



Additive Productivity: a new era in FFF professional 3D Printing is born

Sales Partners Info Europe #82 – Launch of Hyper Speed Upgrade Kit for Pro3 Series (HUK3)

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To: Main Sales Partner in Europe

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From: Diogo Quental, Managing Director - Europe (diogo.quental@raise3d.eu)

Dear Sales Partners,

We are thrilled to inform you that we're bringing to the market a breakthrough development for FFF 3D Printing: an upgrade kit for Pro3 series (the HUK3) that will make it print, on average, 3.8 times faster.

Kit contents

The HUK3 includes software upgrades, 2 high-flowrate Pro3 hot ends, a smart auto frequency calibrator, a spool of white Hyper Speed PLA, and a spool of natural Hyper Speed ABS.

Technology

In the wake of the development of high-speed for the RMF500, Raise3D managed to apply its learnings to its Pro3 series printers, achieving a speed 3.8 times faster than the current best professional printer available in the market.

The challenge was never to just instruct an FFF printer to print at a higher speed. Telling an FFF 3D printer to print at high speed is quite simple, and most manufacturers and users have tried it at some point. The challenge was to be able to do so in while keeping the same quality of layer adhesion and surface finish, in addition to the structural stability of the whole printer.

Raise3D can proudly announce that its R&D team has achieved this goal, initially for its Pro3 series dual extrusion 3D printer, for which the whole Raise3D's ecosystem - hardware, software, and filament - had to be adapted.

The Pro3 Series' strong and stable frame allows the printer to maintain high dimensional accuracy and excellent surface quality while running at extremely high acceleration and high speeds. Also, the Pro3's advanced onboard processors allowed Raise3D's R&D team to fully unleash the power of innovative motion planning techniques, and process over 600,000 steps per second to implement an active vibration cancellation algorithm.

The hyper speed solution is partially protected by Raise3D's existing patents.

Competitive Arena

Raise3D's analysis of the current competitive arena in the professional market is that with the Hyper Speed Upgrade Kit, the Pro3 Series current technological leadership becomes even more clear, and besides the already existing overall quality, it will undoubtedly be the fastest professional dual-extrusion printer in the market for some years.



This represents an opportunity for Raise3D to push the market to the next level of FFF and to substantially increase its current customer base, which is needed to fulfill its ambitious development plan. For these reasons, it has been decided to make available until the end of the year the HUK3 an exceptionally affordable price.

Performance

The results reached with the installation of the HUK3 in Pro3 series, and the use of filaments from the high speed lines are impressive and make it clear stand out for all other professional printers:

	Productivity	Volume Speed	Shell Speed	Infill Speed	Acceleration	Weight Consumption
Current Professional Market best printers	1x	6mm ³ /s	25 to 60mm/s	80 to 100mm/s	500 to 1,500mm/s ²	100 to 200g per day
Pro3 Series with full HUK3D installation	3 to 5x	28mm ³ /s	120 to 250mm/s	200 to 350mm/s	5000 to 10,000mm/s ²	600 to 1,000g per day

**All results with 0.4mm nozzle and 0.2 mm layer height.*

Filaments available

One of the challenges Raise3D faced while pushing for higher speed was the limitation coming from the filaments' flowability.

In FFF, as it is known, the deposited material lines are fused by the residual heat of the material and the pressure of the moving nozzle. However, when the printing speed increases by a factor of 4, the filament has very short time to melt from solid to a molten state, leaving the extruded material in a semi-molten state, with a hot shell and cold core, which can cause nozzle clogging and poor bonding quality between layers. Raise3D and their partners worked together to solve this challenge and is now launching two new filament lines for high-speed printing: the **Hyper Speed** and the **Hyper Core**.

The Hyper Speed is comprised of the more widespread filaments, while the Hyper Core is oriented towards more professional and industrial filaments, such as fiber-reinforced materials for industrial and end-use parts production and heavy-duty applications such as tooling, jigs & fixtures.

Both filament lines are optimized with balanced molecular weight and flowability, which allows them to have an excellent interlayer bonding quality and Z-direction strength, a smooth surface quality, and absolutely zero warpage, making it perfectly suitable for many functional parts.

The Hyper Speed line will initially have available PLA and ABS, but other materials, like PETG, PC, ASA, ESD-safe, among others, are already in the pipeline to be released.

During 2023, the Hyper Core line will also launch its first filament, PPA CF, which is a carbon fiber-reinforced composite filament with superior heat resistance, strength, and stiffness.

To enhance the number of materials available for their customers, Raise3D will now invite filament manufacturers to join a specific new stage of their Open Filament Program (OFP), focused on high speed filaments.

Additive Productivity, ROI, and Batch Size

The application of the Hyper Speed Upgrade Kit to Pro3 series printers allows it to achieve a speed on average 3.8 times faster than the current best professional printer available in the market. From Raise3D's calculations,



the boost in productivity is such that 3D printing service providers may be able to pay back their investment in Pro3 series printers in a matter of weeks.

The increased productivity shall also have a substantial impact on traditional manufacturing processes, like injection molding and CNC, in particular when the part produced may be subject to frequent or regular design changes.

With an increased productivity of over 3 times, the all-in cost of a Pro3 series printer becomes extremely affordable when compared to the usual price of even just the tooling required in other manufacturing processes. This, together with the full flexibility provided by additive manufacturing, makes now FFF 3D printing very competitive as a manufacturing method even for sizeable batches, and shall make print farms / print factories more and more common.

Sales Process to end Customers

Sales to end customers will start on the 10th of November.

The HUK3 is available to all customers who already have or will purchase Pro3 series printers and can be purchased from any Raise3D's sales partner or authorized reseller.

