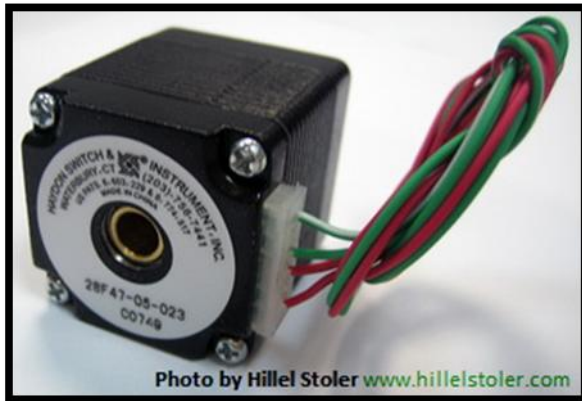


Fab@Home Model1 Part Catalog (With Photos)

www.fabathome.org



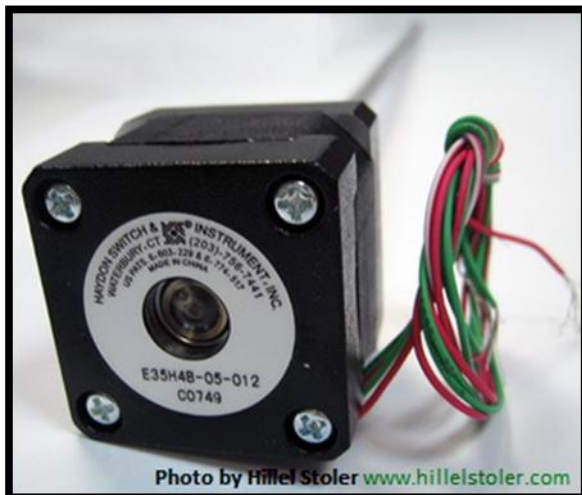
[1.1] Syringe Tool Linear Motor

Part number: 28F47-05-023ENG

Quantity required: 1

Unit Price: 129.20 USD

Details: Size 11 Non-captive Hybrid Linear Actuator; 5V; bipolar; 5.25inch shaft length overall; 6.68mm long M3X0.5 thread one end; 0.125+/-0.001inchOD X 0.25inchL journal other end.



[1.2] X Axis Linear Motor

Part number: E35H4B-05-012ENG

Quantity required: 1

Unit Price: 150.00 USD

Details: Size 14 External Hybrid Linear Actuator; 5V; bipolar; 13.708inch shaft length overall; 0.25inchOD X 0.000625inch (B-series) thread; 1.25inchL X 0.187+/-0.001inchOD journal.



[1.3] Y Axis Linear Motor

Part number: E35H4B-05-013ENG

Quantity required: 1

Unit Price: 145.00 USD

Details: Size 14 External Hybrid Linear Actuator; 5V; bipolar; 12.878inch shaft length overall; 0.25inchOD X 0.000625inch (B-series) thread; 1.25inchL X 0.187+/-0.001inchOD journal.



[1.4] Z Axis Linear Motor

Part number: E35H4P-05-010ENG

Quantity required: 1

Unit Price: 132.00 USD

Details: Size 14 External Hybrid Linear Actuator; 5V; bipolar; 10inch shaft length overall; 0.25inchOD X 0.00015625inch (P-series) thread; 0.974inchL X 0.187+/0.001inchOD journal.



[1.5] X Slave Axis Lead Screw

Part number: LSS-025-0125A97

Quantity required: 1

Unit Price: 41.89 USD

Details: 0.25inchOD X 0.000625inch (B-series) lead screw; 14.506inch length overall; 0.187+/0.001inchOD journal both ends; 1inch and 1.25inch long.



[1.6] Additional Lead Nuts for X; Y Axes

Part number: 42-195-2

Quantity required: 2

Unit Price: 6.00 USD

Details: To couple belt driven X shaft to X carriage; and to help stabilize the Y carriage (use 2 nuts).



[2.0] Nylon Zip Cable Ties - 4 inch long

Part number: GL-GT-18S3

Quantity required: 10

Unit Price: 0.02 USD

Details: For cable bundling and securing.



