

ZLJ5415THB 52-6RZ

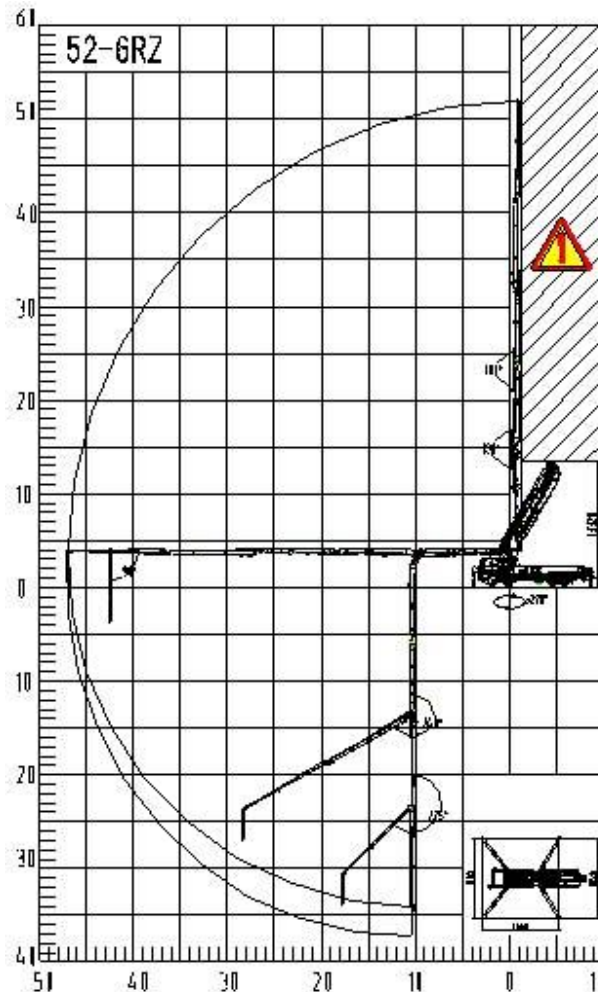
ZLJ5415THB 52-6RZ truck-mounted concrete pump

1. Main technology parameter

Model		ZLJ5415THB 52-6RZ	
Pumping system	Max. Theor. output	m ³ /h	150
	Max. Theor. concrete output Pressure	MPa	8.5
	Rated working pressure	MPa	35
	Pumping frequency	min ⁻¹	23
	Hopper capacity	L	600
	Filling height	mm	1540
	Hydraulic system type		Close loop
	Distribution valve		S valve
	Oil cylinder dia. × stroke	mm	φ 130×2100
	Concrete cylinder dia. × stroke	mm	φ 260×2100
	Hydraulic oil cooling		Air cooling
	Recommended concrete slump	cm	12~23
	Max. aggregate dimension	mm	40
Placing boom	Structure type		52-6RZ
	Placing depth	m	52
	Horizontal distance	m	47
	Placing depth	m	37.3
	Slewing angle		±270°
	Boom number		5
	The length of boom section	mm	10710/8420/8090/10180/6100/4500
	Sections folding angle		90° /180° /180° /240° /250° /90°
	Pipe diameter	mm	125
	End hose length	mm	3000
	Min. height of opening placing boom	mm	13320
	Outriggers span (front × rear × side)	mm	10715×10535×10660
Chassis and the whole machine	Chassis model		Actros 4141 8×4
	Wheelbase	mm	1700+4600+1350
	Engine type		OM501LA
	Engine power	kW/(r/min)	300/1800
	Engine moment	N.m/(r/min)	2000/1080
	Maximum displacement	cc	11946
	Oil tank cubage	L	400
	Tail gas exhaust standard		Euro. III
Total weight	kg	40000	

	Overall dimensions	mm	13125×2500×4000
Others	Lubrication mode		Automatic lubrication
	Oil tank volume	L	800
	Control mode		Manual+ remote control
	Maximum water pressure	MPa	7
	Water tank volume	L	400
	Pipe cleaning mode		Water cleaning/dry cleaning

