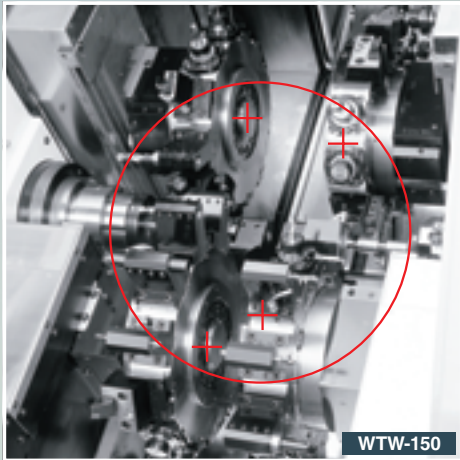


GENERAL CATALOG

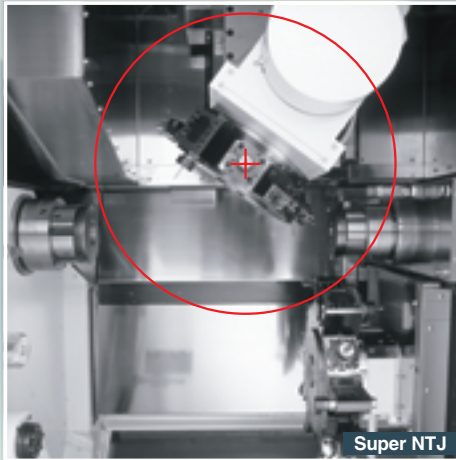
NAKAMURA-TOME
PRECISION INDUSTRY CO.,LTD.

High Production Multi-Tasking



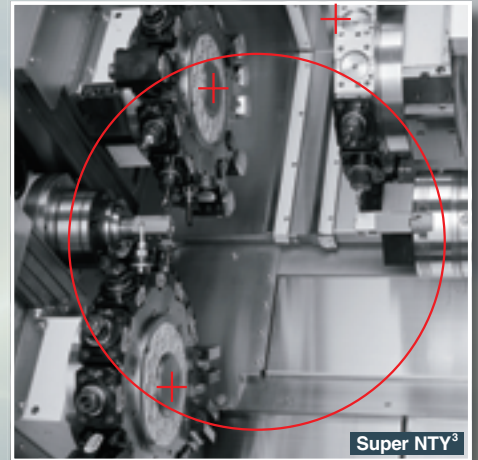
WTW-150

01 With multi-point machining, and minimized idle time, more time is spent cutting chips. By simultaneously machining with the upper and lower turret, during the first and second processes, cycle time is drastically reduced.



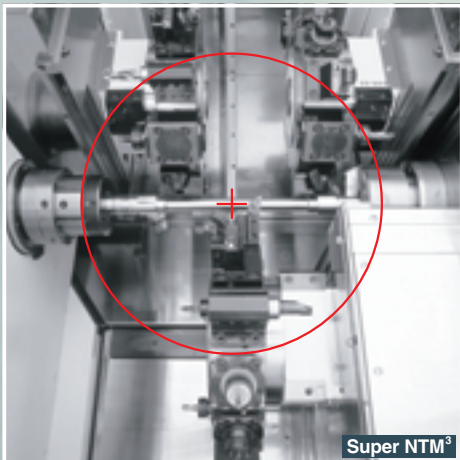
Super NTJ

02 Only 0.2 sec. for tool to tool change on the B-axis turret. Productivity superior to that of a machining center.



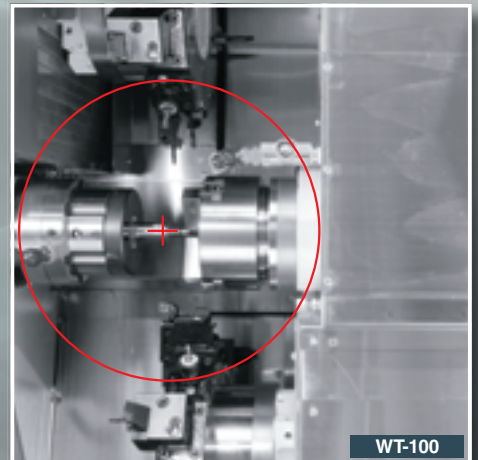
Super NTY³

03 Y axis on all turrets. Cycle time for milling is reduced further.



Super NTM³

04 Excellent for shaft work and long bar work, which when chucked between synchronized spindles, have up to twice the cutting power available for turning, and up to three times the cutting power for milling, the latter achieved when three tools are cutting simultaneously.



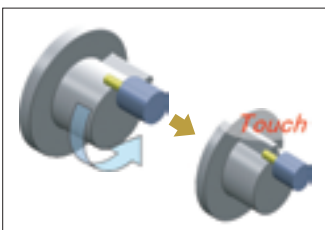
WT-100

05 Phase-error-free part transfer from left to right hand spindles, eliminates the necessity for work-in-process and for re-chucking.

Less Fixtures!

NT Work Navigator

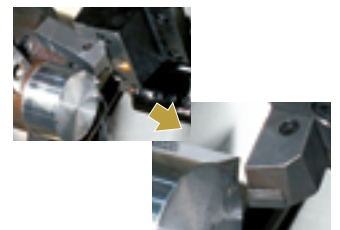
No shelves for jigs or fixtures around the machine are necessary any more.



Before machining a complex or irregular part, the coordinate recognition of raw part geometry is necessary. It can be provided with less cost, less labor and more ease. A round bar mounted on turret head as a measurement tool contacts with the part and then triggers the coordinate values to be recorded in the CNC control. This is versatile software developed using torque control technology of servomotor. Consequently the high complex fixtures for chucks and stocker pallets are eliminated, the cost of positioning parts can be dramatically reduced.

Less Set-up!

Overload Detection



Machine

Faster Cycle Time

A wide range of parts, from small to large batch production.

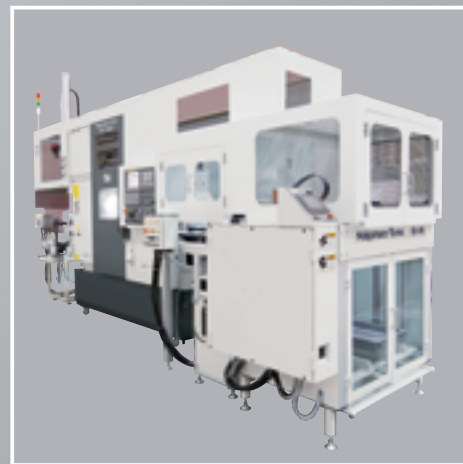
From Turning to Mill-Turning

ADVANTAGE

- A full-face turning center, superior to a 5-face machining center
- Indexing time (tool-to-tool) 0.2 seconds.
- Up to 24, 36, or 48 driven-tools available
- Simultaneous machining with upper and lower turrets
- Simultaneous machining on both L/R 2 stage
- C-axis indexing is standard 0.001°
- Direct transfer by R side spindle
- Automation
- Outstanding chip evacuation
- Machine fully-covered
- Power saving function

One-hit machining

MONO-ZUKURI THE FASTEST MACHINE ONE-HIT MACHINING!



A security feature to rely on when the worse happens.

When unavoidable human error results in a collision, the servo drive detects overload and drastically reduces the impact on machine by reversing slide movement direction within less than 8 milliseconds. In addition to minimizing damage of the first impact, the fears that the tool will move to the next program block and cause a second impact, are reduced to zero. Collisions that used to break tool tips and get the tools from holders will just move the tools now.

Less Skills!

NT Nurse

Features essential for complex machining are in an all-in-one package.



Features essential for complex machining are in an all-in-one package. The Soft Work Pusher enables accurate parts transfer, ensuring that phase and length errors that result from bad chucking are prevented. Other features include precise synchronization of the left and right hand spindles, Load Monitor for axis-and-spindle load monitoring, Tool Counter for tool life management, and Tool Life for calling up spare tools. In addition, many other operator support features facilitate programming, set-up, operation and production control, all offered in one single package.

Super Mill Series



Super Mill WY-250

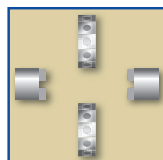
The high-output, high-torque motor (7.5kW/40Nm) features phenomenal machining ability. ●



* Alarm light is optionally available.

Super Mill WY-250

Capacity	
Max. turning diameter/Max. turning length	215mm/580mm
Distance between centers	max. 870mm/min. 250mm
Bar capacity L/R	L: 65mm R: 51mm
Chuck size	L: 210mm (8") R: 165mm (6")
Axis travel	
Slide travel (X1/X2)	160.5mm/160mm
Slide travel (Z1/Z2/B2)	580/580/620mm
Slide travel (Y1/Y2)	±50mm/-50mm, +20mm
Spindle L, R	
Spindle speed L/R	4500min ⁻¹ / 5000min ⁻¹
Left spindle motor	18.5/11kW 225/185N·m
Right spindle motor	15/11kW 120/120N·m
Upper turret	
Number of turrets	1
Driven-tool spindle speed	6000min ⁻¹
Driven-tool motor	7.5/3.7kW 40/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24st
Drive system/Number of tool stations	Individual rotation/12
Lower turret	
Number of turrets	1
Driven-tool spindle speed	6000min ⁻¹
Driven-tool motor	7.5/3.7kW 40/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24st
Drive system/Number of tool stations	Individual rotation/12
General	
Floor space (L×W×H)	4,436mm×2,678mm×2,395mm
Machine Weight (incl. control)	12,000kg



Turning Milling	L/R chuck size L : 8"/210mm R : 6"/165mm	Distance between centers 870mm	Max turning diameter 225mm	Max. turning length 580mm	Bar capacity L : 65mm ⁻¹ R : 51mm ⁻¹
control. FANUC 31i-A	Spindle motor L : 18.5/11kW R : 15/11kW	Spindle speed L : 4500min ⁻¹ R : 5000min ⁻¹	Number of tool stations Dodecagonal 24st	Milling Motor 7.5/3.7kW 6000min ⁻¹	Y axis Upper turret : ±50mm Lower turret : -50mm/+20mm





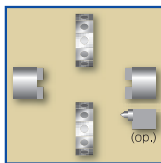
Super Mill WT-150

Major improvement of the milling-unit, resulting in higher rigidity



Super Mill WT-150

Capacity	
Max. turning diameter/Max. turning length	190mm/400mm
Distance between centers	max.750mm/min.200mm
Bar capacity	51mm 42mm (op.) L:65mm (op.)
Chuck size	6" 165mm
Axis travel	
Slide travel (X1/X2)	157.5/167.5mm
Slide travel (Z1/Z2/B)	465/465/550mm
Slide travel (Y) upper turret (option)	±35mm
Spindle L, R	
Spindle speed	5000min ⁻¹ 6000min ⁻¹ (op.) 4500min ⁻¹ (op.)
Left spindle motor	15/11kW 75.4/38.6N·m
Right spindle motor	11/7.5kW 75.4/38.6N·m
Upper turret	
Number of turrets	1
Driven-tool spindle speed	6000min ⁻¹ 3600min ⁻¹
Driven-tool motor	7.5/3.7kW 40/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24
Drive system/Number of tool stations	Individual rotation/12
Lower turret	
Number of turrets	1
Driven-tool spindle speed	6000min ⁻¹ 3600min ⁻¹
Driven-tool motor	7.5/3.7kW 40/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24
Drive system/Number of tool stations	Individual rotation/12
General	
Floor space (L×W×H)	3,615mm×1,985mm×1,860mm
Machine Weight (incl.control)	8,900kg



Turning Milling	L/R chuck size 6"/165mm	Distance between spindles 750mm	Max. turning length 400mm	Max turning diameter 190mm	Bar capacity L: 51mm 65mm (op.) R: 51mm 42mm (op.)
2-path control F-181TB	Spindle motor L: 15/15kW R: 11/7.5kW	Spindle speed L: 5000min ⁻¹ 4500min ⁻¹ (op.) R: 5000min ⁻¹ 6000min ⁻¹ (op.)	Number of tool stations Dodecagonal 24st x 2	Driven-tool motor 7.5/3.7kW x 2 6000min ⁻¹	Y axis (op.) ±35mm (Upper turret)
					Tailstock (op.) MT-4 (Rotating center) 80mm (Quill std.)

