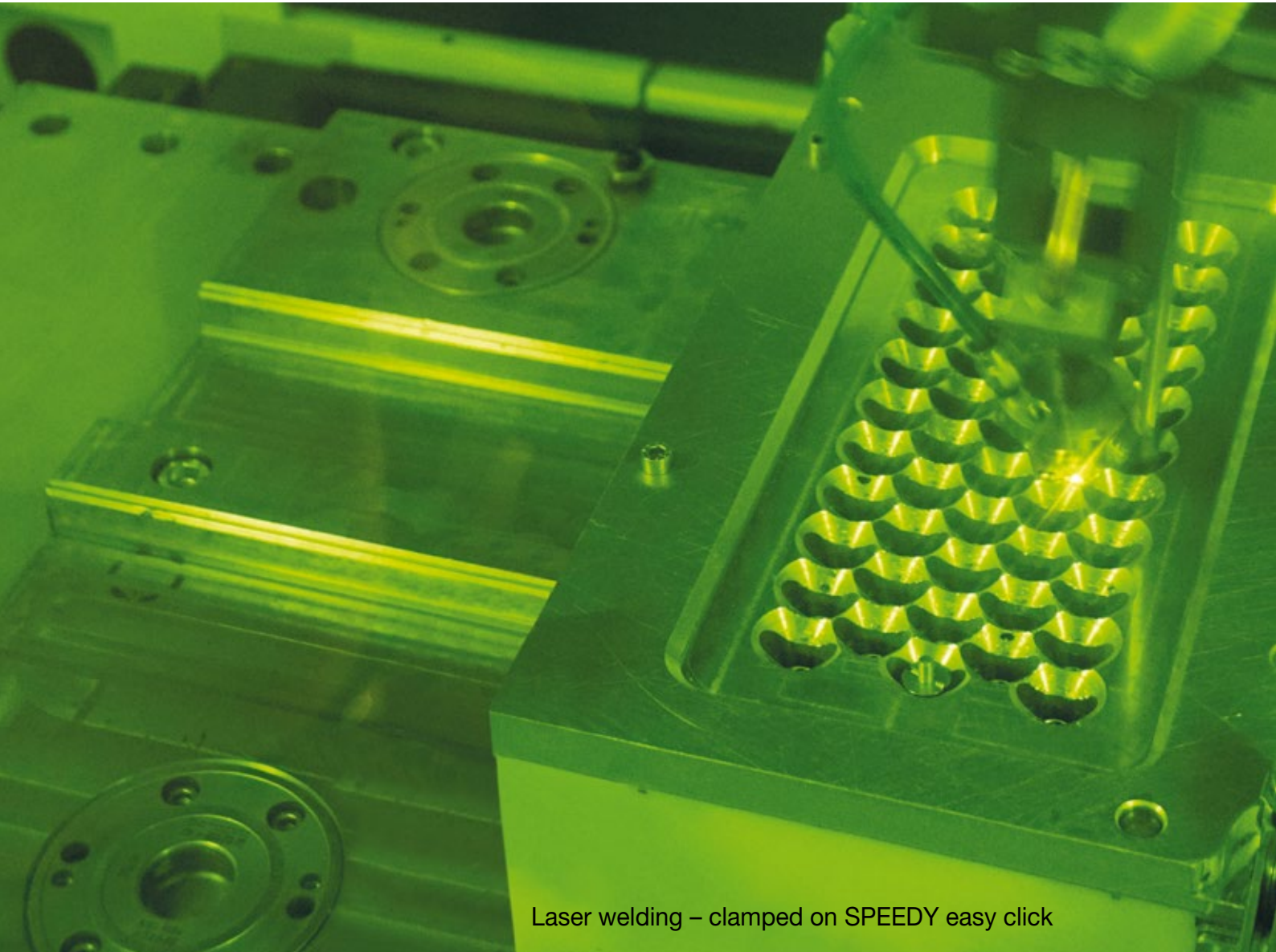




**ROEMHELD**  
HILMA ■ STARK

**STARK... always on the pulse  
of innovative technology**



Laser welding – clamped on SPEEDY easy click

**STARK zero point clamping systems  
INNOVATIONS & SOLUTIONS**

# Investment in future growth

## Cover picture

Page 1



Battery pack clamped on SPEEDY easy click.

The low weight and the high energy density of the Kreisel battery pack is due above all to the special, patented welded connection made by a high-power laser. Due to the highly automated manufacturing processes, the battery technology can be assembled particularly quickly in series production (15 seconds per kilowatt-hour) and also particularly economically. Meticulous research and a strong will to become better and better produced the result that positioned Kreisel Electric as a world leading rechargeable battery manufacturer.

Photo cover page: Kreisel Electric GmbH, A-4240 Freistadt

## Ground-breaking



## Innovations / Products



SPEEDY classic 2 balance	Page 4
Flexible height and position clamping element	Page 5
SPEEDY easy click	Page 6–7
SPEEDY Surface Mount	Page 8
Optical clamping check	Page 9
Coupling–electrically, pneumatically, hydraulically	Page 10–11
SPEEDY etec	Page 12
SPEEDY classic 2 NG-S	Page 13
SPEEDY classic NG	Page 14
SPEEDY classic 2	Page 15
Adapter plates, mount control	Page 16–17

## Product overview

Overview of all products	Page 18–19
Quality control	Page 20



### Foundation for an innovative future

STARK Spannsysteme GmbH is constructing a new building with around 3,140 sq m of floor space and is moving the company's headquarters from Götzis to Rankweil. The ground-breaking ceremony in the new industrial park "Impulszone Römergrund", around six kilometres from the current site, took place recently.

The move to the new building with larger offices, production and storage facilities is intended to make processes in production and assembly more efficient, and create more space and a pleasanter atmosphere for the 45 employees. At the same time the organisation, which has already been recognised by the State of Vorarlberg as an "Excellent training organisation", will also have a dedicated training workshop on the new site.

### Space for new staff and expanded production

"To be able to keep up with future growth the generously-sized space is designed for sixty staff. For the same reason, production capacity will also be expanded. We are investing in more new machines that we could not procure before due to lack of space. A turning-milling centre, a CNC grinding machine and 5-axis machining centre are already planned. The new building is to be ready in spring 2017, we will then move."



General Manager Roland Kiefer



## STARK ... a company of the Roemheld Group

Roemheld, Hilma, STARK – the three brands of the Roemheld Group are among the world's market leaders for productive solutions in industrial manufacturing, assembly, clamping and drive technology.

With our components, products and systems, we make your manufacturing more efficient and more flexible. The Roemheld Group is represented internationally by sales partners and joint ventures.

[www.stark-inc.com](http://www.stark-inc.com)  
[www.roemheld.de](http://www.roemheld.de)  
[www.friedrichshuette.com](http://www.friedrichshuette.com)



# Zero point-orientated flexibility

## SPEEDY classic 2 balance – we place emphasis on flexibility



Direct workpiece clamping – a gripping topic for the future. However this technology has its demands.

STARK Spannsysteme has accepted this challenge and developed a system that has the characteristic of equalising corresponding tolerances.

