

LANTEC

GEAR DRIVES
WINCHES & HOISTS
BRAKES & CLUTCHES

Driven to Excellence

Log Skidder Winch LANTEC Model 40 Hydraulic Winch Specification

Winch Type

- Single Drum
- Hydraulic Motor Driven
- Power in, Free-Spool out
- Parallel and Planetary Gear Drive

Free-Spool Type

- Friction-type Free-Spool: Spring force engaged, hydraulic pressure released.

Performance

Rated Line Pull (1st layer)	40,000 lb	<i>178 kN</i>	<i>At maximum allowable input torque, using 7/8" (22.2 mm) dia cable</i>
Rated Line Pull (top layer)	23,780 lb	<i>106 kN</i>	<i>At maximum allowable input torque, at 18.50" (470 mm) Pitch Diameter</i>
Rated Line Speed (1st layer)	162 fpm	<i>49 mpm</i>	<i>At maximum allowable input speed, using 7/8" (22.2 mm) dia cable</i>
Rated Line Speed (top layer)	273 fpm	<i>83 mpm</i>	<i>At maximum allowable input speed, at 18.50" (470 mm) Pitch Diameter</i>

Maximum allowable input torque 3,760 lb in (425 Nm), maximum allowable input speed 3,500 rpm. Maximum allowable torque and speed are not permitted simultaneously. Above figures based on 62.2:1 standard gear ratio.

Drum Size & Cable Capacity

Barrel Diameter:	10.00" (254 mm)	240 ft of 3/4" Cable on 6 Layers
Flange Diameter:	20.25" (521 mm)	170 ft of 7/8" Cable on 5 Layers
Between Flanges:	8.00" (203 mm)	

Features

- **Free-Spool Clutch:** Oil immersed friction-type; spring applied, hydraulic pressure released (600 psi full release). Oil immersed design prevents corrosion and maintains holding power when wet, unlike the competition's dry clutch design.
- **Gearing:** Parallel shaft and planetary gearing (compact, weight and space saving).
- **Bearings:** Ball and roller-type anti-friction bearings used throughout the winch.
- **Compact Design:** Hydraulic motor located inside winch profile
- **Serviceability:**
 - Long life, wet, free-spool clutch, no adjustments or service required.
 - Lubrication is wet sump filled to oil level (forced lubrication system not required).
 - Ball and roller-type bearings, no tapered roller bearings to pre-load or adjust.
 - Parallel shaft and planetary gearing. No bevel gearing and no setting of gear mesh.

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20060 Rev 0

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Options

- Many optional gear ratios are available, for OEM quantities, to suit fixed, dual, and variable displacement hydraulic motors allowing a wide range in winch performance.

Comparative Information

	LANTEC	Others
Hydraulic Drive	<p>Designed from the ground up as a hydraulically driven winch.</p> <p>The hydraulic motor is parallel to the winch drum axis rendering a very compact package.</p>	<p>Designed as a mechanical winch, with adaptation to use a hydraulic motor input.</p> <p>The motor is arranged perpendicular to the winch drum axis, and takes up valuable space.</p>
Skidder Duty	<p>This is a true <u>skidder duty</u> winch, not an adaptation of a utility winch. LANTEC provides a compact footprint and robust construction, combined with an indestructible free-spool mechanism.</p>	<p>Some other winches are simply utility winches being proposed as skidder duty winches.</p>
Free-Spool Mechanism	<p>LANTEC's free-spool utilizes a multi-disc, oil immersed, friction clutch. It is spring applied and hydraulic pressure released. This design is as indestructible and reliable as you can get.</p> <p>The LANTEC winch free-spool clutch is stationary, operating on the ring gear of the final planetary gear stage, therefore, <u>no hydraulic rotary union is required</u>.</p> <p>Since the friction plates are immersed in oil there are no corrosion problems and no undesired slippage.</p>	<p>Clarke / Lufkin / Allied Winches utilize a multi-disc, DRY friction clutch. Since it is intended to be kept dry, corrosion can result from condensation and clutch slippage can result due to oil leakage onto the friction plates. Since the clutch rotates, a hydraulic rotary union is required to port the release oil to the clutch; a potential source for failure and leakage.</p> <p>Other winches make use of a gear or spline disconnect to provide free-spool. This type is easily damaged in skidder duty service.</p>
Serviceability	<p>Other than oil changes, there are no requirements for maintenance. All components are easily accessible from the side covers and there are no components hidden within the drum barrel.</p>	<p>Clarke / Lufkin / Allied Winches utilize tapered bearings and bevel gear drives requiring trained service persons to make the proper adjustments.</p> <p>The free-spool clutch, requiring regular maintenance, is buried within the drum barrel, making for difficult access.</p> <p>Others bury some or all of the gear train within the drum barrel.</p>
Lubrication	<p>The LANTEC winch operates in an oil bath and does not require an oil pump pressure lubrication system.</p>	<p>Rely on a forced oil system to maintain adequate lubrication.</p>

