



Redefine Productivity with **KITAGAWA-NORTHTECH**



ENGINEERING 101

▶ Pull-Back Chucks ◀

Grip it, hold it, reduce cycle time and keep that part stabilized!

A valuable tool used to maintain parallelism & perpendicularity when machining with limited pull back capabilities is the pull-back, or draw down, chuck. A pull-back chuck is a chucking system that is designed to pull a work piece back to a qualified, fixed part stop that is not part of the chuck's jaws.

PULL-BACK CHUCK BRINGS VALUE TO THE MACHINING PROCESS

Length Control

Pull-back chucks provide a surface by which to control part length. In practical terms, this z-axis surface, allows for consistent flange thickness and a fixed point to work from when programming. This surface essentially becomes the “zero” from which all other programming can be referenced from. Since the pull back chuck literally *pulls* the part back against this non-moving surface, repeatability to this “zero” is absolute.

Feature Control: Parallelism & Perpendicularity

When a pull-back chuck and ‘qualified’ part stop are combined, we have a system for also controlling the typical parallelism and perpendicularity issues associated with most all sliding jaw chucks. The part stop must first of all be “qualified” in the sense that its face run-out value must be lower than the requirement for parallelism/perpendicularity. This is easy enough to accomplish by machining this surface while mounted to the chuck face, to a near zero value. With this surface now qualified, we simply need to keep the work piece back against the part stop during machining. This is where a pull-back chuck literally seats the part back against this surface to ensure these feature control results.

Increased Holding Robustness

Another compelling case for pull-back chucks is the added robustness of part holding and the resulting cycle time reduction. With the part securing gripped between the jaws and held back against the part stop, more aggressive machining is possible. Cycle time **reduction of 20~40%** are not uncommon and pay for themselves in a period of weeks through this enhanced productivity.

- ▶ **Length Control:** Less scrap - more thru-put
- ▶ **Feature Control:** Less scrap - more thru-put
- ▶ **Increased Holding Robustness:** Decreased cycle time – more thru-put

Contact Kitagawa-NorthTech, Inc.
TODAY to reach your productivity objectives!

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