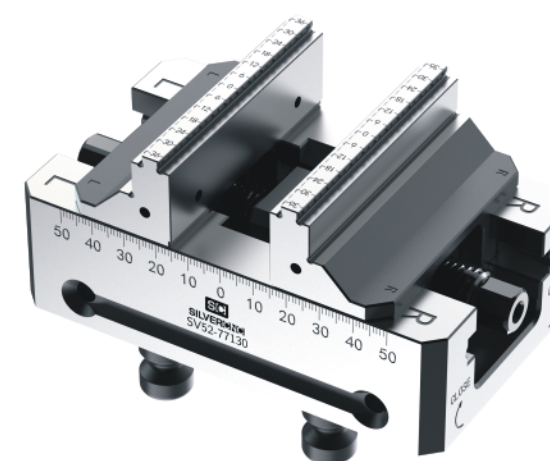




High End CNC Workholding



Shenzhen SilverCNC Tech Co.,Ltd.

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Email: liuxuan@silvercnc.com

Webste: www.silvercnc.com



Zero Point System
Self Centering Vise

www.silvercnc.com



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, tommbstone, pyramid, dovetail fixture and customized solutions for global customers.

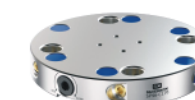
With SilverCNC rotary solution, probing system, to help you to optimize processing technology, to improve machine tool efficiency and increase your competitive edge

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52mm plate



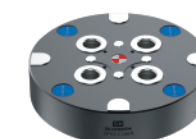
96mm plate



Double-station plate



Four-station plate



52mm Pnuematic base plate



96mm Pnuematic base plate



Self centering vise



Jaws



Pnuematic centering vise



Riser



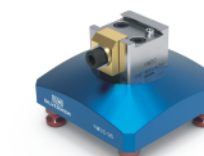
Pyramid



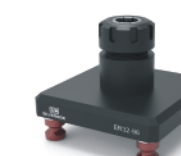
Studs



Dovetail



Dovetail fixture



Collet



Chuck

Mechanical zero point basic:

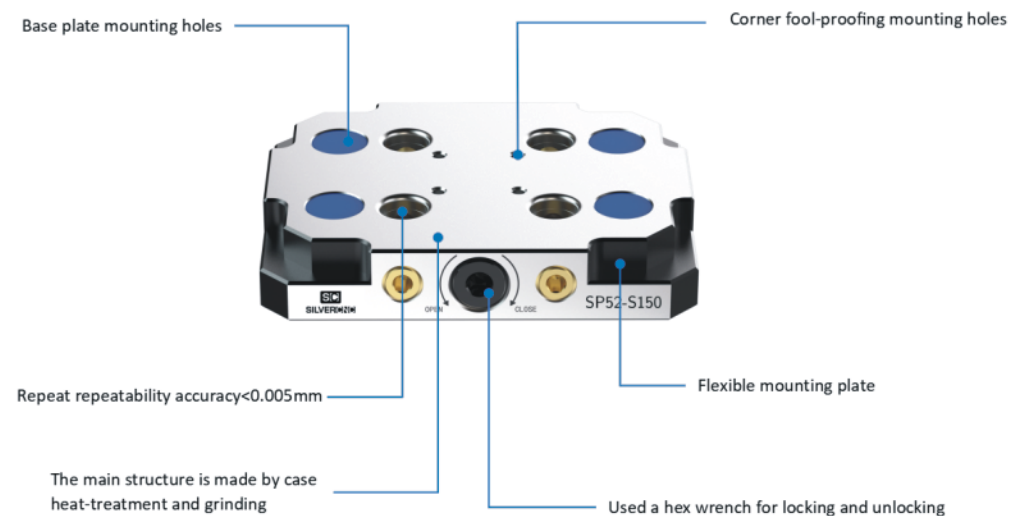
The four hole mechanical zero point clamping is a positioning tool that can quickly exchange fixtures and centering fixtures. The standard installation ways enables the rapid and repeatable conversion of vice, pallet, chuck and other tools between machine tools, and ensures the accuracy without disassembly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

Mechanical zero point basic:

- 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:

- 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



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

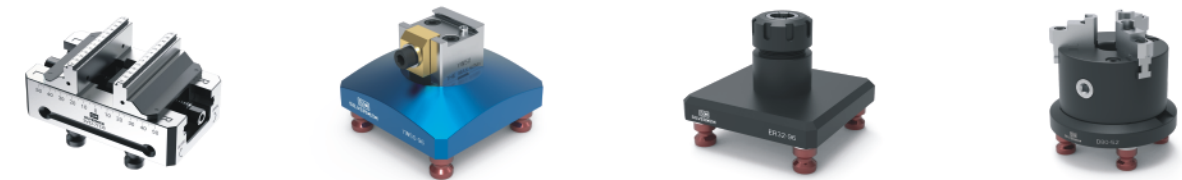
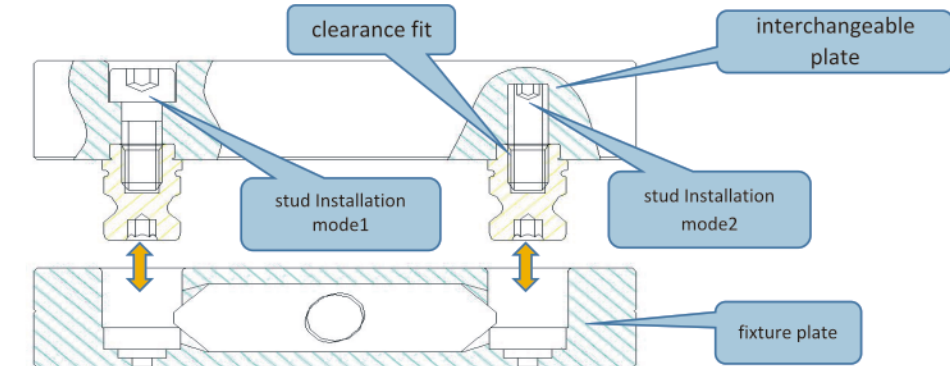
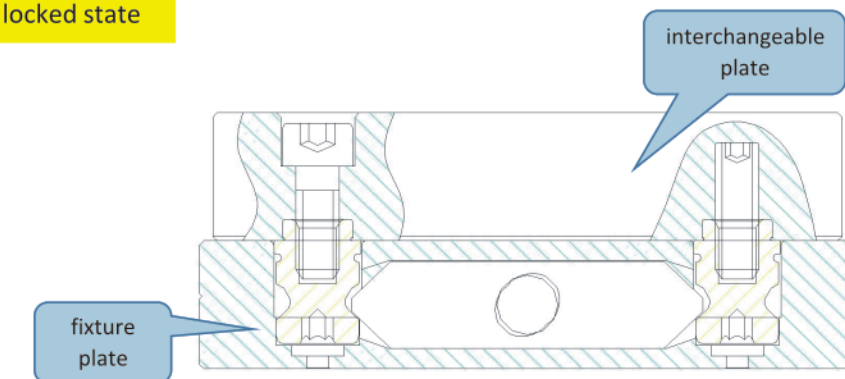


