

Structural Steel Manufacturing Lines Lydney, United Kingdom

**LOT 529002:
FICEP BEAM LINE , YEAR 2001
TECHNICAL SPECIFICATIONS**



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Ficep Beam Line (Year 2001)

Available for Immediate Sale

Location: Lydney, United Kingdom

Comprising:

- 18x10m Cross transfer and Infeed rollers
- Ficep Saw/ Drill Unit, Model 1203 DB, Serial: 26052, Year: 2001. 1200x600mm Non Mitre Saw and mist lubrication system, (3) HSS Drill Units, (1) Vertical and (2) Horizontal each with 8 Station ATC, c/w/ marking station.
- 18m Coping Machine Infeed Conveyor
- Ficep 1261 TT Oxy Structural Beam Coping Machine, Year: 2001 Serial No. 25641, Gudel 5-Axis Profile cutting robot, Serial No. 0903204 Mounted within a cutting cabin
- (2) Outfeed / Cross Transfer Bays, each 12x6m

Central PLC Control cabinets

(Crane, Walkways and one swarf conveyor excluded from sale)

Drawings and Manuals Available – Electronic Format

Dismantling and Loading Available – On Request

Model 1203 DB

NUMERICALLY CONTROLLED DRILLING & SAWING SYSTEM equipped with a Model FENICE 7 axes CNC Control System, consisting of:

(See enclosed LAYOUT)

IN-FEED SYSTEM

- infeed multi-zone transfer table with chains
- loading device with catches
- monorail with power and measuring rack
- idle rollerway with plain rolls
- carriage powered by a servomotor
- pincher powered lifting system
- pincher for gripping of the structural steel sections, complete with one camera
- automatic pincher clamping device for beams
- stationary reference units
- bar length automatic measuring device through photocell
- one hydraulic alignment device

WORKING UNITS complete with:

- One "36-characters" MARKING UNIT
- One vertical DRILL HEAD
- Two horizontal DRILL HEADS
- Three 8-positions tool change systems
- Swarf conveyor for the drilling unit
- One idle roll of the lifting type between the drilling machine and the saw
- One SAWING MACHINE Model SGB 1260F

OUT-FEED SYSTEM complete with:

- unilateral unloading device (short pieces and scraps)
- unilateral unloading device (600 to 2500 mm long pieces)
- powered rollerway complete with A.C. drive motor and clutch
- stationary reference units
- special loading/unloading lifting device (manual or automatic mode)
- outfeed transfer table with catches (unloading in manual mode)

HYDRAULIC POWER PACK to suit the Drilling and Sawing Units.

ELECTRIC CABINET enclosing:

- power electric equipment
- control gears for the Drives
- electronic equipment

CNC CONTROL SYSTEM

- Model FENICE with 7 controlled axes

MAIN CAPACITIES AND SPECIFICATIONS

Type of sections that can be processed:

Double T Beams (welded and/or fabricated) having the following characteristics:

Web height	min. 76 mm max. 1220 mm
Flanges height	min. 42 mm max. 600 mm
U channels min.	min. 76 mm max. 1220 mm
Flanges height	min. 45 mm
Flanges height (possibility to grip web only)	min. 40 mm max. 300 mm
Angles	min. 80x80x6mm max. 300x300x50 mm
Flats width	min. 100 mm max. 1220 mm
Flats thickness	min. 10 mm max. 50 mm
Square tubes	min. 80x80 mm max. 600x600 mm
Rectangular tubes	min. 80x40 mm max. 1200x600 mm
Range of section lengths that can be processed	
Entry side	min. 18000 mm
Exit side	max. 18000 mm
Entry side	min. 2500 mm
Exit side	max. See layout
Positioning weight	max. 9000 kg
Linear weight of the section to be handled	max. 500 kg/m
Carriage speed	max. 40 m/min
Spindle positioning speed	10 m/min
Working height	850 mm

Note: The physical and dimensional characteristics of the structural steel sections are set forth by UNI STANDARDS; this does also apply to rolling and distortion tolerances

Drilling Units

No. of drill heads	3
two horizontal Drill Heads with single spindle one vertical Drill Head with single spindle	
Max. drilling diameter with tapered adapter No.4	50 mm
Min. Drilling diameter	8 mm
Max. thickness that can be drilled	75 mm
Spindle rotation motor per head (a.c.)	11 kW
Spindle R.P.M. (with continuous adjustment by program)	RPM 150 - 1500
Positioning stroke to suit the gauge line vertical drilling unit	20 to 1200 mm
horizontal drilling units	10 to 600 mm
TOOL CHANGE	
number of tools change devices	n° 3
number of tools to be changed	n° 8
adapter size	ISO45

