



**X**SERIES  
*MALTA DYNAMICS*

**X**500

**INSTRUCTION  
MANUAL**

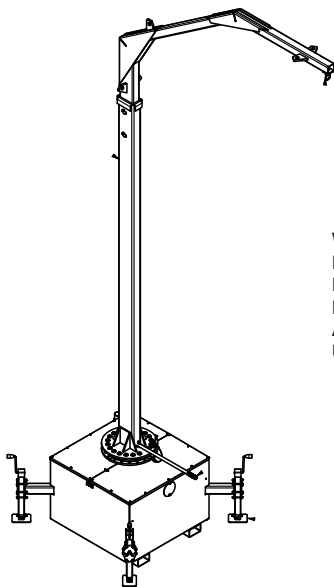


## THE X500 INSTRUCTION MANUAL

These instructions apply to the following model(s): X500

Manual Revision Date: October 10, 2023

*Please visit [www.MaltaDynamics.com](http://www.MaltaDynamics.com) for the latest user instruction manual revision available for this product offering as well as supporting documentation.*



Width: 6'-2"  
Height: 25'-3"  
Length: 13'-2"  
Reach: 10'  
Anchor Point Height: 25'  
Unit Weight: 6,100 lbs



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# GENERAL

Malta Dynamics fall protection systems are designed for use where fall hazards exist.

This equipment is to be used with an ANSI rated self-retracting device (SRD) with an average arrest force of 900lbs or less. This fall arrest system meets the needs of a construction and industrial worker's safety requirements.

The X500 is comprised primarily of A36 steel but also includes but not limited to rubber, plastics, copper, and concrete.

## TRAINING

All training shall be conducted by trainers deemed competent. Manufacturer's based training is essential to help understand the capabilities and limitations of their personal protective equipment. Training also helps promote confidence and should be conducted as an initial introduction as well as periodically for review and additional practice.

Please note it is the expectation of the manufacturer that users are all deemed competent for working at heights and confined space under the relevant industry codes.

## TRAINING TOPICS

Following is a suggested list of training objectives. Training should be site and project specific and may need to cover more topics than those listed.

1. Recognizing fall hazards and eliminating hazards where possible.
2. Knowing the four parts of a fall arrest system:  
Anchorage, Body Support, Connectors and Devices.
  - Select the proper PPE for the job.
  - Consider environmental and other workplace factors.
  - Determine and reduce free fall distance, always work in limited free-fall.
  - Wear a properly fitted harness.
  - Implement a pre-determined rescue plan.
  - Inspect and maintain all PPE.
  - Understand the limitations and requirements of the PPE being used.
  - Understand the consequences of not following or understanding these instructions.



## **WARNING**

Malta Dynamics systems shall be a part of a complete fall protection system.

If the user chooses to disregard this warning, he or she is solely responsible for the safety of the entire system and all users.

Prior to replacing or modifying any components to a fall protection system, consult Malta Dynamics.

Any changes to this system must be authorized by Malta Dynamics in writing.

Operators must read and understand all instructions fully; failure to do so could result in a serious or fatal injury.

To achieve the maximum level of safety that this system is capable of providing, all instructions must be followed diligently.

This means careful planning of your application and work method.

## **UNDER PENALTY OF LAW**

The instructions are not to be removed except by the user of this system. Current instructions must always be available to any potential user. If you have any difficulty or experience any problems with Malta Dynamics systems or need assistance with the instruction: contact Malta Dynamics for assistance.

This equipment is designed to be used as a part of a complete fall protection system. It is to be inspected and maintained on a regular basis.

It is the responsibility of the user and their management to review these instructions periodically, and to ensure their continued compliance.

## **WARNING**

You assume complete liability if you fail to follow these instructions and become injured. Use this system only as instructed.



# WARNINGS & LIMITATIONS

- Failure to follow these instructions could result in a serious or fatal electrical incident. Read, understand, and follow the instruction manual, assembly drawings, and warnings provided with your system before beginning installation to avoid injury.
- Equipment shall only be used by a person trained and competent in its safe use.
- Do not use if the system or any part of the system appears to be damaged.
- Do not use the system if any components do not operate properly.
- Use in highly corrosive or caustic environments dictates a more frequent inspection and servicing program to ensure the integrity of the system is maintained. Always perform a hazard analysis before use that identifies impact hazards, swing hazards, or any other hazards that may exist. Address and correct all hazards before use.
- If used in highly corrosive or caustic environments a more frequent inspection and servicing program to ensure the integrity of the system is maintained.
- Do not attempt to repair this system.
- Do not make alterations or additions to the equipment without the manufacturer's prior written consent, and that any repair shall be carried out in accordance with the manufacturer's procedures.
- Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
- A rescue plan shall be in place to deal with any emergencies that could arise during work.
- All equipment must be inspected before each use. Any component exhibiting deformities, unusual wear, or deterioration must be immediately discarded.
- The X500 is designed for up to 1 worker in any combination of Fall Restraint or Fall Arrest with a maximum weight capacity of 310lbs. The X500 is a mobile engineered anchorage solution designed to protect workers from fall hazards.
- Never use fall protection equipment for towing or hoisting.
- Do not operate the machine in strong or gusty winds.
- Do not increase the surface area of the platform or load. Increasing the area exposed to the wind will decrease machine stability.
- Inspect for dangers that may arise be the use of combinations of items of equipment in which the safe function of any one item is affected by or interferes with the safe function or another.
- User must carry out a pre-use check of the equipment, to ensure that it is in a serviceable condition and operates correctly before it is used.



