
- Three neck lengths: 15, 19, and 23mm

Bi-Polar Heads

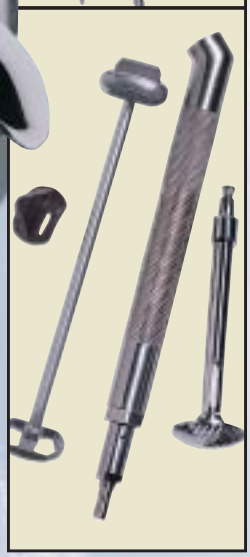
- Cobalt chrome alloy
- Four shell spherical diameters: 40, 44, 48, and 52mm
- Inner head diameter: 22.2mm
- Three neck lengths: standard (26mm), +2 (28mm), +4 (30mm)
- Bi-rotational head-shell motion
- Potentially less glenoid and acromion wear
- Increased lateral offset

GLENOIDS

- Direct compression molded ArCom® polyethylene
- 45° angled keel
- 4mm thickness
- Non-conforming geometry allows for natural glenohumeral translation
- Designed for easier implantation

This system has been developed in cooperation with Richard L. Worland, M.D., Medical Director, The Joint Replacement Center, Advanced Orthopaedic Centers, Richmond, Virginia.

Integrated™ Shoulder System



HUMERAL STEMS

- Ream and trial surgical technique
- Cobalt chrome with proximal porous coating
- Fixed head (Neer II™ and K-II-C) and modular options (Mod-II-C, Atlas® and Atlas® Plus)
- Standard Morse taper
- Tapered geometry
- Anterior, posterior, and lateral (with suture holes) fins for suture attachment
- 50° neck resection angle
- One set of instruments for all stem options
- 25 years of excellent clinical results[1]

MODULAR HEADS

- Cobalt chrome alloy
- Seven head sizes: 15, 17, 20, 22, 24, 28, and 32mm head heights
- 4mm offset head with 8 head positions*

GLENOIDS

- All-poly keeled and pegged and porous screw fixed option
- Direct compression molded ArCom® polyethylene
- Sizes: standard, small and x-small
- Conforming geometry (radius of curvature of the glenoid and head are equal)
- Any head can be used with any glenoid

FRACTURE PROXIMAL COMPONENT

- Useful in two- and three-part fracture cases
- Through-holes for screw fixation
- Suture holes

[1]On file at Biomet.
Neer II™ is a trademark of Biomet, Inc. and was designed in conjunction with Charles S. Neer II, M.D.
Modular II-C and Atlas® Modular were developed in conjunction with Edward V. Craig, M.D., and Richard F. Kyle, M.D.
Atlas® and ArCom® are registered trademarks of Biomet, Inc.
Integrated™ is a trademark of Biomet, Inc.
*510(k) pending

Huene™ Biaxial Elbow

HUENE™ BIAXIAL ELBOW

- Biaxial design more accurately reproduces normal anteroposterior translocation of the ulna, thereby providing more flexion than traditional single hinge elbows
- Differential torque mechanism provides initial movement through the ulnar axis, promoting normal elbow articulation
- 16° of varus-valgus laxity and 10° of rotation to help reduce the chance for implant loosening, implant fracture, and polyethylene wear
- Titanium alloy humeral component with porous coated collar and anterior flange
- Titanium alloy ulnar component with bond coated collar
- Axles and central link are cobalt chrome alloy, with ArCom® polyethylene axle and saddle bearings
- Complete instrumentation, including rasp/trials and humeral resection guide
- Easy-to-use, internally contained axle locking clip

Developed in conjunction with Donald R. Huene, M.D., of Fresno, California.
U.S. Pat. Nos. 5,314,484 and 5,376,121
ArCom® is a registered trademark of Biomet, Inc.
Huene™ is a trademark of Biomet, Inc.

iBP™ Elbow System

iBP™ ELBOW

- Resurfacing design requires minimal bone resection
- Complete instrumentation for accurate resection and component alignment
- Cobalt chrome alloy humeral component
- Ulnar component is titanium alloy with a direct molded ArCom® polyethylene bearing
- Non-constrained design allows for medial lateral translocation
- Interlok® finished stems for enhanced cement fixation

Developed in conjunction with H. Kudo of Sagamihara-Shi, Japan, and J. Pooley, M.D., of Newcastle, England.
Patent Pending
ArCom® is a registered trademark of Biomet, Inc.
iBP™ and Interlok® are trademarks of Biomet, Inc.

Indiana Tome™ System for Carpal Tunnel Release

INDIANA TOME™

- Divides the transverse carpal ligament with minimal disturbance to surrounding tissues
- Clinically proven to reduce postoperative pain and encourage faster return to daily activity[1]
- Requires only local anesthesia
- Can be performed in a minor surgery room, reducing procedure cost
- 2cm incision allows direct visualization of the distal third of the transverse carpal ligament
- The Indiana Tome incorporates a "straddle and cut" design to help isolate the blade from surrounding anatomy
- Self-retaining retractor and proximal retractor eliminate the need for an assistant and enhance the view of the carpal tunnel
- Transverse carpal ligament is prepared with three instruments that clear away tissues and create a channel for safe passage of the Indiana Tome
- The Tome Guide provides proper alignment of the Indiana Tome and serves as an additional barrier between the Indiana Tome and the surrounding anatomy
- To view the surgical technique and learn more about the Indiana Tome system for carpal tunnel release, please visit the Indiana Tome web site at www.biomet.com

[1]Lee W.P.A., Plancher K.D., Strickland J.W.: Carpal Tunnel Release with a Small Palmar Incision. *Hand Clinics* May 1996; 271–84. Developed in conjunction with James W. Strickland, M.D., of the Indiana Hand Center, Indianapolis, Indiana.

