

# DURMA



Head Quarter & Ataevler

## *Durmazlar has aimed continous development since 1956*

*Owes one of the world's most contemporary production plants in the production technology business .3 different plants oriented to different product families, 1000 dedicated employees and 150.000 m2 footprint.*

*In order to offer solution according to clients' needs and enriching the quantity and quality of its own patent rights; long experienced Engineering Department transformed to Durma Research & Develepment Center has opened in the year 2010. Designed and engineered with modern technics; its products are equipped with proven quality components to precisely fulfill your requirements. We serve " accuracy, speed, flexibility, durability, reliability and advanced technology" with high performance/price ratio.Worldwide Durma distributors and technical support network assures perfect support to our clients.*

*With its 55 years of experience, its product quality, innovative solutions Durma gives importance and cares you with proactive approach. We thank all our clients to hold us at the top segment of the world brands.*



Laser Factory



Başköy Factory

# Durma Press Brakes

Durma press brakes guarantee precision, low maintenance costs, low operating cost, and longterm reliability . These features along with large investments in modern manufacturing equipment have made Durma the largest volume press brake producer in the world.

All Durma press brakes are produced with modern design technology and incorporate rigid stress relieved frames to increase your productivity with accurate part production. Demanding applications are easily achieved.

A broad offering of sizes and features satisfy nearly all economical requirements.

## AD-R Series

### Real Innovation

Value oriented press brakes with large strokes, daylight, and gaps to allow cost effective production of simple to complex large shaped that require large dimensions for handling and removal. A simple to use control reduces the required operator level.



## AD-S Series

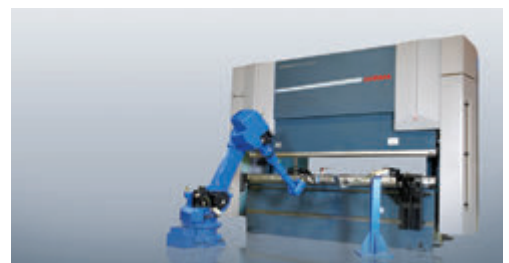
### Superior

Unlimited possibilities and features providing faster and quicker setups and part production. Large daylight opening and working areas  
Outboard mounted long ram guides provide stability while allowing full length between the frame acute angle bending  
Stable and fast ac servo motor driven backgauge system  
3D Graphical Controller and Offline Software  
Automatic table crowning  
Automatic sheet following systems



## AD SERVO Series

Eco-friendly press brake for clean energy saving operations.  
Lower cost, Energy Efficient, Accurate ,Speed and Quiet .



## FBS Flexible Bending Solutions

Durma's advanced technology in the bending of large format parts has; for the automated and reduced labor bending of large sheet and plate parts. diversified uses in the different industries while avoiding long, expensive welding operations which even takes the risk of material stability.

Reduced material handling

- Compensation for high spring-back sheets
  - Reduced setup times by automated loading and unloading
  - Increased employee safety
  - On higher tonnage press brakes Durma utilizes a unique "box construction" which provides the most stable machine frame in the industry.
- Durma provides the latest technology in "large format" bending and automation.



# AD-S SERIES



- *High end solution for bending*
- *Represent the latest technology in press brake automation,*
- *Well conceived design*
- *Ultimate productivity when performing precision work*
- *Large daylight opening and working space*
- *The application of highly dynamic hydraulics servo valves*
- *Long double guides in combination with well designed cylinder construction make a large and flexible beam opening possible.*
- *Stable and fast AC Servo motor driven backgauge system*
- *3D Graphical Controller & Offline Software*
- *CNC Controlled crowning*
- *Ensures maximum angle accuracy thus satisfying even the highest demands*
- *Provides standardly 4 axis Y1 Y2 X and R*

# FEATURES



## *Syncro Y1Y2 Axes & CNC Control Motorized Crowning*

*Independent left and right axes (Y1Y2) controlled by electronics servo valves & electronics linear position controllers. CNC controlled motorized crowning system homogenizes bending forces every points of the bending parts to acquire straights bents. The need for shimming is eliminated.*



## *Sliding Front Arms*

*Quickset support arms are mounted on a linear guide way and ball bearing system that allows "finger tip" lateral adjustment of the front support arms. Vertically adjustment is also easily achieved.*



## *X-R Back Gauge*

*Fingers` depth and height is calculated by CNC controller and executes high speed servo motors produced by Siemens. Retraction is also a standard feature to acquire accurate parts. Back gauge fingers are easily adjusted on linear guides by ball integrated motion system.*

# CNC Control Units

## ModEva 10S 3D & Pc 1200 3D S W



ModEva is a range of numerical controls adapted to the actual market demand. Therefore the complete ModEva serie runs now under Windows ModEva can provide a calculating capacity and performance adapted to simple machinery with a 3D graphic display, it can also be transformed into a real workstation with a very high-power CPU and maximum graphic capabilities thus making Cybelec<sup>®</sup> adapted numerical control available to the most sophisticated machinery.

