









SUPER COVERS™

HD COMPOSITE MANHOLE RING AND COVER

This is the first economical composite ring and cover unit in the United States to meet and exceed the AASHTO Class D HS-20 Traffic Loading requirements.

Key Features Include:

-  **Employee safety**
-  **Double hinged 180deg. easy open**
-  **D.O.T. traffic rated**
-  **Anti-theft for scrap metal and lockable**
-  **Infiltration seal/gasket**
-  **Toxic gas and odor control**
-  **Anti-corrosive seize proof**
-  **Custom emblems available**



Smart Key/Handle Design



Thick Ridged Durable Construction



SUPER COVER™

product guide and specification

Product Description/Overview:

What is a **Super Cover™** and why is it unique? The **Super Cover™** is a Heavy Duty FRP composite manhole cover that is engineered to **remove ALL negative aspects of cast iron**, such as:

- Corrosion / Seizing
- Weight for Safer Handling
- Scrap Metal Theft
- Infiltration/Odor Seal



When opening and installing heavy cast iron products it is both extremely rigorous and dangerous to employees, which greatly increase the risk for injury. **Safety** is and has become a very important to owners who want to protect their employees as well as **better manage daily operational risks**, thus making the **Super Cover™** the preferred option.

Super Cover™ are used for **municipal Sewer & Storm water** manhole applications, underground cable/electrical vaults, and/or any structure requiring a secure access point for human entry.

Standard Sizes:

Super Cover™ comes in the two most common standard sizes a **24" and 30" clear opening** which accommodate 95% of what's used or required for new and/or existing construction today. These are the **most common sizes** and we **mass produce them to lower the cost as much as possible**. OSHA has adopted a 30" clear opening for human entry confined spaces and State agencies are slowly integrating that into design requirements. We meet this requirement and are fully compliant.

***See Detail Sheet for Dimensions**

Specification:

Manhole ring and cover is made of non-metallic **composite materials** capable of withstanding traffic loading requirements that meet or exceed **HS-20** rating. Cover is affixed to ring using a double hinge capable of **180 degree** opening. A rubber gasket seal is embedded into the ring so that it provides a **means of preventing inflow**.

Testing and Strength:

Multiple **Super Cover™** units have been tested by an independent 3rd party and signed off by a US registered licensed Professional Engineer. The **US Department of Transportation** requires gratings and manhole covers to be tested for load rating under **AASHTO M-306**. In order to be classified H/HS-20 Heavy Duty product must withstand 16,000lbs for 60 seconds without cracking or breaking. A 2.5 times safety factor is required which brings the **total proof load to 40,000lbs**.



Super Cover™ Test Results:

Table 2: Breaking Strength of the Tested Manhole Covers

Manhole Cover	Peak Load, lbs	% of Proof Load	Displacement Right Before Break		Maximum Displacement	
			mm	in	mm	in
1	140009	350	29.13	1.15	31.25	1.23
2	138013	345	28.64	1.13	29.88	1.18
3	112643	281	23.18	0.91	28.79	1.13

Load Vs. Displacement

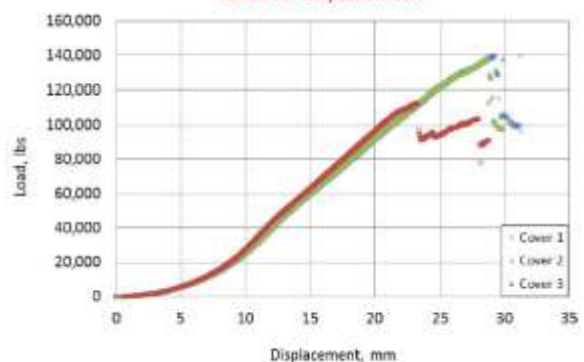


Figure 10: Load Vs. Displacement Curve for All the Specimens

The **Super Cover™** was able to average **130,000lbs total force weight before failure**.

That's 90,000lbs over the requirement for Heavy Duty/ HS-20 rating.

***Full test reports available upon request**



Double Hinged Lay-Flat Opening

The double hinge provides a safer guided way to open the access cover. Unlike standard un-hinged units that can fall and roll off 360° uncontrollably, our unit is guided and keeps worker in a 100% safer position.



Anti-Corrosive Material

Corrosion and rust are inherent to all metals as a natural occurrence. When exposed to higher than normal levels of corrosion this process only speeds up causing negative effects to the structure. Our composite material is inert to the corrosion meaning it will not have a negative reaction like seizing which is a major issue.



Optional Locking Latch Anti-Theft

Our units have an option of a secure locking latch built in to the unit. Since our units are not made of metal they have zero scrap metal value as a natural theft deterrent.



Toxic Gas and Odor Seal

Every unit we offer has a built-in rubber gasket seal that greatly reduces the release of toxic gases and odors. This greatly reduces exposure and health hazards to humans and surrounding environments.



Heavy Duty Traffic Load Rated

Our unit truly is a Sewer Cover as it exceeds its load limits by as much as 10 times. The unit has reached as much as 140,000lbs before cracking which far beyond the highest levels any road way in the United States could ever support.



Infiltration Water Seal

Water will make its way into just about anything and can be a huge problem especially for sewer

Installation Recommendation:

Unit installation method is the same as traditional standard cast iron manhole ring and covers.

However you have the option with our units to secure and/or fasten them down through various methods utilizing the bolt holes in the ring flange:

1. Anchor bolt them down using the ring bolt holes at the various locations.
2. Rebar/J-Hooks can be placed through bolt holes on ring to secure into uncured concrete or grout.

Once the ring and cover is set flush with final support/resting surface, grout or concrete can be used to hold the unit in place and protect it from any outside forces. When installing in



asphalt paved areas it is **highly recommended** that concrete or high strength grout be used to create a square or circular apron no less than 12" from the edge of the cover.

This will protect the unit from any side wall damage as asphalt has a tendency to derogate and compact faster than concrete leaving the edge walls exposed to direct impacts.

Additional Product Images:

