

ORION K105

The future
is here.



language



pasqualli

ORION K105

The future is here

Orion K105 tractors are specialised machines matching most advanced 'made in PASQUALI' technology and top production efficiency, along with environmental care.

The electronically-operated Stage IIIB 98 HP engine complies with the strictest European standards as for emission control: **a supremacy among isodiametric tractors translating into lower consumption, less toxic emissions and higher operating comfort.**

Innovative technical content, elegant design and reduced overall dimensions make **Orion K105 indispensable machines for future agriculture.**



Engine

Clean power

New Orion K105 tractors come with a 4-cylinder, 3.8 l Kubota engine, with 98 HP at 2400 rpm.

The latest generation Common Rail engine ensures **a precise injection control, and therefore a more efficient combustion, improved performance and less fuel consumption.**

Devices such as EGR (the exhaust gas recirculation system), the DOC (diesel oxidation catalyst) and the DPF (diesel particulate filter), whose regeneration takes place automatically during work, dramatically reduce toxic substances emitted into the environment.

Counter-rotating shafts of the engine reduce vibrations to the advantage of the heard noise and the higher operating comfort.

Electronic management

The electronically-managed engine has an electronic control unit that **ensures a correct operation of the power unit and sets the revolution number, keeping it constant.**

The engine rpm electronic management has been entirely developed by BCS Group; it is fast and precise, through the dashboard located at the right of the steering wheel and operates: speed increase and decrease, set speed setting and recalling, electronic governor switching off and shifting to idle speed.

ADVANTAGES

A correct setting of the speed while working means:

- steady tractor inching speed
- steady PTO revolutions
- steady hydraulic flow

and, what is more, the set speed can be recalled by simply pressing one button, thus improving work efficiency and saving time and fuel.

TECHNICAL SPECIFICATIONS

Model	Kubota V3800 CR-TE4
Emission level	Stage IIIB
No. of cylinders	4
Intake	Turbo
Displacement	3769 cc
Injection	Direct Common Rail
Power kW/HP	72,1 / 98
Rated speed	2400 rpm
Maximum torque	330 Nm @1500 rpm
Cooling	Liquid
Balancing	Counter-rotating shafts



Transmission

OS-Frame

The transmission of the Orion K105 features the exclusive OS-Frame, with many advantages.

ADVANTAGES

- Engine and clutch are reciprocally connected by a single transmission shaft that transmits movement to both transmission and independent PTO, through a single central cardan joint, guaranteeing **top mechanical performance, compact dimensions and larger steering angles**, indispensable while working in narrow areas.
- The coupling of engine and OS-Frame is made by an high inertia flywheel which **reduces vibrations to the advantage of performance and higher operator's comfort**, along with the 'Long Travel' torsional damper.
- A joint located in the center section of the tractor makes the front axle swing up to 15° with respect to the rear axle, stabilising geometry on gradients or rough grounds and guaranteeing **maximum traction of the four wheels, with full grip on the ground**.

Synchronised gearbox

The synchronised gearbox is formed by **4 ranges and 4 speeds, for a total of 16 ratios both in forward and reverse, with synchronised reverser**.

The logic sequence of speeds (from 700 m/h to 40 km/h) - without any overlapping for all ranges - allows you to select the best gear for the required use, making the tractor's use more rational with: fuel saving, reduced stress on mechanical components, reduced engine strain and above all improved quality of work.



Long life clutch

The clutch is **multiple disc in oil bath type; its hydraulic control is proportional and electronically managed**. It modules engagement and releases in a punctual way and the clutch results softer and more performing than traditional dry clutches.

The clutch is hydraulically controlled by a proportional solenoid valve connected to an electronic control unit; the latter reads the pedal position through a potentiometer and guarantees an improved progressiveness so that the operator can control the tractor more and more precisely.

Orion K105 tractors use this type of **evolved hydraulic clutch placed inside the transmission, to reduce engine projection and the tractor's length**. A technological choice bringing about concrete advantages.

ADVANTAGES

- Longer life;
- No maintenance;
- Top manoeuvrability thanks to the reduced overall dimensions.

Pro-Act System

The clutch engaging pedal comes with the Pro-Act System, a system for a more comfortable and ergonomic movement of the foot on the pedal. The operator feels modulation more precisely.



Electrohydraulic reverser

Orion K105 transmission can be equipped with the **exclusive electronically-operated reverser, with EasyDrive® electronic handling**.

The comfortable reverser lever on the left of the steering wheel allows the operator to **reverse the driving direction without lifting the hands from the steering wheel and without using the clutch pedal**, while keeping the vehicle control at all times.

The EasyDrive® electrohydraulically-operated reverser is especially handy and easy to use for all those works requiring many direction changes, such as greenery maintenance, material handling with fork lift, snow moving works or for movements at the headland in vineyards and orchards.

The electronic system was entirely developed and produced by BCS Group: a set of sensors detect the dynamic conditions of the tractor and handles the transmission clutch, the reverser and the brakes, adapting the tractor's behaviour to the work conditions.

The most important difference vs conventional reversers is the **dynamic control of brakes**: the electronic control unit operates the brakes depending on the inching speed and guarantees drive reversal with a preset deceleration, reducing manoeuvring times and increasing operating safety.

For the best feeling between you and your tractor, **the operator can modify the system reactivity in 5 different levels** (from 'soft' to 'aggressive'), depending on the different working needs, through the two buttons located close to the lever.

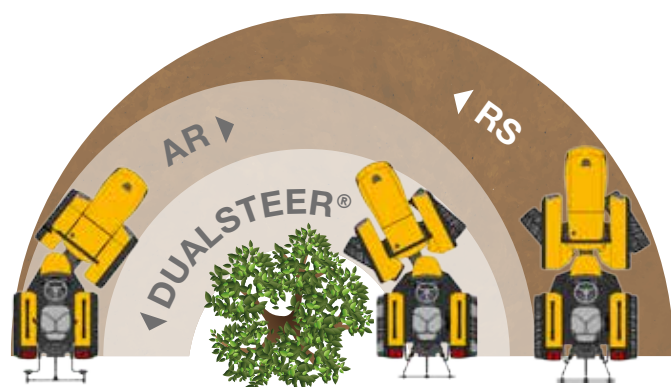
Agility

Steering

All specialised tractors must be handy to manage so that they can be operated in very narrow areas.

