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Hall 11
Booth G 21

FAGOR ITALIA S.R.L.
Cassina Plaza, Palazzo CD3
Via Roma, 108
20060 CASSINA DE PECCHI MI
Tel.: 39-0295 301 290
Fax: 39-0295 301 298
Email: italy@fagorautomation.it
www.fagorautomation.com



FAGOR AUTOMATION

WE INTERVIEW IÑAKI SÁNCHEZ, CNC SALES MANAGER OF FAGOR AUTOMATION

“High-end features, customizing and exquisite attention are what the current market demands”



Fagor Automation customers gather again at BIMU 2010, one of the most important exhibitions for the Machine-tool sector in Europe. The expectations are high. The efforts of Fagor Automation for innovating its products and services and offer solutions and business opportunities to its customers anywhere in the world are very well known.

At this BIMU 2010, the most relevant manufacturers and distributors in the world and Europe present their latest developments, technology and services; Is the transformation experienced by the machine-tool sector lately significant? Where have the most important changes taken place?

Of course, the economic crisis that began in 2008 and from which now we seem to begin to emerge, has definitely changed the way to act in the Machine-tool sector. In countries we have traditionally called developed only those companies that once bet on internationalization and to provide added value to their products are the ones that will survive in a sector with more and more suppliers at very competitive prices. We must offer a high performance and customized product, backed also by an exquisite attention to customers, wherever they are. The old stuff is not good enough any more, these serial productions for customers that were a few km away have gone elsewhere. But, let's have it clear, there is also an opportunity for high quality machines if you are willing to look for the demand that is more and more present in Asian countries. the consumption of machine tools in Asia

is currently 60% of global consumption, whereas 10 years ago was 25%.

At the booth of Fagor Automation, the 8065 stands out, a CNC that combines operating ease and power. What would you point out about this novelty? What do you think Fagor Automation customers will appreciate most?

The 8065 is a CNC that had been in our head for a long time, but we could not find the right time to launch it to the market. That time is now and we are going to get our customers to see in this modern CNC everything that Fagor Automation has learned in its 30-year history. I'm sure that they will soon notice that it is a powerful and modern CNC capable of controlling high-end machining centers and lathes with the operating easy that has always identified us.

With the new 8065 CNC, how is Fagor Automation's offer for the international market? Could it possible be your full product range what they will appreciate most?

At Fagor Automation, our offer is more and more complete, not only thanks to the 8065 that will help its brothers 8055 and 8070 in the

hard struggle for market share, but because we have also further completed our catalogs of motors and feedback devices. Obviously, if your customers move, which they have to in Europe, and you want to continue as their supplier, you have to move with them, there is no other way. In my opinion, this is what they appreciate most, that we listen to them and do our best to respond to their needs.

The BIMU 2010 will be good to keep in direct touch with your various public. Do you know what your customers appreciate most? your proximity, after-sales support, your capability of innovation, etc.?

Everything you just said has been key to Fagor's success in all the years we have been on the market. Those who know us already know it and what we want is that all those who have not yet known this type of attention that we can provide to our customers, go for it. It is on exhibitions like BIMU where we can overcome certain reluctance of customers who otherwise would not purchase a machine equipped with Fagor. Let them visit our booth and see what company we are talking about and what kind of people we are.

Being settled in 18 countries worldwide with your own branch offices gives you enough credibility and knowledge so as to analyze the international scene. In this regard, how do perceive the Italian and European markets lately?

It is a market that increasingly wants to be distinguished by the quality of their product and looks more and more at the emerging markets. Today we speak of globalization as a factor for success, but at Fagor Automation we believe that it must always be accompanied by the local approach. The certainty that the customer is going to find a solution to his needs wherever he installs his machine is essential to gain his loyalty. Until now, our Italian customers have used our network mainly in Europe and in the USA, but now that they are looking more at other markets like India or China, we want them to keep trusting our vast network. In 1987, we were in Hong Kong and today we have 5 branch offices in China. We have begun a little late in India, but we are strongly betting on that country; we now have two offices there, but we will soon have about as many offices there as in China. Wherever our customers' machines are, we want to be there to support them.

Fagor Automation has been characterized in recent years for its efforts in brand image/ communication, both corporate and product, are you taking significant new things, in this regard, to this edition of BIMU?

