

TP SERIES TURRET PUNCH

BETTER PARTS **>>>** BETTER PROFITS



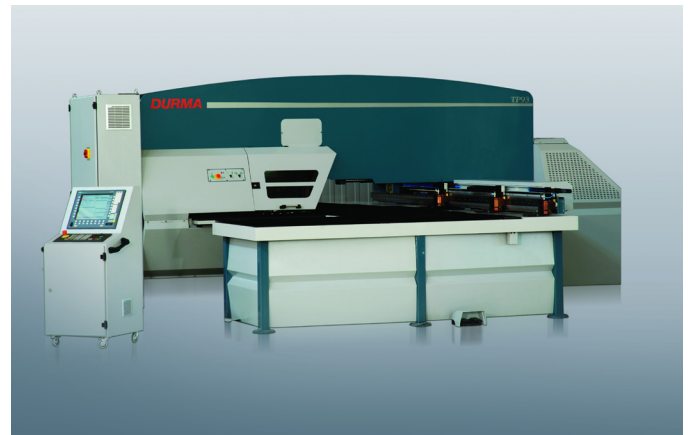
TP SERIES

Standard Equipment

- Siemens 840Dsl CNC Control
- Remote Diagnostic via Ethernet
- Automatic Clamp Positioning
- Alignment Tool
- Oil Cooler
- Brush Table
- Up to Six Indexable Multi-Tool Stations
- Network via Ethernet
- Automatic Tool Lubrication
- USB Port
- Auto Sheet X Axis Repositioning
- Work Chute (TP9)

Optional Equipment

- Load/Unload Systems
- Tool Holders
- Wheel Programming Software
- Indexable Multi-Tool CAD/CAM Nesting Software
- Parts Chute



Capacities

- 49" x 78" x 22/33 Tons
- 49" x 100" x 22/33 Tons
- 60" x 120" x 22/33 Tons

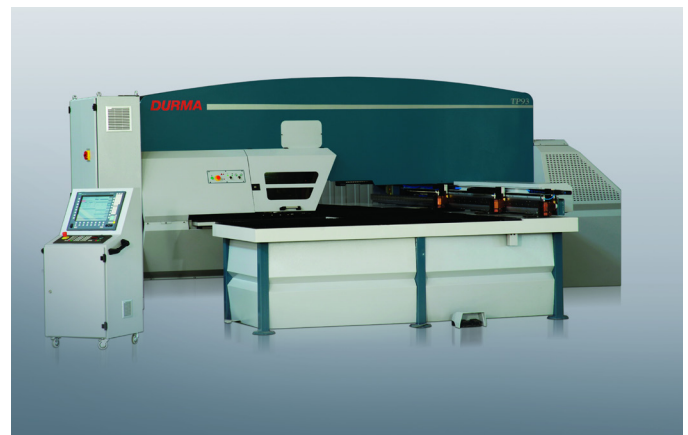
RP SERIES

Standard Equipment

- Siemens 840Dsl CNC Control
- Network via Ethernet
- Automatic Tool Lubrication
- USB Port
- Oil Cooler
- Work Chute (RP9)
- Remote Diagnostic via Ethernet
- Automatic Clamp Positioning (RP9)
- Alignment Tool
- Auto Sheet X Axis Repositioning
- Brush Table

