



CNC Enhancement Accessories



Zero Point System
Self Centering Vise

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Modular clamping system Maximize the efficiency of your machine tool

SilverCNC mechanical zero point system

When machining in small quantities parts and frequently replacing fixtures, it is necessary for you to know the clamping solutions and services provided by SilverCNC.

Zero point base plate, pneumatic plate, self-centering vise, riser, tombstone, pyramid, dovetail fixture and customized solutions for global customers.

With SilverCNC rotary solution, probing system, to help you to optimize processing technology, to improve machine tool efficiency and increase your competitive edge

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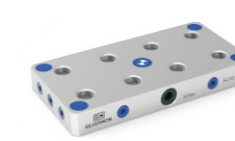
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Self centering vise	page 16	Chuck fixture	page 22
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52mm plate



96mm plate



Multi-station plate



Studs



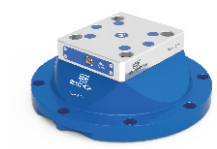
Self centering vise



Double station vise



Angle plate



Riser



Three sided tombstone



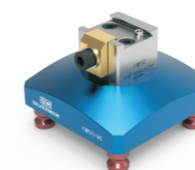
Four sided tombstone



Pyramid



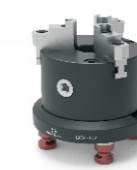
Dovetail



Dovetail fixture



Collet



Chuck



Accessories

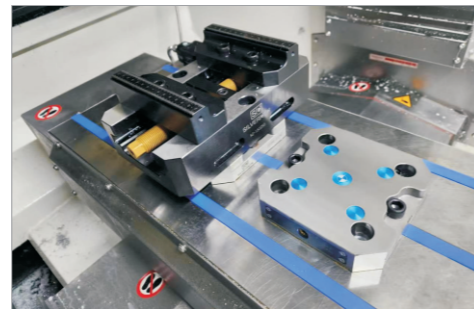
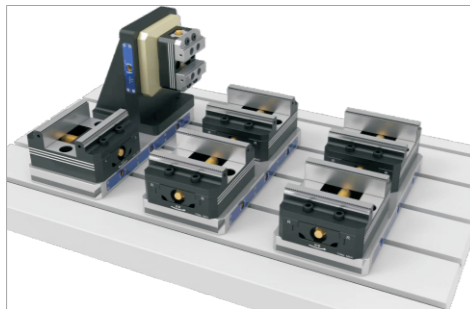
Various Applications of Mechanical Zero Point System

Application 1 (zero point base plate, self-centering vise, right angle plate)

Zero point base plate and self centering vise fixed on machine tool table are the most commonly used scenarios

Double station plate can improve machine tool usage and clamping efficiency further

If without a rotary table, when using a right angle plate, 5 surfaces can be machined to ensure machining accuracy



Application 2 (on 4th axis rotary table)

Fixing the zero point base plate on the flange of the 4-axis, combined with various types of fixtures to ensure that the coordinate origin remains unchanged, which can achieve efficient clamping and machining

For C170 and small 4axis models, please use 52mm plate, for bigger 4axis models, please choose 96mm type zero plate and self centering vise.

please use the positioning hole on the zero plate to calibrate the center without purchasing a center calibration plate



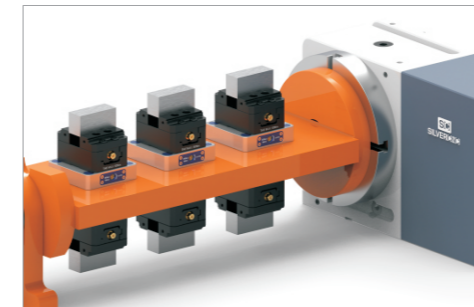
Various Applications of Mechanical Zero Point System

Application 3 (trunnion table)

"The trunnion table and zero point plate are also the most common application."

4axis rotary, tailstock, 2/3/4 multiple sides in one bridge plate, 2/3/4 sets of zero point, vise, chuck combination

Pneumatic zero point plate can also be selected to achieve automated upper and lower workpiece for machining.

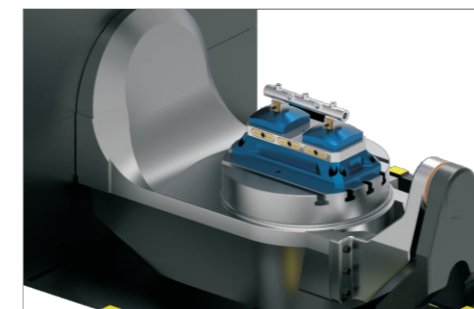


Application 2 (dovetail fixtures)

Dovetail fixtures can be mounted on four and five-axis CNC machines for milling applications. It offers superior clamping strength and part access

Dovetail and zero point plate combined, which can reduce clamping time, improve the efficiency of machine tool, and also improve machining accuracy. Ideal for small parts that need a lot of clearance

Three models of dovetails for you to choose. all of which has been improved to have the ability to mount to 52 and 96mm base plates



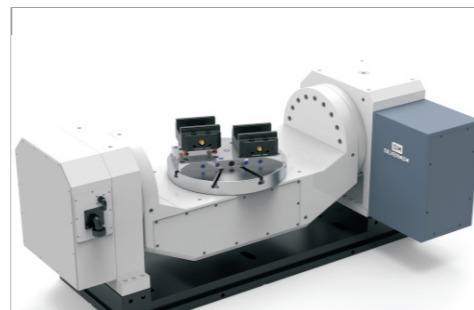
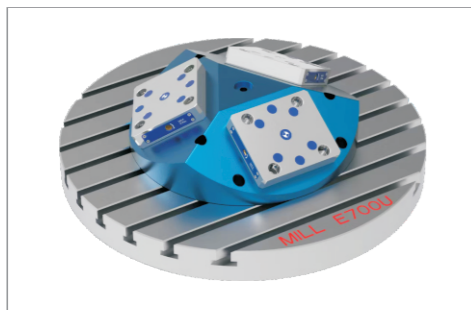
Various Applications of Mechanical Zero Point System

Application 3 (on 5th axis machine tool)

Five axis machine tools and five axis turntables are the most commonly used scenarios for zero point products and self centering vise.