* Tailstock cannot be equipped on the machine with Sub spindle.



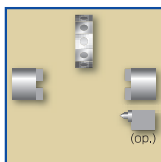
Super Mill SC-200L

Innovative milling system contributes to realization of powerful cuts ever.



Super Mill SC-200L

Capacity	
Max. turning diameter/Max. turning length	410mm/350mm
Distance between center	757.8mm
Bar capacity	65mm
Chuck size	8"
Slide travel	
X-axis slide travel	277mm
Z-axis slide travel	580mm
Y-axis slide travel (option)	±41mm
Spindle	
Spindle speed	4500min ⁻¹
Spindle motor	11/7.5kW 248.1/210N·m
Turret	
Number of turrets	1
Type of turret/Number of indexing pos.	Dodecagonal turret/12
Milling (op.)	
Driven-tool spindle speed	6000min ⁻¹
Drive-tool motor	7.5/3.7kW 40/16N·m
Rotary system/Number of driven-tool stations	Single drive/12
Tailstock (op.)	
Quill diameter/Quill stroke	80mm/80mm
Quill taper	MT-3 (Build-in dead center)
General	
Floor space (L×W×H)	2,771mm×1,883.8mm×1,964.6mm
Machine weight (incl.control)	5,000kg



Turning Milling	Chuck size 8"	Distance between centers 757.8mm	Max. turning diameter 410mm	Max. turning length 350mm	Bar capacity 65mm
Control FANUC 21i-TB	Spindle motor 11/7.5kW	Spindle speed 4500min ⁻¹	Number of tool stations Dodecagonal 12st	Driven-tool motor 7.5/3.7kW 6000min ⁻¹	Y axis (op.) ±41mm
					Tailstock (op.) MT-3 (Rotating center) 80mm (Quill std.)
					Sub spindle (op.) 7.5/5.5kW 6000min ⁻¹ 6"/42mm

* 18i-TB when Sub spindle is equipped.



Turret-Type Multi-Tasking Machine / Multi-Turret

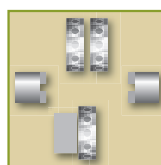
Super NTY³

Long-awaited triple Y-Axis! Y-Axis on all three turrets



Super NTY³

Capacity	
Max. turning diameter/Max	Turning length 175mm/588mm
Distance between centers	Max. 820mm / Min. 200mm
Bar capacity	42mm
Chuck size	6"165mm
Axis travel	
Slide travel(X1/X2/X3)	135/135/135mm
B-axis Slide travel(Z1/Z2/Z3)	245/245/578mm
Slide travel(Y1/Y2/Y3)	±31/±31/±31mm
Spindle L, R	
Spindle speed	6000min ⁻¹
L-spindle motor	11/7.5kW 75.4/38.6N-m
R-spindle motor	11/7.5kW 75.4/38.6N-m
Upper turrets	
Number of turrets	2
Driven-tool spindle speed	6000min ⁻¹
Drive motor	7.1/2.2kW 16/8N-m
Type of turret head/ Number of indexing pos.	Dodecagonal drum turret/24
Drive type/ Number of driven-tool stations	Individual rotation/12
Lower turret	
Number of turrets	1
Driven-tool spindle speed	6000min ⁻¹
Drive motor	7.1/2.2kW 16/8N-m
Type of turret head/ Number of indexing pos.	Dodecagonal drum turret/24
Drive type/ Number of driven-tool stations	Individual rotation/12
General	
Floor space(LxWxH)	2,780mmx1,970.5mmx1,940mm
Machine weight	8000kg



Turning Milling	L/R chuck size 6"	Distance between spindles 820mm	Max. turning diameter 175mm	Max. turning length 588mm	L/R bar capacity 42mm
3-path control F-31iA 13 controlled axes	Spindle motor L:11/7.5kW R:11/7.5kW	Spindle speed 6000min ⁻¹ /51mm	Y axis 62mm x 3 (±31mm)	Number of tool stations Dodecagonal 24st x 3	Driven-Tool motor 7.1/2.2kW x 3 6000min ⁻¹



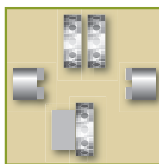
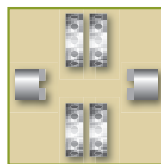
WTW-150

Ultimate productivity! Max. turning diameter 310mm, From flange work to shaft work.



WTW-150 | WTS-150

Capacity	
Max. turning diameter/Max. turning length	310mm/255mm
Distance between spindles	max. 1070mm/min. 195mm
Bar capacity	65mm 51mm 42mm
Chuck size	6"
Axis travel	
Slide travel (X/Z/B2)	Upper turret 207.5/300/875mm
Slide travel (X/Z)	Lower turret 207.5/300mm Lower turret 207.5/800mm
Slide travel	Upper turret 60mm (±30) x 2
Spindle L, R	
Spindle speed	4000min ⁻¹ 5000min ⁻¹ 6000min ⁻¹
L spindle motor	15/11kW 7.5/5.5kW (op. 15/11kW)
R spindle motor	15/11kW 7.5/5.5kW (op. 15/11kW)
Upper turrets	
Number of turrets	2
Driven-tool spindle speed	6000min ⁻¹
Drive motor	3.7/2.2kW 23.6/14N-m
Type of turret/Number of indexing pos.	Dodecagonal/12st
Drive type/Number of driven-tool stations	Individual rotation/12
Lower turret	
Number of turrets	2 1
Driven-tool spindle speed	6000min ⁻¹
Drive motor	3.7/2.2kW 23.6/14N-m
Type of turret/Number of indexing pos.	Dodecagonal/12
Drive type/Number of driven-tool stations	Individual rotation/12
General	
Floor space (LxWxH)	3,850mmx2,330mmx2,320mm
Machine Weight	10500kg 10000kg



2-path control x 2 F-18iTB 8 controlled axes	Turning Milling	L/R chuck size 6"	Distance between spindles 1070mm	Max. turning diameter 310mm	Max. turning length 255mm	L/R bar capacity L:65, 51, 42mm R:51, 42mm
3-path control F-16iTB 12 controlled axes	Spindle motor 15/11kW 7.5/5.5kW	Spindle speed 4000min ⁻¹ /65mm 5000min ⁻¹ /51mm 6000min ⁻¹ /42mm	Number of tool stations Dodecagonal 12st x 4	Driven-Tool motor 3.7/2.2kW x 4 6000min ⁻¹	Max. turning length 255mm Upper turret 755mm Lower turret	Y axis ±30mm x 2 (Upper Turrets)



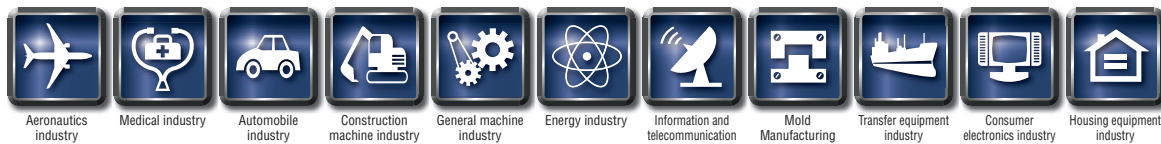
* For WTW, see above
* For WTS, see below

* 3 turrets for WTS

* 3 driven-tool motors for
WTS

* For WTW, see above
* For WTS, see below

Series



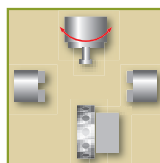
Super NTJ

Productivity superior to that of a machining center! Best for machining high precision hydraulic parts

Super NTJ



Capacity	
Max turning diameter/Max turning length	190mm/620mm
Distance between spindles	max.970mm/min.210mm
Bar capacity	51mm (op. L:65mm)
Chuck size	165mm (6")
Axis travel	
Slide travel (X1/X2/Z1/Z2/B2)	345/167.5/1240/685/760mm
Slide travel(Y) upper	90mm (±45mm)
Spindle L, R	
Spindle speed	5000min ⁻¹ (op. L:4500min ⁻¹)
L spindle motor	15/11kW 113.4/83.1N·m
R spindle motor	11/7.5kW 83.1/56.7N·m
Upper turret	
Rotating tool speed	6000min ⁻¹
Milling motor	5.5/3.7kW 24/16N·m
Least index angle increment	1°
B-axis positioning range	182°(±91°)
Type of turret/Number of indexing pos.	Dodecagonal/24
Drive type/Number of driven-tool station	Individual rotation/12
Lower turret	
Driven-tool spindle speed	6000min ⁻¹
Driven-tool motor	5.5/3.7kW 24/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24
Drive type/ Number of driven-tool station	Individual rotation/12
General	
Floor space (L×W×H)	3,660mm×2,320mm×2,170mm
Machine Weight	12500kg



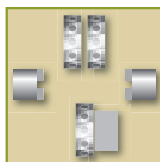
Turning Milling	L/R chuck size 6"	Distance between spindles 970mm	Max.Turning diameter 190mm	Max.turning length 620mm	L/R bar capacity 51mm 65mm (op.L)
2-path control F-18ITB 9 controlled axes	Spindle motor L:15/11kW R:11/7.5kW	Spindle speed 5000min ⁻¹ 4500min ⁻¹ /65mm	Upper turret Y axis 90mm B axis 182°	Number of tool stations Dodecagonal 24st × 2	Driven-tool motor 5.5/3.7kW × 2 6000min ⁻¹

Super NTM³

Astounding milling power. Highest productivity and flexibility achieved with 3 turrets.

