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TRANSPORTABLE DRILLING RIG W125 - DH - T



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TRANSPORTABLE DRILLING RIG
W125 - DH - T

FIELD OF APPLICATION

The **WF 125 - DH - T** mobile drilling and work over rig is mounted on a trailer and intended to be utilized to perform the following jobs:

Work over jobs afferent to the oil and gas wells, such as:

- running-in and pulling-out of tubing;
- running-in and pulling-out of sucker rods;
- running-in and pulling-out of sinking pumps.

Repair and remedy jobs afferent to the wells, such as:

- straightening of oval casing strings;
- drilling of cement plugs;
- wash of sand plugs;
- fishing jobs.

Installation and removal of the Christmas tree;

Drilling jobs: if adequately equipped, the **WF 125 - DH - T** mobile drilling and work over rig can perform geologic drilling jobs down to a depth of 1,300 (4265 ft) to 2,100 m (6890 ft) under the following conditions:

- use of 4½ in or 5 in drill pipes;
- max. working load of the hook is limited to 125 mton (281,000 lbs).

DESCRIPTION

The **WF 125 - DH - T** mobile drilling and work over rig is mounted on a trailer and operated by means of a CATERPILLAR 3408 DITA Diesel engine of 503 HP, 377 kW and 2,100 rpm, which are coupled to an ALLISON M5610H hydro-mechanical transmission performing 5 + 1R* speed stages.

1R* - 1 reverse speed

SPECIFICATIONS

• Max. working hook load with 8 lines	125 mton (281,000 lbs)
• Max. recommended working depth (for a hook load limit of 125 mton) with:	
tubing of 2 7/8 in	7,500 m (24606 ft)
drill pipes of 4½ in	2,100 m (6890 ft)
drill pipes of 5 in	1,300 m (4265 ft)
• Number of the lines	8 lines
• Drilling line size	28 mm (1. 1/8 in)
• Pipe stands length	max. 18 m (59 ft)
• Operation type	Diesel and hydro mechanical operation
• Number of operating engines	1
• Operating engine type	CAT 3408 DITA diesel engine of 503 HP, 377 kW and 2,100 rpm
• Number of hydro mechanical transmissions	1
• Hydro mechanical transmission type	ALLISON M 5610 H
number of speed stages	5 + 1 reverse
• Draw works type	TFI-20
max. line pull	20 mton (45,000 lbs)
number of hoisting speeds	5 + 1 reverse
number of drums	1
main brake	band brake
auxiliary brake type	FH-560 hydraulic brake



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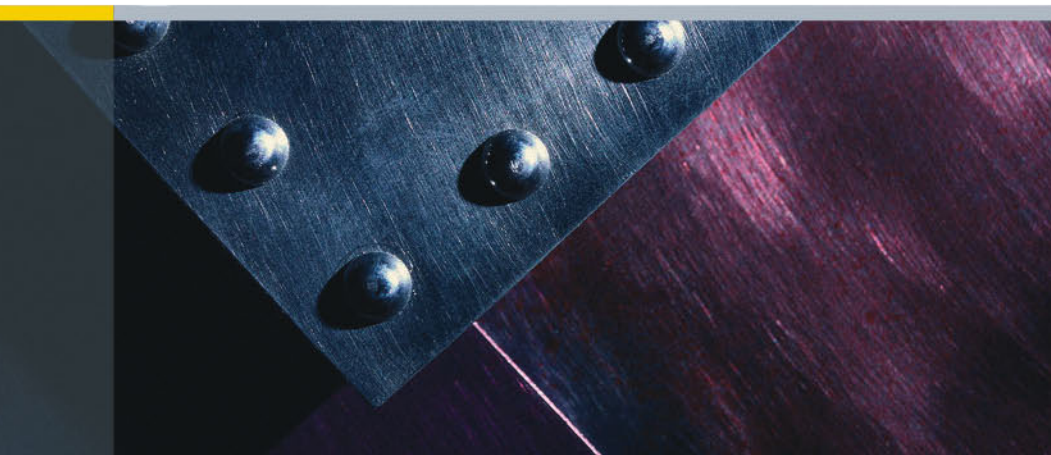


• Mast type	MU-125
hook load with 8 lines	125 mton (281,000 lbs)
clear mast height (from the ground up to the crown block beam)	32 m (105 ft)
racking capacity (stands of 18 m)	
tubing of 2 7/8 in	7,500 m (24,606 ft)
drill pipes of 4 1/2 in	2,100 m (6890 ft)
section number	2 U-shape telescopable sections
mast tilting	by means of 2 hydraulic cylinders (risers)
mast telescoping	using telescoping line wound on a hydraulically-actuated drum

• Substructure type	tiltable monoblock parallelogram
max. load of the rotary table beams	125 mton (281,000 lbs)
max. load at the setbacks	80 mton (180,000 lbs)
simultaneously-applied max. load	205 mton (461,000 lbs)
working floor height	4.6 m (15 ft)
clear height under the rotary table beams	3.66 m (12 ft)
substructure tilting	by means of the handling system of the rig