Small size, strong clamping force, advantages in avoiding travel restrictions, preventing interference, etc

SilverCNC can customize various solution according your five axis worktable. Please send rotary table or machine dimension to us, we will send the simulated 3D model for confirmation



Application 4 (riser+ zero point base plate +self centering vise)

For some small parts machining on 5axis machine tools, you have to increase the height of the parts to improve flexibility and prevent interference.

Riser and zero point plate is a very popular and cheap solution. The material for the raised is aluminum, and the bolt holes at the bottom are determined based on the machine tool work table T-slot distance.

SilverCNC can customize various types of riser based on your machine tool size and zero point plate. Please contact our sales manager to know more.



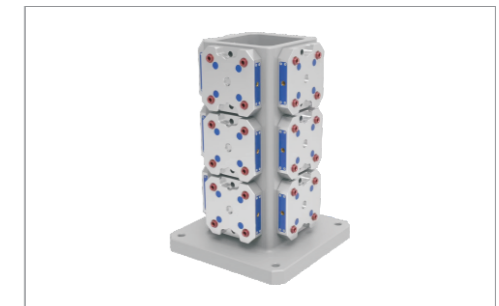
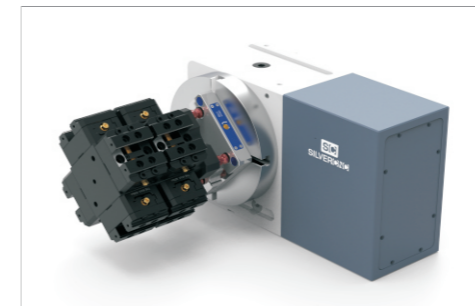
Various Applications of Mechanical Zero Point System

Application 5 (tombstone)

Tombstone often used on VMC and HMC, which is efficient, and effective workholding solutions for CNC machining operations

Many type of fixture can fixed on the tombstom, such as zero point plate, self centering vise, OK vise. to meet your processing requirements.

Tombstome can also be integrated with 5th axis rotary table for processing multiple surfaces at one time, improving machining efficiency.

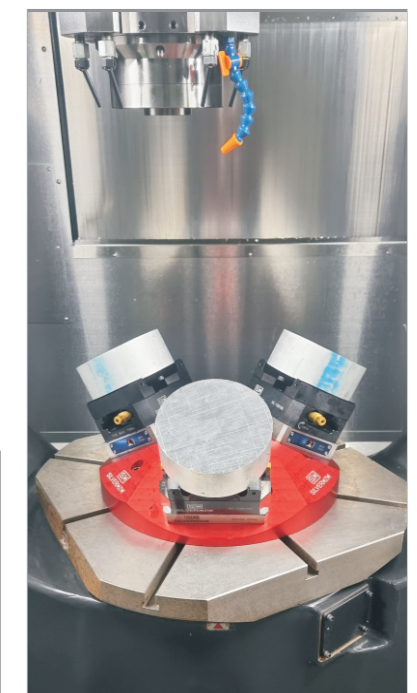
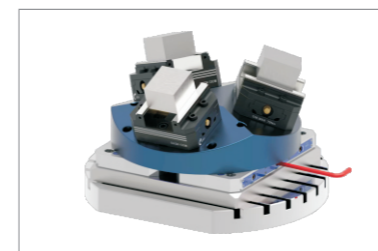


Application 6 (pyramid)

SilverCNC pyramid design provides maximum access to all machined surfaces and allows or enhanced spindle and cutting tool clearance

SilverCNC pyramid compatible with SC96-S195 zero point plate, various of dovetail, vise, chuck and serrated jaw options are available.

Noted: Please inform us of the model and specifications of the machine tool before ordering, or send us the drawings of the worktable. We will design the fixing holes according to the drawings



