

How Lubristation™ ALEX Standardizes Lubrication Excellence

Most industrial facilities already know that contamination causes premature bearing failures. The harder problem is stopping it at the dispensing point — reliably, every time, regardless of who is doing the job.

Lubretec bv · June 2026

Walk through most manufacturing plants and you will find the same scene at lubrication time: a technician lifts the lid off an open drum, dips a hand pump, fills a can, and carries it to the machine. The oil that arrives has passed through at least three uncontrolled steps. It may have picked up airborne particles from the plant environment. It may have absorbed moisture from a humid night. It may be the wrong viscosity grade, selected from a row of drums that look identical. Nobody knows, because nobody measured. This is not negligence. It is the result of designing a lubrication workflow around informal habit rather than controlled process. The **Lubristation™ ALEX** exists to replace that habit with a standardised, engineered alternative — one that makes the correct lubrication practice the only available practice at the point of use.

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The Problem Is at the Dispensing Point

ISO 4406 defines fluid cleanliness in three particle-count ranges, and the numbers are unforgiving. Bulk lubricant delivered in a standard 200-litre drum typically arrives at an ISO cleanliness code of 18/16/13 or worse — millions of particles per 100 ml across the 4 µm, 6 µm and 14 µm size ranges. A precision rolling-element bearing operating under normal industrial loads requires a target of 16/14/11 or better to achieve its rated service life. The oil in the drum is already too dirty before the technician lifts the pump. Moisture compounds the problem. Water concentrations as low as 100–500 ppm — far below the threshold of visible cloudiness — reduce lubricant film strength, accelerate additive depletion, and promote corrosive wear. Open storage and non-sealed dispensing allow the plant's humidity to enter the oil continuously, especially during the temperature swings that cause condensation inside containers overnight. Cross-contamination is the third failure mode. In facilities using multiple lubricant types, the wrong oil in the wrong machine can be more damaging than dirty oil of the right type. Where dispensing is informal and containers are unlabelled or inconsistently identified, human error is not an exception — it is a statistical certainty over time.

The oil in the drum is already too dirty before the technician lifts the pump. Standardisation must begin at the dispensing point.

Four Functions in One Station

ALEX addresses each failure mode through four integrated functions, all delivered in a single wall-mounted or frame-mounted unit measuring 700 × 580 × 400 mm.

Controlled dispensing — An air-operated piston pump handles oils up to 680 cSt, delivering a consistent, measured volume at each actuation. The pneumatic drive eliminates electrical hazards and requires no motor maintenance. ALEX is compatible with 20 L, 50 L and 200 L drums and IBC containers up to 1,000 L.

Active 10 µm filtration — Every volume of oil dispensed passes through a 10-micron filter element — not as an optional step, but as an integral part of each dispensing cycle. A 3-micron high-efficiency element is available for tighter cleanliness targets. ALEX also supports closed-loop recirculation to decontaminate bulk containers in storage before dispensing begins.

Desiccant air breather — As oil leaves the container, incoming air passes through an industrial desiccant breather before contacting the oil surface. Moisture is removed to below 10% relative humidity. Particulate is filtered from the incoming air stream. The desiccant element provides a visible colour-change saturation indicator — no instruments required.

Colour-coded Lube ID — A ten-colour identification kit is applied consistently to the station, dispensing nozzle, hose and machine service point. Each colour uniquely identifies one lubricant type across the facility. A technician filling a machine tagged Yellow uses the Yellow station and connects the Yellow nozzle. Cross-contamination becomes visually conspicuous before a wrong connection is made.

Monitoring Built In

Two additional features move ALEX beyond a dispensing station into a basic condition monitoring asset. An integrated digital oil consumption meter records cumulative dispensed volume at each station. Gradual consumption increases can indicate a developing seal failure. Sudden spikes indicate a spill or incorrect top-up. Zero consumption at a regularly serviced point flags a missed task. None of these signals are visible without measurement. An M16×1.5 in-line sampling port allows an oil sample to be taken at the dispensing point without interrupting service. Consistent sampling location and method are prerequisites for meaningful oil analysis data. A dedicated port eliminates improvised sampling that contaminates the sample and makes results incomparable over time.

What Standardisation Actually Delivers

The case for standardised lubrication equipment is not primarily about the equipment. It is about what happens to failure rates when contamination control becomes systematic rather than individual. Moving an oil's ISO cleanliness code down by one level — achievable with consistent 10-

micron dispensing filtration — typically extends calculated bearing fatigue life by a factor of 1.5 to 3.0, depending on bearing type and operating conditions. Over the service life of a gearbox or bearing housing, that improvement compounds. Lubricant service intervals extend because the oil stays cleaner. Seal life extends because the oil is not carrying abrasive particles across sealing surfaces. Unplanned failures fall because the conditions that cause them are no longer present. The financial arithmetic follows directly. A single avoided bearing replacement in a production environment — including parts, labour and downtime — routinely recovers a multiple of the cost of the lubrication station that prevented it. Facilities implementing structured lubrication reliability programmes consistently report 30–70% reductions in lubrication-related failures over two to three years. ALEX is the hardware implementation of that programme at the dispensing point.

Lubrication failures are predictable. The contamination pathways that cause them are well-understood. The standards that define acceptable cleanliness targets — ISO 4406, ICML best practice, TPM autonomous maintenance — have existed for decades. What has been absent in most facilities is not knowledge. It is a standardised, repeatable way to apply that knowledge at the point where the oil meets the machine. That is what ALEX does. Not by requiring technicians to follow a more complex procedure, but by making the correct procedure the only available one.

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About Lubrettec

Lubrettec bv, Malle, Belgium, is an independent specialist in lubrication reliability equipment serving more than 1,000 industrial customers across EMEA. lubrettec.com · <mailto:marketing@lubrettec.com>

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