BioSymMetRic™ PIP Fixator

BIOSYMMETRIC™ PIP FIXATOR

- Quadrilateral frame provides superior stability for fracture and fracture dislocations about the proximal interphalangeal joint
- The Biosymmetric Frame can be applied to facilitate dynamic or static fixation
- Low profile frame design and wire minimize impingement of surrounding fingers
- Radiolucent frame with radiopaque markers provides precise guidance for the insertion of 0.045 smooth wires
- The ability to differentially distract or compress each side of the finger allows realignment of the joint after the application of the fixator is complete
- Two reusable instruments are used to adjust the Biosymmetric Fixator along the length and width of the frame, allowing considerable flexibility in patient application
- Can be used to provide initial stability for reconstructive procedures such as volar plate arthroplasty

The Biosymmetric™ PIP Fixator was developed in conjunction with Thomas J. Graham, M.D., and The Cleveland Clinic Foundation, Cleveland, Ohio.
Biosymmetric™ is a trademark of Biomet, Inc.

Biomet® Trigger Finger Release Knife

BIOMET® TRIGGER FINGER RELEASE KNIFE

- Simple technique provides percutaneous release of the A1 pulley
- “Straddle and cut” blade technology
- Procedure can be done in an office setting, saving time and cost
- Small 3mm incision
- Done under local anesthesia
- Cost effective
- Non-cutting lower skid does not penetrate the flexor tendon

Designed in conjunction with Michael J. Dunn of Long Branch, New Jersey, and Gary M. Pess, M.D., of Eatontown, New Jersey.

Humeral, Radial & Ulnar Nails

UNIFLEX® HUMERAL NAIL

- The strength and biocompatibility of titanium alloy
- Reamed or unreamed application
- Features a 5° proximal bend and Pathfinder™ Tip for ease of insertion
- Four proximal and two distal locking screws promote torsional control
- Two A/P and two M/L proximal screws provide intraoperative surgical latitude–one target arm for either A/P or M/L screw placement
- Stabilize very high shaft fracture
- Proven clinical results [1, 2, 3]

BIOMET® RETROGRADE HUMERAL NAIL

- The strength and biocompatibility of titanium alloy
- Enables fixation of humeral shaft fractures while avoiding postoperative shoulder symptoms
- Specifically designed instrumentation that allows safe preparation of the nail entry site in the distal humerus
- Proximal and distal interlocking using a nail mounted targeting device
- Features a 5° distal bend for ease of insertion
- Reamed or unreamed application
- Proven clinical results[4]

S.S.T.® SMALL BONE LOCKING NAIL for the FOREARM

- Reamed or unreamed application
- Readily treats the most complex fractures, non-unions, or osteoporotic bone
- Fully cannulated nails and screws simplify insertion
- Locks via unique optional fixator
- Closed technique reduces operative time, blood loss and minimizes tissues trauma
- One nail for the radius or ulna

[1]Blasier, R.B., Graham, T.J.: "Locking Intramedullary Nailing of Fractures of the Humeral Shaft." A Supplement to the *American Journal of Orthopaedics*, May 1996, Volume XXV, Number 5S.

[2]Blasier, R.B., et al.: "Biomechanical Analysis of Humeral Shaft Fractures Fixed With Intramedullary Nails." A Supplement to the *American Journal of Orthopaedics*, May 1996, Volume XXV, Number 5S.

[3]Moran, M.C.: "Antegrade Humeral Nailing." A Supplement to the *American Journal of Orthopaedics*, February 1998, Volume XXVIII, Number 2S.

[4]Moran, M.C.: "Retrograde Humeral Nailing," A Supplement to the *American Journal of Orthopaedics*, February 1998, Volume XXVIII, Number 2S.

Fracture Fixators & Plates

ULSON™ FIXATOR

- Promotes early range of motion while grip and strength are maintained
- The palmar angle is maintained
- Collapse of the radius is prevented
- No pin migration
- Less bulk than cast
- Angular stability of fracture
- Simple surgical procedure
- Inexpensive
- Excellent, reproducible clinical results[1,2,3]

MINI HAMMER™ FIXATOR

- Easy to use
- Light weight
- 64° flexion
- 360° rotation
- Allows anatomical joint to be exercised
- Compression or distraction of fracture
- Applied in either medical or dorsal positions

BECTON™ COLLES FRACTURE PLATE

- Excellent outcomes[4]
- Lower complication rate than external fixation[4]
- Better patient acceptance compared to external fixation
- Economical
- Simple procedure compared to external fixation
- Holes accept 2.7mm and 3.5mm screws

References:

[1]Becton, J.L., Colborn, G.L. and Goodrich, A.J.: "Use of an Internal Fixator Device to Treat Comminuted Fractures of the Distal Radius." *American Journal of Orthopaedics* 1998;9:619–623.

[2]Scheker L., et al.: "Management of Unstable Distal Radius Fractures Using the Ulson Device." ASSH 53rd Annual meeting Abstracts, September 1998.

[3]Martello J., et al.: "Management of Unstable Distal Radius Fractures Using the Ulson Device" ASSH 52nd Annual meeting Abstracts, September 1997

[4]Ulson, H.J.R. (1988): "Colles' Fractures combined Internal and External fixation." In Barton's (ED): *Fractures of the Hand and Wrist.* Churchhill-Livingston, 277-289.

Notes

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