



# MES-360

CONTINUOUS IMPROVEMENT SOFTWARE  
FOR THE ENTIRE LAB

## MES-360

# THE SYSTEM FOR SMART OPTICAL MANUFACTURING

---

*Our MES-360 manufacturing execution system provides real-time data for all machines and production processes to optimize productivity and increase competitiveness for every lab.*

### **MES (Manufacturing Execution System)**

MES systems track and document the transformation of raw materials into finished goods for manufacturers. They collect and report real-time data to help optimize plant floor conditions and improve production quality and output. Cooperation between Satisloh and best-in-class partners brings the power of smart manufacturing to the optical industry with MES-360. This powerful tool directly connects machines and quality inspection stations, monitors all processes, and collects data – all displayed in real-time and tracked referencing each job and process step.

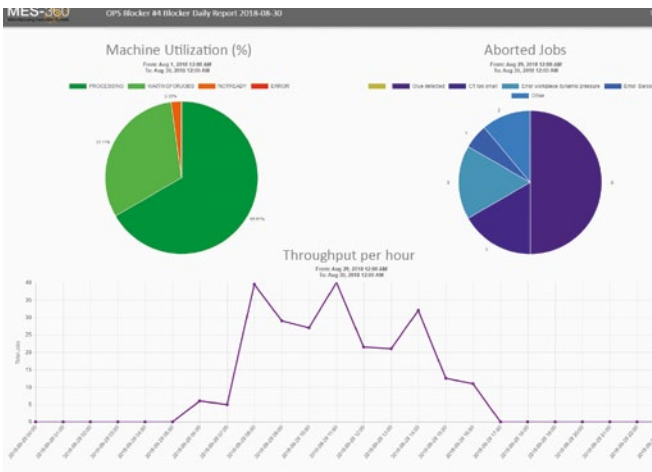
### **Open Platform**

Because most labs use equipment from more than one manufacturer, MES-360 is an open system that connects to Satisloh's and other manufacturers' machines. It interfaces with most LMS and ERP systems and can be easily installed in any software and production environment.

### **Transparency throughout the Lab**

Various MES-360 data can be viewed simultaneously by multiple people on a variety of devices in the lab or off-site via remote monitoring. The system sends alerts to operators so that immediate action can be taken to keep production running efficiently. The alert can escalate to managers when action isn't take in a user-defined time frame.





MES-360 MM machine productivity report

Machine	Action	Due
M001	Check grease levels and change	21:00:00
M002	Check grease levels and change	21:00:00
M003	Check grease level	21:00:00
M004	Check water pressure	21:00:00
M005	Check buffer tank	21:00:00
M006	Check buffer tank	21:00:00
M007	Check tool holder for damage	21:00:00
M008	Wipe the inside of accumulating tray with water	21:00:00
M009	Wipe the inside of the barrel	21:00:00
M010	Check tool and spray gun	21:00:00
M011	Check tool and spray gun	21:00:00
M012	Wipe the inside of accumulating tray with water	21:00:00
M013	Check exterior surface	21:00:00
M014	Check tool and spray gun	21:00:00
M015	Check tool and spray gun	21:00:00
M016	Wipe the inside of accumulating tray with water	21:00:00
M017	Wipe the inside of accumulating tray with water	21:00:00
M018	Check tool and spray gun	21:00:00
M019	Check tool and spray gun	21:00:00
M020	Check tool and spray gun	21:00:00
M021	Check tool and spray gun	21:00:00
M022	Check tool and spray gun	21:00:00
M023	Check tool and spray gun	21:00:00
M024	Check tool and spray gun	21:00:00
M025	Check tool and spray gun	21:00:00
M026	Check tool and spray gun	21:00:00
M027	Check tool and spray gun	21:00:00
M028	Check tool and spray gun	21:00:00
M029	Check tool and spray gun	21:00:00
M030	Check tool and spray gun	21:00:00

Maintenance actions per machine displayed on Maintenance Scheduler App

## MES-360

MES-360 has four modules that monitors machines, tracks breakage and coating batches, and intelligently routes jobs to maximize production efficiency based on real-time data. Use the modules that best fit your lab’s needs.

