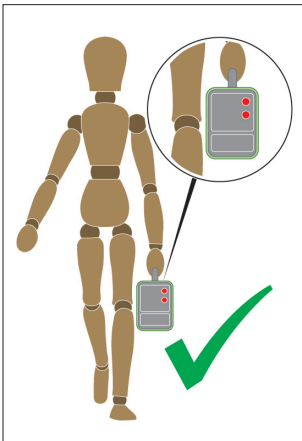


Choosing a welding set?

Make sure you can handle it



This is leaflet INDG390(rev2),
revised 02/12

Introduction

This leaflet is aimed at employers, although suppliers of welding sets will also find it useful. It gives advice on identifying, managing and controlling the risks to your employees caused by handling welding equipment.

At the end of the leaflet there is an illustrated checklist to help you make the right choice when you select welding equipment.

Welding sets are becoming smaller and lighter. But if you need to regularly move the set by hand, you may need to include this task as part of your general handling risk assessment.

The risks

Manual welding can be a demanding and difficult job. It can involve precision work, with the welder's body being in a fixed or awkward posture, often in a confined environment. Welders also have to handle heavy materials and equipment.

All these factors may increase the risk of workers developing musculoskeletal disorders, such as back problems, or even upper limb pain in the neck and shoulders.

A study found that 51% of welders suffered at least one period of sickness over a two-year period, taking time off work because of muscle, joint and tendon disorders.

Selecting equipment

When selecting work equipment, the Provision and Use of Work Equipment Regulations 1998 require you to consider the risks to the health and safety of people using that equipment. This includes manual handling risks.

Selecting the right welding set may help avoid:

- personal suffering caused by injuries or ill health from musculoskeletal disorders;
- the financial burden of sickness absence and increased insurance premiums;
- reduced productivity; and
- welders being unable to come back to this type of work, which could affect their future earnings.

Reducing injuries and ill health caused by handling welding equipment will benefit people working in this sector.

Here are some design features to look at when deciding between welding sets with the same power output:

- Do you have to carry the set? Consider controlled pushing or pulling of the set instead of lifting and carrying.
- How easily can you grasp the set?
- Are the handles suitable?
- Can you hold the set close to the body (avoid sharp corners, jagged edges, rough surfaces etc)?
- Is it well balanced?

Also consider:

- handle orientation;
- ease of pushing/pulling;
- axle types;
- size of wheels;
- wear and maintenance of wheels/tyres;
- effect of torch, wire feed, hoses, gas bottles etc on the handling characteristics of the welding set.

The checklist in this leaflet will help you select the right welding set.

Want to know more?

Getting to grips with manual handling: A short guide Leaflet INDG143(rev2)
HSE Books 2004 (priced packs of 10 ISBN 978 0 7176 2828 5)
www.hse.gov.uk/pubns/indg143.pdf

Manual handling assessment charts Leaflet INDG383 HSE Books 2003 (priced packs of 10 ISBN 978 0 7176 2741 7) www.hse.gov.uk/pubns/indg383.pdf

Manual handling. Manual Handling Operations Regulations 1992 (as amended). Guidance on Regulations L23 (Third edition) HSE Books 2004
ISBN 978 0 7176 2823 0 www.hse.gov.uk/pubns/books/l23.htm

There is also advice on HSE's website at www.hse.gov.uk/msd and at www.hse.gov.uk/welding/index.htm.

Further information

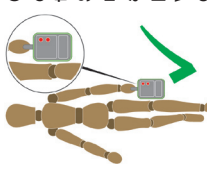
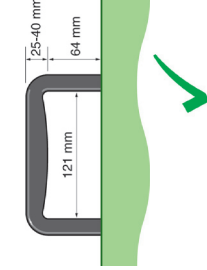
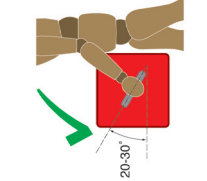
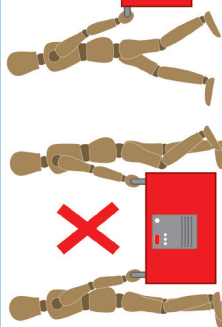
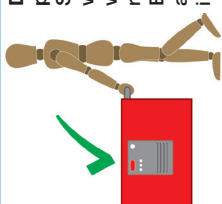


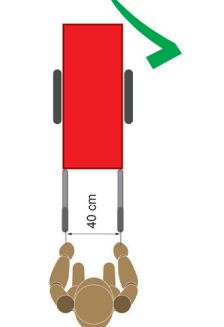
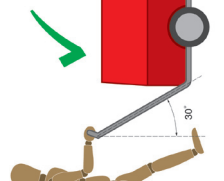
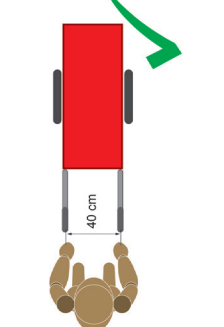
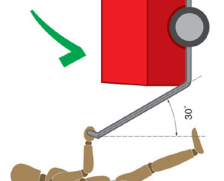
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This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This leaflet is available in priced packs from HSE Books ISBN 978 0 7176 6499 3. A web version can be found at www.hse.gov.uk/pubns/indg390.pdf.

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Welding set buyer's guide: Considering manual handling

| Welding set size | Handling type | Ergonomic checklist |
|------------------|-------------------------------------|--|
| Small | Single person One- or two-handed | <p>Can the set be carried close to the body? Smooth edges and rounded corners allow closer physical handling without injury or clothing damage</p>  <p>Does the handle allow a powerful grip while carrying? Good handle size and clearance allows a better grip, even while wearing gloves</p>  <p>Is the handle position good? Side-mounted handles allow closer handling Is the wrist position comfortable? Angled handles improve wrist comfort and enable a stronger grip</p>  |
| Medium | Two-person | <p>Do both people have a comfortable posture? Side-mounted, protruding handles will help by giving extra leg space to walk more freely with a good posture, reducing lower back forces significantly. Even though the second handle arrangement is better, it could be improved by adding wheels</p>    <p>Is it too heavy for one person? Avoid lifting and carrying over 10 kg* with one hand or 25 kg* with two hands - it can increase the risk of lower back injury</p>  |
| Large | Two to four wheels | <p>Good handle width? Is there enough room for someone to stand inside the handles while gripping them?</p>  <p>Good handle clearance? Is there room below the legs to allow a full swing of the leg while walking forwards, pushing the trolley?</p>  <p>Good handle height? Can the welder lift and move the set without stooping?</p>  <p>Axle configurations? Consider how easily the welder can move over rough surfaces, when evaluating different axle designs</p>  |

Remember to consider torches, wire feeders, hoses, gas bottles etc in any risk assessment - they change the handling characteristics of equipment

*Weights and dimensions are guidance values only