

The Winning Force

DURMA

TP SERIES Turret Punch



RP SERIES Punch Press



- Strong
- Precise
- Efficient
- Fast
- High Repeatability



DURMA The Winning Force






As a total supplier for sheet metal manufacturing with almost 60 years of experience, Durma understands and recognizes the challenges, requirements and expectations of the industry. We strive to satisfy the ever higher demands of our customers by continuously improving our products and processes while researching and implementing the latest technologies.

In our three production plants with a total of 150.000 m², we dedicate 1,000 employees to delivering high quality manufacturing solutions at the best performance-to-price ratio in the market.

From the innovations developed at our Research & Development Center to the technical support given by our worldwide distributors, we all have one common mission: to be your preferred partner.

Present Durmazlar machines with **DURMA** name to the world.

	1 High technology, modern production lines	
2 Top quality components		3 High quality machines designed in R&D Centre

TP SERIES Turret Punch

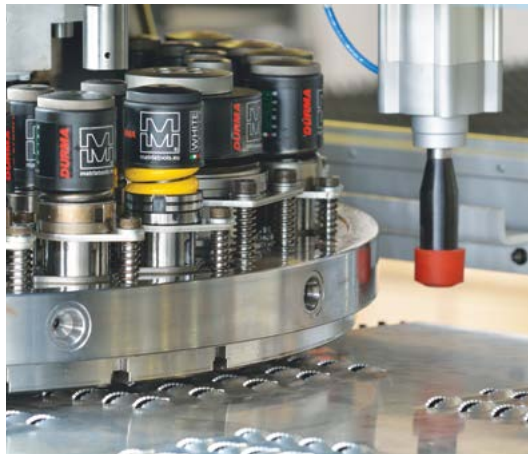
- Small, medium and large format sheet processing
- Punching, forming, tapping, and wheel technology capabilities
- Stress relieved O frame
- Flexible turret configurations to eliminate tool setups
- Auto lubrication of moving parts
- Rigid guides
- One of the best controller with functionality & flexibility
- Powerful control with user friendly CAD-CAM Software
- Programmable sheet clamping system decreases set-up times and scrap ratio
- Automation can be easily integrated for efficient and lean operations while also
- Increasing operator safety and as well as decreasing operator fatigue.



Precise and High Speed Turret

The punching head stroke rates of 1200 strokes per minute during punching and 3200 per minute during marking. Also can be forming at punching speed. The machine control adjusts stroke travel speed and position.

With its dynamic design, it is possible to obtain speeds of
116 m/min in X axis
80 m/min in Y axis
140 m/min simultaneously
High acceleration (1g) is possible across the whole working range without any restriction.



