



KIROVSKY ZAVOD

Since 1801



**HIGH-POWER WHEELED TRACTORS OF K-744R SERIES
300-428 h.p.**

KIROVETS®



Dear friends,

We have been working for the benefit and prosperity of Russia for over 215 years. Founded in April 1801 as a small iron foundry enterprise, our plant now emerged into a multi-purpose industrial complex.

We founded the tractor industry in our country by starting mass production of Fordson-Putilovets tractors in 1924. We were among the first in the world to organise mass production of high-power wheeled tractors. KIROVETS brand exists for more than 50 years. To say the least of it, this name is known on all continents of the planet.

More than 90 years of experience in the tractor construction industry allow us to compete successfully with global tractor industry leaders. And today our plant moves forward. We are evolving.

We have made active and consistent improvements in our company and our product for several years. As a result, we now have state-of-the-art production lines, an efficient quality control system, highly professional team and, what is even more important for our customers, — new competitive product.

I would like to express our special thanks to all our clients and partners for their trust and support. You are our reason to move forward and improve.

Together we can build a new agriculture, new machinery, new Russia!

Sergey Serebryakov,
CEO of the Peterburgsky Traktorny Zavod, JSC

ABOUT OUR TRACTOR PLANT

Peterburgsky Traktorny Zavod, JSC is one of the leading units of the Kirovsky Zavod Group of Companies. Open joint-stock company Kirovsky Zavod is a multi-industry holding, manufacturing products for agriculture and fuel and energy complexes, road building, industrial and civil construction, oil and gas sector, nuclear power industry, defense industry, municipal infrastructure, railway transport, shipbuilding.

Our plant is the founder of Russian tractor construction industry. Tractors mass production was initially mastered in 1924. Since 1962, the plant has been manufacturing unique high-power articulated tractors under the brand name KIROVETS, and tractor-mounted industrial machines. For many years, KIROVETS brand has been occupying leading position in the market segments of high-power wheel-tyre tractors, front-end loaders with load capacity of 6 tons, and tractor modules-mounted special-purpose machines.

DEALER AND SERVICE NETWORK

Dealer and service centers of the Peterburgsky Traktorny Zavod are located in all regions where KIROVETS tractors are used. The plant takes on long-term obligations on high-quality warranty and post-warranty repair of manufactured equipment.

Our service centers have all the necessary factors for for qualified maintenance and repair: trained personnel, equipment, facilities, and service cars. Service network is our main support in consumer management.

ORIGINAL SPARE PARTS

Original spare parts are the spare parts that are the same as the parts and components supplied to manufacturer's assembly line. Since December 2013, all spare parts are branded with the Kirovsky Zavod trademark. Depending on the process conditions, the part branding is made by engraving or applying a self-destructing vinyl label with the part number on it.

By branding the products, the manufacturer guarantees their quality and compliance with all requirements and standards. You can purchase original spare parts from the Plant Spare Part Sales Department, and from the plant regional dealers.

FINANCIAL TOOLS

In the modern competitive environment is not enough to just produce high-quality goods, but it is also important to help the customer to find the best conditions for financing their purchase.

We offer our clients several financial tools and help with their use in order to optimise their costs. The most interesting finance programs are ones of Rosagroleasing, Russian Agricultural Bank and Sberbank of Russia.



High-power agricultural general-purpose tractors KIROVETS of K-744R series are designed for basic and pre-sowing tillage, and work effectively with sowing complexes and other contemporary units.

This series includes machines of different levels of power and equipment: K-744R1 (300 h.p.), K-744R2 (350 and 354 h.p.), K-744R3 (390 and 401 h.p.), and K-744R4 (420 and 428 h.p.)



