Jan 1982

"DAWN" HAND WINCHES

FULLY APPROVED FOR MOUNTING ON VEHICLES

For Tow Trucks, Carriers, Builders, Structural and Industrial Engineers. Factories, Warehouses, Store Yards, Etc.

- Constructed throughout of high grade materials, designed without keys or set screws to shear or strip.
- Another feature of these winches is the simplicity of operation. The handle can be turned in either direction without manually releasing any locking mechanism.
- The brake is of a weston screw type designed so that at no stage or position can the double acting pawl be disengaged. (This ensures maximum safety).
- Brake lining is of selected disc fibre giving maximum wear and efficiency.

MANUFACTURED TO AND APPROVED BY LIFTS AND CRANES REGULATIONS AND TO S.A.A. CRANE AND HOIST CODE

Manufactured in Australia by:

DAWN TOOLS & VICES
(A Division of Siddons Pty. Ltd.)

1 NORRIS STREET, NORTH COBURG, VICTORIA, 3058 - TELEPHONE: 350 3811

REPLACEMENT PARTS
PRODUCT CODE NUMBERS

150 WINCH (Cat. No. 126068)

Description	CODE NO
Drum	198980
Base (Frame)	198981
Brake Nut	198982
Ratchet	198983
Gear	198984
Handle	198985
Pawl	198986
Bush	198987
Large Brake Disc	198988
Small Brake Disc	198989
Circlip	198990
Pin	198991

No. 1 WINCH (Cat. No. 126017)

Description	CODE NO
Plunger Assembly	198509
Tie Bar Assembly	198511
Handle Assembly	198525
Pawl Bolt Assembly	198585
Pinion Assembly	198559
Pawl Spring	198705
Ratchet	198752
Pawl	198815
Double End Frame	198900
Single End Frame	198901
Winding Drum	198921
Brake Discs	198522

No. 2 WINCH (Cat. No. 126025)

Description	CODE NO
Double End Frame	198902
Single End Frame	198912
Winding Drum	198922
Main Gear	198932
Pinion Assembly	198595
Tie Bar Assembly	198512
Handle Assembly	198525
Plunger Assembly	198509
Pawl Bolt Assembly	198585
Pawl Spring	198705
Double Acting Pawl	198815
Grease Nipple STR	
Grease Nipple 90	
Optional Extras (not shown)	
High Ratio Pinion	198714
(for lifting only NOT D.L.I. Approved)	
Extension Coupling	198825

No. 5 WINCH (Cat. No. 126033)

Description	CODE NO
Double End Frame	198903
Single End Frame	198913
Winding Drum	198923
Main Gear	198933
Pinion Assembly	198596
Tie Bar Assembly	198512
Handle Assembly	198526
Plunger Assembly	198509
Pawl Bolt Assembly	198585
Pawl Spring	198705
Double Acting Pawl	198815
Grease Nipple STR	
Grease Nipple 90	
High Ratio Pinion	198715
Extension Coupling	198825

Pinion Assembly
comprising

Pinion
Fibre Brake Discs (2)
Ratchet
Brake Nut
Release Washer
Nyloc Nut

Tie Bar Assembly

Tie Bar (3)
Nut SAE (3)

Handle Assembly
comprising

Bolt
Bar
Pin
Grip
Washer
Nut

Plunger Assembly
comprising

Plunger (2)
Cap (2)
Spring (2)
Split Pin
Pin

Pawl Bolt Assembly
comprising

'Castle' Nut
Split Pin
Spacer
Bolt
Washer

Cat. No. 126068 (Auto Brake)

150 WINCH

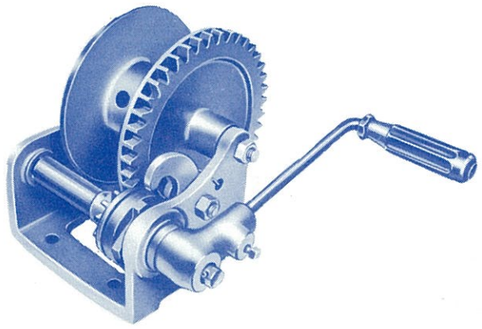
***SAFE WORKING LOAD 150 kg**

ROPE
- Nominal Size ..... 4 mm
- Grade ..... G 1570
- Construction ..... 6/19 FC RHOL
- Max. Length ..... 30 metres
- Breaking Strength ..... 7.7 kn

