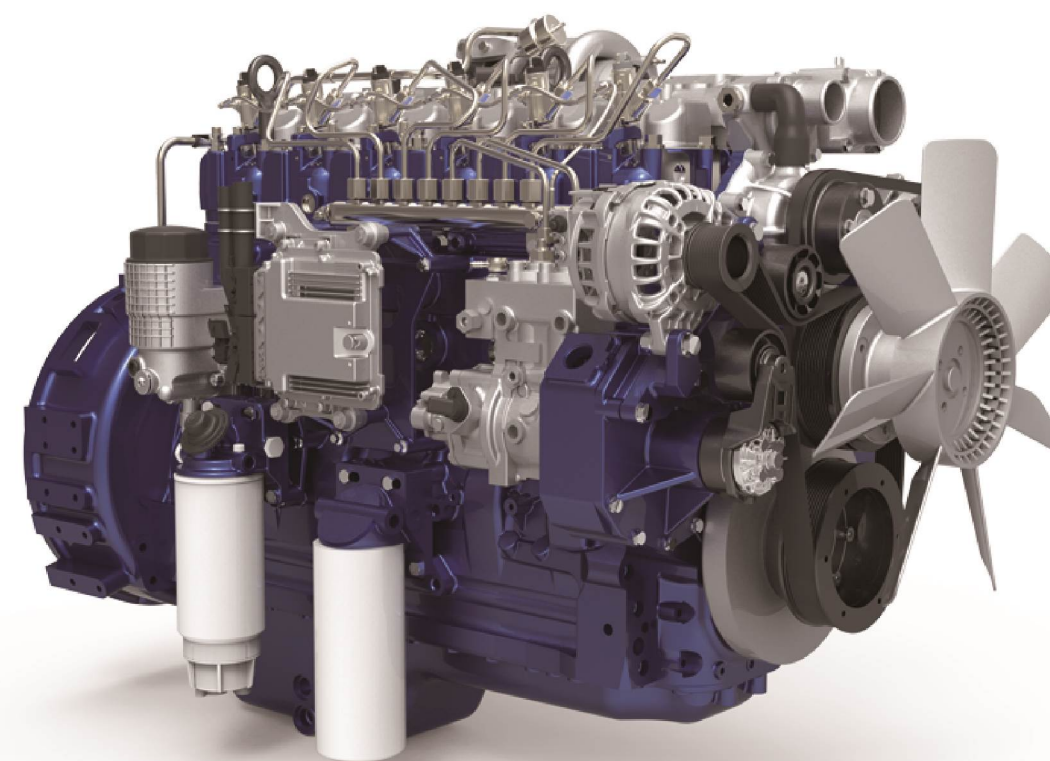


WEICHAI



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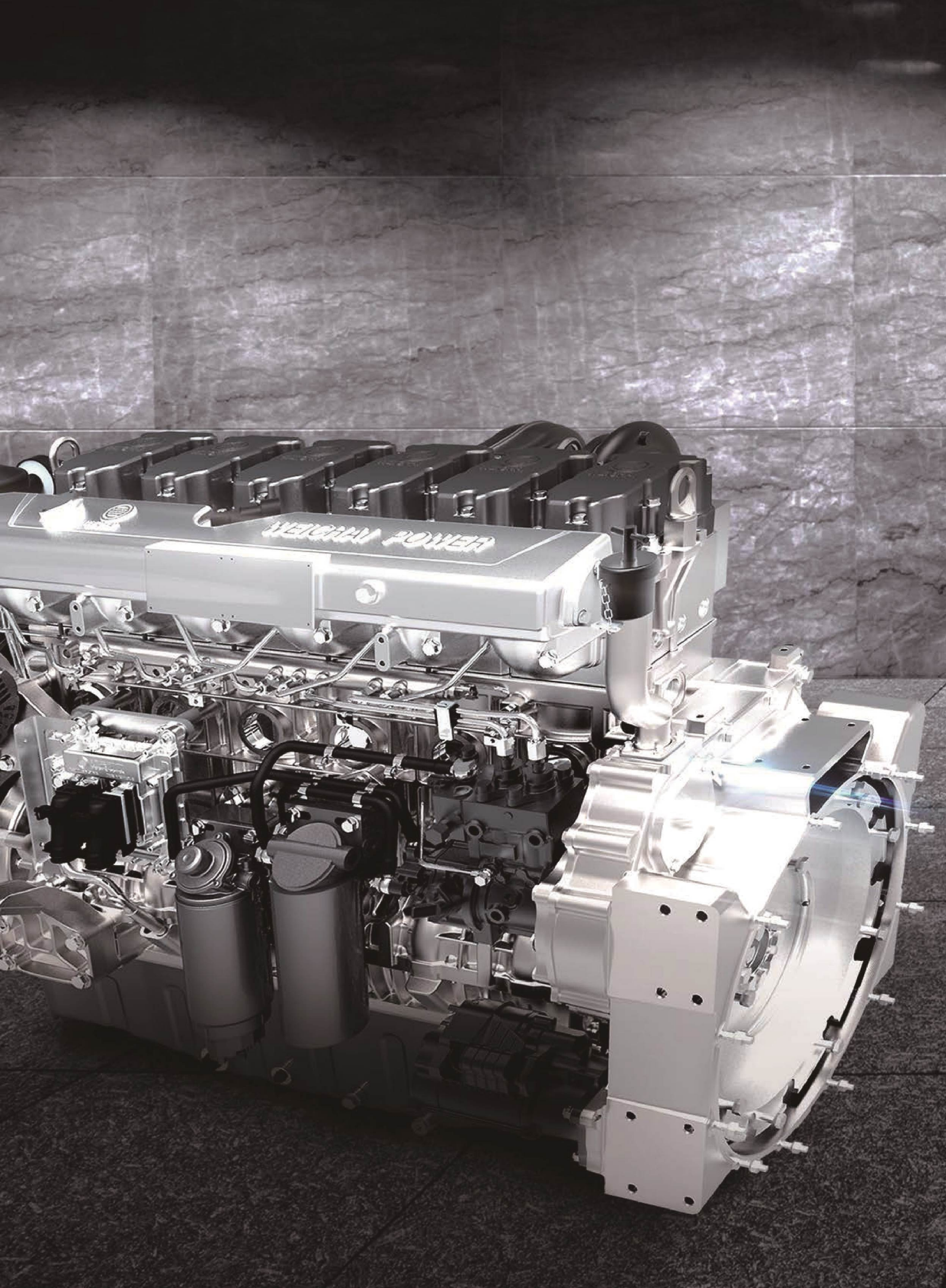
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WEICHAI
Agricultural Equipment
Engine

