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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 a trainer at the Porta Production School, where I teach courses on competitive manufacturing methods for CNC machine tool users.*

*With over 25 years of experience in this field, I have developed and fine-tuned my approach, the **PORTA Production Method**, to help manufacturing companies using Machining Centers in battery and Twin-Spindle Centers to lower the cost per part, become more competitive and win more orders".*

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PORTASOLUTIONS

FLEXIBLE TRANSFER AND 3-SPINDLE MACHINING CENTER: WHICH DO YOU CHOOSE?

You are a production manager in the CNC machining sector and manage the entire production department's organization, performance, and operators. You will certainly also have the delicate task of assessing decisions on investments in new machines.
You have a great responsibility on your shoulders but also a big fear of change and mistakes.

CHANGE indeed, it is one of our worst enemies because it keeps us stuck in old situations, postponing or worse, keeping us stuck without moving us in the right direction.

Unfortunately, such behavior is intrinsic to the human mind. This cognitive bias leads us to fall into HABITS and make similar or the same choices we have always made but continue to bring barely satisfactory and unsatisfactory results.

Again, the human mind works this way, so it's not your fault...
However, it would be our fault if we didn't act and did nothing to stop this situation.

This state of mind probably prevents clarity about the context and array of options you can choose from. Maybe you know that there are various types of machines but are insufficiently familiar with the differences between one and the other.

If that's the case, you'll be glad to know this article is for you.

We aim to compare and explain the differences between Flexible Transfer and the 3-independent-spindle Machining Center.

I'll give you a preview.

Flexible Transfer DOES NOT EXIST. It is just an attempt by the manufacturers of Transfer Machines to develop something more flexible. In reality, these machines are special prototypes that provide performance and flexibility.

But now back to us...

From the 1960s to date, we have seen an evolution of production technologies that have gone hand in hand with changes in market demands. This is firm ground to build on if you want to remain competitive and continue to meet your customers' needs.

In the 1960s and 1970s, two categories of machines dominated:

- On the one hand, the high-output, built-to-order Transfers had to cope with the demand for large batches.
- On the other hand, the standard, mass-built Machining Centers met the need for flexibility and the production of different components.

However, as time passed, CNC machining industry companies had a new need. They required a machine that would allow them to be productive and flexible at the same time.

Fear of change keeps us stuck without moving us in the right direction.

Hence the need arose for new standard and flexible Machining Centers, but with higher output than the classic One-Spindle Machining Centers on the market.

Against this backdrop, in 1958, Oscar Porta, a well-known mechanical designer from Brescia, founded Porta Transfer. Also in that year, Oscar Porta designed the first Transfer machines, which, since 1923, had mainly been produced by the U.S. company Goss & Deleeuw, in Connecticut.

Years later, fate led the founder to sign a twenty-year joint venture in Geneva with Goss & Deleeuw of all people, who saw PORTA Transfers as a technological leap forward because they were the first ever numerically controlled Transfers.

This joint venture allowed Porta to work with a local company directly on the U.S. market from the 1980s until 2000 when the Porta family opened its U.S. headquarters, Porta North America Inc.

The company's 43-year presence in the U.S. market, the most competitive in the world, has given it a chance to respond increasingly well to the needs of the U.S. market and beyond. This then led it to develop Flexible Transfer models, like other manufacturers at the time were trying to do, attempting to meet the new need for flexibility in an increasingly high-performance way.

You may have heard of the Flexible Transfer solution and maybe even used it. You will know that it features output, with added flexibility, owing to the revolver heads that provide more flexibility than traditional Transfer.

However, as anticipated, this is just an attempt to respond to the market's needs through an ungainly extension of the Transfer Machines line.

By this, we mean special, rigid machines designed to run like a Formula 1 car, to which now, with the talk of "Flexible Transfer", we attempt to add seats and try to say that we will produce a nice bus to carry more people.

In short, said through gritted teeth ... Flexible Transfers DO NOT WORK!

The truth is that the market needed a NEW CATEGORY of standard Machining Centers capable of genuinely meeting the needs of Machining Center users with productive yet standard solutions.
This is why CNC Machining Centers with 3 independent spindles were developed.

I'll explain in the following few lines if you don't have the faintest idea what they are.

This is a standard Machining Center that, by taking advantage of 3-independent-spindle technology, positions itself halfway between high quantities of Transfers and the small batches of traditional Machining Centers in battery (typically 3 Centers and up).