Orion K105 tractors have a matchless manoeuvring capacity, thanks to their short wheelbase and their compact dimensions.

The steering wheel is power assisted, through a dedicated hydraulic system. The manoeuvres are precise and the turning radiuses are very small both in models with steering wheels and in those with central articulation, and especially in Dualsteer® versions.



Dualsteer®

Dualsteer® is internationally patented and is unique on the market: it is a **double steering system joining the central joint of the frame to the steering of front wheels**, the steering angle can reach 70°.

The two hydraulic cylinders in the central joint increase both the power of steering, with high precision at extremely low speeds, and directionality and stability during road transport at high speed.

ADVANTAGES

- Safety and stability typical of steering wheel version;
- Performance while steering and manoeuvring easiness typical of version with central joint;
- Performing on any ground, even with high gradient;
- These machines are indispensable for works in narrow vineyards, in greenhouses, gardening and greenery maintenance.



Top efficiency

Hydraulic system

The hydraulic system has **two circuits with independent pumps and heat exchanger** for oil cooling.

The pump for the power steering and electrohydraulic controls has a flow rate of 33 l/min, while that for lifts and remote control valves a flow rate of 30 l/min. An oversized system is available as optional, with lift pump with flow rate of 49 l/min.

Joystick

The new electronically-operated multifunction joystick (available as an optional) **allows the hydraulic system and the lifts to be controlled at the same time through a single device**; in this way, all operations involving the tractor hydraulic system can be performed safely and easily.

A numbered knob integrated in the armrest can be used to adjust the system sensitiveness.

PTO and lifts

The rear PTO, with multiple-disc clutch in oil bath is **independent from the transmission and is synchronised with all progress speeds**. It can be engaged also while driving through an electrohydraulically-operated control located on the dashboard (equipped with safety system for involuntary operation); the speed is 540/540E rpm or, as an optional, 540/1000 rpm.

The **sturdy rear lift** has multipurpose fittings category 1 and 2 to fit simply and quickly all attachments available on the market. The high lifting capacity of 2300 kg increases to 2700 kg for SDT versions.

Optional equipment include a rod and a hydraulic tie rod for adjusting the implement directly from the driver's seat, as well as a **performing front lift**, with hydraulic outlets, indispensable when using combined implements.





Active and passive safety

Operating safety

The use in full safety, on high gradients and crosswise, is guaranteed by the **project geometry of Orion K105 tractors, featured by a low centre of gravity and the very good balancing of weights on the axles** (50% at the front - 50% at the back), with implement coupled to the rear lift.

The operator's seat with approved roll-bar or cab, the safety belt secured to the seat and the quality of the materials used guarantee top protection for the operator in each and every condition.

The differential lock, simultaneous front and rear or rear only, is electrohydraulically operated and the tractor can be in traction all the time.

The disengagement of front drive, through an electrohydraulic control, improves road transfers and protects especially delicate grounds.

Braking system

The braking system is formed by four disc brakes in oil bath intervening simultaneously and continuously on all four wheels, even when the front drive is released, as they are supported by a hydrostatic control acting as braking divider.

The **independent Brake-off parking brake** is exclusive to Orion range: **it automatically engages when the engine is switched off**. When the tractor is moving an electrohydraulically-operated handy button on the dashboard is used to engage it.



Driving position

Absolute comfort

The pleasure of working with a Orion K105 tractor results not only from the machine's performance, but also the comfort that it reserves for the driver. The **driving platform is hanging on silent-blocks to dampen vibrations and noise** to the advantage of operating comfort.

The controls are ergonomically located and easy to be operated; when seated, the operator has a complete, unobstructed view on the machine and on the implement.

The steering wheel has a new shape and it can be gripped more easily; its tilting can be adjusted for the best adjustment according to the build of the driver and for an easier access to the same platform.

Reversibility

The multipurpose function of Orion K105 tractors is enhanced by the reversibility of the driving seat (not available in SDT versions).

Just in a few seconds the operator can rotate the driving platform by 180° (seat, steering wheel, dashboard and pedals), to **work with a front-mounted implement and steadily supervising all working operations**, favouring comfort and safety.

Approved cabs

Comfort cabs

Comfort cabs create a **good living environment in the compartment** and were designed with a streamlined silhouette to **protect the greenery rich in vegetation** they need to work in.

Interiors are refined and the platform is hanging on silent-blocks; it's completely independent from the tractor frame. All cabs have large glassy windows and glass roof for top visibility of the operator even when the driver's seat is in reverse position.

The cabs are equipped with air conditioning and cooling system; they can have a tapered structure to be used in narrow vineyards located on gradients.

Compact AIRTECH cabs

For SDT versions the **new Compact AIRTECH cabs** are available, **pressurised and approved for Category 4**, insulating operators from toxic inhalation during phytosanitary treatments, for a healthy and safe working environment, also thanks to two large activated charcoal filters installed at the front. Pressurization and internal and external temperature are monitored on a digital display.



The **low-profile single-body frame with low clearance from the ground** makes the use under the foliage, in trellis vineyards and greenhouses extremely easy. The structure, being suspended on silent-blocks, dampens noise and vibrations.

The air conditioning/heating system is automotive type with vents at the front of the operator, for the best temperature and distribution of the air flow.



Functional design

Overstructures

Orion K105 tractors feature an **aggressive look, at the same time elegant and functional**, with a muscular line that guarantees at the same time the best visibility for the operator, all this thanks to the introduction of new technological solutions and of the new power unit.

In addition to the four front light clusters on front fenders, two LED beams above the hood grill increase the lighted area favouring over-night work or in case of poor visibility.

Maintenance and inspection operations of the engine compartment are quick and handy, thanks to the large opening angle of the bonnet.

