Performance PVM SERIES

PRECISION ENGINEERING TECHNOLOGIES
A Group Company of Phillips Machine Tools

PVM PERFORMANCE LINE VERTICAL MACHINING CENTERS

are Designed with Precision and Accuracy in mind.
These are one-stop vertical machining centers.
engineered to increase productivity, optimize tool life,
and significantly reduce your cost per part.

Engineered for your success

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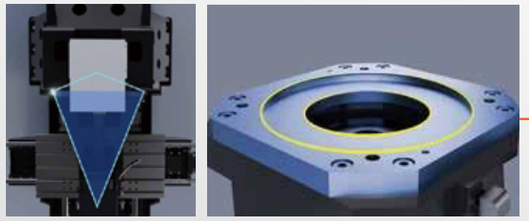
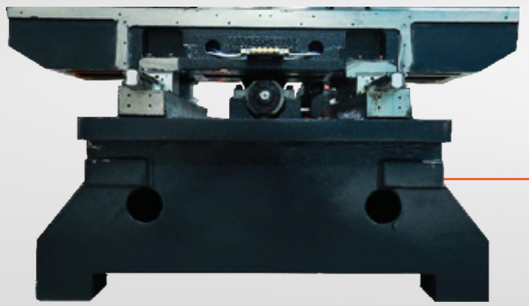
High Rigidity, High Precision Structural Design

