

**Absolutely  
unique!**



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# Absolutely unique!

**Latest multi-spindle automatics ensure the worldwide competitiveness of the A. Berger group**

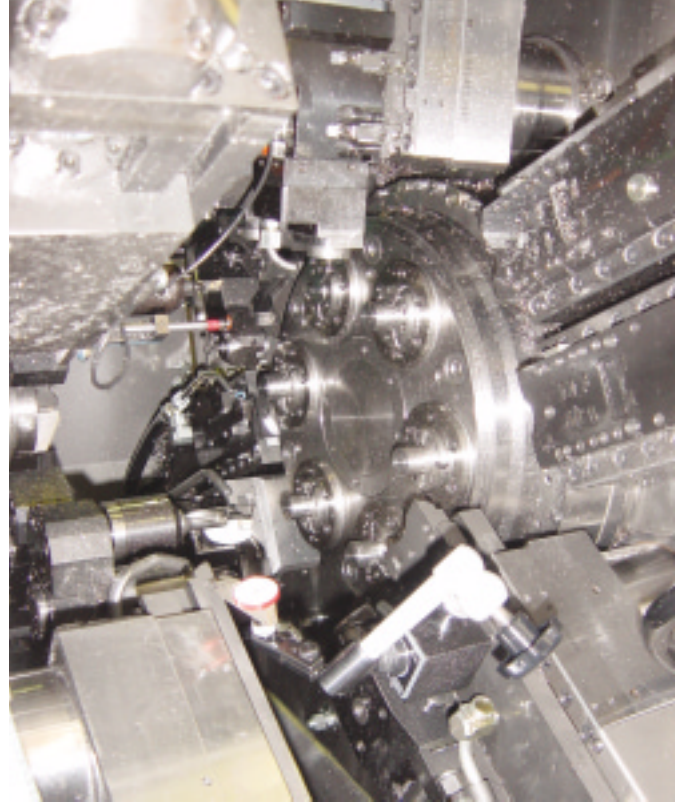
**If one believes the relevant industrial journals, there is only one conclusion: The production site Germany is dead or is at least dying. Excessive company taxation, bureaucracy, inflexible social security legislation, excessive labor and wage costs - these are, according to the reports in the journals, factors which hinder local companies to compete with more and more international companies. The Alois Berger GmbH & Co. KG company is proof that this is not necessarily the case. This worldwide successful company has two priorities: Well-trained staff - the training program attendance rate in the own company is 15 percent - and excellent machinery, such as the INDEX multi-spindle automatics at Memmingen.**

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One thing first to mention. The Alois Berger group also struggles with the difficulties of the production site Germany. But instead of complaining, the company is offensively looking for new solutions. Example 1: The company counters the lack of specialists with the already mentioned high training program attendance rate, whereas this rate is even more expressive when looking at absolute figures: Among the approximately 1,000 staff members employed in the German plants, there are 150 trainees („...who will usually be hired.“). Example 2: The Allgaeu company combats the undisputed high wage and labor costs with highly productive machinery.

The company was founded in 1955 at Ottobeuren. As a contracting turning shop starting with originally two employees („one for the day shift and one for the night shift“), Alois Berger established a solid clientele relatively quickly.

Today, the company group counts worldwide 1,300 employees of which 4/5 are employed in the German plants (Memmingen,



Ottobeuren, Wertach and Ummendorf). The company is still a family enterprise and six of the seven children are working in the company. Each site has its manufacturing focal point along with the corresponding machinery. At the headquarters in Memmingen, where mainly technically complex precision parts above 6 mm diameter are manufactured, the INDEX CNC multi-spindle automatics are used.

The main focus lies in the production of ready-to-install precision parts which are mainly delivered to suppliers of the automotive industry. More than 70 percent of the turnover (148 million Euros) are achieved in this sector. At the Memmingen site, this share is even 85 percent. An uncomfortable customer? For Chief Engineer Oswald Berger, Managing Partner, this is not



*Chief Engineer  
Oswald Berger, Managing  
Partner of the A. Berger  
GmbH: "...the new invest-  
ments are strongly concen-  
trated on INDEX since, in  
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comparable machines for  
such machining tasks."*



