Vibration Laser Screed

Lightweight, manually operated concrete leveling screed with fully automatic height control

Product Overview

The Concrete Wolf Vibration Laser Screed is the world's first automatically height-controlling extra-lightweight concrete laser screed. It combines rotary laser guidance with vibration technology to deliver ±1 mm precision surface leveling — requiring no rails, no skilled operator experience, and no manual height adjustment. The screed blade is raised and lowered automatically by servo motors 50 times per second in response to rotary laser input and multi-axis sensor data.

The vibration force is directed so that it reduces the operator's pulling effort by approximately 30–50 kg, making it easy to use across a full shift. Assembly takes approximately 15 minutes.

Available Models

MODEL COMPARISON	
Model	"1300" / "1800"
Working width	1250 mm (49.2 in / 4 ft 1 in) / 1750 mm (68.9 in / 5 ft 9 in)
Vibration motors	1 motor / 2 motors
Vibration power	750 N / 1500 N (2 × 750 N)
Weight	14 kg (30.9 lbs) + battery / 19 kg (41.9 lbs) + battery
Power consumption	5 A/h (1300) / 7.5 A/h (1800)

Recommendation: The 1800 model is recommended as the default choice — it is more stable and efficient. The 1300 model is preferred only when working areas are too narrow for the 1800.

Technical Specifications

MACHINE	
Manufacturer	Concrete Wolf, Estonia
Height	1200 mm (47.2 in)
Leveling accuracy	±1 mm
Height control rate	50 Hz (50 corrections/sec)
Pouring capacity	~200 m²/hour (~2,150 ft²/hour)
Pour thickness	Unlimited — machine rests on poured concrete surface
POWER SYSTEM	

Power source	18 V power-tool battery (not included, 22 V in the case of Hilti)
Operating voltage	15.5–25 V
Compatible brands	Milwaukee, Makita, DeWalt, Bosch, Metabo, Hilti
Recommended capacity	5–12 Ah (higher capacity = longer runtime)
Dual battery support	Yes
Battery adapter	Included; brand-specific adapter installed at order. Additional adapters: €30 each
VIBRATION SYSTEM	
Vibration technology	BLDC vibration motors inside vibrating beam
Vibration frequency	Adjustable 15–45 Hz (15–45 times/sec)
Operator pull assist	~20 - 30% pulling force reduction
HEIGHT CONTROL SYSTEM	
Technology	Rotary laser + servo motors
Servo motors	Located at left and right ends inside vibrating beam
Laser type required	Red-beam rotary laser (300–600 rpm). Cross-line lasers NOT compatible.
Recommended laser	600 rpm
Laser beam height	Recommended 30–60 cm above concrete surface Maximum 100 cm above concrete surface

LASER RECEIVERS (×2, INCLUDED)	
Manufacturer	Concrete Wolf, Estonia
Positioning accuracy	±0.5 mm
Reception radius	360°
Data sampling rate	250 kHz (4 µs)
Position output speed — 600 rpm laser	100 ms (10×/sec)
Position output speed — 300 rpm laser	200 ms (5×/sec)
Reception distance — 300 rpm	≤ 70 m (230 ft)
Reception distance — 600 rpm	≤ 50 m (164 ft)
Laser detection speed	4 nanoseconds
Data transmission time	30 ms after beam detection

Package Contents

- Vibration Laser Screed device (model 1300 or 1800)
- Laser receivers × 2
- Brand-specific 18 V power-tool battery adapter (1 included)

Not Included — Required to Operate

- Red-beam rotary laser (300–600 rpm) — any brand; 600 rpm recommended
- 18 V power-tool batteries (Milwaukee, Makita, DeWalt, Bosch, Metabo, or Hilti)
- Measuring tape

Concrete Viscosity Compatibility

Suitable classes: S2 / S3 / S4

Recommended: S3 (100–160 mm slump / 4.0–6.3 in slump)

Not suitable: S1 (too stiff), S5 or very fluid S4 (too fluid — machine may sink)

CLASS	SLUMP (MM)	SLUMP (IN)	DESCRIPTION	FLOW (EN 12350-5)
S1	10–50 mm	0.4–2.0 in	Very stiff	≤340 mm
S2	50–100 mm	2.0–4.0 in	Stiff	340–420 mm
S3	100–160 mm	4.0–6.3 in	Standard	420–500 mm
S4	160–210 mm	6.3–8.3 in	Flowable	500–600 mm
S5	≥220 mm	>8.7 in	Very flowable (SCC)	>600 mm

Material Compatibility

- Concrete: S2, S3, S4
- Sand leveling
- Traditional dry screed / cement screed
- Crushed rock (fractions 0–4 mm and 0–8 mm); stones > 12 mm may cause blade drag
- Other leveling materials (any material the operator can pull through)

Package Dimensions

MODEL "1300"	
Package dimensions	36 × 130 × 25 cm
Package weight	20 kg

MODEL "1800"	
Package dimensions	36 × 180 × 25 cm
Package weight	27 kg

Maintenance & Warranty

Before use	Spray working surfaces with biodegradable oily substance to prevent concrete adhesion
After use	Wash with running water and brush. Pressure washing acceptable at low pressure; protect laser receiver connectors and laser receivers.
Warranty	1 year (official manufacturer warranty)
Spare parts	All parts held in stock; available from manufacturer
First assembly	~15 minutes

Key Features & Differentiators

- World's first automatically height-controlling lightweight concrete laser screed
- No rails required — floats on poured concrete
- Unlimited pour thickness (rests on concrete, not subbase)
- Compatible with any base condition: rebar, mesh, fiber reinforcement — irrelevant
- Servo motors adjust height 50 times/second (vs. ~4 times/sec for hydraulic competitors)
- Works with any standard 18 V power-tool battery brand — no proprietary battery system
- Suitable for high-rise, basement, apartment, and tight-access environments
- Can create sloped surfaces by angling the laser beam or adjusting receiver heights
- No special training or certification required