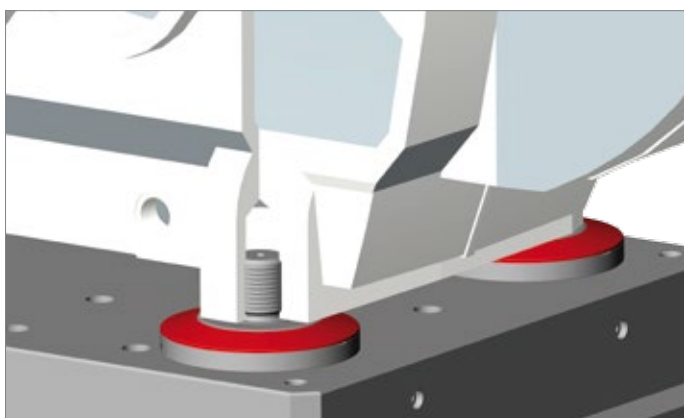
The SPEEDY balance series has particular advantages: **existing threads on the workpiece can be used, a special fit is not required.** Thanks to the integrated equaliser function in the clamping element of +/- 0.75 mm the workpiece can be clamped directly using the thread without additional effort.

The retractable nipples are available with different threads. They can be screwed in either manually or using automation.

The system has zero point accuracy and therefore the workpiece can be used on several machines or even for intermediate measurements.

Safety checks are integrated with a pneumatic clamping check and release check. The supply lines to the clamping elements are supplied hydraulically via deep bores. Other versions, e.g. DHF (third hand function) incl. pneumatic checking are available on request.

The clamping element described in the flyer is based on SPEEDY classic 2 technology (clamping using spring force 20 kN, hydraulic release). Other elements such as SPEEDY hydratec (double-action hydraulic) or SPEEDY etec (electrically powered) are also available.

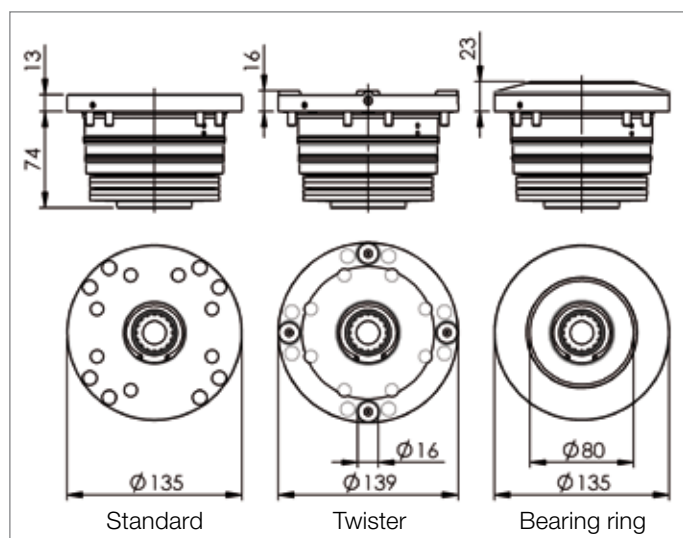


Existing thread is used for clamping

### Specifications

Art. no.	801 201 – 801 212
Insertion force	20 kN
Retention force	38 kN
Lifting force at release pressure	Max. 15 kN
Max. operating pressure	80 bar
Release pressure	60 bar
Clamping / release time	Approx. 2 sec

Subject to technical change without notice



## Flexible height and position clamping element (art. no. 6000 008)



Workpiece with multiple clamping and support points

The newly developed, flexible position clamping element from STARK solves clamping situations where “adaptation to suit the workpiece” is required.

The “distortion” of workpieces is a sensitive topic during any mechanical machining process that now also affects zero point clamping technology. While on pallets, plates and stable parts, overdetermination (multiple clamping and support points) can be accepted, In the case of thin-walled parts and direct workpiece clamping, the risk of “distortion” is however very high.

Distortion-free clamping is possible using a 3-point support.

But what happens if stability suffers as a result? If further clamping and support points are necessary?

**It is exactly here that the flexible position clamping element comes into play – clamping and support in one element.**

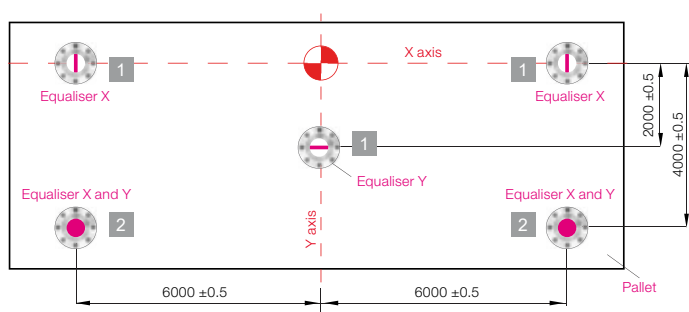
First the clamping force is applied to all clamping elements with up to 20 kN. While the 3 support points are fixed and pulled onto the supports during clamping, additional flexible position clamping elements are also moved into position at further retaining points and clamped. The fixing force achieved depends on the hydraulic pressure.

Ask our specialists to advise you!



Patented, flexible position clamping element in x/y/z direction

## Retractable nipple with equaliser ±1,5 mm



- 1 Flange retractable nipple with equaliser ±1.5 mm in one axis
- 2 Flange retractable nipple without zero point with equaliser in X and Y axis ±1.5 mm

These retractable nipples are available for the SPEEDY airtec, SPEEDY classic and in System 3000.

Example SPEEDY airtec:

Art. no.	Type
5000 021	Zero point
5000 022	Equaliser ±1.5 mm
5000 023	Without centring ±1.5 mm



Art. no. 5000 022

### Flange retractable nipple with equaliser ±1.5 mm in one axis

The critical contradiction of “stable clamping” and the necessary “movement” is ideally solved with the retractable nipple with equaliser. The retractable nipple with equaliser is used if a large amount of thermal expansion is to be expected. The compensa-

tion of ±1.5 mm also contributes to the simpler and cost-saving manufacture of the pallets, as larger manufacturing tolerances are possible. In addition the flange on the retractable nipple can be used as a hardened, wear-free support.

# SPEEDY easy click – from simple to complex

**New: now also with blowing out, system control and single mounting**



### Clicks – and holds

The new SPEEDY easy click is a mechanical fast closing clamp that clicks in and stays in place without the supply of energy. Release is simply by means of an air connection at a pressure of 4–8 bar.

SPEEDY easy click is used for cutting and non-cutting machining.

The mechanical clicking system makes SPEEDY easy click ideal as a robot gripper in automation engineering. The quick clamping time (click) enables it to be used as a design element in production lines. The particularly compact design permits tight spacing, short retractable nipples 15 mm long ensure short extraction distances.

Integrated query options and oil-free operation extend the range of applications. The SPEEDY easy click is also available with system control, polling and blowing out.

Clicks in immediately, also without the supply of energy

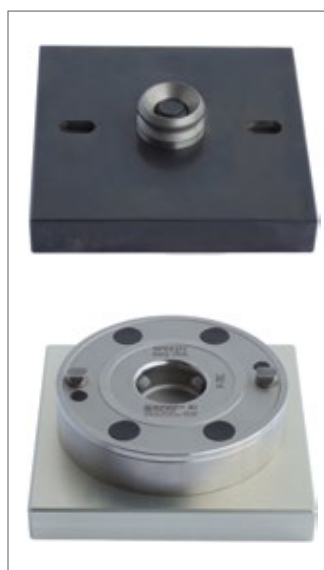
### Specifications

Art. no.	7000 019	7000 119
Blowing out *	-	Yes
System control *	-	Yes
Height	19 mm	19 mm
Sizes	ø85 mm	ø85 mm
Clamping force	5 kN	5 kN
Retention force	10 kN	10 kN
Release pressure	4–8 bar	5.5–8 bar
Release time	0.1 sec	0.1 sec
Clamping time	Clicks in immediately	
Repeatability	10 µm	10 µm
Weight	Approx. 800 g	Approx. 800 g

Subject to technical change without notice

\* Function only with an air line

Note: The test pressure is reduced to 1 bar for system control (please follow instructions).