WE HAVE PRESERVED THE CHARACTERISTICS THAT YOU APPRECIATE

- Modern reliable low-maintenance domestic engines YaMZ, TMZ with power capacity 300 h.p. to 420 h.p. and foreign fuel-efficient Mercedes-Benz engines with power capacity 354 h.p. to 428 h.p.
- Powerful hydraulic pump with a productivity rate of 180 l/min and a modern hydraulic distributor with 5 variable-delivery sections, providing connection to all modern agricultural implements
- Time-tested reliable transmission that allows gear shifting without stopping
- Capacious fuel tank that allows you to work during high season without losing time for refuelling
- Robust multipurpose backside three-point lift hitch
- Wheel doubling system that lowers soil pressure and provides increased traction in field
- Mature spare parts market
- High productivity
- Low operation and maintenance cost
- Excellent maintainability
- Reasonable price and various acquisition programs

WE HAVE IMPROVED THE FEATURES AND EXPANDED OPPORTUNITIES THAT LACKED BEFORE



➤ The exterior of the tractor is changed by shape, material and paintwork of some elements that allows you to preserve the brightness and color saturation for the entire machine lifespan, as well as to avoid corrosion



➤ New design of air cleaner with cyclone allows more reliable motor operation, easier maintenance (replacement of filter elements can be performed when you directly stand on the ground)



➤ Fewer parts of hydraulic system, fewer hydraulic connections, new all-season oil, and thus higher reliability and ability to work at very low temperature, up to -40°C



➤ New unique agricultural lift hitch with even more multipurpose design – the hitch is suitable for both domestic and imported implements of 3-rd and 4-th category



➤ New comfortable cabin. Improved noise prevention and vibrating insulation. Every scope of supply comprises air conditioning and an extra heater, audio system, adjustable steering column with multifunction color display. Panoramic windows and increased glass area greatly improve visibility from the driver's seat



➤ New radiators with tiltable sections for easy and quick cleaning. To improve the engine's thermal stability in heavy conditions the radiators with enhanced water section are used in models KIROVETS K-744R3 and K-744R4 in the Premium scope of supply



➤ Hydraulic oil tank of a new design with extra filtration, separation of the suction lines, oil level and oil temperature sensors facilitate maximum protection of hydraulic systems in severe operating conditions



➤ New option – electro-hydraulic system for positioning agricultural implements provides fully-featured work with turnwrest ploughs and other mounted and semi-mounted implements not equipped with adjusting depth wheels

COMFORT AND SAFETY

We made tractor operator's workplace convenient, comfortable and safe. In the tense periods of field works, tractor cabin becomes a home for the driver, providing comfort for sometimes as long as 10-12 hours a day.

Modern materials and technical solutions used by our designers provide protection against noise and vibrations. Pressurised cabin is cushioned, with cabin metal shielded by modern vibration-absorbing rubberised and soundproofing materials.

Workplace ergonomics meets modern requirements. Spring-mounted operator's seat is located in the center of the cabin, with an excellent outlook in all directions, an important feature for field works and maneuvering.

Driver's seat has a wide adjustment range in height, longitudinal position and according to driver's weight. Steering column height and tilt can also be adjusted. This allows tractor operators with all kinds of bodily constitution to find the optimum driving position for themselves.

Assistant operator or agronomist can be located in the tractor cabin on the additional passenger seat. Just like driver's seat, the passenger's seat is equipped with safety belts.

Tractor operator can easily monitor parameters of tractor work using multifunctional color display. All tractors of series K-744R are prepared for satellite monitoring systems GPS/GLONASS installation.

Tractor control does not require noticeable physical effort. In order to facilitate transmission control a pneumatic system for mode selection and switching on the rear axle drive is installed (option on request).

Field works often occur in really hot periods when "outboard" ambient temperature reaches +40°C. But the reverse may be true, when in frosty winter only KIROVETS can clear snow blockages or carry a heavy load. This is why we equip all K-744R tractors with powerful air conditioning and effective heating systems.

At the seasonal peak of field work every hour is precious, and darkness should not hinder the work. KIROVETS' four headlights and eight working spotlights efficiently illuminate the working area around the tractor perimeter.

Safety-wise, KIROVETS tractor is protected in all aspects. It is a sturdy machine with efficient braking system and reliable steering. Cabin is equipped with roll-over protection system (ROPS) and falling objects protective structure (FOPS).



HIGH POWER

We let our consumers choose for themselves. Depending on production tasks and preferences, you can choose a tractor from a wide power range – 300 h.p. to 428 h.p.

