



BUILT FOR BUSINESS

XCEL 3D PRINTER

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XCEL SPECIFICATIONS

PRINTING SPECIFICATIONS

Layer Height	Positioning Precision	Extruders	Filament Diameter
10-600 Micron	DW/H: 18/10 Micron	1	1.75mm

PHYSICAL DIMENSIONS

Depth	Width	Height	Body Construction
1050 mm	900 mm	2850 mm	Aluminium

BUILD VOLUME

X	Y	H
550 mm	500 mm	2200 mm



ELEVATE TO NEW HEIGHTS

3D printing has already proven its feasibility in many industries for small format printing projects. With further developments, organizations have come to realize the need for larger printing formats for many engineering needs.

These organizations want the same quality, ease of use and performance for these larger printers. The challenge is to be able to achieve these needs at a cost-effective price point.

With this knowledge, we developed the Xcel 3D printer. It opens new possibilities with large scale 3D printing for rapid prototyping.

This gives our user better options when testing out new prototypes at any size without compromises.



FEATURES

LARGE FORMAT

The need for larger print models is crucial for many manufacturing companies that need to have the option. Industries include aviation, architecture and other engineering fields.

The XceL has a build volume of 550 x 500 x 2220 mm which yields a total volume of 610 L to fit any print. These dimensions ensure the ability to print most large format models for most organizations.

Stability, consistent print quality and reliability are key for most industrial users. In order to satisfy these high demanding users the XceL has been designed out of high grade parts.

The frame consists out of a 5mm laser-cut aluminium frame reinforced by 45x45mm extrusion profile ensures stability. The linear movement components from Hiwin supported by CNC milled aluminium components ensure low maintenance costs and high precision movements.

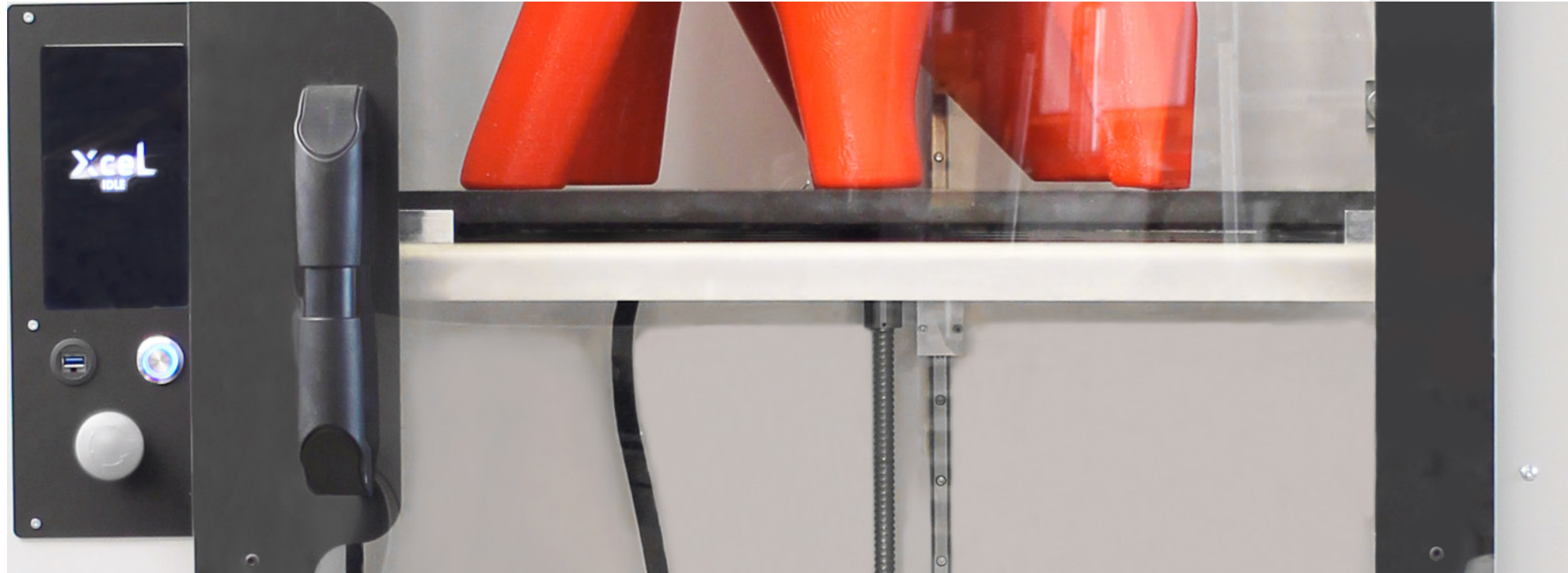
The print-head is equipped with E3D hot ends to ensure a constant extrusion flow, quick heat-up time and printing with high-detail. Depending on your needs, nozzle sizes between .6mm and 1.4mm can be equipped to find a perfect balance between detail and speed.



