



TIPO D4 and D8

Automatic CNC lines for the punching and cutting of flat and angle bars





BASIC VERSION

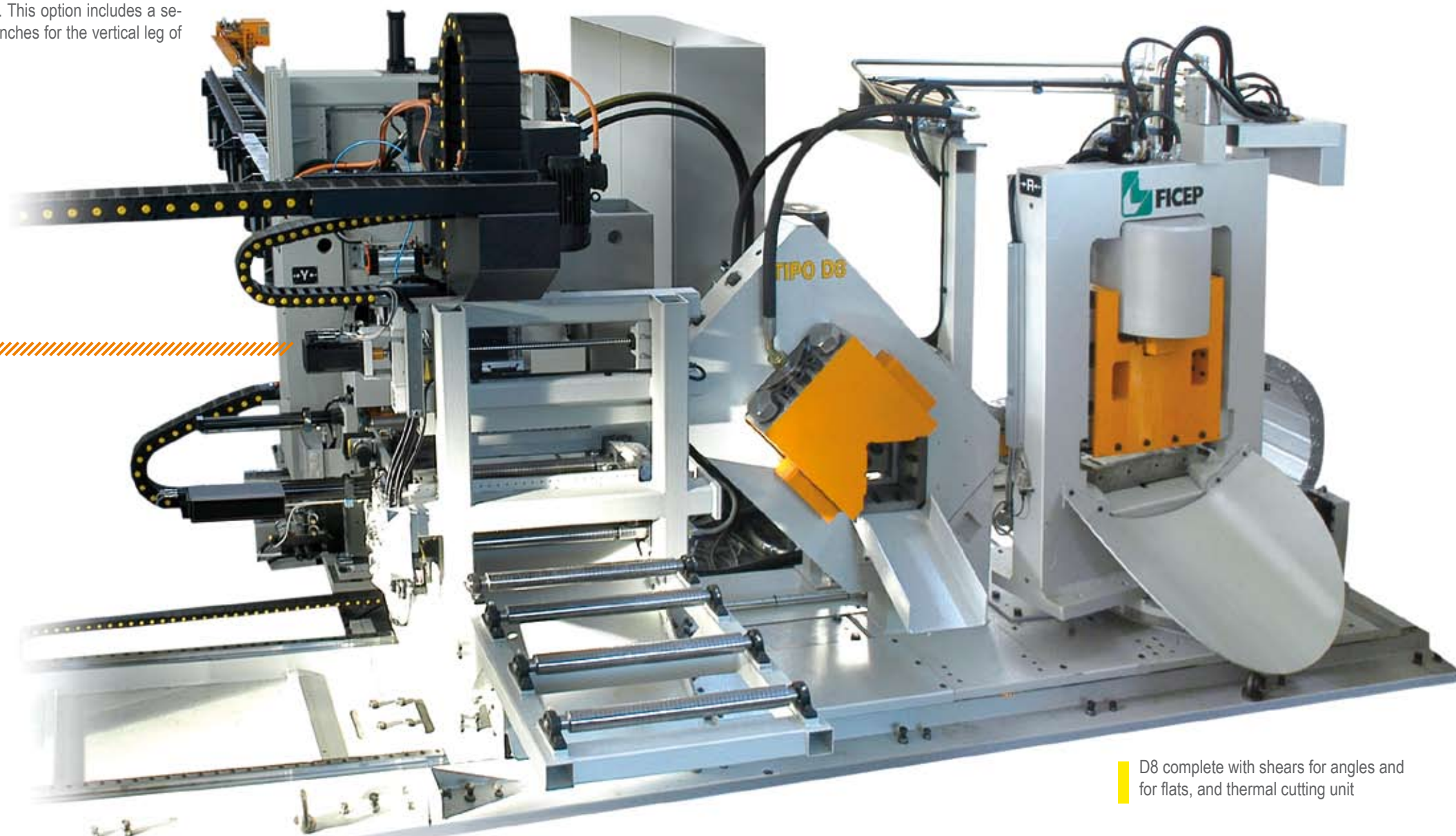
Structural steel work requires a huge number of plates designed for use as base plates and other connection plates. These plates are generally thick and almost always punched, perforated and cut to shape. Sometimes there is a need to automatically marking the component. The D4 – D8 make it possible to process very thick plate carrying out several operations in a single pass. The basic versions have punching capability with either 4 or 8 1100kN punch stations. This is combined with a 2200kN rotating shear unit for cutting 510 mm wide by 25 mm thick plates. Flats slide on an idle rollerway and are moved by a **CNC controlled carriage with hydraulic pincher**.