Plate installation

Separate state

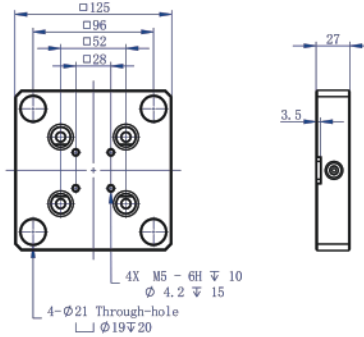
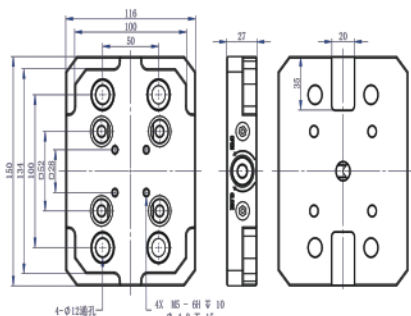
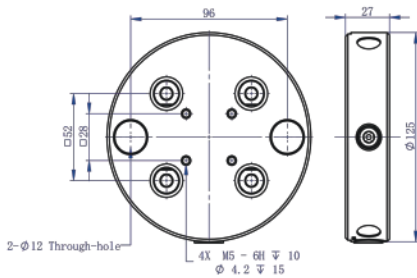
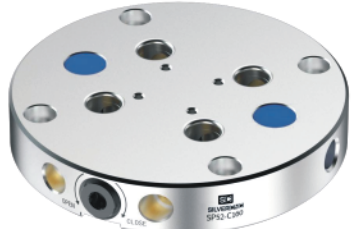
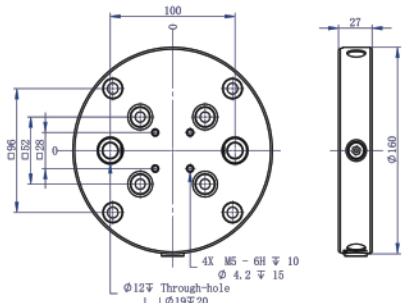


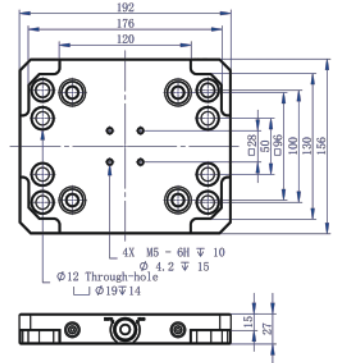
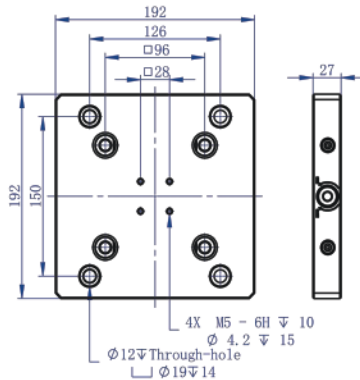
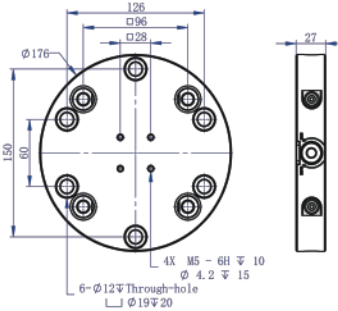
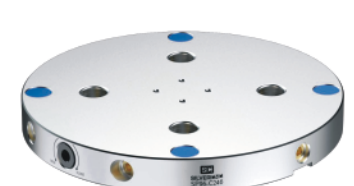
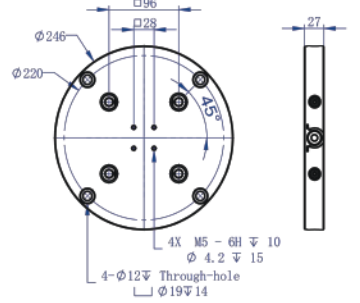
locked state



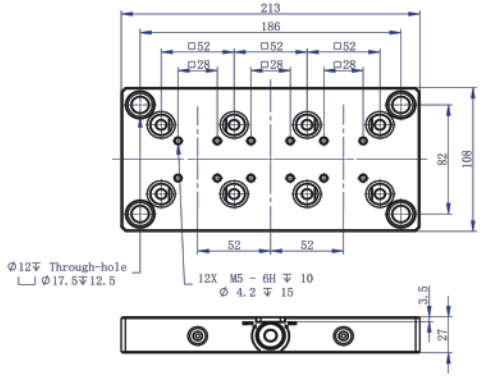
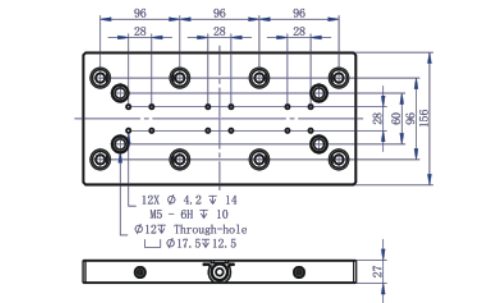
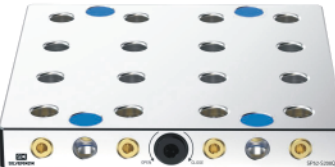
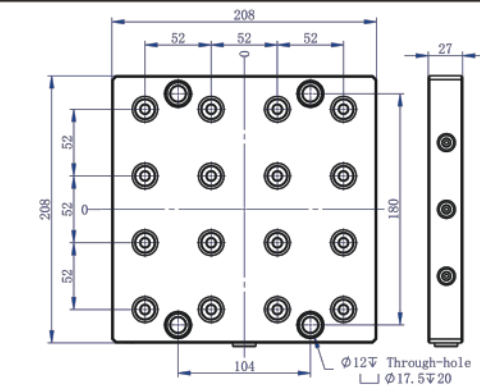
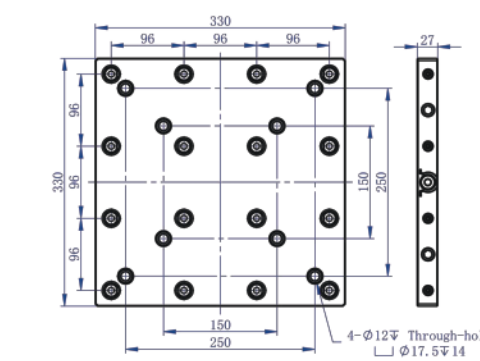
52mm type zero point base plate