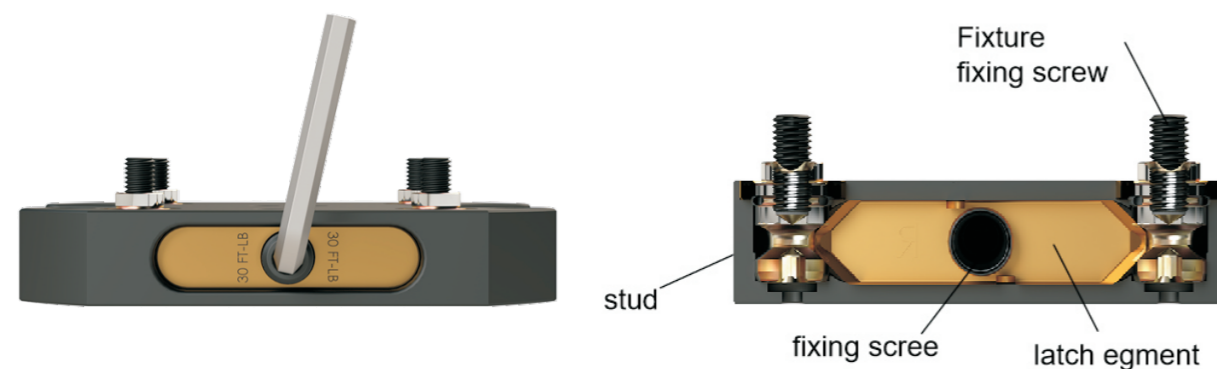
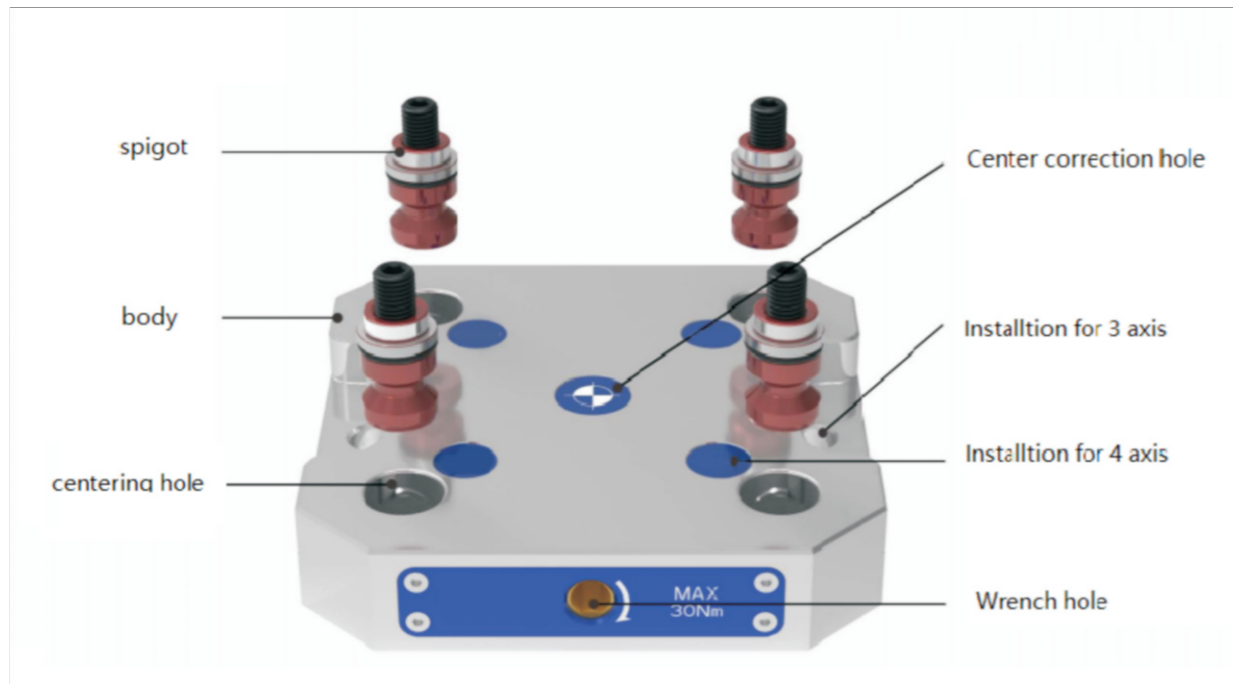
Mechanical zero point basic

The four hole mechanical zero point clamping is a positioning tool that can quickly exchange fixtures and centering fixtures. The standard installation ways enables the rapid and repeatable conversion of vice, pallet, chuck and other tools between machine tools, and ensures the accuracy without disassembly and alignment time

Benefits used zero point clamping system

- Repetition accuracy is within 0.005mm
- Large bearing area, suitable for heavy cutting
- Reduce fixture replacement and adjustment time by more than 80%
- Fixtures can be standardized
- Numerous combinations of tooling and fixtures can be designed"

Mechanical zero point structure:

