QMP SERIES

Direct-driven spindle motor ensures better torque transmission, decreased noise and reduced vibration.

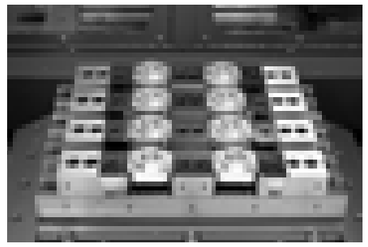
QMP-23A is equipped with a standard BT-30 spindle which can accelerate from 0 ~ 12,000 rpm in only two seconds. 15,000, 30,000 rpm and BT-40 spindles are also available as option.

QMP-40A

The Arm Type ATC is equipped with a unique roller cam mechanism. Together with the simultaneous unclamping system, the QMP-23A is able to achieve a smooth and rapid tool change in one second (tool to tool). The rapid traverse of 48 m/min (0.8 G) for all three axes contributes to high productivity.

QMP-23A

QMP SERIES

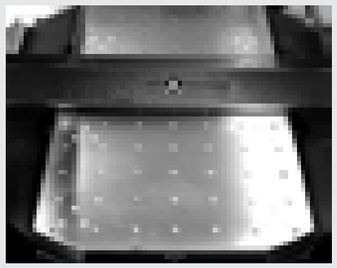




Utilizing the Hydraulic Rotary Mechanism, QMP series can perform fast, stable, and reliable pallet changing. X/Y rapid traverse (G00) is 48 m/min.

QMP-32Aapc

(Top Cover is Optional)

QMP-23Aapc



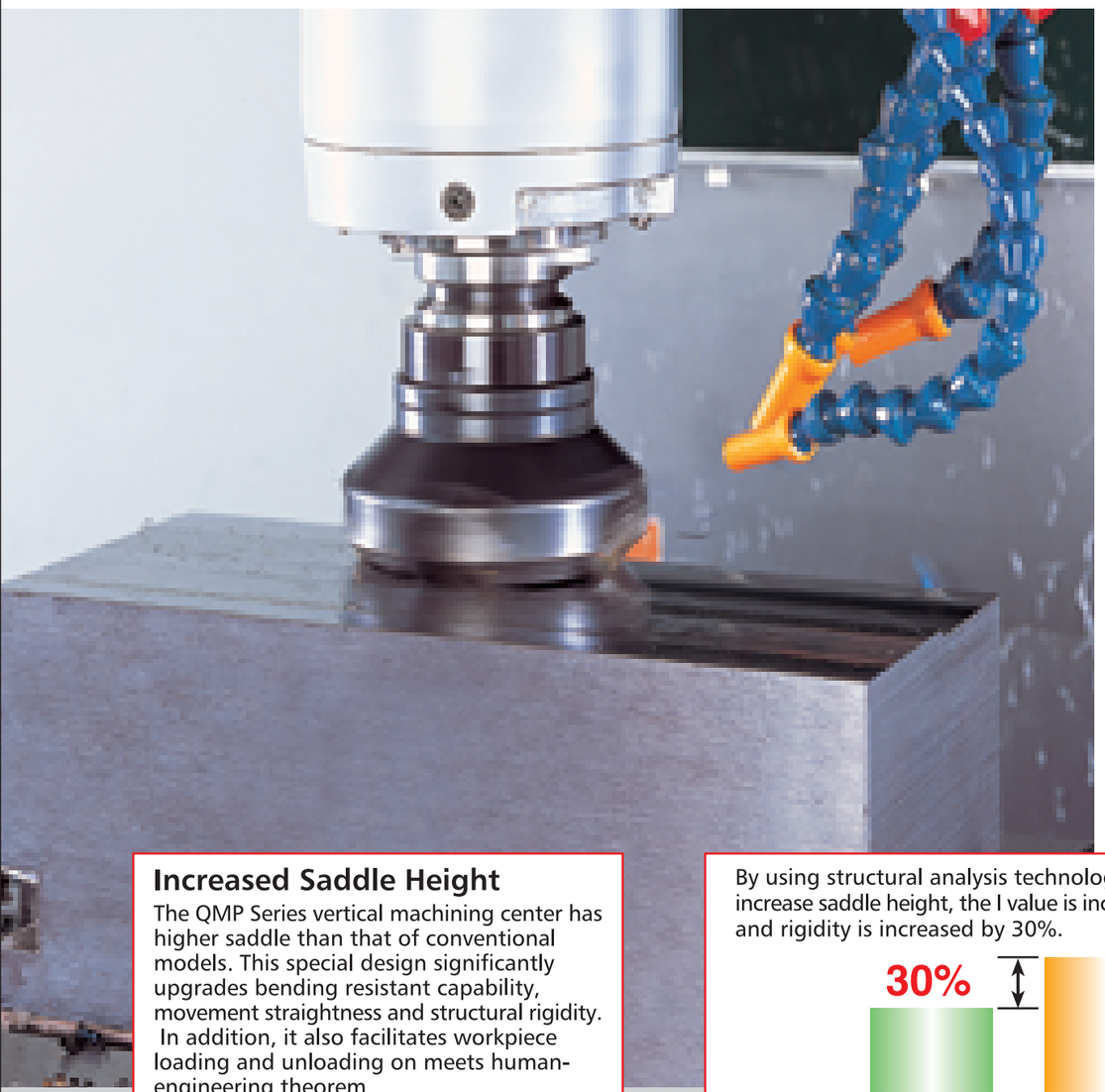
6-Second APC Changing Time. (QMP-23Aapc)

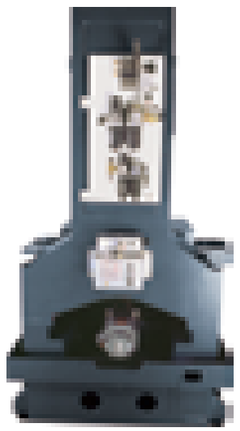
Compact design of the QMP-Series occupies the least amount of floor space and contributes to space saving.

