ECISS

Egyptian Company for Industrial & Scientific Services

TECHNICAL DETAILS

Everything the dashboard does, in detail.

A walk-through of capture, statistics, charts, reporting and access control in the ECISS Quality Control Dashboard for the AdvanceLab AL-3300th.

AT A GLANCE

Instrument	AdvanceLab AL-3300th bottle wall-thickness gauge
Connection	USB-serial adapter (FTDI, Prolific, CH340, CP210x), port auto-detected
Locations	Base, Base Feet, Heel, Label, Shoulder
Versions	Routine (5 readings per mold) and R&D (20 readings per mold: 4 angles × 5 locations)
Statistics	Count, mean, standard deviation, Cp, Cpk and yield, per location
Outputs	PDF report, CSV, Excel workbook, session ZIP
Platform	Windows desktop application, licensed per PC
Access	Four user roles with a full audit log

INSIDE

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Capture and the two versions

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The live log

From the gauge to the screen, one reading at a time.

The dashboard listens to the AL-3300th over its USB-serial link and places every reading in the right mold and the right location. Operators never type a thickness by hand.

STEP 1

Connect

Plug in the USB-serial adapter. The port is detected automatically and can be chosen from the sidebar.

STEP 2

Measure

Each reading fills the next free position, and the bottle guide shows the next point to take.

STEP 3

Review

Statistics and charts update as readings arrive, so out-of-limit locations show up while the run is still going.

TWO VERSIONS, ONE APPLICATION

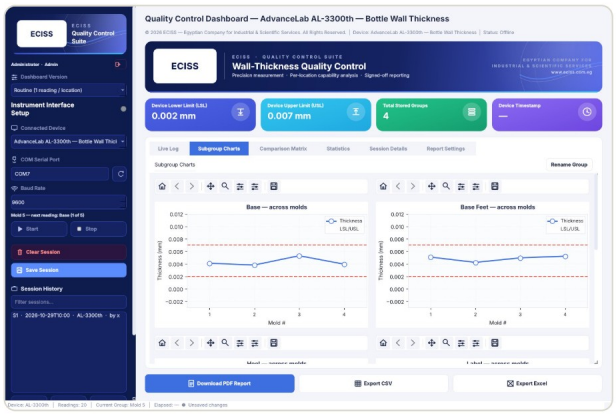
Routine

Fast production checks. Five readings per mold, one per location.

Readings: 5 per mold

Locations: Base, Base Feet, Heel, Label, Shoulder

Charts: one per location, comparing the same location across all molds



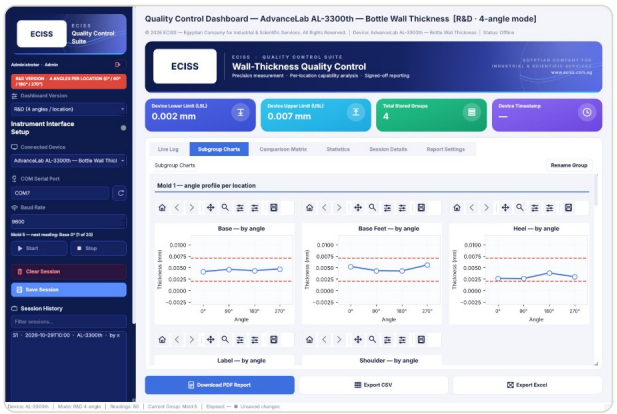
R&D

Full wall-thickness mapping. Four angles at every location of every mold.

Readings: 20 per mold (4 angles × 5 locations)

