



Anvil Attachments offers bulk material handling products such as grabs, grapples and clamshell buckets for the shipping industry under its brands Hawco, Pro-Line, Anvil, Owen, Yaun, Williams, and Drott.

The company supplies a wide range of grabs for large ports and handling companies worldwide. Its products include two and four rope grabs, which are purpose-built for the materials being handled, as well as radio remote-controlled ship gear variants that are either hydraulic or diesel-hydraulic powered.

## **Chapter 1: Overview of Grabs Types**

### **Ports & Stevedoring Grabs**

There are several options for Ports & Stevedores to handle breakbulk for loading and unloading from vessels. Below we will discuss the most common types and the pro's and con's of each.

Ships Grabs:

- Radio Controlled Single Line Grabs
- Cable Grabs
- Diesel Hydraulic Grabs
- Electro-Hydraulic Grabs
- Hydraulic Grabs

## **Chapter 2: Radio Controlled Single Line**

### **RADIO CONTROLLED SINGLE LINE GRABS**

Radio controlled single line grabs one of the oldest and most reliable forms of ships gear grabs on the market today. A ships gear grab is any grab that connects to the cranes which are built onto a ship. These cranes are typically a single hook point with no other cable or hydraulics run to the hook. Some will have have power to supply an electro

hydraulic. Radio Controlled Single Line grabs are completely self-contained, no external power source, hydraulics or cables are required.



These grabs are ideal for the following materials:

- Grains
- Coal
- Pet Coke
- Other loose flowing material

Pro's:

- Inexpensive
- Reliable Operation
- Easy to maintain
- Simple installation

Con's:

- Slower
- Capacity Restrictions - Not ideal for heavy materials
- Only available in clamshell bucket syle
- Require substantial working height for cables to close bucket

Options:

- Patented Cluster Sheave (increase cable life 3X)
- Bolt-On Edges
- Bolt-On Sealed Lips
- Spillways
- Splillplates
- Environmental Covers

[Click here for more info on Anvils Radio Controlled Single Line Grabs](#)

# Chapter 3: Cable Grabs

## FOUR ROPE CABLE GRABS

Cable operated grabs can be customized for any material being handled, grabs are optimized for the crane and material. These grabs are typically designed for large capacities up to 65 cubic yards (50 cubic meters) depending on the crane and the material. These grabs can be clamshell bucket style or grapple style.



These grabs are ideal for the following materials:

- Grains
- Coal
- Pet Coke
- Other loose flowing material

Pro's:

- Greatest production– these grabs are very large compared to other types
- Purpose built for the material being handled
- Often mounted on a barge for mobility on rivers

Con's

- High upfront cost
- Require large expensive crane

# Chapter 4: Diesel Hydraulic Grabs

## DIESEL HYDRAULIC GRAPPLES AND BUCKETS

Diesel Hydraulic grabs are typically used for "ships gear" as they require only a single hook point for installation and are completely self contained. They are available in either a grapple or clamshell style and are powered by a diesel engine and can handle any material with ease. Grapples are most commonly used for scrap, but can also be used for pig iron. Clamshell buckets can be used for any loose flowing material, including heavy ores.



Diesel grapples are ideal for the following materials:

- Scrap
- Pig Iron

Diesel Clamshell Buckets are ideal for the following materials:

- Grains
- Coal
- Pet Coke
- Heavy Ores

Pro's:

- Best option for handling scrap with ships gear (skip pans are inefficient)
- Best option for handling heavy ores
- Customizable tine and bowl options for specific materials
- Fast payback on purchase
- No working height required for cables

Con's:

- High upfront cost
- Proper maintenance required for smooth operation

### **Diesel Grapple Options:**

Options:

- Various tine configurations—Can be used as a bucket with fully enclosed
- Quick Connect Tines—Easily swappable

### **Diesel Clamshell Bucket Options:**

- Interchangeable Bowl Assemblies
- Bolt-On Edges
- Bolt-On Sealed Lips
- Bolt-On Teeth
- Spillways
- Spillplates
- Environmental Covers

## **Chapter 5: Electro-Hydraulic Grabs**

### **ELECTRO-HYDRAULIC GRABS**

Most ships are fitted with an electro-hydraulic during construction. These are grabs with an electric motor which must be feed by an electric cable to the grab. Replacement is difficult because it is hard to match the correct electrical specifications. If the crane does not have electricity to the hook point a hose reel and power pack are needed which is a very expensive retrofit. These grabs do not require working height for cables to close the bucket.

## **Chapter 6: Hydraulic Grabs**

### **HYDRAULIC GRABS**

Hydraulic grabs are versatile grabs that can be used on a wide range of materials. Common sizes range from 1 cubic yard (.76 cubic meters) up to 10 cubic yards (7.65 cubic meters). These grabs are typically installed on a material handler like a Sennebogen or Liebherr. Due to the length of the boom, these are restricted for use on loading and unloading barges.



Pro's:

Versatile - can be used for a wide range of materials

Con's:

Restricted from large sizes by the capacities of the material handler

Shorter operating range than other options