



# CNCHAP 3 AXIS SYNCHRONIZED HYDRAULIC PRESS BRAKE



## GENERAL SPECIFICATION

If your aim is to provide important developments in quality, productivity, esthetic and security aspects, ERMAK CNC HAP is what you looking for.

CNC HAP series is developed for works with wide variety and where production speed is important. Syncro system is provided by synchronized cylinders with proportional valve technology like in CNC AP machines. And this means bending angle with maximum precision. CYBELEC DNC 60PS is used in CNC HAP. This controllers' easy usage, high capacity and fast processing power, durability and service network all around the world provides your machine high performance.

**ERMAK**  
SHEET METAL WORKING MACHINERY

*Since 1965*

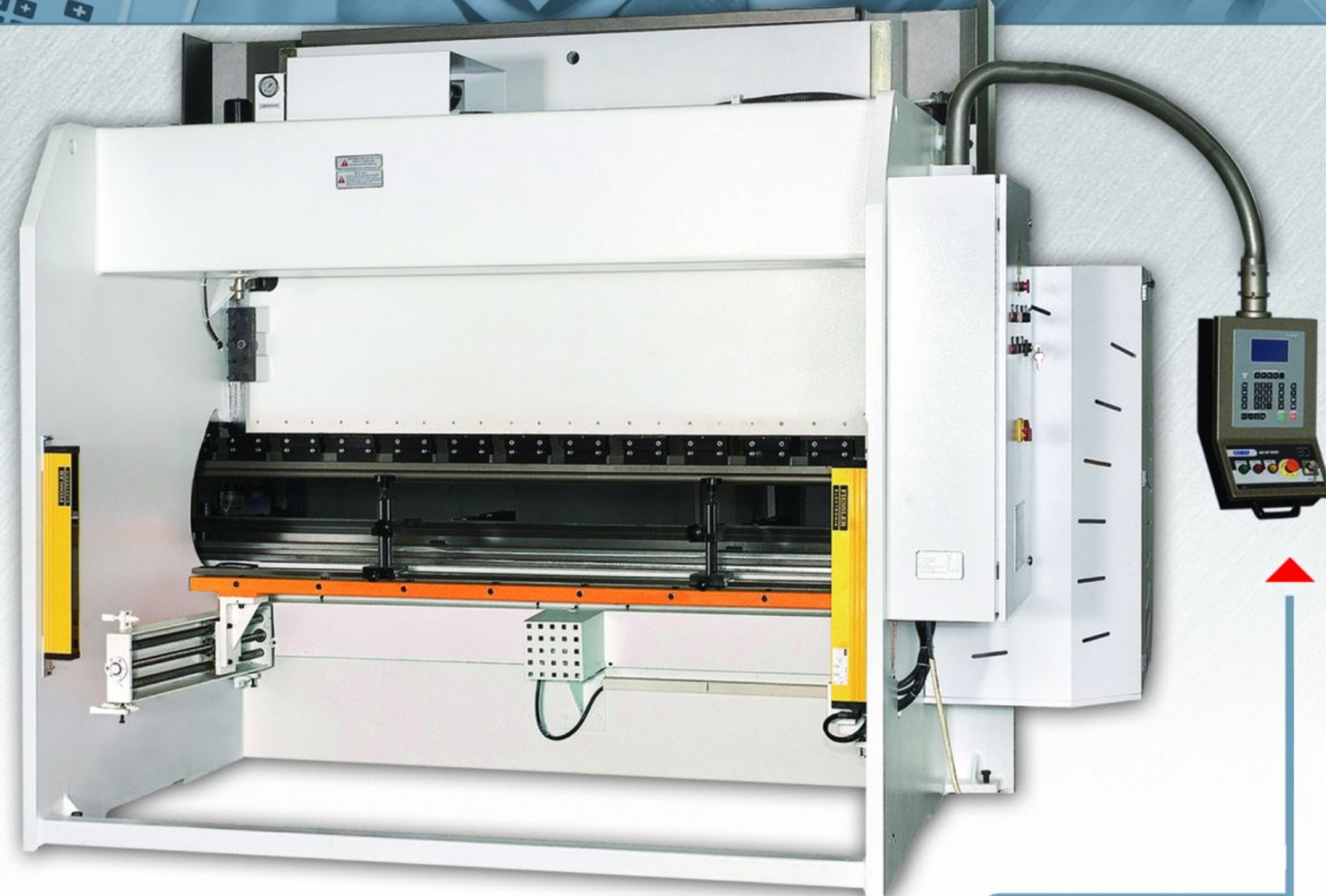
### CYBELEC DNC 60 G Controller

Sequence repeat, sub-programs and chain-programming, 75 x 130 mm Black-White LCD graphic screen (visible area), 240 x 128 pixel automatic contrast adjustment, 16 input (24 or 32 optional), Easy cut page.

