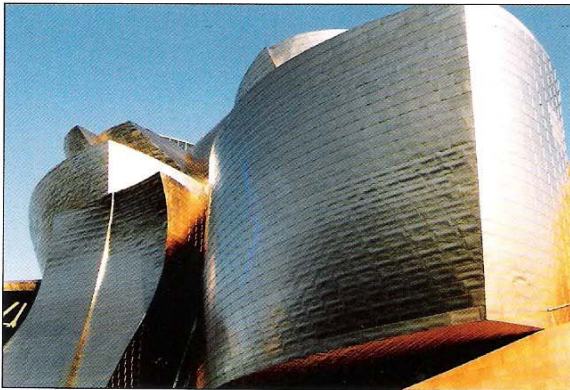
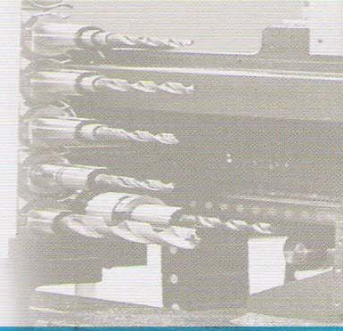


DX - DZ
VICTORY 8 - VANGUARD 10
Automatic CNC drilling, marking
and sawing lines for beams,
channels and flats





The H-I-U etc. rolled steel sections are the supporting frame of all the modern civil and industrial constructions.

Technical & Economical choices:

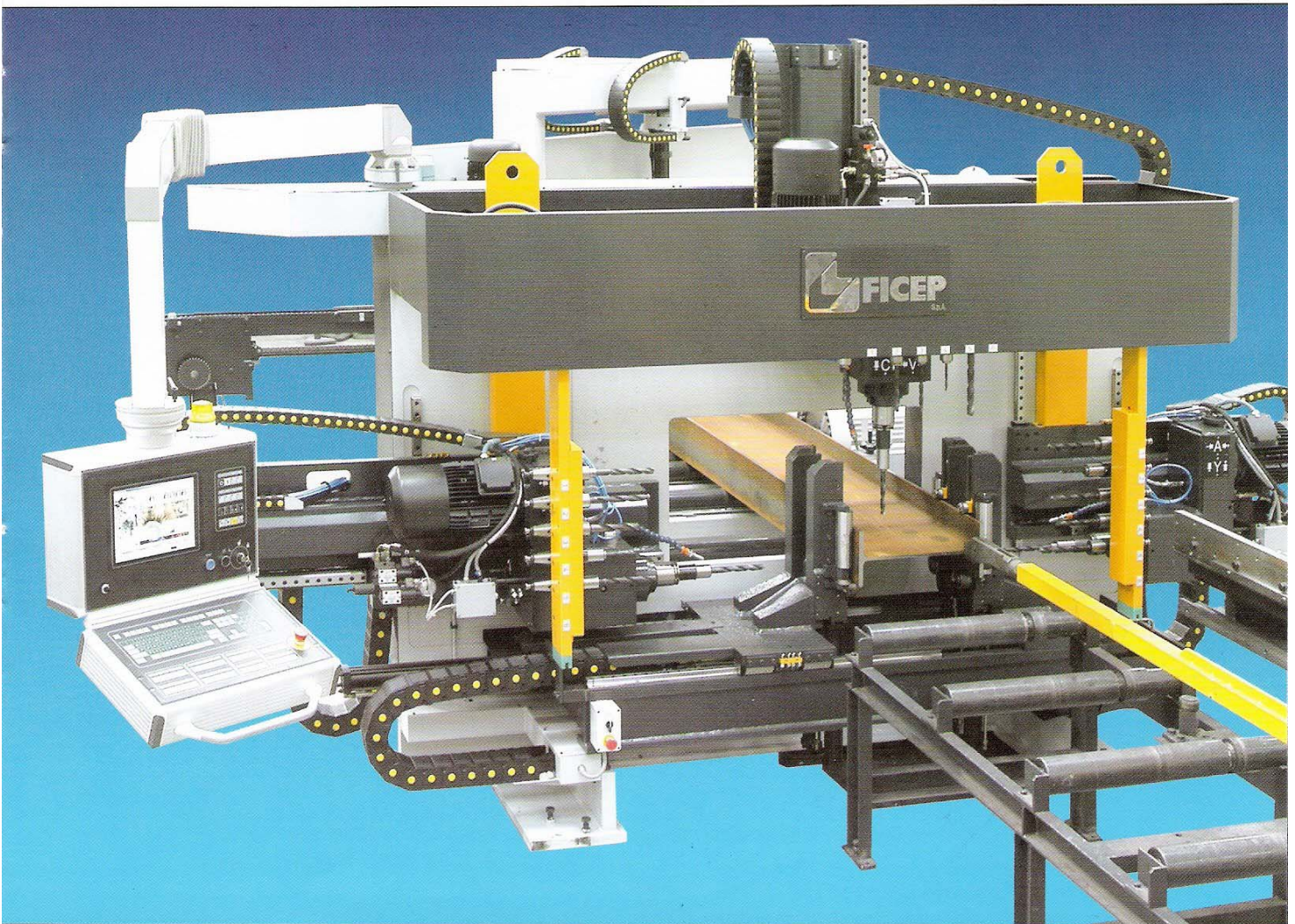
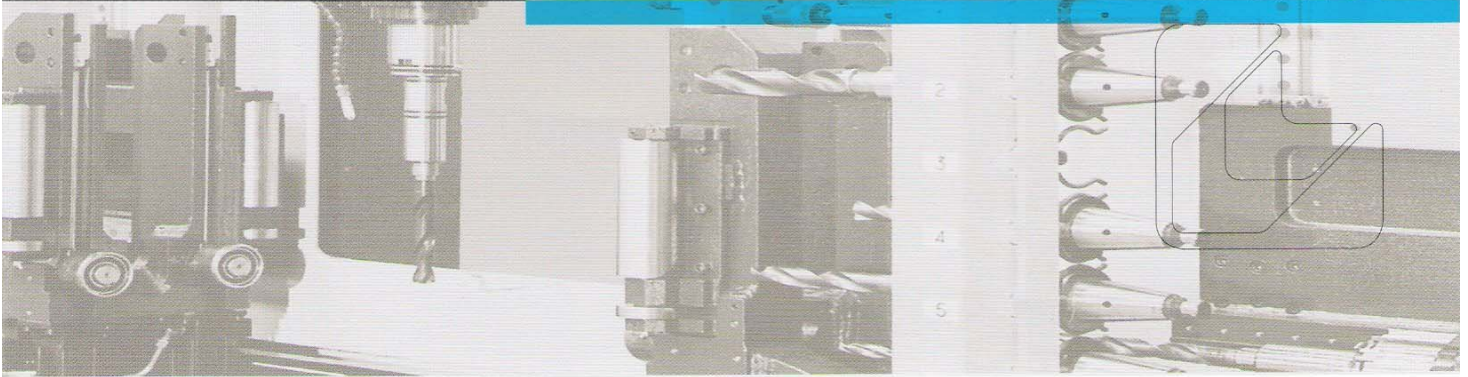
- Interfaces within your existing environment
- Reduced cost per linear meter
- Ease of assembling
- Planning simplicity
- Possibility to identify and trace the manufactured workpiece
- Good adaptability to the anti-seismic requirement

