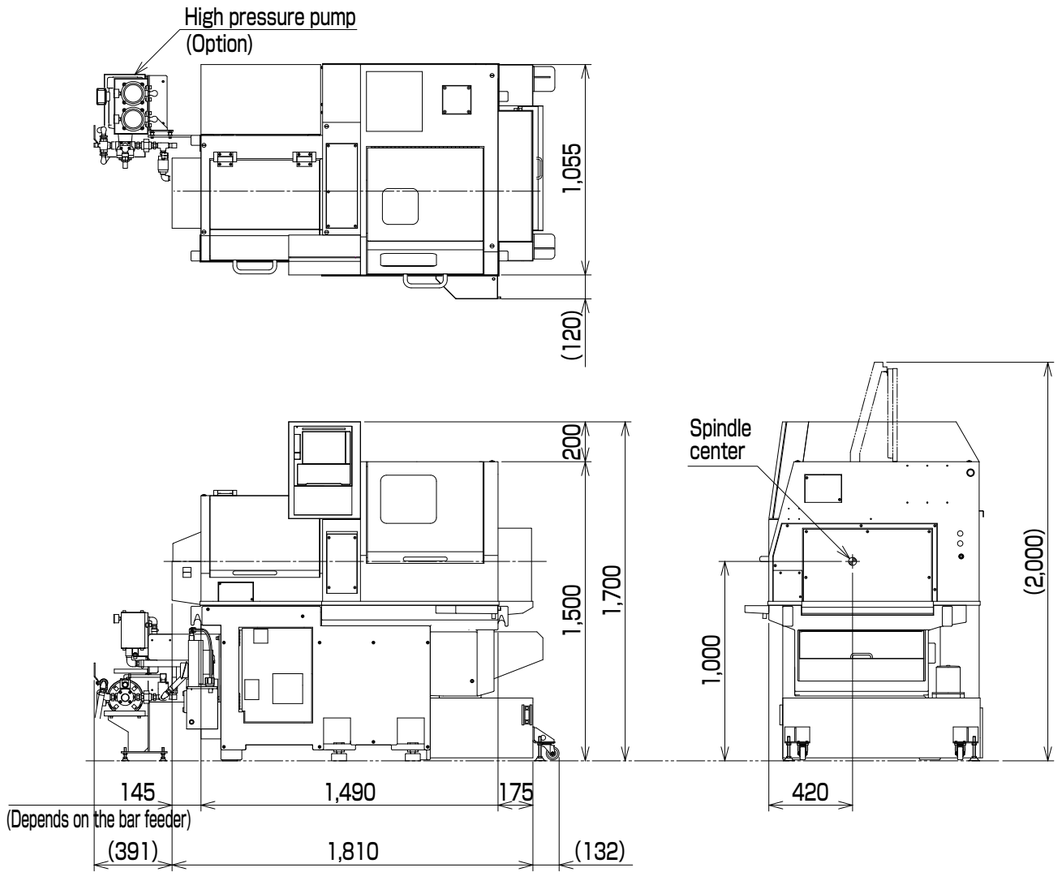
Layout

B075-VR/B0125-VR/B0126-VR/B0205-VR/B0206-VR



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PRECISION TSUGAMI

CNC Precision Automatic Lathe

BO series
B073-VR/B0123-VR/B0203-VR
B075-VR/B0125-VR/B0205-VR
B0126-VR/B0206-VR

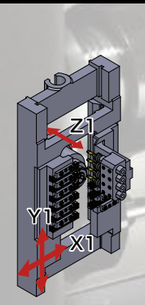
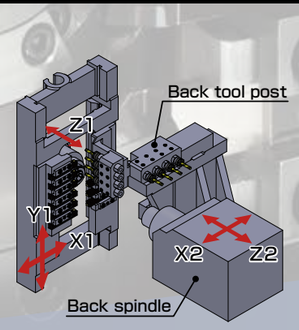
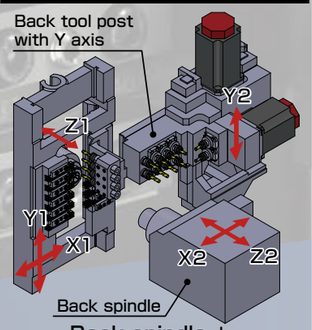
Advanced B07/12/20 series
Realizes further high-speed, high accuracy, and high rigidity

Upgraded B07/12/20-V series Improved machining capabilities and usability.

B0 series

■ Specifications

	B07-VR	B012-VR	B020-VR
Bar stock chucking dia.	ϕ7 mm	ϕ12 mm	ϕ20 mm
Main spindle speed	Max. 15,000 min^{-1}	Max. 12,000 min^{-1}	Max. 10,000 min^{-1}
Back spindle speed	Max. 12,000 min^{-1}		
Main spindle motor output	1.1/1.5 kW	2.2/3.7 kW	3.7/5.5 kW
Back spindle motor output	2.2/3.7 kW		

B073-VR/B0123-VR/ B0203-VR	B075-VR/B0125-VR/ B0205-VR	B0126-VR/B0206-VR
		
Without back spindle	Back spindle + Back tool post	Back spindle + Back tool post with Y axis

OD tool	9 tools (B07-VR: □8 mm B012/20-VR: □12 mm)		
Front drill holder	4 tools (ϕ20 mm)	8 tools (Front side: 4 ϕ20 mm/ Back side: 4 ϕ20 mm)	
Back drill holder	—	4 tools (ϕ20 mm)	—
Back drive	—	Option (Modular type)	4 fixed tools (ϕ20 mm) 6 live tools (ER11)
Total number of tools	13 tools	21 tools	27 tools

Advanced B0 series

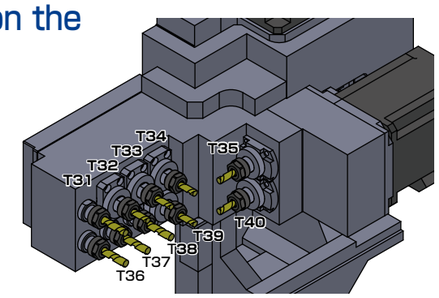
Enhanced machining capability

High output built-in motor is equipped on the main and back spindle of B012-VR and B020-VR.

