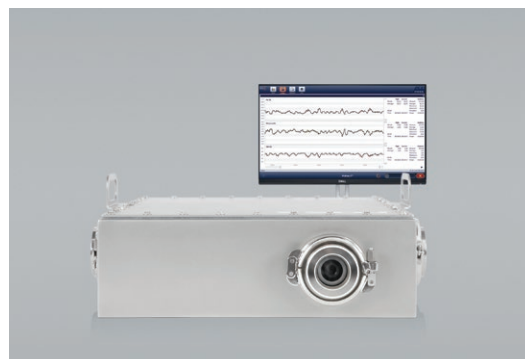


ProFoss™ 2

Continuous in-line analysis of shredded cane for efficient processing



ANALYTICS BEYOND MEASURE

Installed directly in the production line, ProFoss™ 2 measures Pol and Brix in the shredded cane before it enters the extraction process (milling train or diffuser).

Process efficiency with in-line analysis

Results are provided every few seconds. This continuous flow of information allows timely adjustments for improved process efficiency which, in turn, leads to a rapid return on investment.

Multiple applications from payment analysis to mass balance calculation

When a tracking system is implemented, the ProFoss 2 measurements of pol and brix in incoming cane are an ideal platform for payment analysis, for example, based on sucrose content. Results for POC (pol in open cells) helps to manage wear in the shredder and precise analysis of incoming sucrose ensures accuracy in mass balance calculations.

Simple to run solution

ProFoss 2 is delivered with start-up calibrations for all key parameters and FossManager™ networking software makes it possible monitor, configure and adjust the instrument remotely.

Sample type

Sugar Cane (shredded)

Parameters

Pol and Brix

Technology

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

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)

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)
Process environment	Process control equipment
Degree of protection	IP 69*
Approvals	ATEX & IECEx certified (dust explosion hazard approval)
Hygiene approval	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.

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