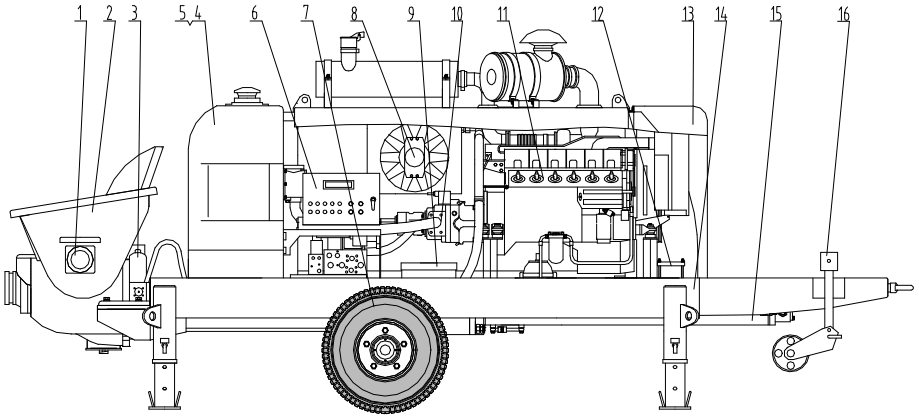
Chapter 1 Main technology parameter

Model			ZP 814 D
Pumping system	Max. theo. concrete output (L./H.)	m^3/h	80/46
	Max.concrete pumping pressure (H./L.)	MPa	14/8
	Strokes/minute (L./H.)		28/14
	Distributing valve style		Spipe valve
	Concrete cylinder diameter×stroke	mm	Φ200×1710
	Hopper capacity×feeding height	mm	600×1410
	Outlet diameter	mm	Φ180
Power system	Diesel engine model		HA694NA
	Rated power	kW	73.55
	Rated speed	r/min	2300
	Tail gas exhaust standard		/
Hydraulic system	Circuit type		Open circuit
	Pumping system pressure	MPa	32
	Distributing system pressure	MPa	19
	Mixing system pressure	MPa	14
	Max mixing speed	r/min	29
	Capacity of oil tank	L	350
Others	Capacity of fuel tank	L	205
	Max. aggregate diameter/ Inside diameter of delivering pipe	mm	50/Φ150 40/Φ125
	Inside diameter of delivering pipe	mm	Φ125/Φ150
	Dimensions：length×width×height	mm	6470×2220×2260
	Total weight	kg	6020

Chapter 2 Main part names



Part names：

SN.	1	2	3	4
Name	Agitator	Hopper	Distributing system	Hydraulic oil tank
SN.	5	6	7	8
Name	Oil tank	Electric cabinet	Drag mechanism	Cooling system
SN.	9	10	11	12
Name	Lubricating system	Hydraulic system	Diesel engine	Battery
SN.	13	14	15	16
Name	Cover	Frame	Pumping system	Supporting wheel

