



Grenchen-based Binder Electronic Components AG makes high-grade bar-turning pieces from a wide range of materials for the connector industry.

A DIRECT CONNECTION TO SUCCESS

Grenchen-based Binder Electronic Components successfully rationalized its fluid management processes and boosted productivity by switching from five different cutting oils to universal high-performance MOTOREX ORTHO NF-X.

Binder Electronic Components AG was founded in Grenchen in 1979 as a subsidiary of Franz Binder GmbH + Co. Elektrische Bauelemente KG of Neckarsulm. The company manufactures electronic components in the field of high-end electronic connectors – plugs – on over

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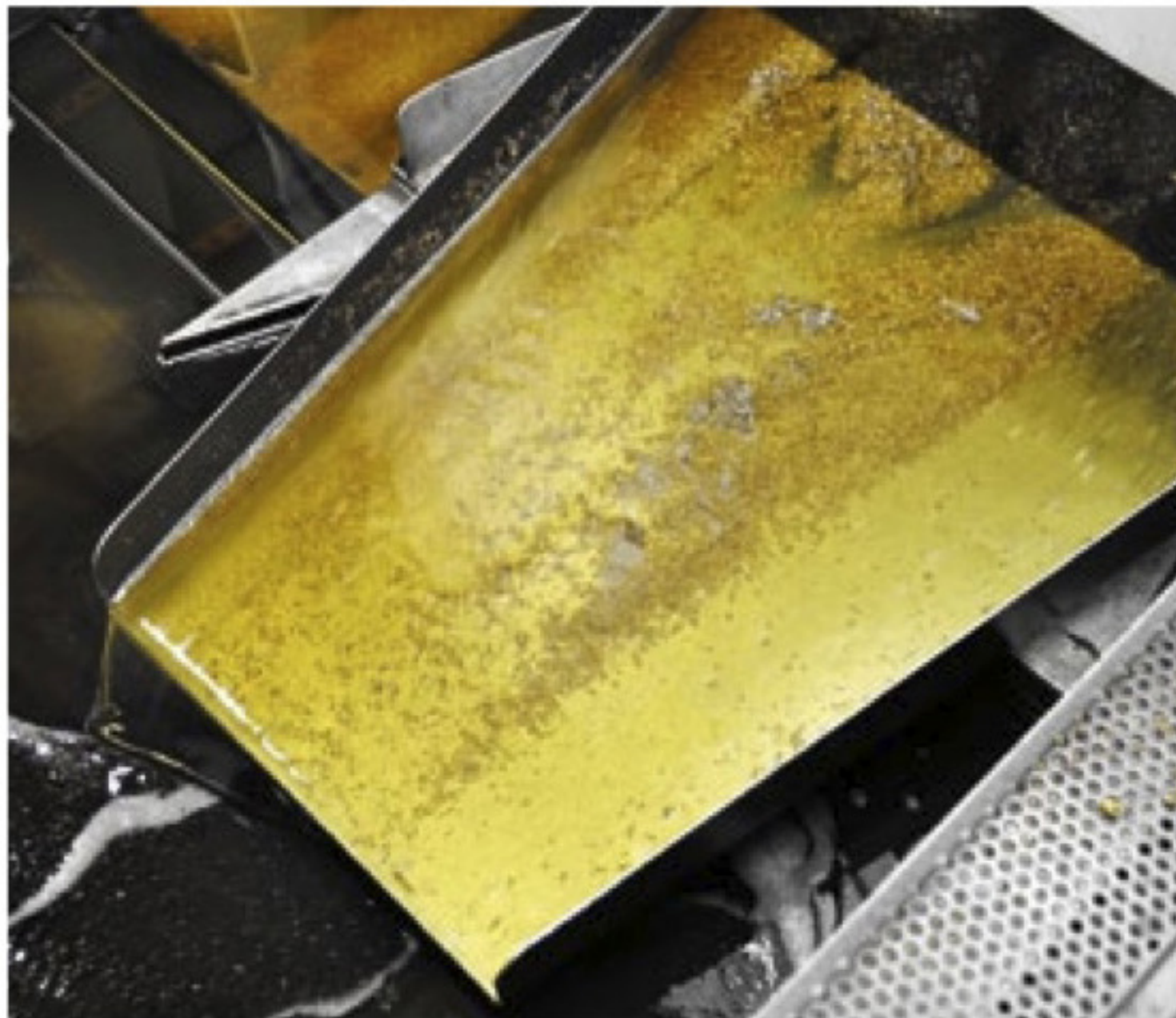
60 different machines. The metal-removing steps in the production process are all performed in Grenchen. The traditional bar-turning manufacturer’s 60 employees work ring material along with bar material of diameters ranging from 2 to 32 mm. Final assembly takes place at the main plant in Germany.

