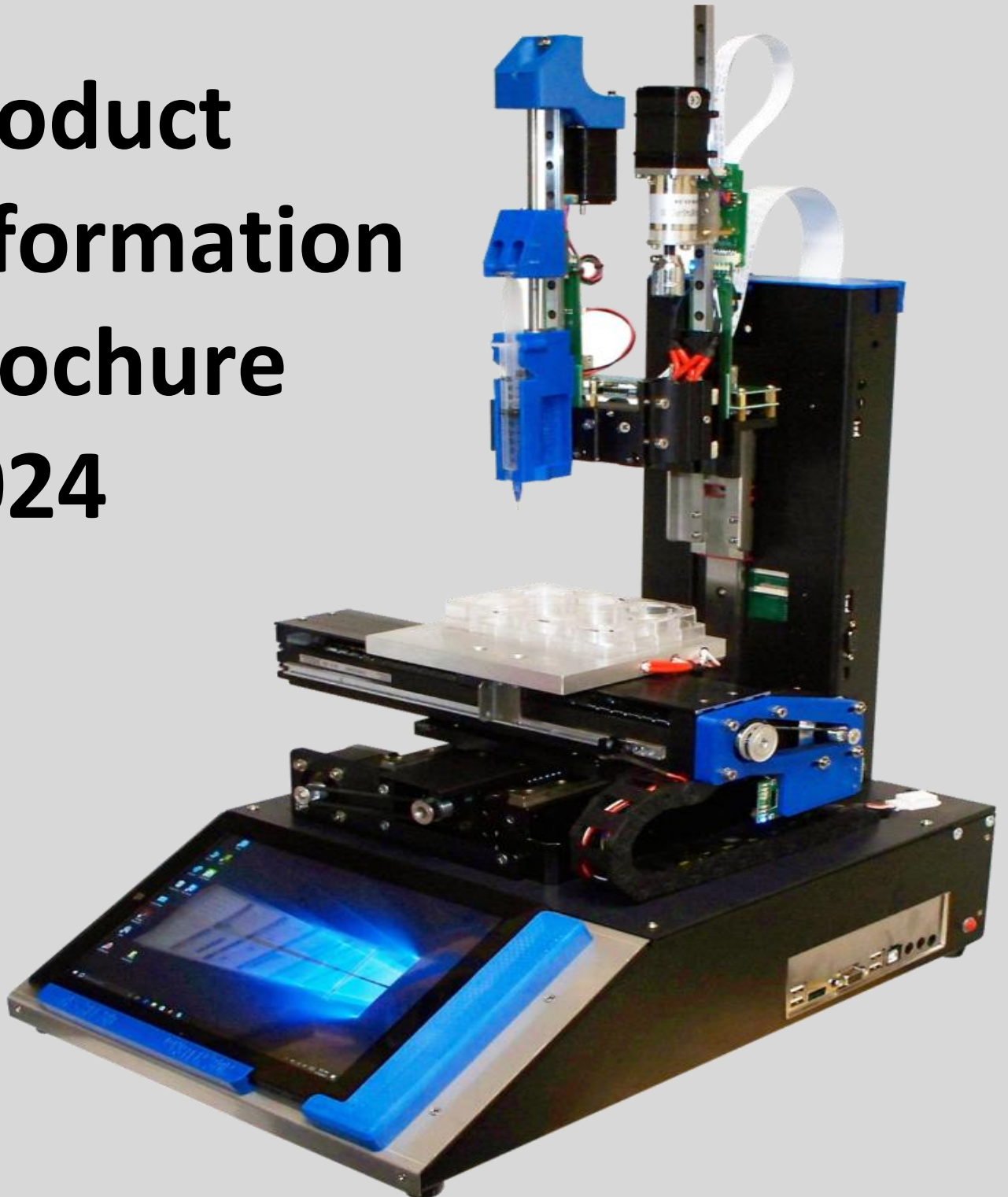




Product Information Brochure 2024



Hydra 16AS - Standard

Industries & Laboratories



Rugged and Large Volume Printer for serious applications with dozen of heads for various materials

Specifications

- Motion Control : 3-Phase with Closed-Loop Feedback
- Positional Resolution X/Y/Z in μm : 6 / 6 / 1
- Positional Accuracy X/Y/Z in μm : 60 / 60 / 10
- Integrated Windows Tablet PC Multi-touch Screen
- Integrated Dual CAN-bus architecture
- Exterior Dimension: 120x88x125 cm
- Bed Temperatures: 120°C
- Optional Chamber Heater: 55°C
- Power: 750W
- Voltage: 110-120 VAC/220-240 VAC
- Frequency: 50/60Hz
- Build Volume: 600x400x250 mm

Hydra 16AT - Tall

Industries & Laboratories



**Rugged and Extra Tall
Volume Printer for
serious applications with
dozen of heads for
various materials**

Specifications

- Motion Control : 3-Phase with Closed-Loop Feedback
- Positional Resolution X/Y/Z in μm : 6 / 6 / 1
- Positional Accuracy X/Y/Z in μm : 60 / 60 / 10
- Integrated Windows Tablet PC Multi-touch Screen
- Integrated Dual CAN-bus architecture
- Exterior Dimension: 120x120x153 cm
- Bed Temperatures: 120°C
- Optional Chamber Heater: 55°C
- Power: 750W
- Voltage: 110-120 VAC/220-240 VAC
- Frequency: 50/60Hz
- Build Volume: 600x400x500 mm

Hydra 16AL - Large

Industries & Laboratories



Rugged and Extra Large Volume Printer for serious applications with dozen of heads for various materials

Specifications

- Motion Control : 3-Phase with Closed-Loop Feedback
- Positional Resolution X/Y/Z in μm : 6 / 6 / 1
- Positional Accuracy X/Y/Z in μm : 60 / 60 / 10
- Integrated Windows Tablet PC Multi-touch Screen
- Integrated Dual CAN-bus architecture
- Exterior Dimension: 120x120x125 cm
- Bed Temperatures: 120°C
- Optional Chamber Heater: 55°C
- Power: 750W
- Voltage: 110-120 VAC/220-240 VAC
- Frequency: 50/60Hz
- Build Volume: 600x400x250 mm

Hydra 21

Industries & Laboratories



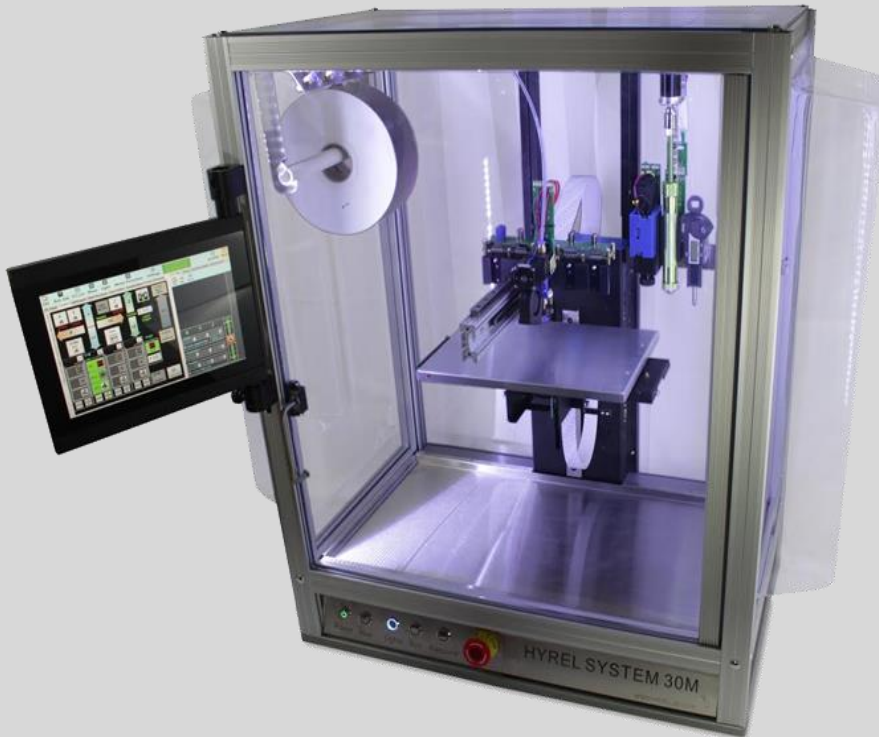
Rugged and all metal bench-top design with dozen of heads for various materials

Specifications

- Motion Control : 3-Phase with Closed-Loop Feedback
- Positional Resolution X/Y/Z in μm : 6 / 6 / 1
- Positional Accuracy X/Y/Z in μm : 60 / 60 / 10
- Integrated Windows Tablet PC Multi-touch Screen
- Integrated Dual CAN-bus architecture
- Exterior Dimension: 107x61x84 cm
- Bed Temperatures: 120°C
- Optional Chamber Heater: 55°C
- Power: 750W
- Voltage: 110-120 VAC/220-240 VAC
- Frequency: 50/60Hz
- Build Volume: 400x300x250 mm

System 30M

Business & Education



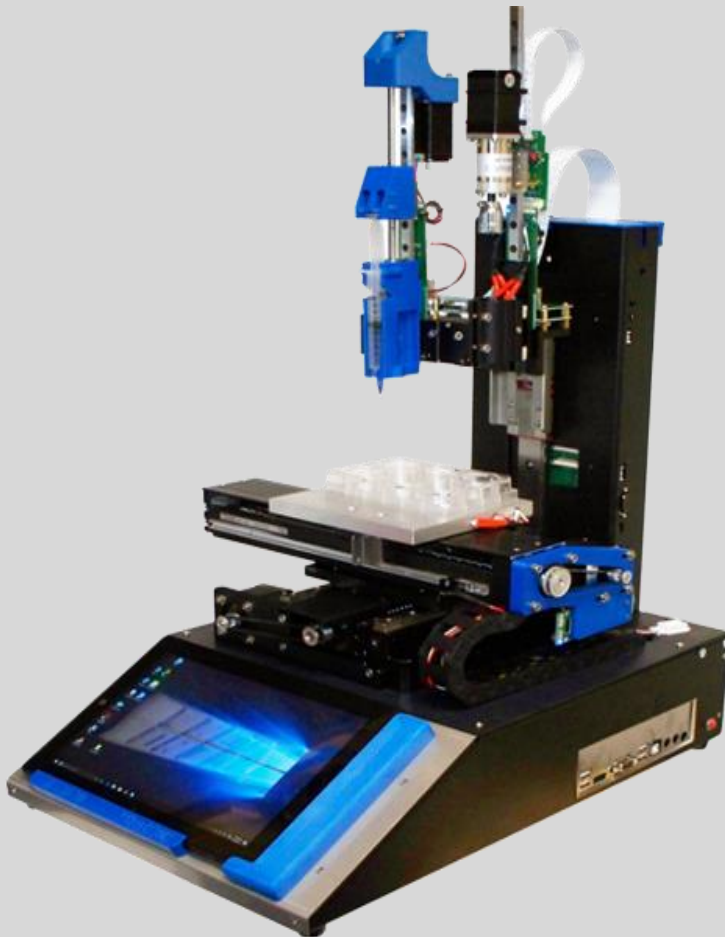
The Workhorse for
Material Science suited
for Standard Prints,
Multi Material Prints,
Exotic Materials and
Experimentation.

