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GET BACK TO MAKING MONEY

As Competitively As You Used To!

By Maurizio Porta

WELCOME
to the world of
PORTA PRODUCTION

The author's voice

" Hi!
*I am **Maurizio Porta**, CEO of Porta Solutions and trainer at Porta Production School, where I explain competitive methods of production for the world of the users of Machine Tools for metalworking.*

*After more than 25 years of experience in this field, I developed and designed my method, the **PORTA Production Method**, to help production companies that use Machining Centers in battery and Twin-spindle Centers to reduce the piece cost, become more competitive and win more orders."*

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ENERGY EFFICIENCY: THE NEED TO TACKLE CHANGE

In this period of great uncertainty and difficulty, one of the most critical issues is the disproportionate hike in the costs of energy and raw materials.

If this unprecedented increase is not addressed immediately in a conscious and reasoned way, all profits will go out of the window.

It has never been so important, therefore, for companies to seize the bull by the horns and change their organization and operations, with a view to energy efficiency.

To deal with this issue, I take my cue from an interview I gave a few months ago on the subject of 'Energy Saving'.

A new approach. The issue of energy saving has never been as much the focus of attention as it is today. The conflict in Ukraine has highlighted the weaknesses of our supply system, at both a national and a European level. Given the situation, in which for the first time some companies have stopped doing business and others are considering doing so, what actions can help our production system to overcome the crisis?

Energy at 360°. I believe we need to learn to think about energy at 360°. This means, for example, reducing the size of premises where activities are carried out. If we can operate in a third of the area previously needed, we will be saving space. Less space means lower heating and air-conditioning costs, lower insurance costs on the property, lower cleaning costs, and so on.

Another aspect is the personnel: because if the manual labor can be carried out with less effort to obtain the same results, you can make real savings in terms of work force and energy.

From my point of view, therefore, it is necessary to have operational tools that guarantee the control of costs and strategies to achieve the objective. People all too often talk about saving electricity, but almost everyone fails to consider energy at 360 degrees, which I call "hidden energy". All production processes have hidden energy that can be transformed into room for improvement and profit. In the Italian production system, there are departments equipped with machinery that require too much energy, too much manpower and too much space to operate.

We need to take inspiration from the energy sector, where energy efficiency at an industrial level means using less energy to carry out the same tasks, reducing, in the first instance, the costs of users and, subsequently, applying this 360-degree approach to the entire production process in the manufacturing sector.

I can provide practical examples where this has been done to achieve considerable efficiency. In fact, the industrial cost of a part produced in this way can be the same, if not less, than that of the same part produced in Asia.

Doing more with less is the basis of this change of mentality.

This is such a revolutionary approach that it is often hard for the industry to believe it. That is because it is a disruptive approach. And, for this very reason, the best way to describe the concept is with numbers.

Mathematics is not a matter of opinion. It is the same for everyone and puts different production models on the same plane, comparing them in an objective manner.

Doing more with less, developing a data-driven mindset.

Data management allows people to make better decisions and develop a "DATA-DRIVEN" mindset, to solve complex problems and obtain a complete view of performance, while improving production processes.

It has not always been this way.

Once upon a time it was not necessary to have such levels of complexity within business organizations, because the pace of evolution was slow. Today, if you don't have up-to-date data in real time, you risk losing out because you would be basing assessments on data that are no longer valid.

It would be like trying to get from point A to point B in the center of Milan in the shortest possible time using a 1970s map, while your competitor uses Google Maps.

This example makes you understand why having up-to-date data is essential to make correct decisions in a short time, and the same is true about the choice of equipment for your production department.

That is why we need in-depth analysis based on an objective and non-interpretable mathematical model.

For this very reason it is necessary to first do one's "homework", and then take action by putting into practice what has been studied in theory.

Why change? The world is constantly changing. You can say that this has always been the case, and it is true: the world has been and always will be evolving. The difference lies in the speed with which this happens.

It used to take a hundred years for a technology to change. Then it took fifty years, then ten, and then five. Today we are experiencing continuous change:

you might fall behind within the span of just a year, and risk looking for something that no longer exists because it is outdated.

Continuous change must be aligned with continuous improvement (Kaizen approach).

What is crucial today is to understand how to deal with change as correctly and painlessly as possible.

However, change simply never comes without pain. The truth is that solutions that yield results in the short term with minimal effort simply do not exist!

