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LOVOL HEAVY INDUSTRY CO., LTD.

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Specifications and designs are subject to change without prior notice.

Machines shown may include optional parts.

The above parameters are subject to change without notice, the illustrations in text is not always the type of standard models.

TE SERIES TRACTORS (25-35 HP)

TE series compact tractor brings Efficiency, versatility, power and comfort to your life.

LOVOL
AGRICULTURE



LOVOL OVERVIEW

Lovol Heavy Industry Co, Ltd. is an international multi-business group primarily specializing in agricultural equipment, construction machinery, vehicles, financial services and other businesses. The company now has a total asset of 2.5 billion dollars with 15,000 employees in and beyond China In 2015, the sales revenue has reached 5 billion dollars.



LOVOL BRAND

In 2018, the brand value of LOVOL is evaluated to be RMB 58.195 billion .

LOVOL PRODUCT

As one of the fastest growing brands in China, Lovol is available to provide customers with a full range of products, including tractors, combine-harvester, tractor implements, etc.

LOVOL R&D

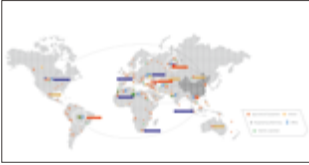
Located in Bologna, Italy, Lovol European R&D Center boasts a team of more than 200 experts, focusing on the development of power shifting platform tractors and large grain harvesters. Lovol Japan R&D Center is responsible for the research of construction machinery and hydraulic electric control technology. Equipped with Body Power Center, Transmission Capacity Center and Hydraulic Electric Control Center, Lovol Weifang Institute of Technology is mainly engaged in mechanical shifting platforms and harvest machinery; Lovol Zhucheng Technical Center is responsible for the development of agricultural implements and municipal equipment attachments.

LOVOL FACTORIES

Lovol has two major agricultural equipment production bases, one in Italy and one in Weifang, China, and 12 industrial parks, including Arbos (Europe) Factory, MaterMacc Factory, Goldoni Factory in Europe; Arbos (China) Factory and Lovol Heavy Equipment in Weifang, Shandong; Five-star Vehicle Factory, Five-star Car Factory and Arbos Agricultural Equipment and Implements Factory in Zhucheng, Shandong; Construction Machinery Factory in Qingdao; Axle Case Factory in Linyi, Shandong; Engine Plant in Tianjin; and Beidahuang Factory in Harbin, Heilongjiang.

LOVOL NETWORK

Lovol now has developed more than 300 distributors in 120 countries and regions, forming five-in-one global operating network integrating sales, after-sales service, spare parts supply, customer training and information feedback.



AN OMNIPOTENT COMPACT TRACTOR

LOVOL be responsibility for your trust. We will bring a best friend, an excellent employee for you.



What TE series compact tractors will brings you? Landscapers, Snow movers, Finish mowers, Gardeners, Lawn seeders, Fence builders, Livestock farm, Weekend entertainment, even grower farm. Take a look at new LOVOL TE series tractors you will see everything is here. Equipped with stronger chassis and transmissions, we deliver the extra durability and reliability your demand for a wide range of jobs. The new high quality 3 cylinders engine brings more available power but lower fuel consumption.

Fashionable Appearance and Comfortable Cabin

You can choose different types of cabin according to operation needs.

If you prefer economical efficiency, maintenance convenience, and a board view, you may choose ROPs and Sunshade type. If you prefer comfortable driving, you can choose the cabin to keep out wind and rain. Except framework and ceiling, all other components in a cabin are built with glass, which guarantees comfort as well as good view. You can also select tractors with detachable cabin, satisfying your various needs.

Configuration				
Integral type flat floor	Optional	Optional	Optional (equipped with fan heater)	Optional (equipped with fan heater)
Non-flat floor	Optional	Optional	—	Optional (equipped with fan heater)



Paddy field tire, farmland tire, construction tire and turf tire are for option.



Classic Rops and Sunshade type



Classic Cabin type

Operating handle is properly arranged and easily controlled, allowing safer and more comfortable operation



Do you want to enjoy your work as well as enjoy the raining? If you are working in orchard or bosh, and don't want to be hurt by the thick bough. Do you want to make your tractor as warm as home when you are doing snow clearing?