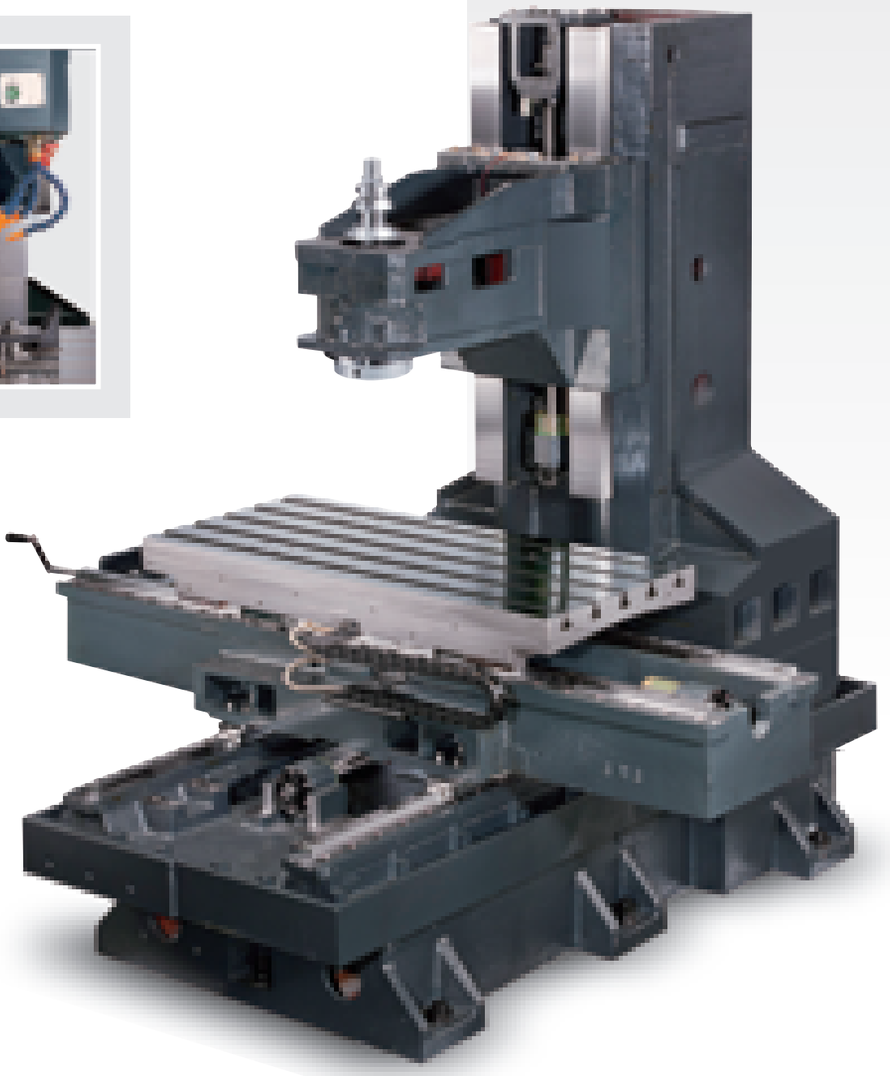
X and Y axis are equipped with roof-type telescopic covers for rapid traverse. The roof-type telescopic cover is uniquely designed for metal chips to fall off easily. Z axis is also equipped with a telescopic cover to protect linear guideways and ballscrews.

Increased Power and Performance

QMP-32A / QMP-40A

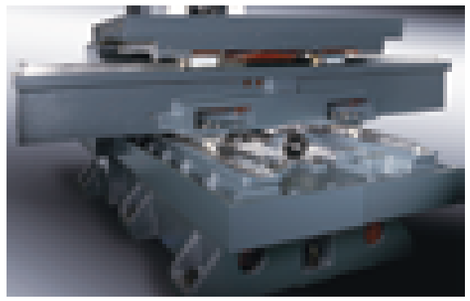




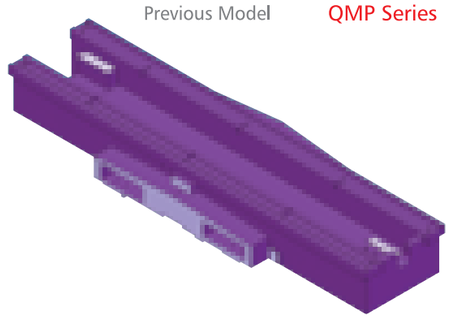


Increased Saddle Height

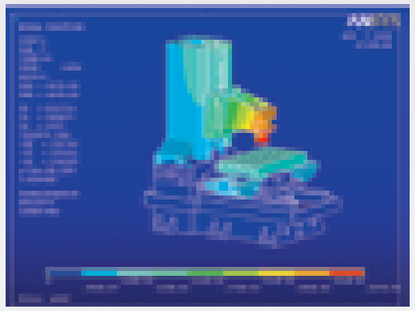
The QMP Series vertical machining center has higher saddle than that of conventional models. This special design significantly upgrades bending resistant capability, movement straightness and structural rigidity. In addition, it also facilitates workpiece loading and unloading on meets human-engineering theorem.