Hydraulic horizontal and vertical clamps tightly keep the material in the working position.

The fully optional lines of the Tipo D4 and D8 include the possibility to have both flats and angle working units on the machine at the same time. This option includes a separate punching unit with 2 punches for the vertical leg of the angle bar.



D4 punching unit



D8 complete with shears for angles and for flats, and thermal cutting unit

TIPO D8



PUNCHING UNIT



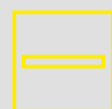
Tipo D8 punch for plates. 1100kN punching unit provided with automatic selection and rotation of 8 different punching diameters.



Tipo D4 punch for plates. 1100kN punching unit provided with four punches selected from the automatic program.



Punch for angle unit. Horizontal punching unit with 2 selectable punches for putting holes in the vertical flange of angles on any gauge line.



SHEAR FOR FLATS AND ANGLES

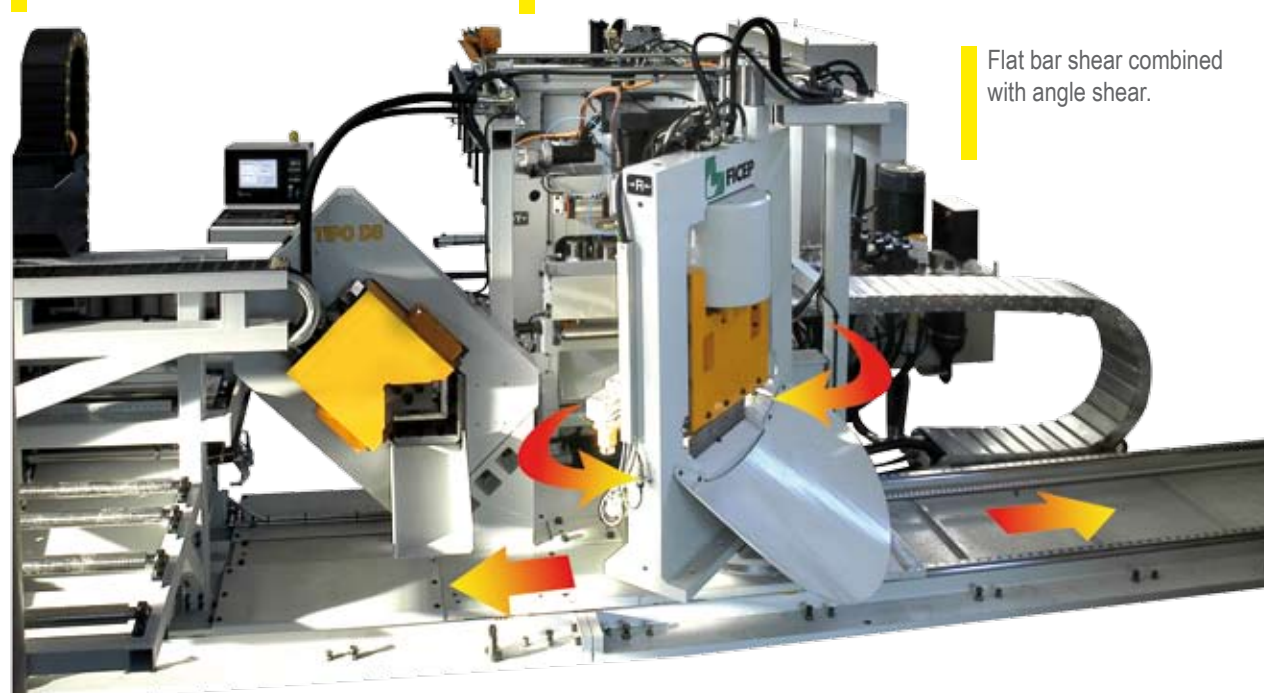
PLASMA CUT



SHEAR FOR ANGLES
A second kN 1800 shear for angles is combined to the shear for flats. Both shears slide on linear guides and can be automatically selected by the CNC.

