

The new performance level.



BW 154 and BW 174



High power, top manoeuvrability, superb driving and operating comfort plus outstanding flexibility – impressive features which are shared by all BOMAG pivot-steered tandem rollers. These models are today's standard-setting class in modern compaction equipment, combining top compaction quality with huge productivity. And the proven measuring and control technology used in BOMAG ASPHALT MANAGER 2 takes efficiency to a new level on site. With new target value control the system delivers the highest level of compaction performance. All BOMAG pivot-steered tandem rollers meet the latest emissions standards with multiple environmentally-friendly features.





BOMAG BW 154 and BW 174 tandem rollers.

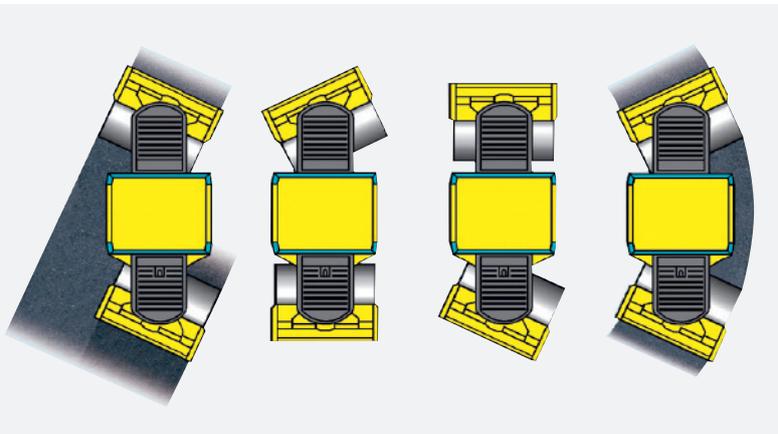
BOMAG pivot-steered tandem rollers are high precision units. They utilise the full expertise of the global market leader to deliver maximum efficiency.

- ◆ **Economical:** low compaction costs per compacted tonne
- ◆ **Effective:** optimized sprinkling using special water-saving nozzles
- ◆ **Flexible:** easy handling with four steering modes for precise rolling patterns
- ◆ **Innovative:** automatic compaction control with BOMAG ASPHALT MANAGER 2
- ◆ **Economical:** efficient KUBOTA engines meet the latest Emission Standards with greater economy thanks to BOMAG ECOMODE
- ◆ **Intelligent:** the water tanks are mounted under the cab giving high stability against and easy filling
- ◆ **Precise:** excellent all-round vision of drum surfaces and edges
- ◆ **Networked:** fail-safe electronics with CAN-BUS technology
- ◆ **Standard:** operator's cab with latest operating concept, road safety compliant lighting (StVZO), and CE conformity



Pivot steering: precision rolling.

Pivot steering uses two individually steered drums for high manoeuvrability and precise handling – ideal in the tight working areas often found on small to medium sites. The operator has four steering modes available and each one can be combined with crabwalk mode.



Four steering modes: diagonal, front, rear, and synchronised.

An automatic system mode ensures that the front drum will always be steered, depending on the travel direction. With this steering concept BOMAG pivot-steered rollers have major advantages on small and medium work. However, the rollers are well suited to larger scale projects requiring high compaction output and operator comfort over long periods.

With drum offset up to 1,350 mm on either side („crabwalk“), machine weight can be distributed over a wider area, especially on sensitive and thin layers. The crabwalk can be combined with any of the four steering modes, allowing sensitive mixes to be compacted without marks. Large asphalt areas can be compacted in the shortest possible time with this set-up. And the crabwalk feature is also a positive contributor to safety, e.g. close to edges or unsupported haunches.

BOMAG comfort steering.

So what happens when the roller is operated around bends in crabwalk mode? Answer: the patented steering system reduces the crabwalk in these situations. The driver does not need to worry about manual corrections with BOMAG steering control.



Crabwalk gives drum offset on both sides up to 1,350 mm.



Special drum geometry produces seamless joints ...



... and prevents the surface from loosening.

The Drums: tough and durable.

