

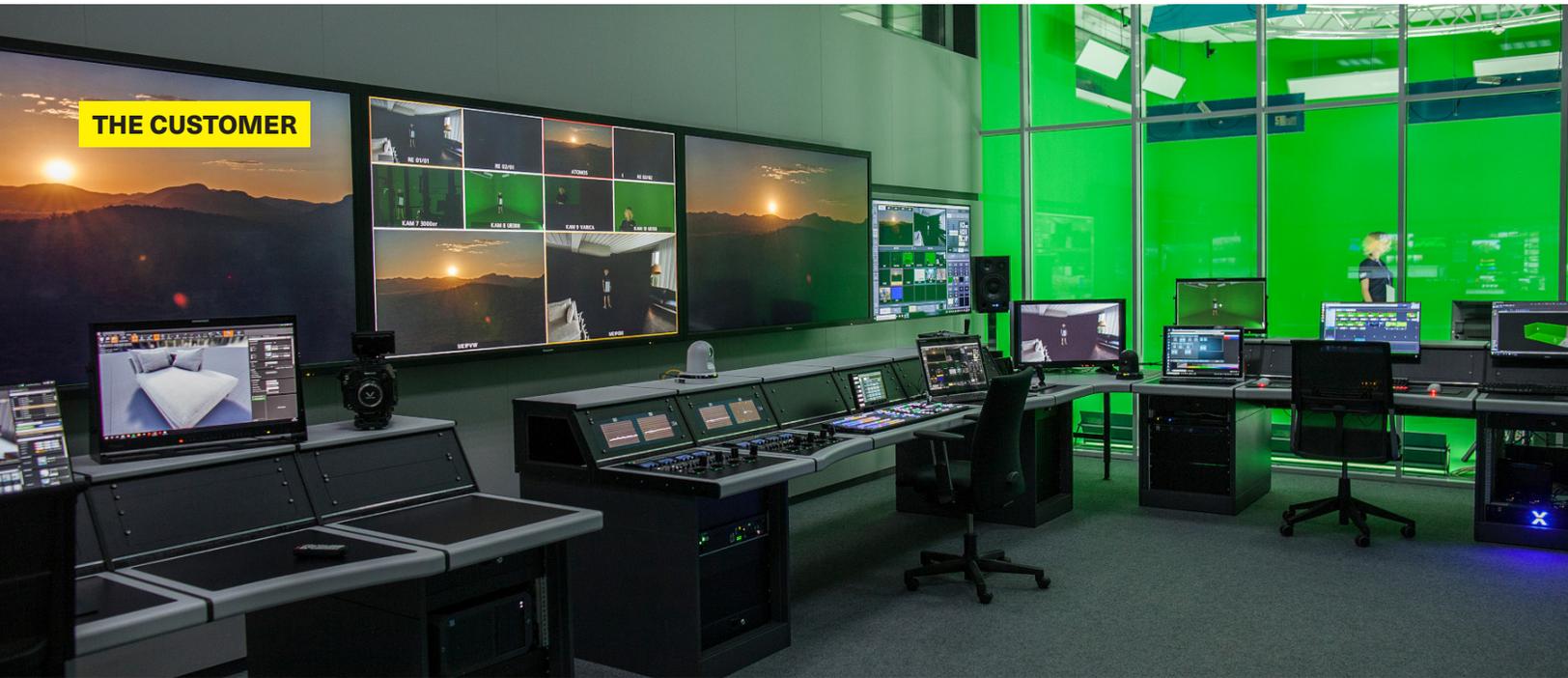


# KST Moschkau



INDUSTRY  
APPLICATION  
LOCATION  
PRINTERS  
MATERIALS

Media Production  
End-Use Parts  
Düren, Germany  
FX20  
Onyx



KST Moschkau GmbH is a family-managed business founded in 1985. As a project system house, KST develops complex system solutions in the main business areas of Broadcast & ProAV, media technology, and AV security systems.

Within KST Moschkau, the system construction division manufactures its own extensive product portfolio of components, articles, and systems using state-of-the-art production techniques - where they've begun to extend their product portfolio to out-of-the-box solutions for tailored requests.



## THE CHALLENGE

At the beginning of February 2020, KST started production on the KST-OH series, an outdoor housing for the Panasonic PTZ camera. The demand for the product exceeded their expectations, but they soon realized the current manufacturing process was not scalable for small series production. Originally, the camera housing was designed in-house and the components were outsourced to CNC shops to be machined.

Since the housing contained several Aluminum plates, iterations quickly became expensive for customizing these low-quantity orders. The process became labor and time-intensive - requiring many steps to obtain and assemble the many components for a single product. On top of that, their dependence on third parties left them with no control over shipment delays - forcing them to delay projects even further for their customers.

... they soon realized the current manufacturing process was not scalable...





## THE SOLUTION

Rather than outsourcing the majority of their product to machine shops, the KST team took matters into their own hands. As a Markforged customer, they instantly understood how impactful the FX20 could be on their supply chain. By using the FX20, KST was able to print 3 components on a single print bed - 525x400x400 mm. On a smaller machine, they would have had to print fewer parts per build, and split up some of their larger designs into multiple parts.

