

MULTISPINDLE AUTOMATIC LATHES MORI-SAY

PRODUCTION PROGRAM



MORI-SAY

MULTISPINDLE AUTOMATIC LATHES MORI-SAY

MORI-SAY 620AC



- ✓ **High accuracy at mass and series production**
- ✓ **High rigidity at machining**
- ✓ **High thermal and dynamic stability**
- ✓ **Controlled feed and spindle motors**
- ✓ **Possibility of use of CNC options**
- ✓ **Possibility of machine modification to the variant for machining semi-products**

Traditional cam automatic lathe with high accuracy, rigidity and quickness. It is intended for the mass and series production of precise components from the bar stock. The characteristics of the concept include high precision and flexibility with machining on six spindles with six independent longitudinal saddles, six cross saddles and four cross saddles. The machine enables the usage of various types of automatic bar stock feeders.

TECHNICAL DATA	620AC	620SAC
Number of spindles	6	6
Pitch diameter of spindles	180 mm	180 mm
Speed range of spindles	500 – 6,000 rpm	500 – 4,500 rpm
Speed range of spindles	NO	YES
Bar stock dimension		
Round cross section	∅ 20 mm	∅ 20 mm
Hexagonal cross section	17 mm	17 mm
Square cross section	14 mm	14 mm
Max. length of bar feeding	100 mm	100 mm
Working cycle		
Working time	0.8 – 90 s	0.8 – 90 s
Idle time	0.7 s	0.7 s
Frontal slides – number	6	6
Range of working strokes of the stations I, II, IV and V	0 – 68 mm	0 – 68 mm
Range of working strokes of the stations III and VI	0 – 90 mm	0 – 90 mm
Cross slides – number	6	6
Range of working strokes	0 – 36 mm	0 – 36 mm
Adjustability	13 mm	13 mm
Compound slides – number	4	4
Range of working cross strokes	0 – 36 mm	0 – 36 mm
Range of working longitudinal strokes of the stations I, II	0 – 51 mm	0 – 51 mm
Range of working longitudinal strokes of the stations IV, V	0 – 55 mm	0 – 55 mm
Motors		
Spindle motor (Siemens)	9 kW	9 kW
Feed motor (Siemens)	6.5 Nm	6.5 Nm
Machine dimensions		
Machine total length with bar stock guide	6,142 mm	6,142 mm
Machine total length without bar stock guide	3,000 mm	3,000 mm
Machine height	2,197 mm	2,197 mm
Machine width	1,370 mm	1,370 mm
Machine weight including standard equipment	5,000 kg	5,000 kg
Machine operational input	20.3 kVA	20.3 kVA

TECHNICAL DATA**632AC/SAC****642AC/SAC**

Number of spindles	6	6
Pitch diameter of spindles	276 mm	276 mm
Speed range of spindles (AC)	250 - 4,250 rpm	250 - 4,250 rpm
Speed range of spindles (SAC)	250 - 3,350 rpm	250 - 3,350 rpm
Speed range of spindles	SAC - YES	SAC - YES

Bar stock dimension

Round cross section	∅ 32 mm	∅ 42 mm
Hexagonal cross section	27 mm	36 mm
Square cross section	22 mm	29 mm
Max. length of bar feeding	125 mm	125 mm

Working cycle

Working time	1.4 - 90 s	1.4 - 90 s
Idle time	1.0 s	1.0 s

Frontal slides - number

	6	6
Range of total strokes	45 - 120 mm	45 - 120 mm
Range of working strokes	0 - 110 mm	0 - 110 mm

Cross slides - number

	6	6
Range of working strokes	0 - 55 mm	0 - 55 mm
Adjustability	25 mm	25 mm

Compound slides - number (stations I, II, IV, V)

	4	4
Range of working longitudinal strokes	0 - 64 mm	0 - 64 mm
Range of working cross strokes	0 - 55 mm	0 - 55 mm

Motors

Spindle motor (Siemens)	22 kW	22 kW
Feed motor (Siemens)	38 Nm	38 Nm

Machine dimensions

Machine total length with bar stock guide	6,884 mm	6,884 mm
Machine total length without bar stock guide	4,501 mm	4,501 mm
Machine height	2,570 mm	2,570 mm
Machine width	1,770 mm	1,770 mm
Machine weight including standard equipment	11,850 kg	11,850 kg

Machine operational input

	40 kVA	40 kVA
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MULTISPINDLE AUTOMATIC LATHES MORI-SAY**MORI-SAY 632AC / 642AC**

- ✓ **Version for machining of the bars with max. dia. 32 mm and 42 mm**
- ✓ **High rigidity at machining**
- ✓ **High thermal and dynamic stability**
- ✓ **Controlled feed and spindle motors**
- ✓ **Possibility of use of CNC options**
- ✓ **Possibility of machine modification to the variant for machining semi-products**

This machine is comparable with other cam machines of the same size for the bar stock machining offered on the market. The important improvements of the constructional character with the emphasis on extension of the machine technological possibilities have been done without an interference with the conception of the MORI-SAY machines.