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XCEL PRINTER





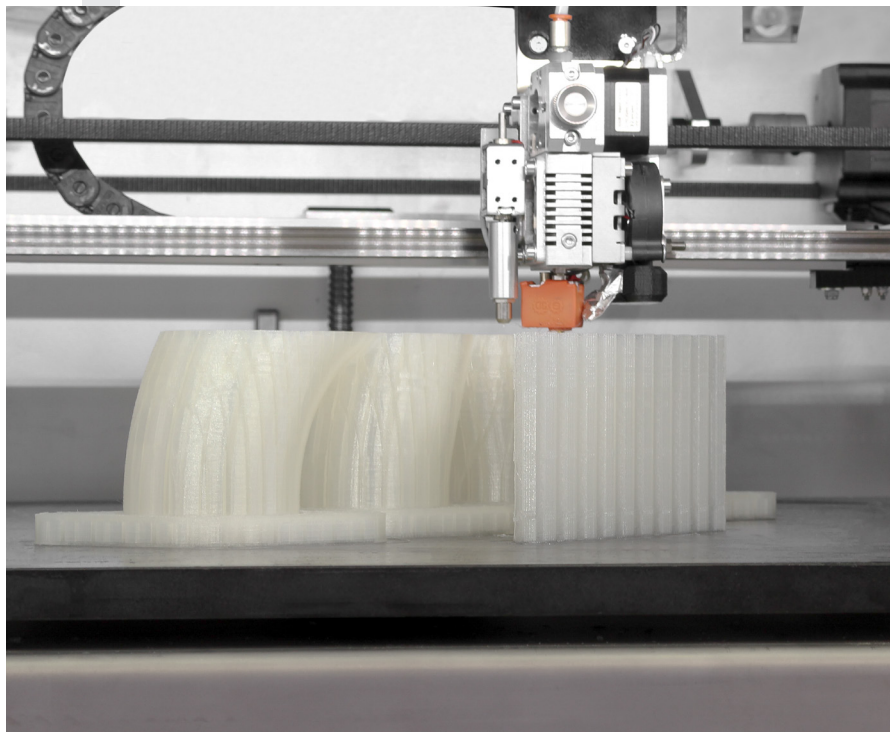
AUTO-BED LEVELLING

Due to the large print volume, the challenge for the printing process is to allow better work-flows that give users time to focus on other tasks. To achieve this we added an automated bed levelling system.

A bed levelling is crucial for when printing because it is a good indicator of how well the first layer will be printed and subsequently the end quality of the print job. A good bed adhesion is crucial. Especially with tall prints, forces can increase. The bed levelling ensures this.

