

Niro Pharma Systems

AEROMATIC
BUCK
COLLETTE
COURTOY
FIELDER
NICA
NIRO

Buck Systems Blending Technology

SP15 *NIR* Laboratory Blender *Laboratory Scale Blender with Process Analytical Technology*

- Enhanced process knowledge and control
- Real time blend data
- Actual blend end point determination
- Measures all ingredients for uniformity
- No sampling and laboratory analysis required
- All instrumentation installed in GMP enclosures
- Battery free power supply to instrumentation

Niro Pharma Systems unites the technologies of Aeromatic, Buck, Collette, Courtoy, Fielder, Nica, and Niro to supply advanced processing solutions for solid dosage forms to the pharmaceutical industry.

GEA Buck Systems

SP15 NIR Laboratory Blender

The New SP15 NIR Laboratory Blender is the apparatus that today's pharmaceutical scientist and researcher has been looking for. The SP15 NIR uses Near-Infrared to measure actual powder movement inside the IBC as it is blended. The researcher will be able to monitor ingredient movement on-line, as the blending occurs; this real-time data allows increased understanding of powder behavior. An additional benefit of this analytical technology is that the behavior of all the ingredients within the IBC can be accurately monitored, where as traditionally the focus has been on the Active ingredient only. Because the powder blend is known, then the number of samples that need to be taken is dramatically reduced.

The result is faster research times, better understanding of formulation behavior, and a closer control of the blending process.

Enhanced Design

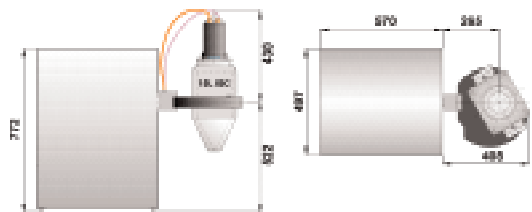
The technology works by using a combination of a Zeiss NIR measuring head, a Corona data analyzer, and radio frequency transmitters and receivers. The key to the design is to install all the additional instrumentation onto a moving rotating object, as well as provide the necessary utilities. Buck Systems have succeeded in installing all of this instrumentation in a GMP enclosure without having to bolt on boxes to the externals of the blending head. Power is supplied to the instruments through a slip ring, which means the instrumentation has a permanent and un-interrupted power source. Proximity switches in the blending head activate the measuring head at exactly the right time to trigger the data acquisition.

Data analysis and software

Data is transferred by radio frequency from the Blender to a local PC. The blender is supplied with a combination of Winaspect and ProcessXplorer software to allow the data to be analyzed and displayed. Buck Systems' technicians use this software to provide analysis techniques, such as fingerprint methodology for each ingredient, and rate of change of the blend. Buck Systems' technicians are available to provide full customer support.

Technical Data

- 5, 10 and 15L containers, rectangular geometry allows scale up to larger IBC. Blending Prism™ technology optional.
- Container fitted with sapphire glass window to attach NIR measuring head.
- OMK 0/45 Diffuse Reflectance Measuring Head.
- Corona Remote NIR analyzer with RF Transmitters.
- Allen Bradley Micrologix PLC.
- Allen Bradley 300 Micro HMI.
- 2-15 RPM variable blending speed via Allen Bradley Flexpower inverter.



Niro Pharma Systems

AEROMATIC
BUCK
COLLETTE
COURTOY
FIELDER
NICA
NIRO

Buck Systems

GEA Process Engineering Ltd
Wharfdale House · 257 Wharfdale Road
Tyseley · Birmingham · B11 2DP · United Kingdom
Tel: +44 121 765 5800 · Fax: +44 121 765 5801
E-mail: buck-systems@niropharma.com

For North America Contact:

Niro Inc.
9165 Rumsey Road
Columbia · Maryland 21045, USA
Tel: +1 410 997 7010 · Fax: +1 410 997 5021
E-mail: info@niroinc.com