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## **ABB Ability™ Lubcel**

Powerful MES dedicated to lubricants  
formulation and blending





# A plant-wide advantage



You are looking for flexibility to deal with numerous and various grades to produce.



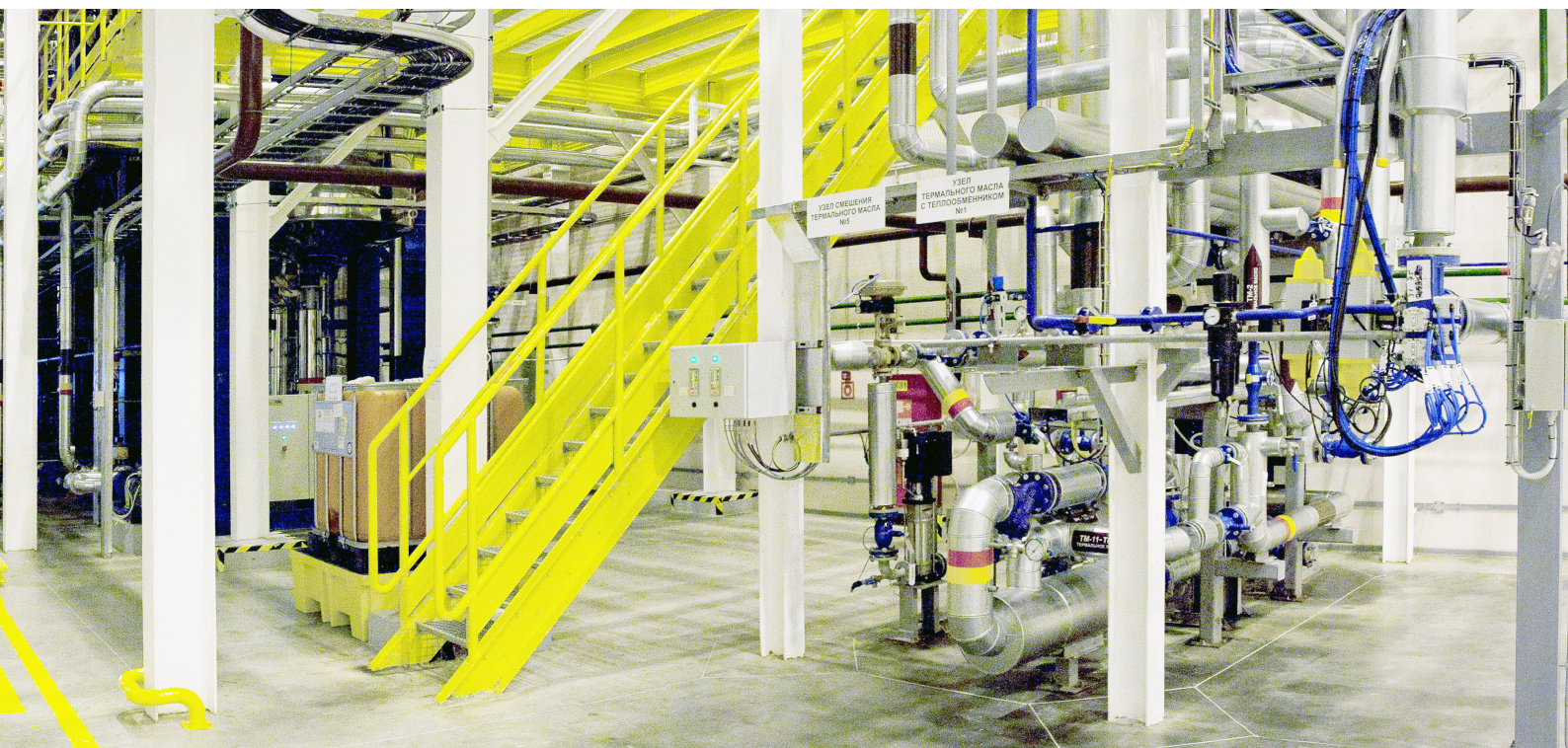
You are looking for rigor and security, while keeping the highest quality standards.



You are aiming at good batches with no corrections and better productivity.

**Lubcel™ was designed to meet these major requirements.**





### Process and know-how

Whatever your blending process:

- ABB (Automatic Batch blender),
- ILB (In Line Blending),
- SMB (Simultaneous Metering Blending),
- Multi-staged blending process including cocktails,
- Hybrid blending systems

Whatever your dosing and transfer equipment:

- Automatic dosing controlled by load cells, PD meters or mass flow meter,
- operator assisted drum emptying system,
- manual introduction of powder and additives,
- pigged lines and collectors,
- piggable manifolds

Lubcel™ will help you to fully master your lube oil manufacturing activities.

Although they are not as automated as the blending activity itself (or even not automated at all), the other plant activities require similar attention to procedure and quality control. Lubcel™ ensures the entire management of raw materials, formula, sub-recipes, recipes, stocks, cleaning and production stages. It matches your expectations and encompasses the control and supervision of all the operations within the plant:

- receipt of materials,
- batch or in-line blending,
- materials movements,
- package filling,
- bulk loading,
- workshop management.