[3.0] 4 Conductor Shielded 22awg

Part number: JS-6152-1

Quantity required: 10 Foot

Unit Price: 4.40 USD

Details: Cable extensions for stepper motors.



[4.0] 2 Conductor No Shield 22awg

Part number: JS-5050-1

Quantity required: 20 Foot

Unit Price: 5.60 USD

Details: Cable for limit switches.



[5.0] Flat Ribbon Cable; 26 Conductor; 28 AWG stranded

Part number: PP-F28A26G-1 26C

Quantity required: 2 Foot

Unit Price: 0.55 USD

Details: Cable connection between the microcontroller and the amplifier / breakout board / limit switches.



[6.0] 24VDC Power Supply for Stepper Amplifiers

Part number: EPS363-ND

Quantity required: 1

Unit Price: 53.44 USD

Details: 24V; 1.67A; 40W Desktop Power Supply; No AC cord; 3-pin IEC 320 inlet.



[7 .0] AC Power Cord; IEC 3 prong to USA 3 prong plug

Part number: AE9888-ND

Quantity required: 1

Unit Price: 6.67 USD

Details: 2m long; AC power cable for power supply. (Pictured: Type B Plug - USA 3 pin)



[8.0] 26 Pin Ribbon Cable Male Plug

Part number: MPK26K-ND

Quantity required: 2

Unit Price: 6.16 USD

Details: 26 pin; 2 row 0.1inchx0.1inch pitch ribbon cable male plug connector; without flanges for connecting to LPC-H2148 headers.



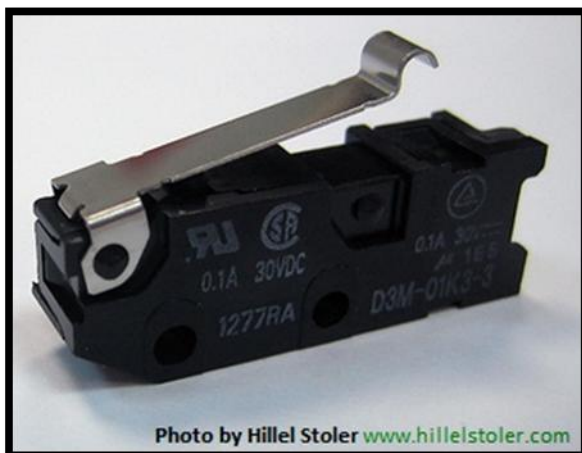
[9.0] Strain relief for 26 Pin Ribbon Cable

Part number: MPSR26-ND

Quantity required: 2

Unit Price: 0.69 USD

Details: Matching strain relief for 26 pin ribbon cable IDC connector.



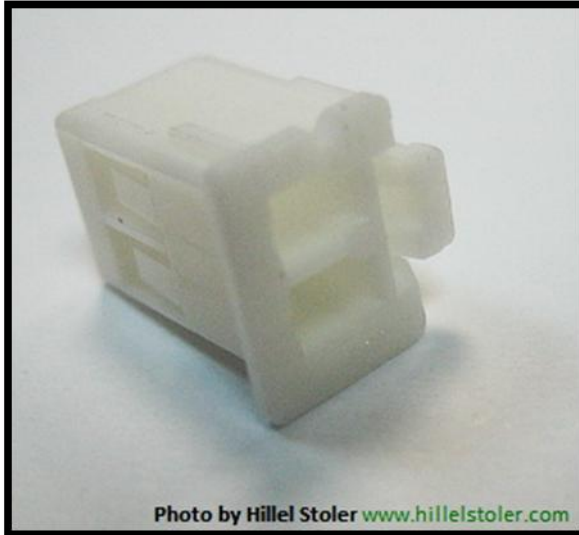
[10 .0] Limit switch

Part number: SW884-ND

Quantity required: 6

Unit Price: 1.96 USD

Details: Normally open; SPST connectorized; 51 gmf actuation; false roller snap action switch for limit switch.



[11.0] Cable connector for Limit Switch

Part number: 455-1903-ND

Quantity required: 6

Unit Price: 0.06 USD

Details: JST type XA 2 position connector for Omron limit switches.



