

Bill of Materials

Name	Supplier	Part #	Link	Price	Number	Total Price
Structural						
Side wall left	Alro		1/4" black delrin 24"x48"	189.9	1	189.9
Side wall right	Alro		1/4" black delrin 24"x48"	189.9	1	189.9
Saddle	Alro		1/4" black delrin 24"x48"	191.68	1	191.68
Particleboard	Lowe's	6904	http://www.lowes.com/pd_6904-99899-	7.68	1	7.68
Inside flap	Art Supply Store		4'x4' vinyl sheet	9	1	9
Braces	Alro			13.46	1	13.46
90 angle bracket	McMaster	8982K91	http://www.mcmaster.com/#aluminum-angles/=qu7uep	3.26	1	3.26
Bolts 4-40, 3/8"	McMaster	91771A108	http://www.mcmaster.com/#91771A108	4.56	1	4.56
Nuts 4-40	Assembly room		http://www.mcmaster.com/#90480A005			0
Delrin Glue	Lowe's	44649	http://www.lowes.com/pd_44649-69-	5.48	1	5.48
Wood Screws	Lowe's	2967	http://www.lowes.com/pd_2967-37672-	5.58	1	5.58
Black Spray Paint	Lowe's	113854	http://www.lowes.com/pd_113854-4-	3.98	1	3.98
5 Arm Knob	McMaster	59625K33	http://www.mcmaster.com/#59625K33	0.77	6	4.62
18-8 Flat Head Screw	McMaster	92210A546	http://www.mcmaster.com/#92210A546	6.91	1	6.91
60 deg angle bracket	McMaster	33125T43	http://www.mcmaster.com/#33125T43	2.48	2	4.96

Motor and Drive

NEMA 23 stepper motor	Pololu	NEMA 23	http://www.pololu.com/product/1476	24.95	1	24.95
Follower Pulleys	SDP/SI	A 6A 3-10H3708	https://sdp-si.com/eStore/Catalog#	10.36	3	31.08
Driven pulley	SDP/SI	A 6A 3-20DF03716	https://sdp-si.com/eStore/Catalog/Group/217#	12.86	1	12.86
Timing belt	SDP/SI	A 6R 3-C037	https://sdp-si.com/eStore/Catalog/Group/217	3.1	10	31
Coupler shaft	Assembly room	1/2" dia, 2.25" long			3	0
Motor mount	McMaster	6546K31	http://www.mcmaster.com/#6546K311	16.97	1	16.97
Aluminum Round Stock	McMaster	8974K28	http://www.mcmaster.com/#8974K28	2.17	1	2.17
Motor screws	Assembly room	5mm, 3/16" long			4	0
Follower mount	Assembly room	1" square stock			3	0
Follower Shaft	Assembly room	1/8 Al rod				0
Follower bushings	McMaster	6391K112	http://www.mcmaster.com/#6391K112	0.68	3	2.04
Motor bearings	McMaster	60355K505	http://www.mcmaster.com/#60355K505	5.84	2	11.68
Set screw	McMaster	92313A103		3.31	1	3.31

Vacuum

Vacuum tube outside	McMaster	1830T279	http://www.mcmaster.com/#1830T279	11.66	1	11.66
Vacuum tube inside	McMaster	1830T259	http://www.mcmaster.com/#1830T259	12.63	1	12.63
Vacuum	Fuller Brush Co.	FBMV4	http://www.fullerproducts.com/	36.9	1	36.9
Vacuum Tube Plug	McMaster	9277K49	http://www.mcmaster.com/#9277k49/=qv61ar	3.35	1	3.35
Vacuum Tube Elbow	Lowe's	23909	http://www.lowes.com/pd_23909-1815-	1.56	1	1.56

Electronics

Motor Driver	Pololu	2134	http://www.pololu.com/product/2134	9.95	1	9.95
IR sensor	Pololu	2460	http://www.pololu.com/product/2460	5.95	1	5.95
Arduino	SparkFun	DEV-11021	https://www.sparkfun.com/products/11021	29.95	1	29.95
Power supply	Mechatronics room	--	--	60	1	60
Limit switches	Mechatronics room	--	--	0	2	0
LED warning lights	Assembly room	--	--	0	1	0

Total

948.98
