

INSIGHTS

EDITION **2** 2022

THE ORIGINAL.

The 5-axis benchmark C 42.

A MATTER OF FOCUS.

Sustainability in mechanical engineering.

PRECISION.

The 24" Comfort control panel.



Preface.

Dear business partners and customers,
colleagues and employees,

This year's long hot summer was followed by an extremely busy autumn full of trade fairs – with two major events being the AMB in Stuttgart and the IMTS in Chicago. Hermle presented and demonstrated its wide range of machining centres at both of them. The top tech trends were automation and digitalisation. Our robot and handling systems, each adapted to 5-axis machining centres, enabled visitors to see and marvel at the breadth of Hermle machining applications in the field of automation. The 24" control panel for the two control variants, which was exhibited for the first time, proved to be a big hit – as did the special area of technology development, which took a closer look at milling and turning trends.

We took part in roughly 40 trade fairs worldwide in 2022 and were able to introduce our products, automation solutions and digitalisation trends to a myriad of visitors. The share of the Hermle machining centres going out to our customers which are equipped with automation has gone above the 50% threshold. This is driven by current investment needs for automated manufacturing solutions combined with ingenious rack storage and handling technology. We are spurred on to further intensify our activities in this area in order to combat the present shortage of skilled workers in the industries we supply.

The recently published figures bolster the positive developments, and we expect the forecast for 2022 as a whole to remain good. Hermle is proving to be a reliable and, above all, innovative partner where customer needs are always put first.

We thank you for the trust you have placed in us and for a good, cooperative partnership. We wish you and your families a very Merry Christmas and a happy and healthy 2023.

Kind regards,



Franz-Xaver Bernhard
Director of Sales, Research and Development

HERMLE C 42 THE ORIGINAL.

The 5-axis benchmark
among machining centres.

**Whether heavy, tiny or extremely complex:
Our C 42 machining centre is able to machine any
workpiece, no matter how intricate, to the highest
level of precision – thanks to 5-axis machining
and mill/turn technology. The innovative mill/turn
centre boasts an extensive tool storage and can
be expanded easily with additional magazines and
various other automation solutions.**



Find further information on our C 42 machining centre here. Or visit our showroom today at www.hermle.de/showroom_en



AGILE, EXTREMELY AGILE, 5-AXIS.

Thanks to the 5-axis technology, even the most complex machining tasks can be carried out precisely to the nearest micron, also at the steepest angles. Three axes in the tool, two in the workpiece and everything perfectly coordinated. Further, the mill/turn technology enables both milling and turning in just one setup. Thus reducing machining time considerably.

THE TOOL GIANT.

Thanks to the 42-pocket pick-up magazine, tools can be changed in a matter of seconds. Just think, in the time it took to read this sentence, several tool changes took place. It is crazy! Additional magazines further increase the number to 528 for even more varied machining capability.

THE MODULAR PRINCIPLE.

Flexibility is a top priority at Hermle. And this is the reason why, several automation solutions can be adapted to the C 42. Depending on the main application, pallet changers and handling or robot systems supplement and enhance machining centre performance. Ingenious automation allows for even greater productivity.

FOR EVERY WORKPIECE DIMENSION.

The conditions are perfect: With powerful drives, a robust swivelling rotary table and the right tool, the C 42 machines everything, from miniature parts to the largest workpieces. Heavy loads are conveyed inside the spacious and freely accessible working area by the crane.

OPTIMISED GANTRY CONCEPT.

The swivelling rotary table moves the workpiece dynamically in two axes and the tool in three axes. This level of mobility is countered by real stability: Excellent damping characteristics are achieved as a result of mineral casting technology. The result: Ultra-precise machining for perfect surfaces.



Efficient milling operations with 5-axis technology:
Three axes in the tool, two axes in the workpiece.

SUSTAINABILITY.

Sustainability in mechanical engineering: **A MATTER OF**

FOCUS

Whenever Hermle and efficiency are mentioned in the same sentence, the idea of saving time and increasing productivity springs to mind. As it happens, the machine manufacturer is just as efficient when it comes to improving the use of valuable resources. The potential for saving energy and making better use of it is far from exhausted here.

“Our engineers have long been leading the way in encouraging the development of energy-efficient machines,” says Tobias Schwörer, Division Manager Development and Design at Maschinenfabrik Bertold Hermle AG. This topic is not some newfangled concept: Back in the 2000s, everyone was talking about the “total cost of ownership”; more recently, energy consumption and carbon footprint have become the buzzwords. However, sustainability means more than merely being economical, it is about lasting and surviving. “Twenty-five or thirty years of operation are not uncommon for our machining centres. This also distinguishes our products from others in the market and makes them resource friendly,” adds Tobias Schwörer. Achieving this target is one of the goals of machine development

and production. It is also important to mention that the production of mineral casting beds and components puts a lot less strain on resources than conventional base body manufacturing techniques. Getting the longest possible service life out of a product also throws up some challenges – for developers and service technicians alike. “We have to consider repair scenarios when designing the machine and think about how it can be repaired in 10 or 20 years’ time,” explains Tobias Schwörer. As such, parts availability is a key aspect that requires ingenious approaches from the service team. This is especially true for electronic components since electronics development – obviously driven by the consumer sector – is subject to significantly shorter product life and innovation cycles than mechanical engineering. With regard to technology, quite a lot has occurred over the past 20 years, making it very difficult for operating elements



Tobias Schwörer, Head of Engineering Department at Hermle.

