HEDELIUS

CUSTOMER MAGAZINE 08/2021

HED*line*

THE BIG HEDELIUS IN-HOUSE EXHIBITION.

7th – 9th September 2021

CNC machining centres
Made in Germany.

THE BIG HEDELIUS IN-HOUSE EXHIBITION 2021.

Live in Meppen: 07 – 09/09/2021

Dear Ladies and Gentlemen,

from 7th to 9th September 2021, we would like to invite you to explore the latest developments in machining technology at our traditional HEDELIUS in-house exhibition in Meppen. Discover 15 HEDELIUS machining centres, some operating live. We will be presenting, for example, the new TILTENTA 11 with a remarkable Y travel length of 1,100 mm and various ACURA machining centres with robot and pallet automation, including our MARATHON P422 automation solution. This issue of HEDline will give you an idea of what to expect.

In addition to HEDELIUS, well-known co-exhibitors will be presenting their products and services – from CAM systems to tools and tool holders, clamping and measuring technology to equipment optimisation products.

Take the opportunity to speak to industry colleagues in a relaxed atmosphere. Our exclusive catering service will provide food and drinks continuously.

We look forward to welcoming you to Meppen again. Naturally, with a comprehensive hygiene system in place.

Sign up now.

D. Hempelmann

Dennis Hempelmann
Managing Director
HEDELIUS Maschinenfabrik GmbH

15 HEDELIUS MACHINING CENTRES

Some operating live!

ACURA 50 EL AND ACURA 65 EL

with a wide range of pallet and robot automation systems

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KEY DETAILS AT A GLANCE

DATES

Tuesday	07/09/2021, 9 am to 5 pm
Wednesday	08/09/2021, 9 am to 5 pm
Thursday	09/09/2021, 9 am to 5 pm

LOCATION

HEDELIUS Maschinenfabrik GmbH
Sandstraße 11, 49716 Meppen, Germany

MAXIMUM NUMBER OF VISITORS PER DAY

150 people

ENTRY REQUIREMENTS

1. Proof of full Corona vaccination, recovery from Corona, or a negative test result (within last 24 hours)
2. Advance registration with full contact details and the date you would like to attend the exhibition

REGISTRATION

Online:	www.hedelius.de
Email:	info@hedelius.de
Fax:	+49 (0)5931 9819-10

DATA PROTECTION

The collection and processing of your personal data takes place exclusively for a specific purpose within our company. No further use or disclosure of data to third parties will take place, except for contact tracing in the context of the coronavirus pandemic up to three weeks after the event. We also refer you to our privacy policy at: www.hedelius.de/en/data-protection-declaration

CONTACT PERSON

Steffen Kathmann
steffen.kathmann@hedelius.de

MARATHON P422

the automation solution from HEDELIUS:
machine + automation + service all from a single source

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TILTENTA 11

with a remarkable
Y travel length of 1,100 mm

Pages 8/9

SMALL DIMENSIONS. MAXIMUM PRECISION.

The compact 5-axis machining centres of the **ACURA series** with rotary/tilt table mounted on both sides

ACURA 65

ALSO WITH 80-TOOL MAGAZINE

ACURA 85

ACURA 50

The 5-axis machining centres of the ACURA series are impressive in terms of both highly productive parts production and high-performance machining. The constant vertical axis design eliminates the disadvantages of many conventional machining centres and ensures higher accuracy and better machining performance. Thanks to its small dimensions, an ACURA can be integrated into almost any manufacturing plant. A large sliding door and low machine bed height provide perfect access to the rotary/tilt table. This facilitates the setting up and control process for single part and small series production. The stainless steel cover and vertical casing within the workspace ensure ideal chip removal and reduce cleaning effort.

ACURA 50/65/85
LIVE at the in-house exhibition
7th – 9th September 2021

THE STRONGEST COMPACT MACHINE.

The **ACURA 85** with large travel lengths of 900 x 850 x 700 mm (X/Y/Z)

- Clamping surface Ø 850 x 750 mm, clamping weight max. 1,000 kg
- Forward-facing clamping surface for better access
- 80-tool magazine that can be operated from the front
- Crane loading possible without restrictions
- 5-axis simultaneous milling
- 50 kW milling spindle
- Perfect for automation

VERTICAL MILLING PERFECTED.

