

Deliverable H

Prototype III and Customer Feedback

March 23, 2025

Thinker Titans

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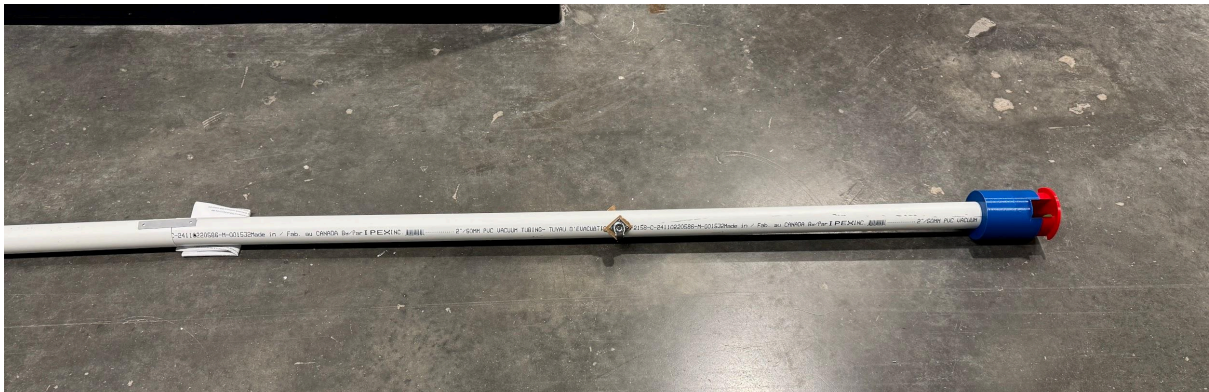
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1 Prototype III



1.1 Prototype Analysis

This final prototype is a very useful final device. After going through thorough testing it was very successful and accurate in reaching needed distances, and properly rotating.

Unfortunately, the main part of the design which holds the blade did not properly 3D print, thus we could not test the scraping ability. However in theory and with what the rest of the device is capable of it should work. This final device successfully adapted all previous feedback and test results into a final working product.

2 Prototyping Test Plan for Prototype III

Test #	Test Objective (Why)	Description of Prototype used and of Basic Test Method (what)	Description of Results to be Recorded and how these results will be used (How)	Test Duration (When)	Results
1	Does the main top part fit and hold everything	Putting all parts together and seeing if it all functions and fits	If all the parts can fit together and individually function it is valid	2 mins	Yes, there is a container that holds the sample and it fits properly
2	Does it properly rotate and scrape	See how all parts function when put together and rotated	If all parts of the prototype work with it all the parts put together it is Valid	5 mins	Yes it rotates properly, how ever the scraping was weak
3	Does it function at all sizes	Using the whole prototype and setting it to all potential lengths	If the prototype is valid at all lengths it is valid	10 mins	Yes, it has full functionality at all sizes

3 Feedback

After consulting fellow students, friends, and family we received feedback on certain features of our final concept. Specifically, that it may be difficult to consistently collect our sample as the collection depends on it being situated vertically, which will be difficult to maintain. Additionally, the manual hand turning focus in our design may be physically straining after continuous use.

4 Updated BOM

 Group 10 BOM