

# SolidWorks Add-in – Missing Holes

The purpose of this document is to give a general overview/scope of what we at Armo would like to accomplish within SolidWorks.

## Objective

SolidWorks plugin that detects holes, and if there is a mating part with that component, validate if mating part has concentric holes as well, otherwise flag it giving a visual cue to the user and trigger an external database event where it can be logged for further action. This tool will be used as a final design check.

## Feature Requirements

- Must be run within assemblies
- Must be able to detect holes in any orientation
- Must be able to detect holes that are made with both the hole wizard and holes that are made via sketch/extrudes
- Must be able to work with slotted holes (i.e. Slotted counterbores wherein the mating hole should be in the center of the slot)
- Must provide visual feedback to the user whether it be through a list displayed on screen or by other means as to what parts are affected and where
- Must allow the user to make the changes required in the model while retaining/amending the list
- Must allow the user the ability to remove false positive from the list
- Must be able to log to an external database through a http request endpoint giving information such as part name, parent assembly, etc.
- Must check hole sizing requirements (i.e. Check if the mating/threaded hole which lines up with a counterbore is the correct size)

## Project Requirements

- Armo Tool Ltd must retain rights to any source code generated by means of custom programming for this project
- Project should be written in C# atop of the .NET Framework
- Project must be well documented
- Project must be compatible with SolidWorks 2017 SP5 and SolidWorks 2018 SP4 at time of writing
- Project should not use any features that of which are unavailable with our current licensing

