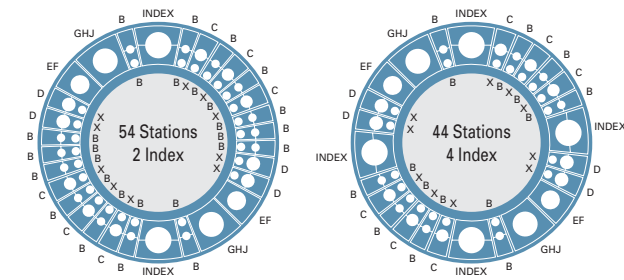


Turret Layout



Tooling range

Range	Round punch	No. of Stations	
		54ST/2 I/T	44ST/4 I/T
X	~0.5"	10	10
B	~1.0"	28	16
C	~1.5"	6	6
D	~2.0"	4	4
E	~2.5"		
F	~3.0"	2	2
G	~3.5"		
H	~4.0"	2	2
J	~4.75"		
INDEX	~3.0"		
VT	12,18 Stations	2	4
VM	20,40 Characters		

* With Auto-index stations, Index tool (I/T), VARITool (VT) or VARIMARK (VM) can be selected as options in desired combination.

Specifications

	MOTORUM 2548	MOTORUM 2558
Punching capacity	27.5 tons (245 KN)	
Maximum sheet thickness	0.25" (Steel ball table)	
Y-axis stroke	63.0"	75.0"
X-axis stroke	100.4"	
Maximum sheet size (YxX)	Without repositioning 49.21" x 98.43"	60.04" x 98.43"
	With one reposition 49.21" x 196.85"	60.04" x 196.85"
Throat depth	52.76"	63.78"
Feed clearance	0.984"	
Maximum allowable sheet weight	330 lbs	
Hit rate	Punching: 25 mm pitch Nibbling: 1 mm pitch	X: 400 HPM / Y: 300 HPM X: 800 HPM / Y: 700 HPM
Simultaneous axis speed	4.920"/min	
Punching accuracy	± 0.004"	
Turret index speed	40 rpm	
Index tool speed	180 rpm	
Compressed air	Quantity 35 ft ³ /min	Pressure 71 PSI
Power supply	23 KVA	

Option	
• Varitool	• Programmable up forming
• Varimark	• In turret bending
• Brush table	• Slug suction unit
• 4-Station Tapping	• Downward extrusion protection
• 8-Station Tapping	• Programmable positioning workholder
• Retractable Die-holder function	• Cell ready

■ Safety Specification
Machines built CE-safety conformity is available as option.

MURATA MACHINERY, LTD. MACHINE TOOLS DIVISION

International Business Dept.
2, Nakajima, Hashizume, Inuyama-shi, AICHI 484-8502, JAPAN
TEL : +81-(0)568-61-3645 FAX : +81-(0)568-61-6455

Headquarters
136, Takeda-Mukaishiro-cho, Fushimi-ku, KYOTO 612-8686,
JAPAN
TEL : +81-(0)75-672-8138 FAX : +81-(0)75-672-8691

http://www.muratec.co.jp
e-mail info@muratec.co.jp

MURATA MACHINERY USA, INC

2120 Queen City Drive, P.O.Box 667609,
Charlotte, N.C. 28208, U.S.A.
TEL : +1-704-875-9280 FAX : +1-704-392-6541
http://www.muratec-usa.com

MURATA MACHINERY EUROPE GmbH

Hanns-Martin-Schleyer-Straße 3, D-47877, Willich, GERMANY
TEL : +49-(0)2154-914-250 FAX : +49-(0)2154-914-283

MURATA DO BRASIL COMERCIO E REPRESENTACAO DE MAQUINAS LTDA.

Estrada de Santa Izabel, 3383-KM 38,5
Itaquaquecetuba-SP-CEP 08599-000 BRAZIL
TEL : +55-(0)11-4648-6222 FAX : +55-(0)11-4648-6737

MURATA MACHINERY SINGAPORE PTE LTD.