By using structural analysis technology to increase saddle height, the I value is increased and rigidity is increased by 30%.



Work Samples:

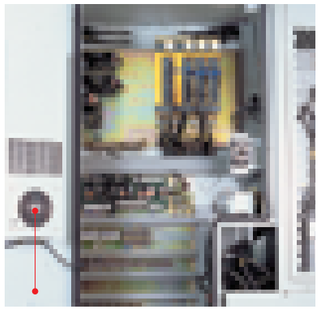


Super High Speed Machining Center

Fair Friend utilizes Finite Element Method (FEM) and advanced 3D software in the design and development of all their machine tools. The end result is superior machines with the optimum combination of structure, speed and rigidity.

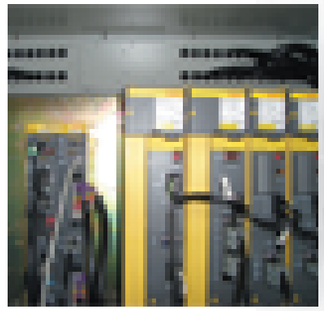
The EC cabinet adopts rigorous dust-free design to ensure lifetime dependability of the electric components.

Transparent side window on headstock cover enables convenient inspection and maintenance.



Heat exchanger is included as a standard accessory.

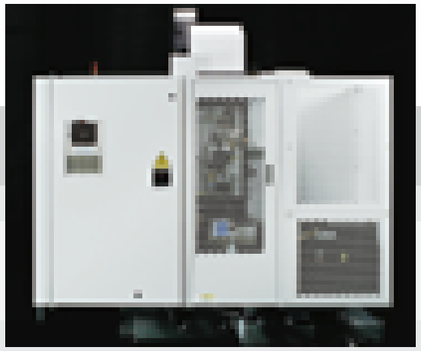
Rubber seals are mounted at the EC cabinet door for optimal enclosure.



Water-proof fittings are mounted at the openings for wires to avoid invasion of oil mist.

Powerful flushing system can quickly and efficiently remove metal chips.

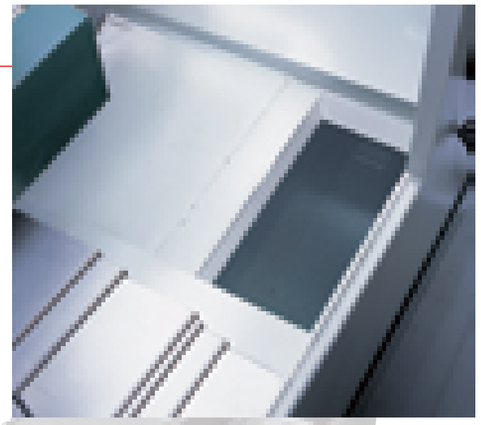
Dust-Proof Electrical Cabinet And Modern Appearance Rear Design

