

# CHANCE®

## Powered Hoists



Catalog 1150 May 2015

Hoists - Powered - 1150

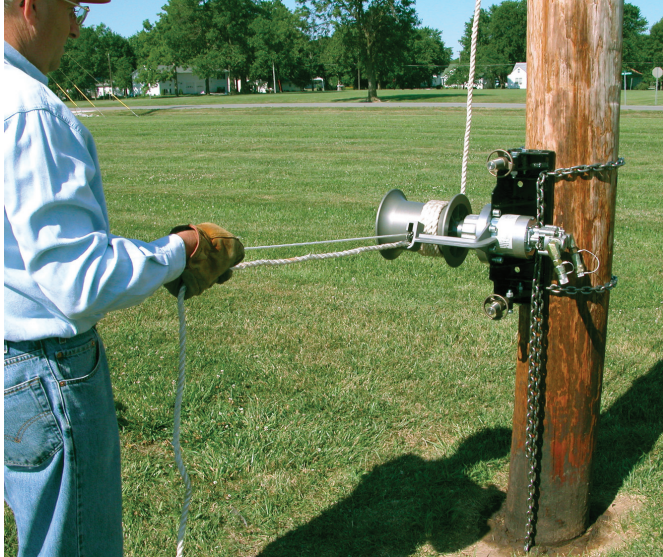


## Series 90 Capstan Hoists

- 1,000-lb. & 3,000-lb. Load Ratings
- 12V, 115V, 230V, Hydraulic, Gasoline

Powerful design for tough jobs.

Improved design features a multiple-planetary drive/back-stop clutch assembled on the center shaft of a steel gearcase with full-length internal teeth. This design handles more rugged jobs, extends service life and reduces maintenance.



**Optional Rope Lock** – At left: Automatically supports load when fall line is released, until operator resumes hoisting. At right: The release lanyard permits lowering or lifting load with precise control over speed and distance.

For improved load control, steel capstan drum features nickel-plated rope surface, larger radius at load-line wrap and rope hook. Position fall line so it will not pullover end of drum. If rope comes off end of drum and hook catches it, stop hoist, secure load and correct rope position on drum.

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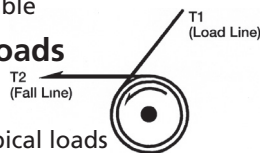
### Versatile to various applications

Lightweight, powerful portable hoists move heavyweight and difficult-access tasks, including:

- Setting utility poles • Cell tower erection
- Pulling wheeled equipment over obstacles
- Raising transformers (even over fences in back lots)
- Hoisting heavy insulators
- String and tensioning conductors
- Pulling indoor and underground cable

### Simple technique eases all loads

- Graph and diagram at right show capstan principle in action
- Operator effort remains low for typical loads simply by adding wraps on capstan drum
- Such little effort is required, any crew member can run hoist

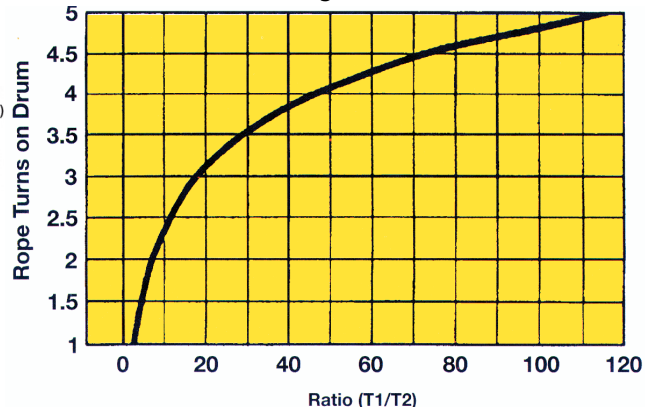


**Example:** 4 wraps of rope = 1:44 ratio.

That is, 1 lb. pull on Fall Line develops 44 lb. on Load Line. Therefore, 20 lb. of pull develops 880 lb. of lift.

