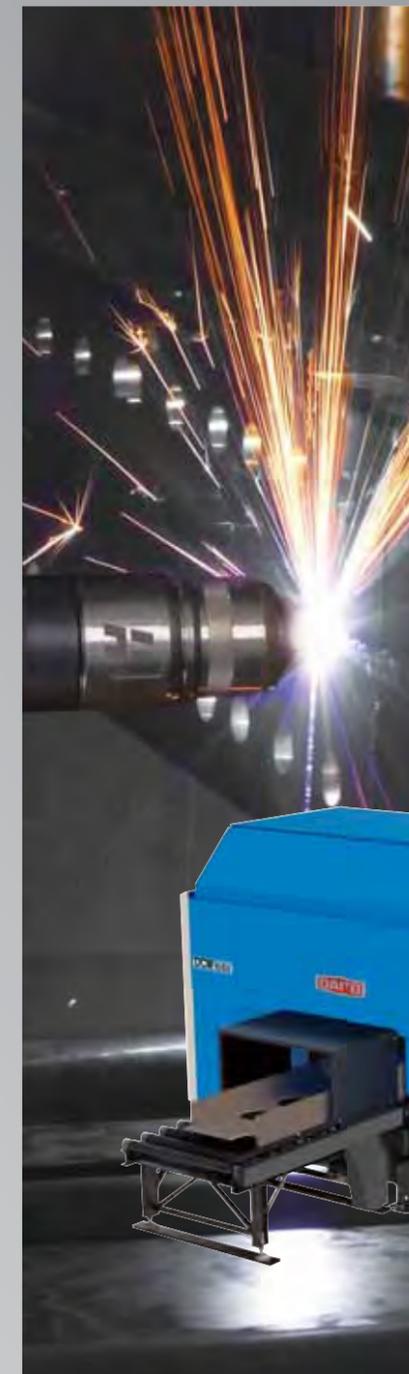
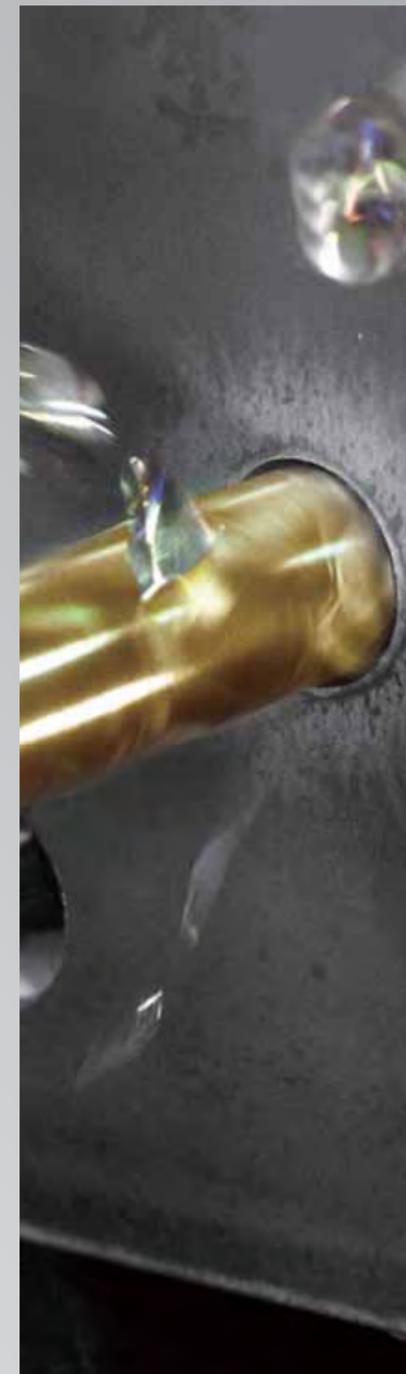