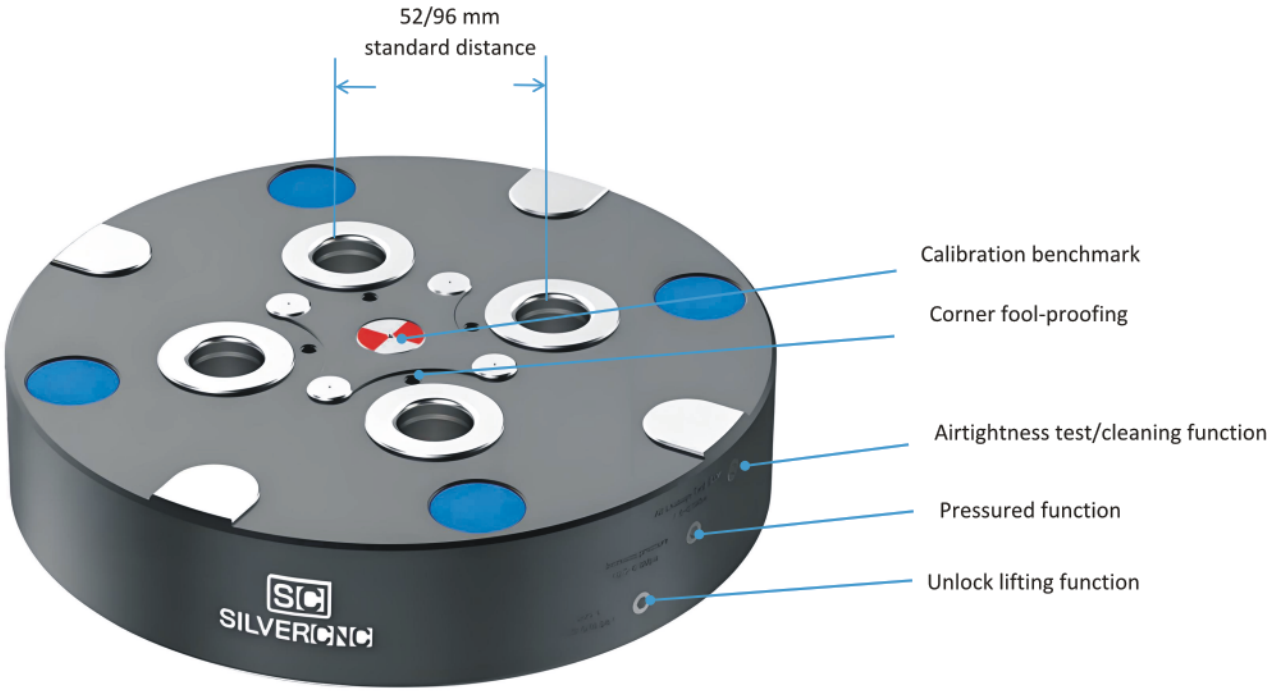
96mm type zero point base plate

	SP52-S125 Dimension: 125*125*27 Repeatability: 0.005 Clamping force: 20KN Material: steel Weight/Kg: 2.8KG Mounting: 96*96mm	
	SP52-S150 Dimension: 150*116*27 Repeatability: 0.005 Clamping force: 20KN Material: steel Weight/Kg: 3KG Mounting: 100*50mm and clamping edge	
	SP52-C125 Dimension: $\phi 125 \times 27$ Repeatability: 0.005 Clamping force: 20KN Material: steel Weight/Kg: 2.5KG Mounting: 96mm PCD ON 180°	
	SP52-C160 Dimension: $\phi 125 \times 27$ Repeatability: 0.005 Clamping force: 20KN Material: steel Weight/Kg: 3.5KG Mounting: 100mm PCD ON 180°	

	SP96-S192 Dimension: 192*156*27 Repeatability: 0.005 Clamping force: 30KN Material: steel Weight/Kg: 5.5KG Mounting: 150*100/50mm and clamping edge	
	SP96-SS192 Dimension: 192*192*27 Repeatability: 0.005 Clamping force: 30KN Material: steel Weight/Kg: 7.5KG Mounting: 150*126mm	
	SP96-C176 Dimension: $\phi 176 \times 27$ Repeatability: 0.005 Clamping force: 30KN Material: steel Weight/Kg: 4.5KG Mounting: 150*126/50mm and clamping edge	
	SP96-C246 Dimension: 192*156*27 Repeatability: 0.005 Clamping force: 30KN Material: steel Weight/Kg: 5.5KG Mounting: 4*45° on 220mm PCD	

Multi-position base plate

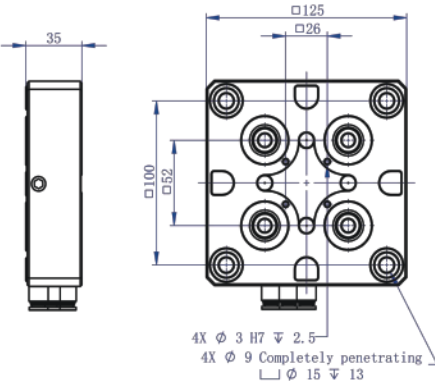
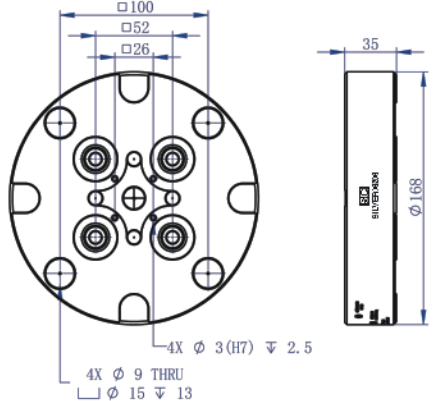
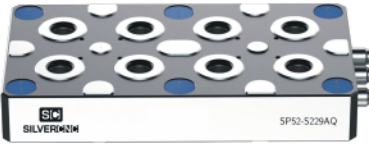
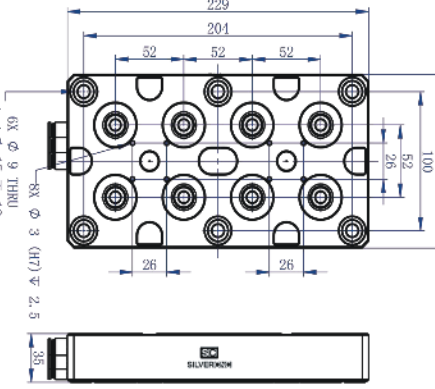
	SP52-S213D Dimension: 213*108*27 Repeatability: 0.005mm Clamping force: 20KN Material: steel Weight/Kg: 4.5KG Mouting:186×82mm	
	SP96-S330D Dimension: 330*156*27 Repeatability: 0.005mm Clamping force: 30KN Material: steel Weight/Kg: 11KG Mouting:250×60mm	
	SP52-S208Q Dimension: 208*208*27 Repeatability: 0.005 Clamping force: 20KN Material: steel Weight/Kg: 8.5KG Mouting:104×180mm	
	SP96-S330Q Dimension: 330*330*27 Repeatability: 0.005 Clamping force: 30KN Material: steel Weight/Kg:23KG Mouting:150×150mm/ 250×250mm	



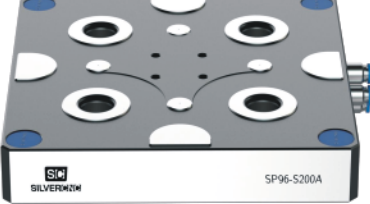
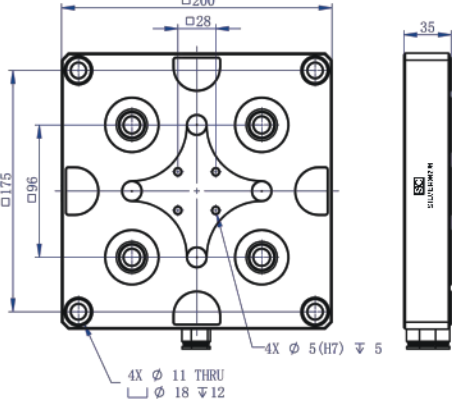
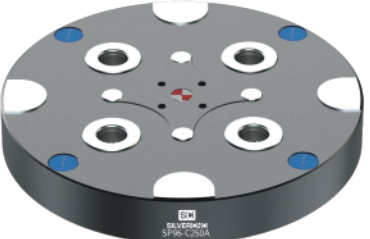
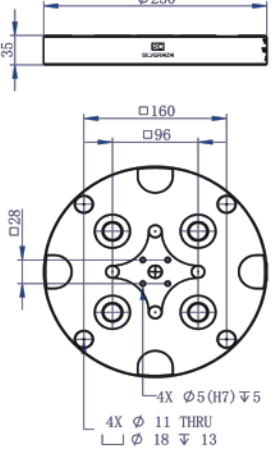
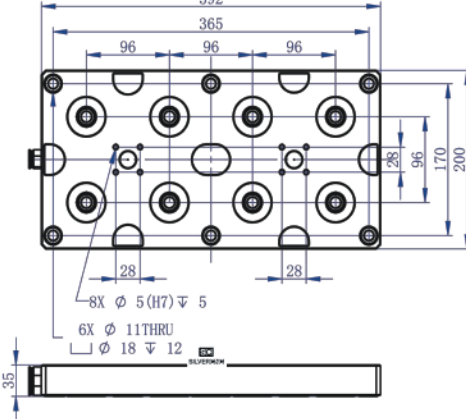
Design, highlights

