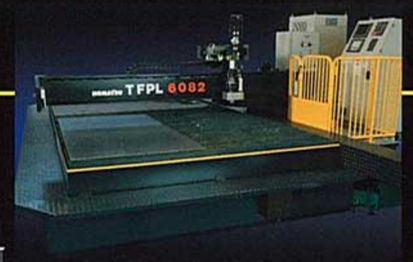
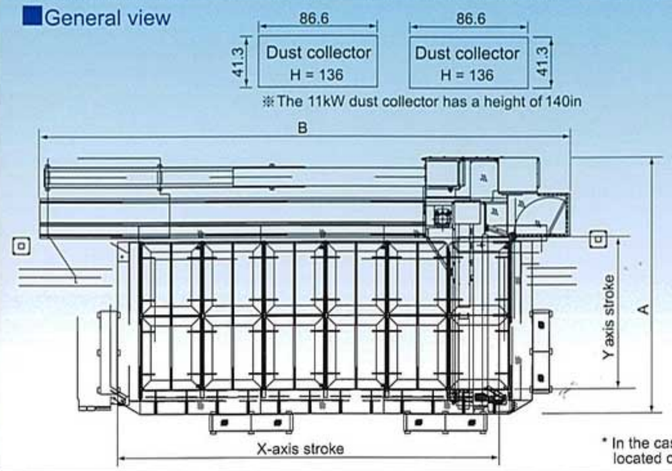
TFPL SERIES

TWISTER TFPL SERIES



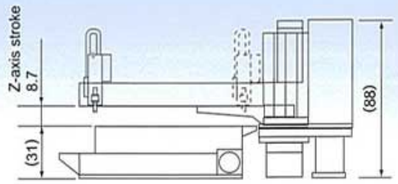
Specifications

General view



※This is one example of peripheral machinery layout.
※A safety area of 20in is required around the cutting machine. A height of 24in above the top of the fume collector is required as an exhaust area.

	TFPL6082 TFPL3082	TFPL6084 TFPL3084	TFPL6012 TFPL3012	TFPL6014 TFPL3014
A	192.9	192.9	216.5	216.5
B	376	620	376	620



* In the case of the 30kW Twister (TFPL30**), the Twister power unit is located on the machine.

Main specifications

Item		Model	TFPL6082	TFPL6084	TFPL6012	TFPL6014	TFPL3082	TFPL3084	TFPL3012	TFPL3014
Twister output power		kW	60				30			
Twister power unit rated utilization		%	100				100			
Max. material thickness(Mild steel)		in.	1.5				1.0			
Max. pierce thickness(Mild steel)		in.	1.5				1.0			
Cutting area dimension (Y-X)		in	98 x 244	98 x 484	122 x 244	122 x 484	98 x 244	98 x 484	122 x 244	122 x 484
Stroke	X-axis	in.	267.7	511.8	267.7	511.8	267.7	511.8	267.7	511.8
	Y-axis	in.	102.3		126		102.3		126	
	Z-axis	in.	8.7							
Traverse speed	X-axis	IPM	787							
	Y-axis	IPM	1575							
	Z-axis	IPM	787							
Driving method	X, Y -axis		Rack & pinion + Linear guide							
	Z-axis		Ball-screw + Linear guide							
Positioning accuracy		in.	± 0.006/12							
Positioning repeatability		in.	±0.004							
Controller			FANUC-0iM							

Main Functions and Options

● : Standard ○ : Optional

	TFPL6082	TFPL6084	TFPL6012	TFPL6014	TFPL3082	TFPL3084	TFPL3012	TFPL3014
Safety devices (Light curtain type, contact type)	●							

●Materials and specifications are subject to change without notice
●For a better understaning of the mechanism, the photographs in this brochure show the Twister without the spatter guard shield in place.