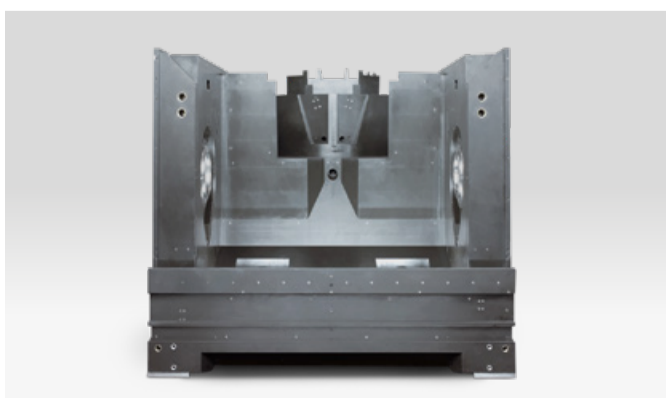
THE POTENTIAL IS IN THE AIR

or control units, for example, to remain available as original spare parts in the long term. Rather, Hermle must demonstrate the ability to replace them with newer generation products. Needless to say, this requires a forward-looking strategy: Hermle attempts to adapt systems with a shorter life span instead of integrating them, making sure subsequent replacement goes as smoothly as possible.

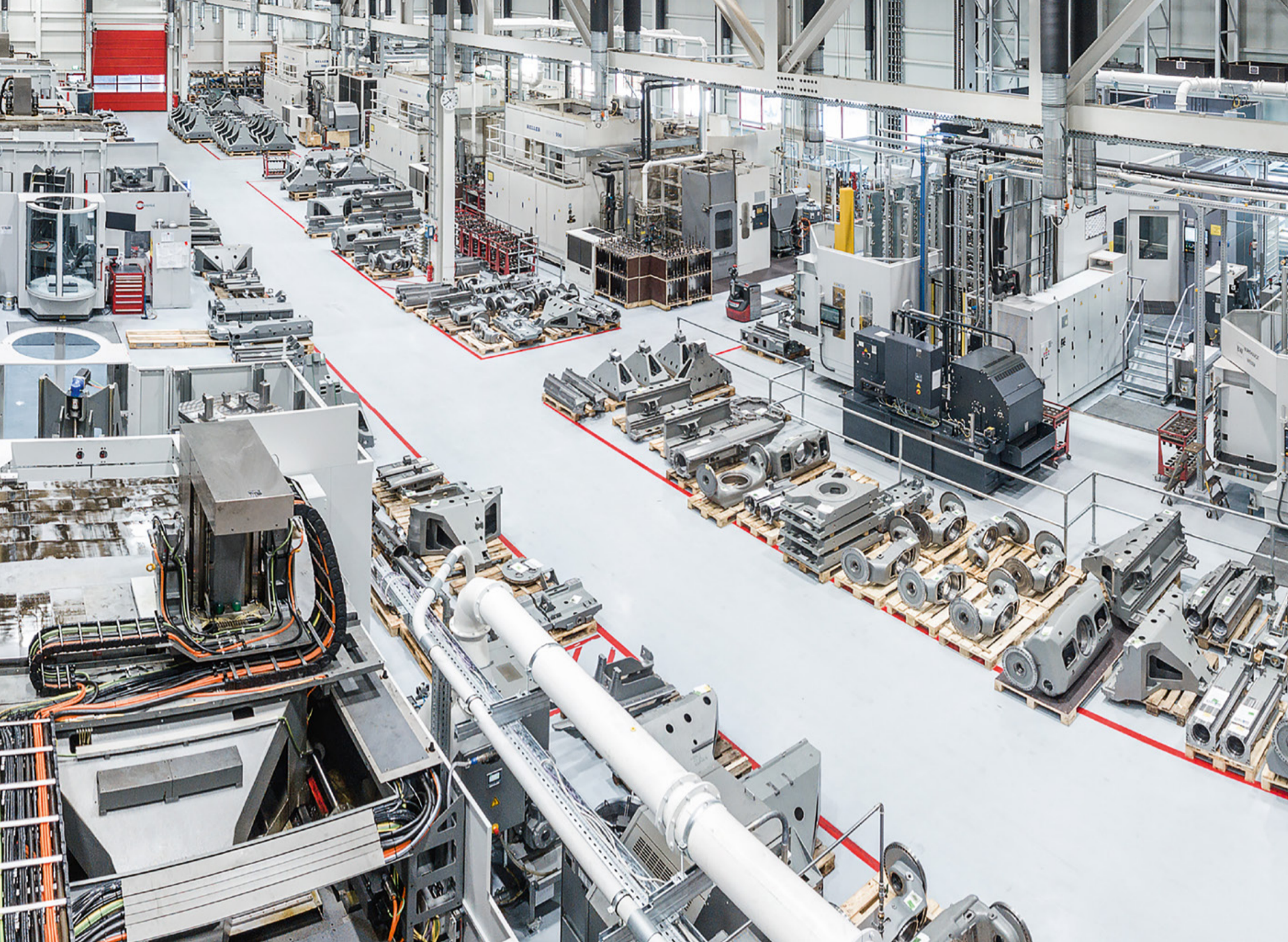
PROCESS IS MAXED OUT

When identifying areas for potential savings developers are now focusing their attention on the periphery. Since this basically determines how energy efficient a machining centre really is in the end. “Drive technology is at the cutting edge of what is possible – and has been for 20 years, actually. The recovery of braking energy has also been standard practice at Hermle for a long time,” claims the mechanical engineer. High-quality servo drives have long been the

norm for the main drives, and torque drives in rotary tables are not a rarity these days. The handling systems of automation solutions are predominantly all electric. On the other hand, a large amount of the energy is required by devices developed as part of the machining process in recent decades – such as oil mist extraction, chip conveyor and the entire coolant system, including the internal cooling of tools. This is an essential energy demand that even energy recovery cannot compensate for. Nevertheless: “When scrutinising demand in relation to productivity, the state-of-the-art plants are much better than the old ones,” emphasises Tobias Schwörer. Developers are therefore focusing on optimising the auxiliary consumers. For example, if frequency control is used to vary the coolant pressure for the internal cooling of tools, users are able to save energy in their production processes. To do so, however, the respective process must be well known and the correct pressure settings clearly assigned to the tools and relevant machining