TE series provide option for closed cabin, based on ergonomics, with large glass, that delivers more cab space and a wider field of view. The integrated design also eliminates holes in the floor for the pedals for an environment that minimizes noise and unwanted dust from entering the cab. Doors open wide for easier entry and exit from the cab. The cleverly devised windows half lock opens just enough for fresh air ventilation while minimizing grass, hay and dust entering the cab, both side windows and rear window can be open.

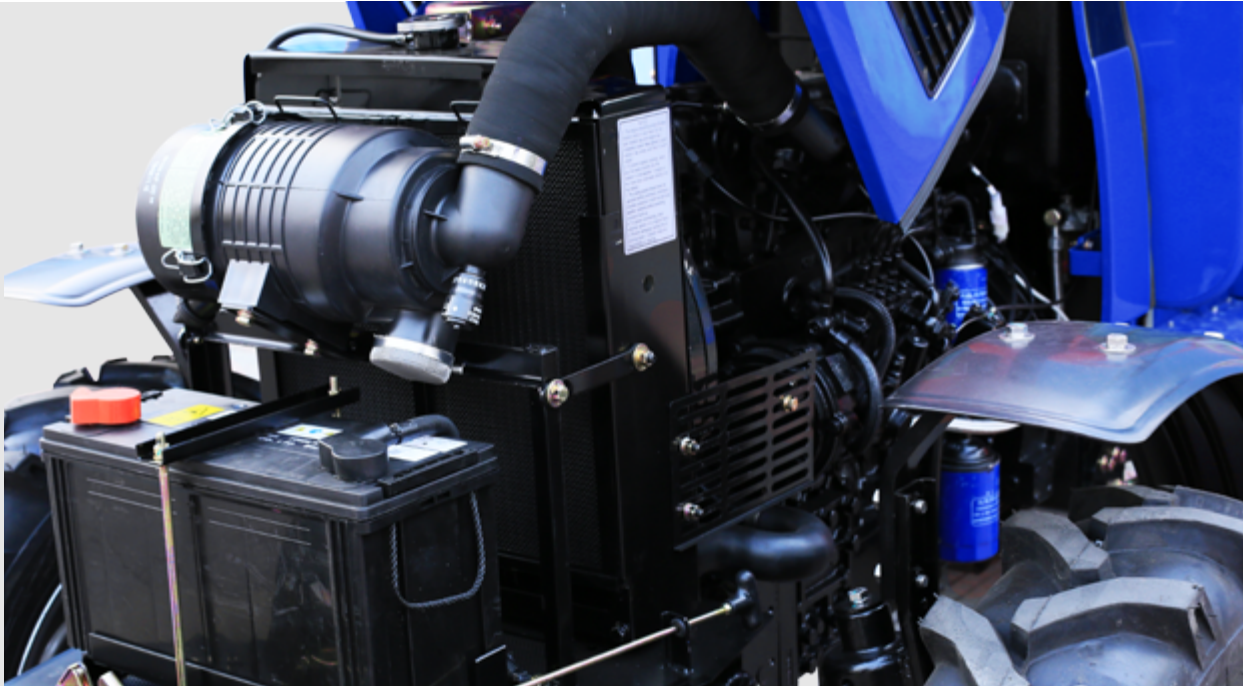
- 1 Operating handle is properly arranged and easily controlled, allowing safer and more comfortable operation.
- 2 4WD switch is located on the left side of the floor.
- 3 Dual-speed PTO switch is set on the left side of the seat.
- 4 The combination instrument is equipped with fuel gauge, tachometer, digital hour meter, and engine oil pressure gauge, displaying clear information and allowing a driver to understand the conditions timely and make right decision immediately.
- 5 Shifting handle, lifter handle and two-ways removable hydraulic output valve handle are set on the right of the seat, which is convenient for right hand operation. Handles are reasonably arranged in proper heights, improving the efficiency and security for operation.
- 6 Switch of differential lock is set on the right side on floor.
- 7 Advanced Grammer seats, luxurious and reliable, are available for flat-floor type tractors. The softness of seat is adjustable, meeting the requirements of people of different weights. In addition, good damping function increases driving comfort. Seat can be move forward, backward, upward and downward, satisfying drivers in different heights.

Standard three-cylinders engine

Stable performance and reliable quality

What's the feeling that you are riding a horse crossed thousands miles but never stopped. LOVOL TE tractors have a strong heart, making you feel riding a swift horse.