Specifications

- Motion Control : 3-Phase with Closed-Loop Feedback
- Positional Resolution X/Y/Z in μm : 5 / 5 / 1
- Positional Accuracy X/Y/Z in μm : 50 / 50 / 10
- Integrated Windows Tablet PC Multi-touch Screen
- Integrated Dual CAN-bus architecture
- Exterior Dimension: 87x41x82 cm
- Bed Temperatures: 120°C
- Optional Chamber Heater: 55°C
- Power: 750W
- Voltage: 110-120 VAC/220-240 VAC
- Frequency: 50/60Hz
- Build Volume: 200x200x200 mm

Engine HR

Bio 3D Printer



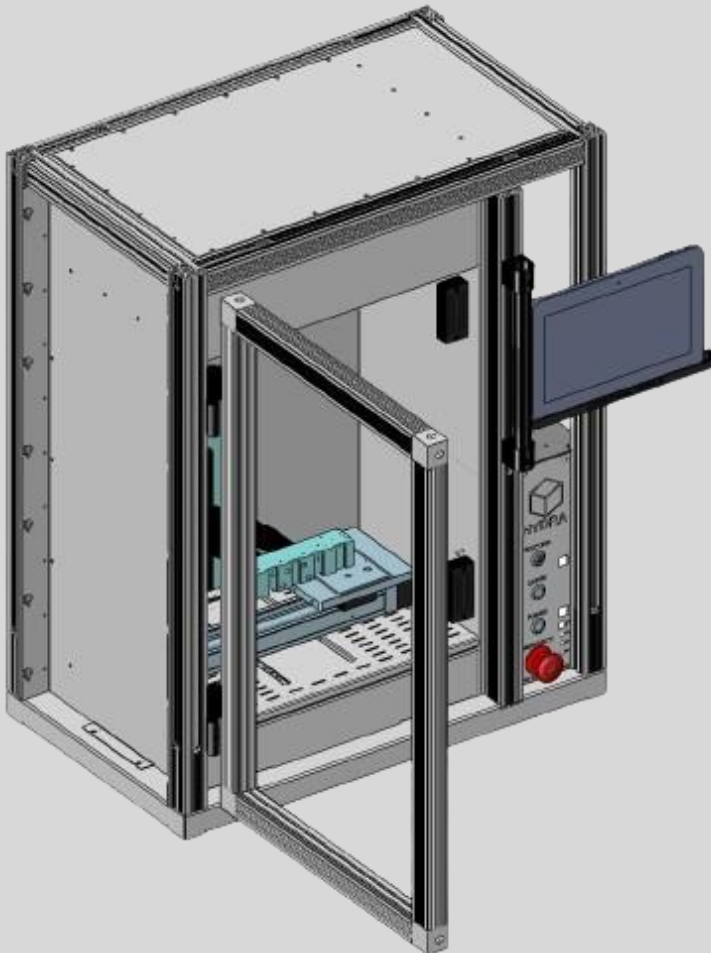
The High Resolution Platform for Biologicals and Micro-scaffolding and ideal for micro-fluids and bio-plotting. Configured for Well plates and UV Photo-initiation.

Specifications

- Motion Control : 0.9° Stepping Motor now with Closed-Loop Feedback
- Positional Resolution X/Y/Z in μm : 1.25 / 1.25 / 1
- Positional Accuracy X/Y/Z in μm : 12 / 12 / 10
- Integrated Windows Tablet PC Multi-touch Screen
- Integrated Dual CAN-bus architecture
- Exterior Dimension: 33x51x49 cm
- Chamber Heater: No Chamber
- Power: 750W
- Voltage: 110-120 VAC/220-240 VAC
- Frequency: 50/60Hz
- Build Volume: 100x100x100 mm

Bio 23

Bio 3D Printer



Designed specifically for the needs of bio-printing community in mind. This printer is ideal for biologicals; micro-scaffolding and micro-fluids and bio-plotting. Configured for Well plates and UV Photo-initiation with initiation. It is featured with HEPA filter and SS 304[food grade]

Specifications

- Motion Control : 0.9° Stepping Motor now with Closed-Loop Feedback
- Positional Resolution X/Y/Z in μm : 1.25 / 1.25 / 1
- Positional Accuracy X/Y/Z in μm : 12 / 12 / 10
- Integrated Windows Tablet PC Multi-touch Screen
- Integrated Dual CAN-bus architecture
- Exterior Dimension: 33x51x49 cm
- HEPA Filter & SS304 enclosure
- Chamber Heater: No Chamber
- Power: 750W
- Voltage: 110-120 VAC/220-240 VAC
- Frequency: 50/60Hz
- Build Volume: 100x100x100 mm

Engine SR

Standard Prints & Emulsions



The Standard Resolution Platform for the Laboratory and ideal for Standard Prints, Multi-material Prints, Exotic Materials prints and Experimentation. However, this printer is not recommended for Thermoplastics.

Specifications

- Motion Control : 0.9° Stepping Motor now with Closed-Loop Feedback
- Positional Resolution X/Y/Z in μm : 5 / 5 / 1
- Positional Accuracy X/Y/Z in μm : 50 / 50 / 10
- Integrated Windows Tablet PC Multi-touch Screen
- Integrated Dual CAN-bus architecture
- Exterior Dimension: 33x54x56 cm
- Bed Temperatures: 80°C
- Chamber Heater: No Chamber
- Power: 750W
- Voltage: 110-120 VAC/220-240 VAC
- Frequency: 50/60Hz
- Build Volume: 200x200x200 mm

SLA 3D Printer

Industries & Laboratories

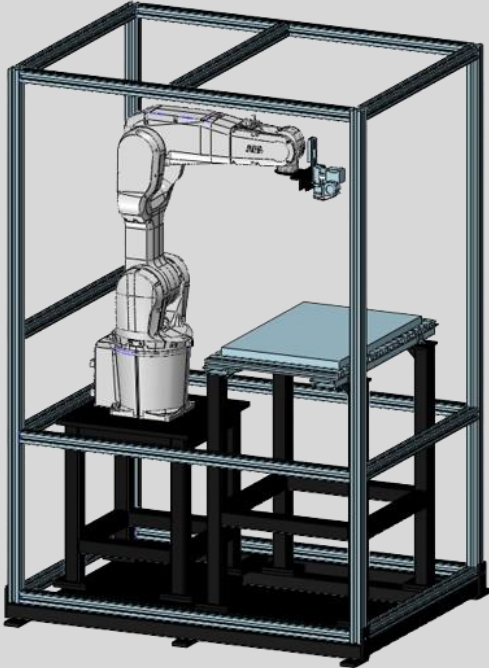


SLA 3D Printers can create highly detailed and accurate parts with a wide range of materials. It is ideal for Prototyping, Dental, Medical, Proof of Concept, and Master Patterns for Vacuum Casting, etc.

Specifications

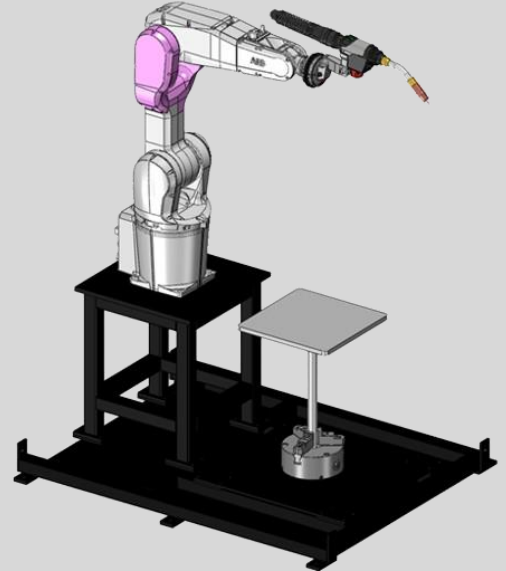
- Working material : Photo-sensitive resins
- Indoor Temperature : 15-30°C
- Humidity : 20%-70%
- Enclosure : High Flexible PC Anti-radiation Detachable Cover
- Build Plate Dimensions : 230×130×250 mm
- Input: DC Input Interface
- Touchscreen : 3.5"
- Light Source: Parallel Matrix LEDC
- Screen : 10.1"; 8K Resolution
Monochromatic LCD screen with protection film
- Layer Thickness : 0.01-0.2mm
- Exposure Time : 2-10 seconds
- Support Settings : Thin; Medium & Thick

Robotic 3D Printer Industries & Laboratories

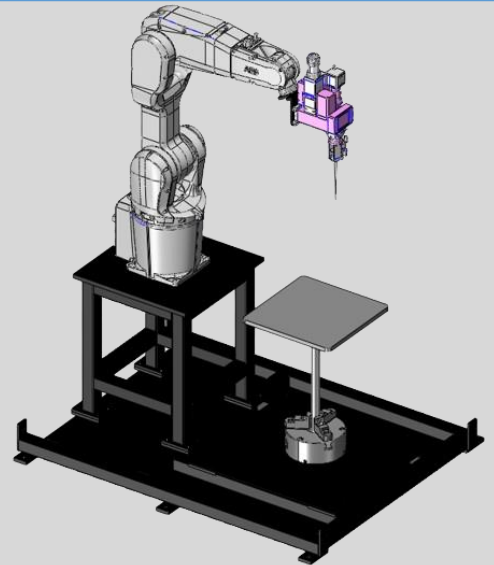


Plastic Filament Additive Manufacturing

- Key Benefits**
- High Production Uptime
 - Short Cycle Times
 - Harsh Production Environment
 - Flexible Integration & Production
 - Consistent Parts Quality



