

Acceptance Test AIGB 2.0

Requirement	(Y/N)	Comments
Plants with a volume from 5x5x5cm to 25x25x25 cm must fit within the AIGB2.0		
The AIGB2.0 must cost less than the AIGB1.0 + €300		
The AIGB2.0 must be able to control to humidity to a set value +-10% within 5 minutes		
The AIGB2.0 must be able to have a flow of 1L/min 95% of the time		
The AIGB2.0 must be able to mix the nutrient values of the water reservoir, with an allowed error of 10% when compared to the optimal set value		
The AIGB2.0 must be able to control the light intensity to a set value with an error of less than 10%		
The AIGB2.0 must be able to control the colour profile of the light to a set value with an error of less than 10%		
The AIGB2.0 must be able to control its temperature with a maximum error of $\pm 1^{\circ}\text{C}$		
The AIGB2.0 must run on 24V or 48V DC		
The electrical components of the AIGB2.0 must be protected in line with the IP51		
The AIGB2.0 must be able to function without user input for at least 2 weeks		
The AIGB2.0 must be controllable and monitorable with a graphical interface		
It must be simple to remove components from the AIGB2.0		
The AIGB2.0 must be mobile enough moveable by 2 people		
The AIGB2.0 must be able to function both inside and outside		
The AIGB2.0 must be able to replenish its own water level		
The AIGB2.0 must be able to control its CO2 concentration with an error of less than $\pm 10\%$		
The AIGB2.0 must have a height of less than 1.9 meters		

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Cat	Improvement	Priorities	(Y/N)	Comments
General	Online Dashboard	<u>Must have</u>		
	Add plant profiles	Nice to have		
	Add Flexible and longer ethernet cable	Nice to have		
	Isolate holes of AIGB2.0	<u>Must have</u>		
	Check, test and possibly change AD-converter	<u>Must have</u>		
Safety	Improve safety of cables surrounding reservoir	<u>Must have</u>		
	Isolate LCD-screen pins	<u>Must have</u>		
	Add a flexible exit tube for watering grid	<u>Must have</u>		
	Add a protective screen on backside	Nice to have		
Watering system	Attach AIGB2.0 to watering network	<u>Must have</u>		
	Redesign the AIGB for a bigger reservoir	<u>Must have</u>		
	Choose and buy pump with longer working lifespan	<u>Must have</u>		
	Give the pumps fixed positions in reservoir	<u>Must have</u>		
Conductivity	Add a controller for the conductivity	<u>Must have</u>		
	Make the conductivity sensor work via the raspberry Pi	<u>Must have</u>		
	Automatic dispenser of nutrients	<u>Must have</u>		
	Place the conductivity sensor in watering grid	<u>Must have</u>		
Temperature	Add a controller for the temperature	<u>Must have</u>		
	Separate the temperature,- and CO2-sensor	<u>Must have</u>		
	Add a different heat source than LED's	Don't fix it		
	Prevent water damage from condensation	<u>Must have</u>		
CO2	Add a controller for the CO2-value	Nice to have		
	Add a system that adds CO2	Nice to have		

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pH	Add a controller for the pH-value	<u>Must have</u>		
	Make the pH-sensor work via the raspberry Pi	<u>Must have</u>		
	Add a pH calibration button on the dashboard	<u>Must have</u>		
Humidity	Add a controller for the humidity	<u>Must have</u>		
	Add a system that adds humidity	Don't design it		
Lighting	Add a day and night cycle	<u>Must have</u>		
	Add an option to the dashboard to change the light intensity and colour	<u>Must have</u>		
	Add a reflecting product	Nice to have		
	Add a light intensity sensor	Don't add it		