

## BOMAG single drum rollers.

Cutting-edge compaction technology and outstanding productivity.



# BOMAG single drum rollers – cutting-edge compaction technology and outstanding productivity

BOMAG single drum rollers continue to set the standards for soil compaction. The unrivalled expertise and experience of the world market leader have been brought to bear on the development of this series. The result is: cutting-edge compaction technology and impressive productivity, low running costs and customised specifications to suit any application. In brief: BOMAG single drum rollers are ahead on every point.



## Giving you the competitive edge!

Single drum rollers play a key role on site. They create a firm base, quite literally, for subsequent progress. There's no question of compromise – BOMAG has met in full the demands of site managers using the latest technology for the BW 177 to BW 332 models in the -4 series.

- **Profitable.** Lowest cost per cubic metre is the key measure of success. BOMAG single drum rollers demonstrate how efficient soil compaction is done.
- **Powerful.** Maximum compaction using high linear loads and amplitudes.
- **Cost-effective.** BOMAG ECOMODE is synonymous with the lowest fuel consumption.
- **Intelligent.** Automatic compaction control with VARIOCONTROL.
- **Innovative.** Unique  $E_{VIB}$  measuring technology, integrated vibratory plates and special drums: BOMAG sets the pace.
- **Smart designs.** Comfortable workplace and easy servicing. BOMAG single drum rollers were developed together with people on site.
- **Flexible.** A range weighing from 7 to 32 tonnes with the widest choice of options.
- **Best resale values.** Quality speaks loudest: years of hard work and still in demand.



## Drum and front frame.

The specifications for drums are as varied as the types of construction site. BOMAG takes a new direction with a drum that opens up new potential uses.



BOMAG smooth drum for universal applications.

Fast conversion times with smart scrapers.



Even the conventional smooth drum on the D/DH models is full of smart features: The edges are tapered for a smooth surface. The standard contact scrapers at front and rear are made from polyurethane for top cleaning performance.

PD/PDH single drum rollers with pad foot roller drums are suitable for compacting cohesive soils. The cleverly shaped pad feet penetrate deep into the soil and provide a powerful kneading effect.

Patented and unique: The scraper teeth are attached to a beam and can be centrally adjusted. The special tooth profile minimises friction losses. The tooth caps are made from high wear-resistant, tempered manganese steel and can be individually replaced.

Smooth drums can be easily converted into pad foot drums with a segmented shell. This greatly expands the scope of use. The three-part shape allows optimum adjustment and easy assembly. The scraper beam ensures conversion times are kept to a minimum: With conventional designs, there can be 50 screws to loosen and re-tighten; with BOMAG there are just twelve – all readily accessible.



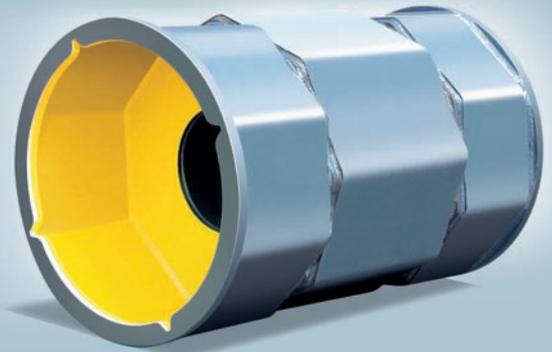
Soft to medium-hard consolidated rock – ideal for the rock crushing drum.

The rock drum is used for crushing and compacting soft to medium-hard consolidated rock. This roller drum can entirely replace mobile breakers up to soil class 6, cutting overall costs.

Drum features: The elevated front section on the BOMAG front frame creates extra room between drum and frame which makes it easier to work on tough terrain. Generous ground clearance allows the roller to negotiate dips. Access to the scrapers is more convenient than ever. And a feature taken for granted with BOMAG: no projecting bolt heads on the frame.

The polygonal drum has revolutionised soil compaction. The geometry allows optimum introduction of energy into the soil and achieves previously unattainable compaction depths. Fill layers can be doubled using the polygonal drum!

Efficiency is unbeatable on spread material and for follow-up compaction: While other methods need time excavating material, storing it and compacting in layers, the polygonal drum does it all itself. The most powerful single drum roller in the world, the new BW 332 DEEP IMPACT achieves compaction up to four metres! At the same time the polygonal drum can be used on all types of soil and works without power-draining scrapers.



Polygonal drum: A system of plates and angles.

