

SKYFIRE CNC

SVM-1 series CNC Milling Machine Mini VMC Workstation Datasheet 2017 V1.1

SUPER PERFORMANCE

HIGH PRECISION

LOW PRICE



Quick review to help your decisions:

TABLE #1 Basic Configurations

Model	Enclosure	Spindle system	Spindle drive	Axis driving	CNC controller
SVM-1S	Electric box behind	R8/MT3	BLDC	Closed loop STEPPER	4 axis MACH3 USB Controller *other options available
SVM-1L	Half enclosure	R8/MT3	BLDC	Closed loop STEPPER	4 axis MACH3 USB Controller *other options available
SVM-1VMC <i>Workstation</i>	Full enclosure	BT30+PDB	AC SERVO	AC SERVO	14" touch screen tablet PC LINUX CNC with MESA7i76e (Or MACH3 with USB controller)
SVM-1VMC <i>Mini VMC</i>	Full enclosure	BT30+PDB	AC SERVO	AC SERVO	SKYFIRE 4 axis industrial controller (5 axis controller optional)

TABLE #2 Option Status & Remarks

Model	Power drawbar	2 nd spindle kit	4 th Axis kit	ATC	MPG	Remarks
SVM-1S	√	√	√	X	√	<i>Most economic SVM-1 type</i>
SVM-1L	√	√	√	X	√	<i>Economic SVM-1 type with enclosure</i>
SVM-1VMC <i>Workstation</i>	•	√	√	√	√	<i>Professional PC based small industrial level VMC</i>
SVM-1VMC <i>Mini VMC</i>	•	√	√	√	√	<i>Professional small industrial level VMC</i>
				√ optional	X not optional	• already installed

TABLE #3 Option Index

[Optional Installation of SVM-1 series](#)

[Optional Tooling & Accessories](#)

[Detector & Measurement Series](#)

[Work-holding Series](#)

[R8/MT3 Tool Holder Series](#)

[BT30 Tool Holder Series](#)

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SVM-1S



SVM-1S is the most economic benchtop type among SVM-1 series CNC milling machine. Personal machinists can have a precision and powerful industrial level machine in compact size and low price.

SVM-1S supports 4th even 5th axis set and the 2nd high speed engraving spindle can be installed too.

SVM-1S can be controlled by your own computer via USB or Ethernet cable (depends on selected controller). It's a entry level CNC to start your professional machining career.



Some parts in the pictures are optional
Review our website for more information and pictures/videos

KEY POINTS:

- Compact SKYFIRE original design
- Super rigid/high quality **HT250** resin sand casting iron structure
- Precision **LINEAR WAY** system for all 3 axis
- Ball screws for all 3 axis
- Industrial level motion **accuracy**
- Super powerful **BLDC** spindle driving system
- High performance **CLOSED LOOP** stepper driving system for all 3 axis
- **PC BASED** CNC controllers
- Manual central lubrication system for all motion parts
- Optional 2nd high speed engraving spindle

DIMENSIONS

Table Size:	650mm × 190mm / 25.6" × 7.5"
Table Slots:	3 × 12mm Slots
Travel Range (X Y Z):	350mm × 190mm × 300mm / 14.7" × 7.5" × 11.8"
MAX Spindle Nose to Table:	400mm / 15.7"
MIN Spindle Nose to Table:	100mm / 3.9"
Spindle Center to Column:	230mm / 9"

MONTION FEATURES

Max On Table Weight:	50Kgs
Max Feed Rate:	7 MPM / 276 IPM
Positional Tolerance:	0.03mm/200mm
Repeatable Tolerance:	≤0.01mm
XYZ Traveling Tolerance:	≤0.01mm /200mm
1 st Spindle Radio/Axial Run Out:	≤0.003mm at taper

SPINDLE CONFIGRATIONS

1 st Spindle Taper:	R8 / MT3
1 st Spindle Speed:	300-6000RPM
1 st Spindle Driving System:	2200W BLDC Motor System
1 st Tool Changing:	Manual (SKYFIRE Quick Tool Changing system <i>optional</i>)

MOTION PARTS

3 Axis Driving:	High Performance CLOSED LOOP Stepper System
3 Axis Motion:	HIWIN™ H Class LINEARS for all 3 axis
Ballscrews:	C7 Class Rolled Type Ballscrews
Bearings:	Precision P4 Class Bearings

