



# MST

Machine Sazi Tabriz Group

“ Manufacturer of **Universal**  
and **CNC** machine tools  
with more than 50 years  
of experience





# Brief History of the MST Company

Machine Sazi Tabriz Group (MST) was pioneered and established around five decades in year 1967 for the purpose of transfer of technology and manufacture of original equipments and machine tools with the technologic cooperation of European Countries in industrial zone, Tabriz City of Iran.

During the course of its years of professional activities and execution of its successful planning in production, was able in manufacturing and presenting the below reflected machine tools and services:

## Fields of activities

- 1 - Manufacture of various Universal and CNC Lathe Machines.
- 2 - Manufacture of various Universal and CNC Milling Machines.
- 3 - Manufacture of various Vertical and Horizontal CNC Machining Centers.
- 4 - Manufacture of various Grinding and Sharpening Machines.
- 5 - Manufacture of various Drilling Machines.
- 6 - Manufacture of various Accessories Required by Tools and Spare Parts Machines.
- 7 - Presentation of technical and engineering services to customers.



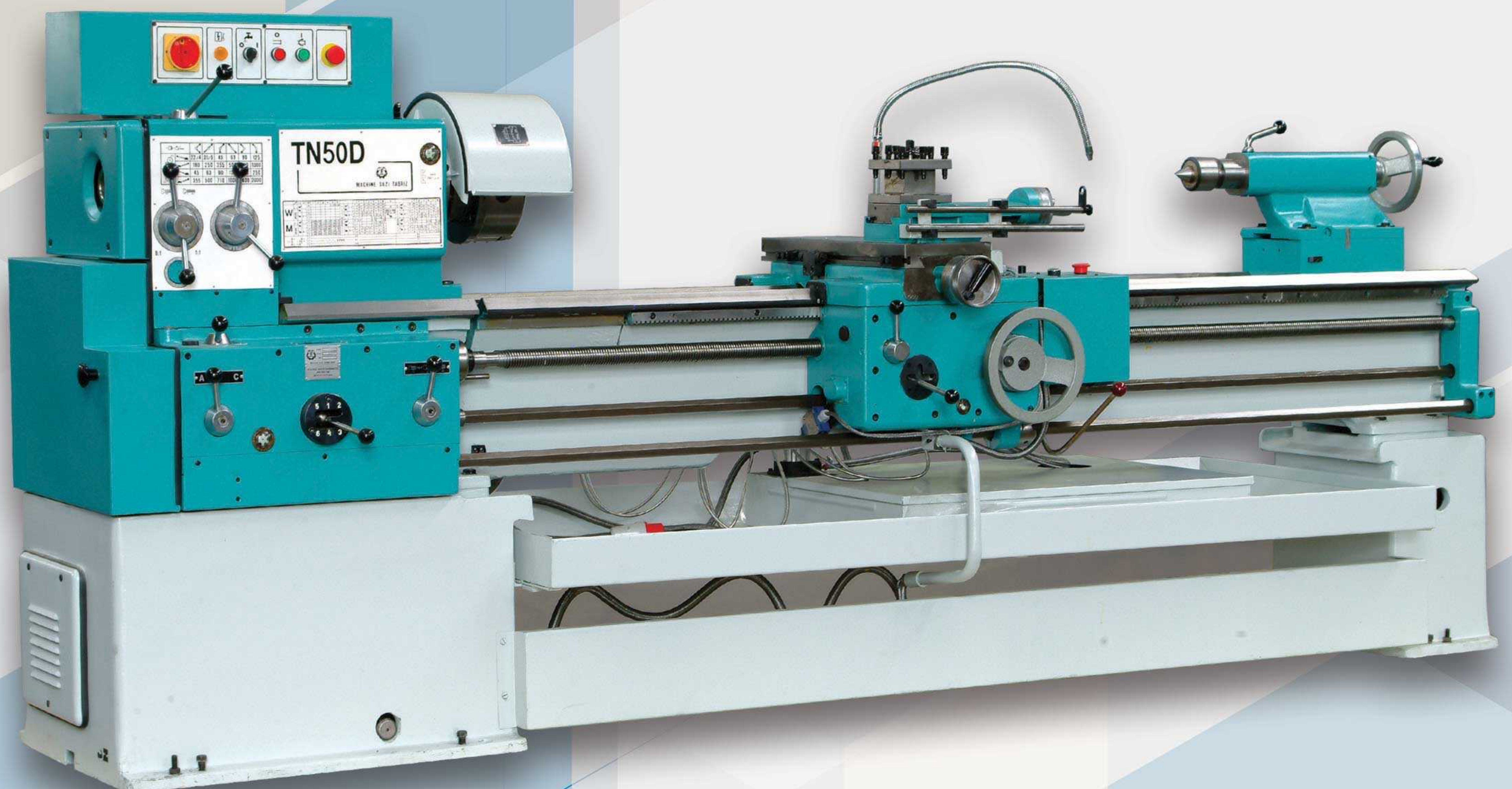


# UNIVERSAL LATHE MACHINE

This machine with its four hardened and ground guide ways is suitable for all turning operations both single and mass production. It can be equipped with special attachments to comply with different applications including internal drilling, external grinding and screw thread cutting.

Apron is equipped with rapid approach which reduces the time needed for machining.

When machine has idle tool holder can be moved rapidly in four directions lessening machining time and wearing of machine components.





