

CNC ■ Spindle ■ Slide  
Precision Lathe

# 4- E- XXO

**TAKAMAZ**

High Quality Compact Machine Designed for  
Accurate Cutting and Ease of Use

CNC 1 Spindle 1 Slide Precision Lathe

**XG-4**

**TAKAMAZ NEW COMPACT MACHINE!**

Unprecedented productivity with a 4-inch,  
gang type, built-in motor spindle!!



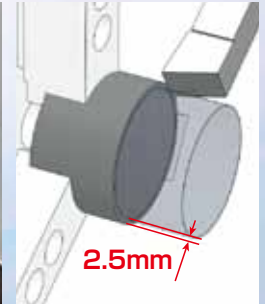
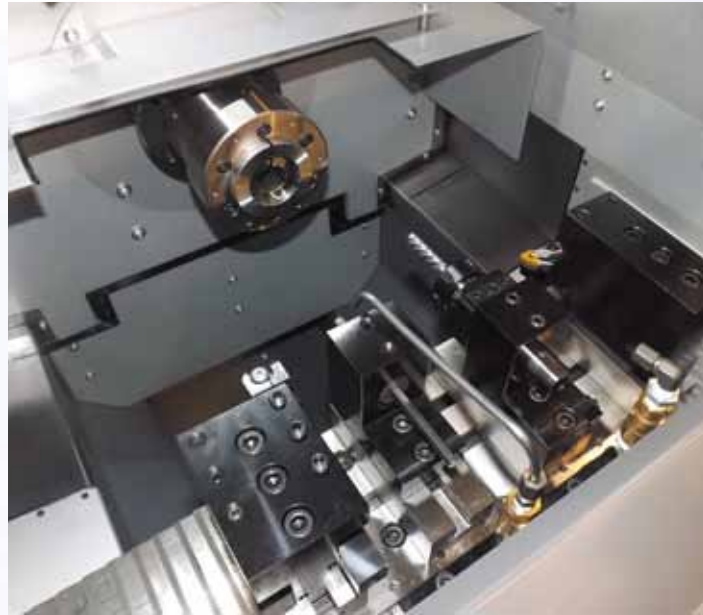
※The image shows the loader equipped machine.

# Improved Productivity Through Higher Accuracy and Shorter Cycles!!

A 4-inch built-in motor spindle with high-speed specifications (max. 8,000 min<sup>-1</sup>) is featured as standard, realizing higher cutting accuracy and shorter spindle acceleration/deceleration times than existing machines. (Comparison: Spindle acceleration/deceleration time up to 40% shorter)

A high level of cutting accuracy can be maintained by taking advantage of low vibration of the built-in motor spindle, in contrast to belt drive, and this helps with mass production of precision parts.

In addition, locating the holder at a position within the operator's reach (spindle center height: 950 mm) and extending the slide stroke to 200 mm has resulted in a machine configuration that assures ample working space.



[O.D. heavy cutting]

Cutting cross-sectional area( $t \times f$ )  
**0.70mm<sup>2</sup>**

7.5/5.5/3.7 kW motor allows heavy cutting.

## XG-4 Standard Machine

### Designed for Space Savings + Operability

The standard machine has a compact design with a machine width of 1,506 mm, or 780 mm for the loader equipped machine, and its size makes it easy to install in dead space in a plant.



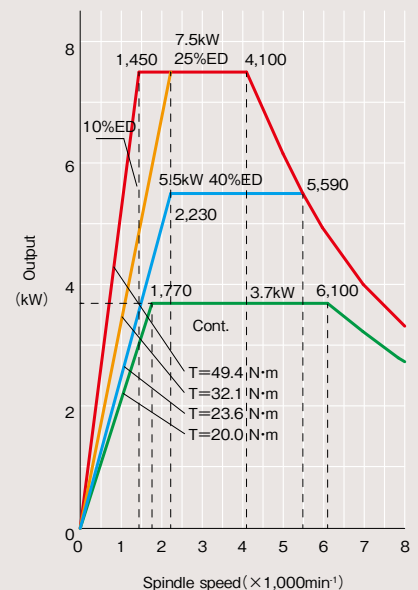
The operation panel is a touch panel, with a streamlined, simple screen displaying the minimum required buttons and enabling easy, intuitive operation like the operations on a tablet computer while ensuring visualization and efficiency.

