

	Project CNC machine				Project Link GitHub				
	Title cnc_laser_v1.0.SLDASM				Project Number CNC.00.00				
	Designer Vladimir Tyrkin				Drawn by Vladimir Tyrkin				
	File CNC_BOM.xlsx				Date 18 March 2023				
Dwg.	Item No.	Qty	Description	Material	Manufacturer	Part Number	Manufacturer Link	Weight	Total Weight
CNC.01.01		3	Structural Aluminum Profile 2040	6063-T5	McMaster-Carr	5537T111-5537T107	McMaster-Carr	346	1038
					Soberizavod	224SHX	Soberizavod		
CNC.01.11		2	Structural Aluminum Profile 2020	6063-T5	McMaster-Carr	5537T514-5537T751	McMaster-Carr	169	338
					Soberizavod	222SHX	Soberizavod		
CNC.01.21		1	Frame Base Y	6063-T5	McMaster-Carr	4630T124	McMaster-Carr	43.77	43.77
CNC.01.22-1		1	Frame Base Mount Bracket Y Without Hole	6061 Alloy	McMaster-Carr	9146T14-9146T141	McMaster-Carr	7.97	7.97
CNC.01.22-2		1	Frame Base Mount Bracket Y With Hole	6061 Alloy	McMaster-Carr	9146T14-9146T142	McMaster-Carr	7.9	7.9
CNC.02.25		4	Threaded Rod	Alloy Steel	McMaster-Carr	94595A235	McMaster-Carr	2.16	8.64
CNC.01.02-1		2	Foot	Polycarbonate Sheet	McMaster-Carr	8574K281	McMaster-Carr	32.67	65.34
CNC.01.02-2		1	Foot	Polycarbonate Sheet	McMaster-Carr	8574K281	McMaster-Carr	32.67	32.67
CNC.01.02-3		1	Foot	Polycarbonate Sheet	McMaster-Carr	8574K281	McMaster-Carr	30.39	30.39
CNC.02.42		1	Adjustment Equipment Part	Polycarbonate Sheet	McMaster-Carr	8574K281	McMaster-Carr	73.78	73.78
CNC.02.41		1	Stepper Side Part	Polycarbonate Sheet	McMaster-Carr	8574K281	McMaster-Carr	67.72	67.72
CNC.02.44		1	Equipment Adapter	Polycarbonate Sheet	McMaster-Carr	8574K281	McMaster-Carr	51.48	51.48
CNC.02.21		1	Right Side Base	Polycarbonate Sheet	McMaster-Carr	8574K281	McMaster-Carr	99.76	99.76
CNC.02.31		1	Left Side Base	Polycarbonate Sheet	McMaster-Carr	8574K281	McMaster-Carr	104.4	104.4
CNC.02.22		8	Wheel Spacer 1	6061-T6 (SS)	McMaster-Carr	4634T36	McMaster-Carr	1.12	8.96
CNC.01.31		4	Corner For Sensor	6060 Alloy	McMaster-Carr	5585N13-5585N117	McMaster-Carr	2.49	9.96
CNC.02.24		2	Corner Bracket For Cable Chain	6060 Aluminum	McMaster-Carr	5585N19-5585N137	McMaster-Carr	5	10
CNC.02.43		8	Wheel Spacer 2	6061-T6 (SS)	McMaster-Carr	4634T36	McMaster-Carr	1.37	10.96
CNC.02.51		1	Frame Base X	6063-T5	McMaster-Carr	4630T124	McMaster-Carr	17.7	17.7
CNC.02.52		1	Frame Base Mount Bracket X	6061 Alloy	McMaster-Carr	9146T15-9146T151	McMaster-Carr	6.75	6.75
CNC.02.60		1	Equipment Cable Carrier	Nylon	Aliexpress	none	Aliexpress	21.86	21.86
CNC.03.00		1	Cable Carrier	Nylon	Aliexpress	none	Aliexpress	21.86	21.86
CNC.04.05-1		1	Cable label X	Acrylic	Aliexpress	none	Aliexpress	1.58	1.58
CNC.04.05-2		1	Cable label Y	Acrylic	Aliexpress	none	Aliexpress	1.58	1.58
CNC.04.05-4		1	Cable label PWR	Acrylic	Aliexpress	none	Aliexpress	1.58	1.58
CNC.04.05-5		1	Cable label DATA	Acrylic	Aliexpress	none	Aliexpress	1.58	1.58
CNC.05.01-1		2	T-slot Table Plate	6105 Alloy	Soberizavod	TL1	Soberizavod	541.63	1083.3
CNC.05.01-2		2	T-slot Table Plate	6105 Alloy	Soberizavod	TL1	Soberizavod	541.8	1083.6
CNC.05.01-3		1	T-slot Table Plate	6105 Alloy	Soberizavod	TL1	Soberizavod	377.6	377.6
CNC.05.05		2	Corner Braket Long	6061 Alloy	McMaster-Carr	5585N18-5585N134	McMaster-Carr	117.04	234.08
CNC.02.11		1	Rotary Shaft	AISI 1020	McMaster-Carr	8920K18-8920K183	McMaster-Carr	61.66	61.66
None		4	Corner Bracket 40x20L	AISI 1035 Steel (SS)	Soberizavod	H49	Soberizavod	49	196
None		8	Corner Bracket 20x20L	Steel	Soberizavod	none	Soberizavod	10.14	81.12
				Anodized 6063 Aluminum	McMaster-Carr	5537T935	McMaster-Carr		
None		1	LASER 5500mW	Multimaterial	Aliexpress	none	Aliexpress	400	400
None		4	Limit Switch	Multimaterial	DIGIKEY	none	DIGIKEY	1.6	6.4
				Multimaterial	Aliexpress	none	Aliexpress		
None		2	Nema 17HS4401 Stepper Motor	Multimaterial	Aliexpress	none	Aliexpress	315	630
None		12	Cable Tie Plastic	Nylon 101	McMaster-Carr	7130K12	McMaster-Carr	0.18	2.16
None		3	Timing Belt 430mm	Rubber	Aliexpress	none	Aliexpress	3.98	11.94
			Timing Belt 430mm	Rubber	McMaster-Carr	3682N1-3682N13	McMaster-Carr		
None		3	GX16-4P cable female	Multimaterial	Aliexpress	none	Aliexpress	10	30
None		3	Pulley GT2-12	Multimaterial	Aliexpress	none	Aliexpress	1.23	3.69