The vertical 3-axis machining centres of the **FORTE series** with a modern travelling column design

Workpieces of up to 2,000 kg can be processed on the fixed machine bench without restricting the high dynamics of the machine. Thanks to the special design of the travelling column – made wholly of grey cast iron, with the milling spindle at a constant distance from the guide shoes of the Z axis – the series is impressive for its remarkable precision, surface quality and cutting performance. It provides a superb solution for access to the working space and chip removal. Perfect for processing heavy workpieces, e.g. in toolmaking, but also for large chip volumes, e.g. in aluminium machining.

FORTE 50/65/85
LIVE at the in-house exhibition
7th – 9th September 2021

SMALL POWERHOUSE.

The ultra compact **FORTE 50** with large, fast tool changer

- Top performance with a footprint of only approx. 3.9 x 3.4 m
- Generous X travel length of 1,120 mm
- Large Z travel length of 550 mm
- Parallel tool magazine loaded during main processing time with 55 or 80 positions
- Completely sealed-off workspace
- Vertical stainless-steel covering for optimised chip removal

FOR ANYONE PLANNING BIG THINGS.

The high-performance long-bed milling machines of the **TILTENTA series** with infinitely variable, pivotable main spindle

TILTENTA 6-2300

TILTENTA 9-2600

TILTENTA 11-2600

TILTENTA 7-2600

The 5-axis machining centres in the TILTENTA range perform all sorts of machining tasks in the areas of mechanical engineering, tool and mould construction, shaft and roll machining, and in the aerospace industry. The large work area with infinitely variable, pivotable main spindle allows for the vertical machining of long workpieces weighing up to 6,000 kg. Moreover, the integrated NC rotary table and a workspace partition also offer precise 5-side machining of parts weighing up to 1,800 kg in pendulum mode. The machining centres are notable for their vertical stainless steel covers, allowing optimal chip removal and the full encapsulation of the working area as standard.

TILTENTA 6/7/9/11
LIVE at the in-house exhibition
7th – 9th September 2021

THE NEW SIZE.

The **TILTENTA 11** with an extra long Y travel length of 1,100 mm

- Extra-large Y travel length of 1,100 mm
- Ideal for powerful face machining of cross beams, shafts and other longer workpieces as well as for precise machining of cubic workpieces
- High table load (6,000 kg fixed table, optional integrated 1,800 kg heavy-duty rotary table)
- Utmost precision across four axes in the tool and one axis in the workpiece
- Fast tool change in a few seconds despite travel lengths of up to 4,600 mm
- Perfectly designed workspace with vertical slat covers and good accessibility

“PRECISION AND FLEXIBILITY ARE EVERYTHING”

In 2019, special machine manufacturer Piras Metalltechnik invested in its third HEDELIUS, a TILTENTA 9-3600. Piras is characterised by its precision and flexibility, and so this machine is an ideal fit.

Read the full case study here.

A quarter of a century has elapsed since Guido Piras and his wife Monika founded Piras Metalltechnik GmbH & Co. KG in the Fichtel Mountains. Having started out as a small contract manufacturing firm, the company, which is located in the village of Weißenstadt (population 3,000) today has 25 employees and offers customers from Germany and further afield innovative complete solutions in mechanical engineering, metal technology, electrical engineering, automation and special machine construction. With its modern, diversified fleet of machines, the company covers a wide range of production processes and batch sizes, and manufactures almost 100% of its products in-house. Guido Piras also swears by the faithful services of three CNC machining centres from HEDELIUS.

From contract manufacturers to special machine manufacturers

The purchase of the first CNC machine in 1998 marked a real milestone in the company’s history. In 2013, the first of two 5-axis HEDELIUS machining centres joined the fleet. “Not only did it allow us to machine long workpieces with precision, but we were also able to manufacture series components more efficiently in pendulum mode,” Guido Piras explains, alluding to the increased challenges of flexibility in production. “And they are still in use today.”

Piras and his employees attest to the great flexibility and high reliability of HEDELIUS machining centres. Image (from left to right): Stefan Lautenbacher, Dominik Schöffel (both CNC machine operators) and Guido Piras (Managing Director).

