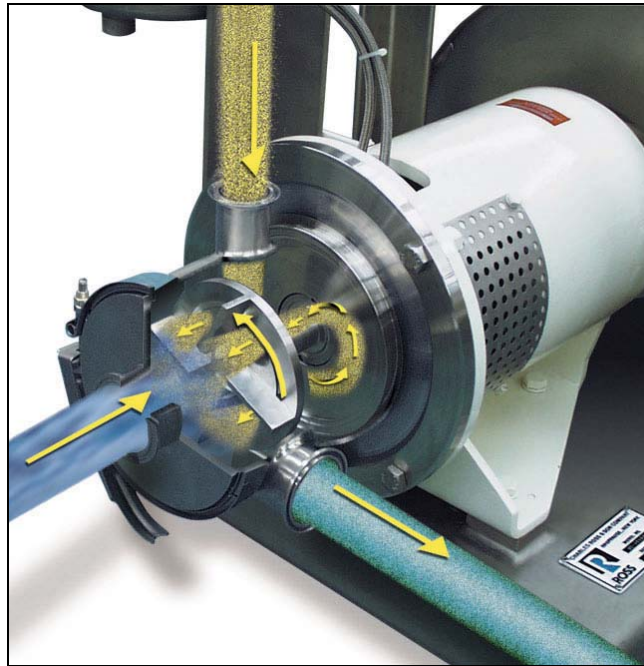


ROSS INLINE SLIM THEORY

The Ross Inline SLIM is an innovative powder induction and mixing device based on the Ross Inline Mixer Emulsifier.

The Inline SLIM consists of a rotor and stator mixing arrangement, specially designed to create negative pressure (vacuum) behind the rotor, which can be used as the motive force to suck powdered (or liquid) ingredients directly into the stream of the incoming liquid. The resultant powder/liquid mixture then is expelled centrifugally through the openings in the fixed stator before exiting the tangential discharge connection.



The graphic above illustrates the general principle of combining liquid and powder streams with the Inline SLIM

Powdered ingredients may be introduced to the powder inlet via a hand-held wand arrangement, or a hopper arrangement. Each approach has its specific benefits that will be addressed below.

The Inline SLIM differs from other powder induction systems in that:

- It does not usually require the use of a centrifugal pump on the inlet or outlet side to create the suction for the induction of powders.
- It does not use an eductor to create the suction, thereby making the Inline SLIM more tolerant of flow and viscosity changes.