### Module



#### Features

- Collects machine status data
- Productivity reports with machine utilization details (time producing versus waiting for jobs versus maintenance and other down time) and number of lenses produced
- Tracks:
  - cycle times
  - errors for each machine
  - tool usage
- Provides maintenance prompts for:
  - tool changes
  - machine maintenance
- Graphical lab dashboard displays real-time status of machines and jobs
- E-mail/SMS alerts if machines are not producing due to machine errors or lack of jobs to process

#### Benefits

- Real-time machine status enables immediate troubleshooting when machines are down or not receiving enough work
- Proactive maintenance planning
- Proactive tool management
- Improved machine utilization and uptime
- Improved throughput times
- Improved productivity and reduced waste
- Improved overall equipment effectiveness (OEE)

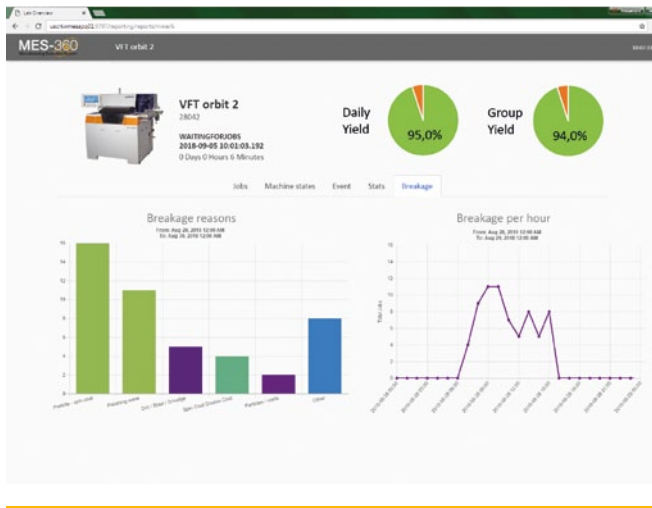
#### Optional Add-on Apps for MES-360 MM Module



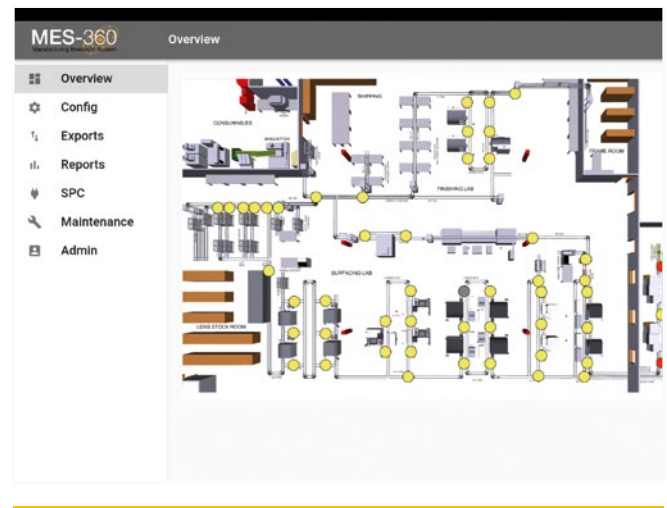
*Maintenance Scheduler: Plan and record maintenance for all machines and peripheral equipment*



*Job Booking: Tracks jobs through manual processing steps*



MES-360 BT machine breakage tracking report



MES-360 CR conveyor decision point dashboard

## Module

BT



Breakage Tracking

### Features

- Tracks breakage by
  - job
  - machine
  - Rx range
  - lens material
- Tracks how tool age impacts breakage
- Email/SMS alerts when breakage occurs
- Interfaces with inspection equipment and cosmetic inspection stations with Manual Inspection App (optional)

### Optional Add-on App for MES-360 BT Module



*Manual Inspection: Log and record cosmetic and other rejects to further correlate defects and troubleshoot them*

### Benefits

- Effectively troubleshoots quality issues
  - tracking problems back to specific machines, lens materials, or Rx's
- React faster to breakage issues with alerts
- Better yields and lower costs

## Module

CR



Conveyor Routing\*

### Features

- Smart control of conveyor systems
- Dynamic job routing based on yield, maintenance, machine status, and machine availability
- Routing based on specific job parameters (e.g. lens material, base curves, Rx, etc.)
- Machine workload balancing
- Graphical lab dashboard shows real-time status of conveyor decision points

### Optional Add-on Apps for MES-360 CR Module



*Tray Check: Monitor tray status on the fly (actual status, next process) with a handheld device*



