

F Series

The F series mud pumps are developed by our company independently, which include F-500, F-800, F-1000, F-1300 and F-1600 pumps in the metric system or in the British system. The products keep the features in F series including advanced structure, small size, reliability and easy to maintenance. The products by Rongsheng have employed the same manufacturing technologies and quality standards as products provided by Baoshi and Lanshi companies in Chinese market.

Gear Pair	It adopts herringbone gear transmission with larger transmission torque and stable performance.
Frame	The frame is welded with steel plates. The pinion shaft bearing seat and the upper and bottom seats of crankshaft are made of cast steel and the frame is processed to eliminate stress after welding, therefore, it has good stiffness and strength. The bottom seat of crankshaft adopts slab reinforced structures. There are necessary oil sump and oil pipeline system within the machine frame, which are used for cooling and lubrication.
Crankshaft	The crankshaft is made of cast alloy steel. The inner bore of the herringbone gear and the crankshaft are jointed together by interference fit and fastened by bolts and locknuts. Both sides of the crankshaft are equipped with double row spherical roller bearings to the heart so as to ensure the stability in operation and to improve the bearing capacity.
Pinion Shaft	It is made of forging alloy steel. On the shaft there is herringbone gear whose tooth surfaces are of medium hardness. There is shaft extension at both ends, where belt wheels or chain wheels may be installed.
Crosshead	The integral crosshead is casted with nodular cast iron, so the crosshead has good resistance to abrasion. Apart from RS-F500 drilling pumps, which adopt guide tube structure, all other crosshead guides are made up of an upper and a bottom guide. Gaskets may be added under the crosshead guide to regulate the concentricity. The extension rod is connected to the crosshead by flange with pin so as to ensure the concentricity of the crosshead and the extension rod. The packing adopts double sealing structure, which realizes good seal performance.

Fluid Cylinder	The fluid cylinder is made of forged alloy steel. The RS-F series pumps adopt straight-through type cylinders, with saw tooth threads at the top side. They are small in size and the volumetric efficiency is very high. The cylinder surface is processed by nickel-phosphor plating in order to increase their resistance to corrosion. The three cylinders of a pump are interchangeable.
Valve Assembly	F500 adopts API#5 valves, RS-F800 and FS-F1000 drilling pump adopt API#6 valves, RS-F1300 and FS-F1600 drilling pumps adopt API#7 valves, RS-F2200 drilling pump adopts API#8 valves and the parts of the fluid end of F800 and F1000 are interchangeable. The parts of the fluid end of RS-F1300 and RS-F1600 are interchangeable.
Lubrication System	The lubrication system adopts pressure lubrication combining with splash lubrication, or otherwise it may also adopt external motor driven lubrication according to the user.
The Spraying System	The spraying system is composed of spraying pump, water tank and spraying pipes. The spraying pump is a centrifugal pump. It can be driven by a belt wheel installed on either side of the pinion shaft or by a motor, using water as cooling and lubricating liquid.
Cantilever Hoister System	In order to reduce the labor intensity of drilling workers, and for easy field operation, the RS-F1300 and RS-F1600 pumps are equipped with a cantilever hoister, which is used to help removing or replacing the liner or other parts of the fluid end.

RS-F 500



Rated Input Power	373 kW (500 HP)
Stroke Per Minute	165 SPM
Stroke Length	7 1/2"
Gear Ratio	4.286:1
Max. Working Pressure	5000 psi
Valve	API #5
Max. Liner Size	6 3/4"
Suction Inlet Flange	8" flange
Discharge Outlet Flange	4" flange, 5000 psi
Overall Dimension (L×W×H)	11.94 × 7.77 × 7.6 ft ³
Approx Weight	21039 lb

Performance Data of RS-F500 Mud Pump

Liner Size	in	6 3/4	6 1/2	6	5 1/2	5	4 1/2	4	3 1/2
Discharge Pressure	MPa	9.2	10	11.7	13.9	16.8	20.8	26.3	34.5
	psi	1334	1450	1670	2016	2400	3016	3814	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)							
170	384 (515)	37.29 (591.0)	34.62 (548.7)	29.46 (466.9)	24.72 (391.8)	20.50 (324.9)	16.59 (262.9)	13.08 (207.3)	10.05 (159.2)
*165	*373 (500)	36.2 (573.7)	33.6 (532.5)	28.6 (453.3)	24 (380.4)	19.9 (315.4)	16.1 (255.)	12.7 (201.2)	9.75 (154.5)
150	339.4 (455)	32.9 (521.4)	30.55 (484.2)	26 (412.1)	21.8 (345.5)	18.1 (286.8)	14.64 (232.0)	11.55 (183.0)	8.86 (140.4)
140	316.5 (424)	30.72 (486.9)	28.51 (451.8)	24.27 (384.6)	20.36 (322.7)	16.88 (267.5)	13.66 (216.5)	10.78 (170.8)	8.27 (131.0)
130	293.9 (394)	28.52 (452.0)	26.47 (419.5)	22.53 (357.1)	18.91 (299.7)	15.68 (248.5)	12.68 (200.9)	10.01 (158.6)	7.68 (121.7)
120	271.2 (364)	26.33 (417.3)	24.44 (387.3)	20.8 (329.6)	17.45 (276.5)	14.47 (229.3)	11.71 (185.6)	9.24 (146.4)	7.09 (112.3)
110	248.7 (333)	24.1 (381.9)	22.4 (355.0)	19.07 (302.2)	16 (253.6)	13.27 (210.3)	10.73 (170.0)	8.46 (134.0)	6.5 (103.0)
1	2.261 (3.03)	0.219 (3.47)	0.204 (3.23)	0.173 (2.74)	0.145 (2.29)	0.121 (1.91)	0.098 (1.55)	0.077 (1.22)	0.059 (0.93)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-F 800