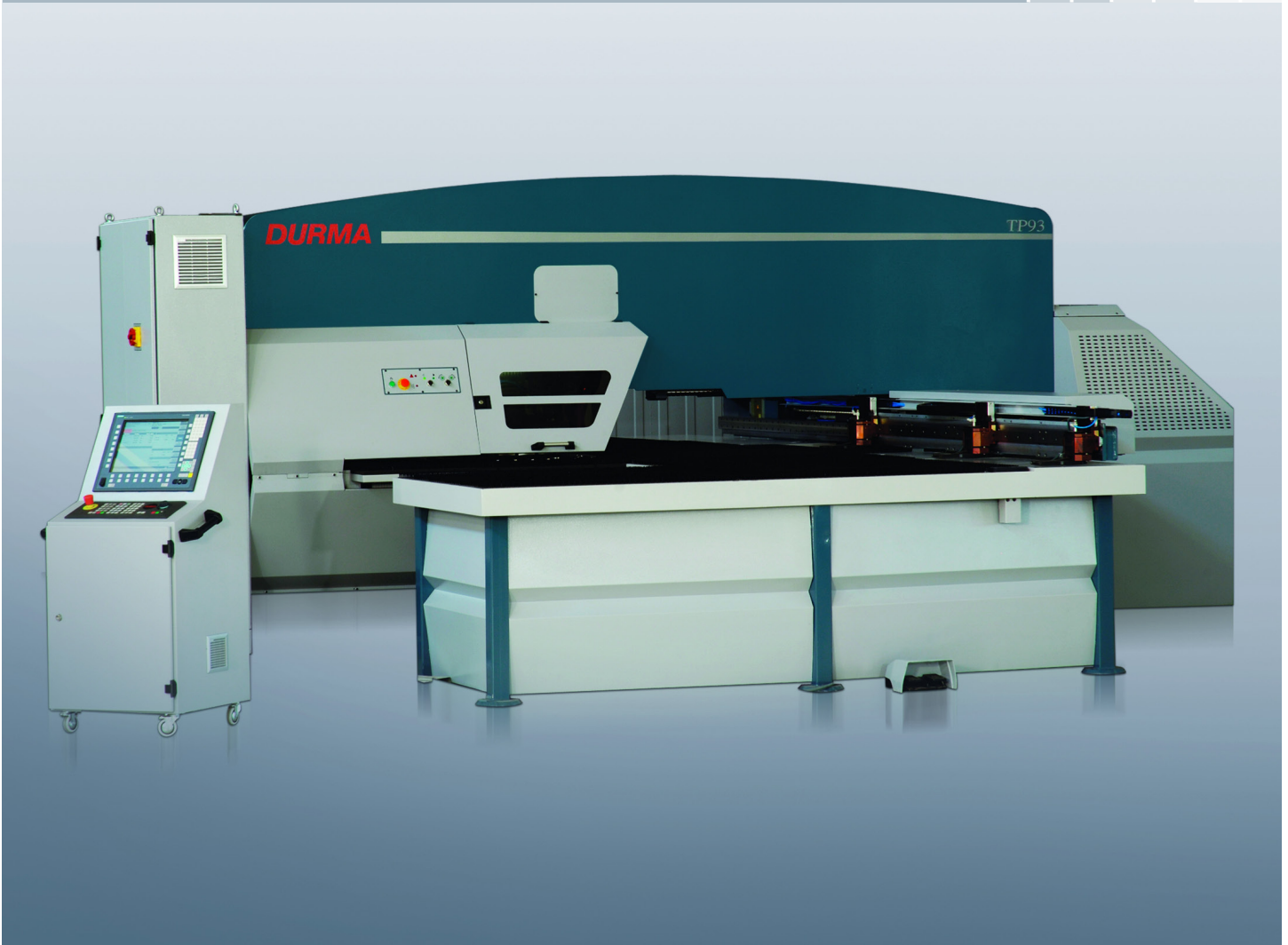
Optional Equipment

- Indexable Multi-Tool CAD/CAM Nesting Software
- Automatic Sheet Clamps (RP6)
- Work Chute (RP6)
- Tool Holders
- Wheel Programming Software