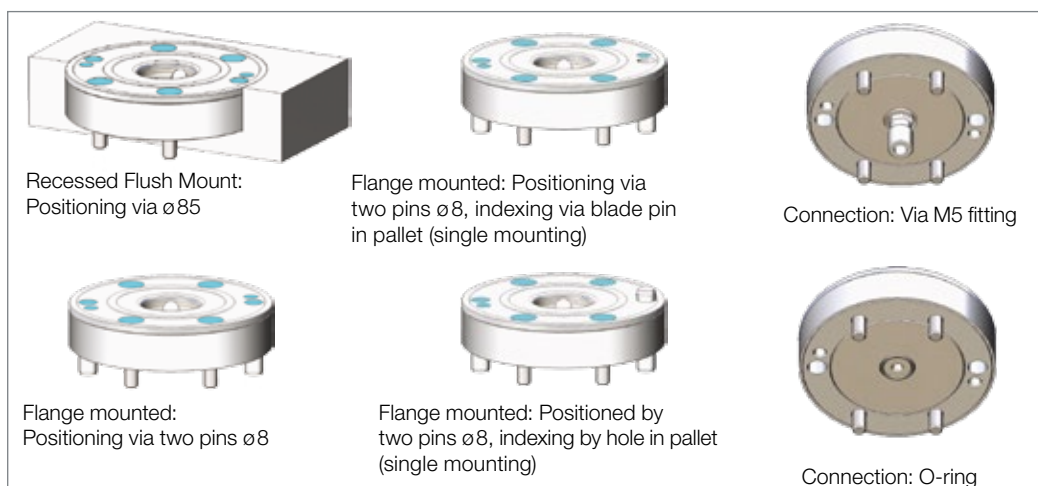


SPEEDY easy click for single mounting especially for straight-forward handling (automation) see also SPEEDY classic 2 NG-S

### Applications

- As design element
- As robot handling equipment
- Mounting systems
- 3/4/5-axis machining

### Installation variants



Speed easy click – clicks in immediately

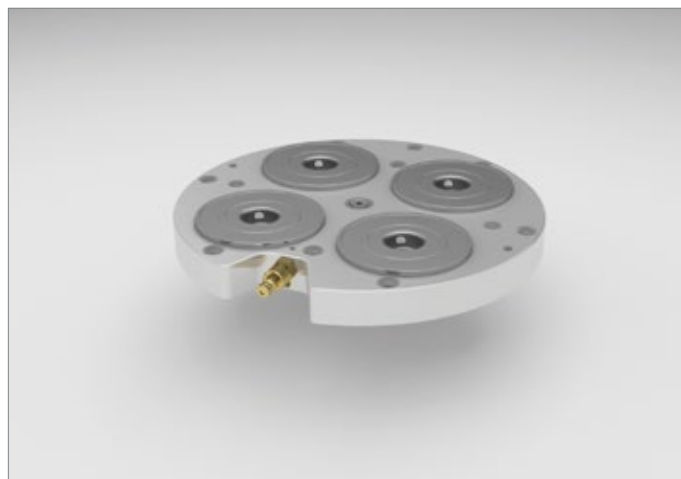
## Fast closing clamp plate SPEEDY easy click

### Applications

- On 3/4/5-axis machines for all common machining tasks such as milling, grinding, eroding
- Fast closing clamp plate SPEEDY easy click made of high quality tool steel

### Characteristics

Fast closing clamp plate with 4 SPEEDY easy click. The pallet is clamped mechanically using 4 x 5 kN spring force and released pneumatically with 3–8 bar air pressure. Due to a compact height of only 28 mm particularly suitable for small machines. King pin hole and fastening holes for tables with 4 or 6 star T-slots.

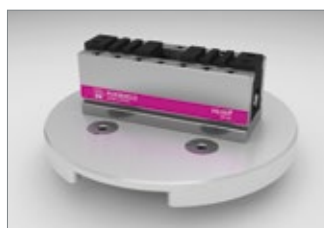
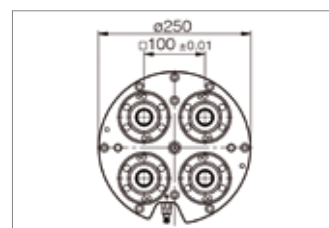


Art. no. 805 100

Art. no.	Description	Dimensions (mm)
805 100	Fast closing clamp plate 4 SPEEDY classic easy click	ø250 x 28 (anodised aluminium)
805 101	Pallet unfinished	ø250 x 28
805 102	Pallet Hilma MC60	ø250 x 28
805 103	Jaw chuck	ø250 x 28



Art. no. 805 101



Art. no. 805 102



Art. no. 805 103

### Accessory



Sliding valve G1/8"  
Art. no. 5000 300



Retractable nipple  
with zero point  
Art. no. 7000 100



Retractable nipple  
with equaliser  
Art. no. 7000 101



Retractable nipple  
without centring  
Art. no. 7000 102

See also SPEEDY easy click catalogue: [www.stark-inc.com](http://www.stark-inc.com)

Contact: [office@stark-inc.com](mailto:office@stark-inc.com)

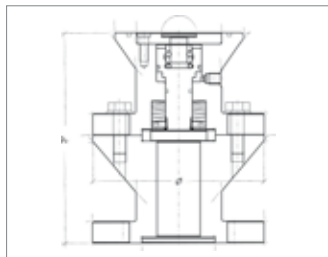
# You want to gain height?

## SPEEDY Surface Mount

Want to machine workpieces on 5 sides and clamp with repetitive accuracy? Then the modular systems from STARK are just right.

STARK has developed zero point clamping systems since 1988 and is considered a pioneer in this field. The retractable nipple is mounted directly on the clamping device or directly on the workpiece.

In the figures on the right you can see a few of the initial applications for STARK zero point clamping systems.