2. Working scope fig.



3. Capability feature

3.1 Chassis

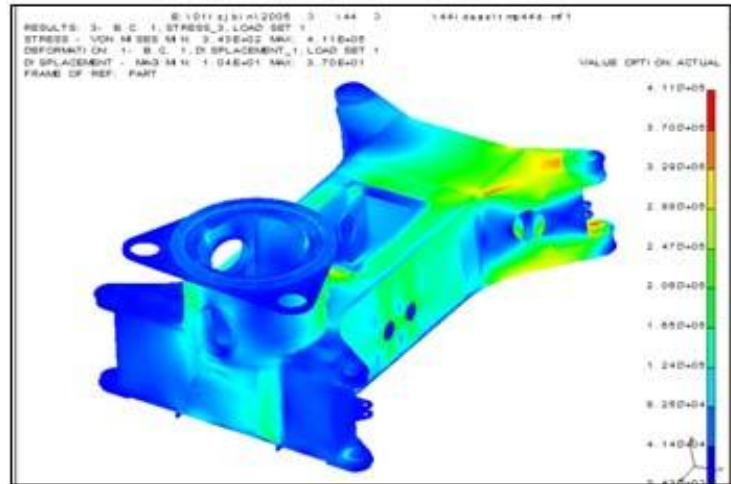
The 52m truck-mounted concrete pump adopts BENZ chassis, ISUZU chassis, and so on.

3.2 Boom system

Boom, swivel head, swivel framework, base structure and stabilizer consists boom system.

- 3. 2. 1Wide placing range: the 52-6RZ placing boom is manufactured by Zoomlion itself. Its' horizontal radius is 47m, and the maximum vertical reach is 52m.

3. 2. 2 Extractive design: ZOOMLION is the first corporation that introduces into PRO/E、ANSYS、ADMAS、IDEAS software, and so on .Through analysis for the boom、 base structure and stabilizer, stress is very reasonable. According to the calculation, engineers rectify the design, so this will make the boom system more reasonable and unparalleled.



3. 2. 3 Light weight: strong rigidity Boom frame is made of high strength alloy steel, which designed with the newest structure. Thus the placing boom becomes less weight with better mechanics performance and much stronger rigidity.

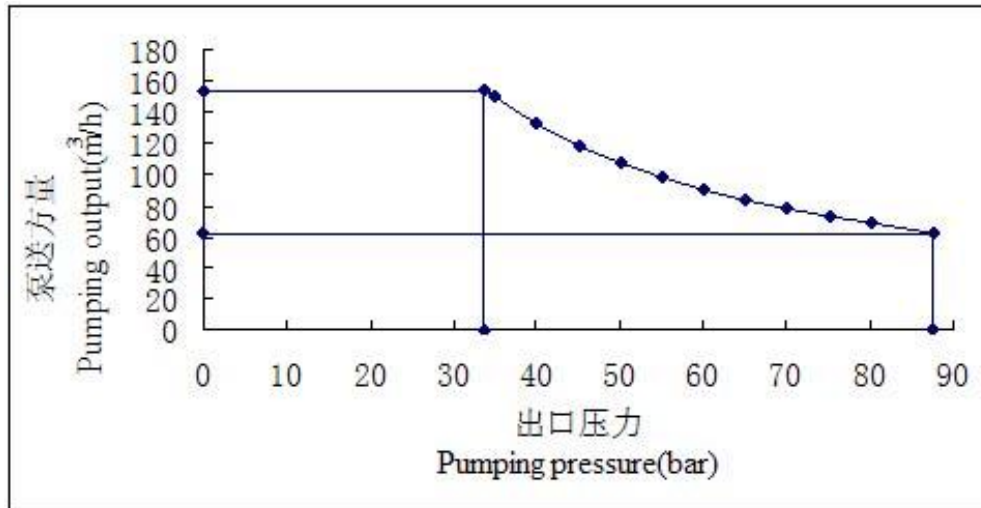
3. 2. 4 More steady: equipped with slewing reducer、 slewing bearing which with advanced technique in world and electro-hydraulic proportional direction valve, etc. All of these ensure the boom’s motion of slewing and extension more steady.

3. 2. 5 High reliability: electro-hydraulic proportional valves and compensation valve with secondary pressure relief valves are all original ones imported from Germany HAWE. This prevents boom going at excessive speed while it being folded back. And this also prevents boom being damaged in case of the increase of pressure in boom cylinders caused by outside force. So, the reliability of the whole machine is improved effectively.