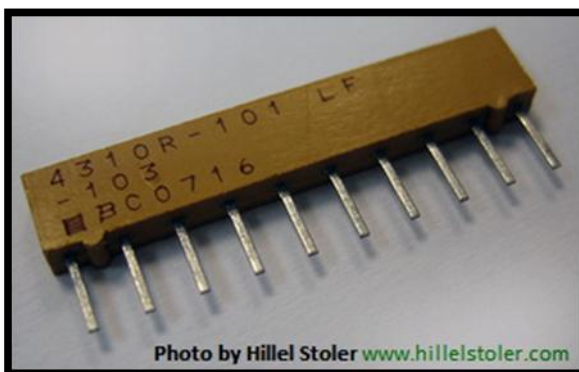
[12.0] Crimp contacts for limit switch connector

Part number: 455-1904-1-ND

Quantity required: 12

Unit Price: 0.04 USD

Details: JST crimp contacts for XA connector; 28-22 AWG - Need 2 per switch connector.



[13 .0] 10kOhm, bussed 9 resistor network, SIP

Part number: 4310R-1-103LF-ND

Quantity required: 1

Unit Price: 0.65 USD

Details: Soldered onto Xylotex board to pull down limit switches; 10kOhm; 10 pin SIP; 9 resistors; 1 end bussed to 10th pin.



[14.0] USB Cable; A male to B male - 2m long

Part number: AE1493-ND

Quantity required: 1

Unit Price: 4.88 USD

Details: Connect the PC to the Microcontroller.



[15.0] Electronics Standoff Spacers; #4-40 threaded; male/female; 0.5 inch long; aluminum

Part number: 8401K-ND

Quantity required: 16

Unit Price: 0.49 USD

Details: Mount Xylotex amplifier board and Winford DB25 Breakout board to the base rear; M-F 4-40 threaded aluminum hex 0.5 inch long.



**[16.0] PET Braided sleeving;
1/4inch ID nominal**

Part number: 9284K2

Quantity required: 10 Foot

Unit Price: 3.26 USD

Details: Abrasion protection and bundling of cables.



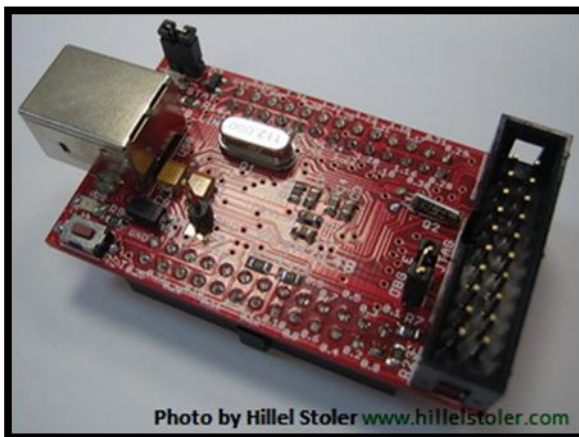
**[17.0] Heat-Shrink Tubing,
Black Polyolefin, Assortment
Kit**

Part number: STA-KIT-ND

Quantity required: 1 kit

Unit Price (for a kit): 10.95 USD

Details: Heat shrink tubing assortment kit used to insulate and reinforce soldered cable connections.



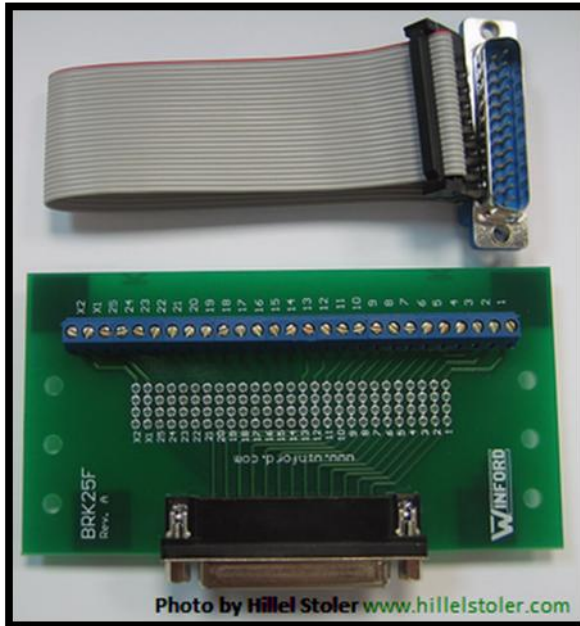
**[18.0] LPC-H2148
Microcontroller Board**

