



POWERPLUS GROUP PTE. LTD. Powerplus Building 39 Ubi Crescent, Singapore 408587 Tel: (65) 63399333 Fax: (65) 63399933 Email: enquiry@powerplus.us

Research & Development Facility

POWERPLUS GROUP INC., U.S.A.

2130 N. Arrowhead Avenue, San Bernardino, CA 92405, USA Tel: (1) 909 300 3333 Fax: (1) 909 323 3333 Email: hq@powerplus.us

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ABOUTUS

CORPORATE OVERVIEW

POWERPLUS GROUP INC., USA, a leading global manufacturer of a comprehensive range of construction equipment, is part of Worldwide Techno-Equipment Group (1973) Pte Ltd. Established since 1973, POWERPLUS GROUP has evolved into a world-renowned organization that offers machinery unparalleled in price, quality and performance.

POWERPLUS machinery is manufactured with enhanced capacities to exceed even the most stringent international standards of quality and safety. With the aim of producing machinery that is able to withstand even the most extreme climatic conditions and rugged terrains, POWERPLUS Research & Development team which has its Headquarters in the United States, has been the backbone behind all its innovative engineering solutions.

Optimizing the best of technology from the United States, Europe and Japan, POWERPLUS machinery is configured to its ideal technical capabilities. A multinational team of engineers analyzes the data collected from our network of distributors worldwide and are on the constant lookout for ways to maximize the life-span of POWERPLUS machinery.

Today the Company's clientele spans over 100 countries across 6 continents.

At the forefront of setting quality standards, every POWERPLUS machine undergoes a technical review after 2 years and is tested rigorously before a new model is churned out of its production facility.

With an emphasis on delivering value and excellent after-sales service to our customers, the POWERPLUS experience outshines and outclasses its competitors in all aspects.



VALUE-ADDED MACHINES ENGINEERED TO MAXIMIZE DURABILITY

When it comes to moving material, nothing gets the job done like a POWERPLUS Wheel Loader. No matter what your project, these rugged, high-performance machines are the fast, efficient way to get more work done. Delivering solid performance, coupled with its distinct emotive design and high grade ergonomic interior, POWERPLUS Wheel Loaders are a class of its own.

CONDUCIVE WORKING ENVIRONMENT FOR OPERATOR'S COMFORT AND INCREASED PRODUCTIVITY

- Full wrap-around glass cabin for 360° operational view for precise execution of works
- Ergonomic cabin with personalized amenities includes POWERPLUS adjustable suspension seat, MP3 player and air-conditioning
- Pilot joystick control and transmission wrist speed control for ease of operation
- Noise and shock reduction cabin with ROPS/FOPS for reduced operator's fatigue and increased safety



PLUS POINTS FOR END-USERS

- POWERPLUS Wheel Loaders offer an extensive range of bucket capacities from 1.0m³ to 7.0m³
- Reinforced chassis design to withstand the roughest terrains and extreme climatic conditions
- Newly designed engine cover for better access to the engine bay for easy maintenance
- Wide range of attachments to perform different applications
- High levels of customizations can be made to suit the requirements of end-users from various industries



MINIMIZED ENVIRONMENTAL IMPACT

- Wheel Loader manufactured according to international safety and environmental standards
- Perfectly matched powertrain and drivetrain systems achieve low fuel consumption
- Higher emission standards to minimize environmental pollution
- Up to 90% of recyclable and bio-degradable parts



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OPERATIONS

- Hydraulic steering allows for precise positioning and easy driving
- Pilot joystick control for single hand operation
- VDO (Germany) instrument panel for more accurate readings
- Electronic ZF (Germany) gearbox comes with wrist speed control for easy shifting through the gears
- Ergonomically designed air-conditioned cabin reduces external noises and vibrations
- POWERPLUS suspension seat

ACCESSORIES

- Newly designed rear engine cover for best heat dissipation and ease of maintenance
- MP3 player with stereo speakers
- LED working lights
- Beacon lights
- Reverse signal
- Rear-view camera

