

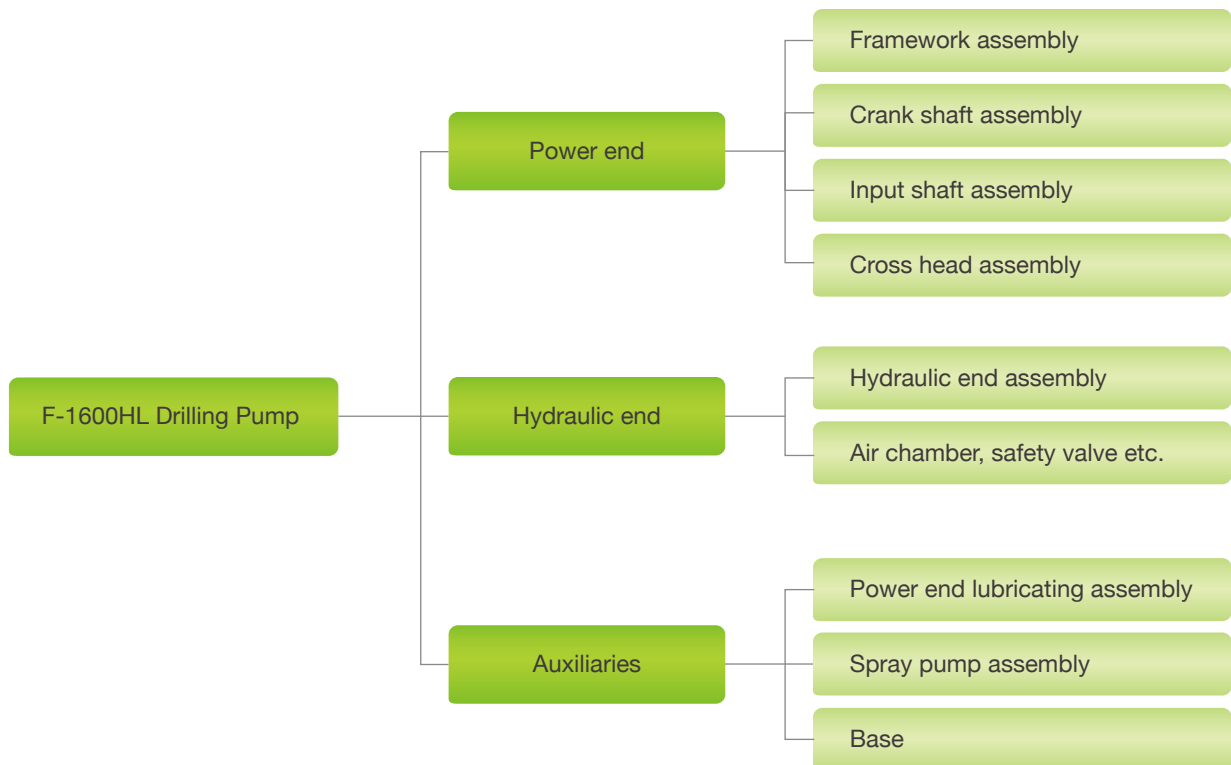
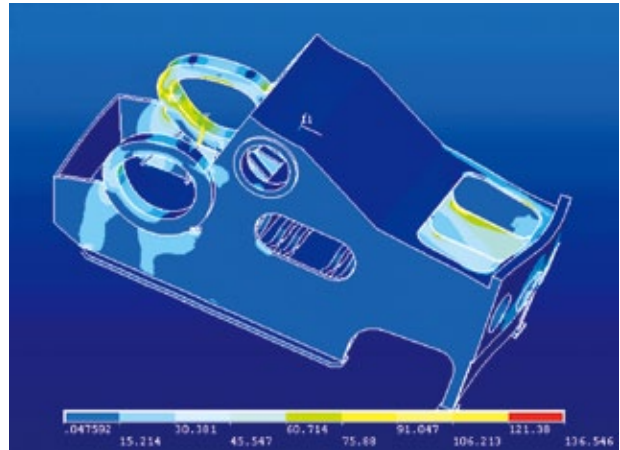
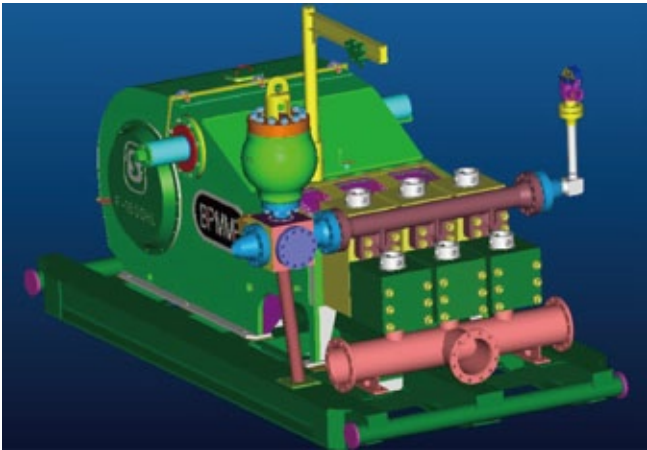