# TN50BR / TN50D

## Technical specification

<b>WORKING AREA</b>	
Swing over bed	500 mm
Swing over cross slide	270 mm
Swing in gap	700 mm
Distance between centers	1060, 1560, 2060 mm
Cross slide travel	300 mm
Top slide travel	140 mm
Max. section of cutting tool	32x20 mm
Max. workpiece weight	300/45 Kg/ r.p.m
Width of gap in front of face plate	230 mm
Bed width	340 mm
<b>HEAD STOCK</b>	
Number of spindle speed steps	24
Speed range: I range	range 1: 22.4-1000 r.p.m
Speed range: II range	range 2: 45-2000 r.p.m
Taper in spindle bore	morse NO.6
Spindle bore dia. (through bore)	50 mm
<b>TAILSTOCK</b>	
Tailstock sleeve	Morse No.5
Tailstock sleeve bore	70 mm
Tailstock sleeve travel	180 mm
<b>FEEDS</b>	
Number of longitudinal and cross feeds	38
Rangs of longitudinal feed	0,05 - 6.4 mm / rev
Rangs of cross feeds	0,025 - 3.2 mm / rev
Rapid traverse Z / X axes	2.5 / 0.35 mm/min
<b>THREAD PITCHES</b>	
29 metric threads	0.5 - 40 mm
35 whitworth threads	80 - 1 t.p.i
26 module threads	0.25 - 20 module
31 Diametral pitch threads	2 - 72 D.P
Lead Screw	Tr 40 x 6 mm
<b>MOTORS</b>	
Main motor: power	5.5 KW
Main motor: speed	1450 r.p.m
Rapid travers motor: power	0.55 KW
Rapid travers motor: speed	2800 r.p.m
Coolant pump motor	0.09 KW / 2800 r.p.m
<b>MACHINE TYPE</b>	
Turning length	1000 / 1500 / 2000 mm
Total length	2575 / 3075 / 3575 mm
Approx. weight	1650 / 1750 / 1850 kg
<b>DIGITAL INFORMATION ( TN50D )</b>	
Digital Readout	DSC-802L
Resolution X/Y	1 $\mu$ m ( 0.001mm )

