

# Manipulator Arm (Top Mounted)

MA-T

Cameron's heavy-duty manipulator arm is designed to accommodate client demands for an efficient, safe and rigid tubular handling system for all drilling operations. The engineering of the manipulator arm enhances low maintenance and long equipment life using industry-proven components and high-fatigue capacity materials. The manipulator arm comprises a hydraulic, remote-operated control system to provide smooth, natural and comfortable operation.

The manipulator arm has a SWL of 600 kg at maximum stroke and is designed for permanent installation in the derrick at offshore drilling locations.



## Main Features

- High-capacity slew bearing on top mounted slew-base for permanent installation on derrick
- Heavy-duty tilt cylinders designed to secure redundancy in case of cylinder failure
- Hydraulic internal slew gears of well proven design for slew purposes
- Inside twin telescopic cylinder with back side connections; secures high speed extension/retraction and reduces the use of hydraulic hoses
- Interchangeable guide head with standardized interface
- Remote hydraulic control stand with hydraulic valve assembly for permanent installation

## Safety Features

- Mechanical heavy-duty end stoppers for slew, telescope and guide head tilt
- Proportional counterbalance valves for lifting (tilt), telescoping and guide head open/close/tilt
- Sensors for slew, tilt and telescope for integration with the rigs anti-collision (optional)
- Emergency lowering system if hydraulic power loss
- Dual retention of all fasteners
- Guide fingers are chamfered to reduce risk of overstressing the guide head or the manipulator arm structure

Technical Specifications	SI	Imperial (US)
Lifting capacity at maximum stroke	6000 N	1322 lb
Slew/holding torque	83 kN·m/105 kN·m	61,217 ft-lb/77,444 ft-lb
Slew speed	1.2 rpm	
Maximum stroke	5200 mm	17 ft
Maximum reach	8300 mm	27 ft
Telescope push/pull force	48,000 N	10,790 lb
Design code	DNV-OS-E101 drilling plant	
Area classification	Zone 1, IIB, T3 area	

Scope of Supply	Options
Manipulator arm assembly, complete with one guide head	Riser guide head, range up to 47"
Remote hydraulic control stand	Casing guide head, range 10" to 20"
Documentation	Control system with sensor package for integration with the ZMS or anti-collision systems
	Cable remote operator panel
	Radio remote operator panel
	Greater capacities in reach, lifting, slewing and stroke to meet client requirements
	Centralized greasing system for slew bearing, pinion and tilt cylinders

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