MULTISPINDLE AUTOMATIC LATHES MORI-SAY

MORI-SAY 657AC / 667AC



- ✓ **Version for machining of the bars with max. dia. 57 mm and 67 mm**
- ✓ **High rigidity at machining**
- ✓ **High thermal and dynamic stability**
- ✓ **Controlled feed and spindle motors**
- ✓ **Possibility of use of CNC options**
- ✓ **Possibility of machine modification to the variant for machining semi-products**

The multi-spindle automatic lathe MORI-SAY 657AC, 667AC is conceptually congruent with the series of the TAJMAC-ZPS multi-spindle automatic lathes. It is intended for the mass and series production of the precise components from the bar stock. Machine is fully mechanical and equipped with speed motors for feeds and spindles controlled by the control system. The machine is able to produce two different components, so it can operate as two three-spindle machines.

TECHNICAL DATA

657AC/SAC

667AC

Number of spindles	6	6
Pitch diameter of spindles	340 mm	340 mm
Speed range of spindles (AC)	200 - 3,200 rpm	200 - 2,750 rpm
Speed range of spindles (SAC)	200 - 2,750 rpm	
Speed range of spindles	SAC - YES	NO

Bar stock dimension

Round cross section	∅ 57 mm	∅ 67 mm
Hexagonal cross section	50 mm	58 mm
Square cross section	40 mm	47 mm
Max. length of bar feeding	145 mm	145 mm

Working cycle

Working time	1.4 - 90 s	1.4 - 90 s
Idle time	1.1 s	1.36 s

Frontal slides - number

Range of total strokes	45 - 150 mm	45 - 150 mm
Range of working strokes	0 - 142 mm	0 - 142 mm

Cross slides - number

Range of working strokes (stations I, II)	0 - 66 mm	0 - 66 mm
Range of working strokes (stations III, IV, V, VI)	0 - 57 mm	0 - 57 mm
Adjustability	25 mm	25 mm

Compound slides - number (stations I, II, IV, V)

Range of working longitudinal strokes (stations I, II)	0 - 95 mm	0 - 95 mm
Range of working longitudinal strokes (stations IV, V)	0 - 100 mm	0 - 100 mm

Cross strokes of the compound slides are identical with the strokes of cross slides

Motors

Spindle motor (Siemens)	30 kW	30 kW
Feed motor (Siemens)	38 Nm	38 Nm

Machine dimensions

Machine total length with bar stock guide	7,420 mm	7,420 mm
Machine total length without bar stock guide	5,380 mm	5,380 mm
Machine height	2,437 mm	2,437 mm
Machine width	2,200 mm	2,200 mm
Machine weight including standard equipment	15,650 kg	15,700 kg

Machine operational input

	51 kVA	51 kVA
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TECHNICKÉ PARAMETRY**832AC/SAC****842AC/SAC**

Number of spindles	8	8
Pitch diameter of spindles	360 mm	360 mm
Speed range of spindles (AC)	270 - 3,750 rpm	270 - 2,750 rpm
Speed range of spindles (SAC)	270 - 3,200 rpm	
Speed range of spindles	SAC - YES	SAC - YES

Bar stock dimension

Round cross section	∅ 32 mm	∅ 42 mm
Hexagonal cross section	27 mm	36 mm
Square cross section	22 mm	39 mm
Max. length of bar feeding	125 mm	125 mm

Working cycle

Working time	1.4 - 90 s	1.4 - 90 s
Idle time	1.0 s	1.36 s

Frontal slides - number

Range of total strokes	45 - 120 mm	45 - 150 mm
Range of working strokes	0 - 110 mm	0 - 110 mm

Cross slides - number

Range of working strokes in the stations I, II, V, VI	0 - 50 mm	0 - 50 mm
Range of working strokes in the stations III, IV, VII, VIII	0 - 41 mm	0 - 41 mm
Adjustability	25 mm	25 mm