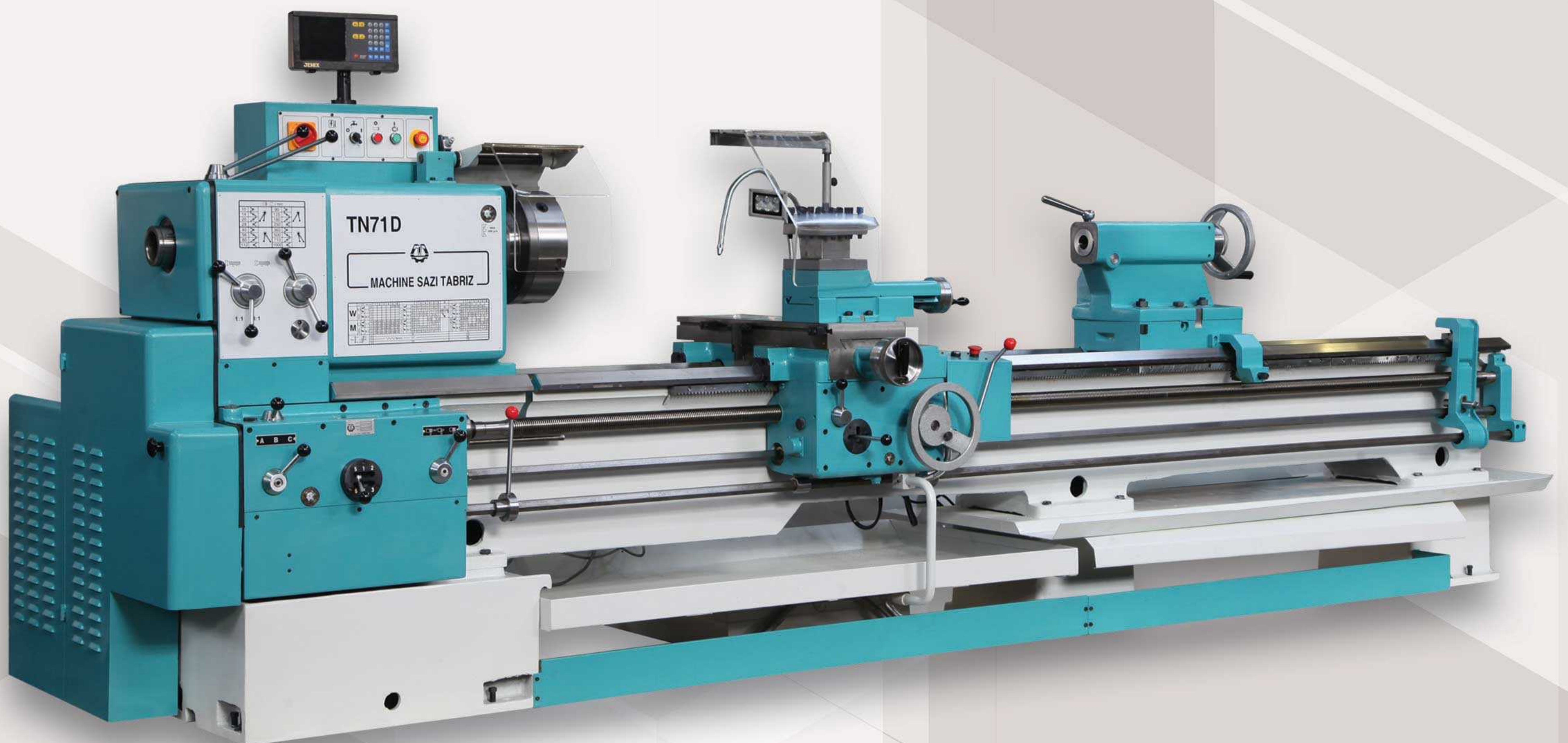


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# TN71D / TN71B

## Technical specification

<b>WORKING AREA</b>	
Swing over bed	710 mm
Swing over cross slide	420 mm
Swing without gap bridge	960 mm
Distance between centers	2125,3125,4125 mm
Cross slide travel	400 mm
Top slide travel (hand operated)	180 mm
Max. section of cutting tool	40x25 mm
Max. workpiece weight	1500/45 Kg/ rpm
Width of gap in front of face plate	300 mm
Bed width	450 mm
<b>HEAD STOCK</b>	
Number of spindle speed steps	16
Speed range: I range	range 1: 10-112 r.p.m
Speed range: II range	range 2: 90-1000 r.p.m
Spindle nose dia.	220 mm according to DIN 55027
Spindle bore dia. (through bore)	71 mm
Taper in spindle bore	80
Height of centers	355 mm
Inner diameter of spindle bearing in front	110 mm
<b>TAILSTOCK</b>	
Tailstock sleeve dia.	90 mm
Tailstock sleeve taper	Morse No.5
Tailstock sleeve travel	240 mm
Cross resetting	±10
<b>FEEDS</b>	
Number of longitudinal and cross feeds	38
Range of longitudinal feed 1.1-8.1	0,05 - 6.4 mm / rev
Rangs of cross feeds 1.1-8.1	0,025 - 3.2 mm / rev
Rapid traverse Z / X axes	2.5 / 0.35 mm/min
<b>THREAD PITCHES</b>	
29 metric threads	0.5 - 40 mm
35 whitworth threads	80 - 1 t.p.i
26 module threads	0.25 - 20 module
31 Diametral pitch threads	2 - 72 D.P
Lead Screw	Tr 48 x 6 mm
<b>MOTORS</b>	
Main motor: power	7.5 KW
Main motor: speed	1440 r.p.m
Rapid travers motor: power	0.55 KW
Rapid travers motor: speed	2800 r.p.m
Coolant pump motor	0.09 KW / 2800 r.p.m
<b>MACHINE TYPE</b>	
Turning length	2000 / 3000 / 4000 mm
Total length	4000 / 5000 / 6000 mm
Approx. weight	3000 / 3250 / 3500 kg
<b>DIGITAL INFORMATION ( TN71D )</b>	
Digital Readout	DSC-802L
Resolution X/Y	10µm ( 0.01mm )



# SLANT BED CNC LATHE MACHINE

CNC TC Series turning machine  
High stability  
High rigidity  
Suitable for high accuracy production  
Good design  
High speed





# TC SERIES

Technical specification		TC20	TC35	TC50
Swing over bed	mm	420	528	528
Swing over cross slide	mm	240	370	370
Turning length (Between centers)	mm	520	785	1200
Chuck size	mm	8" (210)	10" (254)	10" (254)
Bed inclination		45°	45°	45°
Spindle nose		A2 – 6	A2 – 8	A2 – 8
Spindle bore	mm	66	86	86
Bar capacity	mm	51	76	76
Spindle speed range	r.p.m	25-4500	30-3500	20-3000
Spindle motor	Kw (std)	12	15	15
Spindle bearing diameter	mm	100	130	130
Type of turret	Hydraulic	VDI 30	Hydraulic(Angle)	Hydraulic(Angle)
Number of tools		12	12	12
Dimension of tool shank	mm	20 x 20	25 x 25	25 x 25
Cross travel (X-axis)	mm	200	290	290
Longitudinal travel (Z-axis)	mm	400	650	1040
Rapid traverse in X/Z	m/min	24/30	15/18	15/18
Servo Motor (X-axis)	N.m	11	16	16
Servo Motor (Z-axis)	N.m	11	18	18
Tailstock travel	mm	350	500	530
Tailstock quill travel	mm	60	100	100
Tailstock quill diameter	mm	60	85	85
Tailstock spindle taper		MT # 4	MT # 5	MT # 5
Hydraulic pump motor	Hp	1.5	1.5	1.5
Coolant pump motor	kw	0.46	0.46	0.46
Packing(X-Y-Z)	cm	364x185x200	418x203x236	450x205x240
Weight	Kgs	4100	6200	9800



# FLAT BED CNC LATHE MACHINE

## CNC Turning Machine TME40

- Durability, strength and superior
- Assembled using hardened and grinded parts.
- Central lubrication system.
- Easy operation and maintenance
- Hydraulic chuck and tailstock





# TME40

## Technical specification

Swing over bed	500 mm
Swing over cross slide	270 mm
Max. Turning diameter	300 mm
Distance between centers	1000 mm
Max length of work	900 mm
Bed width	340 mm
Hydraulic chuck size	8"
Spindle nose	A6-2 (DIN 55026)
Spindle bore	50 mm
Bar capacity	30 mm
Spindle bearing diameter	80 mm
Spindle speed range	150-2250 r.p.m
Spindle motor	5.5 kw
Type of turret	Electric turret 6 ANGLE
Number of tools	6
Dimension of tools	20 x20 mm
Cross travel (X-axis)	200 mm
Rapid traverse in X , Z axes	X:6 , Z:8 M/min
Type of tailstock	Hydraulic
Tailstock traverse	950 mm
Tailstock sleeve diameter	70 mm
Tailstock sleeve travel	115 mm
Tailstock sleeve taper	Morse 5
Hydraulic pump motor	1.5 Kw (AC)
Servo motor X-axis	6 N.m
Servo motor Z-axis	11 N.m
Weight	~2250 kg
Packing (L.W.H)	2500×1370×1700 mm



# UNIVERSAL MILLING MACHINE

FP4MD is a modern universal milling machine with appropriate size for drilling & milling medium size pieces.

