

# ToolNews

Number 541, January 2020

Tools. Next Level.

## CONTENTS

### Measurement technology

Precision for the highest standards  
Magnifier lamp LUXO Wave LED  
Roughness tester FUTURO  
H+S precision gauge strips and foils

### Manufacturing technology

Increased deburring productivity  
Shrink chucks from 3 mm diameter  
Optimal space when turning  
NC precision drill chuck promotion

### Assembly technology

Silicone spray FUTURO  
Industrial cleaner CRC  
Labelling device DYMO  
Torque screwdriver set PB

### Standard parts

Hoists, brochure "Lifting means"  
Swiss Plastics 21 to 23 January 2020  
Adjustable inserts 2020 – don't miss out!  
Ball valves, promotion until 31.01.20

### Personal Protective Equipment

Brütsch/Rüegger Tools gloves range  
REEBOK safety shoes  
NERIOX Winter leather gloves  
Hot prices for cold days

### Forum

Endress+Hauser Flowtec AG – At the pulse of measurement

## FEATURED

### Screw assembly: Big potential

Even the smallest screw can cause the largest structure to collapse. That is why Brütsch/Rüegger Tools is increasingly active in fastening technology. In addition, digitised screw assembly in accordance with VDI 2862-2 provides many other advantages: Increased process reliability thanks to classification, greater productivity due to standardisation and complete traceability due to documentation. Read the article on the back which deals with a newly set-up assembly station and whose design was realised with the help of the consulting services of Brütsch/Rüegger Tools.

## +swiss plastics

/expo

Swiss Plastics Expo:  
Inspiration, education and networking

All those involved in any way with plastics will meet at the Swiss Plastics Expo at [Messe Lucerne from 21 to 23 January 2020](#). At this important industry event you will learn everything about plastics and their processing, new products, application examples and expand your knowledge at the "Innovation Symposium" (included in the exhibition ticket). Visit [Brütsch/Rüegger Tools in Hall 2/Stand B2042](#). Our 360-degree view into the world of plastics will help you to optimise processes, operations and storage systems. Learn about modern solutions for your industry, network with experts and get to know your potential "innovation trigger"! You can make an appointment directly via the following form: <https://www.visit-swissplastics-expo.ch/de/directory/meeting/bruettsch-rueegger-werkzeuge-ag-2/27>



The right tool at the right time in the right place: In assembly technology, the smallest factor is important.

### Assembly technology and operating equipment Our core competence for more than 140 years

Since the beginning of the company's history in 1877, Brütsch/Rüegger Tools has focused on assembly technology and operating equipment. From consulting to purchasing through to service, we deliver all the products, systems and solutions required for workshop operations within a very short time. Ranging from workbenches to screwdriver sets to adhesives, there is simply nothing that we do not offer for your manufacturing and assembly needs!

#### No-obligation advice

It has always been our goal to meet all customer requirements without compromise. Let our experienced assembly technology specialists advise you with no obligation to yourself and contact us at [info@brw.ch](mailto:info@brw.ch) or on +41 (0) 44 736 63 63. We will only be satisfied when we see that our expertise has truly provided you with the best possible results for your requirements!



The Assembly Technology team from Brütsch/Rüegger Tools.

## Individualised assembly – Productivity gains par excellence

Assembly technology is no exception when it comes to digitisation. Communicating assembly tools and the standardised documentation of processes and results allow complete traceability. Especially operators of safety-relevant applications with safety-relevant screw connections depend on reliable products and legal protection (via data as evidence) to prevent damage or expensive legal cases. Product safety is essential when it comes to this.

Other topics relating to assembly, such as modern production guidance or individualised instructions, are also gaining in importance – not least because of the urgently necessary productivity increase in Switzerland.

"Lean assembly" is the key word here, whose implementation takes place in the form of individualised yet quickly modifiable assembly lines as well as "lean-appropriate" operating equipment. In line with the trends, Brütsch/Rüegger Tools has greatly expanded its product and service portfolio. Today, it extends far beyond assembly technology and focuses increasingly on the interplay of technologies and economic strategies for process streamlining.



Brütsch/Rüegger Tools offers a wide range of proven hand tools and ...