30 Loyang Way #05-17/18 Loyang Industrial Estate
SINGAPORE, 508769
TEL : +65-6545-1228 FAX : +65-6545-2221

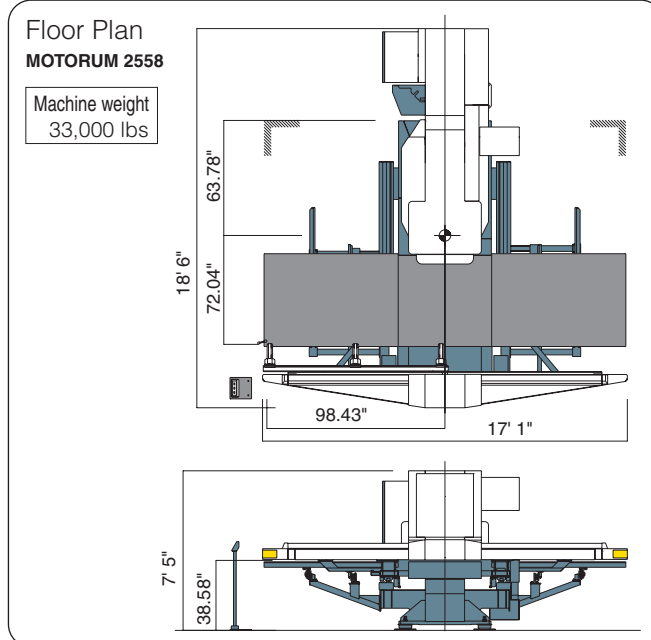
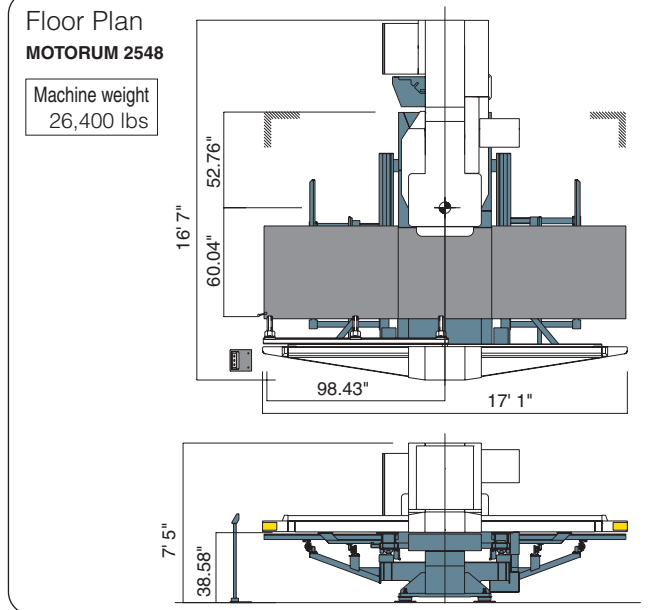
MOTORUM 2548/2558

CNC Servo Motor Driven Ram Turret Punch Press

muratec

CNC Servo Motor Driven Ram Turret Punch Press

MOTORUM 2548/2558



* Machine appearance may differ to that shown in the catalogue pictures.
* All specifications are subject to change without advanced notice.



MOTORUM 2548/2558

Servo Drive Pioneer Motorum has evolved to a new level

Functionality!
Power!
Speed!

