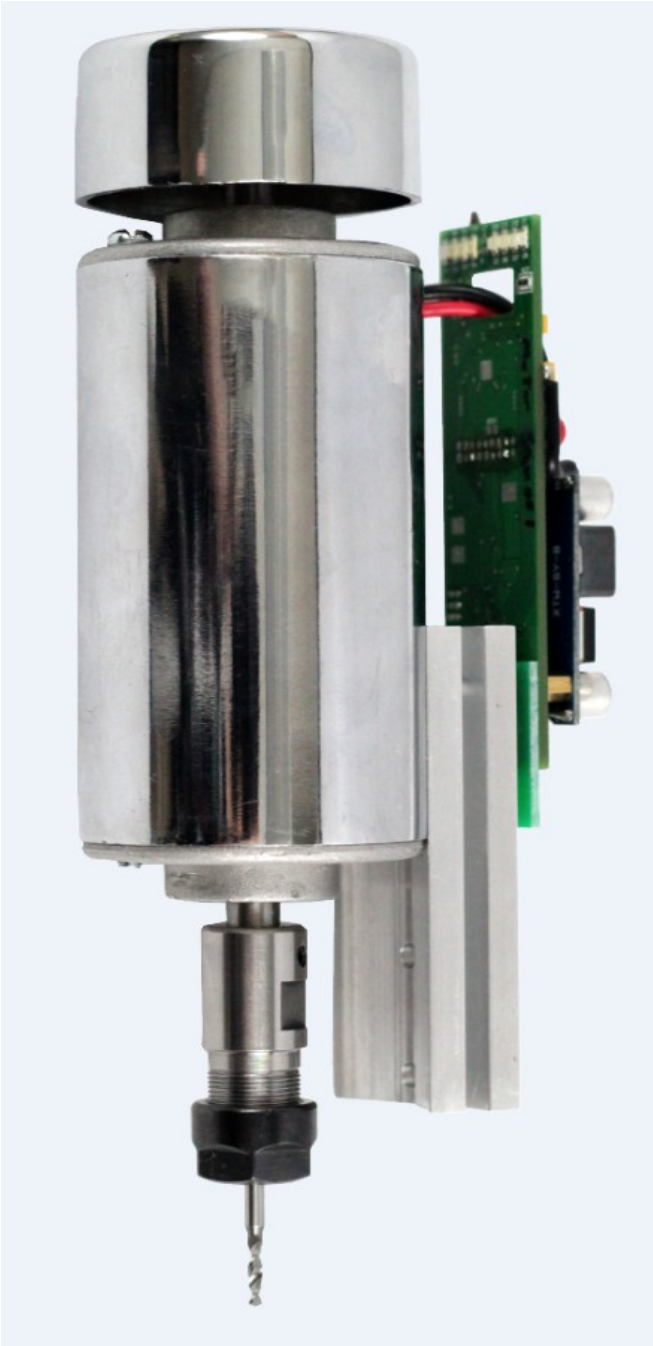
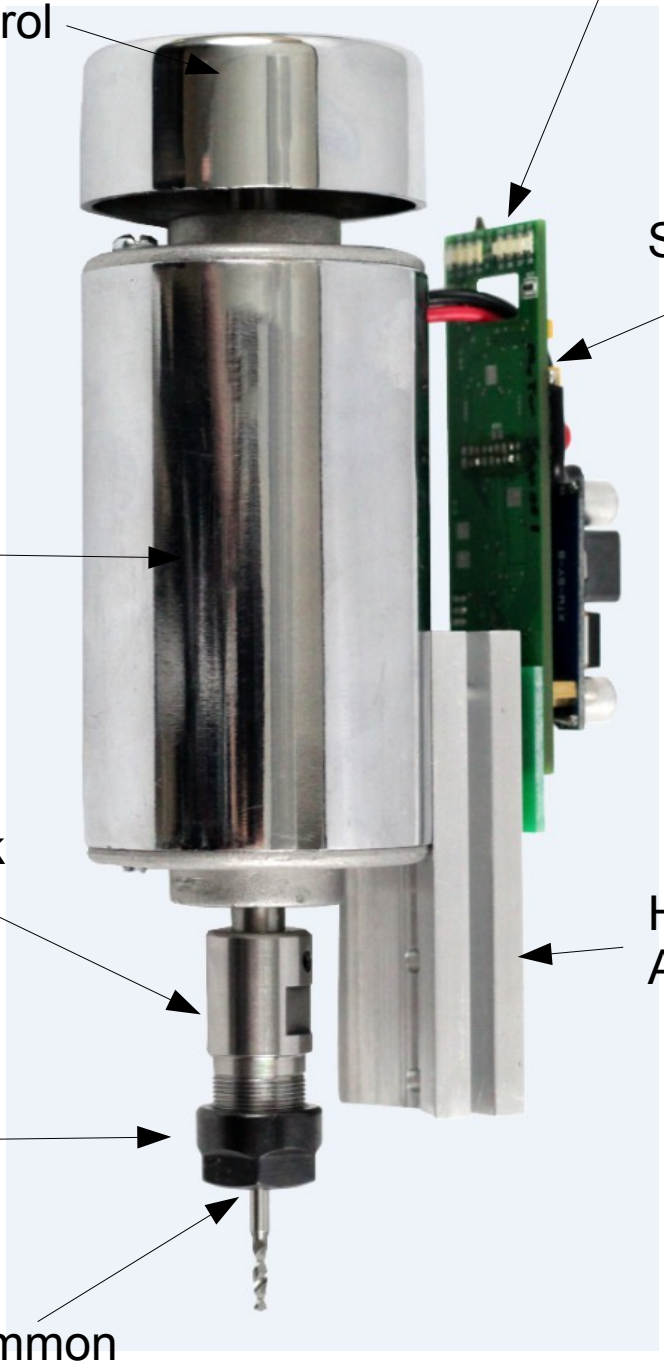
Drill Mill Head