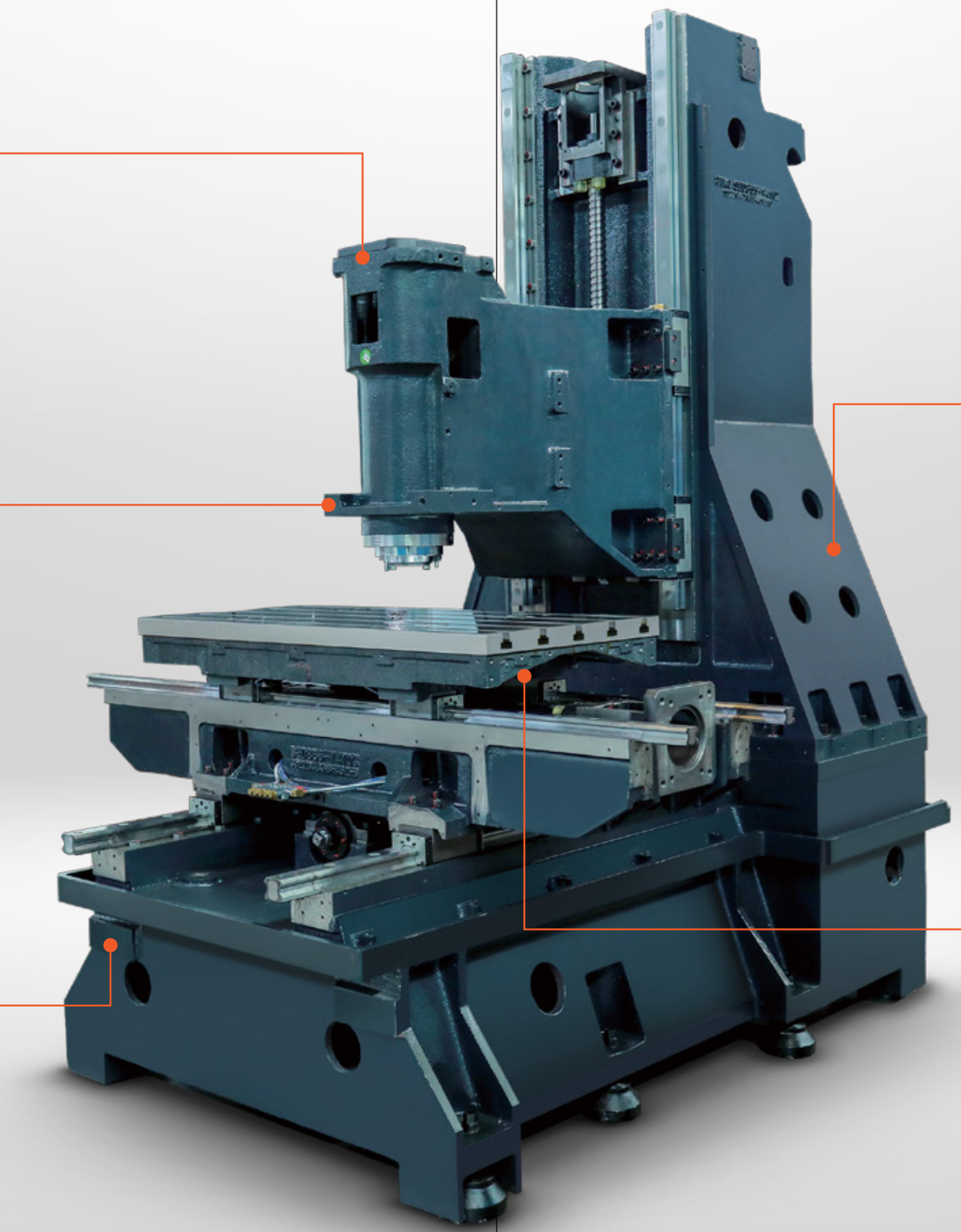


Spindle heat insulation with oil circulation inside

Lightweight with spindle-shape structure design, enhance the rigidity and dynamic response ability of the headstock.

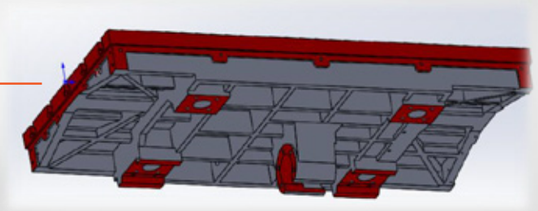
Bed and saddle are all designed with triangular stable structure, which strengthens the rigidity of the main load-bearing parts, it can ensuring the accuracy and stability.





"Pyramid" column structure design

Optimization design of the full series structures, lightweight the movement components, and improved the movement response.

