

CLASS: 1NMCT1

NAME: Yoran

FIRSTNAME: Pauwels

Assembly Name : slimme hondenvoeder

Assembly Revision : _____

Approval Date : 18-Jun-17

Part Count : 21

Total Cost : €192

Part #	Part Name	Description	Revision	Qty	Supplier
BYJ48	nema 17	12v 2ampere stepper motor		1	Nema 17 Stappenmotor 42BYGHW811. (n.d.). Retrieved 9 June 2017, from https://3dprinteronderdelen.nl/42byghw811-nema-17-stappenmotor.html
A9060	lichtsensor	a sensor where the resistance changes on how many light there is		2	Photoresistor Sensor. (n.d.). Retrieved 8 March 2017, from https://prototype-winkel.nl/photoresistor-sensor
/	laser transmitter	a 3 V laser transmitter		1	Laser Transmitter 650nm. (n.d.). Retrieved 8 March 2017, from https://prototype-winkel.nl/laser-transmitter-650nm
/	gewicht sensor (1kg)	een load cell die to with a limit of 1Kg en works on 5V		1	Gewichtsensor 1. (n.d.). Retrieved 8 March 2017, from https://www.hackerstore.nl/Artikel/838

/	gewichtsensor(5kg)	een load cell die to with a limit of 5Kg en works on 5V	1	Gewichtsensor 5. (n.d.). Retrieved 8 March 2017, from https://www.hackerstore.nl/Artikel/682
HX711	sensor tussen bord	a board that amplifies and changes anlog signal to digital signal, especially for load cell's	2	HX711 Dual Channel Gewichtsmodule. (n.d.). Retrieved 10 March 2017, from https://prototype-winkel.nl/hx711-dual-channel-gewichtssensor
	z-as	a small piece wich makes it possible to connecto two rods of differents sizes	1	Z-as koppeling 5mm > 8mm. (n.d.). Retrieved 18 April 2017, from https://3dprinteronderdelen.nl/z-as-koppeling-5mm-8mm.html
mcp3008	8channel ADC	an 8 channel analog to digital converter	1	MCP3008. (n.d.). Retrieved 10 March 2017, from https://www.hackerstore.nl/Artikel/594
/	90° pvc tube	a 90° turn pvc tube , diam: 70mm	1	Martens lijmbocht 'VV - 90 graden' PVC diam 80 mm Planit. (n.d.). Retrieved 18 June 2017, from https://www.plan-it.be/nl/gereedschap-installatie/sanitair-installatiemateriaal/wateraanvoer-kranen/buizen-en-accessoires/martens-lijmbocht-'vv-90-graden'-pvc-diam-80-mm/2026326

/	pvc verloop	a piece wich changes the size of a tube form 120 to 70 mm	1	Martens lijmverloopstuck PVC diam 100-90 mm Planit. (n.d.). Retrieved 18 June 2017, from https://www.plan-it.be/nl/gereedschap-installatie/sanitair-installatiemateriaal/wateraanvoerkranen/buizen-en-accessoires/martens-lijmverloopstuck-pvc-diam-100-90-mm/2026944
/	pvc straight	a straight pvc tube of 70 mm diam	1	https://www.plan-it.be/nl/gereedschap-installatie/sanitair-installatiemateriaal/wateraanvoerkranen/buizen-en-accessoires/martens-waterafvoerbuis-'l.1m'-pvc-diam-100-mm/2025673
/	extension power socket	a extension power socket with at least 2 sockets	1	Stekkerblok 4 x 16 A wit met schakelaar en snoer 1,5 m Planit. (n.d.). Retrieved 18 June 2017, from https://www.plan-it.be/nl/gereedschap-installatie/elektra/schakelmateriaal/stopcontacten/stekkerblok-4-x-16-a-wit-met-schakelaar-en-snoer-1-5-m/3085967
BC547	transistor	a piece wich cuts power until the base lets i t through	1	NPN Transistor BC547. (n.d.). Retrieved 18 June 2017, from https://www.tinytronics.nl/shop/nl/componenten/transistor-fet/npn-transistor-bc547
/	feeding bowl	a feeding bowl for dogs	1	Red Bowl Pets At Home. (n.d.). Retrieved 18 June 2017, from http://www.petsathome.com/shop/en/pets/red-bowl

