

Flight Mill Parts – *Corrected*

(Part dimensions are listed under notes in case the listed supplier no longer carries the items.)

Item	Item #	Vender	Source/Website	Unit	# used *	Cost/ Unit	Cost \$US	Notes/Instructions
ferrite ring magnets	63B06929118	Magnet Shop	http://www.magnetshop.com/	100 pack	1	12.00	12.00	OD: 0.69", ID: 0.29", Thickness: 0.118"; 7oz pull; 1 glued to the delrin rod, and 1 to the 3/8" teflon bearing, opposing - to generate the "float."
hypodermic tubing	HTX-22T-12 (B000FMYLZS)	Small Parts, Inc.	http://www.smallparts.com/	each	4	8.37	33.48	22 gauge; 0.0358" OD x 0.01975" ID x 0.004" wall; used for flight mill arms and main axis rod. Cut into 1.5" lengths for the axes; use a metal file to round ends; should fit snugly into Delrin rod hole, loosely into the rotating Teflon head hole. For flight arm, bend last 1/2" at a 95° angle.
nickel ring magnets	R311	K&J Magnetics	http://www.kjmagnetics.com	each	60	0.20	12.00	3/16" OD x 1/16" ID x: 1/16" thick; Used to trigger the digital hall effect sensors.
3/8" Teflon rod	47503	United States Plastic Corporation	http://www.usplastic.com/	foot	5	1.92	9.60	30 ea x 3/4" lengths. Drill each 3/4" piece w/ a size 68 bit 1/2" deep (parallel - for axis); also drill a perpendicular hole w/ a size 70 bit to accept the rotating arm, placed 1/8" off of the opposite end.
1" diameter Delrin rod, 3.75" long		Professional Plastic	http://www.professionalplastics.com/ DELRINSHEET-ROD	foot	10	20.00	200.00	Many suppliers: just use cheapest on the internet. Drill each 3.75" piece w/ a size 70 bit 1/2" deep (parallel – for axis).
Hall effects sensor	OHN3120U	Optikinc	http://www.optekinc.com/	each	1	3.00	3.00 [@]	Look under magnetic sensors on the left side of the Optikinc website then look for the part number. A link is given for current suppliers.

* Number used to fabricate 30 flight mills.

@ Some suppliers require a minimum order of \$25US.