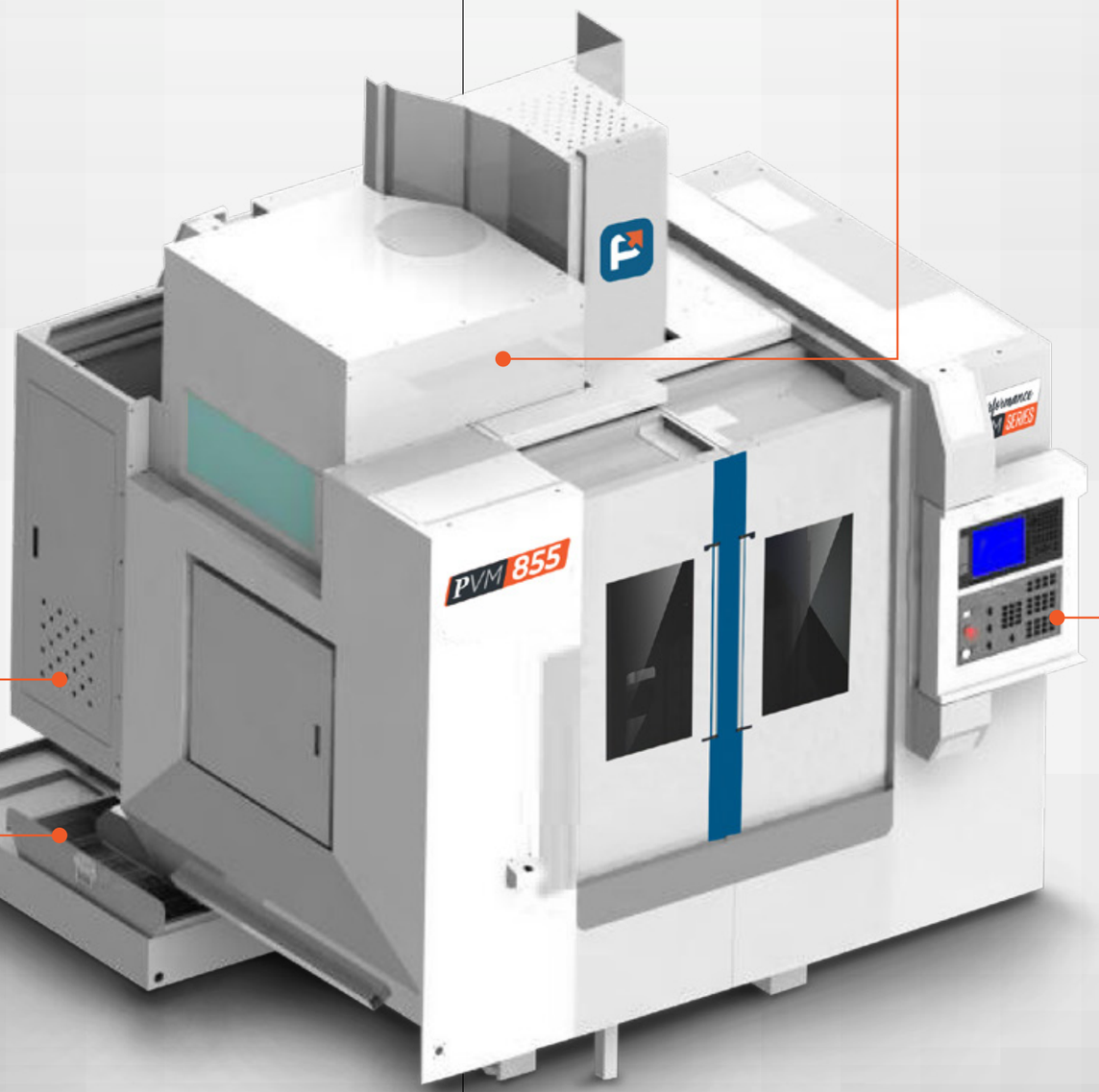


Machine Ergonomics

Spindle Oil Chiller

Standard cooling +
Chip flushing system

Improve processing efficiency while ensuring the quality of processing. Keep the machine cleaning and reduce the time of manual cleaning.



Fully closed ATC cover

Reduce the chip enter into ATC when process, ensure the accuracy of the processing, while prolonging the service life of the tool.

The secondary development CNC system, intelligent man -machine interface, create a high -efficiency and more convenient experience for customers.

PVM

Description		Unit	PVM 855	PVM 1055	PVM 1165	PVM 1265
Table	Table	mm	500×1000	500×1100	600×1200	600×1300
	Max. Load Capacity	kg	600		800	
	T-Slots	mm	5 X 18-100			
	Dist. Table Surface to Spindle	mm	120 - 720			
Spindle	Spindle Taper	type	BBT40			
	Spindle Speed	rpm	12000			
	Spindle Driving Method	type	Direct Drive			
	Main Spindle Power Output	kw	11 / 15			
	Max. Spindle Torque	nm	118 @ 1500 rpm			
Feed	Travel (X/Y/Z)	mm	850 / 550 / 600	1000 / 550 / 600	1100 / 650 / 600	1200 / 650 / 600
	Rapids Rate (X/Y/Z)	m/min	48/48/36		36/36/32	
	Feed Rate (X/Y/Z)	m/min	12			
	Guideways	type	Roller Guideways			
ATC	Number of Tools	nos.	24 (30 / 32)			
	Max. Tool Dia. (W.T / W.O)	mm.	Ø78 / Ø120			
	Max. Tool Length	mm	300			
	Max. Tool Weight	kg	8			
Accuracy	Tool Change Time	sec	2.5			
	Positioning	mm	0.008			
	Repeatablity	mm	0.004			
Power Supply	Air Consumption	bar	6~8			
	Electric Power Supply	kva	21		36	
	Voltage	v/hz	380v±10% 50hz			
Machine	Machine Size	mm	2300 X 2700 X 2850	2650 X 2700 X 2850	3200 X 2985 X 2960	3200 X 2985 X 2960
	Weight	kg	4,500	5,000	5,500	5,500
	Controller	type	Mitsubishi / Fanuc / Siemens			

Technical specifications and optional items may be subject to change without prior notice.