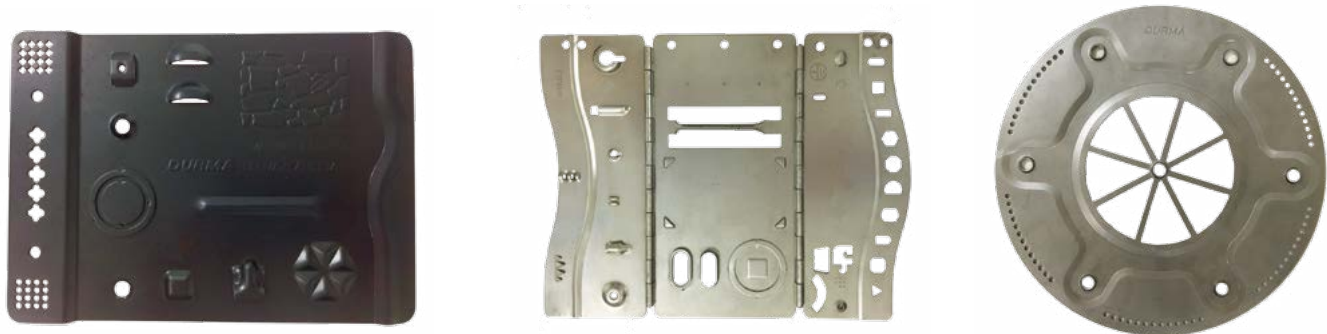
Intelligent Hydraulics

- Highly dynamic punch drive with closed loop control
- New valve technology DECV: Direct Electronic Copy Valve
- Based on proven Voith H + L copy valve
- Rugged against mechanical stress
- Simple oil filtration is sufficient
- Directly operated, no hydraulic control circuit
- Very fast step response
- Very accurate proportional response
- Predefined machine cycles with programmable stroke parameters
- Process safety by feedback monitoring
- Improved diagnostics by pressure sensors
- Optimized power consumption with load-controlled active “two-pressure-system

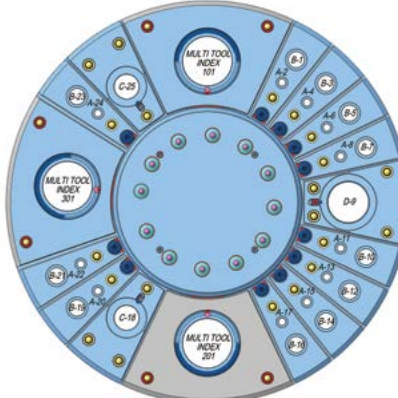
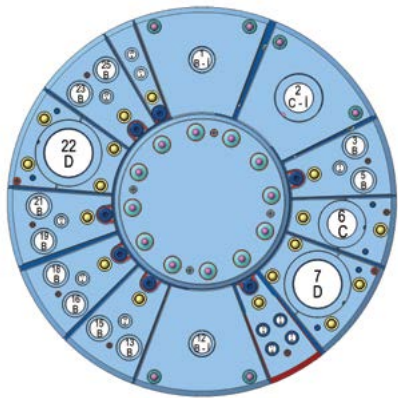


High Quality Forming

Simplifies setup of progressive forms, flanges, and embossments. With roller technology are possible not only on straight geometries but also on curved and round areas. This method is of particular interest for sectors such as air conditioning technology. (Wheel tools, tapping tools) High speed marking



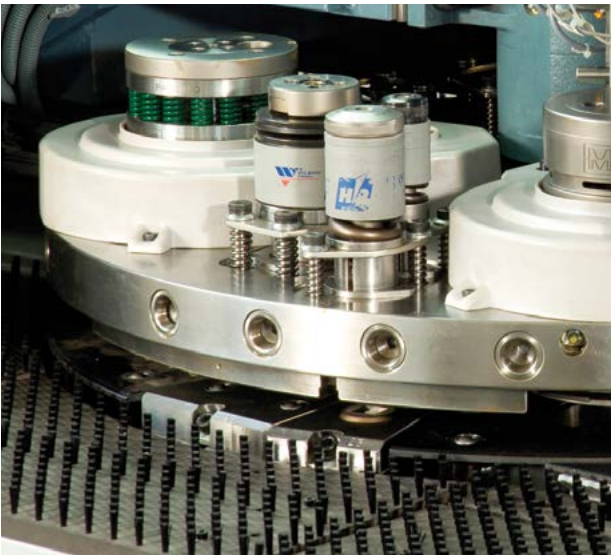
Turret



Station	Sizes	TP6-9	TP63-93-123 TPL63-93 TP-TPL Servo
A - fix	0.8 - 12.7 mm	11	11
B - fix	12.8 - 31.7 mm	10	11
C - fix	31.8 - 50.8 mm	1	2
D - fix	50.9 - 88.9 mm	2	1
B - index	12.8 - 31.7 mm	2	-
C- index	31.8- 50.8 mm	1	-
D - index	50.9 - 88.9 mm	-	3

3 Auto Index Stations

Provide maximum flexibility by simplifying tooling inventories and reducing tool setup time. Tools are rotatable in 0.01° increments enabling the processing of complex shaped parts with the minimum number of tools. Tool change takes less than 3 seconds to complete total turret movement and just 0,6 seconds for single tool. Forming almost at punching speed by closed loop hydraulic by H+L Hydraulic. A variable forming position ensures that forming operations can be carried out with minimal stroke travel. The dies are positioned below the table surface, preventing sheets from being scratched or caught, therefore micro tags can be reduced to minimum for more precision parts.