Standard

# CNCHAP 3 AXIS SYNCHRONIZED HYDRAULIC PRESS BRAKE

## CNC CONTROLLERS



### ER 50 Controller General Specifications

- State of the art technology
- Panel based housing
- Color LCD display with 6.4" TFT high brightness display
- Memory capacity of 64 MB
- Product memory at least 4 MB
- Tool library for 30 punches / 30 dies
- Fast programming with easy page selection
- External memory storage via USB interfacing
- Directly angle programming
- Unfolded length calculations
- Automatic tonnage calculations
- Automatic motorized crowning calculations

ER50 *standard*

### CYBELEC DNC 60 PS General Specifications

- Die and punch programming (20 die, 30 punch),
- Automatic conversion: Inch / mm; US TON / Metric TON; PSIx1000 / kg/cm<sup>2</sup>,
- 999 program and 13 bending in each program,
- 99 bending repeat,
- In closed circuit, high accuracy of top beam positioning by speed, pressure and parallelism control,
- Adjustment of moving speed, speed up, slowdown and gain by machine parameters,
- Correction of Y1, Y2 and X axis independently,
- Automatic or programmable back gauge retract feature,
- Programmable waiting time under pressure (Ironing),
- Adjustable short stroke for each part and bending job in normal bending page,
- Adjustable speed change point (Mute point),
- Warning message on screen for the correct side of material in reverse bending (Return + Swing + Swivel),
- Provides bending in circle quality by programming of bending number and radius for ideal curve,
- Keypad with membrane covering and LED warning lights,
- Back up of material, tooling and machine parameters by RS-232 serial port.
- Languages: French, German, English, Italian, Spanish, Portuguese, Netherlandish, Swedish, Danish, Finnish, Norwegian, Turkish.
- Programmable bending angle, Automatic calculation bend allowance and unfolded length. (Automatic pressure control)

DNC 60 *standard*

### ER 70 Controller General Specifications

- User friendly , CNC controller with ver good price and highperformance .
- 2 D Graphical Bending Simulation
- Delem Bending Software
- 2 D Graphical product Drawing
- 2D Graphical Manual Collision Control
- Automatic Calculations Bend Allowance depending inner or outer dimension
- Automatic Calculations X, R target positions for the product dimension and bend sequence (Move Bend or Swap Bend)
- Automatic Calculation Unfolded Length
- Automatic Executed Y1, Y2 position depend of angle value
- Automatic calculated internal radius or bumping
- Screen size: 10,4" TFT LCD Monochrome
- Operating System: Windows CE
- Memory: 64 Mb
- Free space for end-users: at least 2 Mb (approx. 1000 programs)
- Sequence max. 99 per program
- Y1, Y2, X, R (Max Four Axes) AC (0-10 V) or Servo Axes (±10 V)
- Punches / Dies Memory: 30/60
- Manual bend sequence determination
- Bend Sequence determinations, 2D Graphical Bending Simulation
- USB Backup./restore of parameters and Product
- 2 USB Ports for the transferring and keyboard and mouse

ER70 *optional*

### OPTIONALS EQUIPMENTS

- Offline programmable with Profile-W software
- Optional Colour Screen

### X axis backgauge system



*standard*

### 2 axis backgauge system



*optional*

### LINK 7000

INTERFACE software  
convert to PC 1200-  
DNC60 product memory,  
Punch die transferring  
with RS 232

