

OpenESpin 2017

Quantity	Description	Each	Total	Notes
Electrical				
1	Arduino Uno	\$25.00	\$25.00	
1	gShield V5	\$49.99	\$49.99	
1	5 position Duel Row Terminal Block	\$2.00	\$2.00	
2	NEMA 17 Stepper Motor	\$10.00	\$20.00	
1	12v DC 30amp Power Supply	\$25.00	\$25.00	
100.5"	24AWG Two Conductor Shielded Wire	\$7.00	\$7.00	
90"	22AWG Four Conductor Wire	\$3.50	\$3.50	
1	USB cable type A/B for Arduino	\$4.00	\$4.00	
1	8 Pin Terminal Block.	\$2.75	\$2.75	
1	Limit Switch-long arm 2"(50.8mm)	\$5.38	\$5.38	
2	Micro Limit Switch	\$1.00	\$2.00	
Nuts and Bolts				
14	M3x10mm Pan Head Screws	\$0.03	\$0.42	
13	M3x12mm Pan Head Screws	\$0.02	\$0.26	
46	M3x16mm Pan Head Screws	\$0.03	\$1.38	
2	M3x20mm Pan Head Screws	\$0.03	\$0.06	
14	M3 x 25mm Pan Head Screws	\$0.03	\$0.42	
4	M3x35mm Pan Head Screws	\$0.07	\$0.28	
1	M3x45mm Pan Head Screw	\$0.15	\$0.15	
4	M3x50mm Pan Head Screws	\$0.19	\$0.76	
1	M5x50 Bolt. Threaded all the way down.	\$0.59	\$0.59	
91	M3 Nuts	\$0.01	\$0.91	
1	M3 Lock Washer	\$0.02	\$0.02	
1	M5 Nut.	\$0.29	\$0.29	
13	M3 Flat Washers	\$0.03	\$0.39	
28	#6 x1/2" Pan Head Screws (3.5mmx13mm)	\$0.02	\$0.56	
1	1/4-20 Nut	\$0.03	\$0.03	
5	1/4-20 x 1/2" Bolts	\$0.08	\$0.40	
5	1/4-20 Slide In T-Nuts	\$0.21	\$1.05	
4	M2x16mm Pan Head Screws	\$0.10	\$0.40	
4	M2 Nuts	\$0.05	\$0.20	

Motion Control

1	GT2 Idler Pulley for 6mm wide belt	\$2.00	\$2.00
1	GT2 2mm pitch pulley – for 6mm wide belt	\$3.00	\$3.00
4	4'x6mm GT2 Timing Belt- (1220mm)	\$0.89	\$3.56
8	608ZZ Ball Bearings	\$1.25	\$10.00
1	5mmx6.35mm Flexible Shaft Coupling	\$9.00	\$9.00

Sold by the foot.

Miscellaneous

2	PVC pipe. 3/4"x5 foot SCH40	\$1.55	\$3.10
8	PVC Pipe End Cap.	\$0.29	\$2.32
1	14"x1"x1" Aluminum T-slot Profile	\$2.50	\$2.50
1	1/4"-20 Allthread – 12" long	\$2.00	\$2.00
1	1"x 5 foot PVC Pipe – Sch 40	\$2.50	\$2.50
1	1/4"x49"x97" Melamine Panel	\$20.00	\$20.00
1	.08"x30"x36" Acrylic Sheet	\$20.00	\$20.00
1	Package Small Wire Ties	\$2.00	\$2.00
1	16 Ga. 304 Stainless Steel Sheet, 12" x 12"	\$15.00	\$15.00

Only need 3.125" (79.3mm)

Total

\$252.17

Quantity	Laser Cut Parts	Material
1	1PCB1 Deck	.25" Melamine
1	1PCB2 Deck	.25" Melamine
1	1PCT1 Deck	.25" Melamine
1	1PCT2 Deck	.25" Melamine
1	PVC Pipe End Cap.	.25" Melamine
6	Deck Spacers – two sizes	.25" Melamine
1	Carriage – Multiple Pieces	.25" Melamine
1	TableSupport – Multiple Pieces	.25" Melamine
1	SyringeSlide	.25" Melamine

Melamine was chosen for it's cost, availability and surface. It's easily cleaned and has a fairly inert surface, and is easily cut with most 40 watt lasers.

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1	SyringeHolder	.25" Melamine	
2	Door Frame	.25" Melamine	
1	SyringeCarriage – Four Piece	.25" Melamine	
2	TopSideCover	Acrylic	
1	TopCenterCover	Acrylic	
2	BottomSideCover	Acrylic	
1	BottomCenterCover	Acrylic	
1	DoorCover – 14 3/8 th x 11 3/8 th	Acrylic	Size approximate.
1	TableA	Paper	Print paper or laser cut it out of paper.
1	TableB	Paper	Print paper or laser cut it out of paper.

Quantity 3D Printed Parts Your choice of PLA or ABS.

1	Terminal Mount
8	LevelingCollarB
1	DoorLatchBase
1	DoorLatchHandle
2	SwingHinge
1	LevelingCollar
4	OutSideGuides
1	DoorSwitchMount
8	Bearing Inserts – Thin Base
8	Bearing Inserts – Thick Base
4	CarriageAdjustmentMountB
1	BeltMountClamp (2pc)
1	SyringeSwivel
1	SyringHoldDown
1	SlideSpacer
1	TopIdlerBracketB
4	SideCoverBracket
4	TopSideCoverBracket
8	SyringeBearingInsertsOffset
8	SyringBearingInsertStraight

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1	CarriageScrewHolder1-4
6	DoorTrack
1	SwitchMount
1	SyringeMotorMount

Software

OpenESpin Firmware