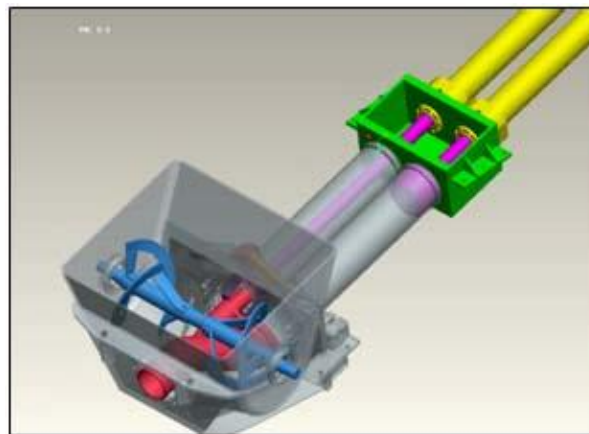
3. 3 Pumping system

3. 3. 1 Less impulsion: with the utilization of best time difference logic switch technology, the match time of main hydraulic cylinders’ switching-over and S tube’s swing is in the best state. And the impulsion of hydraulic system while changing direction is much less.

3. 3. 2 High technology performance: large displacement hydraulic pumps supply oil to the pumping hydraulic system. By using this system, not only the reliability of the machine is improved, the performance of the machine is much better. The maximum theoretic concrete output can reach 150m³ per hour, and the maximum pressure can reach 8.5MPa.



3. 3. 3 High efficient suction: Big cylinder diameter, long stroke, small obliquity and the newest structure of the hopper and S tube, all of them improves the ability of concrete suction as well as the efficiency of power's utilization.



3. 3. 4 High reliability: hydraulic components and electrical components are all from international famous companies. The outstanding design of the whole system ensures the high reliability and low cost.

3. 4 Electricity system

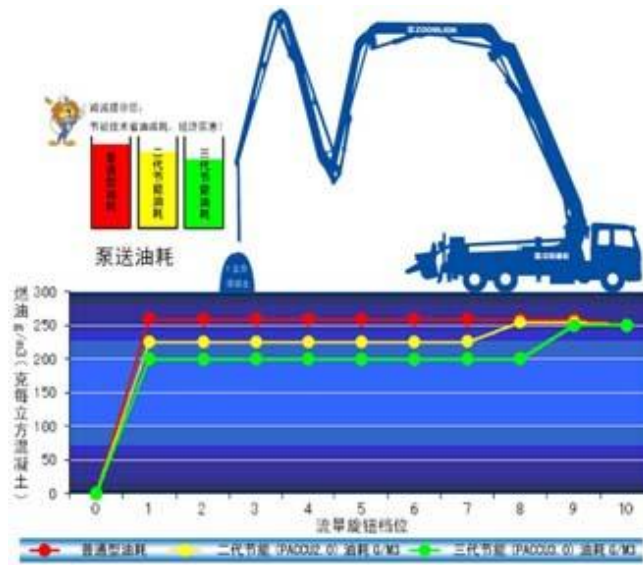
3. 4. 1 The advanced and reliable electricity equipment: Zoomlion truck-mounted concrete pump has the advanced digital technology control, the intelligent global detection and the self-check trouble system. The electric control box has the flexible outside, excellent manufactory crafts. This equipment runs the high-smart control system reliable, steadily and safely in chassis and pump control.

3. 4. 2 Full function remote control: original Germany remote control can do it very conveniently and reliably to operate placing boom、 pumping units system、 the chassis diesel and etc.

3. 5 Low cost

3. 5. 1 Low oil cost : our truck-mounted concrete pump adopts new technology who can economize energy sources. The computer can read engine rotate speed、 pumping pressure and concrete output, and can

make the engine power match the load demand power after calculation. Saving 26% diesel per stere concrete.



3. 5. 2 High power utilization: placing boom and pumping units system all apply constant power variable control, which will reduce the power loss and improve the system efficiency, with ensuring whole machine’s performance.

3. 5. 3 Parts which are very damageable cost lower

3. 5. 3. 1 Bend pipe is molten, which makes pipe’s thickness even, so bend pipe’s life is very longer.



3. 5. 3. 2 Inner surface of pipe is quenched by super frequency and the end of letting in concrete is inlaid with alloy bush, which makes the pipe’s life is longer than 30000m³.

3. 5. 3. 3 Glasses and cutting ring adopt alloy that is wearable and especial technology, so they have the longer life.



3. 5. 4 Low use cost: adopting pneumatic lubrication system, which is originate in the trade. This system has absolute stability and ; this system is operated and maintained .Its failure probability is very lower.



