

powRgrip (press-fit technology)

The powrgrip (PG) system is a press-fit system that consists of a toolholder, a special high precision collet and a bench-top hydraulic press. The collets have a very slight tapered profile (1:100) that allows them to be pressed in using the bench-top press. The result is a controlled expansion of the toolholder that generates the highest clamping forces in the industry, as well as industry leading TIR of 3 microns (0.00012") or better.

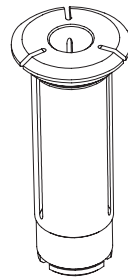
The collet tapers have a special heat treatment that allows them to be used and re-used over 20,000 times without wearing out or galling the toolholder surfaces. Each collet is designed with a square shoulder that when pressed in makes contact with the face of the toolholder. This positive stop mechanism allows the use of a back-up screw within the collet to be used to set the cutting tool projection length to within 10 microns (0.0004").

At this point there are four (4) powRgrip collet sizes available. PG 10 with clamping diameters of 0.2mm to 6mm (1/16" to 1/4"), PG 15 with clamping diameter of 3 to 10mm (1/8" to 3/8"), PG 25 with clamping diameter of 3 to 20mm (1/8" to 3/4") and PG 32 from 6mm to 25mm (1/4" to 1"). Toolholders are available in HSK, TC (DIN 69871), BT, CAT, CAPTO and Cylindrical shank designs. These toolholder sizes are available in different lengths up to 14".

The small bench top press has state of the art circuitry that allows the machine to automatically select the correct clamping pressure depending on the PG collet series being used. This removes operator involvement in the pressure selection, so toolholders and collets can't be damaged inadvertently by selecting the wrong pressure. The pressure range is 9 tons and below with clamping cycles of 10 seconds. The tools can be used as soon as the clamping cycle is completed.

The PG system can also dissipate vibrations better than other systems based on its collet - holder combination. The broken surfaces between the cutter and collet, then again between the collet and holder, allow the system to absorb and dissipate the vibrations. Dampening the vibrations faster means that the cutting tool, part and spindle will see less vibrations resulting in better surface finishes, longer tool life and less spindle wear.

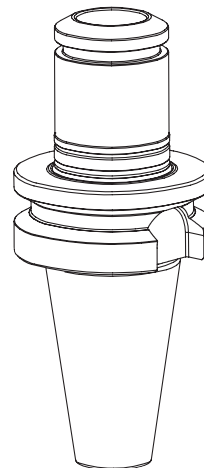
The PG system is designed to work with all cutter materials, HSS, Carbide, Cobalt and others as long as the shank diameter is held to the h6 tolerance band. This is the same requirement that other high precision systems require. Most, if not all end mill manufacturers produce their offerings within this range.



Square Shoulder for repeatability.

Slightly taper body for maximum clamping power and long life.

Built-in back-up screw for precise presetting



Ground face for positive stop of collet

Material expansion of the holder generates clamping force as the collet is pressed in.

Most standard shank sizes and types are available

Made in
Switzerland



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