MUCH MANY ADVANTAGES WITH INVICTUS K600

OS-FRAME TRANSMISSION
in order to optimize mechanical efficiency and stability even on rough terrain.

EXCELLENT DRIVING CONDITIONS
with ergonomic controls placed to be easily found and activated by the operator.

REVERSIBLE DRIVING POSITION
optional on all models.

KUBOTA ENGINE
with direct injection and counter-rotating mass: low fuel consumption, excellent performance and reliable over a long time period.

ELECTRONIC JOYSTICK
in order to optimize hydraulic system performance facilitating operator control.

‘LOW NOISE’ CABINS
Comfortable and compact cabins with high visibility.

PERFECT WEIGHT DISTRIBUTION ON THE AXLES
in order to optimize efficiency, machine stability and traction during operation.

50% 50%

Comfort, high performance for a captivating design - unique tractor

Achievement of maximum efficiency and convenience has represented the key point in the development and implementation of the new Invictus K600. Prestigious engine, high performing hydraulic system, extremely compact dimensions and maximum operator comfort, in addition to an attractive and simple design are the characteristics making the difference between an Invictus K600 and a competitor corresponding tractor.

Invictus K600 has a large availability of options, making it extremely versatile and presents itself as a useful tool for row crop operations, greenhouse and nursery work and green maintenance, to be performed during both summer and winter time. In the above mentioned context, related to municipal services, it is important to highlight the exceptional maneuverability characteristics, the small size, the great comfort and low overall operation costs.

HYDRAULIC SYSTEM
High performance hydraulic system to adopt a great deal of hydraulically-fired equipments.

SHORT WHEELBASE
in order to reduce turning radius so as to be able to move with maximum ease even in small spaces.

139 cm

PLANETARY GEARS
Only machine from its category with planetary gears on both axles in order to ensure maximum power transmission and durability.

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INVICTUS K600 AR
Isodiametric tractors, monodirectional or reversible, with central articulation

The Invictus K600 AR are specialized tractors, born to be used in particularly narrow areas: row cultivations, vineyards, orchards, greenhouses and nurseries besides the Winter and Summer maintenance, like for Municipalities. They are particularly performing machines, thanks to the isodiametric wheels and the frame with central articulation, their best qualities: agility and maneuverability. The limited steering radius, the reversibility of the driving position (optional) and the constant adherence to the ground make the Invictus K600 AR multi-purposes and versatile machines, which can be used for a great variety of works under total control. In spite of the limited dimensions, the driving position is particularly comfortable with easily reachable controls also in the reversed position.

INVICTUS K600 RS
Isodiametric tractors, monodirectional or reversible, with steering wheels

The Invictus K600 RS are multi-purpose specialized tractors, particularly performing in vineyards, orchards, nurseries cultivations and greens maintenance. The low hub and the all-wheel drive assure stability and adherence to the ground and allow the Invictus K600 RS to work both on flat and uneven, sloping grounds. The short pitch and the narrow track enhance the maneuverability qualities and allow to operate also in narrow spaces. The engine power together with the perfect weight distribution on the axles are features which enhance the value of the Invictus K600 and make them incomparable for any use. The reversible driving position (optional) allows to operate practically and rationally both with towed and front attachments and to work in the highest precision and comfort.

Kubota V2203: power, performance and savings

The Invictus K600 are mounting a 4-cylinder, 2.2 liter Kubota engine developing 48 horsepower with a vigorous torque of 145 Nm corresponding to just 1700 rpm.

The V2203 engine with direct injection is provided with a counter-rotating mass now absolutely necessary for cantilever engine machine applications in order to avoid annoying vibrations and redundant noise inside the cabin. The provided application has - as excellence - an optimal position on the driveshaft side. V2203 engine is also completely biodiesel compatible.

