



PERFOMAX

**VERTICAL
TURRET
MILLING
MACHINE**

*23 years of
conventional
machinery excellence*



www.stengineers.com

CONTENT

PERFOMAX SERIES

02 PM-200

03 PM-450

04 PM-500

05 PM-550

06 PM-600

07 B-420



NC SERIES

08 IV-400

10 B-800

MILLING MACHINE

PM-200



PM-200

MODEL	PM-200
HEAD	16 Steps
MOTOR	3HP
SPINDLE SPEED	50HZ: Low 66~270 High 550~3750 60HZ: Low 80~325 High 500~4500
QUILL TRAVEL	127mm

<input type="radio"/>	Meehanite casting with annealing and stress relieving treatment.
<input type="radio"/>	Dovetail on both axis
<input type="radio"/>	Turcite - B coated on x and y ways.
<input type="radio"/>	Spindle is made from SCM-415 with tempering treatment and precise ground.
<input type="radio"/>	Precision angular contact bearing, P47210 for high accuracy and heavy duty cutting.
<input type="radio"/>	Hardened and ground on the xyz slidways and table T-slot.
<input type="radio"/>	The One piece back gear housing with bearing is finish bored into the housing after installation, providing the best alignment for quieter and more efficient operation.
<input type="radio"/>	Centralized one shot lubrication system for ways, nuts and lead screws.
<input type="radio"/>	Bearing support to the end of the motor.

*offer applicable for the machine only

MILLING MACHINE

PM-450



PM-450

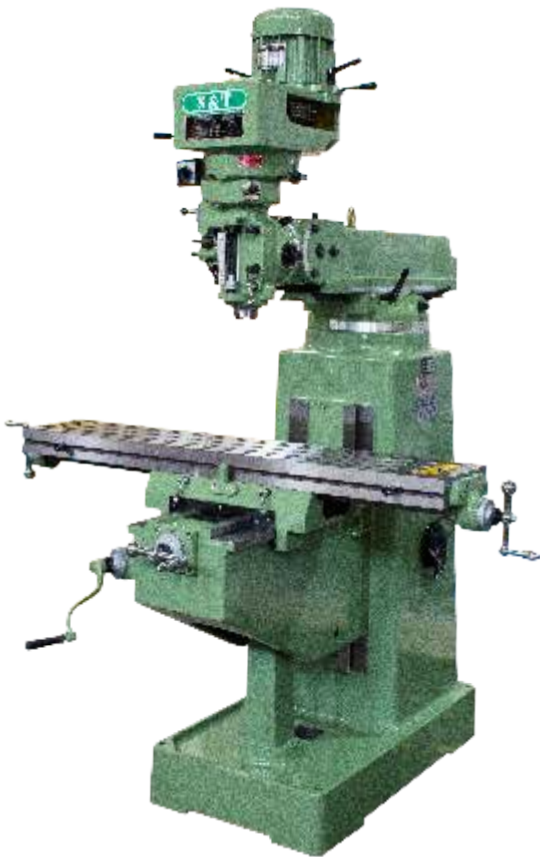
MODEL	PM-450
HEAD	16 Steps
MOTOR	3HP
SPINDLE SPEED	50HZ: Low 66~270 High 550~3750 60HZ: Low 80~325 High 500~4500
QUILL TRAVEL	127mm

<input type="radio"/>	Meehanite casting with annealing and stress relieving treatment.
<input type="radio"/>	Dovetail on both axis
<input type="radio"/>	Turcite - B coated on x and y ways.
<input type="radio"/>	Spindle is made from SCM-415 with tempering treatment and precise ground.
<input type="radio"/>	Precision angular contact bearing, P47210 for high accuracy and heavy duty cutting.
<input type="radio"/>	Hardened and ground on the xyz slidways and table T-slot.
<input type="radio"/>	The One piece back gear housing with bearing is finish bored into the housing after installation, providing the best alignment for quieter and more efficient operation.
<input type="radio"/>	Centralized one shot lubrication system for ways, nuts and lead screws.
<input type="radio"/>	Bearing support to the end of the motor.