Super NTM³

Capacity	
Max.turning diameter/Max.turning length	190mm / Upper turret 205mm: Lower turret 640mm
Distance between spindles	max.970mm/min.210mm
Bar capacity	51mm (op. L:65mm)
Chuck size	6"165mm
Axis travel	
Slide travel (X1/X2/X3)	167.5/167.5/167.5mm
Slide travel (X1/X2/X3)	250/250/685mm
Slide travel (Y) Upper turret×2	102mm (+61mm, -41mm)
Spindle L, R	
Spindle speed	5000min ⁻¹ (op. L:4500min ⁻¹)
L Spindle motor	15/11kW
R spindle motor	11/7.5kW
Upper turret	
Number of turret	2
Driven-tool spindle speed	6000min ⁻¹
Drive motor	5.5/3.7kW 24/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24
Drive type/Number of driven-tool station	Individual rotation/12
Lower turret	
Number of turret	1
Driven-tool spindle speed	6000min ⁻¹
Drive motor	5.5/3.7kW 24/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24
Drive type/Number of driven-tool station	Individual rotation/12
General	
Dimension (L×W×H)	3,930mm×2,270mm×2,110mm
Machine weight	12000kg



Turning Milling	L/R chuck size 6"	Distance between spindles 970mm	Max.turning length 190mm	Max. turning diameter 205mm Upper turret 640mm Lower turret	L/R bar capacity 51mm 65mm (op.L)
3-path control F-16ITB 11 controlled axes	SPindle motor L:15/11kW R:11/7.5kW	Spindle speed 5000min ⁻¹ /51mm 4500min ⁻¹ /65mm	Y axis (op.) +61mm, -41mm × 2 (Upper Turrets)	Number of tool stations Dodecagonal 24st × 3	Driven-Tool motor 5.5/3.7kW × 3 6000min ⁻¹



Multi-Turret Type Multi-Tasking Turning Center / WT- S

WT-100

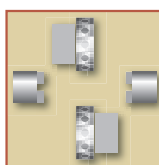
Multi-tasking compact machine featuring state of the art capabilities



* Alarm light is optionally available.

WT-100

Capacity	
Max. turning diameter/Max. turning length	190mm/503mm
Distance between spindles	max. 735mm/min. 210mm
Bar capacity	42mm
Chuck size	6" 165mm
Axis travel	
Slide travel (X1/X2)	135/135mm
Slide travel (Z1/Z2/B)	503/503/525mm
Slide travel (Y) upper turret	±31mm
Spindle L, R	
spindle speed (max.)	6000min ⁻¹
L spindle motor	11/7.5kW 75.4/38.6N·m
R spindle motor	11/7.5kW 75.4/38.6N·m
Upper turret	
Number of turrets	1
Driven-tool speed	6000min ⁻¹
Driven-tool motor	7.1/2.2kW 16/8N·m
Type of turret/Number of indexing pos.	Dodecagonal/24
Drive type/Number of driven-tool stations	Individual rotation/12
Lower turret	
Number of turret	1
Driven-tool speed	6000min ⁻¹
Driven-tool motor	7.1/2.2kW 16/8N·m
Type of turret/Number of indexing pos.	Dodecagonal/24
Drive type/Number of driven-tool stations	Individual rotation/12
General	
Floor space	2,300mm×1,620mm×1,940mm
Machine Weight	5,650kg



Turning
Milling

L/R chuck size
6"/165mm

Distance between
spindles
735mm

Max. turning
diameter
190mm

Max. turning
length
503mm

L/R bar capacity
42mm

2-path control
F-31iA
7 controlled axes

Spindle motor
L:11/7.5kW
R:11/7.5kW

Spindle speed
6000min⁻¹/42mm

Number of tool
stations
Dodecagonal 24st × 2

Driven-tool motor
7.1/2.2kW × 2
6000min⁻¹

Y axis
±31mm
(Upper turret)

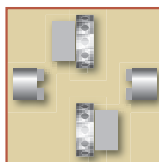
WT-150

High speed, high rigidity and compact multi-tasking machine



WT-150

Capacity	
Max. turning diameter/Max. turning length	190mm/400mm
Distance between spindles	max. 750mm/min. 200mm
Bar capacity	51mm (op. L: 65mm)
Chuck size	6" 165mm
Axis travel	
Slide travel (X1/X2)	157.5/167.5mm
Slide travel (Z1/Z2/B)	465/465/550mm
Slide travel (Y) upper turret	±35mm
Spindle L, R	
Spindle speed	5000min ⁻¹ (op. L: 4500min ⁻¹)
L spindle motor	15/11kW
R spindle motor	11/7.5kW
Upper turret	
Number of turrets	1
Driven-tool spindle speed	6000min ⁻¹
Driven-tool motor	5.5/3.7kW 24/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24st
Drive Type/Number of driven-tool stations	Individual rotation/12
Lower turret	
Number of turrets	1
Driven-tool spindle speed	6000min ⁻¹
Driven-tool motor	5.5/3.7kW 24/16N·m
Type of turret/Number of indexing pos.	Dodecagonal/24st
Drive Type/Number of driven-tool stations	Individual rotation/12
General	
Floor space (L×W×H)	3,615mm×1,985mm×1,860mm
Machine Weight	8,900kg



Turning
Milling (op.)

L/R chuck size
6"/165mm

Distance between
spindles
750mm

Max. turning
diameter
190mm

Max. turning
length
400mm

L/R bar capacity
51mm
65mm (op. L)

2-path control
F-18iTB
7 controlled axes

Spindle motor
L:15/11kW
R:11/7.5kW

Spindle speed
5000min⁻¹
4500min⁻¹/65mm

Number of tool
stations
Dodecagonal 24st × 2

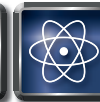
Driven-tool motor
5.5/3.7kW × 2
6000min⁻¹

Y axis (op.)
±35mm
(Upper turret)

Series

Aeronautics
industry

Medical industry

Automobile
industryConstruction
machine industryGeneral machine
industry

Energy industry

Information and
telecommunication
industryTransfer equipment
industryConsumer
electronics industryHousing equipment
industry

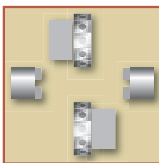
WT-250 II

Multi-purpose super machine for various types of parts, for small and large batches



WT-250

Capacity	
Max. turning diameter/Max. turning length	250mm/555mm
Distance between spindles (max/min)	885mm/265mm
Bar capacity	L:65mm R:51mm R:65mm (op.)
Chuck size	8" 215mm 6" 165mm
Axis travel	
Slide travel (X1/X2)	195mm/195mm
Slide travel (Z1/Z2/B)	600mm/600mm/620mm
Slide travel (Y) upper turret	±41mm
Spindle L, R	
L: $\phi 65$ mm L: $\phi 45$ mm L: $\phi 65$ mm (op.)	
Spindle speed	4500min ⁻¹ 5000min ⁻¹ 4500min ⁻¹
L spindle motor	18.5/15kW (op. 26/22kW 15/11kW Wide range)
R spindle motor	11/7.5kW (op. 15/11kW 18.5/15kW)
Upper turret	
Number of turrets	1
Type of turret/Number of indexing pos.	Dodecagonal drum turret /24
Driven-tool spindle speed	6000min ⁻¹
Drive motor	3.7/2.2kW
Driven-tool/Number of driven-tool station	Individual rotation/12
Lower turret	
Number of turrets	1
Type of turret/Number of indexing pos.	Dodecagonal drum turret /24
Driven-tool spindle speed	6000min ⁻¹
Drive motor	5.5/3.7kW
Driven-tool/Number of driven-tool station	Individual rotation/12
General	
Machine dimension (L×W×H)	4,059mm×2,314mm×2,225mm
Machine Weight	8,700kg

Turning
Milling (op.)L/R chuck size
8"/220mm
6"/165mmDistance
between spindles
870mmMax turning
diameter
250mmMax. turning
length
555mmBar capacity for L/R
65mm/51mm
65mm (op. R)2-PATH
FS31i-A
7-axes controlSpindle motor
L: 18.5/15kW
R: 11/7.5kWSpindle speed
4500min⁻¹/5000min⁻¹
4500min⁻¹ (op. R)Number of tool
stations
Dodecagonal 24st × 2Milling motor
5.5/3.7kW × 2
6000min⁻¹
3600min⁻¹ (op. R)Y-axis
function (op.)
±41mm