# Drilling Coping Machine

**DCM1050**  
DRILLING COPING MARKING



**DAITO SEIKI CO., LTD.**

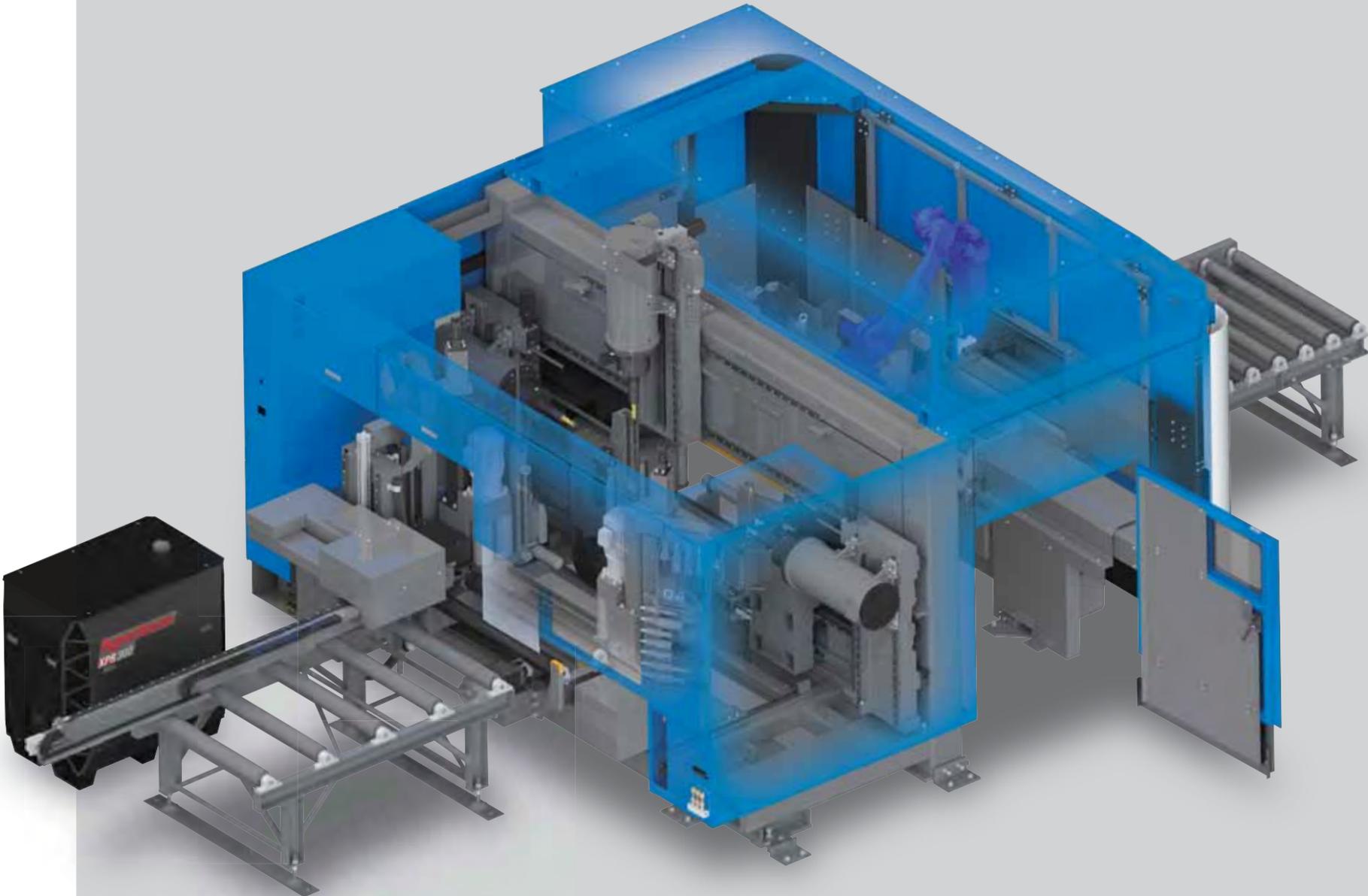
2-26, Higashihatsushima, Amagasaki, Hyogo, Japan  
TEL +81-6-6489-1209 FAX +81-6-6488-5455

<http://www.daito-seiki.com>

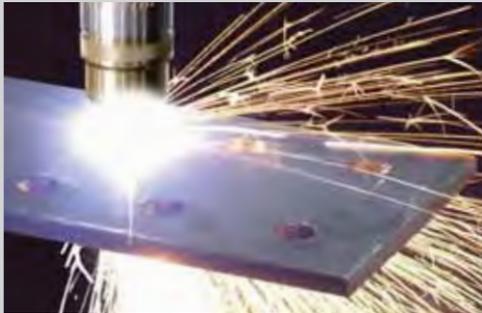
# Drilling Coping Marking "MULTI-TASKING"

Daito's Drilling Coping machine DCM1050 is a multi-tasking machine combining a CNC Drill (3 spindles), a CNC Robotic Coper for standard or complicated plasma cuts, plus marking machine for part number code and welding / layout marking.

