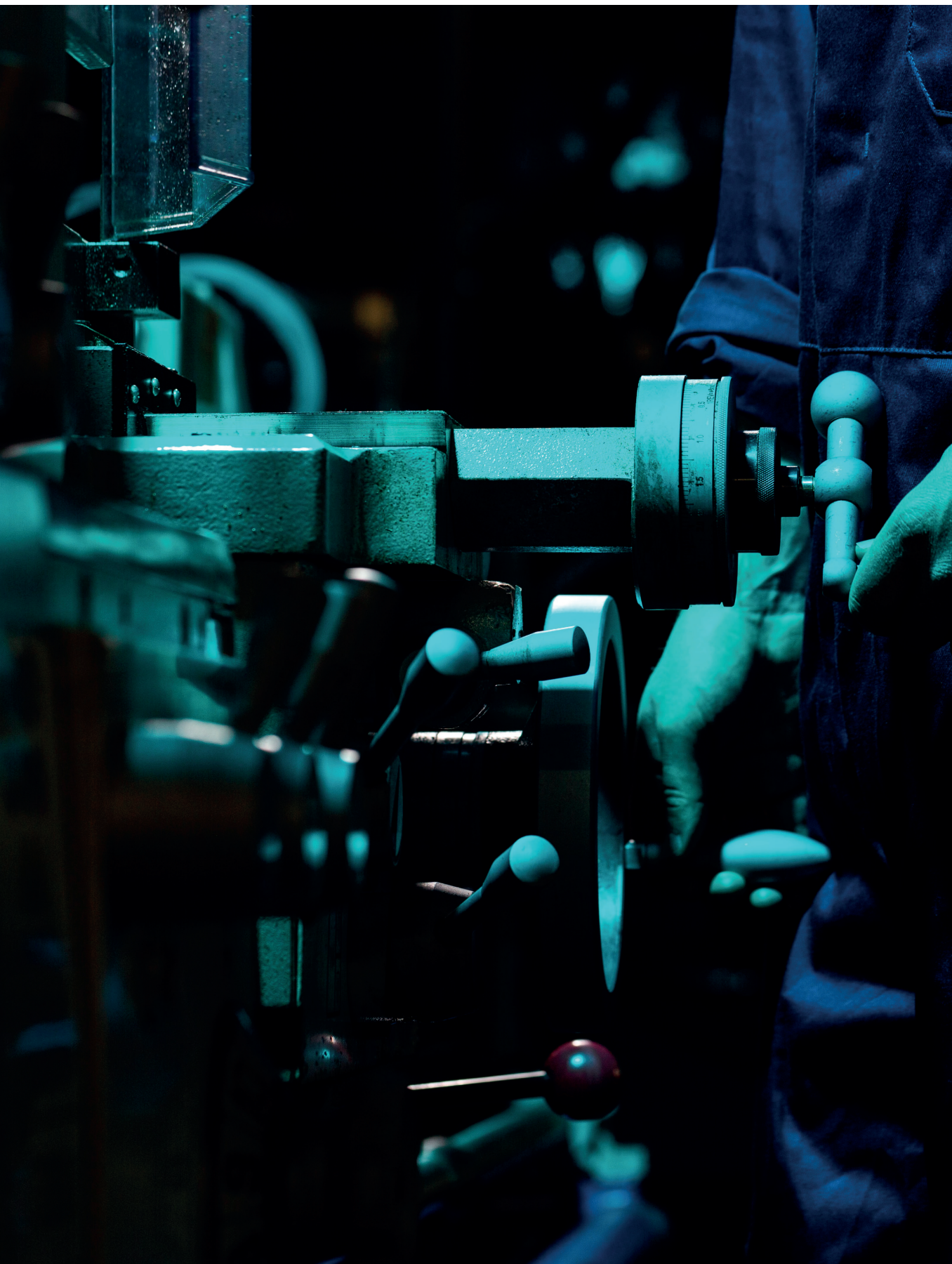


ISSN 1970-7290

# tubetoday

INTERNATIONAL MAGAZINE FOR TUBE, PIPE AND BARS



year XIX  
number 83  
december 2021

R.T.S.



**Tube**<sup>®</sup>  
Düsseldorf  
  
Hall 5 J16

Poste Italiane Spedizione in a.p. - 45%  
art. 2 comma 20/b legge 662/96 - D.R.T. - D.C.B. Torino  
nr. 83/2021  
[www.tubetoday.com](http://www.tubetoday.com)

Order your subscription to:  
Ordina il tuo abbonamento a:

tubetoday

*The international magazine for tube pipe and bars*  
La rivista internazionale per tubi e barre



*1 Year subscription (4 issues - Tube today via surface mail)*

*1 Anno di abbonamento (4 uscite - Tube today via posta)*

Italy / Italia Euro 55,00

Europe / Europa Euro 70,00

*Individual copy price / Prezzo per copia singola*

Italy / Italia Euro 15,00

Europe / Europa Euro 20,00

*Circulated over 5.000 companies across the world / Distribuito ad oltre 5000 aziende nel mondo*

o Money transfer / Bonifico bancario

Headed to / Intestato a: **R.T.S. s.r.l. - Via Caselette Km 16,200 - 10091 Alpignano - Torino - Italia**

o Check bank / Assegno bancario

Headed to / Intestato a: **R.T.S. s.r.l.**

Bank / Banca.....Check number / Numero dell'assegno.....

**R.T.S s.r.l**  
**Data bank / dati bancari**

**IBAN IS CHANGED**  
**IBAN: IT80 Z030 6930 0401 0000 0016 804**

**SWIFT: BCITITMM**

*The subscription is undersigned by / L'abbonamento è stato sottoscritto da:*

Name / Nome.....Surname / Cognome.....

Company / Azienda di appartenenza.....

Sector of activity / Settore di attività dell'azienda.....

Held position / Carica ricoperta.....

Address / Indirizzo.....

Zip post code / CAP.....Town / Country / Località.....

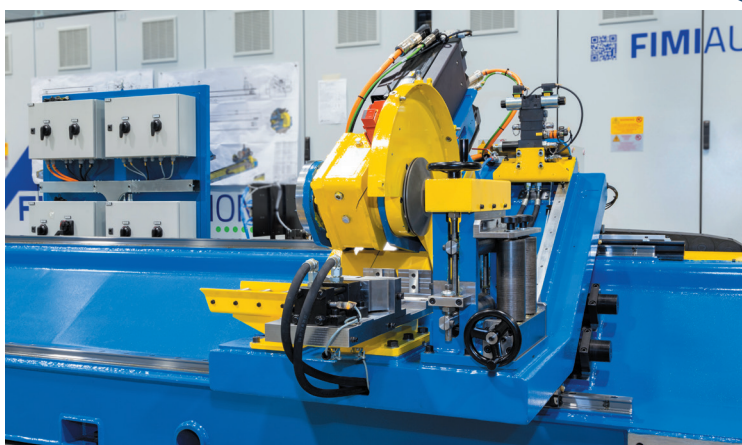
Phone / Telefono.....Fax .....E-Mail.....





## **SB SERIES** FLYING CUT-OFF

# **1/2 ÷ 5"**



**12,7 ÷ 127,0 mm** outer diameter

**0,5 ÷ 8,0 mm** wall thickness

**6.000 ÷ 16.000 mm** tubes Length

**up to 800 N/mm<sup>2</sup>** yield strength

**up to 130 m/min.** working speed

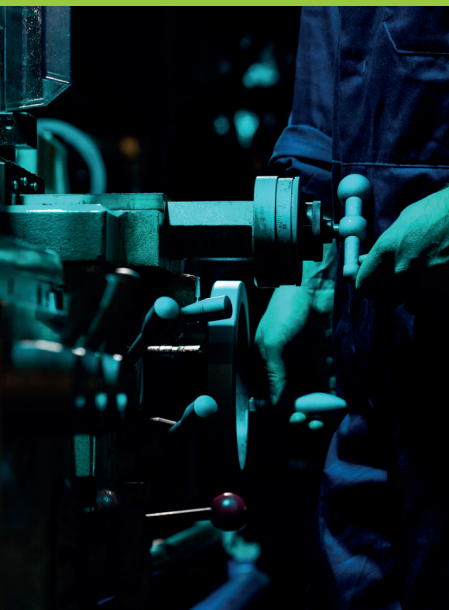
Single blade cut-off for tubes with diameters from 12,7 up to 127 mm. and all the quadrangular profiles which can be obtained from this measure.

It has the following main features:

- possibility to adjust power and speed in a wide range in order to optimize the working conditions of the blades, both in HSS and TCT;
- reduced time for clamps replacement;
- minimum necessity of maintenance and easy chips evacuation and cleaning;
- low operating costs.

Available with Siemens automation (PLC, drives and motors) or with Allen Bradley solutions (PLC, drives and motors) for the American market.





tubetoday

Pubblicato da:



**Riviste Tecniche Specializzate s.r.l.**

Via Caselette km 16,200

10091 Alpignano - Torino - Italia

Tel.: 011 95 66 950 - 011 95 16 923

Fax: 011 95 66 950

www.tubetoday.com

redazionali@tubetoday.it

tubetoday@tubetoday.it

**Company chart:**

**Chief Executive Officer:**

Roberto Domenico Suraci

**Editor in chief:**

Alberto Manzo

**Editorial staff:**

Giovanni Teolis,

Daniele Pallante

**Sales Manager:**

Fabiano Altobello

**Design and pre-print:**

Massimiliano Prencepe

Inspire Communication

**Printed by:**

Tipografia FB s.n.c.

Via Val della Torre, 273

Borgo Industriale

Alpignano (TO)

Magazine signed up at n°5708

10-06-2003 at Register of

the Turin Court Stationery.

Shipment by postal subscription.

Year 19<sup>th</sup> Dicembre 2021.

Reproduction of entire or part of the content is prohibited without the permission of the publisher.

## EDITORIAL

*Alberto Manzo*



Positive outlook for European economy gives back a significant contrast with fears for worldwide increasing pandemic.

The positive trend in machine tools sector during 2021 is extremely encouraging: recent data indicates that CECIMO's MT output in 2021 is expected to grow at an annual rate of about 11.5%, reaching 22.5 billion euros in 2021. With a share of about 33%, CECIMO countries will maintain the number 1 position in the global MT market. Despite the uncertainty in pandemic, there is need of normality that develops itself in a fibrillation in economy and industry, with the decisive effects coming from economic contribution from governments, aimed at a compensative trend to negative effects of various lockdowns.

These are, in general, the best perspectives that design a good framework for Tube 2022, that will be held in Düsseldorf from May 9th to 13th, and remains the outstanding event for tube sector.

After the postponement and following cancellation of 2020 edition, the growth of the MT sector gave impetus to the new edition that has already acquired the participation of a large number among the main companies.

The European market in MT sector is pulled up by export: Total MT exports and MT imports to increase by 12% and 13% retrospectively on a year-over-year basis. Germany, Italy and Switzerland remain the major CECIMO exporters and the two major MT export destinations outside Europe are China and the United States. Japan, China and the Taiwan region remain the major MT supplying markets for CECIMO countries (outside Europe).

It is important to underline that the effects of a rough rise of pandemic can have a deep impact on the forecast for 2022: the uncertainty of new virus variants and new measures issued by governments can change the situation and slower the growth.

Another critical element are supplies: supply chain denotes many bottlenecks and the growth of the quotation for scrap is indicative in this sense.

In Italy, the growth is faster than in every other European country: in 2021 production reached 6,325 million euro, marking a 22.1% upturn compared with the previous year. The outcome was due to the excellent trend of Italian manufacturers' deliveries in the domestic market, increased by 27.8% to 2,965 million euro, as well as to the positive performance of exports, achieving 3,360 million euro, i.e. 17.4% more than in the previous year. This trend should continue even in 2022, the year when all the ground lost in 2020 should be recovered.

With a double-sided expectations for the near future, we face a holidays period easier than one year ago: economic trends and vaccination campaign give us the idea of a more positive overall situation. If one year ago we were in a negative moment with many expectations for the future, now the feeling is of a positive situation with some remaining shadows. And it is already a good result.

From the editorial staff, the management and myself, I want to send you, everywhere you are and everything you are doing, the best wishes of serenity and joy for the holidays and new year: I hope to see you all in 2022, stronger and safer than ever, with more confidence in the future and in an economic growth that will take everyone out of the crisis.



