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Product Catalog



 Lee
Specialties Ltd.



*Wireline equipment built by
wireline specialists for wireline specialists...*

Wireline Trucks & Skids

Acquisition Systems & Software

Production Logging Tools

Pressure Control Equipment

Pressure Control Skids & Accessories

What we stand for...

Service
Quality
Innovation
Integrity

What we do...

Design
Prototype
Field-Test
Manufacture



Production Logging Tools

- ▶ Collects digital data from connected downhole tools
- ▶ Lithium battery pack powers MAT and all tools in string
- ▶ Stores data within 64 MB internal memory core
- ▶ 1, 12.5, and 25 samples/sec recording rates
- ▶ Data is downloaded into a computer via USB
- ▶ Software generates Premier Logging file
- ▶ CCL contained within tool body
- ▶ Perfect for use in remote or hazardous environments

Memory Adapter Tool

OD	1.375 in. (3.49 cm)
Length	44.9 in. (114 cm)
Weight	10.8 lb (5 kg)
Temp. Rating	302°F (150°C)
Pressure Rating	15,000 psi (103 MPa)

Battery Pack

Length	35.8 in (91 cm)
Temp. Rating	329°F (165°C)
Capacity	13 Ah

- ▶ Sensitive sodium iodide scintillation crystal
- ▶ Photo multiplier tube
- ▶ Detects naturally occurring and artificially induced gamma ray radiation
- ▶ Correlates surrounding lithology
- ▶ Tracer logs can determine fluid movement or direction of fractures

OD	1.375 in. (3.5 cm)
Length	35.4 in. (90 cm)
Weight	8.6 lb (4 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)	34mA
100V (telemetry)	6mA

	Memory Adapter Tool	Gamma Ray
Part#	AM015W*0001	AM012W*0001
Lithium Battery Pack	AM015UU0006	N/A
O-Ring Kit	AM015RM0001	AM012RM0001

* Enter "A" for standard service or "B" for H₂S service.



- ▶ Provides mechanical and electrical connection between wireline (braided line) and toolstring
- ▶ Intended as a “weak link” if toolstring becomes stuck in a wellbore
- ▶ Wireline will pull out of the cable head in a controlled fashion when predetermined force is applied
- ▶ Model shown features 1.375 in. (3.49 cm) fishneck for 0.219 (7/32) in. (5.5 mm) braided line**

Fishneck	1.375 in. (3.49 cm)
OD	1.438 in. (3.7 cm)
Length	15.125 in. (38.4 cm)
Weight	5.5 lb (2.5 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103 MPa)

0.313 (5/16) in. Crimp Kit **AM009UU0006**
 0.219 (7/32) in. Crimp Kit **AM009UU0007**

Part# **AM009W*0002**
 O-Ring Kit **AM009RM0002**

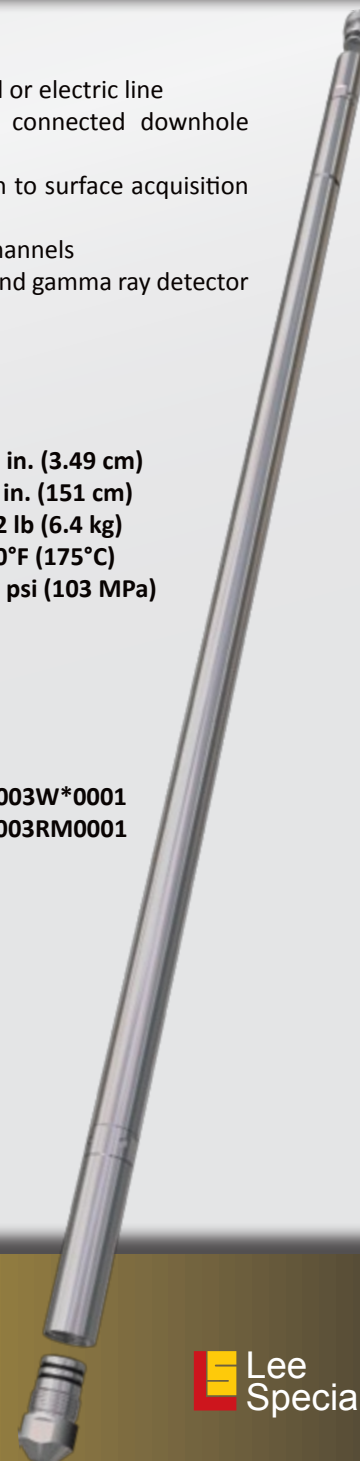
- ▶ Wireline deployed - braided or electric line
- ▶ Collects digital data from connected downhole tools
- ▶ Real-time data transmission to surface acquisition system
- ▶ Multiplex up to 16 digital channels
- ▶ Casing collar locator (CCL) and gamma ray detector contained within body

OD	1.375 in. (3.49 cm)
Length	59.6 in. (151 cm)
Weight	14.2 lb (6.4 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103 MPa)

Power Requirements:

100VDC, 28mA

Part# **AM003W*0001**
 O-Ring Kit **AM003RM0001**



* Enter “A” for standard service or “B” for H₂S service.
 ** Please specify line size and other requirements when ordering.