Capacity

- 49" x 78" x 22/33 Tons



STANDARD EQUIPMENT

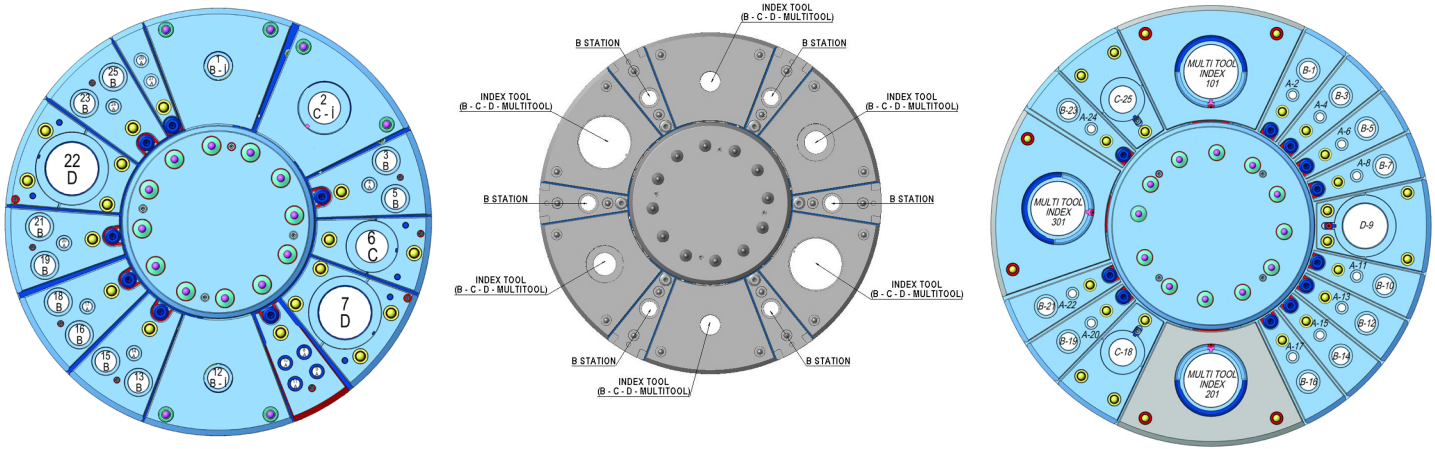
- Siemens 840Dsl CNC Control
- Up to Six Indexable Multi-Tool Stations
- Remote Diagnostic via Ethernet
- Network via Ethernet
- Automatic Clamp Positioning
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- USB Port
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- Work Chute

OPTIONAL EQUIPMENT

- Load/Unload Systems
- Indexable Multi-Tool
- Tool Holders
- CAD/CAM Nesting Software
- Wheel Programming Software
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CAPACITIES

- 49" x 78" x 22/33 Tons
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FLEXIBLE TURRET CONCEPTS

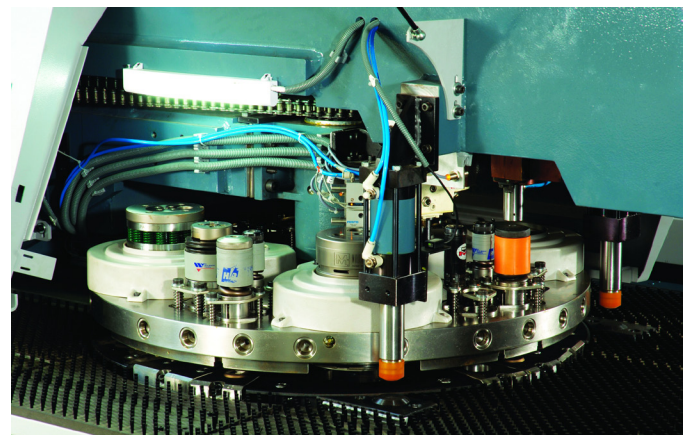
Thick turret tooling concept is used with all stations bushed. It can be equipped with up to six indexable multi-tool stations (center). Station-to-station indexing is done in three seconds or less.

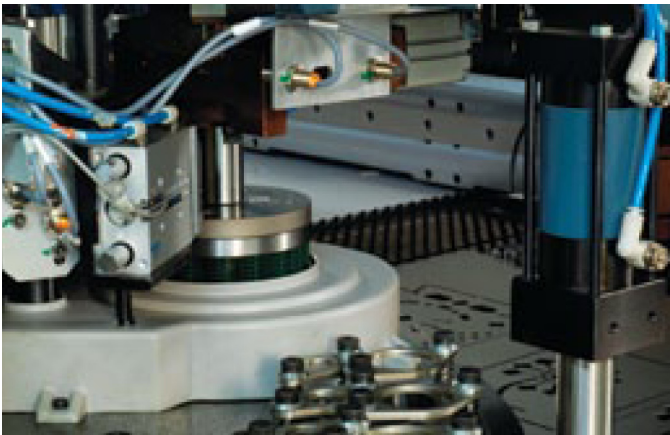
All dies are positioned below the table surface preventing marking of the sheet. Micro tags can be reduced to minimum for more precise parts.

INDEXABLE MULTI-TOOLS

Up to six indexable stations provide maximum flexibility by reducing tool inventories and reducing setup times. Processing of complex parts can be achieved with a minimum of tools. Index from tool to tool is achieved in 0.6 seconds.