The facts

Company:
Piras Metalltechnik GmbH & Co. KG in Weißenstadt, 25 employees

Task:
Flexible production of series parts and highly complex individual parts for special machine construction

Solution:
5-axis machining centre **TILTENTA 9-3600** with 180-tool standby magazine

Benefits:
- High flexibility & precision
- Setup optimisation

The 180-tool standby magazine has long delighted Piras, and has saved the company vast amounts of time and money. All three HEDELIUS machining centres have their own standby magazine.

“The design of the TILTENTA 9 is successful in every way.”

Guido Piras, Managing Director
of Piras Metalltechnik GmbH & Co. KG

Stand-by magazine always available

From the very outset, both machines included a 180-slot standby magazine that automates the tools required and makes them available for use within seconds. “We were hugely impressed by the standby magazine, as hardly anyone else was offering anything like that at the time,” says Piras, acknowledging the massive cost and time savings that can be achieved for a wide range of products by eliminating the need to change tools manually. Given this background, it is hardly surprising that the company’s third HEDELIUS machine, a TILTENTA 9-3600 purchased at the end of 2019, also featured a standby magazine.

Highly complex components

With its large travel lengths of 3600 x 900 x 900 mm (X/Y/Z), it is the biggest machining centre in the fleet to date. Equipped with a sixth horizontal axis, the TILTENTA 9-3600 is typical of the flexibility and precision that characterise production at Piras. Custom and series components are produced, sometimes in unusual shapes, and in a wide variety of dimensions and batch sizes. When it comes to special machine construction, there is particular demand for highly complex components, which can be manufactured to reliably high quality standards using the TILTENTA 9-3600. The ability to apply face machining to long workpieces with precision has paid off time and time again.

“Actively thinking”

Piras has long appreciated the technical advantages of his three HEDELIUS machining centres: “Precision and flexibility are paramount for us, and the HEDELIUS lives up to that one hundred percent,” he says. High praise for the engineering expertise of the Emsland based firm. He now knows that the overall picture is completed by “superb service”: “We feel very well looked after here.” Piras has also received exemplary customer service from HEDELIUS following his latest acquisition: “You sense that they’re really thinking actively about your needs, as the TILTENTA 9 design is a resounding success once again.”

HOW IS THE PRECISION ACHIEVED?

HEDELIUS Managing Director Dennis Hempelmann takes us behind the scenes.

Mr Hempelmann, one of the key distinguishing features of HEDELIUS machining centres is their high precision. What is the key to such high workpiece accuracy?

Dennis Hempelmann: Many factors come together here. One factor is the machine itself. The design, components and software all have an influence on the processing result. However, many additional aspects must also be taken into account, from the location of the machine, measuring devices, clamping devices and tools to the qualification of employees.

Your portfolio continues to develop. How do you bring these aspects together in the development of a new machine?

Making it work depends on the respective field of application. Basically, in the first phase of every new machining centre development criteria such as stability, accuracy, dynamics, automation, space requirements, transport dimensions and manufacturing costs are in conflict with each other and must be weighted with a view to the subsequent area of application.

As our machining centres are designed for a wide range of applications in machine and tool construction, the criteria of stability and accuracy are of greater importance here. This is also how the special design of the TILTENTA machining centres came into being in 2008. With their constant projecting Y axis, they score with high rigidity and precision over the entire travel range of the Y and Z axis.

Constant performance thanks to constantly projecting Y axis

The results were so impressive that we also developed the compact 5-axis machining centres of the ACURA series based on this design.

At the outset, you also mentioned that the choice of components was an important factor for precise workpiece machining. Which assemblies are particularly important here?

The travelling column, the beds and the rotary/tilt table units should be highlighted as particularly important assemblies. HEDELIUS manufactures and measures these completely in-house. In addition, we use pre-aligned roller guideways from German and Swiss manufacturers.

The alignment of the guideways requires special care and experience. Fine alignment with optical measuring technology means that the Y axis rails, for example, are assembled with a maximum straightness of 5 µm. At the end of assembly, the positioning accuracy, repeat accuracy, straightness and backlash of the linear axes are checked and documented via a laser interferometer. For example, the positioning accuracies of the linear axes are regularly below 6 µm as per ISO 230-2.

