



Manual handling information

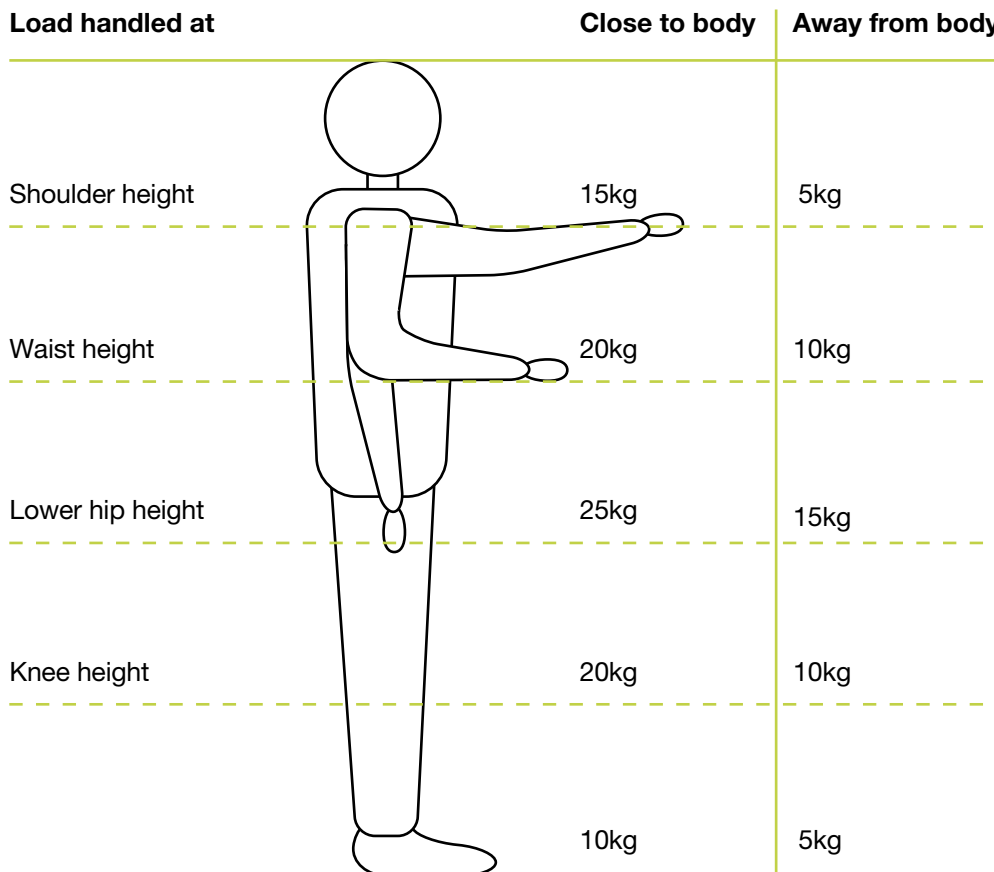
Guidelines for safer manual handling

Lifting and lowering

Basic guidelines for lifting and lowering loads are provided in Diagram 1. It is assumed that the worker can grasp the load easily, and that they can work in an upright position.

If the design restricts the lifting operation to the guideline figures, there is a good chance that it will offer reasonable protection to the majority of workers on construction sites.

Diagram 1: Basic guidelines for handling



Note that the figures in Diagram 1 assume that a worker is carrying out 25 handlings per hour. If the number is higher than this, the figures should be reduced as follows:

- **75 handlings per hour: reduce by 30 per cent**
- **150 handlings per hour: reduce by 50 per cent**
- **300 handlings per hour: reduce by 80 per cent**

If the worker has to twist to the side during the lifting operation, the figures in Diagram 1 should be reduced as follows:

- **Handler twists through 45°: reduce by 10 per cent**
- **Handler twists through 90°: reduce by 25 per cent**

If the load has to be carried for a distance of more than 10 metres without a rest, the guidelines have to be further reduced. See Table 2 for details.

Life outside the tick box.



Posture

Table 1 provides guidelines on how to reduce the amount of time spent working in non-ergonomic positions. This recognises that, sometimes, such work is unavoidable.

Table 1: Limiting exposure to an unsafe posture

| Work position | Maximum exposure |
|--|---|
| Stooping (back is bent more than 20°) | Less than 10 minutes per hour, or fewer than 24 stoops per hour |
| Working above shoulder level | Less than 10 minutes per hour, or fewer than 24 operations per hour |
| Twisted head (where head is bent at an angle of more than 20°) | Less than 10 minutes per hour |
| Kneeling or working with knees bent | Less than 10 minutes per hour |

Physical strain

Again, these guidelines concentrate on limiting the exposure to the risk.

Table 2: Limiting physical strain

| Activity | Position/distance | Maximum exposure |
|---|----------------------|--------------------------------------|
| Supporting the Diagram 1 load for more than six seconds | Above shoulder level | Eight times per hour |
| | At waist level | 15 times per hour |
| | Below knee level | Four times per hour |
| Carrying the Diagram 1 load at waist level without a rest | 10-15 metres | Reduce Diagram 1 load by 15 per cent |
| | 15-25 metres | Reduce Diagram 1 load by 30 per cent |

Construction work and handling hazards

Many day-to-day construction operations expose workers to the possibility of harm from lifting and lowering, working with poor posture or from physical strain. Some of these are detailed in Table 3.

Table 3: Operations introducing handling hazards

| Hazardous handling operation | Site operation(s) that could expose workers to the hazard |
|---|--|
| Lifting heavy loads | Blockwork, placing reinforcing bar, installing structural elements such as I-beams |
| Stooping while working | Fixing reinforcing bar, finishing concrete, digging, scabbling concrete, pipe-laying, spreading concrete |
| Working above shoulder height | Brickwork, scaffolding, installing services, glazing |
| Working with a twisted neck | Working in confined spaces, for example when installing services |
| Working while kneeling, or with legs bent | Fixing HD bolts in confined spaces, finishing concrete, scabbling concrete, pipe-laying |
| Carrying heavy loads | Reinforcing bar, blockwork, steel sections |

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