Greetings,

AT DJO®, we’re pioneering technologies that challenge the status quo with the intention of increasing performance for you and your patients. We strive to exceed your expectations and exceed your needs as the market evolves. Our portfolios are Different by Design, and we invite you to explore our comprehensive Total Hip Arthroplasty portfolio in this brochure.

DJO’s hip ecosystem has at its core, products that are designed for any total hip procedure, created in collaboration with surgeons, utilizing relevant orthopaedic insights and trends, all supported by a well-trained salesforce. You’ll have the opportunity to learn about the anthropometric data we use in the research and development phase of an implant’s lifecycle, the clinical data on our proprietary ingrowth coating, as well as the surgical arm we’ve introduced to help reduce the number of assistants in the OR and put control back in your hands.

Our implant and instrumentation designs are supported by medical education programs that are tailored to your needs. SurgicalMedEd@djoglobal.com can be contacted for a full list of upcoming personalized educational opportunities.

We look forward to working with you!
EMPOWR Acetabular™ System

EMPOWR Acetabular™ is DJO’s modern, premium, intelligently designed acetabular system featuring advanced fixation technologies, efficient instrumentation, and a feature enabling future dual mobility offering. This system—combined with our femoral stem options which all have 12/14 robust micro-threaded trunnions—provides surgeons a comprehensive THA solution for all surgical approaches and settings.

P²™ Coating
Proprietary Titanium Porous coating by DJO Surgical®, is the first porous coating in the world wherein the non-spherical bead itself is also porous—giving it its name, P²™. This coating is proven to show disappearance of zone 2 radiolucent lines at one year follow up signifying osseointegration.

Efficient Instrumentation
EMPOWR Acetabular™ System has the ability to be implanted with just ONE TRAY resulting in as much as 50% in space and sterilization cost savings compared to some systems in the market. Instrument efficiency makes this system ASC ready for surgeons seeking cost minimization opportunities.

Enhanced Screw Impants & Instruments
Screw features allow for 24° angulation and screw geometry ensures flush seating. The instrumentation has the ability to access tighter space and advance drill bit easily with reduced chances of tissue damage at the incision.

Anatomically Optimized Design
Created using a virtual patient pelvic model derived from over a hundred CT scans, and analyzing bone thickness using a heat-map analysis (Red=Thick Bone; Green=Thin Bone). Insights from these analyses were leveraged to strategically place screw holes in the pelvic region with the thickest amount of bone to aid in maximal bone purchase.

Advanced Liner Locking Mechanism
Definitive visual and tactile confirmation of fully seated condition (see Figure 1). Locking features have been extensively tested to establish correct tolerances without compromising on the poly thickness (Poly Thickness at the dome: 5.3mm).

HXe+™ Liners
Highly-crosslinked, designed for ball and socket kinematics, and are blended with vitamin E (see Figure 1). In lab testing, these poly bearings have been demonstrated to significantly reduce oxidation and long-term wear.

Figure 1
**TaperFill® Stem**

TaperFill® is the first anatomically congruent, tri-taper stem designed from anthropometric data for improved stability. With instruments designed for the DAA and stem features such as a reduced lateral shoulder, curved distal tip and proprietary P²™ ingrowth coating, TaperFill® has been a preferred stem of choice by DAA surgeons since its introduction.

**Proximal AP Taper**
A 12° proximal taper (1) is designed to provide fixation and rotational stability through increased surface area contact with cortical bone structures.

**Reduced Distal Taper**
A 4° distal taper (2) is designed to reduce the possibility of stress shielding and helps account for proximal/distal mismatch.

**ML Taper**
The ML taper (3) of the TaperFill stem is identical to DJO’s Linear® Hip stem which has demonstrated over 20 years of clinical history.

**Standard and Lateral Offsets**
Direct lateralization of the neck allows for increased soft tissue tension without increasing leg-length.

**Anthropomorphic data** constructed from CT scans, were used to determine the stem design.

8mm Reduced neck geometry designed for increased ROM
4° Reduced lateral shoulder for ease of insertion
12° Proximal AP taper for enhanced stability
20+ year clinical history
EasyLead™ Distal Tip protects bone and facilitates final positioning
-1σ 21.2
μ 27.5
+1σ 26.5
Origin™ Stem

A hydroxyapatite (HA) coated cementless implant with compaction broaching system and a streamlined instrument set. The design of this stem is based on the clinically successful principles of the CORAIL® system that has been successfully utilized in the US for over 30 years, implanted in over 2 million patients.10

Versatile

Three Collared Offset Options in one system to restore biomechanics. 135° Collared and Non-Collared in Standard and Lateral offsets as well as a Collared Coxa Vera option with a 125° neck angle.

Compaction Broaching Philosophy
Created with the intent of preserving more blood supply compared to traditional rasping. Based on the clinically successful geometry, material and compaction broaching technique originated by the ATROS Group.10

Hydroxyapatite Coating (HA Coated Ti6Al4V) designed to promote osseointegration and stability.

Clinical Data
In a recent Journal of Arthroplasty study, Origin™ had “statistically significant lower postoperative periprosthetic fracture rate than TaperLoc®” with an experienced surgeon over a two year period following a transition to the Origin stem system.11
Linear® Stem

The Linear® is a versatile hip system with a 20+ year clinical history that incorporates a reduced lateral shoulder, proximal fixation, and reduced distal geometry designed to provide a stable implant for multiple surgical approaches.

Reduced Proximal Lateral Design
The proximal lateral shoulder of the Linear hip is reduced, which helps facilitate the implantation of the stem and helps to avoid varus implant positioning.