Travelling columns, beds and rotary/tilt table units are manufactured and measured in-house.

Pre-aligned roller guideways from German and Swiss manufacturers

Laser-based angle measuring device for calibrating rotary axes

Direct length measurement systems

So precision is the top priority right from the assembly of the machining centre – but how is workpiece accuracy ensured over the long term in everyday machining operations?

We exclusively install direct length measuring devices in our machining centres for position detection of the X, Y and Z axes. For example, the position control loop includes the complete feed mechanism. This type of position determination is also called “closed loop” measurement. Mechanical transmission errors can thus be detected by the linear encoder on the feed axis and adjusted via the control electronics. Direct linear encoders are essential for machines that require high positioning accuracy and machining speeds. This is why all HEDELIUS machining centres are equipped with direct measuring systems as standard.

For 5-axis machining centres, we also use direct angle sensors in the centre of each axis of rotation in the integrated rotary tables, the swivel spindle drives and the rotary/tilt table units.

By using laser-based angle measuring devices, we can measure the positioning accuracy of rotational axes with a resolution of ±1" on request and calibrate the axes to the highest positioning accuracy. As a result, positioning accuracies of less than ±5" can be achieved even with series components. On some models, it is also possible to optionally equip the C axis with angle measuring devices in a higher accuracy class in order to increase the positioning accuracy to below ±2.5".

Slip-stick-free roller guideways combined with direct distance measuring systems and high angular accuracy enable the milling of fits in a quality of IT6 and better in most cases, which reduces both the production time and the number of spindle tools required. We are happy to give our customers a demonstration of the high circular shape accuracy of our machining centres with a Renishaw measuring device.

RENISHAW BALLBAR TEST FOR ACCURACY TESTING OF MACHINING CENTRES

The Renishaw ballbar test has established itself as a fast and simple test method for the accuracy of machining centres. Within a few minutes, the measurement provides information on the interplay of two linear axes and the accuracy of a circular movement.

Nominal dimension		Basic tolerance	
over	to	IT6	IT7
50 mm	80 mm	19 µm	30 µm
80 mm	120 mm	22 µm	35 µm
120 mm	180 mm	25 µm	40 µm

Excerpt from the ISO tolerance system

Laser for tool measurement

Mechanical tool probe

Are there other measuring devices in addition to the length and angle measuring systems that ensure precision during machining?

Yes, 3D measuring probes, for example, are just as indispensable in today's production as the measuring systems mentioned above. 3D probes are used for everything from preparatory measurements, such as determination of the allowance, regulating measurements during machining, such as readjustment for fits, to monitoring measurement at the end of the programme for creating logs. Almost all machining centres today are also equipped with a switching tool probe or a laser for tool measurement.

Kinematic calibration

APPLICATION OPTIONS FOR 3D MEASURING PROBES

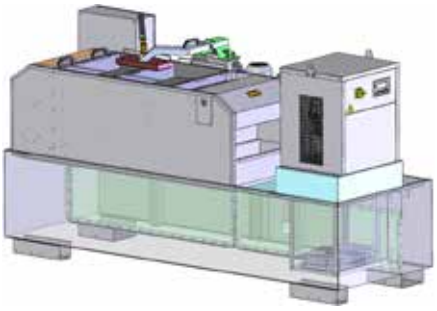
- Measurement of allowances with fluctuating blank dimensions, such as for cast or sawn parts
- Determining the workpiece orientation for establishing a coordinate rotation
- Adjustments to the machining process, e.g. tool deflection, workpiece deformation and thermal effects
- Testing of special features
- Tracking of deviations in characteristics via logs

To what extent can repeat accuracy also be applied to the production of complex parts?

The transformation chain, i.e. the position of the rotary axes in relation to the linear axes, can change permanently due to thermal conditions such as weather or process influences. If challenging parts are to be manufactured with high precision over a long period of time, the transformation chain must be calibrated regularly. With software options such as Heidenhain's KinematicsOpt cycle or Sinumerik's cycle 996, this calibration can be carried out directly by the machine operator in a matter of minutes.

Active spindle chiller to remove the heat generated in the spindle

Optional: integrated immersion cooler for cooling lubricant temperature control



Coolant system with immersion cooler (available from 2022)

High temperatures inevitably arise in the machining process, which can have a negative impact on manufacturing quality. How does HEDELIUS prevent this problem?

