



# TEST REPORT

## Chain saw DOLMAR PS-420

**OWNER OF THE TEST CERTIFICATE:**

**Manufacturer and applicant:**

Dolmar GmbH

Jenfelder Strasse 38

D-22045 Hamburg

[www.dolmar.com](http://www.dolmar.com)





**Chain saw DOLMAR PS 420 with 38 cm cutting length**

Dolmar GmbH, Jenfelder Strasse 38; D-22045 Hamburg

<b>Test item</b>	<b>Test results</b>				<b>Evaluation</b>
<b>Eignung</b>	Chain saw in the power class up to 3 kW, for semi-professional use				
<b>Engine power</b>					
Power	Engine speed	Torque	Spec. fuel consumption		NE
max. 2.0 kW	9500 min <sup>-1</sup>	2.0 Nm	47 kW/l		
1.8 kW	6000 min <sup>-1</sup>	max.2,4 Nm	kW/l		
<b>Fuel consumption</b>					
	max. power		max. torque		
absolute / specific	1.2 l/h	420 g/kWh	1.0 l/h	484 g/kWh	
<b>Exhaust emission</b>	complies with level II of the standard 2002/88 EG				
	H Category SH 2 ≥ 20 < 50 cm <sup>3</sup> Hubraum				
	Permissible limits		Dolmar PS 420		
	From 01.02.2008		With catalyst		
	CO ≤ 805 gkw/h		294 gkw/h		
	Σ HC + Nox ≤ 50 g/kwh		48 gkw/h		
	EC-type approval of motor vehicle Federal e1*97/68SHU °2004/26 * 0485*00				
<b>Chain lubrication</b>					
Oil consumption	at 5000 min <sup>-1</sup>		at 9000 min <sup>-1</sup>		.
min / max	3 ml/min	8 ml/min	6 ml/min	13 ml/min	<b>O</b>
<b>Noise</b>					
	idling	full load	racing		
Sound pressure level	81 dB(A)	103 dB(A)	103 dB(A)		-
	Equivalent sound pressure level 101 dB(A) (operation modes idling/ full load/ racing with equal duration of exposure)				
	Sound power level 110 dB(A) according to Directive 2000/14/EG				
<b>Vibration</b>					
	idling	full load	racing		
front handle	2.9 m <sup>2</sup>	5.4 m <sup>2</sup>	4.2 m <sup>2</sup>		<b>+</b>
rear handle	2.6 m/s <sup>2</sup>	4.9 m/s <sup>2</sup>	2.4 m/s <sup>2</sup>		
	Equivalent vibration total value front/rear 4.3/ 3.6 m/s <sup>2</sup>				

<b>Chain brake</b>				
Hand guard activation	activation force	aver. braking time	max. braking time	NE
	34 N	0.09 s	0.10 s	
Inertia activation	horizontal acceleration		vertical acceleration	NE
	239 m/s <sup>2</sup>		573 m/s <sup>2</sup>	
<b>Kickback</b>				
Cutting attachment, 38 cm 0,325"	Kickback value with chain brake.		Chain stop angle	NE
Full chisel tooth	°		°	
<b>Power to weight ratio</b>				
Power to weight ratio	With cutting attachment 38 cm		Without cutting attachment	
	2.8 kg/kW		2.4 kg/kW	+
<b>Operability / handling</b>				
Control elements	Easy to reach and use			+
Primer	Primer			+
	STOP-switch returns to default automatically			+
	Softer power transmission when starting the saw due to spring in start device			+
Chain assembly	simple, chain sprocket easy accessible			o
Chain tensioning	simple, laterally in drive sprocket cover			o
<b>Maintenance</b>				
Air filter and spark plug cover	No tools required, screw has formed grip			+
Housing	Difficult to disassemble, making cleaning difficult			-
Air filter	cleaning	No tools required, clamp		+
	soiling	Normal		o
Tank cover	Practical form, can be opened using combination wrench			o
<b>Reliability</b>				
	No defects during test			+
<b>Operating manual</b>				
	clear, well illustrated			+
<b>Operator safety</b>				
EG-type examination test	TÜV Product Service No. M6 07 06 24243 080			
GS-Test	TÜV Product Service No. AL 07 06 24243 081			

Rating: ++ / + / o / - / --./.(o = Standard / NE= no evaluation, complies with tolerance value)

Threshold values and evaluation criteria are described in the "Information about the Utility Value Test" available from the DLG and the KWF.

## Description and Technical Data (measured values)

### Motor

- Air-cooled single-cylinder two-stroke engine;
- Engine displacement 42 cm<sup>3</sup>; bore 42 mm; stroke 31mm;
- Fuel: minimum octane number 91ROZ; mixed lubrication,  
1:100 with DOLMAR HP High Power-2-stroke oil  
1 :50 with DOLMAR High Power-2-stroke oil  
1:40 with other 2-stroke oils (JASO FC or ISO EGD)  
2T- special fuel with "KWF-TEST"
  
- Spark plug Bosch WSR-6F or NGK BPMR 7A.
- Idling speed 2800 min<sup>-1</sup>; max. speed 13500 min<sup>-1</sup>  
(electronic torque control)

### Cutting attachment

- Clutch drum with external chain sprocket;
- Guide bar with sprocket nose
- Full chisel tooth chain, pitch 0.325", gauge 1.3 mm.

### Additional equipment (not tested)

- Guide bars 33 to 45 cm cutting lengths;

### Main dimensions and weights

Length,	incl. cutting attachment 38 cm	765 mm
	engine unit with spiked bumper	395 mm
Width,	engine unit	187 mm
	incl. handle	245 mm
Height,	engine unit	190 mm
	with front hand guard	277 mm
Stump height,	chain sprocket cover	18 mm
	handle	14 mm
Tank capacity,	fuel	0.47 l
	chain oil	0.26 l
Weight,	incl. cutting attachment 38 cm	5.6 kg
	without cutting attachment	4.7 kg

# Test

## Test facilities

Kuratorium für Waldarbeit und Forsttechnik, Groß-Umstadt  
DLG-Testzentrum Technik & Betriebsmittel, Groß-Umstadt

## Field test

Forstl. Bildungszentrum Königsbronn, Itzelberg  
Forstamt Ehringshausen  
Frostamt Lampertheim

## Authors

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## FPA/DLG-Test Committee

„Geräte und Werkzeuge“ (“Equipment and tools”) with 16 members  
Chairman: Josef Berthold, WAS Laubau

## FPA/DLG- approval:

November 2007  
Test No. .4679  
DLG-Test Report: 5740

According to the test regulations, the applicant is entitled to display the test mark on machines of this type and to use the certification for advertising purposes.

## DLG-Testzentrum Technik & Betriebsmittel Groß-Umstadt

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## Kuratorium für Waldarbeit und Forsttechnik e.V. (KWF)

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