### Computer



CYBELEC CYCAD,  
DELEM Profile-W  
Office Offline Software  
*Optional*

### RS 232

Free of charge  
CYBACK  
standart data  
transferring software

### Server



Ethernet Network

# CNCHAP 3 AXIS SYNCHRONIZED HYDRAULIC PRESS BRAKE

## STANDARD EQUIPMENTS

- Mono block, welded steel frame rigid to deflection moment and high tensile with ST44 A1 material.
- Cybelec DNC 60P controller,
- Y1 + Y2 + X Axis,
- Synchronization control of Y1 + Y2 axis by  $\pm 0.01$  accuracy linear encoders is provided by means of hydro-electrical technique, with servo valves
- AC motorized back gauge system with ball screwed shaft in X-axis, Analog Dynamic, Fast Servo controlled Backgauge
- Hydraulic system by proportional valve system with the brands Bosch-Rexroth or Hoerbiger,
- High accuracy Heidenhain – Givi mesure linear encoders,
- Electrical panel with cooling system, designed to meet CE Standards and composed of automation and electrical equipments with
- Automatic tonnage adjustment, with proportional valves
- Getting the required angle in one step without trial-error method by entering material type, width, length and thickness,
- Automatic adjustment of back gauge position according to the bending program,
- Bending sequence,
- Automatic calculation of required stroke for the required bending angle,
- Harmony of used tooling and bending part,
- Storing the programs in memory and recalling,
- Hardened, grinded and standard segmented (835 mm) top and bottom tooling system. Bottom tool with four V-dies in dimensions of 60x60,
- Amada Promecam clamping system with quick release,
- User-friendly, moveable and ergonomic control panel carrying all buttons,
- Light Guard positioned at the back side of the machine,
- Multiple point parallelism adjustable back gauge bar, back gauge fingers with the accuracy of 0.01
- Front support arms with T-slot and mm/inch scale,
- 400 mm throat depth,
- Conforming to EU machine safety directives and CE Regulations.



standard



optional



optional



optional



standard



optional



optional



optional

## OPTIONAL EQUIPMENTS

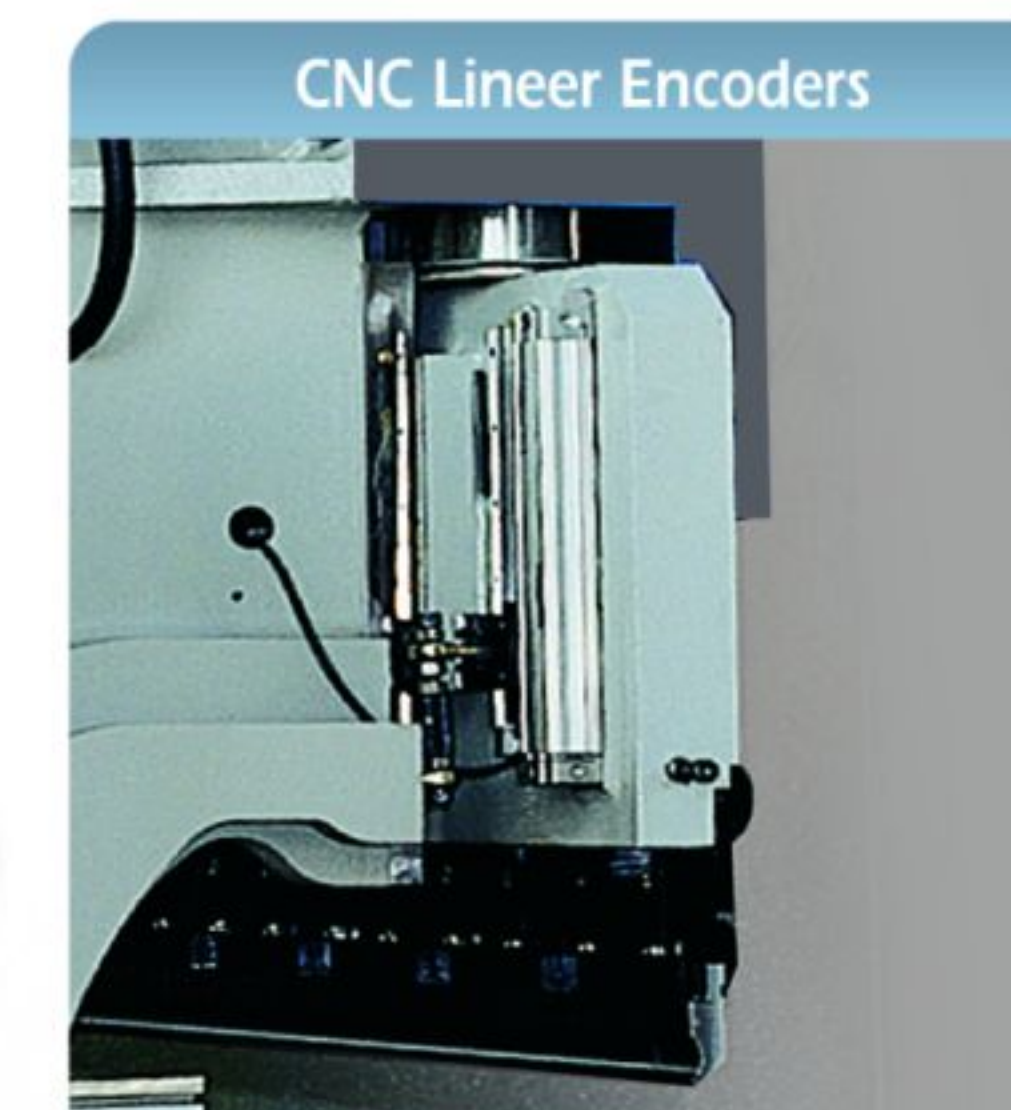
- CYCAD: interface converts 2D drawing prepared on different programs with format \*.DXF and \*.IGES to Cybelec format
- LINK 7000: Interface Software Convert to PC 1200-DNC60 product Memory, Punc, die Transferring with RS232
- Manuel WILA Anti-Deflection system,
- R axis,
- Motorized Wila Anti-Deflection System which operates automatically according to tonnage applied,
- Front light guard system,
- Laser Protection: Laser protection system for die area, LASER SAFE LZS, AKAS II, (Camera based system) Sick V4000, DFS LASER
- Pneumatic top tool holding system,
- Hydraulic top and bottom tool holding system,
- Sliding front arms with bearing rollers,
- Hydraulic oil coolant,
- Automatic slide greasing system,
- Special throat depth (500,600 and 750 mm),
- Special top and bottom tool
- Tandem application