Each drill has an automatic tool changer to cover tapping, milling, chamfering holes and boring blind holes. The wide range of functions make the DCM the most versatile machine for non-repetitive structural steel processing. Daito DCM, the machine of the future.



**DRILLING MACHINE** / **COPING MACHINE**



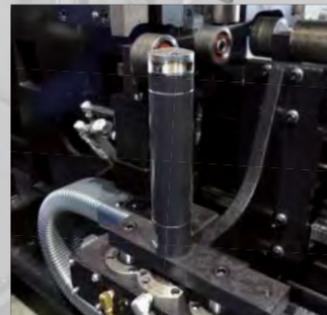
## DRILL MODULE

### DIRECT DRIVE SPINDLES



3 spindles with direct drive built-in motor enables a quiet, accurate, powerful and stable drilling / milling condition.

### UNDER WEB SUPPORT



The unit also functions as a height gauge and a bottom scratcher.

### Auto Tool Changer(ATC) for each drill

The magazine stores Max. 8 tools for the top spindle; Max. 7 tools for Left / Right spindles (industry leader) and will hold a variety of tapping, milling, scratching, chamfering, scribing and optional tools.

The cuts are more accurate with our new rigid compatible tool holders of dihedral restraint.



## VARIETY OF FUNCTIONS WITH BUILT-IN MOTORS

### 4 VERTICAL CLAMPS ROLLERS



Four hydraulic vertical clamps securely hold down the workpiece to straighten slightly bowed beams and avoid upward deviation of the workpiece.

### FLANGE HEIGHT GAUGE/SUPPORT



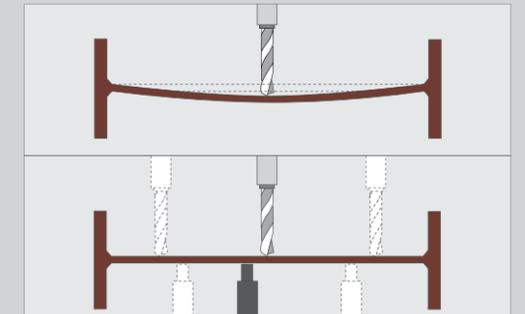
If a distorted workpiece causes overhangs in spite of being clamped vertically, the support measures the overhangs to compensate hole positions.

### WEB HEIGHT GAUGES



Two web height gauges check actual web height to allow automatic compensation for possible irregularities.

### WEB SUPPORTS



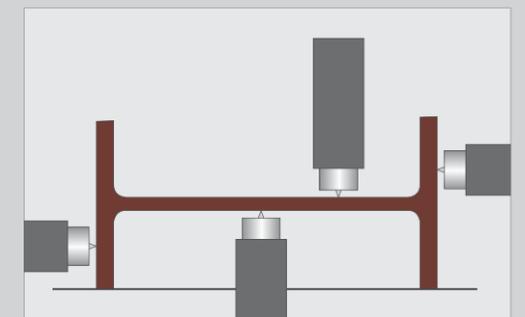
Web supports prevent thinner webs from bending under the pressure of drilling. This feature reduces drill bit failure and improves hole quality.