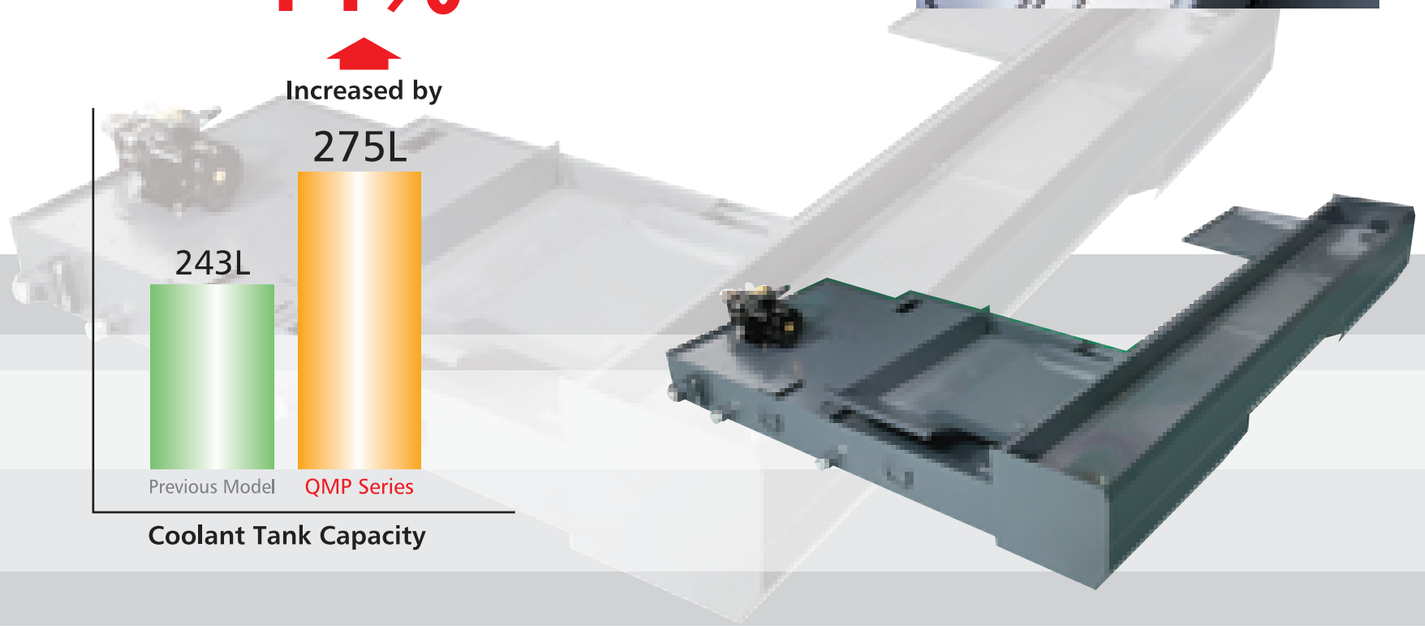


QMP-32A / 40A

Multiple Layers Of Filtration Greatly Extends Coolant Service Life.

Integrated sheet metal fabrication, with large chip disposal openings, contributes to convenient chip cleaning.





Air-gun and coolant-gun fittings for your convenience.

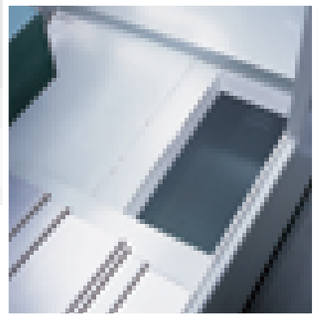
Optional chip screw is also available.

Oversized side-window openings for convenient maintenance of the X-axis servomotor, linear guideways and ballscrews.

Rear installation of the Y-axis servomotor provides a convenient maintenance space.

Ballscrews in all three axes are pre-tensioned to increase accuracy.

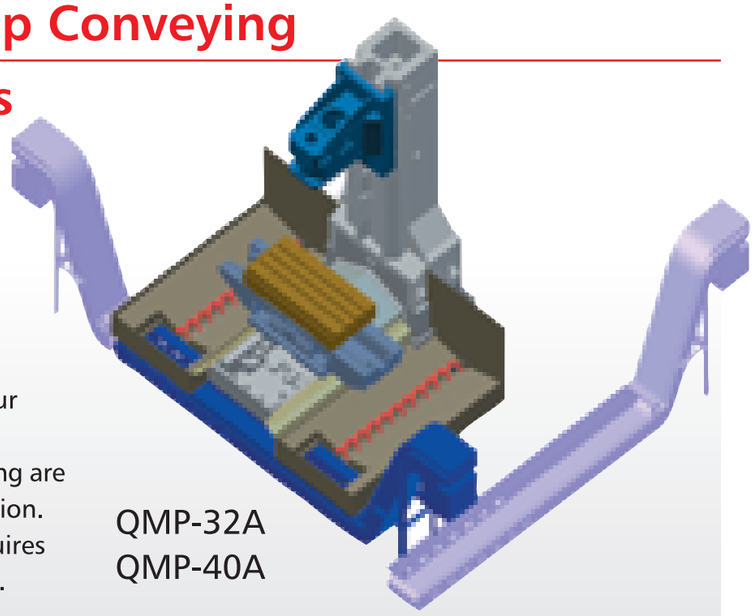
Oil/coolant separation device is attached to the base.
No separate leveling adjustment is required.



Integrated sheet metal fabrication, with large chip disposal openings, contributes to convenient chip cleaning.

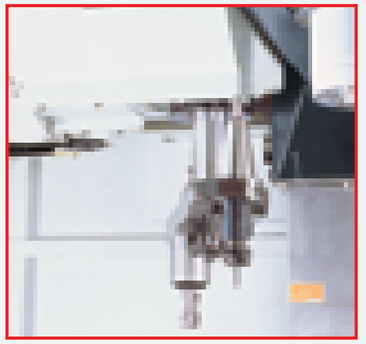
Diversified Chip Conveying Configurations

Multiple chip conveying configurations to meet your diversified needs (option).
Left, right and rear conveying are all available for your selection.
Adding chip conveyor requires no change of coolant tank.



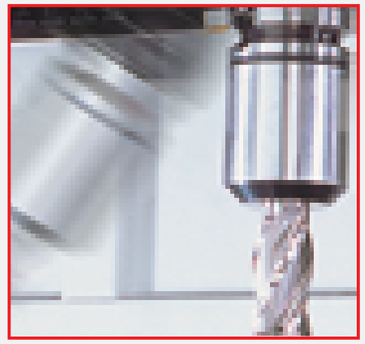
QMP-32A
QMP-40A

Efficient Tooling and Spindle Systems for Increased Productivity.



AUTOMATIC TOOL CHANGING SYSTEM

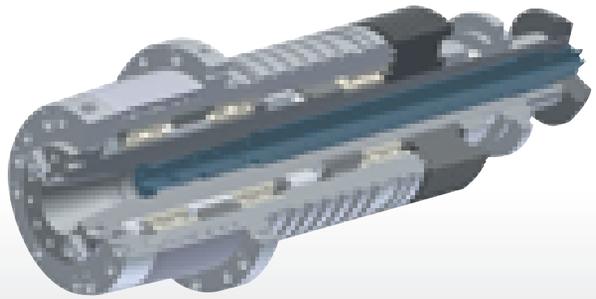
The arm-type, high-speed, high-efficiency tool changing system undergoes 1 million cycles of uninterrupted durability and stability testing.