Same features and functionality as the gamma ray detector (page 36) plus:

- ▶ Two scintillation crystal gamma ray detectors
- ▶ The best tool to use with a tracer ejector
- ▶ Monitors radioactive material as it passes each detector

- ▶ Non-motorized
- ▶ Pressure balanced chamber
- ▶ Maintains constant internal pressure exceeding wellbore pressure
- ▶ Electrically activated solenoid ejects a finite amount of radioactive fluid
- ▶ Radioactive fluid concentration is small with short half-life
- ▶ Gamma ray detectors (pages 36 & 38) determine fluid velocity and direction
- ▶ Flow profiles can be determined from data sent to acquisition system
- ▶ Filler pump provides a safe and efficient method of transfer for radioactive fluids

OD	1.375 in. (3.5 cm)
Length	67.5 in. (171 cm)
Weight	16.3 lb (7.4 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

OD	1.375 in. (3.5 cm)
Length	40.9 in. (104 cm)
Weight	18 lb (8.2 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)	53mA
100V (telemetry)	11mA

	Dual Gamma Ray
Part#	AM012W*0002
O-Ring Kit	AM012RM0002
Filler Pump	N/A

	Tracer Ejector
	AM004WB0006
	AM004RM0006
	AM004WB0003

* Enter "A" for standard service or "B" for H₂S service.

- ▶ Derives fluid density in a well
- ▶ Transducer measures differential pressure over a 24 in. column of fluid
- ▶ Measurements can be obtained while the tool is continuously moving up or down the well
- ▶ 0.001 g/cc (1kg/m³) resolution
- ▶ ±0.03 g/cc (±30kg/m³) accuracy
- ▶ 0-2 g/cc (0-2,000 kg/m³) range

OD	1.375 in. (3.5 cm)
Length	51.6 in. (131 cm)
Weight	15.6 lb (7 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)	27mA
100V (telemetry)	5mA

	Gradiomanometer
Part#	AM002W*0001
O-Ring Kit	AM002RM0001
Gradio Fill Pump	AM008UU0009
Silicone Oil	PM002UU0038

- ▶ Measures fluid capacitance (also known as “water hold-up” or “water cut”) between probe and tool body
- ▶ Measurement determines water percentage

OD	1.375 in. (3.5 cm)
Length	26.8 in. (68 cm)
Weight	6.6 lb (3.1 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)	5mA
100V (telemetry)	3mA

	Dielectric
Part#	AM006W*0001
O-Ring Kit	AM006RM0001
Gradio Fill Pump	N/A
Silicone Oil	N/A

* Enter “A” for standard service or “B” for H₂S service.

1.688 in. Inline Flowmeter

2.125 in. Inline Flowmeter



- ▶ Precision roller bearings
- ▶ Zero drag sensor provides low threshold and optimizes low-flow measurement
- ▶ Run at any point in a tool string
- ▶ Run in combination with a fullbore or continuous spinner to obtain production profiling in a single logging run
- ▶ Performs in all orientations from vertical to horizontal
- ▶ 0.037 rps/ft/min (0.12 rps/m/min) spinner response

	1.688 in.	2.125 in.
OD	1.688 in. (4.3 cm)	2.125 in. (5.4 cm)
Length	31.1 in. (79 cm)	32.3 in. (82 cm)
Weight	11 lb (5 kg)	14 lb (6.4 kg)
Temp. Rating	350°F (175°C)	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)	15,000 psi (103.5 MPa)

Power
Requirements:
18V (memory)
100V (telemetry)

21mA
4mA

21mA
4mA

Part#	AM005W*0013	AM005W*0016
O-Ring Kit	AM005RM0013	AM005RM0016
Impeller	AM005UU0012	AM005UU0014
Bearings	PM005UU0029	PM005UU0029

* Enter "A" for standard service or "B" for H₂S service.





