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# SANY TRAILER PUMP UPGRADES TO C5

King of the Pump World, Top in Sales Volume for 10 Years



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QUALITY CHANGES THE WORLD.

## **CHALLENGE THE HEIGHT OF SKY**

By virtue of its unrivaled technical strength in the trailer mounted concrete pump sector, Sany has repeatedly surpassed even its own accomplishments to set concrete pumping records across the globe.

SANY trailer mounted concrete pumps have participated in 80% of the high-rise buildings with a height above 300 meters completed or under construction.

SANY trailer mounted concrete pumps have contributed to every construction height breakthrough in China.

Shenzhen SEG Plaza

Hong Kong International Financial Center Guangzhou TV Tower

Hong Kong International Commerce Center Shanghai World Financial Center Guangzhou East Tower

Shanghai Tower



### **ANY DISTANCE**



### Pumping of marine concrete surpasses 1,000m

With a total length of 41.58km, Qingdao Bay Bridge is the world's longest cross sea bridge.

The bridge is located in Kiaochow Bay sea area, where the sea water has a high saline content and is highly corrosive. Moreover, the bridge needed to be resistant to freeze-thaw cycles that will occur more than 50 times per year. Due to this, the bridge pier was poured with a dedicated high performance marine concrete with extremely high viscosity and corrosion resistance. That placed extremely rigorous requirements on the concrete pump.

SANY HBT80C-2122 trailer pump was employed to pump the bridge concrete. Thanks to its super strong pumping capacity and steady performance, the pump achieved a new long distance marine concrete pumping record (above 1,000 m).

### Horizontal pumping distance exceeds 4,000m

SANY has developed the super pump with an outlet pressure of 50 MPa. A new world record. Also, it increased the trailer mounted concrete pump's horizontal pumping distance to more than 4,000m.





#### -22°C cannot freeze SANY trailer mounted concrete pump's awesome power

In the winter of 2007, Moscow's temperature reached -22°C. SANY's trailer mounted concrete pump continued operating during construction of the Russian Federation Building. By virtue of its strong ability and adaptability, SANY trailer mounted concrete pump has earned a strong reputation across all of Europe.



# 55°C ignites SANY trailer-mounted concrete pump's passion of creating the world record in pumping height

In mid summer of 2007, the temperature in Dubai was extremely high. At the construction site of Burj Dubai, reputed to be the worlds tallest skyscraper, the temperature rose to over 50°C, Even in this extreme, the Sany HBT120C-2120D operated without fail.







### **12h** Continuous Pumping: SANY Trailer-mounted Concrete Pump Lives up to Its Mission

During the Wushan River Bridge Steel Pipe Concrete Pumping project, Sany trailer mounted concrete pumps set three world records. Steel pipe concrete pumping: length of 560m, continuous volume of 600m3 and continuous pumping time of 12 hours.

#### Continuous Pouring of 60,000m<sup>3</sup> concrete completed in 60h

During the concrete pouring of Shanghai Tower, reputed as China's tallest skyscraper (height:632m), the entire foundation pouring project employed 18 pieces of SANY equipment (including four trailermounted concrete pumps). The continuous pouring of 60,000 m<sup>3</sup> concrete was completed within 60 hours.



SANY Trailer-mounted Concrete Pump's Construction in Wushan Yangtze River Bridge Project



SANY Trailer-mounted Concrete Pump's Construction at Shanghai Tower.



### Easily handle pumping of difficult concrete like B90, C150, and 3-gradation concrete

The Moscow Federation Building is reputed to be the worlds tallest steel and concrete building. During the project construction process, SANY trailer mounted concrete pumps successfully pumped B90 (equivalent to C110) concrete vertically to a height of 120m.

In projects like Three Gorges Hydropower Station and Guangxi Dahua Hydropower station etc. aggregate of large diameter presented many challenges. The SANY 120A concrete delivery pump can pump aggregate with diameter of up to 80mm. This solved the challenge of pumping three gradation concrete.

In Japan Tokyo Yomiuri Shimbun Building Project, the concrete pumping height was up to 200m. Some of the concrete strength even hit C150. SANY HBT80C-1818D trailer mounted concrete pump lived up to its mission.



#### Silt, slag, waste materials and mortar etc can be pumped

SANY's product lines include special purpose pumps such as filling pumps, tubular pile pumps, and mortar pumps. They can pump different special media, including slag, silt, sewage, mortar, industry waste, etc.





