

8. Reporting

Hardware manual

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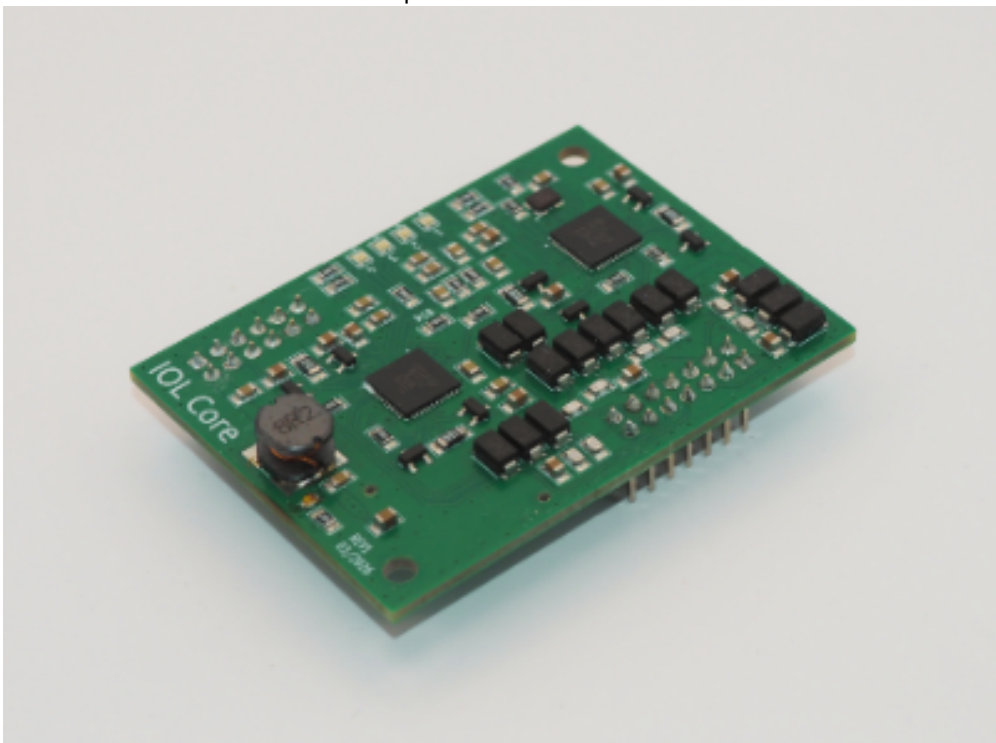


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8. Reporting

Pinetek Insight generates PDF reports from your production data, automatically at run end, on a schedule, or on demand, and can send them by e-mail. Report management requires the **Admin** role and is found under *System → Reports*.



E-mail dispatch requires configured SMTP settings ([chapter 9.4](#)). Reports are generated in the system language ([chapter 9.1](#)).

8.1 Concepts

Element	Purpose
Template	A report definition: type, trigger, filters, recipients and an ordered list of sections
Block	A reusable content element (HTML). Types: <i>Header, Footer, Section</i>
Common Layout	The shared header/footer used by all templates unless overridden

A template is assembled from blocks; generated PDFs are archived per template.

8.2 Report templates

Templates

ALLACTIVEINACTIVE

+ NEW TEMPLATE

Name	Type	Trigger	Recipients	Send Email	Active	Last Sent	Actions
Daily OEE Report system	Period	Manual	0	No		—	
Production Run Report system	Run	Run End	0	No		—	
Weekly OEE Report system	Period	Manual	0	No		—	

Items per page:

10

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System → Reports → Templates lists all templates with type, trigger, recipients, e-mail flag, active flag and last-sent time. From the list you can **Generate / Download PDF**, send a **test e-mail**, edit, duplicate, activate/deactivate or delete a template (deleting also removes its archived PDF files). Templates marked **system** are predefined and cannot be edited or deleted.

There are two report types:

- **Run Report:** covers a single production run. Generated at run end or on demand (you pick the run; defaults to the most recent completed run).
- **Period Report:** covers a date range. Generated on schedule or on demand (you pick the range).

8.3 Creating and editing a template (Report Builder)

← Edit Report

PREVIEW
SAVE
SAVE & EXIT

REPORT SETTINGS
SECTIONS

General

Report Type

RUN REPORT
PERIOD REPORT

Covers a date range. Scheduled automatically or generated on demand.