* with Y-axis



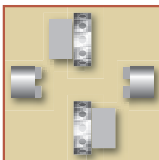
WT-300

High rigidity multi-tasking machine with box-type slides for all axes



WT-300

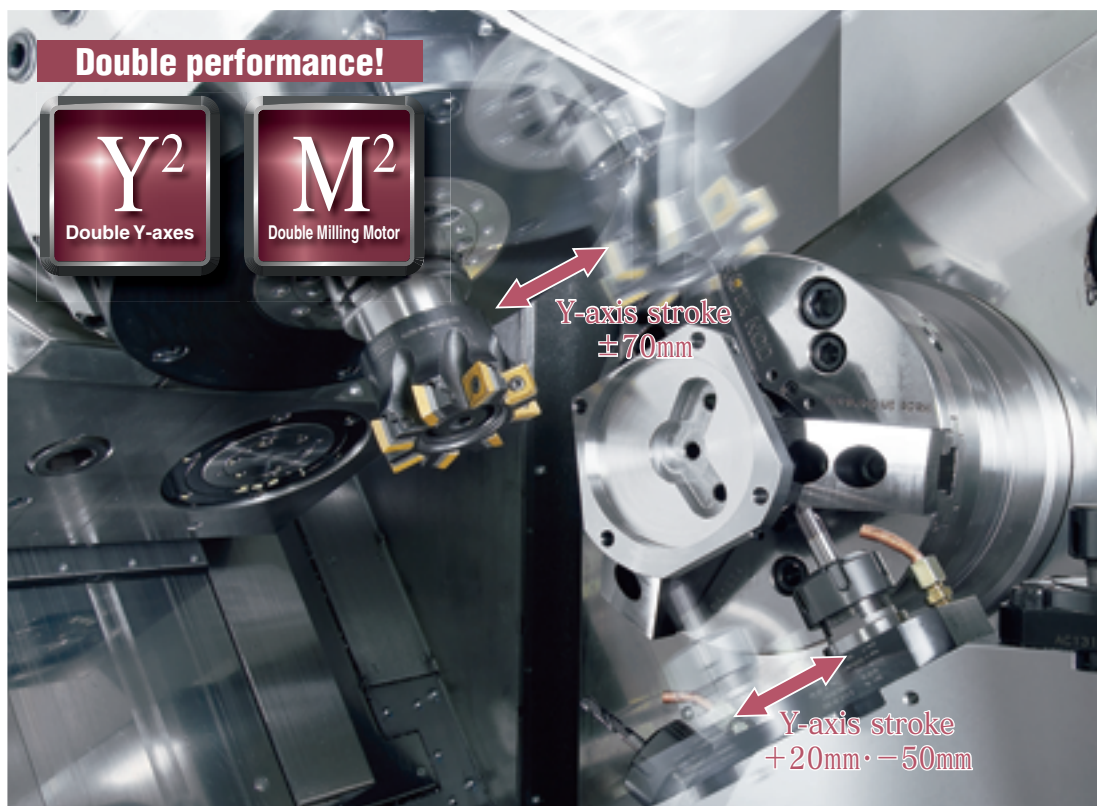
Capacity	
Max turning diameter Upper / lower turret	270mm 199mm/270mm
Max turning length	780mm
Distance between spindles	max.1100mm/min.250mm
Bar capacity	65mm (op. L 102mm)
Chuck size	8" / 10" 12" 305mm
Axis travel	
Slide travel (X1/X2)	195/195mm 152.5/195mm
Slide travel (Z1/Z2/B)	780/780/850mm
Slide travel (Y) upper turret	±60mm ±40mm
Spindle L, R	
Spindle speed	4500min ⁻¹ 2500min ⁻¹ /L 4500min ⁻¹ /R
L spindle motor	15/11kW (op. 18.5/15kW)
R spindle motor	15/11kW (op. 18.5/15kW)
Upper turret	
Number of turrets	1
Driven-tool spindle speed	3600min ⁻¹
Type of turret/Number of indexing pos.	1Dodecagonal/24st
Drive motor	5.5/3.7kW 39.2/23.3N·m
Driven-tool/Number of driven-tool station	Individual rotation/12
Lower turret	
Number of turrets	1
Driven-tool spindle speed	3600min ⁻¹
Type of turret/Number of indexing pos.	Dodecagonal/24st
Drive motor	5.5/3.7kW 39.2/23.3N·m
Driven-tool/Number of driven-tool station	Individual rotation/12
General	
Machine Dimension (L×W×H)	4,230mm×2,518mm×2,266mm
Machine weight	14,000kg

Turning
MillingL/R chuck size
8"/10"Distance between
spindles
1100mmMax turning
diameter
270mm (*1)Max. turning
length
780mmL/R Bar capacity
65mm
102mm (op. L)2-path control
F-181TB
7 controlled axesspindle motor
L:15/11kW
R:15/11kWSpindle speed
4500min⁻¹Number of tool
stations
Dodecagonal 24st × 2Driven-tool motor
5.5/3.7kW × 3
3600min⁻¹Y axis (op.)
±60mm / $\phi 65$ mm
±40mm / $\phi 102$ mm

(*1) When bar capacity is Dia. 102mm, Max. turning diameter will be Dia. 199mm for upper turret, and Dia. 270mm/lower turret



ATC Multi-Tasking Machine



Super NTJX



HSK-A63



CAPTO C6

SANDVIK



KM63

KENAMETAL

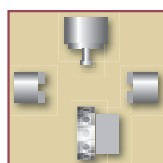
Super NTJX

World premiere! Y axis on lower turret

Super NTJX

Capacity	
Max. turning diameter/max. turning length	245mm/1090mm
Distance between spindles	max. 1290mm/min. 210mm
Bar capacity	51mm (op. L: 65mm)
Chuck size	170mm (6")
Axis travel	
Slide travel (X1/X2/Z1/Z2/B2)	455/222.5/1090/1005/1008mm
Slide travel (Y1/Y2)	±70/+20, -50mm
Spindle L, R	
Spindle speed	6000min ⁻¹ (op. L: 4500min ⁻¹)
L spindle motor	15/11kW 221.5/162.5N·m
R spindle motor	11/7.5kW 208/115N·m
Tool spindle	
Tool spindle speed	8000min ⁻¹ (op. 12000min ⁻¹)
Tool spindle motor	7.5/3.7kW Max 54N·m
Tool shank type	KM63 (op. CAPTO C6, HSK-A63)
ATC, Number of tools	40pcs. (op. 80, 120)
Max. tool diameter/No. adjacent tools	70mm/90mm
Max. tool length/Max. tool weight	280mm/8kg
Orientation function	90 degree indexing
B-axis positioning range	230° (±115°)
Lower turret	
Driven-tool spindle speed	6000min ⁻¹
Drive motor	5.5/3.7kW Max 24N·m
Type of turret/Number of indexing pos.	Dodecagonalk/24st
Drive type/Number of driven-tool stations	Individual rotation/12
General	
Floor space (L×W×H)	4,718mm×2,922mm×2,445mm
Machine weight	14000kg

* Alarm light is optionally available.



Turning Milling	L/R chuck size 6"	Distance between spindles 1290mm	Max turning diameter 245mm	Max turning length 1090mm	L/R bar capacity 51mm 65mm/op. L	Spindle speed 6000min ⁻¹ 4500min ⁻¹ /65mm
2-path control F-31A 10 controlled axes	Spindle motor L:15/11kW R:11/7.5kW	Tool spindle Y axis 140mm B axis 230°	Lower turret Y axis 70mm (+20/-50mm)	Tool spindle motor 7.5/3.7kW 8000min ⁻¹	Driven-tool motor 5.5/3.7kW 6000min ⁻¹	Number of ATC tools 40pcs. op. 80/120pcs
						KM63 CAPTO C6 HSK-A63





Super NTX

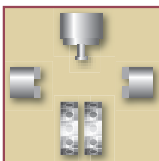
ATC tool spindle on twin-spindle twin-turret machine

Super NTX | Super NTX(S)



* Alarm light is optionally available.

Capacity	
Max.turning diameter/Max.Turning length	390mm/1100mm
Distance between spindles	max.1400mm/min.250mm
Bar capacity	65mm (op. 71mm)
Chuck size	8" (op. 10")
Axis travel	
Slide travel (X1/Z1/B2)	630/1150/1150mm
Slide travel (X2/X3/Z2/Z3)	255/255/375/375mm 255/- /1150/- mm
Slide travel (Y)	160mm (±80)
Spindle L, R	
Spindle speed	4500min ⁻¹ (op. 3500min ⁻¹)
L spindle motor	22/18.5kW
R spindle motor	22/18.5kW
Tool spindle	
Tool spindle speed	8000min ⁻¹ (op. 12000min ⁻¹)
Tool spindle motor	18.5/11kW
Tool shank type	KM63, CAPTO C6 (op. HSK-A63)
ATC Number of tools	24pcs. (op. 40, 80, 120)
Max. tool diameter/No adjacent tools	90mm/120mm
Max. tool length/Max. tool weight	300mm/8kg
Orientation function	90 degree indexing
B-axis positioning range	230° (±115°)
Lower turret	
Number of turrets	2 1
Driven-tool spindle speed	3600min ⁻¹
Drive motor	5.5/3.7kW 40/26N·m
Type of turret/Number of indexing pos.	Dodecagonal/24st
Drive type/Number of driven-tool stations	Individual rotation/12
General	
Floor space (L×W×H)	5,875mm×3,668mm×3,150mm 5,825mm×3,571mm×3,085mm
Weight	20000kg



* NTX (S) has no lower turret on left side

Turning Milling	L/R chuck size 10"	Distance between spindles 1400mm	Max. turning diameter 390mm	Max turning length 1100mm	L/R Bar capacity 71mm/10" 65mm/8"	Spindle speed 10" 3500min ⁻¹ 8" 4500min ⁻¹
3-path control F-16ITB 11 controlled axes	Spindle motor L:22/18.5kW R:22/18.5kW	Tool spindle Y axis 160mm B axis 230°	Tool spindle motor 18.5/11kW 8000min ⁻¹	Driven-tool motor 5.5/3.7kW × 2 3600min ⁻¹	Number of ATC tools 24pcs. op. 40/80/120pcs.	KM63 CAPTO C6 HSK-A63

* x1 for NTX (S)



STW-40

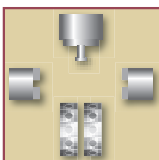
Lead time is drastically reduced by all machining with one chucking

STW-40 | STS-40



* Alarm light is optionally available.

Capacity	
Max turning diameter/Max. turning length	400mm/1500mm
Distance between spindles	max.1900mm/min.300mm
Bar capacity	71mm (op. 90mm)
Chuck size	305mm/12" (op. 380mm/15")
Axis travel	
Slide travel (X1/Z1/B2)	620/1600/1600mm
Slide travel (X2/X3/Z2/Z3)	275/275/550/550mm 275/- /1600/- mm
Slide travel (Y)	200mm (+110/-90mm)
Spindle L, R	
Spindle speed	3500min ⁻¹ (op. 2500min ⁻¹)
L spindle motor	22/15kW (op. 30/22kW)
R spindle motor	22/15kW (op. 30/22kW)
Tool spindle	
Tool spindle speed	6000min ⁻¹ (op. 12000min ⁻¹)
Tool spindle motor	15/11kW
Tool shank type	KM63 (op. CAPTO C6, HSK-A63)
ATC magazine, number of tools	40pcs. (op. 80pcs.)
Max. tool diameter/No adjacent tools	90mm/120mm
Max. tool length/Max. tool weight	250mm/8kg
Orientation function	90 degree positioning
B axis positioning range	200° (±100°)
Lower turret	
Number of turrets	2 1
Driven-tool spindle speed	3600min ⁻¹
Drive motor	5.5/3.7kW 58.3/39.2N·m
Type of turret/Number of indexing pos.	Dodecagonal/12st
Drive type/Number of driven-tool stations	Individual rotation/12
General	
Floor space (L×W×H)	6,700mm×3,476mm×3,173mm
Machine weight (incl.control)	25000kg



* STS has no lower turret on left side

Turning Milling	L/R chuck size 15"	Distance between spindles 1900mm	Max. turning diameter 400mm	Max. turning length 1500mm	L/R bar capacity 90mm/15" 71mm/12"	Spindle speed 15" 2500min ⁻¹ 12" 3500min ⁻¹
3-path control F-16ITB 11 controlled axes	Spindle motor L:22/15kW R:22/15kW	Tool spindle Y axis 200mm B axis 200°	Tool spindle motor 15/11kW 6000min ⁻¹	Driven-tool motor 5.5/3.7kW × 2 3600min ⁻¹	Number of ATC tools 40pcs. op. 80pcs.	KM63 CAPTO C6 HSK-A63

* x1 for STS



TW Series

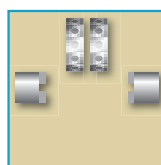
TW-8

Minimum floor space, low cost, long awaited compact two-spindle machine



TW-8

■ Capacity		
Max. turning diameter/Max. turning length	190mm/115mm	190mm/100mm
Distance between spindles	max.735mm/min.210mm	
Bar capacity	26mm	op. 34mm op. 42mm
Chuck size	6" 165mm	
■ Slide travel		
Slide travel (X1/X2)	155/155mm	
Slide travel (Z1/Z2)	180/525mm	
■ Spindle L, R		
Spindle speed	6000min ⁻¹	
L-spindle motor	7.5kW	
R-spindle motor	7.5kW	
■ Turret L, R		
Number of turrets	2	
Type of turret head/Number of indexing pos.	Dodecagonal turret/12	
■ Milling (op.)		
Driven-tool speed	4000min ⁻¹	
Drive motor	2.2kW	
Drive type/Number of driven-tool stations	/6	
■ General		
Floor space (L×W×H)	2,300mm×1,600mm×1,600mm	
Machine weight (incl. Control)	5,010kg (TW-8MM)	



Turning Milling (op.)	L/R chuck size 6"/165mm	Distance between centers 735mm	Max. turning diameter 190mm	Max. turning length 115mm	L/R bar capacity 26mm 34mm (op.) 42mm (op.)
2-path control F-31iA 4 controlled axes	Spindle motor L:7.5kW R:7.5kW	Spindle speed 6000min ⁻¹	Number of tool stations Dodecagonal 12st × 2	Driven-tool motor 2.2kW × 2 4000min ⁻¹	



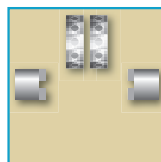
TW-10MM

A bar machine, which improves productivity, through a high output motor, which ensures high speed machining.