Yes. Any heat input into the workpiece and the tool can mean that permissible tolerances are exceeded and this, in turn, can lead to undesired outcomes. In other words, the quality requirements for the workpiece are then no longer being met.

In order to achieve the highest accuracy and reproducible results during machining, the ambient conditions must also be constant. For this purpose, it is particularly important to maintain the workpiece at a constant temperature during machining. This can be achieved by cooling the spindle and the coolant.

What does this mean in reality?

To remove the heat generated in the milling spindle, we equip the ACURA 65 series machining centres, for example, with active spindle chillers. In order to optimally control the cooling output, the spindle chiller is equipped with a temperature sensor attached to the machine bed, which permanently records the current bed temperature and from this specifies the target value of the cooling temperature.

Thanks to active cooling in combination with the high control accuracy of ±0.2 Kelvin, increased thermal stability is already achieved as standard. However, since the spindle cooling cannot remove all the heat, we have also installed optional temperature sensors on the spindle, the travelling column and, in some cases, also on the rotary axes to compensate for structural displacements via the control.

As already mentioned, active, controlled cooling of the coolant can also counteract the heat input into the material and tool. For this purpose, our cooling systems can optionally be equipped with an integrated immersion cooler for temperature control of the cooling lubricant.

Finally, Mr Hempelmann, can you tell us what HEDELIUS is currently working on?

We are expanding our own automation programme to provide our customers with optimal technical solutions for flexible, highly productive and high-precision manufacturing. Our MARATHON has already gone down well. In addition this year, we want to launch a smaller solution for automated 5-axis machining with the ACURA series. We are starting with a 6-pallet storage system for the ACURA 65. Based on this, an 8-pallet storage system for the ACURA 50 will follow next year.

Is this smaller solution ideal for smaller businesses looking to start automation?

Not necessarily. When we designed it, our focus was much more on automation accompanying the production process. In other words, this is primarily about set-up optimisation in small series production. Let yourself be surprised! (laughs)

Good. Now, this really is the last question. It cannot be ignored that there is currently a lot of construction work going on at the company premises. This means that HEDELIUS is investing, not just in product development, but also in infrastructure...

Indeed. We are currently expanding our office capacity by 650 square metres. The new premises should be ready for use by the end of October. They will primarily provide a modern working environment for Sales, Marketing and Customer Service. Further investments are planned for 2022. We will build another production hall and warehouse at our site in Meppen. Through this, we want to continue our growth course over the past few years.

But, one thing at a time. I am currently very much looking forward to welcoming our customers back to Meppen in person in a few weeks' time for our big in-house exhibition. A warm welcome awaits!

Expansion of the company building in Meppen: at the end of the year, the new premises for Sales, Marketing and Service should be ready for use.


06

FOCUS ON AUTOMATION.

Perfect automation with the 5-axis machining centres of the **ACURA EL series**

Greater productivity, more reliable delivery, less pressure on employees – there are plenty of good reasons to automate production. The 5-axis machining centres from the ACURA EL range are ideal for automation. The abbreviation “EL” stands for “external loading”, referring to the machine’s provision for loading pallets or workpieces into the workspace from the side of the machine.

SIDE LOADING.

- Outstanding accessibility of the workspace for individual part production during the day shift
- Workspace visible for optimised process control during automation set-up
- Crane loading remains possible without restrictions
- Little depth space required for easy integration into an existing production line

THE IN-HOUSE AUTOMATION SOLUTION FROM HEDELIUS.

ACURA 65 + multi-pallet storage system **MARATHON P422**

The 5-axis ACURA 65 machining centre in combination with the **MARATHON P422** multi-pallet storage system from HEDELIUS is a perfect unit for the automation of small and medium-sized series production as well as re-curring individual parts. Precise, user-friendly and flexible. With just one point of contact for the entire system.

