Pollux 32

Pollux for Bright solutions

Additive production in small- and medium-sized batches has suddenly become much more profitable thanks to the additive production method called SMS (Selective Mask Sintering). This is the start of a new era in additive fabrication. It has developed from single-point sintering, as in the traditional SLS method, to melting the whole layer in one flash. One and the same machine produces parts from various materials as well as tools for thermoforming and for casting. The material used for thermoforming is permeable to vacuum, making drilling of vacuum channels unnecessary. This saves a lot of time in the design phase and gives you a very good surface finish.

The mechanical strength of the materials is developed to fulfill the demands of the specific application. Materials can be used for producing end user parts as well as functional prototypes in the SMS system.

Need for speed?

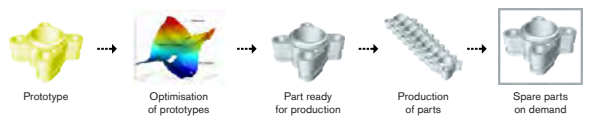
Product life cycle is becoming shorter and shorter and manufacturers have to maintain a fast product development in order to stay competitive.

Sintermask can shorten your product development time and shorten the time to market for plastic parts, by utilisation of the SMS process. The SMS process is used from the first prototypes, through production and finally supply of "Spare parts on demand". Spare parts on demand will reduce logistics drastically, save storage space and release working capital.

Some steps in the traditional development will simply be eliminated. The development time can be shortened with more than 30 weeks for a product with complex tools for injection moulding. The design freeze can be done later with more time for optimisation or the time to market can be shorter. The input required by the SMS machine in order to start production is only files coming from 3D CAD systems.

Once the machine has received the 3D CAD model of the product that you want to make, and the file has been sliced, then the sintering process starts layer by layer at a speed of 20–35 mm/h in the z direction, depending on the layer thickness. The layer thickness can be varied between 50–120 µm. Processing time per layer is the same, regardless of the number of parts being produced or their shape within the build area. The maximum build envelope is 210 mm x 300 mm x 500 mm. The machine operates safely, without the need for a nitrogen supply.

PRODUCT LIFE CYCLE



Lowest part cost for warm processes with additive fabrication technology

Fastest process, short cycle times and short time to extract parts from the build chamber

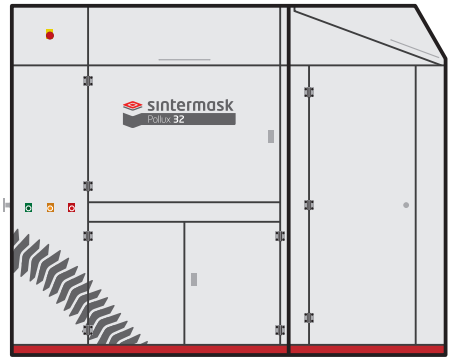
Best mechanical properties for the parts produced

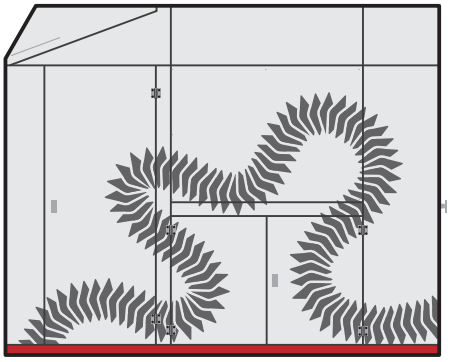
Most flexible process with regard to using different build materials

Possibility to reuse material is more than 80%

Technical data

Technology	SMS (Selective Mask Sintering)
Build speed	10–20 seconds per layer
Build envelope	210 mm x 300 mm x 500 mm (W, D, H)
Resolution Z	50–120 µm
Build height per hour	20–35 mm
Material	According to requirements of the specific application
Support structures	Not necessary
Nitrogen supply	Not necessary
Power requirement	3 x 230 V (400V phase to phase, 230V phase to neutral)
Power consumption	Average 3 kW; peak 11 kW
Dimensions	125 cm x 210 cm x 170 cm (W, D, H)
Data file input	STL file
Software	Windows XP
Connection	Ethernet TCP/IP





Sintermask Technologies AB
Krokslätts Fabriker 30, SE-431 37 Mölndal, Sweden, +46 31 338 39 90, www.sintermask.com