MORI SEIKI
NLX2500SY/700_M730BM

SERIAL NUMBER:NL254120730
OUR REFERENCE: M4877

Basic Machine

J-A00643* NLX2500SY/700_M730BM

Spindle

J-002553 High-output spindle (spindle 1) 26/ 22 kW, 4,000 min-1 (Y, SMC, SY)

Chuck

J-010630 (Spindle 1) KITAGAWA 10" Hollow Chuck Unit BB210A821 + KITAGAWA Hollow Cylinder SS1881K21

J-010650 (Spindle 2) KITAGAWA 6" Hollow Chuck Unit B206A521F + HOWA Solid Cylinder C1SB115M4774

Turret

J-002554 20-station bolt-tightened turret (Y, SMC, SY)

Coolant

J-000320 High-pressure coolant system 1 MPa/ 1.5 MPa (1.1 kW/ 2.2 kW)

Chip disposal

J-003300 Air blow for chuck (spindle 1) (MC, Y, SMC, SY)
The air blow removes chips adhering to the chuck. This prevents loss of gripping accuracy caused by chip accumulation.
The air blow is controlled by an M code in the program.
- M51: Air blow for chuck (spindle 1) ON
- M59: Air blow for chuck (spindle 1) OFF

It is also possible to set a timer, so that it turns off after a specified time.
It can also be turned on and off with the air blow button on the front of the operating panel.
※Depending on the parameters, the spindle may be jogged during air blow.

J-003290 Chip conveyor (right discharge, hinge type) (/700)
Chips are loaded onto hinge type plate and discharged to outside of the machine.
Effective in discharging long chips.
Not suitable to discharge minute powdery chips generated when machining cast or gun metal etc because chips may flow into coolant tank.
Suitable for conveying chips such as steel (long, short), aluminum (long), SUS (long, short), brass (long), copper (long
·MC, Y, S, SMC, SY - Chip conveyor capacity: 470 L/h - Coolant throughput: Max. 240 L/min
·MC, Y, S, SMC, SY: NP-00063.R6 (Enomoto BeA)

Automation

J-002253 Bar feeder I/F
This is the interface for the bar feeder, which increases productivity by feeding bar material automatically.

Other (Machine Option)

J-000860 Dry anchor

J-002276 Chuck foot switch (double) for spindle 1, 2

J-000855 Signal tower 3 layers (red, yellow, green).
This signal tower informs the operator of the machine's status with lights and a buzzer.
Red: When an alarm occurs a buzzer sounds and the signal tower light comes on.
Yellow: When the program end is executed, a buzzer sounds and the signal tower light comes on.
Green: During NC operation, the signal tower light comes on. (The buzzer does not sound.)
(PATLITE)

J-005390 Total counter
Total counter counts the number of machined workpieces.
The counter is electronic and retains the data by means of a built-in lithium battery. The battery life is approximately seven years.
8-digit display
0731 301 (NIHON HENCSTRA)

J-005391 Workpiece counter
When the number of machined workpieces reaches the preset value, the machine will perform one of the following operations: start interlock or block delete.
6-digit display
0732 002 (NIHON HENCSTRA)

Special Constructions

SK001	Transformer
SK002	MORI-APL Desktop programming software

Services provided with this machine:

SK003	Transportation to BSL Industries, Tamworth.
SK007	Installation of machine at BSL Industries, Tamworth.
SK008	Operator / Programmer training - 5 days, on site at BSL Industries, Tamworth.

Total Package Price for NLX2500SY/700 machine **£131,000.00**

Attachment

Technical Description

Basic machine

The specifications below apply to a basic machine without additional options.
Specifications in square brackets [ ] are values or features for a machine with additional options.

Capacity

Swing over bed	mm (in.)	920 (36.22) <Interfere with front cover: 599 (23.58)>
Swing over cross slide	mm (in.)	742 (29.21)
Maximum turning diameter:		
- For 35mm(1.37in.) overhang of O.D. cutting tool	mm (in.)	366 (14.41)
- For 40mm(1.57in.) overhang of O.D. cutting tool	mm (in.)	356 (14.02)
Standard turning diameter:		
- For 35mm(1.37in.) overhang of O.D. cutting tool	mm (in.)	271 (10.67)
- For 40mm(1.57in.) overhang of O.D. cutting tool	mm (in.)	275 (10.83)
Maximum turning length	mm (in.)	705 (27.76)
Bar work capacity	mm (in.)	80 (3.15)

Travel

X-axis	mm (in.)	260 (10.24)
Y-axis	mm (in.)	±50 (±1.97)
Z-axis	mm (in.)	795 (31.30)
Spindle 2 <B-axis>	mm (in.)	734 (28.90)