**BENDING**

CLOMEA, concave and convexi radii in a single step

6

**EXHIBITION**

EMO Milano, a positive edition

Made in Steel 2021, beyond expectations

Tintos, Taiwan 2022

8

10

12

**SPECIAL**

SOFTWARE

14

**CURIOUS NEWS**

From the world

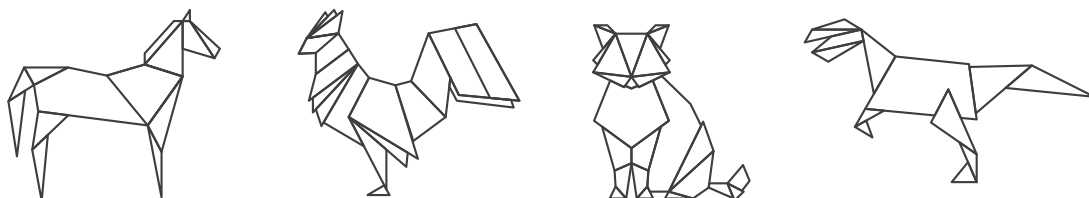
20

**NEWS**

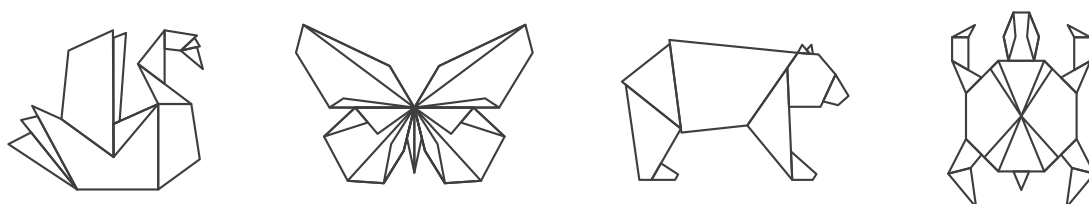
From the business world

22

R.T.S.	1 cover
R.T.S.	2 cover
FIMI	3
CLOMEA	7
INSPIRE COMMUNICATION	3 cover
ALPIGNANO MARCO	4 cover



# COMMUNICATION GETS A GOOD SHAPE



PR COMMUNICATION GRAPHICS PRINT

# CLOMEA, how to manage concave and convexi radii in a single step

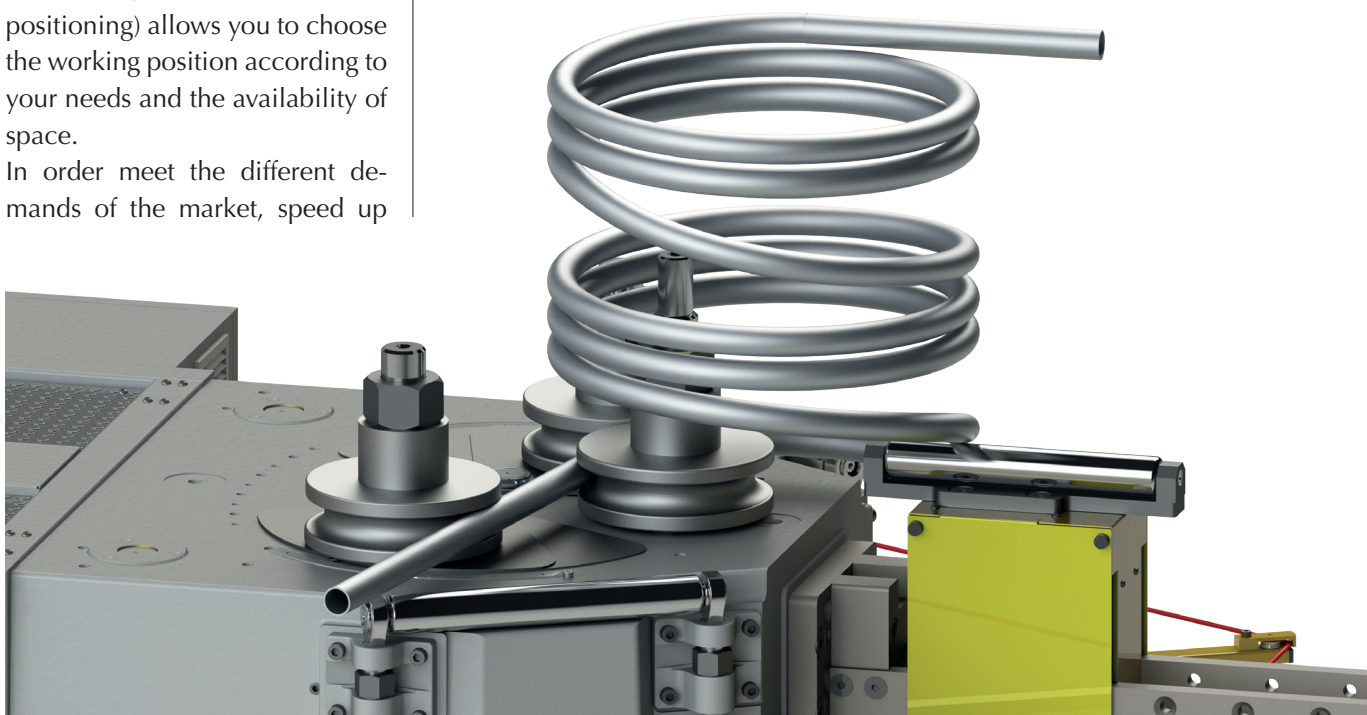
3C Clomea is an Italian company with decades of experience in the mechanical sector. Present for over 40 years on the Italian and international market, it specializes in the design and production of bending machines and equipment for processing metal pipes and profiles.

Over the years, the company has constantly expanded its production and currently has a wide range of models of bending machines of various sizes and power, which are offered with different levels of technology. The versatility of our machines allows their application in the most varied fields, from facades to verandas and roofing in general, metal carpentry and various production sectors such as the window, furnishing and lighting industry, the naval one, railway, automobile, etc. The reversibility feature of the machines (horizontal or vertical positioning) allows you to choose the working position according to your needs and the availability of space.

In order meet the different demands of the market, speed up

processing procedures and meet the needs in different sectors, the company offers the possibility of equipping its machines with different models of electronic and numerical controls; the latter allow the management of single-run processing cycles to manage multiple consecutive radii on the same bar, as well as automatic multi-run processing cycles for the processing of more demanding profiles or profiles for which a more gradual yielding is required to obtain the best result. As part of the constant work of research, development, innovation and improvement of our products, we have recently completed the development and construction of the new series of controls to be placed alongside our machines, all renewed in appearance and improved in character-

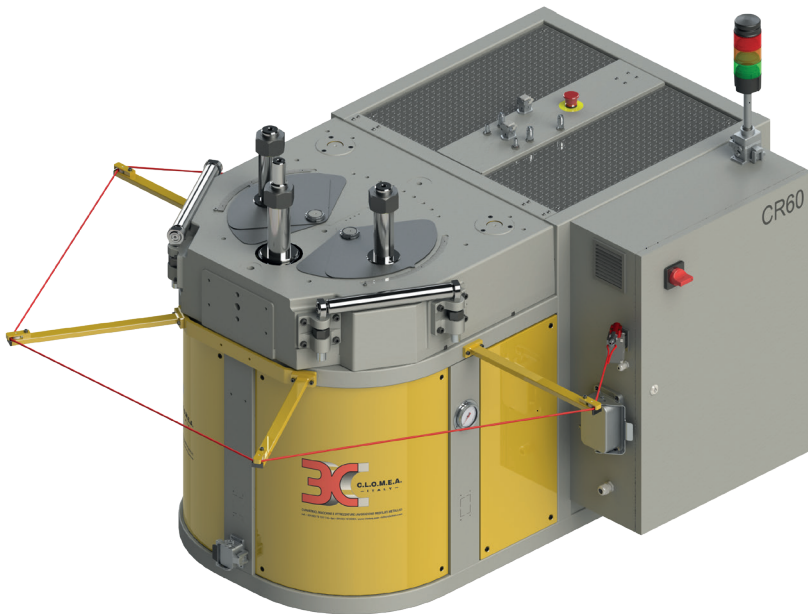
istics, with particular attention also to the ease and intuitiveness of use. Equipped with fanless industrial PCs with Intel processor and Windows 10 operating system, they are equipped with an IP65 aluminium front panel and a stainless-steel keyboard, as well as protected USB ports. The 15" HD screen with resistive touch-screen technology allows typing even with gloves. The new controls allow, in addition to their own functions related to the management of bending processes, the ease of creating, consulting, editing and archiving bending programs, importing DXF files, the ability to connect to the network and remote assistance. With a view to maximum attention to optimal operation and safety, the most advanced of the range also allow the constant mo-





## FROM THE BUSINESS WORLD

### BENDING - CURVATURA



machines, are always scrupulously tested before supply; we offer a training service for personnel who will work on the bending machine also with the aim of verifying the functionality of the machine itself and the conformity of the equipment, as well as a consultancy and assistance service.

The particular attention paid to the requests and needs of our customers allows us to propose a single machine to bend the most diverse materials and to offer something we are proud of and not found everywhere: solutions.

monitoring of important data such as the temperature and pressure of the oil inside the machine, as well as the level of electrical absorption.

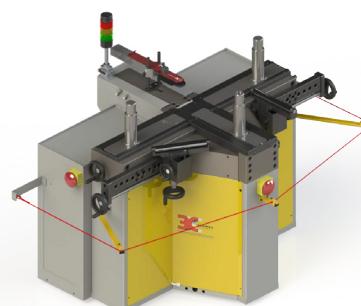
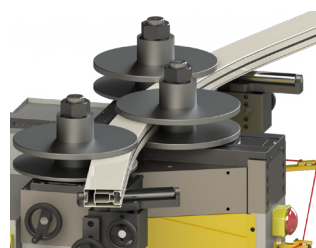
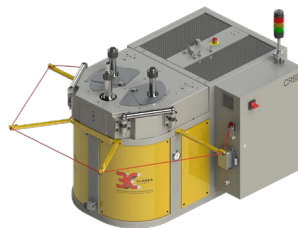
Thanks to the use of specific equipment, our bending machines ensure the management of concave and convex radii in a single processing step and are also used for the creation of spirals with variable steps and radii, which can be programmed and controlled automatically by our CNCs.

Our technical department, in the constant search for new solutions, designs, develops and builds rollers and equipment aimed at ensuring maximum precision during all work phases, in order to obtain the maximum reduction, if not the absence, of the deformations on the processed material. Our steel rollers allow you to work on rough profiles, painted or subjected to other treatments. All equipment and rollers, like



### MACCHINE CURVATRICI BENDING MACHINES

**OFFRIAMO QUALCOSA CHE NON TROVATE OVUNQUE: SOLUZIONI**  
**WE OFFER SOMETHING YOU DON'T FIND EVERYWHERE: SOLUTIONS**



**MAKE THE SHAPE YOU WANT**

Follow us on:      

[www.clomea.com](http://www.clomea.com)

# Positive edition for EMO Milano 2021

**Over 60,000 visitors and 91 represented countries.**

**With EMO Milano 2021, the world manufacturing industry of machine tools, robots and automation systems launches the new post-pandemic era.**

EMO MILANO 2021, the world trade show dedicated to the metalworking sector held at the Exhibition Centre of fieramilano Rho, closed last Saturday, 9 October.

Promoted by CECIMO, the European Association of Machine Tool Industries, and organised by

the operational structures of UCI-MU-SISTEMI PER PRODURRE, the Italian machine tools, robots and automation systems Manufacturers' Association, EMO MILANO 2021 registered more than 60,000 visitors coming from 91 countries.

Luigi Galdabini, General Commissioner of EMO MILANO 2021, stated: "The exhibition data confirm the value of the event, considered as the appointment of reference for the worldwide manufacturing industry of machine tools, robots and automation systems".

"In such a complicated, historic

## EMO MILANO

 Written by: Press office EMO

moment, where the public health emergency is not yet completely over – continued Luigi Galdabini - EMO showed its importance, drawing all those operators to Milan, who could have the green light to move from their countries of origin. Moreover, the participation of the operators, coming not only from Europe, also proves the attractiveness of Italy, regarded as one of the most interesting and promising markets, as well as a leading manufacturing country in the sector".

Alfredo Mariotti, Director of the Exhibition, pointed out: "A very large number of exhibitors have expressed their full satisfaction with the results achieved over these six exhibition days. "Qualified and very motivated visitors", "A duly organised trade show in all its details and not least those related to safety": these are the most common expressions of appreciation received both from habitual exhibitors of the world metalworking trade show and from companies who did not have particular, previous participation experiences".

