




# Know your lifts

The essential guide to working with  
manhole and meter pit covers



We'll run through the most common covers used across our region and describe the typical equipment you need to properly handle them, along with advice on best-practice lifting techniques.

This will help you carefully assess each cover you have to work with and make informed judgements about your approach.

Manual-handling potential hazards

Generic control measures

Guidelines you must apply when conducting frequent lifting and lowering operations

We've put together this advice and guidance to support and complement our key Essential Standards and Health and Safety policies, as well as any training you've completed.



# Contents

<b>4</b>	The Pristine manhole cover lifting key set
<b>5</b>	Carrying equipment
<b>6</b>	Before lifting a cover
<b>7</b>	Your typical tools
<b>8</b>	Proteus lifters
<b>9-11</b>	Pry bar lifts
<b>12</b>	Two-man lifts
<b>13</b>	Using two lifting keys or hooks
<b>14-16</b>	Two key lifts – up to 25kg
<b>17-19</b>	Two key lifts – over 25kg
<b>20</b>	Four key lifts
<b>21</b>	Two hook lifts
<b>22-23</b>	Lift and slide covers
<b>24</b>	Techno-covers
<b>25</b>	Secure covers

## The Pristine manhole cover lifting key set

We have introduced the Pristine manhole cover lifting key set to replace our existing range of manhole cover lifting keys.

### The set consists of:

- Six manhole cover location ends
- Two lifting handles
- A tool to remove debris from lifting slot on the cover
- Two split pins for locating the handles and location ends
- Two shims
- Two spreader bars for split covers



# Carrying equipment

There are lots of simple things you can do to reduce strain and potential injury.

- When you carry a rucksack, always wear both shoulder straps. And, if your rucksack has one, use the waist strap to keep it secure.
- Pack your rucksack so it feels comfortable to wear, with the load evenly distributed.
- Make sure you've got protective guards for all tools with points or sharp edges. This will protect you against stabbing and cutting while you carry your bag and when you reach in to retrieve tools
- Take care when you pick your bag up or put it down. The motion of swinging a bag off your shoulder or around your body can exert strain on your spine, muscles and ligaments.

- Avoid heavy lifting while you're wearing a rucksack or carrying a tool bag. Keep your bag away from the lift area to avoid causing a trip hazard while you're lifting.



Only carry essential items and tools with you, and limit the weight you carry.



## Before lifting a cover

Make sure any health and safety issues identified in your PoWRA or SHE 5 have been adequately identified and controlled before you start lifting any access cover.

- Think about how your work impacts others – are you obstructing a public footway or road?
- Make sure you have the right clothing, including your Personal Protective Equipment (PPE). Regularly check your PPE's in good condition.
- Check you've got the right tools and that they're all in good condition.
- Keep your tools within easy reach so you won't need to twist or stoop for them.
- Assess the best way to lift the cover
  - use the information in this booklet about the weight of different covers to make sure you're able to safely lift the one at hand.
- Gauge the weight of the cover and minimise the force or effort you'll need to lift it by:
  - establishing what equipment is the best for the job. For example, does it need lifting keys?
  - identifying any mechanical lifting aids you might need.
  - checking the condition of the cover,

especially the lifting point. Is the keyway excessively worn? If so, how might this affect the lift?

- Decide before you start what direction to move the cover and where you will set it down after lifting.

Once lifted, never prop up a cover – make sure it's set down safely within your work area.

Report any issues to your manager.





## Your typical tools

### Protective gloves and a screwdriver



### Pristine lifting key set



The Pristine lifting key set includes a variety of lifting keys of different lengths and key widths. Always choose the right tool for the task. Use the lifting key that best fits the keyway, and make sure you choose a key length that lets you lift using your legs – not your back.

### Pry bar set



## Proteus lifters



The proteus lifter can help you lift the heaviest covers. You'll need two people to assemble and operate it.

You should never handle or use a proteus lifter, under any circumstances, until you've completed the relevant awareness training.





## Pry bar lifts

When you're lifting from a kneeling position, always use a knee pad or kneeling board to reduce the strain on your knees.

Throughout the day, alternate your activity by using different positions that are comfortable for lifting covers. For example, one-knee kneeling (alternating the knee used), full kneeling (both knees) or squatting.

### Performing the lift:

- Select a pry bar suitable for the size of cover and offering maximum leverage.
- Clear any debris from the meter cover using either the pry bar or a flat-headed screwdriver.
- Get a firm grip of the pry bar handle.
- Remove the lid by prising it open with the pry bar (not a screwdriver) then carefully place it safely to one side.

When you use the pry bar to lift a lid, avoid using a rotating/twisting motion to protect your elbow and wrist. Lever the lids with an up-down motion.

When you've finished your task, replace the lid, making sure it's securely inserted and lies flat within its housing. Be careful not to create a triphazard.

When you lift a Stanton Warrior lid, follow the same principles as with a pry bar lift. You can use the Stanton key instead of a large pry bar to remove the cover.