POWERTRAIN

- Engine options include CAT(L), CUMMINS (USA), DEUTZ (Germany), ISUZU (Japan) and POWERPLUS (USA)
- Reduced environmental impact and carbon footprint
- Transmission comes in both mechanical and hydrostatic / electronic types
- Careful selection of axles to achieve optimal power to weight ratio

ELECTRONICS

- Electronically-controlled boom height limiter
- HELLA (Germany) electronic and lighting system
- VARTA (Germany) battery

BUCKET AND ATTACHMENTS

- Bucket types and sizes can be customized to suit different applications
- Italian technology heat treatment bucket teeth and wear plates
- Wide range of attachments can be fitted on and quickly interchanged with a quick coupler

HYDRAULICS

- Equipped with high quality PERMCO (USA) hydraulic pumps
- Rubber seals for hydraulic cylinders imported from Japan
- Hydraulic hoses imported from GOODYEAR (USA) and MANULI (Italy)
- Option of hydraulic piston pump available for selected models

"Illustration and statements made are based on standard operations which include optional specifications and attachments.

CHASSIS

- Reinforced articulated chassis designed to withstand the roughest terrains and extreme climatic conditions
- Driveshaft positioned within the chassis to prevent damage from impact against foreign objects

TIRES

- FUJI (Japan) tires
- Option of nylon, radial and solid tires available

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POWERTRAIN TRANSMISSION

POWERPLUS ENGINE

The ideally-matched, POWERPLUS powertrain system has been built and refined over the years to work together in perfect harmony, ensuring optimized performance. POWERPLUS offers an option of CAT(L), CUMMINS (USA), DEUTZ (Germany), ISUZU (Japan) and POWERPLUS (USA) engines to match the different market requirements across the globe.

These world-renowned OEM brands enjoy international warranty to minimize downtime and maximize productivity. Spare parts are also easily available.

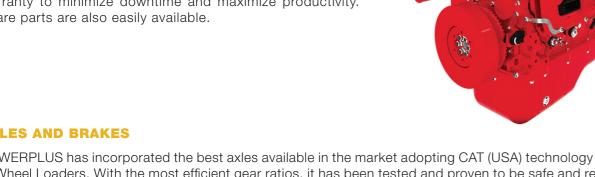
*Optional ZF (Germany) wet brake axles are also available.



AXLES AND BRAKES

POWERPLUS has incorporated the best axles available in the market adopting CAT (USA) technology into our range of Wheel Loaders. With the most efficient gear ratios, it has been tested and proven to be safe and reliable over the

Safety is of utmost importance when these Wheel Loaders are carrying heavy loads and maneuvering around the job sites. Our technical department has bolstered up the braking force by installing a dual brake booster system and additional calipers on the rear brake discs (for PP966T-V and above).



POWERPLUS TRANSMISSION

POWERPLUS Wheel Loaders can be equipped with a variety of transmissions from the mechanical to electronic type and even automatic gearboxes. While the mechanical gearbox is easier to service and repair, all electronic transmissions come with wrist speed control which allow operators to change directions and run through the gears at the flick of their wrists.

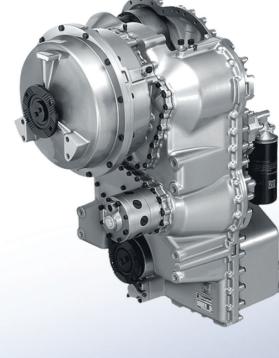
Our range of large-sized wheel loaders, come equipped with ZF Ergopower transmissions imported directly from Germany. The automatic powershift transmission has been optimized for application in wheel loaders. Due to the vertical arrangement of spur gear ratios, the axle differential can be integrated into the housing. It also comes with an AEB starter for easy calibration during service, maintenance and even for an overhaul.

