



The iOPS® System.



Optimize HPP production for better equipment control and operation with JBT-Avure's iOPS®.

JBT-Avure iOPS® is Overall Equipment Effectiveness (OEE) software for improved HPP factory utilization, visibility and control. With iOPS® manufacturers can capture more data, analyze it faster, and act on it immediately. Get access to important production effectiveness data in real time to locate bottlenecks and root causes through production and machine utilization reports.

iOPS collects data 24/7 and uploads to a military grade secure cloud service. From connection to transmission and storage, all data is fully encrypted with two-factor authentication. By monitoring OEE & downtime, manufacturers can pinpoint failures within the HPP production environment. The data can then be analyzed and viewed from different angles with user friendly dashboards. The insights gained help to formulate improvement measures in your production line.

IOPS® DETAIL DASHBOARDS

OEE RATE



A simple yet powerful metric to eliminate equipment losses and waste. See effectiveness on a daily, weekly or monthly level and compare where you are mainly spending that time.

$$\text{OEE Rate} = \text{Quality Rate} * \text{Availability Rate} * \text{Productivity Rate}$$

AVAILABILITY RATE



Ensure cycles are produced as planned, keeping the machine up and running, minimizing time losses. Determine how machine and operator time is spent, whether in production or waiting.

$$\text{Availability Rate} = \text{Cycle Time} / (\text{Cycle Time} + \text{Out of Cycle Time})$$

PRODUCTIVITY RATE



Monitor number of cycles per hour to achieve maximum throughput. Average and overall batch times are shown as well as a breakdown of the time percentage distribution. View trends day over day, week over week, or month over month. Compare overall time to the average.

$$\text{Productivity Rate} = \text{Sum minimum cycle time} / (\text{Sum overall cycle time} - \text{Hold-time})$$

QUALITY RATE



Safeguard quality with no rework, no defects, no waste. The graphs are color coded to pinpoint alarms quickly. Analyze batch quality, sort on successful or failed batches, zoom for success or alarm details.

$$\text{Quality Rate} = \text{Total Successful Batches} / \text{Total Batches}$$

Features

- ✓ Analytic status reports
- ✓ Real time trending available
- ✓ Configurable alarms and triggers
- ✓ Powerful drill-down reporting
- ✓ Operational benchmarking to compare performance over time

The main iOPS® dashboard contains high level key performance indicator statistics for measuring OEE, Availability, Productivity and more. Click on any of the information buttons on the main dashboard to drill down to detailed granular KPI data. All dashboards generate reports and filter by date ranges, with drill down by predefined time periods or zoom on month, week and day. Detailed, color coded-graphs and charts enable the maintenance team to quickly view and analyze data and formulate improvement measures in the production line. Additional filters include the ability to sort by lot, batch, recipe, alarm, operator and customer.

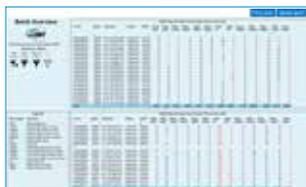
Benefits

- ✓ Higher productivity at lower cost
- ✓ Initiate work orders for maintenance
- ✓ Central location of data in a single dashboard
- ✓ Predefined set of managerial reporting available
- ✓ Analysis on operational processes



iOPS® DETAIL DASHBOARDS

BATCH OVERVIEW



By comparing nominal times with actual, iOPS can provide the user a quick overview on where opportunities are to reduce time.

ALARMS



The Alarm tabs allow maintenance to analyze warnings and stops, including the severity, frequency, duration, and steps per alarm. Compare the time impact of these alarms with a single click. Drill through for more details on that batch or alarm.

WAITING TIME



Analyzing and omitting wait time can speed up throughput. By comparing nominal times with actual, iOPS can quickly provide an overview of opportunities to reduce wait time.

FAILED/SUCCESSFUL BATCHES



If iOPS detects ineffectiveness in the system, a voice message can be sent via text, email, voice, or customized reporting. Compare failed and successful batches on a daily, weekly or monthly basis. Filter by customer, product etc. to find the source of the issue.

By monitoring OEE & downtime, manufacturers can pinpoint failures within the HPP production environment. The data can then be analyzed and viewed from different angles with user friendly dashboards.

Customer quote:

Willem van de Ven

Pascal Processing
Site Manager

"The dashboard enables you to have the right information quickly whereas before we had to go back and revise the old data we had on the machine," he says. "It gives us a good picture of how efficiently we are working with a machine and how efficient individual operators are. We found for example that we were losing time by manually filling machines and by changing that we have been able to save 45 minutes per week between four-five people increasing productivity with almost 4 hours per week."



COUNT ON JBT TO HELP PROTECT YOUR INVESTMENT

JBT's greatest value in PRoCARE® services comes from preventing unexpected costs through smart, purposeful, and timely maintenance based on unmatched knowledge and expertise. PRoCARE service packages are offered as a maintenance agreement in various service levels, depending on your production and cost management requirements.



JBT LIQUID FOODS

FRESH PRODUCE TECHNOLOGIES | FRESH-CUT, ROBOTICS, STEAMING | FRUIT AND VEGETABLE PROCESSING | SECONDARY PROCESSING | ASEPTIC SYSTEMS | FILLING AND CLOSING | IN-CONTAINER STERILIZING | TRAY SEALING | HIGH-PRESSURE PROCESSING | POWDER PROCESSING | TUNA PROCESSING

OUR BRANDS



JBT PROTEIN PROCESSING

SECONDARY

BRINE PREPARATION | HOMOGENIZATION | INJECTION
INJECTION & RETURN MILLING | MACERATION | MASSAGING
TENDERIZATION | TVI MEAT SLICING | AUTOMATED TRAY LOADING

FURTHER

WEIGHING | PORTIONING/TRIMMING | COATING | FRYING & FILTRATION | PROOFING
COOKING | COOLING | CHILLING | FREEZING | REFRIGERATION | CLIPPING & PACKAGING
SOLUTIONS | X-RAY TECHNOLOGY | TRAY SEALING | HIGH-PRESSURE PROCESSING

OUR BRANDS



ALSO REPRESENTING



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