All under control

The new, automotive-inspired dashboard is a concentrate of digital technology. The **multifunction colour display** continuously keeps under control - with top precision - any value of the machine and all diagnostic warning indicators of the tractor, in addition to the electrohydraulically-operated logically placed and easy traceable controls.

Analogue warning indicators are available for a quick and immediate read-out of the values, thanks to their dials.



The most complete range

To blaze a new trail, you need courage and vision, as well as experience and expertise. All these competences have always been belonging to PASQUALI and now they are revolutionarily applied to the Orion K105 tractor range.

Five different versions of tractors, each one developed for the special requirements we are stimulated to satisfy by our customers, one day after the other.

Orion K105 AR

Reversible isodiametric tractors, with central articulation: the reference version for specialised agriculture and for city works thanks to their narrow track and reduced steering radius.

Orion K105 RS

Reversible isodiametric tractors, with steering wheels: they are the conventional version and the one that mostly fits to multifunction works, on gradients as well, thanks to its high stability and grip.

Orion K105 DUALSTEER®

Reversible isodiametric tractors, with double steering system, getting a steering angle of 70°, the best one for its category, for an agile and quick movement in narrow areas.

Orion K105 MT

Reversible isodiametric tractors, with steering wheels: they are dedicated to forage harvesting, even uphill, thanks to their low centre of gravity and to the enlarged driving place.

Orion K105 SDT

Monodirectional tractors, with short-wheel base and differentiated wheels: they are specially recommended both for specialised agriculture in vineyards, orchards and greenhouses and for typical works of conventional tractors.

Orion K105 AR



	250/80R18	11.5/80-15.3	280/70R18	320/65R18	250/85R20	300/70R20
	with adjustable rim	with fixed rim	with adjustable rim	with adjustable rim	with adjustable rim	with adjustable rim

A	240	290	282	320	245	286
B	879	888	849	873	940	942
C	898/1112	948/972	1022/1112	1022/1112	882/1230	996/1260
D	1138/1352	1238/1262	1304/1394	1342/1432	1127/1475	1282/1546

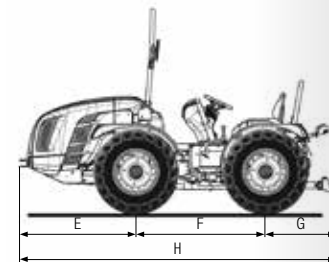
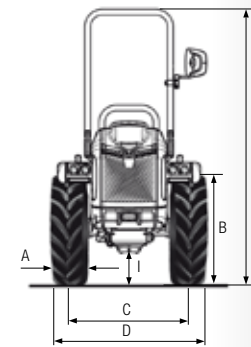


	320/70R20	340/65R20	31x15.50-15 XTC	31x15.50-15 STG	33x12.50-15 T413	13.6-16 Garden
	with adjustable rim	with adjustable rim	with fixed rim	with fixed rim	with fixed rim	with fixed rim

A	316	343	368	394	325	391
B	975	958	800	800	843	968
C	996/1260	996/1260	1016	1016	959/965	1240
D	1312/1576	1339/1603	1384	1410	1284/1290	1631

Dimensions Orion K105 AR (mm):

E	F	G	H	I	L	M	N
				min/max	min/max	min/max	min/max
1348	1495	882	3725	161/271	2254/2364	2070/2180	2139/2249



