


# DLG Tractor Datasheet PowerMix


Performance and fuel consumption during field and transport applications


## Fendt 728 Vario Gen7


DLG Test Report 7435



	Boost	Standard	
			
Rated power	223	-	kW
Maximum power	223	-	kW
According to	UNECE R 120		

	Boost	Standard	
			
Rated power	203	-	kW
Maximum power	206	-	kW
According to	OECD Code 2		

	Diesel	AdBlue	
			
Energy efficiency	242	24.2	g/kWh
Consumption per hectare	5.4	0.4	l/ha
Area output	10.4		ha/h

	Diesel	AdBlue	
			
Energy efficiency	332	33.3	g/kWh
Consumption per 100 kilometre per ton	3.8	0.3	l/100tkm
Haul capacity	1030		tkm/h



# Measurement results overview

Power Take-Off (PTO) power according to OECD Code 2	Engine speed	Power Take-Off Power	Specific consumption		Diesel consumption	Ratio AdBlue to diesel
			Diesel	AdBlue		
	min <sup>-1</sup>	kW	g/kWh		l/h	Vol-%
<b>Standard mode</b>						
Rated power	-	-	-	-	-	-
Maximum power	-	-	-	-	-	-
Maximum torque	-	-	-	-	-	-
Torque increase	-	%				
Drop in speed	-	%				
Overcapacity	-	kW				
Starting torque	-	%				
<b>Boost mode</b>						
Rated power	1700	203	220	21.8	53.6	7.5
Maximum power	1500	206	217	21.1	53.5	7.4
Maximum torque	1300	186	211	21.3	47.1	7.6
Torque increase	20	%				
Drop in speed	24	%				
Overcapacity	3	kW				
<b>Savings potential through speed reduction for the same power output</b>						
80 % of standard rated power, instead of full throttle only at 90 % of rated speed	1735	162	223	21.2	43.4	7.2
	1534		215	21.1	41.9	7.5
<b>Savings in %</b>			<b>-3.6</b>	<b>-3.5</b>		
40 % of standard rated power, instead of 90 % of rated speed only with 60 % of rated speed	1529	81	233	21.1	22.7	6.9
	1016		216	19.2	21.2	6.8
<b>Savings in %</b>			<b>-7.3</b>	<b>-6.6</b>		

PowerMix - Field work	Engine speed	Delivered net power	Specific consumption		Consumption / hectare		Area output
			Diesel	AdBlue	Diesel	AdBlue	
	min <sup>-1</sup>	kW	g/kWh		l/ha		ha/h
Heavy pulling work <sup>1</sup>	1338	144	254	24.6	11.2	0.9	4.5
Medium pulling work <sup>1</sup>	1188	114	249	25.4	6.8	0.5	5.7
Heavy PTO shaft work	1419	170	231	22.8	4.9	0.4	13.8
Medium PTO shaft work	1237	120	229	23.5	3.3	0.3	13.9
Light PTO shaft work	1269	72	251	24.4	2.1	0.2	15.2
Drawbar + PTO + Hydraulic work	1399	121	242	24.7	3.8	0.3	9.3
<b>Overall result at field work</b>			<b>242</b>	<b>24.2</b>	<b>5.4</b>	<b>0.4</b>	<b>10.4</b>

<sup>1</sup> scaled with PTO Power 197.2 kW

PowerMix - Transport work	Engine speed	Delivered net power	Specific consumption		Consumption per 100 km and per t		Transport power
			Diesel	AdBlue	Diesel	AdBlue	
	min <sup>-1</sup>	kW	g/kWh		l/100tkm		tkm/h
Heavy transportwork	1428	135	318	31.4	6.3	0.5	821
Light transportwork at 40 km/h	1150	35	423	46.8	1.4	0.1	1239
Optional: light transportwork at 50 km/h	1190	45	448	44.1	1.5	0.1	1566
Optional: light transportwork at 60 km/h	1409	60	452	46.0	1.7	0.1	1890
<b>Overall result transport work at 40 km/h</b>			<b>332</b>	<b>33.3</b>	<b>3.8</b>	<b>0.3</b>	<b>1030</b>