Click Link below to watch video

Specifications:

Programmable Speed
Programmable Print Cooling Fan 0 – 100 %
Weight 1000 grams,
1/8 inch chuck
Power supply, 12v 3.5 amps max
Interface, CanBus



Theory of Operation:

The Hyrel Drill-Mill Head was designed to allow manufacture Of PCB on the Hyrel Printer.

It is NOT designed to be a full capacity Mill.

It IS capable of teaching students Gcode using Blue machining Wax.

Gcode Supported

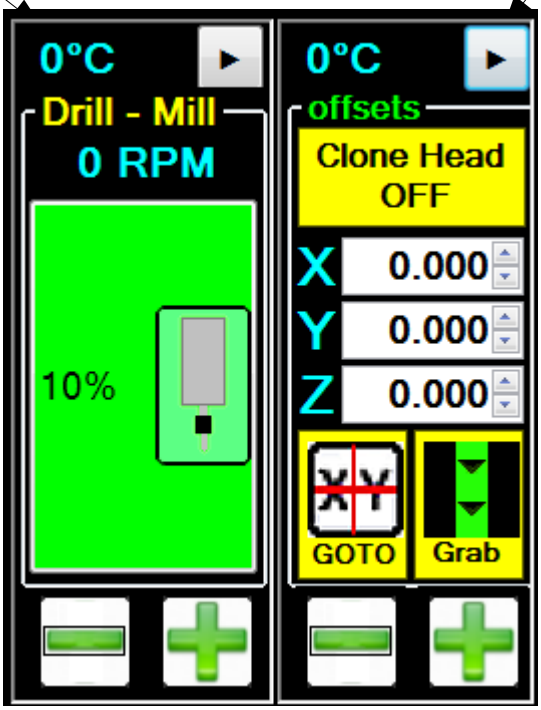
G0 Move fast
G1 Move ac programmed feed rate
G2 Clockwise arc, uses classical I and J for Arc definition.
G3 CCW arc, uses classical I and J for Arc definition.

