



Cryogen: Coolant at the right spot

COOL

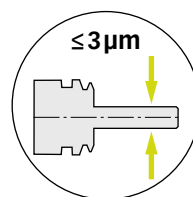
CO₂ cools the cutting edge in a safe and clean way, thanks to powRgrip® with an optimum dosage.

CLEAN

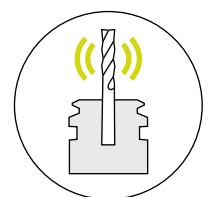
No contamination at all, therefore no necessity of additional cleaning of the workpiece afterwards.

CRYO-powRgrip®

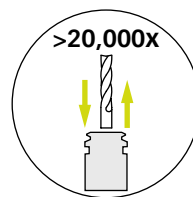
PG-CRYO collets offer the latest tool cooling technology, for a clean chipping of workpieces (i.e. Medical industries).



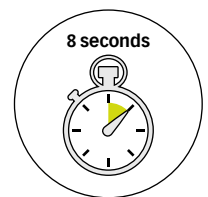
Total system runout
TIR ≤ 3 µm at 3 x D



Excellent vibration
dampening



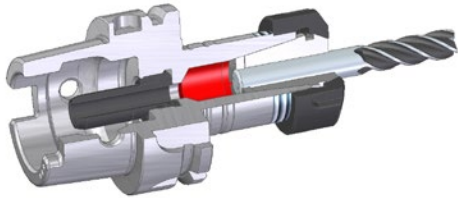
Maximum clamping force
and low runout, even after
20'000 tool changes



Tool ready for
use in 8 seconds
with PGU 9500

The major difference of toolholding systems

Solution: reducing of the condensation space



ER toolholder

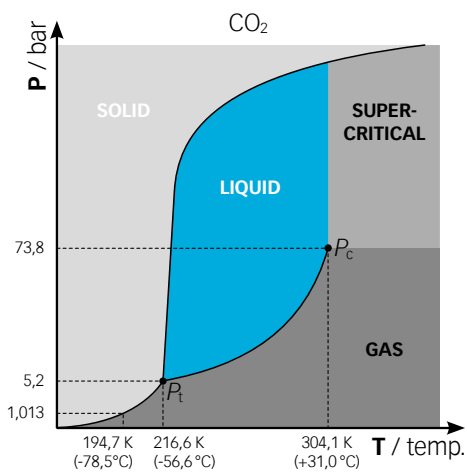
Typical tool clamping system, with the risk of icing of the holder, due to the gaseous state behaviour of CO₂.



PG-CRYO toolholder

The cooling medium will be directly led to the cutting edge through the cutting tool. The CO₂ expands at the cutting edge and the ice snow provides an efficient and clean chipping

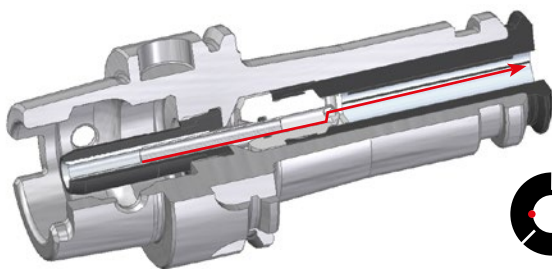
State of aggregation diagram CO₂



Benefit of CRYO-powRgrip®

- // Perfect guidance of the cooling medium to the cutting edge
- // Tool life increase
- // Productivity increase, due to higher cutting parameters
- // Better surface finishing
- // No disposal of the cooling fluid necessary
- // No necessity of workpiece cleaning
- // 100% recycling of the chips

For peripheral external cooling



For internal cooling

