

A large, light gray geometric pattern consisting of a repeating grid of triangles and squares, forming a larger triangular shape that points downwards. It is positioned in the upper half of the page.

OWNER'S MANUAL

BOOMS

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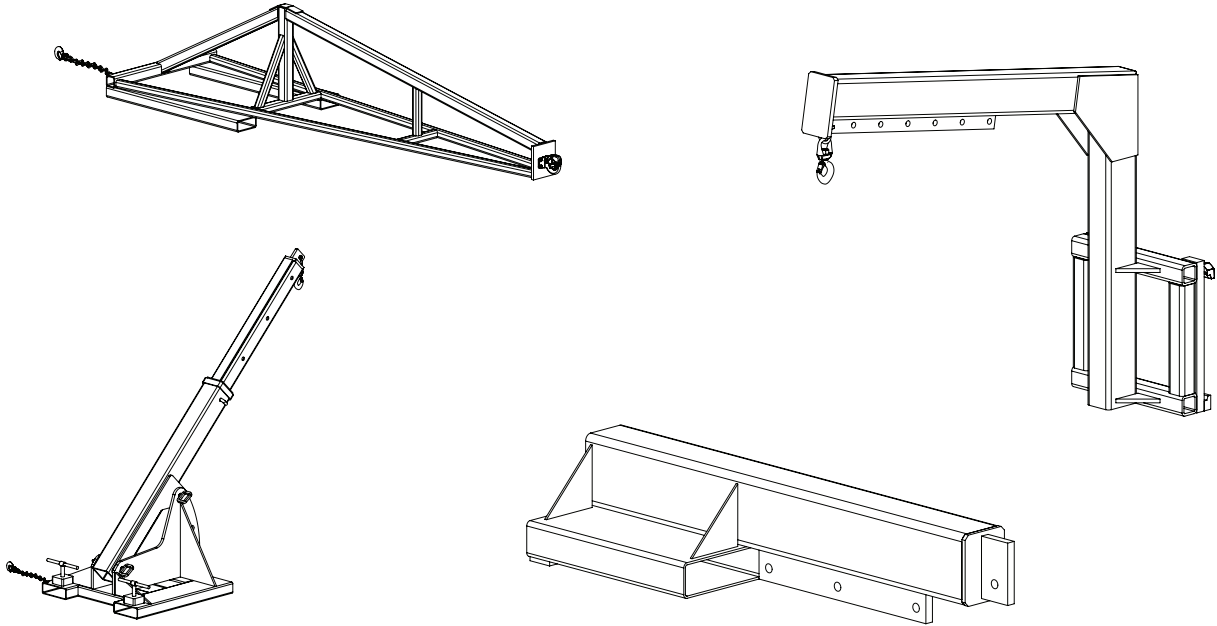


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MODEL: _____

SERIAL NUMBER: _____

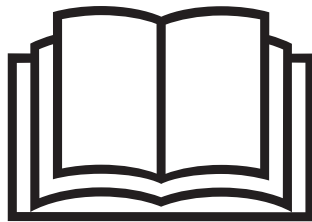
(Located on data plate attached to the unit frame)

DATE PURCHASED: _____

INTRODUCTION

SYMBOLS USED IN THIS OWNER'S MANUAL

Throughout this owner's manual (and on the boom itself) there are universal safety symbols. They are commonly used in the equipment and attachment manufacturing industries. These symbols are meant to alert users to possible dangers when using the boom. Please pay careful attention to any section of this owner's manual with one of these symbols.



**Read Owner's
Manual**



**Safety Hazard
Alert**

BEFORE INSTALLATION AND OPERATION:



Be sure to read this owner's manual and understand its contents prior to using the Arrow Material Handling Products (Arrow) booms. If there is anything in this manual you do not understand, please contact your authorized dealer, or Arrow Customer Service at 913-495-4803. We will be glad to answer your questions.

Arrow cares about your safety, and the safety of others who use, or are in the vicinity of the booms. Arrow takes great pride in engineering and building quality equipment with operator safety in mind, but the responsibility for the safe use of this equipment ultimately belongs to the operator.



