

A proud heritage

Since 1977, the gold standard for bone ingrowth fixation has been the clinically proven Porocoat® porous coating.

The press-fit provided by Porocoat® porous coating provides immediate implant stability and fast bone-to-implant bonding.

It has been shown to enable deep bone ingrowth for secure fixation which has been proven by excellent survivorship rates of 95.3% at 15 years (AML® Cup)¹, 100% at 10 years (Duraloc® 300 Cup)² and 99.9% at 5 years (Pinnacle® Cup)³.

Changing Requirements

We are pioneers

We are innovators

We are visionaries

As orthopaedic technologies have improved and total hip arthroplasty has become widely accepted as a life-changing surgical intervention, patient expectations for prolonged mobility and implant durability have increased. Whilst the incidence of patients presenting with indication for total hip replacement may increase, the demands and expectations of arthroplasty patients are also changing as they seek earlier surgical intervention to regain an active life.

Building on the strong foundations of Porocoat® coating and with the aim of delivering the next generation of coating technology, Gription™ porous coating technology delivers a new benchmark in cementless fixation.

GRIPTION™

References

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3. Kindsfater K et al. "99.9% Midterm Survival of the Pinnacle® Multiliner acetabular Cup in a prospective Multi center Study" Poster presentation P077, AAOs San Diego, CA February 14-18, 2007.
4. Bobyn, J.D. et al.: The Optimum Pore Size for the Fixation of Porous-Surfaced Metal Implants by the Ingrowth of Bone. Clin Orthop Rel Res 1980;150:263-270.
5. Karageorgiou V, et al.: Porosity of 3D biomaterial scaffolds and osteogenesis. Biomaterials 2005;26:5474-91.
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7. DePuy Internal Test Report: WR070146; 06/2007.
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Revised: 08/10

GRIPTION™

Porous Coating Technology

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GRIPTION™

Building on a great Heritage

DePuy Gription™ Porous Coating is an evolutionary development in implant fixation technology. This advanced, three-dimensional fixation is designed to maximise initial stability, which leads to long-term biological fixation. Gription™ technology emulates the reliable foundation of DePuy Porocoat® Porous Coating, which has more than 30 years of clinical heritage.⁴

For Demanding Patients

Gription™ coating provides best fixation properties for atypical primary patients who suffer from a disease state that complicates fixation, or traditional revision patients. It also satisfies the needs of exceptionally demanding patients with a high activity level where immediate fixation against the deficient host bone is required.

With Demanding Conditions

While initial stability and long-term fixation are key elements of Gription™ coating's three dimensional structure, they would not be complete without the strength of the porous matrix itself. Gription™ coating is specifically developed to maintain mechanical integrity under extreme compression forces and provide better fixation in complex and demanding conditions.

Engineered Pore Structure

Gription™ coating is manufactured using the same proven processing parameters as used in Porocoat®, which delivers a clinically established pore size of 300 microns and 63% porosity.^{1,2,3}

Ingrowth Strength of 3D Structure

As the distance from the substrate to the bone interface increases, the pore size and porosity also increases. This allows rapid, deep biological bone in-growth designed to provide longer lasting and more secure cup placement (Figure 1).⁵

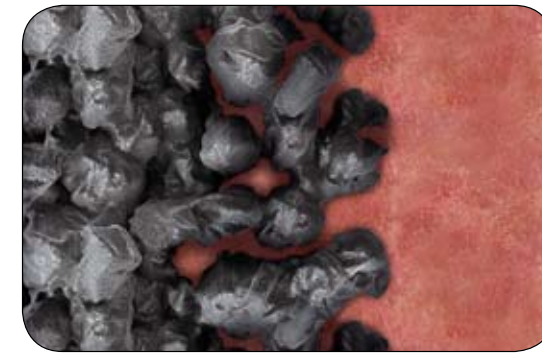


Figure 1. The volume of porosity increases as the distance from the cup surface increases

Multi Layered Coating

A combination of macrotexture and microtexture topographies provides a favourable mechanical loading environment for bone reconstitution that enables greater cell adhesion and proliferation compared to traditional porous coatings.

Coefficient of Friction and Initial Stability

Gription™ coating provides a 1.2 coefficient of friction which is a substantial improvement over plasma spray coating and a 36% improvement over a contemporary tantalum cementless interface (Figure 2). This ensures improved initial stability and "scratch fit" upon implantation.^{6,7}