● Main/back spindle capability

		B012-VR	B020-VR
Main spindle	Output	2.2/3.7 kW	3.7/5.5 kW
	Torque	7.5/12.6 N·m	12.8/19.0 N·m
Back spindle	Output	2.2/3.7 kW	2.2/3.7 kW
	Torque	7.5/12.6 N·m	7.5/12.6 N·m

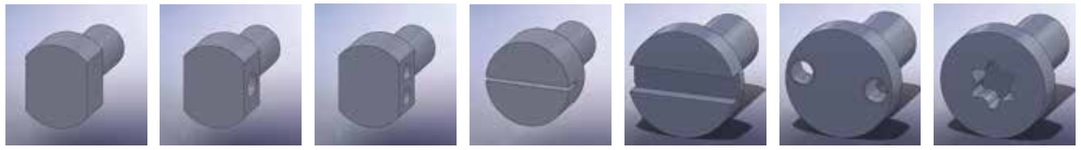
Maximum of 6 live tools can be mounted on the back tool post, and it can flexibly handle a variety of back machining needs. (B0126-VR/B0206-VR)



● Back tool post specifications

	Back	Cross
Fixed tool	ϕ20 mm × 4 holes (T31, T36 to T38)	
Live tool	ER11 × 4 (T32 to T34, T39)	ER11 × 2 (T35, T40)
	Max. speed: 8,000 min^{-1} (Rated speed: 6,400 min^{-1})	

● Processing pattern on back side



End milling | Cross drilling and tapping | Cross off-center drilling and tapping | Slotting | End face milling | Off-center drilling and tapping | Torx-shape processing

Approach for energy efficiency

Energy saving mode

The function turns off each axis servo motor, pumps (coolant, lubrication), fans, lights, and NC screen to reduce standby power while ensuring machining accuracy.

Shortened cycle time

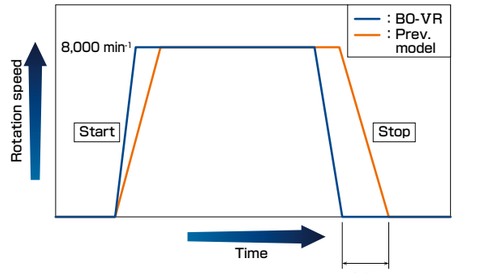
Fixed type work chute

No interference with the front tool post, and it shortens the product collecting time to one second.

Fixed type work chute

Shortens start and stop time of live tool of front tool post

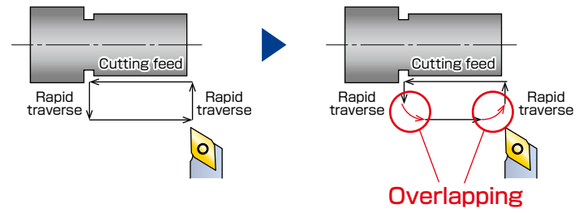
By optimizing the start-up operation, the time required for start/stop is reduced by approximately 50%.



Approx. 50% reduction

Smart overlap

Overlapping of rapid traverse and cutting feed shortens the machining time.



Overlapping

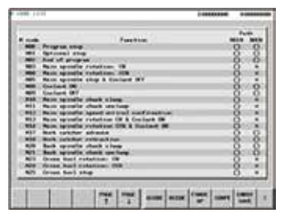
Improved usability

Built-in coolant (Option)

M-code oil blow to supply coolant from the upper side of the guide bushing to the tool tip

Various software functions help the operators for easy-to-use.

Offset input screen
Tool numbers are displayed on the screen with easy-to-understand illustrations to assist offset inputting.



M code/G code list screen
Assists in debugging programs.

Shift amount setting for spindle phase synchronization control
Easy phase alignment between the main spindle and the back spindle when using a collet for non-round bar.

B07-VR, Ideal for machining micro parts

A dedicated machine for processing micro parts requiring high accuracy such as connectors for telecommunications, watch parts from Ø1 mm to Ø7 mm small bar.

Reliable basic features

- The toggle is replaced with TSUGAMI' s unique chuck mechanism which provides the quick response and better balance characteristics.
  Contributes to finer roundness at high speed rotation.
- Ceramic ball bearings are mounted on the main spindle which enables a stable turning pattern, increases surface roughness, and prolongs tool life.

Higher operability

- The clearance of the guide bushing, an important factor for micro parts machining, can be easily adjusted from the tooling zone side.

Various options cover diversified workpieces.

Back drive (B075/125/205-VR: Option)

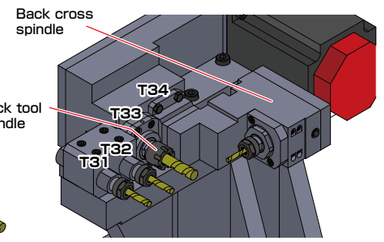
- Off-center drilling, tapping, and end milling on the back side can be performed simultaneously with the front side machining.

● Specifications

Max. speed: 8,000 min^{-1} *	
T31, T32	Fixed tool (φ20 mm)
T33, T34	Modular type
Modular type live tools	Back cross spindle, Back tool spindle, Fixed-tool adapter

* Rated speed: 6,400 min^{-1} When the rotation of the spindle exceeds the rated speed, keep the exceeding speed range within 30% of one cycle of the machining process.

Fixed-tool adapter



Direct-drive rotary guide bushing (Option)

- Direct-drive rotary guide bushing with built-in motor has no belts or other devices which cause vibration during high speed machining. The stable geometrical accuracy, the dimensional accuracy, and the surface roughness are secured.

● Specifications

Model	Rotation speed	Max. machining length
B073-VR/B075-VR	Max. 12,000 min^{-1} *	70 mm
B0123-VR/B0125-VR/B0126-VR	Max. 12,000 min^{-1} *	170 mm
B0203-VR/B0205-VR/B0206-VR	Max. 10,000 min^{-1} *	170 mm

* Rated speed: 8,000 min^{-1} When the rotation of the spindle exceeds the rated speed, keep the exceeding speed range within 30% of one cycle of the machining process.

Guide-bushing type or guide-bushless type is selectable. (Option)

- Guide bushing and guide-bushless are switchable by user. Optimal machining is possible according to product accuracy or length.
  The guide-bushless does not require ground bars, and enables high precision machining from cold-drawn bars.

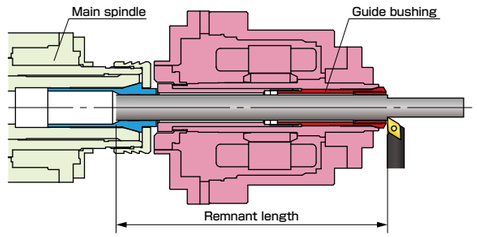
- Stationary guide bushing (B07-VR: Standard)
- Carrier type rotary guide bushing
- Direct-drive rotary guide bushing
- Guide-bushless

● Remnant length

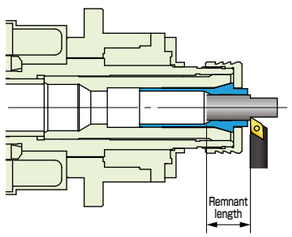
Model	Stationary guide bushing	Carrier type rotary guide bushing	Direct-drive rotary guide bushing	Guide-bushless
B073-VR/B075-VR	120 mm+α mm	180 mm+α mm	210 mm+α mm	–
B0123-VR/B0125-VR/B0126-VR				30 mm+α mm
B0203-VR/B0205-VR/B0206-VR				

α: Workpiece length

Direct-drive rotary guide bushing



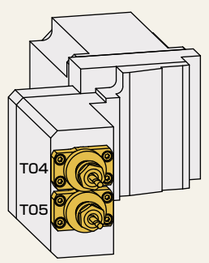
Guide-bushless



Live tool of front tool post (Option)

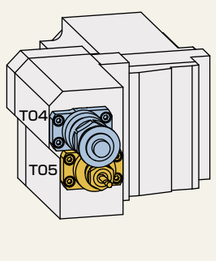
Live tool with max. speed of 10,000 min^{-1} reduces the cycle time for small hole drilling.

