

powRgrip® for composites
Superior toolholding performance

REGO-FIX 

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Introduction

Expand your production opportunities

powRgrip optimizes composites machining.

Absolute precision Demand for parts made from composites is booming in many industries including aerospace and defense, automotive, wind energy and sporting goods. Unfortunately for the shops manufacturing those parts, the same properties that make composites stronger and lighter are also what create major machining challenges, most of which stem from heat.

Composites are dry machined to protect the materials from coolant contamination. As a result, the cutting tools and toolholders heat and cool repeatedly. This frequent thermal cycling can cause increased TIR inaccuracy, loss of clamping forces as well as excessive vibration when using certain types of toolholding systems on the market.

Unlike other toolholding systems, powRgrip (PG) is unfazed by heat and takes all the risk out of machining composite components. Whether you're drilling, routing or profiling surfaces for helmets, skateboards and skis or parts for aircrafts, ships or guns, powRgrip gives you high-speed accuracy along with reliable and consistent TIR and exceptional vibration dampening for part processing security and long tool life.

If you're producing components made from composites, you've already made significant investments in the material itself and the high-end, often expensive, cutting tools needed to effectively machine composites. Don't risk scrapping those parts by skimping on tooling and using a subpar system. Let powRgrip handle the heat of your composite machining operations.



Swiss quality standard

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



Features and benefits

powRgrip outperforms all other tooling systems

Developed especially for high-speed cutting and high-performance cutting strategies, powRgrip optimizes productivity, improves precision and boosts flexibility to adapt to changing part machining needs.

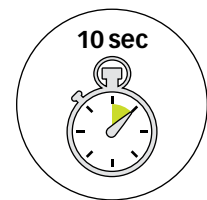
powRgrip gives you confidence and peace of mind in knowing that you run the most advanced toolholders ever made. Here is what makes powRgrip the best.

Speed/ease of use Tool change outs in less than 10 seconds and easy Z-height adjustments in any standard presetter without the need for expensive adjustment tools.

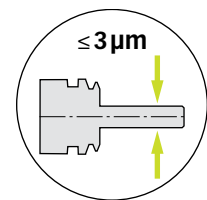
Precision Precisely engineered and balanced by design, powRgrip delivers TIR of <math><0.0001''</math> (3 μm), along with precise length adjustment repeatability of <math><0.0004''</math> (10 μm).

Quality Swiss-made and 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 dampening and extreme precision.



Tool ready for use in less than 10 seconds.



Total system runout TIR $\le 3 \mu\text{m}$ at 3x D.

Strength Industry's highest clamping torque rating of 1,100 Nm.

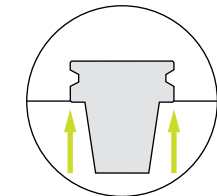
Reliability Accuracy and gripping forces that continue to meet or exceed original values even after extensive cycling.

Versatility Accommodates all types of tool shanks and materials in h6 tolerance and sizes from $\text{\O} 0.0079''$ –1.0" (0.2–25.4 mm) with the same system to reduce tooling inventory. *(REGO-PLUS licensed BIG-PLUS® dual-contact holders also available.)

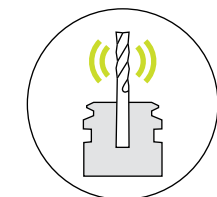
Safety Complete user safety without risk of injury from heat or pinch zones.

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.

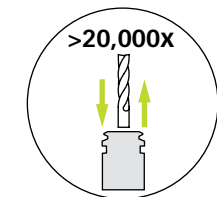
Key advantages



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



Excellent vibration dampening.



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

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

How powRgrip works

powRgrip is a unique collet-holding system that consists of three main components — press-fit assembly mounting units, collets and holders — each of which works 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 dampening as well.