/	4m 25mm bolt/nuts	bolts of 25mm long 4mm diameter	1	Sencys zeskantbout met moer gegalvaniseerd staal M4 x 40 mm - 20 stuks Planit. (n.d.). Retrieved 18 June 2017, from https://www.planit.be/nl/gereedschap-installatie/ijzerwaren/bouten/sencys-
/	rasberri pi 3 model B (kit)	a kit containing, an power adapter, casing, a pi, and an SD-Card,	1	Raspberry Pi 3 B Starter Kit compleet met unieke behuizing € 59,95 SOSsolutions.be. (n.d.). Retrieved 18 June 2017, from https://www.sossolutions.be/raspberry-pi-3-b-starter-kit-compleet-met-unieke-behuizing
/	cerealdispenser	an plastic storage container wich let cereal drop out by turning a wheel	1	MANSION Granendispenser - Feelgoodproducten voor in en rond het huis bij CASA casashops.com. (n.d.). Retrieved 18 April 2017, from https://be.casashops.com/nl/producten/mansion-granendispenser/525973/
a4988	steppermotor controle bord	a board wich makes it possible to contral the nema 17 steppermotor	1	A4988 Stepper Driver + heatsink. (n.d.). Retrieved 9 June 2017, from https://3dprinteronderdelen.nl/a4988-stepper-driver-heatsink.html

/	12 volt 2ampere adapter	an adapter wich outputs 12V 2A	1	Universele AC - DC Adapter - 12 V - Universele AC - DC Adapter, Type: Netstroom aansluiting, 1 vaste plug 5.5 x 2.1mm, Uitgaande stroomsterkte max: 2250mA, Spanning in: 100-240V 50-60Hz, Spanning uit: 12 Volt. (n.d.). Retrieved 9 June 2017, from https://www.allekabels.be/ac-dc-adapter/7207/1307597/universele-ac-dc-adapter-12-v.html
/	mdf-wood plate	an mdf plate of 122,60, 1,8 cm	1	Sencys MDF-paneel hoge densiteit 122 x 61 x 1,8 cm Planit. (n.d.). Retrieved 18 June 2017, from https://www.planit.be/nl/bouw-materialen/hout/mdf-platen/sencys-mdf-paneel-hoge-densiteit-122-x-61-x-1-8-cm/1888015

Total

21

Picture of Assembly



also available from	Units	Unit Cost	Max Cost	Real Cost
	€	\$ 16,95	€ 16,95	€ 16,95
Licht-sensor LDR. (n.d.). Retrieved 8 March 2017, from https://www.hackerstore.nl/Artikel/57	€	\$ 0,75	€ 1,50	€ -
Laser. (n.d.). Retrieved 8 March 2017, from https://www.hackerstore.nl/Artikel/161	€	\$ 2,35	€ 2,35	€ 2,35
http://www.tinytronics.nl/shop/index.php?route=common/home	€	\$ 6,95	€ 6,95	€ 6,95

	€	\$	8,95	€	8,95	€	6,95
Sensorversterker HX711. (n.d.). Retrieved 10 March 2017, from https://www.hackerstore.nl/Artikel/696	€	\$	3,95	€	7,90	€	7,90
				€	3,95	€	3,95
MCP3008 - 8-Channel 10-Bit ADC With SPI Interface € 6,75 SOSsolutions.be. (n.d.). Retrieved 10 March 2017, from https://www.sosolutions.be/mc	€	\$	4,30	€	4,30	€	4,30
	€	\$	1,69	€	1,69	€	1,69

€	\$	9,38	€	9,38	€	9,38
€	\$	5,49	€	5,49	€	5,49
€	\$	4,29	€	4,29	€	4,29
€	\$	0,15	€	0,15	€	0,15
€	\$	5,00	€	5,00	€	5,00

€	\$	4,49	€	4,49	€	4,49
€	\$	59,95	€	59,95	€	59,95
€	\$	11,99	€	11,99	€	-
€	\$	4,95	€	4,95	€	4,95

€ \$ 16,95 € 16,95 € -

€ \$ 14,99 € 14,99 € 14,99

€ 192,17