LOVOL TE series tractors with standard 3-cylinders diesel engine on models 20-32 horse power, 4-cylinders diesel engine on models 35 horse power, with the new design and engine adjustment provides continuously power, with the torque reserve to keep going when the going gets tough, with a rated speed of just 2350 rpm and insulated muffler to keep engine running quiet, liter per hour fuel consumption saves more money in your pocket.



Standard engine: cylinder Nos.: 3; displacement: 1.65L; engine rated power: 18.4kW; PTO power: 15.89kW; rated rpm: 2350; intake type: natural
 Enhanced engine: cylinder nos.: 3; displacement: 1.496L; engine rated power: 18.4kW; PTO power: 15kW; rated speed: 2400; intake type: natural; emission standard: EPA 4

Highly user-friendly maintenance system easily handles different challenges.



High torque reserve
 Torque reserve for the engine reaches more than 25%, allowing strong ability to overcome instant overload and less frequency in shifting gears when it does climbing and other load-varying operations.

Full-pressure lubrication system
 Full-pressure lubrication system allows users to maximally reduce maintenance cost and thereby cutting unnecessary expenses. Each piston and piston pin are sprayed by the pressure system to avoid engine overheat.

Equipped with safety starting switch
 The engine cannot be started until the clutch is disengaged, ensuring the safety of starting the tractor.

Low fuel consumption
 Direct injection technology is adopted in cylinder to realize full combustion.

- 1、Maintenance-free battery, realizing maintenance free and convenient use.
- 2、Equipped with preheating start-up device, engine can be successfully started at -15°C in winter.
- 3、The installation and disassembly of radiator grille is easy, allowing quick removal of dust on grille, which ensures the cooling effect of engine and reduces the cost of maintenance.
- 4、Dry air filter and wet air filter are available: dry air filter is installed inside hood to avoid sight blockage, which is provided with cleanliness alarm device, realizing filter replacement in time, Wet air-cleaner features lower maintenance cost.



Standard three-cylinders engine
Stable performance and reliable quality

Shift designs of 8F+2R, 8F+8R, and 16R+4F are available. 8F+8R shift transmission can be equipped with synchronized, featuring convenient and smooth operation, which meets requirements of different operations. Furthermore, the clutch friction plate adopts special metal-ceramic material, improving the service life and reducing the maintenance cost of the whole machine. At present, the 8F+8R type shift and the 8F+2R type shift are main products to promote. So next, a detailed description of shift of 8F+8R type and 8F+2R type is provided.

8F+8R shuttle type shift

8+8 shuttle type shift design consists of 3 gear levers among which flat-floor type main gear lever and auxiliary gear lever are arranged on the right side of driver and non-flat-floor type gear lever is arranged in the middle of the floor. In addition, the main gear lever can reach 4 gears (1, 2, 3, and 4) and auxiliary gear lever can reach 2 speed zones (L represents low-speed zone, H represents high-speed zone). Shuttle type gear lever is arranged on the lower left side of the steering wheel to control forward and reverse gears. Operating levers are reasonably arranged, meeting the requirements of human-machine engineering and realizing convenient and comfortable operation as well as greater efficiency.