justify the strong demand for processed sections, and the parallel development of steel construction industries and service centers.

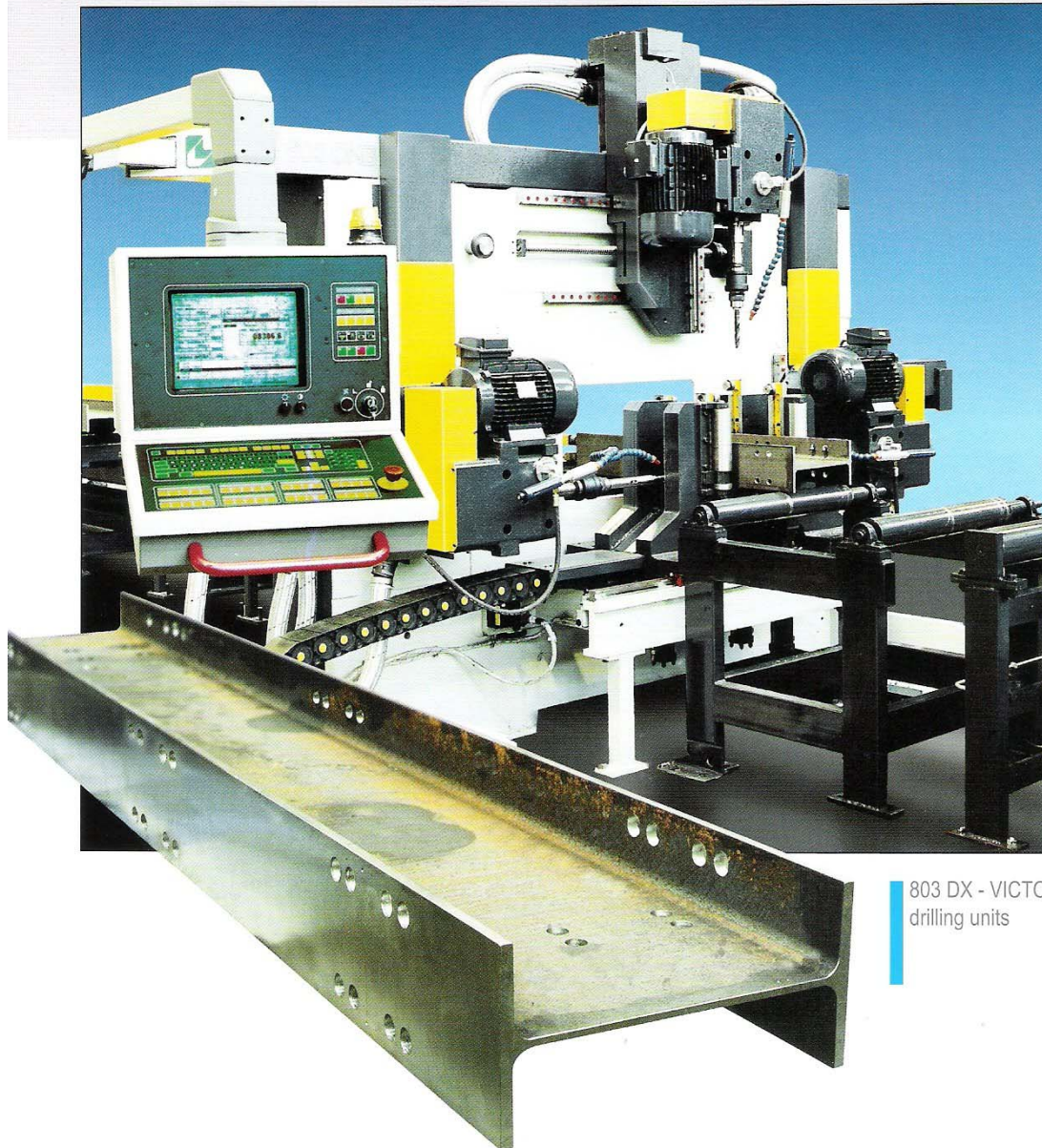
Ficep turns to these production sectors with a complete range of CNC lines suitable for the automatic processing of every kind of flat or shaped rolled section; the main goal is to increase the productivity through:

