

# Valtra T163e Direct

Tractor Test No. 1985/13

## APPLICANT

GVS-Agrar AG  
Im Majorenacker 11  
8207 Schaffhausen

## TRACTOR

Manufacturer: Valtra Inc.  
Model: Valtra T163e Direct  
Approval certificate no.: ---

## SUSPENSION AND BRAKES

Central four-wheel drive with powershift transmission  
Front axle suspension (lockable)  
Wet disc brake on front and rear axle  
Automatic all-wheel activation  
Spring-loaded parking brake

## DRIVER PROTECTION

Integrated safety cab with mechanical suspension

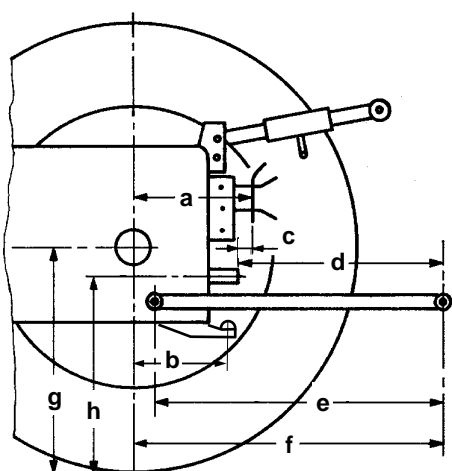


## TYRES

		Track width:
front:	540/65 R28	1940 mm
rear:	650/65 R38	1820 mm

## DIMENSIONS

Length:	5100 mm
With front mounting:	— mm
Front overhang from steering wheel:	— mm
Width:	2520 mm
Height:	2910 mm
Wheelbase:	2750 mm
Ground clearance:	400 mm
Turning diameter:	12,2 m (without four-wheel drive) 13,0 m (with four-wheel drive)



### Rear

a: 660 mm  
b: 600 mm  
c: 200 mm  
d: 720 mm  
e: 930 mm  
f: 1180 mm  
g: 830 mm  
h: 790 mm

### Front

d: — mm  
e: — mm  
f: — mm  
g: — mm  
h: — mm

## TEST EQUIPMENT

- air-conditioning compressor
- air compressor

## WEIGHT

in test equipment

Front:	3370 kg	46 %
Rear:	3970 kg	
Total:	7340 kg	

Permissible front axle load:	5500 kg
Permissible rear axle load:	9000 kg
Permissible total weight:	12500 kg

Payload:	5160 kg
Towed weight, braked:	32 200 kg

## CAPACITIES

Fuel tank	275 l	
AdBlue tank	23,5 l	
Engine oil	19 l	(change interval 500 h)
Gearbox oil	65 l	(change interval 2000 h)
Hydraulic oil	62 l	(change interval 1000 h)



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## ENGINE (Manufacturer's data)