- Highly-accurate controls allow loads to be moved a fraction of an inch
- Note: Always use at least as many wraps of rope on the drum to lower a load as required to lift that load

### Mechanical Advantage of Series 90 Hoists



# Series 90 Capstan Hoists

## 1,000-lb. Load Rating



### Electric Drive

**12-Volt DC Power Hoist**  
with 25' #2 Cu Cable, four Terminals, Relay, Foot Switch

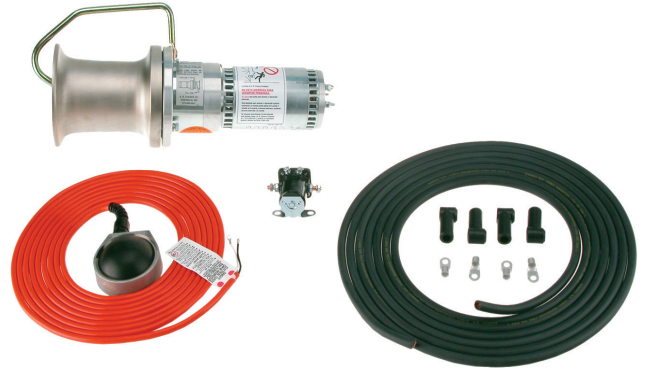
|             |                    |
|-------------|--------------------|
| Catalog No. | Weight, each       |
| C3081172    | 56½ lb. (25.7 kg.) |

**115-Volt AC**  
includes Power Hoist and Foot Control Switch only

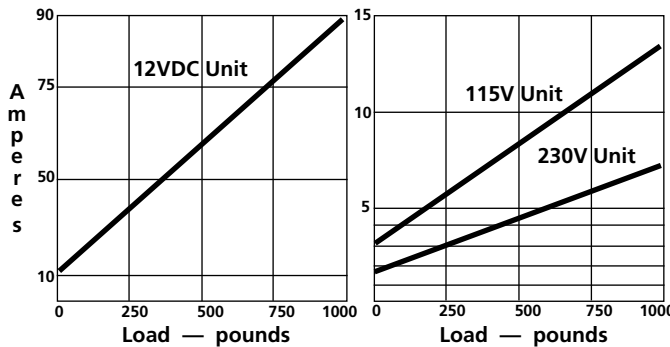
|          |                   |
|----------|-------------------|
| C3081170 | 49 lb. (22.2 kg.) |
|----------|-------------------|

**230-Volt AC**  
includes Power Hoist and Foot Control

|          |                    |
|----------|--------------------|
| C3081171 | 49½ lb. (22.5 kg.) |
|----------|--------------------|



### Electrical source requirements

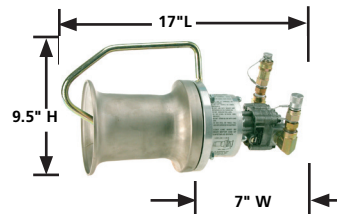


Four 3/8" mounting bolts furnished with each unit. Mounting flange provides eight 3/8" tapped holes on 5 3/8" bolt circle.

### Hydraulic Drive

includes Power Hoist only;  
To order Foot Control Switch, see next page.

|             |                    |
|-------------|--------------------|
| Catalog No. | Weight, each       |
| C3081180    | 28½ lb. (12.9 kg.) |



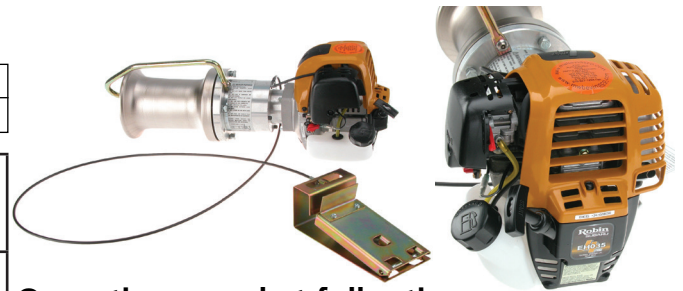
Hydraulic-drive hoist does not include foot control switch.