3D / 10,4" color screen  
TFT type screen  
128 Mb Ram  
128 DM Main Memory  
Easy Cursor  
Automatic Bend Sequences  
PC Off line 3D Software

All ModEva<sup>TM</sup> consoles are equipped with the new Quick Cursor<sup>TM</sup> device. One of its main features is the possibility of completely programming a part on a single page. When producing more complex parts, the graphic sequences generated by a CAD/CAM system can easily be viewed on the user console.

All ModEva come with PC 1200 off line bending software. PC 1200 program allows you to prepare your programs, calculate offers and check feasibility of the parts in your Office on a PC. No time wasted on the machine.



## ModEva 15S

3D / 15" color screen  
TFT type screen  
128 Mb 256/512 Ram  
20 GB Main Memory  
Easy Cursor  
Automatic Bend Sequences  
PC Off line 3D Software



## Delem DA 66W

The DA-66W is the Delem modular press brake controller. All graphics, including product and machine as well as tool setup are also available in 3D. This to visualize the machine situation as accurate as possible. The DA-66W can program 2D products, accurately showing and calculating including sheet thickness and radii. During programming automatic generation of bend sequencers can be used as well as manual selection. The operator can overrule to his own choice. With the DA-66W also special tools for e.g. hemming bends can be programmed. The DA-66W helps the user in programming these bends (with their specific parameters) and also shows the prebend as well as the hemming operation during production.

## Delem DA 69W

The DA-69W is 1:1 compatible with the DA-66W and offers next to 2D products also 3D products. 3D products can be programmed with accurate sheet thickness and desired radii. Automatic bend sequence calculation can help finding the optimum bendsequence even from very complex products. Multiple products can programmed in 3D, 2D as well as numerical. Storage is managed on the CF-harddrive. The controllers Windows operating system enabled easy integration in factory networks and due to the real-time capable OS, also instant switch of is possible. The controller will start-up time after time, without annoying booting messages. The DA-66W and DA-69W can also be equipped with an optional touch screen.



*High Stroke | Daylight | Throat  
= High working space*

*AD-S machines offers wide spaces for ease of operation also reduces cycle times.*



*Safety Systems for CE Countries*

*AD-S can be fully comply with European CE regulations. System respects to the latest CE regulations by its laser protection, guards and hydraulics and electronics safety protects operators and the machine itself.*