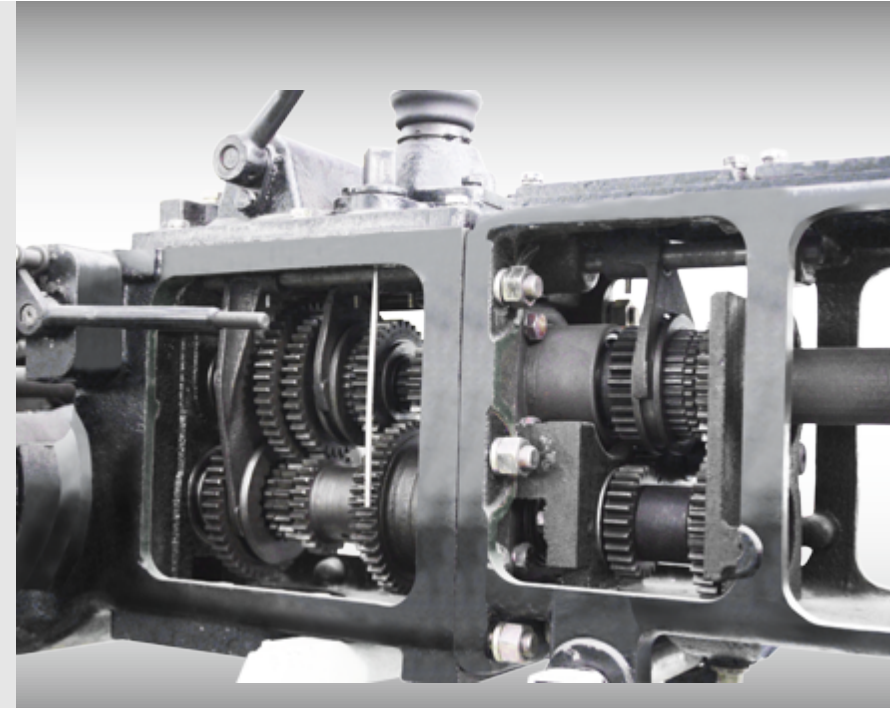
8+2 type shift

8+2 type shift design consists of 2 gear levers which are arranged in the middle of the floor. In addition, the main gear lever can reach 5 gears (four forward gears, i.e., 1, 2, 3, 4 and one reverse gear R). Auxiliary gear lever can reach 2 forward speed zones (L represents low-speed zone, H represents high-speed zone). The gear lever features reasonable height and location, which avoids interference with driver's leg in process of shifting and realizes comfortable operation.

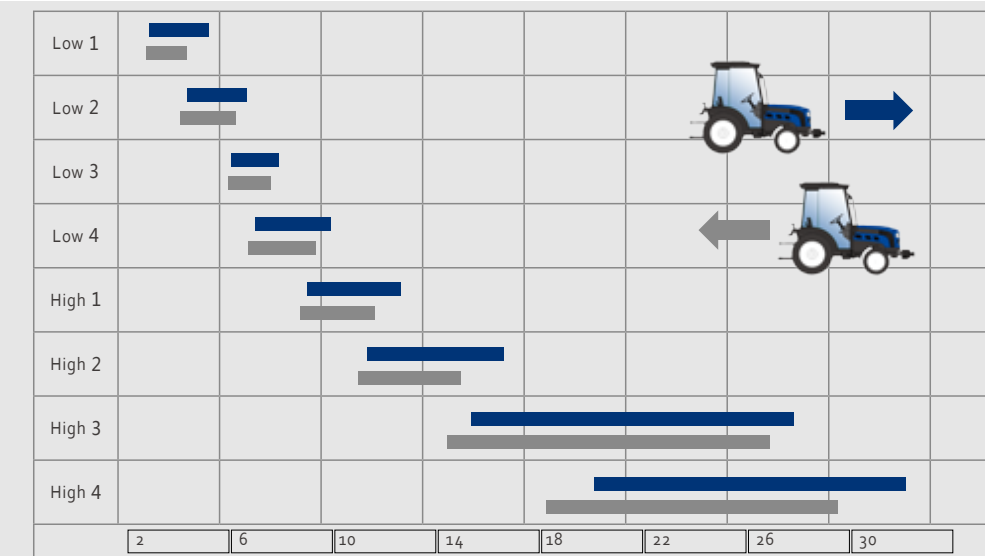
Reasonable velocity distribution

Proper working speed selection can not only deliver maximum productivity and economical efficiency, but extend the service life of tractors. Tractors shall not work under overload often, so that engine can have a certain power reserve. Field working speed of tractors shall ensure that engine works at around 80% of its rated load. For example: 1 level higher gear with small fuel consumption can be used in case of light load operation and low working speed. The distribution of theoretical tractor speed (engine 2350r/min) is shown in the following table.

Types	Plowing	Returning straws to field	Rotary cultivating	Sowing	Spraying
Operation speed	6-9	7-8	3-5	5-7.5	2-5



New gantry-type enhanced front drive axle features 20% increase in carrying capacity, intermediate cylinder, flexible steering, and 350mm ground clearance, meeting the needs of various working conditions.



Standard GEAR ST, it features 8 speeds forward and 2 speeds reverse. If you work on many transporting, you'll like this transmission, simple, reliable, efficient, making your work easier.

