

Fab@Home Model 2.0 Single Syringe Tool

Item	Description	Purchase from	Product #	Cost Per			Sub Total
				Unit	Min order	Quantity	
TRANSMISSION							
x guide shafts	10 (-.005/- .014) mm Dia, 375mm Long, 416 ST. Steel Shaft	SDP/SI	540PX0MHGAM-375	\$25.02	1	2	\$50.04
y guide shafts	10 (-.005/- .014) mm Dia, 300mm Long, 303 ST. Steel Shaft	SDP/SI	A 7X 1M100300	\$19.11	1	2	\$38.22
z guide shafts	10 (-.005/- .014) mm Dia, 280mm Long, 303 ST. Steel Shaft	SDP/SI	540PX0MHGAM-280	\$19.48	1	2	\$38.96
x drive shaft	6 (-.004/- .012) Dia, 400mm Long, 303 ST. Steel Shaft	SDP/SI	A 7X 1M060400	\$10.57	1	1	\$10.57
guide shaft bearings	Self Lubricating Bronze Bearing 10.02mm Bore 15.9mm Panel Hole diameter	SDP/SI	A 7241MPSB10M	\$1.53	1	12	\$18.36
drive support bearing	Self Lubricating Bronze Bearing 6.02mm Bore 14.5 mm Panel Hole diameter	SDP/SI	A 7241MPSB06M	\$1.32	1	3	\$3.96
x drive pulley	GT (2mm) Pitch, 18 Teeth, Aluminum alloy Timing Pulley	SDP/SI	A6A51M018DF0606	\$9.53	1	2	\$19.06
idlers and z drive pulleys	GT (2mm) Pitch, 15 Teeth, Aluminum alloy Timing Pulley, 6mm length	SDP/SI	A6A51M015DF0604	\$9.46	1	5	\$47.30
y drive pulley	GT (2mm) Pitch, 15 Teeth, Aluminum alloy Timing Pulley, 9mm length	SDP/SI	A6A51M015DF0904	\$9.59	1	1	\$9.59
ball bearings	Flanged- no shield ball bearing, 4mm Bore Dia, 8mm Outer Diameter, Stainless/ISO 6, Beacon 325 Lubrication	SDP/SI	A 7Y 5MF0804G	\$8.33	1	10	\$83.30
x axis coupler	Rigid Coupling with bores of 4 / 6MM on Opposite Sides	SDP/SI	A 5X 9M0406	\$8.91	1	1	\$8.91
idler & support shaft	4 (-.004/- .012) Dia, 25mm Long, 303 ST. Steel Shaft	SDP/SI	A 7X 1M040025	\$3.15	1	6	\$18.90
shaft collar	4MM Bore, 8MM O.D., 5MM WIDE, STEEL/Zinc PLATE, COLLAR STYLE	SDP/SI	A 7C 2M108040	\$1.85	1	2	\$3.70
xyz belts	3 mm GT2 Pitch, 6mm Wide, Open ended Neoprene Belt	SDP/SI	A 6R51MC060	\$9.30	1	4	\$37.20
CHASSIS							
Acrylic	Cast Acrylic 6mm thick sheet 24"x36" White	McMaster	8505K957	\$45.23	1	3	\$135.69
Belt Tension Screws	Metric 18-8 SS Button Head Socket Cap Screw M4 Size, 16 mm Length, 7 mm Pitch	McMaster	9209SA194	\$0.10	100	4	\$9.94
Tension inserts	Metric Brass Threaded Insert for Thermoplastic Tapered, M4x.7 Internal Thread, 4.7mm Length	McMaster	94180A351	\$0.13	100	4	\$12.78
Belt clamp screws	Metric Class 12.9 Socket Head Cap Screw Alloy STL M2.5 Thread, 16mm Length, 0.45mm pitch	McMaster	91230A106	\$0.13	100	16	\$12.63
small inserts	Metric Brass Threaded Insert for Thermoplastic Tapered, M2.5-.45 Internal Thread, 3.4mm Length	McMaster	94180A321	\$0.09	100	16	\$9.25
medium inserts	Brass Threaded Insert for Thermoplastics Tapered, 6-32 Internal Thread, .150" Length	McMaster	93365A130	\$0.11	100	51	\$11.04
base pad inserts	1/4-20 brass threaded inserts; 0.3inch length	McMaster	93365A160	\$0.33	25	4	\$8.33
base pad	Rubber Foot; 1/4-20 X1/2inch thread; 1inch diameter 25lb rated	McMaster	9377K53	\$1.36	1	4	\$5.44
shim washers	Stainless steel washers, .016" thick .15"ID .27"OD	McMaster	9094SA715	\$0.02	250	25	\$4.49
thumb screw	#6-32 thumb screw 1/2" length	McMaster	91882A227	\$2.56	1	1	\$2.56
Screws to fasten acrylic	#6-32 Button head hex socket, 1/2" long 18-8 stainless steel	McMaster	92949A148	\$0.05	100	150	\$9.94
Square nuts to fasten acrylic	#6-32 Flat Square Nut; Steel; 5/16inch OD; 7/64inch thick	McMaster	9485SA115	\$0.01	100	150	\$2.00
ELECTRONICS							
Motor	SM063 motor	saelig	SM062	\$160.00	1	4	\$640.00
Hub	snap hub (SM-HUB6)	saelig	SM-HUB6	\$160.00	1	1	\$160.00
Dual Syringe TOOL							
plunger rod	Metric Class 4.6 Plain Steel Threaded Rod, M3 size, 1 meter length, .5 mm Pitch, 140mm req'd	McMaster	98861A040	\$1.57	1	1	\$1.57
plunger connector	Metric 18-8 SS Round Knurled Thumb Nut, M3 screw, 12mm Head Dia, .5mm Pitch	McMaster	9036SA130	\$1.62	1	5	\$8.10
gear on syringe drive	6mm bore, 28mm pitch dia. 16mm hub dia.	SDP/SI	A 1P 2MYD08035D	\$8.53	1	1	\$8.53
gear on tool motor	4mm bore, 28mm pitch dia. 16mm hub dia.	SDP/SI	A 1P 2MYD08035B	\$8.53	1	1	\$8.53
material drive bearing	mm Bore, 6mm Outside Dia., 440C Stainless / ISO 6 Ball bearing, lube with Grease (Beacon 325)	SDP/SI	A 7Y 5MFS0603G	\$14.12	1	1	\$14.12

COST	
Total	\$1,453.01
Electronics subtotal	\$800.00
Chassis subtotal	\$224.09
Transmission subtotal	\$388.07
Tool subtotal	\$40.85
# of parts	495
# of parts (w/o screws)	195