Never let anyone use the Arrow boom unless they have first read this owner's manual.

SPECIAL NOTE: The information and illustrations contained in this Arrow boom owner's manual were current at the time of publication. Arrow reserves the right to redesign all or any portion of this equipment and the owner's manual at any time without notification. For questions or concerns, or to inquire about updates, please contact your authorized dealer or the Arrow Customer Service Team at 913-495-4803.

YOUR BOOM HAS:

- Been designed by the Arrow engineering team using registered Professional Engineers;
- Been built with materials our purchasing department has gone to great lengths to ensure are specified for your boom and meet all applicable specified standards (ANSI, ASTM, ASQC, and/or MIL-SPEC);
- Been entirely manufactured according to print using OSHA regulations by a trained and experienced workforce located in the heartland of America;
- Been built right and built to last with you and your employees' safety in mind.

COMPLIANCE WITH STANDARDS

Arrow created this owner's manual to assist you in understanding OSHA guidelines for safe use and to conform to those guidelines.

There are several portions of the OSHA code that pertain directly to booms. They are:

- inspection of the boom itself
- inspection of the forklift used to lift the boom

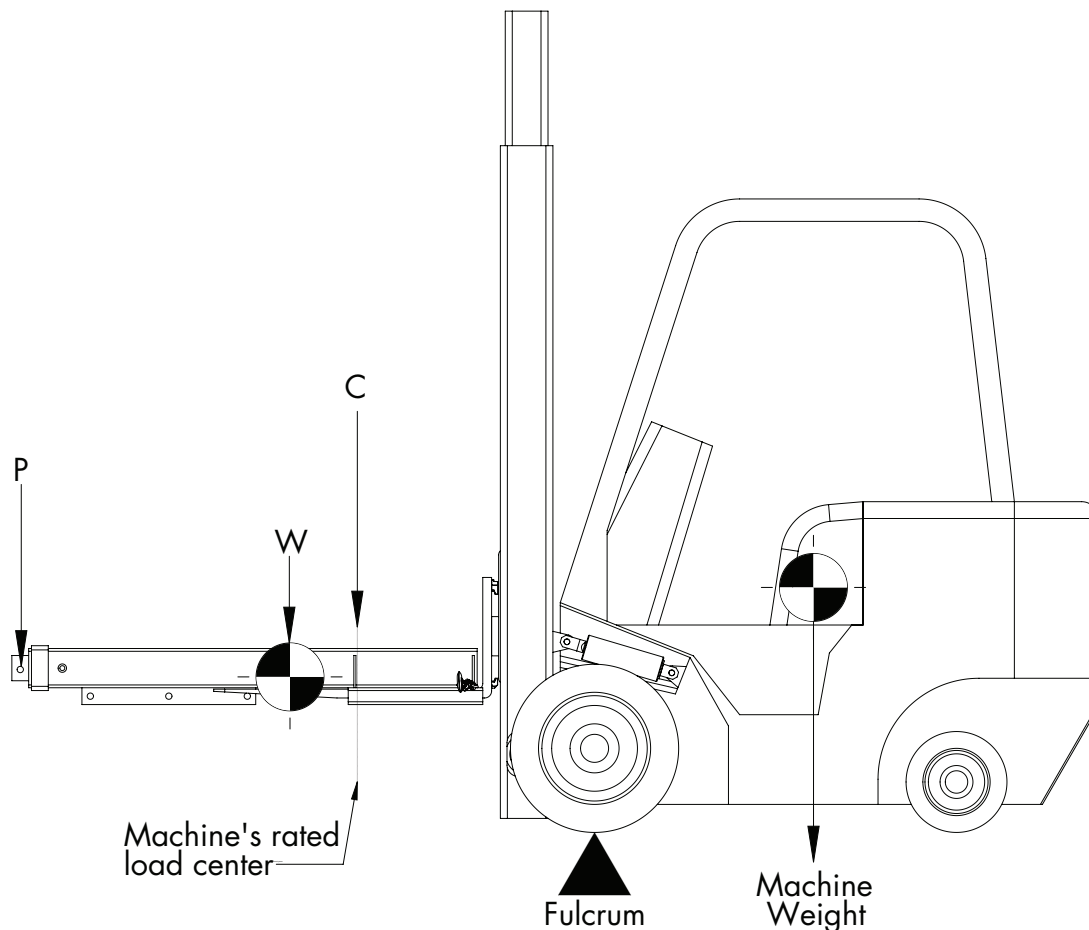
The Inspection Points section of this owner's manual outlines ongoing inspection needs. Arrow recommends that inspections occur prior to any use of the boom and an ongoing inspection log be maintained for the boom. It's recommended that inspection logs be kept for a minimum of 10 years for documentation of OSHA compliance.

