



# PID

# inca

# PID Tuner

## ROBUST ADVANCED PID CONTROL

## STAY TUNED

Advanced Process Control (APC) is undoubtedly the control philosophy of the future. However, currently about 95% of all controllers in the process industry are still of the PID-type, simply because they are so easy to implement in a DCS or PLC. Consequently, even if you have installed an APC system like INCA, it will continue to act on the plant via the underlying PID control loops. You therefore need to have your PID loops optimally tuned, which is where INCA PID Tuner comes in.

**TESTED!**  
Increases  
profitability

## 8 REASONS TO FINE-TUNE YOUR PID LOOPS

1. **Increase plant stability and safety:** INCA PID Tuner offers you stable operation in all operating points, whether your plant is operating at full or half load.
2. **Earn more money:** Companies can gain up to 1 million Euros per year simply by fine-tuning their primary loops.
3. **Cut back on downtime:** INCA PID Tuner takes into account the wear of actuators during the fine-tuning process, allowing you to find a balance between plant performance and actuator wear. And less actuator use means less downtime.
4. **Reduce energy consumption:** Oscillating processes consume more energy than stable systems.
5. **Get a grip on raw material consumption:** INCA PID Tuner guarantees better control and reduces use of raw material.
6. **Ensure better quality control:** A better controlled process means less blending. On average 30% of control loops increase short-term variability.
7. **Reduce manual operation:** In many plants about 30% of control loops are manual, so plant operators have to spend too much time keeping the plant running. With INCA PID Tuner, operators focus on optimizing the plant.
8. **Reduce transition times** between operating points.

## PID TUNER, THE BENEFITS ARE OBVIOUS:



### Based on engineering specifications

INCA PID Tuner is one of the few tools that optimizes PID loops based on engineering specifications.

### Not restricted to open loop step response tests

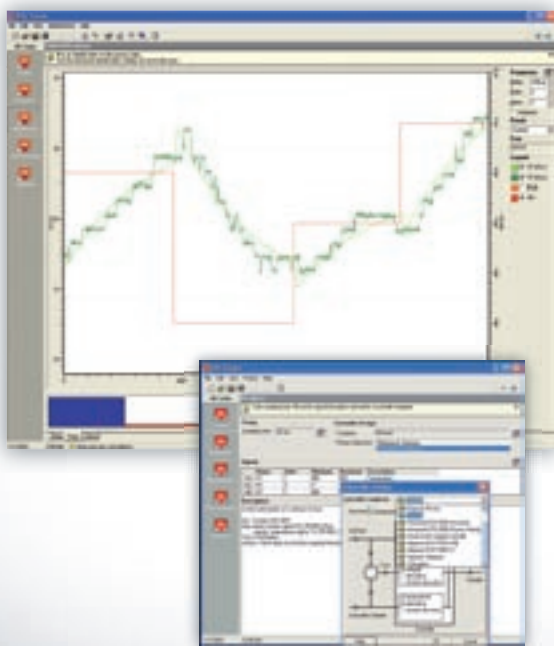
Many different test patterns are possible, even closed loop tests. This means you do not have to take your PID controller in manual to tune the loop.

### Vast library of PID structures

INCA PID Tuner has a library of PID structures of the most frequently used DCS and PLC systems (Siemens, ABB, Honeywell, Emerson, etc.). The parameters calculated by INCA PID Tuner can be directly entered in the DCS or PLC system.

### Multi-functional

INCA PID Tuner imports your process data quickly, reads many file formats and has an OPC interface for real-time monitoring.



## PID TUNER AT WORK

### To ensure an optimally tuned PID loop, the following steps are essential:

- **Process data collection:** INCA PID Tuner contains modules that connect to the most frequently used DCS, PLC and RTDB systems via OPC, enabling it to retrieve historical data stored in files or databases.
- **Data pre-processing:** INCA PID Tuner contains all the functionalities needed to remove spikes, trends or noise.
- **System identification:** INCA PID Tuner's state-of-the-art identification techniques find the dead times, the order of the system and all dynamic parameters.
- **Control design:** As soon as a PID algorithm is selected, INCA PID Tuner calculates the optimal PID settings taking into account the limitations of the DCS/PLC system.
- **Validation:** INCA PID Tuner allows you to compare and analyze the predicted behavior with the real closed loop behavior.