PowerMix Datasheet

DLG TEST REPORT 7582

	Boost	Standard	
Rated power*	204	189	kW
Maximum power*	210	195	kW
According to*	ISO14396		

	Boost	Standard	
Rated power	176	164	kW
Maximum power	189	177	kW
According to	OECD Code 2		

	Diesel	AdBlue	
Energy efficiency	247	26.9	g/kWh
Consumption per hectare	5.5	0.5	l/ha
Area output	10.0		ha/h

	Diesel	AdBlue	
Energy efficiency	361	37.5	g/kWh
Consumption per 100 kilometre per ton	4.2	0.3	l/100tkm
Haul capacity (40km/h)		996	tkm/h

* Manufacturer information

Assessment in brief

The DLG PowerMix is a standardized test procedure in which the German Agricultural Society (DLG) measures the energy efficiency of tractors under conditions that replicate real-life field and transport operations. Testing is carried out on the DLG roller test bench. The resulting data provide a transparent basis for evaluating tractor performance and overall efficiency under consistent and repeatable conditions. The scatter plots below illustrate the results in fuel consumption and productivity.

Field work:
The DLG PowerMix test results for tractors in the power class of 210 kW +/- 20 kW indicate a specific fuel consumption range of 241 g/kWh to 288 g/kWh under standardized field load conditions. The tractor evaluated in this test showed a specific fuel consumption of 247 g/kWh.

Transport work:
In the DLG transport test, tractors within the same power range have achieved specific fuel consumption values between 321 g/kWh and 436 g/kWh. The tested machine showed a fuel consumption of 361 g/kWh.

The green scatter plots show the results of all machines tested on the roller test bench according to PowerMix 2 (period 2018 – present).

Performance and fuel consumption during field and transport operations

Performance and fuel consumption during exemplary field work		Engine speed	Driving speed	Delivered net power	Diesel consumption		Ratio AdBlue to Diesel	Specific consumption	
								Diesel	AdBlue
		1/min	km/h	kW	kg/h	l/h	Vol-%	g/kWh	
Z1P[1]	ploughing, heavy tine cultivator	1371	7.2	129	32.1	38.4	8.8	248	28.6
Z1G[1]	cultivator, disc harrow	1587	9.5	142	36.0	43.1	8.4	254	28.0
Z2P[1]	mech. seed drill, planter	1414	8.8	96	24.0	28.8	8.2	250	27.0
Z2G[1]	stubble working, seed bed combination	1343	11.7	109	27.6	33.0	8.6	254	28.6
Z3K	milling, rotary harrows seeding combination	1633	5.8	157	36.0	43.1	8.3	230	24.8
Z3M	cut 1. step, cultivator-rotary harrows-seeding combination	1605	14.8	159	38.4	46.0	8.5	241	26.8
Z4K	pneumatic seeding drill, milling as plant care, mulch	1409	5.9	111	25.2	30.2	8.3	226	24.6
Z4M	cut 2. step, direct seeding machine	1403	16.0	119	28.7	34.3	8.5	242	26.9
Z5K	plant protector, mineral fertiliser, tedder, swather	1425	5.9	64	16.1	19.3	7.7	251	25.6
Z5M	cut 3. step, airseeder	1420	16.1	68	18.4	22.0	8.0	269	27.9
Z6MS	self-loading wagon, manure spreading	1566	6.9	127	30.9	37.0	8.4	243	26.8
Z7PR	high pressure baler, round baler or square baler	1576	10.0	107	26.9	32.2	8.3	252	27.3
								247	**26.9**

[1] scaled with PTO Power 179.8 KW

	Energy efficiency		Consumption per hectare		Area output
	Diesel	AdBlue	Diesel	AdBlue	
	g/kWh	g/kWh	l/ha	l/ha	ha/h
Heavy pulling work[1]	251	28.29	11.7	1.0	4.0
Medium-duty pulling work[1]	252	27.8	7.2	0.6	5.0
Heavy PTO work	236	25.8	4.9	0.4	13.0
Medium-duty PTO work	234	25.7	3.4	0.3	13.8
Light PTO work	260	26.7	2.2	0.2	13.9
Traction+PTO+hydraulic work	248	27.1	3.5	0.3	10.0