• Rotary table type	MRS-205
max. opening	520.7 mm (20.1/2 in)
max. static load	320 mton (720,000 lbs)
max. transmitted power	500 HP
max. rotor speed	300 rpm
max. rotor torque (when rotated)	1,600 kgf.m (11,573 lb-ft)
max. static torque of the rotor	8,000 kgf.m (57,864 lb-ft)

• Crown block type	(4 + 2).28.GF-125
max. hook load	125 mton (281,000 lbs)
number of sheaves	4
number of running sheaves	1
sheave number (dead end of the line)	1



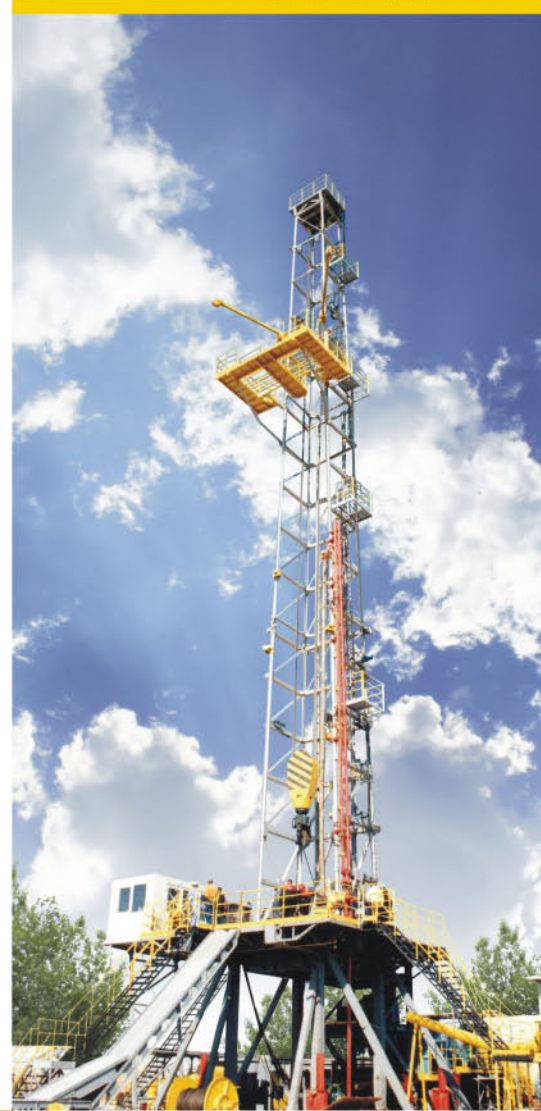
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• Hook block type	4.28.MC-125
max. hook load	125 mton (281,000 lbs)
number of sheaves	4

• Swivel type	CH 125
max. static load	125 mton (281,000 lbs)
max. working pressure	210 bar (3045 PSI)
bore size	70 mm (2.3/4 in)
max. speed	300 rpm
thread for connection between the stem and the sub	4.1/2 in REG-LH type
thread for connection between the sub and the kelly	6.5/8 in REG-LH type
thread for connection to the rotary hose	LP 3 in type

• Unitized pump type	GMP 3PN-700 (CAT)
number of unitized pump	2
mud pump type	3 PN-700 triplex, single-acting pump
number of mud pumps	2
max. power at the pump inlet shaft	700 HP
max. working pressure (with liners of 5 in)	215 bar (3120 PSI)
max. theoretic flow rate (with liners of 7.½ in)	31.3 l/s (496 GPM)
operating Diesel engine type	CAT 3412 TA (475 HP; 1,200 rpm)
hydraulic torque converter type	NATIONAL C 245-100 FH
number of power units for each pump	1

• Air system	
air compressor type	6 C1 with pistons
number of air compressor	2
mechanical operated	1
electrical operated	1
flow rate at 10 bar pressure	1 m³/min (35.3 CFM)
discharge max. pressure	12 bar (174 PSI)
nominal pressure	10 bar (145 PSI)
air tank	2 x 210 l = 420 l



• Mud system	
total mud volume	171 m ³ (1075 BBL)
water volume (i.e. water for cooling the brakes and other needs within the mud system)	2 x 45 m ³ = 90 m ³ (566 BBL)
number of cleaning stages	3
shale shaker type / number	SV-UP-01 vibratory type / 2
desander type	6 x 8 in
desilter type	12 x 4 in
degasser type	atmospheric
mud weight	1.1 ÷ 2.2 kgf / dm ³

• Fuel system to supply the rig engines, the unitized pumps and the electric power generating set	
total volume of stored fuel, as follows:	51 m ³ (321 BBL)
daily tank	4 m ³ (25 BBL)
storing tank	19 m ³ (120 BBL)
storing tank	28 m ³ (176 BBL)

• Electric system for lighting and auxiliary aggregata	
	conceived for having its "zero" earthed normally manufactured (dust - and rain - tight), explosion-proof
supply voltage for:	
power receivers	3 x 380 V x 50 Hz
normal-lighting receivers	220 a.c.V x 50 Hz
safe-lighting receivers	24 V d.c.