After years of experience in the domestic and international manufacturing sector, PORTASOLUTIONS decided to specialize in this category, creating a new industry benchmark and investing in research and development to design the PORTACENTER.

The PORTACENTER, the class-leading 3-independent-spindle Machining Center par excellence, is a standard machine capable of sustainably increasing the output of production departments without raising costs while sustaining a lean company structure.

Three spindles in simultaneous, non-parallel machining operation, with a four-position pallet change, 3 in machining and 1 in masked time, for part change.

A perfect mix of features to help you boost performance and margins in your production department.

It is very competitive regarding cost per part and guarantees delivery within only 3 to 4 months of ordering, depending on the desired configuration.

HOW TO LOWER COST PER PART AND INCREASE PRODUCTIVITY... IN 4 STEPS

When you make the difficult choice to invest a significant sum of money in putting a new machine in your production department, there are many unknowns and an equal number of fears.

Have you ever experienced such feelings?

In that case, don't worry because this is common and completely normal.
It is normal to make do with the machines available in the department.
It is normal to feel safe in this dimension.
It is normal to fear approaching something new about which you know little.
Adding one more machine, identical to the 15 you already have in the department, is normal.

The thing to do is to "equip" yourself with the right tools and allow someone to guide you along the path to choosing the machine.

If you are a production manager or a user of CNC Machining Centers looking for the right direction to go, the following are key steps you can take, particularly to lower cost per part and increase productivity.

If you think the machine alone is enough to achieve a highly competitive cost per part... YOU ARE WRONG.

Cost per part calculation is far more complex and includes many different items, such as equipment, automation, skilled labor, and energy costs.

PORTASOLUTIONS' services can be divided into 4 steps:

1. **Calculation of cycle time and cost per part**
2. **"Zero risk" Test Drive**
3. **Staff training**
4. **Development of new products**

The first step to maximize the return on your investment is to calculate the cycle time and cost per part, plan your investments and identify exactly what return you will get from them while minimizing the margin of error.

"When a man of words meets a man of numbers, the man of words is a dead man".

What do we mean? It means that we enjoy approaching challenges with numbers at the ready and laying down in black and white what our solutions can achieve.

Therefore, it is essential to perform cycle time and cost per part calculations, two solid points that set the direction of your project.

Scientific knowledge of the cycle time figure allows you to measure the increase in output to better plan your production strategy and fully meet your customers' demands.

But reducing cycle time is not enough.

Cycle time and cost per part calculations set the direction of your project.

You should also reduce the cost per part, with a view to:

- lowering market prices and thus increasing competitive advantage;
- increase company margins;
- a more flexible and lean production structure.

As I mentioned earlier, cost per part calculation is a complex task, with many cost items to consider to arrive at a reliable figure for each component.

But how can we achieve both results at the same time?

By using the right technical team and the right tools, you can, on the one hand, increase your production speed and, on the other, decrease your facility overhead costs, which also fall on the cost per part.

And what technology enables you to achieve these results?

The PORTACENTER 3-Spindle Machining Center incorporates the concepts of productivity (to reduce cycle time) and flexibility (to lower cost per part) in one machine.

A Machining Center that produces, on average 3.5 times faster than a single Machining Center and can cut fixed costs by 68% compared to the model of Machining Centers in battery.

Mathematical certainty that a calculation study for cycle time on the machining operation of one or more components is 100% true and verified is almost impossible.

The designs remain only pieces of paper until they find direct application on the machine tool for which these calculations are being made and put into operation.

If you work in machining operations and want to evaluate a new plant, relying solely on a practice study without a hands-on supporting test is very risky.

Until you have proof of numbers, we are only talking about promises that could be very unreal.

Therefore, it is essential to put your trust in machine tool manufacturers that can provide this type of service on the type of system you intend to purchase:

- with the family of components with which you have to work;
- with the correct equipment you want to use;
- actually performing the work to be done in the production department.

Looking for a machine tool builder that can offer a service to solve this problem is both necessary and helpful. And this is even truer when you think of switching to a new technology or machine tool.