Raycus Laser Wire Arc Additive Manufacturing



Fronius MIG Wire Arc Additive Manufacturing

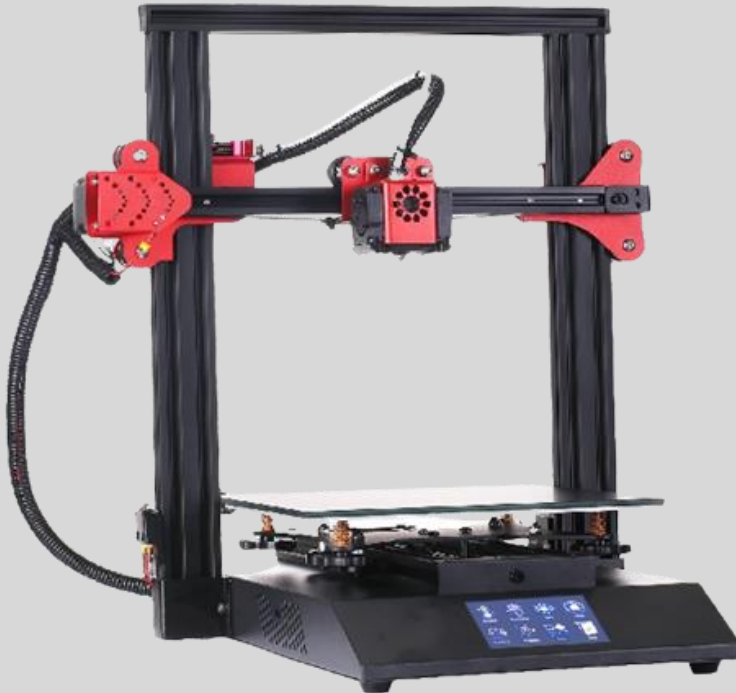
Specifications

- Handling Capacity : 5 Kgs
- Axis : 6
- Software : RobotStudio
- Controller : IRC5
- Robot Control Software : RoboWare
- Maximum Print Speed : 60 mm/sec

- Manipulator Weight : 2450 Kgs
- Protection Standard : IP67
- Maximum Axis Speed : 60 - 190°/sec
- Reach : 3.5 m
- Axis 6 : 220°C to -220°C
- Materials : Plastics & Metals

Advance Hyrel - M18

Budget Desktop 3D Printer for Educational Purpose



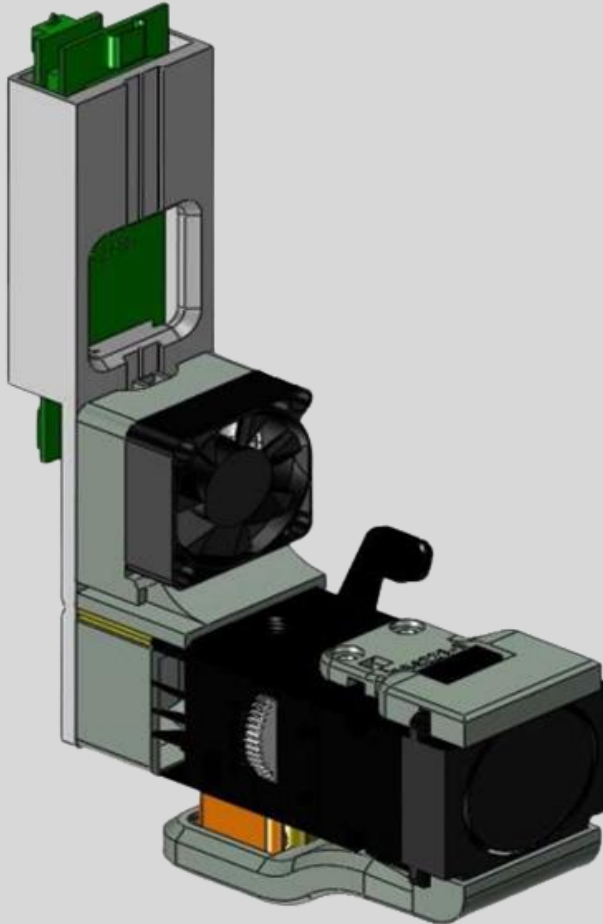
M18 is a desktop budget 3D printer is an affordable and cost-effective 3D printing device designed for individuals, hobbyists, students, and small businesses who want to explore the exciting world of 3D printing without breaking the bank.

Specifications

- Machine Weight : 9.3 Kgs
- Nozzle Diameter : 0.4mm
- Positional Accuracy X/Y/Z in μm : 12 / 12 / 4
- Control Panel : Touch Screen
- Printing Speed : 10-60 mm/sec
- Exterior Dimension: 57.5×46.5×65.6 cm
- Bed Temperatures: 50°C
- Material diameter : 1.75 mm
- Power: 12V and 20A
- Layer Thickness : 0.1 - 0.3 mm
- Drives : NEMA 17 Stepper Motor
- Build Volume: 300×300×400 mm

XHT - 250

Filament Head



Printable Materials

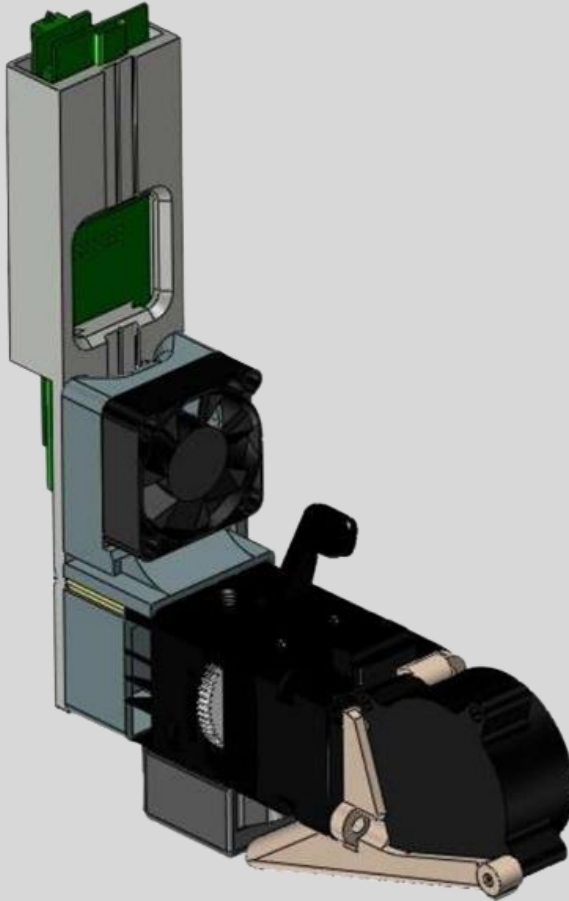
- ABS
- PLA
- Nylon
- HIPS
- PP
- PC
- PET
- Laybrick
- T-Glase

Specifications

- Maximum Temperature : 250°C
- Filament Type : Standard
- Filament size [mm] : 1.75± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description : Standard Torque for 1.75 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 17 - 5.18:1

XHT - 450

High Temperature Filament Head



Printable Materials [High Temperature Materials]

- PC
- PEEK
- Ultem

Specifications

- Maximum Temperature : 450°C
- Filament Type : Standard
- Filament size [mm] : 1.75± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description :Standard Torque for 1.75 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 17 - 5.18:1

MK1 - 250

Filament Head



Printable Materials

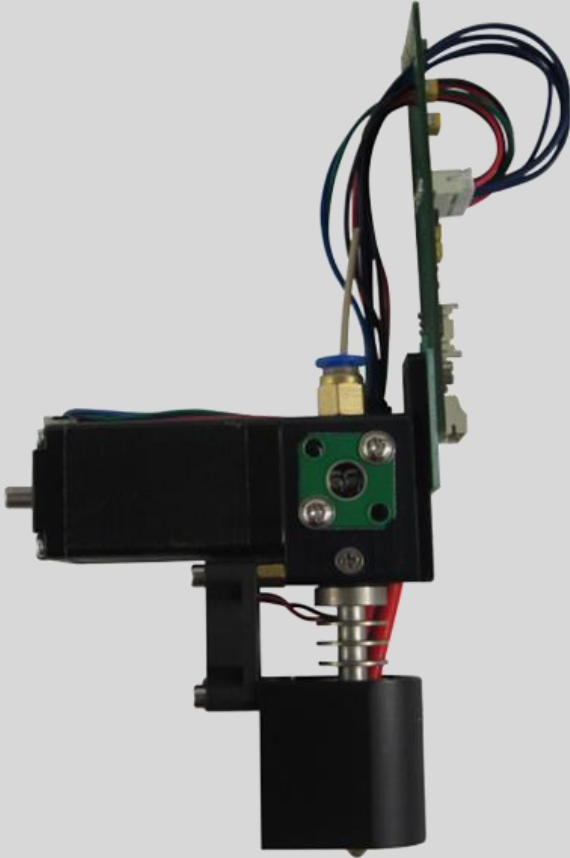
- ABS
- PLA
- Nylon
- HIPS
- PP
- PC
- PET
- Laybrick
- T-Glase

Specifications

- Maximum Temperature : 250°C
- Filament Type : Standard
- Filament size [mm] : 1.75± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description : Standard Torque for 1.75 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 11 - 1:1

MK1 - 450

Filament Head



Printable Materials [High Temperature Materials]