### Gasoline Drive

includes Power Hoist and Foot Throttle Control only  
Recommended bracket: C3080925, see next page.

|             |                   |
|-------------|-------------------|
| Catalog No. | Weight, each      |
| C3081190    | 46 lb. (20.9 kg.) |

Gasoline unit features 35 cubic-centimeter 4-cycle engine.



| Series 90 Hoist | Rope Speed for 1,000 lb. load | Source Required to meet Rope Speed Rate |
|-----------------|-------------------------------|---|
| 12-Volt DC      | 22 feet per minute            | 90 amperes motor current                |
| 115-Volt AC     | 40 feet per minute            | 14 amperes motor current                |
| 230-Volt AC     | 21 feet per minute            | 7 amperes motor current                 |
| Hydraulic       | 93 feet per minute            | 8 gal. per min. & 1,000psi              |
| Gasoline        | 40 feet per minute            | Engine speed: 7,000rpm                  |

### Operating speed at full rating

For continuous lift or pull at maximum rating (1,000 lb.) with a 20% duty cycle, table at left highlights information for each power-drive type:

- Rate of lift or pull (rope speed)
- Power output needed (source, minimum)

### Recommended rope for capstan hoists

- Poly-Dacron or Composite Fiber Braided (consists of polyester fibers) Shown in Chance Catalog Section 1250.

Hoists - Powered - 1150



### Options and Components for 1,000-lb.-rated hoists

#### All-Purpose Bracket

- For 1,000-lb. Series 90 hoists
- Includes two E3081334P chain clamps for poles, angles, and beams

| Catalog No. | Weight, each      |
|-------------|-------------------|
| C3081335    | 26.5 lb. (12 kg.) |

#### Bolt-Down Bracket

- For 1,000-lb. Series 90 hoists
- Same as above, except does not include chain clamps

|           |                  |
|-----------|------------------|
| E3081321P | 9 lb. (4.09 kg.) |
|-----------|------------------|

#### Capstan Drum

- For 1,000-lb. Series 90 hoists
- Replacement, does not include mounting bolt or washer

|           |                  |
|-----------|------------------|
| E3081327P | 7 lb. (3.18 kg.) |
|-----------|------------------|

#### Universal Bracket

- Recommended for gasoline 1,000-lb. hoist
- Also fits other 1,000-lb. Series 90 & earlier 750-lb. hoists
- Bolts down or uses two C4170346 Chain Clamps (below) for mounting on poles, angles and beams

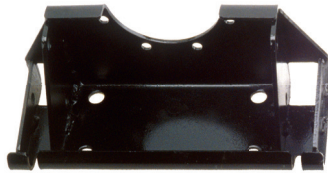
|          |                  |
|----------|------------------|
| C3080925 | 13 lb. (5.9 kg.) |
|----------|------------------|

#### Chain Clamp

- For Universal Brackets only
- One per Cat. No., two required for C3080925 Bracket

|          |   |
|----------|---|
| C4170346 | 7 <sup>1</sup> / <sub>8</sub> lb. (3.2 kg.) |
|----------|---|

1,000-lb. Bolt-Down Bracket E3081321P



Chain Clamp C4170346 (Chains are 85" long.)



Universal Bracket C3080925 Recommended for Gasoline hoist

#### Rope Lock Device C3080856

- Must be ordered as a separate item.
- Includes 2 mounting bolts, washers and release lanyard.
- Accepts 1/2", 5/8" and 3/4" rope.



Hydraulic Foot Control C3080685



Wheel handles on chain binders make tightening easy.

All-Purpose Bracket C3081335

To fit angle steel and beams, furnished bolts pin the clamps to form a 90° attachment shoulder.

To fit poles to 23" in diameter, chain clamps pivot to automatically adjust.

Chain Clamp E3081334P (Chains are 72" long.)

**Chain Clamp** for Series 90 hoists  
One per Cat. No.; for All-Purpose or Bolt-Down Brackets

|           |                 |
|-----------|-----------------|
| E3081334P | 6 lb. (2.7 kg.) |
|-----------|-----------------|

**Rope Lock Device** for Series 90 hoists  
Includes mounting bolts and washers

|          |                 |
|----------|-----------------|
| C3080856 | 2 lb. (0.9 kg.) |
|----------|-----------------|

