

LSS

INDUSTRIAL
3D PRINTING
SOLUTIONS

The impossible, the only way.

Upgrades

XStream BDS Digital

**Digitales Scanner-Upgrade
für bis zu 90 % höhere Produktions-
geschwindigkeit bei verbesserter
Detailauflösung**

Ist-Zustand

Füll-Scan-Geschwindigkeit: 5 mm/s Base; 10 mm/s High Speed (analog)

Konturgeschwindigkeit: 1,778 mm/s

Analoge Laserleistungsanpassung in Abhängigkeit von Scannergeschwindigkeit per EOY (End-of-Vector-Elektronik)

Open-Loop-Scan-System, keine Positions-Rückmeldung der Scanspiegel

Minimal erzielbare Wandstärke: 0,55 mm

Zustand nach Upgrade

Füll-Scan-Geschwindigkeit: 12,7 - 15,24 mm/s

Konturgeschwindigkeit: 5 mm/s

Closed-Loop-Scan-System, ständige Positions-Rückmeldung der Scanspiegel, dadurch **deutlich verbesserte Positionsgenauigkeit und Geschwindigkeitsermittlung**

Eliminierung des DOS Computers

Deutlich reduzierte Scanzeiten

Minimal erzielbare Wandstärke: 0,5 mm bei gleichzeitig verbesserter Festigkeit

**Digital Scanning Upgrade
for up to 90 % higher production
speed and improved detail
resolution**

Current condition

Fill scan speed: 20 in/s Base; 40 in/s High Speed

Contour speed: 70 in/s

Analog laser power adjustment depending on actual scanner-speed by EOY (end-of-vector board)

Open-loop-scanning-system, no feedback of mirror position

Minimal achievable wall thickness: 0,55 mm

Condition after Upgrade

Fill scan speed: 500-600 in/s

Contour speed: 200 in/s

Closed-loop scanning system, permanent position feedback, **greatly improved positioning and more accurate velocity feedback**

Elimination of the DOS computer

Greatly reduced scan-times

Minimal achievable wall thickness: 0,5 mm with better strength

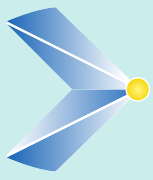
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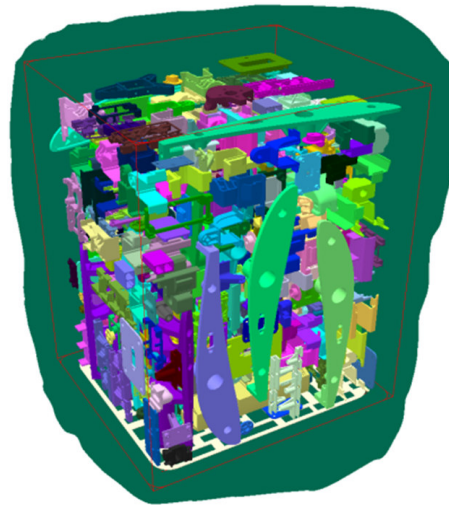
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XStream BDS Digital: Speedtest

Build-time comparison



		HiQ HS 50W scan spacing 0,22	XBDS Digital 100W scan spacing 0,25
Total sintering time	hh:mm:ss	79:32:48	18:35:29
Add powder layer			
Warmup stage	hh:mm:ss	01:14:57	
Build stage	hh:mm:ss	10:25:51	10:25:51
Cooldown stage	hh:mm:ss	00:05:37	
Wait for temperatures			
Warmup stage	hh:mm:ss	00:09:17	
Build stage	hh:mm:ss		
Cooldown stage	hh:mm:ss	01:03:43	
Build time summary			
Build prep stage	hh:mm:ss	00:00:07	00:00:07
Warmup stage	hh:mm:ss	01:24:14	01:24:14
Build stage	hh:mm:ss	89:58:44	29:01:20
Cooldown stage	hh:mm:ss	01:09:20	01:09:20
Total build time	hh:mm:ss	92:32:25	31:35:01
Build stage time in hours		89,979	29,022
mm/hour in build stage		4,73	14,65
			ca. 310%

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