H 20i

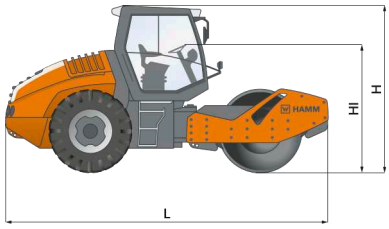
Compactor with smooth drum

Compactors Series H / Series H268

HIGHLIGHTS H

- 3-point articulation for excellent traction and cross-country mobility
- Operating concept Easy Drive
- Electronic machine management Hammtronic
- Excellent view of machine and construction site
- High compaction performance due to linear load and big amplitudes

Machine dimensions		
Total length (L)	mm • in	6600 • 259.8
Width (B)	mm • in	2308 • 90.9
Total height (H)	mm • in	2970 • 116.9
Drum width (X)	mm • in	2140 • 84.3
Height, loading, min. (Hl)	mm • in	2320 • 91.3



EU Stage V / EPA Tier 4

TECHNICAL DATA	Unit	H 20i
Weights		
Operating weight with cab	kg • lbs	20105 • 44,332
Operating weight with ROPS	kg • lbs	19915 • 43,913
Operating weight, max.	kg • lbs	21980 • 48,466
Axle load, front/rear	kg • lbs	13200/6905 • 29,106/15,226
Static linear load, front	kg/cm • lbs/in	61,7 • 345.5
French classific., data/class		88,3/VM5
Load per tire, rear	kg • lbs	3452,5 • 7,613
Machine dimensions		
Total length	mm • in	6600 • 259.8
Total height with cab	mm • in	2970 • 116.9
Height, loading, min.	mm • in	2320 • 91.3
Wheelbase	mm • in	3265 • 128.5
Total width with cab	mm • in	2308 • 90.9
Ground clearance, center	mm • in	390 • 15.4
Turning radius, inside	mm • in	4200 • 165.4
Angle of driving slope, front/rear	°	43/28
Drum dimensions		
Drum width, front	mm • in	2140 • 84.3
Drum diameter, front	mm • in	1600 • 63.0
Drum thickness, front	mm • in	45 • 1.8
Drum type, front		Smooth
Wheel dimensions		
Size of tires, rear		AW 23.1-26 12 PR
Width over tires, rear	mm • in	2160 • 85.0
Number of tires, rear		2
Diesel engine		
Manufacturer		DEUTZ
Type		TCD 6.1 L6
Number of cylinders		6
Power rat. ISO 14396, kW/PS/rpm		160,0/217,6/2300
Power rating SAE J1349, kW/HP/rpm		160,0/214,4/2300
Emission standard		EU Stage V / EPA Tier 4
Exhaust gas after-treatment		DOC-DPF-SCR
Drive		
Speed, infinitely variable	km/h • mph	0 - 12,0 • 0.0 - 7.5
Regulation, infinitely variable		Hammtronic
Climbing ability, vibration on/off	%	53/58
Vibration		
Vibration frequency, front, I/II	Hz • vpm	27/30 • 1,620/1,800
Amplitude, front, I/II	mm • in	2,05/1,22 • .081/.048
Centrifugal force, front, I/II	kN • lbs	331/242 • 74,475/54,450
Steering		
Oscillation angle +/-	°	10
Steering, type		Articulated steering
Tank capacity/Fill capacity		
Fuel tank, capacity	L • Gal	280 • 74.0
AdBlue/DEF tank, content	L • Gal	32 • 8.5
Sound level		
Acoustic power LW(A), sticker	db(A)	106
Acoustic power LW(A), measured	db(A)	104

EQUIPMENT

12 V outlets (double), 2 large working and rear view mirrors, 3-point articulation, Dashboard with displays, indicator lights and function key, Operating concept Easy Drive, ECO mode, Speed preselect, Hose protection on front vehicle, Transport rings for vibration crusher drum, Vibration crusher drum, VC quick-change toolholder system, Automatic vibration system, Lighting package as per road traffic regulations, Camera system

