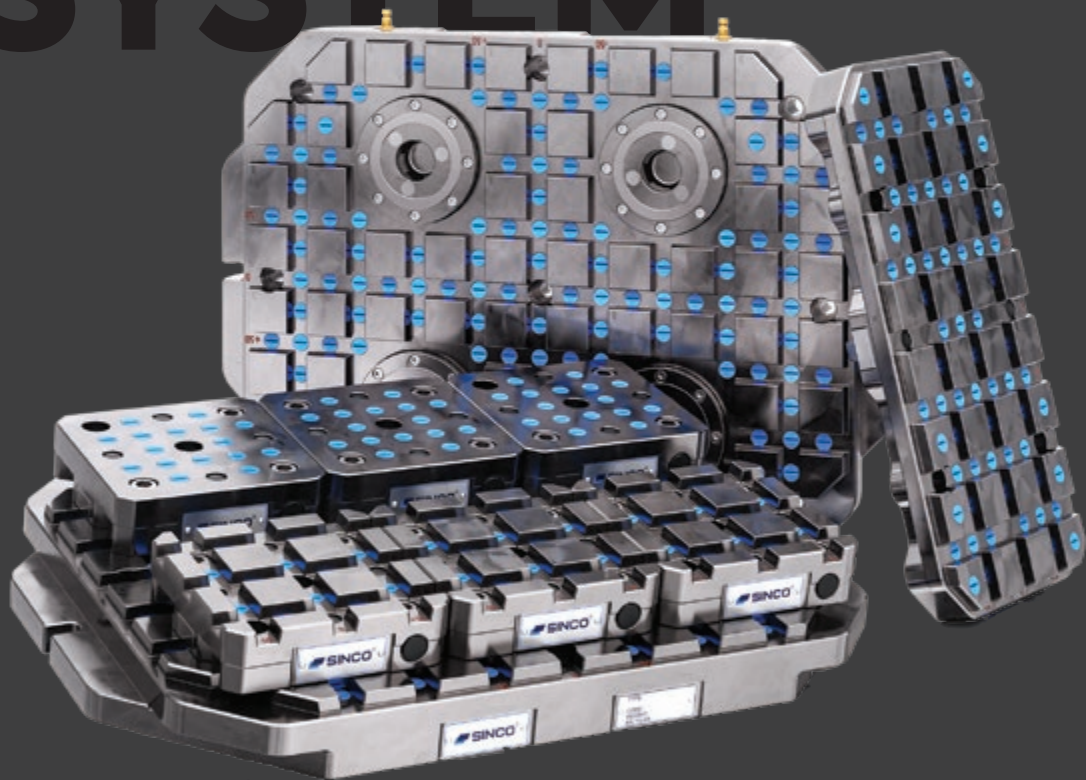


# MULTIZERO® CLAMPING SYSTEM



System catalogue



“ More **flexible,**  
**efficient,**  
and **simple**  
production lines.”

As the world seems to be turning faster every year and as we face countless improvements and fascinating innovations in technology at the speed of light, efficiency and speed have become more important than ever. We believe that time is money, so efficiency, flexibility and speed have become the core of the SINCO® brand.

The introduction of our unique and patented MultiZero® Clamping System is changing the perception of zero-point clamping systems on the market and make the usage incomparably simpler, faster and more flexible. We're constantly focused on creating simple and innovative clamping solutions in the field of metal processing. Powered by 40 years of industry experience, we believe that we have the perfect know-how to cater to your company's needs. With every user and market in mind, we can treat each company individually at the highest possible level.

SINCO® provides solutions based on real-time industry problems in the field of highly productive clamping, whether it is a high-series production facility or small production lines, in a period when saying “time is money” is more important than ever.

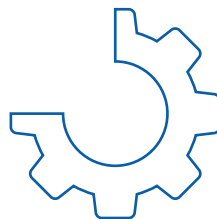


**“Focus on  
the user and  
the market  
– everything  
else will follow.”**

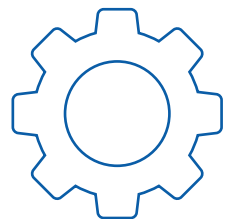
At SINCO®, we are aware that every customer is unique, which is why the MultiZero® program is designed to satisfy a range of specific customer needs. The system expresses its added value in a wide variety of industries in both serial and low serial production, as well as single part production.