- It is essential for safety that equipment is withdrawn from use immediately should any doubt arise about its condition for safe use or it has been used to arrest a fall. Unit must not be used again until confirmed in writing by a competent person that it is acceptable to do so.
- It is essential for safety that the anchor device or anchor point should always be positioned, and work carried out in such way, as to minimize both the potential for falls and potential fall distance.
- A full body harness is the only acceptable body holding device that can be used in a fall arrest system.
- Verify the free space required beneath the user at the workplace before each occasion of use, so that, in the case of a fall, there will be no collision with the ground or the other obstacle in the fall path.
- Consider hazards that may affect the performance of the equipment and corresponding safety precautions that have to be observed (e.g.: extremes of temperature, trailing or looping of lanyards or lifelines over sharp edges, chemical reagents, electrical conductivity, cutting, abrasion, climatic exposure, pendulum falls).
- It is essential for the safety of the user that if the product is re-sold outside the original country of destination the reseller shall provide instructions for use, for maintenance, for periodic examination and for repair in the language of the country in which the product is to be used.
- Perform regular periodic examinations, and that the safety of users depends upon the continued efficiency and durability of the equipment.
- Periodic examination frequency shall be at least every 12 months. Periodic examinations are only to be conducted by a competent person and strictly in accordance with the manufacturer's periodic examination procedures.
- Check the legibility of the product markings.
- Any repair shall only be conducted by a competent person for repair, who has been authorized by the manufacturer, and that the repair procedure shall be strictly in accordance with the manufacturer's instructions.
- Always check for obstructions below the work area to make certain the potential fall path is clear.
- Use only compatible locking snap hooks or locking carabiners with this product.
- Use only approved Malta Dynamics hardware with this product.
- Do not attempt to move the system while workers are attached.
- The X500 should always be placed on level surfaces as any unexpected movement of the unit could occur resulting in bodily injury or death.
- Do not remove product labels.
- It is the customer's responsibility to confirm that the system and



components will work in and are acceptable for their specific application and environment.

## GENERAL OPERATION & INITIAL SETUP

Don a full body harness according to the manufacturer's instructions.

Install only ANSI compliant self-retracting lifelines (SRL's) and personal fall protection according to the manufacturer's instructions supplied with that product.

### INITIAL SETUP:

Before using the unit, be sure to read, understand, and follow the instructions that come with your system. Knowing how to use the system properly will greatly reduce the possibility of injury.

Equipment Needed for Assembly:

- a. This manual
- b. Applicable safety equipment for workers' use during assembly, such as hard hats, safety shoes, etc.
- c. Telescoping fork truck or crane (minimum lifting height: 35 feet; recommended capacity: 6,000 pounds )
- d. Man lift/cherry picker
- e. Torque wrench
- f. Lifting straps
- g. Wrench/Socket sizes: 15/16 inch
- h. A spacious, level area for assembly

**WORKING AREA/USE:** When using the unit, the walking/working surface being accessed by the user must be of a sufficient height as not to allow any part of a worker's body to strike an object, or, the next lower level, in the event of a fall arrest situation, as required by OSHA. The X500 may be used up to 30 degrees off plumb in the East, West and South directions depending upon model and anchor points being used so long as the user cannot strike an object or the next lower level in a fall arrest.





# WARNING

**WARNING:** Use only ANSI rated SRLs. Adhere to all safety precautions and warnings that come with your SRL. Attach SRLs only to designated anchor points on the system. Failure to do so could lead to serious injury or death.

**LOCATION:** The area where the system is used must be no less capable of supporting twice the weight of the system and the loads applied by the system in event of a fall.

**SYSTEM CAPACITY FOR X500:** The maximum number of users per unit is **1 (one)**. Only (1) user per individual anchor point is permitted. The capacities are based on maximum user's weight, including tools, clothing etc. of 310 lbs. Warning: Maximum working load for each attachment point is 310 lbs. Do not exceed this weight per individual attachment point.

