HeyGears

Pulsing Release Module 2

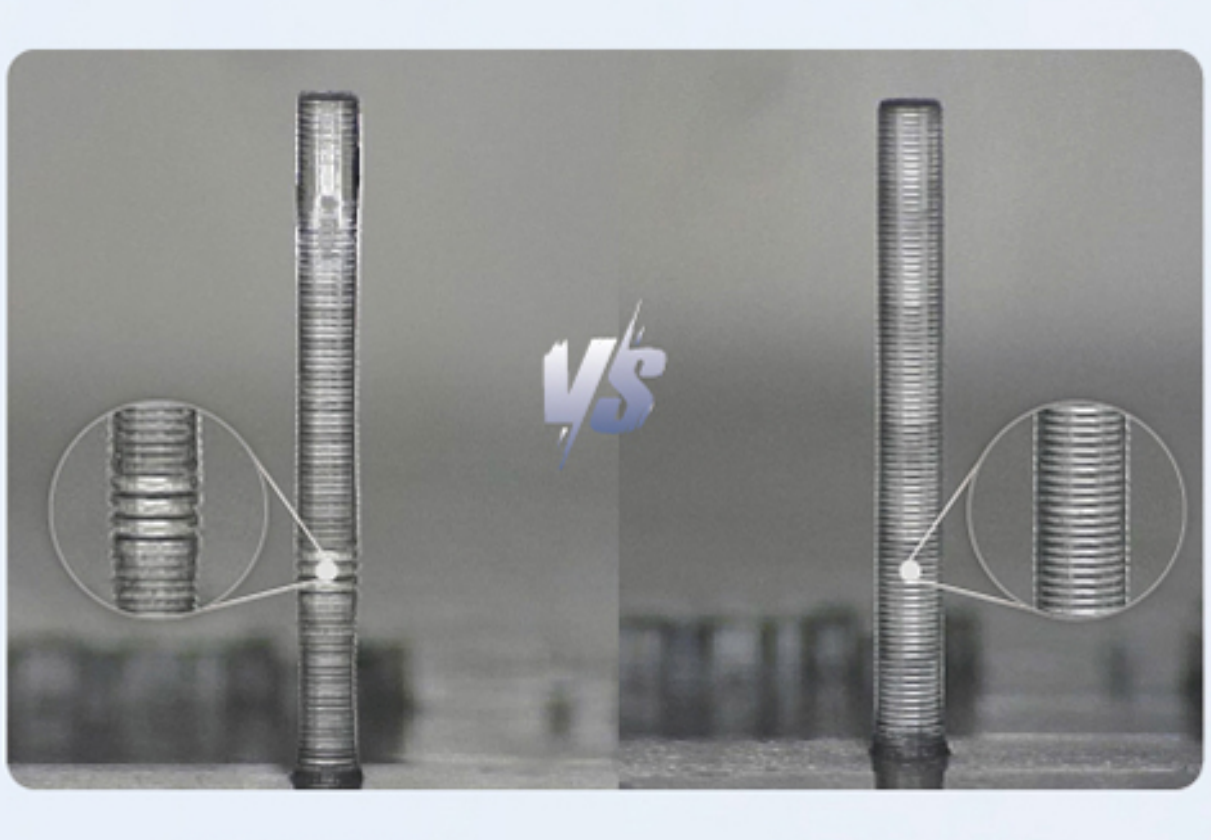
Boost Your 3D Printing Efficiency

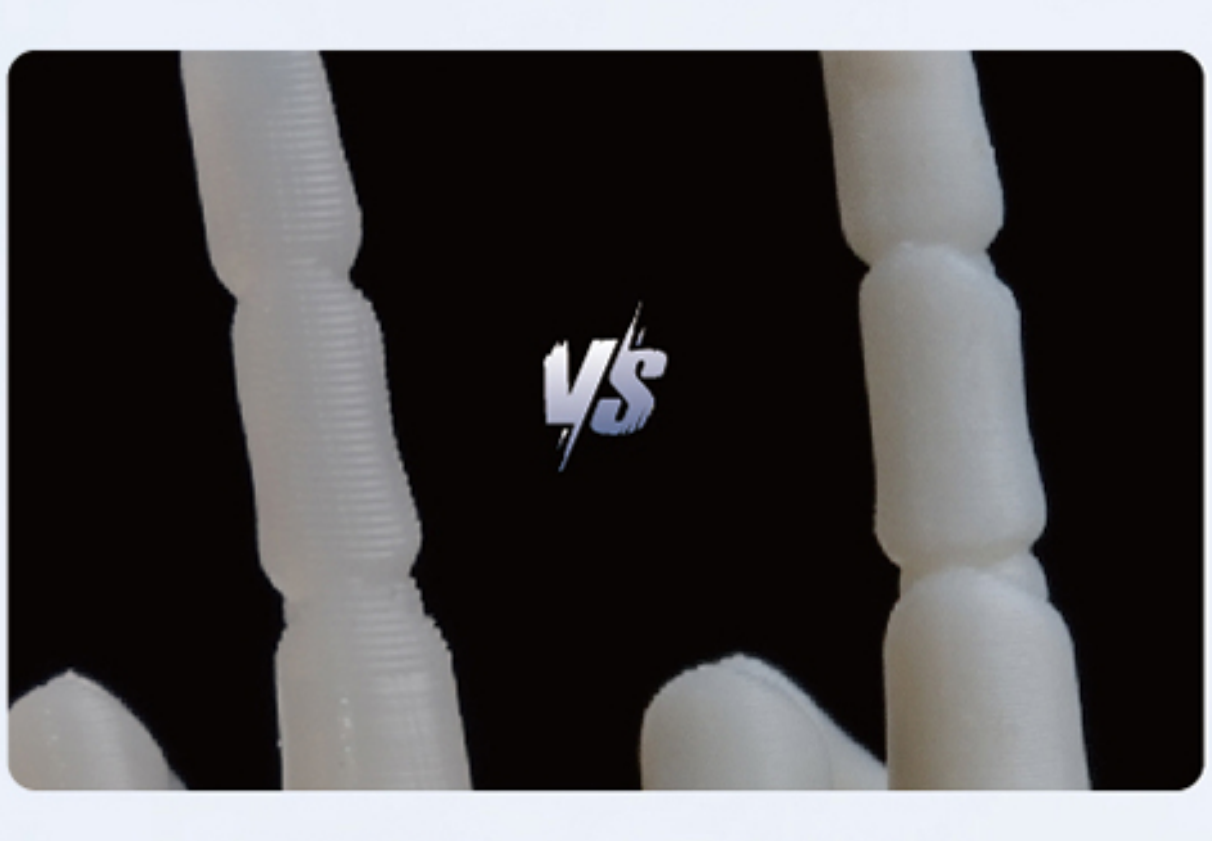
*Compatible 3D Printers: Reflex 2, Reflex 2 Pro.
Use with Reflex 2 Series Pulsing Release Resin Tank. Contact sales team for more details.