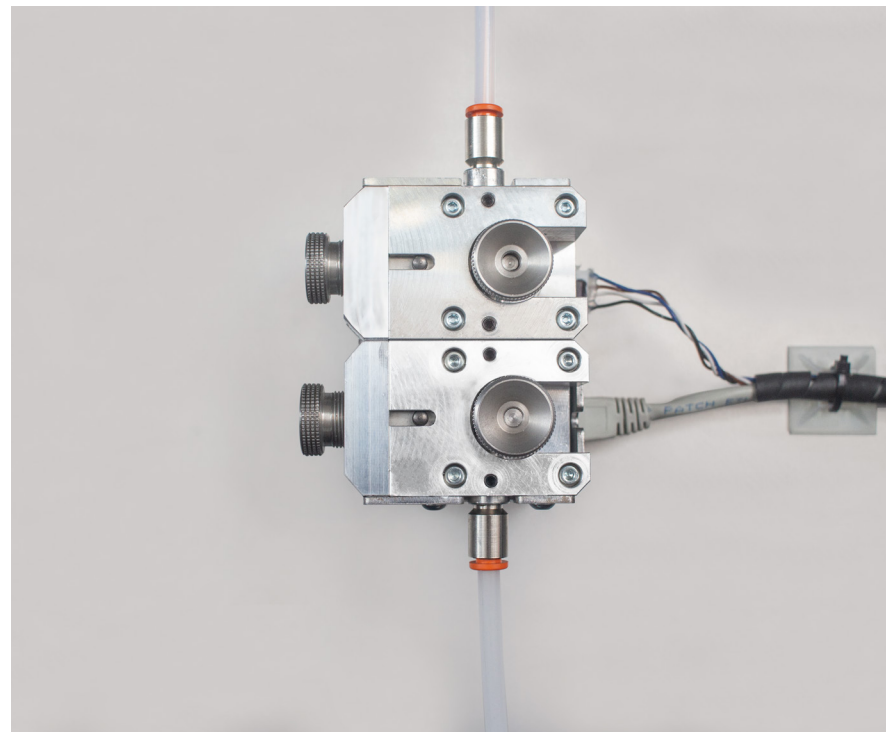
The fact that it is automatically ensures repetitiveness, saves time and measures within a precision of 0.05mm .

Auto bed levelling is activated immediately when a print job is started, which leads to an optimized work-flow for the operator which saves time for the printing process and reduces human error.



Using the right print bed has a significant impact on print quality. Especially when printing large objects. Having an ultra-flat bed with great product adhesion will reduce a lot of basic printing problems that you may face. To achieve this, we use a Granite print surface for a number of reasons.

Granite is an extremely material which distributes heat very well. Our granite beds are ground flat to extreme precision. The combination of extreme flatness and perfect heat distribution ensure that even materials that show significant warping stay attached to the bed for a perfect print result. The thickness of the rock also acts as an anchor for large prints and does not expand when heated which aids in the printing process.



FILAMENT MONITORING

The Xcel has a built in system to monitor filament flow from the spool to the extruder during the printing process. This means the Xcel can detect if there is an obstruction or if the filament has run out.

The machine will automatically pause when detecting such a situation which will give the operator the option to replace the spool or resolve the obstruction issue.

INTELLIGENT

The XceL can be fully controlled on the 7 inch touchscreen. This makes it easy to use for even untrained personnel. The user interface was designed to be easy to use while offering a range of options on the printer that offers full control of the printing process.

Additionally, the option to connect the XceL to your local network through cable or wifi and use the on-board storage for stand-alone printing is added.

When logged in, the XceL can then be controlled from any device with network capability and a browser, allowing you the upload, start, pause, stop and monitor your prints.

Monitoring your prints can be done with the (optional) built-in web-cam that allows you to track the progress of your print at any time.



