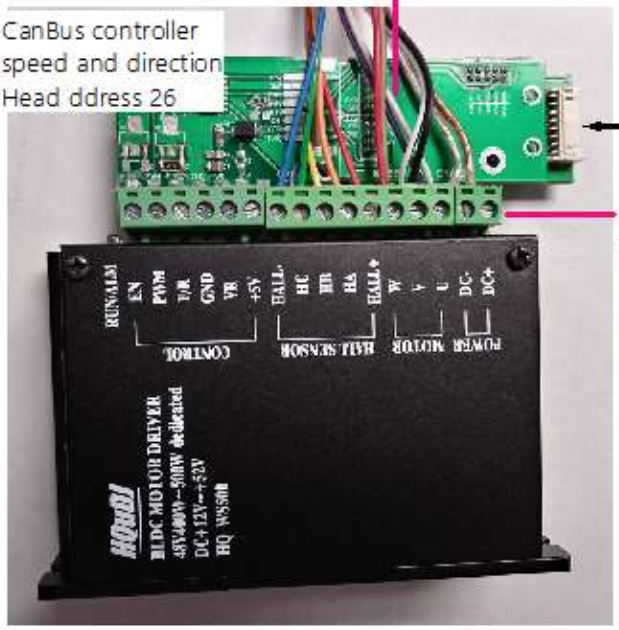
3 phase Drill Mill Head ST3

CONTENTS:

HYREL International, Inc. | 2900 Cole Court, Norcross, GA 30071 | 404.914.1748 | hyrel3d@gmail.com | http://hyrel3d.com | http://hyrel3d.net

3 phase Drill Mill Head ST3

Rainbow flat cable from inverter
inside of electronics cabinet.



CANBUS to Tablet Interface 102207

48V 500Watts

3 phase inverter with hall sensor feedback
gives better torque and speed control

SSR

Safety SSR, enabled by EMO switch

3 phase Drill Mill Head ST3

Theory of Operation:

The Hyrel ST3 Head was designed to for light duty drilling and milling
on the Hydra series of machines.
It is possible to make simple Pcbs using flatcam to convert your gerber to gcode path.
It is also possible to machine aluminum using small Z increments.
Kiri-Moto has some very interesting possiblities to convert STL to 3d tool paths.

It is NOT designed to be a full capacity Mill.

It IS capable of teaching students Gcode using machining wax.

Gcode Supported

G0 Move fast.
G1 X100 Y100 F200 ;Move at programmed feed rate.(mm per minute)
G2 X100 Y100 I20 J0 ; CW arc, uses classical I and J for arc definition.
G2 X100 Y100 I20 J0 ; CCW arc, uses classical I and J for arc definition.
G2.1 I-20 J0 P3 F500 ;execute the Archimedes spiral with spacing P

M0 machine pause.
M3 T26 S100 ;Start Spindle motor CW.
M4 T26 S100 ;Start Spindle motor CW.
M5 T26 S0 ;Spindle motor stop.
M7 ;auxiliary output 1 on
M8 ;auxiliary output 2 on
M9 ;auxiliary outputs OFF.

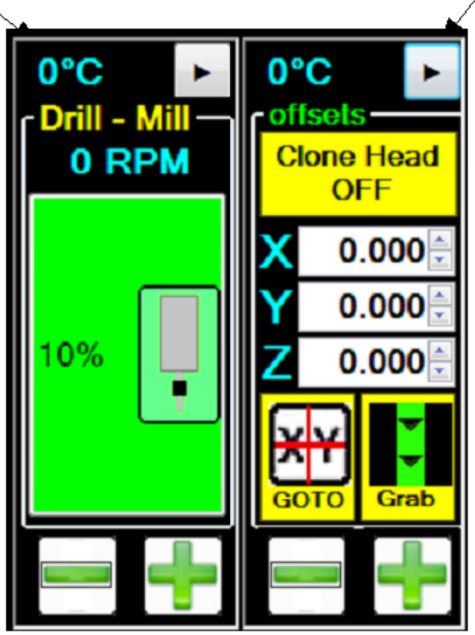
For more in depth G and M codes look on our Wiki Gcode Dictionary pages.

3 phase Drill Mill Head ST3

DRILL_MILL HEAD SETTINGS.

Live Temperature
Ignore at this time

Navigate button, click to
Move to next settings panel



RPM indicator

Manual
Motor start/stop
0-100% power
(Pwm drive control)

Finger friendly UP/Down

CLONE
Used for Parallel
Printing, multiple
Copies of 1 Part
at the same time.

OFFSETS
Used when printing
With multiple heads
In a single build.

GOTO X,Y OFFSET
Used during initial
Head offset calibration

Grab:
Automatically reads
The current X-Y offsets
And plugs them into the
Head Offsets w and Y.

Head Model

RTD TYPE
(not used)

Drive Motor
Current
(Not Used)

Drive Motor
MicroStep
Resolution.
(Not Used)

Right click on **Flash**
To store these settings
As power on default.