**Foot Controls** for Series 90 hoists

|          |  |
|----------|--|
| C4176145 | 3 <sup>1</sup> / <sub>2</sub> lb. (1.59 kg.) |
| C4170337 | 4 lb. (1.81 kg.)                             |

for 12-Volt DC drive

|          |                   |
|----------|-------------------|
| C3080685 | 24 lb. (10.9 kg.) |
|----------|-------------------|

for 115- and 230-Volt AC drive

|          |                   |
|----------|-------------------|
| C3080685 | 24 lb. (10.9 kg.) |
|----------|-------------------|

for Hydraulic drive



# Swivel-Base Truck Mount

for 12V, 115V & Hydraulic 1,000-lb. Series 90 Capstan Hoists

Sets at angles needed for variety of jobs

- Turntable design permits proper alignment without repositioning service vehicle
- Heavy-gauge steel base bolts directly to truck body wherever convenient
- Bracket can be pinned at 15-degree interval around circular base for: stringing, tensioning, and sagging conductors; pulling in cable; hoisting equipment; setting poles; and pulling vehicles



**⚠ WARNING**

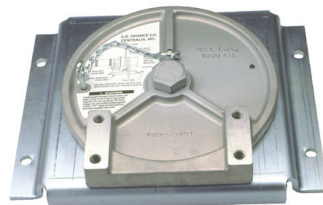
This is not a personnel lifting device. A label on the unit warns against lifting people or loads directly above people.

To store hoist on C-bracket, simply remove four bolts. The C-bracket also can be bolted down for fixed-angle.

**Utilize truck as portable power source**

- Only 12V, 115V, 230V and Hydraulic 1,000-lb.-rated hoists are recommended for truck mounting
- See page 1153 to order

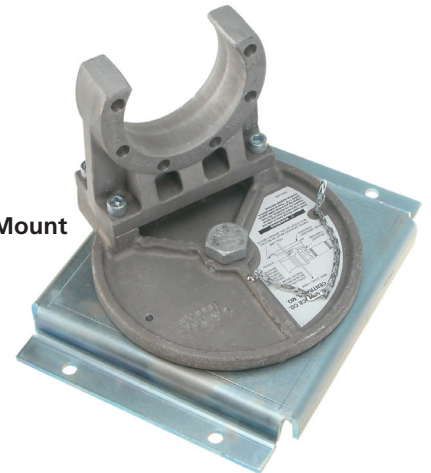
Swivel Bracket C3080903



**Swivel Bracket only**

| Catalog No. | Weight, each     |
|-------------|------------------|
| C3080903    | 18 lb. (8.1 kg.) |

Swivel-Base Truck Mount T3081506



**Swivel Base Truck Mount (Assembled Swivel Bracket and C-Bracket at right)**

| Catalog No. | Weight, each       |
|-------------|--------------------|
| T3081506    | 23 lb. (10.35 kg.) |

C-Bracket C3080890



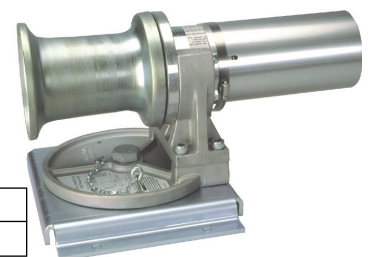
**C-Bracket only — complete with mounting bolts**

|          |                  |
|----------|------------------|
| C3080890 | 5 lb. (2.25 kg.) |
|----------|------------------|

**Weather Shield for 12-Volt DC hoist only**  
complete with band clamp



| Catalog No. | Weight, each     |
|-------------|------------------|
| C3080909    | 1 lb. (0.45 kg.) |