ELECTRONICS

CNC Controller:	4 Axis USB CNC Controller for MACH3 -200kHz
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	(MESA7i76e Ethernet controller for Linuxcnc optional)
Axis Driving Power Supply:	DC Power Supply
Relay Output:	2 way relay integrated and expandable

POWER REQUIREMENTS

Power Input:	200-240VAC 50/60HZ Single Phase
Power Consumption:	Typical 3000W

MISCELLANEOUS FEATURES

Machine Shell:	Worktable guard & Electric Box
Spindle Box Balancing:	Nitrogen spring
Lubrication:	Manual central lubrication
Work Light:	LED work light
Coolant System:	optional
Mist Cooling System:	optional
2 nd Operation Panel:	optional
MPG:	optional
Machine Cabinet Stand:	optional

OVERALL FEATURES

Overall Dimensions(L*W*H):	LWH 910*860*980mm
Net Weight:	300kgs
Package Dimensions(L*W*H):	LWH 1100*1000*1200mm
Gross Weight:	350kgs
Package Type:	Composite Plywood Case

STANDARD ACCESSORIES

SKYFIRE™ CNC DRIVER DISK:	8G USB disk 1pcs
Power Wire:	16A 1.8m power wire 1pcs
USB Cable:	2m USB cable 1pcs

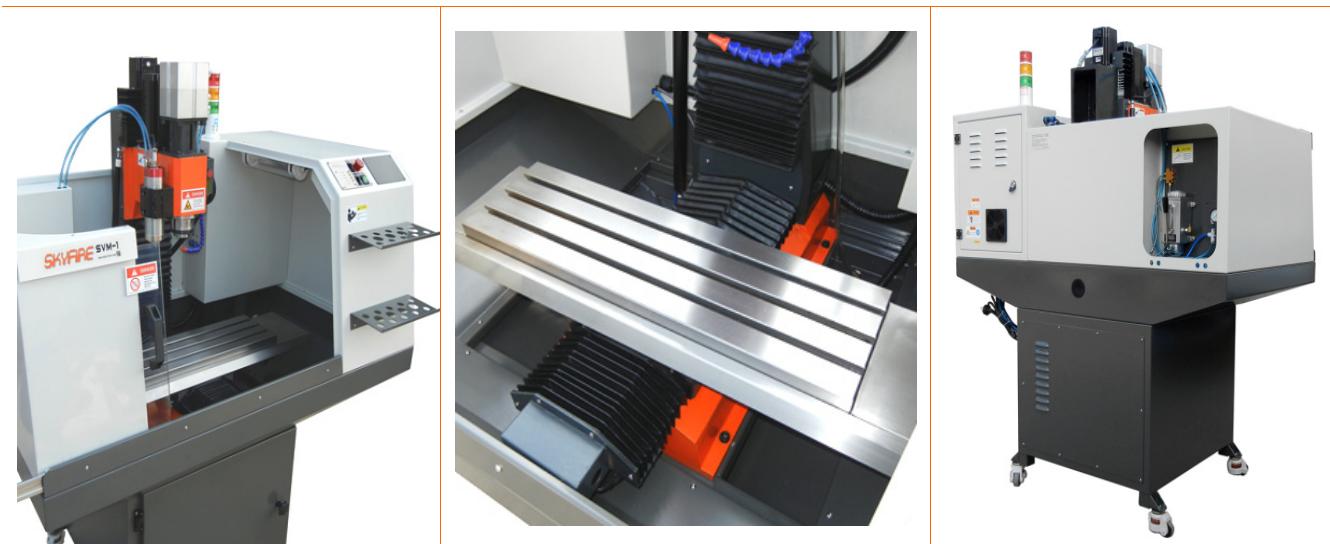
SVM-1L



SVM-1L is an economic type among SVM-1 series with half enclosure. Compared to SVM-1S, it provides machine guard walls and contains coolant+swarf removing system in the stand cabinet.

SVM-1L supports 4th even 5th axis set and the 2nd high speed engraving spindle can be installed too.

SVM-1L can be controlled by your own computer via USB or Ethernet cable (depends on selected controller).