01 Upgraded for Precision: Advanced Pulse Control

Improved Surface Quality for Precise Details

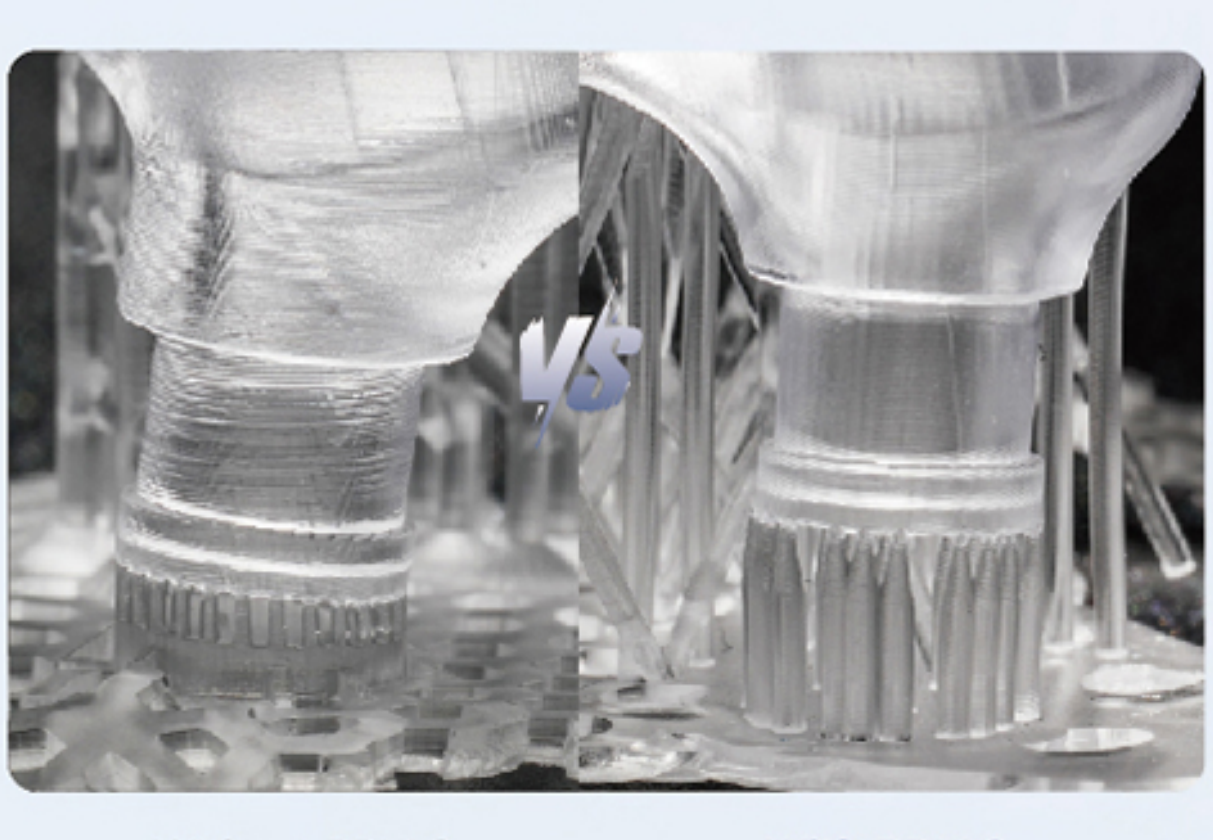
1. Achieves superior surface quality, even for ultra-fine pillars with a diameter of ≤1 mm

