

Reciprocating Submersible Plunger Pump Oil Production System

I. System Main Parts

Reciprocating submersible plunger pump oil production system mainly includes: sucker rod pump, permanent magnet linear motor, submersible cable and control cabinet.

II. Working Principle

The linear motor carries out reciprocating movement under the control of the ground control cabinet, to drive the plunger of the sucker rod pump reciprocating, so as to complete the lifting well liquid to the ground via tubing.

III. Movement Features and Reliability

- Intermittent movement of the linear motor, high in pump efficiency and energy-saving.
- Short connection distance between sucker rod pump and linear motor, without stroke loss, anti-impact control precise airlock resistance.
- No ground moving parts, safe and environment-protective, small coverage.
- No moving parts inside tubing, adaptable to all kinds of well barrel.
- A remote wireless patrol control system could be installed, to realize remote control and online parameter adjustment;
- A dynamic liquid level monitoring system could be installed, so as to maintain optimal oil recovery status.

IV. Adaptable Mediums

Adaptable to crude oil lifting in deep wells such as straight wells, inclined wells and horizontal wells, etc.

V. Technical Parameters

5-inch casing specification

Parameters Model	Rated Voltage (V)	Max. Projection Diameter (mm)	Connecting Tubing Dimension (in)	Used Casing Inner Diameter (mm)	Stroke (m)	Frequency of Stroke (min-1)	Rated Displacement (m ³ /d)	Adaptable Pump Setting (m)
SKQYDB-114-380-10/28	380	114	φ73	≥124	1.23	0.1-8	8	1000
SKQYDB-114-380-10/32	380	114	φ73	≥124	1.23	0.1-8	10	800
SKQYDB-114-380-15/28	380	114	φ73	≥124	1.23	0.1-8	8	1500
SKQYDB-114-380-15/32	380	114	φ73	≥124	1.23	0.1-8	10	1200
SKQYDB-114-660-18/28	660	114	φ73	≥124	1.23	0.1-8	8	1800
SKQYDB-114-660-18/32	660	114	φ73	≥124	1.23	0.1-8	10	1500
SKQYDB-114-660-22/28	660	114	φ73	≥124	1.23	0.1-8	8	2500
SKQYDB-114-660-22/32	660	114	φ73	≥124	1.23	0.1-8	10	2000
SKQYDB-114-660-22/38	660	114	φ73	≥124	1.23	0.1-8	15	1500
SKQYDB-114-660-22/44	660	114	φ73	≥124	1.23	0.1-8	20	1000
SKQYDB-114-660-22/57	660	114	φ73	≥124	1.23	0.1-8	35	800
SKQYDB-114-1140-30/32	1140	114	φ73	≥124	1.23	0.1-8	10	2500
SKQYDB-114-1140-30/38	1140	114	φ73	≥124	1.23	0.1-8	15	2200
SKQYDB-114-1140-30/44	1140	114	φ73	≥124	1.23	0.1-8	20	1500

7-inch casing specification

Parameters Model	Rated Voltage (V)	Max. Projection Diameter (mm)	Connecting tubing Dimension (in)	Used Casing Inner Diameter (mm)	Stroke (m)	Frequency of Stroke (min-1)	Rated Displacement (m ³ /d)	Adaptable Pump Setting (m)
SKQYDB-114-1140-80/38	1140	143	Φ89	≥156	1.23	0.1-8	15	3500
SKQYDB-114-1140-80/44	1140	143	Φ89	≥156	1.23	0.1-8	20	2500
SKQYDB-114-1140-80/57	1140	143	Φ89	≥156	1.23	0.1-8	35	1500
SKQYDB-114-1140-80/70	1140	143	Φ89	≥156	1.23	0.1-8	54	1000

VI. Applications

At present, reciprocating submersible plunger pump oil production system has been applied by our company, which are used in crude oil exploration, shale gas recovery by discharging water, and coal-bed gas recovery by discharging water.



威马股份
WEIMA OIL & GAS LIFTING

Tel: 0086 531-75919863

Fax: 0086 531-78856601

Website: www.sdweima.com

Email: weima@sdweima.com