



ASEP  
Elmar  
DynaWinch  
Bowen  
SSR  
Hydrolex

# Creating the Complete Wireline Solution

## Our Vision

Our vision is to be globally recognised as the supplier of wireline equipment products, after sales and training against which all others are measured.

The Elmar product range covers wireline trucks and winches, masts, wireline pressure control equipment, slickline tools, hydraulic control units and tubular products. High quality Elmar, DynaWinch and ASEP equipment is manufactured in our six major plants, and we can provide a wireline service company with the full package it needs to perform an intervention – from the winch unit to the pressure control to the tools. We have equipment to suit any need but the one thing that all our products have in common is that they can be relied upon.

## Our Innovation

We have always been an innovation led company. Our team of design engineers based in the Netherlands, Scotland, Dubai, Singapore, Canada, and USA are conducting challenging research and development projects as well as client specific design programs. An example of NOV Elmar innovation is our new 30,000 psi rated pressure control equipment known as "NOLA".

Aided by the most up-to-date engineering and analysis software, our designs are robust, long lasting and comply with relevant region-specific regulations such as Norsok and ATEX.

Driven by the high cost of energy extraction and with a clear mandate to limit environmental impact, well servicing companies are constantly searching for increasingly more efficient technology and we aim to deliver.

The e-drive winch is a recent development to enable our clients to comply with rapidly changing emissions regulations. The e-drive is a fully electrically driven unit and also provides far greater levels of control than hydraulic units, and eliminates potential leaks. Designed to operate without a diesel engine, the result is a quieter, more controlled and environmentally friendly product which can be operated remotely from anywhere in the world. Today the e-drive. What will tomorrow bring?



## Our People

The best products in the world achieve nothing without competent people to operate them and a professional level of after sales support. With 12 locations around the globe we are never far from our customers, and our global product database and Service and After Sales structure allow us to pinpoint any parts or service personnel required and dispatch them at short notice. We are able to offer our clients a respected and challenging training program to satisfy all competency requirements, in a variety of languages.



# Product Lines



## Our Products

Our products are what have made us so well-known and require little introduction. Equipment from the 6 product lines (shown below) is available for rental or for sale. Contact your nearest NOV Elmar office for more details.



### Winches and Masts

(Including ASEP, Elmar and DynaWinch designs)

- Wireline Units
- Wireline Trucks
- Crane Trucks
- Masts
- Powerpack Units
- Spooling Units



### Wireline Pressure Control

- Pressure Control Equipment Strings
- Large Bore Pressure Control Equipment
- Crown Plugs
- Accessories



### Wireline Tools

(Including Bowen, PCE and NOV designs)

- Wireline Tools
- Slickline Tools
- Accessories



### Wellhead Control Equipment

- Combined Grease & Hydraulic Control Units
- Hydraulic Control Units
- Grease Control Units
- Pressure Testing Workshops
- Test and Injection Units
- Umbilical Reelers
- Accessories



### Completion Equipment

- Slotted Casing
- Holed Casing
- Perforating Guns
- Wire Wrapped Screens
- Accessories



### Automation Products

- LineMinders
- SmartMonitors
- Smart Control Systems



## Service and After Sales

For your spare parts, service, training or rental needs, contact your nearest office (see back cover).



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NOV Elmar  
K-WINCH Winch Drums



		Drum Series (width)																			
		D3	D50	700				D51	700	1054				700	1054						
		D3	D50	SC05	SC06	SC08	Left <sup>1</sup>	Right <sup>1</sup>	BC06	D51	BC07	BC08	BC11 <sup>2</sup>	Left <sup>1</sup>	Right <sup>1</sup>	Left <sup>1</sup>	Right <sup>1</sup>	BC22	BC26		
		D3	D50	SC05	SC06	SC08	SC09		BC06	D51	BC07	BC08	BC11 <sup>2</sup>	BC15		BC20 <sup>2</sup>		BC22	BC26		
<b>Outside Diameter (mm)</b>		457	600	450	600	700	600		700	728	850	1,016	1,400	1,016		1,400		1,016	1,400		
<b>Inside Diameter (mm)</b>		162	382	260	350	500	350		260	352	350	400	550	400		550		400	550		
<b>Width Between Flanges (mm)</b>		431	700	700	700	700	270	370	700	700	700	1,054	1,054	635	300	190	714	650	1,054		
<b>Winch Drum Weight (Kg)</b>		149	322	260	450	375	470		395	416	610	1,085	1,900	1,345		2,700		990	1,900		
<b>Drum Mount</b>	D3 Drum Mount	X																			
	D50 Drum Mount		X																		
	D51 Drum Mount								X												
	700 SD Series Single Drum Mount			X	X	X	X	X	X												
	700 DD Series Double Drum Mount			X	X	X	X	X	X												
	850 Series Double Drum Mount										X										
<b>Wire Capacity (m)</b>	0.092" Super Light Duty Slickline	10,973	17,983	15,185			12,492	9,116													
	0.108" Light Duty Slickline	7,925	13,106	10,957	19,644		9,028	6,588													
	0.125" Medium Duty Slickline		10,058		14,663	13,810	6,765	4,937													
	0.160" Heavy Duty Slickline					8,134															
	3/16" Light Duty Braided Line			3,506	6,473				11,551	9,144		57,396	57,396	21,698	10,115						
	7/32" Medium Duty Braided Line								8,351	7,620		26,153	41,492	15,775	7,334	9,010	34,320				
	1/4" Heavy Duty Braided Line								6,334	5,639		19,897	31,761	11,938	5,668			12,694			
	5/16" Super Heavy Duty Braided Line											12,714	20,195	7,609	3,564	4,269	16,520	7,958	24,450		
	9/32" Medium Duty Mono-Conductor Line										7,220							9,845			
	3/8" Heavy Duty Mono-Conductor Line										5,890							5,568			
	7/16" Light Duty Multi-Conductor Line												10,084			2,207	8,308		12,200		
	15/32" Medium Duty Multi-Conductor Line												8,950			1,808	7,110		10,600		
	17/32" Heavy Duty Multi-Conductor Line												6,992			1,530	5,682		8,520		
																					<b>Estimated Weight of 7,620m of Wireline</b>
																				<b>Kg</b>	<b>Lbs</b>
																				265	584
																				375	827
																				488	1,076
																				771	1,700
																				968	2,134
																				1,265	2,789
																				1,676	3,695
																				2,629	5,796
																				1,890	4,167
																				3,048	6,720
																				3,640	8,025
																				3,788	8,351
																				5,013	11,052



WinchDrum SC06



WinchDrum BC06



BC15 Split WinchDrum



WinchDrum SC05



WinchDrum SC08



WinchDrum BC11  
Non-magnetic core drum



BC20 Split WinchDrum

<sup>1</sup> Viewed from operator console.

<sup>2</sup> Non-Magnetic core drum.

Note: Wireline lengths are theoretical and may reflect wire lengths not commercially available. Weights include sprocket, exclude wire. Please contact Elmar for advice on winch drums for diameters or lengths not shown. Suitable transport boxes are available, please contact Elmar for further information.

# K-WINCH Winch Units

## Winch Units

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### Skid Mounted Wireline Units

SurveyLine . . . . .	8
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LightLine. . . . .	10
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SlimLine . . . . .	13
SlimSplit A . . . . .	14
SlimSplit A Aluminium . . . . .	15
SlimSplit B . . . . .	16
SlimSplit C Aluminium . . . . .	17
UniLine . . . . .	18
UniSplit A . . . . .	19
UniSplit B . . . . .	20
UniSplit C . . . . .	21
MultiLine . . . . .	22
MultiSplit B . . . . .	23
MultiSplit C . . . . .	24
DataLine . . . . .	25
DataSplit C . . . . .	26

### Truck Mounted Wireline Units

LandLine D SL . . . . .	27
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# NESSIE Explained



NESSIE

NESSIE

NESSIE



### Wireline Winch Unit

Available in three versions:

- ▶ Single drum
- ▶ Double drum
- ▶ Triple drum

Designed to NORSOK specifications



### Grease Injection Skid

10,000 psi or 15,000 psi well pressure.

Four modes of operation:

- ▶ Automatic, based on well pressure (patented NOV Elmar feature)
  - ▶ Remote automated from cabin unit
  - ▶ Automated from SmartMonitor on unit
  - ▶ Fully manual from operation panel on unit
- Designed to NORSOK specifications



### Wellhead Pump Skid

Dual output unit, ATEX Zone 1 hazardous environments, featuring:

- ▶ Control of the hydraulic master valve
  - ▶ Control of the down hole safety valve
  - ▶ Control of the balance line
- Designed to NORSOK specifications

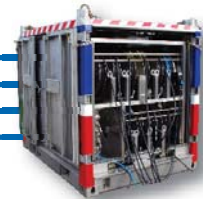


### Power Unit

Houses the following components:

- ▶ Main Electric Drive
- ▶ Control Components

Designed to NORSOK specifications



### BOP Control Unit

Well control system with three modes of operation:

- ▶ Remote control from cabin unit
  - ▶ Local control from SmartMonitor on unit
  - ▶ Fully manual from operation panel on unit
- Designed to NORSOK specifications



### Cabin Unit

Contains three SmartMonitors controlling:

- ▶ Wireline Winch Unit
- ▶ Backup / Camera
- ▶ BOP Control Unit / Grease Injection Skid / Pressure Test Skid
- ▶ Cabin Unit is optional if site is operated from remote location

Designed to NORSOK specifications



Remote Location



### Pressure Test Skid

For pressure testing the following pressure control equipment:

- ▶ 5,000 psi, 10,000 psi and 15,000 psi well pressure
- Designed to NORSOK specifications

For more information visit [www.nov.com/Elmar](http://www.nov.com/Elmar)

## NOV Electric Smart System Intervention Equipment

- ▶ Fully electrically driven wireline winch and associated well control panels
- ▶ Elimination of diesel driven hydraulics, reduces noise and risk of spillage
- ▶ High flexibility and controllability
- ▶ Reliable with low cost of ownership
- ▶ Designed to NORSOK specifications



[www.nov.com/Elmar](http://www.nov.com/Elmar)

# SurveyLine

This Single Drum Survey Wireline Unit is designed for running and retrieving survey tools and performing light duty wireline operations such as gauge cutter, LIB and drift runs. It has the option of a diesel/hydraulic or electric/hydraulic power unit. The frame incorporates forklift pockets in the base for ground handling and a single point lifting eye for crane handling. It is designed to be lightweight yet robust and is particularly suitable for applications where unit weight or footprint size is restricted.



The unit is fitted with removable guards for ease of access during routine maintenance. The open console style allows the operator to comfortably stand at the unit with all the necessary controls clearly identified with engraved stainless steel labels.



## Dimensions & Weights

**PART NUMBER L-6901020684V02:** (L) 1.20 m, 3.94 ft (W) 1.29 m, 4.23 ft (H) 1.83 m, 6.01 ft (Weight) 1,600 kg, 3,527 lbs

**PART NUMBER L-6901020684V01/V03/V04:** (L) 1.10 m, 3.61 ft (W) 1.12 m, 3.67 ft (H) 1.43 m, 4.68 ft (Weight) 1,125 kg, 2,480 lbs

## Hydraulic Drive System

- Closed loop hydraulic system
- Stepless transmission
- Hydraulic dynamic braking
- One handed operation
- Low maintenance system
- Operators adjustable handbrake

## Slickline Operations

- Max. Line Speed at Core: 451 ft/min.
- Max. Line Speed at Rim: 1,200 ft/min.
- Max. Line Pull at Core: 1,480 lbs +
- Max. Line Pull at Rim: 520 lbs +

## Winch System

- Winch drum D3 (refer to Winch Drum Foldout for detailed information)

## Depth & Tension System

WAC5-400 Series Measuring Heads:

- 0.082", 0.092" & 0.108" (Imperial or Metric)

Weight Indicator Systems c/w 100 ft of hose:

- WAW1-001 (0 - 2,000lbs)

## Electric Power Pack

- Motor - 20 HP (15 kW) 3 Phase/480/60 Hz (suitable for Zone 1 environments)
- Starter - Direct-on-line
- Different rating motors available on request

## Features & Benefits

- CE/ATEX standard
- NORSOK standard
- Lightweight
- Heliportable
- Designed for ease of operation
- Full stepless range of line speed and pulls
- Compact unit
- Ease of maintenance and drum change-out
- Ergonomically designed for operator comfort
- Flexible for various zoned requirements
- Ease of transportation
- Small foot print
- Single point lift
- Excellent low speed control
- Easily removable guards on all moving parts
- Integral power pack
- Power unit options (diesel/electric)
- Integral fork lift pockets

## Options

- L-6901020684V01: CE, ATEX CAT III
- L-6901020684V02: CE, ATEX CAT II, DNV 2.7-1, NORSOK Z-015
- L-6901020684V03: CE, ATEX CAT II, NORSOK S-010, E-001, S-002
- L-6901020684V04: CE, ATEX CAT II



Winch control panel



L-6901020684V02: Complete with DNV 2.7-1 lifting frame

# BaseLine

This rugged, compact and fully self-contained design unit is suitable for rapid deployment on onshore and offshore operations in temperate and tropical climates. The unit frame is constructed of carbon steel. Side-entry forklift pockets make positioning easy and the unit can be rigged-up and operational in minutes. Suitable for mounting on a trailer or truck bed or for heli-portable operations.



The BaseLine is equipped with the unique Elmar closed loop hydraulic drive system which makes fine control possible over a wide power band and is fitted with a powerful liquid-cooled diesel engine.



## Dimensions & Weights (excl. winch drum & wire)

(L) 1.66 m, 5.45 ft (W) 1.22 m, 4.00 ft (H) 1.63 m, 5.33 ft (Weight) 1,200 kg, 2,646 lbs

### Hydraulic Drive System

- Powerful 350 bar (5,000 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of fast acceleration at high speeds
- Hydraulic reservoir: 65 Litres, 17.2 US Gallon
- Hydraulic dynamic braking
- Low maintenance system

### Slickline Operations

Based on 30,000 ft 0.108" wire on SC05 drum, tool weight 125 lbs:

- Max. Line speed at core 345 m/min, 1,133 ft/min
- Max. Line speed at OD 575 m/min, 1,887 ft/min or
- Max. Line pull at core 3,533 kg, 7,789 lbs
- Max. Line pull at OD 2,528 kg, 5,574 lbs

### Winch System

- Winch Drum SC05 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Operator adjustable manual handbrake
- Planetary gearbox ratio 4:1

### Depth & Tension System

- MP16 II measuring head with integral load cell, maximum line tension 0-2,000 kg (0-4,400 lbs)
- CombiGauge combined weight indicator and depth counter 0-900 kg (0-2,000 lbs)

### Power Pack

- Engine: four cylinder diesel engine providing 34.5 kW (46 HP) @ 3,000 rpm
- Starter system: electric
- Electrical system: 12 VDC / 45A alternator, 100 Ah maintenance free calcium battery
- Diesel reservoir: 38 Litres, 10 US Gallon
- Engine controls: mounted on engine: Start and stop / Hour counter / Monitoring and safety system

### Control Panel

- Hydraulic main pressure gauge
- Hydraulic control pressure gauge
- Hydraulic oil temperature gauge
- Line tension valve
- Winch direction and speed control valve
- Throttle control

### Features & Benefits

- Economical design and minimum servicing needs equals lowest cost of ownership
- Lightweight single lift unit, ideal for heli-portable operations
- Powerful water-cooled four cylinder diesel engine, saves weight and maintenance
- Industry's most compact self-contained wireline winch, ideal when space is at a premium
- Weight and format ideal for offshore operations
- Reliable Elmar patented closed loop hydraulic system for trouble-free operation
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Fitted with drainage drip tray to eliminate environment impact and spillage from well fluids and lubricants

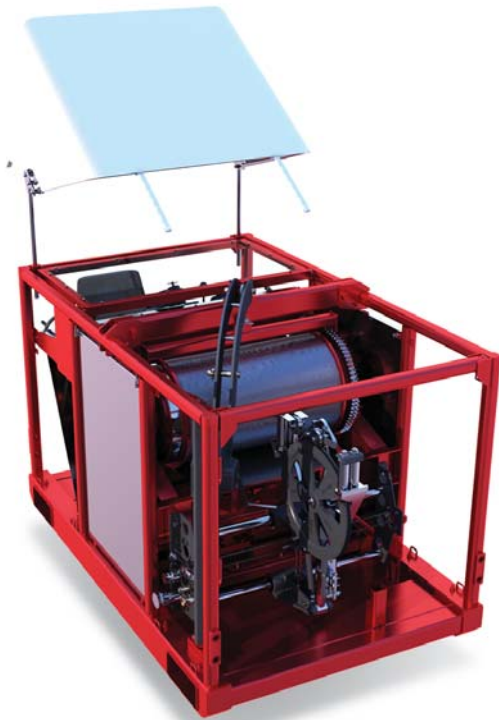
### Options

- Wire Size 0.092"
- Wire Size 0.108"
- CombiGauge 0-2,000 lbs/ft
- CombiGauge 0-900 kg/m

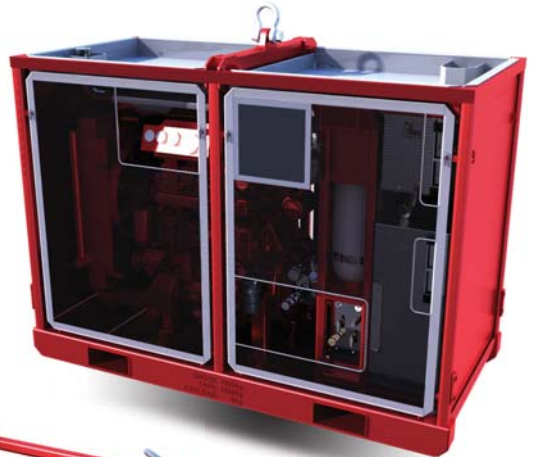
# LightLine

This Single Drum Lightweight twopiece Wireline Winch and Power Pack is designed for heavy duty slickline operations utilizing wires sizes up to 0.108".

The combination of the 83HP Zone II Power Pack coupled to an Open Loop hydraulic system and four speed gearbox give excellent jarring characteristics and high line speeds. With individual Winch and Power Pack weights of 1,500kg (including drum, wire and fluids), a carbon steel frame certified to EN12079/DNV 2.7-1 and the wire size capability make this the lightest, Zone II unit available for 0.108" operations.



Power Pack  
Part Number L-6931049821



Removable accumulator bank can be used out with the Power Pack

## Dimensions & Weights

### PART NUMBER L-6931049771:

Winch Module: (L) 1.91 m, 6.27 ft (W) 1.23 m, 4.04 ft (H) 1.32 m, 4.33 ft (Weight) 1,500 kg, 3,307 lbs (including 27,000ft of 0.108" slickline wire)  
 Power Pack Module: (L) 2.17 m, 7.10 ft (W) 1.05 m, 3.44 ft (H) 1.66 m, 5.45 ft (Weight) 1,800 kg, 3,968 lbs (wet with accumulator bank in frame)  
 (Weight) 1,470 kg, 3,241 lbs (wet with accumulator bank removed)

## Hydraulic Drive System

- Renowned open loop hydraulic system
- Momoblock hydraulic layout eliminates hoses
- Compact transmission with 4 speed gearbox
- Hydraulic dynamic braking
- Low maintenance system
- Operator's adjustable handbrake

## Line Speeds and Pulls

- Max. Line Speed at Core: 890 ft/min
- Max. Line Speed at Rim: 3,280 ft/min
- Max. Line Pull at Core: 8,000 lbs +
- Max. Line Pull at Rim: 3,000 lbs +

## Winch System

- Winch Drum SC05 (refer to Winch Drum Foldout for detailed information)

## Depth & Tension System

- 5-600 Series Measuring Heads
- 0.092", 0.108" or 3/16" (Imperial or Metric)
- Weight Indicator Systems c/w 100 ft of hose
- 0-2000 lbs or 0-4000 lbs range
  - Load cell

## Power Pack

- (57 kW) 76 HP @ 2,200 rpm
- 4 cylinder Diesel
- 2500 psi max hydraulic pressure
- Diesel reservoir: 63 Litres, 17 US Gallon

## Certification

- Ex Zone 2 (max 200°C)
- EN12079/DNV2.7-1

## Features & Benefits

- Dual BOP control (c/w power pack mounted accumulator system)
- Removable accumulators to reduce power pack weight in liftable frame
- Stuffing Box Control
- Drum change out arm
- 25ft Power Pack to Winch coupling hoses
- Single Point Lift (4 point lift available)
- Lightweight
- Compact foot print
- Heliportable
- EN12079/DNV certified allowing boat/rig transfer
- Ease of operation
- Low maintenance

## Options

- Operators Sun Canopy
- Jacking Wheels



# FlyLine

FlyLine winches are the solution in situations where critical requirements such as access, footprint or weight are a key factor in winch selection. For example, if urgency of the situation justifies heli transport or a fast boat, or if space or access are too restricted for a container-format winch. The FlyLine is a lightweight, compact dual-lift wireline winch unit, suitable for rapid deployment onshore and offshore in temperate and tropical climates.

Together with the lightweight and compact design and the option of dual drum and ATEX certification, this unit means uncompromising versatility of function and application.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects):

Power Pack Module:	(L) 2.00 m, 6.56 ft (W) 1.20 m, 3.94 ft (H) 1.51 m, 4.95 ft (Weight) 1,900 kg, 4,189 lbs
Single Drum Winch Module (Open Console):	(L) 2.25 m, 7.38 ft (W) 1.35 m, 4.43 ft (H) 1.48 m, 4.86 ft (Weight) 1,450 kg, 3,197 lbs
Double Drum Winch Module (Open Console):	(L) 2.90 m, 9.51 ft (W) 1.35 m, 4.43 ft (H) 1.48 m, 4.86 ft (Weight) 1,600 kg, 3,527 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of fast acceleration and extremely high speeds
- Hydraulic tank: 98 Litres (26 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.108" wire on SC05 drum, tool weight 125 lbs:

- Max. Line speed at core 365 m/min, 1,054 ft/min
- Max. Line speed at OD 630 m/min, 1,626 ft/min or
- Max. Line pull at core 2,965 kg, 7,789 lbs
- Max. Line pull at OD 1,690 kg, 5,574 lbs

## Winch System

- Winch Drum SC05, SC08, SC09, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return
- Planetary gearbox ratio 5.8:1/7:1

## Depth & Tension System

- MP16 II measuring head with integral load cell
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: four cylinder diesel engine providing 54 kW (72 HP) @ 2,200 rpm
- Starter system: spring / hydraulic / air
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Diesel reservoir: 120 Litres, 32 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- Line tension valve
- Winch direction and speed control valve
- Brake control
- Emergency stop button
- Horn

## Features & Benefits

- Fully certified frame meet the most stringent certification standards
- Dual-lift for ease of transport
- Ultra-lightweight for fast heli-deployment
- Open operator station on winch module for visibility and light weight
- Powerful water-cooled four cylinder diesel engine delivering up to 54 kW (72 HP)
- Smallest footprint in a winch of this capacity: small, but powerful!
- Power pack designed to run quietly non-stop
- Reliable Elmar patented closed loop hydraulic system for trouble-free operation
- Unique hydraulic transmission for stable winch speed and maximum control
- Weight and format ideal for offshore operations
- Fitted with drainage drip tray to eliminate environment impact and spillage from well fluids and lubricants
- ATEX certification available to meet European sector requirements
- Extensive customising options, because every customer has different needs

## Options

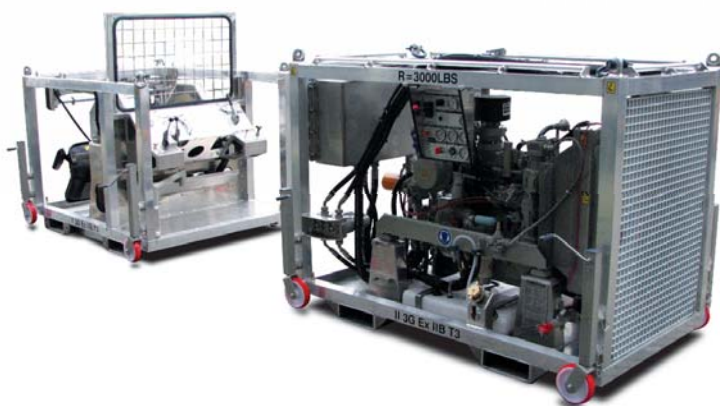
- Single or Double Drum
- Auxillary Drive
- Jacking Wheels
- SmartMonitor 12"
- MP20 Measuring Head



# FlyLine Aluminium

FlyLine winches are the solution in situations where critical requirements such as access, footprint or weight are a key factor in winch selection. For example, if urgency of the situation justifies heli transport or a fast boat, or if space or access are too restricted for a container-format winch. The FlyLine is a lightweight, compact dual-lift wireline winch unit, suitable for rapid deployment onshore and offshore in temperate and tropical climates.

Together with the lightweight and compact design and ATEX certification, this unit means uncompromising versatility of function and application.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects):

Power Pack Module: (L) 2.05 m, 6.73 ft (W) 1.31 m, 4.28 ft (H) 1.68 m, 5.51 ft (Weight) 1,360 kg, 2,998 lbs  
 Single Drum Winch Module (Open Console): (L) 2.00 m, 6.56 ft (W) 1.61 m, 5.27 ft (H) 1.46 m, 4.79 ft (Weight) 860 kg, 1,896 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of fast acceleration and extremely high speeds
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.108" wire on SC05 drum, tool weight 125 lbs:

- Max. Line speed at core 365 m/min, 1,054 ft/min
- Max. Line speed at OD 630 m/min, 1,626 ft/min or
- Max. Line pull at core 2,965 kg, 7,789 lbs
- Max. Line pull at OD 1,690 kg, 5,574 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Operator adjustable manual handbrake
- Planetary gearbox ratio 5,8:1

## Depth & Tension System

- MP16 II measuring head with integral load cell
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: four cylinder diesel engine providing 54 kW (72 HP) @ 2,200 rpm
- Starter system: spring / hydraulic / air
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- Line tension valve
- Winch direction and speed control valve
- Brake control
- Emergency stop button

## Features & Benefits

- Fully certified frame meet the most stringent certification standards
- Dual-lift for ease of transport
- Ultra-lightweight for fast heli-deployment
- Open operator station on winch module for visibility and light weight
- Reliable turbo charged four cylinder diesel motor with exceptional power to weight ratio
- Smallest footprint in a winch of this capacity: small, but powerful!
- Power pack designed to run quietly non-stop
- Reliable Elmar patented closed loop hydraulic system for trouble-free operation
- Unique hydraulic transmission for stable winch speed and maximum control
- Weight and format ideal for offshore operations
- Fitted with drainage drip tray to eliminate environment impact and spillage from well fluids and lubricants
- Optional ATEX certification available to meet European sector requirements
- Extensive customising options, because every customer has different needs

## Options

- Auxillary Drive
- Jacking Wheels
- SmartMonitor 12"

# SlimLine

The SlimLine onepiece winch unit is the solution when space is at a premium, the operator needs an enclosed cabin, and ease of deployment is critical. This highly compact, versatile, self-contained wireline winch unit can be ordered in single or dual-drum configuration, allowing you to conduct both slickline and logging operations using a single unit. The standard configuration comprises a self-contained power pack, control cabin and winch module in an ATEX certified Zone 2 configuration. The unit is also available in Zone 1 or Rig Safe configuration.



With the SlimLine you can switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime. Featuring the dependable field-proven Elmar closed loop hydraulic system used in Elmar winches on oil fields worldwide, the SlimLine is one of the industry's most compact all-weather solution for today's dynamic world of well servicing.



## Dimensions & Weights (excl. winch drum & wire)

Power Pack / Cabin / Winch:	(L) 3.60 m, 11.81 ft (W) 1.35 m, 4.43 ft (H) 2.70 m, 8.86 ft (Weight) 5,200 kg, 11,464 lbs
Power Pack / Cabin / Winch, incl. Airconditioning:	(L) 3.60 m, 11.81 ft (W) 1.35 m, 4.43 ft (H) 3.00 m, 9.84 ft (Weight) 5,200 kg, 11,464 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging
- Capable of fast acceleration and extremely high speeds
- Hydraulic tank: 90 Litres (23.8 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 303 m/min, 994 ft/min
- Max. Line speed at OD 463 m/min, 1,520 ft/min or
- Max. Line pull at core 3,838 kg, 8,462 lbs
- Max. Line pull at OD 2,904 kg, 6,404 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 152 m/min, 499 ft/min
- Max. Line speed at OD 417 m/min, 1,367 ft/min or
- Max. Line pull at core 4,622 kg, 10,189 lbs
- Max. Line pull at OD 3,050 kg, 6,725 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven

## Winch System (cont.)

- Fail safe spring return brake
- Planetary gearbox ratio 5.8:1 / 7:1
- Wire sizes from 0.092" slickline to 1/4" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 54 kW (72 HP) @ 2,200 rpm
- Starter system: air / hydraulic / spring / electric
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 120 Litres, 31.7 US Gallon

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 54 kW (72 HP)
- One or two drums for well servicing from logging to slickline and heavy duty fishing
- Comfortable cabin in a compact footprint
- One operator and one winch for logistical convenience
- Excellent jarring characteristics
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system
- Optional ASEP SmartMonitor: sophisticated display system for speed, depth and tension with automatic shutdown
- Customising options available, because every customer has different needs

## Options

- Arctic Package
- Desert Package
- Air Conditioner
- BOP Control
- Stuffingbox Control
- SmartMonitor 12"
- MP20 Measuring Head

# SlimSplit A

This design is a twopiece wireline winch unit comprising of a separate power pack module and separate enclosed short length operator cabin / double drum winch module. Each module can be lifted separately. The system is suitable for cased hole slickline, braided line and mono-conductor operations.



With the SlimSplit A you can switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime. Featuring the dependable field-proven Elmar closed loop hydraulic system used in Elmar winches on oil fields worldwide, the SlimSplit A is one of the industry's most compact all-weather solution for today's dynamic world of well servicing.



## Dimensions & Weights (excl. winch drum & wire)

Power Pack Module:	(L) 2.00 m, 6.56 ft (W) 1.20 m, 3.94 ft (H) 1.51 m, 4.95 ft (Weight) 1,900 kg, 4,189 lbs
Cabin / Winch Module (Short Cab):	(L) 2.71 m, 8.89 ft (W) 1.35 m, 4.43 ft (H) 2.70 m, 8.86 ft (Weight) 3,000 kg, 6,614 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration and extremely high speeds
- Hydraulic tank: 98 Litres (26 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 303 m/min, 994 ft/min
- Max. Line speed at OD 463 m/min, 1,520 ft/min or
- Max. Line pull at core 3,838 kg, 8,462 lbs
- Max. Line pull at OD 2,904 kg, 6,404 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 152 m/min, 499 ft/min
- Max. Line speed at OD 417 m/min, 1,367 ft/min or
- Max. Line pull at core 4,622 kg, 10,189 lbs
- Max. Line pull at OD 3,050 kg, 6,725 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven

## Winch System (cont.)

- Fail safe spring return brake
- Planetary gearbox ratio 5.8:1
- Wire sizes from 0.092" slickline to 1/4" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: four cylinder diesel engine providing 54 kW (72 HP) @ 2,200 rpm
- Starter system: spring / hydraulic / air
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 120 Litres, 32 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 54 kW (72 HP)
- One or two drums for well servicing from logging to slickline and heavy duty fishing
- Comfortable cabin in a compact footprint
- One operator and one winch for logistical convenience
- Excellent jarring characteristics
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system for smooth control and extremely slow logging speeds
- Optional ASEP SmartMonitor: sophisticated display system for speed, depth and tension with automatic shutdown
- Customising options available, because every customer has different needs

## Options

- Arctic Package
- Desert Package
- Air Conditioner
- BOP Control
- Stuffingbox Control
- SmartMonitor 12"
- MP20 Measuring Head

# SlimSplit A Aluminium

This design is a two piece wireline winch unit comprising of a separate power pack module and separate enclosed short length operator cabin / drum winch module. Each module can be lifted separately. The system is suitable for cased hole slickline, braided line operations.



With the SlimSplit A Aluminium you can switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime. Featuring the dependable field-proven Elmar closed loop hydraulic system used in Elmar winches on oil fields worldwide, the SlimSplit A Aluminium is one of the industry's most compact all-weather solution for today's dynamic world of well servicing.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects):

Power Pack Module:

(L) 2.05 m, 6.73 ft (W) 1.31 m, 4.28 ft (H) 1.68 m, 5.51 ft (Weight) 1,360 kg, 2,998 lbs

Cabin / Winch Module (Short Cab):

(L) 2.90 m, 9.51 ft (W) 1.46 m, 4.79 ft (H) 2.39 m, 7.84 ft (Weight) 900 kg, 1,984 lbs

Cabin / Winch Module (Short Cab), incl. Airconditioning:

(L) 2.90 m, 9.51 ft (W) 1.46 m, 4.79 ft (H) 2.74 m, 8.98 ft (Weight) 1,120 kg, 2,469 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration and extremely high speeds
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 303 m/min, 994 ft/min
- Max. Line speed at OD 463 m/min, 1,520 ft/min or
- Max. Line pull at core 3,838 kg, 8,462 lbs
- Max. Line pull at OD 2,904 kg, 6,404 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 152 m/min, 499 ft/min
- Max. Line speed at OD 417 m/min, 1,367 ft/min or
- Max. Line pull at core 4,622 kg, 10,189 lbs
- Max. Line pull at OD 3,050 kg, 6,725 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake

## Winch System (cont.)

- Planetary gearbox ratio 5,8:1
- Wire sizes from 0.092" slickline to 1/4" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: four cylinder diesel engine providing 54 kW (72 HP) @ 2,200 rpm
- Starter system: spring / hydraulic / air
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 54 kW (72 HP)
- Comfortable cabin in a compact footprint
- One operator and one winch for logistical convenience
- Excellent jarring characteristics
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system for smooth control and extremely slow logging speeds
- Optional ASEP SmartMonitor: sophisticated display system for speed, depth and tension with automatic shutdown
- Customising options available, because every customer has different needs

## Options

- Air Conditioner
- SmartMonitor 12"
- MP20 Measuring Head

# SlimSplit B

The SlimSplit B twopiece winch unit with separate power pack/cabin and winch module is the solution when space is at a premium, the operator needs an enclosed cabin, and ease of deployment is critical. This highly compact, versatile, self-contained wireline winch unit can be ordered in single or dual-drum configurations, allowing you to conduct both slickline and logging operations using a single unit. The standard configuration comprises a self-contained power pack/control cabin and winch module in an ATEX certified Zone 2 configuration.



This unit is available in three frame variants which can be transported separately (two or three pieces) and assembled at the well site either onshore or offshore. With the SlimSplit B wireline winch you can switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Power Pack / Cabin Module (Short Cab):	(L) 2.14 m, 7.01 ft (W) 1.35 m, 4.43 ft (H) 2.70 m, 8.86 ft (Weight) tbd kg, tbd lbs
Power Pack / Cabin Module (Short Cab), incl. Airconditioning:	(L) 2.14 m, 7.01 ft (W) 1.35 m, 4.43 ft (H) 3.00 m, 9.84 ft (Weight) tbd kg, tbd lbs
Winch Module:	(L) 1.67 m, 5.48 ft (W) 1.35 m, 4.43 ft (H) 2.70 m, 8.86 ft (Weight) 2,050 kg, 4,519 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 90 Litres (24 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 303 m/min, 994 ft/min
- Max. Line speed at OD 463 m/min, 1,520 ft/min or
- Max. Line pull at core 3,838 kg, 8,462 lbs
- Max. Line pull at OD 2,904 kg, 6,404 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 152 m/min, 499 ft/min
- Max. Line speed at OD 417 m/min, 1,367 ft/min or
- Max. Line pull at core 4,622 kg, 10,189 lbs
- Max. Line pull at OD 3,050 kg, 6,725 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven

## Winch System (cont.)

- Fail safe spring return brake
- Planetary gearbox ratio 5.8:1 / 7:1
- Wire sizes from 0.092" slickline to 1/4" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 54 kW (72 HP) @ 2,200 rpm
- Starter system: air / hydraulic / spring
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 120 Litres, 32 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 54 kW (72 HP)
- Field-exchangeable single or dual-drum winch frames for well servicing flexibility, from basic slickline to fishing and logging
- Comfortable cabin in a compact footprint
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system
- Optional ASEP SmartMonitor: sophisticated display system for speed, depth and tension with automatic shutdown
- Customising options available, because every customer has different needs

## Options

- Arctic Package
- Desert Package
- Air Conditioner
- BOP Control
- Stuffingbox Control
- SmartMonitor 12"
- MP20 Measuring Head

# SlimSplit C Aluminium

The SlimSplit C Aluminium threepiece winch unit is the solution when space is at a premium, the operator needs an enclosed cabin, and ease of deployment is critical. This highly compact, versatile, self-contained wireline winch unit can be ordered in single drum configuration. The standard configuration comprises power pack, control cabin and winch module in an ATEX certified Zone 2 configuration.

When deployment flexibility is critical, the SlimSplit C Aluminium unit is available in three frame variants which can be transported separately and assembled at the well site either onshore or offshore. With the SlimSplit C Aluminium wireline winch you can switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Power Pack Module:	(L) 2.24 m, 7.35 ft (W) 1.43 m, 4.69 ft (H) 1.69 m, 5.54 ft (Weight) 1,950 kg, 4,299 lbs
Cabin Module (Medium Cab):	(L) 2.00 m, 6.56 ft (W) 2.13 m, 6.99 ft (H) 2.90 m, 9.51 ft (Weight) 1,570 kg, 3,461 lbs
Winch Module:	(L) 1.88 m, 6.15 ft (W) 1.36 m, 4.45 ft (H) 1.32 m, 4.33 ft (Weight) 630 kg, 1,389 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 120 Litres (32 US Gallon)
- Hydraulic dynamic braking

## Cased Hole & Mono-Conductor Operations

Based on 20,000 ft 9/32" wire on BC07 drum, tool weight 150 lbs:

- Max. Line speed at core 63.7 m/min, 209 ft/min
- Max. Line speed at OD 115 m/min, 380 ft/min or
- Max. Line pull at core 6,315 kg, 13,923 lbs
- Max. Line pull at OD 3,443 kg, 7,591 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 152 m/min, 499 ft/min
- Max. Line speed at OD 417 m/min, 1,367 ft/min or
- Max. Line pull at core 4,622 kg, 10,189 lbs
- Max. Line pull at OD 3,050 kg, 6,725 lbs

## Winch System

- Winch Drum BC06, BC07 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake

## Winch System (cont.)

- Planetary gearbox ratio 20:1
- Wire sizes 7/32" and 9/32" mono-conductor, 5/16" braided line

## Depth & Tension System

- SmartHead measuring head with integral load pin and two encoders
- SmartMonitor basic depth panel for visualization of depth, speed and tension

## Power Pack

- Engine: four cylinder diesel engine providing 54 kW (72 HP) @ 2,200 rpm
- Starter system: spring / hydraulic / air
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 90 Litres, 23 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 54 kW (72 HP)
- Comfortable cabin in a compact footprint
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system for smooth control even at extremely slow logging speeds
- Optional ASEP SmartMonitor: sophisticated display system for speed, depth and tension with automatic shutdown
- Pressurisation with Fire and Gas System
- Customising options available, because every customer has different needs

## Options

- Air Conditioner
- BOP Control
- Emergency Winch Drive
- Auxillary Drive

# UniLine

The UniLine onepiece winch unit is the solution when rig space is restricted, the operator needs an enclosed cabin, and you want to minimize machine movements. This compact wireline winch unit can be ordered in single or dual-drum configurations, allowing slickline and logging operations using a single unit. Because you can fieldswap e.g. a deep cased hole slickline winch frame for a logging winch frame, these units have unparalleled versatility.

The standard configuration comprises a self-contained power pack, control cabin and winch module in an ATEX certified Zone 2 configuration. This economical, onepiece unit - that is operations-ready on delivery - allows you to switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Short Cabin / Power Pack / Winch: (L) 4.50 m, 14.76 ft (W) 1.50 m, 4.92 ft (H) 2.74 m, 8.99 ft (Weight) 7,200 kg, 15,873 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 126 Litres (33 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 260 m/min, 937 ft/min
- Max. Line speed at OD 445 m/min, 1,330 ft/min or
- Max. Line pull at core 4,815 kg, 8,462 lbs
- Max. Line pull at OD 2,810 kg, 6,404 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 260 m/min, 599 ft/min
- Max. Line speed at OD 445 m/min, 1,367 ft/min or
- Max. Line pull at core 4,815 kg, 10,189 lbs
- Max. Line pull at OD 2,810 kg, 6,625 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven

## Winch System (cont.)

- Fail safe spring return brake
- Planetary gearbox ratio 5,8:1
- Wire sizes from 0.092" slickline to 5/16" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell
- SmartHead II CH, tension range 0-10,000 kg (0-22,050 lbs)
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 81 kW (109 HP) @ 2,200 rpm
- Starter system: pneumatic, hydraulic
- Electrical rig supply: 110/220 VAC 115 VAC 60 Hz or 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 116 Litres, 30 US Gallon

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 81 kW (109 HP)
- Single or dual-drum winch frames for well servicing flexibility, from basic slickline to fishing and logging
- Comfortable cabin in a compact footprint; optional medium and long cabins for logging computer racks
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system for smooth control even at extremely slow logging speeds
- Optional ASEP SmartMonitor: sophisticated control system for safe, high-precision automatic operation
- Customising options available, because every customer has different needs

## Options

- Air Conditioner
- BOP Control
- Stuffingbox Control
- SmartMonitor 12"
- Electronic Rack
- 6 kW Belt Driven Generator
- Single Drum Winch Unit BC07 or BC22

# UniSplit A

This design is a twopiece wireline winch unit comprising of a separate power pack module and separate enclosed operator cabin / single or double drum winch module. Each module can be lifted individually or both combined as a single lift. The system is suitable for cased hole slickline, braided line and mono-conductor operations.



The standard configuration comprises a self-contained power pack, control cabin and winch module in an ATEX certified Zone 2 configuration. The unit is also available in Rig Safe configuration. This economical unit - that is operations-ready on delivery - allows you to switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Power Pack Module: (L) 1.35 m, 4.43 ft (W) 1.50 m, 4.92 ft (H) 2.70 m, 8.86 ft (Weight) 2,900 kg, 6,393 lbs  
Cabin / Winch Module: (L) 3.78 m, 12.40 ft (W) 1.50 m, 4.92 ft (H) 3.00 m, 9.84 ft (Weight) 4,950 kg, 10,913 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 126 Litres (33 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 260 m/min, 937 ft/min
- Max. Line speed at OD 445 m/min, 1,330 ft/min or
- Max. Line pull at core 4,815 kg, 8,462 lbs
- Max. Line pull at OD 2,810 kg, 6,404 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 260 m/min, 599 ft/min
- Max. Line speed at OD 445 m/min, 1,367 ft/min or
- Max. Line pull at core 4,815 kg, 10,189 lbs
- Max. Line pull at OD 2,810 kg, 6,625 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven

## Winch System (cont.)

- Fail safe spring return brake
- Planetary gearbox ratio 5,8:1
- Wire sizes from 0.092" slickline to 5/16" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell, maximum line tension 0-2,000 kg (0-4,400 lbs)
- SmartHead II CH, tension range 0-10,000 kg (0-22,050 lbs)
- CombiGauge combined weight indicator and depth counter 0-2,000 kg (0-4,400 lbs)

## Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 81 kW (109 HP) @ 2,200 rpm
- Starter system: pneumatic, hydraulic
- Electrical rig supply: 110/220 VAC 115 VAC 60 Hz or 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 116 Litres, 30 US Gallon

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 81 kW (109 HP)
- Field-exchangeable single or dual-drum winch frames for well servicing flexibility, from basic slickline to fishing and logging
- Comfortable cabin in a compact footprint; optional medium and long cabins for logging computer racks
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system for smooth control even at extremely slow logging speeds
- Optional ASEP SmartMonitor: sophisticated control system for safe, high-precision automatic operation
- Customising options available, because every customer has different needs

## Options

- Air Conditioner
- BOP Control
- Stuffingbox Control
- SmartMonitor 12"
- Electronic Rack



# UniSplit B

The UniSplit B twopiece winch unit with separate power pack/cabin and winch module is the solution when rig space is restricted, the operator needs an enclosed cabin, and you want to minimize machine movements. This compact wireline winch unit can be ordered in single or dual-drum configurations, allowing you to conduct both slickline and logging operations using a single unit. And because you can fieldswap e.g. a deep cased hole slickline winch frame for a logging winch frame, these units have unparalleled versatility.

The standard configuration comprises a self-contained power pack/control cabin and winch module in an ATEX certified Zone 2 configuration. The UniSplit B is the economical, twopiece unit that is operations-ready on delivery. With the UniSplit B wireline winch you can switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Short Power Pack / Cabin Module:

Short Power Pack / Cabin Module, incl. Airconditioning:

Medium Power Pack / Cabin Module:

Winch Module, Single Drum:

Winch Module, Double Drum:

(L) 2.83 m, 9.28 ft (W) 1.50 m, 4.92 ft (H) 2.78 m, 9.12 ft (Weight) 4,500 kg, 9,921 lbs
(L) 2.83 m, 9.28 ft (W) 1.50 m, 4.92 ft (H) 3.00 m, 9.84 ft (Weight) 4,540 kg, 10,009 lbs
(L) 3.48 m, 11.41 ft (W) 1.50 m, 4.92 ft (H) 2.78 m, 9.12 ft (Weight) tbd kg, tbd lbs
(L) 1.66 m, 5.45 ft (W) 1.50 m, 4.92 ft (H) 2.63 m, 8.63 ft (Weight) 2,350 kg, 5,181 lbs
(L) 1.66 m, 5.45 ft (W) 1.50 m, 4.92 ft (H) 2.63 m, 8.63 ft (Weight) 2,250 kg, 4,960 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 126 Litres (33 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 260 m/min, 937 ft/min
- Max. Line speed at OD 445 m/min, 1,330 ft/min or
- Max. Line pull at core 4,815 kg, 8,462 lbs
- Max. Line pull at OD 2,810 kg, 6,404 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 260 m/min, 599 ft/min
- Max. Line speed at OD 445 m/min, 1,367 ft/min or
- Max. Line pull at core 4,815 kg, 10,189 lbs
- Max. Line pull at OD 2,810 kg, 6,625 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven

## Winch System (cont.)

- Fail safe spring return brake
- Planetary gearbox ratio 5,8:1
- Wire sizes from 0.092" slickline to 5/16" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell
- SmartHead II CH, tension range 0-10,000 kg (0-22,050 lbs)
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 81 kW (109 HP) @ 2,200 rpm
- Starter system: pneumatic, hydraulic
- Electrical rig supply: 110/220 VAC 115 VAC 60 Hz or 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 116 Litres, 30 US Gallon

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 81 kW (109 HP)
- Field-exchangeable single or dual-drum winch frames for well servicing flexibility, from basic slickline to fishing and logging
- Comfortable cabin in a compact footprint; optional medium and long cabins for logging computer racks
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system for smooth control even at extremely slow logging speeds
- Optional ASEP SmartMonitor: sophisticated control system for safe, high-precision automatic operation
- Customising options available, because every customer has different needs

## Options

- Air Conditioner
- BOP Control
- Stuffingbox Control
- SmartMonitor 12"
- Electronic Rack
- 6 kW Belt Driven Generator
- Single Drum Winch Unit BC07 or BC22

# UniSplit C

The UniSplit C threepiece winch unit separate power pack, cabin and winch module is the solution when rig space is restricted, the operator needs an enclosed cabin, and you want to minimize machine movements. This compact wireline winch unit can be ordered in single or dual-drum configurations, allowing you to conduct both slickline and logging operations using a single unit. And because you can fieldswap e.g. a deep cased hole slickline winch frame for a logging winch frame, these units have unparalleled versatility. The standard configuration comprises a self-contained separate power pack, control cabin and winch module in an ATEX certified Zone 2 configuration.

The UniSplit C is the economical, threepiece unit that is operations-ready on delivery. When deployment flexibility is critical, the UniSplit unit is available in three frame variants which can be transported separately and assembled on the rig. With the UniSplit C wireline winch you can switch between every imaginable well servicing activity without having to have another winch, operator or engineer on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Power Pack Module: (L) 1.35 m, 4.43 ft (W) 1.50 m, 4.92 ft (H) 2.75 m, 9.02 ft (Weight) 3,200 kg, 7,055 lbs

Long Cabin Module: (L) 3.00 m, 9.84 ft (W) 1.50 m, 4.92 ft (H) 3.00 m, 9.84 ft (Weight) 3,450 kg, 7,606 lbs

Winch Module: (L) 1.67 m, 5.48 ft (W) 1.50 m, 4.92 ft (H) 2.63 m, 8.63 ft (Weight) 2,350 kg, 5,181 lbs

## Hydraulic Drive System

- Powerful 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 126 Litres (33 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 260 m/min, 937 ft/min
- Max. Line speed at OD 445 m/min, 1,330 ft/min or
- Max. Line pull at core 4,815 kg, 8,462 lbs
- Max. Line pull at OD 2,810 kg, 6,404 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 260 m/min, 599 ft/min
- Max. Line speed at OD 445 m/min, 1,367 ft/min or
- Max. Line pull at core 4,815 kg, 10,189 lbs
- Max. Line pull at OD 2,810 kg, 6,625 lbs

## Winch System

- Winch Drum SC06, BC06 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 5,8:1
- Wire sizes from 0.092" slickline to 5/16" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell
- SmartHead II CH, tension range 0-10,000 kg (0-22,050 lbs)
- CombiGauge combined weight indicator and depth counter

## Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 81 kW (109 HP) @ 2,200 rpm
- Starter system: pneumatic, hydraulic
- Electrical rig supply: 110/220 VAC 115 VAC 60 Hz or 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 116 Litres, 30 US Gallon

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- Powerful water-cooled four cylinder diesel engine delivering up to 81 kW (109 HP)
- Field-exchangeable single or dual-drum winch frames for well servicing flexibility, from basic slickline to fishing and logging
- Comfortable cabin in a compact footprint; optional medium and long cabins for logging computer racks
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system for smooth control even at extremely slow logging speeds
- Optional ASEP SmartMonitor: sophisticated control system for safe, high-precision automatic operation
- Customising options available, because every customer has different needs

## Options

- Air Conditioner
- BOP Control
- Stuffingbox Control
- SmartMonitor 12"
- Electronic Rack (long cabin version)
- 6 kW Belt Driven Generator
- Single Drum Winch Unit BC07 or BC22
- Pressurisation c/w Fire & Gas Detection (Long Cab version only)

# MultiLine

The MultiLine is an economical, onepiece unit that is immediately ready for use as soon as it has been positioned. Elmar has put an end to the need to compromise, by developing the MultiLine wireline winch. This versatile, sophisticated, self-contained wireline winch can be ordered in single or dual-drum configurations. The standard configuration comprises a self-contained power pack, control cabin and winch module in an ATEX certified Zone 2 configuration.



The versatility of the MultiLine wireline winch means you can switch between every imaginable well servicing activity without having to have another winch, operator, engineer or logging instrumentation on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Medium Cabin / Power Pack / Winch: (L) 5.40 m, 17.73 ft (W) 2.00 m, 6.56 ft (H) 2.90 m, 9.51 ft (Weight) tbd kg, tbd lbs  
 Long Cabin / Power Pack / Winch: (L) 6.36 m, 20.87 ft (W) 2.00 m, 6.56 ft (H) 2.90 m, 9.51 ft (Weight) 14,000 kg, 30,865 lbs

## Hydraulic Drive System

- 400 bar (5,802 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 125 Litres (33 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Cased Hole Operations

Based on 25,000 ft 5/16" wire on BC08 drum, tool weight 1100 lbs:

- Max. Line speed at core: 106 m/min, 347 ft/min
- Max. Line speed at OD: 258 m/min, 864 ft/min or
- Max. Line pull at core: 8,100 kg, 17,858 lbs
- Max. Line pull at OD: 5,073 kg, 11,185 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06, BC07, BC08, BC11, BC15, BC20, BC22, BC26 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 22,62:1
- Wire sizes from 0.092" slickline to 5/16" braided line
- Wire sizes from 7/16" to 17/32" mono-conductor line

## Depth & Tension System

- SmartHead measuring head with integral load pin and two encoders, maximum line tension 0-10,000 kg (0-22,050 lbs)
- SmartMonitor basic depth panel for visualization of depth, speed and tension

## Power Pack

- Engine: water-cooled six cylinder Caterpillar diesel engine providing 129.5 kW (173.6 HP) @ 2,200 rpm
- Starter system: air / hydraulic / electric
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 240 Litres, 63 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- One to two drums for every imaginable well servicing activity, from swabbing and fishing to multi-conductor logging
- One operator and one winch, saves space and personnel
- Powerful six cylinder 129.5 kW (173.6 HP) diesel engine, a dependable and responsive workhorse
- Ergonomic, safe and responsive operator controls
- Sophisticated ASEP SmartMonitor control system available for precision automatic operation
- Minimum servicing requirements equals maximum availability
- Optional slewing base and slewing winch drums close to wellhead / wide operating arc
- Customising options available, because every customer has different needs
- Easily deployable to both onshore and offshore locations

## Options

- Arctic Package
- Air Conditioner
- BOP Control
- Stuffingbox Control
- Electronic Rack
- Intercom
- Cabin Pressurization with Fire and Gas system
- Dehumidifier
- Auxillary Drive
- MP16 II Measuring Head
- MP20 Measuring Head

# MultiSplit B

The MultiSplit B twopiece wireline winch unit with separate power pack/cabin and winch module, which can be transported either separately or assembled as a single lift unit, offers great deployment flexibility. This versatile, sophisticated, self-contained wireline winch can be ordered in single or dual-drum configurations. The standard configuration comprises a self-contained power pack/control cabin and winch module in an ATEX certified Zone 2 configuration.

The versatility of the MultiSplit B wireline winch means you can switch between every imaginable well servicing activity without having to have another winch, operator, engineer or logging instrumentation on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Cabin / Power Pack Module: (L) 2.88 m, 9.45 ft (W) 2.00 m, 6.56 ft (H) 3.00 m, 9.84 ft (Weight) 6,500 kg, 14,330 lbs

Winch Module, Single Drum: (L) 2.01 m, 6.59 ft (W) 2.00 m, 6.56 ft (H) 2.65 m, 8.69 ft (Weight) 4,650 kg, 10,251 lbs

Winch Module, Double Drum: (L) 2.01 m, 6.59 ft (W) 2.00 m, 6.56 ft (H) 2.65 m, 8.69 ft (Weight) 3,900 kg, 8,598 lbs

## Hydraulic Drive System

- 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 125 Litres (33 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Cased Hole Operations

Based on 25,000 ft 5/16" wire on BC08 drum, tool weight 1100 lbs:

- Max. Line speed at core: 106 m/min, 347 ft/min
- Max. Line speed at OD: 258 m/min, 864 ft/min or
- Max. Line pull at core: 8,100 kg, 17,858 lbs
- Max. Line pull at OD: 5,073 kg, 11,185 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06, BC07, BC08, BC11, BC15, BC20, BC22, BC26 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 22,62:1
- Wire sizes from 0.092" slickline to 5/16" braided line
- Wire sizes from 7/16" to 17/32" mono-conductor line

## Depth & Tension System

- SmartHead measuring head with integral load pin and two encoders, maximum line tension 0-10,000 kg (0-22,050 lbs)
- SmartMonitor basic depth panel for visualization of depth, speed and tension

## Power Pack

- Engine: water-cooled six cylinder Caterpillar diesel engine providing 129.5 kW (173.6 HP) @ 2,200 rpm
- Starter system: air / hydraulic / electric
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 240 Litres, 63 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- CombiGauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- One to two drums for every imaginable well servicing activity, from swabbing and fishing to multi-conductor logging
- One operator and one winch, saves space and personnel
- Powerful six cylinder 129.5 kW (173.6 HP) diesel engine, a dependable and responsive workhorse
- Ergonomic, safe and responsive operator controls
- Sophisticated ASEP SmartMonitor control system available for precision automatic operation
- Minimum servicing requirements equals maximum availability
- Optional slewing base and slewing winch drums close to wellhead / wide operating arc
- Customising options available, because every customer has different needs
- Easily deployable to both onshore and offshore locations

## Options

- Arctic Package
- Air Conditioner
- BOP Control
- Stuffingbox Control
- Electronic Rack
- Intercom
- Cabin Pressurization with Fire and Gas system
- Dehumidifier
- Auxillary Drive
- MP16 II Measuring Head
- MP20 Measuring Head

# MultiSplit C

The MultiSplit C threepiece wireline winch unit with separate power pack, winch and cabin module, which can be transported either separately or assembled as a single lift unit, offers great deployment flexibility. The standard configuration comprises a self-contained separate power pack, control cabin and winch module in an ATEX certified Zone 2 configuration.



The versatility of the MultiSplit C wireline winch means you can switch between every imaginable well servicing activity without having to have another winch, operator, engineer or logging instrumentation on the rig, saving you time, money and production downtime.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Power Pack Module:	(L) 1.36 m, 4.46 ft (W) 2.00 m, 6.56 ft (H) 2.70 m, 8.86 ft (Weight) 4,550 kg, 10,031 lbs
Cabin Module:	(L) 3.00 m, 9.84 ft (W) 2.00 m, 6.56 ft (H) 3.18 m, 10.43 ft (Weight) 3,750 kg, 8,267 lbs
Winch Module, Single Drum:	(L) 2.01 m, 6.59 ft (W) 2.00 m, 6.56 ft (H) 2.65 m, 8.69 ft (Weight) 4,650 kg, 10,251 lbs
Winch Module, Double Drum:	(L) 2.01 m, 6.59 ft (W) 2.00 m, 6.56 ft (H) 2.65 m, 8.69 ft (Weight) 3,900 kg, 8,598 lbs

## Hydraulic Drive System

- 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 125 Litres (33 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Cased Hole Operations

Based on 25,000 ft 5/16" wire on BC08 drum, tool weight 1100 lbs:

- Max. Line speed at core: 106 m/min, 347 ft/min
- Max. Line speed at OD: 258 m/min, 864 ft/min or
- Max. Line pull at core: 8,100 kg, 17,858 lbs
- Max. Line pull at OD: 5,073 kg, 11,185 lbs

## Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06, BC07, BC08, BC11, BC15, BC20, BC22, BC26 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 22,62:1
- Wire sizes from 0.092" slickline to 5/16" braided line
- Wire sizes from 7/16" to 17/32" mono-conductor line

## Depth & Tension System

- SmartHead measuring head with integral load pin and two encoders, maximum line tension 0-10,000 kg (0-22,050 lbs)
- SmartMonitor basic depth panel for visualization of depth, speed and tension

## Power Pack

- Engine: water-cooled six cylinder Caterpillar diesel engine providing 129.5 kW (173.6 HP) @ 2,200 rpm
- Starter system: air / hydraulic / electric
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 240 Litres, 63 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- CombiGauge
- IFM Canbus
- Line tension valve
- Throttle control
- Winch direction and speed control
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- One to two drums for every imaginable well servicing activity, from swabbing and fishing to multi-conductor logging
- Powerful six cylinder 129.5 kW (173.6 HP) diesel engine, a dependable and responsive workhorse
- Ergonomic, safe and responsive operator controls
- Sophisticated ASEP SmartMonitor control system available for precision automatic operation
- Minimum servicing requirements equals maximum availability
- Optional slewing base and slewing winch drums close to wellhead / wide operating arc
- Customising options available, because every customer has different needs
- Easily deployable to both onshore and offshore locations

## Options

- Arctic Package
- Air Conditioner
- BOP Control
- Stuffingbox Control
- Electronic Rack
- Intercom
- Cabin Pressurization with Fire and Gas system
- Dehumidifier
- Auxillary Drive
- Double Drum Winch
- MP16 II Measuring Head
- MP20 Measuring Head

# DataLine

Sophisticated, self-contained onepiece wireline winch unit, with the space and power of three racks full of computer, communications equipment and other peripherals. Powerful yet precisely controlled winch, capable of deep-hole logging. The standard configuration comprises a self-contained onepiece power pack, sophisticated logging and control cabin, and winch module in an ATEX Zone 2 certified configuration. Unit is also available in a Rig Safe configuration.

DataLine is the industry's most advanced logging winch unit, saving on the cost, personnel and downtime needed for a separate winch. The DataLine unit is the high-capacity, advanced solution for today's dynamic world of well servicing; economical unit in an ISO 20ft container format that is operations-ready on delivery.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Long Cabin / Power Pack / Winch: (L) 6.06 m, 19.88 ft (W) 2.44 m, 8.01 ft (H) 2.96 m, 9.71 ft (Weight) tbd kg, tbd lbs



## Hydraulic Drive System

- 400 bar (5,802 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Hydraulic tank: 175 Litres (46 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Open Hole Operations

Based on 25,000 ft 15/32" wire on BC11 drum, tool weight 2000 lbs:

- Min. Line speed at core: 0.4 m/min, 1.2 ft/min
- Min. Line speed at OD: 0.8 m/min, 2.6 ft/min or
- Max. Line pull at core: 9,750 kg, 21,500 lbs
- Max. Line pull at OD: 5,200 kg, 11,500 lbs

## Winch System

- Winch Drum BC11, BC15, BC20, BC22, BC26 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 22,62:1

## Depth & Tension System

- SmartHead measuring head with integral load pin and two encoders, maximum line tension 0-10,000 kg (0-22,050 lbs)
- SmartMonitor basic depth panel for visualization of depth, speed and tension
- MMD, dual encoder depth connection, stretch correction, CS/CT

## Power Pack

- Engine: water-cooled six cylinder Caterpillar diesel engine providing 176.5 kW (237 HP) @ 2,200 rpm
- Starter system: air / hydraulic / electric
- Electrical rig supply: 110/220 VAC 115 VAC 60 Hz / 230 VAC 50 Hz phase
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 300 Litres, 79 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- IFM Canbus
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button
- Generator start / stop

## Features & Benefits

- Powerful water-cooled six cylinder diesel engine delivering up to 176,5 kW (237 HP)
- Electrically self-supporting for even the highest OH logging system demands, thanks to optional high-output 30 kW generator
- Spacious cabin with up to three computer racks with sophisticated power distribution
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability

## Features & Benefits (cont.)

- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system with dual-speed gearbox for smooth control even at extremely slow logging speeds
- ASEP SmartMonitor: sophisticated control system for safe, high-precision automatic operation
- Optional unit and drum slewing for perfect spooling control close to wellhead
- Winterisation options for dependable operation and comfort in polar conditions
- Customising options available, because every customer has different needs

## Options

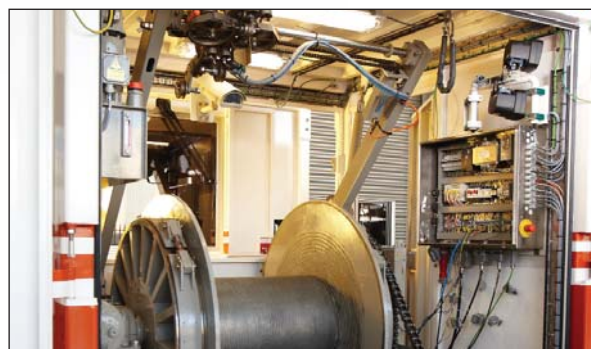
- Arctic Package
- Air Conditioners
- Electronic Racks
- Dual Starter
- Intercom
- SP/DLL Reel
- Loadcell Reel
- Cabin Pressurization with Fire and Gas system
- Dehumidifier
- Slow Speed Valve

# DataSplit C

Sophisticated, self-contained threepiece wireline winch unit available in single drum configuration, and in two cabin lengths. With the complexity and sophistication of current well logging technology, the space and power demands of three racks full of computer, communications equipment and other peripherals can be hard to meet. Moreover, deep-hole logging operations require a powerful but precisely controlled winch.



The standard configuration comprises a self-contained power pack, sophisticated logging and control cabin and winch module in an ATEX Zone 2 certified configuration. Unit is also available in a Rig Safe configuration. DataSplit C is the industry's most advanced logging winch unit, saving on the cost and personnel and gives the operator maximum flexibility in module positioning if footprint is key.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).

Power Pack Module:	(L) 1.35 m, 4.43 ft (W) 2.44 m, 8.01 ft (H) 2.70 m, 8.86 ft (Weight) 4,650 kg, 10,251 lbs
Long Cabin Module:	(L) 3.15 m, 10.34 ft (W) 2.44 m, 8.01 ft (H) 3.00 m, 9.84 ft (Weight) tbd kg, tbd lbs
Extra Long Cabin Module:	(L) 3.81 m, 12.50 ft (W) 2.44 m, 8.01 ft (H) 3.00 m, 9.84 ft (Weight) 5,600 kg, 12,346 lbs
Winch Module:	(L) 2.01 m, 6.59 ft (W) 2.44 m, 8.01 ft (H) 2.64 m, 8.66 ft (Weight) 4,150 kg, 9,149 lbs

## Hydraulic Drive System

- 400 bar (5,802 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Hydraulic tank: 175 Litres (46 US Gallon)
- Hydraulic braking
- Low maintenance system

## Open Hole Operations

Based on 25,000 ft 15/32" wire on BC11 drum, tool weight 2000 lbs:

- Min. Line speed at core: 0.4 m/min, 1.2 ft/min
- Min. Line speed at OD: 0.8 m/min, 2.6 ft/min or
- Max. Line pull at core: 9,750 kg, 21,500 lbs
- Max. Line pull at OD: 5,200 kg, 11,500 lbs

## Winch System

- Winch Drum BC11, BC15, BC20, BC22, BC26 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 22,62:1

## Depth & Tension System

- SmartHead measuring head with integral load pin and dual encoders, maximum line tension 0-10,000 kg (0-22,050 lbs)
- SmartMonitor depth panel for visualization of depth, speed and tension
- MMD, dual encoder depth connection, stretch connection CS/CT

## Power Pack

- Engine: water-cooled six cylinder Caterpillar diesel engine providing 176.5 kW (237 HP) @ 2,200 rpm
- Starter system: air / hydraulic / electric
- Electrical rig supply: 110/220 VAC 115 VAC 60 Hz / 230 VAC 50 Hz 3 phase
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 300 Litres, 79 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- IFM Canbus
- Line tension valve
- Throttle control
- Winch direction and speed control
- Air pressure
- Brake control
- Emergency stop button
- Generator start / stop

## Features & Benefits

- Powerful water-cooled six cylinder diesel engine delivering up to 176 kW (237 HP)
- Electrically self-supporting for even the highest OH logging system demands, thanks to optional high-output 30 kW generator
- Spacious cabin with up to three computer racks with sophisticated power distribution
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability

## Features & Benefits (cont.)

- Superior sound and thermal insulation exceed industry compliance requirements
- Reliable Elmar patented closed loop hydraulic system with dual-speed gearbox for smooth control even at extremely slow logging speeds
- ASEP SmartMonitor: sophisticated control system for safe, high-precision automatic operation
- Optional unit and drum slewing for perfect spooling control close to wellhead
- Winterisation options for dependable operation and comfort in polar conditions
- Customising options available, because every customer has different needs

## Options

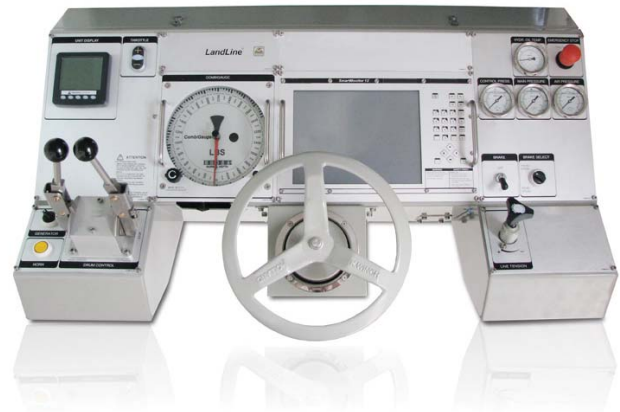
- Arctic Package
- Air Conditioners
- Electronic Racks
- Dual Starter
- Intercom
- SP/DLL Reel
- Loadcell Reel
- Cabin Pressurization with Fire and Gas system
- Dehumidifier
- Slow Speed Valve

# LandLine D SL

A multipurpose slickline wireline unit that can be deployed exactly as a container, with all the transportation flexibility that this means. The LandLine D SL unit can be operated directly from the transport platform. Simply open the doors, start the integrated power pack, and your winch is operational.



Besides the winch bay and operator station, this long unit includes extra cabin space that can accommodate an engineer's desk or a workshop.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).  
(L) 6.05 m, 19.85 ft (W) 2.44 m, 8.01 ft (H) 2.73 m, 8.96 ft (Weight) 8,900 kg, 19,621 lbs

### Hydraulic Drive System

- 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 200 Litres (53 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

### Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 260 m/min, 937 ft/min
- Max. Line speed at OD 445 m/min, 1,330 ft/min or
- Max. Line pull at core 4,815 kg, 10,615 lbs
- Max. Line pull at OD 2,810 kg, 6,195 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core 152 m/min, 499 ft/min
- Max. Line speed at OD 417 m/min, 1,367 ft/min or
- Max. Line pull at core 4,622 kg, 10,189 lbs
- Max. Line pull at OD 3,050 kg, 6,725 lbs

### Winch System

- Winch Drum SC05, SC06, SC08, SC09, BC06, BC07 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Wire sizes from 0.092" slickline to 1/4" braided line

### Depth & Tension System

- MP16 II measuring head with integral load cell
- CombiGauge combined weight indicator and depth counter

### Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 81 kW (109 HP) @ 2,200 rpm
- Starter system: electric
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 350 Litres, 92 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

### Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

### Features & Benefits

- ISO 20 ft sea container format
- ISO corner blocks in upper and lower frame
- Modular exchangeable engine base and winch mount

### Features & Benefits (cont.)

- Powerful four cylinder 81 kW (109 HP) diesel engine
- Single or double drum configuration
- 0.092" to 0.160" slickline, 3/16" to 1/4" braided line / E-line
- Standard Elmar double drum mount system
- Rear access underfloor tool or lubricator storage (applicable for truck mounted configuration only)
- Versatile interior layout easily accommodates operator and client representative
- Extensive interior storage solutions
- Rear bumper storage (applicable for truck mounted configuration only)
- Electrical generator up to 30 kW
- SmartMonitor compatible
- Air conditioning with dehumidifier and heating functions
- Elmar field proven, closed loop hydraulic system

### Options

- Arctic Package
- SmartMonitor 12"
- Generator
- Airconditioner
- BOP Control
- Stuffingbox Control
- ToolRack
- StemRack
- Zone 2 ATEX
- MP20 Measuring Head



# LandLine D CH

A multipurpose cased hole wireline unit that can be deployed exactly as a container, with all the transportation flexibility that this means. The LandLine D CH unit can be operated directly from the transport platform. Simply open the doors, start the integrated power pack, and your winch is operational.



Besides the winch bay and operator station, this long unit includes extra cabin space that can accommodate data acquisition equipment and an engineer's desk or a workshop.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).  
(L) 6.05 m, 19.85 ft (W) 2.44 m, 8.01 ft (H) 2.73 m, 8.96 ft (Weight) 8,900 kg, 19,621 lbs

## Hydraulic Drive System

- 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 200 Litres (53 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Cased Hole Operations

Based on 25,000 ft 5/16" wire on BC08 drum, tool weight 1100 lbs:

- Max. Line speed at core: 100 m/min, 339 ft/min
- Max. Line speed at OD: 255 m/min, 626 ft/min or
- Max. Line pull at core: 10,000 kg, 22,046 lbs
- Max. Line pull at OD: 4,910 kg, 10,825 lbs

## Winch System

- Winch Drum SC05, SC06, BC06, BC07, BC08, BC15 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 22,62:1

## Depth & Tension System

- SmartHead measuring head with integral load pin and two encoders, maximum line tension 0-10,000 kg (0-22,050 lbs)
- SmartMonitor basic depth panel for visualization of depth, speed and tension

## Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 81 kW (109 HP) @ 2,200 rpm
- Starter system: electric
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir 350 Litres, 92 US Gallon
- Engine controls; Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- ISO 20 ft sea container format
- ISO corner blocks in upper and lower frame
- Modulair exchangeable engine base and winch mount

## Features & Benefits (cont.)

- Powerful four cylinder 81 kW (109 HP) diesel engine
- 0.092" to 0.160" slickline, 3/16" to 1/4" braided line / E-line
- Standard Elmar single drum mount system
- Rear access underfloor tool or lubricator storage (applicable for truck mounted configuration only)
- Versatile interior layout easily accommodates operator and client representative
- Extensive interior storage solutions
- Rear bumper storage (applicable for truck mounted configuration only)
- Electrical generator up to 30 kW
- SmartMonitor compatible
- Air conditioning with dehumidifier and heating functions
- Elmar field proven, closed loop hydraulic system

## Options

- Actic Package
- Generator
- Airconditioner
- Electronic Rack
- Engineer Desk
- Engineer Chair
- Dehumidifier
- Intercom
- Zone 2 ATEX
- MP16 II Measuring Head
- MP20 Measuring Head
- Double Drum Mount
- Turbo Engine 129.5 kW

# LandLine D OH

A multipurpose open hole wireline unit that can be deployed exactly as a container, with all the transportation flexibility that this means. The LandLine D OH unit can be operated directly from the transport platform. Simply open the doors, start the integrated power pack, and your winch is operational.



## Dimensions & Weights (excl. winch drum & wire)

Transport dimensions (excl. roof mounted objects).  
(L) 6.05 m, 19.85 ft (W) 2.44 m, 8.01 ft (H) 2.73 m, 8.96 ft (Weight) 8,900 kg, 19,621 lbs

Besides the winch bay and operator station, this long unit includes extra cabin space that can accommodate data acquisition equipment and an engineer's desk or a workshop.



