



# aeroswift

The Aeroswift project was established to develop the world's largest and fastest powder bed metal 3D printer. The end goal of the project is to supply a variety of 3D printed metal parts to Aerospace OEM's. The Aeroswift machine was developed by Aerosud Innovation Centre in close collaboration with the CSIR National Laser Centre and funded by the Department of Science and Technology (DST).

Additive manufacturing (or 3D printing) is a relatively new manufacturing technology. The technology is used to manufacture parts layer-by-layer, directly from computer generated 3D models. With Aeroswift technology, parts can be "built" by sequentially melting layers of fine metal powder with a laser.

The Aeroswift system has the ability to produce parts that are substantially bigger than what is achievable with current state of the art systems. Parts can also be produced up to ten times faster than with present systems. The large build volume of the Aeroswift machine does not only allow for the production of large parts (up to 2m x 0.6m x 0.6m) but also allows for the production of large batches of smaller parts.

Aeroswift started producing Aerospace parts in 2016 for the locally developed AHRAC aircraft with first flight testing in 2017. The technology is delivering on expectations of producing high-quality material at improved production rates.

Aeroswift has the potential to revolutionise manufacturing by allowing for the production of large, highly complex parts, with minimal material wastage. Increased production rates, coupled to the design freedom offered by the technology, can lead to drastic cost reduction in various industries, including Aerospace.



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