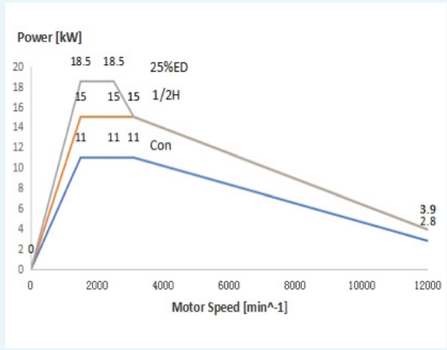
Standard

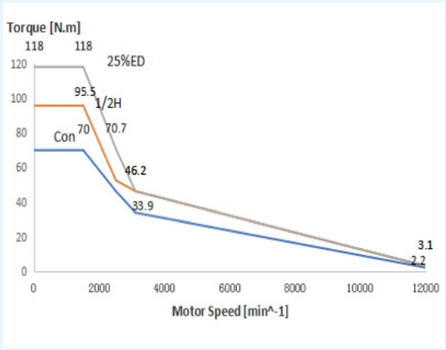
- 10.4" LCD Mitsubishi M80A
- Manual Pulse Generator
- Rigid Tapping
- CF / USB Interface
- Auto Power Off
- Door Interlock
- LED Machine Light
- Auto Lubrication System
- Spindle Air Blast
- Spindle Oil Chiller
- Air Gun
- Coolant Gun
- Coolant Tank with Chip Tray & Pumps
- Spindle Coolant Nozzles, Ring Spray
- Pneumatic System
- Fully Enclosed Splash Guard
- Transformer
- Panel AC
- Levelling Bolts & Blocks
- Tools and Tools Box
- Machine Manuals

Options

- Fanuc / Siemens Controller
- CTS Preparation
- Thru Spindle Coolant 20 / 30 / 70 bar
- High Speed Spindle 16,000 / 20,000 / 24,000 rpm
- Spindle Type HSK-A63 (* 20,000 / 24,000 rpm)
- Chip Conveyor Hinge / Screw / Screw
- Chip Bin
- Oil Mist Collector
- Oil Skimmer
- Automation Preparation
- Auto Door
- Additional I/O
- 4th Axis / 5th Axis Pre-Wiring
- 4th Axis / 5th Axis Drive Package
- Rotary Table (4th & 5th axis)
- Probing System
- Tool Length Measurement
- ATC Extension (30T / 32T)
- High Column 150 / 200 mm
- Linear Scales (X / Y / Z axis)
- CE Certificate

Spindle Torque Diagram

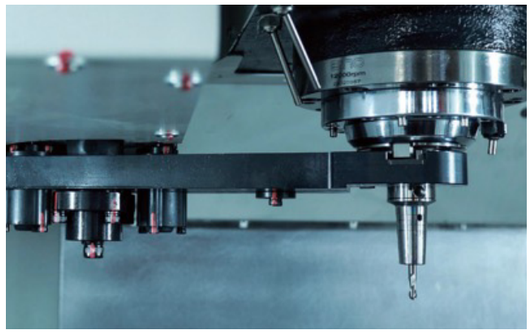




Stable ATC Unit

ATC

The standard disc type tool changer achieves higher tool change efficiency, effectively improves the stability of tool changing action, reduces maintenance costs, and greatly improves production efficiency



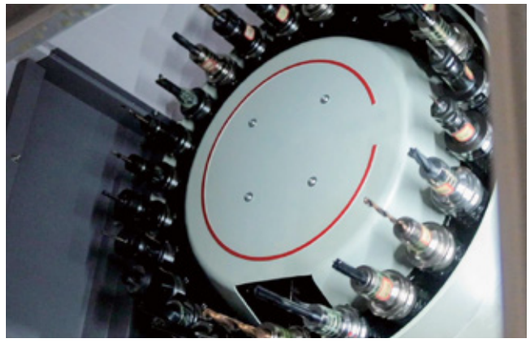
Automatic Tool Changer

24T
ATC
Shortest
Distance

2.5S
Tool Change
Time (T-T)