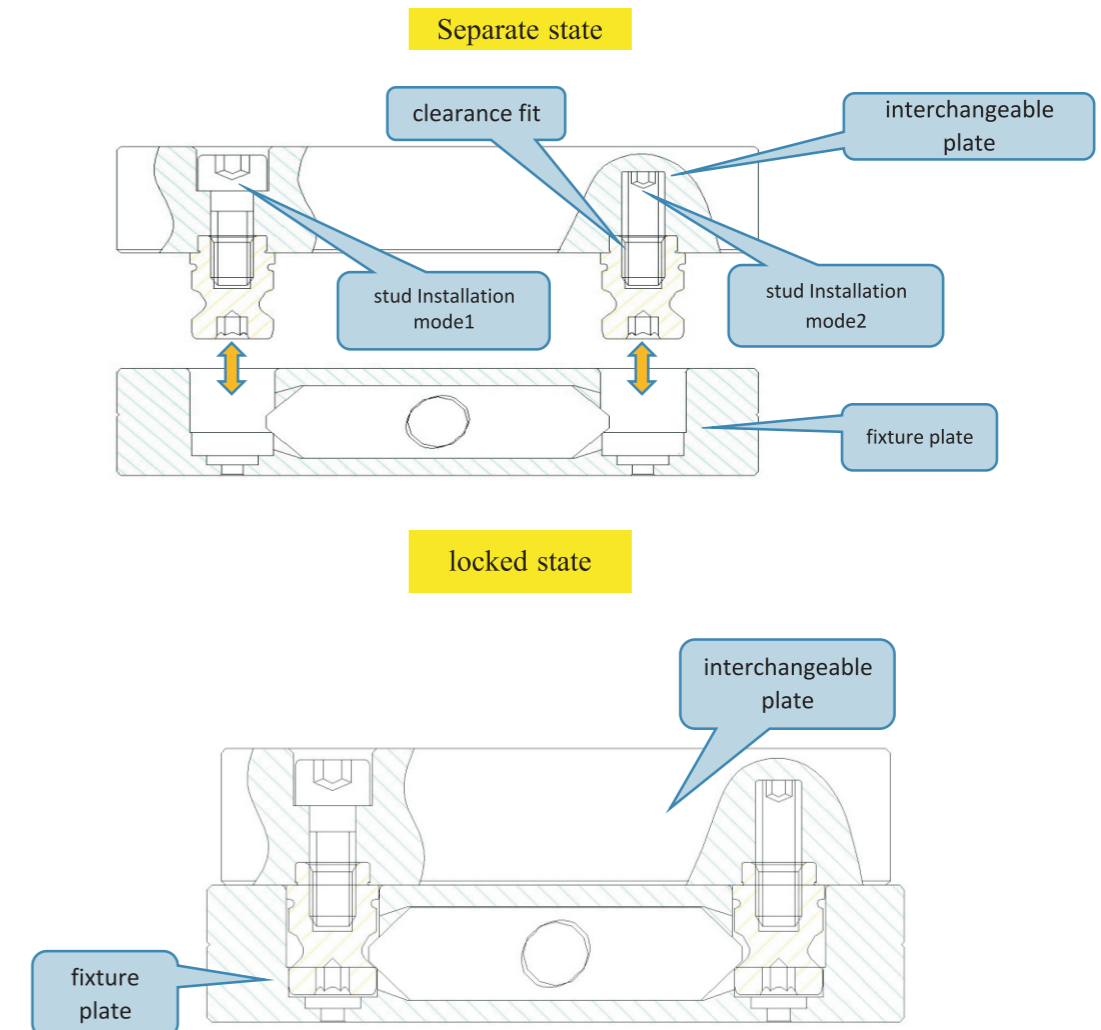


Various fixture combination

With the mechanical zero point plate, you can design various tooling fixtures flexibly, and exchange them among three-axis, four axis and five axis machine tools quickly to reduce the downtime of the machine tool.



Plate installation



52mm type zero point base plate

96mm type zero point base plate

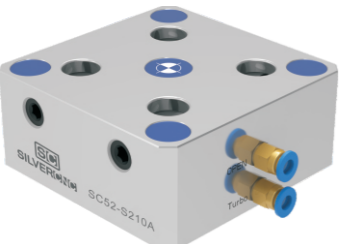
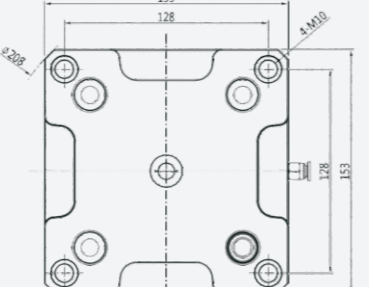
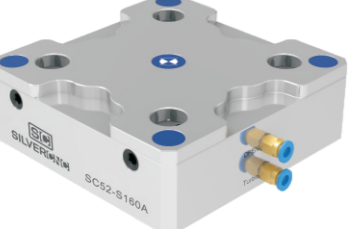
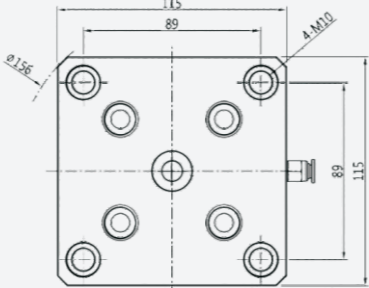
	<p>SC52-S120 Dimension: 106*106*25 Repeatability: 0.005 Clamping force: 18KN Material: steel Weight/Kg: 2KG</p>	
	<p>SC52-S145 Dimension: 106*106*25 Repeatability: 0.005 Clamping force: 18KN Material: steel Weight/Kg: 2KG</p>	
	<p>SC52-S150 Dimension: 120*106*25 Repeatability: 0.005 Clamping force: 18KN Material: steel Weight/Kg: 2KG</p>	
	<p>SC52-S96 Dimension: 121*121*25 Repeatability: 0.005 Clamping force: 18KN Material: steel Weight/Kg: 2.5KG</p>	

	<p>SC96-S190 Dimension: 150*150*30 Repeatability: 0.005 Clamping force: 22KN Material: steel Weight/Kg: 4KG</p>	
	<p>SC96-S195 Dimension: 150*128*30 Repeatability: 0.005 Clamping force: 22KN Material: steel Weight/Kg: 4KG</p>	
	<p>SC96-S200 Dimension: 168*150*30 Repeatability: 0.005 Clamping force: 22KN Material: steel Weight/Kg: 5KG</p>	
	<p>SC96-S205 Dimension: 150*150*30 Repeatability: 0.005 Clamping force: 22KN Material: steel Weight/Kg: 4KG</p>	

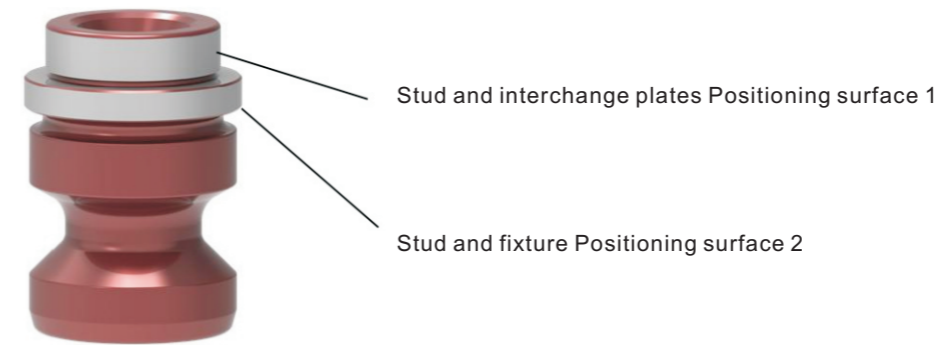
Multi-station base plate

	<p>SC52-S230 Dimension: 208*106*25 Repeatability: 0.005mm Clamping force: 18KN Material: steel Weight/Kg: 4KG</p>	
	<p>SC96-S379 Dimension: 348*163*25 Repeatability: 0.005mm Clamping force: 22KN Material: steel Weight/Kg: 12KG</p>	