**THE PRODUCTION OF  
INDIVIDUAL PIECES**



**LOW-SERIES  
PRODUCTION**



**SERIAL  
PRODUCTION**



# MultiZero® Clamping System

**POWERED by**  **SINCO®**

The MultiZero® Clamping System offers users the highest level of flexibility, speed, accuracy, repeatability and simplicity in zero point clamping in their everyday processing production and reduces the overall set up times by 90%. The system forms a connection between the machine table and the pallet, fixture, vise or the workpiece itself and is compatible with most 3-axis and 5-axis machine tables. The unique array of conical slots offers one-step positioning with an accuracy of 5µm and up to 273 zero points in one solution, making it the leading one on the market. The system product family is represented by six types of

MultiZero® Plates and five types of MultiZero® Pallets of various dimensions and function types, which are mutually interchangeable into endless combinations. These flexible arrangements of pallets, workpieces, vises or fixtures allow the coverage of most of the available working surface, which maxes out the production capacity and increases the machine running time by up to 90%. With a unique surface layout that enables countless zero point clamping possibilities, combined with a large number of zero points that offer pure freedom to the user's needs, the system stands out as the most flexible zero point clamping system on the market.

“ The MultiZero® System offers up to **273 zero points in one solution** – the most on the market. ”



# “Implementing the maximum productivity that pays off quickly”

- ✓ **Productivity**  
**Increase of machine running time**
- ✓ **Speed**  
**90% less set-up time**
- ✓ **Flexibility**  
**Up to 273 zero points**
- ✓ **Accuracy**  
**High repetition accuracy <5µm**
- ✓ **Simplicity**  
**One-step positioning and clamping**
- ✓ **Safety**  
**High clamping forces up to 65kN per zero point**
- ✓ **Quality**  
**Premium stainless steel, production and quality control**

Save time

**-90%**

Reduced set up times

Save money

**€93,000**

Per year savings

Save effort

**1,163%**

ROI on an annual basis

## Increased machine running time with the MultiZero® Clamping System

**Standard clamping procedure**

**0%**

Longer machine running time

**MultiZero® clamping system**

**90%**

Longer machine running time

## Set-up processes in comparison

**Standard clamping procedure**

**100%**

Set-up time required

1. Plan the clamping technique.
2. Clean the machine table.
3. Clean the clamping device contact surfaces.
4. Position using the slot nuts.
5. Align.
6. Fasten with the clamping screws.
7. Determine the zero points.
8. Start the program.
9. End the program.

**MultiZero® clamping system**

**10%**

Set-up time required

1. Clean the machine table.
2. Clean the clamping device contact surfaces.
3. Start the program.
4. End the program.



# Why the MultiZero® Clamping System?

1

## One-step positioning

One-step positioning and clamping at every zero point.

2

## The most zero points on the market

Up to 273 zero points in one.

3

## The best flexibility on the market

A flexible holding system with limitless clamping options and usages.

4

## 90% shorter setting-up

Short set-up time and fast pallet changeover.

5

## 5µm Repeatability and Accuracy

Precise repeatability and accuracy with every clamping.

6

## Up to 65kN clamping force

Up to 65kN clamping force per zero point. Average pallet clamped with 260kN.



7

**Premium Quality and Consistency**

System quality and consistency guaranteed through the entire system family.

8

**Profitability**

Economic production and great profitability through substantial time savings. Less clamping, more processing.

9

**Pays off quickly**

The system fully pays off after between 6 and 12 months.

10

**Simple to use**

The system ensures simplicity in clamping and processing.

11

**Compatibility**

Designed for most machine tables.

“

The MultiZero® system represents a **new generation of machine tables that offer an all-in-one clamping experience.**

”



“

Constant repeatable  
manual or automatic  
clamping with an  
**accuracy of 5 $\mu$ m.**

”

A blurred background image of a construction site. In the foreground, a thick, dark, coiled cable or hose curves across the bottom. In the background, a construction worker wearing a hard hat and safety gear is visible, standing near a structure. A crane or similar heavy machinery is also partially visible in the distance. The overall scene is out of focus, emphasizing the text overlay.