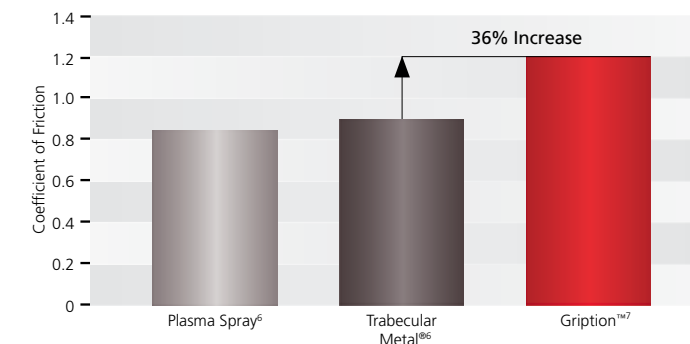
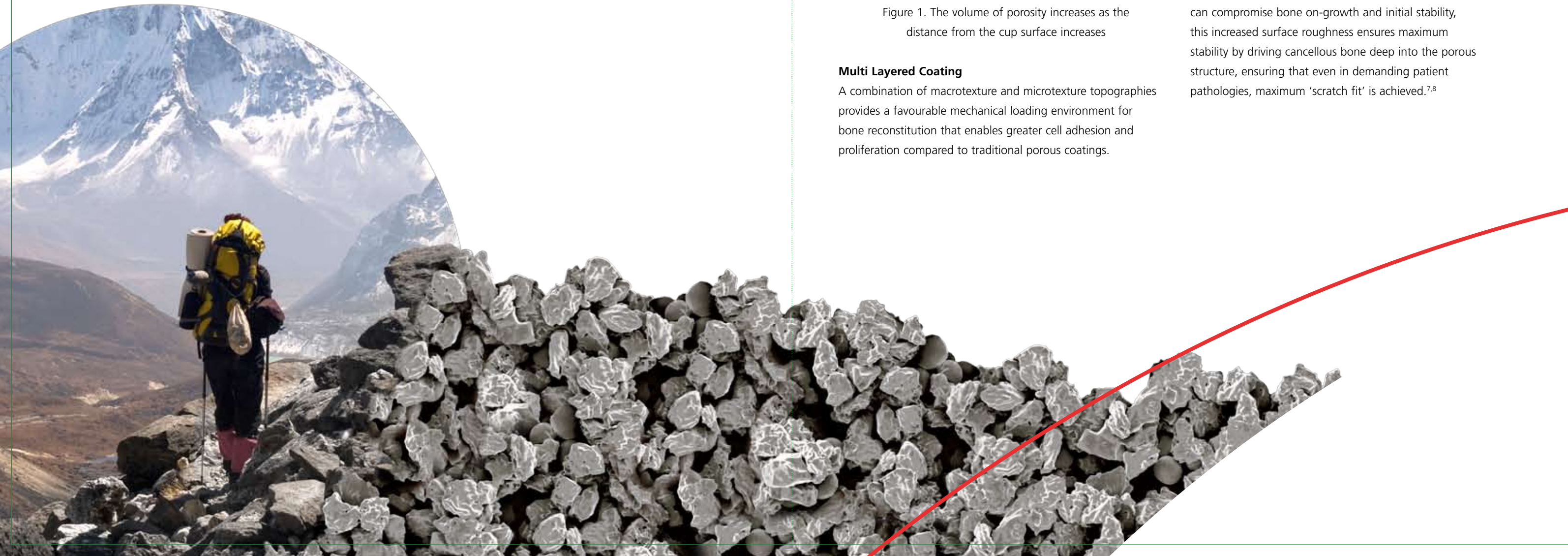


Figure 2

Coefficient of Friction and Clinical Benefits

Gription™ technology has demonstrated an industry-leading coefficient of friction (Figure 2). As excess micromotion can compromise bone on-growth and initial stability, this increased surface roughness ensures maximum stability by driving cancellous bone deep into the porous structure, ensuring that even in demanding patient pathologies, maximum 'scratch fit' is achieved.^{7,8}





PINNACLE[®]
HIP SOLUTIONS

Featuring

GRIPION™

Technology

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 **DePuy**
companies of *Johnson & Johnson*

Ordering Information



Size	100	Sector	Standard	Deep Profile	Multihole
44 mm	1217-31-044	N/A	N/A	N/A	N/A
46 mm	1217-31-046	N/A	N/A	N/A	N/A
48 mm	1217-31-048	1217-32-048	N/A	N/A	1217-30-048
50 mm	1217-31-050	1217-32-050	N/A	N/A	1217-30-050
52 mm	1217-31-052	1217-32-052	N/A	N/A	1217-30-052
54 mm	1217-31-054	1217-32-054	1217-16-054	1217-17-054	1217-30-054
56 mm	1217-31-056	1217-32-056	1217-16-056	1217-17-056	1217-30-056
58 mm	1217-31-058	1217-32-058	1217-16-058	1217-17-058	1217-30-058
60 mm	1217-31-060	1217-32-060	1217-16-060	1217-17-060	1217-30-060
62 mm	1217-31-062	1217-32-062	1217-16-062	1217-17-062	1217-30-062
64 mm	1217-31-064	1217-32-064	1217-16-064	1217-17-064	1217-30-064
66 mm	1217-31-066	1217-32-066	1217-16-066	1217-17-066	1217-30-066
68 mm	N/A	N/A	1217-16-068	1217-17-068	1217-30-068
70 mm	N/A	N/A	1217-16-070	1217-17-070	1217-30-070
72 mm	N/A	N/A	1217-16-072	1217-17-072	1217-30-072
74 mm	N/A	N/A	1217-16-074	N/A	N/A
76 mm	N/A	N/A	1217-16-076	N/A	N/A
78 mm	N/A	N/A	1217-16-078	N/A	N/A
80 mm	N/A	N/A	1217-16-080	N/A	N/A

