

## Materials, Simple List

Notes	Quantity	Size	Part	Might Buy
	15	5/16-18	Nuts	
	5	5/16-18	Tee Nuts	
	2	5/16	Washers	
	53 inches	5/16-18	Threaded Rod	2 @ 36 inches.
	13	1/4-20	Nuts	
	20	1/4	Washers	
	1	1/4-20 x 3/4	Bolt	
	1	1/4-20 x 1	Bolt	
	1	1/4-20 x 2	Bolt	
	36 inches	1/4-20	Threaded Rod	
	109	#10-24	Nuts	
	126	#10	Washers	
	2	#10-24 x 3/4	Round Head Machine Screw	See notes
	22	#10-24 x 1	Round Head Machine Screw	
	6	#10-24 x 1-1/4	Round Head Machine Screw	
	12	#10-24 x 1-1/2	Flat Head Machine Screw	
	13	#10-24 x 3	Round Head Machine Screw	See notes
	27 inches	#10-24	Threaded Rod	1 @ 36 inches
	72	1-5/8	Drywall Screw	1 pound box
	12	#8	Finish Washers Optional	
	36 inches	1/8 x 3/4 x 3/4	Aluminum Angle	
	94 inches	1/2 inch ID	Black Iron Pipe	10 foot length
	4 inches	1/4 inch ID	Fuel Line	
	6	#4	Hose Clamp	
	1	4 inch diameter	Band Clamp	See note below
	8	1/2 inch	EMT Two Hole Clamps	
	1	Small Bottle	Carpenter's Wood Glue	
	12 feet	1x4	Wood Board	2 @ 8 feet
	7 feet	1x6	Wood Board	1 @ 8 feet
	1	Tube	Loctite Green Thread Locker	
	30	608 (22x8mm)	Skate Bearings	

Note: One roll of plumbing hanger tape can replace the 1/2 inch EMT clamps and band clamp.

## Materials, Detailed List

Notes	Quantity	Size	Part	Might Buy
	15	5/16-18	Nuts	
			3 per leadscrew (9)	
			4 Y compression rod	
			2 for optional knobs	
	5	5/16-18	Tee Nuts	
			3 for leadnuts	
			2 for optional knobs	
	2	5/16	Washers	
			2 Y compression rod	
	53 inches	5/16-18	Threaded Rod	2 @ 36 inches.
			6 inches Y compression rod	
			7 inches Z leadscrew	
			2 @ 20 inches for X and Y leadscrews (40)	
	13	1/4-20	Nuts	
			6 Z rails	
			1 Cable clamp on Z rail	
			4 Router cradle	
			1 Router band anchor	
			1 Router band strap	
	20	1/4	Washers	
			4 Z rails	
			2 Z cable clamp	
			2 on each leadnut support screw (6)	
			2 Y leadnut block	
			1 Router mount on 2 inch bolt	
			2 Router cradle	
			2 Router band strap	
			1 Router aluminum angle anchor	

		1	1/4-20 x 3/4	Bolt for Anchor Angle	
		1	1/4-20 x 1	Bolt for Router Band Strap	
		1	1/4-20 x 2	Bolt for Router Mount	
		36 inches	1/4-20	Threaded Rod	
			2 @ 17-1/4 Z rails	(34.5)	
			1.5 cradle		
		109	#10-24	Nuts	
			2/ truck bearing, 24 bearings	(48)	
			2/ truck for flat head screws	(12)	
			2/ Z tension rod	(6)	
			2/ X tension rod	(2)	
			2/ leadnut	(6)	
			2 for Y leadnut block	(2)	
			3/ stepper mounting screw, 11 screws	(33)	
		126	#10	Washers	
			2/ truck bearing	(48)	
			2/ truck mount, on flat head screws	(12)	
			2/ leadnut	(6)	
			2 Y leadnut block	(2)	
			2/ Z tension rod	(6)	
			2 X tension rod	(2)	
			2/ EMT clamp	(16)	
			2/ stepper screw, 11 screws	(22)	
			Y rail support boards. Can be finish washers	(8)	
			X gantry beam. Can be finish washers	(4)	
		2	#10-24 x 3/4	Round Head Machine Screw	See notes
			2 Required for Z bottom truck bearings All other bearing axles can be 3/4 or 1 inch		
		22	#10-24 x 1	Round Head Machine Screw	
			8 X trucks		
			8 Y trucks		
			6 Z trucks		