Mineral casting bed of a C 42 U machining centre from Hermle AG.



Machining capacities of Maschinenfabrik Berthold Hermle AG.

situation. "This can't be achieved without a certain amount of effort – or at the push of a button," says the Head of the Development Department.

A LOT OF ENERGY IS IN THE AIR

Besides electricity consumption, Hermle also keeps a close eye on the compressed air demands of its machines. Cleaning and sealing air has a particularly high impact, e.g. for a clean tool change or the labyrinth seals of the high-speed motor spindles. Developers help save compressed air by optimising the seals and flow conditions. Furthermore, they always try to use components that do not need any cleaning or sealing air at all, whenever and wherever possible. Hermle also avoids the application of pneumatic drives in its auto-

in mind. "Due to the high energy demands of the peripheral devices, programs such as the after-work disconnection – a staged stand-by mode of a machining centre – definitely make sense from a financial perspective," adds the development manager.

Users first notice the positive impacts of the hardware and software interventions through savings on their electricity bill. Additionally, public investment subsidies for machine tools are increasingly linked to their energy efficiency. The carbon footprint of machining centre transportation to the final installation site also plays a role in this respect. To keep this footprint as small as possible, Hermle relies on modern building technology and the shortest possible supply chains. Therefore, the mineral casting beds and the sheet metal enclosures are manufactured at the company's own factory in Zimmern ob Rottweil, which is less than 20 kilometres away from Gosheim.

For materials and purchased parts, the machine manufacturer deliberately looks for local sources of supply in German-speaking and neighbouring European countries. A gas-fire com-