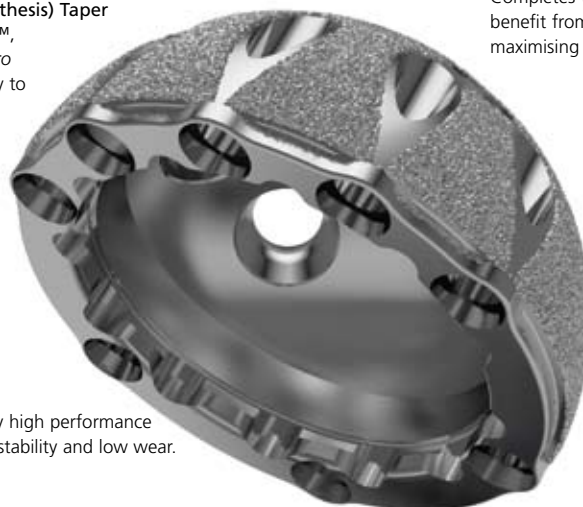
Key Features and Benefits

Pinnacle® Hip Solutions leads through innovation, proven tribological solutions and a complete offering including innovative bearing combinations such as CoMplete.

Patented VIP (Variable Interface Prosthesis) Taper
Advanced modularity Accepts Ceramax™, Ultamet™ and Marathon™ inserts Macro and microstability Locks the insert tightly to the cup.

Dome design
Delivering maximised polyethylene congruency.

Enhanced stability
Accepts range of DePuy high performance bearings for optimised stability and low wear.



Optimised function

Completes the Pinnacle® portfolio ensuring that patients benefit from DePuy's High Performance Bearing range, maximising range of movement.

ARDs (Anti Rotation Devices)

Polyethylene inserts feature a rim that locks the liner securely into the Pinnacle® shell.

GRIPTION® Fixation Technology

Provides an advanced, three-dimensional fixation which is designed to maximise initial stability, that leads to long-term biological fixation.

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TRI·LOCK®
BONE PRESERVATION STEM



Featuring

GRIPTION™

Technology

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Ordering Information

Size	Standard Offset	High Offset
0	1012-04-005	1012-14-005
1	1012-04-010	1012-14-010
2	1012-04-020	1012-14-020
3	1012-04-030	1012-14-030
4	1012-04-040	1012-14-040
5	1012-04-050	1012-14-050
6	1012-04-060	1012-14-060
7	1012-04-070	1012-14-070
8	1012-04-080	1012-14-080
9	1012-04-090	1012-14-090
10	1012-04-100	1012-14-100
11	1012-04-110	1012-14-110
12	1012-04-120	1012-14-120

Key Features and Benefits

Threaded insertion feature
Provides excellent stem control during insertion

12/14 Articul/eze® taper
Maximises range of motion and is designed to eliminate taper to cup impingement

Reduced lateral shoulder
Designed to preserve greater trochanter and enhance stem insertion through a minimally invasive approach

Progressive dual offsets with direct lateralisation
Designed to restore the natural anatomy and provide biomechanical stability

GRIPTION™ Fixation Technology
Provides consistent implant seating height and additional initial stability

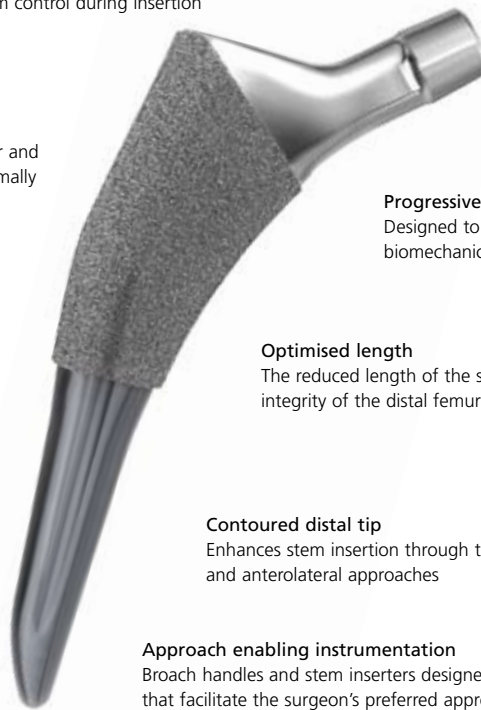
Optimised length
The reduced length of the stem maintains the integrity of the distal femur

Reduced distal M/L width
Allows for proper proximal cortical contact and loading in DORR Type A femurs

Contoured distal tip
Enhances stem insertion through the anterior and anterolateral approaches

Extensive size range
Standard and high offsets offered in all sizes, 0-12. Consistent intervals between sizes help achieve proper fit and proper leg length

Approach enabling instrumentation
Broach handles and stem inserters designed with geometries that facilitate the surgeon's preferred approach



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