Compound slides - number (stations I, II, V, VI)

Range of working longitudinal strokes	0 - 64 mm	0 - 64 mm
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Cross strokes of the compound slides are identical with the strokes of cross slides

Motors

Spindle motor (Siemens)	29 kW	29 kW
Feed motor (Siemens)	38 Nm	38 Nm

Machine dimensions

Machine total length with bar stock guide	6,208 mm	6,208 mm
Machine total length without bar stock guide	3,463 mm	3,463 mm
Machine height	2,616 mm	2,616 mm
Machine width	1,932 mm	1,932 mm
Machine weight including standard equipment	11,320 kg	11,320 kg

Machine operational input

	60 kVA	60 kVA
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MULTISPINDLE AUTOMATIC LATHES MORI-SAY**MORI-SAY 832AC / 842AC**

- ✓ **Version for machining of the bars with max. dia. 32 mm and 42 mm**
- ✓ **High rigidity at machining**
- ✓ **Controlled feed and spindle motors**
- ✓ **Possibility of use of CNC options**
- ✓ **Possibility of machine modification to the variant for machining semi-products**

MORI-SAY 832AC, 842AC is the most successful representative of the contemporary generation of the cam multi-spindle automatic lathes manufactured in TAJMAC-ZPS.

It is intended for the mass and series production of precise components from the bar stock. The conception characteristics of the high accuracy and rigidity at machining.

MULTISPINDLE AUTOMATIC LATHES MORI-SAY

MORI-SAY TMZ518CNC PENTA



- ✔ **Version for machining of the bars with max. dia. 19 mm**
- ✔ **High rigidity at machining**
- ✔ **High thermal and dynamic stability**
- ✔ **Independent speeds of spindles**
- ✔ **Possibility of machine modification to the variant for machining semi-products**

MORI-SAY TMZ518CNC PENTA is the new five-spindle automatic lathe complete concept, composed of multi-spindle CNC lathe, bar loader, oil treatment system, chiller and chip conveyor.

The innovative design allows installation of machine and of all its systems in a shorter time, thanks to the electrical cabinet integrated into the base of the machine. The wide working area allows easy and operator-friendly setup, together with the VDI quick-change tooling system. Machined parts and bar remains are collected in two different containers at the back side of the machine.

TECHNICAL DATA

TMZ518CNC PENTA

Number of spindles	5
Pitch diameter of spindles	290 mm
Maximum spindle speed	8,000 rpm
Rated spindle motor power (TMZ)	3.7 kW
Max. bar stock dimension	
Round cross section with collets 9007E (SCHÜTTE)	∅ 18 mm
Round cross section with collets DAVENPORT	∅ 19 mm
Hexagonal cross section	16 mm
Max. length of bar feeding	90 mm
Idle time (drum indexing time)	0.4 s
Frontal slides axes W1 – W4	
Number	4
Max. working stroke	250 mm
Compound slides	
Number (stations I, II, III, IV, V)	5
Working stroke, X1 – Z1 axes	70 mm - 130 mm
Working stroke, X2 - Y2 – Z2 axes	70 mm - 125 mm - 130 mm
Working stroke, X3 – Z3 axes	60 mm - 90 mm
Working stroke, X4 – Y4 – Z4 axes	70 mm - 125 mm - 165 mm
Working stroke, X5 – Y5 axes	70 mm - 95 mm
Pick-Up S05	
Max. speed	6,000 rpm
Max. motor power	3.7 kW
Pick-Up W5	
Working stroke in W5 axis	390 mm
Pick-Up U5 tool slide rest	
Toll holder type, station V	∅ 12 mm / ∅ 16 mm
Number	2
Working stroke, U5 axis	105 mm
Frontal driven attachments (axes S01 to S04)	
Number	4
Max. speed	6,000 rpm
Machine dimensions	
Total machine length with bar loader (4m)	8,351 mm
Machine height	2,329 mm
Machine width	2,200 mm
Machine weight	
Stock guideways and chips disposal system	9,500 kg
	4,700 kg

TECHNICAL DATA

TM620CNC / SCNC

Number of spindles	6
Pitch diameter of spindles	180 mm
Max. spindles speed (identical on all spindles)	6,000 rpm (CNC)
Max. spindles speed (identical on all spindles)	4,500 rpm (S CNC)
Rated motor power	11 kW
Speed range of spindles	With CNC - YES