Chapter 3 Capability feature

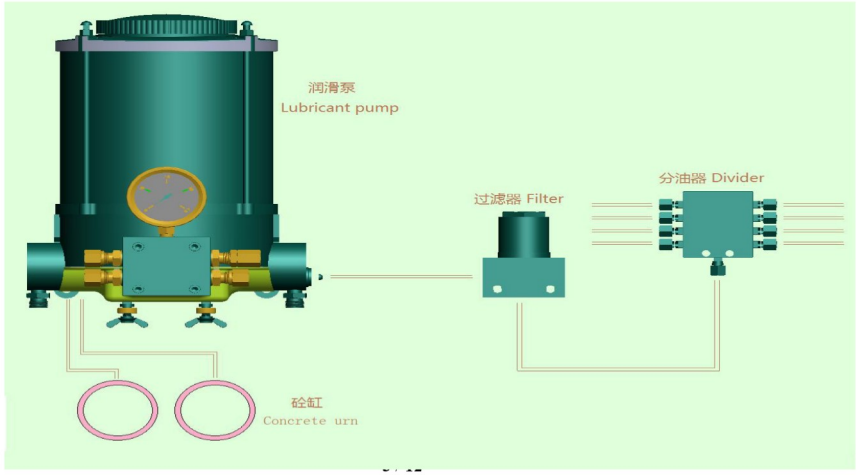
3.1 Machine performance

3.1.1 Great reliability

I. Industry controller which ensures great reliability, powerful function, and high level IP (Ingress protection) , is applied as the core of the control system. ZP 814 D is fully capable of working in tough working condition. Modularization designed switches, nobs, and buttons are easy to extend function.

II. The main components of the pumping unit have been thoroughly calculated, analyzed, tested for strength and stiffness under different working conditions.

III. Pressure boost lubrication technology: Apply synchronized lubrication pump which has the advantage of high working pressure, less pipe jam rate, compact structure, lower noise, steady supply, and easy maintenance.



3.1.2 High efficiency

I. Apply flow simulation analysis to concrete hopper, cylinder, S-tube valve, and optimize the structure of the hopper to reduce concrete accumulation zone. The general concrete suction efficiency is 10% higher than average in the industry.

II. Pumping adapting technology: Improve the pumping ability for poor quality concrete by pumping control program, and optimizing the suction & discharging runner of pumping structure (Reduce pumping resistance, pumping jam rate, pumping stability).

III. Apply underlying interior spring suspension structure to adapt multiple terrain. The trailing speed is greatly increased.

3.1.3 Cost performance:

Long life span & low running cost consumable part:

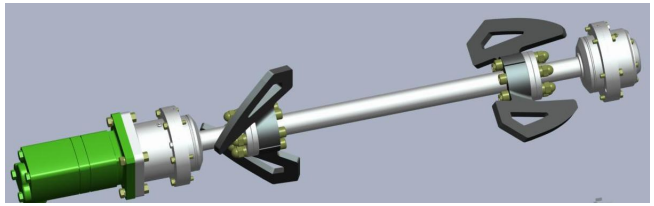
I. High anti-abrasion spectacles plate, wear ring: Life span is increased by 30% through applying highly durable materials. Leading the industry.

II. Reinforced concrete cylinder & pipe: By applying latest electroplating process to reduce the falling of hard chromium coating. The abrasion resistance of the hard chromium coating is increased by more than 10%. By introducing Italian CIFA quenching machine, and applying the axial velocity of the four-section controlled surface quenching to ensure better hardness and better abrasion resistance of the pipe interior surface. At the same time the pipe can still maintain fine ductility. Thus solve the pipe explosion issue of other producers.

III. New type S-tube valve: Optimizing S-tube valve runner, reducing the concrete pumping resistance in S-tube valve, and increasing the life span by 30% through applying professional ANSYS software for flow simulation analysis.

IV. New type concrete piston: Improving the working condition adaptability, increasing abrasion resistance by applying anti-hydrolysis polyurethane complex material in high temperature environment. The life span is increased to around 12,000 cubic meter, when pumping C30 concrete below build of 30 floors.

V. New type mixing paddle: Computer simulated paddle surface and new type integrated axial bolt design provide compact structure and perfect geometric appearance. The life span is increased by 60% when pumping C30 concrete.



3.1.4 Safety：

I. Over heat alarm: Protect engine from over heat in high temperature region.

3.3 Hydraulic system

3.3.1 Dual pump dual circuit hydraulic system

I. Apply dual main pump to supply pumping system, and then distribution system in sequence. The 92% of engine power shall be transferred to pumping system. Consuming relatively small power to acquire great pumping ability. The main pump is equipped with pressure cut-off, and constant power function. The concrete output shall change according to real time pumping pressure automatically. This mechanism ensures the safety and stability of the power consumption. In addition, manually adjustment for concrete output is also available for the user.