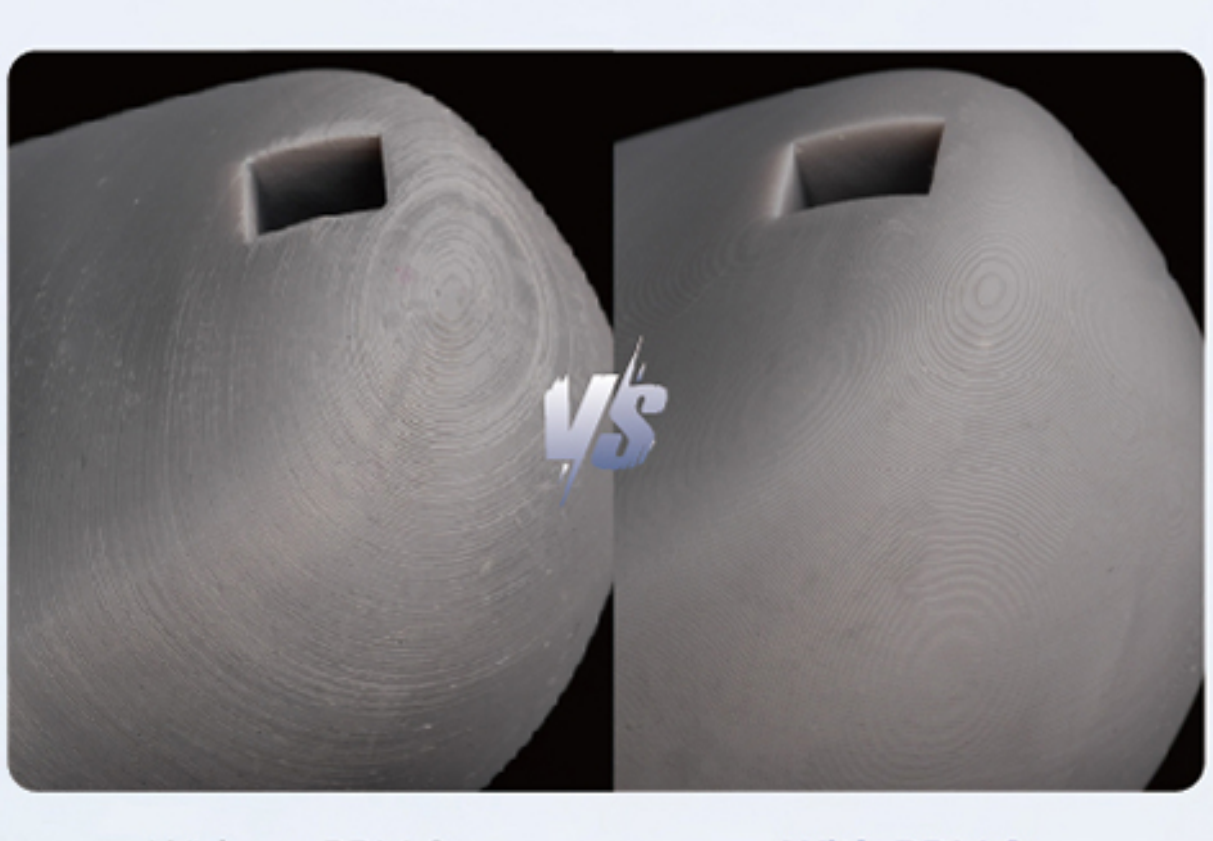

Without PRM 2 **With PRM 2**


Without PRM 2 **With PRM 2**

*Data sourced from HeyGears Lab, the results may vary with different resins. Refer to the Material Guide for details.