### Advantages at a glance:

- Two contact scrapers as standard (D)
- PD scrapers with central adjustment
- Exchangeable caps for scraper teeth
- Easy-to-assemble pad foot segmented shell
- Polygonal drum for maximum depth effect
- Rock crushing drum for consolidated rock
- Optimised front frame shape



BOMAG BW 332 – the most powerful single drum roller in the world.

# The drive system: power and efficiency!

The drive on the BOMAG single drum rollers is designed with efficiency in mind. The economical, durable Deutz diesel engines with high pressure injection system, turbo charger and intercooler lay the foundations for higher efficiency. The rear axle has a no-spin differential, i.e. an automatic lock up to 100%. If one wheel lifts, the other will still drive the roller forwards.



DH drive - up to 63% climbing capability. A BW 219 PDH-4 on a dam project.



With ECOMODE you can save up to 20,000 litres of fuel in four years.

## Two travel systems D and DH:

The D models achieve climbing capabilities of up to 53%. Engine output can be converted into traction using the manual slip control.

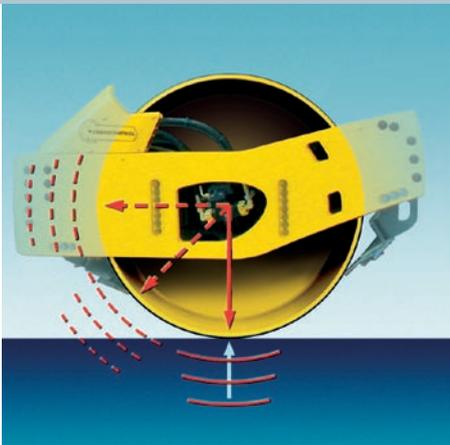
When conditions are really tough - go for DH machines! The DH drive has two outstanding features: ASC and ECOMODE.

The Anti-Slip Control (ASC) accurately controls the right level of power to drum and wheels, thus preventing slippage. The drives have higher torques. DH single drum rollers keep working on inclines of up to 63%. And there is no extra stress on the transmission. This means that, e.g. pad foot segments can be readily fitted.

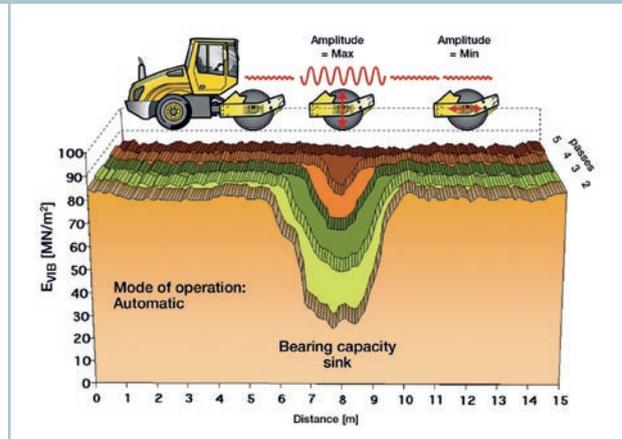
BOMAG ECOMODE is the key to reduced running costs, lowering fuel consumption by up to 30%. This is possible by intelligent engine control that runs the engine in the optimum range and simultaneously regulates the hydraulics. This happens without any loss of compaction output or travel power. Other benefits are the reduction in noise levels and drive component protection with lower speeds.

## Advantages at a glance:

- No-spin axles with 100% automatic locking function
- ASC traction control for maximum climbing capability (DH)
- 30% less fuel consumption with ECOMODE
- Significantly lower noise levels



BOMAG VARIOCONTROL: linear vibration ...



... and uniform compaction with no excess passes.

## The vibration systems.

**Vibration is the heart of the roller. It beats strongly on BOMAG single drum rollers. There are two systems to choose from: Circular exciter and VARIOCONTROL.**

### Well-known and proven: the circular exciter.

Single drum rollers with circular exciters provide two amplitudes and are easy to operate.

#### Advantages are:

- Powerful circular exciter with high compaction power
- Simple operation with two amplitudes

### Progressive, intelligent and flexible:

#### BOMAG VARIOCONTROL BVC

BOMAG VARIOCONTROL has revolutionised soil compaction.

#### VARIOCONTROL means:

- The drum vibrates linearly instead of on a circular path
- The amplitude is progressively adjustable
- The amplitude is regulated automatically

The range of applications is expanded by VARIOCONTROL. With care or with power – as required on site. For example, if there are sensitive buildings nearby, the low amplitude is selected so that unwanted vibration is eliminated. If on the other hand compaction power is needed, then VARIOCONTROL produces previously unattainable output. Thanks

No-risk compaction with VARIOCONTROL.

to linear oscillation, amplitudes of up to 2.85 mm are possible and which cannot be achieved using conventional systems.