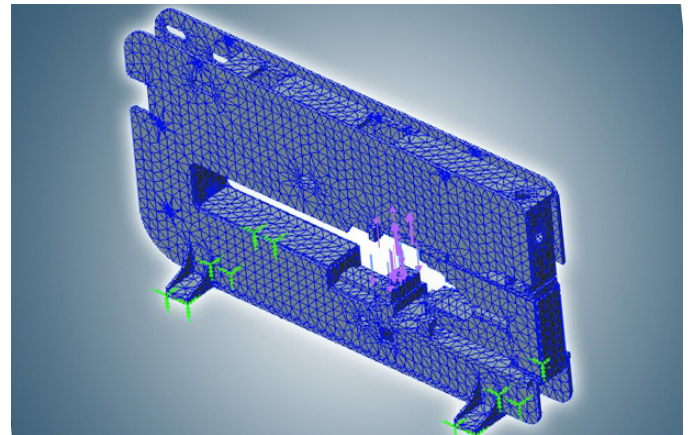
All indexable stations are positioned and synchronized with two backlash free servo motors and reducers. The position of the indexable station is programmable in 0.01° increments.





INTELLIGENT HIGH SPEED HYDRAULICS

Advanced closed loop hydraulic ram positioning system by Hartmann Lammler or Rexroth. Punching speeds to 1200 hpm and marking to 1800 are reached. The closed loop system also allows forming and use of the Wilson's "wheel" technology.



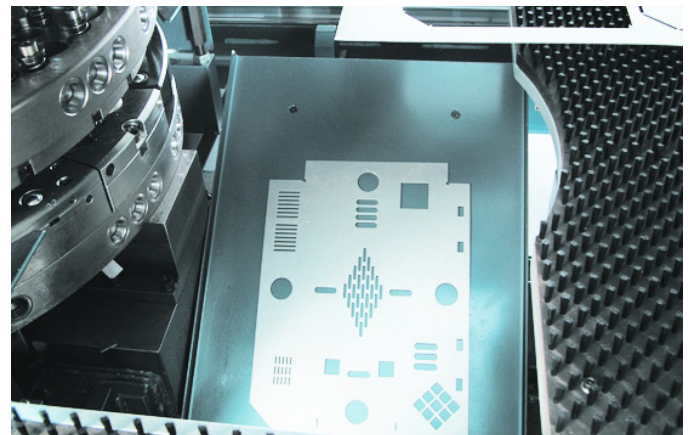
STRESS RELIEVED BRIDGE FRAME CONSTRUCTION

Finite element analysis is on high performance computers is used in the design process. The concept consists of two fully enclosed box fabrications that are welded put under high load and stress relieved. The result is reduced vibration and deflection under full loads providing greater part precision, reduced tool wear, and noise reduction.