... and both machines and electric tools for all metal-processing processes ...



... operating supplies (cloths and towels, work lights, etc.) to chemical-technical products ...



... to operating equipment and custom shadow boards.

### Above and beyond assembly technology

Our full range of assembly technology includes a huge selection of hand and power tools, chemical and technical products (adhesives, lubricants and cleaning agents ...), abrasives and shop equipment. Small machines and articles for complete workshop maintenance, such as ladders or industrial vacuum cleaners round off the portfolio. Thanks to our multi-brand strategy, you have access to all premium brands and will liaise with just one contact person who will provide solutions tailored exactly to your needs. That's why many of our customers value our own brands "FUTURO" and "NERIOX" in addition to the premium brands. Both offer unbeatable value for money.

### Highly efficient in procurement and consulting

Brütsch/Rüegger Tools also helps you to minimise your procurement process costs. In a single order, you can combine any number of products from different manufacturers and thus drastically reduce the total number of your suppliers. If you have any questions about applications or products, our specialist consultants and application specialists are always at your disposal. Our goal is to always offer you the best range of equipment. For this purpose, we stock a huge assortment of no less than 30,000 items from a total of 700 suppliers in the field of assembly technology and make sure it is always up to date. So that you don't lose sight of it all, we have brought everything together in one easy-to-use location: our [ToolShop](#).

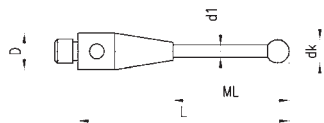
### Tailored to your requirements: our ToolServices

As a single-source supplier, a professional service is a core component of our business. In addition to our range of training courses and seminars, we also provide you with personal support for the layout of operating equipment. Individually equipped tool sets and cases or foam inserts for optimum workplace organisation have been our "service bestsellers" for years. Last but not least: For the calibration/repair of torque tools, we draw on our partner Metron Measurement. Their certified laboratory, certified by the Swiss Accreditation Body (SAS), calibrates all torque tools and tension testers from our range. What does our close co-operation with Metron mean for you? Short lead times and optimised processes!

## Measurement technology



### Precision for the highest standards



Nüssler's high-quality range includes various standard series of micro styli **145480**, styli **146250**, adapters and star styli **145620** for co-ordinate measuring devices, measuring arms and height gauges. Materials such as ruby, carbide, ceramic, silicon nitride or diamond are preferred for the measuring ball. Steel, carbide, ceramic or carbon fibre are used for the shaft.

Special styli can be made according to customer specifications. For this, we require the following dimensions: Total length (L), thread (M2-M5), insert length (ML), ball diameter (dk), shaft diameter (d1), holder diameter (D) as well as the material for shaft and ball.

### Magnifier lamp LUXO Wave LED

**Promotion**



The LUXO Wave magnifier lamp is a table lamp with a spring-balanced arm, ideally suited for industrial applications. With 2 LED modules, it offers shadow-free illumination with light from both sides, or alternatively a three-dimensional enlargement by means of one-sided light from the left or right side. The primary lens with 3.5 dioptres or 5 dioptres (depending on the model) allows a total magnification of 188% or 225% respectively, as well as distortion-free viewing. Take advantage of our current promotion, valid until 29.02.2020.

**151221.0100** at a special price of **CHF 510.00** instead of CHF 600.00  
**151221.0200** at a special price of **CHF 530.00** instead of CHF 625.00

### Clinotronic PLUS

**SwissMade** – The Clinotronic PLUS **175800** compact inclinometer with a measuring range of  $\pm 45$  degrees has four precisely machined measuring bases on the housing circumference. The hard-anodised aluminium housing and the robust sensor cell ensure high performance even in challenging conditions. The Clinotronic PLUS complies with strict CE standards (immunity to electromagnetic influences). The use of commercially available 1.5 V batteries ensures continuous power supply no matter where you are in the world.



### Analogue load cells

Load cells measure and display forces and weights. The devices operate according to a closed circuit principle (hydraulic). The load cells are suitable for resting and pulsating loads. The pressure plate is similar to a swash plate and adapts to the force-transmitting stamp. The piston stroke is up to 0.5 mm. On customer request, a test report, traceable to national standards, is issued.