Commitment is essential. We need to have a long-term vision and be willing to take on challenging situations which take us out of our comfort zone, in order to achieve better results.

Whenever an important change is introduced, one is dealing with the typical phenomenon known as the J-CURVE. This means that, even if the methods are applied correctly, it is normal to experience even more problems in the short term.

This effect is often used to describe financial dynamics, but personally I always go back to it when I introduce what I have called my PORTA PRODUCTION METHOD in a company for the first time.

In the short term, in fact, there is often a decline in performance, which is physiological when a different way of operating is introduced. This is the sign that makes me understand that change is really taking place.

There is a drop in performance in the short term, for a large gain in the medium to long term.

Those who manage to resist during the initial stages will be greatly satisfied in the future!

When you make an investment in innovation, you see an initial decline in the improvement curve, which is directly proportional to the degree of innovation (the deeper the curve, the stronger the innovation). After a period of adjustment, you return to the starting level and then take off.

What I propose to you through the PORTA PRODUCTION SCHOOL and with the support of the Technical Tutor is a path that reduces the depth of the curve, thanks to the application of the PORTA PRODUCTION METHOD.

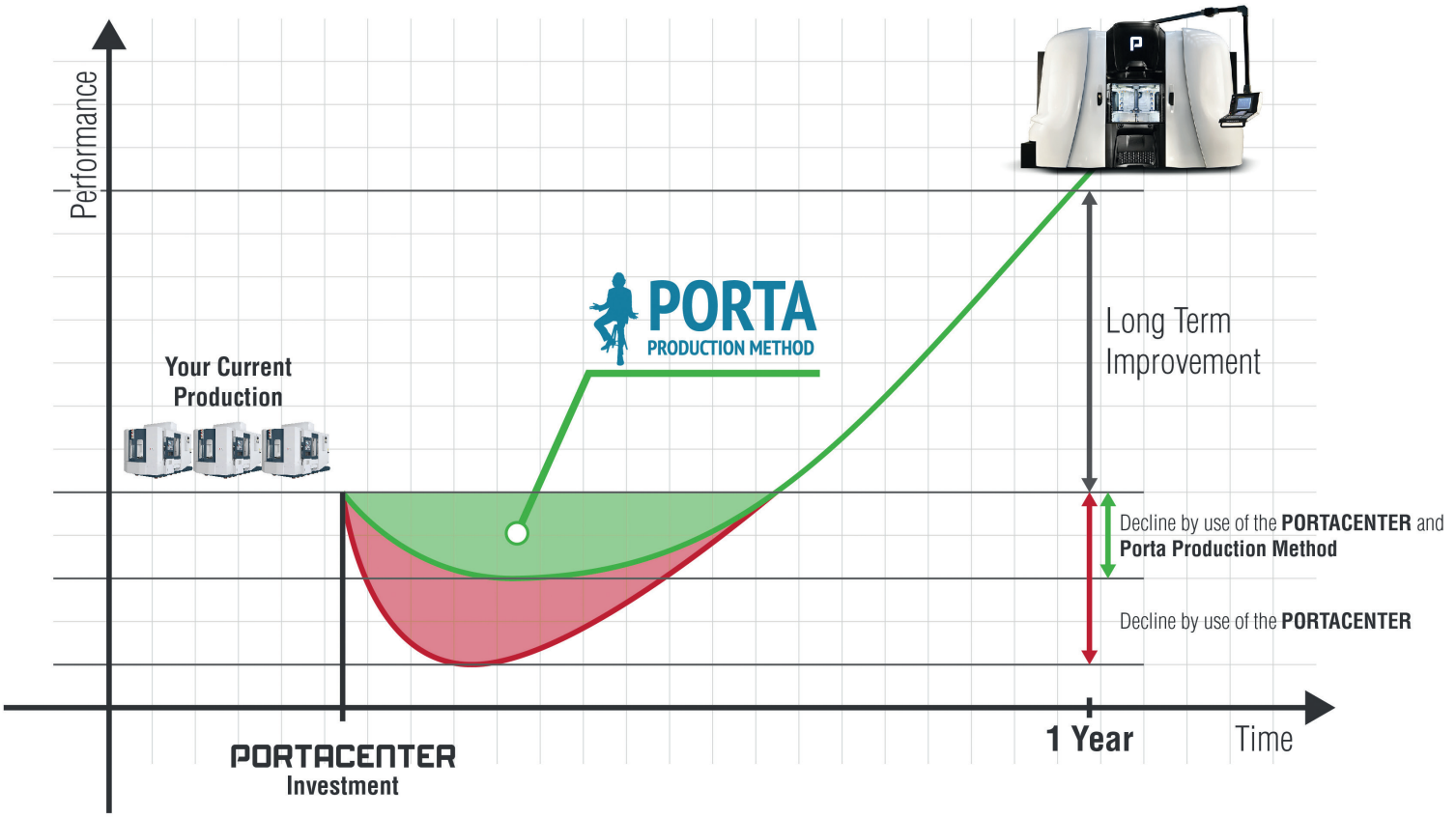
Having dealt with the issue of change, there is a second enemy to contend with: **perception**.