## Hydraulic Drive System

- 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 200 Litres (53 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Open Hole Operations

Based on 25,000 ft 15/32" wire on BC11 drum, tool weight 2000 lbs:

- Max. Line speed at core: 100 m/min, 196 ft/min
- Max. Line speed at OD: 255 m/min, 660 ft/min or
- Max. Line pull at core: 12,000 kg, 26,455 lbs
- Max. Line pull at OD: 4,930 kg, 10,869 lbs

## Winch System

- Winch Drum BC08, BC11, BC15, BC20, BC26 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 22,62:1

## Depth & Tension System

- SmartHead measuring head with integral load pin and two encoders, maximum line tension 0-10,000 kg (0-22,050 lbs)
- SmartMonitor basic depth panel for visualization of depth, speed and tension

## Power Pack

- Engine: water-cooled six cylinder Caterpillar diesel engine providing 129.5 kW (173.6 HP) @ 2,200 rpm
- Starter system: electric
- Electrical rig supply: 115 VAC 60 Hz / 230 VAC 50 Hz
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 350 Litres, 92 US Gallon
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

## Features & Benefits

- ISO 20 ft sea container format
- ISO corner blocks in upper and lower frame
- Modular exchangeable engine base and winch mount
- Powerful six cylinder 129.5 kW (173.6 HP) diesel engine
- Single or split drum configuration
- Wire size: 3/16" - 17/32"
- Standard Elmar single drum mount system
- Extensive interior storage solutions
- Optional multiple computer racks to accommodate data acquisition system
- Rear bumper storage (applicable for truck mounted configuration only)
- Electrical generator up to 30 kW
- Air conditioning with dehumidifier and heating functions
- Elmar field proven, closed loop hydraulic system

## Options

- Arctic Package
- Generator
- Airconditioner
- Two Speed Gearbox
- Slow Speed Valve
- Electronic Rack
- Engineer Desk
- Engineer Chair
- Dehumidifier
- Intercom

# OneTruck

With its distinctive and innovative profile, the OneTruck sets a new standard for truck mounted winches: tough, reliable, uncompromising.



The design criteria behind this pioneering concept include rapid international deployability, maximum operator comfort, generous storage capacity, protection from extreme environments, ease of operation, and sustainability in the field. Central to this cutting edge design is a lightweight body.

The body is mounted to the aluminium floor. This innovative lightweight platform has the exceptional rigidity needed to bear the weight and forces of high-capacity winch drums and extreme wireline tension. With the OneTruck, wireline services companies now have a self-contained mobile slickline winch that will give years of dependable service, at a low cost of ownership.

## Dimensions & Weights (excl. winch drum & wire)

(L) 6.05 m, 19.85 ft (W) 2.44 m, 8.01 ft (H) 2.44 m, 8.01 ft (Weight) 7,200 kg, 15,873 lbs

### Hydraulic Drive System

- 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of stable logging at ultra low speeds
- Capable of fast acceleration at extremely high speeds

### Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 260 m/min, 937 ft/min
- Max. Line speed at OD 445 m/min, 1,330 ft/min or
- Max. Line pull at core 4,815 kg, 10,615 lbs
- Max. Line pull at OD 2,810 kg, 6,195 lbs

### Cased Hole Operations

Based on 25,000 ft 5/16" wire on BC08 drum, tool weight 1100 lbs:

- Max. Line speed at core: 100 m/min, 339 ft/min
- Max. Line speed at OD: 255 m/min, 626 ft/min or
- Max. Line pull at core: 10,000 kg, 22,046 lbs
- Max. Line pull at OD: 4,910 kg, 10,825 lbs

### Open Hole Operations

Based on 25,000 ft 15/32" wire on BC11 drum, tool weight 2000 lbs:

- Max. Line speed at core: 100 m/min, 196 ft/min
- Max. Line speed at OD: 255 m/min, 660 ft/min or
- Max. Line pull at core: 12,000 kg, 26,455 lbs
- Max. Line pull at OD: 4,930 kg, 10,869 lbs

### Winch System SL

- Winch Drum SC05, SC06, SC08, SC09, BC06, BC07 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 5,8:1
- Wire sizes from 0.092" slickline to 1/4" braided line

### Winch System CH

- Winch Drum SC05, SC06, BC06, BC07, BC08, BC15 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 5,8:1
- Wire sizes from 0.092" slickline to 1/4" braided line

### Winch System OH

- Winch Drum: BC08, BC11, BC15, BC20, BC26 (refer to Winch Drum Foldout for detailed information)
- Winch drum is chain driven
- Fail safe spring return brake
- Planetary gearbox ratio 5,8:1
- Wire sizes from 0.092" slickline to 1/4" braided line

### Depth & Tension System

- MP16 II measuring head with integral load cell
- CombiGauge combined weight indicator and depth counter

### Power Pack

- Engine controls: Start and stop / Hour counter / Monitoring and safety system
- Engine: power take off
- Electrical supply: 110/220 VAC
- Control voltage: 24 VDC (by internal converter)

### Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button

### Features & Benefits

- Single or double drum configuration
- 0.092" to 0.160" slickline, 3/16" to 1/4" braided line / E-line
- Standard Elmar double drum mount system
- Opening side hatch for easy access to storage cabinets
- Side hatch doors function as weather protection when opened
- Rear access underfloor tool or lubricator storage
- Versatile interior layout easily accommodates operators and client representative
- Extensive interior storage solutions
- Underfloor belly box storage areas
- Chain and sheave storage
- Rear bumper storage
- Electrical generator 30kW
- SmartMonitor compatible
- Air conditioning with dehumidifier and heating functions
- Elmar field proven, closed loop hydraulic system
- Extensive customising options, because every customer has different needs

### Options - SL

- SmartMonitor 12"
- Additional Airconditioner
- BOP Control
- Stuffingbox Control
- Intercom
- Storerack BOP
- Storerack WireLine Sheave
- Domestic Appliance Package
- MP20 Measuring Head

### Options - CH & OH

- Additional Airconditioner
- Electronic Rack
- Dehumidifier
- Two Speed Gearbox
- Pressurisation
- MP16 II Measuring Head (CH)

# K-WINCH Combination Crane and Winch Units



## Combination Crane and Winch Units

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TruckLine D . . . . .	.35
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N.B. The technical data contained within these pages was correct at the time of publication but should not be used as operational guidelines. For operational guidelines please refer to the operation and maintenance manual supplied with the equipment. Elmar reserves the right to change, alter, modify or improve specifications at any time without prior notice.





# CombiTruck

Operating costs are reduced through the combined benefits of single vehicle operations, with space for all the crew, using light weight rugged vehicles. Everything required to operate safe and efficient well site operations can be carried on a single vehicle. The crane is rear mounted and the winch skid slews about the winchman's seat to align with the well head. This arrangement maximises the rig up height available, reduces vehicle weight and maximises the available equipment storage.



The operator's cabin is constructed from insulated GRP panels and features powerful twin air conditioning units for maximum operator comfort and reduced fatigue. Wireline operations are controlled from a captain's chair providing easy and safe control with excellent visibility through the large cabin windows. The vehicle can be configured for slickline and braided operations with a standard double drum winch skid. The spacious cabin provides ample space for operations with additional bench seating.



SmartMonitor

## Dimensions & Weights

### PART NUMBER L-6901011072

Operational Dimensions (overall length of vehicle): (L) 10.50 m, 34.40 ft (W) 2.50 m, 8.20 ft (H) 4.00 m, 13.12 ft  
Weights Estimated GVW (no payload): 20,050 kg, 44,200 lbs

## Chassis

- MAN 6x6, 33,000 kg chassis with additional 4 man crew cab
- Other chassis available on request

## Crane

- Rear mounted crane to maximise rig up height and crane capacity
- Hydraulic outriggers
- 56ft three part boom with synchronised movement, 20,000lbs @ 5ft radius capacity
- Hydraulic capacity alert system to safe guard against instability
- Fail safe anti two block system to prevent cable and hook damage caused by two blocking
- Alternative crane models available on request

## Hydraulic Drive System

- Powered from twin vehicle driven PTOs
- Closed loop hydraulic control; fast response time
- Constant slow speed control
- Rapid response suitable for slickline operations
- Stepless speed control requiring no gear changing
- Winch skid slews +/- 25° around operator's seat to align with wellhead

## Operations

- Dual drum configurations: Slickline/Swabline or Slickline/Slickline
- Single logging drum

## Winch System

- Drums can be configured with slip rings for logging
- Slickline:
  - 0.082" Wire - 50,000 ft
  - 0.108" Wire - 37,000 ft
  - 0.125" Wire - 27,000 ft
- Swabline:
  - 3/16" Braided - 34,000 ft
  - 7/32" Braided - 25,000 ft
  - 1/4" Braided - 19,000 ft
- Electric Line: 5/16" Cable - 25,000 ft

## Depth & Tension System

- Combined measuring head with depth and tension measurement. Twin measuring wheel design to accommodate both wire sizes
- Electronic and mechanical read outs providing redundancy
- Cable removable without need to remake head
- Winchman's panel displays and records depth, tension and line speed. The panel provides a depth alarm and overpull shut down safe guards

## Electrical Power

- Heavy duty vehicle batteries and alternator provide electrical power
- AC power through onboard inverter
- Back up DC generator available

## Control Panel

- Captain's chair including all winch operating controls
- Electronic winchman's control panel
- Engine display panel
- Fully insulated cabin
- AC power sockets
- Large viewing windows with heat reflective laminated safety glass
- Twin wall mounted air conditioning units
- Additional bench seats

## Options

- 110ft five part boom with synchronised movement, 40,000lbs @ 5ft radius capacity
- Single logging drum with 5/16" electric line
- Fully redundant power pack / P.T.O.
- SmartMonitor



Slewing winch skid

# TruckLine C

The TruckLine 82ft crane and winch are mounted on a single slewing base and the drum can be aligned with the wellhead. Rigging-up was never so easy, so quick and so safe! Designed with the now-famous Elmar attention to quality, reliability, sustainability and operator safety and comfort, the TruckLine is a versatile well servicing workhorse that proves its value every time a remote production well is visited for logging or fishing operations.

The crane is designed to lift PCE or a full tool string into place even when fully extended at shallow angles, and the wireline winch can be configured for single and double drums. All the advanced features of an Elmar wireline winch are at your disposal. The TruckLine C is available in rig-safe / Non-zoned configuration.



## Dimensions & Weights (excl. truck chassis, winch drum & wire)

(L) 11.80 m, 38.73 ft (W) 2.51 m, 8.23 ft (H) 4.33 m, 14.21 ft (Weight) 17,600 kg, 38,801 lbs

### Hydraulic Drive System

- 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 250 Litres (66 US Gallon)

### Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 260 m/min, 937 ft/min
- Max. Line speed at OD 445 m/min, 1,330 ft/min or
- Max. Line pull at core 4,815 kg, 10,615 lbs
- Max. Line pull at OD 2,810 kg, 6,195 lbs

### Winch System

- Winch Drum SC05, SC06, BC06, BC07 (refer to Winch Drum Foldout for detailed information)
- Wire sizes from 0.092" slickline to 1/4" braided line

### Depth & Tension System

- MP16 II measuring head with integral load cell, maximum line tension 0-2,000 kg (0-4,400 lbs)
- CombiGauge combined weight indicator and depth counter 0-2000 kg (0-4,400 lbs)

### Power Pack

- Engine controls: Start and stop / Hour counter / Monitoring and safety system
- Engine: power take off
- Control voltage: 24 VDC

### Control Panel

- Winch and crane controls
- Hydraulic pressure gauges
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Emergency stop button

### Features & Benefits

- Combined winch and 3025 crane boom unit
- Just one operator needed for winch and crane
- Fast and safe rig-up capability
- PTO drive from truck chassis
- Extra wide cabin to comfortably accommodate additional engineers
- Fully integrated 4 section 25m (82ft) crane boom
- Maximum SWL 15 ton lifting capability\*
- Single / double drum configurations available
- Light duty (0.092") to super heavy duty (0.140") slickline capability
- Light duty (3/16") to medium duty (1/4") braided line operations
- Light duty (3/16") to medium duty (1/4") mono-conductor line operations
- Slewing ring provides 350° rotation of integrated winch and crane

### Features & Benefits (cont.)

- Unique winch drum slewing feature
- Drum mount alignment with the well after rig-up
- Available in Rig safe / Non-zoned options
- Hydraulic leveling support outriggers
- Fully enclosed cabin offers environmental protection and operator comfort
- Hydraulic sunroof
- Removable panels give easy access for maintenance

### Options

- Tool room and foldable stair with handrail
- Water tank or belly box
- Load pin (4 ton, MP16 II)
- Pressure transmitter (MP16 II)
- Wire spray tank
- Automatic spooling with manual override
- BOP reel and control system
- Stuffing box reel and control system
- Wellhead pressure reel
- Slipping collector 2 or 4 rings
- CombiGauge correlating depth tension read out
- Air conditioner; Safety kit; Personal comfort kit
- Belly box (under body storage box)
- Tool storage (BOP and lubricator)
- MP20 Measuring head

\* Depending on TruckLine configuration

ASEP Product Line

# TruckLine D

The TruckLine 82ft crane and winch are mounted on a single slewing base and the drum can be aligned with the wellhead. Rigging-up was never so easy, so quick and so safe! Designed with the now-famous Elmar attention to quality, reliability, sustainability and operator safety and comfort, the TruckLine is a versatile well servicing workhorse that proves its value every time a remote production well is visited for logging or fishing operations.

The crane is designed to lift PCE or a full tool string into place even when fully extended at shallow angles, and the wireline winch can be configured for single and double drums. All the advanced features of an Elmar wireline winch are at your disposal. The TruckLine D is available in Zone 2 configuration.



## Dimensions & Weights (excl. truck chassis, winch drum & wire)

(L) 11.65 m, 38.22 ft (W) 2.57 m, 8.43 ft (H) 4.26 m, 13.98 ft (Weight) 19,150 kg, 42,219 lbs

### Hydraulic Drive System

- 400 bar (5,800 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 300 Litres (79.3 US Gallon)

### Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150 lbs:

- Max. Line speed at core 260 m/min, 937 ft/min
- Max. Line speed at OD 445 m/min, 1,330 ft/min or
- Max. Line pull at core 4,815 kg, 10,615 lbs
- Max. Line pull at OD 2,810 kg, 6,195 lbs

### Winch System

- Winch Drum SC05, SC06, BC06, BC07 (refer to Winch Drum Foldout for detailed information)
- Wire sizes from 0.092" slickline to 1/4" braided line

### Depth & Tension System

- MP16 II measuring head with integral load cell, maximum line tension 0-2,000 kg (0-4,400 lbs)
- CombiGauge combined weight indicator and depth counter 0-2000 kg (0-4,400 lbs)

### Power Pack

- Engine: water-cooled four cylinder Caterpillar diesel engine providing 81 kW (109 HP) @ 2,400 rpm
- Starter system: air / hydraulic / electric / spring
- Control voltage: 24 VDC (by internal converter)
- Diesel reservoir: 200 Litres (52.8 US Gallon)

### Control Panel

- Winch and crane controls
- Hydraulic pressure gauges
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Emergency stop button

### Features & Benefits

- Combined winch and 3025 crane boom unit
- Just one operator needed for winch and crane
- Fast and safe rig-up capability
- PTO drive from truck chassis
- Extra wide cabin to comfortably accommodate additional engineers
- Fully integrated 4 section 25m (82ft) crane boom
- Maximum SWL 15 ton lifting capability\*
- Single / double drum configurations available
- Light duty (0.092") to super heavy duty (0.140") slickline capability
- Light duty (3/16") to medium duty (1/4") braided line operations
- Light duty (3/16") to medium duty (1/4") mono-conductor line operations

### Features & Benefits (cont.)

- Slewing ring provides 350° rotation of integrated winch and crane
- Unique winch drum slewing feature
- Drum mount alignment with the well after rig-up
- Available in Rig safe / Non-zoned options
- Hydraulic leveling support outriggers
- Fully enclosed cabin offers environmental protection and operator comfort
- Hydraulic sunroof
- Removable panels give easy access for maintenance

### Options

- Tool room and foldable stair with handrail
- Water tank or belly box
- Load pin (4 ton, MP16 II)
- Pressure transmitter (MP16 II)
- Wire spray tank
- Automatic spooling with manual override
- BOP reel and control system
- Stuffing box reel and control system
- Wellhead pressure reel
- Slipping collector 2 or 4 rings
- CombiGauge correlating depth tension read out
- Air conditioner; Safety kit; Personal comfort kit
- Belly box (under body storage box)
- Tool storage (BOP and lubricator)
- MP20 Measuring head

\* Depending on TruckLine configuration



# DataCrane

An aluminium material bodied combined slickline / cased hole wireline winch and crane truck. Length of the cabin and the winch bay are configurable to suit clients exact requirements. Unit comprises of a PTO drive system, enclosed medium length operator cabin and medium length winch bay section capable of accepting a double drum winch assembly plus a full capability wireline support crane. Unit is mounted to an Elmar or client supplied 6x4 or 8x4 truck chassis. The system is suitable for cased hole slickline, braided line and mono-conductor operations.

The DataCrane body is a completely modular design manufactured using CNC punch technology and features smooth side panels with countersunk rivets. The combined operator cabin and winch bay module are mounted onto a rotating bearing assembly which enables wireline operations to be carried out to the rear or to either side of the truck. The full capacity telescoping crane is mounted behind the truck cab and has the capability to support surface pressure control equipment within the same working envelope as the wireline winch drums.



## Dimensions & Weights

Weights and dimensions are specific to each individual truck. US Department of Transportation axle loadings, overall dimensions and exhaust gas emission regulations are adhered to.

## Hydraulic Drive System

- Powerful 340 bar (5,000 psi) closed loop hydraulic system
- Variable displacement hydraulic pump and hydraulic motor
- Capable of fast acceleration at extremely high speeds
- Hydraulic tank: 80 Litres (21.1 US Gallon)
- Hydraulic dynamic braking
- Low maintenance system

## Slickline Operations

Based on 30,000 ft 0.125" wire on SC06 drum, tool weight 150lbs:

- Max. Line speed at core: 260 m/min, 937 ft/min
- Max. Line speed at OD: 445 m/min, 1,330 ft/min or
- Max. Line pull at core: 4,815 kg, 10,615 lbs
- Max. Line pull at OD: 2,810 kg, 6,195 lbs

Based on 25,000 ft 7/32" wire on BC06 drum, tool weight 350 lbs:

- Max. Line speed at core: 260 m/min, 599 ft/min
- Max. Line speed at OD: 445 m/min, 1,367 ft/min or
- Max. Line pull at core: 4,815 kg, 10,615 lbs
- Max. Line pull at OD: 2,810 kg, 6,195 lbs

## Winch System

- SC06 winch drum (600 mm (OD) / 350 mm (core) / 700 mm (wide) weight 450 kg)
- 0.125" wire capacity of more than 9,150m (30,000ft)
- Winch drum is chain driven
- Fail safe spring return brake
- Wire sizes from 0.092" slickline to 1/4" braided line

## Depth & Tension System

- MP16 II measuring head with integral load cell, maximum line tension 0-2,000 kg (0-4,400 lbs)

## Power Pack

- Power Take Off (PTO) drive from 6x4 or 8x4 truck chassis engine
- Air supply from truck chassis air brake reservoir tanks
- Electrical rig supply: 115 VAC 60 Hz
- Control voltage: 12 VDC (from truck chassis battery)
- Diesel reservoir: from truck chassis diesel fuel tanks
- Engine controls: Start and stop / Hour counter / Monitoring and safety system

## Control Panel

- Hydraulic main pressure gauge
- RPM gauge
- Line tension valve
- Throttle control
- Winch direction and speed control valve
- Air pressure
- Brake control
- Emergency stop button
- Remote control panel for crane operations

## Crane

- National model 1195 telescoping boom crane
- Rear cab mount design with A style front outriggers and out / down style rear outriggers

## Features & Benefits

- Capable of being fitted to any cabover or conventional 6x4 or 8x4 truck chassis
- Field-exchangeable single or dual-drum winch frames for well servicing flexibility, from basic slickline to fishing and logging
- Comfortable cabin in a compact footprint: optional medium and long cabins for logging computer racks
- Ergonomic, safe and responsive operator controls
- Minimum servicing requirements equals maximum availability
- Superior sound and thermal insulation exceed industry compliance requirements
- Customising options available, because every customer has different needs

## Options

- Arctic Package
- Tropical / Desert Package
- Air Conditioners
- BOP Control
- Stuffing Box Control
- SmartMonitor 12"
- Lower Lifting Capacity / Shorter Boom Length Crane

# Crane Truck

To complement the range of logging and wireline trucks, Elmar offer a range of well servicing crane trucks with various chassis and booms configurations. The wireline crane truck has a maximum height of 120ft. Pressure control equipment is carried on the flat bed area of the truck. The unit can be fitted with an air compressor. A pressure test unit and an air operated pressure equipment control panel can be fitted as an optional extra.



MAN 6 x 6 chassis



Kenworth 6 x 4 chassis

## Typical Dimensions & Weights

Operational Dimensions: (L) 10.40 m, 34.12 ft (W) 2.43 m, 7.96 ft (H) 3.97 m, 13.02 ft (Weight) 21,500 kg, 47,399 lbs

## Typical Mast Boom

- 110ft boom length - (120ft overall height)
- Alternative boom lengths available on request

## Typical Capacities

- Max wireline pull at 25ft radius (72ft working height): 4,000lbs
- Safe working load at 25ft radius (72ft working height): 8,000lbs
- Maximum capacity: 40,000lbs
- Rotation (non continuous): 375°
- Max. wind speed, rigging up/down: 25mph
- Max. wind speed, operational: 60mph

## Features & Benefits

- Choice of chassis
- Variable boom heights
- Designed for ease of operation
- Designed for ease of maintenance
- Dual operators control stations
- Heavy duty unit
- Suitable for cased hole logging operations
- 4 or 6 wheel drive chassis options
- Flat bed area for equipment transport
- Anti Two Block (A.T.B.) system
- Load Moment Indicator (L.M.I.)
- Hydraulically operated outriggers

## Options

- Independent compressor: Output: 106cfm/102 psi Power: Independent Rigsafe Diesel Engine
- Large feet provided for outriggers
- Grease and hydraulic control module
- Pressure control equipment basket
- Pressure test unit
- Auxillary winch
- Compressor
- 20ft flat bed
- Alternative chassis available on request
- Drop sides on flatbed
- P.T.O. driven pressure test unit
- P.T.O. or Power Pack driven



Mercedes 6 x 4 chassis



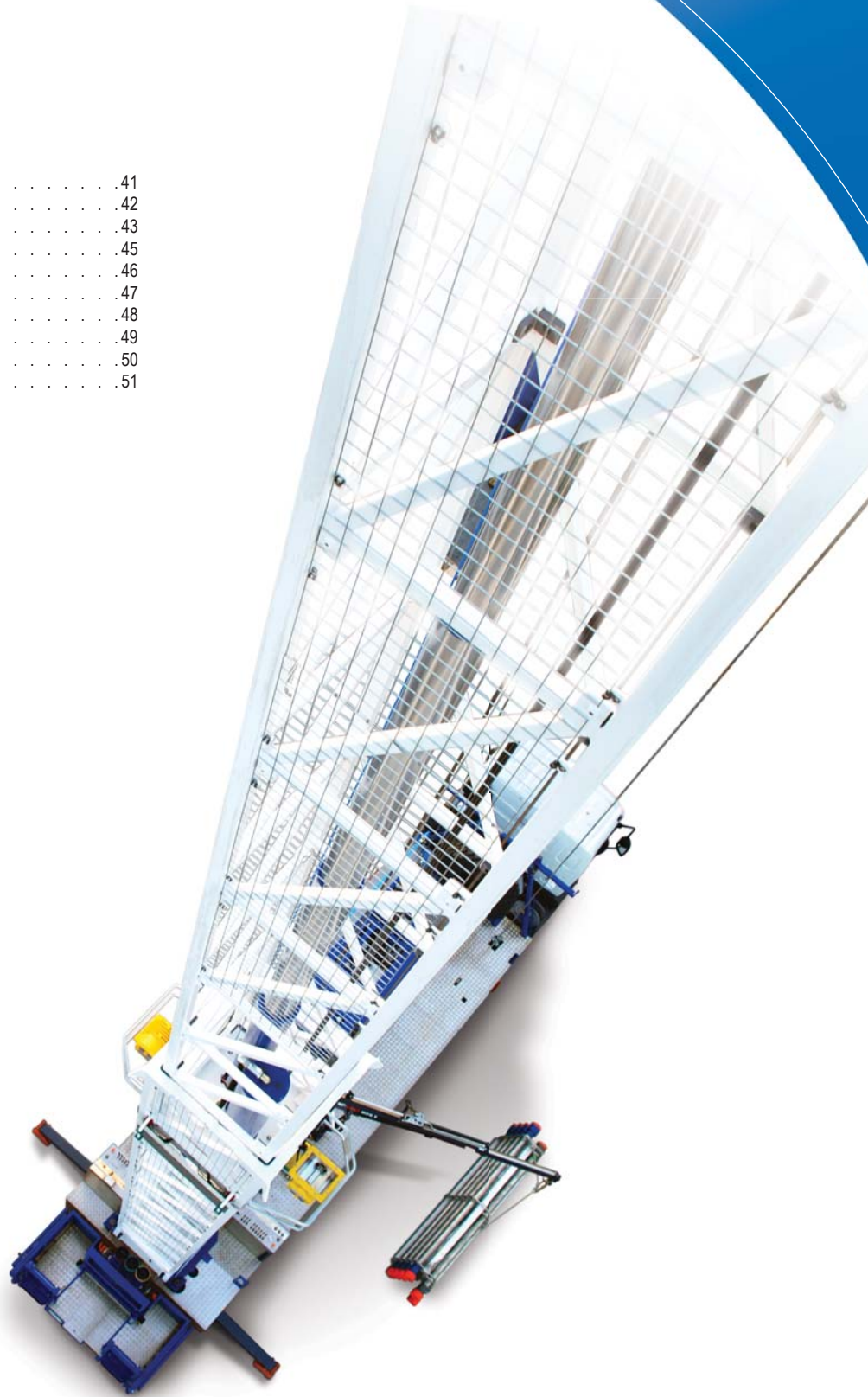
Maximum working height 120ft (36.5m)



# K-WINCH Mast Units

## Mast Units

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N.B. The technical data contained within these pages was correct at the time of publication but should not be used as operational guidelines. For operational guidelines please refer to the operation and maintenance manual supplied with the equipment. Elmar reserves the right to change, alter, modify or improve specifications at any time without prior notice.



# Slickline Mast Units

Elmar slickline mast units are compact, lightweight, heli-portable units ranging from 30ft to 70ft in height. The simplicity of their design not only makes them extremely reliable, but also allows them to be rigged up by 2 operators in approximately 20 minutes.



L-6921061666  
40ft BaseReach  
Telescopic Boom Mast

45

- Max column load: 6,600 lbs (2,994 kg)
- Max line pull: 3,300 lbs (1,497 kg)
- Max operating height: 40 ft (12.2 m)



L-6901014831  
70ft SkyFold  
Folding Boom Mast

47

- Max column load: 12,000 lbs (5,443 kg)
- Max line pull: 6,000 lbs (2,722 kg)
- Max operating height: 70 ft (21.3 m)

**OPTIONS:**

- Jacking castors
- 1 tonne utility winch



L-6901025693V02 Rigsafe  
Single Cylinder (11HP)  
Power Pack

55

○ Data Sheet Page Number

# Wireline Mast Units

The rugged design of Elmar's wireline mast units makes them ideal for use in harsh offshore and land based environments. All Elmar wireline mast units use a proven open loop hydraulic system.



L-6921023551 80ft Zone 1 Lightweight Lattice Section Wireline Mast

50

- Max column load: 20,000 lbs (9,072 kg) \*
- Max line pull: 10,000 lbs (4,536 kg) \*
- Max operating height: 80 ft (24.4 m)

\* Column guyed

L-6921032611 47ft HighReach Telescopic Boom Mast

46

- Max column load: 22,530 lbs (10,190 kg)
- Max line pull: 11,265 lbs (5,095 kg)
- Max operating height: 42 ft (12.80 m) without Fly Jib

L-6901031666V01 70ft Zone 1 Lightweight Wireline Mast

48

- Max column load: 12,000 lbs (5,443 kg)
- Max line pull: 6,000 lbs (2,722 kg)
- Max operating height: 70 ft (21.3 m)

L-690433 80ft Zone 1 Wireline Mast

49

- Max column load: 4,480 lbs (10,300 kg)
- Max line pull: 2,240 lbs (5,150 kg)
- Max operating height: 90 ft (27.4 m) \*

\* Utility jib extension

&

&



L-6901026430 Removable Power Unit

Input: 30 l.p.m @ 2,000 psi  
Output: 3,000 psi Minimum flow rate 15 l.p.m.  
Weights: 485 lbs (220 kg)



L-6901045879 Electro/Hydraulic Zone 1 Power Pack

Electrical requirements: 440V/690V 3 phase, 50Hz/60Hz  
Output: 7.5kW @ 1,500 r.p.m.  
Max pressure delivered: 3,000 psi  
Minimum flow rate 11.6 l.p.m.  
Weights: 3,086 lbs (1,400 kg)  
Dimensions:  
Feet L 6.43 W 3.84 H 3.38  
Metres L 1.96 W 1.17 H 1.03

L-6931054303V01 Diesel/Hydraulic Rigsafe Power Pack

Max pressure delivered: 3,000 psi  
Weights: 3,086 lbs (1,400 kg)  
Dimensions:  
Feet L 6.43 W 3.84 H 3.38  
Metres L 1.96 W 1.17 H 1.03



L-6901036308V01 Hydraulic/Hydraulic Rigsafe Power Pack

Input: 30 l.p.m @ 2,000 psi  
Output: 3,000 psi Minimum flow rate 15 l.p.m.  
Weights: 1,367 lbs (620 kg)  
Dimensions:  
Feet L 3.74 W 3.12 H 3.15  
Metres L 1.14 W 0.95 H 0.96



L-6901046105V01 Air/Hydraulic Power Pack

Air requirements: 100 psi max, 280 c.f.m.  
Output: 7.5kW @ 1,500 r.p.m.  
Max pressure delivered: 3,000 psi  
Minimum flow rate 11.6 l.p.m.  
Weights: 3,086 lbs (1,400 kg)  
Dimensions:  
Feet L 6.43 W 3.84 H 3.38  
Metres L 1.96 W 1.17 H 1.03

+

+

OR



L-6901025693V02 Rigsafe Single Cylinder (11HP) Power Pack

55

The array of power packs available to drive these wireline masts units makes this range extremely flexible.

**OPTIONS:**

- Lightweight option
- Power unit options
  - Rigsafe
  - Group II category 3 ATEX certified (Zone 2)
  - Group II category 2 ATEX certified (Zone 1)



L-6901025693V02 Rigsafe Single Cylinder (11HP) Power Pack

55



L-6901045879 Electro/Hydraulic Zone 1 Power Pack

Electrical requirements: 440V/690V 3 phase, 50Hz/60Hz  
Output: 7.5kW @ 1,500 r.p.m.  
Max pressure delivered: 3,000 psi  
Minimum flow rate 11.6 l.p.m.  
Weights: 3,086 lbs (1,400 kg)  
Dimensions:  
Feet L 6.43 W 3.84 H 3.38  
Metres L 1.96 W 1.17 H 1.03

○ Data Sheet Page Number

# Wireline Mast Trucks

Elmar wireline crane and mast trucks are self contained units designed for use on land wells. The large amount of storage on these units allows them to transport virtually all pressure control equipment to the well site.



L-690581V01  
95ft Truck Mounted  
Wireline Mast

51

Self Contained  
Compressor  
Unit

All Elmar wireline mast/crane trucks use a proven open loop hydraulic system.

**OPTIONS:**

- Tail lift platform
- On-board pressure control
- On-board pressure test unit
- On-board DHSV/MV unit
- Chassis options
- Sheave lock
- Extension jib for mast
- Weight indicators

○ Data Sheet Page Number

Elmar Product Line





# 40ft BaseReach

The Elmar BaseReach mast is a highly compact, easily-transported telescopic mast, constructed in high-grade steel and specially prepared to withstand the harsh climate of offshore rigs.



With a high safe working load, this unit, in combination with an Elmar wireline unit, is designed for super light duty to medium duty slickline operations, and can withstand high side winds. The BaseReach unit is equipped with labor and time-saving features for maximum rig-up efficiency. The BaseReach telescopic wireline mast is highly compact, rigid and stable, for heavy work in the toughest conditions.



Optional power pack  
L-6901025693V02

## Dimensions & Weights

PART NUMBER L-6921061666V02

BaseReach Transport Dimensions: (L) 4.05 m, 13.29 ft, (W) 1.20 m, 3.94 ft, (H) 1.80 m, 5.91 ft

BaseReach Operating Dimensions: (L) 4.60 m, 15.10 ft, (W) 4.30 m, 14.11 ft, (H) 12.70 m, 41.68 ft

BaseReach Weight: 1,700 kg, 3,748 lbs

## Mast Capacity

- Under Hook Height (m): 11.30
- Column Safe Working Load (ton): 3.00
- Main Winch Lift Capacity (ton): 1.50
- Main Winch Hold Capacity (ton): 1.50

## Wind Operating Conditions

- Rigging up/down allowed at wind speed up to 11 m/sec.
- Between 13 and 27 m/sec. guy lines are required.

## Features & Benefits

- From 11.3 m to nearly 18 m maximum under-hook height - long tool strings are no problem
- All-steel construction - for maximum strength in minimum dimensions
- Extensive safety features and interlocks - for maximum working safety
- Guy line set
- Storage box

## Options

- Jacking wheel
- Storage cover
- 30ft version L-6901061666V01



Utility winch



Storage locker



Control panel

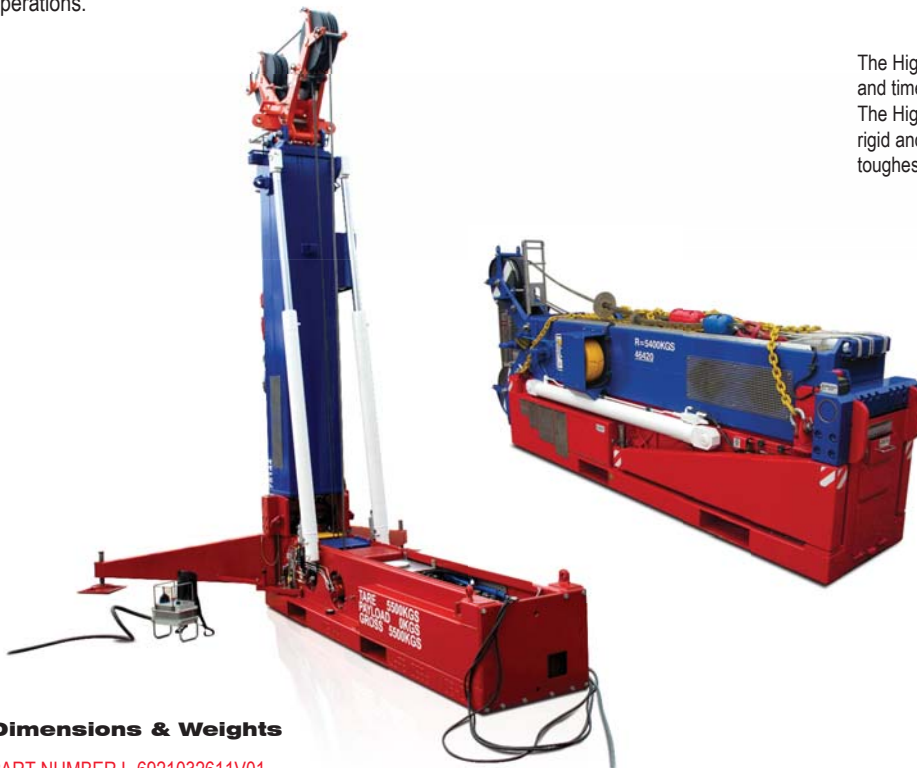
Working height  
37ft (11.30m)



# 47ft HighReach

The Elmar HighReach mast is an easily transported telescopic unit with a compact transport and operational footprint which is constructed in high grade steel and prepared to withstand the harsh environment of offshore operations. With a high safe working load and the ability to be deployed in Zone 1 areas, this mast in combination with an Elmar wireline unit is designed for heavy duty slickline and braided cable operations.

The HighReach mast is equipped with Ergonomic and time saving features for maximum rig up efficiency. The HighReach telescopic Wireline mast is very compact, rigid and stable. This mast is designed for heavy work in the toughest environments.



Max working height without Fly Jib extension 42ft (12.80 m) with Fly Jib 54ft, (16.50 m)

## Dimensions & Weights

PART NUMBER L-6921032611V01

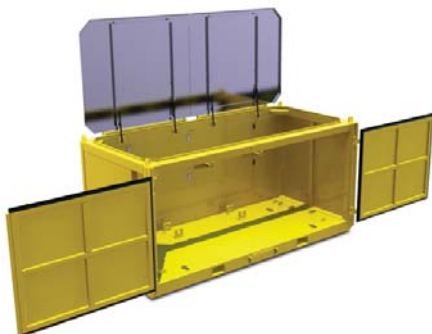
HighReach Transport Dimensions: (L) 3.71 m, 12.17 ft, (W) 0.87 m, 2.86 ft, (H) 2.15 m, 7.05 ft  
 HighReach Operating Dimensions: (L) 4.76 m, 15.62 ft, (W) 3.67 m, 12.04 ft, (H) 18.88 m, 61.94 ft (including fly jib)  
 HighReach Weight: 5,650 kg, 12,456 lbs

## Mast Capacity

- Under Hook Height (m): 13.00
- Column Safe Working Load: 22,050 lbs (10,000 kg)
- Main Winch Lift Capacity (tonne): 2.70
- Main Winch Hold Capacity (tonne): 5.00

## Wind Operating Conditions

- Rigging up/down allowed at wind speed up to 11 m/sec.
- Between 13 and 30 m/sec. guy lines are required.



Optional transport container (L-6901046873)

## Features & Benefits

- From 4.2 m to nearly 17 m maximum underhook height
- All-steel construction - for maximum strength and minimum dimensions
- Extensive safety features and interlocks - for maximum working safety
- Beacon light
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area
- Electro-hydraulic power pack
- NORSOK compliant version L-6921032611V01/V02

## Options

- Five sheave head
- Fly Jib (mast extension 3.5m)
- Guy line set
- Manrider winch with manrider safety harness
- Floodlight
- MastTractor
- Jacking wheel
- PVC Storage cover
- Transport container
- Storage box
- Air driven power pack L-6921032611V03
- Single electrical hook-up L-6921032611V02



# 70ft SkyFold

This Lightweight Slickline/Wireline Mast is designed for use as a self-supporting structure for slickline/wireline operations. The unit is simple to operate, robust and lightweight and has a 6,000 lbs line pull capacity.



The mast is positioned with the help of removable jacking castors, and hydraulically extended. It is fitted out with an hydraulic winch rated at 1 tonne, with an internal brake and a fast wind position. A storage box is incorporated in the base frame to hold loose items and accessories. The mast can be set-up by two experienced operators in around 20 minutes. It is designed for free standing use, but should be secured to the deck with additional guy ropes if used in winds above 30mph.



Optional power pack  
L-6901025693V02

Working height  
70ft (21.56m)

## Dimensions & Weights

PART NUMBER L-6901014831

Operational Dimensions: (L) 8.20 m, 26.90 ft (W) 5.90 m, 19.60 ft (H) 1.75 m, 5.70 ft (Weight) 2,000 kg, 4,408 lbs

## Features & Benefits

- Robust tubular construction
- Sheave lock system allows upper sheave to be lowered to ground to simplify rigging-up operations
- Top wireline sheave supplied with mast
- High grade aluminium construction
- Heliportable
- 4 point lift
- Hydraulically erected
- (2) x 3,000lbs hydraulic winches
- Integral basket for guy wires and loose item storage
- Restricted access to control valves as a safety feature
- Positive hydraulically operated boom-locking pins
- Backstay and guy wires supplied with tirtor tensioners
- Outriggers can be removed and replaced by guy wires in confined rig-ups
- High hook shutdown system
- Last 3 wraps shutdown system on manrider winch
- Slackwire shutdown system on manrider winch
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area

## Capacities

- Max. wireline pull: 6,000lbs
- Safe working load at head fixture: 12,000lbs
- Auxiliary winch capacity: (1.36 tonne) 3,000lbs
- Max. wind speed, rigging up/down: 25mph
- Max. wind speed, operational - unguyed: 45mph
- Max. wind speed, operational - guyed: 60mph

## Options

- Manrider winch
- Jacking castors
- Alternative lightweight sheave wheel sizes
- Dedicated lightweight power pack



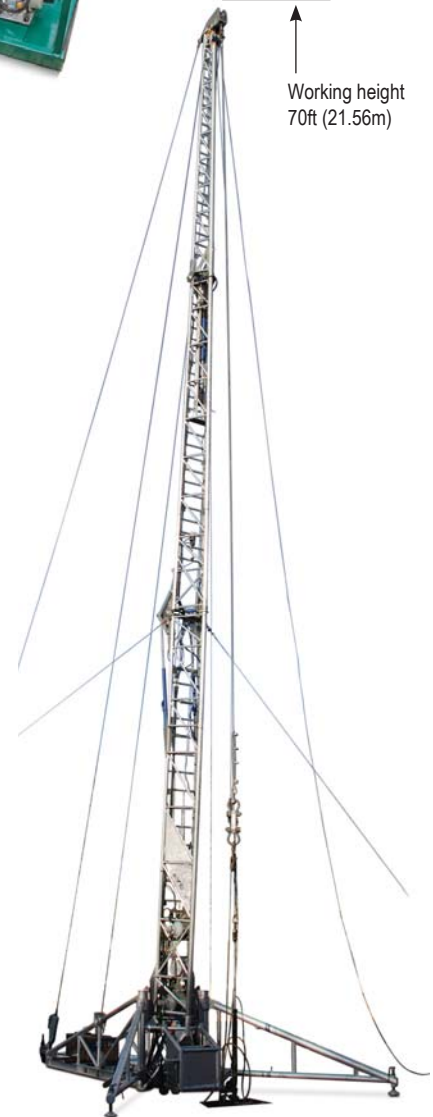
Utility winch and sheave lock winch



Overhaul weight storage



Operator's control panel



# 70ft Zone 1 Lightweight Wireline Mast

The Elmar Zone 1 Lightweight Wireline Mast is a compact, lightweight and heavy duty unit capable of operating in wind gusts of up to 60 mph at fully variable operating heights from 27 ft (8.23 m) to 70 ft (21.3 m). The hydraulically operated mast sections are easily erected by 2 men in approximately 15 minutes. The column load SWL rating is 20,000 lbf (9,072 kgf).



## Dimensions & Weights

**PART NUMBER L-6901031666V01**

Operational Dimensions: (L) 6.10m, 20.00 ft (W) 1.50 m, 4.92 ft (H) 1.50 m, 4.92 ft (Weight) 5,200 kg, 11,464 lbs

## Features & Benefits

- Modular design for 4 x individual lifts of less than 5,732 lbs (2,600 kgs)
- Sheaves provided for running wireline over horse's head
- Lower sheave fixed to mast frame
- (2) x 2 tonne lifting winches, one winch complete with man-riding and emergency lowering facility
- 5 section telescoping mast to 70ft (21.3m)
- Variable operating height
- Fully erected in 15 minutes
- Rated for use in 60 mph wind
- DNV 2.7-3 certified frame
- Compact heavy duty construction
- Horse's head protection frame
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area

## Options

- Intensifier unit for hydraulic drive, uses winch unit power pack L-6901036308V01
- Rig safe diesel power pack L-6931054303V01
- Hydraulic wheel kit L-6601034982
- Floodlight kit L-6601034983
- Power pack hose/cable connection kit L-6501056220



Man-riding winch



Operator's control panel



Optional power pack L-6901036308V01



# 80ft Zone 1 Wireline Mast

The Elmar 80ft Zone 1 Wireline Mast, DNV certified, is a compact, heavy duty unit capable of operating in wind gusts of up to 60 mph at fully variable operating heights from 28ft (8.6m) to 80ft (24.4m).



The hydraulically operated mast sections are easily erected by 2 men in approximately 15 minutes. The column load SWL rating is 22,700lbf (10,300kgf). The mast can be extended to 90ft by adding an additional 10ft extension. The mast requires an external hydraulic powerpack.

Optional power pack L-6901046105V01



## Dimensions & Weights

PART NUMBER L-690433

Operational Dimensions: (L) 8.00 m, 26.25 ft (W) 1.32 m, 4.33 ft (H) 2.80 m, 9.20 ft (Weight) 9,000 kg, 19,800 lbs

## Features & Benefits

- 5 section telescoping mast to 80ft (24.4m)
- (1) x 5 tonne winch for hanging wireline sheave
- (1) x 3 tonne winch
- (1) x 2 tonne lifting winch, complete with man-riding and emergency lowering facility
- High hook shutdown system
- Last 3 wraps shutdown system on manrider winch
- Slack wire shutdown system on manrider winch
- Gross weight 19,800 lbs (9,000 kg) approximately
- Variable operating height
- Fully erected in 15 minutes
- Rated for use in 60 mph wind
- Pneumatic remote control pendant
- 10ft extension, maximum height 90ft L-652875
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area

## Options

- Air driven power pack L-6901046105V01
- Electro-hydraulic power pack L-6901045879
- NORSOK compliant version
- Hydraulically actuated top covers
- Power pack hose/cable connection kit L-6501056223



Operator's control panel



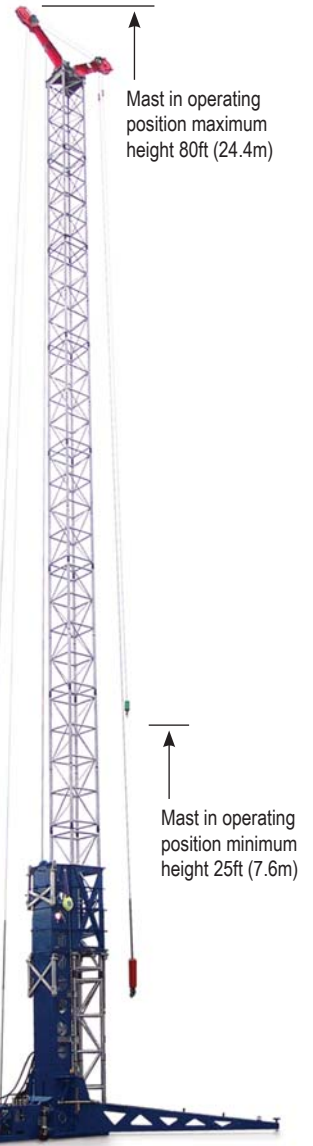
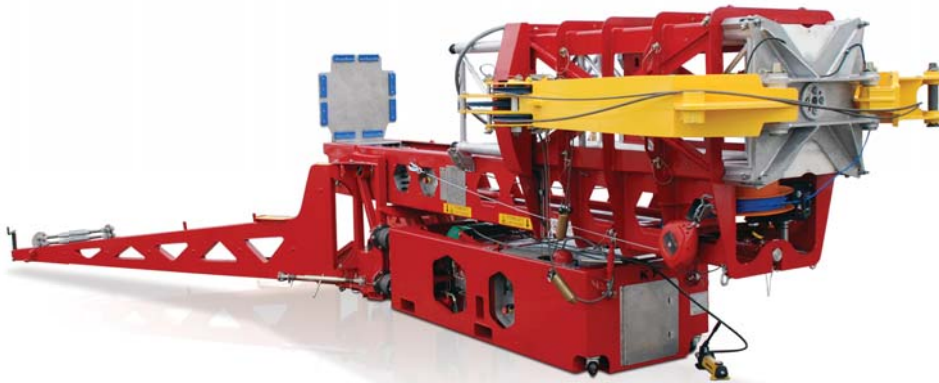
Operator's control pendant



# 80ft Zone 1 Lightweight Lattice Section Wireline Mast



The Elmar Zone 1 Lightweight Aluminium Lattice Section Wireline Mast is a heliportable mast designed for use on either offshore or land based wells. The mast column is modular in design allowing the height of the mast to vary from 25ft to 80ft depending on the number of column sections installed. This simplifies the rigup process and reduces rigup time for two operators to 15 minutes. The column SWL is rated to 20,000lbs, operable in wind speeds up to 60mph. The mast requires an external power pack.



## Dimensions & Weights

### PART NUMBER L-6921023551

Mast Base:	(L) 4.70 m, 15.42 ft (W) 0.93 m, 3.05 ft (H) 1.83 m, 6.00 ft (Weight) 1,302 kg, 2,870 lbs
Power Pack:	(L) 2.20 m, 7.22 ft (W) 1.09 m, 3.58 ft (H) 0.55 m, 1.80 ft (Weight) 950 kg, 2,095 lbs
Transport Frame:	(L) 2.71 m, 8.89 ft (W) 2.32 m, 7.61 ft (H) 2.30 m, 7.54 ft (Weight) 1,104 kg, 2,433 lbs

## Features & Benefits

- 9 section modular column to 80ft (24.4m)
- (2) x 2 tonne lifting winches mounted in power pack module
- One winch complete with man-riding and emergency lowering facility
- Hydraulic driven intensifier
- High hook shutdown system
- Last 3 wraps shutdown system on manrider winch
- Slackwire shutdown system on manrider winch
- Lower wireline sheave fixed to power pack frame
- Column section transportation frame
- Fully erected in 15 minutes
- Rated for use in 60mph wind
- Guy wires with tirtor tensioners
- Outriggers can be removed and replaced by guy wires in confined rig-ups
- Mast and powerpack can be connected together and lifted as one

## Options

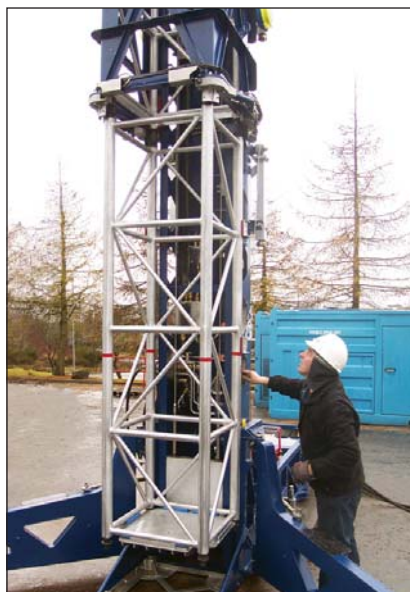
- Additional column sections can be added to increase operating height
- Electro-hydraulic power pack
- Transportation frame for mast and powerpack



L-6901023554 Transport Frame Module



L-6901026430 Removable Power Unit



Mast operation illustrating column section insertion

Elmar Product Line



# 95ft Truck Mounted Wireline Mast

This Elmar Mast Truck L-690581 is designed for wireline operations on land wells. The mast has DNV approval and certification. The mast column consists of three lattice work sections with the top two hydraulically extendable to give the mast's operating height of 95ft. Two sets of four hydraulic locking dogs lock the mast in the fully extended position.



Maximum working height 95ft (29m)

Manrider Winch L-652954 (DNV certified, EU compliant for manriding)



## Dimensions & Weights

PART NUMBER L-690581V02

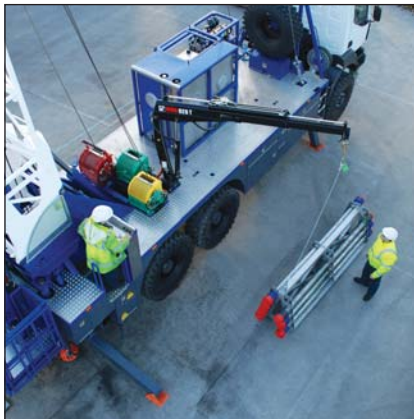
Operational Dimensions: (L) 12.65 m, 41.50 ft (W) 2.85 m, 9.35 ft (H) 4.83 m, 15.83 ft (Weight) 28,700 kg, 63,272 lbs

## Features & Benefits

- 3 section telescoping mast to 95ft (29m)
- 35,000lbs (15.9 tonne) column load
- Heavy duty lattice work construction
- Coach built bodywork with cupboards, storage space and access stair to load deck
- Hydraulic stabilizers
- (2) x 2 tonne utility DNV lifting winch
- (1) x 2 tonne sheave lock/utility DNV winch
- Control stations for winch and mast operations
- Floodlights on column and for deck illumination
- Mast load indicator (Zone 1 electric with digital display)
- Pressure equipment storage
- 6 x 6 chassis, 8.2T front, 20.5T rear axle GWT
- Sheave lock
- Guard rails

## Options

- Hydraulically driven grease injection/hydraulic control module
- Truck mounted, hydraulically driven 10,000 psi pressure test unit
- Tail lift platform
- Man rider winch - DNV certified
- Hydraulic crane/hoist for deck handling
- Client specified chassis
- Hydraulically driven DHSV/MV unit



Utility crane



Winches and control panel



Truck mounted PTU and grease and hydraulic control module







# K-WINCH Power Packs

## Power Packs

Rigsafe Single Cylinder (11HP) Mast Erecting Power Pack . . . . .	.55
Zone 1 Electric 55kW (75HP) Wireline Power Pack . . . . .	.56
AirPack C . . . . .	.57
GenPack. . . . .	.58



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# Rigsafe Single Cylinder (11 HP) Mast Erecting Power Pack



This Elmar rigsafe diesel hydraulic power pack is a stand-alone unit specifically designed to erect and operate masts units. It supplies hydraulic power on an open loop system. This unit is constructed in carbon steel with a crash frame, four-point lift and slings. It has integral hydraulic and diesel tanks with fluid level indicators and filler/breather caps.

The hydraulic oil is supplied from the tank through a pressure filter and returned via a filter back into the tank. A removable tray is fitted to the top of the unit. The engine is fitted with "Rigsafe" equipment.



## Dimensions & Weights (Operational)

PART NUMBER L-6901025693V02

(L) 1.06 m, 3.48 ft (W) 0.75 m, 2.46 ft (H) 0.86 m, 2.82 ft (Weight) 350 kg, 772 lbs

## Hydraulic Drive System

- Open loop
- System pressure relief valve
- 10 micron pressure filter
- Tank top return filtration

## Specification

- Engine: Yanmar L100AE
- Cylinders: Single
- Output: 11HP (8 KW)@1,700 rpm
- Hydraulic Reservoir: 16 Gallons (72 Litres)
- Diesel Reservoir: 1.2 Gallons (5.5 Litres)
- Build Standard: BS 7072
- Zone Standard: Rigsafe
- Starting: Pull Start (see option)
- Hydraulic connections: Snaptite

## Rigsafe Equipment

The following equipment is supplied on Rigsafe engine assemblies:

- Exhaust spark arrestor
- Automatic engine - overspeed shut-down, inlet valve
- Anti-static fan belts
- Non metallic blower fan
- Resilient engine shock mounts

## Features & Benefits

- Full load operation in Rigsafe conditions
- Dedicated mast power pack
- Designed for ease of maintenance
- Compact single cylinder unit - Small foot print
- Rigsafe rated
- Anti vibration mounts
- Four point lift
- Hose storage on top of unit

## Hydraulic Hose Set

- Standard length 25 feet
- Snaptite flat faced quick connect couplings (option available)



Wireline Masts can be erected from standard open loop powerpacks. Masts suited for this option are fitted with flow diverters to reduce the hydraulic flow rate suitable for operation/erection of the mast.

# Zone 1 Electric 55 kW (75 HP) Wireline Power Pack



This Zone 1 Electro Hydraulic Power Pack is a stand alone unit designed for closed loop medi or containerised wireline winches. The unit can also drive a respooler system.



Constructed in carbon steel with a heavy duty crash frame and forklift pockets in the base, it is fitted with a removable hose tray in the top of the unit. It has an integral hydraulic reservoir with fluid level indicator and filler/breather cap. A suction strainer is located within the hydraulic oil reservoir for oil filtration.



## Dimensions & Weights (Operational)

PART NUMBER L-6901010124

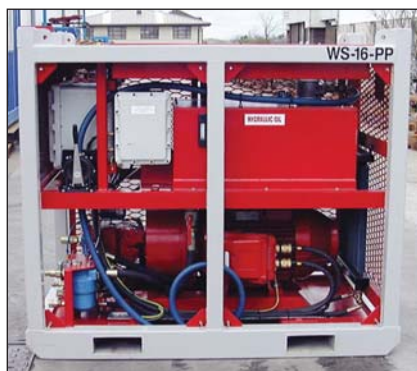
(L) 1.89 m, 6.20 ft (W) 1.10 m, 3.61 ft (H) 1.64 m, 5.36 ft (Weight) 2,000 kg, 4,410 lbs

## Hydraulic Drive System

- Closed loop
- System pressure relief valve
- Tank mounted 125 micron suction strainers
- Tank top return filtration

## Specification

- Motor: Brook Crompton
- Supply: 415volt, 50Hz, 3 phase
- Starting Current: 200amp (Star-Delta start)
- Output: 55 Kw (75 HP)
- Hydraulic Reservoir: 66.5 Gallons (251 Litres)
- Build Standard: BSEN12079
- Zone Standards: Zone 1
- Starting: See options
- Hydraulic quick connections



## Zone 1 Equipment

- Eexd electric motor
- Eexd electrical enclosures

## Control Panel

- Start
- Stop
- Running
- Power on
- Forward/Reverse Polarity Selector

## Features & Benefits

- Full load operation in Zone 1 conditions
- Ease of operation
- Full instrumentation
- Designed for operator safety (full guards)
- Low start current (Eexd Star Delta Start)
- Designed for ease of maintenance
- Compact unit - Small foot print
- Full Zone 1 rated
- Anti vibration mounts
- Quick release fasteners on all guards
- Hose storage on top of unit
- Four point lift to BS12079
- Integral forklift pockets

## Options

- Respooler drive
- Starting Systems:
- Star Delta - Low current start system
  - D.O.L. - Direct on line
- Build Options:
- BSEN 12079 (Four point lift)
  - BS 7072 (Four or Single point lift)

## Hydraulic Hose Set

- Standard length 25 feet with quick connect couplings (optional couplings available)



Eexd Star Delta starter

# AirPack C

This design is a single piece pneumatic energy supply unit comprising of an integral power pack, open operator console and pneumatic compressor section. Unit can be transported as a single lift.



Suitable for onshore and offshore operations. Truck or trailer mounted. Operable as a stand alone unit. Basic equipment in Zone II configuration. Standard configuration can operate in -20 to +40 degrees C temperatures. Ex Zone II / Cat 3 / ATEX / Lloyd's certified.



## Dimensions & Weights

(L) 2.94 m, 9.65 ft (W) 1.20 m, 3.94 ft (H) 1.51 m, 4.95 ft (Weight) 3,000 kg, 6,614 lbs

## Pneumatic System

- 5000 lpm / 10 bar compressor with air receiver

## Power Pack

- Powerful 4 cylinder Caterpillar diesel engine providing 54 hp (40 Kw) @ 2,100 rpm
- Can be fitted with pneumatic, spring or hydraulic starter systems (client dependent)

## Control Panel

- Clearly laid out ergonomic anodized aluminium control panel with English text as standard

## Features & Benefits

- Elmar field proven reliability
- Operating in worldwide locations and environments
- Industry standard equipment used by major well service companies
- Standard Elmar components provide inter fleet interchangeability
- Commonly designed Elmar operating systems and components
- Superior quality components and corrosion resistant materials utilised
- All components easily accessible for maintenance
- Low operating and maintenance costs

## Options

- Please contact Elmar for further information and advice on possible configurations



# GenPack

This design is a single piece electrical energy supply unit comprising of an integral power pack, open operator console and electrical generator section. Unit can be transported as a single lift.



Suitable for onshore and offshore operations. Truck or trailer mounted. Operable as a stand alone unit. Basic equipment in Zone II ATEX configuration. Standard configuration can operate in -20 to +40 degrees C temperatures. Generator unit 20 Kva, -20 certified, Ex Zone II ATEX.



## Dimensions & Weights

Dimensions and weights are design dependent.

## Electrical System

- 15 Kw 120 V or 220 V integral generator (client dependent)

## Power Pack

- Lister Petter LPW4 18,7 kW @ 1800 rpm / 15,0 kW @ 1500 rpm
- Can be fitted with electric, pneumatic, spring or hydraulic starter systems (client dependent)

## Control Panel

- Clearly laid out ergonomic anodized aluminium control panel with English text as standard

## Features & Benefits

- Elmar field proven reliability
- Benefits Operating in worldwide locations and environments
- Industry standard equipment used by major well service companies
- Standard Elmar components provide inter fleet interchangeability
- Commonly designed Elmar operating systems and components
- Superior quality components and corrosion resistant materials utilised
- All components easily accessible for maintenance
- Low operating and maintenance costs

## Options

- Please contact Elmar for further information and advice on possible configurations



# K-WINCH Accessories

## Depth and Tension Display Systems

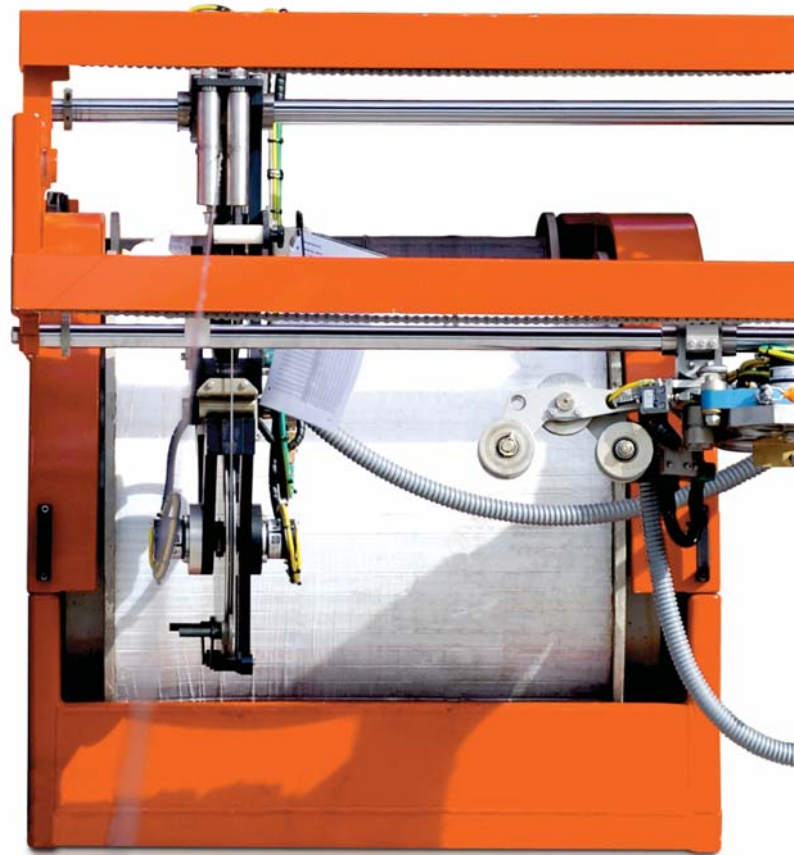
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## Measuring Heads

5000 Series Measuring Heads . . . . .	.63
MP16 II Measuring Head . . . . .	.64
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# CombiGauge

This design is a combined hydro-mechanical wireline depth and tension display system enabling both wireline depth and tension to be viewed simultaneously on a single gauge. An accurate tension display can be achieved when used in conjunction with any Elmar measuring head design with an integral hydraulic load cell. Accurate depth display is achieved by means of a mechanical cable drive from an Elmar measuring head mounted depth gearbox (specific to the wire size being utilised).



## Dimensions & Weights

(L) 0.23 m, 0.75 ft (W) 0.23 m, 0.75 ft (H) 0.15 m, 0.49 ft (Weight) 5.4 kg, 11.90 lbs

Unique Elmar design combined hydro-mechanical depth and tension display gauge. Depth and pull visible on same gauge. Operator views single gauge instead of separate depth odometer and tension gauge. Lightweight design. Basic equipment in NonZoned configuration. Standard configuration can operate in -20 to +50 degrees C temperatures.



## Slickline Capability

- Designed for super light duty (.092") to super heavy duty (.160") slickline operations

## Swabbing & Fishing Capability

- Designed for light duty (3/16") to super heavy duty (5/16") braided line operations

## Logging Capability

- Designed for light duty (3/16") to super heavy duty (5/16") monoconductor line operations
- Designed for light duty (7/16") to heavy duty (17/32") multiconductor line operations

## Depth & Tension Display

- CombiGauge units easily exchanged for different tension ranges
- Display Universal mount allows fitting of CombiGauge to all winch unit designs
- Pull button on front of CombiGauge to reset depth odometer
- Rotating knob on front of CombiGauge to reset tension reading
- Adjustable valve on lower body to dampen tension needle vibration
- Depth scale of 0 - 99,999 ft with resolution of 1ft
- Fixed non-rotating 360 degree scale
- Configurable with feet or metres odometer
- Configurable with lbs or kg tension gauge
- Configurable with or without correlating depth function

## Control Panel

- Clearly laid out ergonomic anodized aluminium control panel with English text as standard
- Clearly marked large scale analogue tension increments

## Features & Benefits

- Combined depth & tension display gauge with single point of view for operator
- Depth and pull visible on same gauge for maximum safety
- Integrates as standard into all wireline units or can retrofit to non-Elmar units
- Short hydraulic hose to integral load cell on measuring head provides tension signal
- Short mechanical drive cable to correct ratio gearbox on measuring head provides depth signal
- Needle rotates to display correct tension while gauge remains fixed

## Options

- Available with either pounds or kilograms tension readout
- Available with either feet or meters depth readout
- Available with or without correlated depth readout
- Separate individual CombiGauge displays can be supplied to
- cover a range of tensions
- Couples to either a single or dual output mechanical depth gearbox
- fitted to measuring head

## Available Scales

CombiGauge Lbs/Feet	
0-2000 Lbs/Feet	0-2000 Lbs/Feet/CorrelatingDepth
0-3200 Lbs/Feet	0-3200 Lbs/Feet/CorrelatingDepth
0-4400 Lbs/Feet	0-4400 Lbs/Feet/CorrelatingDepth
0-8800 Lbs/Feet	0-8800 Lbs/Feet/CorrelatingDepth

CombiGauge Lbs/Metres	
0-2000 Lbs/Metres	0-2000 Lbs/Metres/CorrelatingDepth
0-3200 Lbs/Metres	0-3200 Lbs/Metres/CorrelatingDepth
0-4400 Lbs/Metres	0-4400 Lbs/Metres/CorrelatingDepth
0-8800 Lbs/Metres	0-8800 Lbs/Metres/CorrelatingDepth

CombiGauge Kgs/Feet	
0-900 Kgs/Feet	0-900 Kgs/Feet/CorrelatingDepth
0-1500 Kgs/Feet	0-1500 Kgs/Feet/CorrelatingDepth
0-2000 Kgs/Feet	0-2000 Kgs/Feet/CorrelatingDepth
0-4000 Kgs/Feet	0-4000 Kgs/Feet/CorrelatingDepth

CombiGauge Kgs/Metres	
0-900 Kgs/Metres	0-900 Kgs/Metres/CorrelatingDepth
0-1500 Kgs/Metres	0-1500 Kgs/Metres/CorrelatingDepth
0-2000 Kgs/Metres	0-2000 Kgs/Metres/CorrelatingDepth
0-4000 Kgs/Metres	0-4000 Kgs/Metres/CorrelatingDepth

# Weight Indicator and Mechanical Depth Measurement



All Wireline units can be supplied with weight indicator and depth measurement systems. Standard weight indicator systems are supplied with a hydraulic load cell, 100 feet of hydraulic hose and a weight indicator gauge calibrated in pounds or kilos.



PART NUMBER L-5701010170

## Weight Indicator System

Weight Indicator systems are hydraulically operated and require no external power source. They are assembled and fully charged with hydraulic fluid when fitted to the wireline unit. Full scale capacity ranges are from 1,000lbs to 6,000lbs or from 1,000kgs to 3,000kgs. The indicator provides a dial face calibrated in lbs or kilos and has a dampener to smooth pointer sensitivity. Also included is a dial adjust gear which rotates the dial to make the necessary tare adjustments. The load cell transmits a hydraulic pressure signal through a diaphragm sensing element held in place by the load cell housing. Hose lengths supplied to suit the customer requirements.

### Equipment Accessories:

Description of Equipment	Rating	Part Number
100ft. Hose	0 - 2000lbs	WAW1-001
100ft. Hose	0 - 3000lbs	WAW1-003
100ft. Hose	0 - 4000lbs	WAW1-005
100ft. Hose	0 - 5000lbs	WAW1-004
100ft. Hose	0 - 6000lbs	WAW1-009

A pressure sensor can be supplied in order that the system can be used with the SmartMonitor, which will give electronic read out and recording of tension. Depth measurement is by a five digit mechanical counter which is mounted to the operators control console and connected to the measuring head by a cable of the appropriate length. The selection of the wheel size and the angle drive option gives accurate measurement in feet or meters.



Load cell

## Mechanical Depth Measurement System

Depth Measurement is catered for by a (5) digit mechanical counter mounted on the operators control console. This is attached to the Measuring Head via a right angle drive\* and counter cables of various lengths.



Mechanical Depth Measurement System

### Equipment Accessories:

Description of Equipment	Part Number
5 Digit Veeder Root Counter	MBC0-001
8ft Counter Cable	WAC0-034
10ft Counter Cable	WAC0-035
12ft Counter Cable	WAC0-031
16ft Counter Cable	WAC0-032

Note: \* See measuring heads for right angle drive and measuring wheel options

# 5000 Series Measuring Heads

The 5000 Series Measuring Heads are designed as wrap around heads for use with slickline and braided cables. The 5-500 type are the traditional post mounted heads and can be set up for imperial or metric measurement of all wire and cable sizes up to 7/32". All 5-600 type heads are lightweight and have the ability to mount encoders for electronic read-out of line speed, depth and tension when combined with the SmartMonitor. Both head types are mounted on a parallelogram traverse and have the ability to "float" with the wire due to a gas strut counter balance system.



5-500 measuring head



5-600 measuring head

## Common Features

- Traditional wrap round measuring head
- Screw down adjustable pressure wheels
- Robust construction
- Cable drive system
- Adjustable pressure wheels
- Metric or imperial measurement

## Features & Benefits (5-600)

- Spring loaded pressure wheel prevents wire damage
- Guide rollers attached to measuring head
- Lightweight measuring wheel (16" nominal diameter, metric or imperial measurement) with hard steel measuring surface
- Robust cast aluminium construction
- Only one pressure wheel for all line sizes
- Mechanical cable drive depth system
- Unique parallelogram traverse mechanism allows measuring head to 'float' with line

## Option

- Optical encoder (hazardous or safe area)

## Mechanical Depth Measurement System

- Depth Measurement is catered for by a (5) digit mechanical counter mounted on the operators control console. This is attached to the measuring head via a right angle drive and counter cables of various lengths

### Equipment Accessories:

Description of Equipment	Part Number
5 Digit Veeder Root Counter	MBC0-001
8ft Counter Cable	WAC0-034
10ft Counter Cable	WAC0-035
12ft Counter Cable	WAC0-031
16ft Counter Cable	WAC0-032



Mechanical Depth Measurement System

### PART NUMBER L-6991010166: 5-500 Measuring Head

#### 16" AND 17 1/4" MEASURING WHEELS

Metric Measurement (Angle Drive Gearbox MBG2-039 3:2 Ratio)		Imp. Measurement (Angle Drive Gearbox MBG2-024 1:2 Ratio)	
Item	Part Number	Item	Part Number
0.092" Wheel	WMC5-062	0.092" Wheel	WMC5-064
0.108" Wheel	WMC1-002	0.108" Wheel	WMC9-022
0.125" Wheel	WMC1-001	0.125" Wheel	WMC3-004
3/16" Wheel	WMC1-004	3/16" Wheel	WMC3-005
0.092" Pressure Wheel	WMC5-053	0.092" Pressure Wheel	WMC5-055
0.108" Pressure Wheel	WMC5-054	0.108" Pressure Wheel	WMC5-056
0.125" Pressure Wheel	WMC5-042	0.125" Pressure Wheel	WMC5-297
3/16" Pressure Wheel	WMC5-060	3/16" Pressure Wheel	WMC5-059

### PART NUMBER L-6991010167: 5-600 Measuring Head

#### OPTIONS

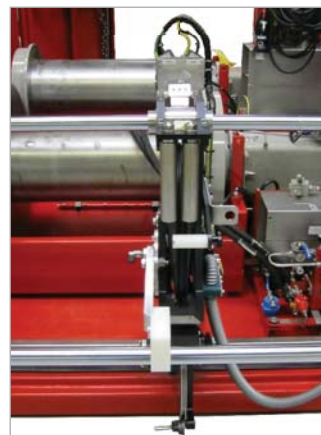
Measuring Wheels (Metric)	Part Number (Metric)
0.092" Wheel	WMC1-007
0.108" Wheel	WMC1-008
0.125" Wheel	WMC1-009
3/16" Wheel	WMC1-010
7/32" Wheel	WMC1-011
Measuring Wheels (Imperial)	Part Number (Imperial)
0.092" Wheel	WMC3-013
0.108" Wheel	WMC3-014
0.125" Wheel	WMC3-015
3/16" Wheel	WMC3-016
7/32" Wheel	WMC3-017
Encoders	Part Number
Zone 2	WAC9-014
Non-Zoned (100 pulses/per rev)	WAC9-015
Non-Zoned (300 pulses/per rev)	WAC9-016
Gearboxes (Common accessories)	Part Number
Angle Drive Gearbox (1:2 ratio for imperial)	MBG2-024
Angle Drive Gearbox (3:2 ratio for metric)	MBG2-039

# MP16 II Measuring Head

This design is a combined hydro-mechanical wireline depth and tension measurement system enabling both wireline depth and tension signals to be provided to a separate remote display. An accurate tension display can be achieved when used in conjunction with an Elmar CombiGauge design using the MP16 II integrated hydraulic load cell. Accurate depth display is achieved by means of a mechanical cable output from the depth gearbox mounted to the measuring head. This measuring head is a three wheel wrap around design comprising two upper wheels and one lower wheel. Wireline replacement can be achieved without cutting of the rope socket.