ADVANTAGES OF ZF ERGOPOWER GEARBOX

- Superior technology
- Easy and convenient handling
- Cost savings through compact modular design
- Prevention of meshing errors through extremely short shafts
- Low noise emission due to helical and high contact toothing
- Connection possibility for electronic driveline management

*ZF4WG210: PP973T-V & PP980T-V

*ZF4WG310: PP992T-V





HYDRAULICS

Created for the customer who requires reliability and high production in earth moving projects, POWERPLUS Wheel Loaders are assembled with an advanced hydraulic system to deliver a smoother operation.

Our technical department in California, USA, has carefully selected PERMCO (USA) to drive the hydraulic system on this powerful workhorse. The result of our collaboration with PERMCO (USA) is a specially designed hydraulic gear pump that optimizes the performance of the machine.

We have also incorporated GOODYEAR (USA) and MANULI (Italy) hydraulic hoses into our range of Wheel Loaders. Through the use of high quality hoses, you can be assured of their ability to withstand very high pressures even during the toughest operations. Every hose is tried and tested at our factories after the fittings, couplers and adaptors have been installed.

*Piston pumps are also available as an option.

CHASSIS

The POWERPLUS Wheel Loader chassis is constructed through the use of high grade Q345B steel. They are welded together through robotic systems supervised by our team of highly-skilled welders to ensure the quality and consistency of our machines.

By reinforcing our chassis, POWERPLUS Wheel Loaders achieve a high operating weight which results in better stability when loading heavy material. Our engineers have relocated the fuel and hydraulic tanks from both sides of the chassis and placed them at the counterweight. This change has allowed for a higher ground clearance and enables POWERPLUS Wheel Loaders to overcome the









OPERATOR COMFORT

POWERPLUS ergonomically designed air-conditioned cabin features a fully enclosed glass to improve visibility in all directions. Sophisticated design solutions simplify the operator's everyday work with a pilot joystick control, wrist speed control and a well-designed VDO (Germany) instrument panel.

Higher levels of operator comfort helps you work more efficiently and increases productivity. The all-new POWERPLUS Wheel Loader is designed to get the job done faster and keeps you working comfortably.

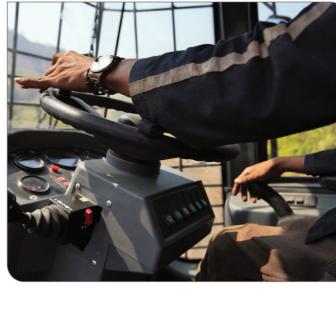
EASY ACCESSIBILITY

A newly redesigned rear engine cover boasts of a lockable 5-door entry point for ease of access to the engine bay for service and maintenance. It also offers better heat dissipation through the incorporation of wire mesh on the pneumatically actuated doors.

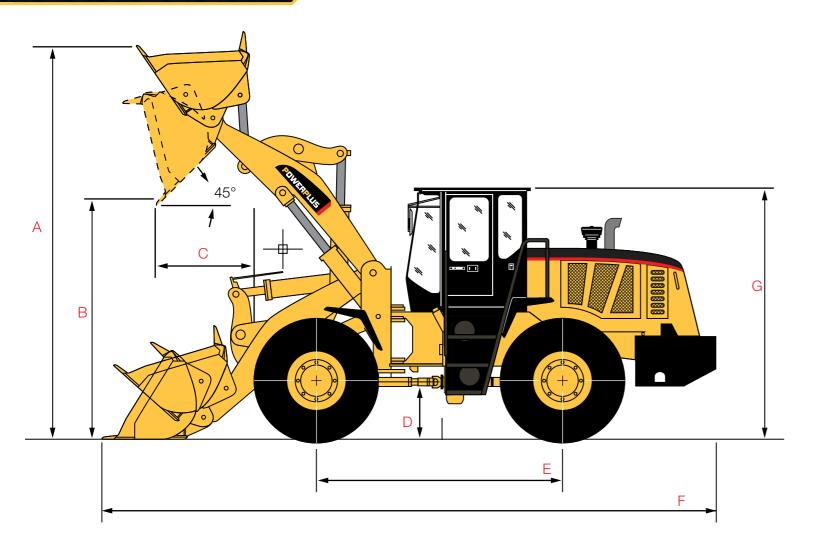
The choice of high quality steel over fibre-glass for the fabrication of the engine cover is due to its durability. It has the ability to last throughout ther machine's 10-15 years lifespan.

