VERO-S NSE-HT mini

The proven Quick-change Pallet System I Heat-resistant up to + 200 °C

VERO-S NSE-HT mini

General information

- Suitable for high temperatures
- Excellent thermal conductivity
- No cooling necessary for unlocking
- Positioning via short taper
- Turbo integrated by default
- Low height
- Form-fit, self-retained locking
- The modules are stainless and completely sealed
- One consistent clamping pin size for all NSE-mini-modules
- All modules can be operated with a system pressure of 6 bar
- Suitable for actuation with inert gas

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Functional diagram

1. High-precision short taper centering
2. Wedge hook drive
3. Turbo function
4. Large surfaces
5. Completely sealed system
6. Large flat surface
7. Locking screw

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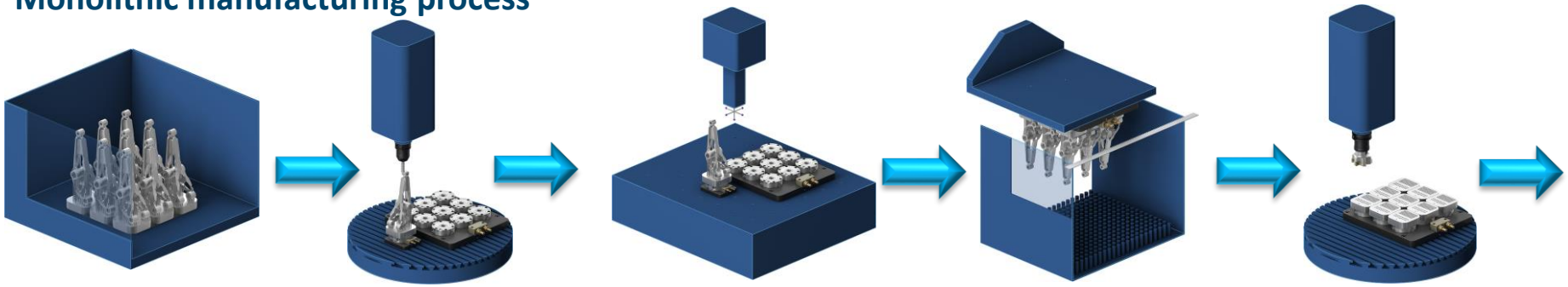
Monolithic manufacturing process



1. Manufacture additives

The workpieces are „printed“ directly on the substrate plate. Clamping modules with anti-twist protection enable the use of island substrate plates, which enable 5-sided post-processing.

2. Machining

Manufacture of functional surfaces and fits on a milling machine. The clamping station NSL mini 100-25-V1 can be used to clamping island substrates.

3. Measure up

Check the dimensional accuracy of the workpiece. The island substrate plates can be clamped on the clamping station NSL mini 100-25-V1.

4. Separate

Separating the workpieces from the substrate plates on a band saw. With a clamping station with 9 pieces NSE mini 90-25-V1, all workpieces can be separated from the substrate plates at once.

5. Machining

Joint milling of the island substrate plates on a 9-way clamping station for the next use. Joint milling over achieves optimal results with the same height, perfect preparation for the next construction process.

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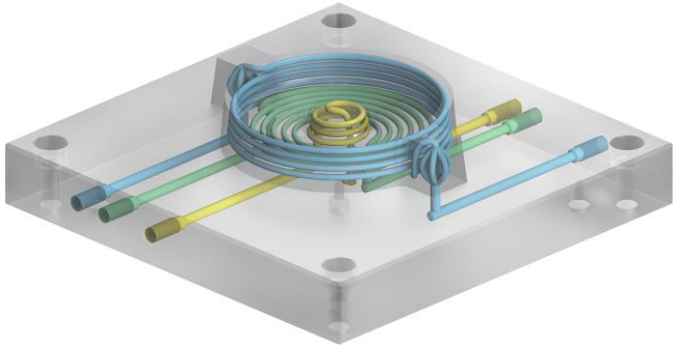
Hybrid workpieces – the best out of both worlds

+ Less costs

The advantages of both technologies are fully exploited through the conventional production of simple workpiece parts and the additive production of complex geometries.



