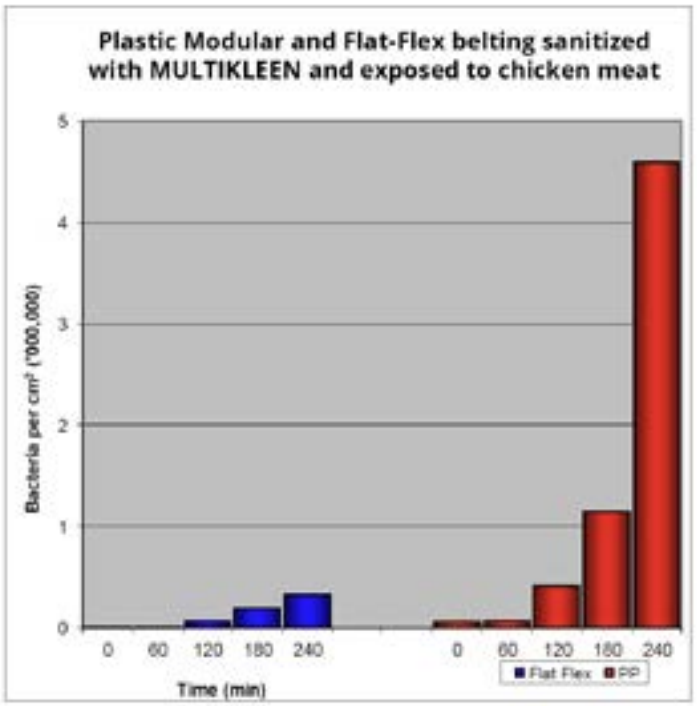
# Stainless Steel Belting Improves Hygiene Standards




Use of stainless steel Flat-Flex® and Compact Grid™ belting instead of modular plastic types can increase food conveyor hygiene standards by at least 10 times, and in some cases by more than 100 times.

Research in the UK and USA shows that, under production conditions, Wire Belt's Flat -Flex belting is more hygienic than plastic types for conveying vegetables, meat and fish. This shows that stainless steel is preferable to plastic where hygiene and ease of sanitation are important, especially in areas where accessibility and extended production runs present cleaning problems

Openness of the Flat-Flex results in less build-up of contaminants than plastic modular belts, as well as making cleaning easier and allowing visual inspection of drive shafts without the need for dismantling. The advantages of stainless steel over plastic for belting include easier and more effective cleaning as well as greater resistance to damage resulting in scratches and crevices that can lead to increased opportunities for attachment and growth of bacteria.

Research in the UK shows that with fish and meat Flat-Flex picks up fewer bacteria, maintains a lower level of contamination over time and is easier to sanitise, possibly because the gaps in plastic modular belting cannot be as readily cleaned as the stainless steel belting and harbour bacteria with quicker recontamination of the belt as a consequence. Drive shafts and the undersides of plastic modular belting are particularly difficult to clean in comparison with Flat-Flex belting.

Experiments with meat and fish also showed that plastic modular belting tended to contain trapped debris, even after thorough sanitising and rinsing. Experiments with carrots showed that Flat-Flex could usually be cleaned to a satisfactory level with just one clean but plastic modular belting often required a second or even third clean to reach a standard acceptable for production to start.

The increasingly rapid growth in bacteria on plastic modular belting compared with Flat-Flex stainless steel belting, especially after two hours, is shown by results of the study with chicken meat (fig 1) after sanitisation with Multikleen.  In the USA, where Flat-Flex is approved by the US Department of Agriculture (USDA), research shows that, with proper cleaning and sanitising schedules, stainless steel belting reduces the problems of biofilms forming on product contact and non-contact surfaces. Consisting of microbes and substances that protect them from surrounding environments, biofilms can harbour potentially dangerous pathogens and create reservoirs of contaminants that are very difficult to eradicate completely. Once a biofilm is established, bacteria living within it can withstand stronger doses of sanitising agent – up to 3000 times stronger than unattached cells – and are more resistant to heat. Bacteria can also be loosened and contaminate product flowing over the biofilms.

Design features of Flat-Flex and Compact Grid help to eliminate the crevices and hard-to-reach places where biofilms form, and also help to improve hygiene levels generally, especially in high-usage and difficult-to-clean areas of conveyor belting. They have between 70 and 85 per cent open framework structure, are designed to reduce or eliminate areas where product or debris can become lodged and do not typically need to be removed from the conveyor system for cleaning.