Some parts in the pictures are optional
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KEY POINTS:

- Compact SKYFIRE original design
- Super rigid/high quality **HT250** resin sand casting iron structure
- Precision **LINEAR WAY** system for all 3 axis
- Ball screws for all 3 axis
- Industrial level motion **accuracy**
- Super powerful **BLDC** spindle driving system
- High performance **CLOSED LOOP** stepper driving system for all 3 axis
- **PC BASED** CNC controllers
- Manual central lubrication system for all motion parts
- Optional 2nd high speed engraving spindle

DIMENSIONS

Table Size:	650mm × 190mm / 25.6" × 7.5"
Table Slots:	3 × 12mm Slots
Travel Range (X Y Z):	350mm × 190mm × 300mm / 14.7" × 7.5" × 11.8"
MAX Spindle Nose to Table:	400mm / 15.7"
MIN Spindle Nose to Table:	100mm / 3.9"
Spindle Center to Column:	230mm / 9"

MONTION FEATURES

Max On Table Weight:	50Kgs
Max Feed Rate:	7MPM / 276 IPM
Positional Tolerance:	0.03mm/200mm
Repeatable Tolerance:	≤0.01mm
XYZ Traveling Tolerance:	≤0.01mm /200mm
1 st Spindle Radio/Axial Run Out:	≤0.003mm at taper

SPINDLE CONFIGRATIONS

1 st Spindle Taper:	R8 / MT3
1 st Spindle Speed:	300-6000RPM
1 st Spindle Driving System:	2200W BLDC Motor System
1 st Tool Changing:	Manual (SKYFIRE Quick Tool Changing system <i>optional</i>)

MOTION PARTS

3 Axis Driving:	High Performance CLOSED LOOP Stepper System
3 Axis Motion:	HIWIN™ H Class LINEARS for all 3 axis
Ballscrews:	C7 Class Rolled Type Ballscrews
Bearings:	Precision P4 Class Bearings

ELECTRONICS

CNC Controller:	4 Axis USB CNC Controller for MACH3 -200kHz
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	(MESA7i76e Ethernet controller for Linuxcnc optional)
Axis Driving Power Supply:	DC Power Supply
Relay Output:	2 way relay integrated and expandable

POWER REQUIREMENTS

Power Input:	200-240VAC 50/60HZ Single Phase
Power Consumption:	Typical 3000W

MISCELLANEOUS FEATURES

Machine Enclosure:	Half enclosure with cabinet stand
Spindle Box Balancing:	Nitrogen spring
Lubrication:	Manual central lubrication
Work Light:	LED work light
Coolant System:	Integrated coolant system and swarf drawer
Mist Cooling System:	optional
2 nd Operation Panel:	optional
MPG:	optional
Air Blow Gun:	included

OVERALL FEATURES

Overall Dimensions(L*W*H):	LWH 850*1400*1700mm
Net Weight:	550kgs
Package Dimensions(L*W*H):	LWH 1100*1600*1900mm
Gross Weight:	650kgs
Package Type:	Composite Plywood Case

STANDARD ACCESSORIES

SKYFIRE™ CNC DRIVER DISK:	8G USB disk 1pcs
USB Cable:	2m USB cable 1pcs
Machine Feet:	FOOT-MASTER casters 4pcs

SVM-1VMC-Workstation



SVM-1VMC-Workstation is a professional personal CNC with AC SERVO spindle motor and AC SERVO 3 axis driving system. It's equipped with a touch screen PC based CNC controller to allow users do all CNC works from CAM programming to CNC machining on a single machine.

SVM-1VMC-Workstation supports 4th / 5th axis set and the 2nd high speed engraving spindle can be installed.

An optional 8-tool ATC can be installed on SVM-1VMC-Workstation.



Some parts in the pictures are optional
Review our website for more information and pictures/videos

KEY POINTS:

- Compact SKYFIRE original design
- Super rigid/high quality **HT250** resin sand casting iron structure
- Precision **LINEAR WAYS & C3** class ground ball screws for all 3 axis
- Industrial level motion **accuracy**
- Super powerful **AC SERVO** spindle driving system
- Professional **AC SERVO** driving system for all 3 axis
- Industrial **BT30** spindle unit & Pneumatic **power drawbar** installed
- Optional 8 tool **ATC** installation
- **PC BASED** CNC controllers
- **14" touch screen** industrial tablet computer integrated
- **Full AUTO** central lubrication system for all motion parts

DIMENSIONS

Table Size:	650mm×190mm / 25.6"×7.5"
Table Slots:	3×12mm Slots
Travel Range (X Y Z):	350mm×190mm×300mm / 14.7"×7.5"×11.8"
MAX Spindle Nose to Table:	400mm / 15.7"
MIN Spindle Nose to Table:	100mm / 3.9"
Spindle Center to Column:	230mm / 9"

