

**Manhole Buddy lifting products are designed for one-person operation. Used as instructed in this guide, an average build person, male or female, can safely lift a load equal to their own weight, using only modest physical effort.**

A Manhole Buddy system comprises a Lifting Trolley and a Cover Attachment. Each element is designed such that when combined, they will raise a drain cover sufficiently to clear the retaining frame. A safe lifting action is achieved by the operator pushing downwards on the trolley handle. Steel and Alloy lifting trolleys are available, along with four cover lifting attachments. All elements have been safety tested by an independent authority.



### **MagTec**

a strong permanent magnet, for use on metallic covers.



### **KeyTec**

a key-attached system typically used on non-metallic or large split covers.



### **VacTec**

a manually-charged vacuum device for smooth covers



### **ChainTec**

an adjustable chain system with hook connections

### **LIFTING AND MOVING DRAINAGE COVERS HAS INHERENT RISKS.**

Manhole Buddy equipment should only be used by competent persons who are familiar with the lifting activity and have read this User Guide

### Contents

Page 1	Cover page
Page 2	Unfolding the lifting trolley
Page 3	Repacking the lifting trolley
Page 4	<b>MagTec</b> magnetic lifting attachment
Page 5	<b>KeyTec</b> key-based lifting attachment
Page 6	<b>VacTec</b> vacuum lifting attachment; <b>ChainTec</b> lifting attachment
Page 7	Safety consideration; Good practice; Caring for equipment
Page 8	Product data; Warranty; Declaration of Conformity

## Unfolding the Manhole Buddy Lifting Trolley



Remove locking pin



Undo Velcro strap



Raise front section



Insert locking pin  
(see right for alternatives)



Straight handle (left) is most common configuration.  
Cranked handle (right) may be useful on raised covers



Press stay bars inwards to  
release front arm



Push front arm  
forward ..



... until stay bars are straight

**Before using the lifting trolley, check all pins and bolts are in place and secure  
Inspect for any visible signs of misalignment or damage**

**DO NOT use faulty or damaged equipment**

Repacking the Manhole Buddy Lifting Trolley after use



Raise front arm by lifting stay bars in front of joint



Fold front arm back against frame



Remove locking pin



Fold handle section forward



Refit Velcro strap



Replace locking pin on frame

**Take care** to avoid pinching or trapping fingers when folding the trolley

## Manhole Buddy MagTec

**MagTec** magnets are supplied **exclusively for use with** a Manhole Buddy lifting trolley.

- The magnet requires no external power or recharging
- The magnet can only be activated when in contact with a metallic surface. It will connect best with a clean and smooth metallic surface but is nevertheless suitable for lifting most patterned metallic covers.
- When active, the magnet transmits a strong but localised magnetic field. Users should be mindful of the effect this could have on sensitive electronic equipment or storage media. **Anyone fitted with a heart pacemaker should not approach or use this equipment**
- When placed on the cover, the magnet becomes part of the suspended load. The total weight of the magnet and the cover must not exceed the **Working Load Limit** of the Lifting Trolley.

The lifting hanger on the magnet incorporates the main lifting pin and the high leverage slots (arrowed). Rotating the hanger (or the magnet) allows the user to place the trolley in the most convenient lifting position



Moving the lifting pin on the magnet (three positions available) alters the height of the trolley handle. This allows the user to select an operating position that best suits their height or stature.

To de-activate the magnet, press the safety release button at the end of the On-Off handle and firmly control its return to the Off position **using two hands**. A magnet should never be uncoupled whilst an unsupported load is attached.

## Useful Tips

1. **Use the high leverage facility to loosen the cover.** Place the magnet on edge of the cover as shown on right, engage the lifting pins in the open slots and push down on handle. If it is still stuck, repeat this procedure on other sides of the cover
2. **On split covers, try lifting one half first, as the connecting bolts may be missing.** If the bolts are in place, straddle the joint and lift the cover as one
3. **Having unseated the cover, raise it using the main lifting position.** Engage the forward lifting arm with the horizontal lifting pin. If necessary, adjust the lifting pin position (three available) to match your height or stature
4. **Having raised the cover, pivot the trolley through 90 degrees.** This retains your position for refitting the cover
5. **Where possible, avoid heavy hammering and levering of covers.** On stubborn covers (with two persons), one can apply constant lifting effort centrally; the other can **gently** shock the edges of the cover to help it release



