

## Requirements list group 18

Requirements	Rationale
The grabber is lighter than 250 grams.	This constraint comes from the physical constraints of the user and what weight is possible to carry.
The grabber must reach the ground, 20 cm from his wheelchair, when the wheelchair is at its lowest.	See what height he uses wheelchair? Find out what distance is optimal for picking up an item?
Our participant must be able to travel with his new grabber.	Our user expressed interest in using the grabber outside of the house and identified flaws with taking his current grabber out. Mainly that it is not portable nor convenient to store anywhere.
The new grabber reduces the steps required to pick an item up compared to his current grabber. The grabber should bring the grabbed item directly to the users' wheelchair table.	His current grabber requires him to place the grabbed item on a table which is then picked up by hand. This is because the grabber is too long to place the item directly on his wheelchair table.
The new grabber should be more comfortable to hold than his previous grabber.	Due to the users' condition, his hands developed in a manner unconventional to most ergonomics. Thus, most handles designed for many users do not cater to him.
The new grabber must not create a shock which can break his arm or other bones.	Heavy jerk or shocks can break our users' bones.
Our participant must be able to use the grabber on his own.	The user lives autonomously.
The required force to actuate the grabber must be at least the same as his previous grabber.	This force is limited by the grip strength of the user.
The grabber should be fully functional and operational with one hand.	The participant cannot reach the other side of the wheelchair.

Wishes	Rationale
The grabber can be used with both hands.	In the case where one hand is rendered unusable, the other hand can be used.
With the new grabber our participant can pick up heavier items.	User mentioned the inability to carry and pain when carrying heavier items with his current grabber.
The required force to actuate the grabber should be less than his previous grabber.	This force is limited by the grip strength of the user.