### SUPPORT ROLLER FOR ANGLES/TEES



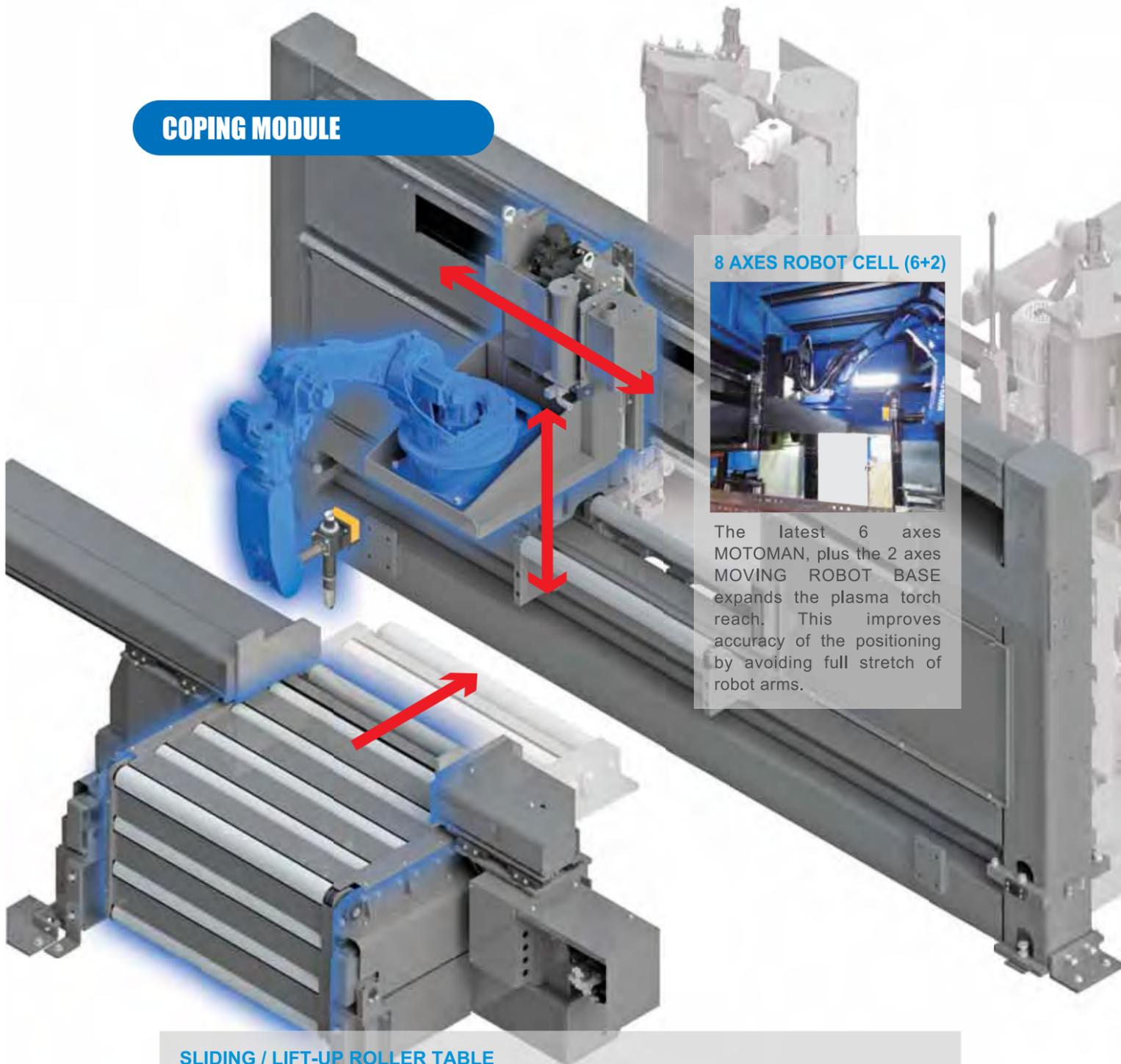
For angles and tees, the roller supports workpiece to make accurate hole position and longer tool life available.

### FOUR SIDES LAYOUT MARKING



With marking tools, the layout markings of product codes and welding positions are available including bottom flange.

## COPING MODULE

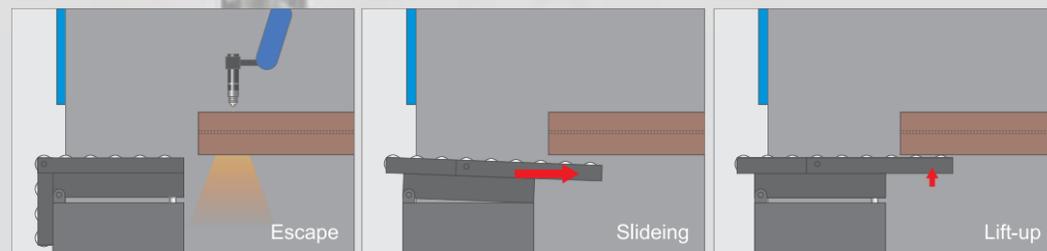


### 8 AXES ROBOT CELL (6+2)



The latest 6 axes MOTOMAN, plus the 2 axes MOVING ROBOT BASE expands the plasma torch reach. This improves accuracy of the positioning by avoiding full stretch of robot arms.

### SLIDING / LIFT-UP ROLLER TABLE



The powered roller table goes out of machine escaping dross for cutting; comes back inside to lift up even deformed workpiece for work feeding.

## VARIETY CUTS BY ROBOT

### LASER/CONTACT MEASUREMENT



Either Laser sensor or torch contact sensing is selectable for the work size measurement depending on the jobs.