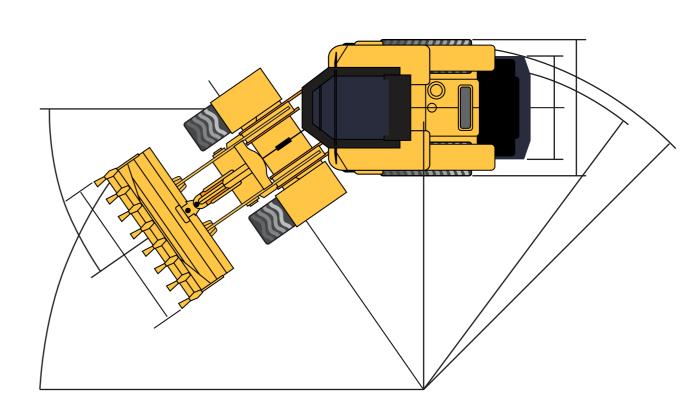












	MODEL	PP928T-V PP938T-V		PP950T-V	PP966T-V	
	DIMENSIONS					
Α	LIFTING HEIGHT	mm	3866	4506	5080	5337
В	DUMPING HEIGHT	mm	2750	3000	3250	3140
С	DUMPING REACH	mm	920	1050	1137	1250
D	MINIMUM GROUND CLEARANCE	mm	320	375	450	450
E	WHEELBASE	mm	2350	2850	3030	3200
F	OVERALL LENGTH	mm	5880	7020	7717	7960
G	OVERALL HEIGHT	mm	2820	3300	3375	3490
Н	BUCKET LENGTH	mm	2060	2510	2680	3070
1	TURNING RADIUS	mm	4750	5755	5755	6640
J	WIDTH (tread center)	mm	1500	1800	1865	2250
K	WIDTH (over tires)	mm	1910	2310	2382	2880
L	TURNING RADIUS (inside of tires)	mm	4475	5390	5712	6230
М	TURNING RADIUS (outside of tires)	mm	4680	5612	5973	6480

	MODEL		PP968T-V	PP973T-V	PP980T-V	PP988T-V
	DIMENSIONS					
Α	LIFTING HEIGHT	mm	5337	5337	5180	5699
В	DUMPING HEIGHT	mm	3140	3180	3180	3220
С	DUMPING REACH	mm	1250	1250	1250	1275
D	MINIMUM GROUND CLEARANCE	mm	517	450	510	495.5
Е	WHEELBASE	mm	3200	3200	3200	3400
F	OVERALL LENGTH	mm	7920	7920	8270	8696
G	OVERALL HEIGHT	mm	3470	3470	3560	3710
Н	BUCKET LENGTH	mm	3050	3050	3070	3250
_	TURNING RADIUS	mm	6640	6640	6630	7042
J	WIDTH (tread center)	mm	2250	2250	2250	2350
K	WIDTH (over tires)	mm	2960	2960	2939	3099
L	TURNING RADIUS (inside of tires)	mm	6230	6230	6223	7042
М	TURNING RADIUS (outside of tires)	mm	6520	6520	6593	6486

