CAMERON

Super 116E Class

Self-Elevating Drilling Unit (SEDU)

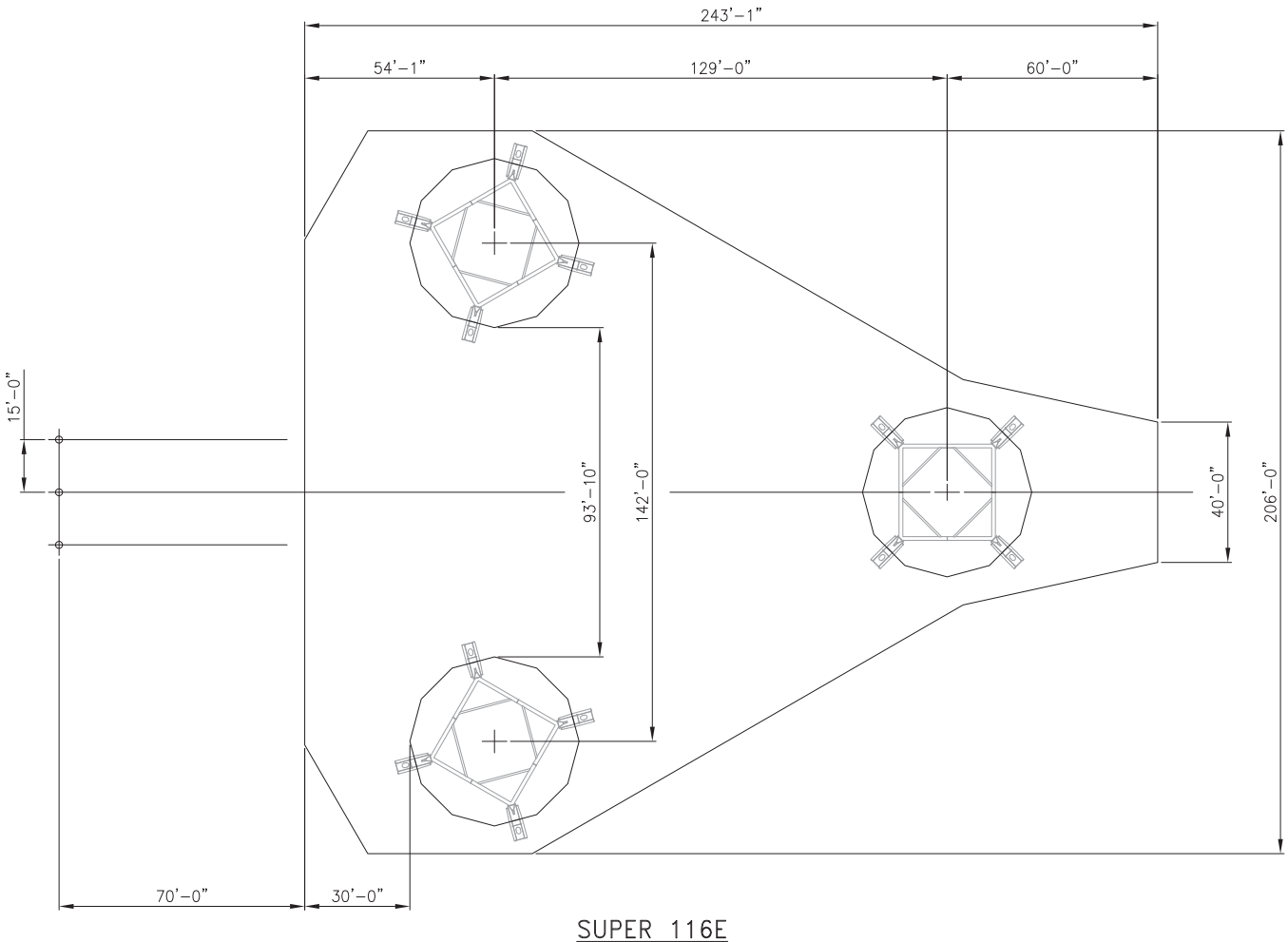
TECHNOLOGY

CAMERON

RAISING THE BAR FOR JACKUP RIG PERFORMANCE

Cameron's LETOURNEAU™ Super 116E Class jackup rig provides the oil and gas industry with a proven versatile and cost-effective tool for exploratory and development drilling, as well as workover operations in most moderate metocean regions of the world, in water depths to 375 ft. Drilling payloads (VDL) can exceed 8000 kips including cantilever-combined drilling loads to 2650 kips.

