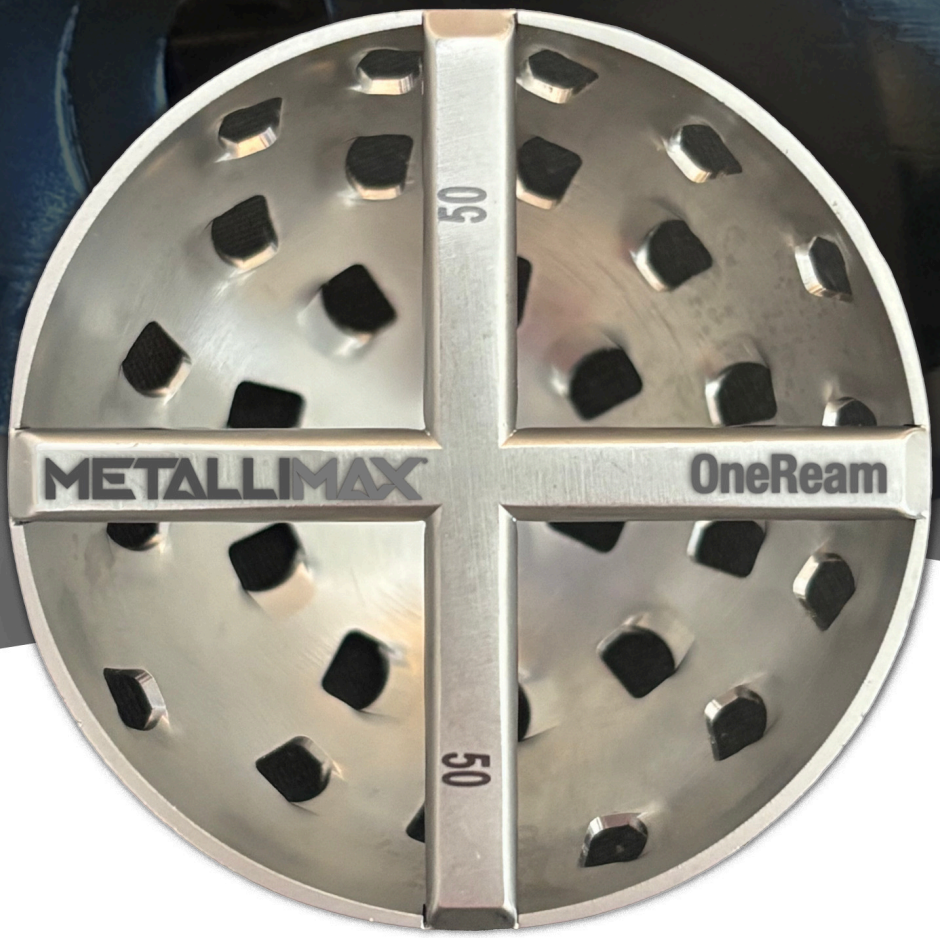
METALLIMAX®

OneReam® Acetabular Reaming System



REAM ONCE. REAM RIGHT.

PURPOSE-BUILT FOR SINGLE-REAM ACETABULAR PREPARATION

15 SIZES · 44–58 MM · ±250 MICRONS

Instructions for use are available at www.metallimax.com/downloads.

Rev. 1 · 10-2026

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KNOWN PROBLEMS OF OVERUSED REAMERS

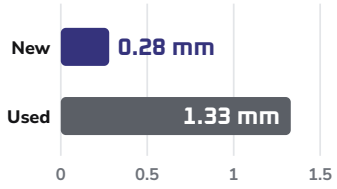
Published research shows the high cost of worn acetabular reamers: shallower cuts, smaller cavities, more force, more heat.[1–4]

DIAMETER

−1.33 mm

Smaller diametrical ream cavity than the stated reamer size, on average, with used reamers.[1]

