

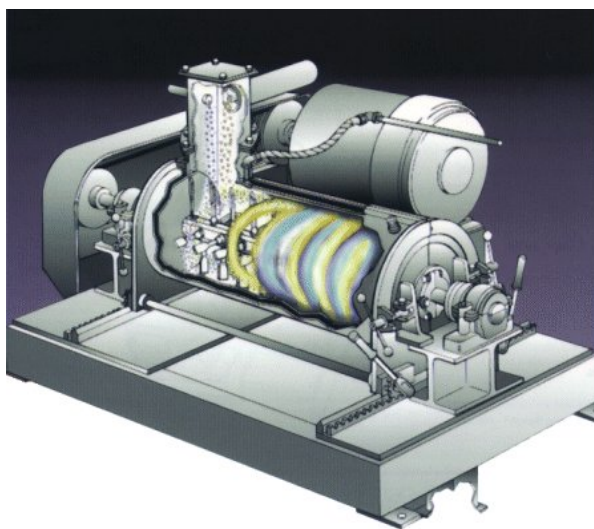
**Case study:**

**Continuous Heating of Starch**

A pharmaceutical product has to be wetted with water under vacuum, must be homogenised, and sterilised by means of heating up the product under vacuum for 1,5 hours. The temperature of the product must be equal through the whole batch. After each batch the unit must be cleaned with an automatic CIP system



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|--------------|---|---|
| APPLICATION  | : | <b>Heating</b>  |
| PRODUCT      | : | Modified starch   |
| REQUIREMENTS | : | Continuous heating of a large amount of starch (fine powder) From 40 °C to 80 °C. Heat efficiency of the equipment should be high to minimize the size of the equipment and the consumption of energy.  |
| Capacity     | : | 6 - 8 t/h.  |
| SOLUTION     | : | Bepex Turbulizer TJS-48   |
| RESULTS      | : | Turbulizer constructed of 304 SS (contact parts) and provided with a heating jacket. The Turbulizer with its high speed rotor has a high heat transfer rate and is therefore suitable to heat a large amount of powdery materials. A high temperature heating medium (e.g. heat transfer liquid with > 200 °C) should preferably be used to further optimize the heat efficiency of the process. For 6 - 8 t/h of starch, the Turbulizer is equipped with a 110 kW E-Motor. |



For ultra rapid heating of solids in a compact designed unit the Turbulizer is a perfect choice.

Minimal space requirements and low investment costs make this technology very efficient.