# Increased productivity and quality

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Control room with  
multiscreen user  
interfaces

## A Manufacturing Executing System

Designed to control all the plant activities, Lubcel™ is the Manufacturing Executing System dedicated to formulation and blending of lubricants with the following benefits:

- full consistency in operating the system,
- reduced manpower requirements,
- real-time data collection,
- total and smooth availability of information,
- better coordination between activities,
- productivity improvement and cost reduction (no waiting time, no loss of material, production on-spec first time).

Lubcel™ provides rapid responses to unexpected changes and optimize your short term schedule.

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With Lubcel™ you will achieve the total integration of your production system.

## Process optimisation and flexibility

The blending plants have to deal with a very high number of recipes and permanent changes in products, formulae and components. The high connectivity of Lubcel™ will federate all your systems, existing or future:

- Enterprise Resource Planning (ERP)
- Warehouse Control System
- Laboratory Information Management System
- Tank Gauging system
- Existing DCS or PLC
- Filling/loading systems
- Receipt system



Lubcel™ interface in wagon/truck bulk material loading station

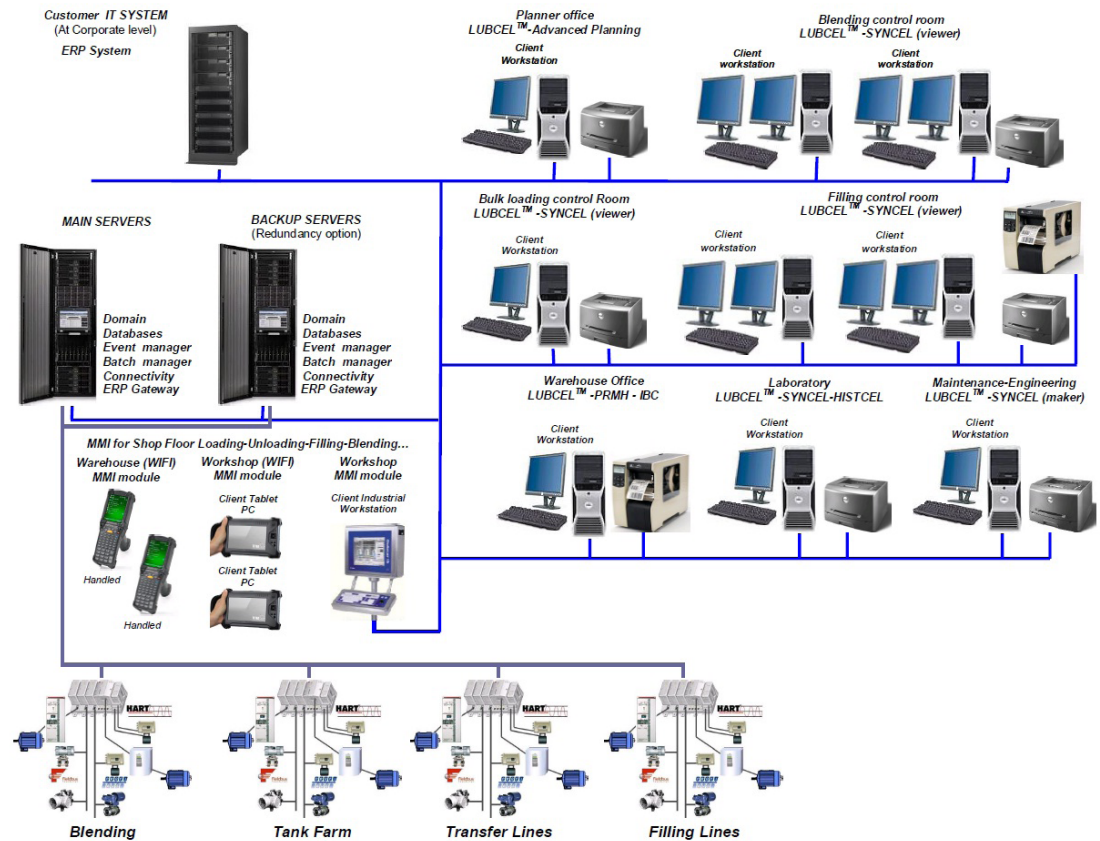
Lubcel™ is the central system managing the whole production by integrating all pieces of equipment and optimizing their use to reach maximal production capacities.

## Easy to operate

With a familiar intuitive windows ergonomics. Lubcel™ makes information available wherever



## System architecture



needed: control room, laboratory, etc. Interfaces are user-friendly and enhance user efficiency.

A simulation mode allows the rehearsal of all types of operations, a quick learning of the system and reduce errors due to a lack of experience.

### Quality

Lubcel™ helps you in your pursuit of total quality control:

- No human errors,
- No Cross contamination,
- Management of batch samples,
- Tank quarantine until Quality Control release,
- Consideration of material properties,
- Data tracking of all operations (consumption/production reports, Key Performance Indicators (KPIs),
- Collection of quality data for laboratory,
- Management of rinsing operations.