<table>
<thead>
<tr>
<th>VERSIONS ENGINE</th>
<th>VERSIONS ENGINE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>K600</strong></td>
<td><strong>K600</strong></td>
</tr>
<tr>
<td>Type</td>
<td>V2203</td>
</tr>
<tr>
<td>Power (kw/hp)</td>
<td>35.2 / 48</td>
</tr>
<tr>
<td>No. of cylinders</td>
<td>4</td>
</tr>
<tr>
<td>Displacement</td>
<td>2197</td>
</tr>
<tr>
<td>Aspiration</td>
<td>Natural</td>
</tr>
<tr>
<td>Cooling</td>
<td>Water</td>
</tr>
</tbody>
</table>

**Kubota V2203: power, performance and savings**

**HIGH DRIVING COMFORT**
**LESS VIBRATIONS**
**LESS NOISE**
**REDUCTIONS OF EMISSIONS**
**REDUCTIONS OF CONSUMPTION**
**RELIABILITY AND PERFORMANCE**
Invictus K600 were manufactured with the new Synchro 24 speed shift (12 forward + 12 reverse) by more than 30 km/h for both driving directions, with synchronized inverter and helical profile gears.

Logical speed sequence, no overlaps throughout all ranges, always allows right gear selection for the tasks for which the tractor is intended to, enabling optimal machine utilization, fuel saving, minor mechanical component and engine wear, an overall high operating quality. The “Long-life” clutch designed for Invictus K600 is a multiple oil bath discs one. It does not require adjustment or maintenance. Modular and smoothly engaging clutch, mounted in the transmissions system to reduce engine overhang and consequently the tractor length.

Gearboxes with the best speed range

The Invictus K600 are provided with OS-Frame transmissions awarding lots of advantages:

A unique transmission shaft through the central assy moves both the gearbox main clutch and the PTO independent clutch, while assuring the best mechanical output and the highest tractor maneuverability.

The special structure of the transmission with cantilever engine allows a particular low gravity centre without actual ground contact, essential feature for the operations to which the tractor is destined.

It is a “monolithic” structure in a single cast iron casting. The joint in the middle of the machine lets the front axle oscillate up to 15° with respect to the rear axle, stabilizing the machines on steep terrain. This assures the highest stability and constant traction, as the four wheels are always stuck on the ground.

The distribution of the weights on the axles, 40% on the rear and 60% on the front, is proved optimal once the rear lifting equipment is mounted.

The ideal balance of the machine while working assures stability, safety and traction.

The 4-wheel drive allows absolute safety on every terrain, exploiting to the maximum the machine’s designed towing and security outfits.

High quality axles

Invictus K600 are equipped with planetary gear axles. The choice has been dictated by the need to reduce wheelbase increasing manoeuvrability as well as to extend tractor prestige and reliability.

Gear fundamental features, with respect to older cheap “cascade” gears used by the competition, identify themselves with virtually unlimited gear life and greater power transmission achieved by having three gears instead of only one cheaper model.
High quality and performance

The hydraulic system is a dual circuit, powered by two gear pumps able to deliver:

|                      | STANDARD | OVERSIZE PUMP (Optional | Standard with Joystick) |
|----------------------|----------|--------------------------|
| Flow rate to the lift and the distributors | 22,1 l/min | 33,1 l/min |
| Flow rate to the hydroguide and electro-hydraulic control | 16,8 l/min | 22,1 l/min |

**PLUS**

Everything close at hand

A specific electronic control joystick has been developed only for Invictus K600.

The joystick can control both hydraulic system and rear rockshaft supplying 7 rear hydraulic connections and making practical and safe every manoeuvre involving tractor’s hydraulics.

The joystick control, placed as an arm rest on operator’s right side is an integral part of the driver’s seat.

The seat and joystick rotate when reverse equipment mode is enabled. The joystick is designed to be vertically adjustable so the driver seat can be accessible from both right and left side. Despite machine’s small size, joystick can even be set up within the cab.

In the oversize pump version, joystick option is a standard equipment and a heat exchanger is also provided in order to stabilize operating temperatures.

Operation hydraulic pressure is 180 bar.

Tractors without joystick are equipped with up to 6 hydraulic outlets located in the rear part of the equipment. This enables the use of equipment requiring large hydraulic flow. Lifting and devices controls are conveniently placed in an ergonomic position allowing intuitive manual operations.

**PTO with maximum power needed to transmission**

The rear PTO is independent from the gearbox and synchronized with all progress speeds, essential for traction towing. PTO can be engaged in a practical and safe way through an electro-hydraulic servo command. Two speed regimes are available: 540 and 750 rpm.

PTO is always engaged under load, the brake in off position and security prevents accidental engagements.

**Active and passive safety**

The low hub, the constant traction and the efficiency of the braking system with multi-disc wet brakes assure the highest safety of operation in every conditions.