STANDARD cabin

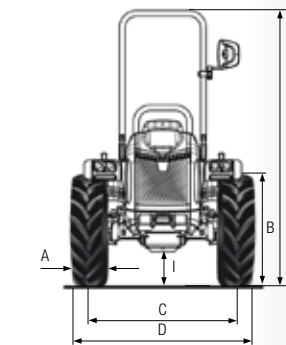


CONICAL cabin

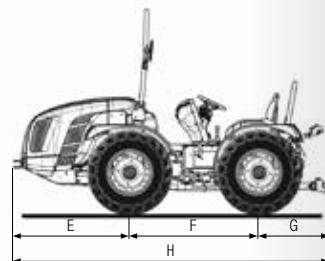
TECHNICAL FEATURES	Orion K105 AR
ENGINE	KUBOTA V3800 CR-TE4
Number of cylinders	4 in-line
Displacement (cm ³)	3,769
Intake	Turbo
Fuel system	Direct injection "Common rail"
Emission level	Stage 3B
Balancing	Counter-balance shafts
Power (kW/HP)	72.1 / 98
Rated speed (rpm)	2,400
Maximum torque (Nm/rpm)	330 / 1,500
Speed management	Electronically regulated with a console with functions: increase and decrease of engine speed, memorize and recall a particular speed or switch off the electronic throttle and go to the minimum idle speed
Cooling	Liquid
Tank capacity (lt)	54
CHASSIS	Swinging integral chassis OS-FRAME with central articulation
DRIVE	Four-wheel drive. Front-wheel drive disengagement with electro-hydraulic control
TRANSMISSION	32 speeds synchronized gearbox: 16 FWD and 16 REV with synchronized reverser
POWER SHUTTLE EASYDRIVE® (optional)	Electro-hydraulic power shuttle electronically actuated with the lever (with 3 position FWD-N-REV) installed on the left of steering wheel. Possibility to choose from 5 levels of reactivity
Transmission clutch	Multidisc in oil bath electronically-managed and proportional hydraulic control with PRO-ACT System
DIFFERENTIAL	Front and rear. Differential lock: front and rear simultaneously or only rear with electro-hydraulic control
AXLES	Front and rear with epicyclic reduction units. Front axle, oscillating in the middle (approx. ±15°)
REAR PTO	Independent from the gearbox and synchronized with forwarding speed. Engageable under load with brake in disengaged position
PTO clutch	Multidisc in oil bath with electro-hydraulic control
PTO rotation speed (rpm)	Standard: 540/540E - Optional: 540/1,000
HYDRAULIC SYSTEM	Double circuit with independent pumps and heat exchanger
Flow rate to the hydroguide and the electro-hydraulic controls (lt/min)	33
Flow rate to the lift and the control valves (lt/min)	30 (optional oversized pump with flow rate 49 lt/min)
Maximum hydraulic pressure (bar)	180
REAR CONTROL VALVES	Mechanical control
Standard	2 double acting
Optional and in addition to the standard ones	1 single acting and 1 double acting or 1 double acting and 1 double acting with float
Joystick (optional)	With proportional electronic control of lifts and control valves consisting of: 1 single acting with adjustable flow and free return, 5 double acting (replacing the standard ones) and oversized pump 49 lt/min. Potentiometer to change the sensibility of the joystick
ELECTRIC SYSTEM	Battery 100 Ah / 12 V - Alternator 95 A
Rear power outlets	7 pin and 3 pin
REAR LIFT	Standard: by two external rams - Optional: position and draft control
Three-point hitches	Standard: standard couplers cat. 1 and 2. Optional: quick couplings, L-shaped, cat. 1 and 2, arms with adjustable length and hooks with adjustable width.
Three-point tie bar	Standard: with manual adjustment - Optional: hydraulically controlled upper link and tie rod link arm
Ball joint lifting capacity (kg)	2,300
FRONT LIFT (optional)	By two external rams with front protection and 2 double acting control valves with free return
Three-point hitches	Rigid with quick couplings cat. 1
Lifting capacity (kg)	800
DRIVING PLATFORM	Reversible with platform suspended on silent block. Suspended pedals mounted on rotating control column
Steering wheel	With adjustable inclination
Seat with gas spring for easy tipping and safety belt	Standard: comfortable sprung seat, adjustable according to the driver's weight - Optional: "Kab Seating" or pneumatic seat
SERVICE BRAKES	Oil bath discs with hydrostatic control, acting on the four wheels
Parking brake	Automatic and independent Brake-Off
STEERING	Hydrostatic steering acting on central articulation. Flow deviator for steering unit
SAFETY	Standard: front homologated roll-bar
CABIN (optional)	Homologated and sound-proof with monocoque body fitted on silent-block, beacon lamp and fabric covered seat. With ventilation, heating system and air conditioning. Available with standard or conical structure
INSTRUMENT PANEL	With multi-function colour and digital display complete with: hour counter, battery voltage, fuel consumption, DPF level, simultaneous reading of engine speed, forwarding speed and PTO speed. Warning lights and acoustic alarm
TYRES (standard)	250/80R18
Optional	11.5/80-15.3 * 280/70R18 * 320/65R18 * 250/85R20 * 300/70R20 * 320/70R20 * 340/65R20 * 31x15.50-15 con battistrada XTC o STG * 33x12.50-15 T413 * 13.6-16 Garden
TOW HOOKS (standard)	Rear CUNA and front
Optional	Rear tow hook: EC approved or EC approved (Slider type) or CUNA (Slider type)
WEIGHT in order of speed	
With roll-bar (kg)	2,300
With cabin (kg)	2,445
OPTIONAL	Front bumper, Beacon lamp, Front weight, Weights for wheels, Active carbon filter for cabin

Orion K105 RS

	340/65R18	280/70R18	320/65R18	250/85R20	300/70R20
	with adjustable rim	with adjustable rim	with adjustable rim	with adjustable rim	with adjustable rim
A Tyre width (mm)	343	282	320	245	286
B Tyre diameter (mm)	899	849	873	940	942
C Wheel track min/max (mm)	1098/1538	1098/1538	1098/1538	1046/1588	1134/1618
D Width min/max (mm)	1441/1881	1380/1820	1441/1881	1291/1833	1420/1904



	320/70R20	340/65R20	31x15.50-15 XTC	31x15.50-15 STG	13.6-16 Garden
	with adjustable rim	with adjustable rim	with fixed rim	with fixed rim	with fixed rim
A Tyre width (mm)	316	343	368	394	391
B Tyre diameter (mm)	975	958	800	800	968
C Wheel track min/max (mm)	1134/1618	1134/1618	1260/1374	1260/1374	1240/1400
D Width min/max (mm)	1450/1934	1477/1961	1628/1742	1654/1768	1631/1791



STANDARD cabin



CONICAL cabin

Dimensions Orion K105 RS (mm):							
E	F	G	H	I min/max	L min/max	M min/max	N min/max
1348	1495	882	3725	184/294	2254/2364	2070/2180	2139/2249