OPTIONAL EQUIPMENT

ROPS cabin with heating and air conditioning, FOPS-approved (level I), Safety belt monitoring device, Armrest comfort setting, left, Auxiliary heater, Tachograph, HCQ navigator, , , Frequency regulation, HAMM Compaction Meter (HCM), Automatic engine-off function, Telematics interface, Working light, Rotating beacon, Engine hood with electrical easy access engine cover release, Coming home lighting, Battery isolating switch, , Tool kit

WIRTGEN AMERICA

6030 Dana Way
Antioch, TN 37013
Phone +1 615-501-0600
Fax +1 615-501-0691
info.america@wirtgen-group.com
www.wirtgen-group.com/america

HAMM AG

Hammstraße 1
D-95643 Tirschenreuth
Tel +49 9631 80-0
Fax +49 9631 80-111
www.hamm.eu

HAMM

Compactors / Series H EU Stage V / EPA Tier 4/ H 20i 04.21 2667828 en-US V7
Further data on request / subject to change
Illustrations may contain optional features.

US

WIRTGEN GROUP

HAMM

The H series
Powerful, environment-friendly, comfortable

Welcome to the compactor of the future!

The operator can reach the driving platform easily and safely via the convenient entry with three large steps and an anti-slip edge at the threshold. There, a comfortable workplace awaits.

The ergonomic seat, operating console and steering wheel are all adjustable. This means every driver will find their ideal working position in which to remain focused for long periods of work.

Convenient and safe: the steps.

- excellent visibility
- optimum ergonomics
- latest engine technology
- high slope angles

All machine models in this series are also available with open driver's platform and ROPS/canopy.

First-class visibility

The spacious working position with plenty of headroom offers a wealth of storage room. Documents can be safely locked away. What's more, the HAMM engineers also thought to provide utility space as well as two 12 V connections for a cooler or to charge a cell phone.

Ready for any challenge

High slope angles

The high slope angles of the H series make compaction easier than ever. They enable the compactors to maneuver safely even in uneven or steep terrain.

Impressive compaction power

The H series compactors rise to any challenge with outstanding compaction force. And the static linear load speaks for itself: on the H 16i for example, it's over 280 lbs/in (50 kg/cm). This means that the compactors are ideally equipped for efficient and speedy compaction with deep penetration.

The right drum for every job

Drums with different exciter systems are available for the H series. In addition to the conventional vibratory drum for all machine models, a VIO drum which can compact using vibration or oscillation is available for the H 13i. Another option is the plate compactor attachment for the H 11i – H 16i models. This ensures optimally compacted surfaces with non-cohesive soils.

Compactor with plate compactor attachment

Vibratory drum

In the vibratory drums, rapid rotation of a rotary vibrator causes the drum to vibrate with the result that vertical compaction forces are directed into the ground.

VIO drum

Unlike with vibration, oscillation creates a movement during which the drum always remains in contact with the ground. The VIO drum combines vibration and oscillation in one system. The driver can switch between the two compaction systems while moving.

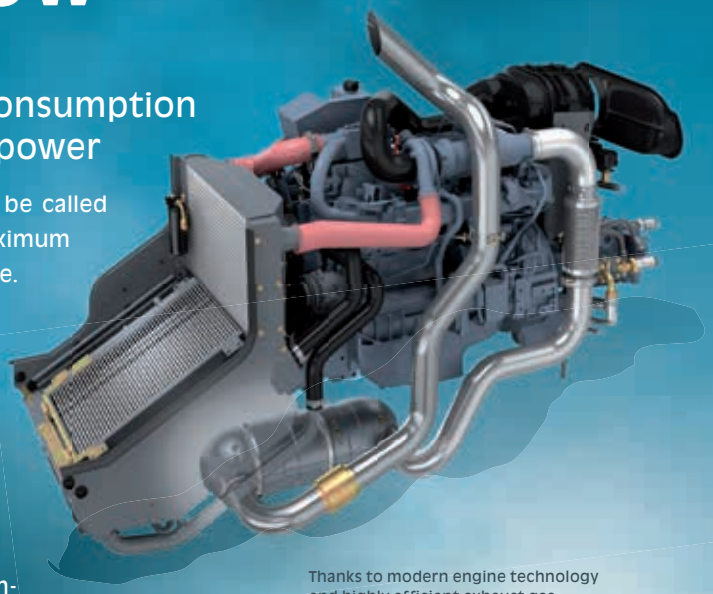
Engine technology for today and tomorrow