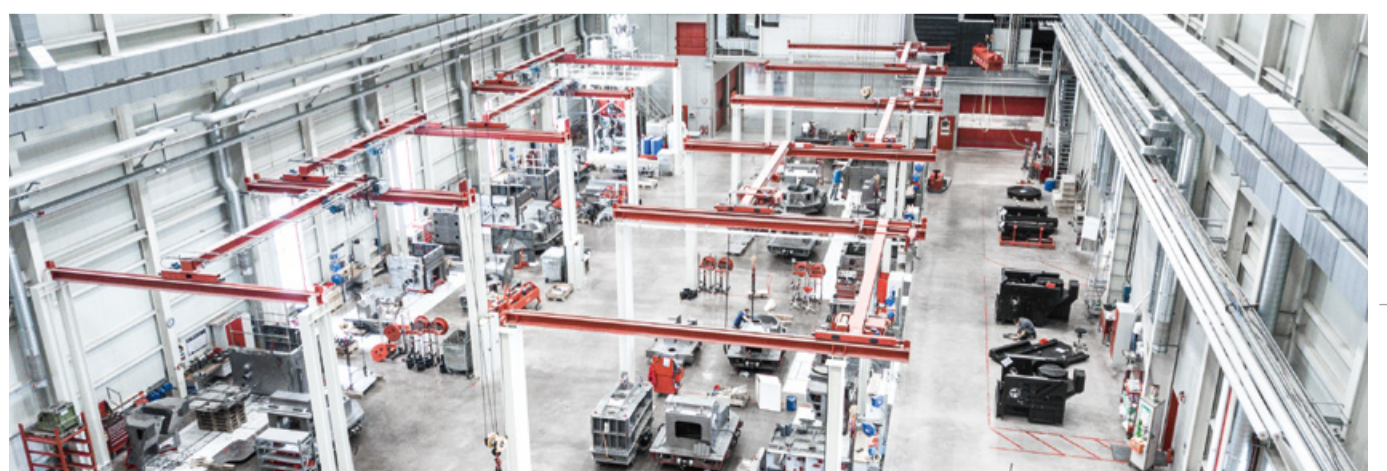
bined heat and power plant supplies the production facilities with electricity and heat, while the integrated alarm and control system of the climate and lighting control technology with break and night disconnection ensures greater efficiency and at the same time a pleasant working environment.

EFFICIENCY FROM THE VERY FIRST CHIP

Machining is no longer just about productivity, but also about the efficient use of resources. This in turn means reliable production processes over long periods of time. Here, too, the software-based management of the manufacturing process, such as an internal collision check and modern CAD/CAM programs with meaningful simulation, ensure that at the end of the day users manufacture perfect workpieces in their machining centres – preferably without run-ins, test runs and rejects. Since this also helps to save energy. How sustainably a machine works therefore no longer depends on the mechanics alone, but also on the use of intelligent software tools, the know-how of the operator and – in the near future – on the networking with building technology.

AND IN THE HEAT

mation systems and instead installs electric drives wherever this makes sense. "A growing future trend will also be networking the machines with the building technology," says Tobias Schwörer, addressing a topic that for the first time looks beyond the boundaries of milling centres. Since there is one form of energy that accumulates in large quantities at machines and is still rarely exploited: Waste heat. Cooling units cool the motor spindle or the NC table, for example, and simply release the resulting heat into the workshop. This, in turn, needs to be temperature controlled using air-conditioning systems. "It would make much more sense to use heat exchangers to channel this form of energy into the heating cycle of the building technology. Even though all involved parties are all still in the early stages of developing this technology, this approach holds enormous potential for further increasing energy efficiency in manufacturing plants," reveals Tobias Schwörer. And the software-based energy management of a production plant should also be kept



Mineral casting production of Maschinenfabrik Berthold Hermle AG.

PRODUCT.

PRECISION.

THE 24" COMFORT CONTROL PANEL

Ergonomic design down to the smallest detail: Our 24" Comfort control panel can be individually adapted to every operator thanks to its flexible height adjustment and tilting screen - and that is not by all means.

17.5°
tilt



+/- 150 mm
height adjustment



Download brochure

Intuitive graphical menu navigation

A well-designed keyboard layout, also ideal for longer periods of use

Available with control unit models TNC 640 from Heidenhain and S 840 D sl from Siemens

Central handle for easy one-handed operation

Large screen with small outer dimensions for a maximum viewing area

Clear multi-window technology for parallel display areas





WHEN TAKING A RISK ACHIEVES POSITIVE OUTCOMES.

www.bravotech.be

top, from left to right Operators Victor D'Haese and Johan Hoeckman standing next to Bravotech owner Bram Vergote, operators Tom Lasseel and Steven Van Der Meirsch and Hermle Nederland B.V. sales rep John Verlinden. right This part of an optical bench is designed to safely support lenses and sensors in a satellite.

Bravotech knows how to manufacture complex geometries and perfect surfaces. The Belgian subcontractor regularly expands its machinery with Hermle 5-axis machining centres. It appreciates the high level of precision that basically does away with the need for manual reworking.



Bravotech is a successful subcontractor based in the Belgian town of Oudenaarde. The company mills, deburrs and polishes moulds for hard-top cases, blades and turbine wheels for compressors and pumps, as well as engine components such as camshafts and crankshafts. The most unusual order of the company to date: Door handles ordered by an Arab prince for his palace in Oman. "Because of the many details, one latch took 27 hours on the machine," managing director Bram Vergote recalls. When one of its major customers ended its contract during the COVID-19 pandemic, the Belgian company moved into new sectors and now also manufactures camera and lens housings and carriers for satellites.



In 2015, Bram Vergote purchased the first workshop of a three-building complex in Oudenaarde.