Spindle 1

Maximum spindle speed	min^{-1}	4,000
Type of spindle nose		JIS A_2-8
Through-spindle hole diameter	mm (in.)	91 (3.58) [111 (4.37)]
Spindle bearing inner diameter	mm (in.)	140 (5.51)
Minimum spindle indexing increment	deg.	0.001

Spindle 2

Maximum spindle speed:		
- Standard	min^{-1}	6,000
- Through-spindle hole diameter 73 mm (2.87 in.)	min^{-1}	[5,000]
Type of spindle nose:		
- Standard		JIS A_2-5
- Through-spindle hole diameter 73 mm (2.87 in.)		[JIS A_2-6]
Through-spindle hole diameter:		
- Standard	mm (in.)	43 (1.69)
- Through-spindle hole diameter 73 mm (2.87 in.)	mm (in.)	[73 (2.87)]
Spindle bearing inner diameter:		
- Standard	mm (in.)	85 (3.35)
- Through-spindle hole diameter 73 mm (2.87 in.)	mm (in.)	[120 (4.72)]
Minimum spindle indexing increment	deg.	0.001

Turret

Number of tool stations	tools	12 [10] [20]
Shank height for square tool	mm (in.)	25 (0.98)
Diameter of boring bar shank part	mm (in.)	50 (1.97) <Spindle 2: 32 (1.26)> [Double boring bar holder: 32 (1.26)]
Turret Indexing time	sec	0.27
Maximum rotary tool spindle speed	min^{-1}	6,000

Feedrate

Rapid traverse rate:		
- X-axis	mm/min (ipm)	30,000 (1,181.10)
- Y-axis	mm/min (ipm)	10,000 (393.70)
- Z-axis	mm/min (ipm)	30,000 (1,181.10)
- B-axis	mm/min (ipm)	30,000 (1,181.10)

Motors

Spindle 1 drive motor:		
- 25%ED/50%ED/cont	kW (HP)	18.5/18.5/15 (24.67/24.67/20.00)
- 10 min/30 min/cont	kW (HP)	[26/26/22 (34.67/34.67/29.33)]
Spindle 2 drive motor <30 min/cont>	kW (HP)	11/7.5 (14.67/10.00)
Rotary tool spindle drive motor <3 min/5 min/cont>	kW (HP)	5.5/5.5/3.7 (7.33/7.33/4.93)
Feed motor:		
- X-axis	kW (HP)	3.0 (4.00)
- Y-axis	kW (HP)	3.0 (4.00)
- Z-axis	kW (HP)	3.0 (4.00)
- B-axis	kW (HP)	2.0 (2.67)

Power Sources

Electrical power supply <cont>	kVA	37.6
Compressed air supply	MPa (psi), L/min (gpm)	0.5 (72.5), 250 (66)

Tank Capacity

Coolant tank capacity	L (gal.)	366 (96.62)

Machine Size

Machine height	mm (in.)	2,187 (86.10)
Floor space <width x depth> <with chip conveyor>:		
- Right disposal conveyor	mm (in.)	3,994 x 2,080 (157.24 x 81.89)
- Rear disposal conveyor	mm (in.)	3,056 x 2,977 (120.31 x 117.20)
Mass of machine	kg (lb.)	6,360 (13,992)

NC Unit

CNC Unit M730BM

Controlled axis

Controlled axis	X, Z, C, Y, B, 6
Simultaneously controllable axes	X, Z, C, Y
Least input increment	0.001 mm (0.0001 in.)
Least command increment	0.001 mm (0.0001 in.)
Max commandable value	±99,999.999 mm (±9,999.9999 in.)
Inch/metric conversion	
Machine lock	
Chuck and tailstock barrier	
Chamfering ON/OFF	
Backlash compensation	±9999 pulses
Rapid traverse/cutting feed backlash compensation	
Stored pitch error compensation	
Inclined angle offset	
Inclined axis control for arbitrary axis <Y-axis>	

Operation

Dry run	
Single block	
Jog feed	0 - 5,000 mm/min (0 - 196.85 ipm) <20 steps>
Manual return to reference position	
Manual handle feed	1 unit per control system: x1, x10, x100

Interpolation functions

Positioning	
Thread cutting/synchronous feed	
Multiple thread cutting	
Retract during thread cutting cycle	
Continuous thread cutting	
Variable lead thread cutting	
High-speed skip	
Return to reference position	
Reference position return check	
Return to second reference position	
3rd/4th reference position return	
Polar coordinate interpolation	
Cylindrical interpolation	
Helical interpolation	Circular interpolation + Linear interpolation <max. 2 axes>