The booth has a more modern look according to the personality of our company and to our innovative spirit. The booth layout and the communication elements used are fresher and better represent our character. We have emphasized our novelties, more than our product diversity, especially our 8065 CNC and our new “3A” Absolute feedback products. ■

Our collaboration with Italy continues to bear fruit

It is quite a pleasure for Fagor Automation to exhibit our new products and novelties at this new edition of BIMU due to its international prestige and because it is an opportunity to be near the Italian market where we have been since 1990.

Fagor Italy is part of Fagor Automation and although almost 20 years have gone by since we developed our 800 CNC together, we have continued to grow hand in hand and do not forget our achievements and mutual learning.

All of you, our customers, have always been and are the reason why we are here today showing our novelties: the 8065 CNC and leading solutions in absolute feedback “3A”. Fagor Automation would have not grown in experience and reliability without your confidence. You are the force that thrusts us to keep innovating and be accurate and close.

We keep sowing and reaping, always having you near us. ■



Pedro Ruiz de Aguirre
General Manager

Integral solutions for complex machines: Large and with high-end features

In its more than 30 years of existence, Fagor Automation has given solutions to all kinds of machines, from the simplest looking for flexible operation and production to the most complex with very high technical and productive demands.

During the BIMU exhibition, Fagor Automation is going to present their latest advances in control and measurement systems showing a qualitative leap in the technology used to provide integral solutions to high-end machines. There are three main products to point out:

8065 CNC: Friendly as always; more powerful than ever

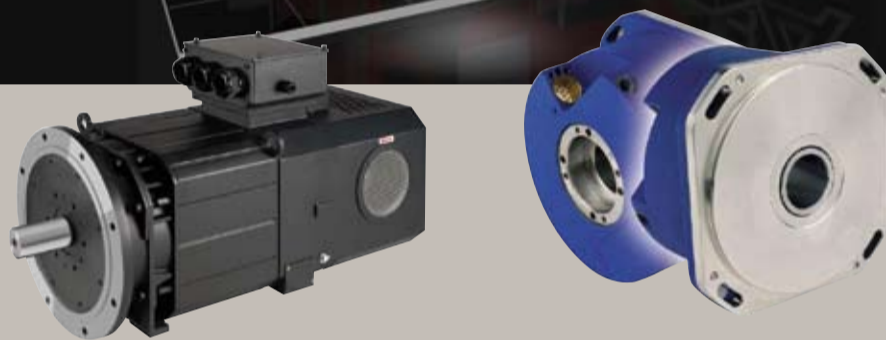
The new CNC combines the operating and programming experience of the 8055 and the technological power of the 8070. The 8065 CNC makes it easy to set up all kinds of machines. It offers tools to manage any type of standard kinematics. It also offers volumetric compensation which is becoming a common demand in the search for high machining accuracy. While machining, it permits detecting and correcting in 3D the minor mechanical imperfections that the machine may have and obtain high-precision parts. Another novelty of the 8065 CNC is the adaptive control that detects the machining conditions of the tool such as consumed power, temperature of the tool tip, how fast the tool is wearing and part surface finish. All this data is processed and both the axis feedrate and the spindle speed are adapted for machining under the best conditions in order to achieve maximum productivity and longest useful life of the tools.

Servo systems: High power motors

In order to meet our customers' demands, Fagor Automation now offers more high-torque axis motors and high-power spindles. As for axis motors, the range of the FKM family now goes up to 115 Nm for large machines that require higher motor torque. Likewise, this type of machines need to



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move large spindles and that's why new FM9 spindle motors have been created to further complete the FM7 motor range with power reaching 130 kW in S1.

3Absolute: Solutions from Fagor Automation

Fagor Automation has manufactured linear and rotary optical encoders for the machine-tool sector from the very beginning.

Optical technology has always been preferred over other technologies due to their high quality and optimum performance. Throughout the years, Fagor Automation has polished several aspects of the design of their linear encoders to offer, today, one of the

highest-quality linear encoders on the market. This opinion is shared by their customers through independent tests run using both incremental and absolute technologies.

BIMU visitors will be able to enjoy the presentation of the new "3A" Absolute solutions. The absolute encoder LA, with a measuring length of up to 30 m, the longest on the market. It has been designed and manufactured by Fagor Automation to provide solutions to the machine-tool world. They will also present the new absolute angular encoder that integrates

existing technologies with new technologies to deliver a product with absolute performance that fully covers the needs of position for the machine-tool industry.

So, starting with the CNC, going through the servo drives and reaching the measuring systems, Fagor Automation offers an integral solution for all kinds of machines. Choosing Fagor Automation allows you to have a single interlocutor for designing your machine and they will make it easy for you to integrate their products. ■

news

"Advanced Photon Source" (APS) bets on Fagor Automation



"Advance Photon Source" (APS), at Argonne National Laboratory in Chicago, one of the more technologically complex machines in the world, has the Fagor Automation linear encoders.