REGULATIONS AND STANDARDS

RESIDUAL CAPACITY

Forklifts, and other types of material handling equipment, can be thought of as balancing on a fulcrum positioned under the front tire contact patch. The weight of the machine is on one side and balances out all of the loads on the other side such as the weight of the attachment and the lifted load. As weight is added to the load side (e.g. installing a boom), the rated capacity of the machine must be lowered to prevent tipping. Also, as the distance from the load to the fulcrum increases, the rated capacity of the machine must be lowered. End result: a forklift with a boom will have a significantly lower capacity than the same machine with only forks.

The ITSDF B56.1-2016 standard for low lift and high lift trucks requires machines to have a new capacity rating calculated by the machine manufacturer for use with specific attachments. Machine data plates and placards must also be adjusted. Similar standards apply to other types of machines like telehandlers.



HAZARDS

KNOWN HAZARDS AND HAZARD MITIGATION

In addition to reducing the rated capacity of the machine (see the Regulations and Standards section of this manual), adding a boom introduces the following hazards:

Hazard	Mitigation
Pinch points near the moving parts of the boom	Keep hands and other body parts away from connection points in the boom while in operation
Potential for swinging loads when using slings	<ul style="list-style-type: none"> • Use tag lines to stabilize the load. • Drive slowly • Reduce cornering speeds
Increased collision risk	Booms extend the space required to maneuver the vehicle. Be aware of obstacles and the position of the boom at all times.



WEAKEST LINK IN THE CHAIN

A lifting system is a series of individual components, each of which must meet the capacity requirements for lifting a given load. When using a boom, the capacity rating for each of the following components must be considered (at a minimum):

- The machine must have a high enough rated capacity at the new load center.
- The boom must have a high enough capacity at the intended hook point.
- The sling/chain must have a high enough capacity and must be used according to the manufacturer's instructions. Pay particular attention to the angle between the legs of slings attached to 2 hook points. Large angles may significantly reduce the lifting capacity of the sling/chain.
- The lifting hook and shackle must have a high enough capacity. If any 1 of these items does not have a high enough capacity to lift the load, then the entire system is at risk.

**ELECTRICAL HAZARDS**

Adequate clearance must be maintained between the boom and any aerial electrical lines. All lines are to be considered energized unless they are Locked Out and Tagged Out by authorized personnel. The minimum standoff distance is recommended to be ten (10) feet.

**COLLISION HAZARDS**

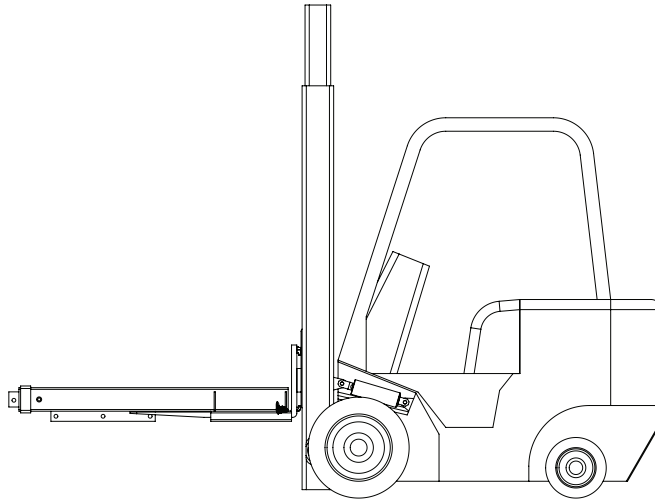
When in use, adequate clearance between the boom and physical objects must be maintained.