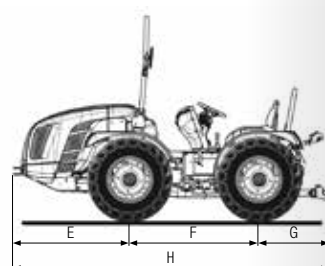
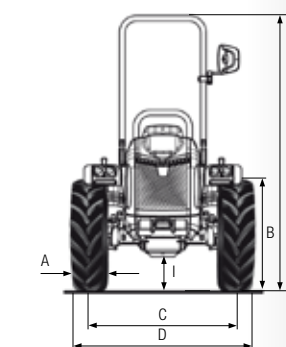
TECHNICAL FEATURES	Orion K105 RS
ENGINE	KUBOTA V3800 CR-TE4
Number of cylinders	4 in-line
Displacement (cm ³)	3,769
Intake	Turbo
Fuel system	Direct injection "Common rail"
Emission level	Stage 3B
Balancing	Counter-balance shafts
Power (kW/HP)	72.1 / 98
Rated speed (rpm)	2,400
Maximum torque (Nm/rpm)	330 / 1,500
Speed management	Electronically regulated with a console with functions: increase and decrease of engine speed, memorize and recall a particular speed or switch off the electronic throttle and go to the minimum idle speed
Cooling	Liquid
Tank capacity (lt)	54
CHASSIS	Swinging integral chassis OS-FRAME with steering wheels
DRIVE	Four-wheel drive. Front-wheel drive disengagement with electro-hydraulic control
TRANSMISSION	32 speeds synchronized gearbox: 16 FWD and 16 REV with synchronized reverser
POWER SHUTTLE EASYDRIVE® (optional)	Electro-hydraulic power shuttle electronically actuated with the lever (with 3 position FWD-N-REV) installed on the left of steering wheel. Possibility to choose from 5 levels of reactivity
Transmission clutch	Multidisc in oil bath electronically-managed and proportional hydraulic control with PRO-ACT System
DIFFERENTIAL	Front and rear. Differential lock: front and rear simultaneously or only rear with electro-hydraulic control
AXLES	Front and rear with epicyclic reduction units. Front axle, oscillating in the middle (approx. ±15°)
REAR PTO	Independent from the gearbox and synchronized with forwarding speed. Engageable under load with brake in disengaged position
PTO clutch	Multidisc in oil bath with electro-hydraulic control
PTO rotation speed (rpm)	Standard: 540/540E - Optional: 540/1,000
HYDRAULIC SYSTEM	Double circuit with independent pumps and heat exchanger
Flow rate to the hydroguide and the electro-hydraulic controls (lt/min)	33
Flow rate to the lift and the control valves (lt/min)	30 (optional oversized pump with flow rate 49 lt/min)
Maximum hydraulic pressure (bar)	180
REAR CONTROL VALVES	Mechanical control
Standard	2 double acting
Optional and in addition to the standard ones	1 single acting and 1 double acting or 1 double acting and 1 double acting with float
Joystick (optional)	With proportional electronic control of lifts and control valves consisting of: 1 single acting with adjustable flow and free return, 5 double acting (replacing the standard ones) and oversized pump 49 lt/min. Potentiometer to change the sensibility of the joystick
ELECTRIC SYSTEM	Battery 100 Ah / 12 V - Alternator 95 A
Rear power outlets	7 pin and 3 pin
REAR LIFT	Standard: by two external rams - Optional: position and draft control
Three-point hitches	Standard: standard couplers cat. 1 and 2. Optional: quick couplings cat. 1 and 2, arms with adjustable length or quick couplings, L-shaped, cat. 1 and 2, arms with adjustable length and hooks with adjustable width
Three-point tie bar	Standard: with manual adjustment - Optional: hydraulically controlled upper link and tie rod link arm
Ball joint lifting capacity (kg)	2,300
FRONT LIFT (optional)	By two external rams with front protection and 2 double acting control valves with free return
Three-point hitches	Rigid with quick couplings cat. 1
Lifting capacity (kg)	800
DRIVING PLATFORM	Reversible with platform suspended on silent block. Suspended pedals mounted on rotating control column
Steering wheel	With adjustable inclination
Seat with gas spring for easy tipping and safety belt	Standard: comfortable sprung seat, adjustable according to the driver's weight Optional: "Kab Seating" or pneumatic seat
SERVICE BRAKES	Oil bath discs with hydrostatic control, acting on the four wheels
Parking brake	Automatic and independent Brake-Off
STEERING	Hydrostatic steering acting on front wheels. Flow deviator for steering unit
SAFETY	Standard: front homologated roll-bar
CABIN (optional)	Homologated and sound-proof with monocoque body fitted on silent-block, beacon lamp and fabric covered seat. With ventilation, heating system and air conditioning. Available with standard or conical structure
INSTRUMENT PANEL	With multi-function colour and digital display complete with: hour counter, battery voltage, fuel consumption, DPF level, simultaneous reading of engine speed, forwarding speed and PTO speed. Warning lights and acoustic alarm
TYRES (standard)	280/70R18
Optional	340/65R18 * 320/65R18 * 250/85R20 * 300/70R20 * 320/70R20 * 340/65R20 * 31x15.50-15 XTC or STG * 13.6-16 Garden
TOW HOOKS (standard)	Rear CUNA and front
Optional	Rear tow hook: EC approved or EC approved (Slider type) or CUNA (Slider type)
WEIGHT in order of speed	
With roll-bar (kg)	2,385
With cabin (kg)	2,530
OPTIONAL	Front bumper, Beacon lamp, Front weight, Weights for wheels, Active carbon filter for cabin

Orion K105 DUALSTEER®

	340/65R18	280/70R18	320/65R18	250/85R20	300/70R20
	with adjustable rim	with adjustable rim	with adjustable rim	with adjustable rim	with adjustable rim
A Tyre width (mm)	343	282	320	245	286
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D Width min/max (mm)	1441/1881	1380/1820	1441/1881	1291/1833	1420/1904

	320/70R20	340/65R20	31x15.50-15 XTC	31x15.50-15 STG	13.6-16 Garden
	with adjustable rim	with adjustable rim	with fixed rim	with fixed rim	with fixed rim
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B Tyre diameter (mm)	975	958	800	800	968
C Wheel track min/max (mm)	1134/1618	1134/1618	1260/1374	1260/1374	1240/1400
D Width min/max (mm)	1450/1934	1477/1961	1628/1742	1654/1768	1631/1791

Dimensions Orion K105 DUALSTEER® (mm):							
E	F	G	H	I min/max	L min/max	M min/max	N min/max
1348	1495	882	3725	161/271	2254/2364	2070/2180	2139/2249