The pioneer laboratory funded by the U.S. Department of Energy, is an X-ray accelerator ring, which keeps the X-ray beam in place by two magnets, has relied on the work of Fagor Automation to ensure that the beam remains centered between the ring and the electrodes.

The center offers the brightest X-ray beams in America and is visited by over 5,000 scientists worldwide, who provide ideas for new discoveries in nearly every scientific discipline today. Their research allows a real and positive impact on new technologies, health, economy and the fundamental understanding of the materials that make up our world. Fagor Automation's technology makes

it possible to reduce the danger of lack of precision on the rings and its ensuing danger of radioactivity, highly destructive for electronic and optical components.

The lab has acquired 22 Fagor encoders and expects to acquire up to a total of 300 units in the near future.

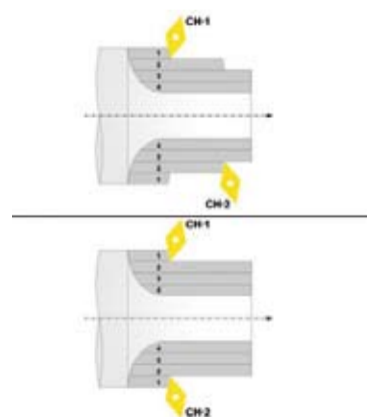
Dynamic distribution of machining operations, DINDIST: savings, precision and safety

For a few years now, it is becoming more and more common to see lathes where two turrets perform machining operations simultaneously.

This allows machines to double their productivity by cutting machining time in half. A great breakthrough. A great breakthrough with a drawback: the complexity of programming the piece to manage both turrets independently without colliding, since the shock would be a significant risk to the integrity of the machine and a waste of programming time.

This is our great breakthrough: Fagor Automation has developed the feature "Dynamic distribution of machining operations" called DINDIST that makes it possible to program the machine in a single channel, as if it were a single-turret lathe. This feature incorporates special functions to facilitate the operator's programming work,

thereby reducing considerably program preparation time and provide greater safety to the machine without having to control at all times every "air cutting" movement the machining passes, the feedrates of the axes, etc., that increase the risk of errors. This results in considerable benefits in time savings, accuracy and quality.



Fagor Automation bets on micro-technology participating in the "Micromanufacturing" project.

Fagor Automation has participated in the "Micromanufacturing" project that was created to respond to the need to use micro-technology in sectors as diverse as automotive, biotechnology, electronics and medicine.

It is carried out by 21 partners with vast experience and renown prestige in the field of precision manufacturing. It has been financed by the Spanish Ministry of Science and Innovation and the European Regional Development Fund ERDF.

A micro-machine has been developed that can drill holes down to 50 microns in diameter which represents a considerable breakthrough. To get an idea, one must bear in mind that the average diameter of a hair is 70 microns.

The budget for "Micromanufacturing" has exceeded €11 million. ■



Microperforated hair.



Fagor Automation in Italy History

- 1990** Opening of the Italian branch, with CNC and DRO Division.
- 1993** The market wants a product that is simple and easy. Fagor Italia participates with headquarter in the development of 800 CNC and hence the birth of the term "self-teaching" in the machine-tool world.
- 1995** Fagor Italy moves to new larger premises as the staff keep growing.
- 1995** First development of the conversational CNC based on the 8050 CNC in collaboration between Fagor Italy and headquarter.
- 1999** Development of the CNC 8055TCO/MCO dedicated to the grinding world.
- 2000** Opening of the motion control division.
- 2001** First 8070 CNC installed in Italy.
- 2006** Fagor Italy develops the software for cylindrical grinding.
- 2008** Opening of the sales division for sectors other than tool-machines.
- 2009** Collaboration with headquarter in the development of the new 8065 CNC.

ALL THE STAFF WILL WAIT FOR YOU AT THE BOOTH



Pierluigi Barbieri Ciro Annichiarico



Marco Sordi Diego Perego



Guido Pigozzo Massimiliano Belluschi



Christian Kusterle Stefano Mantovan



Pietro Monopoli Rosario Oldani



Claudio Pozzi Fulvio Bolzoni

CUSTOMERS' EXPERIENCE

INTERVIEW WITH ANDREA FIORANI PRODUCTION MANAGER BSA SRL

"Fagor Automation a leading global supplier"

The B.S.A. SRL., precision machine shop located in San Giuliano Milanese, born in the late 60's, from the experience in heat treatment for induction hardening and starts in the production of rollers for the steel industry. 80% of production is destined to foreign markets and in particular to East Asia. It has a large number of machines out in the field reaching about 2,500 rolls per month, with maximum dimensions up to Ø 800 mm and 8000 mm in length and handling the whole production cycle: from cutting to the main phases of turning, milling, hardening and grinding.