M0 machine pause
M3 Spindle motor start
M5 Spindle motor stop

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.

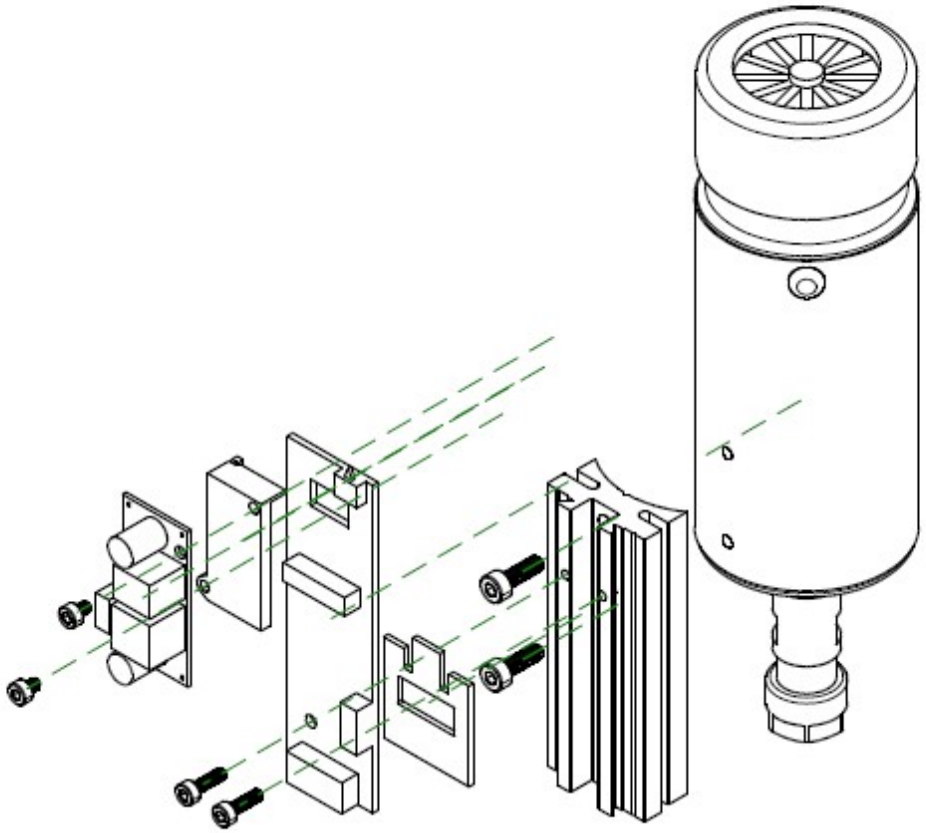
TIPS:

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 worryingvAbout the z offsets.

DISCLAIMER: !!!Use at your own risk.!!!

No warranty or guarantee is offered for the application of this Product,
The user agrees to be ENTIRELY responsible for Safe Operation
Of this product.



Item #	QTY.	Part Name
1	1	500031 Boost Regulator PCA.XTW6009.3A35V Stand In
2	1	300360.Mill-Drill Motor.400W
3	2	200304-12 M4x12mm
4	1	103124.Boost Regulator Bracket
5	1	102080-80.DRILL HEAD
6	2	200303-4.M3x4.Cap.Socket.91292A109
7	2	200303-10.M3x10.SocketHead.Screw.SS.91292A113
8	1	102508.PCBSpacerStop.H3D
9	1	500207.EXTRUSION HEAD CIRCUIT BOARD

MATERIAL: Assembly	TOLERANCES: X ± .25 XX ± .05	DRAWN: Jon Parriott	DATE: 4/15/2015	HYREL, LLC
FINISH:		CHECKED		TITLE: 402080 DM1 Drill-Mill Head Assembly
		QA		
		MFG		SIZE: A / FSCM NO. / DWG NO.: 402080 / REV
	ANGLES: ± .5°	APPROVED		SCALE / SHEET