- Processing efficiency
- Reduction of handling operations between the different processing phases
- Hardware and Software connected in order to simplify the machine language and open dialogue with every external estimation and planning center.





1003 DZ
VANGUARD 10



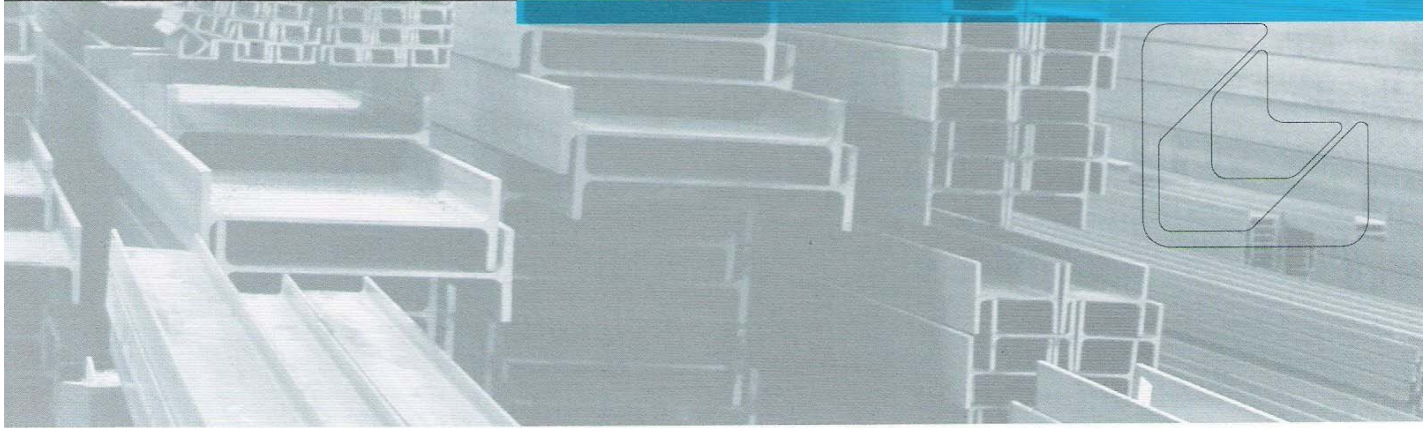
803 DX - VICTORY 8
drilling units

- Powered rollerway to feed up to 12 mt. long bars. The rollerway is suitable to receive optional cross loading tables
- The machine frame is manufactured with a heavy duty steel to height ratio
- Two horizontal drill heads, one facing to the other, to process the profile flanges, each monospindle head is equipped with a manual quick tool change device with morse taper 4
- One monospindle vertical drill head to process the profile web equipped with a manual quick tool change device with morse taper 4
- Hydraulic double jaw assembly working automatically to clamp

the material being processed both vertically and horizontally. The material repositioning is carried out while the clamps are closed

- Outfeed conveyor for bars up to 12 mt. composed of:

- supporting carriage structure
- a CNC carriage with pincer for the longitudinal profile positioning. The pincer can be adjusted in height and turned to two positions, and it is equipped with an automatic device to control the position for safety
- Idle rolls system for profile support. The rollerway is suitable to receive optional cross loading tables