DRUM DIMENSIONS
- Length ..... 54 mm
- Diameter ..... 50 mm

RATIO ..... 4.1 to 1

DIMENSION EXCLUDING HANDLE
150 mm x 160 mm x 170 mm



Cat. No. 126025 (Auto Brake)

No. 2 WINCH

***SAFE WORKING LOAD 1.25 tonnes**

ROPE
- Nominal Size 10mm
- Grade ..... B 1770
- Construction ..... 6/25 WRC RHOL
- Max. Length ..... 40 metres
- Breaking Strength ..... 63.1 kn

DRUM DIMENSIONS
- Length ..... 200 mm
- Diameter ..... 100 mm

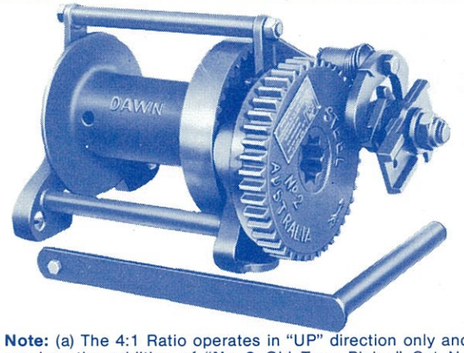
DIMENSION EXCLUDING HANDLE
375 mm x 325 mm x 275 mm

RATIO ..... 4 to 1
[see note (a)]

RATIO ..... 22 to 1
[see note (b)]

Effort required on handle to raise full load..... 16.6 kg

BEARINGS ..... Replaceable Bronze Brushes



Note: (a) The 4:1 Ratio operates in "UP" direction only and requires the addition of "**No 2** Old Type Pinion" Cat No 127386/8714 plus a suitable extension (see figure 1).

(b) Extension to the winding mechanism for normal operation can be achieved by the addition of "Extension Coupling" Cat No 127386/8825 plus an Extension Shaft (see Figure 1).

Cat. No. 126017 (Auto Brake)

No. 1 WINCH

***SAFE WORKING LOAD 0.5 Tonnes**

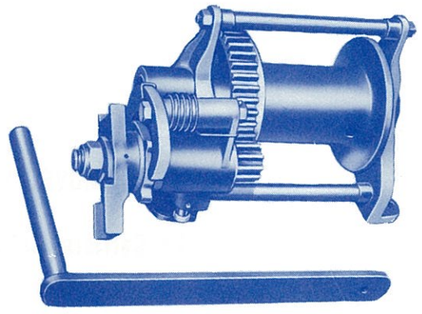
ROPE
- Nominal Size 8mm
- Grade ..... B 1770
- Construction ..... 6/25 WRC RHOL
- Max. Length ..... 24 metres
- Breaking Strength ..... 40.2 kn

DRUM DIMENSIONS
- Length ..... 150 mm
- Diameter..... 90mm

DIMENSION EXCLUDING HANDLE
300 mm x 225 mm x 225 mm

RATIO ..... 4.1 to 1

BEARINGS ..... White Metal



Cat No. 126033 (Auto Brake)

No. 5 WINCH

***SAFE WORKING LOAD 2.75 Tonnes**

ROPE
- Nominal Size ..... 14 mm
- Grade ..... B 1770
- Construction ..... 6/25 WRC RHOL
- Max. Length ..... 50 metres
- Breaking Strength ..... 124 kn

DRUM DIMENSIONS
- Length ..... 250 mm
- Diameter ..... 145 mm

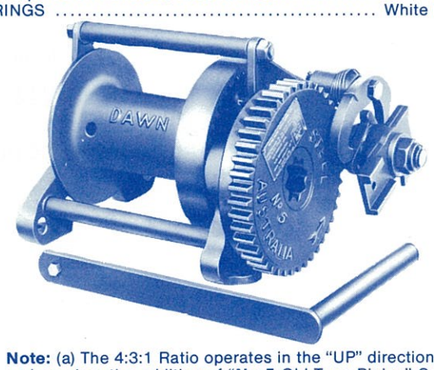
DIMENSIONS EXCLUDING HANDLE
500 mm x 425 mm x 375 mm

RATIO ..... 4.3 to 1
[see note (a)]

RATIO ..... 24 to 1
[see note (b)]

Effort required on handle to raise full load..... 17.5 kg

BEARINGS ..... White Metal



Note: (a) The 4:3:1 Ratio operates in the "UP" direction only and requires the addition of "**No 5** Old Type Pinion" Cat No 127386/8715 plus a suitable extension (see Figure 1).