The enemy "perception" manifests itself in a situation not supported by concrete data. Typically, the person speaking considers a situation to be true, while the listener perceives it as incorrect.

We all have our individual perceptions which, being our own personal ones, are by definition "all correct". It is quite another thing to discuss objective data and then discuss it in plain terms, uncolored by personal perception.

It is necessary to objectify reality, in order to reduce the impact of subjective dynamics.

To do this, therefore, it is essential to adopt a method that allows one to be more competitive and improve the profitability of one's company, without outsourcing any of the key activities.



LET 'S START AGAIN WITH 3!

To tackle the change, a certain amount of risk must certainly be considered, but this risk must be weighed and supported by a certain awareness of the step about to be taken.

In addition to being based on concrete data and tested numbers, the right choices must be made with the use of the right means.

In this regard, I present (if you do not already know it) a highly efficient and state-of-the-art solution: **the technology with 3 independent spindles.**

The 3-spindle machining center is a technology that falls between the classic machining centers and the Transfer machines. It is a machine created to respond to the new needs of the market about certain types of parts, their complexity, increasingly smaller batches, and frequent changes in production batches.

Applications and industrial sectors. In the case of the 3-spindle PORTACENTER, a leading model of 3-spindle machining centers, the most competitive factor is the cost per part. Therefore, when a customer puts in a request, the approach is always to identify the cost per part starting from two elements related to the locking system: either self-centering for users of Transfer machines, or with traditional clamps for users of machining centers. Undoubtedly, for users of Transfer machines, the cost per part is important when the batches are small and the PORTACENTER offers significant advantages in this regard. While for users of machining centers, the PORTACENTER is an attractive solution when compared with sets of machining centers, typically comprising 3 or more depending on the situation, sector and materials concerned.

The most competitive factor is the cost per part.

This type of machine lies in the middle: between the high volumes typical of the Transfer and the small batches typical of the machining center, with the cost per part as the point of comparison.

What are the advantages? Porta Solutions was founded as a company specializing in the construction of Transfer machines (Porta Transfer). In recent years it has carried out a process of rebranding, changing the company name to Porta Solutions S.p.A., with the aim of focusing the growth and future of the company on the research and development of machining centers with 3 independent spindles. This is how we came to develop the PORTACENTER. It is the only type of machine that we currently produce, as we have decided to no longer produce transfer machines to order.

The PORTACENTER is a machining center with 3 standard spindles, available in two main versions:
- model PORTACENTER 250
- model PORTACENTER 500

We start from the entry level, the PORTACENTER 250, a number that represents the working cube of the machine, with ISO 40 or HSK 63 spindle connection, to arrive at the PORTACENTER 500 with ISO 50 or HSK 100 connection. The tool magazine starts from 12 tools per station - and therefore 36 in total - then goes to 72 tools, and to the solution with 120 tools.

Another important factor is the occupied area. The smallest machine takes up 30m^2, while the largest machine takes up 80m^2.

Regarding power, it is possible to choose different motor configurations: from the most important for machining steel and stainless steel, with 33 kW at the spindle, to high-rpm motors with electro-spindle technology for machining aluminum, in particular for the Automotive sector.

Something of particular significance in these times is the redesign of the latest machines at the level of energy characterization: we have studied and developed a solution with the CNR *(Consiglio Nazionale delle Ricerche)* which we have worked on a lot because the energy cost, as we all know, plays a significant part in the cost of the final piece.