**COMPONENT COMPATIBILITY:** The X500 is designed for use with ANSI Z359.14-2021 Class 1 Self retracting lifelines or comparable that maintains an average arresting force of 900lbs or less and approved components only. Substitution or replacement with non-approved components will endanger the compatibility within the system and may affect the reliability and safety of the total system.

**MOVING THE SYSTEM:** Always disconnect workers before attempting to move the system. Never expose a worker(s) to a fall hazard by moving the system while connected to the system.

**SURFACE GRADE:** The X500 is designed for use on surfaces that allow the unit to be leveled within 2° horizontal and vertical to grade.

Warning: Do not use on surfaces that do not allow the unit to be leveled within 2° horizontal and vertical to grade.

**WORKING DISTANCE:** WARNING: DO NOT EXCEED WORKING DISTANCE REQUIREMENTS.

**CONNECTORS:** Anchorage connectors are components that couple the personal fall arrest system to the anchorage. In accordance with ANSI Z359.1-2007 the anchorage connector must be capable of withstanding (without breaking) a 5,000 lb. (22.2kN) load, and able to withstand a 3,600 lb. (16kN) load without cracking, or permanent deformation visible to the unaided eye. Non-approved, non-compatible components may cause accidental disengagement (roll-out). Only self-locking, self-closing connectors are recommended.



Caution must be taken when using self-retracting devices near moving machinery, electrical hazards, sharp edges, or abrasive surfaces. Contact with these elements may cause equipment failure, personal injury, or death.

## LIFTING THE UNIT

**FORKLIFT TRANSFER:** To properly lift the unit with a forklift, use the built-in forklift pockets.

## ASSEMBLY INSTRUCTIONS:

1. Ensure all parts are accounted for before assembly. (20- 5/8th 2" Hex cap Bolts, 20- 5/8th alloy lock washers, 20- 5/8th washer, swing arm, and weighted base)
2. Fill grease fitting located on the underside of the pivot gear (Where the weighted base and swing arm connect)
3. Before attempting to connect the swing arm to the weighted base, ensure that all four outrigger jacks are deployed and are supporting the weight of the system.
4. Attach the lifting device to the pick point located on the upper mast of the swing arm.
5. Slowly lifting the swing arm with a crane/telehandler, align the predrilled bolt holes to the holes on the weighted base.
6. Install all 20 bolts, lock washers, and washers on the inner holes of the unit.
7. Once all bolts are installed using a torque wrench, ensure all bolts ( 5/8-11 SAE J429 G8) are torqued to the following:
  - a. 159 ft-lb, for "lubricated" conditions
  - b. 180 ft-lb, for some anti-seize, thread lockers, and some plain conditions
  - c. 212 ft-lb, for zinc and dry conditions
8. Ensure all bolts are installed and torqued to the correct specs before disconnecting lifting device. Use a manlift/cherry picker to safely reach connecting device.
9. Ensure the unit is within 2 degrees of level by looking at the two levels installed on the front/side of the mast.
10. Unit should rotate when a force is applied to the handle and be able to rotate 360 degrees in both directions.

# MAINTENANCE SCHEDULE

X500 Maintenance & Inspection Schedule			
Every Use (By Authorized User)	Monthly (By Authorized User)	12 Month (Competent Person Other than End User)	Item to Inspect
	X		Grease Coupler
X	X	X	Labels
X	X	X	Manual
	X	X	Grease Fittings
X	X	X	Anchor Points (Bolts & Swivel)
		X	Torque Bolts

## SAFETY INSTRUCTIONS

### Safety Warning Labels

You shall read and follow all instructions and safety labels for your own protection.

You must read and fully understand or have the following instructions explained to you before using this equipment. You must be properly trained prior to using this equipment. This system shall be inspected prior to each use. The X500 shall be inspected by a competent person at a minimum of every 12 months.

All inquiries should be made to Malta Dynamics either by means of phone, fax, or e-mail. Malta Dynamics shall not be held responsible for injuries the user may receive from a fall if the system or any PPE is used outside of the prescribed scope or any Industrial Code of Practice.



### WARNING

The user is responsible for all maintenance, training and inspection records. The system user pre-certified on an annual basis by an authorized Malta Dynamics representative or competent person.

At no time shall this unit be altered or repaired unless authorized by the manufacturer. Failure to follow the preceding instructions can result in a serious or fatal injury.

At no time shall the equipment not be used in a way or for a purpose other than as instructed by the manufacturer.

Use of components within the system must adhere to the instructions provided. Using combinations of components including but not limited to lanyards, harnesses, SRDs, and anchors in combinations is strictly prohibited.

Exposing the system to any chemical that could in any way effect its performance must be avoided. Users must contact the manufacturer for further guidance if such a situation presents itself.