Automatic backup of cutting programs, useful in the event of unexpected trouble, is also featured and can be selected from an SD card, a USB flash memory device or the internal memory of the NC unit for storage.



### Spindle power characteristic curve

■ Max.8,000min<sup>-1</sup> Standard type (AC 7.5/5.5/3.7 kW) φ65





### Operator-oriented Design

The machine configuration provides extensive working space in a small body through perfect placement of components. The operator-oriented design allows the door to be fully opened in unison by lifting the operation panel.

A full-width door above the holder mounting position.  
The door opening is 590 mm wide.



### TAKAMAZ Loader System



The “WA30” compact servo loader utilizing upper space in the machine is adopted to meet the user’s needs.

The system ensures speedy and accurate workpiece transfer, and helps to achieve labor savings and higher productivity. What is more, combining it with TAKAMAZ peripheral devices for automation allows the construction of versatile production lines.

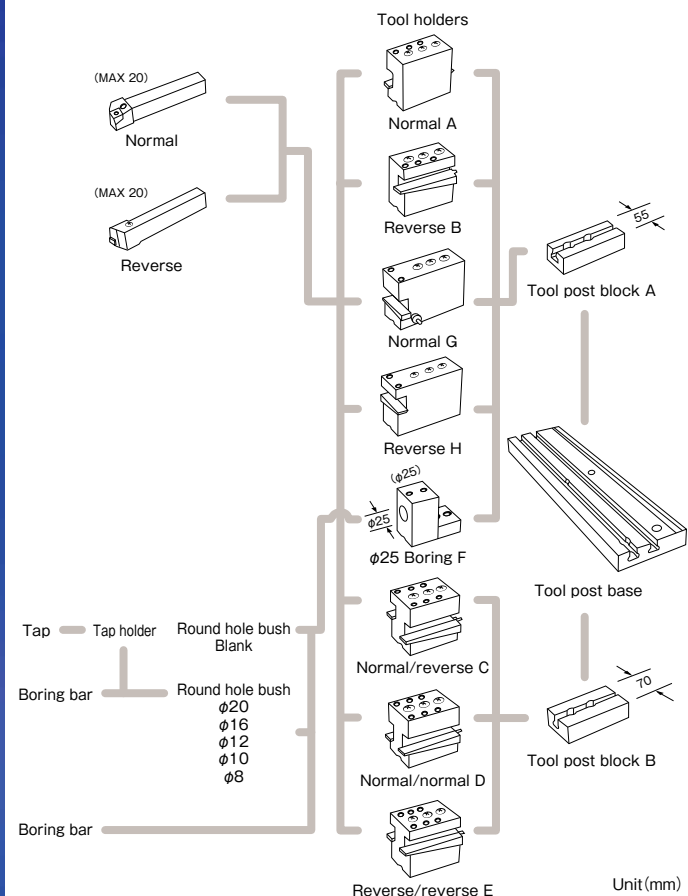
#### Loader transfer capacity

Item		Unit	WA30
Loading Time (Reference)		sec.	4
Transport Work Dimension	Diameter x Length (Reference)	mm	φ30×50
	Weight	kg	0.3 (One side)

※Varies depending on the workpiece shape.

