DMG MORI

Order Acknowledgement dated 18/09/18

# 1* EX DEMONSTRATION DMG MORI NTX 2000
# Our Reference: M9664
# Serial Number: NTX21180210
# Year of Manufacture: 2018

## Basic Machine

J-A01418* NTX 2000 | 1500SZM

## Control

J-004222* Control F31iB5 with CELOS

J-003261* CELOS - ERGOline Touch
to facilitate machine operation incl. 21.5 "
ERGOline Touch ® control with multi touch
screens. Uniform management,
documentation and visualization of order,
process - and machine data.
Networkable with CAD / CAM
User friendly and productive MAPPS
system

## Spindle

J-000206 Spindle 1 through-spindle hole dia. 91 mm
(spindle speed 4,000 min-1, 26/ 22 kW)

The bar machining capacity of standard specification
spindle 1unit is modified from φ65 mm to φ80 mm.
This specification does not include chucks and cylinders
which support spindle 1.
They need to be selected separately.
Spindle 1 spindle through-hole diameter: φ91 mm
Spindle 1 bar machining capacity: φ80 mm
Spindle 1 maximum rotation speed: 4,000 min-1
Spindle 1 output (30 min./Continuous): 26/22 kW

## Chuck for Main spindle

J-000207 (Spindle 1) KITAGAWA 10"" Hollow Chuck
BB210A821 + Kitagawa Hollow
SR1781C21

## Chuck for Counter spindle

J-011379 (Spindle 2) KITAGAWA 8 "" Hollow Chuck Unit
BB208A621 + Kitagawa Hollow SR1566C21

## Equipment for Chucks

J-002276 Chuck Foot Switch (Double)
For Main And Counter Spindle

Chuck unclamping and clamping are operated by separate foot switches to prevent mistakes. To activate a foot switch, you must first press the locking plate of the foot switch forward to release the switch lock. Chuck unclamping and clamping are performed with two sets of double foot switches, one for the main spindle and one for the sub spindle.

## Tailstock

J-003188 Spindle 2 Tailstock Specification

Provides a center holder which can be mounted into spindle 2 to use it as a tailstock. This allows you to process the tip of the workpiece. The tailstock positioning motor includes a brake, to prevent the sub spindle from being pushed back when used as a tailstock.
× The center is not included with this option.
Please purchase separately.

## Tool Magazine

J-004893 Tool storage capacity 76 tools (Capto C6)

## Coolant supply / Chip removal

J-G00428 Usable coolant type: Water-soluble
To avoid the risk of poor accuracy or machine trouble, do not use oil-based coolant. Please select oil-based coolant specification in case of using oil-based coolant.

J-004929 Chip conveyor (right discharge, hinge type + scraper type with drum filter type) (/1500)

This allows disposal of any kinds of chips. It is especially suited for disposal of cast metal and aluminum chips.

1) Discharged chips and dirty coolant are put in the primary conveyor.
2) Long chips are discharged by the hinge conveyor, while dirty coolant and short chips go to the secondary conveyor.
3) Dirty coolant is passed through the filter, and short chips and sludge clinging to the filter are washed away by the powerful backwashing unit and discharged by the scraper conveyor.
4) The filter is always kept clean by the powerful backwashing unit, so it does not get clogged.

J-004454 Interface for Super-high-pressure Coolant System (7.0 MPa) (Ogura Clutch/ Shinano Kikou) (Through-spindle Coolant System for Tool Spindle)

This I/F is for mounting the high-pressure coolant system (separate type) on the machine. Including the electrical components and coolant piping.
*The high pressure coolant unit (separate type) is not included.
*When using Super-high-pressure coolant system, there is a possibility that the machining accuracy may be effected by rising of the coolant temperature. It is highly recommended to select coolant chiller and mist collector to reduce the influence on the machining accuracy.

J-004253 Coolant flow switch for through-spindle coolant system

"The flow switch detects if the through spindle coolant is flowing or not. An alarm occurs when the flow amount becomes less than the set level (*Note 2) for a specified time. An alarm halts the machine, stops feeding and spindle rotations. Since this can detect whether coolant is being supplied or not, it prevents defective workpieces.
(*Note 1) In the case of hole machining with a small diameter drill, coolant flow may not be detected.
(*Note 2) It is necessary to set the level every time according to tools to be used."

J-022270 Rotating Clear-view Window

J-003220 Coolant Gun

Useful for flushing away chips on the workpiece and machining chamber covers. Coolant gun at the front of the machine, with magnet to attach to the machine cover when not used. Pressing the coolant gun button on the control panel activates the coolant pump, and using the gun's trigger starts and adjusts coolant spray. The coolant pump automatically stops after 2 minutes.

J-003236 Coolant float switch (lower limit detection)

Monitors coolant level. (lower limit detection)
An Alarm on the operation panel occurs when the coolant falls to a set level.

J-004931 Air blow for chuck (spindle 1)

An air jet port on the upper side of the chuck ejects air to remove chips adhering on the jaws and chuck. This prevents loss of gripping accuracy caused by chips caught in the machine. An air blow nozzle to attach to the air get port is included.

J-005080 Mist Collector Interface (Duct Only, Dia.200 mm)

Interface for attaching a mist collector to collect dust and particles and to condense oil mist and smoke generated during the machining process. Includes only the duct outlet from the machine body. Mist collector, duct hose, drain hose, stand, electric parts, etc. not included.

