

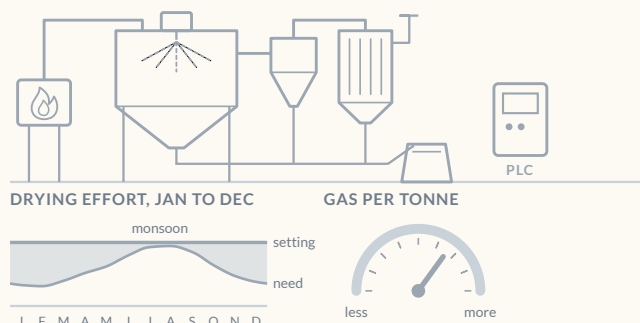
FOR CHEMICAL POWDER DRYERS

More powder. Less gas.

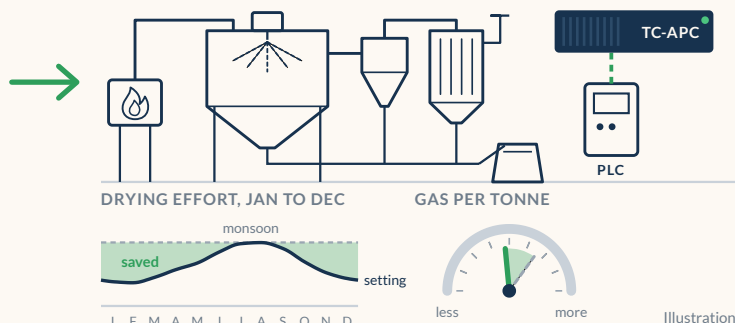
Dried for today's air, not for the monsoon.


Thermo-Cognitive Advanced Process Control (TC-APC): less gas and fan power, and moisture held close to its limit.

YOUR DRYER TODAY



YOUR DRYER WITH TC-APC


The air, the grade and the feed change. Your setpoints don't. With TC-APC, they do.


THE SCIENCE UNDER TC-APC

A dryer's result is decided in the droplet, in seconds.

A powder's moisture, density and particle size are set in the droplet. That's the science TC-APC is built on, and AI makes it sharper. So TC-APC knows how wet your powder is every few seconds, not every hour. Droplet science is the field of our Chief Scientific Advisor, **Prof. Pratim Biswas**, Member, US National Academy of Engineering and former Dean of Engineering, University of Miami; Fuchs Memorial Award 2018, the highest honor in aerosol science.

- Porous particles made by spray drying. *Advanced Materials*, 2007
- A model of particle-laden gas flows with strong heat and mass transfer. *Computers & Fluids*, 2006

- Predicting the size and charge of particles formed as droplets evaporate. *Chemical Engineering Science*, 2021

WHAT TC-APC DOES ON YOUR DRYER

- **Optimizes and adjusts the dryer in real time** for each grade, as the air, the feed and the season change. Gas and fan power come down.
- **More powder sold by weight.** Each lot is held close to its moisture limit, not dried to the safe end of its range, and the costly ingredient is dosed at the lowest ratio that keeps the grade in specification.
- **Less off-spec at start-ups and grade changes.** The changeover is shaped, so less powder is made that is neither one grade nor the other.

YOUR NUMBER, WORKED OUT

₹1.4 to 1.6 crore a year

on one mid-sized gas-fired dryer not yet optimized

Saved: ₹54 to 67 lakh on gas, ₹30 lakh on fan power and ₹20 lakh on the costly ingredient. Gained: ₹40 lakh of powder, with each lot held closer to its moisture limit.

We work out your own number free, from your dryer logs and lab results.

- No gain, no project
- Shadow mode first
- Savings on your own meters

An engineering group of IIT Bombay alumni

Advisors: Prof. Pratim Biswas, Member, US National Academy of Engineering; former Dean of Engineering, University of Miami · Prof. Janat Shah, founding Director, IIM Udaipur

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yielddynamics.in/applications/dryers

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Scan for the dryer page