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ABOUT US

Introduction

Weichai has four business platforms covering power train, luxury yacht, vehicle and auto parts. Its subsidiaries are spread across Europe, North America, Southeast Asia and other regions. Global R&D and Operation Centers are established in Chicago, Marseilles, Forli, Frankfurt and Singapore. At present, Weichai has offices in more than 40 countries and over 400 authorized service stations. Weichai products has been sold to 100 countries and regions around the world. Weichai is committed to extending its industry supply chain and improving its competitiveness through strategic investments. Weichai



acquired French Baudouin in 2009, further expanding engine business. In 2012, Weichai Group acquired 75 percent of Italy's Ferretti, the world's largest luxury yacht manufacturing enterprise. Later in 2012, Weichai Group's subsidiary, Weichai Power, signed a strategic cooperation agreement with KION Group, one of the world's top industrial forklift truck manufacturers and global leader of the hydraulic technology. Weichai aims to provide maximum satisfaction through its full range of engine and power offerings.

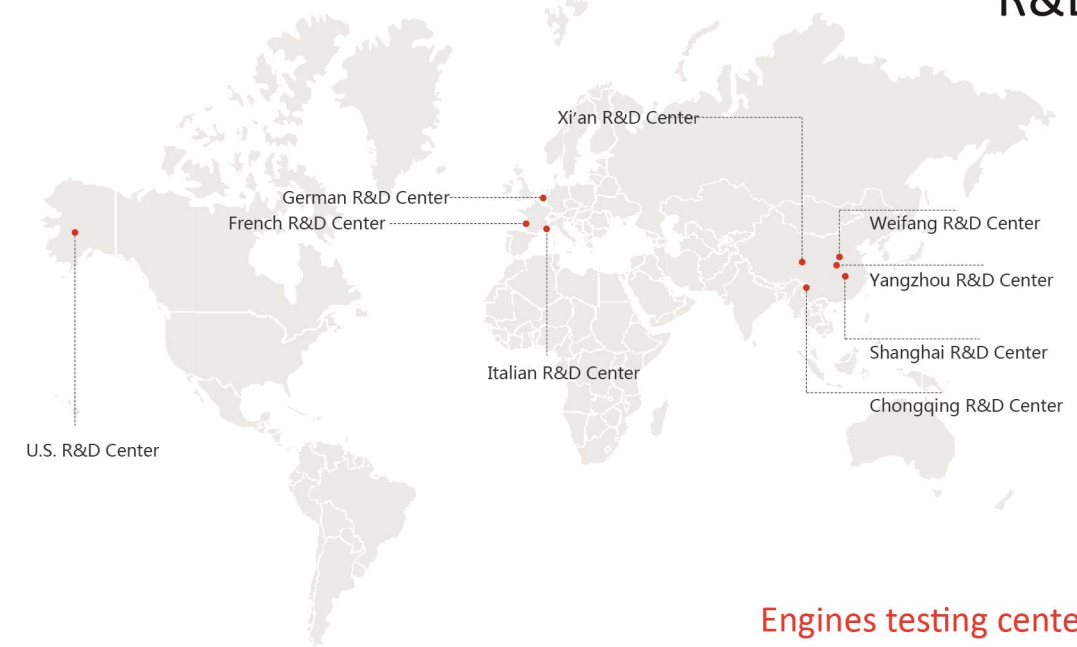
The most advanced manufacturing base of engines in the world

Weichai has an Industrial Park covering 220 hectares. Phase I invested 150 Million USD and 200,000 engines are produced per year. Phase II invested 140 Million USD and 150,000-ton castings are produced per year. All facilities are imported from world famous companies such as Heller of Germany, ATLAS and ABB of Switzerland. ALL facilities on the product line are connected by LAN, which manages production in realtime. The lines include 50 machining centers, 8 robots, 5 fine finishing centers and CMM.



R&D Capacity

Global Layout



Engines testing center development

- Engines testing center at a cost of \$ 300 million to build, covers an area of 5,000 square meters, construction area of 10,000 square meters, is currently the largest, most versatile and the strongest engine test center.

- Germany TUV authorized laboratory
China National Accreditation Service for Conformity Assessment (CNAS) authorized laboratory
National key laboratory of internal combustion engine reliability



R&D Guarantee

Simulating Calculation	Five-axis test-bed	Vehicle hub rotation	Performance optimization
Provide theoretical support	Convenient and efficient matching test	Provide accurate test data	Promote power train performance