4. Manufacture ability

ZOOMLION has very big workshop、high exact machining machine and high making employee; ZOOMLION has horizontal machining center、numerical control double-face boring lathe、numerical control boring-milling machine ,and so on; ZOOMLION has advanced paint line used for painting parts and whole machine; ZOOMLION has instrument which can calculate granule and control cleanness degree, so hydraulic system cleanness degree can be assured; ZOOMLION has numerical control flex machine、plasma cutting machine working under the water、automation welding machine、three coordinate lineation machine 、ultrasonic detector, and so on ,so structure parts quality can be assured.

5. Main components

5. 1Main assembly components

SN	Name	Company	Country
1	Chassis	BENZ	Germany
2	Placing boom	ZOOMLION	CHINA
3	Base structure and outrigger	ZOOMLION	CHINA
4	Swivel reducer		Italy

5	Remote control	HBC/NBB/HETRNIC	Germany
6	Transfer box		Germany

5.2 Main assemblies of hydraulic system

SN	Name	Manufacturer
1	Hydraulic pumps group	REXROTH/KPM
2	Hydraulic pump of placing boom	REXROTH/PSM
3	Hydraulic valve	REXROTH
4	Multi- valve of placing boom	HAWE/ REXROTH
5	Multi- valve of outrigger	Italy Oil control
6	Balance valve	HAWE/LUEN
7	Mixing motor	EATON
8	Oil filter	Italy MP/ Germany INTERNOMAN

5.3 Main assemblies of electric system

SN	Name	Trademark	Note
1	Control	IFM	German
2	Coder	P+F	German
3	Touch screen	Schneider	France
4	Relay	Schneider	France
5	Switch	Schneider	France
6	Breaker	Schneider	France
7	Sensor	Danfoss	Denmark

6. Main patents

SN	Patent name	Patent number
1	Bidirectional columniation grease lubrication pump	95236140.X
2	Cushion device used for columniation oil cylinder of concrete pump	96224468.6
3	Columniation device which can suck and vent slurry	02223548.5
4	High-low pressure switch device	02277152.2

5	Device used for mixing and jetting slurry	03227330.4
6	Valve preventing concrete from flowing	03227524.2
7	Electro-magnetic logical control device used for concrete pump	03227710.5
8	Lubrication oil pump with many row adjustable pistons	03227810.1
9	High-low pressure switch device that only uses one valve block	03248174.8
10	Concrete pump controller	03248651.0
11	Mixing seal device used for concrete pump	200420068546.2
12	A pumping mechanism	200420068681.7
13	Automatic isochronous device for pumping materiel	200520050012.1
14	Screw device for mixing and transporting concrete	200520050014.0
15	Device for filling water	200520050013.6
16	Concrete pumping mechanism	200520052933.1
17	Concrete pumping truck	200620050188.1

Some patents explanation:

“Cushion device used for columniation oil cylinder of concrete pump” (patent number is 96224468.6) ,this patent insures big swing moment and reduces swing impact, so swing oil cylinder and S tube life increases.

Mixing seal device with independent knowledge property right (patent number is 200420068546.2) constructs two blockade: one is high pressure oil theca between wearable bearing and seal loop by especial structure; the other can discharge the concrete by leak which through the first blockade, so the phenomena that mortar blocks the mixing axis doesn’t happen, thus the mixing device life increases.

A pumping mechanism(patent number is 200420068681.7) through especial structure can connect concrete cylinder with water tank and hydraulic cylinder, so coaxiality between hydraulic cylinder and concrete cylinder increases, pumping resistance with no load reduces, thus the whole capability of concrete pump increases.