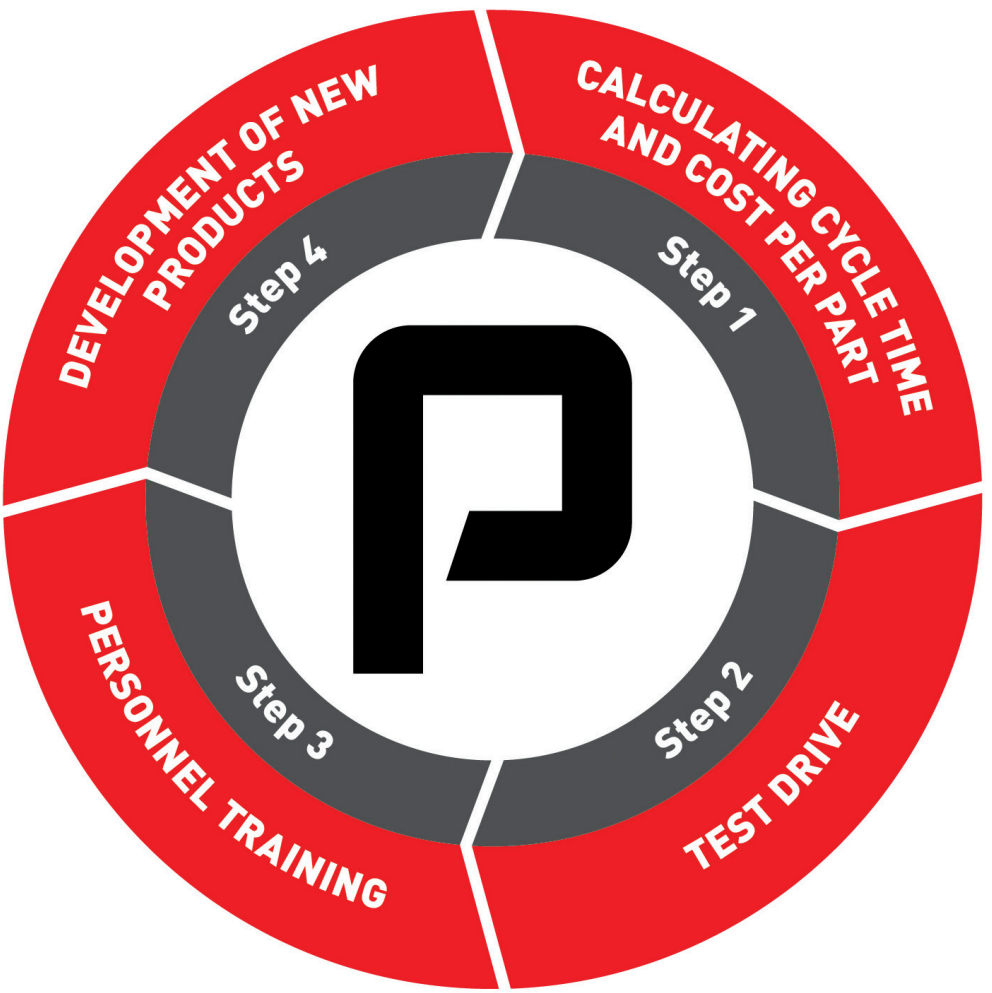
Here is an example that illustrates better what we are talking about.

You are a user of Machining Centers, accustomed for years to this category of machine tools, of which you know every single detail.

Obviously, this situation generates a sense of "security" for you, so you make the same purchase choice repeatedly, also for subsequent machine tools.

Therefore, you will tend to buy more and more Machining Centers and are unlikely to move to different and alternative solutions. Although, sometimes, the numbers may prove you are wrong.

This brain-created cognitive bias turns us into victims of a mental distortion of reality, changing our perception of things like a self-defensive shield. By nature, our brains are programmed to avoid pain, fleeing the unknown and blindly trusting only what we know. But this double-edged sword keeps you anchored to "what you've always done.



What is the solution? The key is to search for new alternative solutions to test directly in the field.

The "ZERO RISK" TEST DRIVE emerged from this need.

This service allows you to test the PORTACENTER before signing the contract. You can test it directly by processing the components for which you are evaluating the new machine.

Most importantly, the Test Drive helps you make that mental leap that is holding you back, preventing you from changing.

The four main benefits of the Test Drive are:

1. Check the CYCLE TIME presented in the study practice.
2. Test the EQUIPMENT.
3. You can make any improvements to the process, before purchasing the machine.
4. Check the setup time from one product to another.

With this service, we introduce the "risk reversal" concept, the practice that allows the buyer not to have to decide based only on theoretical facts, reducing the investment mistake risk to zero.