MODEL		PP928T-V	-V PP938T-V		PP950T-V		PP966T-V			
OPERATING WEIGHT	kg	6100	10800		13300		17000 17000		000	
RATED LOAD	kg	1800	3000		4000		5000	5500		
BUCKET HEAPED CAPACITY	m ³	0.8	1.8	3	2.5		3.1	3.1		
ENGINE	<u> </u>						5.1			
MODEL		CUMMINS 4BTA3.9-C100	WEICHAI WP6G125E23	CUMMINS 6BT5.9-C130	WEICHAI WP6G175	CUMMINS 6BTA5.9-C180	WEICHAI WD10G220	SC11CB220	CUMMINS 6CTAA8.3-C2	
RATED POWER	HP	100	125	130	175	180	220	220	215	
RATED SPEED	rpm	2000	2200	2200	2100	2100	2200	2200	2200	
EMISSION RATING					Eu	ro II			-	
TRANSMISSION										
TYPE		Mechanical control fixed shaft powershift	Advance YD13		ZF 4WG180 (L) Electromagnetic with wrist control lever		Mechanical control planetary powershift			
GEAR SHIFT	2 Forward, 2 Reverse	4 Forward, 3 Reverse		4 Forward, 3 Reverse		4 Forward, 4 Reverse				
TYPE				Articulated	frame, load sen	sing fully hydraul	ic steering			
AXLES										
GRADEABILITY	30	30 28 30								
MAIN REDUCER TYPE	Two grade reduction system; spiral bevel gear type main reducer and planetary reducer for wheel hub, high efficiency and low noise. Disc caliper to ensure high brake torque & reliability									
CABIN										
TYPE	Ergonomically designed soundproof cabin enabling wide operational view, comes standard with an adjustable air suspension, POWERPLUS driver's seat, streamline dashboard, air conditioning and MP3 player for extensive operations with well-deserved comfort.									
BRAKE SYSTEM										
SERVICE BRAKE		Air over hydraulic disc brake on 4 wheels								
PARKING BRAKE	Flexible shaft control expand hoof type Air brake control band brakes									
WORKING EQUIPMENT										
MAXIMUM BREAKING FORCE KN		60	103		140		≥ 175			
HYDRAULIC SYSTEM										
RATED PRESSURE	MPa	16	1	7	1	8		17		
LIFTING TIME	TING TIME sec 4.5 ± 0 .		5.5 ± 0.2		5.5 ± 0.2		5.95			
TOTAL TIME sec		8.5 ± 0.5	9.8	± 0.5	9 ± 0.5 10.95					
TIRES										
SIZE 16/70-20-1			17.5-25-16PR		20.5-25-16PR		23.5-25-16PR	23.5-2	25-20PR	

MODEL		PP968T-V			PP973T-V		PP980T-V		PP988T-V	
OPERATING WEIGHT	kg		17300		17800		21500		23500	
RATED LOAD	kg	5500			57	750	6500		7500	
BUCKET HEAPED CAPACITY	m ³		3.3		3.5		3.8		4.5	
ENGINE										
MODEL		WEICHAI WD10G220E21	SC11CB220	CUMMINS 6CTAA8.3-C215	SC11CB220	CUMMINS 6CTAA8.3-C215	SC11CB240	CUMMINS 6CTAA8.3-C240	CUMMINS QSM11-C290	
RATED POWER	HP	220	220	215	220 / 215	215	238	240	290	
RATED SPEED	rpm	2200	2200	2200	2200	2200	2200	2200	2100	
EMISSION RATING			Euro II							
TRANSMISSION										
TYPE	ZF 4WG180 (L) Electromagnetic with wrist control lever			ZF4WG210 Ergopower (Made in Germany) countershaft, powershift with KD switch				ZF4WG260 Powershift, spur gear constant-mesh		
GEAR SHIFT		4 Forward, 3 Reverse								
TYPE				Articulated	frame, load sens	sing fully hydraulio	steering			
AXLES										
GRADEABILITY	۰				3	0				
MAIN REDUCER TYPE	Two grade reduction system; spiral bevel gear type main reducer and planetary reducer for wheel hub, high efficiency and low noise. Disc caliper to ensure high brake torque & reliability									
CABIN										
TYPE	Ergonomically designed soundproof cabin enabling wide operational view, comes standard with an adjustable air suspension, POWERPLUS driver's seat, streamline dashboard, air conditioning and MP3 player for extensive operations with well-deserved comfort.									
BRAKE SYSTEM										
SERVICE BRAKE				Air	over hydraulic dis	sc brake on 4 whee	els			
PARKING BRAKE	Air brake control band brakes									
WORKING EQUIPMENT							- 19			
MAXIMUM BREAKING FORCE	kN		≥ 182		≥ '	170	≥	190	≥ 218	
HYDRAULIC SYSTEM	'	-1				- 200				
RATED PRESSURE	MPa		18			18		18	21	
LIFTING TIME	sec		6.15 ± 0.2		5.95	± 0.2	6.0	± 0.2	6.1 ± 0.2	
TOTAL TIME sec		10.95			10.95 ± 0.5			± 0.5	11.8 ± 0.5	
TIRES	· ·				The state of the s			with the state of		
SIZE		23.5-25-20PR		23.5-2	5-20PR	26.5-2	5-28PR	26.5-25-20PR		

