



SYIL X

VERTICAL MILLING MACHINES

CNC Milling Machines of Unsurpassed Quality at the Best Price



BEST VALUE FOR MONEY

CNC machines since 2001

At SYIL, we design and manufacture CNC machining centers to meet every need. As a manufacturer with over 20 years of experience in the CNC industry, we understand your unique production and manufacturing needs. Get the most out of your production with our machining centers ranging from 3-axis entry-level models to 4-axis powerhouses and 5-axis machining centers for precise milling.

Our trust is earned by sourcing components from premium brands and suppliers. Our own processes meet the most stringent quality criteria, and our quality management is ISO 9001:2015 certified.

With expertise and passion

The SYIL brand is an upcoming manufacturer of high-performance CNC machining centers. Our top-notch machines have been in use in the machine shops, automotive and computer technology industries for more than two decades.

The combination of machine quality and price is unbeatable at SYIL.



TECHNICAL SPECIFICATIONS

Based on standard configuration

	X5	X7	X9	X11
Travel distances				
X-axis (mm)	300	400	760	1000
Y-axis (mm)	260	300	500	500
Z-axis (mm)	300	380	500	500
Distance from spindle nose to table top	150-450	150-530	100-600	110-610
Distance between spindle and column surface	330	358	530	650
Table				
Table size (mm)	560×260	700×300	860×500	1050×550
Table load (kg)	150	150	500	600
Table surface (number×size×distance in mm)	T-slots 3×14×80	T-slots 3×14×100	T-slots 18×5×100	T-slots 18×5×90
Spindle				
Spindle taper	BT30	BT30	BT40	BT40
Power-drive	Direct	Belt	Belt/direct	Belt/direct
Max. spindle speed (rpm)	20,000	12,000	12,000	10,000/ 12,000
Feed				
Rapid traverse (mm / min)	30,000	30,000	30,000	30,000
Cutting feed (mm / min)	10,000	10,000	10,000	10,000
Automatic tool changer				
Type	Wheel	Umbrella	Arm	Arm
Tool holder			BT40	BT40
Tool storage capacity	16	12	24	24
Max. tool diameter (mm)	63	63	125	120
Max. tool length (mm)	200	200	240	300
Max. tool weight (kg)	3	3	7	7
Tool to tool (s)	1	1.5	2	2.5
Other data				
Machine weight (kg)	2180	2200	6000	5000
Machine dimensions L x W x H (mm)	2020×1000×2360	1800×1600×2250	1850×2245×2800	2700×2300×2800
Footprint including coolant tank and controller				
Min/max air pressure (MPa (psi))	0.4/0.8 (60/120)	0.4/0.8 (60/120)		
Coolant tank capacity (Liters)	80	80		

Controller

Available controller	X5	X7	X9	X11
LNC M6800	✓	✓		
Syntec 22MA	✓	✓	✓	✓
Siemens 828D		✓		✓
FANUC 0iMF Plus		✓	✓	✓

Power

Controller	X5	X7	X9	X11
Syntec 22MA				
Spindle motor output (Rate/Max) kW:	5.5/7.5	8.2/12	11/17	11/17
Drive motors (X, Y, Z) kW:	1/1.7/2.4	1.1/1.7/2.4	3.9/3.9/5.9	3.9/3.9/5.9
Power Source:	AC380V/ 3-Phase	AC380V/ 3-Phase	AC380V/ 3-Phase	AC380V/ 3-Phase
Power (kVA):	12	14	25	25
LNC M6800				
Spindle motor output (Rate/Max) kW:	3.7/5.5	2.2/3.0		
Drive motors (X, Y, Z) kW:	0.85/1.3/1.3	0.85/1.3/1.3		
Power Source:	AC380V/ 3-Phase	AC220V/ 1-Phase		
Power (kVA):	10	7		
Siemens 828D				
Spindle motor output (Rate/Max) kW:		7.5/11		
Drive motors (X, Y, Z) kW:		1.1/2.2/2.2		
Power source:		AC380V/ 3-Phase		
Power (kVA):		14		

Accessories

Standard included accessories

	X5	X7	X9	X11
Absolute servos	✓	✓	✓	✓
Rigid tapping	✓	✓	✓	✓
High flow coolant pump and tank	✓	✓	✓	✓
Coolant washdown hose	✓	✓	✓	✓
Air gun outlet	✓	✓	✓	✓
LED Traffic light beacon/signal tower	✓	✓	✓	✓
Networking capabilities/USB data transfer	✓	✓	✓	✓
Remote MPG for all axes	✓	✓	✓	✓
Steel axis covers	✓	✓	✓	✓

SYIL X5

Space- And Money-Saving CNC Machine



Standard:

SCHNEEBERGER mineral casting
THK ball screws and linear motion guides
20,000 rpm BT30 spindle
16-pocket ATC servo type

X5 Standard

LNC M6800 CNC controller
with 3 axis servo motor

X5 Syntec

Syntec 22MA CNC controller
with 3/4 axis servo motor

The SYIL X5 is a 3-axis machining center for maximum precision and powerful performance at an affordable price. You can easily add a 4th axis to your X5.