“

High retention forces enable  
the **clamping of the pallet**  
with **260kN of force or more.**

”

# MultiZero® Technology

The system comprises a MultiZero® Plate mounted and positioned directly on the machine table and centering elements attached to MultiZero® Pallets, fixtures or vises. The system comprises a unique array of conical slots that are used for centering and clamping, with a zero point at every crossing point of the conical slots. Every pallet or fixture with conical centering elements is automatically positioned and oriented as they are put onto the MultiZero® system. The pallet is clamped mechanically onto the MultiZero® Pallet with screws or automatically with pneumatic modules onto the MultiZero® Pneumatic Plate or Pallet. Conical slots on the base plate ensure the centering of this element in two axes. The system can be used on 3-axis, 5-axis and horizontal machining centers, as well

as on sink erosion machines and measuring machines. The MultiZero® System is designed according to DIN 55201 and fits most of the machine tables. Depending on the size, each MultiZero® Plate has from 31 to 273 zero clamping points for 3-axis and 21 to 212 zero clamping points for 5-axis machining. The zero points are in an array of 50×50 or 100×100mm. Special sizes and usage of plates or pallets can be designed, adapted and produced by the SINCO® personalization program. The MultiZero® Clamping System has a unique system layout that compensates for thermal expansion. Centering elements slide through the conical slots, which allows thermal expansions in both directions. It also provides dimensional stability and system rigidity.

“Experience the  
maximum performance.”



# Transform your machine table into zero-point one

## WHY MULTIZERO®?

Having a large number of zero points and thus high flexibility, the self centering of pallets or fixtures and high accuracy and repeatability in clamping, the MultiZero® clamping system is very suitable for low-series, single-part production and serial production where multiple pallets, fixtures and workpieces can be clamped with high repeatability in positioning.

The system maintains high positioning accuracy during serial and low-volume production and provides numerous possibilities in single part production and the clamping of more complex workpieces.



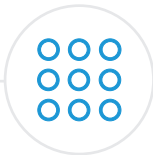
### High flexibility

With a unique array of conical slots that enable countless zero point clamping possibilities combined with a large number of zero points that offer pure freedom to meet user needs, the system stands out as the most flexible zero point clamping system on the market.



### Repeatability and accuracy

The MultiZero® Clamping System will always achieve precision and repeatability with a clamping accuracy of 5µm.



### Many zero points

The system provides up to 273 zero points in one solution, making it the leading one on the market. With such a high volume of zero points, the system enables great flexibility, simple set-up and freedom of clamping.



### One-step positioning and clamping at every zero point

MultiZero® Pallets and Fixtures are automatically centered and oriented as they are put onto the base plate; no additional centering is needed.



### High vertical and lateral clamping forces

MultiZero® Clamping System offers high levels of rigidity and clamping forces, making the system reliable enough to withstand the highest lateral and vertical machining forces.