Test conditions fieldwork	Ballasting		Axle load distribution				Total weight	Tire pressure		PTO shaft
	Front	Rear	Front		Rear			Front	Rear	
	kg	kg	kg	%	kg	%	kg	bar	bar	1000/1000E
Heavy pulling work	1150	1800	5010	38	8115	62	13125	1.2	1.2	-
Medium-duty pulling work	0	0	4120	40	6080	60	10200	1.2	1.2	-
Heavy PTO work	0	0	4120	40	6080	60	10200	1.2	1.2	1000
Medium-duty PTO work	0	0	4120	40	6080	60	10200	1.2	1.2	1000E
Light PTO work	0	0	4120	40	6080	60	10200	1.2	1.2	1000E
Traction+PTO+hydraulic work	0	0	4120	40	6080	60	10200	1.2	1.2	1000E

Performance and fuel consumption in transport operations

PowerMix - Transport work	Motor speed	Delivered effective power	Specific consumption		Consumption per 100 km and per ton		Transport performance
			Diesel	AdBlue	Diesel	AdBlue	
	min^{-1}	kW	g/kWh		l/100tkm		tkm/h
Heavy transportation work	1820	124	342	35.3	6.7	0.5	757
Light transport work at 40 km/h	1415	33	494	53.5	1.6	0.1	1234
Light transport work at 50 km/h	1626	42	522	55.9	1.7	0.1	1519
Light transport work at 60 km/h	-	-	-	-	-	-	-
Overall result transportation work 40 km/h			**361**	**37.5**	**4.2**	**0.3**	**996**
Overall result transportation work 50 km/h			**365**	**37.8**	**4.2**	**0.3**	**1138**
Overall result transportation work 60 km/h			**-**	**-**	**-**	**-**	**-**
Idle consumption	**1.9**	**l/h**					
Trailer weight	**29800**	**kg**					

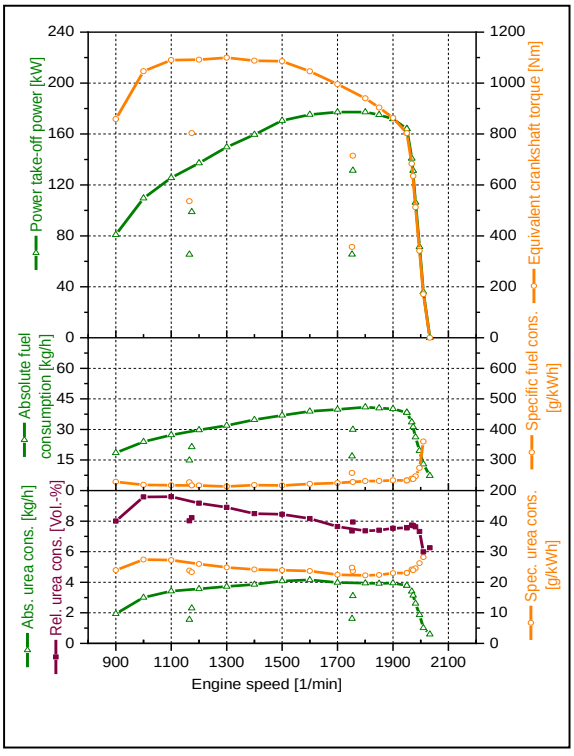
Test conditions Transport use	Ballasting		Axle load distribution				Total weight	Tire pressure	
	Front	Rear	Front		Rear			Front	Rear
	kg	kg	kg	%	kg	%	kg	bar	bar
Transportation work	-	-	4120	40	6080	60	10200	1.6	1.6

Tires	Front	Rear
Manufacturer/Type	Nokian SoilKing VF	Nokian SoilKing VF
Tire size	600/70 R28	710/70 R42
Equipment		
Pressureless return		**Yes**
A/C		**Yes**
Compressor		**Yes**
Front power lift		**Yes**
Front PTO (can be disengaged)		**No**