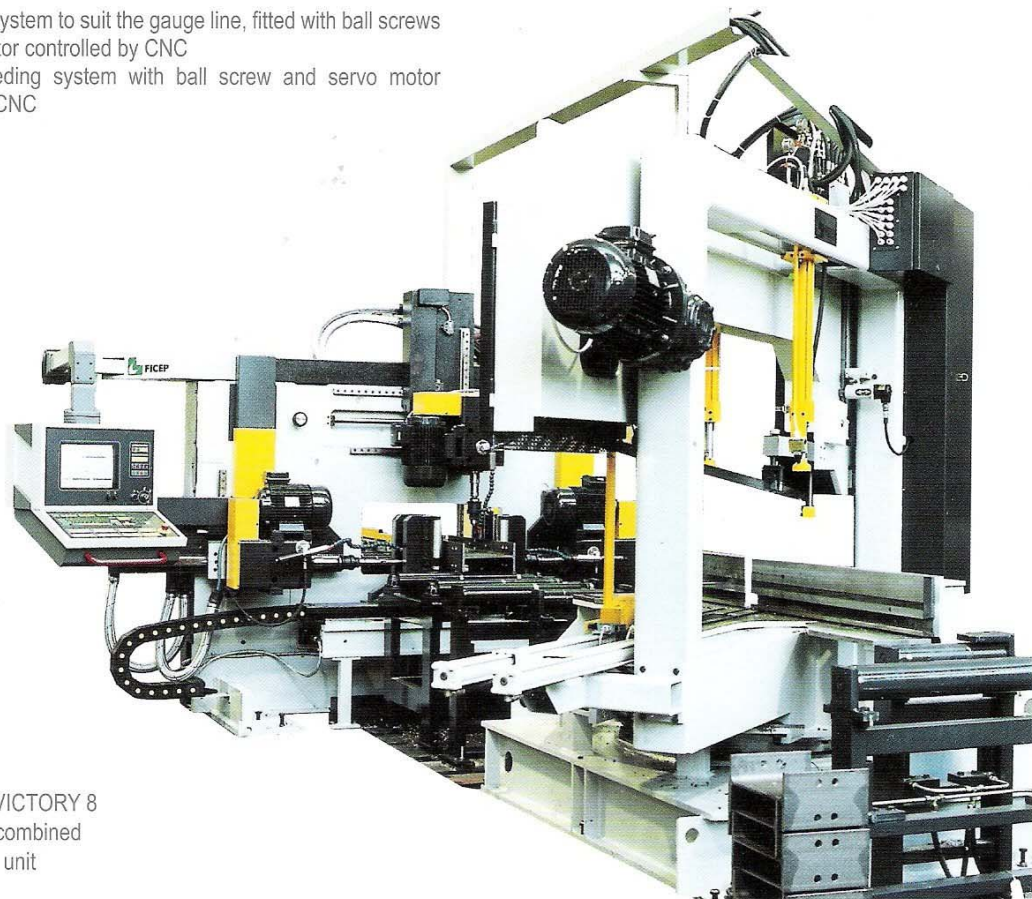


- Hydraulic power pack, complete with cooling system with heat exchanger
- Pneumatic system
- Electric system
- FICEP ARIANNA CNC control system
- Safety protections on the machine (EC norms)
- Electronic device to change feeding speed into working speed automatically
- Electronic system to change drill rotating speed automatically allowing the pre-setting of parameters
- Internal/external cooling system for drills automatically selected by CNC, only for DZ

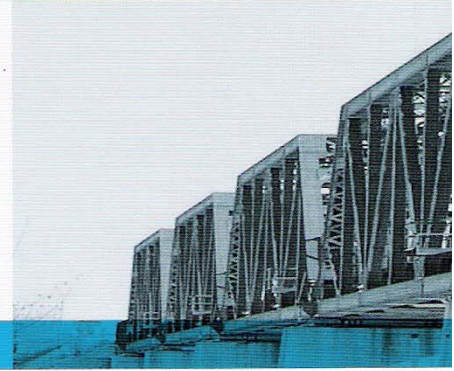
SPECIFICATIONS OF THE MONOSPINDLE DRILL HEADS

Each spindle is a system with 2 independent axis, and includes:

- Positioning system to suit the gauge line, fitted with ball screws and servo motor controlled by CNC
- Material feeding system with ball screw and servo motor controlled by CNC



603 DXB - VICTORY 8
drilling line combined
with sawing unit



1003 DZB BASIC VERSION COMBINED WITH SAWING UNIT

The DX and DZ drilling lines become DXB and DZB when they are combined with a band sawing unit in order to carry out automatically drilling and shearing operations at 90° or at variable mitering on the same system.