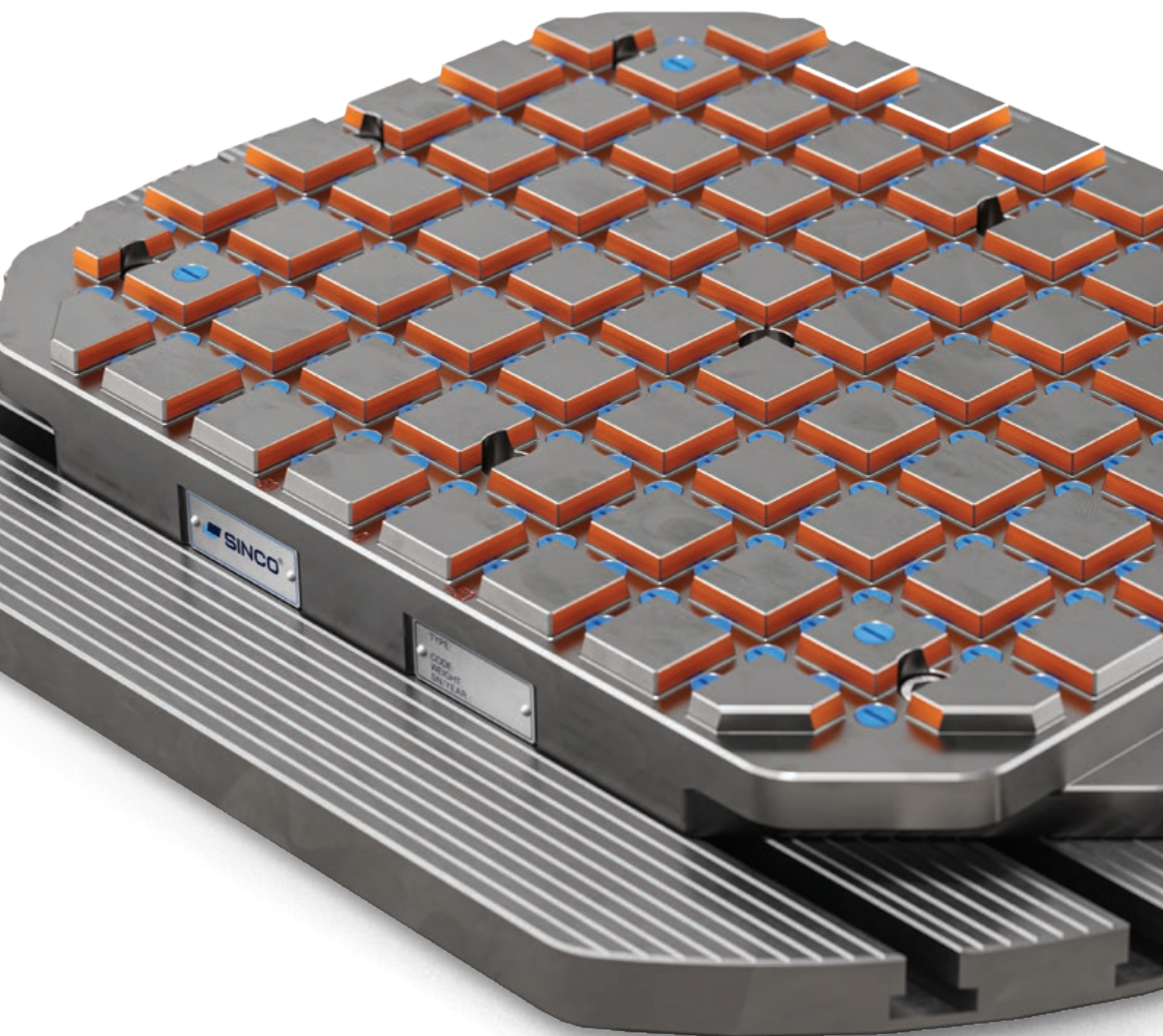
With the MultiZero® system, companies can improve their overall productivity and the profitability of processing.

# Flexibility

With a unique array of conical slots that enable countless zero point clamping possibilities, combined with a large number of zero points that offer pure freedom to meet user needs, the system stands out as the most flexible zero point clamping system on the market. The workpieces, vises, fixtures and pallets of various dimensions and types are mutually interchangeable in endless combinations. These flexible arrangements of clamping elements and workpieces allow the coverage of most of the available machine working surface, which maxes out the production capacity.

- The flexible arrangements of pallets, workpieces, vises or fixtures allow the coverage of most of the available working surface, which maxes out the production capacity.
- The system is simple to use due to its unique design.
- The wide selection of pallet types and sizes enable the clamping of geometrically demanding workpieces.
- The MultiZero® Clamping System can utilize commonly available standard clamps, vises and fixtures and is compatible with most classic clamping methods and machines.