Sawing Machine

Main specifications of the band sawing machine Model SGB 1 260F for sections cold sawing:

sawing capacity at 90°	min. 80 x 10 mm
sawing capacity at 90°	max. 1250 x 600 mm
sawing band motor	7,5 kW
sawing speed	20 - 100 m/min.
band size	54 x 1.6 x 9500

Marking Unit

36 characters marking unit to mark (one bar at a time) the bottom half flanges of I-beams, one flange of the U-beams (max. 250 mm wide) and the vertical flange of angles (max. 250x250 mm).

Main technical features

marking capacity	kN 80
marking positions	no. 36
size of marking letter/number	mm 11 x 6

The marking cycle is CNC automatically controlled and moves along the longitudinal sense by means of the X axis of the line.

Systems

Hydraulic Power Unit System

hydraulic power unit system	DES 25621
power unit motor	4 kW
variable delivery pump	36 litres/min
working pressure	75 bar
power unit reservoir capacity	95 litres
preheating system	
air/oil heat exchanger	
Saw Hydraulic System	DES 26029
Marking Unit Hydraulic System	DES 25252

Useful data:

Type of normally used oil	HYDRUS 32
Oil quantity required to fill the circuitry	140 litres

System working pressure	75 bar
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Pneumatic System

working pressure	min. 5 bar max. 6 bar
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Connection specifications

shop supply line - min. cable dia.	3/4 gas
FRL connection - min. cable dia.	1/2 gas

For more detailed information see Pneumatic System Diagram DES 23900

ELECTRIC SYSTEM

Main A.C. supply line
type
voltage
cycles
total power installed approx

three phase
415 volts+/- 10%
50 Hz
99 kW

connection specifications
No. and type of wires

three+ ground

For more detailed information, please refer to: Wiring diagram DES 25994

Ficpe Saw drill (1203 DB – 2001):



18m cross transfer and infeed rollers:



In feed and transfer:



Control panel, drill and saw unit:



3 HSS drill units (vertical and 2 horizontal):



Straight cut band saw:



Saw drill 18m out feed and transfer:



Saw drill out feed, cross transfer to coping machine and 18m infeed:



ONE FICEP MODEL "1261 TT" AUTOMATIC THERMAL COPING MACHINE FOR BEAMS equipped with a Model FENICE 5+1 axes CNC Control System, consisting of:

(See enclosed LAYOUT)

Main capacities and specifications
Sections that can be processed :

	Min	Max
I- BEAMS		
Web height	76mm	1220 mm
Flange width	42mm	600mm
CHANNELS (web downwards)		
Web height	76mm	1220 mm
Flange width	45mm	600mm
Flange width (possibility to grip web only)	40mm	
ANGLES		
Flange height (unequal flanges as well)	80x80x6 mm	300x300x30 mm
Common for all sections		
Range of section lengths that can be processed (With longitudinal copes on both heads having a maximum length of 400 mm on the lower half flanges).	2500 mm	18000 mm
Positioning weight		9000 kg
Linear weight of the section to be handled		50 kg/m
Carriage speed		40 m/min.
Working level's height		850 mm

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

THE SYSTEM CONSISTS OF :

IN-FEED SYSTEM

- infeed multizone transfer table with chains
- loading device with catches
- monorail with power and measuring rack
- idle and powered rollerway with plain rolls
- carriage powered by a servomotor CNC controlled
- pincher powered lifting system
- pincher for gripping of the structural steel sections, complete with one camera. The pincher can be rotated to clamp either the web or the flange of the section.
- automatic pincher clamping device for beams
- stationary reference units
- bar length automatic measuring device through photocell
- one hydraulic alignment device

THERMAL COPING UNIT

ROBOT (stand-off type) complete with torch for the oxygen cutting of sections for structural steel works of a volume of 1220 x 600 x 800* mm. on both heads.