J-002148 Oil Skimmer

Removes oil that rises to the surface of the coolant in the coolant tank. Maintains coolant quality, slows coolant deterioration. Reduces cost of waste oil handling.

## Measuring / Monitoring

J-004281 Automatic in-machine tool presetter for tool spindle and turret 2 (turret 2 specifications)

Allows highly efficient tool measurement, improving ease of setup. The presetter, which is stored in the Spindle 1 chuck cover, is moved in/out automatically (M codes) and measures the tool in the tool spindle.
An optical type probe sensor attached to the tool spindle measures the tool in Turret 2.
※The type is subject to change without notice.

Tool spindle measurement LP2H (Renishaw)/ Turret 2 measurement OMP60 (Renishaw)
※Only available for Turret 2 specifications.

## Automation

J-004166 Signal lamp 4 colors (Red, yellow, green, blue)

Indicate machine status by the LED color.
Mounted at top front of machine for visibility from distance. Bright LED lighting with 360 degree viewing angle. Low maintenance and low power consumption.
Color Specification (2 type):
<Type 1 (Standard)>
・Red: general error
・Yellow: intervention necessary (Machine Error)
・Green: automatic mode
・Blue: set-up mode
<Type 2>
・Red: general error
・Yellow: Program end (M02/M30)
・Green: automatic mode
*Does not include buzzer, can be ordered separately

J-015301 Workpiece unloader (spindle 2, workpiece receiver) + workpiece conveyor + external workpiece bucket)

J-G00998 Spindle 2 workpiece ejector (cylinder type)

This is option for the Spindle 2 specifications.
A workpiece can be unloaded using the workpiece unloading device which is directly driven by an air cylinder.

J-004290 Bar feeder I/F (LNS) (multiple)

This is the interface for the bar feeder, which increases productivity by feeding bar material automatically.

**General Options**

J-001247 Dry anchor

Anchors are fitted to prevent the machine from moving due to small earthquakes and vibrations during operation. Fork-cut anchors must be driven in before installation.

J-002210 Multi Dry Filter

The multi dry filter removes moisture and oil content from the compressed air supplied from the compressor. It prevents problems of pneumatic devices that may be caused by moisture and oil contained in the air. With auto-drain and differential pressure gages for filter monitoring (IN / OUT).
・Filter Unit: T105A-1000MSP (Maeda Shell).

J-003686 Manual Pulse Generator (Separate Type)

・Handheld manual pulse generator facilitates set-up
・Connected to operation panel by robust coiled cord
・Rear-surface magnet for storing on operator panel or handy temporary placement as desired on the machine
・Equipped with high intensity white LED useful for illuminating the workpiece and tool
・Simple switching between the operator panel and handheld manual pulse generator operation
Specifications
・Pulse generator resolution: 100 pulses / rotation
・Feed axis selection rotary switch
・Pulse multiplier rotary switch: x1, X10, x50, x100
・Emergency stop button
・High intensity LED light

## Options for Control

J-008707 Installation of high-speed skip terminal

The skip function operates based on a high-speed skip signal (connected directly to the NC; not via the PMC) instead of an ordinary skip signal.
4 high-speed skips are available and terminal blocks are used to connect the signals.
Delay and error of the skip signal input is 0-2 msec at the NC side (not considering those at the PMC side).
This high-speed skip signal input function keeps this value to 0.1 msec or less, thus allowing high-precision measurement.

J-G00618 X-Axis Direction, JIS/ISO Compliant
The X-axis moves in the direction that is compliant with JIS/ISO.

## Options for MAPPS / CELOS Control

J-004769 DMG MORI Messenger

It's possible to monitor how machines run on real time basis not depending on the place and time. Due to the monitoring customers can keep the high efficiency and suppress the downtime of the machines.
It's also possible to provide analysis result of machine productivity and running ratio by specifying period and shift. With the analysis result customers can estimate the production volume accurately.

## Services

J-004965 3D Model Data of Machine

3D model data of the machine is provided.
BSL Industries Limited can use the 3D model data in their CAD system for simulation.

The following two types of 3D model data can be provided:

・ Model for checking the outer shape of the machine (to be used to create the layout of the factory)

・Model for checking interference inside the machine (to be used to check machining programs and tool paths)

*Shipped against a signed non-disclosure agreement

*To avoid technical information from being leaked, the data to be provided is simplified.

Information other than the machine shape and interference inside the machine is not included.

**Special constructions services**

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|---|---|
| SK001/002 | High Pressure (20-70 Bar* single fixed pressure setting) Coolant Unit with twin cartridge filtration system (*only for tool / holder with Max. 2mm orifice - over 2mm will result in a reduction of pressure) |
| SK003/4/5 | Power skiving function (retrofit) |
| SK006 | Transformer |
| SK007/018 | Transportation to BSL Industries Limited |
| SK008 | Installation & boltdown at BSL Industries Limited |
| SK009 | Operator / programing training at BSL Industries Limited for 10 days |

SK012

DMG MORI Messenger to be installed on the following existing machines at BSL Industries Limited:
NMV5000 - NM501JK0592
NTX2000 - NTX20130611
NTX2000 - NTX20111202
NLX2500SY - NL254130936
NLX2500SY - NL254120730
NVX5100 - NV502130614

| | |
|---|---|
| SK015 | Chip Bin |
| SK016 | Machine Mat |

**Special Offer Package Price:** **£499,500.00**