Parallel type, 2 tools



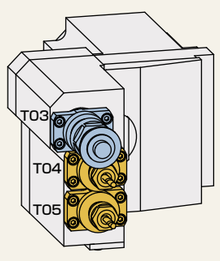
Front tool post		
Turning tool: 3 tools	B07-VR	□8 mm
	B012/20-VR	□12 mm
Live tool: 2 tools	T04, T05	ER11
Rear tool post		
Front drill holder: 4 holes	ϕ20 mm	
Turning tool: 3 tools	B07-VR	□8 mm
	B012/20-VR	□12 mm

Shift type, 2 tools



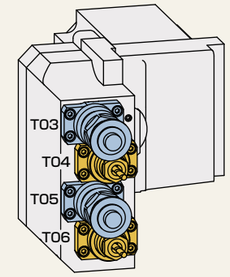
Front tool post		
Turning tool: 3 tools	B07-VR	□8 mm
	B012/20-VR	□12 mm
Live tool: 2 tools	T04	ER16
	T05	ER11
Rear tool post		
Front drill holder: 4 holes	ϕ20 mm	
Turning tool: 3 tools	B07-VR	□8 mm
	B012/20-VR	□12 mm

Shift type, 3 tools



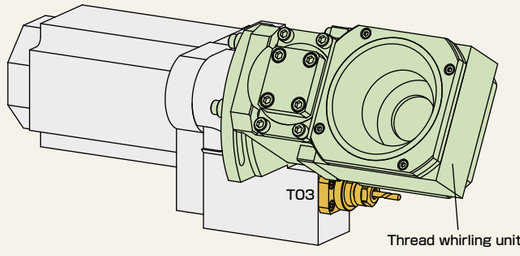
Front tool post		
Turning tool: 2 tools	B07-VR	□8 mm
	B012/20-VR	□12 mm
Live tool: 3 tools	T03	ER16
	T04, T05	ER11
Rear tool post		
Front drill holder: 4 holes	ϕ20 mm	
Turning tool: 3 tools	B07-VR	□8 mm
	B012/20-VR	□12 mm

Shift type, 4 tools



Front tool post		
Turning tool: 2 tools	B07-VR	□8 mm
	B012/20-VR	□12 mm
Live tool: 4 tools	T03, T05	ER16
	T04, T06	ER11
Rear tool post		
Front drill holder: 4 holes	ϕ20 mm	
Turning tool: 3 tools	B07-VR	□8 mm
	B012/20-VR	□12 mm

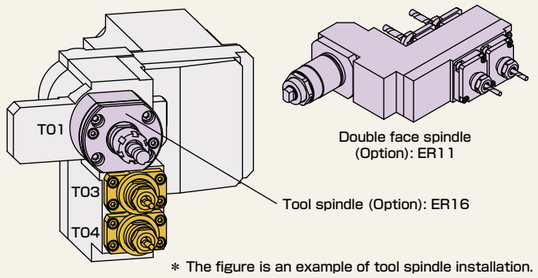
Thread whirling type*



Front tool post			Rear tool post		
Thread whirling unit : 1	Max. machining dia.	ϕ9 mm	Turning tool: 4 tools	B012/20-VR	□12 mm
Thread whirling unit speed	Max. 4,000 min^{-1}				
Live tool: 1 tool	T03	ER11			
Live tool speed	Max. 5,000 min^{-1}				
Turning tool: 2 tools	B012/20-VR	□12 mm			

* Not available for B073/75-VR.

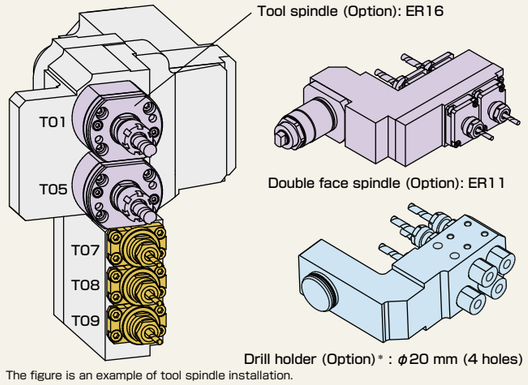
Modular type 1



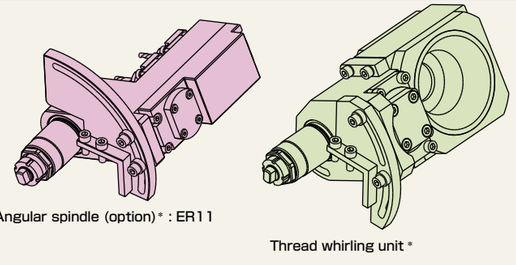
* The figure is an example of tool spindle installation.

Front tool post			Rear tool post		
Live tool: 3 tools	T01	Modular type	Front drill holder: 4 holes	ϕ20 mm	
	T03, T04	ER11	Turning tool: 2 tools	B07-VR	□8 mm
Live tool speed	Max. 8,000 min^{-1}			B012/20-VR	□12 mm
Turning tool: 3 tools	B07-VR	□8 mm			
	B012/20-VR	□12 mm			

Modular type 2



* The figure is an example of tool spindle installation.



* Mountable positions and the number of tools on the rear tool post are limited by modular type tools selected.

Front tool post			Rear tool post		
Live tool: 5 tools	T01, T05	Modular type	Turning tool: 6 tools	B07-VR	□8 mm
	T07, T08, T09	ER11		B012/20-VR	□12 mm
Live tool speed	Max. 8,000 min^{-1}				
Thread whirling unit speed	Max. 4,000 min^{-1}				

Increased operability with dedicated software

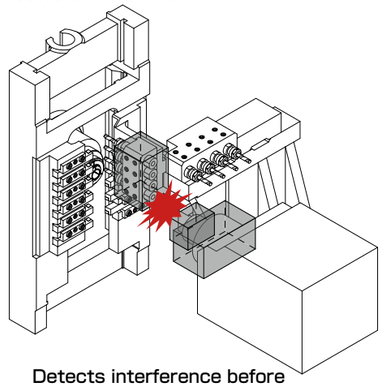
Safety setting by interference check function

Interference check function for SWISS type automatic lathe

Sets the shape of each tool post in a rectangular form, and checks for interference occurrence between the components.

▼

Detects interference with tool posts beforehand in real-time in 3D space, and gives an alarm.



Detects interference before it occurs and gives an alarm.