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TFP

TWISTER SERIES

TWISTER

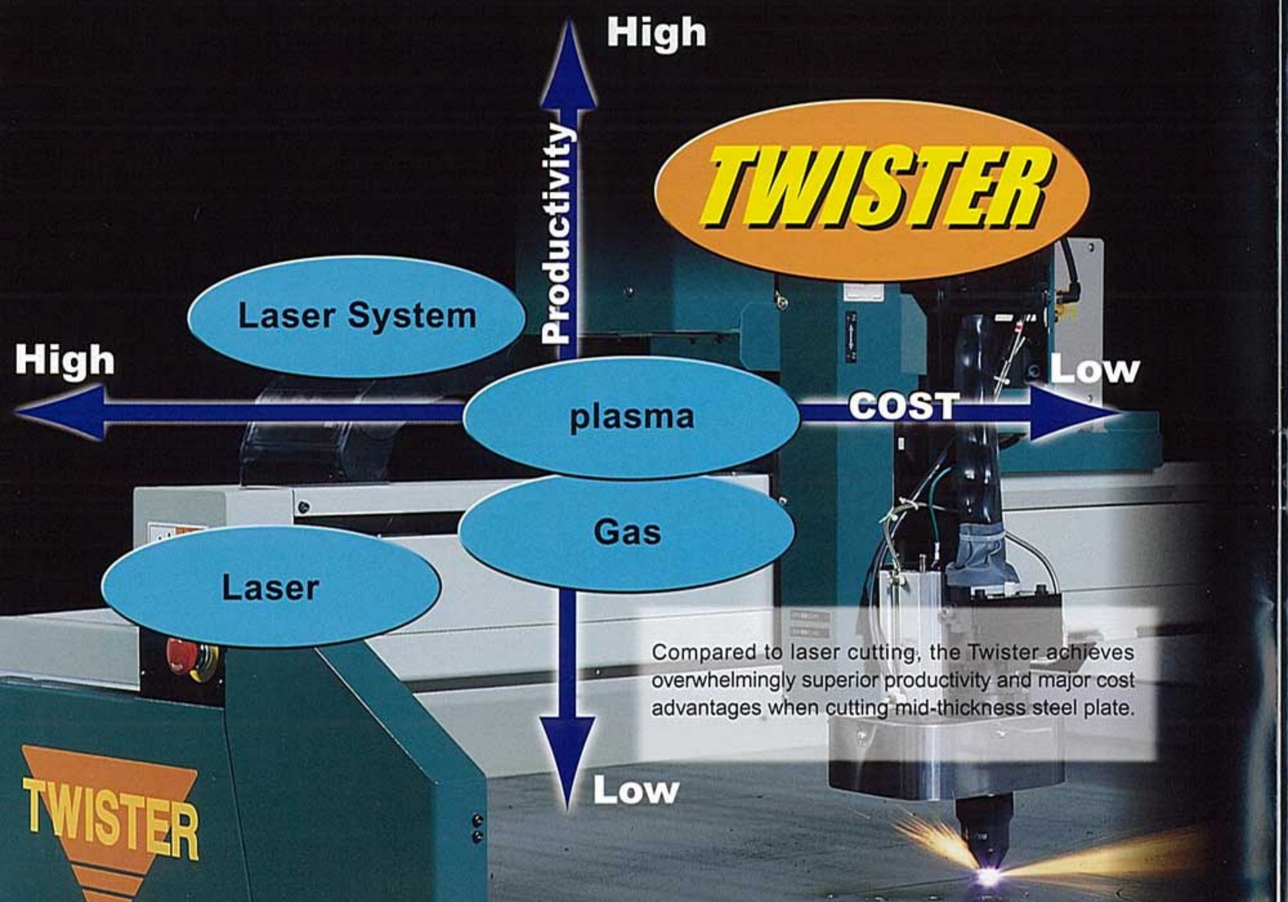
KOMATSU
Komatsu Industries Corporation

The Challenge of Indeterminable Fluctuating Production (R)

The high quality cutting machine " Twister " features outstanding and high productivity far exceeding laser cost performance