Rated Input Power	597 kW (800 HP)
Stroke Per Minute	150 SPM
Stroke Length	9"
Gear Ratio	4.185:1
Max. Working Pressure	5000 psi
Valve	API #6
Max. Liner Size	6 1/2"
Suction Inlet Flange	10" flange
Discharge Outlet Flange	5 1/8" flange, 5000 psi
Overall Dimension (L×W×H)	13 × 6.58 × 5.56 ft³
Approx Weight	30865 lb

Performance Data of RS-F800 Mud Pump

Liner Size	in	6 1/2	6 1/4	6	5 1/2	5	4 1/2	4
Discharge Pressure	MPa	14.6	15.8	17.2	20.4	24.7	30.5	34.5
	psi	2118	2290	2495	2915	3582	4424	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)						
160	636 (853)	39.21 (621.4)	36.26 (574.7)	33.41 (529.5)	28.07 (444.9)	23.20 (367.7)	18.79 (297.8)	14.85 (235.3)
*150	*597 (800)	36.76 (582.6)	34 (538.9)	31.32 (496.4)	26.32 (417.1)	21.75 (344.7)	17.62 (279.2)	13.92 (220.6)
140	557.2 (746.7)	34.3 (543.6)	31.73 (502.9)	29.23 (463.3)	24.57 (389.4)	20.3 (321.7)	16.45 (260.7)	12.99 (205.8)
130	517.4 (693.3)	31.85 (504.8)	29.47 (467.1)	27.14 (430.1)	22.81 (361.5)	18.85 (298.7)	15.27 (242.0)	12.06 (191.1)
120	477.6 (640)	29.4 (465.9)	27.2 (431.1)	25.06 (397.2)	21.06 (333.8)	17.4 (275.7)	14.1 (223.4)	11.14 (176.5)
110	437.8 (587.7)	26.95 (427.1)	24.93 (395.1)	22.97 (364.0)	19.3 (305.9)	15.95 (252.8)	12.92 (204.7)	10.21 (161.8)
1	3.98 (5.33)	0.245 (3.88)	0.227 (3.59)	0.209 (3.31)	0.175 (2.77)	0.145 (2.29)	0.117 (1.85)	0.093 (1.47)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

Rated Input Power	597 kW (800 HP)
Stroke Per Minute	150 SPM
Stroke Length	9"
Gear Ratio	4.185:1
Max. Working Pressure	5000 psi
Valve	API #6
Max. Liner Size	6 1/2"
Suction Inlet Flange	10" flange
Discharge Outlet Flange	5 1/8" flange, 5000 psi
Overall Dimension (L×W×H)	13 × 6.58 × 5.56 ft ³
Approx Weight	30865 lb

Structural Characters:

The fission frame is designed based on the frame of the RS-F800 mud pump. The single module of the mud pump is no more than 2.5t and can be transported by helicopter. So the mud pump can meet the needs of drilling in jungles.

Performance Data of RS-F800FT Mud Pump

Liner Size	in	6 1/2	6 1/4	6	5/1/2	5	4 1/2	4
Discharge Pressure	MPa	14.6	15.8	17.2	20.4	24.7	30.5	34.5
	psi	2118	2290	2495	2915	3582	4424	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)						
160	636 (853)	39.21 (621.4)	36.26 (574.7)	33.41 (529.5)	28.07 (444.9)	23.20 (367.7)	18.79 (297.8)	14.85 (235.3)
*150	*597 (800)	36.76 (582.6)	34 (538.9)	31.32 (496.4)	26.32 (417.1)	21.75 (344.7)	17.62 (279.2)	13.92 (220.6)
140	557.2 (746.7)	34.3 (543.6)	31.73 (502.9)	29.23 (463.3)	24.57 (389.4)	20.3 (321.7)	16.45 (260.7)	12.99 (205.8)
130	517.4 (693.3)	31.85 (504.8)	29.47 (467.1)	27.14 (430.1)	22.81 (361.5)	18.85 (298.7)	15.27 (242.0)	12.06 (191.1)
120	477.6 (640)	29.4 (465.9)	27.2 (431.1)	25.06 (397.2)	21.06 (333.8)	17.4 (275.7)	14.1 (223.4)	11.14 (176.5)
110	437.8 (587.7)	26.95 (427.1)	24.93 (395.1)	22.97 (364.0)	19.3 (305.9)	15.95 (252.8)	12.92 (204.7)	10.21 (161.8)
1	3.98 (5.33)	0.245 (3.88)	0.227 (3.59)	0.209 (3.31)	0.175 (2.77)	0.145 (2.29)	0.117 (1.85)	0.093 (1.47)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-QF 800



