

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 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.

Limited Equipment Warranty

The product is warranted to be free from defects in material and workmanship, in normal use and service, 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

About this User Guide

- ♦ Care has been taken to ensure all information provided is accurate at 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.

EC Declaration of Conformity

in accordance with Machinery Directive 2006/42/EG

PWM (Sales) Ltd, Gowdall Lane, Pollington, DN14 0AU
PWM Distribution, Saunders Lane, Romsey, SO51 0GP

hereby declare that the **Manhole Buddy Trolley** and the **Cover Attachment Systems** (*MagTec*, *ChainTec*, *KeyTec*) comply with the essential Health and Safety requirements of the EC Machinery Directive 2006/42/EG



Paul Welburn
Director
PWM (Sales) Ltd

Sean Kelly
Director
PWM Distribution

User Equipment Record

Date Purchased

Trolley type Aluminium Steel

Trolley serial no.

Magnet type Supreme Mega

Magnet serial no.

Accessories

User Notes

User Guide

Version 5 (March 2010)

Manhole Buddy was developed to assist in unseating, raising and moving drainage covers.
Its design objectives were:

To best protect the user

which it achieves by positioning them a safe distance from the cover

To lessen physical input

achieved through the mechanical advantage inherent in the trolley design

To improve productivity

the trolley unfolds with two simple actions. A choice of attachment methods ensures most covers can be raised quickly, yet safely.

Product designed for **One Person Operation**

Moving drainage covers has inherent risks.

This equipment should only be used by competent persons, who are familiar with the activity and have read and fully understood this User Guide

Manhole Buddy

Manhole & Drain Cover Lifter



Manhole Buddy - General Information

A Manhole Buddy system generally comprises a multi-function Lifting Trolley and a Cover Attachment system.

Two trolleys are offered, in Aluminium or Steel. The Aluminium trolley has an uncoated surface, the Steel is powder-coated. Both trolleys carry a label indicating their **Working Load Limit**.

Three cover attachment methods can be used with either trolley:

- ♦ A strong permanent magnet - **MagTec**
- ♦ A key and spreader bar kit - **KeyTec**
- ♦ An adjustable chain system - **ChainTec**

The **MagTec** method can be used on most metal covers. No lifting keys are required.

The **KeyTec** solution uses lifting keys and is most useful on non-metallic or large split covers.

The **ChainTec** system has a variety of uses and uniquely, can reach down to sub-surface assets.

All three methods use the same lifting hanger to connect with the trolley, hence each preserves the unique capabilities of the trolley.

The lifting hanger on each system can be rotated relative to the cover, so it is always possible to place the trolley in the best lifting position for any given situation, be it to avoid moving traffic, local obstructions or broken surfaces.

Manhole Buddy - Summary Data

Trolley with standard wheels	Aluminium Trolley	Steel Trolley
Weight	8 kg	16 kg
Folded length	910 mm	910 mm
Folded height	310 mm	310 mm
Unfolded length	1930 mm	1930 mm
Working Load Limit	100 kg	150 kg
MagTec Magnet including lifting hanger	Supreme Magnet	Mega Magnet
Weight	14 kg	21.5 kg
Holding Value **	409 kg	600 kg

** For comparative purposes only. NOT an indicator of lifting performance on a patterned drainage cover.

KeyTec System

Max. key spacing 990 mm

Weight
with one set of keys 7.5 kg

Working Load Limit 150 kg

ChainTec System

Through chain length 1200 mm (hook to hook)

Weight 4.5 kg

Working Load Limit 150 kg

Preparing the Trolley for use

The Manhole Buddy trolley should be delivered fully assembled. To put the equipment to use:

- ♦ Undo securing strap and unfold the 'T' handle.
- ♦ The main hinge joint will lock automatically or (on some steel frames) a push pin is inserted.
- ♦ Unfold the forward lifting arm - the restraining braces will hold it in the extended position
- ♦ Check the wheels are properly fitted and the retaining 'R' clips or split pins are secure



Sprung hinge lock



Pin hinge lock

There are two lifting points on the trolley. These engage with the lifting hanger (below) which is used on all three cover attachment systems.



- ♦ The inboard High Leverage lifting pins engage with the slots on the hanger (left) to deliver maximum force for unseating covers
- ♦ The outer lifting point connects with the upper lifting pin (centre) for raising and moving covers
- ♦ The High Leverage pins engage with the end loops on the KeyTec spreader bar, using the Multi-way Hook (right) for unseating covers

Adjusting the pin positions on the hanger raises or lowers the height of the T-handle, allowing the user to establish a working position that is suitable for the task and most comfortable for them.

Folding the Trolley after use

1. Having unhooked the attachment, lift the restraining bars to fold the front lifting arm inwards and rest it against the handle section.
2. 'Break' the T-handle, either by depressing the sprung hinge lock or removing the push pin.
3. Fold T-handle forward to lay on top of frame.
4. Refit securing strap (where present).

It is advisable to familiarise yourself with the folding action before using the equipment as there is the potential to pinch or trap fingers.