*Helmut Pleyer, Technical  
Sales Director of INDEX  
multi-spindle automatics:  
"...due to the V-shaped arran-  
gement, both tool carriers  
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*„...whereas the quantities strongly vary. Here, we cover a spectrum of 20,000 parts per year up to 220,000 per day.“*

necessarily the case since: „We know that these customers expect a continuous improvement of our productivity and compare this with annually reduced unit prices. If you look at things this way and you take all efforts to increase productivity, you will be able to work together on an acceptable basis.“

Whereas Oswald Berger points out that: „In our competition, we are surely not the cost leader but we see ourselves as a technology leader.“ He explains: „We offer our customers comprehensive technology in the machining sector ranging from four millimeter to 400 millimeter diameter. There are surely not many competitors covering a comparable spectrum. „ Additionally, the Memmingen site is very often a development partner also, which means that parts are designed together with the customer. Oswald Berger mentions another important feature: „Our site, without exaggerating, is equipped with one of the most modern hardening plants worldwide, which allows us to make an even wider range of products to offer our customers.“

Today, Berger directly supplies companies, such as BMW, DaimlerChrysler, General Motors, and is proud to have a multitude of very large suppliers in the automotive industry on their reference list, such as Bosch, TRW, Siemens, VDO, Delphi and Borg Warner. „Basically, one could say that we just concentrate our efforts more on complex turned parts, difficult materials and higher machining depth. We use considerably more ball bearing steel 100Cr6 than free machining steel.“ An interesting aspect is that - although many companies have settled down in the so-called low-wage countries - the biggest Berger customers are in countries, such as the Czech Republic and Mexico.

„Our strength at the Memmingen site mainly lies in the



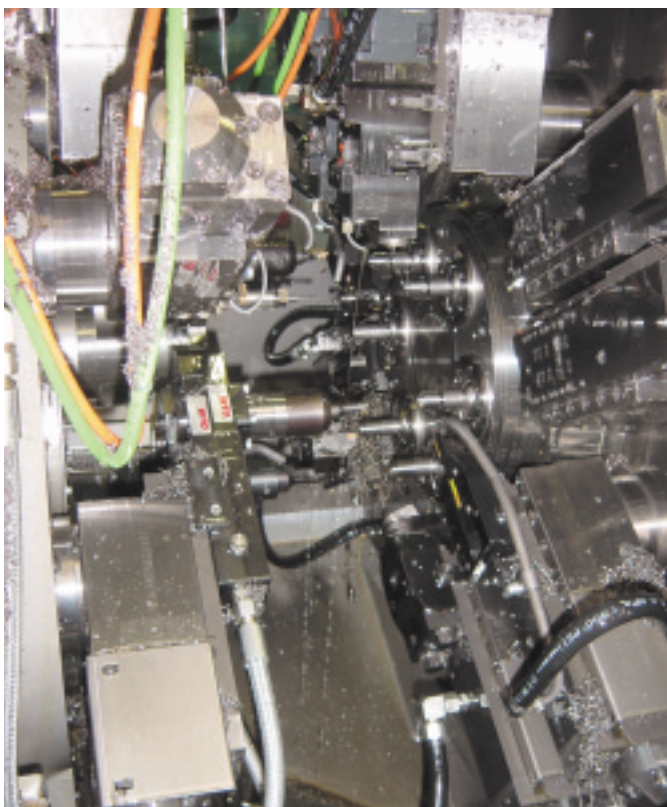
*Obligatory: All multi-spindle automatics are supplied via the latest bar loading magazines.*

diameter range of up to 67 millimeters, whereas the quantities strongly vary. Here, we cover a spectrum of 20,000 parts per year, up to 220,000 per day.“ Here, one cannot be successful by simply using ‘conventional’ turning machines. This is the sector for multi-spindle automatics.

Oswald Berger: „The new investments at the Memmingen site are strongly concentrated on INDEX since, in our opinion, there are no comparable machines for these machining tasks.“ The advantages, according to the statement of Production Manager Helmut Häußler, „...lie in the independent rotating speed for difficult materials. Another advantage is the number of tool carriers since there is no other manufacturer of NC-controlled multi-spindle automatics who is able to offer similar features.“ Ilja Karas, Head of Division CNC multi-spindle auto-



*Easy access: The switch cabinet was relocated horizontally on the top of the machine*



*The spindles driven separately by hollow shaft motors can be adapted individually to the particular machining situation.*

matics, adds: „The advantage is that one is thus able to produce complex parts with a relatively small number of special tools or complex chucks. Compared to machines of other manufacturers, which we use as well, this advantage becomes obvious.“