Turbocharged diesel engines (namely such engine types are used in KIROVETS tractors) show excellent cost-efficient performance and engine output. A characteristic feature of our engines is the high rotational moment at rate power.

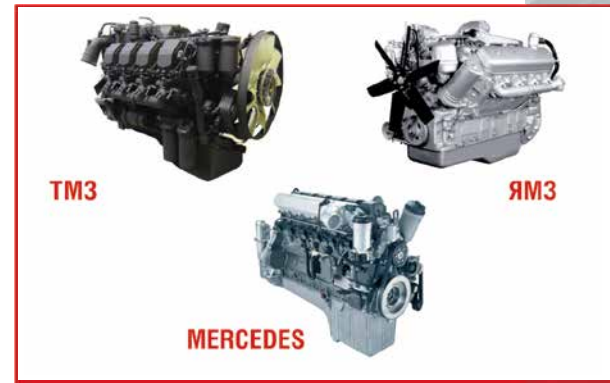
To enhance engine reliability and to increase engine resource, new air filters with improved design are installed on KIROVETS tractors. Due to two-step combined air cleaning system and high-positioned air intake the engines are protected even in heavy dust concentration conditions. Replacement filter elements are easily accessible for purging and replacing.

Reliable cooling is essential for tractor engines operating in severe conditions. Since 2014, the most high-power KIROVETS tractors are completed with new radiator set with enlarged water section, and since 2015, all models have tiltable sections for easy cleaning and purging.

Domestic fuel systems of diesel engines are of mechanical type. They are simple in design and are well adapted to our fuel. Mercedes-Benz engines, equipped with more modern systems with fuel feed electronic control, include additional filters with nozzles specially adapted to Russian fuel by German specialists.

Preheating systems are used to start engine at negative temperatures, so winter operation of KIROVETS tractors does not cause special difficulties.

Fuel tank located on the rear semi-frame holds 800 litres, a good fuel reserve for the longest work shift.



Scope of supply \ power level	300	350	400	430
Standard	YaMZ		Tutayevsky MZ	
Premium	–		Mercedes-Benz	

Manufacturers	Models
Avtodizel LLC (Yaroslavl)	YaMZ-238ND5 – 300 h.p.
Tutayevskiy engine plant OJSC (Yaroslavl Oblast)	TMZ 8481.10 (-02, -04) – 350, 390, 420 h.p.
Daimler AG (Germany)	Mercedes-Benz OM460LA.E3A/5 – 354 h.p. OM460LA.E3A/4 – 401 h.p. OM460LA.E3A/3 – 428 h.p.



► In 1924, our plant mastered mass production of Fordson-Putilovets wheel-tyre tractors, the model that was later replaced by more advanced Universal wheel-tyre tractors. The name KIROVETS appeared for the first time on track-type tractor prototypes in the late 1930's. Their successor, KD-35 batch-production tractor, was being manufactured in 1940-50 at Lipetsk and Minsk tractor plants

► Legendary K-700 was in production until 1975. It was replaced by more advanced models K-700A and K-701. They remained in mass production for more than a quarter of a century and created a glorious chapter in the history book of the brand

90 YEARS FOR BENEFIT OF RUSSIA

OVER 600 000 TRACTORS PRODUCED
OPERATIONAL EFFICIENCY OF TRACTORS INCREASED 20 TIMES



1924 First mass-produced tractor in Russia, FORDSON-PUTILOVETS tractor



2016 Advanced series of tractors KIROVETS K-744R

► July 13, 1962 was the day when the first KIROVETS K-700 was manufactured in the plant workshops, and so we count the history of our brand, our tractor from this day onward. The first batch of tractors was sent to different regions of the country for extensive testing in order to launch mass production process within one year

► Alongside with mass production models manufacturing, the plant was constantly elaborating innovative solutions. Some of them remained as unique and exhibition samples, but many were launched in mass production





EFFECTIVE TRACTION

Field work is a tough task for a tractor. Severe loads are transferred to all elements of the drivetrain and the running gear. Therefore there are special requirements to them.