Drums are not just the interface with the surface, they also house the heart of every asphalt roller: the exciter system. Split front and rear drums are a common feature on pivot-steered asphalt rollers. Why? Because shearing stresses in asphalt are reduced using this design. Shearing occurs on tight bends and can lead to cracks in the surface. Specially developed drum geometry ensures uniform compaction and evenness.

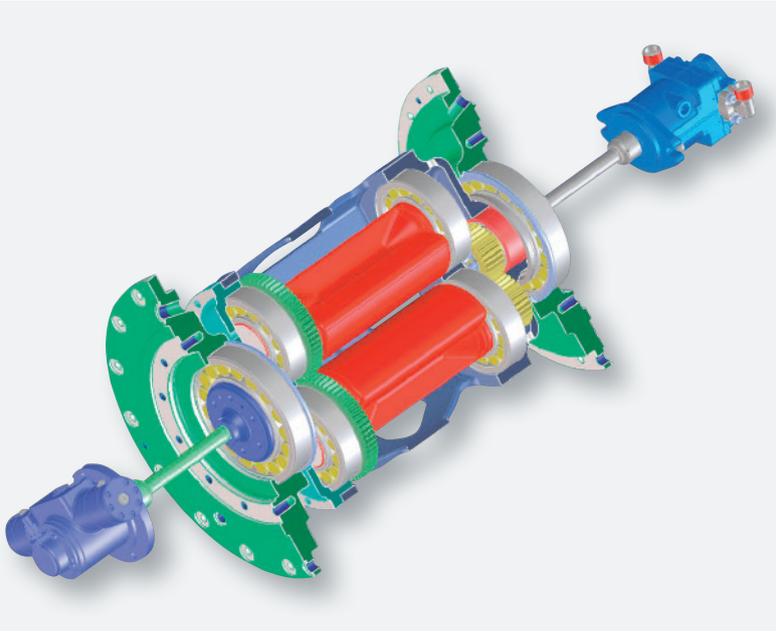
The Exciter System: optimised force.

BOMAG asphalt rollers are either equipped with circular exciters or with directed oscillators (with BOMAG ASPHALT MANAGER 2). Compaction power is optimised by carefully tuned amplitudes and frequencies. Power which can be applied sensitively if required, e.g. on bridges or in urban areas: in two stages for rollers with circular exciters; infinitely and automatically for rollers with BOMAG ASPHALT MANAGER 2.



Split drums reduce shearing on tight bends without surface cracking.

BOMAG ASPHALT MANAGER 2. Measuring results on site.



Two shaft exciter: variable force direction using two counter-rotating, adjustable eccentric weights (marked red).

BOMAG offers directed oscillation systems in combination with BOMAG ASPHALT MANAGER 2 in the 7 t class (BW 154) and 10 t class (BW 174). The system: two counter-rotating, adjustable eccentric weights which can be adjusted for compaction force in terms of applied direction and intensity.

By slewing the complete exciter system including the centrifugal mass the applied direction of the compaction force changes, and can be adjusted infinitely between vertical (deep penetration high-performance compaction) and horizontal (sensitive, low-vibration surface compaction). This allows precise adjustment of the compaction power being delivered in order to match the material type, the lift height, the sub-base or the surrounding area, as far as is required or specified. In other words sensitivity where needed, power where possible. The exciter system has a short kick-in time, and fast response times – giving level surfaces right “from the off”.



Perfect for sensitive applications: ASPHALT MANAGER 2 on bridge decking.





Automatic measurement and control.

An infinitely adjustable directed oscillator system is the basis for this technology. The dynamic stiffness value EVIB in MN/m² is determined as a reference or comparison value for compaction progress. The interaction between asphalt and vibrating mass during compaction is recorded by acceleration transducers on the front drum and controlled by a high-speed control circuit. This provides automatic adjustment of the compaction force to match the stiffness of the layer being compacted. The current EVIB value [MN/m²] affects the compaction intensity via the effective amplitude. The special EVIB feature has been programmed with target values for typical compaction jobs, such as base layers, binders and different surface layers.

A central control and display unit, the BOP (BOMAG Operation Panel), continuously informs the roller operator about the dynamic stiffness of the material and the compaction progress; it also shows information about surface temperature, travel speed, exciter frequency and effective amplitude. And most importantly thanks to the use of straightforward menus, the system is easy to work with.

