

Solving the need for improved feeder design and efficiency

THE SPI-BETA, AGRI-THERM'S NEW EXPERIMENTAL PROTOTYPE SOLID PULSE INJECTION FEEDER, is an innovative solution for producers of agricultural residue or those who have transition crops. The state-of-the-art unit offers you greater output and overall control, while using much less energy than conventional feeders.

FEATURES AND BENEFITS

Designed for hot, harsh and high pressure environments, the SPI Feeder is an intermittent solid pulse injection feeder designed for all types of free flowing or cohesive biomass, including powders, granules, catalysts and particles such as polymers, rubber, coal, lignite, tar sands, oil shale, etc.

ENHANCED, EFFICIENT DESIGN:

Agri-Therm takes standard feeder machination to the next level with the SPI Feeder. Improved design eliminates backflow, plugging and downtime associated with conventional auger/screw feeders. The unit uses much less gas and energy than dilute-phase pneumatic transport feeders, making it an impressively energy-efficient solution.

IMPROVED FEED RATE:

The SPI Feeder features improved feed-rate control that maintains a consistent feed through dynamic-instant pressure balancing techniques, while the programmable relay provides accurate control of solenoid valves to adjust feed rate. The feeder can be set to operate from a minimum of 0.5 g/sec to more than 200 kg/hr.

VARIABLE BIOMASS INTAKE:

The SPI Feeder can consume a wide range of particles, including ultra-fine powders (<30 µm), cohesive particles (Hausner powder ratio up to 1.4) and bulky particles (3 cm+). The intermittent feeding system promotes good mixing and heat transfer.

INCREASED, CONTROLLABLE OUTPUT:

When optimized for peak performance, the unit can reach more than 20 times the solid mass to gas mass flow ratio. Increased control allows you to determine biomass/output characteristics, from ultra-fine and cohesive powders to large, 3 cm chips/straws.



TECHNICAL SPECS:

Operating Temperature

Can inject into reactor vessels from ambient to 900°C. Cooling jackets for a feeding tube can be added for high-end temperatures.

Construction Material

The unit is constructed with 316 SS, elastomer moulded flanges. Sections of the unit can be custom-made in transparent materials for viewing.


Agri-THERM Inc. is a spin-off company of The University of Western Ontario and is managed by WORLDdiscoveries.

The University of Western Ontario
100 Collip Circle, Suite 105
London, ON N6G 4X8

519.850.2307

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agri-therm.com

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| DOCKET #: 207-258 | CLIENT: WORLDdiscoveries | VERSION: A | REVISION: | DATE: December 15/10 | TIME: 2:45 |
| | SIZE: 8.5"w x 11"h with bleeds | COLOUR: RGB | | | DESIGNER: cf |
|  | JOB DESCRIPTION: Agri-Therm SPI-Beta | | PRODUCTION NOTES: | | |
| | Electronic Sell Sheet | | | | |
| THE MARKETING DEPARTMENT 457 KING STREET, LONDON ONTARIO, CANADA N6B 1S8 TELEPHONE 519 439 8080 FACSIMILE 519439 8081 WWW.THEMARKETINGDEPARTMENT.CA | | | | | |