The outfitted hull, supported on three open truss legs by Cameron's LETOURNEAU robust rack and pinion elevating system, is comprised of drilling assembly, engine/gen-sets, mud storage and processing equipment, storage and machinery rooms, and workshops. Four-level living quarters with top mounted control rooms accommodate up to 120 POB. Bow-mounted helideck services S-61N, S92 or optionally Mi-17 helicopter.

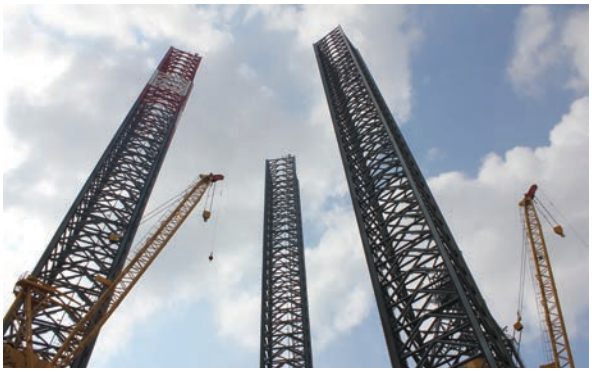


SUPER 116E

SUPER 116E CLASS SPECIAL FEATURES

Unlike many others who design for the short term, Cameron is committed to building drilling systems, products, and services that not only meet today's deep drilling challenges, but also stand ready to meet whatever the industry brings next.

- 2650-kip combined capacity cantilever assembly provides support for a 1500-kip hook load plus 7500-kip full setback in tandem with 400-kip conductor tension. Operational reach is to 70-ft aft of stern and transverse +/- 15 ft from rig centerline.
- Includes 10 mud pits and three slugging pits, with a 4927-bbl combined capacity. The mud system can be configured to accommodate simultaneous use of oil-based and water-based mud.
- Utilizes Cameron's LETOURNEAU 375-Kip Elevating Unit in an in-line configuration: tested and proven evolution of our prior units with more than 9000 units sold.
- Designed to survive 40-ft seas, combined with a one-knot current and 100-knot wind in 350 ft of water.
- Cameron's LETOURNEAU leg guide and pinion system provides a stiff leg/hull interface during all phases of operation. The LETOURNEAU system is simple since it does not require a separate leg fixation system, which can be overly complex and adds risk to certain operations. A fail-safe brake set holds a full severe storm holding load with a tested and proven reserve margin.
- Leg design utilizes the LETOURNEAU square cross-section configuration, resulting in high strength and stiffness-to-weight ratios, as well as redundant load paths.



- Modular leg design maintains the ease of construction for which Cameron's LETOURNEAU products are known. These products are also designed to support leg additions or reductions in remote locations.
- Leg yoke well and leg guide design permits the pulling of an individual leg into the leg well to inspect the spud can's bottom plate surface without dry docking for the five-year special survey, saving considerable time and expense.
- Longitudinal and transverse skidding of the drill package utilizes our electro-mechanical rack and pinion skidding system. The proven and rugged skidder system is designed for smooth and simple operation and is combined with our spring loaded brake system.
- Provisions for optional independent stand making and pipe handling from pipe racking to downhole.
- Zero-pollution containment provisions, including all wastewater, deck, and drillfloor runoff collection and treatment to less than 15-ppm oil contaminates.

PRINCIPAL CHARACTERISTICS

Hull		
Overall Length (including helideck)	305.3 ft	93.05 m
Hull Length (between perpendiculars [LBP])	243.1 ft	74.08 m
Hull Width	206.0 ft	62.79 m
Hull Depth (at side)	26.0 ft	7.92 m
Gross Tonnage (estimated)	7460 tonnes	
Net Tonnage (estimated)	2240 tonnes	
Load Line Displacement	27,530 kips	12,488 MT
Load Line Draft	17.0 ft	5.18 m
Waterplane Area	27,055 sq ft	2513 sq m
Bow to Centerline Forward Leg Spacing	60.0 ft	18.29 m
Longitudinal Leg Spacing	129.0 ft	39.32 m
Transverse Leg Spacing	142.0 ft	43.28 m
Aft Leg Centers to Transom	54.1 ft	16.48 m
Design Service Temperature (structure)	14° F to 113° F	-10° C to 45° C

Legs		
Length, Overall	477.5 ft	145.53 m
Chord, Centerline to Centerline	30.0 ft	9.14 m
Spud Can – Diameter (flat-to-flat) (standard/optional)	46.0/50.9 ft	14.02/15.52 m
• Height	23.8 ft	7.25 m
• Nominal Projected Area (standard/optional)	1555/2084 sq ft	144/194 sq m
• Storm Bearing Pressure	10.5/7.8 ksf	502/375 kPa

Drillfloor and Substructure		
Length	46.0 ft	14.02 m
Width	70.0 ft	21.34 m
Height (above baseline)	63.9 ft	19.49 m
Rotary Travel (port and transverse)	15.0 ft	4.57 m
Derrick Size	35 x 32 x 170 ft	11 x 10 x 52 m
Clearance Under Rotary Beams to Main Deck	31.5 ft	9.60 m
Height of Monkey Board Above Drillfloor	87.5 ft	26.67 m

PRINCIPAL CHARACTERISTICS (CONT.)