- ▶ Measures inside diameter of a wellbore
- ▶ Sensors connected to three equally spaced arms provide well ID measurement
- ▶ Condition of a well can be extrapolated from measurements
- ▶ Tool data indicates presence of restrictions or out-of-round conditions
- ▶ Designed to pass from large to lesser diameters while logging down or up without locking up the arms
- ▶ 0.2 in. (0.5 cm) resolution
- ▶ 1.625 in. - 11 in. (4 cm - 28 cm) measurement range

OD	1.375 in. (3.5 cm)
Length	60.375 in. (153 cm)
Weight	16.2 lb (7.3 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)	105mA
100V (telemetry)	53mA

- ▶ Bottom section of tool pivots
- ▶ 10° bend angle
- ▶ Aids in moving tool string through deviated, misaligned, or horizontal wells
- ▶ Can be used to de-centralize string

OD	1.375 in. (3.5 cm)
Length	20.1 in. (51 cm)
Weight	7.4 lb (3.4 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)	N/A - Straight-thru
100V (telemetry)	N/A - Straight-thru

	3-Sensor Caliper	Knuckle Joint
Part#	AM016W*0006	AM017W*0001
O-Ring Kit	AM016RM0006	AM017RM0001



* Enter "A" for standard service or "B" for H₂S service.

Roller Centralizer

Bowspring Centralizer

- ▶ Centers tool string as it moves in and out of well
- ▶ Arms expand and contract to fit casing or tubing
- ▶ Carbide rollers eliminate friction and wear
- ▶ 0 - 100 lb (0 - 45.4 kg) adjustable arm tension
- ▶ 2.125 in. model (225 lb arm tension) and single pin version also available

OD (collapsed)	1.375 in. (3.5 cm)
OD (expanded)	7 in. (17.8 cm)
Length	37 in. (94 cm)
Weight	12.5 lb (5.7 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)	N/A - Straight-thru
100V (telemetry)	N/A - Straight-thru

- ▶ Centers tool string as it moves in and out of well
- ▶ Arms expand and contract to fit casing or tubing
- ▶ Single pin version also available

OD (collapsed)	1.375 in. (3.5 cm)
OD (expanded)	7 in. (17.8 cm)
Length	32.3 in. (82 cm)
Weight	11 lb (5 kg)
Temp. Rating	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)

Power Requirements:

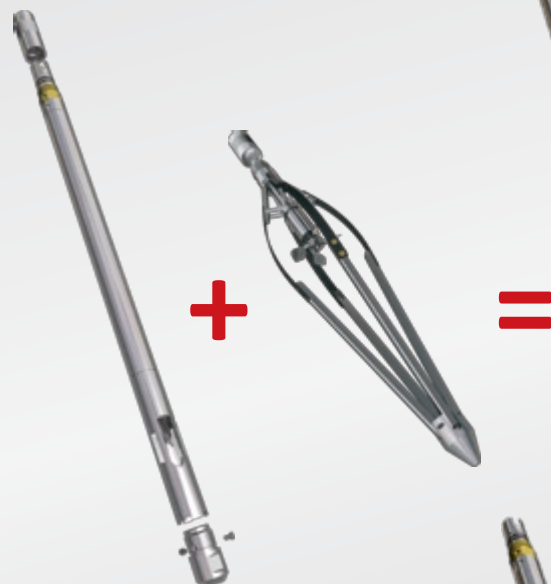
18V (memory)	N/A - Straight-thru
100V (telemetry)	N/A - Straight-thru

	Roller Centralizer	Bowspring Centralizer
Part#	AM011W*0001	AM011W*0003
O-Ring Kit	AM011RM0001	AM011RM0003

* Enter "A" for standard service or "B" for H₂S service.

Pressure/Temperature/Flow (PTF) Sensor

Production Logging Tools



OD **1.375 in. (3.5 cm)**
 Length **27.2 in. (69 cm)**
 Weight **7.8 lb (3.5 kg)**
 Temp. Rating **350°F (175°C)**
 Pressure Rating **15,000 psi (103.5 MPa)**

Part# **AM011W*0003**
 O-Ring Kit **AM011RM0003**

Power Requirements:

18V (memory) **41mA**
 100V (telemetry) **9mA**



- ▶ Incorporates a quartz pressure sensor, temperature sensor, and bidirectional flow sensor
- ▶ Pressure sensor has built-in temperature compensation
- ▶ Bellows and buffer of silicone oil isolates sensors from wellbore fluids
- ▶ RTD resistor temperature sensor
- ▶ Flowrate sensor obtains rotational direction and speed from an attached spinner
- ▶ PTF is compatible with both fullbore (page 44) and continuous (page 45) spinners
- ▶ 0.02 psi (0.14 kPa) pressure resolution
- ▶ ±3.2 psi (±22 kPa) pressure accuracy (equal to 0.02%)
- ▶ 0.018°F (0.01°C) temperature resolution
- ▶ ±1.6°F (±1°C) temperature accuracy
- ▶ 0.36°F (0.2°C) temperature repeatability
- ▶ 0.083 rps flow resolution
- ▶ ±2% flow accuracy

* Enter "A" for standard service or "B" for H₂S service.