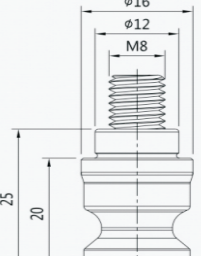

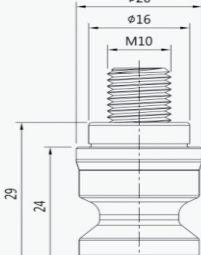
Pneumatic base plate

	<p>SC52-S160A Dimension: 115*115*46 Repeatability: 0.005 Clamping force: 18KN Material: steel Weight/Kg: 4KG</p>	
	<p>SC96-S210A Dimension: 153*153*50 Repeatability: 0.005 Clamping force: 22KN Material: steel Weight/Kg: 7KG</p>	

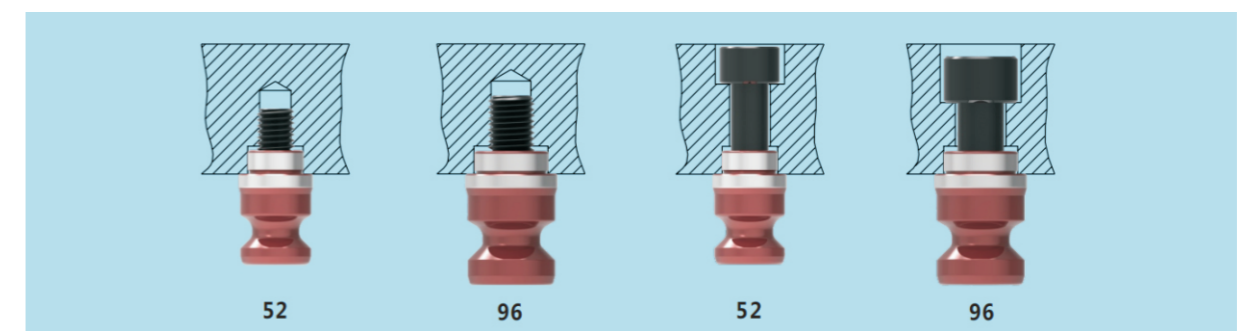
Studs



☆ Note: the stud and the exchange plate should be interstitial. When installing stud, lubricate the cylinder surface to prevent straining the surface

	<p>LD12-16 Dimension: $\phi 16 \times 34$ Material: steel Weight/Kg: 0.04KG</p>	
	<p>LD16-20 Dimension: $\phi 20 \times 40$ Material: steel Weight/Kg: 0.05KG</p>	

Studs locking



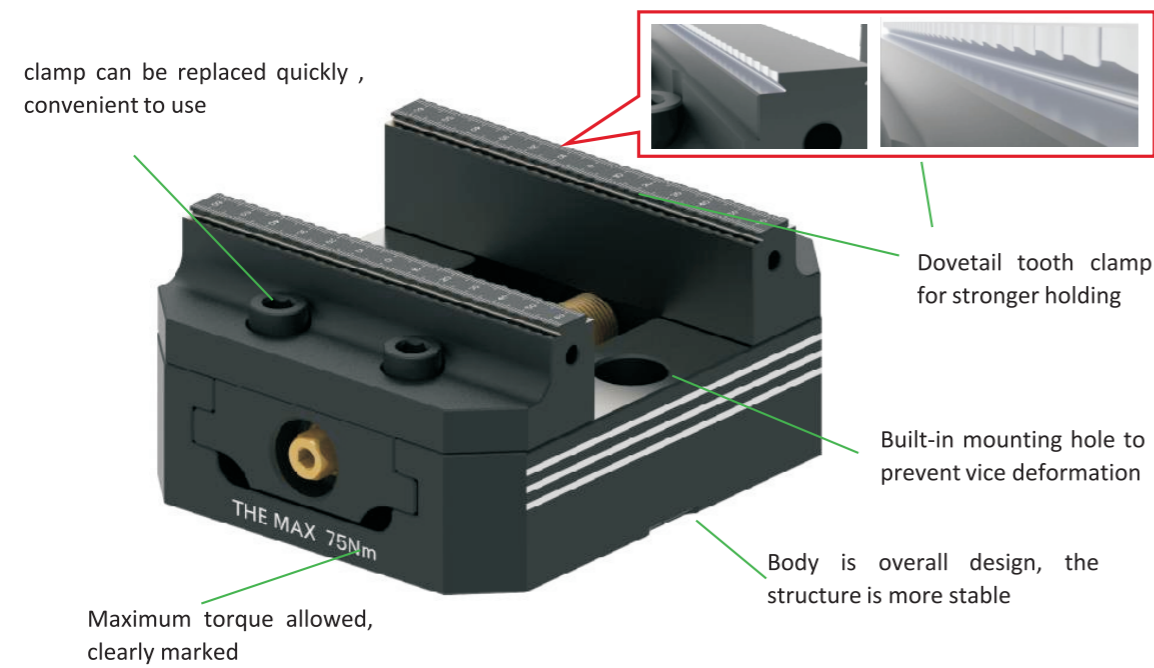
Self-centering vise

SILVERCNC Self centering vise is applicable to various CNC processing fields. It has the characteristics of high precision, light weight, large clamping range and flexible operation. It can realize positioning and clamping in one step, and its claw can hold the work piece with complex contour. The work piece with different contour can be processed by simply changing the claw. The accuracy of repeated positioning is within 0.02mm. Vises can be connected and replaced with major foreign brands, such as Lang brand, 5th, Jaggens, Schunk, etc.

Its compact structure and practical design make it the most popular choice for most machining plants in the world.

