20th SMR
>2002ANNIVERSARY2022<

Lima Corporate
Orthopaedic motion

BALANCED
by design

MODULARITY, FIXATION, PERFORMANCE

Balanced by design since 2002

Each individual clinical case requires
a **tailored solution**.

A **BALANCED** shoulder replacement system should empower surgeons to work well within each patient soft tissues' condition, aiming to minimize the risk of instability and dislocation.

LimaCorporate continues to innovate and progress digital technology to transform orthopedics.
It has launched the world first ever modular shoulder platform system that supports surgeons to achieve a **BALANCED, PERFORMING** and well **FIXED** joint replacement for each individual patient.

Leveraging our italian design and engineering heritage, we continue to achieve pioneering milestone developements in orthopedics, continually **EVOLVING** the original shoulder platform system.[1]

SMR
MODULAR SHOULDER REPLACEMENT

2002
SMR launch based on *Sistema Randelli* shoulder platform legacy[1]

2005
First all-poly glenosphere for RSA

Trabecular *Titanium*

2007
First 3D printed orthopedic implants

ODEP 10A

2017
First RSA to receive ODEP 10A rating[16]

3D

2021
First hospital 3D manufacturing facility

EVOLVED MODULARITY
DESIGNED FOR YOUNG, DEMANDING ACTIVE PATIENTS.

SMR 3-Pegs Cemented Glenoid

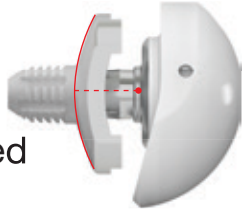
Designed for primary TSA cases, includes 4 sizes to match most of the glenoid surfaces.

The proven survivorship of this implant has been awarded with a **ODEP 10A**'s rating.

ODEP 10 A

SMR Stemless

Innovative solution in bone preserving implants, combining advanced modularity and **T*T*** technology.
Convertible stemless system since 2015



SMR Lateralized Connectors

A simple solution in cases where additional sphere lateralization is required during shoulder arthroplasty.
Allows lateralization from 5 to 10mm from glenoid surface

SMR Humeral Body

Depending on each clinical case, surgeons can choose between 140° and 150° humeral neck-shaft angle, with the aim of maximising the arch of motion of the shoulder.
3 versions, (HA-coated, Fracture, Short) are available for both inclincations.

EVOLVED MODULARITY
ONE SHOULDER SYSTEM FOR HA, TSA, RSA & FRACTURES

SMR

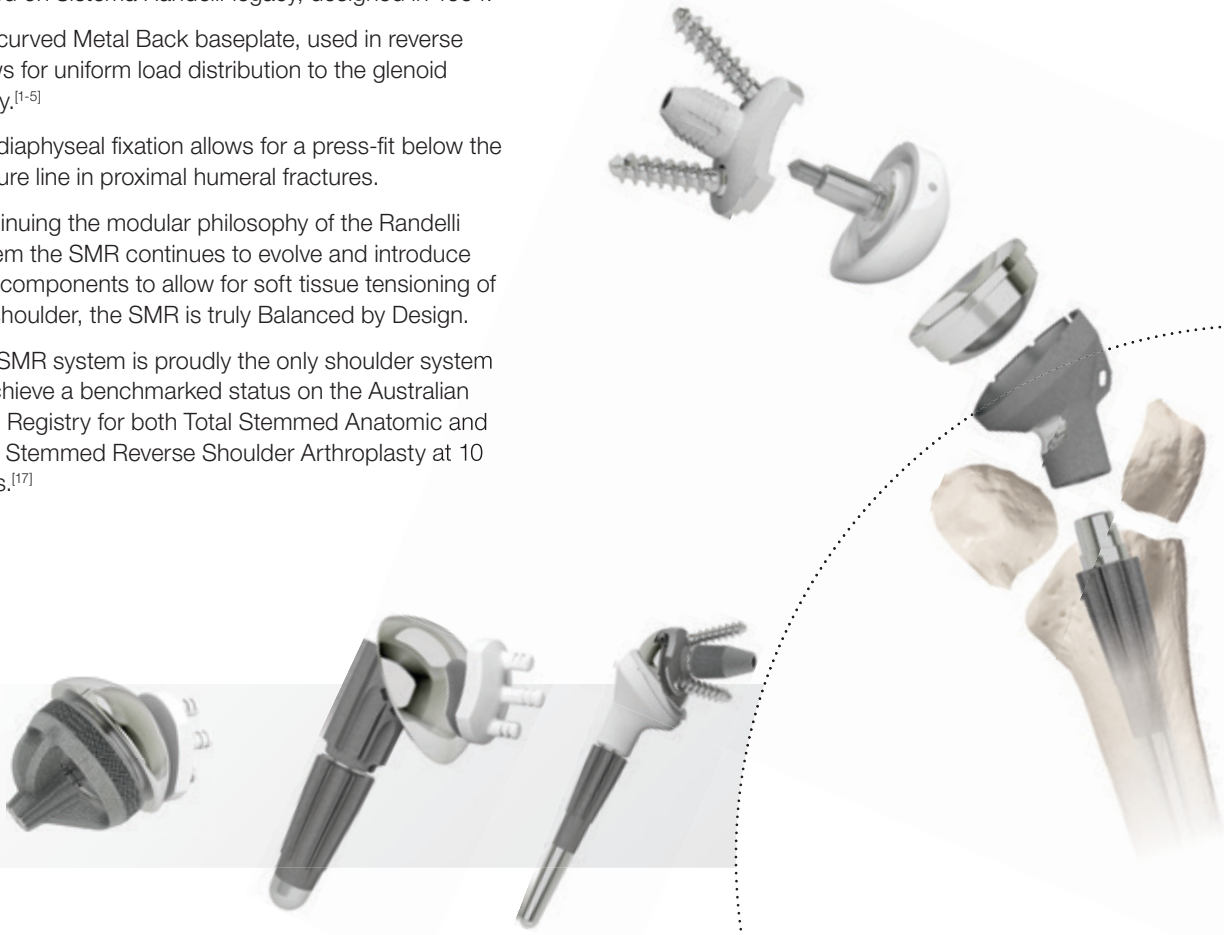
Based on *Sistema Randelli* legacy, designed in 1994.