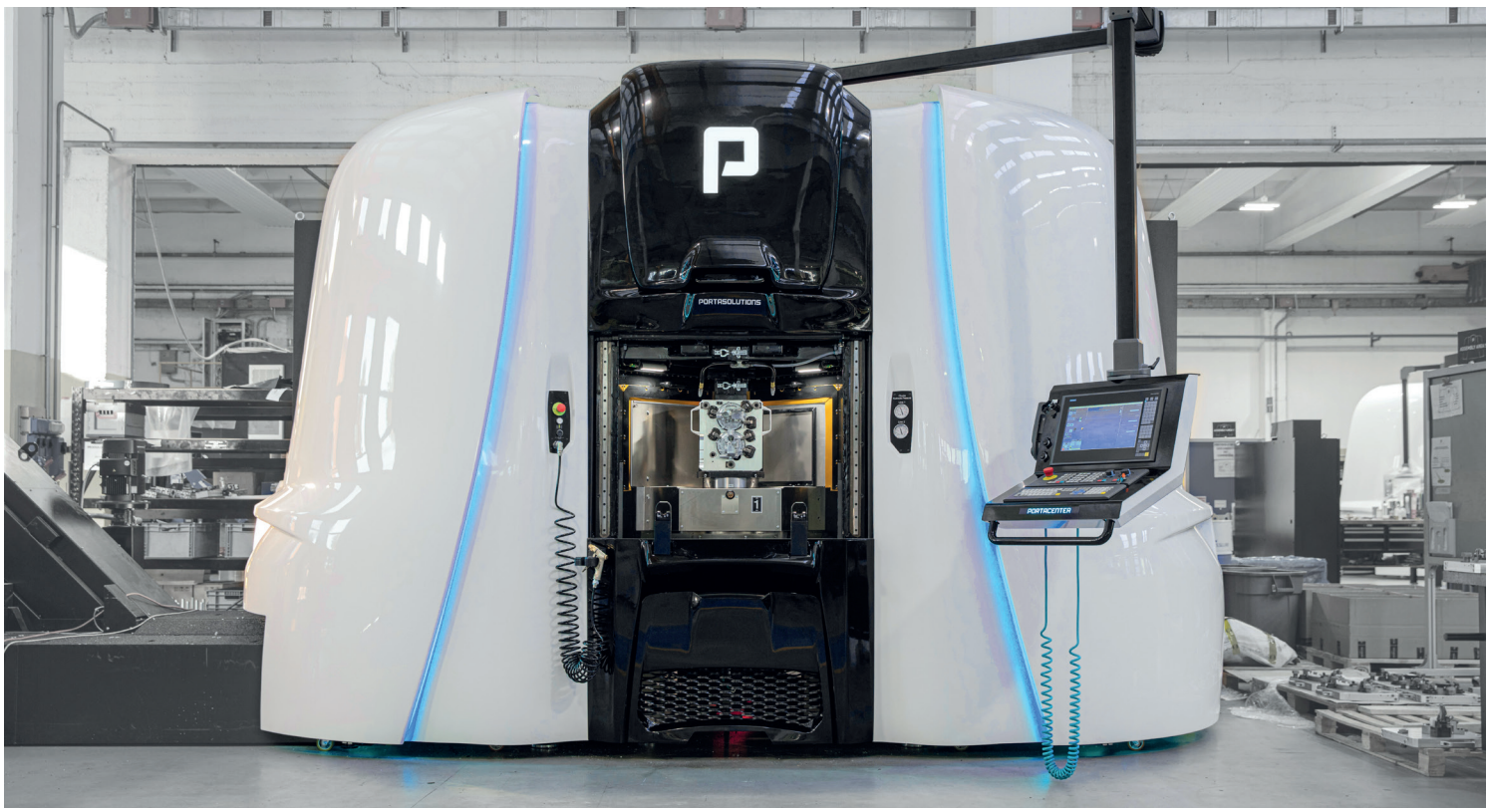
Key services. The PORTACENTER was designed with the aim to create a standard, flexible machine that could be ready for delivery at a competitive price, based on series construction characterized by assembly that we have consistently optimized over the years. To quote a figure, in 2021, it took an average of 93 days (3 months) from the date of an order to delivery of the tested machine. We aim to offer not customization, but a flagship service for the implementation of exclusively "turnkey" projects. The "100% turnkey" service allows us to create an installation suited to the customer's needs, with particular regard to the equipment, which must be chosen and made precisely to best exploit the potential offered by our solution and thereby achieve specific standards of performance.

The efficiency of our After-Sales Service department is leading to a real growth in requests by our customers, especially for the definition of new equipment, the feasibility studies and cycle times of new parts, and the selection of tools, all with the primary objective of optimizing production.