Max. bar stock dimension

Round cross section	∅ 20 mm
Hexagonal cross section	17 mm
Max. length of bar feeding	100 mm

Idle time	0.7 s
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Frontal slides (axes W1 to W6)

Number	6
Max. stroke (W1 to W5)	110 mm
Max. stroke W6	310 mm

Compound slides axes X1 - X6, Z1 - Z6

Number (stations I, II, III, IV, V, VI)	6
Radial stroke (axes X1 to X5)	60 mm
Radial stroke (axis X6)	50 mm
Axial stroke (axes Z1 to Z5)	70 mm

Pick-Up S06

Max. speed	6,000 rpm
Max. power output	2,2 kW

Pick-Up W6

Working stroke in W6 axis	310 mm
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Pick-Up tool slide rest, U6, V6

Max. number	2
Working stroke of U6, U61 axes	80 mm

Machine dimensions

Machine total length with bar stock guide	8,049 mm
Machine total length without bar stock guide	3,834 mm
Machine height	2,794 mm
Machine width	1,434 mm

Machine weight	8,000 kg
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MULTISPINDLE AUTOMATIC LATHES MORI-SAY

MORI-SAY TM620CNC



- ✓ **Number of spindles: 6**
- ✓ **Maximum diameter of bar: 20 mm**
- ✓ **Max. length of bar feeding: 100 mm**
- ✓ **Spindle speed: max. 6,000 rpm**
- ✓ **Possibility of machine modification to the variant for machining semi-products**

Six-spindle fully CNC-controlled automatic lathe of high accuracy, rigidity and speed. It is designed for mass and serial production of precision components from bar material up to a maximum of ∅ 20 mm (∅ 24 mm).

High productivity is enabled by a total of 21 CNC-controlled axes and another 13 available for special accessories and 6 spindles with a maximum speed of 6,000 rpm. Spindle drum indexing: 0.7 s. The Fanuc i30-B plus control system and two operator panels ensure comfortable and friendly machine operation. Accessories identical with those of MORI-SAY 620AC.

MULTISPINDLE AUTOMATIC LATHES MORI-SAY

MORI-SAY TMZ642CNC



- ✓ **High accuracy at mass and series production**
- ✓ **High rigidity comparable to cam-operated machines**
- ✓ **6 independent AC drives for spindles**
- ✓ **CNC control system Siemens SINUMERIC 840D sl**
- ✓ **Own technological Tmis software**
- ✓ **Possibility of machine modification to the variant for machining semi-products**

The innovative technical solution developed by our engineers and protected by provisions of law, allows to independently control the speed of each spindle and to calibrate the power of each AC spindle motor in accordance with the requirements of the specific machining operations performed by each customer.

At the same time, the absolute independence of each spindle makes it possible to perform any type of machining, including machining operations requiring spindle stopping or C-axis spindle orienting, thus making of the TMZ a real and complete turning and milling centre.

TECHNICAL DATA

TMZ642CNC

Number of spindles	6
Pitch diameter of spindles	340 mm
Max. speed	5,000 rpm
Nominal power output	7 kW

Max. bar stock capacity

Round cross section	∅ 42 mm
Hexagonal cross section	36 mm
Max. length of bar feeding	180 mm

Max. bar capacity (with automatic bar loader)

For HAINBUCH SK52BZ1 clamping collets	48 mm
For SCHÜTTE clamping collets 42 type 9112E	45 mm
For SCHÜTTE clamping collets 32 type 9070E	37 mm

Idle time	0.7 - 1 s
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Frontal slides (axes W1 to W6)

Number	6
Max. stroke	360 mm

Compound slides (axes X1 to X5 and Z1 to Z5)

Number (stations I, II, III, IV, V)	5
Axial stroke (axes Z1 to Z2)	160 mm
Axial stroke (axes Z3 to Z5)	120 mm
Radial stroke (axes X1 to X5)	80 mm

Cut-off slide (standard axis X6)

Stroke	66 mm
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Frontal driven attachments (axes S01 to S06)

Number	6
Max. speed	6,000 rpm

Machine dimensions

Machine total length with bar stock guide	7,811 mm
Machine total length	4,965 mm
Machine height	2,392 mm
Machine width	1,870 mm
Machine weight	11,750 kg

TECHNICAL DATA

TMZ842CNC

Number of spindles	8
Pitch diameter of spindles	480 mm
Max. speed	4,500 rpm
Nominal power output	7 kW

Max. bar stock capacity

Round cross section	∅ 42 mm
Hexagonal cross section	36 mm
Max. length of bar feeding	180 mm