# **5 KEY PUMP TECHNOLOGY**



### ADVANCED ENERGY-SAVING TECHNOLOGY

### WEAR-RESISTING TECHNOLOGY

### **ADVANCED HYDRAULIC SYSTEM**

#### Differential pressure controlled, bi-directional hydraulic system.

Sany trailer mounted concrete pump hydraulic system pump controls use differential pressure sensing technology and bi-directional pumps. The bi-directional pumps feature smooth direction change abilities. The open loop charge system continually circulates the hydraulic oil for filtration and cooling. The constant supply of filtered, cooled hydraulic oil prolongs equipment life and lowers maintenance costs.



### **INTELLIGENT CONTROL SYSTEM**

#### Fault self-diagnosis technology

The intelligent control system monitors the machine for over 50 faults in real time. Faults are displayed on the monitor. Review of the faults can reduce troubleshooting time by 70%.

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#### **Emergency Override Available**

In case of a fault during operation, an emergency override mode is available for cleanout and shutdown.

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### High flow, high efficiency valve system

Our system adopts a high pressure, high flow electro-hydraulic main control valve and an integrated valve with optimized tubing design and layout. The system features a short reversing design, low pressure loss, low temperature and high reliability.



#### **Automatically retracted Distons**

With the press of a button, the two pistons return to the water tank. This reduces daily maintenance time and extends the life of the pistons.



#### **Dedicated motion controller**

Entirely different from conventional motion controllers, the Sany controller integrates the pumping algorithm with an onboard database. The result is faster operation and superior performance.



### **EFFICIENT PUMPING SYSTEM**

#### **High-efficiency pump technology**

The hydraulic system pump controls use differential pressure sensing technology and bi-directional pumps. The bi-directional pumps feature smooth direction change abilities. This allows efficient pumping action and precise swing cylinder control.

#### **High power mixing motor**

High displacement mixing motor keeps the mixture properly conditioned.

#### Large bore reversing cylinder

The large bore reversing cylinder allows powerful reversing to prevent pipe blockage.

#### **New-type hopper**

The hopper's inner cavity has been optimized to improve aggregate mixing and to high density, complex concrete.









### **ADVANCED ENERGY-SAVING TECHNOLOGY**

New generation energy saving technology automatically adjusts engine power output to match the load results in fuel savings of up to 25%.





Won the Level-I Prize of Hunan Provincial Award for Progress in Science and Technology (the top prize in construction machinery sector) and the gold prize of Chinese Patent Award.

Fuel consumption comparison table



### WEAR-RESISTING TECHNOLOGY

G5 improved wearing part Adopt Sino-Germany high-tech materials and advanced technology to greatly improve the product performance





**Discharge port** Inner bushing adopts a special steel, whose abrasive resistance is 15 times that of ordinary steel, with service life hitting 60,000 to 80,000 m<sup>3</sup>.

Wear plate and cutting ring Using a special process with a bonding strength greater than

100MPa, the wear plate's service life is up uo 50,000 to 60,000m<sup>3</sup>. The cutting ring's service life is up to 20,000 to 30,000m<sup>3</sup>.





**Concrete piston** 

Using German rubber piston technology with excellent abrasion performance and resistance to heavy stress and high temperatures. It has a long service life allowing the piston to pump 25,000 to 30,000 cubic meters concrete without replacement.



#### **Delivery cylinder**

The inner layer is plated with chrome with thickness of above 3mm, and so its hardness exceeds HV900, with service life hitting 100,000 to 140,000 m<sup>3</sup>.

### **TECHNICAL SPECIFICATIONS**

#### **Electric**

Model	HBT6006A-5	HBT6013C-5
Place of Production	China	China
Max.delivery pressure(theoretical) Low pressure/High pressure(Mpa)	7	8 /13
Max.concrete output(theoretical) Low pressure/High pressure(m <sup>3</sup> /h)	70	65 / 40
Motor rated power (kw)	75	90
Rated Rotary Speed (rpm)	1480	1480
Delivery cylinder Bore (mm) *Strok(mm)	Ф200×1400	Ф200 × 1400
Hopper capacity (m <sup>3</sup> )* Feeding heigh(mm)	0.6× 1415	0.7 × 1320
Dimension (L*W*H) (mm)	6590×2100×2200	6185 × 2100 × 2200
Gross weight (kg)	5880	5790
Max. aggregate size: Φ150 mm delivery pipe (mm)	50	50
Max. aggregate size: Φ125 mm delivery pipe (mm)	40	40
Туре	Gate Valve	S-Valve
Slump of concrete (mm)	100 ~ 230	100 ~ 230

