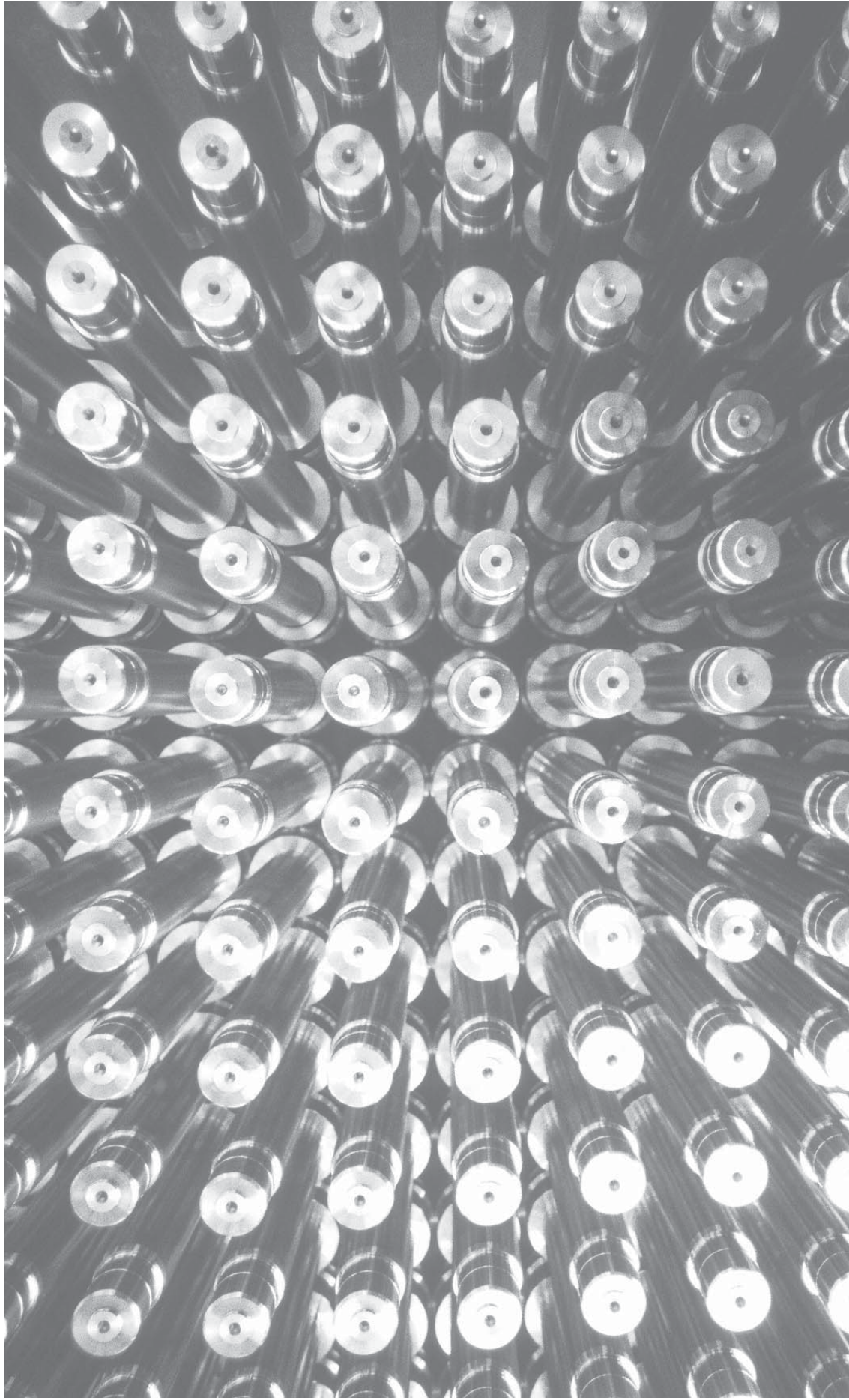


**Dynamic growth
by investing in the
in-house brand**



Reprint from
the journal



06 - 2008

Investment in high technology secures competitiveness

Dynamic growth by investing in the in-house brand

Using cutting-edge technology has always been part of the program of the Pohl + Jehne Produktionsgesellschaft mbH. When it comes to the series production of precision-turned parts, the medium-sized supplier company in Nauen has always opted for production turning machines from its "in-house brand" INDEX. For six months, the INDEX C100 presented for the first time at the in-house exhibition in 2007, has also been proving that it fully meets the high expectations.

After more than 40 years at its old location, Pohl + Jehne, established in 1949 in Berlin-Spandau, has put into practice a concept for the series production of demanding turned and milled parts in a new facility with 900 m² of production area, only 30 km away from its old production site. Optimum material flow, highly advanced machinery and experienced staff ensure favorable production costs and low error rates. The most important customers are the locking technology and customers from the electro-, medical and combustion technologies, which have the highest requirements in terms of quality and meeting deadlines.

The company received an additional surge in innovation in August 2006 when Dr. Stefan Bauer, who had previously been a corporate consultant for the company for many years, joined Pohl + Jehne as managing director. Since that time, apart from a reorganization of the business processes, 2.5 million Euros were invested into the existing machinery to add another seven highly advanced CNC machines, for the most part production turning machines from INDEX.

Dr. Stefan Bauer: "Against the background of today's time and price pressure, we see the necessity of investing into increasingly higher-quality machine technology. Surprisingly, this has not led to job cuts because as a result of higher com-



The large tool stock in the three turrets and the standard W-serration of the C100 ensure short setup times even with small lot sizes.