The advantages that this system offers are the following:

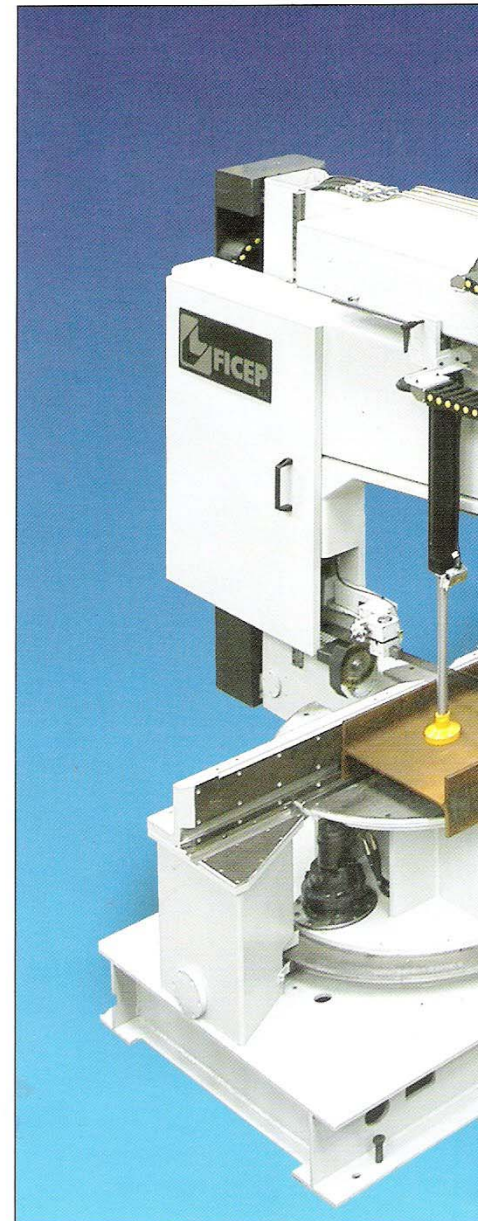
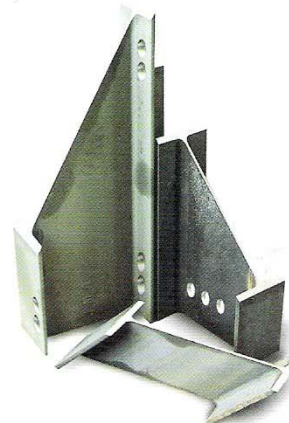
- Layout optimization and therefore space saving in the area
- Reduction of personell working on the system
- Reduction of the initial investment costs as the system has common elements between the two lines (CNC – rollerways – tables – service equipments)
- Reduction of handling
- Possibility to obtain very short final workpieces automatically, both drilled and cut

