

LIGHTNING TIME SAVERS

Quick Die Change Specialists

Lightning Time Savers is an engineering and consulting firm that has the knowledge and know-how to formulate a Quick Change program tailored to your specific needs. Together we will find solutions to these problems:

- HOW DO I GET STARTED?
- WHAT IS AVAILABLE IN HARDWARE AND METHOD IMPROVEMENTS?
- HOW MUCH TIME CAN BE SAVED?
- CAN I JUSTIFY THE SYSTEM?
- HOW MUCH TIME AND MONEY IS REQUIRED?

LIGHTNING TIME SAVERS HAS THE EXPERIENCE...

- 16 Years Installing Hardware and Method Improvements Reducing Job Change on 50 to 2000 ton Presses to Under 10 Minutes.

SOME OF OUR CLIENTS...

ABB CO.	TOWER AUTOMOTIVE
JOHN DEERE	FORD MOTOR COMPANY
SNAP-ON TOOLS	HARLEY-DAVIDSON
WHIRLPOOL	UNITED TECHNOLOGIES
ELECTROLUX	GENERAL MOTORS
FREIGHTLINER	DELPHI
AMANA	BOEING CORPORATION

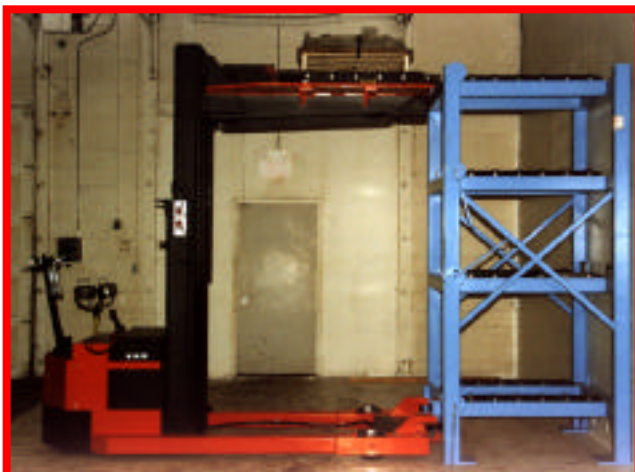


TWO-STATION DIE CART

This Die Cart enables one operator to unload and load small dies in less than 2 minutes.

LIGHTNING TIME SAVERS HAS THE KNOW HOW...

- Gary Zunker, President of Lightning Time Savers, conducts Quick Change seminars in the U.S. and Canada sponsored by PMA. He addressed the World Conference on JIT in London, England (Oct. 1987) on the topic of die handling. He is the author of *Retrofitting for Quick Die Change in America* and *A Supplement to Retrofitting for Quick Die Change in America*, published by Fabricators and Manufacturers Association.
- Mr. Zunker received the 1986 "Fabricator of the Year" award from the Fabricators and Manufacturers Association (FMA) for his work designing a new die cart.



TURNKEY SYSTEMS

Complete turnkey systems enable one operator to change multi-ton dies with the utmost precision in under 2 minutes.

LTS Quick Die Change Specialists

Services Offered...

CONCEPT DEVELOPMENT

On-Site Training Sessions for Both Management and Hourly Personnel

- How to get started
- How to justify your system
- How to develop your overall plan
- How to utilize the team approach
- How to maximize your effectiveness
- How to ready die before and after die changes

FEASIBILITY STUDIES

Lightning Time Savers Will Develop a Plan of Action - Highlight Costs vs Changeover Time Savings

- Provide a detailed project schedule
- Identify time, money, and manpower requirements
- Identify costs for die and press modifications
- Identify required hardware and method changes

IMPLEMENTATION

Lightning Time Savers Will Provide the Knowledge to Successfully Complete Your Quick Change Program. Two Options Include:

- **Function as a Project Manager**--Provide technical assistance and project coordination from start to finish. The customer has the option to purchase and install the equipment.
- **Total Turnkey Engineering**--Lightning Time Savers is responsible for the purchase, installation and start-up. We will provide drawings of machinery and die modifications, engineering coordination from start to finish.

Products Available...

- Air, Hydraulic, and Spring Lifters
- Hydraulic and Mechanical Die Clamps including the Patented Original "Half-turn" Mechanical Die Clamps
- Air, Rail, and Wheeled Die Carts
- Ball-transfer Die Tables
- Push Carts
- Die Manipulators for separating, rotating, and reassembling dies for cleaning, inspect, and repair
- On-site milling services for ram and bolster modifications
- LTS "U"-pc Attachment
- Docking Mechanisms
- Coil, Die Storage and Pre-stage Racks
- Surface-Mount Rollers
- Fixed, Removable, Swivel and Special Bolster Extensions
- New Bolsters, Sub-plates, and Ram Plates



150-TON OBI PRESS
Ball-roller Table - Die Transfer System,
Die Exchange Under 2 minutes

"Bring Your Problems to Light"

**GARY ZUNKER,
PRESIDENT**



LIGHTNING TIME SAVERS

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