

CASE STUDY



TURNING SMALL PRECISION COMPONENTS QUAKERCUT® 005 XP

CHALLENGES

A leading supplier of small, precision turned parts for various industries such as electrical equipment, electronics, telecom, locks, fasteners and blinds was looking for productivity improvement. The customer had been using water-based coolants such as semi-synthetics and full synthetics, but always ran into production interruptions when running unmanned. The customer was looking for:

- » A technology providing non-stop unmanned production
- » Cost savings from cradle-to-grave metalworking fluid management

THE SOLUTION

Binol, a Quaker Chemical Company, analyzed the customer's challenges and introduced QUAKERCUT® 005 XP, a low viscosity neat cutting and grinding oil to replace the water-based coolants. After using QUAKERCUT® 005 XP for brass parts and QUAKERCUT® 008 XP for stainless steel parts, the customer was able to realize the following operational improvements:

- » **No dirt build-up in machines causing production interruptions**
- » **Productivity improvement of 40% realizing a savings of 8,500 € per machine/year**
- » Reduced machine maintenance
- » **No need for coolant waste disposal, nor biocide treatment**
- » Re-use of oil from chips, parts and washing machine

PROCESS AND EQUIPMENT

Material	Brass and stainless steel
Machine	42 Rotex and Citizen machines
Filter	Sedimentation
Tank Volume	20 - 250 liter
Pump Pressure	1 to 4 bar
Running Time	Was 8-10 hours/day, now more than 12 hours/day
Type of tool	Inserts
Operation	Turning and drilling
Adjustments	Re-use of oil from chips and cleaned parts

THE EXPERTISE

Metalworking lubricants represent a very minor part of the costs in a metalworking process, typically less than 1%. This case illustrates the importance of correct fluid selection. The impact of the fluid can be a multiple of its costs, making the price of a metalworking fluid insignificant. That is why Quaker focuses on developing fluids with the highest performance without compromise, fluids that sharpen your competitive edge.

THE PRODUCT

QUAKERCUT® 005 XP is an extra high performance neat cutting oil based on advanced ester technology from renewable raw materials with a viscosity of approximately 5,5 mm²/s at 40°C. High polar additives gives optimal wetting and lubricating properties ensuring high surface finish quality and improved tool life. The product should be used neat and the main application is heavy-duty metalworking operations.