Rated Input Power	597 kW (800 HP)
Stroke Per Minute	155 SPM
Stroke Length	220 mm
Gear Ratio	4.038:1
Max. Working Pressure	34.5 MPa
Valve	API #6
Max. Liner Size	170 mm
Suction Inlet Flange	203 mm flange
Discharge Outlet Flange	103 mm flange, 34.5 MPa
Overall Dimension (L×W×H)	3583 × 1960 × 1534 mm ³
Approx Weight	11171 kg

Structural Characters:

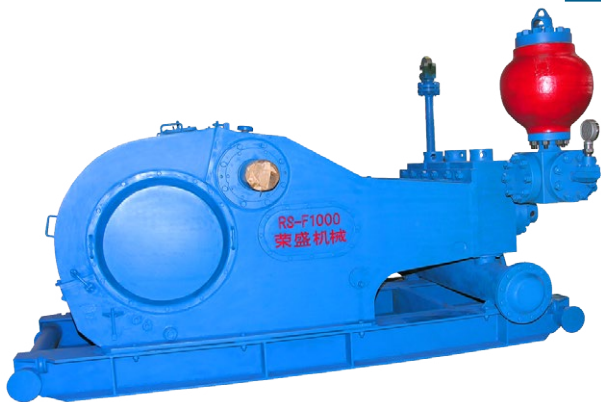
The RS-QF800 mud pump is lighter than RS-F800 mud pump by 1/3. Its crankshaft is forged and full balanced. The main wearing parts are the same as RS-F800 mud pump.

Performance Data of RS-QF800 Mud Pump

Liner Size	mm	170	160	150	140	130	120	110	100
Discharge Pressure	MPa	13.88	15.67	17.83	20.47	23.74	27.86	33.16	34.5
	psi	2011	2271	2584	2966	3440	4037	4805	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)							
160	616 (825)	39.96 (633.38)	35.38 (560.78)	31.11 (493.10)	27.08 (429.23)	23.36 (370.26)	19.90 (315.42)	16.72 (265.02)	13.82 (219.05)
*155	*597 (800)	38.71 (613.57)	34.28 (543.35)	30.13 (477.57)	26.24 (415.91)	22.63 (358.69)	19.28 (305.59)	16.20 (256.78)	13.39 (212.24)
150	577 (774)	37.45 (593.59)	33.18 (525.91)	29.16 (462.20)	25.39 (402.44)	21.90 (347.12)	18.66 (295.77)	15.67 (248.37)	12.96 (205.42)
140	539 (722)	34.95 (553.97)	30.97 (490.88)	27.21 (431.29)	23.71 (375.81)	20.44 (323.98)	17.41 (275.95)	14.63 (231.89)	12.09 (191.63)
130	500 (670)	32.46 (514.50)	28.75 (455.70)	25.27 (400.54)	22.01 (348.87)	18.98 (300.84)	16.17 (256.30)	13.58 (215.25)	11.23 (178.00)
120	462 (619)	29.96 (474.88)	26.54 (420.67)	23.32 (369.63)	20.31 (321.92)	17.52 (277.70)	14.93 (236.65)	12.54 (198.76)	10.37 (164.37)
110	423 (567)	27.46 (435.25)	24.33 (385.64)	21.38 (338.88)	18.62 (295.13)	16.06 (254.56)	13.68 (216.83)	11.49 (182.12)	9.503 (150.63)
1	3.85 (5.16)	0.2497 (3.9578)	0.2212 (3.5061)	0.1944 (3.0813)	0.1693 (2.6835)	0.1460 (2.3141)	0.1244 (1.9718)	0.1045 (1.6564)	0.08639 (1.36931)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-F 1000



Rated Input Power	746 kW (1000 HP)
Stroke Per Minute	140 SPM
Stroke Length	10"
Gear Ratio	4.207:1
Max. Working Pressure	5000 psi
Valve	API #6
Max. Liner Size	6 3/4"
Suction Inlet Flange	12" flange
Discharge Outlet Flange	5 1/8" flange, 5000 psi
Overall Dimension (L×W×H)	14 × 7.71 × 6.11 ft³
Approx Weight	36469 lb