Further information is available at [www.brw.ch](http://www.brw.ch)

### Roughness tester FUTURO

**SwissMade** – Portable roughness tester that meets every requirement in the workshop and measuring room. From simple roughness measurement on the machine to measurements in the measuring room with stands, special probes and other accessories. The device works with the tried and tested "analogue Hall effect technology" in use since 1995. This results in above-average linear output signals. **ABSOLUTELY UNIQUE!** With the VHF version, you get ONE device with which both **skid and skidless tracers** can be utilised!



### Diameter checking – fast and easy

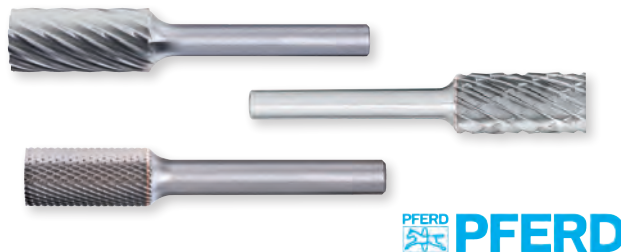
With the high-precision plug gauges **164110** from AZUREA (**SwissMade**) you can quickly and reliably check bores of  $\varnothing$  0.05 to  $\varnothing$  20.0 mm. In our ToolShop at [www.brw.ch](http://www.brw.ch) you will find the specific usable lengths and accuracies for the corresponding dimensions. The high-precision processing of the gauge body, the high-quality materials used and the ergonomic handle made of anodised aluminium with clear labelling make these pin gauges a top product.



## Manufacturing technology



### Increased deburring productivity



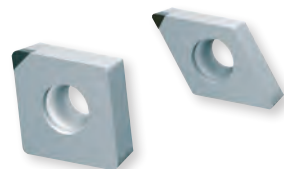
Manual deburring is a process that is often given too little attention. It is preferable to try to do this directly on the machine. However, this is not always possible or the fastest or most efficient way. That is why a lot of manual work is still used here. Important factors here are the surface quality of the workpiece, the smooth running of the milling bit, the noise development and, of course, the service life. This is also essentially dependent on the material of the workpiece, which is what gave rise to the special lines (teeth) designed for this purpose. For example, the **INOX** teeth for machining stainless steel and soft titanium **228450** to **228480**. With this, up to 100% higher machining performance is achieved compared to milling bits with conventional cross toothing.

The **ALU 228500** to **228580** teeth have been specially developed for the machining of aluminium. It is characterised by long tool life and quiet milling action. For even better results, this is also available with HICOAT coating HC-NFE.

For hard materials, the **MICRO** toothing **228800** to **228830** is the first choice for fine processing up to 68 HRC with high surface quality. Take advantage of the **promotion from 21.01** to 29.02.2020

### Reduce costs with CBN

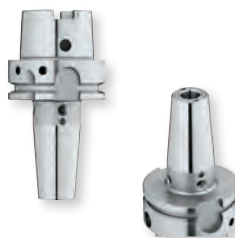
Cubic boron nitride (CBN) is known as the second-hardest material after the diamond and, unlike diamond, shows little chemical reaction in the processing of ferrous metals. This reduces grinding operations and reduces machining costs of hardened steel up to 68 HRC with lightly interrupted and smooth cutting. The CBN disposable inserts are available as DCMW (**310900**), CCMW (**310905**), VBMW (**310910**), CNMA (**310915**) and CNMA (**310920**) starting at **CHF 38.40**.



**FUTURO**

### Shrink chucks from 3 mm diameter

The shrink chucks **FUTURO TOOLFLUSH 331522** are currently in high demand. In order to make your workpiece even more accessible, further dimensions have been added to the range. New in the range are 3 mm, 4 mm and 5 mm diameter holders in the 80 mm and 130 mm projection lengths. In the 6 to 16 mm diameter range, the projection length 160 mm was added. From a diameter of 6 mm, the coolant holes can be resealed.



### Optimum space for turning

When performing turning operations with the tip positioned at an angle, the space is not exactly optimal. This is significantly easier with the new extra-slim revolving centre **344505**. With the 60°/30° double cone and the specially designed bearing, we achieve a minimum interference contour and do so with a concentricity of **max. 0.003 mm**.

