

CHANGE[®]

Powered Hoists



Catalog 1150 March 2020

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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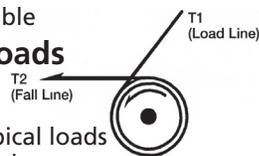
Versatile to various applications

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
- Stringing and tensioning conductors
- Pulling indoor and underground cable

Simple technique eases all loads

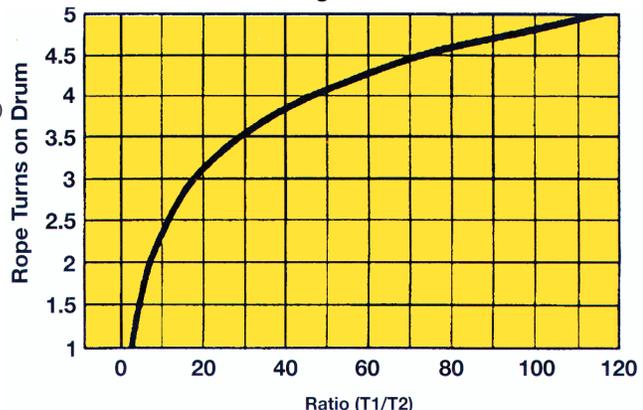
- Graph and diagram at right show capstan principle in action
- Operator effort remains low for typical loads simply by adding wraps on capstan drum
- Little effort is required, any crew member can run hoist



Example: 4 wraps of rope = 1:44 ratio. That is, 1 lb. pull on Fall Line develops 44 lb. lift 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



Phone: 573-682-5521 Email: hpsliterature@hubbell.com Web: hubbellpowersystems.com

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

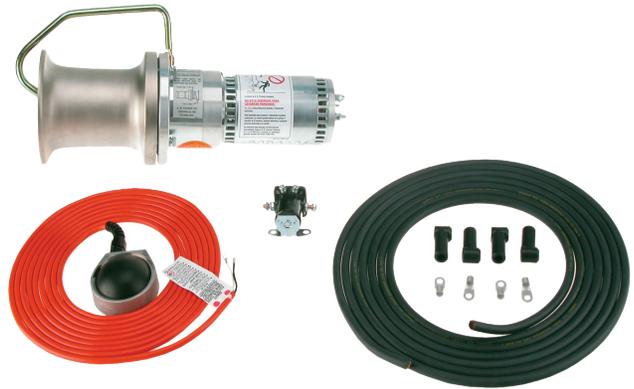
Catalog No.	Weight, each
C3081172	56½ lb. (25.7 kg.)

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

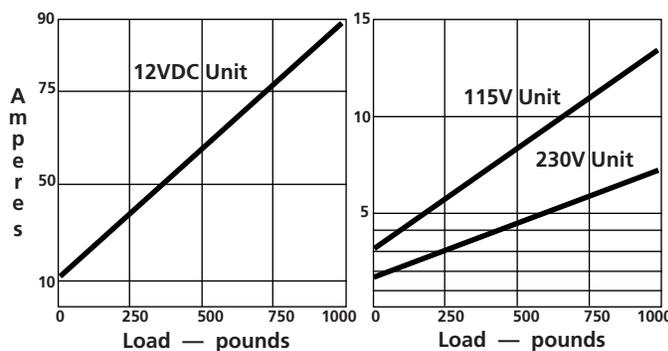
C3081170	49 lb. (22.2 kg.)
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230-Volt AC
includes Power Hoist and Foot Control

C3081171	49½ lb. (22.5 kg.)
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Electrical source requirements



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

Hydraulic Drive

includes Power Hoist only;
To order Foot Control Switch, see page 1155.

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.



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.

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



Series 90 Capstan Hoists

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. (4.1 kg.)
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1,000-lb. Bolt-Down Bracket
E3081321P

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.)
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Universal Bracket
C3080925
Recommended for Gasoline hoist

Chain Clamp for Series 90 hoists

One per Cat. No.; for All-Purpose or Bolt-Down Brackets

E3081334P	6 lb. (2.7 kg.)
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Chain Clamp for Universal Brackets only

One per Cat. No., two required for C3080925 Bracket

C4170346	7 1/8 lb. (3.2 kg.)
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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 up to 23" in diameter, chain clamps pivot to automatically adjust.



Chain Clamp E3081334P
(Chains are 72" long.)



Chain Clamp C4170346
(Chains are 85" long.)



Series 90 Capstan Hoists

Options and Components (continued) for 1,000-lb.-rated hoists

Capstan Drum

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

E3081327P	7 lb. (3.2 kg.)
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1,000-lb.
Capstan Drum
E3081327P

Rope Lock Device for Series 90 hoists

Includes mounting bolts and washers

C3080856	2 lb. (0.9 kg.)
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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.



Foot Controls for Series 90 hoists

for 12-Volt DC drive

C4176145	3 1/2 lb. (1.6 kg.)
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for 115- and 230-Volt AC drive

C4170337	4 lb. (1.8 kg.)
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T3081515 Foot Control with Guard	8 lb. (3.6 kg.)
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P3081512PK Foot Guard Kit	4 lb. (1.8 kg.)
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for Hydraulic drive

C3080685	24 lb. (10.9 kg.)
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C4176145

C4170337



Hydraulic
Foot Control
C3080685



Foot Guard Kit
P3081512PK

Foot Control
with Guard Kit
T3081515PK

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 only

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

Swivel Bracket C3080903



C-Bracket only — complete with mounting bolts

C3080890	5 lb. (2.3 kg.)
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C-Bracket C3080890



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

Catalog No.	Weight, each
T3081506	23 lb. (10.4 kg.)