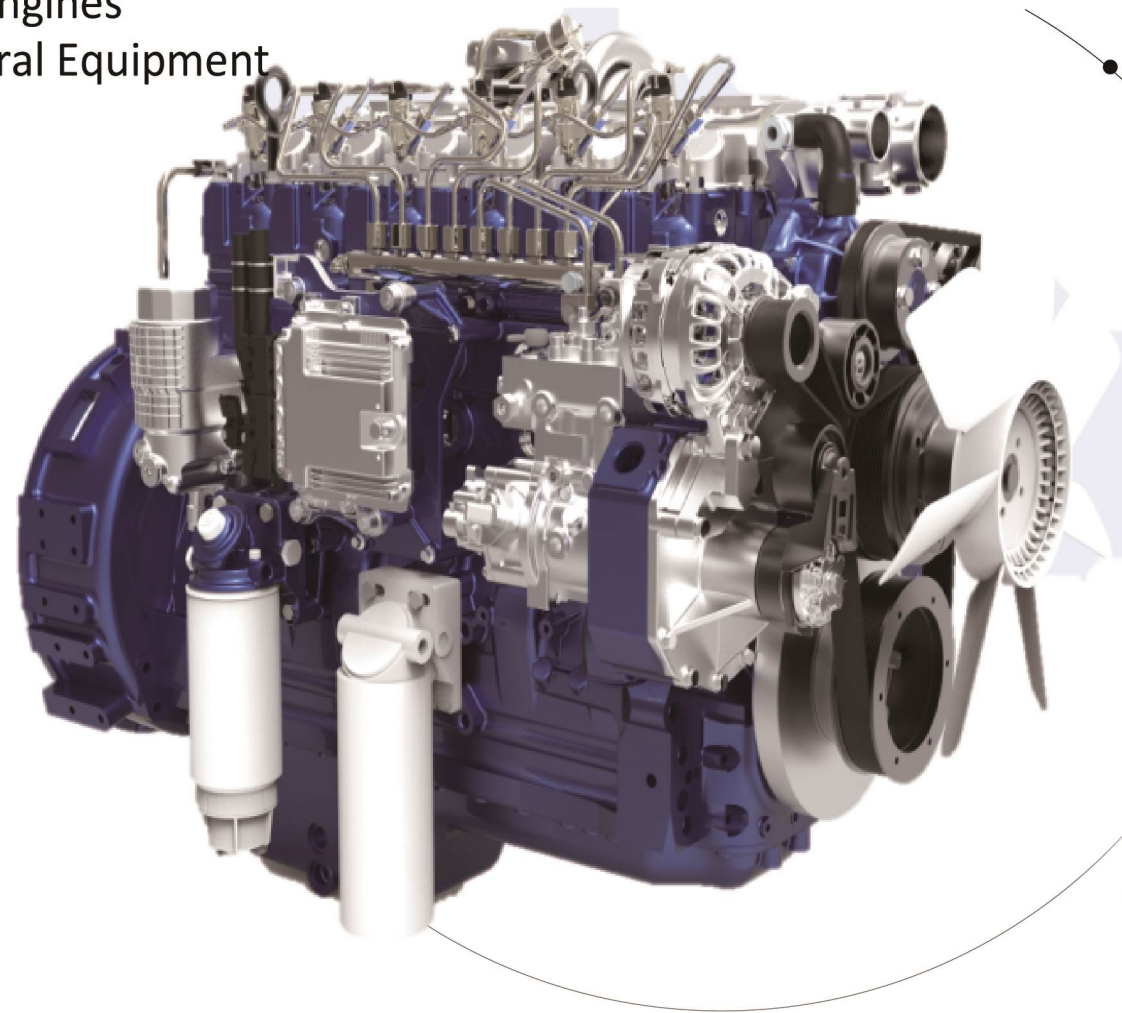
Three-height test team



Team
30 people

Mission
To provide customers with a broad geographical adaptability, high-performance and high-quality products.

Overview - Engines for Agricultural Equipment



● Agricultural Tractor

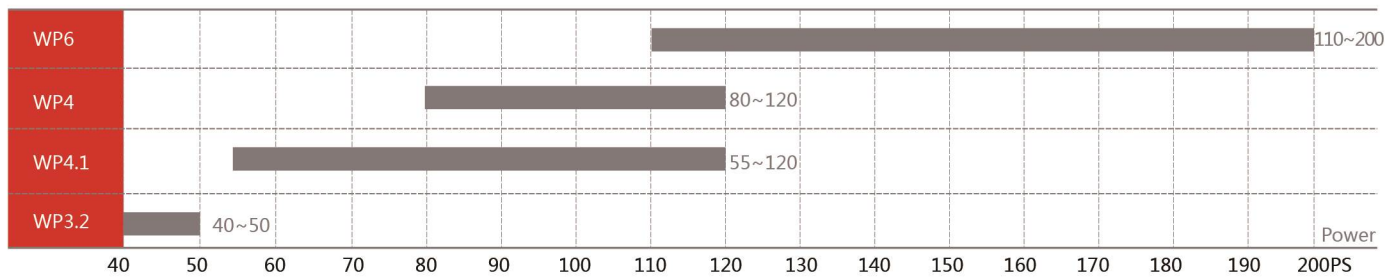
● Corn Harvester

● Wheat Harvester

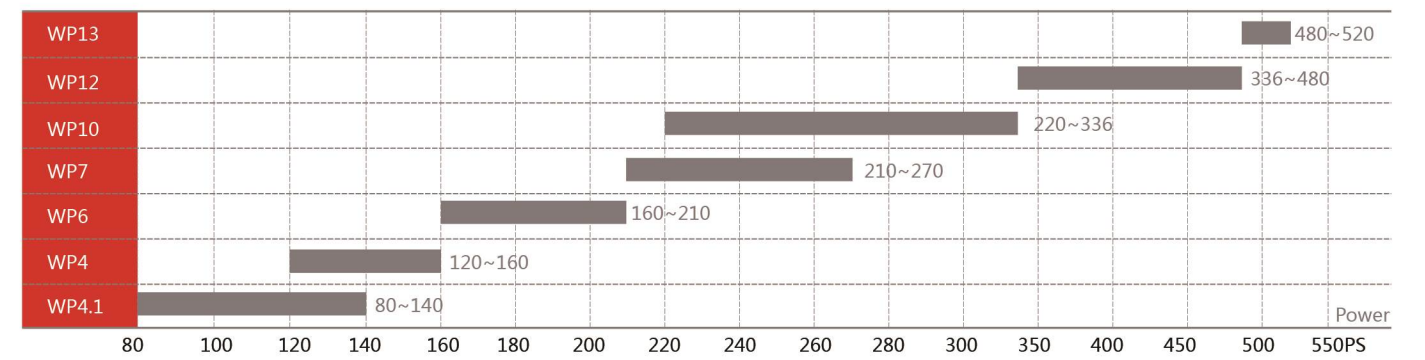
● Silage Machine

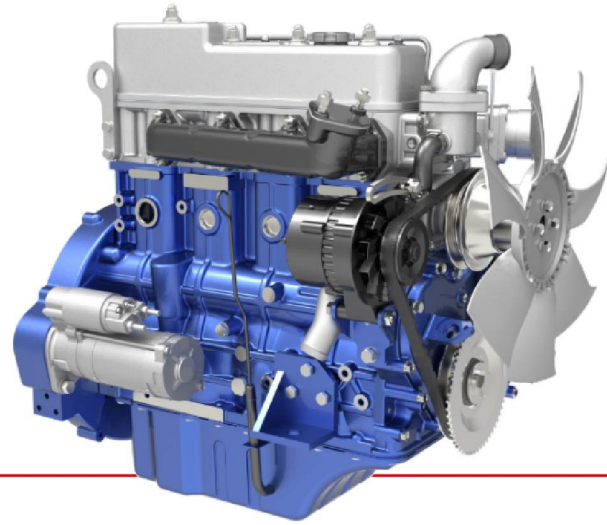


Engines for Agricultural Tractors (Net Power)



Engines for Harvesting Machines





Major Engine Products for Agricultural Equipment

WP3.2 Engine Platform

WP3.2 is the engine Weichai developed for tractors below 50hp.

