New to Forum,

I need to replace the drives/steppers/power supply of a used 3-axis Taig Deasktop CNC I purchased. It loose steps, is slow, and is not set-up correctly.

I was considering the following replacement components:

[MeanWell 48V DC 7.3A 350W  Power Supply to drive steppers (Manufacturer Part #:NES-350-48)](http://www.mouser.com/ProductDetail/Mean-Well/NES-350-48/?qs=sGAEpiMZZMsPs3th5F8koPF2exM897jT%252bLz1TT6w5%252bQ%3d)

[The Ethernet SmoothStepper (B-ESS) - to eliminate the LTP port from older PC](https://warp9td.com/index.php/products)

[G540 4-Axis Digital Step Drive (to drive stepper motors)](https://www.homanndesigns.com/index.php?main_page=product_info&cPath=24&products_id=80&zenid=j5hkqva71llakaka90qqgc6g63)

[NEMA23 381oz/in 3.5A, Dual Shaft Stepper Motors, KL23H2100-35-4B, Inductance 2.8 mH (trying to hold < 2.5mh inductance)](https://www.automationtechnologiesinc.com/products-page/nema-23/nema-23-quarter-inch-dual-shaft-with-a-flat-381-oz-in/)

However, I started reading about the Dynomotion solution on the CNC forum and what kind of support is out there to get this project completed.

The goal of this project is to.

1. Replace the existing CNC motion control on the Taig machine I have.
2. To teach myself how to set-up/configure the motion solution for a machine.
3. Prepare me for a replacement CNC motion controller on an existing knee mill that has an existing fried/not working/out dated solution.
4. Support from such a forum as this and experienced people (willing to share) is absolute necessary, as I am weak in all areas needed to make this project a success.

I understand it will cost money. But education cost money, period. May it be through the organized system or the school of hard knocks; it is going to cost something.

I just would like to minimize the cost as I go … moving forward with a solution I can grow into and have the support to get better.

Dynomotion solution is the choice I am making.

So, if I may, can I please get a few question answered before I spend my first $1000.00?

1. I would really like to have a solution that would a closed-loop. Now I am not looking for the closed loop solution like the industrial CNC machining centers; however, I would like to have a solution that can correct itself without having to re-reference.
2. So, I would first need help in deciding which motors to purchase.
	1. Low cost: Stepper motor with encoders attached (digital quadrature signal)

<https://www.automationtechnologiesinc.com/products-page/nema-23/nema-23-quarter-inch-dual-shaft-with-a-flat-381-oz-in/>

Encoder from: [www.usdigital.com](http://www.usdigital.com)

Can someone please suggest one as I am not sure which one of these will work wtith KFLOP.

* 1. Much higher cost: ClearPath-Integrated Servo System (CPM-SDSK-2331S-RLN)

<https://www.teknic.com/model-info/CPM-SDSK-2331S-RLN/>

* 1. Mid-Range Cost: NEMA 23 283 oz-in (2.0 Nm) Easy Servo Motor; Fully Closed Position Loop with Integrated 4,000 CPR (1,000-line) Encoder; 20-50VDC/6A Peak, KL-5056H

<https://www.automationtechnologiesinc.com/products-page/nema23-closed-loop-stepper-motor-system-hybrid-servo-kit/nema-23-283-oz-in-2-0-nm-easy-servo-motor-fully-closed-position-loop-with-integrated-4000-cpr-1000-line-encoder-20-50vdc6a-peak/>

1. Based on the motors choice, the Dynomotion solution to go with:
	1. KFLOP Controller, KSTEP, and Kanalog
	2. Do I need the Konnect for other devices?

Will not be using spindle feedback at this time
Will not be using glass scale feedback.
I would like On/OFF Spindle Control by relay
External Inputs:

CycleStart Button

StopButton

Coolant on/off Button

Spindle on/off Button

Limit/Reference Switches.

Future External Inputs:
MPG pendant.
Possibly 4th axis.

1. When choosing a power supply for motors/controller, can I get some possible suggestions?
	1. Here is what I was thinking:

Low cost: MeanWell 48V DC 7.3A 350W Power Supply to drive steppers (Manufacturer Part #:NES-350-48)

<http://www.mouser.com/ProductDetail/Mean-Well/NES-350-48/?qs=sGAEpiMZZMsPs3th5F8koPF2exM897jT%252bLz1TT6w5%252bQ%3d>

* 1. Higher cost: Low Voltage (75 VDC) Motor Drive Power Supplies

<https://www.teknic.com/products/servo-motor-dc-power-supply/>