#### Diesel

Model	HBT4008C-5I	HBT4010C-5I	HBT5010C-5I	HBT6013C-5I	HBT5008C-5S
Place of Production	India	India	India	India	China
Max.delivery pressure(theoretical) Low pressure/High pressure(Mpa)	8	6/10	6 / 10	8 / 13	8
Max.concrete output(theoretical) Low pressure/High pressure(m <sup>3</sup> /h)	41	42/28	59 / 39	65 / 41	50
Engine rated power(kw)	49	49	73.6	81	55
Rated Rotary Speed (rpm)	2100	2100	2100	2100	2200
Delivery cylinder Bore (mm) *Strok(mm)	Ф180 × 1400	Ф180 × 1400	Ф180 × 1400	Ф200 × 1400	Ф180 × 1400
Hopper capacity (m <sup>3</sup> )* Feeding heigh(mm)	0.6 × 1240	0.6 × 1240	0.6 × 1240	0.7 × 1320	0.6 × 1240
Dimension (L*W*H) (mm)	5600 × 2050× 2050	5600 × 2050× 2050	5600 × 2050 × 2050	6330 × 2280 × 2470	5670 × 2045× 2370
Gross weight (kg)	4300	4600	4800	5600	3950
Max. aggregate size: Ф150 mm delivery pipe (mm)	50	50	50	50	50
Max. aggregate size: Ф125 mm delivery pipe (mm)	40	40	40	40	40
Туре	S-Valve	S-Valve	S-Valve	S-Valve	S-Valve
Slump of concrete (mm)	100 ~ 230	100 ~ 230	100 ~ 230	100 ~ 230	100 ~ 230
Model	HBT6016C-5S(T3)	HBT6013C-5S	HBT8018C-5S(T3)	HBT12020C-5M	HBT12020C-5M(CE)
Model Place of Production	HBT6016C-5S(T3) China	HBT6013C-5S China	HBT8018C-5S(T3) China	HBT12020C-5M China	HBT12020C-5M(CE) China
Place of Production Max.delivery pressure(theoretical) Low pressure/High pressure(Mpa)					
Place of Production Max.delivery pressure(theoretical)	China	China	China	China	China
Place of Production Max.delivery pressure(theoretical) Low pressure/High pressure(Mpa) Max.concrete output(theoretical)	China 10 / 16	China 8 / 13	China 10 / 18	China 11 / 21	China 11 / 21
Place of Production Max.delivery pressure(theoretical) Low pressure/High pressure(Mpa) Max.concrete output(theoretical) Low pressure/High pressure(m <sup>3</sup> /h)	China 10 / 16 70 / 45	China 8 / 13 65 / 40	China 10 / 18 85 / 50	China 11 / 21 120 / 75	China 11 / 21 120 / 75
Place of Production Max.delivery pressure(theoretical) Low pressure/High pressure(Mpa) Max.concrete output(theoretical) Low pressure/High pressure(m <sup>3</sup> /h) Engine rated power(kw)	China 10 / 16 70 / 45 180	China 8 / 13 65 / 40 114	China 10 / 18 85 / 50 180	China 11 / 21 120 / 75 297	China 11 / 21 120 / 75 297
Place of Production Max.delivery pressure(theoretical) Low pressure/High pressure(Mpa) Max.concrete output(theoretical) Low pressure/High pressure(m <sup>3</sup> /h) Engine rated power(kw) Rated Rotary Speed (rpm) Delivery cylinder Bore (mm)	China 10 / 16 70 / 45 180 2200	China 8 / 13 65 / 40 114 2050	China 10 / 18 85 / 50 180 2200	China 11 / 21 120 / 75 297 1900	China 11 / 21 120 / 75 297 1900
Place of Production Max.delivery pressure(theoretical) Low pressure/High pressure(Mpa) Max.concrete output(theoretical) Low pressure/High pressure(m <sup>3</sup> /h) Engine rated power(kw) Rated Rotary Speed (rpm) Delivery cylinder Bore (mm) *Strok(mm) Hopper capacity (m <sup>3</sup> )* Feeding	China 10 / 16 70 / 45 180 2200 Φ200 × 1800	China 8 / 13 65 / 40 114 2050 Φ200 × 1400	China 10 / 18 85 / 50 180 2200 Φ200 × 1800	China 11 / 21 120 / 75 297 1900 Φ200 × 2100	China 11 / 21 120 / 75 297 1900 Φ200 × 2100
Place of Production         Max.delivery pressure(theoretical)         Low pressure/High pressure(Mpa)         Max.concrete output(theoretical)         Low pressure/High pressure(m <sup>3</sup> /h)         Engine rated power(kw)         Rated Rotary Speed (rpm)         Delivery cylinder Bore (mm)         *Strok(mm)         Hopper capacity (m <sup>3</sup> )* Feeding         heigh(mm)	China 10 / 16 70 / 45 180 2200 Ф200 × 1800 0.7 × 1420 6830 × 2125	China 8 / 13 65 / 40 114 2050 Ф200 × 1400 0.7 × 1420 6730 × 2100	China 10 / 18 85 / 50 180 2200 Ф200 × 1800 0.7 × 1420 7330 × 2125	China 11 / 21 120 / 75 297 1900 Ф200 × 2100 0.7 × 1420 7380 × 2125	China 11 / 21 120 / 75 297 1900 Ф200 × 2100 0.7 × 1420 7380 × 2125