LOTS OF SPACE FOR PRECISION

Vergote entered the world of 5-axis technology in 2011 and bought his first Hermle machining centre, a C 30 U, in 2012. In the meantime, he has regularly expanded his machinery with milling centres from Gosheim: In 2013, he invested in a C 400 U, followed by a C 12 U and a C 52 U in 2015. A C 42 U and another C 400 U have been hard at work in Oudenaarde since 2017 and 2018 respectively. In August 2021, he ordered his seventh machine, a second C 52 U. He uses it to machine the same orders as on the version purchased in 2015, which he needed at the time for one reason only: One of his now most important customers, a case manufacturer, was demanding greater quality in less time.

"THIS MEANT THAT WE WERE SO BUSY LAST YEAR THAT WE HAD TO INVEST IN ANOTHER C 52 U." Bram Vergote

Cooperation with the luggage manufacturers began with simpler and smaller tool components. Over time, the components grew in size and complexity, as did the demands of the client. "Before we had the C 52 U, it took us eight weeks to machine a complete mould. That was too long for the client. We needed a machining centre that would save us time when reworking moulds and offer enough space for the moulds of all case sizes," explains Vergote. Further, the machine had to be able to create the finest details in the surface. "What looks like a textile structure is in fact milled into the surface of the mould by the Hermle machine. In the past, we had to rework all the moulds by hand.

Today, depending on the size of the tool, the C 52 U needs just 10 days and operates very precisely. We have been able to do away with a lot of manual work and achieve a significantly better surface quality," explains the 42-year-old entrepreneur.



With its working range of 1,000 x 1,100 x 750 millimetres and a vertical table clearance of 950 millimetres, the C 52 U offers space even for the largest of moulds.

ANOTHER NEW MACHINE AND PRODUCTS

When the case manufacturer relocated its production to Belgium, it commissioned Bravotech with two new case lines. "This meant that we were so busy last year that we had to invest in another C 52 U," Vergote explains. Since Bravotech now uses the largest of its Hermle machines to also manufacture the lens and sensor carriers - called optical benches - for the aerospace industry and large-volume prototypes for a compressor and pump manufacturer.

GO TO ALL
USER REPORTS





UPDATE ONLY WITH AUTOMATION.

cafmevernv.be

top, from left to right Production manager Frederik Deneire standing next to Jan Van Houtte, managing director of Cafmeyer NV. right Cafmeyer specialises in the manufacture of moulds and technically complex products – from the initial design to the finished assembly.

Cafmeyer manufactures press moulds. The more complex the part, the more parts needed for the mould. In the past, the Belgian mould maker was sometimes pushed to the limits of its capabilities, both in terms of dimension and capacity, and therefore invested in the 5-axis machining centre C 650 U with HS flex heavy automation.



The Belgian company Cafmeyer develops and manufactures moulds of every shape and size – from the drawing to the assembled product. Managing director Jan Van Houtte plans to update and expand the machinery. The opportunity to automate processes is a key criterion for him. Yet another is the level of precision and maximum component volume that can be provided and accommodated by the system.

In 2021, Cafmeyer invested in a 5-axis machining centre from Hermle, which not only satisfied the first criterion, but also provided



Cafmeyer is updating its machinery and invested in an automated C 650 U.

the mould maker with a unique selling point: "When it comes to its size, this machine is one of a kind in our industry," says Van Houtte. This enabled Cafmeyer to win an order which it had previously had to turn down. "The most complex part from this order is a 640-millimetre-long axle featuring a 540-millimetre-deep eccentric bore, this is a real challenge," the managing director explains.

CONVINCING AUTOMATION AND PRECISION

It is possible thanks to the new C 650 U, automated with the HS flex heavy handling system. There is space for 15 pallets in the rack storage, which Cafmeyer also utilises for smaller components.



The 5-axis technology provides Cafmeyer with more machining opportunities while also challenging the operators.

"We simply clamp several parts onto one large pallet, thus making us much more efficient and flexible," managing director Frederik Deneire explains. The automation and the traverse paths of 1,050 x 900 x 600 millimetres – plus its overall precision – were the factors that convinced those in charge that the 5-axis machining centre from Gosheim was the right choice for them. Even though the C 650 U has been up and running for about a year, the operators are not yet able to fully utilise the new capa-

"WHEN IT COMES TO ITS SIZE, THIS MACHINE IS ONE OF A KIND IN OUR INDUSTRY." Frederik Deneire

cities. "However, if there is a chance of using the C 650 U, the 5-axis machine is always the first choice," stresses Deneire. "The most difficult part is in fact the extra axes. We only recently entered the world of 5-axis machining, and this still requires a bit of rethinking. However, we have also discovered that we can produce parts faster and run completely new machining processes than on our 3-axis machine," adds the production manager.

FAST INITIAL TRAINING

In contrast, the operators soon came to terms with the automation, even though it was a completely new concept for Cafmeyer. The same applies to the Heidenhain control unit, which they already knew in principle from the existing Hermle machine. "In total, we had eight days of training: Four immediately after installation and another four a few weeks later once the operators had become familiarised with the C 650 U and HS flex heavy," explains Deneire.

