

SC-100X²

NAKAMURA-TOME
PRECISION INDUSTRY CO.,LTD.

Born to be fast

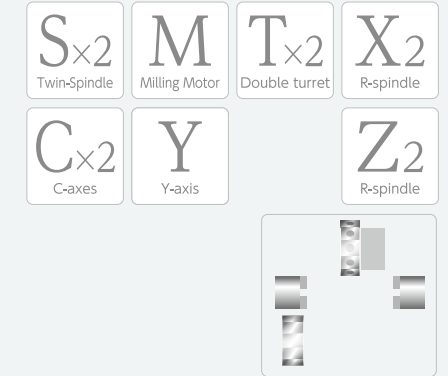
Innovative
Technology

~ Creating new values ~

SC-100X²

1. Two Tools in Cut
2. Lower turret + two-axes on R-spindle
3. Easy to use Superimposed Cycle

- L-spindle Bar Capacity dia.51mm / 6,000min⁻¹
- R-spindle Bar Capacity dia.42mm / 6,000min⁻¹
- Milling and Y-axis are Standard
- 11/7.5kW L-spindle motor
- 7.5/5.5kW R-spindle motor
- 7.1/2.2kW Milling motor / Max. speed 6,000min⁻¹
- Turret Hand Unloading Gripper on Lower Turret
- Recovery of lubrication oil (*Standard spec.)
- Environment-Friendly Inverter type hydraulic unit



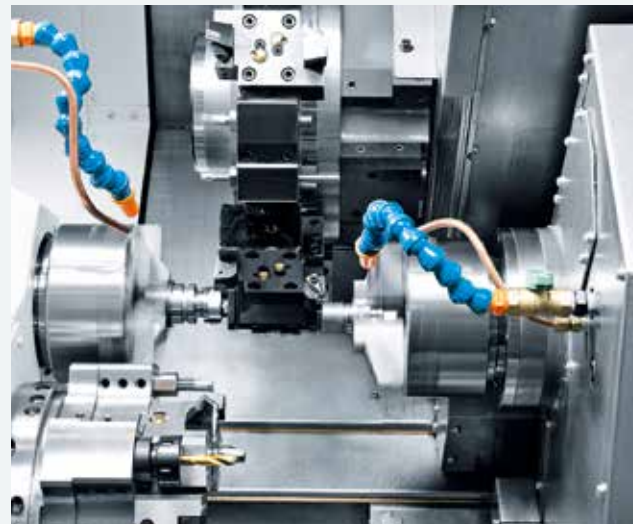
Fast Machining

2 Tools in Cut



Lower Turret
Max. 9 Stations without Milling function
+ Unloading Gripper

Superimposed Machining



Superimposed cycle is simultaneous machining through overlapping control between L-spindle and R-spindle.

Unloading Gripper with Built-in Parts Conveyor (Standard)

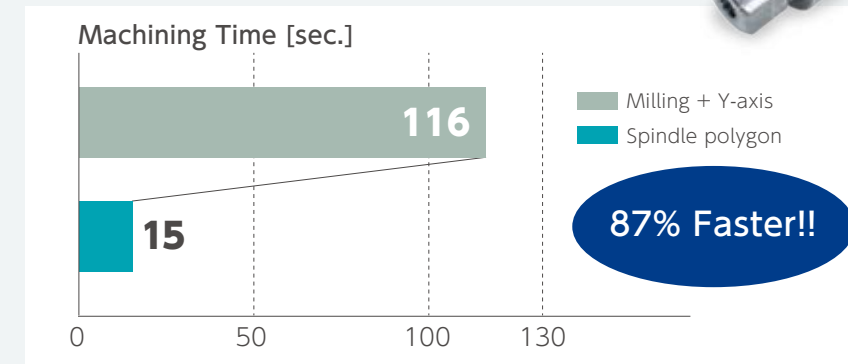
Unloading gripper is mounted on lower turret. It is suitable for bar work automation.



Workpiece size	Diameter	φ15mm~φ51mm
	Length	30mm~100mm
	Weight	0.1kg~1.5kg

Spindle Polygon Turning Function

Faster than with milling and Y-axis



Machining capability

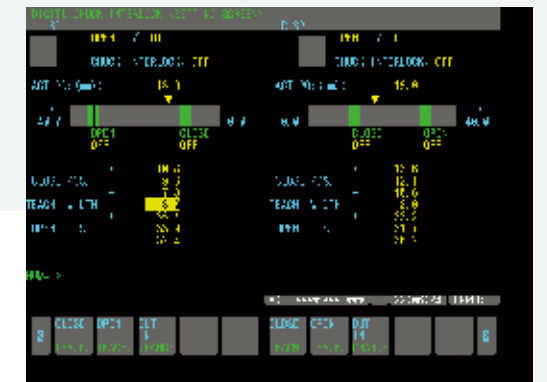
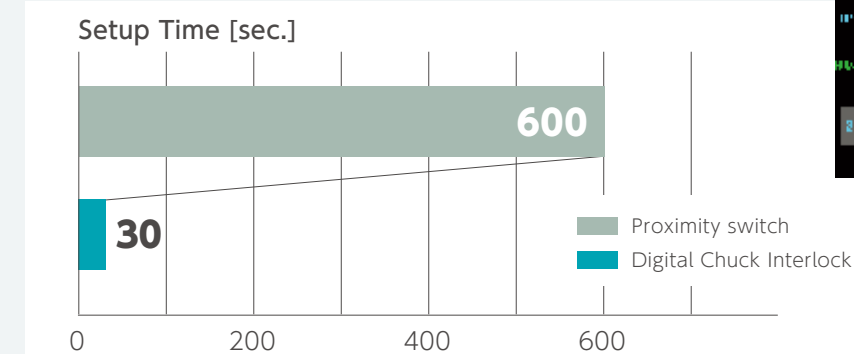
With the addition of new features such as the R-spindle and lower turret, the machine can perform various operations.