<5μm Repeat positioning accuracy	>20KN Clamping force	300Kg Unlocked lifting capacity	800Kg Max. clamping load
 Air pressure unlocking	 Hardened stainless steel	 Spigotr connector with powerful force spray self-cleaning function	 Positioning datum is self-cleaning and air-tightness testing

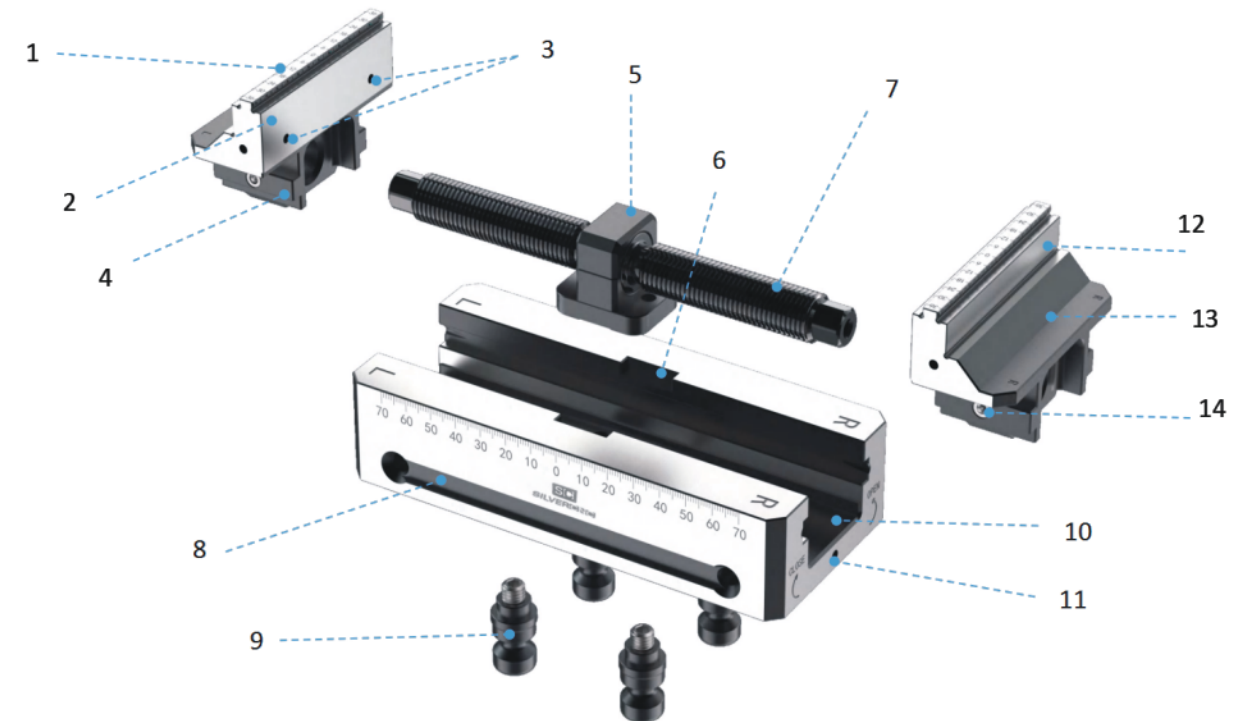
52mm Pnuematic base plate

	SP52-S125A Dimension: 125*125*35 Repeatability: 0.005mm Clamping force: 9KN Lifting load:100KG Unlocking :unkock pressure 0.5-0.8Mpa Material: steel Weight/Kg: 3.5KG Mouting:100×100mm	
	SP52-C168A Dimension: φ168*35 Repeatability: 0.005mm Clamping force: 9KN Lifting load:100KG Unlocking :unkock pressure 0.5-0.8Mpa Material: steel Weight/Kg: 5.5KG Mouting:100×100mm	
	SP52-S229AQ Dimension: 125*229*35 Repeatability: 0.005mm Clamping force: 18KN Lifting load:200KG Unlocking :unkock pressure 0.5-0.8Mpa Material: steel Weight/Kg: 6KG Mouting:100×204mm	

96mm Pnuematic base plate

	SP96-S200A Dimension: 200*200*35 Repeatability: 0.005mm Clamping force: 20KN Lifting load:330KG Unlocking :unkock pressure 0.5-0.8Mpa Material: steel Weight/Kg: 9KG Mouting:175×175mm	
	SP52-C250A Dimension: φ250*35 Repeatability: 0.005mm Clamping force: 20KN Lifting load:330KG Unlocking :unkock pressure 0.5-0.8Mpa Material: steel Weight/Kg: 12KG Mouting:160×160mm	
	SP52-S392AQ Dimension: 392*200*35 Repeatability: 0.005mm Clamping force: 40KN Lifting load:660KG Unlocking :unkock pressure 0.5-0.8Mpa Material: steel Weight/Kg: 18KG Mouting:170×365mm	

Self centering vise



1. Mesh teeth, the left and right jaws are equipped with meshing teeth, improve the stability of the blank for parts clamping processing.

2. Frontal smooth clamping is used to clamp products with required workpiece surfaces to avoid pinching marks or scratches.

3. The threaded hole used for fixing workpiece locating blocks

4. Precise T-rail design to ensure clamping accuracy rigidity effectively.

5. Screw centering device with sealing design, repeatable clamping accuracy $\pm 0.02\text{mm}$.

6. The positioning port of the sub-clamp position is used for the use of the sub-clamping position.

7-1. The hardness of the screw alloy stainless steel real air conditioner improves the rigidity of the transmission, and surface is treated with DLC to improve the wear resistance and corrosion resistance of the product and ensure the service life of the product.

7-2. The hexagon wrench positions at both ends can be used with hexagon socket wrenches and hexagon wrenches to twist a lock.

8. There are clamping slots on the side of the base for automation

9. Equipped with locating drawbars for positioning clamping in quick-change reference plate systems.

10-1. The main body of the vise is made of stainless steel martensitic vacuum heat treatment to improve the hardness, wear resistance and rigidity of the product, and QPQ treatment is done to improve the corrosion resistance and wear resistance to ensure the service life of the product.