"The C100 is the natural development of the ABC", according to Regional Sales Manager Valentin



Trettenbrein (on the right). "The machine has one more turret and allows simultaneous machining. This is an essential aspect in favor of productivity."

Dr. Stefan Bauer (on the left): "Just from the outside, the C100 already looks confidence-inspiring. The way it is standing there, it expresses a sturdy stability contained in itself."

petitiveness our volume of incoming orders has continuously increased."

Not only did Pohl + Jehle's turnover of 2.9 million Euros actually increase over this period by 30% but also the number of staff went from 32 to today's level of 50. The target figures for the first quarter of 2008 have already been exceeded by 10%.

Dr. Bauer: "Suppliers who want to remain competitive have to slim down and procure high-performance machines. Pricing, on-time delivery and quality are the top priority. We manufacture workpieces some of which are highly complex and which have to be OK on 40 to 50 measuring points. This requires, apart from good machines, a lot of experience, which we have acquired together with our customers. This is why customers who once have gone to cheaper providers return to us in most cases after 2 to 3 months."

The largest contribution to the quality of the parts produced Pohl + Jehle in lot sizes from 2 to 100,000 is made by machines from INDEX/TRAUB: 7 ABC machines, one G200, one TRAUBTNL26 and, as a complete innovation, one SpeedLine C100.

Dr. Bauer is quite pleased: "The output produced by the INDEX machines is staggering. Despite three-shift operation on 6 days a week, the first INDEX ABC purchased 12 years ago still works perfectly and is running with high precision.

An INDEX machine has its price, but its performance can't be topped. And as for repairs, with the exception of the usual wear and tear, there's virtually nothing" This is also guaranteed by the new maintenance and repair department set up by Pohl + Jehne over the last few years, which documents all business incidences and performs regular and reproducible maintenance on all machines.

Dr. Bauer: "Over the last 10 years we have got the impression that what INDEX does makes a lot of sense, and this is why this manufacturer has become, as it were, our in-house brand. So, when we saw the SpeedLine C100 at the EMO 2007 for the first time, we spontaneously decided to buy it, thinking that it would give us another competitive edge. Compared with the ABC series, this machine has one more turret and looks more compact and even more stable just from the outside"

Another increase in performance with the C100

Since December 21st, 2007, the C100 has been in use at Pohl + Jehne. The high expectations have been fully met. Dr. Bauer: "For parts that we used to produce on ABC machines, we have now reached on average 20 to 25% more productivity. In addition to that, the high damping properties of the plain-bearing slideways have also produced very good surface finishes and higher tool lives, as can be seen clearly from our records."

A large share of this is due to the innovative INDEX SingleSlide plate-type guide system of the C100. The tool slide for the X and Z movements consists of a single piece and does not traverse the turrets on anti-friction guides, but on flat plain-bearing slideways. The tool carriers 1 and 2 slide on slideways that are firmly screwed down to the machine bed. The virtually wear-free sliding pair consists of through-hardened steel tool plates (slideways) and coated sliding elements (tool carrier). An exact adjustment ensures zero backlash of the sliding pair.

What makes the C100 perform at such a high speed is its innovative drive kinematics by means of scissor kinematics. Because of the small masses to be moved, accelerations of up to 1 g can be obtained. The C100 design thus combines the known advantages of plain-bearing slideways – such as good damping properties and high rigidity – with good acceleration and rapid traverse values, achieved until now only in machine tools based on anti-friction linear slideways. High rapid traverses of up to 60 m/min in the Z axis of the counter spindle guarantee low non-productive times and thus further reductions in the cycle times.

Dr. Bauer: "In one of our parts, we have achieved time savings



The principle of opposite Y axes gives the user of the C100 an enormous surge in productivity.



The INDEX SingleSlide plate-type guide system of the C100 sets new standards in terms of damping, rigidity and tool lives.

of 45 percent on the C100. However, this part could not have been produced on an ABC machine anyway, due to its complexity, which is why we used to produce it on the INDEX G200."

This shows another advantage of the C100 compared to the ABC machine: More and more tools are needed for machining because of the increasing complexity of the workpieces. This is taken into account in the C100 by equipping the three independently traversable tool turrets, as a standard feature, with 14 tool mountings according to DIN VDI 69880-20, to allow machining on the main and counter spindles. Moreover, the principle of two opposite Y axes produces another enormous surge in productivity.

Reduced setup effort

At Pohl + Jehne a wide range of approximately 350 different workpieces is produced in one year. This, of course, makes high demands on the technical personnel and requires many setup operations. The setup engineers at Pohl + Jehne were pleased to note already that the setup effort for the new C100 is less than that for the ABC machines. The reason for this is the ready access and low depth of the working area, the larger number of tools by virtue of the third turret and, in particular, the standard W-serration, an INDEX-specific VDI interface. W-slots in the tool turret ensure repetitive accuracies of +/- 8

µm during setup even with angled tools – and at a distance of up to 100 mm from the tool mounting device.

No initial problems

Intuitively, Dr. Bauer would have preferred to invest in a machine that had already been produced in a piece quantity of 1,000. But the responsible Regional Sales Manager Valentin Trettenbrein had been able to convince him that no initial problems were to be expected of the C100 because this new development had already been tested in various pilot projects prior to its market launch.

Dr. Bauer: "The courage to buy a completely new machine comes from our philosophy always to look forward. We're pleased to say that up to now we have had no problems whatsoever with the new C100, and we have not been able to detect any initial problems. Thus, the existing mutual trust has been confirmed once again. This is why INDEX will be at the top of the list in future investments. We are planning the construction of an additional production hall, for which the next machine to be purchased will certainly again be a C100."

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LP9602.9520-02.09 DE Printed in Germany Subject to change without prior notice

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