Innovative concept replacing remote load cell system at wellhead sheave pulley, the MP16 II can operate at variable rig up angles reducing K-Factor error. Wire oil lubricator tank is fitted to measure head. Can accept pressure transducer on tension load cell circuit for digital signal to Automation Products system. Can accept optical encoder on depth measuring wheel for digital signal to Automation Products system.



## Dimensions & Weights

(L) 0.55 m, 1.80 ft (W) 0.27 m, 0.89 ft (H) 1.06 m, 3.48 ft (Weight) 54 kg, 119 lbs

## Hydraulic Drive System

- Short hose to CombiGauge tension display for maximum tension accuracy.
- Hydraulic tension load cell with sensitive membrane between pivoted upper and lower bodies

## Slickline Capability

- Designed for super light duty (.092") to heavy duty (.135") slickline operations

## Swabbing & Fishing Capability

- Designed for light duty (3/16") braided line operations

## Logging Capability

- Designed for light duty (3/16") to medium duty (7/32") mono-conductor line operations

## Transmission

- Used with different ratio single or dual output depth gearbox fitted to measuring head
- Precision machined depth gearbox systems available for all wireline sizes
- Short cable between depth gearbox and CombiGauge to provide excellent depth accuracy

## Depth & Tension System

- Operates in conjunction with CombiGauge hydro-mechanical combined depth and tension gauge
- Configurable for feet or metres
- Configurable for lbs or kg

## Features & Benefits

- Suitable for .092" to 7/32" operations
- 3 wheel wrap around design with two separate upper wheels & one single lower wheel
- Upper section & lower sections hinged with one integral hydraulic load cell for tension signal
- Operates in conjunction with Elmar CombiGauge combined depth & tension display panel
- Wireline with rope socket or logging head intact can be removed from side of measuring head
- Upper two wheels rotate independently to remove risk of wireline rubbing
- Aluminium main body construction with stainless steel wheels & components
- Max. line tension stand 0-2,000 kg (0-4,400 lbs)
- Max. line tension HD 0-4,000 kg (0-8,800 lbs)

## Options

- Range of precision machined single or dual output gearboxes for accurate depth measurement
- Electro-hydraulic pressure transducer system for electronic tension signal to SmartMonitor
- Optical encoder for electronic depth & speed signal to SmartMonitor
- Hydro-pneumatic automatic wire spooling system
- Wire oiler tank with adjustable nozzle control
- Loadpin (Ex)
- Second encoder
- Calibration tool incl. test wire (Part no.: A1043086)



# MP20 Measuring Head

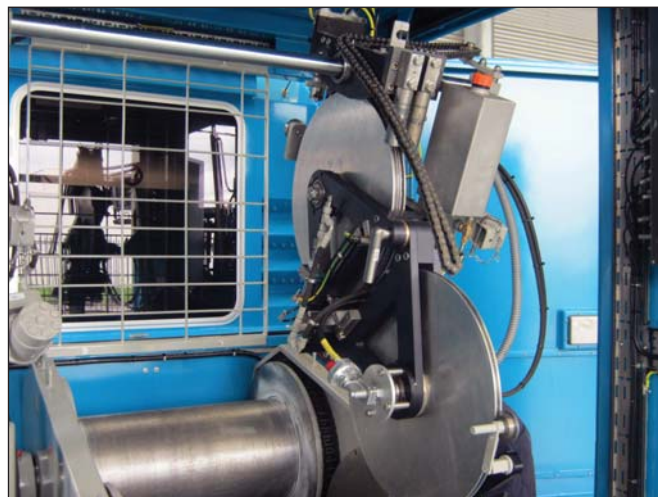
This design is a combined hydro-mechanical wireline depth and tension measurement system enabling both wireline depth and tension signals to be provided to a separate remote display. An accurate tension display can be achieved when used in conjunction with an Elmar CombiGauge design using the dual measuring head integrated hydraulic load cells.



## Dimensions & Weights

(L) 1.13 m, 3.70 ft (W) 0.34 m, 1.12 ft (H) 1.00 m, 3.28 ft (Weight) 105 kg, 231 lbs

Accurate depth display is achieved by means of a mechanical cable output from the depth gearbox mounted to the measuring head. This measuring head is a three wheel wrap around design comprising two upper wheels and one lower wheel. Wireline replacement can be achieved without cutting of the rope socket.



## Hydraulic Drive System

- Short hose to CombiGauge tension display for maximum tension accuracy
- Hydraulic tension load cell with sensitive membrane between pivoted upper and lower bodies

## Slickline Capability

- Designed for super light duty (.092") to super heavy duty (.160") slickline operations

## Swabbing & Fishing Capability

- Designed for light duty (3/16" + 1/4") braided line operations

## Logging Capability

- Designed for light duty (3/16" + 1/4") mono-conductor line operations

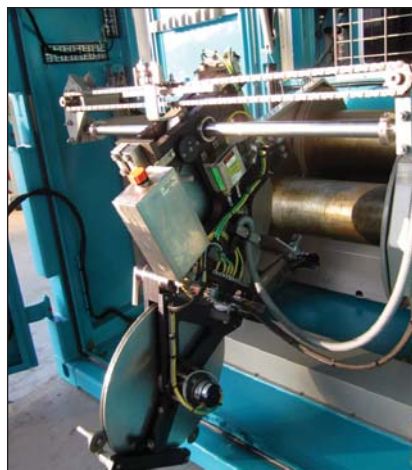


## Transmission

- Used with different ratio single or dual output depth gearbox fitted to measuring head
- Precision machined depth gearbox systems available for all wireline sizes
- Short cable between depth gearbox and CombiGauge to provide excellent depth accuracy

## Depth & Tension System

- Operates in conjunction with CombiGauge hydro-mechanical combined depth and tension gauge
- Configurable for feet or metres
- Configurable for lbs or kg



## Features & Benefits

- Suitable for .092" to 1/4" operations
- 3 wheel wrap around design with two separate upper wheels & one single lower wheel
- Upper section & lower sections hinged with one or two integral hydraulic load cells for tension signal
- Wireline with rope socket or logging head intact can be removed from side of measuring head
- Upper two wheels rotate independently to remove risk of wireline rubbing
- Aluminium main body construction with stainless steel wheels & components
- Max. line tension 4,000 kg (8,800 lbs)

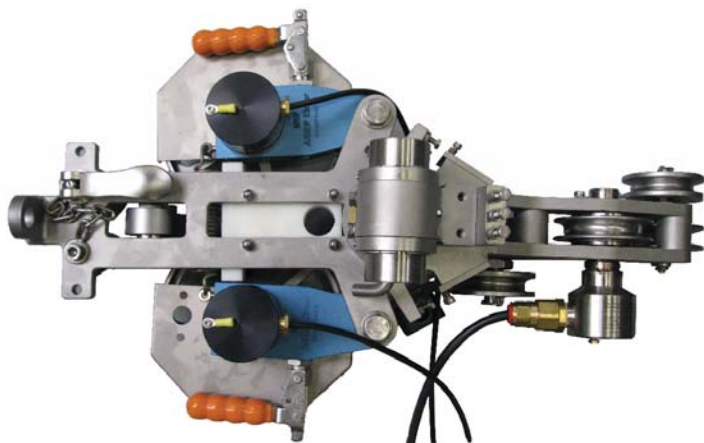
## Options

- Range of precision machined single or dual output gearboxes for accurate depth measurement
- Electro-hydraulic pressure transducer system for electronic tension signal to SmartMonitor
- Optical encoder for electronic depth & speed signal to SmartMonitor
- Hydro-pneumatic automatic wire spooling system
- Wire oiler tank with adjustable nozzle control
- Loadpin (Ex)
- Second encoder
- Calibration tool (Part no.: A1043086)
- Test wire 1/4" (Part no.: A1009653)

# 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

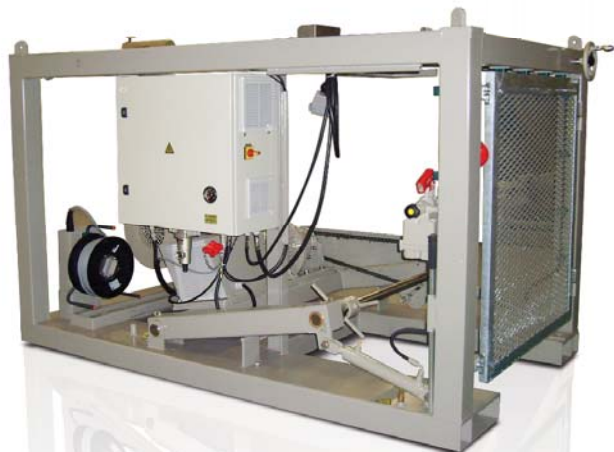
## Options

- 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

# WireSpooler

This design is a single piece wireline tension spooling unit comprising of an integral electric power pack, open operator console and single transport drum winch / tensioning section. Unit can be transported as a single lift. The system is suitable for slickline, braided line and mono-conductor spooling operations



Suitable for onshore operations. Suitable for workshop operations. Operable in conjunction with a separate power source. Fabricated steel frame construction. Open end design to enable rolling in / out of wire transport drums. Open operator console design. Fully certified four lifting points integrated into frame structure. Forklift pockets integrated into frame structure. Tie back anchor points integrated into lower frame structure. Base structure for electric motor integrated into frame structure. Can accept standard format wireline transport drums.



## Dimensions & Weights (excl. winch drum & wire)

(L) 2.20 m, 7.22 ft (W) 1.30 m, 4.27 ft (H) 1.40 m, 4.59 ft (Weight) 900 kg, 1,984 lbs

### Spooling System

- Fixed capstan support arm
- Pneumatically operated tensioning capstan with mechanical horizontal spooling system

### Slickline Capacity

- Designed for super light duty (.092") to super heavy duty (.140") slickline spooling operations

### Swabbing & Fishing Capacity

- Designed for light duty (3/16") to medium duty (7/32") braided line spooling operations

### Transmission

- Variable speed bi-directional electric drive with chain sprocket to transport drum

### Pneumatic System

- Pneumatic supply from external source

### Electrical System

- Client to confirm voltage and frequency of power input at time of order
- 380 V - 440 V / 50 Hz - 60 Hz / 3 phase power input options available

### Power Pack

- Power provided from external electrical and pneumatic power source

### Control Panel

- Remote control panel with umbilical

### Features & Benefits

- Suitable for .092" to 7/32" wire spooling operations
- Compact cost-effective solution for wire spooling requiring only workshop electrical and air supply
- Back tension achieved using capstan with tension adjust facility to avoid "burried" wire
- Remote control panel enables operator to sit in wireline unit cabin and control spooling
- Can be used in conjunction with all known wireline manufacturers transport reels
- Air operated tension control plus electric main drive and hydraulic transport reel positioning

### Options

- Can be supplied with 380V or 440V / 3 phase electrical supply for workshop use
- Additional expanded metal protection panels
- Available with lifting slings
- Can be painted to client specified colour
- Can be supplied fitted within protective 10ft ISO container with wire entry ramps



# Wire Testing and Calibration Tools

The WireTester and TorsionTester designs are mechanical wireline sample testing systems enabling the ductility of slickline up to 0.140" to be ascertained. An accurate tensile/torsional test is provided using an integral test jig using rope sockets located in the main body with instructions for use. Field proven, industry standard, design for integrity testing of wireline samples.

The Tension Calibration Tool is used for precise calibration of the tension measurement system of a wireline winch, and is especially suitable for calibration of the measuring head in combination with the CombiGauge analogue tension display or the SmartMonitor digital depth and tension measurement system.



TorsionTester



WireTester



Tension Calibration Tool

**WIRETESTER PART NUMBER:**  
A1051373

**CALIBRATION TOOL KIT PART NUMBER:**  
A1043086

## TorsionTester

- Dimensions and Weights:  
Length: 0,37 m, 1.21 ft  
Width: 0,12 m, 0.39 ft  
Height: 0,08 m, 0.26 ft  
Weight: 3 kg, 6.6 lbs

## Slickline Operations

- Designed for super light duty (0.066") to super heavy duty (.125") slickline operations

## Features & Benefits

- Basic equipment in NonZoned configuration
- Standard configuration can operate in -10 to +50 degrees C temperatures
- Main body parts manufactured from corrosion resistant aluminium
- Upper lid section closes over lower tray during testing operation
- Can be exchanged with systems available in other worldwide locations for optimum flexibility
- Anodized aluminium finish
- Field proven industry standard design for integrity testing of wireline samples
- Lightweight design
- One piece construction with lower tray and lid with viewing window

## TorsionTester Options

- Please contact Elmar for information and advice on possible configurations

## WireTester

- Dimensions and Weights:  
Length: 0,75 m, 2.46 ft  
Width: 0,25 m, 0.82 ft  
Height: 0,14 m, 0.46 ft  
Weight: 30 kg, 66 lbs

## Hydraulic System

- Hydraulic tension load cell w/sensitive membrane

## Slickline Operations

- Designed for super light duty (.072") to super heavy duty (.160") slickline operations

## Data Acquisition

- Can be used in conjunction with Elmar Automation Products electronic depth / speed / tension winchmans panels
- Tension test data recorded using pen chart recorder
- Supplied with basic set of 50 charts

## Control Panel

- Clearly laid out ergonomic control panel with English text as standard

## Features & Benefits

- Basic equipment in NonZoned configuration
- Standard configuration can operate in -10 to +50 degrees C temperatures
- Stainless steel, unpainted
- Upper lid section closes over lower tray during testing operation
- Can be exchanged with systems available in other worldwide locations for optimum flexibility
- Reduces risk of wire condition assessment being left to "feeling" of the operator.
- Enables monitoring of wireline condition when used in corrosive fluid wells.
- Completely self contained triple tray system with carrying handle.
- Includes two test rope sockets, one ratchet and 50 charts.
- Allows definitive hard copy data on slickline strength and condition to be documented.
- Enables consistent results using calibrated hydraulic bellows and chart recorder

## WireTester Options

- A1051373: WireTester (Max. wire line pull 2000 kg, max. wire line size 0.140", manual driven, CE)
- A1012226: Pear Drop Rope Socket 0.072" & 0.092" (2 off required per tester)

## WireTester Options, cont.

- A1010828: Pear Drop Rope Socket 0.108" & 0.125" (2 off required per tester)
- A1016532: Pear Drop Rope Socket 0.082" & 0.108" (2 off required per tester)
- A1038834: Pear Drop Rope Socket 0.140" (2 off required per tester)
- Please contact Elmar for information and advice on possible configurations

## Tension Calibration Tool

- Dimensions and Weights:  
Length: 1,62 m, 5.32 ft  
Width: 0,61 m, 2.00 ft  
Height: 0,24 m, x.xx ft  
Weight: 48 kg, 106 lbs

*NOTE: Maximum permitted tension on load cell: 5,000 kg (11,000 lbs).*

## Standard Kit Contents

- Calibration tool
- Hand pump and cylinder
- Digital load cell; reading in lbs
- Test wire for MP16
- Test wire for SmartHead; also suitable for StraightHead and DataHead
- User manual

## Options

- L-5501040045: Digital load cell; reading in kg
- A1009653: Test wire for MP20
- Please contact Elmar for information and advice on possible configurations

# Section 1: K-WINCH

## DynaWinch Winches & Masts



The following series of units are base units where modifications or design changes can be made to better fit the wireline service applications.

### DynaWinch Product Lines

#### Aluminum Van Body Truck Units

##### Slickline Van Units

SV1-120 Small radius rear body with tarpaulin roof cover on single axle truck	.73
SV1-140 Flat enclosed roof body with rear doors on single axle truck	.74
SV1-160 Stepped down enclosed roof over drawworks with rear doors on single axle 4x2 truck	.75
SV1-160 Stepped down enclosed roof over drawworks with rear doors on single axle 4x4 truck	.76
SV2-120 Small radius rear body with tarpaulin roof cover on tandem axle truck	.77
SV2-140 Flat enclosed roof body with rear doors on tandem axle truck	.78

##### Perforating and Logging Van Units

LV1-100 45° rear slope body with tarpaulin roof cover on single axle truck with single drum	.79
LV1-100 45° rear slope body with tarpaulin roof cover on single axle truck with single split drum	.80
LV1-180 Sloped rear roof line body with tarpaulin roof on single axle truck	.81
LV1-190 Large radius round back rear roof line body with tarpaulin roof on single axle truck	.82
LV2-100 45° rear slope body with tarpaulin roof cover on tandem axle 6x4 truck	.83
LV2-100 45° rear slope body with tarpaulin roof cover on tandem axle 6x6 truck	.84
LV2-110 15.2 cm (6") slope roof line and 45° rear slope body with tarpaulin roof on tandem axle truck	.85
LV2-180 Sloped rear roof line and square corner body with tarpaulin roof cover on tandem axle truck	.86

##### Combination Van Units

CV2-120 Small radius rear body with tarpaulin roof cover on tandem axle truck	.87
CV3-120 Small radius rear body with tarpaulin roof cover on tri-axle truck	.88
CV3-160 Stepped down enclosed roof over drawworks with rear doors on tri-axle truck	.89

#### Mast, Derrick and Crane Units

##### Logging Telescoping Mast Truck Units

LM1-245 14m (45ft) crown-to-ground hydraulic telescoping mast on single axle truck	.93
LM2-248 15m (48ft) crown-to-ground hydraulic telescoping mast on tandem axle truck	.94
LM2-255 17m (55ft) crown-to-ground hydraulic telescoping mast on tandem axle truck	.95
LM3-248 15m (48ft) crown-to-ground hydraulic telescoping mast on tri-axle truck	.96

##### Swabbing Telescoping Mast Truck Units

WM1-130 9m (30ft) crown-to-ground stiff mast on single axle truck	.97
WM2-144 12m (44ft) crown-to-ground stiff mast on tandem axle truck	.98
WM2-248 15m (48ft) crown-to-ground hydraulic telescoping mast on tandem axle	.99

##### Swabbing Derrick Truck Units

WD2-245 14 m (45') crown-to-ground derrick on tandem axle truck	100
WD2-345 14 m (45') crown-to-ground derrick on tandem axle truck	101
WD3-348 15 m (48') crown-to-ground derrick on tri-axle truck	102

##### Combination Crane and Wireline Truck Units

LC1-200 Rear-mounted boom crane and light duty logging drawworks on single axle truck	103
LC2-600 Rear-mounted boom crane with swivel cabin and logging drawworks on tandem axle truck	104
SC1-400 Rear-mounted articulating crane and wireline slickline drawworks with van body on single axle truck	105
SC1-700 Rear corner-mounted boom crane with van body and slickline drawworks on single axle truck	106
SC2-600 Rear-mounted boom crane with swivel cabin and slickline drawworks on tandem axle truck	107
SC2-700 Rear corner-mounted boom crane with van body and slickline drawworks on tandem axle truck	108

#### Wireline Skid Equipment

##### Slickline Skid Units

SS1-100 Light duty one piece gas-powered slickline skid	111
SS1-110 Light duty one piece diesel-powered slickline skid	112
SS1-120 Light duty one piece electrical-powered slickline skid	113
SS1-200 Medium duty one piece slickline skid	114
SS1-220 Medium duty one piece slickline skid	115
SS2-200LT Two Piece Slickline Skid Package	116
SS2-400 Two piece slickline skid with enclosed operator cabin skid and power pack skid	117

##### Logging Skid Units

LS1-500 Electric powered single drum logging skid unit	118
LS2-400 Two piece logging skid with enclosed operator cabin and power pack skid	119

##### Combination Skid Units

CS1-400 One piece combination slickline and logging skid with enclosed operator cabin Sheaves	120
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##### Pipeline Wireline Skid Units

KS1-400 One piece pipeline wireline skid with enclosed operator cabin	121
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##### Truck Mounted Skid Units

SE1-320 One piece PTO drive truck-mounted slickline skid unit	122
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##### Swabbing Skid Units

WS1-350 One piece heavy duty swabbing skid unit with single drum	123
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# K-WINCH Aluminium Van Body Truck Units



## Slickline Van Units

SV1-120 Small radius rear body with tarpaulin roof cover on single axle truck	.73
SV1-140 Flat enclosed roof body with rear doors on single axle truck	.74
SV1-160 Stepped down enclosed roof over drawworks with rear doors on single axle 4x2 truck	.75
SV1-160 Stepped down enclosed roof over drawworks with rear doors on single axle 4x4 truck	.76
SV2-120 Small radius rear body with tarpaulin roof cover on tandem axle truck	.77
SV2-140 Flat enclosed roof body with rear doors on tandem axle truck	.78

## Perforating and Logging Van Units

LV1-100 45° rear slope body with tarpaulin roof cover on single axle truck with single drum	.79
LV1-100 45° rear slope body with tarpaulin roof cover on single axle truck with single split drum	.80
LV1-180 Sloped rear roof line body with tarpaulin roof on single axle truck	.81
LV1-190 Large radius round back rear roof line body with tarpaulin roof on single axle truck	.82
LV2-100 45° rear slope body with tarpaulin roof cover on tandem axle 6x4 truck	.83
LV2-100 45° rear slope body with tarpaulin roof cover on tandem axle 6x6 truck	.84
LV2-110 15.2 cm (6") slope roof line and 45° rear slope body with tarpaulin roof on tandem axle truck	.85
LV2-180 Sloped rear roof line and square corner body with tarpaulin roof cover on tandem axle truck	.86

## Combination Van Units

CV2-120 Small radius rear body with tarpaulin roof cover on tandem axle truck	.87
CV3-120 Small radius rear body with tarpaulin roof cover on tri-axle truck	.88
CV3-160 Stepped down enclosed roof over drawworks with rear doors on tri-axle truck	.89

The following series of aluminium van body units are base units where modifications or design changes can be made to better fit the wireline service applications.



N.B. The technical data contained within these pages was correct at the time of publication but should not be used as operational guidelines. For operational guidelines please refer to the operation and maintenance manual supplied with the equipment. Elmar reserves the right to change, alter, modify or improve specifications at any time without prior notice.

DynaWinch Product Line





# 4x2 Single Axle Heavy Duty Slickline Van Unit with Single Split Drum Drawworks



Model SV1-120 series is a single axle heavy duty aluminium van unit for slickline service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## SV1-120 Series

### Features

- Small radius rear corner body with tarpaulin roof cover over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Generous quantity of external storage compartments and racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized double drum drawworks to fit desired slickline sizes (up to two lines)

### Wireline Accessories Options (cont.)

#### Spooling

- Linear bar spooler systems or overhead spooler system

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 5.5 m L x 2.5 m W (214" x 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,300 kg (14,000 lb.)
- Rear Tandem Axles  
9,530 kg (21,000 lb.)

### Winch Hoist Specification

#### SA1-110-D Series Drawworks

- Four speed Funk transmission chain drive with hydraulic motor drive system and drop spool attachment

#### Drum Line Capacity

- 7,600 m (25,000') of 0.108" and 0.125"

#### Drum Drive Performance

- Drum Speed  
Up to 750 rpm (2,400 fpm)
- Pulling Power  
Up to 4,300 kg (9,500 lb.)

#### Drop Attachment

Independent hydraulic drive motor with quick disconnect coupling on drop spool that holds up to 3,000 m (10,000') of 0.092" line.

Additional drum drive system options available to best meet specific service work applications.

# 4×2 Single Axle Slickline Van Unit with Single Drum Drawworks



Model SV1-140 series is a single axle aluminium van unit for slickline service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## SV1-140 Series

### Features

- Flat, enclosed roof over drawworks with double rear doors
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Generous quantity of external storage compartments and racks
- Large all-weather climate-controlled operator's cabin
- Ergonomic design control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized double drum drawworks to fit desired slickline line sizes (up to two lines)

### Wireline Accessories Options (cont.)

#### Spooling

- Linear bar spooler systems or overhead spooler system

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### AC Power Supply

- 3,000 W inverter

### Van Dimensions

- 5.5 m L × 2.5 m W (214" × 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
5,400 kg (12,000 lb.)
- Rear Tandem Axles  
9,080 kg (20,000 lb.)

### Winch Hoist Specification

#### SA1-200-D Series Drawworks

- Two speed planetary gear box chain drive with hydraulic motor drive system and drop spool attachment

#### Drum Line Capacity

- 7,600 m (25,000') of 0.108" line

#### Drum Drive Performance

- Drum Speed  
Up to 500 rpm (1,650 fpm)
- Pulling Power  
Up to 4,000 kg (9,000 lb.)

#### Drop Attachment

Independent hydraulic drive motor with quick disconnect chain drive on drop spool that holds up to 3,000 m of 0.092" line.

Additional drum drive system options available to best meet specific service work applications.

# 4×2 Single Axle Slickline Van (Bomb) Unit with Single Drop Spool Drawworks

Model SV1-160 series “Bomb” (drop spool) unit is a single axle van unit for slickline service work applications with a drop off drum spool system. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## SV1-160 Series

### Features

- Stepped down, enclosed roof over drawworks with double rear doors
- 100% aluminium frame all-welded construction
- Light weight design
- Generous quantity of external storage compartments and racks
- All-weather climate-controlled operator’s cabin
- Ergonomically designed control panel
- Low noise level
- Operator’s captain’s chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired quantity of 0.092” or 0.108” slickline sizes

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### 110V AC Power

- 3,000 W inverter AC system

#### Drop Spools

- Quick removable drop off drum spool system with on-board swing out jib-crane with direct current electric winch

### Van Dimensions

- 3.1 m L x 2.4 m W (120” x 96”)

Van dimensions can be varied to best fit end user’s requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
4,500 kg (10,000 lb.)
- Rear Tandem Axles  
7,200 kg (16,000 lb.)

### Winch Hoist Specification

#### SA1-520 Series Drawworks

- Chain drive two speed planetary with hydraulic motor drive system

#### Drum Line Capacity

- 3,000 m (10,000’) of 0.092” line

#### Drum Drive Performance

- Drum Speed  
Up to 500 rpm (1,600 fpm)
- Pulling Power  
Up to 1,700 kg (3,700 lb.)

Additional drum drive system options available to best meet specific service work applications.





# 4x4 Single Axle Heavy Duty Slickline Van Unit with Single Split Drum Drawworks

Model SV1-160 series 4x4 is a single axle heavy duty aluminium van unit for slickline service work applications. This unit is designed to operate in arctic, desert and tropical environments and can be modified to perform other wireline service work applications.



## SV1-160 Series 4X4

### Features

- Stepped down enclosed roof over drawworks with double rear doors
- 100% aluminium frame all-welded construction
- Light weight design
- Generous quantity of external storage compartments and racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired slickline sizes (up to two lines)

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 5.5 m L x 2.5 m W (214" x 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,300 kg (14,000 lb.)
- Rear Tandem Axles  
9,530 kg (21,000 lb.)

### Winch Hoist Specification

#### SA1-110 Series Drawworks

- Four speed Funk transmission chain drive with hydraulic motor drive system

#### Drum Line Capacity

- 7,600 m (25,000') of 0.108" and 0.150"

#### Drum Drive Performance

- Drum Speed  
Up to 700 mpm (2,300 fpm)
- Pulling Power  
Up to 4,800 kg (9,500 lb.)

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Heavy Duty Slickline Van Unit with Double Drum Drawworks

Model SV2-120 series is a tandem axle heavy duty aluminium van unit for slickline service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## SV2-120 Series

### Features

- Small radius rear corner body with tarpaulin roof cover over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Generous quantity of external storage compartments and racks
- Large all-weather climate-controlled operator's cabin
- Ergonomic design control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized double drum drawworks to fit desired slickline sizes (up to four lines)

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.4 m L × 2.5 m W (252" × 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### SA2-810 Series Drawworks

- Two independent drum drive systems: one four speed Funk transmission chain drive for slickline drum, one direct mounted single speed planetary gear box drive for the 0.188" line drum.

#### Drum Line Capacity

- Slickline Split Drum
- 7,600 m (25,000') of 0.108" and 0.125"
- Heavy Duty Slickline Drum
- 7,600 m (25,000') of 0.188"

#### Drum Drive Performance

- Drum Speed  
Up to 750 rpm (2,400 fpm)
- Pulling Power  
Up to 5,400 kg (12,000 lb.)

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Heavy Duty Slickline Van Unit with Single Split Drum Drawworks

Model SV2-140 series is a tandem axle heavy duty aluminium van unit for slickline service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## SV2-140 Series

### Features

- Flat enclosed roof over drawworks with double rear doors
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Generous quantity of external storage compartments and racks
- Large all-weather climate-controlled operator's cabin
- Ergonomic design control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized double drum drawworks to fit desired slickline sizes (up to four lines)

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.4 m L × 2.5 m W (252" × 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### SA1-350 Series Drawworks

- Direct drum-mounted single speed planetary gear box with two speed hydraulic motor drive system.

#### Split Drum Line Capacity

- 7,600 m (25,000') of 0.108" and 0.160" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 rpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Additional drum drive system options available to best meet specific service work applications.



# 4×2 Single Axle Production Logging Van Unit with Single Drum Drawworks

Model LV1-100 series is a single axle heavy duty van unit for case hole production logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LV1-100 Series (Single)

### Features

- 45° rear slope body with tarpaulin roof cover over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Optimized external storage compartments and tool racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Split drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### AC Power Supply

- 10 kW hydraulic drive generator or 3,000 W inverter

#### Auxiliary Hydraulic System

- Auxiliary hydraulic system with cooler for mast trailer option

### Van Dimensions

- 5.5 m L × 2.5 m W (214" × 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
4,500 kg (10,000 lb.)
- Rear Tandem Axles  
9,530 kg (21,000 lb.)

### Winch Hoist Specification

#### LA1-300 Series Drawworks

- Direct drum-mounted single speed planetary gear box with two speed hydraulic motor drive system

#### Drum Line Capacity

- 9,000 m (30,000') of 3/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 320 mpm (1,050 fpm)
- Pulling Power  
Up to 3,200 kg (7,000 lb.)

Additional drum drive system options available to best meet specific service work applications.

# 4x2 Single Axle Case Hole Logging Van Unit with Single Split Drum Drawworks

Model LV1-100 series is a single axle heavy duty van unit for case hole logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LV1-100 Series (Split)

### Features

- 45° rear slope body with tarpaulin roof cover over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Optimized external storage compartments and tool racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Single line drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 5.5 m L x 2.5 m W (214" x 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
5,400 kg (12,000 lb.)
- Rear Tandem Axles  
9,530 kg (21,000 lb.)

### Winch Hoist Specification

#### LA1-410 Series Drawworks

- Direct drum-mounted two speed planetary gear box with two speed hydraulic motor drive system

#### Split Drum Line Capacity

- 4,500 m (15,000') of 5/16" and 3/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging, as low as one mpm.

Additional drum drive system options available to best meet specific service work applications.



# 4x2 Single Axle Case Hole Logging Van Unit with Single Drum Drawworks

Model LV1-180 series is a single axle heavy duty van unit for case hole logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LV1-180 Series

### Features

- Sloped rear roof line and square corner body with tarpaulin roof over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Optimized external storage compartments and tool racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Single line drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 5.5 m L x 2.5 m W (214" x 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
5,400 kg (12,000 lb.)
- Rear Tandem Axles  
9,530 kg (21,000 lb.)

### Winch Hoist Specification

#### LA1-400 Series Drawworks

- Direct drum-mounted two speed planetary gear box with two speed hydraulic motor drive system.

#### Drum Line Capacity

- 6,100 m (20,000') of 5/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging. As low as three mpm.

Additional drum drive system options available to best meet specific service work applications.



# 4x4 Single Axle Case Hole Logging Van Unit with Single Drum Drawworks

Model LV1-190 series is a single axle heavy duty van unit for case hole logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LV1-190 Series

### Features

- Large radius rear body with tarpaulin roof over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Optimized external storage compartments and tool racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Split drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 5.5 m L x 2.5 m W (214" x 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,500 kg (14,400 lb.)
- Rear Tandem Axles  
9,530 kg (21,000 lb.)

### Winch Hoist Specification

#### LA1-400 Series Drawworks

- Direct drum-mounted two speed planetary gear box with two speed hydraulic motor drive system

#### Drum Line Capacity

- 6,100 m (20,000') of 5/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging. As low as three mpm.

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Heavy Duty Logging Van Unit with Single or Double Drum Drawworks



Model LV2-100 series is a tandem axle heavy duty van unit for open hole or case hole logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LV2-100 Series 6X4

### Features

- 45° rear slope body with tarpaulin roof over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Optimized external storage compartments and tool racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Split drum or double drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.1 m L × 2.5 m W (240" × 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,300 kg (14,000 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### LA1-100 Series Drawworks

- Three speed Funk transmission chain drive with two speed hydraulic motor drive system

#### Drum Line Capacity

- 7,600 m (25,000') of 5/16" E-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging. As low as three mpm.

Additional drum drive system options available to best meet specific service work applications.





# 6x6 Tandem Axle Heavy Duty Logging Van Unit with Double Drum Drawworks

Model LV2-100 series 6x6 is a tandem axle heavy duty van unit for open hole and case hole logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LV2-100 Series 6X6

### Features

- 45° rear slope body with tarpaulin roof over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Optimized external storage compartments and tool racks
- Large all-weather climate-controlled operator's cabin
- Ergonomic design control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Single line drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure head or conventional
- Electronic digital meters, weight, speed and depth
- Overhead spooler system

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.4 m L x 2.5 m W (252" x 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
8,170 kg (18,000 lb.)
- Rear Tandem Axles  
19,900 kg (44,000 lb.)

### Winch Hoist Specification

#### LA2-400R Series Drawworks

- Two independent direct drum-mounted two speed planetary gear boxes with two speed hydraulic motor drive system with rear drum raising option

#### Dual Drum Line Capacity

- 5,000 m (16,400') of 15/32" or 7/32" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging. As low as three mpm.

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Heavy Duty Logging Van Unit with Single or Double Drum Drawworks



Model LV2-110 series is a tandem axle heavy duty van unit for open hole or case hole logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LV2-110 Series

### Features

- 15.2 cm (6") sloped roof line and 45° rear slope body with tarpaulin roof over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Optimized external storage compartments and tool racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Single line drum or double drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.1 m L × 2.5 m W (240" × 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### LA1-110 Series Drawworks

- Three speed Funk transmission chain drive with two speed hydraulic motor drive system

#### Drum Line Capacity

- 6,100 m (20,000') of 5/16" or 7/32" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging. As low as three mpm.

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Heavy Duty Logging Van Unit with Single or Double Drum Drawworks

Model LV2-180 series is a tandem axle heavy duty van unit for open hole or cased hole logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LV2-180 Series

### Features

- Sloped rear roof line and square corner body with tarpaulin roof over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Optimized external storage compartments and tool racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Single line drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.1 m L x 2.5 m W (240" x 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### LA2-400 Series Drawworks

- Two independent, direct drum-mounted two speed planetary gear boxes with two speed hydraulic motor drive systems

#### Drum Line Capacity

- 6,100 m (20,000') of 5/16" and 7/32" line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging. As low as three mpm.

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Combination Van Unit with Double Split Drum Drawworks



Model CV2-120 series is a tandem axle heavy duty aluminium van unit for combination slickline and braided line service work applications, carrying up to four different drum lines. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## CV2-120 Series

### Features

- Small radius rear corner body with tarpaulin roof over drawworks compartment
- 100% aluminium frame all-welded construction
- All-weather thermal insulation
- Light weight design
- Generous quantity of external storage compartments and racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized double drum drawworks to fit desired slickline and braided line sizes (up to four lines)

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.4 m L × 2.5 m W (252" × 98")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,300 kg (14,000 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### CA2-920 Series Drawworks

- Two independent Funk four speed transmission chain drive systems

#### Drum Line Capacity

##### Slickline Split Drum

- 7,600 m (25,000') of 0.108" or 0.125"

##### Braided Line Split Drum

- 6,100 m (20,000') of 3/16" or 1/4"

#### Drum Drive Performance

- Drum Speed  
Up to 750 rpm (2,400 fpm)
- Pulling Power  
Up to 4,300 kg (9,500 lb.)

Additional drum drive system options available to best meet specific service work applications.

# 8×6 Tri-Axle Combination Van Unit with Double Split Drum Drawworks



Model CV3-120 series is a tri-axle heavy duty aluminium van unit for combination slickline and braided line service work applications, carrying up to four different drum lines. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## CV3-120 Series

### Features

- Small radius rear corner body with tarpaulin roof over drawworks compartment
- 100% aluminium frame all-welded construction
- Light weight design
- Generous quantity of external storage compartments and racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired braided e-line sizes. Split drum or double drum available.

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.4 m L x 2.6 m (252" x 102")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
7,200 kg (16,000 lb.)
- Rear Tandem Axles  
25,800 kg (57,000 lb.)

### Winch Hoist Specification

#### CA2-945 Series Drawworks

- Two independent Funk transmission chain drive systems: one four speed for the slickline drum, one three speed for the braided line drum

#### Drum Line Capacity

##### Slickline Split Drum

- 7,600 m (25,000') of 0.108" or 0.150"

##### Braided Line Split Drum

- 6,100 m (20,000') of 1/4" or 7/32"

#### Drum Drive Performance

- Drum Speed  
Up to 750 rpm (2,400 fpm)
- Pulling Power  
Up to 5,400 kg (12,000 lb.)

Additional drum drive system options available to best meet specific service work applications.

# 8x6 Tri-Axle Combination Van Unit with Double Split Drum Drawworks



Model CV3-160 series is a tri-axle heavy duty aluminium van unit for combination slickline and braided line service work applications, carrying up to four different drum lines. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## CV3-160 Series

### Features

- Stepped down, enclosed roof over drawworks with double rear doors
- 100% aluminium frame all-welded construction
- Light weight design
- Generous quantity of external storage compartments and racks
- Large all-weather climate-controlled operator's cabin
- Ergonomically designed control panel
- Low noise level
- Operator's captain's chair
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized double drum drawworks to fit desired slickline and braided line sizes (up to four lines)

#### Spooling

- Linear bar spooler systems or overhead spooler system

### Wireline Accessories Options (cont.)

#### Measuring System

- In-line measure heads or conventional measure heads
- Mechanical or electronic display meters

#### Generator

- 10 kW hydraulic drive generator

#### Grease Injector

- 34.5 MPa (5,000 PSI) hydraulic on-board grease injector system

### Van Dimensions

- 6.4 m L x 2.6 m W (252" x 102")

Van dimensions can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
7,200 kg (16,000 lb.)
- Rear Tandem Axles  
25,800 kg (57,000 lb.)

### Winch Hoist Specification

#### CA2-720 Series Drawworks

- Two independent drum drive systems: one four speed Funk transmission chain drive for the slickline drum; one direct mount two speed planetary gear box drive for the braided line drum

#### Drum Line Capacity

##### Slickline Split Drum

- 7,600 m (25,000') of 0.108" or 0.150"

##### Braided Line Split Drum

- 6,100 m (20,000') of 1/4" or 7/32"

#### Drum Drive Performance

- Drum Speed  
Up to 750 rpm (2,400 fpm)
- Pulling Power  
Up to 5,400 kg (12,000 lb.)

Additional drum drive system options available to best meet specific service work applications.





# K-WINCH Mast, Derrick and Crane Units

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The following series of mast and derrick truck units are base units where modifications or design changes can be made to better fit the wireline service applications.



N.B. The technical data contained within these pages was correct at the time of publication but should not be used as operational guidelines. For operational guidelines please refer to the operation and maintenance manual supplied with the equipment. Elmar reserves the right to change, alter, modify or improve specifications at any time without prior notice.

DynaWinch Product Line







# 4x2 Single Axle Logging Unit with 14m (45ft) Telescoping Mast and Single Drum



Model LM1-245 series is a single axle vehicle with an hydraulic telescoping mast that reaches to 14 m (45') for logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LM1-245 Series

### Features

- Operator control cabin is independent from deck and manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- Hydraulic telescoping mast has an extended reach of 14 m (45') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks & Spooler

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring System

- Integrated measure wheel and electronic load cell in spool carriage assembly
- Electronic display meters for line speed, depth and tension.

#### Generator

- 10 kW hydraulic drive generator

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

### Cab Dimensions

- 1.8m L X 2.5m W (72" X 98")

Cab configuration can be varied to best fit end user's requirements.

### Recommended Minimum Chassis Specifications

- Front Axle  
6,400 kg (14,000 lb.)
- Rear Tandem Axles  
9,530 kg (21,000 lb.)

### Winch Hoist Specification

#### LA1-400 Series Drawworks

- Direct drum-mounted two speed planetary gear box with two speed hydraulic motor drive system

#### Drum Line Capacity

- 6,100 m (20,000') of 5/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging. As low as 1 mpm (3 fpm).

Additional drum drive system options available to best meet specific service work applications.



# 6x4 Tandem Axle Mast Logging Unit with 14m (48ft) Telescoping Mast and Single Drum

Model LM2-248 series is a tandem axle unit with hydraulic telescoping mast for reach up to 14 m (48') for logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LM2-248 Series

### Features

- Operator control cabin is independent from deck and manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- Hydraulic telescoping mast has an extended reach of 14 m (48') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks & Spooling

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring

- Integrated measure wheel and electronic load cell in spool carriage assembly
- Electronic display meters for line speed, depth and tension

#### Generator

- 10 kW hydraulic drive generator

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

### Cab Dimensions

- 2.5 m L x 2.5 m W (98" x 98")

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### LA1-100 Series Drawworks

- Three speed Funk transmission chain drive with two speed hydraulic motor drive system

#### Drum Line Capacity

- 7,600 m (25,000') of 5/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 mpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has excellent low speed for logging. As low as 3 mpm (10 fpm).

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Mast Logging Unit with 17m (55ft) Telescoping Mast and Single Drum



Model LM2-255 series is a tandem axle unit with a 17 m (55') hydraulic telescoping mast and a safe working load of 5,450 kg (12,000 lb.) for logging and perforating service work applications.



This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.

## LM2-255 Series

### Features

- Operator control cabin is independent from deck and manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- Hydraulic telescoping mast has an extended reach of 17 m (55') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks and Spooling

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring System

- Integrated measure wheel and electronic load cell in spool carriage assembly
- Electronic display meters for line speed, depth and tension

#### Generator

- 10 kW hydraulic drive generator

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

### Cab Dimensions

- 2.5 m L x 2.5 m W (98" x 98")

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### LA1-400 Series Drawworks

- Direct drum-mounted two speed planetary gear box with two speed hydraulic motor drive system.

#### Drum Line Capacity

- 6,700 m (25,000') of 5/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 400 fpm (1,300 fpm)
- Pulling Power  
Up to 5,600 kg (12,500 lb.)

Has good smooth low speed for logging, as low as 1 fpm (3 fpm).

Additional drum drive system options available to best meet specific service work applications.



# 8x6 Tri-Axle Mast Logging Unit with 14m (48ft) Telescoping Mast and Single Drum

Model LM3-248 series is a tri-axle with hydraulic telescoping mast with reach to 14 m (48') for logging and perforating service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## LM3-248 Series

### Features

- Operator control cabin is independent from deck and manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- Hydraulic telescoping mast has an extended reach of 14 m (48') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks and Spooling

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring

- Integrated measure wheel and electronic load cell in spool carriage assembly
- Electronic display meters for line speed, depth and tension

#### Generator

- 10 kW hydraulic drive generator

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

### Cab Dimensions

- 2.5 m L x 2.6 m W (98" x 102")

Cab configuration can be varied to best fit end user's requirements.

### Recommended Minimum Chassis Specifications

- Front Axle  
7,200 kg (16,000 lb.)
- Rear Tandem Axles  
25,800 kg (57,000 lb.)

### Winch Hoist Specification

#### LA1-200 Series Drawworks

- Two speed hydraulic motor with single speed planetary gear box chain drive system

#### Drum Line Capacity

- 7,600 m (25,000') of 3/8" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 340 mpm (1,100 fpm)
- Pulling Power  
Up to 6,300 kg (13,800 lb.)

Has good smooth low speed for logging. As low as 6 mpm (20 fpm).

Additional drum drive system options available to best meet specific service work applications.

# Single Axle Mast Swab Rig with 9m (30ft) Stiff Mast and Single Drum



Model WM1-130 series is a single axle mast swab rig with one piece stiff mast with reach to 9 m (30') for swabbing and other specialized service work applications. This unit is designed to operate where a small footprint and low environmental impact is required and can be modified to perform other wireline service work applications.



## WM1-130 Series

### Features

- Hydraulic raising one piece stiff mast has reach of 9 m (30') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted
- Operator's controls in crew cab

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks and Spooling

- Multiple size single drum drawworks to fit desired cable sizes
- Overhead spooler
- Hydraulic spooler control

#### Options

- Operator control cabin
- Rear deck control panel
- AC inverter power

### Wireline Accessories Options (cont.)

#### Measuring

- Integrated measure head for speed, depth and weight
- Electronic display meters for line speed, depth and tension

#### Auxiliary Winches

- Hydraulic drive auxiliary winch

### Recommended Minimum Chassis Specifications

- Front Axle  
3,628 kg (8,000 lb.)
- Rear Tandem Axles  
6,123 kg (13,500 lb.)

### Winch Hoist Specification

#### LA1-300 Series Drawworks

- Direct drum-mounted single speed planetary gear box with two speed hydraulic motor drive system.

#### Drum Line Capacity

- 2,000 m (6,500') of 7/32" braided line

#### Drum Drive Performance

- Drum Speed  
Up to 271 mpm (888 fpm)
- Pulling Power  
Up to 2,293 kg (5,055 lb.)

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Mast Swab Rig with 13m (44ft) Stiff Mast and Single Drum

Model WM2-144 series is a tandem axle with one piece stiff mast with reach to 13 m (44') for swabbing and other specialized service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## WM2-144 Series

### Features

- Control cabin is independent from deck and manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- Hydraulic raising one piece stiff mast has reach of 13 m (44') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks and Spooling

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring

- Integrated measure wheel and electronic load cell in spool carriage assembly
- Electronic display meters for line speed, depth and tension

#### Generator

- 10 kW hydraulic drive generator

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

### Cab Dimensions

- 2.5 m L × 2.5 m W (98" × 98")

Cab configuration can be varied to best fit end user's requirements.

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### LLA1-300 Series Drawworks

- Direct drum-mounted single speed planetary gear box with two speed hydraulic motor drive system.

#### Drum Line Capacity

- 4,000 m (13,200') of 7/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 320 mpm (1,050 fpm)
- Pulling Power  
Up to 6,300 kg (13,800 lb.)

Has good smooth low speed for logging, as low as 6 mpm (19 fpm).

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Mast Swab Rig with 15m (48ft) Telescoping Mast and Single Drum



Model WM2-248 series is a tandem axle with hydraulic telescoping mast with reach to 15 m (48') for swabbing and other specialized service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform other wireline service work applications.



## WM2-248 Series

### Features

- Operator control cabin is independent from deck and manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- Hydraulic telescoping mast has an extended reach of 15 m (48') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks and Spooling

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring

- Integrated measure wheel and electronic load cell in spool carriage assembly
- Electronic display meters for line speed, depth and tension

#### Generator

- 10 kW hydraulic drive generator

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

### Cab Dimensions

- 2.5 m L × 2.5 m W (98" × 98")

Cab configuration can be varied to best fit end user's requirements.

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### WA1-300 Series Drawworks

- Direct drum-mounted single speed planetary gear box with two speed hydraulic motor drive system.

#### Drum Line Capacity

- 7,600 m (25,000') of 7/32" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 310 mpm (1,000 fpm)
- Pulling Power  
Up to 6,300 kg (13,800 lb.)

Has good smooth low speed, as low as 6 mpm (19 fpm).

Additional drum drive system options available to best meet specific service work applications.



# 6×4 Tandem Axle Derrick Heavy Duty Swab Unit with 14m (45ft) Derrick and Single Drum Drawworks



Model WD2-245 series is a tandem axle one piece raising derrick option for heavy duty logging and swabbing service work applications. This logging unit comes with heavy rated capacity derrick, climate-controlled operator's cabin and tool storage compartments. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified for slant hole operations.



## WD2-245 Series

### Features

- Control cabin is independent from deck and manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- One piece derrick with raised reach of 13.7 m (45') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks and Spooling

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring

- Integrated measure wheel and electronic load cell in spool carriage assembly
- Electronic display meters for line speed, depth and tension

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

#### Generator

- 10 kW hydraulic drive generator

### Cab Dimensions

- 2.5 m L × 2.5 m W (98" × 98")

Cab configuration can be varied to best fit end user's requirements.

### Recommended Minimum Chassis Specifications

- Front Axle  
7,200 kg (16,000 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### LA1-300 Series Drawworks

- Direct drum-mounted single speed planetary gear box with two speed hydraulic motor drive system.

#### Drum Line Capacity

- 4,000 m (13,200') of 1/2" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 320 rpm (1,050 fpm)
- Pulling Power  
Up to 6,300 kg (13,800 lb.)

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Derrick Heavy Duty Swab Rig with 14m (45ft) Derrick and Single Drum Drawworks



Model WD2-345 series swab rig is a tandem axle one piece raising derrick unit for heavy duty swabbing service work applications. This swab rig comes with heavy rated capacity derrick, climate-controlled operator's cabin and tool storage compartments. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified for slant hole operations.



## WD2-345 Series

### Features

- Control cabin is mounted on top of rear deck, manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- One piece derrick with raised reach of 14 m (45') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks and Spooling

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring

- Integrated measure wheel and electronic load cell in spool carriage assembly
- Electronic display meters for line speed, depth and tension

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

#### Generator

- 10 kW hydraulic drive generator

### Cab Dimensions

- 2.4 m L × 1.8 m W (96" × 72")

Cab configuration can be varied to best fit end user's requirements.

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

### Winch Hoist Specification

#### LA1-200 Series Drawworks

- Two speed hydraulic motor with single speed planetary gear box chain drive system

#### Drum Line Capacity

- 4,000 m (13,200') of 1/2" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 340 rpm (1,100 fpm)
- Pulling Power  
Up to 9,000 kg (20,000 lb.)

Additional drum drive system options available to best meet specific service work applications.



# 8×6 Tri-Axle Heavy Duty Swab Rig with 15m (48ft) Derrick and Single Drum Drawworks

Model WD3-348 series swab rig unit is a tri-axle one piece raising derrick unit for heavy duty swabbing service work applications. This swab rig comes with heavy capacity rated derrick, operator's cabin and tool storage compartments. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified for slant hole operations.



## WD3-348 Series

### Features

- Operator control cabin is mounted on top of rear deck, manufactured from 100% aluminium
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- One piece hydraulic raising derrick with raised reach of 15 m (48') from crown-to-ground
- Hydraulic downrigger cylinders incorporated in rear bumper
- Optimized external storage compartments and tool racks
- Prepped, primed and painted

#### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks and Spooling

- Multiple sized single drum drawworks to fit desired cable sizes
- Integrated spooler system in A-frame
- Hydraulic spooler control

### Wireline Accessories Options (cont.)

#### Measuring

- Integrated measure wheel and electronic load cell in spooler carriage assembly
- Electronic display meters for line speed, depth and tension

#### Auxiliary Winch

- Hydraulic drive auxiliary winch

#### Generator

- 10 kW hydraulic drive generator

### Cab Dimensions

- 2.8 m L × 1.8 m W (120" × 72")

Cab configuration can be varied to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
7,260 kg (16,000 lb.)
- Rear Tandem Axles  
26,300 kg (58,000 lb.)

### Winch Hoist Specification

#### LA1-200 Series Drawworks

- Two speed hydraulic motor with single speed planetary gear box chain drive system

#### Drum Line Capacity

- 3,700 m (12,000') of 9/16" e-line

#### Drum Drive Performance

- Drum Speed  
Up to 340 rpm (1,100 fpm)
- Pulling Power  
Up to 9,000 kg (20,000 lb.)

Additional drum drive system options available to best meet specific service work applications.

# Single Axle Light Duty Logging Unit with Rear Articulated Crane



Model LC1-200 series is a single axle wireline unit for logging service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform slickline service work applications.



## LC1-200 Series

### Features

- Integrated control cabin and rear deck
- Operator's control cabin manufactured from 100% aluminium
- External storage compartments
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- Rear-mounted hydraulic boom crane
- Rear outrigger stabilizers
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple sized drum drawworks to fit desired e-line

#### Spooling

- Linear bar spooler systems or overhead spooling system

### Wireline Accessories Options (cont.)

#### 120AC Power Supply

- One or two 2,800 W inverters for AC power

#### Measuring

- In-line measure head
- Electronic display meters for line speed, depth and tension

#### Crane

- Telescoping crane capacity depends on truck chassis selection

### Recommended Minimum Chassis Specifications

- Ford F550
- GM 5500
- Dodge 5500

### Winch Hoist Specification

#### LA1-300 Series Drawworks

- Direct drum-mounted single speed planetary gear box with two speed hydraulic motor drive system.

#### Drum Line Capacity

- 2,000 m (6,500') of 3/16" four conductor e-line

#### Drum Drive Performance

- Drum Speed  
Up to 36 mpm (118 fpm)
- Pulling Power  
Up to 1,860 kg (4,100 lb.)

Has good smooth low speed. As low as 3 mpm (19 fpm).

Additional drum drive system options available to best meet specific service work applications.

# 6×4 Tandem Axle Logging/Slickline Crane Unit with Rear Boom Crane and Wireline Swivel Cabin



Model LC2-600 series is a tandem axle combination crane and wireline unit for logging service work applications. This unit is designed to operate in arctic, desert and tropical oilfield environments and can be modified to perform slickline service work applications.



**LC2-600 Series/SC2-620/CC2-620**

## Features

- Integrated swivel operator's control cabin and drawworks compartment
- 25° rotating cabin and drawworks compartment
- External storage compartments
- 100% aluminium operator's control cabin section
- All-weather thermal-insulated cabin with climate-controlled interior
- Ergonomically designed control panel
- Low noise level
- Rear-mounted hydraulic boom crane
- Rear and front outrigger cylinders
- Prepped, primed and painted

### Hydraulic System

- Heavy duty closed loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

## Wireline Accessories Options

### Drawworks

- Multiple sized drum drawworks to fit desired e-line sizes

### Spooling

- Linear bar spooler systems or overhead spooling system

### Generator

- 10 kW hydraulic drive generator

## Wireline Accessories Options (cont.)

### Measuring

- Measure head
- Electronic display meters for line speed, depth and tension

### Boom Crane

- Boom reach depending on crane option
- 10, 12, 15, 18 and 20 ton options

## Swivel Cabin Dimensions

- 3.8 m L × 2.3 m W (150" × 92")

Cab configuration can be varied to best fit end user's requirements.

## Recommended Minimum Chassis Specifications

- Front Axle  
7,200 kg (16,000 lb.)
- Rear Tandem Axles  
18,100 kg (40,000 lb.)

## Winch Hoist Specification

### LA1-300 Series Drawworks

- Direct drum-mounted single speed planetary gear box with two speed hydraulic motor drive system.

### Drum Line Capacity

- 7,600 m (25,000') of 7/32" e-line

### Drum Drive Performance

- Drum Speed  
Up to 350 mpm (1,150 fpm)
- Pulling Power  
Up to 4,400 kg (9,700 lb.)

Has good smooth low speed. As low as 6 mpm (19 fpm).

Additional drum drive system options available to best meet specific service work applications.

# 4 x 2 Single Axle Slickline Crane Unit Articulating Crane, Van Body and Drawworks



Model SC1-400 series is a single axle combination crane and wireline unit for slickline service work applications. This unit is designed to operate in an oilfield environment including arctic, desert and tropical conditions and can be modified to perform other wireline service work applications.



## SC1-400 Series

### Features

- Unit has the 120 series van body design with small radius rear corner body style with tarpaulin roof cover over drawworks compartment
- 100% aluminium operator's control cabin section
- All weather thermal insulated cabin with all weather climate controlled interior
- Generous quantity of external storage compartments and racks
- Ergonomic design control panel
- Low noise level
- Rear articulating hydraulic crane
- Rear hydraulic out rigger stabilizers
- Prepped, primed and painted

#### Hydraulic System

- HD close-loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple size drum drawworks to fit desired quantity of .092" or .108" slickline sizes

#### Spooling

- Linear bar spooler systems

### Wireline Accessories Options (cont.)

#### Measuring

- In-line measure heads or conventional measure heads
- Mechanical or Electronic display meters

#### 110V AC Power:

- 3000 watt inverter AC system
- 6000 watt inverter AC system
- 10 kw hydraulic drive generator

#### Drop Spools:

- Quick removable drop off drum spool system

### Van Dimensions

- 4.29m L x 2.48m W (169 in L x 98 in W)

Van dimensions may vary to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,300 kg (14,000 lbs)
- Rear Axle  
9,530 kg (21,000 lbs)

### Winch Hoist Specification

#### SA1-200-D Series Drawworks:

- 2 Spd planetary gear box chain drive with hydraulic motor Drive System with drop spool attachment

#### Drum Line Capacity:

- Slickline Drum: .108"
- 7,600 M (25,000 ft)

#### Drum Drive Performance:

- Drum Speed  
Up to 500 mpm (1,650 fpm)
- Pulling Power  
Up to 4,000 kg (9,000 lbs)

#### Drop Spool Attachment:

- Independent hydraulic drive motor with quick disconnect coupling on drop spool, 3,000m of .092" line.

### Crane Capacity

- Model 805-4S - 4 sections
- Load max. outreach 360kg
- Vertical reach of 12 m (39ft.)
- Horizontal reach of 9 m (29ft.)

# 4 x 2 Single Axle Slickline Crane Unit Rear Boom Crane, Van Body and Drawworks



Model SC1-700 series is a single axle combination crane and wireline unit for slickline service work applications. This unit is designed to operate in an oilfield environment including arctic, desert and tropical conditions and can be modified to perform other wireline service work applications.



## SC1-700 Series

### Features

- Unit has the 160 series van body design with stepped down enclosed roof style over drawworks with double rear doors
- 100% aluminium operator's control cabin section
- All weather thermal insulated cabin with all weather climate controlled interior
- Generous quantity of external storage compartments and racks
- Ergonomic design control panel
- Low noise level
- Rear corner mount hydraulic telescoping boom crane
- Rear hydraulic out rigger stabilizers
- Prepped, primed and painted

#### Hydraulic System

- HD close-loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple size drum drawworks to fit desired quantity of .092", .108" or .125" slickline sizes

#### Spooling

- Linear bar spooler systems

### Wireline Accessories Options (cont.)

#### Measuring

- Measure head
- Electronic display meters for line speed, depth and tension

#### Generator:

- 10 kw hydraulic drive generator

#### Boom Crane:

- Boom vertical reach 13.7m (45 ft) horizontal 11.9m (39 ft)
- Crane capacity 3,600 to 250 kg

### Cab Dimensions:

- 4.39m L x 2.48m W (173 in L x 98 in W)

Cab configuration may vary to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lbs)
- Rear Axle  
9,500 kg (21,000 lbs)

### Winch Hoist Specification

#### SA1-310 Series Drawworks:

- Direct drum mount single spd planetary gear box with 2 spd hydraulic motor Drive System

#### Split Drum Line Capacity:

- Drum: .108" & .125" Line
- 7,600 M (25,000 ft) of ea.

#### Drum Drive Performance:

- Drum Speed  
Up to 620 mpm (2,030 fpm)
- Pulling Power  
Up to 2,300 kg (5,030 lbs)

Additional drum drive system options available to best meet specific service work applications.

# 6 x 4 Tandem Axle Slickline Crane Unit Rear Boom Crane and WL Swivel Cabin



Model SC2-600 series is a tandem axle combination crane and wireline unit for slickline service work applications. This unit is designed to operate in an oilfield environment including arctic, desert and tropical conditions and can be modified to perform logging service work applications.



## SC2-600 Series

### Features

- 600 series has integrated swivel operator's control cab and drawworks compartment
- 25 degrees rotating cabin and drawworks compartment
- External storage compartments
- 100% aluminium operator's control cabin section
- All weather thermal insulated cabin with all weather climate controlled interior
- Ergonomic design control panel
- Low noise level
- Rear mount hydraulic boom crane
- Rear and front out rigger cylinders
- Prepped, primed and painted

### Hydraulic System

- HD close-loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple size drum drawworks to fit desired slickline

#### Spooling

- Linear bar spooler systems or overhead spooling system

### Wireline Accessories Options (cont.)

#### Measuring

- Measure head
- Electronic display meters for line speed, depth and tension

#### Generator:

- 10 kw hydraulic drive generator

#### Boom Crane:

- Boom reach depending on crane option
- 10, 12, 15, 18 & 20 Ton options

### Swivel Cab Dimensions

- 3.81m L x 2.33m W (150 in L x 92 in W)

Cab configuration may vary to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
7,200 kg (16,000 lbs)
- Rear Tandem Axles  
18,100 kg (40,000 lbs)

### Winch Hoist Specification

#### SA1-200-D Series Drawworks:

- Two independent drum drive systems, each drum has a 2 spd planetary gear box chain drive with hydraulic motor Drive System

#### Drum Line Capacity:

- Slickline Drum: .108" & .125"
- 7,600 M (25,000 ft) of ea.

#### Drum Drive Performance:

- Drum Speed  
Up to 500 rpm (1,650 fpm)
- Pulling Power  
Up to 4,000 kg (9,000 lbs)

Additional drum drive system options available to best meet specific service work applications.



# 6 x 4 Tandem Axle Slickline Crane Unit Rear Boom Crane, Van Body and Drawworks



Model SC2-700 series is a tandem axle combination crane and wireline unit for slickline service work applications. This unit is designed to operate in an oilfield environment including arctic, desert and tropical conditions and can be modified to perform other wireline service work applications.



## SC2-700 Series

### Features

- Unit has the 160 series van body design with stepped down enclosed roof style over drawworks with double rear doors
- 100% aluminium operator's control cabin section
- All weather thermal insulated cabin with all weather climate controlled interior
- Generous quantity of external storage compartments and racks
- Ergonomic design control panel
- Low noise level
- Rear corner mount hydraulic telescoping boom crane
- Rear hydraulic out rigger stabilizers
- Prepped, primed and painted

### Hydraulic System

- HD close-loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations

### Wireline Accessories Options

#### Drawworks

- Multiple size drum drawworks to fit desired quantity of .092", .108" or .125" slickline sizes

#### Spooling

- Linear bar spooler systems

### Wireline Accessories Options (cont.)

#### Measuring

- Measure head
- Electronic display meters for line speed, depth and tension

#### Generator:

- 10 kw hydraulic drive generator

#### Boom Crane:

- Boom vertical reach 13.7m (45 ft) horizontal 11.9m (39 ft)
- Crane capacity 3,600 to 250 kg

### Cab Dimensions

- 5.48m L x 2.48m W (216 in L x 98 in W)

Cab configuration may vary to best fit end user's requirements

### Recommended Minimum Chassis Specifications

- Front Axle  
6,530 kg (14,400 lbs)
- Rear axle  
18,100 kg (40,000 lbs)

### Winch Hoist Specification

#### SA2-300 Series Drawworks:

- Two independent drum drive systems, each drum has a direct drum mount single spd planetary gear box with 2 spd hydraulic motor Drive System

#### Drum Line Capacity:

- Drum: .108" & .125" Line
- 7,600 M (25,000 ft) of ea.

#### Drum Drive Performance:

- Drum Speed  
Up to 620 mpm (2,030 fpm)
- Pulling Power  
Up to 2,300 kg (5,030 lbs)

Additional drum drive system options available to best meet specific service work applications.



# K-WINCH Wireline Skid Equipment

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The following series of wireline skid units are base units where modifications or design changes can be made to better fit the wireline service applications.



N.B. The technical data contained within these pages was correct at the time of publication but should not be used as operational guidelines. For operational guidelines please refer to the operation and maintenance manual supplied with the equipment. Elmar reserves the right to change, alter, modify or improve specifications at any time without prior notice.

DynaWinch Product Line





# Light Weight Single Drum Gas Engine Power Slickline Skid Unit

Model SS1-100 series self-contained slickline skid unit is designed to work in markets requiring economical, portable, compact, lightweight equipment for wireline survey service work on land based applications. The winch hydraulic system is powered by a 13 horse power gas engine providing a good range of drum speed and pulling power for most light duty wireline service work applications.



## SS1-100 Series

### Features

- Aluminium base frame all-welded construction
- Single point lift
- Light weight
- Compact design
- 13 horse power gas engine
- Closed loop hydraulic system
- Direct hydraulic motor drum drive
- Machined steel drum
- Mechanical disc brake
- Prepped, primed and painted
- Measuring head
- Depth mechanical counter
- Dual spring balanced manual hand spooler
- Minimum maintenance system
- Friendly control design for operations with operator's seat
- Non Zone applications

### Options

- Weight indicator gauge and load cell
- Forklift pockets under skid
- Choice of other power source (diesel engine)

### Winch Hoist Specification

Max Speed  
 Core 200 mpm (650 fpm)  
 Rim 360 mpm (1100 fpm)

Max Pull  
 Core 400 kg (900 lb.)  
 Rim 225 kg (500 lb.)

Drive specifications can be adjusted to best fit service applications.

### Drum Line Capacity

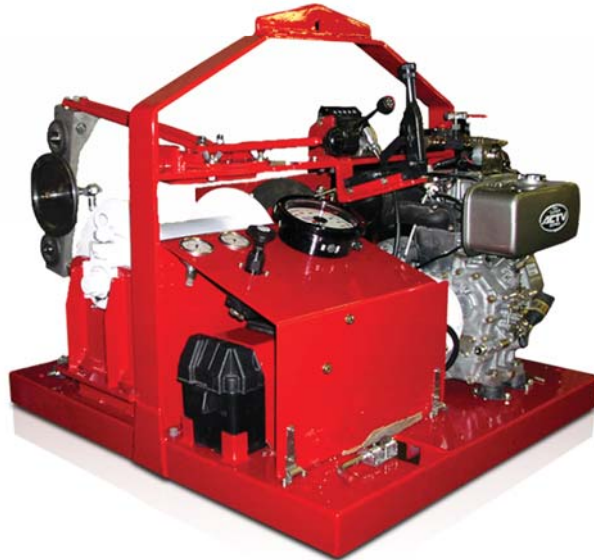
4,000 m (13,100') of 0.092"  
 or equivalent metric line sizes

### Skid Dimensions

- 1.0 m L x 1.0 m W x 1.0 m H (39" x 39" x 39")
- Dry Skid Weight
- 275 kg (600 lb.)

# Light Weight Single Drum Diesel Engine Power Slickline Skid Unit

Model SS1-110 series self-contained slickline skid unit is designed to work in markets requiring economical, portable, compact, lightweight equipment for wireline survey service work on land based applications. The winch hydraulic system is powered by an 8 horse power diesel engine providing a good range of drum speed and pulling power for most light duty wireline service work applications.



## SS1-110 Series

### Features

- Aluminium base frame all-welded construction
- Single point lift
- Light weight
- Compact design
- 8 horse power gas engine
- Closed loop hydraulic system
- Direct hydraulic motor drum drive
- Machined steel drum
- Mechanical disc brake
- Prepped, primed and painted
- Measuring head
- Depth mechanical counter
- Dual spring balanced manual hand spooler
- Minimum maintenance system
- Friendly control design for operations with operator's seat
- Non Zone applications

### Options

- Weight indicator gauge and load cell
- Forklift pockets under skid
- Choice of other power source (diesel engine)

### Winch Hoist Specification

Max Speed  
Core 145 mpm (475 fpm)  
Rim 245 mpm (800 fpm)

Max Pull  
Core 400 kg (870 lb.)  
Rim 240 kg (525 lb.)

Drive specifications can be adjusted to best fit service applications.

### Drum Line Capacity

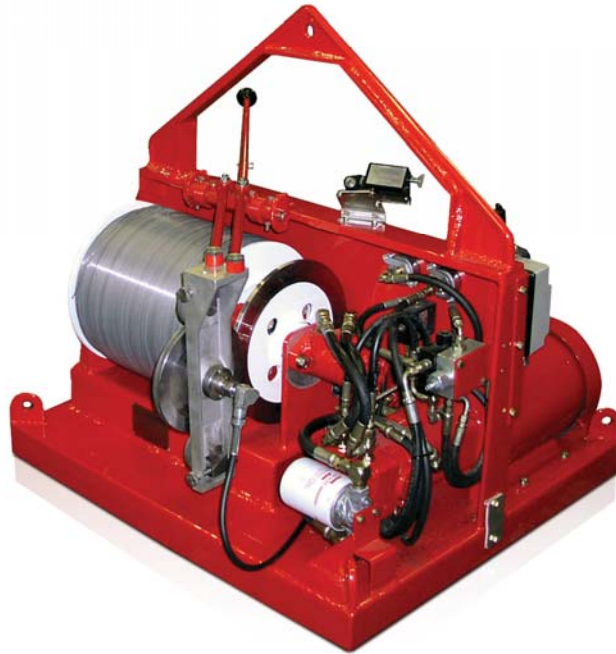
4,000 m (13,100') of 0.092"  
or equivalent metric line sizes

### Skid Dimensions

- 1.0 m L x 1.0 m W x 1.0 m H (39" x 39" x 39")
- Dry Skid Weight
- 275 kg (600 lb.)

# Light Weight Single Drum Electric Power Slickline Skid Unit

Model SS1-120 series electric powered slickline skid unit is designed to work in markets requiring economical, portable, compact, lightweight equipment for wireline survey service work on land based applications. The winch hydraulic system is powered by a 10 horse power electric motor providing a good range of drum speed and pulling power for most light duty wireline service work applications. Requires external electrical power source.



## SS1-120 Series

### Features

- Aluminium base frame all welded construction
- Single point lift
- Light weight
- Compact design
- 10 horse power electric motor
- Close-loop hydraulic system
- Direct hydraulic motor drum drive
- Machined steel drum
- Mechanical disc brake
- Prepped, primed and painted
- Measuring head
- Depth mechanical counter
- Dual spring balanced manual hand spooler
- Minimum maintenance system
- Friendly control design for operations
- None Zone applications

### Options

- Weight indicator gauge and load cell
- Forklift pockets under skid
- 50 or 60 Hz power source

### Winch Hoist Specification

Max Speed  
Core 125 mpm (400 fpm)  
Rim 400 mpm (1,300 fpm)

Max Pull  
Core 1,060 kg (2,300 lb.)  
Rim 635 kg (1,350 lb.)

Drive specifications can be adjusted to best fit service applications.

### Drum Line Capacity

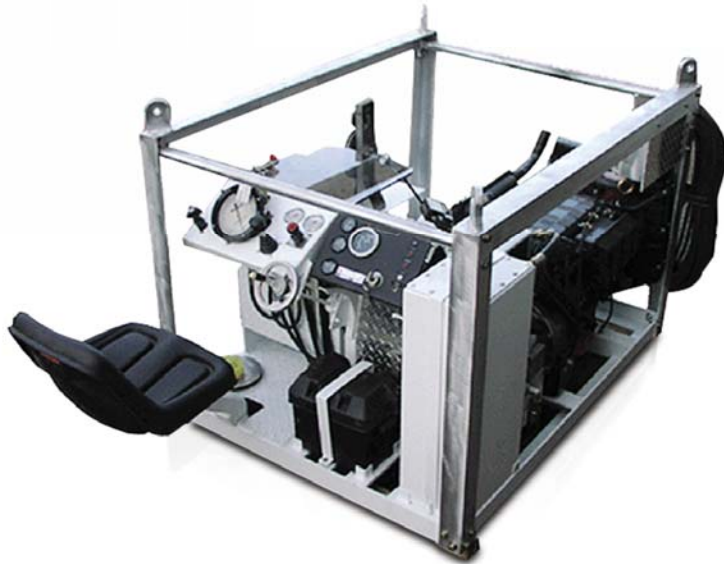
4,000 m (13,000') of 0.092"  
or equivalent metric line sizes.

### Skid Dimensions

- 1.0 m L x 1.0 m W x 1.0 m H (39" x 39" x 3")
- Dry Skid Weight
- 250 kg (550 lb)

# Medium Duty Single Drum Diesel Engine Power Slickline Skid Unit

Model SS1-200 series self-contained slickline skid unit is designed to work in markets requiring economical, portable, compact, lightweight equipment for medium duty wireline survey service work on land based applications. The winch hydraulic system is powered by a 26 horse power diesel engine providing a wide range of drum speed and pulling power for all medium duty wireline service work applications.



## SS1-200 Series

### Features

- Aluminium frame all-welded construction
- Four point lift
- Light weight
- Compact design
- 26 horse power diesel engine
- Closed loop hydraulic system
- Direct hydraulic motor drum drive
- Machined steel drum
- Mechanical disc brakes
- Prepped, primed and painted
- Measuring head
- Depth mechanical counter
- Linear bar hand spooler
- Minimum maintenance system
- Friendly control design for operations
- Non Zone applications

### Options

- Weight indicator gauge and load cell
- Heli-portable
- Forklift pockets under skid
- Quick removable drum spool

### Winch Hoist Specification

Max Speed  
 Core 274 mpm (900 fpm)  
 Rim 400 mpm (1,300 fpm)

Max Pull  
 Core 1,100 kg (2,400 lb.)  
 Rim 750 kg (1,650 lb.)

Drive specifications can be adjusted to best fit service applications.