● Features

- 3D model structure of the components allows the more accurate interference detection.
- The machine stops before entering the interference area by "the interference check function before moving".
- In addition, it is effective for manual operation such as JOG mode.

Simplified operation for efficient setup

Automatic cut-off function/ Automatic facing function

Setting the condition of cut-off or facing on the dedicated screen.

Input tool number, offset number, bar diameter, spindle speed, and feedrate, then press the soft key START.

Cut-off and facing can be performed easily. It is possible to command cut-off or facing with the dedicated M codes as well.

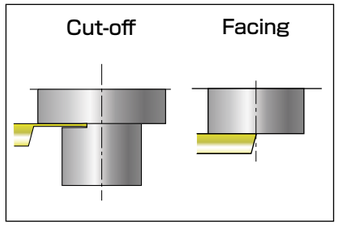
Coolant ON, Spindle rotation ON

▼

Tool approach

▼

Cut-off / Facing



Tool height compensation function (Patented)

Accurate alignment of tool height with the spindle centerline is the important factor for turning of fine parts. Setting of the tool height compensation amount and update of offset data are achieved by simple turning process and inputting the measured data to the dedicated screen.

Efficient operation with extensive maintenance information

Periodical maintenance screen

Maintenance information, such as lubrication amount, collet chuck/guide-bushing cleaning, and battery replacement, can be checked on the screen.
Items or setting period can be customized, and the selection can be arranged according to the working condition.

Function setting screen

Use/non-use of options, such as workpiece discharge device and high-pressure coolant, can be set on the dedicated screen.
Setting related to options can be added or rearranged easily.

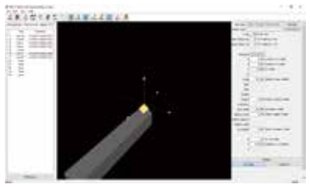
B0 series automatic programming software "Abile" (Standard)

B03-V Abile　B05-V Abile
B06-V Abile

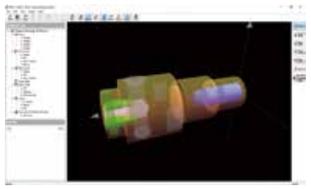
With TSUGAMI's know-how (machining process and cutting conditions), high quality and standardized programs can be created.

Creating NC program in two steps

Step 1 Input tool data



Step 2 Input workpiece geometrical data



Automatic creation

NC program creation

Cycle time calculation

Automatic execution from program creation to simulation with simple operation

3D simulation

"Abile" B0 series

Applicable models	B03-V Abile	B073-VR/B0123-VR/B0203-VR
	B05-V Abile	B075-VR/B0125-VR/B0205-VR
	B06-V Abile	B0126-VR/B0206-VR

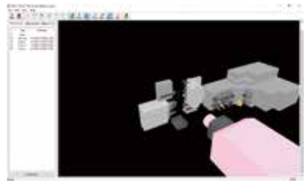
Hardware requirement

Item	Specification
OS	Windows 8 Windows 10 Windows 11 (Installation of Open GL library is required.)
Computer	PC/AT compatible (DOS/V)
CPU	Intel Celeron 2 GHz or faster (3 GHz or above is recommended.)
Memory	512 MB or more
HDD	400 MB or more free space is required
CD-ROM drive	Double speed or more (Used for installation)
Display	16.77 million color bit display (Full color) Resolution: 1,024×768 or higher

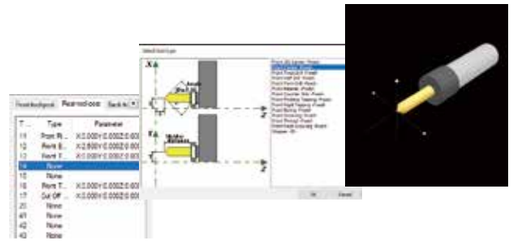
Easy input

Input tool data

Tool definition can be implemented like actual tool setting on the machine.
Tool type, tool width, drill diameter, mounting position, etc. is set one by one for each tool.

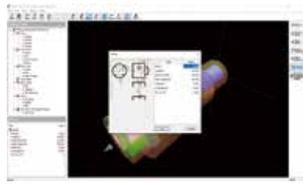


Click T number and select the type of tool to be set.
Just input simple data, such as tool dia. or width.

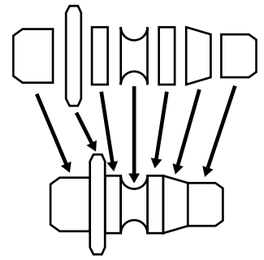


Input workpiece geometrical data

Geometrical definition does not require complicated operation like CAD.
The simplified geometrical setting (stacking block method) minimizes the time required for geometrical data input.
Even a beginner can learn the input method quickly.



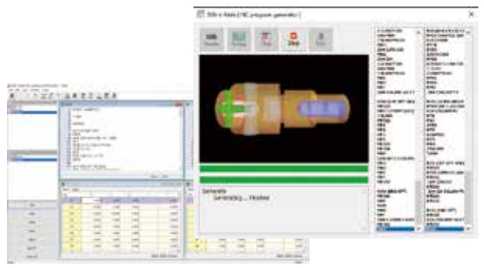
The stacking block method divides the OD of the workpiece into several blocks, then stacks all of them to form the shape of the workpiece.



Output a variety of information

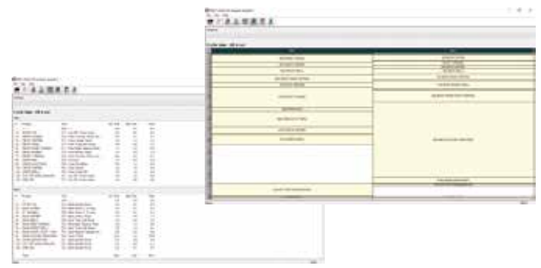
NC program / Offset data creation

Not only waiting codes in two-path programs but also NC programs with machine-specific M codes/G codes are automatically created.



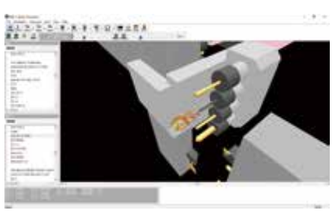
Cycle time calculation

The cycle time is automatically calculated, and cutting/non-cutting time and process time of each path are displayed clearly.



Simulation

The 3D simulation enables the operation check from any angle.