# Technical data

Engine*		
Manufacturer	AGCO Power	
Stage of exhaust emission	V	
Rated engine speed	1700 min <sup>-1</sup>	
Engine power according		
UNECE-R 120	Standard	Boost
Rated power	- kW	223 kW
Maximum power	- kW	223 kW
at engine speed	-	1500-1700 min <sup>-1</sup>
Boost activation requirement		

Variabel

## Exhaust aftertreatment device

Nitrous gaseous emission	Selective Catalytic Reduction (SCR)	
Particulate emission	Diesel Particulate Filter (DPF), Diesel Oxidation Catalysator (DOC)	
Time for regeneration (average)	35 min	
Regeneration interval:		
- maximum	500 h	
Replacement intervals	-	

## Exhaust gas recuperation

-

## Exhaust-gas turbocharger

Wastegate-Turbocharger

## Number of cylinders

6

## Bore

110 mm

## Stroke

132 mm

## Displacement

7527 cm<sup>3</sup>

## Main fan

Diameter 560 mm

Number of fan blades 9

Fan Type hydraulic, pushing fan

## Tank volume

Diesel / AdBlue 450 l / 48 l

## Transmission\*

Manufacturer Fendt

Type of construction CVT, VarioDrive TA 190

Number of ranges 0

Number of gears -

Forward 0,02 km/h to 60 km/h

Reverse 0,02 km/h to 33 km/h

Design speed 60 km/h

## Chassis\*

### Front axle

Manufacturer Dana

Type planetary driven steering axle

Axle load front rear total

Unladen masses 3590 kg 5720 kg 9310 kg

Permissible 6900 kg 11500 kg 15000 kg<sup>2</sup>

Technically permissible 9980 kg<sup>3</sup> 11500 kg - kg

## Dimensions\*

Length w/o front linkage 5516 mm

Width 2650 mm

Height 3280 mm

Wheelbase 2900 mm

	Front	Rear
Distance hitch points to PTO shaft (lower links horizontal)	567 mm	702 mm

	Front	Rear
Distance axle to hitch points (lower links horizontal)	1170 mm	1306 mm

Turning circle 11800 mm

## Rear PTO Shaft\*

Profile 6 spline (1 3/4")

## Transmission ratio

PTO mode 540 540E 1000 1000E

Engine speed [min<sup>-1</sup>] 1618 1405 1649 1432

## Front PTO Shaft\*

Profile 6 spline (1 3/8")

## Transmission ratio

PTO mode 540 540E 1000 1000E

Engine speed [min<sup>-1</sup>] - - 1647 -

## Hydraulic power lift\*

front rear

Category 3N 3N/3

Lifting force at the hitch points exerted through full range 31.9 kN 89.01 kN

## Hydraulic power\*

System CCLS (Closed Center Load Sensing System)

