STARK ... always on the pulse of innovative technology

STARK zero point clamping systems
INNOVATIONS & SOLUTIONS

Laser welding – clamped on SPEEDY easy click
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.

**Investment in future growth**

**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

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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
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.
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.

Specifications

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>801 201 – 801 212</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion force</td>
<td>20 kN</td>
</tr>
<tr>
<td>Retention force</td>
<td>38 kN</td>
</tr>
<tr>
<td>Lifting force at release pressure</td>
<td>Max. 15 kN</td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>80 bar</td>
</tr>
<tr>
<td>Release pressure</td>
<td>60 bar</td>
</tr>
<tr>
<td>Clamping / release time</td>
<td>Approx. 2 sec</td>
</tr>
</tbody>
</table>

Subject to technical change without notice
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!

Retractable nipple with equaliser ±1,5 mm

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:

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000 021</td>
<td>Zero point</td>
</tr>
<tr>
<td>5000 022</td>
<td>Equaliser ±1,5 mm</td>
</tr>
<tr>
<td>5000 023</td>
<td>Without centring ±1,5 mm</td>
</tr>
</tbody>
</table>

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-
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.

Specifications

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

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 straightforward 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

- Recessed Flush Mount: Positioning via ø85
- Flange mounted: Positioning via two pins ø8, indexing via blade pin in pallet (single mounting)
- Flange mounted: Positioning via two pins ø8
- Flange mounted: Positioned by two pins ø8, indexing by hole in pallet (single mounting)
- Connection: Via M5 fitting
- Connection: O-ring
- 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 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.

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Description</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>805 100</td>
<td>Fast closing clamp plate 4</td>
<td>ø250 x 28 (anodised</td>
</tr>
<tr>
<td></td>
<td>SPEEDY classic easy click</td>
<td>aluminium)</td>
</tr>
<tr>
<td>805 101</td>
<td>Pallet unfinished</td>
<td>ø250 x 28</td>
</tr>
<tr>
<td>805 102</td>
<td>Pallet Hilma MC60</td>
<td>ø250 x 28</td>
</tr>
<tr>
<td>805 103</td>
<td>Jaw chuck</td>
<td>ø250 x 28</td>
</tr>
</tbody>
</table>

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

Web: www.carlaneroemheld.com
Email: info@clrh.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.

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

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Ø</th>
<th>Height</th>
<th>Retention force</th>
<th>Release pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000 151</td>
<td>100 mm</td>
<td>85 mm</td>
<td>55 kN</td>
<td>5 – 6 bar</td>
</tr>
<tr>
<td>5000 152</td>
<td>100 mm</td>
<td>135 mm</td>
<td>55 kN</td>
<td>5 – 6 bar</td>
</tr>
</tbody>
</table>

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

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. Straightforward 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.

The green indicator indicates correct clamping.

Optical clamping check, integrated into the fast closing clamp plate

Clamp control valve
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.

- 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 manual 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
matically, 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 clearing nozzles. As a consequence automated, repetitively accurate clamping is possible.

Example calculation

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

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor voltage</td>
<td>48 V DC</td>
</tr>
<tr>
<td>Power max.</td>
<td>180 W</td>
</tr>
<tr>
<td>Standby *</td>
<td>0 W</td>
</tr>
<tr>
<td>Clamping time</td>
<td>Approx. 1–3 sec</td>
</tr>
<tr>
<td>Release time</td>
<td>Approx. 3 sec</td>
</tr>
<tr>
<td>Control voltage</td>
<td>24 V DC</td>
</tr>
<tr>
<td>Insertion force</td>
<td>7 kN</td>
</tr>
<tr>
<td>Retention force</td>
<td>38 kN</td>
</tr>
<tr>
<td>Weight</td>
<td>5.7 kg</td>
</tr>
</tbody>
</table>

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
- µ-accuracy
- Extremely high stiffness
- Play-free shaped fit

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sizes</td>
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<tr>
<td>Blowing out</td>
<td>Yes</td>
</tr>
<tr>
<td>System control</td>
<td>Yes</td>
</tr>
<tr>
<td>Clamping check</td>
<td>Yes (option)</td>
</tr>
<tr>
<td>Insertion force</td>
<td>20 kN</td>
</tr>
<tr>
<td>Retention force</td>
<td>38 kN</td>
</tr>
<tr>
<td>Repeatability</td>
<td>0.002 mm</td>
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<tr>
<td>Release pressure</td>
<td>40 bar</td>
</tr>
<tr>
<td>Max. pressure</td>
<td>80 bar</td>
</tr>
<tr>
<td>Weight</td>
<td>2.5</td>
</tr>
<tr>
<td>Pneumatic</td>
<td>Double-action</td>
</tr>
</tbody>
</table>

* Hydraulically actuated variant

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

Advantages

- For manual and automated loading
- µ-accuracy
- Extremely high stiffness
- Play-free shaped fit

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

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

STARK – a company of the Roemheld Group
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

Specifications

<table>
<thead>
<tr>
<th></th>
<th>SPEEDY classic 2 NG</th>
<th>3 NG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. pressure</td>
<td>80 bar</td>
<td>80 bar</td>
</tr>
<tr>
<td>Release pressure</td>
<td>40 bar</td>
<td>50 bar</td>
</tr>
<tr>
<td>Insertion force</td>
<td>20 kN</td>
<td>30 kN</td>
</tr>
<tr>
<td>Lifting force</td>
<td>15 kN</td>
<td>30 kN</td>
</tr>
<tr>
<td>Repeatability</td>
<td>5 µm</td>
<td>10 µm</td>
</tr>
<tr>
<td>Weight</td>
<td>2.5 kg</td>
<td>6.5 kg</td>
</tr>
</tbody>
</table>

Subject to technical change without notice

Example SPEEDY classic 2 NG

Variants

Standard  | Tornado  | Twister

STARK – a company of the Roemheld Group
Success using standards from STARK – can be used quickly and safely

See also SPEEDY classic 2 catalogue: www.stark-inc.com
Contact: office@stark-inc.com

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

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. Description Dimensions (mm)
805 200 Fast closing clamp plate 4 SPEEDY classic 2 360 x 360 x 50 (anodised aluminium)
805 202 Pallet Hilma MC100 360 x 360 x 28
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 Jaw chuck 360 x 360 x 28

Web: www.carrlaneroemheld.com
Email: info@clrh.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 hyratec**

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

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**STARK – a company of the Roemheld Group**

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**Products for productivity**
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.

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