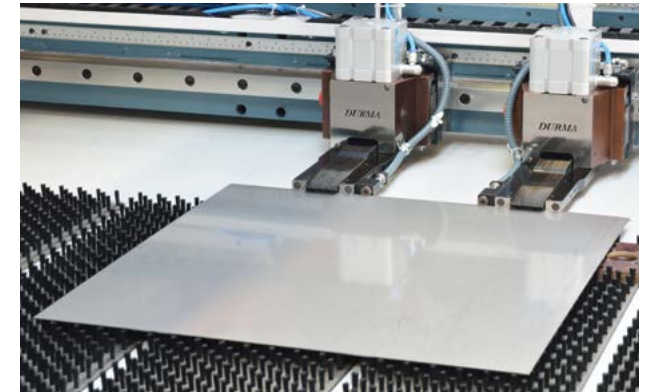
Reposition

It is possible to process sheet length over table length without need to reposition.



Automatic Clamps

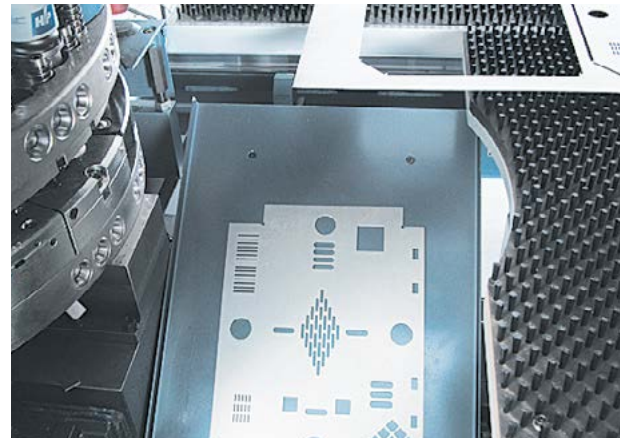
When punching thinner material, one of the problem is to control the sheet movement at non clamping area. To eliminate this matter 3 clamps or more is available.



Workchute

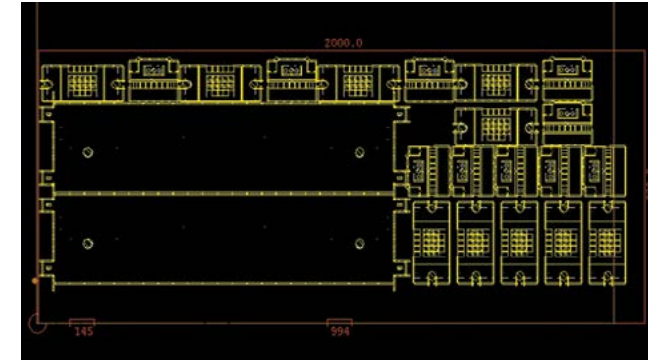
To evacuate parts during punching also with sorting and stacking capacity.

The parts chute, small parts up to 400 x 600 mm can be ejected directly into a parts container. An optional conveyor system. (optional)



Cadcam Software

Programming time minimized by using fast and easy CAD-CAM software (cncKAD) metalix. By choosing the effective position of the tool automatically to use maximum area of the sheet, additional reposition and work strips is eliminated.



Motion and Table

A new design of X and Y axis, direct drive technology is used. This will increase the performance and eliminates any loses from belts, gears or any transmission systems.

