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## UNDERSTANDING CMAA CRANE SERVICE CLASSIFICATIONS

Crane service classifications are important to select and install a crane that is appropriate for your application and facility. Selecting the appropriate crane classification will help to ensure the working condition and longevity of your overhead system. Pushing your system beyond its service rating is both dangerous and counterproductive. Using an overhead crane in accordance with its service classification will not only protect your long-term investment and ensure worker safety—it will also provide valuable insight about the maintenance and inspection requirements of your overhead system.

The CMAA developed crane service classes to help users determine the safest and most economical crane for their operation. In doing so, you must consider how much weight and how frequently the crane will be lifting and transporting materials. Once you have determined what needs to be moved and how often, a crane can be selected. The following is a list of crane classifications according to the CMAA

### CRANE SERVICE CLASSIFICATIONS

<b>CLASS A</b>	STANDBY OR INFREQUENT SERVICE	Class A cranes are used as standby or infrequent service cranes. These are systems intended for use at slow speeds and with long periods of idling between each lift. This class often includes installation and maintenance cranes for applications involving public utilities, motor rooms, and transformer stations. Capacity loads might be handled for the installation of the equipment and for infrequent maintenance.
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<b>CLASS B</b>	LIGHT SERVICE	Class B cranes are designed for light service requirements at slow speeds. Duty cycle and loads may vary from no load to an occasional full load with two to five lifts per hour, averaging ten feet per lift. Cranes in this class are often used in light assembly facilities, repair shops, service buildings, and warehousing where service requirements are light and slow.
<b>CLASS C</b>	MODERATE SERVICE	Class C cranes are designed for moderate service in an environment where the crane will need to handle loads averaging 50 percent of the rated capacity, with five to ten lifts per hour. The lift height for Class C cranes averages 15 feet. Most cranes are designed to meet Class C service requirements. This service often includes cranes used in manufacturing, machine shops, or papermill machine rooms.
<b>CLASS D</b>	HEAVY SERVICE	Class D cranes are designed for heavy service applications. In other words, 50 percent of the crane's rated capacity is handled constantly throughout the workday. The crane will need to perform an average of 10 to 20 lifts per hour, with heights averaging 15 feet. Class D cranes are designed to move loads quickly and are usually installed in locations where heavy equipment must be moved constantly. This service is often used for applications in heavy machine shops, foundries, fabricating plants, steel warehouses, container yards, and lumber mills.

<p><b>CLASS E</b></p>	<p>SEVERE SERVICE</p>	<p>Class E cranes are designed to handle loads approaching rated capacity throughout their lifetime. In other words, Class E cranes should lift their rated load capacity at an average of 20 lifts per hour. They can operate at any height, and they have few limitations for their workload per hour. These systems are often installed in scrap yards or production mills and are usually used when heavy items need to be transported regularly throughout the workday. Applications often include cement mills, lumber mills, fertilizer plants, and container handling. Class E and F cranes require more frequent maintenance and provide the highest reliability possible.</p>
<p><b>CLASS F</b></p>	<p>CONTINUOUS SEVERE SERVICE</p>	<p>Class F cranes are the most powerful cranes available. These systems are similar to Class E cranes because they are designed to handle severe service. They also require the ability to handle loads approaching their rated capacity—throughout their entire lifetime. The main difference between the two is that Class F cranes are designed for continuous severe service.</p> <p>Oftentimes, Class F cranes are custom designed for a specific function within a particular facility. They are built for ultimate performance and reliability, no matter how often they are used and regardless of their weight capacity. The most important factor for Class F cranes is that they can handle high capacity loads with constant frequency. Class F cranes are often used in industrial settings, although very few industries need to meet a Class F service rating. These systems are difficult to design because they require the ability to handle the most extreme working conditions.</p>