Part number: LPC-H2148

Quantity required: 1

Unit Price: 39.95 USD

Details: Philips ARM7TDMI microcontroller board with header connections and USB port; board MFG by Olimex.



[19 .0] DB25 Female to Screw Terminal break out board

Part number: BRK25F-R-FT

Quantity required: 1

Unit Price: 19.99 USD

Details: Simplify wiring from Xylotex amplifier board to the LPC2148.



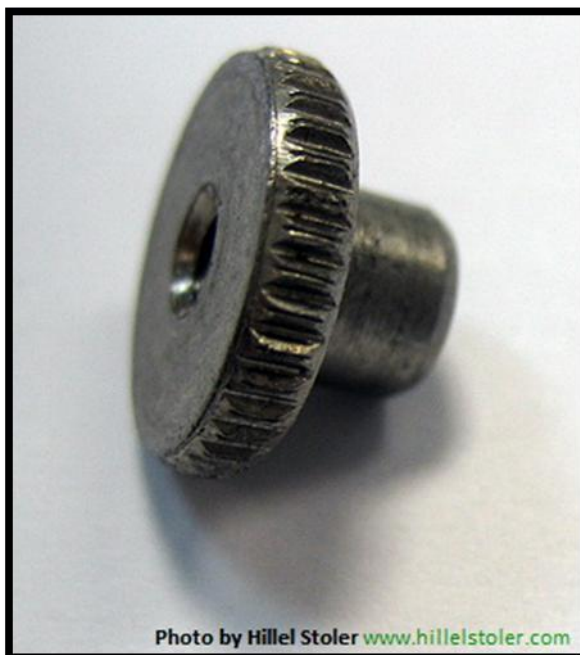
[20.0] Stepper Motor Amplifier Board

Part number: XS3525-8S-4

Quantity required: 1

Unit Price: 185.00 USD

Details: 4 Axis Stepper Motor Amplifier Board.



[21.0] SS Round Knurled Thumb Nut for Syringe Piston; M3-0.5 thread; 12mm OD; 7.5mm H

Part number: 90368A150

Quantity required: 5

Unit Price: 1.62 USD

Details: Used as an insert in the neoprene pistons to couple to syringe tool motor shaft.



[22.0] Linear Shaft; X; Z axes

Part number: 6061K33

Quantity required: 4

Unit Price: 6.23 USD

Details: Hardened Precision Steel Shaft; 1/2inch OD; 12inch long.



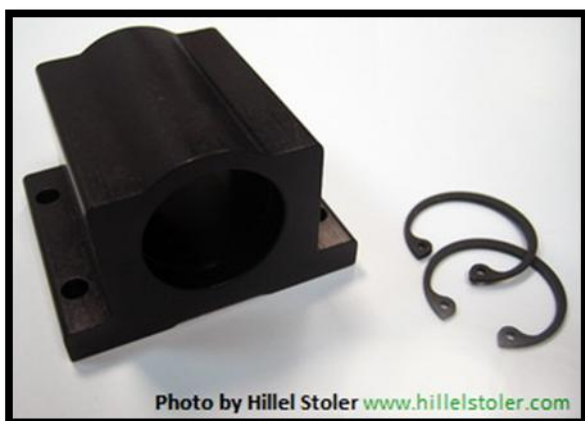
[23.0] Linear ball bearings for X; Y axes

Part number: 60595K73

Quantity required: 4

Unit Price: 18.48 USD

Details: Self-aligning bearings seem to have too much play when only 1/shaft.



[24.0] Aluminum Pillow Blocks for X; Y linear bearings; 7/8inch Bore

Part number: 9804K3

Quantity required: 4

Unit Price: 29.79 USD

Details: Pillow blocks to hold fixed-alignment linear ball bearings.