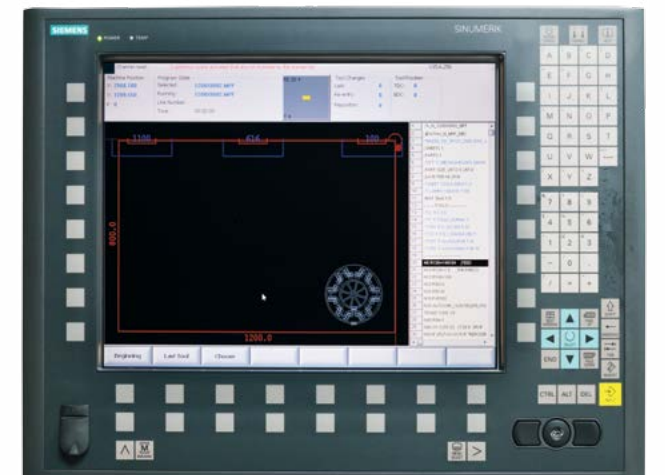
Ball table mainly easy movement of the sheet, brush table is generally for sensitive and soft material punching for not to scratch the sheet. Both is available according to customer demands.



Control System

Siemens Sinumerik 840 DSL control system is applied for punching . Controls and screen are mounted on a mobile control panel. The control system and other hardware are mounted in a separate cabinet. Machining can be started with just a few steps. Network (ethernet) connection is available as well as programming on the control panel. UPS system prevents the control unit from the voltage fluctuations and cuts.

Integrated online help messages answer all questions at the location they arise. The diagnostic concept provides visual depictions of any function faults. Remote diagnostics is a matter of course over Internet for diagnostics for machine controller.



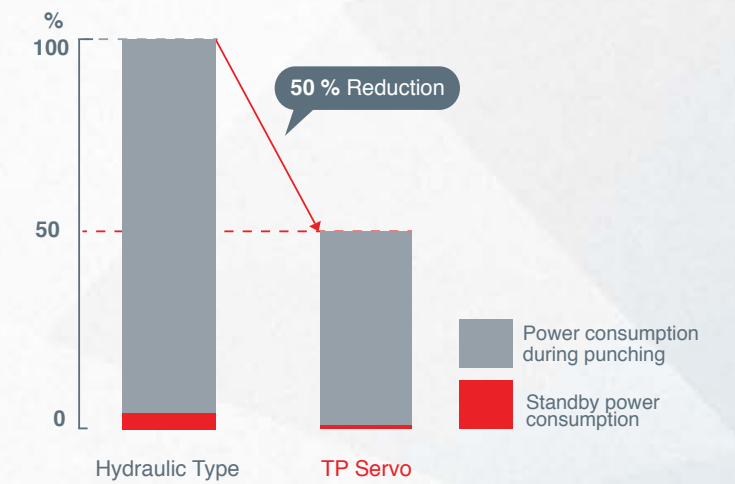
TP SERVO Turret Punch

Providing energy efficiency, mineral oil does not require, green, Servo control Punch Machines

- TP Servo series utilizes an two servo linear motor to drive the ram (eliminating the hydraulic power supply and chiller).
- Electrical consumption is less than one-half of comparable hydraulic machines.
- TP Servo offers significantly faster punching speeds than mechanical turrets.
- Space-saving design makes the most of valuable floor space.

The TP Servo series turret punch press is packed with a wide variety of standard features to help produce parts faster, easier and more economically.

Power Consumption Comparison



TP Series

Standard & Optional Equipment

Standard Equipments

Command pedal
CAD-CAM software & Activator(Dongle)
Control unit, Siemens Sinumerik 840 D SL Windows 7 operating system
Remote diagnostic function
Programming on the control panel
Automatic clamp positioning.
Sheet set switches on clamps
Network, Ethernet communication.
Automatic tool lubrication
UPS for control panel
Movable scrap box
Brush table
Oil Cooler
USB Driver
Reposition on X axis
Alignment Tools for Index Stations (C+B Station) - (for TP6, TP9)
Alignment Tools for Index Stations (D Station) - (for TP63, TPL63, TP93, TPL93, TP123, TP Servo, TPL Servo)
Manual nesting
Warning lamp
Light barriers for CE