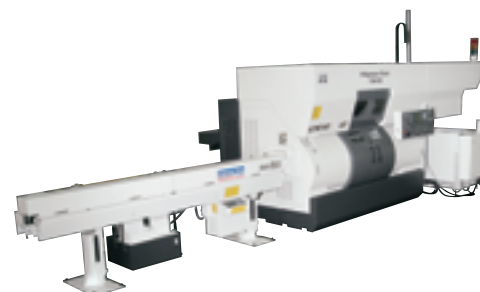


TW-10MM

Capacity	
Max. turning diameter/Max. turning length	10mm/155mm
Distance between centers	max.870mm/min.250mm
Bar capacity	42mm (op. 51mm)
Chuck size	6" 165mm
Slide travel	
Slide travel (X1/X2)	180/180mm
Slide travel (Z1/Z2)	200/620mm
Slide travel (Y1/Y2)	±30/±30mm
Spindle L, R	
Spindle speed	5500min ⁻¹ 5000min ⁻¹
L-spindle motor	7.5/5.5kW (op. 11/9kW)
R-spindle motor	7.5/5.5kW
Turret L, R	
Number of turrets	2
Type of turret head/Number of indexing pos.	Dodecagonal turret/12
Milling	
Driven-tool speed	3600min ⁻¹
Drive motor	3.7/2.2kW
Drive type/Number of driven-tool stations	Individual rotation/12
General	
Floor space (L×W×H)	22,940mm×2,249mm×1,972mm
Machine weight (incl. Control)	6,150kg



Turning Milling	L/R chuck size 6"	Distance between centers 870mm	Max. turning diameter 210mm	Max. turning length 155mm	L/R bar capacity 42mm 51mm (op.)
2-path control F-18iTB 4 controlled axes	Spindle motor 7.5/5.5kW+7.5/5.5kW 11/9kW (op. L)	Spindle speed 5500min ⁻¹ /42mm	Number of tool stations Dodecagonal 24st × 2	Driven-tool motor 3.7/2.2kW × 2 3600min ⁻¹	Y axis (op.) ±30mm



Twin-Spindle Multi-Tasking Machine



Aeronautics industry



Automobile industry



Construction machine industry



General machine industry



Energy industry



Information and telecommunication industry



Transfer equipment industry



Electrical Appliance industry



Home Appliance industry

TW-20

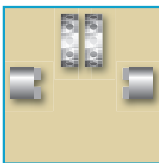
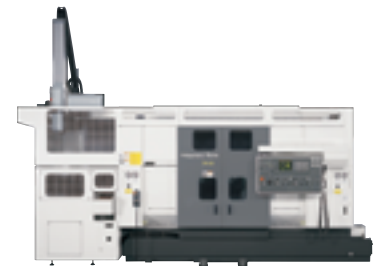
With high speed flexible machining, this the kernel of the TW-series, dedicated towards factory automation.



TW-20

16st

Capacity	
Max turning diameter/ Max turning length	270mm/192mm
Distance between spindles	max.1080mm/min.300mm
Bar capacity	51mm (op. 65mm)
Chuck size	8" 215mm
Axis travel	
Slide travel (X1/X2)	195/195mm
Slide travel (Z1/Z2)	265/780mm
Slide travel (Y1/Y2) (op.)	±45/±45mm
Spindle L, R	
Spindle speed	5000min ⁻¹
L spindle motor	15/11kW (op. 18.5/15kW)
R spindle motor	15/11kW
Turret / L, R	
Number of turrets	2
Type of turret/Number of indexing pos.	Dodecagonal /24
Driven tools (op.)	
Type of turret/Number of indexing pos.	3600min ⁻¹
Driven-tool motor	3.7/2.2kW
Drive type/Number of driven-tool stations	Individual rotation/12
General	
Floor space (LxWxH)	3,444mmx2,235mmx2,135mm
Machine weight (incl. Control)	7,800kg



Turning Milling (op.)	L/R chuck size 8"	Distance between centers 1080mm	Max turning diameter 270mm	Max. turning length 192mm	L/R bar capacity 51mm 65mm (op.)
2-path control F-181TB 4 controlled axes	Spindle motor 15/11 kW+15/11 kW 18.5/15kW (op. L)	Spindle speed 5000min ⁻¹ /51mm 4500min ⁻¹ /65mm	Number of tool stations Dodecagonal 24st x 2	Driven-tool motor 3.7/2.2kW x 2 3600min ⁻¹	Y axis (op.) ±45mm

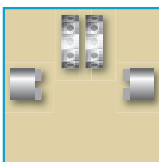
TW-30

Best suited for all sorts of Heavy Duty Machining. A super machine, which takes pride for its rigidity and bar capacity.



TW-30

Capacity	
Max turning diameter/ Max turning length	335mm/300mm
Distance between spindles	max.1300mm/min.320mm
Bar capacity	71mm
Chuck size	10"254mm
Axis travel	
Slide travel (X1/X2)	265/265mm
Slide travel (Z1/Z2)	350/980mm
Slide travel (Y1/Y2) (op.)	±70/±70mm
Spindle L, R	
Spindle speed	3600min ⁻¹
L spindle motor	22/18.5kW (op. 30/22kW)
R spindle motor	22/18.5kW
Turret / L, R	
Number of turrets	2
Type of turret/Number of indexing pos.	Dodecagonal/24
Driven tools (op.)	
Type of turret/Number of indexing pos.	3600min ⁻¹
Driven-tool motor	5.5/3.7kW
Drive type/Number of driven-tool stations	Individual rotation/12
General	
Floor space (LxWxH)	4,370mmx2,125mmx2,250mm
Machine weight (incl. Control)	10,820kg



Turning Milling (op.)	L/R chuck size 10"	Distance between centers 1300mm	Max turning diameter 335mm	Max. turning length 300mm	L/R bar capacity 71mm
2-path control F-181TB 4 controlled axes	Spindle motor 22/18.5kW+22/18.5kW 30/22kW (op. L)	Spindle speed 3500min ⁻¹	Number of tool stations Dodecagonal 24st x 2	Driven-tool motor 5.5/3.7kW x 2 3600min ⁻¹	Y axis (op.) ±70mm

SC Series

SC-200 / SC-200L

Realization of both powerful cuts and better cost performance. 8 inch machine

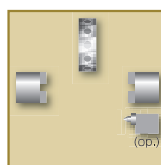


* Alarm light is optionally available.

SC-200

SC-200L

Capacity	
Max.turning diameter	432mm/410mm (with Y-axis)
Max.turning length	370mm/760mm
Distance between center and spindle	509mm
Bar capacity	65mm
Chuck size	8"
Slide travel	
X-axis slide travel	277mm/261mm (with Sub spindle)
Z-axis slide travel	365mm 580mm
Y-axis slide travel (option)	±35mm
Spindle	
Spindle speed	4500min ⁻¹
Spindle motor	11/7.5kW
Turret	
Number of turrets	1
Type of turret heads/Number of indexing pos.	Dodecagonal drum turret
Milling (op.)	
Driven-tool speed	6000min ⁻¹
Drive motor	5.5/3.7kW
Drive type/Number of driven-tool stations	Individual rotation/12
Tail stock (op.)	
Quill diameter / Quill stroke	80mm/80mm
Quill taper	MT-4 (Rotating center)
Sub spindle (op.)	
Chuck size/Bar capacity	6" 165mm/34mm 6" 165mm/42mm
Spindle speed/spindle motor	5000min ⁻¹ / 5.5/3.7kW 6000min ⁻¹ / 7.5/5.5kW
Distance between spindles	max.615mm/min.220mm max.800mm/min.220mm
General	
Floor space (LxWxH)	2,330mmx1,855mmx1,800mm (SC-200) 2,771mmx1,884mmx1,965mm (SC-200L)
Machine weight (Incl.control)	2,700kg 5,000kg



Turning
Milling (op.)

Chuck size
8"

Distance between
center and spindle
509mm
757.8mm/200L

Max.turning diameter
432mm
410mm/200L

Max.turning length
370mm
530mm/200L

Bar capacity
65mm

Tail stock (op.)
MT-4 (Rotating center)
80mm (Quill std.)

C-axis for Sub spindle
Rapid index speed 600mm/min
Least command increment 0.001

control.
FANUC
21i-TB

Spindle motor
11/7.5kW

Max spindle
speed
4500min⁻¹

Number of tool
stations
Dodecagonal 12st

Driven-tool motor
5.5/3.7kW
6000min⁻¹

Y axis (op.)
±41mm

Sub spindle (op.)
5.5/3.7kW
5000min⁻¹ 6"/34mm

Sub spindle (op.)
7.5/5.5kW
6000min⁻¹ 6"/42mm

* 18i-TB when Sub spindle is equipped.

* 24 station turret is optionally available.