standard



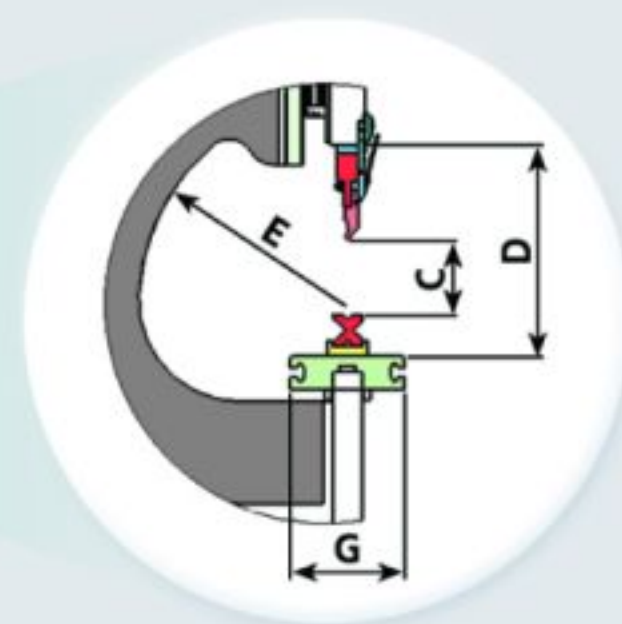
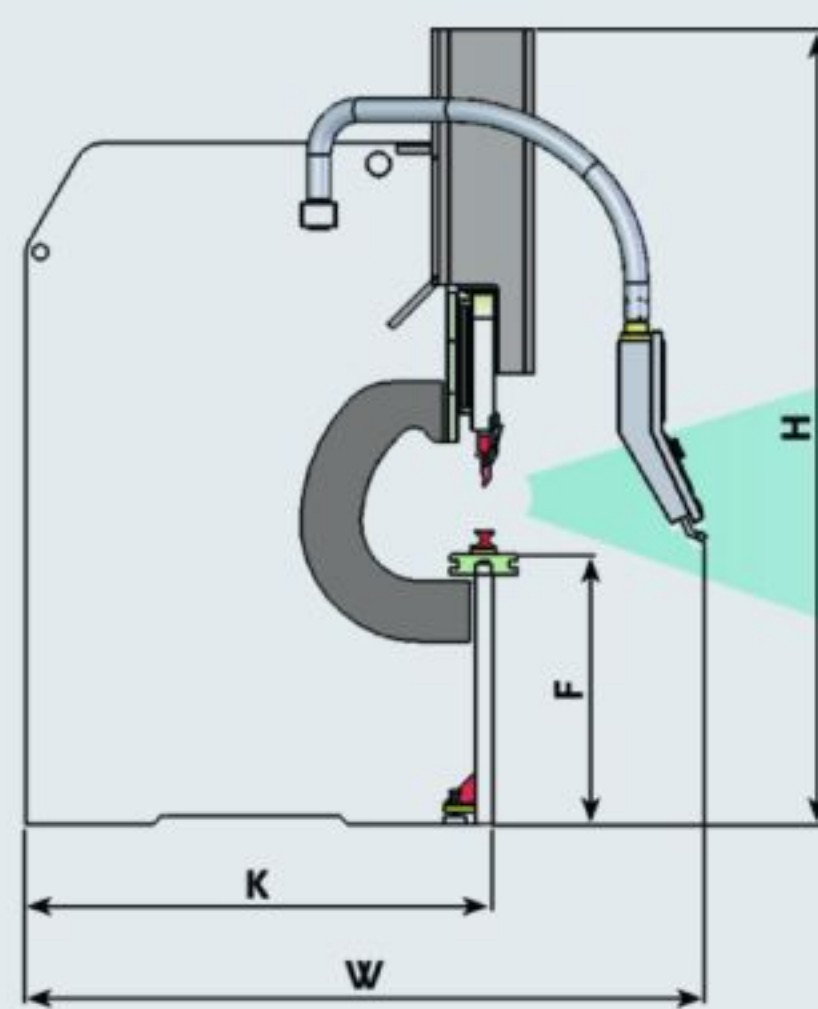
standard