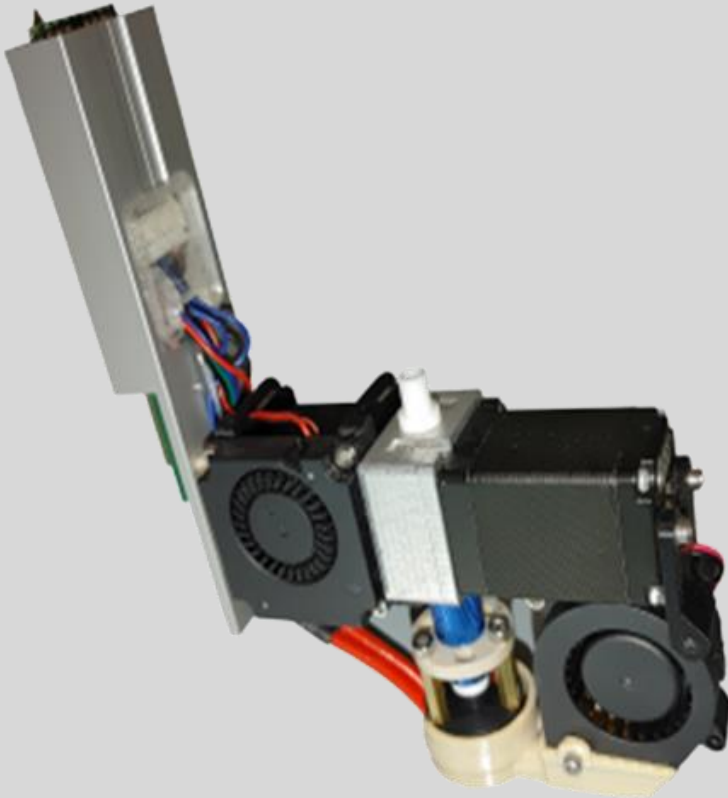
- PC
- PEEK
- Ultem

Specifications

- Maximum Temperature : 450°C
- Filament Type : Standard
- Filament size [mm] : 1.75± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description : Standard Torque for 1.75 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 11 - 1:1

MK2 - 250

Filament Head



Printable Materials [Flexible Materials]

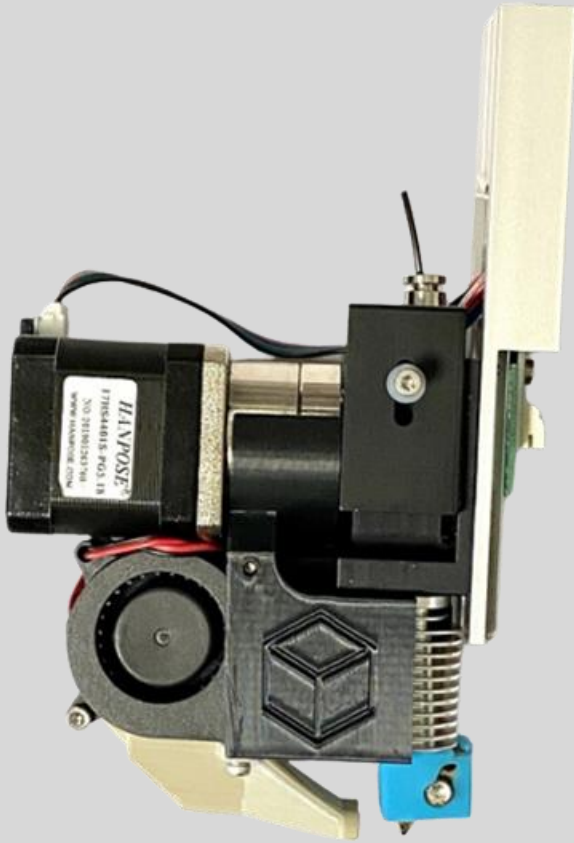
- BendLay
- Flex 45
- MoldLay
- Ninjaflex
- EcoFlex PLA
- PlastInk_Rubber
- T-Glase

Specifications

- Maximum Temperature : 250°C
- Filament Type : Standard
- Filament size [mm] : 1.75± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description :Standard Torque for 1.75 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 11- 1:1

HT1 - 250

Filament Head



Printable Materials

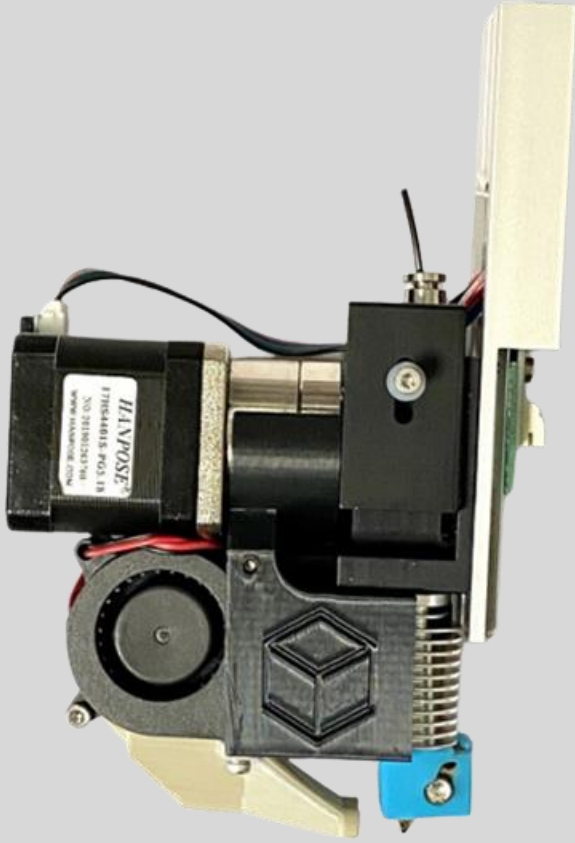
- ABS
- PLA
- Nylon
- HIPS
- PP
- PC
- PET
- Laybrick
- T-Glase

Specifications

- Maximum Temperature : 250°C
- Filament Type : Standard
- Filament size [mm] : 1.75± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description : Standard Torque for 1.75 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 17 - 5.18:1

HT1 - 450

Filament Head



Printable Materials [High Temperature Materials]

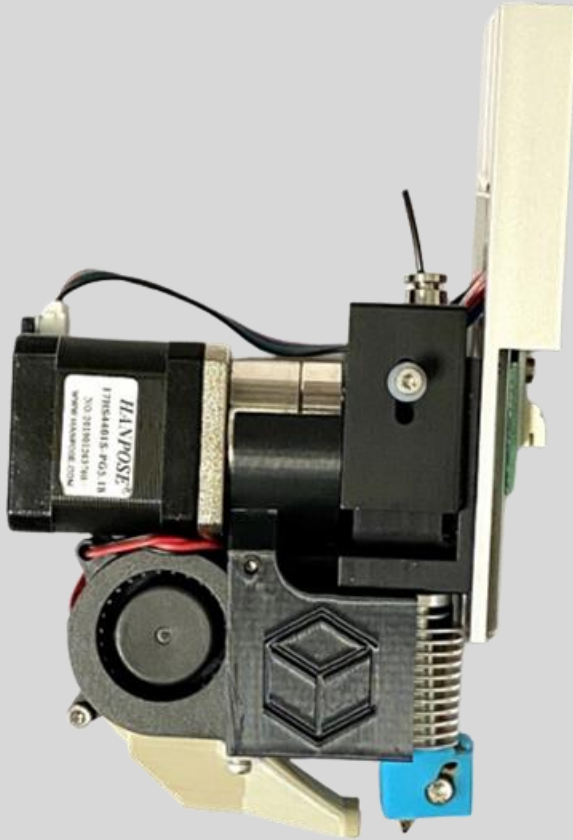
- PC
- PEEK
- Ultem

Specifications

- Maximum Temperature : 450°C
- Filament Type : Standard
- Filament size [mm] : 1.75± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description : Standard Torque for 1.75 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 17 - 5.18:1

HT3 - 250

Filament Head



Printable Materials

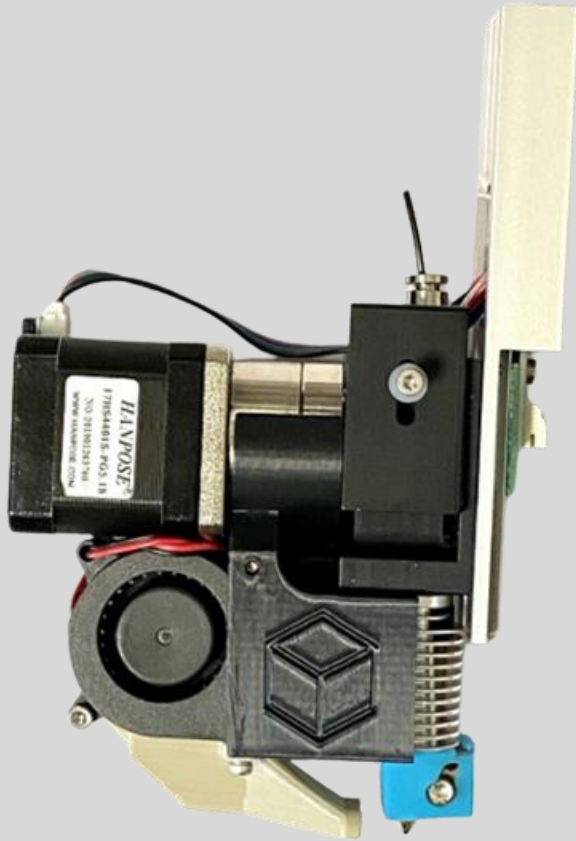
- ABS
- PLA
- Nylon
- HIPS
- PP
- PC
- PET
- Laybrick
- T-Glase

Specifications

- Maximum Temperature : 250°C
- Filament Type : Standard
- Filament size [mm] : 2.85± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description : Standard Torque for 2.85 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 17 - 14:1

HT3 - 450

Filament Head



Printable Materials [High Temperature Materials]

- PC
- PEEK
- Ultem

Specifications

- Maximum Temperature : 450°C
- Filament Type : Standard
- Filament size [mm] : 2.85± 0.15
- Nozzle type : Hyrel Special
- Nozzle size [mm] : Ø 0.4; Ø 0.6; Ø 0.8
- Description : Standard Torque for 2.85 mm Filaments
- Power Supply : 12V & 3.5A
- Interface : CanBus
- Viscosity : Standard
- Motor : NEMA 17 - 14:1

Powder Extruder

Powder Feeding Head



The powder extruder is print head for plastic powders or pellets which print at 180°C - 200°C.

The powder extruder has a resin printed funnel as a hopper, which displaces the powder into the heating unit and then to the nozzle.

Nozzle Size of 0.8mm is preferred for these extruders to avoid clogging.