Photo by Hillel Stoler www.hillelstoler.com

[25.0] Linear Shaft; Y axis

Part number: 6649K2

Quantity required: 2

Unit Price: 33.25 USD

Details: Hardened Precision Steel Shaft; 1/2inchOD; 12inch long; 1/4-20 tapped ends; 1/2inch deep.



Photo by Hillel Stoler www.hillelstoler.com

[26.0] Flange ball bearing for Z axis

Part number: 6483K53

Quantity required: 2

Unit Price: 27.79 USD

Details: Flange-Mount Fixed-Align Linear Ball Bearing Std Length; Round Flange; 1/2inch ID; Steel Sleeve.



Photo by Hillel Stoler www.hillelstoler.com

[27.0] Shaft Collar

Part number: 6157K14

Quantity required: 6

Unit Price: 2.53 USD

Details: One-Piece Aluminum Clamp-On Collar 1/2inch bore; 1-1/8inch Outside Diameter; 13/32inch Width.



[28.0] Flange shaft supports for X Axis

Part number: 57745K21

Quantity required: 4

Unit Price: 31.50 USD

Details: Four-Bolt Flange Mount Shaft Supports; for 1/2inch Shaft OD; Aluminum.



[29.0] #8-32 brass threaded inserts

Part number: 93365A140

Quantity required: 31

Unit Price: 0.11 USD

Details: Brass Threaded Insert for Thermoplastics Tapered; 8-32 Internal Thread; .185inch Length.



[30.0] 1/4-20 brass threaded inserts; 0.3inch length

Part number: 93365A160

Quantity required: 4

Unit Price: 0.25 USD

Details: Brass Threaded Insert for Thermoplastics Tapered; 1/4-20 internal thread; 0.3inch length.



Photo by Hillel Stoler www.hillelstoler.com

[31 .0] #6-32 SS socket cap screw; 1/2inch length

Part number: 92196A148

Quantity required: 12

Unit Price: 0.06 USD

Details: Mounting linear bearings to acrylic sheet and etc.



Photo by Hillel Stoler www.hillelstoler.com

[32.0] #6-32 nylon locknut; 11/64inchh; 5/16inchw

Part number: 91831A007

Quantity required: 6

Unit Price: 0.05 USD

Details: For mounting X-axis HSI external nuts to nut flanges on XY coupling bracket.



Photo by Hillel Stoler www.hillelstoler.com

[33.0] 1/4-20 to #6-32 Threaded Insert for Metal

Part number: 90248A017

Quantity required: 4

Unit Price: 0.68 USD

Details: For reducing tap size of Y-rail ends from 1/4-20 to #6-32 for mounting to X linear bearing pillow blocks. 9/32inch long - rail is tapped 1/2inch deep.



[34 .0] #6-32 SS socket cap screw; 1inch length; partial thread

Part number: 92196A153

Quantity required: 4

Unit Price: 0.07 USD

Details: For fastening Z-axis HSI External Nut to Z-Carriage.



[35.0] #8-32 SS socket cap screw; 3/4inch length

Part number: 92196A197

Quantity required: 18

Unit Price: 0.08 USD

Details: Mounting X rail flange mounts to base walls; for belt tensioner, and mounting Z-table to Z-Carriage.



[36.0] 18-8 Stainless Steel Flat Washer 8 Screw Size, 11/64" Id, 3/8" Od, .024"-.038" Thk

Part number: 92141A009

Quantity required: 15

Unit Price: 0.02 USD

Details: Mounting the Z table to the Z carriage; prevent stress cracks in Z-Table Support Cross from spring forces associated with leveling the table.

Photo by Hillel Stoler www.hillelstoler.com



[37 .0] M3-0.5 SS socket cap screw; 10mm length

Part number: 91292A113

Quantity required: 8

Unit Price: 0.06 USD

Details: Mounting X; and Y linear motors to 0.25inch acrylic.

