

### **Atex-approved fluid mixing system**

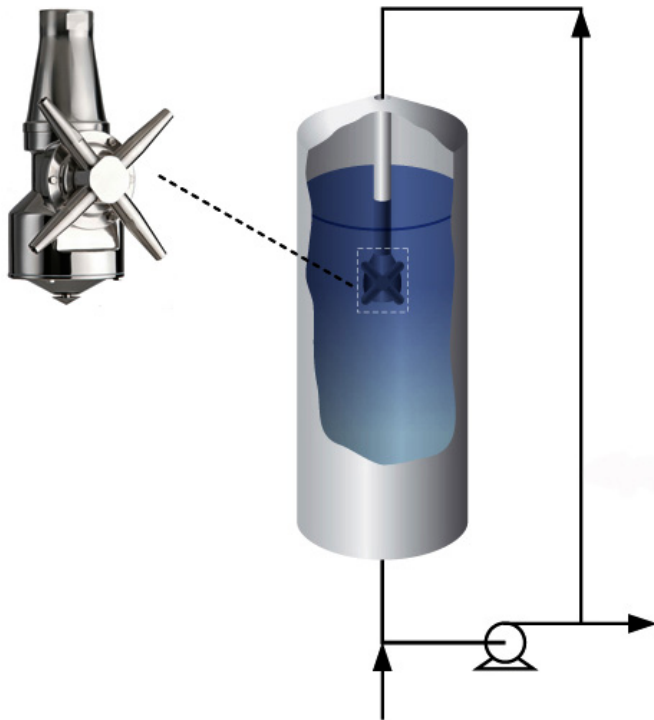
**If your existing equipment does not comply with the Atex-directive, you are probably in the planning process of installation of such equipment before July 1<sup>st</sup> 2007, when all existing equipment must be conforming to the Atex directive. By installing an ISO-MIX mixing system you will both achieve Atex-compliance in an easy and inexpensive way and obtain much shorter mixing times in your plant.**

In-mixing of smaller quantities of 96% alcohol or other ingredients into larger volumes of alcoholic beverages, often prove to be a tedious job, even in systems with installed traditional propeller mixers.

ISO-MIX A/S recently has installed its unique Rotary Jet Head (RJH) mixing systems in a number of plants for the manufacture of Vodka and Cognac type of beverages. Previously it could take up to 3–4 hours of mixing, before in-mixing of just 250 l of 96% alcohol in a batch of 30,000 l was completed. By installing an ISO-MIX system the in-mixing was performed in less than 10 minutes.

This much shorter mixing time naturally was an important advantage to the manufacturer. What, however, proved to be of equal importance, was that the new mixing system was intrinsically ATEX-approved, while the entire system ended up much cheaper investment-wise than a comparable traditional mixing system.

The ISO-MIX fluid mixing system simply consists of a pump, a recirculation loop and an ISO-MIX RJH installed under the liquid surface in the tank to be agitated (see fig. 1). Often the existing pump and the CIP loop may be used, which naturally will reduce the cost of installation proportionally. The fluid or the ingredients to be mixed into the bulk volume is introduced into the recirculation loop on the suction side of the recirculation pump. The liquid being recirculated will then exit the nozzles in the ISO-MIX RJH, which are slowly rotated around two axes by a turbine driven by the recirculating liquid. The resulting jetting effect ensures an extremely fast in-mixing of the components to be mixed into the bulk volume.



*Figure 1. The ISO-MIX solution with the ISO-MIX RJH installed under the liquid surface.*

Since the RJH in its mixing mode is always submerged and will only rotate when liquid is pumped through the mixer it is intrinsically ATEX-approved. The only component possibly to be ATEX-approved is the pump motor in case the pump is positioned in the zone 0 area. Therefore, by using an ISO – MIX RJH for fluid mixing in explosion zone 0 areas, first of all offers a much faster and less energy consuming mixing system, which is ATEX-approved but it is also much more economical solution than traditional systems using propellers for agitation.

For further information please visit [www.iso-mix.com](http://www.iso-mix.com).

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