+ Optimal cooling

In additive manufacturing, the cooling channels can be designed to be particularly close to the contour, which is ideal for injection molding.

+ More productivity

Cooling and processing times can be reduced considerably.

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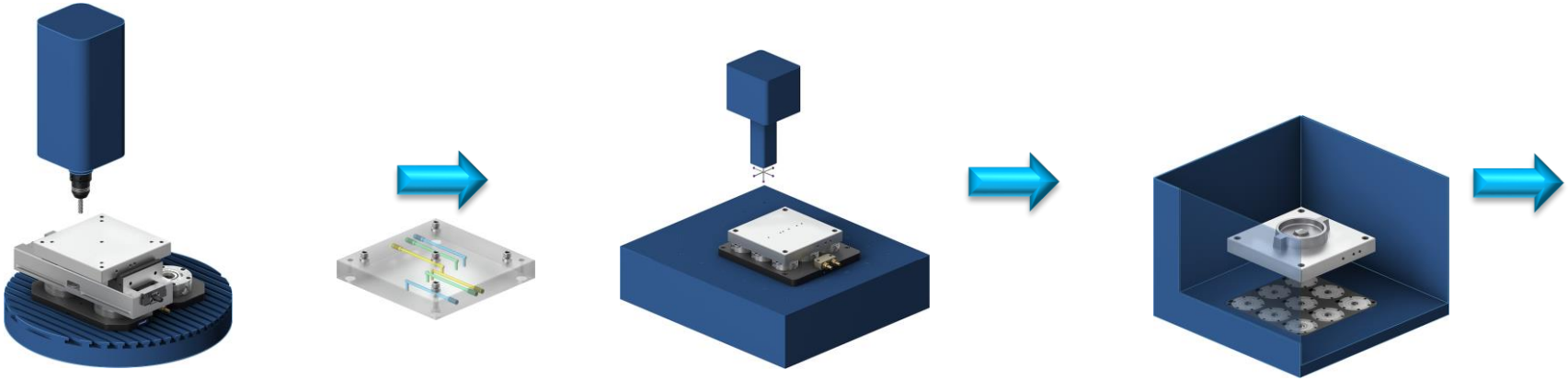
Hybrid manufacturing process



1. Machining & assembling

The hybrid blank is manufactured conventionally, then the clamping bolts are mounted directly on the hybrid blank. With an A-bolt in the center, the thermal zero point can be places in the center.

2. Measure

Offset measurement parallel to the main time can be reliably carried out with a measuring machine. The offset values can be adopted in the AM machine. Time-consuming measurement processes that are linked to the AM machine are no longer necessary.

3. Manufacturing additive

The complex part of the workpiece is additively „printed“ on the hybrid blank.

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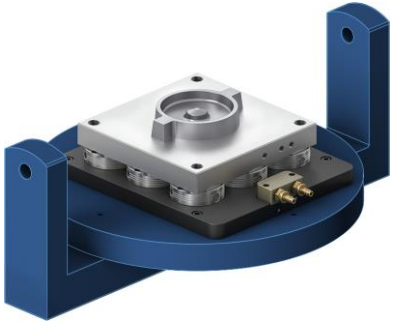
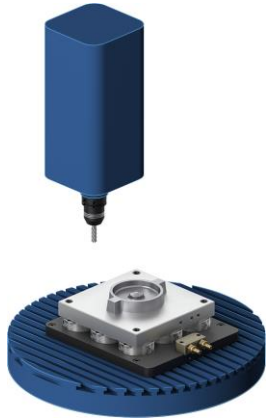
Hybrid manufacturing process



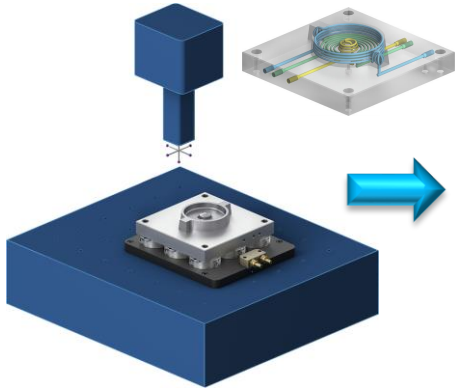
4. Depowder

Cooling channels and undercuts are de-powdered on a de-powdering machine.