When did your collaboration with Fagor begin?

In the late 90's we had the need to move from manual turning to CNC-controlled turning while affecting our operators as little as possible. The market appreciates the programming ease of Fagor 8050 CNC which became 8055. Since then, we chose this supplier.

What are the main features you like best?

It must be said that in our three production areas our fleet consists of lathes, milling and grinding machines. For each type of machine, performance is key for us. In turning, the possibility of programming complex profiles easily and the ability to easily resume program execution after a sudden stop; thanks to the 8070 CNC, we have also been able to buy more machines for more work processes. The same is true for milling where we can program complex parts thanks to the conversational mode, producing small series quickly. Cylindrical grinding is a different story.

What are the most significant aspects for grinding?

There are many aspects. First to have a graphic environment for simple and powerful programming that respects the main aspects that we experience in CNC for lathes and mills. This allows us to use our operators easily across our full range of machines. Another aspect is the result that Fagor has given us in the implementation of cycles that are important to us and therefore have a complete range available to us that satisfies all grinding related issues.

What's your opinion on their technical support.

Very good, the staff is always available and our relationship is that of a very efficient cooperation. ■



INTERVIEWS PAGNONI FABIO AND ANTONIO LIZZADRI IN CHARGE OF PRODUCTION AT PEDRALI MECHANICS

"The strength of Fagor is to have combined ease and power"

The Pedrali Meccanica Srl is a company founded in 1973, located in Albino in the province of Bergamo, it has evolved over the years specializing in precision turning, milling and boring of rolled, forged and stamped parts. In 2007 they opened the second location at Albano S. Alessandro where they can handle up to 60 tons. They operate in various sectors from oil to nuclear, chemical and energy in general, and export their products practically all over the world.

Pedrali works in sectors where the process of engineering and manufacturing is essential, what are the criteria you follow in choosing a partner as Fagor Automation to perform these tasks?

It is important to us to have a supplier who may have a range of products than can cover our range of machines, from simple to more complex ones, and it is easy to use, Fagor fully meets this requirement.

What are the main features of Fagor CNC's that satisfy you the most?

Our production covers almost all parts with complex shapes, both in lathe and milling. Fagor CNC's have a very powerful profile editor with which, easily and intuitively, it is possible to design a part and assign the technological parameters to it. Moreover, in the case of turning, when the workpiece is forged, it is possible to design the profile of the raw part and the finished part and the CNC optimizes the machining passes taking into account the initial shape.

You also have lathes with double ram and boring mills also for



turning, how has Fagor satisfied the management of these machines?

With the introduction of the 8070 CNC, it has been possible to exploit the full potential of this control. In the lathe world thanks to the simultaneous management of both work processes and to the DINSBIT feature that optimizes the removal of the 2 Rams. In the boring world we have the feature "combined machine" where in addition to the boring cycles it is possible to manage turning cycles when using the Andrea spindle (Testa D'andrea). All this greatly reduces the processing time and hence production costs. Also there is an on-PC simulator that makes programming much easier.

How do you evaluate the 'reliability of Fagor products you used?

Our collaboration with Fagor began 17 years ago and since then we have sold a lot of machines. The advantage of Fagor is to be a global supplier of motors, drives, measuring systems, DRO's and CNC's. Our experience is very positive in terms of failure rate which throughout this period has been very low.

What do you think of Fagor service and applications?

We have a constant and valuable support in terms of applications and programming with the availability of new features or to listen to our suggestions; as is the positive feedback we have with service support as the availability is almost immediate and very accessible. ■

WE SPEAK WITH DIEGO PEREGO, SALES MANAGER OF THE MACHINE-TOOL SECTOR OF FAGOR ITALY.

“I am increasingly convinced that there is no product on the market as simple and complete”.

Who said that the undisputed worldwide success achieved in the field Milling and Turning by Fagor Automation with the 8055 CNC family thanks to the flexibility, power and especially the conversational programming language, cannot be exported to the grinding world? For this reason, the Italian subsidiary of Fagor Automation has decided to develop conversational software for grinding, easy and intuitive like its brothers Lathe and Mill; precise and complete to meet the requirements of a machine of this level.