Process Integration

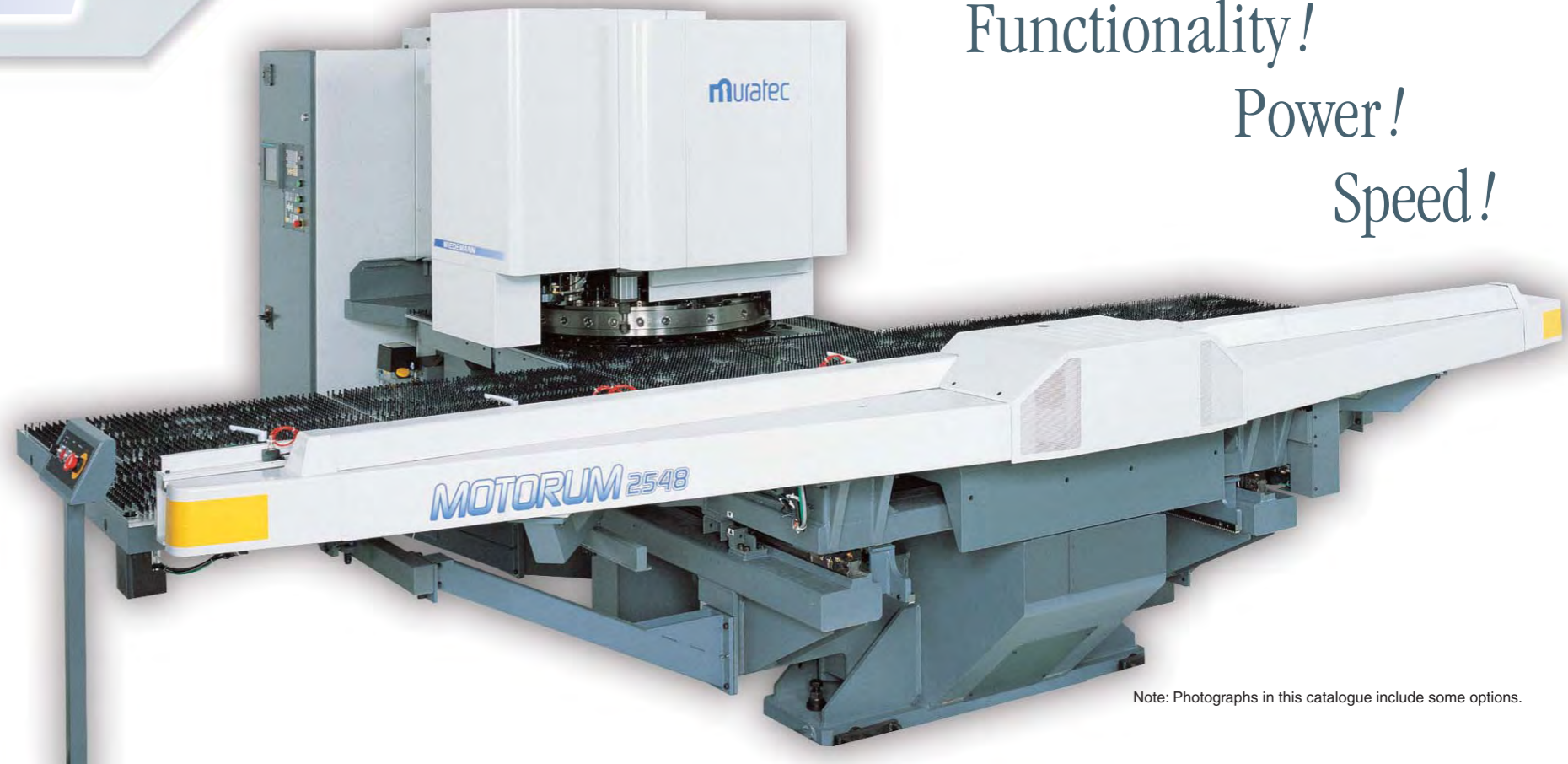
- Downward extrusion up to 0.079"
- Servo controlled upward forming
- In turret bending height as high as 0.787"

Increased power delivers higher processing stability

- Servo motor with 27.5 tons punching capacity

Increased speed raises productivity

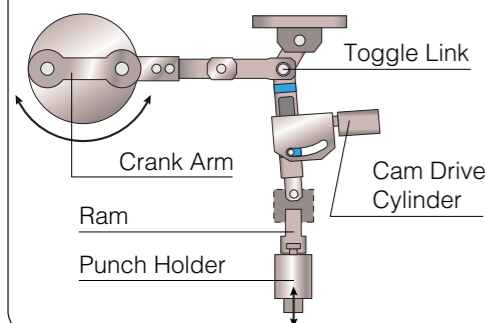
- Higher auto-index speed, to 180 rpm
- Faster punching rate, to 400 hpm



Note: Photographs in this catalogue include some options.