(b) Extension to the winding mechanism for normal operation can be achieved by the addition of "Extension Coupling" Cat No 127386/8826 plus an Extension Shaft (see Figure 1).

* Above capacity is governed by a single fall of rope, however safe working load can be increased by different pulley block arrangements (see Figure 2).

Manufactured to and Approved by Lifts and Cranes Regulations and in accordance with Australian Standard 1418 Part 2 - 1980 SAA Crane Code Part 2 Serial Hoists.

For Tow Trucks, Carriers, Builders, Structural and Industrial Engineers, Factories, Warehouses, Store Yards etc.

Installation & Maintenance Instructions

INSTALLATION

(i) The mounting base to which the winch is secured must be reasonably flat, so that when the hold-down bolts are tightened the end frames do not distort. This can cause the winch to seize.

(ii) To attach cable to winch drum feed it through the small hole, along and inside the journal so that the rope can be attached on the outside and is visible at all times. The large hole in the drum will assist this operation.

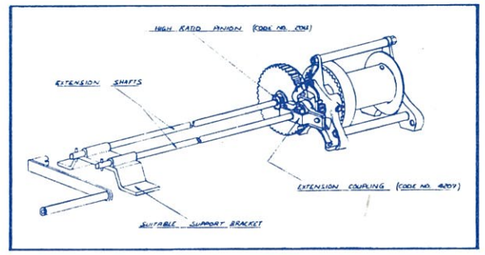
(iii) The cable is to be wound on the drum so that, to raise the load the gear must rotate in the direction of the arrow shown on its face.

MAINTENANCE

(i) Regularly grease through grease nipples

(ii) Keep teeth on gears and pinion well covered in grease.

N.B. Care must be taken not to get any oil or grease on ferrodo brake discs as this can tend to bind the winch when lowering under load.



Suggested method of using high and low ratio gears.

Figure 1

OPERATION

(i) To raise the load, wind the handle in the clockwise direction rotating the gear in the direction of the cast arrow shown on its face. To lower simply rotate the handle in the opposite direction.
(ii) To obtain free run out of cable, line up the unshrouded section of the pinion teeth with the gear and lift the plunger. Extraction of the pinion and handle from the gear enables the winding drum to rotate freely.
(iii) To use high ratio for rapid wind-up another type pinion with extended shaft is required. (Illustration shows typical tow truck application.

TO INCREASE THE LIFTING CAPACITY

The lifting capacity can be increased by the installation of different pulley block arrangements, without effecting the safe working load of the winch.

In "A" the "DAWN" winch is lifting a load through a return pulley and no additional advantage is achieved.

In "B" with two falls of lifting ropes (a and b) the load can be doubled.

(Dawn No. 2, 25 Cwt., 1250 Kg. SWL x 2 = 50 Cwt., 2500 Kg.)
(Dawn No. 5, 55 Cwt., 2750 Kg. SWL x 2 = 110 Cwt., 5500 Kg.)

In "C" with three falls of lifting rope (a,b,c) the load can be trebled.

(Dawn No. 2, 25 Cwt., 1250 Kg. SWL x 3 = 75 Cwt., 3750 Kg.)
(Dawn No. 5, 55 Cwt., 2750 Kg. SWL x 3 = 165 Cwt., 8250 Kg.)

In "D" with four falls of lifting rope (a,b,c,d) the load can be quadrupled.

(Dawn No. 2, 25 Cwt., 1250 Kg. SWL x 4 = 100 Cwt., 5000 Kg.)
(Dawn No. 5, 55 Cwt., 2750 Kg. SWL x 4 = 220 Cwt., 11,000 Kg.)

NOTE:

(i) By increasing the falls of rope the speed of lift decreases.

(ii) At the head of each of the pulley block arrangements (W) shows the point from where the entire load is suspended.

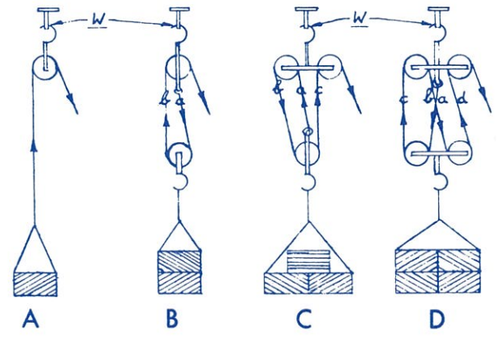


Figure 2