• Electric power generating set	
	CAT 3406 type with SR 4 generator or CAT C15 generator
number of electric power generating sets	1
power	365 kVA (292 kW)
speed	1,500 rpm
voltage	3 x 400 / 231 V
frequency	50 Hz

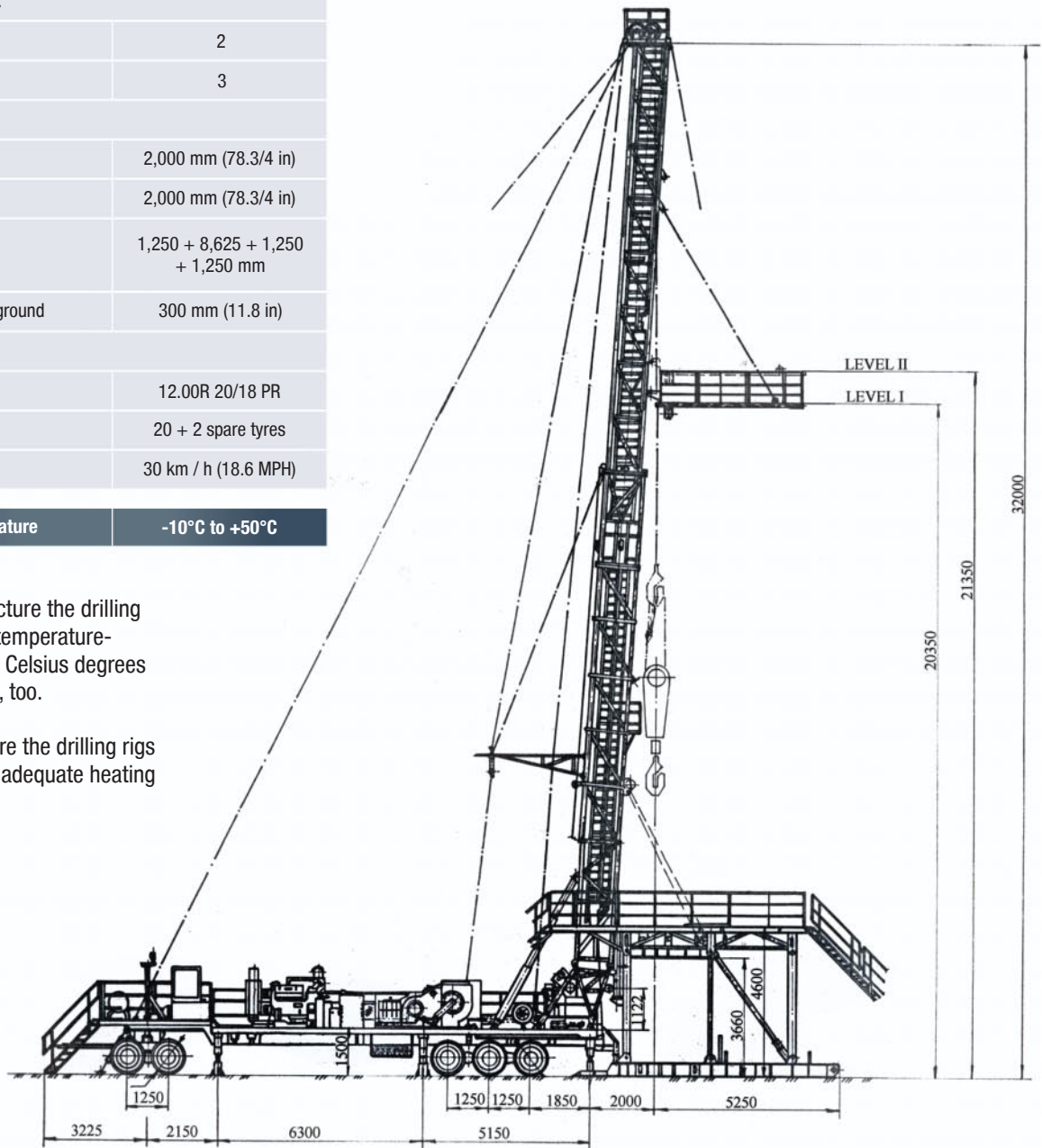


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• Rig trailer	
number of driving axles:	
front axle number	2
rear axle number	3
wheel track:	
front wheels	2,000 mm (78.3/4 in)
rear wheels	2,000 mm (78.3/4 in)
axle base	1,250 + 8,625 + 1,250 + 1,250 mm
min. distance from the ground	300 mm (11.8 in)
tyres:	
type	12.00R 20/18 PR
tyre quantity	20 + 2 spare tyres
max. running speed	30 km / h (18.6 MPH)
• Environmental temperature	
	-10°C to +50°C

UPETROM can manufacture the drilling rigs for working under temperature-range conditions of -40 Celsius degrees to +40 Celsius degrees, too.

Such case stands require the drilling rigs to be equipped with an adequate heating system.



**WF 125-DH TRAILER MOUNTED
 DRILLING & WORKOVER RIG**



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