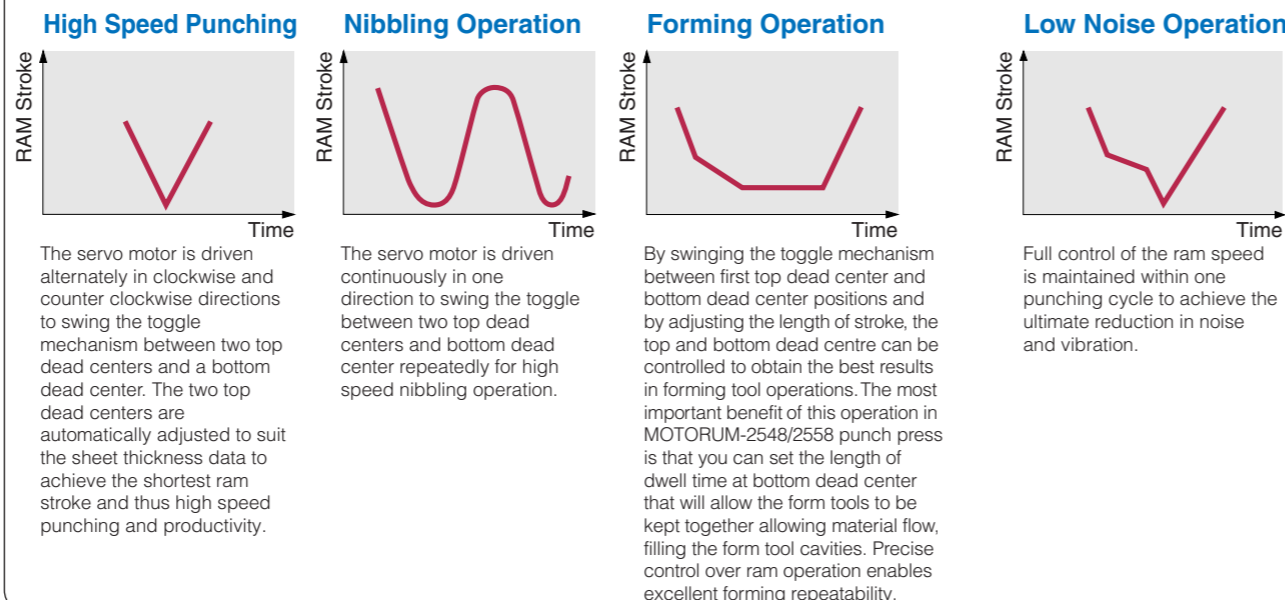
The Servo Motor Driven Punching Mechanism

The MURATEC ram drive technology incorporates a toggle mechanism driven by an AC servo motor. This innovative technology has resulted in achieving higher productivity, an environment friendly operation, and energy efficient production. A single rotation of the crank arm gives two punching strokes. By utilizing a mechanical advantage, the servo driven ram technology provides greater punching force while generating less heat and using less energy.



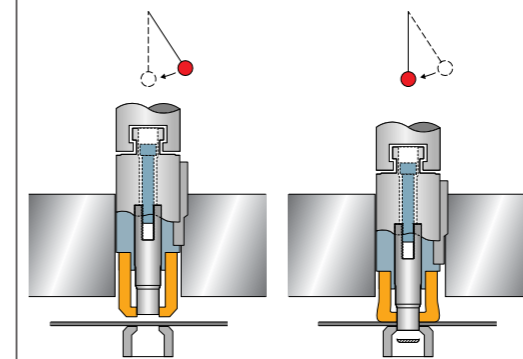
Ram Operation Patterns

The servo motor drive mechanism delivers precise RAM control. Combined with Muratec application, Motorum 2548/2558 enables Ram Operation Patterns ideal for a wide range of processes.



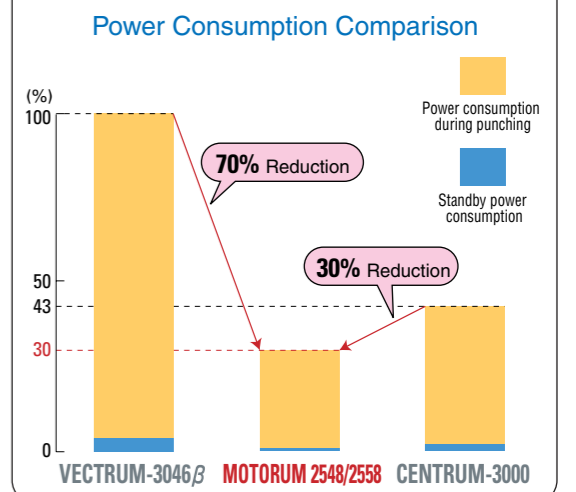
Punch-in, Pull-Out Type Wiedemann Tooling

The positive Punch-in and Pull-out design of the ram, which is mechanically linked to the punch holder during the punching cycle, guarantees positive punching. This design has already been field proven for its high strength, precision and simplicity of tooling. By combining this feature with the newly innovated servo motor driven ram, the reliability of the machine has been greatly enhanced.