### Drum Line Capacity

4,000 m (15,000') of 0.092"  
 3,500 m (11,500') of 0.108"  
 or equivalent metric line sizes

### Skid Dimensions

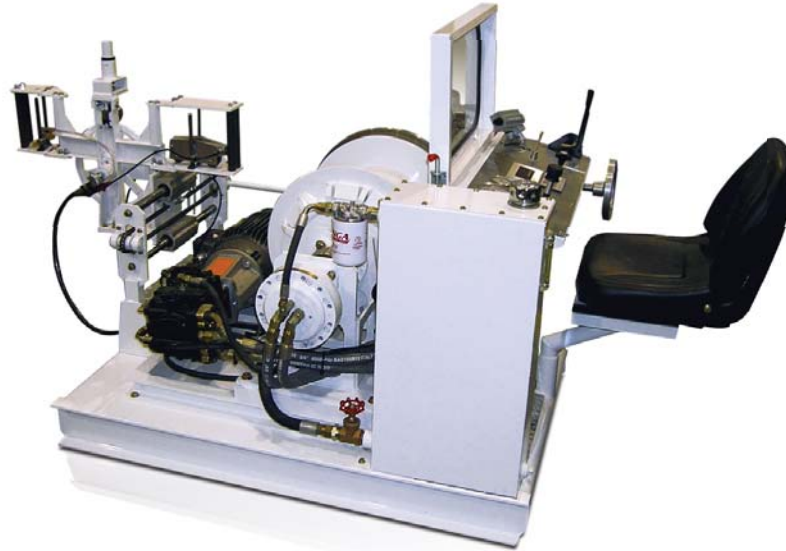
1.5 m L x 1.2 m W (60" x 48")

Dry Skid Weight  
 • 600 kg (1,350 lb.)

# Medium Duty Single Drum Electric Power Slickline Skid Unit



Model SS1-220 series electric power slickline skid unit is designed to work in markets requiring economical, portable, compact, lightweight equipment for light to medium duty wireline service work on land based applications. Requires external electric power source. The winch hydraulic system is powered by a 15 horse power electric motor providing a wide range of drum speed and pulling power for all light to medium duty wireline service work applications.



## SS1-220 Series

### Features

- Aluminium frame all-welded construction
- Light weight
- Compact design
- 15 horse power electric motor
- Closed loop hydraulic system
- Direct hydraulic motor drum drive
- Machined steel drum
- Mechanical disc brake
- Prepped, primed and painted
- Measuring head
- Depth mechanical counter
- Linear bar hand spooler
- Weight indicator gauge / load cell
- Minimum maintenance system
- Friendly control design for operations
- Forklift access from front or rear
- Non Zone applications

### Options

- Electronic measure system
- Crash cage and lifting system
- Non-II certified

### Winch Hoist Specification

Max Speed  
Core 329 mpm (1,070 fpm)  
Rim 540 mpm (1,770 fpm)

Max Pull  
Core 700 kg (1,540 lb.)  
Rim 545 kg (1,200 lb.)

Drive specifications can be adjusted to best fit service applications.

### Drum Line Capacity

7,600 m (25,000') of 0.092"  
5,400 m (18,000') of 0.108"

### Skid Dimensions

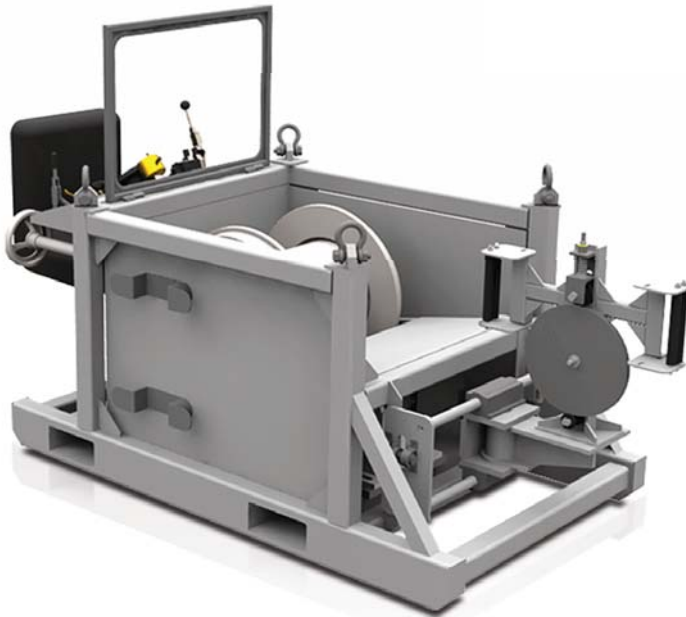
1.9 m L x 1.1 m W (72" x 42")

Dry Skid Weight  
• 715 kg (1,575 lb.)



# Two Piece Slickline Skid Package

Model SS2-200LT (DW Light) series two piece lightweight slickline skid package is designed to work in markets where full operational capabilities of slickline are required, but weight restrictions are a concern.



Each component has a lifting weight of less than 1,000 kg (2,200 lb.) with line (108 version) or 1,500 kg (3,300 lb.) (with line) in the 125 version, for a wide range of wireline work.

Designed to conform to DNV 2.7-3 certification and for work in Rig Safe environments. Zone II packages available.

## SS2-200LT Series

### Features

- All welded aluminium frame
- Integrated operator's control panel
- Four point lifting sling
- Integrated forklift pockets
- 58–75 horse power engine
- Closed loop hydraulic system
- Machine aluminium drum
- Mechanical rake band
- Primed and painted
- Measure head and mechanical depth read out
- Chain driven drums

### Options

- Weight indicator
- Zone II configuration
- Available in wire size 0.108" and 0.125"

### Winch Hoist Specification

Max Speed  
Core 249 mpm ( 816 fpm)  
Rim 409 mpm (1,341 fpm)

Max Pull  
Core 1,257 kg (2,771 lb.)  
Rim 765 kg (1,687 lb.)

### Drum Line Capacity

Drum designed to hold up to 7,500 m (25,000') of 0.092", 0.108" or 0.125" line.

### Winch Skid Dimensions

Storage (approximate):  
• 185 cm L × 117 cm W × 96 cm H  
(72 /12" × 46" × 38")

Deployed (approximate):  
• 254 cm L × 117 cm W × 150 H  
(100" × 46" × 59")

Wet Weight:  
• <1,000 kg (2,200 lb.)

### Power Pack Skid Dimensions

• 183 cm L × 99 cm W × 127 cm H  
(72" × 39" × 50")

Wet Weight  
• <1,000 kg (2,200 lb.) (58 hp)  
• <1,500 kg (3,300 lb.) (78 hp)

# Slickline Single Drum and Control Cab Skid with Diesel Engine Power Pack Skid

Model SS2-400 series two piece slickline skid package unit is designed to work in markets requiring portable, compact, lightweight equipment for slickline service work applications. The 45 horse power diesel power pack skid provides the hydraulic winch skid with a wide range of drum speed and pulling power for wireline service work applications.



**SS2-400 Series**

## Features

- Aluminium frame all-welded construction
- Integral enclosed operator cabin
- Four point lifting slings
- Integral forklift pockets
- Light weight
- Compact design
- 45 horse power diesel power pack
- Closed loop hydraulic system
- Direct drum planetary drive system
- Machined steel drum
- Mechanical band brake
- Prepped, primed and painted
- Measuring head
- Depth mechanical counter
- Linear bar hand spooler
- Minimum maintenance system
- Friendly control design for operations

## Options

- Weight indicator gauge and load cell
- Electronic measuring system
- Heli-portable
- Zone II specifications

## Winch Hoist Specification

Max Speed  
 Core 200 mpm (660 fpm)  
 Rim 550 mpm (1,800 fpm)

Max Pull  
 Core 1,500 kg (3,500 lb.)  
 Rim 860 kg (1,950 lb.)

Drive specifications can be adjusted to best fit service applications.

## Drum Line Capacity

7,500 m (25,000') of 0.092", 0.108" or 0.125" slickline

## Skid Dimensions

- Control Skid
- 2.0 m L x 1.7 m W (80" x 65")
- Dry Weight
- 900 kg (2,000 lb.)
- Power Skid
- 2.0 m L x 0.9 m W (80" x 36")
- Dry Weight
- 800 kg (1,750 lb.)

# Logging Single Drum Skid Unit Zone I Electric Power



Model SS1-500 series Zone I classification electric powered logging skid unit is designed to work on a drilling rig floor on land or off-shore applications.



The winch hydraulic system is powered by a 30 horse power electric motor providing a wide range of drum speed and pulling power for all wireline logging service work applications. Requires external electrical power source.

## LS1-500 Series

### Features

- Steel base frame all-welded construction
- Four point lift
- Compact design
- 30 horse power electric motor
- Closed loop hydraulic system
- Four speed transmission drum drive
- Machined steel drum
- Mechanical band brake
- Prepped, primed and painted
- Measuring head
- Depth mechanical counter
- Front dual bar mechanical hand spooler system
- Minimum maintenance system
- Friendly control design for operations

### Options

- Weight indicator gauge and load cell
- Forklift pockets under skid
- 50 or 60 Hz power source
- Planetary drum drive
- Zone I applications

### Winch Hoist Specification

Max Speed  
Core 190 mpm (620 fpm)  
Rim 430 mpm (1,410 fpm)

Max Pull  
Core 2200 kg (4,900 lb.)  
Rim 1,100 kg (2,400 lb.)

Drive specifications can be adjusted to best fit service applications.

### Drum Line Capacity

Typical drum design can hold up to 5,200 m (16,000') of 7/32" braided line or metric equivalent.

### Skid Dimensions

- 1.5 m L x 1.3 m W (60" x 50")

# Logging Single Drum with Control Cab Skid and Diesel Engine Power Pack Skid

Model LS2-400 series two piece logging skid package unit is designed to work in markets requiring portable, compact equipment for logging service work applications.

The 80 horse power diesel power pack skid provides the hydraulic winch skid with a wide range of drum speed and pulling power for all case or open hole logging service work applications and provides a climate-controlled operator's cabin.



## LS2-400 Series

### Features

- Aluminium frame all-welded construction
- Integral enclosed operator cabin
- Climate-controlled operator cabin
- Four point lifting slings
- Integral forklift pockets
- Light weight
- Compact design
- 80 horse power diesel power pack
- Closed loop hydraulic system
- Machined steel drum
- Air-activated band brake
- Prepped, primed and painted
- Minimum maintenance system
- Friendly control design for operations

### Options

- Measure head
- Weight indicator gauge and load cell
- Electronic measuring system
- Spooler system
- Heli-portable

### Winch Hoist Specification

Max Speed  
 Core 180 mpm (370 fpm)  
 Rim 430 mpm (880 fpm)

Max Pull  
 Core 12,000 kg (26,000 lb.)  
 Rim 7,000 kg (15,400 lb.)

Drive specifications can be adjusted to best fit service applications.

### Drum Line Capacity

Typical drum design can hold up to 7,600 m (25,000') of 7/32", 1/4" or 5/16" braided line or 15/32" multi-conductor or equivalent metric line sizes.

### Skid Dimensions

Control Skid  
 • 3.8 m L x 2.2 m W (150" x 87")

Power Skid  
 • 2.7 m L x 1.2 m W (108" L x 48")

# Double Drum Combination Skid with Control Cabin and Diesel Power Pack

Model CS1-400 series one piece combination skid unit is designed to work in markets requiring portable equipment for slickline and logging service work applications. The skid is designed to operate in harsh environments and can withstand severe transport handling conditions. The 110 horse power diesel engine provides hydraulic power to the winch drums and to the hydraulic generator which provides the operator's cabin with a climate-controlled environment. The winch drums can be designed with any combination of line for slickline, swabbing and logging service work applications.



## CS1-400 Series

### Features

- Steel frame all-welded construction
- Enclosed climate-controlled operator cabin
- Four point lifting slings
- Integral forklift pockets
- One piece self contained skid
- 110 horse power diesel power pack
- Closed loop hydraulic system
- Dual drum drawworks winch
- Prepped, primed and painted
- Minimum maintenance system
- Friendly control design for operations

### Options

- Measure head
- Weight indicator gauge and load cell
- Electronic measuring system
- Spooler system
- Hydraulic generator

### Skid Dimensions

5.3 m L x 2.4 m W (210" x 94")

### Braided Drum Winch Hoist Specification

Max Speed  
Core 180 mpm (370 fpm)  
Rim 430 mpm (880 fpm)

Max Pull  
Core 12,000 kg (26,000 lb.)  
Rim 7,000 kg (15,400 lb.)

Typical drum design can hold up to 7,600 m (25,000') of 7/32", 1/4" or 5/16" braided line or equivalent metric line sizes.

### Slickline Drum Winch Hoist Specification

Max Speed  
Core 420 mpm (1,400 fpm)  
Rim 600 mpm (2,000 fpm)

Max Pull  
Core 1,950 kg (4,300 lb.)  
Rim 1,350 kg (3,000 lb.)

Typical drum design can hold up to 7,600 m (25,000') of 0.092", 0.108" or 0.125" line or equivalent metric line sizes.

# Heavy Duty Pipeline Wireline Skid with Control Cabin and Diesel Power Pack

Model KS1-400 series heavy duty pipeline wireline skid unit is designed to work in markets requiring portable equipment for pipeline service work applications. The skid is designed to operate in harsh environments and can withstand severe transport handling conditions. The design allows the skid to be packed inside a 6.1 m (20') shipping container.



The 110 horse power diesel engine provides hydraulic power to the winch drum and spooler system. The control cabin comes with control panel, captain's chair, bench seat and storage cabinets. The heavy duty drawworks winch assembly is designed specifically for heavy line pull service applications.

## KS1-400 Series

### Features

- Steel frame all-welded construction
- Enclosed climate-controlled operator's cabin
- Four point lifting slings
- Integral forklift pockets
- One piece self contained skid
- 110 horse power diesel power pack
- Closed loop hydraulic system
- Heavy duty drawworks winch
- Prepped, primed and painted
- Minimum maintenance design
- Friendly control design for operations
- Heavy duty measure head, rated at 13,600 kg (30,000 lb.)
- Electronic measuring system

### Options

- 10 kW hydraulic generator
- Cabin air conditioning

### Skid Dimensions

Length: 5.3 m (210")  
Width: 2.1 m (84")  
Height: 2.2 m (86")

### Operator Cab Dimensions

Length: 1.6 m (61")  
Width: 1.9 m (73")  
Dry Weight: 7,500 kg (16,500 lb)

### Winch Hoist Specification

Max Speed  
Core 140 mpm (450 fpm)  
Rim 300 mpm (984 fpm)

Max Pull  
Core 18,600 kg (41,000 lb.)  
Rim 8,800 kg (19,400 lb.)

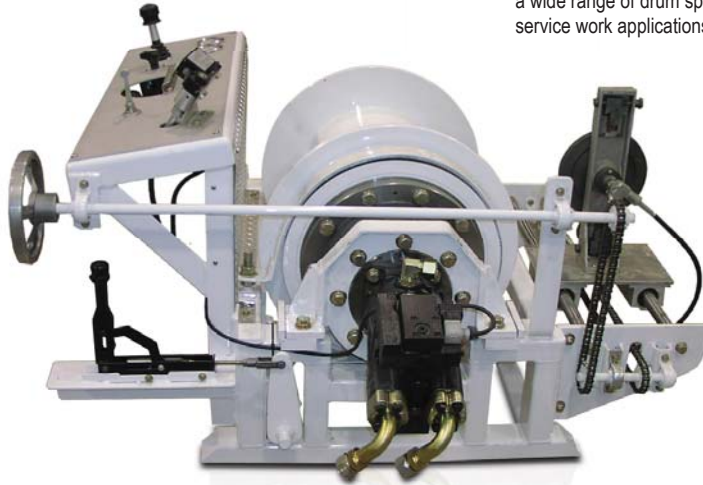
Typical drum design can hold up to 3,000 m (10,000') of 1/2" cable.

# Slickline Truck Mounted Skid Unit Single Drum Drawworks



Model SE1-320 series truck mounted self-contained Slickline skid unit, designed to work in markets requiring economical equipment for medium duty wireline service work on land based applications.

The winch hydraulic system is powered by the truck PTO system offering a wide range of drum speed and pulling power for all medium duty wireline service work applications.



## SE1-320 Series

### Features

- Modular steel skid design, can be removed from truck deck
- Below deck external storage available on truck deck
- Work vise mounted on truck deck
- Truck PTO power supply for hydraulic system
- Skid dash panel truck engine remote engine throttle
- Operator dash panel controls
- Prepped, primed and painted

#### Hydraulic System:

- HD close-loop hydraulic system
- Minimum maintenance design systems
- Friendly control design for operations
- Installed on truck chassis or sent out as a field installation package

### Wireline Accessories Options

#### Drawworks

- Multiple size double drum drawworks to fit desired .092" or .108" slickline line sizes

#### Spooling

- Linear bar spooler systems

### Winch Hoist Specification

#### Max Speed

Core	274 mpm (900 fpm)
Rim	400 mpm (1,300 fpm)

#### Max Pull

Core	1,100 kg (2,400 lbs)
Rim	750 kg (1,650 lbs)

Drive specifications can be adjusted to best fit service applications

### Drum Line Capacity

4,000 m (15,000 ft) of 0.092" line  
3,500 m (11,500 ft) of 0.108" line

### Skid Dimensions

- 1.5m L x 1.5m W (60 in L x 60 in W)

# One Piece Heavy Duty Wireline Swabbing Skid Unit with Single Drum



Model WS1-350 series one piece heavy duty wireline swabbing skid unit is designed to work in markets requiring portable, compact, heavy duty equipment for wireline swabbing service work on land-based applications. The winch hydraulic system is powered by a 180 horse power diesel engine providing a good range of drum speed and pulling power for wireline swabbing service work applications.



## WS1-350 Series

### Features

- Steel base frame all-welded construction
- Four point lift
- 180 horse power diesel engine
- Closed loop hydraulic system
- Planetary gear box chain drive and two speed hydraulic motor
- Machined steel drum
- Heavy duty band air brakes
- Prepped, primed and painted
- Measuring head
- Depth mechanical counter
- Overhead hydraulic spooler
- Minimum maintenance system
- Friendly control design for operations with operator's seat
- Non Zone applications

### Options

- Enclosed Control Cab

### Winch Hoist Specification

Max Speed  
Core 136 mpm (450 fpm)  
Rim 335 mpm (1,100 fpm)

Max Pull  
Core 5,350 kg (11,800 lb.)  
Rim 2,100 kg (4,600 lb.)

Drive specifications can be adjusted to best fit service applications.

### Drum Line Capacity

4,900 m (16,000') of 9/16" braided cable or equivalent metric line size

### Skid Dimensions

5.0 m L x 2.1 m W x 2.2 m H  
(198" x 84" x 86")

Approximate Operating Skid Weight

- 9,071 kg (20,000 lb.)





# Section 2: CONTROL

## Wellhead Control Equipment



### Elmar Product Lines

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#### Combined Grease and Hydraulic Control Units

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# CONTROL Hydraulic Control Units

## Hydraulic Control Units

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# Portable Hydraulic BOP Unit

This compact unit is ideal for opening and closing all sizes from single to quad hydraulic BOPs.



## Dimensions & Weights

**PART NUMBER L-691060**

(L) 40 cm, 16 in (W) 47 cm, 19 in (H) 40 cm, 16 in (Weight Dry) Dry 38 kg, 84 lbs (Weight Wet) 52 kg, 114 lbs

## Features & Benefits

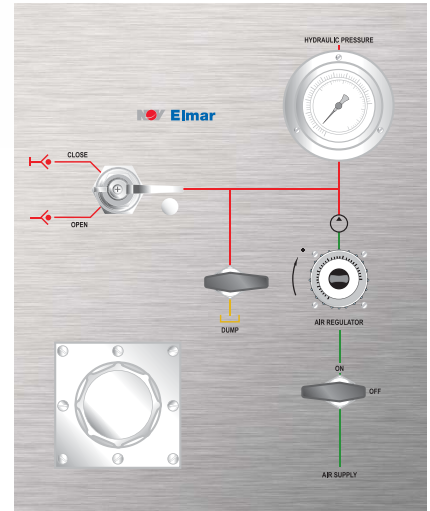
- Lightweight and economical
- Positive control - leaves no doubt whether BOP is open or closed
- Air driven hydraulic pump
- Machine engraved, stainless steel, colour coded panel
- High quality valves, gauges and fittings used throughout
- All stainless steel construction

## Options

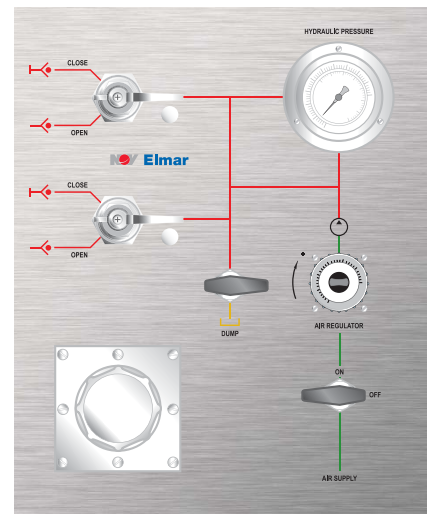
- Choice of hoses and fittings
- Choice of pump ratios
- Choice of controls from single to quad BOPs
- Steel frame and tank
- CE marked. ATEX approved



Part number L-691060



Control panel for part number L-691050 single BOP



Control panel for part number L-691060 dual BOP



Dual BOP part number L-690778

## Unit Options

Part Number	Description
L-691050	Single BOP
L-6901033322	Single BOP accumulator plus hand pump back-up
L-691060	Dual BOP
L-690778	Dual BOP accumulator plus hand pump back-up
L-6901010891	Quad BOP accumulator plus hand pump back-up

## Hose Options

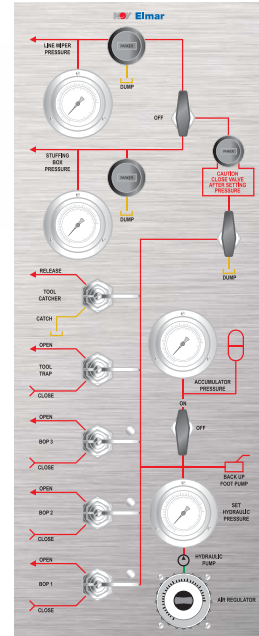
Part Number	Working Pressure	Description
L-691000	5,000 psi	1 x 1/4" I.D. (6.4mm) "Y" Hose BOP Open
L-691100	5,000 psi	1 x 1/4" I.D. (6.4mm) "Y" Hose BOP Close
L-690760	5,000 psi	2 x 50ft (15.2m) 1/4" I.D. (6.4mm) Hose
L-690615	5,000 psi	Twin Hose Assembly

# Portable Hydraulic Actuator

This portable hydraulic actuator is designed for those wireline pressure operations which do not require larger and more expensive Elmar units. This package offers a flexible, lightweight and cost effective means of controlling various combinations of wireline pressure control equipment.



Control panel for part number L-690341



## Dimensions & Weights

PART NUMBER L-690341

(L) 84 cm, 33 in (W) 33 cm, 12 in (H) 66 cm, 26 in (Weight) 95 kg, 210 lbs

## Features

- 5 gallon (20 litre) reservoir
- All stainless steel construction
- 2.6 gallon (10 litre) accumulator
- Machine engraved, stainless steel, colour coded panel
- Air driven hydraulic pump with back-up manual pump
- High quality valves, gauges and fittings used throughout

## Options

- Choice of panel controls
- Choice of hoses and fittings
- Choice of pump ratios
- Stainless steel back-up hand pump
- CE marked, ATEX approved



## Typical Panels (more available on request)

L-691110	L-690170
Line Wiper	Line Wiper
Tool Catcher	Stuffing Box
BOP 3	Tool Catcher
BOP 2	BOP 2
BOP 1	BOP 1
L-690341	L-691120
Stuffing Box	Stuffing Box
Tool Catcher	Tool Catcher
Tool Trap	Tool Trap
Line Wiper	BOP 2
BOP 3	BOP 1
BOP 2	
BOP 1	

## Hose Options

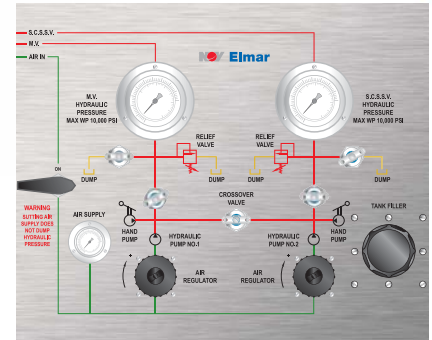
Part Number	Working Pressure	Description
L-691080	5,000 psi	1 x 25ft (7.6m) 1/4" I.D. (6.4mm) Hose
L-690760	5,000 psi	1 x 50ft (15.2) 1/4" I.D. (6.4mm) Hose
L-690740L075	5,000 psi	1 x 75ft (22.8m) 1/4" I.D. (6.4mm) Hose
L-690740	5,000 psi	1 x 100ft (30.4m) 1/4" I.D. (6.4mm) Hose
L-690740L120	5,000 psi	1 x 120ft (36.5m) 1/4" I.D. (6.4mm) Hose
L-691000	5,000 psi	1 x 1/4" I.D. (6.4mm) "Y" Hose BOP Open
L-691100	5,000 psi	1 x 1/4" I.D. (6.4mm) "Y" Hose BOP Close

# Dual Output 10,000 psi Control Unit

These multipurpose control units are used to actuate or pressure test master valves, sub surface safety valves, downhole safety valves and other hydraulically actuated equipment.



Side view



Control panel c/w stainless steel back-up hand pumps

## Dimensions & Weights

PART NUMBER L-691710

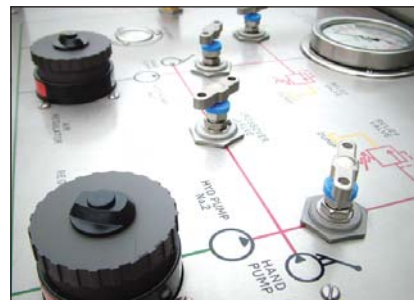
(L) 70 cm, 28 in (W) 50 cm, 20 in (H) 58 cm, 23 in (Weight) 65 kg, 143 lbs

## Features

- Dual outlets
- Two air driven hydraulic pumps
- All stainless steel construction
- 10,000 psi maximum output pressure
- Adjustable relief valves on each circuit
- Tank mounted return filter with bypass valve
- External drain facility to eliminate contaminated hydraulic fluid
- Stainless steel back-up hand pumps

## Options

- All required connectors can be supplied
- All hose configurations/pressures can be accommodated
- CE marked, ATEX approved
- Low pressure alarm system



Stand alone reel assembly L-690674  
These stand alone reel assemblies can be used to connect hydraulic lines between equipment.

## Hose Assembly Options

Part Number	Working Pressure	Description
L-690183L010	10,000 psi	2 x 10ft (3.1m) 1/4" I.D. (6.4mm) Hose
L-690183L050	10,000 psi	2 x 50ft (15.2m) 1/4" I.D. (6.4mm) Hose
L-690183L100	10,000 psi	2 x 100ft (30.4m) 1/4" I.D. (6.4mm) Hose

## Hose Reel Option

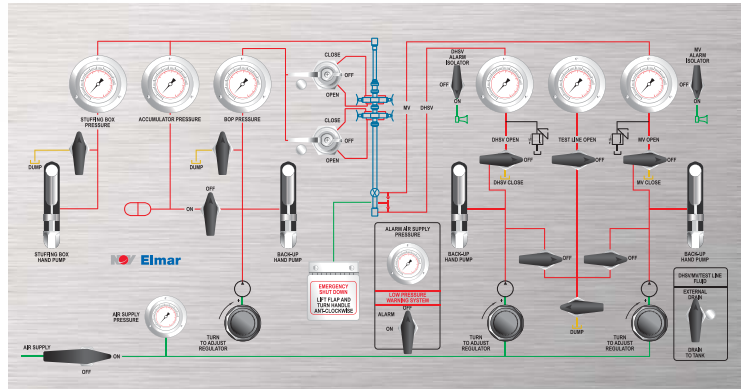
Part Number	Working Pressure	Description
L-690674	10,000 psi	1 x 150ft (45.7m) 1/4" I.D. (6.4mm) Hose





# DHSV/MV/2-BOP/SB Control Unit

This Elmar hydraulic unit has been developed to control a downhole safety valve, a master valve, two wireline BOPs, test line and stuffing box. The unit features an audible warning air horn which operates whenever the DHSV, MV or air lines fall below their preset pressures.



Control panel

## Dimensions & Weights

PART NUMBER L-690267V01

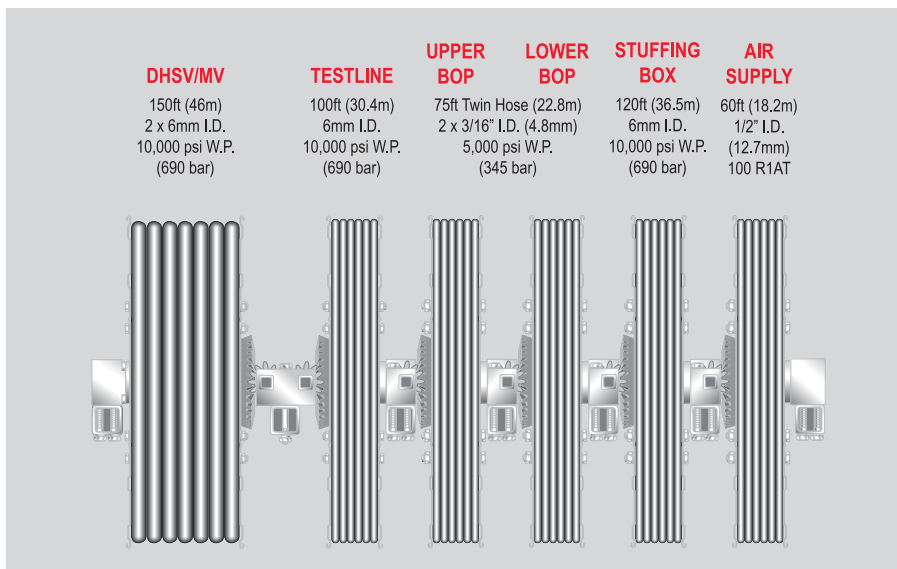
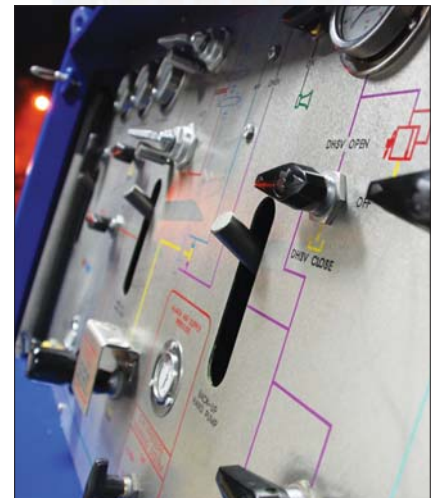
(L) 120 cm, 47 in (W) 85 cm, 33 in (H) 154 cm, 61 in (Weight) 900 kg, 1,984 lbs

## Features

- Alarm system
- Large hydraulic oil reservoir
- Relief valves on each circuit
- Machine engraved, stainless steel, colour coded panel
- Two 5 gallon (20 litre) accumulators
- Air driven hydraulic pumps with back-up stainless steel hand pumps
- Emergency shutdown facility
- Test line facility
- Hoses on Elmar "wet centre" reels

## Options

- Remote ESD system
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area
- 3-BOP version, part number L-6901010507
- Air operated master valve



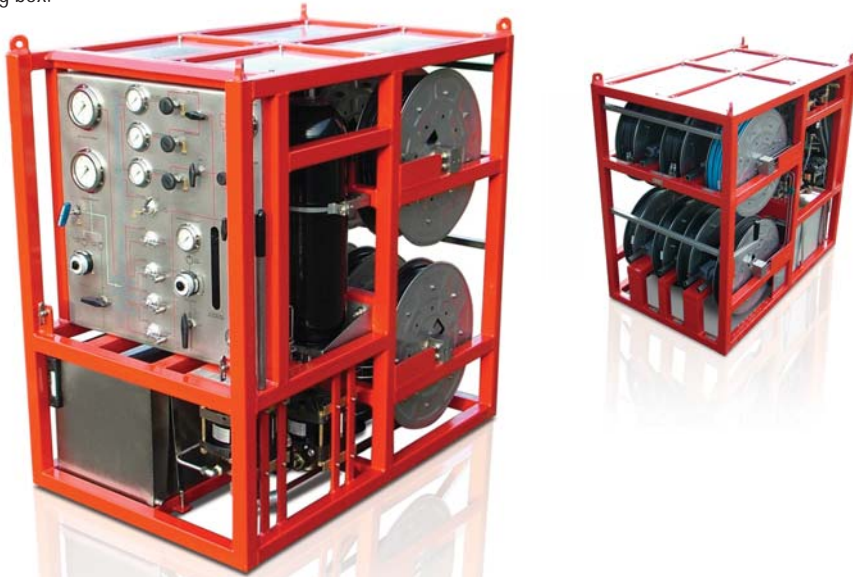
Typical reel assembly

Elmar Product Line



# 15 Series 3-BOP Hydraulic Control Module

This module and the 15 series grease control module form the controls for the 15 series pressure equipment system for up to 15,000 psi maximum wellhead pressure. This hydraulic module has been designed to operate 3 wireline BOPs, a tool trap, tool catcher, line wiper and a dual stuffing box.



## Dimensions & Weights

PART NUMBER L-697830

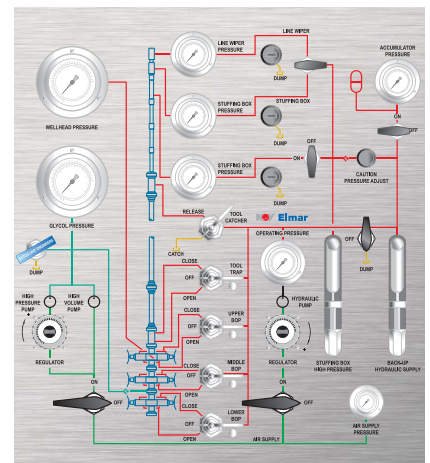
(L) 137 cm, 54 in (W) 85 cm, 33 in (H) 137 cm, 54 in (Weight) 770 kg, 1,700 lbs

## Features

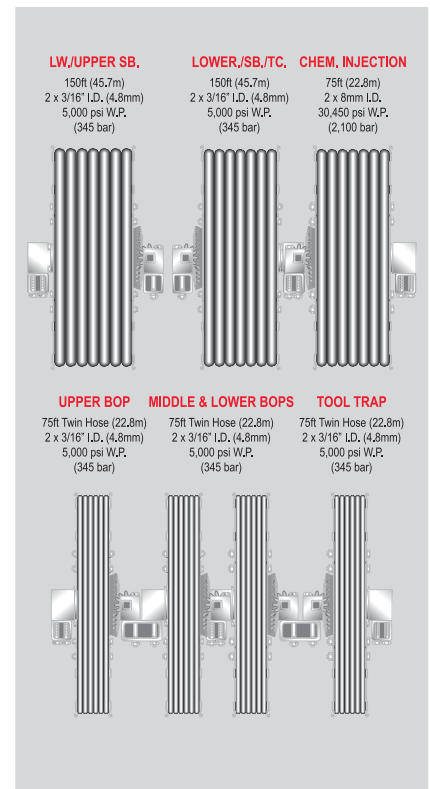
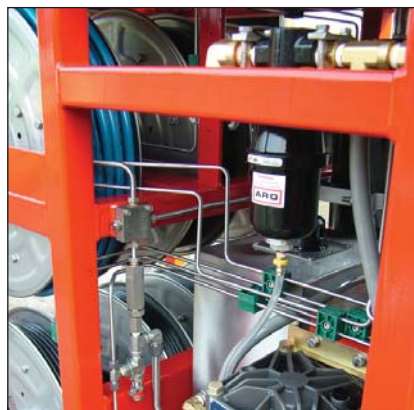
- Air driven hydraulic pump
- 5.3 gallon (20 litre) accumulator
- Hoses on Elmar "wet centre" reels
- Machine engraved stainless steel, colour coded panel
- Back-up stainless steel hand pumps
- Glycol/chemical injection facility
- Pressure test facility
- Compliments 15 Series Grease Module part number L-695740 (see page 137)

## Options

- Transport frame for pressure equipment (see page 218)
- Single stuffing box control and air reel, part number L-695800
- CE marked, ATEX approved



Control panel



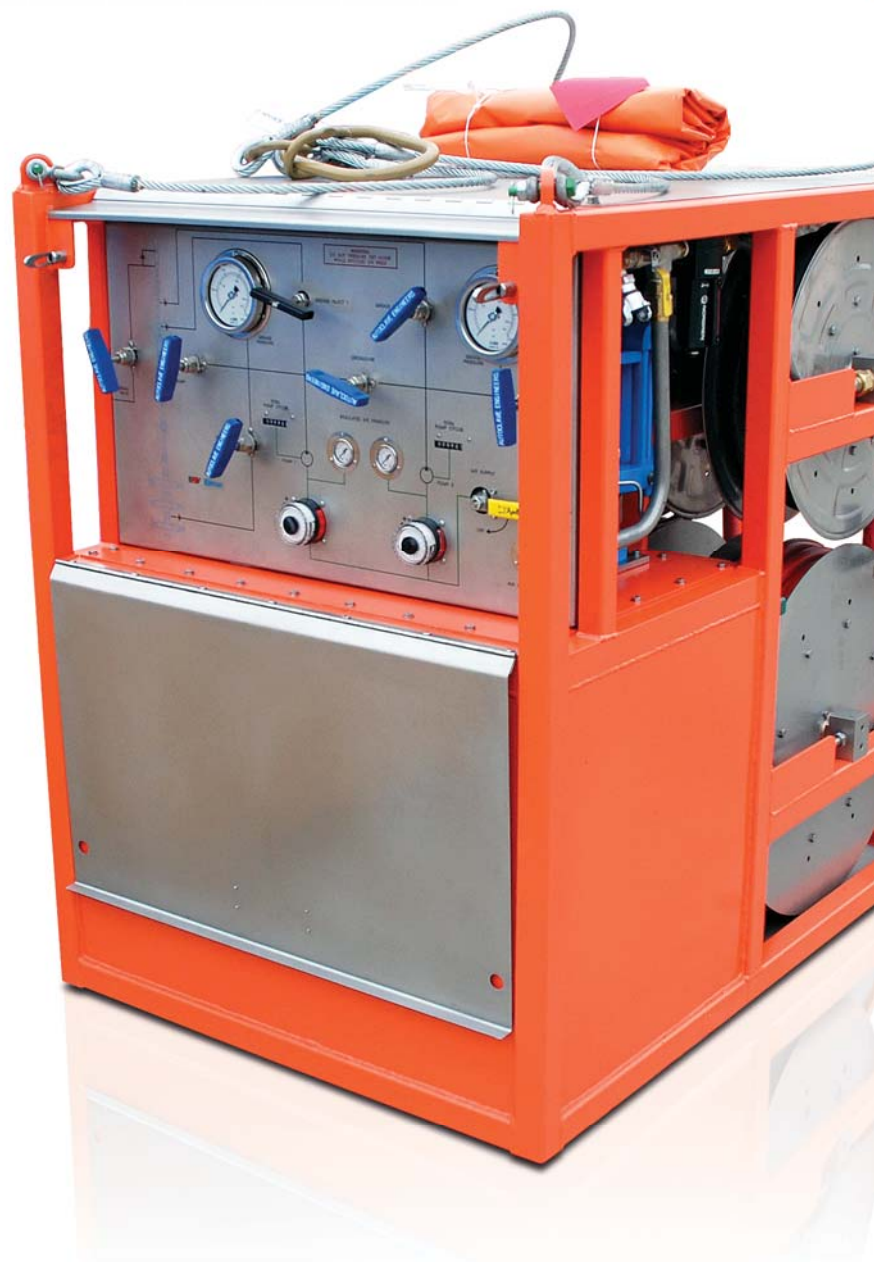
Typical reel assembly



# CONTROL Grease Control Units

## Grease Control Units

15 Series Grease Module . . . . . 137

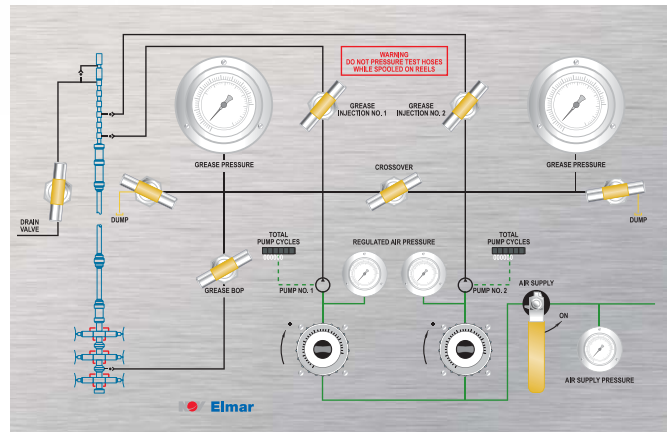


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# 15 Series Grease Module

This module and the 15 series hydraulic control module form the controls for the 15 series pressure equipment system for up to 15,000 psi wellhead pressure. Either module may be used separately.



Control panel

## Dimensions & Weights

PART NUMBER L-695740

(L) 137 cm, 54 in (W) 98 cm, 38 in (H) 130 cm, 51 in (Weight) 1,100 kg, 2,425 lbs

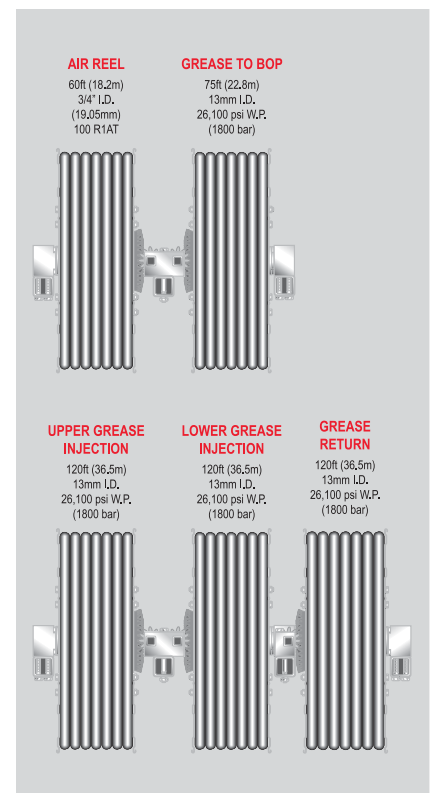
## Features

- Two air driven grease pumps 235:1
- Maximum grease output pressure 22,500 psi
- Hoses on Elmar "wet centre" reels
- Machine engraved, stainless steel, colour coded panel
- Large grease tank
- Two Grease Head and one BOP grease injection lines
- Individual pump stroke counters
- Storage locker
- Compliments 15 Series Hydraulic Module, part number L-697830 (see page 133)



## Options

- Transport frame for pressure equipment (see page 218)
- Grease transfer pump, part number L-698420 (see page 165)
- CE marked, ATEX approved



Typical reel assembly

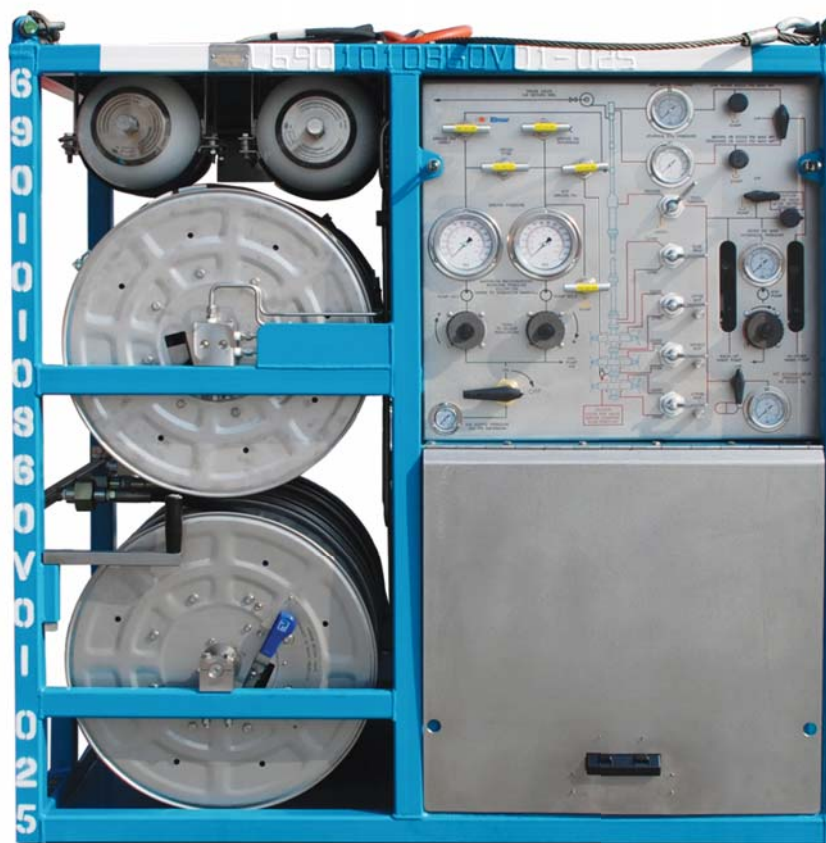


# CONTROL Combined Grease and Hydraulic Control Units



## Combined Grease and Hydraulic Control Units

10 Series 3-BOP (API 16D) Control Module . . . . .	141
5 Series "E-Lite" Control Module . . . . .	142
10 Series Diesel Driven BOP and Grease Control Module . . . . .	143
25D Diesel Driven BOP and Grease Control Module . . . . .	144



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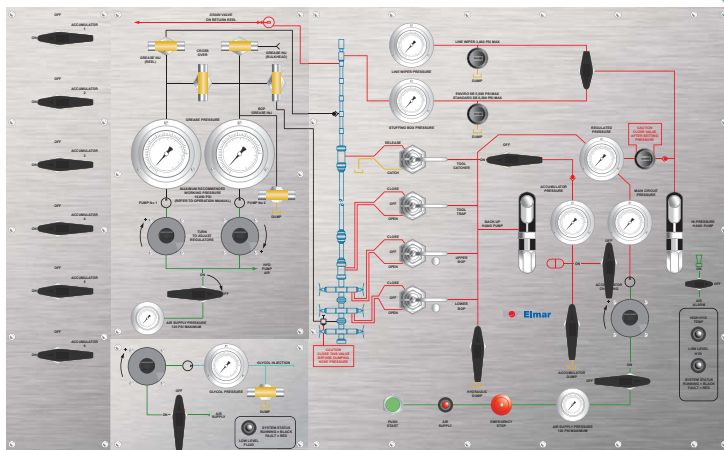




# 10 Series 3-BOP (API 16D) Control Module



This combination module is designed to operate 3 wireline BOPs, a tool trap, glycol injection/PTU (10,000 psi), stuffing box, line wiper and grease injection. It is suitable for well pressure up to 10,000 psi and is designed with reference to API 16D; a standard which includes maximum BOP closing times.



Control panel

## Dimensions & Weights

PART NUMBER L-6901051974

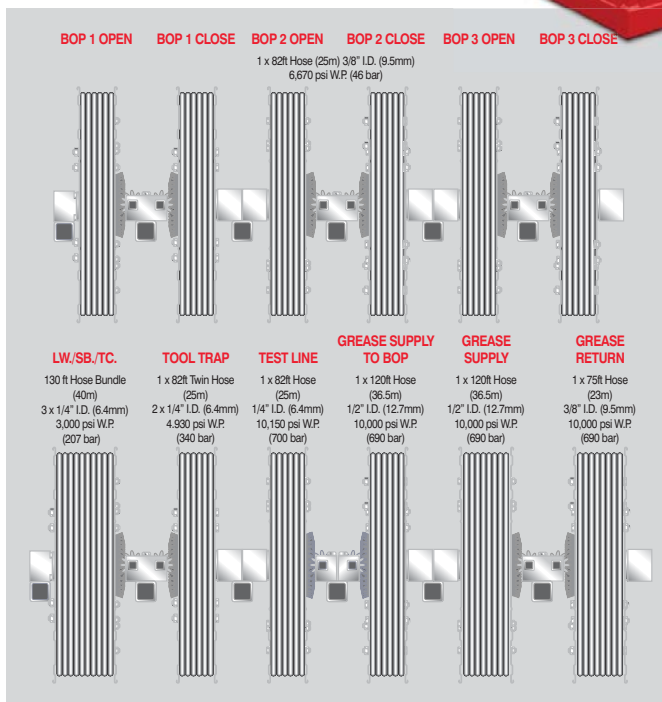
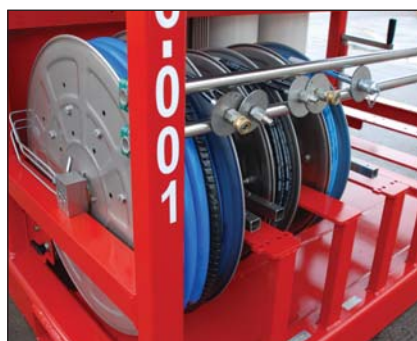
(L) 228 cm, 90 in (W) 163 cm, 64 in (H) 196 cm, 77 in (Weight) 3,500 kg, 7,716lbs (maximum figures)

## Features

- Air driven hydraulic pump
- Hoses on Elmar "wet centre" reels
- Machine engraved, stainless steel, colour coded panels
- Back-up stainless steel hand pumps
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area

## Options

- Steel or stainless steel frame option
- Fireproof hoses
- Glycol injection/PTU (10,000 psi)
- Grease injection (10,000 psi)
- Remote ESD system
- Hydraulic reel rewind



Maximum reel assembly configuration



# 5 Series “E-Lite” Control Module

This combination grease and hydraulic control module is designed to operate 3 wireline BOPs, a tool trap, tool catcher, stuffing box, line wiper and grease injection during wireline intervention up to 10,000 psi maximum wellhead pressure.



## Dimensions & Weights

PART NUMBER L-6901010860V01

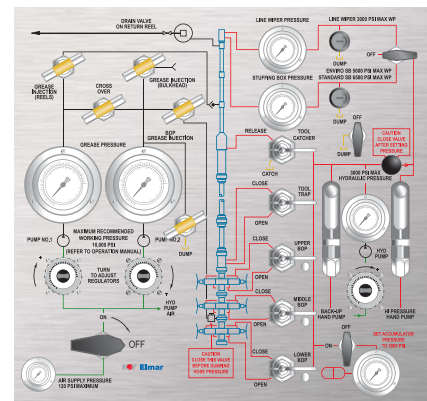
L) 146 cm, 58 in (W) 82 cm, 32 in (H) 147 cm, 59 in (Weight Dry) 920 kg, 2,024 lbs, (Weight Wet) 1,300 kg, 2,860 lbs

## Features

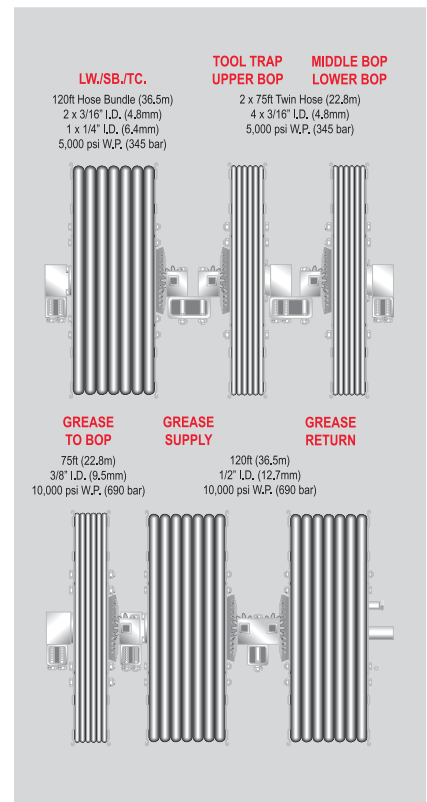
- Air driven hydraulic pump
- Two air driven 175:1 grease injection pumps
- Two x 10 litre accumulator
- Hoses on Elmar “wet centre” reels
- Machine engraved, stainless steel, colour coded panel
- Back-up stainless steel hand pumps
- Large grease tank with divider for use with two grease types
- Large bore grease return valve
- Frame designed to BS EN 12079-1 (2006)

## Options

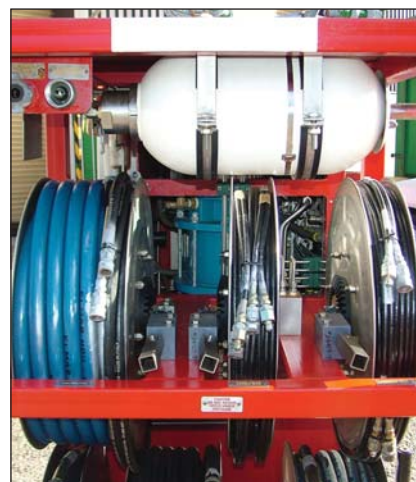
- Transport frame for pressure equipment (see page 217) Note: L-6901010860V02 not suitable for transport frames L-690598/690665
- Grease transfer pump L-698420 Wiwa 4:1 or L-840689 Alemite 5:1 (see page 165)
- Two air driven 85:1 grease injection pumps part number L-840880 (see page 165)
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area
- 120ft grease hose for second grease injection point L-6901007839



Control panel



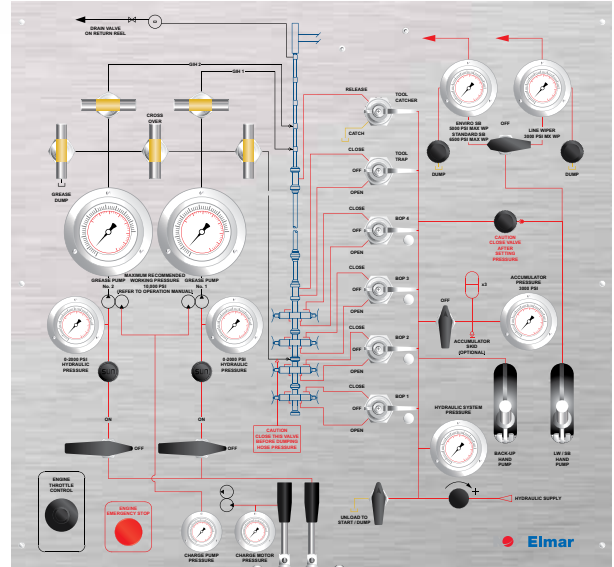
Typical reel assembly



# 10 Series Diesel Driven BOP and Grease Control Module



This diesel driven grease and hydraulic control module is designed to operate 3 or 4 BOPs, tool trap, tool catcher, stuffing box, line wiper, grease injection. This module is suitable for well pressure up to 10,000 psi.



Control panel with throttle control lever

## Dimensions & Weights

PART NUMBER L-6901048500V01

(L) 285 cm, 112 in (W) 154 cm, 61 in (H) 188 cm, 74 in (Weight) 3,650 kg, 8,047 lbs

## Features

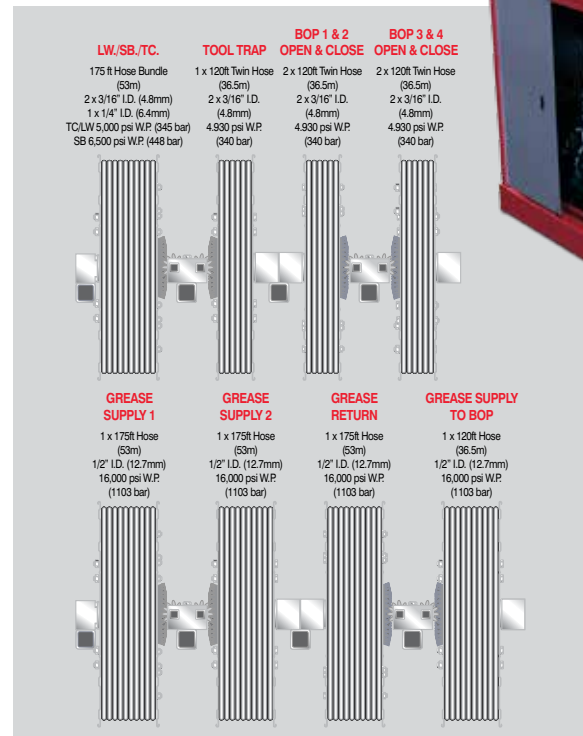
- Rigsafe, water cooled, electric start diesel engine
- Two WIWA hydraulically driven grease intensifiers each capable of delivering 1.2 US gal/min (4.6lpm) at 25 cycles/min
- 1 x 5.3 gallon (20 litre) accumulator and 2 x 9.8 gallon (37 litre) accumulators for BOP back-up supply
- Twin x 58 gallon (2 x 220 litres) grease tank for different viscosities
- Low fuel consumption
- Hoses on Elmar "wet centre" reels for grease supply and and return
- Machine engraved, stainless steel, colour coded panel
- Back-up stainless steel hand pumps
- Bulkhead for hydraulic outputs

## Options

- 15,000 psi version
- Low temperature kit (-40°C)
- Stainless steel panel covers
- Back-up air driven grease pump in place of one intensifier
- Steel, stainless steel or steel EN12079 certified frame
- Steel or stainless fuel and hydraulic tanks
- Grease recirculation/heating circuit
- Two auxiliary 3,000 psi lines via bulkhead
- Plug-in accumulator skid to meet API 16D closing times (30 seconds) on a 4" triple Elmar compact BOP
- Elmar "wet centre" reels for hydraulic lines

## Options (cont.)

- Powered reel rewind
- Work lights
- Wellhead pressure gauge



Maximum reel assembly configuration



# 25D Diesel Driven BOP and Grease Control Module



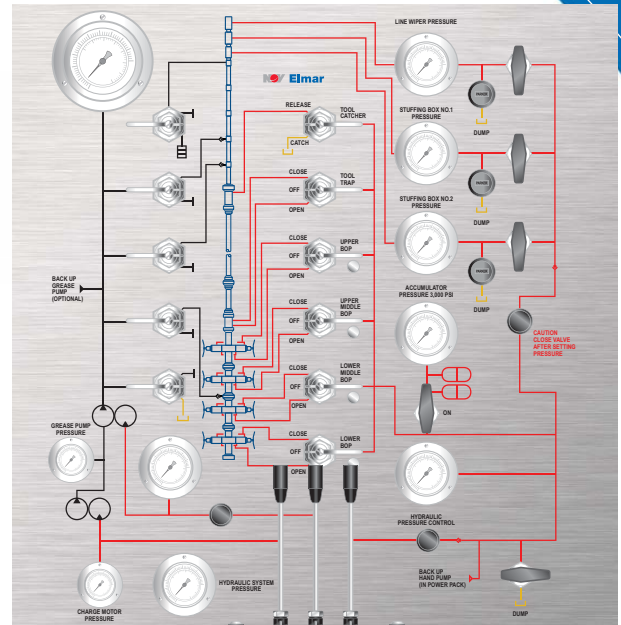
This 25,000psi working pressure diesel driven grease control module features an Elmar high pressure grease intensifier pump in a compact package. The intensifier delivers high flow rates at high pressures.



## Dimensions & Weights

PART NUMBER L-6901017786V06

(L) 274 cm, 108 in (W) 136 cm, 54 in (H) 192 cm, 76 in (Weight) 4,000 kg, 8,818 lbs



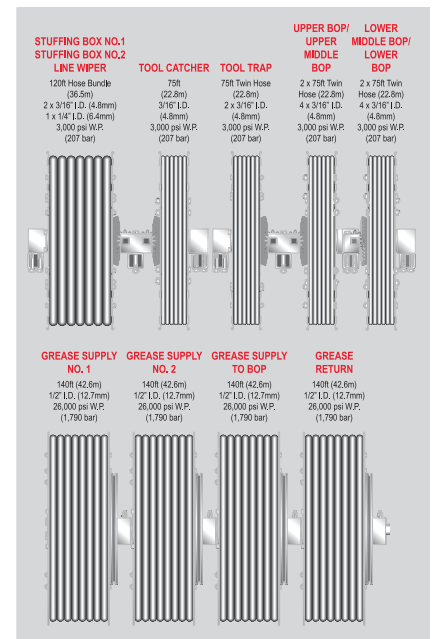
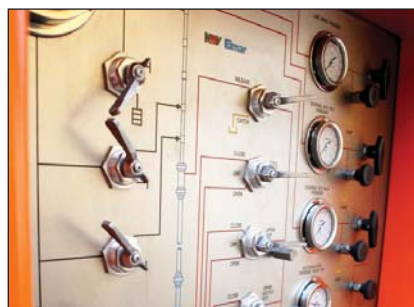
Control panel

## Features (L-6901017786V01)

- Maximum working pressure 25,000 psi (limit can be specified)
- Rigsafe, air cooled, electric start 44hp Deutz diesel engine, part number L-6901017786V04
- Elmar hydraulically driven grease intensifier pump capable of delivering 1.6 US gal/min (6lpm) at 56 strokes/min
- Air driven back-up 235:1 grease pump
- (2) grease supply outlets, 1 grease to BOP outlet, 1 grease return outlet
- 120 USgal (454 litre) grease capacity in twin tanks
- 36 USgal (135 litre) fuel tank capacity
- Elmar mimic panel for easy logical control
- DNV 2.7-1/BS EN12079 frame with full drip pan
- Operating temperature range -20°C to +50°C

## Options

- Low temperature kit (-40°C)
- Sound deadening panels for power pack
- **Variant V02:**  
As standard but including powered grease hose reels and storage cupboard
- **Variant V03:**  
As standard but including hydraulic control facility for quad BOP control, tooltrap, toolcatcher, dual stuffing box and line wiper. Accumulator storage for emergency BOP operation
- **Variant V04:**  
As V03 but including powered grease hose reels and manual hydraulic hose reels
- **Variant V06:**  
As V04 but suitable for use in hazardous areas up to ATEX Category 3 (Zone 2)



Typical reel assembly



Elmar Product Line



# CONTROL Pressure Testing Workshops

## Pressure Testing Workshops

Containerised Pressure Testing Workshop (Mobile) . . . . . 147



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# Containerised Pressure Testing Workshop (Mobile)



This Elmar Pressure Testing Workshop has been designed to provide a safe and controlled environment for pressure testing and maintenance operations. The workshop allows testing to be carried out on location or on a company base. The cabin gives the operator full control of testing and monitoring up to maximum 24,000 psi working pressure.



Workshop with test unit, Baker vice and chain hoist

## Dimensions & Weights

PART NUMBER L-6901013720

(L) 9.15 m, 30.01 ft (W) 2.44 m, 8.00 ft (H) 2.85 m, 9.35 ft (Weight) 18,000 kg, 39,672 lbs

## Features

- Max-Safe (24,000 psi WP) pressure test unit
- (4) x colour camera CCTV system and DVD recorder
- (3) x roof mounted air conditioners
- 10ft work bench complete with vice
- Removable Baker vice
- Chain hoist rated to (1) tonne
- 220V/110V electrical system
- Removable steel blast panels (internal)
- Door locks when pressure applied
- Warning light
- Operator's control cabin
- Designed, built and certified in accordance with DNV.2.7-1 (2007)
- Floor mounted test stump (removable)
- Internals lined with wood
- Fully load tested

## Max-Safe pressure test unit (24,000 psi) wall mounted panel

### Features

- Air driven high volume and high pressure pump systems
- 56.8 gallon (215 litre) stainless steel reservoir
- Wall mounted Elmar "wet centre" reel
- Diaphragm pump to return drained fluid to tank
- Electronic chart recorder

## Monitoring System

- (4) x colour camera CCTV system
- 24 hour DVD recorder
- Flat screen monitor



Roof mounted air conditioners



Wall mounted "Max-Safe" pressure test unit



Flat screen monitor and CCTV controls



CCTV camera





# CONTROL Test and Injection Units

## Test and Injection Units

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# Portable Glycol Injection and Pressure Test Unit



This Elmar compact stand-alone portable pressure test unit has been designed for glycol injection, or to pump water for pressure testing up to 10,000 psi.



## Dimensions & Weights

PART NUMBER L-697240-V02 (EUROPEAN CE COMPLIANT)

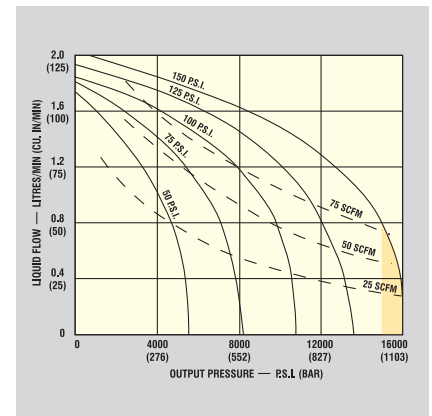
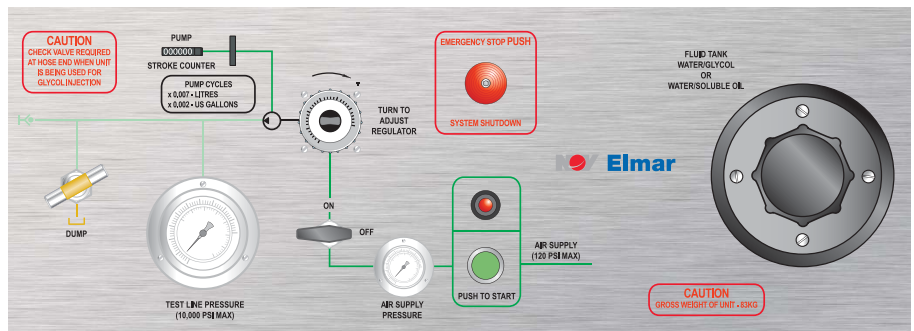
(L) 89 cm, 35 in (W) 31 cm, 12 in (H) 43 cm, 17 in (Weight Dry) 60 kg, 132 lbs (Weight Wet) 83 kg, 183 lbs

## Features

- 5.3 gallon (20 litre) stainless steel test fluid tank
- Machine engraved, stainless steel, colour coded panel
- Air driven high pressure pump
- Stroke counter to monitor injection rate
- CE marked, ATEX approved for use in a Category 3 (Zone 2) hazardous area

## Options

- 15,000 psi unit part number L-690736
- Non CE marked and non ATEX approved version
- 50ft hose assembly, part number L-690183L050
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area



Typical 10,000 psi pump chart

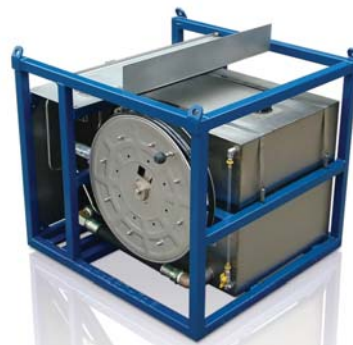
Elmar Product Line



# Portable 10,000 psi and 15,000 psi Pressure Test Units



This Elmar compact stand-alone portable pressure test unit has been designed to pump water, or glycol for pressure testing up to 10,000 psi.



## Dimensions & Weights

PART NUMBER L-696820

(L) 90 cm, 35 in (W) 95 cm, 37 in (H) 80 cm, 31 in (Weight) 217 kg, 477 lbs

## Features

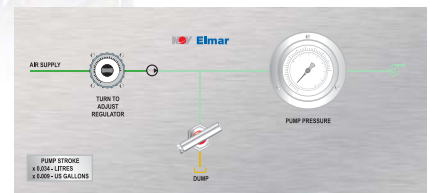
- 54 gallon (200 litre) stainless steel test fluid tank
- Machine engraved, stainless steel, colour coded panel
- 100ft test line hose on Elmar "wet centre" reel
- Air driven high pressure pump

## Options

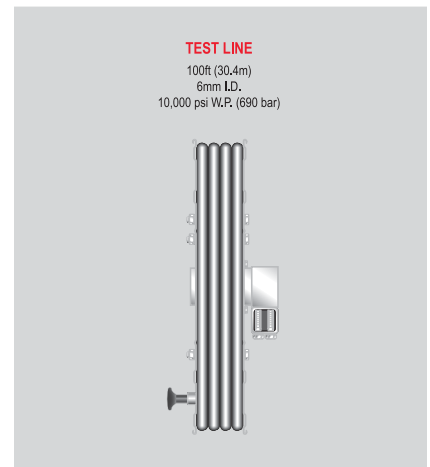
- 15,000 psi unit part number L-696830
- Methanol injection
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area



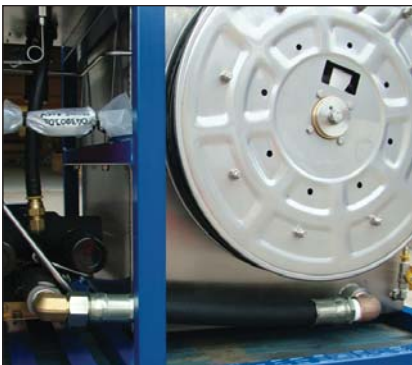
Test fluid tank and reel assembly



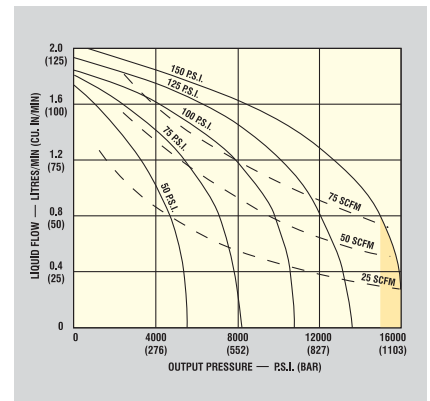
Control panel



Typical reel assembly



Control panel



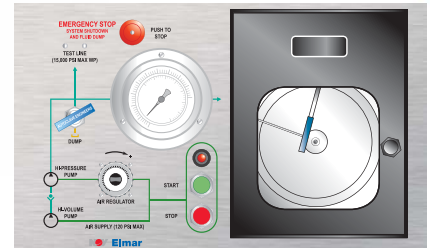
Typical 10,000 psi pump chart

# 700 Series Pressure Test Unit

This Elmar 700 series pressure test unit has been designed for pressure testing up to 22,500 psi. Two air driven pumps are provided; a volume pump for rapid filling and a high pressure pump. A chart recorder allows the pressure test to be recorded.



Part Number L-690240  
(European CE compliant option)



Control panel for part number L-690240 CE marked

## Dimensions & Weights

PART NUMBER L-690268/L-690240/L-690250

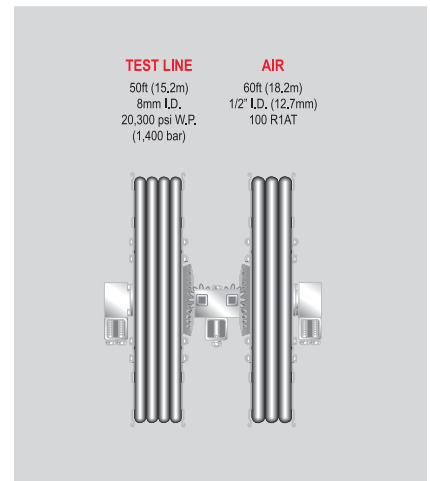
(L) 69 cm, 27 in (W) 76 cm, 30 in (H) 102 cm, 40 in (Weight) 190 kg, 420 lbs

## Features

- Machine engraved, stainless steel, colour coded panel
- 8" chart recorder with 2/8 hour mechanical clock
- Air driven high volume and high pressure pumps
- Hoses mounted on Elmar "wet centre" reels
- 14 gallon (53 litre) stainless steel reservoir tank
- Stainless steel front protective covers

## Options

- 0-10,000 and 0-22,500 psi high pressure pump
- Galvanised 4 wheel trolley
- part number L-690269
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area
- part number L-6901003968



Typical reel assembly

## UNIT OPTIONS

Part Number	Working Pressure	Reservoir
L-690268	10,000 psi (690 bar)	52 Litre Tank
L-690240	15,000 psi (1,035 bar)	52 Litre Tank
L-690250	22,500 psi (1,552 bar)	52 Litre Tank

## CHART OPTIONS

Part Number	Description
L-570040	0-15,000 psi
L-570030	0-20,000 psi
L-571490	0-30,000 psi

## CONVERSION FACTORS

277 cu. in. = 1 Imp gallon

231 cu. in. = 1 U.S. gallon

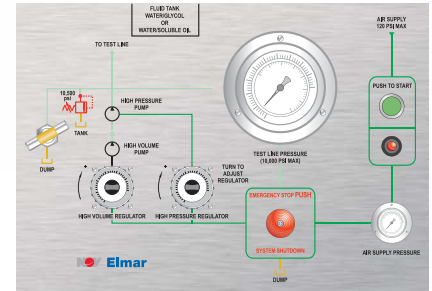


Part Number L-690268



# 800 Series Pressure Test Unit

This compact air driven pressure test unit is designed to operate horizontally or vertically in workshop or field environments and will slot into a logging truck compartment. These units feature a high volume pump for fast filling and a high pressure pump for testing up to a maximum 10,000 psi (690 bar), 15,000 psi (1,035 bar) or 22,500 psi (1,550 bar).