It is more flexible when used with four hole mechanic zero point system.

SILVERCNC self centering vise is a good choice for flexible production!



Small size vise

SC-75100 and SC-75150 are small size vise.

They are suitable for clamping small products and can be used with 52 type four hole zero point base to realize rapid clamping and positioning and improve production efficiency.

	<p>SC-75100 Dimensions: 75*100*56mm Repeatability: 0.01mm Forward jaw clamping range: 0-40mm Reverse jaw clamping range:38-76mm Jaw width: 75mm maximum torque: 60Nm Weight: 2.5KG</p>	
	<p>SC-75150 Dimensions: 75*150*56mm Repeatability: 0.01mm Forward jaw clamping range: 0-90mm Reverse jaw clamping range:38-126mm Jaw width: 75mm maximum torque: 60Nm Weight: 3KG</p>	

Medium size vise

Large size centering vise

SC-130155 and SC125-128 are medium size self centering vise, they are the most widely used and are most loved by the majority of users. It can be used with 96 type four hole zero point base, which is more convenient and fast, and can quickly improve the production efficiency.


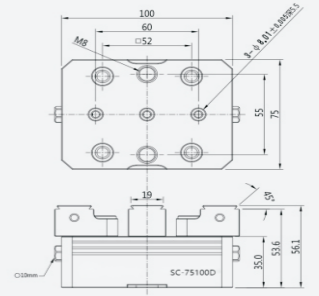

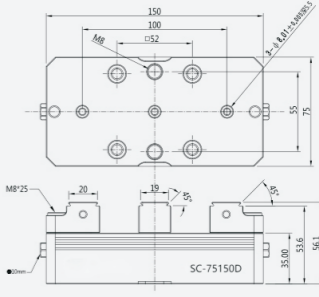

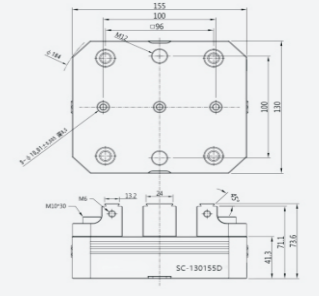

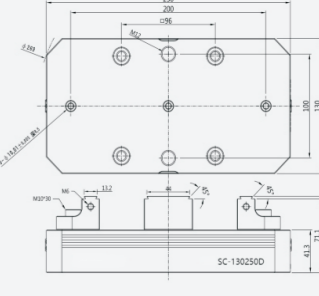
	<p>SC-125128 Dimensions: 125*128*73.5mm Repeatability: 0.02mm Forward jaw clamping range: 0-56mm Reverse jaw clamping range: 78-128mm Jaw width: 125mm maximum torque: 75Nm Weight: 6KG</p>	
	<p>SC-130155 Dimensions: 130*155*73.5mm Repeatability: 0.02mm Forward jaw clamping range: 0-82mm Reverse jaw clamping range: 78-150mm Jaw width: 130mm maximum torque: 75Nm Weight: 7KG</p>	

Large size centering vise

SC-130250 and SC-150250 are large size self centering vise, they are used for clamping large parts. It can be used with 96 type four hole zero point base, which is more convenient and fast, and can quickly improve the production efficiency.

	<p>SC-130250 Dimensions: 130*250*73.5mm Repeatability: 0.02mm Forward jaw clamping range: 0-180mm Reverse jaw clamping range: 78-254mm Jaw width: 130mm maximum torque: 75N/m Weight: 10KG</p>	
	<p>SC-150250 Dimensions: 150*250*94mm Repeatability: 0.02mm Forward jaw clamping range: 0-155mm Reverse jaw clamping range: 94-243mm Jaw width: 150mm maximum torque: 100N/m Weight: 16KG</p>	

Double station vise

	<p>SC-75100D Dimensions: 75*100*56mm Repeatability: 0.01mm Forward jaw clamping range: 0-10mm Reverse jaw clamping range: 17.5-25mm Jaw width: 75mm maximum torque: 60Nm Weight: 2.5KG</p>	
	<p>SC-75150D Dimensions: 75*150*56mm Repeatability: 0.01mm Forward jaw clamping range: 0-37mm Reverse jaw clamping range: 17.5-55mm Jaw width: 75mm maximum torque: 60Nm Weight: 3KG</p>	
	<p>SC-130155D Dimensions: 130*155*73.5mm Repeatability: 0.02mm Forward jaw clamping range: 0-28.5mm Reverse jaw clamping range: 32-62mm Jaw width: 130mm maximum torque: 75Nm Weight: 8KG</p>	
	<p>SC-130250D Dimensions: 130*250*73.5mm Repeatability: 0.02mm Forward jaw clamping range: 0-63mm Reverse jaw clamping range: 32-99mm Jaw width: 130mm maximum torque: 75N/m Weight: 11KG</p>	

Risers

SC96-80L



Dimensions: 130*150*104mm
 Repeatability: 0.005mm
 Clamping force: 22KN
 Material: steel
 Weight/Kg: 8.5KG

This riser a very flexible design, with 4 studs at the bottom that can be installed on various forms of 96mm base plates, and multiple risers can be used simultaneously to solve travel troubles.

Repeatability in 0.005mm, 4pcs studs for free.

SC96-S275



Dimensions: $\phi 275 \times 100$
 Repeatability: 0.005mm
 Clamping force: 22KN
 Material: steel
 Weight/Kg: 10KG

The S96-S275 raised zero point plate designed for five axis machine tools specially, which can avoid interference during machining.

The fixing hole can be customized according to the T-slot of the machine tool.

SC96-S195 base plate installed on the riser to ensure repeatability in 0.005mm, with 4pcs studs for free.