Max. Tool Wt.	8kg
Max. Too Dia.	Φ78/Φ120
Max. Tool Length	300mm

ATC

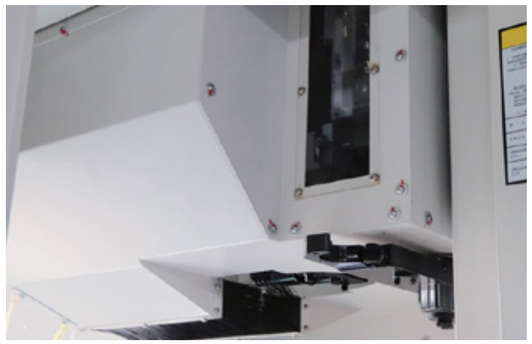


The cam-driven tool changer ensures high-precision rotation

Each tool magazine is rigorously tested before leaving the factory to guarantee a high tool change reliability

The tool magazine capacity is 24T as standard, and 30T/32T is optional

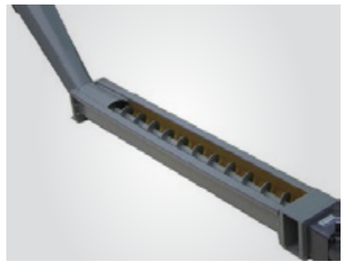
ATC Full Guard



Fully closed ATC cover eliminates the chip enter into ATC when process, ensure the accuracy of the processing, while prolonging the service life of the tool.

Excellent Chip Handling

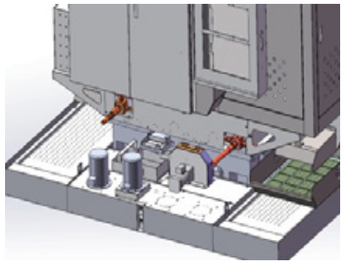
Chip Conveyor



CC Type	Description	
Spiral	Steel	Long & Curly Chips
Chain Type	Steel	Long Chips
Scraper	Aluminum	Small & Powder Chips

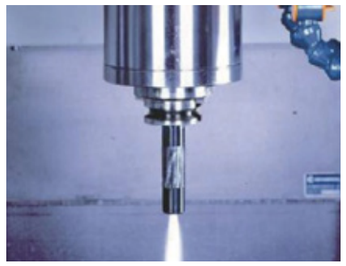
Standard System

Bed Wash



Filtration System

CTS



Standard System

20 bar

30 bar

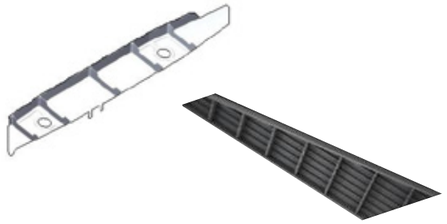
50 bar

70 bar

Application Capabilities

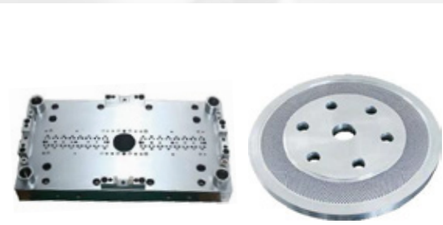
The PVM series excels in handling advanced Industrial Parts like those in Automotive, Aerospace, Die & Mould industries. These machines are engineered for High-Speed, High-Precision, and High-Rigidity, catering to the requirements of Automation Lines and Non-Ferrous Parts prevalent in the Electronics & Communication Industry.