Smaller Diametrical Ream Cavity
Average, mm



Bars drawn to scale

64 of 78

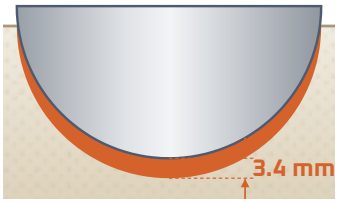
Off size: reamers from five hip systems did not cut to their stated size.[2]

DEPTH

−3.4 mm

Shallower ream depth with used reamers at the same surgeon-level force and time (3.9 vs 0.5 mm).[3]

Used reamer cut Same force & time
3.4 mm left unreamed



Drawn to scale, 52 mm reamer

95–318%

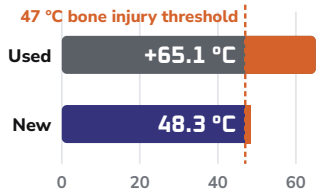
More force: needed by used reamers to approach the same depth, even with twice the reaming time.[3]

HEAT

+65.1 °C

Average temperature reached by used reamers at new-reamer depth, above the 47 °C threshold for thermal bone injury.[3,4]

Temperature at the same depth
Average, °C



Bars drawn to scale

47 °C · 1 min

Bone injury: observed in animal studies at 47 °C for 1 minute.[4]

Bench and animal studies of generic new vs used reamers; not studies of OneReam.

The answer: one sharp, true-to-size Grater.

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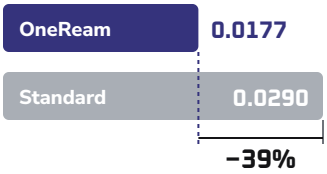
A SMOOTHER, CLEANER CUT

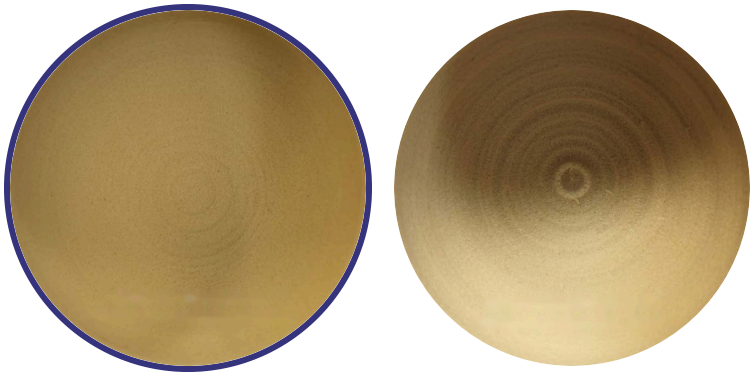
Smoother Cavity Finish

The OneReam® tooth design left a **smoother cavity finish** than a standard crossbar reamer, a **statistically significant** difference in bench testing.*[6,7]

39%

lower average residual ridge height*





OneReam tooth design* **Standard crossbar reamer**

52 mm cavities in 30 PCF Sawbones

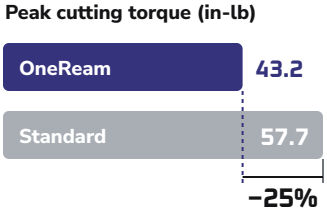
Lower Peak Cutting Torque

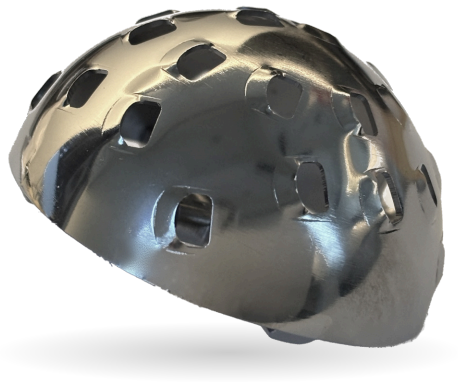
A **statistically significant** reduction in bench testing, with **10.5% lower average torque** too (21.3 vs 23.8 in-lb).*[5,7]