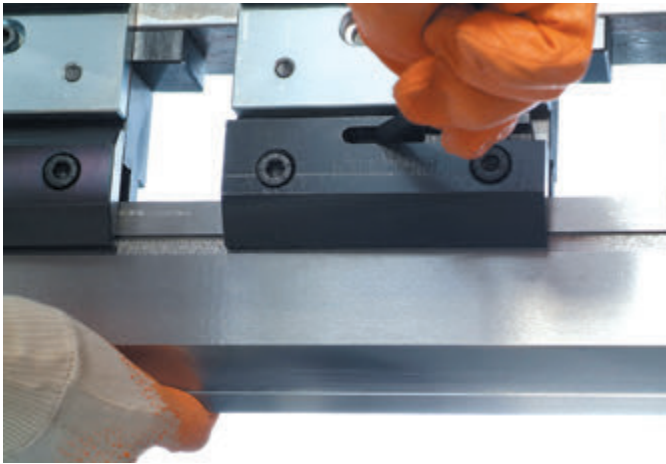
## *Tool Holders*



*Eurostyle Clamping*

*Eurostyle tool holders offers precise tool setup by their ground surfaces.*





*Quick Release Clamping*



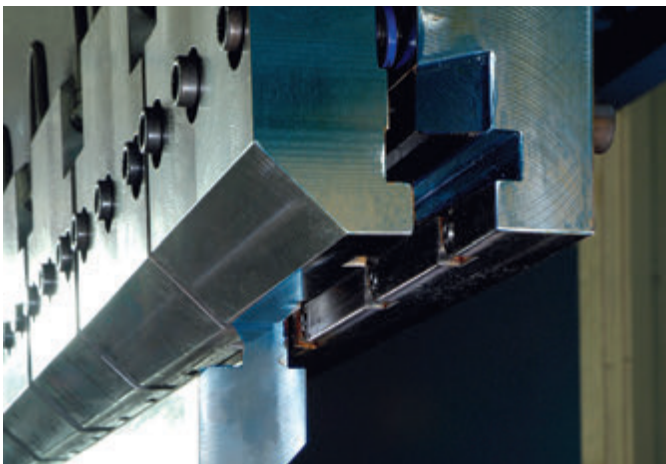
*Hydraulic Euro Clamping*



*Hydraulic New Standard Clamping*



*Durma Tool Clamping*



*Durma Hydraulic Clamping*

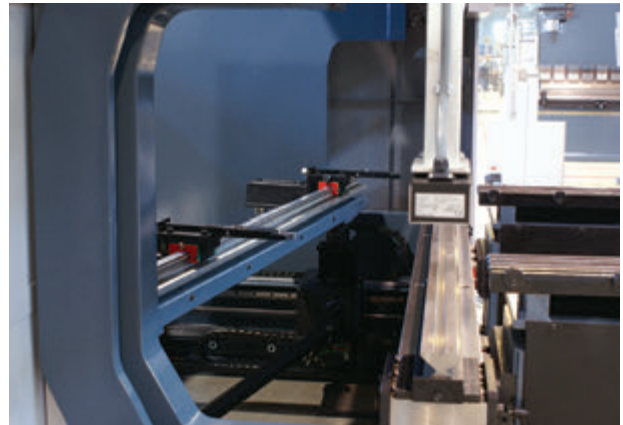


*Hardening Tools*

## *Back Gauge Options*



*X, R, Z1 Z2 4 Axes*



*X1, X2, R, Z1, Z2 5 Axes*

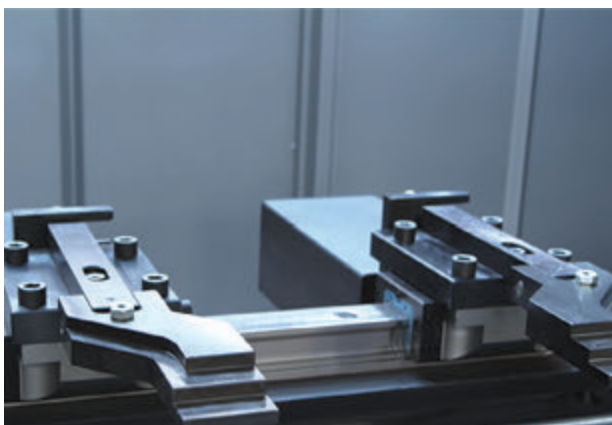


*X1, X2, R1, R2, Z1, Z2 6 Axes*

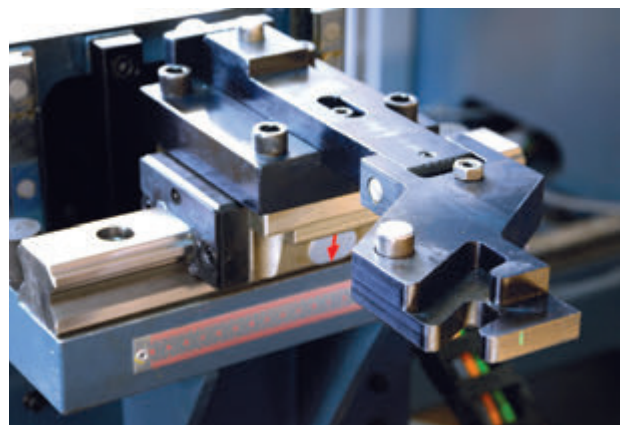


*Delta X*

## *Back Gauge Fingers*



*3 Step Finger Blocks*



*Special Fingers*

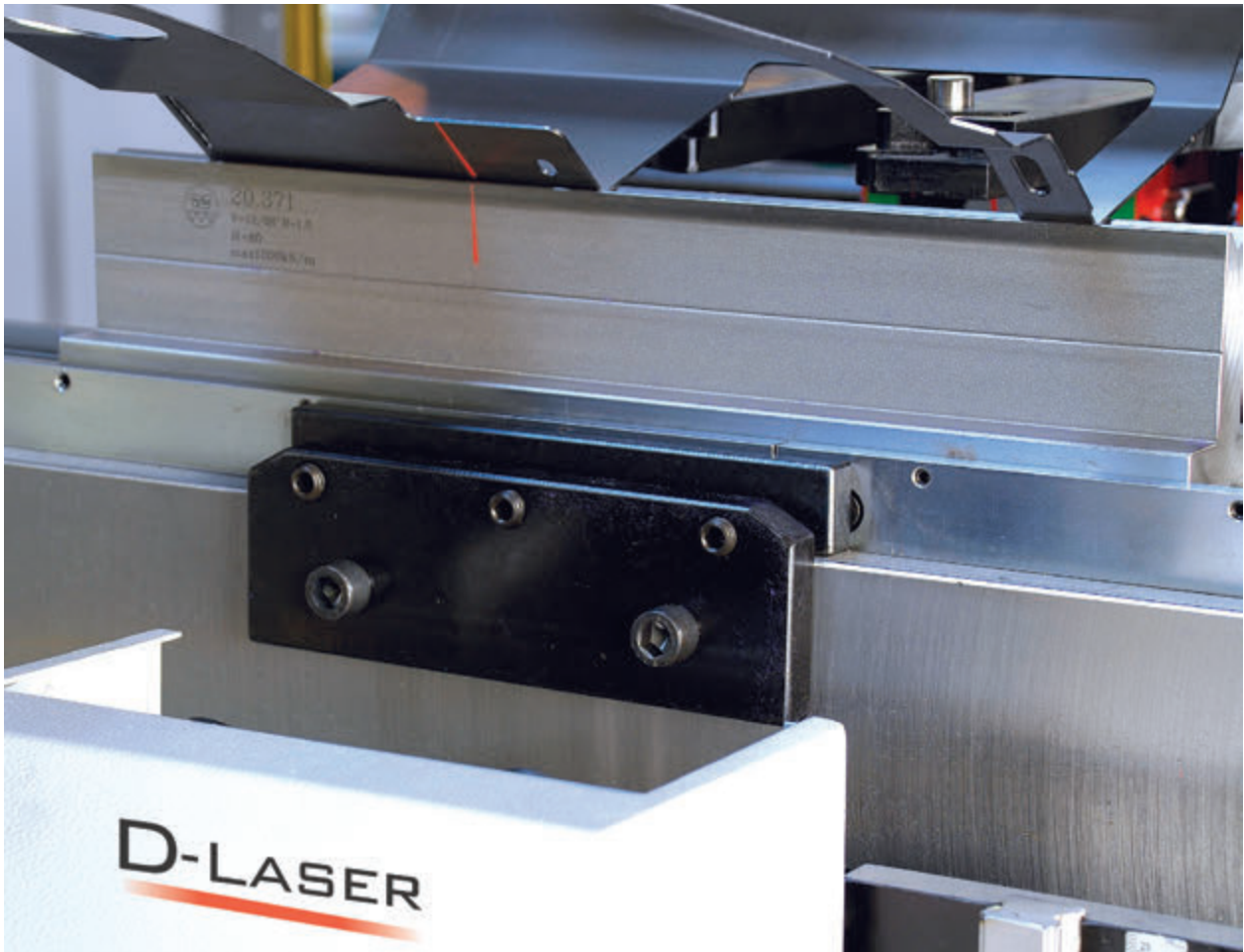
## Bottom Tool Positioning Systems



*Pneumatic Positioning System*



*Motorized Positioning System*



*Laser Angle Measurement System*

*Manufacturing sheet metal parts with properly bending angles that are kept constant all times often meets a problem during the actual production process: different parameters in material thickness and stresses. The best solution is laser based bending angle measuring device.*

- Any bending angle can be measured.
- Very compact, everything in the appliance.
- Light influence, light or dark material surfaces play practically no part at all.

## STANDARD EQUIPMENTS

Y1, Y2, X, R - 4-Axes

"Control Unit - CNC Cybelec ModEva 10S 3D with PC 1200 3D SW  
or Delem 66W"

CNC controlled motorized Crowning

CNC controlled Hyd-Mech Crowning ( Standard  $\geq$  800 t )

European Clamping system ( Standard  $\leq$  400 t )

DURMA Clamping system ( Standard  $\geq$  600 t )

Sliding Front Arms with full length linear guide

Back gauge , Servo-motorised & Linear guide & Ball bearing system ( X- R )

