

## Mini Mill CNC Conversion Source Guide - [From DIYMachining.com](http://DIYMachining.com)

Item	MFG/Vendor	Description	Part Number	Cost (ea)	Qty	Total
1*	Harbor Freight	2 Speed Benchtop Mill/Drill Machine	44991	\$ 479.99	1	\$ 479.99
2		Wire Grommets	67582	\$ 5.99	1	\$ 5.99
3		150 PC Spade Connector Assortment	67683	\$ 4.99	1	\$ 4.99
4	CNC Fusion	Mini Mill Kit#2 X-Y-Z Axis (USED)	NA	\$ 619.00	1	\$ 619.00
5	Automation Technologies	NEMA23 425oz/in 2.8A Stepper Motor ¼" Dual shaft	KL23H286-20-8B	\$ 31.95	3	\$ 95.85
6	Mouser	Power Supply 24 Volt 8.8 Amp	SE-200-24	\$ 37.60	1	\$ 37.60
7	Synthetos	GRBL Shield - Motor Controller	gShield v5	\$ 49.99	1	\$ 49.99
8	McMaster-Carr	18 AWG 4 Conductor Shielded Cable (25ft.)	8233T36	\$ 20.35	1	\$ 20.35
9		3/8" ID Heat Shrink Tubing (4ft.)	7856K16	\$ 3.17	1	\$ 3.17
10		1/8" ID Heat Shrink Tubing (4ft.)	7856K13	\$ 1.91	1	\$ 1.91
11	Amazon	Electronics Enclosure 10" Width x 10" Height x 4" Depth	JB-3960	\$ 24.30	1	\$ 24.30
12	Amazon	Emergency Stop Push Button Switch	a12081700ux0229	\$ 5.22	1	\$ 5.22
13	Amazon	24V DC Fan 40x10mm	NA	\$ 3.99	1	\$ 3.99
14	SparkFun	SparkFun Redboard (Arduino Uno Equivalent)	DEV-12757	\$ 19.95	1	\$ 19.95
<b>Estimated Total Cost</b>						<b>\$ 1,372.30</b>

Item	Link
1	<a href="http://www.harborfreight.com/two-speed-variable-bench-mill-drill-machine-44991.html">http://www.harborfreight.com/two-speed-variable-bench-mill-drill-machine-44991.html</a>
2	<a href="http://www.harborfreight.com/180-piece-harness-grommet-set-67582.html">http://www.harborfreight.com/180-piece-harness-grommet-set-67582.html</a>
3	<a href="http://www.harborfreight.com/150-piece-terminal-and-connector-set-67683.html">http://www.harborfreight.com/150-piece-terminal-and-connector-set-67683.html</a>
4	<a href="http://www.cncfusion.com/minimill1.html">http://www.cncfusion.com/minimill1.html</a>
5	<a href="https://www.automationtechnologiesinc.com/products-page/nema-23/kl23h286-20-8b">https://www.automationtechnologiesinc.com/products-page/nema-23/kl23h286-20-8b</a>
6	<a href="http://www.mouser.com/ProductDetail/Mean-Well/SE-200-24/?qs=sGAEpiMZZMsPs3th5F8koBXG%2f88ctzcM7%252bcCQ8TI45g%3d">http://www.mouser.com/ProductDetail/Mean-Well/SE-200-24/?qs=sGAEpiMZZMsPs3th5F8koBXG%2f88ctzcM7%252bcCQ8TI45g%3d</a>
7	<a href="https://www.synthetos.com/project/grblshield/">https://www.synthetos.com/project/grblshield/</a>
8	<a href="http://www.mcmaster.com/#sensor-connectors/=ys9ap4">http://www.mcmaster.com/#sensor-connectors/=ys9ap4</a>
9	<a href="http://www.mcmaster.com/#catalog/121/839/=ys9eb7">http://www.mcmaster.com/#catalog/121/839/=ys9eb7</a>
10	<a href="http://www.mcmaster.com/#catalog/121/839/=ys9fdk">http://www.mcmaster.com/#catalog/121/839/=ys9fdk</a>
11	<a href="http://www.amazon.com/gp/product/B005UP9VZK?psc=1&amp;redirect=true&amp;ref=oh_aui_detailpage_o00_s00">http://www.amazon.com/gp/product/B005UP9VZK?psc=1&amp;redirect=true&amp;ref=oh_aui_detailpage_o00_s00</a>
12	<a href="http://www.amazon.com/gp/product/B0094GM004?psc=1&amp;redirect=true&amp;ref=oh_aui_detailpage_o00_s01">http://www.amazon.com/gp/product/B0094GM004?psc=1&amp;redirect=true&amp;ref=oh_aui_detailpage_o00_s01</a>
13	<a href="http://www.amazon.com/gp/product/B00NIA351K?psc=1&amp;redirect=true&amp;ref=oh_aui_detailpage_o01_s00">http://www.amazon.com/gp/product/B00NIA351K?psc=1&amp;redirect=true&amp;ref=oh_aui_detailpage_o01_s00</a>
14	<a href="https://www.sparkfun.com/products/12757">https://www.sparkfun.com/products/12757</a>

\* Be sure to use a 20% off coupon

Note - Other prices may vary depending on time of purchase