MONTION FEATURES

Max On Table Weight:	50Kgs
Max Feed Rate:	10MPM / 393 IPM
Positional Tolerance:	0.005mm/200mm
Repeatable Tolerance:	≤0.005mm
XYZ Traveling Tolerance:	≤0.01mm /200mm
1 st Spindle Radio/Axial Run Out:	≤0.003mm at taper

SPINDLE CONFIGURATIONS

1 st Spindle Taper:	BT30
1 st Spindle Speed:	100-8000RPM
1 st Spindle Driving System:	2200W AC SERVO Motor System
1 st Tool Changing:	Pneumatic power drawbar
ATC System:	Optional 8 tool ATC

MOTION PARTS

3 Axis Driving:	High Performance AC SERVO driving System
3 Axis Motion:	HIWIN™ H Class LINEARS for all 3 axis
Ballscrews:	C3 Class Ground Type Ballscrews
Bearings:	Precision P4 Class Bearings

ELECTRONICS

CNC Controller:	14" touch screen industrial tablet PC + LINUX CNC with MESA card controller (4 axis MACH3 USB controller optional)
Axis Driving Power Supply:	AC power supply
Relay Output:	Integrated and expandable

POWER REQUIREMENTS

Power Input:	200-240VAC 50/60HZ Single Phase (220/380VAC 3-phase optional)
Power Consumption:	Typical 5000W

MISCELLANEOUS FEATURES

Machine Shell:	Full enclosure with cabinet stand
Spindle Box Balancing:	2x Nitrogen springs
Lubrication:	AUTO central lubrication
Work Light:	LED work light
Coolant System:	Integrated coolant system and swarf drawer
Mist Cooling System:	optional
MPG:	optional
Air Blow Gun:	included
Air Source:	>0.5Mpa

OVERALL FEATURE

Overall Dimensions(L*W*H):	LWH 850*1400*1700mm
Net Weight:	550kgs
Package Dimensions(L*W*H):	LWH 1100*1600*1900mm
Gross Weight:	650kgs
Package Type:	Composite Plywood Case

STANDARD ACCESSORIES

SKYFIRE™ CNC DRIVER DISK:	8G USB disk 1pcs
Machine Feet:	FOOT-MASTER casters 4pcs

SVM-1VMC



SVM-1VMC is a professional small industrial CNC with AC SERVO spindle motor and AC SERVO 3 axis driving system. It's equipped with a standard 4 axis industrial CNC controller (5 axis version available).

SVM-1VMC supports 4th / 5th axis set and the 2nd high speed engraving spindle can be installed.

Optional 8-tool ATC can be installed on SVM-1VMC.

Other brands industrial CNC controllers can be optional.



Some parts in the pictures are optional
Review our website for more information and pictures/videos

KEY POINTS:

- Compact SKYFIRE original design
- Super rigid/high quality **HT250** resin sand casting iron structure
- Precision **LINEAR WAYS & C3** class ground ball screws for all 3 axis
- Industrial level motion **accuracy**
- Super powerful **AC SERVO** spindle driving system
- Professional **AC SERVO** driving system for all 3 axis
- Industrial **BT30** spindle unit & pneumatic **power drawbar** installed
- Optional 8 tool **ATC** installation
- Professional 4 axis (optional 5 axis) **Industrial CNC controller with tech. support**
- **Full AUTO** central lubrication system for all motion parts

DIMENSIONS

Table Size:	650mm×190mm / 25.6"×7.5"
Table Slots:	3×12mm Slots
Travel Range (X Y Z):	350mm×190mm×300mm / 14.7"×7.5"×11.8"
MAX Spindle Nose to Table:	400mm / 15.7"
MIN Spindle Nose to Table:	100mm / 3.9"
Spindle Center to Column:	230mm / 9"

MONTION FEATURES

Max On Table Weight:	50Kgs
Max Feed Rate:	10MPM / 393 IPM
Positional Tolerance:	0.005mm/200mm
Repeatable Tolerance:	≤0.005mm
XYZ Traveling Tolerance:	≤0.01mm /200mm
1 st Spindle Radio/Axial Run Out:	≤0.003mm at taper

SPINDLE CONFIGURATIONS

1 st Spindle Taper:	BT30
1 st Spindle Speed:	100-8000RPM
1 st Spindle Driving System:	2200W AC SERVO Motor System
1 st Tool Changing:	pneumatic Power Drawbar
ATC System:	Optional 8 tool ATC