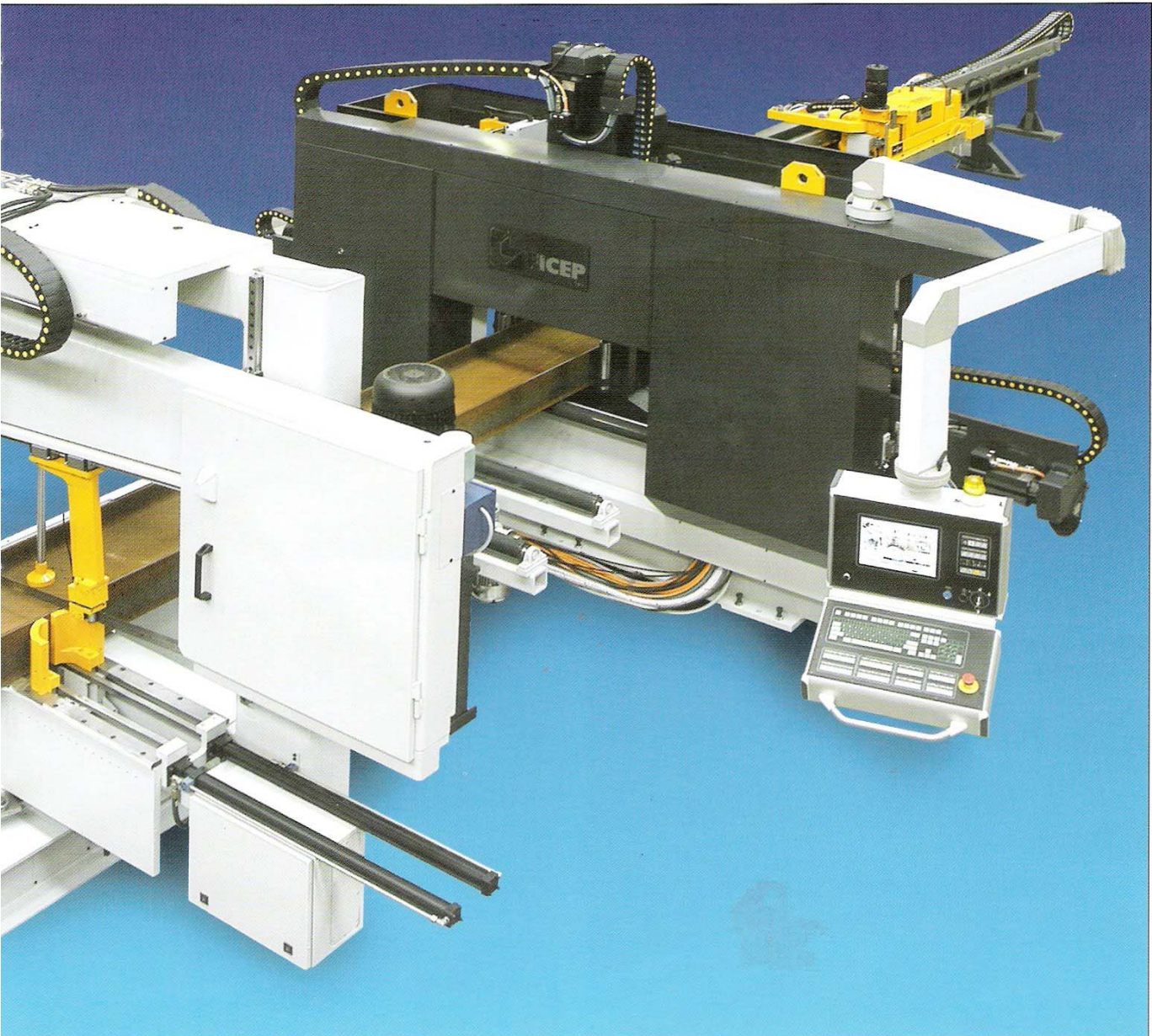
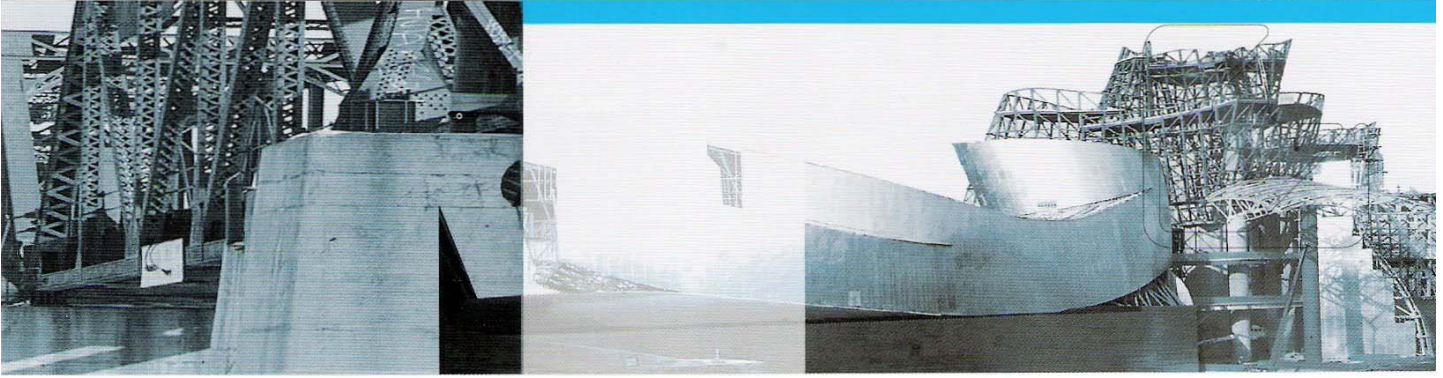
SPECIFICATIONS OF THE SAWING UNIT IN DXB and DZB MODELS

Sawing unit built with:

- Sturdy structure welded into a closed frame in order to minimize the vibration
- Prismatic sliding guides installed on the basic structure
- Blade guide system
- Blade lubrication and cooling system
- Brush for blade cleaning
- System to adjust cutting speed according to the section of the profile
- Swarf conveyor
- Automatic saw mitering at +45°/-45°
- Automatic control of the vertical blade stroke

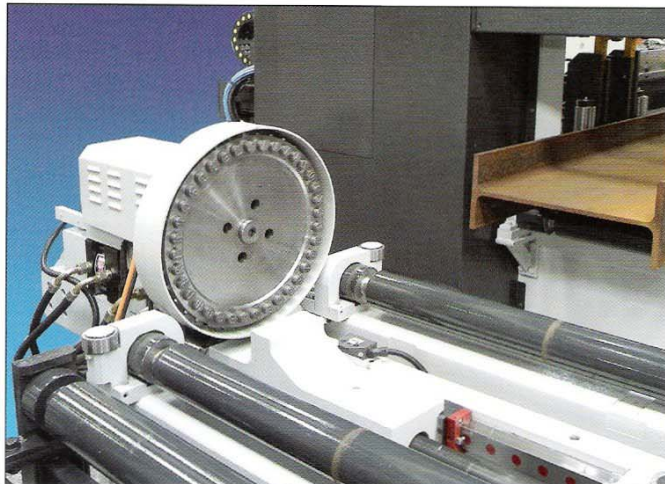
1003 DZB - VANGUARD 10
drilling line combined
with sawing unit