### Know-how

Lubcel™ prevents cross-contamination between products in the blending vessels, pigged lines, holding tanks and filling machines.

Lubcel™ fully controls rinse and flush operations on the basis of your own compatibility matrix, so as to minimise slops and product losses.

Lubcel™ viscosity adjustment maintains the blend on-spec even when the properties of base-oil vary.

### Data tracking and historics

Lubcel™ collects the production data for each operations:

- Date and time
- Equipment used
- Actual quantities of components used
- Sample results
- Wastes and flushing quantities

Lubcel™ generates reports upon completion of operations. Historics are archived in a long-term relational database from which statistical analysis are possible for process optimization or queries.

### Analytical tools

Lubcel™ provides powerful analytical tools to identify and analyse the production phases which need productivity improvements. These tools enable to!

- follow-up of production, dosing and waiting times,
- optimise human resources,
- optimise process and maintenance operations,
- increase productivity and quality.

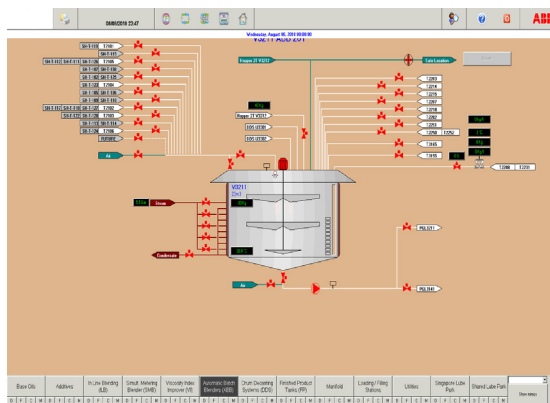


# A cost-effective investment

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Lubcel™ on Man  
Machine Interface  
to control drum  
decanting operation

Lubcel™ with its well-designed process-control, quality control and information-management functions brings the following benefits:

- easy process tuning,
- reduction of stops,
- controlled use of materials and equipment,
- reblend rate virtually zero,
- compliance with strict regulations,
- total customer satisfaction.



Lubcel™ synoptic screen

## Quick and right information

Overview and zoom in displays give fast and complete information to authorized users.

Color graphic mimic screens show the status of the equipment and the instruments values, and highlight the location of any failure as soon as it occurs.

## Syncel graphic module

- SCADA system.
- Animated synoptic screens.
- Management and record of events.
- Integrated electrical and manufacturer documentations.
- Compatible with all OPC servers.

The replay function enables the visualisation of animated synoptics of production modules starting from a date over several months ago.

## An open system

Based on the most recent technologies (Windows, client-server architecture, relational database) and standard software tools, Lubcel™ is associated to interface libraries available for the most common PLC's and DCS's.

Lubcel™ has the capability to exchange data with your enterprise resource planning system, to up-date its data real time, thus optimizing the overall efficiency of the entire production facility.





With CMMS integration, Lubcel™ enables an efficient maintenance of the plant, for instance by organizing preventive maintenance operations in the pump room of a tank farm

### Simple configuration

Configuration tools are part of Lubcel™ system. They enable an easy modification of process parameters as well as of synoptics. For the configuration of circuits as for the creation or modification of synoptics, development licences are included in the Lubcel™ software.

The screenshot displays the Lubcel configuration tool interface. It features a top menu bar with options like 'File', 'Edit', 'View', 'Tools', 'Help', and 'About'. Below the menu is a toolbar with various icons for file operations and editing. The main workspace shows a detailed process flow diagram with numerous tanks, pumps, and pipes. The tanks are labeled with codes such as 'T101', 'T102', 'T103', etc., and the pumps are labeled with codes like 'P101', 'P102', 'P103', etc. The diagram is color-coded, with tanks in green and pipes in blue. The interface also includes a status bar at the bottom showing the current project name and some system information.

Lubcel™ configuration tools enable process modifications

### CMMS integration

With its CMMS (Computerized Maintenance Management System), Lubcel™ enables efficient maintenance activities, by:

- managing maintenance operations (scheduling of work orders, planning of spare parts, service contracts, etc.),
- integrating technical documentations (quick access to instruction manuals and easy diagnosis and corrective actions),

- consequently improving plant availability and reducing downtime risks and costs.

### Main references

- Amoc
- BP Castrol
- Blendcor
- Chevron
- Copec
- Engen
- Enoc
- Exxon Mobil
- Galp
- Gulf Oil
- Idemitsu
- Indian Oil
- Infineum
- Lukoil
- Lubriplate
- Lubrizol
- Q8
- Mogas
- Naftec
- Orlen
- Oryx Energies
- Pertamina
- Petrobras
- Petromin
- Petronas
- Petrosam
- Petroser
- PSO
- RAK Petroleum
- Repsol
- Shell
- Sinopec
- Total







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