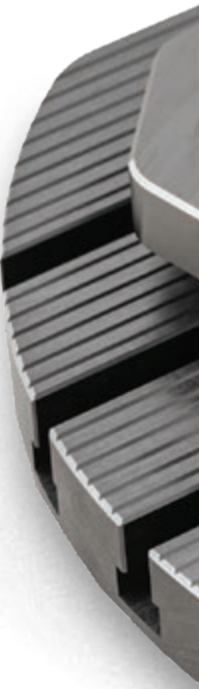




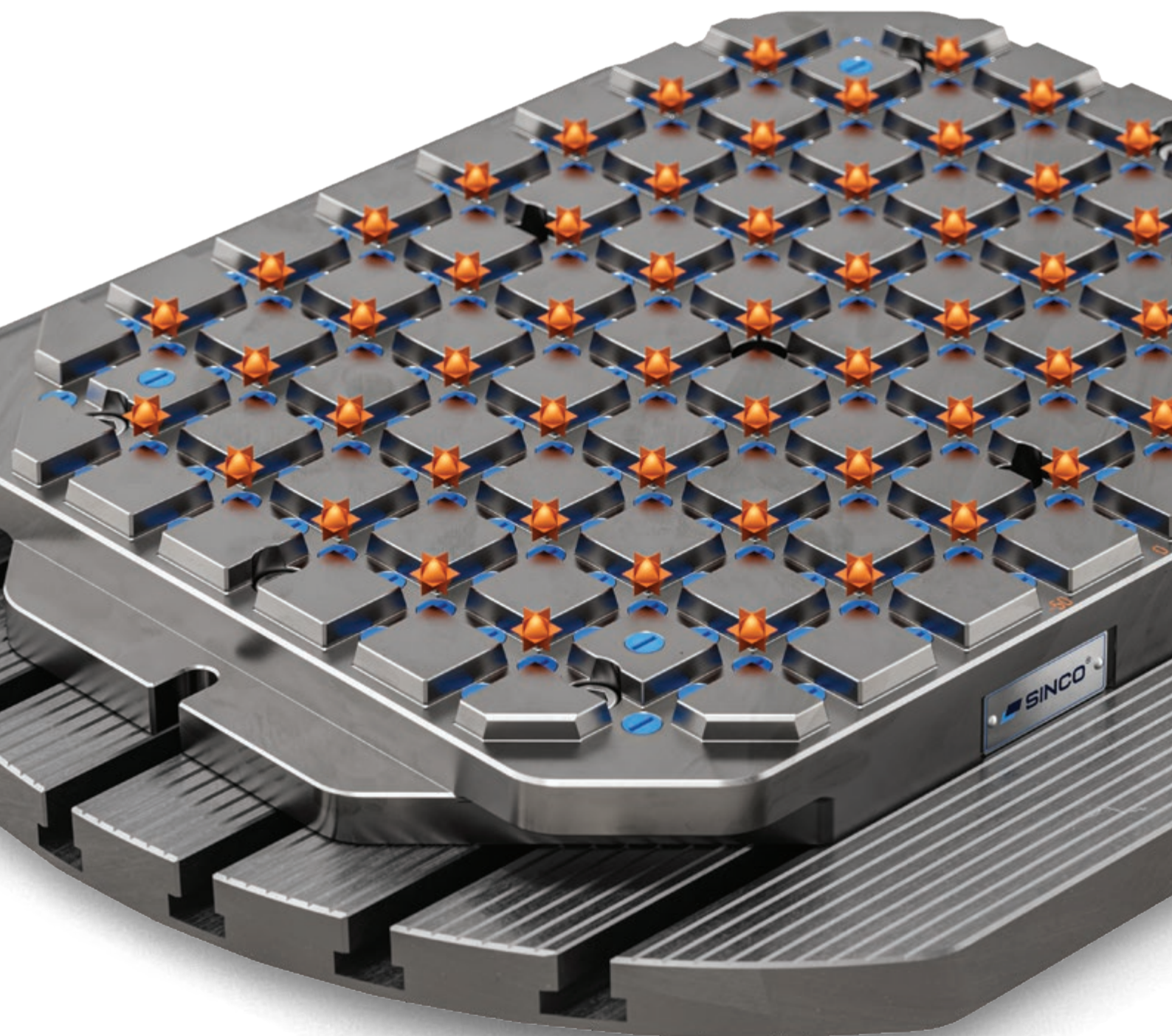
# Large number of zero points

The MultiZero® Clamping System offers up to 273 zero points in one solution, making it the market leader. The many zero points are one of the main benefits of the system and allow the use of endless combinations of clamping layouts. This also allows the maximum utilization of the machine working area. MultiZero® zero points allow complete freedom of clamping, as zero point positioning and centering is available over the entire system array, with system layout of 50×50 and 100×100mm.

- The many precisely defined clamping points allow endless combinations of clamping layouts, which makes the system the most modular on the market.







# Precise zero point positioning

The zero point positioning of the MultiZero® Clamping System makes the whole clamping experience easier, faster and more precise, allowing the user to repeatedly clamp with an accuracy of 5µm. Positioning is ensured by a unique array of conical slots that correspond to the conical surfaces of the centering elements embedded in every MultiZero® Pallet, vise or fixture. This means that every MultiZero® product is automatically centered as it is put on the MultiZero® system, which allows the stacking of pallets, workpieces, vices and fixtures under the principle of unlimited clamping variants and options.

- The influence of thermal expansion, which is a common phenomenon, does not affect the accuracy of the mutual positioning of the MultiZero® Plate or Pallet due to the unique positioning system.
- The fast and accurate clamping of the workpiece, pallet, vise or fixture on the MultiZero® Plate significantly increases the operating time of the machine, as well as its efficiency.