MagTec Magnets – General Information

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

- ♦ The magnets requires no power or recharging and can only be activated when in direct contact with a metallic surface.
- ♦ To de-activate the magnet, a safety release button on the On-Off handle is depressed and the handle firmly controlled whilst returning to the Off position. A magnet **should never** be de-activated whilst an unsupported load is attached to the Trolley.
- ♦ The Magnet will connect most effectively with a clean and smooth metallic surface. As drainage covers vary in design and condition, the competence of the user will play an important part in the effective use of this equipment.

ANYONE WITH A HEART PACEMAKER SHOULD NOT APPROACH OR USE THE MAGNET

- ♦ These Magnets transmits a strong but localised magnetic field. Users should be mindful of the effect this might have on adjacent electronic equipment and magnetic storage devices

MagTec Magnets - typical lifting routine

- ♦ Clean the surface of the drainage cover
- ♦ Position the magnet centrally on the cover
- ♦ Swing magnet activation lever to On position
- ♦ Hook outer lifting point into the hanger frame
- ♦ Apply consistent downward pressure on the 'T' handle, maintaining straight arms and allowing the knees to bend
- ♦ When the cover is raised, swing it to the side and place securely on a flat surface

If a cover has been compacted into the frame by dirt or heavy traffic, extra effort may be required to unseat it. As an alternative to pry bars, Manhole Buddy systems have a High Leverage lifting capability:



- ♦ Reposition the magnet on the edge of the cover and activate
- ♦ Hook the high leverage lifting pins into the slot on the hanger frame - see picture above
- ♦ Apply consistent pressure on the 'T' handle.
- ♦ If necessary, repeat at various points on the edge of the cover until it has been unseated
- ♦ Reposition the magnet centrally on the cover so it can be raised evenly and moved aside

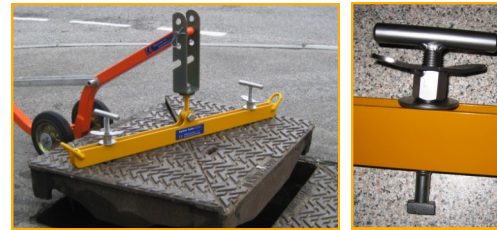
Note: When deactivating the magnet, depress the locking button in the handle (circled right) and **using both hands**, control the return action of the lever.



KeyTec System – General Information

The **KeyTec** system should be used where non-metallic covers are being lifted; it also provides an alternative means for lifting large split covers.

A Spreader Bar is secured to the cover through threaded lifting keys; a standard Manhole Buddy hanger connects the system to the lifting trolley



The stainless steel lifting keys are available in three standard blade widths:

... 35 mm 'T' ... 25 mm 'T' ... 20 mm 'L' ...

- ♦ The spreader bar should be placed centrally on the cover to ensure level lifting.
- ♦ With the bar secured, the lifting hanger can be raised and rotated to a position at which the lifting trolley can be best engaged.
- ♦ Unseating the cover will be achieved by use of the Multi-way Hook between the High Leverage lifting pins on the trolley and the end loops on the spreader bar (picture opposite page)

For maximum safety, the correct key type must be used when lifting covers; it will also be necessary to rid the key slots of dirt to ensure a secure fit.

ChainTec System – General Information

The **ChainTec** system was created for one-person lifting of large concrete-topped pavement covers, having ovalised key slots.



The 10 mm diameter hook on adjustable chain legs allows covers of any shape and form to be lifted.

The High Leverage unseating capability is available in some configurations; the Multi-way Hook can also be deployed through individual chain links.

Balanced lifting and carriage is best achieved with all four chain legs in use. Lifting a cover with only two attachment points is not recommended.

The chain legs are proof tested and tagged at the point of manufacture and in accordance with LOLER regulations, should be inspected every 6 months.

Key Safety Considerations

Manhole Buddy is designed for one person operation. If a co-worker is involved in the task, they should be fully conversant with the activity and the risks associated with handling covers.

A suitable extension pole should be used if they are assisting in the placement of covers, so they remain a safe distance from both the load and the opening.

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.

Suspending a load inherently involves some degree of risk of damage or injury, should an element fail. With suspended magnets, there is a potential hazard associated with the unexpected dropping of the load, as a result of conditions that could not be anticipated by the magnet supplier.

All Cover Attachments become part of the load when attached to the trolley, hence their weight must be taken into account, so that the **Working Load Limit** of the trolley is not exceeded. See weight information on page 1 (cover page).

Suggested Good Practice

- DO** Check all equipment thoroughly before each use for damage, loose linkages or missing security pins
- DO** Use the high leverage facility or a safe alternative, to unseat jammed covers before attempting to raise
- DO** Clean the surface of the drainage cover before deploying a magnet
- DO** Adjust the *ChainTec* to ensure the load is balanced and securely held
- DO** Ensure only the correct fitting keys are used with a **KeyTec** system
- DO NOT** Permit untrained personnel to use Manhole Buddy lifting equipment
- DO NOT** Swing on the 'T' bar handle or try to raise a cover by a 'jerking' action
- DO NOT** Allow a magnet On-Off lever to return unsupported to the Off position
- DO NOT** Permit **MagTec** magnets to be used with inappropriate lifting devices
- DO NOT** Lift a load using less than 3 Chain Legs, with a **ChainTec** system
- DO NOT** **OVER-EXERT YOURSELF**
If a cover does not respond to the general techniques outlined in this User Manual, a more powerful lifting system is probably required.