The original clamping cylinder



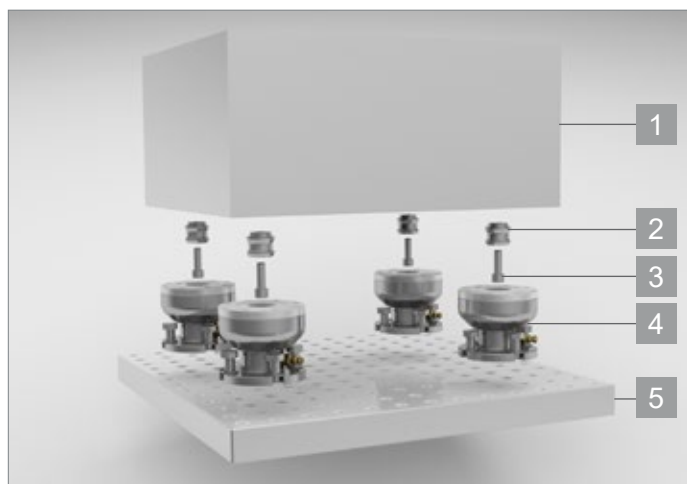
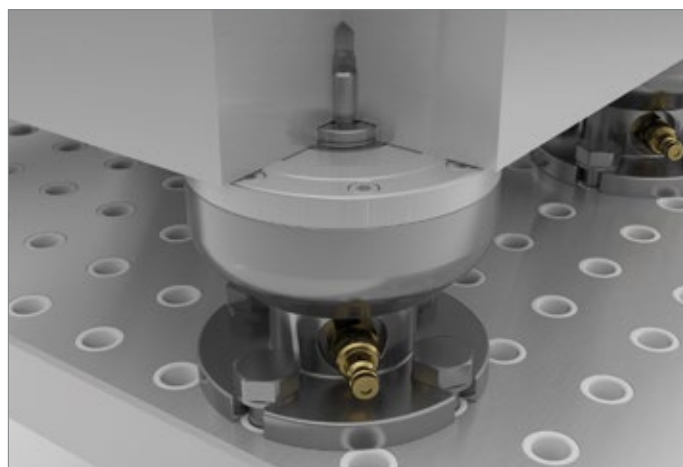
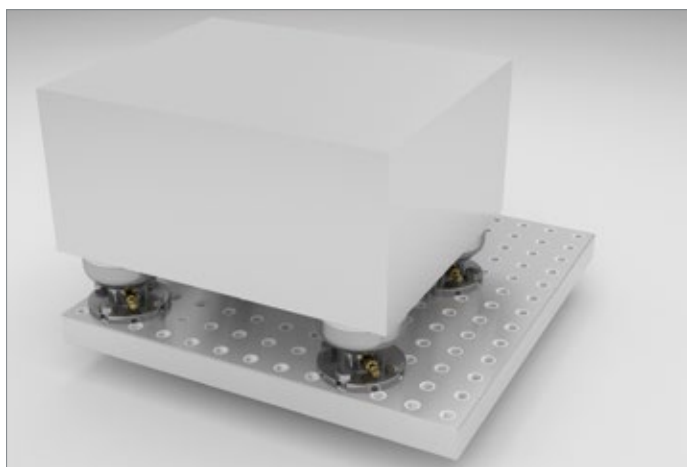
Workpiece with retractable nipple



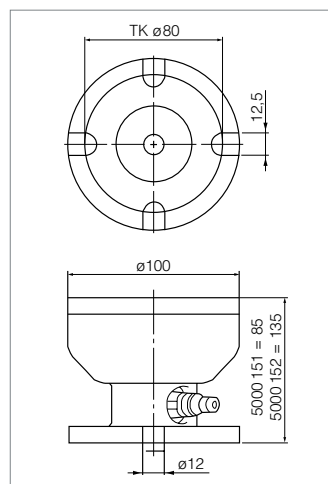
SPEEDY Surface Mount with workpiece

For this purpose there is, e.g., the SPEEDY airtec (see figures):

Art. no.	Ø	Height	Retention force	Release pressure
5000 151	100 mm	85 mm	55 kN	5–6 bar
5000 152	100 mm	135 mm	55 kN	5–6 bar



- 1 Workpiece
- 2 Retractable nipple
- 3 Screws
- 4 SPEEDY airtec Surface Mount
- 5 Perforated pallet



Surface Mount elements are available for all STARK zero point clamping systems. In addition you have the option of appropriately adapted retractable nipples so that nothing “gets in the way” during machining.



## Optical clamping check



The green indicator indicates correct clamping.



Optical clamping check, integrated into the fast closing clamp plate

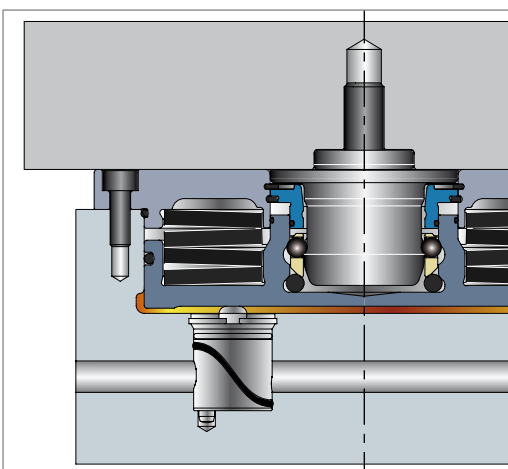
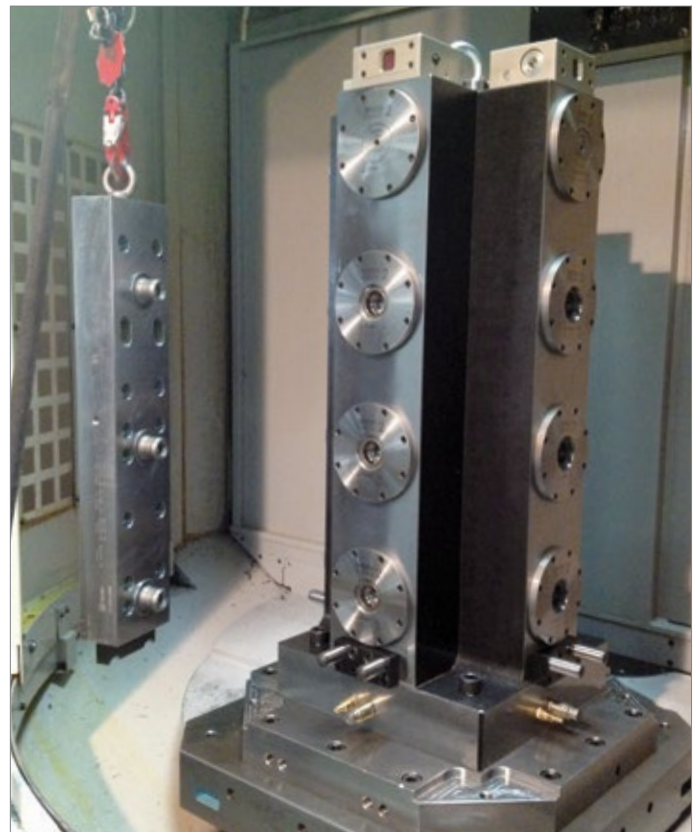
Is the zero point clamping system securely clamped? In many applications, e.g. during turning, the clamping check is a must. The newly designed optical clamping check checks the position of the piston in the SPEEDY and outputs absolutely reliable information via a traffic light signal. Straight-forward operation and straightforward upgrading are key advantages of these safety components.



### Built-in clamping check

For safety reasons a clamping check is strongly recommended on all high-speed machines. SPEEDY classic can be optionally equipped with a mechanical clamp control valve.

The evaluation of the clamping check can be integrated directly into the machine controller. With a corresponding hydraulic unit and suitable controller, existing machines can also be retrofitted.