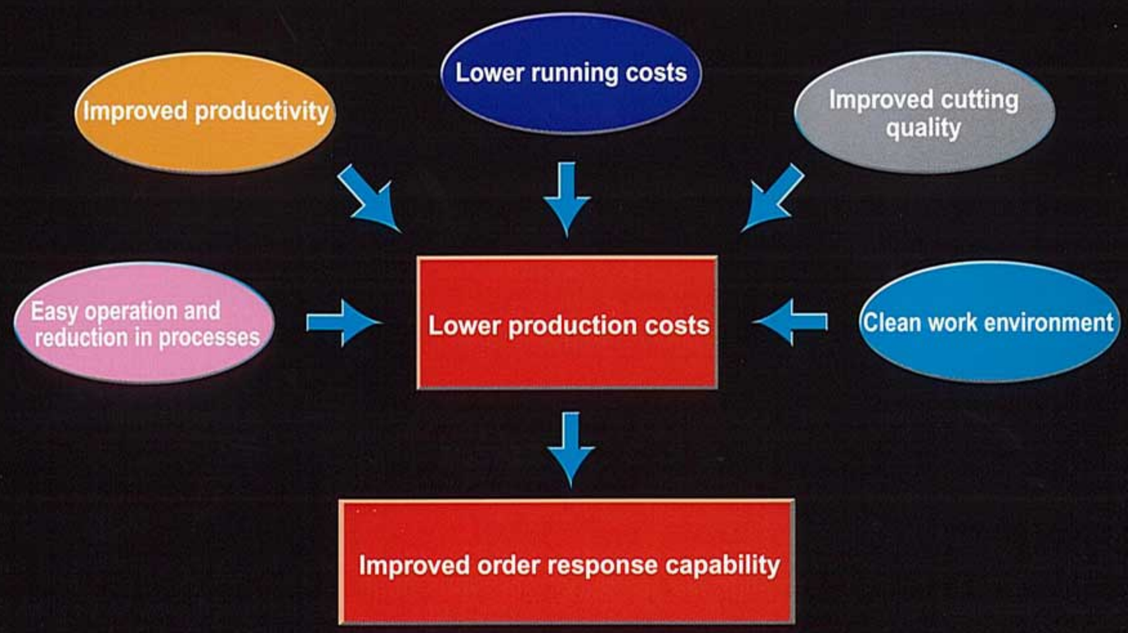
Production lots and delivery times are indeterminable factors for the manufacturing sector in this age. The key words are “improved order response capability”.
In addition to the Twister's improved productivity, cost performance and cutting quality in the area of mid-thickness steel plate, the ease of setting up has also been improved. This machine promises vastly improved cutting work.

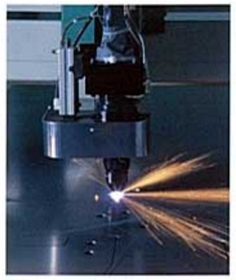
TWISTER SHOCK!



Compared to laser cutting, the Twister achieves overwhelmingly superior productivity and major cost advantages when cutting mid-thickness steel plate.

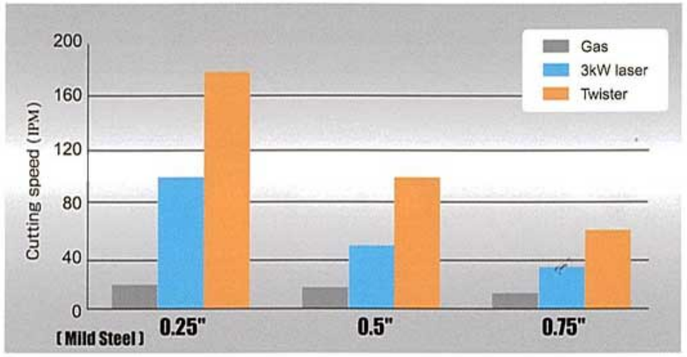
Innovative Functions and Cost Advantages





Improved productivity

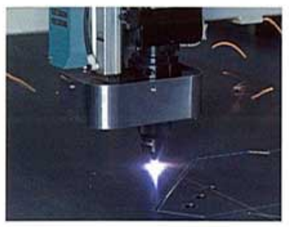
Exponential increase in cutting speed thanks to high power unit and high-speed twister gas

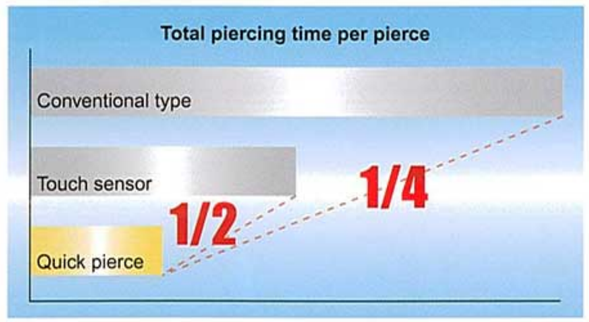


Cutting speed has been increased dramatically thanks to 30kW power unit and high-speed twister gas flow. Gives about twice the cutting speed of a 3kW laser.

Piercing time shortened with quick pierce

Total piercing time has been shortened thanks to high speed touch sensor system and quick pierce which incorporates actions such as gas interchange in the cycle.

