

INSTALLATION

PRE-CONSTRUCTION CHECKLIST

SAFETY

- » Personal Protective Equipment
- » Fall protection
- » Follow OSHA excavation safety measures
- » Rigging & lifting
- » Other relevant safety precautions

ENGINEERING & PERMITS

- » Review the detailed final design prepared by the Engineer/Architect of Record
- » Review the project specifications
- » Project design documents take precedent over these general recommendations
- » Make sure necessary project approvals and permits are obtained

PROJECT PLAN REVIEW

- » Make sure you completely understand project plans, details, and specifications
- » Ask the design engineer any questions you have about the project before starting
- » Coordinate your work with the General Contractor and other trades
- » Consider having a Pre-Installation meeting

CONSTRUCTION PLANNING

- » Locate and mark all underground utilities; call 8-1-1 or online at www.call811.com
- » Manta Ray[®] products should be stored above the ground on wooden cribbing, keeping the units clean.
- » Ensure no damage of the galvanized finish (if applicable) such as staining, cracking, chipping, etc.
- » Use approved lifting devices.
- » Verify weight of the units for safe lifting, transport, and installation.

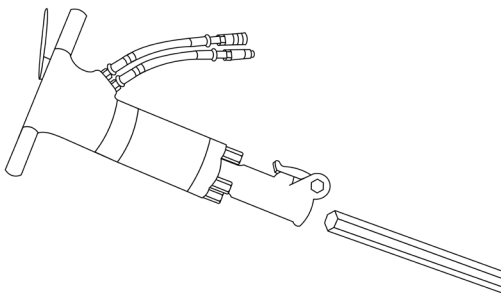
EQUIPMENT

- » Lifting and setting equipment
- » Hand held jack hammer
- » Load testing assembly
- » Excavator or skid steer with mounted hydraulic hammer
- » Shovels, rakes, hoes
- » Level and measuring tapes

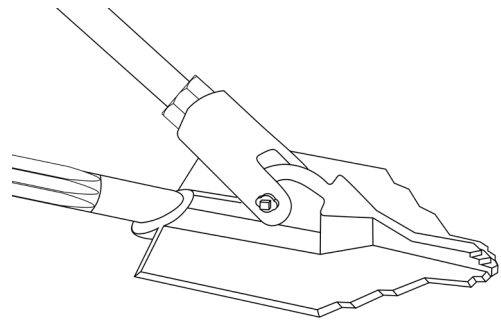


INSTALLATION

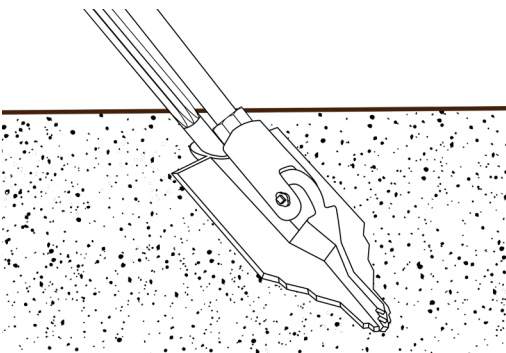
THE DETAILS



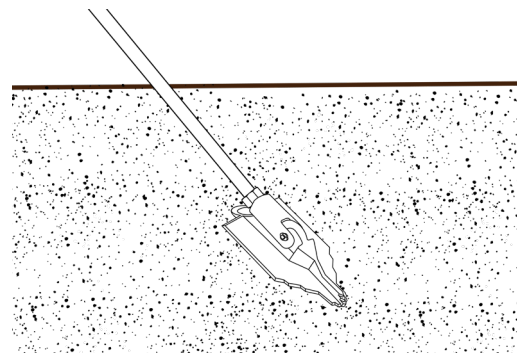
1. Install drive steel in hammer



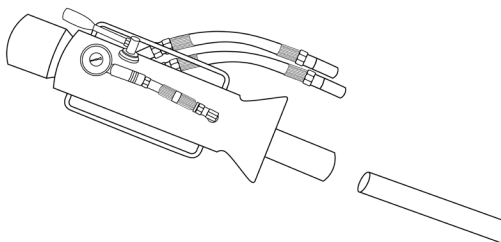
2. Insert drive steel and threaded bar to anchor



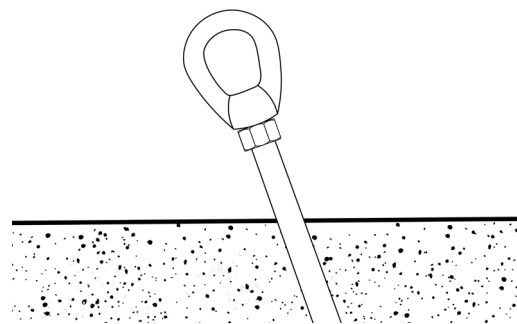
3. Drive anchor to depth



4. Remove drive steel



5. Attach load locker and set anchor



6. Remove load locker and attach termination