Specifications

- Minimum Temperature : 180°C
- Maximum Temperature : 220°C
- Material Type : PLA; PCL [Pellets/Powder]
- Power Supply : 12V & 2A
- Volume [cc] : Varying
- Reservoir : Plastic
- Motor : NEMA 17 - 7:1
- Interface : CANBus
- Reservoir Re-usability : Yes

SDS 1/5/10/30/60

Reservoir Head



The SDS is line of extruders for low viscosity emulsions which print at room temperature.

The heads are available for 5, 10, 30, or 60cc bio-degradable plastic syringes.

Printable Materials

- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : 1; 5; 10; 30; 60
- Viscosity : Up to 100,000 cP
- Reservoir : Polypropylene
- Motor : NEMA 11 - 3:1
- Interface : CANBus

SDS - 30/60/150 XT

Reservoir Head - Extra Torque



The SDS XT is line of extruders for medium-high viscosity emulsions which print at room temperature. The heads are available for 30, 60 and 150cc bio-degradable plastic syringes.

Printable Materials

- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : 30; 60; 150
- Viscosity : Up to 300,000 cP
- Reservoir : Polypropylene
- Motor : NEMA 17 - 25.9 : 1
- Interface : CANBus

DSD 50

Reservoir Head - Two-part Mixtures



The DSD 50 extruder is used for two mixture of 1:1 flow ratio which print at room temperature. The heads is available for 30cc volume capacity.

Printable Materials

- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : 25
- Viscosity : Up to 100,000 cP
- Reservoir : Polypropylene
- Motor : NEMA 11 - 1 : 1
- Interface : CANBus
- Flow Ratio of Mixtures : 1:1; 2:1; 3:1

DSD 50HT

Reservoir Head - Two-part Mixtures with Hgh Torque



The DSD 50HT extruder is used for two mixture of 1:1 flow ratio which print at room temperature. The heads is available for 30cc volume capacity.

Printable Materials

- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : 25
- Viscosity : Up to 300,000 cP
- Reservoir : Polypropylene
- Motor : NEMA 17 - 25.9 : 1
- Interface : CANBus
- Flow Ratio of Mixtures : 1:1; 2:1; 3:1

HSD-10-Ardes

Reservoir Head - Heated Extruder



The HSD-10 is a special heated extruder with a polyamide reservoir for emulsions which print at temperatures up to 75°C. The HSD-10 heads accept our specially modified Ardes 10cc syringes. Industry standard luer tips or needles are available from a variety of sources.

Printable Materials

- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : 75°C
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : 10
- Viscosity : Up to 100,000 cP
- Reservoir : Polyamide
- Motor : Nema 11 - 1 : 1
- Interface : CANBus

HSD-30 BD

Reservoir Head - Heated Extruder



The HSD-30 is a special heated extruder with a polypropylene reservoir for emulsions which print at temperatures up to 50°C. The HSD-30 heads uses bio-degradable syringes. Industry standard luer tips or needles are available from a variety of sources.

Printable Materials

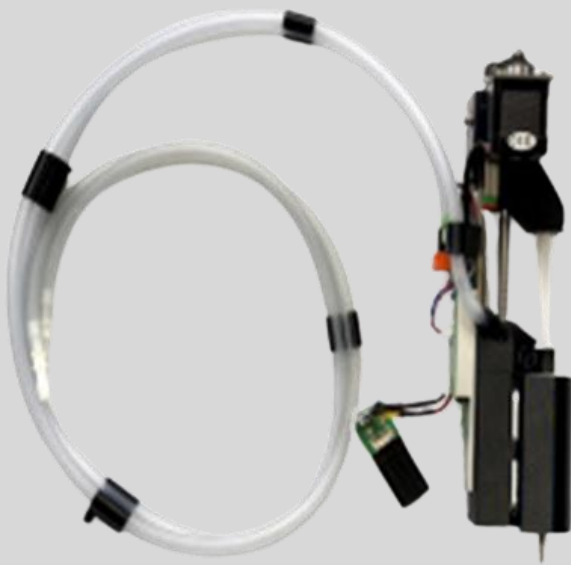
- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : 50°C
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : 30
- Viscosity : Up to 100,000 cP
- Reservoir : Polypropylene
- Motor : Nema 11 - 3 : 1
- Interface : CANBus

RSD

Reservoir Head - Refrigerated



The RSD is a special refrigerated extruder with a polypropylene reservoir for emulsions which print at temperatures -5°C to ambient temperatures.

The RSD heads accept 30cc [BD plastic syringe reservoirs] with luer fittings. Industry standard luer tips or needles are available from a variety of sources.

Printable Materials

- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : -5°C
- Maximum Temperature : 80°C
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : 30
- Viscosity : Up to 100,000 cP
- Reservoir : Polypropylene
- Motor : Nema 11 - 3 : 1
- Interface : CANBus

EMO

Reservoir Head



The EMO-25 is 25cc print head for medium viscosity emulsions which print at room temperature.

The EMO-25 has a 25cc anodized aluminum reservoir with a threaded collar at each end. The top has a threaded rod, which is how material is displaced; the bottom holds a nozzle, or a nozzle or luer adapter. Industry standard luer tips or needles are available from a variety of sources.

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels; Clay; Paste
- Power Supply : 12V & 2A
- Volume [cc] : 25
- Viscosity : Up to 300,000 cP
- Reservoir : Aluminium
- Motor : NEMA 11 - 19:1 , 27:1
- Interface : CANBus
- Reservoir Re-usability : Yes

EMO XT

Reservoir Head - Extra Torque



The EMO XT is 15cc print head for medium viscosity emulsions which print at room temperature.

The EMO XT has a 15cc SS reservoir with a threaded collar at each end. The top has a threaded rod, which is how material is displaced; the bottom holds a nozzle, or a nozzle or luer adapter. Industry standard luer tips or needles are available from a variety of sources.

Printable Materials

- Liquids
- Gels
- Paste
- Clay

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels; Clay; Paste
- Power Supply : 12V & 2A
- Volume [cc] : 15
- Viscosity : Up to 1,000,000 cP
- Reservoir : Stainless Steel
- Motor : NEMA 11 - 100:1
- Interface : CANBus
- Reservoir Re-usability : Yes

EMO ST

Reservoir Head - Super Torque



The EMO-ST is 15cc print head for medium viscosity emulsions which print at room temperature.

The EMO-ST has a 15cc SS reservoir with a threaded collar at each end. The top has a threaded rod, which is how material is displaced; the bottom holds a nozzle, or a nozzle or luer adapter. Industry standard luer tips or needles are available from a variety of sources.

Printable Materials

- Liquids
- Gels
- Paste

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels; Clay; Paste
- Power Supply : 12V & 2A
- Volume [cc] : 15
- Viscosity : Up to 2,000,000 cP
- Reservoir : Stainless Steel
- Motor : NEMA 17 - 25.9:1
- Interface : CANBus
- Reservoir Re-usability : Yes

EMO 300XT

Reservoir Head - Extra Torque



The EMO-300XT is 300cc print head for medium viscosity emulsions which print at room temperature.

The EMO-300XT has a 300cc SS reservoir with a threaded collar at each end. The top has a threaded rod, which is how material is displaced; the bottom holds a nozzle, or a nozzle or luer adapter. Industry standard luer tips or needles are available from a variety of sources.

Printable Materials

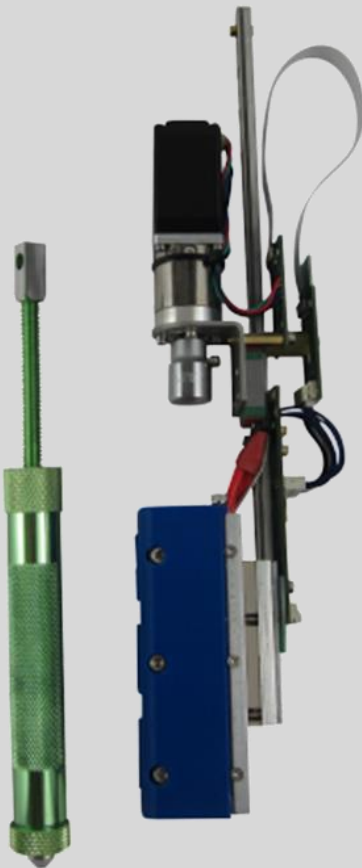
- Liquids
- Gels
- Paste
- Clay

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels; Clay; Paste
- Power Supply : 12V & 2A
- Volume [cc] : 300
- Viscosity : Up to 1,000,000 cP
- Reservoir : Stainless Steel
- Motor : NEMA 11 - 100:1
- Interface : CANBus
- Reservoir Re-usability : Yes

VOL

Reservoir Head



The VOL extruder is 25cc print head for medium viscosity emulsions which print at up to 75°C.

The VOL has a 25cc anodized aluminum reservoir with a threaded collar at each end. The top has a threaded rod, which is how material is displaced; the bottom holds a nozzle, or a nozzle or luer adapter. Industry standard luer tips or needles are available from a variety of sources.

Printable Materials

- Wax
- Emulsions
- Paste
- Clay

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Wax; Emulsions; Clay; Paste
- Power Supply : 12V & 2A
- Volume [cc] : 25
- Viscosity : Up to 300,000 cP
- Reservoir : Aluminium
- Motor : NEMA 11 - 51:1
- Interface : CANBus
- Reservoir Re-usability : Yes

KR2

Reservoir Head



The KR2 is our 15cc print head for high viscosity emulsions which print at up to 180°C, with our improved reservoir/plunger system.

The improved reservoir/plunger system consists of a custom machined reservoir, a dual-gasketed plunger, and a ball screw in place of the threaded rod.

These improvements were made to surmount the issue of high temperature, high viscosity material leaking past the single gasket of the KRA; most users will not encounter this situation. As an option to reduce wasted volume, a conical plunger is available.

Printable Materials

- Resins
- Emulsions
- Hot Glue

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : 180°C
- Material Type : Resins; Emulsions; Hot Glue
- Power Supply : 12V & 2A
- Volume [cc] : 15
- Viscosity : Up to 1,000,000 cP
- Reservoir : Stainless Steel
- Motor : NEMA 11 - 100:1
- Interface : CANBus
- Reservoir Re-usability : Yes

KR2 ST

Reservoir Head - Super Torque



The KR2 ST is our 15cc print head for high viscosity emulsions which print at up to 180°C, with our improved reservoir/plunger system.