Machine specifications

Item		B073-VR	B075-VR	B0123-VR	B0125-VR	B0126-VR	B0203-VR	B0205-VR	B0206-VR
Machining range, Machining capacity	Bar stock chucking dia.	ϕ1 mm to ϕ7 mm		ϕ3 mm to ϕ12 mm			ϕ3 mm to ϕ20 mm		
	Max. back spindle chucking dia.	—	ϕ7 mm	—	ϕ12 mm		—	ϕ20 mm	
	Max. machining length	70 mm (Stationary guide bushing) 40 mm (Carrier type rotary guide bushing *1) 70 mm (Direct-drive rotary guide bushing *1)		210 mm (Stationary guide bushing *1) 80 mm (Carrier type rotary guide bushing *1) 170 mm (Direct-drive rotary guide bushing *1) 45 mm (Guide-bushless *1)					
	Max. main spindle drilling dia.	ϕ4 mm		ϕ7 mm			ϕ10 mm		
	Max. main spindle tapping dia.	M4		M6			M10		
	Max. back spindle drilling dia.	—	ϕ4 mm	—	ϕ10 mm		—	ϕ10 mm	
	Max. back spindle tapping dia.	—	M4	—	M10		—	M10	
	Max. live tool drilling dia.	ϕ4 mm (Front tool post *1)	ϕ4 mm (Front tool post *1/Back tool post *1)	ϕ6 mm (Front tool post *1)	ϕ6 mm (Front tool post *1/Back tool post *2)		ϕ6 mm (Front tool post *1)	ϕ6 mm (Front tool post *1/Back tool post *2)	
	Max. live tool tapping dia.	M4 (Front tool post *1)	M4 (Front tool post *1/Back tool post *1)	M5 (Front tool post *1)	M5 (Front tool post *1/Back tool post *2)		M5 (Front tool post *1)	M5 (Front tool post *1/Back tool post *2)	
	Max. live tool slotting cutter dia.	ϕ25 mm (Front tool post *1)		ϕ30 mm (Front tool post *1)					
Machine	Main spindle speed	Max. 15,000 min-1 (Rated speed: 12,000 min-1) *3		Max. 12,000 min-1 (Rated speed: 10,000 min-1) *3			Max. 10,000 min-1 (Rated speed: 8,000 min-1) *3		
	Back spindle speed *4	—	Max. 12,000 min-1 (Rated speed: 8,000 min-1) *3	—	Max. 12,000 min-1 (Rated speed: 8,000 min-1) *3		—	Max. 12,000 min-1 (Rated speed: 8,000 min-1) *3	
	Rotary guide bushing speed	Carrier type *1: Max. 8,000 min-1 (Rated speed: 6,000 min-1) *3 Direct-drive type *1: Max. 12,000 min-1 (Rated speed: 8,000 min-1) *3		Carrier type *1: Max. 8,000 min-1 (Rated speed: 6,000 min-1) *3 Direct-drive type *1: Max. 12,000 min-1 (Rated speed: 8,000 min-1) *3			Carrier type *1: Max. 8,000 min-1 (Rated speed: 6,000 min-1) *3 Direct-drive type *1: Max. 10,000 min-1 (Rated speed: 8,000 min-1) *3		
	Live tool speed	Front tool post *1: Max. 10,000 min-1 (Rated speed: 6,800 min-1) *3	Front tool post *1: Max. 10,000 min-1 (Rated speed: 6,800 min-1) *3 Back tool post *1: Max. 8,000 min-1 (Rated speed: 6,400 min-1) *3	Front tool post *1: Max. 10,000 min-1 (Rated speed: 6,800 min-1) *3	Front tool post *1: Max. 10,000 min-1 (Rated speed: 6,800 min-1) *3 Back tool post *1: Max. 8,000 min-1 (Rated speed: 6,400 min-1) *3		Front tool post *1: Max. 10,000 min-1 (Rated speed: 6,800 min-1) *3	Front tool post *1: Max. 10,000 min-1 (Rated speed: 6,800 min-1) *3 Back tool post *1: Max. 8,000 min-1 (Rated speed: 6,400 min-1) *3	
	Tool storage capacity (Standard)	13	21	13	21	27	13	21	27
	Tool size	8 mm × 8 mm × 85 mm		12 mm × 12 mm × 85 mm					
	Rapid traverse rate	36 m/min(X2, Z2)(only for 5-linear axis machine) 32 m/min(Y1, Z1) 24 m/min(X1)		36 m/min(X2, Z2)(only for 5,6-linear axis machine) 32 m/min(Y1, Z1) 24 m/min(X1) 15 m/min(Y2)(only for 6-linear axis machine)					
Motors	Main spindle	1.1/1.5 kW		2.2／3.7 kW			3.7/5.5 kW		
	Back spindle	—	2.2/3.7 kW	—	2.2／3.7 kW		—	2.2／3.7 kW	
	Linear axes	0.5 kW(Z1: 0.75 kW)		0.5 kW(Z1:0.75 kW)					
	Live tool	1.0 kW (Front tool post *1)	1.0 kW (Front tool post *1) 0.75 kW (Back tool post *1)	1.0 kW (Front tool post *1)	1.0 kW (Front tool post *1) 0.75 kW (Back tool post *2)		1.0 kW (Front tool post *1)	1.0 kW (Front tool post *1) 0.75 kW (Back tool post *2)	
	Coolant pump	0.10 kW	0.25 kW	0.25 kW					
	Lubricating oil pump	3.0 W		3.0 W					
Power supply and others	Weight	1,350 kg	1,800 kg	1,350 kg	1,800 kg	1,850 kg	1,350 kg	1,800 kg	1,850 kg
	Power source requirement	6 kVA	10 kVA	7.2 kVA	10.7 kVA	10.9 kVA	9.6 kVA	12.9 kVA	13.1 kVA
	Compressed air requirement	0.4 MPa or more		0.4 MPa or more					
	Air discharge rate *5	100 NL/min		100 NL/min					
	Coolant tank capacity	130 L	160 L	165 L	160 L		165 L	160 L	
	Width x Depth x Height	1,625 mm × 1,055 mm × 1,700 mm	1,810 mm × 1,055 mm × 1,700 mm	1,735 mm × 1,055 mm × 1,700 mm	1,810 mm × 1,055 mm × 1,700 mm		1,735 mm × 1,055 mm × 1,700 mm	1,810 mm × 1,055 mm × 1,700 mm	

*1 Option
*2 Option for 5-linear axis machine
*3 When the rotation of the spindle exceeds the rated speed, keep the exceeding speed range within 30% of one cycle of the machining process.
*4 There are restrictions by options such as front discharge.
*5 It may change depending on the mounted options.