The differential lock, which can be operated by an ergonomically positioned knob on the instrument panel allows the tractor to be always in traction.

The roll-bar and the safety belts on the seat protect the operator from any possible capsizing.

**Lever strength**

Tractors such as Invictus K600 are often used with performing equipment fitted on the lifting.

The solid rear hydraulic lift, with its high lifting capacity, relies on multi-purpose practical and versatile connections designed to adapt in a fast and simple way to all marketed equipments. Lifting arms are equipped with normal connections, quick couplers and quick couplers with hook angular lateral adjustment.
Reserved to the driver

The driving location combines comfort, ergonomics, functionality and safety in an absolute original way. The driving position is custom-fitted on the driver: the whole platform has been built with highest quality materials in order to obtain finishes resistant to atmospheric agents and to make the job more pleasant to the operator. In the reversible version the driving module is mounted on silent-block absorbing vibrations and noise for a better comfort. From the sprung seat the operator enjoys a complete view both on the machine and on the attachments. The digital display is integrated in the instrument panel with its non-glare screen which guarantees the total control of the unit.

Certified cabs

Available in Lusso and Comfort versions, Invictus K600 cabs have been designed with the greatest care to even the smallest details to guarantee the inside comfort and not to damage the environment.

The structure is mounted on a suspended platform completely independent from the tractor structure in order to reduce noise and vibrations.

They are equipped with large, roomy and soundproof interiors.

The large windows improve the driver’s view when operating in traditional or even reversed driving position.

Air conditioning and heating are granted by a reliable, high performance system.

PLUS

Reversible driving position: versatility and highest operation comfort

A few seconds are required to rotate by 180° the seat, the steering wheel and the console so that the operator may work having the equipment in front of him and constantly be able to control the operations. This means: maximum security and comfort.
TECHNICAL FEATURES INVICTUS K600 AR

STEERING RADIUS

INVICTUS K600 AR WITH THE FORESEEN WHEELS:

<table>
<thead>
<tr>
<th>Tyre type</th>
<th>8.25-16</th>
<th>250/80-18</th>
<th>280/70R18</th>
<th>320/65R18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width (mm)</td>
<td>2450</td>
<td>2500</td>
<td>2530</td>
<td>2650</td>
</tr>
<tr>
<td></td>
<td>2600</td>
<td>2700</td>
<td>2700</td>
<td></td>
</tr>
</tbody>
</table>

WEIGHTS

<table>
<thead>
<tr>
<th>Type</th>
<th>With cabin (kg)</th>
<th>With roll-bar (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1720</td>
<td>1560</td>
</tr>
</tbody>
</table>

TRACTOR DIMENSIONS INVICTUS K600 AR (mm):

<table>
<thead>
<tr>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1150</td>
<td>1390</td>
<td>730</td>
<td>3270</td>
<td>2013266</td>
<td>2220</td>
<td>675</td>
<td>2106</td>
</tr>
</tbody>
</table>

ENGINE

Manufacturer: KUBOTA
Model: V 2203 M Di
Number of cylinders: 4
Displacement cm³: 2197
Aspiration: Naturally aspirated
Compression ratio: 19:1
Balancing: With counter-rotating balancing weights
Power Kw/HP: 35.2 / 48
Nominal speed (rpm): 2900
Maximum torque (Nm/prm): 1440 / 1700
Cooling: Water

ELECTRIC SYSTEM

Battery (Ah): 70
Alternator (kw): 70

SPEEDS

Engagement control: Electro-hydraulic
PTO clutch: Multidisc, in oil bath

TRANSMISSION

Synchronized gearbox: 24 speeds (12 forward and 12 reverse) with synchronized reverse
Main clutch: Multidisc, in oil bath
Differential: Front and rear with simultaneous differential lock and electro-hydraulic control

WEIGHTS OPERATIONAL

<table>
<thead>
<tr>
<th>With cabin (kg)</th>
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</tr>
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<tbody>
<tr>
<td>1760</td>
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</tbody>
</table>

DRIVE

Four-wheel drive, permanent
PTO drive: Multidisc, in oil bath
Engagement control: Electro-hydraulic

HYDRAULIC SYSTEM

Double circuit with independent pumps
Flow rate to the lift and the distributors (l/min.) 16.8 (optional oversize pump 22.1 lt and heat exchanger)
Flow rate to hydraulic pump which controls the hydroguide and electro-hydraulic control (l/min.) 22.1 (optional oversize pump 33.1 lt and heat exchanger)
Maximum hydraulic pressure (bar) 140