These, as well as heavy-duty versions, are also available with a carbide tip on request.



**FUTURO**

### Fight wear with the FUTURO D-Cut

For optimal processing of graphite and copper we recommend the **FUTURO D-Cut** cutters. The diamond layer is specially developed for this purpose and is extremely abrasion-resistant. The CVD coating achieves optimum results with maximum accuracy. The dimensional accuracy is **less than 5µ** and is documented for **every** tool. With the **227700** double-edged, the **227710** four-edged copy milling cutters and the **227720** ball cutters, an extensive range is available from our warehouse.





## Assembly technology



### Silicone spray FUTURO

#### Promotion



#### FUTURO

**Protects, maintains and insulates** plastic, rubber and metal parts permanently with good lubricant effect. Protects electrical contacts against moisture, UV protection, prevents squeaking and creaking noise between different materials, e.g. metal/plastic etc., serves as an assembly aid, e.g. for hose connections.

Container: Spray can  
Contents: 500 ml

**523020.0100** at a special price of **CHF 4.90** instead of CHF 7.60  
Valid until 31.01.2020



### PTFE dry lubricant CRC

PTFE dry lubricant **NSF H1 CRC** forms a dry lubricant film based on PTFE. The PTFE film is oil, grease and silicone free, has a good non-stick effect and is temperature resistant.

Container: Spray can  
Contents: 500 ml

**523627.0010** at a special price of **CHF 14.90** instead of CHF 18.00  
Valid until 31.01.2020

#### Promotion



#### Promotion



### Industrial cleaner CRC

Industrial cleaner **NSF K, A8** is a highly effective cleaner and degreaser for the food technology industry. The high cleaning power in combination with a short drying time allows fast work with little effort.

Container: Spray can  
Contents: 500 ml

**523650.0010** at a special price of **CHF 10.90** instead of CHF 13.20  
Valid until 31.01.2020

### Windscreen cleaner polyston®

Winter windscreen cleaner polyston® Classic made in Switzerland for good cleaning performance up to -20°C. Ready-to-use mixture for car windscreen and headlight washer systems.

Container: Canister  
Contents: 5 l

**690100.0200** at a special price of **CHF 11.85** instead of CHF 13.50  
Valid until 31.03.2020

#### Promotion



#### Promotion



### DYMO labelling device

Use the electronic labelling device **DYMO LabelManager™ 420P** on its own – or connect it to your PC or Mac via USB.

**496521.0100** at a special price of **CHF 134.90** instead of CHF 149.00  
Valid until 31.01.2020

**10% discount** on suitable label cassettes **496600/496615/496625** can be found in our ToolShop (valid until 31.01.2020).

## Standard parts



### Hoists, brochure "Lifting means"

#### Promotion



Make your safety in the area of lifting technology a high priority in 2020 and benefit from our promotional prices right at the start of the year! As a result of varying customer needs, our assortment has grown continuously and today includes 34 different hoists! A small extract from the promotional brochure:

- 862161** Rotatable safety hoist ring, DSR UP 360°: up to 67% higher rated load with the same thread size compared to the previous model, 27 dimensions, of which 10 inch dimensions
- 862191** Safety hoist ring, DSS UP 360°: Up to 22% higher rated load with the same thread size compared to the previous model, 29 dimensions, now also inch, M24 to M100, up to 32 t rated load
- 862180** Safety hoist ring SEB UP 360°: rated load 0.5 t to 16 t, aligns itself automatically for safety! (therefore, it is not necessary to align manually in the direction of the load)
- 862106/862108** Hoist ring MA / Ring nut FE: High-strength steel, grade 8, safety factor 4, EN 1677-1, extremely attractive prices, top price-performance ratio

Promotion duration: 01.01.2020 to 29.02.2020, order our promotional brochure "Lifting means" under the **code 41.01**.

### Swiss Plastics 21 to 23 January 2020

The 6th Swiss Plastics trade fair from 21 to 23 January 2020 in Lucerne is coming ever closer. **Our trade fair focus:** AHP hydraulic cylinders, thermal insulating sheets, hoists, special parts according to drawings, pneumatic systems, guide elements Bolexp and much more. Visit us at our stand **in Hall 2, stand B2042**. Free admission tickets at [www.brw.ch](http://www.brw.ch) or by email to: [Verkauf.norteile@brw.ch](mailto:Verkauf.norteile@brw.ch)  
Your Standard Parts team is looking forward to your visit!