Lower torque may mean smoother handling and less physical strain for the surgeon.[7]

25%

lower peak cutting torque*





OneReam Acetabular Grater

** Bench data from a reamer with cutting-tooth geometry, orientation and spiral arrangement identical to OneReam's, vs a standard crossbar reamer (52 mm, 30 PCF Sawbones).[5-7] Bench results may not predict clinical performance. Cavity photos: manufacturer data, Figures 6–7.[7]*

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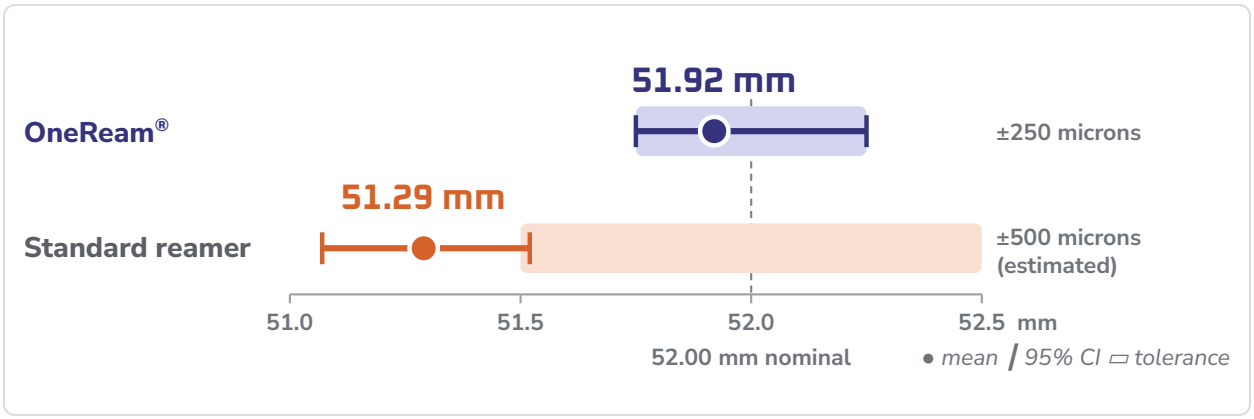
TRUE TO SIZE

±250 microns
DIAMETRICAL TOLERANCE

143 cycles
STILL WITHIN TOLERANCE*[7]

185.8 in-lb
HELD WITHOUT FAILURE†[7]

HITS ITS SIZE*[6,7]



STAYS ON SIZE

52 mm
GRATER

▶

143
CUTTING CYCLES

▶

52.20 · 52.15
CAVITIES, MM

▶

±250
STILL WITHIN TOLERANCE

BUILT FOR THE HARDEST BONE

4.3×
185.8 ÷ 43.2 IN-LB

Peak cutting torque, bench*
43.2 in-lb

Static torque held without failure†
= stall torque of a widely used orthopedic power drill[7]
185.8 in-lb

** Bench data from a reamer with cutting-tooth geometry, orientation and spiral arrangement identical to OneReam's, vs a standard crossbar reamer (52 mm, 30 PCF Sawbones).[5-7] Bench results may not predict clinical performance.*
† Static torque test of the crossbar (manufacturer data), performed on the production crossbar reamer itself rather than the bench-test reamer.[7]

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ENGINEERED FOR EASE OF USE

OneReam® is built around the single ream: one reamer, at the size you planned, on a standard crossbar driver.

"Bear Claw" Teeth

Proprietary scallop design for enhanced cutting action

Electropolished Surface

For superior capability

Traditional X-Ray Profile

Traditional hemispherical form and X-ray profile







Dual Offset & Straight Handle Compatible

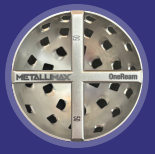
Accessible for all surgical approach needs

Standard Crossbar Design

Engineered to fit many drivers

Every Millimeter Covered

15 sizes, 44–58 mm, in 1 mm steps



740

THE SINGLE-REAMER TECHNIQUE

No intraoperative acetabular fractures.[8]

Primary THAs in hips with normal acetabular morphology, using a single-reamer technique.