Cafmeyer currently uses the C 650 U primarily for its mould making processes. In the future, it will also be used to produce milled parts for other companies. "The C 650 U opens up a whole host of opportunities. And Hermle has significantly raised the standards in terms of the support we now expect from our other service suppliers," concludes Frederik Deneire.



Cafmeyer also utilises the C 650 U for smaller components – and places them together on one pallet for efficient machining.



“OPEN AND HONEST, BUT WITHOUT THE SHOW”

zm-mangner.de

top, back row, from left to right Dominik Neidhardt, Paul Kammler, Gergö Eszenyi, Balazs Poszet, Artur Scheiermann and Mario Schäfer with managing director Mike Mangner
front Oliver Kammler and Klaus-Dieter Mangner right After finishing the fit on the C 400 U, the hardened part insert is ready for contour machining.

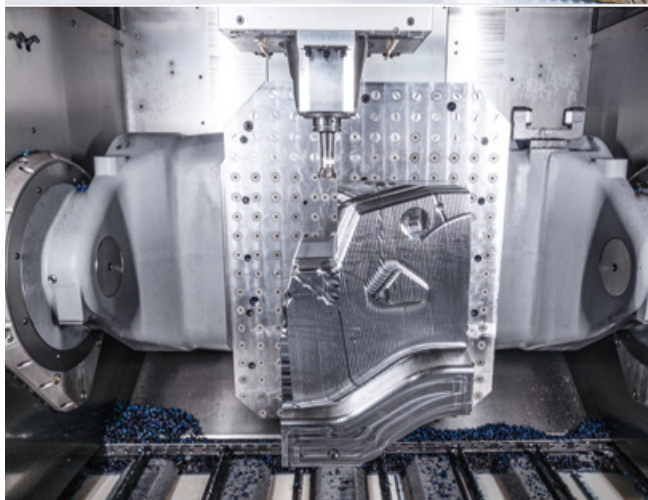
Zerspanungstechnik Mangner chooses quality over loud marketing. The company owner now provides us with a rare glimpse inside the production facility. With the new 5-axis machining centres from Gosheim on its side, Mangner is sure it can live up to its delivery promises.



Zerspanungstechnik Mangner GmbH is a traditional subcontractor whose managing director Mike Mangner sees understatement as a virtue. In fact, Mike Mangner did not do any advertising or publicity at all after purchasing and moving into the facilities in Bad Laasphe in 2014. “We simply paid attention to quality and delivery deadlines. And that is something customers still appreciate to this day,” Mike Mangner claims. He believes word of mouth and positive discourse helped develop the business: “Open and honest, but without the show”. In fact, it is the first time that Mangner has opened its roller shutter to give anyone a glimpse of its production facilities. “Just for Hermle,” stresses the 38-year-old. He appreciates the modest way in which Maschinenfabrik Berthold Hermle AG goes about its business. “That suits us down to the ground.”

“THE C 400 U IS AMAZING, BUT THE C 42 U IS STILL MORE DYNAMIC AND FASTER.” Mike Mangner

Upon entering the workshop, you can see that he is not just impressed by Hermle’s attitude: Nine 5-axis machining centres from Gosheim form a corridor of milling machines. Mike Mangner believes in having more machines than qualified employees. “We have a great team here. But if one of them is not working at full capacity, it is a big drag on our profitability. If, on the other hand, a milling machine is not running, it enables us to remain flexible,” he says when justifying his ongoing technology investments. “Yet another reason is the excellent service: Should something go wrong, we know that a technician will usually be here within a day with the right spare part.”



top More machines than qualified employees is the key to ensuring efficient operation for Mike Mangner, owner and managing director of Zerspanungstechnik Mangner GmbH. bottom The C 650 U is machining a component of a 13-part mould. It will be seen whether everything fits together perfectly later on – during assembly in the USA.

TOP FIT

The workshop machinery includes three C 400 U machines, a C 52 U and – since last year – a C 650 U. “Thanks to its 1,050 x 900 mm X-Y traverse path, it ties in perfectly with the other 5-axis machines,” Mike Mangner explains. The one thing the subcontractor does not have to worry about is capacity utilisation: The workpiece on the machining table of the C 650 U is a component of a 13-part mould made from TQ1. This special steel is characterised by its high temperature strength and maximum toughness, which obviously means enormous tool wear. “By working with the right cutting values and other settings, we have managed to get the service life under control and even maximised it,” explains operator Mario Schäfer. “When it comes to long machining times of up to 65 hours, the role of service life is just as important as accuracy,” Schäfer says. Because everything has to fit together perfectly, without the need for reworking, when the client subsequently assembles the mould.