Clamp control valve

# Coupling quickly and safely – electrically, pneu

## Multimedia coupling (electrical + pneumatic)

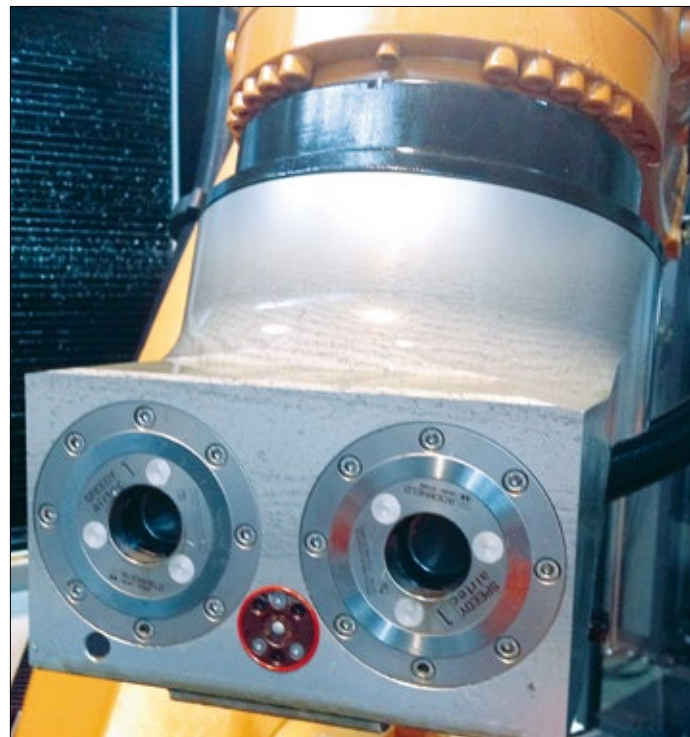
The STARK media coupling with the combination of pneumatics and electrics was specially developed for automation. During this process particular attention was paid to reliability. The coupling can be used in combination with all STARK zero point clamping systems. An automatically extending, integrated clearing nozzle keeps the contacts clean.

A special seal ensures the reliable transfer of all media in harsh everyday conditions.

- Electrical and pneumatic coupling with clearing device
- Extremely small space envelope
- IP67 (coupled)
- Can be combined with all STARK zero point clamping systems



Example: Gripper and gripper plate for robot with multimedia coupling and electrically isolated ground terminal.



Example: Gripper for robot with pneumatic and electrical coupling

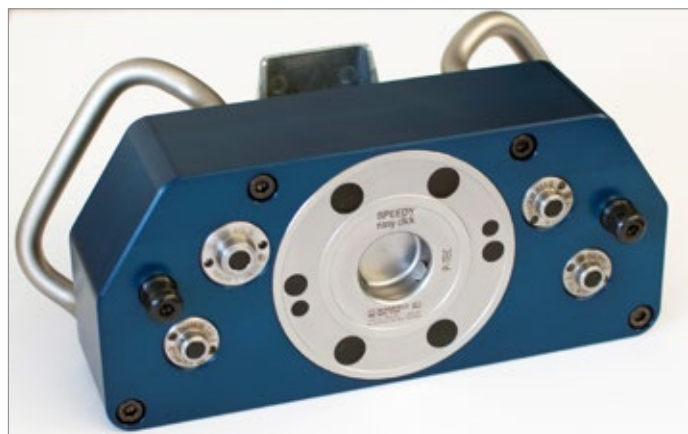
## Multimedia coupling (hydraulic + pneumatic)

If several lines are to be coupled and uncoupled again at the same time, this solution represents an enormous simplification. STARK is also setting new standards in relation to reliability here! The coupling, which can be configured as required by the customer (number of lines and nominal sizes), is equipped with the SPEEDY easy click. This feature makes it possible to safeguard the connections via the machine controller or the unit used. Only if the related enable has been provided is it possible to remove the man-

ual coupling from the parking station. Coupling is then undertaken by simply pushing into place – the SPEEDY easy click engages. And only if the enable to uncouple has been given (e.g. only once all lines are depressurised) is the SPEEDY easy click supplied with the release pressure. The actual release process, the uncoupling, is undertaken conveniently using a button. It could not be more straightforward and more reliable.



- One coupling process for all media by SPEEDY easy click – time saving
- A safety function can be integrated in the actuation of the SPEEDY easy click (enable for coupling by controller, polling coupling parking station).
- Tidy hose connections – no mix ups



# atically, hydraulically

## Docking unit with media transfer

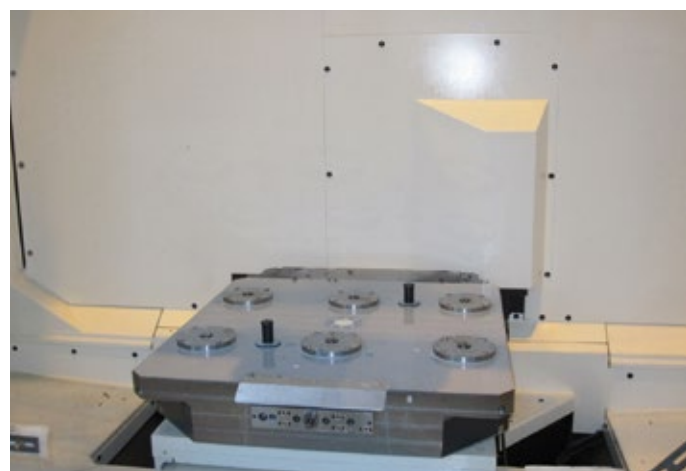
### Minimise set-up times – relocate set-up times

Significant cost-savings in manufacturing are now increasingly only achievable by shortening process times and especially by relocating set-up times away from the machine. Productivity can be significantly increased by using zero point clamping systems with the related time saving.



Pallet store with more than 50 jigs

- Saving in expensive machine pallets reduces costs, storage space and weight.
- Automated solutions can also be realised using a simple range of machinery.

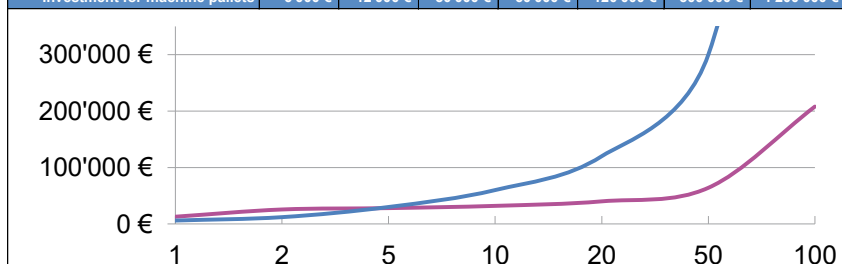


The example shows a mechanical jig. The exchangeable plate is equipped with a zero point clamping system SPEEDY Sweeper. The docking unit supplies the pallet with oil and air for clamping, releasing, clearing or polling. This feature has several advantages at once. All the energy and supply lines are routed via the docking unit.

Effective protection of the clamping point is ensured by the central locking provided by the clamping elements SPEEDY Sweeper. The raised supports and the central locking are cleaned using the integrated cleaning nozzles. As a consequence automated, repetitively accurate clamping is possible.

### Example calculation

Number of pallets / jigs	1	2	5	10	20	50	100
Procurement STARK	12'000 €	24'000 €	24'000 €	24'000 €	24'000 €	24'000 €	48'000 €
Retractable nipple jig	800 €	1'600 €	4'000 €	8'000 €	16'000 €	40'000 €	160'000 €
Investment STARK	12'800 €	25'600 €	28'000 €	32'000 €	40'000 €	64'000 €	208'000 €
Investment for machine pallets	6'000 €	12'000 €	30'000 €	60'000 €	120'000 €	300'000 €	1'200'000 €



### Liebherr works Nenzing

“By using the zero point clamping system we have made a six-figure saving. We manufactured the jigs in-house and equipped them with retractable nipples that are then clamped directly on the zero point clamping systems on the machine pallet.”

