

ProFoss™ 2

In-line process analysis in the feed industry



ANALYTICS BEYOND MEASURE

ProFoss™ 2 increases profit in feed production with continuous analysis, directly in the process line without bypass.

Streamline your feed production with in-line analysis

Get complete control of your feed production with a continuous flow of real-time results. Installing ProFoss 2 in or right after the mixer enables you to measure critical key parameters such as protein, fat and moisture and make timely adjustments to meet specified final product quality.

Produce closer to targets to increase profit

Increase your profit opportunities with real-time measurement. For instance, more accurate moisture control reduces raw material cost. By moving moisture targets 0.5% closer to specification, a feed manufacturer producing 100,000 tons of feed annually can produce the same amount of feed using 500 tons less raw material. In addition, real time results lead to improved product consistency, reduced rework and energy savings.

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.

Product types

Feed raw materials, feed mash, feed pellets, feed ingredients in different feed product types such as broiler feed, layer feed, aqua feed, dry pet food, etc.

Parameters

Moisture, protein, fat, fibre

Technology

High resolution NIR diode array (DDA) technology installed directly into the process line without bypass

Installation

At raw material intake, in the mixer or right after the mixer, after the dryer and at the final product loading

Specifications

Measuring technology: Reflectance	
Analysis frequency	Real time: Average analysis time per result 2 - 3 seconds
Wavelength range	1100 - 1650 nm
Detector	InGaAs Diode Array
Spectral dispersion InGaAs Diode Array detector	1,1 nm/pixel
Process line interface	Sapphire; Diameter 45 mm, thickness 12 mm, with food grade FFPM O-ring seal
Product temperature	Max 150 °C (302 °F)
Product pressure	Production pressure < 21 bar (< 305 PSI). Shock pressure < 50 bar (< 725 PSI)

Technology	NIR technology
Software package	ISIScan NOVA™ for instrument control
Wavelength accuracy	< 0.5 nm
Wavelength precision	< 0.02 nm
Wavelength temperature stability	< 0.01 nm/ °C
Spectral noise	< 60 micro AU
Vibrations - require optical fiber fixation	0.4 Grms
Ambient operating temperature	Basic configuration -5 °C - 40 °C (23 °F - 104 °F) , Cooling with a compressed air line allows use up to 65 °C (149 °F) ATEX configuration 0 °C - 50 °C (32 °F - 122 °F)
Pressurised air – cooling (Amb. Temp. 45 - 65°C)	Cooling air Flow rate minimum 5 l/min, >99.9 % water free, >99.9 % free of oil and fine particles down to 0.3 µm
Ambient humidity	< 90% RH
Dimensions (W x D x H)	w x h x d = 420 x 420 x 135 mm (16.5 x 16.5 x 5.3 inches) + brackets to hold the unit
Weight	25 kg (20 kg)
Power supply	1 phase, 100-240 VAC (max ±10 % of the rated voltage), max. 40 VA, 50 - 60 Hz
Cabinet / Housing materials	1.5 mm (lid 2.5mm) Stainless Steel EN 1.4301 (SS2333)
Mechanical environment	Process control equipment
Degree of protection	IP 69*
Approvals	ATEX & IECEx certified (dust explosion approved)
Hygiene	3A hygiene certified
Communication	KEPServerEX (Ethernet, Analogue Profibus/Profinet) to PLC/SCADA; FossManager™
Network	High quality, shielded LAN cable; minimum category 5e. RJ 45 (IP 67) LAN connections
Operation	Indoor use or outdoor shielded from rain and direct sunlight

*IP69 is the highest protection for dust entering the unit. IP69 means protected against the effect of high-pressure water and/or steam cleaning high temperature.

FOSS

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