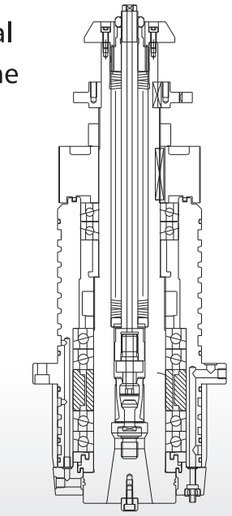


High Speed ATC+Rapid Traverse+High Acceleration=

High Productivity ➡ High Profits

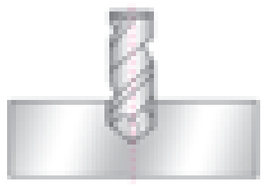
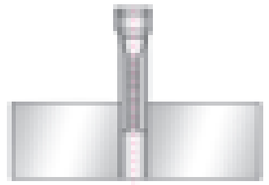
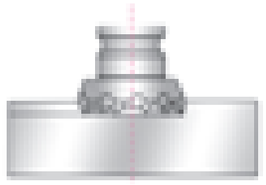
Utilizing a high-rigidity spindle greatly increases the metal removal rate. FEELER's performance-proven spindle design also improves the machining accuracy and extends operational life!





Cutting Capacity Example

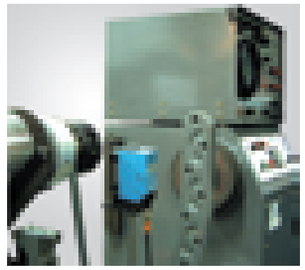
Workpiece Material: Medium Carbon Steel (S45C)

Machining Types		
Drilling	Tapping	Face Milling
		
Tool Diam. (mm) x Feed (mm/rev)	Tool Diam. (mm) x Pitch (mm/rev)	Width (mm) x Depth (mm) x Feed (mm/min)
Ø40 x 0.1	M24 x 3.5	308 c.c. 80 x 3.5 x 1100

Rigorous Quality Control and Inspection System

ZEISS 3-D Coordinate Measurement Machine (CMM)

This equipment is utilized to ensure the quality and precision of all major components.



Spindle Dynamic Balancing

Besides being tested and adjusted in the dynamic balancing machine, the spindle is also tested in the machine tool to measure vibration during high speed operation.

Laser Inspection System

This test inspects the precision of the axial movement over the full stroke in order to obtain the correct positioning accuracy.

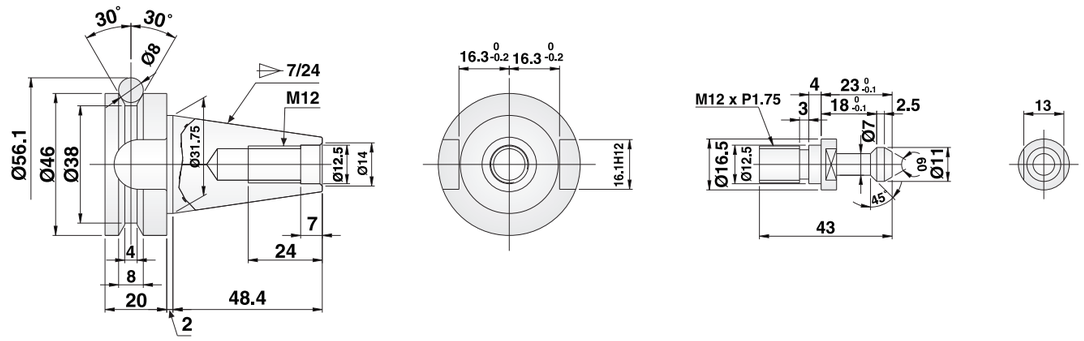
Ball Bar Test

This test inspects the X-Y plane circularity to assure curvature accuracy.

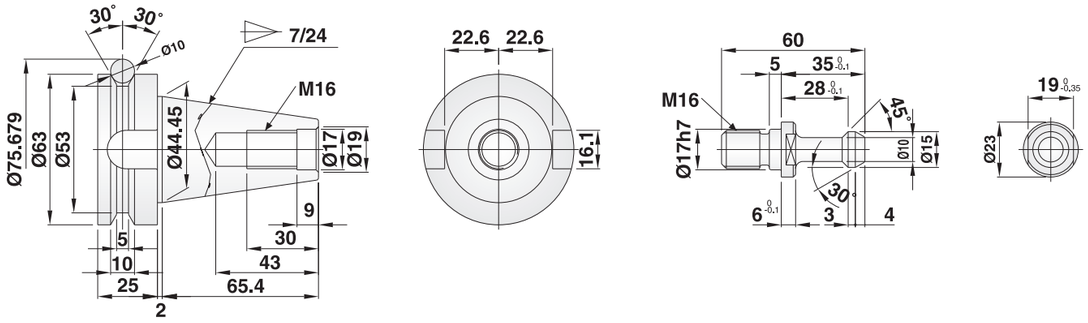
Static Accuracy

	Measured Plane	Permissible	Measured
		(mm / 300 mm)	(mm / 300 mm)
Perpendicularity	X - Y	0.015	0.008
	Y - Z	0.015	0.009
	Z - X	0.015	0.009
	Measured Plane	Permissible	Measured
		(mm / Full Stoke)	(mm / Full Stoke)
Positioning Accuracy	X	0.010	0.007
	Y	0.010	0.007
	Z	0.010	0.007
	Measured Plane	Permissible	Measured
		(mm)	(mm)
Repeatability	X	0.006	0.004
	Y	0.006	0.004
	Z	0.006	0.004
	Measured Plane	Permissible	Measured
Circularity		(mm)	(mm)
	X - Y	0.015	0.008