10-2. The design of the inclined surface drainage and chip removal structure on both sides of the main body can ensure the stability of the accuracy of the product

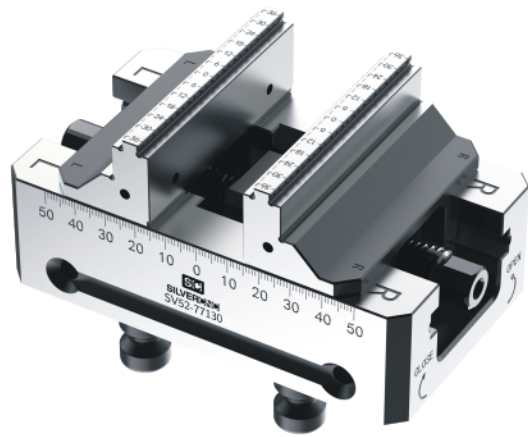
11. M5 threaded hole for mounting RFID chips

12. Reverse use smooth clamping, to clamp the machined workpiece face/non-embossable workpiece face

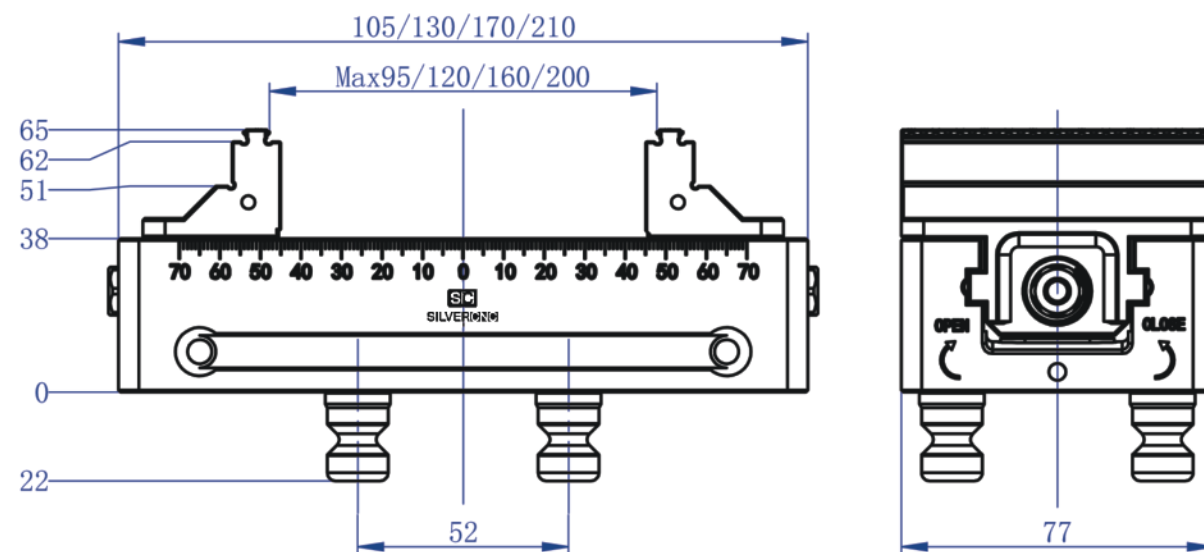
13-1. The one-piece clamp is made of alloy stainless steel to improve the rigidity of the transmission, and the surface is treated with DLC improve the wear resistance and corrosion resistance of the product and ensure the service life of the product. 13-2. The jaw design can be used for reversible clamping to extend the clamping stroke.

14. The preload device can eliminate the mating gap and effectively improve the stability of the vise's clamping accuracy."

52mm distance self centering vise

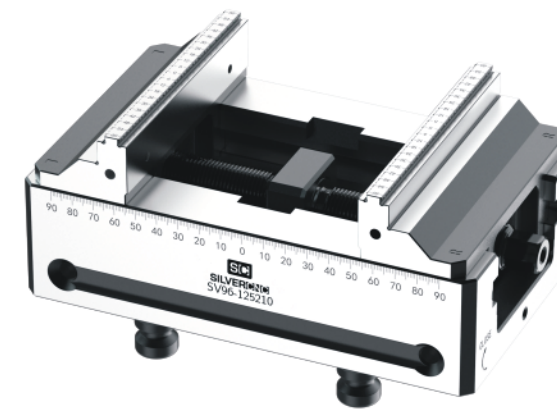


Standard 52mm distance fit the base plate
Vise repeatability <0.02mm
Clamping force: 14KN
Max. torque: 70N.m
Material: hardened stainless steel

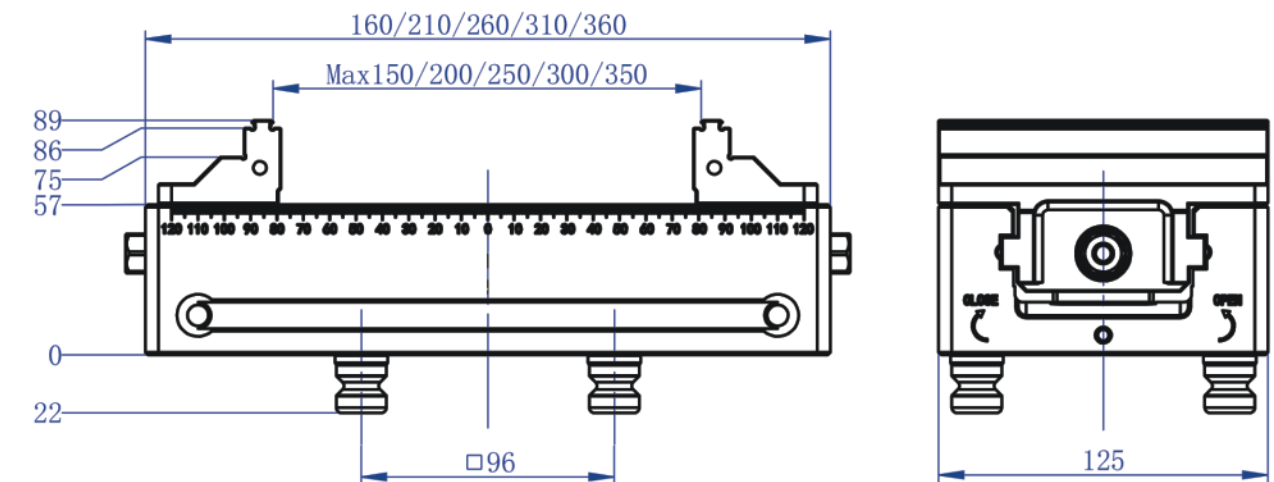


Selection Guide	Model	Size/mm			Clamping Range/mm	Weight/KG
		Jaw width	Length	Height		
	SV52-77105	77	105	87	0-95	2.8
	SV52-77130	77	130	87	0-120	3.2
	SV52-77170	77	170	87	0-160	3.8
	SV52-77210	77	210	87	0-200	4.4

96mm distance self centering vise

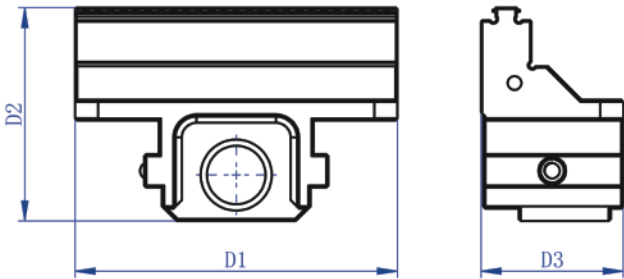
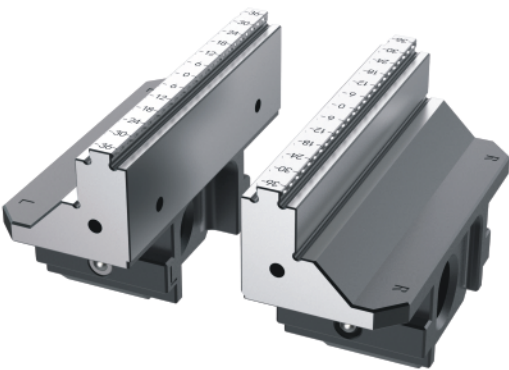