Performance Data of RS-F1000 Mud Pump

Liner Size	in	6 3/4	6 1/2	6 1/4	6	5 1/2	5	4 1/2
Discharge Pressure	MPa	16.4	17.6	19.1	20.7	24.6	29.8	34.5
	psi	2380	2550	2770	3000	3570	4320	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)						
150	799 (1071)	43.92 (696.1)	40.71 (645.2)	37.71 (597.7)	34.71 (550.1)	29.14 (461.8)	24.11 (382.1)	19.50 (309.0)
*140	*746 (1000)	41 (649.8)	38 (602.3)	35.2 (557.9)	32.4 (513.5)	27.2 (431.1)	22.5 (356.6)	18.2 (288.4)
130	693 (929)	38.07 (603.4)	35.28 (559.1)	32.68 (517.9)	30.1 (477.0)	25.26 (400.3)	20.89 (331.1)	16.9 (267.8)
120	639 (857)	35.14 (556.9)	32.57 (516.2)	30.12 (477.4)	27.77 (440.1)	23.3 (369.3)	19.28 (305.5)	15.6 (247.2)
110	586 (786)	32.21 (510.5)	29.85 (473.1)	27.66 (438.4)	25.46 (403.5)	21.37 (338.7)	17.68 (280.2)	14.3 (226.6)
100	533 (714)	29.28 (464.0)	27.14 (430.1)	25.14 (398.4)	23.14 (366.7)	19.43 (307.9)	16.07 (254.7)	13 (206.0)
1	5.33 (7.14)	0.293 (4.64)	0.271 (4.29)	0.251 (3.97)	0.231 (3.66)	0.194 (3.07)	0.161 (2.55)	0.130 (2.06)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

Rated Input Power	970 kW (1300 HP)
Stroke Per Minute	120 SPM
Stroke Length	12"
Gear Ratio	4,206:1
Max. Working Pressure	5000 psi
Valve	API #7
Max. Liner Size	7"
Suction Inlet Flange	12" flange
Discharge Outlet Flange	5 1/8" flange, 5000 psi
Overall Dimension (L×W×H)	15.37 × 7.92 × 6.57 ft³
Approx Weight	54172 lb

Performance Data of RS-F1300 Mud Pump

Liner Size	in	7	6 3/4	6 1/2	6 1/4	6	5 1/2	5
Discharge Pressure	MPa	19.2	20.6	22.3	24.1	26.1	31.1	34.5
	psi	2785	2988	3234	3495	3785	4510	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)						
130	1050 (1408)	49.19 (779.6)	45.74 (725.0)	42.41 (672.2)	39.22 (621.6)	36.14 (572.8)	30.36 (481.2)	25.10 (397.8)
*120	*970 (1300)	45.41 (719.7)	42.22 (669.2)	39.15 (620.5)	36.20 (573.7)	33.36 (528.7)	28.03 (444.2)	23.17 (367.2)
110	889 (1192)	41.63 (659.8)	38.7 (613.41)	35.89 (568.8)	33.18 (525.9)	30.58 (484.7)	25.69 (407.1)	21.24 (336.6)
100	808 (1083)	37.84 (599.7)	35.18 (557.6)	32.63 (517.1)	30.17 (478.2)	27.8 (440.6)	23.36 (370.2)	19.31 (306.0)
90	727 (975)	34.06 (539.8)	31.67 (501.9)	29.36 (465.3)	27.15 (430.3)	25.02 (396.5)	21.02 (333.1)	13.38 (212.0)
50	404 (541)	18.92 (299.8)	17.59 (278.8)	16.31 (258.5)	15.08 (239.0)	13.9 (220.3)	11.68 (185.1)	9.65 (152.9)
1	8.08 (10.8)	0.3784 (6.00)	0.3518 (5.57)	0.3263 (5.17)	0.3017 (4.78)	0.278 (4.40)	0.2336 (3.70)	0.1931 (3.06)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-F 1300L



Rated Input Power	970 kW (1300 HP)
Stroke Per Minute	120 SPM
Gear Ratio	4.206:1
Max. Working Pressure	5000 psi
Cylinder Type	L
Max. Liner Size	7 1/4"
Suction Inlet Flange	12" flange
Discharge Outlet Flange	5 1/8" flange, 5000 psi
Pinion Shaft Dia.×Extension Length	8.5" × 13.23"
Overall Dimension (L×W×H)	15.76 × 7.92 × 6.07 ft ³
Approx Weight	50398 lb

Structural Characters:

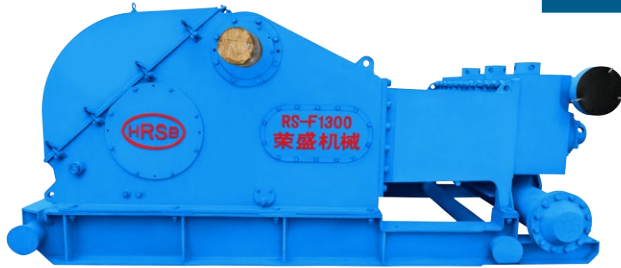
- The frame is welded with steel plates. The pinion shaft bearing seats and the upper and bottom seats of crankshaft are made of cast steel. There are necessary oil sump and oil pipeline system in the frame, which are used for cooling and lubrication.
- The crankshaft is made of cast alloy steel.
- The pinion shaft and the big herringbone gear are made of forged alloy steel with medium hardness gear surface.
- The crosshead is casted with nodular cast iron. The crosshead guides include the upper and the bottom guides. Gaskets may be added under the bottom guide to regulate the concentricity.
- The fluid cylinders are made of forged alloy steel. The cylinders include the suction and the discharge cylinders and they are assembled as L type as the 12-P-160 mud pump of National Oil Well. The cylinder surface is processed by chemical plating in order to increase their resistance to corrosion. The fluid end wearing parts are the same as the 12-P-160 mud pump and can be bought internationally.

