

Machining

## Avoiding Toolholding Workarounds

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Machinists are some of the most innovative thinkers, solving real-world problems and getting parts made and out the door on time. Sometimes things don't always go as planned and they have to come up with a quick solution that gets the job done using whatever they have at their disposal.

A common quick workaround is creating an extended length toolholder out of available parts. In a good majority of machine shops, there are a lot of toolholding monstrosities of cobbled together toolholders. Like a Jacobs chuck in a straight shank collet holder in side lock end mill holder. Or a collet chuck in collet chuck in a collet chuck.

To elaborate, imagine a person standing on a chair and he still can't quite reach what he needs from a high shelf. He stacks a couple of thick books on top of the chair and stands on those, but he still can't reach so he grabs another one. He can finally reach high enough, but what he is standing on is extremely unsafe.

While the quick solutions machinists use may get parts out the door, they're typically not without compromise. Stacking tolerances means reduced machining quality and cutting tool life, and the increased vibration from these crazy assemblies can reduce spindle bearing life and, in the worst case, be a danger to operators.

HAIMER is here to help machinists avoid this toolholding workaround. HAIMER stocks extended reach toolholders in popular sizes and tapers for just about any application.

### For Long Reach Medium and Heavy Milling Applications

When machining applications demand a long reach, shrink fit chucks with extended gage lengths are HAIMER's go-to recommendation for many reasons:  $3\mu\text{m}$  or better runout, extreme gripping force, and excellent balance are just the start. HAIMER stocks extended gage lengths in popular CAT, BT and HSK sizes, and when a machinist needs the least amount of interference possible, check out the Power Mini Shrink Fit Chucks. They feature a slim nose design that is ideal for 5-axis machining in the die and mold, aerospace and medical industries. Additionally, HAIMER stocks straight shank shrink fit extensions for added versatility.

### For Long Reach Light Milling and Drilling Applications

ER Collet Chucks with extended gage lengths bring together long reach, high precision and versatility. Runout accuracy is  $3\mu\text{m}$  or better in the collet bore, and HAIMER's high precision ER collets guarantee  $5\mu\text{m}$  or better runout at three times the tool diameter. Extended length collet chucks feature a reinforced base for enhanced rigidity. In stock are sizes ranging from ER11 to ER40 in popular CAT, BT and HSK styles.

## For Long Reach Small Diameter Milling and Drilling Applications

HAIMER's HG Collets are a high-precision collet, and the HG Mini takes it to a new, tinier level. Available for the clamping of tool shanks from 1mm to 4.5mm, the HG Mini extensions are perfect for light milling and drilling applications with micro tools. These slim collets are threaded in from the rear, eliminating the need for collet nuts and reducing the over-nose diameter. HAIMER offers these straight shank extensions in three standard sizes, ranging from 100mm to 130mm in overall length.

## For Your Specific Application

HAIMER always applies their engineering expertise to a shop's machining applications. While the standard inventory of toolholders covers a broad range of applications, every year HAIMER make thousands of custom toolholders tailored to meet specific needs.

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