KIROVETS transfer gearbox (TGB) is a mechanical one with hydraulic control. Its speed range 'forward 16/backward 8' consists of 4 ranges with 4 speeds each. Within one range tractor operator can shift gears on the move without breaking the power flow. Transmission can be equipped with pneumatic system for mode selection and switching on the rear axle drive.

A characteristic feature of KIROVETS driving axles are self-locking differentials of "no-spin" type that ensure unsurpassed off-road capability in the heaviest conditions. Planetary reduction gears spaced in sides, transfer rotational moment directly to the wheels. The benefits of such a scheme are: increased ground clearance and good accessibility for maintenance and repair.

Reliable transmission of high rotational moment is guaranteed by production technology. Gear wheels of transfer gearbox and axles are made according to increased accuracy rating. There is used metal-ceramic discs for the friction of the transfer gearbox drive shaft.

Increasing the traction and reducing specific load on the soil are possible by using sets for doubling the wheels supplied as optional equipment. Using dual wheels is especially effective on water-logged soils.

Optimising the tractor weight distribution and improving adhesion of wheels with the soil is possible by using unitised ballast weights placed on the cargo semi-frame and under-engine semi-frame of K-744R3 and K-744R4 models.

With its considerable dimensions, KIROVETS has decent handleability. Frame design provides for it. The frame consists of two semi-frames connected by a hinge pivot device. Semi-frames can be rotated by an angle of $\pm 32^\circ$ around the vertical hinge, by virtue of which turning radius on the outer wheel is less than 8 metres. Semi-frames can shift up to $\pm 16^\circ$ against the horizontal hinge, ensuring KIROVETS perfect patterning of the soil surface, and as a result all the wheels are constantly adhered to supporting surface.

Every tractor operator with KIROVETS operation experience notices its particularly smooth ride. Leaf suspension of under-engine axle is providing this wonderful effect. Sprung axle is unavailable or too expensive an option for many foreign analogies, but it is a basic equipment for the KIROVETS.



MOUNTING THE AGRICULTURAL IMPLEMENTS

The value of the tractor is determined by ability to use it with a complex of aggregated machines. Towing attachment standards, hydraulic, electrical and pneumatic requirements, and other settings of trailing units may vary depending on the type, size and manufacturer. Equipment aggregated with tractors is improved day by day, and during the lifetime of the tractor there may be several changes of agricultural machinery generations. Therefore, the most important criteria for tractor is hydraulics overcapacity and versatility of towing attachments.

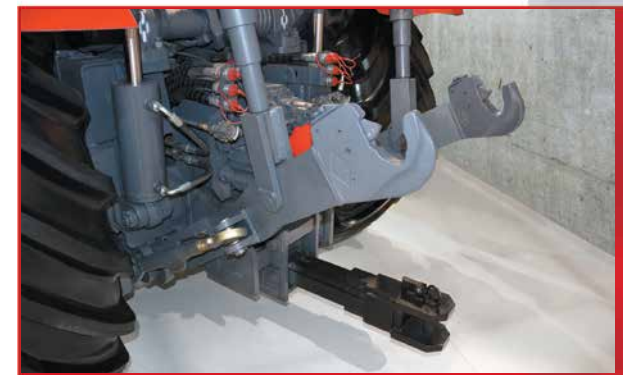
The work equipment hydraulic system of KIROVETS tractors is of load-sensitive category and can be marked also as Load Sensing or LS-system. Axial-piston pump with automatic flow control delivers hydraulic fluid only when it is necessary to actuate the working equipment. At that, flow and pressure are limited to specified values.

Hydraulic system has four pairs of operating outputs in hydraulic lines, additional lines for drainage and free discharge. Pump maximum capacity is 180 l/min. To actuate hydraulic engines of agricultural machinery movable operating elements and to provide the hold-down of implements, flow control is possible in remote-mount hydraulic lines.

A 3-point hitch attachment of IV category providing load-carrying capability in hitch pin up to 9000 kg is included into the basic scope of supply. To simplify mounting with any domestic and foreign agricultural implements, tractors are equipped with automatic hooks of lower arms manufactured by Walterscheid.

