

# DOLPHIN MEASURING HEAD - SLICKLINE/BRAIDED LINE



## PRODUCT DESCRIPTION

The "Dolphin" Slickline/Braided Line Measuring Device is a heavy duty three wheeled device which accurately measures both wireline depth and tension. Tension is measured from a load pin which also serves as the axle for the tension wheel. Since the depth and tension wheels are opposite each other, the wire wraps around all three wheels. This creates a relatively high signal at the load pin which provides a very accurate tension measurement. This electronic signal is transmitted via an electrical cable to the hoistman's panel and/or logging computer representing wireline tension. A calibration resistor is included in the load pin to send out a signal to calibrate the computer system.

A hydraulic load cell is included which measures wireline tension independently of the electronic load pin. It is mounted in the frame and measures the tension differential between the top measure wheel and the bottom tension wheel. A second depth idler wheel is provided to eliminate wire rub against a single wheel with the movement of the hydraulic load cell.

The measuring wheel is coupled to an optical encoder that transmits electrical signals via an electrical cable to the hoistman's panel and/or logging computer representing cable depth and speed.

This measuring head is unique from previous versions in that the wireline can be removed from the side of the measuring head without cutting off the cable head. The guide rollers are slotted so they can be slid out of the way to remove the wireline. Spooling rollers and pressure wheels are provided to keep the wire in the wheels at low or no tension. Wire abrasion and fatigue are minimized by using a non reverse bend configuration.

The measuring head is designed to mount on a single 40mm overhead spooling bar using linear bearings to allow it to slide back and forth in front of the drum so the wire can be spooled evenly.

With the BenchMark Winchman's Panel, depth can be accurately measured on different sized lines without changing wheels. This is done electronically by the panel using the depth information provided by an encoder. Changes in wire size are accounted for by the panel software. Wire stretch can also be automatically calculated by the panel.

## PRODUCT FEATURES

- Cable sizes .092 to .125 slickline & 3/16" to 1/4 e-line/braided line
- Tension load axle & amplifier can be configured to different outputs
- Can measure wireline tensions up to 9,000 pounds – 4,082 kg)
- Includes both hydraulic load cell and electronic tension load pins. These tension devices operate completely independent of each other.
- 2 fully independent depth measurements - optical encoder and magnetic pickup
- Backup depth system – reduces drag on measuring wheel by eliminating mechanical drive cable
- Line removal from the side without cutting off Cable Head
- Minimizes wire abrasion & fatigue by using non-reverse bend configuration
- Separate measure and idler wheels side-by-side to prevent wire rub
- Large diameter wheel radius minimize wire fatigue
- Spooling rollers and pressure wheels keep wire in wheel at low/no tension
- Spring pressure wheel keeps wire turning with wheel even with sudden direction change or jarring action
- Mounts on a 40mm overhead spooling bar
- Encoder & tension amplifier certified for Zone II area use available
- Anodized aluminum frame

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## GENERAL SPECIFICATIONS

Height:	45.55"	1.15 m
Width:	23.27"	.591 m
Depth:	11.08"	.281 m
Weight:	132 lbs	59.87 kg
Measuring Wheel		
Circumference	4 feet	1.219 meters
Diameter	16 inches	.406 meters
Maximum Tension:	9,000 lbs	4,082 kg
Line Sizes:	.092" – 1/4"	2.3 mm – 6.35 mm
Operating Temperature:	-40°C to +65°C	-40°F to +149°F
Encoder:	1,200 PPR , others available	
Backup Counter:	4 PPR Quadature	
Load Pin:	Passive low voltage, Differential voltage, 4-20ma current loop	
Hydraulic Load Cell:	Independent mechanical tension measuring device	