Cantilever and Subbase		
Maximum Well Center, Aft of Transom	70.0 ft	21.34 m
Cantilever Beam – Length	126.0 ft	38.40 m
• Depth	18.0 ft	5.49 m
• Spacing	52.0 ft	15.85 m

Pipe Rack Deck – Length	60.0 ft	18.29 m
• Width	52.0 ft	15.85 m
• Height (above main deck)	22.5 ft	6.86 m

Elevated Pipe Rack Capacity	800 kips	363 MT
Clearance Under Pipe Rack Beams to Main Deck	19.5 ft	5.94 m

Sub-base – Length	35.0 ft	10.67 m
• Width	67.0 ft	20.42 m
• Depth	12.0 ft	3.66 m

Heliport		
Bow-Mounted Octagon (flat to flat)	73.0 ft	22.25 m
Height Clearance (to plating)	15-degree static trim	
Helicopter Type (optional)	S-61N/S92 or Mi-17	
Helicopter Refueling System (optional)	1000 gal	3785 L
Helicopter Fire Fighting	Foam System	
Regulations (structural)	CAP 437	
Accomodation Capacity	120 POB*	
Double Stateroom with Private Bath	52 Cabins	
Four-Man Stateroom with Private Bath	4 Cabins	
Medical Treatment Room	1 Bed	
Offices	6	
Conference Room	1	
Recreation Room	2	

* Alternative configurations from 106 to 120 POB are available.

ELEVATING SYSTEM

Make/Model	LETOURNEAU 375-Kip elevating unit
Number	12 each, 5 high, in-line configuration (60 pinions total)
Jacking Speed (nominal)	1.5 ft/min (0.46 m/sec)
Drive	LETOURNEAU proprietary electro-mechanical rack and pinion
Brake	LETOURNEAU spring-loaded, dry plate multidisk, electric release
Control and Monitoring	LETOURNEAU proprietary PLC based touch screen

VOLUME CAPACITIES (TYPICAL)

Base Oil Storage	1253 bbl	199 cu m
Brine Storage	683 bbl	109 cu m
Drill Water (including combined tanks)	14,060 bbl	2235 cu m
Drill Water (inner bottom tanks only)	4769 bbl	758 cu m
Potable Water	1656 bbl	263 cu m
Fuel Oil Storage	1994 bbl	317 cu m
Fuel Oil Day Tank	4555 gal	17,243 L
Lube Oil	1229 gal	4652 L
Dirty Oil	66 bbl	10 cu m
Bulk Cement and Mud "P" Tanks (8)	12,845 cf	364 cu m
Liquid Mud Tanks, Active and Reserve (8)	4589 bbl	730 cu m
Slugging Pits (2)	338 bbl	54 cu m
Sandtrap and Process Tanks	373 bbl	59 cu m
Skimmer Tank	445 bbl	71 cu m
Trip Tank	80 bbl	13 cu m
Preload Capacity	49,777 bbl	7914 cu m

DECK LOADINGS

Main Deck	500 lb/sq ft	2.44 MT/sq m
Machinery Deck	500 lb/sq ft	2.44 MT/sq m
Drillfloor		
• Inside of Derrick Base	500 lb/sq ft	2.44 MT/sq m
• Outside of Derrick Base	270 lb/sq ft	1.32 MT/sq m
Cantilever Pipe Rack Decking	270 lb/sq ft	1.32 MT/sq m
Quarters and Walkways	94 lb/sq ft	0.46 MT/sq m
Mud Pits	21 lb/gal	2.50 kg/L
Main Deck Pipe Rack Beams	5000 lb/ft	7.40 MT/m

BASIC MACHINERY AND EQUIPMENT

Pedestal Deck Cranes – (3)

(2) – LETOURNEAU PCM – 120SS Crane – ABS CRC to API 2C Design				
Boom Length		120.0 ft		36.6 m
Min. Reach		25.0 ft		7.6 m
Max. Reach		123.0 ft		37.5 m
Static Capacity	84.1 kips at	25.0 ft	38.20 MT at	7.6 m
	38.7 kips at	50.0 ft	17.60 MT at	15.2 m
	15.7 kips at	100.0 ft	7.10 MT at	30.5 m
	7.0 kips at	123.0 ft	3.20 MT at	37.5 m