Michael Torghele, supervisor small-scale mechanical engineering

# Industry 4.0

## SPEEDY etec

With SPEEDY etec the advantages of STARK clamping technology can also be used if no hydraulics or pneumatics are available. The system is integrated into the existing controller. The same retractable nipples as on SPEEDY Sweeper or Speedy Hydratec are used (variants such as with bearing ring like Speedy Hydratec or raised supports like SPEEDY Sweeper). In this way existing pallets can be clamped.

With the SPEEDY etec series, STARK Spannsysteme is setting new standards for machines and machining centres without hydraulics and for other applications.

This design is based on the proven technology for the clamping element:

- Insertion and extraction from the fit
- High insertion forces (7 kN) and retention forces (38 kN)
- Self-locking – safe in case of power failure
- Short clamping and release times
- High level of safety due to varied range of polling options
- Third hand function (DHF)
- Highest precision

### Compact design

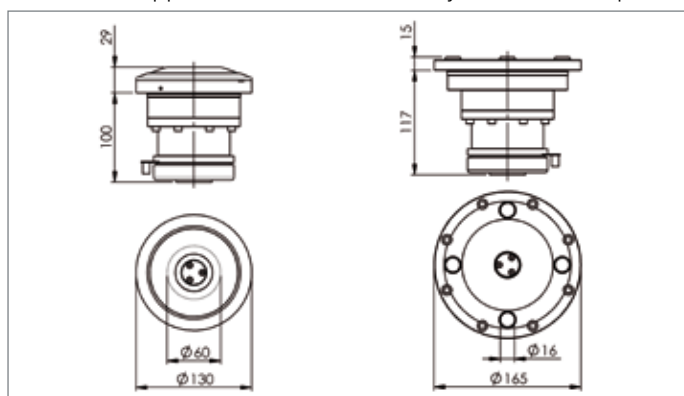
With the dimensions  $D = 130$  mm, installation depth  $<100$  mm and a motor voltage of 48 V as well as a power rating of 180 W, the maximum is realised, above all in the drive technology.

### Advantages

- Low power consumption
- Fewer environmental aspects need to be addressed
- All positions can be adopted without modification (e.g. third hand function DHF)
- Electrical polling (clamping and release position) is easy to add
- Self-locking - safe in case of power failure

### Two designs

Retractable nipples suitable for SPEEDY hydratec or Sweeper:



Patented electrical zero point clamping system SPEEDY etec.

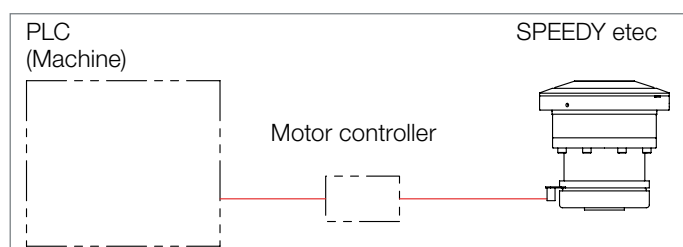
### Specifications

Motor voltage	48 V DC
Power max.	180 W
Standby *	0 W
Clamping time	Approx. 1–3 sec
Release time	Approx. 3 sec
Control voltage	24 V DC
Insertion force	7 kN
Retention force	38 kN
Weight	5.7 kg
Self-locking in case of power failure	

Subject to technical change without notice

\* Control depending on configuration

### Connection diagram



# Precise and robust

## SPEEDY classic 2 NG-S

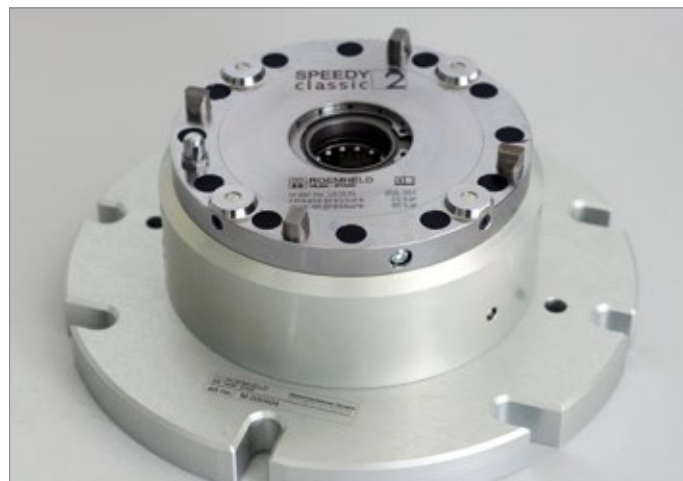
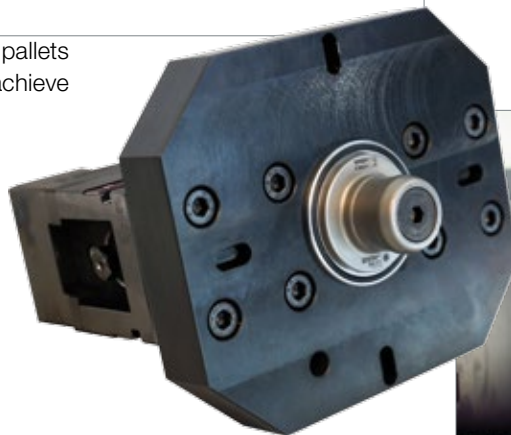
The SPEEDY classic 2 NG-S was specially developed for single mounting and 5-axis machining. It is extremely well suited to manual and automated loading. It can be combined with the SPEEDY classic 2 NG at any time. There are variants with hydraulic and pneumatic actuation.

### Advantages

- For manual and automated loading
- $\mu$ -accuracy
- Extremely high stiffness
- Play-free shaped fit



You can simply make pallets yourself, as a result you achieve maximum availability.



SPEEDY classic 2 NG-S can be adapted to almost any machine using various adapters.

### Specifications

Sizes	$\varnothing 139$ mm
Blowing out	Yes
System control	Yes
Clamping check	Yes (option)
Insertion force *	20 kN
Retention force	38 kN
Repeatability	0.002 mm
Release pressure *	40 bar
Max. pressure	80 bar
Weight	2.5
Pneumatic	Double-action

\* Hydraulically actuated variant



Extremely high stiffness due to play-free shaped fit and high preload force on the plate springs

# Success using standards from STARK – can be

## SPEEDY classic NG with reinforced spring assembly for high weights

### Reliable clamping of large workpieces

The SPEEDY classic NG has been completely revised and now offers high repeatability and robustness under extreme conditions.

Its ideal application is milling and turning work on large workpieces.

Due to the reinforced spring assembly a higher insertion force is achieved. This permits the extremely precise machining of heavy or high load workpieces.

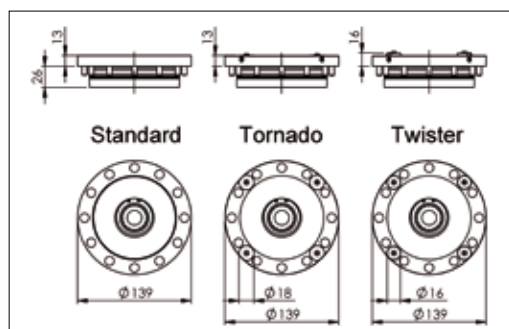
On request, SPEEDY classic NG can be equipped with integrated media ducts to convey media, e.g. oil, air, water, etc.

For safety reasons a clamping check is strongly recommended on all high-speed machines. Optionally, SPEEDY classic NG can be equipped with a mechanical clamp control valve.