2. ≤3 mm* Thin-Walled Structures: Reduces Abnormal Surface Layer Lines


Without PRM 2 **With PRM 2**


Without PRM 2 **With PRM 2**

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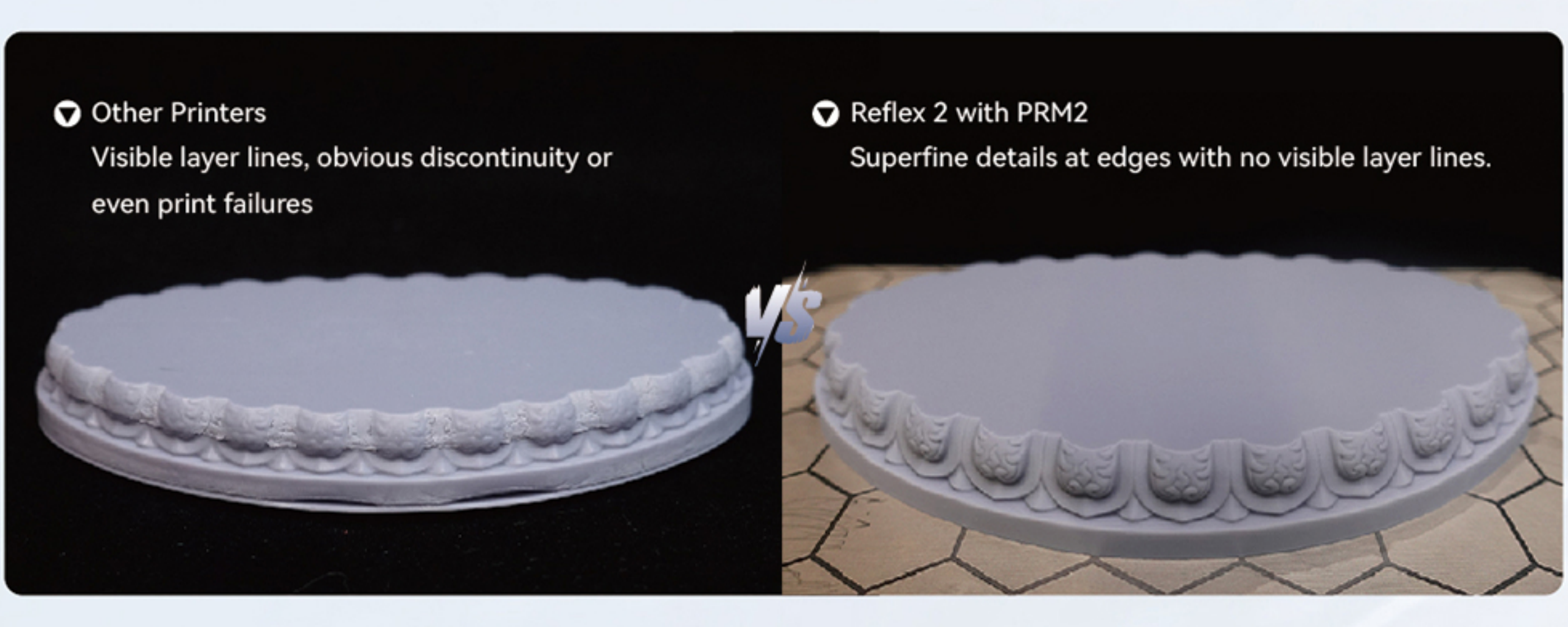
Large-format Parts


Other Printers
Visible layer lines, obvious discontinuity or even print failures

Reflex 2 with PRM2
Superfine details at edges with no visible layer lines.

02 Discover the Benefits for You

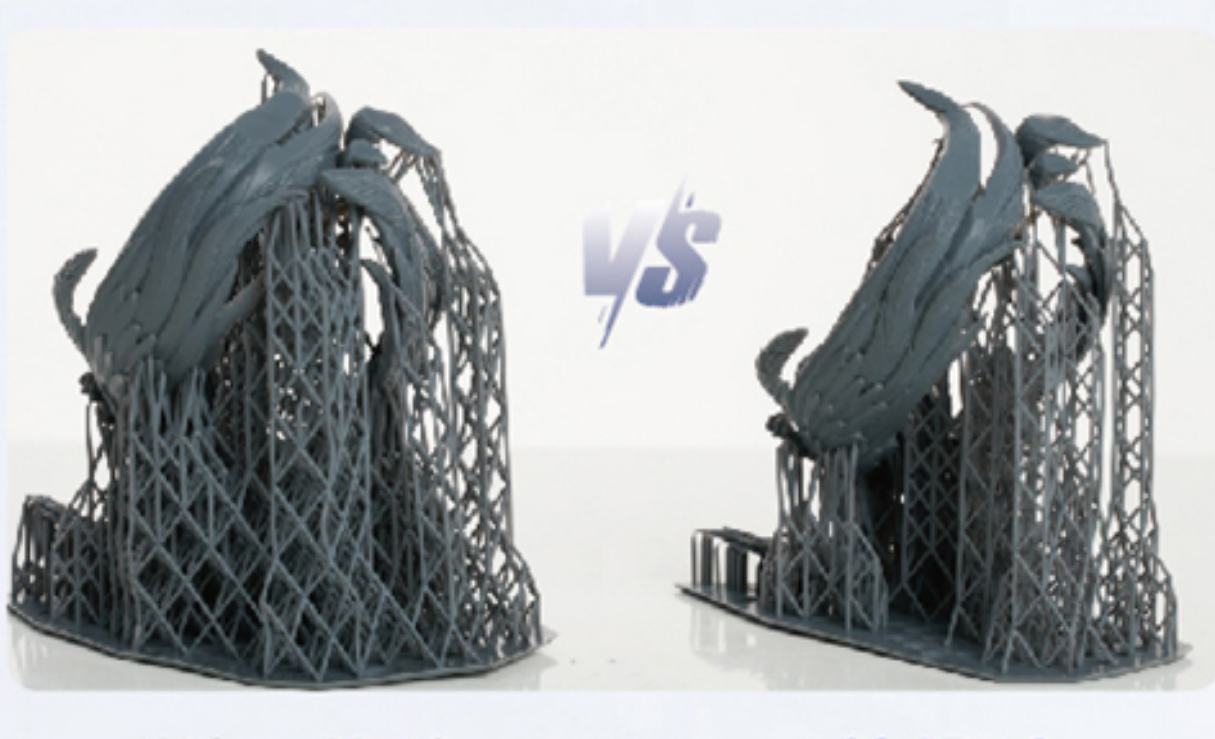
25%~54% Less Time Needed for Sanding or Polishing

The total area of support contact points has been reduced by 25% to 54%, resulting in a decrease in the time needed for sanding or polishing.

