NELES

Expertune PID Loop Optimizer Standard Version

PID Loop Tuning as easy as

1. Select the controller.
2. Specify PID address.
3. Select Autotune.

During AutoTune, answer the questions, and your loop is tuned. Tunes and analyzes loops from data collected in either manual or automatic. During AutoTune, you have total control of the tuning process. **Get data for analysis and tuning from a setpoint change.**

Metso Saves You Time and Increases Your Profitability

- Optimizes your control loops.
- Reduces tuning time from hours to minutes per loop.
- Improves product quality.
- Reduces waste and rework.
- Saves energy.

It's All In The Faceplate

When working with the software, click on the faceplate and you are on-line, live. From the faceplate, change setpoint, output, mode and download tunings.

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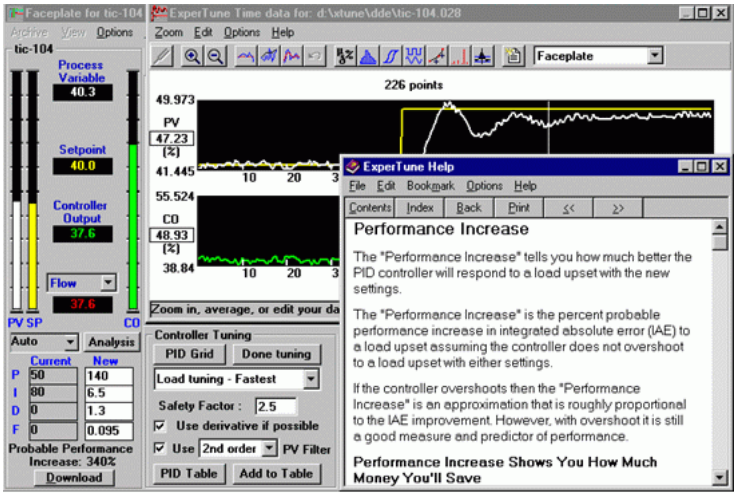


Performance Increase
Tells you how much better the response will be with the new settings.

Control Performance

Choose from: .

- •Optimal: minimum absolute error to step load—recommended
- •Fast: quarter amplitude damping (approximates Ziegler Nichols)
- •Slow: 10% overshoot
- •Setpoint (Lambda) PID tuning.

Test different tunings in simulation before you download to find the best one for your process.

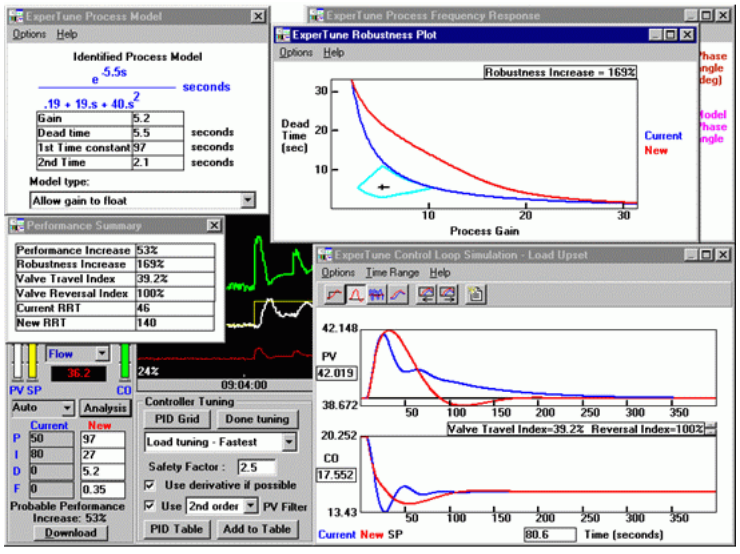
Safety Factor
Adjust the safety factor for the response and robustness you want.
There is always a trade-off between fast tuning and sensitivity to changing process conditions (changing gain and dead time). The fastest tuning with the lowest safety factor is also the most sensitive to a changing process. Conversely, the slowest tuning with the highest safety factor is the least sensitive or more robust. .

PID loop optimizer quickly lets you compare simulated time and robustness plots, off-line, before you download PID values. Compares current to new values. .

Advanced Data Editing
Graphically zoom on the data you want to use. Clean up the data by averaging or drag the mouse to change the data on the screen.

Tune Several Loops At Once
View the interactions of a loop on others. Save time tuning and on start-ups by tuning several at the same time.

Powerful, Instant Analysis Windows—See The Response Before You Download Tuning



Advanced Version

•**Simulation**. See the process response off-line before you download tuning. Try “what if”—change a PID parameter and instantly see the new response compared to current tuning. Set point or upset response.

•**Modeling.** Up to second order with dead time. From one chunk of data.

•**Robustness.** Available only with PID loop optimizer, this quickly shows the tradeoff between tuning and stability. Compares current to new.

•**Frequency response.**

The analysis windows are completely automated, integrated and cohesive. Select a different model, change PID selection or enter your own PID values and ExperTune instantly updates all plots.

Improve Control by Reducing Hysteresis

PID loop optimizer automatically analyzes loop data and reports on your valve condition.