Standard 96mm distance fit the base plate
Vise repeatability <0.02mm
Clamping force: 20KN
Max. torque: 100N.m
Material: hardened stainless steel



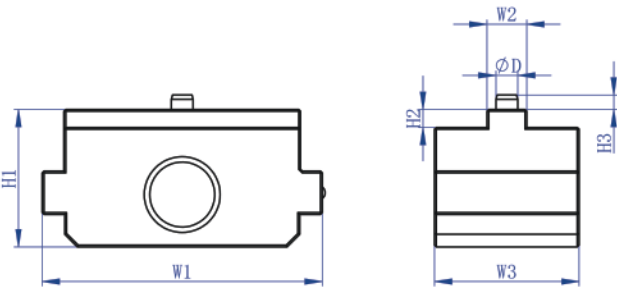
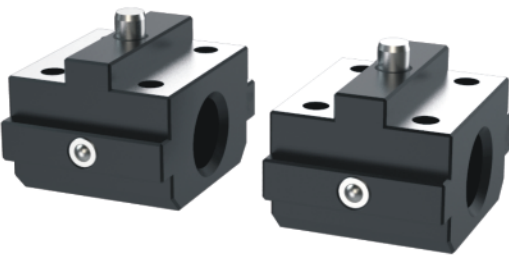
Selection Guide	Model	Size/mm			Clamping Range/mm	Weight/KG
		Jaw width	Length	Height		
	SV96-125160	125	160	111	0-150	80
	SV96-125210	125	210	111	0-200	11
	SV96-125260	125	260	111	0-260	13
	SV96-125310	125	310	111	0-300	15
	SV96-125360	125	360	111	0-350	17

Vise hard jaw



Products series	Models	Size			Repeatability	Clamping	Material	Weight
		D1	D2	D3				
77 vise	SVJ-H77	77	51	34	<0.02	14000	Stainless steel	0.5
125 vise	SVJ-H125	125	65	47	<0.02	20000	Stainless steel	1.5

Vise Soft jaw



Products series	Models	Size/mm							Repeatability	Clamping/N	Material	Weight/Kg
		H1	H2	H3	W1	W2	W3	φD				
77 vise	SVJ-H77	29.1	5	4.5	44	10	34.5	6	<0.02mm	14000	Stainless steel	0.5
125 vise	SVJ-H125	38.1	5	6	77.5	11	40	6	<0.02mm	20000	Stainless steel	1.5

Pneumatic self centering vise



Product Features

Pneumatic mechanical self-locking design “air unlocking, air locking” to ensure the stability of the clamping force in production.

Large-capacity power piston chamber structure design provides multiplier clamping force.

Structural S-shaped oil lubrication system design, to enhance the use of product precision and life

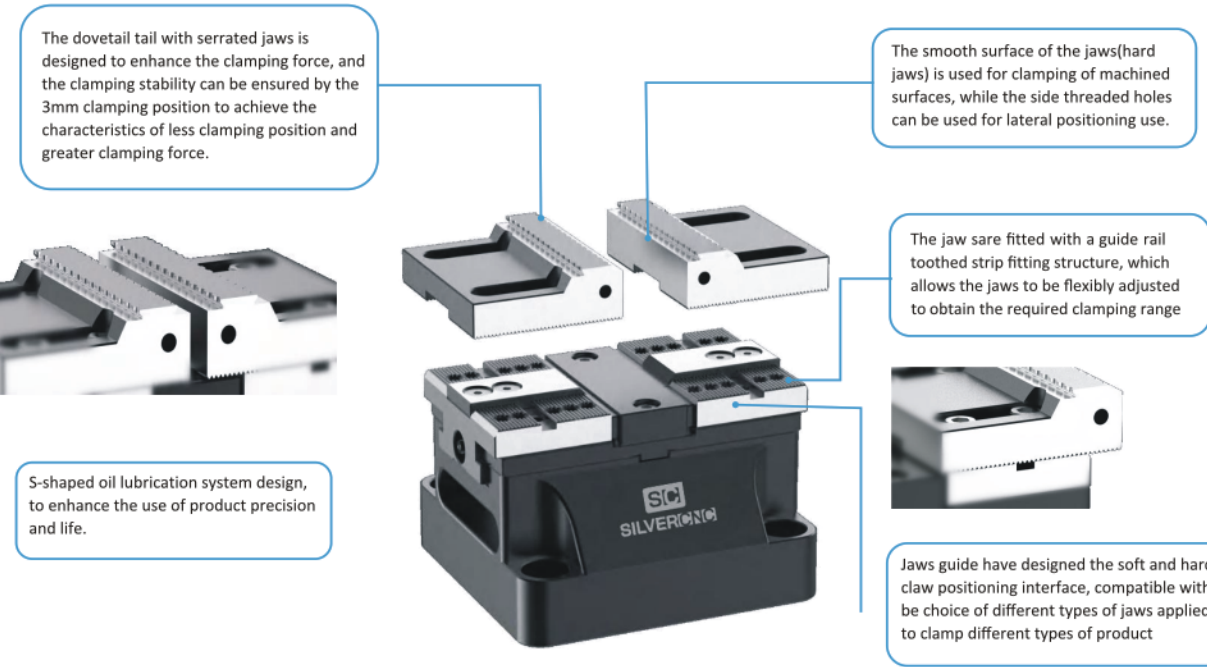
The jaws are fitted with a guide rail toothed strip fitting structure, which allows the jaws to be flexibly adjusted to obtain the required clamping range.

Jaw guide design of soft and hard claw positioning interface, compatible with the choice of different types of jaws applied to clamp different types of product applications.

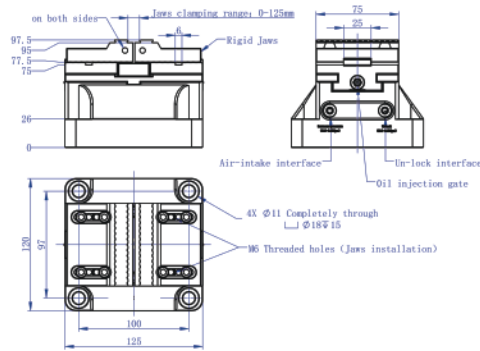
The smooth surface of the jaws (hard jaws) is used for clamping of machined surface, while the side threaded holes can be used for lateral positioning.

Dovetail with serrated jaws designed to enhance the clamping to be reasonable, 3mm clamping position to ensure the stability of the clamping to achieve less clamping ,larger clamping force.