This machine has both vertical and horizontal heads .

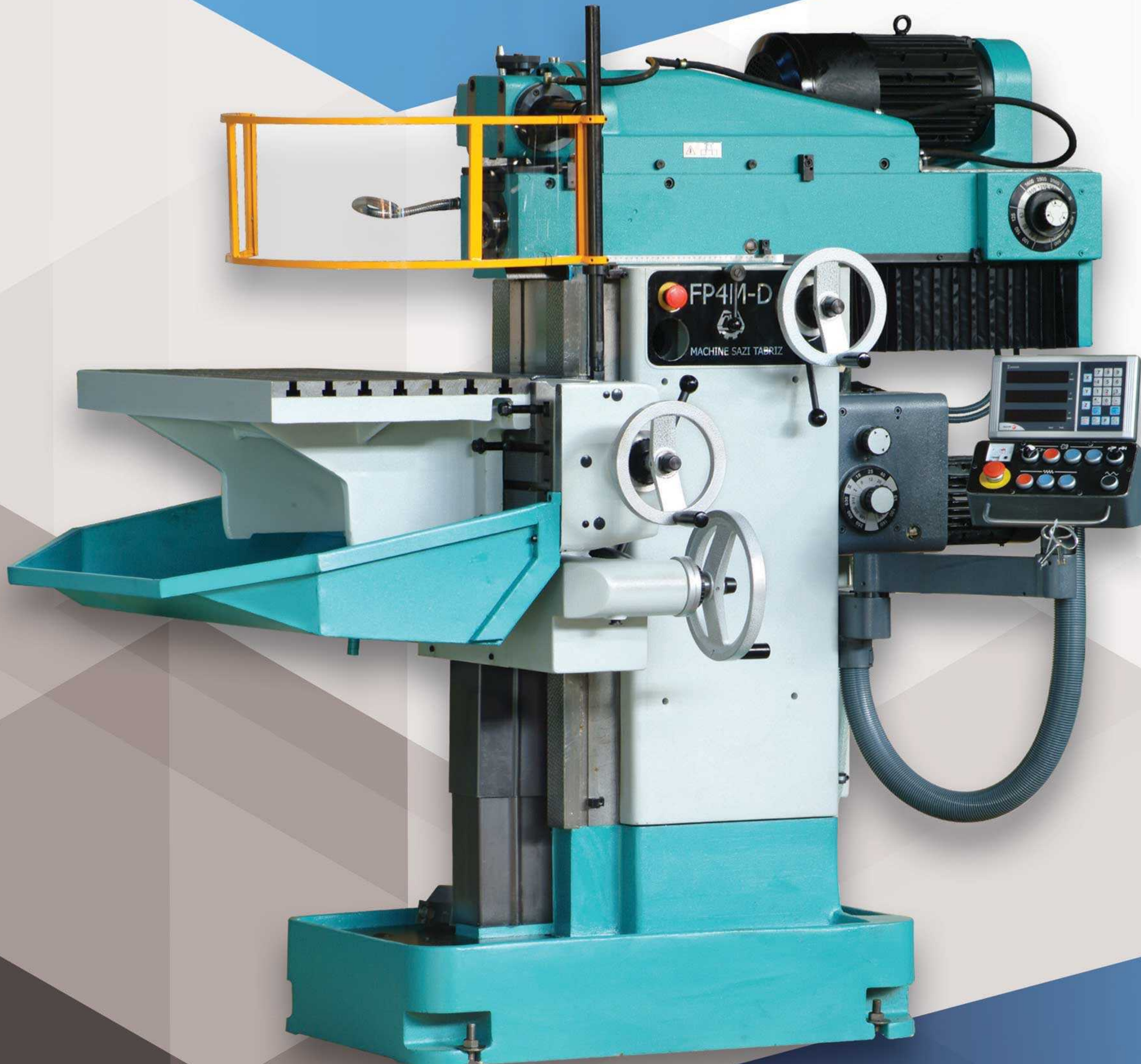
These heads are easily changed.

The machine is equipped with digital measuring system, optical scales at 3 Axes ( x,y,z ) and digital readout for precise movements.

The features of this machine :

Elegant design & convenient in operation, easy installation & maintenance

Milling the various dimension .





