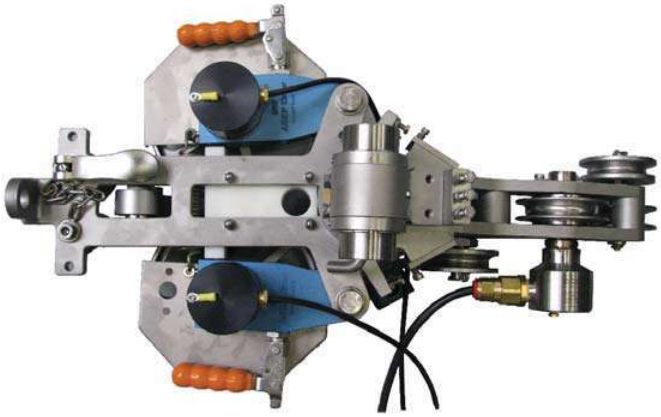
SmartHead II Measuring Head

This design is a compact, lightweight device for electronic wireline depth/tension measurement, enabling wireline depth/speed/tension signals to be provided to a separate remote display, designed for mounting to spooling arm of a wireline unit. It is unique in measuring both depth and tension on wire-line cables from 3/16" to 6/10" in diameter, for open and cased hole wireline applications.



Accurate tension/depth display is achieved using integral electronic load pin and digital output from the optical encoder. This design is a five wheel straight through design comprising of two upper wheels and one lower wheel with two horizontally oriented depth measurement wheels. Wireline replacement can be achieved without cutting of the rope socket. The safe working load for the SmartHead is 15,000 kg, while the tension reading is between 0 and 10,000 kg.



Dimensions & Weights

(L) 0.71 m, 2.33 ft (W) 0.44 m, 1.44 ft (H) 0.31 m, 1.02 ft (Weight) 33 kg, 73 lbs

Swabbing & Fishing Capability

- Designed for (3/16") to (5/16") braided line operations
- Designed for (3/16") to (5/16") mono-conductor line operations

Logging Capability

- Designed for (7/16") to (6/10") multi-conductor line operations

Depth & Tension System

- +/- 3 m in 3,000 m (10 ft in 10,000 ft.) with Elmar encoder installed (without magnetic marks)
- 0.3 m in 3,000 m (1 ft in 10,000 ft) (with magnetic marks). ASEP SmartMonitor is required to fully utilize the mark detection and stretch correction algorithms
- Combined error <= 1% full scale

Auto Spooling

- The SmartHead is designed to accommodate the switches (electric or pneumatic) for Elmar's autospooling system, which is fitted to all wireline units.

Signals

- The encoder provides HTL pulses as a standard; however, many different encoder signal formats are available. The loadpin provides two independent tension signals of 4 and 20 mA. Various outputs are also available (mV, V). The MMD sensor generates a passive signal.

Certification

- Elmar provides an explosion safe, CE marked version (ATEX compliant), which is suitable for use in Zone 1 and Zone 2 hazardous areas.

Features & Benefits

- Dual tangential measuring wheels made from hardened stainless steel
- Straight-line measurement (cable sizes can be changed without affecting measurement)
- Most suitable design for high accuracy logging operations
- Includes both horizontal and vertical guide rollers to minimize measuring wheel loading
- Rollers are oversized to increase reliability and reduce maintenance
- Rollers are made from hardened stainless steel
- Bearings can be greased from inverted fittings which are installed on each wheel
- Corrosion resistant main structure
- All metal parts are stainless steel or anodized aluminium
- Main structure made of stainless steel making it suitable to withstand powerful jarring actions during heavy duty fishing jobs
- Wireline with logging cable head installed can be removed from underside of measuring head
- Alignment rollers & lower bar to ensure wireline is retained
- High degree of common interchangeable rollers, bearings & wheels
- Can operate at variable rig-up angles

Features & Benefits (cont.)

- Lightweight design with integral tension makes the device ideal for high angle rigups
- Electronic backup depth and tension measurement system using a magnetic encoder and a dual signal loadpin. Using magnetic pickup reduces drag on measuring wheel by eliminating mechanical drive cable
- Max. line tension 0-10,000 kg (0-22,050 lbs)
- Delivered with Wheel Set #2 and Wheel Set #3

Options

- Hydro-pneumatic or electric automatic wire spooling system
- Wire oiler tank with adjustable nozzle control
- SmartHead configuration standard: CH and OH / mil sockets / full exi / Zone 1 NORSOK
- Calibration tool incl. test wire (Part no.: A1043086)

Tension Support Wheels Set #1	3/16" ≤ x < 1/4"	A1079485
Tension Support Wheels Set #2	1/4" ≤ x < 3/8"	A1079486
Tension Support Wheels Set #3	3/8" ≤ x < 1/2"	A1079487
Tension Support Wheels Set #4	1/2" ≤ x < 17/32"	A1079488
Optional set for 6/10""		A1094914
Wire Support Wheel Load Pin		A1024055

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