

Safe Use/Installation Instructions

Drag Box Base and Top Extensions (5mtr Series)

DB5 SERIES

**This describes the correct and safe method of assembly, to change and add struts.
It also offers a guide to Correct Installation Procedure.**

The method of equipment installation described is only a suggestion, the ultimate safety and responsibility of installation is with the company/person responsible for installing it.

Box Type	Length	Height	Weight	Spindles
Drag Box Base	5mtr	2.6mtr	4866kg	(695 Fixed)
Drag Box Top Extension	5mtr	2.0mtr	3860kg	(695 Fixed)
Drag Box Top Extension	5mtr	1.3mtr	2995kg	(695 Fixed)

Part 1

The changing/making up of the Drag Box described above, adding of struts and adjusting the internal of the box can be carried out as follows:

- (1) The drag box base needs to be put down in a safe working area and on a flat safe surface.
- (2) The drag box plates need to be separated into two halves, it needs to be lifted safely using the correct lifting points on the box, and a chain sling that has the correct safe working load, and conforms to LOLER. Making sure, that if you lift it up directly above the plate on the ground, no one walks or works underneath while the top is elevated.
- (3) Once the plates are separated, you are ready to add the struts, to form your square or rectangle. To insert the spindles in the strut holders, simply remove the large long pins and r clips supplied in the strut holders, add the struts onto the strut holders in the plate on the ground and replace the long thick pins through the strut holes, adding the large r clips onto the end of the pins.
You are now ready to complete the connection of the drag box plate on the ground to the elevated plate. Remove the long pins and r clips from the strut holders in the elevated plate, and gently lower the top plate onto the end of the struts on the bottom plate, again remembering not to put your hands on the end of the strut holders, (risk of jamming your hands in the strut joint) then add the long pins and r clips once the struts are in the holders. The drag box is now ready to be used.
- (4) To extend the internal of the drag box by 200mm simply lay the box on a safe flat surface, remove the long pins and clips from the holders on one side and lift it until the holes appear at the end of the strut holders, put the long pins back in the struts, and replace the large r clips. Be careful when repositioning the struts (risk of jamming your hand in the joint).

Part 2

- (1) Excavate approximately 1.5mtr below ground level to the overall plan size as required
- (2) Place assembled drag box base in the excavation by use of a suitable 4 Leg chain sling (as can be supplied by us – 11.2t swl in this case) on the correct lifting points on the box plates. It is correct practice to install the box vertically.
- (3) The drag box base can be progressively installed by using the ‘cut and lower’ technique, using the excavator to apply downward pressure to each corner of the box. There are pulling points fitted to the box section behind the cutting edge, do not pull the drag box by the struts, we can supply a two leg chain that can be used for pulling. When the top of the base is at ground level it is now ready for the top extension to be added.
- (4) The top extension will come made up with the four top box connectors and pins ready to be attached to the base. To connect, simply take out the pins at the end of the top box connectors, lift safely the top extension onto the base, making sure the connectors fit tightly into the holders on the both plates of the drag box base, then add the pins that you removed previously._
- (5) If you wish to add any further top extensions, repeat paragraph 4 (Part 2) _

- (6) Once you are ready to extract the boxes, you must lift off the top extensions one by one, using the correct lifting points and method.

It is very important that you consider the risk to the person going into the excavation putting the chains onto the boxes for extraction – the only safe way is to use a suitable man working cage that has head and side protection.

When you are ready to lift out the drag box base you need to account for the soil cohesion/friction pressures on the sides of the base. It is correct practice to try and free the box from the sides of the excavation before extracting, using caution not to damage the box.

Warning – Shock loads can be more than twice the static load, and can cause very serious damage to the chain you are using – which could also include the chain failing, causing death or serious injury to the people around the excavation.

- (7) The drag box base should be progressively withdrawn as you are backfilling the excavation.

Current Safety Legislation

We recommend that users of any excavation support equipment are familiar with the following regulations, references and publications:

- (i) HSE – Health and Safety at Work Act - 1974
- (ii) HSE – Occupational Health and Safety Act - 1996
- (iii) HSE – Construction Design and Management Regulations - 2007
- (iv) HSE – Working at Height Regulations
- (v) HSE – Safety in Excavations – CIS8REV1
- (vi) HSE – Health and Safety in Excavations - Be Safe and Shore – HSG 185
- (vii) BS8002 (1994) – Earth Retaining Structures
- (viii) CIRIA SP95 – The Design and Construction of Sheet Piled Cofferdams
- (ix) CIRIA Report 97 – Trenching Practice

Current Safety Legislation requires that the product users formulate a safe system of work to undertake the excavation, which may include a Temporary Works Design. This information is intended to provide general guidance only on the practical aspects of installing and dismantling our boxes – if ever there is a doubt about whether you need trench support or not, remember this:

Four very experienced groundworkers were laying foul drains across a greenfield site. The trench was 4.5mtr deep and 2.2mtr wide, with vertical sides. The contractors were advised to provide shoring but they insisted that the ground, comprising of mudstone, was self-supporting and showed no sign of movement. The following day the trench side collapsed catastrophically, killing three of the workers and seriously injuring the fourth.

Moral to the story – No matter how much trenching experience you have, never take the ground for granted – don't become a statistic!

For any further information you require, on technical support or advice on temporary works designs and equipment, contact:

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