STANDARD cabin



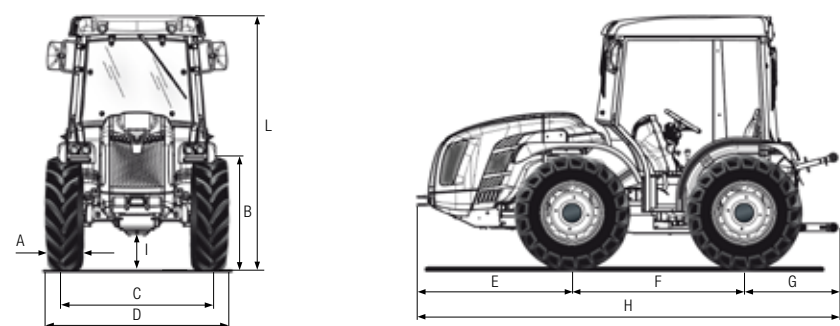
CONICAL cabin

TECHNICAL FEATURES	Orion K105 DUALSTEER®
ENGINE	KUBOTA V3800 CR-TE4
Number of cylinders	4 in-line
Displacement (cm³)	3,769
Intake	Turbo
Fuel system	Direct injection "Common rail"
Emission level	Stage 3B
Balancing	Counter-balance shafts
Power (kW/HP)	72.1 / 98
Rated speed (rpm)	2,400
Maximum torque (Nm/rpm)	330 / 1,500
Speed management	Electronically regulated with a console with functions: increase and decrease of engine speed, memorize and recall a particular speed or switch off the electronic throttle and go to the minimum idle speed
Cooling	Liquid
Tank capacity (lt)	54
CHASSIS	Swinging integral chassis OS-FRAME with central articulation and steering wheels
DRIVE	Four-wheel drive. Front-wheel drive disengagement with electro-hydraulic control
TRANSMISSION	32 speeds synchronized gearbox: 16 FWD and 16 REV with synchronized reverser
POWER SHUTTLE EASYDRIVE® (optional)	Electro-hydraulic power shuttle electronically actuated with the lever (with 3 position FWD-N-REV) installed on the left of steering wheel. Possibility to choose from 5 levels of reactivity
Transmission clutch	Multidisc in oil bath electronically-managed and proportional hydraulic control with PRO-ACT System
DIFFERENTIAL	Front and rear. Differential lock: front and rear simultaneously or only rear with electro-hydraulic control
AXLES	Front and rear with epicyclic reduction units. Front axle, oscillating in the middle (approx. ±15°)
REAR PTO	Independent from the gearbox and synchronized with forwarding speed. Engageable under load with brake in disengaged position
PTO clutch	Multidisc in oil bath with electro-hydraulic control
PTO rotation speed (rpm)	Standard: 540/540E - Optional: 540/1,000
HYDRAULIC SYSTEM	Double circuit with independent pumps and heat exchanger
Flow rate to the hydroguide and the electro-hydraulic controls (lt/min)	33
Flow rate to the lift and the control valves (lt/min)	30 (optional oversized pump with flow rate 49 lt/min)
Maximum hydraulic pressure (bar)	180
REAR CONTROL VALVES	Mechanical control
Standard	2 double acting
Optional and in addition to the standard ones	1 single acting and 1 double acting or 1 double acting and 1 double acting with float
Joystick (optional)	With proportional electronic control of lifts and control valves consisting of: 1 single acting with adjustable flow and free return, 5 double acting (replacing the standard ones) and oversized pump 49 lt/min. Potentiometer to change the sensibility of the joystick
ELECTRIC SYSTEM	Battery 100 Ah / 12 V - Alternator 95 A
Rear power outlets	7 pin and 3 pin
REAR LIFT	Standard: by two external rams - Optional: position and draft control
Three-point hitches	Standard: standard couplers cat. 1 and 2. Optional: quick couplings cat. 1 and 2, arms with adjustable length or quick couplings, L-shaped, cat. 1 and 2, arms with adjustable length and hooks with adjustable width.
Three-point tie bar	Standard: with manual adjustment - Optional: hydraulically controlled upper link and tie rod link arm
Ball joint lifting capacity (kg)	2,300
FRONT LIFT (optional)	By two external rams with front protection and 2 double acting control valves with free return
Three-point hitches	Rigid with quick couplings cat. 1
Lifting capacity (kg)	800
DRIVING PLATFORM	Reversible with platform suspended on silent block. Suspended pedals mounted on rotating control column
Steering wheel	With adjustable inclination
Seat with gas spring for easy tipping and safety belt	Standard: comfortable sprung seat, adjustable according to the driver's weight - Optional: "Kab Seating" or pneumatic seat
SERVICE BRAKES	Oil bath discs with hydrostatic control, acting on the four wheels
Parking brake	Automatic and independent Brake-Off
STEERING	Double steering system DUALSTEER® with 4-cylinders. Hydrostatic steering acting on front wheels and central articulation. Flow deviator for steering unit
SAFETY	Standard: front homologated roll-bar
CABIN (optional)	Homologated and sound-proof with monocoque body fitted on silent-block, beacon lamp and fabric covered seat. With ventilation, heating system and air conditioning. Available with standard or conical structure
INSTRUMENT PANEL	With multi-function colour and digital display complete with: hour counter, battery voltage, fuel consumption, DPF level, simultaneous reading of engine speed, forwarding speed and PTO speed. Warning lights and acoustic alarm
TYRES (standard)	280/70R18
Optional	340/65R18 * 320/65R18 * 250/85R20 * 300/70R20 * 320/70R20 * 340/65R20 * 31x15.50-15 XTC or STG * 13.6-16 Garden
TOW HOOKS (standard)	Rear CUNA and front
Optional	Rear tow hook: EC approved or EC approved (Slider type) or CUNA (Slider type)
WEIGHT in order of speed	
With roll-bar (kg)	2,450
With cabin (kg)	2,580
OPTIONAL	Front bumper, Beacon lamp, Front weight, Weights for wheels, Active carbon filter for cabin

Orion K105 MT



	31x15.50-15 XTC	31x15.50-15 STG	440/50R17 ALL GROUND	425/55R17 AC70G	340/65R20
	with fixed rim	with fixed rim	with fixed rim	with fixed rim	with adjustable rim
A Tyre width (mm)	368	394	431	430	343
B Tyre diameter (mm)	800	800	873	884	958
C Wheel track min/max (mm)	1510	1510	1476	1476	1354/1618
D Width min/max (mm)	1878	1904	1907	1906	1697/1961



Dimensions Orion K105 MT (mm):					
E	F	G	H	I min/max	L min/max
1348	1495	882	3725	184/294	2070/2180