# FP4MD / FP4M

## Technical specification

<b>MOVING AXES</b>	
Longitudinal travel (X)	500 (20") mm
Cross travel (Y)	400 (16") mm
Vertical travel (Z)	400 (16") mm
Quill stroke Z axis	80 (3") mm
Horizontal traverse of headstock (ARM)	150 (6")
Swivel of headstock	0 to $\pm 90^{\circ}$
<b>MAIN SPINDLE</b>	
Power / Speed of motor	3.7 ~ 4.4 / 1400 ~ 2800 Kw / rpm
Spindle speed range	50...2500 r.p.m
Number of spindle speeds	18
Adjustable speed	1.25
Spindle taper	A40 (M16-DIN2080)
Tool clamping	Manually
<b>FEED DRIVE</b>	
Power of motor	0.8 / 1.2 Kw
Rapid rate	1300 mm/min
Feedrate	8...630 mm/min
<b>VERTICAL TABLE</b>	
Clamping surface of table	842 × 274 mm
Number & width of T-slots	4 (14H7) mm
Distance between T-slots	63 mm
Max. load in vertical table	600 Kg
<b>HORIZONTAL TABLE</b>	
Clamping surface of table	800 × 460 mm
Number & width of T-slots	7 (14H7) mm
Distance between T-slots	63 mm
Max. load in horizontal table	400 Kg
<b>GENERAL SPEC.</b>	
Working area	2.8 × 3 M
Weight of machine	1415 Kg
Main voltage	380 v / 50 Hz
Main power	7.5 KVA
Packing dimension (L× W× H)	1.85 × 1.56 × 2.01 M
<b>DIGITAL INFORMATION ( FP4MD )</b>	
Digital Readout	DSC-803M
Resolution X/Y	5 $\mu$ m ( 0.005mm )



# UNIVERSAL MILLING MACHINE

- Universal Milling & Boring Machine
- Available in two Standard version with wide range of attachments and accessories
- Horizontal and vertical head
- High cutting capacity
- Ideally for workshops and small plants