Features

- 1/ The compact electrically controlled VE pump has a small size, high torque reserve and low fuel consumption, with good high-speed performance and high reliability;
- 2/ Cylinder body and head are manufactured with imported automated casting lines, with high precision and product consistency;
- 3/ Electrically controlled fuel system and sensors in the common rail engine models.

Applications

Agricultural tractors, etc.

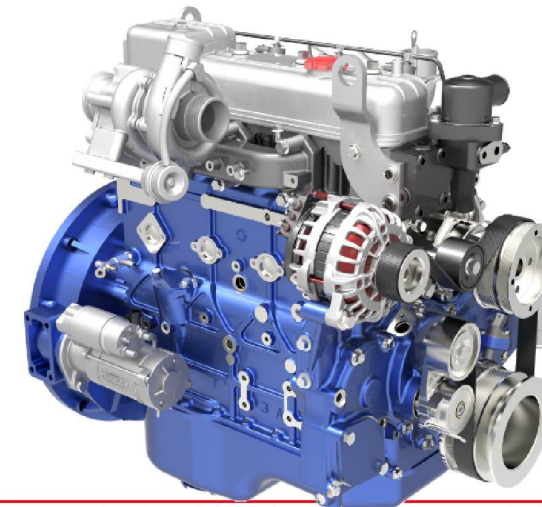
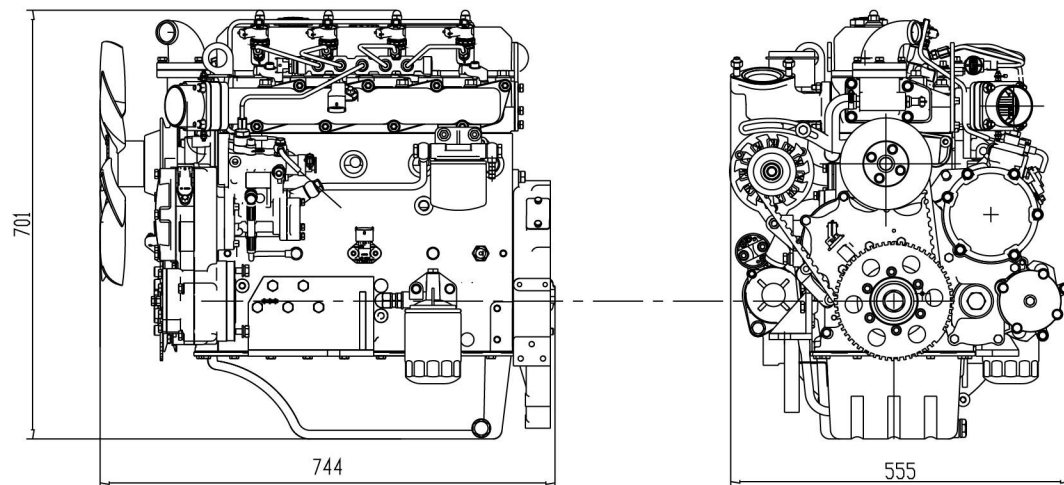
Specifications

Cylinder number : 4	Bore (mm) × Stroke (mm): 98×105
Displacement (L) : 3.2	Power (kW): 29.4-36.8
Rotation: anti-clockwise (seen from the flywheel)	Length (mm) × Width (mm) × Height (mm): 744×555×701
Weight (kg): 355kg	

WP3.2 Series Model List

Engine Model	WP3.2G40E346	WP3.2G45E346	WP3.2G48E346	WP3.2G50E348
Power/Speed (KW/rpm)	29.4/2400	33.1/2400	35.3/2400	36.8/2400
Max. Torque/Speed (Nm/rpm)	165/1500-1900	185/1500-1900	210/1500-1900	210/1500-1900
Type	EC VE pump + NA	EC VE pump + NA	EC VE pump + NA	EC VE pump + NA
Bore × Stroke (mm)	98x105	98x105	98x105	98x105
Displacement (L)	3.17	3.17	3.17	3.17
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

Outline - WP3.2 for Agricultural Tractors



WP4.1 Engine Platform

WP4.1 is developed based on the new Euro V vehicle engine platform, combining the operating characteristics of agricultural equipment and upgrading the auxiliary parts. The B10 life of the engine reaches 10000h.

Features

- 1/ Standard configuration includes BOSCH high-pressure common rail fuel injection system that is compatible with 12/24V electrical system;
- 2/ Inherited the high-strength cylinder body, head and liner of the vehicle engine platform;
- 3/ High-standard parts - smart starter protection, shaft-connecting water pump and etc.;
- 4/ The strengthening board on the cylinder block could reduce vehicle vibration and noise;

Applications

Agricultural tractors, corn harvesters, wheat harvesters, etc.