NC specifications

Item	B073-VR/B0123-VR/B0203-VR	B075-VR/B0125-VR/B0205-VR	B0126-VR/B0206-VR
Controlled axes	X1, Z1, Y1	X1, Z1, Y1, X2, Z2	X1,Z1,Y1,X2,Z2,Y2,C1,C2
Least input increment	0.001 mm (X-axis in diameter) (B073/75-VR: 0.0001 mm)		0.001 mm (X-axis in diameter) /0.001 deg
Max. programmable value	±8 digits		
Interpolation method	Linear, Circular		
Feedrate	1 to 6,000 mm/min		
Feedrate override	0 to 150% in 10% increments		
Dwell	G04 0 to 99999.999		
Absolute/incremental command	X, Z, Y: Absolute U, W, V: Incremental		X, Z, Y, C: Absolute U, W, V, H: Incremental
Number of tool offset	64	Main:64 Back:64	
LCD/MDI	10.4" color LCD		
Display language	English		
Part program storage size	2 Mbyte	2 Mbyte (sum of main and back)	
Number of registerable programs	1,000	1,000 (sum of main and back)	
Miscellaneous functions	M3-digits	Main: M5-digits Back: M3-digits	
Spindle functions	S5-digits		
Tool functions	T4-digits		

Machine standard accessories

Item	B073-VR B0123-VR B0203-VR	B075-VR B0125-VR B0205-VR	B0126-VR B0206-VR
Automatic programming software (Abile)	○	○	○
Tool height compensation function	○	○	○
Tool counter	○	○	○
Periodic maintenance screen	○	○	○
Main/back spindle adapter	○ (main spindle only)	○	○
Door interlock (Tooling zone/Headstock area)	○	○	○
Coolant level switch	○	○	○
Spindle cooling unit	○	○	○
Automatic power shut off	○	○	○
Main/back spindle air purge	○ (main spindle only)	○	○
Shut-off valve for air purge	○	○	○
Automatic cut-off function/ Automatic facing function	○	○	○
Internal light (Tooling zone/Headstock area)	○	○	○
Dimensional compensation function	○	○	○
Tool tray	○	○	○
Guide bushing adapter	○ (only for B073-VR)	○ (only for B075-VR)	—
Front drill holder	○	○	○
Back drill holder	—	○	—
Back drive (4 fixed + 6 non-modular type)	—	—	○
Drill holder (ER11)	○ (4 pcs.)	○ (7 pcs.)	○ (7 pcs.)
Center-adjustable double heads drill holder (ER11)	—	○ (1 pc.)	○ (1 pc.)
Main spindle brake	○ (option for B073-VR)	○ (option for B075-VR)	○
Main spindle 1 deg index	○ (option for B073-VR)	○ (option for B075-VR)	—

NC standard accessories

Item	B073-VR B0123-VR B0203-VR	B075-VR B0125-VR B0205-VR	B0126-VR B0206-VR
Chasing function	○	○	○
Continuous threading	○	○	○
Manual pulse generator	○	○	○
Memory card I/O interface	○	○	○
Background editing	○	○	○
Run time & parts number display	○	○	○
Custom macro	○	○	○
Constant surface speed control	○	○	○
Spindle synchronous control (rotation/phase)	—	○	○
Tool geometry/wear offset	○	○	○
Chamfering & corner R	○	○	○
Tool nose radius compensation	○	○	○
Multiple repetitive cycle	○	○	○
Extended program editing	○	○	○
Canned drilling cycle	○	○	○
Rigid tap (Main spindle, Back spindle)	○ (main spindle only)	○	○
Cut-off detection (Speed differential type)	—	○	○
Spindle speed fluctuation detection	—	○	○
Fixed data setting screen	○	○	○
Direct drawing dimension programming	○	○	○
Threading retract	○	○	○
Polar coordinate interpolation	○ *	○ *	○
Cylindrical interpolation	○ *	○ *	○
Offset input screen	○	○	○
M code/G code list screen	○	○	○
Shift amount setting for spindle phase synchronization control	—	○	○
Interference check function	—	○	○
Energy saving mode	○	○	○
Power consumption monitor	○	○	○
ECO operation mode	○	○	○

* Main/back spindle C-axis control (option) is additionally required.

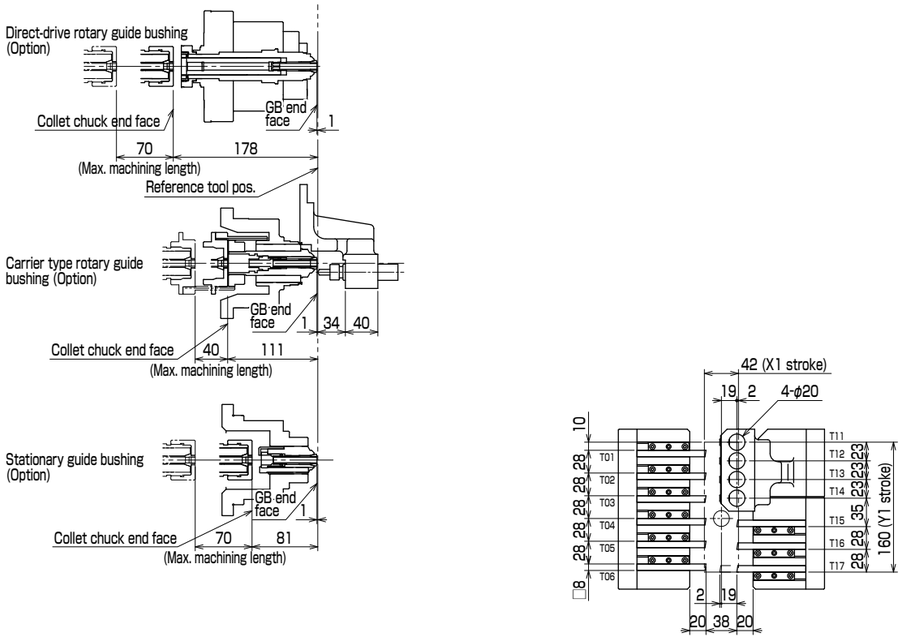
Options

Item		B073-VR B0123-VR B0203-VR	B075-VR B0125-VR B0205-VR	B0126-VR B0206-VR
Guide bushing	Stationary guide bushing	○ (B073-VR: Standard)	○ (B075-VR: Standard)	○
	Carrier type rotary guide bushing	○	○	○
	Direct-drive rotary guide bushing	○	○	○
	Guide-bushless	○ (B073-VR: Not available)	○ (B075-VR: Not available)	○
Spindle functions	Main spindle C-axis control	○	○	Standard
	Back spindle C-axis control	—	○	Standard *1
	Back spindle brake	—	○	○
	Back spindle 1 deg index	—	○	—
High accuracy functions	0.1 μm resolution	○ (B073-VR: Standard)	○ (B075-VR: Standard)	○
	Coolant temperature controller	○	○	○
Live tools (Front tool post)	Parallel type, 2 tools	○	○	○
	Shift type, 2 tools	○	○	○
	Shift type, 3 tools	○	○	○
	Shift type, 4 tools	○	○	○
	Thread whirling	○ (B073-VR: Not available)	○ (B075-VR: Not available)	○
	Modular type 1 *2	○	○	○
	Modular type 2 *3	○	○	○
	Tool spindle *4	○	○	○
	Double face spindle *4	○	○	○
	Angular spindle *4	○	○	○
	Thread whirling unit *4	○	○	○
	Drill holder *4	○	○	○
Live tools (Back tool post)	Back drive (2 fixed + 2 modular type)	—	○	—
	Back tool spindle *4	—	○	—
	Back cross spindle *4	—	○	—
	Fixed-tool adapter *4	—	○	—
Coolant	High pressure pump	○	○	○
	M code oil blow	○	○	○
	Built-in coolant	○	○	○
	Wavy nozzle	○	○	○
Work discharge	Work conveyor	—	○	○
	Work catcher	Standard	○ (B075-VR: Standard)	○
	Work tray	—	○	○
	Front discharge	—	○	○
	Rear discharge	—	○	○
Chip disposal	Chip conveyor	—	○	○
	Chip carrier	—	○	○
Machine maintenance and Monitoring functions	Cut-off detection (Touch switch type)	○	○	○
	Signal indicator	○	○	○
	MT-LINK i	○	○	○
	AI servo monitor *5	○	○	○
Tooling	Collet chuck with carbide lining	○	○	○
	Adapter for non-round bar (main spindle/back spindle)	○ (main spindle only)	○	○
	Spindle liner	○	○	○
	Tool set gauge	○	○	○
NC functions	Multi-language display	○	○	○
	Manual handle retrace	○	○	○
	Inch/metric conversion	○	○	○
	Helical interpolation	○ *6	○ *6	○
	3-dimensional coordinate conversion	○	○	○
	Automatic setting of pick-up position (G430-G431)	—	○	○
	Torque limit skip for Z2 axis (G432)	—	○	○
Safety and other	Mist collector	○	○	○
	Automatic fire extinguisher	○	○	○
	Coolant flow switch	○	○	○
	Bar feeder interface	○	○	○
	Rigid tap (live tool)	○	○	○
	RS232C interface	○	○	○
	Abnormal load detection	○	○	○