BOMAG VARIOCONTROL can do even more; it is intelligent, and will progressively and automatically regulate amplitude. The advantage: Maximum quality and uniform compaction with no excess passes. VARIOCONTROL lowers costs per m<sup>3</sup>.

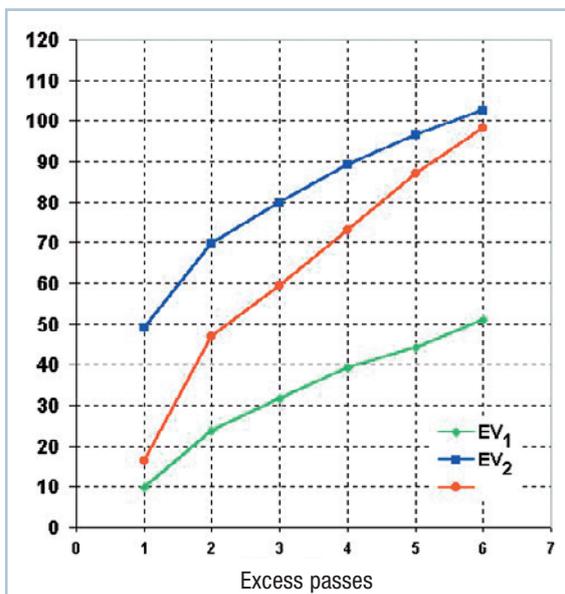
#### Advantages at a glance

- VARIOCONTROL with linear, directed vibration
- Progressive adjustment of amplitude
- Careful compaction in sensitive environments
- Outstanding performance with amplitudes of up to 2.85 mm
- Maximum flexibility
- Automatic regulation of amplitude
- Indicates the end of compaction
- Prevents drum bounce

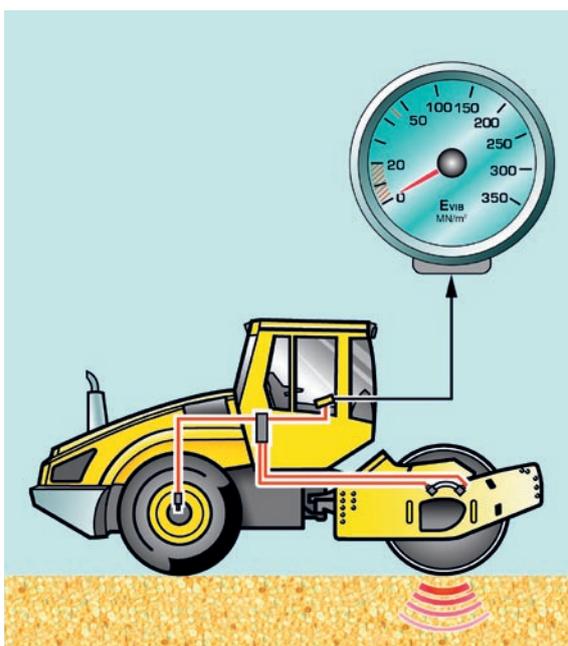


# BOMAG $E_{VIB}$ measuring technology: Reaching the target consistently

BOMAG  $E_{VIB}$  measuring technology makes it possible to control compaction during the compaction process. Surface-covering and precise.



$E_{VIB}$  correlates with plate bearing tests.



Basic model: BOMAG BEM  $E_{VIB}$  meter.

$E_{VIB}$  from BOMAG sets more new standards.  $E_{VIB}$  provides a measurement for soil stiffness for the first time directly related to the plate bearing test.  $E_{VIB}$  is expressed in  $MN/m^2$ . Only BOMAG uses two measuring sensors on the drum to optimise accuracy. Another unique feature: The measuring density –  $E_{VIB}$  is calculated every 10 cm. Weak points are pin-pointed to reduce the level of manual checking.

BOMAG offers a choice of display instruments: The BEM round gauge is the basic model. The BTMprof with display and printer offers more utility. The driver sees a message on the display when the target has been reached or if further compaction is no longer possible. This feature eliminates excess passes or the destruction of the soil structure.

The BOMAG Compaction Management BCM 05 goes a step further. BCM 05 saves  $E_{VIB}$  values across the entire site.



Everything controlled with BOMAG measuring technology.

Compaction can be tracked in real-time path by path, location by location on the large display. The colour display always tells the driver what's happening. Data can be transferred to the site office by USB stick where it can be analysed and archived.

