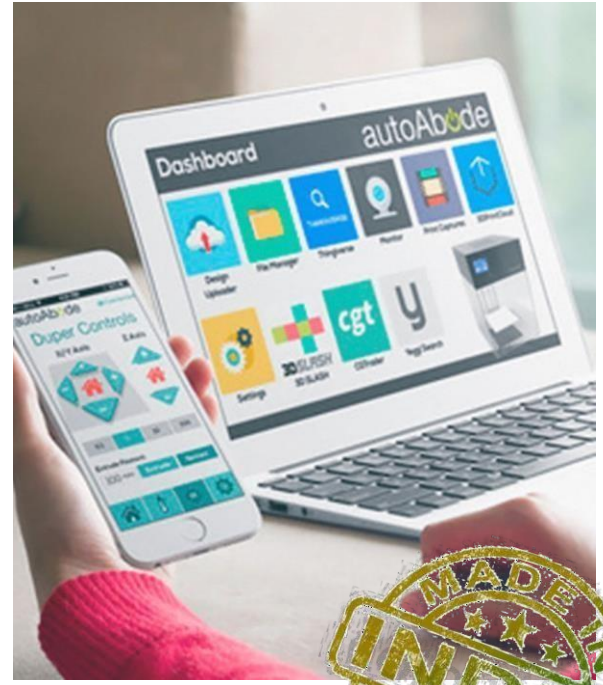# duper XL600
Industrial Grade Composite FDM/FFF 3D Printer

Manufacturing Powerhouse

Duper XL600 is a high-performance desktop 3D printer useful for printing high polymers and thermoplastics with wireless connectivity

It's designed for applications like functional prototyping, end part use, jigs and fixtures, pattern for casting, tooling, molds for composite, fabrication display and modelling.

It's large 3D printing build platform, enables it as an ideal solution for the most demanding and professional environments.

The printer works in FDM/FFF technology, guaranteeing high quality results. It deposits melted thermoplastic filaments layer by layer to turn digital models into physical objects.

High quality professional large format 3D printing at an affordable and accessible price!

Key Features

- ▸ **600×600×600 mm (L.B.H)**
- ▸ **Fully Enclosed Machine for Multi material printing**
- ▸ **Compatible 0.2, 0.4, 0.6, 0.8 1.0 mm nozzles**
- ▸ **Positional Accuracy 20 microns**
- ▸ **Auto Resume on Power Outage**
- ▸ **Print Accuracy 50-150 microns**
- ▸ **Printing Speed 300mm/s**
- ▸ **Best in Class Large format Industrial grade**
- ▸ **Dual Servo Extruder System**
- ▸ **Cooled Direct Drive All Metal extruder System**
- ▸ **400 °C ± 2 °C – precision temperature control system**

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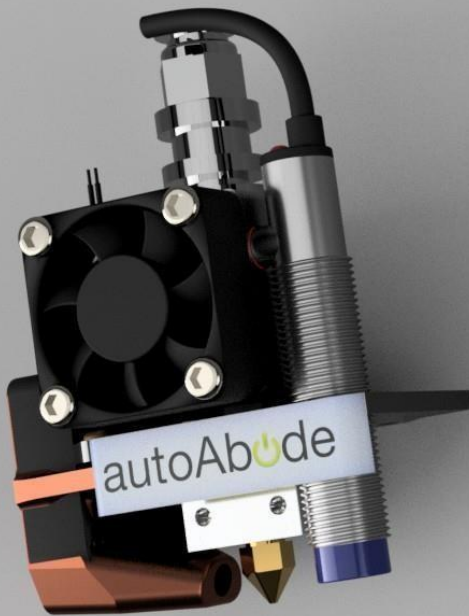
Dual Servo Independent Nozzle Extrusion System

The Direct Drive Metal Smart Extruder Core is a culmination of product design and endless hours of rigorous testing that delivers dependable, consistent performance and superior

Hardened swappable brass nozzles of various sizes for use with high abrasive materials like Carbon Fibre and other Industrial grade high temp multi materials.