Com Window, for
Diagnostics and
Advanced status.

Read:
Reads back the
Firmware revision

Reset:
Performs a soft reset
Of the Head.

3 phase Drill Mill Head ST3

TIPS:

Balance the Z up down speed to give good drilling feed rate. When correct the holes in the pcb will be very clean and burr free.

Ebay has a large number of suppliers who sell resharpened bits at very good prices.
Make sure to purchase bits that have plastic collars, this allows You to swap bits in the middle of a drill cycle without worrying about the Z offsets.

Sample Bits

DISCLAIMER:

!!!Use at your own risk.!!!

No warranty or guarantee is offered for the application of this product.

3 phase Drill Mill Head ST3

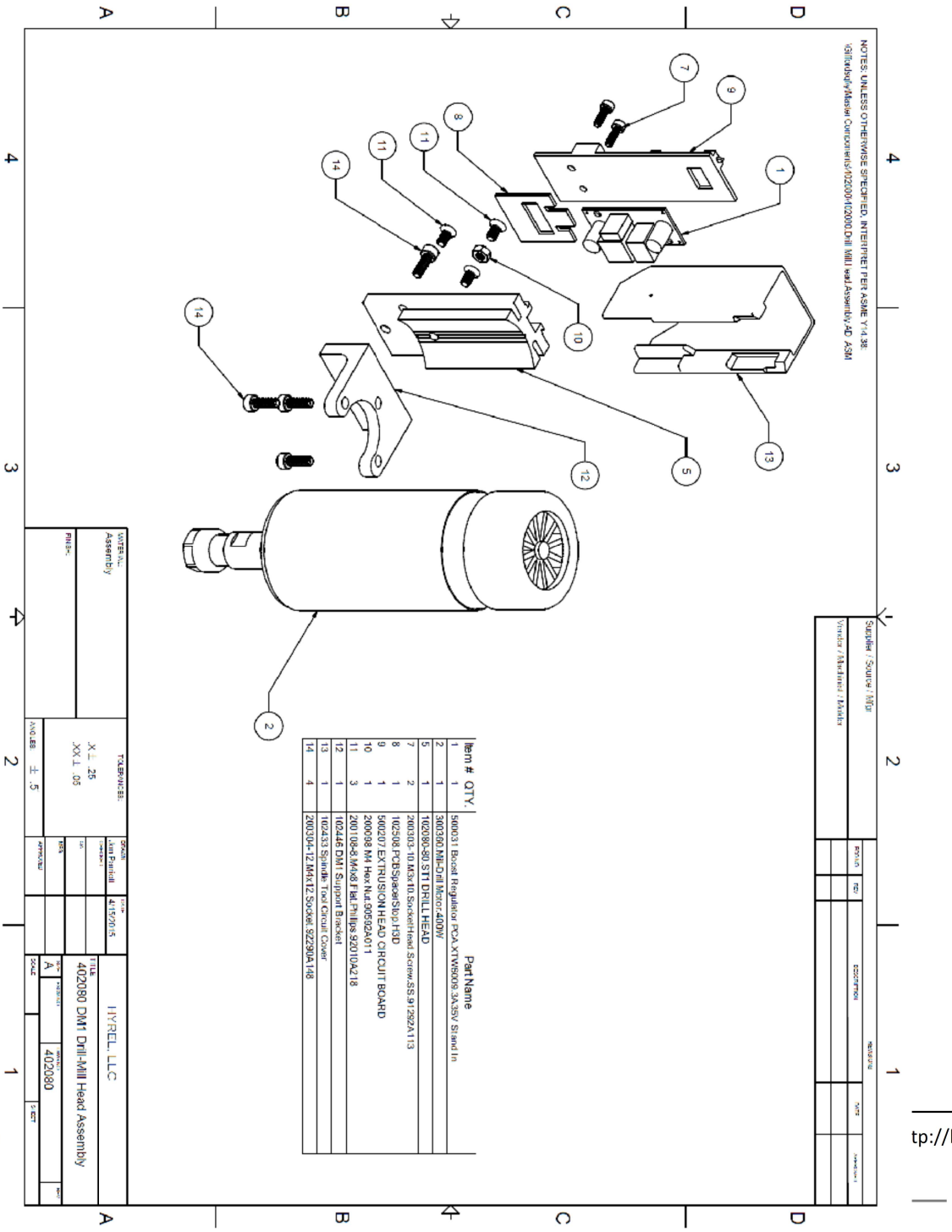
The user agrees to be ENTIRELY responsible for safe operation of this product.

Optional Accessories:

3 phase Drill Mill Head ST3

50 Piece Drill Set D7-2 Pieces Each Size:

#56, #57, #58, #59, #60, #61, #62, #63, #64, #65, #66, #67, #68, #69, #70, #71, #72, #73, #74, #75, #76, #77, #78, #79, #80,



3 phase Drill Mill Head ST3

For More Information:

Web: http://hyrel3d.com

Web: http://hyrel3d.net

Email: hyrel3d@gmail.com

Phone: **404-914-1748**