*offer applicable for the machine only

MILLING MACHINE

PM-500



PM-500

MODEL	PM-500
HEAD	16 Steps
MOTOR	3HP
SPINDLE SPEED	50HZ: Low 66~270 High 550~3750 60HZ: Low 80~325 High 500~4500
QUILL TRAVEL	127mm



Square bed way on Y-axes

<input type="radio"/>	Meehanite casting with annealing and stress relieving treatment.
<input type="radio"/>	Square way designed on y.
<input type="radio"/>	Turcite - B coated on x and y ways.
<input type="radio"/>	Spindle is made from SCM-415 with tempering treatment and precise ground.
<input type="radio"/>	Precision angular contact bearing, P47210 for high accuracy and heavy duty cutting.
<input type="radio"/>	Hardened and ground on the xyz slidways and table T-slot.
<input type="radio"/>	The One piece back gear housing with bearing is finish bored into the housing after installation, providing the best alignment for quieter and more efficient operation.
<input type="radio"/>	Centralized one shot lubrication system for ways, nuts and lead screws.
<input type="radio"/>	Bearing support to the end of the motor.
<input type="radio"/>	Quill Diameter 100mm
<input type="radio"/>	Extra wide table working area 54 inch x 10 inch

*offer applicable for the machine only

MILLING MACHINE

PM-550



PM-550

Variable Speed Head by
Inverter System

MODEL	PM-550
HEAD	16 Steps
MOTOR	3HP
SPINDLE SPEED	Inverter (Variable Speed) 70~4200 RPM
QUILL TRAVEL	127mm



Square Bed Way on Y/Z - axis

<input type="radio"/>	Meehanite casting with annealing and stress relieving treatment.
<input type="radio"/>	Square way designed on y.
<input type="radio"/>	Turcite - B coated on x and y ways.
<input type="radio"/>	Spindle is made from SCM-415 with tempering treatment and precise ground.
<input type="radio"/>	Precision angular contact bearing, P47210 for high accuracy and heavy duty cutting.
<input type="radio"/>	Hardened and ground on the xyz slidways and table T-slot.
<input type="radio"/>	The One piece back gear housing with bearing is finish bored into the housing after installation, providing the best alignment for quieter and more efficient operation.
<input type="radio"/>	Centralized one shot lubrication system for ways, nuts and lead screws.
<input type="radio"/>	Bearing support to the end of the motor.
<input type="radio"/>	Quill Diameter 100mm
<input type="radio"/>	Extra wide table working area 54 inch x 10 inch

*offer applicable for the machine only

MILLING MACHINE

PM-600



PM-600

MODEL	PM-600
HEAD	16 Steps
MOTOR	5HP
SPINDLE SPEED	Inverter (Variable Speed) 70~4200 RPM
QUILL TRAVEL	127mm

○	The rigid and precision spindle is driven by a powerful inverter motor
○	60" x 12" working table with ground T-slots
○	High rigid precision spindle driven by 5 HP powerful motor
○	X,Y axes are driven by inverter motors
○	NT40# spindle taper
○	The X and Y axes slideways are coated with polytetrafluoroethylene
○	The X, Y and Z axes slideways and top of working surface are hardened and ground
	Square slideways on column and knee

*offer applicable for the machine only

BED TYPE MILLING MACHINE

B-420



B-420

MODEL	B-420
HEAD	16 Steps
MOTOR	5HP
SPINDLE SPEED	50HZ: Low 66~270 High 550~3750 60HZ: Low 80~325 High 500~4500
QUILL TRAVEL	127mm

MODEL		B-420
Table		1524 x305 mm
TRAVEL		
Longitudinal		1020mm
Cross		510mm
Vertical		510mm
Spindle Travel		127mm
SPINDLE		
Taper		NT40#
Variable Speed		75~42000 RPM
Spindle Nose to Table Surface		160-630mm
Spindle speed		
16-speed-range	Low Range -	Low : 60, 95, 150, 225 High : 535, 825, 1320, 1930
transmission(opt)	High Range -	Low : 120, 195, 305, 450, High 1055, 1640, 2620,
Infinitely variable speed		3.7 KW, 3PH
Swivel Angle to Right & Left		90°
Approximate Net Weight		2350 kgs
Floor Space (L x D x H)		2179 x 1690 x 2350 mm