## Manhole Buddy KeyTec

**KeyTec** equipment is supplied **only for use with** a Manhole Buddy lifting trolley.

- The basic package comprises a folding spreader bar, high leverage lifting hook and a carry bag which will accommodate up to three pairs of lifting keys
- Three lifting key types are available (pictured below). Two feature 'T' shaped blades, of 25 and 35 mm width. The third key type has an 'L' shaped blade of 20 mm width. The keys are inserted through the spreader bar, engaged in the cover slot and secured in place by adjusting the locking collar.
- Where a cover has threaded lifting points (most commonly found indoors) the spreader bar can be secured using threaded bolts and appropriate washers
- The lifting hanger on top of the **KeyTec** incorporates the main lifting pin and can be rotated freely. This facility is particularly beneficial; see further explanation in **Useful Tips** below (item 4.)
- When secured to the cover, the **KeyTec** components become part of the suspended load. The total weight of the **KeyTec** elements and the cover must not exceed the **Working Load Limit** of the Lifting Trolley.



## Useful Tips

1. **Position the spreader bar centrally on the cover.** Keys should therefore be at equal distances from the centre.
2. **Use the high leverage facility to loosen the cover** (pictured right). Fit the lifting hook on the pins on the forward lifting arm. Engage the lower hook in the end loop of the spreader bar. Press gently on trolley handle to unseat the cover.
3. **Having unseated the cover, raise it using the main lifting position.** Engage the forward lifting arm with the horizontal lifting pin. If necessary, adjust the lifting pin position (three available), which in turn will raise or lower the trolley handle, thereby giving you the most comfortable working position. You can also rotate the lifting hanger to a position that gives easiest access for the lifting trolley.
4. **Having raised the cover, pivot the trolley through 90 degrees.** This retains your position for refitting the cover
5. **Where possible, avoid heavy hammering and levering of covers.** On stubborn covers (with two persons), one can apply constant lifting effort centrally; the other can **gently** shock the edges of the cover to help it release



## Manhole Buddy *VacTec*

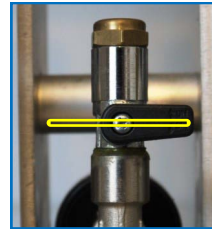
The **VacTec** lifting attachment is designed for lifting and low-level transportation of items having smooth non-porous surfaces, typically concrete-topped drain covers and paving slabs. It attaches to the surface through the vacuum created and maintained by the user. The surface texture and condition of the piece being lifted will influence the strength and retention of the vacuum, so performance will vary. Because a constant vacuum can not be guaranteed, the device is **NOT SUITABLE** for suspending loads for long periods.



### In Use

The **VacTec** user manually creates the vacuum.

1. Move the lever (behind the gauge) to the horizontal position
2. Create the vacuum with a push-pull action on the handle - 4 or 5 strokes will ensure a strong vacuum is established
3. A strong vacuum exists when the needle is on the left side of the dial. The vacuum can be strengthened at any time by one or more recharging strokes
4. To release the vacuum when lifting is complete, return the lever to the vertical position

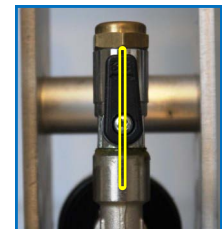


**Valve closed**

Vacuum enabled



**Strong** ! **Recharge**



**Valve open**

Vacuum disabled

## Manhole Buddy *ChainTec*



**Through chain length:** 1200 mm (hook to hook); **Hook dia:** 8 mm **Weight:** 4.5 kg; **Working Load Limit:** 150 kg

A chain-based lifting attachment, based on two chain sections, terminated on 8 mm diameter hooks, as shown above. Individual chains are load-tested on assembly and tagged with Safe Working Load and Serial Number.

Chain lengths are adjusted by slotting links into the centre block.

**ChainTec** features the same lifting hanger as **MagTec** and **KeyTec** attachments, hence multiple (3) lifting pin positions permit the user to establish the most comfortable stance at the trolley handle.

