

## ***Summary of Ergonomic Analysis EZ Mop Dump Station vs. Traditional Mop Bucket Dumping***

### **Overview:**

LiftSmart/DataFit conducted a side-by-side ergonomic evaluation comparing traditional mop bucket dumping to Separation Dynamics' **EZ Mop Dump Station**. The analysis measured joint forces, range of motion, balance, and stability using the LiftSmart motion capture system, ***demonstrating the reduced risk of slips, trips, and lifting injuries.***



***EZ Mop Bucket Dump Station:*** EZ lifting with handle and tilt mechanism, air-shock assists lift and holds bucket in place for rinsing, filter pad removes debris to prevent pipe plugging, sump pump transfers used mop water to drain or a holding tank.

Category	EZ Mop Dump Station	Traditional Mop Bucket Dumping
Ergonomics	Designed for waist-level dumping, reducing bending/lifting	Requires lifting and tipping bucket, risking strain/injury
Injury Prevention	Reduces risk of slips, trips, and lifting injuries	Common sources of strains and slips due to lifting/spilling
Speed & Efficiency	Quick disposal; no need to walk to slop sink or floor drain	Slower; often requires walking to janitor's closet or slop sink
Spill Risk	Enclosed or guided system minimizes water splashes	High splash and spill risk, especially when lifting to sink
User Experience	Easy to use, even for smaller or less-abled workers	Can be physically demanding and unpleasant
Facility Cleanliness	Contains mess at the source; cleaner janitorial areas	Often leaves splash zones and residual water near disposal

## Key Results of Ergonomic Evaluation:

Body Region	EZ DUMP Station
	Injury Risk Reduction
Hips	64%
Knees	69%
Ankles	60%
Lower-body strains to spine	65%
Shoulders	71%
Elbows	82%
Wrists	83%
Upper-body strains to spine	79%
Pelvis	54%
Trunk	51%
Spine	79%
Balance-related injuries	71%
Posture-related injuries	78%
Fatigue-related injuries	70%
Stability-related injuries	79%

## Conclusion:

**Manual mop bucket dumping consistently exceeded ergonomic safety guidelines for lifting, shoulder and back strain, and balance stability. The EZ Mop Dump Station reduced peak forces, improved body mechanics, and significantly lowered the risk of acute and repetitive strain injuries.**

**Source:** LiftSmart / DataFit Job Site Analysis Report (2025). Contact Separation Dynamics or DataFit for the full report and video analysis.