The use of at least one (1) trained spotter is highly recommended to assist the safe transport of lifted loads.

**ENVIRONMENTAL HAZARDS**

The boom shall not be used during periods of high winds or storms unless an authorized person has approved of such use.

INSTALLATION AND REMOVAL



FORK MOUNTED MODELS:

- Slide the boom's fork pockets all the way back on the forks.
- For models with chains, wrap the chain around a solid portion of the forklift carriage, pull tight, and clasp the hook on the chain to keep it in place.
- Fork models with straps and pins, ensure that the straps extend behind the fork heels and install the pin and keeper.
- DO NOT OPERATE WITHOUT INSTALLING THE CHAIN OR PIN (as equipped).

CARRIAGE MOUNTED MODELS:

- Remove forks, or other attachments, from the carriage.
- Remove the bolt-on lower clips from the boom.
- Lift the boom using the forklift carriage and the upper clips on the boom.
- Install the bolt-on lower clips securely against the lower carriage bar.

COUPLER MOUNTED MODELS:

- Lift the boom by hooking the machine coupler under the hooks supplied on the boom.
- Install the latch pin(s) to secure the boom to the machine.

INSPECTION POINTS

Prior to any use we recommend operators include the following items when performing inspections.



1. Visually inspect the boom for physical damage, corrosion, bending, and freedom of extension (if so equipped), and overall cleanliness;
2. Check welds for cracking or breaks.
3. Check each lift mount hole for elongation or cracking.
4. Check safety chain for secure fastening, no damage, cracking, or elongation of links or hook.
5. Check safety pin(s) for proper operation and no sign of cracking or bending;
6. If equipped with lifting hook, check lifting hook for throat spreading ($>15\%$), lateral twisting ($\geq 10^\circ$), or cracking.
7. If equipped with lifting hook, check condition of throat safety latch.
8. If equipped with a lifting hook, verify hook capacity meets or exceeds the capacity of the hook position number as specified by the applicable decals and/or identity plates located on the unit.

OPERATION



DO NOT OPERATE THIS EQUIPMENT UNTIL:

- The lift vehicle manufacturer has approved it to be used with booms.
- The owner/operator manual is read and thoroughly understood.
- ALL supplied safety restraints and safety pins are applied before use.
- You are familiar with all applicable government regulations.
- Your personnel are trained in these regulations and licensed where applicable.
- Your personnel are trained in the use of this equipment.



GENERAL OPERATING RULES:

- An inspection of the boom must be made before EACH SHIFT.
- The boom must never be loaded beyond the manufacturer's specified load limits. This information may be found on applicable decals and/or identity plates located on the unit.
- Hook capacity must be equal to or exceed the capacity of the hook position number, as specified by the applicable decals and/or identity plates located on the unit.
- Forklifts used to hoist the boom must be fully OSHA compliant.
- The lift capacity established by the manufacturer of the industrial truck used to lift the boom shall never be exceeded.
- The forklift operator must be properly licensed and trained in the use of the boom.
- The forklift driver must remain at the controls of the forklift, with the engine running, at all times when the boom is under load.
- When placing material into a wheeled vehicle, the receiving vehicle or trailer MUST be firmly chocked and all braking systems set.

- The wearing of hardhats and steel toed footwear is recommended by all personnel within the immediate area when the boom is in use.
- Should there be the possibility of objects falling from the boom, the manufacturer recommends the establishment of a Controlled Access Zone (CAZ) directly underneath the boom under load and extending outward ten (10) feet in all directions.
- No modifications may be made to either the hoist vehicle and/or the boom without the express written consent of the manufacturer after their review and written reply of approval by a registered Professional Engineer (P.E.).
- Unauthorized (other) personnel are expressly forbidden from attaching the boom and/or utilizing the forklift with the boom affixed.
- It is suggested that personnel using the boom be required to read these operating instructions and sign the manufacturer's release before they are allowed to use the equipment. This signed release should be retained in their respective personnel files for the duration of their employment.