Energy Conservation & Low Running Cost

An environment-friendly eco-machine, Motorum uses the energy it needs only at the time of punching, thanks to the servo motor drive mechanism.



The Key to Reduced Lead Time

Motorum 2548/2558 provides high speed processing with reliability and accuracy. This machine also raises overall productivity through process integration of bending, forming, tapping and other processes, together with reduction of time needed to setup and program.



In Turret Bending (Option)

The servo drive allows precise stop positioning of the RAM punch, which in turn gives accurate angle control, for Z-bending via index-station processing. Increase in turret feed clearance takes the in turret bending height to a maximum of 0.787".

- Stations used: Auto-index (F-Station)

- Process types



- Sheet thickness: 0.02" - 0.06" (Mild Steel)

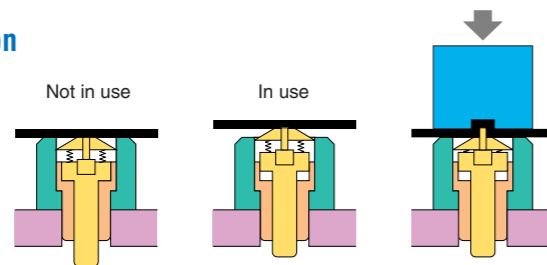


Forming

Optimum control of RAM speed leads to fast and accurate forming of the highest quality, with minimal distortion of the workpiece.

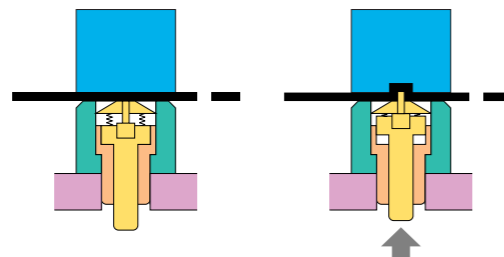
Retractable forming die function

Upward forming tool dies are retracted to die height when not in use. This is to avoid interference of the forming die with the workpiece and workholders. This allows free movement of the sheet without any restrictions and improves quality.



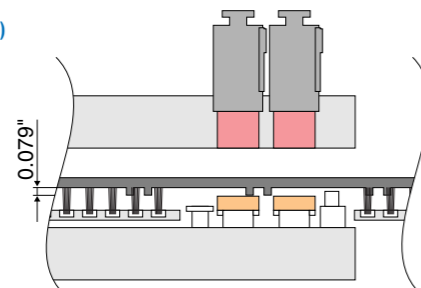
Programmable up forming (Option)

After lowering the punch onto the material, the servo controlled upward forming stroke will not lift the material. This improves accuracy on extrusion and other high precision forming processes.



Downward extrusion protection (Option)

Conventional turret punch presses have long had difficulty with downward extrusion. As the formed work is lifted off the upper surface of the die during table/sheet movement, this option eliminates degradation of the form stemming from interference with the die.



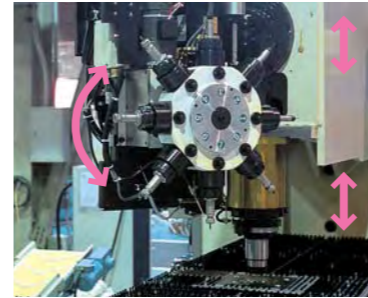
Tapping

8-Station Tapping Unit (Option)

A full-scale rigid tapping unit using with synchronization of RPM and feed speed by the servo motor.

- Tap size: M2 ~ 10
- Tapping methods: Machine thread / Rolling thread
- Max. sheet thickness: 0.25"

*Specifications vary, depending on type of material, hole diameter, etc.



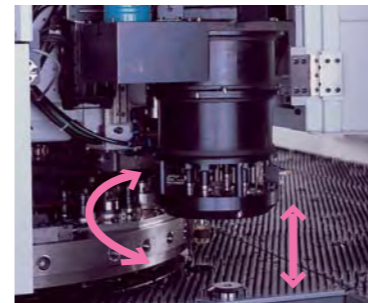
8-Station Tapping Unit (Option)

4-Station Tapping Unit (Option)

This tapping unit uses the floating method with dual cylinder feeding for a preset RPM.

- Tap size: M2.6 ~ M8
- Tapping methods: Machine thread / Rolling thread
- Max. sheet thickness: 0.125"

*Specifications vary, depending on type of material, hole diameter, etc.



