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yndetech

# Dental implant manufacturer achieves cleaner laser melting production process

## Yndetech simplifies metal powder handling with the Russell AMPro®Lab Sieve Station

Yndetech uses digital technologies to design and manufacture dental products and implants. The company produces fixed and removable prosthetics, orthodontic devices, and other components for over 2,000 dentists and dental technicians across Italy and Southern Europe.

Founded in 2016, Yndetech provides a 24-hour turnaround service for dental implants. Dentists and dental technicians submit their requirements online before they are added to a virtual plate ready for manufacturing at one of the company's three production sites: Fano, Rome, and Lecce. Yndetech uses laser melting, milling, and 3D printing to produce around 1,000 teeth daily across 200 to 300 parts (crowns or bridges).

The dental implant manufacturer's primary production method is 3D metal printing through laser melting. Yndetech selected the DMP Flex 100 and 200 printers from 3D Systems to produce high-quality parts, and nine of these 3D metal printers are installed across its sites.

Yndetech dental implants

Yndetech uses cobalt chromium and titanium to manufacture implants through laser melting. These metal powders allow Yndetech to produce certified biocompatible dental products with a high resistance to wear and corrosion, as well as a smooth surface finish that prevents bacteria growth.

## The challenge

At the manufacturer's Lecce site, three 3D metal printers produce dental implants. However, the powder sieving machine at this site exposed operators to cobalt chromium and titanium powder, creating health and safety risks and requiring extensive operator involvement, which caused downtime in production.

A further challenge was that the sieving process in Lecce was carried out using a manual sieve, which was time-consuming, so Yndetech was keen to find an alternative.

As a result, Yndetech began researching sieving technologies to identify an AM powder recovery machine that could handle the output of multiple printers and protect operators from powder exposure.

## The solution

Yndetech was referred to Russell Finex because of its range of sieving machines, especially for additive

manufacturing. Yndetech met with the Russell Finex sales engineer and discussed the different options for the manufacturer's powder handling.

The dental implant manufacturer purchased the Russell AMPro®Lab Sieve Station because it is a compact machine providing a cleaner sieving process. The non-vibratory sieve unit easily connects with 3D printers and reclaims small batches of powder.

The Russell AMPro®Lab Sieve Station was installed at Yndetech's Lecce site, where it sieves powders for the multiple 3D metal printers in operation. The machine's bottle-to-bottle system contains the powder and prevents it from coming into contact with operators.

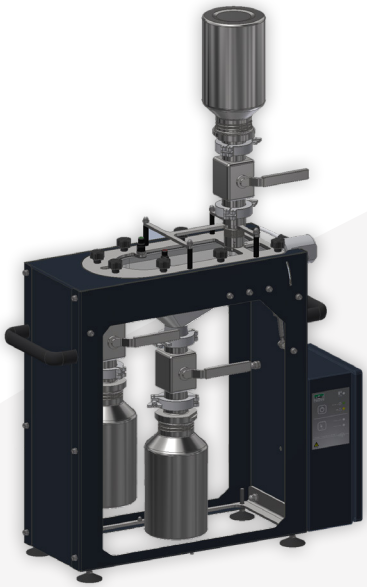
Yndetech has also benefited from the lower noise generated compared to its previous sieving machine. The Russell AMPro®Lab Sieve Station uses the Russell Vibrasonic® Deblinding System, which ensures quieter machine operation.

After experiencing the cleaner powder sieving process provided by the Russell AMPro®Lab Sieve Station, Yndetech is planning to invest in a second machine for use at another of its production sites.

> "We've been using the AMProLab at our Lecce site. The machine is compact, silent, and allows us to sieve the powder in a very clean way, which dramatically improves the safety of our operators. It's really simple to use. Our next goal is to have one AMProLab in Fano as well." said Francesco Grande, Chief Technology Officer.

In addition, Yndetech has been able to rely on ongoing support from the Russell Finex team. This service was essential given the pivotal role of laser melting in Yndetech's dental implant production.

Grande continued, "Our experience with Russell Finex was excellent, both for the quality of the equipment and the technical support we received. For companies like ours, it's crucial that we can count on after-sales support, as it gives us peace of mind."



## The Russell AMPro®Lab Sieve Station

### Key benefits:

→ **Improved health and safety**
Enclosed sieve system avoids powder exposure

→ **Compact and mobile design**
Benchtop lab scale unit processes smaller powder batches from 1-4L

→ **Low noise levels**
Russell Vibrasonic® Deblinding System ensures quieter operation

## About Russell Finex

Founded in 1934, Russell Finex designs and manufactures sieving, filtration and ultrasonic deblinding equipment for a range of industries. With its head office in the U.K. and subsidiaries in Belgium, the U.S.A., India, Brazil, and China the company supplies to over 140 countries. **Contact** Russell Finex today to find out more about its range of sieves, separators, and filtration equipment.

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