In automatic mode the system automatically optimises the compaction power in split seconds, so always delivers the appropriate compaction power. This prevents drum bounce and operating errors. Adjustment of the direction of the oscillator is always in relation to the travel direction to prevent common asphalt scuffing. This can occur on some asphalt materials particularly where inadequate proportions of aggregate are present in the mix.

ASPHALT MANAGER 2 can be enhanced with the addition of new modules. The technical requirements for surface covering compaction control can be achieved with BOMAG COMPACTION METER (BCM) and GPS, the satellite-assisted location system. With this, all compaction data from a project can be recorded, processed, managed, graphically displayed and, if required, printed out locally.



A site can be documented with the „BCM 05 mobile“ and BOMAG evaluation software „BCM 05 office“.

Higher performance through attention to detail.



Power-pack: the BW 174 AP-4i 4-cylinder Kubota engine with direct fuel injection (tier 3 B/4).

Electronics: linked data via CAN BUS.

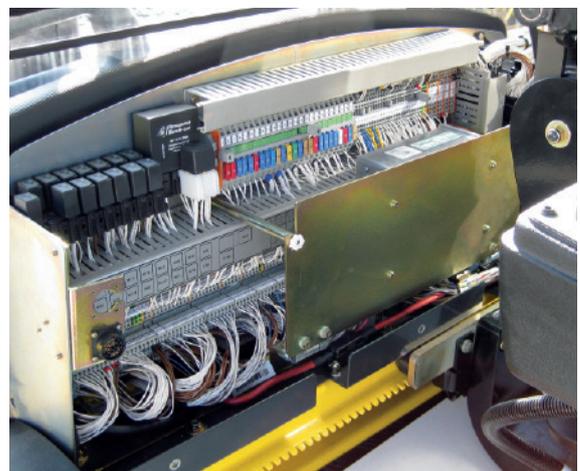
There are many hidden features on the BW 154 AP and BW 174 AP rollers, perhaps not noticed by the operator but which contribute hugely to outstanding roller performance. Multiple control signals need to be detected, transferred and processed in real-time. To respond to changing travel and operating situations the transfer of signals in these pivot-steered units takes place via the latest CAN BUS technology. This provides a total link-up of the electronics system, quick error detection and standardized interfaces. Vibration proof terminal technology, reliable plug-and-socket connections and abrasion resistant cable surfaces ensure operational reliability even on the toughest sites.

The Drive: the intelligent use of power.

All pivot-steered BOMAG rollers are powered by powerful 4-cylinder KUBOTA engines with direct fuel injection, turbocharger and 4-valve technology; engines which impress with responsive development of power, low fuel consumption and low CO2 emissions, as well as smooth and quiet operation. Current emissions standards are of course met in full. And these environmentally-friendly engines are all fitted with soot particle filters *).

The standard-equipment BOMAG ECOMODE system produces the lowest fuel consumption. Active engine management means power is available when needed and reduced when permitted by the application. Intelligent sensors and clever controls immediately detect the actual power requirement and the speed of the KUBOTA engine is automatically adjusted. An added bonus is the low-noise environment generated in the cab.

*) as of BW 174 AP-4i



Control centre: electronics located behind the operator's seat.



Reliable Sprinkling.

Five (on model BW 154) or six (on model BW 174) water nozzles are arranged along the front and rear cross-members protected from the wind and apply a uniform film of water to the drums. This prevents any asphalt residues adhering to the drum surfaces. Two well-proven independent pumps supply water from the tank to the nozzles. So should one pump fail, the second will immediately take over.

The water tanks are housed under the operator's cab for easy filling from ground level, and provide the operator with a good view to the front and rear of the roller. In addition, this arrangement means that the centre of gravity of the roller becomes lower for increased stability. The tanks are located close to the engine, so that water is protected from freezing temperatures on cold days.

Other key features:

- ◆ Multi-stage interval switch for accurate water metering up to continuous output
- ◆ New nozzle design for perfect spraying patterns with reduced water consumption
- ◆ Visual and audible early warning of low water level
- ◆ Triple filtration of water extends pump service life
- ◆ Easy and quick drainage of tanks, pumps and lines to prevent frost damage



Inner Strengths – the BOMAG operating system.

