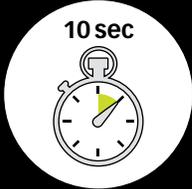


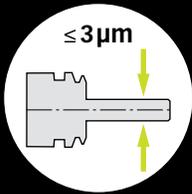
powRgrip® for cast iron manufacturing
Superior toolholding strength and accuracy

REGO-FIX ▲

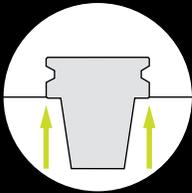
powRgrip for cast iron manufacturing



Tool ready for use in less than 10 seconds.



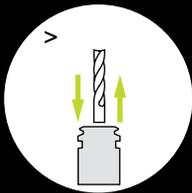
Total system runout TIR $\leq 3 \mu\text{m}$ at $3 \times D$.



Higher toolholder stiffness due to taper (AT1) and face contact with REGO-PLUS holders.*



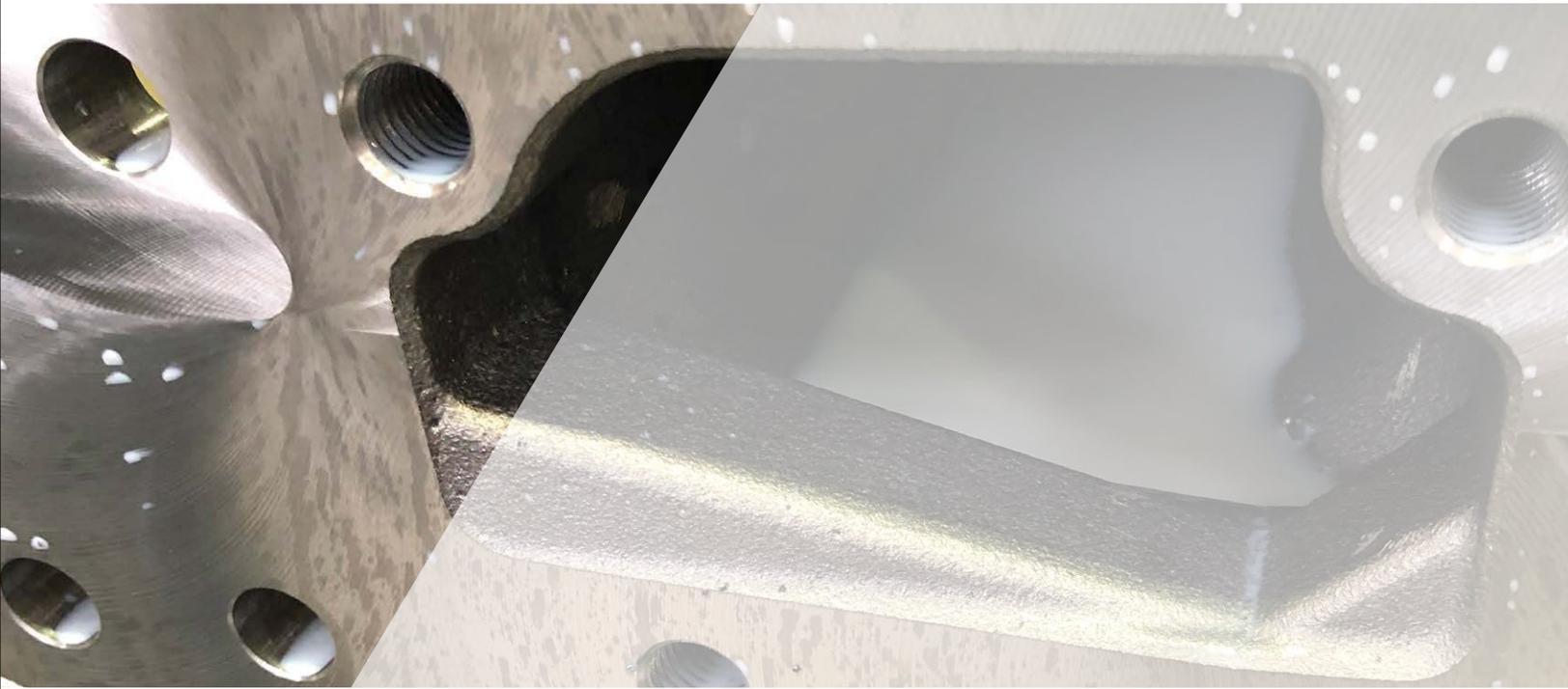
Excellent vibration damping.



