

NEW!
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Product Highlights 2013



Made in
Switzerland



Swiss
Precision
Tools



REGO-FIX®

Rethink Your Process with **REGO-FIX**

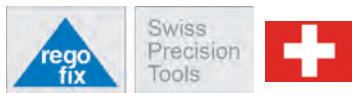
PRECISE, CONSISTENT, STABLE

Your process is only as strong as its weakest link. Don't let your toolholding be that link. Toolholding plays a critical role in your production performance. REGO-FIX's products—including the **powRgrip® system**, **ER collet system** and **Swiss automatic toolholders**—along with its range of accessories offer the toolholding solutions you need to maximize production efforts.

With REGO-FIX, you can expect:

- Swiss precision tools that shape the manufacturing landscape
- Constant access to new, innovative solutions that boost accuracy and productivity
- Toolholders that ensure high precision, ease of operation and increased tool life
- Products with unbeatable runout accuracy, vibration dampening and balance quality
- A highly experienced team to help you every step of the way
- Quick turnaround on all product orders via a 98% same-day fulfillment rate

Made in Switzerland



PRECISE



powRgrip® Toolholding
Collet System

CONSISTENT



ER Collet System

STABLE



Swiss Type
Cylindrical Toolholders

REGO-FIX

PRODUCT PORTFOLIO



High-quality, precision toolholding has a great impact on the machining process. Regardless of the type of REGO-FIX product you choose, you receive the best possible runout accuracy, vibration dampening, balance quality and flexibility.

REGO-FIX's advanced product mix, including the powRgrip® System, ER Collet System and Swiss automatic holders, works together interchangeably, resulting in the flexibility to create solutions that provide the industry's best accuracy, balancing and tool life.

With REGO-FIX's ongoing commitment to research and development, you are assured of the most advanced products in toolholding, along with world-class customer service and support.



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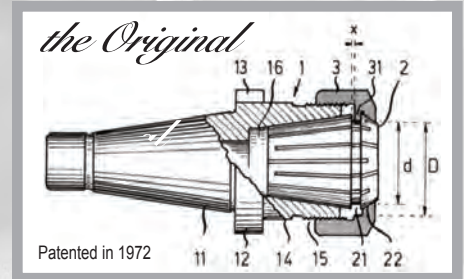
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ER Collets



REGO-FIX ER System

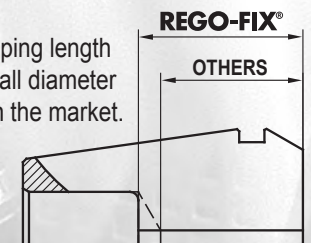
REGO-FIX's ER Collet System is ideal for a variety of machining applications including milling, drilling, reaming, tapping and grinding. Invented by REGO-FIX in 1972, the innovative and flexible ER Collet System is the most widely used and accepted collet clamping system in the world!



REGO-FIX collets are available in two levels of precision: **Standard Precision** and **Ultra-Precision (UP)**.

ER Collets are offered in inch and metric sizes in both precision levels from ER 8 series to ER 50 series. This broad selection of collets can accurately clamp tool shanks ranging from 0.2 mm (0.0079") up to 34.0 mm (1.338").

Gain up to 20% more clamping length when using REGO-FIX small diameter collets over other brands in the market.



REGO FACT!

*If you wear out one endmill cutter per day at a cost of \$50 each, you could save close to \$8,000 annually PER toolholder by simply switching from a side lock endmill holder (typical TIR = 0.0010") to a **REGO-FIX ER Collet Toolholder** (TIR = less than 0.0004")!*

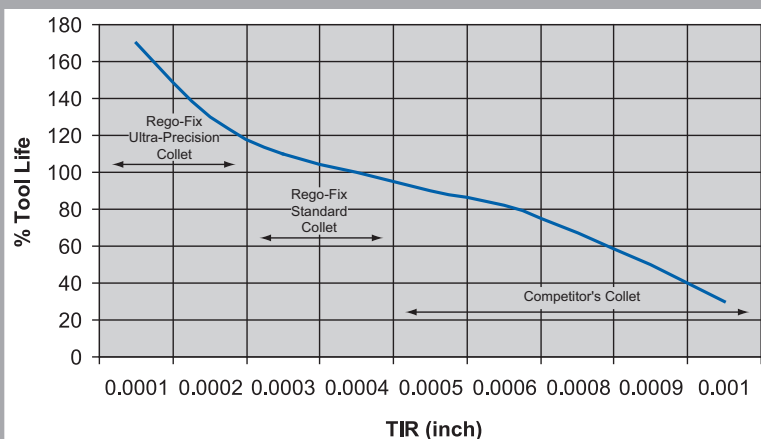


How TIR Impacts Tool Life!