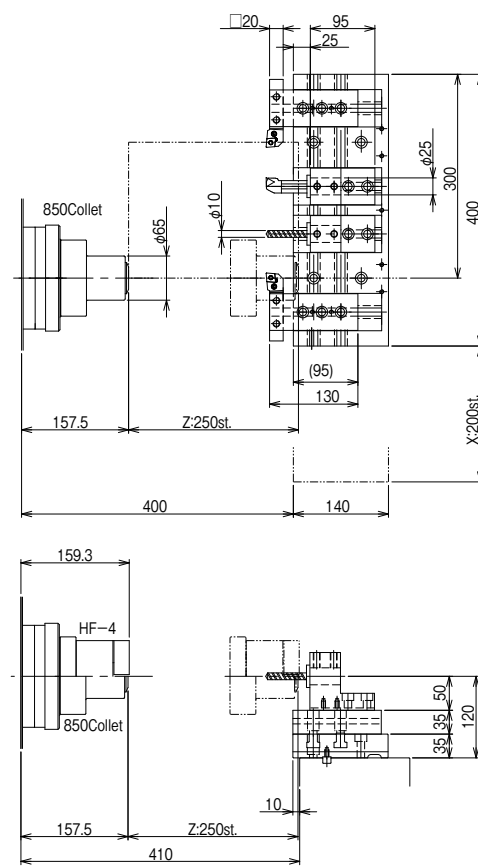
## Tooling System

## TOOLING



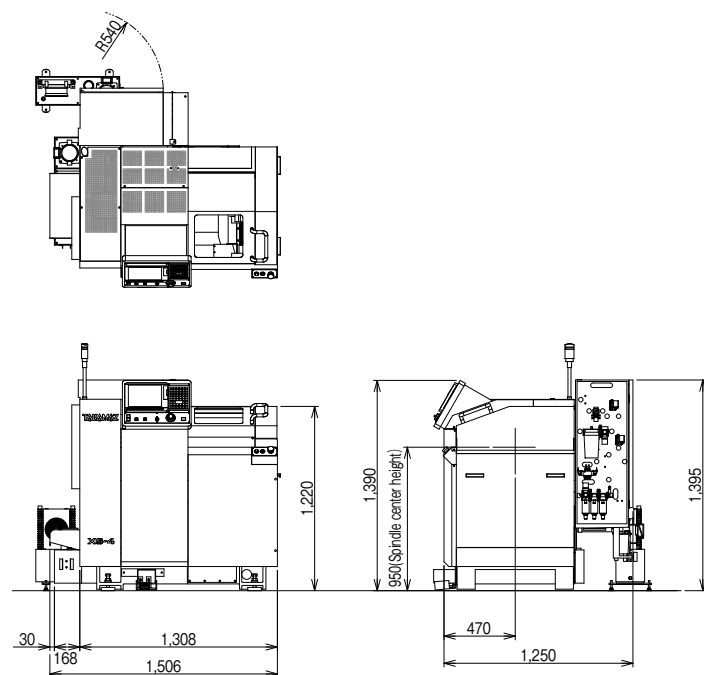
## Stroke-Related Drawing

## STROKE & GANG

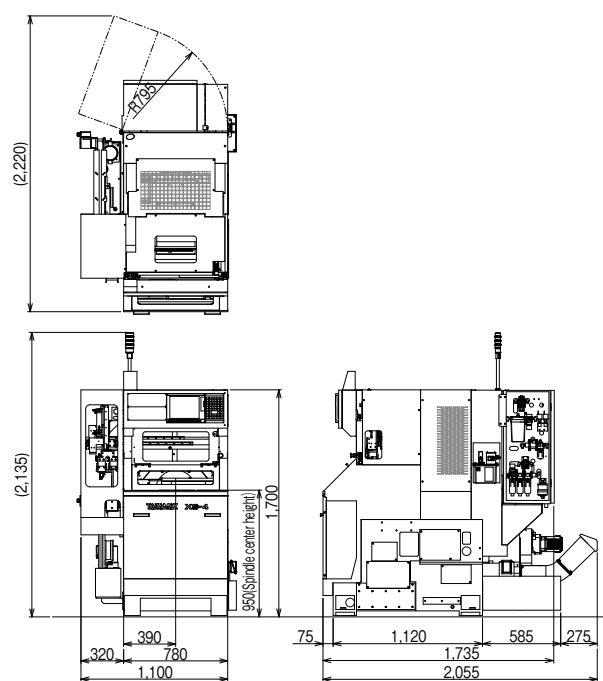


## Floor Space Drawing

## SIZE & FLOOR SPACE



### Loader Specifications



Unit (mm)