BCM 05 positioning combines the  $E_{VIB}$  values with positioning data from the GPS receiver BOMAG StarFire. BCM 05 positioning creates accurate compaction maps, without input from the driver. And note this: The BOMAG StarFire receiver achieves accuracy to 10 cm without any need for a local reference station. It couldn't be more flexible, more accurate or easier!

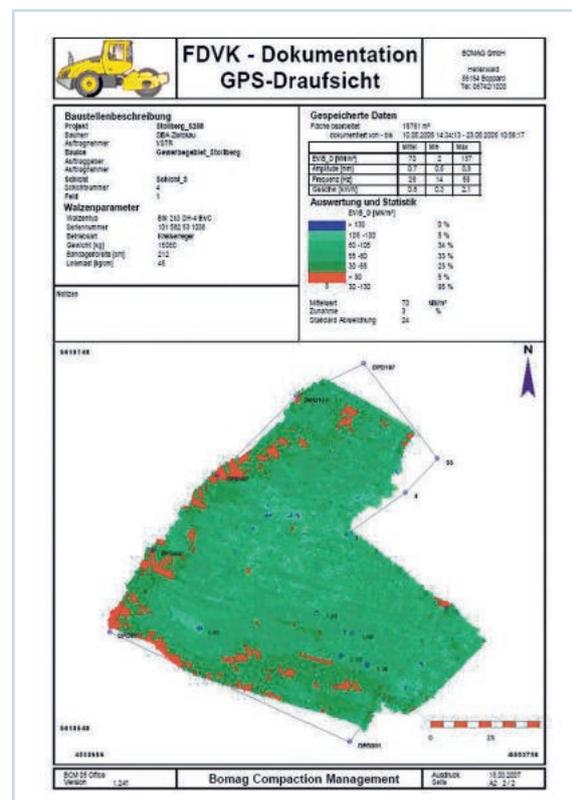
**$E_{VIB}$  advantages at a glance:**

- $E_{VIB}$  is expressed in MN/m<sup>2</sup>
- Surface-covering compaction control
- High measuring accuracy with two sensors
- Comprehensive analysis of weak points with high measuring density
- Displays end of compaction (BTMprof model and upwards)



For immediate use anywhere: BOMAG StarFire GPS receiver.

- Integrated printer (BTMprof)
- BCM 05 documentation system optionally track-bound or with GPS
- BOMAG StarFire receiver flexible without reference station
- Retrofitting and upgrades at any time



Accurate compaction maps with BCM 05 positioning.

# The workplace.

Equipment will only work as well as the person operating it. So BOMAG single drum roller workplaces are designed so that the driver is comfortable and feels good.



Driver visibility to the wheels is outstanding.



The cab provides the driver with the best all-round visibility, especially to the wheels. The generous space and well thought-out storage areas create a comfortable workplace. A standard feature of single drum rollers with cabs is the sprung deluxe seat with many adjustment options \*). The entire seat can be shifted to the side for better visibility \*\*).

The arrangement of the two adjustable steering wheels \*) shows how much thought has gone into ergonomics: The steering wheel is offset to the left, which means the driver can work without fatigue, while using the right hand to operate the travel lever with integrated vibration control switch.

There's nothing difficult about operating BOMAG single drum rollers. Coherently labelled switches, clearly arranged displays: Even inexperienced drivers can start work fast.

Standard heating is located in the footwell providing warmth quickly. Large disk nozzles and the heated rear windscreen ensure good visibility even in winter. An air conditioning unit is optionally available.

\*) Optional for BW 211

\*\*\*) Standard feature on BVC, otherwise optional

Comfortable rotary seat.

The roller driver has everything in sight and under control. BOMAG single drum rollers comply with the 1x1m rule. And the powerful MegaBeam working head lights provide optimum visibility at night. Optional Xenon head lights turn night into day for greater safety on site.

Noise levels on DH models with ECOMODE are reduced with standard insulation. The high-quality materials are robust and washable, made for site use. Easy cleaning was also a major factor when designing the floor.

**Advantages at a glance:**

- Generous cab
- Ergonomic offset steering wheel
- Easy to operate
- Outstanding overview
- MegaBeam working lights
- Low noise level with noise insulation
- Easy to clean
- Footwell heating
- Heated rear windscreen



Easy to operate, perfect ergonomics: The dash board.



Powerful MegaBeam working head lights. Xenon optional.



Spacious and quiet: The cab.



BOMAG single drum rollers meet the 1x1m rule.

## A multi-talented single drum roller: Attachment plates and dozer blade.

Some material types are a major challenge. Sand and gravel tend to loosen on the surface. Crushed rock and anti-frost layers are typical examples. Circular roller drums reach their limits on such applications.