Fullbore Spinner

- ▶ Incorporates a collapsible impeller
- ▶ Spinner collapses to run through tubing and expands to larger diameter in casing
- ▶ Provides large cross-sectional velocity measurements
- ▶ Increased sensitivity results in more accurate flow measurements across well diameter
- ▶ 3.28 ft/min (1 m/min) threshold velocity
- ▶ 0.037 rps/ft/min (0.12 rps/m/min) spinner response



5 in.

7 in.

OD (collapsed)	1.375 in. (3.5 cm)	1.375 in. (3.5 cm)
OD (expanded)	5 in. (12.7 cm)	7 in. (17.8 cm)
Length	20.1 in. (51 cm)	27.6 in. (70 cm)
Weight	4 lb (1.8 kg)	6 lb (2.7 kg)
Temp. Rating	350°F (175°C)	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)
100V (telemetry)

N/A - Mechanical, end-of-string device.

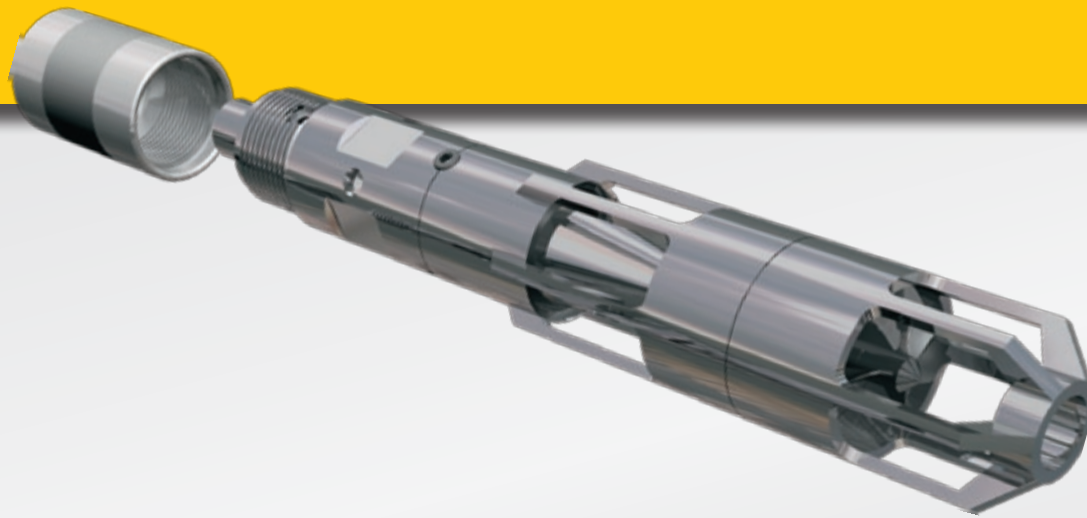
N/A - Mechanical, end-of-string device.

Part#
O-Ring Kit

AM005W*0002
AM005RM0002

AM005W*0008
AM005RM0008

* Enter "A" for standard service or "B" for H₂S service.



- ▶ Impeller is integrated into tool body
- ▶ Effective in restricted boreholes, tubing, and high flow velocity
- ▶ Available in 1.375 in. to 2.125 in. diameters
- ▶ 3.28 ft/min (1 m/min) threshold velocity
- ▶ 0.037 rps/ft/min (0.12 rps/m/min) spinner response

	1.375 in.	1.688 in.	2.125 in.
OD	1.375 in. (3.5 cm)	1.688 in. (4.3 cm)	2.125 in. (5.4 cm)
Length	8.7 in. (22 cm)	9.1 in. (23 cm)	9.25 in. (23.5 cm)
Weight	2.2 lb (1 kg)	2.4 lb (1.1 kg)	2.8 lb (1.3 kg)
Temp. Rating	350°F (175°C)	350°F (175°C)	350°F (175°C)
Pressure Rating	15,000 psi (103.5 MPa)	15,000 psi (103.5 MPa)	15,000 psi (103.5 MPa)

Power Requirements:

18V (memory)	N/A - Mechanical, end-of-	N/A - Mechanical, end-of-	N/A - Mechanical, end-of-
100V (telemetry)	string device.	string device.	string device.

Part#	AM005W*0003	AM005W*0004	AM005W*0007
O-Ring Kit	AM005RM0003	AM005RM0004	AM005RM0007



* Enter "A" for standard service or "B" for H₂S service.

Tool String Configuration Examples