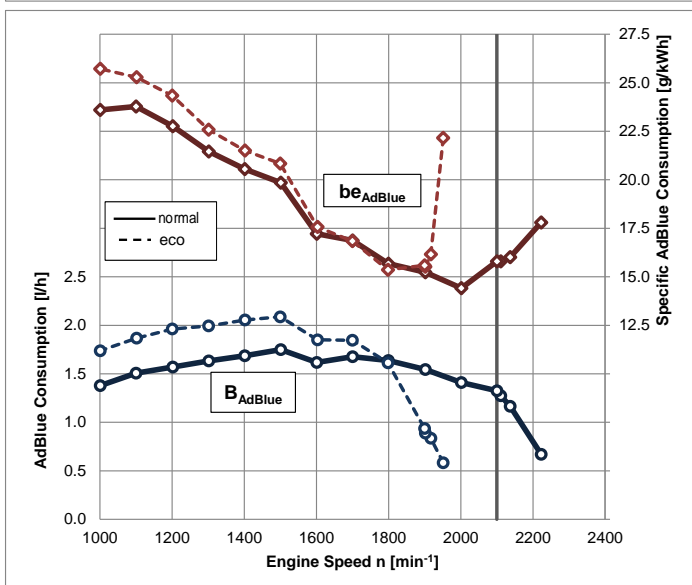
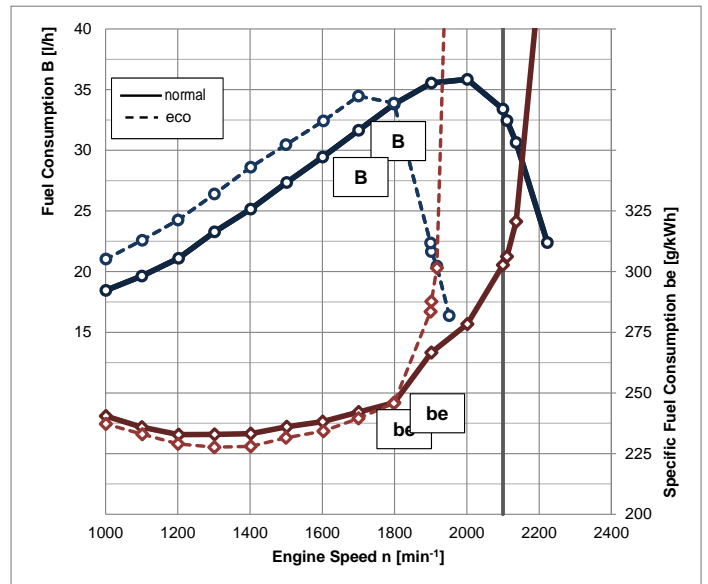
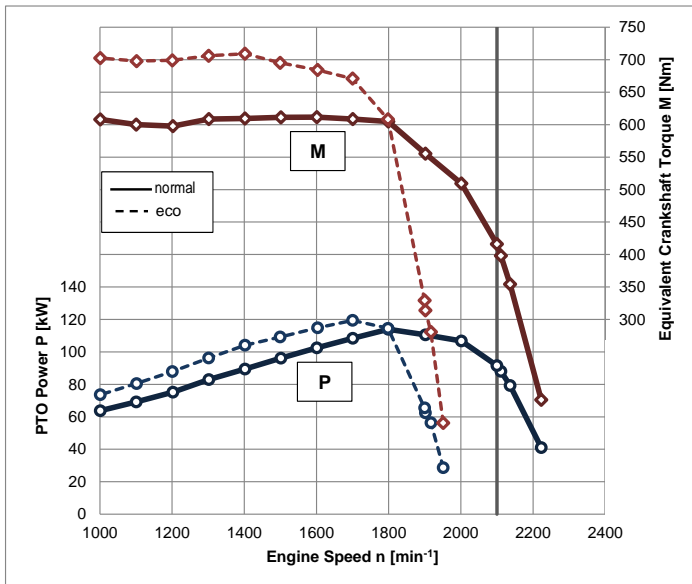
Manufacturer: AGCO Sisu Power  
 Model: 74AW1.851  
 Injection: Diesel direct injection  
 CommonRail  
 Supercharging: Exhaust gas turbocharger and air-to-air intercooling  
 Exhaust emission treatment: DOC + SCR

Bore/stroke: 108 / 134 mm  
 Cylinders / capacity: 6 / 7365 cm<sup>3</sup>  
 Cooling: Water, viscous fan

Rated power: 125 kW (170 PS) ISO TR 14396

Rated engine speed: 2100 min<sup>-1</sup>  
 Exhaust stage: IIIB

## POWER TAKE-OFF MEASUREMENT



### Measurement conditions:

- air temperature 20 °C
- relative atmospheric humidity 27 %
- atmospheric pressure 958 mbar



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## Full load test values

	Speed [min <sup>-1</sup> ]		Power		Fuel consumption		AdBlue consumption		
	Engine	PTO	kW	HP	Specific [g/kWh]	Absolute [l/h]	Specific [g/kWh]	Absolute [l/h]	
Rated power	<b>2100</b>	<b>1050</b>	<b>91,5</b>	<b>124,5</b>	<b>303</b>	<b>33,4</b>	<b>16</b>	<b>1,3</b>	
Maximum power	norm	<b>1800</b>	<b>900</b>	<b>113,4</b>	<b>154,2</b>	<b>246</b>	<b>33,7</b>	<b>16</b>	<b>1,7</b>
	Eco	1700	850	119,4	162,4	240	34,5	17	1,9
Normal speed PTO	<b>2000</b>	<b>1000</b>	<b>106,8</b>	<b>145,2</b>	<b>278</b>	<b>35,9</b>	<b>14</b>	<b>1,4</b>	

