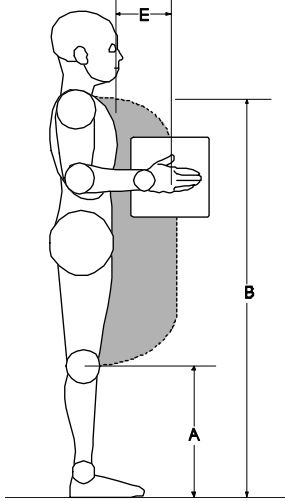
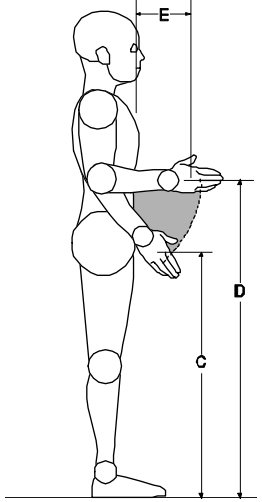


Material Handling Guidelines

- Load weight should be less than 51 pounds for a single person lift.
- Handle load within the maximum lifting zone (preferably within optimal). See Figure below.
- Handle load at a horizontal distance less than 12 inches from the body.
- Ideally, the frequency of lifting is once every five minutes or less, and a maximum frequency of 15 lifts per minute.
- Perform lifts without twisting.
- Provide a stable load to reduce balance shifting while lifting or carrying.
- Standing surfaces should be stable and high-friction.
- The load dimensions should allow a comfortable grasp, adequate handles are preferred.
- Optimal handle design has a 0.75 inch diameter, 4.5 inches or more in length, a 2 inch clearance and has a cylindrical shape with a smooth, non-slip surface.
- Optimal handhold cutout should have a height of 3 inches or more, 4.5 inches in length, and have a semi-oval shape.
- Containers should be 16 inches or less in width and less than 12 inches in height for manual material handling purposes.

Recommended Dimensions for Lifting Zone (Maximum and Optimal)

Zone	Dimension	Description	Maximum Lifting Zone	Optimal Lifting Zone
A	Min 22"	Maximum Zone Bottom: Bottom minimum acceptable working height for material handling.		
B	Max 49"	Maximum Zone Top: maximum acceptable working height for material handling.		
C	Min 33"	Optimal Zone Bottom: Minimum working height in preferred material handling range.		
D	Max 38"	Optimal Zone Top: Maximum working height in preferred material handling range.		
E	Max 6"	Distance From Body (to midpoint of hands): Optimal working distance in front of the body.		