By putting your endmills, drills and reamers in better quality toolholders and ER collets from REGO-FIX, you can benefit from lower TIR and realize significant cost savings!



Tool Life Affected by TIR





What Makes REGO-FIX Collets Different?

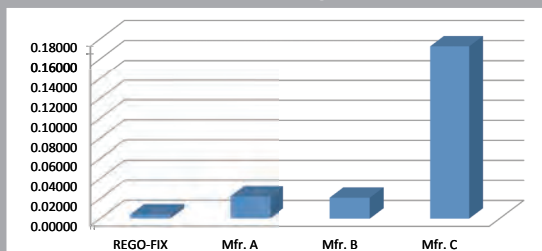
REGO-FIX's ER Collet System is recognized world-wide as the most accurate, consistent and repeatable.

- ER collets are manufactured in our state-of-the-art Swiss facility under one roof—offering better process control, batch-to-batch consistency and guaranteed quality.
- Two levels of quality
 - Standard Precision—(TIR of less than 0.0004")
 - Ultra Precision (UP)*—(TIR of less than 0.0002")
- * All UP collets are hand inspected and measured to assure compliance*
- Proprietary slot manufacturing processes and special vision systems allow for better slot geometry control. This results in increased collet consistency and guaranteed TIR over the FULL clamping range.

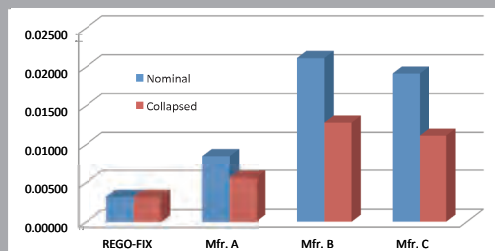
- Superior surface finish provides improved accuracy of fit.
- Special formulated spring steel and heat treat processes result in better wear, longer life, and improved flexibility.
- Broadest of offerings: ER standard and UP collets, rigid tapping collets, axial tension/compression tap collets, coolant-through metallic sealed collets, and microbore collets.

INDUSTRY COMPARISON

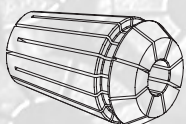
TIR of GB tapping Collets



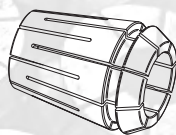
TIR of Standard Collets



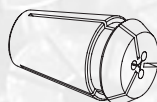
ER COLLET OPTIONS



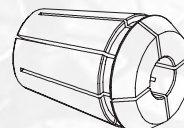
Standard & Ultra Precision Collets



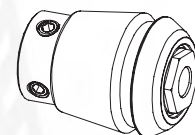
Metallic Sealed Collets



Microbore Collets



Rigid Tapping Collets

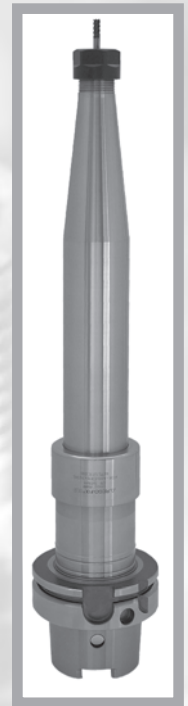


Compensating Tapping Collets

ER Toolholders

REGO-FIX ER Toolholders

REGO-FIX's ER System toolholders come in a wide offering to meet the growing variety of spindle configurations available in the machining industry. All ER toolholders are manufactured in Switzerland utilizing ISO quality systems and proprietary in-process manufacturing controls. In addition to producing the many standard holder versions (CAT, BT, TC ISO), REGO-FIX also is a certified and licensed manufacturer of specialized taper formats, including:



Certified by Sandvik

REGO+PLUS
dual contact toolholders

BIG Plus – licensed by BIG Daishowa

Xtoolholder+

Unbalanced with 100gmm



Balanced down to 1.4gmm

REGO FACT!

Impact of Balancing on Surface Finish!

This magnified view of a surface after machining highlights the significant impact that the unbalance of a toolholder can have on the finished product.

**rego
fix**

Balance and Toolholders



Balance holders to 80,000 rpm with REGO-FIX's patented optional ring system.



REGO-FIX's patented two-level HSK holder balancing optimum dynamic toolholder stability.