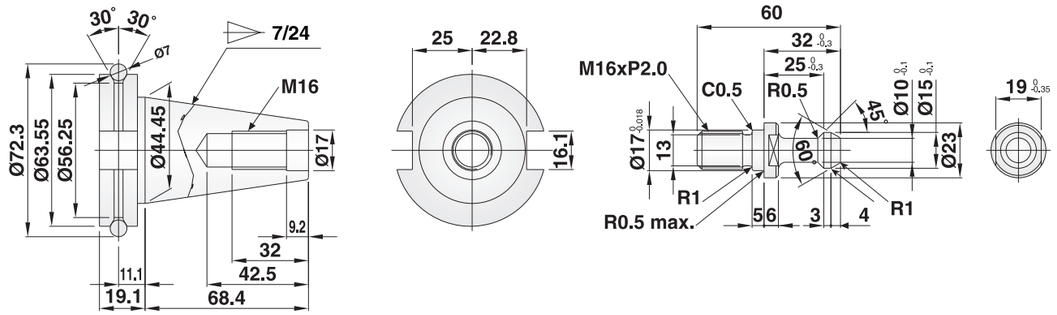
BT-30



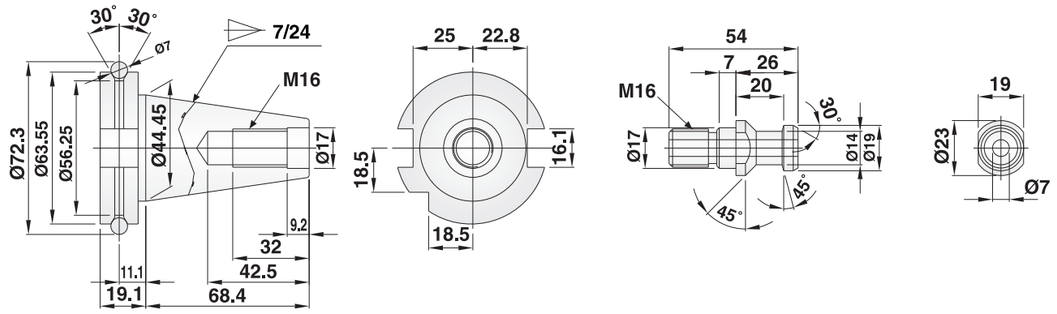
BT-40



CAT-40

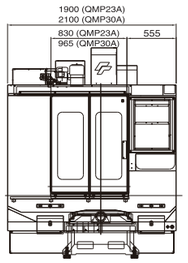


DIN-40

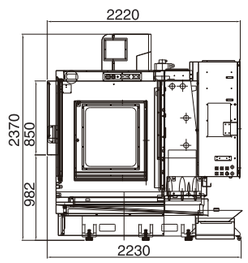


Machine Dimensions, Table Dimensions, and Working Capacity

QMP-23A (#30)
QMP-30A (#30)



Machine Dimensions



Machine Dimensions

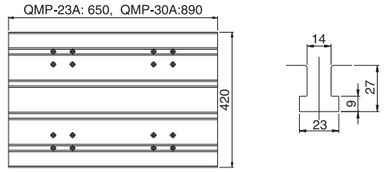
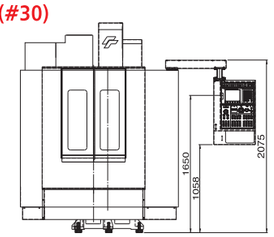
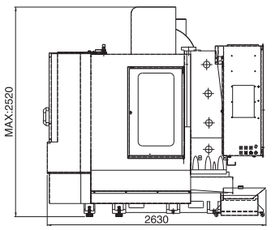


Table Dimensions

QMP-23Aapc (#30)



Machine Dimensions



Machine Dimensions

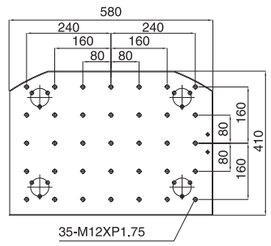
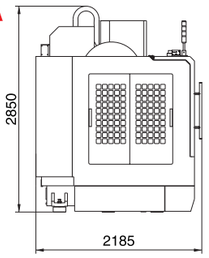
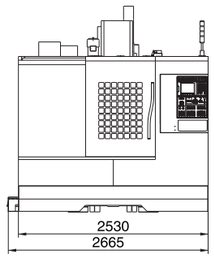


