

Ergonomic Assessment

Moving Cages and Carts

Concern Details

When packages exit the cubing machine, they are sorted into cages for transport or pushed to different areas around the facility to be sorted further. The push force required to move a full cage ranges from 16-38 kg and 7-17 kg empty.

The upper end of the required push forces exceed the initial push force guideline of 23 kg [1] and result in increased risk of injury.

Countermeasures

Countermeasures are required to reduce the push force:

- **Worker:**
 - o Push carts and cages with two hands instead of pulling them.
- **Company:**
 - o Choose appropriate casters/wheels to reduce push forces and maintain wheels in good condition.
 - o Design sort process to minimize double handling of boxes during sorting.
 - o Replace carts and cages with bins to be moved by pallet lift or forklift.

References

- (1) Snook, S.H. and Cirello, V.M. (1991). "The design of manual handling tasks: Revised tables for maximum acceptable weights and forces." *Ergonomics* 34(9): 1197-1213.

