

Buffering and prewash for binwasher



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Specialization Electromechanical Engineering Technology

Situation

Greenyard Prepared Bree is a company that processes fruits and vegetables into preservatives and sauces. Within the company different types of bins are used to catch the remnants of the processing. These bins are emptied outside and washed with warm water so that they can be reused again.

Problem statement

The already present washing machine is not optimally used due to the forklift drivers cannot constantly supply bins to the washer. This results in the washer needing to reheat water for every bin. Secondly there are quite some leftovers in the bins that scatter around the place when washing. This can prove troublesome for health security.

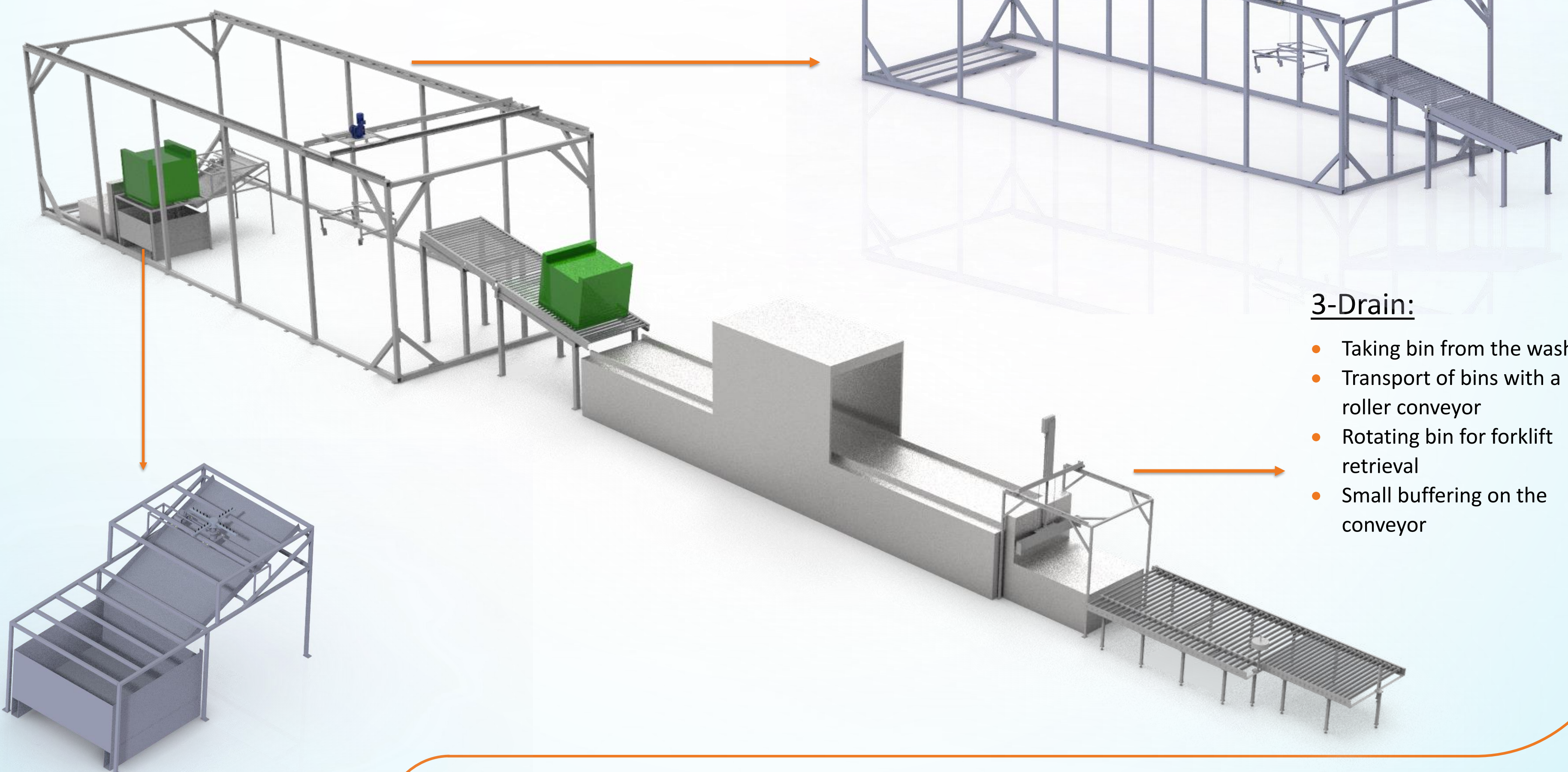
Main requirements

- All used steels must be stainless steel
- All present bins must be reused
- 20 bin capacity in prebuffer
- Must fit the existing washing machine
- Maximum outside area: 7x17 m
- Must be weatherproof

1-Supply:

- Grab the bins
- (Overhead) crane with grabber to transport the bins
- Working area of the crane used as storage for the bins

Mechanical design



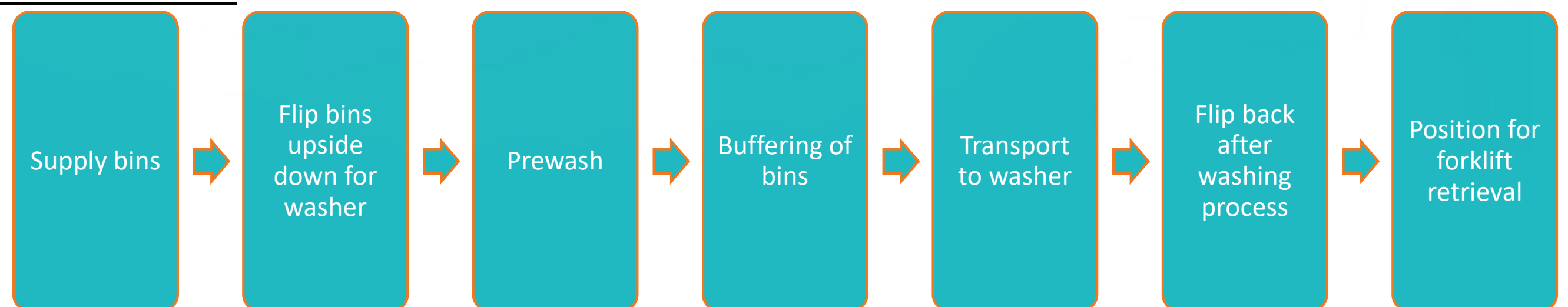
3-Drain:

- Taking bin from the washer
- Transport of bins with a roller conveyor
- Rotating bin for forklift retrieval
- Small buffering on the conveyor

2-Processing- prewash:

- Flipping of the bin for prewashing
- Prewashing of the bin with a rotating sprinkler
- Catching food remnants from prewashing

Procedure



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