Control panel CE marked version

## Dimensions & Weights

PART NUMBER L-690646-V02

(L) 76 cm, 30 in (W) 45 cm, 18 in (H) 61 cm, 24 in (Weight Dry) 82 kg, 181 lbs (Weight Wet) 112 kg, 247 lbs

## Features

- Stainless steel frame
- Lightweight, 110 pounds (50 kg)
- Vertical or horizontal operation
- 5 gallon (19 litre) stainless steel reservoir tank
- Air driven high volume and high pressure pumps
- Machine engraved, stainless steel, colour coded panel

## Options

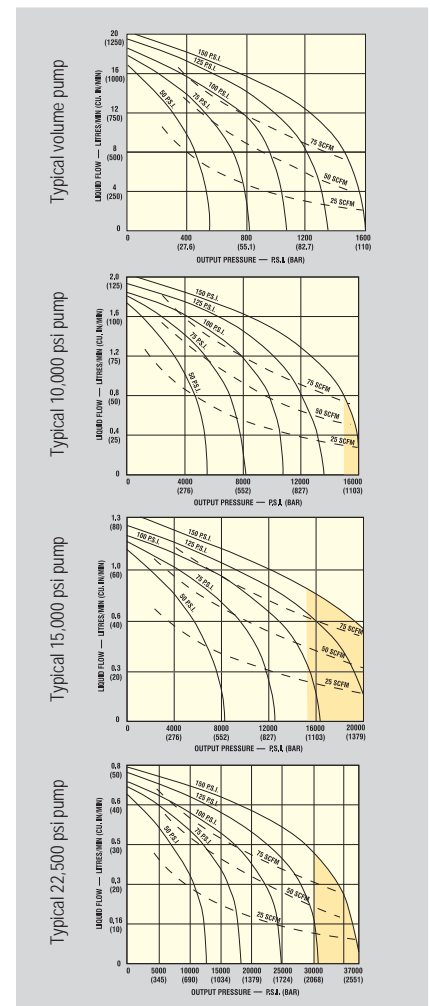
- 30ft long pressure hose
- Free standing chart recorder with 10ft long hose
- External suction
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area

## UNIT OPTIONS

Part Number	Working Pressure	Reservoir	Features
L-690535-V01	0-10,000 psi (690 bar)	19 Litre Tank	
L-690535-V02	0-10,000 psi (690 bar)	30 Litre Tank	CE
L-690646-V01	0-15,000 psi (1,035 bar)	30 Litre Tank	
L-690646-V02	0-15,000 psi (1,035 bar)	30 Litre Tank	CE/ATEX
L-690801	0-22,500 psi (1,552 bar)	19 Litre Tank	
L-690802	0-22,500 psi (1,552 bar)	19 Litre Tank	with chart recorder
L-692610-V01	0-15,000 psi (1,035 bar)	19 Litre Tank	
L-692610-V02	0-15,000 psi (1,035 bar)	19 Litre Tank	with external suction
L-697850	0-20,000 psi (1,379 bar)	19 Litre Tank	with chart recorder

## OPTIONAL EXTRAS

Part Number	Description
L-690538	10,000 psi 6mm ID hose assembly x 50 ft, 10,000 psi WP, with quick couplings and (1) 1/2" NPT (M) adapter
L-691220	15,000 psi 8mm ID hose assembly x 30ft, 18,850 psi WP, with quick couplings and (1) 1/2" NPT (M) adapter
L-691221	22,500 psi 8mm ID hose assembly x 30ft, 30,450 psi WP, with quick couplings and (1) 9/16" AE (M) adapter
L-6501027302	Chart recorder connection kit for 800 Series PTU, 15,000 psi WP



## CONVERSION FACTORS

277 cu. in. =	1 Imp gallon
231 cu. in. =	1 U.S. gallon

# 900 Series Pressure Test Unit

These systems have been developed for oil or service company use. Each pumping unit has a large reservoir for injection fluids such as water and glycol. The high volume and high pressure pumps allow rapid fill and pressure build up.



Part Number L-6901045726V01

## Dimensions & Weights

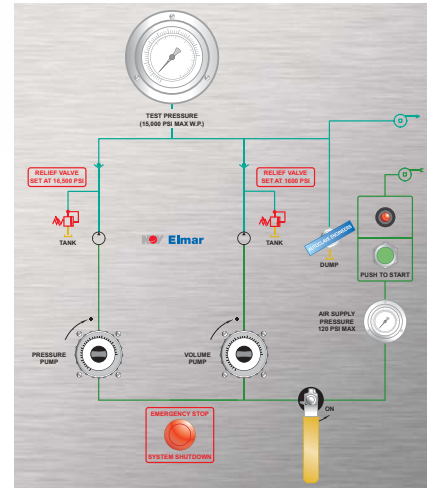
PART NUMBER L-6901045726V01 (15,000 PSI) L-6901049466V02 (10,000 PSI)  
 (L) 160 cm, 60 in (W) 92 cm, 35 in (H) 176 cm, 69 in (Weight) 770 kg, 1,700 lbs

## Features

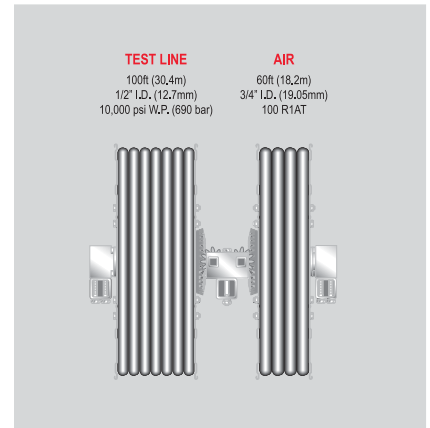
- 10,000 psi or 15,000 psi W.P.
- Air driven high volume and high pressure pumps
- 264 gallon (1,000 litre) stainless steel reservoir tank
- Output hose and reel
- Air supply hose and reel
- Water, glycol and methanol service

## Options

- Free standing chart recorder c/w hose
- Stainless steel frame
- Stainless steel protective covers
- Forklift runners
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area
- Test fluid return pump



Control panel for part number L-6901045726V01



Reel assembly for part number L-6901045726V01

## UNIT OPTIONS

Part Number	Working Description	Working Pressure
L-6901049466V01	CE, ATEX, Steel Frame	10,000 psi (690 bar)
L-6901049466V02	CE, ATEX, Stainless Steel Frame	10,000 psi (690 bar)
L-6901049466V03	Steel Frame	10,000 psi (690 bar)
L-6901049466V04	Stainless Steel Frame	10,000 psi (690 bar)
L-6901045726V01	CE, ATEX, Steel Frame	15,000 psi (1,035 bar)
L-6901045726V02	CE, ATEX, Stainless Steel Frame	15,000 psi (1,035 bar)
L-6901045726V03	Steel Frame	15,000 psi (1,035 bar)
L-6901045726V04	Stainless Steel Frame	15,000 psi (1,035 bar)





# “Maxsafe” Workshop Pressure Test Unit

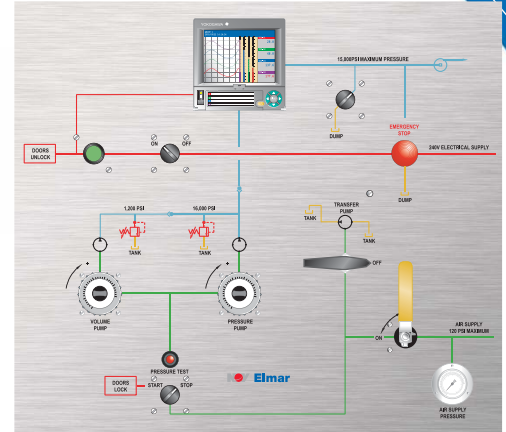
This Elmar “Maxsafe” two piece workshop pressure test unit has been designed for mounting either side of a workshop pressure test bay wall. Pressure transducers have been used to remove all fluid pressure from behind the operator panel making this the safest most efficient hydrostatic pressure test unit available.



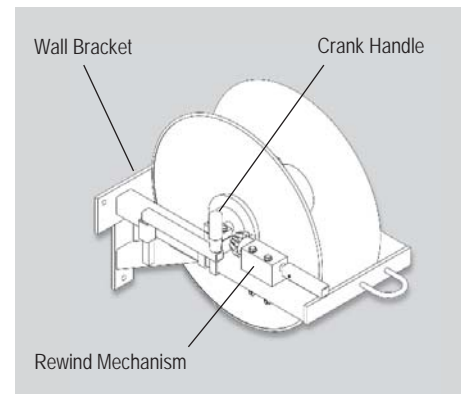
Tank pump unit



Control panel unit



Control panel



Reel assembly

## Dimensions & Weights

### PART NUMBER L-6901003825V01

Control Panel Unit:	(L) 103 cm, 41 in (W) 61 cm, 24 in (H) 179 cm, 70 in (Weight) 240 kg, 529 lbs
Tank Pump Unit:	(L) 111 cm, 44 in (W) 91 cm, 36 in (H) 110 cm, 43 in (Weight) 290 kg, 639 lbs
Reel/Bracket:	(L) 66 cm, 26 in (W) 46 cm, 18 in (H) 58 cm, 23 in (Weight) 90 kg, 198 lbs
Typical Hose Installation Kit:	(L) 103 cm, 41 in (W) 61 cm, 24 in (H) 179 cm, 70 in (Weight) 70 kg, 154 lbs

## Features

- Air driven high volume and high pressure pump systems
- Diaphragm pump to return fluid (drained from test piece) back to tank
- 56.8 gallon (215 litre) stainless steel reservoir tank
- 15,000 psi electronic digital chart recorder
- Wall mounted Elmar “wet centre” reel with 12mm ID x 75ft (23m) long hose
- Installation kit options to suit clients test bay design and dimensions

### Safety features include:

- Flashing lights indicate when unit is in use
- Door interlock relays prevent pressure build up when personnel or test bay door is open
- Automatic bleed-off if door is opened

## Options

- (4) x Camera colour CCTV system
- 24 hour VCR
- Data acquisition software for PC or laptop
- 0-24,000 psi unit (1,632 bar), part number L-6901003825V02
- Containerised Pressure Testing Workshop ready version 0-24,000 psi unit (1,632 bar), part number L-6901003825V04
- CE marked



Complete assembly

Note:  
Installation kit needs to be confirmed at time of order. Client to supply pressure test bay dimensions.

# Wall Mounted Pressure Test Unit

This Elmar two piece pressure test unit has been designed for mounting either side of a workshop pressure test bay wall, and includes features essential for safe and efficient hydrostatic pressure testing up to 22,500 psi.



## Dimensions & Weights

### PART NUMBER L-690708

Frame and Reel: (L) 63 cm, 25 in (W) 77 cm, 30 in (H) 125 cm, 49 in  
 Control Panel: (L) 28 cm, 11 in (W) 61 cm, 24 in (H) 61, 24 in  
 (Weight Overall) 140 kg, 309 lbs

## Features

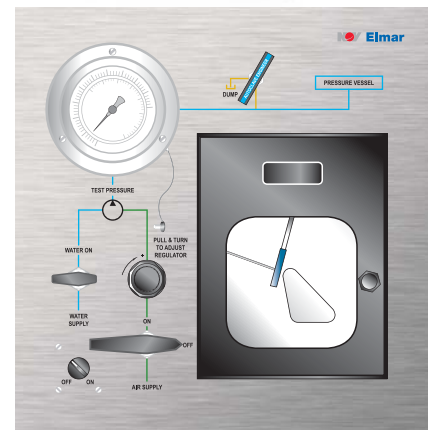
- Air driven high volume and high pressure pump systems
- Diaphragm pump to return fluid (drained from test piece) back to tank
- Adjustable gauge cut-off pump at preset test pressure
- 0-30,000 psi 8" 2/8 hour chart recorder
- Wall mounted Elmar "wet centre" reel with 8mm ID x 82ft (25m) long hose
- Installation kit options to suit clients test bay design and dimensions

### Safety features include:

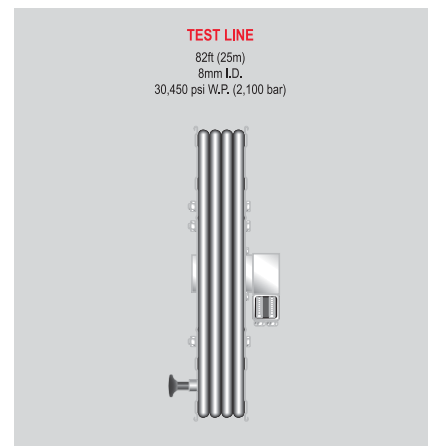
- Flashing lights indicate when unit is in use
- Door interlock relays prevent pressure build up when personnel or test bay door is open
- Automatic bleed-off if door is opened

## Options

- (4) x Camera colour CCTV system
- Electronic pressure recorder and digital display
- 24 hour VCR
- 8mm I.D. x 40ft (12m) hose
- Charts, part number L-571490
- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area



Control panel



Typical reel assembly

Note: Installation kit needs to be confirmed at time of order. Client to supply pressure test bay dimensions.





# CONTROL Sub-Sea Umbilical Reelers

## Sub-Sea Umbilical Reelers

Sub-Sea Umbilical Reelers. . . . . 161



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# Sub-Sea Umbilical Reelers

The Elmar 'Reel Pack' hose tensioning units cover a large range of umbilical diameters and lengths. All units have the standard safety feature of a self-centering directional control hand lever, which has to be used in conjunction with the 'Dead Mans' foot pedal to facilitate drum rotation.

These units can be manufactured to DNV 2.7-1 or the latest BS EN 12079 specifications. Custom units built on request.

The Reel Pack featured is designed to accept a one core Umbilical of 3.600m (11,811ft) in length with a minimum bend radius of 850mm.



Part Number L-6941057373



## Dimensions & Weights

PART NUMBER L-6941057373

(L) 2.98 m, 9.78 ft (W) 2.52 m, 8.27 ft (H) 2.57 m, 8.43 ft (Weight) 9,000 kg, 19,842 lbs

## Specifications

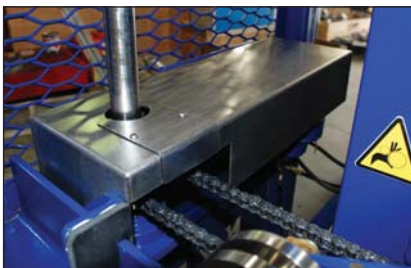
Core Dia:	850mm
Capacity (28mm hose):	3,600m
Max. Drum Speed:	7rpm
Max. Line Speed:	124ft/min
Max. Line Pull (Running):	650kg

## Features & Benefits

- CE marked, ATEX approved
- DNV 2.7-1/BS EN12079 certified frame
- Pneumatic driven manual spooler
- Guards on all moving parts
- Integral fork lift pockets

## Options

- Multiway hydraulic/electric slip rings
- Auto tensioning
- Auto spooler



Chain guard

## Dimensions & Weights

PART NUMBER L-6941064626

(L) 4.00 m, 13.12 ft (W) 3.00 m, 9.84 ft  
(H) 4.00 m, 13.12 ft (Weight) 23,000 kg, 50,706 lbs

## Specifications

Core Dia:	1,340mm
Capacity (64mm hose):	3,400m
Max. Drum Speed:	3rpm
Max. Line Speed:	60ft/min

## Features & Benefits

- CE marked ATEX
- DNV 2.7-1
- Pneumatic driven
- Auto spooler with correction facility
- Guards
- Integral forklift
- 30 channel electrical slip ring
- 6 channel 15000 PSI hydraulic slip ring
- Remote control station.
- Auto tensioning
- Disc brake
- -20°C to +50°C

## Dimensions & Weights (approx.)

PART NUMBER L-6941064627

(L) 2.98 m, 9.78 ft (W) 2.50 m, 8.20 ft  
(H) 2.57 m, 8.43 ft (Weight) 5,000 kg, 11,023 lbs

## Specifications

Core Dia:	1,150mm
Capacity (58mm hose):	300m (TBC)
Max. Drum Speed:	3rpm
Max. Line Speed:	60ft/min

## Features & Benefits

- CE marked ATEX
- DNV 2.7-1
- NORSOK
- Pneumatic driven
- Guards
- Integral forklift
- 6 channel 15000 PSI hydraulic slip ring
- Remote control station.
- Auto tensioning
- Disk brake
- -20°C to +50°C



# CONTROL Accessories



## Accessories

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# Air Driven Grease Injection Pumps and Accessories



Elmar air-operated grease pumps, developed in conjunction with WIWA, are designed for use in Elmar's grease control modules. Elmar high-pressure grease pumps consist of a reciprocating air drive, coupled to a piston fluid pump. There are three pumps ratios available: 85:1, 175:1, and 235:1. With an air input of 100 psi the maximum output pressure is respectively 8,500 psi, 17,500 psi and 22,500 psi, to suit well operations to 5,000, 10,000 and 15,000 psi. A 4:1 ratio pump is also available for fast transfers from a drum to grease reservoir on Elmar modules. Driving the pump through an air regulator allows an infinitely variable control of the grease flow rate and pump stall pressure. An air line lubricator is required at the pump air input for reliable performance.

## WIWA GREASE INJECTION AND TRANSFER PUMPS

Part Number	Ratio	Air Motor Size	Output per Cycle	Max Cycles per Min.	Max Air Pressure	Maximum Pressure
L-840890	235:1	12" (30cm)	2.6 cu.in. (43cc)	75	100 psi (6.9 bar)	23,500 psi (1,621 bar)
BN 216876/225	225:1	9" (23cm)	2.6 cu.in. (43cc)	25	100 psi (6.9 bar)	22,500 psi (1,552 bar)
L-840750	175:1	8" (20cm)	2.6 cu.in. (43cc)	75	100 psi (6.9 bar)	17,500 psi (1,207 bar)
L-8401005837	175:1	8" (20cm)	2.6 cu.in. (43cc)	75	100 psi (6.9 bar)	17,500 psi (1,207 bar)
BN 216876/169	169:1	8" (20cm)	2.6 cu.in. (43cc)	25	100 psi (6.9 bar)	17,000 psi (1,166 bar)
L-840880	85:1	6" (15cm)	2.6 cu.in. (43cc)	75	115 psi (8 bar)	8,500 psi (586 bar)
L-698420	4:1	3" (7.5cm)	1.8 cu.in. (29cc)	75	100 psi (6.9 bar)	460 psi (32 bar)



WIWA Pump Ratio: 175:1



Ratio: 85:1



Ratio: 235:1



Ratio: 4:1

PART NUMBER L-840750

L-840880

## Features

- Air driven hydraulic pump
- Relief valve on air motor to set maximum working pressure
- Oil bath above upper packing for long service life
- Large built-in air silencer
- High pressure pump tube of rugged construction
- Replaceable packing sets in pump tube
- Foot valve can be examined/replaced without pump strip-down
- ATEX Category 2 (Zone 1) approved versions are available

## Elmar Wireline Grease

Elmar wireline greases are polybutene base fluids, specially formulated for effective pressure control and wireline lubrication. Elmar wireline greases contain inhibitors, and provide protection during wireline operations against corrosion from hydrogen sulphide (H<sub>2</sub>S), acids, caustics and saline brines. Elmar wireline greases have a clear amber colour, and because of their cohesive and adhesive properties minimise drip and spatter, thus reducing well site contaminations. Elmar wireline greases are supplied in 55 US gallon (205 litres) drums and are available in a range of viscosities to cover applications in ambient temperatures ranging from -20°C to in excess of +60°C. A bio-degradable version is available in selected viscosities. On special request, greases are available for temperatures down to -40°C, and specially inhibited for well fluids with high CO<sub>2</sub> content.

## GREASE FOR WIRELINE GREASE INJECTION SYSTEMS

Part Number	Grease Type	Operating Temperature Range (°C)	Biodegradable Grease Type	Part Number
L-8871010730	OCR 767-VIS 10	-40°C to -15°C		
L-8871010731	OCR 768-VIS 12	-23°C to +7°C	OCR 780-VIS 12	L-8871010729
L-880194	OCR 770-VIS 16	+7°C to +30°C	OCR 780-VIS 16	L-880284
L-880195	OCR 774-VIS 20	+18°C to +40°C	OCR 780-VIS 20	L-880285
L-880102	OCR 776-VIS 24	+27°C to +55°C	OCR 780-VIS 24	L-880104
L-880103	OCR 778-VIS 28	+32°C to >+55°C	OCR 780-VIS 28	L-880101
L-880217	OCR 779-VIS 30	+35°C to >+60°C	OCR 780-VIS 30	L-880286
L-880247	Poly Multi K	-20°C to +5°C		
L-882800	Poly Multi	-5°C to +20°C		
L-882802	Poly Multi HP-HT	+5°C to +35°C		

# Air Driven Grease Injection Pumps and Accessories



WIWA Pump Ratio: 235:1  
PART NUMBER L-840890



WIWA Pump Ratio: 175:1  
PART NUMBER L-840750



WIWA Pump Ratio: 85:1  
PART NUMBER L-840880

## Air Motor Kits For 235:1 WIWA Grease Injection Pump L-840890

Part Number	Description
L-661450	Air Motor Seal Kit
L-661460	Air Motor Repair Kit (includes items in above seal kit)

### Fluid Section Kits

L-660506	Fluid Section Repair Kit
L-830016	Upper Packing Mixed Assembly
L-831429	Lower Packing Mixed Assembly
L-838890	Bottom Valve Assembly

## Air Motor Kits For 175:1 WIWA Grease Injection Pump L-840750

Part Number	Description
L-660770	Air Motor Seal Kit
L-660340	Air Motor Repair Kit (includes items in above seal kit)

### Fluid Section Kits

L-660350	Fluid Section Repair Kit
L-838750	Upper Packing Mixed Assembly
L-838930	Lower Packing Mixed Assembly
L-838890	Bottom Valve Assembly

## Air Motor Kits For 85:1 WIWA Grease Injection Pump L-840880

Part Number	Description
L-661430	Air Motor Seal Kit
L-661440	Air Motor Repair Kit (includes items in above seal kit)

### Fluid Section Kits

L-660350	Fluid Section Repair Kit
L-838750	Upper Packing Mixed Assembly
L-838930	Lower Packing Mixed Assembly
L-838890	Bottom Valve Assembly

### General Items

Part Number	Description
L-661470	85:1 Pump Repair Kit (Kits L-661440 and L-660350 combined)
L-660360	175:1 Pump Repair Kit (Kits L-660340 and L-660350 combined)
L-661480	235:1 Pump Repair Kit (Kits L-661460 and L-660506 combined)
L-837241	Engineering Adhesive for Air Motor
L-837242	Lubricator Grease for Air Motor
L-880000	"Killfrost" Airline Lubricant
L-690207	Flow Test Unit for Grease Pump

# Hand Pump Assemblies

Elmar lightweight portable hand pumps have been designed to be used with wireline pressure control equipment.



Stuffing box or pack-off hand pump

PART NUMBER L-690730



Single BOP hand pump part number L-690750

### Features

- 3,000 psi maximum working pressure on BOP hand pump
- 6,500 psi maximum working pressure on stuffing box hand pump
- 10,000 psi maximum working pressure on Quick Test Sub and Wireline Cable Cutter hand pump
- Lightweight portable construction
- Aluminium base channel
- Integral hydraulic reservoir

### Options

- 15,000 psi maximum working pressure on Q.T.S. part number L-690676
- 20,000 psi maximum working pressure on Q.T.S. part number L-6901011548

### Stuffing Box or Pack-Off Hand Pump

Part Number	Description
L-690730	Hand Pump Assembly 6,500 psi Working Pressure

### Hydraulic Hose Assembly

Part Number	Description
L-691080	25ft
L-690760	50ft
L-690740	100ft

### Quick Test Sub and Wireline Cable Cutter Hand Pump

Part Number	Description
L-690573	Hand Pump Assembly 10,000 psi Working Pressure

### Hydraulic Hose Assembly

Part Number	Description
L-690587	25ft
L-690586	50ft
L-6901004505	100ft

### Single BOP Hand Pump

Part Number	Description
L-690750	Hand Pump Assembly 3,000 psi Working Pressure

### Hydraulic Hose Assemblies

Part Number	Description
L-691080	25ft
L-690760	50ft
L-690740	100ft

L-691000	"Y" Hose Assembly for BOP Opening	
L-691100	"Y" Hose Assembly for BOP Closing	

### Stainless Steel Hydraulic Hand Pump

Elmar-designed, stainless steel, modular hand pumps. These are now fitted to all our hydraulic modules. They are completely interchangeable with the former steel hand pumps.

### Features

- Naval brass cylinder
- All other parts stainless steel
- "O" ring and PolyPak Seals
- Improved check valve
- Dust seal on top of cylinder
- Easy to maintain
- No more seized-up hand pumps



Stainless steel hydraulic hand pump

### Part Numbers

Part Number	Output Pressure	Output Volume	In Port	Out Port
L-793400 Service Kit L-663820	0-3,000 psi (0-207 bar)	0.66 cu.in./stroke (11cc)/stroke	1/4" N.P.T.-F	1/4" N.P.T.-F
L-790013 Service Kit L-663830	0-6,000 psi (0-414 bar)	0.36 cu.in./stroke (5.9cc)/stroke	1/4" N.P.T.-F	1/4" N.P.T.-F
L-792000 Service Kit L-663810	0-10,000 psi (0-690 bar)	0.28 cu.in./stroke (4.6cc)/stroke	1/4" N.P.T.-F	1/4" N.P.T.-F
L-790008 Service Kit L-660487	0-15,000 psi (0-1,035 bar)	0.13 cu.in./stroke (2.1cc)/stroke	1/4" N.P.T.-F	3/8" A.E.S.L.

# Stand Alone Mechanical and Electronic Chart Recorders



These chart recorders are designed as an "Add on" to existing Pressure Test Units to produce a paper or paper and electronic pressure test record.



Mechanical chart recorder

Electronic chart recorder  
part number L-6901004669



## Dimensions & Weights

(L) 36 cm, 14 in (W) 26 cm, 10 in (H) 50 cm, 20 in  
(Weight) 45 kg, 99 lbs

## Features

- Mechanical Chart Recorder
- Paper type output
- Mounted on anti-vibration mounts within a hand portable stainless steel frame
- Suitable for up to 22,500 psi test pressure
- Complete with 10ft hose and quick connectors

## Options

- CE marked, ATEX approved for use in a Category 2 (Zone 1) hazardous area
- Transport "Peli" case (fully water proof)
- Full range of adapters for connection to equipment

## Unit Options

Part Number	Description
L-690772	for 6,000 psi Pressure Test Unit
L-690767	for 10,000 psi Pressure Test Unit
L-690696	for 15,000 psi Pressure Test Unit
L-690768	for 22,500 psi Pressure Test Unit

## Dimensions & Weights

**ELECTRONIC CHART RECORDER PART NUMBER L-6901004669**

(L) 40 cm, 16 in (W) 23 cm, 9 in (H) 23 cm, 9 in (Weight) 15 kg, 33 lbs

## Features

- Electronic Chart Recorder
- Digital display
- Record to memory function
- Supplied c/w computer software for viewing collected data
- Anti tamper file transfer
- CE marked
- Supplied in stainless steel trimmed flight case
- 2,000 bar test pressure transducer included

## Option

- Full range of adapters for connection to equipment



# Section 3: WPCE

## Wireline Pressure Control



### Elmar Product Lines

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Note on Bowen wireline pressure control products: Elmar discontinued the manufacture of Bowen wireline products on January 1st 2010, and will discontinue spare parts from January 1st 2020. Note that many former Bowen design features have been incorporated into current Elmar designs, so please contact your nearest sales location for further information. This announcement does not affect the Bowen wireline tool product range of Elmar or Bowen products manufactured by other NOV companies. NOV is the only company entitled to sell Bowen original products.

N.B. The technical data contained within these pages was correct at the time of publication but should not be used as operational guidelines. For operational guidelines please refer to the operation and maintenance manual supplied with the equipment. Elmar reserves the right to change, alter, modify or improve specifications at any time without prior notice.



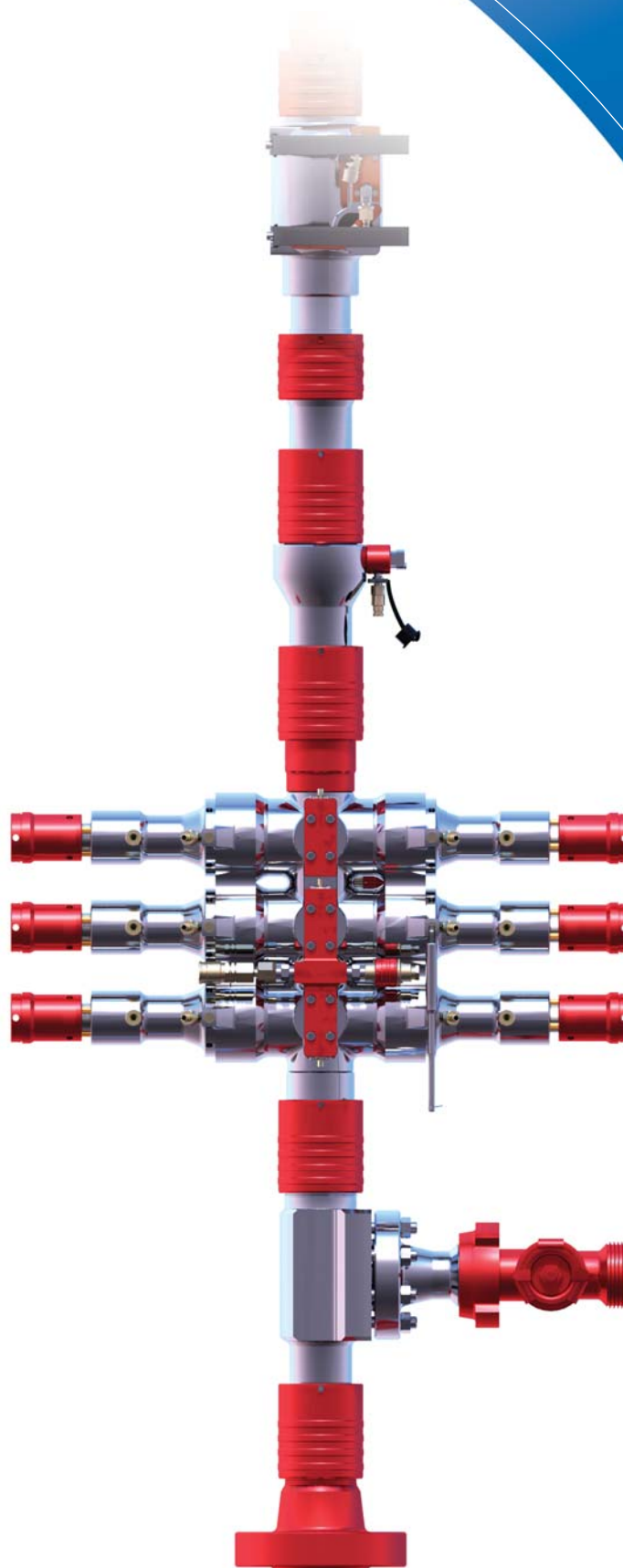


# WPCE Pressure Control Equipment Strings



## Pressure Control Equipment Strings

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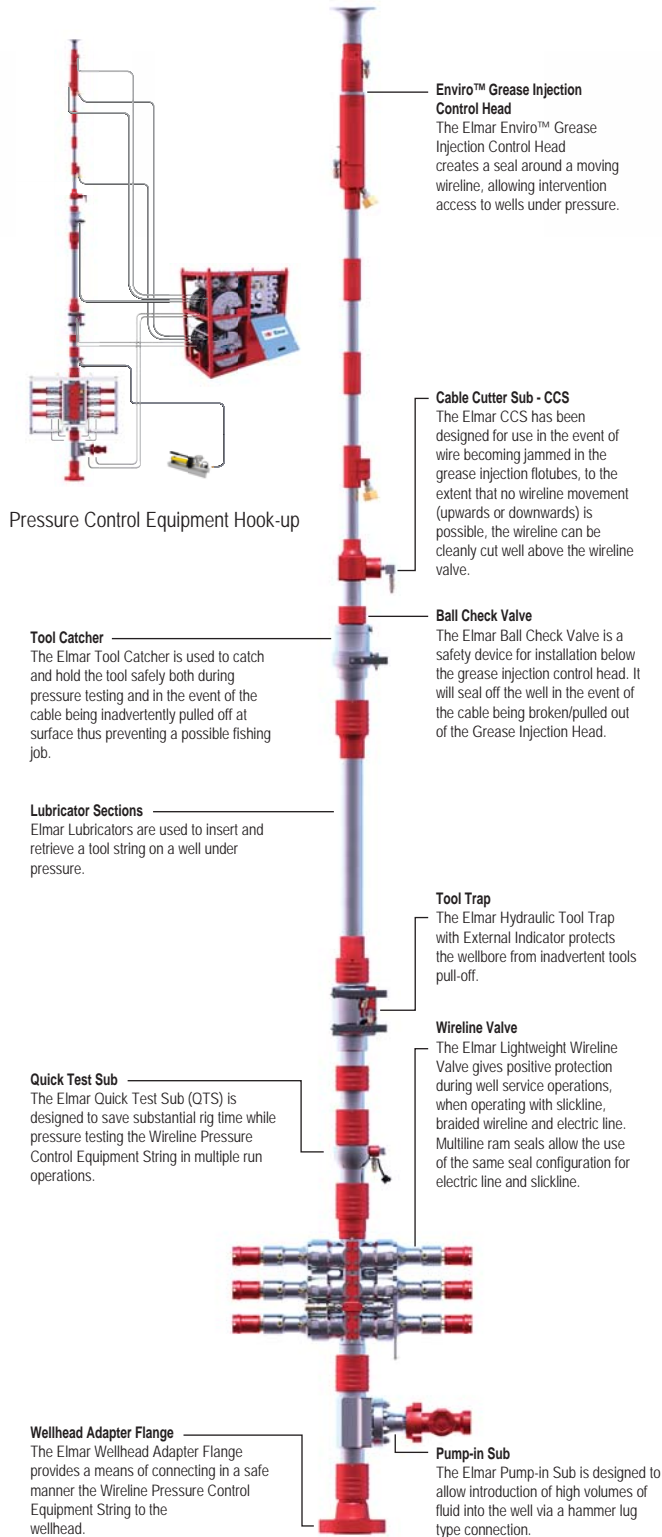




# Electric Line Pressure Control Equipment String



Elmar designs and manufactures pressure control equipment and accessories for slickline and braided cable operations. NOV Elmar Pressure Control Equipment Strings are fully traceable and certified by independent authorities.



Note: For corresponding diagram see next page. Additional equipment available on request.

## TYPICAL PRESSURE CONTROL EQUIPMENT STRING RIG-UP

Item	Description
1	*Enviro™ Stuffing Box, Line Wiper and Grease Head with (6) concentric flow tubes
1.1	Extra Injection Coupling and flotube for dual injection
1.2	Protector Sleeve for cable head
2	Flow Control Manifold *
2.1	Hydraulic Line Wiper with cable guide 7/32" / .230"
2.2	Grease Injection Control Head with (4) concentric flow tubes .230" wire
2.3	Low Pressure Waste Grease Hose x 120ft (from line wiper) 3.5K psi WP
3	Grease Hose 1/2" x 120ft long with hex unions *
4	Combination Hydraulic Tool Catcher/Ball Check Valve 1 3/16" fish neck
4.1	Combination Hydraulic Tool Catcher/Ball Check Valve 1 3/16" fish neck c/w 1.2" NPT port
5	Integral Grease Head Cable Cutter Sub for cutting cable up 15/32"
5.1	Hand Pump Assembly for Cable Cutter Sub
5.2	Hose Assembly 1/4" x 100ft long with quick connections 10,000 psi WP
6	Hydraulic Stuffing Box with 16" dia wheel .108" wire
7	Lightweight Lubricator Section with threaded quick unions, 4ft long
8	Lightweight Lubricator Section with threaded quick unions, 5ft long
9	Lightweight Lubricator Section with threaded quick unions, 6ft long
10	Lightweight Lubricator Section with threaded quick unions, 8ft long
11	Lightweight Lubricator Section with threaded quick unions, 10ft long
12	3" Lubricator Section with integral quick unions (various lengths available on request)
13	Lubricator Lifting Clamp, Spreader and wire rope slings (sling length to be specified)
13.1	Lubricator Dolly with 4 3/4" -4x2thd quick union
14	Hydraulic Tool Trap with external indicator
15	Quick Test Sub
15.1	Hand Pump Assembly for Quick Test Sub
15.2	Hose Assembly 1/4" x 25ft long with quick connections 10,000 psi WP
16	Triple Hydraulic Compact BOP with manifold block
17	Galvanised Triple BOP Cage
18	Dual Hydraulic Compact BOP with manifold block
19	Galvanised Dual BOP Cage
20	Single Hydraulic Compact BOP with manifold block
21	Galvanised Single BOP Cage
22	Lightweight BOP with manifold block; available in Single, Dual and Triple configurations
23	Stainless Steel Crash Frame for "Lightweight" BOP configurations
24	0-10,000 PSI BOP Manifold Gauge
25	Pump-In Sub with (1) 2"-1502 side outlet
25.1	Plug Valve 2"-1502 Weco male x female
26	Wellhead Adapter Flange 3 1/16" 10,000LB 6BX BX-154
27	5 Series 3-BOP Grease and Hydraulic Control Module with (2) 175:1 pumps (see versions)
28	5 Series Mainframe
29	Grease Transfer Pump 4:1 ratio
30	Hydraulic Actuator LW/SB/TC/3-BOP *
31	Lifting Ball
32	Test Cap
33	Test Plug and Collar
34	Safety Flow Diverter Valve and wire clamp
35	Male Thread Protector (spare)
36	Female Thread Protector (spare)
37	Line Wiper, Stuffing Box or Tool Catcher Hand Pump *
38	Hydraulic Hose 1/4" x 100ft long with quick couplings *
39	Tool Trap or BOP Hand Pump *
40	Hydraulic Hose 1/4" x 50ft long with quick couplings *
41	*Y" Hose, BOP Open *
42	*Y" Hose, BOP Close *
43	Low Pressure Waste Grease Hose x 60ft long (from BOP) 3.500 psi WP
44	Low Pressure Waste Grease Hose x 60ft long (from module) 3.500 psi WP

# Typical Electric Line Pressure Control Equipment String Rig-up

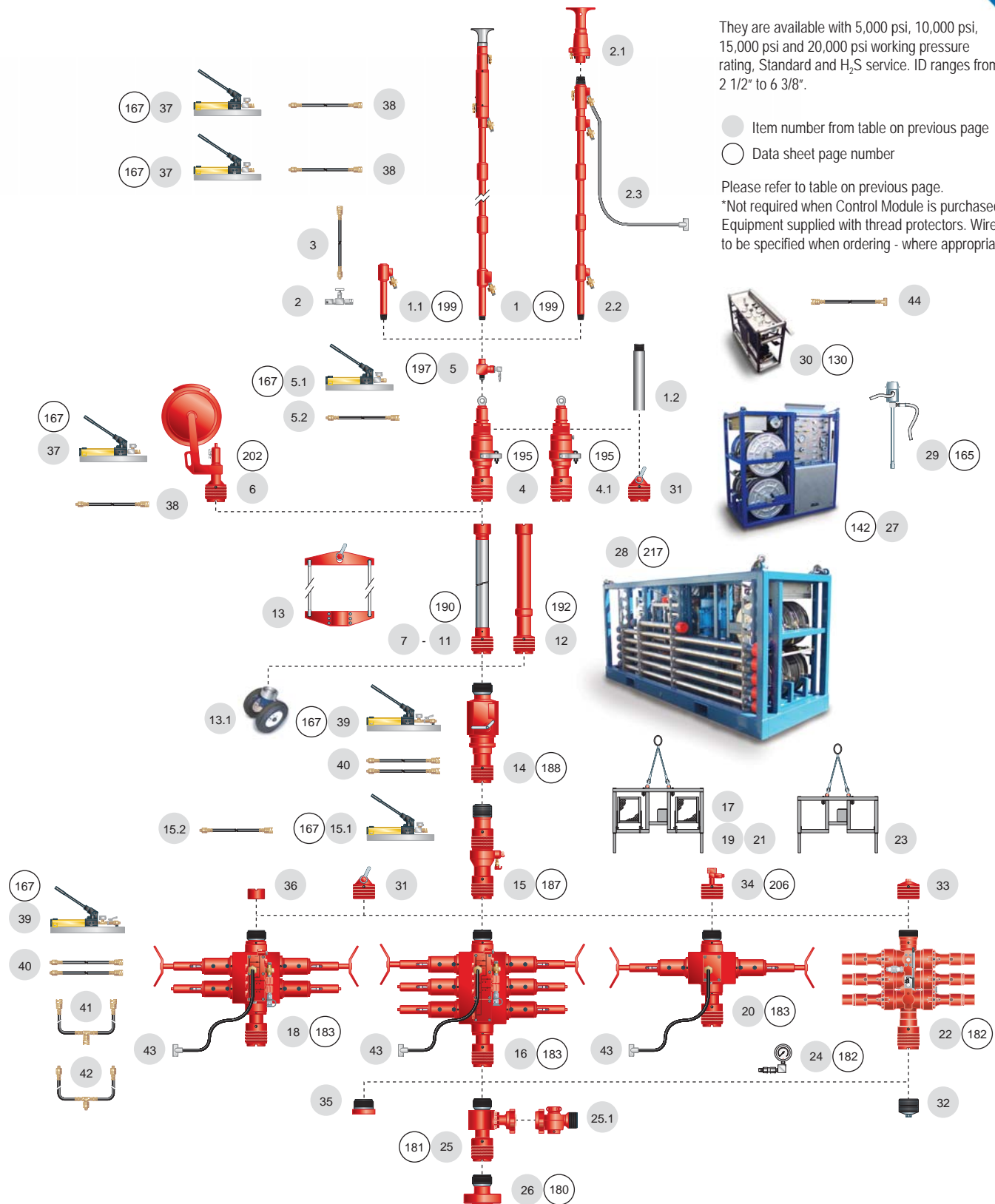


The Elmar Pressure Control Equipment String is designed for complete control of the well pressure during electric/stranded line operations on a "live" well.

They are available with 5,000 psi, 10,000 psi, 15,000 psi and 20,000 psi working pressure rating, Standard and H<sub>2</sub>S service. ID ranges from 2 1/2" to 6 3/8".

- Item number from table on previous page
- Data sheet page number

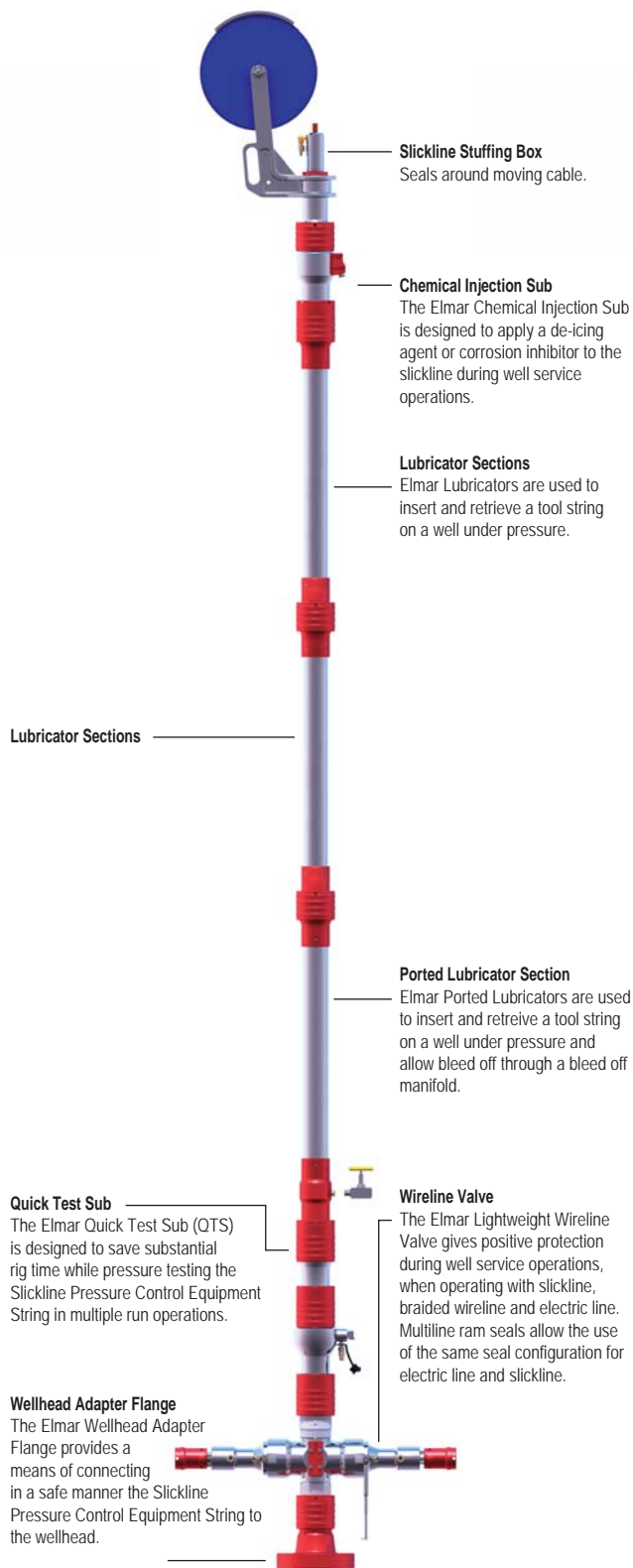
Please refer to table on previous page.  
 \*Not required when Control Module is purchased.  
 Equipment supplied with thread protectors. Wire size to be specified when ordering - where appropriate.



# Slickline Pressure Control Equipment String



Elmar design and manufacture pressure control equipment and accessories for slickline and braided cable operations. NOV Elmar Pressure Control Equipment Strings are fully traceable and certified by independent authorities.



## TYPICAL PRESSURE CONTROL EQUIPMENT STRING RIG-UP

Item	Description
1	Hydraulic Tool Catcher 1 3/16" fish neck
2	Hydraulic Stuffing Box with 16" dia wheel 0.108" wire/0.125 wire
3	Liquid Seal Slickline Control Head Upper SGI Assy 15,000 psi
3.1	Liquid Seal Slickline Control Head Lower SGI Assy 10,000 psi**
4	Chemical Injection Sub 0.125" wire
5	Lightweight Lubricator Section with threaded quick unions, 4ft long
6	Lightweight Lubricator Section with threaded quick unions, 5ft long
7	Lightweight Lubricator Section with threaded quick unions, 6ft long
8	Lightweight Lubricator Section with threaded quick unions, 8ft long
9	Lightweight Lubricator Section with threaded quick unions, 10ft long
10	Lubricator Section with ported lower connection (various lengths available on request)
11	3" Lubricator Section with integral quick unions (various lengths available on request)
12	Lubricator Lifting Clamp, Spreader and wire rope slings (Sling length to be specified)
12.1	Lubricator Dolly with 4 3/4" -4x2thd quick union
13	Bleed-Off Sub
14	Quick Test Sub
14.1	Hand Pump Assembly for Quick Test Sub
14.2	Hose Assembly 1/4" x 25ft long with quick connections 10,000 PSI W/P
15	Triple Hydraulic Compact BOP with manifold block
16	Galvanised Triple BOP Cage
17	Dual Hydraulic Compact BOP wire with manifold block
18	Galvanised Dual BOP Cage
19	Single Hydraulic Compact BOP wire with manifold block
20	Galvanised Single BOP Cage
21	Lightweight BOP with manifold block; available in Single, Dual and Triple configurations
22	Stainless Steel Crash Frame for "Lightweight" BOP configurations
23	0-10,000 PSI BOP Manifold Gauge
24	Pump-In Sub with (1) 2"-1502 side outlet
24.1	Wellhead Adapter Flange 3 1/16" 10,000LB 6BX BX-154
25	Mainframe
26	Hydraulic Actuator LW/SB/TC/3-BOP *
27	Lifting Bail
28	Test Cap
29	Test Plug and Collar
30	Safety Flow Diverter Valve and wire clamp
31	Male Thread Protector (spare)
32	Female Thread Protector (spare)
33	Line Wiper, Stuffing Box or Tool Catcher Hand Pump *
34	Hydraulic Hose 1/4" x 100ft long with quick couplings *
35	BOP Hand Pump *
36	Hydraulic Hose 1/4" x 50ft long with quick couplings *
37	*Y" Hose, BOP Open *
38	*Y" Hose, BOP Close *

Note: For corresponding diagram see next page. Additional equipment available on request.

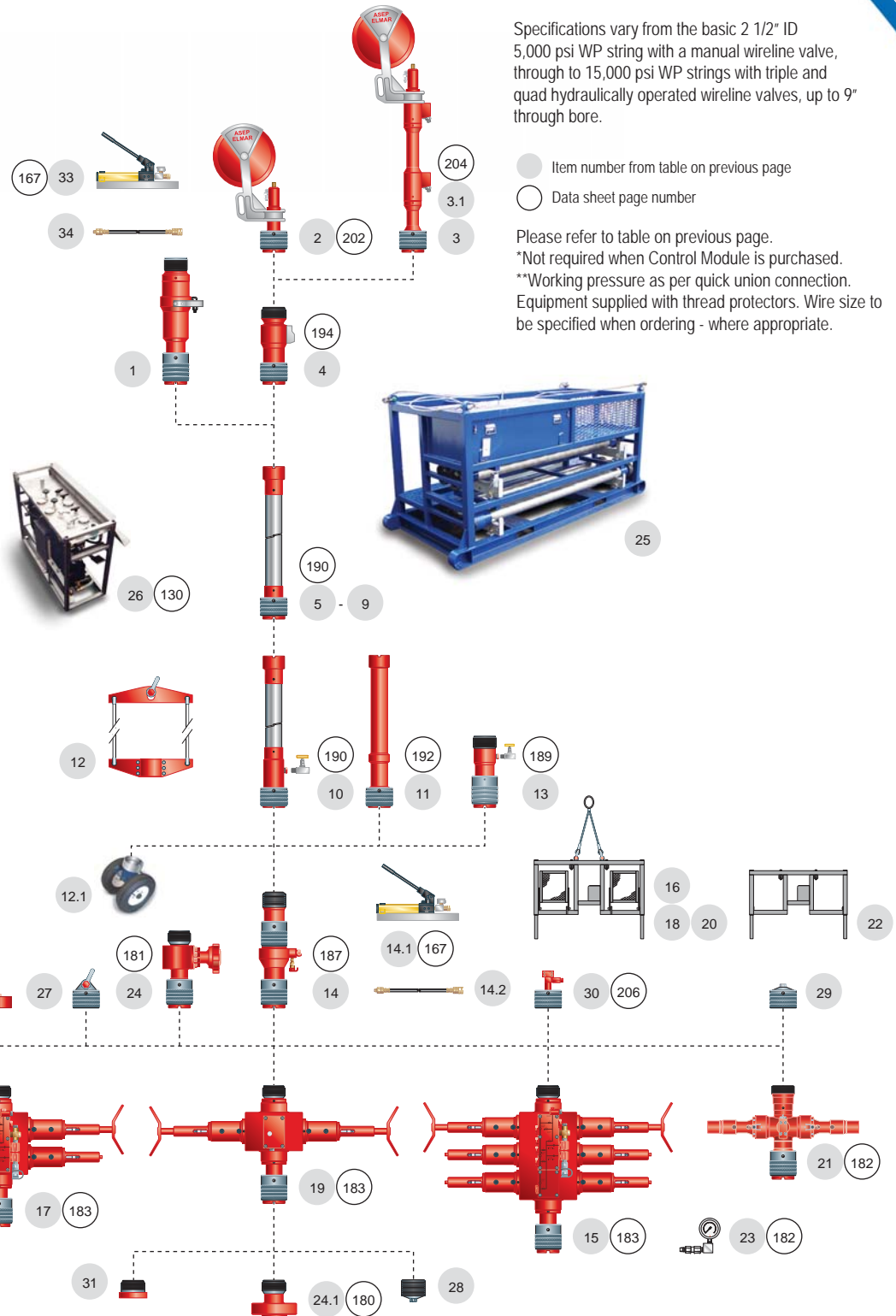
Elmar Product Line



# Typical Slickline Pressure Control Equipment String Rig-up



A full range of slickline pressure control equipment is available, including well head adapters, wireline valves, lubricators, stuffing boxes and other accessories.

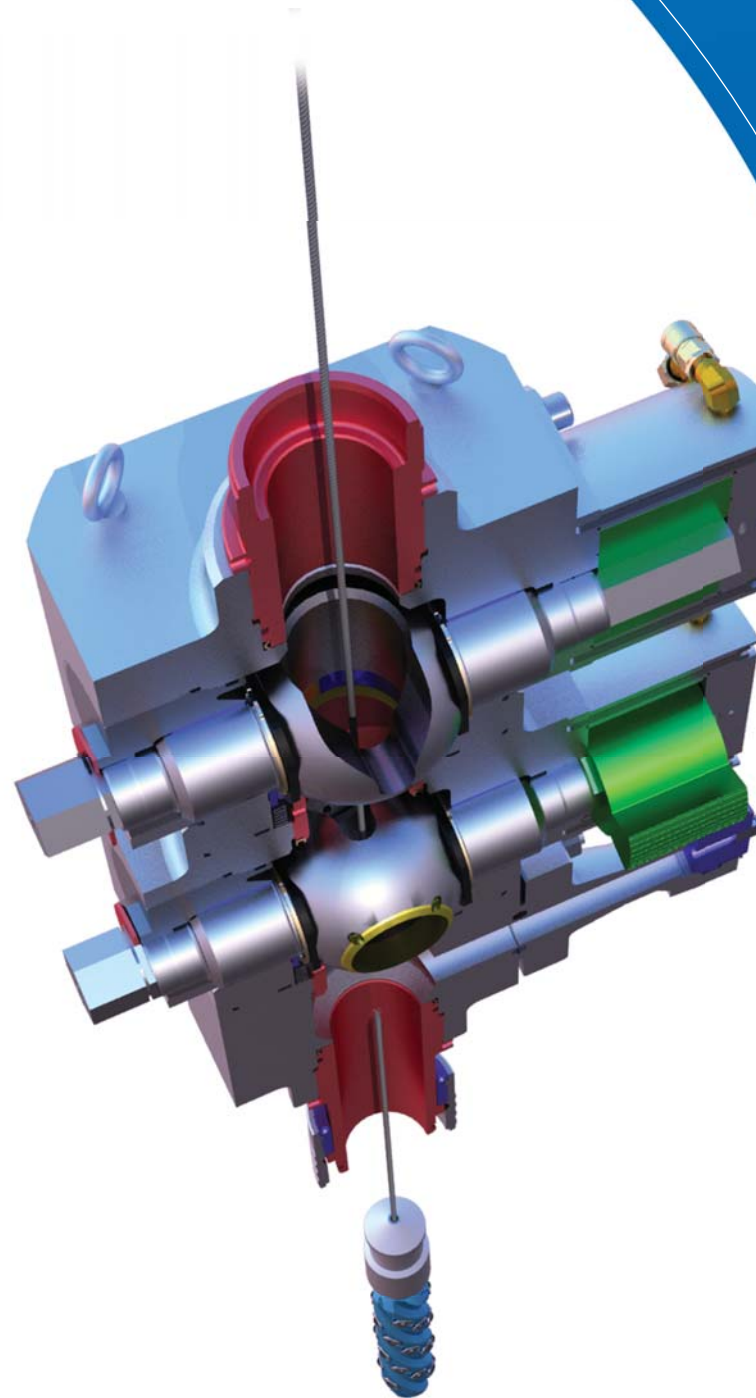


# WPCE Electric Line and Slickline Pressure Control Equipment



## Electric Line and Slickline Pressure Control Equipment

Wireline Shear Seal Valve . . . . .	179
Wellhead Adapter Flange . . . . .	180
Pump-in Sub . . . . .	181
Lightweight Wireline Valve . . . . .	182
Compact Wireline Valve . . . . .	183
Multi Line Ram Seal . . . . .	184
Q-GUIDE™ Rams . . . . .	184
Constrictor Multi Line Ram Seal . . . . .	185
Q-GUIDE™ Shear and Seal Wireline Ram Assembly . . . . .	186
Quick Test Sub - QTS . . . . .	187
Hydraulic Tool Trap with External Indicator . . . . .	188
Bleed-Off Sub . . . . .	189
Lightweight Lubricator . . . . .	190
Wireline Lubricator with Threaded Unions . . . . .	191
Wireline Lubricator with Integral Unions . . . . .	192
Variable Length Lubricator - VLL . . . . .	193
Chemical Injection Sub . . . . .	194
Combination Hydraulic Wireline Tool Catcher and Ball Check Valve . . . . .	195
Piranha™ Wireline Tool Catcher . . . . .	196
Cable Cutter Sub - CCS . . . . .	197
Venting/Glycol Injection Valve . . . . .	198
Enviro™ Wireline Grease Injection Control Head . . . . .	199-200
Air Line Wiper . . . . .	201
Lightweight Stuffing Box . . . . .	202
QuickLoad™ Slickline Stuffing Box . . . . .	203
Liquid Seal Slickline Control Head . . . . .	204
Turn Around Sheave - TAS . . . . .	205
Safety Flow Diverter and Cable Clamp . . . . .	206



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# Wireline Shear and Seal Valve

The patent pending NOV Elmar Wireline Shear and Seal Valve is a full opening, hydraulically controlled, ball valve normally installed below the wireline valve and above the wellhead valves. Its primary function is to shear wireline and seal off the through bore.



Wireline Shear and Seal Valve (Patent pending)

The assembly consists of a trunnion ball, cutter inserts, seal carrier and hydraulic actuator. When actuated the ball rotates to a closed position making the cutter inserts cleanly cut the wireline. Cams around the trunnion ball allow for the seal carrier to disengage during the cut and reengage to create an elastomeric seal on the trunnion ball OD. The design utilises a manual closing system as a secondary function and comes with mechanical locks.



The WSSV is available in all common bore sizes and comes with Quick Union connections as standard. Flanged options are available upon request.

## Features

- Compatible with all quick unions
- Working Pressure rating up to 15,000 psi
- Manifold type "A"
- Elastomeric seals are hydrogenated Nitrile unless otherwise requested
- Manufacturing standard
  - PSL 3 and PR1
  - PSL 4 and PR2 optional
- Actuator hydraulic supply: 2,500 psi (compatible with standard wireline BOP control modules)
- Material class
  - EE - Sour Service
  - HH - Sour Service (optional)

## Ball Configurations

- Single
  - Single cutter ball, shear/seal down
  - Single blind ball, seal up/down (non cutting)
- Dual
  - Dual cutter ball, shear/seal down, shear/seal down
  - Single cutter ball, shear/seal down, blind ball seal up/down

## Cutting performance

- 6 x 0.125" slickline
- 4 x 0.140" slickline
- 4 x 7/32" electric line
- 3 x 9/32" electric line
- 2 x 5/16" electric line
- 1 x 5/16" dyform
- 1 x 0.472" 7 conductor
- 1 x 0.520" 7 conductor
- 1/4" capillary tubing
- Micro coil

## API 6A Temperature Class

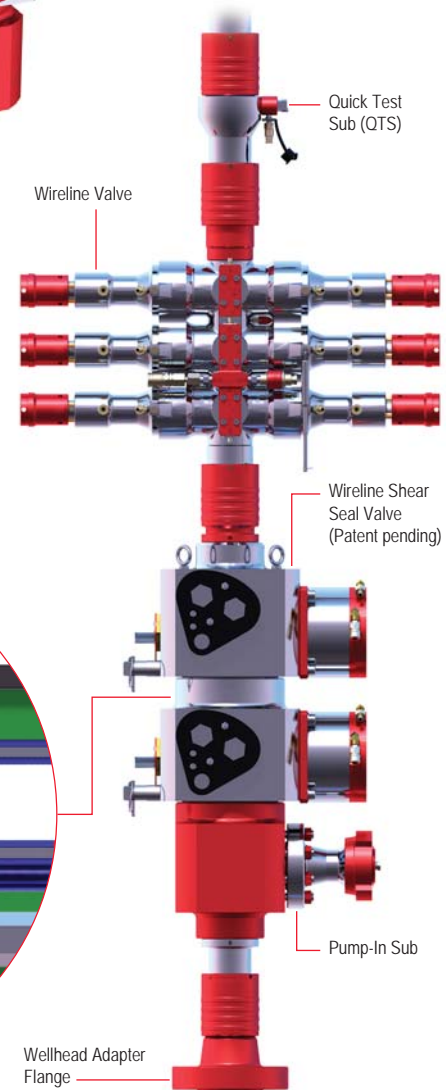
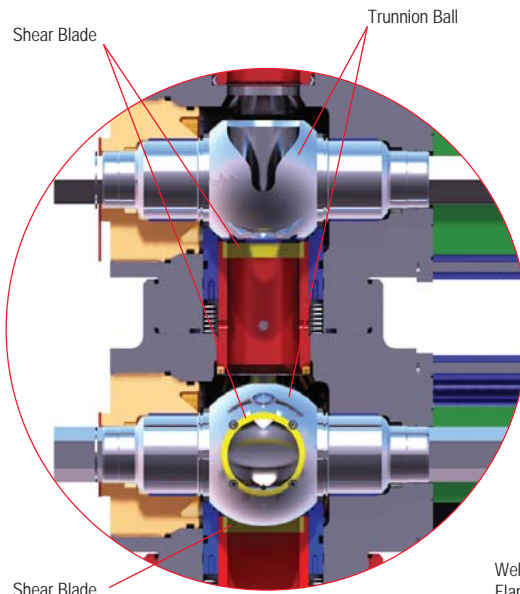
- P-V standard
- L/K-V optional
- P-X optional

## Applicable Standards

- API 6A
- NACE MR 0175
- SI 289, 1974
- SI 913, 1996
- SI 2306, 1998 - PUWER

## Options

- Inconel Inlay
- Inconel Ball



Dual Wireline Shear Seal Valve in position



# Wellhead Adapter Flange

The Elmar Wellhead Adapter Flange provides a means of connecting the wireline valve and lubricator assembly to the wellhead in a safe and secure manner.



Typical Elmar Adapter Flange

The Elmar Wellhead Adapter Flange consists of a quick union machined on a standard API flange. The upper end has a standard Bowen type, Otis type or Elmar quick union and can be supplied with a blanking plug and collar if required.

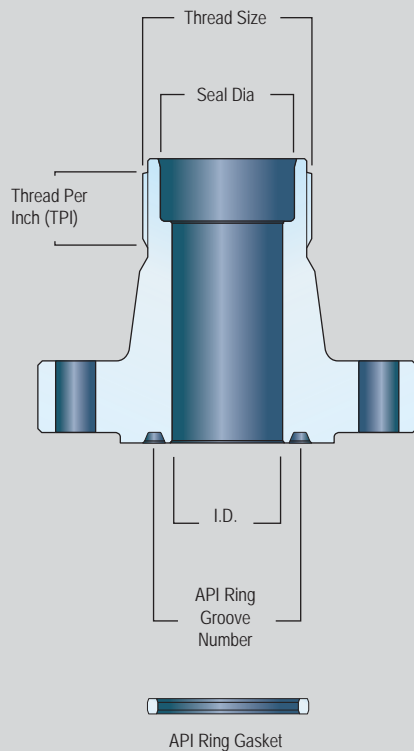
Elmar Wellhead Adapter Flanges are available in various bore sizes and working pressures up to 15,000 psi.

Elmar will design and manufacture well-head adapter flanges for all API and Russian "GOST 28919" standard models. Elmar Adapter Flanges are fully traceable and certified to API 6A.

## PART NUMBERS

Part Number	Flange Size	Ring Groove	W.P.	Service	Quick Union Connection
L-973284	2 1/16"	BX-152	10,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-971759	2 1/16"	R-24	5,000 psi	H2S	6 5/16"-4thd (4.375") Bowen
L-973252	2 1/16"	BX-152	10,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-972584	2 9/16"	BX-153	10,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-974031	2 9/16"	R-26	2,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-973081	2 9/16"	R-27	5,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-971762	2 9/16"	R-27	5,000 psi	H2S	6 5/16"-4thd (4.375") Bowen
L-971768	2 9/16"	BX-153	15,000 psi	H2S	6 5/16"-4thd (4.375") Bowen
L-973256	2 9/16"	BX-153	10,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-972363	2 9/16"	R-27	5,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-972237	3 1/16"	BX-154	10,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-973732	3 1/16"	BX-154	10,000 psi	STD	5 1/2"-4x2thd (4.375") Bowen
L-979919	3 1/16"	BX-154	10,000 psi	H2S	6 5/16"-4thd (4.375") Bowen
L-975187	3 1/16"	BX-154	10,000 psi	H2S	6 5/16"-4thd (3.750") Bowen
L-972361	3 1/16"	BX-154	10,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-978774	3 1/16"	BX-154	15,000 psi	H2S	7"-5thd (4.375") Bowen
L-972148	3 1/8"	R-35	5,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-971765	3 1/8"	R-31	3,000 psi	H2S	6 5/16"-4thd (4.375") Bowen
L-973986	3 1/8"	R-35	5,000 psi	H2S	6 1/2"-4thd (4.750") Otis
L-972358	3 1/8"	R-35	5,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-972149	4 1/16"	R-39	5,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-971738	4 1/16"	BX-155	10,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-979742	4 1/16"	R-39	5,000 psi	H2S	6 5/16"-4thd (4.375") Bowen
L-974529	4 1/16"	R-39	5,000 psi	H2S	7"-5thd (5.250") Bowen
L-979726	4 1/16"	BX-155	10,000 psi	H2S	6 5/16"-4thd (4.375") Bowen
L-973693	4 1/16"	BX-155	10,000 psi	H2S	6 1/2"-4thd (4.750") Otis
L-976006	4 1/16"	BX-155	10,000 psi	H2S	7 1/2"-4thd (5.500") Otis
L-972359	4 1/16"	R-39	5,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-972366	4 1/16"	R-44	5,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-972364	4 1/16"	BX-155	10,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-979123	4 1/16"	BX-155	15,000 psi	H2S	7"-5thd (4.375") Bowen
L-9701013333	5 1/8"	BX-169	10,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-9701013748	7 1/16"	BX-156	10,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-9701013749	7 1/16"	BX-156	10,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-9701017611	5 1/8"	BX-169	10,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-9701025195	4 1/16"	BX-155	10,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-9701026671	4 1/16"	R-39	5,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-9701026852	7 1/16"	R-46	5,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-9701030100	7 1/16"	R-45	3,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-9701039742	5 1/8"	R-44	5,000 psi	H2S	7 7/8"-4x2thd (6.125") Elmar
L-974533	5 1/8"	R-44	5,000 psi	H2S	8 1/4"-4x2thd (6.750") Bowen
L-971742	5 1/8"	BX-169	10,000 psi	H2S	4 3/4"-4x2thd (3.750") Elmar
L-979884	7 1/16"	R-46	5,000 psi	H2S	6 5/16"-4thd (4.375") Bowen
L-974636	7 1/16"	RX-46	5,000 psi	H2S	9"-4thd (6.750") Otis
L-973967	7 1/16"	R-46	5,000 psi	H2S	6 1/8"-4x2thd (4.750") Elmar
L-979884	7 1/16"	R-46	5,000 psi	H2S	6 5/16"-4thd (4.375") Bowen

Note: Additional sizes available on request.



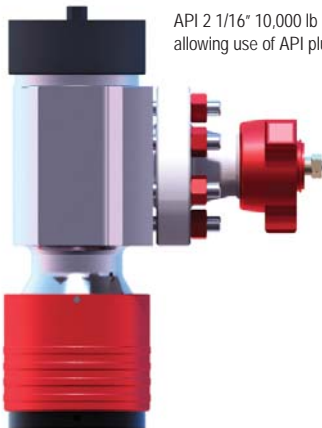
Typical Elmar Wellhead Adapter Flange Section

# Pump-In Sub

The Pump-In Sub (PIS) is normally positioned below the wireline valve and above the wellhead. Its main function is to allow well control by pumping fluid below a closed wireline valve.



Typical Elmar standard 3" Pump-in Sub



API 2 1/16" 10,000 lb BX152 connection allowing use of API plug/gate valve if required

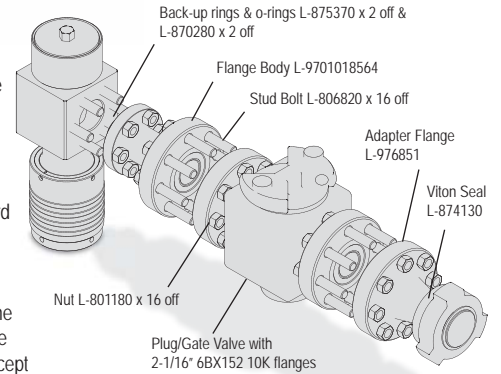
Typical Elmar 3" Flanged Pump-in Sub



Typical Elmar 3" Integral Pump-in Sub

The PIS has quick unions top and bottom, and a WECO (Hammer Union) type side connection. Pump-in subs are normally supplied with a blind plug & nut on the WECO port. A suitable valve is needed to operate the PIS, replacing the blind plug. Pump-in subs can also be used for fluid sampling or inhibitor injection. Specially designed pump-in subs, with different top and bottom unions are used as wellhead adapter x-overs.

For service companies that require positive isolation between the well bore and WECO type piping connections whenever the Pump-In Sub is placed below the wireline valve, Elmar has developed conversion kits to adapt the existing Elmar standard Pump-In Subs to API flanged valves. A flanged Gate or Plug valve can thus be placed between the Pump-In Sub body and the WECO for any version except the integral one. Conversion kit part number L-9701019077



## Elmar Standard Pump-In Sub

Part Number	I.D.	Working Pressure	Service	Quick Union Connection	Side Outlet
L-972052	3"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	2" 1502
L-977282	3"	10,000 psi	H <sub>2</sub> S	6 5/16"-4lhd (4.375") Bowen	2" 1502
L-980851	3"	15,000 psi	H <sub>2</sub> S	7"-5thd (4.375") Bowen	2" 2202
L-972224	4 1/16"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar	2" 1502
L-9701014556	5 1/8"	10,000 psi	H <sub>2</sub> S	7 7/8"-4x2thd (6.125") Elmar	2" 1502
L-980837	6 3/8"	10,000 psi	H <sub>2</sub> S	11 1/2"-4lhd (8.250") Otis	2" 1502

Note: Additional sizes available on request.

## FLANGED PUMP-IN SUB

Part Number	I.D.	Working Pressure	Service	Quick Union Connection	Side Outlet
L-9701010046	3"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	2" 1502
L-9701016296	3"	15,000 psi	H <sub>2</sub> S	7"-5thd (4.375") Bowen	2" 2202
L-9701016295	4 1/16"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar	2" 1502
L-9701029607	5 1/8"	10,000 psi	H <sub>2</sub> S	7 7/8"-4x2thd (6.125") Elmar	2" 1502

Note: Additional sizes available on request.

## INTEGRAL PUMP-IN SUB

Part Number	I.D.	Working Pressure	Service	Quick Union Connection	Side Outlet
L-9701007262	3"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	2" 1502
L-9701013336	5 1/8"	10,000 psi	H <sub>2</sub> S	7 7/8"-4x2thd (6.125") Elmar	2" 1502

Note: Additional sizes available on request.

## ACCESSORIES

Part Number	Description	Working Pressure	Service	Connection
L-840805	Plug Valve	10,000 psi	H <sub>2</sub> S	2" 1502
L-840605	Plug Valve	15,000 psi	H <sub>2</sub> S	2" 2202

Note: Additional sizes available on request.

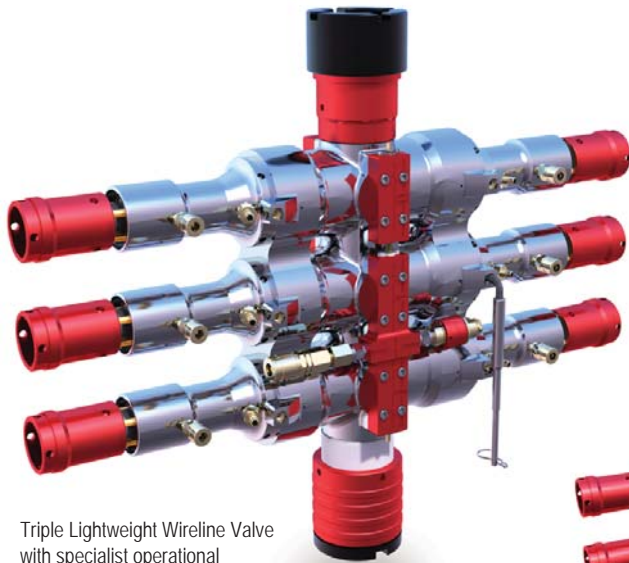
For Seal Kit part numbers add "K" to the item part number e.g. L-972052K.

# Lightweight Wireline Valve

The Elmar Lightweight Wireline Valve is available in 3" and 4 1/16" I.D., 10,000 psi working pressure, H<sub>2</sub>S service, in either single, dual or triple configurations.

The Elmar Lightweight Wireline Valve gives positive protection during well service operations, when operating with slickline, braided wireline and electric line.

All Elmar Lightweight Wireline Valves are up to 60% lighter than previous generation wireline valves.



Triple Lightweight Wireline Valve with specialist operational hand tools

Dual Lightweight Wireline Valve



Single Lightweight Wireline Valve



## Features

- Lightweight, allowing easier handling 3" Single 66kg, (146lb), Dual 114kg, (251lb) and Triple 162kg, (357lb) with Elmar lightweight quick unions
- Compact size, allowing shorter rig-up heights
- Back-up manual closure
- Threaded quick unions, allowing the use of any Bowen, Elmar or Otis type union without changing the body
- Ram position indicator rods
- Manifold blocks with integral equalisation, glycol and grease injection
- Maximum working pressure 10,000 psi H<sub>2</sub>S service
- Maximum hydraulic working pressure 3,000 psi API 6A and NACE compliant, with Third Party Design Approval
- Keyless Q-GUIDE™ ram design providing flexible ram configuration and positive wireline guiding
- Multiline inner seal accommodating a range of wireline sizes from slickline to 5/16"
- Supplied with specialist operational hand tools

## Option

- Stainless steel cage

## RAM ELEMENTS

Part Number	Description
L-980081	3" Multi Line InnerSeal Slickline to 5/16"
L-970103	4 1/16" Multi Line Inner Seal Slickline to 5/16"
L-978182	3" Outer Seal
L-978183	4 1/16" Outer Seal

## 3" I.D. PART NUMBERS

Part Number	I.D.	Working Pressure	Srv.	Single/Dual/Triple	Quick Union Connection	Seal Kit
L-974223	3"	10,000 psi	H <sub>2</sub> S	Single	4 3/4"-4x2thd (3.750") Elmar	L-974223K
L-974111	3"	10,000 psi	H <sub>2</sub> S	Dual	4 3/4"-4x2thd (3.750") Elmar	L-974111K
L-974224	3"	10,000 psi	H <sub>2</sub> S	Triple	4 3/4"-4x2thd (3.750") Elmar	L-974224K

## 4 1/16" I.D. PART NUMBERS

Part Number	I.D.	Working Pressure	Srv.	Single/Dual/Triple	Quick Union Connection	Seal Kit
L-9701013494E12	4 1/16"	10,000 psi	H <sub>2</sub> S	Single	6 1/8"-4x2thd (4.750") Elmar	L-9701013494E12K
L-9701009090E12	4 1/16"	10,000 psi	H <sub>2</sub> S	Dual	6 1/8"-4x2thd (4.750") Elmar	L-9701009090E12K
L-9701010635E12	4 1/16"	10,000 psi	H <sub>2</sub> S	Triple	6 1/8"-4x2thd (4.750") Elmar	L-9701010635E12K

Note: Additional sizes available on request. Ram line size to be specified at time of ordering.