## Machine Specifications

Item		Unit	XG-4
Capacity	Optimum turning diameter	mm	φ30
	Max. turning diameter	mm	φ170
	Max. turning length	mm	175
	Chuck size	inch	Collet, 4
	Max. swing over bed	mm	φ380
Spindle	Spindle nose	JIS	A <sub>2</sub> -4
	Spindle bearing I.D.	mm	φ65
	Through-hole on spindle	mm	(φ20)
	Spindle speed	min <sup>-1</sup>	Max.8,000
Tool post	Type		Gang type
	Tool shank	mm	□20
	Boring holder I.D.	mm	φ25
	Max. stroke	mm	X:200 Z:250
	Rapid traverse rate	m/min	X:18 Z:18
Motors	Spindle motor	kW	AC7.5/5.5/3.7
	Feed motor	kW	X:AC0.75 Z:AC0.75
	Coolant motor	kW	AC0.18
	Hydraulic motor	kW	(AC0.75)
Size	L×W×H	mm	1,506×1,250×1,395 (780×1,735×1,700*)
	Machine weight	kg	1,550 (1,700*)
Total electric capacity		KVA	14

\*When the loader is mounted.

( ) : Option

## Standard Accessories

- ☐ Boring holder ..... 1 set  
☐ O.D. holder ..... 1 set  
☐ Collet flange ..... 1 set  
☐ Air solid chucking cylinder ... 1 set  
☐ Spindle indexing device (radiator) ... 1 set
- ☐ Thread cutting unit  
 (Including constant surface speed control) ... 1 set  
☐ Service tool kit ..... 1 set  
☐ TAKAMAZ instruction manual ... 1 set

## Optional Accessories

- ☐ Tool holders  
☐ Collet chucks  
☐ Hydraulic chucks  
☐ Hydraulic unit (With a separate tank)  
☐ TAKAMAZ loader system  
☐ Spindle indexing device (Electric)  
☐ Chip conveyor\*1  
☐ (Floor type / Spiral type)  
☐ Front air blower
- ☐ Rear coolant unit  
☐ Tool post air blow / coolant  
☐ Coolant unit (116 lit.)  
☐ Work light  
☐ Signal light (1-tier / 2-tier / 3-tier)  
☐ Automatic fire extinguisher  
☐ Automatic power shut-off device  
☐ Special color  
☐ Others\*2

\*1 Can only be installed at the rear with the loader specification and at the left side with the standard specification.

\*2 For more information on attachments, consult our sales representative.

## Controller Specifications

Item	TAKAMAZ & MITSUBISHI M80
Controlled axes	2 axes (X,Z)
Simultaneously controllable axes	Simultaneous 2 axes
Least input increment	0.0001mm (X in diameter)
Least command increment	X:0.00005mm Z:0.0001mm
Auxiliary function	M3 digits
Spindle function	S4 digits
Tool function	T2 digits
Tape code	EIA(RS232C)/ISO(840) automatic recognition
Cutting feedrate	1~5,000mm/min
Command system	Incremental / Absolute
Linear interpolation	G01
Circular interpolation	G02,G03
Cutting feedrate override	0~150%
Rapid traverse override	F0,100%
Program number	Program file name 32 characters
Backlash compensation	0~9,999μm
Program memory capacity	500Kbyte (1,280m)
Tool offsets	99 sets
Registered programs	1,000 pcs.
Tool geometry / Wear offset	Standard
Canned cycle	G90,G92,G94
Background editing	Standard
Direct drawing dimension programming	Standard
Custom macro	Standard
Nose R compensation	G40,G41,G42
Inch / Metric conversion	G20 / G21
Programmable data input	G10
Multiple repetitive cycle	G71~76
Multiple repetitive cycle II	Pocket-shaped
Canned drilling cycle	Standard
Chamfering / Corner R	Standard
Constant surface speed control	G96,G97
Variable lead thread cutting	G34
Clock function	Standard
Alarm history display	512 pcs.
Sub-program call	up to 8 loops
Decimal point input	Standard
2nd reference point return	G30
Work coordinate system setting	G50,G54~59
Stored stroke check	Standard
Input / Output interface	SD card, USB Flash Memory, Ethernet
Graphic trace	Standard
Graphic check	Standard
Tool life management	Standard
Multiple M codes in one block	Max.3
Set of Instruction Manuals for Control Device	CD-ROM

## Optional Specifications

Spindle orientation  
RS232C

- If you modify the machine or replace the loader yourself, our after-sales service may not be available.

