Console Inserts

Removal From Console

C	D	E
		
All Source Plastic Insert (Version 3)	**All Source Console Bag (DuraFlex Console)**	**Traditional Console Bag (Traditional Console)**

Criteria	C	D	E
Retrieval Height (vertical)	30" (0.76 m)	29.5" (0.75 m)	26", 29.5" (0.66 m, 0.75 m)
Retrieval Reach (horizontal)	Negligible	14.75" (0.37 m)	15" (0.38 m)
Approximate Time Removing (unlocking console, removing insert, dumping, re-locking console)	17 sec	41 sec	53 sec
Posture: Retrieval	• Standing • Moderate back flexion • Sustained for approximately 2 sec	• Squatting • Extended shoulders • Sustained for approximately 5 sec	• Kneeling • Extended shoulders • Neck forward and side flexion • Sustained for approximately 9 sec

Lifting and Dumping Console Inserts

C	D	E
 	 	 
All Source Plastic Insert (Version 3)	**All Source Console Bag (DuraFlex Console)**	**Traditional Console Bag (Traditional Console)**

Criteria	C	D	E
Lifting retrieval height (vertical)	30" (0.76 m)	6" (0.15 m)	6" (0.15 m)
Grip	Good	Fair	Fair
Maximum Weight Capacity	60 lb	100 lb	100 lb
Posture: Lifting	• Standing • Moderate back flexion • Even, balanced grip	• Standing/squatting • Extreme back flexion • Uneven grip • Unbalanced load	• Standing/squatting • Extreme back flexion • Uneven grip • Unbalanced load
Posture: Dumping	• Standing upright • Support weight of load on side of bin	• Standing upright • Extended shoulders	• Standing upright • Extended shoulders
Risk (Insert at 100% Capacity)	Moderate NIOSH LI*: 1.29	Moderate NIOSH LI: 2.91	Moderate NIOSH LI: 2.91
Risk (Insert at 75% Capacity)	Low NIOSH LI: 0.97	Moderate NIOSH LI: 2.18	Moderate NIOSH LI: 2.18
Risk (Insert at 50% Capacity)	Low NIOSH LI: 0.65	Moderate NIOSH LI: 1.45	Moderate NIOSH LI: 1.45
Risk (Insert at 25% Capacity)	Low NIOSH LI: 0.32	Low NIOSH LI: 0.73	Low NIOSH LI: 0.73

**LI = Lifting Index*

General Conclusions

Executive Consoles

Based on testing, objective measures, and professional judgment, the preferred executive console is **A**, the **All Source DuraFlex Console**. The "checkmark" and "X" determine acceptability when compared to ergonomic design guidelines and usability.

Executive Console		Dimensions	Design Features	Comments
A	 **All Source DuraFlex Console**	✓	✓	**Positive** ▪ Document deposit height is within recommended material handling range of 24" to 62" (0.61 m to 1.57 m) above the standing surface. ▪ Lock height is within recommended material handling range of 24" to 62" (0.61 m to 1.57 m) above the standing surface. ▪ Door opens 180º to provide full access to contents. ▪ Self-locking lock does not require user to bend over and manually lock the door. ▪ The fifth hook reduces gaps forming between the bag and the console as the bag fills, preventing documents from falling between the bag and the console, and minimizes unnecessary material handling. ▪ The fixed hooks prevent the console bags from moving and falling off the hooks as the bag fills, preventing documents from falling between the bag and the console, and minimizes unnecessary material handling. ▪ The plastic hooks prevent puncturing and tearing of nylon console bags, lengthening the lifespan of the bags. **Negative** ▪ Awkward to lift using 1-person lift; it is recommended that a lift assist or 2-person lift is used.
B	 **Traditional Console**	✓	✘	**Positive** ▪ Document deposit height is within recommended material handling range of 24" to 62" (0.61 m to 1.57 m) above the standing surface. **Negative** ▪ Heavy and awkward to lift using 1-person lift. It is recommended that a lift assist or 2-person lift is used. ▪ Lock height is too low (21.5"; 0.55 m), outside the recommended material handling range of 24" to 62" (0.61 m to 1.57 m) above the standing surface. ▪ Traditional lock requires user to bend over and manually lock the door. ▪ The four-hook design allows for gaps to form between the bag and the console as the bag fills. This may result in documents falling between the bag and the console, increasing material handling and time on task. ▪ The screw-in hooks allow the console bags to move and possibly fall off the hooks as the bag fills. This may result in documents falling between the bag and the console, increasing material handling and time on task. ▪ The metal hooks may puncture or tear the nylon console bags, shortening the lifespan of the bags.

Console Inserts

Based on testing, objective measures, and professional judgment, the preferred console insert is **C**, the **All Source Plastic Insert (Version 3)**. The "checkmark" and "X" determine acceptability when compared to ergonomic design guidelines and usability.

Console Insert		Retrieval	Lifting and Dumping	Comments
C	 **All Source Plastic Insert (Version 3)**	✓	✓	**Positive** ▪ Quick, easy retrieval and return ▪ Neutral postures during handling ▪ Lip rests on shred bin when dumping contents ▪ Console only needs to be open 90º to retrieve and return ▪ Multi-directional; cannot be put in console backwards ▪ Durable **Negative** ▪ Not recommended to carry up and down stairs
D	 **All Source Console Bag (DuraFlex Console)**	✓	✘	**Positive** ▪ Easy retrieval and put away (all hooks within line of sight) ▪ Durable ▪ Can be dragged down stairs **Negative** ▪ Load shifts inside bag when lifting ▪ Load capacity of bag is too high (100 lb) ▪ Not recommended to carry up stairs ▪ Uni-directional; can be put in console backwards ▪ Time on task is significantly longer compared to inserts
E	 **Traditional Console Bag (Traditional Console)**	✘	✘	**Positive** ▪ Durable ▪ Can be dragged down stairs **Negative** ▪ Awkward postures during retrieval and put away (back hooks not in line of sight) ▪ Load shifts inside bag when lifting ▪ Load capacity of bag is too high (100 lb) ▪ Not recommended to carry up stairs ▪ Uni-directional; can be put in console backwards ▪ Time on task is significantly longer compared to inserts

All Source Ergonomic Insert vs Traditional Console Bag

Findings as per 3rd party testing by HumanTech

Time removing (unlocking console, removing bag/insert, dumping and re-locking console)

Traditional Console Bag – 53 seconds

All Source Insert – 17 seconds

Savings of 36 seconds per console!

Scenario 1:

If a location services 5000 consoles - 50 hours a week is saved!

If an employee earns $15 an hour - $750 a week is saved!

This equates to $39,000 per location saved in one year!