4-Station Tapping Unit (Option)

High-Speed Auto-Index Mechanism

Index tool speed has been raised to 180RPM. Reduction of positioning time for index tool angles, multi-tools and marking tools shortens production time.

High-Speed Indexing

Fast indexing any angle shortens production of needed for complex forms.



Varitool 12-station type (Option)

Varitool (Option)

The VARITOOL is available in 12 and 18 tool configurations. Using VARITOOL in the Auto-index station increases the turret tool capacity. The 12-station tool configuration has tool sizes up to 0.5" dia., while the 18-station has a maximum tool size of 0.354" dia.



Varimark (Option)
Stamping Character Size:
0.083" x 0.125" (40 characters)
0.125" x 0.197" (20 characters)

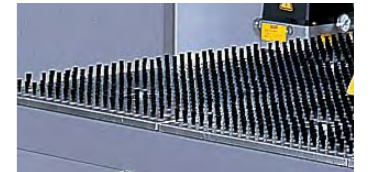
Varimark (Option)

The VARIMARK is built-in with 20 or 40 standard alphanumeric and punctuation characters for stamping on the worksheet.

Designed for higher productivity, quality and operating ease

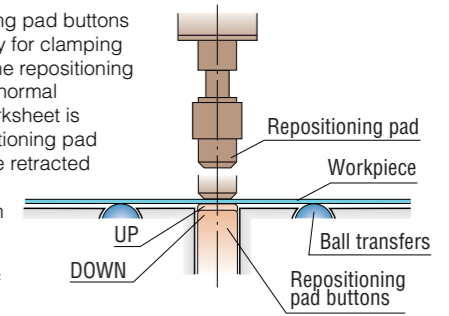
Brush Table (Option)

While reducing scratching on the back of the worksheet, the brush table also gives stable movement of the worksheet. The brush table reduces noise during worksheet movement and eliminates scratches to the back of worksheet.



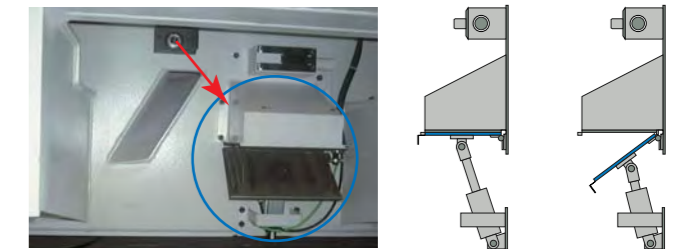
Retractable Repositioning Pad Buttons

Retractable repositioning pad buttons are raised automatically for clamping the worksheet during the repositioning operation only. During normal punching when the worksheet is moving over the repositioning pad buttons, the buttons are retracted downward which eliminates scratches on the under side of the worksheet. This enhances the quality of the finished worksheet.



Slug Suction Unit (Option)

The slug suction unit enables better punching quality and minimizes slug pull-back problem for thin worksheets. This function is extremely useful while processing worksheets having scratch prevention films. The air suction helps to detach cut films from the workpiece.



Built-in Turret Parts Chute

A part chute is provided underneath the inner track punch centre for efficient discharge of small parts, to enable micro jointless parts production. The parts discharge port is located at CNC control side of the press frame. Maximum part size: 7.9" (X) x 5.9" (Y) Minimum part size: 1.2" (X) x 3.1" (Y)

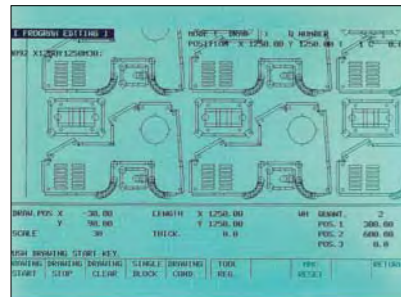


Sheet Metal Processing Expertise

The operator should be able to output a high level of processing know-how without having to think about how to do it, and this is the control concept of MOTORUM.