Synchro-shuttle, it features 8 speeds forward and 8 speeds reverse, with a reliable, synchronized gear. If you are doing many loader works, Synchro-shuttle will be best option for you. Shuttle lever located by the left side of steering wheel makes you easier to move forward and reverse. The synchronized shuttle gear enables that you can shifting quickly without stop the tractor, save your time.

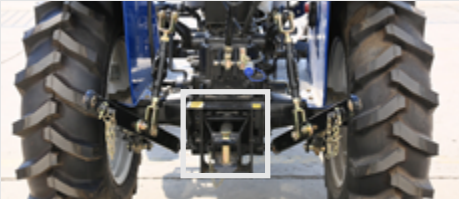
Creep Gear, it features 16 speeds forward and 4 speeds reverse. If you are doing special work which required very low speed, we provide the lowest 0.42km/h speed by full torque. you can take a walk with your tractors.

Dual-speed PTO is adopted for more fuel-efficient field operation. Solid CAT I three-point hitch realizes more reliable field operation.

6 or 8-teeth dual-speed power-output shaft in TE series tractor features two combinations: (low gear 540r/min, high gear 1000r/min) and (low gear 540r/min, high gear 720r/min). Drivers can select the best PTO shaft speed in light of actual ground conditions. Low rotation speed is applicable to heavy PTO operations like rotary cultivation, especially in the case that soil is hardened. However, high rotation speed can be employed when soil is soft, such as second rotary cultivation, to maximize efficiency and complete operations faster. Meanwhile, the fuel will be saved maximally to reduce use cost thanks to the great matching between engine speed and operating load.

TE series tractors adopt standard CAT I₁ three-point hitch. Interface, pulldown lever and lifting lever are made of quality steel after heat treatment process, featuring high strength, resilience and durability.

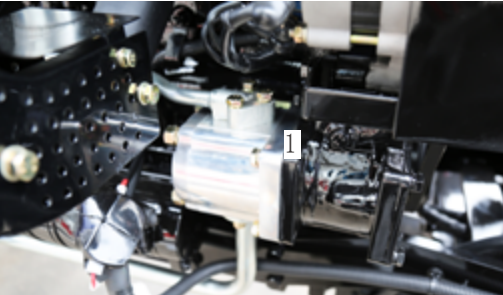
Usually, three-point hitch is used to attach heavy ploughs, harrows, rotavators, seeders and spraying boxes in agricultural work. In the process, the high-strength design protects the hitch system from damage when tractors work in bumpy lands, so that the maintenance cost can be reduced. The rated lifting capacities (610mm behind the ball-joint) of 428kg (TE204/244), 592kg (TE254/284), 632kg (TE304), 683kg (TE354) exceed other brands' products of the same kind. In addition, the rear hitch system features gear feedback and floating control functions. Gear feedback is usually used in other machines and tools, such as lawn mowers and rotavators, while floating control is used in operations like sowing. It meets most of the application requirements of agricultural machines of low horsepower.



According to the height of the trailer, the hitch joint can be adjusted upwards or downwards to avoid hindering the output of PTO, which is convenient for users.



TE series tractors all are equipped with 22mm-thick tow bar (24mm-thick ones optional) made of quality steel after heat treatment process, featuring high strength and resilience. When small-sized trailers, agricultural machines or pesticide vehicles are being pulled, enhanced tow bars are capable to bear stronger traction and torque force. Besides, standard hitch device can be equipped to pull heavier medium-large trailers with the help of braking function.



Strong Versatility

Simple and reliable hydraulic control system and highly effective human-machine engineering together ensure the smooth going of operations in municipal system under complex working conditions. TE series tractors adopt open hydraulic system. With the single hydraulic gear pump driven by the crank axle of the engine, the hydraulic fluid in the hydraulic gear pump driving system will be supplied to the steering system via single-channel stable shunt valve. Despite the speed of the engine, the single-channel stable shunt valve keeps constant fluid flowing into the steering system to ensure the stability and safety of the steering. Another stream of hydraulic fluid goes through the bypass of the single-channel stable shunt valve to the rear part of the tractor via distributor to support the cylinder of the lifter or the agricultural machines attached at hydraulic output valve. All hydraulic fluid, used or unused, will flow back to hydraulic fluid cylinder through return loop. This sort of cyclic hydraulic fluid system driven by a gear pump is called an open hydraulic system.

