![Valmet FORWARD logo]

Properly tune and stabilize your plant

Valmet PID Loop Optimizer

Eliminate the guesswork and stabilize your plant

Diagnose instrument and valve issues

Valmet PID Loop Optimizer shows you how to reduce control valve wear, extending valve life and service time.

Process models you can trust

To get good tuning, you need good process models. PID Loop Optimizer automatically finds the best model to fit your data.

Special tools for special loops

- Level wizard
- pH characterizer
- Cascade loops
- Feedforward
- Coordinated tuning

PID Loop Optimizer goes far beyond simple PID Tuning. It helps you to address all aspects of PID loop performance.

Detailed reports for control loops

PID Loop Optimizer automatically generates detailed reports for control loops.

Resolve loop oscillations

Stabilize the plant by finding the root cause of oscillations. Tools include:

- Power spectrum analysis
- Cross-correlation

Support for advanced control

PID Loop Optimizer supports your advanced control needs with:

- Frequency domain models
- Generates DMC vectors
- Selects set point filters
- Integrates with Valmet PlantTriage™

Version comparison

Eliminate guesswork
in controller tuning and loop optimization

Resolve problems
with sensors, filtering, tuning and control valves

Feature	Standard	Standard plus	Advanced
Support for all single loop controllers and PLCs.	Yes	Yes	Yes
Support for all DCS controllers.			Yes
PID Tuning optimized for load upsets or set point changes (from data collected in auto or manual).	Yes	Yes	Yes
Traditional Lambda tuning rules (including Lambda for level).		Yes	Yes
Safety factor: Adjust the safety factor for the trade-off between response and robustness you want.	Yes	Yes	Yes
Performance increase: Tells you how much better the response will be with the new settings.	Yes	Yes	Yes
Process modeling, up to second order with dead time, including integrators (from open or closed loop data).	Yes	Yes	Yes
Characterizer—Optimal performance at all production rates. Linearizes your process for optimal performance across the entire range.		Yes	Yes
Universal linearizer for pH loops. pH control with little or no cycling.		Yes	Yes
Advanced reporting. Customize your report templates in MS Word.		Yes	Yes
Setup wizards for easy OPC connection to live loop data on many PLC's.	Yes	Yes	Yes
Setup wizards for easy OPC connection to live loop data on many DCS's.			Yes
Tune and analyze data from your plant historian (via OPC HDA).	Yes	Yes	Yes
Collect and store live loop data via OPC DA.	Yes	Yes	Yes
Tune and analyze data from ASCII text files.	Yes	Yes	Yes

The advanced package is required for DCS systems and optional for all other controllers

Understand
process dynamics

Stabilize
the plant

Document results
quality

	Feature	Standard	Standard plus	Advanced
Time simulation	Time simulation of setpoint changes or load upsets. What-if analysis of current to new. Try out new values in simulation without affecting the plant.	Yes	Yes	Yes
	Comparison of actual to model. See how close the model fits your time data.		Yes	Yes
	Simulated response to noise. Includes valve wear indexes.		Yes	Yes
Robustness plot	Trade-off between tight tuning and sensitivity to dead time or gain changes.	Yes	Yes	Yes
	Dial in the robustness you want (by dragging the robustness line).		Yes	Yes
Hysteresis analysis	Hysteresis check—automatic. Improve control by reducing hysteresis.	Yes	Yes	Yes
	Hysteresis check—manually choose locations. Gives you more control of hysteresis checking.		Yes	Yes
Drop 'n drag modeling	Graphically zoom in, edit, filter, or average your time data.	Yes	Yes	Yes
	Manually set plot ranges for the time data plot.		Yes	Yes
Valve analysis	Valve wear analysis. Extend valve life. Reduce valve maintenance.		Yes	Yes
	Valve Stiction Wizard: Evaluate stiction problems to reduce cycling.		Yes	Yes
Multi variable analysis	Multi-variable loop analysis: Number of extra trends (to DDE, or OPC). Monitor other variables on the same faceplate or trend.	1	No Limit	No Limit
	Multi-variable loop analysis: Add additional loops to faceplate and trends. Swap loop variables for analysis, modeling, simulation, tuning and interaction evaluation.		Yes	Yes
	Multi-variable loop analysis: Use Relative Response Time to decouple interacting loops and cascades.		Yes	Yes
	Auto and cross correlation. See how loops affect one another.		Yes	Yes

The complete toolkit for control loop optimization

- Simplifies PID tuning
- Connects to your controller via industry-standard OPC
- Develops process models
- Simulates mock tuning
- Diagnoses valve issues
- Produces automated reports
- Corrects for non-linearities
- Compares before and after tuning
- Finds the optimal PV filter

- Tunes for level loops, surge tanks, and other integrating processes
- Responds to set point and loads
- Supports over 700 industrial control algorithms
- Provides many options for tuning methods
- Ensures loop stability using robustness plots

Valmet's professionals around the world work close to our customers and are committed to moving our customers' performance forward – every day.

Valmet