Report Name *

Copy of Daily OEE Report

Description

OEE summary for a single day. Configure the trigger time and recipients, then activate.

☒ Active
☐ Send Email

Trigger

☒ Manual (on demand only)
☐ Scheduled (automatic)

Filters (optional)

Narrow this report to a specific product or program. All sections (OEE summary, charts, run table) will only include matching data.

Product

Program

Recipients

Select users

New Report opens the Report Builder:

- **General:** name, description, report type, active flag.
- **Trigger:**
 - **Manual ****(on demand only)**, * **Triggered at Run End:** generated automatically when a production run is stopped (run reports), or
 - **Scheduled (automatic):** for period reports, choose the report period (rolling window: daily / weekly 7 days / monthly 30 days / quarterly 90 days), the run-at time (HH:MM) and, for weekly/monthly schedules, the day of week / day of month.
- **Filters (optional):** narrow the report to a specific product or program; all sections (OEE summary, charts, run table) then include only matching data.
- **Recipients:** select users; enable Send Email to dispatch the PDF automatically.
- **Header & Footer:** by default the shared Common Layout is used (). Enable Custom header/footer to override for this template only; you can load the common layout as a starting point.
- **Sections:** pick a block from the library and Add it; reorder with Move up / Move down. Click a section to edit its title and HTML content directly in the built-in editor; Save as Block stores an edited section back to the library for reuse.
- **Generate Preview:** renders the report with chosen parameters (run or date range) before saving.

Edit Report
PREVIEW
SAVE
SAVE & EXIT

REPORT SETTINGS
SECTIONS

Sections
Pick block: AI Summary
+ ADD

Report Parameters
Production Statistics
Run Detail Table
Stop Reasons
Pareto Chart

Section title: Report Parameters
SAVE AS BLOCK

```

1 <!-- Report Parameters -->
2 <table class="filter-meta">
3   <tbody>
4     {% if runs | length == 1 %}
5     {% set r = runs[0] %}
6     <tr><td>Product</td><td><strong>{{ r.product }}</strong></td></tr>
7     <tr><td>Program</td><td>{{ r.program }}</td></tr>
8     <tr><td>Start</td><td>{{ r.start }}</td></tr>
9     <tr><td>End</td><td>{{ r.end }}</td></tr>
10    <tr><td>Target / Actual</td><td>{{ r.target_qty }} / {{ r.actual_qty }}</td></tr>
11    <tr><td>OEE</td><td><strong>{{ r.oeo | round(1) }}%</strong></td></tr>
12    {% elif oee_summary %}
13    <tr><td>Period</td><td><strong>{{ oee_summary.date_from }} &ndash; {{ oee_summary.date_to }}</strong></td></tr>
14    <tr><td>Runs</td><td>{{ oee_summary.run_count }}</td></tr>
15    {% if filter_product_name %}
16    <tr><td>Product filter</td><td>{{ filter_product_name }}</td></tr>{% endif %}
17    <tr><td>Program filter</td><td>{{ filter_program_code }}</td></tr>{% endif %}
18    <tr><td>Avg OEE</td><td><strong>{{ oee_summary.oeo | round(1) }}%</strong></td></tr>
19    {% endif %}
20    <tr><td>Generated</td><td>{{ generated_at }}</td></tr>
21  </tbody>
22 </table>

```

8.4 Blocks library

Report Blocks		+ NEW BLOCK	
Name	Description		Actions
AI Summary	AI-generated interpretive summary – insights and implications, not raw numbers (requires MISTRAL_API_KEY).	predefined	   
OEE Daily Trend	Bar + line chart of OEE components aggregated per day (weighted via oee_metrics).	predefined	   
OEE Summary	Four KPI cards: Availability, Performance, Quality, OEE.	predefined	   
OEE Trend Chart	Embedded base64 PNG of the OEE trend chart.	predefined	   
OEE Weekly Trend	Bar + line chart of OEE components aggregated per week (weighted via oee_metrics).	predefined	   
Page Break	CSS page break for PDF pagination.	predefined	   
Pareto Chart	Embedded base64 PNG of the downtime Pareto chart.	predefined	   
Production Statistics	KPI cards for OEE/A/P/Q + 2-column table for quantities and times.	predefined	   
Production Summary	Per-product table with totals row.	predefined	   
Report Parameters	Filter info: product, program, date range, run count.	predefined	   

Items per page: 10
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< < > >

System → *Reports* → *Blocks* manages the reusable content elements. Each block has a name, description, type (*Header*, *Footer*, *Section*) and HTML content with Jinja2 template variables (8.6).