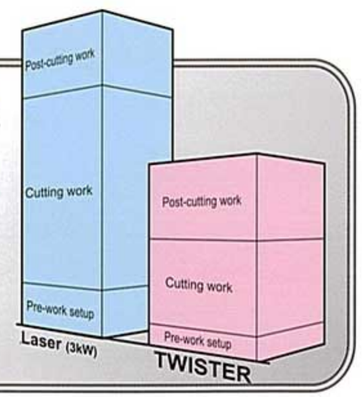




Comparison with laser cutting machine

40% shorter production time

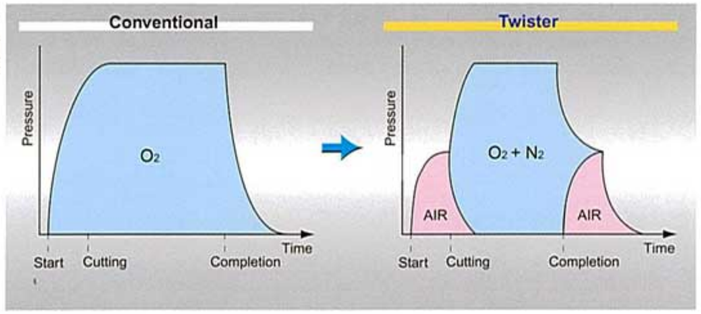
- Cutting time is half that of laser.
- Less dross and so post-cutting work (time) is the same as laser.
- Test cutting is unnecessary and so pre-work setup is halved.



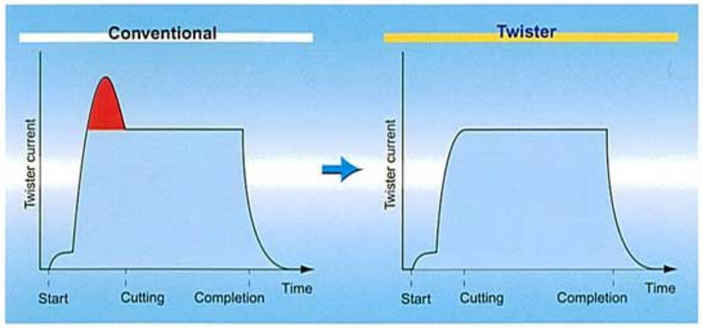
Lower running costs

Thanks to the adoption of main gas flow pattern control, the life of consumable parts has been greatly extended

A main gas flow pattern has been adopted which incorporates the advantages of both oxygen and nitrogen. Thus the life of consumable parts has been greatly extended. (US Patent No.6248972)



Thanks to the quick arc change, the life of consumable parts has been greatly extended.

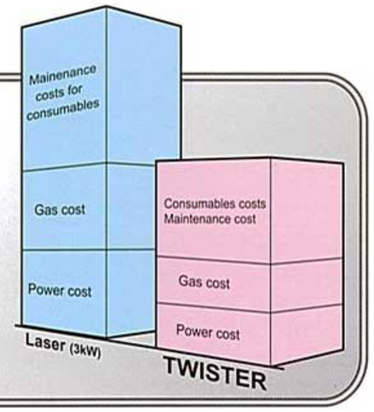


Due to the quick arc change, current overshoot on ignition has been curbed. Thus, the life of consumable parts has been greatly extended. (US Patent No.6933463)

Comparison with laser cutting machine

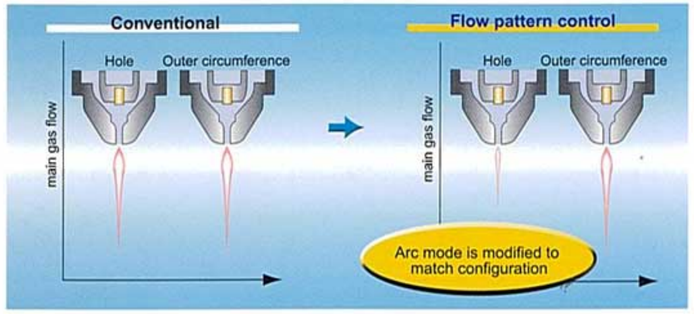
50% reduction in running costs

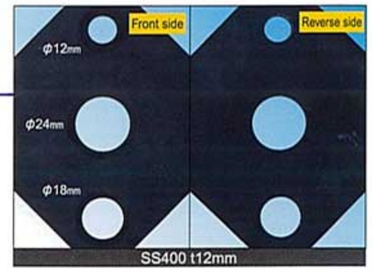
- 20% cut in total production costs.