### Single drum rollers with plate attachments

Single drum rollers with plate attachments are the solution here. With refined cardan suspension, the plates fit squarely every time. The working frequency can be adjusted over a wide range to

suit different conditions. The result is a perfect surface. The plates can be shifted 70 cm to either side when approaching embankments. If necessary, the plate set can be quickly detached from the carrier unit by a central locking system for use on different machines.



For a perfect surface: BW 213 DH-4 with attachment plates.

### Single drum rollers with dozer blade

Spread and compact at the same time? No problem with the optional dozer blade. With both the powerful travel system and anti-slip control, the blade can spread large volumes of material. The blade's float setting is used for smoothing. An even surface can be created in reverse drive as with a crawler.

For more profit: Attachment plates and dozer blade make BOMAG single drum rollers full multi-talented machines.



Spread and compact at the same time: Single drum roller with dozer blade, in this case a BW 177 DH-4.

### Advantages at a glance:

- Attachment plates available, integrated ex works
- Progressively adjustable plate frequency
- 70 cm sideways extension possible
- Central locking system
- Automatic function to prevent accidental reverse drive with a lowered plate
- Integrated dozer blade with float setting

## Easy servicing.

Here less is more. Less need for servicing means less downtime, risks cut and lower costs. BOMAG has consistently designed for this requirement. The result: BOMAG easy service.



No grease nipples: Less servicing and longer service life.



A safety feature: The small number of service points can be accessed from the ground. The hood can be easily opened by hand.

Greasing? Never! All bearing points are filled with high-performance lubricants and hermetically sealed for the entire service life. Dirt cannot penetrate and lubricant cannot leak out. This maximises service life.

The hood can be easily and fully opened by hand, giving clear access to the engine compartment. All service points, whether dip stick, filters or filling points, can be reached from the ground. This means a lower risk of accidents. Drain valves are attached to the outside of the frame for all fluids. All units are readily accessible.

The BOMAG cooling system takes in cooling and combustion air so that the cooler remains clean under practically any conditions and the service life of the air filters is greatly increased.

The rubber buffers on the drum can be replaced individually without dismantling the frame parts.

### Advantages at a glance:

- No grease nipples
- Sealed bearings for maximum service life
- Drain valves on the frame for all fluids
- Dust-free cooling
- Individually replaceable rubber buffers
- Bolted not welded front frame for quick repairs

## Customisation: BOMAG has the answer to every requirement:

### The options

From the BW 177 to the BW 332: A wide range of different models in weight classes 7 to 32 tonnes, with different drums, travel systems and exciters, always providing the right solution. Single drum rollers can be customised using various options. Here is a selection:



BW 177 to BW 332: The -4 series includes models weighing from 7 to 32 tonnes.



Federal motor safety standard lighting for safe operation on roads.



Fast fuelling system for quick filling.

- ROPS cab
  - Air conditioning unit
  - MP3 radio
  - Flashing beacon
  - Federal motor safety standard lighting
  - Bio-hydraulic oil
  - Different tyre profiles (tractor profile, rock tyres)
  - Fast fuelling system
  - Safety ventilation system
  - Winter package
  - Electronic anti-theft protection
  - Special paint finishes
- and much more.

If you have a special requirement BOMAG is always here to help.



Power and versatility on landfill site construction: BW 213 DH with pad foot shell and tractor tyres.

## Benefits at a glance.

**No compromise – BOMAG single drum rollers are designed for longevity and durability. The advantage: long availability and high resale value. A BOMAG machine is a sound investment. The key factor in profitability is not the price but the total costs over the machine's operating life.**



Every component must pass multiple tests.



Reliable hose protection.



Tested and proven around the world on the toughest jobs: BOMAG single drum rollers.

**These features highlight BOMAG quality leadership:**

- Fan-cooled exciter
- Nylon-encased wiring harnesses
- Sealed-off central electrics
- Powder coated paintwork
- Enclosed rear frame to protect all components
- High-quality compound material for the hood: three times tougher than GPR
- Two-stage fuel filter with water separator
- Four-stage air filter
- Can be used with an outside temperature of up to 53°
- Electric monitoring of operating parameters
- Plastic diesel tank to prevent corrosion

BOMAG customer services and parts are global in reach. The expert in compaction technology, BOMAG offers support for every application. BOMAG's experts are happy to assist customers on site as well.

**Customers throughout the world trust the BOMAG name.**

**The company has been part of the FAYAT Group since 2005. BOMAG has six branches in Germany, eleven independent subsidiary companies and four production units across the globe. More than 500 dealers in over 120 countries offer distribution and support for BOMAG equipment.**

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