MOTION PARTS

3 Axis Driving:	High Performance AC SERVO driving System
3 Axis Motion:	HIWIN™ H Class LINEARS for all 3 axis
Ballscrews:	C3 Class Ground Type Ballscrews
Bearings:	Precision P4 Class Bearings

ELECTRONICS

CNC Controller:	ADTECH CNC4640 4 axis industrial CNC controller (5 axis CNC4650 version available) Other industrial controllers are optional
Axis Driving Power Supply:	AC power supply
Relay Output:	4 way relay integrated and expandable

POWER REQUIREMENTS

Power Input:	200-240VAC 50/60HZ Single Phase (220/380VAC 3-phase optional)
Power Consumption:	Typical 5000W

MISCELLANEOUS FEATURES

Machine Shell:	Full enclosure with cabinet stand
Spindle Box Balancing:	2x Nitrogen springs
Lubrication:	AUTO central lubrication
Work Light:	LED work light
Coolant System:	Integrated coolant system and swarf drawer
Mist Cooling System:	optional
MPG:	optional
Air Blow Gun:	included
Air Source:	>0.5Mpa

OVERALL FEATURE

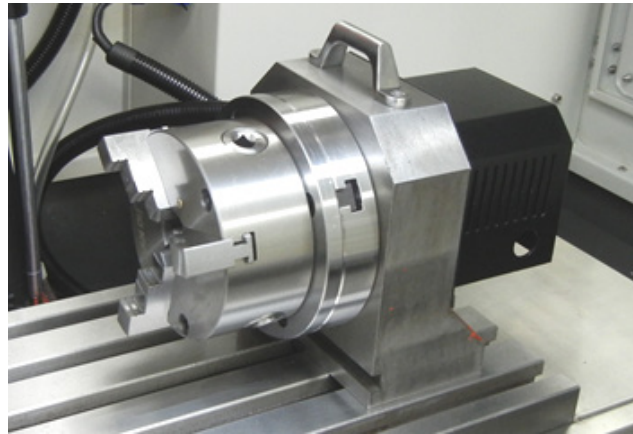
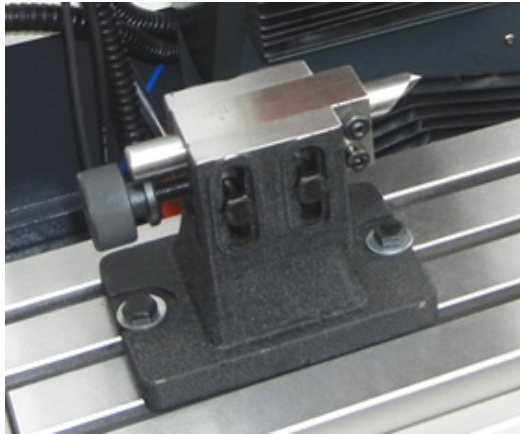
Overall Dimensions(L*W*H):	LWH 850*1400*1700mm
Net Weight:	550kgs
Package Dimensions(L*W*H):	LWH 1100*1600*1900mm
Gross Weight:	650kgs
Package Type:	Composite Plywood Case

STANDARD ACCESSORIES

SKYFIRE™ CNC DRIVER DISK:	8G USB disk 1pcs
Machine Feet:	FOOT-MASTER casters 4pcs

Optional Installations for SVM-1 series:

- SKYFIRE HVR-6 Harmonic Drive 6" 4th Axis Installation**
ZERO backlash / tolerance < 3'
- 3-jaw Chuck Kit for 4th Axis**
O.D 125mm, including mounting adapter and accessories
- Tail Stock for 4th Axis**



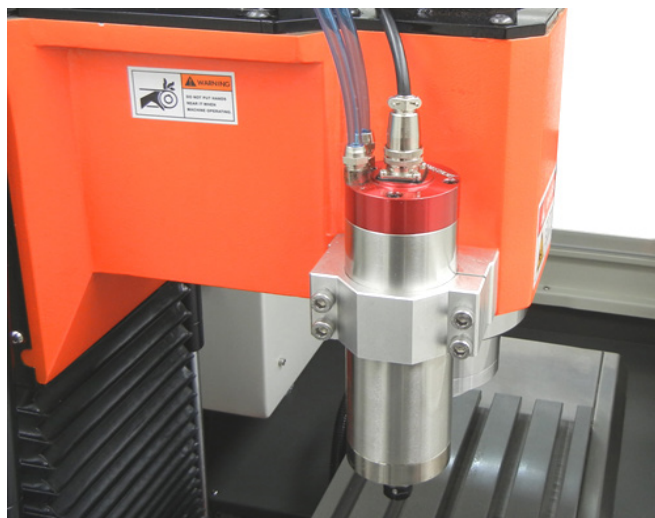
- SKYFIRE 5th Axis Kit Installation**

COMING SOON

- SKYFIRE ATC-BT30-8T Installation**
BT30-8 tool / Geneva drive type



- 2nd High Speed Engraving Spindle Kit Installation**
800W/24K rpm/ER11/water cooled type / including VFD & cooling pump etc.



