

# MUCH MANY ADVANTAGES WITH VALIANT 600



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



**REVERSIBLE DRIVING POSITION** optional on all models.



### **KOHLER ENGINE** with direct injection: low fuel consumption and excellent performance.



## **LOOK** modern and captivating.



### **PLANETARY GEARS** on both axles in order to ensure maximum power transmission and durability.





SERVICE BRAKES oil immersed multidisc.





### A proposal for all your needs

The **Valiant 600** are isodiametric tractors extremely versatile and reliable. They have been studied in detail for specific use in vineyards, orchards, greenhouses and, in general, for specialized crops where the tractor's structural characteristics are of fundamental importance in allowing work to be done in a practical way. The excellent steering radius, the four-wheel drive that optimises the power that is transmitted to the wheels and a compact and secure alignment, allow the **Valiant 600** provide performances at the top of their category, along with excellent levels of productivity and low operating costs.

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





**PTO INDEPENDENT** and synchronized with the gearbox.

134 cm

## SHORT WHEELBASE in order to reduce turning radius so

as to be able to move with maximum ease even in small spaces.



# VERSIONS



## **VALIANT 600 AR**

Isodiametric tractors, monodirectional or reversible, with central articulation

The **Valiant 600 AR** are specialized tractors, born to be used in particularly narrow areas: row cultivations, vineyards, orchards, greenhouses and nurseries. They are particularly performing machines, thanks to the isodiametric wheels and the frame with central articulation. The limited steering radius, the reversibility of the driving position (optional) and the constant adherence to the ground make the **Valiant 600 AR** multi-purposes and versatile machines. In spite of the limited dimensions, the driving position is particularly comfortable with easily reachable controls also in the reversed position.



### VALIANT 600 RS Isodiametric tractors, monodirectional or reversible, with steering wheels

The **Valiant 600 RS** are multi-purpose specialized tractors, particularly performing in vineyards, orchards and greens maintenance. The low hub and the all-wheel drive assure stability and adherence to the ground and allow the **Valiant 600 RS** to work both on flat and sloping grounds. The engine power together with the perfect weight distribution on the axles make them safe and trusty supporters. The reversible driving position (optional) allows to operate practically and safe both with rear-and front-mounted attachments.

# ENGINE



## Kohler KDi 2504M: compact, reliable and performing

The **Valiant 600** are mounting a 4-cylinder, 2.5 liter Kohler engine developing 49 horsepower with a vigorous torque of 170 Nm corresponding to just 1500 rpm.



VALIANT	Туре	Power (kw/hp)	No. of cylinders	Displacement	Aspiration	Cooling
600	KDi 2504M	36 / 49	4	2482	Natural	Water

# PLUS

The new Synchro 24-speed gearboxes (12 forward + 12 reverse) assure a maximum speed of more than 30 km/h for both driving directions, with synchronized inverter. Logical speed sequence, no overlaps throughout all ranges, always allows right gear selection for the tasks for which the tractor is intended to, enabling fuel

saving and an overall high operating quality.

The "Long-life" clutch designed for **Valiant 600** is a wet multiple discs one, allowing easy and gradual engagements. It is mounted in the transmissions system to reduce engine overhang and the tractor length and it does not require maintenance.



#### GRAPH OF THE SPEEDS IN Km/h - ENGINE SPEED: 2600 RPM

The graph highlights the perfect progression of the ratios, without any speed overlapping between the ranges.

	Reverse			Forward gear
35,64 Km/h	4°	Ш	4°	32,60 Km/h
26,85 Km/h	<b>3°</b>	Ш	3°	24,56 Km/h
18,63 Km/h	2°	Ш	2°	17,04 Km/h
12,12 Km/h	1°	Ш	1°	<b>11,09</b> Km/h
9,63 Km/h	4°	Ш	4°	8,81 Km/h
<b>7,26</b> Km/h 🔙	3°	Ш	3°	<b>6,64</b> Km/h
<b>5,03</b> Km/h ┥	2°	Ш	2°	<b>4,60</b> Km/h
<b>3,27</b> Km/h	<b>1</b> 1°	Ш	1°	<b>2,99</b> Km/h
<b>2,61</b> Km/r	n 💶 4°	1	4°	<b>2,39</b> Km/h
1,97 кл	m/h 💶 3°	I	3°	<b>1,80</b> Km/h
1,36 א	(m/h 🧲 2°	I	2°	<b>1,25</b> Km/h
0,89 ×	(m/h < 1°	1	1°	<b>0,81</b> Km/h

# AN ABSOLUTELY UNIQUE CONTEXT

## PLUS

## High performing hydraulic system

The hydraulic system is a dual circuit, powered by two independent pumps: one pump controls the power steering and electro-hydraulic control (maximum flow rate 15,4 I/min), the other pump controls the hoist and the distributors (maximum flow rate 25,6 I/min). Operation hydraulic pressure is 180 bar.



