



Established in 1846, Ludolph Bremerhaven has become one of the world's leading suppliers of nautical and aviation equipment. With approval from the Federal Aviation Office of Germany, the company specialises in the manufacturing and repair of structural parts for aeronautical systems, including compasses, airspeed indicators and variometers.

THE CHALLENGE

One of Ludolph's primary customers is Airbus, a leading manufacturer of commercial and military aircraft. Bound by strict regulations, all materials including the metalworking fluid used in production, must be approved by Airbus. Their previous coolant manufacturer met these stringent requirements however, the product produced significant foam during operation, causing machines to frequently overflow.

Though Ludolph had invested in automated machining equipment, which would allow machines to run daily, the foam issue was so severe that it caused machine shutdowns, drastically reducing throughput and requiring more labour hours.

THE SOLUTION

The team at Ludolph tested several cutting fluids, but they all produced significant residues, causing excessive dirt build-up on machines. Then they tried TRIM® MicroSol® 585XT, an advanced semisynthetic that offers superior cooling and lubricity while also eliminating foam.

The fluid performs exceptionally well in mixed metal operations and is compatible with iron, aluminium and difficult-to-machine metals like titanium. The fluid is formulated for a naturally long sump life without additional chemicals, such as biocides or fungicides. Most importantly, MicroSol 585XT also has Airbus approvals.

THE RESULTS

After transitioning to MicroSol 585XT, Ludolph eliminated foam in their machines, and increased productivity by minimising machine cleaning and associated downtime. The fluid also allowed the company to run machines over the weekend without triggering shutdowns, improving output and labour efficiency.

Moreover, machine sumps maintained their optimal coolant concentration for a longer period, which cut down on top offs and overall coolant consumption. Plus, the new fluid delivered an exceptionally long sump life compared to competitors and industry standards, lasting a minimum of **two years**.

Given the coolant's success, the company has now converted all 34 of its machines to MicroSol 585XT.

THE NUMBERS

- Eliminated foam, reducing costly machine downtime and coolant consumption
- Increased sump life to **2 years**
- Enabled **2 days** of automated weekend productivity, improving productivity without additional labour hours