Dwg.	Item No.	Qty	Description	Material	Manufacturer	Part Number	Manufacturer Link	Weight	Total Weight
None		1	Flexible shaft coupling 5x5	Multimaterial	Aliexpress	none	Aliexpress	16.06	16.06
None		1	Connector D-SUB 9 Male	Multimaterial	MOUSER	none	Mouser	5	5
None		1	Connector PG11	ABS	Amazon	none	Amazon	12.38	12.38
None		1	Cable Holder	ABS	Soberizavod	none	Soberizavod	3.07	3.07
None		1	Heat-Shrink Tubing 1 (Length 110mm)	Rubber	Digikey	ATU031K-ND	Digikey	0	0
None		1	Heat-Shrink Tubing 2 (Length 25mm)	Rubber	Digikey	SCT-NO.2-E5-0-12MMND	Digikey	0	0
Total weight								6322.2	

3D printed parts

CNC.02.23		1	Spacer for stepper	PET-G	McMaster-Carr	3462N1	McMaster-Carr	20.9	20.9
			File: ProductionFiles/SpacerForStepper.STL						
CNC.02.45		2	Carriage Spacer	PET-G	McMaster-Carr	3462N1	McMaster-Carr	5.49	10.98
			File: ProductionFiles/CarriageSpacer.STL						
							Total weight	31.88	