The 740-hip study is a study of a surgical technique, not a study of OneReam.

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SPECIFICATIONS & REFERENCES

Cutting diameters	44–58 mm in 1 mm increments (15 sizes).
Diameter tolerance	±250 micron cutting-diameter tolerance.
Cup	420 stainless steel (ASTM F899), “Bear Claw” spiral cutting teeth.
Back	304 stainless steel (ASTM F899), computer-welded 5 mm crossbar.
Surface finish	Electropolished.
Supplied	Non-sterile; reusable, designed for repeated sterilization. Evaluate regularly and replace as necessary.
Driver connection	Standard crossbar connection; used with straight and offset drivers in a cadaver lab.[7] Confirm compatibility with your driver before first use.
Static torque	185.8 in-lb without failure.[7]

References:

1. Slotkin S, Frisch NB, Roc G, Silverton CD. Hemispherical and minimally invasive total hip reamers: a biomechanical analysis of use and design. *Arthroplasty Today*. 2016;3(2):131–136. doi:10.1016/j.artd.2016.09.009
2. Vaughan P, Johnston P, Keene G. Accuracy of acetabular reamers in total hip arthroplasty [abstract]. *Orthop Proc*. 2010;92-B(Supp III):396. doi:10.1302/0301-620X.92BSUPP_III.0920396b
3. Sherman WF, Flick TR, Dranoff CS, Weintraub MJ, Kale NN, Sommi C, Sanchez FL. Variability of cutting and thermal dynamics between new and used acetabular reamers during total hip arthroplasty. *Arthroplasty Today*. 2021;7:91–97. doi:10.1016/j.artd.2020.12.002
4. Eriksson AR, Albrektsson T. Temperature threshold levels for heat-induced bone tissue injury: a vital-microscopic study in the rabbit. *J Prosthet Dent*. 1983;50(1):101–107. doi:10.1016/0022-3913(83)90174-9
5. Tecomet. TS-18-0008: Dynamic Torque and Cutting Efficiency Test for Redesigned Smooth Cut Acetabular Reamers. Internal test report; October 4, 2019.
6. Tecomet. TS-18-0010: Size and Form, and Smoothness Verification Testing for Redesigned Smooth Cut Acetabular Reamer. Internal test report; February 24, 2019.
7. Tecomet. Cross Bar Acetabular Reamer Technical Data Sheet. Doc #10008-01 Rev. B; August 2025.
8. Woelfle CA, Lonza GC, Neuwirth AL, Cooper HJ. A single-reamer technique is an effective strategy for acetabular preparation in primary total hip arthroplasty. *Arthroplasty Today*. 2025;35:101841. doi:10.1016/j.artd.2025.101841

Notes:

OneReam® bench data (references 5–7) come from a reamer with cutting-tooth geometry, orientation and spiral arrangement identical to OneReam’s: 52 mm reamer, 30 PCF Sawbones, compared with a standard crossbar reamer. Bench results may not predict clinical performance. References 1–4 and 8 describe generic new vs used reamers, bone thermal thresholds in animals, and a single-reamer surgical technique; they are not studies of OneReam. Reamer size selection relative to the chosen implant is per the implant manufacturer’s surgical technique.

No surgical cutting device, including the OneReam Acetabular Grater, will maintain as-new performance after repeated use. In testing, the OneReam Grater maintained its tolerancing through 143 simulated cycles. This is not a predicted useful life for the product as a cutting device, nor a guarantee of performance.

Email or call Metallimax to order.

Request an evaluation sample

(772) 265-4681 orders@metallimax.com

www.metallimax.com

Instructions for use & downloads

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