

Energy Efficiency Report

EOS P 396 and EOS P3 NEXT

This report demonstrates the improved energy efficiency of the EOS P3 NEXT system compared to its predecessor, the EOS P 396. Energy consumption is analyzed across three distinct phases: heat-up, building, and cooling. It varies depending on the size of the build job and the number of parts within a single job setup, as indicated by the nesting density.

To illustrate the enhanced efficiency of the EOS P3 NEXT system, we present energy consumption data for two representative build job setups and highlight the reduction in energy usage. One setup represents a standard qualification job, while the other is a full-sized demo job.

For comparison purposes, both calculations were performed using build times for PA 2200 with a 120µm parameter set. The results are based on actual job durations and measured consumption data from EOS internal laser sintering systems.

Example 1: Qualification Job

Build height: 92.2 mm
Nesting density: 5.8%

EOS P 396		EOS P3 NEXT	
Duration (incl. heat-up and cooling) [h:min]	Energy consumption [kWh]	Duration (incl. heat-up and cooling) [h:min]	Energy consumption [kWh]
15:58	12.8	3:51	10.4

19% reduction of energy consumption

Example 2: Demo-Job

Build height: 621.3 mm

Nesting density: 14.9%

EOS P 396		EOS P3 NEXT	
Duration (incl. heat-up and cooling) [h:min]	Energy consumption [kWh]	Duration (incl. heat-up and cooling) [h:min]	Energy consumption [kWh]
49:54	86.1	28:59	65.7

24% reduction of energy consumption