5. Machining

Finishing the surface and manufacturing of functional surfaces.



6. Measure

Final measurement of the workpiece. The clamping bolts can then be removed. The workpiece is ready.

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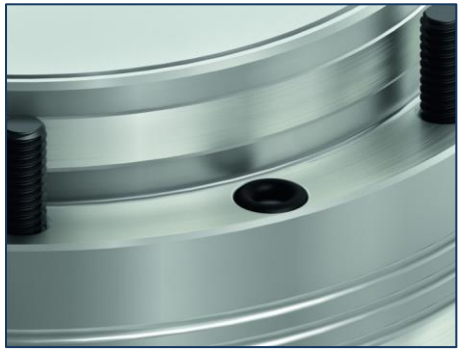
Highlights

High-temperature resistant

Especially for applications with high temperatures. Ensuring smooth actuation of the module up to an operating temperature of 200 °C. Your advantage: Due to the cooling process, the module can be actuated directly without any loss of time.



Control of the quick-change pallet system

The modules are actuated via bottom air connections. It can be operated with inert gas, so that no separate compressed air supply is required in the area of the additive machines.

Centering via short taper

The precise short taper centering combined with the form-fit and self-retaining locking characterizes the SCHUNK quick-change pallet system.

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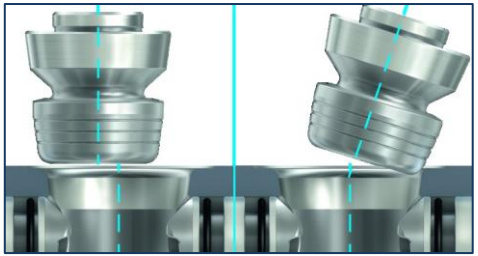
Highlights

Locking via clamping slides

Large contact surfaces between clamping slides and clamping pin ensure a low surface pressure, resulting in a long service life.



Easy positioning – more user-friendly

Entry radii on the clamping pin enable quick and safe joining even at a tilt angle and eccentricity. Benefit: more user-friendly for manual and automated loading.

Module completely sealed

The cover plate at the lower piston chamber seals the system off completely. Your advantage: no penetration of chips, dirt or coolant.

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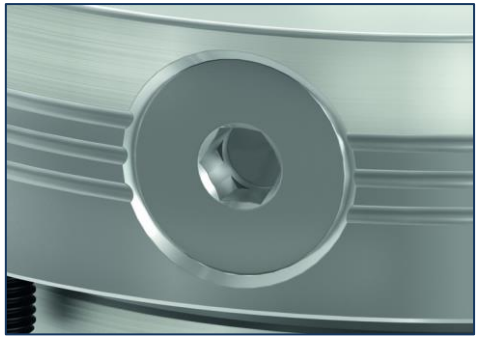
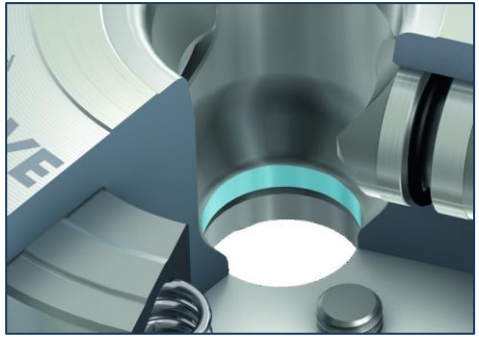
Highlights



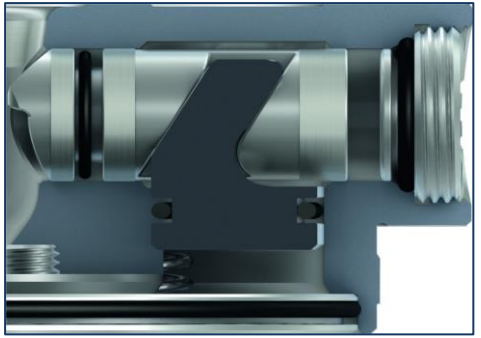
Completely sealed clamping slide bore

A locking screw on the clamping slide bore seals the system completely. Advantage: No ingress of the very fine metal powder, chips, dust or coolants in other applications.