Maximum clamping force and low runout, even after 20,000 tool changes.



*The BIG-PLUS System – licensed by BIG DAISHOWA – is manufactured at REGO-FIX in Switzerland under license according to BIG-PLUS specifications.



Introduction

Achieve greater cast iron process security and productivity with powRgrip

Extraordinary reliability and outstanding quality.

We understand your cast iron challenges

Most people think of difficult-to-clean cookware when they think about cast iron, but manufacturers in industries ranging from automotive to heavy machinery have turned cast iron alloys into truly modern materials. Despite its reputation for high machinability, however, cast iron's abrasiveness, porousness and rough surface can significantly reduce tool life and accuracy, particularly with drilling applications.

Unleash the true productivity of cast iron with powRgrip

To overcome cast iron machining challenges, manufacturers turn to the REGO-FIX powRgrip (PG) toolholding system. Designed for the highest level of ease of use and accuracy, the PG system can optimize cast iron machining operations and allow you to maximize productivity, reduce cost per part and shorten cycle times, all while significantly increasing tool life in an exceptionally abrasive material.

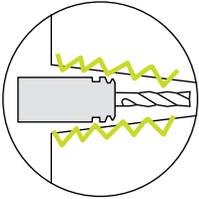


Swiss quality standard

Our products marked Swiss-made are manufactured at our headquarters in Tenniken, Switzerland.

powRgrip for cast iron manufacturing

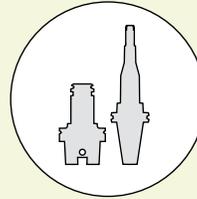
Achieve consistent results in an inconsistent material.



Increased Tool Life & Quality

Cast iron's porous structure creates micro-interruptions throughout the material, while its abrasive material characteristics lead to uneven tool wear and poor tool life. These make drilling, tapping and reaming applications

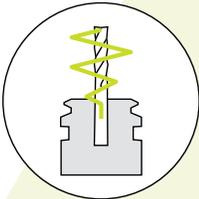
particularly difficult, given that the natural inconsistency of the material makes creating perfectly straight holes difficult.



REGO-FIX Xtended Length Toolholders

Designed for machining applications that require longer reach or present clearance challenges, Xtended Length powRgrip toolholders come in

lengths up to 600 mm and in nose versions of PG 10, PG 15 and PG 25. These vibration-damping holders provide an ideal solution for holmaking and deep-hole drilling applications in cast iron.

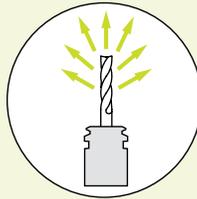


Exceptional Vibration Damping

The powRgrip toolholding system solves these problems to provide the utmost in process security for cast iron applications. Unlike hydraulic or shrink-fit holders, the superior stiffness and rigidity of PG holders allow for extremely low total indicated

runout (TIR), created perfectly straight holes and high-quality threads with ease. Because the PG system minimizes vibrations, even in difficult materials like cast iron, tool life goes up dramatically – in some cases by 400-500%.

The resulting absence of vibrations creates more even wear across the tool's cutting edge, allowing for additional regrinding and resharpening operations across the life of the tool. With PG holders, even the notoriously difficult deep-hole drilling and gundrilling applications can be performed with minimal vibrations, leading to extended tool life and additional cost savings.