Why has Fagor Italy decided to dedicate resources to such a challenging project?

Users of our CNC's have always appreciated programming ease together with safe execution and reliability. Talking with our customers, operating in the grinding world, we realized that it was possible to combine the typical performance of our CNC with the easy programming experienced in lathes / milling machines.

On what type of grinder is this product more suitable?

In these years of development we had the chance to install it on a wide range of machinery, both new and retrofit, from classical cylindrical grinders for inside or

outside grinding to combined inside/outside machines, inclined wheel, up to surface grinders. So we can safely say that the needs of most customers are totally satisfied.

We speak of cylindrical grinders: Does installing this Software add news to the normal interface of the 8055?

The main menu is modified to summarize very clearly the main machining conditions, and the software implements a number of machining cycles such as Plunge, angle Plunge, asynchronous Plunge, and passing through and tapered (both with the possibility of executing multi-plunge roughing), crowning of any radius, shoulder Plunge operations. It is also important to note that most of the

cycles allow a digital taper correction, the contemporary shoulder grinding, dividing the work into four stages, each with its own machining technological data. In addition the operator will have cycles for setting the work piece offset and dresser offset, then a page of incremental offsets setup, enabling inside the machining cycle and surely the page for wheel forming and dressing.

About wheel dressing, how does the Software help the operator manage the profile and wheel correction?

This is one of the basic characteristics of the simplicity of our software. In fact, with a simple click on the screen and using a graphic icon, the operator can choose the design of the desired profile among the ones



Form

proposed by the database, or may choose to draw the profile using a versatile editor. After entering the necessary technological parameters for forming, it will be up to the canned cycle to carry out the profile on the face of the wheel and thanks to the double diamond management option, even on both sides. Once the profile is done, the data is saved for future dressing.

How do you interface the machining cycle with the dressing requirements?

In of each cycle, the operator has a field dedicated to wheel dressing, through which you can select the frequency of execution and all the technological parameters distinguishing between roughing and finishing feedrates. Regardless of this setting the operator has the power to command a dressing operation at any time via a dedicated button, without interrupting the running cycle.

Tell us what are, in your opinion, the strengths of this product.

To begin with, remember that grinders are machines with very specific programming needs and the great difficulty for the CNC

operator is to interact with various devices that are often equipped with. Thanks to conversational interface and in a few fully interactive programming steps, through icons, we provide the operator the possibility to activate the devices for Crash control



Multi-pl-con

and Gap control, the diameter measuring device, longitudinal positioning. Thanks to the experience when making special machines we could implement in our software basic services such as recalibration of the piece at the end of the cycle using the diameter measuring device, the possibility to save all the data of the wheel being used before taking it apart so they can use it next time. No less important is the auto-diagnosis that checks the data entered before the execution of the machining operation, highlighting the conflicts and the errors.

Tell us also about surface grinding?

The same may be said for surface grinding or for cylindrical inside/outside grinding, obviously with a dedicated graphic interface and special interest in specific machining for this type of machines.

Your opinion on this product and on its market opportunities.

So far our feedback has been increasingly convinced that there is no product on the market as simple and complete at the same time, It can also satisfy the needs of the customer who produces small batches; therefore, always different parts, and of those who produce in long series of parts. This belief is backed by our existing customers in the Lathe and Milling world, that might find a similar operating environment and, therefore, can use the experience operators already trained. Finally, there is a willingness to develop new features that may meet specific requests thanks to the fruitful collaboration that has always bound our subsidiary to Headquarters. ■

Culture and show



ART Salvador Dali
With "Il sogno si avvicina", the artist returns to the Palazzo Reale after 50 years since his last personal visit.
Where? Palazzo Reale - Museum
22/09/2010 - 30/01/2011



MUSIC Mamma mia!
The musical that sets all the theaters dancing with Abba's most popular songs.
Where? Teatro Nazionale - Teatro
24/09/10 - 31/10/2010



CINEMA I've seen Films
Third edition of Rutger Hauer's "I have seen films" film festival in Milan.
Where? Varie - Varie
30/9/2010 - 09/10/2010



EXHIBITION Il segno Alfa
The Triennale shows the history of this car make. And that of a country ...
Where? Triennale di Milano - Art gallery
24/09/2010 - 10/10/2010

Timetable

	Milan	New York	Tokyo	San Francisco
open	09:30	03:30	16:30	00:30
close	18:00	12:00	01:00	09:00