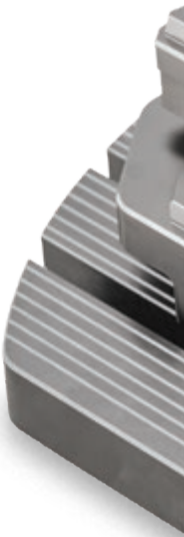




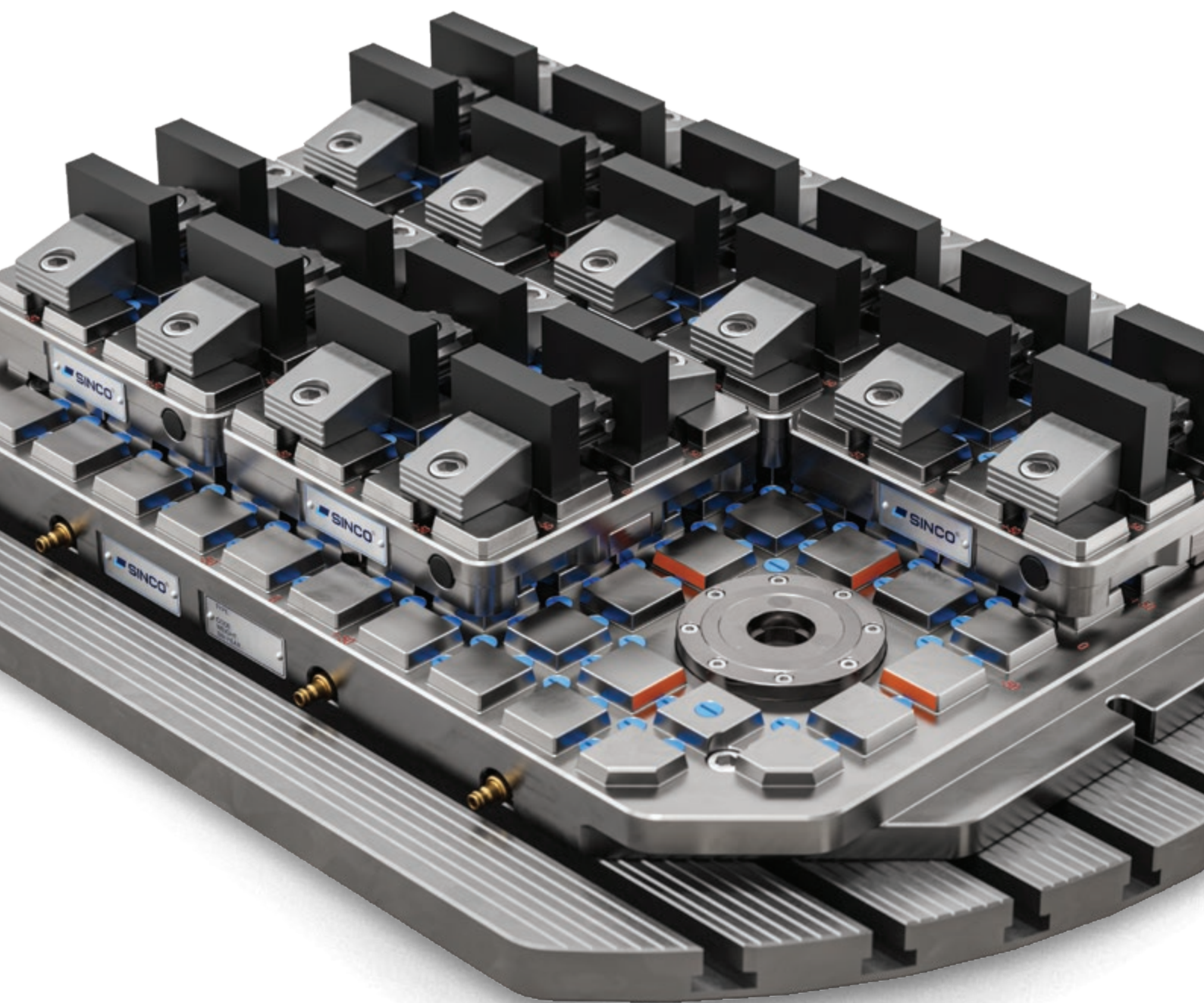
# Repeatability and accuracy

As repeatability is one of the most important things for achieving top quality results and cost-effective production in clamping and machining, the MultiZero® Clamping System boasts of a high degree of repeatability and precision. The MultiZero® Clamping System will, despite the constant exchange of pallets, workpieces, vises or fixtures, always achieve a clamping position with an accuracy of 5µm. This way, users can achieve an unmatched consistency of quality while processing with the MultiZero® Clamping System.