"The work carried out by the EMOteam – concluded Director Alfredo Mariotti – has been appreciated by Italian and foreign operators, who also expressed their satisfaction on the social media, thus supporting the climate of trust that characterises the sector and regarded EMO MILANO 2021 as the event launching the post-pandemic era".

Despite the mobility restrictions still in force, EMO MILANO confirmed its international character





## FROM THE BUSINESS WORLD

### EXHIBITION - FIERE

even on this occasion. Foreign exhibitors accounted for 60% of the total, whereas foreign visitors made up 30% of the overall number.

An absolute attraction for the operators of the world manufacturing industry was the wide product offering on show, representing all the segments of the sector, expression of the production proposal of over 700 enterprises, exhibited within 6 halls completely set up for the event and covering 100,000 square meters of overall exhibition area.

Germany, Switzerland, France, Spain, Austria, Slovenia, Turkey, Poland, Russia and Denmark were the most represented countries at the trade show, which was also attended by numerous operators from Finland, Croatia, Estonia, Lithuania, Hungary, Czech Republic, USA, Great Britain, Israel, Japan, South Korea, Ireland and Egypt.

Among the foreign visitors, there were also over 30 qualified foreign operators participating in the business missions organised by UCIMU-SISTEMI PER PRODURRE in cooperation with MAECI and ICE-Italian Trade Agency, as well as 30 members of an autonomous delegation from Turkey. The matching activity organised by UCIMU-SISTEMI PER PRODURRE has materialised into 1,200 meetings arranged at the stands of the Exhibitors that took part in the initiative.

Besides registering the users' interest, EMO MILANO 2021 attracted the attention of the

international press: about 400 accredited journalists, of whom 40% were from abroad.

Students also confirmed their interest for the event. Young visitors were 1,300, including students from Technical High Schools, Universities and ITS-Higher Technical Schools, who visited the exhibition accompanied by their teachers. Among them, 450 were escorted on guided tours by tutors of UCIMU- SISTEMI PER PRODURRE.

Beside the technology offering, EMO MILANO 2021 featured numerous side initiatives, such as EMO Digital, the exhibition area focused on digital technologies; EMO Additive Manufacturing, dedicated to one of the most promising fields of the manufacturing production; EMO Start-Up, which offered an overlook of new enterprises working on the development of products and projects related to the world of production systems and metalworking.

A novelty of EMO MILANO 2021 was the Speakers Corner, the arena set up in Hall 5, which proposed over 80 speeches and in-depth analyses and discussions by exhibitors and organisers. In addition, 20 meetings were hosted within the EMO ADDITIVE area, arranged by AITA-ITALIAN ASSOCIATION OF ADDITIVE TECHNOLOGIES. Over 2,000 attendees registered for the meetings, in addition to about 3,000 remotely connected users (for an average of 500 users per day), who, over the six exhibition days, were able to follow the events



held at the trade show thanks to the live streaming service.

The interest in the exhibition is highlighted also by the consultation statistics of the exhibition website. Over 800,000 views were recorded on [emo-milano.com](http://emo-milano.com): from Italy, Germany and Switzerland, followed by the USA, France, Spain and Japan.

These figures are added to the 600,000 views registered on the Smart Catalog, the official catalogue of the exhibition, viewed mainly by mobile phones.

The social community of EMO MILANO reported a remarkable growth, from 2,770 users in 2015 to 9,440 followers recorded on 10 October 2021.

Among all Exhibition profiles - Facebook, Twitter, Instagram and LinkedIn - LinkedIn had the highest activity. In the period 13 September 2021 - 10 October 2021, there were over 23,000 page views (+809%), about 7,500 single users for 330,000 views of the posts published on the official profile of the trade show.

The next edition of EMO MILANO will take place in October 2027.



**MADE IN STEEL**
 Written by: Press Office Made in Steel

# Made in Steel 2021 beyond expectations: steel rebirth and new beginning

The **ninth edition of Made in Steel**, the main Conference & Exhibition in Southern Europe for the steel industry, organised by siderweb – the steel community, has exceeded expectations.

From 5 to 7 October, the event,

entitled “Renaissance – Here begins the steel rebirth”, at fieramilano Rho hosted 184 exhibitors, of which 22 coming from abroad, on an exhibition area of about 10,000 square metres. Foreign exhibitors represented a total of 15 countries. Attendance totalled 13,505, from 68 countries.

Digital MIS – Expoplaza, Made in Steel 2021 digital platform supporting business, a virtual meeting place for visitors and exhibitors, and the [www.madeinsteel.it](http://www.madeinsteel.it)





## FROM THE BUSINESS WORLD

### EXHIBITION - FIERE



website, were accessed by a total of 42,679 users, generating 134,086 page hits.

Also the social channels of the event (Facebook, Instagram and Linked-in) performed very well, generating more than 80,000 hits during the three days of the event. Siderweb TV, the channel specifically conceived for this edition of Made in Steel, streamed more than 20 hours of conferences live from the siderweb Conference Room, featuring interviews with the protagonists of the steel supply chain, as well as in-depth analyses and institutional videos by exhibitors. The siderweb YouTube channel was viewed more than 7,000 times.

Made in Steel was the first inter-

national event in attendance for the steel industry in the world since the outbreak of the pandemic. It offered the protagonists of the steel value chain, operators, exhibitors and visitors a packed agenda of high-level conferences, with over 30 national and international speakers, amongst whom Alec Ross, innovation advisor to the Obama administration. On Wednesday 6 October, Made in Steel hosted the annual meeting of Federacciai.

"Numbers speak for themselves and I was amazed by the turnout. It was an exciting three days: there were great expectations and a burning desire to meet, but also the willingness to understand where the steel sector is going.

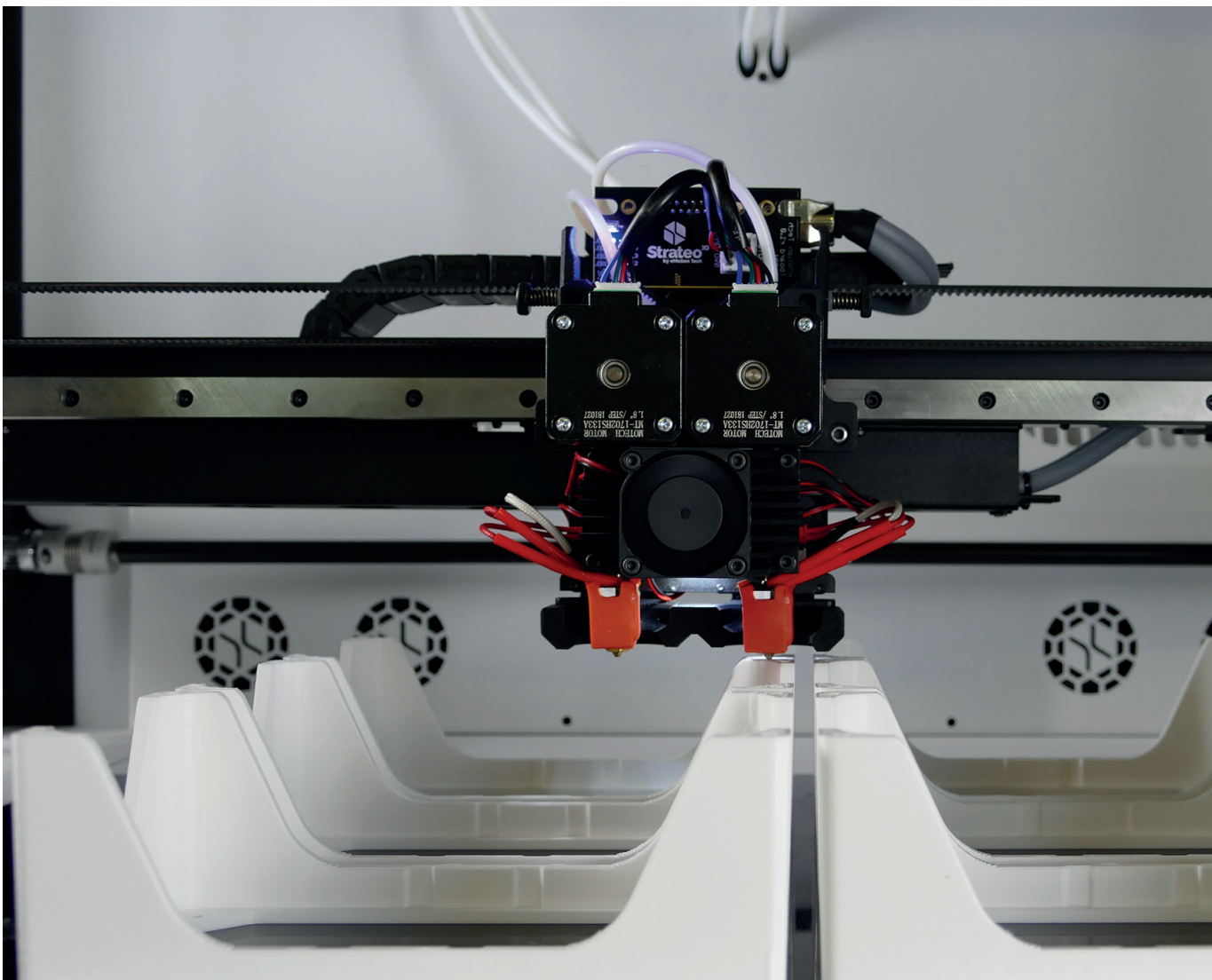
Our industry is in the middle of an earthquake, with rising prices, shortage of raw materials, soaring energy costs and tariffs. All these issues were discussed in depth during the ninth edition of Made in Steel. Once again, the event proved to be a safe harbour for operators of the supply chain, a place to do business and exchange views: it is a compass providing orientation amidst the powerful tides that are rocking our market and a radar to intercept future trends," said Emanuele Morandi, president and managing director of Made in Steel. The tenth edition of Made in Steel will be held in 2023.

# TIMTOS x TMTS 2022, Taiwan's first co-branded machine tool show

TIMTOS x TMTS 2022, Taiwan's largest first and only co-branded machine tool show, will be held in Taipei Nangang Exhibition Center, Hall 1 and 2 from February 21 to 26, 2022. A total of 900+ exhibitors will pack the exhibition halls with 5,200 booths. Notably, it will be not only the largest trade show in Taiwan since the outbreak of the pandemic, but one of the most significant events for the global machine tool industry in early 2022.

In an international press conference for TIMTOS x TMTS 2022 today, the organizers, James C. F. Huang, Chairman of TAITRA, Larry Wei, Chairman of TAMI and Wen-Hsien Hsu, Chairman of TMBA sat side by side with two industry giants, Jimmy Chu, Chairman of Fair Friend Group and Jui-Hsiung Yen, Chairman of TTGroup, making an insightful panel discussion on the theme "Impacts, Challenges and Opportunities for Global Machine Tool

Industry after The Pandemic." Chairman Huang of TAITRA said that Taiwan plays a crucial role in supporting the global machine tool supply chain, as Taiwan is renowned for its customization and innovation. What's more, Taiwan's expertise in communications and information technology enable Taiwan machine tool manufacturers to develop the best solutions for end users around the world,. Huang also pointed out that the TIMTOS x TMTS mega







TIMTOS

## FROM THE BUSINESS WORLD

### EXHIBITION - FIERE

show will be showcasing a wide array of R&D outputs of high profile manufacturing from Taiwan Team.

TAMI Chairman Wei added that the previous supply chain has been fundamentally changed since the global pandemic has created an opportunity for Taiwan players to explore new businesses in the post-pandemic era.

Meanwhile, Chairman Hsu, TMBA, encouraged continuous progression toward intelligent manufacturing, SaaS and interfa-

ce unity. The co-branded event, TIMTS x TMTS 2022, will be another eye-catcher, right after Taiwan machine tool industry's outstanding performance in helping fight against the pandemic with great success last year.

The emerging industries, for example, electric vehicles have caused great impacts on the global machine tool supply chain to date. Jimmy Chu, Chairman of Fair Friend Group and Jui-Hsiung Yen, Chairman of TTGroup shared options and experiences about enterprise transformation in the wake of such opportunities and challenges, which fully demonstrated Taiwan companies' resilience and flexibility when dealing with the supply chain issues.