one-tool in cut		two-tools in cut			
Right spindle cutting with Upper Turret		Simultaneous cutting		Superimposed cutting	

Fast & Easy Setup

Digital Chuck Interlock(Standard)

Set the Chuck Open and Close detection position easily. The chuck open end / close end position is setup on the control screen. Setup time and machining cycle time are reduced.



User Friendly Operation Panel



FANUC 0i-TF Plus with iHMI
15 inch touch screen control

Maintenance Manager

Maintenance information such as the life of consumable parts can be managed, and each item can be customized.



Servo Viewer

By testing a measurement, the load, position, and speed of each axis are read and visualized with a waveform.



Quick MDI

Short cut can be created for codes that are frequently used.



Manual

All Manuals can be viewed. Manuals can be added or deleted.



User Friendly Interface for Easy Programming

Possible to make program faster by using convenient functions such as Copy & paste, Re-do, Font change, Color change, Calculation for cutting conditions etc.



Calendar

Possible to do quick and easy scheduling in front of the machine.



L-spindle φ51

L-spindle motor 11/7.5kW
6,000min⁻¹

R-spindle φ42

R-spindle motor 7.5/5.5kW
6,000min⁻¹

Upper Turret

Type of turret head
Dodecagonal drum turret

Number of indexing positions 24

Y-axis slide travel ±40mm

Milling motor 7.1/2.2kW
6,000min⁻¹

Lower Turret

Type of turret head
Circular

Number of indexing positions 12^{**}

^{**}3 station used for gripper



15 inch touch screen control

Nakamura-Tome FANUC(0i-TF PLUS) Essential functions for multitasking machine is standard.



Unloading Gripper with
Built-in Parts Conveyor
(Standard)

Maintenance Friendly
Cover Design



SC-100X²

Machine Specification

■ Capacity

Max.turning diameter	195mm
Standard turning diameter	180mm
Max.turning length	400mm
Bar capacity(L/R)	φ51mm / φ42mm
Chuck size (L/R)	6" / 5"(6")

■ Axis Travel / Rapid Feed

X1 / X2-Axis slide travel	150mm / 150mm
Z1 / Z2-Axis slide travel	400mm / 400mm
Y1-Axis slide travel	±40mm
X1 / X2-Axis rapid feed rate	20m/min
Z1 / Z2-Axis rapid feed rate	36m/min
Y1-Axis rapid feed rate	6m/min

■ Left Spindle

	φ51mm
Spindle speed	6,000min ⁻¹
Spindle speed range	Stepless
Spindle nose	A2-5
Hole through spindle	63mm
I.D. of front bearing	90mm
Hole through draw tube	52mm

■ Right Spindle

	φ42mm
Spindle speed	6,000min ⁻¹
Spindle speed range	Stepless
Spindle nose	A2-5
Hole through spindle	56mm
I. D.of front bearing	80mm
Hole through draw tube	43mm

■ C-axis

Least input increment	0.001°
Least command increment	0.001°
Rapid index speed	600min ⁻¹
Cutting feed rate	1 ~ 4,800° /min
C-axis clamp	Disk clamp
C-axis connecting time	1.5sec.

■ Parts Catcher (Unloading Gripper)

Workpiece size	Diameter	φ15mm ~ φ51mm
	Length	30mm ~ 100mm
	Weight	0.1kg ~ 1.5kg

■ Upper Turret

Type of turret head	Dodecagonal drum turret
Number of tool stations	12 (max.24)
Number of indexing positions	24
Tool size (square shank)	□20mm (12st) / □16mm (24st)
Tool size (round shank)	φ25mm

■ Lower Turret

Type of turret head	Circular
Number of tool stations	9
Number of indexing positions	12 (3 station used for gripper)
Tool size (square shank)	□20
Tool size (round shank)	φ25mm

■ Milling (Upper Turret)

Driven system	Individual rotation
Milling spindle speed	6,000min ⁻¹
Spindle speed range	Stepless
Number of milling stations	12
Holder type and Tool size	Straight holder φ1mm ~ φ14mm
	Cross Holder φ1mm ~ φ14mm

■ Drive motor power

L-spindle	11/7.5kW
R-spindle	7.5/5.5kW
Milling (Upper Turret)	7.1/2.2kW

■ General

Height	1,799mm
Floor space (L × W)	3,072mm × 1,973.7mm
Machine weight (incl. control)	7,000kg



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