Machine user-friendliness has a major influence on performance and operational workmanship. A roller should be intuitive to control and easy to manoeuvre. This helps to avoid human error and improves finished results.

All begins from the driver's first contact with the machine. Development engineers at BOMAG analysed movement and working routines, and designed a cab to meet real needs. The result is an ergonomic workplace to suit every purpose.

The driver has no superfluous switches or complex information menus. Instead, all key operating controls stay in reach however they may be adjusted to suit individual operator preferences.

Together with a multifunction travel lever, designed to fit the shape of a hand, the armrest system provides excellent support and makes extended roller working stress-free.

The cab offers a high level of comfort, clear vision and ease of operation.





Modern digital display shows all important functions. A round gauge on AP models ...



... and LC display for rollers with BOMAG ASPHALT MANAGER.



Flashing beacon on the cab roof.

Easy handling for accuracy and top workmanship.

- ◆ The spacious cab with panoramic windows and heated rear windscreen provides an unobstructed view over drums and to mat edges; windows are hinged for adjustable ventilation
- ◆ The projecting roof with rain gutter provides a clear view in poor weather
- ◆ Flat floor with no seat guide rails for quick and easy cleaning
- ◆ Clear, glare-free display screens for:
 - Engine speed (AM version)
 - Travel speed
 - Fuel indicator
 - Water level
 - Warning and fault alarms
 - Service and diagnosis codes
- ◆ Mini steering wheel and other key functions integrated in armrest
- ◆ Ergonomically shaped multi-function lever Handling



The seat slides across the full width of the cab and is turned 225° using a foot control.

Easier handling can be personalised.

The high comfort deluxe seat used on the BW 154 and BW 174 pivot-steered rollers offers a range of adjustment options for every driver's seating needs and preferences and can be moved sideways and turned to any direction of travel to suit the type of work in progress.

The curved arm consoles can be adjusted for different operator heights and provide excellent support through long working days. Controls are integrated into the arm consoles making them convenient and easy to reach regardless of the seating position adopted. These features make work stress-free and support unbroken operator concentration over long periods.

The result is relaxed posture with a clear view to the mat edges.





This deluxe seat can be adjusted to suit every operator preference.

Settings, left-hand steering console:

- ◆ Handwheel
- ◆ Steering mode
- ◆ Crabwalk
- ◆ Water sprinklers

Settings, right-hand driving console:

- ◆ Working mode (edge cutter, chip spreader & service)
- ◆ Travel speed
- ◆ Amplitude
- ◆ Vibration mode – automatic or manual
- ◆ EMERGENCY STOP

Vibration settings, working modes and travel speed are close at hand.



Precision steering using the hand-wheel in the arm rest.

Other key seating features:

- ◆ Easy to slide across the full cab width using a foot bracket
- ◆ Easy adjustment with smooth roller bearings
- ◆ Adjustment options for height, weight and seat back position
- ◆ The seat can be turned to provide ergonomic and stress-free positions



Options for increased utilisation.



Edge cutter for a clean edge.

In addition to the full standard specification, BOMAG offers a wide range of options for both the 7 t class and 10 t class.

Edge cutters give a clean cut to asphalt surfaces or after compacting binder and base layers along edges. The cutters come equipped as standard with drum edge lighting for night-time deployment and can be supplemented with a guide rod for greater precision cutting of edges. Pressure rollers are available for a range of uses. Control of these tools is carried out from the cab where the operator has a continual view of the edge cutter and pressure roller.



Optional lighting for the drum edge.

Customised paint is becoming increasingly popular and BOMAG offers colour choices for the BW 154 and BW 174. Special paint work featuring different colour combinations is of course also available.



Single or multi-coloured? BOMAG will supply almost any colour scheme.



BOMAG also offers all pivot-steered asphalt rollers as an ACP combination version for careful rolling and kneading effect on asphalt.