### Advantages

- New spring assembly – increased insertion force over service life
- Reinforced piston
- Covers for fasteners
- Optimised air feed
- Nozzle replacement simplified

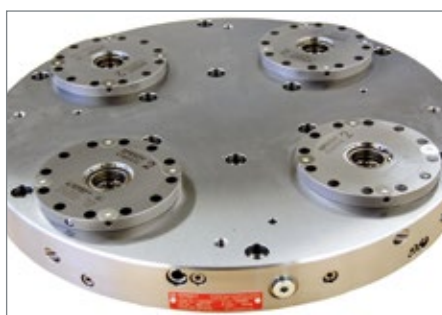


Example SPEEDY classic 2 NG

### Variants



Standard



Tornado



Twister

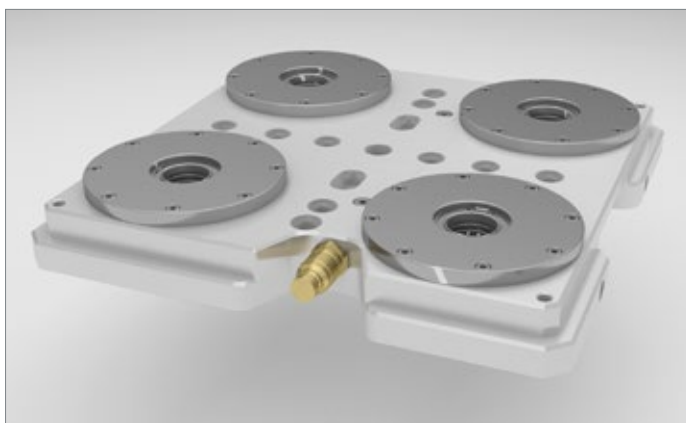
### Specifications

SPEEDY classic	2 NG	3 NG
Max. pressure	80 bar	80 bar
Release pressure	40 bar	50 bar
Insertion force	20 kN	30 kN
Lifting force	15 kN	30 kN
Repeatability	5 µm	10 µm
Weight	2.5 kg	6.5 kg

Subject to technical change without notice

# used quickly and safely

## Fast closing clamp plate SPEEDY classic 2



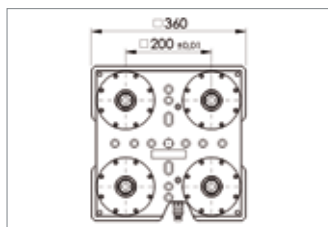
### Applications

- On 3/4/5-axis machines for all common machining tasks such as milling, grinding, eroding
- Fast closing clamp SPEEDY classic 2 made of high quality tool steel. Little space needed due to low height

### Characteristics

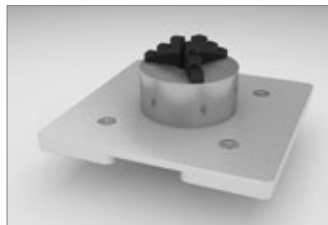
Fast closing clamp plate with 4 SPEEDY classic 2. The pallet is clamped mechanically using 4 x 20 kN spring force and raised hydraulically on release. Fastening holes, clamping edge, positioning holes and an alignment surface make placing in operation straightforward on many common machines. The system can be scaled and also suits larger machines.

Art. no. 805 200



Art. no.	Description	Dimensions (mm)
805 200	Fast closing clamp plate 4 SPEEDY classic 2	360 x 360 x 50 (anodised aluminium)
805 203	Pallet Hilma MC100z	360 x 360 x 28
805 204	Pallet unfinished	360 x 360 x 28
805 205	Pallet Hilma NC125	360 x 430 x 28
805 206	Pallet Hilma MC100	360 x 360 x 28
805 207	Jaw chuck	360 x 360 x 28

Art. no. 805 204



Art. no. 805 206

Art. no. 805 207



Art. no. 805 203

Art. no. 805 205

### Accessory



Fixing clamp for M12  
Art. no. 805 201



Pressure booster  
Art. no. 804 411  
classic 2, section 4.2



Hydraulic hose  
Art. no. 704 151  
classic 2, section 4.3



Retractable nipple  
Art. no. see:  
classic 2, section 3

See also SPEEDY classic 2 catalogue: [www.stark-inc.com](http://www.stark-inc.com)

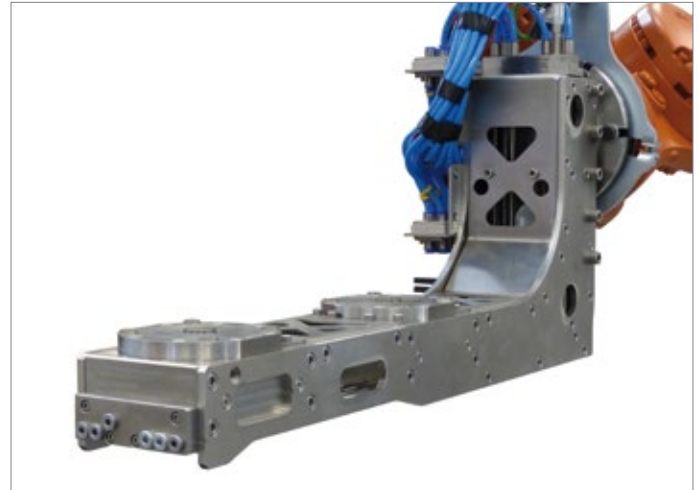
Contact: [office@stark-inc.com](mailto:office@stark-inc.com)

# Adapter plates for zero point clamping systems

## Your clamping task – our extensive experience

STARK Spannsysteme, as a leading manufacturer of zero point clamping systems, designs and produces adapter plates in conjunction with zero point clamping solutions.

We have the necessary experience for the different applications. As we see ourselves as a provider of zero point clamping systems also in the area of automated manufacture, we offer comprehensive solutions for adapter plates. Whether during machining, washing, mounting or honing – we have the experience for your clamping task.



Adapter plate gripper for transport and, e.g., for washing systems



Cylinder head on adapter plate



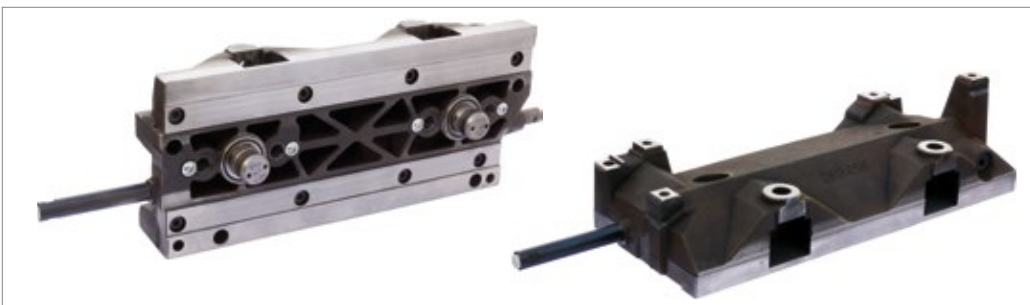
## Adapter plates – applications



Adapter plate with SPEEDY classic 1 retractable nipples, hardened supports on work-piece and SPEEDY.