TE open hydraulic system with a system pressure of 18 MPa features pump of 24 LPM or 36 LPM flow capacity (optional according to the operation demands) to meet different application requirements of users. The structure emphasizes the importance of safety rather than operation because the priority is given to steering system by the single-channel stable shunt valve. The design can maintain a single continuous operation with a simpler structure, lower cost and higher stability.

What ensures sophisticated operations in gardens are the comfortable and practical driving space, reasonably arranged tractor components, and convenient machine operation.

- 1、Single hydraulic pump
- 2、Single-channel stable shunt valve
- 3、Large-capacity hydraulic fluid tank (optional)

Front Loading Operation

LOVOL loader designed to work perfectly with TE tractors and its hydraulic system. There are two loaders to choose from.

TZ02D, available on model TE200/4 TE250/4, with 200kg loading capacity and 0.18 m3 bucket, you can move more and heavier stuffs. Also we provide all kinds of loader attachment. Most attach and detach in less than a minute, without tools.

TZ03D, available on model TE320/4 TE350/4, with 300kg loading capacity and 0.2 m3 bucket.



Besides the enclosure of lifter serving as a hydraulic fluid cylinder, an external hydraulic fluid cylinder of 8L is optional to reduce the cost and satisfies the various demands of agricultural operation flexibly. By separating the fluid in hydraulic fluid cylinder from the lubricant for drive system, the cleanliness of the hydraulic fluid is improved and the maintenance cost is reduced. Built-in cylinder of lifter realizes compact structure.



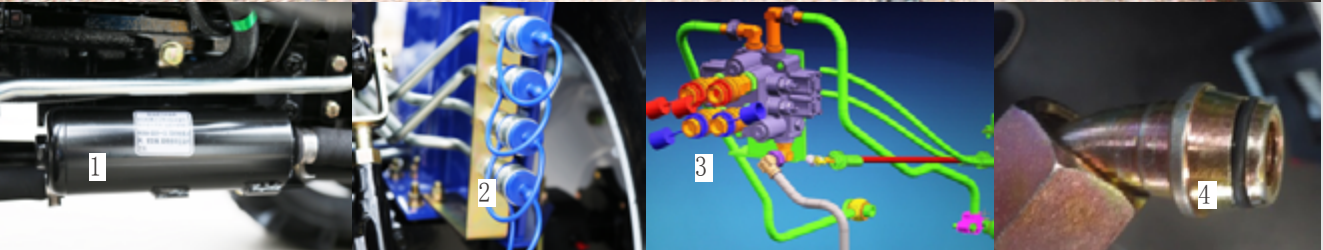
Backhoe Operation

LOVOL HW03 backhoe was designed to work perfectly with TE models. With its quick changing joint, one person can install or detach it in less than five minutes.

Various hydraulic output options are available:

① double-loop hydraulic output + single loop hydraulic output ② single-loop hydraulic output (standard).

Users can make choice according to their own purpose. Single-loop hydraulic output is used in transport operation for convenient disassembly on trailer; double-loop hydraulic output is convenient to attach various hydraulic machines and tools to complete operations. Filters for hydraulic fluid are equipped to ensure free flowing of fluid into gear pump and cleanliness of hydraulic fluid in valves and cylinder. In addition, quick-change joint structure applied in both single and double-loop hydraulic output, featuring easy attachment of various hydraulic machines, simple disassembly, reliable sealing and zero leakage.



- 1、Filters for hydraulic fluid.
- 2、Quick-change joint for double-loop hydraulic output, Quick-change joint of single-loop circuit hydraulic output.
- 3、Structure improvement of hydraulic pipe and joint.
- 4、24 degree cone sealing ring at sealing face.

Operations in Gardens and Orchards

Drivers can select the best PTO shaft speed in light of actual conditions. Usually, heavy spraying machines are attached on tractors for operations in gardens and orchards. If it is the case, low speed and heavy-loaded PTO operations shall be employed. However, high speed can be adopted in lawn mowing operation to maximize efficiency and complete operations faster. Same as operations in field, the fuel will be used more economically and the cost will be saved when the engine speed matches the operation load. Adjustable rear wheelbase improves your working experience. In order to deal with different working conditions in gardens and orchards, the wheelbase can be adjusted, ranging from 960mm to 1460mm. Only simple tools and one person are required to complete the adjustment within half an hour. Your work will no longer be tedious.