The improved reservoir/plunger system consists of a custom machined reservoir, a dual-gasketed plunger, and a ball screw in place of the threaded rod.

These improvements were made to surmount the issue of high temperature, high viscosity material leaking past the single gasket of the KRA; most users will not encounter this situation. As an option to reduce wasted volume, a conical plunger is available.

Printable Materials

- Resins
- Emulsions
- Hot Glue

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : 180°C
- Material Type : Resins; Emulsions; Hot Glue
- Power Supply : 12V & 2A
- Volume [cc] : 15
- Viscosity : Up to 2,000,000 cP
- Reservoir : Stainless Steel
- Motor : NEMA 17 - 25.9:1
- Interface : CANBus
- Reservoir Re-usability : Yes

TAM

Reservoir Head



The TAM is our 15cc print head for high viscosity emulsions which print at up to 270°C, with our improved reservoir/plunger system. This head may be used in conjunction with a UV Array mounted around the nozzle or a UV Pen. The improved reservoir/plunger system consists of a custom machined reservoir, a dual-gasketed plunger, and a ball screw in place of the threaded rod. These improvements were made to surmount the issue of high temperature, high viscosity material leaking past the single gasket of the KRA; most users will not encounter this situation. As an option to reduce wasted volume, a conical plunger is available.

Printable Materials

- Resins
- Emulsions
- Hot Glue

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : 270°C
- Material Type : Resins; Emulsions; Hot Glue
- Power Supply : 12V & 2A
- Volume [cc] : 15
- Viscosity : Up to 1,000,000 cP
- Reservoir : Stainless Steel
- Motor : NEMA 11 - 100:1
- Interface : CANBus
- Reservoir Re-usability : Yes

SMH -2

Reservoir Head - Two-part Mixtures



The SMH -2 extruder is used for two mixture of varying flow ratio which print at room temperature with a higher torque. The materials are fed externally. The heads is available for varying volume capacity.

Printable Materials

- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : Variable
- Viscosity : Up to 100,000 cP
- Reservoir : Depends on feeding heads
- Motor : -NA-
- Interface : CANBus
- Flow Ratio of Mixtures : Variable

DMH -2

Reservoir Head - Two-part Mixtures



The DMH -2 extruder is used for dynamic two mixture of varying flow ratio which print at room temperature with a higher torque. The materials are fed externally. The heads is available for varying volume capacity.

Printable Materials

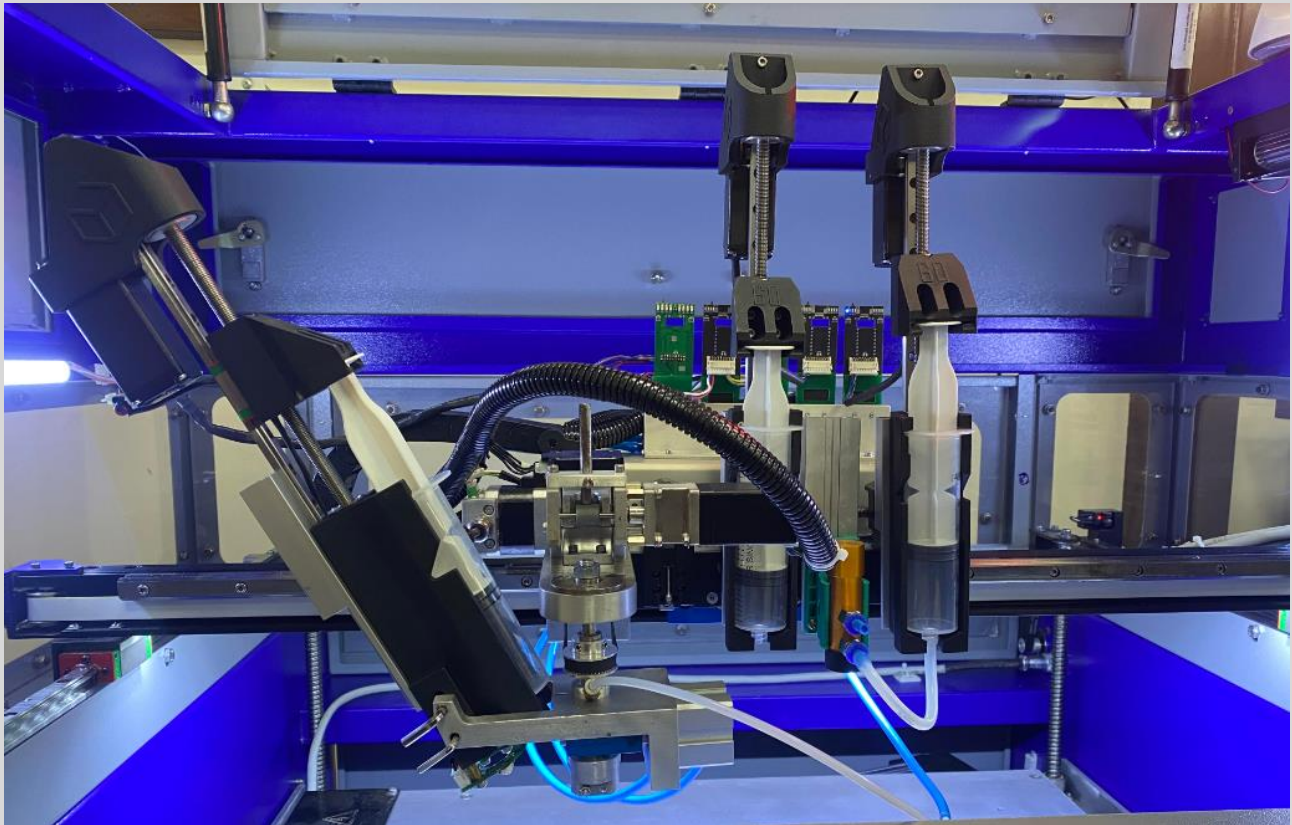
- Liquids
- Gels
- Emulsions

Specifications

- Minimum Temperature : Ambient Temperature
- Maximum Temperature : Ambient Temperature
- Material Type : Liquid; Gels
- Power Supply : 12V & 2A
- Volume [cc] : Variable
- Viscosity : Up to 100,000 cP
- Reservoir : Depends on feeding heads
- Motor : -NA-
- Interface : CANBus
- Flow Ratio of Mixtures : Variable

Fibre Extruder

Fibre; UV Resin & 2 Part Epoxy Resin Hardener Extruder for GFRP



Introducing our indigenous-developed multi-print head extruder with groundbreaking capabilities.

This combo extruder features with fiber extrusion & cutting mechanism; an UV attachment to cure the photosensitive resin & static mixing head to allow resin & hardener to mix.

This extruder is developed to print GFRP.

Dial Indicator

Bed Levelling



A dial indicator is a useful tool for leveling the bed of a 3D printer accurately.

It allows you to measure the height of the printer's print bed at various points and adjust them accordingly.

Allowance of ± 20 microns is permissible.

Dial Indicator with IOT

Smart Inspection System



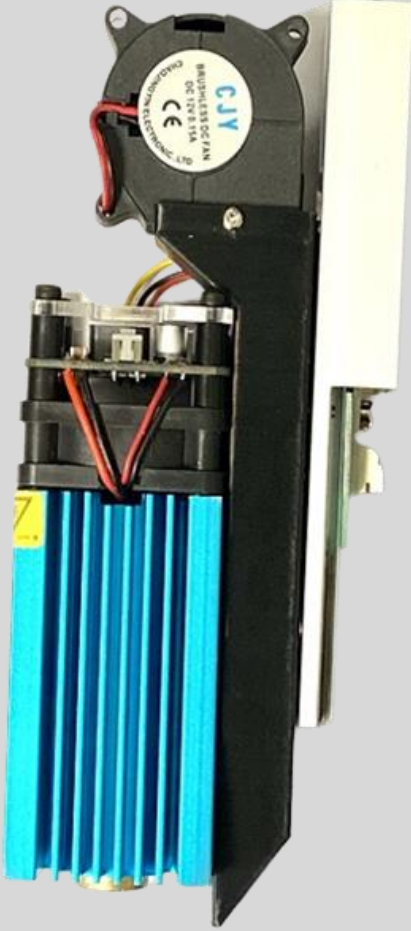
An assembly line Smart IoT enabled inspection system which enables continuous monitoring and improvements of product and process quality

Salient Features:

- Smart IoT nodes with independent local functions, but also beam useful data to cloud.
- IoT sensor enabled nodes that can not only beam data, but can also control actuators.
- RPC (Remote Procedure Calls) from anywhere into IoT nodes on demand.
- IoT nodes pushing data to servers.
- Built in OS for configuration that enables quick, easy deployment on site.
- Multi protocol support: WiFi, Zigbee and GSM modes of communication.

LA5-808

Laser Head



Adding a laser attachment to a 3D printer can enable various functionalities beyond traditional 3D printing.

Hyrel offers 40w CO₂ laser and Diode lasers on some of our Hydra models.

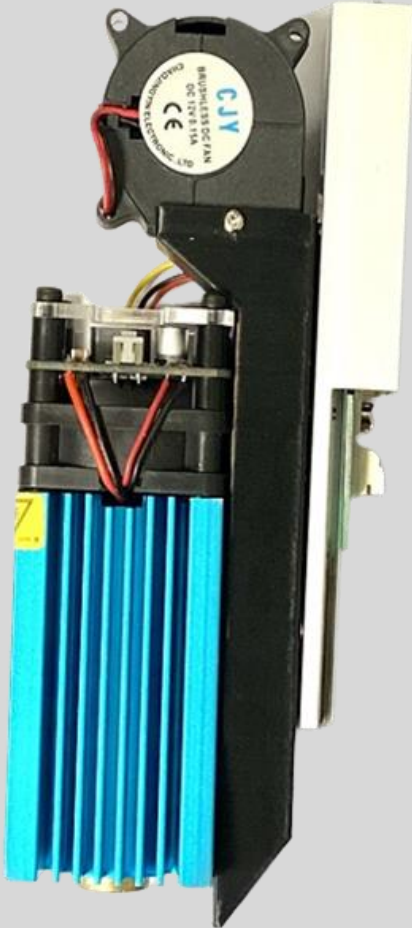
We recommend at least 500 cfm (850 m³/h) of exhaust while lasering.