Alignment fit in the body

A Ø 12H7 fit in the center allows the alignment of a clamping station by means of positioning elements directly on the clamping module. Clamping stations can be designed flatter.



Wedge hook drive

Provides a maximum force in any position. Advantage: Even if fine metal powder gets into the cutting area, the clamping slides do not block. The module clamps reliably.

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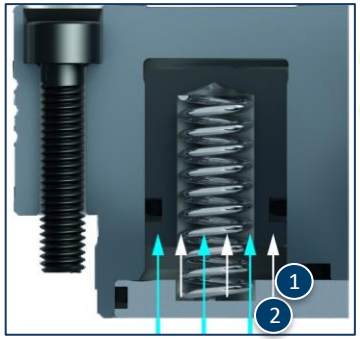
Highlights



1 Spring force

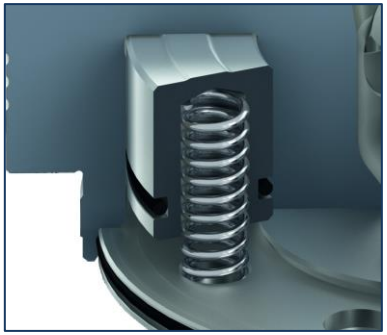
2 Additional force

Integrated turbo function

In order to raise the pull-down force, the quick-change pallet module is additionally pressurized with compressed air during clamping. Due to the turbo function the pull-down force increases by the factor of 5 (max. 2,500 N) compared to clamping merely based on spring force.

Made of stainless steel – long service life

All functional components are made of hardened stainless steel.

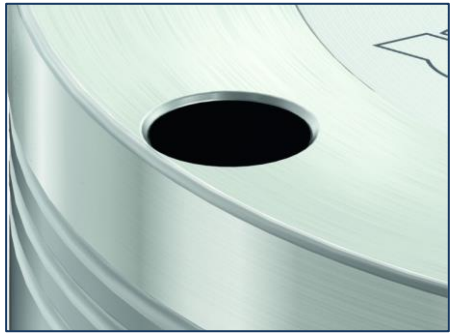


Corrosion and high-temperature resistant pressure springs

For a maximum life span, all the actuating springs are made of fatigue-free stainless steel. Special springs have been selected, which operate without loss of performance even under continuous temperature load.

VERO-S-HT mini

Highlights

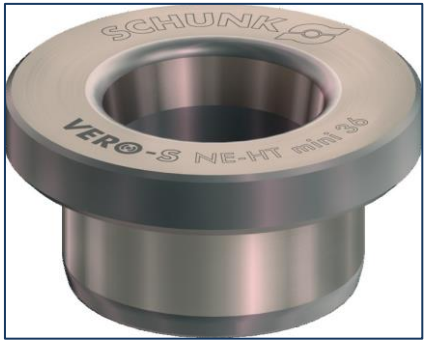


Cover caps for fastening screws

High-temperature resistant cover plugs prevent the accumulation of powder nests and other contamination.

Integrated anti-twist protection

The module NSE-HT mini 88-20-V1 is equipped with an anti-twist protection V1. The indexing pin can be additionally secured with a screw to prevent it from falling out of the fitting bore. Indexing pin remains securely joined even in the event of a large thermal expansion of the fitting.



NE-HT

If a pull-down can be dispensed with, the NE-HT centering element is used. The short taper centering is identical to the zero point clamping system. Temperatures of up to 500 °C are also possible here.

Superior Clamping and Gripping

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