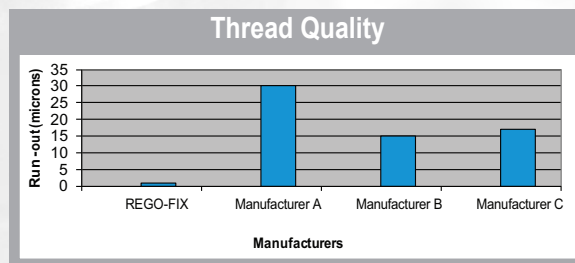
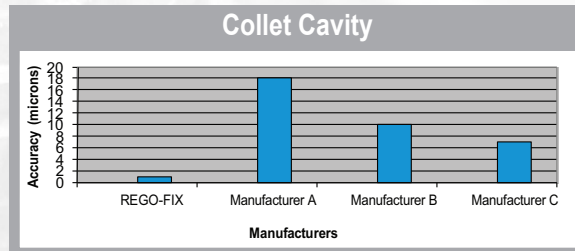
What Makes REGO-FIX Toolholders Different?

REGO-FIX's ER toolholders are designed and manufactured with some of the tightest standards and tolerances found on the market. This allows us to hold our dimensions to a more narrow tolerance, providing better fit and accuracy.

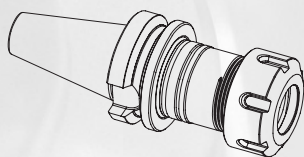
- 3-point measurement of all AT3 steep tapers versus the more commonly used 2-point system.
- Tighter thread tolerance reduces friction and provides more holding torque and lower TIR.
- Controlling toolholder thread runout to assure a more accurate alignment with the collet nut.
- Collet to taper TIR of less than 0.0001."
- Modified pull stud thread design eliminates steep taper growth from pull stud assembly.
- Unique 100% precision balancing of all toolholders for the highest rpm ratings.
- Full lot traceability of all tool holders for maximum reliability and process control.

REGO-FIX Toolholders versus the Others

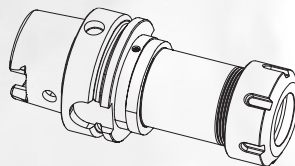
REGO-FIX's tighter tolerances are clearly evident in test comparisons. In a recent random sampling, REGO-FIX was clearly superior in toolholder accuracy and repeatability.



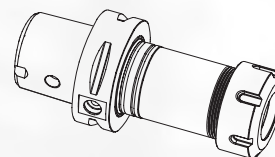
ER TOOLHOLDER OPTIONS



Steep Taper: CAT / BT / TC



HSK 25 - 125 forms A/C/E/F



REGO-FIX CAPTO C3-C8

ER Collet Nuts

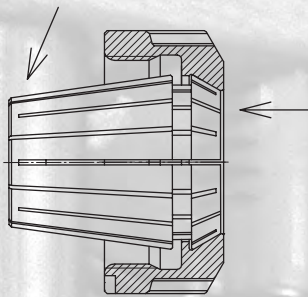


REGO-FIX ER Collet Nuts

REGO-FIX's ER collet clamping nuts are manufactured to exacting tolerance—tighter than established DIN 6499 standard requirements—for the purpose of attaining a better “fit” between the matching ER toolholder and collet. The Hi-Q ER nut was developed by REGO-FIX and offers a unique design that improves clamping force on the tool shank, offers better balance and is the first self-locking ER system.

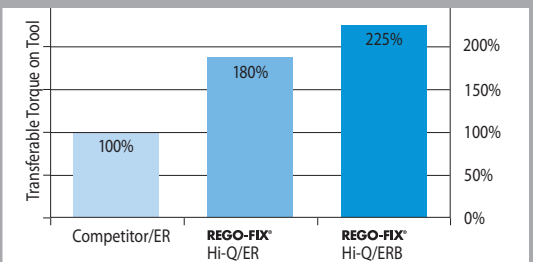
What Makes REGO-FIX Collet Nuts Different?

- Special impregnated metal treatment (NOT a coating like some others) reduces friction and results in increased clamping forces on the tool shank—up to 125% greater clamping!
- Self-locking design retains the ER collet in the nut for easier insertion and removal.
- Friction bearing option provides the highest clamping forces available for tough milling applications.
- Tighter thread quality assures better torque transmission and less distortion.
- Broadest options of ER clamping nuts of any manufacturer.



The innovative design of the Hi-Q ER clamping nut allows the ER collet to be retained in the nut and reduces the risk of improper assembly.

Torque Comparison of Clamping Nuts

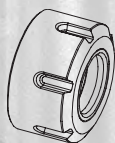


REGO-FIX Hi-Q ER clamping nuts in both the Standard and Friction Bearing design offer a significant increase in clamping force on the tool shank. This allows for more aggressive machining without the risk of tool slippage.

