

# 204 RIG SPECIFICATION



## MD COWAN - SUPER SINGLE® MD525 (M)

### MD COWAN SPECIFICATIONS

<b>DERRICK AND SUBSTRUCTURE</b>				
<b>DERRICK/MAST</b>				YES – API 4G Monogrammed
Make/type:				INTERNATIONAL DERRICK SERVICE (IDS)
With no set back:				
Height:				72'
Dimensions of base:				8'1" WIDE X 6' DEEP
Dimensions of crown:				8'1" X 6' DEEP
Gross nominal capacity:				825,000 GNC
Static hook load:				500,000 SHL
Minimum number of lines:				8
Ladders with safety cages and rests:				YES
Platform for crown sheave access:				YES
Light system explosion proof:				YES
MAKE-UP/BREAK-OUT TOOL				1-BLOHM & VOSS Make-up/Break-out wrench WITH UP TO 65,000 FT-LBS. M/U torque; 85,000 FT-LBS B/O torque
<b>SUBSTRUCTURE</b>				YES
Make/type:				IDS
Slip Bowl height (above Ground level):				14' 8"
Length:				48'
Width:				12'
Slip Bowl beam capacity (total):				250 TON
Clear height below Slip Bowl beams (to Ground level):				10'6"
<b>Hydraulic Pipe Arm</b>				1- IDS HYDRAULIC PIPE ARM FOR HANDLING 3-1/2" TO 5" RANGE II or III DRILL PIPE, 6-1/4" TO 8-1/4" DRILL COLLARS & RANGE III CASING W/HYDRAULIC ARM FOR HANDLING PIPE FROM PIPE RACK TO GRABBERS

<b>DRAWWORKS AND ASSOCIATED EQUIPMENT</b>				
<b>Drawworks</b>				
Make/type:				RIG TECH RT-400B
Engine make/type:				CAT C-15 W/ALISON 6-SPD. TRAN.
Rated input power:				540 HP
Drum size (diameter x length):				21" X 25-1/8"
Drum type (grooved/smooth):				GROOVED (Lebus)
For drill line size:				1 1/4"
Brake type (disk/drum):				DRUM
Brake size:				42" x 10"
Maximum Hook load - 8 lines:				435,000 LBS
Crown block safety devices:				YES
Make/type: Forum device				RT-400 CROWN PROTECTOR
Auxiliary brake:				EATON WCB 424
Independent fresh water cooling system for draw works and air brake:				EATON-AIRFLEX MODEL # RT-BWCS-101 400,000# BRAKING
<b>Wire line Unit</b>				YES
Make/model:				OIL WORKS OWI-1000
Wire length (nominal):				12,000'
Wire size:				.092 IN
Max working load:				835 LBS
Safe working load:				800 LBS
Depth counter:				YES
Pull Indicator				NO
<b>DERRICK HOISTING EQUIPMENT</b>				
<b>Crown Block</b>				
Make/type:				IDS
Rated Capacity:				500,000 SHL
No. of sheaves:				8--7 vertical/1horizontal
Sheave diameter:				6-36" 1-30" 1-24"
Sheave grooved for line size:				1 1/4"
<b>Traveling Block</b>				
Make/type:				COWAN INTEGRATED 4-SHEAVE SPLIT BLOCK
Rated Capacity:				250 TON
No. of sheaves:				4

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sheave diameter:				36"
Sheave grooved for line size:				1 1/4"
<b>Drilling Line</b>				YES
Diameter:				1-1/4"
Construction:				BETHLEHEM STEEL AMERICAN RRL/IWRC/EIPS DOMESTIC or equivalent
Length (original):				2,500'
Drilling line reel:				YES
Drum cover:				NO
Drilling line drum power driven:				Optional
Roller guides:				NO
<b>Dead Line Anchor</b>				
Make/type:				HERCULES HA-119T
Weight sensor:				60,000#
<b>SLIP BOWL SYSTEM - NON-ROTATING</b>				
Make/type:				N/A
Gate/Bowl Opening:				N/A
Hook Load:				N/A
Operating Air Pressure:				N/A
Operating Hydraulic Pressure:				N/A
Tubular Goods Range				N/A
<b>Top Drive/Power Swivel</b>				
Make:				VENTURETECH
Model:				XK-250
Type (electric/hydraulic):				HYDRAULIC - SUNSTRAND HYDRAULIC PUMP POWERED BY CATERPILLAR C-18 DIESEL ENGINE & HYDRAULIC SYSTEM
Rated capacity:				250T
Working pressure:				5,000 PSI
Maximum continuous torque @ 120 rpm: (Power curve available upon request)				22,000 FT-LBS
Maximum continuous rotary speed:				160 RPM
Cooling system type:				N/A
Upper inside BOP:				2 3/4" INSIDE
Floating Cushion sub (Upper Torque Sub):				4 1/2" I.F.
100 RPM Dynamic load rating:				140 Tons