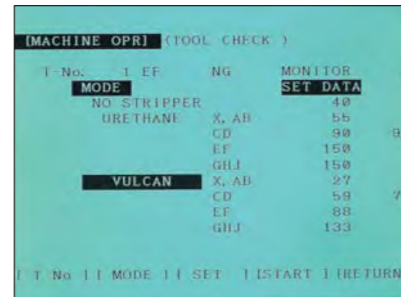
Conversational NC Programming and Editing



Program Creation & Background Editing

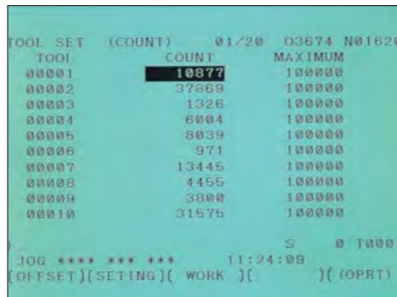
Programs can be created using the conversational mode. Background editing of programs is also possible.

Tool Alignment Confirmation Function



The MOTORUM servo ram control features a ram motor torque monitoring system that enables the operator to detect punch and die nonalignment, avoiding damages to the punch and die.

Tool Life Monitor Function



The MOTORUM incorporates a programmable auto tool life monitor function, that when tool life has reached a set hit number the "Tool Life Caution" message is displayed to capture the operator's attention to carry out the punch and die regrinding.

Optional Automated Cell Systems

Applying the rich delivery results and expertise of sheet metal FMS, Muratec offers automated cell systems ideal for client needs.



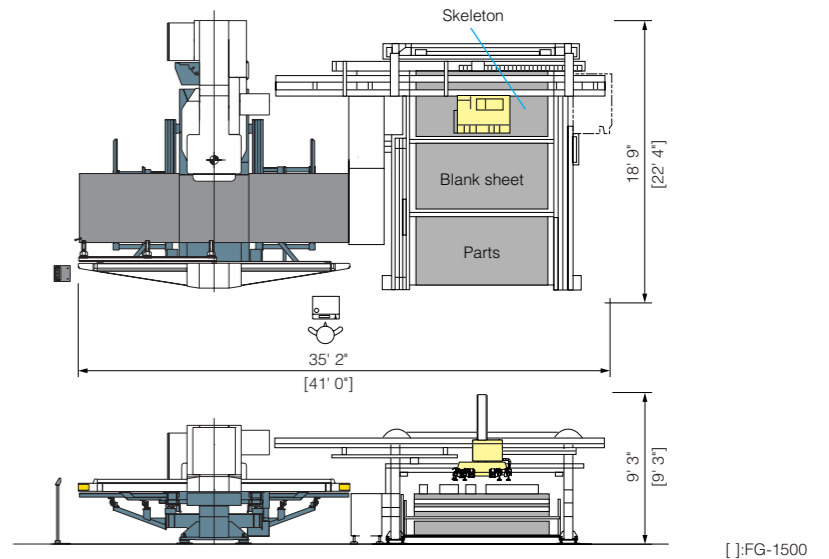
FG-1250/FG-1500

Features

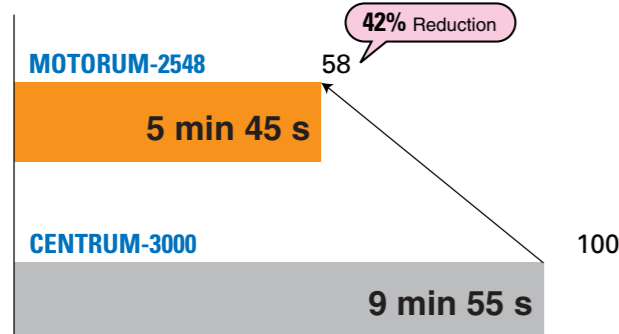
- Micro jointless parts production
- Flexible stacking system reduces
- Post-process operations and parts handling
- Manual blank sheet loading operation is possible
- Effective parts handling of small size and hole intensive parts
- NC-type loader unit control & scheduler

	FG-1250	FG-1500
Sheet Size: Max. (Y x X)	49.2" x 98.4"	60.0" x 120.0"
Min. [Nested Layout]	39.4" x 59.0"	
[Single Part]	11.8" x 19.7"	
Blank Sheet Thickness:	0.024" to 0.125"	