standard



optional



## TYPES

| TYPES               | CNC HAP Series Specifications |      |               |                          |        |               |  |                 |        |                              |     |          |                               |    |                                  |                               |                                    |        |                  |      |                                        |      |                         |      |                              |        |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
|---------------------|-------------------------------|------|---------------|--------------------------|--------|---------------|--|-----------------|--------|------------------------------|-----|----------|-------------------------------|----|----------------------------------|-------------------------------|------------------------------------|--------|------------------|------|----------------------------------------|------|-------------------------|------|------------------------------|--------|--------------|----|-------------|----|--------|----------|--------------|--------------|-------------|---------------|--------|--------|-------|--------|
|                     | BENDING LENGTH                |      | BENDING POWER | DISTANCE BETWEEN COLUMNS |        | Y RAPID SPEED |  | Y WORKING SPEED |        | Y RETURN SPEED               |     | CROWNING | TRAVEL IN X AXIS              |    | SPEED OF X AXIS STANDARD AC AXES |                               | SPEED OF X AXIS DYNAMIC SERVO AXES |        | TRAVEL IN R AXIS |      | OPTIONAL SPEED OF DYNAMIC SERVO R AXES |      | BACKGAUGE FINGER BLOCKS |      | NUMBER OF SHEET SUPPORT ARMS |        | OIL CAPACITY |    | MOTOR POWER |    | STROKE | DAYLIGHT | THROAT DEPTH | TABLE HEIGHT | TABLE WIDTH | MACHINE WIDTH | LENGTH | HEIGHT | WIDTH | WEIGHT |
|                     | A                             |      | B             |                          |        |               |  |                 |        | OPTIONAL Manual or Motorized |     | AC Axes  | Optional Dynamic Servo X Axes |    |                                  | Optional Dynamic Servo R Axes |                                    | Amount | Amount           |      |                                        | Lt.  | KW                      | C    | D                            | E      | F            | G  | K           | L  | H      | W        |              |              |             |               |        |        |       |        |
|                     | mm                            | Ton  | mm            | mm/sec                   | mm/sec | mm/sec        |  | mm              | mm/sec | mm/sec                       | mm  | mm/sec   | mm/sec                        | mm | mm/sec                           | mm/sec                        | Amount                             | Amount |                  |      |                                        |      | mm                      | mm   | mm                           | mm     | mm           | mm | mm          | mm | mm     | mm       | mm           | mm           | mm          | mm            | mm     | kg     |       |        |
| CNC HAP 1270 - 35   | 1270                          | 35   | 1000          | 150                      | 17     | 100           |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 80                               | 4                             | 100                                | 310    | 250              | 900  | 90                                     | 1245 | 2150                    | 2150 | 1550                         | 2780   |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 2100 - 35   | 2100                          | 35   | 1550          | 150                      | 17     | 100           |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 80                               | 4                             | 100                                | 310    | 250              | 900  | 90                                     | 1245 | 2900                    | 2150 | 1550                         | 3450   |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 2600 - 80   | 2600                          | 80   | 2050          | 100                      | 10     | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 150                              | 7.5                           | 180                                | 400    | 400              | 900  | 225                                    | 1550 | 3750                    | 2750 | 1950                         | 6000   |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 2600 - 120  | 2600                          | 120  | 2050          | 100                      | 10     | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 11                            | 180                                | 415    | 400              | 900  | 225                                    | 1560 | 3750                    | 2800 | 2050                         | 7050   |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3100 - 80   | 3100                          | 80   | 2550          | 100                      | 10     | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 150                              | 7.5                           | 180                                | 400    | 400              | 900  | 225                                    | 1550 | 4250                    | 2750 | 1950                         | 7000   |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3100 - 120  | 3100                          | 120  | 2550          | 100                      | 10     | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 11                            | 180                                | 415    | 400              | 900  | 225                                    | 1560 | 4250                    | 2800 | 2050                         | 8450   |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3100 - 160  | 3100                          | 160  | 2550          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 180                                | 415    | 400              | 900  | 225                                    | 1570 | 4250                    | 2800 | 2150                         | 9450   |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3100 - 200  | 3100                          | 200  | 2550          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 200                                | 435    | 400              | 900  | 225                                    | 1580 | 4550                    | 2850 | 2250                         | 10950  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3100 - 250  | 3100                          | 250  | 2550          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 300                              | 18.5                          | 250                                | 495    | 400              | 900  | 280                                    | 1650 | 4550                    | 2950 | 2350                         | 14750  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3100 - 300  | 3100                          | 300  | 2550          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 300                              | 22                            | 250                                | 510    | 400              | 900  | 340                                    | 1700 | 4550                    | 3050 | 2450                         | 16500  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3100 - 400  | 3100                          | 400  | 2550          | 100                      | 7      | 90            |  | 1000            | 230    | 350                          | 200 | 180      | 2                             | 2  | 400                              | 30                            | 300                                | 600    | 400              | 1000 | 290                                    | 1950 | 1550                    | 3250 | 2550                         | 20200  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3100 - 500  | 3100                          | 500  | 2450          | 80                       | 6      | 65            |  | 1000            | 230    | 350                          | 250 | 180      | 2                             | 2  | 500                              | 30                            | 350                                | 600    | 500              | 1000 | 350                                    | 2100 | 4900                    | 3600 | 2650                         | 23000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3600 - 160  | 3600                          | 160  | 3150          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 180                                | 415    | 400              | 900  | 225                                    | 1570 | 4750                    | 2800 | 2150                         | 10950  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3600 - 200  | 3600                          | 200  | 3150          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 200                                | 435    | 400              | 900  | 225                                    | 1580 | 4950                    | 2850 | 2250                         | 13400  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3600 - 250  | 3600                          | 250  | 3150          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 300                              | 18.5                          | 250                                | 525    | 400              | 1000 | 280                                    | 1650 | 4950                    | 2950 | 2350                         | 16250  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3600 - 300  | 3600                          | 300  | 3150          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 300                              | 22                            | 250                                | 530    | 400              | 980  | 290                                    | 1700 | 4950                    | 3150 | 2450                         | 18000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3760 - 160  | 3760                          | 160  | 3250          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 180                                | 415    | 400              | 900  | 225                                    | 1570 | 4900                    | 2800 | 2150                         | 11750  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3760 - 200  | 3760                          | 200  | 3250          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 200                                | 435    | 400              | 900  | 225                                    | 1580 | 5100                    | 2900 | 2250                         | 14400  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 3760 - 300  | 3760                          | 300  | 3250          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 300                              | 22                            | 250                                | 510    | 400              | 100  | 290                                    | 1700 | 5100                    | 3150 | 2450                         | 18550  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 120  | 4100                          | 120  | 3550          | 100                      | 10     | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 11                            | 180                                | 415    | 400              | 900  | 225                                    | 1580 | 5050                    | 2800 | 2100                         | 10900  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 160  | 4100                          | 160  | 3550          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 180                                | 415    | 400              | 960  | 225                                    | 1580 | 5050                    | 2850 | 2150                         | 12750  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 200  | 4100                          | 200  | 3550          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 200                                | 435    | 400              | 960  | 225                                    | 1600 | 5150                    | 2950 | 2250                         | 14900  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 250  | 4100                          | 250  | 3550          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 300                              | 18.5                          | 250                                | 525    | 400              | 1000 | 240                                    | 1650 | 5150                    | 3050 | 2350                         | 17600  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 300  | 4100                          | 300  | 3550          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 2                             | 2  | 300                              | 22                            | 250                                | 520    | 400              | 1000 | 290                                    | 1750 | 5350                    | 3150 | 2450                         | 19000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 400  | 4100                          | 400  | 3550          | 100                      | 7      | 90            |  | 1000            | 230    | 350                          | 200 | 180      | 2                             | 2  | 400                              | 30                            | 300                                | 565    | 400              | 1000 | 340                                    | 1980 | 5450                    | 3300 | 2550                         | 25000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 500  | 4100                          | 500  | 3550          | 80                       | 6      | 65            |  | 1000            | 230    | 350                          | 250 | 180      | 2                             | 2  | 500                              | 30                            | 350                                | 600    | 500              | 1100 | 340                                    | 2100 | 5450                    | 3700 | 2650                         | 30500  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 600  | 4100                          | 600  | 3550          | 80                       | 6      | 65            |  | 1000            | 230    | 350                          | 250 | 180      | 2                             | 2  | 600                              | 37                            | 350                                | 600    | 500              | 900  | 350                                    | 2000 | 5900                    | 3600 | 2650                         | 35000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4100 - 1200 | 4100                          | 1200 | 3100          | 70                       | 6      | 55            |  | 1000            | 350    | 350                          | 250 | 180      | 4                             | 4  | 1200                             | 55                            | 500                                | 900    | 500              | 800  | 600                                    | 2650 | 5500                    | 4600 | 3200                         | 68000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4270 - 120  | 4270                          | 120  | 3780          | 100                      | 10     | 90            |  | 800             | 350    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 11                            | 180                                | 415    | 400              | 900  | 225                                    | 1578 | 5280                    | 2800 | 2150                         | 11000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4270 - 200  | 4270                          | 200  | 3780          | 100                      | 9      | 90            |  | 800             | 350    | 350                          | 200 | 180      | 2                             | 2  | 200                              | 15                            | 200                                | 435    | 400              | 1000 | 225                                    | 1598 | 5320                    | 2970 | 2250                         | 15050  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4270 - 400  | 4270                          | 400  | 3780          | 100                      | 7      | 90            |  | 1000            | 350    | 350                          | 200 | 180      | 2                             | 2  | 400                              | 30                            | 300                                | 563    | 400              | 1000 | 340                                    | 1978 | 5600                    | 3300 | 2550                         | 27500  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 4270 - 600  | 4270                          | 600  | 3600          | 80                       | 6      | 65            |  | 1000            | 350    | 350                          | 250 | 180      | 4                             | 4  | 600                              | 37                            | 350                                | 600    | 500              | 900  | 350                                    | 2000 | 6100                    | 3600 | 2650                         | 36000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 5100 - 200  | 5100                          | 200  | 4100          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 4                             | 4  | 200                              | 15                            | 200                                | 455    | 400              | 1015 | 240                                    | 1600 | 6450                    | 3000 | 2250                         | 17650  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 5100 - 300  | 5100                          | 300  | 4100          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 4                             | 4  | 300                              | 22                            | 250                                | 550    | 400              | 1100 | 290                                    | 1860 | 6450                    | 3150 | 2450                         | 23000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 5100 - 500  | 5100                          | 500  | 4100          | 80                       | 6      | 65            |  | 1000            | 230    | 350                          | 250 | 180      | 4                             | 4  | 500                              | 30                            | 350                                | 650    | 500              | 1100 | 350                                    | 2100 | 6900                    | 3700 | 2650                         | 36000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 5100 - 600  | 5100                          | 600  | 4100          | 80                       | 6      | 65            |  | 1000            | 350    | 350                          | 250 | 180      | 4                             | 4  | 600                              | 37                            | 350                                | 600    | 500              | 900  | 350                                    | 2000 | 6900                    | 3800 | 2650                         | 45000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 5100 - 1000 | 5100                          | 1000 | 4100          | 80                       | 6      | 60            |  | 1000            | 350    | 350                          | 250 | 180      | 4                             | 4  | 1000                             | 45                            | 500                                | 900    | 500              | 850  | 350                                    | 2500 | 6950                    | 4100 | 3150                         | 66800  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 6100 - 200  | 6100                          | 200  | 5100          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 4                             | 4  | 200                              | 15                            | 200                                | 455    | 400              | 1075 | 240                                    | 1835 | 7400                    | 3100 | 2350                         | 20000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 6100 - 300  | 6100                          | 300  | 5100          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 4                             | 4  | 300                              | 22                            | 250                                | 530    | 400              | 1100 | 280                                    | 1900 | 7500                    | 3200 | 2450                         | 32000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 6100 - 400  | 6100                          | 400  | 5100          | 100                      | 7      | 90            |  | 1000            | 230    | 350                          | 200 | 180      | 4                             | 4  | 