Hydraulic oil transmission and hydraulic separate

Total capacity 95 l

Removable 80 l

## Hydraulic flow

Maximum delivery 165 l/min

Optional 220 l/min

Max. flow at one rear remote 170 l/min

Maximum pressure\* 200 bar

\* Manufacturer data

<sup>2</sup> up to 50 km/h

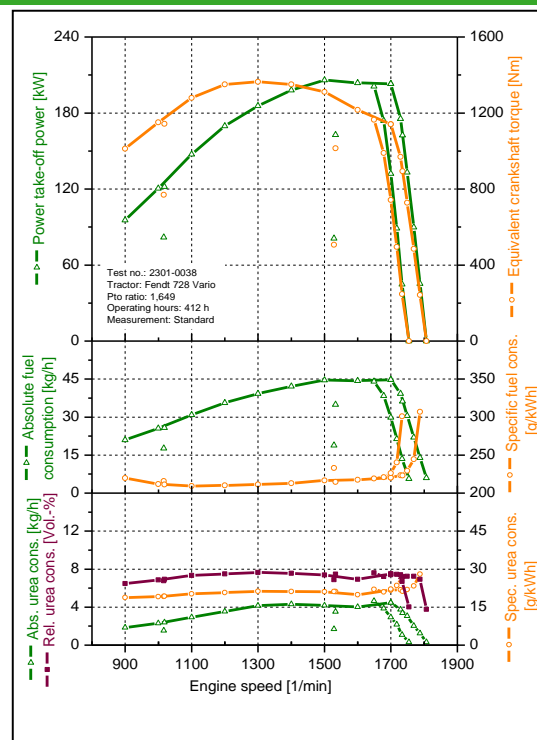
<sup>3</sup> up to 8 km/h during use of front loader

# Power Take-Off Power according to OECD Code 2

Measuring point	Engine speed 1/min	PTO power kW	Equiv. Torque Nm	Absolute consumption				Ratio AdBlue to fuel Vol-%	specific consumption	
				fuel		AdBlue			fuel g/kWh	AdBlue g/kWh
				kg/h	l/h	Kg/h	l/h			
<b>Rated power</b>										
Boost	1700	203	1,141	44.7	53.6	4.4	4.0	7.5	220	21.8
Standard	-	-	-	-	-	-	-	-	-	-
<b>Maximum power</b>										
Boost	1500	206	1,311	44.6	53.5	4.3	4.0	7.4	217	21.1
Standard	-	-	-	-	-	-	-	-	-	-
<b>Maximum torque</b>										
Boost	1300	186	1,364	39.2	47.1	4.0	3.6	7.6	211	21.3
Standard	-	-	-	-	-	-	-	-	-	-
<b>1000 PTO shaft rotation</b>										
Boost	1649	201	1,165	44.1	52.8	4.4	4.0	7.6	219	22.0
Standard	-	-	-	-	-	-	-	-	-	-
<b>Part loads at full throttle</b>										
80 % of boost rated pw.	1735	162	894	36.2	43.4	3.4	3.1	7.2	223	21.2
80 % of standard rated pw.	-	-	-	-	-	-	-	-	-	-
<b>Part loads with governor control set to 90 % of rated engine speed</b>										
80 % of boost rated pw.	1534	163	1,014	34.9	41.9	3.4	3.1	7.5	215	21.1
80 % of standard rated pw.	-	-	-	-	-	-	-	-	-	-
40 % of boost rated pw.	1529	81	507	18.9	22.7	1.7	1.6	6.9	233	21.1
40 % of standard rated pw.	-	-	-	-	-	-	-	-	-	-
<b>Part loads with governor control set to 60 % of rated engine speed</b>										
60 % of boost rated pw.	1018	122	1,143	25.8	30.9	2.4	2.1	6.9	211	19.3
60 % of standard rated pw.	-	-	-	-	-	-	-	-	-	-
40 % of boost rated pw.	1016	82	770	17.7	21.2	1.6	1.4	6.8	216	19.2
40 % of standard rated pw.	-	-	-	-	-	-	-	-	-	-