*Stocker type is also available



Benchmark



Worksheet example

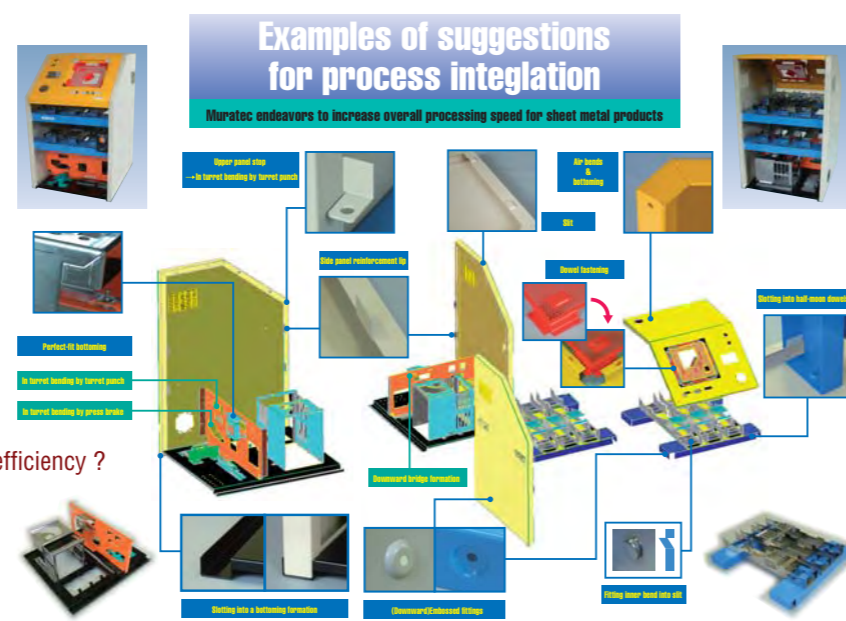


Process Innovation

In addition to improving processing ability, Muratec works with customers in revising production processes for sheet metal products and offers suggestions for improvement of industrial techniques.

Do you

- Want to raise production speed?
- Want to consolidate processes and reduce holding time for work-in-process?
- Want to decrease the number of welded parts and raise efficiency?
- Want to reduce the number of parts?
- Want to reduce the number of actual parts?
- Want to improve the production processes?

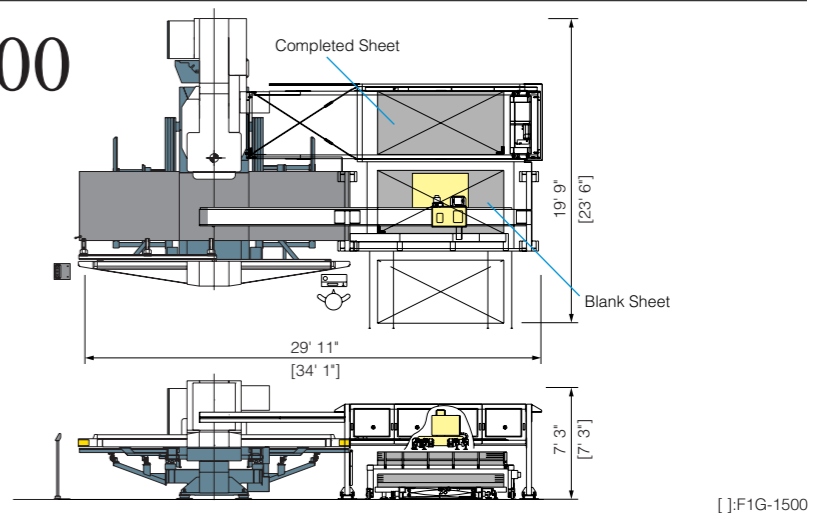


F1G-1250/F1G-1500

Features

- Space saving compact design
- Increased productivity through reduced loading cycle time
- Quieter system operation
- Manual blank sheet loading operation is possible
- NC-type loader unit control & scheduler

	F1G-1250	F1G-1500
Sheet Size: Max. (Y x X)	49.2" x 98.4"	60.0" x 120.0"
Min.	11.8" x 29.5"	
Blank Sheet Thickness:	0.024" to 0.177"	
Loading Cycle Time:	22 seconds	29 seconds



FFG-1250/FFG-1500

Features

- Compact design to store and handle full size blank sheets and finished parts
- Unmanned operation over extended periods for variety of production schedules
- Quieter system operation
- Manual blank sheet loading operation is possible
- NC-type loader unit control & scheduler

	FFG-1250	FFG-1500
Sheet Size: Max. (Y x X)	49.2" x 98.4"	60.0" x 120.0"
Min.	11.8" x 29.5"	
Blank Sheet Thickness:	0.024" to 0.177"	
Loading / Unloading Cycle Time:	25 seconds	29 seconds