Specifications

- Watts : ~5
- Wavelength : 808 nm
- Columnated : FAC
- Focused : Yes
- Focal Distance : ~18mm
- Dot Size : ~250 μm
- Pulsable : upto 2 kHz
- ø0.25mm

LA6-450

Laser Head



Adding a laser attachment to a 3D printer can enable various functionalities beyond traditional 3D printing.

☑ Hyrel offers 40w CO₂ laser and Diode lasers on some of our Hydra models.

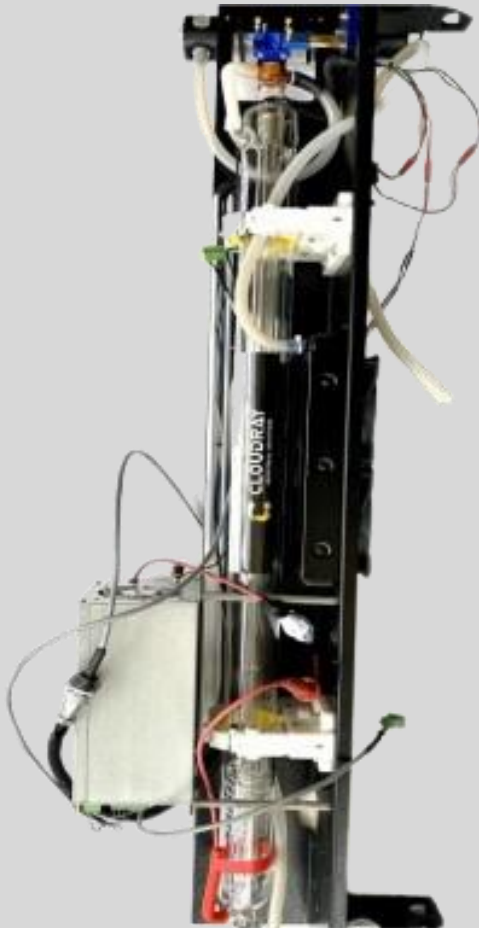
☑ We recommend at least 500 cfm (850 m³/h) of exhaust while lasering.

Specifications

- Watts : ~6
- Wavelength : 450 nm
- Columnated : No
- Focused : Yes
- Focal Distance : ~18mm
- Dot Size : ~250 μm
- Pulsable : upto 2 kHz
- ø0.25mm

LA40

Laser Head



Adding a laser attachment to a 3D printer can enable various functionalities beyond traditional 3D printing.

☑ Hyrel offers 40W CO₂ laser and Diode lasers on some of our Hydra models.

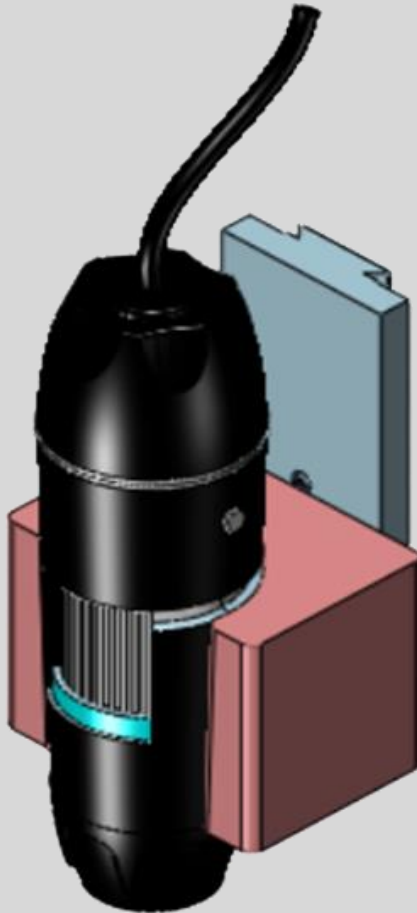
☑ We recommend at least 500 cfm (850 m³/h) of exhaust while lasering.

Specifications

- Rated Power : 40W
- Maximum Power : 50W
- Length : 720mm
- Outer Diameter : 50mm
- Catalytic : Yes
- Triggering Voltage : 13kV
- Working Voltage : 9kV
- Triggering Current : 4mA
- Working Current : 20mA
- Spot Diameter : 3mm

Mic200

Microscope



The Mic200 (200x Microscope) provides magnification and capture of images and video.

This allows you to see even the smallest of details, in high resolution, directly on your computer screen.

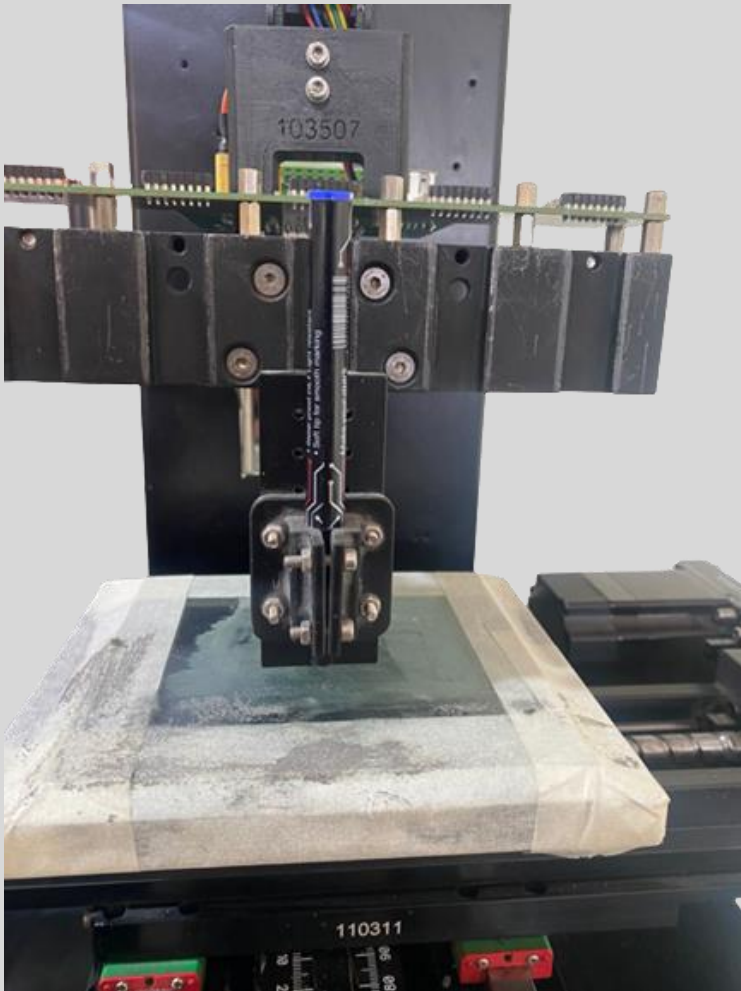
Details like layer height, material inspection, post-processing inspection, nozzle tip inspection, etc.

Specifications

- Light Source : LED
- Maximum Magnification : 1000X
- Body Material : Plastic
- Real angle of view : 45°
- Voltage : 5V

Pen

Educational Purpose



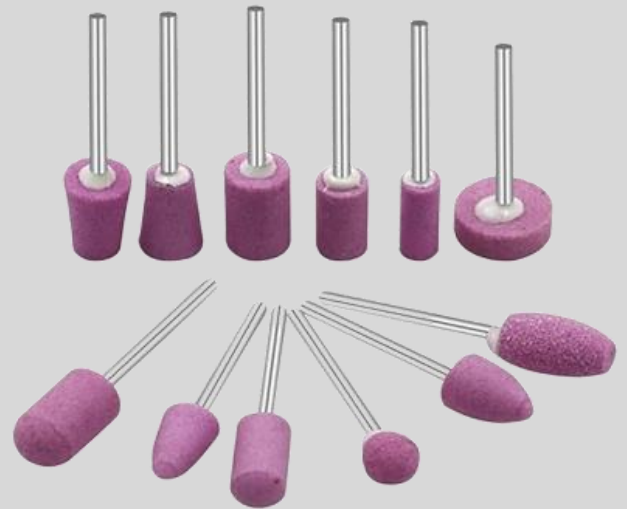
Adding a pen as an extruder replacement for training or educational purposes is a creative and engaging way to understand the basic principles of 3D printing without the complexities of using melted plastic filament. Instead of extruding plastic, the pen will draw with ink or a marker.

Polishing Head

Polishing Tool



The Polishing Head is intended for light internal & external polishing operations (especially circuit board work), and provides between 500 and 5,000 RMP (depending on load) to a 1/8" chuck. 12VDC, 4A, 40W.



UVP

Photo-initiators Head



The UV Pen is a flashlight-like light source, providing high-power UV light.

This is typically used in conjunction with reservoir-based printing to provide UV photoinitiation of crosslinking in photocurable materials

Printable Materials

- Photo-sensitive Resins

Types of UV Pen

<i>Name</i>	<i>Wavelength</i>	<i>Power</i>	<i>Others</i>
UVP 365	365 nm	10W	Focusable
UVP 405	405 nm	10W	Focusable
UVP 450	450 nm	10W	Focusable

UV Arrays

Photo-initiators Attachment



UV Array for SDS



UV Array for EMO



UV Array for VOL



UV Array for TAM

The UV Arrays are set in a halo arrangement around the nozzle of the head, and they can put out a maximum of between 0.4 and 0.6 watts.