- optional • - standard



ns. Kindly consult your POWERPLUS territory sales personnel for details.

OPTIONAL

ENGINE

Anti-Freeze Coolant Cold Boot Euro III Engines Enlarged Radiator Pre-Heat Starter

HYDRAULICS

Piston Pump

CABIN

Canopy Type Glass Protection ROPS/FOPS

AXLES

ZF (Germany) Wet Brake Axles

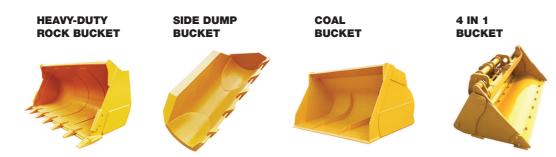
TIRES

Radial Tires Solid Tires

ACCESSORIES

Customized Buckets Customized Front Arm Load Limiter Rear View Camera

ATTACHMENT







HAY



PALLET

FORK



QUICK

COUPLER



SWEEPER

*Availability of equipment may vary across different regions. Kindly consult your POWERPLUS territory sales personnel for details.

GLOBAL NETWORK DISTRIBUTION

POWERPLUS is committed to creating long-term value for its customers, partners and stakeholders. Our Service Centers are strategically located in major construction, industrial and manufacturing hubs in key regions around the world.

Given our years of experience in the industry, it is no doubt that our customers can always rely on us for the expertise, services and solutions we provide. Most importantly, you will find our after-sales service a satisfying experience at all our Service Centers worldwide.



DURABILITY, RELIABILITY & AFFORDABILITY

POWERPLUS Parts and Service Centers provide a convenient channel for you to order the original spare parts through a network of highly certified OEM manufacturers and an effective distribution of spare parts through our global network of vendors.

From determining the correct part number to locating and ordering, we are committed to working round the clock for timely solutions and delivery to ensure we serve our customers promptly and efficiently.

Coupled with the affordable parts prices and high interchangeability across the POWERPLUS machinery range, we take pride in being able to offer value to our customers with cost-effective solutions. Most importantly, you are able to retain the machines with high residual value to enhance your returns on investment.







SERVICE

Delivering Unsurpassed Customer Service - Because You Matter.

Our dedicated team of customer service executives, skilled engineers and technicians are well-trained to ensure timely and propitious support throughout the customer life cycle. With a comprehensive dealer network coverage and service facilities support, POWERPLUS dedicated team of account managers and service teams from the Customer Service Charter are trained to respond to your queries and requests promptly and efficiently.

To deliver more, our service package includes educating our customers with training, maintenance and servicing to ensure customers are empowered to utilize the machines at its best; therefore optimizing the machine's performance and increasing uptime.

At POWERPLUS, we strive to build and maintain long-term relationships with each and every client based on trust, integrity and professionalism.

