CUBIC MACHINERY

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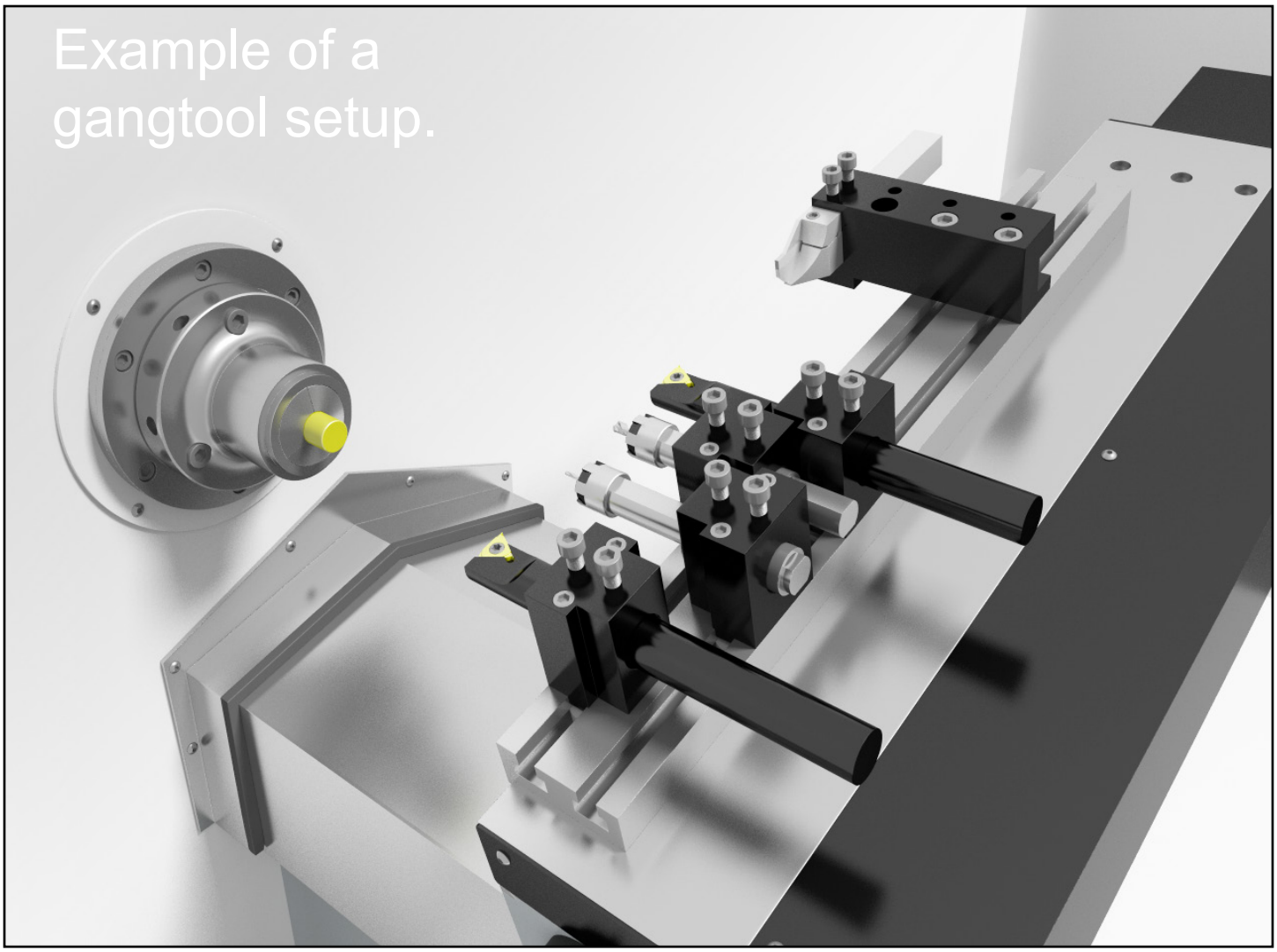
Choosing a Lathe-Type Part 1

Here at Cubic we've supported manufacturing companies for over 25 years and through those years as we've visited shop floors and discussed bottlenecks a troubling pattern has appeared often. Manufacturing companies have scheduling and workflow problems due to picking the inappropriate type of lathe. For example, using a turret lathe for parts that can be machined on a gang tool can cost time and in turn floor efficiency. Also, the high upfront cost of a Swiss-type machine may sometimes be avoided with a turret lathe that comes with a programmable tailstock. The key is to understand the different lathe types attributes and flaws.

At Cubic we are known for our high quality gang tool lathes to the point many companies are surprised to hear we also offer turret and Swiss-type lathes. This diversity allows us to offer the proper machine for a business in the terms of the present jobs and future jobs.

When to use a gang tool

In general, the gang tool lathe is optimal for smaller parts that require only 2-7 tools. These types of parts allow for the minimalist beauty of the gang tool to take effect. Tools are mounted in a row on the machines cross slide. To change a tool one must simply back away the tool in Z then index to a different tool in X, and move back into the cut in Z. This design forgoes the unclamp, rotation and clamp steps of a turret which can save 1 to 3 seconds on each tool change. In addition to the speed gained by using a gang tool lathe, one also gains accuracy. This is again due to the minimalist design of the tool plate. Rule of thumb in life: the more things that can go wrong, the more things that will go wrong. Lathes are similar in that every moving part added not only has a lifespan but within that life span that part will add its positional uncertainty to the positional uncertainty of the machine. Turret is a more general tool like a swiss-army knife that has to face uncertain job requirements, while gang tool is specialized for higher production run such as aerospace connectors and fasteners. Setup is simpler as well as plates can be preset, allowing for simple replacement when changing over to a different job.



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