

INCODEMA 3D SCALES ADDITIVE MANUFACTURING OPERATIONS WITH HK TECHNOLOGIES SIEVING SYSTEMS



CHALLENGE

Incodema 3D is a contract manufacturer specializing in advanced metal additive manufacturing for the aerospace, defense, and power generation industries. Utilizing cutting-edge EOS laser powder bed fusion systems, Incodema 3D produces complex cooling components, heat exchangers, and structural parts that are often impossible to fabricate through traditional methods.

However, the rapid growth of their operations revealed a significant bottleneck: the manual powder recovery and sieving process.

Prior to working with HK Technologies, Incodema 3D operators had to:

- Scoop powder manually into containers after each print build.
- Transport the heavy buckets to a separate sieving station.
- Manually sieve materials, often battling slow processing and powder losses due to inadequate screening technology.

This created not only serious operational inefficiencies and material waste, but also safety risks for operators, who had to repeatedly lift 15 to 20-pound buckets overhead throughout each shift. These inefficiencies severely limited Incodema 3D's ability to scale production and fulfill customer demand.



It was a very manual, time-consuming, labor-intensive process... Every large format machine took several hours just to scoop out, and then you had several more hours sieving it. Meanwhile, the machine sat idle - costing us time and money.

—Kevin Engel, Director of Additive Operations
Incodema 3D



FEATURED PRODUCT

HK VACUUM RECLAIM SIEVING STATION



17" diameter sieve with integrated vacuum conveying



Inline automated sieving with ultrasonic debinding



Configurable for reactive powder handling (explosion-proof motors)



Portable, caster-mounted design

SOLUTION

Recognizing the urgent need for a better system, Incodema 3D explored available market options and identified HK Technologies' Additive Material Sieving Station as a clear front-runner.

KEY REASONS FOR CHOOSING HK TECHNOLOGIES INCLUDED:

- **Integrated vacuum conveying:** Powder was extracted directly from the printer and fed into the sieving system.
- **Automated ultrasonic sieving:** Prevented screen clogging, improving throughput and powder recovery rates.
- **Flexibility:** HK's solution did not tie Incodema 3D to a specific powder vendor, unlike some competitor offerings.
- **Custom engineering support:** HK's team collaborated directly with Incodema 3D to optimize designs for safety, ease of cleaning, and reactive material handling.

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Other companies offered similar equipment, but HK's straightforward, no-frills design and value stood out. Plus, *their willingness to customize and support our goals made a huge difference.*

—Kevin Engel

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Initially, Incodema 3D piloted a loaner HK sieve, and after a successful evaluation, expanded their investment. They now operate seven HK sieving stations, supporting a fleet of 35 EOS printers.

RESULTS

The transition to HK Technologies' sieving solutions transformed Incodema 3D's operations:

METRIC	BEFORE HK TECHNOLOGIES	AFTER HK TECHNOLOGIES
TURNOVER TIME	1+ HOUR PER MACHINE	5-10 MINUTES PER MACHINE
MATERIAL RECOVERY	~30% LOSS	30% WASTE ELIMINATED
FLEET SIZE	12 PRINTERS	35 PRINTERS
WORKER SAFETY	REPETITIVE HEAVY LIFTING	MINIMAL MANUAL HANDLING

MAJOR BENEFITS ACHIEVED

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With the ultrasonics, we're now reclaiming 30% more material that used to be discarded. That translates to real savings — and helps us hold our pricing for customers even as inflation rises.

— Kevin Engel, Director of Additive Operations, Incodema 3D, on how HK helped reduce waste by 30%

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Saving an hour per turnover, across ten turnovers a day, across 35 machines — the machine hours we reclaimed are incredible.

— Jeff Wood, Director of Operations, Incodema 3D, on significant uptime gains

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We're no longer asking operators to haul, and lift buckets all day long. It's safer, more efficient, and better for employee morale.

— Kevin Engel on enhanced safety and ergonomics

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Without HK sieves, we couldn't have scaled from 15 to 35 printers as quickly as we did. They're part of our growth strategy.

— Kevin Engel on scalable growth enablement

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CUSTOMER EXPERIENCE WITH HK TECHNOLOGIES

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HK came to our facility, listened to our needs, reviewed our drawings, and helped us spec out exactly what we needed. It wasn't a cookie-cutter sale — it was real engineering collaboration.

— Kevin Engel describes Incodema 3d's relationship with HK Technologies as collaborative, transparent, and impactful

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The HK sieves are easy to maintain. Clean the sieve screens after each run, monitor filter changes — and that's it. If we ever need parts or help, HK's team is quick to respond.

— Jeff Wood on straightforward maintenance of HK Technologies equipment

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"We absolutely plan to continue scaling with HK. Their equipment and engineering support help us stay ahead.

— Kevin Engel on continuing their partnership with HK Technologies

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ABOUT HK TECHNOLOGIES

HK Technologies, a division of the Cleveland Vibrator Company, is a trusted leader in industrial sieving, screening, and material handling systems. Known for engineering excellence and practical innovation, HK Technologies delivers solutions that drive real operational efficiencies for industries including additive manufacturing, food processing, and specialty chemicals.

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