Table Dimensions

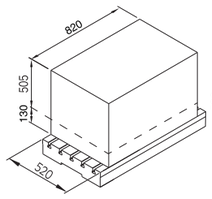
QMP-32A



Machine Dimensions



Machine Dimensions



Working Capacity

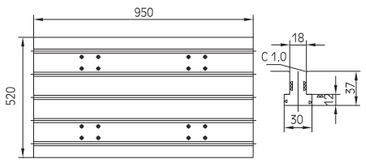
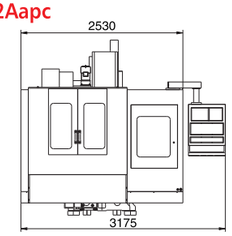
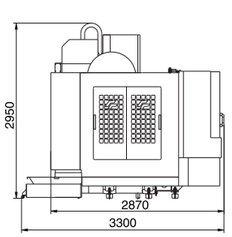


Table Dimensions

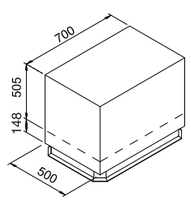
QMP-32Aapc



Machine Dimensions



Machine Dimensions



Working Capacity

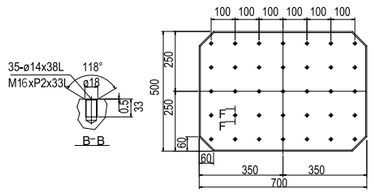
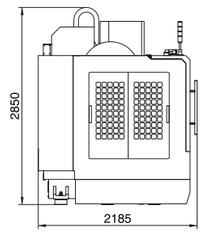
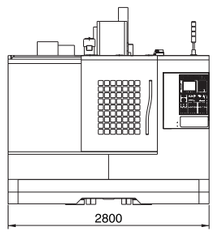


Table Dimensions

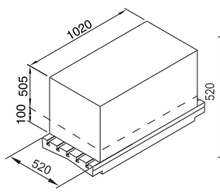
QMP-40A



Machine Dimensions



Machine Dimensions



Working Capacity

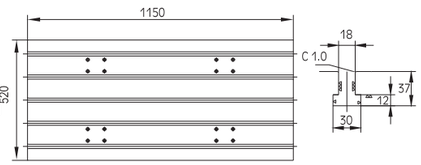


Table Dimensions

Machine Specifications

MODEL	UNIT	QMP-23A (#30)	QMP-23Aapc (#30)	QMP-30A (#30)	QMP-23A (#40)	QMP-23Aapc (#40)	QMP-32A	QMP-32Aapc	QMP-40A
TRAVEL									
X-axis Travel	mm	580		760	580		820	800	1,020
Y-axis Travel	mm	420		420	420		520		
Z-axis travel	mm	510		510	510	510	505		
Spindle Nose to Table Surface	mm	80 - 590	135 - 645	80 - 590	80 - 590	135 - 645	130 - 635	148 - 653	100 -605
Spindle Center to Column Surface	mm	510			510		560		
Table Surface to Floor	mm	820	915	820	820	915	940	1,025	970
Table Center to Column Surface	mm	245 - 665			245 - 665		300 - 820		
TABLE									
Table Dimension	mm	650 x 420	580 x 410	890 x 420	650 x 420	580 x 410	520 x 950	500 x 700	520 x 1,150
Maximum Load	kg	300	120	300	300	120	800	200	800
T-slot		14mm x 4 x 100mm	35-M12 x P1.75	14mm x 4 x 100mm	14mm x 4 x 100mm	35-M12 x P1.75	18mm x 5 x 100mm	35 - M16 x P2.0	18mm x 5 x 100mm
Spindle Speed	rpm	50 - 12,000			10,000	10,000	10,000		
Spindle Taper		7 / 24 taper No. 30			7 / 24 taper No. 40		7 / 24 taper No. 40		
Spindle Power	kW	3.7 / 5.5			7.5 / 11		15 / 18.5 (7.5 / 11)		
FEED RATE									
X-axis Rapid Traverse	m/min	48			48		48		
Y-axis Rapid Traverse	m/min	48			48		48		
Z-axis Rapid Traverse	m/min	48			48		30		
ATC									
Tool Changing Time (tool-to-tool)	sec / Hz	1.0 / 60			1.3 / 60		1.9 / 60		
		1.25 / 50			1.5 / 50		2.2 / 50		
Tool Changer	m/min	Arm Type			Arm Type		Arm Type		
Tool Selection Method		Random			Random		Random		
Numbers of Tools		20			20		24		
Pull Stud		P - 30T (45°)			P - 40T (45°)		P - 40T (45°)		
Maximum Tool Weight	kg	4			7		8		
Maximum Tool Length	mm	200			250		300		
Maximum Tool Diameter	mm	Ø63			Ø80		Ø80		
Maximum Tool Diameter (Non-Adjacent Tool)	mm	Ø100			Ø130		Ø150		
OTHER									
Floor Space	mm	1,900 x 2,230	1,900 x 2,630	2,100 x 2,230	1,900 x 2,230	1,900 x 2,630	2,665 x 2,185	3,300 x 3,175	2,800 x 2,185
Machine Weight	kg	3,000	3,800	3,300	3,000	3,900	6,300	7,500	6,600
Maximum Machine Height	mm	3,270	2,520	2,370	2,370	2,520	2,850	2,950	2,850
Power Capacity	KVA	20			20		25	25	25
Air Source	bar	6-8			6-8		6-8		
AUTOMATIC PALLET CHANGER									
Change Time	sec	---	6	---	---	6	---	10	---
APC Type		---	Rotary	---	---	Rotary	---	Rotary	---

• Specifications are subject to change without prior notice. • Available Controls: FANUC / MITSUBISHI.