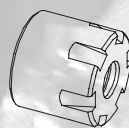
ER COLLET NUT OPTIONS



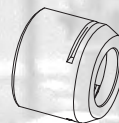
Hi-Q Standard & Coolant Nuts



Friction Bearing & Friction Bearing Coolant Nuts



Hi-Q Mini & Mini Coolant Nuts



Mini High Speed Nuts



Externally Threaded Coolant Nuts

ER Coolant Disks

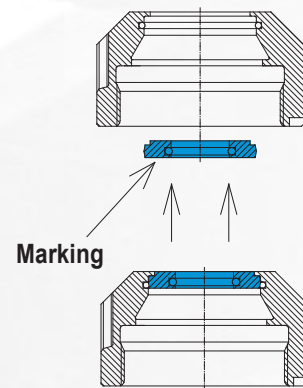
REGO-FIX ER Coolant Disks Options

REGO-FIX offers two unique patented disk systems for machines using internal coolant. The ER Coolant Disk (DS) is utilized for coolant through drilling applications whereas the Coolant Flush Disk (KS) is used to direct coolant around the outside of the tool in milling applications. Increases in tool life of up to 30% or more have been experienced by better directing coolant to the cutting edges of the tool. These unique innovations are designed to be used with both the standard ER collet and the ultra precision ER collet.



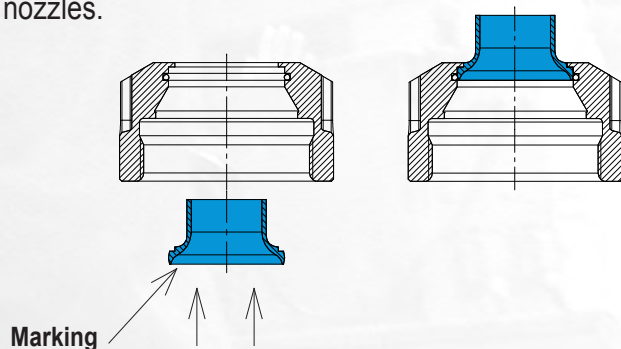
Sealing Disks

The metal ER Coolant Disk seals to both the cutting tool and the clamping nut with the help of an O-ring in each component. As a result, a water tight seal that can withstand over 2,000 psi coolant pressure is formed. This seal forces all of the coolant to be directed through the cutting tool to provide maximum pressure and flow to the cutting tip. The disk also acts as a shield to keep cutting chips and debris from plugging up the collet slots.



Coolant Flush Disks

The metal ER Coolant Flush Disk directs coolant down the shaft of a non coolant-through endmill. The disk is designed with a slight gap between the endmill and the disk nose, allowing the coolant to pass through. The disk nose acts like a directional spray nozzle, providing more coolant to the cutting tip of the endmill than traditional flood nozzles.



Watch a demonstration



powRgrip®

The Revolutionary Toolholding System that Leads the Way in Precision and Performance

REGO-FIX's powRgrip System is a unique collet-holding system that utilizes a special shallow-tapered collet that is pressed into a holder with a matching taper. This state-of-the-art system uses either a hydraulic hand-pump or a table top hydraulic press specifically designed to quickly insert these collets with up to 9 tons of force. powRgrip delivers **superior runout, maximum clamping force, high-vibration dampening**, and the ultimate in **ease-of-use toolholder assembly**. It is ideal for a variety of machining applications including milling, drilling, reaming and tapping, and is a superior alternative to shrink fit and hydraulic toolholding systems. The flexibility of powRgrip allows for machining ranging from heavy roughing or slotting to ball nose finishing or micro drilling.



Tool
Precise preset repeatability for both HSS and carbide tools

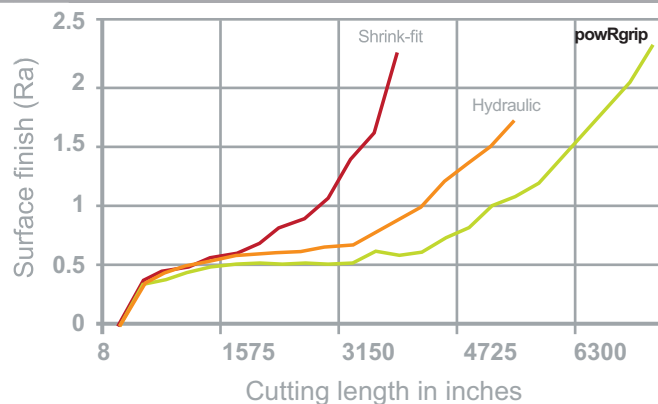
Collet
Slightly tapered shape maximizes clamping force

