

# Laser-sintering offers the possibility to directly produce a functional fuel tank prototype

## EOSINT P - Fully functional fuel tank in 4 days

### Requirement:

- fully functional fuel tank

### Solution:

- laser-sintering with EOSINT P 700 using polyamide material

### Result:

- highly representative parts in record time
- 75 % time savings
- 25 % cost savings



Project partner: **FKM**  
Sintertechnik

# Laser-sintering offers many advantages with the production of functional prototypes

## EOSINT P 700 with Polyamid

### Requirement:

- fully functional petrol tank for:
- data verification
- assembly tests
- functional tests
- tool design

### Solution:

- laser-sintering with EOSINT P 700 using polyamide material



Project partner: **FKM**  
Sintertechnik

# With laser-sintering the prototype can be built within the shortest time

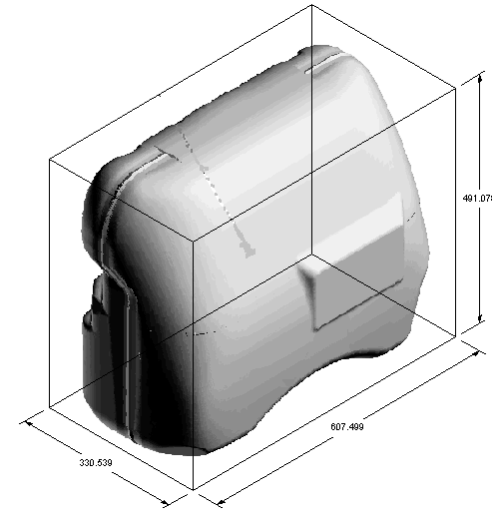
## Project progress: Day 1 to...

### data preparation

- part dimensions:  
607 mm x 330 mm x 491 mm
- data preparation 15 min

### Build process

- build time: 33 hours



Project partner: **FKM**  
Sintertechnik

# Within 3 or 4 days the laser-sintered prototype is ready for use

## Project progress: ... by the 3rd or 4-th day

- cooling (outside the system) 1 day
- unloading the part
  - remove from exchangeable frame system & remove loose powder 60 min
- Finish
  - Option (depending on wall thickness):  
Infiltration with PU 1 night  
Heat treatment for PU 5 hours



Project partner: **FKM**  
Sintertechnik

# Laser-sintered prototypes can be used for multiple purposes

## Application possibilities of the polyamides EOSINT P

- PA 2200 & PA 3200 GF:
  - mechanical properties
  - chemical resistance
  - heat resistance
  - density of sintered parts
  - high performance under pressure
- Suitable for many container application
  - fuel or oil tanks
  - brake fluid or cooling water reservoir
  - wind screen washer reservoir
  - ...



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Sintertechnik

# Laser-sintered prototypes offer time and cost savings

## The view of the user

### Result:

- highly representative fully functional parts
- great time and costs savings
- time savings: 75 %
- cost savings: 25 %

*"With fully functional, laser-sintered containers in one piece using EOSINT P 700 with PA we help our customers to cut cost and time significantly in their R&D projects."*

Jürgen Blöcher, CEO FKM Sintertechnik



Project partner: **FKM**  
Sintertechnik

# The unpacking of the laser-sintered prototype



Project partner: **FKM**  
Sintertechnik

Source: EOS, FKM

EOS 2006 · Case Study P FKM FuelTank · FP

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