A key advantage of this service is that it is given and guaranteed without the need for the customer to stop production, since we can carry out tests and trials on a twin machine available at our school. This represents a useful and highly appreciated After-Sales Service which has become increasingly in demand. All this is also replicated in our headquarters in the United States, a very important market for us, which requires this type of on-site service.

Porta Solutions is also working hard on training. The Porta Foundation was set up for this purpose in 2019. This is a non-profit organization that includes the Porta Production School, a real school for those who use not only Porta machines, but also other types of machinery. The school combines theoretical and practical training directly with the machines, a choice that is garnering considerable interest from companies.

A 100% TURNKEY SERVICE: THE PATH TO SUCCESS



When you buy a machining center, you typically have to deal with various suppliers, from the manufacturers of the system and tools to the designers of the equipment.

The supply chain is often cumbersome and difficult to manage, and shifts the focus of its employees from the company's core business to the dynamics of each supplier.

Typically, in fact, the manufacturer is only concerned with selling the machine, delegating to other companies or to the buyer the task of choosing the tools, equipment and other parts required to complete the system.

A single point of reference, with real experts for each phase that offer assistance in the process of purchasing the machinery, is seen to be a holy grail: this is why we offer the benefit of a centralized system with a team of specialized people the customer can count on every step of the way. This service is especially valuable in the case of complex purchases that involve systems and machines.

Porta Solutions has studied and tested the "100% turnkey" service with this issue in mind. It assists the customer with the sale of the machine but also offers a complete package ranging from selection of the best tools to the design of the most suitable and best performing equipment for the project in hand.

Porta Solutions offers only "turnkey" solutions.

This is a precise method which helps the user of machining centers to greatly improve the results and performance of the system, thanks to the centralized study of all the complementary elements of the machine.

In this regard, one of the most advanced services of Porta Solutions is without doubt the Zero Risk Test Drive, which offers the customer the opportunity to find out for himself, in a practical way with the Demo machine, what is proposed on paper. This can be done before signing the order, so the customer can make a decision without taking any risk.

If the Test Drive meets the customer's expectations, we move on to the next

step of negotiation and, once the order is concluded, the dedicated process of the "100% turnkey" service is agreed.

To guarantee the final result of the significant reduction in the cost per part, Porta Solutions offers ONLY "turnkey" solutions, taking full responsibility for all the variables in play relating to equipment, tools and robotic automation systems.

There are many machine tool manufacturers who say they offer a turnkey service, but in reality, it is always difficult for production companies to find serious suppliers capable of providing a complete service.

Porta Solutions, on the other hand, guarantees a true "100% turnkey" service, assisting customers in their projects from start to finish, including setup and tooling.

Below are the 6 main benefits of this service:

1. FEASIBILITY STUDY

The process engineers analyze the feasibility of the request, for which Porta Solutions S.p.A. assumes 100% responsibility.

2. CYCLE TIME

The Time and Methods department optimizes each individual operation based on mathematical calculations, to obtain the best hourly production.

3. DESIGN OF EQUIPMENT

The Technical Office designs the equipment internally, considering the specific characteristics of the PORTACENTER to obtain the best performance.

4. STATE-OF-THE-ART TOOLS

This phase involves the co-design of the tools by the technical personnel and the OEM departments of the main tool suppliers.

5. CPK/CMK CERTIFICATION

A detailed report is prepared in the Zeiss control room that assesses performance in terms of process capacity to maintain an optimal state during production, aiming for "zero waste".

6. START-UP OF PRODUCTION

In this last phase, the customer is assisted in the start-up of production and in the training of personnel in the field, to transmit all the process know-how and make the personnel totally independent.

With the PORTACENTER, which 17 years after its launch is now in its fourth generation, the company has always focused on technological evolution and relative reliability. This is to keep up with market demands and be highly competitive, ensuring the same for its customers as well.

Do you want to find out how to achieve the goal of energy efficiency and keep your competitiveness high, applying the right tools and methods?

Write NOW to the following email address and immediately request your free consultation with a dedicated Technical Tutor:

tutor@portaproduction.com

Phone: +39 030 800673

Email: info@portaproduction.com

To learn more about Competitive Production and the PORTA Production Method

CLICK HERE

www.machiningcentersbook.com

Check out my book designed for users of machine tools for metalworking who want to take their work to the next level!

To your results,

Maurizio Porta

PORTA PRODUCTION METHOD Master Trainer

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