P²™ Fixation Technology
Metaphyseal fit with rotational stability is key to the survivorship of flat wedge stems. Linear®’s design includes a 6° proximal taper in addition to P²™ porous coating designed to provide a locking, proximal fit.
EXPRT® Revision Stem

A premium, streamlined implant at a reinvented price point.
A full-line, modular femoral stem inspired by the clinical success of Wagner style predecessors. The system’s intuitive design and premium quality is based on extensive research and development that redefines revision arthroplasty by offering an anatomically-inspired design that has an emphasis on efficiency and strength.

Efficiency and What it Means for You:
EXPRT Revision Hip is a 2 tray revision system resulting in an 80-90% reduction in instruments compared to competitive systems. Streamlined instrumentation means less money and time spent on sterilization, less overall time in the operating suite, and less storage space.

An Emphasis on Strength
EXPRT Revision Hip tapers are shot peened, larger than competitors’ tapers, and can withstand fatigue loading without failure at 1,000 lbf for 5 million cycles with the worst case construct.

Case Study
Gregory Polkowski, M.D. Vanderbilt University
Revision Cause:
- Complex primary total hip for chronic femoral neck fracture nonunion.

EXPRT® Revision Hip benefits in this case:
- Variable body height allowed fine tuning.
- Being able to dial in femoral anteversion was key.
- Short stem (130mm) was helpful in preserving more bone.
EVOLVE™ Stem

Proven Design.
The Evolve™ stem is a highly polished, High Nitrogen Stainless Steel (ISO5832-9) dual tapered cemented stem based on the clinically successful design principals originated in Exeter, UK.

This geometry creates compressive radial loading, designed to reduce friction between the cement and implant.

Versatile
Primary, Fracture, and Revision capabilities within one system. The collarless neck helps to facilitate intraoperative adjustments and four offset options to restore biomechanics, allowing independent fine adjustments of leg length, offset, and femoral fill.

Legacy
A study in Clinical Orthopaedics and Related Research looked at the differences between the two methods of fixation in the +75yrs patient category. Early revision was 9.14 times more common in the best three cementless stems than in the best three cemented stems. The Evolve System honors the design classification similar to the best three performing cemented stems in this study.
Revelation® microMAX™ Stem

This stem geometry is based on a more complete understanding of hip joint biomechanics and bone morphology. MicroMAX’s lateral flare geometry is developed to mimic physiologic distribution of biomechanical loads by loading both lateral and medial cortices. 24

Stability
Designed to fit the metaphyseal area closely to maximize stability and provide physiologic load transfer and resulting stability. 24

Anatomic Design
The lateral flare, anterior prominence and flat posterior face engage the cortical walls of the intertrochanteric region to combat subsidence and resist de-stabilizing forces in multiple planes. 24

“This would create an internal collar which would provide the means to transfer load to the entire proximal perimeter of the femur (Gruen zones 1 and 7). As such the component could rest on the entire femur, distributing load both medially and laterally in a more physiologic fashion” 24 (rest fit vs. press fit).

Advances in Orthopedics Volume 2019, Article ID 5804642

“Unlike prior stem designs which demonstrate stress shielding, diaphyseal hypertrophy, thigh pain, subsidence, and occasional fracture on insertion, the ‘lateral flare’ stem design has minimized these adverse outcomes. Lateral flare stems have demonstrated preservation of >95% bone stock in proximal Gruen zones 1 and 7, less than 0.5 mm subsidence; no fracture on insertion of the stem when employing a ‘rest fit’ rather than press fit insertion technique; and no thigh pain.” 24-28
DJO® and a New Era for the DAA

The Direct Anterior Approach has been the fastest growing THA approach for more than the last decade.29 DJO® has stayed ahead of the curve by developing training, tools, implants, and instrumentation with the DAA in mind.

Medical Education

Personalized training tailored to your needs featuring hands-on cadaveric opportunities with experienced DAA Faculty. Contact ADVANCE@djoglobal.com for upcoming training opportunities.

ADAPTABLE™

The first fully sterile, surgeon-controlled leg and retractor holder designed for a safe DAA.

DAA Specific Instrumentation

DJO’s DAA specific retractors feature:
- Dual Curves to help reduce compression forces on the soft tissue while maximizing the wound opening.
- Deep working ends to accommodate patients with increased BMI.
- Length to keep hands out of the operating area.
- Holes at the end of retractors to combine with the ADAPTABLE retractor holder.

DAA Friendly Implants

With a wide variety of DAA friendly stem implant designs, DJO has many options that can be utilized through a minimally invasive incision.
A Mobile Solution
• Fully mechanical, lightweight, with a sleek carbon fiber design.
• Easy to setup, transport, and store.
• A fraction of the size of a traditional specialty table.

A Versatile Platform
• Optimized for the outpatient setting.
• A 2-in-1 efficient DAA Solution facilitating retractor placement and leg positioning for acetabular and femoral exposure.
• This allows the surgeon to perform a manual leg length assessment, as well as range of motion and impingement checks.

Gives You Total Control
• The first fully sterile, surgeon-controlled leg and retractor holder designed for a safe DAA.
• Helps decrease risks associated with undertrained or unauthorized staff running the specialty table.
• Can improve OR economy by better utilizing existing staff in the OR.
• Opportunity for a solo-DAA™ by optimizing OR headcount.
References

1. Pipeline product currently under development. Not available for sale.


5. As compared to instrumentation in FMP system, with flexible shaft driver (803-05-239) and non-bowed drill guide (803-05-005). Data on file at DJO® - PR18-033-01 (9Nov2018)


8. Data on file at DJO Global. Laboratory testing does not necessarily indicate clinical performance.


19. Exeter® is a registered trademark of Stryker®


29. AAHKS survey 2018

Trademarks

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