Working pressure:				5,000 PSI
Output power:				24,000 ft-lbs
<b>POWER SUPPLY SYSTEMS</b>				
<b>RIG POWER PLANT</b>				
<b>Diesel Engine/Generator Sets</b>				
Quantity:				2
Make/type:				CATERPILLAR / C-15
Maximum continuous power:				540 HP
At rotation speed of:				CONSTANT 1200RPM
Equipped with spark arrestors:				YES
Mufflers installed:				YES
<b>AC - Generator</b>				
Quantity:				2
Make/type:				CATERPILLAR/455 KW
At rotation speed of:				CONSTANT 1200RPM
Output volts:				60 Hz 480 VOLTS
<b>Air Compressors - Medium Pressure (rig air):</b>				
Quantity:				CURTIS – 1 each
Make:				
Model:				RS30F
Rated Capacity:				102 CFM
Working pressure:				175 PSI
Prime mover (electric/diesel):				ELECTRIC
Continuous power:				30 HP
<b>AIR RECEIVERS</b>				
				OILWORKS – 1 each
Volume (total):				600 ft <sup>2</sup>
Maximum Pressure				175 PSI
Location:				Lube Skid
<b>FUEL TANK</b>				
Standard Cylindrical Tank/ Optional Rectangular				MDC FABRICATED
Cylindrical 8' diameter				265 BBL.

<b>WELL CONTROL</b>				
<b>LOW PRESSURE BLOWOUT PREVENTERS</b>				
All appropriate components H <sub>2</sub> S rated				No
<b>RAM TYPE PREVENTERS</b>				YES
Quantity:				1
Make/model:				Horn or Other Type LWS
Type (single / double / triple):				DOUBLE
Size:				11 IN
Working pressure:				5,000 PSI
Ram locks:				YES
Type (manual/hydraulic):				MANUAL
Side outlets:				4
Size:				4"
WP:				5,000 PSI
Bottom connection:				11" x 5M
Top connection:				11" x 5M
<b>AVAILABLE RAMS (INSTALLED)</b>				
Quantity / type / size:				1/BLIND
Quantity / type / size:				1/PIPE/4 1/2"
<b>ANNULAR PREVENTER</b>				Yes
Quantity:				1
Make/type:				Horn or Other HA
Size:				11" x 5M
Working pressure:				5,000 psi
Bottom connection:				5,000 psi
Top connection:				5,000 psi
<b>KILL LINE VALVES</b>				YES
Quantity:				1
Make/type:				
Size:				2-1/16 IN
Working pressure:				5,000 PSI
Hydraulic / manual / non-return:				MANUAL
Quantity:				1
Make/type:				
Size:				2-1/16 IN
Working pressure:				5,000 PSI
Hydraulic / manual / non-return:				NON-RETURN

<b>BOP CONTROL SYSTEM</b>				
<b>Accumulator Unit</b>				
Make/model:				Burnsco "Bison"
Location:				LOWER DOGHOUSE SKID
Fluid reservoir capacity:				160 US GALLONS
Total accumulator capacity (with out prior recharge):				160 US GALLONS
System working pressure:				3,000 PSI
Total useful accumulator volume equals all preventer opening and closing volumes:				160/YES
Plus percent additional volume:				
<b>Accumulator Hydraulic Pumps</b>				
Electric Driven:				
Quantity:				1
Make/model:				TRIPLEX
Each driven by motor of power:				20HP
At operating pressure:				3,000 PSI
Air Driven:				
Quantity:				2
Make/model:				
Flow rate of each pump:				
At operating pressure:				3,000 PSI
<b>Primary Control Panel</b>				
Control panel make/model:				Townsend/Burnsco
Location:				DOG HOUSE SKID
Panel controls for the following functions:				
Annular BOP:				YES
Ram BOP's:				YES
Choke line valve:				YES
System pressure regulator:				YES
Pressure regulator for annular:				YES
Flow meter:				
Quantity of pressure gauges:				3
<b>CHOKE MANIFOLD</b>				
Nominal size:				2" & 4"
Minimum ID:				
Maximum WP:				5,000 PSI

Quantity of fixed chokes:				2
Make/model:				MC FEE MN-60
Size (ID):				3/4" ORIFICE 1 1/2" OD
Quantity of adjustable chokes:				2
Make/model:				AOP INDUSTRIES
Size (ID):				2-1/16 IN
Power choke remote control panel:				NO
Make/model:				N/A
Size (ID):				N/A
<b>CHOKE LINE (BOP to MANIFOLD)</b>				YES
Quantity:				1
Make/type:				Midwest Hose
ID:				3"
Working pressure:				5,000 PSI
H2S Service:				NO
<b>FLEXIBLE BOP CONTROL HOSES</b>				YES
Quantity:				10
Make/type:				SYNFLEX TYPE "B"
ID:				1"
Working pressure:				5,000 PSI
Fire resistant:				YES
<b>Traveling Stand for BOP's</b>				YES
<b>MUD SYSTEM</b>				
<b>MUD PUMPS</b>				YES
Quantity:				2
Make:				WEATHERFORD OR BOMCO
Model:				MP10
Horsepower:				1,000
Type (triplex / duplex):				TRIPLEX
Mud pumps drive motors / engines:				CATERPILLAR 3508 ©
Motor type:				Variable Speed - Diesel
Continuous power rating per engine:				1200 RPM FOR 3508
Fluid end type:				WEATHERFORD (Interchangeable w/Emsco F-1000)
Maximum working pressure:				5,000 PSI
Test pressure:				5,000 PSI
Pump stroke counter type:				CUSTOMER TO FURNISH
Supercharging pump type:				YES