Optional Equipments

Additional clamps
Table (brush&ball)
Tools, Tool holders, reducers
CAD-CAM SW Second activator (dongle)
SW for Autonesting, Wheel and Tapping tools
Sheet deformation alert switch
Turret cover for perforated sheets
Vacuum slug remover
Workchute
Automatic lubrication for the machine
Air condition for electrical box
Loading- Unloading preparation
Loading- Unloading system
Additional table
Special table
Transformer
UPS for machine (30KvA - 10 min)
Additional allignment tool

Technical Details

TP Series	Unit	TP6	TP9	TP63	TP93	TP123	TPL63	TPL93	TP Servo	TPL Servo
Maximum tonnage	ton	30	20	30	20	30	30	30	20	20
Frame type	-	O frame	O frame	O frame	O frame	O frame	O frame	O frame	O frame	O frame
X axis movement	mm	2000 + R	2000 + R	2500 + R	2500 + R	2500 + R	3000 + R	3000 + R	2500 + R	3000 + R
Y axis movement with single tool	mm	1250	1250	1250	1250	1250	1500	1500	1250	1500
Automatic Repositioning range *	mm	10000*	10000*	10000*	10000*	10000*	10000*	10000*	10000*	10000*
Speed of Y axis	m/min	70	70	75	75	80	60	60	80	60
Speed of X axis	m/min	90	90	100	100	116	70	70	116	70
Lateral speed Y + X	m/min	114	114	125	125	140	92	1200	140	92
Max. Hit rate (1 mm pitch, 1mm thickness)	1/min	850	1100	850	1100	1200	850	350	535	535
Max. Hit rate (25 mm pitch, 1mm thickness)	1/min	325	375	325	375	425	275	325	325	325
Max. Hit rate : Marking	1/min	2800	2800	2800	2800	3200	2800	2800	820	820
Main cylinder stroke	mm	40	40	40	40	40	40	40	40	40
Maximum punching stroke	mm	25	25	25	25	25	25	25	25	25
Max. cutting thickness (Fixed Station)	Mild Steel	6	6	6	6	6	6	6	6	6
	Stainless Steel	3	3	3	3	3	3	3	3	3
Max. cutting thickness (Index Station)	Mild Steel	3	3	3	3	3	3	3	3	3
	Stainless Steel	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Positioning accuracy	mm	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1
Repeatable accuracy	mm	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05
Turret rotation speed	rpm	30	30	22	22	22	22	22	22	22
Auto index rotational speed	rpm	150	150	150	150	150	150	150	150	150
Max. weight of sheet	kg	100	100	120	120	120	200	200	120	200
Hard disk	Gbyte	80	80	80	80	80	80	80	80	80
RAM	Gb SDRAM	4	4	4	4	4	4	4	4	4
Network system	-	Windows 7	Windows 7	Windows 7	Windows 7	Windows 7	Windows 7	Windows 7	Windows 7	Windows 7
LCD colorscreen Super VGA	-	15"	15"	15"	15"	15"	15"	15"	15"	15"
USB	-	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ethernet	-	10/100	10/100	10/100	10/100	10/100	10/100	10/100	10/100	10/100
Machine dimension										
Height (H)	mm	2310	2310	2310	2310	2310	2310	2310	2135	2310
Width (without light barrier) (W)	mm	4200	4200	5360	5360	5360	6300	6300	5260	6160
Width (with light barrier)	mm	6200	6200	7360	7360	7360	8300	8300	6260	6260
Length (without light barrier) (L)	mm	5600	5600	5750	5750	5750	6650	6650	5260	6210
Length (with light barrier)	mm	6600	6600	6800	6800	6800	7650	7650	6260	7210
Table height	mm	940	940	940	940	940	940	940	940	940
Weight approx.	kg	11000	11000	12960	12960	12960	19500	19500	14000	21500
Hydraulic System Motor	kw	11	7.5	11	7.5	15	11	7.5	-	-
Oil tank	lt	180	180	180	180	240	180	180	-	-
Air pressure	bar	6	6	6	6	6	6	6	6	6
Number of Clamps	pcs.	2	2	3	3	3	4	4	3	4
Holding force of clamps	-	1000	1000	1000	1000	1000	1000	1000	1000	1000
Table type	kg	Brush	Brush	Brush	Brush	Brush	Brush	Brush	Brush	Brush
Energy Consumption	Kwh	8	7	9	8	11	8	9	4.5	4.5
Taret (except tool and tool holder)										
A - fix 0.8 -12.7 mm	11	11	11	11	11	11	11	11	11	11
B - fix 12.8 - 31.7 mm	10	10	11	11	11	11	11	11	11	11
C - fix 31.8 - 50.8 mm	1	1	2	2	2	2	2	2	2	2
D - fix 50.9 - 88.9 mm	2	2	1	1	1	1	1	1	1	1
B - indeks 12.8 - 31.7 mm	2	2	-	-	-	-	-	-	-	-
C - indeks 31.8- 50.8 mm	1	1	-	-	-	-	-	-	-	-
D- indeks 50.9 mm to 88.9 mm	-	-	3	3	3	3	3	3	3	3