Feed functions

Rapid traverse override	F0/5/10/25/100% <5 steps>
Feed per minute	
Feed per revolution	
Constant tangential feedrate control	
Cutting feedrate clamp	
Automatic acceleration and deceleration	Liner type <rapid traverse>/ Differential type <cutting feed>
Feedrate override	0-200% <10% increments>
Feedrate override cancel	

Program input

Optional block skip	1 block
Max commandable value	±8 digits
Program number	4-digit O code
Sequence number	5-digit N code
Decimal point programming	Electrical calculator type decimal point programming is changeable using parameter.
Diameter specification <X-axis>	
Plane selection	
Rotary axis designation	
Rotary axis roll-over	
Work coordinate system	
Chamfering/Corner R	
Programmable data input	
Sub-program call	Up to 8 nestings
Custom macro	200 sets <#100 - #199, #500 - #599>
Interruption type custom macro	
Single canned cycle	
Multiple repetitive cycle	
Multiple repetitive cycle II	Pocket profile, zigzag thread cutting
F15 format	
Absolute/incremental command	X(U), Z(W), Y(V), C(H), B

Miscellaneous function/spindle speed function

Miscellaneous function	M4-digit
Auxiliary function lock	
Multiple miscellaneous function commands	3 commands (Standard Only for Limited M Codes)
Spindle speed function	S5-digit
Constant surface speed control	
Spindle override	50-150% <10% increments>
Spindle orientation <spindle 1>	Without lock
Spindle orientation <spindle 2>	Without lock
Load monitoring function A	
Spindle synchronized control	
Multiple-spindle control	
Synchronous tapping <for rotary tool spindle>	

Tool function/Tool offset function

Tool function	T4-digit
Number of tool offsets	80 sets
Tool nose radius compensation	
Tool geometry offset/Tool wear offset	
Tool life management	80 sets
Tool offset measurement direct input	
Tool offset measurement direct input B	In-machine presetter
Y-axis offset	

Editing function

Part program storage	320 m (1,049.92 ft)/128 KB
Number of stored programs	200 programs
Background editing	
Expanded tape editing	
Undo/Redo function <MAPPS>	
Line no. display <MAPPS>	

Setting and display

Status display	
Clock function	
Position read-out, position display	
Program comment display	Program name 48 characters
Parameter setting display	
Self-diagnosis function	
Alarm display	
Alarm history display	
Operator's message history display	
Operation history display	
Help function	
Running time display/No. of parts display	
Actual feedrate display	
Display of actual spindle speed and T code	
Operation panel: Display section	10.4" color TFT
Regular interval maintenance screen	
Screen clear	It is possible to set on the screen of saving electricity power.

Data input/output

I/O interface	USB
50 MB Program storage area, updatable <for card DNC operation function, for data backup> <MAPPS>	Files up to 10 MB in size can be edited

Standard Equipment

Control unit

- Operating system <operation panel>: MAPPS IV

Spindle specification

- Spindle drive motor is 18.5/18.5/15 kW (24.7/24.7/20 HP) <25% ED/ 50% ED/ cont.> and max. spindle speed is 4,000 min^{-1}. <spindle 1>
- Spindle drive motor is 11/7.5 kW (15/10 HP) <25% ED/ cont.> and max. spindle speed is 6,000 min^{-1}. <spindle 2>

Turret

- Turret tool attachment method is 12-station bolt-tightened type and turret indexing time is 0.27 sec a station.
  This time is measured when the number of tools attached to the turret is half the number of tool stations. The turret indexing time may be longer depending on the number and arrangement of tools.
- Rotary tool spindle drive motor is 5.5/5.5/3.7 kW (7.5/7.5/5 HP) <3 min/5 min/cont.> and max. rotary tool spindle speed is 6,000 min^{-1}.
- Overhang of O.D. cutting rotary tool is 50 mm (2.0 in.).

Coolant

- Coolant system <325 W, 50 Hz/520 W, 60 Hz>

Measurement

- Manual in-machine tool presetter <spindle 1>, Pivoting type
- Manual in-machine tool presetter <spindle 2>, Removable type

Safety features

- Full cover
- Door interlock system <incl. mechanical lock>
- Low hydraulic pressure detecting switch
- Low air pressure detecting switch

Others

- Air blow for chuck <spindle 2>
- Automatic power-off system
- Workpiece unloader <built-in type>
- Spindle 2 workpiece ejector
- Chuck foot switch <single> <controlled by pedal>
  Double foot switch is obliged to use with EN regulation compliance machine for security reason.
- LED worklight
- Hand tools
- One set of operation and programming manuals