### ROTATING TORCH



With wear resisting bearings, the Daito rotating torch base solved the problem of cable twists and damage against the robot arm.

### TWO POINTS AIR PURGE



The air from the torch base blows off drill chips, debris and dusts to avoid possible measurement errors.

### WALK THROUGH HOUSING



The new fully enclosed plasma housing features full length doors and a walk through design. Convenient for cleaning and maintenance.

### REPLACABLE PROTECTION



The design engineers have made it simple remove and replace without needing experience.

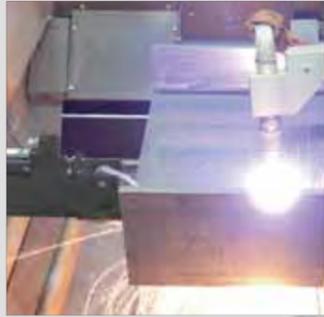
### UNDERSIDE CUTTING / MARKING



The robot torch can fully cut / mark all four sides, including the underside of a workpiece. Plus when cutting box tubing we only have 2 pieces, which saves tool life.

## WORK FEED MODULE

### LAST CUT FUNCTION



Ensures the workpiece can be accurately fed through the machine and the entire length can be processed with out waste.

### 4 WORK FEED ROLLERS



Four work feed rollers are linked together so heavy workpieces can feed smoothly and accurately.

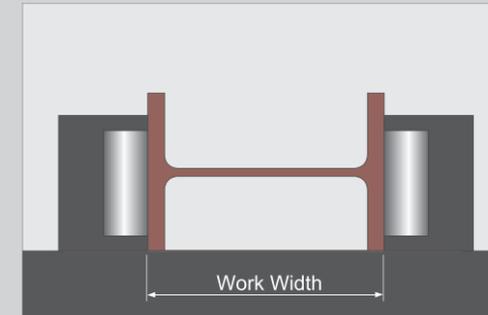
### MOVING VICE



The pinch rollers loaded saddle slides back and forth to follow up the work feed enabling very accurate positioning.

## Concentrated Work Feed Functions

### WORK WIDTH MEASUREMENT



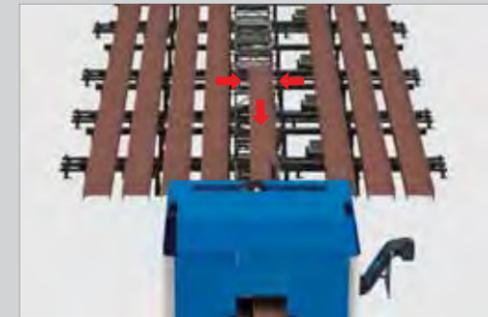
The actual work width is measured and compared with the program data. If there is any mismatch the machine will stop and alert the operator.

### MEASURING DISK



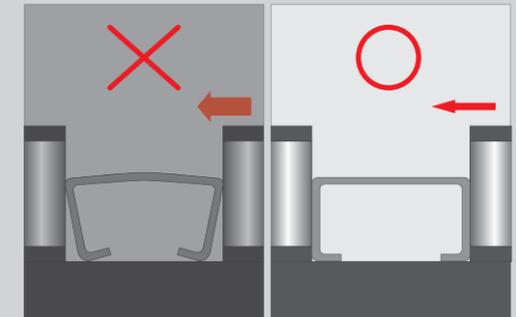
The work feed measurement is optimized by two types of disk contacts: one for ordinary work; the other for thin-wall work.

### TWO SIDE LOADING



As the work feed mechanism is built into the machine, the workpieces can be supplied from both sides of the roller table and is not affected by a carriage system.

### VICE PRESSURE REGULATION



The vice clamp force is optimized by program data to enable processing of thin wall workpieces without deformation.

### SLIP DETECTION



The sliding saddle work feed is measured by contacts of the measuring disk. If work slip is detected, the feed stops with an alarm.

