



### SLS - How it works

SLS technology utilises a CO2 laser to fuse or melt together (sinter) pre-heated fine nylon powder in 0.1mm layers under an inert atmosphere. The laser is guided by a computer controlled set of mirrors driven from an stl file.

The build platform and the model gradually step downwards by the layer thickness, as the powder feed pistons alternately rise to provide a fresh charge of powder for the roller to accurately spread over the build area.

Once setup and running the machines run unattended, allowing 24/7 production for an extremely fast turnaround service.

The process does not require any support structure (unlike [SLA](#) ) during part build and this

allows the full 3D volume of the machine to be used to build parts. This means multiple (different) parts can be stacked in the build leading to very efficient use of capacity.

On cooling the finished models are broken out of the 'Cake' of unsintered powder, brushed clean and given a light air blast. They are then checked, measured, bagged, labeled and then carefully packed and shipped to the customer.

This whole process can often take less than 24 hours.