22
Pallets measuring 400 x 400 mm

150
kg clamping weight

245
Tools

ACURA 65 + MARATHON P422

LIVE at the in-house exhibition

7th – 9th September 2021

- Machine + automation + service from a single source
- Intuitive, safe operation thanks to Heidenhain's continuous operating concept (TNC 640) – on the machine, at the pallet storage terminal and at the optional standby magazine's tool terminal
- Rotary/tilt table mounted on both sides for high-precision 5-axis machining
- Unrestricted access at the front due to loading from the left side of the machine
- Set-up of fixtures and tools (subsequent set-up with "zero" set-up time) while machining.
- Clamping of workpieces during operating time
- 965 mm loading height up to pallet top edge for user-friendly set-up
- Set-up optimisation with zero-point clamping elements from Schunk Vero NSA Plus
- Rotating storage/retrieval station with query sensor for safe operation (sensor detects whether there is already a pallet in place)
- Pallet pneumatically locked at set-up station for optimal clamping
- Small footprint

DOUBLE THE PRODUCTIVITY: THE TWINNER CONCEPT.

ACURA 50 EL + INDUMATIK Light 120 + ACURA 65 EL

Even more options, even more productivity: the TWINNER concept from HEDELIUS involves linking two 5-axis machining centres with a pallet handling system. A TWINNER with an ACURA 50 EL, an ACURA 65 EL and an INDUMATIK Light 120 will be on display at the HEDELIUS exhibition from 7th to 9th September 2021.

The Indumatik Light 120 loads the 5-axis machining centres with pallets measuring 400 x 400 and 200 x 200 mm. The demonstration unit holds a total of 33 pallets (12 measuring 400 x 400 mm and 21 measuring 200 x 200 mm). Of course, other pallet dimensions are available. Both machining centres have an HSK A63 spindle operating at 18,000 rpm and a standby magazine. A total of 480 tool slots are available across both CNC machines (235 tool slots on the ACURA 50 and 245 on the ACURA 65).

480
Tools

2
Milling machines

ACURA 50 EL + INDUMATIK Light 120 + ACURA 65 EL

LIVE at the in-house exhibition

7th – 9th September 2021

FOR ALL SITUATIONS.

Full order books? Both machines run automatically around the clock.

Need to make new parts? One machine runs through automatically, while the other makes the new parts.

Need to produce a single part quickly? One machine continues to run automatically, while the other produces the individual part.

As there's always at least one machine running automatically, it is possible to harness the full benefits of automation.

FIRST ONE, THEN TWO...

A TWINNER can also be integrated step-by-step into the production process. When starting out, for instance, you might purchase a machining centre plus automation. Once orders start increasing, you can expand your system by acquiring a second machining centre. Your space requirements and investment volume are significantly smaller than those of a conventional linear production system.

HIGH PRODUCTIVITY IN A SMALL SPACE.

ACURA 50 EL + multi-pallet storage system **EROWA ERC 80**

The EROWA ERC 80 loads the ACURA 50 EL 5-axis machining centre with pallets sized 320 x 320 mm. The multi-pallet storage system has capacity for 10 pallets sized 320 x 320 mm (option for 16 pallets), with a transfer weight of 80 kg. Alternatively, the pallet storage system can also handle smaller pallets, e.g. up to 24 pallets at Ø 210 mm. The special thing about this design is that it requires little space.

ACURA 50 EL + EROWA ERC 80
LIVE at the in-house exhibition
7th – 9th September 2021

- Super compact, very small footprint: approx. 4.5 m x 3.4 m
- Chaos-based production of different components
- Storage and retrieval station
- Priority-based workpiece supply

LARGE VARIANCE? HIGH NUMBER OF PIECES? BOTH!

ACURA 65 EL + robot cell **BMO Platinum**

The BMO Platinum robot cell is ideal for workpiece loading for up to two CNC machines. A 6-axis robot removes the workpieces from grid drawers and places them in the machine. In order to be able to produce small batch sizes flexibly and economically and to increase the unmanned running time of the system, there are also eight pallet spaces for holding the clamping devices. This means that the robot first inserts the required clamping device into the machine and then loads it with blank parts from the supply drawer.

ACURA 65 EL + BMO Platinum
LIVE at the in-house exhibition
7th – 9th September 2021

- Several product series in one production run
- Multiple gripping options
- For 8 pallets (395 x 395 mm) or 16 pallets (395 x 195 mm)
- 4 (optional 7) product drawers, refilling during operation possible
- Variable product heights with the freely divisible drawer system
- Transfer weight 24, 50 or 80 kg

“THIS LEAVES TIME TO ENJOY A GLASS OF GOOD WINE”

Using an ACURA 65 EL with BMO robot automation, the wine-growing machine manufacturer ERO manufactures different machine components in batches of 1 to 1,000 pieces – even unmanned.