Driven by motor of power:				PINION SHAFT
Discharge/suction line ID:				3 1/2" X ID
Mud pump pulsation dampener type:				AS SUPPLIED BY WEATHERFORD
Reset relief valve:				3"
<b>Torque Converters</b>				
Quantity:				2
Make/type:				U.S. Oilworks / C300-80
<b>TRANSFER PUMPS / MIXING PUMPS</b>				YES
Mixing Pumps				
Quantity:				2
Make/model:				5" X 6" W/50 H.P. ELECTRIC MOTORS-MISSION MAGNUM
Output capacity:				11" IMPELLER 80 TO 110 GALLONS PER MINUTE
Drive motor type:				ELECTRIC 50HP
Power output:				N/A
<b>CHARGING PUMPS</b>				YES
Quantity:				2
Make/model:				5" X 6" W/50 H.P. ELECTRIC MOTORS- MISSION MAGNUM
Output capacity:				11" IMPELLER-80 TO 110 GALLONS PER MINUTE
<b>STANDPIPE MANIFOLD</b>				YES
Quantity of standpipes:				1 (MUD)
Standpipe/ID:				4"/ 3" ID
Kill line outlet:				YES
fill-up like outlet:				YES
Bleed-off line outlet:				YES
Outlet for MWD sensor				YES
<b>ROTARY HOSES</b>				YES
Quantity				2
Make/type:				Midwest Hose
ID x Length:				4" ID X 44' L.
Working pressure:				5,000
Snubbing lines:				YES
Quantity:				2
Make/type:				Midwest Hose
ID x Length:				4" x LENGTH DEPENDS ON PUMP RIG UP



Working pressure:				5,000
Snubbing lines:				YES
<b>LOW PRESSURE MUD SYSTEMS</b>				2-12'W X 5'H X 40' L W/10' PORCH ON END FOR PUMPS V-CRIMPED; DESIGNED TO ELIMINATE SURFACE TRIP HAZARDS ON WALKING SURFACE
<b>MUD TANKS (CURVED BOTTOMS)</b>				YES
Quantity:				2
Total capacity (usable):				~700 bbls
Usable capacity No. 1:				~350
Type (active / reserve):				ACTIVE
Height:				5
Mixer:				YES
High Pressure Mud guns:				YES
Usable capacity No. 2:				~350
Type (active / reserve):				ACTIVE
Height:				5
Mixer:				YES
High Pressure Mud guns:				YES
<b>SHALE SHAKER</b>				
Quantity:				1
Make/model:				VORTEX FLUID SYSTEM
Type:				ORBITAL 3000 DUAL SHAKER
Nominal flow rate (total):				1000
<b>MUD AGITATORS</b>				YES
Quantity:				3
Make/model:				Bario Max 2000 or equivalent
Driven by motor of power:				10 HP
Located in tanks:				YES
Impeller Blades, Type				YES
<b>MUD HOPPER</b>				YES
Quantity:				1
Make/model:				Oilworks mixing hopper
Feed pump make/model:				5" X 6" MISSION MAGNUM
Type/size:				11" IMPELLER

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Capacity:				450
Drive motor hp:				50
Is feed pump dedicated to mud hopper(s):				YES
<b>DESANDER</b>				YES – US Oilworks
Cone No. & size				2 - 10"
DESILTER				10 - 4" cone
<b>WATER TANK</b>				MDC FABRICATED
Rectangular V-crimp 8' Wide				400 bbl.
<b>Centrifugal Pumps</b>				2
Type/Size:				ODESSA PUMP 2" X 3" CENTRIF. Or equivalent
Drive Motor HP:				20 HP MOTORS
<b>BRAKE COOLING/LUBESTER SKID</b>				
Additional skid containing a brake cooling unit and lubrication bulk handling equipment.				MDC Fabricated Skid
Brake cooling unit				Rig Tech RTBSS-101
				5 EA BULK LUBE TOTES; 350 GAL. EA; STAINLESS STEEL TANKS INCLUDED FOR ENGINE OIL, HYDRAULIC OIL, GEAR OIL, ENGINE COOLANT, AND WASTE OIL
Bulk Handling Lubester				
Tote				
Make:				Custom Metalcraft, Inc.
Model:				TranStore 515829
Hose Reel				(4 total) 50 ft; ½" hose
Make:				Lincoln
Model:				94300 series "A"
Pump for Oil Totes				
Make:				
Model:				
Pump for Coolant				
Make:				
Model:				

OPTIONAL EQUIPMENT – INCLUDED				
AUXILIARY TRAILERS				
RIG MANAGER/TOOLPUSHER OFFICE/LIVING QUARTERS				13' X 48' Skid Mounted
TELEHANDLER FORKLIFT				N/A
DRILL PIPE				N/A
DRILL COLLARS				N/A
PIPE RACKS				4 SETS