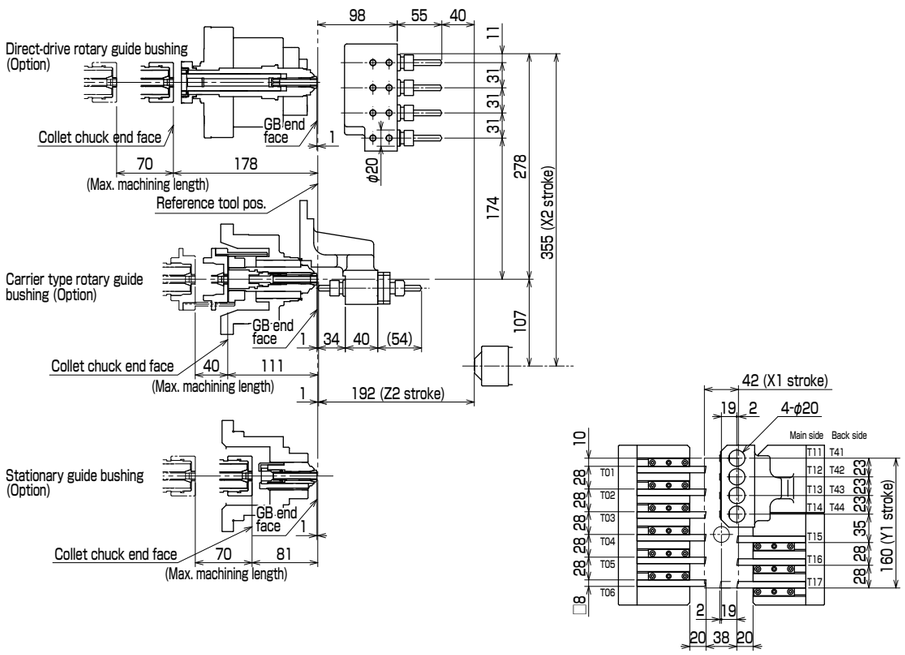
*1 Brake is an option. *2 2 non-modular type + 1 modular type *3 3 non-modular type + 2 modular type *4 Selectable for modular type.
*5 MT-LINK i (option) is additionally required. *6 Main/back spindle C-axis control (option) is additionally required.

