

Class	1MCT1
First Name:	Merijn
Name	Defoort
Project Name :	Plant-It
Assembly Revision :	2
Approval Date :	
Part Count :	41
Total Cost :	€325,59

Part #	Part Name	Description	Revision	Qty
1	Soil humidity sensor	Sensor the measure the uhumidity in soil	1	1
2	Raspberry Pi 4 model B	Raspberry pi	1	1
3	Raspberry pi GPIO T-cobbler	Board to contol modules via Raspberry Pi	1	1
4	Light Sensor	Sensor to read the light instensity	1	1
5	Water proof temperature sensor	A waterproof temperature sensor	1	1
6	5V 2-way relay	relay that needs 5V to operate components with hight amperage or voltage	1	1
7	5V water pump	Pump for The Irrigation system	1	1
8	16x2 LCD Display	Display that shows data in a 16 by 2 character format	1	1
9	jumper cables M to M and F to M	Cables to connect everythin together	1	2

10	Growing ligh	Special light to grow plants	2	1
11	Power cable fot Water pump	Wall plug + cable to power your pump	2	1
12	Power supply 5V (Raspberry Pi)	Power cable for Raspberry	1	1
13	wall plug+ cable	cable and plug to power your lamps	2	1
14	1,5m <sup>2</sup> cable	brown cable = + side blue cable = - side	2	2
15	470 resistor	resistor for buttons	1	3
15	4,7k resistor	resistor for Temp sensor	1	1
16	1k resistor	resistor for your lcd display	1	1
17	10k ohm resistor	resistor for your LDR	1	1
18	power module 3,3V - 5V	power module to power components next to the raspi	1	1
19	10k ohm potentio meter	potentiometer to control brightness LCD	1	1
20	buttons	buttons to control the feed of your LCD	1	3
21	Socket E27	Socket for growing light	2	3
22	MCP3008 module	Controller for your Analog signals	1	1
23	Shift register	module to control your LCD	1	1

24	Multiplex sheet 50x50cm 10mm	Wooden material to make most of the case	2	6
25	plexiglass 2mm 50x50	Plastic glass material to make seethru walls	2	2
26	plexiglass 3mm 50x50	Plastic glass material to make seethru door	2	1
27	Breadboard	A board that is used to connect al of the components	2	1
<b>Total</b>				<b>41</b>

## Picture of Assem



### Supplier

<https://www.reichelt.com/be/nl/>

<https://www.sossolutions.nl/>

<https://www.reichelt.com/be/nl/raspberry-pi-t-cobbler>

<https://www.hobbyelectronica.nl/product/lichtsensor-ldr/>

[v.sossolutions.nl/waterdichte-ds18b20-digitale-temperat](https://www.sossolutions.nl/waterdichte-ds18b20-digitale-temperat)

[Code=df0&hvadid=430533494283&hvpos=&hvnetw=g&](#)

<https://www.gotron.be/mini-peristaltische-pomp-6v.html>

[aspberry Pi %26 Arduino %26 Development Tools V](#)

[78&pd\\_rd\\_r=554d8aec-6029-4c2d-bb54-c33f17c1f716&t](#)

[g-groeilamp-bloeilamp-set-van-3-stuks/9200000102302/](https://www.groeilamp-bloeilamp-set-van-3-stuks/9200000102302/)

[Raspberry Pi %26 Arduino %26 Development Tools](https://benl.rs-online.com/web/p/raspberry-pi-power-supply-modules/21925/1289448/apparaat)

[https://benl.rs-online.com/web/p/raspberry-pi-power-sup](https://benl.rs-online.com/web/p/raspberry-pi-power-supply-modules/21925/1289448/apparaat)

[be/apparaatsnoer-open-einde/21925/1289448/apparaat](https://www.brico.be/nl/gereedschap-installatie/elektra/kabel-en-accessoires/21925/1289448/apparaat)

[https://www.brico.be/nl/gereedschap-installatie/elektra/k](https://www.brico.be/nl/gereedschap-installatie/elektra/kabel-en-accessoires/21925/1289448/apparaat)