## RAM OPTIONS

Q-GUIDE™ Shear and Seal Wireline Ram (see page 186)

Q-GUIDE™ Ram Assembly (see page 184)

## ACCESSORIES

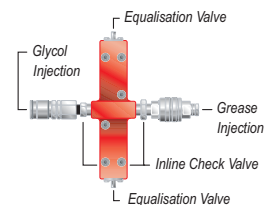
Part Number	Description
L-660492	BOP Gauge Kit 5,000 psi
L-660493	BOP Gauge Kit 10,000 psi



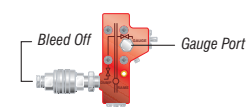
Q-GUIDE™ Ram Assembly

## MANIFOLD

Grease/Glycol and Equalisation



Bleed Off and Gauge

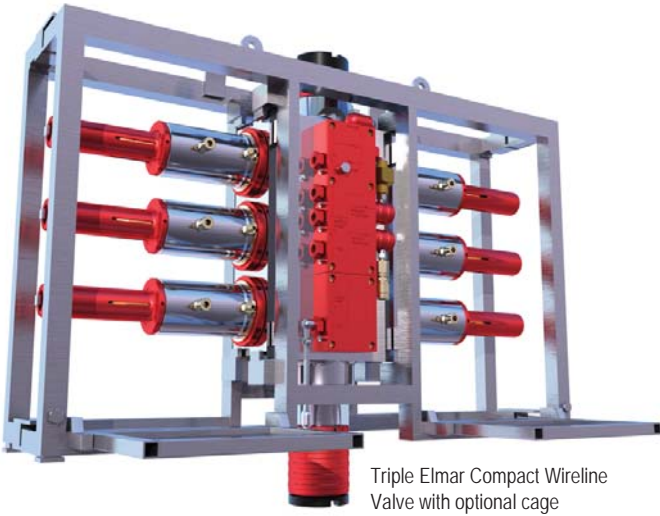


# Compact Wireline Valve

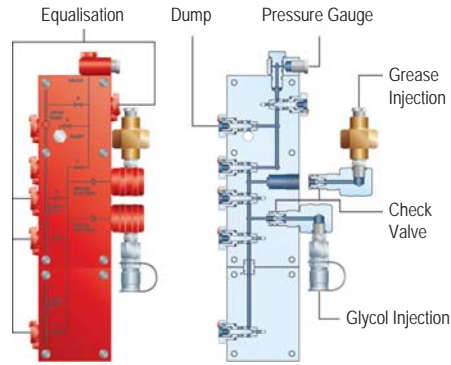
The Elmar Compact Wireline Valve is of mono-block construction and is designed for use in either single, dual, triple or quad configurations.

The valve gives positive protection during well service operations, when operating with slickline, braided wireline and electric line. It is available in a full range of sizes and working pressures, from 2 1/2" to 9" bore sizes, and 5,000 psi to 20,000 psi working pressures. Additional sizes are available on request.

For greater corrosion resistance all sizes of Elmar Compact Wireline Valves can be supplied with Inconel inlays in the ram bores and the through bore.



Triple Elmar Compact Wireline Valve with optional cage



Typical triple manifold Block type "C"

Manifold type 'A': Equalisation and Pressure Gauge Connection Facility

Manifold type 'B': Equalisation, Pressure Gauge Connection & Grease Injection Facility

Manifold type 'C': Equalisation, Pressure Gauge Connection & Grease and Glycol Injection Facility

## Features

- Compact size, allowing shorter rig-up heights
- Keyless ram bores, allowing ram inversion as and when required
- Quick coupled hydraulic cylinders, allowing fast removal of cylinder for ram or seal replacement
- Threaded quick unions, allowing the use of any Elmar, Bowen or Otis quick union without changing the body (integral unions/flanges are available as an optional extra)  
Note: 20K Compact Wireline Valve has integral lower connections to conform with requirements of API 6A
- Ram position indicator rods
- Hydraulic cylinder support arms for 4" - 9" wireline valves
- Manifold block with integral equalisation, glycol and grease injection
- Q-Guide Ram Assembly for Multi Line slickline to 0.312" (see page 184)
- 9" design features lightweight style cylinder assemblies

## Options

- Inconel inlay of all sealing surfaces
- Stainless steel cage

### MANIFOLD GAUGE KITS

Part Number	Description
L-660492	Manifold Gauge Kit, 5,000 psi WP
L-660493	Manifold Gauge Kit, 10,000 psi WP

### RAM OPTIONS

Multi Line Ram Seal (see page 184)
Q-GUIDE™ Ram Assembly (see page 184)
Q-GUIDE™ Shear and Seal Wireline Ram (see page 186)

## PART NUMBERS

Part Number	I.D.	Working Pressure	Srv.	Single/Dual/Triple	Quick Union Connection	Manifold Block Type
L-979991	3"	5,000 psi	H <sub>2</sub> S	Dual	4 3/4"-4thd (3.750") Bowen	C
L-980049	3"	5,000 psi	STD	Dual	5"-4thd (3.500") Otis	C
L-979992	3"	10,000 psi	STD	Dual	4 3/4"-4thd (3.750") Bowen	C
L-980050	3"	5,000 psi	H <sub>2</sub> S	Dual	5 3/4"-4thd (4.000") Otis	C
L-980051	3"	5,000 psi	H <sub>2</sub> S	Dual	5 1/2"-4x2thd (4.375") Bowen	C
L-980027	3"	10,000 psi	H <sub>2</sub> S	Triple	6 1/2"-4thd (4.750") Otis	C
L-980052	3"	10,000 psi	H <sub>2</sub> S	Triple	6 5/16"-4thd (4.375") Bowen	C
L-979998	3"	10,000 psi	H <sub>2</sub> S	Dual	6 5/16"-4thd (4.375") Bowen	C
L-980253	3"	15,000 psi	H <sub>2</sub> S	Triple	7"-5thd (4.375") Bowen	C
L-972505	3"	10,000 psi	H <sub>2</sub> S	Single	4 3/4"-4x2thd (3.750") Elmar	A
L-972142	3"	10,000 psi	H <sub>2</sub> S	Dual	4 3/4"-4x2thd (3.750") Elmar	C
L-971402	3"	10,000 psi	H <sub>2</sub> S	Triple	4 3/4"-4x2thd (3.750") Elmar	C
L-980053	4"	10,000 psi	H <sub>2</sub> S	Single	8 1/4"-4x2thd (6.000") Bowen	A
L-980054	4"	10,000 psi	H <sub>2</sub> S	Dual	8 1/4"-4x2thd (6.000") Bowen	C
L-972354	4 1/16"	10,000 psi	H <sub>2</sub> S	Single	6 1/8"-4x2thd (4.750") Elmar	A
L-972353	4 1/16"	10,000 psi	H <sub>2</sub> S	Dual	6 1/8"-4x2thd (4.750") Elmar	C
L-972488	4 1/16"	10,000 psi	H <sub>2</sub> S	Triple	6 1/8"-4x2thd (4.750") Elmar	C
L-980007	4 1/16"	10,000 psi	STD	Dual	8 1/4"-4x2thd (6.000") Bowen	C
L-979731	4 1/2"	15,000 psi	H <sub>2</sub> S	Triple	9 1/2"-4thd (6.250") Otis	C
L-981300	4.89"	5,000 psi	H <sub>2</sub> S	Single	6 7/8"-4thd (5.625") Elmar	A
L-980055	5 1/8"	5,000 psi	H <sub>2</sub> S	Dual	8 1/4"-4x2thd (6.750") Bowen	B
L-9701026985	5 1/8"	10,000 psi	H <sub>2</sub> S	Single	7 7/8"-4x2thd (6.125") Elmar	A
L-9701026984	5 1/8"	10,000 psi	H <sub>2</sub> S	Dual	7 7/8"-4x2thd (6.125") Elmar	C
L-9701026983	5 1/8"	10,000 psi	H <sub>2</sub> S	Triple	7 7/8"-4x2thd (6.125") Elmar	C
L-980056	5 1/8"	10,000 psi	H <sub>2</sub> S	Dual	9"-4thd (6.750") Otis	B
L-980057	5 1/8"	10,000 psi	H <sub>2</sub> S	Triple	9"-4thd (6.750") Otis	B
L-971559	6 3/8"	5,000 psi	H <sub>2</sub> S	Dual	9 7/8"-4x2thd (8.000") Bowen	B
L-980059	6 3/8"	10,000 psi	H <sub>2</sub> S	Dual	11 1/2"-4thd (8.250") Otis	B
L-980724	6.67"	5,000 psi	H <sub>2</sub> S	Single	9 3/8"-4thd (7.750") Elmar	A
L-9701022541	4 1/16"	20,000 psi	H <sub>2</sub> S	Single	Integral 4 1/16" 20,000lb BX155 API flange top & bottom connection	A
L-9701022302	4 1/16"	20,000 psi	H <sub>2</sub> S	Quad	9.50"-4thd (5.500") Elmar box and Integral 4 1/16" 20,000lb BX155 API flange bottom connection	C
L-9701042229	9"	10,000 psi	H <sub>2</sub> S	Quad	Integral 9" 10,000 psi BX157 API flange top & bottom connection	C

Note: Additional sizes available on request. For Seal Kit part numbers add "K" to the item part number e.g. L-979991K.

# Constrictor Multi Line Ram Seal and Q-GUIDE™ Rams



The Elmar Q-GUIDE™ ram is a proprietary patented design that provides a positive alignment for the wireline. V-shaped flat guides on either side of the inner seal restrict the wireline so that the section of line contacting the inner seal is always centred and parallel to the wireline valve axis.



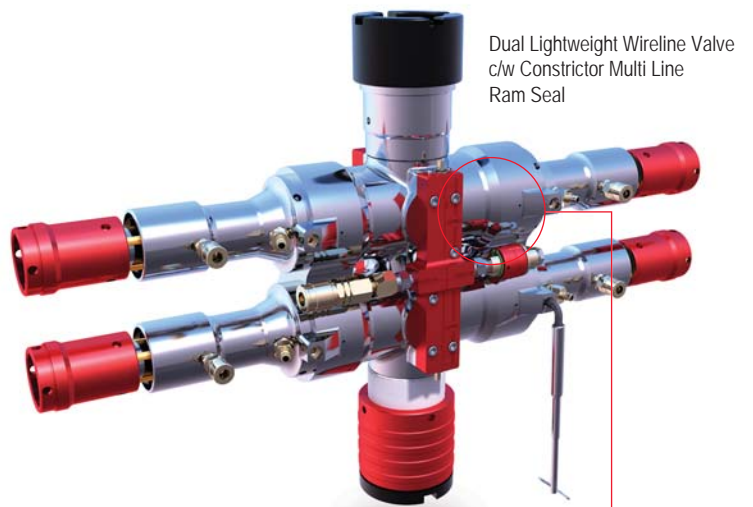
Q-GUIDE™ Ram Assembly  
(Patented design)

The Q-GUIDE™ has been designed to accommodate eccentric set-ups where the wireline goes through the wireline valve body at an angle and can be trapped by the rams before falling in the cable groove.

The Q-GUIDE™ style of ram has been developed to replace integral guide style rams. Inner and outer seals used in the Q-GUIDE™ are the same as used in the current styles of ram bodies.

The Elmar Constrictor multi-line inner seal can be used with the Q-GUIDE™ ram for maximum effect.

The Q-GUIDE™ is available for all sizes of wireline valves.



Dual Lightweight Wireline Valve  
c/w Constrictor Multi Line  
Ram Seal

## RAM ASSEMBLY PART NUMBER

BOP Size	New Part Number	Coding
3"	L-9701042661	* *
4 - 4.5"	L-9701042660	* *
5 - 5.5"	L-9701042659	* *
6 - 6.5"	L-9701042502	* *
9"	L-9701042231	* *

## Ordering Information

### ELASTOMER

H	HYD NITRILE
M	MULTI

### MULTILINE RANGE - HYD NITRILE

1	Blind - 5/16"
2	5/16" - 15/32"

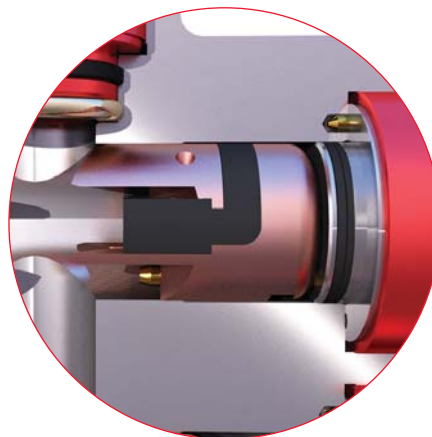
## LINE SIZE

125	188	218	250	281	312	375	438	468
1/8"	3/16"	7/32"	1/4"	9/32"	5/16"	3/8"	7/16"	15/32"

Note: Additional line sizes available on request.

Ordering Example: L-9701972667M312 - 3" Q-GUIDE™ ram assembly dressed with multiline seals for Blind through to 5/16" wireline.  
L-9701972667H312 - 3" Q-GUIDE™ ram assembly dressed with HNBR seals for 5/16" wireline.

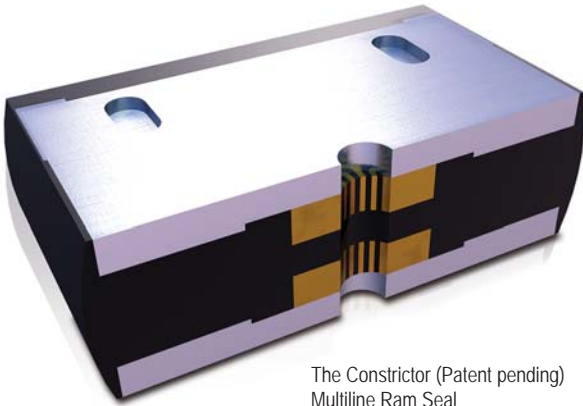
The Constrictor (Patent pending)  
Multiline Ram Seal



Multi Line Ram Seal

# Constrictor Multi Line Ram Seal

A reliable BOP or Wireline Valve seal is one of the most important safety barriers which prevent the catastrophic release of well pressure and ensures the safety of both personnel and the environment.



The Constrictor (Patent pending) Multiline Ram Seal

## PART NUMBERS - Normal Temperature Range

Part Number	Working Pressure	Size	Line Size	Ram Range
L-9701030345	15,000 psi	3"	Blind to 0.330"	M312
L-9701024611	15,000 psi	4" - 4 1/2"	Blind to 0.330"	M312
L-9701025504	15,000 psi	5" - 5 1/2"	Blind to 0.330"	M312
L-9701013623	15,000 psi	6" - 6 1/2"	Blind to 0.330"	M312
L-9701042591	15,000 psi	9"	Blind to 0.330"	M312

## Features

- 15,000 psi third party witnessed and certified from -10°C to 121°C
- 12 hour gas hold
- Working pressure of 15,000 psi
- Repeated sealing action means fewer redresses required

Operating temperatures in addition to normal range

- Arctic: -46C to 30C
- Elevated: 20C to 180C
- For part numbers please contact sales

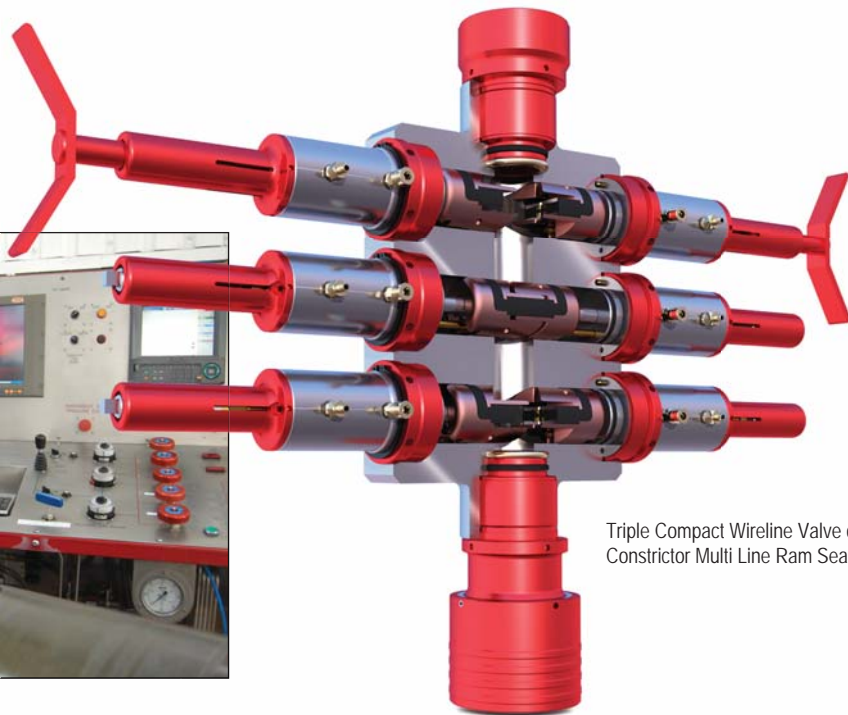


The patent pending Constrictor is the well intervention industry's first multiline seal designed to be third party witnessed and certified at extreme conditions. Seals are certified by gas testing for 12 continuous hours, sealing blind and at temperatures ranging from -46°C to 180°C to best simulate a diversity of working environments. Designed for performance you can trust, the Constrictor Multiline Ram Seal is certified, multi size and long lasting with repeated activation.

The Constrictor is a wireline valve (formerly known as wireline BOP) multiline ram seal that controls well fluids through the wellbore during intervention operations involving braided line or electric line. It has evolved from earlier commercially proven ram seals, improved to be even more reliable, require less maintenance and operate under more challenging pressure and temperature conditions for longer durations.

This technology is the first of its kind to be 3rd party witness tested under extreme pressure, temperature and time conditions and then obtain an independent review certificate. Benefits verified by an independent third party include:

- In the event of unexpected cut and drop, it can seal blind, contain wellbore fluids for at least 12 hours and seal successfully on any wireline up to 5/16".
- The same seal is used for testing of both low and high end temperature range.
- The Constrictor can close on the wireline cable without shearing, allowing crews to perform remedial work on the cable.
- Fits existing Elmar Q Guide™ rams and can be retrofitted to an existing wireline valve while in operation and used repeatedly without degradation, making it suitable for fishing operations.



Triple Compact Wireline Valve c/w Constrictor Multi Line Ram Seal

# Q-GUIDE™ Shear and Seal Wireline Ram Assembly



The Q-Guide™ Shear and Seal Wireline Ram Assembly has been developed to satisfy the requirements for wireline operators to be able to shear their wire and seal the well independently of the well control equipment used by the drilling or oil company.



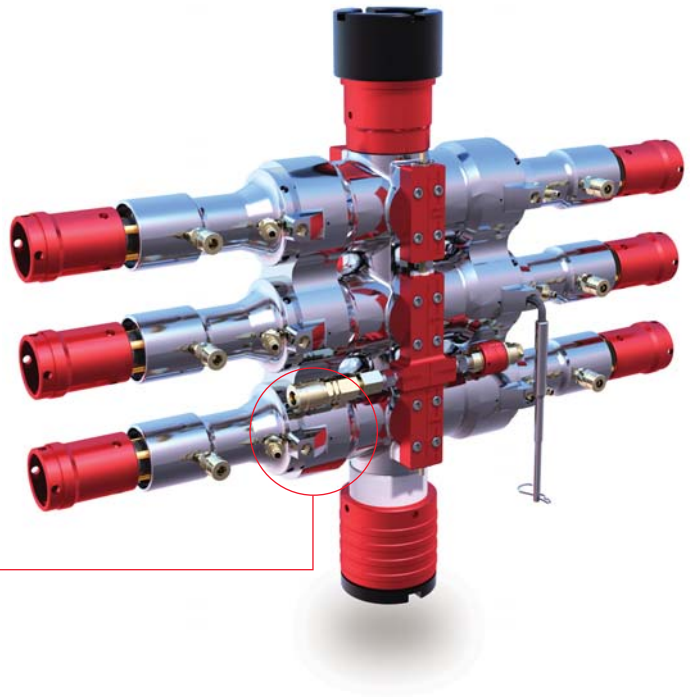
Q-GUIDE™ Shear and Seal Ram Assembly 2 1/2" - 3" BOP size  
L-9701017458

The Elmar Q-GUIDE™ Shear and Seal Wireline Ram Assembly can be installed in Elmar Compact and Lightweight design wireline valves of up to 15,000 psi working pressure and has a full bore guiding and shearing capacity. For use with up to 15/32" wire.

The ram bodies are manufactured from H<sub>2</sub>S resistant alloy steel, the elastomers from tear resistant HYD NITRILE and the shear blades from wear resistant tool steel.

The new Q-GUIDE™ style of shear and seal ram assemblies have been developed to replace the existing shear and seal ram assemblies. The bodies are manufactured from the same blanks that the normal Q-GUIDE™ rams use. This design also uses the normal inner and outer seals. The table below shows the old shear and seal ram assembly part numbers and their equivalent new Q-GUIDE™ Shear and Seal Ram Assembly part numbers.

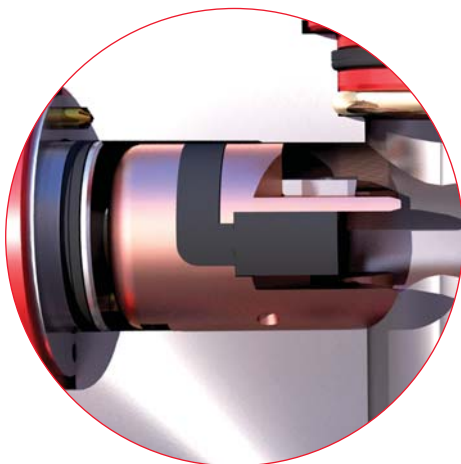
Triple Lightweight Wireline Valve c/w Shear and Seal Wireline Rams



## PART NUMBERS

Original Part Number	New Part Number	BOP Size	Shearing Capacity
L-977452	L-9701042889	2 1/2" - 3"	0.108" - 15/32" wireline
L-972357	L-9701042888	4" - 4 1/2"	0.108" - 15/32" wireline
L-980016	L-9701042887	5" - 5 1/2"	0.108" - 15/32" wireline
L-979366	L-9701042501	6" - 6 1/2"	0.108" - 15/32" wireline

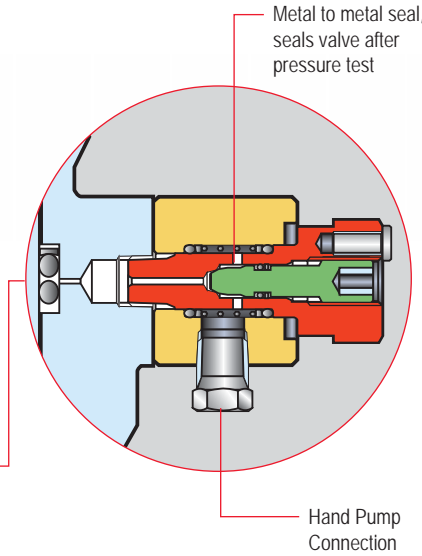
Note: Up to 15/32" shearing capabilities dependant on BOP ram sizes. Hardened materials are susceptible to sulphide stress cracking (SSC).



Shear and Seal Ram

# Quick Test Sub - QTS

The Elmar Quick Test Sub (QTS) is designed to save rig time while pressure testing the wireline pressure control equipment string when multiple wireline runs are required.



Quick Test Injection Port c/w Integral Valve

The Elmar Quick Test Sub is inserted either above or below the wireline valve at the position of the joint normally opened to insert and retrieve tools from the well. After performing the first pressure test to check the integrity of the whole String, subsequent pressure tests can be made using the Quick Test Sub to verify the integrity of the joint disconnected, rather than having to test the complete string.

This is achieved by connecting a small hydraulic hand-pump to the Quick Test Sub and testing the joint 'O' ring seal from the outside. It is estimated that the use of the Elmar Quick Test Sub can reduce the time needed to pressure test the String at each subsequent test by more than 1/2 hour.

## Features

- Saves rig time on pressure test due to design features
- Eliminates prospect of contaminating well with test fluids
- Saves on glycol
- Eliminates risks of pressure testing with perforating guns

## PART NUMBERS

Part Number	I.D	Working Pressure	Service	Quick Union Connection	Seal Kit
L-971404	3"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	L-971404K
L-972235	3"	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	L-972235K
L-970918	3"	10,000 psi	H <sub>2</sub> S	6 1/2"-4thd (4.750") Otis	L-970918K
L-971299	4"	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.000") Bowen	L-971299K
L-972578	3"	15,000 psi	H <sub>2</sub> S	7"-5thd (4.375") Bowen	L-972578K
L-972222	4 1/16"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar	L-972222K
L-980972	4.89"	5,000 psi	H <sub>2</sub> S	6 7/8"-4thd (5.625") Elmar	L-980972K
L-9701013745	5 1/8"	10,000 psi	H <sub>2</sub> S	7 7/8"-4x2thd (6.125") Elmar	L-9701013745K
L-973101	5 1/8"	10,000 psi	H <sub>2</sub> S	9"-4thd (6.750") Otis	L-973101K
L-973577	6 3/8"	10,000 psi	H <sub>2</sub> S	11 1/2"-4thd (8.250") Otis	L-973577K
L-981721	6.67"	5,000 psi	H <sub>2</sub> S	9 7/8"-4thd (7.750") Elmar	L-981721K

Note: Additional sizes available on request.

## QUICK TEST SUB & WIRELINE CABLE CUTTER HAND PUMP

Part Number	Description
L-690573	Hand Pump Assembly 10,000 psi Working Pressure
L-690676	Hand Pump Assembly 15,000 psi Working Pressure



## HYDRAULIC HOSE ASSEMBLY

Part Number	Description
L-690587	25ft (10,000 psi)
L-690586	50ft (10,000 psi)
L-690677	25ft (15,000 psi)

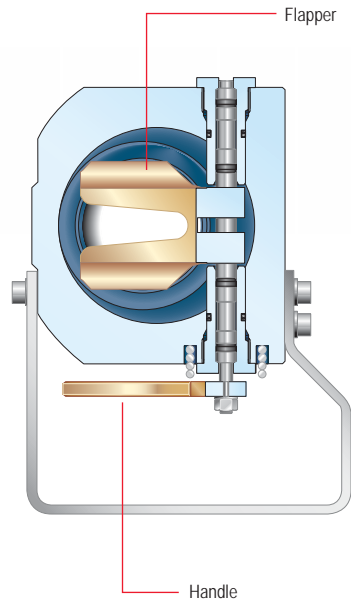
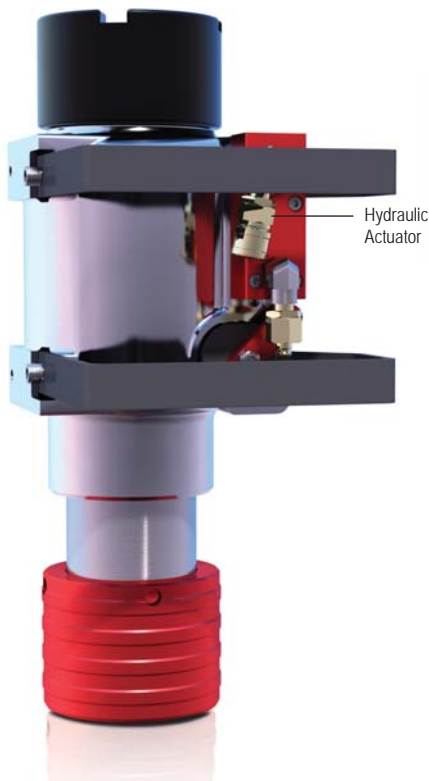
Hose Assembly 1/4" ID, with Quick Connectors and Dust Covers





# Hydraulic Tool Trap with External Indicator

The Elmar Hydraulic Tool Trap with external indicator is installed between the wireline valve and the lubricator string.



It prevents the loss of wireline tools downhole in the event of the wire being pulled-off the rope socket, by retaining the dropping tool on a flapper. The flapper has an opening larger than the wireline, but smaller than the tool string.

The flapper is operated by a hydraulic actuator, through an external handle, connected to the flapper with a low-torque pressure-balanced shaft. The external handle doubles as a tool passage indicator. The tool string may be pulled freely upwards through the tool trap. The flapper will move upwards, together with the external handle, indicating tool passage. As soon as the string bottom has cleared the flapper, the flapper will drop back into the trap position, pushed by a torsion spring. The flapper can be lifted remotely when running a tool in the well by activating the piston in the hydraulic actuator. Pumping back the piston to its original position allows the flapper to return to its trap position.

The hydraulic actuator can be operated by a dual output manual pump or with an Elmar Hydraulic Control Module.

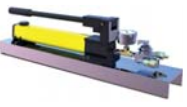
## Features

- Lightweight - 3" 10,000 psi working pressure (part number L-971169)
- Lightweight - 4 1/16" 10,000 psi working pressure, part number L-972219
- Positive tool passage indicator
- Pressure-balanced flapper shaft
- Remote hydraulic operation. Enhanced operational safety
- Can be operated manually in case of hydraulic failure

## Option

- Manual Tool Trap with external indicator

## ACCESSORIES

Part Number	Description
L-690750	Tool Trap Hand Pump 
L-690615	50ft Twin Hose Assembly 

## PART NUMBERS

Part Number	I.D.	Working Pressure	Service	Quick Union Connection	Seal Kit
L-974814	2 1/2"	15,000 psi	H <sub>2</sub> S	6 5/16"-4thd (3.750") Bowen	L-974814K
L-976271	2 1/2"	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	L-976271K
L-971169	3"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	L-971169K
L-978383	3"	5,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	L-978383K
L-970339	3"	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	L-970339K
L-974828	3"	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	L-974828K
L-974794	4"	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.000") Bowen	L-974794K
L-972219	4 1/16"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar	L-972219K
L-9701013337	5 1/8"	10,000 psi	H <sub>2</sub> S	7 7/8"-4x2thd (6.125") Elmar	L-9701013337K
L-978441	5 1/2"	5,000 psi	STD	8 1/4"-4x2thd (6.750") Bowen	L-978441K
L-9701003477	6 3/8"	5,000 psi	H <sub>2</sub> S	9 1/2"-4thd (8.000") Otis	L-9701003477K
L-980216	6 3/8"	10,000 psi	H <sub>2</sub> S	11 1/2"-4thd (8.250") Otis	L-980216K

Note: Additional sizes available on request.

# Bleed-Off Sub

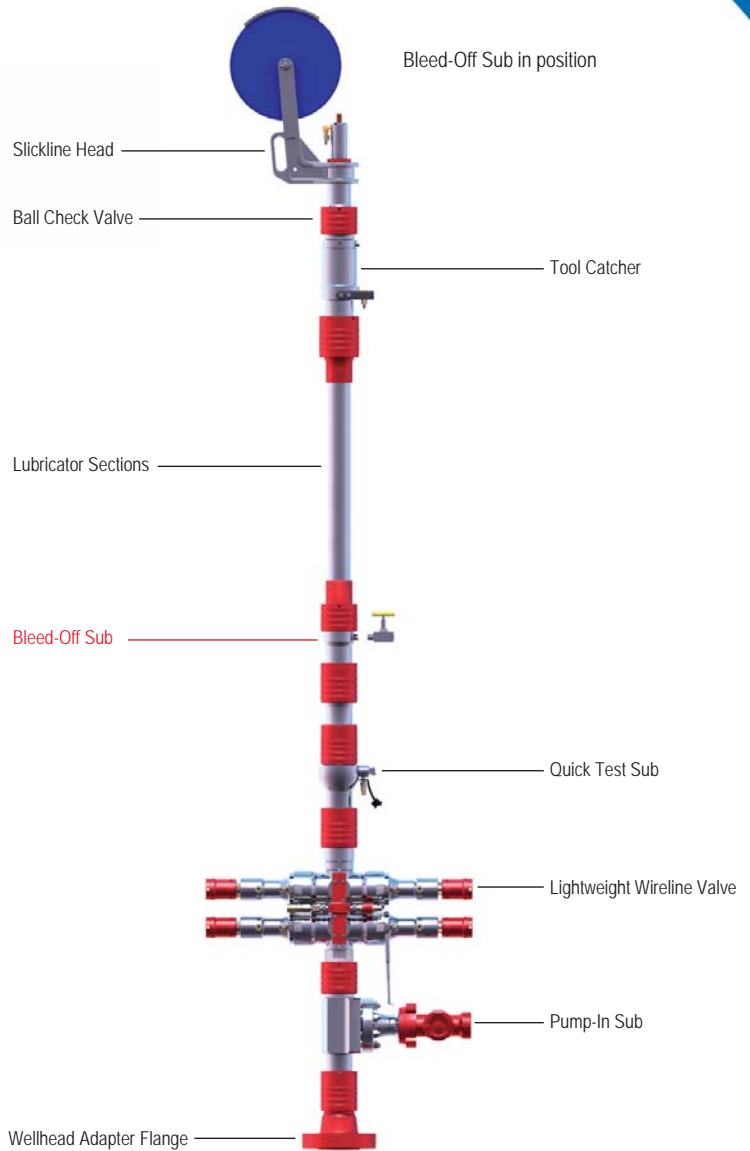
For applications when a bleed-off port is required on the lubricator string, bleed-off subs are available with a 1/2" NPT port for connection of a suitable valve. The Bleed-Off Sub is particularly effective when used in conjunction with Lightweight Lubricator.



Typical Elmar Bleed-Off Sub

### ACCESSORIES

Part Number	Description
L-500060	Needle Valve, 10,000 psi H <sub>2</sub> S 1/2" NPT



### PART NUMBERS

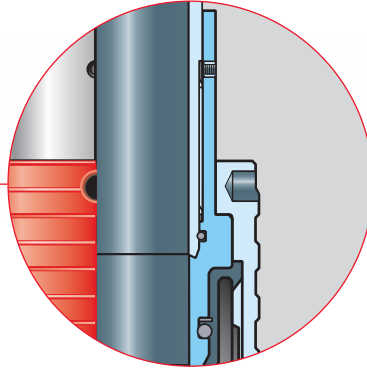
Part Number	I.D.	Working Pressure	Service	Quick Union Connection	Bleed Port
L-974292	3"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	1/2" NPT
L-970915	3"	10,000 psi	STD	4 3/4"-4thd (3.750") Bowen	1/2" NPT
L-970916	3"	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	1/2" NPT
L-9701002871	3"	10,000 psi	H <sub>2</sub> S	6 1/2"-4thd (4.750") Otis	1/2" NPT
L-974293	4 1/16"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar	1/2" NPT
L-980859	6 3/8"	10,000 psi	H <sub>2</sub> S	11 1/2"-4thd (8.250") Otis	1/2" NPT

Note: Additional sizes available on request.  
For Seal Kit part numbers add "K" to the item part number e.g. L-974292K.

# Lightweight Lubricator

The Elmar "Lite" lubricators enable the wireline tool string to be introduced or retrieved from a well bore under pressure. They are normally positioned above the wireline valve, tool trap or quick test sub.

Up to 70% lighter than an integral equivalent



Buttress Type Thread

By using high strength stainless steel alloys, the weight of a lubricator section is reduced by up to 70% with respect to conventional integral lubricators.

The Elmar "Lite" lubricator consists of four basic parts: a quick union collar, a male quick union, a lubricator tube, and a female quick union. The quick unions are manufactured in H<sub>2</sub>S resistant alloy steel to prevent galling.

Elmar "Lite" lubricators are rated 10,000 psi H<sub>2</sub>S service. The Elmar lightweight quick unions have been selected for optimum weight reduction and to prevent unsafe cross-string assembly. Upper and lower adapters are available to connect existing equipment. These are rated 5,000 psi or 10,000 psi depending on the type of connection.

### 3" I.D. LIGHTWEIGHT LUBRICATOR

Part Number	Upper Connection	Lower Connection	I.D.	W.P.	Srv.	L.	WT.
L-9701971246L040	4 3/4"- 4x2thd (3.750") Elmar Box	4 3/4"- 4x2thd (3.750") Elmar Pin	3"	10K	H <sub>2</sub> S	4ft	54 lb
L-9701971246L050	4 3/4"- 4x2thd (3.750") Elmar Box	4 3/4"- 4x2thd (3.750") Elmar Pin	3"	10K	H <sub>2</sub> S	5ft	63 lb
L-9701971246L060	4 3/4"- 4x2thd (3.750") Elmar Box	4 3/4"- 4x2thd (3.750") Elmar Pin	3"	10K	H <sub>2</sub> S	6ft	72 lb
L-9701971246L080	4 3/4"- 4x2thd (3.750") Elmar Box	4 3/4"- 4x2thd (3.750") Elmar Pin	3"	10K	H <sub>2</sub> S	8ft	90 lb
L-9701971246L100	4 3/4"- 4x2thd (3.750") Elmar Box	4 3/4"- 4x2thd (3.750") Elmar Pin	3"	10K	H <sub>2</sub> S	10ft	108 lb

### 4 1/16" I.D. LIGHTWEIGHT LUBRICATOR

Part Number	Upper Connection	Lower Connection	I.D.	W.P.	Srv.	L.	WT.
L-9701971846L040	6 1/8"- 4x2thd (4.750") Elmar Box	6 1/8"- 4x2thd (4.750") Elmar Pin	4.06"	10K	H <sub>2</sub> S	4ft	96 lb
L-9701971846L050	6 1/8"- 4x2thd (4.750") Elmar Box	6 1/8"- 4x2thd (4.750") Elmar Pin	4.06"	10K	H <sub>2</sub> S	5ft	113 lb
L-9701971846L060	6 1/8"- 4x2thd (4.750") Elmar Box	6 1/8"- 4x2thd (4.750") Elmar Pin	4.06"	10K	H <sub>2</sub> S	6ft	129 lb
L-9701971846L080	6 1/8"- 4x2thd (4.750") Elmar Box	6 1/8"- 4x2thd (4.750") Elmar Pin	4.06"	10K	H <sub>2</sub> S	8ft	161 lb
L-9701971846L100	6 1/8"- 4x2thd (4.750") Elmar Box	6 1/8"- 4x2thd (4.750") Elmar Pin	4.06"	10K	H <sub>2</sub> S	10ft	193 lb

### 5 1/8" I.D. LIGHTWEIGHT LUBRICATOR

Part Number	Upper Connection	Lower Connection	I.D.	W.P.	Srv.	L.	WT.
L-9701013338L040	7.875"- 4x2thd (6.125") Elmar Box	7.875"- 4x2thd (6.125") Elmar Pin	5 1/8"	10K	H <sub>2</sub> S	4ft	181 lb
L-9701013338L050	7.875"- 4x2thd (6.125") Elmar Box	7.875"- 4x2thd (6.125") Elmar Pin	5 1/8"	10K	H <sub>2</sub> S	5ft	212 lb
L-9701013338L060	7.875"- 4x2thd (6.125") Elmar Box	7.875"- 4x2thd (6.125") Elmar Pin	5 1/8"	10K	H <sub>2</sub> S	6ft	242 lb
L-9701013338L080	7.875"- 4x2thd (6.125") Elmar Box	7.875"- 4x2thd (6.125") Elmar Pin	5 1/8"	10K	H <sub>2</sub> S	8ft	304 lb
L-9701013338L100	7.875"- 4x2thd (6.125") Elmar Box	7.875"- 4x2thd (6.125") Elmar Pin	5 1/8"	10K	H <sub>2</sub> S	10ft	366 lb

### ACCESSORIES

Torque Tool for use in Baker vice (Aluminium Sleeve)		Torque Bench with Grip Vice		Miscellaneous	
L-973957	3" Torque Tool	L-971489	3" Torque Bench	L-970852	3" Hook Wrench
L-973958	4 1/16" Torque Tool	L-972196	4 1/16" Bench	L-971983	4 1/16" Hook Wrench
L-973959	Combined 3" & 4 1/16" Torque Tool Set	L-973217	Combined 3" & 4 1/16" Torque Bench Set	L-981611	5 1/8" Alum. Sleeve
Test Cap		Test Plug		Connection	
L-9701035927		L-9701035926		4 3/4"- 4x2thd (3.750") Elmar	
L-9701035929		L-9701035928		4 3/4"- 4thd (3.750") Elmar	
L-9701035933		L-9701035932		6 1/8"- 4x2thd (4.750") Elmar	
L-9701035931		L-9701035930		7 7/8"- 4x2thd (6.125") Elmar	
L-9701035935		L-9701035934		9"- 4thd (6.750") Otis	

Note: For Seal Kit part numbers add "K" to the item part number e.g. L-9701971246K.

## Features

- Corrosion resistant tube made from high strength NACE certified stainless steel
- Quick unions are coupled through premium Elmar Lite coupling:
  - Tube-to-union seal is metal-to-metal backed-up by o-ring
  - Special handling tools can be supplied upon request. Calibrated torque is not required
- Bending stresses at the thread undercut are minimised
- Elmar Lightweight Quick Unions:
  - 3" ID: 4 3/4"- 4x2thd (3.750" seal dia)
  - 4 1/16" ID: 6 1/8"- 4x2thd (4.750" seal dia)
  - 5 1/8" ID: 7.875"- 4x2thd (6.125" seal dia)
- Other unions available upon request

# Wireline Lubricator with Threaded Unions

This Lubricator Section is used when performing wireline or electric line operations and can feature a bleed port if required.



Threaded Lubricator

## Features

- Maximum working pressure 15,000 psi
- Standard and H<sub>2</sub>S Service

Quick unions are of the screwed type with an Elmar ACME thread, which incorporates an 'O' ring seal. Third party design approval is available if required.

### 3" DIAMETER THROUGH BORE

Part Number	Ports	Working Pressure	Service	Quick Union Connection	I.D.	Length
L-977704	No Port	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	3"	4ft
L-981192	No Port	5,000 psi	H <sub>2</sub> S	5 1/2"-4x2thd (4.375") Bowen	3"	8ft
L-979738	No Port	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	3"	8ft
L-981377	1 x Port	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	3"	8ft
L-977357	No Port	15,000 psi	H <sub>2</sub> S	7"-5thd (4.375") Bowen	3"	8ft
L-979375	1 x Port	5,000 psi	STD	5"-4thd (3.500") Otis	3"	10ft
L-976032	No Port	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	3"	10ft

### 4" - 4 1/2" DIAMETER THROUGH BORE

Part Number	Ports	Working Pressure	Service	Quick Union Connection	I.D.	Length
L-981207	1 x Port	5,000 psi	H <sub>2</sub> S	7"-5thd (5.250") Bowen	4"	5ft
L-978858	No Port	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.000") Bowen	4"	6ft
L-972446	1 x Port	5,000 psi	H <sub>2</sub> S	6 1/2"-4thd (4.750") Otis	4"	8ft
L-981554	2 x Port	10,000 psi	STD	6 1/2"-4thd (4.750") Otis	4"	8ft
L-978860	No Port	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.000") Bowen	4"	10ft
L-970132	1 x Port	10,000 psi	H <sub>2</sub> S	8 3/8"-4thd (5.250") Otis	4"	10ft
L-978857	2 x Port	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.000") Bowen	4"	10ft

### 5" - 5 1/2" DIAMETER THROUGH BORE

Part Number	Ports	Working Pressure	Service	Quick Union Connection	I.D.	Length
L-981330	No Port	10,000 psi	H <sub>2</sub> S	9"-4thd (6.750") Otis	5 1/8"	3ft
L-981329	No Port	10,000 psi	H <sub>2</sub> S	9"-4thd (6.750") Otis	5 1/8"	5ft
L-981328	1 x Port	10,000 psi	H <sub>2</sub> S	9"-4thd (6.750") Otis	5 1/8"	8ft

### 6" - 6 1/2" DIAMETER THROUGH BORE

Part Number	Ports	Working Pressure	Service	Quick Union Connection	I.D.	Length
L-972448	1 x Port	5,000 psi	H <sub>2</sub> S	9 1/2"-4thd (8.000") Otis	6 3/8"	6ft
L-971629	1 x Port	5,000 psi	H <sub>2</sub> S	9 7/8"-4x2thd (8.000") Bowen	6 3/8"	8ft
L-981191	No Port	5,000 psi	H <sub>2</sub> S	9 7/8"-4x2thd (8.000") Bowen	6 3/8"	8ft
L-9701008030	2 x Port	5,000 psi	H <sub>2</sub> S	9 1/2"-4thd (8.000") Otis	6 3/8"	10ft
L-9701008031	No Port	5,000 psi	H <sub>2</sub> S	9 1/2"-4thd (8.000") Otis	6 3/8"	10ft
L-971558	1 x Port	5,000 psi	H <sub>2</sub> S	9 7/8"-4x2thd (8.000") Bowen	6 3/8"	10ft
L-972054	No Port	10,000 psi	H <sub>2</sub> S	11 1/2"-4thd (8.250") Otis	6 3/8"	10ft

Note: Additional lengths and quick unions available on request.

# Wireline Lubricator with Integral Unions

The Integral Lubricator Section is a pressure containing cylinder used when performing wireline operations.



Integral Lubricator

## Features

- Maximum working pressure 15,000 psi
- Standard and H<sub>2</sub>S Service

Its purpose is to allow the wireline tool string to be raised above the wellhead prior to and after wireline operations, thereby enabling the wellhead valve to be opened and closed, allowing entry and exit from the well bore.

During slickline operations, three lubricator sections are normally used, each having a different ID, the uppermost section having the smallest, then opening out to the lower section with largest ID. During electric line operations the lubricators normally have the same ID.

### 3" DIAMETER THROUGH BORE

Part Number	Ports	Working Pressure	Service	Quick Union Connection	I.D.	Length
L-978727	No Port	5,000 psi	STD	5"-4thd (3.500") Otis	3"	4ft
L-979050	No Port	5,000 psi	H <sub>2</sub> S	4 3/4"-4thd (3.750") Bowen	3"	8ft
L-975273	No Port	5,000 psi	H <sub>2</sub> S	5 1/2"-4x2thd (4.375") Bowen	3"	8ft
L-979632	1 x Port	5,000 psi	STD	5"-4thd (3.500") Otis	3"	8ft
L-973569	No Port	5,000 psi	H <sub>2</sub> S	4 3/4"-4thd (3.750") Bowen	3"	10ft
L-979635	No Port	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	3"	10ft
L-979636	2 x Port	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	3"	10ft
L-975391	No Port	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	3"	10ft
L-970394	No Port	15,000 psi	H <sub>2</sub> S	7 1/2"-4thd (5.500") Otis	3"	8ft

### 4" - 4 1/2" DIAMETER THROUGH BORE

Part Number	Ports	Working Pressure	Service	Quick Union Connection	I.D.	Length
L-973521	No Port	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.000") Bowen	4 1/16"	8ft
L-9701011054	No Port	10,000 psi	H <sub>2</sub> S	8 3/8"-4thd (5.250") Otis	4 1/16"	8ft
L-971357	No Port	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.000") Bowen	4 1/16"	10ft
L-9701007554	1 x Port	15,000 psi	H <sub>2</sub> S	9 1/2"-4thd (6.250") Otis	4 1/2"	5ft
L-979729	No Port	15,000 psi	H <sub>2</sub> S	9 1/2"-4thd (6.250") Otis	4 1/2"	10ft

### 5" - 5 1/2" DIAMETER THROUGH BORE

Part Number	Ports	Working Pressure	Service	Quick Union Connection	I.D.	Length
L-9701010224	No Port	5,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.750") Bowen	5 1/2"	4ft
L-9701007644	2 x Port	10,000 psi	H <sub>2</sub> S	9"-4thd (6.750") Otis	5 1/2"	8ft
L-9701008461	No Port	5,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.750") Bowen	5 1/2"	10ft
L-981662	No Port	10,000 psi	H <sub>2</sub> S	9 5/32"-4x2thd (6.750") Bowen	5 1/2"	10ft
L-972656	No Port	10,000 psi	H <sub>2</sub> S	9"-4thd (6.750") Otis	5 1/2"	10ft

### 6" - 6 1/2" DIAMETER THROUGH BORE

Part Number	Ports	Working Pressure	Service	Quick Union Connection	I.D.	Length
L-970485	No Port	10,000 psi	H <sub>2</sub> S	11 1/2"-4thd (8.250") Otis	6 3/8"	5ft
L-970486	No Port	10,000 psi	H <sub>2</sub> S	11 1/2"-4thd (8.250") Otis	6 3/8"	6ft

Note: Additional lengths and quick unions available on request.

# Variable Length Lubricator - VLL

The Elmar Lightweight Variable Length Lubricator is designed to achieve two specific functions: To effectively contain well pressure during wireline intervention and provide safe and easy access to the wireline in the event of a problem.

## Features

- Corrosion Resistant Tube made from high strength NACE Certified Stainless Steel
- Quick unions and Variable Length Adapters are coupled through Premium Elmar Lite Coupling:
  - Tube-to-union seal is metal to metal backed-up by O-Ring
  - Uses existing special handling tools. Calibrated torque is not required
- Allows safe and easy access to the wireline in the event of a problem
- Bending stresses at the thread undercut are minimised
- Elmar Lightweight Quick Unions:
  - Upper Connection: 4 3/4" - 4x2thd (3.750" seal dia)
  - Lower Connection: 6 1/8" - 4x2thd (4.750" seal dia)

As with the conventional Lightweight Lubricator, the Elmar Variable Length Lubricator enables the wireline toolstring to be introduced into the well while maintaining full pressure integrity.

By using high strength Stainless Steel Alloys, the weight of the lubricator section is reduced by up to 70% compared to integral equivalent.

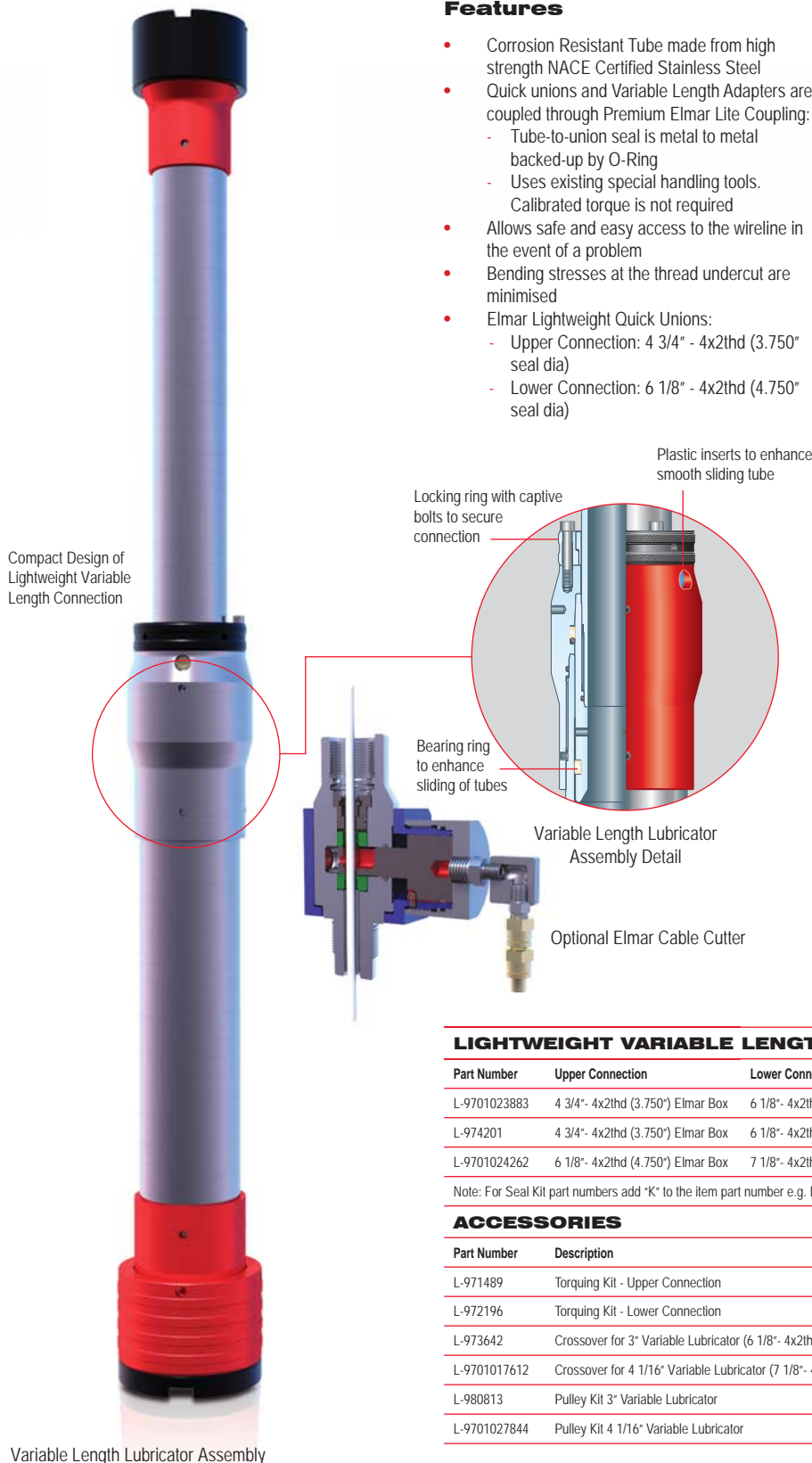
The Elmar Lightweight Variable Length Connection is comprised of two specially designed adapters and a locking ring.

The Variable Length and Quick Union adapters are connected to the lubricator tube by a premium-threaded connection with a metal-to-metal seal, backed up by an elastomer seal. The use of stainless steel alloys reduces the amount of maintenance required between jobs.

Should there be a problem with the wireline during intervention work, e.g. stranded line, the Elmar Lightweight Variable Length Lubricator can be unlocked and disconnected above the wireline valve and the lower section raised and locked in the retracted position allowing access to the wireline.

A lightweight pulley kit provides a safe and controlled lift of the lower variable length section. This is particularly useful whenever the top sheave and the lubricator string are supported by a single lifting device.

It is recommended that the Variable Length Lubricator be used in conjunction with the Elmar Cable Cutter Sub (see page 197).



## LIGHTWEIGHT VARIABLE LENGTH LUBRICATOR

Part Number	Upper Connection	Lower Connection	I.D.	W.P.	Srv.	L.	WT.
L-9701023883	4 3/4" - 4x2thd (3.750") Elmar Box	6 1/8" - 4x2thd (4.750") Elmar Pin	3"	10K	H <sub>2</sub> S	5ft	59kg 130 lb
L-974201	4 3/4" - 4x2thd (3.750") Elmar Box	6 1/8" - 4x2thd (4.750") Elmar Pin	3"	10K	H <sub>2</sub> S	10ft	80kg 176 lb
L-9701024262	6 1/8" - 4x2thd (4.750") Elmar Box	7 1/8" - 4x2thd (6.125") Elmar Pin	4 1/16"	10K	H <sub>2</sub> S	5ft	124kg 273 lb

Note: For Seal Kit part numbers add "K" to the item part number e.g. L-9701023883K.

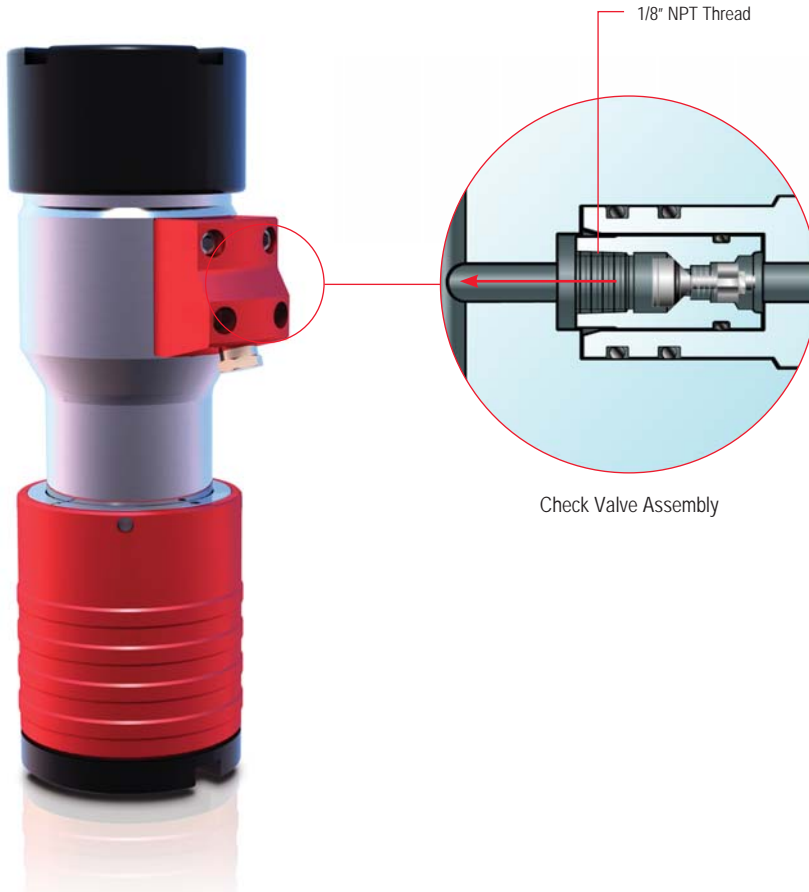
## ACCESSORIES

Part Number	Description
L-971489	Torquing Kit - Upper Connection
L-972196	Torquing Kit - Lower Connection
L-973642	Crossover for 3" Variable Lubricator (6 1/8" - 4x2thd (4.750") Elmar Box by 4 3/4" - 4x2thd (3.750") Elmar Pin)
L-9701017612	Crossover for 4 1/16" Variable Lubricator (7 1/8" - 4x2thd (6.125") Elmar box by 6 1/8" - 4x2thd (4.750") Elmar Pin)
L-980813	Pulley Kit 3" Variable Lubricator
L-9701027844	Pulley Kit 4 1/16" Variable Lubricator

Variable Length Lubricator Assembly

# Chemical Injection Sub

The Elmar Chemical Injection Sub is designed to apply a de-icing agent or corrosion inhibitor to the wireline during well service operations.



Installed below the grease injection control head or slickline stuffing box, the Elmar chemical injection sub utilizes replaceable felt packings to coat the wireline and prevent the chemical from passing downhole.

The Elmar chemical injection sub consists of a one piece body with integral quick unions on both ends, a quick union collar assembly, a manifold injection block assembly with integral check valve and a felt packing retainer assembly. The check valve assembly is designed for easy and quick replacement.

Elmar chemical injection subs are available in a full range of wire sizes, and 5,000 psi to 15,000 psi working pressures.

## Features

- Lightweight: L-972901/L-972877 (see table)
- One piece body with integral quick unions
- Integral check valve
- Available to suit all wire sizes
- Other sizes available upon request

## PART NUMBERS

Part Number	Wire Size	Working Pressure	Service	Quick Union Connection
L-972901	0.125"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2lhd (3.750") Elmar
L-976217	0.125"	5,000 psi	H <sub>2</sub> S	5"-4lhd (3.500") Otis
L-978641	0.125"	10,000 psi	H <sub>2</sub> S	5 3/4"-4lhd (4.000") Otis
L-972877	0.125"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2lhd (4.750") Elmar
L-978049	0.125"	10,000 psi	H <sub>2</sub> S	6 5/16"-4lhd (4.375") Bowen
L-972683	0.125"	10,000 psi	H <sub>2</sub> S	6 1/2"-4lhd (4.750") Otis
L-970273	7/32"	5,000 psi	H <sub>2</sub> S	4 3/4"-4lhd (3.750") Bowen
L-976595	7/32"	10,000 psi	STD	4 3/4"-4lhd (3.750") Bowen
L-973218	7/32"	10,000 psi	H <sub>2</sub> S	2"-10TPI Acme
L-974664	7/32"	15,000 psi	H <sub>2</sub> S	6 1/4"-4lhd (4.000") Otis

Note: For Seal Kil part numbers add "K" to the item part number e.g. L-972901K.

# Combination Hydraulic Wireline Tool Catcher & Ball Check Valve



The Elmar Hydraulic Tool Catcher is a safety device for installation below the grease injection head or slickline stuffing box.



If the tool is pulled into the top of the lubricator and the wire stripped from the rope socket, the tool catcher will engage the tool's fishing neck and prevent the loss of the tool string into the well bore. The tool catcher is designed to be fail-safe: it is permanently in the catch position and requires hydraulic pressure to release.

Elmar hydraulic tool catchers for electric line are normally supplied with an integral ball check valve assembly, and a top connection into which a grease head can be directly screwed. As an option the tool catcher is available with a glycol injection port. For slick line operations Elmar hydraulic tool catchers are available with quick unions top and bottom.

Elmar hydraulic tool catchers are available with ratings from 5,000 psi to 15,000 psi WP, STD and H<sub>2</sub>S service. Collet sizes vary from 1" to 1 3/4" fishing necks. Multi-catch options are available in two ranges: 1" to 1 3/4" and 1 3/16" to 2 5/16".

## NON-PORTED

Part Number	Collet Size	Working Pressure	Service	Lower Connection	Upper Connection
L-971167	1 3/16"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2 (3.750") Elmar	2"-10TPI Acme Box
L-974439	1 3/16"	10,000 psi	STD	4 3/4"-4thd (3.750") Bowen	2"-6-60° Acme Box
L-974440	1 3/16"	10,000 psi	STD	4 3/4"-4thd (3.750") Bowen	2"-10TPI Acme Box
L-972218	1 3/16"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2 (4.750") Elmar	2"-10TPI Acme Box
L-974569	1 3/16"	15,000 psi	H <sub>2</sub> S	6 5/16"-4thd (3.750") Bowen	2"-6-60° Acme Box
L-974661	1 3/16"	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	2"-6-60° Acme Box
L-974715	1 3/16"	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2 (6.000") Bowen	2"-10TPI Acme Box
L-974816	1 3/8"	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	2"-10TPI Acme Box
L-974919	1 3/16"	5,000 psi	H <sub>2</sub> S	4 3/4"-4thd (3.750") Bowen	2"-10TPI Acme Box
L-974997	1 3/16"	5,000 psi	H <sub>2</sub> S	4 3/4"-4thd (3.750") Bowen	2"-6-60° Acme Box
L-975268	1 3/16"	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	2"-10TPI Acme Box
L-975279	1 3/16"	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	2"-10TPI Acme Box
L-975719	1 3/16"	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2 (6.000") Bowen	2"-6-60° Acme Box
L-978722	1 3/16"	5,000 psi	STD	5"-4thd (3.500") Otis	2"-10TPI Acme Box
L-976010	1 3/8"	10,000 psi	H <sub>2</sub> S	8 1/4"-4x2 (6.000") Bowen	2"-10TPI Acme Box
L-976157	1 3/16"	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	6 5/16"-4thd (4.375") Bowen
L-976245	1 3/8"	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	2"-10TPI Acme Box
L-978716	1 3/16"	5,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	2"-10TPI Acme Box
L-979471	1 3/16"	5,000 psi	H <sub>2</sub> S	5 1/2"-4x2thd (4.375") Bowen	2"-10TPI Acme Box
L-978707	1 3/16"	10,000 psi	H <sub>2</sub> S	6 1/2"-4thd (4.750") Otis	2"-10TPI Acme Box
L-980633	1 3/8"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	2"-10TPI Acme Box
L-980634	1 3/8"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar	2"-10TPI Acme Box
L-978303	1 3/8"	5,000 psi	H <sub>2</sub> S	4 3/4"-4thd (3.750") Bowen	2"-10TPI Acme Box
L-976245	1 3/8"	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen	2"-10TPI Acme Box
L-981553	1 3/8"	5,000 psi	H <sub>2</sub> S	5 1/2"-4x2thd (4.375") Bowen	2"-10TPI Acme Box
L-9701006901	1 3/8"	5,000 psi	STD	5"-4thd (3.500") Otis	2"-10TPI Acme Box
L-9701006903	1 3/8"	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis	2"-10TPI Acme Box
L-9701006904	1 3/8"	5,000 psi	H <sub>2</sub> S	6 1/2"-4thd (4.750") Otis	2"-10TPI Acme Box

Typical Elmar Combination Hydraulic Tool Catcher/Ball Check Valve

## ACCESSORIES

Part Number	Description
L-690730	Hand Pump Assembly
L-690760	50ft Hose Assembly 1/4" ID 100 R2AT Hose with 1/4" NPT Male Hose Ends and Snapite Male and Female Connectors
L-690740	100ft

## PORTED 1/2" NPT (LOCATED IN UPPER BODY)

Part Number	Collet Size	Working Pressure	Service	Lower Connection	Upper Connection
L-980773	1 3/16"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2 (3.750") Elmar	2"-10TPI Acme Box
L-981592	1 3/16"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2 (4.750") Elmar	2"-10TPI Acme Box
L-9701010837	1 3/8"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2 (3.750") Elmar	2"-10TPI Acme Box
L-9701010838	1 3/8"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2 (4.750") Elmar	2"-10TPI Acme Box

Note: Additional sizes available on request. For Seal Kit part numbers add "K" to the item part number e.g. L-971167K.



# Piranha™ Wireline Tool Catcher

The Elmar Piranha™ Hydraulic Tool Catcher is a safety device for installation below the grease injection head or slickline stuffing box.



If the tool is pulled into the top of the lubricator and the wire stripped from the rope socket, the tool catcher will engage the tool's fishing neck and prevent the loss of the tool string into the well bore. The tool catcher is designed to be fail-safe: it is permanently in the catch position and requires hydraulic pressure to release.

Elmar hydraulic tool catchers for electric line are normally supplied with an integral ball check valve assembly, and a top connection into which a grease head can be directly screwed. The tool catcher is available with a glycol injection port. For slick line operations Elmar hydraulic tool catchers are available with quick unions top and bottom.

Elmar hydraulic tool catchers are available with ratings from 5,000 psi to 15,000 psi WP, STD and H<sub>2</sub>S service. Multi-catch from 1" to 1 3/4".

The Elmar Piranha™ Wireline Tool Catcher features a one-piece multi-finger collet machined from a high strength alloy to perform tool catching duties. The multi-catch collet is capable of catching tool strings featuring fish-neck rope sockets from 1" to 1.75", thus saving redress time.

The new generation tool catcher also features other improvements including, a larger diameter tool stop to allow the latest head diameters to pass through already made up to the wireline, a stronger return spring to reduce reset time, relocation of the piston O-ring from piston to upper body so any corrosion does not affect operation, and specification of corrosion resistant coating for the upper body.



Typical Elmar Piranha™ Tool Catcher/Ball Check Valve

## Features

- Single piece collet for easy assembly
- Designed for increased corrosion resistance
- Reliable catching from 1" to 1.75" fishing necks
- Port located in upper body

## ACCESSORIES

Part Number	Description
L-690730	Hand Pump Assembly
L-690760	50ft Hose Assembly 1/4" ID 100 R2AT Hose with 1/4" NPT Male Hose Ends and Snapfit Male and Female Connectors
L-690740	100ft

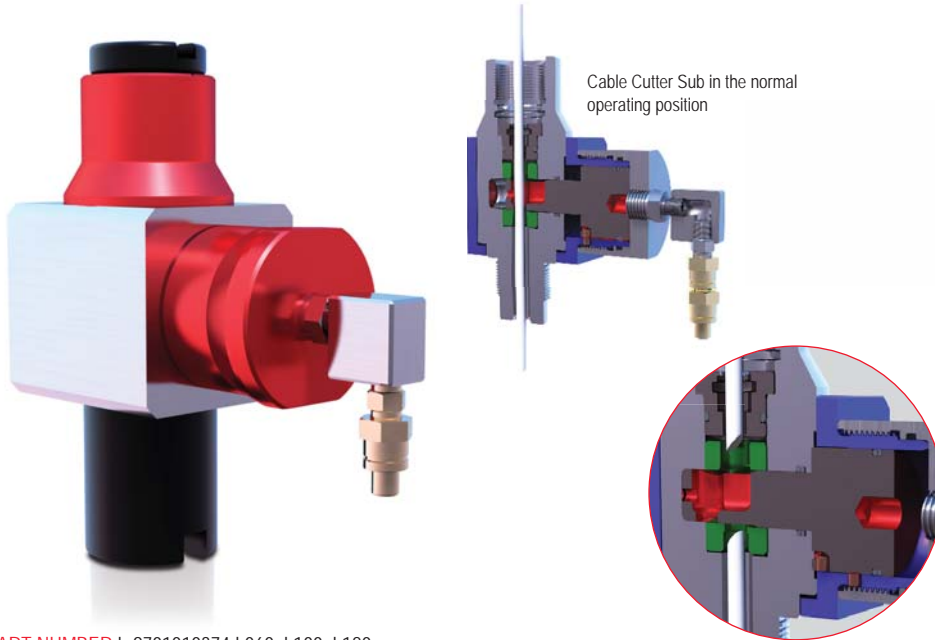
## PART NUMBERS

Part Number	Multi-Catch	Working Pressure	Service	Lower Connection	Upper Connection
L-9701027112	1 to 1 3/4"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	2"-10TPI Acme Box
L-9701038482	1 to 1 3/4"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar	2"-10TPI Acme Box
L-9701038503	1 to 1 3/4"	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar	4 3/4"-4x2thd (3.750") Elmar
L-9701040893	1 to 1 3/4"	10,000 psi	H <sub>2</sub> S	6 1/2"-4thd (4.750") Otis	6 1/2"-4thd (4.750") Otis
L-9701041053	1 to 1 3/4"	5,000 psi	H <sub>2</sub> S	7"-5thd (5.250") Bowen	7"-5thd (5.250") Bowen
L-9701042089	1 to 1 3/4"	10,000 psi	H <sub>2</sub> S	4 3/4"-4thd (3.750") Elmar	2"-10TPI Acme Box
L-9701048216	1 to 1 3/4"	10,000 psi	H <sub>2</sub> S	6 1/2"-4thd (4.750") Otis	2"-10TPI Acme Box
L-9701048553	1 to 1 3/4"	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar	6 1/8"-4x2thd (4.750") Elmar

Note: Additional sizes available on request.  
For Seal Kit part numbers add "K" to the item part number e.g. L-9701027112K.

# Cable Cutter Sub - CCS

The Elmar Cable Cutter Sub - CCS is positioned in the lubricator string above the tool catcher/ball check valve and immediately below the grease injection head.



In the event of wire becoming jammed in the grease injection flotubes, to the extent that no wireline movement (upwards or downwards) is possible, the wireline can be cleanly cut well above the wireline valve, thus allowing an easier recovery in stranded armour situations, or cleanly dropping the severed end of the wireline into the well when so required by safety considerations.

When used with the variable length lubricator it makes it possible in a single lift set-up to open the lubricator string after sealing with the wireline valve, secure the wireline, and start recovery procedures without stripping wireline through the BOP seals and potentially losing seal.

Cable Cutter Sub in the cut position showing a cut cable

**PART NUMBER** L-9701010374 L060, L100, L120  
Cable Cutter Assembly with either 60ft, 100ft or 120ft hose, plus a lockable hand pump assembly.

## Features

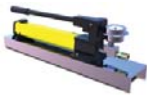
- Suitable for cutting wireline up to 15/32" multi-conductor
- 10,000 psi working pressure and H<sub>2</sub>S service
- 2"-10TPI female box x 2"-10TPI male pin
- Hydraulically operated piston for cutting
- Unique hydraulic quick connections and padlocked pump to prevent inadvertent use
- Safety shear pinned cutting piston

## Options

- 15,000 psi Cable Cutter Sub L-9701021995
- Case for Cable Cutter Assembly L-8781010375

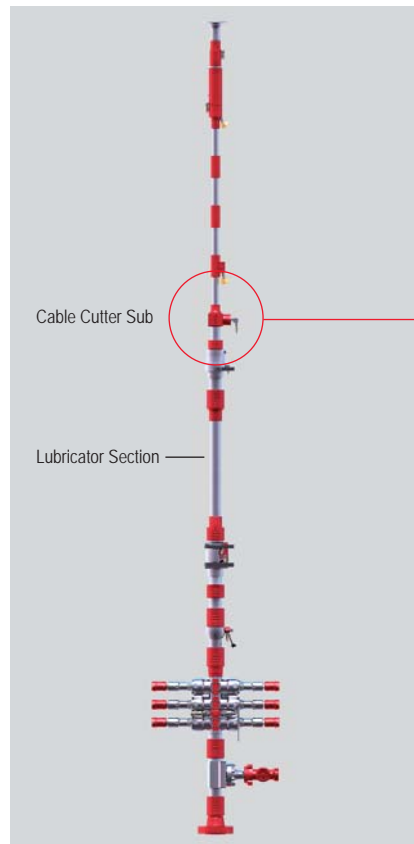
### HAND PUMP ASSEMBLY

Part Number	Description
L-6501010372	Lockable Hand Pump Assembly 10,000 psi W.P.