LIMITED WARRANTY

OVERVIEW

The goal of Arrow Material Handling Products (“Arrow”) warranty policy is to assure confidence, reduce downtime and minimize cost of ownership. Should issues arise, please contact your authorized dealer or Arrow’s Customer Service Team at 913-495-4803 or CustServ@ArrowMHP.com and we will strive to resolve any issues in a timely manner.

Arrow offers a Limited Warranty on products delivered hereunder against faulty workmanship and use of defective materials for a period of twelve (12) months from the date of shipment. This warranty does not include, and there in hereby excludes, maintenance parts and consumables including but not limited to hooks, chains and other similar items.

Disassembly, modification or welding of units without Arrow’s written authorization voids the warranty.

No warranties are expressed or implied as to the fitness of the equipment on which the attachment or accessory is installed. The purchaser is responsible for promptly informing Arrow Customer Service of any suspected operational deficiencies or failures. Arrow is the sole party responsible for analysis of reported deficiencies or failures. Repair or replacement will be at the sole discretion of Arrow. Field repairs or modifications undertaken without prior approval by Arrow Customer Service may invalidate the warranty.

All returns require a MRA. That policy and form can be found on the website (www.arrowmhp.com) or via phone at 913-495-4803.

GENERAL

The Arrow Limited Warranty is extended only to the original purchaser and may be void in the event that the product is sold or otherwise transferred. No warranty will apply to any product that has been (i) modified, altered or adapted without Arrow’s written consent, (ii) abused or misused, (iii) repaired by any third party in a manner that fails to meet Arrow’s repair standards, (iv) improperly installed, or (v) used with any device or implement not covered by this warranty.

The warranties set forth herein are in lieu of any and all other warranties, express or implied, including the warranties of merchantability and fitness for a particular purpose. The purchaser acknowledges that no other representations or warranties were made or relied on in connection with the purchase of the Arrow Products. No person is authorized to vary, modify or change the terms of this limited warranty.

Neither party shall be liable for any indirect, punitive, special, incidental or consequential damage in connection with or arising out of the use of the property sold to the purchaser, including without limitation, loss of business, revenue, profits, goodwill, consequential damages, whether in contract or tort, including negligence.