*offer applicable for the machine only

SPECIFICATION

MODEL	PM-200	PM-450	PM-500
Table	1067 x 230 mm	1370 x 254 mm	1372 x 254 mm
T-Slot (width x number x distance)	16x3 x63.5	16x3 x63.5	16x3 x63.5
TRAVEL	890 mm/min	890 mm/min	890 mm/min
Longitudinal			
Cross	680mm	915mm	950mm
Vertical	355mm	406mm	395mm (square)
Spindle Travel	406mm	406mm	395mm
Arm Travel	127mm	127mm	127mm
SPINDLE	460mm	570mm	520mm
Taper			
Spindle Nose to Table Surface	R8 or NT30#	R8 or NT30#	R8 or NT 30#
spindle center to column	80-466 mm	80-466 mm	80-490mm
Spindle speed	140-450mm	140-660mm	140-500mm
Step Head	66~4540 (50Hz) (16steps)		
Low Range -			
High Range -	50~3900 (50Hz)		
Spindle speed	-	-	-
Quill Feeds Per Rev. of Spindle	0.04-0.08-0 .15 mm	0.04-0.08-0 .15 mm	0.04-0.08-0 .15 mm
Dia.of Quill	ø86	ø86	ø86
Spindle Motor	1.5KW 3PH or 2.2KW 3PH	1.5KW 3PH or 2.2KW 3PH	2.2KW 3PH or 3.7KW 3PH
Swivel Angle to Right & Left	90°	90°	90°
Swivel Angle to Front & Back	45°	45°	45°
Approximate Net Weight	950kgs	1250kgs	1400 kgs

MODEL	PM-550	PM-600
Table	1372 x254 mm	1524 x 305 mm
T-Slot (width x number x distance)	16x3 x63.5	16x3 x63.5
TRAVEL		
Longitudinal	950mm (square)	800mm (square)
Cross	395mm (square)	400mm (square)
Vertical	395mm	380mm
Spindle Travel	127mm	127mm
Arm Travel	520mm	520mm
SPINDLE		
Taper	R8 or NT 30#	NT40#
Spindle Nose to Table Surface	80-490mm	100 mm
spindle center to column	140-500mm	127 mm
Spindle speed		
Step Head	66~4540 (50Hz) (16steps)	
Low Range -		
High Range -	50~3900 (50Hz)	
Spindle speed	-	70~4200 RPM
Quill Feeds Per Rev. of Spindle	0.04-0.08-0 .15 mm	0.004 - 0.008 - 0.15 mm-
Dia.of Quill	ø86	ø100-
Spindle Motor	2.2KW 3PH or 3.7KW 3PH	5 HP-
Swivel Angle to Right & Left	90°	90°
Swivel Angle to Front & Back	45°	45°
Approximate Net Weight	1450 kgs	1550 kgs

STANDARD ACCESSORIES

- Drawbar
- Way Chip Protectors
- Tool Box with Tool

OPTIONAL ACCESSORIES

- Power Feed for X Axis
- Power Feed for Y Axis
- Rapid Motor for Knee
- Elevation
- Halogen Worklight
- Cooling Pump System
- Gear type feed in X Axis
- Gear type feed in Y Axis
- Chip Tray
- Halogen Worklight
- Electric control box with
- Operation panel
- Digital read our systems

VERTICAL TURRET MILLING MACHINE

IV-400

No 'G' Code
NO CNC PROGRAMMER
 REQUIRED
 No 'M' Code



<input type="radio"/>	Spindle material is SCM415 full hardened through carbonizing heat treatment
<input type="radio"/>	NST#30/R8 spindle with 3HP variable speed motor (inverter motor option is available).
<input type="radio"/>	Spindle quill drive box is transmitted by ballscrew for better precision.
<input type="radio"/>	Essential castings are made of high grade of Meehanite cast iron, which has been stressed and relieved to provide a rigid machine structure.
<input type="radio"/>	Standard with 10" X 54" table with hardened and ground.
<input type="radio"/>	Table T-slot is precision ground to exact tolerance.
<input type="radio"/>	Precision ballscrews are equipped on X&Y axes.
<input type="radio"/>	X and Y slideways and gibs are coated with Turcite-B to provide smooth and wear resistant surface.
<input type="radio"/>	1:2 ratio timing belt pulleys on XY axes to increase drive torque.

*offer applicable for the machine only

BED TYPE MILLING MACHINE

IB-800

No 'G' Code
**NO CNC PROGRAMMER
 REQUIRED**
 No 'M' Code



<input type="radio"/>	NST#40 spindle with 5HP inverter motor.
<input type="radio"/>	Spindle material is SCM415 full hardened through carbonizing heat treatment.
<input type="radio"/>	Essential castings are made of high grade of Meehanite cast iron, which has been stressed, relieved to provide a rigid machine structure.
<input type="radio"/>	Standard with 10" X 54" table with hardened and ground.
<input type="radio"/>	Table T-slot is precise ground for precise tolerance.
<input type="radio"/>	Precise ballscrews are equipped on X&Y axes.
<input type="radio"/>	X Y slideways and gibs are coated with Turcite-B to provide smooth and wear resistant surface.
<input type="radio"/>	XYZ slideways are hardened and ground for wear resistance and excellent longevity.
<input type="radio"/>	1:2 ratio timing belt pulleys on XY axes to increase drive torque.