20% - 60% Fewer Supports

A lower peeling force reduces the demand for supports. As a result, support material usage is cut by 20%-60%* while ensuring successful prints, improving resin utilization.

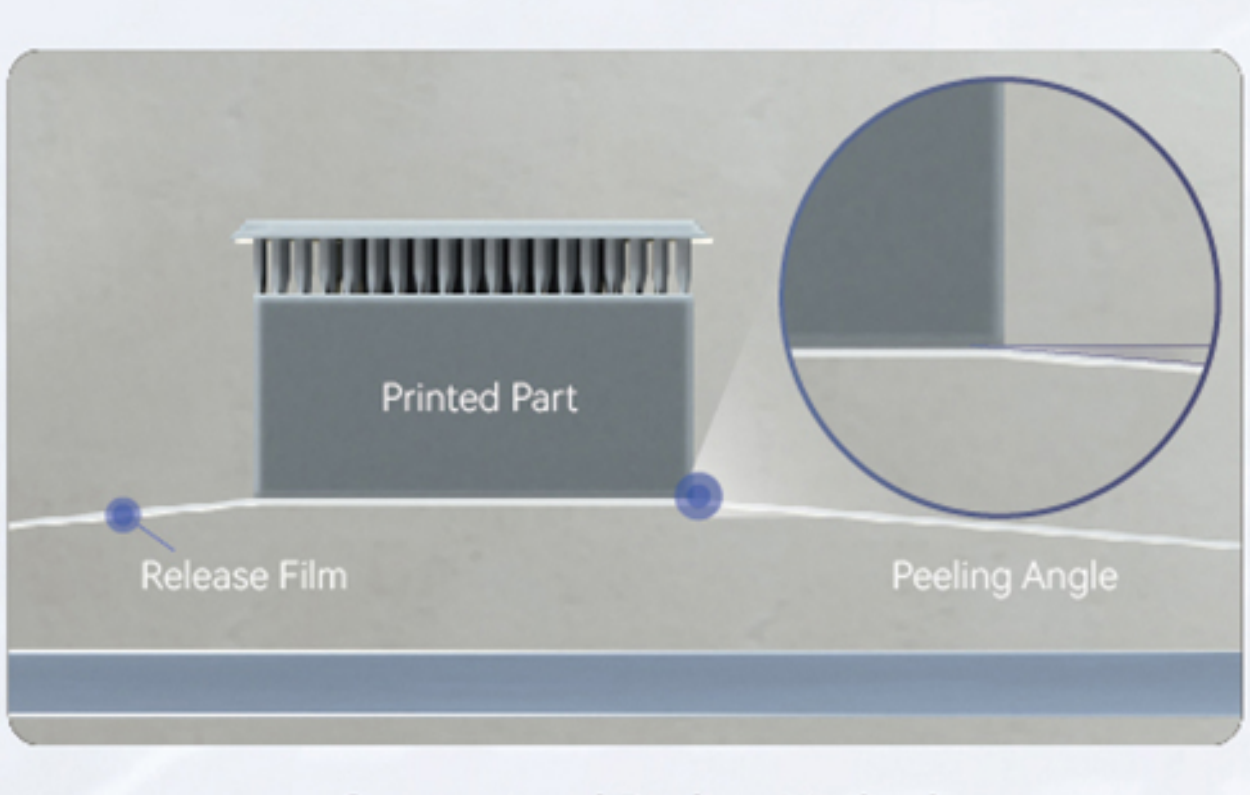
Without PRM 2 **With PRM 2**


Without PRM 2 **With PRM 2**

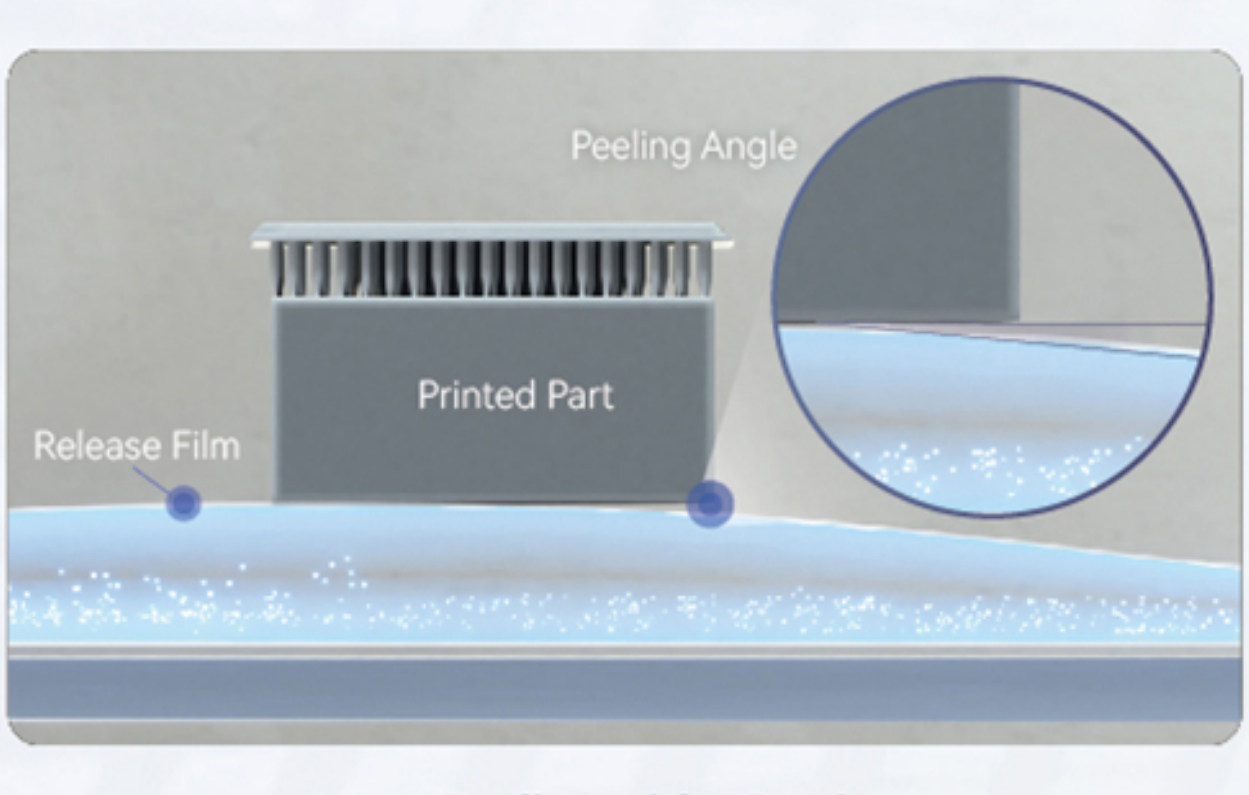
*Data sourced from HeyGears Lab, the results may vary with different resins. For low-viscosity materials, it is recommended to adjust the support critical angle to ensure printing quality.

03 How it Works

During the printing process, the Pulsing Release Module 2 (PRM 2) creates a cycle of positive and negative pressure within the release film with periodic inflation and deflation.
This creates a larger peeling angle, reducing the force needed to separate the printed part from the release film.