## Hitch-Receiver Mount for Swivel-Base Mount

for 12V, 115V, 230V & Hydraulic  
1,000-lb. Series 90 Capstan Hoists

Quick and convenient, fits 2"-square towing receivers

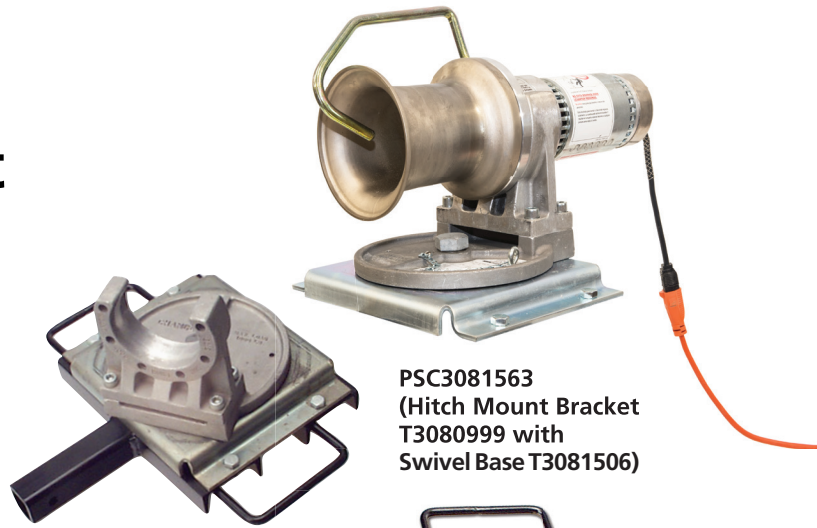
- Faster than any other method, job-ready mount puts capstan hoist in right position for pulling, stringing, and lifting jobs
- With hoist stored on it, mount's square tube simply inserts and pins in any 2"-square receiver of a Class III or IV towing hitch

### Specially designed for swivel-base mount

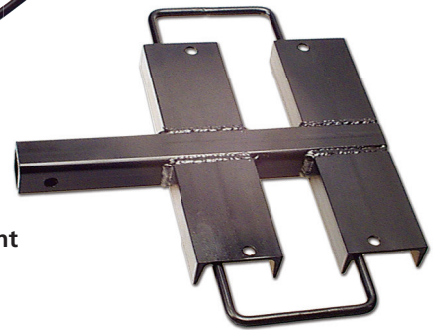
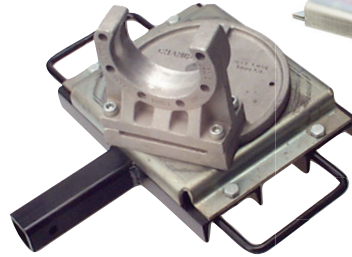
- T3080999 Hitch-receiver Mount features hole pattern specifically designed to fit Swivel-Base Mount T3081506 (for more details see page 1155)
- Swivel mount's turntable design permits proper alignment without repositioning service vehicle
- Swivel mount permits pinning bracket at every 15-degree interval around circular base for: stringing, tensioning, and sagging conductors; pulling in cable; hoisting equipment; setting poles; and pulling vehicles

### Utilize truck as portable power source

- Hitch-Receiver Mount is rated at 1,000 lb. to correspond with ratings of capstan hoists for which it is intended
- Only 12V, 115V and Hydraulic 1,000-lb.-rated hoists are recommended for truck mounting
- See page 1153 to order



PSC3081563  
(Hitch Mount Bracket  
T3080999 with  
Swivel Base T3081506)



1,000 lb. rating  
Hitch-Receiver Mount  
T3080999  
as furnished

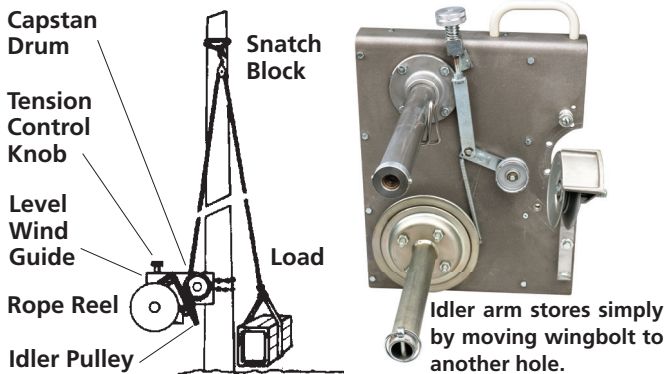
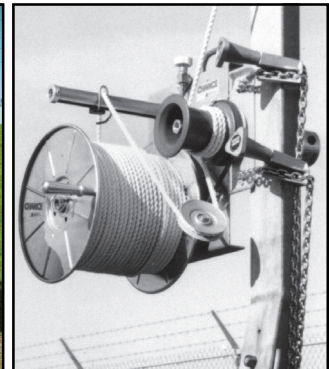
| Catalog No. | Description                   | Weight          |
|-------------|-------------------------------|-----------------|
| T3080999    | Hitch Mount for Capstan Hoist | 21 lb./9.56 kg. |
| PSC3081563  | Hitch Mount with Swivel Base  | 62 lb/28.1kg    |

