

100% PURE 3D-PRINTED TUNGSTEN PARTS

# DUNLEE INVESTS INTO FIVE NEW 3D TUNGSTEN-PRINTING MACHINES



*DMLS factory for mass production of high-precision 3D-printed tungsten parts.*

Dunlee, the pioneer of pure tungsten 3D printing further expands capacity due to increased order intake and rising interest in printed refractory metals.

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**Dunlee, a Philips brand, has been developing and manufacturing pure 3D-printed tungsten parts for more than ten years.** In fact, Dunlee is the only manufacturer to produce pure 3D-printed tungsten parts with a wall thickness of 100 micron, which is even thinner than an eggshell. Following increased interest in tungsten, which is the perfect choice for demanding applications such as shielding against high temperatures and radiation, an investment into five new

highly specialized machines has been completed. This is a clear commitment to growing and establishing the Dunlee 3D printing service as the leading provider of 3D-printed tungsten parts.

**DUNLEE**

### Continuous business growth requires more machine capacity

The ongoing growth is based on two positive developments. Firstly, more and more medical customers that manufacture CT systems have finalized the design-in phase and are starting to release the printed tungsten parts to volume production. They are ramping up their orders to high volumes (thousands per year), which makes Dunlee the only provider of printed tungsten capable of providing the required high volumes in repeatable quality. Secondly, 3D printing overcomes the old barriers of design and processing limitations of tungsten that restricted the use of this metal. Customers coming from diverse industrial applications are just starting to understand the benefits of this new technology, "We are at the outset of developing new applications but are already seeing great interest from companies with very challenging requirements. Promising activities are already underway and we are constantly working to improve and expand our manufacturing capabilities," explains Peter Hoogerhuis, Head of Operations.

### Highly customized machine park with a capacity of many thousands of tungsten parts per year

Due to the hardness and the high melting point of tungsten, Dunlee requires very special, customized 3D printers. Right from the start, Dunlee has been working in a very close technical cooperation with EOS, a leading provider of direct laser metal sintering machines and purchased five new specially fabricated printers. In total, the facility now counts eleven 3D metal printers based on the DMLS technology, which makes Dunlee the leading provider of 3D-printed tungsten parts in fine detailed resolution. Dunlee is also making further investments into special testing equipment that allows faster tests and thus faster development of new process capabilities (e.g. rapid prototyping of new tungsten part designs).

### Specialized and experienced partner for demanding applications

Being part of Philips, a leading health technology company, Dunlee exactly knows and understand the very demanding requirements of medical customers. This knowledge, together with our long experience of processing pure tungsten, makes Dunlee the ideal partner for demanding parts in extreme applications. One of the biggest challenges in ramping up 3D printing capacity is to achieve a consistently high level of quality. Repeatability of design and quality is crucial when producing the same part in high volumes, especially in fine-detailed resolution. This reproducibility is not only of great importance for medical companies but is, of course, also very beneficial for every customer that is looking for highest quality for this special tungsten manufacturing process. We at Dunlee are proud to provide exactly the repeatable quality needed.



Multiple thousands tungsten parts per year can be manufactured in the newly expanded facility.



Big team of industry experts is ready to leveraging maturity of other processes to the new machines to ensure a fast ramp-up.

**For more information, please contact  
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