Performance Data of RS-F1300L Mud Pump

Liner Size	in	7	6 3/4	6 1/2	6 1/4	6	5 1/2	5
Discharge Pressure	MPa	19.2	20.6	22.3	24.1	26.1	31.1	34.5
	psi	2785	2988	3234	3495	3785	4510	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)						
130	1050 (1408)	49.17 (779.6)	45.7 (725.0)	42.41 (672.2)	39.22 (621.6)	36.14 (572.8)	30.36 (481.2)	25.10 (397.8)
*120	*970 (1300)	45.41 (719.7)	42.22 (669.2)	39.15 (620.5)	36.20 (573.7)	33.36 (528.7)	28.03 (444.2)	23.17 (367.2)
110	889 (1192)	41.63 (659.8)	38.7 (613.4)	35.89 (568.8)	33.18 (525.9)	30.58 (484.7)	25.69 (407.1)	21.24 (336.6)
100	808 (1083)	37.84 (599.7)	35.18 (557.6)	32.63 (517.1)	30.17 (478.2)	27.8 (440.6)	23.36 (370.2)	19.31 (306.0)
90	727 (975)	34.06 (539.8)	31.67 (501.9)	29.36 (465.3)	27.15 (430.3)	25.02 (396.5)	21.02 (333.1)	13.38 (212.0)
50	404 (541)	18.92 (299.8)	17.59 (278.8)	16.31 (258.5)	15.08 (239.0)	13.9 (220.3)	11.68 (185.1)	9.65 (152.9)
1	8.08 (10.8)	0.3784 (6.00)	0.3518 (5.57)	0.3263 (5.17)	0.3017 (4.78)	0.278 (4.40)	0.2336 (3.70)	0.1931 (3.06)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-F 1300FT



Rated Input Power	970 kW (1300 HP)
Stroke Per Minute	120 SPM
Stroke Length	12"
Gear Ratio	4.206:1
Max. Working Pressure	5000 psi
Valve	API #7
Max. Liner Size	7"
Suction Inlet Flange	12" flange
Discharge Outlet Flange	5 1/8" flange, 5000 psi
Overall Dimension (L×W×H)	14.74 × 8.18 × 6.40 ft ³
Approx Weight	52050 lb

Structural Characters:

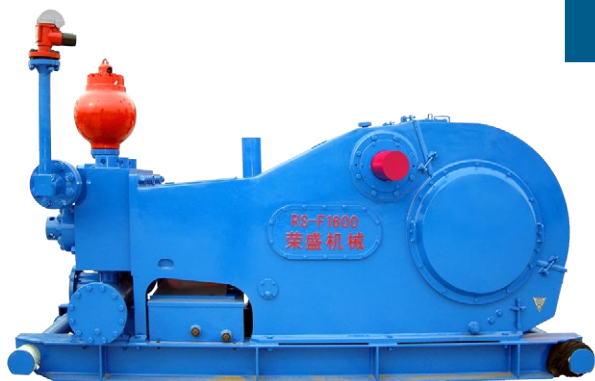
The frame of the RS-F1300FT split pump is split structure. The maximum weight of a single module of the split pump is not more than 7496lb (3400kg). It can be transported by aircraft. It meets the drilling needs of the jungle and other places where the traffic is inconvenient. Pump performance parameters is the same as RS-F1300 drilling pump.

Performance Data of RS-F1300FT Mud Pump

Liner Size	in	7	6 3/4	6 1/2	6 1/4	6	5 1/2	5
Discharge Pressure	MPa	19.2	20.6	22.3	24.1	26.1	31.1	34.5
	psi	2785	2988	3234	3495	3785	4510	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)						
130	1050 (1408)	49.19 (779.6)	45.74 (725.0)	42.41 (672.2)	39.22 (621.6)	36.14 (572.8)	30.36 (481.2)	25.10 (397.8)
*120	*970 (1300)	45.41 (719.7)	42.22 (669.2)	39.15 (620.5)	36.20 (573.7)	33.36 (528.7)	28.03 (444.2)	23.17 (367.2)
110	889 (1192)	41.63 (659.8)	38.7 (613.4)	35.89 (568.8)	33.18 (525.9)	30.58 (484.7)	25.69 (407.1)	21.24 (336.6)
100	808 (1083)	37.84 (599.7)	35.18 (557.6)	32.63 (517.1)	30.17 (478.2)	27.8 (440.6)	23.36 (370.2)	19.31 (306.0)
90	727 (975)	34.06 (539.8)	31.67 (501.9)	29.36 (465.3)	27.15 (430.3)	25.02 (396.5)	21.02 (333.1)	13.38 (212.0)
50	404 (541)	18.92 (299.8)	17.59 (278.8)	16.31 (258.5)	15.08 (239.0)	13.9 (220.3)	11.68 (185.1)	9.65 (152.9)
1	8.08 (10.8)	0.3784 (6.00)	0.3518 (5.57)	0.3263 (5.17)	0.3017 (4.78)	0.278 (4.40)	0.2336 (3.70)	0.1931 (3.06)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-F 1600