Specifications

Cylinder number: 4	Bore × Stroke (mm): 105×118
Displacement (L): 4.1	Power (kW): 40 ~ 103
Compression ratio: 17.5:1	Rotation: anti-clockwise (seen from the flywheel)
Length × Width × Height (mm): 950×660×780	Weight (kg): 420

WP4.1 Model List for Agricultural Tractors

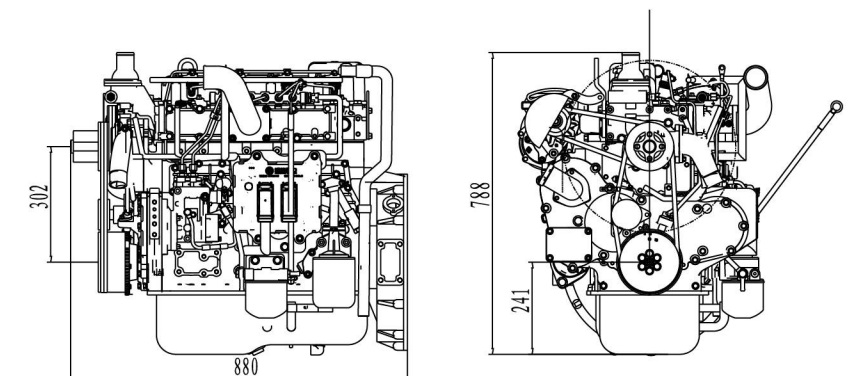
Engine Model	WP4.1G55E301	WP4.1G60E301	WP4.1G65E301	WP4.1G70E302	WP4.1G75E301	WP4.1G80E301	WP4.1G85E301
Power/Speed (KW/rpm)	40.4/2300	44.1/2300	47.8/2300	51.5/2300	55.2/2300	58.8/2300	62.5/2300
Max. Torque/Speed (Nm/rpm)	220/1400-1600	240/1400-1600	260/1400-1600	280/1400-1600	300/1400-1600	330/1400-1600	350/1400-1600
Type	EC HP CR + TC	EC HP CR + TC	EC HP CR + TC	EC HP CR + TC	EC HP CR + TC	EC HP CR + TC	EC HP CR + TC
Bore × Stroke (mm)	105x118	105x118	105x118	105x118	105x118	105x118	105x118
Displacement (L)	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Emission	off-road Stage III	off-road Stage III	off-road Stage III	off-road Stage III	off-road Stage III	off-road Stage III	off-road Stage III

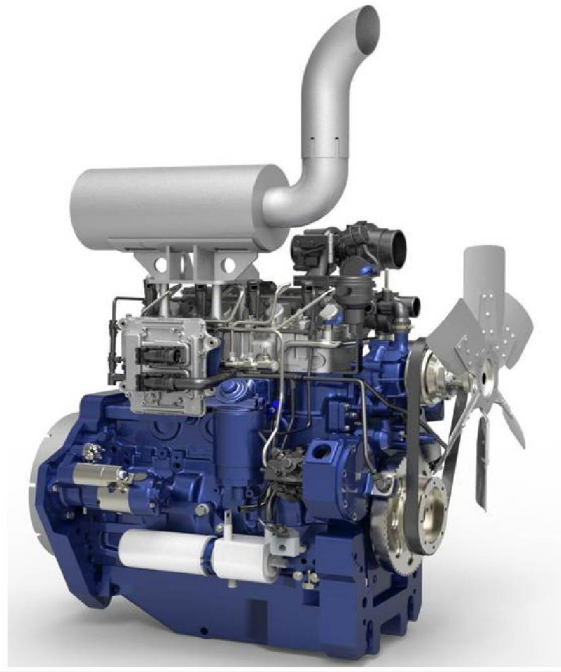
Engine Model	WP4.1G90E301	WP4.1G95E301	WP4.1G100E301	WP4.1G110E310	WP4.1G115E310	WP4.1G120E310
Power/Speed (KW/rpm)	66.2/2300	71/2300	73.5/2300	82/2300	85/2300	91/2300
Max. Torque/Speed (Nm/rpm)	365/1400-1600	385/1400-1600	400/1400-1600	420/1400-1600	460/1400-1600	480/1400-1600
Type	EC HP CR + TC	EC HP CR + TC	EC HP CR + TC	TC IC	TC IC	TC IC
Bore × Stroke (mm)	105x118	105x118	105x118	105x118	105x118	105x118
Displacement (L)	4.1	4.1	4.1	4.1	4.1	4.1
Emission	off-road Stage III	off-road Stage III	off-road Stage III	off-road Stage III	off-road Stage III	off-road Stage III

WP4.1 Model List for Harvesters

Engine Model	WP4.1G125E302	WP4.1G125E301	WP4.1G133E310	WP4.1G140E301
Power/Speed (KW/rpm)	92/2200	92/2300	98/2300	103/2300
Max. Torque/Speed (Nm/rpm)	480/1600-1800	480/1600-1800	515/1400-1600	520/1600-1800
Type	EC HP CR + TC IC	EC HP CR + TC IC	TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	105x118	105x118	105x118	105x118
Displacement (L)	4.1	4.1	4.1	4.1
Emission	off-road Stage III	off-road Stage III	off-road Stage III	off-road Stage III

Outline - WP4.1





WP4 Engine Platform

WP4 is the product of the joint venture founded by Weichai and Deutz. After years of adaptation and performance improvements, the product is now widely used in the areas of agricultural equipment.

Features

- 1/ The second-class balance mechanism could reduce vibration and noise to prolong longer engine component life and increase comfort;
- 2/ The poly V-belt pulley system has high transmission efficiency, low transmission noise belt drive and an extended belt replacement cycle;
- 3/ The three-stage fuel filter set the functions of electric pumping, oil-water separating and filtration in one to achieve excellent oil adaptability;
- 4/ PTO with various ratio options could meet the needs of different vehicles.

Applications

Agricultural tractors, corn harvesters, wheat harvesters, etc.

Specifications

Cylinder number: 4
 Displacement (L): 4.5
 Rotation: anti-clockwise (seen from flywheel)
 Weight (kg): 450

Bore (mm) × Stroke (mm): 105×130
 Power (kW): 51.5 ~ 118
 Length × Width × Height (mm): 991×578×1032

WP4 Model List for Agricultural Tractors

Engine Model	WP4G80E330	WP4G85E330	WP4G90E330	WP4G95E330	WP4G100E331
Power/Speed (KW/rpm)	60/2300	63.5/2300	67/2300	71/2300	73.5/2300
Max. Torque/Speed (Nm/rpm)	330/1400-1600	350/1400-1600	370/1400-1600	390/1400-1600	400/1400-1600
Type	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	105x130	105x130	105x130	105x130	105x130
Displacement (L)	4.5	4.5	4.5	4.5	4.5
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