Holder
Superior runout and vibration dampening in a variety of taper styles



powRgrip's Impact on Tool Life

Increased Tool Life



Watch powRgrip in action



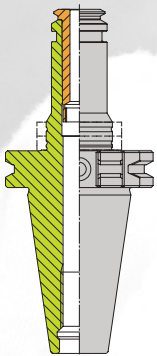
10
Year
powRgrip
System



Features and Benefits

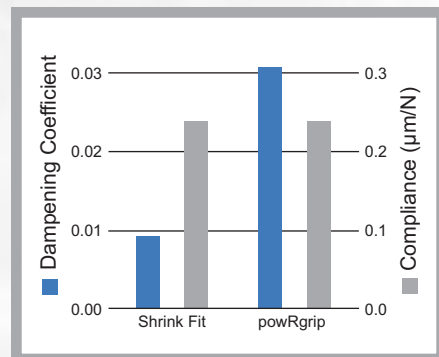
- Accurate—TIR of $< 0.0001"$ (3 μm).
- Precise—"z" length adjustment repeatability of $< 0.0004"$ (10 μm).
- Safe—no dangerous heat or hazardous EMF radiation.
- Fast—clamping operation in less than 10 seconds.
- Flexible—can interchange collets from tool shank dia 0.0079" – 1.0" (0.2 – 25 mm).
- Wide taper options—CAT / HSK / BT / CAPTO / BIG + / TC / ISO.
- Dampening—high vibration dampening due to unique interrupted surface design.
- Shanks—can clamp carbide or HSS in h6 tolerance, including Weldon flats.

Vibration Dampening—an Independent Analysis by Fraunhofer IPK



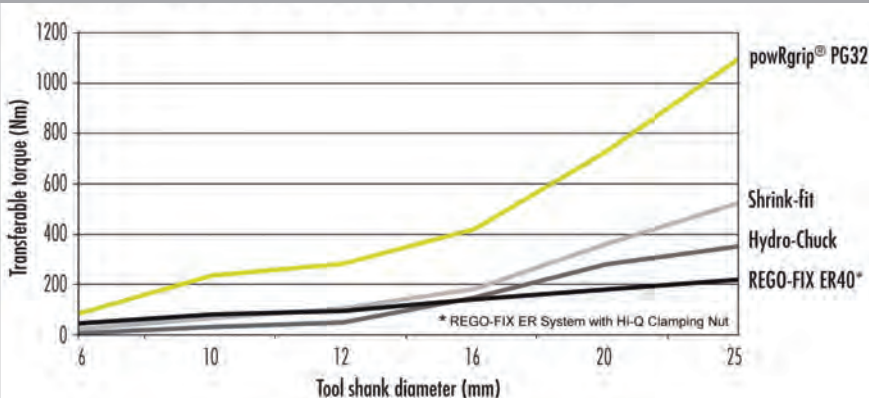
"The compliance of the powRgrip System is similar to a shrinking chuck, but the dampening coefficient is significantly higher."

"The non-linear correlation of the normal force and damping leads to the conclusion that the powRgrip System is possibly in a better design point than a standard shrinking chuck, and therefore has a higher damping coefficient."



powRgrip's Superior Gripping Force

Transferable Torque of the powRgrip® System



5 Year
WARRANTY
20,000
CYCLES

For 5 years or 20,000 cycles, REGO-FIX guarantees the impregnated surface treatment will not wear off—when properly maintained—and the powRgrip holder and collet will not exceed 0.0001" in TIR.

powRgrip® Toolholders

powRgrip Toolholders

powRgrip toolholders are designed with a highly precise internal taper that accepts the matching taper of the powRgrip collets. This provides an unmatched level of accuracy and flexibility by being able to interchange collets and customize your powRgrip toolholder to hold a variety of inch, metric, coolant through or coolant flush options.

There are multiple options of nose profiles that are available in most all taper designs. As a result, any powRgrip toolholder can change its holding diameter in a matter of minutes by just switching out the powRgrip collet.