CONTINUAL INNOVATION

Since its founding in 1979 the plant has seen continual expansion and renovation. Today it boasts a 4000 square-meter production floor and an extremely diverse range of machines, including cam-controlled machines, Swiss-type CNC automatic lathes, multi-spindle machines and even rotary indexing machines. The plant’s bar turners are masters of every production technique on these machines, working materials such as brass, bronze, aluminum, synthetics and, increasingly, stainless steel.

CUTTING OIL A KEY FACTOR

Until recently the plant used five different cutting oils, which impacted the production flow by affecting not only which machines were available but also the choice of tools, cleaning of parts and swarf processing. For many years, chips were collected and centrifuged by hand or using simple machines. The work was both



Binder's production process results in 350 tonnes of swarf. Recycling the swarf and recovering the cutting oil carried away with it are essential factors in keeping the company's costs under control.



Switching to a single cutting oil simplified oil recovery using a fully automated swarf centrifuge.



The recovered cutting oil is purified using filtration equipment, then returned to the machine tools along with a portion of fresh oil.

onerous and exacting as the recovered oil could only be used on machines operating with the same type of fluid. Errors were not uncommon, and the mixing of different oils took its toll on cutting statistics.

When the company decided to acquire a fully automated swarf centrifuge, the time had clearly come to move to a universal cutting oil. Just a few years ago this would have been pure wishful thinking, but now MOTOREX was able to fill several different machines with high-performance ORTHO NF-X cutting oil for testing.

A NEW START WITH ORTHO NF-X

The test runs on various types of machines using MOTOREX ORTHO NF-X proved that it was indeed possible to perform every step of the machining process with one and the same cutting oil. Not only that, but the integrated Vmax technology actually yielded improved production figures and surface R_a values. The improvements on non-ferrous metal surfaces were especially notable, bringing them up to the highest visual quality standards. Based on this success, Binder Electronic Components AG switched the entire plant to the new cutting oil. The move greatly simplified purchasing, logistics, recovery of oil from swarf and parts cleaning.

350 TONNES OF SWARF PER YEAR

The company works roughly 450 tonnes of metal per year, producing some 100 tonnes of product and 350

CUTTING OIL CLEARS THE WAY



"The move to universal cutting oil from MOTOREX has cleared the way for a large number of additional improvements in the production process. A few years ago this would have been pure wishful thinking. Today it's reality!"

David Phan,
Director of Production

Binder Electronic Components AG,
Grenchen/Switzerland

tonnes of swarf. The reason lies in the multitude of small-diameter parts it produces to watch industry standards. These must be produced from relatively stable, i.e. thick bar material. The chips, mostly brass, are automatically carried to the oil recovery facility in mobile collection carts and centrifuged twice. The recovered oil is microfiltered (10 microns) and returned to the machine tools. The chips, free of problematic substances such as chlorine and heavy metals, can then be taken for recycling without further problems.

We will be glad to provide information on the latest generation of MOTOREX machining fluids and on optimization options for your business. ●