#### Promotion



### Promotional brochure "Product sets"

Take advantage of our selection of product sets, which eliminate the need for tedious searching and chasing up new pieces for common dimensions! The promotional brochure is still **valid until 31.01.20** and contains more than 40 different product sets from various fields and applications at top promotional prices.

You can find all the product sets from our promotion at: [www.brw.ch](http://www.brw.ch) > Standard Parts > Promotions.  
Or request the **promotional brochure "Product sets"** now under the **code 42.01**.

### Adjustable inserts 2020 – Don't miss out!

It is high time the adjustable inserts in your moulds were updated! We will give you until the end of February 2020 to benefit from these top prices. Our prices are valid from **just one piece and are available for next day delivery to your address from the Urdorf warehouse**. Use **code 43.01** to request our **promotional flyer**.

You will also find the adjustable insert for DATI® 2900, which prevents twisting by means of an individual locking mechanism.

#### Promotion



#### Promotion



### Ejectors

Until **31.01.20**, you can order high-quality ejector products boasting an unbeatable price-performance ratio. Many different dimensions and variants are available from our Urdorf warehouse.

**Do you want to top up your supply at the beginning of the year?**

Send us your annual requirements by email to: [verkauf.normalteile@brw.ch](mailto:verkauf.normalteile@brw.ch) or contact our specialists in Standard Parts sales and be prepared to be pleasantly surprised by our offer. You don't know what you're missing out on until you see for yourself!

## Personal Protective Equipment



### Brütsch/Rüegger Tools gloves range



MAXIFEX, MAPA, SHOWA, ANSELL, KCL, UVEX and many more. Gloves, one of the more difficult topics when it comes to personal protective equipment. Each brand has its strengths and areas of application and it is often very difficult to meet all the needs of employees with just one brand. Not only do the gloves have to be comfortable, they must also protect the wearer. It is often the case that different brands of gloves are used, which results in several suppliers of gloves.

Brütsch/Rüegger Tools unites many well-known glove brands under one roof. SHOWA, ANSELL, KCL, UVEX etc. are trademarks that you can obtain from Brütsch/Rüegger Tools from a single source. Don't miss out and get all your

gloves from the Brütsch/Rüegger Tools warehouse.

Call us on **+41 44 736 36 55** and we will provide you with the most efficient solution for acquiring your PPE.

Do you need an alternative? Do you want to test something new? Do you want to pay less for the same protection class?

Gloves from our NERIOX and FUTURO range do all this and more. A trial run is definitely worth it! Call us and request a free sample of our NERIOX/FUTURO gloves.

### REEBOK safety shoes

The REEBOK brand is well known in the sports sector and now also offers safety shoes. The shoes fulfil the latest safety requirements and leave nothing to be desired in terms of comfort! We want to give a special mention to the insole with memory function which adjusts the footbed to your sole within a very short time. A completely new feel. Call us on +41 (0) 44 736 63 55 to ask for a pair to test.

The REEBOK is available as SIP **534035/36** or S3 **534242**.

**New**



### NERIOX Winter leather gloves

Leather gloves that protect your hands and keep them warm! The NERIOX Winter leather glove **530014** is made of robust cowhide leather and protects you from hazards at work.

The inner hand lining made of warm, synthetic material protects against the cold. The glove is suitable for handling and working with hand tools. The NERIOX Winter is available from stock in sizes 9–11. The entire range of NERIOX gloves can be found by visiting [www.brw.ch](http://www.brw.ch).

**New**

### Safety helmet DI!ROCK

DI!ROCK – The modern helmet in a mountaineering design is becoming more and more popular at Brütsch/Rüegger Tools. Due to its short brim and the 4-point chin strap, it is often used for working at heights. Helmet wearers particularly appreciate the low weight and the ventilation openings on top. This allows the warm air to escape and ensures a pleasant head climate. Call us on +41 (0) 44 736 63 55 to ask for one to test. The DI!ROCK is available from stock in blue, white, yellow and orange.