* : Special table must be added to the machine and the light barriers must be located the correct position. Max.weight 100 kg.

Loading & Unloading System

TP CELL automates efficiently raw material loading and unloading of ready components along with skeleton. TP CELL allows mixing of automatic and manual operations as needed from production point of view.

- Compact layout
- Process efficiency
- Unmanned production
- Automatic material loading and unloading of part along with skeleton
- Allows full manual process with machine as with stand-alone solutions.



Sheet Thickness Measurement System

To avoid multiple sheet metal processing, precision sheet thickness measurement system.



Sheet Separation System

Effective sheet separating system for separating sheets from one another

Technical Specification	Unit	TP Cell
Positioning accuracy	mm	± 0,1
Repeatable accuracy	mm	± 0,1
Max. weight of sheet	kg	200
Air pressure	bar	6
Cycle time for loading and unloading	sec.	32
Max. size of sheet	mm	1500x6x3000



RP SERIES

Durma Punch Presses

Rotational - Head Punch Durable punching operation for cost effective processes

- Single rotational head machines with versatile C frame construction.
- Stress relieved steel construction.
- Powerful Siemens controller with user friendly CAD-CAM Software.
- Fast and simple operation.
- High quality and well known hydraulic and electronic components.



Features

Control System

Siemens Sinumerik 840 DSL control system is applied for punching with strategic alliance with Siemens. Controls and screen are mounted on a mobile control panel. The control system and other hardware are mounted in a separate cabinet. Machining can be started with just a few steps. Network (ethernet) connection is available as well as programming on the control panel. UPS system prevents the control unit from the voltage fluctuations and cuts. Integrated online help messages answer all questions at the location they arise. The diagnostic concept provides visual depictions of any function faults. Remote diagnostics is a matter of course over Internet for diagnostics for machine controller. The control ensures that optimal acceleration values can be attained at every stage of machining, depending on the actual masses that need to be moved.



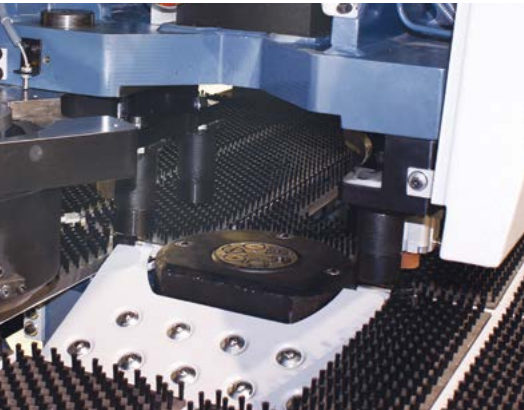
Auto Clamps

Automatic clamps (standard with RP6 - RP9) position according to the CAM program, sheet remove sensors at clamps detects the sheet hold, in case any possible release machine stops to protect working environment.



