



FEEL THE POW(D)ER

Precise and reproducible addition of powdery substances



Is it possible to precisely, reproducibly and safely add a desired amount of powder or powdery substances to your processes? Can it be done automatically? And at a reasonable price? - YES, it is !

[LAMBDA Laboratory Instruments](http://www.lambda-instruments.com), a company focused on the development of innovative instruments for laboratory use, has introduced a new digital powder dosing instrument - the LAMBDA DOSER

The [LAMBDA DOSER powder doser](#) is a unique laboratory scale „pump“ for the controlled addition of powders and powdery or crystalline substances. It has been developed to make the usual spoon-like additions of substances into reaction vessels obsolete. With the LAMBDA DOSER the addition of chemicals becomes not only reproducible and safe, but also conforms to modern safety and quality regulations required in the laboratory manipulation of chemicals.

The DOSER opens new possibilities in biochemistry for the separation of protein fractions by salting out or for the addition of sparingly soluble substances into [bioreactors in biotechnology](#), e.g. for biotransformations. This prevents volume increases and makes product isolation easier.

The LAMBDA DOSER is made according to a patented design and consists of a motor unit, a distributor and a glass body with glass threads on both sides and one side neck for filling. The powder dosing instrument is extremely easy to set up and to clean. It is so compact that it can be placed without problem onto any reactor construction. The special shape of the distributor makes it easy to work with a great variety of powders, even “difficult” powders.

The digital control of the DOSER by a microprocessor allows a precise dosing speed over a large range (from 0 to 999). This results in a large, reproducible flow rate range, e.g. 50 mg/min to 50 g/min for NaCl, which covers the vast majority of needs on the laboratory scale. Several vessels cover a capacity from a few grams to over one kg of powdery substance.

One side neck in the glass vessel allows filling during operation. The DOSER is air tight and allows powder dosing under controlled atmosphere, thereby protecting substances from oxygen and humidity. Furthermore, it allows safe handling and dosing of dangerous and toxic powdery substances.

The DOSER can be programmed (30 steps of dosing speed and time) and can be automatically switched on and off. There are several remote control options, e.g. by external signals 0-12 V or also by the optional RS-485 or RS-232 interface for enhanced PC control, which can be further complemented by the [PC control software PNet](#). This allows the DOSER to be used for many different existing and new applications (e.g. variable flow rates, dosing gradients, etc.).

The LAMBDA DOSER makes the addition of chemicals reproducible, controlled and safe, thereby allowing laboratories to fulfill GLP and safety requirements.



For safety reasons, the DOSER is powered by a low voltage 12 V DC plug-in power supply (for mains: 100-240V, 50-60 Hz).

The use of the DOSER together with the [LAMBDA INTEGRATOR](#) allows the quantification of the amount of solid transferred as a function of time. The INTEGRATOR can also be used together with other LAMBDA instruments, e.g. the [peristaltic pumps PRECIFLOW, MULTIFLOW, HIFLOW or MAXIFLOW](#) or [syringe pumps VIT-FIT](#) for the quantification of the amount of liquid, and with the [LAMBDA MASSFLOW gas flow controller](#) for the amount of gas transferred over a period of time.

About the company: LAMBDA develops innovative, high quality laboratory instruments with an excellent price to performance ratio: laboratory fermenters, fermentors, bioreactors for cell culture, peristaltic pumps, tubing pumps, infusion pumps, syringe pumps, fraction collectors, samplers, powder dosing instruments, mass flow gas controllers and fermentation software for biotechnology, microbiology, food and agricultural, chemical and pharmaceutical research and development as well as for general laboratory and research applications.

LAMBDA Laboratory Instruments has over 30 years of experience in the development of laboratory instruments. Our mission is to invent, develop and supply high quality laboratory instruments with interesting properties and innovative concepts.

LAMBDA Laboratory Instruments – where innovation keeps quality high and prices low