Improved cutting quality

Cutting quality has been improved by main gas flow control

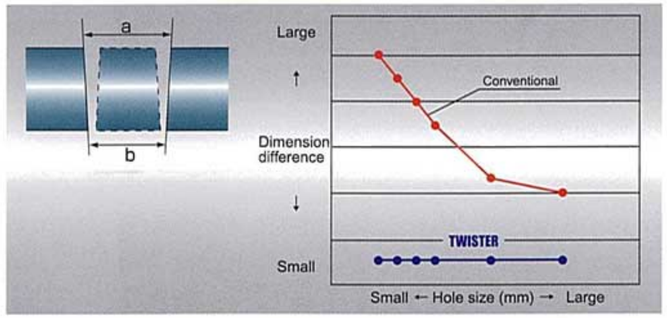




The arc mode has been optimised matched to configurations by using main gas flow control. This has greatly improved cutting quality. (US Patent No.6248972)

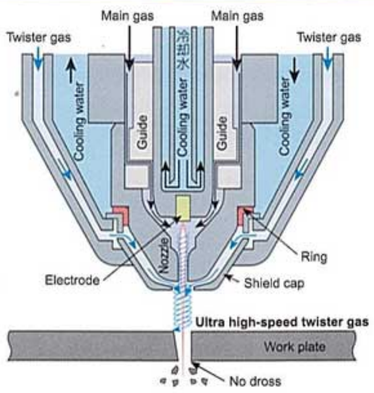
Disparity between upper and lower hole size reduced thanks to twister gas flow control

The twister gas flow control system ensures optimum gas flow based on configuration. This has reduced the disparity between upper and lower hole size. (US Patent No.6222154)

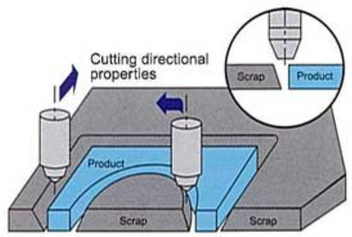


Dross adhesion sometimes occurs depending on the plate thickness and the configuration.

Twister gas drastically reduces dross

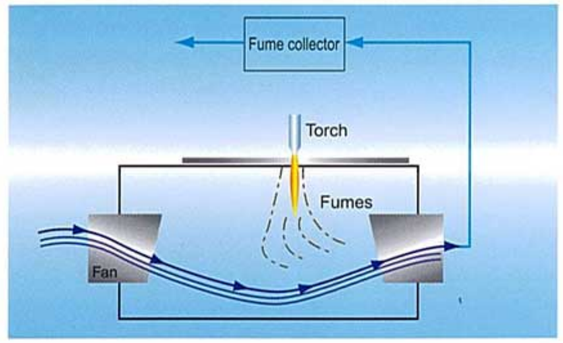


A powerful downward spiral flow around the plasma arc reduces dross. (US Patents No.6268583, No.6222154)



Clean work environment

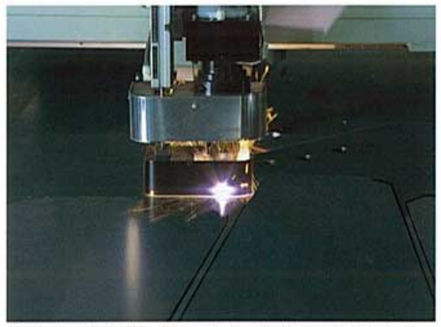
Fume up-flow has been eliminated by a push-pull system and area fume (dust) collector system



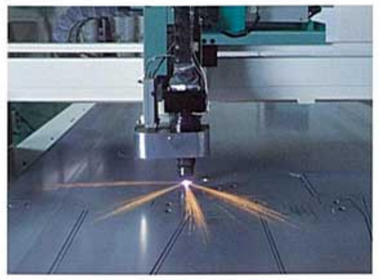
Effective fume (dust) collection is achieved by the push-pull system and zoned fume collection system limited to the work area. This greatly improves working environment. (US Patent No.6664495)

Spatter splash curbed by the spatter shield

Spatter splash has been greatly reduced during piercing thanks to the spatter shield that is activated while piercing. (Patent pending)



For a better understanding of the mechanism, the photographs in this brochure show the Twister without the spatter guard sheet in place.