[https://www.reichelt.com/be/nl/metaalfilmweerstand-470](https://www.reichelt.com/be/nl/metaalfilmweerstand-470-ohm-1-watt-5%/)

[https://csd-electronics.de/Passieve-Comp-/weerstand](https://csd-electronics.de/Passieve-Comp-/weerstand-470-ohm-1-watt-5%/)

[https://www.reichelt.com/be/nl/metaalfilmweerstand-19-](https://www.reichelt.com/be/nl/metaalfilmweerstand-19-ohm-1-watt-5%/)

[https://www.reichelt.com/be/nl/metaaloxideweerstand-1](https://www.reichelt.com/be/nl/metaaloxideweerstand-19-ohm-1-watt-5%/)

<https://www.otronic.nl/a-60560325/spanningsregelaars/>

[https://www.gotron.be/low-cost-potentiometer-10k-linea](https://www.gotron.be/low-cost-potentiometer-10k-lineair/)

[https://www.amazon.nl/Industri%C3%ABle-Accessoire-1](https://www.amazon.nl/Industri%C3%ABle-Accessoire-10k-ohm-1-watt-5%/)

[ion.be/verhuisfitting-e27/p47072?channable=004737690](https://www.ion.be/verhuisfitting-e27/p47072?channable=004737690)

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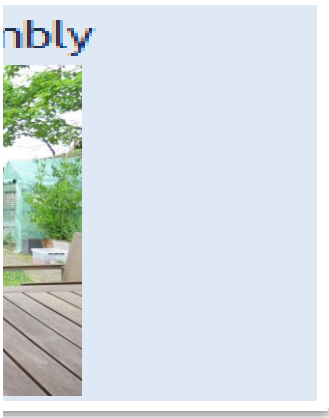
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[989&hvpos=&hvnetw=g&hvrnd=785707490161938050](#)

<https://plexiglas.nl/plexiglas-helder-3-mm-50x50-cm>

[Code=df0&hvadid=430610924795&hvpos=&hvnetw=g&](#)



(picture can only be added with END delivery of project!)

also available from	Units	Unit Cost	Max Cost	Real Cost
<a href="https://benl.rs-online.com/web/p/">https://benl.rs-online.com/web/p/</a>	one	€ 9,85	€ 9,85	€ 9,85
<a href="https://benl.rs-online.com/web/p/raspberry-pi/">https://benl.rs-online.com/web/p/raspberry-pi/</a>	one	€ 59,59	€ 59,59	€ 59,59
<a href="https://www.sossolutions.nl/assembled-pi-t-cobbler">https://www.sossolutions.nl/assembled-pi-t-cobbler</a>	one	€ 10,86	€ 10,86	€ 10,86
<a href="https://www.pcfelectronics.nl/nl/ldr-sensor-module.html">https://www.pcfelectronics.nl/nl/ldr-sensor-module.html</a>	one	€ 1,45	€ 1,45	€ 1,45
<a href="https://tecvoordeel.nl/product/ds18b20-temperatuur-sensor">https://tecvoordeel.nl/product/ds18b20-temperatuur-sensor</a>	one	€ 11,45	€ 11,45	€ 11,45
<a href="https://www.pcfelectronics.nl/nl/ldr-sensor-module.html?hvrand=2228730086868400222&amp;hvpone=&amp;hvptwo=&amp;hvqn">https://www.pcfelectronics.nl/nl/ldr-sensor-module.html?hvrand=2228730086868400222&amp;hvpone=&amp;hvptwo=&amp;hvqn</a>	one	€ 5,99	€ 5,99	€ 5,99
<a href="https://www.pcfelectronics.nl/nl/ldr-sensor-module.html?hvrand=2228730086868400222&amp;hvpone=&amp;hvptwo=&amp;hvqn">https://www.pcfelectronics.nl/nl/ldr-sensor-module.html?hvrand=2228730086868400222&amp;hvpone=&amp;hvptwo=&amp;hvqn</a>	set of 5/4	€ 7,74	€ 7,74	€ 7,74
<a href="https://www.pcfelectronics.nl/product/hd44780-16x2-karakters-lcd-display-mc">https://www.pcfelectronics.nl/product/hd44780-16x2-karakters-lcd-display-mc</a>	one	€ 6,40	€ 6,40	€ 6,40
<a href="https://www.pcfelectronics.nl/product/hd44780-16x2-karakters-lcd-display-mc">https://www.pcfelectronics.nl/product/hd44780-16x2-karakters-lcd-display-mc</a>	bundel of 64	€ 6,99	€ 13,98	€ 13,98

