



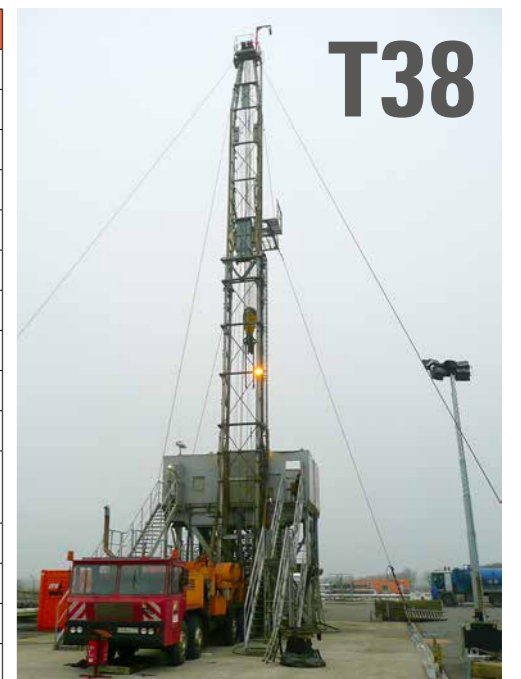
MB WELL SERVICES

Drilling & Heavy Workover
Rigs and Services





Rig No.	T49	T48	T47	T46	T45	T44 / T43	T41 / T38	T32
Rig type	S&S 550 SD	S&S 1000 SD	Satvia TB1800V	Cabot 900	IRI750	Salzgitter ZA420	Salzgitter ZA417	Salzgitter ZA312
Mast type	S&S-110-300K	DTS-01000-124-440	TM180	112'-350,000	KM117-358	GT120/33	GT120/33	GT80/28
Mast height (m)	38.10	38.10	37.50	34.10	35.70	36.00	36.00	27.40
Mast erection	telescopic	telescopic	telescopic	telescopic	telescopic	telescopic	telescopic	telescopic
Total height substructure (mtr.)	4.90	6.10	6.10	4.60	5.80	4.90	4.90	4.90
Max. hookload (tons)	155	220	200	165	180	120	120	80
Setback load substructure (tons)	85	150	150	160	135	70	70	-
Setback capacity (5" tubing in mtr.)	3000	3500	3500	2500	3500	2500	2500	-
Rotary table type	American Block	American Block	Upetrom	National	Hacker	IDECO	Upetrom	Upetrom
Rotary table clearance (mm)	520	27 1/2"	27 1/2"	27 1/2"	27 1/2"	17 1/2"	17 1/2"	17 1/2"
Drawworks type	S&S CE550SD	S&S CE1000SD	ZHP 4.29-EG + Viking MK44	Cabot 2346	IRI 2042 DB	ZA420	ZA417/5	ZA312
Drive motors drawworks	1x CAT C15	2x CAT C15	3x Deutz TCD 2015 V8	2x CAT D343	2x CAT 3406	1x Deutz BF12	1x Deutz BF12	1x Deutz F12
Power output (kW/PS)	397/540	795/1081	883/1200	588/800	596/810	316/430	316/430	216/293
Diameter of line (mm)	28.6	31.8	31.8	28.6	28.6	25.4	25.4	25.4
Top drive type	-	TESCO 250 HXI 700	Satvia KDK 220	-	-	-	-	-



2x Casing Jack EEW CJU 230



A casing jack is a substructure equipped with an integrated hydraulic lifting system. It is used in jobs where the weight of the casing string exceeds the hook load of the rig. Since these load peaks often represent only a small percentage of the total job, the combination of a smaller rig and a casing jack is much more economical than the use of a bigger rig.

Max. lifting capacity (tons)	230
Travel (mtr.)	1.7
Lifting / lowering speed (mm/sec)	22.4 / 34
Total height substructure (mtr.)	5.50
Clear height below spider platform (mtr.)	2.50
Setback load substructure (tons)	100
Rotary table clearance (mm)	520

DIN EN ISO 9001:2008 SCCP:2011 Standard

In order to provide replicable services at the highest level, our operations are displayed in a defined process landscape. This also includes the complete documentation, reporting and regular review of all processes and work instructions.

In order to ensure that the most recent regulations are applied in quality management and work safety, we regularly undertake the verification of external certification organizations.

Holistic customer support

Our project management is strictly focused to the fulfillment of customer requirements. On request we execute drilling, workover and abandonment services as turn-key projects. We also work as main contractor including the coordination of sub contractors. Support for project planning and licensing procedures as well as the documentation works are also part of our portfolio.

Drilling and Heavy Workover Services

Drilling

- Drilling of oil, gas, cavern and geothermal wells up to 3,500 m
- Drilling of sidetracks out of existing wells
- Directional drilling and drilling of horizontal wells
- Arranging and organizing of contractor services during drilling and workover projects

Workover on caverns

- Change of pipe level during leaching processes on caverns
- Changing of cavern completions from leaching process to initial filling
- Leak tests on caverns
- Re-completions

Plug and abandonment of wells

- Plug and abandonment of wells according to the regulations

ESP replacement

- Dismantling of well head flanges and well packers
- Removal of ESP incl. control line
- Configuration and run-in of submersible pump on production tubing with control line
- Positioning and function test of submersible pump

Change-out of production tubings

- Release of the production packer
- Removing and installing of the tubing string

Pressure test

- Test of production tubing, annulus, well head, BOP

Fishing and milling during workover jobs

- Fishing of e.g. casings, tubings, sucker rods, lost cables, sand filter, production packer etc.
- Milling of e.g. packer, casings, tubings, cement bridges etc.

Cementation

- Annular cementation or bottom hole cementation
- Cement-Squeezing to seal the well against formation, gaps, cracks or depleted reservoirs
- Execution of plug or bottom hole cementations
- Plug and abandonment of decommissioned or uneconomic wells

Pumping and acid treatments

- Self-reliant execution of pumping operations like pressure tests, killing wells, cementations, circulation operations, well cleaning, acid treatment, pumping of annular protective fluid, setting of packers, release of setting tool, opening and closing of circulation systems (i.e. sliding doors)

Gravel Packs

- Installation and removal of gravel pack assemblies

Wellhead installation and nipling up works

- Installation and dismantling of flanges
- Configuration, installation and dismantling of well heads

Production tests

- Production tests after perforation or acid treatments

Treatment performances on H2S-wells, operative personnel is instructed in handling with hydrogen sulphides

- Handling of hydrogen sulfide
- Kick and emergency exercises
- Personnel instructed in handling of respiratory protection and gas measuring devices

Change-out of production wells

- First completion, pull-out of old completion, run-in of new completion