- Mist Cooling Kit Installation**
air/oil volume adjustable; Including control valve



- Handheld MPG**
100P/R, 4 axis



- ADTECH CNC4650 5 Axis Industrial CNC Controller Upgrade**
for SVM-1VMC only



- Other Industrial CNC Controller Installation**
Please talk to us directly.
for SVM-1VMC only



- High Speed Electric Spindle;**
ATC Supporting High Speed Spindle (ISO20/24krpm);
ATC Supporting BT30 spindle(10krpm);
Spindle upgrades please talk to us directly.



Optional Tooling / Accessories for SVM-1 series:

Detector & Measurement series:

Electronic Tool Setter-Type A

This type tool setter can be fixed-mounted on worktable.
 Tool measuring and limit dual signals / air blower integrated



Electronic Tool Setter-Type B

This type tool setter is mostly used to measure Z height.
 50mm height / magnet bottom / most suitable to MACH3 controller



Mechanical Tool Setter-Type C

This type tool setter is mostly used to measure Z height.
 50mm height / magnet bottom / easy and economic / universal usage



Optical Edge Finder-16LB

OD16mm / 10mm ball / LED-BEEP/ Tolerance 0.05mm



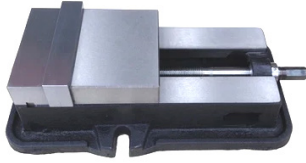
Optical Edge Finder-20LB High Precision Type

OD20mm / 10mm ball / LED-BEEP/ Tolerance 0.005mm



Work-holding Series:

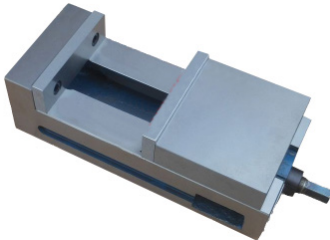
- 4" Angle Clamp Precision Mill Vise**



-
- 5" Angle Clamp Precision Mill Vise**



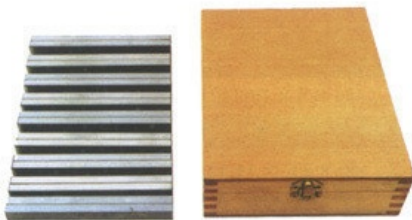
-
- 4" Heavy Ground Precision Mill Vise**



-
- M10-58pcs Clamping Kit**



-
- Precision Parallels Kit (18pcs)**



R8/MT3 Tool Holder Series for SVM-1S/L:

- R8/MT3-ER32/25/20/16 Full Series Mill Tool Holders**
(tolerance<0.005mm)



-
- R8/MT3-APU8 Drill Tool Holder(max 8mm)**



-
- R8/MT3-APU10 Drill Tool Holder(max 10mm)**



-
- R8/MT3-APU13 Drill Tool Holder(max 13mm)**



-
- R8/MT3-FMB22 Face Mill Holder**



-
- R8/MT3-BF1 Boring Tool Holder**



-
- R8/MT3-SCH22 Saw Cutter Holder**



-
- R8/MT3-GT12 Overload Protection Tapping Holder**



-
- Tapping Collets (M3/M4/M5/M6/M8/M10/M12)**



BT30 Tool Holder Series for SVM-1VMC(Workstation):

- BT30-L70-ER32/25/20/16 Full Series Mill Tool Holders**
(tolerance<0.005mm)



- BT30-L70-ER32/25/20/16 -H Full Series**
High Precision/High Speed Series Mill Tool Holders
(dynamic balanced, over 24krpm, tolerance<0.003mm)