Right angle plate

SC96-A90



Dimensions: 150*149*199mm
 Repeatability: 0.008mm
 Clamping force: 22KN
 Material: AL+steel
 Weight/Kg: 5.5KG

Three sided tombstone

SC52-S160

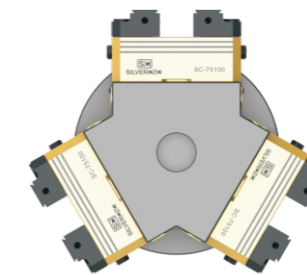
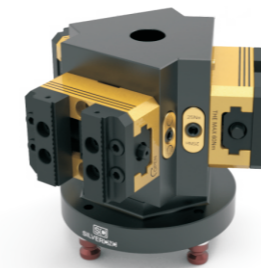


Dimensions: $\phi 160 \times 167$ mm
 Material: steel+aluminum
 Weight: 7KG

This three side tombstone integrates the 52 type zero pint base plate, the compact design can add 3 small size vise SC-75100.

The unit features pull studs on the bottom so that it can be mounted onto any 96mm base plate.

It's perfect fit for SilverCNC C180 and C200 4th axis rotary table



Four sided tombstone

75-A96

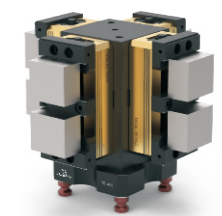
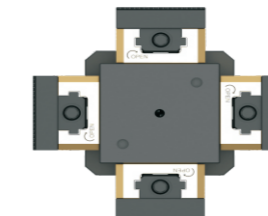
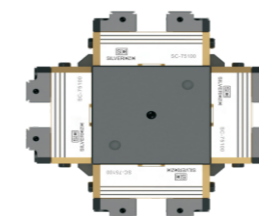


Dimensions: 126**126*200mm
 Material: aluminum
 Weight: 7KG

The 75-A96 is an ultra compact 4 sided mini tombstone designed to work with smaller 4 and 5 Axis machines. The goal was to increase productivity.

The entire tombstone will quick change onto any 96mm zero point base plates. With a maximum of 12 vises on the tombstone, the machine can run unattended.

It's perfect fit for SilverCNC C180 and C200 4th axis rotary table



Three sided pyramid

Pyramid give users the ability to increase the productivity of 5 axis machining centres. The angled faces permit multi-part loads while still providing the increased part access needed in 5 axis machining centres.

The flexible design ties together many of zero point base plate and top tooling options.



Dimensions: $\phi 395 \times 115$ mm
 Material: Aluminum
 Weight: 35KG
 30° angle. For use machines with 120° or more tilt.



Vise mounted in vertical orientation

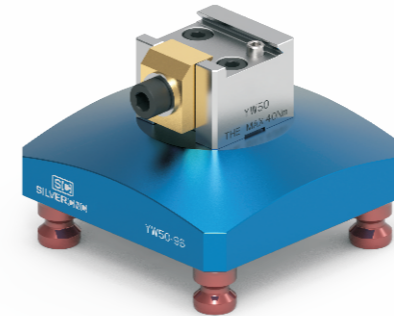
Pyramid compatible with SC96-S195 zero point plate, all kinds of top tooling can be mounted on plate. such as self centering vise, dovetail fixtures



Vise mounted in horizontal orientation

Noted: Please inform us of the model and specifications of the machine tool before ordering, or send us the drawings of the worktable. We will design the fixing holes according to the drawings

Dovetail Fixtures



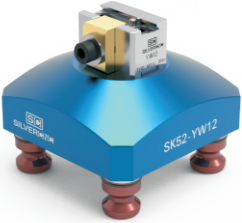
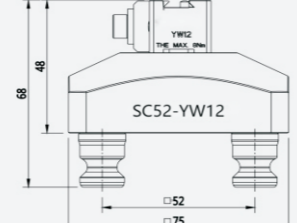
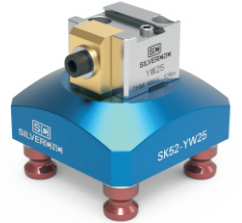
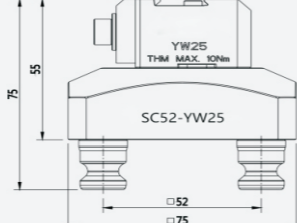
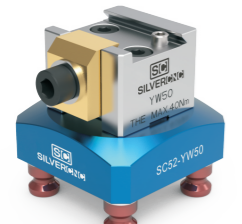
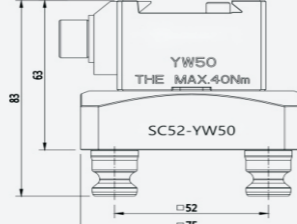
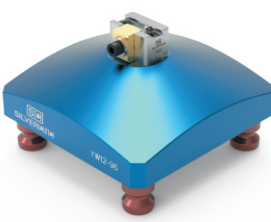
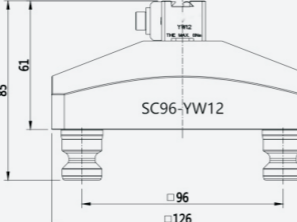
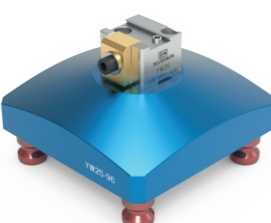
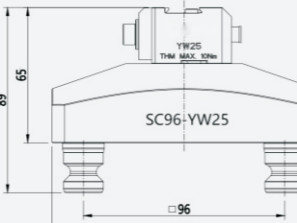
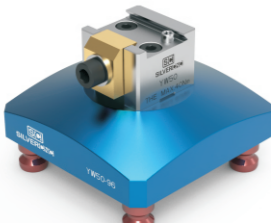
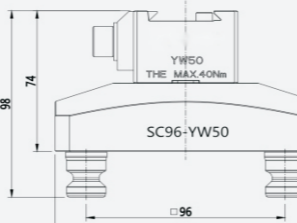
Locating pins for precise repeatability
 "45° dovetail for increased clamping force"
 Compatible with 52 and 96 zero point system