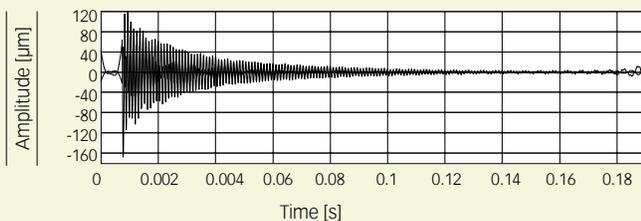
A comprehensive catalog of solutions

The PG system is available in a wide selection of holder types, lengths and diameters, all of which are balanced by design for steep taper and HSK toolholders.

All PG collets, including our PG-TAP series, come in inch and metric sizes. Unlike many shrink-fit and hydraulic solutions, our PG-TAP collets are able to accept an H9 shank tap in any PG toolholder for the utmost in process versatility. To learn more about the PG system, as well as PG options suited for your cast iron applications, visit www.regousa.com.

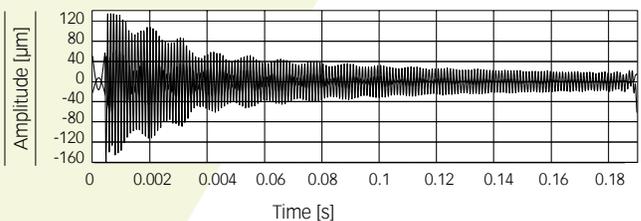
Measurement of vibrations | powRgrip

Amplitude indication of the REGO-FIX **powRgrip toolholder**



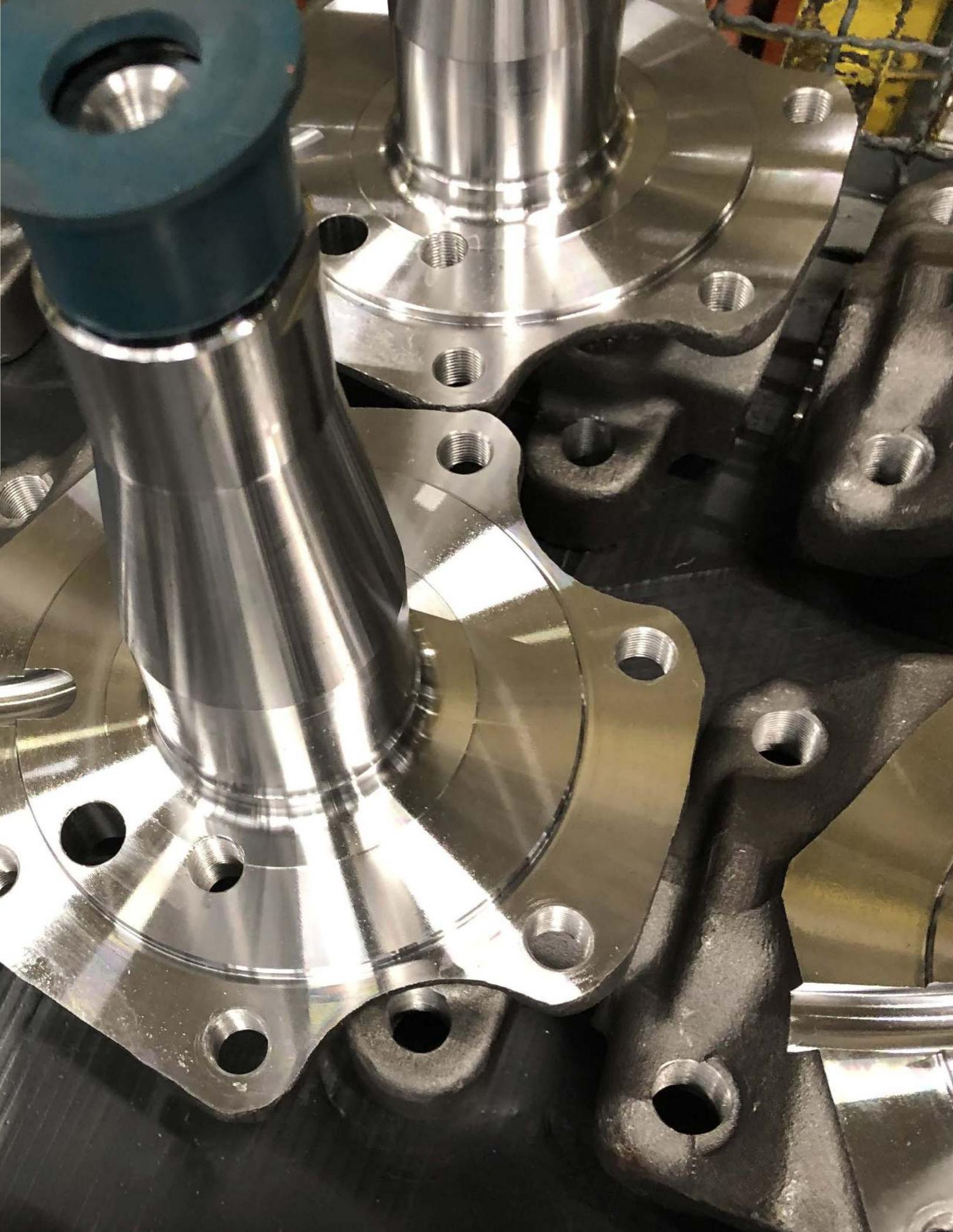
Measurement of vibrations | Shrink-fit holder

