

TEST REPORT



Stihl MS 500i

Test number: 8679

OWNER OF THE TEST CERTIFICATE:

Manufacturer and applicant:

Andreas Stihl AG & Co. KG

Badstrasse 115

71336 Waiblingen - Germany

www.stihl.de



Test Results and Evaluations

Chain-saw STIHL MS 500i tested with 63 cm full chisel cutting attachment

STIHL MS 500 i (with electronically controlled injection)

STIHL MS 500 i W (with electronically controlled injection and handle heating)

Andreas Stihl AG & Co. KG; Badstrasse 115; 71336 Waiblingen - Germany

Test item	Test results				Rating
Class	Chain saw in the power class above 4 kW for professional use				
Engine power					
P _{max} = 5.0 kW	Engine speed	Torque		Spec. fuel consumption	n.e.
Md _{max} at 4.3 kW	10.000 rpm	4.7 Nm		63 kW/l	
	7.500 rpm	5.4 Nm		54 kW/l	
Fuel consumption					
	maximum power		maximum torque		+
absolute / specific	3,0 l/h	455 g/kWh	2,9 l/h	500 g/kWh	
Exhaust emission					
Complies with type approval regulations stage V of 97/68/EG in version (EU) 2016/1628, approval number: e1*2016/1628*2016/1628SHB3/P*0126*00					o
Chain lubrication					
Oil consumption	at 5.000 min ⁻¹		at 9.000 min ⁻¹		o
min / max	3 ml/min	4 ml/min	14ml/min	18 ml/min	
Sound pressure level					
	idling speed	full load speed	Full throttle no load		-
at ear of the operator	87 dB(A)	107 dB(A)	108 dB(A)		
Equivalent sound pressure level, according to DIN EN ISO 22868: 106 dB(A)					
Sound power according to DIN EN ISO 22868: 119 dB(A)					
Vibration					
35 cm saw bar (chain 63 PM3)	idling speed	full load speed	full throttle no load		o
front handle	5.3 m/s²	3.6 m/s²	2.8 m/s²		
rear handle	4.6 m/s²	3.6 m/s²	1.7 m/s²		
Total equivalent vibration according to DIN EN ISO 22867					
Front handle 4.0 m/s²; rear handle 3.5 m/s²					

Test item	Test results			Rating
Chain brake				
Handguard activation	Actuating force 29 N	Average braking time 0.05 s	Maximum braking time 0.07 s	n.e.
Inertia activation	horizontal acceleration 344 m/s²		vertical acceleration 645 m/s²	
Kickback				
Tested with 40 cm Rollomatic E guide bar, 36 RS saw chain	Chain stop angle without chain brake 26 °			n.e.
Weight				
Weight per unit power (MS 462 C-M)	With cutting attachment 1.7 kg/kW	Without cutting attachment 1.4 kg/kW		++
Operability / handling				
Control elements	easy to reach and easy to use, OFF button large area operability with gloves good			+
Machine start	Decompression valve and primer available, actuation of a ON button is not required			++
Engine control	Electronic control, no regulator screws, saw automatically adjusts for optimal performance. No calibration required.			++
Chain assembly	Easy to access and use			o
Chain tensioning	simple, tensioning on the side of machine			o
Refilling	No tools required for removing fuel tank caps, easy access			o
Handle heating	MS 500 i W only, activation with flip switch, the usability with gloves is good			+
Maintenance				
Air filter and spark plug cover, casing	Quick release, requires combine wrench			o
Air filter cleaning	No tools			+
soiling	increased			0
Reliability	No damages occurred during the test			o
Operating manual	clear, well-illustrated			+
Work safety				
GS-approval	DPLF K-GS-2017/8584			n.e.

Evaluation: ++ / + / o / - / --. / (o = Standard / n.e = no evaluation, complies with tolerance value)

Description and Technical Data

Engine

- Air-cooled single-cylinder two-stroke engine
- Displacement 79.2 cm³; bore 54 mm; stroke 34,6 mm
- Fuel: minimum octane number 90ROZ (Mixture 1:50) or two-stroke special fuel with "KWF-Test"; manufacturers recommendation: Stihl MotoMix
- Spark plug NGK CMR6H
- Idling speed 3.000 rpm

Cutting equipment

- Clutch drum with external chain sprocket
- Guide bar with or without tooth sprocket nose
- Half or full chisel tooth chain available according to manual
- Pitch 3/8" gauge 1.6 mm
- Several guide bars available according to manual

Main dimensions and weights (measured values)

Length,	incl. cutting attachment	945 mm
	engine unit without spiked bumper	445 mm
Width,	engine unit	190 mm
	incl. handle	250 mm
Height,	engine unit	220 mm
	with front hand guard	300 mm
Stump height,	chain sprocket cover	19 mm
	handle	30 mm
Tank volume,	fuel	760 ml
	chain oil	330 ml
Weight,	incl. cutting attachment	7,9 kg
	without cutting attachment	6,3 kg

In acknowledgement of the results of the test carried out by the KWF the approved product is also entitled to carry the following test marks: "DLG anerkannt".

Test committee: tools and equipment
Chairman: Dr. Sebastian Paar, Laubau

Inspection closed: April 2019

Approval until: April 2024

First approval: April 2019

Responsible test engineer

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practical application carried out by professional user

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