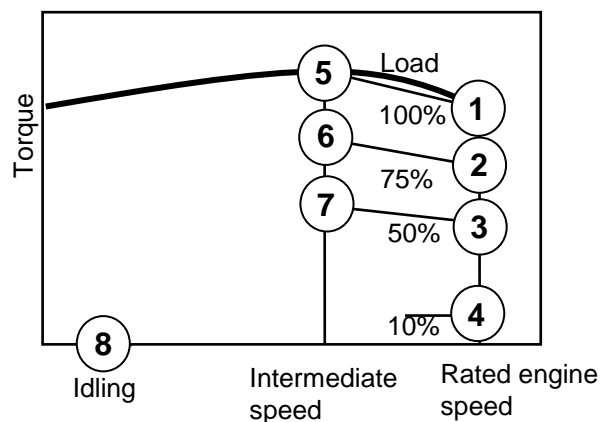
Max. torque: 612 Nm at 1600 min<sup>-1</sup>  
 Torque increase: 47 % at 24 % speed drop  
 Starting torque: 146 %  
 Idling speed: 650 min<sup>-1</sup>  
 Cutoff speed: 2234 min<sup>-1</sup>

## Partial load values

Fuel consumption with 42,5 % partial load at normal PTO speed

PTO shaft Fuel AdBlue  
 1000 min<sup>-1</sup>: 382 g/kWh, 20,9 l/h 23 g/kWh, 1,0 l/h  
 1000E min<sup>-1</sup>: — g/kWh, — l/h — g/kWh, — l/h

## In characteristic diagram



Measuring point	Fuel consumption		AdBlue consumption	
	Specific [g/kWh]	Absolute [l/h]	Specific [g/kWh]	Absolute [l/h]
1	303	33,4	16	1,3
2	328	27,3	20	1,2
3	394	21,9	24	1,0
4	1224	13,7	51	0,4
5	234	28,9	18	1,7
6	247	22,5	20	1,4
7	272	16,6	21	1,0
8	-	1,8	-	0,0

## EMISSIONS

### Exhaust gas emissions

▪ Black smoke 0,05 SZ (BOSCH)

### Emissions according to ISO 8178-4, C1

▪ Hydrocarbons HC 0,01 g/kWh\*  
 ▪ Nitrogen oxides NOx 2,06 g/kWh\*  
 ▪ Carbon monoxide CO 0,03 g/kWh\*  
 ▪ Particulate number Pn 3,3E13 #/kWh\*  
 ▪ Cycle consumption  
 Fuel 314 g/kWh\* (20,8 l/h)  
 AdBlue 20 g/kWh\* ( 1,0 l/h)

\* With reference to PTO power

### Noise level

▪ Noise level at driver's ear: 71,5 dB(A)  
 ▪ Passing noise: 86,0 dB(A)