**New**



### Coated winter gloves

The Snow Fighter is the perfect glove for employees who are exposed to the cold.

The NITRAS Snow Fighter **530807** keeps hands warm with its soft lining. The Snow Fighter WV with a sanded full coating is a new addition to the range. This offers additional protection against moisture and keeps hands dry and warm. Both models are available in sizes 8–11 from the Brütsch/Rüegger Tools warehouse. The entire range of gloves can be found by visiting [www.brw.ch](http://www.brw.ch).

## Last Minute



### H+S precision gauge strips and foils

You need quality – we deliver it quickly and reliably. The comprehensive h+s range is available exclusively from Brütsch/Rüegger Werkzeuge AG. The h+s strips and foils are available from stock in various materials, varying thicknesses from 0.005 to 2.0 mm and in widths up to 150 mm. The precision gauge tape can be cut to your required width. Laser cutting parts are manufactured using a drawing or CAD file. Thanks to flexible production systems, even the smallest batches can be delivered quickly, reliably and cost-effectively.

We would be happy to advise you on all matters relating to material and quality.

### NC precision drill chuck promotion

Benefit from the slim NC precision drill chuck promotion until 31.1.2020. The slim SK 331105 and HSK-A 331544 with improved workpiece access.

For improved clamping safety independent of the direction of rotation with high clamping torque up to 15 Nm.

The precision drill chuck is available in the following clamping ranges: 0.3–8 mm, 0.5–13 mm and 1–16 mm.

**FUTURO**

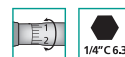


### Torque screwdriver set PB

**PB 9320 DigiTorque set B2**, in a practical tool box for laboratory, development, hobbies etc., with DigiTorque V02 torque handle and PB C6 bits for slotted, Phillips, Pozidriv, hex and Torx® screws.

Range: 0.4–2.0 Nm

**432048.0100** at a special price of **CHF 199.00** instead of CHF 251.90 Valid until 31.01.2020



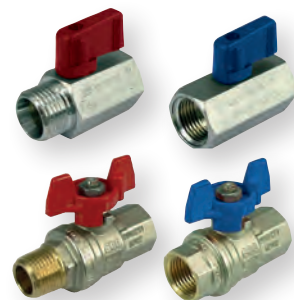
### Ball valves Promotion until 31.01.20

All ball valves have the following characteristics: One-piece body construction, complete through-access, housing: nickel-plated brass, ball: hard chrome-plated brass, ball seal: PTFE, spindle seal: FKM, colours of handles/levers: red/blue.

**838740 and 838743:**  
Operating temperature: -20°C to 120°C, operating pressure max. 30 bar, thread: ISO 7/1 (inside: G, outside: R)

**838746 and 838755:**  
Operating temperature: -40°C to 170°C, operating pressure max. 40 bar, thread: ISO 228 (inside: G, outside: R)

**Promotion**



**Promotion**



### Hot prices for cold days

Take advantage of our promotional prices!

**534331** Winter boots Alaska S3, size 39–47 at a **special price** of **CHF 119.00** instead of CHF 153.00

**598511** Pilot jacket various colours, size S–XXL at a **special price** of **CHF 49.00** instead of CHF 70.50

**536376/536377** Softshell jacket Norton, size S–XXXL at a **special price** of **CHF 58.00** instead of CHF 78.00



## OUR PARTNER



## SERVICEBOX



### ToolBook, Edition 19

The tool catalogue with the complete range on 3200 pages  
**code 01.04**



### NERIOX Booklet, Edition 2019

**Code 02.01**



### FUTURO Booklet, Edition 2017

**Code 03.01**



### Joining Technique Edition 2019

**Code 04.01**



Enables highest measurement accuracy in mass flow, volume flow and density: the newly developed Coriolis flow meter "Promass Q 300I/500".

### Flow measurement experts Endress+Hauser Flowtec AG

At Endress+Hauser Flowtec AG you can feel the atmosphere of a traditional family business. The average length of time that an employee remains at the 42-year-old company, which is one of the world's largest providers of flow measurement technology, is an entire decade. Of the total 2000 employees, 1200 work at the headquarters in Reinach (BL). The main customers are the food industry, water and waste water sector, the chemical industry, life science, oil and gas, raw materials and metals, power plants and energy.