Engine Model	WP4G105E330	WP4G110E330	WP4G115E330	WP4G120E330
Power/Speed (KW/rpm)	77/2300	82/2300	85/2300	91/2300
Max. Torque/Speed (Nm/rpm)	416/1400-1600	445/1400-1600	465/1400-1600	500/1400-1600
Type	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	105x130	105x130	105x130	105x130
Displacement (L)	4.5	4.5	4.5	4.5
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

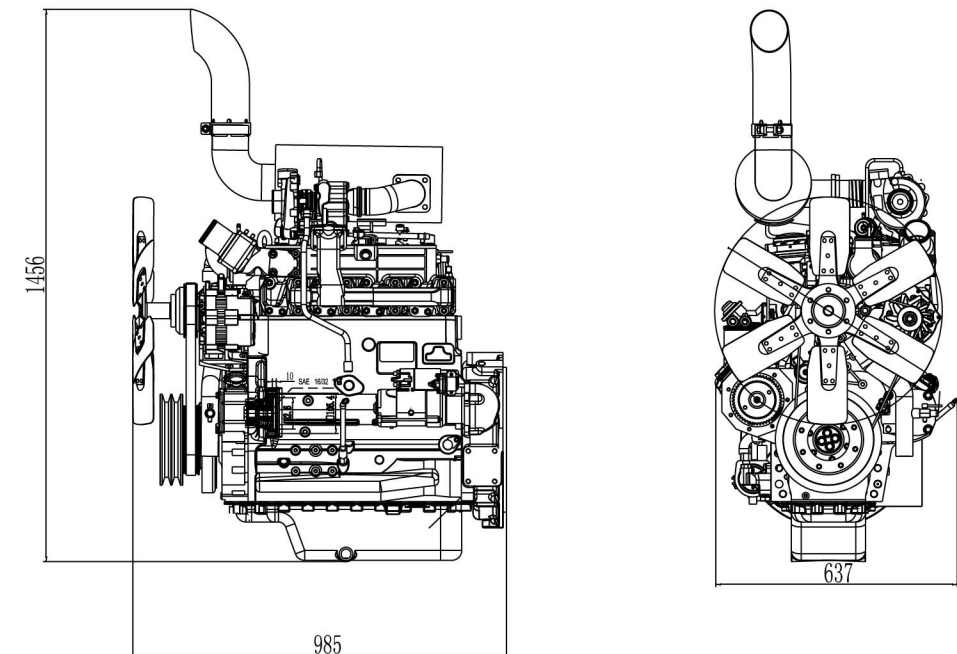
WP4 Model List for Harvesters

Engine Model	WP4G110E333	WP4G125E331	WP4G133E330	WP4G140E331	WP4G145E330
Power/Speed (KW/rpm)	81/2200	92/2200	98/2200	103/2200	107/2200
Max. Torque/Speed (Nm/rpm)	480/1600-1800	520/1600-1800	550/1600-1800	550/1600-1800	560/1600-1800
Type	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	105x130	105x130	105x130	105x130	105x130
Displacement (L)	4.5	4.5	4.5	4.5	4.5
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

Engine Model	WP4G154E331	WP4G160E331	WP4G120E331	WP4G125E330	WP4G130E330
Power/Speed (KW/rpm)	113/2200	118/2200	89/2300	92/2300	95/2300
Max. Torque/Speed (Nm/rpm)	560/1600-1800	570/1600-1800	480/1600-1800	500/1600-1800	515/1600-1800
Type	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	105x130	105x130	105x130	105x130	105x130
Displacement (L)	4.5	4.5	4.5	4.5	4.5
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

Engine Model	WP4G140E330	WP4G154E330	WP4G160E330	WP4G165E330
Power/Speed (KW/rpm)	103/2300	113/2300	118/2300	120/2300
Max. Torque/Speed (Nm/rpm)	550/1600-1800	570/1600-1800	570/1600-1800	570/1600-1800
Type	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	105x130	105x130	105x130	105x130
Displacement (L)	4.5	4.5	4.5	4.5
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

Outline - WP4





WP7 Engine Platform

WP7 is the high-end product Weichai developed that meets the Euro IV standard using only electronically controlled high pressure common rail system + turbocharging and intercooling. The engine has received the off-road Stage III emission certification, and can be certified for Euro V and Euro VI through the installation of appropriate treatment.

Features

- 1/ The four-valve integral cylinder head and electronically controlled high pressure common rail fuel system could meet off-road Stage III and on-road Euro IV/V with minimum vehicle changes during upgrading;
- 2/ Engine body with extra support has standard arc design and "damping ribs" for high reliability;
- 3/ Weichai special three-stage filter could effectively remove impurities in the fuel to greatly reduce fuel system failure rate;
- 4/ Remote oil filtration control could effectively enhance vehicle layout and maintenance convenience;
- 5/ Rear-mounted gear system with cut gear design offers smooth operation and low noise;
- 6/ Double-curved fan provides large air volume, low power consumption, and low noise, being able to meet the 46 °C ambient temperature limit of the vehicle.

Applications

Agricultural tractors, harvesters, silage machine, etc.