# FP4MH / FP4MHD

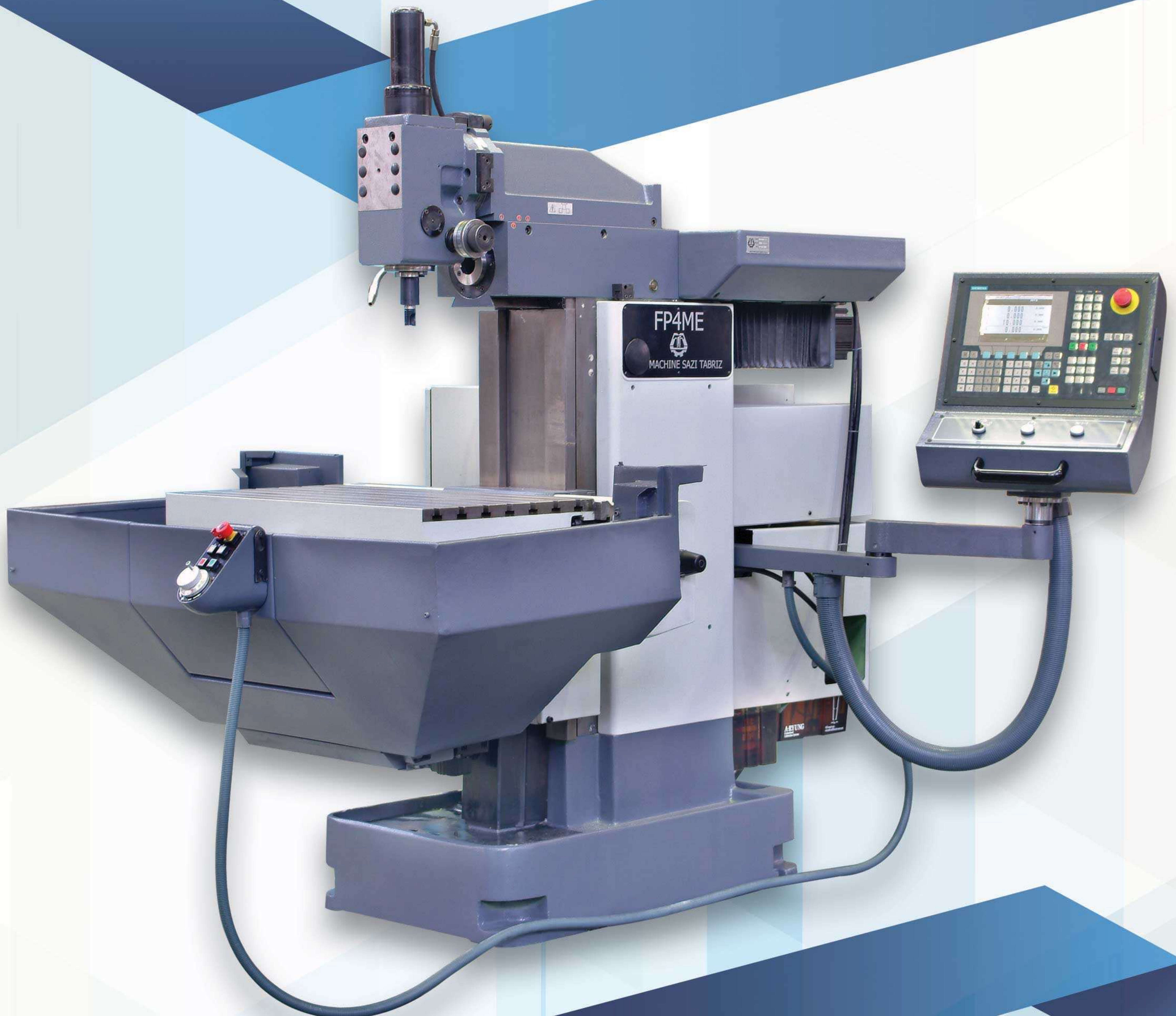
## Technical specification

<b>MOVING AXES</b>	
Longitudinal travel (X)	500 mm
Cross travel (Y)	400 mm
Vertical travel (Z)	400 mm
Quill stroke Z axis	80 mm
Horizontal traverse of headstock (ARM)	0 to $\pm 150$ mm
Swivel of headstock	
<b>MAIN SPINDLE</b>	
Power / Speed of motor	4 / 1400 Kw / r.p.m
Spindle speed range	50 / 2500 r.p.m
Number of spindle speeds	18
Adjustable speed	1.25
Spindle taper	Hydraulic(A40-DIN69871)
Tool clamping	Manualy
<b>FEED DRIVE</b>	
Power of motor	1 Kw
Rapid rate	1300 mm/min
Feedrate	8 / 630 mm/min
<b>VERTICAL TABLE</b>	
Clamping surface of table	842 × 274 mm
Number & width of T-slots	4 (14H7) mm
Distance between T-slots	63 mm
Max. load in vertical table	600 Kg
<b>HORIZONTAL TABLE</b>	
Clamping surface of table	800 × 460 mm
Number & width of T-slots	7 (14H7) mm
Distance between T-slots	63 mm
Max. load in horizontal table	400 Kg
<b>GENERAL SPEC.</b>	
Working area	2.8 × 3 M
Weight of machine	1415 Kg
Main voltage	380 v / 50 Hz
Main power	7.5 KVA
Packing dimension (L× W× H)	1.85 × 1.56 × 2.01 M
<b>DIGITAL INFORMATION ( FP4MHD )</b>	
Digital Readout	DSC-803M
Resolution X/Y	5 $\mu$ m ( 0.005mm )



# CNC MILLING MACHINE

- Available in two standard version with wide range of attachments and accessories
- Horizontal and vertical head
- High cutting capacity
- Ideally for workshops and small plants





# FP4ME

## Technical specification

Table size	460 x 800 mm
No. of T-Slots	7 (14H7)
Distance of T-Slots	63 mm
Max. table load	Approx. 400 kgs
X-Axis travel	475 mm
Y-Axis travel	372 mm
Z-Axis travel	375 mm
Spindle quill stroke (Z-Axis)	80 mm
Vertical milling head on headstock (manually adju.)	150 mm
Spindle motor power	4 kw
No. of spindle speeds	3 (Auto)
Speed range	5 - 2800 r.p.m
Tool shank	ISO 40 ( DIN 69871 )
Tool clamping	Automatic
Feed range	1 - 3000 mm/min
Rapid rate	6000 mm/min
Central lubrication	
Coolant system	
Operating voltage	380V / 50Hz
Power requirement	10 KVA
Transport box (L x W x H)	135 x 220 x 176
Machine weight	1600 kgs



# VERTICAL MACHINING CENTER

- Four rail bed for movement of the table
- Strength and dynamical, statical precision
- Automatic pallet change

Vertical machine centers manufactured in M.S.T are delivered as standards VMC CNC or with change table as an extra option because of using powerful structure and particular precision designing its elements and subassemblies, and applying the recent manufacturing technologies, this machine have an outstanding quality among similar machines.





# VMC SERIES

Technical specification		VMC850	VMC1050	VMC1250
Table working surface	mm	500 ×1000	500 ×1200	500 ×1220
Longitudinal travel (X)	mm	800	1050	1143
Cross travel (Y)	mm	500	500	530
Vertical travel (Z)	mm	610	610	640
Spindle nose to table	mm	100~710	100~710	150~790
Spindle center to column	mm	550	550	550
Spindle taper	mm	BT40	BT40	BT40
Spindle speed	r.p.m	60~8000	60~8000	60~8000
Spindle motor	Kw	9/12	9/12	9/12 (Hi-Lo gear box)
Guideway		Linear guide way	Box way	Box way
X-Y-Z Rapid traverse	m/min	30/30/24	18/18/15	18/18/15
Coolant pump motor		GRUNDFOS 0.46kw (3.1 m3/h)		
Tool selection		Bi-Direction random type shortest path		
Cutting feed range	mm/min	1~8000	1~8000	1~8000
No. of tools		24	24	24
Adjacent pockets max. tool dia.	mm	75	75	90
Max. tool dia.(without Adjacent tools)	mm	150	150	150
Max. tool length	mm	350	350	350
Max. tool weight	kg	8	8	8
Table load capacity	kg	600	800	1500
Machine weight	kg	5500	6000	6500
Floor space	mm	2350 x 3200	2920 x 3200	2800 x 3300
X-Y-Z Ball screw dia.	mm	Ø 40	Ø 40	Ø 40
Cutting / Milling	mm	120 cc/min	120 cc/min	180 cc/min
Capacity / Drilling	mm	Ø30	Ø 30	Ø 40
For CK45 / Tapping capacity		M30 × P3.5	M30 × P3.5	M30 × P3.5
Power supply		380V / 50Hz / 3ph		
Possible for 4th axis		Yes	Yes	Yes
XYZ Axis Feed Motor(static)	N.m	16	16	27