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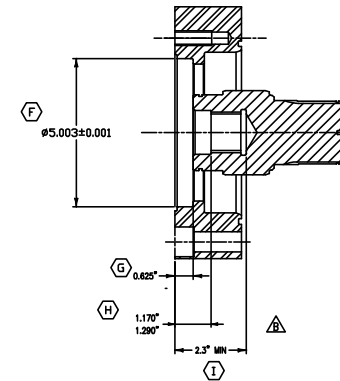
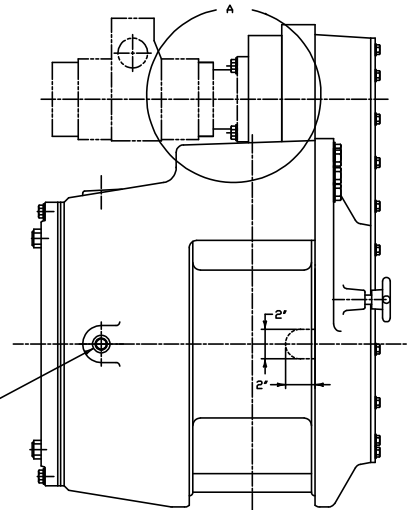
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DRUM SIZE : $\phi 10$ BARREL X $\phi 20.5$ FLANGE X 8" LONG
 MOTOR SIZE : (COMMERCIAL 2-SPEED SAE C-MOUNT MOTOR SHOWN)

○ INDICATES INSPECTION CHECK DIMENSIONS



SPLINE SPECIFICATIONS -
 14T 12/24DP 30°
 FLAT ROOT SIDE FIT

DETAIL 'A'

BRAKE RELEASE PORTS
 -08 ORB (3/4-16UNF)
 (SELECT ONE AND PLUG THE OTHER)

FILLER AND BREATHER PLUG
 SAE -16 ORB (1 5/16-12UNF)

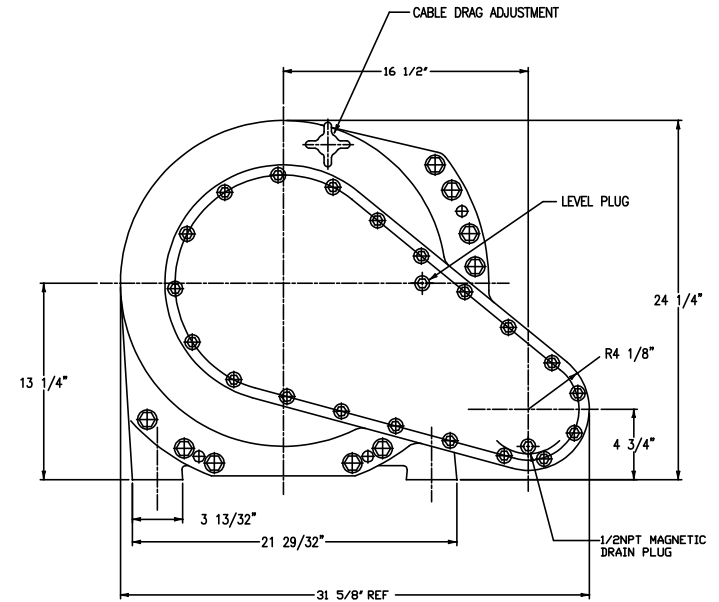
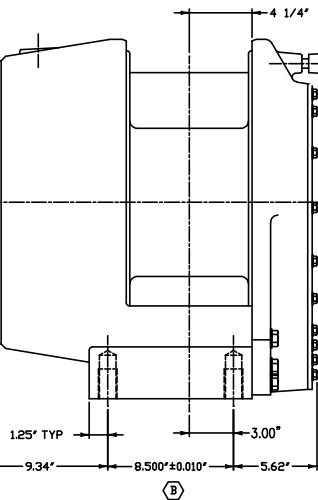
ALTERNATE LEVEL PLUG
 LOCATION SAE -16 ORB
 (1 5/16-12UNF)

LEVEL PLUG (SIGHT GLASS)
 -16 ORB (1 5/16-12UNF)

4 HOLES 1/2-13UNC X 1 1/4 DEEP

$\phi 6.375$ "

DRAIN PLUG
 SAE -16 ORB (1 5/16-12UNF)



MOUNTING BOLT HOLES 1 1/4-7UNC X 2.0 DEEP (4 PLACES)

OVERALL RATIO IS 62.2:1

CERTIFIED DRAWING

THIS DRAWING IS CERTIFIED TO BE DIMENSIONALLY CORRECT FOR INSTALLATION PURPOSES FOR THE APPLICATION IDENTIFIED BELOW

CUSTOMER _____
 MODEL NO. _____
 SERIAL NO. _____
 CERTIFIED BY _____
 ON ACCEPTANCE, SIGN AND DATE THIS SHEET AND RETURN TO
 LANTEC, A DIVISION OF LANTEC DESIGN GROUP LTD.
 APPROVED BY _____

REV	DESCRIPTION	DATE	APPROVED	REVISIONS	DATE	APPROVED
B	2.3 was 2.415, 0.625 was 0.50	00-11-22	lbd /			
A	LEVEL PLUG ADDED TO PRIMARY COVER	00-03-24	D.R.H. /			

ITEM	QTY	NUMBER	DESCRIPTION
Model 40	1		Skidder Winch C-Mount
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TOLERANCES UNLESS OTHERWISE SPECIFIED:
 XX : ±.020
 XXX : ±.005
 FRACTIONS : 1/16
 ANGLES : 2°
 FINISH : MACHINED FINISH UNLESS NOTED OTHERWISE
 SCALE : 10:1 NOT SCALE DRAWING
 THIS IS A PRELIMINARY DRAWING
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Winch Installation
 Model 40 Skidder Winch C-Mount
 DRAWN BY: DRI 00-02-04
 CHECKED BY: GD 00-02-14
 APPROVED BY: GD 00-02-14
 NONE 1 OF 1