## MATERIAL HANDLER SPECIAL APPLICATION

For AC, Hydraulic & Gasoline 1,000-lb. Series 90 Capstan Hoists (Order hoists on page 1153)

### Application and Operation

- Portable system sets up fast where large vehicle-mounted equipment is impractical
- Lifts tools, apparatus, sets poles, and moves materials in warehouse or store yard
- Automatically takes up rope on reel and keeps line out of dirt
- Mounts to wood, concrete, or steel poles and angle-member structures with one bracket and two chain clamps
- Operator can keep all activity in view while controlling lift with tension-adjustment knob and hoist's foot control



### Material Handler chassis only

| Catalog No. | Weight, each      |
|-------------|-------------------|
| C3160760    | 38 lb. (17.2 kg.) |

### Must order separately:

- C3080925 Bracket, for poles, beams or angles (page 1154);
- Two C4170346 Chain Clamps (page 1154);
- Poly-dacron or Polyester Braided Rope (Cat. Sect. 1250);
- C4170343H Take-Up Reel with handle (shown above; Capacity: 600 ft. x 1/2" rope or 1,500 ft. x 3/8" rope; Weight: 20 lb. / 9 kg.)



Hoists - Powered - 1150

# Series 90 Capstan Hoists

## 3,000-lb. Load Rating 12V, 115V Hydraulic, Gasoline



### Electric Drive

#### 115-Volt AC

includes Power Hoist and Foot Control Switch only

| Catalog No. | Weight, each    |
|-------------|-----------------|
| C3081370    | 58 lb. (26 kg.) |

### Hydraulic Drive

includes Power Hoist only;  
To order Foot Control Switch, see page 1158.



|           | Catalog No. | Weight         |
|-----------|-------------|----------------|
| Hydraulic | C3081380    | 44 lb. (20kg.) |

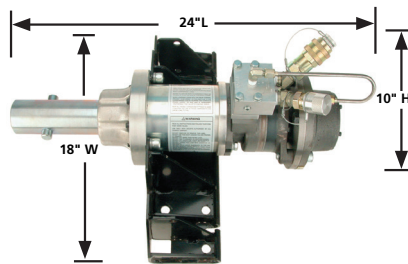
With Bayonet  
for Collapsible Reel by others  
or Removable Capstan  
Drum C4170341  
ordered separately, page 1158.



**NOTE:** Includes Power Hoist only.  
To order Foot Control Switch, see page 1158.

|                      | Catalog No. | Weight              |
|----------------------|-------------|---------------------|
| Hydraulic Bayonet    | C3080900    | 36 lb. (16.4 kg.)   |
| Hydraulic Reversible | C3080940    | 100 lb. (45.36 kg.) |

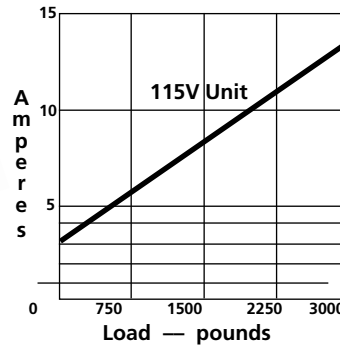
With Bayonet  
for Collapsible  
Reel by others  
or Removable  
Capstan Drum  
C4170341  
ordered separately,  
page 1158. Includes Power Hoist and Bolt-Down Bracket.  
To order Foot Control Switch, see page 1158.



### Gasoline Drive

includes Power Hoist and Foot Throttle Control only  
Gasoline unit features 35 cubic-centimeter 4-cycle engine.

| Catalog No. | Weight, each      |
|-------------|-------------------|
| C3081390    | 58 lb. (26.3 kg.) |



### Components

- Four ½" mounting bolts furnished with each unit
- Mounting flange provides eight ½" tapped holes on 5-5/8 bolt circle
- Recommended rope for use with capstan hoists are Poly-Dacron or Composite Fiber Braided (consists of polyester fibers) as shown in Chance Catalog Section 1250

| Series 90 3,000-lb. Hoist | Rope Speed for 3,000 lb. load | Source Required to meet Rope Speed Rate |
|---------------------------|-------------------------------|---|
| 115-Volt AC               | 12 feet per minute            | 14 amperes motor current                |
| Hydraulic                 | 30 feet per minute            | 8 gal. per min. & 1,000psi              |
| Gasoline                  | 11 feet per minute            | Engine speed: 7,000rpm                  |