400                              | 30                            | 300                                | 565    | 400              | 1100 | 320                                    | 2000 | 7650                    | 3500 | 2550                         | 36500  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 6100 - 500  | 6100                          | 500  | 5100          | 80                       | 6      | 65            |  | 1000            | 230    | 350                          | 250 | 180      | 4                             | 4  | 500                              | 30                            | 350                                | 650    | 500              | 900  | 350                                    | 200  | 7900                    | 3700 | 2650                         | 43000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 6100 - 600  | 6100                          | 600  | 5100          | 80                       | 6      | 65            |  | 1000            | 230    | 350                          | 250 | 180      | 4                             | 4  | 600                              | 37                            | 350                                | 600    | 500              | 900  | 350                                    | 2000 | 7900                    | 3800 | 2650                         | 53500  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 6100 - 800  | 6100                          | 800  | 5100          | 80                       | 6      | 60            |  | 1000            | 230    | 350                          | 250 | 180      | 4                             | 4  | 800                              | 37                            | 400                                | 650    | 500              | 900  | 350                                    | 2350 | 7900                    | 4100 | 2950                         | 63000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 6100 - 1000 | 6100                          | 1000 | 5100          | 80                       | 6      | 60            |  | 1000            | 350    | 350                          | 250 | 180      | 4                             | 4  | 1000                             | 45                            | 500                                | 900    | 500              | 850  | 350                                    | 2500 | 6500                    | 4100 | 3150                         | 74800  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 6100 - 1200 | 6100                          | 1200 | 5100          | 70                       | 6      | 55            |  | 1000            | 350    | 350                          | 250 | 180      | 4                             | 4  | 1200                             | 55                            | 500                                | 900    | 500              | 800  | 600                                    | 2650 | 7500                    | 4500 | 3300                         | 90000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 7100 - 800  | 7100                          | 800  | 6100          | 80                       | 6      | 60            |  | 1000            | 350    | 350                          | 250 | 180      | 4                             | 4  | 800                              | 37                            | 400                                | 650    | 500              | 900  | 350                                    | 2350 | 8500                    | 4100 | 2950                         | 72000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 7100 - 1200 | 7100                          | 1200 | 6100          | 70                       | 6      | 55            |  | 1000            | 350    | 350                          | 250 | 180      | 4                             | 4  | 1200                             | 55                            | 500                                | 900    | 500              | 800  | 600                                    | 2650 | 8500                    | 4600 | 3300                         | 137500 |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 8100 - 200  | 8100                          | 200  | 7100          | 100                      | 9      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 4                             | 6  | 200                              | 15                            | 200                                | 455    | 400              | 1100 | 250                                    | 1960 | 9500                    | 3150 | 2450                         | 31250  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 8100 - 300  | 8100                          | 300  | 7100          | 100                      | 8      | 90            |  | 800             | 230    | 350                          | 200 | 180      | 4                             | 6  | 300                              | 22                            | 250                                | 530    | 400              | 1170 | 350                                    | 2000 | 9500                    | 3500 | 2500                         | 46000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 8100 - 400  | 8100                          | 400  | 7100          | 100                      | 7      | 90            |  | 1000            | 230    | 350                          | 200 | 180      | 4                             | 6  | 400                              | 30                            | 300                                | 565    | 400              | 900  | 320                                    | 2000 | 9500                    | 3700 | 2550                         | 52500  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 8100 - 500  | 8100                          | 500  | 7100          | 80                       | 6      | 65            |  | 1000            | 230    | 350                          | 250 | 180      | 4                             | 6  | 500                              | 30                            | 350                                | 600    | 500              | 900  | 250                                    | 2100 | 9500                    | 3800 | 2650                         | 68000  |              |    |             |    |        |          |              |              |             |               |        |        |       |        |
| CNC HAP 8100 - 600  | 8100                          | 600  | 7100          | 80                       | 6      | 65            |  | 1000            | 230    | 350                          | 250 |          |                               |    |                                  |                               |                                    |        |                  |      |                                        |      |                         |      |                              |        |              |    |             |    |        |          |              |              |             |               |        |        |       |        |

*Consult to our company for special dimension and capacity applied machines.*



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