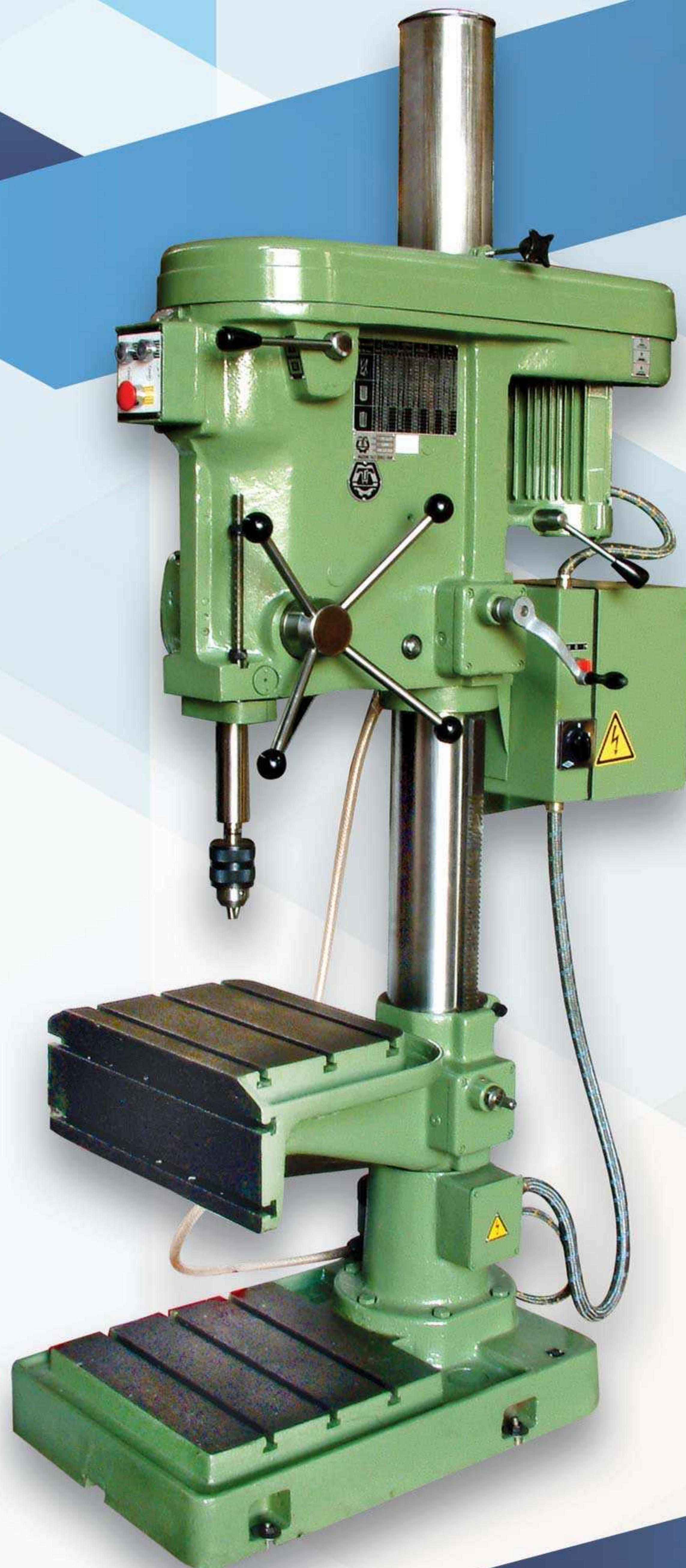


# PILLAR DRILLING MACHINE

This machine is capable of machining all usual metals, including: drilling, reaming tapping and sinking.

Its specification, strength, power, speeds, feeds are designed so as to fulfill a wide range your production needs.

This machine can be used both for single part and mass production .



