

ProFoss™

In-line process analysis in the dairy powder industry



ANALYTICS BEYOND MEASURE

ProFoss™ increases profit in dairy powder production with continuous analysis, directly in the process line without bypass.

Streamline your dairy powder production with in-line analysis

Get complete control of your dairy powder production with a continuous flow of real-time results. Installing ProFoss after the secondary drying stage enables you to validate the moisture content and make timely adjustments to meet specified final product quality.

Increase your profits from day one

Profit opportunities are waiting to be found in your dairy powder process whether you are producing skim milk powder, whole milk powder, whey powder, WPC, MPC or caseinate powder. For instance, more accurate control of moisture in the final dairy powder provides increased yield. At the same time, improved product consistency can provide new pricing options, reduce rework and help to optimise the mass-balance.

Improve your business with accurate control

The continuous flow of results provides full traceability, alerts if products are out of spec and enables you to deliver a consistent high product quality that meets the demands of your customers.

Sample types

Skim milk powder, whole milk powder, whey powder, WPC powder, MPC powder, caseinate powder

Parameters

Moisture, protein, fat

Technology

High resolution NIR technology with a powder probe connected to the analyser via fibre optics.

Installation

After the fluid bed and sifter

Specifications

Light source lifetime	Dual lamp system = 12,000 hour average lamp time
Software package	ISIScan™ Nova for instrument control
Wavelength accuracy	0.5 nm
Wavelength precision	< 0.02 nm
Wavelength stability	< 0.01 nm/°C
Noise	< 60 micro AU
Random vibrations	0.4 grms at 10 – 150 Hz according to IEC 60068-2-64 0.4 grms at 10 – 1250 Hz according to FOSS internal standard (more information available on request)
Temperature	-5 – 40°C (23 – 104°F). With purge -5 – 65°C (23 – 149°F)
Installation in ATEX zone	0 – 40°C (32 – 104°F). With purge 0 – 65°C (32 – 149°F)
Purge air	Flow rate minimum 5 l/min, > 99.9% water free, > 99.9% free of oil and fine particles down to 0.3µm
Ambient humidity	10 – 90 % relative
Dimensions (w x h x d)	42 x 42 x 13.5 cm (16.5 x 16.5 x 5.3 inches) + brackets to hold the unit
Weight	25 kg / 55 lbs
Cabinet	1.5 mm (lid 2.5mm) Stainless Steel EN 1.4301 (SS2333)
Protection	IP69K* according to IEC 60529 and DIN 40050 part 9, NT ELEC 023
Communication	KepServerEX (Ethernet, OPC 4-20 mA, Profibus/Profinet) to PLC/SCADA; FossManager™
Power supply	Recommended isolated or conditioned line power 100 – 240 VAC, 50 – 60 Hz, 2.0 A, 150W

* IP69K is the highest protection for dust entering the unit. IP69K means protected against the effect of high-pressure water and/or steam cleaning at high temperature.

ProFoss Reflection	
Analysis time	Average time per result 3 - 15 seconds
Measurement mode	Reflectance
Wavelength range	1100 – 1650 nm
Detector	InGaAs diode array
Spectral dispersion	1.1 nm / pixel

FOSS

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