Angles: 0°, 90°, 180°, 270°

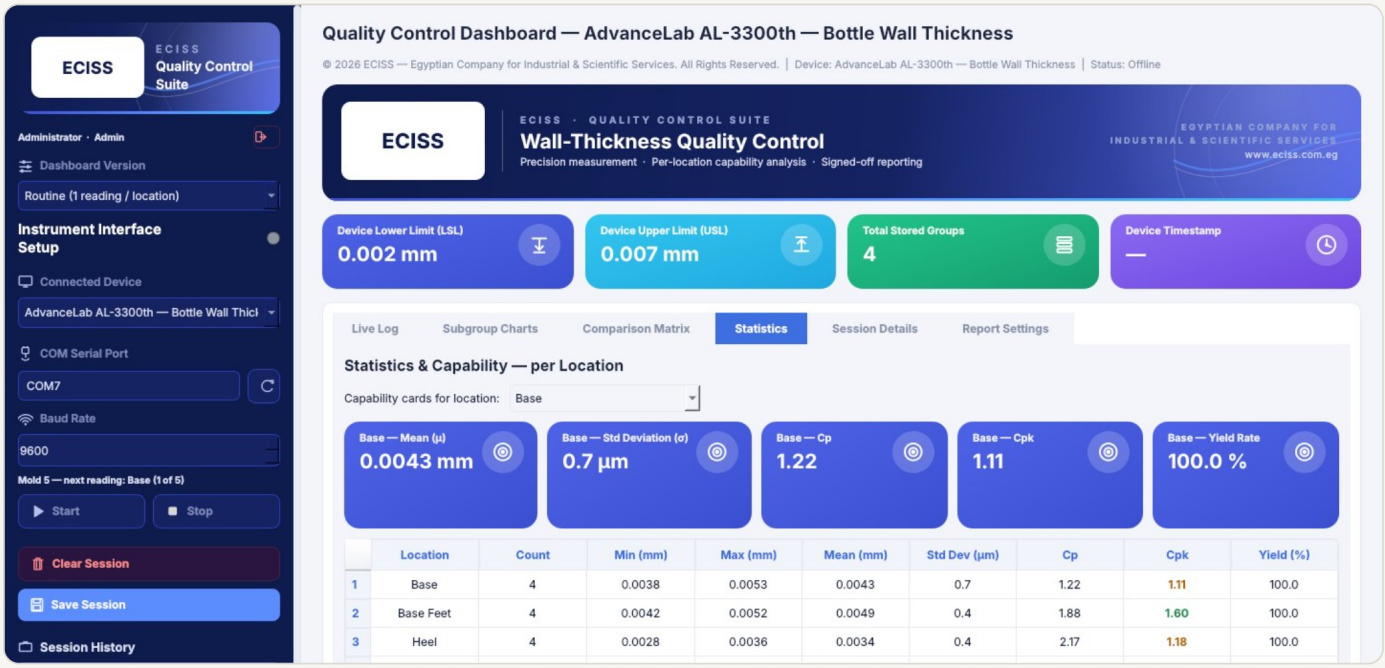
Charts: per mold, one per location, comparing the four angles



WHY PER LOCATION A Base reading and a Shoulder reading are different features with different targets. Comparing them in one statistic hides real problems, so every figure in the dashboard is kept per location.

Numbers that mean something, location by location.

The Statistics tab gives one row per location, calculated across every mold in the session. The same table is carried into the PDF, CSV and Excel exports.



Statistics tab. Screenshot uses demonstration data.

COLUMNS AND FORMULAS

Count	Number of readings for the location
Min / Max	Lowest and highest reading at the location
Mean	Average thickness
Std Dev	Sample standard deviation (n − 1), in µm
Cp	`(USL − LSL) / 6σ`
Cpk	`min(USL − μ, μ − LSL) / 3σ`
Yield (%)	Share of readings inside LSL and USL

CHARTS

Routine. One subgroup chart for each location. Every mold is a point on it, so drift from mold to mold is visible at a glance.

R&D. For each mold, one chart per location comparing the four angles, which exposes uneven wall distribution around the bottle.

Limits. LSL and USL are drawn on every chart, and out-of-limit readings are flagged in the data log.

Sessions

Work is kept per session and can be cleared, which asks for confirmation.

