3D Delta Printer

http://www.deltaprinter.co.za

General information

Local suppliers of 3d printer parts

http://secure-www.openhardware.co.za/cart/
http://robotics.org.za/
http://www.fabric8.co.za/
http://www.nanitech.co.za/3d-printers.html
http://www.abs-filament.co.za/
http://www.netram.co.za/
http://www.taito3d.co.za/
http://www.fabit3d.co.za/
http://www.3d-printer.co.za
http://www.3d-print.co.za
http://www.hobbytronics.co.za/

Forums

https://groups.google.com/forum/#!forum/deltabot
http://forum.seemecnc.com

Other

https://github.com/jcrocholl/kossel
http://www.flickr.com/photos/jcrocholl/tags/kossel
https://plus.google.com/u/0/photos/110997713826931701065/albums/5773609700932594497
https://plus.google.com/photos/108445838894930891556/albums/5831544897289918977
https://github.com/drogge/kossel
https://github.com/faeton13/Kossel_T
**Delta printer components**

**Electronics**

RAMPS 1.4 or equivalent (RAMBO, RUMBA, very cost effective, Azteeg X3, Megatronics, Printrboard)

RAMPS requires an Arduino ATMega to work, the others are single board solutions.

[https://ultimachine.com/rambo](https://ultimachine.com/rambo)
[www.reprapdiscount.com](http://reprapdiscount.com)

[http://reprap.org/wiki/Azteeg_X3](http://reprap.org/wiki/Azteeg_X3)
[http://reprapworld.com/?searchresults&cPath=1591_1643](http://reprapworld.com/?searchresults&cPath=1591_1643)

4 x stepper motor Drivers

A4988 Pololu compatible driver (need fans on all the time) or

DRV 8825 Designed by Kliment Pololu compatible driver

4 x Endstops (1 of 4 for the automatic bed level calibration)

LCD Controller (not needed BUT with it you can run printer independently from computer)
Power supply (use modified computer power supply)

**Stepper Motors**

4 x NEMA 17 as strong as possible


**Hotends**

J-Head www.hotends.com

E3D http://e3d-online.com/

AluhotendV4-1.75mm -www.3dindustriesaustralia.com.au

Budaschnozzle

**Build your own hotend**

http://www.deltaprinter.co.za/hotend
(If you build your own hotend you will need the following electronics)

1 x 100K ohm EPCOS B57560G104F NTC THERMISTOR

1 x Ceramic Cartridge Heater 40W

**Heatbed**

MK2A Heated Bed [www.reprapdiscount.com](http://www.reprapdiscount.com)

**Build your own heatbed**

[http://www.deltaprinter.co.za/heatbed](http://www.deltaprinter.co.za/heatbed)
If you build your own heatbed you will need the following electronics:

4 x PTC Heater for crimper 80/100/150/200/230/270 220V (select 100 degrees)


Filament feeder

Airtripper's Direct Drive Bowden Extruder V3

http://www.thingiverse.com/thing:35404

Print your own 2 bearing filament feeder

http://www.deltaprinter.co.za/filamentfeeder

You will need 2 x 696zz bearings
Bearings

http://www.bearingman.co.za

Rod ends

Magnets (if you are going the magnetic connector route)

http://magnetech.co.za/

Traxxas Turnbuckles (if you not going the magnetic connector route)

readily available in the model shops

Belts or string

zero stretch braided fishing line or Braided Cotton thread at crafters shops
Pulleys

Custom made pulleys and rollers at http://www.vesconite.com/

Pneumatic tube and fittings

Fasteners
mostly M3 (some M4 and M6)

Aztec fasteners

Filament

Build your own filament extruder

http://www.deltaprinter.co.za/filamentextruder
Aluminium composite sheeting

KömAlu comprises two aluminium sheets sandwiching a polyethylene core

www.maizey.co.za

Calibration of Delta printer

http://minow.blogspot.com/

http://www.youtube.com/watch?v=XmP9JQPAIr4&feature=youtu.be

https://gist.github.com/kastner/4772276

Automatic bed leveling probe on Mini Kossel (video)

https://groups.google.com/forum/#!topic/deltabot/a6gow3KotQk

http://flickr.com/photos/jcrocholl/tags/retractable

Arduino software

To upload the firmware to the Arduino compatible control board

http://arduino.cc/en/Main/Software

Firmware

Firmware is the software that runs on the control board on your printer.

Repetier-Firmware https://github.com/sousoux

Marlin firmware by Johan Rocholl(who wrote the original firmware for the Delta printer)

https://github.com/jcrocholl/Marlin

Interface Software

To print the article directly via usb cable to printer or to upload your article to SD card on the LCD controller.

Article to be created in .stl format(various open source programs can export the article in .stl format - Openscad http://www.openscad.org being one of them)

Printrun http://www.repetier.com/download/

Repetier-Host

Slicing Software:
Slic3r (incorporated in Repetier-Host)
http://slic3r.org/

KISSlicer
http://kisslicer.com/
Skeinforge
Cura