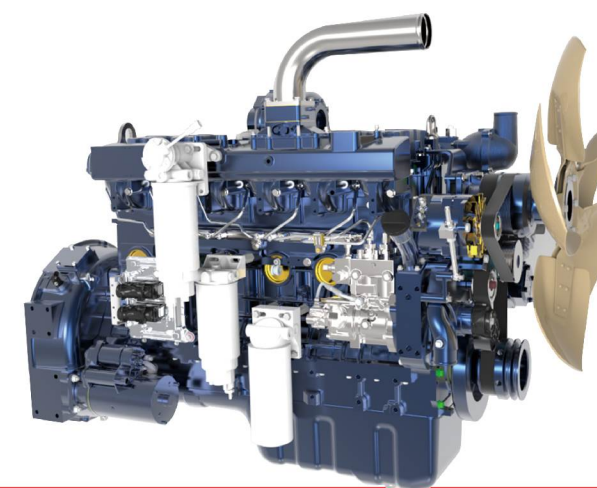
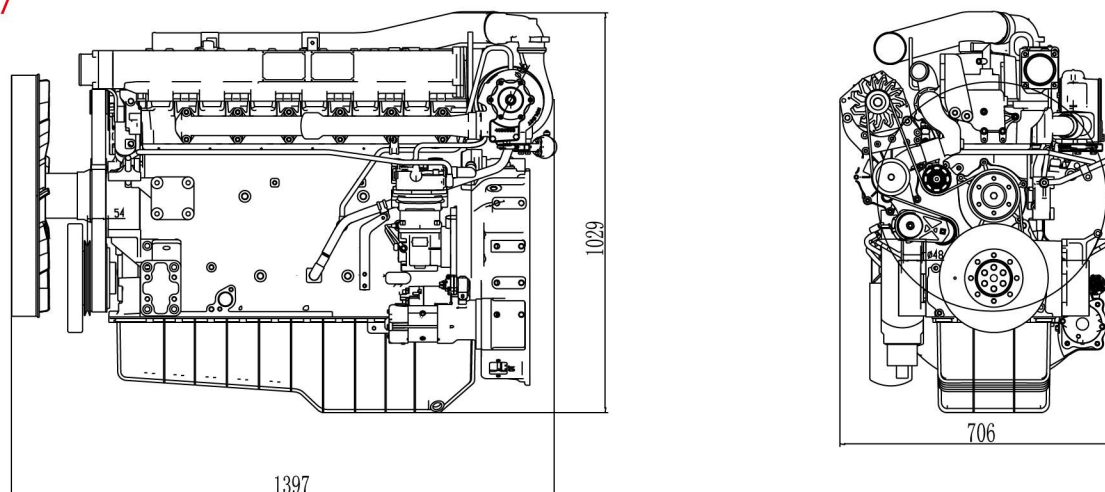
Specifications

Cylinder number: 6	Bore (mm) × Stroke (mm): 108×136
Displacement (L): 7.47	Power (kW): 154 ~ 199
Rotation: anti-clockwise (seen from flywheel)	Length × Width × Height (mm): 1397×706×1029
Weight (kg): 700	

WP7 Model List

Engine Model	WP7G210E300	WP7G220E300	WP7G240E301	WP7G270E303
Power/Speed (KW/rpm)	154/2200	162/2200	176/2200	199/2200
Max. Torque/Speed (Nm/rpm)	950/1300-1500	1000/1300-1500	1100/1300-1500	1200/1300-1500
Type	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	108×136	108×136	108×136	108×136
Displacement (L)	7.47	7.47	7.47	7.47
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

Outline - WP7



WP10 Four-valve Engine Platform

WP10 is the four-valve engine with low engine speed, high torque, high power, and the fuel consumption lower than competitors by 2-3L. It is the engine developed based on the classic Styer engine platform for silage machine.

Features

- 1/ The electronically controlled high pressure common rail technology meets off-road Stage III standard and is convenient to upgrade;
- 2/ The four-valve structure offers fuller air intake and higher combustion efficiency, effectively raising the torque to improve vehicle performance;
- 3/ Three-stage fuel filter has great fuel adaptability and improved reliability;
- 4/ Extra-support structure could effectively reduce engine vibration and enhance comfort.

Applications

Silage machine etc.

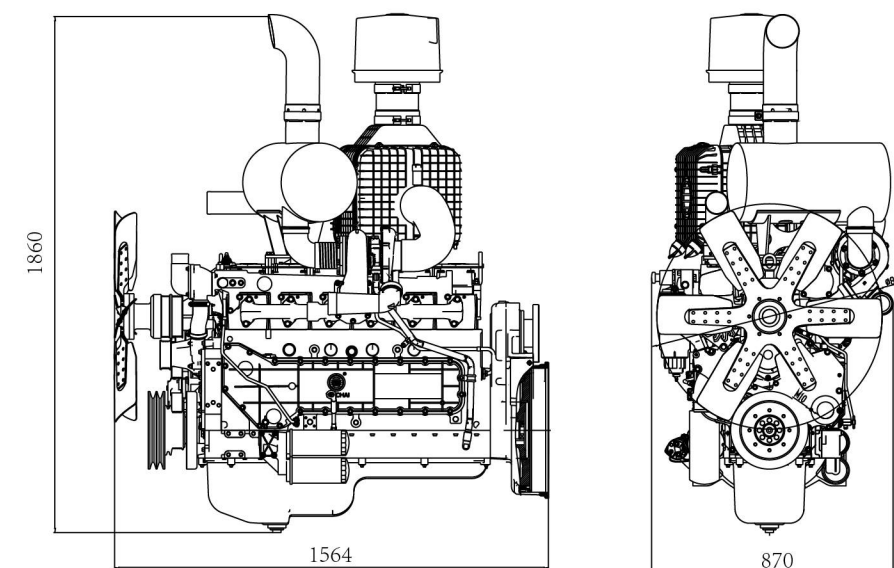
Specifications

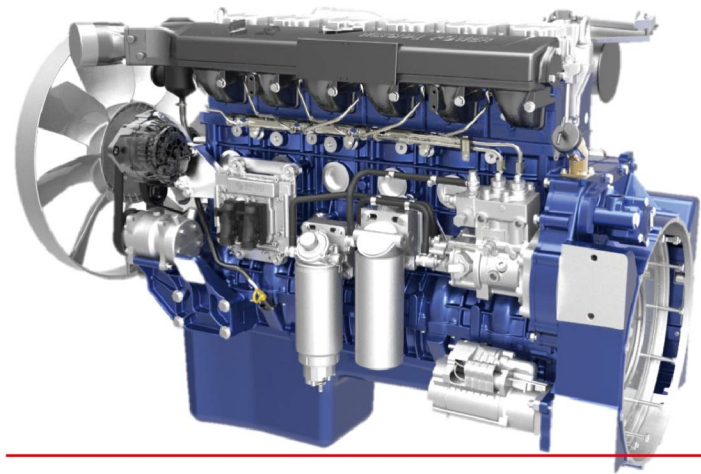
Cylinder number: 6	Bore (mm) × Stroke (mm): 126×130
Displacement (L): 9.7	Power (kW): 162 ~ 266
Compression ratio: 17:1	Rotation: anti-clockwise (seen from flywheel)
Length × Width × Height (mm): 1527×870 ×1870	Weight (kg): 875

WP10 Model List for Silage Machine

Engine Model	WP10G220E341	WP10G240E341	WP10G270E341	WP10G336E341
Power/Speed (KW/rpm)	162/2200	178/2200	199/2200	247/2200
Max. Torque/Speed (Nm/rpm)	950/1400-1600	1100/1400-1600	1100/1400-1600	1550/1200-1500
Type	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	126x130	126x130	126x130	126x130
Displacement (L)	9.7	9.7	9.7	9.7
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

Outline - WP10





WP12 Engine Platform

WP12 is the special four-valve engine Weichai developed for silage machine, having improved the external characteristic torque to better meet the working condition of the silage machine.