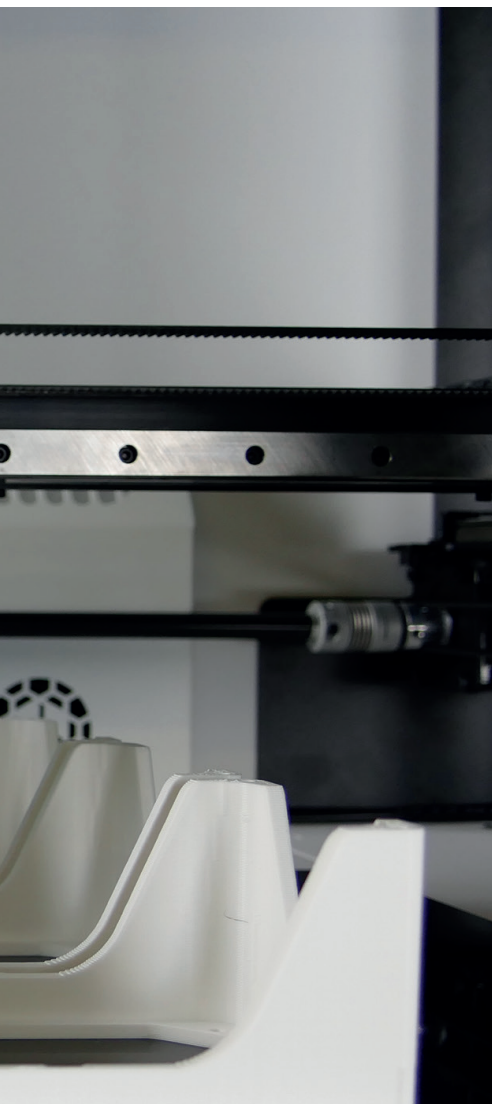
Aside from Fair Friend Group and TTGroup, key exhibitors at home and abroad include HIWIN, PMI, Victor Taichung, YLM, SOCO, SHINBU, KFO, CHMER, FANUC, MAZAK, YOU JI, TAKISAWA, YCM, TRUMPF, Delta, Mitsubishi, and Siemens.

The machinery industry has become Taiwan's third trillion-dollar industry, second to the semiconductor and panel industries. Total exports of Taiwan machine tools from January to October this year reached US\$2,245 billion, a phenomenal increase by 27.6% over the same period last year. With increasing COVID-19 vaccination rates and growing demands, it is expected that Taiwan machine tool industry exports will hit a new record in the next few months.



In response to border control, TIMTOS x TMTS 2022 will launch a lineup of online services and activities in conjunction with the physical exhibition, including On-site Guide for Online Visitors, Live Tour @ Showground, Live Stage for product launches, virtual display, and online 1-on-1 procurement meetings.

The online registration for TIMTOS x TMTS 2022 visitors is available on the official website [www.timtos-tmts.com.tw](http://www.timtos-tmts.com.tw). For updates on the latest, please visit the official website, or follow the shows on social media.





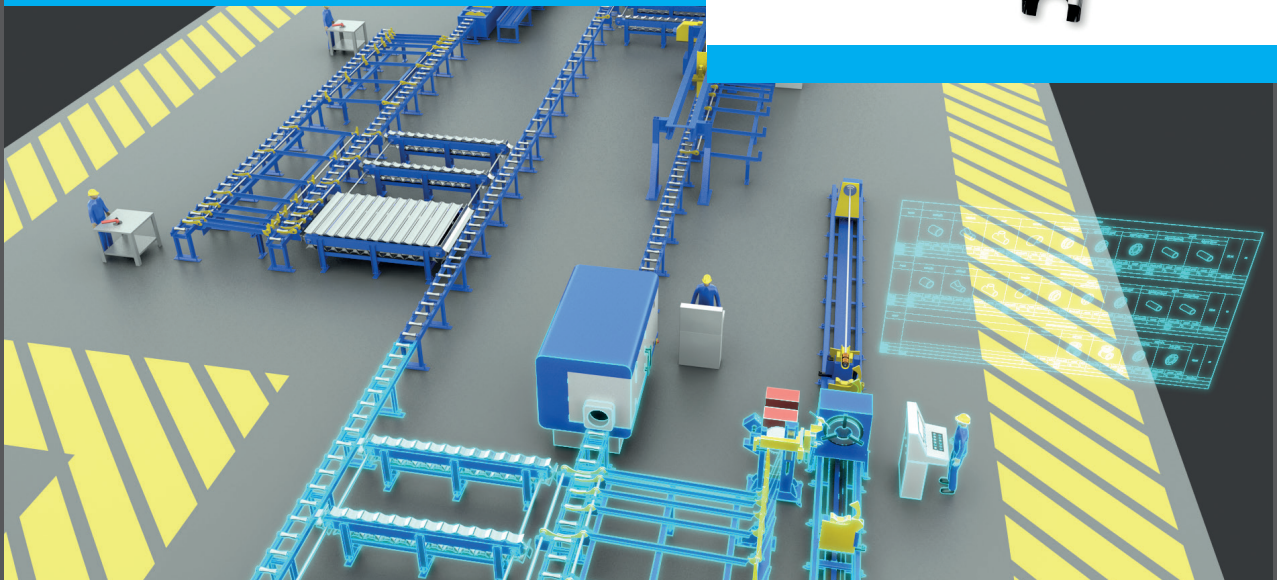
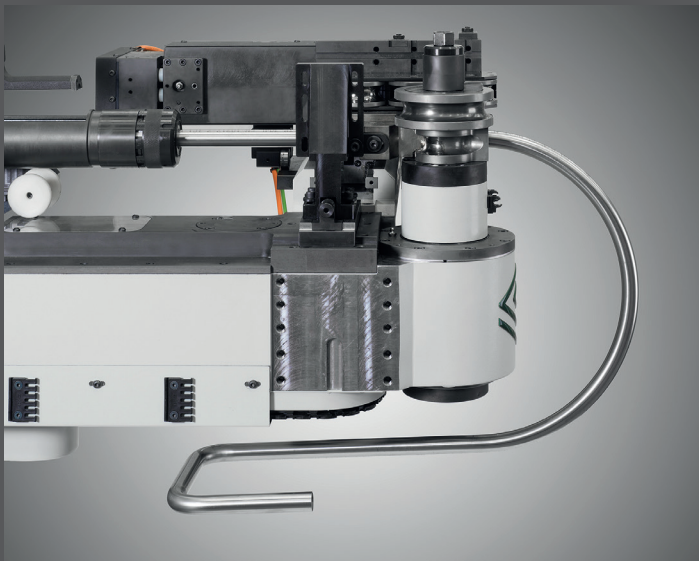
## SPECIAL SOFTWARE

Written by: Mr. Giovanni Teolis

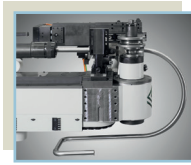
Machine Tools are every day more dependent from software: operativity, functions, monitoring, analysis and remote control are impossible without a skilled software that rules over mechanical parts of the machinery.

The pulse to Industry 4.0, however, is strictly connected with software application and progress and enhancements in the field can be noted every day.

In order to follow the more recent innovations and processes in software, Tube Today asked the companies for sending their updates: in next pages, readers will find a tracking shot about the new products of worldwide producers. In a moment in which long range technologies are growing up, also in consequence of the pandemic and health emergency, being up to date is a useful topic to pursue.







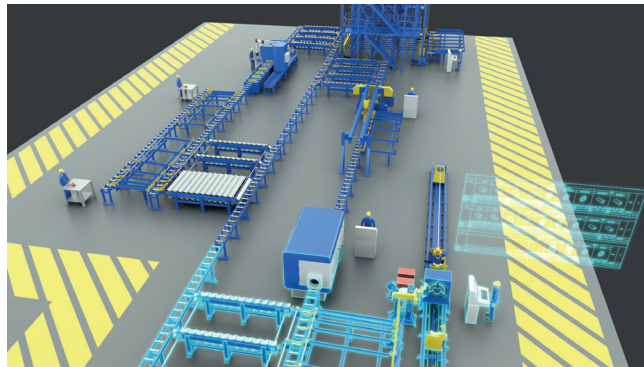
## 3R SOLUTIONS



### Software for the Pipe-Spool Life Cycle from Engineering to Installation

3R solutions offers an integrative software suite, which can be used to plan, control, and document the entire fabrication cycle for pipe-spool projects. In Engineering the operators can easily import their 3D models into 3R's software. This software can then be used to create isometric drawings, including customer-specific spool-splitting parameters, generate documents such as Bills of Material, Cutting or Welding lists, or CNC data for the machines inside the shop.

In Production Planning, the operators can use the 3R software to create optimized work packages, which utilize the capacities of the machines and work stations to the best extent possible, balancing the workload evenly and reducing both waiting and retooling times as much as possible. By interfacing with scheduling and warehousing software, it is possible



to make sure that all required resources are available, and all spools are fabricated in a timely manner.

By linking the individual workstations and machines inside the shop to the central database, it is possible to not only provide all work orders in digital format, but also to supply the required CNC data for many machines. All progress updates can be transmitted in real time, and every piece of pipe can be tracked throughout the entire fabrication cycle.

In addition, since the software used in Engineering, Production Planning and the workshop itself all use the same database, revisions can be managed easily. If a revised version of a

drawing is imported, 3R's software can automatically check if the previous version has already been released for fabrication or not. In case fabrication has already begun, the software can flag the spool, and inform the workers in the shop that no more work is to be performed on it. This prevents loss of work time and materials, which otherwise would have been spent fabricating the wrong spool.

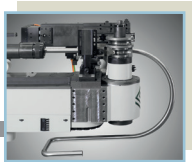
The tracking capability of 3R's software extends to Quality Control and Installation works as well, and it is possible to generate a wide range of reports, all of which can be customized to fit the client's format. And since the reports are stored in digital format, they can be accessed even years after actual fabrication, simply by entering the spool number.

Pipe-spool fabrication is a process that does not only involve the shop floor. Even the most sophisticated and capable machines are only as good as the preparation and logistics that support them. While the best efficiency can be reached by combining machines, logistics and software (like in 3R's customized smart-shop solutions), significant savings

can already be achieved by using good software to plan, control and document all processes inside the shop.







## AutoForm TubeXpert



### AutoForm TubeXpert

#### Design Tools Rapidly and Simulate the Tube Bending, Forming and Hydroforming Processes

AutoForm TubeXpert is an easy-to-use and highly intuitive software solution for rapid tool design and simulation of tube bending, forming and hydroforming processes. The software enables you to meet the increasing demands regarding part complexity, part quality and advanced materials, such as high-strength steels and aluminium, as well as the increasing complexity and variety of forming processes.

With AutoForm TubeXpert, you can carry out comprehensive virtual tryout analyses of the forming process of tubular parts including all process steps from bending and preforming to hydroforming, annealing and calibration, cutting and tube end forming. In addition, the software enables you to perform accurate springback simulation after any of the forming process steps and automatically make the necessary adjustments to the tool geometry and process parameters in order to compensate the effects of springback. The full integration of AutoForm-Sigma technology in AutoForm TubeXpert enables you as a part designer, process engineer, or tool and die maker to systematically improve tool designs and process layouts and evaluate the robustness of the manufacturing process.



## BLM GROUP



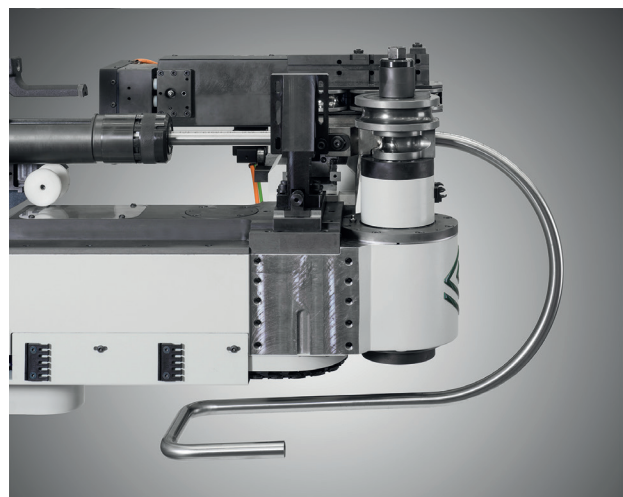
### A compact bending head to produce new geometries

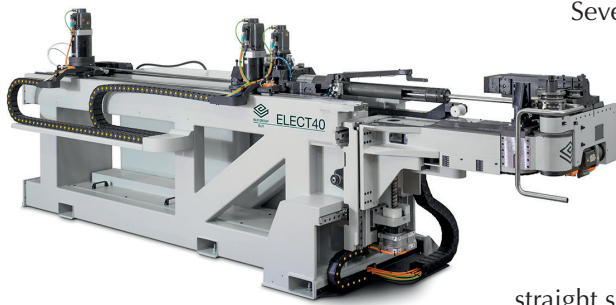
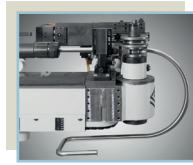
#### BLM GROUP has developed a new compact bending head for the ELECT40, capable of executing shapes that were previously impossible with only one bending direction.