Hermle delivered the latest investment in March 2022, a C 42 U. “Mario and I took the decision to buy the C42 U on our own,” discloses Mike Mangner and goes further by saying: “The C 400 U is amazing, but the C 42 U is still more dynamic and faster.”

Which job is executed on which machine is a question of size and precision. “High-precision parts are machined on our newest Hermle,” Schäfer explains. They are all user friendly and clearly structured – regardless of the year of construction. “The basic principle of the machines and controls is awesome and never changes. There are a few new functions here and there, but they are learned in next to no time,” the operator tells us.



MILLING AND TURNING FOR THE PERFECT RIDE.

thunderbike.de

top In 2006, Thunderbike impressively demonstrated that it is a leading light in the custom bike industry: Spectacula helped it win the European Championship at the Custom Chrome Show in Mainz. **right** A bit more complex is the triple tree. The multi-part component later connects the chassis and front wheel to the frame.

Most people who catch a glimpse of a real Thunderbike are usually lost for words. The Harley-Davidson dealer and custom bike manufacturer reveals how it manufactures bespoke clutch covers and rims and what role Hermle's mill/turn technology plays in all of this.

Thunderbike employs 160 people in the German town of Hamminkeln and offers exactly what the name suggests: Legendary Harley-Davidson motorbikes. Further, the company produces parts for customising motorbikes and making complete custom bikes with their own individual frames. It is also where you will find a service workshop, an ultra-modern showroom and the distribution centre for original Harley-Davidson and after-market parts.



Julian Otten is able to work flexibly on all three Hermle machines thanks to the standardised operating concept.

HERMLE KICK-OFF WITH MILL/TURN TECHNOLOGY

The demands placed on surfaces and designs, as well as the ambition to drive the business forward, highlighted the need for a new machine in 2012. Hermle, was the only manufacturer at the time that could offer the right technology with the C 42 U MT to meet Thunderbike's needs: Exquisite-looking rims milled from a solid block with an unprecedented level of perfection. "Even back then, we manufactured our own rims. But it required three machines and five to six clamping setups," points out Thomas Zarmann, production manager at Thunderbike. The MT table variant, which can be simul-

taneously rotated and swivelled, allows machining in various angles. In contrast to a pure lathe, Thunderbike can thus use shorter tools to create more complex geometries. To this day, the C 42 U MT overcomes the biggest challenges – monoblock wheels – without any problems: Long runtimes at high feed rates and speeds and almost always in 5-axis simultaneous machining.

UNIVERSAL APPLICATION

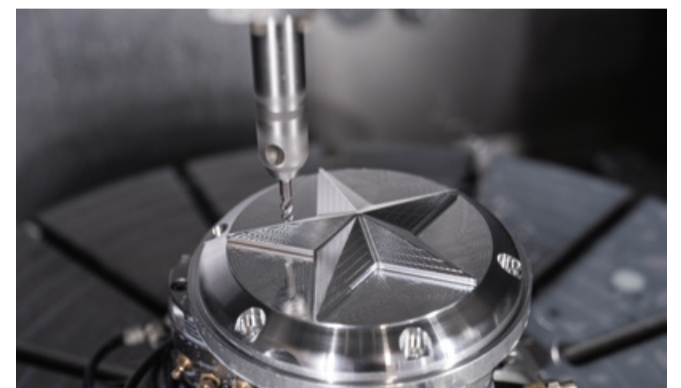
In addition to rims, Thunderbike also manufactures attachment parts such as wheel centres, indicator and air filter elements, generally made of aluminium, brass and sometimes stainless steel. Another part is the self-designed Open Mind clutch cover. The star starts to stand out from the blank after just a few minutes on the C 42 U MT. However, the surface still shows traces of the milling process. The job of removing them is left to the surface finishing colleagues. They grind and sandblast the unfinished clutch cover. "We could, of course, produce the cover on the machine with a perfectly finished surface, thus eliminating the manual tasks. But that takes up a lot



from left to right. Jürgen Scherer, HPV Hermle Vertriebs GmbH, with production manager Thomas Zarmann and the operators Julian Otten and Herbert Niehues from Thunderbike.



of time, and we would only manage to produce seven parts a day instead of 50," Zarmann explains. The component is given its black finish during the anodising process. A final run through one of the three 5-axis machining centres ensures the star shines bright.



It takes just a few minutes for the C 42 U MT to machine the star from the blank.

"... BUT THAT TAKES UP A LOT OF TIME, AND WE WOULD ONLY MANAGE TO PRODUCE SEVEN PARTS A DAY INSTEAD OF 50." Thomas Zarmann

Finally, it is time to go to the showroom. The brightly milled star of the Open Mind clutch cover looks very impressive on a black bike. Once the last chip has been removed, the raw aluminium remains unprotected. "If you ride around in the rain for two years and never clean it, marks will start to appear on the surface of the star," warns Thomas Zarmann. "But the majority of people who invest in design parts look after their bikes properly. And, anyway, these Harleys stay in the garage when it is raining."



