

Lindor Mixers in Thermoplastic Elastomer Manufacture Boosts Efficiency

Dordrecht, The Netherlands – Higher mixing efficiency, lower energy consumption and the elimination of any product degradation were major benefits that the Dutch company Wittenburg gained by installing a Lindor 4000-litre mixer on a new production line for its Cawiton range of thermoplastic elastomer coating compounds in place of the plant's previously used ribbon blenders. Being to carry out the homogenisation and remixing of recycled elastomer granules, the Lindor machines also gave the advantages of a self-emptying facility and compact dimensions. The TPE compounds are widely used to provide a tough soft-touch coating on implements such as surgical instruments, razor handles and binocular bodies.

Lindor machines are entirely free of internal moving parts such as mixing ploughs or agitators which often cause product degradation either mechanically or as a result of friction-induced heating. Their unique design introduces only a very small amount of energy into the mix.

The mixing effect is derived from specially designed tapered scoops that run the whole length of the horizontally-arranged mixing drum and are an integral part of its inner surface. They induce a gentle but thorough 3-dimensional, figure-of-eight motion in the components of the entire mix, completely eliminating any 'dead' spaces and ensuring virtually 100 % product discharge.



A further consideration of relevance to the chemical industry and others where gases or atmospheres laden with dust or solvent vapours pose an explosion risk is EU Directive ATEX 95, which came into force in July 2003. The Lindor mixer possesses an inherent advantage in relation to this thanks to the absence of independently moving parts within the mixing space. Metal-to-metal contact and its attendant risk of spark generation are completely avoided.

Additionally, a correctly operated Lindor mixer releases no dust into the surrounding atmosphere and thus avoids generating a potentially explosive external dust/air mixture.

Units fitted with explosion-proof motors, approved cabling and control gear and a nitrogen purge system are now working on such hazardous materials as powdered metals, starch powders and actual powdered explosives.