

# Long-term clinical experience with the philosophy of elastic monoblock cups

1973

RM Classic non-coated



1983

RM Classic particle coated



2002

RM Pressfit UHMWPE



2009

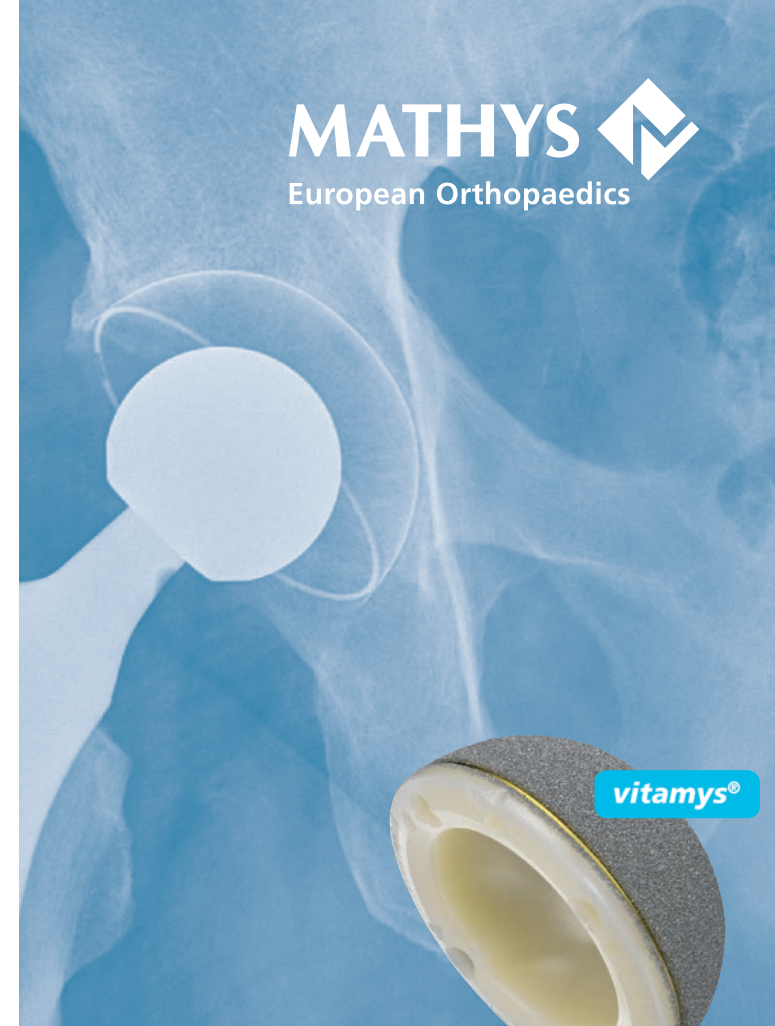
RM Pressfit vitamys®



## References

- 1 Ihle M et al. The results of the titanium-coated RM acetabular component at 20 years: A long-term follow-up of an uncemented primary total hip replacement. *J Bone Joint Surg Br.* 90(10) 2008:1284-90
- 2 Oonishi et al. The effects of polyethylene cup thickness on wear of total hip prostheses. *J Mater Sci Mater Med.* 1998 Aug;9(8):475-8.
- 3 Wyss T, et al, Five-year Results of the Uncemented RM Pressfit Cup Clinical Evaluation and Migration Measurements by EBRA, *J Arthroplasty* (2013), <http://dx.doi.org/10.1016/j.arth.2012.11.004>
- 4 Lafon L, et al. Cementless RM Pressfit Cup. A clinical and radiological study of 91 cases with at least four years follow-up. *Orthop Traumatol Surg Res* (2014), <http://dx.doi.org/10.1016/j.otsr.2014.03.007>
- 5 Beck M et al. Oxidation prevention with vitamin E in a HXLPE isoelastic monoblock pressfit cup: Preliminary results in Knahr K (Ed.), *Total Hip Arthroplasty*, Springer Press, 2012

MATHYS   
European Orthopaedics



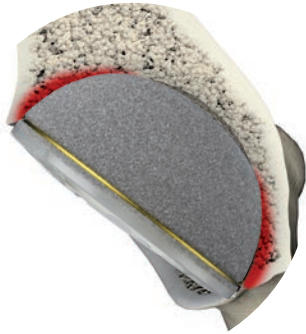
# RM Pressfit & RM Pressfit vitamys®

Uncemented monoblock acetabular cup

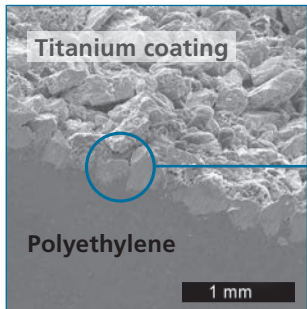
# Innovation based on clinical evidence

## Design

Uncemented pressfit primary fixation



Single Titanium particle coating – osseointegration and durable secondary stability



Short and simple – easy to use with few surgical steps and instruments

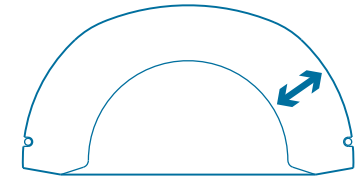
## Reduction of stress shielding

Elasticity similar to human bone

	Density [g/cm <sup>3</sup> ]	E modulus [N/mm <sup>2</sup> ]	Tensile strength [N/mm <sup>2</sup> ]
Bone	0.2–2	500–6000	10–150
UHMWPE	0.94	1000	35
vitamys	0.94	800	37
Titanium	4.5	105000	> 400

## Reduction of wear and osteolysis

Maximum possible polyethylene thickness for low wear rates<sup>2</sup>



Low wear rates reported for RM Pressfit UHMWPE cups<sup>3,4</sup>

vitamys® – improved wear behaviour and ageing resistance with vitamin E stabilized highly crosslinked polyethylene<sup>5</sup>

Based on the proven concept of the elastic RM Classic Cup with excellent 20y long-term clinical results<sup>1</sup>



94.4% survival

Wear rates of different material combinations (Hip simulator test: 5 mio cycles, protein content 30g/l)