Not only does REGO-FIX produce the popular holder versions (CAT, HSK, BT, TC) that are used worldwide, but REGO-FIX is also a certified and licensed manufacturer of specialized taper formats in powRgrip, including:



Certified by Sandvik

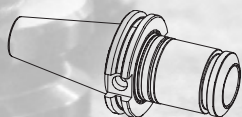
REGO+PLUS
dual contact toolholders

BIG Plus – licensed by BIG Daishowa

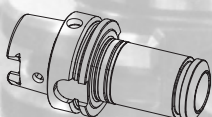
Xtoolholder+



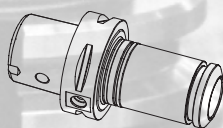
PG COLLET OPTIONS



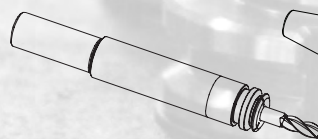
Steep Taper: CAT /
BT / TC



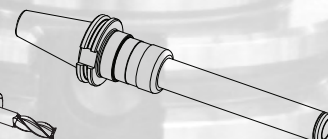
HSK 25 - 125
forms A/C/E/F



REGO-FIX
CAPTO C3-C8



Cylindrical
PG 06 - PG 25



Xtended Length
PG 10 - PG 25

powRgrip® Collets



Clamping diameters ranging from as small as 0.0079" (0.2mm) up to a maximum of 1.0" (25mm)

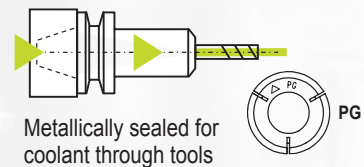
powRgrip Collets

powRgrip (PG) Collets are precisely engineered to exacting tolerances. This assures that once the collets are pressed into the matching powRgrip holder, the result will be an accurately assembled system of less than 0.0001" TIR. Special metal processing provides the collets unique black appearance and results in an extremely hard surface finish that allows users to experience unmatched longevity and repeatability.

PG collets will accept either carbide or HSS cutting tools as well as Weldon flats. All powRgrip collets come with an adjustment screw to permit accurate presetting of the "z" length any standard presetting machine. Five PG collet series options are available in both inch and metric versions:

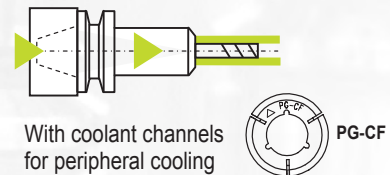
powRgrip Standard Collets (PG)

Standard PG collets can be used either with non-coolant or with coolant-through tools. Each collet is mechanically sealed by the slot design for internal through tool coolant, handling up to 2,000 psi of high pressure coolant.



powRgrip Coolant Flush Collets (PG-CF)

Coolant flush collets direct coolant along the outside of an endmill cutting tool shank, resulting in a high-pressure peripheral "sleeve" of coolant flowing around the shank and to the cutting edges of the endmill.

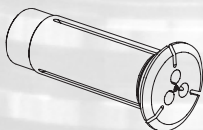


REGO FACT!

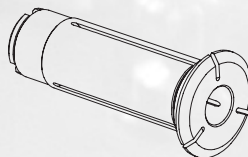
REGO-FIX customers have realized up to 30% more tool life as a result of using PG-CF collets, since more coolant is able to reach the cutting edges of the endmill! For a machine shop going through an average of one (1) \$75 endmill / day per machine, this would result in a savings of over \$5,000/year per machine!



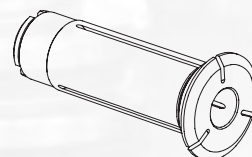
PG COLLET OPTIONS



Micro-Bore Collets
PG 06 - PG 10



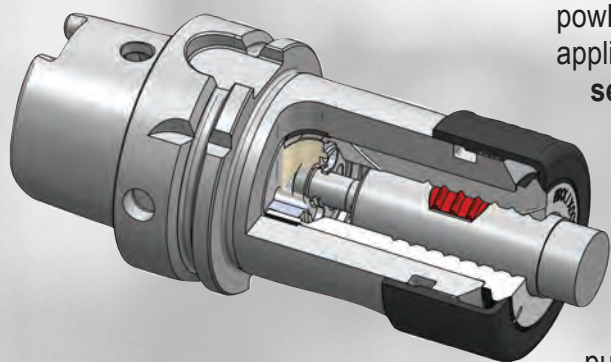
Standard and Coolant
Flush PG 10 - PG 32 Collets



Turning Collets
PG 15 - PG 32

powRgrip® System Options

NEW powRgrip secuRgrip®



Watch secuRgrip in action



powRgrip now offers an option for those most difficult machining applications that require the ultimate in cutting tool security.

secuRgrip utilizes powRgrip's tremendous gripping strength in combination with a patented locking key system and threaded cap. These two additional levels of cutting tool security provide an added degree of confidence for those special applications such as expensive castings or complex parts.

Unlike other systems, secuRgrip does not require the purchase of any expensive special modified endmills from limited manufacturers. Instead, it allows for the use of standard Weldon flat tools on any standard carbide or HSS endmill. The locking key fits into the Weldon flat prior to assembly and secures the endmill to the collet in this easy to assemble system.