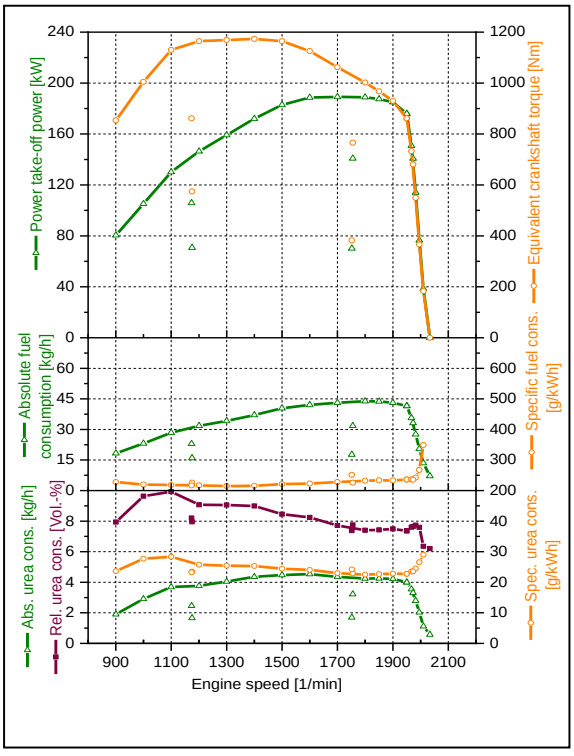
Power Take-Off Power according to OECD Code 2

Measuring point	Engine speed	PTO power	Equiv. Torque	Absolute consumption				Ratio AdBlue to Diesel	specific consumption	
				Diesel		AdBlue			Diesel	AdBlue
	1/min	kW	Nm	kg/h	l/h	kg/h	l/h	Vol-%	g/kWh	
Rated power										
Boost	1950	175.9	861	41.5	49.5	4.0	3.6	7.4	236	22.7
Standard	1950	164.1	804	38.3	45.6	3.8	3.5	7.6	233	23.1
Maximum power										
Boost	1700	189.2	1,062	43.1	51.3	4.4	4.0	7.7	228	23.0
Standard	1800	177.2	940	41.0	48.8	3.9	3.6	7.4	231	22.2
Maximum torque										
Boost	1400	172.0	1,173	37.1	44.1	4.4	4.0	9.0	215	25.3
Standard	1300	149.7	1,100	32.0	38.0	3.7	3.4	8.9	213	24.9
1000 PTO shaft rotation										
Boost	1882	186.3	945	43.6	51.9	4.2	3.8	7.4	234	22.6
Standard	1882	172.7	876	40.2	47.9	4.0	3.6	7.5	233	22.8
Part loads at full throttle										
80 % of boost rated pw.	1973	140.7	681	33.1	39.5	3.3	3.0	7.7	236	23.6
80 % of standard rated pw.	1973	131.3	635	31.2	37.2	3.1	2.9	7.7	238	23.9
Part loads with governor control set to 90% of rated engine speed										
80 % of boost rated pw.	1756	140.8	766	31.8	37.8	3.2	2.9	7.8	226	22.9
80 % of standard rated pw.	1755	131.3	715	29.9	35.6	3.1	2.8	7.9	228	23.7
40 % of boost rated pw.	1752	70.2	383	17.6	21.0	1.7	1.6	7.4	251	24.2
40 % of standard rated pw.	1752	65.5	357	16.9	20.1	1.6	1.5	7.4	258	24.8
Part loads with governor control set to 60% of rated engine speed										
60 % of boost rated pw.	1173	105.9	862	23.0	27.3	2.5	2.2	8.2	217	23.2
60 % of standard rated pw.	1174	98.8	804	21.4	25.5	2.3	2.1	8.2	217	23.3
40 % of boost rated pw.	1175	70.7	575	16.0	19.0	1.7	1.5	8.0	226	23.5
40 % of standard rated pw.	1166	65.4	536	14.9	17.7	1.6	1.4	8.0	227	23.8

Standard



Boost



Technical Data

Engine*				
Manufacturer			**Massey Ferguson**	
Stage of exhaust emission			**5**	
Rated engine speed			**1950**	**min^{-1}**
Motor power according to				
ISO14396	**Standard**		**Boost**	
Rated power*	189	kW	204	kW
Maximum power*	195	kW	210	kW
at engine speed*	1850		1850	min^{-1}
Boost activation Prerequisites				
variable				
Exhaust aftertreatment device				
Nitrous gaseous emission		SCR DOC		
Particulate emission		Soot catalyst		
Time for regeneration (average)			20	min
Regeneration interval:				
- maximum*			1200	h
Replacement intervals			as needed	
Exhaust gas recuperation			**No**	
Exhaust-gas turbocharger			**Yes**	
Number of cylinders			**6**	
Bore			**108**	**mm**
Stroke			**134**	**mm**
Displacement			**7400**	**cm³**
Main fan			**0**	
Diameter			630	mm
Number of fan blades			11	
Fan Type				Vistronic
Tank volume				
Diesel / AdBlue	500 l	/	43 l	