Swivel-Base Truck Mount
T3081506



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 1156)
- 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

Catalog No.	Description	Weight
T3080999	Hitch Mount for Capstan Hoist	21 lb. (9.5 kg.)
PSC3081563	Hitch Mount with Swivel Base	62 lb. (28.1kg.)



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



PSC3081563
(Hitch Mount
Bracket T3080999
with Swivel Base T3081506)

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

Catalog No.	Weight, each
C3080909	1 lb. (0.5 kg.)

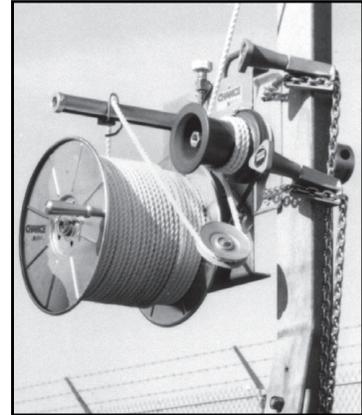


MATERIAL HANDLER SPECIAL APPLICATION

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

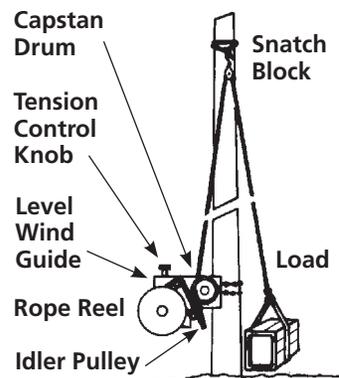


Material Handler chassis only

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 1155)
- 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.)



Idler arm stores simply by moving wingbolt to another hole.

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. (26.3 kg.)

Hydraulic Drive

includes Power Hoist only;
To order Foot Control Switch, see page 1161.



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

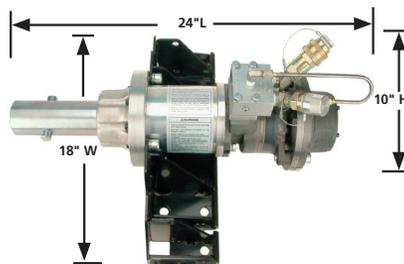
With Bayonet
for Collapsible Reel by others
or Removable Capstan
Drum C4170341



NOTE: Includes Power Hoist only.
To order Foot Control Switch, see page 1161.

	Catalog No.	Weight
Hydraulic Bayonet	C3080900	36 lb. (16.4 kg.)
Hydraulic Reversible	C3080940	100 lb. (45.4 kg.)

With Bayonet
for Collapsible
Reel by others
or Removable
Capstan Drum
C4170341
ordered separately,
page 1161.

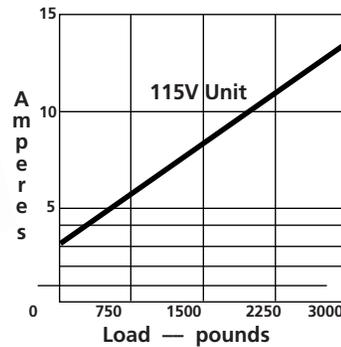


NOTE: Includes Power Hoist and Bolt-Down Bracket.
To order Foot Control Switch, see page 1161.

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.)



Electrical source requirements

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)



Series 90 Capstan Hoists

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.)



CAPSTAN HOIST FIXED HITCH MOUNT 2,000 lb MAX Working Load

- For use with CHANCE 3,000 lb Capstan Hoists (max load 2,000 lbs) and CHANCE 1,000 lb Capstan Hoists (max load 1,000 lbs)

PSC3081578	45 lbs (20.4 kg)
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Fits standard 2" hitch receiver



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



Bolt-Down Bracket

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

Catalog No.	Weight, each
E3081434P	14 lb. (6.4 kg.)

3,000-lb. Bolt-Down Bracket E3081434P



Capstan Drum

- For 3,000-lb. Series 90 hoists
- Replacement, does not include mounting bolt or washer

Catalog No.	Weight, each
E3081362P	11 lb. (5 kg.)

3,000-lb. Capstan Drum E3081362P



Series 90 Capstan Hoists

Options and Components (continued) for 3,000-lb.-rated hoists

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.)

Bayonet Adapter C3080820



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.)
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Removable Capstan Drum C4170341



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

C3080856	2 lb. (0.9 kg.)
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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.



Foot Controls for Series 90 hoists
for 115-Volt AC drive

C4170337	4 lb. (1.8 kg.)
T3081515 Foot Control with Guard	8 lb. (3.6 kg.)
P3081512PK Foot Guard Kit	4 lb. (1.8 kg.)

C4170337



for Hydraulic drive

C3080685	24 lb. (10.9 kg.)
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for Gasoline drive

T3080997	2 lb. (0.9 kg.)
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Foot Control with Guard Kit P3081515PK



Hydraulic Foot Control C3080685

Foot Guard Kit P3081512PK





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