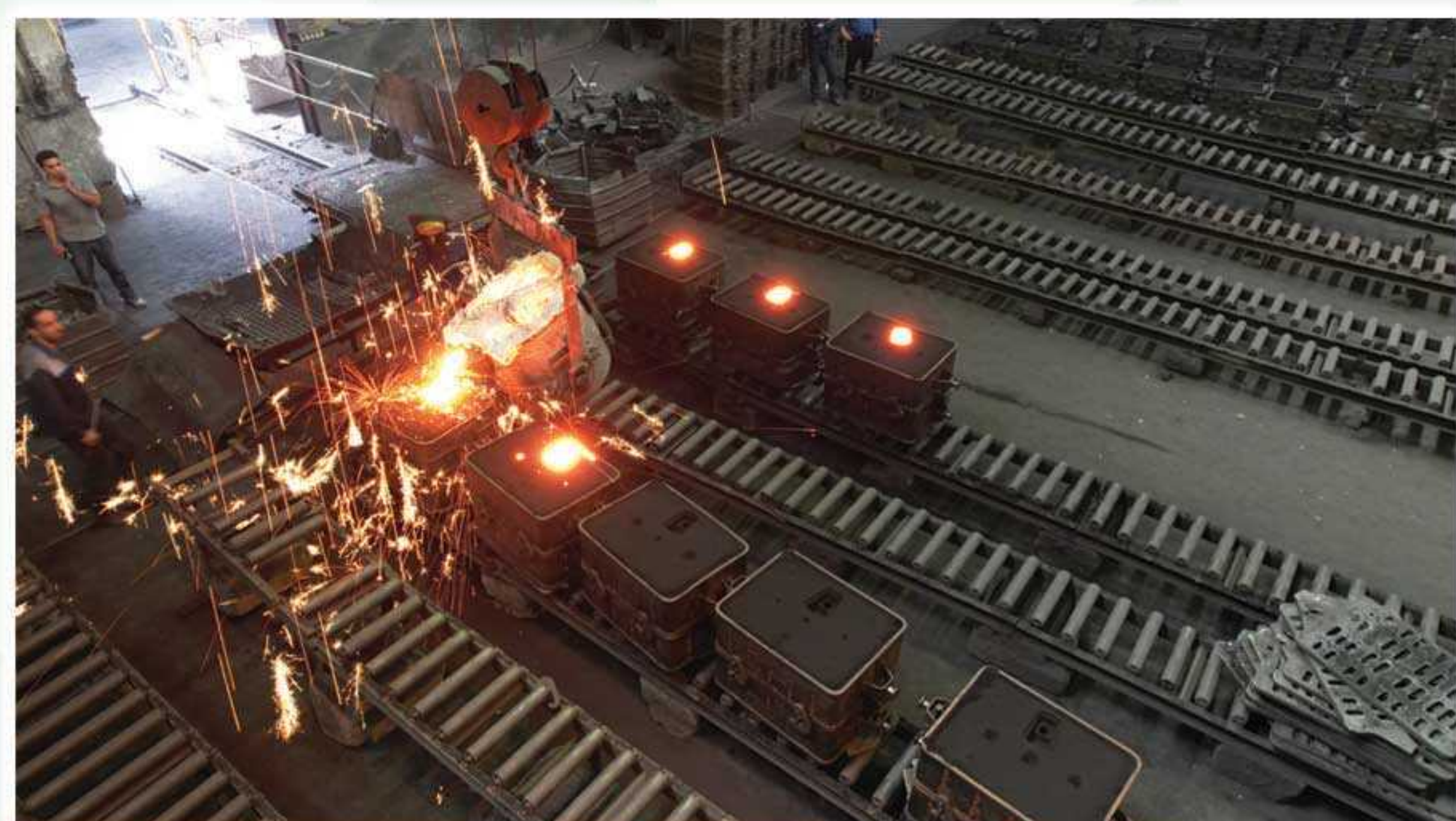


# MS32B

## Technical specification

Drilling Dia. (Steel)	32 mm
Max. Tapping Dia.	32 mm
<b>CAPACITY</b>	
Max. Drilling depth	200 mm
Feeds number	4
<b>SPECIFICATION OF SPINDLE</b>	
Spindle speed number	15
Spindle speed range	56 - 2240 r.p.m
Spindle taper	Morse No. 4
Feeds range	0.11 - 0.45 mm/min
Main motor power	2.2 kw
Main motor speed	1440 r.p.m
<b>SPECIFICATION OF TABLE</b>	
Clamping surface	420 × 420 mm
Angle table	316 × 400 mm
Surface clamping area	200 × 510 mm
Distance/Spindle nose	625 mm
To Clamping surface	0 mm
Distance/Spindle nose to clamping surface	1150 mm
Of Angle table	800 mm
Distance center-Line of spindle to column	305 mm
Vertical travel of headstock	350 mm
Dimension of machine with saeworthy Packing	1300x700x2300 mm
Packing volume	2 m3
Height of machine	2140 mm
Weight of machine	645 Kg
Floor space of machine	620x1130 mm









Certificate CH06/0283

The management system of



# MACHINE SAZI TABRIZ CO.

Gharamalek, P.O.: 51977-13141, Tabriz- Iran

has been assessed and certified as meeting the requirements of

## ISO 9001:2008

For the following activities

**DESIGN, MANUFACTURING, INSTALLATION AND SERVICING OF  
A WIDE RANGE OF MACHINE TOOLS AND RELATED EQUIPMENT  
CONSISTING OF HORIZONTAL, VERTICAL MACHINING CENTERS  
IN VARIOUS MODELS AND SIZES, TURNING AND  
MILLING MACHINERY BOTH IN C.N.C. AND  
CONVENTIONAL VERSIONS, GRINDING AND DRILLING**

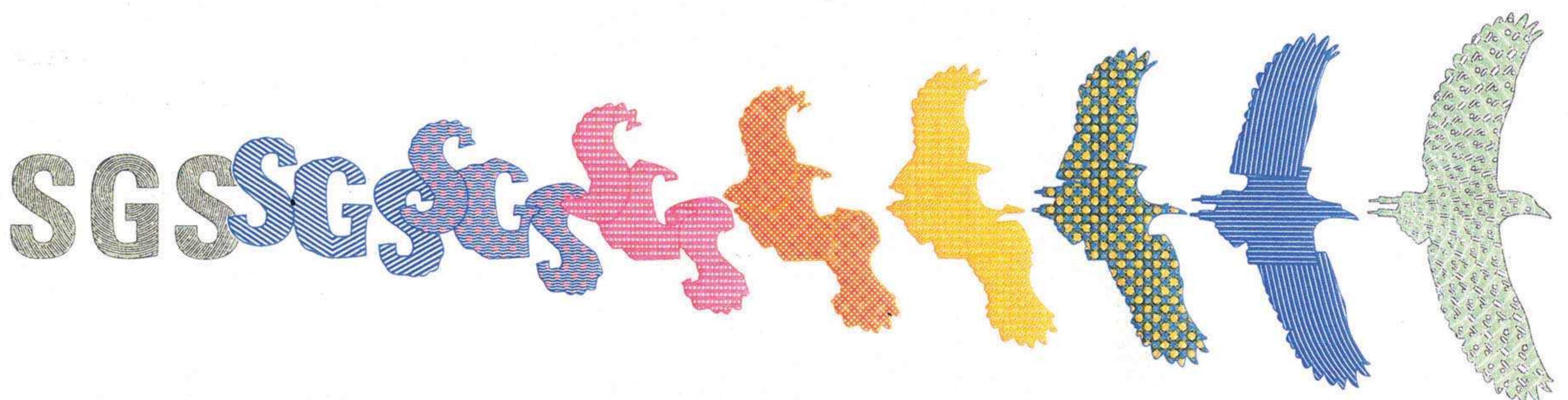
This certificate is valid from 8 May 2015 until 7 May 2018  
and remains valid subject to satisfactory surveillance audits  
Recertification audit due before 25 April 2018  
Issue 4. Certified since May 2006

Authorised by

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