### 4 VERTICAL CLAMP ROLLERS

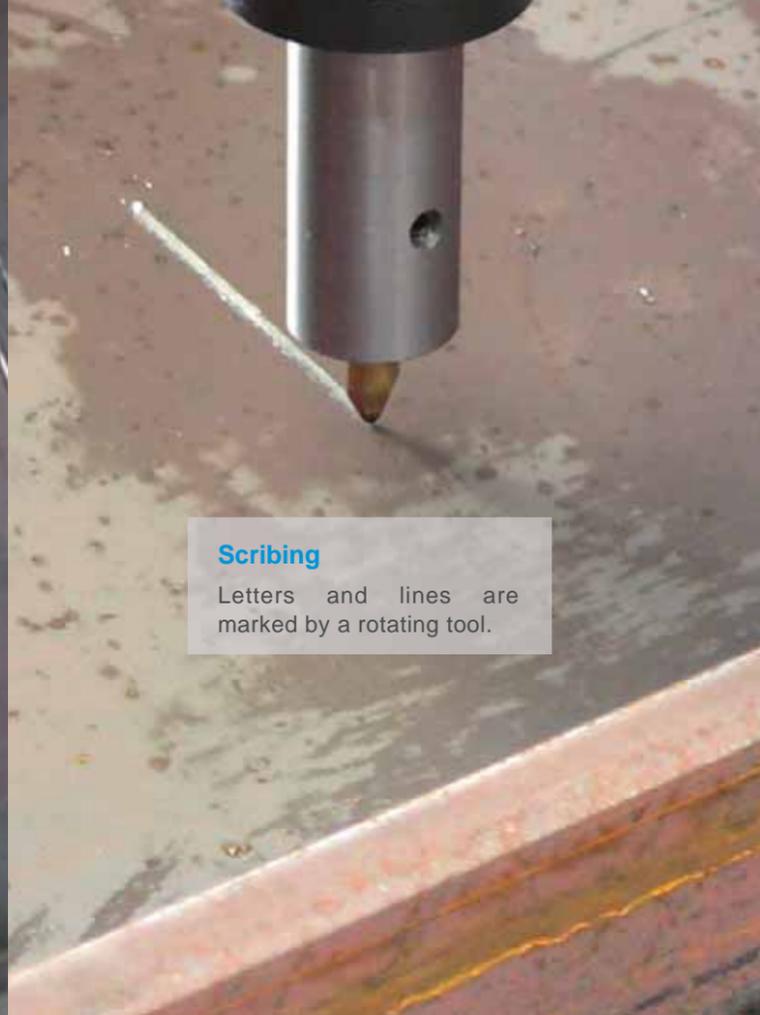


During work feed, the four vertical rollers clamp even distorted workpieces firmly to push down.



**Scratching**

Shallow engraving for small letters and thin lines. The fastest marking available, perfect for layout / welding lines.



**Scribing**

Letters and lines are marked by a rotating tool.