AUTO SHUTDOWN



ON-BOARD STORAGE



MULTI-PLATFORM



USER PRIVILEGES



AUTOMATIC UPDATES



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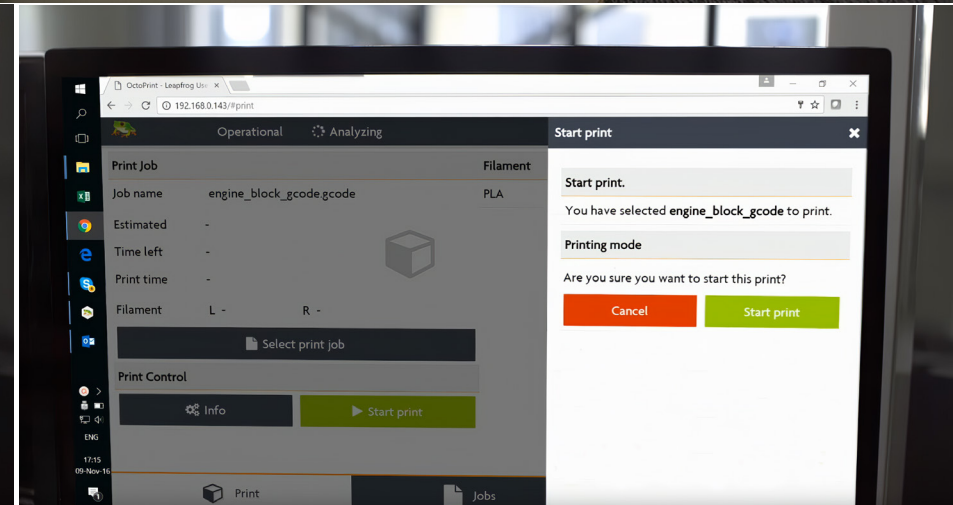
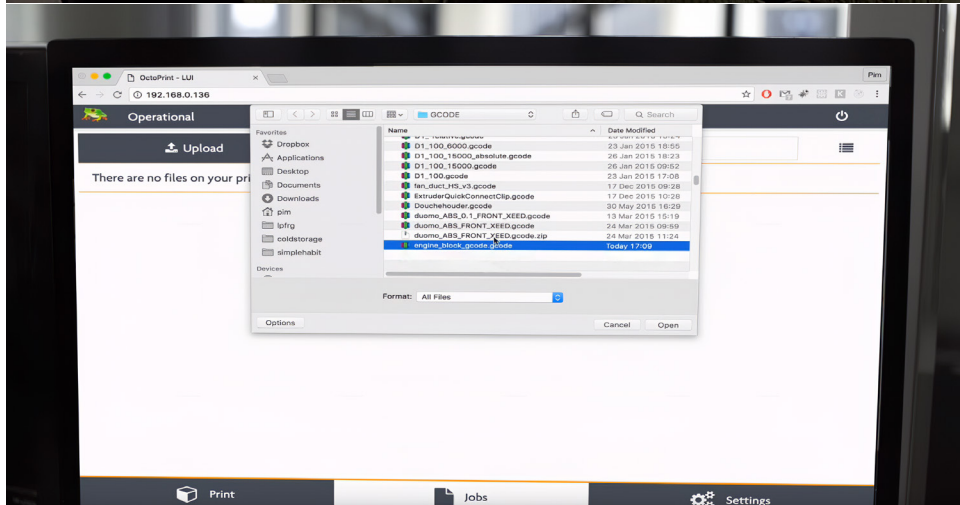


WEBCAM



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XCEL PRINTER



Easily monitor your printing process from anywhere.

BUILD CAPACITY

- Print with temperatures up to 300°C
- Control printing with full enclosure
- E3D Extruder nozzle sizes:
 - 0.6mm
 - 0.8mm
 - 1.0mm
 - 1.2mm
 - 1.4mm

SAFETY

- Emergency Stop Switch
- Enclosed Environment
- Silicon Sleeve for Hot-End
- Maximum Temperature Warning



PRINTING

- Access and control from anywhere with built in web-cam
- Step by Step maintenance program
- Multi language options
- Online Software updates or from USB
- 32GB Storage which is upgradeable

BUILD FRAME

- Direct Drive Extruder with adjustable filament tensioner
- CNC milled parts
- 5mm laser cut frame
- 45x45mm Aluminum extrusion

WORK-FLOW

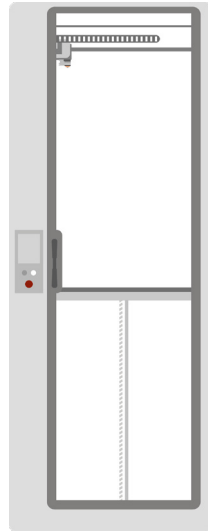
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XCEL PRINTER



1. Create a printable file

First you will need a CAD model of the desired part. Export the file in the STL format and import it into Slicer software like Simplify 3D which is compatible with the Xcel. Select your material profile, print speed and more and then prepare the file for printing.



