

Fast Concrete Leveling Machine

Motorized vibrating-bar leveling machine for concrete and sand — ideal for uneven bases, mesh, and underfloor heating

Product Overview

The Concrete Wolf Fast Concrete Leveling Machine is a precision concrete and sand leveling tool designed for high-speed, high-versatility operation. The working element rests on the poured concrete surface (not the subbase), making it ideal for floors with reinforcement mesh, underfloor heating pipes, or any uneven base. A powered wheel (145 Nm of rotational torque) drives the machine, while a vibrating bar (750 N / ~76 kg force) combined with a plow blade levels the surface. The device is compact: it disassembles in 30 seconds and fits through a 45 cm opening in transport mode.

The machine uses the same rotary laser receiver system as the other Concrete Wolf models, with height corrections at the speed of the rotary laser beam. It is the fastest machine in the range at up to 350 m²/hour and the most versatile in terms of base surface conditions and material types.

Technical Specifications

MACHINE	
Manufacturer	Concrete Wolf, Estonia
Working width	1180 mm vibrating bar (58.9 in)
Height	917 mm (36.1 in) — machine profile
Overall height	1200 mm (47.2 in) — with laser receivers
Max transport speed	80 cm/s (2.62 ft/s)
Max working speed	30 cm/s (0.98 ft/s)
Weight (with batteries)	68 kg (150 lbs)
Wheel rotational torque	145 Nm (107 ft-lb)
Vibration power	750 N (~76 kg / 168 lbs)
Leveling accuracy	±1 mm
Height control rate	At the speed of the rotary laser beam
Pouring capacity	350 m²/hour (3,767 ft²/hour)
Pour thickness (above support surface)	0–300 mm (0–11.8 in)
Concrete resting weight	~3–5 kg on leveled concrete surface during operation
Transport opening width	45 cm (machine fits through 45 cm door/opening)
Assembly/disassembly	~30 seconds

Construction material	304 stainless steel
Laser beam height	Recommended 30–60 cm above concrete surface Maximum 100 cm above concrete surface
HEIGHT CONTROL SYSTEM	
Primary guidance	Red-beam rotary laser (300–600 rpm)
Laser data processing	250 kHz
Recommended laser	600 rpm
POWER SYSTEM	
Energy source	Battery (included)
Battery type	2 × 12 V 38 Ah AGM (operating voltage: 24 V)
Working time (max load)	~2 hours
Charger	AGM 24 V 20 A (included)
Charging — normal	10 A / 24 V → ~4 hours
Charging — fast	20 A / 24 V → ~2 hours
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

- Fast Concrete Leveling Machine with 2 × 12 V 38 Ah AGM batteries
- Laser receivers × 2
- Battery charger — AGM 24 V 20 A

Not Included — Required to Operate

- Red-beam rotary laser (300–600 rpm) — any brand; 600 rpm recommended
- Measuring tape

Concrete Viscosity Compatibility

Recommended: S2–S3 (2.0–6.3 in slump)

Also suitable: S1 (very stiff, 0.4–2.0 in) and S4 (flowable, 6.3–8.3 in)

Not suitable: S5 (very fluid) and very fluid S4 (>~200 mm slump)

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

Base Surface Compatibility

Flat / prepared subbase	Ideal — full working speed
Fiber-reinforced concrete	Ideal — full working speed
Rebar / reinforcement mesh	Ideal — working element rests on poured concrete, not subbase
Underfloor heating pipes	Ideal — working element rests on poured concrete, bumps in subbase have no effect
Sand base preparation	Excellent — powerful wheel, suitable for multiple passes
Crushed rock (0–4, 0–8 mm)	Yes — caution with stones >12 mm (blade drag)
Very uneven subbase	Best choice among Concrete Wolf models for highly uneven bases

Operating Modes

Power Button

- Press 1: Press 1: Activates device — the logo and battery symbol on laser receivers illuminate, machine in neutral
- Press 2: Deactivates device — working body lowers, sleep mode

Three-Stripe Button (Mode Selector)

- Press 1: Forward / transport mode — max 80 cm/s, working body tilts for front lift
- Press 2: Neutral — working body stays raised, no functions active
- Press 3: Reverse / working mode — max 30 cm/s, device finds laser beam and levels automatically

Speed Control (Thumb)

- In working mode: starts vibrating bar and increases reverse speed
- Note: When operator raises front of device $>8^\circ$ in working mode, only reverse function remains active: the machine switches to transport mode

Laser Receiver Indicators

Red arrow flashing (no direction)	Laser beam not detected for >0.6 seconds
Red arrow UP flashing	Plow is above the vibrating screed → moving up
Red arrow DOWN flashing	Plow is above the vibrating screed → moving down
Green '0' light	Plow at correct set height
3 squares — all green	Battery 83–100%
3 squares — 2 green	Battery 50–83%
3 squares — 2 yellow	Battery 33–50%
3 squares — 2 red	Battery 16–33%
3 squares — 2 flashing red	Battery $<16\%$

Operational Notes

- Concrete must always be poured slightly above the desired finished level before leveling
- Machine maintains parallel alignment automatically during operation
- If wheel loses traction on very fluid material (e.g., saturated sand), it may spin — assist manually

Package Dimensions

Package dimensions	80 × 60 × 135 cm
Package weight	70 kg

Maintenance & Warranty

Before use	Spray with biodegradable oily substance
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)
First assembly	~10 minutes; 30 sec disassembly and assembly for transport

Key Features & Differentiators

- Highest pouring capacity in the range: 350 m²/hour
- Working element rests on poured concrete — unaffected by subbase conditions
- Ideal for floors with underfloor heating, mesh, rebar, or other obstacles below
- Powerful motorized wheel (145 Nm) — excellent for sand and base-layer leveling
- Most compact in motorized range — fits through 45 cm opening, 30-second disassembly and assembly
- Dual-function: concrete leveling AND sand/base preparation with the same machine
- Suitable for sports court bases, driveways, garages, warehouses, and industrial floors
- 200 Hz height correction rate vs. ~4 Hz for hydraulic competitors
- No training required