



18. Force - lifting: frequency and weight

Ergonomic
design

What do you see or notice in terms of:

Note: For background information, see other side.

- frequency of lifting?

- weight?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail
on other side





18. Force - lifting: frequency and weight



We looked at ...	Why be concerned? (consequences)	Recommendations																																																						
<p>Frequency of lifting</p>	<p>If lifting is frequent:</p> <ul style="list-style-type: none"> • general fatigue • local muscle fatigue • movements less coordinated 	<ul style="list-style-type: none"> • Limit lifting frequency to less than once per 5 minutes, if possible • Use mechanical aids if loads are heavy, hard to handle, or lifted often <p>If loads are lifted frequently:</p> <ul style="list-style-type: none"> • store heavy loads (more than 10 kg/22 lbs) at hip level • store light objects between 60 cm/24" (knee level) and 150 cm/60" (shoulder level) 																																																						
<p>Weight</p>	<p>Maximum weight depends on lifting conditions - all the factors reviewed above. If high, the likelihood of incidents and of back or hand/arm problems goes up quickly</p>	<ul style="list-style-type: none"> • Display weights on loads • For occasional lifting straight ahead with a good grasp and over a distance of 70 cm/28", lift loads with a recommended top weight of less than: <table border="1" data-bbox="787 1018 1380 1291"> <thead> <tr> <th colspan="2"></th> <th colspan="3">Distance of hands from body</th> </tr> <tr> <th colspan="2"></th> <th>20 cm</th> <th>35 cm</th> <th>50 cm</th> </tr> </thead> <tbody> <tr> <th rowspan="4">Grip height</th> <th>40 cm</th> <td>19 kg</td> <td>11 kg</td> <td>8 kg</td> </tr> <tr> <th>75 cm</th> <td>22 kg</td> <td>12 kg</td> <td>9 kg</td> </tr> <tr> <th>100 cm</th> <td>20 kg</td> <td>11 kg</td> <td>8 kg</td> </tr> <tr> <th>140 cm</th> <td>17 kg</td> <td>10 kg</td> <td>7 kg</td> </tr> </tbody> </table> <table border="1" data-bbox="787 1344 1380 1617"> <thead> <tr> <th colspan="2"></th> <th colspan="3">Distance of hands from body</th> </tr> <tr> <th colspan="2"></th> <th>8 "</th> <th>14 "</th> <th>20 "</th> </tr> </thead> <tbody> <tr> <th rowspan="4">Grip height</th> <th>16 "</th> <td>42 lb</td> <td>24 lb</td> <td>18 lb</td> </tr> <tr> <th>30 "</th> <td>48 lb</td> <td>26 lb</td> <td>20 lb</td> </tr> <tr> <th>40 "</th> <td>44 lb</td> <td>24 lb</td> <td>18 lb</td> </tr> <tr> <th>55 "</th> <td>37 lb</td> <td>22 lb</td> <td>15 lb</td> </tr> </tbody> </table>			Distance of hands from body					20 cm	35 cm	50 cm	Grip height	40 cm	19 kg	11 kg	8 kg	75 cm	22 kg	12 kg	9 kg	100 cm	20 kg	11 kg	8 kg	140 cm	17 kg	10 kg	7 kg			Distance of hands from body					8 "	14 "	20 "	Grip height	16 "	42 lb	24 lb	18 lb	30 "	48 lb	26 lb	20 lb	40 "	44 lb	24 lb	18 lb	55 "	37 lb	22 lb	15 lb
		Distance of hands from body																																																						
		20 cm	35 cm	50 cm																																																				
Grip height	40 cm	19 kg	11 kg	8 kg																																																				
	75 cm	22 kg	12 kg	9 kg																																																				
	100 cm	20 kg	11 kg	8 kg																																																				
	140 cm	17 kg	10 kg	7 kg																																																				
		Distance of hands from body																																																						
		8 "	14 "	20 "																																																				
Grip height	16 "	42 lb	24 lb	18 lb																																																				
	30 "	48 lb	26 lb	20 lb																																																				
	40 "	44 lb	24 lb	18 lb																																																				
	55 "	37 lb	22 lb	15 lb																																																				

Translated and adapted from SOBANE materials, available at www.sobane.be/fr/tms_obs.html