| 1.2 | 1.0 | 0.8 | 0.4 |
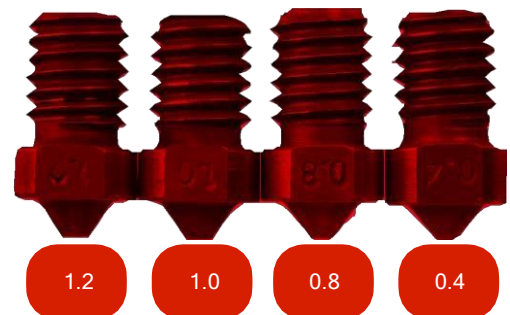
Industrial Power, Limitless Possibilities

duper XL600 offers the most reliable 3d printing experience. Enable full geometric freedom with water-soluble support.

use the most advanced composite materials - all with just the push of a button.

duper **XL600**

Wi Fi

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On Board Camera for easy monitoring of long 3d prints over WiFi. High Resolution 8MP Camera for capturing fine details

32 Bit Micro controller for dedicated communication & File handling. With 16GB of File storage memory, you will never run out of space in duper XL600 3d printer
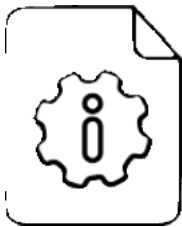
32 Bit

Linear Guided Rail Gantry System with IGUS German Drag Chain for ultra Precise and Smooth Movements of the Print Head.
Less Noise. High Accelerations.

600mm

——600mm——
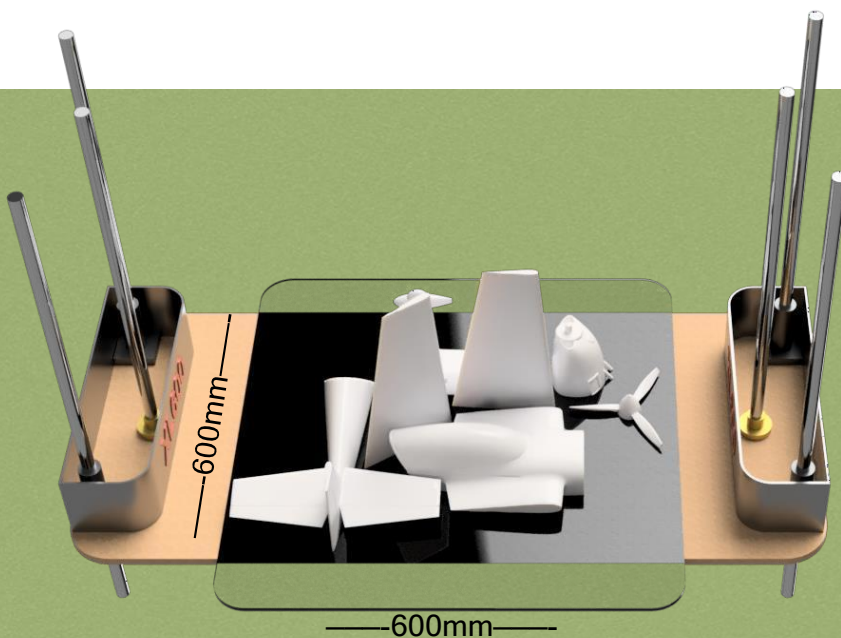
Z Mechanism : High standard Lead Screw Mechanism with 4 roundshaft linear support with Pause Print Option. Filament Runout Sensor Power Loss Recovery Noise: Less than 65 db

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TECHNICAL SPECIFICATIONS

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PRINTER BASIC CONFIGURATION

Build Volume	600 x 600 x 600 mm
Machine Size	900 x 900 x 800 mm (~78KG)
Nozzle Diameter	Various (0.1, 0.2, 0.3, 0.4,1.0 mm)
Extruder	Dual Servo Extrusion System
Extruder Dia	1.75 mm Filament
Platform	Reusable Glass Build Plate with Heat Bed
Connectivity	Wi-Fi, LAN, USB Port, Live Camera
Port	USB 2.0 × 2, Ethernet × 1
Touch Screen	7" Full Colour Touch Screen
Monitoring	8MP Real Eye Camera Live Monitoring

PRINTING

Technology	FDM /FFF
Printing Speed	300 mm/s
Layer Thickness	100 microns
Platform	Automatic Levelling