Conventional Peeling Method



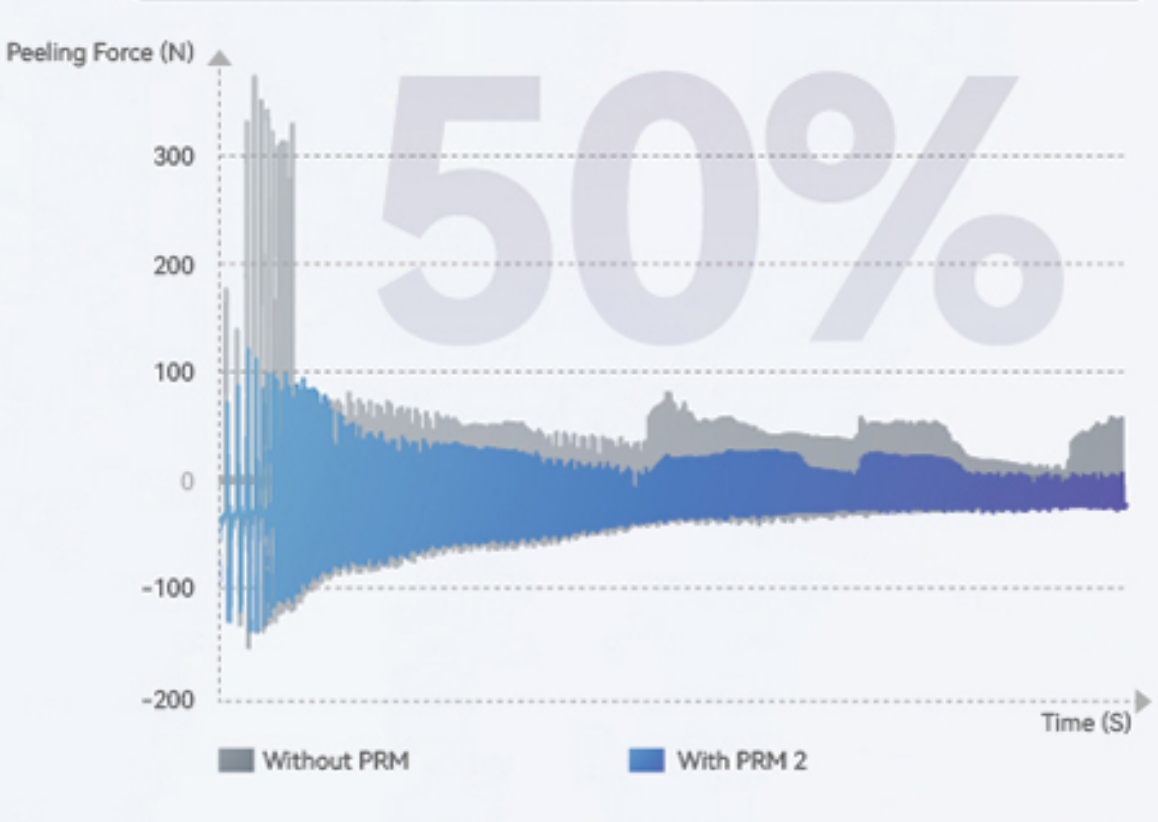
Peeling with PRM 2

The PRM 2 is designed to be used with a Pulsing Release Resin Tank, which features two layers and airflow guiding strips. After extensive development, a consistent oscillating movement of the film at the same frequency across the entire printing area was achieved.

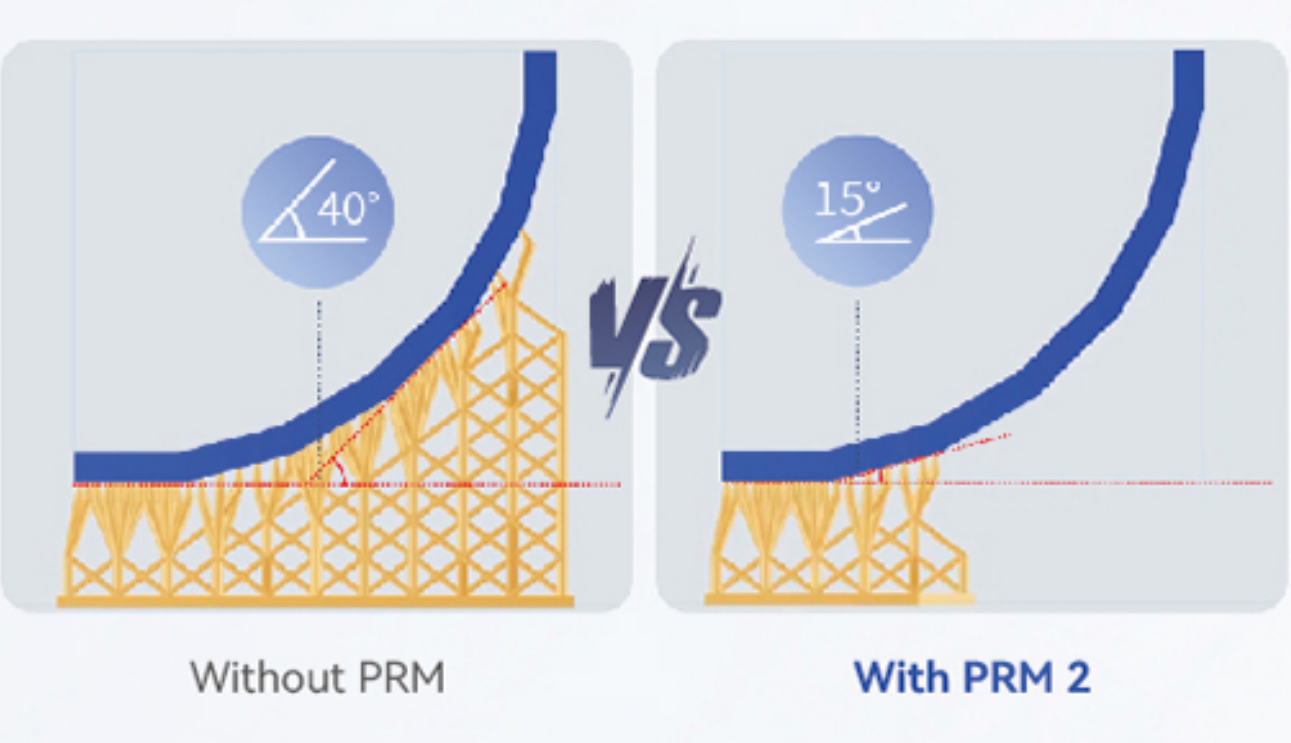
Reduce Peeling Force by Approximately 50%[1]

The Reflex 2 series, combined with the Pulsing Release Module 2, achieves a dramatic reduction in peeling force—by about 50%.
This not only minimizes the need for support optimization but also breaks through the limits of manual tuning, ensuring a comprehensive improvement in final print quality.