Sliding sheet support Arms with T-Canal and Tilting stop

Protection covers

Special designed - worldclass hydraulics blocks & valves

Worldclass electronics system

## OPTIONAL EQUIPMENTS

CE with Manual F.AKAS II M -FPSC-B-C (SAFETY PLC)

CE with FIESSLER AKAS-LC II AKAS-3 M Motorised + FPSC (SAFETY PLC)

CE with SICK C 4000- only for tandem

DFS1 Laser Finger protection ( for Bottom Beam-Non CE )

Z1, Z2 Axes

X1, X2 Axes

R1, R2 Axes

R1 R2 axes on the finger blocks

Delta X axis ,+250mm stroke

X Axis =1000 mm - Back protection with Light barrier

AP3-AP4 Sheet follower with sliding guide- Motorised height adj

Quick Release Clamping

Durma Hydraulic or Mechanical Clamping

Wila Hydraulic or Mechanical Clamping

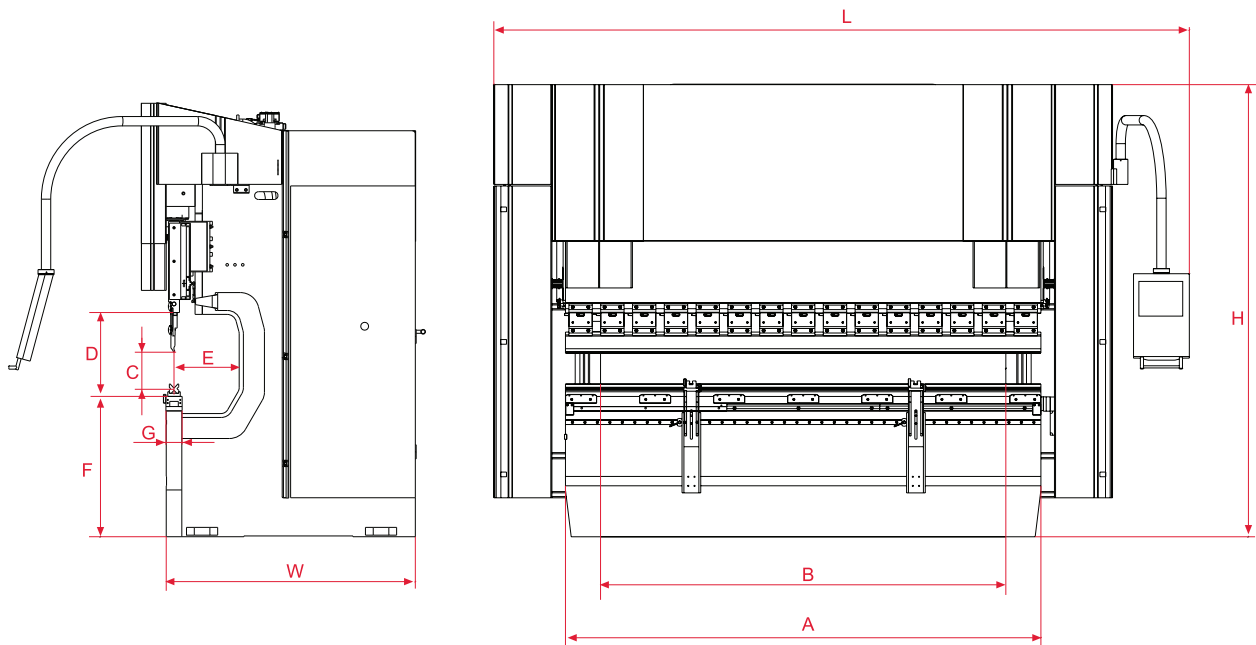
Tool options ( Durma, European, Wila ) in tool catalog