Efficient and environment-friendly

State-of-the-art Deutz diesel engines supply the H-series compactors with clean power. With an output of 214 HP (H 18i, H 20i and H 25i) or 140 HP (H 11i, H 13i and H 16i) the power plants have sufficient reserves for efficient compaction, even under extreme conditions. At the same time, they are extremely environment-friendly: state-of-the-art combustion technology and diesel particle filters with automatic regeneration significantly reduce emissions. As a result, the engines satisfy the strict requirements of Tier 4i / EU III B.

Optimum fuel consumption without loss of power

The engine output can be called up in two stages: in "maximum rpm" mode or ECO mode. In the ECO mode, the Hammtronic shows its capabilities and controls the engine speed dynamically, depending on the load requirement. The traction and vibration drives as well as all other components are operated in the optimum range at all times, according to the work situation. This is why the compactors are highly efficient and economical to use.



Thanks to modern engine technology and highly efficient exhaust gas purification, the particulate and nitrogen oxide emissions of the diesel engines have been greatly reduced.

H series

The compactors of the future

1 Cabin

Driver's cabin with excellent all-around visibility. Individually adjustable operating console with integrated display and freely adjustable steering column. Generous headroom.

18 Telematics interface

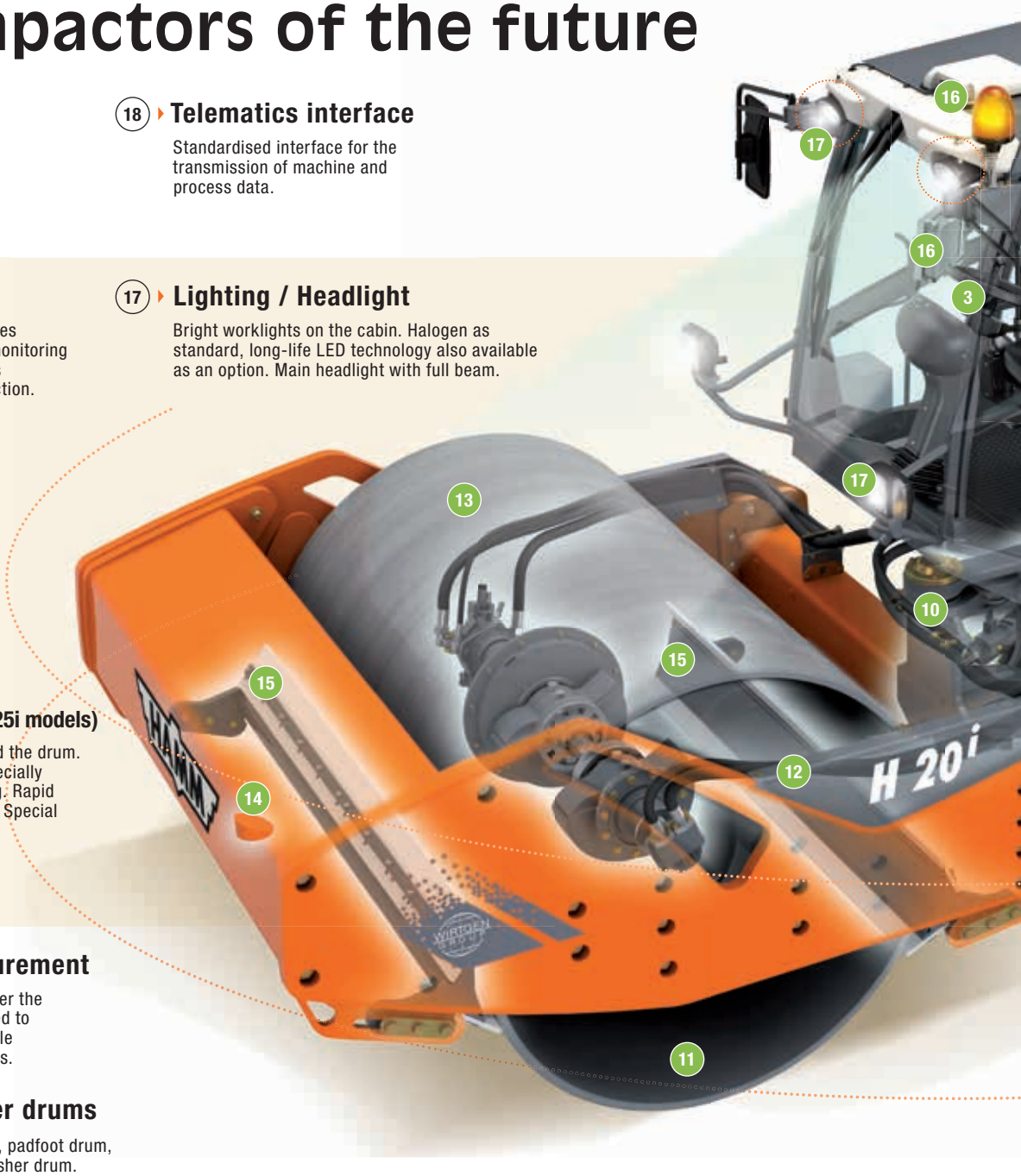
Standardised interface for the transmission of machine and process data.