The 7 t pivot-steered model is also available as the BW 154 ACP-4 combination version where the rear steel drum is replaced by four smooth tyres which produce careful rolling and kneading on asphalt. Well coordinated wheel loads give intensive compaction and large tyre diameters produce a more even asphalt finish. Combination rollers also have higher gradeability. In addition to standard water tanks, a generous central tank with direct pressure sprinkling is mounted over the tyres. Pivot-steered combination rollers may also be equipped with BOMAG ASPHALT MANAGER 2 (BW 154 ACP-4 AM) or a precision chip spreader (BS150).

Other options:

- ◆ Air conditioning
- ◆ Bio/hydraulic oil
- ◆ Bypass flow filter
- ◆ Radio or fittings for a radio
- ◆ Drum edge lighting
- ◆ Work and service lights
- ◆ Special back-up warning buzzer with broadband technology («white noise»)
- ◆ Flashing beacon
- ◆ Asphalt surface temperature display
- ◆ On combination rollers: thermal aprons

| | AP | AP AM 2 | ACP | ACP AM 2 |
|---------------|---|---|---|---|
| BW 154 | Tandem roller: split smooth drum with circular exciter front and rear | Tandem roller: split smooth drum with directed vibrator at front and circular exciter at rear | Combination roller: split smooth drum with circular exciter at front and wheel set at rear (only BW 154 ACP-4) | Combination roller: split smooth drum with directed vibrator at front and wheel set at rear (only BW 154 ACP-4 AM) |
| BW 174 | | | | |

Precision chip spreading for skid resistance.

To enhance skid resistance on asphalt surfaces, pivot-steered models can be fitted with an optional precision chip spreader. Based on patented vibrating screed technology the spreader provides uniform spreading at a defined rate. The spreading widths are up to 1.50 m (BS 150) and 1.80 m (BS 180).

The spreader inclination angle can be changed during travel. This allows the operator to adjust the spread rate to each chip mix and site requirements, preventing material losses at the edges, track overlaps and over-spread waste.

BOMAG chip spreader features:

| | BW 154 | | BW 174 | |
|--|-------------|-----------|-------------|-----------|
| | BS 150 | | BS 180 | |
| | Standard | Sliding | Standard | Sliding |
| Empty weight (spreader with supporting frame) | 560 kg | 600 kg | 640 kg | 700 kg |
| Hopper content (max.): | 550 l | | 900 l | |
| Fill height | 1,43 m | | 1,50 m | |
| Spread width | max. 1,50 m | | max. 1,80 m | |
| Sliding spreader | – | +/- 20 cm | – | +/- 20 cm |

Hydraulic lateral displacement is available to move the unit quickly to the side limits without turning the roller. A quick change device makes assembly and disassembly quick and easy. The hopper is mounted on the supporting frame and connected electrically

and hydraulically to the roller using quick couplings. A standard filler filter prevents damage from external particle ingress and allows rapid cleaning of the hopper.

**Other key features:**

- ◆ Patented precision chip spreader
- ◆ Lighting with guard to protect against impact damage compliant with German licensing regulations for the use of vehicles in road traffic (StVZO)
- ◆ Reinforced parking skids or jacks for secure positioning
- ◆ Easy adjustment of the spread rate through hydraulic pivoting
- ◆ Spreading width regulator for exact control of spread width
- ◆ Safe operation of unit from the cab (switches integrated into the arm console or travel lever)

The BS 150 and BS 180 precision chip spreaders are suitable for all conventional chippings, including double-crushed chips 2/5 and 1/3 as well as crushed sand particle size 0/2.

The large pivot range allows safe loading onto low-loaders. The spreader does not require separate transport.



Check out these advantages:

Rollers fitted with ASPHALT MANAGER offer variable compaction forces, making them suitable for effective deep compaction work as well as use on sensitive areas such as bridge decks. With pivot steering, these units meet the tightest specifications in terms of precision and ease of handling.



Service and Maintenance.

The economical Kubota engine is mounted directly beneath the operator's cab. The water tanks are integrated into large swing doors which can be opened fully for easy access to the engine and all service areas such as wear parts or air and

hydraulic filters. A range of BOMAG service kits is also available, combining all parts needed for regular servicing and maintenance work. Only BOMAG original parts specific to these models are used to reduce unwanted interruption and downtime. In addition to long service intervals and fewer servicing requirements, our central service department and global service network keep BOMAG rollers running smoothly wherever they work.