As an option, KIROVETS tractors can be equipped with the position management system of hitch attachment required for operation with ploughs and other mounted implements without adjusting depth wheels.

Floating drawbar and power takeoff mechanism with shaft rotation frequency of 1000 rpm may be installed on the tractors as an option.



DESIGN VARIANTS OF END PORTIONS FOR THE POWER TAKEOFF SHAFT

Designation in the specification	Number of slots	Outer diameter of slots, mm
744R-42.00.000-1	20	55
744R-42.00.000-1-01	20	44
744R-42.00.000-1-02	21	35

YIELD GUARANTEE

'What will be the new output yield?' is the main issue that troubles any harvester. A man can not control everything. We cannot control the weather, but we can maximise the benefit each day and each hour allotted to us by nature to catch. We must manage to cultivate land, to sow, to apply fertilizers, to make procurement of fodder, to harvest, to carry out the finished product from the field.

That's where effective and reliable machinery is applicable. For many years, KIROVETS tractor has been serving as the basis for Russia tractor forces. Huge experience has been accumulated in respect of using KIROVETS tractors in different soil and climatic zones. A lot of farms in Russia and abroad noted performance, reliability and durability of our tractors.

Technical features of modern tractors KIROVETS of K-744R series allow successful work with traditional implements, and with the most up-to-date high-performance agricultural machines.

Using KIROVETS tractors guarantees great yield!



Type of disk harrows	Required tractor power per meter of the operating width, h.p.	K-744R1 (300 h.p.)	K-744R2 (350-354 h.p.)	K-744R3 and K-744R4 (390-428 h.p.)
		Operating width, m		
two-row	30 – 40	8 – 10	9 – 12	11 – 14
four-row	50 – 70	4 – 6	5 – 7	6 – 8
x-shaped two-row	45 – 60	5 – 7	6 – 8	7 – 9

Type of seeding machine	Required tractor power per meter of the operating width, h.p.	K-744R1 (300 h.p.)	K-744R2 (350-354 h.p.)	K-744R3 and K-744P4 (390-428 h.p.)
		Operating width of the sowing complex, m		
sowing complex of tiller type	30 – 35	7 – 9	8 – 10	10 – 13
sowing complex of disk type	25 – 30	8 – 10	10 – 12	12 – 15
sowing complex of combined type	33 – 37	6 – 8	8 – 9	10 – 12
+ tanker of the pneumatic sowing complex	40 – 60			
mechanical seeding machines	25 – 30	10 – 12	12 – 14	14 – 17

Cultivator type	Required tractor power per meter of the operating width, h.p.	K-744R1 (300 h.p.)	K-744R2 (350-354 h.p.)	K-744R3 and K-744R4 (390-428 h.p.)
		Operating width, m		
tined (chisel)	35 – 50	6 – 9	7 – 10	8 – 12
disc	25 – 35	9 – 12	10 – 14	12 – 17
combined	30 – 60	5 – 10	6 – 12	7 – 14

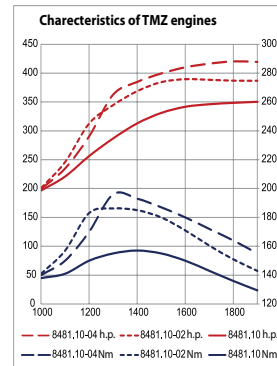
Plough type	Required tractor power per plough-bottom, h.p.	K-744R1 (300 h.p.)	K-744R2 (350-354 h.p.)	K-744R3 and K-744R4 (390-428 h.p.)
		Number of plough-bottoms		
conventional	30 – 35	9 – 10	10 – 12	12- 14
turnwrest	35 – 40	8 – 9	9 – 10	11 – 12

Type of deep tiller	Required tractor power per meter of the operating width, h.p.	K-744R1 (300 h.p.)	K-744R2 (350-354 h.p.)	K-744R3 and K-744P4 (390-428 h.p.)
		Operating width, m		
operating depth. up to 45 cm	50 – 80	4 – 6	4 – 7	5 – 8
operating depth. up to 60 cm	70 – 90	3 – 4	4 – 5	5 – 6