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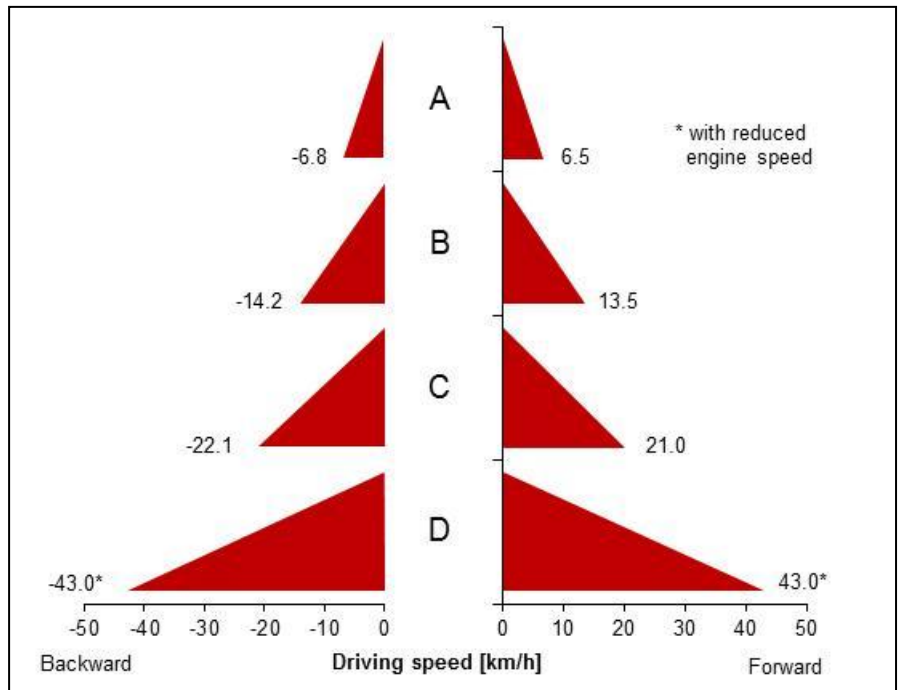
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## TRANSMISSION

### Travel gear

- Continuously variable transmission
- hydrostatic / mechanical power split
- 4 groups

Driving speed at rated engine speed  
(tyre radius  $r = 875$  mm)



## PTO transmission

### Rear

- Wet multi-plate clutch, electro-hydraulic engagement

### Front

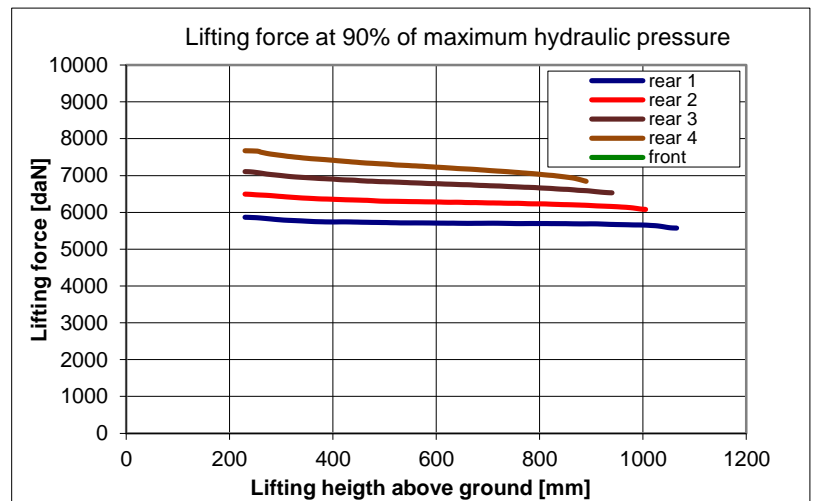
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PTO shaft	Rear						Front
	430	540	540E	1000	1000 E	Ground speed	1000
Engine speed	-	1874	-	2000	-	-	-

## HYDRAULICS

### Remote hydraulics

- max. oil pressure: 203,0 bar
- max. flow rate : 155,7 l/min
- flow rate: 151,4 l/min at 172,6 bar
- max. hydraulic power: 45,5 kW (148,3 l/min and 184,0 bar)
- max. flow rate through a single coupler: 90,1 l/min
- max. quantity of oil taken: 40 l



## 3-Point Hitch

### Rear

3-Point Hitch, category: III  
Control hydraulics via lower link, (EHR)

### Front

- —

Measurement	Lifting movement	Lifting force at 90% pressure		
		Continuous	Maximum	
Rear	Lower link, very short	835 mm	5570 daN	5870 daN
	Lower link, short	775 mm	6075 daN	6500 daN
	Lower link, medium	710 mm	6530 daN	7110 daN
	Lower link, long	660 mm	6835 daN	7685 daN
Front	-	-	-	-

Explanatory notes on tractor test at:  
[www.traktorentest.ch](http://www.traktorentest.ch)



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