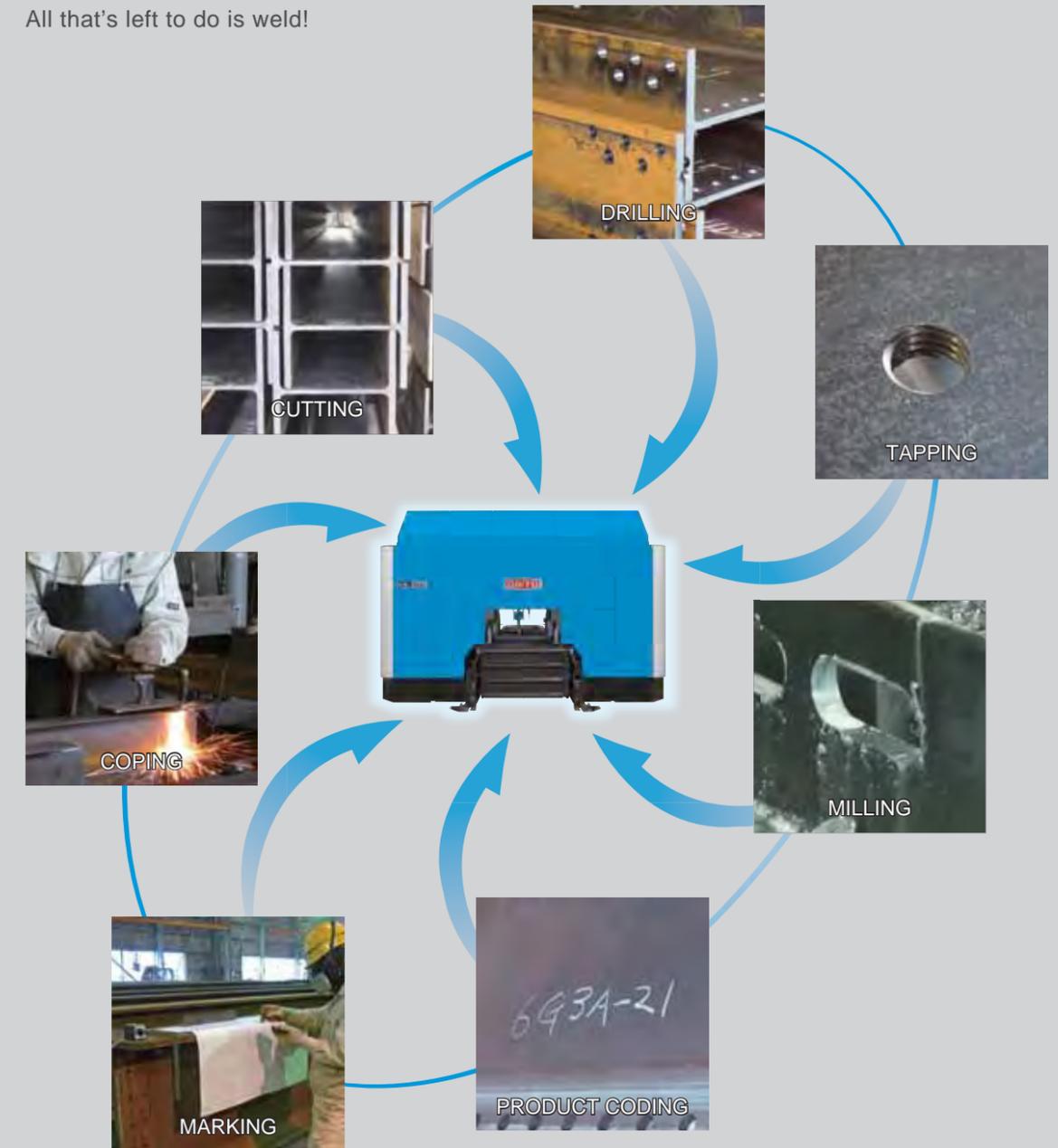
**Plasma Marking**

Letters and lines regulated automatically through the CNC and plasma system.

# COMPLETE PART PROCESSING - ALL IN ONE MACHINE

Conventional structural steel processing automation includes substantial human manual operations. Such as various markings, fusion cutting, tapping and milling. These human / manual operations are now automated by DCM1050 and already completely scribed / marked.

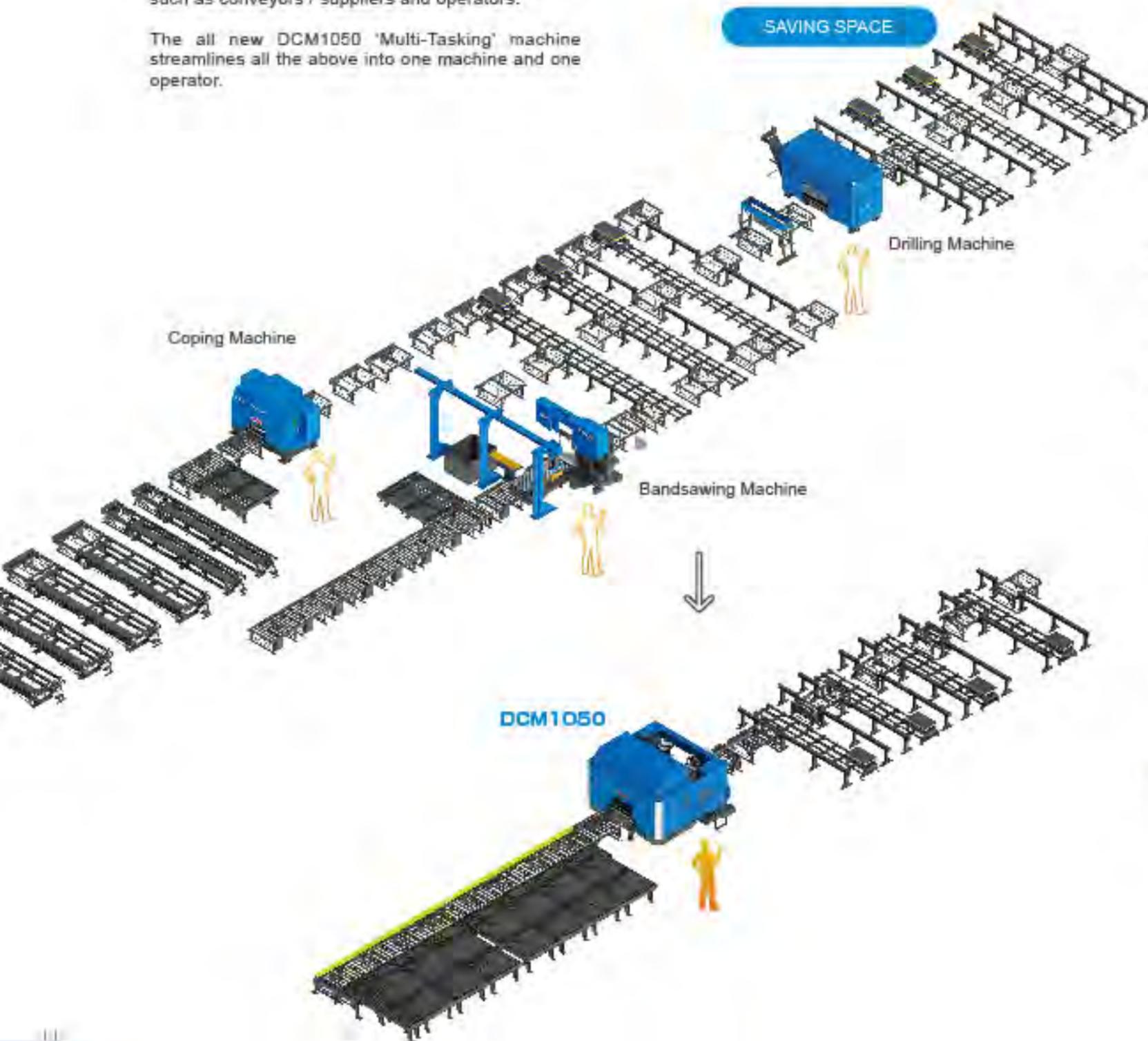
All that's left to do is weld!