## **Transmission and high quality axles**

The **Valiant 600** are provided with OS-Frame transmissions awarding the highest tractor maneuverability and the best mechanical output.

The joint in the middle of the machine lets the front axle oscillate up to  $15^{\circ}$  with respect to the rear axle, stabilizing the machines on steep terrain.

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

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 **Valiant 600** are equipped with planetary gear axles in order to ensure maximum power transmission and durability.

**5**°

6 VALIANT 600



## Lever strength

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.



**Quick couplings** 

L-shaped quick couplings

### PTO with maximum power needed to transmission

The rear PTO is independent from the gearbox and synchronized with all progress speeds. PTO at 540 rpm can be engaged in a practical and safe way through an electro-hydraulic control.

## **PLUS**

## **Reserved to the driver**

The driving position is custom-fitted on the driver with ergonomic controls placed to be easily found and activated by the operator. The reversibility can be achieved in just a few seconds thanks to the rotating console which allows the driving position consisting of seat-steering wheel-instrument panel, to rotate by 180°, so that the operator can practically and rationally work both with rear and front attachments.

The braking system with multi-disc wet brakes, the roll-bar and the safety belts on the seat assure the highest safety of operation in every conditions.



# TECHNICAL FEATURES VALIANT 600 AR

		8.25-16	250/80-18	280/70R18	320/65R18
		WITH ADJUSTABLE RIM	WITH ADJUSTABLE RIM	WITH ADJUSTABLE RIM	WITH ADJUSTABLE RIM
A Tyre width r	nm.	212	240	282	319
<b>B</b> Tyre height r	mm.	848	879	849	873
C Wheel track	Mono	794 - 1100	865 - 1107	869 - 1119	931 - 1119
min/max mm.	Rev	827 - 1100	865 - 1107	931 - 1119	931 - 1119
D Width	Mono	1006 - 1312	1105 - 1347	1151 - 1401	1250 - 1438
min/max mm.	Rev	1039 - 1312	1105 - 1347	1213 - 1401	1250 - 1438



		260/70R20	31x15.50-15 XTC	31x15.50-15 STG	31x13.50-15 Garden	
		WITH ADJUSTABLE RIM	WITH FIXED RIM	WITH FIXED RIM	WITH FIXED RIM	
A Tyre width r	nm.	258	368	394	351	
<b>B</b> Tyre height	mm.	872	800	800	782	
<b>C</b> Wheel track	Mono	846 - 1120	1003	1003	991	
min/max mm.	Rev	902 - 1120	1005	1003	391	
D Width	Mono	1104 - 1378	1371	1397	1342	
min/max mm.	Rev	1160 - 1378	1571	1097	1342	



#### TRACTOR DIMENSIONS VALIANT 600 AR (mm):

	E	F	G	H	l Min-Max	L Max	М
VALIANT 600 AR	1160	1340	730	3230	220 / 270	2220	675

### STEERING RADIUS VALIANT 600 AR WITH THE FORESEEN WHEELS:

Tyre type	8.25-16	250/80 18	280/70 R18	320/65 R18	260/70 R20	31x15.50 15	31x13.50 15
mm	2450	2500	2530	2650	2600	2700	2700