# Cover Types

## Atplas

100 x 100mm



## Saunders

150mm diameter



## Double Atplas

250 x 200mm



## Atlantic (6 port Talbot)

600 x 250mm



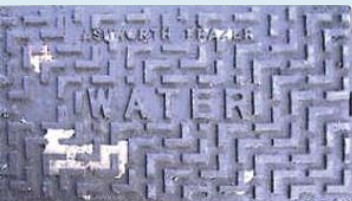
## Talbot

150 x 150mm



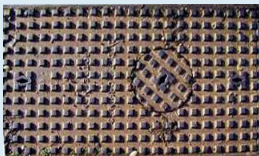
## Ashworth Frazer

380 x 280mm



## G&C Bulls Eye

750 x 300mm



## G&C Bulls Eye

100mm diameter



## D400 D/triangular

Grade A (Heavy Duty) ductile iron surface boxes to BS 5834

- 150 x 150 x 100 / 8.4kg
- 225 x 225 x 100 / 13.2kg
- 300 x 300 x 100 / 21.3kg



## Stanton Warrior

400 x 250mm / 27kg



When lifting a Stanton Warrior lid follow the same principles as with a pry bar lift. The Stanton key may be used as an alternative to a large pry bar to remove the cover.

## J. Blakeborough & Sons Fire Hydrant

760 x 332mm / 15kg



These covers are very old and can be difficult to lift.

# Two-man lifts using the Pristine key

Two-man lifts should follow the same principles as a single person lift, but it's essential you plan the lift together and communicate throughout. [Click here](#) to watch the training video regarding using the pristine key.

## Performing the lift

Make sure there's enough space to manoeuvre together. Then:

- You both need to:
  - check the cover is free to lift and free of any defects that may affect lifting.
  - adopt a stable position, stand directly in front of the load, with your feet about shoulder-width apart.
- Insert the lifting keys into their slots and get a firm grip of their handles. Keep close to the load.
- Bend and unlock your knees and tighten your stomach muscles, then lift evenly from your legs.

If you think it's necessary, conduct the lift in two stages to avoid overreaching. Lift the cover from the frame, put it down at an angle on the frame and then reposition your feet before placing the cover in its final location. Do not overstretch, and ensure you communicate with the other lifter.

## Always:

- Lift with your legs, not your back.
- Keep the natural curve in your spine.
- Move your feet.
- Avoid jerky movements, and never lift a cover by bending and twisting at the same time.



Never attempt to lift a cover if you don't feel you can do so safely.



# Using two lifting keys or hooks

## Performing the lift

- Inspect the cover – check for wear or damage and clear any debris away from the cover and out of the keyways using a screwdriver. Before you lift, decide where you'll put the cover.
- Adopt a stable position. Stand directly in front of the cover, with your feet about shoulder-width apart and, if possible, place one foot slightly in front of the other.
- Insert the correct lifting keys (they should fit snugly in the keyway and be fully engaged). Get a firm grip of the handles.
- Test the cover's free in the housing before trying a full lift.
- Bend and unlock your knees and tighten your stomach muscles, then lift evenly from your legs.

When you've finished your work, reverse this procedure to replace the cover. Make sure it's securely inserted back into place and sitting correctly in its frame.

## Always:

- Lift evenly with your legs – not your back. Make sure you don't yank, snatch or jerk.
- Keep the natural curve in your spine. Don't bend your back any further during the lift.
- Move smoothly. Don't attempt to lift a cover by bending and twisting.



Never attempt to lift a cover if you don't feel you can do so safely.





# Two key lifts—Up to 25kg

## Meter Inspection Lid

550 x 400mm / 9kg



## Galvanised Lid

600 x 450mm / 11kg



## Clarcon DOM

500 x 350mm / 9kg



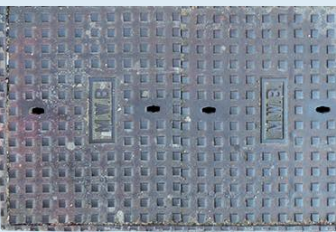
## Wilder & Sons

247 x 212mm / 13kg



## MWB Double Cover

450 x 300mm / 9kg (per cover)



## No markings

600 x 450mm / 14 - 15kg



Thomas Dudley

400 x 250mm / 15kg



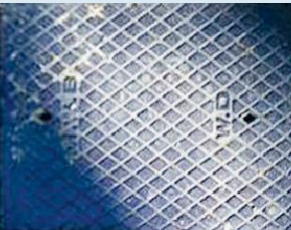
D400 Hydrant  
box

Badged 'W'  
& 'Thames Water'

380 x 230 x 125mm

MWB Kensington Palace

900 x 450mm / 22kg



LCC FH Cover  
Replacement  
Kit c/w

Badged 'FH' & 'Thames  
Water'

700 x 350 x 75mm

M260

600 x 450mm / 24kg



Ductile Iron Single Seal  
Cover & Frames

'Kitemarked'

- 600 x 450 / 40kg
- 600 x 450 / 40kg
- 600 x 450 / 75kg





## Highway Covers & Frames

'Kitemarked'

- 600 x 600 x 100 – 60Kg
- 600 x 600 x 150 – 70Kg
- 675 x 675 x 100 – 76 Kg
- 675 x 675 x 150 – 83 Kg

The weight stated above is the cover weight and does not include the frame.



