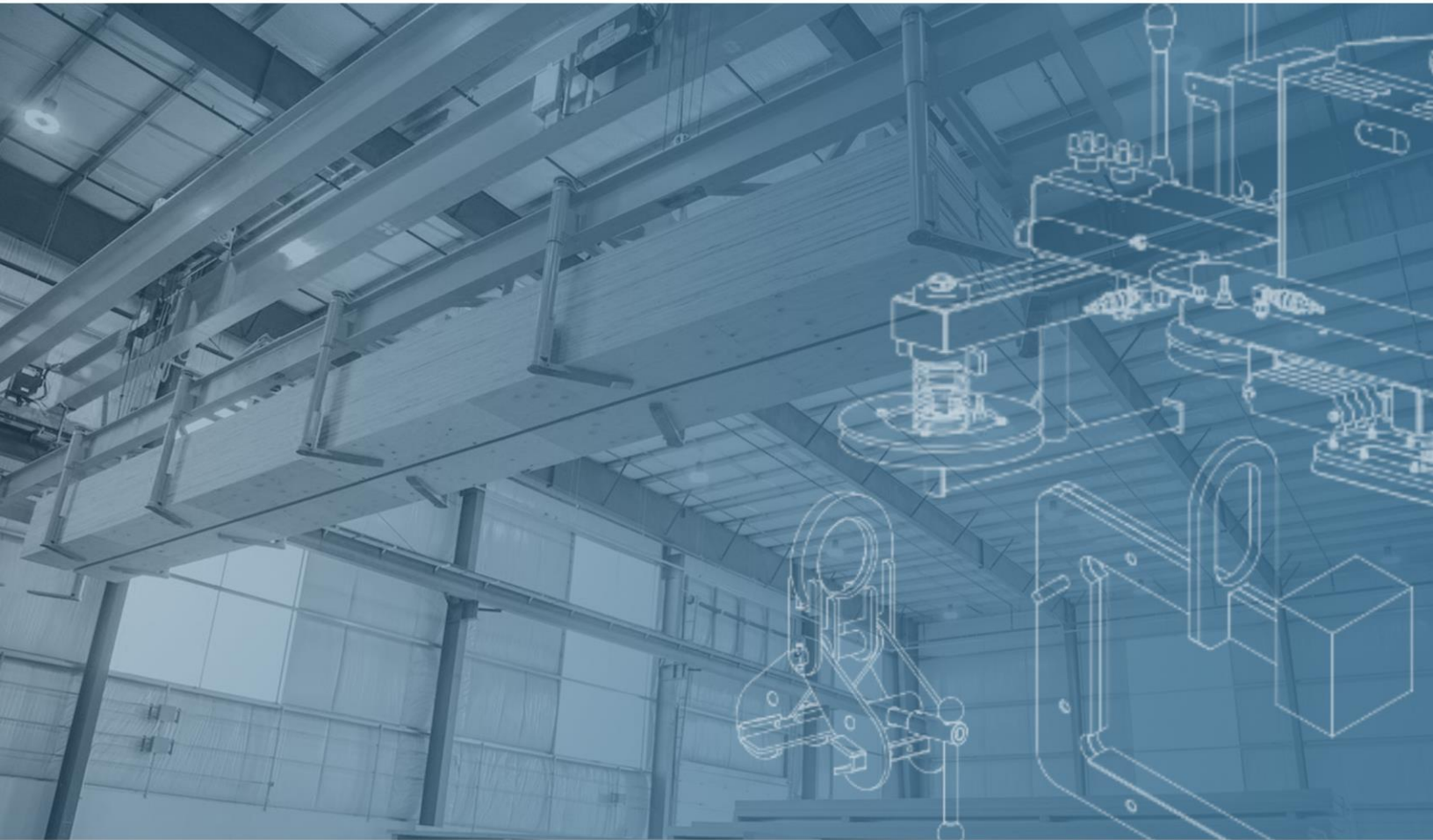




CMAA Specification No. 80 - 2021

BELOW-THE-HOOK LIFTING DEVICE OPERATOR'S MANUAL



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1.1

REFERENCE DOCUMENTS

- 1.1.1 This Below-the-Hook Lifting Device Operator's Manual, Specification 80, has been prepared by the Engineering Committee of the Crane Manufacturers Association of America, Inc. as a supplement to the manufacturer's supplied operating instructions and maintenance manual with the intent to provide additional information for the operation of below-the-hook lifting devices. Operation of a lifting device involves more than operating the controls of the crane. The operator must consider and anticipate the motions and actions that will occur when operating a lifting device.

The words **SHALL** and **SHOULD** are used throughout this manual and have the following meaning:

- 1.1.2 **SHALL:** This word indicates that adherence to the particular requirement is necessary in order to conform to the Specification.

SHOULD: This word indicates that a rule is a recommendation, the advisability of which depends on the facts in each situation.

- 1.1.3 It is the responsibility of the lifting device owner to establish programs to designate and to train qualified operators.

- 1.1.4 Training programs for lifting device operators and maintenance personnel should be based on the manufacturer's operating instructions and maintenance manual, and in accordance with the latest edition, as applicable, of the following:

- 1.1.4.1 ASME B30.20 Safety Standard for Below-the-Hook Lifting Devices

- 1.1.4.2 CMAA Specification 78 Standards and Guidelines for Professional Services Performed on Overhead and Traveling Cranes and Associated Hoisting Equipment

- 1.1.4.3 CMAA Specification 79 Crane Operator's Manual

- 1.1.5 Such training programs should also provide information for compliance with any federal, state, or local code requirements and existing plant safety rules and regulations.