All secuRgrip collets are designed to provide "z" height adjustment when required. secuRgrip is currently available in both the PG 25 and PG 32 holder series.

powRgrip Machines

powRgrip offers two options of clamping and unclamping the powRgrip collets into the toolholders. Both provide the same level of accuracy and clamping force for all powRgrip products.

- **Automated PGU 9006 machine**—capable of accepting interchangeable dies from the series PG6, PG10, PG15, PG25 and PG32. The table-top unit operates using standard 120V AC power. Dies are easily changed without any tools and automatically adjust the hydraulic pressure of each series once inserted into the machine.
- **Hand Pump PGC 2506 Machine**—also accepts interchangeable dies for the series PG6, PG10, PG15 and PG25. This unit utilizes a two-stage hydraulic pump to press in and remove the PG collets. Tool shank diameters range from as small as 0.0079" (0.2mm) up to a maximum 0.75" (20mm).



powRgrip® Testimonials



Smith & Wesson

Task: To improve tool deflection and run-out which dictated that machines be run slower

Competition: Various

Decision made in favor of powRgrip

"The purchase of the REGO-FIX ER collets and powRgrip System was easily justified when we realized the resultant production savings."

"I have to admit that I was a bit skeptical that a simple tooling change to powRgrip would really make that much difference. But the proof is in our reduced revolver frame cycle times."

—Kris Gallant, Manufacturing Engineer, Smith & Wesson

(Manufacturing News, October 2011)



Northeast Tire Mold

"powRgrip collets and holder last longer. We've been running our REGO-FIX collets for six years, and they are still like brand new. Over this same time period we would have already had to replace holders if we were using heat-shrink. The powRgrip tooling also provides quicker tool changeouts as compared with heat shrink holders."

—Mike Christie, Vice President,
Northeast Tire Mold

(Moldmaking Technology, May 2012)



Jakadofsky Jet Engines

Task: delivering the required benefits and results when used for machining super alloys:

- Absolute concentricity
- Problem-free functionality
- Ease of use

"The bottom line for us is that the powRgrip System paid for itself in just six months. I'm thoroughly convinced by the powRgrip. I like simple solutions that work reliably."

—Peter Jakadofsky, CEO and Owner, Jakadofsky JetEngines



Swiss Type Automatics

ER Tooling for Swiss Type Automatics

REGO-FIX manufactures the most accurate and widest selection of cylindrical holder offerings in the world. As the demand for more accuracy in many Swiss machine applications has grown, our offerings and precision has expanded to meet these needs.

Toolholder options include:

- Cylindrical shanks
- Cylindrical shanks with flats
- Doubled Ended
- Special ER to ER adapters called SwissQuick

All of these cylindrical holders and adapters come with our Hi-Q mini-nut design to provide ample clearance in the tighter gang tooling configuration of Swiss machines.



SwissQuick-ER to ER adapters

One of the latest REGO-FIX innovations is the SwissQuick ER to ER adapter. These are short “mini-holders” with a solid ER body profile on the back end, and a smaller ER series cavity on the front end. This unique design results in the shortest and most rigid ER to ER reduction available. Because of the solid body design, accuracy can be improved with a taper to collet cavity TIR of less than 0.0001” (3 um), and are repeatable within 0.0005” on tool length. The SwissQuick adapter offers a unique means to preset tool length offline for replacing worn tools in a matter of seconds.



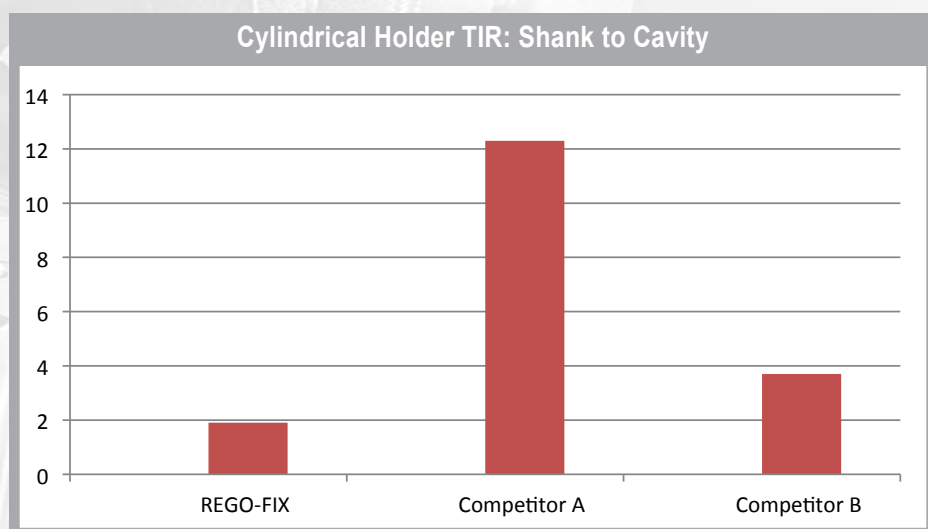
SwissQuick adapters are offered in both fine thread and coarse thread options on the solid body “back end.” These range from ER 11 to ER 32, with a variety of ER cavity outputs from ER 8 to ER 20.