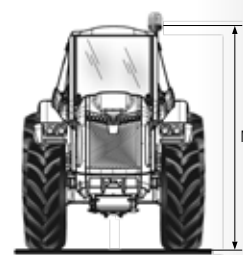
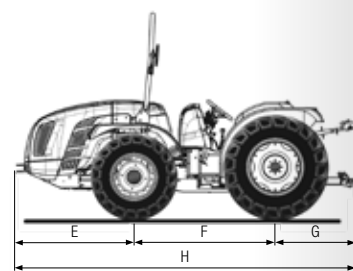
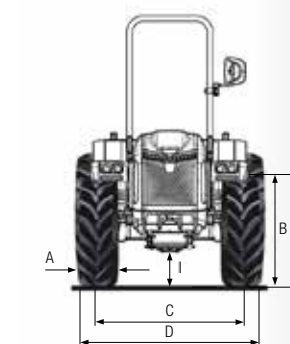
TECHNICAL FEATURES	Orion K105 MT
ENGINE	KUBOTA V3800 CR-TE4
Number of cylinders	4 in-line
Displacement (cm ³)	3,769
Intake	Turbo
Fuel system	Direct injection "Common rail"
Emission level	Stage 3B
Balancing	Counter-balance shafts
Power (kW/HP)	72.1 / 98
Rated speed (rpm)	2,400
Maximum torque (Nm/rpm)	330 / 1,500
Speed management	Electronically regulated with a console with functions: increase and decrease of engine speed, memorize and recall a particular speed or switch off the electronic throttle and go to the minimum idle speed
Cooling	Liquid
Tank capacity (lt)	54
Air filter	Integrated cyclone prefilter with high-performance air filter and front air intake
CHASSIS	Swinging integral chassis OS-FRAME with steering wheels
DRIVE	Four-wheel drive. Front-wheel drive disengagement with electro-hydraulic control
TRANSMISSION	32 speeds synchronized gearbox: 16 FWD and 16 REV with synchronized reverser
POWER SHUTTLE EASYDRIVE® (optional)	Electro-hydraulic power shuttle electronically actuated with the lever (with 3 position FWD-N-REV) installed on the left of steering wheel. Possibility to choose from 5 levels of reactivity
Transmission clutch	Multidisc in oil bath electronically-managed and proportional hydraulic control with PRO-ACT System
DIFFERENTIAL	Front and rear. Differential lock: front and rear simultaneously or only rear with electro-hydraulic control
AXLES	Front and rear with epicyclic reduction units. Front axle, oscillating in the middle (approx. ±15°)
REAR PTO	Independent from the gearbox and synchronized with forwarding speed. Engageable under load with brake in disengaged position
PTO clutch	Multidisc in oil bath with electro-hydraulic control
PTO rotation speed (rpm)	Standard: 540/1,000 - Optional: 540/540E
HYDRAULIC SYSTEM	Double circuit with independent pumps and heat exchanger
Flow rate to the hydroguide and the electro-hydraulic controls (lt/min)	33
Flow rate to the lift and the control valves (lt/min)	30
Maximum hydraulic pressure (bar)	180
REAR CONTROL VALVES	Mechanical control
Standard	1 single acting and 2 double acting
Optional and in addition to the standard ones	1 single acting or 1 double acting or 1 double acting with float
Joystick (optional)	With proportional electronic control of lifts and control valves consisting of: 1 single acting without free return and 3 double acting (replacing the standard ones). Potentiometer to change the sensibility of the joystick
ELECTRIC SYSTEM	Battery 100 Ah / 12 V - Alternator 95 A
Rear power outlets	7 pin and 3 pin
REAR LIFT	By four external rams with hydraulic suspension and Dual Floating System®
Three-point hitches	Quick couplings, L-shaped, cat. 1 and 2, arms with adjustable length and hooks with adjustable width
Three-point tie bar	Standard: with manual adjustment Optional: hydraulically controlled upper link and tie rod link arm
Ball joint lifting capacity (kg)	2,300
FRONT LIFT (optional)	By two external rams with front protection and 2 double acting control valves with free return
Three-point hitches	Rigid with quick couplings cat. 1
Lifting capacity (kg)	800
DRIVING PLATFORM	Wider version, reversible with platform suspended on silent block. Suspended pedals mounted on rotating control column
Steering wheel	With adjustable inclination
Seat with gas spring for easy tipping and safety belt	Standard: comfortable sprung seat, adjustable according to the driver's weight - Optional: pneumatic seat
SERVICE BRAKES	Oil bath discs with hydrostatic control, acting on the four wheels
Parking brake	Automatic and independent Brake-Off
STEERING	Hydrostatic steering acting on front wheels. Flow deviator for steering unit
SAFETY	Standard: semi-cabin and beacon lamp
CABIN (optional)	Homologated and sound-proof with monocoque body fitted on silent-block, beacon lamp and fabric covered seat. With ventilation, heating system and air conditioning
INSTRUMENT PANEL	With multi-function colour and digital display complete with: hour counter, battery voltage, fuel consumption, DPF level, simultaneous reading of engine speed, forwarding speed and PTO speed. Warning lights and acoustic alarm
TYRES (standard)	31x15.50-15 XTC
Optional	340/65R20 * 31x15.50-15 STG * 440/50-17 All-Ground * 425/55-17 AC70G
TOW HOOKS (standard)	Rear CUNA and front
Optional	Rear tow hook: EC approved or EC approved (Slider type) or CUNA (Slider type)
WEIGHT in order of speed	
With semi-cabin (kg)	2,480
With cabin (kg)	2,560
OPTIONAL	Front bumper, Front weight, Weights for wheels, Air prefilter with impeller, Active carbon filter for cabin

Orion K105 SDT

	260/70R16	300/70R20	260/70R16	340/65R20	280/70-18	360/70R20
	Front	Rear	Front	Rear	Front	Rear
A Tyre width (mm)	258	286	258	343	265	357
B Tyre diameter (mm)	770	958	770	958	849	1042
C Wheel track min/max (mm)	1122/1522	1054/1490	1122/1522	1054/1490	1098/1538	1170/1490
D Width min/max (mm)	1380/1780	1340/1776	1380/1780	1397/1833	1363/1803	1527/1847

	280/70-18	320/70R24	320/65R18	380/70R20	340/65R18	420/65R24
	Front	Rear	Front	Rear	Front	Rear
A Tyre width (mm)	265	316	319	370	343	418
B Tyre diameter (mm)	849	1092	873	1078	899	1155
C Wheel track min/max (mm)	1098/1538	1034/1518	1166/1470	1170/1490	1170/1466	1190/1460
D Width min/max (mm)	1363/1803	1350/1834	1485/1789	1540/1860	1513/1809	1608/1878

