

Fish Sorter Bill Of Materials					
Item Number	Description	Vendor	PN	Qty	Notes
1	Microscope	Leica	DM6000B	1	or equivalent such as DM8
2	HC PL FLUOTAR 2.5x/0.07 NA Objective	Leica	506523	1	
3	N PLAN 5x/0.12 NA PH0 Objective	Leica	506303	1	
4	Mercury arc lamp	Leica	EL6000	1	
5	Andor Zyla 4.2 sCMOS camera	Oxford Instruments	Zyla 4.2	1	
6	DAPI filter set	Chroma	39000	1	
7	EGFP /IF/TC/ Cy2/ AlexaFluro 488 filter set	Chroma	39002	1	
8	EYFP/ Venus/ Citrine filter set	Chroma	39003	1	
9	TXR/ mCherry/ AlexaFluor 594 filter set	Chroma	39010	1	
10	Cy5/ AlexaFluor 647/ Draq5	Chroma	39007		
11	Motion stages for collection plate, x	Zaber	T-LSQ150D	1	or equivalent
12	Motion stages for collection plate, y	Zaber	A-LSQ150A-E01	1	or equivalent
13	Motion stage for pipette	Zaber	T-LSQ075B	1	or equivalent
14	Motion stage data cable	Zaber	X-DC02	1	
15	Optical breadboard	Thorlabs	PBG2436F	1	
16	Optical post platform for collection plate	Thorlabs	C1519	2	
17	Optical post for collection plate	Thorlabs	P8	2	
18	Optical post for collection plate	Thorlabs	P1.5	2	
19	Pipette XY mount	Thorlabs	CXY1	1	
20	Cage rods for Pipette XY mount	Thorlabs	ER1	4	
21	Optical post for Pipette	Thorlabs	DP14A	1	
22	Pipettor fluidic nut mount (with modification)	Thorlabs	SM1A62	1	Requires machined modifications, see mechanical drawings
23	Valve controller terminal	Wago	750-881	1	
24	Valve controller block	Wago	750-504	1	
25	Valves	Festo	VOVK-BT6-M32C-MN-1H5ZP-FB	2	
26	Valve manifolds	Festo	VABS-C12-6-B-M3	2	
27	Festo Push-In to Threaded Straight Fitting 4mm OD Tubing	Digikey	QSM-M4-I	4	
28	Festo Push-In to Threaded Straight Fitting 4mm OD Tubing	Digikey	QSM-M3-I	2	
29	Aluminum enclosure for pneumatics controller	Digikey	1401E	1	
30	Mounting bracket for Wago	McMaster-Carr	8961K102	1	
31	Precision pressure regulator 0-30psi, SMC Corp. AR20-N01H-1Z-D	Grainger	807P6	1	
32	Precision vacuum regulator 30-inHg, SMC Corp. IRV10-N07BG	Grainger	301548	1	
33	In-line vacuum filter, SMC ZFC5D-B	Grainger	301537	1	
34	Panel-mount pressure gauge, 0-30psi, 1.5" dia.	McMaster-Carr	4000K719	1	
35	Panel-mount vacuum gauge, 30-0inHg, 1.5" dia.	McMaster-Carr	4002K25	1	
36	Toggle switch, panel mount	Digikey	360-M2011SS1W01/CUL-N983-ND	1	
37	LED indicator, green, panel-mount, 24Vdc	Digikey	679-2842-ND	1	
38	Power connector, panel-mount, 2.5mm x 5.5mm	Digikey	CP-0648-ND	1	
39	Line cord for power adapter, 3 conductor, US plug	Digikey	AC30UNA-R	1	
40	Desktop power adapter, 24Vdc, 36W	Digikey	993-1447-ND	1	
41	3-Way Stopcock, PC, Female x Female x Male Locking	Cole-Parmer	EW-48523-28	1	
42	Luer to Hose Barb Fitting, Polypropylene, Male Luer Lock x 1/16" ID: 10/Pk	Cole-Parmer	EW-50110-11	1	
43	Luer to Hose Barb Fitting, Polypropylene, Female Luer x 3/32" ID: 10/Pk	Cole-Parmer	EW-50109-70	1	
44	1/4" OD hardwall tubing	McMaster-Carr	5548K966-25ft	1	
45	1/4" OD firm tubing	McMaster-Carr	5648K74-25ft	1	