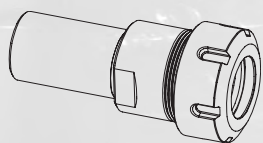
What Makes our Cylindrical Holders Better?

Years of experience and development at REGO-FIX has led to the unmatched quality of the cylindrical holder products. Coupled with our precision ER collet offering, this results in the highest accuracy for all types of Swiss machining applications. Some of the unique features seen in REGO-FIX Cylindrical Holders include:

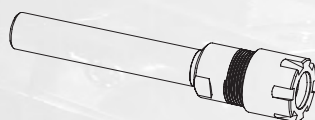
- Accuracy—TIR of less than 0.0001" from ER cavity to cylindrical O.D.
- Roundness—h6 precision ground shanks for precise centering
- Material—special formulated tool steel for all mini-threaded holders to improve strength
- Coolant Through—most versions fully threaded to allow for optional coolant flow
- Options—largest variety of metric and inch sizes, with both standard and coolant through nuts



COLLET OPTIONS



Round shank with standard nuts



Round shank and with flat with mini nuts



Double ended with mini nuts

Accessories & Milling Chucks



REGO-FIX features a system of products that create a “cleaning lab” environment within a customers’ shop, and satisfy the often overlooked need for cleanliness in CNC tooling applications.

Ultrasonic Cleaning System—Heavy-duty, stainless steel, double-wall design provides highly efficient cleaning. The multi-frequency operating system ensures optimum cleaning conditions for most tooling system components.



Before and after use of Ultrasonic Cleaning System

View the Ultrasonic Cleaning System in progress



Automatic Taper Cleaner—The revolving motion of the table and the rotating brushes of the gently clean tool holder tapers of contaminants and debris, while maintaining and improving proper toolholder—spindle contact.

Spindle Taper Wiper—Make removing contaminants and debris from the spindle socket easy.

ForceCheck System—Allows customers to quickly and accurately verify proper drawbar retention force, ensuring optimum contact between the tool holder and machine spindle.

Toolholder Clamping Fixture—Table-mounted roller bearing tool fixture is available for most standard toolholder taper types.



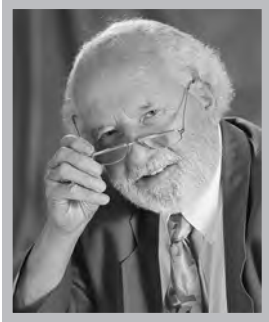
Milling Chucks—REGO-FIX Milling Chucks are designed to provide the best run-out and highest gripping force available from a milling chuck. They can be used for roughing to finish and can be reduced down with sleeves to fit your machining application.



Watch a demonstration



A Tradition of Progress



Fritz Weber, a precision toolmaker from Switzerland, founded REGO-FIX in 1950. He then went on to invent and patent the original ER collet system in 1973, a revolutionary product that continues to set the standard in toolholding design. REGO-FIX remains family-owned and operated under the reigns of the founder's three sons: Andreas, Stefan and Richard Weber.



REGO-FIX designs, manufactures and tests all its toolholders in a state-of-the-art, ISO-certified facility in Tenniken, Switzerland. These toolholders are then ship to the REGO-FIX North American headquarters in Indianapolis, Indiana, where they are stocked at maximum capacity. To meet the needs of a diverse customer based in the United States, Canada and Mexico, the North American headquarters also consists of an expert service and support team.



Made in Switzerland



Accessories & Cleaning Products



REGO-FIX®

Cylindrical ER
& Floating Toolholders



REGO-FIX®

ER Collets, Nuts & Disks



REGO-FIX®

ER Steep Taper Toolholders
(CAT/BT/TC)



REGO-FIX®

HSK ER Toolholders
& REGO-FIX CAPTO



REGO-FIX®

Other Toolholders



REGO-FIX®

powRgrip® SYSTEM



REGO-FIX®

Swiss Automatic Tooling



REGO-FIX®

Milling Chucks



REGO-FIX®

Product Highlights
2013



REGO-FIX®

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