# RECLAIM YOUR WORKSHOP

Conventional structural steel processing automation includes DRILLING / BANDSAWING / COPING machines, plus all the material handling facilities such as conveyors / suppliers and operators.

The all new DCM1050 'Multi-Tasking' machine streamlines all the above into one machine and one operator.



LESS MACHINES

LESS PEOPLE / OPERATORS

Drilling Machine



Bandsawing Machine



Coping Machine



DCM1050



# SPECIFICATIONS

## DCM1050

Work	Capacity	Min. W75mm x H12mm x t3.2 *1 Max. W1,025mm x H500mm x t50	
	Profile	H I U O L T O -	
Drill Spindle	Hole Dia.	Carbide *2 $\Phi 18 \sim \Phi 26$ Oil hole $\Phi 15 \sim \Phi 30.5$ H.S.S. *2 $\Phi 5 \sim \Phi 50$	
		Tapping *2	M6 ~ M24
		Milling *2	6mm ~ 12mm
	Axis	3 Axis Top / Left / Right	
	Spindle rpm	3,000rpm ( Max.5,000rpm )	
	No. of Drills in ATC (Each Unit)	Top 8 / Left,Right 7	
Min. Work Length	Auto Cycle	1,000mm	
	Manual	800mm	
Main Work Feeder	Feeding System	Pinch roller	
	Feeding Speed	28.6m/min	
	Max. Indexible Weight	8,000kg	
	Measure	Measuring Disk	
Motor Output	Spindle	8.5kW x 3	
	Plasma	70.0kW	
	Robot	2.0kW	
	Spindle Temperature Regulator	4.3kW	
	Hydraulic	5.5kW	
	Others	16.5kW	
Power Consumptions	AC200V		
Machine Weight	12,000kg		
Standard Accessories	Oil Hole Drill bit Dia.18,22,24 for Each Spindle Straight Shank Adaptor1set, Plasma Torch Chip1set		
Options	Carbide Drill, H.S.S. Drill, Scratch Tool, Scribing Tool Milling Tool, Tapping Tool, Chamfering Tool Moles Taper Adaptor, Laser Marker Angle Lifter Free Conveyor, Pusher, Powered Roller Table Free Roller Table, Powered Roller Unit, Chip Conveyor Bottom Scratcher, Short Work Product Scrap Cart		

The specifications are subject to change without notice.

\*1 Square tubing:t2.3, Flat bar:t9.0

\*2 The tools are optional. Please specify on your order.

# OVERALL DIMENTIONS (mm)

## DCM1050