Founded in 1953, the Endress+Hauser Group, to which Flowtec AG belongs, generates a return on sales of 13 percent and has 70 percent equity.

Interesting fact: In 2018, the group submitted no less than 287 patent applications. With sustainable energy management, the Basel-based company uses both solar energy and geothermal energy for their production facilities.



Batch size 1 as standard: final customer assembly at Endress+Hauser Flowtec AG.

## Endress+Hauser Flowtec AG – At the pulse of measurement

Whether for measuring methane content in biogas production or for monitoring the steam quality in bread production, Endress+Hauser Flowtec AG offers high-quality equipment for accurate measurement and dosing of liquids, gases and steam.

The solutions provided by the industrial flow measurement technology and fluid management solution specialist are used worldwide in a wide range of applications. The requirements vary according to the industry. While high precision, purity and safety are required in the pharmaceutical industry, the systems on an oil tanker must operate at a wide range of temperatures.

Increasingly, operators are linking measurement and dosing technology to their digital control systems. This enables them to gain valuable knowledge from their processes and to continuously optimise them. In other words: the easiest way to save money is to reduce resource consumption. No wonder the devices of this traditional family-owned company are booming. It produces every flow meter just-in-time and exactly to customer requirements at six production sites worldwide.



Yves Gattlen: "Thanks to the screw systems, we gain new process data with which we optimise the assembly."



The new assembly workplace was designed for this ultrasonic measuring device: the "Prosonic Flow G 300I/500".



Also designed with ergonomics in mind: the new assembly workplace based on the VDI 2862-2 directive.



Immediately accessible: offset drivers from HS-Technik and torque/offset wrenches from SCS Concept.

### Two highlights, five measuring principles

The "Heartbeat Technology" is a product highlight with which Endress+Hauser Flowtec combines several diagnostic, verification and monitoring functions for process optimisation. Another innovation is the "Promass Q 300I/500" for the precise flow measurement of media with air pockets. This includes milk, for example, which has air pockets due to the protein and fat structure. This flow meter reduces the measurement errors caused by this to a minimum.

To cover the wide range of applications – which, by the way, are mainly maintenance-free instruments – the Basel-based company uses five measuring principles (Coriolis, magnetic-inductive, vortex, ultrasonic, thermal). A product portfolio of 30 million variants also requires a perfect organisation of the material flow. Since a plant failure could cause enormous costs for the end customer, quality assurance is a top priority for all processes.

### Process reliability and standardisation

Yves Gattlen, Production Project Manager at Endress+Hauser Flowtec's Customer Assembly Department, explains: "We continuously optimise our screw assembly processes." For the industrialisation of the new ultrasonic flow meter "Prosonic Flow G 300I/500", the expert for industrialisation, together with the Engineering department, has designed a new workplace with standardised processes. In accordance with the guideline VDI 2862-2, each screw case is now precisely defined (1, 2, 3) and assigned to a risk class (A, B, C). All screw processes are programmed on this basis. "VDI 2862-2 requires minimum traceability of OK/not OK for risk class A, but depending on the screw case, comprehensive documentation with screw curve makes sense for us," Yves Gattlen continues. When designing the screw assembly, the variety of fittings was the greatest difficulty. Because each measuring device has its own specifications.

### System with digital tightening solutions

The one-piece-flow assembly line, which is carried out in a model mix, required a process-compatible and "reliable" design. To optimally evaluate the new screw system, Yves Gattlen brought in an assembly technology specialist. Due to his wealth of experience as a consultant, Frank Thies, Strategic Account Manager at Brütsch/Rüegger Tools, was quickly chosen as the man for the job.

After weighing up all options, the project manager, together with the internal engineering team, decided to use HS-Technik gun and offset drivers and torque/offset wrenches from SCS Concept. The decisive factors for the electronic and interconnectable multi-brand solution were the strong, global sales and support services of Brütsch/Rüegger Tools. Yves Gattlen sums up: "Last but not least, it was a question of providing our assembly staff with a system that would enable them to do their work correctly, reliably and efficiently."