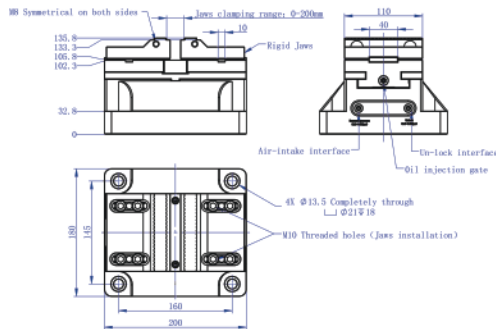
Product Features



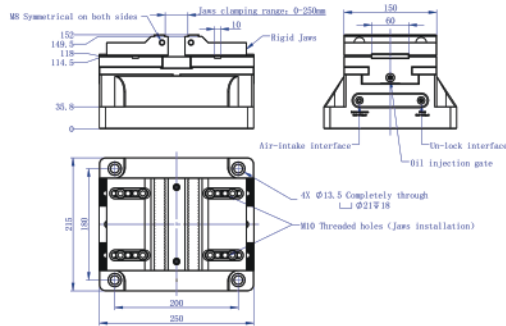
Pneumatic self centering specification



Vise models	Unlock way	Work pressure	Repeatability	Clamping force	Single jaw stroke	Clamping range	Weight	Remark
SPV-P75	Pneumatic	0.5-0.8Mpa	<0.01mm	4200(N)	2.5mm	0-125mm	7KG	Customizable soft
SPV-H75	Hydraulic	6Mpa	<0.01mm	9000(N)	2.5mm	0-125mm	7KG	Customizable soft



Vise models	Unlock way	Work pressure	Repeatability	Clamping force	Single jaw stroke	Clamping range	Weight	Remark
SPV-P110	Pneumatic	0.5-0.8Mpa	<0.01mm	12000(N)	2.5mm	0-210mm	25KG	Customizable soft
SPV-H110	Hydraulic	6Mpa	<0.01mm	30000(N)	2.5mm	0-210mm	25KG	Customizable soft



Vise models	Unlock way	Work pressure	Repeatability	Clamping force	Single jaw stroke	Clamping range	Weight	Remark
SPV-P150	Pneumatic	0.5-0.8Mpa	<0.01mm	20000(N)	2.5mm	0-250mm	42KG	Customizable soft
SPV-H150	Hydraulic	6Mpa	<0.01mm	45000(N)	2.5mm	0-250mm	42KG	Customizable soft

Pneumatic self centering -Positive and negative use the hard jaws



Vise hard jaw front and reverse side use



Front clamping schematic of hard jaws



Hard jaw reverse clamping schematic

How to installation



Allen wrench to disassemble the left and right jaws from the jaw holder



Reverse the direction of the disassembled left and right jaws to install or adjust the jaw clamping range.



Installation completed



Pneumatic self centering -How to use soft jaws



Pneumatic vise house



Soft jaw clamping schematic



Modeling positioning clamping schematic

How to installation



Prepare the required soft jaws and corresponding pneumatic vise



Installation of soft jaws or adjustment
of the clamping range of the jaws
by means of the screw locking



Installation completed



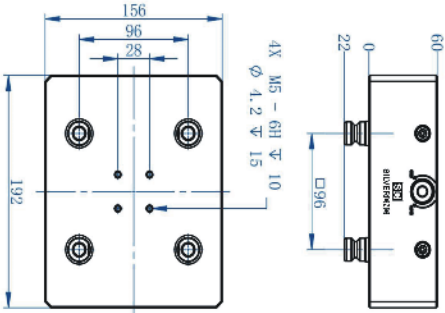
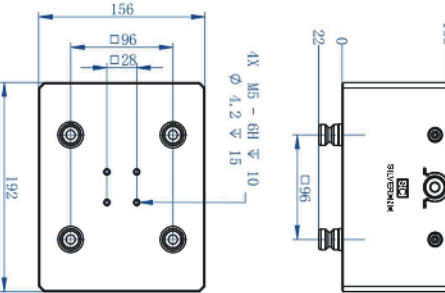
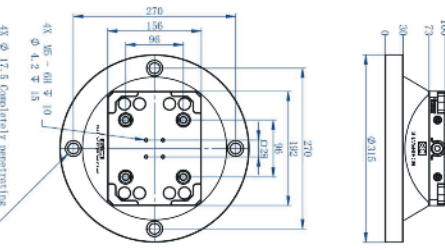
Risers

This riser a very flexible design, with 4 studs at the bottom that can be installed on various forms of 52mm base plates, and multiple risers can be used simultaneously to solve travel troubles.
Repeatability in 0.005mm, 4pcs studs for free.

	SPR52-H60S Dimension: 150*116*60 Repeatability: 0.005mm Clamping force: 20KN Material: steel Weight/Kg: 7KG	
	SPR52-H100S Dimension: 150*116*100 Repeatability: 0.005mm Clamping force: 20KN Material: steel Weight/Kg: 12KG	
	SPR52-H150C Dimension: $\phi 250$*150 Repeatability: 0.005 Clamping force: 20KN Material: AL+steel Weight/Kg: 15KG The fixing hole can be customized according to the T-slot of the machine tool.	

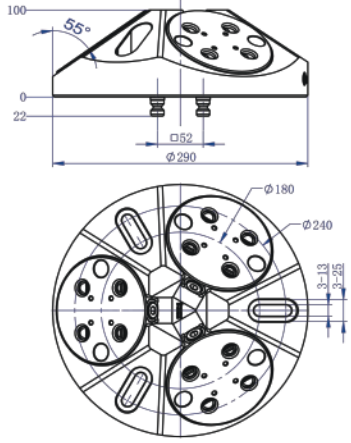
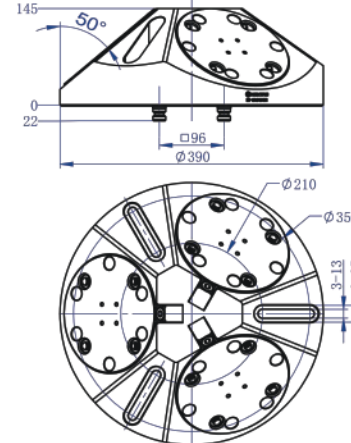
Risers

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."

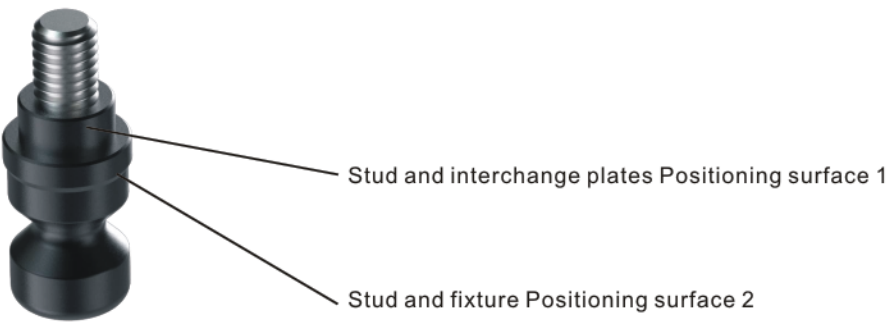
	SPR96-H60S Dimension: 192*156*60 Repeatability: 0.005mm Clamping force: 30KN Material: steel Weight/Kg: 12KG	
	SPR96-H100S Dimension: 192*156*100 Repeatability: 0.005mm Clamping force: 30KN Material: steel Weight/Kg: 20KG	
	SPR96-H150C Dimension: φ315*150 Repeatability: 0.005 Clamping force: 30KN Material: AL+steel Weight/Kg: 22KG The fixing hole can be customized according to the T-slot of the machine tool.	

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.

	SPY52-P290 Dimension: φ390*100 Repeatability: 0.005mm Clamping force: 20KN Material: steel Weight/Kg: 15KG Pyramid compatible with 52mm zero point plate, all kinks of top tooling can be mounted on plate. such as self centering vise, dovetail fixtures The fixing hole can be customized according to the T-slot of the machine tool.	
	SPY96-P390 Dimension: φ390*145 Repeatability: 0.005mm Clamping force: 30KN Material: steel Weight/Kg: 37KG Pyramid compatible with 96mm zero point plate, all kinks of top tooling can be mounted on plate. such as self centering vise, dovetail fixtures The fixing hole can be customized according to the T-slot of the machine tool.	