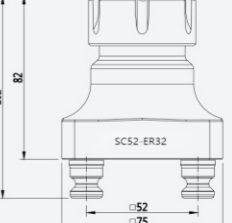

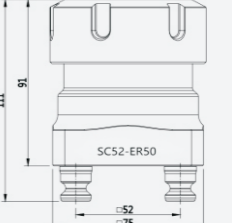

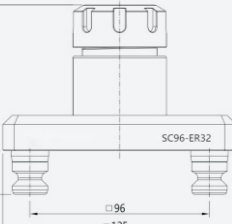
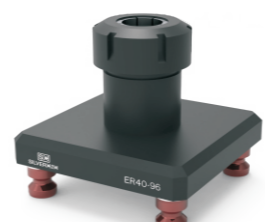
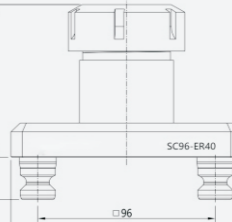

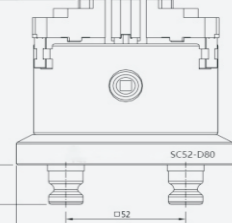

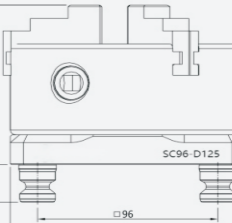
The dovetail is made of integral stainless steel grind to ensure accuracy and stability

YW12	YW25	YW50
Dimension: 21*32*19mm Dovetail depth: 2.54mm Clamping range: 12-25mm Material: stainless steel Max. torque: 8Nm Weight/Kg: 0.15KG	Dimension: 38*38*27mm Dovetail depth: 2.54mm Clamping range: 25-70mm Material: stainless steel Max. torque: 10Nm Weight/Kg: 0.25KG	Dimension: 50*50*38mm Dovetail depth: 2.54mm Clamping range: above 50mm Material: stainless steel Max. torque: 40Nm Weight/Kg: 0.65KG

Dovetail Fixtures

Chuck and collet

	<p>SC52-YW12 Dimension: 21*32*19mm Dovetail depth: 2.54mm Clamping range: 12-25mm Material: stainless steel Max. torque: 8Nm Weight/Kg: 0.15KG</p>	
	<p>SC52-YW25 Dimension: 38*38*27mm Dovetail depth: 2.54mm Clamping range: 25-70mm Material: stainless steel Max. torque: 10Nm Weight/Kg: 0.25KG</p>	
	<p>SC52-YW50 Dimension: 50*50*38mm Dovetail depth: 2.54mm Clamping range: above 50mm Material: stainless steel Max. torque: 40Nm Weight/Kg: 0.65KG</p>	
	<p>SC96-YW12 Dimension: 126*126*85mm Dovetail depth: 2.54mm Clamping range: 12-25mm Material: stainless steel Max. torque: 8Nm Weight/Kg: 2KG</p>	
	<p>SC96-YW25 Dimension: 126*126*89mm Dovetail depth: 2.54mm Clamping range: 12-25mm Material: stainless steel Max. torque: 10Nm Weight/Kg: 2.5KG</p>	
	<p>SC96-YW50 Dimension: 126*126*98mm Dovetail depth: 5.05mm Clamping range: above 50mm Material: stainless steel Max. torque: 40Nm Weight/Kg: 2.8KG</p>	

	<p>SC52-ER32 Dimension: 75*75*83mm Clamping range: 3-25mm Material: stainless steel Weight/Kg: 1.4KG</p>	
	<p>SC52-ER50 Dimension: 75*75*92mm Clamping range: 6-40mm Material: stainless steel Weight/Kg: 3KG</p>	
	<p>SC96-ER32 Dimension: 125*125*104mm Clamping range: 3-25mm Material: stainless steel Weight/Kg: 2.6KG</p>	
	<p>SC96-ER40 Dimension: 125*125*111mm Clamping range: 3-32mm Material: stainless steel Weight/Kg: 3KG</p>	
	<p>SC52-D80 Dimensions: φ95*100mm Material: Hardened steel+ surface anti rust Weight: 2.5KG</p>	
	<p>SC96-D125 Dimensions: 125*125*130mm Material: Hardened steel+ surface anti rust Weight: 8KG</p>	

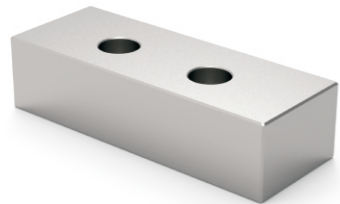
Accessories

Zero Point System Application



6061 Aluminum Jaws

AL75-75*44*24 Compatible with SC-75100/SC-75150"
 AL130-130*49*33 Compatible with SC-125128/SC-130155/SC-130250"
 AL150-150*56*37 Compatible with SC-150250"



1018 Steel Jaws

SL75-75*44*24 Compatible with SC-75100/SC-75150"
 SL130-130*49*33 Compatible with SC-125128/SC-130155/SC-130250"
 SL150-150*56*37 Compatible with SC-150250"

Self centering vise jaws



Standard Steel Jaws

SSD75-75*44*24 Compatible with SC-75100/SC-75150"
 SSD130-130*49*33 Compatible with SC-125128/SC-130155/SC-130250"
 SSD150-150*56*37 Compatible with SC-150250"



Centering Pins



Threaded Locating Pins