# TAKAMAZ

## TAKAMATSU MACHINERY CO.,LTD.

■ HEAD OFFICE & PLANT  
1-8 ASAHIGAOKA HAKUSAN-CITY ISHIKAWA JAPAN. 924-8558 TEL +81-(0)76-274-1403 FAX +81-(0)76-274-8530

## TAKAMATSU MACHINERY USA INC.

■ CHICAGO HEAD OFFICE  
1280 LANDMEIER ROAD ELK GROVE VILLAGE, IL 60007 USA TEL +1-(0)847-981-8577 FAX +1-(0)847-981-8599  
 ■ CINCINNATI OFFICE  
5233 MULHAUSER ROAD, WEST CHESTER TOWNSHIP, OH 45011 USA TEL +1-(0)513-870-9777 FAX +1-(0)513-870-0325  
 ■ GREENVILLE OFFICE  
506 MATRIX PARKWAY PIEDMONT, SC 29673 USA TEL +1-(0)847-981-8577

## TAKAMAZ MACHINERY EUROPE GmbH

INDUSTRIEGEBIET, DIEPENBROICH 27 D-51491 OVERATH, GERMANY  
TEL +49-(0)2206-866-150 FAX +49-(0)2206-865-123

## TAKAMAZ MACHINERY (HANGZHOU) CO.,LTD.

■ HANGZHOU HEAD OFFICE  
NO.6800, JIANGDONG 3RD ROAD, JIANGDONG INDUSTRIAL PARK, XIAOSHAN, HANGZHOU, ZHEJIANG, CHINA  
TEL +86-(0)571-8287-9709 FAX +86-(0)571-8215-3732  
 ■ GUANGZHOU OFFICE  
ROOM 1316, NO.2, KEHUI FOURTH STREET, NO.99 OF SCIENCE ROAD, LUOGANG DISTRICT, GUANGZHOU  
TEL +86-(0)20-8210-9921 FAX +86-(0)20-8210-9921

## TAKAMATSU MACHINERY (THAILAND) CO.,LTD.

■ BANGKOK HEAD OFFICE  
888/59 MOO 9, TAMBOL BANGPLA, AMPHUR BANGPLEE, SAMUTPRAKARN PROVINCE, THAILAND  
TEL +66-(0)2-136-7831 FAX +66-(0)2-136-7834  
 ■ EASTERN SEABOARD BRANCH  
848/14 MOO 3, TAMBOL BO WIN, AMPHUR SIRACHA, CHONBURI 20230  
TEL +66-(0)38-182-509 FAX +66-(0)38-182-510

[www.takamaz.co.jp](http://www.takamaz.co.jp)

## TP MACHINE PARTS CO.,LTD.

128/345 MOO 1 THEPARAK ROAD, BANGSAOTHONG SUBDISTRICT, BANGSAOTHONG DISTRICT, SAMUTPRAKARN  
TEL +66-(0)2-706-3820 FAX +66-(0)2-706-3822

## PT.TAKAMAZ INDONESIA

JL. FESTIVAL BOULEVARD BLOK AA 11 NO.30,31 GRAND WISATA TAMBUN, BEKASI 17510  
TEL +62-(0)21-8261-6431 FAX +62-(0)21-8261-6430

## TAKAMAZ MACHINERY MEXICO,S.A.DE C.V.

AVENIDA DE LOS INDUSTRIALES 522, LOCAL 4, INDUSTRIAL JULIAN DE OBREGON, 37290 LEON, GUANAJUATO MEXICO  
TEL +52-477-784-0468

## TAKAMATSU MACHINERY VIETNAM CO.,LTD

NO.25, NGUYEN LUONG BANG, TAN PHU WARD, DISTRICT 7, HO CHI MINH CITY, VIETNAM  
TEL +84-(0)28-5417-3917 FAX +84-(0)28-5417-3919

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The user must not export, sell, or relocate the product, to any country with different regulations or standards.



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