OPTIONS

NC rotary table servo type | 4th axis 125 mm

Tail Stock for 125 mm NC rotary table

Probe System | Wireless type

Tool Setter Kits | Cable type TTC200

SYIL Tooling Package



SYIL X7

Small Size – Big Benefits



The SYIL X7 offers a small footprint with unprecedented speed.

OPTIONS

Spindle

30,000 rpm HSK-E40 Built-in Type Power Drawbar System

Automatic Tool Changer

16 positions BT30 | power drawbar arm type

Others

NC rotary table servo type | 4th axis 125 mm

Probe System | Wireless type

Filtermist

Chip Conveyor

Standard:

SCHNEEBERGER mineral casting
THK ball screws and linear motion guides
12,000 rpm BT30 spindle
12-pocket ATC umbrella type

X7 Standard

LNC M6800 CNC controller
with 3 axis servo motor

X7 Syntec

Syntec 22MA CNC controller
with 3/4 axis servo motor

X7 Siemens

Siemens 828D 15" screen CNC controller
with 3/4 axis servo motor

X7 5-axis

Syntec 22MA 15" screen CNC controller
with 5-axis servo motor
NC rotary table DDR type | 5-axis

Tail Stock for 125 mm NC rotary table

Tool Setter Kits | Cable type TTC200

Central Coolant System(CTS 20 Bar)

SYIL Tooling Package



SYIL X9

First-Class Components and Solid Construction



Standard:

SCHNEEBERGER mineral casting
10,000 rpm BT40 spindle
24-pocket ATC arm type

X9 Syntec

Syntec 22MA 15" screen CNC Controller
with 3/4 axis servo motor

X9 FANUC

FANUC 0iMF Plus CNC Controller
with 3/4 axis servo motor

The X9 is our 3-axis machining centers for high-speed machining. Made with first-class components. Superb solid construction.

OPTIONS

Spindle

24,000 rpm HSK-A63 Built-in Type Power Drawbar System

Others

NC rotary table servo type | 4th axis 255 mm

Probe System | Wireless type

Filtermist

Chip Conveyor

Tail Stock for 255 mm NC rotary table

Tool Setter Kits | Cable type TTC200

Central Coolant System (CTS 20 Bar)

SYIL Tooling Package



SYIL X11

Designed for Large Workpieces



Standard:

SCHNEEBERGER mineral casting
10,000 rpm BT40 spindle
24-pocket ATC arm type

X11 Syntec

Syntec 22MA 15" screen CNC Controller
with 3/4 axis servo motor

X11 FANUC

FANUC 0iMF Plus CNC Controller
with 3/4 axis servo motor

X11 Siemens

SIEMENS 828D (260) CNC Controller
with 3/4 axis servo motor

The X11 boasts excellent production performance and provides final production efficiency to its customers.

OPTIONS

Spindle

24,000 rpm HSK-A63 Built-in Type Power Drawbar System

Others

NC rotary table servo type | 4th axis 255 mm

Probe System | Wireless type

Filtermist

Chip Conveyor

Tail Stock for 255 mm NC rotary table

Tool Setter Kits | Cable type TTC200

Central Coolant System (CTS 20 Bar)

SYIL Tooling Package



FEATURES

SCHNEEBERGER Mineral Casting

All SYIL X series machines are built on a high-quality SCHNEEBERGER mineral casting.



Mineral casting

Mineral casting is ideal for frame structures. Polymer concrete offers clear technological, economical and environmental advantages compared to steel and cast. Mineral casting provides excellent vibration damping, high chemical resistance and significant thermal advantages (thermal expansion similar to that of steel). Connection elements, cables, sensor and measurement systems can all be poured into the assembly.

FEATURES

THK – Linear Guides and Ball Screws

All X series machines are powered by THK linear motion guides and ball screws.