	Dimensions Orion K105 SDT (mm):						
	E	F	G	H	I min/max	L min/max	M min/max
Orion K105 SDT RS	1348	1607	918	3873	157/257	2216/2316	1792/1857
Orion K105 SDT DUALSTEER®	1348	1607	918	3873	134/234	2216/2316	1792/1857



Compact AIRTECH cabin

TECHNICAL FEATURES	Orion K105 SDT RS	Orion K105 SDT DUALSTEER®
ENGINE	KUBOTA V3800 CR-TE4	
Number of cylinders	4 in-line	
Displacement (cm³)	3769	
Intake	Turbo	
Fuel system	Direct injection "Common rail"	
Emission level	Stage 3B	
Balancing	Counter-balance shafts	
Power (kW/HP)	72.1 / 98	
Rated speed (rpm)	2,400	
Maximum torque (Nm/rpm)	330 / 1,500	
Speed management	Electronically regulated with a console with functions: increase and decrease of engine speed, memorize and recall a particular speed or switch off the electronic throttle and go to the minimum idle speed	
Cooling	Liquid	
Tank capacity (lt)	70 lt (version with roll-bar) - 54 lt (version with cabin)	
CHASSIS	Swinging integral chassis OS-FRAME with steering wheels	Swinging integral chassis OS-FRAME with central articulation and steering wheels
DRIVE	Four-wheel drive. Front-wheel drive disengagement with electro-hydraulic control	
TRANSMISSION	32 speeds synchronized gearbox: 16 FWD and 16 REV with synchronized reverser	
POWER SHUTTLE EASYDRIVE® (optional)	Electro-hydraulic power shuttle electronically actuated with the lever (with 3 position FWD-N-REV) installed on the left of steering wheel. Possibility to choose from 5 levels of reactivity	
Transmission clutch	Multidisc in oil bath electronically-managed and proportional hydraulic control with PRO-ACT System	
DIFFERENTIAL	Front and rear. Differential lock: front and rear simultaneously or only rear with electro-hydraulic control	
AXLES	Front with epicyclic reduction units and rear with bull-gear units. Front axle, oscillating in the middle (approx. ±15°)	
REAR PTO	Independent from the gearbox and synchronized with forwarding speed. Engageable under load with brake in disengaged position	
PTO clutch	Multidisc in oil bath with electro-hydraulic control	
PTO rotation speed (rpm)	Standard: 540/540E - Optional: 540/1,000	
HYDRAULIC SYSTEM	Double circuit with independent pumps and heat exchanger	
Flow rate to the steering unit and the electro-hydraulic controls (lt/min)	33	
Flow rate to the lift and the control valves (lt/min)	30 (optional oversized pump with flow rate 49 lt/min)	
Maximum hydraulic pressure (bar)	180	
REAR CONTROL VALVES	Mechanical control	
Standard	2 double acting	
Optional and in addition to the standard ones	1 single acting and 1 double acting or 1 double acting and 1 double acting with float	
Joystick (optional)	With proportional electronic control of lifts and control valves consisting of: 1 single acting with adjustable flow and free return, 3 double acting (replacing the standard ones) and oversized pump 49 lt/min. Potentiometer to change the sensibility of the joystick	
FRONT CONTROL VALVES (only with joystick)	4 double acting, 1 single acting and 1 single acting with adjustable flow and free return with E-Plug System	
ELECTRIC SYSTEM	Battery 100 Ah / 12 V - Alternator 95 A	
Rear power outlets	7 pin and 3 pin	
REAR LIFT	Standard: by two external rams Optional: position and draft control	
Three-point hitches	Standard: standard couplers cat. 1 and 2. Optional: quick couplings cat. 1 and 2, arms with non-adjustable length or quick couplings, L-shaped, cat. 1 and 2, arms with adjustable length and hooks with adjustable width	
Three-point tie bar	Standard: with manual adjustment - Optional: hydraulically controlled upper link and tie rod link arm	
Ball joint lifting capacity (kg)	2,700	
FRONT LIFT (optional)	With front protection and 2 double acting control valves with free return	
Three-point hitches	Rigid with quick couplings cat. 1	
Lifting capacity (kg)	800	
DRIVING PLATFORM	Monodirectional with platform suspended on silent block. Suspended pedals mounted on control column	
Steering wheel	With adjustable inclination	
Seat with safety belt	Standard: comfortable sprung seat, adjustable according to the driver's weight - Optional: "Kab Seating" or pneumatic seat	
SERVICE BRAKES	Oil bath discs with hydrostatic control, acting on the four wheels	
Parking brake	Standard: acting on the rear transmission, with hand lever - Optional: automatic and independent Brake-Off with knob on the dashboard	
STEERING	Hydrostatic steering acting on the front wheels	Double steering system DUALSTEER® with 4-cylinders. Hydrostatic steering acting on front wheels and central articulation
SAFETY	Standard: front homologated roll-bar	
CABIN (optional)	Compact AIRTECH version, pressurised and homologated cat. 4. Sound-proof with monocoque body fitted on silent-block, beacon lamp and fabric covered seat. Safety cell integrated in the structure, instrument panel and air ducts (car type). Air conditioning system and Brake-Off	
INSTRUMENT PANEL	With multi-function colour and digital display complete with: hour counter, battery voltage, fuel consumption, DPF level, simultaneous reading of engine speed, forwarding speed and PTO speed. Warning lights and acoustic alarm	
TYRES (standard)	260/70R16*300/70R20	
Optional	260/70R16*340/65R20 - 280/70-18*360/70R20 - 280/70-18*320/70R24 - 320/65R18*380/70R20 - 340/65R18*420/65R24	
TOW HOOKS (standard)	Rear CUNA and front	
Optional	Rear tow hook: EC approved or EC approved (Slider type) or CUNA (Slider type)	
WEIGHT in order of speed		
With roll-bar (kg)	2,520	2,570
With Compact cabin (kg)	2,700	2,700
OPTIONAL	Front bumper, Beacon lamp, Front weight, Weights for front wheels, Cast-iron rim flanges for rear wheels 24", Front plate for implements connection, Active carbon filter for pressurised cabin	

THE SERVICES



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