### Operating speed at full rating

For continuous lift or pull at maximum rating (3,000 lb.) with a 20% duty cycle, table at left highlights information for each power-drive type:

- Rate of lift or pull (rope speed)
- Power output needed (source, minimum)

### Recommended rope for capstan hoists

- Poly-Dacron or Composite Fiber Braided (consists of polyester fibers shown in Chance Catalog Section 1250)



T3080997 Foot Control Only

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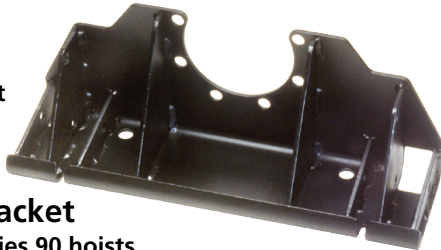
### Options and Components for 3,000-lb.-Rated Hoists

#### All-Purpose Bracket

- For 3,000-lb. Series 90 hoists
- Includes two E3081334P chain clamps for poles, angles, and beams

| Catalog No. | Weight, each      |
|-------------|-------------------|
| C3081443    | 32 lb. (14.5 kg.) |

#### 3,000-lb. Bolt-Down Bracket E3081434P



#### Bolt-Down Bracket

- For 3,000-lb. Series 90 hoists
- Same as above, except does not include chain clamps

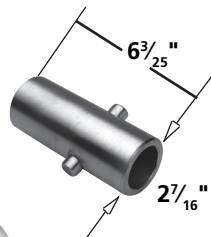
|           |                   |
|-----------|-------------------|
| E3081434P | 14 lb. (6.36 kg.) |
|-----------|-------------------|

#### Capstan Drum for 3,000-lb. Series 90 hoists

Replacement, does not include mounting bolt or washer

|           |                |
|-----------|----------------|
| E3081362P | 11 lb. (5 kg.) |
|-----------|----------------|

#### Bayonet Adapter C3080820



#### Removable Capstan Drum C4170341



#### Chain Clamp E3081334P (Chains are 72" long.)



#### Rope Lock Device C3080856

Must be ordered as a separate item.

Includes 2 mounting bolts, washers and release lanyard.

Accepts 1/2", 5/8" and 3/4" rope.



#### Hydraulic Foot Control C3080685



Wheel handles on chain binders make tightening easy.

**All-Purpose Bracket C3081443**

To fit angle steel and beams, furnished bolts pin the clamps to form a 90° attachment shoulder.

#### Bayonet Adapter retrofits on 3,000-lb. standard Hydraulic hoist for collapsible reel or C4170341 drum

| Catalog No. | Weight, each    |
|-------------|-----------------|
| C3080820    | 5 lb. (2.2 kg.) |

#### Capstan Drum Removable for 3,000-lb. hoist w/bayonet; 8 1/2" dia. x 8 1/2" length; on and off w/out tools

|          |                  |
|----------|------------------|
| C4170341 | 12 lb. (5.4 kg.) |
|----------|------------------|

#### Chain Clamp for Series 90 hoists

One per Catalog No.  
Two required for All-Purpose or Bolt-Down Brackets

|           |                 |
|-----------|-----------------|
| E3081334P | 6 lb. (2.7 kg.) |
|-----------|-----------------|

#### Rope Lock Device for Series 90 hoists

Includes mounting bolts and washers

|          |                 |
|----------|-----------------|
| C3080856 | 2 lb. (0.9 kg.) |
|----------|-----------------|

#### Foot Controls for Series 90 hoists

for 115-Volt AC drive

|          |                  |
|----------|------------------|
| C4170337 | 4 lb. (1.81 kg.) |
|----------|------------------|

for Hydraulic drive

|          |                   |
|----------|-------------------|
| C3080685 | 24 lb. (10.9 kg.) |
|----------|-------------------|

for Gasoline drive

|          |                 |
|----------|-----------------|
| T3080997 | 2 lb. (.90 kg.) |
|----------|-----------------|