Peeling Force Comparison Chart



Support Critical Angle[2] Required

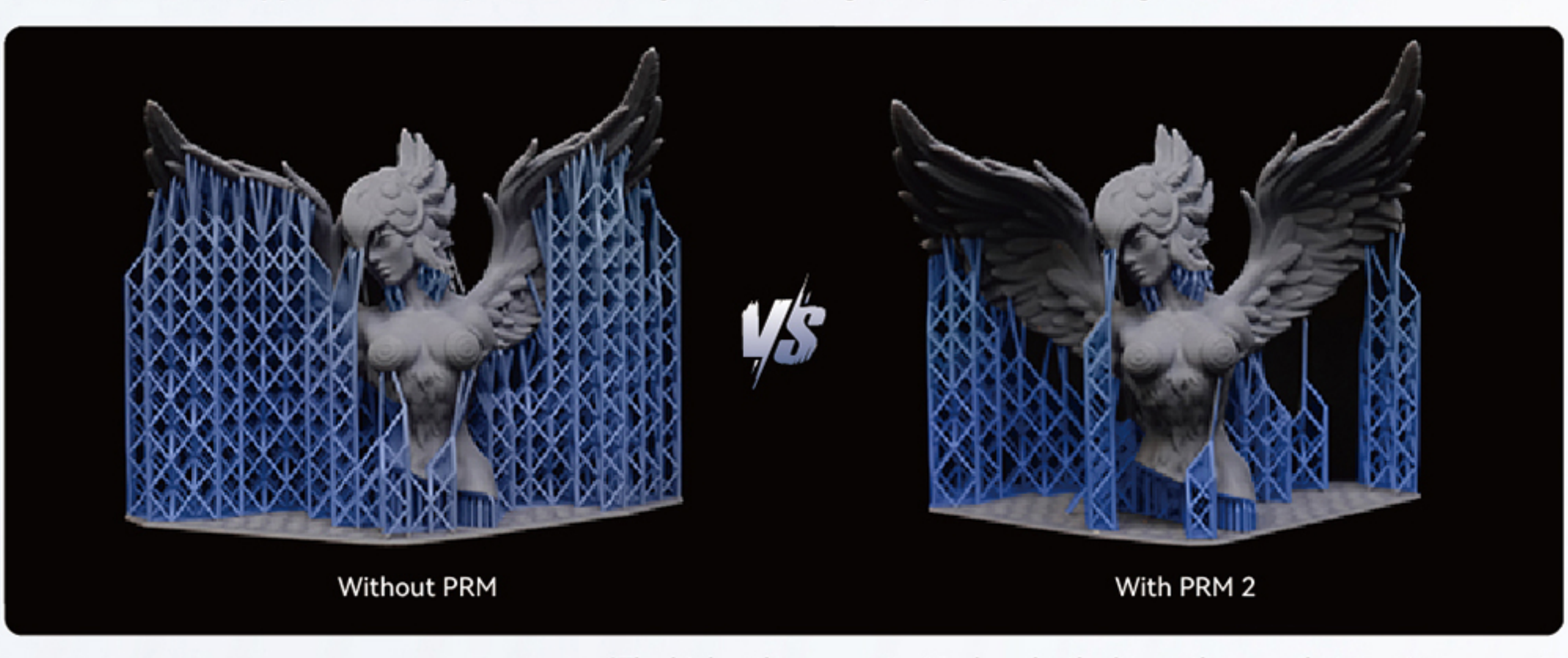


Without PRM **With PRM 2**

[1] Data sourced from HeyGears Lab, based on large-format models printed with Reflex 2 and PAP10 resin. The results may vary per model.
[2] The support critical angle is related to the angle between the model's surface tangent and the build platform's horizontal line. A larger critical angle for supports results in more of the model surface area being supported - support requirements will vary with model geometry.

Successful Prints with a Support Critical Angle as Low as 15°

The reduction in peeling force allows for a lower critical support angle*, which minimizes the number of supports and the area of support contact points, thereby streamlining the post-processing workflow.


Without PRM With PRM 2

*The higher the support critical angle, the larger the area that requires supports.

Push the Boundaries of Your Support Settings

The reduction in peeling force allows for more extreme support parameters: the diameter of the support contact point can be reduced by up to 30%, achieving up to a 70% reduction in the area of the support contact point.

Without PRM
Denser Support Points
Larger Point Diameter

With PRM 2
Optimized Support Points
Smaller Point Diameter

*Data sourced from HeyGears Lab, based on the model with PAU10 resin.

04 Pulsing Release Module 2 Specifications

Product Name	UltraCraft PrintBoost System
Product Model	UltraCraft Pulsing Release Module 2 (International Version)
Marketing Name	Pulsing Release Module 2
Input Voltage	24V DC
Rated Power	25 W
Module Dimensions	310×148×235 mm/12.52*5.83*9.25 in
Weight	3 kg

HeyGears was founded in 2015 as an innovation-driven company, devoted to providing digital manufacturing solutions in various industries. The company bases its core competencies in 3D printing, software development, materials, and big-data handling. We have a global presence with teams across North America, Latin America, Europe, Middle East, and Asia Pacific.

HeyGears believes in a product development process rooted deeply into vertical applications, and our vision goes beyond just 3D printing technology. We strive to create vertically integrated solutions through the solid establishment of hardware, software, material, and service platforms, delivering our goal to bring advanced technology into daily life.

HeyGears

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