Features

- 1/ The four-valve structure with mid-mounted injector has high combustion efficiency, strong power and low fuel consumption;
- 2/ High-mounted three-stage fuel filter has automatic pumping and heating function;
- 3/ High-mounted oil filter enables customers to use and maintenance;
- 4/ Engine with vehicle oil cooler could cool the hydraulic oil for the vehicle to reduce customer costs.

Applications

Silage machine etc.

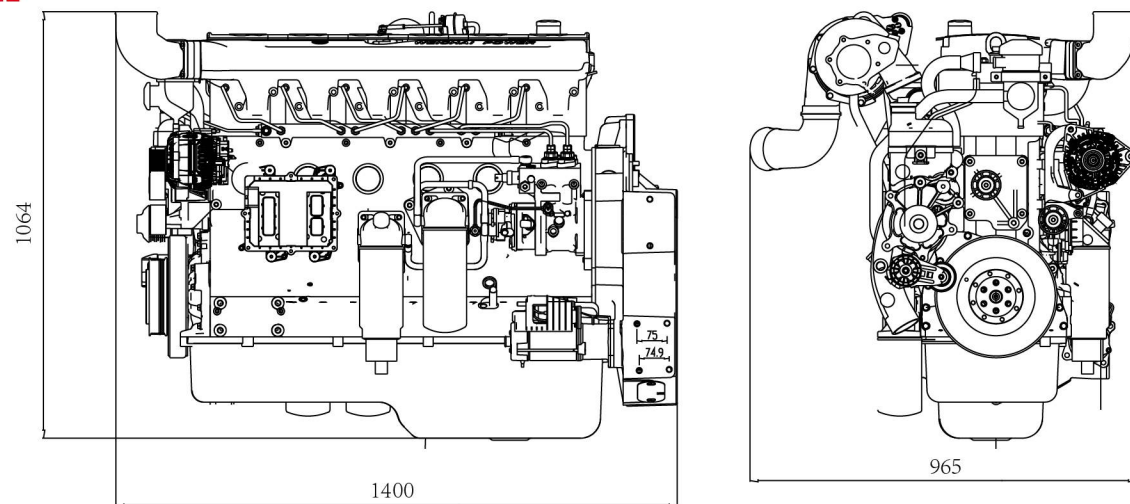
Specification

Cylinder number: 4	Bore (mm) × Stroke (mm): 126×155
Displacement (L): 11.596	Weight (kW) : 250-353
Compression ratio: 17:1	Rotation: anti-clockwise (seen from flywheel)
Length × Width × Height (mm): 1308×784 ×857	Weight (kg): 905

WP12 Model List for Silage Machine

Engine Model	WP12G340E311	WP12G380E310	WP12G400E310	WP12G440E310	WP12G480E310
Power/Speed (KW/rpm)	250/2100	280/2100	294/2100	323/2100	353/2100
Max. Torque/Speed (Nm/rpm)	1800/1300-1500	1650/1200-1600	1780/1200-1500	1920/1200-1500	2100/1200-1500
Type	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC	EC HP CR + TC IC
Bore × Stroke (mm)	126×155	126×155	126×155	126×155	126×155
Dispalcement (L)	11.6	11.6	11.6	11.6	11.6
Emission	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III	Off-road Stage III

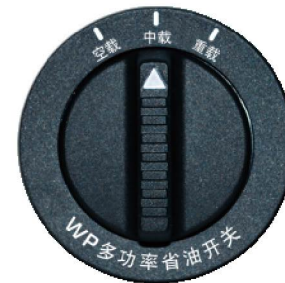
Outline - WP12



Exclusive Technologies

93 Dust Filter

- 1/ The patented 93 dust filter from Weichai uses three-stage filtration;
- 2/ The 93 dust filter is a standard part for agricultural equipment;
- 3/ Key part early wear rate is reduced by more than 90%
- 4/ Mass supply has been realized for agricultural equipment and construction machinery, for an amount of more than 60,000 units.



Multi-power fuel-efficient switch

- 1/ The WP multi fuel-efficient switch could meet the power needs of no-load, mid-load, or heavy-load, helping the driver change driving habits.



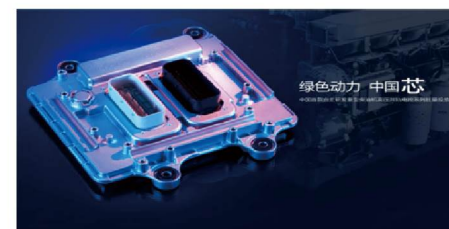
Water-separating Fuel Filter

- 1/ The special water removing filter element for Euro III standard could be widely used in rural areas and other harsh conditions;
- 2/ Avoid difficult starting or flameout after starting in the alpine region;
- 3/ Resolve the starter drag because of exhaust after maintenance to lower starter ring gear failure rate;
- 4/ Replace the tedious manual pumping process.

Logic behind GPS Installment



Vehicle equipped with Weichai engine have better financial options and offers more peace of mind!



Self-developed ECU

- 1/ Break the monopoly of foreign technology to make major breakthroughs in the development of diesel engine electronic control system aspect;
- 2/ The Electronical Control Institute with more than 100 technical staff can provide unique "dual throttle control", "multi power output" and other unique features for agricultural equipment, making the vehicle more fuel efficient and more convenient to control.

Weichai Service

Products of Weichai Power have been sold to 100 countries and regions on five continents. Currently, a worldwide service network had been established with 40 foreign field offices and and over 400 authorized service locations.

Also, Weichai has set up global operation centers in Wiesbaden/ Aschaffenburg (Germany), Forli (Italy), Marseilles (France), Chicago(USA), and Singapore, etc.