Max. bar capacity (with automatic bar loader)

For clamping collets SK52 BZI HAINBUCH	52 mm
For clamping collets SCHÜTTE 42 type 9112E	49 mm
For clamping collets SK56 BZI HAINBUCH	52 mm

Idle time	1 s
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Frontal slides (axes W1 to W8)

Number	8
Max. stroke	425 mm

Compound slides (axes X1 to X7 and Z1 to Z7)

Number (stations I, II, III, IV, V, VI, VII)	7
Axial stroke (axes Z1 to Z7)	200 mm
Radial stroke (axes X1 to X7)	80 mm

Cut-off slide (U8 axis)

Stroke	66 mm
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Frontal driven attachments (axes S01 to S08)

Number	8
Max. speed	6,000 rpm

Machine dimensions

Machine total length with bar stock guide and without electric cabinet	6,983 mm
Machine total length without bar stock guide and electric cabinet	4,438 mm
Machine height	3,238 mm
Machine width	2,352 mm

Machine weight

Electric cabinet weight	16,600 kg
Electric cabinet dimensions	2,400 kg
	5,000 x 2,265 x 600 mm

MULTISPINDLE AUTOMATIC LATHES MORI-SAY

MORI-SAY TMZ842CNC



- ✓ High accuracy at mass and series production
- ✓ High rigidity comparable to cam-machines
- ✓ 8 independent AC spindle drive units
- ✓ Control CNC system Siemens SINUMERIC 840D sl
- ✓ Own technological software Tmis
- ✓ Possibility of machine modification to the variant for machining semi-products

This eight-spindle automatic lathe is designed for mass and series production of turned parts up to diameter 42 mm.

The main products which are produced on these machines are mostly spin components for the automotive industry. In addition, the machine produces components for the production of bearings, fittings, valves, components for the aircraft industry, etc.

MULTISPINDLE AUTOMATIC LATHES MORI-SAY

MORI-SAY TMZ867CNC



- ✓ **High accuracy at mass and series production**
- ✓ **High rigidity comparable to cam-machines**
- ✓ **8 independent AC spindle drive units**
- ✓ **Control CNC system Siemens SINUMERIC 840D sl**
- ✓ **Own technological software Tmis**
- ✓ **Possibility of machine modification to the variant for machining semi-products**

Eight-spindle automatic lathe MORI-SAY TMZ867CNC represents a facing machine with horizontal axis of rotation of spindle drum.

The machine enables automatic, highly productive and complex machining mostly of rotary parts from bar material and semi-products as are precise casts and forged pieces. The machine joins the advantages of high productivity of cam multi-spindle automatic machines and complex machining of parts on standard facing machining centres when minimizing demands on built-up area. The machine significantly broadens technological possibilities of machining. After additional assembly of special accessories, the machine can manufacture also two various simple parts- it works as two time four-spindle.

TECHNICAL DATA

TMZ867CNC

Number of spindles	8
Pitch diameter of spindles	480 mm
Max. speed	2,500 rpm
Nominal power output	20 kW

Max. bar stock capacity

Round cross section	∅ 67 mm
Hexagonal cross section	58 mm
Max. length of bar feeding	200 mm

Max. bar capacity (with automatic bar loader)

For clamping collets SK80 BZI HAINBUCH	77 mm
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Idle time

1 s

Frontal slides (axes W1 to W8)

Number	8
Max. stroke	425 mm

Cross slides (axes X1 to X7 and Z1 to Z7)

Number (stations I, II, III, IV, V, VI, VII)	7
Axial stroke (axes Z1 to Z7)	200 mm
Radial stroke (axes X1 to X7)	80 mm

Cut-off slide (U8 axis)

Stroke	70 mm
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Frontal driven attachments (axes S01 to S08)

Number	8
Max. speed	6,000 rpm

Machine dimensions

Machine total length with bar stock guide and without electric cabinet	6,983 mm
Machine total length without bar stock guide and electric cabinet	4,538 mm
Machine height	3,238 mm
Machine width	2,352 mm

Machine weight

Electric cabinet weight	2,400 kg
Electric cabinet dimensions	5,000 x 2 265 x 600 mm



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TAJMAC-ZPS, a. s. | třída 3. května 1180 | 763 02 Zlín, Malenovice | CZECH REPUBLIC
Phone: +420 577 532 072 | www.tajmac-zps.cz | e-mail: info@tajmac-zps.cz