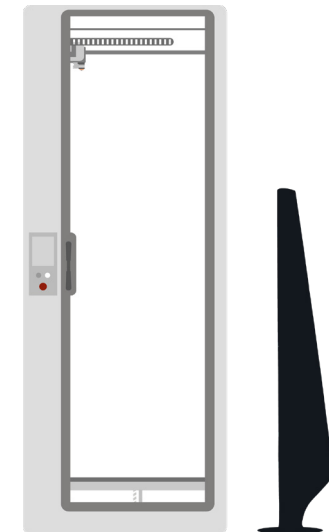
2. Send file to printer

After exporting the file as a G-Code, transfer it over your network to your printer or you can use a USB thumb-drive.



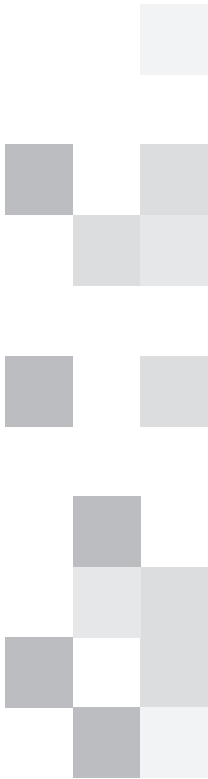
3. Prepare the printer

Load your desired filament. Apply adhesive onto print bed and load the G-code of the print model.



4. Start print

Your print job will start after pressing the start button in the menu. The Xcel will initiate the automated calibration sequence followed by your print job.



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DESCOS DESIGN TESTIMONIAL

While the body of the butler is shaped organically and therefore complex for most production techniques, 3D printing stood up to the task. The height of the body (around 1 meter) made it a challenge, which was easily tackled by the Xcel's 2 meter height building platform. And by 3D printing, it only took 2 days to produce the two parts.



CLEAN MOBILITY ENGINEERING TESTIMONIAL

“Through using 3D printing we are hoping we can create more sets of blades for our team. We are also hoping to find a way to 3D print the diffuser ring, which is a really big part of the project. If not for 3D printing, the blades are usually made in segments, bonded together with glue and then laminated over. This process takes about two months, while with the help of Leapfrog 3D Printers the blades took only a month. 3D printing has also enabled us to save money. It takes away aluminium, which is a big reduction on costs. However, we believe more than anything that 3D printing saves time.”



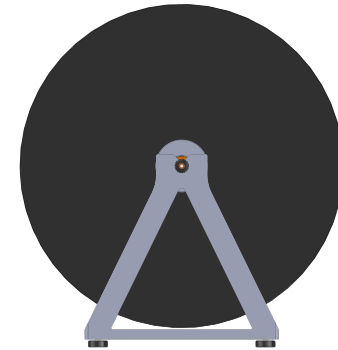
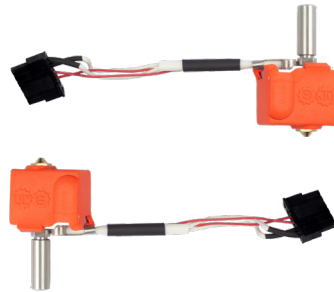
TECHSLEEVES ENGINEERING TESTIMONIAL

1. **Customization.** Having to deal with customer-specific products, each sleeve or bridge that goes into their machines has to be custom made; at this moment 3D printing is the most efficient tool to use for such demands offering ideal costs and time;
2. **Weight reduction.** With the parts now created with the help of the Xcel, the company discovered another advantage; the weight is considerably lower than before, reducing manipulation issues and creating a more reliable machine;
3. Improved performance – both the costs and time of production are now at optimal values not only for the company but also for the final client

XCEL OPTIONS

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XCEL PRINTER



3D PRINTER TRAINING

Live training for your 3D printer

HIGH TEMPERATURE HOT-ENDS

- Nozzle sizes 0.6mm, 0.8mm, 1.0mm, 1.2 mm, 1.4mm
- Brass nozzles (standard) or tool steel for abrasive materials
- Silicon sleeve for heat insulation
- Quick and easy procedure to swap hot end

EXTENDED WARRANTY

This product provides the customer an additional year of warranty on the Leapfrog Xcel.

FILAMENT OPTIONS

- Spools from 750g and up to 25kg
- Open Filament System
- Adjustable print-head for experimental filaments.



SOLUTIONS FOR RAPID PRODUCT DEVELOPMENT

LEAP FORWARD

LEAPFROG 3D PRINTERS

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