

# Mix Gardner, Sift Kek, Get Results

Two GARDNER Mixers and a KEK Centrifugal Sifter supplied to Quest International's Bromborough Port, Wirral site, by Kemutec, are giving sterling performances 12 months on. Quest, an ICI Group company, is one of Europe's leading suppliers of food flavorings. They have won contracts from some of the biggest and best names in the business through the excellence of their products, the reliability of their service and their fastidious attention to hygiene. The Bromborough Port site employs around 230 people and has a turnover of US \$50 million. To meet customers' demands, the factory operates 24 hours a day, 7 days a week—only shutting, briefly, twice a year, for maintenance. Independent auditors make random, unannounced hygiene inspections several times a year. This keeps everyone on their toes and provides Quest's customers with the quality assurances they demand.



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Given this regime, any equipment not only has to perform, it has to be reliable, easy to clean and have no bug traps. Quest is a longstanding Kemutec customer, mainly for size reduction mills. Hitherto, for historical reasons, they have used mixers and sifters of other manufacture. However, some ongoing failure problems with their existing mixers prompted Engineering Manager, John Hardman, and his team to look elsewhere. Not only was there a need to replace an old machine, but also an additional mixer was required to keep abreast with the on-going growth in demand for Quest's products.

Project Engineer, Andy Turnbull, looked at three possible mixer suppliers. Kemutec proved the most willing to respond to Quest's requirements within the cost constraints. ICI's specialists had become involved with the metallurgical problems causing the agitator to deteriorate on the previous mixer. As a result some solutions had been proposed with which Quest felt comfortable. In addition, over the years Quest have identified the type of mixing agitator that works best over the full range of their products. Although, Kemutec had every confidence in the design of their GARDNER Mixers, they were more than willing to accommodate Quests custom requirements. Accordingly, the finished machines have door seals, mixing paddles, internal radii and agitator construction to meet Quest's Specifications. In addition, the replacement mixer had to fit exactly into the space vacated by the problem mixer. Therefore, the accuracy of the mixer body fabrication was critical. As John Hardman comments, "Despite all of the design changes, Kemutec's price was still competitive. What really gave us the confidence was their specialist engineers' in-depth knowledge of mixers, mixer construction and the mixing process."

Food flavourings are produced in 1 ton batches. Pre-weighed ingredients are manually loaded via a tipping station on the floor above the mixers. Most of these ingredients are

hygroscopic powders together with some minor additions of fats and liquids. Typically, Quest produces a number of batches of a flavour and then the mixing system is washed from top to bottom and hot air dried ready to mix the next batch of a flavor. To aid cleaning the sifter and mixer were furnished with electrics to IP65 specification and finished 180 / 240 grit internally and bead blast externally.



Quest develops new flavors on their own account and they also respond to the specific needs of their customers too. Flavoring products are despatched Europe-wide to manufacturers of meals, soups, desserts and snacks. As stated previously, quality is a key issue. Accordingly, all mixes are passed through a sifter before being packed into lined boxes. Most of Quest's mixers have a centrifugal sifter at the outlet. All of Kemutec's extensive range of Kek Sifters are of the Centrifugal type. Thus, Quest did not need to be sold the benefits of centrifugal sales, which include their compact size relative to capacity, quiet vibration free operation and their high efficiency sifting.

To convince Quest to switch sifter manufacturers, Kemutec provided one of their latest cantilevered shaft design Kek Centrifugal Sifters for on-site trials at Bromborough Port. These new machines feature a drive shaft and paddle assembly

cantilevered from the motor end thus eliminating the over-size end bearing and seal.

Because there is no over-size end bearing and seal, the electrically inter-locked over-size end access door can be hinged to the sifter body and is easily opened by way of a single hand-wheel. Opening and, in particular, closing the door could not be easier as there is no bearing and seal to align.

With the door opened, the sifting screen retaining plate/over-size baffle can be removed allowing the sifting screen itself to be withdrawn. At this point the sifter interior and all working parts are easily accessible for cleaning—either because they have been removed or because they are easily accessed through the generous inspection door at the side of the sifter. John Hardman and his team are most impressed with the Kek Sifters, "They are so easy to strip down for cleaning, inspection and maintenance."

The on-site trial convinced Quest to purchase the Kek Sifter to police the mixes produced in the new GARDNER Mixer. Quest's own

engineers installed the two mixers and the sifter. As John Hardman concludes, "We had some minor teething problems at the outset. These were readily resolved by Kemutec. In fact, I was so impressed by their service that, for one of those rare times, I put my appreciation in writing!" Mr. Hardman continues, "I've been happy to tell everyone how pleased I am with this new Kemutec equipment."

Kemutec operate a comprehensive Test and Demonstration facility and welcomes the opportunity to show customers their equipment in action first hand. It was in this facility that Kemutec was able to prove to Quest that they could meet the microscopic dispersion of colour that is so crucial to the quality of their customers' products.

Kemutec confirm that they have recently received several more enquiries from Quest and are looking forward to the next order.

For more information about this or other applications for Gardner Mixers or Kek Sifters, or for details about Kemutec full range of products, visit our web site at [www.KemutecUSA.com](http://www.KemutecUSA.com) or contact us at 215-788-8013



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Kemutec supplies Kek brand Sifters and Mills, PPS Air Classifier Mills, Gardner Mixers and Blenders and Mucon Valves and Discharge Aids.