Lifting and Handling Guidance

Source: L23, Manual Handling Operations Regulations 1992 (as amended) Guidance on Regulations

Manual handling risk assessment detailed assessment guidelines filter

Introduction

1 The Manual Handling Regulations set no specific requirements such as weight limits. Instead, they focus on the needs of the individual and set out a hierarchy of measures for safety during manual handling operations:

(a) avoid hazardous manual handling operations so far as is reasonably practicable;
(b) make a suitable and sufficient assessment of any hazardous manual handling operations that cannot be avoided; and
(c) reduce the risk of injury from those operations so far as is reasonably practicable.

Risk assessment filter

2 Where manual handling operations cannot be avoided, employers have a duty to make a suitable and sufficient assessment of the risks to health. This assessment must take into account the range of relevant factors listed in Schedule 1 to the Regulations. A detailed assessment of every manual handling operation, however, could be a major undertaking and might involve wasted effort. Many handling operations, for example lifting a tea cup, will involve negligible handling risk. To help identify situations where a more detailed risk assessment is necessary, HSE has developed a filter to screen out straightforward cases.

3 The filter is based on a set of numerical guidelines developed from data in published scientific literature and on practical experience of assessing risks from manual handling. They are pragmatic, tried and tested; they are not based on any precise scientific formulae. The intention is to set out an approximate boundary within which the load is unlikely to create a risk of injury sufficient to warrant a detailed assessment.

4 The application of the guidelines will provide a reasonable level of protection to around 95% of workingmen and women. However, the guidelines should not be regarded as safe weight limits for lifting. There is no threshold below which manual handling operations may be regarded as `safe'. Even operations lying within the boundary mapped out by the guidelines should be avoided or made less demanding wherever it is reasonably practicable to do so.

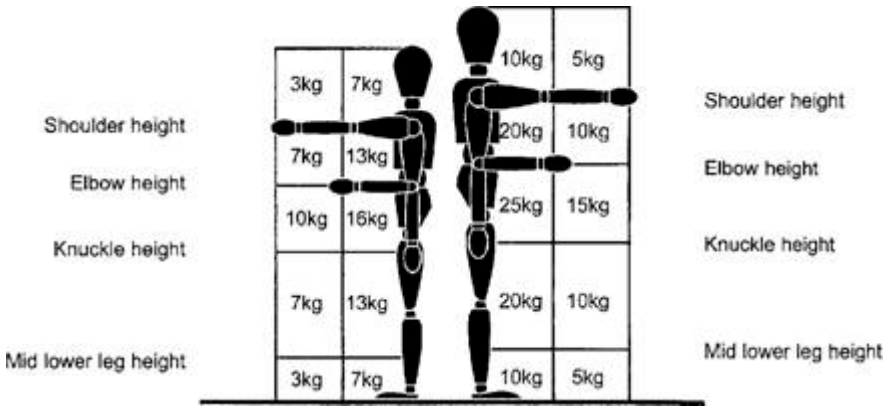
5 It is important to remember that the purpose of the guidelines is to avoid wasted time and effort. The use of the filter will only be worthwhile, therefore, where the relevance of the guideline figures can be determined quickly, say within 10 minutes.

If it is not clear from the outset that this can be done, it is better to opt immediately for the more detailed risk assessment.

Guidelines for lifting and lowering

6 The guidelines for lifting and lowering operations assume that the load is easy to grasp with both hands and that the operation takes place in reasonable working conditions with the handler in a stable body position. They take into consideration the vertical and horizontal position of the hands as they move the load during the handling operation, as well as the height and reach of the individual handler. For example if a load is held at arm's length or the hands pass above shoulder height, the capability to lift or lower is reduced significantly.

7 The basic guideline figures for identifying when manual lifting and lowering operations may not need a detailed assessment are set out in Figure 1. If the handler's hands enter more than one of the box zones during the operation, the smallest weight figures apply. It is important to remember, however, that the transition from one box zone to another is not abrupt; an intermediate figure may be chosen where the handler's hands are close to a boundary. Where lifting or lowering with the hands beyond the box zones is unavoidable, a more detailed assessment should always be made.