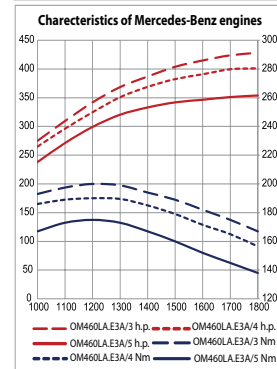


TECHNICAL DATA

Engines

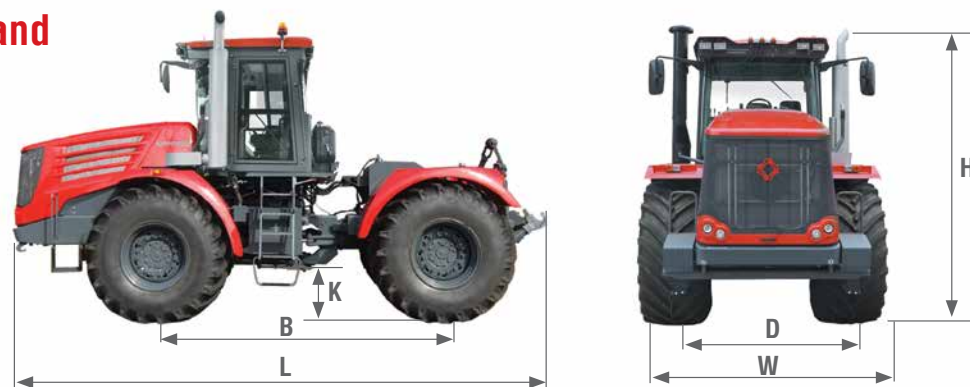


Parameters	K-744R1 Standard	K-744R2 Standard	K-744R3 Standard	K-744R4 Standard
Nominal power, h.p. (kW)	300 (220)	350 (257)	390 (287)	420 (309)
Type of engine	YaMZ-238ND5	TMZ-8481.10	TMZ-8481.10-02	TMZ-8481.10-04
Type of engine	V-shaped 8-cyl.	V-shaped 8-cyl.	V-shaped 8-cyl.	V-shaped 8-cyl.
Operating capacity, l	14.86	17.24	17.24	17.24
Rated rotational speed of crank shaft, rpm	1900	1900	1900	1900
Maximum torque, Nm	1280	1570	1860	1960
Rotational speed at maximum torque, rpm	1100...1400	1300...1500	1300...1500	1300...1500
Specific fuel consumption, g/h.p.-h (g/kW-h)	162 (220)	157 (213)	157 (213)	157 (213)



Parameters	K-744R2 Premium	K-744R3 Premium	K-744R4 Premium
Nominal power, h.p. (kW)	354 (260)	401 (295)	428 (315)
Type of engine	Mercedes-Benz OM460LA.E3A/5	Mercedes-Benz OM460LA.E3A/4	Mercedes-Benz OM460LA.E3A/3
Type of engine	Inline 6-cyl.	Inline 6-cyl.	Inline 6-cyl.
Operating capacity, l	12,82	12,82	12,82
Rated rotational speed of crank shaft, rpm	1800	1800	1800
Maximum torque, Nm	1750	1900	2000
Rotational speed at maximum torque, rpm	1300	1300	1300
Specific fuel consumption, g/h.p.-h (g/kW-h)	151 (205)	151 (205)	151 (205)

