

Licensing and Technology Transfer Opportunity

Title of Technology Available: “DEVICE FOR INSPECTING DIMENSIONS OF A TOOL HOLDER”

BRIEF DESCRIPTION OF INVENTION:

The present disclosure relates generally to the field of tool measuring and inspecting apparatus, and more particularly to a tool holder gauge for HSK standard machine centre. The present disclosure relates generally to the field of tool measuring and inspecting apparatus. In particular, it pertains to a tool holder gauge for inspecting tool holder face and tapered angle for HSK and BT standard tool holders.

Brief Background of Invention:

In present day machine centres, the basic function of any tool holder is to provide a means of securely and rigidly mounting a cutting tool to the machine. Each machine operation has its own special requirements for the cutting tools and tool holders. The design of the tool holder is also based on certain standards developed by DIN, ISO, ASME etc. These standards are correspondent to the standards of the spindle used in any machine centre. For example, the HSK tool holders and spindle use DIN 69893 standards. So if a HSK A63 tool holder is to be used, it will only work with a HSK A63 spindle. Hence, to ensure that the three characteristics of effective machining are maintained, the dimensions of a tool holder should be regarding to the desired standards.

The existing gauges are expensive, and also require a certain level of skill in the art to a user to use these gauges properly. There is, therefore, a need to provide a simple and cost-effective gauge for inspecting dimensions of the tool holder.

Describe the final product:

The design of the disclosed device (also referred to as tool holder gauge hereinafter) can be done by taking into consideration, two key areas such as a face of a holder and taper angle of the tool holder. These areas are important because they are the most affected regions (due to machining) in the tool holder. Also the accuracy of dimensions of the face and the taper angle determine the

clamping characteristic of the tool holder. If there is an error in the dimensions of these areas, clamping force will get affected. As a result, it leads to erratic machining.

In an embodiment, the disclosed device incorporates a cylindrical member having a tapered bore extending along length of the cylindrical member to accommodate the tool holder. Inner surface of the cylindrical member is tapered at a predefined angle to make the tapered bore for fitment with outer surface of the tool holder having accurate dimensions.

1. Technological Domain (Keywords): Tool holder Gauge, HSK, Tool holder, HSK A63 Spindle, DIN 69893, Taper Gauge.

Stage of Development:

Ideation/Prototype/**Advanced Prototype**/Ready to Market technology

Provide Information on Competitors who manufacture and/or sell similar products:

- KTA Spindle Toolings
- TAEGUTEC India
- Otto Bilz (India)

What are the unique advantages your innovation has compared to the competition:

- The present disclosure provides provide an improved tool holder gauge for HSK standard machine centre.
- The present disclosure provides provide a device for inspecting dimensions of a tool holder.
- The present disclosure provides provide a simple and cost-effective device for inspecting tool holder face and tapered angle for HSK and BT standard tool holders.

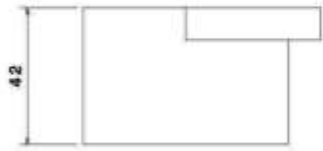
A few potential companies who might be interested in this technology:

- KTA Spindle Toolings
- TAEGUTEC India
- Otto Bilz (India)

Intellectual Property Status: Indian Patent application with number filed in (mention year)

Filed at the Indian Designs Office on **03rd October 2019** as a **complete** application **201941013525**

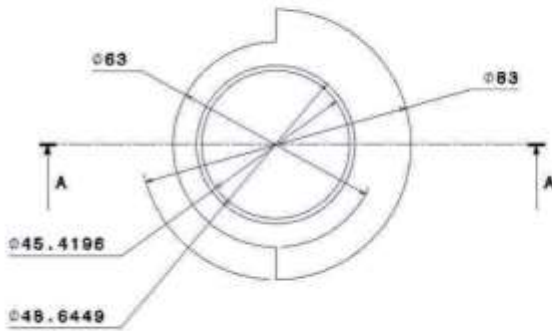
Proof of Concept:



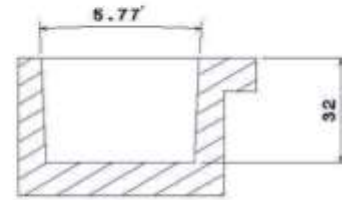
Front view
Scale: 1:1



Left view
Scale: 1:1



Top view
Scale: 1:1



Section view A-A
Scale: 1:1

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