Rated Input Power	1193 kW (1600 HP)
Stroke Per Minute	120 SPM
Stroke Length	12"
Gear Ratio	4.206:1
Max. Working Pressure	5000 psi
Valve	API #7
Max. Liner Size	7 1/4"
Suction Inlet Flange	12" flange
Discharge Outlet Flange	5 1/8" flange, 5000 psi
Overall Dimension (L×W×H)	15.37 × 7.92 × 6.57 ft³
Approx Weight	54567 lb

Performance Data of RS-F1600 Mud Pump

Liner Size	in	7 1/4	7	6 3/4	6 1/2	6 1/4	6	5 1/2	5
Discharge Pressure	MPa	22.0	23.6	25.4	27.4	29.6	32.1	34.5	34.5
	psi	3190	3420	3684	3974	4293	4655	5000	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)							
130	1292 (1733)	52.77 (836.4)	49.19 (779.6)	45.74 (725.00)	42.41 (672.2)	39.22 (621.6)	36.14 (572.8)	30.36 (481.2)	25.10 (397.8)
*120	*1193 (1600)	48.71 (772.0)	45.41 (719.7)	42.22 (669.2)	39.15 (620.5)	36.20 (573.7)	33.36 (528.7)	28.03 (444.2)	23.17 (367.2)
110	1093 (1466)	44.65 (707.7)	41.63 (659.8)	38.7 (613.4)	35.89 (568.8)	33.18 (525.9)	30.58 (484.7)	25.69 (407.2)	21.24 (336.6)
100	994 (1333)	40.59 (643.3)	37.84 (599.7)	35.18 (557.6)	32.63 (517.2)	30.17 (478.2)	27.8 (440.6)	23.36 (370.2)	19.31 (306.0)
90	895 (1200)	36.53 (579.0)	34.06 (539.8)	31.67 (502.0)	29.36 (465.3)	27.15 (430.3)	25.02 (396.6)	21.02 (333.1)	17.37 (275.3)
50	497 (666)	20.29 (321.6)	18.92 (299.9)	17.59 (278.8)	16.31 (258.5)	15.08 (239.0)	13.9 (220.3)	11.68 (185.1)	9.65 (152.9)
1	9.94 (13.3)	0.406 (6.43)	0.3784 (6.00)	0.3518 (5.57)	0.3263 (5.17)	0.3017 (4.78)	0.278 (4.41)	0.2336 (3.71)	0.1931 (3.06)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-QF 1600



Rated Input Power	1193 kW (1600 HP)
Stroke Per Minute	120 SPM
Stroke Length	11"
Gear Ratio	3.778:1
Max. Working Pressure	5000 psi
Valve	API #7
Max. Liner Size	7"
Suction Inlet Flange	10" flange
Discharge Outlet Flange	4 1/16" flange, 5000 psi
Overall Dimension (L×W×H)	14.3 × 7.28 × 6.36 ft ³
Approx Weight	41623 lb

Structural Characters:

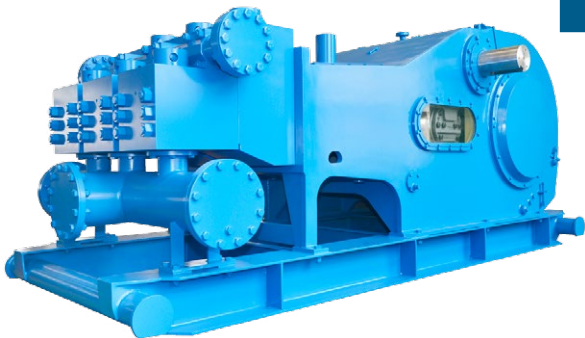
- The crankshaft adopts assembled structure, and the material is high quality alloy steel forging. The pump has the characteristics of light weight, large carrying capacity, high anti fatigue strength and full balance, so that the pump operates more smoothly.
- Gear is herring bone gear transmission. The tooth surface is treated by carburizing and quenching process, the grinding process, the tooth surface hardness is high, the tooth profile error is small. It has the advantages of large carrying capacity, strong anti pitting corrosion resistance, high transmission accuracy, highly stability and so on.
- Guide is casting copper alloy plate. Compared with the conventional cast iron plate, the guide has highly capacity and long service life.
- The main structure of the hydraulic end and conventional F pumps are the same.
- RS-QF1600 pump compared with the ordinary F1600 pump, the whole machine weight loss rate of 28.3%, more convenient for hoisting and transportation.

Performance Data of RS-QF1600 Mud Pump

Liner Size	in	7	6 3/4	6 1/2	6 1/4	6	5 1/2
Discharge Pressure	MPa	23.7	25.5	27.5	29.8	32.3	34.5
	psi	3440	3700	3990	4320	4685	5000
Stroke per Minute SPM	Power kW (HP)	Displacement L/s (GPM)					
140	1285 (1723)	48.9 (775.0)	45.5 (721.1)	42.2 (668.8)	39.0 (618.1)	35.9 (569.0)	30.2 (478.6)
*130	*1193 (1600)	45.2 (716.4)	42.0 (665.7)	39.0 (618.1)	36.0 (570.6)	33.2 (526.2)	27.9 (442.2)
120	1101 (1477)	41.7 (660.9)	38.7 (613.4)	35.9 (569.0)	33.2 (526.2)	30.6 (485.0)	25.7 (407.3)
110	1009 (1354)	38.2 (605.5)	35.5 (562.6)	32.9 (521.4)	30.4 (481.4)	28.0 (443.8)	23.6 (374.0)
100	918 (1231)	34.7 (550.0)	32.3 (512.0)	29.9 (473.9)	27.7 (439.0)	25.5 (404.2)	21.4 (339.2)
50	459 (615)	17.3 (274.2)	16.1 (255.2)	14.9 (236.1)	13.8 (218.7)	12.7 (201.3)	10.7 (169.6)
1	9.18 (12.3)	0.347 (5.50)	0.323 (5.12)	0.299 (4.74)	0.277 (4.39)	0.255 (4.04)	0.214 (3.39)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-F 1600HL