Easy operation and reduct ion in processes

Streamlined work processes achieved thanks to Komatsu's original technology

Quick Change Torch

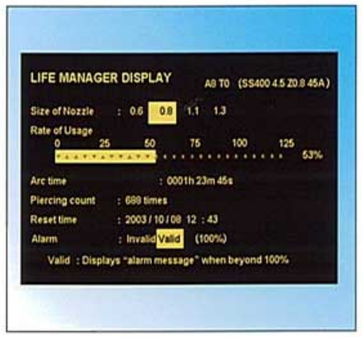
Shortening of consumable parts replacement time due to the adoption of a quick-change torch.

Unitization of consumable parts enables off-line setup. The time required for replacement of consumable parts on site has been greatly reduced.
(US Patent No.6320156)

Consumable Life manager

Consumable parts service life managed by life manager

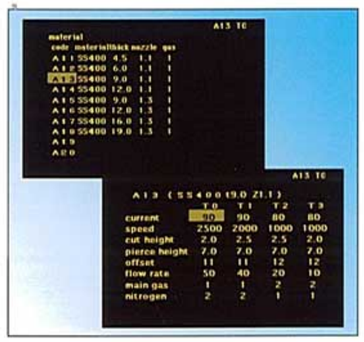
Thanks to the life manager display, anyone can make a decision on the service life of the consumable parts.
(US Patent No.6933462)



Technology Table

Optimal work conditions automatically set by technology table

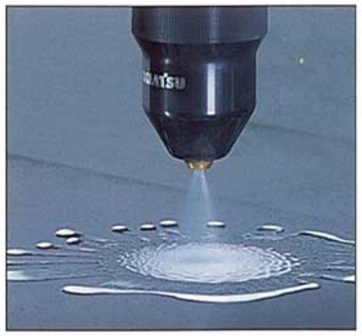
Work can be started at the press of a button. Troublesome adjustment is absolutely unnecessary.



Anti-Spatter Spray throughout Torch

Torch oil jet reduces consumable parts damage

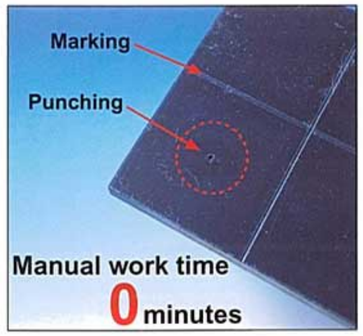
A spatter splash prevention agent is sprayed out from the tip of the torch to the pierce point. Due to this, damage to the consumable parts during piercing is reduced. (Patent pending)



Automatic Marking/Punching

Fully automated marking and (center) punching using an arc marker

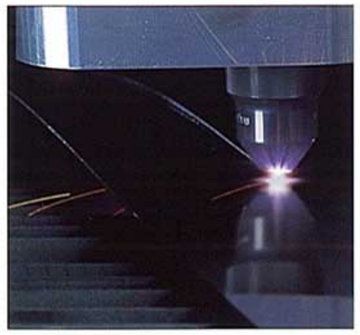
Marking and punching can be incorporated in the cutting process. The switch over to cutting is done automatically.