Amplitude indication of a standard **shrink-fit holder**



Test and comparison done by:





How powRgrip works

powRgrip is a unique collet-holding system that consists of three main components – press-fit assembly mounting units, collets and holders – all of which work in harmony. The result is the distinctive powRgrip toolholder-to-collet/collet-to-tool shank interfaces that give the system its extraordinary performance and holding capabilities.

Press-fit assembly mounting units

Tabletop mounting units – either hydraulic manual-pump style or automated – quickly press powRgrip collets into or remove them from system toolholders with up to nine tons of force.

Collets

powRgrip collets feature high-precision tapers and a unique wear-resistant surface treatment that results in an extremely hard surface for unmatched longevity and repeatability.

HOLDERS

With equally precise tapers that match those of the collets, powRgrip factory-balanced toolholders deliver superior runout and vibration damping as well as provide either coolant-through or peripheral cooling capabilities.



Cutting tool



powRgrip collet



powRgrip toolholder



Automatic clamping unit (PGU)



Manual clamping unit (PGC)



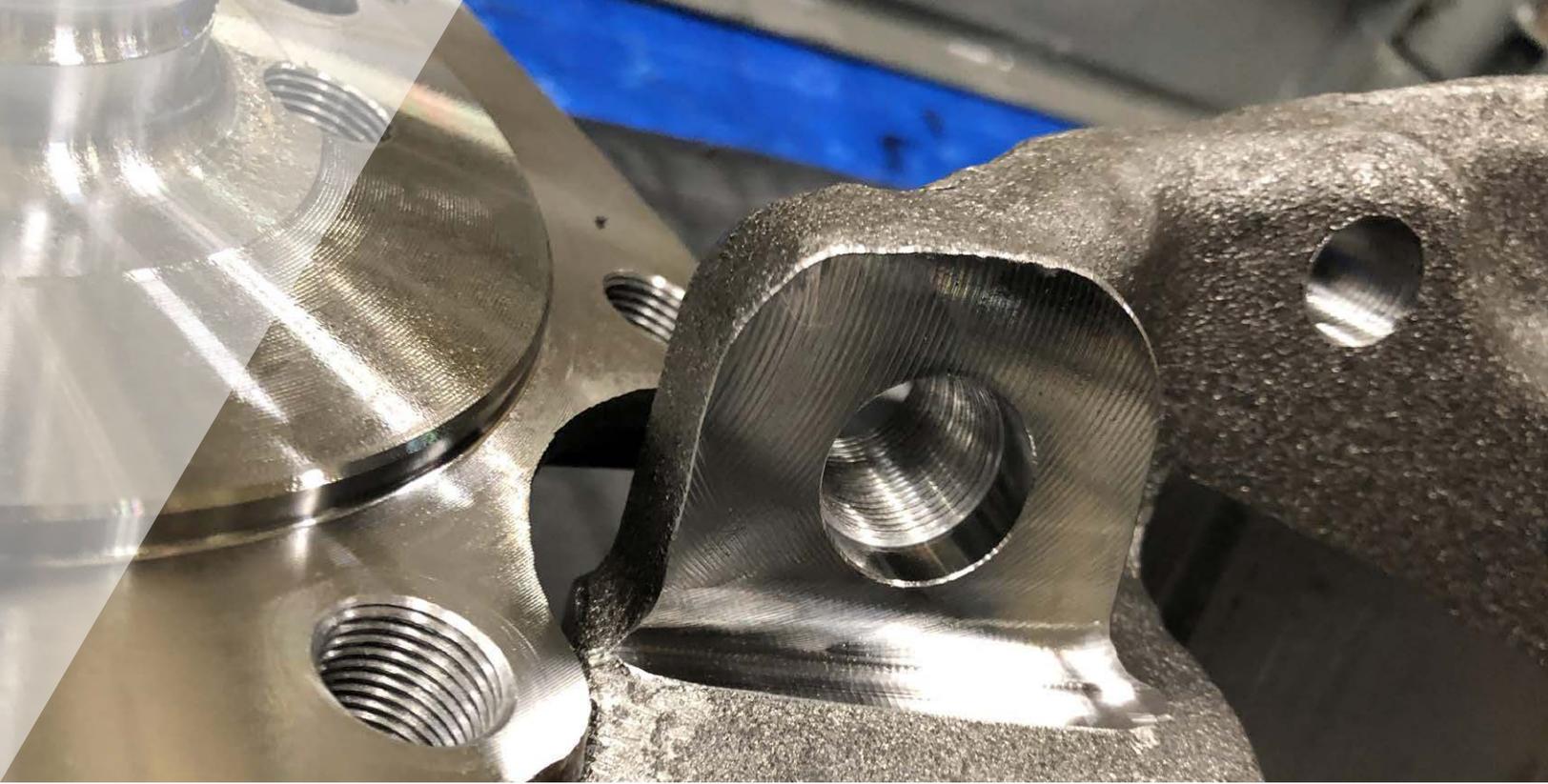
[Discover powRgrip](#)

powRgrip toolholding outperforms all other tooling systems

Developed especially for high-speed cutting (HSC) and high-performance cutting (HPC) strategies, powRgrip optimizes productivity and improves precision for fast machining of high-quality cast iron parts.

Here is what makes powRgrip the best:

- **Speed/ease of use** — Change out tools in less than 10 seconds and make easy Z-height adjustments in any standard presetter without the need for expensive adjustment tools.
- **Precision** — Precisely engineered and balanced by design, powRgrip delivers TIR of <0.0001 " (3 μm), along with precise length adjustment repeatability of <0.0004 " (10 μm).
- **Quality** — Swiss-made with all perfectly matched components for optimal fit, accuracy and long tool life.
- **Performance** — Toolholder-to-collet and collet-to-tool shank interfaces deliver superior clamping force, high vibration damping and extreme precision.
- **Reliability** — Accuracy and gripping forces that continue to meet or exceed original values even after extensive cycling.
- **Safety** — Complete user safety without risk of injury from heat or pinch zones or toxic fumes omitted from heat shrink units.
- **Warranty** — REGO-FIX guarantees the TIR of a properly maintained powRgrip holder and collet will not exceed 0.0001" and the impregnated surface treatment will not erode for five years or 20,000 cycles.