Main specifications:

- *Coping stroke is from +400 to -400 mm as to the robot zero reference.
- Additional coping macros using the X axis, can be supplied on request, to cover working operations requiring a stroke greater than the above.
- number of controlled axes (5)
- to allow coping shapes and bevelling for welding operations (as detailed in the library enclosed at the end of Section 1).
- Vice assembly to clamp the material being processed. The jaws can operate unilaterally and open and close automatically.
- Automatic pick-up and correction device, to compensate mill size variations of the beams.
- Smoke intake system
- Intake chamber complete with pipes connecting it to the suction group
- Suction group complete with filter.

On the robot frame are also fitted two cameras to enable inspection of the working area.

OUTFEED MATERIAL HANDLING

- Hydraulic alignment device
- Rollerways fitted with powered rolls
- Special unloading lifting device (manually operated)
- Outfeed transfer tables with catches (welding cells)

Hydraulic System

hydraulic power unit system	DES 25293
vices hydraulic system	DES 25316
single shaft motor	3 kW
variable delivery pump	30 litres/min.
working pressure	50 bar
power unit reservoir capacity	95 litres
preheating system	
air/oil heat exchanger	

Useful data:

Type of normally used oil HYDRUS 32

Oil quantity required to fill the 140 litres circuitry.

System working pressure 50 bar

Pneumatic system.

Working pressure: min. 5 bars
max. 6 bars

Connection specifications:

shop supply line
FRL connection

max. cable dia. 3/4 gas
cable dia. 1/2 gas

ELECTRIC SYSTEM

Main A.C. supply line

type

three-phase

Voltage

415 V \pm 10%

Cycles

50Hz

(

total horsepower

58kW

connection specifications

N and type of wires

three + ground

For more detailed information, please refer to Wiring diagram

DES 25995

Oxy fuel coping machine (Ficpep 1261 TT - 2001):



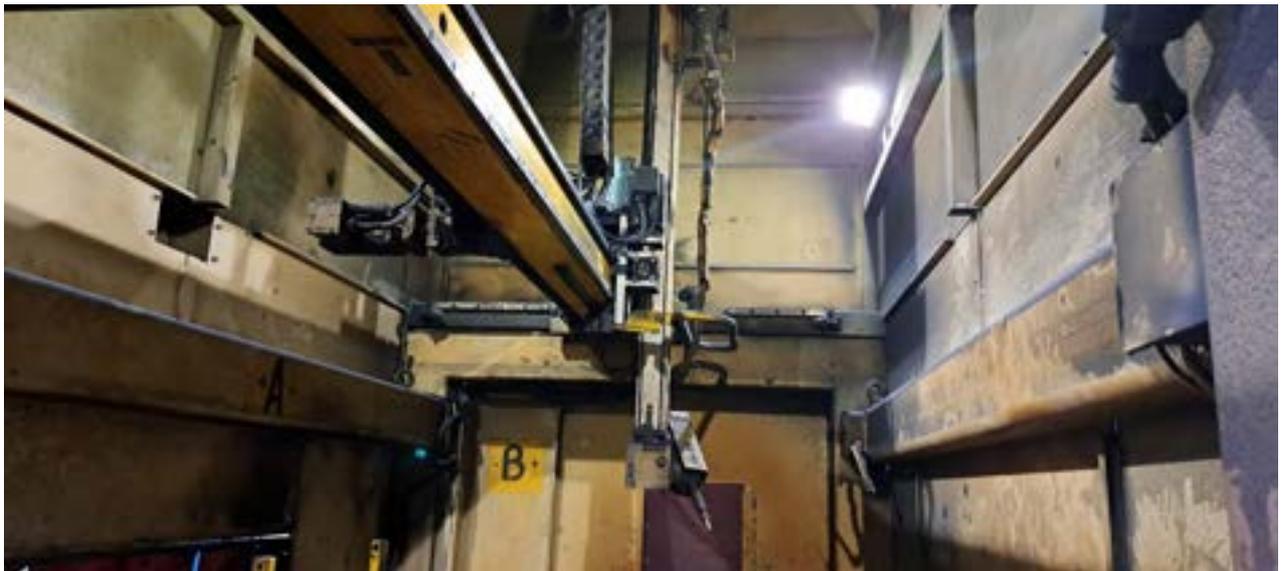
Coping machine 18m in feed:



Cutting cabin:



Oxy fuel cutting robot:



Cutting cabin:



(Scrap conveyor not included)

18m outfeed and cross transfer:



12m cross transfer (2 off):



12m cross transfer (2 off):