Standard

Boost



# PowerMix - performance and fuel consumption during field and transport applications

Performance and fuel consumption during exemplary field work	Engine speed	Driving speed	Deliver-ed net power	Diesel consumption		Ratio AdBlue to diesel	Specific consumption	
	1/min	km/h	kW	kg/h	l/h	Vol-%	Diesel	AdBlue
							g/kWh	
Z1P <sup>1</sup> ploughing, heavy tine cultivator	1177	6.6	132	33.0	39.4	7.6	250	24.7
Z1G <sup>1</sup> cultivator, disc harrow	1499	9.5	156	40.2	48.0	7.4	257	24.5
Z2P <sup>1</sup> mech. seed drill, planter	1160	8.9	107	26.5	31.7	7.8	247	25.0
Z2G <sup>1</sup> stubble working, seed bed combination	1217	11.6	120	30.0	36.0	8.0	250	25.8
Z3K milling, rotary harrows seeding combination	1424	5.6	169	38.1	45.6	7.6	225	22.2
Z3M cut 1. step, cultivator-rotary harrows-seeding combination	1413	14.4	171	40.4	48.4	7.7	236	23.4
Z4K pneumatic seeding drill, milling as plant care, mulch	1253	5.9	121	27.0	32.3	7.8	223	22.9
Z4M cut 2. step, direct seeding machine	1222	14.4	119	28.0	33.5	7.9	235	24.2
Z5K plant protector, mineral fertiliser, tedder, swather	1271	6.0	70	17.2	20.6	7.2	244	23.1
Z5M cut 3. step, airseeder	1267	16.0	74	19.1	22.9	7.7	258	25.7
Z6MS self-loading wagon, manure spreading	1396	6.0	130	30.9	37.0	7.9	238	24.5
Z7PR high pressure baler, round baler or square baler	1402	8.3	111	27.3	32.8	7.8	245	24.9
							<b>242</b>	<b>24.2</b>

<sup>1</sup> scaled with PTO Power 197.2 kW

Performance and fuel consumption during exemplary transport work	Engine speed	Driving speed	Deliver-ed net power	Diesel consumption		Ratio AdBlue to diesel	Specific consumption	
	min <sup>-1</sup>	km/h	kW	kg/h	l/h	Vol-%	Diesel	AdBlue
							g/kWh	
ZTB Transportwork at full load (uphill)	1428	27	135	42.9	51.4	7.6	318	31.4
ZTE40 Transportwork at flat section with 40 km/h	1150	40	35	14.7	17.7	8.1	423	46.8
ZTE50 Transportwork at flat section with 50 km/h	1190	51	45	20.1	24.1	7.5	448	44.1
ZTE60 Transportwork at flat section with 60 km/h	1409	62	60	27.1	32.5	7.7	452	46.0
Idle	700	-	-	1.5	1.9	-	-	-
							<b>332</b>	<b>33.3</b>

# Test conditions

Tires	front	rear
Manufacturer	Nokian Soil King VF	Nokian Soil King VF
Tire size	600/70 R30	710/70 R42
<b>Fitted options</b>		
Free return flow		yes
Air condition		yes
Air compressor		yes
Front hydraulic power lift		yes
Front PTO ( disengageable )		no
		-
		-

PowerMix	Ballast		Axle load distribution				Gross weight kg	Tire pressure		PTO mode 1000/1000E	Boost power available yes/no
	front	rear	front	rear		front		rear			
	kg	kg	kg	%	kg	%		bar	bar		
<b>Performance and fuel consumption during exemplary field work</b>											
Heavy pulling work	1800	2870	5765	41	8290	59	14055	1.2	1.2	-	-
Medium pulling work	0	0	3590	39	5720	61	9310	1.2	1.2	-	-
Heavy PTO shaft work	0	0	3590	39	5720	61	9310	1.2	1.2	1000	-
Medium PTO shaft work	0	0	3590	39	5720	61	9310	1.2	1.2	1000E	-
Light PTO shaft work	0	0	3590	39	5720	61	9310	1.2	1.2	1000E	-
Drawbar+PTO+Hydraulic work	0	0	3590	39	5720	61	9310	1.2	1.2	1000E	-
<b>Performance and fuel consumption during exemplary transport work</b>											
Transport work	0	0	3590	39	5720	61	9310	1.6	1.6	-	-

## Applicant

AGCO GmbH  
 Johann-Georg-Fendt-Str. 4  
 87616 Marktoberdorf  
 Germany  
[www.fendt.com](http://www.fendt.com)

## Test performed by

DLG TestService GmbH  
 Test Center Technology and Farm Inputs  
 Max-Eyth-Weg 1  
 64823 Groß-Umstadt  
 Germany  
[www.dlg-test.de](http://www.dlg-test.de)  
**Test no. 2302-0032**



<https://www.dlg.org/powermix>