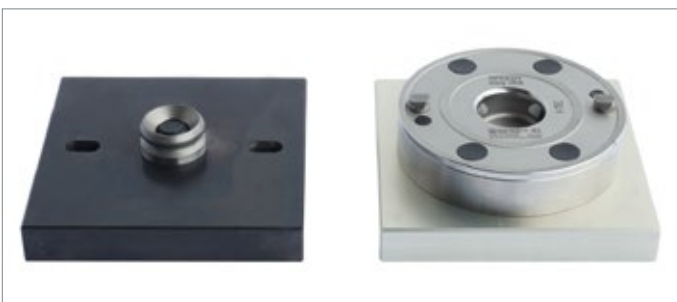
Adapter plate with self-aligning nipples for straightforward insertion during automated loading. Side roller strips for transport. Surfaces protected against corrosion.



Compact adapter plate with ribbing (weight reduction) on hardened contact faces.



SPEEDY classic 2 NG-S  
Prepared pallets / part carriers. Blank fastened from below and positioned via two pins. SPEEDY classic 2 NG-S can be adapted to almost any machine using various adapters. Pallets are collected using robots and placed on the zero point clamping system. Clamped with positive fit and indexed without play.



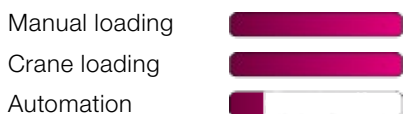
SPEEDY easy click for single mounting especially for straightforward handling (automation) see also SPEEDY classic 2 NG-S

# Zero point clamping systems for every requirement – overview

You will find detailed information in the main catalogue. We would be pleased to advise you!

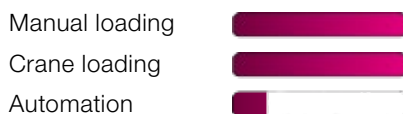
## SPEEDY metec

- simple:** quickly installed
- robust:** few separate parts
- compact:** high power density
- mechanical:** easy maintenance
- independent:** one torque wrench is enough



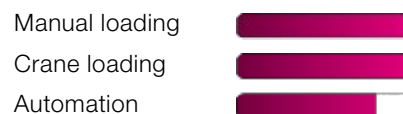
## SPEEDY basic

- modest:** module
- expedient:** very simple installation
- adapted:** hydraulic or pneumatic
- versatile:** 12 variants
- profitable:** best price



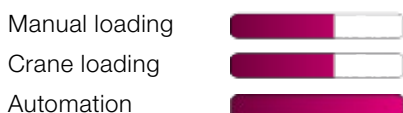
## SPEEDY classic

- elevated:** SPEEDY raises pallet on release
- simple:** easy to clean
- precise:** due to cylindrical fit
- durable:** bolts inserted in the fit
- versatile:** clamping check, mount control, clearing device, media ducts



## SPEEDY Sweeper

- automatic:** for automated solutions
- monitored:** all functions can be polled
- integrated:** built-in couplings available
- adaptable:** wide range of variants available
- clean:** sophisticated clearing device



## SPEEDY e-tec

- communicative:** Industry 4.0-ready
- universal:** matches Sweeper and hydratec interface
- economical:** electric drive
- ecological:** can be recycled
- sensitive:** forces can be measured and controlled



## SPEEDY System 3000

- unique:** flush-mounted SPEEDY and bolts
- free to move:** handling without interfering contour
- very strong:** 52 kN retention force
- automatic:** suitable for automation
- monitored:** all functions can be polled



## SPEEDY airtec

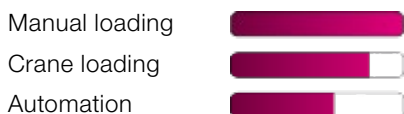
**low maintenance:** intervals up to 2 million cycles

**pure:** clean air is adequate

**powerful:** due to enclosing clamping segments

**precise:** due to cylindrical fit

**fast:** clamping and release time 0.2 sec



## SPEEDY easy click

**click:** clamp by pressing in

**small:** 85 mm diameter and only 19 mm high

**strong:** 5 kN clamping force – 10 kN retention force

**economical:** release using 4 – 8 bar compressed air/electrically

**fast:** release time 0.1 sec



## SPEEDY hydratec

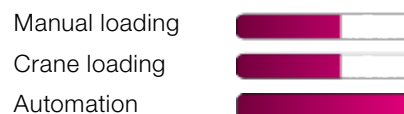
**compact:** enormous power density

**flexible:** equaliser variants possible in the SPEEDY

**clean:** encapsulated against soiling

**monitored:** all functions can be polled

**cost-effective:** short clamping/release times, large number of cycles



## Couplings

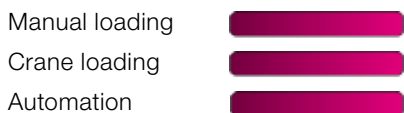
**universal:** hydraulic, pneumatic, vacuum, electric

**integrated:** fits directly in the SPEEDY

**compact:** requires little space

**fast:** no additional actions

**automatic:** coupled/uncoupled on clamping/releasing



## Checking ensures one-hundred percent availability

### Check dimension

There is something special about the SPEEDY classic:

You can straightforwardly check the function yourself! Using the specifically developed check dimension tester your staff are able to undertake a preventive check on the function in a very short time.

### Airflow measurement

The correct adjustment of all parameters is of major importance on automated systems.

For this purpose STARK offers, e.g., a measuring instrument that indicates the current airflow. You can measure this parameter during placing in operation and also later if service is required.

### Insertion force measurement

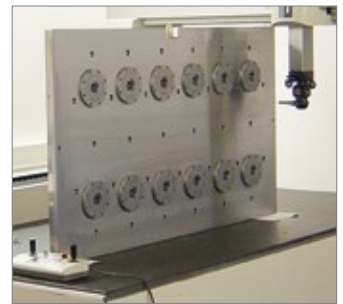
The classic and hydratec systems can be checked using the STARK insertion force tester.

It indicates directly the force acting on the retractable nipple. In this way it is also ensured that the figures defined during design are still met even after extended usage.

### Dimension check

All the products that leave STARK are measured first, the measured values are logged and archived. Should you have any questions on this issue, contact us.

The 3D measurements are made in an air-conditioned measuring room.



## ... because zero point clamping has an origin!

### Specialist

As a leading company in the field of zero point clamping technology, STARK has specialised uncompromisingly in zero point technology. STARK safeguards know-how for the future by training specialist staff.

STARK combines all core competences under one roof.

Continuing development and patents are evidence of the massive power to innovate that exists in the organisation.

Quality, precision, service and specific advice form part of the corporate strategy.

### Partner

In production, STARK sees itself as a partner for a number of sectors and applications.

For the automotive or aerospace sector, mechanical engineering, as well as one-off or series production, STARK is available as a competent point of contact.

Specific advice on the usage of STARK components and custom solutions for production are our strengths.

### Development

Our in-house trials laboratory makes it possible to check out a very wide range of applications.

We undertake the static calculations for our customers for an optimal machining solution.

### Placing in operation – service

With the delivery of STARK products we offer further services in addition to placing in operation on your premises. These could be a pre-defined acceptance, which can also take place, e.g., at the machine manufacturer, or staff training for the safe and efficient handling of your STARK zero point clamping system.

STARK service is also available after placing in operation.



**ROEMHELD**  
HILMA ■ STARK

STARK Spannsysteme GmbH

Römergrund 14, 6830 Rankweil, Austria

Telephone: +43 5522 37 400-0, Fax: +43 5522 37 400-700

E-mail: [info@stark-inc.com](mailto:info@stark-inc.com), homepage: [www.stark-inc.com](http://www.stark-inc.com)