



Minnesota Micro Molding, Machining & MFG. Inc.

Material Cost Savings Case study:

Material:

\$2000 per pound - Implantable bioresorbable PLLA/TCP

Current operation:

- Making 1 million parts annual

Customer current Operational Equipment:

- 2 cavity mold
- Traditional Sodick micro-molding press

Customer engaged M5 for a process quote.

M5 Technology offers:

- Operational cost reduction, electricity, cycle time, spacial requirements, repair, replacement, prototyping.
- Material cost savings of \$400K per year at current production levels.

M5 technology can increase the customers output from 1 to 1.5 million in the same or less time, of current operation.

Machine Footprint Value Proposition

Machine density comparison	# Presses	Sales	Total Sales
30T Sodicks	11	\$700,000	\$7,700,000
M5 iE Platforms	44	\$700,000	\$30,800,000

M5 Micro Molding Machines offer 4:1 density of footprint

30T Sodick
41"x124"



Smallest shot:
<.15g

M5 press
22"x 22"x 9"



Smallest shot:
<.0005g

M5 Technology and Process

1. Standard Sprue size <.0182g per part, no runners.
2. Typical purge for cleaning .060g
3. Material savings 95%+
4. Footprint 22" x 22" x 9"
5. Energy usage - 5amps 115v
6. Shop air 100psi
7. Minimal radiant heat
8. No hydraulic off gassing
9. Mold head, remote location away from control box (internal to production cell)
10. See website for automation cell animation.