<a href="#">906/?bltgh=IGZOZG7Mnqt-QF0PZqFCeg.2_19.25.Product</a>	set of 3	€ 21,99	€ 21,99	€ 21,99
<a href="#">-eu-p260010.html?PROVID=2812&amp;gclid=Cj0KCQiA1pyCB</a>	one	€ 8,59	€ 8,59	€ 8,59
<a href="https://www.reichelt.com/be/nl/raspberry-pi-stroomvoorzier">https://www.reichelt.com/be/nl/raspberry-pi-stroomvoorzier</a>	one	€ 8,59	€ 8,59	€ 8,59
<a href="#">.GOO002013-G-118359634067-S-1075421027920-920000</a>	one	€ 4,99	€ 4,99	€ 4,99
<a href="#">kabels-en-behuizing/elektrische-kabels/sencys-elektrisch-d</a>	10m	€ 6,59	€ 13,18	€ 13,18
<a href="https://www.gotron.be/ra470-weerstand-1-4w-470-ohm-ko">https://www.gotron.be/ra470-weerstand-1-4w-470-ohm-ko</a>	one	€ 0,08	€ 0,24	€ 0,24
<a href="https://www.gotron.be/ra4k7-weerstand-1-4w-4-7-kohm-ko">https://www.gotron.be/ra4k7-weerstand-1-4w-4-7-kohm-ko</a>	one	€ 0,10	€ 0,10	€ 0,10
<a href="https://www.123-3d.nl/123-3D-Koolstoffilm-Weerstand-1-K">https://www.123-3d.nl/123-3D-Koolstoffilm-Weerstand-1-K</a>	one	€ 0,08	€ 0,08	€ 0,08
<a href="https://www.gotron.be/ra10k-weerstand-1-4w-10k-ohm-ko">https://www.gotron.be/ra10k-weerstand-1-4w-10k-ohm-ko</a>	one	€ 0,10	€ 0,10	€ 0,10
<a href="https://www.amazon.nl/AZDelivery-Breadboard-Voedingsa">https://www.amazon.nl/AZDelivery-Breadboard-Voedingsa</a>	one	€ 3,99	€ 3,99	€ 3,99
<a href="https://www.amazon.nl/Ytian-Enkele-Lineaire-Roterende-P">https://www.amazon.nl/Ytian-Enkele-Lineaire-Roterende-P</a>	one	€ 1,00	€ 1,00	€ 1,00
<a href="https://www.werkenmetmerken.be/nl/vm_tactile_schakela">https://www.werkenmetmerken.be/nl/vm_tactile_schakela</a>	one	€ 0,04	€ 0,12	€ 0,12
<a href="#">c.com/nl/p/e27-connector-led-lampen-houder-base-wit_p10</a>	one	€ 3,79	€ 11,37	€ 11,37
<a href="#">ogle- -CSS BE NL Semiconductors Whoop- -(BE:Whoc</a>	one	€ 2,04	€ 2,04	€ 2,04
<a href="#">32385_109466014026_pla-356257857727_pla-1016774&amp;</a>	one	€ 0,58	€ 0,58	€ 0,58



<a href="#">nd=7857074901619380502&amp;hvpone=&amp;hvptwo=&amp;hvqmt=&amp;h</a>	one sheet	€ 14,17	€ 85,02	€ 85,02
<a href="#">)2&amp;hvpone=&amp;hvptwo=&amp;hvqmt=https://plexiglas.nl/plexiglas-</a>	one sheet	€ 12,10	€ 24,20	€ 24,20
	one sheet	€ 12,10	€ 12,10	€ 12,10
<a href="#">02013-G-120928976848-S-1076696512011-920000011242</a>	set of 3	€ 9,99	€ 9,99	€ 9,99
			<b>€ 325,59</b>	<b>€ 325,59</b>