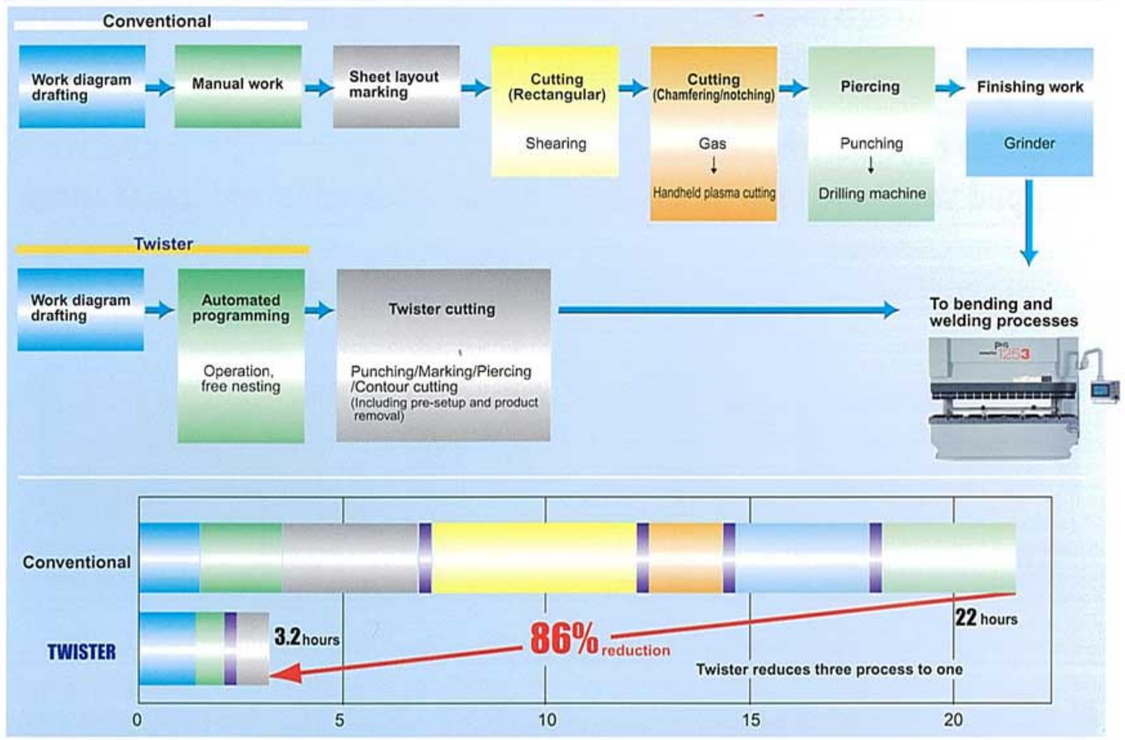
Arc Voltage Control

Cutting stabilization using AVC function

Arc Voltage Controller is equipped to maintain cutting height precisely.

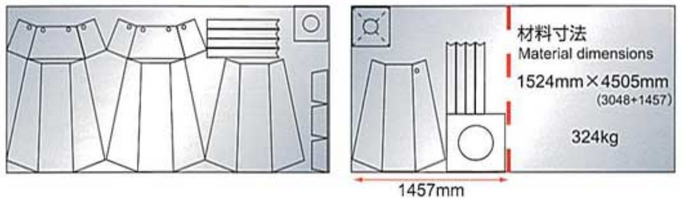


Bending/welding process Reduction in processes

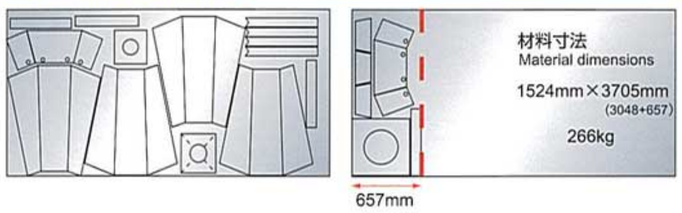


Reducing material costs

Rectangular nesting



Automated nesting



Komatsu nesting auto programming system

Knaps for Windows

Nesting auto programming system

[Metric Dimensions only] (Option)

Fast - Efficient -Simple

Automatic programming system which maximizes the performance of metal working machinery

Improved cost performance!
Equipped with functions to ensure faster programming and lower costs.

Higher speed call up of require parts

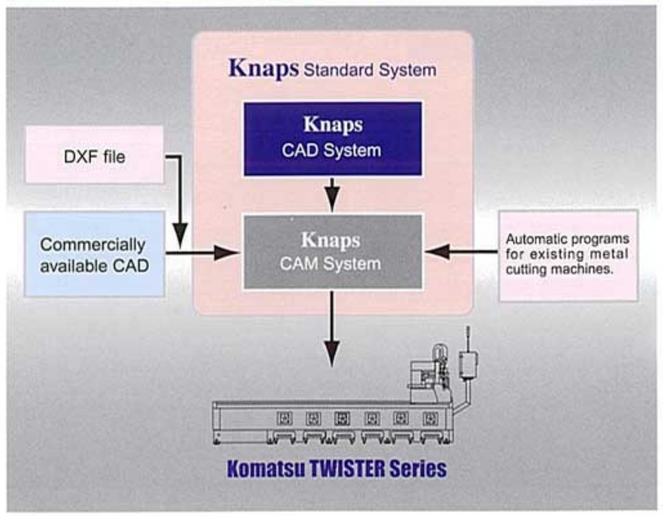
Actual auto nesting facilitating parts-in-parts is standard equipment

Call up screen
The input parts data can be retrieved by client, material, plate thickness, delivery date and part name..... thus the required part data chart is immediately available.

