

Leader indexing chuck technology helps turn a profit

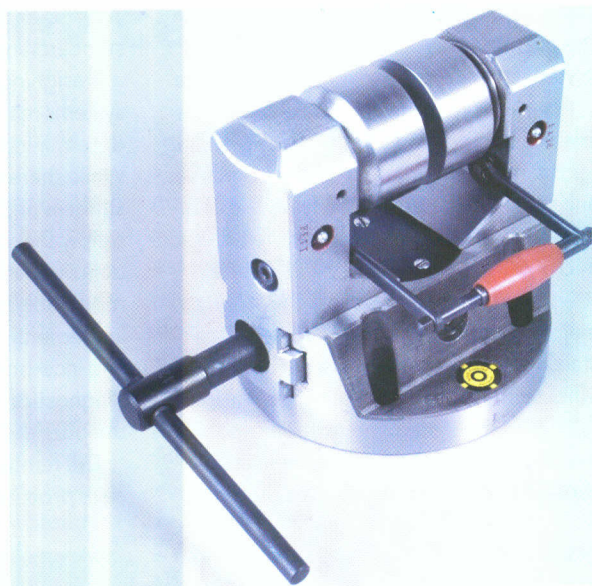
For both accuracy and efficiency, the philosophy of not letting go once you have located a part is the ideal workholding choice. Nowhere is this better demonstrated than by the indexing chuck, which is more than a chuck, it is a complete technology.

Supporting this technology, workholding specialist Leader Chuck Systems offers a wide range of 2-jaw self-centring indexing chucks in diameters from 125 mm up to 500 mm. Specifically-designed for holding valve bodies and similar fittings, the chucks feature interchangeable indexing plates. Usual divisions are four 90° movements with an indexing accuracy of ± 2 seconds of arc, but divisions of any incremental angle can be specified.

"It is not a new concept," admits managing director Mark Jones, "but indexing chucks offer significant advantages for difficult to hold components that would require multiple or staged fixing that could introduce errors. Historically, they have been popular in the production of volume automotive and valve industries for components such as trunnions, couplings and universal joint spiders, valve bodies and multi way connectors. Component accuracy is derived from the indexing accuracy of the chuck as all the machining is effectively related to the first datum setting."

Over the years the range of components making use of the indexing chuck has become increasingly diverse, as designers and production engineers become aware of the benefits and flats or dimples for location and clamping are being included in the cast or forged raw component material. These features simplify location and can even reduce the size of the chuck required in many instances.

Manually indexed the chucks, which can be manually or power clamped, also support the drive towards lean manufacturing as the ability to fixture a part once helps improve profit margins on shorter batch runs. Even though these chucks provide a complete solution for a specific application they do so without compromising the flexibility of the lathe. The quick change philosophy



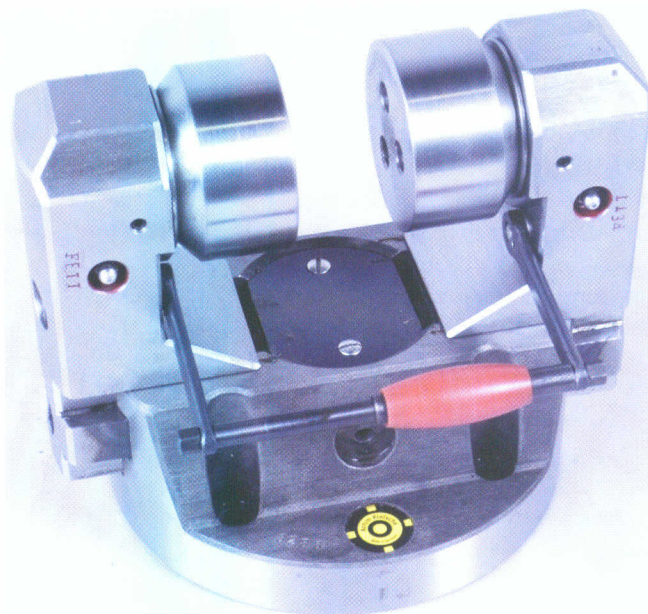
promoted by Leader throughout its workholding product range has also been adopted here, and a fully manual chuck can be removed from a typical turning centre in under 10 minutes. The cost of the investment is also not prohibitive with manual indexing chucks starting at £5,000. So there is no penalty for investing and installing a bespoke solution.

A standard range of Leader indexing chucks is available, produced from high tensile forged steel. However, a depth of workholding knowledge and experience will positively benefit the manufacturing process. This is where Leader can help the customer make significant efficiency gains. As Mark Jones points out: "There are a number of prime considerations for selecting the correct size of chuck; and it is impossible to select the chuck without considering the tooling required, the access it needs to complete the machining necessary."

Clamping jaws are configured for specific applications, and for competitors' products the chucks usually feature one clamping and one static jaw that also provides the indexing drive. This configuration does not

provide any self-centring. However, Leader indexing chucks with manual or power clamping offer simultaneous clamping drive that centres the workpiece as accurately as a standard power jaw chuck of the same size, making this workholding system the number one choice for cast raw material machining.

Based in Tamworth, Leader Chuck Systems has an enviable reputation for the in-house design and production of Leader chucking, stationary clamping, gripping and workholding products. A respected brand name for high quality equipment with more than 60 years' experience, the company also stocks products from the very best suppliers, such as AutoGrip, Bison, CARVEsmart, Gamet, Hainbuch, Hewa, Iram, Lexair, Maprox, MicroCentric, Posistop, ZeroClamp and Zweifel. Able to



provide the right chuck or gripping solution for any application, Leader Chuck offers quality, precision, and reliability at competitive prices with reliable expert advice and a commitment to customer service.

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