- BT30-APU13 Drill Tool Holder(max 13mm)**



- BT30-APU16 Drill Tool Holder(max 16mm)**



- BT30-L45-FMB22 Face Mill Holder**



- BT30- L45-FMB27 Face Mill Holder**



- BT30-BF1 Boring Tool Holder**



- BT30-SCH22 Saw Cutter Holder**

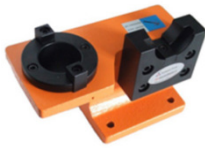


- BT30-GT12 Load Protection Tapping Holder (fits M3-M12 collets *not including the tapping collets)**



 Tapping Collets (M3/M4/M5/M6/M8/M10/M12)

 BT30 Pull Stud-45degree

 BT30 Tool Locker

 ER32 Collets-AA class high precision

1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20mm
(inch series also available 3/32"-25/32")



 ER25 Collets-AA class high precision

1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16mm
(inch series also available 1/16"-5/8")



 ER20 Collets-AA class high precision

1/2/3/4/5/6/7/8/9/10/11/12/13mm
(inch series also available 1/16"-1/2")



 ER16 Collets-AA class high precision

1/2/3/4/5/6/7/8/9/10mm
(inch series also available 1/32"-13/32")



ER Nut Spanners

(ER16-A / ER20-A / ER25-A / ER32-UM)

 **Full series End/Ball end Mill Tools** (please talk to us directly)

Carbide end / ball end mill tools 1-20mm, coated HRC55-58°

 **TAP400R50-22-4T Face Mill Tool** **TAP400R63-22-4T Face Mill Tool** **TAP400R80-27-6T Face Mill Tool** **F1-1/2 Boring Head** (O.D 50mm)

- F1-3/4 Boring Head (O.D 75mm)**



- F1-1/2 Boring Tool Kit (1/2")**



- F1-3/4 Boring Tool Kit (3/4")**



FAQ:

- **What are the advantages of SKYFIRE CNC milling machines compared to other brands at similar size?**

Firstly, SKYFIRE CNC milling machines are small industrial CNC but not hobby level ones. All SKYFIRE CNC machines are made at standard industrial level for small scale but precision machining works. SKYFIRE CNC machines have many superior features including full linear rails of 3 axis, AC SERVO spindle motor and AC SERVO 3 axis driving systems, industrial CNC controllers, 4th / 5th axis set and ATC installations etc. Even on the most economic machine types, CLOSED LOOP steppers are installed to make sure of high precision machining works. Many other detailed advantages are listed in the datasheets too.

Besides the configuration advantages above, SKYFIRE CNC machines are about 2/3 price of other same size CNC machines of similar brands but at least 2X performance of them. No matter you are a hobby machinist or professional machining manufacturer, SKYFIRE CNC will be your best high performance/low cost choice. Many machine types/options to make sure you will find one that most suitable to you. What's more, we provide customized machines as you want to have.

- **What's the difference between SVM-1 and SVM-2 series?**

Except the obvious work range difference of SVM-1/2, there are some other different features too. SVM-1 is a middle size benchtop machine with lighter frame; SVM-2 has much heavier and stronger machine frame to endure heavy duty milling works. So SVM-1 is most fitful to do light but high speed milling works, yet is also no problem for steel and Titanium machining.

- **What's the difference between SVM-1S, SVM-1L and SVM-1VMC (Workstation)?**

SVM-1S is an economic benchtop version without enclosure and stand cabinet. It's an entry level CNC but has much potential of retrofit by users. The machining capacity of SVM-1S is still very powerful.

SVM-1VMC (Workstation) has a full enclosure that can keep all swarf and coolant inside the machine. It's better than the half enclosure of SVM-1L. And full AC SERVO motor system has more advantage than the closed loop stepper + BLDC spindle system of SVM-1L especially during high speed milling works. SVM-1L is an economic type but it's still much better than other similar machines with traditional stepper motors and normal inductive AC spindle motors.

● **What’s the difference between SVM-1VMC Workstation and SVM-1VMC?**

The only difference is the CNC controller. SVM-1VMC Workstation is equipped with PC based CNC controllers. We integrated an industrial tablet PC with touch screen and a keyboard on the machine directly. Users can do all CNC works from CAD/CAM design/programming to machining on it.

SVM-1VMC has our standard industrial CNC controller. Compared to PC based controllers, it’s more reliable for long time machining works because the reliability of the PC based controllers depends on the computer OS also.

So for industrial users, we will suggest SVM-1VMC. But for personal and professional CNC machinist, SVM-1VMC Workstation will be a great choice because it’s very expandable on both software and hardware so users can have a lot of fun on it.