Screws

None		4	Head screw ISO 7380 M5 x 50	AISI 304	Aliexpress	none	Aliexpress	8.84	35.36
None		56	M3 NYLOC DIN 985	AISI 304	Aliexpress	500214	Aliexpress	0.4	22.4
None		6	Square nut M5	Zinc-Plated Steel	Soberizavod	A209	Soberizavod	1.84	11.04
				Zinc-Plated Steel	McMaster-Carr	5537t161	McMaster-Carr		
None		20	M5 NYLOC DIN 985	AISI 304	McMaster-Carr	5100214	McMaster-Carr	1.1	22
None		4	Low Profile Hex Screw M5x30	Alloy Steel	Aliexpress	none	Aliexpress	5.27	21.08
				Alloy Steel	McMaster-Carr	none	McMaster-Carr		
None		8	Head screw ISO 7380 M5 x 35	AISI 304	Aliexpress	none	Aliexpress	5.08	40.64
None		6	Head screw ISO 7380 M5 x 6	18-8 Stainless Steel	Aliexpress	none	Aliexpress	2	12
None		20	ISO 10642 - M3 x 16 - 16N	18-8 Stainless Steel	McMaster-Carr	none	McMaster-Carr	0.47	9.4
None		24	Head screw ISO 7380 M5 x 8	18-8 Stainless Steel	McMaster-Carr	91292A121	McMaster-Carr	2	48
				18-8 Stainless Steel	Aliexpress	none	Aliexpress		
None		16	Washer DIN 125 - A 5.3	Zinc Plated Steel	McMaster-Carr	91166A240	McMaster-Carr	0.44	7.04
None		32	T nut 2020 M5	316 Stainless Steel	Aliexpress	none	Aliexpress	2.08	66.56
None		4	Washer DIN 125 - A 3.2	Zinc Plated Steel	McMaster-Carr	91166A210	McMaster-Carr	0.12	0.48
None		14	ISO 4762 M3 x 8 - 8N	Zinc Plated Steel	McMaster-Carr	91502A103	McMaster-Carr	0.8	11.2
None		14	ISO 4762 M3 x 12 - 12N	18-8 Stainless Steel	McMaster-Carr	none	McMaster-Carr	1.16	16.24
None		8	ISO 7380 - M5 x 10 - 10N	316 Stainless Steel	McMaster-Carr	90943A117	McMaster-Carr	2.09	16.72
None		4	ISO 7380 - M5 x 16 - 16N	18-8 Stainless Steel	McMaster-Carr	92095A212	McMaster-Carr	2.9	11.6
None		16	ISO 7380 - M3 x 8 - 8N	18-8 Stainless Steel	McMaster-Carr	92095A181	McMaster-Carr	0.6	9.6
None		12	ISO 4762 M6 x 20 - 20N	Zinc-Plated Steel	McMaster-Carr	90128A264	McMaster-Carr	6.53	78.36
None		4	ISO 4762 M4 x 6 - 6N	Zinc-Plated Steel	McMaster-Carr	90128A208	McMaster-Carr	3.7	14.8
None		4	Head screw ISO 7380 M3 x 16	AISI 304	Aliexpress	none	Aliexpress	1	4
None		1	Stainless Steel Ball Bearing 625-2Z (ISO 15 RBB - 025 - 8,DE,NC,8_68)	Multimaterial	McMaster-Carr	6153K15	McMaster-Carr	5.6	5.6
Total weight								464.12	

Cables

None		1	Stepper X Cable (Control Cable 1850mm)	Multimaterial	McMaster-Carr	6650T12	McMaster-Carr	50	50
None		1	Stepper Y Cable (Control Cable 2900mm)	Multimaterial	McMaster-Carr	6650T12	McMaster-Carr	50	50
None		1	Power Cable (Power Supply Cable 3200mm)	Multimaterial	McMaster-Carr	7394K31	McMaster-Carr	50	50
None		1	Data Cable (Multiple Conductor Cable 1040mm)	Multimaterial	Digikey	T1430-153-ND	Digikey	50	50
				Multimaterial	McMaster-Carr	6650T14	McMaster-Carr		0
None		1	Hook-Up Wire (Wire 5300mm)	Multimaterial	Digikey	FLTWC0311-26-9-ND	Digikey	50	50
Total weight								250	
All project weight								7068.2	