In furniture and similar sectors, where the selected tubes are often very long and can sometimes require particularly complex bent shapes, the bending head must consume the smallest possible area in order to leave space for the shape that the bent tube will assume.

This need is much less urgent on tube bending machines with right and left-handed bending because of the option of using one or the other bending direction to resolve most interference problems between the tube and machine. This is not the case on tube bending machines with only one direction of bending where the only way to avoid the risk of collision is to reduce the overall dimensions of the bending head as much as possible.

BLM GROUP has done precisely that by developing a new compact bending head for the ELECT40, capable of executing shapes that were previously impossible with only one bending direction. While some parts will still require the use of an in-process right or left-handed tube bending machine, the ELECT40's new compact head provides great flexibility to its users.





Several fundamental aspects were taken into account when designing the tube bending head to resolve the geometries that were previously not feasible: reducing the height of the bending head and increasing the distance between the bending tools and the machine body, respectively reducing the straight part between the bends thereby minimizing the chances of collision, especially on tubes with straight sections of considerable length.

The ELECT40 compact bending head is 35% lower and 31% longer than the standard head. It also utilizes greater speed for both the bending arm (+20%) and the clamp and the pressure die (+25%), with a reduction in the cycle time of about 10% on a typical part with four bends.

As is already the case with the standard head of the ELECT40 and the other tube bending machines of the ELECT family, the compact bending head also allows for manual changes of bending direction from right to left and vice versa.

The design of the compact bending head of the ELECT40 can make all the difference for many sectors in all cases where the parts to be made are particularly complex.

In addition to the furniture sector, there are many sectors in which tubes must be bent into shapes difficult to realize on one bending direction machines. For instance, manufacturers making tube parts for various types of industrial systems, for the nautical sector (handrails, ladders, etc.) and for farming machinery and equipment. For manufacturers who already have an in-process right and left-handed tube bending machine, this solution can be an advantage in terms of production organization, by allowing the manufacturer to reserve the most complex parts for the in-process right and left-handed tube bending machine while sending parts of medium complexity to the ELECT40 with the elongated bending head.

A solution like this can prove to be a real winner, especially for subcontractors who generally have mixed productions in terms of part complexity.



**SD PROGET INDUSTRIAL SOFTWARE**



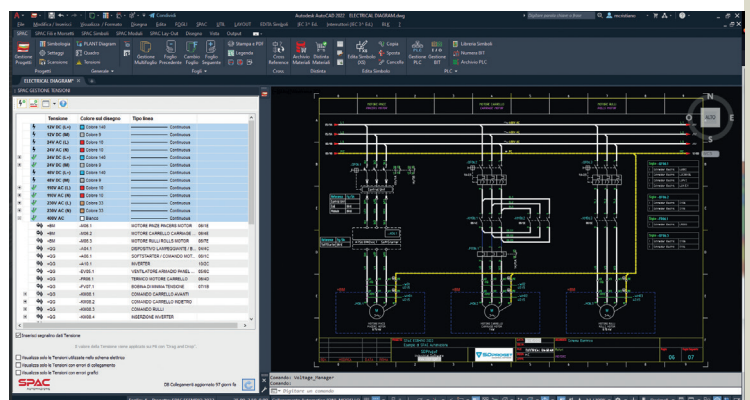
SDProget Industrial Software, one of the leading Italian CAD software development companies, presents a new generation of software: SPAC Automazione 2022 is the latest, innovative release of one of SDProget's flagship products, SPAC Automazione, a professional, highly automated and flexible design system that guarantees users maximum productivity. In particular, SPAC Automazione provides professionals in the electrical sector with an extremely complete and high performance range of specialized functions to address, with maximum efficiency, all issues of design of electrical systems for industrial automation.

SPAC Automation 2022 is characterized by the Autodesk 2022 64-bit graphics engine and can be installed, in the appropriate version, also on AutoCAD 2020, 2021 and 2022. In addition, to ensure a shorter processing time and data stability, SPAC Automation 2022 uses the SQLite database.

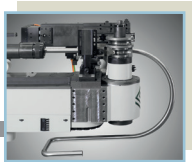
This release can coexist with previous versions of SPAC and can be installed without uninstalling previous releases.

### Project management

One of the novelties introduced with the new SPAC







Automazione 2022 release, within the “Project Management”, is the function that, in case of need, allows to automatically recover damaged drawings.

In order to make the search of materials more effective and precise, the new release allows to quickly find the material articles that have been previously used and present in similar projects; moreover, in case of opening of old projects, SPAC Automazione 2022 allows to convert the database format to the current one.

Finally, this release also allows you to save projects in SPAC Automation 2021 and earlier

#### **Multiple replacement of graphic symbols**

Thanks to the “Multiple Symbol Substitution” function, the operator can configure the graphic exchange files even in the presence of different standards.

SPAC Automazione CAD, in fact, allows to change the symbology according to the corresponding table.

#### **Macro Management in Material Archive (DbCenter)**

SPAC Automation 2022 allows to manage the Macros inside the DbCenter. In particular, this new functionality allows the operator to organize the Macros in families, to add both an internal code and language descriptions and to associate an electric symbol to the Macro.

Finally, through the simple Drag&Drop, release 2022 allows the operator to choose whether to drag on the diagram the whole Macro or the single articles that compose it.

#### **Bill of Materials**

In this new version, the configuration of all fields on the monitor and in output has been implemented. For this reason, SPAC Automazione 2022 allows the generation of BOMs structured in levels with non-exploded Macros.

In addition, PDM Connect module owners can also access the “Bill of Materials Code” function that allows the identification of electrical panels for the management system.

#### **SPAC Data Web**

Through SPAC Automazione 2022 it is also possible to access SPAC Data Web, the online service for updating the components database that SDProget makes available to professionals using SPAC Automazione and SPAC Start Impianti.

#### **Opera4SPAC**

SPAC Automazione 2022 is compatible with Opera4Spac, the solution that integrates SPAC technology for electrical design with that of Opera Industry by Remorides for the management of technical activities in the field and that, thanks to the centralization in Cloud, allows those who draw the electrical diagram to send the tables on smartphones connected to SPAC Automazione using the Opera App, without ever leaving the CAD environment and with the certainty of secure transmission and storage and reception in real time.

# tubetoday

INTERNATIONAL MAGAZINE FOR TUBE, PIPE AND BARS

visit our new website  
[www.tubetoday.com](http://www.tubetoday.com)



**A new look for Tubetoday.** Our website change, is renewed. Articles, editorials, news in real time during fairs or events. Among the new features of the dedicated columns: in addition to the different special for each issue of the in-depth sections.



## CURIOUS NEWS

## FROM THE WORLD

## How to choose the right heating cable for pipes, taps and gutters

The polar cold of these days is not a friend to pipes: when temperatures drop there is a danger that some external parts of the plumbing system may freeze and lose efficiency. Frost affects the normal flow of liquids inside pipes, gutters or taps. To keep your systems running at peak performance, even in the most extreme weather conditions, you can use heating cables.

These are electrical elements that allow heat to be transmitted in a focused and controlled manner. A heating cable is made up of several layers: inside there is a heating matrix and two bus wires, one live and one neutral. When the wires are connected to the power supply, the voltage reaches the matrix, which then heats up, transmitting heat to the tube. The cables can be arranged linearly along the track or they can be arranged in a spiral.

Cables are distinguished from each other based on different characteristics, but are usually separated into two broad categories. On the one hand, there are self-regulating cables, which are able to change the heat supplied based on temperature, and on the other hand, there are constant power heating cables. Installation of the cables is simple and can be done using cable ties, fiberglass tape or a suitable adhesive.

They are usually placed underneath the insulation of the pipe in question. Heating cables are a practical but also a very flexible solution. They can be cut to any length to suit the application. The heating of the track must be controlled through the use of an appropriate thermostat.



## Indiana Jones among snakes and... pipes

It's 40 years old (and he wears it very well) "Raiders of the Lost Ark", a classic of American adventure cinema that launched



one of the most iconic, popular and beloved movie characters, the archaeologist and treasure hunter Indiana Jones, played by Harrison Ford. Hat, leather jacket companion of a thousand adventures and whip that has often saved him from dangerous situations, has become an icon of pop culture and entered the collective imagination of at least a couple of generations.

Among the many curiosities related to this historic film, there is also one that concerns the pipes. To build the famous scene in which Indiana Jones finds himself in a cave full of snakes, the producers scoured every pet store in London and the south of England to find every reptile they could get their hands on. However, there weren't enough, so Steven Spielberg had several tubes of varying lengths cut that were mixed in with the real snakes. Another interesting fact: when Harrison Ford comes face to face with the cobra, there is actually a sheet of glass separating them.

## CURIOUS NEWS

## The next weapon against CO<sub>2</sub> is a membrane of tubes finer than a hair

A membrane of tubes finer than a hair will serve to reduce the carbon dioxide produced by industrial processes, thus lowering emissions and allowing to reduce pollution and global warming. In addition to allowing significant savings in energy and, therefore, production costs. In particular, the process developed by Osmoses, a start-up resulting from a collaboration between MIT in Boston and Stanford University, with Italian Francesco Maria Benedetti among its co-founders, is dedicated to methane refining. The initial aim was to improve the efficiency of chemical separations but an even better result has been achieved: a molecular filtration system that contains thin channels that allow the separation of molecules smaller than an angstrom, through channels 100 thousand times thinner than a human hair.

This is a huge problem: around 3.8 trillion cubic meters of methane are consumed worldwide each year, and 23% of energy demand is met by this fuel. But the raw one that is extracted from the ground, often in conjunction with oil extraction, cannot be used as is. Instead, it requires a refining process, through which contaminants such as hydrogen



sulfide, propane, butane, ethane and even sulfur are removed. In order to separate the different components, the mixture was previously heated to high temperatures, obviously using fossil fuels that turn into CO<sub>2</sub>.

This type of chemical fracturing, similar to distillation, uses huge amounts of energy in the form of heat. In general, these industrial processes are an issue that has so far been little considered in climate policies, yet they require 15% of the world's energy, with the resulting production of greenhouse gases.

Membrane filtration is therefore a promising alternative to fracking. It uses 60% less energy than the conventional system. So far existing membranes, which have low yields and high costs, are used for example to desalinate water. The one developed by Osmoses could be used by large gas plants, avoiding up to one million tons of carbon dioxide for each of them. It would also reduce by up to 85 percent the inevitable product loss that occurs in the process. This amount saved, researchers say, could heat 7 million homes for a year.

The project is still in its infancy. But it has won MIT's Entrepreneurship Competition award, \$100,000 that will be used to buy new equipment and move from prototype to operational model later this year. The idea of Osmoses is then to operate in other types of purification. In fact, the membrane they have developed can be applied to obtain purified oxygen, which increases the efficiency of combustion, particularly in the steel and glass industries. It could also be used for the production of nitrogen, hydrogen and finally for the capture of CO<sub>2</sub>, allowing an effective and direct reduction in the atmosphere.



## NEWS

## FROM THE BUSINESS WORLD

## New full protection wire feeder by Lorch for demanding use in practice

With compact dimensions, low weight, and a robust build, Lorch Schweißtechnik GmbH is offering a new full protection wire feeder to offer perfect welding results even during extreme conditions. The innovative wire feeder was developed for the S and MicorMIG series alike. Welding may very quickly turn into a physically exhausting, narrow affair in particularly challenging working environments, such as ship construction, large component production, container construction, or industrial production. This poses great challenges to the welder and the equipment alike. Lorch has developed the new full protection wire feeder MF-10 for this specifically: With its ultra-compact dimensions of 620 x 245 x 310 millimetres (L x W x H), it is very suitable for use in manholes with a 200-millimetre spool (D200). Its low weight of barely



10 kilograms makes it easy to carry even across longer distances. In contrast to conventional metal cases, the MF-10 is made of high-performance plastic, making it fully insulated and great even for complicated and demanding areas of use. With its extreme stability and robustness, it will resist a drop from 60 centimetres easily, clearly exceeding the standard of 25 centimetres.

Easy access to the tool-free quick fittings of the hose package and user-friendly latching and tension relief also make sure that the intermediate hose package can be removed easily. The transparent spool housing cover enables the welder to check the remaining wire on the spool easily at any time. An integrated inner lighting specifically for the MicorMIG version permits simple guiding and replacement of the wire roll even in poor lighting.