Linear Motion

The LM Guide is THK's flagship product, the world's first practical application of rolling linear motion parts. It achieves higher precision, higher rigidity, reduced labor, higher speed, and longer service life of machines.

THK's ball screws are feed screws that provide high efficiency due to the rolling motion of the balls between the screw shaft and nut.

The drive torque is less than one-third that of a conventional sliding screw, making it ideal for power saving of the drive motor.

CONTROLLERS

Choose Your Preferred Controller



Undoubtedly, the CNC controller is one of the most important parts of the machine. A suitable controller will provide you with a lot of convenience in using the CNC machine.

However, what is suitable may be different for each buyer.

That is why we at SYIL strive to offer you a choice.

LNC M6800

- 10.4" LCD
- High-quality surface design
- Chiclet/ Membrane MDI/Operating Panel

SYNTEC 22MA

- Mechatrolink 3 and EtherCAT serial communication support
- Supports HSHP, HPCC, SPA, ZPEC functions
- 2000 lines look-ahead
- Bell-shaped acceleration/deceleration provides both speed and stability
- Multi-spindle solution: productive, support multi-spindle tapping
- 10.4"/15" screen options
- Maximum 6 axis



Siemens 828D

- Panel-based compact CNC
- Up to 10 axes/spindles and 2 auxiliary axes
- Up to 2 machining channels T, M, G
- 15.6" touch display
- SIMATIC S7-200-based PLC



FANUC 0IMF-Plus

- up to 12 axes, 6 spindle axes and 2 paths
- up to 2 additional loader paths
- 4-axis simultaneous and 3+2 axis machining
- ready to use with integrated software package
- integrated FANUC Dual Check Safety function
- shop-floor programming via MANUAL GUIDE i or TURN MATE i
- additional functions for simple customization
- integrated high-speed PMC
- high speed and high quality machining package
- maximum look-ahead blocks 400
- common operability, maintainability, network and PMC function with CNC Series 30i-MODEL B



OPTIONS

Functions with Added Value

You can individually and flexibly equip our machining centers with a wide range of machine options – for customized support in your production scenarios.



Spindles

30,000 rpm HSK-E40 Built-in Type Power Drawbar System

Available for: **X7**

24,000 rpm HSK-A63 Built-in Type Power Drawbar System

Available for: **X9, X11**



Automatic Tool Changer

16 positions BT30 | Power Drawbar Arm type

Available for: **X7**



Wireless probing

OPS-30 optical probe system with special CNC probe programming contains xyz probe CNC-OP510 optical infrared probe, OSI-20 receiver and standard measuring software. The OP510 CNC xyz touch probe is a compact 3D touch-trigger probe with optical signal transmission. CNC xyz probe can be used for workpiece measuring.

Available for: **X5, X7, X9, X11**



Tool setting

The TTC200 is used for rapid and accurate measurement of tool length and diameter on a wide range of tools. Macros are included preinstalled in the controller to perform broken tool detection during machining.

Available for: **X5, X7, X9, X11**

Rotary tables

With the rotary tables we offer, you can add a 4th or 5th axis to your 3-axis machining center.

Available for: **X5, X7, X9, X11**



Tailstock

We offer tailstocks that can be used in conjunction with your rotary table on a SYIL milling machine.

Available for: **X5, X7, X9, X11**



Filtermist

The Filtermist oil mist filter system can be used to extract coolant mists produced by machining metals on your CNC machine.

Available for: **X7, X9, X11**



Central Coolant System

Our Through-Spindle Coolant system provides up to 20 bar of coolant to the cutting tool, allowing for heavier cuts, higher feed rates, deep-hole drilling, and better surface finishes.

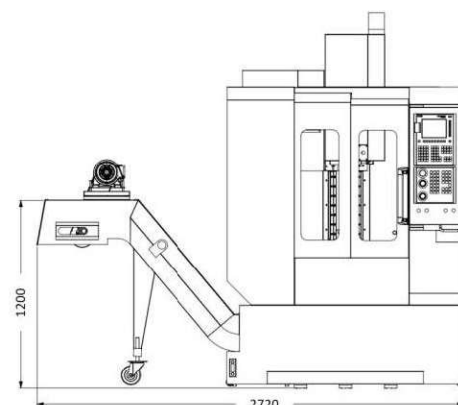
Available for: **X7, X9, X11**



Chip Conveyor

The conveyor is usually installed on the left side of the machine.

Available for: **X7, X9, X11**



Tooling Package

Our package contains the basics you need to start using your new SYIL mill.

Available for: **X5, X7, X9, X11**