



powRgrip® for aerospace manufacturing
Superior toolholding strength and accuracy

REGO-FIX 

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Introduction

powRgrip soars in aerospace manufacturing

Extraordinary reliability and outstanding quality.

Machining challenges As an aerospace shop, you face a barrage of tough machining challenges on a daily basis. And whether those are difficult-to-machine materials, aggressive metal removal requirements or long, awkward tool overhangs, your toolholding system must be able to handle them and provide the utmost in precision, performance and reliability.

Optimized machining operations Yours is an industry where you can't afford to scrap parts. Only the REGO-FIX powRgrip (PG) toolholding system can optimize all of your aerospace/defense part machining operations, maximize your productivity, lower your cost per part and shorten your machining cycle times. But most importantly, powRgrip gives you confidence and peace of mind in knowing that you run the best and most advanced toolholders ever made.



Swiss quality standard

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



Features and benefits

powRgrip toolholding outperforms all other tooling systems

Developed especially for high-speed cutting and high-performance cutting strategies, powRgrip optimizes productivity and improves precision for fast machining of high-quality parts.

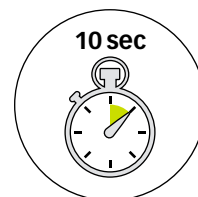
Here is what makes powRgrip the best.

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.

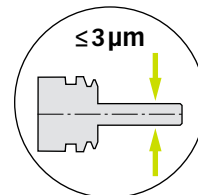
Precision Precisely engineered and balanced by design, powRgrip delivers TIR of $<0.0001''$ ($3\text{ }\mu\text{m}$), along with precise length adjustment repeatability of $<0.0004''$ ($10\text{ }\mu\text{m}$).

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 $\leq 3\text{ }\mu\text{m}$ at $3\times D$.



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 Ø 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 as well as REGO-FIX CAPTO** holders also available.)

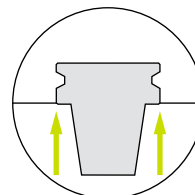
Safety Complete user safety without risk of injury from heat or pinch zones or toxic fumes omitted from heat shrink units.

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.

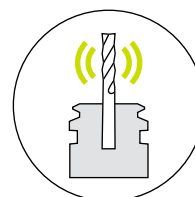
*THE BIG PLUS SYSTEM—licensed by BIG Daishowa—is manufactured at REGO-FIX in Switzerland under license according to BIG PLUS specifications.

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

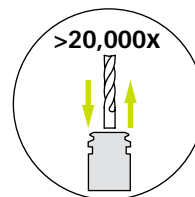
Key advantages



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.

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.

Press-fit automatic preset units A fully automatic assembly and presetter unit is also an available option through the joint partnership with Zoller. Called the »venturion 600«, this powerful unit combines tool clamping and setting in a single system to guarantee maximum parts quality and economic efficiency in your manufacturing process.

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 as provide either coolant-through or peripheral cooling capabilities.



Cutting tool



powRgrip® collet



powRgrip® toolholder



Automatic clamping unit PGU

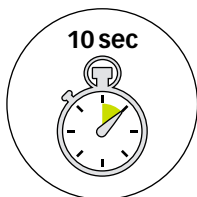


Manual clamping unit PGC

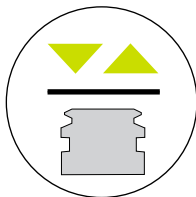


Fully automatic preset and press-in unit

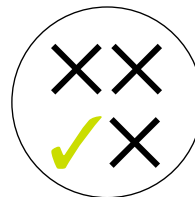
Key advantages



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 aerospace manufacturing

Tackle any machining challenge.

Remarkable versatility Whether you machine structural, engine, landing gear or systems control parts from heat resistant super alloys, aluminum or stainless steels, the powRgrip product line offers special ancillary technologies and accessories as well as specific sizes that will further optimize your aerospace and defense part machining operations.

Add REGO-FIX's secuRgrip technology, Xtended Length Toolholders and PG 32 collets to your powRgrip system and tackle any machining challenge from heavy roughing in tough materials, to high-speed machining aluminum parts, to precision profiling and finishing of composite materials, to milling of hardened steels, as well as small diameter precision drilling and reaming operations in any material.

secuRgrip System For the ultimate in cutting tool security, secuRgrip combines powRgrip's tremendous gripping strength with a patented locking key system that consists of four elements – a threaded insert, toolholder with thread, PG 25-SG or PG 32-SG collet, and safety nut. Together, these elements provide an added degree of confidence for special applications such as heavy-duty material removal and the machining of expensive castings or complex parts. The secuRgrip system has a TIR of 0.0001" and enables manufacturers to preset tool heights.

REGO-FIX Xtended Length Toolholder with MFD Technology Xtended Length powRgrip toolholders come in lengths up to 14" and in nose versions of PG 10, PG 15 and PG 25 for machining applications that require longer reach or present clearance challenges especially in horizontal milling machines.

The Xtended Length holders feature REGO-FIX's MICRO-FRICTION DAMPENING® (MFD) technology that allows the holders to dissipate vibrations faster than standard long reach holders. Dampening the vibrations faster means that the cutting tool, part and spindle will experience fewer vibrations, resulting in better surface finishes, longer tool life and reduced spindle wear.

PG 32 Special large size powRgrip PG 32 collets provide extreme clamping capability and are especially well suited for machining those components made from Inconel® and titanium.







[powRgrip solutions](#)

Sizes and specifications for aerospace manufacturing

powRgrip is available in a wide selection of holder types, lengths and diameters, including those larger toolholder-spindle interface tapers and styles typically required for aerospace applications.

powRgrip toolholders

Sizes and styles include:

CAT 40 and 50
CAT+ 40 and 50*
TC 30, 40 and 50
BT 30, 40 and 50
BT+ 30, 40 and 50*
HSK 63, 80, 100 and 125
HSK 80FP
HD Rigid taper design
CAPTO C3, C4, C5, C6 and C8**

REGO-FIX Q System PG toolholders are balanced by design to G2.5 @ 25,000 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.

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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.

PGU Automatic Presetter Unit Ideal for aerospace production environments, the REGO-FIX fully automated powRgrip tool presetting and measuring system virtually eliminates the need for any operator intervention and, thus, significantly increases tool presetting speed, precision and repeatability. The system provides users with safe, fast presetting and measuring of tools of all types, as well as for the clamping/unclamping, measuring and presetting of powRgrip tools.

Within 10 seconds, the automated presetter clamps the tool then measures its height, determines the machining offsets and sets the tool in the powRgrip toolholder — in as little as one minute. The system works for all PG size collets and up to a 1" diameter tool shank and all standard taper types (BT, CAT, HSK, CAPTO), forms, sizes and gage lengths.

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 with a heavy-duty steel double wall design provides high efficiency cleaning. The multi-frequency operating system ensures optimum cleaning conditions for most tool system components.



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