7. List of delivery of truck-mounted concrete pump

ZLJ5415THB 52-6RZ BENZ Chassis Domestic made boom S tube valve

SN	Name	Model	Qt.	Note
I	Machine			
1	Truck-mounted concrete pump	ZLJ5415THB 52-6RZ	1	
II	Documents			
1	List of Delivery of Truck-mounted Concrete Pump		1	
2	Certificate of the machine		1	
3	Truck-mounted Concrete Pump oil-inlet card		1	
4	Pumping Technical Regulations for concrete Pump		1	
5	ZLJ Truck-mounted Concrete Pump Manual		1	
6	《Spare parts manual》		1	Bound edition
7	Electric manual		1	Provided by electric department
8	《BENZ Manual》		2	Chinese and english 1 set for each
9	Cargo importation certificate		1	For importation chassis
10	Importation vehicle test list		1	For importation chassis
11	Manual of radio control		1	
12	Cleanout water pump instruction		1	
III	Accessory			
1	Remote control		1	
2	Cable for the remote control		1	
3	Charger		1	
4	Battery		2	
5	The key set of Vehicle		2	
6	The key set of electric control		2	
7	Supporting blocks		4	
8	Spray gun		1	for cleaning
9	Outlet hose		1	for cleaning
10	Spare tyre		1	
11	Cupula antenna		1	
12	Operating lamp	24V/60W	1	
13	Working Lamp	05.603.3000	1	
14	The key of the oil port lock		3	
IV	Tools			
1	Cleaning Ball	Φ125	2	For Φ125 pipe
2	150 Cover	0160202B3000	1	For pipe cleaning
3	Special wrench	31A-17A(0010631A0017)	1	For S tube
4	Piston wrench	02B-P	1	
5	Inner six corner wrench	3-17	1	Nine pieces per set

6	Inner six corner wrench	22	1	
7	Placket wrench	5.5-32	1	Ten pieces per set
8	Placket wrench	32-36	1	
9	Placket wrench	36-41	1	
10	Placket wrench	0010631A0014(55-60)	1	
11	Adjustable wrench	250 mm	1	
12	Adjustable wrench	600 mm	1	
13	Screwdriver	150×7	1	
14	Screwdriver	200×8	1	
15	Cross Screwdriver	150×7	1	
16	Cross Screwdriver	200×8	1	
17	Wire-cutter		1	
18	Hammer		1	
19	Inner six corner wrench addition	Φ27×2-350	1	
20	10" Adjustable wrench addition	Φ34×3-350	1	
21	Inflator		1	For accumulator charging
22	Charging joint	0166119A1100	1	For STAFF accumulator
23	Mandrel	0166119A1200	1	
24	Charging joint		1	For CHENGDU TIANREN accumulator whose bladder is imported
25	Manual oil filler	JY-3 (10L)	1	For PTC
26	Hydraulic grease cup	1750RT (0010027097)	1	
27	Pneumatic greaser	68213-B	1	
28	Air pipe or hose	PPS-6-7.5-1/4-BL or 6m 5×8	1	
29	Wrench	FF1101(Φ76-Φ135)	1	
30	Inflate hose		1	Following tools Attached by Chassis
31	Jack		1	
32	Fire extinguisher		1	
33	Anti-slide blocks		2	
34	Crowbar		3	For wheel replace
35			1	
36	Parking designation		1	
37	Emergency wrap		1	
38	Trouble lamp		1	
V	Spare parts			
1	Pipe Coupling	Φ125B II (HBG3.10)	2	
2	Sealing Ring for Pipe Coupling	0019905B0007	2	

8. List of main consumptive parts

SN	Name	Description	Price	Note
I Mechanical parts				
1	Concrete piston	2		
2	Repair bag of main hydraulic cylinder	1		
3	Glasses plate	1		
4	Cutting ring	1		
5	Rubber spring	1		
6	S tube	1		
7	Bearing	2		
8	End side bearing	1		
9	Short chromeplate bush	1		
10	DU bearing	1		
11	Spherical surface bearing	4		
12	Swing cylinder	2		
13	Bush	1		
II Hydraulic parts				
1	Filter	1		
2	Bladder	1		
3	Pressure gauge	1		
4	Seal ring for valves	1		For one set
5	Seal ring attached	1		For one set
III Electric elements				
1	Proximity switch	2		Import
2	Electric magnet	2		Import
3	Terminal relay	4		For one set
4	1 Anti-water switch	2		
	2 Anti-water switch	1		

9. Reference to the standards

- ①National Standard of the People's Republic of China 《Concrete Pump》 (GB/T13333-2004).
- ②Industry Standard of the People's Republic of China 《Concrete conveying pipe's types and dimensions》 (JJ83-91).
- ③Industry Standard of the People's Republic of China 《Technical specification for pumping construction of concrete》 (JGJ/T10-95).
- ④Industry Standard of the People's Republic of China 《Truck mounted concrete pump》 (QC/T718-2004).
- ⑤Company standard of Changsha Zoomlion Heavy Industry Science and Technology Development Co., Ltd. 《Truck mounted concrete pump》 (Q/ OKAM 901-2001).

Warning: because of product technology improving on, technology data is amended, We will not give notice, please consumers pay attention to all kinds of technology information that the delivers. The vehicle appearance takes practicality as veracity.