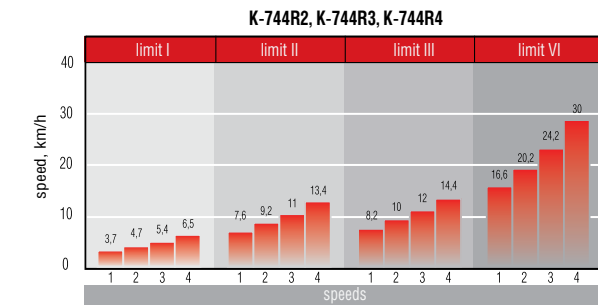
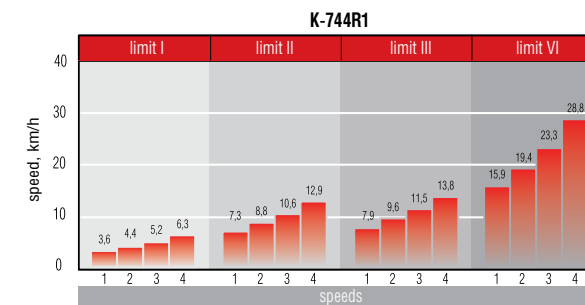
Dimensions and Weight



Dimensions	K-744R1	K-744R2, K-744R3, K-744R4
B Base, mm	3750	3750
L Length (with a raised hitch), mm	7100	7350
W Width, mm	2865	2875
D Wheel track, mm	2115	2100
H Height, mm	3845	3876
K Road clearance (under the hinge pin), mm	460	500
Minimum turning radius (by outer wheel), m	7.98	7.98
Tyre size	28.1R26	30.5R32

Operating weight on single-set wheels, kg	K-744R1	K-744R2	K-744R3	K-744R4
Standard scope of supply	14,900	15,680	17,500	17,500
Premium scope of supply		15,220	17,000	17,000

Transmission



I – auxiliary mode to work with low speed; II and III are the main operating modes for field works; IV – transport mode.

TGB	16/8 four-mode with hydraulic gear shift without breaking the power flow within each mode and with the mechanical switching of modes
Driving axles	Uniform, with self-locking differentials, "no-spin" type, and with spaced planetary reduction gears. Front axle is suspended from the frame by two longitudinal semielliptical bow springs with hydraulic shock-absorbers. The rear axle is connected with the frame tightly

Operator's workplace

Cabin	Two-seat, with built-in safety cage with thermo-, vibration- and noise insulation, air-conditioning and heating. Panoramic windows, sun-protective coating New steering column
Air conditioning system	Used R134a refrigerant coolant
Environmental parameters in the workplace	The maximum temperature in the warm period of the year not exceeding 28°C, minimum temperature during the cold period is not less than 14°C

Drive for working equipment

Hydraulic system of work equipment	The sensitive to the load system (LS): adjustable axial-piston pump, 5-sectional hydraulic distributor, 4 pairs of free outputs (hydraulic lines) with flow control, lines of drainage and free discharge. Pump maximum capacity is 180 l/min.
Power take-off mechanism (option)	1000 rpm (single speed), an independent, with circulation system for the gearbox lubrication. Three design variants of end portion for the power takeoff shaft

Towing attachments

Mounted implement	3-point, category IV ISO, can be completed with a category III adapters (optional). Standard load-carrying capacity (at a distance of 610 mm from the hitch pin) is 5500 kg, on the hitch pin, up to 9000 kg. Possibility of setting the hitch iron and the tow hitch (hydraulic pick-up hitch)
Floating drawbar (option)	Permissible vertical load up to 2200 kg