- The pallet can be moved, together with the workpiece, from one machine to another without losing the zero point
- With the positioning and clamping of the workpieces onto the pallet being done off the machine, and with simultaneous operation on the machine, the processing productivity of the machine rises to 90%.







# High clamping forces and rigidity

The MultiZero® Clamping System offers extremely high rigidity and clamping strength allowing the complete withstanding of high machining forces. Due to the importance of withstanding the high lateral and vertical forces when processing with high machining forces, the MultiZero® Clamping System is designed to accommodate the Z axis, while the other two axes are accommodated by aligning members, regardless of whether the clamping is being performed mechanically or automatically. This way, the system and the workpiece on the machine practically becomes one.

- High retention forces enable up to 65kN per zero point with mechanical clamping and 55kN per pneumatic module with automatic clamping. This way, a standard pallet can be clamped with at least 260kN.
- The system ensures a stable machining process, without vibrations regardless of the machining loads, and is capable of withstanding high machining forces and acceleration.
- Every product in the MultiZero® program is made using premium quality corrosion-resistant steel.





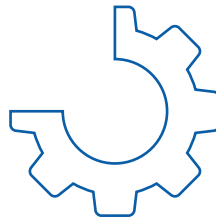
“**Focus on the user and the market,**  
everything else  
will follow.”

At SINCO®, we are aware that every customer is unique, which is why the MultiZero® program is designed to satisfy a range of specific customer needs. The system demonstrates its added value in a wide variety of industries in both serial and low serial production, as well as the production of individual pieces.

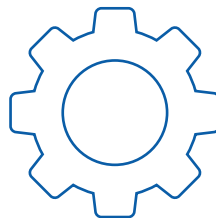




**PRODUCTION OF  
INDIVIDUAL PIECES**



**LOW-SERIES  
PRODUCTION**



**SERIAL  
PRODUCTION**

# Where to implement the MultiZero® Clamping System

## PRODUCTION OF INDIVIDUAL PIECES

### FLEXIBILITY WHERE YOU NEED IT THE MOST

- Enable the clamping of geometrically demanding workpieces.
- The large number of zero points offer complete flexibility and freedom in clamping.
- An infinity of options for clamping the workpieces.
- Compatible with commonly available and used clamps, vises and fixtures.
- Due to the unique design, the entire system area can be used for zero clamping.

### Example:

- CNC Machining industry
- Prototyping





## LOW-SERIES PRODUCTION

### THE HIGHEST DEGREE OF ACCURACY AND REPEATABILITY AT EVERY CLAMPING

- High clamping repeatability on each clamping with an accuracy of 5µm.
- The unique design facilitates the quick and simple change of pallets, workpieces, fixtures and vises.
- The optionally integrated RFID chip enables the rapid identification of workpieces on pallets and the complete traceability of the workpiece through the production process.
- Through the use of the MultiZero® Pneumatic plates and pallets, clamping can be operated fully automatically.

Example:

- Medical industry
- Industrial automation
- Processing industry
- Machine industry



## SERIAL PRODUCTION

### THE HIGHEST DEGREE OF ACCURACY AND REPEATABILITY AT EVERY CLAMPING

- The system offers a fully automated method of clamping, identifying and tracking the workpiece through pneumatic modules and RFID technology.
- High clamping repeatability on each clamping with an accuracy of 5µm.
- The unique design facilitates the quick change of pallets, workpieces, fixtures and vises.

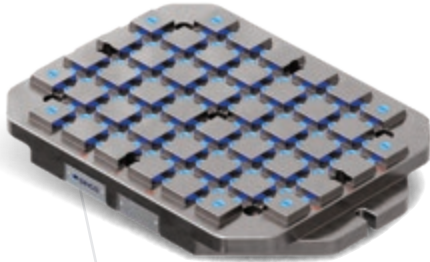
Example:

- Automotive industry.
- Electronics Industry.
- Aerospace industry.