* For SC-200

* For SC-200L

* available only
for SC-200L

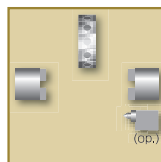
SC-250

Realization of both powerful cuts and better cost performance. 8-inch machine



SC-250

Capacity	
Max.turning diameter/Max.turning length	300mm/500mm
Distance between center and spindle	689mm
Bar capacity	51mm (op. 65mm)
Chuck size	8" 215mm 10" 254mm
Slide travel	
X-axis/Z-axis slide travel	177.5mm/550mm
Y-axis slide travel (op.)	±41mm
Spindle	
Max. Spindle speed	5000min ⁻¹ 4500min ⁻¹
Spindle motor	15/11kW (op. 18.5/15kW)
Turret	
Number of turrets	1
Type of turret heads/Number of indexing pos.	Dodecagonal turret/12 Decagonal turret/10
Milling (op.)	
Driven-tool spindle speed	3600min ⁻¹
Drive motor	3.7/2.2kW
Drive type/Number of driven-tool stations	Single drive/12 Single drive/10
Tailstock (op.)	
Quill diameter/Quill stroke	80mm/80mm
Quill taper	MT-4 (Rotating center)
Sub spindle (op.)	
Chuck size/Bar capacity	8" 215mm/51mm
Spindle speed/spindle motor	5000min ⁻¹ /11/7.5kW
Distance between spindles	max.780mm/min.280mm
General	
Floor space (LxWxH)	2,598mmx1,671mmx1,815mm
Machine weight (Incl.control)	3,800kg



Turning
Milling (op.)

Chuck size
8"/215mm
10"/254mm

Distance between
center and spindle
689mm

Max.turning
diameter
300mm

Max.turning
length
500mm

Bar capacity
51mm
65mm (op.)

Tailstock (op.)
MT-4 (Rotating center)
80mm (Quill std.)

Control
FANUC
21i-TB

Spindle motor
15/11kW
18.5/15kW (op.)

Max spindle
speed
5000min⁻¹/51mm
4500min⁻¹/65mm

Number of tool
stations
Dodecagonal turret 12st

Driven-tool motor
3.7/2.2kW
3600min⁻¹

Y axis (op.)
±41mm

Sub spindle (op.)
11/7.5kW
5000min⁻¹ 8"/51mm



Aeronautics industry



Medical industry



Automobile industry



Construction machine industry



General machine industry



Energy industry



Transfer equipment industry



Electrical Appliance industry



Home Appliance industry

SC-300 / 300L

Big bore and powerful cuts. 10-inch chuck.

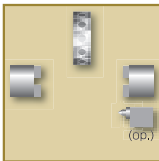


* Alarm light is optionally available.

SC-300

SC-300L

Capacity		
Max.turning diameter/Max.turning length	350mm/600mm	350mm/1100mm
Distance between center and spindle	713.5mm	1213.5mm
Bar capacity	71mm (op. 80mm)	71mm
Chuck size	10" 254mm	
Slide travel		
X-axis/Z-axis slide travel	222.5mm/635mm	222.5mm/1135mm
Y-axis slide travel (op.)	±45mm	
Spindle		
Spindle speed	3500min ⁻¹	
Spindle motor	22/18.5kW op. 30/22kW	22/18.5kW
Turret		
Number of turrets	1	
Type of turret heads/Number of indexing pos.	Dodecagonal turret/12	
Milling (op.)		
Driven-tool spindle speed	3600min ⁻¹	
Drive motor	5.5/3.7kW	3.7/2.2kW
Drive-type/Number of driven-tool stations	Single drive/12	
Tailstock		
Quill diameter / Quill stroke	90mm/100mm	
Quill taper	MT-5 (Rotating center)	MT-4 (Built-in dead center)
Sub spindle (op.)		
Chuck size/Bar capacity	8" 215mm/51mm	
Spindle speed/Spindle motor	3500min ⁻¹ /11/7.5kW	
Distance between spindles	max.810mm/min.310mm	
General		
Floor space (L×W×H)	3,202mm×1,735mm×1,950mm	3,702mm×1,735mm×1,950mm
Machine weight	4,600kg	5,200kg



Turning Milling (op.)	Chuck size 10"/254mm	Distance between center and spindle 713.5mm 1213.5mm/300L	Max.turning diameter 350mm	Max.turning length 600mm 1100mm/300L	Bar capacity 71mm 80mm (op.) 89mm (op.)	Tailstock MT-5 (Rotating center) MT-4 (Built-in dead center) /300L
Control FANUC 21i-TB	Spindle motor 22/18.5kW 30/22kW (op.)	Max spindle speed 3500min ⁻¹	Number of tool stations Dodecagonal turret 12st	Driven-tool motor 5.5/3.7kW 3.7/2.2kW/300L 3600min ⁻¹	Y axis (op.) ±45mm	Sub spindle (op.) 11/7.5kW 3500min ⁻¹ 8"/51mm

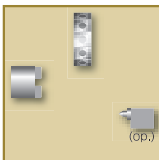
SC-450

Dynamic cuts demonstrate high rigidity. 15-inch super chucker



SC-450

Capacity		
Max.turning diameter/Max.turning length	465mm/785mm	465mm/715mm
Distance between center and spindle	1035mm	
Bar capacity	80mm	
Chuck size	12" 305mm	15" 381mm
Slide travel		
X-axis/Z-axis slide travel	315mm/825mm	
Y-axis slide travel (op.)	±70mm	
Spindle		
Spindle speed	2500min ⁻¹	
Spindle motor	30/22kW	
Turret		
Number of turrets	1	
Type of turret heads/Number of indexing pos.	Dodecagonal turret/12	
Milling (op.)		
Driven-tool spindle speed	3600min ⁻¹	
Drive motor	5.5/3.7kW	
Drive-type/Number of driven-tool stations	Single drive/12	
Tailstock (op.)		
Quill diameter/Quill stroke	120mm/100mm	
Quill taper	MT-4 (Built-in dead center)	
General		
Floor space (L×W×H)	3,786mm×1,975mm×2,100mm	
Machine weight	7,200kg	



Turning Milling (op.)	Chuck size 12"/15"	Distance between center and spindle 1035mm	Max.turning diameter 465mm	Max.turning length 785mm/12" 715mm/15"	Bar capacity 80mm	Tailstock (op.) MT-4 (Built-in dead center) 100mm (Quill std.)
Control FANUC 21i-TB	Spindle motor 30/22kW	Max spindle speed 2500min ⁻¹	Number of tool stations Dodecagonal turret 12st	Driven-tool motor 5.5/3.7kW 3600min ⁻¹	Y axis (op.) ±70mm	

NC specification chart / All models

Model					Control	Display		Part program storage length						
					Standard	Option	Option Standard when Luck-bei is installed	Standard	Option					
Super Multi-Tasking Machine with ATC	ATC series	STW-40		FANUC 16i-TB	Color 10.4"LCD	—	320m+320m +320m	640m+640m +640m	1280m+1280m +1280m	—	—	—	—	
		STS-40					320m+320m	640m+640m	1280m+1280m					
		Super NTX (w)					Color 15"LCD	1280m+1280m +1280m	—					—
		Super NTX (s)						1280m+1280m						
		Super NTJX		FANUC 31i-A	Color 10.4"LCD		Total 2560m	Total 5120m	Total 10240m	Total 20480m				
Turret-Type Multi-Tasking Turning Center	Multi Turret series	Super NTJ		FANUC 18i-TB	Color 10.4"LCD	—	1280m+1280m	—	—	—	—	—	—	
		Super NTY ³		FANUC 31i-A			Total 1280m	Total 2560m	Total 5120m	Total 10240m	Total 20480m			
		Super NTM ³		FANUC 16i-TB			320m+320m +320m	640m+640m +640m	1280m+1280m +1280m	—	—			
		WTS-150					320m+320m +320m	640m+640m +640m	1280m+1280m +1280m					
		WTW-150		FANUC 18i-TB			320m+320m +320m+320m	640m+640m +640m+640m	1280m+1280m +1280m+1280m					
	Super Mill series	Super Mill WY-250		FANUC 31i-A	Color 10.4"LCD	—	Total 640m	Total 1280m	Total 2560m	Total 5120m	Total 10240m	Total 20480m	—	
		Super Mill WT-150		FANUC 18i-TB			320m+320m	640m+640m	1280m+1280m	—	—	—		
		Super Mill SC-200L	Standard Sub spindle	FANUC 21i-TB FANUC 18i-TB	Monochrome 7.2"LCD	Color 10.4"LCD	80m	160m	320m	640m	1280m	— 2560m	—	
	WT series	WT-100		FANUC 31i-A	Color 10.4"LCD	—	Total 640m	Total 1280m	Total 2560m	Total 5120m	Total 10240m	Total 20480m	—	
		WT-150		FANUC 18i-TB			320m+320m	640m+640m	1280m+1280m	—	—	—		
		WT-250 II		FANUC 31i-A			Total 640m	Total 1280m	Total 2560m	Total 5120m	Total 10240m	Total 20480m		
		WT-300		FANUC 18i-TB			320m+320m	640m+640m	1280m+1280m	—	—	—		
	TW series	TW-8		FANUC 31i-A	Monochrome 7.2"LCD	Color 10.4"LCD	Total 320m	Total 640m	Total 1280m	Total 2560m	Total 5120m	Total 10240m	Total 20480m	
		TW-10		FANUC 18i-TB	Color 10.4"LCD	—	320m+320m	640m+640m	1280m+1280m	—	—	—	—	
		TW-20												
		TW-30												
	SC series	SC-200/200L		Standard Sub spindle	FANUC 21i-TB FANUC 18i-TB	Monochrome 7.2"LCD	Color 10.4"LCD	80m	160m	320m	640m	1280m	— 2560m	—
SC-250		Standard Sub spindle	FANUC 21i-TB FANUC 18i-TB	— 2560m										
SC-300/300L		Standard Sub spindle	FANUC 21i-TB FANUC 18i-TB	— 2560m										
SC-450		FANUC 21i-TB	—											

		Number of registerable programs					Number of tool offset			NT Nurse	NT Work Navigator	Overload Detection	Rigid tapping		Manual handle retrace	Luck-bei II
		Standard	Option				Standard	Option					Spindle	Milling		
	Standard when Luck-bei is installed															
-		125+125 +125	200+200 +200	400+400 +400	1000+1000 +1000	-	99+99 +99	-	-	●	●	●	●	●	● (op.)	Standard
		125+125	200+200	400+400	1000+1000		99+99									
		1000+1000 +1000	-	-	-		99+99 +99									
		1000+1000					99+99									
		Total 2000					Total 4000 *1)									
-		1000+1000	-	-	-	99+99	-	-	●	●	●	●	●	● (op.)	Standard	
		Total 1000	Total 2000 *2)	Total 4000 *1)		99+99 +99										
		200+200 +200	400+400 +400	1000+1000 +1000		99+99 +99										
		200+200 +200	400+400 +400	1000+1000 +1000		99+99 +99										
		200+200 +200+200	400+400 +400+400	1000+1000 +1000+1000		99+99 +99+99										
-		Total 500	Total 1000 *3)	Total 2000 *2)	Total 4000 *1)	-	99+99	-	-	●	●	●	●	●	● (op.)	Standard
		200+200	400+400	1000+1000	-											
	320m	125	200	400	- 1000	-	32	64	- 99	●	●	●	●	●	● (op.)	Option
-		Total 500	Total 1000 *3)	Total 2000 *2)	Total 4000 *1)	-	99+99	-	-	●	●	●	●	●	● (op.)	Standard
		200+200	400+400	1000+1000	-									● Standard when milling function is equipped		
		Total 500	Total 1000 *3)	Total 2000 *2)	Total 4000 *1)									●		
		200+200	400+400	1000+1000	-									●		
	Total 640m	Total 250	Total 500	Total 1000 *3)	Total 2000 *2)	Total 4000 *1)	16+16	32+32	99+99	●	●	●	●	● Standard when milling function is equipped	● (op.)	Option
	-	200+200	400+400	1000+1000	-	-	99+99	-	-	●	●	●	●	● Standard when milling function is equipped	● (op.)	Standard
320m	125	200	400	-	-	32	64	-	●	●	●	●	● Standard when milling function is equipped	● (op.)	Option	
				1000												
				-												
				1000												
				-												
				1000												

*1) Part program storage length will be either total 5120m, 10240m or 20480m. *2) Part program storage length will be total 2560m.
 *3) Part program storage length will be either total 1280m, 2560m, 5120m, 10240m or 20480m.

