

## Chemical

## Vertical Mixing Dryer for the Manufacture of Agrochemicals

It is not always sensible or recommendable to utilise horizontal paddle mixers, which are complicated to manufacture and are therefore relatively expensive due to their inherent design, bearings, and design of the agitator parts.

In many cases, generally cheaper vertical mixers / dryers can be used for the homogenisation and drying of powders and granulate formed products.

Because of this, an American manufacturer of agrochemicals was able to use an HVM-VT 8500 to realise a comparatively economical replacement investment in the form of a vertical alternative. In doing so it was particularly important to ensure that the fragile products were prepared extremely gently, that the reproducibility of the formula was guaranteed, that good access for cleaning the machine was provided for, and that the design and implementation of the machine conformed to GMP guidelines. In vertical mixing containers, generally with screwed cover and conical outlet, the agitator is formed by an interior, rotating single-sided bearing helix, which serves to convey the product in batch mode from bottom to top, thereby enabling a uniform, gentle mixing action with high mixing quality and relatively short mixing times to be achieved. The helix is designed in such a way that only extremely small amounts of product remain on the mixing parts. The model can be constructed as a single or double helix, depending on product requirements, and can be realised in a divided or continuous form. The shaft seal is achieved by means of a dual-action slide ring packing, radial shaft seal rings or stuffing-box packing. The special form of the mixing container enables the product to be emptied almost completely from the bottom end with the mixing equipment running.