Once the purchase is made, the authorized reseller will provide a link (<https://support.raise3d.com/hs-upgrade>) for a Raise3D page where the customer can access a software update and receive the installation instructions for the hardware.

If the purchase is made until the end of 2022, an exceptional offer is available.

Sales Process to Sales Partners

Sales by Raise3D to Sales Partners are already possible from now.

The sales process is very much like all other products we have in the portfolio.

Sales Partners are invited to place their orders using our [Order Form](#), where the following information is available:

SKU	Description	Quantity	MSRP (EUR)
[S]3.01.1.024.058A01	Raise3D Hyper Speed Upgrade Kit (Pro3 Series Only)	1	€ 999.00
	<i>If purchased and sold to end customer by 31st Dec 2022</i>		<i>€ 699.00</i>
[S]3.01.1.024.056A01	Raise3D Hyper Speed Hot End 0.4mm (Pro3 Series Only)	1	€ 199.00
[S]3.01.1.024.057A01	Raise3D Hyper Speed Auto Calibrator (Pro3 Series Only)	1	€ 399.00
[S]5.11.19041A01	Raise3D Hyper Speed White PLA Filament	1	€ 36.00
[S]5.11.19039A01	Raise3D Hyper Speed Natural ABS Filament	1	€ 36.00

For purchases done until December 31st, 2022, the discounted price of 699€ for the **Hyper Speed Upgrade Full Kit** will apply, as long as the HUK3 are sold to customers still in 2022. For any remaining stock in 2023 of HUK3 purchased at the discounted price, Raise3D will proceed with a purchase price correction in Q1'23.

For easier follow-up, in 2022, we recommend Sales Partner to place separate orders for HUK3.

Limited Stock

The initial stock is limited.



For this reason, Sales Partners are encouraged to place their orders ASAP, both for the full HUK3 as well as for the high speed filaments, and also get ASAP the orders from their sales network.

If we get out of stock with the initial orders, we will arrange a second shipment by air, and will try to fulfill all orders still in 2022.

Sales without Stock

In case we have more customers wanting to buy the HUK3 in 2022 than the stock we have available, it's still possible for them to secure the discounted price of 699€.

In such case, the process will be the following:

1. Customer buys HUK3 from authorized reseller, and receives the link for Registration
2. Customer accesses the registration link and chooses the option "Pre-Registration", where customer will be asked to provide the SN of the Pro3 series printer owned and upload an invoice of the HUK3 purchased;
3. Raise3D will receive the pre-registration form and inform the reseller and distributor, so that any existing stock in Europe can be immediately allocated to serve those customers;
4. In the end of the year, Raise3D will check the existing pending Pre-Registration situations, and make sure with each distributor that to all sales without stock there is a corresponding invoice by Raise3D waiting to be fulfilled.

Training and Testing

The first batch of units arrives to Europe on the 8th of November, after which we will start immediately shipping to fulfill your orders.

Unfortunately, we don't have any kits available for you to test before that date.

The initial training will happen in the **Monthly Tech Meeting, on the 10th of November**, provided by Yu Zhang. Then, once you receive your first order, we recommend you contact Yu Zhang to arrange a hands-on training, where you may also want to include your resellers.

For those who still didn't provide to Yu Zhang the SN of the Pro3 Series demo printer you will allocate to the testing, please do so at your earliest convenience.

Installation Instructions

Raise3D will have a "How-to" article being released on the 10th of November which shall be sufficient for customers to do the installation by themselves.

Besides the article, together with the unboxing video Raise3D will provide an instructional video for customers to see how to install the HUK3. The video release is planned for the 30th of November.

Webpage, Launch Event and Showcase

At 10:00 CET on November 10th, 2022, Raise3D will host a virtual launch event where you will learn everything you need to know about this new breakthrough in 3D printing.

The launch event video will be available on [Raise3D's official YouTube channel](#), as well as on a Raise3D's [Hyper FFF webpage](#).



For those who may also want to see and experience the Hyper Speed live, Raise3D welcomes them in their booth ([Hall 12.1, Booth C10](#)) at Formnext 2022, from the 15th to 18th of November.

Information to all authorized resellers

Raise3D will be sharing very shortly information with authorized resellers.

We urge all our Distributors to contact their resellers network, and try to get their support to the following actions:

1. Re-share the “teasers” promotion that Raise3D will run from the 1st of Nov till 7th of November;
2. On the 1st of November or as soon as possible:

Send newsletter to their customer base inviting them to check the launch event video which will be available on [Raise3D's Official YouTube Channel](#) from the 10th of November, and learn all about the hyper speed technology and how it will bring FFF professional 3D printing to the next level (please check the “Marketing Assets” folder, to have access to the newsletter template).

3. After the 10th of November:

Send newsletter to their customer base confirming the launch of HUK3, inviting them to watch the launch event video available on [Raise3D's Official YouTube Channel](#), and the [Hyper FFF webpage](#) on Raise3D’s website, where all relevant information will be available.

This newsletter shall also be used to invite Pro3 series’ owners to take advantage of the special deal (HUK3 for 699€) available till 31st of December 2022.

Marketing Assets

You can find the marketing assets available in this folder: [Hyper FFF Upgrade Kit Pro3 Series](#).

Confidentiality

To be aligned with Raise3D’s launch plan defined by the marketing team, Sales Partners are asked to ensure that no public information is released regarding the HUK3 before the official launch by Raise3D on the 10th of November.

Future

The Hyper Speed will also be available in RMF500, the industrial printer developed for Fast Production of Large composite End-use Parts, and Raise3D is now also working to make it available to other printers, in their portfolio, that have the same mechanics as Pro3 series.

Let us know if you have any questions.

Best regards,

Diogo