● Standard ○ Optional — N/A

FEATURE	QMP-23/30	QMP-32Aapc	QMP-32A / 40A
Heat Exchanger	●	●	●
3-axis Pre-tensioned Balls-screw	●	●	●
Automatic Lubrication System	●	●	●
Enclosed Splash Guard	●	●	●
Dust-tight Electrical Cabinet	●	●	●
Spindle Air Sealing	●	●	●
3-color Signal Light	○	●	●
Rapid Tapping	●	●	●
Operation and Maintenance Manual	●	●	●

FEATURE	QMP-23/30	QMP-32Aapc	QMP-32A / 40A
3-axis Linear Scale	—	—	○
Coolant Through Spindle	○	○	○
Tool Measuring System	○	○	○
Automatic Tool Length Measure and Breakage Detection	○	○	○
Chip Conveyor	○	○	○
High Speed Spindle	○	○	○
Spindle Oil Cooler	○	○	○
Chip Screw	—	○	○
Flushing System Coolant Gun	○	●	●
12,000 rpm DDS Spindle	● (only#30)	○	○
15,000 rpm DDS Spindle	○ (only#30)	○	○

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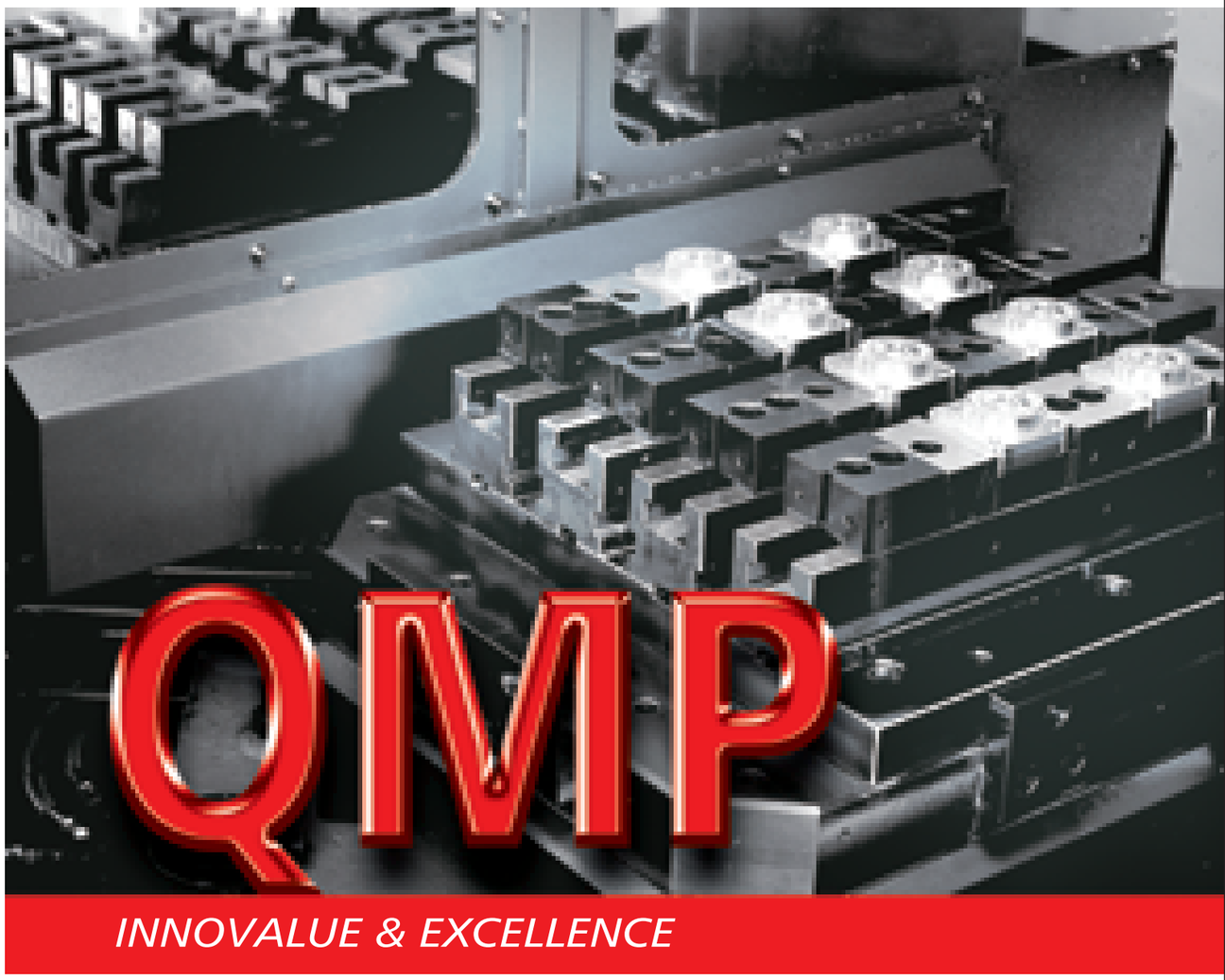

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