NT Nurse System

A machine management feature that contributes to drastic reduction of set-up time !!

NT-Nurse provides a user-friendly environment to achieve the best production results. Among NT Nurse features are the Load monitor for monitoring tool breakage and tool wear, the Soft Work Pusher for accurate parts transfer, as well as several other features to prevent errors and facilitate production.

- TOOL COUNTER
- TOOL LIFE (Spare tool call-up)
- OPERATION CONDITION
- QUICK OFFSET INPUT
- SETTING (SWITCH)
- OPERATION MESSAGE
- LOAD DISPLAY
- GUIDANCE
- GR:LOADER PROGRAM CHECK
- WS: WORK STOCKER POSITION
- GR:SETTING
- SOFT WORK PUSHER
- HAN-BEI (IN PROCESS MEASUREMENT)
- CHUCKING CHECK
- B-AXIS DIMENTION SETTING
- WORK-PIECE MACHINING STATUS
- DATA READ/WRITE
- POWER-SAVE SETTING
- OFFSET HISTORY
- ATC DATA SETTING



Menu Display



Operation Condition Display



Alarm Display



Tool Life (spare tool call-up)



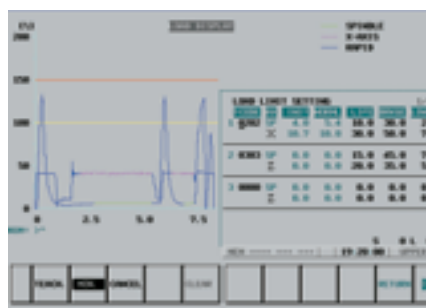
Tool Counter



Alarm History Display



Offset History



Load Monitor



Air-Cut



Power-Saving Setting



Quick Offset Input



Work-Piece Status Display for machines with Gantry loader

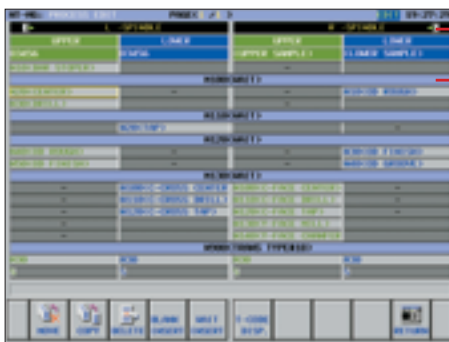
These items are only part of 24 features.

■ Luck bei II NT Manual Guide i

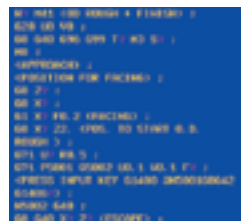
A programming system with the ability of generating NC programs (ISO/EIA G-code programs) easily. Among its features are: Machining cycle creation (conversational function) for easy programming, NC Programming Support, which enables once-programmed machining processes to be cut, copied, pasted and moved, as well as NC program simulation using tool path or solid models.

● Process Editing

A function that automatically recognizes and extracts the name and order of all machining processes, then displays them in table layout. Machining processes can be moved, copied or swapped easily. In addition, waiting M-codes can be added with the click of a button.



Separate display based on Spindle and turret.
Displayed in a clear layout according to waiting functions
Program Display



Waiting function input with the push of a button

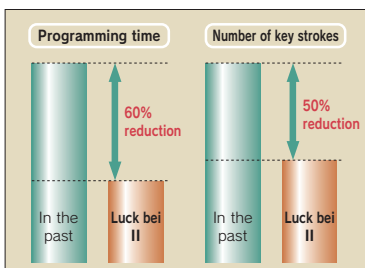
● Fixed Form Function

Abundant fixed forms with over 600 patterns (10 times more than before) are standard. Easy selection of fixed forms from a menu. Additional custom made programs can be registered.



● Machining Cycle (conversational) Function

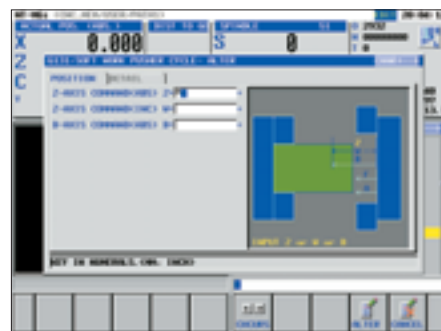
Complex machining accomplished with minimum input
Best guidance for Nakamura-Tome multitasking machine
Smooth input without confusion



In addition to Nakamura-Tome's original work navigator, which is essential for multi-tasking, programming of soft quill pusher and other features can be performed easily.



■ Work navigator programming screen



■ Soft work pusher programming screen



■ Soft quill pusher programming screen

Peripheral Devices for Automation

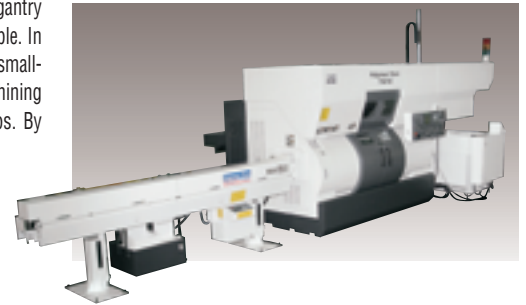
Automation Systems for Small-Sized, Mid

Nakamura-Tome offers built-in type Gantry loaders for both twin spindle machines and for single spindle machines. Standard type gantry comes with a stocker outlet on the machine left hand side; however, right hand side outlet and passage type outlet are both available. In addition to flat type and multi-layer type stockers, multi-layer palletizing stocker 'Hako-bei' is also available, which is suitable for small-sized workpieces. Jump programming function helps start automatic operation from different patterns, depending on the machining status and chucking status of the parts. This simplifies restarting automatic operation, especially after irregular machine stops. By confirming the machining status of the part, the control automatically jumps to the relevant program block and starts the program.

Safety quality specification

Additional safety features such as automatic fire extinguisher, robot fences, and additional interlocks, are available as options, which can be included in your purchase package. Please contact our local distributor for your specific requirements.

1. Among safety interlocks are Electric door lock, Chuck interlock, Hydraulic pressure switch, Air pressure switch, Earth leakage breaker, Quill interlock, (Depending on your country, some of these features could be optional equipment)
2. Various safety fences for work stockers and for robots, ...etc are available. Further discussions with local sales agents are required when deciding the specification.



Twin spindles



STW-40 + GR-210

* 3 axis (Z-axis, X-axis, Y-axis) type Gantry loader. Max handling weight 20kg is available for the GR-210, on condition of handling one part at a time. For more clamping force or other requirements, please contact your local distributors.



Super NTJ + GR-203

* Flange type (std.) and shaft hand type (op.) are available for GR loader hand. Max. part diameter varies depending on machine model. Please contact our local distributors.



WT-100 + GR-201

* Passage type Gantry loader. A cell system consisting of a parts feeder that is most suitable for stocking irregularly shaped mass production raw parts, and palletizing Hako-bei stocker equipped with an external measurement device for finished parts.

Single spindle



SC-250 + GR-103

* Gantry loader for single spindle machine
Equipped with a raw-part-hand and finished-part-hand. In case of sub-spindle specification, a 180-degree-revolving Matabei-hand is necessary.

I-Sized, and Various Kinds of Workpieces.

Gantry Loader

Standard type / Left WT-150 + GR-203



* Work conveyor for part inspection during continuous operation (op.)

Right side outlet / Stroke extension TW-8 + GR-203



* In case of gantry with right hand side outlet, a backside outlet type chip conveyor is required.

Passage type WT-100 + GR-201



* In case of gantry with right hand side outlet, a backside outlet type chip conveyor is required.

● Depending on the machine control type, background editing function cannot be used when either gantry loader are parts catcher C are equipped. ● Gantry loader and parts catcher C cannot be installed on the same machine.

Stocker

Multi-Layer Type Stocker



WT-150+GR-203
* Conveyor is optional

[GR-203] [GR-103]

WS-221	Type	Multi-layer pallet type
	Workpiece diameter	dia.15-100mm
	Number of pallets	10
	Stack height	300mm
	Max. workpiece weight	18kg / pallet

WS-231	Type	Multi-layer pallet type
	Workpiece diameter	dia.20-150mm
	Number of pallets	10
	Stack height	300mm
	Max. workpiece weight	32kg / pallet

[GR-210]

WS-442W	Type	Multi-layer pallet type
	Workpiece diameter	dia.20-220mm
	Number of pallets	20
	Stack height	450mm
	Max. workpiece weight	40kg / pallet

WS-445W	Type	Multi-layer pallet type
	Workpiece diameter	dia.20-220mm
	Number of pallets	14
	Stack height	450mm
	Max. workpiece weight	40kg / pallet

* TO reduce gantry service time, 2 loading stations could be available.

Flat Type Stocker



[GR-203] [GR-103]

WS-121	Type	Flat pallet type
	Workpiece diameter	dia.20-80mm
	Number of pallets	30
	Max. workpiece weight	2kg / pallet

WS-122	Type	Flat pallet type
	Workpiece diameter	dia.20-80mm
	Number of pallets	60
	Max. workpiece weight	2kg / pallet

WS-124	Type	Flat pallet type
	Workpiece diameter	dia.20-80mm
	Number of pallets	120
	Max. workpiece weight	2kg / pallet

[GR-210]

WS-132	Type	Flat pallet type
	Workpiece diameter	dia.20-150mm
	Number of pallets	20
	Max. workpiece weight	18kg / pallet

* If additional fixtures are needed, the price shall be quoted separately.