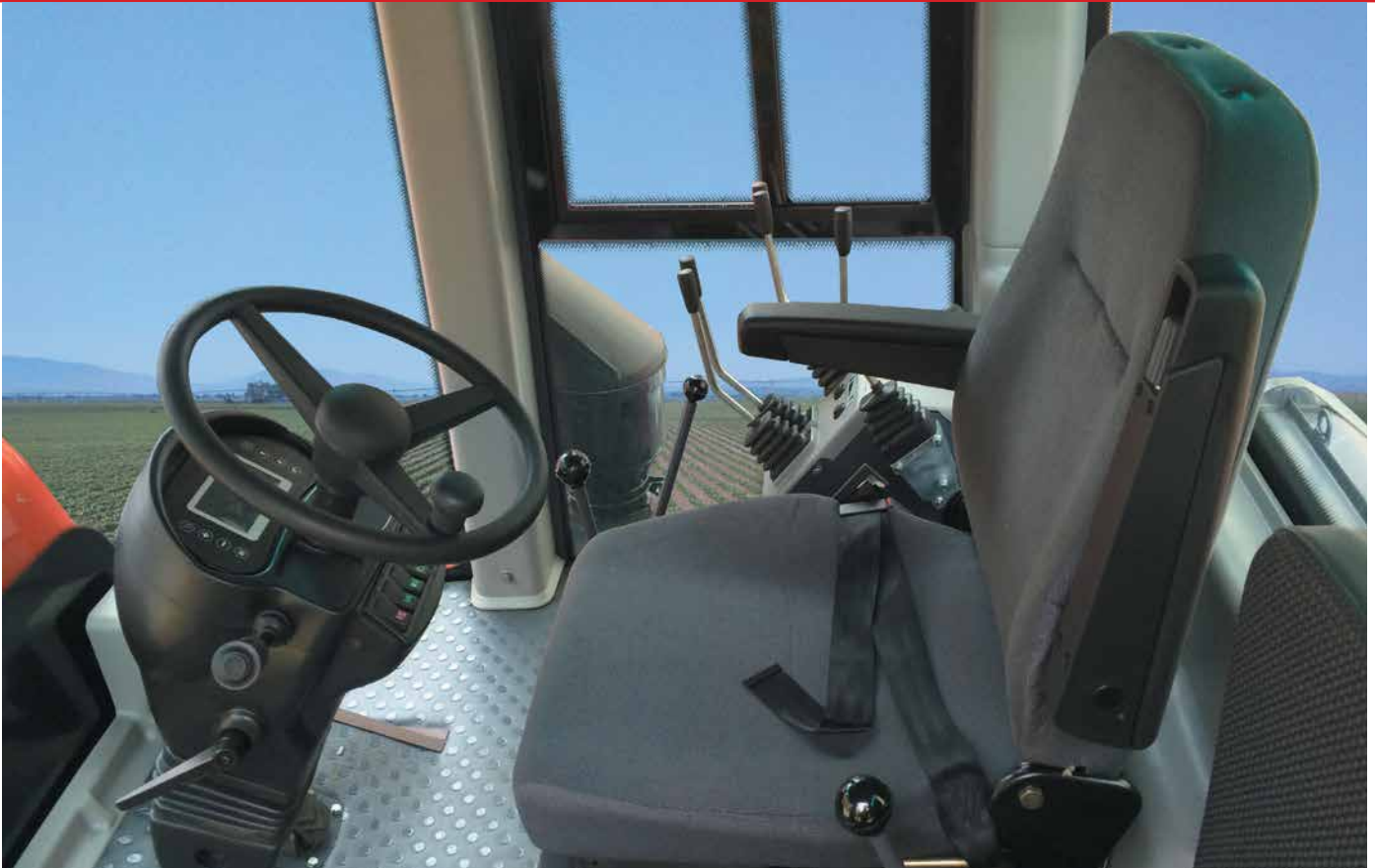
Protection set for layland raising (option)

	Special protection for tractor bumper, bonnet and headlights against mechanical impacts
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Wheel doubling set (option)

Scope of supply	K-744R1	K-744R2, K-744R3, K-744R4
Doubling set without wheels	4 distance rings for DW24-26 rim and fasteners under axle carrier stud M22	4 distance rings for DW27Ax32 rim
Doubling set with wheels	4 distance rings for DW24-26 rim and fasteners under axle carrier stud M22. 4 wheels: rim DW24-26, tire 28.1R26	4 distance rings for DW27Ax32 rim. 4 wheels: rim DW27Ax32, tire 30.5R32

Information about products is provided for reference only, and can not be regarded as a public offer as defined by the Article 437 of the Russian Federation Civil Code. Manufacturer reserves the right to change completeness of delivery and specification without prior notification. For more information about scope of supply and the cost of KIROVETS please contact the company sales department and its authorised dealers.



NEW MODERN CABIN!

- Panoramic windows provide expanded coverage sector and are sun-protected with special film
- New steering column with integrated modern dashboard
- New comfortable driver's seat
- Improved cabin sound insulation
- Optimised HVAC system
- Audio system



KIROVSKY ZAVOD

Since 1801

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