In using the client needs that have been identified in Deliverable B - Needs Identification, the functional criteria, non-functional criteria, and constraints, for the jig have been identified below:

Functional Criteria

- The jig must be portable

It is necessary for the jig to be able to be easily transported to and from the workstation efficiently, as to decrease the time needed to drill the guiding holes into the door.

- The jig can stabilize the drill

The biggest priority of the jig is its ability to stabilize the drill to ensure the hinge prep holes are drilled with utmost accuracy and efficiency.

- The jig will not cause damage to the door

It is vital that the use of the jig will not cause any damage to the door in the form of scuff marks, cracks, holes, etc.

- The jig can attach to the door by itself

The jig must be able to attach to the door by itself in a way that ensures stability and accuracy for the user, and is also easy to use. The jig must be secured to the door in a way that will not cause any damage, but will be secure and stable to ensure the accurate drilling of hinge prep holes.

- The jig has adjustable hole placement

The holes on the jig that are meant to guide the users' drill must be adjustable as to account for a variety of different hinge types and door types. Exact specifications for the holes are outlined in later sections of the document.

Non-Functional Criteria

- The jig is quick to set up

To further increase efficiency when drilling the hinge prep holes, the jig must be quick to set up (and take down) to aid in the quick assembly of the doors.

- The jig is durable

Due to the work environment and anticipated usage, it is vital that the jig is durable as to minimize any risk of damage when in use, and to ensure it is able to be used for a long period of time.

- The jig is lightweight

The jig must be lightweight so that it can be more easily transported and stored. A lightweight design also minimizes risk of damage to the door during use.

Constraints

- The jig will be easy to use

The jig must be easy to use, as to account for the different experience levels of the users, as well as to ensure maximum efficiency when being used.

Table 1: Design Criteria

| Functional Requirements | Non-Functional Requirements | Constraints |
|---|---|---|
| Portability | Durability | User-Friendliness |
| Stability | Weight | |
| Adjustable | Efficiency | |
| Self-sufficiency | | |
| Will not damage door | | |