Place of Production         Max.delivery pressure(theoretical)         Low pressure/High pressure(Mpa)         Max.concrete output(theoretical)         Low pressure/High pressure(m³/h)         Engine rated power(kw)         Rated Rotary Speed (rpm)         Delivery cylinder Bore (mm)         *Strok(mm)         Hopper capacity (m³)* Feeding         heigh(mm)         Dimension (L*W*H) (mm)	China 10 / 16 70 / 45 180 2200 Ф200 × 1800 0.7 × 1420 6830 × 2125 × 2685	China 8 / 13 65 / 40 114 2050 Φ200 × 1400 0.7 × 1420 6730 × 2100 × 2600	China 10 / 18 85 / 50 180 2200 Ф200 × 1800 0.7 × 1420 7330 × 2125 × 2685	China 11 / 21 120 / 75 297 1900 Φ200 × 2100 0.7 × 1420 7380 × 2125 × 2950	China 11 / 21 120 / 75 297 1900 Ф200 × 2100 0.7 × 1420 7380 × 2125 × 2950
Place of Production         Max.delivery pressure(theoretical)         Low pressure/High pressure(Mpa)         Max.concrete output(theoretical)         Low pressure/High pressure(m³/h)         Engine rated power(kw)         Rated Rotary Speed (rpm)         Delivery cylinder Bore (mm)         *Strok(mm)         Hopper capacity (m³)* Feeding         heigh(mm)         Dimension (L*W*H) (mm)         Gross weight (kg)         Max. aggregate size: Φ150 mm	China 10 / 16 70 / 45 180 2200 Ф200 × 1800 0.7 × 1420 6830 × 2125 × 2685 6800	China 8 / 13 65 / 40 114 2050 Φ200 × 1400 0.7 × 1420 6730 × 2100 × 2600 6000	China 10 / 18 85 / 50 180 2200 Ф200 × 1800 0.7 × 1420 7330 × 2125 × 2685 7300	China 11 / 21 120 / 75 297 1900 Ф200 × 2100 0.7 × 1420 7380 × 2125 × 2950 9310	China 11 / 21 120 / 75 297 1900 Ф200 × 2100 0.7 × 1420 7380 × 2125 × 2950 9310
Place of Production         Max.delivery pressure(theoretical)         Low pressure/High pressure(Mpa)         Max.concrete output(theoretical)         Low pressure/High pressure(m³/h)         Engine rated power(kw)         Rated Rotary Speed (rpm)         Delivery cylinder Bore (mm)         *Strok(mm)         Hopper capacity (m³)* Feeding         heigh(mm)         Dimension (L*W*H) (mm)         Gross weight (kg)         Max. aggregate size: Φ150 mm         delivery pipe (mm)         Max. aggregate size: Φ125 mm	China 10 / 16 70 / 45 180 2200 Φ200 × 1800 0.7 × 1420 6830 × 2125 × 2685 6800 50	China 8 / 13 65 / 40 114 2050 Φ200 × 1400 0.7 × 1420 6730 × 2100 × 2600 6000 50	China 10 / 18 85 / 50 180 2200 Ф200 × 1800 0.7 × 1420 7330 × 2125 × 2685 7300 50	China 11 / 21 120 / 75 297 1900 Φ200 × 2100 0.7 × 1420 7380 × 2125 × 2950 9310 50	China 11 / 21 120 / 75 297 1900 Ф200 × 2100 0.7 × 1420 7380 × 2125 × 2950 9310 50



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<ul> <li>Xin Jiang Industrial Park: Sany Heavy Industry Northwest Co., Ltd.</li> </ul>	)
Shenyang Industrial Park: SANYHE International Holdings Co., Ltd.	
Beijing Industry Park: Beijing Sany Heavy Machinery Co., Ltd. / Sany Heavy Energy Machinery Co., Ltd.	
Shanghai Industrial Park Zones: Sany Heavy Machinery Co., Ltd. / Shanghai Sany Precision Machinery Co., Ltd. / Sany Turbine Machinery Co., Ltd.	
Sany Group Headquarters / Sany Heavy Industry Co., Ltd.	
Zhuhai Industrial Park: Sany Marine Heavy Industry Co., Ltd.	
Sany India	
Sany Indonesia	