# Two key lifts—Over 25kg

## Concrete lid

600 x 400mm / 25kg +  
(Weight depends on thickness and make up of fill. Individual, careful assessment is needed.)



## Brickhouse ductile Valiant

900 x 600mm / 28kg

## No markings

600 x 400mm / 34kg



## Stanton Rapide 40

600 x 450mm / 31kg



## Brickhouse Dudley

900 x 600mm / 28kg



## Stanton Trojan 75

600 x 450mm / 34kg



PAM OPT-EMAX 150 Range  
37kg



Peter Savage  
600 x 450mm / 42kg



Glynwed Dreadnought  
600 x 450mm / 38kg



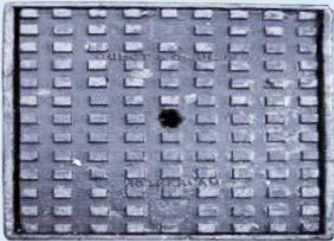
Large galvanised lid  
900 x 900mm / 43kg



Stanton Briton  
610 x 610mm / 40kg



Guest & Chrimmes  
500 x 300mm / 46kg



**Stanton Trojan 57**

600 x 750 / 49kg



**Clover leaf Steel Slide**

750 x 600mm / 49kg



**Stanton & Staveley**

900 x 600mm / 49kg



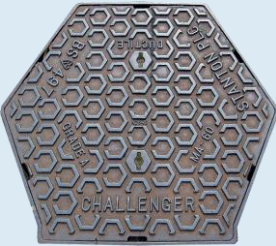
**Stanton Chieftain**

600x600mm / 50kg



**Stanton Challenger**

620x610mm / 49kg



**City of Westminster  
split lid**

600 x 600mm / 50kg



## Four key lifts

### Concrete lid

- 600 x 400mm / 25kg +
- 600 x 600mm / 25kg +

(Weight depends on thickness and make up of fill. Individual, careful assessment is needed.)



### Bripave (brick infill)

600 x 450mm / 44kg

(Weight depends on bricks used.)



## Two hook lifts

### No markings

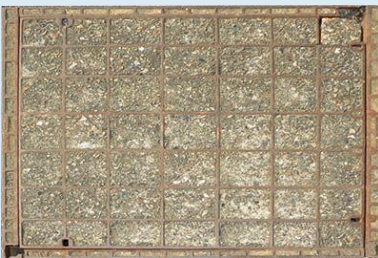
600 x 450mm



### Concrete fill

800 x 600mm / 25kg +

(Weight depends on thickness and make up of fill. Individual, careful assessment is needed.)





# Lift and slidecovers

## Performing the lift

- Inspect the area and clear it if necessary, leaving a clear path to lift and drag. Inspect the cover for potential wear or damage.
- Clear any debris away from the cover and confirm it is free to lift.
- Adopt a stable position. Stand directly in front of the cover, with your feet about shoulder-width apart. If possible, put one foot slightly in front of the other.
- Insert the lifting key and get a firm grip on the handle.
- Bend and unlock your knees, tighten your stomach muscles.
- Lift carefully from your legs
- Roll backwards on the balls of your feet, transferring the load smoothly from your leading leg to the other.
- If you need to, put the cover down before taking a further step backwards.

- Move smoothly. Don't attempt to lift a cover by bending and twisting.



Never attempt to lift a cover if you don't feel you can do so safely.



## Always:

- Lift evenly with your legs – not your back. Make sure you don't yank, snatch or jerk.
- Keep the natural curve in your spine. Don't bend your back any further during the lift.



## Lift and slidecovers

### PAM lift and slide

900 x 600mm / 53kg



### Stanton Rapide 50 Slideout

450 x 300mm / 19kg



# Techno-covers



There are different styles of this type of cover, with variation around the locking device. It's important to understand the release mechanism for each type of cover.

These are standard instructions for the most common techno-covers:



1. Unlock the cover and apply a slight downward pressure, which will release the retaining bolts.



2. Release the pressure you're applying, and allow the sprung hinge to lift the cover.



3. Standing to one side of the cover, hold the handle and lift to fully engage the locking device.

4. To close the cover, stand to one side, release the locking device and lower the cover until it's returned to position 2 (with the cover supported by a sprung hinge). Then apply pressure to the cover top and engage the locking pins, lift the locking hasp and refit the lock.

## Secure covers

We use secure covers across the business. They can only be opened with a specific key, and you shouldn't attempt to lift them.



Contact your team manager for further guidance when you come across a secure cover you need to move.

If the cover's been welded, it's a strong indication that an asset housed below has been isolated or taken out of use. Never attempt to break the weld or seal of any cover. If you need access, escalate the situation immediately.



[thameswater.co.uk](https://thameswater.co.uk)



**Zero** incidents  
**Zero** harm  
**Zero** compromise

Keeping you healthy and safe, every day at work