[powRgrip results](#)

powRgrip makes the difference in cast iron machining

We have the numbers to prove it.

Improved threading productivity

An experienced automotive and heavy equipment producer integrated the PG system to handle cast iron machining challenges for threading applications. REGO-FIX worked with the manufacturer to adapt the PG system with the company's existing line of cylindrical extensions for several different production lines. With the new system, the company achieved a tenfold increase in tool life, resulting in cost savings of roughly \$225 per day.

THREADING		
	Before powRgrip	After powRgrip
Line 1	700 pieces 700 threading operations	3,400 pieces 700 threading operations
Line 2	500 pieces 3,000 threading operations	1,200 pieces 7,200 threading operations
Line 3	600 pieces 2,400 threading operations	3,400 pieces 13,600 threading operations

Big improvements with the right toolholding system

A Tier 1/Tier 2 supplier of automotive parts was struggling with poor tool life with a 25 mm, six-flute cutter making cast iron crank shaft components. Shrink-fit holders would produce uneven tool wear, reducing the life of the tool and making regrinding unprofitably difficult; hydraulic holders solved the wear problem at the expense of tool performance at the edge of the workpiece, which led to scrapped or defective parts. REGO-FIX came to their facility to perform a test of leading toolholding systems, and quickly fixed both issues with ease.

MILLING

	Shrink-fit	Hydraulic	powRgrip
Parts per new tool	2,300	4,500	11,000
Regrinding operations	n/a	2	4
Total parts per tool	2,300	7,875	22,250

Automotive drilling, simplified

A challenging gundrilling application required the utmost in rigidity for one automotive supplier, which sought a toolholding solution that could increase the profitability of its engine production operations. Regardless of toolholding, the same 180 engines would be made per day. When the team from REGO-FIX arrived with a PG system for testing, they quickly found the cost savings the company was looking for.

GUNDRILLING

	Hydraulic	powRgrip
Gundrills consumed	3	2
Total gundrill cost per day	\$540	\$360