	6	#10-24 x 1-1/4	Round Head Machine Screw	
			2 per leadnut (6)	
	12	#10-24 x 1-1/2	Flat Head Machine Screw	
			2 per each truck (12)	
	13	#10-24 x 3	Round Head Machine Screw	See notes
			3 Y stepper mount	
			4 X stepper mount	
			4 Z stepper mount	
			2 Y leadnut block	
	27 inches	#10-24	Threaded Rod	1 @ 36 inches
			10-1/2 X tension rod	
			2 @ 5-1/2 Z truck tension rods (11)	
			5-1/2 Z bottom tension rod	
	72	1-5/8	Drywall Screw	1 pound box
			8 Y rail support tops	
			16 Y rail support ends	
			8 Attach X gantry to Y frame	
			8 Y Tie EMT clamps to Y rail supports	
			4 Y table bed to table legs	
			6 Tie X gantry beam to X ends	
			4 Tie Gantry beam together	
			8 Tie EMT clamps to gantry	
			4 Tie Z sides to Z back	
			2 Tie Z sides to Z bottom	
			4 Tie Z top to carriage body	
	12	#8	Finish Washers Optional	
			Use with screws that tie rail supports together	
	36 inches	1/8 x 3/4 x 3/4	Aluminum Angle	
			2@ 4-1/8 X trucks (8-1/4)	
			2@ 5-1/2 Y trucks (11)	
			2@ 7-1/2 Z trucks (15)	
			1@ ~1-3/4 Z router band anchor	

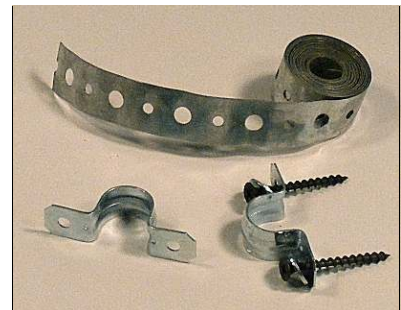
	~94 inches	1/2 inch ID	Black Iron Pipe	10 foot length
			4@ 15-7/8 for X and Y pipe rails	
			2@15 for Z rails	
	~4 inches	1/4 inch ID	Fuel Line	
			Tie leadscrews to steppers, 3 @ ~1-1/4 inch each	
	6	#4	Hose Clamp	
			Tie stepper to leadscrew. 2 per leadscrew	
	1	4 inch diameter	Band Clamp	See note below
			Ties trim router to Z rails	
	8	1/2 inch	EMT Clamps	
			2 per X and Y pipe rail. Tie rails to boards	
	1	Small Bottle	Carpenter's Wood Glue	
			Glue wooden components together	
	12 feet	1x4	Wood Board. See wood section	2 @ 8 feet
	7 feet	1x6	Wood Board	1 @ 8 feet
	1	Tube	Loctite Green, Thread Locker	
			Use to lock nuts into place	
	30	608 (22x8mm)	Skate Bearings	
			2 per leadscrew (6)	
			4 for each truck (24)	

Note: One roll of plumbing hanger tape can replace the 1/2 inch EMT clamps and the 4 inch band clamp.

For the router's mounting strap, the hanger tape is easier to use than a four inch band clamp. Near right image. See page 77 before purchasing a band clamp.



Router band clamp made of plumbing hanger tape.



1/2 inch EMT clamps and plumbing tape.