Controlled Thermal Processing | CTP Cryogenics
818-445-3030 | info@ctpcryogenics.com
2909 Oregon Ct, Unit C1, Torrance, CA 90503

TOOL CHANGE & SHARPENING LOG

One line every time a tool comes out of the press. Keep this on a clipboard at the machine.

Company: **Line:** **Tool ID:** **Material:** **Month:**

Date	Parts since last change	Reason (wear / chip / scheduled)	Action (regrind / replace)	Stock removed (in)	Downtime (min)	Scrap parts	Notes — what the edge looked like

THIS MONTH: **Changes:** **Avg parts/change:** **Shortest:** **Longest:** **Avg downtime:**

Average parts between changes is the single number most shops guess at. Once you have it, it drives everything on the next page.

OUR GUARANTEE: Run our treated tools against the interval you recorded on this sheet — your own baseline, your own parts. If you cannot measure an improvement over that number, we refund the treatment in full and cover the freight back to you. info@ctpcryogenics.com | 818-445-3030

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TOOLING COST PER PART WORKSHEET

What your punches, dies and blades actually cost — including the part that isn't the tool.

Company: **Prepared by:** **Date:**

Production line / cell: **Tool / die ID:** **Tool material:**

1. YOUR NUMBERS (fill in the shaded boxes)

A	Annual production volume on this tool		parts per year
B	Run rate		parts per hour when running
C	Tool purchase cost, each		$ per punch, die section or blade
D	Parts run between regrinds		the interval you actually get — from page 1
E	Regrinds before the tool is scrapped		how many before it's under minimum height
F	Cost of one regrind		$ — outside invoice, or in-house labor
G	Tool change time		minutes, press stop to first good part
H	Line downtime cost		$ per hour, burdened
I	Scrap parts per tool change		parts binned at startup
J	Cost of one scrapped part		$ material plus value added

2. WHAT IT IS ACTUALLY COSTING YOU (work down the page with a calculator)

K	Parts from one tool over its whole life		= D x (E + 1)
L	Tool changes per year		= A / D
M	Press hours lost to tool changes per year		= L x G / 60
N	Cost per 1,000 parts — tool purchase		= C / K x 1,000
O	Cost per 1,000 parts — regrinding		= E x F / K x 1,000
P	Cost per 1,000 parts — changeover downtime		= G / 60 x H / D x 1,000
Q	Cost per 1,000 parts — startup scrap		= I x J / D x 1,000
R	**FULLY LOADED TOOLING COST per 1,000 parts**		= N + O + P + Q
S	**Fully loaded tooling cost per part**		= R / 1,000
T	**Share of that cost that is NOT the tool's price**		= (R - N) / R x 100 = _____ %
U	**Total tooling cost per year**		= S x A

What line T is telling you

On most lines, the tool's purchase price turns out to be a small minority of what tooling really costs — the rest is grinding, lost press hours and startup scrap. If line T is high, buying cheaper tools cannot help you. Running longer between changes is the only lever that moves all four numbers at once.

A spreadsheet version that does this arithmetic for you is at ctpcryogenics.com.

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