Tooling zone

B073-VR

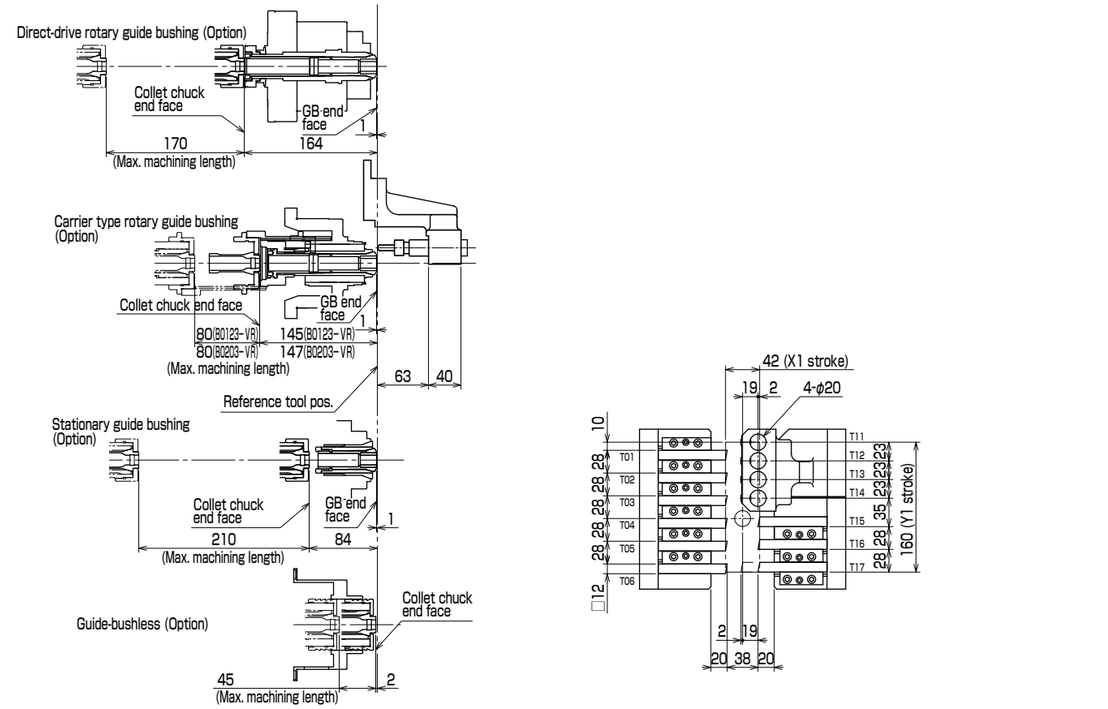


B075-VR

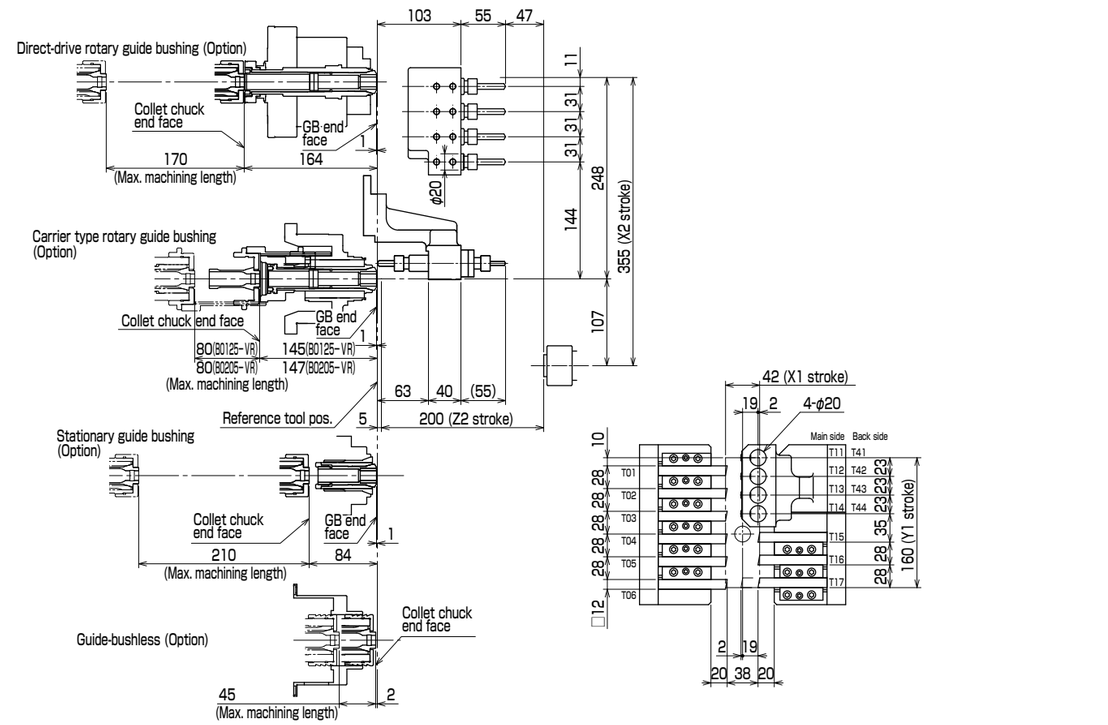


Tooling zone

B0123-VR/B0203-VR

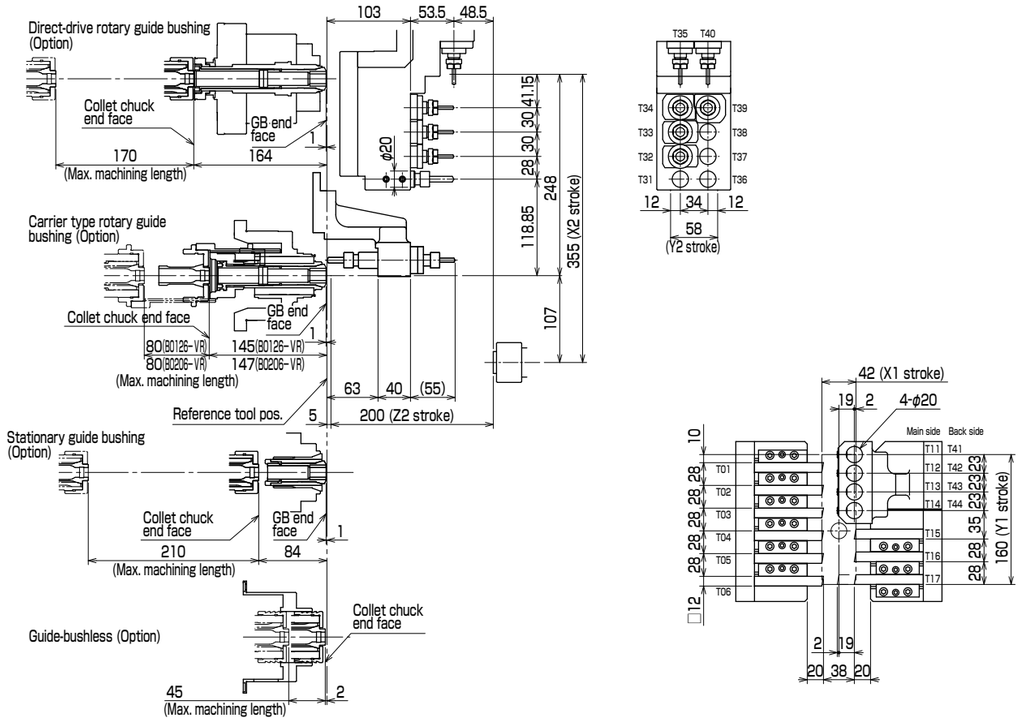


B0125-VR/B0205-VR



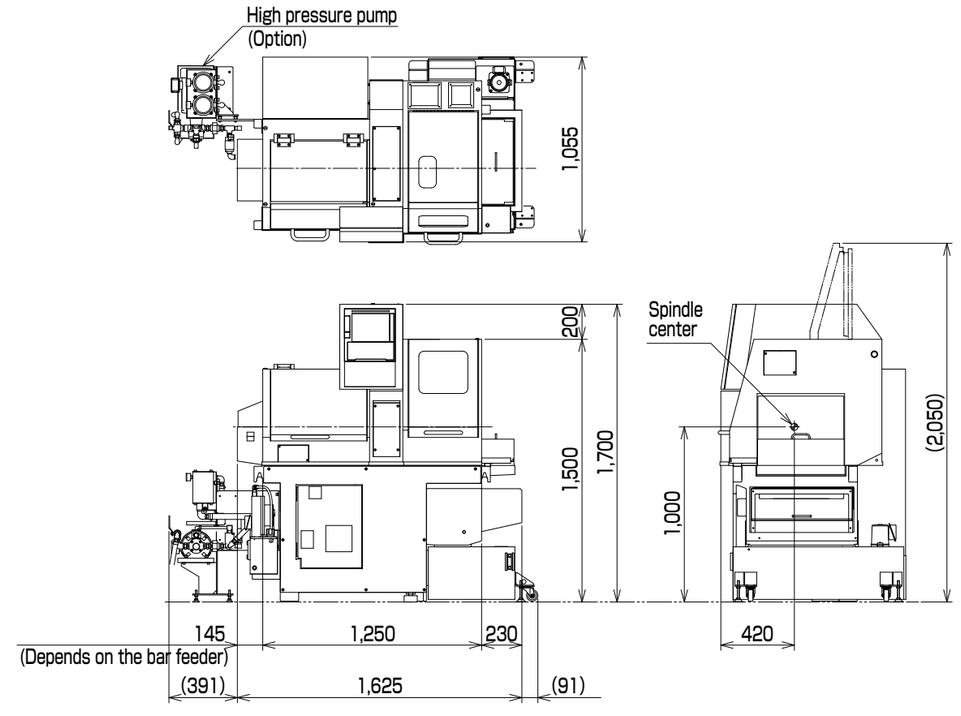
Tooling zone

B0126-VR/B0206-VR



Layout

B073-VR



B0123-VR/B0203-VR