Cutting tool



powRgrip® collet



powRgrip® toolholder



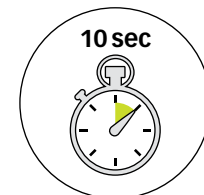
Automatic clamping unit PGU



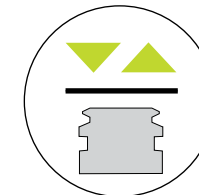
Manual clamping unit PGC



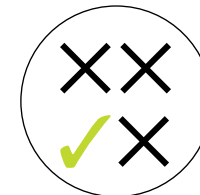
Key advantages



Clamp the tool safely and securely by pushing just one button. The clamping will take less than 10 seconds, without the use of heat.



Clamp tools with maximum clamping force and best runout in the powRgrip collet and toolholder.



Smart System – no setting of parameters required. Clamping pressure is controlled by the insertion of the respective clamping insert (APG). There are five clamping inserts available for the clamping of different collet sizes.

powRgrip for composites

Tackle any machining challenge.

PG collets With high-precision tapers and a unique wear-resistant surface treatment, PG collets press into the matching PG collet holder in less than 10 seconds to create an accurately assembled system of less than 0.0001" that meets the needs of composite machining.

PG collet holders Our PG collet holders are designed with a highly precise internal taper that accepts the matching taper of the powRgrip collets. This provides unsurpassed levels of accuracy and flexibility to interchange collets and customize the toolholder to accommodate a variety of inch, metric, coolant through or coolant flush options. The holders' vibration dampening also reduces spindle wear and helps extend cutting tool life.





[powRgrip solutions](#)

Sizes and specifications for composites

REGO-FIX offers the industry's widest variety of collet and holder types, lengths and diameters. Specific to composites machining, that selection includes high-speed holder types as well as the means to hold cutting tools up to 1" in diameter.

powRgrip toolholders

Sizes and styles include:

CAT 40 and 50
 CAT+ 40 and 50*
 BT 30, 40 and 50
 BT+ 30, 40 and 50*
 HSK 40, 50, 63, 63F, 80, 80FP and 100
 CAPTO C3, C4, C5, C6 and C8**

REGO-FIX Q System PG toolholders are balanced by design to G2.5 @ 22,000 rpm for steep taper holders and up to 90,000 rpm for HSK holders. Type H toolholders are ready to accept the Hi-Q balancing system rings which allow precision balancing of the system up to 80,000 rpm, depending on the balancing rings used.

powRgrip collets

All powRgrip collets are precisely engineered to exact tolerances. Regardless of size or type, the collets clamp all h6 tool shanks — Cylindrical, Weldon and Whistle-Notch — in all shank materials, including solid carbide and high-speed steel (HSS).

Popular sizes are:

PG 6
 PG 10
 PG 15
 PG 25
 PG 32

PG collets are available in Standard, Coolant Flush and secuRgrip versions. Tapping PG Collets available in inch and metric sizes.

Accessories

Enhance your tool life with the correct accessories for safe tool clamping.

Presetting tool The powRgrip presetting tool accepts the powRgrip collets and is inserted into the toolholder. The tool has a small thumb wheel for precise tool length adjustments and allows maximum repeatability in the toolholder assembly.

Toolholder taper cleaner Special taper cleaner brush quickly and easily removes dirt and light rust from powRgrip holder bores before insertion of a tool/collet.

Cleaning paper set Soft, absorbent paper specifically prepared to clean the powRgrip holder bore. The paper is lint free, chemically neutral and for one time use only. It is packaged in containers of 250 sheets.

Ultrasonic cleaner This cleaning system ensures proper cleaning of small powRgrip collets and holders. The system's heavy-duty, double-wall steel design provides high efficiency cleaning and its multi-frequency operating system ensures optimum cleaning conditions for most tool system components.

*The BIG-PLUS SYSTEM—licensed by BIG Daishowa—is manufactured at REGO-FIX in Switzerland under license according to BIG-PLUS specifications.

** REGO-FIX CAPTO—licensed by Sandvik Coromant—is manufactured at REGO-FIX in Switzerland under license according to CAPTO specifications.



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