

## Magforms SLA 3D Printer Technical Specifications



### PRINTER PROPERTIES

#### 3D Printer

Helios-P 450

Helios-P 600

Helios-P 800

#### 3D Printer Size Crated (WxDxH)

1600 × 1600 × 2050 mm  
63 × 63 × 80.7 in

1800 × 1700 × 2200 mm  
70.9 × 66.9 × 86.6 in

#### 3D Printer Size Uncrated (WxDxH)

Without monitor and LED light:  
1380 × 1440 × 1800 mm  
54.3 × 56.7 × 70.9 in  
With monitor and LED light:  
2050 × 1560 × 2120 mm  
80.7 × 61.4 × 83.5 in

Without monitor and LED light:  
1490 × 1580 × 1970 mm  
58.7 × 62.2 × 77.6 in  
With monitor and LED light:  
2160 × 1690 × 2300 mm  
85.0 × 66.5 × 90.6 in

Without monitor and LED light:  
1760 × 1730 × 2100 mm  
65.7 × 68.1 × 82.7 in  
With monitor and LED light:  
2400 × 1800 × 2420 mm  
94.5 × 68.1 × 95.3 in

#### 3D Printer Weight Crated

~1300 kg  
2866 lbs

~1550 kg  
3417 lbs

#### 3D Printer Weight Uncrated

1167 kg  
2573 lbs

1428 kg  
3148 lbs

1700 kg  
3748 lbs

#### Electrical Requirements

220-240 VAC  
50/60 Hz  
Single Phase  
2.5 kW

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50/60 Hz  
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2.5 kW

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50/60 Hz  
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#### Operating Temperature Range

22-26 °C  
71.6-78.8 °F

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71.6-78.8 °F

#### Humidity Range

35-45 %RH  
Non-condensing

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Non-condensing

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Non-condensing

#### Laser

Solid-state frequency tripled Nd:YVO4

Solid-state frequency tripled Nd:YVO4

Solid-state frequency tripled Nd:YVO4

#### Recoater Rim

Marble

Marble

Marble

#### Accessories

UPS  
Drain Device  
Post Curing Apparatus

UPS  
Drain Device  
PCA600 Post Curing Apparatus

UPS  
Drain Device  
PCA800 Post Curing Apparatus

PRINTING SPECIFICATIONS

|                                          |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                      |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3D Printer                               | Helios-P 450                                                                                                                                                                                                                                      | Helios-P 600                                                                                                                                                                                                                                      | Helios-P 800                                                                                                                                                                                                                                         |
| Max Build Volume (xyz)                   | Flexible build volume options with customized resin vat.                                                                                                                                                                                          | Flexible build volume options with customized resin vat.                                                                                                                                                                                          | Flexible build volume options with customized resin vat.                                                                                                                                                                                             |
| Full                                     | 450 × 450 × 400 mm<br>17.7 × 17.7 × 15.75 in<br>175 L<br>46.2 U.S. gal                                                                                                                                                                            | 600 × 600 × 500 mm<br>23.6 × 23.6 × 19.7 in<br>297 L<br>78.5 U.S. gal                                                                                                                                                                             | 800 × 800 × 550 mm<br>31.5 × 31.5 × 21.7in<br>510 L<br>136 U.S. gal                                                                                                                                                                                  |
| Custom                                   | The height of the resin vat is customized (less than full height).                                                                                                                                                                                | The height of the resin vat is customized (less than full height).                                                                                                                                                                                | The height of the resin vat is customized (less than full height).                                                                                                                                                                                   |
| Resin Vat Capacity                       | ~206 kg<br>454 lbs                                                                                                                                                                                                                                | ~350 kg<br>772 lbs                                                                                                                                                                                                                                | ~610 kg<br>1345 lbs                                                                                                                                                                                                                                  |
| Accuracy                                 | L ≤ 100 mm: ± 0.1 mm<br>L ≤ 3.94 in: ± 0.004 in<br>L > 100 mm: ± 0.1% × L<br>L > 3.94 in: ± 0.1% × L<br>*Accuracy may vary depending on parameters, part geometry and size, pre-processing or post-processing methods, materials and environment. | L ≤ 100 mm: ± 0.1 mm<br>L ≤ 3.94 in: ± 0.004 in<br>L > 100 mm: ± 0.1% × L<br>L > 3.94 in: ± 0.1% × L<br>*Accuracy may vary depending on parameters, part geometry and size, pre-processing or post-processing methods, materials and environment. | L ≤ 100 mm: ± 0.15 mm<br>L ≤ 3.94 in: ± 0.006 in<br>L > 100 mm: ± 0.15% × L<br>L > 3.94 in: ± 0.15% × L<br>*Accuracy may vary depending on parameters, part geometry and size, pre-processing or post-processing methods, materials and environment. |
| Slicing Thickness                        | 0.05-0.15 mm<br>0.002-0.006 in                                                                                                                                                                                                                    | 0.05-0.15 mm<br>0.002-0.006 in                                                                                                                                                                                                                    | 0.05-0.15 mm<br>0.002-0.006 in                                                                                                                                                                                                                       |
| Intelligent Scanning Strategy            | Viable Laser Beam                                                                                                                                                                                                                                 | Viable Laser Beam                                                                                                                                                                                                                                 | Viable Laser Beam                                                                                                                                                                                                                                    |
| XY Resolution                            | 0.025 mm<br>0.001 in<br>*XY resolution describes image grayscale adjust.                                                                                                                                                                          | 0.025 mm<br>0.001 in<br>*XY resolution describes image grayscale adjust.                                                                                                                                                                          | 0.025 mm<br>0.001 in<br>*XY resolution describes image grayscale adjust.                                                                                                                                                                             |
| Fine Feature/Outer Surface Scanning      | 0.15-0.2 mm<br>0.006-0.008 in                                                                                                                                                                                                                     | 0.15-0.2 mm<br>0.006-0.008 in                                                                                                                                                                                                                     | 0.15-0.2 mm<br>0.006-0.008 in                                                                                                                                                                                                                        |
| Larger Feature/Internal Surface Scanning | 0.5-0.6 mm<br>0.020-0.024 in                                                                                                                                                                                                                      | 0.5-0.6 mm<br>0.020-0.024 in                                                                                                                                                                                                                      | 0.5-0.6 mm<br>0.020-0.024 in                                                                                                                                                                                                                         |

MATERIALS

|                    |                                                                                  |                                                                                  |                                                                                  |
|--------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Build Materials    | Please refer to the TDS and MSDS for more information for the printing material. | Please refer to the TDS and MSDS for more information for the printing material. | Please refer to the TDS and MSDS for more information for the printing material. |
| Material Packaging | 10 kg per barrel                                                                 | 10 kg per barrel                                                                 | 10 kg per barrel                                                                 |

SOFTWARE AND NETWORK

|                                   |                     |                     |                     |
|-----------------------------------|---------------------|---------------------|---------------------|
| 3D Printer Software               | Magforms iBuild 2.0 | Magforms iBuild 2.0 | Magforms iBuild 2.0 |
| Printer Operating System          | Windows® 10         | Windows® 10         | Windows® 10         |
| Input Data File Formats Supported | SLC,CLI             | SLC,CLI             | SLC,CLI             |