*offer applicable for the machine only

IPRO INTELLIGENT CONVERSATIONAL CONTROL SYSTEM

Features

- Intelligently integrates the control, machine and person.
- Optimized HMI + PLC + Motion + COMM.
- iPRO system enables you to program conventional machining operations right at your machine in an easy programming way.
- iPRO system was designed for users where manual and automated operation are both useful and needed.
- Built in functions: parameter memory, visual communication, USB connectivity, coaching program and coordinate adjustment record.
- Powerful, easy and user-friendly. Great for your daily milling work.



DRO mode

- Built in DRO mode provides DRO functions for your milling work. With this function, you are no longer have to spend extra money on DRO equipment for your machine.



Programming

- Program the iPRO by making simple selections and inputting parameters in numbers.



Program Storage

- An internal drive lets you save hundreds of typical programs. A USB port on iPRO is available to plug in a storage device for backing up programs and moving programs between iPRO and computers.



SPECIFICATION

MODEL	IV-400	IB-800
Travel		
X/Y/Z travel	830/380/355mm (32.7"/15"/14")	850/500/450mm
Spindle nose to table surface	100~506mm (4"~20")	100~530mm
Spindle center to column surface	159~719mm (6.2"~28")	565mm
Ram travel	560mm (22")	-
Table		
Table size	1370 x 250mm (54" x 10")	1270 x 305mm
Table T-slot (No. x size)	3 x 16mm (3 x 0.63")	3 x 16mm
Max. table load	350kgs (771 Lbs)	500kgs
Spindle		
Spindle taper	NST#30/R8	NST#40
Spindle speed	5000RPM (60Hz)	5000RPM (60Hz)
Quill feed	0.04mm~0.08mm~0.14mm (0.0015"~0.003"~0.006")	0.04/0.08/0.14mm
Transmission	Variable speed (Opt. inverter)	Variable speed (inverter)
Quill travel	127mm (5")	127mm
Over swivel on turret	360°	-
Head swivel (R&L)	+/-45°	+/- 45°
Head swivel (Up & down)	+/-45°	-
XY feed rate	0-3m/min (0-0.12")	-
Rapid feed rate XYZ	5mm/min (0.2"/min)	12m/min
Motor		
Spindle motor	3HP	5HP
XYZ motor	1Kw AC servo motor	1Kw AC servo motor
XYZ transmission	1:2 Belt	1:2 Belt
Coolant pump	1/8HP	1/6HP
Machine size		
Overall width (A)	1900mm (75")	1550mm
Overall depth (B)	2087mm (82")	1380mm
Overall height (C)	2120mm (83.5")	2030mm
Net weight	1400kgs (3,087 Lbs)	2300kgs

STANDARD ACCESSORIES

- Stepless spindle head by inverter motor and inverter driver.
- Tapping switch bottom.
- X/Y/Z C3 ground ball screws.
- X/Y axis motor mounting brackets, timing belts, pulleys.
- Z-axis quill drive casting.
- VII hand mechanical hand wheels.
- Remote hand wheel.
- 1 Kw AC servo motors on X/Y, 0.6Kw for quill.
- Electric control box and swiveling control panel.
- Intelligent control panel (Touch screen monitor with conversation operation).
- Rubber chip cover on front and rear of saddle. Auto lubrication.
- Coolant system.
- Quartz work light.
- Base splash guard and column guard R & L.
- Tools and box.

OPTIONAL ACCESSORIES

- Air power draw bar NST#30 or R8 (iV-400, iV-500).
- Air power draw bar NST#40 (iV-520),
- CE.
- Safety guarding on spindle.
- Electrically interlocked table guard.
- 4 axis rotary table.
- Milling chuck R8/NST#30/NST#40.
- Angle-fix lock vise 6".
- Transformer.



S&T ENGINEERS (P) LTD.
making technology affordable

🏠 Corporate Office: 22, Vasanth Nagar, Singanallur, Coimbatore - 641 005. INDIA.

☎ 0422 - 2590810, 2591470, 2593487

☎ 0422 - 2573629

✉ info@stengineers.com

💻 www.stengineers.com

BRANCHES

- Ahmedabad
- Bengaluru
- Chennai
- Cochin
- Coimbatore
- Faridabad
- Gurgaon
- Hosur
- Hyderabad
- Kolkata
- Ludhiana
- Mumbai
- Noida
- Pune
- Vapi