46	Tubing between pipette and pneumatics controller (0.01" ID)	McMaster-Carr	51085K44-5ft	1	37" required between pipette and pneumatics box
47	5/32" OD firm tubing	McMaster-Carr	5648K68-25ft	1	
48	1/8" OD firm tubing	McMaster-Carr	5648K67-5ft	1	
49	Elbow Assembly PEEK - 1/16" OD	IDEX Health & Science	P-430	1	
50	Flangeless Female ETFE, 1/4-28 Flat-Bottom, for 1/16" OD Blue	IDEX Health & Science	P-200X	1	
51	Flangeless Nut Delrin®, Short, 1/4-28 Flat-Bottom, for 1/16" OD Black	IDEX Health & Science	P-208	2	
52	Flangeless Male Nut Delrin®, 1/4-28 Flat-Bottom, 1/16" OD Red	IDEX Health & Science	P-202	1	
53	Flangeless Nut PEEK, 1/4-28 Flat-Bottom, for 1/8" OD Natural	IDEX Health & Science	P-330	1	
54	Flangeless Female ETFE 1/4-28 Flat-Bottom, for 1/8" OD Yellow	IDEX Health & Science	P-300	1	
55	Push to Connect Straight Adapter, for 1/4" Tube OD x 3/8 NPT Male	McMaster-Carr	5779K111	2	
56	Push to Connect Through-Wall Connector for 1/4" Tube OD	McMaster-Carr	5779K677	2	
57	Push to Connect Through-Wall Connector for 5/32" Tube OD	McMaster-Carr	5779K676	1	
58	Push to Connect Straight Adapter, for 1/8" Tube OD x 1/8 NPT Female	McMaster-Carr	5779K123	2	
59	Push to Connect Straight Adapter, for 1/8" Tube OD x 1/8 NPT Male	McMaster-Carr	5779K102	2	
60	Push to Connect 90 Degree Elbow Connector, for 1/4" Tube OD	McMaster-Carr	5779K24	1	
61	Push to Connect Tee Connector, for 1/4" Tube OD	McMaster-Carr	5779K34	2	
62	Push to Connect Adapter, 1/8" Stem OD, for 1/4" Tube OD	McMaster-Carr	5779K362	2	
63	Push to Connect Adapter, 1/4" Stem OD x 5/32" Tube OD	McMaster-Carr	5779K712	2	
64	Push to Connect 90 Degree Elbow Reducer, for 1/4" x 1/8" Tube OD	McMaster-Carr	5779K661	2	
65	Pipette Micro Hemocrit Capillary Tube, PETG, 0.85 x 1.55 x 75 mm	Globe Scientific	51680	1	
66	3/16" cast acrylic	McMaster-Carr	8560K211	1	For laser cut parts
67	Collection plate holder, CNC machined aluminum 6061	External Machining	3-1973	1	
68	Pipettor bracket, CNC machined aluminum 6061	External Machining	3-1953	1	
69	Pipettor arm, CNC machined aluminum 6061	External Machining	3-1954	1	
70	Pipettor rotation clamp, CNC machined aluminum 6061	External Machining	3-0137	1	
71	Non-piezo pipettor holder, CNC machined PEEK	External Machining	3-0075	1	
72	Embryo male mold, SLA 3D printed	Internal Fabrication	3-1488-M2	1	Dental LT Clear V2 resin
73	Embryo mold mount, laser cut cast acrylic	Internal Fabrication	3-1489-M2	1	3/16" clear acrylic
74	Embryo mold holder, laser cut cast acrylic	Internal Fabrication	3-2057-M2	1	3/16" clear acrylic
75	Larvae male mold, SLA 3D printed	Internal Fabrication	3-1477-L2	1	Dental LT Clear V2 resin
76	Larvae mold mount, laser cut cast acrylic	Internal Fabrication	3-1622-L2	1	3/16" clear acrylic
77	Larvae mold holder, laser cut cast acrylic	Internal Fabrication	3-1623-L2	1	3/16" clear acrylic
78	Pipette stabilizer, SLA 3D printed	Internal Fabrication	3-1208	1	Tough 2000 resin