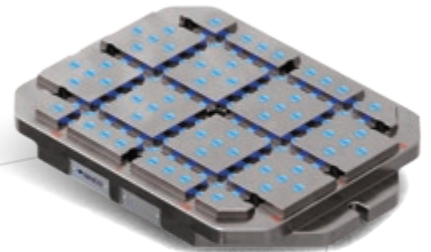




# MultiZero® Clamping System – product program



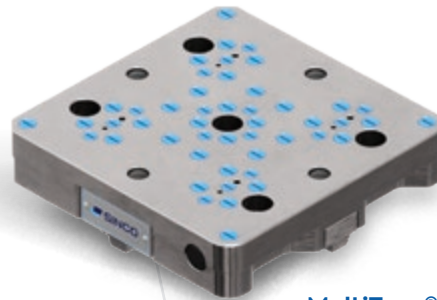
MultiZero® Plate P50



MultiZero® Plate P100



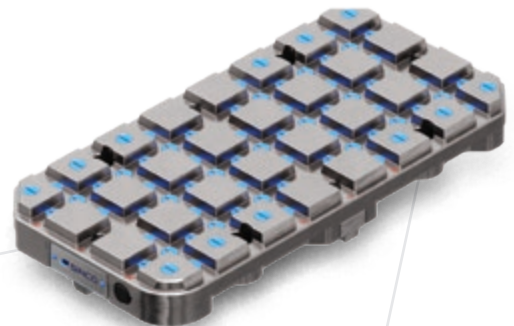
MultiZero® Pneumatic Plate



MultiZero® EDM Pallet



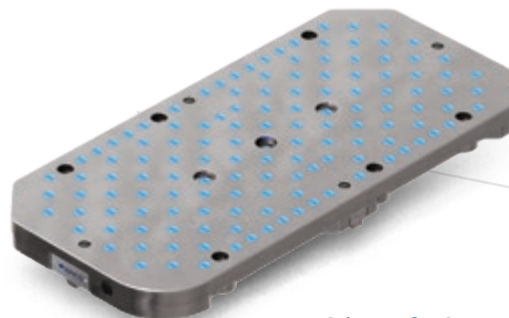
MultiZero® Pneumatic Pallet



MultiZero® Pallet



MultiZero® Blank Pallet



MultiZero® Clamp Pallet



# MultiZero® 4.0

The growing digital maturity of society and the market is also faster and rapidly being transferred to manufacturing companies. With digitalization, traditional manufacturing companies are being transformed into smart factories based on the connectivity of customers, partners, manufacturing jobs, support processes, management and smart machines. The digital transformation of the industry and manufacturing companies will develop much more organically and in line with business through a strategic approach of continuous small steps.

Automation and robotization are among the main advantages introduced by digital transformation in production and business processes.

With zero point pneumatic modules for automatic clamping and with RFID identification and data chips optionally installed on each pallet, the MultiZero® Clamping System is designed to fully fit automated machine environments, offer automatic clamping and the tracking of each pallet with a clamped workpiece, and thus to fully support Industry 4.0.





“ With zero-point pneumatic modules for automatic clamping and with RFID identification and data chips optionally installed on each pallet, the system is **designed to fully fit automated machine environments and support Industry 4.0.**

”

# Minimum set-up times, Maximum productivity





**1,163%**  
ROI per year

Companies can achieve large ROIs (Return on investment) per year by using the MultiZero® Clamping System. The system repays its value extremely quickly, with high levels of flexibility, simplicity and shorter set-up times. Save and progress in style!

**€93,000**  
Per year savings

With the MultiZero® Clamping System, companies can achieve huge annual savings thanks to reduced set-up times. This way, companies can focus on their everyday production, without constantly stressing about the extra time used setting-up and stopping the production workflow.

**-90%**  
Reduced set-up times

With the positioning and clamping of the workpiece onto the pallet being performed off the machine, and with the simultaneous operation of the machine, increased productivity of up to 90% is achieved.

Assumption: 3 shifts; 220 work days/year; a machine-hour rate of €84.00 / MultiZero® products included in the clamping:  
1x MultiZero® Plate 3500, 2x MultiZero® Clamp Pallet

# MULTIZERO® COMPARISON

Categories	Comparable zero point clamping systems	MultiZero® Clamping System
Number of zero points	Up to 20	Up to 273
Holding force	10 to 60kN	65kN at every zero point
Transversal force	Up to 60kN	Up to 100kN
Flexibility in clamping	Low	High
Product size selection	Low	High
Thermal compensation	Medium	High
Compatibility with classic clamping equipment	Poor	Good
Reliability	Medium	High
Machine table size compatibility	Poor	Good