Multi-Layer Palletizing Stocker



- In case workpiece weight exceeds 300g (op.1000g), B2 type shall be selected. Stroke extension is necessary for B2 type.
- For B2 and C2 types, trays shall be taken out and put in from the left side of machine.
- For the D type, it is possible to specify whether the trays are taken out and put in from either machine front, left side or back side.
- Extension for in-out conveyors is optionally available.
- Up to three extension-conveyors for tray stacks are available.

B2 type

For Heavy parts and large diameter parts such as aluminum die castings, the gantry picks up and returns the parts directly from and to the pallet.

C2 type

Equipped with a one-Axis loader, for transferring the parts from the pallet to a work- station, where the gantry picks up and returns parts.

D type

Equipped with a two-Axis loader, adding flexibility to the system layout. In addition to the possibility of partitioning one pallet for raw and finished parts, finished parts can be placed in a washing device.

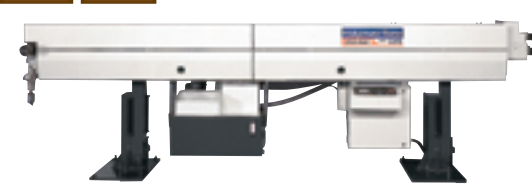
Max. loader carriage weight	-	300g op. 1,000g	300g op. 1,000g
Loader	-	1 axis	2 axis
Shuttle (built-in) axis	Servo feed	Servo feed	Special feed control
Max. loading weight		150kg	
Max. weight for 1 tray		15kg (op.20kg)	
Tray storage space		W450×D600×H650	

Peripheral Devices for Automation

A New Era of Peripheral Devices that

Bar feeder

3m **4m** Auto Cho-bei is a bar feeder with magazine for automatic bar loading. Cho-bei is a bar feeder for manual bar loading.



		Auto Cho-bei II NHF-CB-51(S.M.L)-(3M,4M)			Notes
Max. workpiece diameter (mm)		10 - 30	34 - 42	46 - 51	Hexagonal bar H8-H36
Max. rotation speed (min-1)	Bar material	6,000	5,000	4,000	—
	Hexagonal material	3,000			—
Bar bending (mm/m)		less than 0.5			MAS level B
Bar length (mm)		3,000 / 4,000			Min. 1,500mm
Bar stock capacity [φ mm×pcs]		dia.30mm × 10pcs			Stocker length 300mm
Feeding speed (mm/sec)		Max.400mm/sec			adjustable
Feeding power (kg)		Max.40kg			adjustable
Machine dimension	Length 3M/4M (mm)	S:3,790/4,795	M:3,870/4,875	L:4,165/5,170	—
	Width (mm)	733			—

This is required when bar feeder is equipped.

Parts ejector (Parts catcher)

Parts catcher
Shaft unloader
Gantry loader
Work rest



Parts catcher is a device to unload the workpiece into a bucket and bring it out of the machine. Parts catcher specifications such as Maximum part Diameter x length x weight vary from one model to another. Besides parts catchers with standard specifications, special-made parts catchers can be offered. Please contact our local distributors for specific requirements. For high precision parts, a gripper type unloading device is recommended, such as Parts catcher G or Gantry loader. For such parts, where scratches are not allowed, part catcher A is not recommended. Parts eject checker is necessary for Parts catcher A or B. Please discuss with your local distributor for more details.

Parts catcher A / Bucket type

When a larger spindle bar capacity is selected, a parts catcher with larger specifications is to be selected accordingly (op.)



TW series



Super NTJ



Super NTM³

Parts catcher B / Bucket type



This is a parts unloading device for models with lower turrets on both left and right hand sides, such as WTW-150, Super NTX, STW-40.

Parts catcher C / hand type



Driven by a servo motor for the Z-Axis, this parts catcher unloads parts from both left and right hand side chucks. It is equipped with a two-gripper hand.

Parts catcher G / hand type



It unloads parts from Right hand side chuck. It is one-gripper type parts catcher. Parts are pulled out by moving the right hand side spindle.

Parts catcher / Bucket on turret type

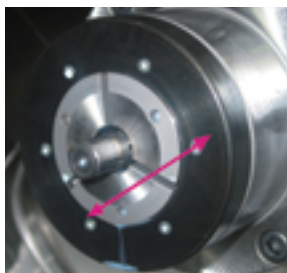


It unloads parts from the right hand side chuck. Parts are ejected by an ejecting device in the right hand side spindle (op.)

This is required when Parts catcher A or B is equipped.

Parts eject checker

Pneumatic parts ejector (Recommended)



Air-blow through the right hand side spindle

Parts are ejected with a pneumatic cylinder. It includes parts ejection confirmation. Two limit switches are equipped on both stroke ends of the pneumatic cylinder: one in the forward end, and one in the backward end. Parts ejection is confirmed when the switch at the forward end is turned ON. An ejecting head corresponding to part diameter and shape is necessary. (engineering arrangement for each part is necessary)

Parts ejector spring type

Parts are ejected by spring force. An ejecting head corresponding to part diameter and shape is necessary. (engineering arrangement for each part is necessary) Ejecting heads with air blow holes are also available. In this case, air blow through the spindle (op.) is necessary.

Parts eject checker (necessary)

It prevents collision by mistake during part transfer. We can offer two kinds of parts confirmation :

1. Check if there is a part in left hand side chuck.
2. Check if the part was ejected from right hand side chuck.



Part off detection



Part eject detection



Stocker type

Workpiece is stocked into a door-mounted box.



outlet chute type

Parts are unloaded through the door onto a conveyor or a bucket. To prevent scratching the parts during unloading, a conveyor is recommended. (Op.) To prevent scratching the parts during unloading, additional plastic plates on the chute can be specified.



Parts eject checker is necessary when parts eject conveyor is equipped.

Parts outlet Door pocket shape

Contribute to Labor Saving.

Factory Automation Devices originally designed and developed by Nakamura-Tome

Shaft Loader Zen-bei

By using a shaft loader and shaft unloader, full automation of shaft work can be achieved.



	SL08W-800	SL10W-1000	SL20W-1000
Push load stroke [mm]	1,730	1,730	1,790
Workpiece diameter × length [mm]	10 - 34 × 100 - 800	10 - 42 × 100 - 1,000	10 - 51 × 100 - 1,000
Push rod bar, A size workpiece length [mm]	100 - 500	100 - 400	100 - 400
Push rod bar, B size workpiece length [mm]	500 - 800	400 - 700	400 - 700
Push rod bar, C size workpiece length [mm]	—	700 - 1,000	700 - 1,000
Stacking capacity [φ mm × pcs]	20 × 23	20 × 23	20 × 23
Loading time [sec]	7	7	7
Machine dimension L × W × H [mm]	2,135 × 879 × 1,151	2,135 × 879 × 1,176	2,235 × 879 × 1,269

Shaft Unloader Hai-bei

By using an auto bar feeder and shaft loader, full automation of shaft work can be achieved.



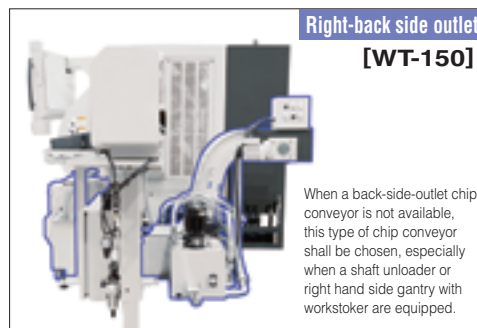
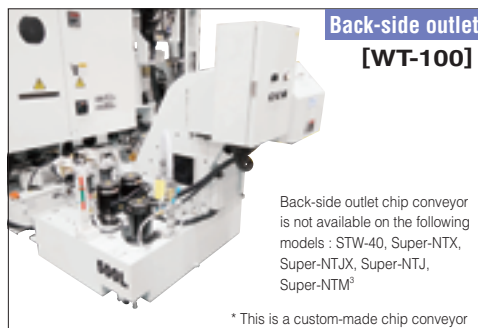
	SU08W-800	SU10W-1000	SU20W-1000
Pull-out bar stroke [mm]	1,830	1,830	1,950
Workpiece diameter × length [mm]	12 - 34 × 100-800	15 - 42 × 100 - 1,000	15 - 51 × 100 - 1,000
Pull-out bar, A size workpiece length [mm]	100 - 500	100 - 400	100 - 400
Pull-out bar, B size workpiece length [mm]	500 - 800	400 - 700	400 - 700
Pull-out bar, C size workpiece length [mm]	—	700 - 1,000	700 - 1,000
Stacking capacity [φ mm × pcs]	20 × 20	20 × 20	20 × 20
Max. workpiece weight [kg]	8	8	8
Unloading time [sec]	7	7	7
Machine dimension L × W × H [mm]	2,529 × 680 × 1,178	2,529 × 680 × 1,203	2,649 × 680 × 1,296

Cutting chips disposal system

Chip conveyor

Chip conveyor is essential for full automation. Nakamura-Tome's multi-tasking machines with their high capabilities for chip-removal ought to be taken into consideration. When using oil-through type tools, a filter shall be considered to remove fine cutting chips from coolant. When using water-soluble coolant, a coolant level float switch is necessary. When using oil-base coolant, auto extinguisher, fireproof dumper, and oil mist collector are indispensable.

Outlet direction



Conveyor type

Drum filter type conveyor / recommended



It prevents coolant related troubles, such as coolant overflow by clogged filters or coolant malfunction. A large-sized drum filter in the coolant tank cleans the coolant. With a rotating drum filter, the special pump washes out coolant from inside outwards, preventing cutting chips from accumulating on the filter outer diameter.

Hinge type conveyor

Steel Aluminum Brass gunmetal



It is suitable for fine chips, long and curled chips, short chips and wavy chips produced during cut-off, but not for powdery chips produced from machining cast iron, ...etc

Scraper type chip conveyor

Casting Aluminum Brass gunmetal



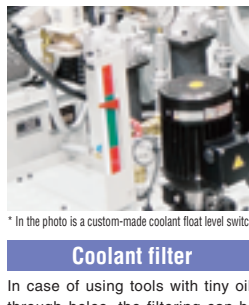
Not suitable for long cutting chips, because they get caught inside the rail, causing malfunctioning. In case of machining casting iron, filtering is improved by attaching a magnet to the bottom of the conveyor.

Coolant separator



Coolant separator is necessary to keep coolant performance. By separating collected lubrication oil from coolant, this minimizes bad odors, prevents coolant from rotting, and prolongs its life.

Coolant float level switch



* In the photo is a custom-made coolant float level switch

Coolant filter

In case of using tools with tiny oil-through holes, the filtering can be insufficient depending on the hole size. If the required filtering accuracy is more than 20-40 micrometers, it is recommended to use a maintenance-free type filter instead. Please contact our local distributors for details.



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