Rotating shear for flats 2.200 kN CNC controlled rotating shear for straight or mitred cutting (+45°/-45°) up to a thickness of 25 mm.

1800 kN shear for angle bar.



Flat bar shear combined with angle shear.

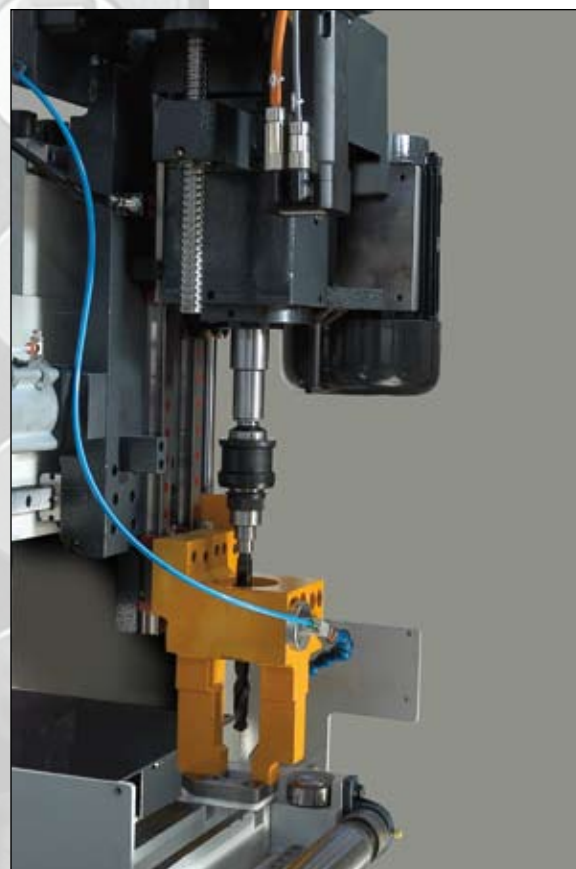


Plasma cutting unit to carry out any kind of shaped cuts.

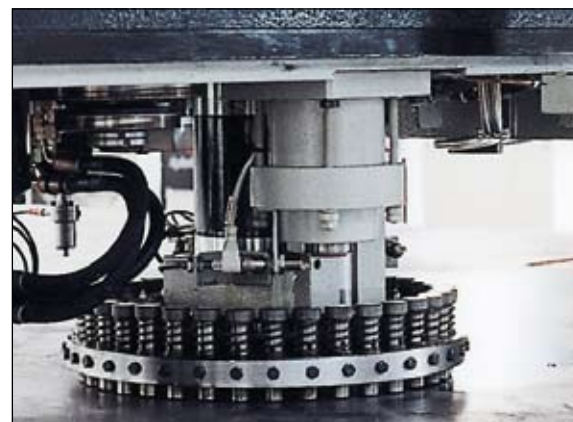


DRILLING - MARKING UNIT

HANDLING



Optional drilling unit. With special tools the same head can perform scribing operation for layout marking.



TIPO D8 optional 80 kN marking unit with 36 characters for pieces CNC controlled marking.



TIPO D4 optional 80 kN marking unit with 38 characters for pieces CNC controlled marking.

Flats and angles slide on an idle rollerway and are moved by a CNC controlled carriage with hydraulic pincher. The pincher is equipped with an electronic device for automatic bar length survey and automatic pincher clamping.



Horizontal and vertical clamp system to hold pieces during operations.





FICEP CNC GOVERNANCE UNIT ARIANNA SERIES

Last generation, controlled-axis, governance unit, based on CANopen field bus technology. The CNC is housed in a revolving control panel, on a pedestal so the operator has maximum visibility of the machine. All input and output boards are connected on the bus and housed directly on the machine. All electromechanical components and drives (that dialogue with the CNC on the bus) are on board the machine.