DISTRIBUTORS

Mechanical control to max. 6 hydraulic couplers
Double acting: 2 acting (Draft and position control)

STEERING

With hydrostatic steering by two rams, acting on the central articulation. Flow divaricator for steering unit for the reversible version

SERVICE BRAKES

Oil immersed multidisc, acting on the rear transmission, with mechanical control

SEATS

Standard: sprung seat
Optional: ‘Bostrom’ seat

SPECIAL HOOKS

Optional Rear rotating or rear adjustable in height (Slider type) tow hooks, both EC approved or CUNA rear adjustable in height (Slider type)

CONSOLE

Digital type

Rear mirror (standard): 31x15.50 (XTC and STG) * 31x13.50 (Garden)
# Technical Features Invictus K600 RS

## Tractor Dimensions Invictus K600 RS (mm):

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tyre width mm.</td>
<td>212</td>
<td>240</td>
<td>262</td>
</tr>
<tr>
<td>Tyre height mm.</td>
<td>848</td>
<td>879</td>
<td>849</td>
</tr>
<tr>
<td>Wheel track min/max mm.</td>
<td>999 - 1305</td>
<td>996 - 1312</td>
<td>984 - 1324</td>
</tr>
<tr>
<td>Width min/max mm.</td>
<td>1211 - 1517</td>
<td>1236 - 1552</td>
<td>1266 - 1606</td>
</tr>
</tbody>
</table>

## Tyres

- Standard: 8.25-16
- Optional: 250/80-18, 31x13.50-15

## CHASSIS

- Swing integral chassis OS-FRAME with steering wheels
- Digital type with chrono-tacho-gyrometer, water thermometer, control warning lights and acoustic alarm

## Engine

- 4-cycle Diesel engine with direct injection
- Model: V 2203 M-DI
- Number of cylinders: 4
- Displacement cm³: 2197
- Aspiration: Naturally aspirated
- Emission level: Tier 3
- Balancing: With counter-rotating balancing weights
- Power KW/HP: 35.2 / 48
- Nominal speed (rpm): 1900
- Maximum torque (Nm/prn): 144.8 / 1700
- Cooling: Water
- Tank capacity (lt.): 45

## Transmission

- Synchronized gearbox: 24 speeds (12 forward and 12 reverse) with synchronized reverser
- Front and rear with simultaneous differential lock and electro-hydraulic control

## Axles

- With adjustable rim with fixed rim with fixed rim with fixed rim

## Drive

- Four-wheel drive
- Rear, independent from the gearbox, 140/190 rpm and synchronized with the gearbox. Engageable under load with brake in disengaged position

## PTO Clutch

- Multidisc, in all both

## Main Controls

- Multidisc, in all both

## Safety

- Front, homologated
- Sound-proof, mounted on "Slient block", heating and ventilation systems. Optional: air conditioning

## Console

- With chrono-tacho-gyrometer, water thermometer, control warning lights and acoustic alarm: Reading of rpm, forward speed and rotation speed of power takeoff

## Tyres

- Standard: 8.25-16
- Optional: 250/80-18, 31x13.50-15

## Towing Hooks

- Standard: Rear CUNA and front
- Optional: Rear rotating or rear adjustable in height (Slider type) tow hooks, both EC approved or CUNA rear adjustable in height (Slider type)

## Weight Operational

- With rail-bar (kg): 1168
- With cab (kg): 1720

## Optional

- Accumulator for weight compensation HRA (with Dual Floating System spare for reversible version), flash light, front weight and weights for sensors
THE SERVICES

SPARE PARTS
A complete range of original spare parts, guaranteed directly by the manufacturer.

ASSISTANCE
A team of specialists, well prepared and available to assure an efficient and resolving service.

WARRANTY
A precise certainty for the customer’s satisfaction: 2-year warranty included in the price.

LUBRICANTS
BCS recommends to use the original PowerLube lubricants.

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Tel. +39 02 94821
Fax +39 02 94960800
info@bcs-ferrari.it

www.bcsagri.it

MADE IN ITALY

The information in this leaflet is not binding: the models described may be modified, without notice, by the Manufacturer.