BOMAG service kits only contain original BOMAG parts.



Counting Costs.

The cost alone of buying a roller is often not the deciding factor. What is also important are operating costs, resale value, ease of service and spare parts supply. The outstanding performance of BOMAG models BW 154 or BW 174, combined with low running costs, emphasise the cost cutting potential of these rollers. Cutting-edge technologies and high quality materials and production are saving BOMAG users time and money every day.

Sustainability and responsible use of resources are standard policy at BOMAG and apply to every BOMAG product. As a result, our pivot-steered rollers can be operated with bio-hydraulic oil without limits. Plastic parts are fully recyclable and machine noise levels are among the lowest on the market. BOMAG rollers are renowned for less downtime, and this derives from more than 50 years experience in compaction technology and the expertise of global compaction leadership. This plus CE conformity spells higher resale value.

BOMAG customers around the world trust in our name.

The company has been part of the FAYAT Group since 2005. BOMAG has six branches in Germany and twelve independent subsidiary companies around the globe.

More than 500 dealers in over 120 countries ensure global sales and service for BOMAG machines.



Head Office / Hauptsitz:
BOMAG
Hellerwald
56154 Boppard
GERMANY
Tel. +49 6742 100-0
Fax +49 6742 3090
info@bomag.com

BOMAG Maschinen-
handelsgesellschaft m.b.H.
Porschestraße 9
1230 Wien
AUSTRIA
Tel. +43 1 69040-0
Fax +43 1 69040-20
austria@bomag.com

BOMAG MARINI EQUIPAMENTOS LTDA.
Rua Comendador Clemente Cifali, 530
Distrito Industrial Ritter
Cachoeirinha – RS
BRAZIL
ZIP code 94935-225
Tel. +55 51 2125-6677
Fax +55 51 3470-6220
brasil@bomag.com

BOMAG (CANADA), INC.
3455 Semenik Court
Mississauga, Ontario L5C 4P9
CANADA
Tel. +1 905 361 9961
Fax +1 905 361 9962
canada@bomag.com

BOMAG (CHINA)
Compaction Machinery Co. Ltd.
No. 2808 West Huancheng Road
Shanghai Comprehensive
Industrial Zone (Fengxian)
Shanghai 201401
CHINA
Tel. +86 21 33655566
Fax +86 21 33655508
china@bomag.com

BOMA Equipment
Hong Kong LTD
Room 1003, 10/F Cham Centre
700, Castle Peak Road
Kowloon
HONG KONG
Tel. +852 2721 6363
Fax +852 2721 3212
bomahk@bomag.com

BOMAG France S.A.S.
2, avenue du Général de Gaulle
91170 Viry-Châtillon
FRANCE
Tel. +33 1 69578600
Fax +33 1 69962660
france@bomag.com

BOMAG (GREAT BRITAIN), LTD.
Sheldon Way
Larkfield, Aylesford
Kent ME20 6SE
GREAT BRITAIN
Tel. +44 1622 716611
Fax +44 1622 710233
gb@bomag.com

BOMAG Italia Srl.
Via Roma 50
48011 Alfonsine
ITALY
Tel. +39 0544 864235
Fax +39 0544-864367
italy@bomag.com

FAYAT BOMAG Polska Sp. z o.o.
Ul. Szyszkowa 52
02-285 Warszawa
POLAND
Tel. +48 22 482 04 00
Fax +48 22 482 04 01
poland@bomag.com

FAYAT BOMAG RUS OOO
141400, RF, Moscow region
Khimki, Klayazma block, h. 1-g
RUSSIA
Tel. +7 (495) 287 92 90
Fax +7 (495) 287 92 91
russia@bomag.com

BOMAG GmbH
300 Beach Road
The Concourse, #18-06
Singapore 199555
SINGAPORE
Tel. +65 6 294 1277
Fax +65 6 294 1377
singapore@bomag.com

BOMAG Americas, Inc.
125 Blue Granite Parkway
Ridgeway SC 29130
U.S.A.
Tel. +1 803 3370700
Fax +1 803 3370800
usa@bomag.com