

OPTIMISING MACHINE FEET WITH NTOP



Ricoh 3D sought the support of MSL, specifically in relation to their expertise with the use of nTop - the next-generation of engineering design software.

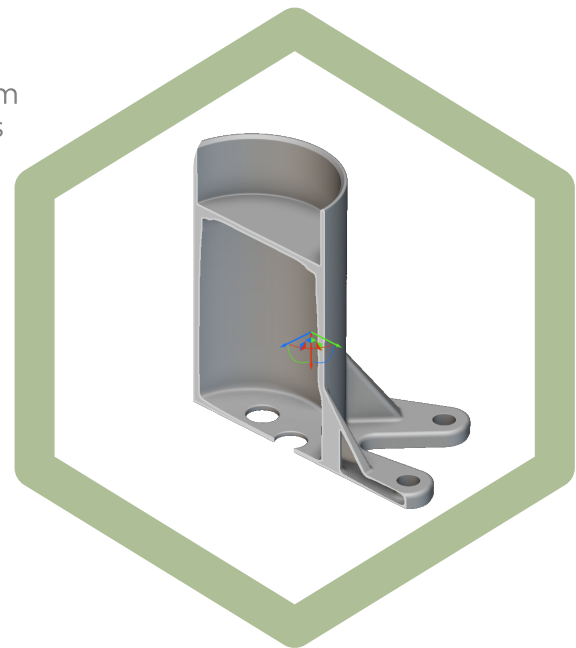
Ricoh 3D needed help to create a print-on-demand solution for a bespoke automation system, that a high-profile global food company required. Specifically, Ricoh 3D required an access kit: to create a complex part enabling heavy manufacturing equipment to be raised off the floor, in the form of 'machine feet'.

THE CHALLENGE

One challenge was convincing the customer that this alternative solution would work more effectively; swaying them away from symmetrical and over-engineered large steel works and convincing them, that the solution would still have the performative ability to hold a machine of circa 500kg.

Having seen examples of optimised parts designed by MSL using nTop, the engineers at Ricoh 3D were inspired to adopt a new approach.

Utilising MSL's nTop expertise enabled Ricoh 3D to take a more advanced engineering approach to the design and development of the machine feet. In addition to which there was a much shorter lead time with this approach meaning it was also more cost-effective.



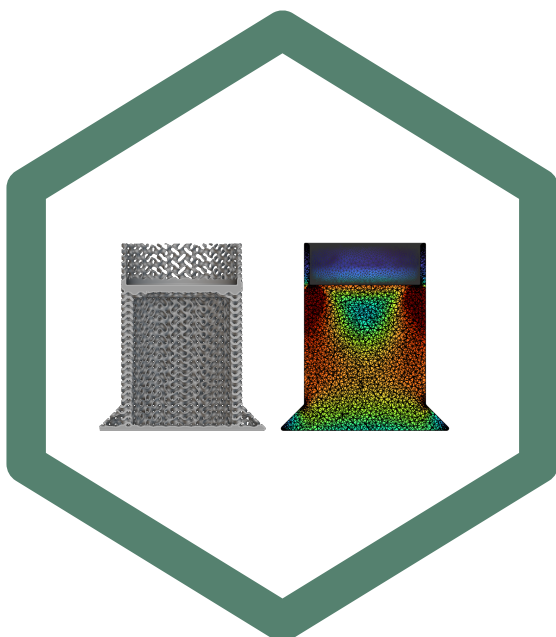
Watch to see how the workflow was created



THE RESULTS

As part of this project 12 machine feet were created, adopting nTop software to optimise the machine feet meant they could safely account for the total weight of the machine at 500kg.

The global customer requested that each foot be designed to withstand 60kg load and the load capacity has been exceeded at a safety factor of 2 (120kg maximum load limit). Destructive testing was also undertaken in-house at Ricoh 3D to confirm the level of performance.



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