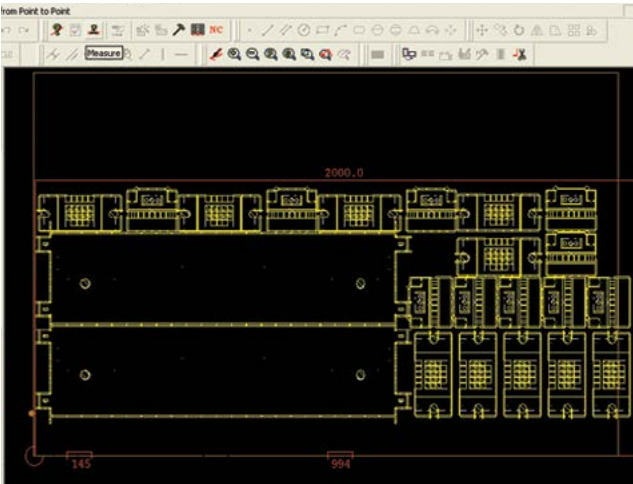
Workchute

Discharges processed small workpieces without interruption or small manual manipulation. (Optional with RP9)



Cadcam Software

Programming time minimized by using fast and easy CAD-CAM software (cncKAD) metalix. By choosing the effective position of the tool automatically to use maximum area of the sheet, additional reposition and work strips is eliminated.



Light Barrier System

DURMA Punch Press is equipped with infra-red barrier system according to CE conformity.



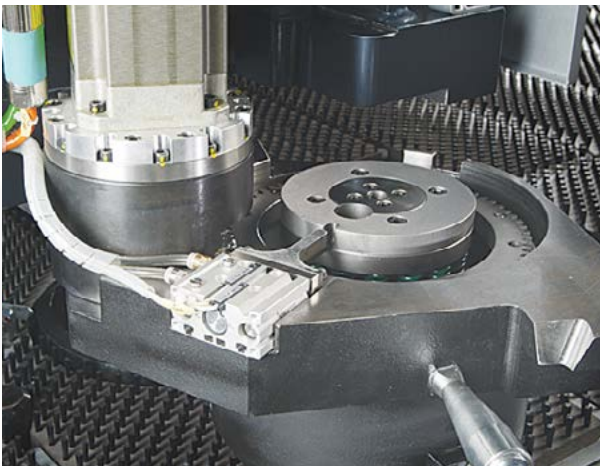
Multi Tooling

Durma rotation punch press machine top and bottom tools work synchronize to obtain all required angular pitch can be $\pm 0,02^\circ$. Upper and lower index groups have no mechanical connections which means they can be perfectly aligned, even defect into the tools can be adjusted. It has a wide tooling usage capacity with 3, 6, 8, 10 tools multi tool selection.



Rotational Head

High rotational speed 40 rpm makes the machine fast. By using zero backlash gearbox system for index position punching. Automatic reposition in the X axis enables to punch longer than 2 meters and eliminate the death area on the sheet.



Technical Details

RP Series	Unit	RP9
Maximum tonnage	ton	20
X axis movement	mm	2000 + R
Y axis movement with multiple tool	mm	1250
Y axis movement with single tool	mm	1285
Max. Cutting thickness	mm	6
Automatic positioning range *	mm	10000*
Speed of Y axis	m/min	75
Speed of X axis	m/min	96
Speed of C axis index	rpm	40
Lateral speed Y + X	m/min	120
Max. Hit rate (1 mm pitch, 1mm thickness)	1/min	1100
Max. Hit rate (25 mm pitch, 1mm thickness)	1/min	370
Max. Hit rate : Marking	Stroke/min	2800
Accuracy for positioning	mm	± 0.1
Max. weight of sheet	kg	120
Hard disk	Gbyte	80
RAM	Gb SDRAM	4
Network system	-	Windows 7
LCD colorscreen Super VGA	-	15"
Working height	mm	980
Table width	mm	2400 x 3900
Machine sizes	mm	3900x4260x2420
Hydraulic system motor	kw	7.5
Oil tank	lt	200
Weight approx.	kg	12000
Main cylinder stroke	mm	40
Maximum punching diameter (for Multitool)	mm	24
Number of Clamps	pcs.	2
Holding force of clamps	kg	1000
Automatic Clamp Positioning	-	Standard
Table type	-	Brush
Energy consumption	Kw/h	8

