Newsletter

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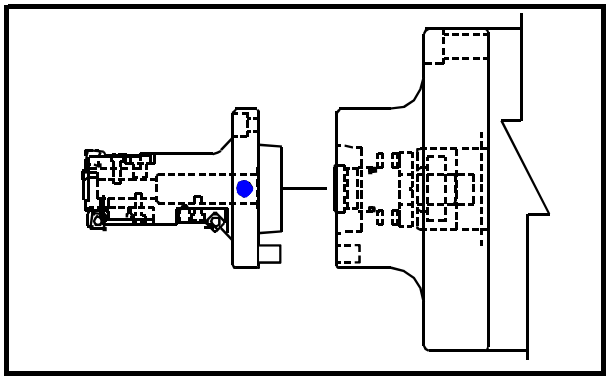

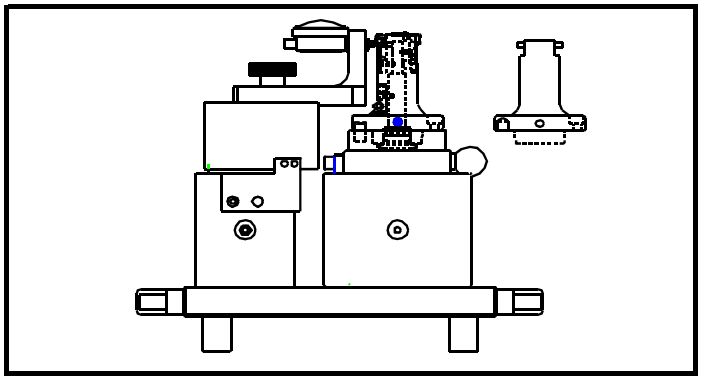

Master Tool was asked to design and quote a boring system for a large compressor manufacturer. The operation was the finish machining of the cylinder bores for a series of six (6) different cast iron compressor housings.

Their existing operation included 4 dedicated spindles on a 15 year old dial machine. The existing tooling was a competitor's ramp angle style generating head that was flange mounted to the spindle and activated with a draw bar. The bores sizes were adjusted using a compensation unit.

The problem presented to Master Tool was the fact that the customer had six (6) different parts with six (6) different bore sizes. Each time a new part was machined, the customer was required to change their tooling. This included disconnecting the draw bar, removing the old tooling, installing the new tooling and test cutting to allow the compensating unit to work. All of this took a minimum of 6-8 hours of change over time and the test cutting resulted in 8-12 scrap parts. The customer had to make 2-3 part change-overs each week.

Master Tool's proposal included a quick change head system that consisted of a single adapter that remained bolted to the spindle and connected to the draw bar at all times. It also included the use of six (6) cutting heads (one size for each part) that could be preset outside the machine on gages provided by Master Tool. The Master Tool system was also designed to semi-finish the bore on the in-stroke of the machine slide and to finish bore on the back stroke. The design provided a rounder, straighter, closer toleranced bore.

During the installation of the adapters, all of the draw bars were set to the same stroke with a draw bar gage provided by Master Tool. This permitted the customer to put any of the four (4) preset cutting heads on any spindle.

The end result was a part change over of less than 15 minutes, the ability to put the heads on any spindle and to get "First Part --- Good Part" with zero scrap.

Part change overs are no longer an expensive, time consuming problem. The customer can now reduce his inventory and get his parts to his customer faster - making him much more profitable.

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