ENSURING EFFICIENCY AND HIGH-END QUALITY.

wiegemann-gmbh.de

top, from left to right Kevin Schäfer, mould maker at Dieter Wiegemann GmbH, with Melanie and Marc Wiegemann.
right The multi-part mould is used to manufacture pump pots for the food processing industry.

Wiegemann is an expert in aluminium and steel mould making and plastic injection moulding, as well as a stickler for deadlines and perfection. When it comes to machining, Wiegemann relies on Hermle. HS flex automation arrived at the German company in the shape of the new C 42 U – making sure its range of machinery is even more flexible and versatile.



At Wiegemann, the end is just the beginning: As soon as the customer has completed the design process and knows exactly what the finished plastic part must look like, it sends a digital 3D model to the mould maker in the German town of Olsberg. For the design engineers at Dieter Wiegemann GmbH, this is the beginning of their work – developing a suitable injection mould. “The more complex the component, the more know-how

“HIGH-PRECISION AND COMPLEX MOULDS ARE OUR CORE COMPETENCE. TO ACHIEVE THIS, WE OBVIOUSLY NEED MACHINES THAT DELIVER PRECISE RESULTS.” Marc Wiegemann

required. That is our strength,” adds Melanie Wiegemann, authorised signatory of Dieter Wiegemann GmbH. To manufacture a mould that produces perfect plastic parts, the developers simulate filling and shaping. “Cooling can cause product distortion,” explains the authorised signatory.

VERSATILITY IS THE KEY

If the simulation promises the desired result, Wiegemann is given the green light to commence. The mould maker then orders the material that finally ends up in the machining department. The first thing you notice: The majority of the milling machines are from Gosheim, manufactured by Maschinenfabrik Berthold Hermle AG. “High-precision and complex moulds are our core competence. To achieve this, we obviously need machines that



Since Wiegemann also mills smaller products, some of which only run for 10 or 20 minutes, the mould maker this time opted for an automated machining centre: The C 42 U with HS flex.

deliver precise results. We have always had nothing but positive experiences with Hermle machining centres. They run reliably and achieve precise results even after many operating hours,” managing director Marc Wiegemann explains.

The fourth and newest machine is a C 42 U with the HS flex handling system. “We obviously also have moulds that require 600 hours of machining. However, since we also mill smaller products, some of which only run for 10 or 20 minutes, we opted for automation this time. This allows us to operate the machining centre at night or over the weekend unmanned,” the managing director adds. The HS flex handling system has a relatively high load and is easy to operate and extremely flexible. Marc Wiegemann also likes the fact that the automation solution comes from a single source. This not only ensures trouble-free communication between the machine and the handling system, but also results in a standardised control concept. “The HACS is so intuitive that all our operators become familiar with it very

quickly. And if the employee who usually works on the automated C 42 U is missing for any reason another colleague can simply take their place,” Marc Wiegemann explains.

UNRESTRICTED THROUGHPUT

Once the work of the 5-axis milling centres is done, the manual tasks begin: Installation of the electrics and hydraulics and sampling. The entire process – from receiving the STEP data to the mould being ready for collection – takes about two to eight weeks. “To ensure successful mould making, we need unrestricted throughput, excellent planning capability and reliable machines, just like the Hermle machining centres. This obviously costs a bit more, but it definitely pays off in the end,” Marc Wiegemann says in conclusion.



The C 42 U with HS flex automation has been in operation around the clock more or less since the end of 2021.

COMPANY.



myHermle.

THE NEW CUSTOMER PORTAL.

myHermle offers a wide range of benefits to our customers in German-speaking countries. Since our new customer portal is always available, clearly structured and is the permanent connection to your Hermle machining centres. An English version is currently in the planning stage.

How it works: Simply log in with your personal access directly via the browser – irrespective of whether you are using a PC, tablet or smartphone. All the machines and associated service messages are then available to you.

Request:

Submit your service request online.

Speed:

Formalised messages with category and prioritisation information enable even faster service processing.

Transparency:

All machine and service messages in a shift-spanning overview.

History:

Transparent overview of the entire message history.

Flexibility:

Log in at any time and from anywhere.

myHermle



Further functions have now been activated:

- Tracking number for tracking deliveries
- Downloading of delivery notes and invoices
- Message display for enquiries

DATES

GO TO OVERVIEW OF DATES
www.hermle.de/dates



SAVE THE DATE:

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awt.kassel@hermle.de
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Prague, Czech Republic
www.hermle.cz

USA



Hermle USA Inc.
Franklin/WI, USA
www.hermleusa.net

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Industriestrasse 8 - 12 · D-78559 Gosheim
Phone +49 (0)7426 95-0
Fax +49 (0)7426 95-1309
info@hermle.de · www.hermle.de

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