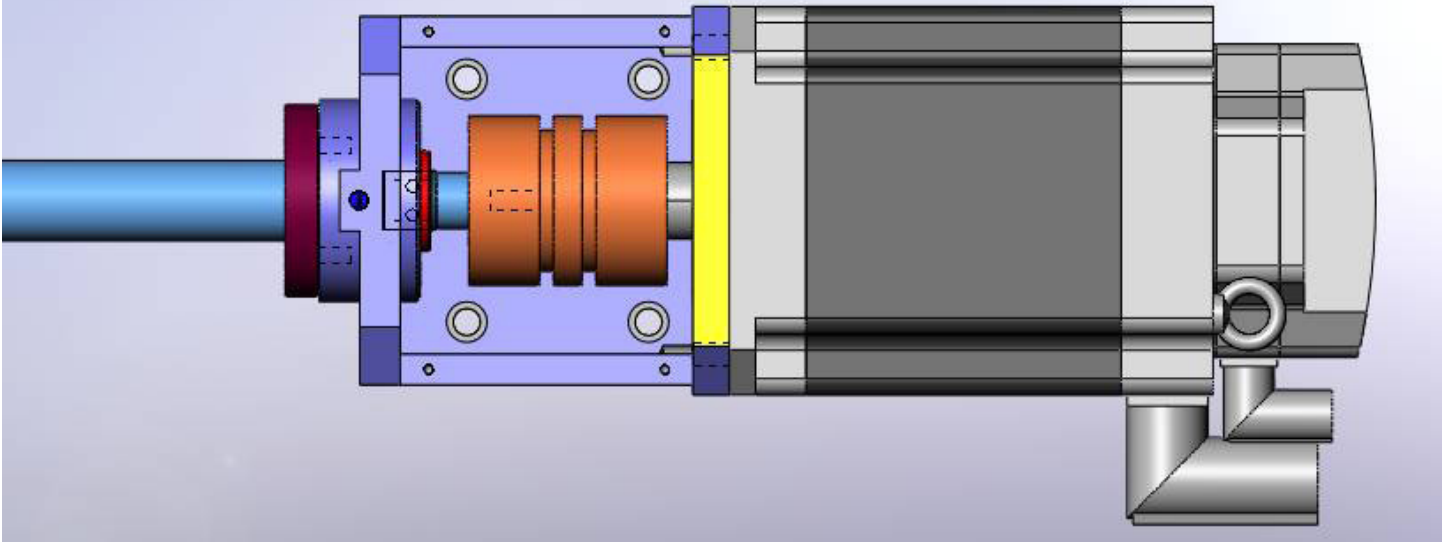
HIGH QUALITY FORMING, TAPPING & 'WHEEL' APPLICATIONS

The variable dwell capability at the bottom of the stroke provides for high quality forming. Typical secondary operations for progressive forms, flanges, embossments, louvers, etc. can many times be eliminated. With roller wheel technology you are not limited to straight geometries but can produce curved and round configurations. Tapping is also possible.



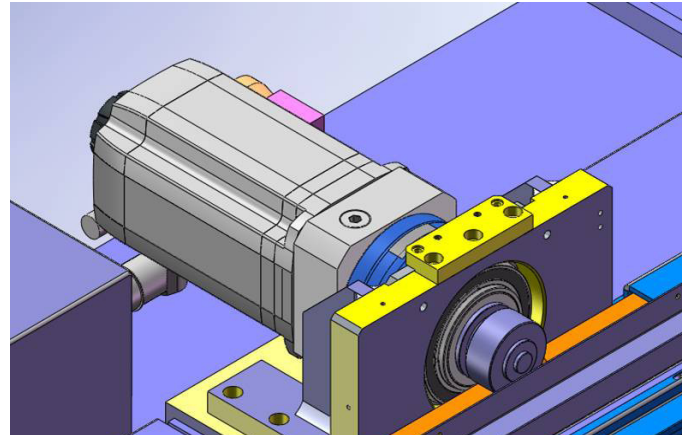
PROGRAMMABLE WORK CHUTE

A large (15.7 x 23.6) programmable work chute allows automatic discharge of parts into a parts container. This feature is standard on the TP6 and TP9 and available optionally on all other models.



**SIEMENS AC SERVO
DIRECT DRIVE SYSTEM**

A new design direct drive positioning system for the X and Y axes increases performance and eliminates any efficiency loss due to belts, gears, and transmissions. Both axes are driven by Siemens servo motors. Simultaneous positioning speeds of just under 5,000 ipm are reached. 1g acceleration is achieved over the whole working range.



**AUTOMATIC SHEET
CLAMP POSITIONING**

Depending on model and X axis range, the machines are equipped with either two, three or four sheet clamps that set in width automatically according to the sheet size.



SIEMENS 840 DSI SERIES CONTROL

Durma has chosen the very powerful Siemens 840 Dsl CNC Control, which has been specially designed for punching. Some of the features are:

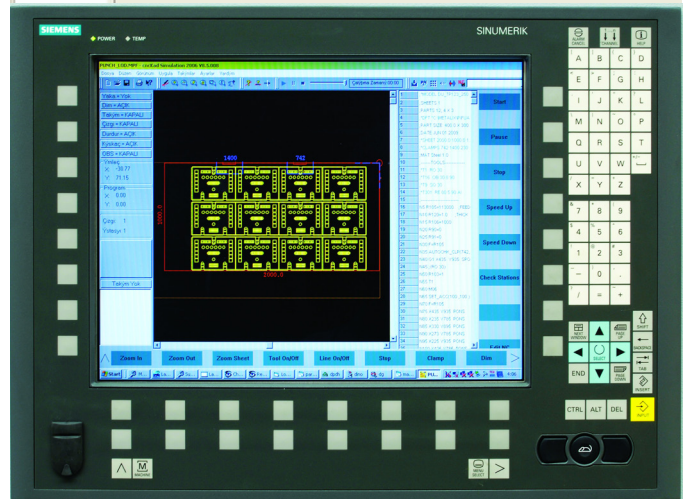
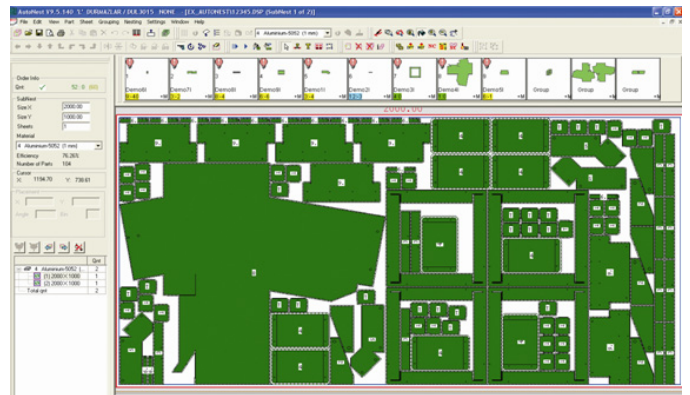
- Movable Control Cabinet
- Ethernet and Network Communication Connections
- UPS Electrical Component Surge Protection System
- Internal Diagnostics w/Graphic Visualization
- Online Help Messages
- Telediagnosics via Modem (optional)
- Automatic Optimization of Sheet Speed According to Sheet Mass
- Graphic Programming @ Machine Control
- Sheet Layout & Automatic Calculation of Sheet Layout
- Removable Software Key (office or machine programming)



CADCAM NESTING SOFTWARE

Available as an option to increase productivity. Several features include:

- Automatic Contour Check and Correction
- Automatic Punching
- Supports Wire-Joints and Micro-Joints
- Allows Predefined Shapes Placement
- Full Common Cut Support
- Turret Setup Customization
- Sheet Reposition and Transformation
- Auto-Indexing
- Offers Special Tools Support
- Automatic and Manual Clamp Avoidance



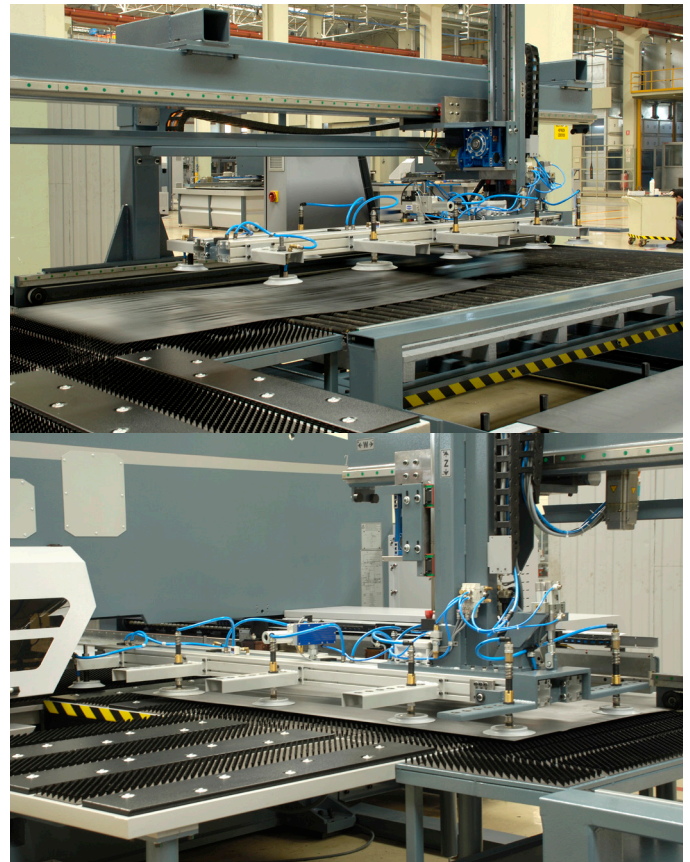
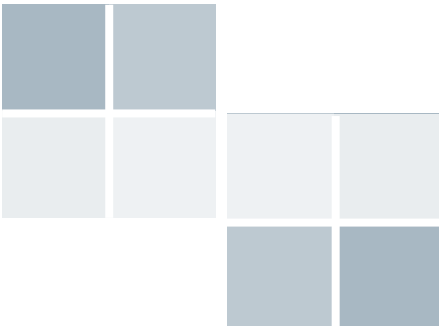