## Safety Considerations

- Manhole Buddy lifting products are designed for one-person operation. All persons using the equipment should have a sound understanding of the risks associated with lifting and moving drain covers and should have previously read this User Guide.
- All cover attachments become part of the load when attached to a lifting trolley. Their weight must therefore be taken into account, so the Working Load Limit of the trolley is not exceeded. Summary data for all Manhole Buddy equipment is shown on page 8 of this guide
- Non-essential personnel should be excluded from areas where drainage covers are being handled. When working in public areas, measures should be taken to bar access to the risk zone.
- If a co-worker is assisting in the placement of covers, a long lever bar should be used as a guiding tool, so as to distance themselves from the suspended cover.
- Suspending a load presents the potential for damage or injury, should an element fail unexpectedly. All Manhole Buddy equipment has been independently tested and expert advice has been taken in the process of setting Working Load Limits. With suspended magnets, there remains the potential for unexpected dropping of the load as a result of conditions that could not be anticipated by the manufacturer. As highlighted elsewhere in this guide, successful use of the VacTec system requires additional competence on the part of the user.

## Suggested Good Practice

- Do** Check all equipment thoroughly before and after each use
- Do** Use the HIGH LEVERAGE facility to unseat a cover before attempting to raise it
- Do** Clean the surface of the cover before setting the magnet in place
- Do** Use both hands to control the return of the magnet handle to the Off position
- Do** Ensure the correct-sized cover key is used when a **KeyTec** is being deployed
- Do** Adjust **ChainTec** chain lengths to ensure the load is balanced
- DO NOT** Permit untrained persons to use Manhole Buddy equipment
- DO NOT** Swing on the lifting trolley handle or use a 'jerking' action to move a difficult cover
- DO NOT** Use Manhole Buddy cover attachments with other lifting devices
- DO NOT** **OVER EXERT YOURSELF**  
if a cover does not respond to the general techniques suggested in this User Guide, a more powerful lifting system is probably required

## Caring for the Equipment

Maintaining equipment in a clean condition lessens the risk of injury when transporting or operating it and makes it easier to undertake inspections for wear or damage.

- It is advisable to store the equipment in a clean and dry environment at all times.
- Spray lubricant should be applied to moving joints on the Lifting Trolley, **KeyTec** hinged joints and the threaded portions of the **KeyTec** Cover Keys, as and when required.
- A thin film of spray lubricant can be applied to the base of the magnet, to lessen the risk of corrosion. Thick oils **should not** be used for this purpose.

## Product data

<b>Trolley</b>	<b>Steel</b>
with standard wheels	<b>Trolley</b>
Weight	16 kg
Folded length	910 mm
Folded height	310 mm
Unfolded length	1930 mm
Working Load Limit	150 kg
<b>MagTec Mega Magnet</b>	
Weight	21.5 kg
Working Load Limit	150 kg
<b>KeyTec</b>	
Max. key spacing	990 mm
Weight (with one pair of keys)	7.5 kg
Working Load Limit	150 kg
<b>VacTec</b>	
Width (Diameter)	300 mm
Height	430 mm
Weight	6.8 kg
<b>ChainTec</b>	
Through chain length	1200 mm
Weight	4.5 kg
Working Load Limit	150 kg

## Equipment Warranty

The product is warranted to be free from defects in material and workmanship, for a period of 12 months from the date of supply to the original purchaser.

The warranty does not apply to failure occurring as a result of abuse, misuse, negligent repairs, modifications, corrosion or normal wear and tear.

Equipment must be returned to your supplier for consideration of any warranty application. Refer to your supplier for any terms and conditions which may be part of your supply agreement

## EC Declaration of Conformity

In accordance with Machinery Directive 2006/42/EG

Hereby declare that the Manhole Buddy Lifting Trolleys and Cover Attachments (MagTec, KeyTec, VacTec and ChainTec) comply with the essential Health & Safety requirements of the EC Machinery Directive 2006/42/EG



## About this User Guide

Care has been taken to ensure all information provided is accurate at the time of writing.

A **Version Number** and **Date of Publication** is shown on the title page.

Updated versions of this guide may be posted on the product or supplier website from time to time.

Due to ongoing developments, later versions of the User Guide may show features and accessories not available with your purchase.

For further information, contact the supplier of your equipment, in the first instance.