*: Special table must be added to the machine and light barriers must be located the correct position. Max weight 100kg

Standard & Optional Equipment

Standard Equipments

Command pedal
 CAD-CAM software & Activator(Dongle)
 Control unit, Siemens Sinumerik 840 D SL Windows 7 operating system
 Remote diagnostic function
 Programming on the control panel
 Automatic clamp positioning (RP6 - RP9)
 Sheet set switches on clamps (RP6 - RP9)
 Network, Ethernet communication.
 Standart 6multi tool with punch and dies
 6 pieces Durma tool and guide(gap 0.3 mm)
 round Ø8
 round Ø10
 round Ø20
 rectangle 4 x 20
 square 7
 square 17
 Automatic tool lubrication
 Alignment Tools for Index Stations (D Station)
 Movable scrap box
 UPS for control panel
 USB driver
 Brush table
 Control panel
 Oil Cooler
 Reposition on X axis
 Manuel nesting
 Warning Lamp
 Light barriers for CE

Optional Equipments

Additional clamps
 Special table
 Tools, Tool holders, reducers
 CAD-CAM SW Second activator (dongle)
 SW for Autonesting & Wheel tools
 Additional table
 Air condition for electrical box
 Sheet deformation alert switch
 Workchute for RP6 - RP9
 Automatic lubrication for the machine
 UPS for machine (30KvA - 10 min)
 Transformator
 Auto Nesting and wheel soft

Fast on Service and Spare Parts

DURMA provides the best level of service and spare parts with qualified personnel and spare parts in stock. Our experienced and professional service personnel are always ready at your service. Our professional training and application enriched courses will give you an advantage to use our machinery.



Consultancy



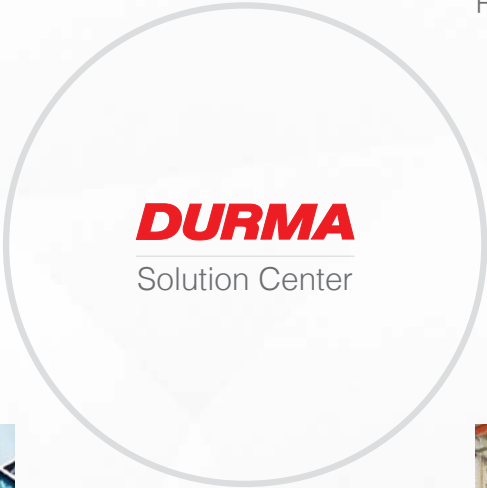
Spare Parts



R&D Center



After Sales Service



Service Agreements



Software



Training



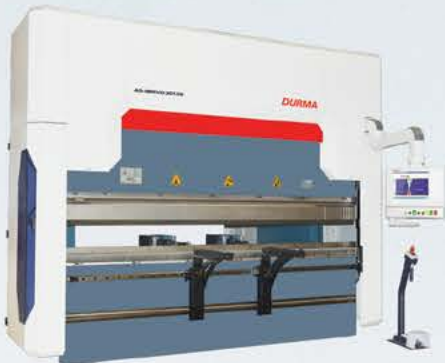
Flexible Solution



FIBER LASER



PUNCH



PRESS BRAKE



VARIABLE RAKE SHEAR



PLASMA



L ANGLE PROCESSING CENTER



ROLL BENDING



PROFILE BENDING



IRON WORKER



POWER OPERATED SHEAR



BANDSAW



CORNER NOTCHER

Lined area for writing notes.

DURMA

Today, Tomorrow and Forever with You...

TP SERIES
Turret Punch

RP SERIES
Punch Press

Durmazlar Makina San. Tic. A.Ş. has right to change catalogue values and machine technical details without notice.

Durmazlar Makina San. ve Tic. A.Ş.
OSB 75. Yıl Bulvarı Nilüfer-Bursa / Türkiye
P: +90 224 219 18 00
F: +90 224 242 75 80
info@durmazlar.com.tr

www.durmazlar.com.tr