	VALIANT 600 AR
CHASSIS	Swinging integral chassis OS-FRAME with central articulation
ENGINE	4-cycle Diesel engine with direct injection
Manufacturer	KOHLER
Model	KDi 2504M
Number of cylinders	4
Displacement cm3	2482
Suction	Naturally aspired
Power KW/HP	36 / 49
Nominal speed (rpm)	2600
Maximum tractor torque (Nm/rpm)	170 / 1500
Cooling	Water
Tank capacity (lt.)	45
TRANSMISSION	Synchronized gearbox: 24 speeds (12 forward and 12 reverse) with synchronized reverser
Main clutch	Multidisc, in oil bath
DIFFERENTIAL	Front and rear with simultaneous differential lock and electro-hydraulic control
AXLES	Front and rear, with epicyclic reduction units
DRIVE	Four-wheel drive, permanent
POWER TAKE-OFF	Rear, independent from the gearbox, 540 r.p.m. and synchronized with the gearbox. Engageable under load with brake in disengaged position
PTO clutch	Multidisc, in oil bath
Engagement control	Electro-hydraulic
HYDRAULIC SYSTEM	Double circuit with independent pumps
Flow rate to the hoist and the distributors (I/min.)	25,6
Flow rate to hydraulic pump which controls the	15,4
hydroguide and electro-hydraulic control (l/min.)	180
Maximum hydraulic pressure (bar)	
DISTRIBUTORS	Mechanical control to max. 6 hydraulic couplers
Rear (standard)	1 double acting (Hydraulic lift by rams) 2 double acting (Draft and position control)
Rear (optional)	1 single acting and 1 double acting with float or 2 double acting in addition to the standard one (Hydraulic lift by ra) 1 single acting and 1 double acting with float instead of the standard one (Draft and position control)
ELECTRIC SYSTEM	
Battery (Ah)	100
Alternator (A)	80
REAR LIFT	Standard: by two external rams - Optional: draft and position control
Three-point hitches	Standard: standard couplers cat. 1 - Optional: quick couplings cat. 1, L-shaped lift arms, lift rods adjustable in length and hooks adjustable in width
Three-point tie bar	With manual adjustment
Lifting capacity at the end of the arms kg	1200
DRIVING UNIT	
Driving platform	Monodirectional or reversible with rotating platform and twin pedal assembly
Steering wheel	Adjustable
SEATS	Standard: sprung seat - Optional: 'Bostrom' seat (only for monodirectional version)
SERVICE BRAKES	Oil immersed multidisc, acting on the rear transmission, with mechanical control
Parking brake	Acting on the service brakes
STEERING	With hydrostatic steering by two rams, acting on the central articulation. Flow deviator for steering unit for the reversible version
SAFETY	
Roll-bar frame (standard)	Front, homologated
CONSOLE	
Digital type	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 * 280/70R18 * 320/65R18 * 260/70-20 * 31x15.50-15 XTC and STG * 31x13.50-15 Garden
TOW HOOKS	
Standard	Rear CUNA and front
Optional	Rear rotating, EC approved
WEIGHT OPERATIONAL	
With roll-bar (kg)	1510
OPTIONAL	Flash light, front weight and weights for wheels

# TECHNICAL FEATURES VALIANT 600 RS

	8.25-16	250/80-18	280/70R18	320/65R18
	WITH ADJUSTABLE RIM	WITH ADJUSTABLE RIM	WITH ADJUSTABLE RIM	WITH ADJUSTABLE RIM
<b>A</b> Tyre width mm.	212	240	282	319
<b>B</b> Tyre height mm.	848	879	849	873
<b>C</b> Wheel track min/max mm.	999 - 1305	996 - 1312	984 - 1324	1074 - 1324
<b>D</b> Width min/max mm.	1211 - 1517	1236 - 1552	1266 - 1606	1393 - 1643



	260/70R20	31x15.50-15 XTC	31x15.50-15 STG	31x13.50-15 Garden
	WITH ADJUSTABLE RIM	WITH FIXED RIM	WITH FIXED RIM	WITH FIXED RIM
<b>A</b> Tyre width mm.	258	368	394	351
<b>B</b> Tyre height mm.	872	800	800	782
<b>C</b> Wheel track min/max mm.	987 - 1325	1100 - 1208	1100 - 1208	1112 - 1196
<b>D</b> Width min/max mm.	1245 - 1583	1468 - 1576	1494 - 1602	1463 - 1547



#### TRACTOR DIMENSIONS VALIANT 600 RS (mm):

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VALIANT 600 RS	1160	1340	730	3230	220 / 270	2220	675

#### STEERING RADIUS VALIANT 600 RS WITH THE FORESEEN WHEELS:

Tyre type	8.25-16	250/80 18	280/70 R18	320/65 R18	260/70 R20	31x15.50 15	31x13.50 15
mm	2800	2830	2930	2950	3350	3250	3200



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SERVICE BRAKES	Oil immersed multidisc, acting on the rear transmission, with mechanical control
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STEERING	With hydrostatic steering, acting on the front wheels. Flow deviator for steering unit for the reversible version
SAFETY	
Roll-bar frame (standard)	Front, homologated
CONSOLE	
Digital type	With chrono-tacho-gyrometer, water thermometer, control warning lights and acoustic alarm. Reading of rpm, forward speed and rotation speed of power takeoff
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TOW HOOKS	
Standard	Rear CUNA and front
Optional	Rear rotating, EC approved
WEIGHT OPERATIONAL	
With roll-bar (kg)	1520
OPTIONAL	Accumulator for weight compensation HDR with Dual Floating System (only for reversible version), Flash light, front weight
	and weights for wheels