● **What’s the difference of the CNC controllers?**

MACH3/4 CNC controller is the easiest controller to start with. You can find many supports and references on the internet. So it’s good for CNC beginners who don’t have much advanced requirements of the controller.

LINUXCNC is a more advanced PC based controller with MESA cards. The good point is that it’s much more “real time” than MACH3/4. LINUXCNC responses very fast and supports encoder feedbacks. So its performance is pretty near to the industrial CNC controllers. We suggest expert machinists who are familiar with LINUXCNC and CNC programming to choose it. Of course, LINUXCNC has a lot of supports and reference too on the internet.

However, our industrial CNC controller is the most recommended one for SVM-1. It’s a really professional controller with great features like reliability, performance and multi functions. It’s also easy to operate with our full English manuals. SVM-1 can do the best under its control. Besides, it can read CAD files directly, supports Ethernet, has additional control panel for manual operation etc. Its CNC system is open so we can do many OEM functions/remaps based on it.

● **What industrial CNC controllers are available?**

We recommend our 4 axis/5axis industrial CNC controller first. They are economic and reliable with good English technical support. All axis are motion linkage at the same time. Our CNC controller G codes are compatible to FANUC G codes so you don’t need to worry about post processor of your CAM software too. Other information or advantages please refer to our controller manuals.

Of course, we can also install other customer specified CNC controllers too. Please talk to

us directly on such requirements.

- **What materials can SVM-1 series mill?**

SVM-1 series is a lighter machine than SVM-2 but still rigid and powerful to mill any material from Aluminum, brass, mild steel, stainless steel to Titanium. SVM-1 has lower material removing rate than SVM-2 but after our many tests on the materials, SVM-1 has shown stable and reliable milling performance.

- **Do I need an ATC? Can it be added on later?**

ATC is very useful if your milling works need many different tools. It will make tool changing much more efficient and easier. With ATC, you don't need to watch the machine all the time and change tools manually. ATC is especially very good for your batch production.

The ATC device can be added later by yourself if you are expert or have a skilled engineer. SVM-1 has standard mounting position for ATC and we left electric connectors and I/O pins on the controller to enable the installation.

- **How about the 4th axis or 5th axis set?**

Our Harmonic Drive 4th and 5th (*coming soon*) axis sets are of very high industrial level accuracy. So please don't compare them to the cheap ones retrofitted from manual rotary table. We can install the 4th /5th set together with your machine, or you can purchase and install them by yourself later.

- **Can I order a customized SVM machine?**

Yes. The advantage of SKYFIRE CNC is that we can provide customized machine as you required. We have full R&D capability to provide upgrades or modifications based on our machine frame. So any such requirements just talk to us directly.

- **How should I place and setup the machine?**

First of all, HANDLE THE MACHINE CAREFULLY. SVM-1 is a heavy machine so must be careful during lifting and placement. The machine comes with 4pcs FOOTMASTERS so you can set and move it easily. But for the best stability, we suggest you to mount the machine to solid ground. It will eliminate some vibration and make mill surface even better.

- **How can I start to operate the machine?**

If the machine is equipped with a PC based CNC controller, we will provide the controller

drive software, the configuration files and setup manual. If the machine comes with the industrial controller, we will provide operation manuals in English.

The machine startup is easy. Connect the correct power supply, add lubrication oil and connect air source, then power up and start to use it. We will provide a startup manual for you. Any more help you need just contact us.

- **What shipment methods available?**

For oversea clients, we can provide ocean shipping to your sea port (CIF/FOB). And we can also provide TO DOOR delivery worldwide. It's all depends on you. Please talk to us directly about the shipping method. If we have a local distributor nearby, the distributor will handle everything for you.

- **What warranty do I have?**

Normally, we provide 12 month warranty for all of the machine parts. Any parts failed because of quality reason, we will send you a new one for replacement free. If you buy our machines from one of our distributors, the distributor will provide services as well. Beyond the warranty period, we will keep provide services and replacement parts at cost price.

But under the conditions that the parts damaged by user's fault, like crashing, overload, wrong power supply etc. we will not be able to provide free services and replacements. But all will be still at cost prices.

Help Information:

SKYFIRE CNC upgrades products aperiodically.

SKYFIRE CNC reserves right of final interpretation of this document.

Please visit our website www.skyfirecnc.com for more information.

Any ordering question Please email sales@skyfirecnc.com for answers ASAP.

Any technical questions please email info@skyfirecnc.com for our service ASAP.

You can also add our Skype: **skyfirecnc** for direct communication.

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