CMAA DUTY CLASS

Class C Standard Service cranes are used in machine shops, auto shops, paper mills or machine rooms.

Class D Heavy Use cranes are used in heavy machine shops, foundries, fabricating plants, steel warehouses, container yards or lumber mills.

SELECTING THE RIGHT DUTY CLASS FOR YOUR OVERHEAD CRANE

IMPORTANT REQUIREMENTS

Purchasing an overhead crane system is a huge step towards maintaining the efficiency of your business and the safety of your workers. You would not want to overwork or underutilize the power of your new equipment. In order to get the most out of and preserve the health of your investment, selecting the right duty class specific to your unique application will be vital. It will involve the careful consideration of a few variables.

Identify these four crane performance conditions to determine which duty class is most appropriate for your workload. Our experts are available to help you.

- **How many average lifts and trolley & bridge movements made per/hour?**
- **What is the average length of each movement?**
- **What is the estimated load of each lift?**
- **What are the total operating hours per day?**

WHAT IS A DUTY CLASS AND WHO CREATES THESE STANDARDS?

The Crane Manufacturers Association of America **(CMAA)** has established crane service classes so that the most economical crane for a particular installation may be specified in accordance with Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes-No. 70 or

Specifications for Top Running and Under Running Single Girder Electric Overhead Cranes Utilizing Under Running Trolley Hoist-No. 74. The crane service classification is based on the load spectrum reflecting the actual service conditions as closely as possible.

Ace Industries' President, Josh Arwood, also serves as the President of the national CMAA organization.

The American Society of Mechnical Engineers **(ASME)** is a professional engineering society founded in 1888 that is widely known for establishing codes standards for mechanical devices, and in this case, hoists.

A **Crane Classification** is the category of crane class based on average load, number of lifts and the frequency of the lifts performed in a given period.

A **Duty Rating** is the classification given to a hoist indicating the amount of use and type of abuse it can withstand during a given time.

A **Hoist Classification** is the category of hoist according to loading, duration and application.

HOIST & CRANE SELECTION INDUSTRY GUIDELINES

CYCLE	SERVICE CLASS	
	CMAA	ASME
LIGHT	B	H2
MODERATE	C	H3
HEAVY	D	H4

CMAA OVERHEAD CRANE DUTY CLASSES

CLASS B (LIGHT SERVICE)

This service class covers cranes which may be used in repair shops, light assembly operations, service buildings, light warehousing, etc. where service requirements are light and the speed is slow. Loads may vary from no load to occassional full rated loads with two to five lifts per hour, averaging ten feet per lift.

CLASS C (MODERATE SERVICE)

This service class covers cranes which may be used in machine shops or paper mill machine rooms, etc. where service requirements are moderate. In this type of service the crane will handle loads which average 50 percent of the rated capacity with 5 to 10 lifts per hour, averaging 15 feet, not over 50 percent of the lifts at rated capacity.

CLASS D (HEAVY SERVICE)

This service class covers cranes which may be used in heavy machine shops, foundaries, fabricating plants, steel warehouses, container yards, lumber mills, etc., and standard duty bucket and magnet operations where heavy duty production is required. In this type of service, loads approaching 50 percent of the rated capacity will be handled constantly during the work period. High speeds are desireable for this type of service with 10 to 20 lifts per hour averaging 15 feet, not over 65 precent of the lifts at rated capacity.

ASME HOIST DUTY CLASSES	TYPICAL AREAS OF CLASSIFICATION	OERATING TIME RATINGS AT 65% MEAN LOAD FACTOR			
		UNIFORMLY DISTRIBUTED WORK PERIODS		INFREQUENT WORK PERIODS	
		MAX ON TIME MIN/HOUR	MAX NO. STARTS PER/HOUR	MAX ON TIME FROM COLD START	MAX NUMBER STARTS
H2 LIGHT USE	Light machine shop fabricating, service and maintenace, loads and utilization randomly distributed, rated loads infrequently handled.	7.5 MINS (12.5%)	75	15 MINS	100
H3 STANDARD USE	General machine shop fabricating, assembly, storage, and warehousing, loads and utilization randomly distributed.	15 MINS (25%)	150	30 MINS	200
H4 HEAVY USE	High volume handling in steel warehouses, machine shops, fabricating plants and mills, and foundaries, manual or automatic cycling operations in heat treating and plating, loads at or near rated load frequently handled.	30 MINS (50%)	300	30 MINS	300

ACE INDUSTRIES
CRANE & HOIST

(800) 733-2231
REPAIRS • PARTS • INSPECTIONS • INSTALLATIONS
MODERNIZATIONS • MANUFACTURING

ACEINDUSTRIES.COM