- **Predefined blocks** (OEE summary, run table, downtime table, charts, standard header/footer, ...) are system-owned: they can be viewed and duplicated, but not edited or deleted. To customise one, duplicate it and edit the copy.
- **Custom blocks** can be created, edited, previewed, duplicated and deleted freely.

Edit Block

Name

Pareto Chart (copy)

Description (optional)

Embedded base64 PNG of the downtime F

HTML Content (Jinja2)

```

1 <!-- Pareto Chart -->
2 {% if charts.downtime_pareto %}
3 
4 {% endif %}

```

CANCEL

SAVE

8.5 Common Layout

Common Report Layout

SAVE

The **header** is a full HTML document shell (DOCTYPE, <head>, CSS, visible page header). The **footer** contains the visible footer and closes the document (</body></html>). Both support Jinja2 template variables (template, generated_at, recipients, etc.). Report sections are inserted between header and footer.

Header HTML

RESET TO DEFAULT

```

1 <!DOCTYPE html>
2 <html lang="en">
3 <head><meta charset="UTF-8">
4 <style>
5 @page {
6   size: A4; margin: 18mm 15mm;
7   @bottom-center { content: "Page " counter(page) " / " counter(pages);
8     font-size: 9pt; color: #888; font-family: Arial, sans-serif; }
9 }
10 * { font-family: Arial, sans-serif; }
11 body { font-size: 10pt; color: #222; margin: 0; }
12 h1 { font-size: 16pt; color: #1E3A5F; margin: 6px 0 2px; }
13 h2 { font-size: 12pt; color: #1E3A5F; margin-top: 16px; margin-bottom: 5px; }
14 | border-bottom: 1px solid #000; padding-bottom: 3px; }
15 .subtitle { font-size: 9pt; color: #666; margin-bottom: 16px; }

```

Footer HTML

RESET TO DEFAULT

```

1 <div style="margin-top:24px; font-size:8pt; font-family:Arial,sans-serif; color:#aaa;
  border-top:1px solid #eee; padding-top:6px;">
2   {% if recipients %}Recipients: {% for r in recipients %}{{ r.name }}{% if not loop.
  last %}, {% endif %}{% endfor %}{% endif %}
3 </div>
4 </body>
5 </html>

```

System → Reports → Layout defines the shared header and footer HTML used by all templates that do not override it. **Edit**, **Preview**, or **Reset to default**. A table of the available template variables is shown in the editor.



Typical use: put your company logo and report title in the common header once; every report uses it automatically.

8.6 Template variables

Block HTML is rendered with Jinja2. The most important context variables:

Variable	Content
runs	List of the production runs in scope, with per-run OEE fields

Variable	Content
runs_by_product / runs_by_program	The same data grouped and aggregated per product / program
oeo_summary	Weighted OEE totals for the whole scope (availability, performance, quality, OEE, quantities)
reasons	Downtime reasons with durations
charts	Pre-rendered charts (embedded images)
generated_at	Generation timestamp
filter_*	The active filters (period, product, program)
t	Translation dictionary: write {{ t.oee }}, {{ t.availability }} etc. so one block renders correctly in any report language

The full, current variable list is displayed inside the Report Builder and the Layout editor (**Available Template Variables**).

8.7 Generating, testing and dispatch

- **On demand:** *Templates* list → **Generate / Download PDF**; pick the run (run report) or date range and optional filters (period report).
- **Test e-mail:** sends a generated report to a single address of your choice; use this to verify SMTP and layout before enabling automatic dispatch.
- **Run end:** active run-end templates are offered for dispatch in the Run Complete dialog ([chapter 5.2.4](#)).
- **Scheduled:** active scheduled templates are generated and e-mailed automatically at the configured time; *Last Sent* in the list shows the most recent dispatch.