

MAGNETIC MANHOLE COVER & GRATE LIFTING DEVICES BEST PRACTICES



Magnetic manhole cover lifters are designed to “help save the backs” of those who lift manhole covers and storm grates. However, there have been people reportedly injured while using these devices. Upon investigation, it was determined that people were not instructed in how to safely use the lifters, or, they didn’t follow the manufacturer’s instructions.

It is important to remind employees of the basic safety rules when using magnetic lifting devices. However, it is not a substitute for reading the manual or being trained in how to properly use this equipment. It is being offered to complement that training.

Set up the site with the necessary cones or other traffic warning methods including, if needed, a flagger. When in a work zone ensure all workers are wearing the proper safety vest, good gloves, and safety boots. Set up the lifter’s position so that the wind is at the lifter’s back, blowing dust and sewer gasses away from them.

Clean off the top of the manhole cover, as it may be covered with a layer of dirt, debris, and other material. You can use a heavy-duty broom if the debris is loose, or you may need a shovel if the debris has become compacted. Bear in mind that magnets do not work on covers that have asphalt over them.

Tap the cover with a maul to loosen it. If the cover is solid, as shown above, you should monitor for flammable gasses around the edges or in pick holes before opening.

Check the manhole cover design to determine the proper method of removal. Make sure the weight of the cover or grate matches the capacity of the lifting device. Remember, open grates mean less contact area for the magnet, so you should use judgment when considering the lifting capacity.

You also need to consider the surface you are working on, if you are on soft ground such as grass, the device should have larger wheels than would be necessary on concrete. Chocking your wheels is recommended.



Different cover and grate designs call for different hooks, magnets, and shaft adjustments. Make sure you are using the right fastener for the job. When attaching the magnet or hook, make sure it is centered. If it is not, the cover or grate will not be easy to control, and you may lose it in the hole or injure yourself. If you are using two magnets or two hooks, make sure the chain is centered on the lifting head (as shown in the photo to the left). You can easily check this by counting the chain links on each side, the links should be the same number.

Ensure the handle is adjusted for the lifter’s size and the weight of the cover is lifted. Likewise, make sure the lifting head connected to the cover is properly adjusted. If the wheels of the device are touching the cover, the lifting head needs to be adjusted.

When lifting, slowly push the lifting handle down. Don’t jerk it and don’t put your full body weight on the handle; doing this may cause you to lose control of the load. Remind the lift to use their legs, not their back.

To replace the cover, use the same technique in reverse.

Have a Pacemaker? Manufacturers Recommend NOT Operating a Magnetic Lifting Device!