The curved Metal Back baseplate, used in reverse allows for uniform load distribution to the glenoid cavity.[1-5]

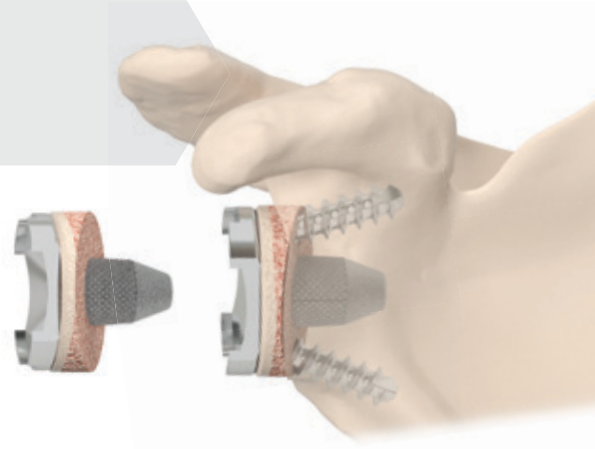
The diaphyseal fixation allows for a press-fit below the fracture line in proximal humeral fractures.

Continuing the modular philosophy of the Randelli system the SMR continues to evolve and introduce new components to allow for soft tissue tensioning of the shoulder, the SMR is truly Balanced by Design.

The SMR system is proudly the only shoulder system to achieve a benchmarked status on the Australian Joint Registry for both Total Stemmed Anatomic and Total Stemmed Reverse Shoulder Arthroplasty at 10 years.[17]



EVOLVED MODULARITY
REVISION AND COMPLEX CASES



SMR TT Metal Back
Bone Grafting Instrumentation

A step-by-step guided procedure allows the surgeon to produce different sizes of bone graft according to the clinical case. T*T* Metal Back with bone-graft provides a reliable method of adressing glenoid bone defects in revision and primary TSA.[8,15]
95% of the T*T* pegs showed total or > 50% integration on CT scans.[15]

PROMADE

A Dedicated Engineering Design Service

Collaborating with surgeons to develop truly bespoke solutions for complex orthopedic reconstructions, by harnessing over 14 years of know how in 3D printing. Aiming to: Enhance Primary Stability, Provide more physiological load transfer, Allow a biomechanical restoration.[6,7,11-13,15]

ProMade devices require regulatory approval.

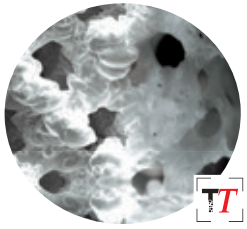
"Bone Ingrowth reported for Trabecular Titanium in Cortical Bone has increased from 10.2% at 4 weeks to 50.5% at 52 weeks.[13]"

Stability with defect, matching shapes.

Coracoid and acromial stabilizers.

Engineered modulus for natural load transfer.[8-9]

Scratch fit with macro/micro roughness.