Extreme caution must be used when using the system around moving machinery.

Workers must be aware and use appropriate caution when using the system around sharp edges.

## INSPECTION

**Inspection frequency:** All systems shall be inspected visually by the user prior to each use. The unit shall be inspected by a competent person every 12 months.

Detailed inspection records shall be kept. An inspection chart is provided in the owner's manual attached to the system for your convenience. In the event this system has been involved in a fall, the unit and all components must be removed from service IMMEDIATELY and checked by a trained and competent person before possibly being put back in service.

Systems used in harsh environments may require more frequent formal inspections. (Example: caustic or corrosive environments.)

**Corrective actions:** If damage is found or questionable conditions are apparent, remove the equipment from service immediately and tag DO NOT USE. Failure to remove systems that have been damaged or where their condition is questionable could lead to a serious or fatal injury.



Use this form to maintain records for inspection of this equipment.

Inspection Date	User	Pass	Fail

1. Proceed around the machine inspecting welds for cracks or gaps  
\*Cracks in the paint may help identify these areas.
2. Check that bolts and nuts are tightened and not missing.
3. Ensure that the leveling jacks show no sign of wear or damage.
4. Inspect the anchor points for deformation, cracks, and that they rotate freely.
5. Make sure that all labels are present and legible.
6. If ANY part of this inspection does not pass, mark machine with DO NOT USE tag and contact your authorized X500 dealer.

## INITIAL QUALITY INSPECTION

(Use this form for the first inspection after receipt of system)

**Purchase Date (mm/dd/yy):** \_\_\_\_\_

**System Serial No:** \_\_\_\_\_

**Date of Inspection (mm/dd/yy):** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_



INSPECTION ITEM	PASS	FAIL
Physical Damage to Body		
Damaged, loose, corroded, or missing hardware or connectors		
Check anchorage points are secured (mounting nuts tight) and inspect the eyes for distortion or cracks		
Check all bolts on mast are in place and secure		
Check that all labels are in place and legible		
Inspect the SRL for damage and ensure that the hook is not damaged and latch works correctly		

## LIMITED WARRANTY

Malta Dynamics, LLC warrants that the X500 shall be free from defects in material and workmanship that develop under normal use for a period of one year from the date of shipment. The foregoing shall be the exclusive remedy of the buyer and the exclusive liability of Malta Dynamics, LLC. Our warranty excludes normal replaceable wear items, i.e. gaskets, wear parts, seals, Orings, belts, drive chains, clutches, etc. Any equipment, part or product which is furnished by Malta Dynamics, LLC but manufactured by another, bears only the warranty given by such other manufacturer (Malta Dynamics, LLC agrees to furnish free of charge a written description of problem or cause). Warranty is voided by product abuse, alterations, use of equipment in applications for which it was not intended, use of non-manufacturer parts, or failure to follow documented service instructions. The foregoing warranty is exclusive of all other warranties whether written or oral, expressed or implied. No warranty of merchantability or fitness for a particular purpose shall apply. The agents, dealers, and employees of Malta Dynamics, LLC are not authorized to make modifications to this warranty, or additional warranties binding on the Malta Dynamics, LLC. Therefore, additional statements, whether oral or written, do not constitute warranty and should not be relied upon.

Except as set forth here in above and without limitation of the above, there are no warranties or other affirmation which extend beyond the description of the products on the fact hereof, or as to operational efficiency, product reliability, or maintainability or compatibility with products furnished by others. In no event, whether as a result of breach of contract or warranty or alleged negligence, shall Malta Dynamics, LLC be liable for special or consequential damages including but not limited to: Loss of profits or revenue, loss of use of the product or any associated product, cost of capital, cost of substitute products, facilities

or services or claims of customers. Malta Dynamics, LLC does not assume responsibility for any accident due to equipment modification or misuse. No claim will be allowed for products lost or damaged in transit. Such claims should be filed with the carrier within fifteen days.

# WARRANTY REGISTRATION FORM

Fax Warranty Registration Form to 740-586-0772 or submit online at [www.MaltaDynamics.com](http://www.MaltaDynamics.com) by clicking on “Contact Us” and then “Warranty Registration”.

## X500 Warranty Registration

Contact: \_\_\_\_\_  
Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: ( ) \_\_\_\_\_ Fax: ( ) \_\_\_\_\_  
Email: \_\_\_\_\_  
Purchased From: \_\_\_\_\_  
Purchase Date: \_\_\_\_\_ Serial No: \_\_\_\_\_  
Type of Industry: ☐ Rental ☐ Construction ☐ Masonry ☐ Other

Please complete this warranty registration card and return via mail, fax or email within 30 days of purchase to validate your manufacturer’s warranty for all Malta Dynamics products.

Warranty provisions of this machine are handled directly through the manufacturer.

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