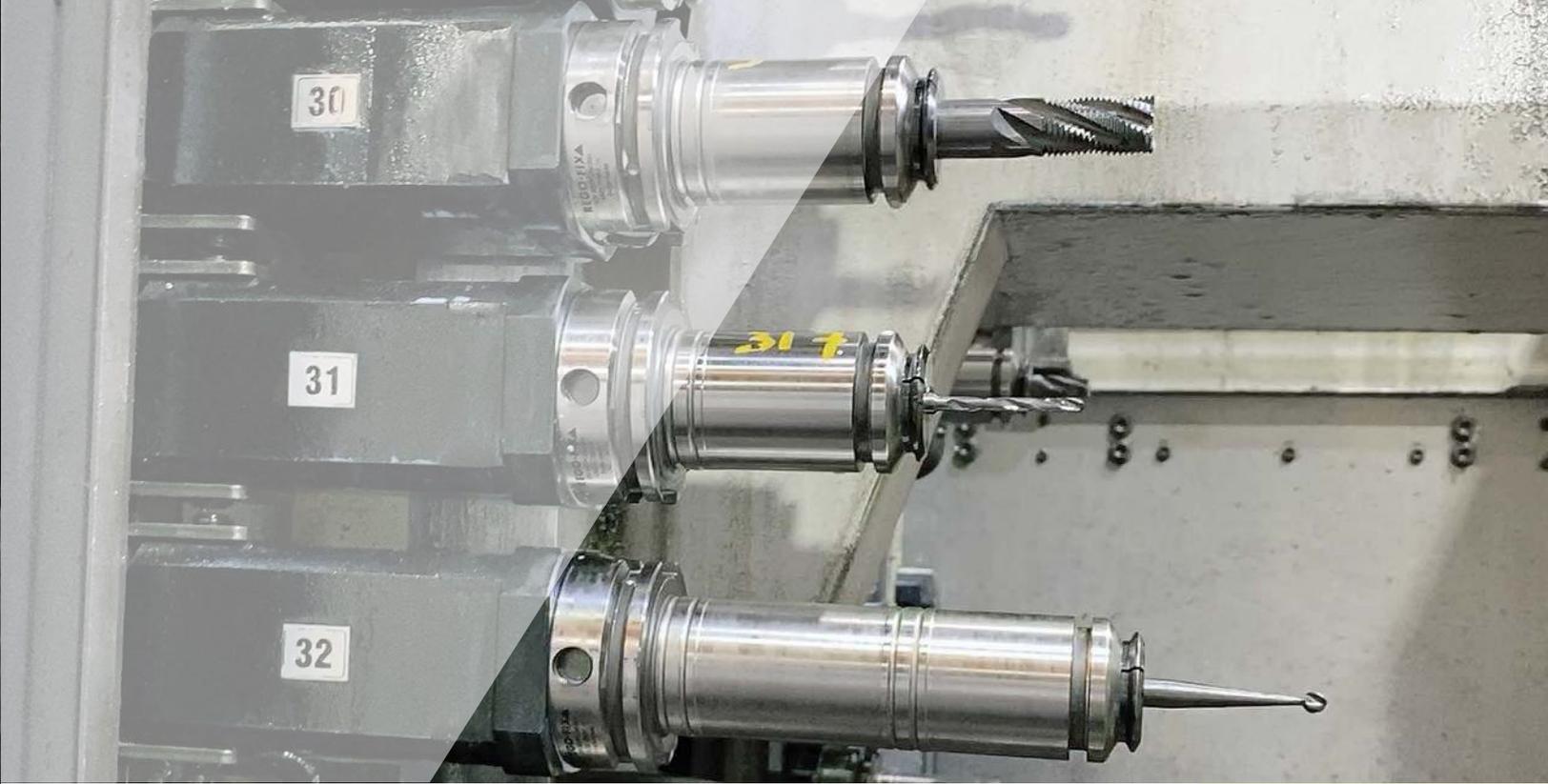
Supercharged cylinder head production

A prominent heavy equipment manufacturer had all the machining expertise necessary to get the most out of its tools – but the toolholders consistently hindered operations. For this application, even when the costs per part and per regrind are the same, the difference between powRgrip and the competition amounted to a 40% productivity increase for every tool. Following a successful test, the company purchased a full line of powRgrip holders.

PRODUCTIVITY

	Shrink-fit	powRgrip
Parts per tool	61	100
Regrinding operations	7	7
Total number of parts	427	700





No-cost PG analysis

REGO-FIX works with you to get results

Our team has the expertise necessary to help your team achieve cast iron manufacturing success, regardless of the application. If you're curious to find out more, contact REGO-FIX, and we will come to your shop with a complete powRgrip system to demonstrate how it can affect your real-life machining processes in real time. All for no cost to you.

Our risk-free testing program ensures that you'll have the opportunity to make a fully informed decision without any additional costs. Following the conclusion of our test, we provide complete validation to prove out the process as well as documentation on the expected return on investment (ROI) you can achieve with powRgrip.

And our support doesn't end with the sale – we work closely with our customers, offering application assistance on cutting parameters and ensuring they can achieve manufacturing success no matter their part-production challenge. And for the utmost in peace of mind, the powRgrip system comes with a five-year, 20,000-cycle warranty on all powRgrip holders and collets.

Five steps to toolholding success:

- CONTACT US**
(317) 870-5959 / regousa.com
- EVALUATION**
Our sales team works with you to tailor a testing package for your unique application.
- ON-SITE TEST**
We perform a risk-free test on your equipment to help you make a fully informed decision about your toolholding.
- ROI**
We analyze the data gathered from our testing to generate a complete return on investment (ROI) report.
- BENEFIT**
Achieve the highest level of manufacturing productivity and profitability for your cast iron applications with powRgrip.