Product parameter and configuration								
	Unit	TE250	TE204	TE244	TE254	TE304	TE324	TE354
Engine		KM385	LL380BT	KM385	KM385	KM390	KM390	4L22
Rated Engine Power ISO TR14396-ECE R120	hp/kW	25/18. 4	20/14. 7	24/17. 6	25/18. 4	30/22.1	32/23.5	35/25.7
Type		3-cylinder, diesel						4-cylinder, diesel
Rated Engine Speed	rpm	2350	2350	2350	2350	2300	2400	2350
Max. Torque ISO TR14396	Nm	≥88	≥88	≥88	≥88	≥110	≥112	≥124
Rated PTO Power	kW	16	12.8	15.4	16	18.8	21.2	21.9
Displacement	ltr	1.65	1.53	1.65	1.65	1.91	1.91	2.16
Fuel Tank Capacity	ltr	29						30
Transmission								
Dry Dual Clutch (Ceramic disk)	in.	8	8	8	8	9	9	9
8F+2R		○	○	○	○	○	○	○
8F+8R		●	●	●	●	●	●	●
8F+8R Synchro Shuttle Shift		○	○	○	○	○	○	○
16F+4R Sliding Gear, Creeper Shift	km/h	*	○	○	○	○	○	○
Speed Range		8F+2R :Forward (1.72-26.02) /Reverse (2.25-10.39)		8F+8R: Forward (1.71-25.76) / Reverse (1.51-24.00)		16F+4R: Forward (0.64-26.02) /Reverse (2.25-10.39)		
Differential Lock		●	●	●	●	●	●	●
Power Take-Off 540/1000 rpm		●	●	●	●	●	●	●
Brakes								
Type		Dry disc, Mechanical						
Parking Brake		Mechanical, Independent of main brakes, Hand lever operated						
Air Trailer Brake		○	○	○	○	○	○	○
Front Axle								
4WD Front Axle		○	●	●	●	●	●	●
2WD Front Axle		●	○	○	○	○	○	○
Steering Angle	°							
Turning Radius Without Brake	m	2.9±0.3		3.5±0.3				
Turning Radius With One Side Brake	m	2.7±0.2		3.2±0.3				
Hydraulic Power Lift								
Type		Position Control						
Cat. I Three Point Hitch		●	●	●	●	●	●	●
Cat.II Three Point Hitch								
Hydraulic Flow	l/min	16	16	16	16	22	17	19
Lift Capacity at 610mm behind Hitch Point	kg	580	520	580	580	620	620	720
No. of Multi-way Valves		2	2	2	2	2	2	2
Cab								
ROPS		●	●	●	●	●	●	●
Cab with Heater		*	*	*	*(Flat floor)	*	*	*(Flat floor)
Air Conditioning		*	*	*	*	*	*	*
SKD CAB		*	○	○	○	○	○	○
Tires and Weights								
Front Tires	Standard	5.0-16	6.0-16	6.0-16	6.0-16	6.5-16	6.5-16	6.5-16
	Optional			6.5-16	6.5-16/26*7.5-12turf tire/28*9-15construction tire/260*70R16radial tire	7.5-16	7.5-16	7.5-16/31*9.5-16turf tire/28*9-15construction tire/260*70R16radial tire
Rear Tires	Standard	9.5-24	9.5-24	9.5-24	9.5-24	11.2-24	11.2-24	11.2-24
	Optional			11.2-24	11.2-24/11.2-20turf tire/15-19.5construction tire/280*85R24radial tire	12.4-24	12.4-24	12.4-24/43.5*13-20turf tire/15-19.5construction tire/280*85R24radial tire
Structure Weight(ROPS)*	kg	1100	1100	1100	1100	1280	1280	1280
Structure Weight(Cab)*	kg	1280	1280	1280	1280	1480	1480	1480
Appearance of the machine								
Length	mm	3370	3225			3312		3480
Width	mm	1475	1475			1475		1515
Height	mm	1860	1900			2045		2255
Wheelbase	mm	1615	1639			1639		1796
Ground clearance	mm	335	270			290		310

Note: ● Standard ○ Optional* Tractor Dry Mass