

ENHANCING COOLANT RELIABILITY AND MACHINING PERFORMANCE AT TOOLRITE

COMPANY OVERVIEW:

Toolrite, based in Essex, is a specialist provider of precision engineered, GMP compliant tooling and spares. The company supports the pharmaceutical, nutraceutical and associated sectors with high quality process and packaging solutions, relying heavily on consistent machining performance to maintain its reputation for accuracy and reliability.

CHALLENGE: COOLANT INSTABILITY LEADING TO PRODUCTION DISRUPTION

Toolrite's engineering teams operate a diverse range of machining processes, each requiring dependable metalworking fluid performance across varying applications and material grades. Prior to transitioning to **Q8 Brunel XF753**, the business was using a coolant technology that soon presented critical stability issues.

Shortly after each machine was filled, the coolant began to break down. Its instability caused several operational problems, gradually growing more severe:

- **Loss of visibility** on machine screens as unstable fluid formed oily residues on surfaces
- **Compromised machine operation**, including sensors and switches affected by sticky deposits
- **Collapse of coolant stability**, leading to concentrate separation
- **Rapid bacterial growth**, resulting in offensive odours and an increased risk of respiratory issues for operators

This combination of factors not only interrupted production efficiency but also created potential health and safety concerns - prompting the need for an urgent and reliable solution.

ASSESSMENT: UNDERSTANDING PROCESSES AND WATER QUALITY

Before recommending an alternative product, **Certas Lubricant Solutions** carried out a comprehensive evaluation of Toolrite's machining

environment. The facility's four key departments - Turning, Milling, Production Grinding and Toolroom - each posed different performance requirements, making the selection of a single, compatible coolant particularly challenging.

A central factor in the assessment was **water quality**, as variations can significantly influence fluid stability, corrosion protection and overall machine cleanliness. Water samples were analysed to ensure the chosen product would remain stable and effective under Toolrite's specific conditions.

SOLUTION: Q8 BRUNEL XF753

Following a full review of machining operations and water characteristics, **Q8 Brunel XF753** was selected as the most suitable option for Toolrite's needs.

The decision was driven by several key performance advantages:

- **Exceptional hard water stability**, preventing separation and residue build up
- **Reliable protection of sensitive aluminium components**
- **Fine droplet size**, ideal for high precision grinding operations
- **Superior cleanliness**, improving visibility and reducing machine contamination

To confirm suitability across all departments, the implementation was carried out in carefully monitored stages. Each phase validated the product's performance under different machining conditions, material grades and operational loads

RESULTS AND IMPACT

The move to Q8 Brunel XF753 delivered immediate improvements in coolant stability, machine cleanliness and operator confidence. The enhanced reliability also contributed to smoother machine operation, reduced downtime and a healthier working environment.