Rated Input Power	1193 kW (1600 HP)
Stroke Per Minute	120 SPM
Stroke Length	12"
Gear Ratio	4.206:1
Max. Working Pressure	7500 psi
Valve	API #7
Max. Liner Size	7 1/4"
Suction Inlet Flange	12" flange
Discharge Outlet Flange	5 1/8" flange, 10000 psi
Overall Dimension (L×W×H)	16.24 × 7.92 × 6.84 ft³
Approx Weight	56817 lb

Structural Characters:

RS-F1600HL high pressure drilling pump based on the conventional RS-F1600 pump power end structure, upgraded the RS-F1600 hydraulic end, used the L shaped liquid cylinder. The maximum working pressure can reach 51.7MPa (7500psi).

Performance Data of RS-F1600HL Mud Pump

Liner Size	in	7 1/4	7	6 3/4	6 1/2	6 1/4	6	5 1/2	5	4 1/2
Discharge Pressure	MPa	22.0	23.6	25.4	27.4	29.7	32.2	38.3	46.3	51.7
	psi	3190	3422	3683	3973	4307	4669	5555	6715	7500
Stroke per Minute SPM	Power kW(HP)	Displacement L/s (GPM)								
120	1193 (1600)	48.71 (772.0)	45.41 (719.7)	42.22 (669.2)	39.15 (620.5)	36.20 (573.7)	33.36 (528.7)	28.03 (444.2)	23.17 (367.2)	18.77 (281.7)
110	1093 (1466)	44.65 (707.7)	41.63 (659.8)	38.7 (613.4)	35.89 (568.8)	33.18 (525.9)	30.58 (484.7)	25.69 (407.2)	21.24 (336.6)	17.20 (272.6)
100	994 (1333)	40.59 (643.3)	37.84 (599.7)	35.18 (557.6)	32.63 (517.2)	30.17 (478.2)	27.8 (440.6)	23.36 (370.2)	19.31 (306.0)	15.64 (248.1)
90	895 (1200)	36.53 (579.0)	34.06 (539.8)	31.67 (502.0)	29.36 (465.3)	27.15 (430.3)	25.02 (396.5)	21.02 (333.1)	17.37 (212.0)	14.08 (223.2)
50	497 (666)	20.29 (321.6)	18.92 (299.9)	17.59 (278.8)	16.31 (258.5)	15.08 (239.0)	13.9 (220.3)	11.68 (185.1)	9.65 (152.9)	7.82 (123.9)
1	9.94 (13.3)	0.406 (6.43)	0.3784 (6.00)	0.3518 (5.57)	0.3263 (5.17)	0.3017 (4.78)	0.278 (4.41)	0.2336 (3.71)	0.1931 (3.06)	0.1564 (2.48)

● Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.

RS-QF 1600HL



Rated Input Power	1193 kW (1600 HP)
Stroke Per Minute	130 SPM
Stroke Length	11"
Gear Ratio	3.778:1
Max. Working Pressure	7500 psi
Valve	API #7
Max. Liner Size	7"
Suction Inlet Flange	12" flange
Discharge Outlet Flange	4 1/16" flange, 10000 psi
Overall Dimension (L×W×H)	15.76 × 7.28 × 6.51 ft ³
Approx Weight	49339 lb

Structural Characters:

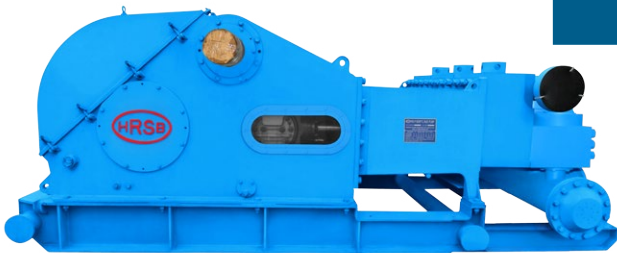
RS-QF1600HL light high pressure drilling pump bases on RS-QF1600 light pump power end structure. The fluid end structure is upgraded. RS-QF1600HL light high pressure drilling pump has absorbed the advantages of the existing drilling pump. The structure and parameters are optimized by using the modern design method. The pump has small volume and light weight. It can be used in the volume and quality index limitation occasions, such as marine, swamp, jungle region for drilling. It also can meet the requirements of high pressure jet drilling technology. The maximum working pressure can reach 51.7MPa (7500psi). Compared with F-1600HL pump, the whole machine weight loss 5.5 tons. And it has the advantages of advanced structure, light weight, stable work, long life, easy to maintain and so on.