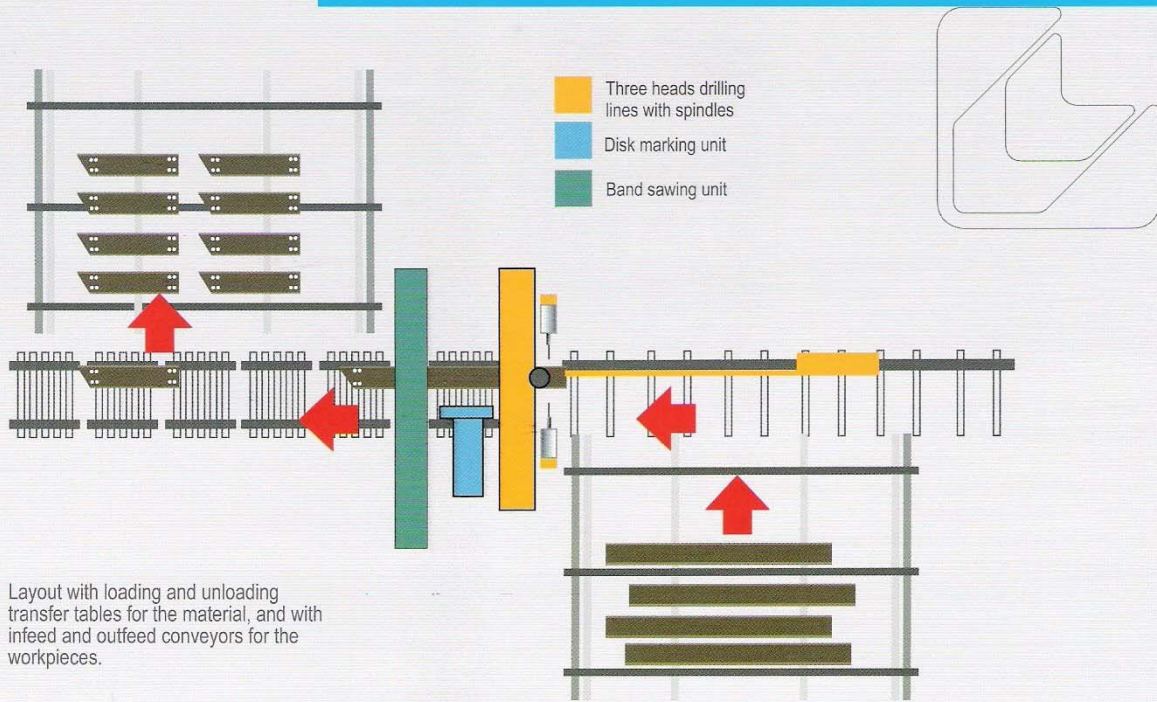




1003 DZ - VANGUARD 10
with tool-change system



1003 DZB - VANGUARD 10
disk marking unit

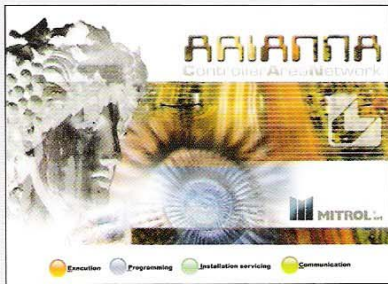


For DX-DXB and DZ-DZB series:

- Infeed / Outfeed conveyor for 16 mt or 20 mt long profiles
- Loading / Unloading transfer tables with catches or carts for 12 mt or 16 mt or 20 mt long profiles
- Marking unit mod. MKT 36 N with 36 positions which is able to mark (one bar at a time) the lower flange of I beams, the flange of Channels and the vertical flange of angles. The marking unit is equipped with characters holder disk, whose rotation is controlled by CNC. The marking cycle is automatically selected by the CNC and uses the X axis of the line in the longitudinal direction.
- Only for DZ-DZB series, independent tool-change device with 6 positions (one device for each drill head). The selection and the change of the tool is automatically controlled by CNC. ISO 45 connection with Morse Taper 4.

Also available for the DXB and DZB series:

- Automatic saw mitering at $+45^\circ/-60^\circ$.
- Internal/external cooling system for drills automatically selected by CNC, only for DX-DXB.



HARDWARE & SOFTWARE FICEP ARIANNA CONTROL UNIT

The new generation control unit, with 7 controlled axes, is based on a field bus CANopen technology.

The CNC is positioned in a mobile control panel, on a pedestal, to let the operator have a complete system overview.

All the input and output cards are connected to the bus and positioned, where possible, directly on the machine.

The CNC is equipped with:

- digital inputs (24V – optoinsulated)
- digital outputs (24V – protected transistors)

The control panel is an industrial PC containing the CNC and having the following specifications:

- 800 Mhz Celeron CPU with 256 MB RAM, 10 GB HD, FDD
- Colour video TFT 12.1"
- Keyboard panel and auxiliary pushbutton panel
- 10/100 RJ45 Ethernet port
- USB modem
- 1 additional USB port to enable the connection with an external floppy driver (excluded from the supply)
- WINDOWS XP operative system
- Teleservice software

Programming

- Simplified data input (with tables and workpiece on-screen graphics)
- Absolute and incremental values
- Diameters programming
- Linear, matrix and flange patterns

Processing

- Automatic tool assignment
- Unit offset sum
- Values ordering

Execution

- Automatic bar length survey and re-calculation for the optimized accumulation
- Automatic cycle stop for "setup" modification, and on-screen indication of the tools to be changed
- Possibility for the drill heads to operate in "multitasking" mode in their working areas (even with automatic tool changer)
- Automatic control to prevent any possible collision of the drills
- Drilling parameters table

All the indications are clearly displayed on the screen, and concern:

- Current program indication, with clear description of the program running at the moment
- CNC inside and outside alarms
- Registration of the date and time of the last 100 alarm messages
- Diagnostic messages to the operator

OPTIONS FOR THE CONTROL UNIT

WIN-STEEL software package (first licence)

This package is meant to input hand-made drawings to be used by the system. It allows printing on modules (workshop sketch), prepares all the necessary data for the manufacturing process and issues the required material list.