TEMPERATURE

Nozzle Max Temp.	400˚C
Bed Platform Max Temp.	120˚C
Ambient Operation Temp.	10 - 40˚C
Storage Temp	0 - 48˚C

MATERIAL

Material Type	Open source spool type filament ,
Filament Diameter	1.75mm
Material Details	PLA, PLA PRO+, HIPS, ABS, ABS PRO+, PETG, PC, Fiber-filled thermoplastics, TPU, Flexible Filaments, PC-ABS, Chopped carbon filament, compatible with all standard engineering thermoplastics material available in the open market in spool format.

SOFTWARE

Software	Simplyfy 3D Licensed Software
Supported Input Files	. STL/ OBJ/ 3MF/ OLTP, GCODE
Supported OS	Windows/ macOS/ Linux

ELECTRICAL

AC Input	240 V ~ 3.9A
Power Requirements	2.5 kW

IN THE BOX

3D Printer, SD Card, Multimeter, Power Cable, Sticking Spray, Allen Key Sets, 2 KG Filament, Cutter, Scraper, Extra Hotend Set, Screw Driver Sets, Heater-Thermistor Set Spool of Material, Related Documents, Emergency Power Breaker & Starter Kit.

ADDITIONAL INFORMATION

Each XL600 will be delivered by our logistics team to ensure safe delivery of the product along with Licensed Software.

Our Trained professionals will provide proper training and assistance as requested.

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ADDITIONAL FEATURES

Auto Print System	**Auto Print Resume on Power Outage and Auto Switchover**
Filament Run-out Sensor	**Filament Runout Sensor & Filament Clogging Detection**
Warranty	**1 Year Comprehensive Warranty that covers spares, labor & servicing cost.**
Extruder Temperature	**Maximum Temperature in 2mins**
Nozzle/Extruder Head	**Cooled Direct drive all metal extruder**
Machine Enclosure	**Anodized & Fully Coated All Metal Body Fully covered chamber with covered Material feeding system.**
HEPA Filters	**HEPA Air filters for safe exhaust air quality**
Bed Heating	**Using Silicon Heat Bed with removable Glass Bed**

HARDWARE & OTHER FEATURES

Gantry System	**High precision XYZ motorized gantry system Cartesian coordinates type, Vibration Free**
Typical Material Features	**Engineering grade thermoplastic materials suitable for end use**
Support Material	**Non-Hygroscopic soluble material – HIPS compatible along with other materials**
XY Movement	**Extruders mounted on Motorized rails moving in X/Y coordinates, vibration free High Precision Linear Guide Rails with 20-micron positional accuracy**

Z Movement	**Precision motorized Z axis movement with ball screw mechanism and auto bed levelling**
Build Rate	**30 cm3/ hour**
Heated Chamber	**Heated Chamber with control on temperature 75 ± 5 °C heated Bed: temperature 120 ± 5 °C**
Modular Design	**Modular Design with transparent Door for print visualization**

HMI Panel	**7 inch Touch Touchscreen based dedicated HMI for operations and maintenance.**
Nozzle Clearing Feature	**Nozzle wiping – before and after printing**
Live Monitoring & Feed	**In built Camera connected to HMI or PC based software for monitoring of printing process**

SOFTWARE CAPAILITIES

PC based software with perpetual license having Flexibility to customize in future for any modification
Solid model Input format : STL, Compatible with CAD tools like Solidworks – Direct print option from CAD tools, able to process STL files generated through 3d scanners/ reverse engineering methods. Automatic model slicing and Layer visualization Automatic support generation with customization features Customization of sparse build Large part build feature – by sectioning and feature alignment capabilities Automatic selection of process parameters for selected materials / nozzles etc. Choice of orientation, layer thickness etc. Part packing and nesting feature Estimation of material consumption Estimation of build time Automatic generation of honeycomb like lattice structure from a solid as input – customizable density, Alarms and interlocks for critical process and machine parameters Machine data logging including errors / alarms etc. Auto Job recovery / repair for uninterrupted printing in case of multi component printing. Ability to Support detailed views of build model, tray, and slice preview for making necessary adjustments before printing job

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