The feeder carrying handle was optimised for harsh practical use as well and will always remain above the centre of gravity of the wire feeder in the MF-10. The handle alignment and the resulting ergonomic angle avoids a torque on the wrist when carrying, greatly relieving the welder when reaching through a manhole or handing down from the scaffolding. The new MF-10 full protection wire feeder is available in four different versions. Two of them are for the MicorMIG series with a wire spool housing of 200 millimetres (D200) and 300 millimetres (D300) each, equipped with the ControlPro operating panel. For the welding units of the S-series, there is the full protection wire feeder MF-10 with its XT-operating panel, each with the small (D200) and the large (D300) spool housing.

## Prima Additive and Materialise advance efficiency and process control of additive manufacturing systems

Prima Additive, the dynamic Business Unit of Prima Industrie Group (Borsa Italiana, Star segment) manufacturing industrial metal Additive Manufacturing systems at global level, and Materialise (Nasdaq MTLS), a global leader in 3D printing solutions, are intensifying their collaboration in the optimization of metal additive manufacturing systems.

The collaboration between the two companies has led to the optimization of the Print Genius 150, the additive manufacturing system by Prima Additive with Powder Bed Fusion technology featuring two lasers working on the same area. On this machine Prima Additive has integrated Materialise's MCP (Materialise Control Platform) hardware control to obtain real-time control functions and a streamlined combination with external systems to assist the process, such as monitoring and control systems.

A major result of the integration between the Prima Additive and Materialise systems is the deve-

## NEWS

lopment of a laser Workload Balancing algorithm that allows to exploit the two lasers to the maximum and in a balanced way, optimizing their workload. Thanks to this algorithm the two lasers are able to work in each layer for the same amount of time, automatically distributing the work in a homogeneous way and eliminating the moments in which only one of the two lasers is at work, maximizing the benefit of having two lasers on the same machine. The first Print Genius 150 resulting from this collaboration was installed at the University of Leuven, Belgium in April 2021.

Prima Additive 150 Family is a very flexible and smart machine platform. It is the best way to explore additive manufacturing, but also to develop new alloys and to qualify new materials and applications. All the machines of the 150 Family are equipped with different sensors that monitor the process in real-time, a double preheating system to heat the surface of the powder bed both from the top and from the bottom through the heated plate (up to 300° C), as well as the possibility to integrate lasers with different wavelengths (e.g. green lasers). Furthermore, the machine offers the user the possibility to set the laser parameters and the layer thickness in real-time during the job. Given the product's characteristics, Materialise MCP adapts well to the software architecture of this family of machines and is a flexible tool of indisputable value to optimize the unique features of this machine.

The Materialise Control Platform is a machine-embedded hardware- and software-driven platform for advanced control of laser-based 3D printing processes. This solution is ideal for machine manufacturers, researchers, and 3D printing users who need to adapt the production process to meet specific needs. The MCP provides all the tools required for an easy-to-use, open and configurable system to connect, control and monitor all process related hardware (Laser, Scanhead and Dynamic Focus). Consistent with Industry 4.0, the MCP is equipped with OPC ua and REST API communication protocols. It allows to get access to real time data for analysis and empowers the user to profit from the real time, closed loop control function embedded in the MCP to further optimize the printing process and reduce costs by improving process repeatability while optimizing printing efficiency.

"After the successful integration of our state-of-the-art Machine Control Platform (MCP) into the Print Genius 150, we demonstrated together that our Optics Load Balancing solution ensures an important gain in printing efficiency without loss of print quality. It was also nice to see how the Prima Additive and Materialise teams - however being located at different sites during Covid-19 travel restrictions - succeeded in delivering such a successful project in such a short time period. Materialise and Prima Additive form a strong complementary partnership and we are looking forward to further joint projects with Prima Additive." - declares Jan Van Espen, Research Manager at Materialise.

"This first joint project between Prima Additive and Materialise is the first brick of a research and business partnership for the two companies that will continue to invest in an ever more profitable technological collaboration for the development of increasingly performing and easy-to-use machines, with the target to make additive technology more usable for SMEs and for all the companies that want to integrate this technology profitably in their production contexts." – comments Paolo Calefati, Head of Additive Manufacturing and Innovation at Prima Industrie.





## NEWS

## Sandvik Celebrates Record Order for its Nuclear Segment

Sandvik Materials Technology is delighted to announce the securing of a record order for nuclear tubes and pipes from a world-leading low carbon energy company for the development of nuclear power stations in the United Kingdom.

Sandvik will supply nuclear tubes and pipes in 29 dimensions in grade 3R65, a molybdenum-alloyed austenitic stainless chromium-nickel steel with a low carbon content. The tubes will be mainly used to connect different systems close to the second reactor at the Hinkley Point C power station in Bristol, England.

The materials will require a high degree of cleanliness to meet the nuclear RCC-M design code, with firm controls on instructions and procedures and regular on-site third-party inspections during manufacturing.

The tubes and pipes will be manufactured at Sandvik's production unit in Sandviken, Sweden. This is the second order from the energy company for Sandvik nuclear materials. In 2018, the company was commissioned to provide a package of tubes for the first reactor at Hinkley Point C. The order was delivered during 2019 and 2020.

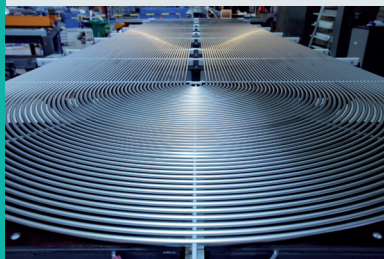
Despite tough competition, the latest order was successfully secured due to Sandvik's record of excellent understanding of the customer's technical requirements, and its delivery of high-quality materials.

Anders Frelin, Regional Sales Manager, Nuclear Power, EMEA, Sandvik Materials Technology, said: "We succeeded thanks to a strong commitment from everyone involved, from the first customer sales contact, through the internal supply chain to final delivery with impressive teamwork.

"It is a great feeling when everything comes together, and you book this kind of order. We have been working on details, instructions, and procedures for a very long time and it's thanks to the efforts from everyone involved that we finally secured this contract."

"We are proud to have been selected as supplier for this prestigious contract, which confirms our position as the leading producer of nuclear tubes," said Patrick Larsson, Production Manager, Sandvik Materials Technology.

A provider of specialist materials and knowledge for next-generation nuclear power supply, Sandvik has a successful record of supporting the nuclear industry for more than 60 years and a 155-year steelmaking heritage. Sandvik has delivered 60,000,000 meters of nuclear fuel tubes to more than 100 reactors worldwide.



## Tenaris and Sandvik Materials Technology extend long-standing alliance with renewal of five-year agreement

Tenaris and longtime business partner Sandvik are extending their nearly 20-year alliance with the signing of a new five-year agreement for the supply of OCTG with premium connections and specialty steel alloys, including CRAs, to serve the oil and gas market.

The renewed agreement combines Sandvik's expertise in material technology and the development of corrosion-resistant steel alloys with Tenaris's excellence in the manufacture of high-quality, high-performing OCTG and premium connections with Dopeless® technology.

"Our strategic alliance facilitates closer cooperation on future innovations targeting the most demanding applications in the market. Together we will be unmatched in the industry allowing us to develop and offer unique solutions for the most challenging operational environments faced by our customers," said Goran Bjorkman President Sandvik Materials Technology.

## NEWS



Tenaris Chairman & CEO Paolo Rocca visited Sandvik Materials Technologies headquarters in Sandviken, Sweden, ahead of the signing of the agreement, which marks two decades of collaboration between the companies.

"We continue to draw from our combined strengths in R&D and manufacturing to offer customers differentiated solutions, unmatched in the industry today," said Rocca. "And, as the sector pivots with a greater focus on low-carbon solutions, we are best-positioned and have the know-how to execute projects for the energy transition such as carbon capture and storage, geothermal and gas production - segments that require advanced materials and product technologies that maximize performance while reducing environmental impact."

The strategic partnership between Tenaris and Sandvik started in 2003 to add value to the oil and gas industry through joint research, product development, and the manufacture of specialized tubular solutions for demanding applications.

For more information about Tenaris, please follow us on Facebook, Twitter, LinkedIn, and Instagram.

## Two new Unison Breeze machines take stauff's total to fifteen

STAUFF, the global manufacturer and supplier of precision fluid power products for a wide range of industries, has purchased two new Unison Breeze 35 mm (maximum pipe diameter) left- and right-hand pipe bending machines. One machine has been installed at STAUFF's manufacturing site in Sheffield, UK. The other has been installed at STAUFF's production facility in Sydney, New South Wales.

This latest purchase of Unison Breeze machines by STAUFF follows on from the organisation's recently signed five-year strategic partnership with Unison Ltd, an agreement providing all STAUFF operations around the world with dedicated in-country support, assistance with product development and other benefits. Once both new Breeze models are operational, there will be no fewer than 15 Unison tube and pipe bending machines at STAUFF's manufacturing centres around the globe.

"It has been an honour to supply STAUFF with so many of our all-electric tube and pipe bending machines over recent years," comments Unison Ltd's Global Account Manager for STAUFF, Steve Chambers. "STAUFF's latest purchase of two 35 mm Breeze CNC machines, however, is particularly significant. Not only does it further underpin STAUFF's appreciation of the uncompromising levels of accuracy and repeatability that our clean, all-electric tube and pipe manipulation technologies provide, but it also marks the purchase of the first new Unison machines by STAUFF under the strategic partnership agreement."

"We have worked with Unison Ltd for more than ten years," adds Ken Cleal, Head of Production at STAUFF UK and STAUFF Global Production Manager for tube and tube manipulation. "Throughout that time, we have received nothing short of the highest levels of service and support from them, whether that be assistance with

product development, operator training, or machine tool maintenance. Unison machines consistently provide the uncompromising levels of accuracy and repeatability that are essential to our operations. Additionally, Unison's Unibend operating system is exceptionally intuitive and user-friendly, making it extremely popular with our teams."

STAUFF's new 35 mm Unison Breeze left- and right-hand machines will be used for the manufacture of small run complex components,





## NEWS

such as hydraulic lines for braking systems. Materials bent will include aluminium, corrosion-resistant steel and exotic alloys. With the ability to bend in both clockwise and anticlockwise directions, the machines are ideal for parts of complex geometry and will provide STAUFF with exceptional flexibility. Equipped with Opt2Sim, Unison's sophisticated 'Design for Manufacture' CAD tube bending simulation software, both machines will also streamline the production of complex, high-value components.

Other Unison tube and pipe bending machines in use by STAUFF include 50 mm and 100 mm multi-stack Breeze machines, 16 mm and 35 mm left- and right-hand pipe bending machines, 50 mm 'pinball style' pipe bending machines and Unison EV Bend 1000 16 mm OD manual CNC benders. Applications include components and systems for construction, agriculture, arboriculture, oil and gas extraction and processing, food and chemical processing, mining, marine and the rail industry.

All Unison Breeze machines offer rapid setup, fast tooling changes, exceptional power, rigid mechanical design and all-electric control for right-first-time repeat sub-contract work, or immediately after producing a single trial part. These are attributes that Unison Ltd believes make its Breeze models the ultimate tube manipulation machines for businesses specialising in small batch production runs. Unison's recently upgraded Unibend software has equipped its Breeze machines with cycle time speed improvements in the region of 25% compared to earlier versions. Available as a retrofit option for Unison Breeze machines that are equipped with the company's latest Unibend control system, the software also incorporates new teach routine and simulation features.

#### **Unison Ltd: intelligent tube technology**

Established in 1973, Unison Ltd is the UK's leading manufacturer of tube and pipe bending machines, offering the largest range of all-electric benders for diameters from 4 mm (5/32") to 275 mm (10" schedule pipe). With a reputation for building highly powerful, highly robust machines that deliver uncompromising levels of accuracy and repeatability, Unison Ltd continually innovates the tube and pipe bending marketplace. The company manufactured the world's first all-electric tube bender in 1994, followed by the world's first all-electric multi-stack tube bender, then the world's largest all-electric tube bender for the shipbuilding industry. Available in single-stack, multi-stack and right/left varieties, Unison machines are delivered to more than 20 countries globally. Unison's tube bending software is recognised as the most user-friendly control system for tube bending machines. The software is written and supported by Unison, ensuring complete control of its evolution, with no need for third party support.