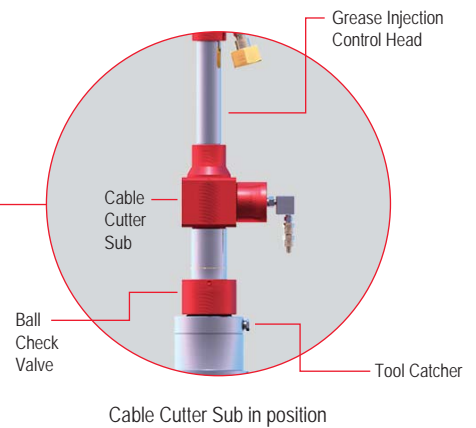


### HYDRAULIC HOSE ASSEMBLY

Part Number	Description
L-6901010373 L060	Hose Assembly 10,000 psi Hose Ends with Quick Connectors and Dust Covers
L-6901010373 L100	
L-6901010373 L120	

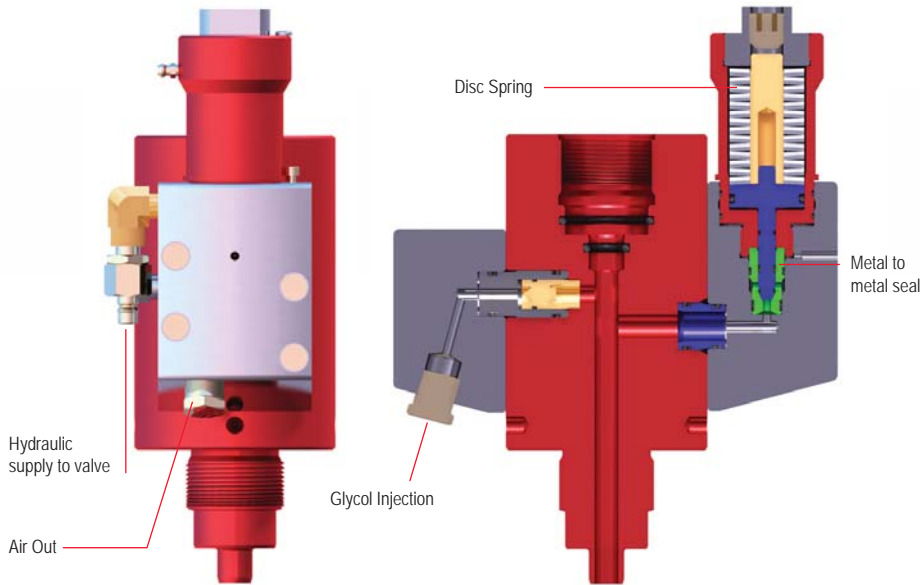


Typical Wireline Pressure Control Equipment String



# Venting/Glycol Injection Valve

The Elmar Venting/Glycol Injection Valve is designed to save rig time while pressure testing the Wireline Pressure Control Equipment String.



The Elmar Venting/Glycol Injection Valve can be controlled from a test pump unit and has three functions:

- (1). Before pumping commences, hydraulic pressure is applied thereby opening the vent valve which allows air to escape, making the filling operation quicker. Once escaping fluid is observed the valve is closed allowing the operator to pressure test, confident that no air is trapped.
- (2). When bleeding down the lubricator this valve can be opened to allow air back into the system thereby discharging the fluid quickly.
- (3). Glycol can be injected below the greasehead - the point most effective to prevent the formation of hydrates.

Elmar Hydraulic Wireline Venting/Glycol Injection Valve (H<sub>2</sub>S Service)

**PART NUMBER** L-9701028012

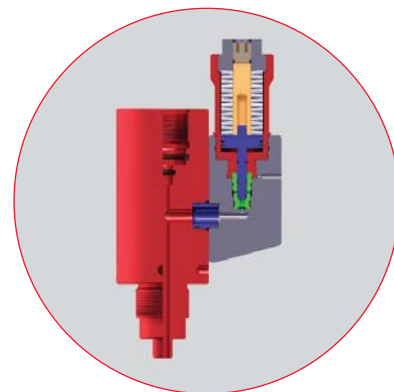
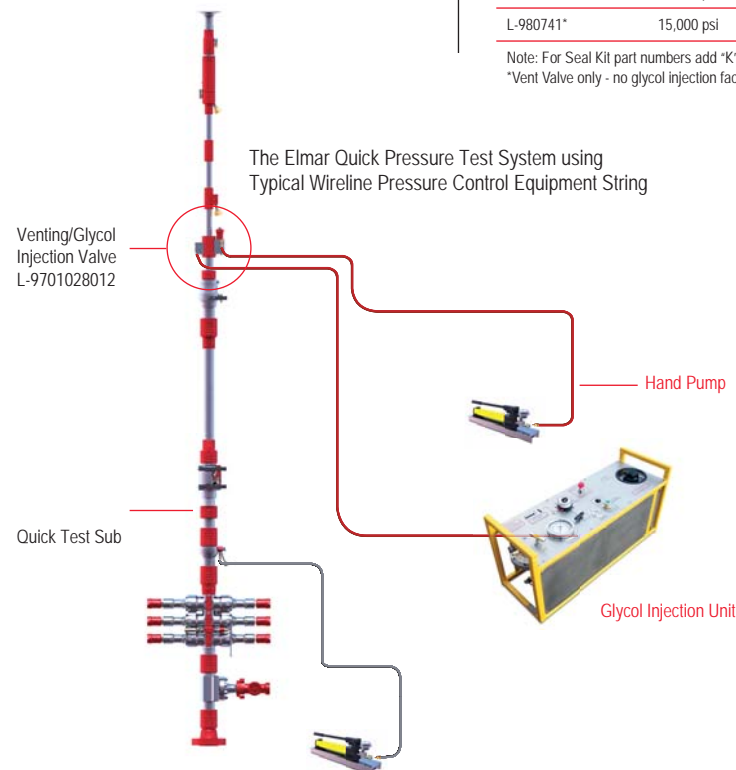
## Features:

- Allows faster filling or draining of riser
- Ensures air vented allowing better first time test
- Allows glycol direct to troublespot

## PART NUMBERS

Part Number	Working Pressure	Service	Upper Connection	Lower Connection
L-9701028012	10,000 psi	H <sub>2</sub> S	2" - 10 Acme Box	2" - 10 Acme Pin
L-971292*	10,000 psi	H <sub>2</sub> S	2" - 10 Acme Box	2" - 10 Acme Pin
L-971293*	10,000 psi	H <sub>2</sub> S	2" - 6 - 60° UN Box	2" - 6 - 60° UN Pin
L-980741*	15,000 psi	H <sub>2</sub> S	2" - 10 Acme Box	2" - 10 Acme Pin

Note: For Seal Kit part numbers add "K" to the item part number e.g. L-9701028012K.  
\*Vent Valve only - no glycol injection facility.

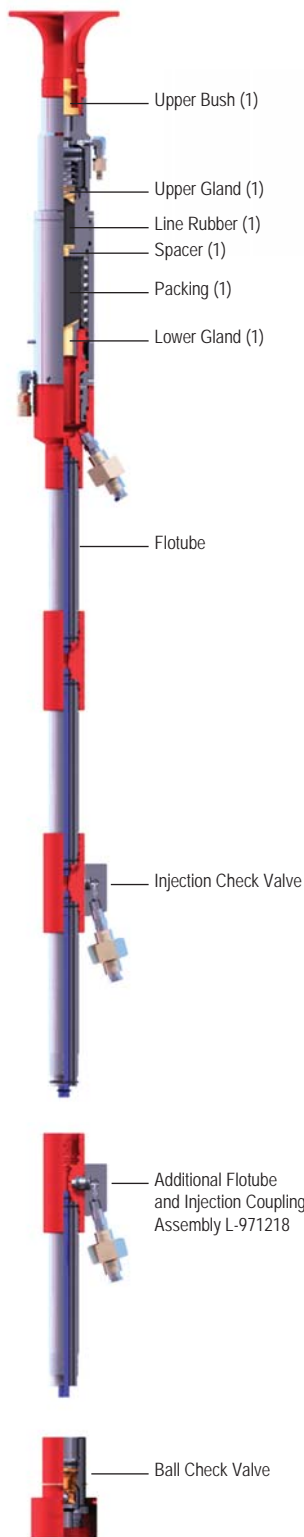


Elmar Vent Valve L-971292  
(No glycol injection facility)

# Enviro™ Wireline Grease Injection Control Head



The Elmar Enviro™ Grease Injection Control Head is designed to create a seal around a moving wireline, allowing intervention access to wells under pressure.



Note: Parts included in Line Size Kit (1). Seal Kit (O-Ring and BURs) does not include Line Size Kit Parts.

Positioned at the uppermost point of the pressure control equipment string, the Elmar Enviro™ Grease Injection Control Head comprises two major sub-assemblies, the Enviro™ Combination Stuffing Box and Line Wiper and the Flotube Assembly.

The hydraulic stuffing box is designed to pack-off on a stationary wireline by means of a pack-off rubber, the hydraulic line wiper will wipe excess grease from a moving wireline.

Two types of flotube assemblies are available, the "solid" type and the "concentric" type, as described in this data sheet. The concentric flotube assembly is made up of an inner flotube sized to fit tightly around the wireline and an outer sleeve to support the assembly.

To prepare for operations, the wireline is threaded through the components of the Elmar Enviro™ Grease Injection Control Head before the rope socket and wireline head are made-up.

When entering a well under pressure, viscous grease is injected into the flotubes at a pressure greater than the existing well pressure. The grease fills the annular space between the inner wall of the flotube and the outside surface of the wireline, forming a liquid seal that contains the well fluids while allowing wireline movement.

The Elmar Enviro™ Grease Injection Control Head is supplied with a pin threaded connection on bottom and a wire tulip guide on top.

When changing line size, a different line size kit is needed for the Enviro™ Combination Stuffing Box and Line Wiper, identified by the line size code letter. See next page for details.

Recommended flotube clearance + 0.003" to 0.008".

The bottom connection can be mated to a quick-union, or a ball check valve/tool catcher combination.

## PART NUMBERS

Part Number	No. of Flotubes	Working Pressure	Srv.	Bottom Connection	Top Connection	Seal Kit
L-971443	3	10,000 psi	H <sub>2</sub> S	2"-10TPI Acme Pin	Wire Tulip Guide	L-971443K
L-971444	4	10,000 psi	H <sub>2</sub> S	2"-10TPI Acme Pin	Wire Tulip Guide	L-971444K
L-971445	5	10,000 psi	H <sub>2</sub> S	2"-10TPI Acme Pin	Wire Tulip Guide	L-971445K
L-971446	6	10,000 psi	H <sub>2</sub> S	2"-10TPI Acme Pin	Wire Tulip Guide	L-971446K
L-971218	1	10,000 psi	H <sub>2</sub> S	2"-10TPI Acme Pin	2"-10TPI Acme Box	L-971218K

## ORDERING INFORMATION

Part number of Grease Injection Control Head (from table above)

Line size (Kit) to be specified - L972039\* L (see table on next page)

Flotube size to be specified (see table on next page)

If dual injection is required, order separately (qty 1) L-971218 in addition to the standard grease head with 1 x manifold

## TEST FIXTURE

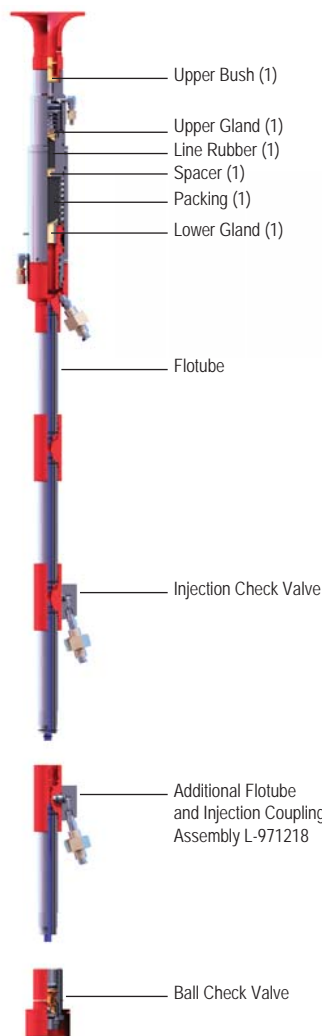
Part Number	Description
L-972201	Test Plug (dummy packer) for Stuffing Box
L-972241	Test Spacer for Line Wiper
L-972264	Test Cap 2"-10TPI Box for Flotube/sleeve connection

## ACCESSORIES

Part Number	Description
L-981444D179IG	Flotube Go-NoGo gauge for Flotube L-981444D179

Note: For go-nogo inspection gauge part number, add "IG" to the flotube part number. For example L-981444D179IG would be the go-nogo gauge for flotube L-981444D179. See reverse for options.

# Enviro™ Wireline Grease Injection Control Head Continued



Note: Parts included in Line Size Kit (1). Seal Kit (O-Ring and BURs) does not include Line Size Kit Parts.

## ORDERING TABLE

*Line Size Code	Line Size	Stuffing Box Packing	Line Wiper Rubber	Flotube I.D.	Flotube	Gauge
B	3/16" 0.188" (1-18)	L-870232	L-831140	0.179	L-981444D179	L-981444D179IG
				0.183	L-981444D183	L-981444D183IG
				0.186	L-981444D186	L-981444D186IG
				0.189	L-981444D189	L-981444D189IG
				0.193	L-981444D193	L-981444D193IG
				0.196	L-981444D196	L-981444D196IG
				0.199	L-981444D199	L-981444D199IG
				0.201	L-981444D201	L-981444D201IG
				0.204	L-981444D204	L-981444D204IG
				0.216	L-981444D216	L-981444D216IG
				0.219	L-981444D219	L-981444D219IG
				0.222	L-981444D222	L-981444D222IG
				0.224	L-981444D224	L-981444D224IG
				0.226	L-981444D226	L-981444D226IG
				0.228	L-981444D228	L-981444D228IG
				C	7/32" 0.219" (1-20) (1-22) (2-23)	L-972200
0.232	L-981444D232	L-981444D232IG				
0.235	L-981444D235	L-981444D235IG				
0.236	L-981444D236	L-981444D236IG				
0.239	L-981444D239	L-981444D239IG				
0.240	L-981444D240	L-981444D240IG				
0.243	L-981444D243	L-981444D243IG				
0.248	L-981444D248	L-981444D248IG				

## ORDERING TABLE

*Line Size Code	Line Size	Stuffing Box Packing	Line Wiper Rubber	Flotube I.D.	Flotube	Gauge				
D	1/4" 0.250"	L-972200	L-831150	0.254	L-981444D254	L-981444D254IG				
				0.256	L-981444D256	L-981444D256IG				
				0.258	L-981444D258	L-981444D258IG				
				0.260	L-981444D260	L-981444D260IG				
				0.261	L-981444D261	L-981444D261IG				
				0.262	L-981444D262	L-981444D262IG				
				0.263	L-981444D263	L-981444D263IG				
				0.264	L-981444D264	L-981444D264IG				
				0.287	L-981444D287	L-981444D287IG				
				0.289	L-981444D289	L-981444D289IG				
				0.291	L-981444D291	L-981444D291IG				
				E	9/32" 0.281"	L-978180	L-831006	0.292	L-981444D292	L-981444D292IG
0.293	L-981444D293	L-981444D293IG								
0.295	L-981444D295	L-981444D295IG								
0.298	L-981444D298	L-981444D298IG								
0.306	L-981444D306	L-981444D306IG								
0.312	L-981444D312	L-981444D312IG								
0.315	L-981444D315	L-981444D315IG								
0.316	L-981444D316	L-981444D316IG								
0.319	L-981444D319	L-981444D319IG								
0.321	L-981444D321	L-981444D321IG								
0.326	L-981444D326	L-981444D326IG								
0.328	L-981444D328	L-981444D328IG								
F	5/16" 0.312" (1-32)	L-972210	L-831130	0.329	L-981444D329	L-981444D329IG				
				0.332	L-981444D332	L-981444D332IG				
				0.335	L-981444D335	L-981444D335IG				
				0.337	L-981444D337	L-981444D337IG				
				0.341	L-981444D341	L-981444D341IG				
				0.366	L-981444D366	L-981444D366IG				
				0.373	L-981444D373	L-981444D373IG				
				0.376	L-981444D376	L-981444D376IG				
				G	3/8" 0.375"	L-972220	L-831005	0.384	L-981444D384	L-981444D384IG
								0.394	L-981444D394	L-981444D394IG
								0.397	L-981444D397	L-981444D397IG
								0.399	L-981444D399	L-981444D399IG
0.404	L-981444D404	L-981444D404IG								
0.407	L-981444D407	L-981444D407IG								
0.408	L-981444D408	L-981444D408IG								
0.410	L-981444D410	L-981444D410IG								
0.411	L-981444D411	L-981444D411IG								
0.413	L-981444D413	L-981444D413IG								
0.416	L-981444D416	L-981444D416IG								
H	7/16" 0.438" (7-42)	L-972230	L-830056					0.423	L-981444D423	L-981444D423IG
				0.425	L-981444D425	L-981444D425IG				
				0.427	L-981444D427	L-981444D427IG				
				0.430	L-981444D430	L-981444D430IG				
				0.433	L-981444D433	L-981444D433IG				
				0.436	L-981444D436	L-981444D436IG				
				0.439	L-981444D439	L-981444D439IG				
				0.442	L-981444D442	L-981444D442IG				
				0.465	L-981444D465	L-981444D465IG				
				0.467	L-981444D467	L-981444D467IG				
				0.470	L-981444D470	L-981444D470IG				
				0.472	L-981444D472	L-981444D472IG				
J	15/32" 0.469" (7-46)	L-976295	L-831270	0.477	L-981444D477	L-981444D477IG				
				0.479	L-981444D479	L-981444D479IG				
				0.481	L-981444D481	L-981444D481IG				
				0.483	L-981444D483	L-981444D483IG				
				0.488	L-981444D488	L-981444D488IG				
				0.490	L-981444D490	L-981444D490IG				
				0.501	L-981444D501	L-981444D501IG				
				0.504	L-981444D504	L-981444D504IG				
				0.523	L-981444D523	L-981444D523IG				
				0.525	L-981444D525	L-981444D525IG				
				0.527	L-981444D527	L-981444D527IG				
				0.529	L-981444D529	L-981444D529IG				
0.537	L-981444D537	L-981444D537IG								

Note: Cable grouping is for guidance only.

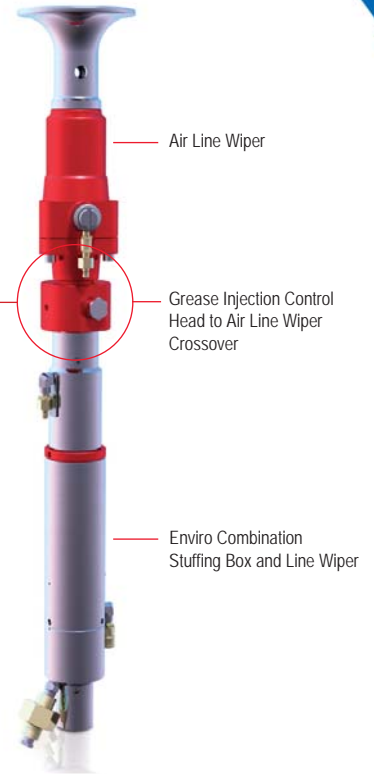
# Air Line Wiper

The Elmar Air Line Wiper has been designed to replace the traditional hydraulically activated line wiper in low pressure operations or to work along side it in high pressure operations.

In a low pressure (less than 5,000 psi) set-up it will typically be positioned above the Elmar stuffing box and in a high pressure (greater than 5,000 psi) set-up it will be positioned above the hydraulic line wiper.

The Elmar Air Line Wiper consists of a steel wiper body, aluminium alloy wire guide, bronze upper bushing and a special nozzle insert. It is designed to be a non-contact line wiper and uses compressed air to wipe grease from the wire. The compressed air is focused on the cable through nozzles drilled in the wiper insert. The nozzles are drilled in a special pattern to create an effective wiping action.

The insert and upper bushing are line size items and need to be ordered as a line size kit to go along with the main assembly. The line size kit can be retrofitted to a standard Elmar hydraulic line wiper to convert it to an air line wiper.



Crossover assembly shown in position

## Dimensions & Weights

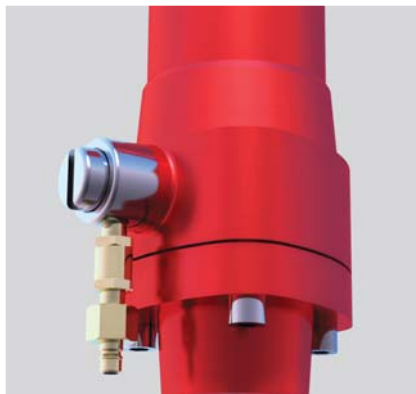
**PART NUMBER L-9701018557**  
(Height) 43 cm, 17 in (Weight) 15 kg, 33 lbs

## Features

- Air operating pressure 120-150 psi (8-10 bar)
- NACE MR 0175 compliant
- Can be fitted retrospectively

## Option

- Crossover assembly L-9701035633 for connection to existing Elmar grease heads



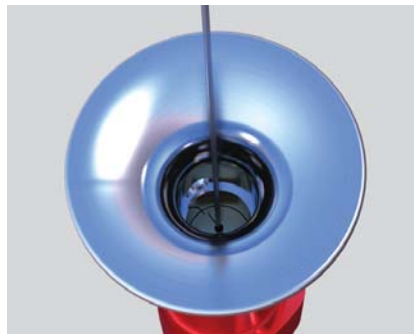
## AIR LINE WIPER

Part Number	Air Operating Pressure	Service	Lower Connection	Seal Kit
L-9701018557	120-150 psi (8-10 bar)	H <sub>2</sub> S	2" Line Pipe Box	L-9701018557K

## Crossover Assembly

Part Number	Air Operating Pressure	Service	Upper Connection	Lower Connection	Side Port
L-9701035633	120-150 psi (8-10 bar)	H <sub>2</sub> S	2" Line Pipe Pin	2"-8TPI ACME Pin	1" NPT

Note: Both line wiper and crossover are NOT pressure retaining parts.



Air Line Wiper showing upper bushing

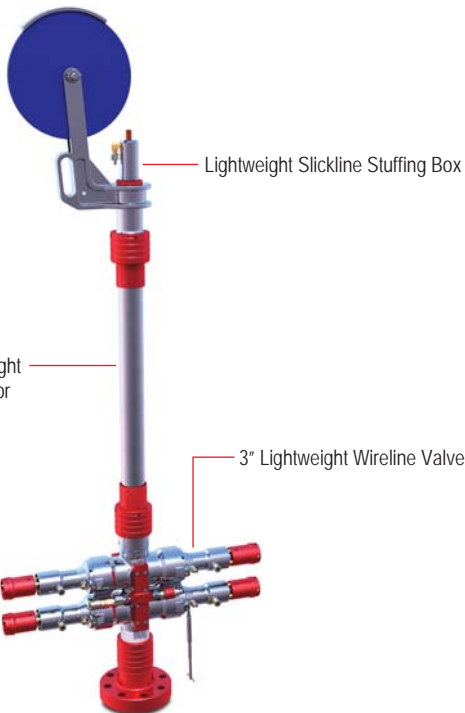
# Lightweight Stuffing Box

The Elmar Hydraulic Slickline Stuffing Box is designed to pack-off all sizes of solid wireline up to 0.160", with safety and convenience.



## Dimensions & Weights

Dimensions Overall: (H) 85 cm, 34 in, (W) 27 kg, 59 lbs



Lightweight Stuffing Box, Lubricator and Wireline Valve

It is lightweight, compact and simple to operate. Positioned at the uppermost point of the pressure control equipment string, the Elmar slickline stuffing box incorporates a blow-out plug to automatically shut-in the well pressure in the event of the slickline breaking or being stripped from the rope socket.

The Elmar slickline stuffing box consists of a chamber which contains packing with an external adjustable nut. The slickline passes through the packing and the nut is hydraulically tightened to the point where leakage around the line, caused by well pressure, is reduced to a minimum. A 16" diameter sheave bracket assembly (or 20" diameter in case of 0.160" wire) and a male quick union assembly are supplied with the stuffing box as standard. If required a manual packing nut can be supplied.

Elmar slickline stuffing boxes are available for a full range of wire sizes, and from 5,000 psi to 15,000 psi working pressures.

## PART NUMBERS

Part Number	Working Pressure	Service	Manual/Hydraulic	Quick Union Connection
L-975765	5,000 psi	STD	Manual	4 3/4"-4thd (3.750") Bowen
L-975275	5,000 psi	H <sub>2</sub> S	Manual	5 1/2"-4x2thd (4.375") Bowen
L-978779	5,000 psi	H <sub>2</sub> S	Hydraulic	4 3/4"-4thd (3.750") Bowen
L-970281	10,000 psi	STD	Hydraulic	4 3/4"-4thd (3.750") Bowen
L-978723	5,000 psi	STD	Hydraulic	5"-4thd (3.500") Otis
L-970134	10,000 psi	H <sub>2</sub> S	Hydraulic	5 3/4"-4thd (4.000") Otis
L-979000	10,000 psi	H <sub>2</sub> S	Hydraulic	6 5/16"-4thd (4.375") Bowen
L-978394	15,000 psi	H <sub>2</sub> S	Hydraulic	6 5/16"-4thd (3.750") Bowen
L-977454	15,000 psi	H <sub>2</sub> S	Hydraulic	6 1/4"-4thd (4.000") Otis
L-977132	5,000 psi	H <sub>2</sub> S	Hydraulic	7"-5thd (5.250") Bowen
L-972551	5,000 psi	H <sub>2</sub> S	Hydraulic	8 1/4"-4x2thd (6.750") Bowen
L-972176	10,000 psi	H <sub>2</sub> S	Hydraulic	2"-10thd Acme Pin
L-973827	5,000 psi	H <sub>2</sub> S	Hydraulic	5"-4thd (3.500") Otis
L-972452	10,000 psi	H <sub>2</sub> S	Hydraulic	4 3/4"-4x2thd (3.750") Elmar
L-972876	10,000 psi	H <sub>2</sub> S	Hydraulic	6 1/8"-4x2thd (4.750") Elmar

Note: Line size to be specified at time of ordering.

## ACCESSORIES

Part Number	Description
L-690730	Stuffing Box Hand Pump
L-690740	Hydraulic Hose Assembly 100ft long
L-690760	Hydraulic Hose Assembly 50ft long
L-970158	Test Plug Assembly for Stuffing Box

Note: Additional sizes available on request.  
For Seal Kit part numbers add "K" to the item part number e.g. L-975765K.

# QuickLoad™ Slickline Stuffing Box

Designed by NOV Elmar's engineering team in Aberdeen, QuickLoad is an evolutionary product that reinforces the company's position as market leaders in wireline pressure control equipment. It is lighter, more reliable and easier to maintain than its alternatives.

The NOV Elmar QuickLoad stuffing box is particularly effective for deepwater operations where heavier line pull and loads are required under greater pressures.

QuickLoad now forms part of NOV Elmar's WPCE rental fleet and is available across all operating regions.

**Key customer benefits include:**

**One man lift**

- Weighing just 18 kilos the main module is easily carried by one person and so can be assembled in a convenient location away from the well. The bracket module can be assembled onto the main module even after the cable head is fed through. This is a major advantage of the new design and negates the need for a removable cartridge.

**Working pressure**

- QuickLoad has a working pressure of up to 15,000 psi

**Safety**

- A built-in dual safety barrier system prevents uncontrolled well fluid loss.
- The dual safety barrier system incorporates a blow out plug and ball check valve for two levels of emergency shut-down.

**Chemical injection**

- An injection port with an integral check valve is provided for injection of chemicals such as glycol and methanol. This port can also be used for oiling of the line if required.

**Change out packings in seconds**

- Rubbers can be quickly changed when worn out without having to rig down and the bracket is removable while the cable remains in-hole, giving the QuickLoad a cost-advantage over other stuffing box designs.



Easy packing changeout



Bracket Assembly

Stuffing Box Assembly

Note: Additional sizes available on request.  
For Seal Kit part numbers add "K" to the item part number e.g. L-9701051541K.

**Dimensions & Weights**

**PART NUMBERS L-9701051541/L-9701051533**  
(Height) 81.5 cm, 32.1 in (Weight) 32 kg, 70 lbs

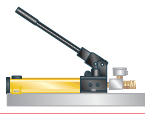


**Features**

- Stuffing Box module weighs 18 kilos
- Proof Load tested to min 11,250lbs (5,625lbs line pull)
- Suitable for all line sizes up to 0.160"
- Combined Ball Check valve and Blow Out Plug
- Sealed bearings maximise expected bearing life
- Dynamic seal parts from corrosion resistant alloys
- Suitable for H<sub>2</sub>S service
- Manufactured to API 6A and fully NACE compliant

**PART NUMBERS**

Part Number	Working Pressure	Service	Bottom Connection
L-9701051541	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar
L-9701051908	5,000 psi	H <sub>2</sub> S	5"-4thd (3.500") Otis
L-9701051909	10,000 psi	H <sub>2</sub> S	6 1/8"-4x2thd (4.750") Elmar
L-9701051910	10,000 psi	H <sub>2</sub> S	7 7/8"-4x2thd (6.125") Elmar
L-9701051911	15,000 psi	H <sub>2</sub> S	7 1/2"-4thd (5.500") Otis
L-9701051913	15,000 psi	H <sub>2</sub> S	7"-5thd (4.375") Bowen
L-9701051914	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis

**ACCESSORIES**

Part Number	Description
L-690730	Hand Pump Assembly 
L-690760	50ft  Hose Assembly 1/4" ID 100 R2AT Hose with 1/4" NPT Male Hose Ends and Snaplite Male and Female Connectors
L-690740	100ft  Hose Assembly 1/4" ID 100 R2AT Hose with 1/4" NPT Male Hose Ends and Snaplite Male and Female Connectors

Note: Additional sizes available on request.  
For Seal Kit part numbers add "K" to the item part number e.g. L-9701051541K.

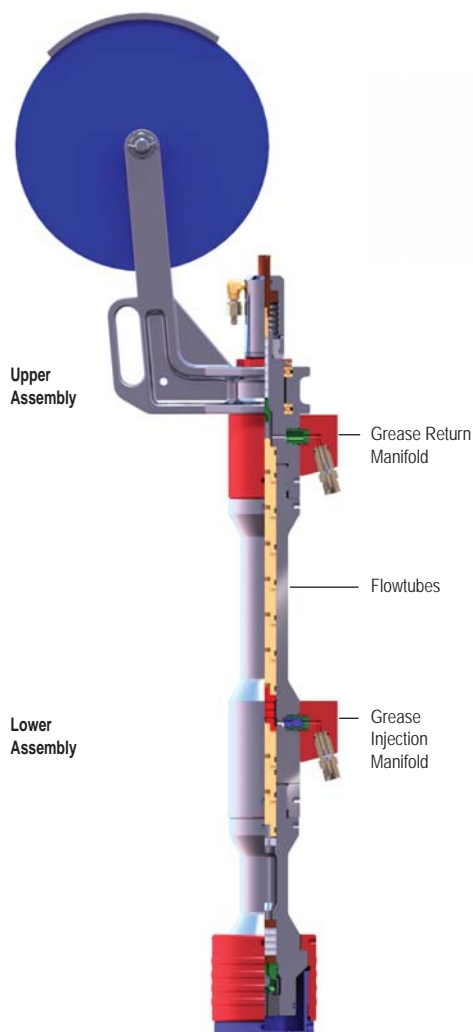


Split Mounting Boss



# Liquid Seal Slickline Control Head

The Elmar Liquid Seal Control Head is designed to seal around a slickline while minimising drag and wear of both the slickline and the pack-off.



Note: Additional sizes available on request.  
For Seal Kit part numbers add "K" to the item part number e.g. L-972506K.

## Dimensions & Weights

**PART NUMBERS L-972506/L-972611**  
(Height) 165 cm, 65 in (Weight) 96 kg, 211 lbs

## ACCESSORIES

Part Number	Description
L-690644-V01	Grease and Hydraulic Control Panel for 10,000 psi operations
L-690644-V02	Grease and Hydraulic Control Panel for 15,000 psi operations
L-690730	Stuffing Box Hand Pump
L-690740	Hydraulic Hose Assembly x 100ft long
L-840890	Grease Pump WIWA 235:1
L-440059	Grease Injection Hose x 120ft long
L-440059	Grease Return Hose x 120ft long

Positioned at the uppermost point of the pressure control equipment string, the control head consists of two major subassemblies, the hydraulic pack-off or stuffing box and the flow tubes assembly.

The stuffing box is meant to pack-off around the slickline when stationary. When the line is moving the seal is achieved by injecting viscous grease into the flow tube stack at a pressure above wellhead pressure. The flow tubes are closely fitting around the slickline, and the grease seals-off effectively the narrow annular space.

The control head incorporates a ball check valve to automatically shut-off the well pressure in the event of pull-off or breakage of the line. A 16" diameter sheave bracket is supplied as standard.

The Elmar Liquid Seal Control Head is of modular design: it can be ordered as two separate assemblies:

- A common upper assembly including the stuffing box, sheave bracket, and the flow-tubes stack, always rated 15,000 psi, H<sub>2</sub>S service
- A lower assembly including the ball check valve and a male quick union, as required by the customer. This is rated according to the type of union chosen. Individual flow tubes must be ordered according to the line size as part of the line size kit.

A compact, air operated grease injection and hydraulic control panel is available for use with the 10,000 psi rated Liquid Seal Control Head. Alternatively separate hydraulic hand pumps and air-operated grease pumps can be used.



Grease and Hydraulic Control Module  
L-690644-V01

## PART NUMBERS

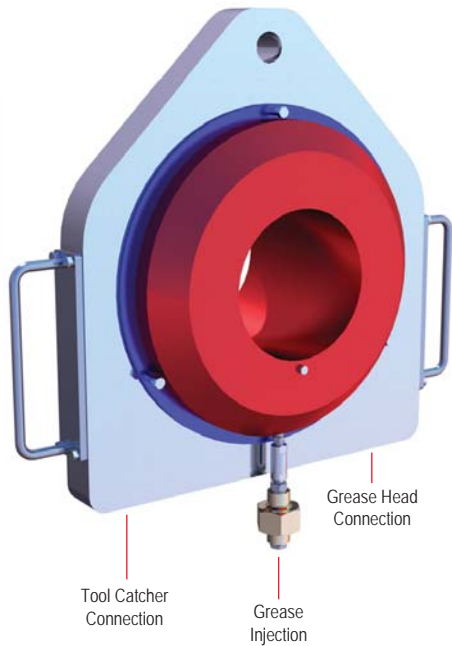
Part Number	Description	Working Pressure	Service	Bottom Connection
L-972506	Upper SGI Assy	15,000 psi	H <sub>2</sub> S	N/A
L-9701003478	Lower SGI Assy	5,000 psi	H <sub>2</sub> S	5"-4thd (3.500") Otis
L-980907	Lower SGI Assy	10,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen
L-972507	Lower SGI Assy	10,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis
L-981469	Lower SGI Assy	15,000 psi	STD	5"-4thd (3.500") Otis
L-972611	Lower SGI Assy	15,000 psi	H <sub>2</sub> S	6 5/16"-4thd (3.750") Bowen
L-972612	Lower SGI Assy	15,000 psi	H <sub>2</sub> S	7 1/2"-4thd (5.500") Otis
L-972613	Lower SGI Assy	15,000 psi	H <sub>2</sub> S	7"-5thd (4.375") Bowen
L-973047	Lower SGI Assy	15,000 psi	H <sub>2</sub> S	6 1/4"-4thd (4.000") Otis
L-9701010097	Lower SGI Assy	10,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar

## LINE SIZE KIT

Part Number	Description	Line Size
L-972506AL	SGI Line Size Kit	0.108"
L-972506BL	SGI Line Size Kit	0.125"
L-972506EL	SGI Line Size Kit	0.160"
L-972506DL	SGI Line Size Kit	3/16" C.T.
L-972506CL	SGI Line Size Kit	0.092"

# Turn Around Sheave - TAS

The Turn Around Sheave has been specially designed to reduce the overall height of the pressure equipment string.



With the conventional pressure equipment system the top sheave is positioned above the tool catcher, grease injection control head and line wiper. By installing the sheave inside a pressure retaining chamber and connecting one end to the tool catcher, the grease injection control head and line wiper can be connected vertically downward, thus reducing the overall height of the system.

The design of the Turn Around Sheave allows the operator to utilise existing equipment (grease injection control heads and line wipers), eliminating the need to purchase all new items. Notice that the Turn Around Sheave must be secured to a member rated 2 x maximum line pull (similar to a wireline top sheave) and cannot be used unsupported.



16" Turn Around Sheave

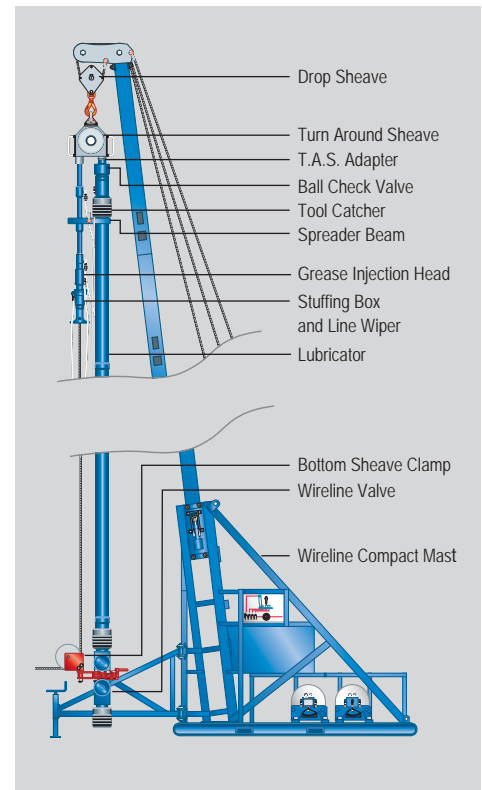
### PART NUMBERS

Part No.	Working Pressure	Service	Wellhead Connection	Sheave Size	Line Size
L-980495	10,000 psi	H <sub>2</sub> S	2"-8 UN Box	14"	0.188"
L-973111	10,000 psi	H <sub>2</sub> S	2"-8 UN Box	14"	0.230"
L-981635	10,000 psi	H <sub>2</sub> S	2"-8 UN Box	14"	0.281"
L-980619	10,000 psi	H <sub>2</sub> S	2"-8 UN Box	14"	0.320"
L-9701013732	10,000 psi	H <sub>2</sub> S	2"-8 UN Box	16"	0.230"
L-981383	10,000 psi	H <sub>2</sub> S	2"-8 UN Box	16"	0.320"

### ACCESSORIES

Part No. (14")	Description	Part No. (16")	Description	Part No. (20")	Description
L-978923	Adapter, 2"-6-60° Box	L-978923	Adapter, 2"-6-60° Box	L-978923	Adapter, 2"-6-60° Box
L-978924	Adapter, 2"-6-60° Pin	L-978924	Adapter, 2"-6-60° Pin	L-978924	Adapter, 2"-6-60° Pin
L-978927	Adapter, 2"-10TPI Acme Box	L-978927	Adapter, 2"-10TPI Acme Box	L-978927	Adapter, 2"-10TPI Acme Box
L-978928	Adapter, 2"-10TPI Acme Pin	L-978928	Adapter, 2"-10TPI Acme Pin	L-978928	Adapter, 2"-10TPI Acme Pin
L-690177	Spreader Beam, 6.75" O.D. Tube	L-6901002564	Spreader Beam, 6.75" O.D. Tube	L-6901002564	Spreader Beam, 6.75" O.D. Tube
L-680218	Insert for 3.25" O.D. Tube	L-680218	Insert for 3.25" O.D. Tube	L-680218	Insert for 3.25" O.D. Tube
L-681482	Insert for 3.50" O.D. Tube	L-681482	Insert for 3.50" O.D. Tube	L-681482	Insert for 3.50" O.D. Tube
L-681237	Insert for 3.563" O.D. Tube	L-681237	Insert for 3.563" O.D. Tube	L-681237	Insert for 3.563" O.D. Tube
L-681473	Insert for 4.09" O.D. Tube	L-681473	Insert for 4.09" O.D. Tube	L-681473	Insert for 4.09" O.D. Tube
L-681438	Insert for 4.438"/4.375" O.D. Tube	L-681438	Insert for 4.438"/4.375" O.D. Tube	L-681438	Insert for 4.438"/4.375" O.D. Tube
L-681443	Insert for 4.50" O.D. Tube	L-681443	Insert for 4.50" O.D. Tube	L-681443	Insert for 4.50" O.D. Tube
L-681476	Insert for 4.70" O.D. Tube	L-681476	Insert for 4.70" O.D. Tube	L-681476	Insert for 4.70" O.D. Tube
L-681472	Insert for 5.00" O.D. Tube	L-681472	Insert for 5.00" O.D. Tube	L-681472	Insert for 5.00" O.D. Tube
L-680217	Insert for 5.25" O.D. Tube	L-680217	Insert for 5.25" O.D. Tube	L-680217	Insert for 5.25" O.D. Tube
L-681439	Insert for 5.41"/5.38" O.D. Tube	L-681439	Insert for 5.41"/5.38" O.D. Tube	L-681439	Insert for 5.41"/5.38" O.D. Tube
L-680216	Insert for 5.50" O.D. Tube	L-680216	Insert for 5.50" O.D. Tube	L-680216	Insert for 5.50" O.D. Tube
L-681408	Insert for 5.695" O.D. Tube	L-681408	Insert for 5.695" O.D. Tube	L-681408	Insert for 5.695" O.D. Tube
L-680215	Insert for 6.25" O.D. Tube	L-680215	Insert for 6.25" O.D. Tube	L-680215	Insert for 6.25" O.D. Tube
L-690099	Universal Lower Sheave Clamp	L-6901002565	Universal Lower Sheave Clamp	L-6901002565	Universal Lower Sheave Clamp
L-980911	TAS wheel, line size 0.188"	L-981511	TAS wheel, line size 0.230"	L-981511	TAS wheel, line size 0.230"
L-981466	TAS wheel, line size 0.281"	L-9701013863	TAS wheel, line size 0.281"	L-9701013863	TAS wheel, line size 0.281"
L-973106	TAS wheel, line size 0.230"	L-981834	TAS wheel, line size 0.320"	L-981834	TAS wheel, line size 0.320"
L-980618	TAS wheel, line size 0.320"	L-981512	TAS wheel, line size 0.430"	L-981512	TAS wheel, line size 0.430"

Note: For Seal Kit part numbers add "K" to the item part number e.g. L-980495K.

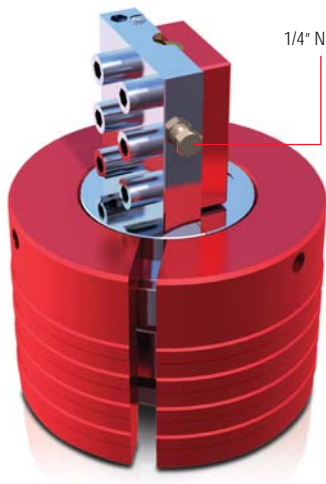


Turn Around Sheave Rig-Up c/w Elmar Compact Mast

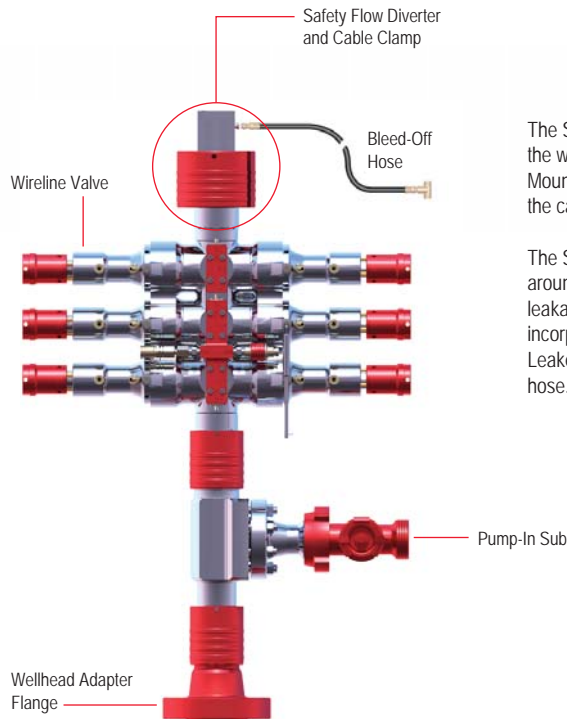
Note: 1. Grease Head and Tool Catcher adapters required depending on floatube type. (2"-6-60° for SWS floatubes and 2"-10 TPI for concentric floatubes).  
2. Sheave wheels available for alternative line sizes.

# Safety Flow Diverter and Cable Clamp

The Safety Flow Diverter is a safety device designed to provide an extra measure of safety whenever it is necessary to work around the wellhead with the wireline valve closed on a cable and the lubricator removed. (e.g. stranded cable repairs).



Safety Flow Diverter and Cable Clamp



Safety Flow Diverter and Cable Clamp in position

The Safety Flow Diverter is installed on top of the wireline valve with the cable in the wellbore. Mounting of the diverter is possible without cutting the cable since all components are split.


The Safety Flow Diverter provides an auxiliary seal around the cable to contain and divert any residual leakage through the wireline valve. The diverter incorporates a cable clamp in a compact assembly. Leaked fluids are diverted through a high-pressure hose.

## Features

- 5,000 psi, 10,000 psi and 15,000 psi working pressure, H<sub>2</sub>S or Standard service
- Integral Cable Clamp available for all electrical wireline sizes
- Available to fit all equipment strings
- High pressure return hose assembly to divert leaked fluid

## BLEED-OFF HOSE ASSEMBLY

Part Number	Description
L-6901024315L060	1/4" Hose Assembly x 60ft long 1/4" NPT and "T" Piece



## PART NUMBERS

Part Number	Service	Working Pressure	Quick Union Connection
L-970276	H <sub>2</sub> S	5,000 psi	4 3/4"-4thd (3.750") Bowen
L-972899	H <sub>2</sub> S	10,000 psi	4 3/4"-4x2thd (3.750") Elmar
L-972953	STD	10,000 psi	4 3/4"-4thd (3.750") Bowen
L-979907	STD	5,000 psi	5"-4thd (3.500") Otis
L-979917	H <sub>2</sub> S	5,000 psi	5 1/2"-4x2thd (4.375") Bowen
L-972951	STD	10,000 psi	5 1/2"-4x2thd (4.375") Bowen
L-970291	H <sub>2</sub> S	10,000 psi	5 3/4"-4thd (4.000") Otis
L-972914	H <sub>2</sub> S	10,000 psi	6 1/8"-4x2thd (4.750") Elmar
L-970285	H <sub>2</sub> S	10,000 psi	6 5/16"-4thd (4.375") Bowen
L-972674	STD	10,000 psi	6 1/2"-4thd (4.750") Otis
L-979920	H <sub>2</sub> S	10,000 psi	6 1/2"-4thd (4.750") Otis
L-970425	H <sub>2</sub> S	5,000 psi	8 1/4"-4x2thd (6.750") Bowen
L-970413	H <sub>2</sub> S	10,000 psi	8 1/4"-4x2thd (6.000") Bowen
L-970434	H <sub>2</sub> S	10,000 psi	9"-4thd (6.750") Otis
L-970491	H <sub>2</sub> S	10,000 psi	11 1/2"-4thd (8.250") Otis
L-9701016508	H <sub>2</sub> S	10,000 psi	7 7/8"-4x2thd (6.125") Elmar

Note: Line size to be specified at time of ordering.  
For Seal Kit part numbers add "K" to the item part number e.g. L-970276K.

# WPCE Slick Coated E-Line & Large Diameter Cable Pressure Control Equipment



## Slick Coated E-Line and Large Diameter Cable Pressure Control Equipment

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Enviro™ Single "Compact" Pack-Off . . . . .	210
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Dual Hydraulic Wireline Annular Valve (BOP-D) . . . . .	213
SLIMLITE Equipment. . . . .	214



N.B. The technical data contained within these pages was correct at the time of publication but should not be used as operational guidelines. For operational guidelines please refer to the operation and maintenance manual supplied with the equipment. Elmar reserves the right to change, alter, modify or improve specifications at any time without prior notice.

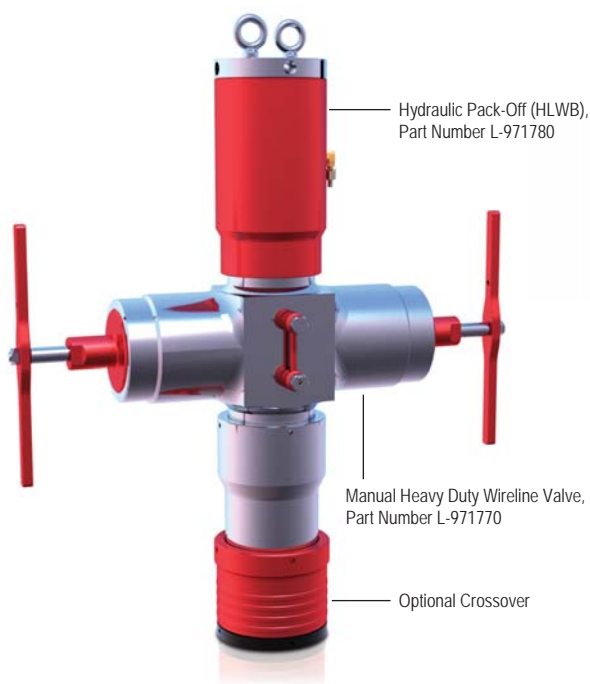




# 5 1/2" Single Manual Heavy Duty Wireline Valve



Elmar manufacture a manually operated single wireline valve with a 5 1/2" ID and a safe working pressure of 5,000 psi for open hole logging.



This along with a hydraulic line wiper and stuffing box L-971780 gives protection against pressure in open hole situations.

The manually operated wireline valve can only be mechanically opened and closed by turning handles that are connected to a threaded shaft which screws into the body of the wireline valve. At the end of the shaft is a plate that locks into the back of the ram body and pushes and pulls the ram depending on the direction you turn the handles.

Single manual ram wireline valves are to be found in service with working pressure ratings up to 5,000 psi, and have an ACME threaded body with o-ring seal.

## PART NUMBERS: MANUAL WIRELINE VALVE

Part Number	I.D.	Working Pressure	Service	Connection	Seal Kit
L-971770	5 1/2"	5,000 psi	H <sub>2</sub> S	7"-5thd Stub Acme Pin	L-660028
L-973844	5 1/2"	5,000 psi	STD	9"-4thd (7.500") Elmar Slimline	L-973844K
L-970058	5 1/2"	5,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.750") Bowen	L-970058K

## RAM ELEMENTS FOR MANUAL WIRELINE VALVE

Part Number	Description
L-973830	15/32" Inner Seal
L-976864	Outer Seal

## HYDRAULIC PACK-OFF (HLWB)

The Hydraulic Pack-Off and Stuffing Box is designed to seal on a moving cable under pressure. Positioned above the wireline valve, the internal parts are removed before the wireline tools are lowered into the well. Once the tools are in the well the internal parts can then be replaced.

The Hydraulic Pack-Off and Stuffing Box works through a hydraulic hand pump which applies pressure to a rubber element that is wrapped around the wireline and therefore provides the seal.

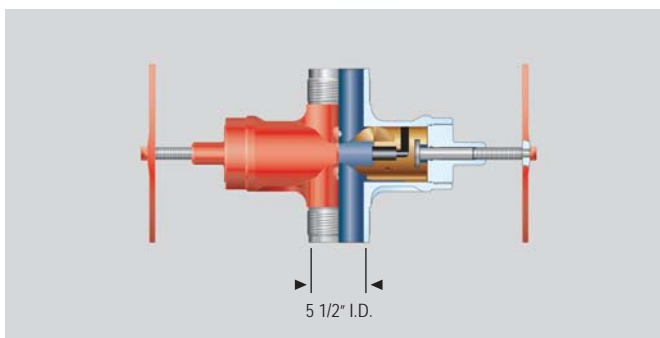
The Hydraulic Pack-Off and Stuffing Box L-971780 has a safe working pressure of 5,000 psi and is suitable for H<sub>2</sub>S service.

## PART NUMBERS: HYDRAULIC PACK-OFF (HLWB)

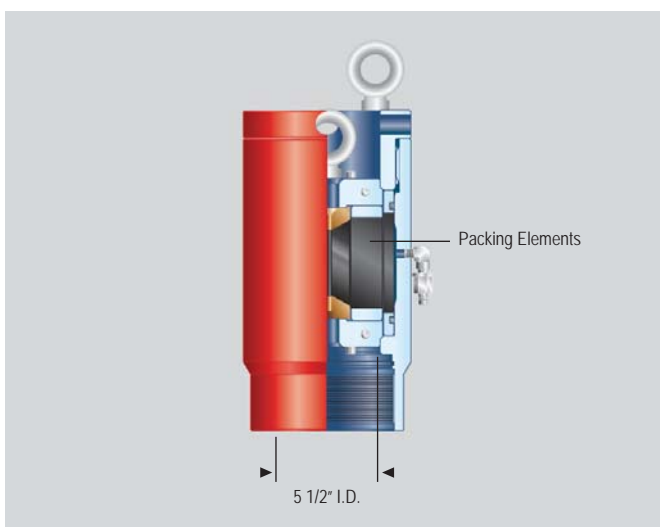
Part Number	Wire Size	Working Pressure	Service	Bottom Connection	Seal Kit
L-971780	15/32"	5,000 psi	H <sub>2</sub> S	7"-5thd Stub Acme Box	L-660027
L-973845	15/32"	5,000 psi	STD	9"-4thd (7.500") Elmar Slimline Pin	L-973845K
L-970059	15/32"	5,000 psi	H <sub>2</sub> S	8 1/4"-4x2thd (6.750") Bowen Male Pin	L-970059K

## PACKING ELEMENTS FOR HYDRAULIC PACK-OFF (HLWB)

Line Size	5/16"	7/16"	15/32"	9/16"
Brass Bushing	L-976672	L-974443	L-974525	L-974396
Packer Insert	L-978160	L-974420	L-974532	L-974419



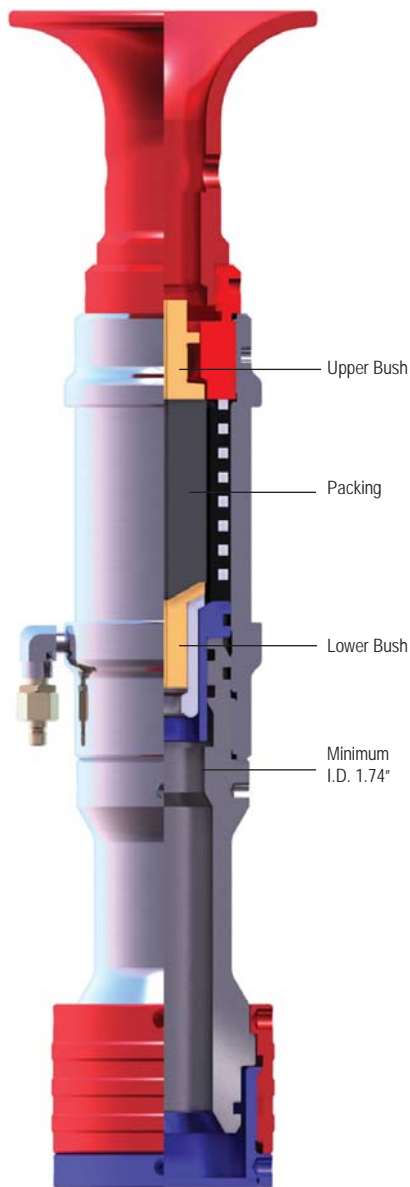
Manual Wireline Valve Section



Hydraulic Pack-Off (HLWB)

# Enviro™ Single “Compact” Pack-Off

The Elmar Enviro™ Single Hydraulic “Compact” Pack-Off is designed to wipe clean moving cable under pressure.



Note: 1. Other quick union sizes are available upon request. 2. Wire size to be specified when ordering. 3. Seal Kit does not include line sized parts - order separately.

## Dimensions & Weights

(Height) 66 cm, 26 in, (Weight) 34 kg, 75 lbs, Clean I.D. 4.42 cm, 1.74 in

Positioned above the tubing/casing, the Enviro™ Single “Compact” Pack-Off is built around the wire before the wireline tool is lowered into the well.

The Enviro™ Single “Compact” Pack-Off works by squeezing the independent rubber element which is wrapped around the wire. The element seals on the cable outer armour against well pressure, as well as wiping the wire free of fluid. The sealing element will seal on static cable, although the ideal cable to seal on is a seasoned cable.

The Enviro™ Single “Compact” Pack-Off is designed so that the rubber element in direct contact with the wire is easily replaced.

The Enviro™ Single “Compact” Pack-Off is rated to 5,000 psi working pressure (static wireline) and H<sub>2</sub>S service and is available with full material traceability and Third Party Certification.

A 0-3000 psi hand pump and hose is required to operate the Enviro™ Single “Compact” Pack-Off.

## PART NUMBERS

Part Number	Working Pressure	Srv.	Quick Union Connection	Seal Kit
L-972872	5,000 psi	H <sub>2</sub> S	4 3/4"-4thd (3.750") Bowen Pin & Collar	L-972872K
L-973105	5,000 psi	H <sub>2</sub> S	5"-4thd (3.500") Otis Pin & Collar	L-973105K
L-981416	5,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen Pin & Collar	L-981416K
L-9701002513	5,000 psi	H <sub>2</sub> S	5 1/2"-4x2thd (4.375") Bowen Pin & Collar	L-9701002513K
L-981164	5,000 psi	H <sub>2</sub> S	4 3/4"-4x2thd (3.750") Elmar Pin & Collar	L-981164K

## SPARE PARTS

Wire Size	Upper Bush	Packing	Lower Bush
3/16"	L-831250	L-831140	L-831260
7/32"	L-831070	L-831150	L-831080
1/4"	L-830058	L-831150	L-830059
9/32"	L-831009	L-831130	L-831008
5/16"	L-831170	L-831130	L-831190
3/8"	L-831011	L-831005	L-831007
0.390"	L-830046	L-830045	L-830047
7/16"	L-830061	L-830056	L-830062
1/2"	L-831280	L-831270	L-831290
9/16"	L-831160	L-831120	L-831180

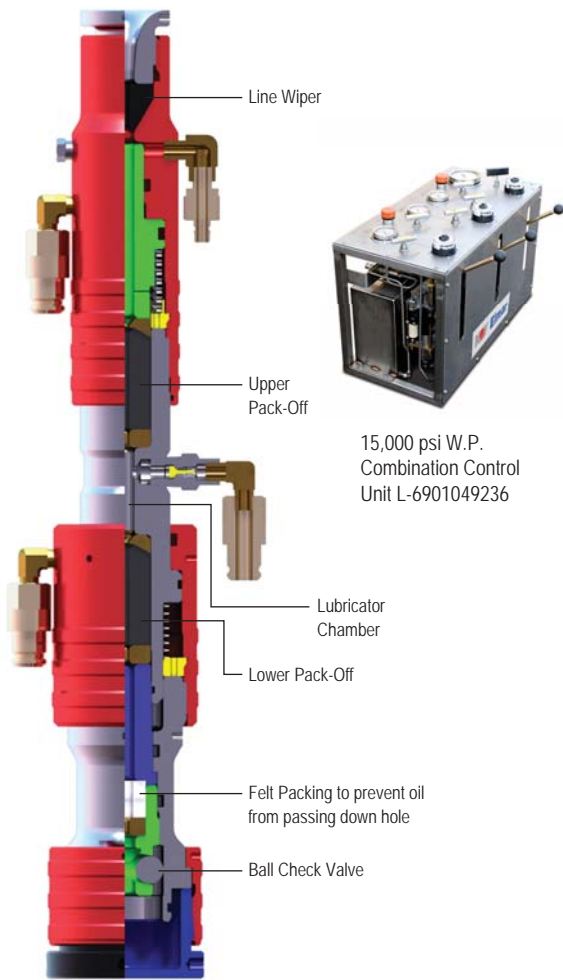
## PRESSURE TEST ACCESSORIES

Part Number	Description
L-979575	Test Stump with 4 3/4"-4thd (3.750") Bowen Box
L-974823	Test Cap with 5"-4thd (3.500") Otis Box
L-978123	Test Stump with 5 3/4"-4thd (4.000") Otis Box
L-978826	Test Stump with 6 5/16"-4thd (4.375") Bowen Box
L-971597	Test Stump with 4 3/4"-4x2thd (3.750") Elmar Box
L-975102	Test Plug (dummy packing element)
L-690730	Hand Pump
L-691080	Hose Assembly x 25ft long
L-690760	Hose Assembly x 50ft long
L-975800	Test Cap with 5 1/2"-4x2thd (4.375") Bowen Box

Note: Additional sizes available on request.

# Slick Cable Pack-Off

The Elmar Slick Cable Pack-Off is designed to seal against moving slick cable under pressure.



Note: 1. Other quick union sizes are available upon request 2. Wire size to be specified when ordering.  
3. Seal Kit does not include line sized parts - order separately.

## Dimensions & Weights (10,000 psi W.P.)

(Height) 67 cm, 26 in, (Weight) 23 kg, 50 lbs

## Dimensions & Weights (15,000 psi W.P.)

(Height) 62 cm, 24 in, (Weight) 21 kg, 46 lbs (quick union not included)

## Features

- Temperature class P-V -29°C to 121°C (-20°F to 250°F)
- Material class
  - DD - Sour Service
- Designed for smooth surface (slick) cable
- 9701048319 rated to 10,000 psi W.P. (15,000 psi T.P.)
- 9701048644 rated to 15,000 psi W.P. (22,500 psi T.P.)
- Hydraulic pressure 10,000 psi W.P.

## PART NUMBERS

Part Number	Working Pressure	Srv.	Quick Union Connection	Seal Kit
L-9701048319	10,000 psi	H <sub>2</sub> S	3 3/4"-8thd (2.500") Elmar	L-9701048319K
L-9701048644	15,000 psi	H <sub>2</sub> S	3 3/8"-8thd (2.720") Elmar	L-9701048644K

Note: Line size to be specified at time of ordering.

Positioned above the tubing/casing, the Slick Cable Pack-Off is built around the wire before the wireline tool is lowered into the well.

The Lightweight Slick Cable Pack-Off works by squeezing each of the two independent rubber elements which are wrapped around the wire. Each element seals on the slick cable against well pressure, while lubricant can be provided above each element. A third rubber part is provided at the top of the assembly for wiping fluid from the wire.

The Lightweight Slick Cable Pack-Off can be rated for up to 15,000 psi working pressure (for static cable) and H<sub>2</sub>S service and is designed so that the rubber elements in direct contact with the wire can be easily replaced. It is available with full material traceability and Third Party Certification.

Two hand pumps and hoses are required to operate the packing elements in the Lightweight Slick Cable Pack-Off while an additional two hand pumps and hoses are required to pump lubricant. Alternatively, a small combination control unit can be used to operate all of these features.

## SPARE PARTS 10,000 PSI & 15,000 PSI W.P., QTY (2) EACH ITEM

Wire Size	Line Rubber	Upper Gland	Brass Seat	Felt Packing	Retaining Washer	Packing
0.188"	L-9701048628D188	L-9701048612D188	L-9701048610D188	L-870326	L-9701048616D188	L-9701038113
0.219"	L-9701048628D219	L-9701048612D219	L-9701048610D218	L-870326	L-9701048616D216	L-9701038114
0.250"	L-9701048628D250	L-9701048612D250	L-9701048610D250	L-870327	L-9701048616D250	L-972200
0.281"	L-9701048628D281	L-9701048612D281	L-9701048610D281	L-870327	L-9701048616D281	L-978180
0.312"	L-9701048628D312	L-9701048612D312	L-9701048610D312	L-870332	L-9701048616D312	L-972210
0.334"	L-9701048628D334	L-9701048612D334	L-9701048610D334	L-870332	L-9701048616D334	L-9701035207
0.345"	L-9701048628D345	L-9701048612D345	L-9701048610D345	L-870332	L-9701048616D345	L-9701048809
0.375"	L-9701048628D375	L-9701048612D375	L-9701048610D375	L-870332	L-9701048616D375	L-972220
0.390"	L-9701048628D390	L-9701048612D390	L-9701048610D390	L-870328	L-9701048616D390	L-9701038238
0.438"	L-9701048628D438	L-9701048612D438	L-9701048610D438	L-870328	L-9701048616D438	L-972230
0.469"	L-9701048628D469	L-9701048612D469	L-9701048610D469	L-870328	L-9701048616D469	L-976295

## 10,000 PSI W.P. ACCESSORIES

Part Number	Description
L-690750	Hand Pump Assembly - Low Pressure Lubrication, 3,000 psi W.P. x 1
L-690573	Hand Pump Assembly - Pack-Off Operation, 10,000 psi W.P. x 2
L-690573	Hand Pump Assembly - High Pressure Lubrication, 10,000 psi W.P. x 1 or
L-6901062499	Combination Hydraulic/Lubrication Control Unit 10,000 psi W.P.
L-690740	100ft Hose Assembly 3,000 psi Working Pressure x 1
L-6901004505	100ft Hose Assembly 10,000 psi Working Pressure x 3
L-980088	Test Plug
L-9701059440	Test Rod

## 15,000 PSI W.P. ACCESSORIES

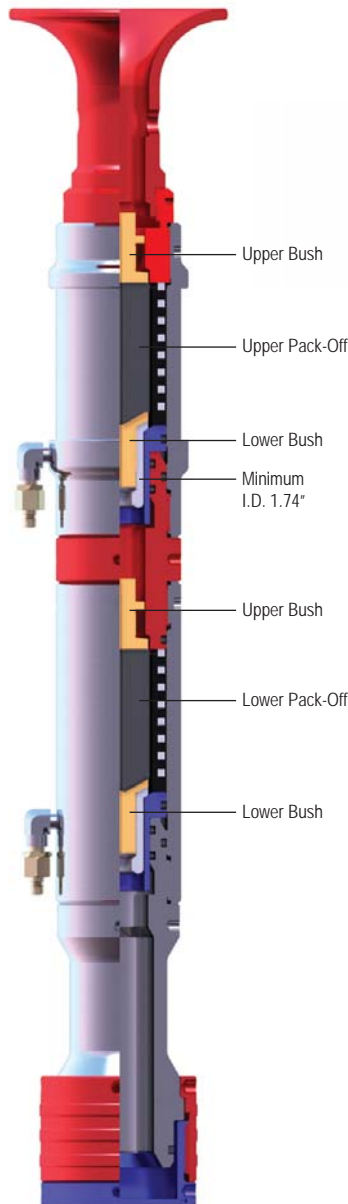
Part Number	Description
L-690750	Hand Pump Assembly - Low Pressure Lubrication, 3,000 psi W.P. x 1
L-690573	Hand Pump Assembly - Pack-Off Operation, 10,000 psi W.P. x 2
L-690676	Hand Pump Assembly - High Pressure Lubrication, 15,000 psi W.P. x 1 or
L-6901049236	Combination Hydraulic/Lubrication Control Unit 15,000 psi W.P.
L-900900	3/8" AEHP Adapter - High Pressure Lubrication Port
L-690740	100ft Hose Assembly 3,000 psi Working Pressure x 1
L-6901004505	100ft Hose Assembly 10,000 psi Working Pressure x 2
L-691222L100	100ft Hose Assembly 15,000 psi Working Pressure x 1
L-980088	Test Plug
L-9701059440	Test Rod

Note: Additional sizes available on request.  
For Seal Kit part numbers add "K" to the item part number e.g. L-9701048319K.



# Enviro™ Dual “Compact” Pack-Off

The Elmar Enviro™ Dual Hydraulic “Compact” Pack-Off is designed to seal against moving cable under pressure.



Note: 1. Other quick union sizes are available upon request 2. Wire size to be specified when ordering.  
3. Seal Kit does not include line sized parts - order separately.

## Dimensions & Weights

(Height) 104 cm, 41 in, (Weight) 45 kg, 99 lbs, Clean I.D. 4.42 cm, 1.74 in

Positioned above the tubing/casing, the Enviro™ Dual “Compact” Pack-Off is built around the wire before the wireline tool is lowered into the well.

The Enviro™ Dual “Compact” Pack-Off works by squeezing each of the two independent rubber elements which are wrapped around the wire. Each element seals on the cable outer armour against well pressure, as well as wiping the wire free of fluid. The sealing element will seal on static cable, although the ideal cable to seal on is a seasoned cable.

The Enviro™ Dual “Compact” Pack-Off is designed so that the rubber element in direct contact with the wire is easily replaced.

The Enviro™ Dual “Compact” Pack-Off is rated to 5,000 psi working pressure (static wireline) and H<sub>2</sub>S service and is available with full material traceability and Third Party Certification.

(2) 0-3000 psi hand pumps and hoses are required to operate the Enviro™ Dual “Compact” Pack-Off.

## PART NUMBERS

Part Number	Working Pressure	Srv.	Quick Union Connection	Seal Kit
L-970338	5,000 psi	H <sub>2</sub> S	4 3/4"-4thd (3.750") Bowen Pin & Collar	L-970338K
L-973711	5,000 psi	H <sub>2</sub> S	5"-4thd (3.500") Otis Pin & Collar	L-973711K
L-973663	5,000 psi	H <sub>2</sub> S	5 3/4"-4thd (4.000") Otis Pin & Collar	L-973663K
L-9701004884	5,000 psi	H <sub>2</sub> S	6 5/16"-4thd (4.375") Bowen Pin & Collar	L-9701004884K

## SPARE PARTS, QUANTITY (2) EACH ITEM

Wire Size	Upper Bush	Packing	Lower Bush
3/16"	L-831250	L-831140	L-831260
7/32"	L-831070	L-831150	L-831080
1/4"	L-830058	L-831150	L-830059
9/32"	L-831009	L-831130	L-831008
5/16"	L-831170	L-831130	L-831190
3/8"	L-831011	L-831005	L-831007
0.390"	L-830046	L-830045	L-830047
7/16"	L-830061	L-830056	L-830062
1/2"	L-831280	L-831270	L-831290
9/16"	L-831160	L-831120	L-831180

## PRESSURE TEST ACCESSORIES

Part Number	Description
L-979575	Test Stump with 4 3/4"-4thd (3.750") Bowen Box
L-974823	Test Cap with 5"-4thd (3.500") Otis Box
L-978123	Test Stump with 5 3/4"-4thd (4.000") Otis Box
L-978826	Test Stump with 6 5/16"-4thd (4.375") Bowen Box
L-975102	Test Plug (dummy packing element)
L-690730	Hand Pump
L-691080	Twin Hose Assembly x 25ft long
L-690760	Twin Hose Assembly x 50ft long
L-975800	Test Cap with 5 1/2"-4x2thd (4.375") Bowen Box

Note: Additional sizes available on request.

# Dual Hydraulic Wireline Annular Valve (BOP-D)



The Elmar Dual Hydraulic Wireline Annular Valve is designed to seal on a static cable under pressure and is recommended for "Safety while Logging" applications and for perforating with large guns.



Positioned above the drilling BOP, or a "Shooting Nipple", it offers, once rigged up, a clean bore of 6" to 6 1/2" (depending on connection type) to run a tool through. The cable and rope socket are initially threaded through the upper section and then connected to the head before passage through the middle and lower section. Several elements are split or slotted for ease of assembly. In subsequent runs the upper and middle sections are lifted with the logging head and remains around the cable while tools are laid down.

The Elmar Dual Hydraulic Wireline Annular Valve seals by squeezing a split rubber element which is wrapped around the wire. This element seals on the cable outer armour against well pressure, as well as wiping the wire free of fluid.

It is designed so that the rubber element which is in direct contact with the wire can be easily replaced.

The sealing element will seal on static cable, although the ideal cable to seal on is a seasoned cable.

An air cleaner port is integral to the unit.

A hydraulic hand pump is required to operate the pack-off.

## PART NUMBERS

Part Number	Wire Size	Working Pressure	Service	Lower Connection
L-970483	0.46"-0.52"	3,000 psi	H <sub>2</sub> S	7"-5thd Stub Acme Pin
L-9701006921	0.46"-0.52"	3,000 psi	STD	9"-4thd (7.500") Elmar Pin

## PRESSURE TEST ACCESSORIES

Part Number	Description
L-971719	Test Cap Assembly, 7"-5 Stub Acme
L-979260	Test Cap Assembly, 9"-4thd (7.500") Elmar Box
L-970835	Overshot Test Piece Assembly
L-982247	Test Rod 15/32"

## SPARES

Part Number	Description
L-970483K	Seal Kit
L-9701006921K	Seal Kit
L-831270	Packing 15/32"

Note: Additional sizes available on request.