Produce batches of 1 to 1,000 pieces unmanned.

Founded in 1965 by farmer Heinz Erbach, the company initially built modern stable facilities. A few years later, the company founder’s brother-in-law, professional winemaker Herbert Roth, joined the company. The name ERO was created from the first letters of the two forward-thinking relatives. Today, around 270 employees work for the company, most of them in the plant built in Simmern/Hunsrück in 2018.

Recognition for innovation

Innovative is a word often used when describing companies. But here it genuinely applies in several respects. The success story began 50 years ago with the first machine for viticulture: the ERO trimmer. The presentation of the first grape harvester in 1981 was another milestone in the company’s history and was largely responsible for its continual growth. In recognition of this development, the company has received several awards, such as the German SME Innovation Award and the Enovitis Award from Italian winemakers.

ERO GmbH’s best seller: the grape harvester

Batch sizes from 1 to 1,000 pieces

“In our modern halls – which contain more than 15,000 square metres of production space – we also want to produce using the most cutting-edge and best methods,” states Jan Inboden, who is responsible for ensuring operations go smoothly at ERO. He is constantly speaking to employees and is always on the front line. “We have a particularly wide range of components here, with batch sizes of 1 to 1000 units,” explains Inboden. He stands in front of the ACURA 65 EL from HEDELIUS and seems very satisfied: “It’s exactly what we were looking for. A 5-axis machining centre that can also manufacture parts in a ghost shift, i.e. unmanned. In conjunction with BMO’s robot automation, this works smoothly with HEDELIUS.” Inboden pulls out a workpiece and explains how a fitting was milled. It always looks the same even after dozens of units are produced: “Above all, we have impeccable quality in terms of dimensional accuracy and surface quality.”

180 tools on standby

Smaller batch sizes are also produced on the ACURA 65 EL. Quick access to the required tools is important to ensure the switch from one order to the next goes quickly and smoothly. Lengthy tool searches and replacements only

The facts

Company:
ERO GmbH in Simmern,
270 employees

Task:
Unmanned production of different machine components in batch sizes from 1 to 1,000

Solution:
ACURA 65 EL 5-axis machining centre from HEDELIUS with BMO robot automation

Benefits:
- Reduction in set-up time
- Increased productivity
- Flawless quality
- Employee-friendly working hours

Jan Inboden (left) with an employee, very satisfied with the ACURA 65 EL

“After work, the machine continues to work for us.”

Jan Inboden, Operations Manager at ERO GmbH

lead to unnecessary downtime and lower productivity. The HEDELIUS has also impressed ERO’s machinists in this respect. The standby magazine has space for 180 tools. “This enables us to keep tool changeovers as a time and cost factor to a minimum!”

In the end everyone benefits

To ensure ERO’s skilled workers can enjoy their evenings off, the machine is equipped with new, different blank parts at the end of the day. The 6-axis robot from BMO Automation then switches the required clamping device to the machining centre and automatically inserts the workpieces. This leaves time to enjoy a glass of good wine, naturally harvested with ERO harvesters. What matters is that everyone benefits in the end. “That includes those who don’t even know the ACURA 65 EL exists,” says Inboden with a smile. It looks like he has already come up with his next idea. As we’ve already said, innovation is not just a buzzword here...

HEDELIUS

IN-HOUSE EXHIBITION

07 – 09/09/2021 IN MEPPEN.
SIGN UP NOW!

The number of attendees is limited to 150 guests per day.
Registration form: **www.hedelius.de**

Due to the coronavirus pandemic,
the following hygiene and safety regulations apply:

Always wear a face mask

Maintain a distance of 1.5 m

Wash and disinfect hands correctly

Stay home if you have symptoms

HEDELIUS Maschinenfabrik GmbH.

Sandstraße 11 | 49716 Meppen | Germany
T +49 (0)5931 9819-0 | F +49 (0)5931 9819-10
info@hedelius.de | www.hedelius.de

CNC machining centres
Made in Germany.