Photo by Hillel Stoler www.hillelstoler.com



[38.0] M3-0.5 SS socket cap screw; 40mm length

Part number: 91292A024

Quantity required: 4

Unit Price: 0.34 USD

Details: Mounting Z linear motor under 0.25inch acrylic.

Photo by Hillel Stoler www.hillelstoler.com



[39.0] #8-32 SS socket cap screw; 1inch length

Part number: 92196A199

Quantity required: 8

Unit Price: 0.09 USD

Details: Mounting Z flange bearings to 3-layer stack for Z-table.



[40.0] M3 SS washers; 9mmOD; 0.7mm thick

Part number: 91116A120

Quantity required: 16

Unit Price: 0.02 USD

Details: HSI Motor mounting to acrylic sheet.



[41.0] #6-32 SS Hex Nut; 7/64 thick; 5/16 OD

Part number: 91841A007

Quantity required: 8

Unit Price: 0.04 USD

Details: Tab/Notch assembly for acrylic sheet parts in tight location - especially on Z table around flange bearings.



[42.0] #4-40 SS socket cap screw; 1/2inch length

Part number: 92196A110

Quantity required: 31

Unit Price: 0.05 USD

Details: Tab/Notch assembly for acrylic sheet parts of syringe tool and Y-carriage; mounting electronics to base rear.



[43.0] #4-40 hex nut; 3/16inch W; 1/16inch H

Part number: 90730A005

Quantity required: 31

Unit Price: 0.03 USD

Details: Tab/Notch assembly for acrylic sheet parts of syringe tool and Y-carriage.



[44.0] #6-32 SS socket cap screw; 3/4inch length

Part number: 92196A151

Quantity required: 10

Unit Price: 0.06 USD

Details: Mounting syringe tool to Y carriage; and attaching Y rails to X linear bearing pillow blocks.



[45.0] #6-32 Brass Threaded Inserts; 0.150inch Length

Part number: 93365A130

Quantity required: 27

Unit Price: 0.00 USD

Details: On the Z carriage; Y carriage and XY coupling plates to allow attachment of acrylic pieces to linear bearing pillow blocks or to lead nuts.



[46 .0] #6-32 SS socket cap screw; 5/8inch length

Part number: 92196A150

Quantity required: 93

Unit Price: 0.06 USD

Details: For various assembly; especially acrylic sheet-edge to square nut assembly.



[47.0] #6-32 Flat Square Nut; Steel; 5/16inch OD; 7/64inch thick

Part number: 94855A115

Quantity required: 84

Unit Price: 0.01 USD

Details: Tab/Notch assembly for acrylic sheet parts.



**[48.0] Wave spring washers;
0.194inch ID; 0.242inch OD;
0.0057inch thk**

Part number: 9714K22

Quantity required: 20

Unit Price: 0.35 USD

Details: Bearing spacing for pulleys and shaft collars on X; Y; Z lead screws.



**[49 .0] Compression Spring;
302 SS; 3/8"H x 0.24"OD x
0.196"ID; 10lb/inch**

Part number: 9435K35

Quantity required: 5

Unit Price: 1.01 USD

Details: For build surface leveling; used as counter force to screws holding table to Z carriage.



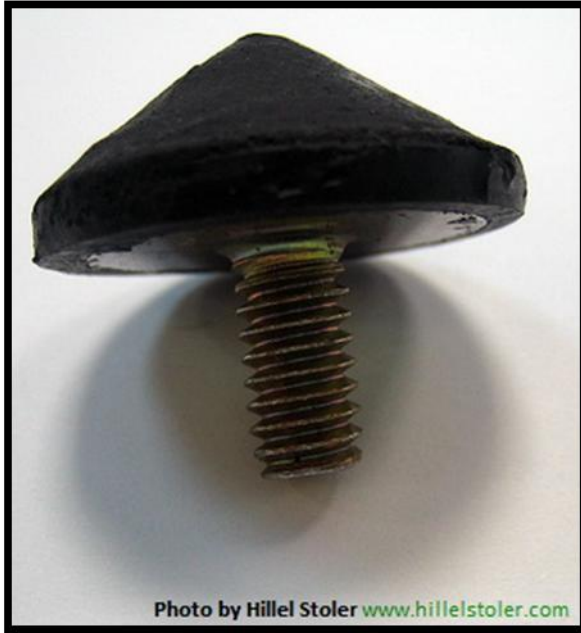
**[50.0] M2.5X0.45 SS Socket Cap
Screw; 8mm length**

Part number: 91292A012

Quantity required: 4

Unit Price: 0.12 USD

Details: For mounting Syringe Tool Motors to Syringe Tool.