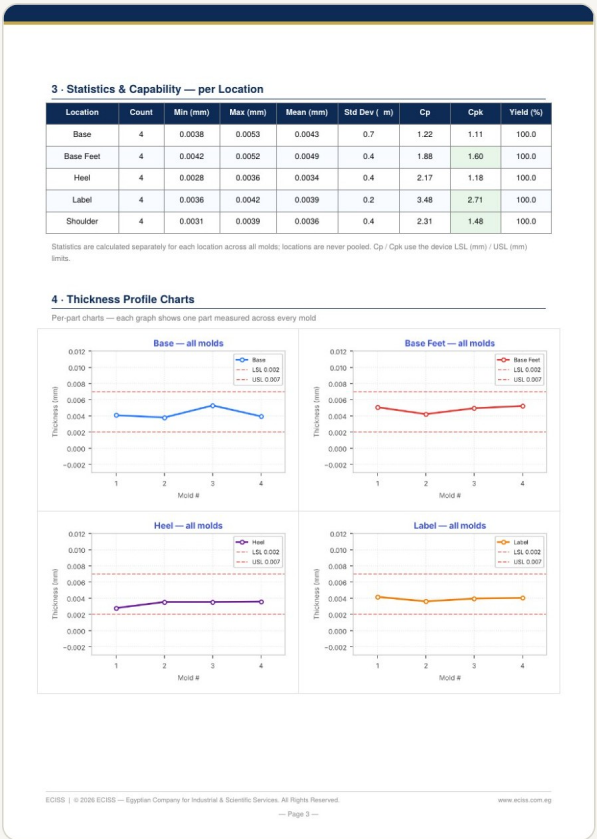
Data log

Every reading with time, number, subgroup, location, device timestamp and status.

Comparative matrix

All groups side by side in one view.

Reports you can sign off. Access you can account for.



3 · Statistics & Capability — per Location

Location	Count	Min (mm)	Max (mm)	Mean (mm)	Std Dev (m)	Cp	Cpk	Yield (%)
Base	4	0.0038	0.0053	0.0043	0.7	1.22	1.11	100.0
Base Feet	4	0.0042	0.0052	0.0049	0.4	1.88	1.60	100.0
Heel	4	0.0028	0.0036	0.0034	0.4	2.17	1.18	100.0
Label	4	0.0036	0.0042	0.0039	0.2	3.48	2.71	100.0
Shoulder	4	0.0031	0.0039	0.0036	0.4	2.31	1.48	100.0

Statistics are calculated separately for each location across all molds; locations are never pooled. Cp / Cpk use the device LSL (mm) / USL (mm) limits.

4 · Thickness Profile Charts

Per-part charts — each graph shows one part measured across every mold

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REPORTING

PDF report. Multi-page report with cover, per-location statistics and charts, available to every role.

CSV and Excel. Raw readings and the per-location statistics table for further analysis.

Sign-off. A Reviewer can approve a report and is named as approver on the PDF.

Identity. An Admin sets the company name, logo, website and other details printed on the cover.

ROLES AND PERMISSIONS

Action	Operator	R&D	Reviewer	Admin
Start and stop capture, save sessions	**Yes**	**Yes**	**Yes**	**Yes**
Export CSV, Excel and PDF	**Yes**	**Yes**	**Yes**	**Yes**
Dashboard opens in the 4-angle R&D	No	**Yes**	No	No

Audit log

Clicks and outcomes are recorded, including cancelled and failed actions such as Clear Session or Delete.

Secure sign-in

Passwords are stored as PBKDF2-HMAC-SHA256 hashes, never in plain text.

Licence and backup

Each licence is locked to one PC. Admins can back up the database on demand.

CONTACT ECISS

Ask for a demonstration on your own line.

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Every reading in a row. The next point on the bottle.

The Live Log is the first tab. Each reading appears as a new row the moment it arrives, and the bottle guide beside the table shows which point to measure next.



Live Log with the bottle guide in the Routine version. Screenshot uses demonstration data.

WHAT EACH ROW RECORDS

Reading Time	When the dashboard received the reading	**Reading #**	Running number within the session
Subgroup	The mold the reading belongs to	**Thickness**	Wall thickness in mm
Location	Base, Base Feet, Heel, Label or Shoulder, with the angle in R&D	**Device Timestamp**	The gauge's own clock, kept alongside the PC time
Status	PASS or FAIL against the gauge's lower and upper limits (LSL and USL)		

Bottle guide

A bottle figure with numbered points. The next point pulses red and finished points turn green. A progress bar reads, for example, "Mold 5, 3 / 5 readings". In R&D a dial shows the angle to read next (0, 90, 180 or 270°).

Session history

Save a session and reopen it later from the sidebar. The log, statistics and charts are restored exactly as they were.

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