But innovative technology needs staff who can use and make the most of it to leverage business investments.

Indeed, another critical element is human capital, the team of people who will use the tools the company invests in.

The basis of quality human capital is unquestionably continuous TRAINING investment in training people and increasing their skills to use in the company's production process.

Finding qualified, experienced, and skilled personnel is now a challenging task. Especially in the machine tool industry, where the phenomenon of

companies competing and "fighting" over professional figures is becoming increasingly common.

If you want to introduce new tools to increase your production department's output and performance, you must form a real team, starting with the people already in your company.

Hence, we came up with the PORTA PRODUCTION SCHOOL. An advanced training school for Machining Center users who want to learn the machining logic of 3-spindle Machining Centers, and Porta Production Method techniques.

The School was established within the Porta Foundation, which uses courses to spread the best competitive production techniques.

The course includes:

1. a teaching room to study theory;
2. a real PORTACENTER 3-spindle Machining Center, complete with equipment and tooling, on which to practice directly;
3. technical staff with over 30 years of experience with whom you can learn, train, make mistakes and improve in a protected environment.

The PORTACENTER is a 3-spindle Machining Center that is replacing common Machining Centers with an average age of 7-10 years, allowing the same production levels with fewer machines installed and thus incurring less cost.

Accommodating a new system such as the PORTACENTER involves training staff and preparing them to take full advantage of this new technology.

As a business owner or production manager, you know how onerous and challenging it is to introduce a new part for production for the first time. You know when you begin but don't know when you end because there are so many variables that it is impossible to predict.

Here are the 5 problems you may typically run into:

1. Problems with part clamping.
2. Problems with non-geometrically compliant blanks.
3. Problems with the material's chemical composition.
4. Tooling problems.
5. Part quality problems.

Then other critical issues outside the technical aspects have a lot of influence, such as the logistics of the material or the toolmaker's level of training.

In addition, if part clamping or tooling changes are required during setup, the time the supplier of those changes takes automatically leads to waits of days or weeks, obliging you to stop everything, retool the machine, and start over.

New product development, precisely because it is "new", needs machine and qualified personnel to perform 3 steps:

1. Adjustment of CLAMPING DEVICES.
2. Loading and testing of the PART PROGRAM.
3. Optimization of parameters based on the TOOLS to be used.

Each point is a time bomb, ready to detonate downtime that we can never plan for.

The key is to search for new alternative solutions to test directly in the field.

For this reason, the solution is to delegate and parallelize this process to reduce all risks associated with new product development activity.

We need a team that can provide its TECHNICAL staff and machines to curb, if not zero, the risks.

Hence our "New Product Development" service, only for PORTACENTER customers, which involves fully entrusting us with this activity.

The advantage is that you can continue production while we develop everything on a sister machine installed at our site.

Here are the steps and benefits of the service:

- Product feasibility on the PORTACENTER.
- Study of part clamping.
- Drafting the best machining process and tooling study.
- Cycle time and relative balancing.
- PORTACENTER Demo equipment.
- Putting the part into the machine.
- Checking part tolerances with a three-dimensional machine.
- Shipping part to customer company for approval.
- Sampling and related CM / CMK.
- Shipping the kit (equipment, tools, part program) to the customer.

With this way of operating, the downtime associated with this activity will no longer affect your production department so that you will improve your productivity.

CHANGE ACCORDING TO MAURIZIO PORTA

The focus of all these services is on observing and analyzing market reactions, which we constantly subject to special studies to follow and support manufacturing companies performing mechanical processing.

As the world continues to evolve and seek increasingly competitive systems, Porta Solutions' vision is to proactively address change, which is often the fundamental barrier to evolution.

Change is synonymous with courage in tackling investments directed at choosing new solutions.

"Change is a very sensitive topic. Change appears laborious in the eyes of the user, the production companies. I think the main thing is not to put up with something, as 90% of companies do, thinking there is no other solution.

Instead, we must prepare to strike while containing costs relative to everyone else. Another determinant is "Time to market", a genuine performance indicator measuring the time from when an idea or project to develop is conceived to when that idea or project becomes a reality.

The market increasingly shows that most projects on paper are not practically feasible in terms of time. As we all know, lead time is as critical in choosing machine as the final cost."

Do you want to face and meet the challenge of making your company significantly more competitive?

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

Email: tutor@portaproduction.com
Phone: **+39 030 800673**

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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