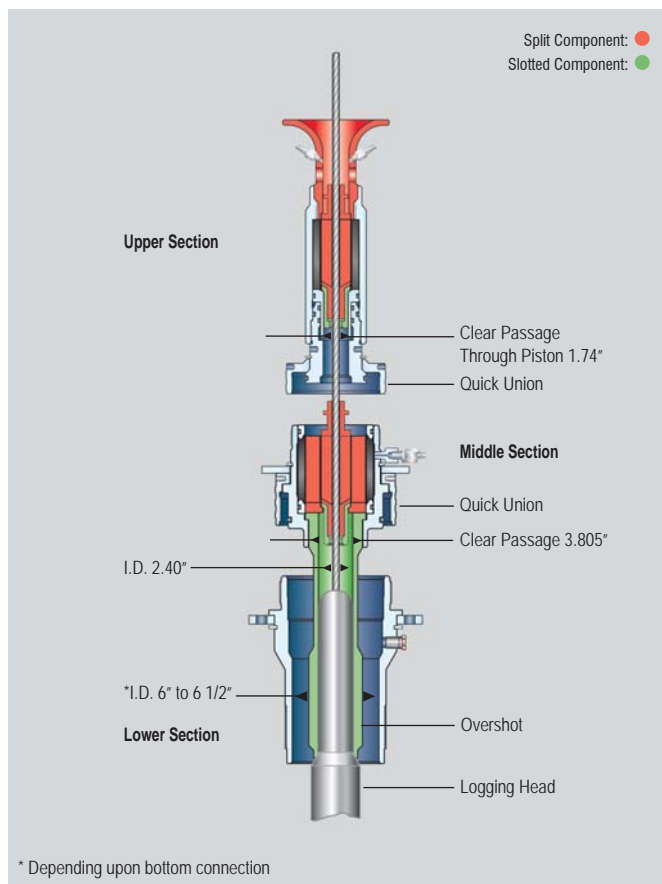
## STUFFING BOX OR PACK-OFF HAND PUMP

Part Number	Description
L-690730 x 2	Hand Pump Assembly

## HOSE ASSEMBLIES

Part Number	Description
L-690108 x 2	25ft
L-690760 x 2	50ft
L-690740 x 2	100ft
L-690541	Air Hose Assembly 1/4" ID ARO Hose

Hose Assembly 1/4" ID 100 R2AT Hose with 1/4" NPT Male Hose Ends and Snaplite Male and Female Connectors



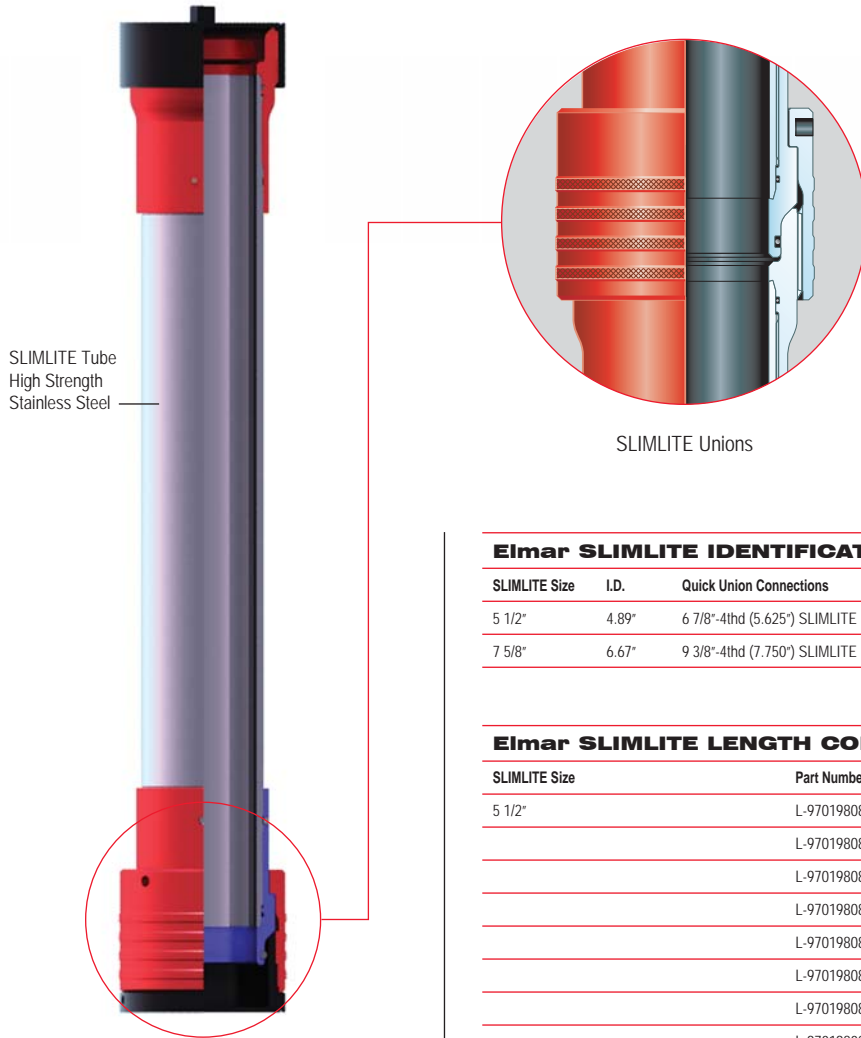
Elmar Hydraulic Wireline Annular Valve Assembly (BOP-D)

Elmar Product Line



# SLIMLITE Equipment

Elmar SLIMLITE equipment is a range of large bore equipment available in H<sub>2</sub>S and Standard service typically used during "Open Hole" wireline intervention work, or for perforating operations with large casing guns.



Elmar's SLIMLITE family uses high strength stainless steel lubricator tubes, with a 5,000 psi H<sub>2</sub>S service rating. Elmar SLIMLITE equipment has a 2.0 safety factor with test pressure = 2.0 x working pressure and complies with API 6A specifications.

SLIMLITE lubricators are available from 4ft to 30ft lengths.

SLIMLITE Unions

### Elmar SLIMLITE IDENTIFICATION CHART

SLIMLITE Size	I.D.	Quick Union Connections	W.P.	Test Pressure	Service
5 1/2"	4.89"	6 7/8"-4thd (5.625") SLIMLITE	5,000 psi	10,000 psi	H <sub>2</sub> S
7 5/8"	6.67"	9 3/8"-4thd (7.750") SLIMLITE	5,000 psi	10,000 psi	H <sub>2</sub> S

### Elmar SLIMLITE LENGTH CODES

SLIMLITE Size	Part Number	Make-Up Length
5 1/2"	L-9701980898L040	4ft
	L-9701980898L050	5ft
	L-9701980898L060	6ft
	L-9701980898L072	7.2ft
	L-9701980898L080	8ft
	L-9701980898L100	10ft
	L-9701980898L150	15ft
	L-9701980898L200	20ft
7 5/8"	L-9701980898L260	26ft
	L-9701980898L300	30ft
	L-9701980713L040	4ft
	L-9701980713L050	5ft
	L-9701980713L060	6ft
	L-9701980713L070	7ft
	L-9701980713L080	8ft
L-9701980713L100	10ft	
L-9701980713L150	15ft	

Note: Additional lengths available on request.

### Features

- Corrosion resistant tube made from high strength NACE certified stainless steel
- Quick unions are coupled through premium Elmar lite coupling
- Bending stresses at the thread undercut are minimised

### SPARES

Part Number	Description
L-9701980898K	Seal Kit
L-9701980713K	Seal Kit



# WPCE Pressure Equipment Systems

## Pressure Equipment Systems

"E-Lite" Pressure Equipment System . . . . .	217
15 Series 15,000 psi 3-BOP Pressure Equipment System . . . . .	218
20,000 psi Pressure Equipment System . . . . .	219
30,000 psi "NOLA" Pressure Equipment System . . . . .	220



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# "E-Lite" Pressure Equipment System

This system consists of the 5 Series "E-Lite" Control Module and full set of lightweight 3" or 4" 1/16" I.D. pressure control equipment.



PART NUMBER L-690598

### Dimensions & Weights

(L) 351 cm, 138 in (W) 130 cm, 51 in (H) 171 cm, 67 in (Weight) 1,200 kg, 2,646 lbs

### Features

- Accommodates single, dual or triple BOPs, all accessories and up to 90ft of lubricator
- BOPs housed in galvanised cages for ease of use
- Galvanised lubricator profiles (4ft to 10ft joints)
- Forklift runners
- Large storage locker
- Heavy duty, DNV 2.7-1/BS EN 12079 compliant, single lift transport frame

### Options

- L-690598 3" I.D. "lightweight" transport rack
- L-690665 4 1/16" I.D. "lightweight" transport rack

### This system accommodates

- Lubricators x 9
- Single, Dual or Triple BOP
- Grease and Hydraulic Control Module L-690597 or L-6901010860V01
- Grease Head
- Tool Trap
- Tool Catcher
- Crossover
- Accessories



L-6901010860-V01  
5 Series "E-Lite" 3-BOP  
Grease and Hydraulic  
Control Module  
(see page 142)



3" 10,000 psi W.P. H<sub>2</sub>S Service  
Dual Lightweight BOP (see page 182)



Equipment Storage Layout

# 15 Series 15,000 psi 3-BOP Pressure Equipment System



This system consists of the 15 Series Grease and Hydraulic Control Modules, transport frame and full set of 2 1/2" or 3" I.D. pressure control equipment.



PART NUMBER L-690208

### Dimensions & Weights

(L) 398 cm, 157 in (W) 157 cm, 62 in (H) 189 cm, 74 in (Weight) 1,700 kg, 3,748 lbs

L-697830  
15 Series 3-BOP  
Hydraulic Control  
Module (see page 133)



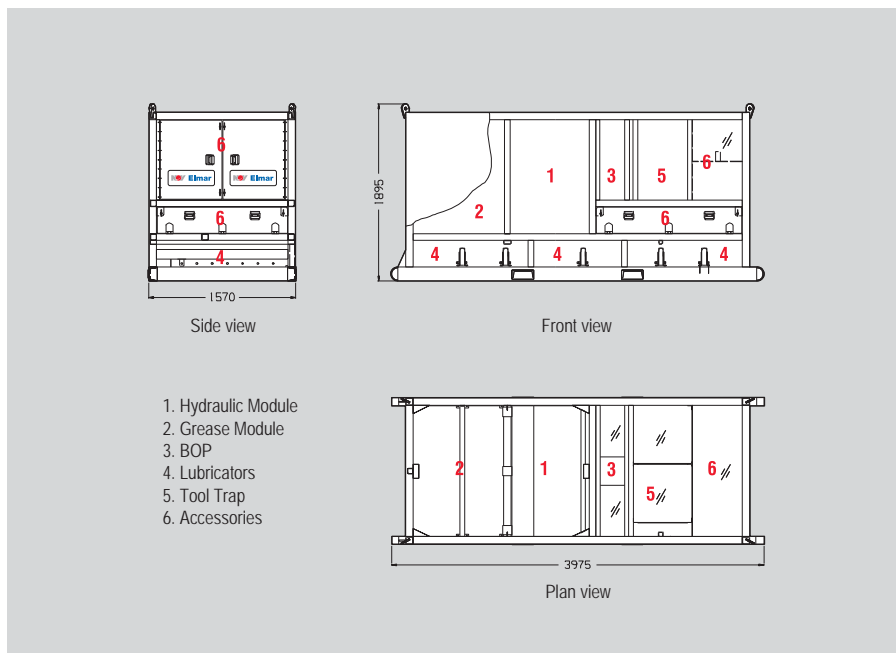
L-695740  
15 Series Grease  
Control Module  
(see page 137)

### Features

- Accommodates 3 BOPs, all accessories and up to 80ft of lubricator
- Triple BOP housed in galvanised cages for ease of use
- Galvanised lubricator runners (4ft, 6ft, 8ft and 10ft joints)
- Forklift runners
- Large storage locker
- Heavy duty, single lift transport frame

### This system accommodates

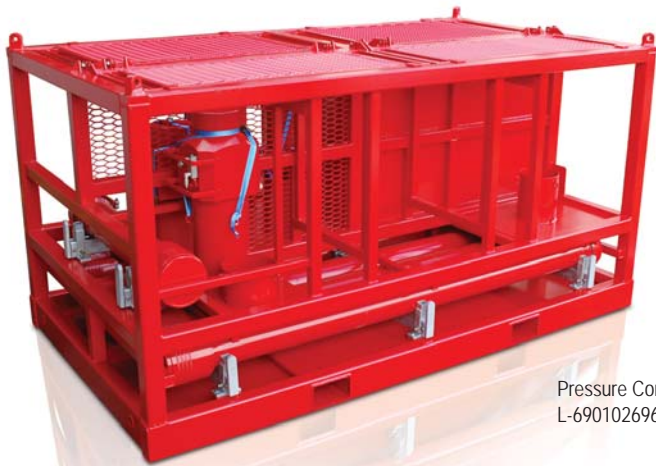
- Lubricators x 8
- Triple BOP
- Hydraulic Control Module L-697830
- Grease Control Module L-695740
- Grease Head
- Tool Trap
- Tool Catcher
- Crossover
- Accessories



Equipment Storage Layout

# 20,000 psi Pressure Equipment System

This system consists of a 25D Control Module, transport frame and a full set of 4 1/16" I.D. pressure control equipment.



Pressure Control System  
L-6901026960V02



25D Diesel Driven BOP and Grease Control Module  
L-6901017786V06 ( Zone 2)  
(see page 144)



20,000 psi W.P. H<sub>2</sub>S Service Quad Compact BOP

## Dimensions & Weights

**PRESSURE CONTROL SYSTEM PART NUMBER L-6901026960V02:** (L) 3.57 m, 11.71 ft (W) 2.00 m, 6.56 ft (H) 1.89 m, 6.20 ft (Weight Fully Laden) 9,600 kg, 21,164 lbs

**QUAD BOP TRANSPORT FRAME PART NUMBER L-6901026733V02:** (L) 1.80 m, 5.91 ft (W) 1.67 m, 5.48 ft (H) 2.20 m, 7.22 ft (Weight c/w BOP) 3,165kg, 6,978 lbs

**25D CONTROL MODULE PART NUMBER L-6901017786V05:** (L) 2.74 m, 8.99 ft (W) 1.36 m, 4.46 ft (H) 1.92 m, 6.30 ft (Weight) 4,000kg, 8,818 lbs

## Features

- Transport frame accommodates a single BOP, all accessories and 64ft of lubricator
- Quad BOP housed in galvanised cage with floorstand
- Forklift runners
- Large storage locker
- Heavy duty, single lift transport frame
- Separate 25D grease and hydraulic control module

## This system comprises

- Lubricators x 7
- Single and Quad BOPs
- Grease and Hydraulic Control Module L-6901017786V05
- Grease Head
- Tool Trap
- Tool Catcher
- Crossover
- Quick Test Sub - QTS
- Quick Union Pump-in Sub
- Transport Frame
- Accessories

## PRESSURE CONTROL EQUIPMENT

### Features

- Includes a quad BOP plus a single BOP with shear and seal wireline rams
- Quad BOP is 50% lighter than standard industry design
- Pressure control equipment suitable for H<sub>2</sub>S service
- Designed, manufactured and tested in accordance with API 6A and PSL 4 (includes gas testing)
- Manufactured with NACE compliant materials



Quad BOP transport frame

## 25D CONTROL MODULE

This 25,000psi working pressure diesel driven grease control module features an Elmar high pressure grease intensifier pump in a compact package. The intensifier delivers high flow rates at high pressures.

### Features

- Maximum working pressure 25,000 psi (limit can be specified)
- Suitable for use in a Zone 2 (category III) hazardous area (L-6901017786V06)
- Rigsafe, air cooled, electric start 44hp Deutz diesel engine (L-6901017786V04)
- Elmar hydraulically driven grease intensifier pump capable of delivering 1.6 US gal/min (6 l/min) at 56 strokes/min
- Air driven back-up 235:1 grease pump
- (2) grease supply outlets, 1 grease to BOP outlet, 1 grease return outlet
- 120 USgal (454 litre) grease capacity in twin tanks
- 36 USgal (135 litre) fuel tank capacity
- Elmar mimic control panel for easy logical control
- DNV 2.7-1/BS EN12079 frame with full drip pan
- Operating temperature range -20°C to +50°C



# 30,000 psi "NOLA" Pressure Equipment System



The system comprises of a Hydraulic Control Module, a Grease Injection Control Module and a full set of 3 9/16" pressure control equipment.

## Electric Line String



Electric Line Frame Including:  
Top Sheave  
Dual Pack-Off  
Line Wiper  
Flotubes  
Tool Catcher  
and Intensifiers

Lubricators  
Quick Test Sub  
Wireline BOPs  
Pump-In Sub  
Tool Trap

## Slickline String



Slickline Frame Including:  
Top Sheave  
Slickline Grease Injection Head and Tool Catcher

Lubricators  
Quick Test Sub  
Crossover  
Wireline BOP  
Pump-In Sub  
Tool Trap

## Features

- 3 9/16" ID
- All the components of industry normal 10,000 psi pressure control strings
- Single and Dual BOPs with shear/seal and multiliner rams
- Hydraulic Cable Clamp
- Grease head with de-gassing feature
- Quick test feature on each lubricator joint
- Patented Constrictor 30,000 psi rated multiliner inner seals
- Full third party certification
- Electric driven modules (no use of compressed air)
- Hydraulic quick unions to enable efficient rig up and rig down

## This system is comprised of a

- Tool Trap
- Pump in Sub
- Wireline BOPs
- Hydraulic Cable Clamp
- Quick Test Sub
- Lubricators
- Tool Catcher
- Slickline Grease Injection Head with Transport Frame
- Braided Line Grease Injection Head with Transport Frame
- Dual Pack-Off for Braided Line
- Hydraulic Control Module
- Grease Injection Control Module
- Transport Frame with Integral Grease Injection
- Transport Frames for all WPCE
- C-Table for derrick rig-up



Grease Injection Control Module  
L-6901034212V01-001 (Zone 2)



Hydraulic Control Module  
L-6901034212V02-001 (Zone 2)



Miscellaneous WPCE transport frame



Lubricator transport frame



BOP transport frame

# WPCE Accessories

## Accessories

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# Specialist Hand Tools and Wellhead Pressure Control Equipment Accessories



Example of a WPCE Hand Tools Tool Box



Example of a WPCE Annual Service Kit



Test Rod  
(see next page)



Wireline Ductility Tester



Wireline Clamp

To simplify and speed-up maintenance of Elmar's wellhead pressure control equipment, a range of specialist hand tools are available, packaged (upon request) in custom made Tool Boxes.

## SPECIALIST HAND TOOLS

Part Number	Description	PCE Size
L-9701022747	Complete Tool Set	3/4"
L-9701026838	Tool Set Box	3/4"
L-9701022749	Complete Tool Set	5/6"
L-9701026000	Tool Set Box	5/6"
L-981053	<b>Multi purpose sliding hammer complete with:</b>	3/4" & 5/6"
L-982386	- Hammer for Multi purpose sliding hammer	3/4" & 5/6"
L-982449	- Multi purpose sliding hammer stem	3/4" & 5/6"
L-982289	- Adapter (Seal Valve)	3/4" & 5/6"
L-982290	- Adapter (Ball Check Valve Housing)	3/4" & 5/6"
L-982291	- Adapter (Check Valve)	3/4" & 5/6"
L-982292	- Adapter (Manifold/Grease Injection Plug)	3/4" & 5/6"
L-816600	- Nyloc Nut	3/4" & 5/6"
L-982473	- Sleeve	3/4" & 5/6"
L-982272	Tool - O-Ring Installation Wireline Valve Plug	3/4" & 5/6"
L-972776	Tool - Valve Seat Seal Setter	3/4" & 5/6"
L-973132	Tool - Ratchet	3/4" & 5/6"
00-11401	Tool - Lock Ring	3/4" & 5/6"
L-981115	Tool - 3" I.D. Wireline Valve Piston Removal	3"
L-980916	Tool - 4 1/16" I.D. Wireline Valve Piston Removal	4"
L-980917	Tool - 5 1/2" I.D. Wireline Valve Piston Removal	5"
L-980918	Tool - 6 3/8" I.D. Wireline Valve Piston Removal	6"
L-973245	Block Manifold Grease Nipple	3/4" & 5/6"
L-8401004348	Tool Hook and Pick Set	3/4" & 5/6"
L-8401003690	Pin Punch	1/4"
L-8401003691	Pin Punch	5/16"
L-8401003692	Pin Punch	3/8"

## Annual Service Kit

Part Number	Description
L-9701060463	3" Kit
L-9701043113	4" Kit

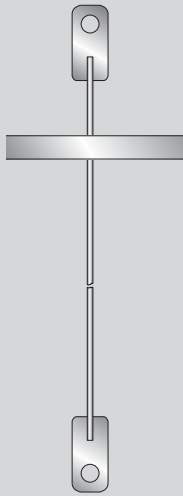
## ACCESSORIES

Part Number	Description
L-982308	Tool - Compact Lock Ring 15,000 psi 6 3/8" I.D.
L-982271	SGI Flotube Removal Tool
L-6801001597	15,000 psi Block Manifold Grease Nipple
L-660493	10,000 psi Manifold Gauge
L-972202	10,000 psi Enviro Test Plug
L-976517	10,000 psi Stuffing Box Test Plug
L-982381	15,000 psi Stuffing Box Test Plug

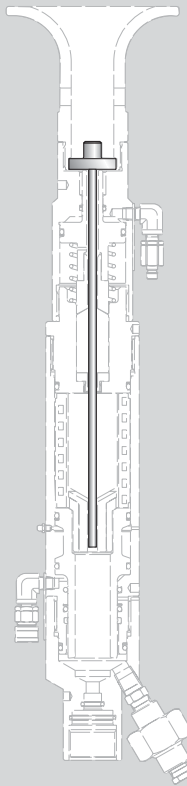
## SLICKLINE ACCESSORIES

Part Number	Description
B111-005	Line Wiper
L-8601017000	Hay Pulley (Sheeve Wheel)
-	Lubricator Gauge Manifold
-	Bleed off Hose for Lubricator Gauge Manifold
L-894550	Wireline Clamp 0.108"
L-894560	Wireline Clamp 0.125" - 3/8"
L-840166	Wireline Ductility Tester

# Test Rods



Test Rod for BOPs



Test Rod for Enviro™, Single and Dual Pack-Off shown with Enviro™

## BOPS

Part Number	Wire Size	Overall (mm)	X-Bar (mm)	Load Test (Kg)	Equipment Size
L-974956	3/16"	1,265	200	500	6 3/8" 10K & 5 1/8" 15K TEC
L-973440	7/32"	1,265	200	500	6 3/8" 10K & 5 1/8" 15K TEC
L-9701004629	7/32"	1,405	200	500	Special
L-9701007264	7/32"	1,405	270	500	9" SSR
L-9701020031	7/32"	1,568	200	500	Special
L-9701006370	1/4"	1,265	200	650	6 3/8" 10K & 5 1/8" 15K TEC
L-980551	9/32" (0.281")	1,265	200	1,000	6 3/8" 10K & 5 1/8" 15K TEC
L-974957	5/16"	1,265	200	1,000	6 3/8" 10K & 5 1/8" 15K TEC
L-972775	3/8"	1,265	200	1,000	6 3/8" 10K & 5 1/8" 15K TEC
L-973114	0.390"	1,265	200	1,000	6 3/8" 10K & 5 1/8" 15K TEC
L-974959	7/16" (0.437")	1,265	200	1,000	6 3/8" 10K & 5 1/8" 15K TEC
L-974958	15/32" (0.468")	1,265	200	1,000	6 3/8" 10K & 5 1/8" 15K TEC
L-9701022607	0.468"	1,442	200	1,000	HLW-B & NRS BOP
L-981256	1/2"	1,265	200	1,000	6 3/8" 10K & 5 1/8" 15K TEC
L-9701022608	0.500"	1,442	200	1,000	HLW-B & NRS BOP

## BOP-V

Part Number	Wire Size	Overall (mm)	X-Bar (mm)	Load Test (Kg)
L-970838	15/32"	720	200	1,000
L-9701011702	7/32"	720	200	1,000
L-982077	7/16"	720	200	1,000

## BOP-D

Part Number	Wire Size	Overall (mm)	X-Bar (mm)	Load Test (Kg)
L-982247	15/32"	1,015	200	1,000

## ENVIRO™

Part Number	Wire Size	Overall (mm)	X-Bar (mm)	Load Test (Kg)
L-972242	3/16" & 15/32"	NA	NA	NA
L-9701007407	7/32" & 5/16"	NA	NA	NA
L-9701007408	0.230" & 0.390"	NA	NA	NA

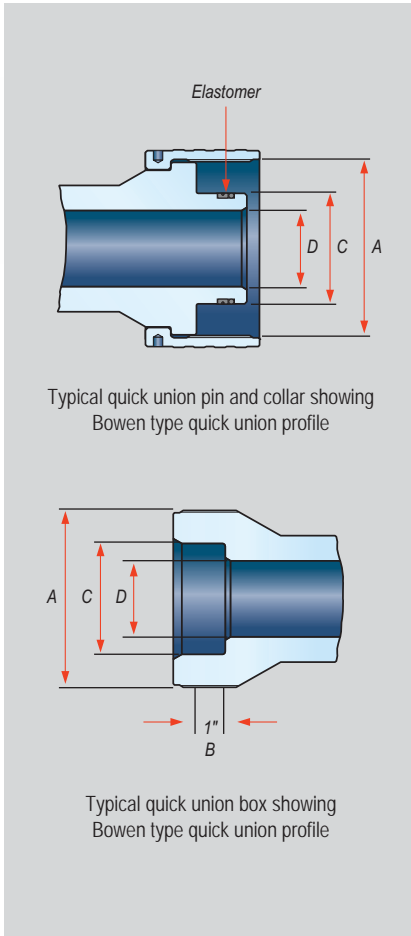
## SINGLE PACK-OFF

Part Number	Wire Size	Overall (mm)	X-Bar (mm)	Load Test (Kg)
L-980712	3/16" & 15/32"	NA	NA	NA

## DUAL PACK-OFF

Part Number	Wire Size	Overall (mm)	X-Bar (mm)	Load Test (Kg)
L-973431	3/16" & 15/32"	NA	NA	NA
L-9701021667	1/2"	NA	NA	NA

# Reference Guide for Common Quick Union Type Connections



Typical quick union pin and collar showing Bowen type quick union profile

Typical quick union box showing Bowen type quick union profile

Typical quick union type connection

## QUICK UNION CONNECTION LEGEND

Item	Description
A	Thread size
B	Threads Per Inch (T.P.I.)
C	Seal Diameter
D	Nominal I.D.

Note: All sizes in inches.  
Additional connections available on request.

## OTIS QUICK UNION TYPE CONNECTIONS

Elmar Code	Thread Size	TPI	Seal Dia	Nominal ID	Working Pressure	Service	O-Ring	BU-Ring	BU-Ring Retainer
O01	5	4	3.500	3.00	5K	STD	L-870310	N/A	N/A
O02	5 3/4	4	4.000	3.00	10K	H <sub>2</sub> S	L-870490	L-873680	N/A
O03	6 1/4	4	4.000	2.50	15K	H <sub>2</sub> S	L-870490	L-974353	L-873260
O04	6 1/2	4	4.750	4.00	10K	STD	L-870540	L-873720	N/A
O05	6 1/2	4	5.188	4.00	5K	STD	L-873140	N/A	N/A
O06	7 1/2	4	5.500	3.00	15K	H <sub>2</sub> S	L-870580	L-974602	L-876260
O07	8 1/4	4	6.188	5.00	5K	H <sub>2</sub> S	L-870710	N/A	N/A
O08	8 3/8	4	5.250	4.00	10K	H <sub>2</sub> S	L-875560	L-875570	N/A
O09	8 3/4	4	7.500	6.38	5K	STD	L-870720	N/A	N/A
O10	9	4	6.750	5.00	10K	H <sub>2</sub> S	L-870850	L-876160	N/A
O11	9 1/2	4	6.250	4.00	15K	H <sub>2</sub> S	L-872560	L-977411	L-871005
O12	9 1/2	4	8.000	6.38	5K	H <sub>2</sub> S	L-873120	N/A	N/A
O13	11 1/2	4	8.250	6.38	10K	H <sub>2</sub> S	L-876060	L-876070	N/A
O14	12	4	10.313	9.00	5K	H <sub>2</sub> S	L-872440	N/A	N/A
O15	12 1/4	4	7.000	5.00	15K	H <sub>2</sub> S	L-875810	L-982000	L-873150
O16	5	4	3.500	3.00	5K	H <sub>2</sub> S	L-870310	N/A	N/A
O17	6 1/2	4	4.750	4.00	5K	H <sub>2</sub> S	L-870540	N/A	N/A
O18	7 1/2	4	5.500	4.50	10K	H <sub>2</sub> S	L-870580	L-873760	N/A
O19	6 1/2	4	4.750	3.00	10K	H <sub>2</sub> S	L-870540	L-873720	N/A
O20	5	4	3.500	2.50	15K	STD	L-870460	L-976083	L-875640
O21	5	4	3.500	3.00	10K	STD	L-870310	L-873570	N/A
O22	8 1/4	4	6.188	5.12	10K	H <sub>2</sub> S	L-870710	L-875001	N/A
O23	6	4	4.875	4.00	5K	H <sub>2</sub> S	L-870550	N/A	N/A

## BOWEN QUICK UNION TYPE CONNECTIONS

Elmar Code	Thread Size	TPI	Seal Dia	Nominal ID	Working Pressure	Service	O-Ring	BU-Ring	BU-Ring Retainer
B01	4 3/4	4	3.750	3.00	5K	H <sub>2</sub> S	L-870470	N/A	N/A
B02	6 5/16	4	4.375	3.00	10K	H <sub>2</sub> S	L-870520	L-873700	N/A
B03	6 5/16	4	3.750	2.50	15K	H <sub>2</sub> S	L-870470	L-974535	L-873170
B04	5 1/2	4x2	4.375	3.00	5K	H <sub>2</sub> S	L-870520	N/A	N/A
B06	7	5	4.375	3.00	15K	H <sub>2</sub> S	L-870520	L-974603	L-873260
B07	8 1/4	4x2	6.000	4.00	10K	H <sub>2</sub> S	L-870690	L-875340	N/A
B08	7	5	5.250	4.00	5K	H <sub>2</sub> S	L-875560	N/A	N/A
B09	8 1/4	4x2	6.750	5.50	5K	H <sub>2</sub> S	L-870850	N/A	N/A
B10	9 5/32	4x2	6.750	5.50	10K	H <sub>2</sub> S	L-870850	L-876160	N/A
B11	9 7/8	4x2	8.000	6.38	5K	H <sub>2</sub> S	L-873120	N/A	N/A
B12	4 3/4	4	3.750	3.00	10K	STD	L-870470	L-873660	N/A
B13	5 1/2	4x2	4.375	3.00	10K	STD	L-870520	L-873700	N/A
B14	4 1/16	4	3.000	2.00	5K	H <sub>2</sub> S	L-870430	N/A	N/A
B15	10 5/8	4	7.500	5.63	10K	H <sub>2</sub> S	L-870720	L-870021	N/A
B16	4 1/2	4	3.000	2.00	10K	H <sub>2</sub> S	L-870430	L-873630	N/A
B17	8 7/8	4x2	6.500	5.00	10K	STD	L-873280	L-875540	N/A
B18	13	4	9.500	7.06	10K	H <sub>2</sub> S	L-874008	L-874009	N/A
B19	8 7/8	4x2	5.500	4.00	15K	H <sub>2</sub> S	L-873270	L-980815	L-871029
B20	6	4x2	4.875	3.38	5K	H <sub>2</sub> S	L-870550	N/A	N/A

## Elmar QUICK UNION TYPE CONNECTIONS

Elmar Code	Thread Size	TPI	Seal Dia	Nominal ID	Working Pressure	Service	O-Ring	BU-Ring	BU-Ring Retainer
E04	6 3/4	4	5.375	4.892	5K	STD	L-870610	N/A	N/A
E05	9	4	7.500	6.765	5K	STD	L-870660	N/A	N/A
E06	4 3/4	4	3.750	3.00	10K	H <sub>2</sub> S	L-870470	L-873660	N/A
E07	8 1/2	4	7.250	6.765	3K	STD	L-870840	N/A	N/A
E08	8 3/4	4	6.500	5.00	10K	H <sub>2</sub> S	L-870630	L-873790	N/A
E09	4 3/4	4x2	3.750	3.00	10K	H <sub>2</sub> S	L-870470	L-873660	N/A
E12	6 1/8	4x2	4.750	4.06	10K	H <sub>2</sub> S	L-870540	L-873720	N/A
E13	3 3/4	8	2.500	-	10K	H <sub>2</sub> S	L-875630	L-872700	N/A
E14	9	4	7.500	6.625	5K	H <sub>2</sub> S	L-870660	N/A	N/A
E16	6 3/4	4	5.375	4.892	5K	H <sub>2</sub> S	L-870610	N/A	N/A
E21	9 3/8	4	7.750	6.67	5K	H <sub>2</sub> S	L-870006	N/A	N/A
E22	6 7/8	4	5.625	4.892	5K	H <sub>2</sub> S	L-870590	N/A	N/A
E30	9 1/2	4	5.500	4.06	20K	H <sub>2</sub> S	L-8701008706	L-9701008692	L-871029
E32	7 7/8	4x2	6.125	5.125	10K	H <sub>2</sub> S	L-873040	L-872080	N/A



# WPCE Horizontal Tree Isolation Plugs

## Horizontal Tree Isolation Plugs

Crown Plugs . . . . . 229







# Horizontal Tree Isolation Plugs

Compared to conventional trees, horizontal spool trees save time and money during workovers and completions. This technology has proven itself in the North Sea, Gulf of Mexico, Australia and Africa.



Plug Running Tool

Plug Pulling Tool

One of the components critical to the effectiveness of trees manufactured by companies such as OneSubsea, Aker Solutions, GE Oil & Gas, Dril-Quip and FMC is the Elmar Horizontal Spool Tree Isolation Plug. This patented, high performance product is unsurpassed for reliable pressure control, even in the harshest environments.

The Elmar 'LSB' (Longitudinal Seal Bore) Lock Mandrel Upper Isolation Plug is a high pressure, high temperature elastomeric sealing unit with a no-go lock system that positively aligns the plug within its corresponding nipple profile. It is designed to hold pressure from below by key/nipple engagement and to hold pressure from above by no-go/nipple arrangement.

The Elmar LSB Plug is typically installed above a CSB (Conical Seal Bore) Metal Sealing Plug Mandrel Lower Isolation Plug, although a CSB Plug may also be used in the upper position. Our CSB Lock Mandrel Isolation Plug is designed with a combination of primary metal seal and a secondary Polymeric/Elastomeric seal system, plus an erosion target that protects the metal seal from sand bombardment. Even after prolonged use, the metal-to-metal seal retains its integrity offering 100% seal energization over its lifetime.

**"Nothing performs better under pressure than the Elmar plug, and it certainly can take the heat!"**

The systems sophisticated design is compact enough for use in a short tree, is simple to operate and maintain, yet is extremely robust and reliable. Such a degree of reliability is the product of space age materials that provide a combination of metal-to-metal and elastomeric seals for H<sub>2</sub>S and CO<sub>2</sub> service conditions and Elmar's stringent ISO 9001 quality assurance system. Each Plug is rigorously PR2 tested for design approval under API6A and 17D.

Operating the Elmar plug is very simple; it is set with an Elmar Running Tool, that is attached to the plug and lowered into the nipple. Fluid pressure is applied above the plug helping energize the metal seals nose. When fully energized, the metal seal no-go's on the hanger nipple profile, ensures the correct alignment of the key and key profile.

While fluid pressure is maintained, downward 'jarring' action is applied driving the Expander Sleeve downward, pushing the keys outward into nipple profile and locking the plug into place. Upward 'jarring' releases the running tool, which also inhibits premature release of the plug, while a 'telltale' pin confirms the setting status. The taper-on keys and Expander Sleeve act as the primary hold-down mechanism. Unidirectional check 'bullets' act as the secondary hold-down mechanism and a measure against vibratory movement. Releasing the Plug requires deforming the check mechanism to allow the Expander Sleeve to move upwards to retract the keys.



## Typical Technical Specifications

In-service Pressure (differential) rating:	10,000psi (from above/below)
Temperature rating:	-20°F to +300°F
Material Class:	FF/HH
PSL Level:	3/4
Product Verification Testing (type):	Full PR2 Tested per API 6A/17D
Product Testing (each plug):	Elmar FAT & SI289/913

Elmar design, manufacture and certify Pressure Control Products to meet and exceed the following established industry standards:

- API 6A
- API 17D
- NACE MR0175
- NPD Regulations
- Statutory Instrument 1996 No. 913
- Statutory Instrument 1998 No. 2306
- Statutory Instrument 1998 No. 2307

## Plug Systems Available

- 2", 3", 4", 5" and 7" Plug Systems

Products are fully traceable and interchangeable, inspected 100% to assure a product of the highest quality exceeds our customer expectations in accordance with Elmar established QMS accredited to BS EN ISO 9001:2008



# Section 4: AP Automation Products

## ASEP Product Lines

### Hardware

LineMinder . . . . .	233
SmartMonitor . . . . .	234
SmartDisplay . . . . .	235
SmartRigUpRemote . . . . .	235
SmartTrainer . . . . .	236



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# LineMinder

The LineMinder display is a Zone 2 ATEX certified visualisation display for depth, tension and speed in wireline units. The depth, tension and speed signals are read in by an external device (DTS box) and sent by using high speed protocol to the LineMinder. The block diagram below shows the overall system overview.

The product has been designed for use in harsh environments and outdoor applications. Glass bonding assembly and anti-reflective (AR) glass surface treatment provides superior optical performance.

The durable glass touchscreen requires the human touch, and offers high reliability and durability; it will continue to work if the surface is scratched or contaminated.

## 7" Display Features

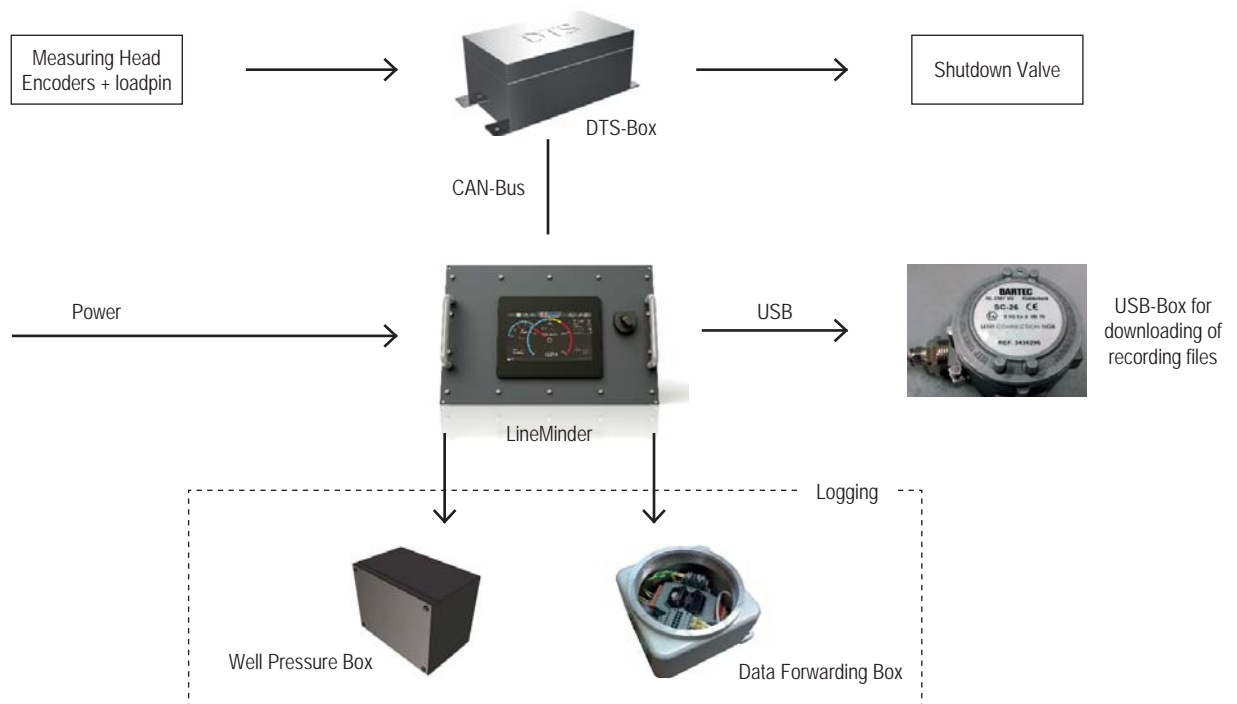
- LineMinder slickline software package
- LineMinder logging software package
- Zone 2 ATEX certified
- High Brightness 7" TFT color display
- Projected Capacitive Touchscreen (PCT)
- Ethernet RJ45 port
- USB host port
- CAN bus

## Hardware Specifications

Display	Specification	TFT-Color
	Size	7" diagonal
	Resolution	WVGA, 800 x 480 pixels
	Backlight	White LED
	Dimming	Yes
<b>Power Supply</b>	Voltage	24 VDC (9 to 30 VDC)
	Current	Max. 1.7 A at 24 VDC
<b>Operating System</b>	Microsoft Windows CE 6.0	
<b>Ambient Conditions</b>	Protection	IP65
	Temperature Range:	
	Operation	-20°C to +50°C
	Storage	-40°C to +85°C
	Humidity	5-85% relative humidity, non-condensing
<b>Dimensions &amp; Weight</b>	Front Size (w x h)	380 cm x 230 cm
	Depth	105 cm
	Weight	7,5 kg



**LineMinder Block Diagram**





# SmartMonitor

The SmartMonitor is a proven, robust and flexible family of touchscreen display panels for monitoring and controlling well servicing equipment, such as wireline winches, ancillary systems (e.g. fire and gas safety systems) and pressure control modules. Each SmartMonitor incorporates a sophisticated programmable controller, touchscreen interface, input/output and communication features, and non-volatile data storage.

The SmartMonitor user interface is an intuitive, ergonomically-designed, visual display of equipment and instrumentation status as well. It also incorporates a range of customisable control functions to operate the host machine (e.g. a winch and/or vehicle) and/or remote machinery (e.g. pressure control devices at the well).

Field experience and customer feedback have resulted in an approach to interface design that takes account of operational realities on oilfields, especially the demands on operator attention during complex and precise well servicing activity. For example, on a slickline winch, the SmartMonitor can automatically monitor the status of supporting systems (e.g. electrical, hydraulic and pneumatic) leaving the operator free to concentrate on the task at hand, and maintain maximum visual contact with personnel at the wellhead. The display is uncluttered, with all essential data (e.g. depth and tension visualisation) prominent alarms will only appear on the screen when the user-preset warning or alarm levels are triggered.

But the SmartMonitor goes much further than purely monitoring. On more advanced machinery, such as a logging winch, SmartMonitor forms the heart of a powerful automatic control system, enabling complex and time-consuming tasks to be carried out in less time, more safely and with fewer personnel. For example, you can set the SmartMonitor in a wireline winch to spool wireline at a user-specified constant tension, adjusting drum speed and direction continuously based on tension feedback. Ideal for logging runs, you can likewise select the constant speed mode, allowing a degree of precision tool movement that would otherwise require an operator highly familiar with the specific winch characteristics.

## Data Communication

The SmartMonitor communicates with the host machine (e.g. wireline winch or pressure control module) using standard electrical signals. The system is richly equipped with communication features such as two CAN buses, plus Ethernet, USB and serial ports. These can be used for communication with the host machine, peripheral equipment, a base station, or other remote location.

The information displayed on the SmartMonitor can be visualised anywhere in the world, enabling advanced, state-of-art off-site support such as diagnostics and software maintenance. The SmartMonitor can communicate with numerous logging/acquisition systems, and can function either as a master or slave in a logging system.



Zone 1



Non-Zoned & Zone 2

## CONFIGURATIONS

Item	Size	Dimensions (L x W x H) mm	Environment		Connection		
			Zone 2	Zone 1	CAN-BUS	Ethernet	USB
SmartMonitor 10" EX1	10"	372 x 270 x 155	✓	✓	✓	✓	✓
SmartMonitor 12"	12"	385 x 230 x 140	✓	✗	✓	✓	✓
SmartMonitor 15"	15"	450 x 300 x 140	✓	✗	✓	✓	✓
SmartMonitor 15" EX1	15"	420 x 315 x 155	✓	✓	✓	✓	✓

# SmartDisplay

The SmartDisplay, available for use in Zone 2 and Non-Zoned areas, is a proven, robust and flexible family of backup display panels for monitoring well servicing equipment, such as wireline winches. The SmartDisplay user interface is an intuitive, ergonomically-designed, visual display of equipment and instrumentation status as well. The display is uncluttered, with all essential data (e.g. depth, tension and speed visualisation).

The SmartDisplay communicates with the host machine (e.g. wireline winch) using standard electrical signals. The display panel is equipped with a serial port for communication with the host machine. USB download is optional.



Box mount



Panel mount

# SmartRigUpRemote

Wireline string rig-up and rig-down are time-consuming tasks that frequently involve three or more people, one of them being the winch operator. However, on offshore platforms, the operator often cannot see the wellhead, making the task more complex and error-sensitive. SmartRigUpRemote solves this by enabling the winch to be controlled from right beside the wellhead. Using this remote control device, precise in-hole and out-hole movement of the wireline can be easily controlled. Fine inching control of the cable means that tools can be mounted, detached and modified with minimum handling, reducing the risk of injury and tool damage, and speeding up throughput. For uncompromised safety, there is an emergency stop button on the handheld console.

SmartRigUpRemote allows the wireline winch to be operated only at restricted speeds, with a very low speed for inching the cable, and a higher speed for use in the surface zone. For full-speed operation, the regular winch controls must be used.

SmartRigUpRemote is available in two varieties based on ATEX zoning: a non-zoned variety, and a Zone 1 / Zone 2 variety.





# SmartTrainer

Thorough winch operator training is essential when operators are expected to work with a new type of winch. Comprehensive training makes an operator familiar with the controls and characteristics of a new winch, reducing the risk of accidents or equipment damage, with costly downtime and delays. Ideally, you want to train operators during shore time, without the need for a test well or tying up scarce equipment.

NOV Elmar offers a convenient solution: SmartTrainer – a suite of products that realistically simulate a real-world wireline operating environment for a specified NOV Elmar wireline winch. Several configurations are available:

## SmartTrainer Basic

- Simulation module
- Operator chair with basic winch control lever
- Two SmartMonitors
- Simulated operator view via customer-supplied projector or video display

## SmartTrainer Standard

- As SmartTrainer Basic, but with third SmartMonitor and two control levers

## SmartTrainer In-Winch software

- Software package to temporarily configure a real winch (with SmartMonitor installed) as a simulator
- All primary winch functions and most support systems and features can be operated using the real cabin controls, without actually running physical wireline



Wireline



Logging

SmartTrainer allows you to prepare wireline winch operators realistically for duties in the hazardous and time-constrained real-world environment.

You prepare the jobs using the NOV Elmar RunPredictor and load them to the SmartTrainer configuration (real winch or winch simulator).

A 3D model of the wireline winch (skid or truck-mounted unit) is visualised on the projector or video screen from, for example, the normal operator's perspective.

Besides the winch, the operator can control the lights, measuring head, drum, brake and more.

Even the advanced SmartMonitor automatic control functions can be used.

The operator is trained realistically, based on real cases.

The entire training job is recorded, enabling the job to be reviewed and analysed together with the trainee via a playback function.

# Section 5: TUBULAR Completion Equipment



## **Completion Equipment . . . . . 239**

- Manufacturing of Tubular Perforating Gun Hardware
- Holing and Slotting of Casing
- Manufacturing of Screens

## **Holing and Slotting of Casing**

Introduction . . . . .	243-244
Slotted Casing . . . . .	245
Slotted Design and Calculation . . . . .	246
Percentage of Open Area Per Square Foot . . . . .	247
Holed Casing . . . . .	248
Holed Casing Calculation . . . . .	249

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# TUBULAR Completion Equipment

NOV Elmar manufacture tubular completion equipment to client's own drawings and specifications. All tubular manufacture is subject to agreed and documented quality assurance processes, and relevant certification and documentation is provided. Our three tubular product lines are Perforating Guns, Slotted and Holed Casing, and Screen products. For further information contact your local sales representative or visit [www.nov.com/Elmar](http://www.nov.com/Elmar)



## Manufacturing of Tubular Perforating Gun Hardware

Elmar have been manufacturing perforating gun hardware and accessories since 1989 and currently have a total capacity of approximately 55,000 feet of production per month between the Dubai and Aberdeen plants. Sizes from 1 9/16" to 10" can be produced along with all required loading tubes, adapters and other accessories. Where applicable the guns meet requirements including API, NACE NPD and EEUMA and are certified by a Third Party certifying authority.



Perforating Guns

## Holing and Slotting of Casing

Elmar slotted and holed liners are manufactured on specially designed multi spindled machines that assure a high level of machining accuracy whilst maintaining metallurgical properties through the continuous application of coolant during the cutting process. We are able to deburr pipes from 2 3/8" to 12" OD and 50' length with a purpose built deburring machine capable of removing swarf, rust and grease. After deburring the pipes are given a protective coating to prevent further rust. Slot widths of 0.012" to 0.25" in a variety of patterns can be accommodated with a range of slot lengths to suit the requirement. Holed casing can be produced with a variety of hole patterns and pitches, with diameters from 9.5mm to 25mm.



Holed and Slotted Casing

## Manufacturing of Screens

Elmar have been producing wire wrapped screens under license since 1995 and have a capacity of 150 joints per week, with a range of base pipe sizes from 4" to 9 5/8".

At the Westhill facility we have the capability to complete the whole screen assembly from machining of the base pipe, welding of components; wrapping of wire through to complete inspection and assembly.



Documents are maintained for customer assurance of full traceability of materials and control of procedures.





# TUBULAR Holing and Slotting Of Casing

## Holing and Slotting of Casing

### Introduction . . . . . 243-244

- Slotting machines
- Hydraulic Handling System
- Holing Machines
- Deburring
- Pipe coating
- Banding
- QA Certification

### Slotted Casing . . . . . 245

- Slot sizes
- Straight or keystone slots
- Slot width and length guide
- Slot patterns
- Casing sizes

### Slotted Design & Calculation . . . . . 246

- Straight slot
- Keystone slot
- Determining slots per foot
- Calculation of required slots/foot

### Percentage of Open Area Per Square Foot . . . . . 247

- 3.5" slotted liner
- 4.5" slotted liner
- 5.5" slotted liner
- 7" slotted liner

### Holed Casing . . . . . 248

- Perforated casing
- Hole sizes
- Casing sizes
- Holing patterns

### Holed Casing Calculation . . . . . 249

- Determining holes per foot



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# Holing and Slotting of Casing

NOV Elmar has the capability at its Aberdeen facility for precision machining and quick delivery of Slotted, Holed or Plugged Casing.



Slotting Machine

## CASING MACHINES

### Slotting Machines

- Specially designed multi-spindle milling machines are used to manufacture NOV Elmar slotted liners.
- Circular milling saws cut the slots with continuous application of coolant to maintain the pipe's metallurgical integrity.



Multi-spindle milling

### Hydraulic Handling System

- With health and safety a priority this roller system has been designed to feed both slotting and drilling machines resulting in increased efficiency while greatly reducing potential safety risks.



Hydraulic handling system



Multi-purpose CNC turning lathe

Elmar Product Line



# Holing and Slotting of Casing



Holing Machine

## HOLING MACHINES

### Holing Machines

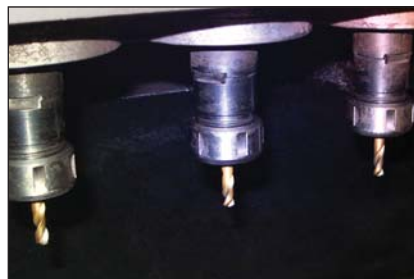
- Elmar holed liners are manufactured on specially-designed multi-spindle drilling machines.
- The holes are drilled using high quality drill bits and the CNC control allows high positional accuracy. Coolant is continuously applied to maintain the pipe's metallurgical integrity.



CNC Control

### Deburring

- A deburring service is offered for both slotted and holed casing.
- Our facility has capacity to de-burr pipes from 2 3/8" O.D. to 12" O.D. The O.D. and I.D. are washed with 3,000 psi jets of water, a degreaser is used if required. Hard sand stones remove rust and burrs from the inside of pipes up to 50ft long. Box and pin caps are cleaned with 3,000 psi jets of water on the I.D. and O.D.



Multi-spindle drilling

### Pipe Coating

- A pipe coating service is available with the ability to coat pipe up to 50ft long internally and externally with a capacity of 100 pipes per day.



Pipe coating process

### Banding

- Pipe is supplied in bundles, banded or with slings as required.

### QA Certification

- Lloyd's accredited to BS EN ISO 9001: 2008

# Slotted Casing



## Slot Width and Length

As a guide the following are the standard slot widths and lengths commonly used:

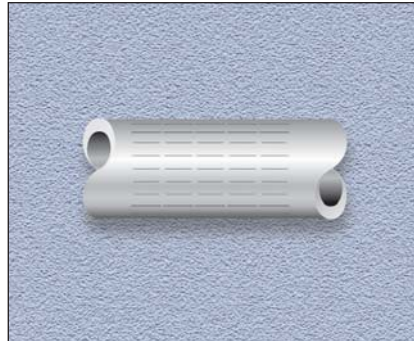
### STANDARD SLOT WIDTH AND LENGTH GUIDE

1.5" Long	2.0" to 2.5" Long	2.5" Long
0.012" wide	0.024" wide	0.078" wide
0.015" wide	0.025" wide	0.125" wide
0.016" wide	0.038" wide	0.250" wide
0.018" wide	0.048" wide	
	0.058" wide	

## Slot Patterns



Staggered pattern (Elmar preferred option)



Straight or parallel pattern



Hi density pattern

## Slot Sizes

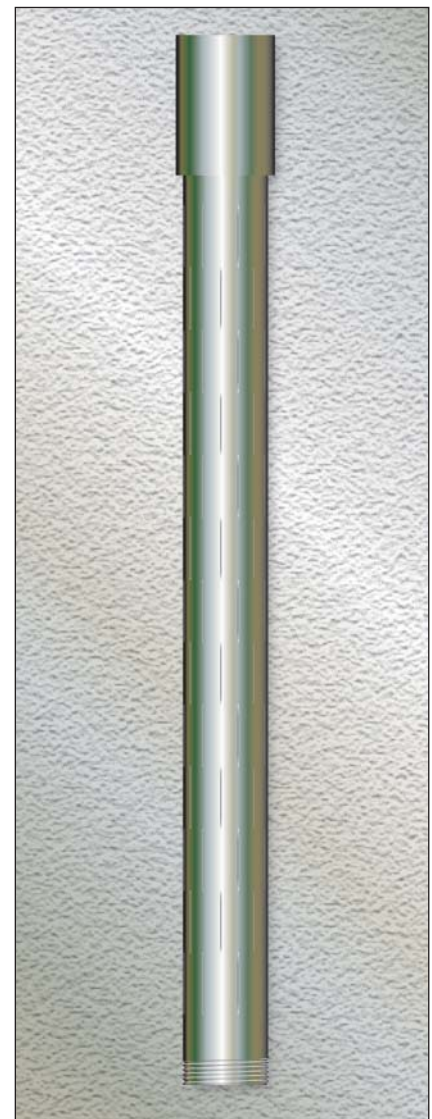
- Elmar provides a range of slot sizes to suit the majority of customers' requirements.

## Straight Slots or Keystone Slots

- Minimum Slot Width = 0.012"
- Maximum Slot Width = 0.250"

## Casing Sizes

- Casing up to a maximum diameter of 14" can be slotted.

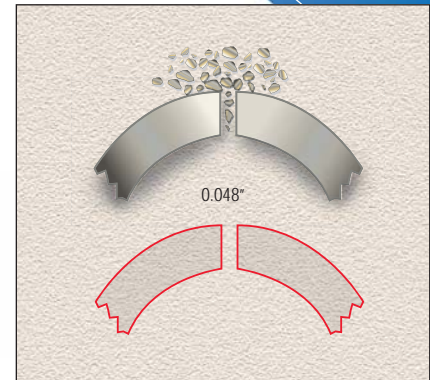
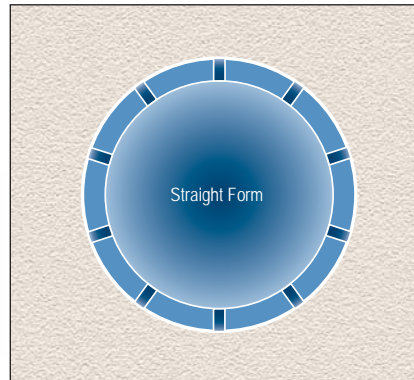


Slotted Casing

# Slotting Design & Calculation

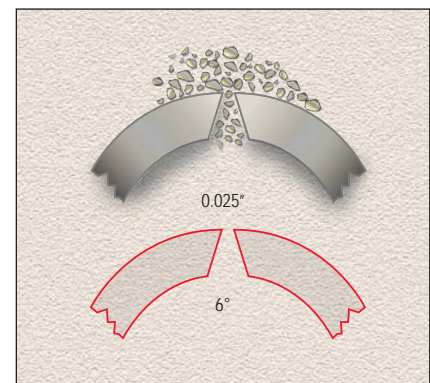
## Straight Slot

- This is the most common type of slot manufactured. It has straight sides, equal width through the wall of the casing and is normally used in consolidated formations or when slots of 0.030" or wider are specified.
- Straight slots are very resistant to wear and are more economic than keystone.



## Keystone Slot

- The slot is narrow at the liner surface and of increasing width with depth into the casing material.
- The narrow slot width at the surface of the liner allows sand grains to bridge across the opening. Sand grains that do enter the slot will pass completely through without clogging.



## Determining Slots Per Foot

- To achieve a required percentage of open area on the pipe surface, the preferred slot size should be selected from the formulation evaluation. The number of slots per foot of pipe can then be calculated using the following formula and tables.

## Calculation of Required Slots/Foot

- After selecting the open area, the slot size and the diameter of the liner, the number of slots per foot can be determined from the following formula:

$$N = \frac{(12 \times 3.14 \times D \times C)}{(100 \times W \times L)}$$

where

N = Required slots/foot

D = Outside diameter of the liner (inches)

C = Required open area (percent of surface area)

W = Selected slot width (inches)

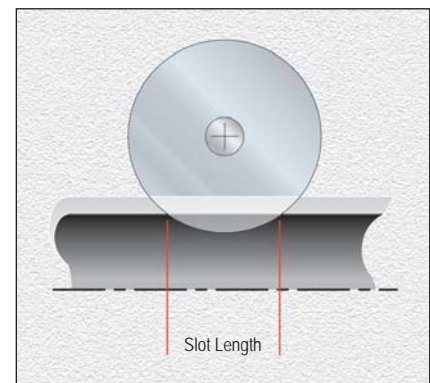
L = Length of slot (inches)

For example, if an open area of 3% is required with 4.5" diameter liner and a slot width of 0.020" wide x 1.5" long has been selected to control the formation, then the number of slots to be cut in the liner is:

$$N = \frac{(12 \times 3.14 \times 4.5 \times 3)}{(100 \times 0.020 \times 1.5)} = 169.646$$

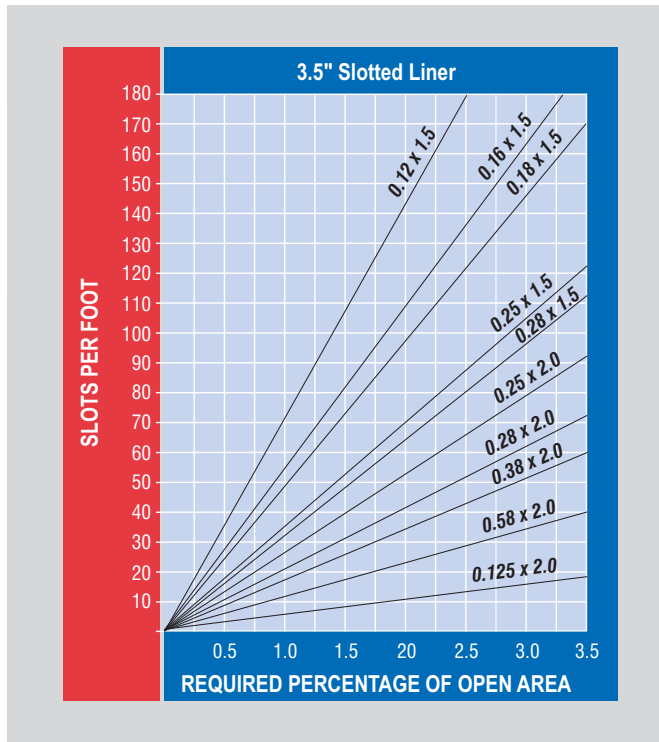
This figure is then rounded to either the nearest multiple of 4 or the nearest multiple of 8 depending on the slotting pattern being cut.

Because the slots are cut by a circular blade, the slot is always longer at the O.D. than it is at the I.D. When specifying the slot length the value used always applies to the length at the I.D.

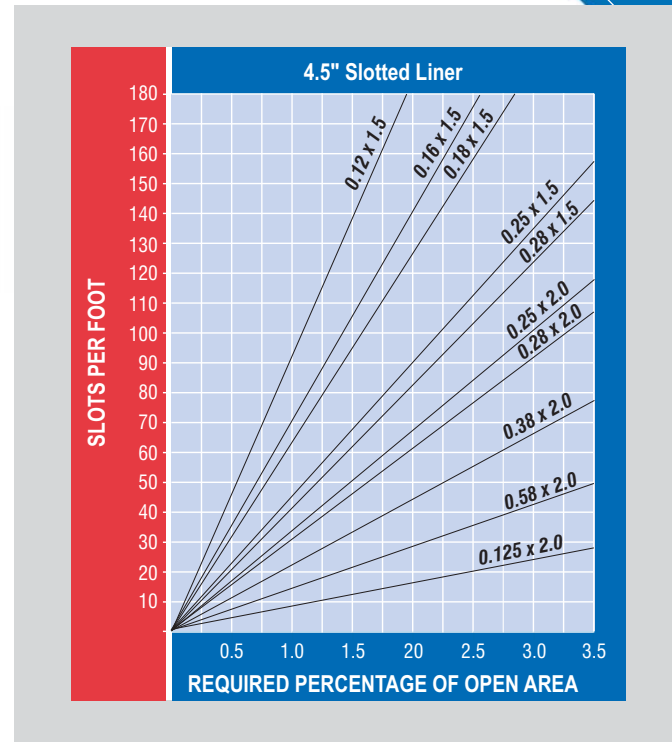


# Percentage of Open Area Per Square Foot

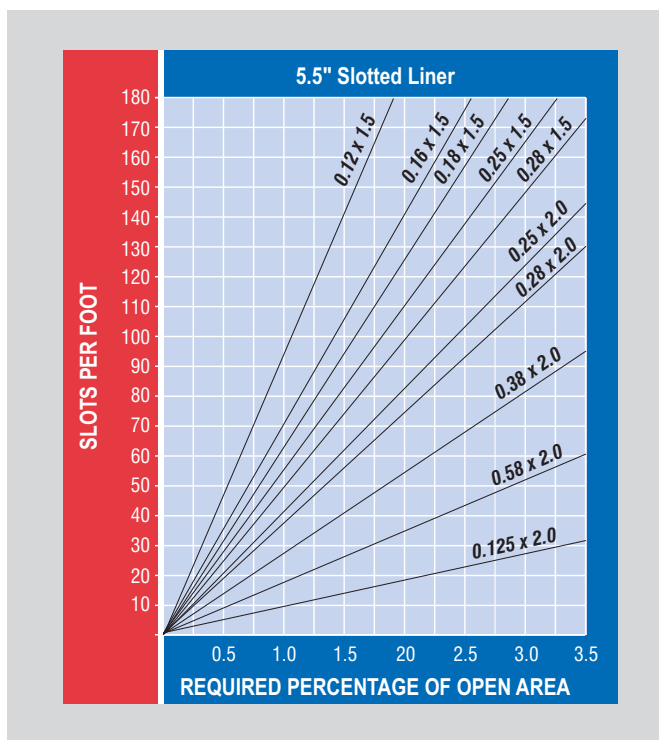
**3.5" Slotted Liner**



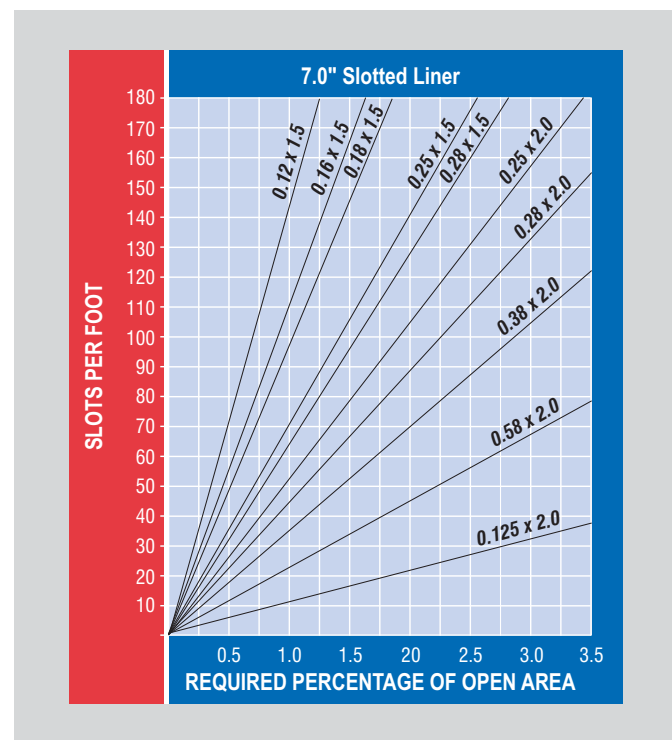
**4.5" Slotted Liner**



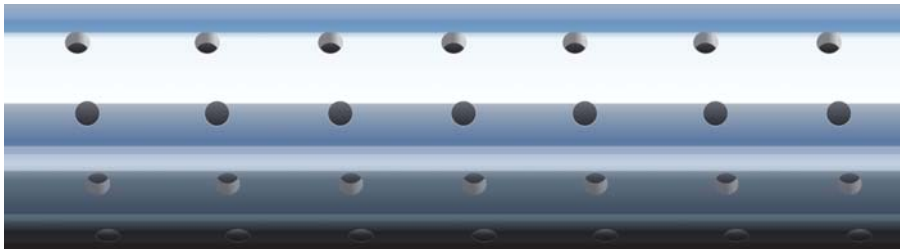
**5.5" Slotted Liner**



**7" Slotted Liner**



# Holed Casing



## Holing Patterns

Elmar preferred patterns.

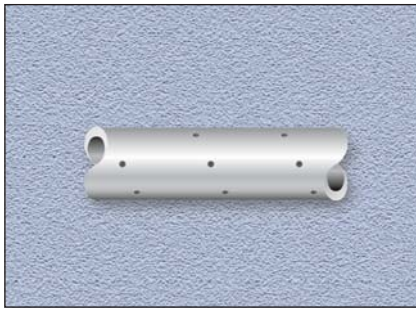


Figure 1: 6" Pitch Pattern

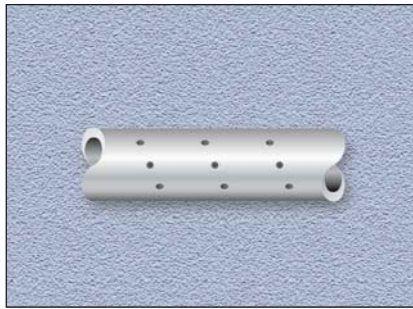


Figure 4: 4" Pitch Pattern

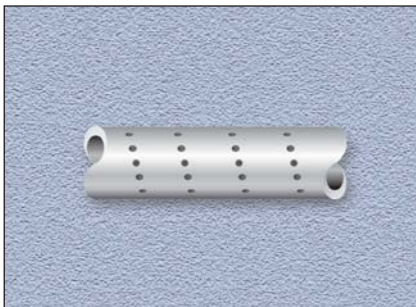


Figure 2: 3" Pitch Pattern

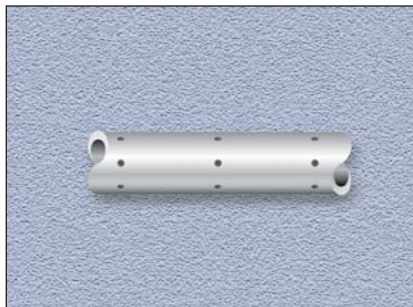


Figure 5: Rows Pattern



Figure 3: 2" Pitch Pattern

The Elmar preferred patterns have the holes arranged in spirals around the pipe. The spacing between the start and the end of one full spiral is defined as the pitch (see above diagrams).

Pitches can be 1", 2", 3", 4", 6" or 12" apart (where 2", 3" and 6" are the preferred). The number of holes in each spiral then determines the total amount of holes per foot.

Alternative patterns which do not have spirals can be arranged (see figure 5). Please contact sales for details.

Normally the pitch of the spirals and the number of holes in each spiral are selected to give an even spread of holes on the pipe surface.

## Perforated Casing

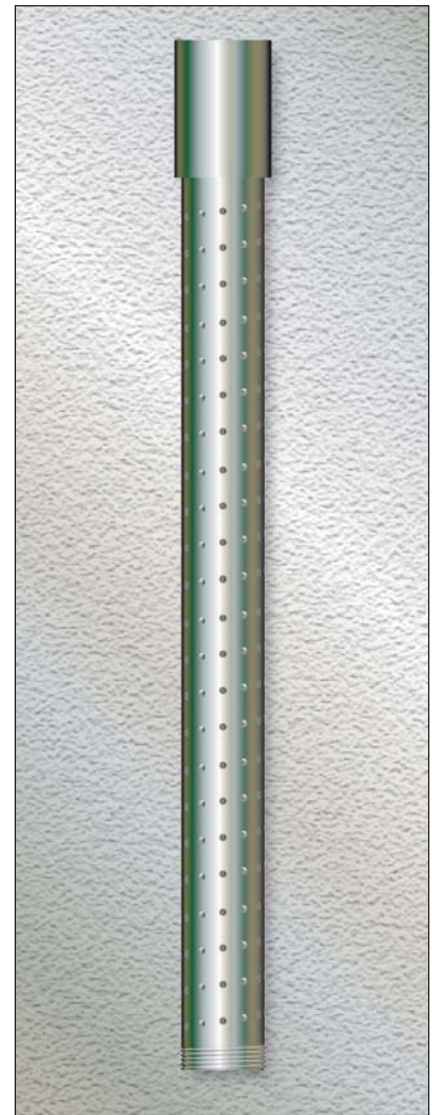
- Elmar provides casing with a range of hole sizes and hole patterns to suit the majority of customers' requirements.

## Hole Sizes

- Our standard hole diameter sizes: 9.5mm, 13mm, 14mm, 16mm, 19mm and 25mm. Other hole sizes can be achieved. Please contact your completions team for details.

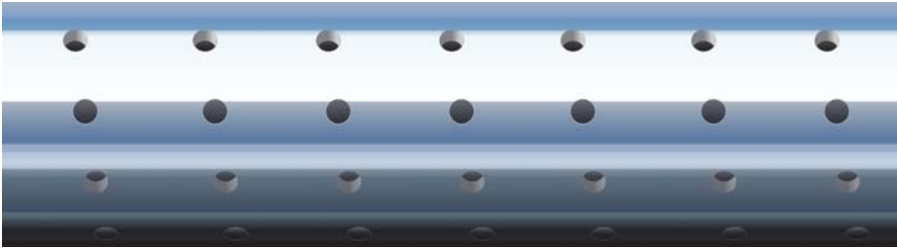
## Casing Sizes

- Casing up to a maximum diameter of 9 5/8" can be holed.



Holed Casing

# Holed Casing Calculation



## Determining Holes Per Foot

- To achieve a required percentage of open area on the pipe surface, the preferred hole diameter should be selected. The number of holes per foot of pipe can then be calculated using the following formula:

$$N = \frac{(12 \times D \times C)}{(25 \times d^2)}$$

where

N = Required holes/foot

D = Outside diameter of the liner (inches)

C = Required open area (percent of surface area)

d = Diameter of hole (inches)

For example, if an open area of 3.0% is required with 4.5" diameter liner and a hole diameter of 0.5" then the number of holes to be drilled in the liner is:

$$N = \frac{(12 \times 4.5 \times 3)}{(25 \times 0.5^2)} = 25.92$$

For spirals on a 6" pitch, round this to the nearest number divisible by 2 (2 Spirals per foot). In this example = 26 HPF

For spirals on a 3" pitch, round this to the nearest number divisible by 4 (4 Spirals per foot). In this example = 24 or 28 HPF

For spirals on a 2" pitch, round this to the nearest number divisible by 6 (6 Spirals per foot). In this example = 24 or 30 HPF

For spirals on a 4" pitch, round this to the nearest number divisible by 3 (3 Spirals per foot). In this example = 24 or 27 HPF

Having determined the amount of holes per foot required, it is necessary to choose a preferred pattern. Ideally this would be one that would provide evenly spaced holes.



# Section 6: WL Wireline Tools

NOV Elmar manufacture a wide range of slickline tools, manufactured to a very high quality standard. The Elmar range is comprised of all standard conveyance tools such as rope sockets, stems, mechanical jars, pulling and running tools; and more advanced tools such as power jars (hydraulic and Spring), mechanical combination tools and mechanical tubing punch perforators. Many tools are available ex-stock from our manufacturing locations.

The universal pulling tool is a field proven alternative to conventional pulling tools and reduces the amount of tools required in a toolbox owing to its adjustable core length and the ability to change its mode of shearing, and the brand new roller conveyance system (RCS) enables access to highly deviated well bores with its simple, robust design. The RCS (which is a non-wheeled device) provides one of the highest roller contact areas available per cm of tool. Tools can be manufactured with QLS, HD or SR connections, or as an alternative with Elmar's high strength Breach Lock connection.

The WL Tool product range is covered in a separate catalogue. For more information on our WL Tools visit [http://www.nov.com/Well\\_Service\\_and\\_Completion/Wireline/WL\\_Wireline\\_Tools.aspx](http://www.nov.com/Well_Service_and_Completion/Wireline/WL_Wireline_Tools.aspx)







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## Downhole Solutions

## Drilling Solutions

## Engineering and Project Management Solutions

## Lifting and Handling Solutions

## Production Solutions

## Supply Chain Solutions

## Tubular and Corrosion Control Solutions

## Well Service and Completion Solutions