This package includes a WIN-CN software package for the recovery of piece programs, the automatic and/or manual selection of the pieces or of the bars to be processed, the loading of the machine with CNC code converter and the return of production information to the control system.

This package is also inclusive of a WIN-BAR software package to be installed on a personal computer connected to a network, and meant for bars optimization.

Minimum Hardware

The WIN-STEEL software package must be installed on a personal computer connected to a network having the following main specifications:

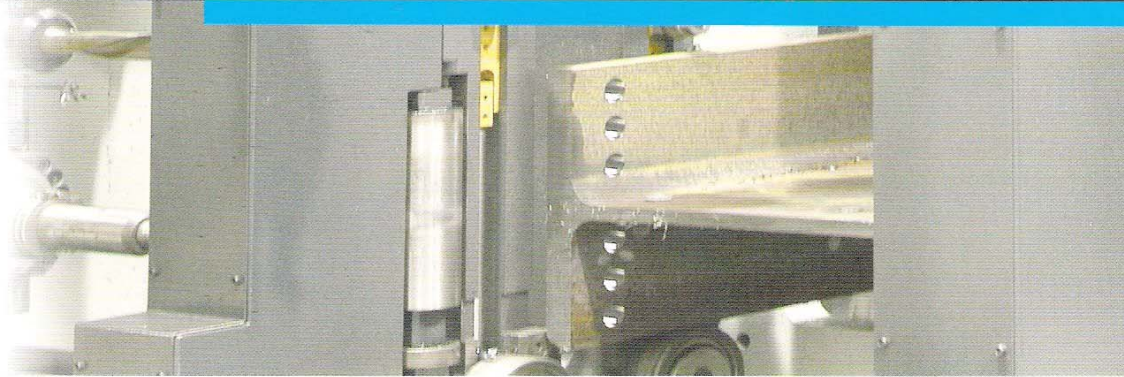
- Operative system Windows 2000 or Windows NT
- Pentium Personal Computer
- 32 MB RAM memory
- SVGA 1024 colour monitor
- 600 MB hard disk
- 1 mouse
- 1 serial port + 1 parallel port
- 1 laser printer compatible Windows 2000 or Windows NT
- CD ROM drive

WIN-STEEL software package (second licence)

IMPORT CAD-DSTV software package

This software (to be installed into the WIN-STEEL package) imports files under DSTV format into the WIN-STEEL Data Base and is used to manage all the geometric and processing data of the workpieces already drawn with a CAD system. The package requires that the files coming from CAD system are saved in the PC under a suitable format.

Network board + Hub (8 ways) + Connectors Conditioner for the electric equipment



MAIN TECHNICAL SPECIFICATIONS			
modello		803 DX - VICTORY 8	1003 DZ - VANGUARD 10
web height min	mm	60	80
web height max	mm	800	1115
flange width min	mm	30	42
flange width max	mm	410	450
drill heads	no.	3	3
spindles per head	no.	1	1
tools per spindle	no.	1	6
spindle power	kW	5,5	7,5
maximun diameter	mm	40	40
axes CNC controlled	no.	7	7

COMPLETE RANGE OF DRILLING LINES FOR BEAMS						
models	web height min/max mm	flange width min/max mm	drill heads no.	spindle power kW	band motor power kW	axes CNC controlled no.
601 DZB ORIENT 6	60/620	30/310	1	7,5	4	3+1
603 DXB VICTORY 6	60/610	30/310	3	5,5	4	7
603 DZB VANGUARD 6	60/610	30/450	3	7,5	4	7
803 DXB VICTORY 8	60/800	30/310	3	5,5	4	7
1003 DZB VANGUARD 10	80/1015	42/450	3	7,5	5,5	7
1001 DZB ORIENT 10	80/1015	42/450	1	11	5,5	3+1
1201 DZB ORIENT 12	80/1220	42/600	1	11	11	3+1
1203 DJB ENTERPRISE 12	80/1120	42/600	3	15	11	7
1003 DZD VANGUARD 10	80/1015	42/450	3	7,5	-	7
1201 DZD ORIENT 12	80/1220	42/600	1	11	-	3+1
1203 DJD ENTERPRISE 12	80/1220	42/600	3	15	-	7

NOTE: Dimensional tolerances of the raw sections are to UNI 5783-5784/73 standards.



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