1.2

TYPES OF SAFETY ALERT SYMBOLS & PLACARDS

- 1.2.1 The Safety Alert Symbol  is used in this manual to indicate hazards and to alert the reader to information which should be known, understood, and followed to avoid DEATH OR SERIOUS INJURY.

Read and understand this manual before using any Below-the-Hook lifting device.

- 1.2.2 Important issues to remember during operation are provided at the crane/lifting device control stations, at various locations on the crane/lifting device, and in the manuals by DANGER, WARNING, or CAUTION instructions or placards, which alert personnel to potential hazards, proper operation, load limitations, and more.

- 1.2.3  *Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.*

- 1.2.4  *Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.*

- 1.2.5  *Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.*

- 1.2.6  *Indicates information considered important, but not hazard related*



- 1.2.7 *Failure to read and comply with any one of the limitations noted in this manual and the manual furnished by the manufacturer of the below-the-hook lifting device can result in serious bodily injury or death, and/or property damage.*



- 1.2.8 *It is a responsibility of the owner to install, inspect, test, maintain, and operate a below-the-hook lifting device in accordance with the ASME B30.20 Safety Standard (latest edition) and OSHA Regulations. If the below-the-hook lifting device is installed as part of a total lifting system, it is also a responsibility of the owner to comply with the applicable ASME B30 volumes that address other types of equipment used in the system.*

- 1.2.9 *It is a responsibility of the owner that all personnel who will install, inspect, test, maintain, and operate a below-the-hook lifting device are qualified on the requirements contained within the operating instructions furnished by the manufacturer of the lifting device, and applicable portions of the ASME B30.20 Safety Standard (latest edition) and OSHA Regulations. If the lifting device is installed as part of a total lifting system, the applicable ASME B30 volume that addresses other types of equipment used in the system must also be read by all personnel.*



- 1.2.10 *Before installing, removing, inspecting, or performing any maintenance on an electrically powered below-the-hook lifting device, the power to the lifter shall be de-energized. Lock and tag out the power source in accordance with ANSI Z244.1. Follow other maintenance procedures outlined in the manual furnished by the manufacturer of the lifting device and applicable ASME B30 volumes.*

80-2 OPERATORS OF BELOW-THE-HOOK LIFTING DEVICES

2.1

OPERATOR AWARENESS

- 2.1.1 There are numerous types of lifting devices; each one is designed for a specific application and shall not be used to lift any load for which the unit was not designed.
- 2.1.2 Operators shall be familiar with the lifter, the controls and functionality of the device. The controls shall be marked, and all markings shall be clearly legible.
- 2.1.3 Reference CMAA Specification 79 Crane Operator's Manual, Sections 2.5 and 2.6, for information on standard hand signals.

2.2

LIFTING DEVICE APPLICATION AND AUTHORIZATION

- 2.2.1 Because the manufacturer of the lifting device has no direct involvement or control over the lifting device's operation and application, conforming to good safety practices is the responsibility of the owner and operating personnel. Only those designated personnel who have shown that they have read and have understood this manual and the manufacturer's operating instructions should be permitted to operate the lifter.

2.3

PLACARDS AND SAFETY LABELS



- 2.3.1 ***READ and OBEY all Danger, Warning, Caution placards and safety labels on the lifting device. Make sure that all placards and safety labels are in place and legible. Failure to comply with safety precautions on the lifter may result in serious injury, death, or property damage.***

2.4

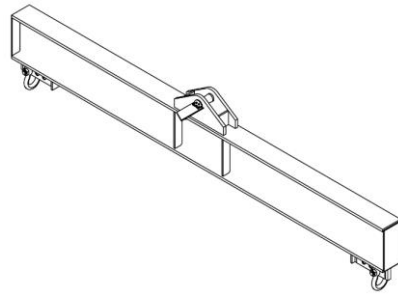
EXAMPLES OF LIFTING DEVICES

2.4.1

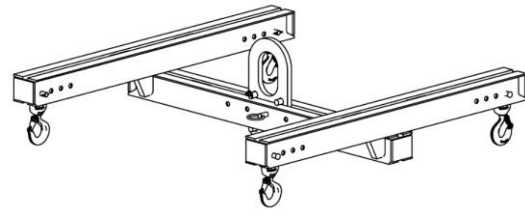
There are a wide variety of lifting devices for material handling. Several common types of lifters are shown below. The operator shall read the manufacturer's operating instructions before using any lifting device to understand the features, capabilities and warnings.

STRUCTURAL LIFTER

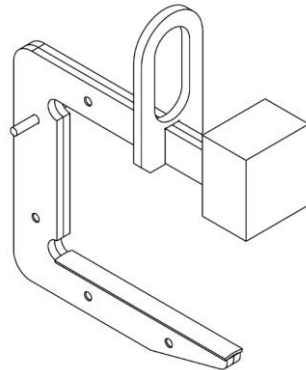
A lifter with a static, rigid structure for supporting a load.



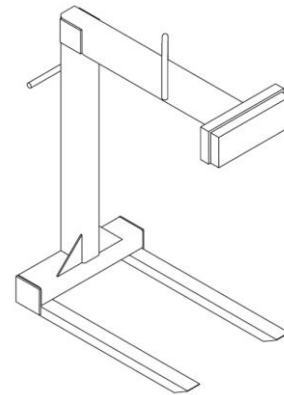
2-Point Lifting Beam



4-Point Lifting Beam



C-Hook



Pallet Lifter

Figure 2.4.1-1

MECHANICAL LIFTER

2.4.2

A lifter composed of two or more rigid parts that move with respect to each other to connect to the load. The lifter may be powered manually, electrically, pneumatically or hydraulically. See Figures 2.4.1-1 through 2.4.2-8.