

Forced Gas Lifting Oil Production System

I. System Main Parts

Forced gas lifting oil production outfit mainly includes: High-pressure gas source device, control cabinet, gas transmission line and oil production device.

II. Working Principle

High-pressure gas source device generates a high-pressure gas, when forced water discharge is being carried out, high-pressure gas will enter the underground oil production device via gas transmission line. After oil liquid is discharged, high-pressure gas will be emitted via gas transmission line, while this will be circulated to lifting crude oil from underground to a destination on ground.

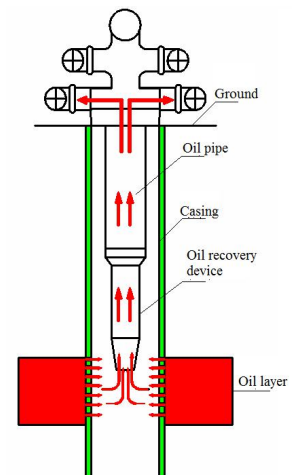


III. Movement Features

- The structure of under-well oil production device is easy, and there are no moving parts, so no sand blocking, airlock or mechanical damages etc. will occur.
- Gas source upper the well only needs regular maintenance, which adopts intermittent operation, with a long service life.
- High pressure gas is generated by high-pressure gas source, and enters oil production device via gas transmission line, lifting oil level to ground. After the lifting is completed, the gas is exhausted via gas transmission line to another well or a gas dealing device.
- The gas transmission line adopts continuous stainless steel hose, so that gas circulates in an enclosed way, without contacting with the outside or gas at well bottom, which is safe, environment-protective and reliable.

IV. System Reliability

- System overall heat resistance could reach up to 350°C.





- Adopt corrosion-resistant materials, with strong media compatibility
- Underground repair cycle is above 5 years
- Oil production device is simple in structure, static seal, without any outflow of oil liquid, nor ground pollution.
- One-source & multiple-well control: One set of control equipment as well as gas source equipment is shared by multiple wells, which is collective control and management, making best use of high pressure gas source.

V. Adaptable Mediums

Forced gas lifting oil production system adapts to the lifting of crude oil in deep wells such as straight wells, inclined wells and horizontal wells etc.

VI. Technical Parameters

High-pressure gas sources

Model	Flow Rate (m ³ /min)	Pressure (Bar)	Power (Kw)	Number of Compression Stage
WM0.6-60	0.6	60	7.5 KW	3
WM1.5-60	1.5	60	11 KW	3
WM1.0-80	1.0	80	11 KW	3
WM1.0-100	1.0	100	15 KW	4
WM1.5-100	1.5	100	18.5 KW	4
WM1.5-150	1.5	150	30 KW	4
WM2.0-150	2.0	150	37 KW	4

Control cabinet

Model	Power (Kw)	Voltage (V)	Ball Valve Type	Control Mode	Control Mode
380/1/20	7.5-30	380	L·T type pneumatic ball valve	Flow, time control	One source multiple wells
380/2/40	11-37	380	L·T type pneumatic ball	Flow, time control	



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Gas transmission line

Specification	Wall Thickness (mm)	Max. Continuous Length (m)	Materials	Pressure (MPa)
3/8"	1.25/1.5	5000	316L	50
1/2"	1.25/1.5	5000	316L	50
5/8"	1.5/2	5000	316L	50
3/4"	1.5/2	5000	316L	50

System parameters

Model	Flow Rate (m ³ /min)	Pressure (Bar)	Displacement (m ³ /d)	Power (Kw)	Pump Setting (m)	Number of Compression Stage
WM0.6-60	0.6	60	8.6	7.5	500	3
WM1.5-60	1.5	60	21.5	11	500	3
WM1.0-80	1.0	80	9.6	11	750	3
WM1.0-100	1.0	100	7.56	15	950	4
WM1.5-100	1.5	100	11.34	18.5	950	4
WM1.5-150	1.5	150	7.44	30	1450	4
WM2.0-150	2.0	150	9.93	37	1450	4



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