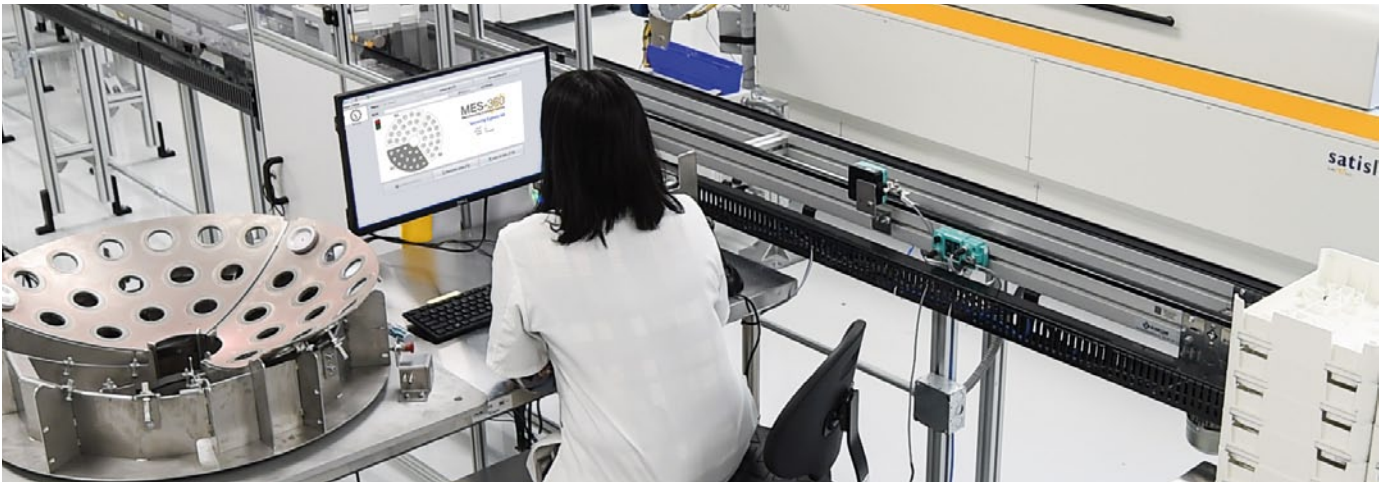
*Conveyor Check: Take even more control of your Integrated Smart Conveyor managing live each decision point and key hardware element (under development)*

### Benefits

- Maximum utilization of available equipment
- Improved flexibility and productivity
- Faster throughput and delivery times
- Workflow optimization reduces work-in-progress and conveyor traffic
- Lower tool costs and faster processing times because jobs are routed to specific machines that are optimized for them

\* only with ISC (integrated Smart Conveyor)





MES-360 CB job tracking through AR coating

## Module



### Features

- Batch building of jobs based on customizable sorting criteria
- Unique batch ID ensures complete tracking through AR coating
- Tracks breakage per batch and per machine
- Error logs, process logs, and maintenance logs for coating machines
- Tracks job-related coating data
- Graphical lab dashboard shows real-time machine status
- E-mail/SMS alerts

### Benefits

- Full traceability and transparency of coating lab allowing troubleshooting and continuous improvement
- Improves coating yields
- Increases coating lab productivity

### Optional Add-on Apps for MES-360 CB Module



*Express AR: Tracks Express AR jobs and optimizes loading for automated sectoring and de-sectoring*



Various MES-360 data can be viewed on a variety of devices in the lab or off-site via remote monitoring.

## TECHNICAL INFORMATION

### Server requirements:

- Physical or virtual server
- Min. 2.5 GHz, 8 core CPU
- Min. 16 GB RAM
- Min. 500 GB free space on hard drive
- Min. 1 Gbit network
- Windows server 2012
- 32/64 bit
- Cloud server available

### Client requirements:

- PC, ThinClient, TabletPC with WIN OS
- Min. 2 GHz dual-core CPU
- Min. 4 GB RAM
- MS WIN 7/8/10 32/64 bit

### Options:

- Turnkey-hardware e.g. industrial PC with barcode-/ RFID-scanner and cabinet
- Barcode-/ RFID-scanner
- Handheld Device
- Tablet
- Tray localization with UWB
- Customization and individualization

## CONTACT

**Satisloh AG**  
 Neuhofstrasse 12  
 CH- 6340 Baar  
 Switzerland  
 Phone: +41 (0) 41766 16 16  
 Fax: +41 (0) 41766 16 10  
 Email: info@satisloh.com

www.satisloh.com

### North America

**Phone:** +1 262 255 6001  
**Email:** info.usa@satisloh.com

### Europe

**Phone:** +49 (0) 6441 912 0  
**Email:** info.de@satisloh.com

### Asia

**Phone:** +852 27 56 7711  
**Email:** info.asia@satisloh.com

### Latin America

**Phone:** +55 (24) 2233 8600  
**Email:** info.latam@satisloh.com

### Service

**Phone:** +1 262 255 6001  
**Email:** service.usa@satisloh.com

**satisloh®**