

## Assemblies

Duckbill® and Manta Ray® earth anchors are made of aluminium or ductile iron to give the ultimate mechanical strength and extreme durability for a variety of soil stabilization applications. The following assemblies are available to fit your application needs.



### Composite Plate with Stop Button

For this assembly the anchor is connected to a cable which attaches to a UV protective composite disk. The anchors, used as a tie down, are terminated with a hand crimping tool after load locking the anchor above the plate.



### Composite Grip

This assembly includes high strength and corrosion resistant components. The cable attaches to a UV protective composite disk. Once secured to the cable, the Composite Grip only has movement one way and secures the plate to the mat.



### MacLean Power Grip

Introducing the MPG anchoring system that provides instant tension anchoring solution with single component disk to distribute load while allowing vegetation growth. Recessed grip allows tendon to be cut below grade.



### Rods and Plates

We provide assemblies for secure fastening of combination solutions and hard armoring. This solution uses 3/8 inch and 1/2 inch diameter rods for higher capacity applications.

## Holding Capacities Ranging from 300 lbs - 5,000 lbs (Soil Dependent)

Capacity	DB040A	DBB40T	DB058D	DB068A	DB068D	DB088A	DB088D	MR68G	MR88G
<b>Soft Soil 7 - 13 Blow Count</b>	100-200 [0.40-0.9]	200-400 [0.9-1.8]	300-600 [1.3-2.7]	400-800 [1.8-3.6]	400-800 [1.8-3.6]	1000- 2000 [4.4-8.9]	1000- 2000 [4.4-8.9]	900-1100 [4-4.9]	1500- 2400 [6.7- 10.67]
<b>Medium Soil 14 - 25 Blow Count</b>	200-300 [0.9-1.3]	400-500 [1.8-2.2]	500-700 [2.2-3.1]	800-1000 [3.6-4.4]	800-1000 [3.6-4.4]	4000* [17.8]	4000- 5000 [17.8- 22.2]	1100- 1500 [4.9-6.7]	2000- 3000 [8.9- 13.3]
<b>Hard Soil 26 and Above</b>	300-400* [1.3-1.8]	500-600* [2.2-2.7]	700-1600* [3.1-7.1]	1000- 1100* [4.4 4.9]	1000- 2500* [4.4-11.1]	4000* [17.8]	5000- 6750* [22.2-30]	1500- 3000* [4.9-13.3]	3000- 5000* [13.3- 22.2]
<b>Ultimate Mechanical Capacity</b>	900 [4.0]	1,100 [4.0]	2,400 [10.7]	1,650 [7.3]	3,700 [16.5]	6,000 [26.7]	10,000 [44.5]	5,000 [22]	10,000 [44.5]

**Note:** Maximum achievable working loads may be affected by tendon selected

Product Capacities are shown in pounds [kN]

\* Limited by Anchor Mechanical Capacity

### MPS Civil Products - Building Solid Foundations.

MPS Civil Products is part of MacLean-Fogg, a diversified international manufacturing enterprise with more than half a billion dollars in sales. A result of the acquisition and merger of Joslyn, Dixie and Foresight, the three most prominent soil anchor manufacturers, MPS Civil Products is now one of the leading suppliers of steel deep foundation systems for use in residential, commercial and marine applications. Our comprehensive product line for residential and commercial applications includes engineered solutions for tension, compression and structural stabilization in many different soils. When Quality and Service is your focus, Solutions are the result.

Patented Worldwide

Nos. D572,546 6,237, 289 7,534,073

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Contact us to learn more about Earth Anchors

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MPS Civil Products





# MPS Civil Products

**Soil Stabilization Solutions**

**Breakthrough Earth Anchoring Technology**



- > Wide Range of Products
- > Customizable per Application
- > Different Assemblies for Desired Capacity
- > Instant Verifiable Loads
- > Capability to be Proof Loaded on Jobsite

## Flexible Tendon Anchors



### 40-DB

The smallest Duckbill anchor is used for light holding capacities and is cabled with 1/8 inch (3.2mm) cable.



### 58-DB-DI

Made with ductile iron and ideal for rocky or hard soils, this anchor is cabled with 1/8 inch (3.22mm) cable. For more aggressive soils it can be cabled with 3/16 inch (4.8mm) cable.



### 68-DB

Used for medium holding capacities, this anchor is cabled with 1/8 inch (3.22mm) cable. For more aggressive soil, it can be cabled with 3/16 inch (4.8mm) cable.



### 68-DB-DI

Made with ductile iron, and ideal for rocky or hard soils, or for use with power installation equipment.



### 88-DB

The most common of the Duckbill anchors, this anchor is cabled with 1/4 inch (6.4mm) cable. For more aggressive soil, it can be cabled with 5/16 inch (7.9mm) cable.



### 88-DB-DI

Made with ductile iron, and ideal for rocky or hard soils, or for use with power installation equipment.

## Solid Tendon Anchors



### MR-68

Used for medium holding capacities in normal/hard soils to 3,000 lbs (13 KN). Accepts 3/8 inch (10mm) anchor rods.



### MR-88

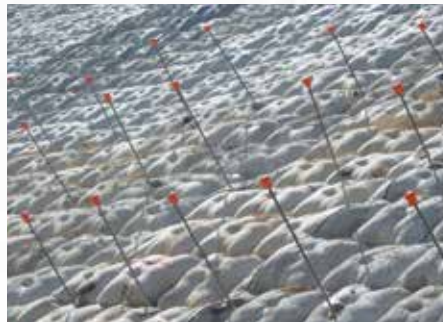
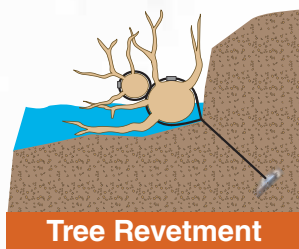
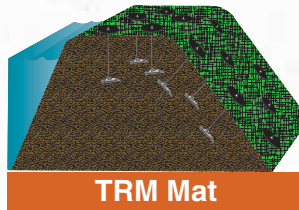
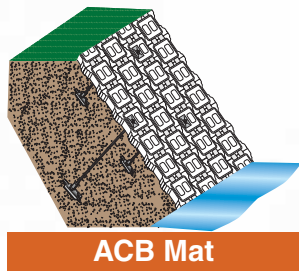
Used for heavy duty holding capacities in normal/hard soils to 5,000 lbs (22 KN). Accepts 1/2 inch (13mm) anchor rods.



# Applications

Duckbill® and Manta Ray® earth anchors offer a wide range of solutions for light to medium soil stabilization applications. Each solution can be customized to meet your specific needs. Applications include:

- Turf Reinforcement Mats
- Articulated Concrete Blocks
- Cellular Confinement
- Soil Reinforcement
- Coir Logs/Wattles
- Stabilization Mats





# Installation

Labor and time saving drive-type Duckbill® and Manta Ray® earth anchors offer a wide range of solutions for light to medium applications. Each solution can be customized to meet your specific needs and the installation process involves three simple steps: drive, load and set. Installation equipment is minimal and readily available. The following equipment may be recommended based on your application.

## Installation



**Sledge Hammer**

## Setting



**T-Handle Locker**



**Electric Hammer Drill**



**Jack Jaw®**



**Hydraulic/Air Hammer**



**LL-2 Load Locker**