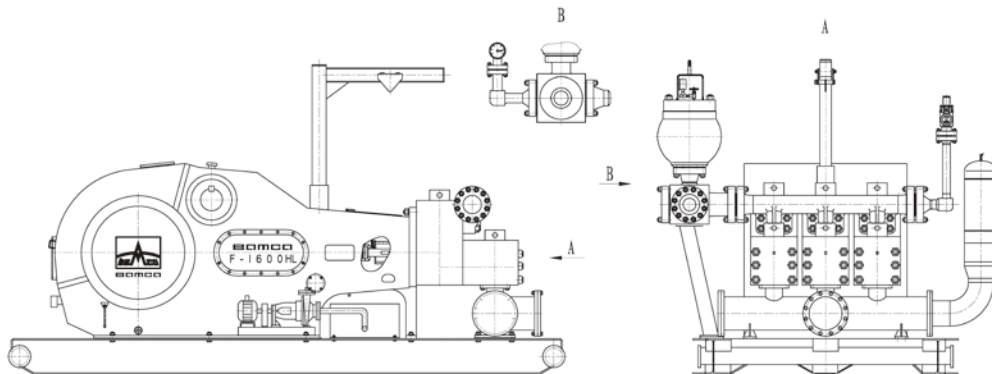
F-1600HL Drill Pump

China National Petroleum Corporation



F-1600HL drilling pump, developed and manufactured by CNPC Baoji Oilfield Machinery Co., Ltd. (BOMCO), is characterized by large displacement, high pressure and strong reliability. Its power end is almost the same with F-1600 pump, and its hydraulic end adopts an L-shaped structure, with displacement increased by 11.4% and maximum pressure increased from 35MPa to 52MPa. F-1600HL drilling pump is mainly used in drilling operations requiring large displacement and high pressure, such as drilling of cluster wells, extended reach wells and horizontal wells, as well as high pressure jet drilling. It is adaptable to 7,000m and 9,000m onshore rigs and offshore platform rigs.

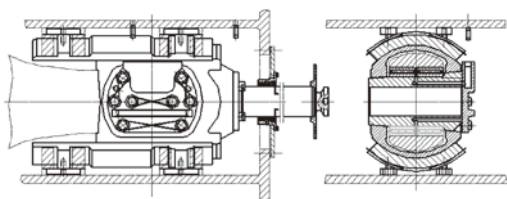
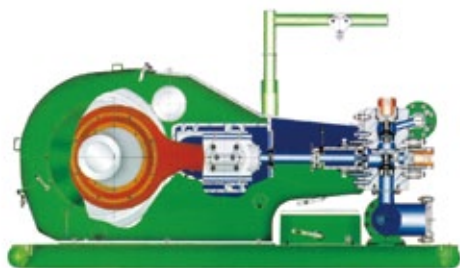




Technical Features

- ✔ The crank shaft is in even wall thickness and underwent cementing process simulation analysis, with forging performance and product quality improved greatly.
- ✔ L-shaped hydraulic cylinders, including both suction and drain cylinders, are adopted, with the merits of high bearing capacity, and convenient replacement of suction and drain valves.
- ✔ The simultaneous cooling equipment and technology for internal and external surfaces of the cylinder liner greatly improves the life cycle of the liner piston, which has been granted with invention patents of both USA and China.
- ✔ It is equipped with both common and high pressure valves, among which common valve is used for large displacement, and high pressure valve is used for high drainage pressure (over 35MPa).
- ✔ The exhaust air chamber shell and auxiliary drainage pipe use integrally forged pieces, with no weld joint and high reliability.
- ✔ It is equipped with the suction air chamber canister without air pocket and with no need for gas charging, which has good function of balancing the suction pressure.
- ✔ External forced lubrication plus splash lubrication is adopted, with great lubricating and cooling effect and high reliability. Its power end is designed to have an oil gathering box, which can further improve the splash oil gathering and lubricating effect of the power end.





Technical Parameters

- ✓ Rated input power: 1193 kW (1600 hp)
- ✓ Stroke: 304.8 mm (12")
- ✓ Rated strokes: 120 min⁻¹
- ✓ Max. pump pressure: 51.7 MPa (7500 psi)
- ✓ Max. displacement: 51.85 L/s (1042 GPM)
- ✓ Gear ratio: 4.206:1
- ✓ Inlet flange: $\Phi 305$ mm (12")
- ✓ Outlet flange: $\Phi 130$ mm (5-1/8"API 10000psi)
- ✓ Valve specification: API 7#
- ✓ Single pump weight: 29,400 kg (including basement, exhaust pipe, five way union, air bag and other accessories)

Model		F-1600HL							
Power rating (kW)		1193 (1600 hp)							
Stroke (mm)		304.8 (12")							
Rated strokes per minute		120							
Piston diameter (mm)		190	180	170	160	150	140	130	120
Max. pressure	MPa	20.7	23.1	25.9	29.2	33.2	38.1	44.2	51.7
	psi	3000	3344	3749	4233	4816	5529	6412	7500
Max. capacity	L/s	51.85	46.54	41.51	36.77	32.32	28.15	24.27	20.68
	GPM	822	738	658	583	512	446	385	328
Inlet flange (mm)		$\Phi 305$ (12")							
Outlet flange (mm)		$\Phi 130$ (5-1/8" API 10000psi)							
Single pump weight (kg)		29,400 (including the base, discharge pipe, five-path, and air chamber etc.)							