

# DESIGN AND TECHNICAL FEATURES INCREASING FOOD SAFETY OF AN IQF FREEZER

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## Abstract

This paper comes at a moment when food safety became a serious concern on the market of frozen foods, with major frozen food recalls which took place in 2016 only due to food contamination. The focus on Individual Quick Freezing (IQF) technologies specifically, is equally relevant in an era when the consumption of frozen products is steadily shifting towards frozen products of higher quality and increasing convenience. This work can be of significant value for food processors due to the lack of an explicit guideline on the matter in the existing legislation and literature. The main objective of this paper is to highlight those specific design and technical features which have a positive impact on a reliable food safety of an IQF freezer. This paper can be used as an orientation guideline by food processors when choosing a food safe IQF freezer.

After almost a decade of experience in the designing and building of IQF freezers, we can surely state that the voice of food processors is the most reliable method to gather realistic feedback on design and technical features which contribute to a reliable food safety. This paper is a result of years of testing, trials and customer feedback. We have found that features such as short cleaning time, elevated housing, limited number of moving parts, easy to clean product-transportation plates, coil-cleaning system, accessible design, and mono-block housing are the main features of an IQF freezer increasing dramatically the food safety standards during freezing process.

We want the reader to be aware, however, that it is up to each food processor to put in efforts and energy to take advantage of these features in order to achieve reliable food safety, as the mere presence of these features does not guarantee results in itself.

**Key words:** *Food safety, IQF freezer, Food safe design, IQF freezing.*