Performance Data of RS-QF1600HL Mud Pump

Liner Size	in	7	6 3/4	6 1/2	6 1/4	6	5 1/2	5	4 1/2
Discharge Pressure	MPa	23.7	25.56	27.6	29.8	32.31	38.5	46.79	51.7
	psi	3437	3706	4002	4321	4685	5583	6785	7500
Stroke per Minute SPM	Power kW(HP)	Displacement L/s (GPM)							
140	1285 (1723)	48.6 (770.3)	45.2 (716.4)	41.9 (664.1)	38.8 (615.0)	35.7 (565.8)	30.0 (475.5)	24.8 (393.0)	20.1 (318.6)
*130	*1193 (1600)	45.2 (716.4)	42.0 (665.7)	38.9 (616.5)	36.0 (570.6)	33.2 (526.2)	27.9 (442.2)	23.0 (364.5)	18.6 (294.8)
120	1101 (1477)	41.7 (660.9)	38.7 (613.4)	35.9 (569.0)	33.2 (526.2)	30.6 (485.0)	25.7 (407.3)	21.2 (336.0)	17.2 (272.6)
110	1009 (1354)	38.2 (605.5)	35.5 (562.7)	32.9 (521.5)	30.5 (483.4)	28.0 (443.8)	23.6 (374.0)	19.5 (309.0)	15.8 (250.4)
100	918 (1231)	34.7 (550.0)	32.3 (512.0)	30.0 (475.5)	27.7 (439.0)	25.5 (404.2)	21.4 (339.2)	17.7 (280.5)	14.3 (226.6)
50	459 (615)	17.4 (275.8)	16.1 (255.2)	15.0 (237.8)	13.8 (218.7)	12.7 (201.3)	10.7 (169.6)	8.8 (139.5)	7.2 (114.1)
1	9.18 (12.3)	0.347 (5.50)	0.323 (5.12)	0.300 (4.75)	0.277 (4.39)	0.255 (4.04)	0.214 (3.39)	0.177 (2.81)	0.143 (2.27)

- Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.
- The * present the recommendatory SPM and input power when mud pump runs continuously.

RS-F 1600FTL



Rated Input Power	1193 kW (1600 HP)
Stroke Per Minute	120 SPM
Stroke Length	12"
Gear Ratio	4.206:1
Max. Working Pressure	7500 psi
Valve	API #7
Max. Liner Size	7 1/4"
Suction Inlet Flange	12" flange
Discharge Outlet Flange	5 1/8" flange, 10000 psi
Overall Dimension (L×W×H)	16.27 × 8.18 × 6.40 ft ³
Approx Weight	57739 lb

Structural Characters:

The frame of the RS-F1600FTL split high pressure pump is split structure. The maximum weight of a single module of the split pump is not more than 8818.5lb (4000kg). It can be transported by aircraft. It meets the drilling needs of the jungle and other places where the traffic is inconvenient. L shaped liquid cylinder is adopted on fluid end. The maximum working pressure can reach 51.7MPa (7500psi).

Performance Data of RS-F1600FTL Mud Pump

Liner Size	in	7 1/4	7	6 3/4	6 1/2	6 1/4	6	5 1/2	5	4 1/2
Discharge Pressure	MPa	22.0	23.6	25.4	27.4	29.7	32.2	38.3	46.3	51.7
	psi	3190	3422	3683	3973	4307	4669	5555	6715	7500
Stroke per Minute SPM	Power kW(HP)	Displacement L/s (GPM)								
120	1193 (1600)	48.71 (772.0)	45.41 (719.7)	42.22 (669.2)	39.15 (620.5)	36.20 (573.7)	33.36 (528.7)	28.03 (444.2)	23.17 (367.2)	18.77 (281.7)
110	1093 (1466)	44.65 (707.7)	41.63 (659.8)	38.7 (613.4)	35.89 (568.8)	33.18 (525.9)	30.58 (484.7)	25.69 (407.2)	21.24 (336.6)	17.20 (272.6)
100	994 (1333)	40.59 (643.3)	37.84 (599.7)	35.18 (557.6)	32.63 (517.2)	30.17 (478.2)	27.8 (440.6)	23.36 (370.2)	19.31 (306.0)	15.64 (248.1)
90	895 (1200)	36.53 (579.0)	34.06 (539.8)	31.67 (502.0)	29.36 (465.3)	27.15 (430.3)	25.02 (396.5)	21.02 (333.1)	17.37 (212.0)	14.08 (223.2)
50	497 (666)	20.29 (321.6)	18.92 (299.9)	17.59 (278.8)	16.31 (258.5)	15.08 (239.0)	13.9 (220.3)	11.68 (185.1)	9.65 (152.9)	7.82 (123.9)
1	9.94 (13.3)	0.406 (6.43)	0.3784 (6.00)	0.3518 (5.57)	0.3263 (5.17)	0.3017 (4.78)	0.278 (4.41)	0.2336 (3.71)	0.1931 (3.06)	0.1564 (2.48)

• Performance data are calculated by 90% mechanical efficiency and 100% volumetric efficiency.