Especially the latest INDEX models, the MS32 Compact, have convinced the production specialists. Helmut Häußler: „The operating convenience, as far as multi-spindle machines are concerned, is unique.“ Helmut Pleyer, Technical Sales Director of multi-spindle automatics at INDEX explains: „The MS32 Compact is worldwide the first multi-spindle turning machine open at the front. The complete working area is freely accessible due to the front open construction which, of course, increases the setup quality considerably.“ To achieve this, the INDEX design engineers have gone to great lengths: The switch cabinet was relocated horizontally on the top of the machine. Thus, it is possible to open the complete front side of the MS32C with the exception of the narrow panel. The Production Manager Helmut Häußler confirms: „The easy setup is remarkable compared to other multi-spindle automatics. But this is only one advantage of this conception. We are

also fully satisfied with the chip fall.“

However, it is no longer necessary to attach a center slide block to the front side, as in case of ‘normal’ multi-spindle automatics, it is only possible to use 12 quills instead of the normally possible 17 quills as tool carrier for the machining of complex workpieces. But this restriction is not very important. For such tasks, the ‘normal’ MS32P is used at the A. Berger GmbH instead of the compact version.

Helmut Pleyer about the advantages of this series: „The MS series is a completely new conception of multi-spindle automatics. We still use two tool carriers at the same time on one spindle. But, due to the V-shaped arrangement, they are located in the viewing and handling area of the operator.“

With INDEX, the customer can decide by means of the tool holder whether the tool carrier is to be used for inside or outside machining. Since the fixed predefinitions for tool carriers of comparable competitive CNC machines strictly limit flexible machining, it is possible to freely equip the 12 tool slides of the INDEX CNC multi-spindle automatics of the C version with tools. The fixed assignment of the slides for cross or longitudinal operations does no longer exist for the MS series. Each tool slide of the MS32C and P can travel CNC-controlled 69 mm in X and 100 mm in Z direction, which means that the machining options are almost unlimited (example gear hobbing, cross boring and cross milling, tapping, turning non-circular workpieces). This is enabled by the spindles which are separately driven by hollow shaft motors and which can be adapted individually to the particular machining situation, which makes it possible that the optimum spindle speed is



*The Production Manager Helmut Häußler (left) and Ilja Karas, Head of Division CNC multi-spindle automatics, rate the easy setup of the MS32 Compact as „absolutely unique.“*



*„The MS32 Compact is worldwide the first multi-spindle turning machine open at the front...“*

available for each spindle position. This represents another advantage of the INDEX machines over competitive machines. Especially for difficult materials, already mentioned by Oswald Berger, it is very important that optimum cutting values are used.

Back to the starting position: Without the concentration on multi-spindle automatics, it would even be very difficult for an international company like the Berger group to ensure its competitiveness. Approximately 175 multi-spindle automatics are used worldwide in the Berger companies. Today, most of these machines are CNC-controlled machines. Oswald Berger: „This improves the quality of each part, reduces the throughput time by more than one tenth and reduces the



*Previously inconceivable: Working in the working area of multi-spindle automatics without dislocations*

space required for the work in process.“

All this requires a great willingness to invest: „Every year we invest in the group between 15 and 20 million Euros of which 80 percent have been invested in machine tools over the past years.“ Conclusion drawn by Oswald Berger: „The future of metal cutting at German production sites is not the production of simple workpieces made of easy-to-cut materials. Our possibilities mainly lie in the production of complex parts made of difficult-to-machine materials requiring an extended machining range. The economic production of such parts is not only a chance for German production sites but also for INDEX.“



*Wherever you look: The INDEX colors dominate at the Memmingen site*

### **The company**

The company, founded by Alois Berger in 1955, counts today 1,250 employees and comprises seven individual companies in Germany and five subsidiaries (Switzerland, Poland, Canada, USA and India). The Berger group sees itself as the leading supplier of ready-to-install precision parts, precision machine components, ball screws, hollow shaft motors and heat treating. Our sites also include the former Maho plant at Wertach where, for example, the known Berger ball screws (quality class 1 -10 with diameters ranging from 16 to 80 mm) are produced. In this connection it is interesting that the Berger ball screws are also installed in INDEX machines (MS32, G160 and ABC).

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