



# Robotic End Of Arm Tooling

Genesis Systems Group designs, builds and implements robotic tooling for work cells. Genesis found that outsourcing custom end of arm tooling (EOAT) to be CNC machined cost nearly \$8,000 and took 20 days. Genesis turned to FDM® technology for less expensive, lighter EOATs and a faster turn time.

<b>System</b>	Fortus 400mc
<b>Material</b>	ULTEM™ 9085 resin Black
<b>Build Time</b>	19h 55m
<b>Material Amount Used</b>	461.13 cm <sup>3</sup> (28.14 in <sup>3</sup> )
<b>Support Material Amount Used</b>	41.13 cm <sup>3</sup> (2.51 in <sup>3</sup> )

## HOW DOES FDM COMPARE TO ALTERNATIVE METHODS?

Method	Time	Cost
<b>CNC Machining*</b>	20 days	\$8,000
<b>FDM**</b>	3 days	\$500
<b>SAVINGS</b>	17 days 85%	\$7,500 94%

\* CNC machining outsourced locally.

\*\* FDM parts produced on in-house equipment.

The FDM process simplified the assembly, allowing the incorporation of internal vacuum tubes to eliminate external hoses that would be damaged during operational use. The EOAT's weight also dropped from 35 to three pounds making it possible to use smaller, less expensive robots. By switching to FDM technology, Genesis dramatically reduced the cost and production time to build EOATs.

ISO 9001:2008 Certified

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