Proven osteoconductivity and osteoinductivity.[5-7]

Lima Corporate
Orthopaedic motion

Scan the QR code

Lima Orthopaedics Australia Pty Ltd
Unit 1, 40 Ricketts Rd
Mt Waverley 3149
Victoria Australia
T +61 (03) 9550 0200
F +61 (03) 9543 4003
limaortho.com.au

Limacorporate S.p.A.
Via Nazionale, 52
33038 Villanova di San Daniele del Friuli
Udine - Italy
T +39 0432 945511
F +39 0432 945512
info@limacorporate.com
limacorporate.com

Proven Performance | Bibliography

[1] Castagna A., Randelli M., Garofalo R., Maradei L., Giardella A., Borroni M. Mid-Term results of a metal-backed glenoid component in total shoulder replacement. J Bone Joint Surg [Br], 92(10): 1410-1415, 2010

[2] Young S.W., Everts N.M., Ball C.M., Astley T.M., Poon P.C. The SMR reverse shoulder prosthesis in the treatment of cuff-deficient shoulder conditions. JSES, 18(4): 622-626, 2009

[3] Poon P.C., Chou J., Young D., Malak S. F., Anderson I.A. Biomechanical evaluation of different designs of glenospheres in the SMR reverse shoulder prosthesis: micromotion of the baseplate and risk of loosening. Shoulder & Elbow, 2: 94-99, 2010

[4] Bloch HR, Budassi P, Bischof A, Agneskirchner J, Domenghini C, Frattini M, Borroni M, Zoni S, Castagna A. Influence of glenosphere design and material on clinical outcomes of reverse total shoulder arthroplasty. Shoulder & Elbow 2014;6:156-64.

[5] Maccioni CB, Sonnabend D. Metal-backed glenoid prostheses. Shoulder & Elbow. 2013 Oct;5(4):217-20.

[6]* Marin E, Fedrizzi L, Regis M, Pressacco M, Zagra L, Fusi S. Stability Enhancement Of Prosthetic Implants: Friction Analysis Of Trabecular Titanium. Hip Int. 2012;403:427-8.

[7]* Gastaldi G, Asti A, Scaffino MF, Visai L, Saino E, Cometa AM, Benazzo F. Human adipose–derived stem cells (hASCs) proliferate and differentiate in osteoblast–like cells on trabecular titanium scaffolds. J Biomed Mater Res A. 2010 Sep;94(3):790–9.

[8] Granville-Chapman J, Copas D, Robinson S, Walton M, Bale RS, Trail IA. The First Series of SMR AXIOMA-TT Early Experiences with an Innovative Trabecular Titanium Implant for Complex Glenoid Reconstruction. Shoulder & Elbow 2015;7(4):318-9.

[9] Mohammed K. Polyethylene and metal black glenoids in conventional total shoulder arthroplasty: New Zealand joint replacement registry experience. J Bone Joint Surg Br. 2012;94-B(Suppl XXI):56.

[10] Mohammed K, Slaven A. Reliable osteointegration of a metal back glenoid in conventional total shoulder arthroplasty at minimum 3 years follow up. J Bone Joint Surg Br. 2012;94-B(Suppl XXI):57.

[11]* Sollazzo V, Massari L, Pezzetti F, Girardi A, Farinella F, Lorusso V, Burelli S, Bloch HR, Carinci F. Genetic effects of Trabecular Titanium™ on MG-63 cell line: a genetic profiling evaluation. ISRN Mater Sci. 2011:392763.

[12]* Asti A, Gastaldi G, Dorati R, Saino E, Conti B, Visai L, Benazzo F. Stem Cells Grown in Osteogenic Medium on PLGA, PLGA/HA, and Titanium Scaffolds for Surgical Applications. Bioinorg Chem Appl. 2010:831031.

[13]* Devine D, Arens D, Burelli S, Bloch HR, Boure L. In vivo evaluation of the osteointegration of new highly porous Trabecular Titanium™. J Bone Joint Surg Br. 2012;94-B(Suppl XXXVII):201.

[14] Kirsch JM, Khan M, Thornley P, Gichuru M, Freehill MT, Neviaser A, Moravek J, Miller BS, Bedi A. Platform shoulder arthroplasty: a systematic review. J Shoulder Elbow Surg. 2018 Apr;27(4):756-763. doi: 10.1016/j.jse.2017.08.020. Epub 2017 Oct 16.

[15] Malhas AM, Granville-Chapman J, Robinson PM, Brookes-Fazakerly S, Walton M, Monga P, Bale S, Trail I. Reconstruction of the glenoid using autologous bone-graft and the SMR Axioma TT metal-backed prosthesis. Bone Joint J 2018; 100-B:1609-17.

[16] 10A ODEP rating refers to the SMR Reverse combination of metal back glenoid, cementless humeral stem, and metal glenosphere. Latest ODEP ratings can be found at www.odep.org.uk

[17] Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR). Hip, Knee &Shoulder Arthroplasty Annual Report 2023 - [Accessed Online 10/10/23]

* Results from Pre-clinical studies

B.1304.83.01F.1 122300

limacorporate.com