3C electronic products



Aeronautical structural parts

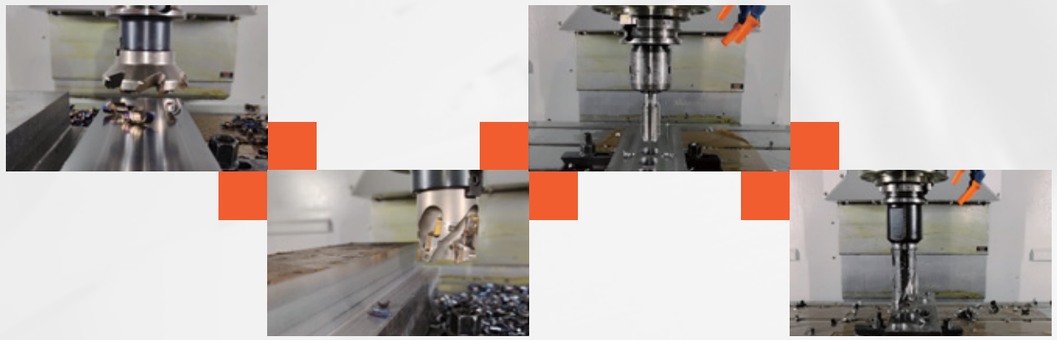
Automotive parts



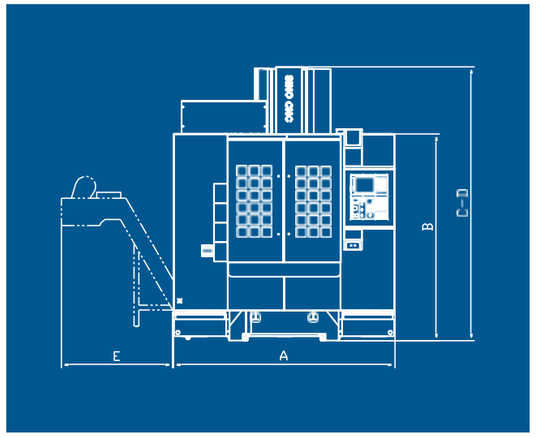
Semiconductor die

Application Capabilities

In order to effectively test the cutting performance and machining application capability of the machine, the PVM series models underwent extensive cutting tests before they were launched. The massive collection of processing data provides theoretical support for further optimization of the machine.



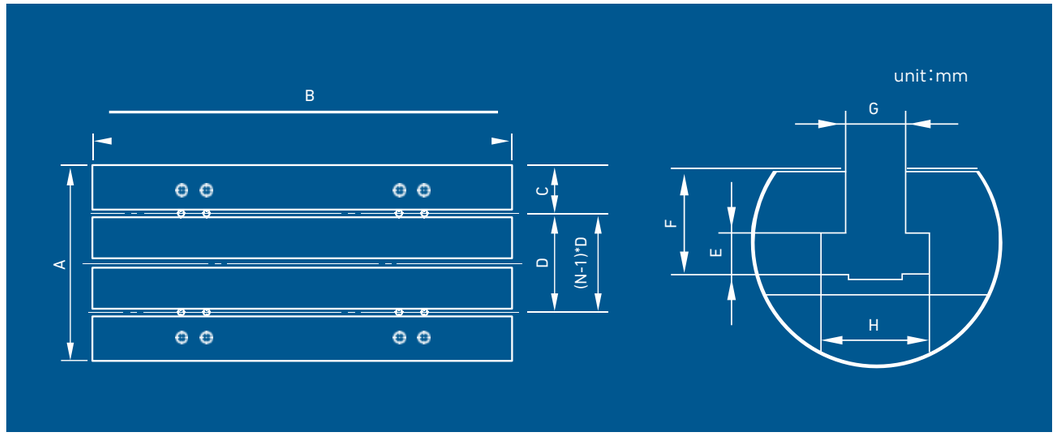
Layout



unit: mm

Size / Model	Model	Model	Model	Model
855	2300	2200	2250-2850	1200
1055	2650	2200	2250-2850	1200
1165	2940	2140	2250-2960	1200
1265	3400	2140	2250-2960	1200

Table Size



Size / Model	A	B	C	D	E	F	G	H	I	units
855	500	1000	50	100	12	30	18	30	5	mm
1055	500	1100	50	100	12	30	18	30	5	mm
1065	600	1200	100	100	12	32	18	30	5	mm
1265	600	1300	100	100	12	32	18	30	5	mm

Our Presence

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