Transmission			
Manufacturer		**AGCO**	
Type of contruction		**ML260**	
Number of ranges		**2**	
Number of gears		**CVT**	
Forward		53	
Reverse		30	
Design-related maximum speed		**53**	**km/h**

Chassis*						
Front axle						
Manufacturer			DANA			
Type			M50HD 4WD suspended			
Axle load	**Front**		**Rear**		**Total**	
Unladen masses	4550	kg	5350	kg	9900	kg
Permissible	6400	kg	11500	kg	16000	kg[2]
Technically permissable	7500	kg	13500	kg	-	kg

Dimensions*				
Length w/o front linkage			**5375**	**mm**
Width			**2750**	**mm**
Height			**3370**	**mm**
Wheelbase			**3050**	**mm**
Distance hitch points to PTO shaft (lower links horizontal)	**Front**		**Rear**	
	692	**mm**	**757**	**mm**
Distance axle to hitch points (lower links horizontal)	**Front**		**Rear**	
	1560	**mm**	**1329**	**mm**
Turning circle			**11400**	**mm**

Rear PTO Shaft*				
Profile			**6x 1 3/8", 20x 1 3/4"**	
Transmission ratio				
PTO mode	540	540E	1000	1000E
Engine speed [min^{-1}]	-	1577	1882	1605

Front PTO Shaft*				
Profile				**6x 1 3/8"**
Transmission ratio				
PTO mode	540	540E	1000	1000E
Engine speed [min-1]	-	-	1920	-

Hydraulic power lift*	**Front**		**Rear**	
Categorie	3		3	
Lifting force at the hitch points exerted through full range	3.5	kN	8	kN

Hydraulic power*			
System	**Load-dependent pressure and flow rate control CCLS (Closed Center Load Sensing System)**		
Hydraulic oil		**seperate circuit**	
Total capacity		**115**	**l**
Removable		**85**	**l**
Hydraulic flow			
Maximum delivery		150	l/min
Optional		275	l/min
Max. flow at one rear remote		140	l/min
Maximum pressure		**200**	**bar**

* Manufacturer data

[2] up to 50 km/h

Additional information

Applicant

AGCO SAS
2 Rue Charles Tellier
60000 Beauvais
France
www.masseyferguson.com

Test performed by

DLG TestService GmbH
Test center technology and farm inputs
Max-Eyth-Weg 1
64823 Groß-Umstadt
https://www.dlg-testservice.com

DLG-Testframe
DLG-PowerMix_2.0 (Stand 01/2025)

Department
Vehicle technology

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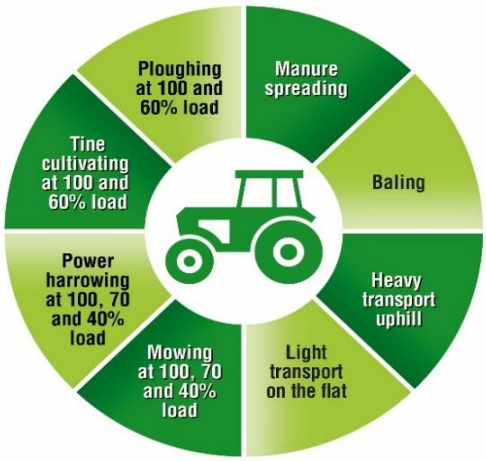
With its methods, test frameworks and awards, the DLG Test Center for Technology and Equipment is a leader in the testing and certification of agricultural technology and equipment. The methods and test profiles are practice-oriented, manufacturer-independent and developed by neutral test commissions. They are based on state-of-the-art measurement and testing procedures, and international standards and norms are also taken into account.



https://www.dlg.org/powermix

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DLG TestService GmbH
Location Groß-Umstadt
Max-Eyth-Weg 1 • 64823 Groß-Umstadt
Telephone +49 69 24788-600
Fax +49 69 24788-690
Tech@DLG.org • www.DLG.org

Download all DLG test reports free of charge at: www.DLG-Test.de