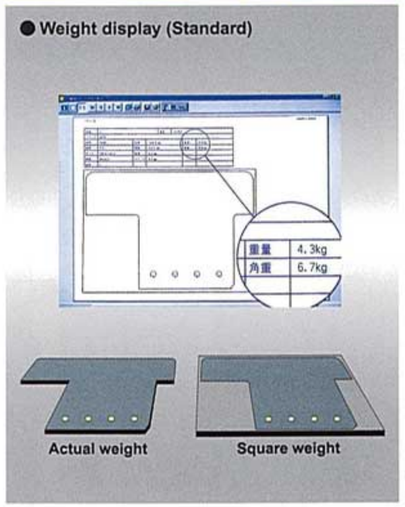
Nesting setting screen
Nesting conditions are set using the received parts data.

Nesting confirmation screen
Actual auto nesting facilitating parts-in-parts layout work is standard equipment.

Flexibility in reading commercially available CAD systems and automatic programming data!



Weight display function is standard equipment!



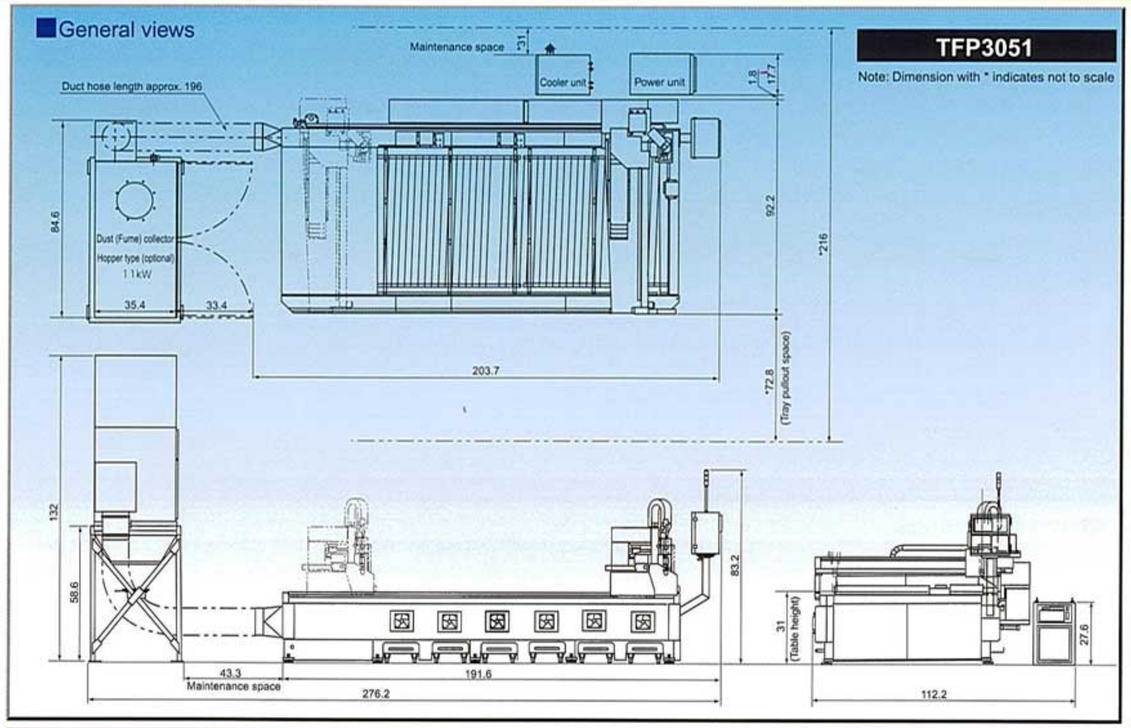
Specifications

TFP SERIES

■General views

TFP3051

Note: Dimension with * indicates not to scale



■Main specifications

Item		Model	TFP3051
Twister output power		kW	30
Max. material thickness(Mild steel)		in.	1.0
Max. pierce thickness(Mild steel)		in.	1.0
Cutting area dimension (Y-X)		in.	60 x 120
Stroke	X-axis	in.	132
	Y-axis	in.	63
	Z-axis	in.	6.7
Traverse speed	X-axis	IPM	984
	Y-axis	IPM	1575
	Z-axis	IPM	394
Driving method	X, Y -axis		Rack & pinion + Linear guide
	Z-axis		Ball-screw + Linear guide
Positioning accuracy		in.	±0.004
Positioning repeatability		in.	±0.002
Controller			FANUC-21M

■Main Functions and Options

●: Standard ○: Optional

Retractable positioning stopper	●
SUS nitrogen cutting function	●
Manual clamper	○
Quick silver (Stainless cutting)	●
Fume collector (11kW/with duct)	○

●Materials and specifications are subject to change without notice