

OSCILLATION REACTOR SYSTEM

“Shaken not stirred” is a concept gaining importance in the Process Engineering. These Contactors are highly efficient, cost effective for Solvent Extraction, Stripping, Reaction and such operations where effective Contact between phases determines the mass transfer and thus the process such as Extraction or Reaction.

Oscillating, Pulsating, Vibration or simply, shaking Contactors for Extraction or Reaction have been around for quite some time. Recently, however, there have been a number of studies which have ascertained their usefulness, specifically, in producing product with uniform properties and by consuming less Energy.

There are several types of Oscillating Contactors that Mamko offers. These are

- 1) Contactors with internal Static Element design that induces pulsation.
- 2) Contactor with mechanical Vibrating device to create pulsation.
- 3) Contactor where pulsation are created by compressed air pressure pulsation.
- 4) Contactor where pulsation are created in the inlet flow.

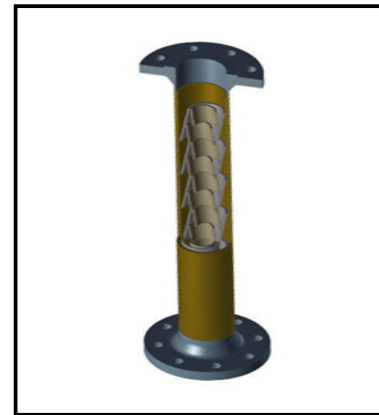
Third and Fourth device requires a great deal of Automation. The first one requires high pressure drop and therefore high energy. Therefore the preference goes to the item No. 2.

Advantages:

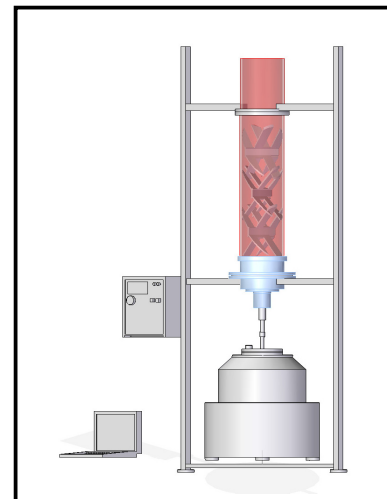
- Continuous and multi-stage extraction process
- Handling of liquids with suspended solids
- A safer and more environmentally friendly process
- Free from moving internal parts
- A fully automated system
- Lower maintenance and operating costs
- Dramatically reduces floor space needs

Applications:

- Minerals processing: uranium, nickel, cobalt, zinc, titanium
- Chemical industry: nitric, phosphoric and hydrochloric acids
- Environmental protection: recovery of nitrates, sulfuric acid, cyanides & halides
- Additional applications include pharmaceutical, food and petroleum industries



[ORS with Static Elements]



[ORS with Vibrating Device]