(1) – LETOURNEAU PCM-220SS Crane – ABS CRC to API 2C Design				
Boom Length		140.0 ft		42.7 m
Min. Reach		32.0 ft		9.8 m
Max. Reach		145.0 ft		44.2 m
Static Capacity	150.0 kips at	37.0 ft	68.00 MT at	11.3 m
	117.5 kips at	50.0 ft	53.30 MT at	15.2 m
	51.7 kips at	100.0 ft	23.50 MT at	30.5 m
	22.3 kips at	145.0 ft	10.10 MT at	44.2 m

DRILLING EQUIPMENT (TYPICAL)

Description	Qty.	Capacity	Source	Model
Derrick	1	35 x 32 x 170 ft, 5.5 ft offset	Cameron	1.5 M API Rated
Drawworks	1	4500 hp	Cameron	LDW1500K
Mud Pumps	3	2200 hp to 7500 psi	Cameron	W-2215
Rotary Table	1	49.5 in	Cameron	L-495
Top Drive	1	750 short tons	Cameron	DDTD-750V2
Traveling Block	1	750 short tons	Cameron	TB-750 ton
Deadline Anchor	1	1000 short tons, 1.5 in to 2 in line	Cameron	Cameron
Drill Line Spooler	1	1.5 in to 2 in x 10,000 ft	Cameron	Cameron
Twin Mouse Hole	1	14 in x 50 ft, traveling type	Cameron	Cameron
Iron Roughneck	1	3.5 in to 9.75 in, 200,000 N•m	Cameron	Cameron
Hydraulic Mud Bucket	1	Articulating Arm	Cameron	Cameron
Hydraulic Cathead	1	250 kN, Stroke 2000 mm	Cameron	Cameron
Driller's Cabin	1	X-Com Chair	Cameron	Cameron
Choke and Kill	1	10,000 psi manifold	Cameron	Cameron
Standpipe Manifold	1	7500 psi, 180-degree gooseneck	Cameron	Cameron
BOP Stack	1	13-5/8 in x 10,000 psi	Cameron	Cameron
BOP Handling	1	75 MT, 100% redundant	Cameron	Cameron
Pipe Tensioner	1	400 short tons	Cameron	Cameron
Conductor Tensioning	1	4 x 100 short tons	Cameron	Cameron
Mud Processing:				
• Shale Shakers	4	750 gal/min	Cameron	M-I SWACO*
• Desander	1	1200 gal/min	Cameron	M-I SWACO*
• Desilter	1	1200 gal/min	Cameron	M-I SWACO*
• Degasser	1	1200 gal/min	Cameron	M-I SWACO*

*Alternatives are available upon request.

RIG POWER (TYPICAL)

600 Volt AC	Qty.	Model	Capacity
Main Engines	5	CAT 3516C-HD*	2150 hp
Generators	5	Kato 6P6.6-3200HR*	2178 kVA
Emergency Engine	1	CAT 3512*	1478 hp
Emergency Generator	1	Kato C060-6422*	1950 kVA
AC Drives – VFD	11	LeT - OEM V3000*	1300 amp each

*Alternatives are available upon request.

SAFETY EQUIPMENT (TYPICAL)

Description	Qty.	Type
Life Boats	4	60-person SOLAS approved with davits
Life Rafts	6	25-person SOLAS approved, throw over with hydroelectric release
Fast Rescue Boat	1	six-person SOLAS and LSA approved

CAMERON'S INSTALLATION AND COMMISSIONING TEAM

Cameron's installation and commissioning team provides world-class service for your projects globally. With more than 130 combined years of rig construction, management, and commissioning experience, our team works with you to ensure that the rig is ready to drill on time and on budget.

We are there with you, from equipment delivery, to the shipyard, through the rig's arrival at the first well. Cameron handles all aspects of installation and commissioning, including receiving and inspecting shipments, working with third parties, and managing Cameron's experienced technicians on site. A dedicated onsite commissioning manager will work with your project manager to lead the project.

At Cameron, we understand the unique challenges and demands of building a rig and integrating a drilling package. We are with you every step of the way.

Specifications and data presented in this brochure are for information use only and are subject to change without notice.
Hull specific specifications may differ.

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Learn more about Cameron's Super 116E Class Platform at:
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HSE Policy Statement
At Cameron, we are committed ethically, financially and personally to a working environment where no one gets hurt and nothing gets harmed.