

MAGNETIC ROBOT BASE



Red-D-Arc's magnetic base is designed for use with our BotX collaborative robotic welder and plasma cutters, firmly securing our cobots to ferrous materials with the simple flip of a lever. Its pivoting magnetic arrays conform to both flat and cylindrical surfaces, utilizing a wide footprint to maintain maximum stability even when the robot arm is at full extension. Additionally, the pivot points feature built-in electrical isolation to protect the robot's electronics from harmful welding currents and static surges. This makes the magnetic base an essential addition to your workspace, delivering the mobility and flexibility needed to expand your operational capabilities.

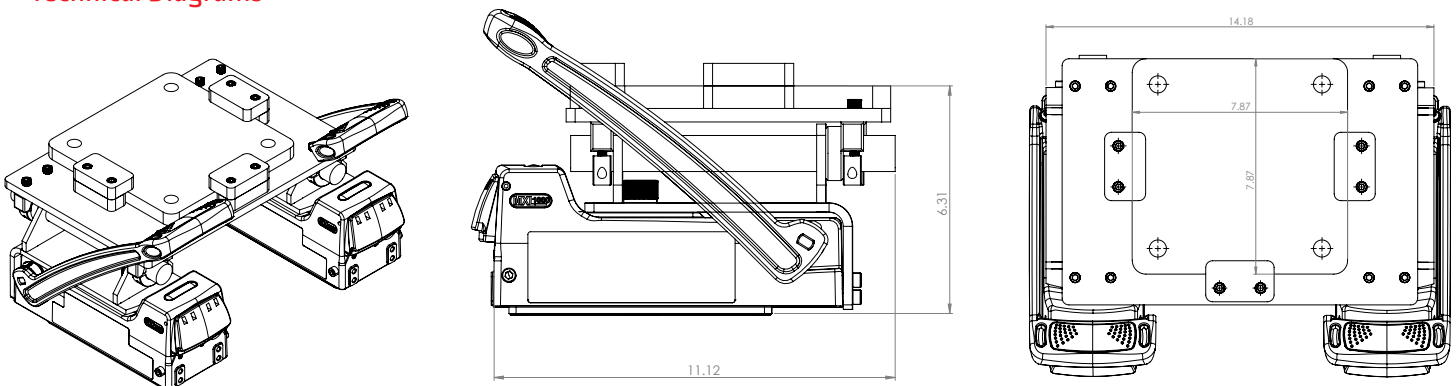
System Components

- **Easy Control:** Simple lever-action handles let you engage the magnets on and off easily.
- **6,000 lbs Holding Power:** Dual magnets deliver a combined 6,000 lbs of breakaway force when mounted on 3/8" [0.375"] ferrous material [3,000 lbs per magnet].
- **Surface Adaptability:** The magnets pivot right at their center of gravity, allowing the base to automatically mold to both flat and round surfaces.
- **Built for BotX:** Stable enough to handle the full 51" [1295.4 mm] arm reach of the Universal Robots UR10e used across our BotX welder and plasma cutter systems.



Mag base setup with the BotX Plasma Cutter

Technical Diagrams



Rental | Lease | Purchase

Red-D-Arc™

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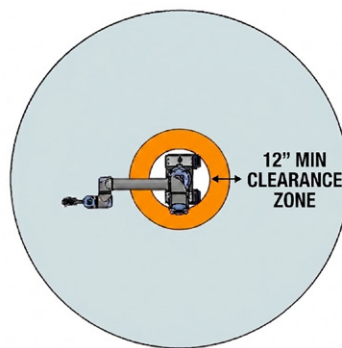
Operational Safety Protocols

Implementing these best practices helps ensure the mounting platform remains within safe operating limits.

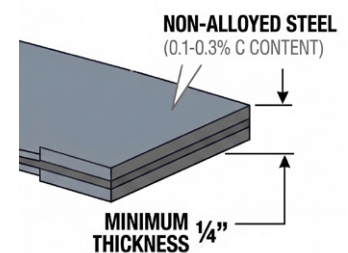
Failure to follow these protocols may increase the risk of equipment instability, magnet failure, and hazardous operating conditions for all personnel.

Mounting

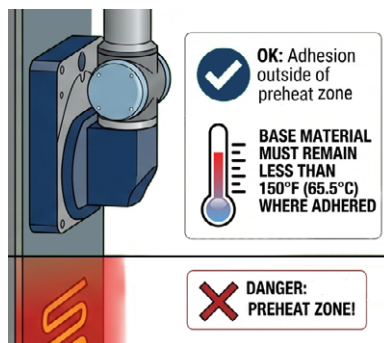
- **Clearance Specifications:**
Maintain a minimum of 12" between the welding arc and the magnetic robot base to avoid heat-induced demagnetization from the weld zone.



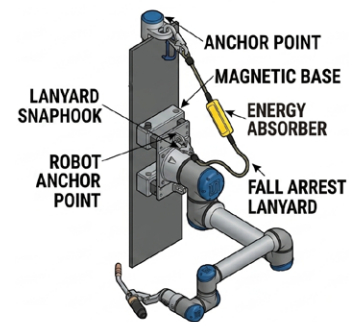
- **Base Material Requirements:**
Base material thickness must be a minimum of 1/4" non-alloyed steel (0.1-0.3% C content) to prevent magnet failure or deflection, and inconsistent welds. Other grades of steel may have reduced magnetic properties.*



- **Preheat Zone Safety:**
The base material **must** be outside of any preheat zone and remain less than 150°F where adhered to prevent magnetic degradation.



- **Fall Arrest:** Ensure redundant safety when vertically mounting the robot. Always barricade off the work area below suspended loads. Assure the anchor connection is capable of supporting the load arresting force.



Pre-Operation Assessment

Before Each Use:

- **Inspection:** Ensure surfaces are free of dust, oil, and welding spatter. Inspect the bottom of the magnet for scratches, pressure points, or cracks. If damage is detected, contact Red-D-Arc support for units under an active agreement; for all other units, contact the manufacturer to determine if repair is necessary.
- **Cleaning:** Clean the surface of the work piece and the underside of the magnet.
- **Lock Check:** Verify the lock function of the safety tab on the lever.

For more information

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