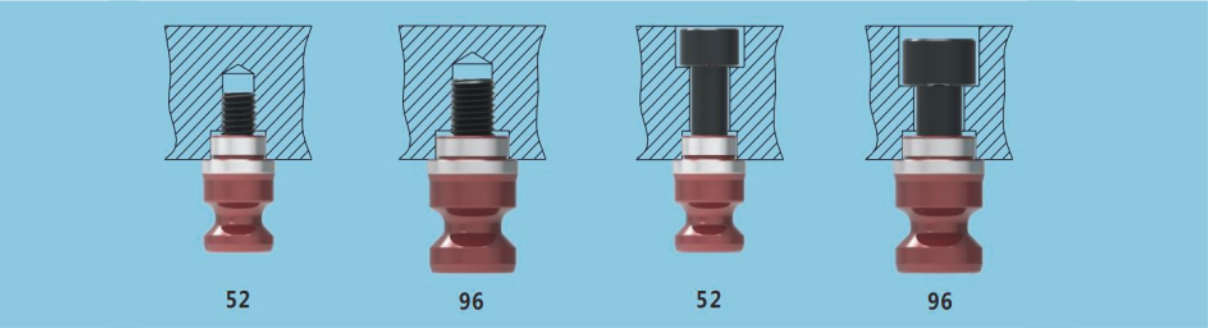
Studs



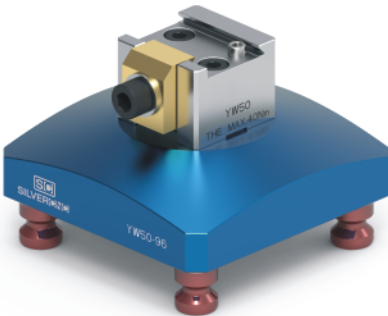
☆ Note: the stud and the exchange plate should be interstitial. When installing stud, lubricate the cylinder surface to prevent straining the surface

	PS16 Dimension: $\phi 16 \times 37$ Material: steel Weight/Kg: 0.15KG	
	PS20 Dimension: $\phi 20 \times 37$ Material: steel Weight/Kg: 0.2KG	

Studs locking



Dovetail Fixtures



Locating pins for precise repeatability

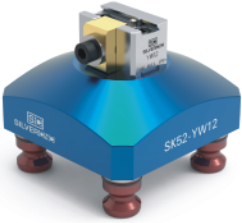
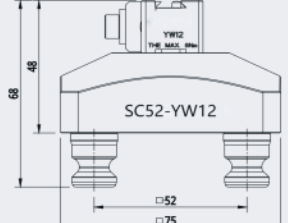
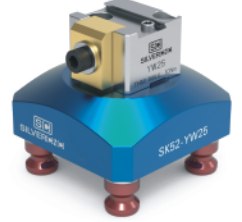
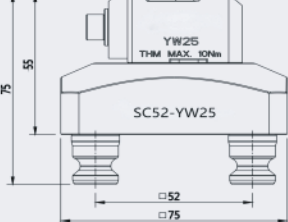
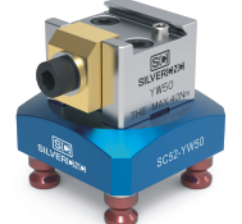
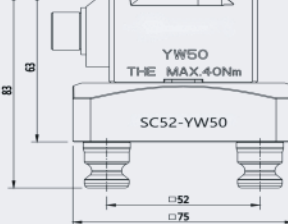
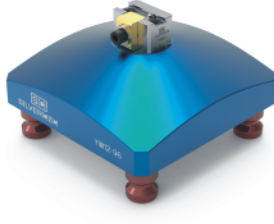
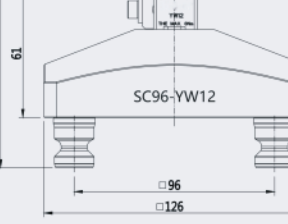
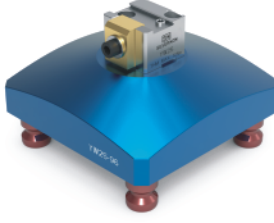
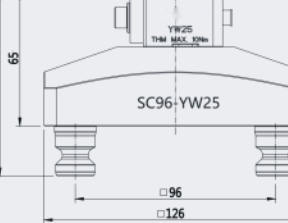
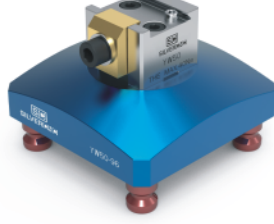
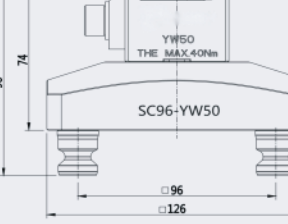
"45° dovetail for increased clamping force" dovetail design for superior clamping strength, stability, and rigidity.

Compatible with 52 and 96 zero point system

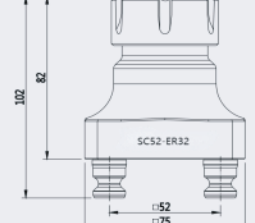
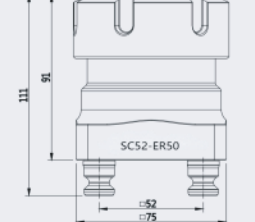
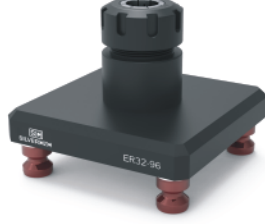
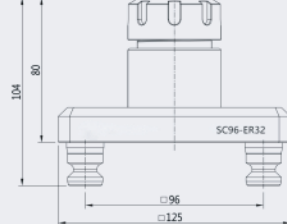
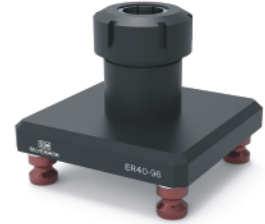
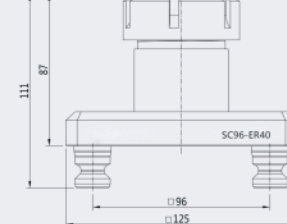
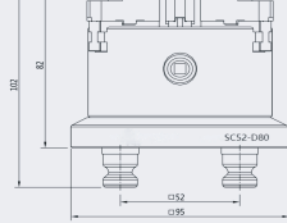
The dovetail is made of integral stainless steel grind to ensure accuracy and stability

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

Modular Dovetail Fixtures

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

Chuck and collet

	SC52-ER32 Dimension: 75*75*83mm Clamping range: 3-25mm Material: stainless steel Weight/Kg: 1.4KG	
	SC52-ER50 Dimension: 75*75*92mm Clamping range: 6-40mm Material: stainless steel Weight/Kg: 3KG	
	SC96-ER32 Dimension: 125*125*104mm Clamping range: 3-25mm Material: stainless steel Weight/Kg: 2.6KG	
	SC96-ER40 Dimension: 125*125*111mm Clamping range: 3-32mm Material: stainless steel Weight/Kg: 3KG	
	SC52-D80 Dimensions: $\varnothing 95 \times 100$ mm Material: Hardened steel+ surface anti rust Weight: 2.5KG	
	SC96-D125 Dimensions: 125*125*130mm Material: Hardened steel+ surface anti rust Weight: 8KG	