## **AutoForm- AutoComp The Most Efficient Compensation Methodology for Successful Springback Compensation**

AutoForm Engineering GmbH, the leading supplier of software solutions for stamping and Body in White assembly processes, presents its newly developed software AutoForm-AutoComp. With this software, users can quickly evaluate and compare different compensation strategies and then select the one that is best suited to their needs. As a result, the final tool geometry and process setup can be defined efficiently ensuring part geometry within the required tolerances and with a minimum number of correction loops in physical tryout.

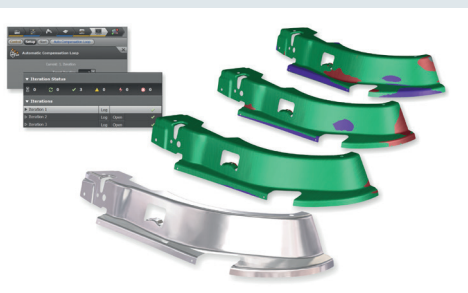
With the increasing use of modern materials, such as high strength steels and aluminum, applying the most effective compensation strategy brings tangible benefits to users. AutoForm-AutoComp allows users to quickly evaluate and select the most effective compensation strategy. With AutoForm-AutoComp, compensation loops are automatically carried out in the background.

## NEWS

Users can select the number of iterations, check the status of these iterations and immediately visualize them on the screen.

With AutoForm-AutoComp, the final tool geometry and process setup are defined much faster ensuring part geometry within the required tolerances and with a minimum number of correction loops in tryout. The effective implementation of AutoForm-AutoComp results in improved planning reliability in die development, tool shop and tryout as well as minimized risk of later, costly changes to tooling or processes.

Dr. Markus Thomma, CMO of the AutoForm Group, stated: "In recent years, springback compensation has become one of the most important issues that affects the body-in-white manufacturing. We are pleased that we can offer our customers a new software to support them in this area. AutoForm-AutoComp helps users to efficiently tackle springback compensation issues. The software enables them to select the most effective compensation strategy and leads to faster and more reliable process engineering."



## Gianni Berengo Gardin and Forni Industriali Bendotti: two stories that met to generate a new outlook

**"90 x 104" is the volume by the Master of photography that tells the Bendotti spirit through images.**

Gianni Berengo Gardin and Forni Industriali Bendotti met: after having printed 260 photographic books and after having designed, prefabricated, assembled and started up 360 ovens in five continents. Two success stories, built shot after shot and oven after oven, two treasures of Made in Italy that have remained strictly true to themselves.

One, the great photographer, capable of maintaining his critical and passionate gaze on a human and social reality that has changed tumultuously over the years.

The other, the company that "invented" the prefabrication of ovens, never failing to pay attention to the design of the needs of each client, no matter where in the world they compete.



Gianni Berengo Gardin has investigated the work

of Forni Industriali Bendotti from his own point of view and, in the 54 photographs collected in the book "90 x 104", he demonstrates that he has captured its essence: the encounter between the craftsmanship of Bendotti's personnel and the highest level of current technology; an encounter that guarantees the result: a high-performance oven with maximum reliability and the best energy and production performance.

It is not easy to "be Gianni Berengo Gardin": one is obliged to make precise and rigorous choices in order to maintain one's own style. And this is what the master of photography has done, purposely renouncing the prevailing digitization in order to testify to the beauty and uniqueness guaranteed by the shots taken on film, in black and white, with hand printing and the use of the finest papers.

The same commitment was put into the field by bendotti, with an inverse canon: to measure and use digitalization applied first to the design of the furnaces and then to their operation, so that they can respond positively to the continuous and ever new requests for control of the heating process and energy optimization. So many words to tell what Gianni Berengo Gardin knows how to say in a click.



## NEWS

## 33.BI-MU: appointment from October 12 to 15, 2022 at Fieramilano Rho

**New features of this edition: focus on 5 technological themes for 5 exhibition areas and concomitance with Xylexpo**

From October 12 to 15, 2022, fieramilano Rho will host 33.BI-MU, Italy's leading and most important event dedicated to the industry of machine tools for cutting, forming and additive manufacturing, robots, digital manufacturing and automation, enabling technologies and sub-contracting.

Promoted by UCIMU-SISTEMI PER PRODURRE, the association of Italian manufacturers of machine tools, robots and automation, and organized by EFIM-ENTE FIERE ITALIANE MACCHINE, 33.BI-MU is held exactly one year after EMO MILANO, the sector's world exhibition that took place in October 2021 and was a complete success with the target audience.

In the wake of this result that, in fact, inaugurated the new post-pandemic era, and by virtue of the particularly favorable economic moment, 33.BI-MU is preparing to gather the consensus of the companies in the

sector that have a decidedly lively and receptive Italian market at their disposal, also thanks to the government incentives that will remain in force at least for the whole of 2022.

Willingness to invest in new production technology, the need to renew plants, which increasingly need to rely on the latest generation of systems and machines, are the reasons that will make the appointment

with 33.BI-MU definitely attended by users of all major outlet sectors. Visitors will find an event full of proposals for all production needs. Alongside machines and systems, the heart of the exhibition, 33.BI-MU will propose a special focus on 5 technological themes for 5 exhibition areas representing the entire ecosystem of the sector: RobotHeart sponsored by SIRI and dedicated to the world of robotics;

BI-MU Digital focused on the world of ITC and connectivity technologies; plusADDITIVE, sponsored by AITA-ASSOCIATION OF ITALIAN ADDITIVE TECHNOLOGIES and dedicated to additive technologies; METROLOGY & TESTING focused on systems, testing and measuring machines and quality control; and, finally, BI-MU LOGISTICS dedicated to logistics for the mechanical industry. In addition to the exhibition offer, there will be BI-MUpiù, a well-established initiative of the biennial machine tool exhibition, which will

propose a busy calendar of thematic cultural in-depth meetings organized by the organizers and exhibitors. Alongside the presentations of the new products on show at the fair, there will be meetings focusing on the topics of greatest interest for operators in the sector. Among these, particular relevance will be given to digitization and sustainability, in response to the new lines dictated by the 4.0 transition and to the approach foreseen by ESG criteria, which are increasingly relevant for those operating in the world of industry.

The great novelty of this edition is then the full concurrence of 33.BI-MU, staged in halls 9-11; 13-15, with Xylexpo, the biennial international exhibition of woodworking technologies and components for the furniture industry, which will occupy the opposite halls (22-24; 14-18), thus creating a single area with total and mutual permeability of the entrance of the two exhibition events.

The two events, undisputed leaders in their respective sectors, are therefore proposed as separate but absolutely complementary events, for a single major exhibition dedicated to the manufacturing industry. The 100,000 visitors expected in Milan for the "week dedicated to instrumental mechanics" will find a superlative offer in terms of content, services, exhibition and thematic insights, many of which are transversal to both exhibitions, allowing the operators involved to optimize travel time. Updated information on [bimu.it](http://bimu.it).



## NEWS

## Automation raising grinding technology productivity

### GrindingHub showcasing efficient fine machining processes

Frankfurt am Main, 23 November 2021. – Fine machining requires a great deal of intuition. That is why many companies still take care of grinding and polishing manually. However, this can quickly become a source of high costs and inconsistencies, especially in series production. Automation solutions deliver reproducible quality at all times. With its combination of grinding technology, automation systems and software, GrindingHub 2022 will be the perfect place for companies to obtain all the information they require on this challenging field.

Unmanned production, 24/7. For many manufacturing companies, this is one of the key factors for success in this highly competitive field. This has been the case for turning, milling and drilling technologies for some time, but increasingly now also for fine machining. Exhibitors at GrindingHub will be providing a first glimpse of their solutions for achieving significant increases in productivity and reproducibility levels.

### Robot-assisted grinding

Top quality surfaces are essential in metal and woodworking as

well as in the automotive and aerospace industries. Fine machining in particular is still performed by hand in many cases, as human sensitivity is difficult to imitate. But manual polishing, grinding and brushing is time-consuming and exhausting work. Automated processes offer an attractive alternative, allowing flawless surfaces to be created faster and at lower cost. At the same time, they relieve people from monotonous and dusty work. The new tools for automated machining from Schunk GmbH & Co. KG based in Lauffen am Neckar, have innovative features which compensate for force and positional inaccuracies, allowing near-perfect results to be achieved. For example, a pneumatic random orbit sander with axial compensation is the company's "specialist" when it comes to grinding and polishing. Its adjustable compliance yields constant contact force and uniform surfaces. Users seeking a highly robust and flexible tool for polishing and brushing workpieces will find a suitable solution in the pneumatic polishing spindle. It shortens machining and start-up times by a significant margin. The compensation force and the axial compliance of the tool are individually adjustable, which yields high-quality and reproducible results regardless of the installation position. Different workpiece geometries can be flexibly machined with just one tool – an economic advantage that almost halves investment costs. Schunk offers its application know-how to support customers in making the change from manual to automatic: "We don't just sell the appropriate machining tools for the robots, we keep the entire application in mind. On request, we test and validate every application on the customer's workpiece in our CoLab robot application center," assures Daniel Mayer, Director Product Sales Robotic Material Removal. "At the end, you receive a test report and video, giving you certainty that the application works."





## NEWS

**Closed-loop manufacturing of complex workpieces**

"The closed loop ensures superior manufacturing quality as well as minute profile tolerances – together with maximum user-friendliness. Even with extremely challenging workpieces, such as grinding wheel bases, turbine blades or grooving inserts, it has proven to be a robust solution on the shopfloor," says Marie-Sophie Maier-Wember, Managing Director of Haas Schleifmaschinen in Trossingen. Software is becoming a driver of precision working because mechanical forces are constantly in play during grinding, especially towards the edges of the grinding tools. These forces affect the interaction between the workpiece, grinding tool, clamping device and grinding machine. They result in ever-increasing levels of inaccuracy, which has an adverse effect on workpiece quality – especially if the system does not allow for a continuous exchange of data between the workpiece and the grinding machine. A self-controlling process based on an integrated measuring solution effectively prevents this loss of precision. Any systematic and machine-specific deviations are continuously



identified by measurement technology during operation and forwarded to the Haas grinding machine software. This incorporates a large number of compensatory functions which complement each other. Any deviations in shape can thus be compensated down to  $\mu$ -level precision. "Without compensation, the tolerance would be several  $\mu$ . In the closed loop, we create tolerances down to just a few  $\mu$  without intervention by the machine operator," explains the managing director. In addition to acting as a driver of precision, Haas grinding machine software solutions have a direct impact on customer shopfloor operations. The Haas grinding machine series can be connected to the ERP system, allowing automatic tool changing and the further processing of production data.

**Future-proof: Networked and automated**

Automation solutions have long been an integral part of the product portfolio of the Hamburg-based engineering company Blohm Jung GmbH. A topical example of this is the tool changer for the current series of grinding machines. Designed for maximum cost efficiency, the solution offers users numerous benefits from reduced setup times to virtually unmanned processing – even of complex workpieces. "However, automation is only one of the key factors involved in increasing productivity," explains Stefan Springer, Head of Product Management at Blohm Jung. "Machine connectivity is also gaining in importance, as

the future of industrial production will be networked." Machines are communicating with each other, exchanging data, controlling and regulating each other. This makes processes run more efficiently and increases productivity. Blohm Jung's "digital production monitor", for example, offers customers the ideal tool for digitally monitoring and optimizing production capacity utilization from anywhere, 24/7. Running and non-running times, piece counts or malfunction times are displayed in real time. This allows any production backlogs to be detected at an early stage. IT security is given top priority here. Online access to the machine is only granted if the customer submits a service request. Data is therefore only exchanged with the customer's consent – and then only the data which is necessary for providing the desired service. Blohm Jung uses a TÜVIT-certified connection to ensure that the data is protected from unauthorized access at all times.

The advantages of the latest products and solutions can be clearly explained and discussed in direct meetings with the experts. Do we have the right equipment for the next project? Which is the best fine machining technique for a specific component and how exactly does the software help me with the manufacturing processes? Interested visitors can find out how to future-proof their processes at the individual companies' booths at GrindingHub 2022 in Stuttgart.

## NEWS

## Electronic, smart and sustainable

### Clamping technology at METAV 2022 – Trend towards cyber-physical production resources

Frankfurt am Main, 01 December 2021 – Holding it all together: Clamping technology grips tools and workpieces securely during machining. However, Industry 4.0 poses a new challenge for clamping technology manufacturers. Using robust, integrated sensor technology, they must now refine their products into cyber-physical production resources that can network with production systems. At METAV 2022 from March 8 to 11 in Düsseldorf, exhibitors will be showing how to exploit the potential of digitalization with smart, electronic clamping technology.