This is typically used in conjunction with reservoir-based printing to provide UV photoinitiation of crosslinking in photocurable materials

The UV Arrays are lower power, and available in 280, 310, 365, 405, or 450 nm

Luer Tips

Nozzles



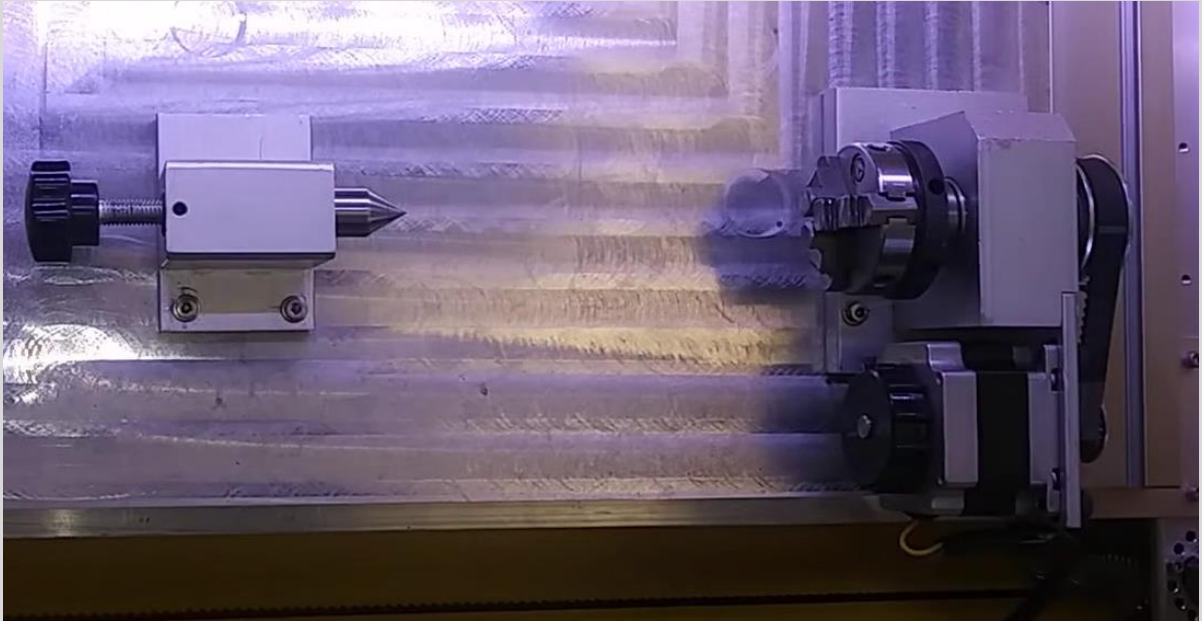
Luer-lock design ensures that tips easily attach to syringes and stay secure. Ideal for dispensing and applying liquids and light gels.

Needle	Nominal outer diameter	Nominal inner diameter	Nominal wall thickness	Common Color
Gauge	mm	mm	mm	
14	2.108	1.6	0.254	14: Dark Green
15	1.829	1.372	0.229	15: Orange
16	1.651	1.194	0.229	16: Purple
17	1.473	1.067	0.203	17: White
18	1.27	0.838	0.216	18: Pink
19	1.067	0.686	0.191	19: Brown
20	0.9081	0.603	0.1524	20: Yellow
21	0.8192	0.514	0.1524	21: Light Green

Source - https://hyrel3d.in/wiki/index.php?title=Luer_Tips

4th Axis Attachment

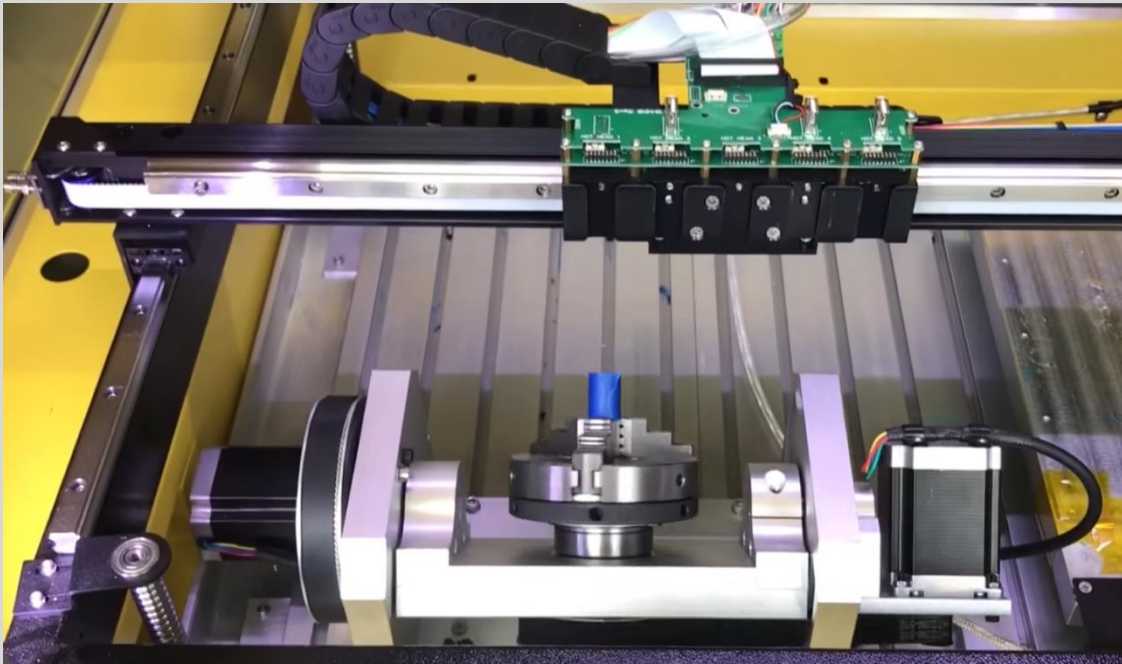
Turning Operations



Rotary 4th axis is used for light machining operations like milling, drilling, tapping etc.. The part on which machining has to be done is rotated about one axis only.

4th/5th Axis Combo Attachment

Turning Operations



This 4th and 5th axis attachment can be used for small machining operations like milling, drilling, tapping on small parts of aluminum and thermoplastics as and when required.

Plastic Shredder

Waste to Wealth



AMS-India presents a line of semi-industrial machines to process plastic waste and convert “waste to wealth”.

AMS-India Plastic shredders are used to break down plastic objects into smaller fragments or granules. This process has several purposes, including recycling, reducing waste volume, and preparing plastics for other industrial processes like extrusion, injection molding, or pelletizing.

Specifications

- Machine type : Automatic
- Shredding material : Plastic
- Body material : Stainless steel
- Voltage-R25H single phase version : 230V 50-60Hz-R25H
- Voltage-R25HH 3 phase version : 400V 3Ph-R25HH
- Power : 3 kW
- Max current : 15 Amps
- Blade rotation speed : 35 RPM
- Fixed blades : 13
- Cutting blades : 14
- Output : 0.5 kg/hr
- Noise level : 85db
- Dimensions : 780x370x1400 mm
- Weight : 70 kgs

Filament Extruder

Waste to Wealth



AMS-India presents a line of semi-industrial machines to process plastic waste and convert “waste to wealth”.

The Eco system to convert plastics to pellets ,pellets to filaments and use the filaments for 3D printing useful objects.

AMS-India filament extruder is a machine used to convert plastic pellets or granules into filament, which is a thin, continuous strand of plastic material. Filament is commonly used in 3D printing and other additive manufacturing processes

Specifications

- Machine type : Automatic
- Working material : Plastic
- Body material : Stainless steel
- Voltage-R25H single phase version : 230V 50-60Hz-R25H
- Voltage-R25HH 3 phase version : 400V 3Ph-R25HH
- Weight : 105 Kgs
- Power : 750 watt heater, 5 numbers
- Max current : 15 Amps
- Dimensions : 2745x520x1345 mm
- Noise Level : 85db
- Filament Diameter : 1.75mm

Manual Injection Moulding Machine

Waste to Wealth



AMS-India presents a line of semi-industrial machines to process plastic waste and convert “waste to wealth”.

These Moulding Machines use the powders made in the Shredder and make small useful parts. The different dies that are required can be manufactured for the parts that are required. We will give the technical information and training to make the dies that are required.

Specifications

- Machine Type : Hand Operated
- Operation : Rack and Pinion Type
- Body Material : Alloy Steel
- Phase : Single
- Voltage : 220V/ 50 Hz
- Power : 2kW
- Heater : Band Heater Ceramic
- Temperature : Upto 250°C
- Build Volume : 20 cc
- Weight : 30 Kgs
- Machine Build Volume : 620x180x765 mm

Plastic Bending Machine

Waste to Wealth



AMS-India presents a line of semi-industrial machines to process plastic waste and convert “waste to wealth”.

This machine uses the powders made in the Shredder and make Sheets on the sheet press. The Plastic sheet so made can be bent to any angle using the Hot bend press. It is controlled from the Repetrel control system.

Specifications

- Machine Type : Automatic
- Bending Material : Plastic
- Body Material : Alloy Steel
- Power Source : Electric
- Voltage : 220V/ 50 Hz
- Power : 2 Kw
- Phase : Single
- Processing Thickness : Upto 3 Mm
- Processing Length : 450 Mm
- Weight : 25 Kgs
- Machine Build Volume : 700x115x425 Mm
- Phase : Single

Plastic Welding Machine

Waste to Wealth



AMS-India presents a line of semi-industrial machines to process plastic waste and convert “waste to wealth”.

AMS-India Plastic Welding machine can be a valuable tool for converting plastic waste into wealth by allowing you to repair, recycle, or repurpose plastic items.

Specifications

- Model : UWHG 3005
- Capacity : 500W
- Output Frequency : 30 Khz
- Input Power : 220V/ 50 Hz
- Controller : Timer XT 546
- Converter Type : PZT
- Operation Mode : Auto
- Horn Material : Titanium
- No. of Horn : 1 No
- Tuning : Manual
- Parameters to Vary : Time & Amplitude
- Weight of The Hand Press Unit : 1.5 Kgs
- Weight of The Generator : 13 Kgs
- Typical Dimensions : 400x290x110 mm

Hot Press Sheet

Waste to Wealth



AMS-India presents a line of semi-industrial machines to process plastic waste and convert “waste to wealth”.

The machine uses the powders made in the shredder and make tiles. The different sizes and shapes of Dies that are required can be manufactured for the tiles required. We will give the technical information and training to make the dies that are required.

Specifications

- Machine Type : Hand Operated
- Operation : Rack And Pinion Type
- Body Material : Alloy Steel
- Power Source : Electric
- Voltage : 220V/ 50 Hz
- Phase : Single
- Heater : Cartridge Heater
- Temperature Range : Upto 500°C
- Maximum Sheet Size : 9” x9” Thickness 8-10 Mm
- Weight : 40 Kgs
- Machine Build Volume : 445x405x500 Mm