Women **Men**

8 These basic guideline figures for lifting and lowering are for relatively infrequent operations - up to approximately 30 operations per hour. The guideline figures will have to be reduced if the operation is repeated more often. As a rough guide, the figures should be reduce by 30% where the operation is repeated once or twice per minute, by 50% where the operation is repeated around five to eight times per minute and by 80% where the operation is repeated more than about 12 times per minute.

9 Even if the above conditions are satisfied, a more detailed risk assessment should be made where:

(a) the worker does not control the pace of work;
(b) pauses for rest are inadequate or there is no change of activity which provides an opportunity to use different muscles;
(c) the handler must support the load for any length of time.

Guidelines for carrying

10 Similar guideline figures apply to carrying operations where the load is held against the body and is carried no further than about 10 m without resting. If the load is carried over a longer distance without resting or the hands are below knuckle height then a more detailed risk assessment should be made.

11 Where the load can be carried securely on the shoulder without first having to be lifted (as for example when unloading sacks from a lorry) the guideline figures can be applied to carrying distances in excess of 10 m.

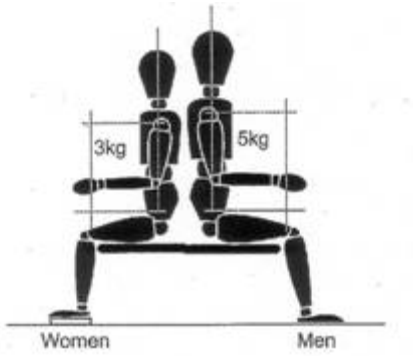
Guidelines for pushing and pulling

12 For pushing and pulling operations (whether the load is slid, rolled or supported on wheels) the guideline figures assume the force is applied with the hands between knuckle and shoulder height. The guideline figure for starting or stopping the load is a force of about 25 kg (ie about 250 Newton's) for men and about 16 kg (ie about 160 Newton's) for women. The guideline figure for keeping the load in motion is a force of about 10 kg (ie about 100 Newton's) for men and about 7 kg (ie about 70 Newton's) for women.

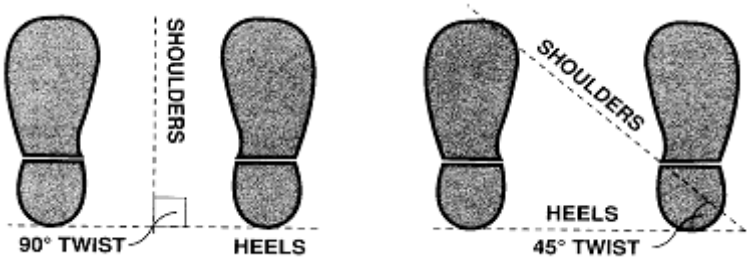
13 There is no specific limit to the distance over which the load is pushed or pulled provided there are adequate opportunities for rest or recovery.

Guidelines for handling while seated

14 The basic guideline figure for handling operations carried out while seated, shown in Figure 2, is 5 kg for men and 3 kg for women. These guidelines only apply when the hands are within the box zone indicated. If handling beyond the box zone is unavoidable, a more detailed assessment should be made.



Other considerations: Twisting



15 In many cases, manual handling operations will involve some twisting (see Figure 3) and this will increase the risk of injury. Where the handling task involves twisting and turning, therefore, a detailed risk assessment should normally be made. However, if the operation is relatively infrequent (see paragraph 8 of this Appendix) and there are no other posture problems then the filter can be used. In such cases, the basic guideline figures shown above should be reduced if the handler twists to the side during the operation. As a rough guide, the figures should be reduced by about 10% where the handler twists through 45° and by about 20% where the handler twists through 90°.

Remember: The use of these guidelines does not affect the employer's duty to avoid or reduce risk of injury where this is reasonably practicable. The guideline figures, therefore, should not be regarded as weight limits for safe lifting. They are an aid to highlight where detailed risk assessments are most needed. Where doubt remains, a more detailed risk assessment should always be made. Even for a minority of fit, well-trained individuals working under favourable conditions, operations which exceed the guideline figures by more than a factor of about two may represent a serious risk of injury. Such operations should come under very close scrutiny.