AUTOMATION

Loading and unloading is easily integrated in to our Durma punching machines. These systems have many advantages which include but are not limited to:

- Reduced Operator Fatigue
- Increased Operator Safety
- Increased Production Efficiency

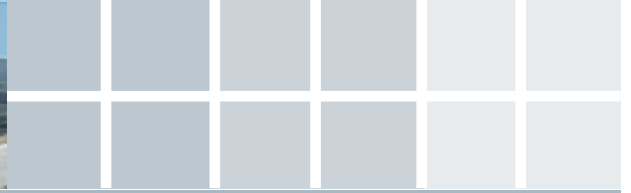
Tower storage can also be added to further enhance production.



TP Series	Unit	TP6	TP9	TP63	TP93	TP123	TPL63	TPL93
Maximum Tonnage	U.S. ton	33	22	33	22	22	33	22
X Axis Movement	inch	78 + R	78 + R	98 + R	98 + R	96 + R	118 + R	118 + R
Y Axis Movement with Single Tool	inch	49.2	49.2	49.2	49.2	49.2	59.1	59.1
Automatic Repositioning Range *	inch	393	393	393	393	393	393	393
Y Axis Speed	ipm	2.7	2.8	2.8	2.8	3.1	2.7	2.8
X Axis Speed	ipm	3	3.5	3	3.5	3.8	3	3.5
Lateral Speed Y + X	ipm	3.5	4.5	3.5	4.5	4.9	3.5	4.5
Max Hit Rate (1mm pitch, 1mm thickness)	hpm	600	900	600	900	1200	600	900
Max Hit Rate (25mm pitch, 1mm thickness)	hpm	300	350	250	300	400	300	300
Max Hit Rate: Marking	hpm	850	1200	900	1200	1800	850	1200
Main Cylinder Stroke	inch	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Maximum Punching Stroke	inch	1	1	1	1	1	1	1
Max Cutting Thickness: Mild Steel	mm	6	6	6	6	6	6	6
Max Cutting Thickness: Stainless Steel	mm	6	6	6	6	6	6	6
Positioning Accuracy	inch	±.004	±.004	±.004	±.004	±.004	±.004	±.004
Repeatable Accuracy	inch	±.002	±.002	±.002	±.002	±.002	±.002	±.002
Turret Rotation Speed	rpm	30	30	22	22	22	22	22
Auto Index Rotational Speed	rpm	150	150	150	150	150	150	150
Max Weight of Sheet	lbs	220	265	265	265	265	441	441
Machine Dimensions								
Height	inch	98.4	98.4	98.4	98.4	90.9	90.9	90.9
Width (without light barrier)	inch	166.0	166.0	1170 / 211	170 / 211	169.0	248.0	248.0
Width (with light barrier)	inch	244.0	244.0	247 / 286	247 / 286	247.0	327.0	327.0
Length (without light barrier)	inch	205.0	236.0	227.0	227.0	189.0	262.0	262.0
Length (with light barrier)	inch	244.0	276.0	268.0	268.0	229.0	302.0	302.0
Table Height	inch	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Approx. Weight	lbs	27558	27558	27558	27558	30424	42990	42990
Motor	kw	11	7.5	11	7.5	15	11	7.5
Oil Tank	lt	180	200	180	180	180	200	200
No. of Clamps		2	2	3	3	3	4	4

* Special table must be added to the machine, and the light barriers must be located at the correct position. Max weight 220 pounds.

Specifications are approximate and subject to change without notice.



DURMA AIMS FOR CONTINUOUS DEVELOPMENT

DURMA's large investment in machining centers and production equipment, as well as its ISO-certified factories totaling 1,350,000 square feet and 1,000 employees, make one of the world's largest, efficient and most contemporary facilities in the world.

In order to offer customer solutions and further develop patents, the Durma Research and Development center opened in 2010. Fifty engineers were added over the last two years.

Designed and engineered with modern technology, Durma products are equipped with high quality and proven readily available components.

Established in 1956, Durma has vast experience in building and supplying quality products. With over 60,000 machines delivered worldwide, Durma has earned a reputation as a supplier of innovative "value oriented" solutions.

Your partner today, tomorrow, and forever.

