Reactor

Abstract

The invention relates to a reactor driven in an oscillatory-rotary manner about its fixed, preferably vertical, axis, for preferably biotechnological and pharmaceutical applications. By means of its process-intensifying properties for mixing, suspension, gaseous material transport, heat transfer, irradiation and particle retention, the applicability on the industrial scale is ensured. The reactor which succeeds without a shaft seal permits particularly robust production with respect to sterile technique with avoidance of cleaning and cleaning validation required when the reactor is constructed as a single-use reactor.

(Fig. 3a)