**[51.0] Rubber Foot; 1/4-20
X1/2inch thread;
1inchdiameter 25lb rated**

Part number: 9377K53

Quantity required: 4

Unit Price: 1.36 USD

Details: Rubber feet for system.

Photo by Hillel Stoler www.hillelstoler.com



**[52 .0] 1/4-20 SS Hex Nut;
7/16inch W; 3/16inch H**

Part number: 91841A029

Quantity required: 4

Unit Price: 0.10 USD

Details: To space rubber feet.

Photo by Hillel Stoler www.hillelstoler.com



Photo by Hillel Stoler www.hillelstoler.com

**[53.0] #2-56 X 5/8inch SS
socket cap screw**

Part number: 92196A083

Quantity required: 12

Unit Price: 0.09 USD

Details: Screws for mounting the limit switches to acrylic sheet parts.



Photo by Hillel Stoler www.hillelstoler.com

[54.0] #2-56 SS hex nut

Part number: 91841A003

Quantity required: 12

Unit Price: 0.03 USD

Details: For mounting the limit switches to the acrylic sheet parts.



[56.0] Aluminum Shaft Collar for Syringe Tool Motor

Part number: 9946K41

Quantity required: 1

Unit Price: 0.81 USD

Details: Used to prevent rotation of non-captive syringe tool motor shaft.



[57.0] #6-32 SS socket cap shoulder screw

Part number: 94035A529

Quantity required: 1

Unit Price: 2.90 USD

Details: Used to prevent rotation of non-captive syringe tool motor shaft; 18-8 SS Precision Hex Socket Shoulder Screw 5/32" Shoulder Diameter; 1/2" L Shoulder; 6-32 Thread.



[58 .0] Ball bearings for HSI motors free ends and belt tensioner

Part number: 57155K321

Quantity required: 7

Unit Price: 7.12 USD

Details: Ball-bearing ABEC5; double shield; flanged; for 0.1875inch OD shaft.



[59.0] SS303 Shaft; 0.1872inch OD; 1.75inch long for belt tensioner

Part number: A 7X 1-06017

Quantity required: 1

Unit Price: 1.92 USD

Details: Stainless steel shaft for belt tensioner; 0.1872+/-0.001inch OD X 1.75inch.



[60.0] Timing belt to couple x-drives

Part number: A 6B 3-145037

Quantity required: 1

Unit Price: 9.10 USD

Details: Timing Belt; Pitch Length 29inch; Urethane/Kevlar; 3/8inch.



[61.0] Timing pulleys to couple x-drives

Part number: A 6H 3-13DF03706

Quantity required: 3

Unit Price: 11.12 USD

Details: Timing Pulley; 0.2 XL Pitch; 0.375inch belt; Fairloc hub; PD 0.828inch.



[62.0] Shaft collar for HSI motors free ends

Part number: A 7X 2-11406

Quantity required: 3

Unit Price: 5.79 USD

Details: Stainless Steel Set-screw Shaft Collar.



[63.0] Syringe Barrel

Part number: 5111LL-B

Quantity required: 1

Unit Price: 0.67 USD

Details: 10cc clear polyethylene syringe barrel; luer tip.



**[64 .0] Syringe Piston;
Neoprene; 10cc**

Part number: 5111S-B

Quantity required: 1

Unit Price: 0.52 USD

Details: Black neoprene rubber piston for use with a 10cc syringe barrel.



[65.0] Syringe Tip Sampler Kit

Part number: 5100

Quantity required: 1 kit

Unit Price (for a kit): 42.34 USD

Details: A kit with a wide variety of different tips; tip caps; end caps; some other piston types.

Version 1.00 (Mar08)

By Hillel Stoler (www.hillelstoler.com)