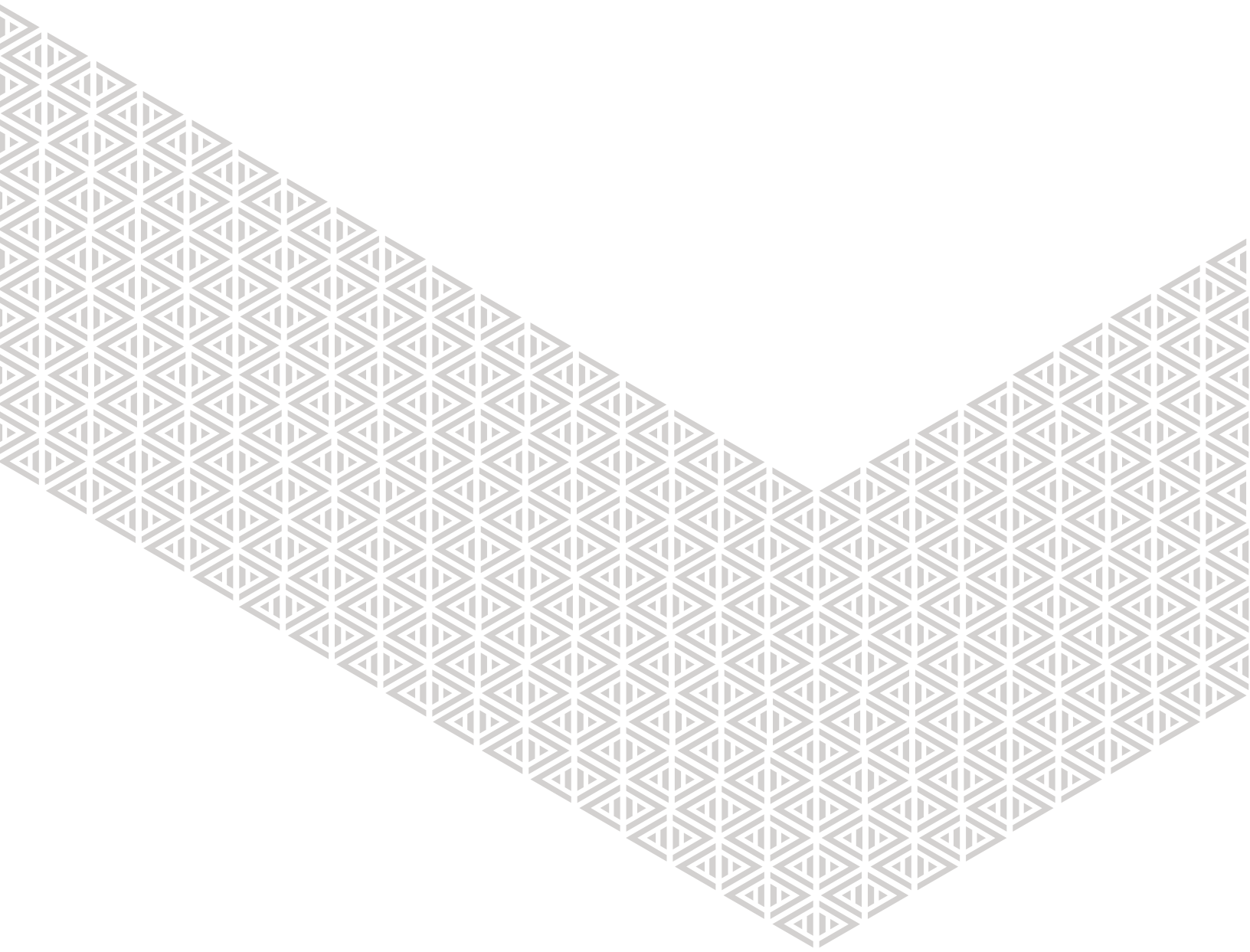
Nothing in this warranty affects any statutory rights of consumers or other purchasers that cannot be waived or limited by contract. This limited warranty gives you specific legal rights, and you may have other rights, which vary from state to state and country to country.

LIMITATIONS

This LIMITED WARRANTY does not cover product, which in the opinion of Arrow, is damaged due to abuse, misuse, misapplication, prohibited operation, improper maintenance, alteration, unauthorized service, contamination by the base machine, or normal wear and tear. This LIMITED WARRANTY is void if the product is modified in any way without the written consent or instruction of Arrow. This LIMITED WARRANTY is null and void if the product is used in a prohibited operation, or unauthorized adjustment / assembly / disassembly has occurred. This LIMITED WARRANTY is the exclusive warranty and is given in lieu of any and all other warranties, whether expressed or implied, arising in any fashion including but not limited to the course of dealing and course of performance, and including but not limited to warranty of merchantability or warranty of fitness for a particular purpose. Dealers or Agents of Arrow have no authority to make any type of representation or warranties on behalf of Arrow beyond those expressly set forth in this document.

In no event shall Arrow be liable to any party, including but not limited to buyer, for any direct, incidental, consequential, punitive, or special damages, including but not limited to loss of profits, loss of productivity, in any way related to or arising, directly or indirectly, from the product. The liability of Arrow for any and all losses and damages to buyer, its successors and assigns, resulting from any cause whatsoever, including the negligence of Arrow, irrespective of whether such defects are discoverable or latent, shall in no event exceed the purchase price of the product with respect to which such losses or damages are claimed.

Please refer to Arrow's Terms and Conditions of Sale document on the website (www.arrowmhp.com) for complete information.



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