- The CNC is provided with:
- 24V opto-insulated digital inputs
 - 24V transistor-protected digital outputs

- The control panel is an industrial PC containing the numerical control, with the following features:
- CPU 800 MHz with 256 MB RAM
 - TFT 12.1" colour screen
 - auxiliary panel and keyboard
 - RJ45 10/100 Ethernet port
 - USB modem
 - 1 additional USB port
 - Windows XP operating system
 - tele-assistance software

- Programming**
- Simplified input data in table form with graphics of piece in line
 - Absolute and incremental quotas
 - Accumulation on same bar of identical or different pieces with bar in line graphics

- Processing**
- Automatic tool assignment
 - Summing of unit offset
 - Order of quotas
 - Automatic optimisation on the basis of quantities remaining of each single piece

- Execution**
- Automatic cycle stop for changing set-up and screen indication of tools to replace

- All displays are clear and in language, and show:
- Program in use and clear indication of the process in course
 - CNC, PLC and machine alarms and messages with description
 - Internal and external CNC alarms
 - Recording of date and time of last 100 alarms
 - Diagnostics messages for operator

OPTIONS FOR THE FICEP ARIANNA CONTROL UNIT

- WIN-STEEL software package (first licence)
(Hardware, commissioning and training excluded)**
- 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 (PC and network not included in the supply), and meant for bars optimization.

- Minimum Hardware**
- The WIN-STEEL software package must be installed on a personal computer connected to a network (PC and network not included in the supply) having the following main specifications:
- Operative system Windows 2000 or Windows XP
 - 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 XP
 - CD ROM drive

- Installation & Training**
- It consists of loading the software on the personal computers. Please note that the Customer should install the computers and connect them to a network in advance, according to the technical specifications that will be supplied by ourselves.
- The training and installation period will depend on the final software configuration chosen by the customer.

- WIN-STEEL software package (second licence)
(Hardware, commissioning and training excluded)**

- WIN-CN software package (to be used when WIN-STEEL is already installed - hardware & commissioning excluded)**
- 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.

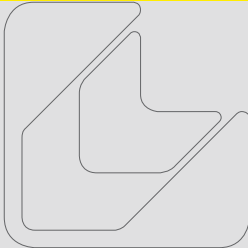
Note: It is necessary to have one WIN-CN Software Package for each line.

- IMPORT CAD-DSTV software package (Hardware, commissioning and training excluded)**
- 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 (commissioning and training excluded)

Conditioner for the electric equipment

TECHNICAL SPECIFICATIONS



MODEL		TIPO D4	TIPO D8
Workable profiles			
Flat bars			
	min.mm	50 x 6	50 x 6
	max. mm	510 x 25	510 x 25
Angle bars (with optional shear horizontal punch unit)			
	min.mm	50 x 50 x 6	50 x 50 x 6
	max.mm	150 x 150 x 16	200 x 200 x 20
UPN needles (core punching – pre-cut to measure)			
	min.	80	-
	max	200	-
Profiles			
Maximum profile length (basic version)	mm	6000	6000
Punching capacity			
Maximum available punching strength	kN	1100	1100
Diameter x thickness – N/mm² 410	mm	35 x 25	35 x 25
Max. punching diameter with standard tool	mm	46	46
Punches in basic version	no.	4	8
Shearing capacity			
Maximum available cutting strength	max. kN	2200	2200
Maximum available strength for cutting angle bars	max. kN	1800	1800
Flat bars	max. mm	510 x 25	510 x 25
Marking capacity (optional)			
Alphanumeric characters	no.	38	36
Maximum available strength	max. kN	80	80
Drilling capacity (optional)			
Drilling max. diameter	mm	40	40
Spindle motor power	kN	5,5	5,5
Controlled axes	no.	2	3

The manufacturer reserves the right to make product design and engineering changes without notice. All the specifications on this catalogue are mere indicative and not binding for the manufacturer. The above mentioned data refer to R=45 kg/mmq material. NOTE: Dimensional tolerances of the raw sections are to UNI 5783-5784/73 standards.



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