Prof. Berend Denkena, head of the Institute of Production Engineering and Machine Tools (IFW) at Leibniz University Hannover and spokesman of the Executive Committee of the WGP (German Academic Association for Production Technology) is already working successfully with cyber-physical clamping systems. In the joint TensorMill project, his institute has developed the world's first clamping system for intelligent networked manufacturing for the efficient and reliable production of integral safety-relevant components. A further aim of Denkena in contributing to research projects of this kind is to encourage the workholding industry to invest heavily in digitalization.

But is the message getting through to the sector? Andreas Maier GmbH & Co. KG (AMF), based in Fellbach in Germany, has been using wireless technology in clamping technology since 2018. AMF Sales Manager Manuel Nau: "We want to know what is happening in the clamping system and to automate the process." The interaction of wireless sensors and signal transmission provides the basis for fully autonomous, unmanned shifts. Their success or failure stands and falls with the seamless monitoring of all key machine elements such as the clamping technology. Parameters that were not available in the past AMF's primary intention in using wireless technology is not to replace wired systems. The focus, rather, is on obtaining parameters such as positions or machine statuses that that were not possible to retrieve before. This is where wireless transmission comes into its own, especially in machines where cables cannot be laid because of the rotating machine tables working inside them.

The set – consisting of gateway, transmitter units and microswitches as well as WLAN router and other accessories – transmits positions via wireless, interference-free and energy-saving Bluetooth to the machine control or to tablets. The Fellbach-based company made a conscious decision to use Bluetooth Low Energy 4.0 because this requires very little energy. The batteries then only need to be replaced every 1.5 to five years. The gateway serves as the interface which receives and visualizes wireless signals before forwarding them to the machine controller or tablets. The transmission range is at least ten meters, although this can be increased by means of antenna extensions.



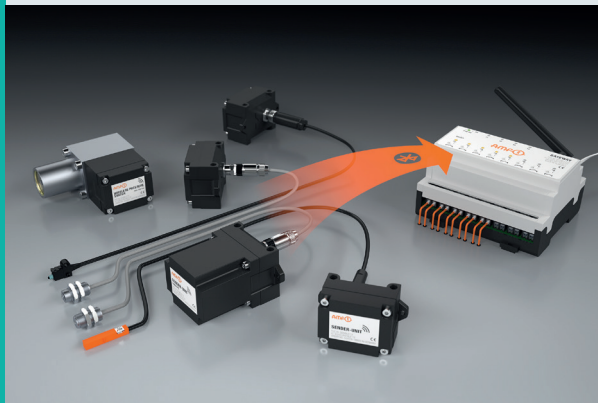


## NEWS

**Wireless signals from robot grippers, workpieces or hydraulics**

The Fellbach-based company attaches great importance to versatile applications. It offers a wide range of products: special wireless sensors can determine the positions of robot grippers or of workpieces, detect the closing positions of clamping systems and allow pressure monitoring of hydraulic clamping technology. As Sales Manager Nau explains, these are just some of the smart products that AMF will be showing at METAV.

Schunk GmbH & Co. KG from Lauffen/Neckar also focuses on the interaction between high-precision holding forces, wireless and sensor technology. In 2018, Schunk presented a smart hydraulic expansion toolholder which it claims is the world's first intelligent model that monitors



the cutting process on the tool itself and enables real-time control of the cutting parameters. This was developed jointly with TU Wien and the Vienna-based company Tool IT GmbH. It exploits the potential of integrated, toolholder-based process monitoring, i.e. focusing on the point at which the chips are produced. Its sensor system detects the

tool's vibrations and oscillations in real time. The system has already proven its worth in reliable milling, countersinking and micro-chipping processes.

**Prolonged milling thanks to process monitoring**

Now Schunk is taking the next step by launching a new version. The completely redesigned toolholder can respond to multiple forms of deviation in the cutting process. The closed control loop means that if chatter marks appear, if a tool is about to break or if the condition of the tool cutting edge changes, the toolholder – equipped with sensor, battery and transmitter unit – can respond in real time, potentially preventing any damage caused by tool breakage immediately.

Like its predecessor, the intelligent system transmits the data wirelessly to a receiver unit in the machine room and from there by cable to a control and evaluation unit where the data is analyzed. "The tool clamping device is electronic and smart," says an enthusiastic Jochen Ehmer, Executive Vice President Clamping Technology at Schunk. "It therefore makes an important contribution to sustainable manufacturing by eliminating scrap and waste."

However, the smart system only reveals its full potential when interacting with the digital production network. "High-precision machining processes can be reliably monitored and controlled if the smart system is integrated into higher-level systems, such as Manufacturing Execution Systems (MESs) and machine controllers," explains Ehmer. "However, this is dependent on the system being able to operate with great precision and reliability – even at higher speeds. This is the only way to detect if the vibration limits are being exceeded – even by a tiny margin." For this reason, Schunk has now designed the toolholder for a maximum speed of 30,000 revolutions per minute.

**Rapid access to processes and machines**

At METAV 2022, interested parties will be able to pick up information not only on the new applications of the revised toolholder, but also about other innovations that will not be appearing until spring 2022. According to Schunk, one such specialized variant includes a data interface that simultaneously monitors processes and machines, while another can even control processes in real time thanks to full machine integration. As the institutional patron of METAV 2022, VDMA Precision Tools will again.

## NEWS

## Automatically prepare edges for welding during laser cutting

“EdgeLine Bevel” from TRUMPF automatically bevels parts during laser cutting to prepare them for welding // Manual beveling no longer required // “This is a one-of-a-kind technology in sheet metal fabrication,” says TRUMPF product manager Patrick Schüle

High-tech company TRUMPF will take the Blechexpo fair as an opportunity to unveil its “EdgeLine Bevel” solution, which automatically prepares parts for welding during the cutting process. Compatible with standard TRUMPF laser-cutting machines, this technology allows users to create beveled edges while cutting out the contours of each part. Liquid metal flows into these bevels during welding to ensure a high-quality weld seam. On today’s shop floors, fabricators typically perform beveling prior to welding using a



milling machine, grinding machine or angle grinder – an additional step that is both cumbersome and time-consuming.

Currently, the only way to create bevels automatically is to use technologically advanced machines with specialist 3D cutting heads. However, these are seldom available on manufacturing lines, especially those operated by smaller fabricators. EdgeLine Bevel from TRUMPF is the first solution that allows users to bevel part edges automatically on much simpler, standard types of laser-cutting machines. The technology can also be used to create bevels on a part’s inner contours, which are impossible for manual angle grinders to access. “This is a truly unique way of eliminating downstream processes in the sheet-metal fabrication environment. It boosts the efficiency of customers’ production lines and confirms the status of TRUMPF as a solution provider for the entire sheet-metal process chain,” says TRUMPF product manager Patrick Schüle.

### Can also be used for countersinks

As well as beveling, EdgeLine Bevel can also automatically make the countersinks required to screw parts together, thereby eliminating yet another downstream process. The technology is suitable for all companies in the sheet-metal fabrication sector that use joining processes on the shop floor or require countersinks for screw connections. “And thanks to the quick and easy programming, this solution also makes sense for companies that only occasionally fabricate parts with bevels and countersinks,” says Schüle. TRUMPF will be launching the new technology at Blechexpo for the standard versions of its TruLaser Series 3000 fiber and TruLaser Series 5000 fiber machines. From spring 2022, existing owners of new-generation TRUMPF laser-cutting machines will also be able to retrofit EdgeLine Bevel technology.





## NEWS

## Supply bottlenecks holding back machine tool production

**Growth not expected until next year in some areas**

Orders received by the German machine tool industry in the third quarter of 2021 were 69 percent up on the previous year's figure. Orders from Germany rose by 67 percent. Foreign orders were 71 percent higher than in the previous year. Orders received by German manufacturers increased by 61 percent in the first three quarters of the year. Domestic orders were 47 percent higher than in the same period last year, foreign orders 69 percent.

"The levels of orders on hand are good. However, supply bottlenecks and sharp rises in the price of raw materials and components are increasingly holding back business," says Dr. Wilfried Schäfer, Executive Director of the VDW (German Machine Tool Builders' Association), Frankfurt am Main, commenting on the result. "Orders are expected to continue rising in the coming months. They are being driven by catch-up effects that will continue for quite some time," Schäfer adds. However, it may not always be possible to translate the orders into sales as desired, as the machines can only be delivered with delays due to a lack of parts, especially electronic components. "And that is why we are having to scale this year's summer forecast of 8 percent growth down to 5 percent," Schäfer concedes. Double-digit growth is expected, by contrast, in the coming year.

Orders are also slowly catching up in relation to the figures posted in 2019, the year before the pandemic, which is generally considered to provide a more meaningful evaluation of the current situation. The figures for the first nine months are 4 percent higher than for the same period in 2019. However, the domestic market is still 12 percent below the 2019 level. "The all-important automotive industry is suffering particularly from the chip shortage in Germany and is therefore cutting back on investment," explains Schäfer. The main driving force is foreign orders, where an increase of 13 percent was posted. Of the top 15 machine tool customers, two-thirds are back above the 2019 mark, especially Austria and Italy. The exceptions are Poland, France and the UK, which have not yet returned to their pre-crisis levels.

The strong demand is resulting in a noticeable increase in capacity utilization. This was 86 percent in October compared to 71 percent as the average for last year. Employment, a delayed indicator of economic development, has not yet bottomed out. This September it was 8.5 percent below last year's figure of 63,300 employees. At the same time, 46 percent of companies reported a considerable shortage of skilled workers in a recent VDMA survey. There is currently a shift in demand towards more electronics-based skills.

"All in all, our industry considers itself well on the way towards overcoming the crisis. We expect supply chains to stabilize again in the coming year. Our industry will then be able to continue its recovery," says Schäfer in conclusion.

## Xiris Automation Inc. Releases RTSP for Video Streaming

Xiris Automation Inc. has recently released the Real Time Streaming Protocol (RTSP) to stream captured video of weld processes



over shared networks. The addition to Xiris WeldStudio™ software allows many users to access the same live video stream using a tablet, smartphone, smart TV or PC with any compatible streaming software such as VLC media player for Windows, Linux, Apple or Android.

RTSP on Tablet

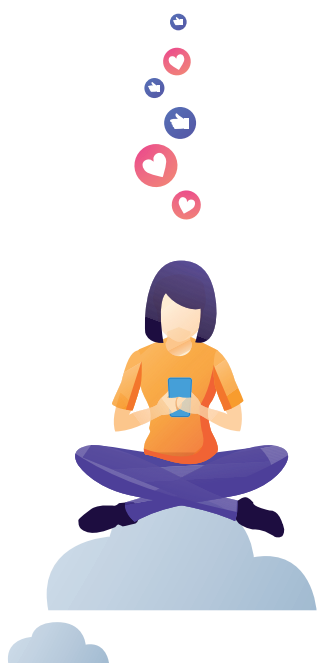
RTSP on Smart Phone

When used in production welding, operators will be able to easily access their installed weld camera stream remotely using RTSP to check on how their build is progressing. Video streaming using RTSP can be particularly beneficial for weld education applications where multiple student welding booths can be effectively monitored from a central office without the need to be present in each booth. Additionally, streaming to Cloud services such as Vimeo is available for unlimited storage, hosting and controlled redistribution to secure users.



# YOUR EVENTS ARE NOW ONLINE

The pandemic and consequent lockdown pushed many remarkable changes in the world of communication: it is possible to see these changes as **opportunities**. One of them is that **events, presentations, lectures** and even **press conferences** are **played on-line**, directly via **web-streaming**. The keystone is managing them in a professional way: interruptions, unstable connection and other problems can push away your audience; otherwise, if your event goes smoothly, it can be the right way to reach your public. Do you want to know how you can achieve this goal? **Download the free quick guide written by the Inspire Communication's experts** that will help you in leading your online event to success.



inspire  
communication

[www.inspirecommunication.it](http://www.inspirecommunication.it)



MACHINE TOOLS  
FOR - TUBE  
PIPE - BARS  
AND WIRE  
**ALPIGNANO MARCO**



## USED MACHINES **ON STOCK**



# WE BUY YOUR USED MACHINE



**ALPIGNANO MARCO**

Via Colgiansesco, 42 - 10091 Alpignano - Tel. +39 011 966 36 56 - Mob. +39 335 60 67 796  
[marco@tubewire.com](mailto:marco@tubewire.com)

**[www.tubewire.com](http://www.tubewire.com)**