Bottom tool separation system

Crowning Vertical

*For other options please contact us.*

AD-S Series		Unit	1260	2060	25100	30100	30135	30175	30220	30320	37175	37220	40175	40220
Bending force		ton	60	60	100	100	135	175	220	320	175	220	175	220
Bending length	(A)	mm	1250	2050	2550	3050	3050	3050	3050	3050	3700	3700	4050	4050
Distance between columns	(B)	mm	1050	1700	2200	2600	2600	2600	2600	2600	3100	3100	3600	3600
Y rapid speed		mm/sec	200	200	180	180	160	120	120	100	120	120	120	120
Y working speed		mm/sec	10	10	10	10	10	10	10	10	10	10	10	10
Y return speed		mm/sec	120	120	120	120	120	100	100	100	100	100	100	100
Crowning		-	Mot.	Mot.	Mot.	Mot.	Mot.	Mot.	Mot.	Mot.	Mot.	Mot.	Mot.	Mot.
Daylight	(D)	mm	433	530	530	530	530	530	530	630	530	530	530	530
Table width	(G)	mm	104	104	104	104	104	104	154	104	104	104	104	104
Table height	(F)	mm	790	900	900	900	900	900	900	900	900	900	900	900
Depth of pit	(F1)	mm	-	-	-	-	-	-	-	-	-	-	-	-
Stroke	(C)	mm	160	265	265	265	265	265	265	265	265	265	265	265
Throat depth	(E)	mm	365	410	410	410	410	410	410	410	410	410	410	410
Support arms		amount	2	2	2	2	2	2	2	2	2	2	2	2
Back gauge finger blocks		amount	2	2	2	2	2	2	2	2	2	2	2	2
Speed of travel in X-axis		mm/sec	350	500	500	500	500	500	500	500	500	500	500	500
Travel in X-axis		mm	500	650	650	650	650	650	650	650	650	650	650	650
Speed of R-axis(max.)		mm/sec	300	350	350	350	350	350	350	350	350	350	350	350
Travel in R-axis		mm	200	250	250	250	250	250	250	250	250	250	250	250
Motor power		kw	4	7.5	11	11	15	18.5	22	37	18.5	22	18.5	22
Oil tank capacity		lt	60	100	100	100	150	250	250	250	250	250	250	250
Length	(L)	mm	2490	3300	3800	4200	4200	4250	4250	4300	4950	4950	5250	5250
Width	(W)	mm	1285	1650	1670	1670	1680	1700	1770	1820	1700	1770	1700	1770
Height	(H)	mm	2375	2750	2750	2750	2750	2750	2900	3230	2900	2900	2750	2900
Weight approx.		kg	3500	6100	8900	9500	10500	11500	12500	17500	13000	14360	13100t	15000



40320	40400	40600	60220	60320	60400	60600	60800	70800	701000	701250	80800	801000	801250	801600	802000
320	400	600	220	320	400	600	800	800	1000	1250	800	1000	1250	1600	2000
4050	4050	4050	6050	6050	6050	6050	6050	7050	7050	7050	8050	8050	8050	8100	8100
3600	3400	3100	5100	5100	5100	5100	5100	5100	5100	5100	6400	6400	6400	6400	6400
100	100	80	80	100	100	80	70	80	70	70	80	70	70	70	70
10	8	7	10	10	8	7	6	7	5	7	7	5	7	6	6
100	80	80	100	100	80	80	80	70	60	70	70	60	70	70	60
Mot.	Mot.	Mot.	Mot.	Mot.	Mot.	Mot.	Hyd-Mech	Hyd-Mech	Hyd-Mech	Hyd-Mech	Hyd-Mech	Hyd-Mech	Hyd-Mech	Hyd-Mech	Hyd-Mech
630	630	700	530	630	630	700	700	700	800	800	700	800	800	1000	1000
154	300	300	154	154	300	300	400	400	400	400	400	400	500	500	700
900	1040	990	1100	1100	1220	990	800	800	800	900	800	800	900	900	950
-	-	1200	-	-	-	1200	1300	1300	1500	1700	1300	1600	1800	1800	2100
365	365	365	265	365	365	365	400	400	500	600	400	500	500	600	600
410	510	510	410	410	510	510	610	610	610	610	610	610	610	610	750
2	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4
2	2	2	4	4	4	4	4	4	4	4	6	6	6	6	6
500	350	350	350	350	350	350	350	350	300	300	300	300	300	300	300
650	750	750	750	750	750	750	750	750	1000	1000	750	1000	1000	1000	1250
350	300	300	300	300	300	300	300	300	250	250	300	250	250	250	250
250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
37	37	45	22	37	37	45	55	55	55	90	55	55	90	90	110
250	450	500	250	250	500	500	750	750	1000	1250	750	1000	1250	1250	2000
5300	5750	5650	7500	7500	7500	7600	8050	8700	8800	8800	9800	10000	10000	10100	10500
1910	2110	3250	1770	1910	2110	2650	3200	3200	3250	3250	3200	3250	3250	3500	4350
3230	3540	3825	3250	3450	3710	3850	4250	4250	5900	6400	4250	5900	6400	7000	8100
21000	27000	40500	20840	28500	36000	54000	72000	79500	95500	110000	85000	102000	135000	163000	249000

*For other sizes please contact us.*