Printing housings on the FX20 lowered costs and accelerated production immensely - giving them more flexibility to prototype and iterate on designs before delivering to customers. The excellent surface finish and the toughness of Onyx helped them keep the highest quality standard for their products. The housing was not visibly different than its aluminum counterpart after post-processing. In fact, the only real difference was the slightly lighter weight. This new method of manufacturing guaranteed the housing to withstand harsh outdoor weather conditions such as rain, UV rays, and extreme temperature variations.

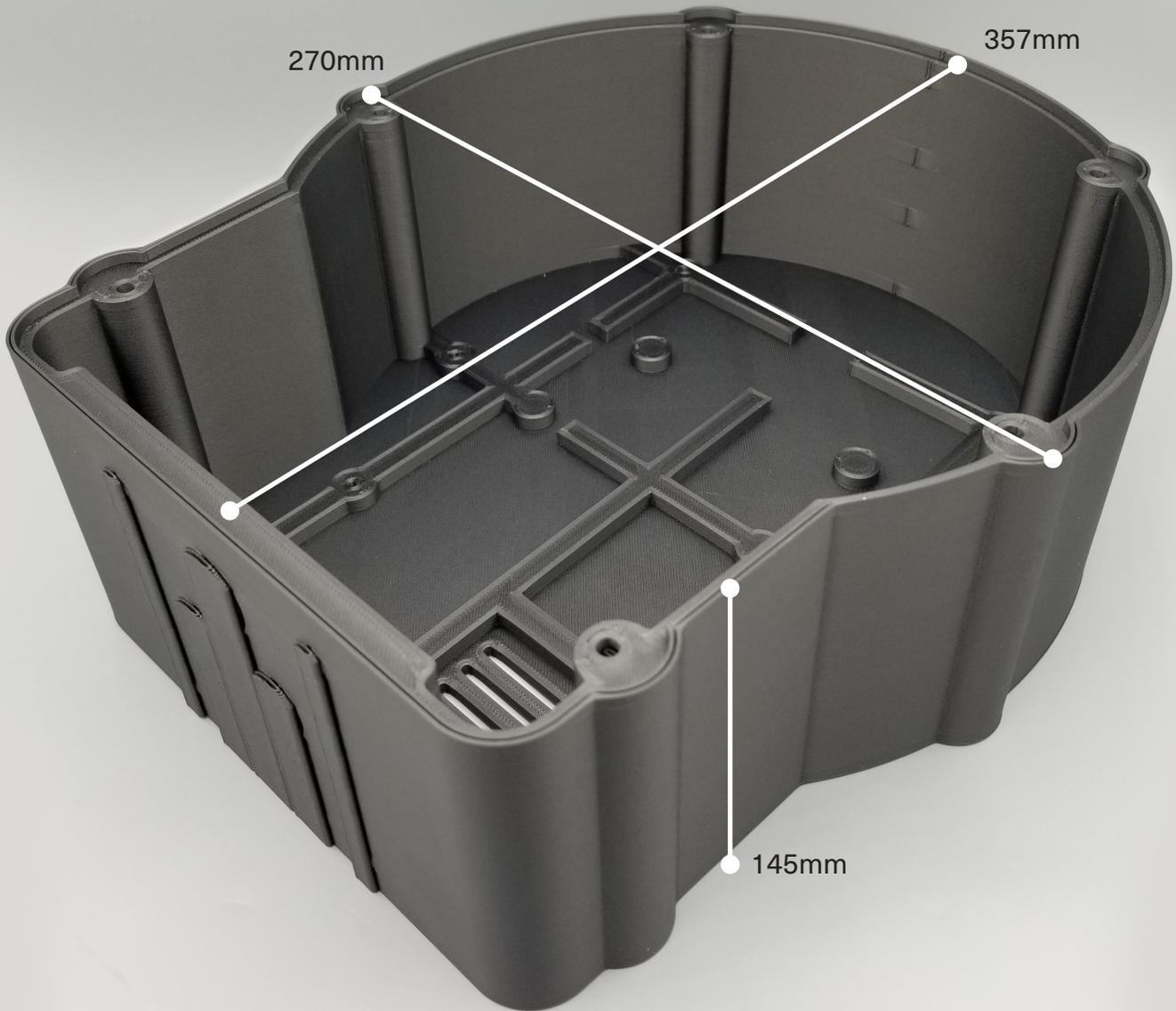
**Printing on the FX20 lowered costs and accelerated production immensely - giving them more flexibility to prototype and iterate on designs before validation.**



**“ By switching to Additive, this immediately lowered costs and accelerated production immensely - giving us the flexibility to prototype and iterate on designs on our own terms before validation. The excellent surface finish and the toughness of Onyx helped us maintain the highest quality standards we set for our products.”**

**Felix Moschkau**

KST MOSCHKAU



# 2 Days

TOTAL LEAD TIME  
COMPARED TO 3-4 WEEKS

# \$443 Total

TOTAL PRODUCTION COST  
COMPARED TO 6X

### KST Camera Mount (3 parts)

Material

Onyx

Lead time

3h 46m

19h 33m

1d 0h

Total

2 days

Cost

\$30.46

\$125.30

\$288.23

Total

\$443.99



## Markforged / Mark3D

Founded in 1985, KST Moschkau GmbH builds complex systems - like devices for TV media production. They've been redesigning parts for additive manufacturing in their camera security division to enable light-weighting, design freedom, and price reduction.

[markforged.com](http://markforged.com)