16 HCQ Navigator

Optional HCQ Navigator enables comprehensive compaction monitoring and documentation as well as exceptionally uniform compaction.

17 Lighting / Headlight

Bright worklights on the cabin. Halogen as standard, long-life LED technology also available as an option. Main headlight with full beam.



15 V-scraper (H 18i – H 25i models)

V-scrapers in front and behind the drum. Fast and easy to change, especially for padfoot segment mounting. Rapid readjustment in case of wear. Special scrapers for padfoot version.

14 Compaction measurement

A specially designed area under the front cross member is provided to accommodate easily accessible compaction measuring devices.

13 Wide range of roller drums

Available with a smooth drum, padfoot drum, padfoot segments and VC crusher drum.

12 Hose protection

Optimum protection against damage thanks to hose protection on both sides ensuring great operational reliability.

11 High static linear load

High static linear load of more than 338 lbs/in (H 20i).

2 Driver comfort

Comfortable driver's seat, individually adjustable and rotatable. Outstanding view over the machine and the surrounding construction site from all seat positions.

Type	Basic data		
H	Weight class (ton)	Drum width (in)	Motor output (HP)
H 11i	12	84	140.7
H 13i	14	84	140.7
H 16i	17	84	140.7
H 18i	20	84	214.4
H 20i	21	84	214.4
H 25i	26	84	214.4

3 Steering

Agile roller with direct steering for reduced driver steering effort.

4 Drive train

Modern, water-cooled engines with diesel particulate filter and automatic soot particle regeneration. Complies with the requirements of EU-level III B and US-EPA Tier 4i and guarantees low-noise, environment-friendly operation.

5 Oil and water cooler

Efficient oil and water cooling. The cooling air volume adapts to the cooling requirements. The result is a reduction in energy requirement and noise emissions.

6 Drive control

Safe drive control via two joysticks. Preselection of maximum speed is standard. Automatic assistance when reversing makes for gentle acceleration and braking. High top speed (8.7 mph).

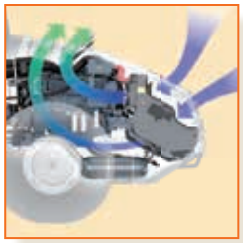
7 Hammtronic

Comes as standard with the "Hammtronic" electronic machine management for the monitoring of all engine and vehicle functions. Automatic traction control drive, vibration and engine speed to the current operating conditions. Reduces fuel consumption, exhaust gas and noise emissions significantly.

HAMMTRONIC

8 Airflow

Intelligently designed airflow for effective engine cooling. Engine cooling is ensured without heating up the operator's platform.



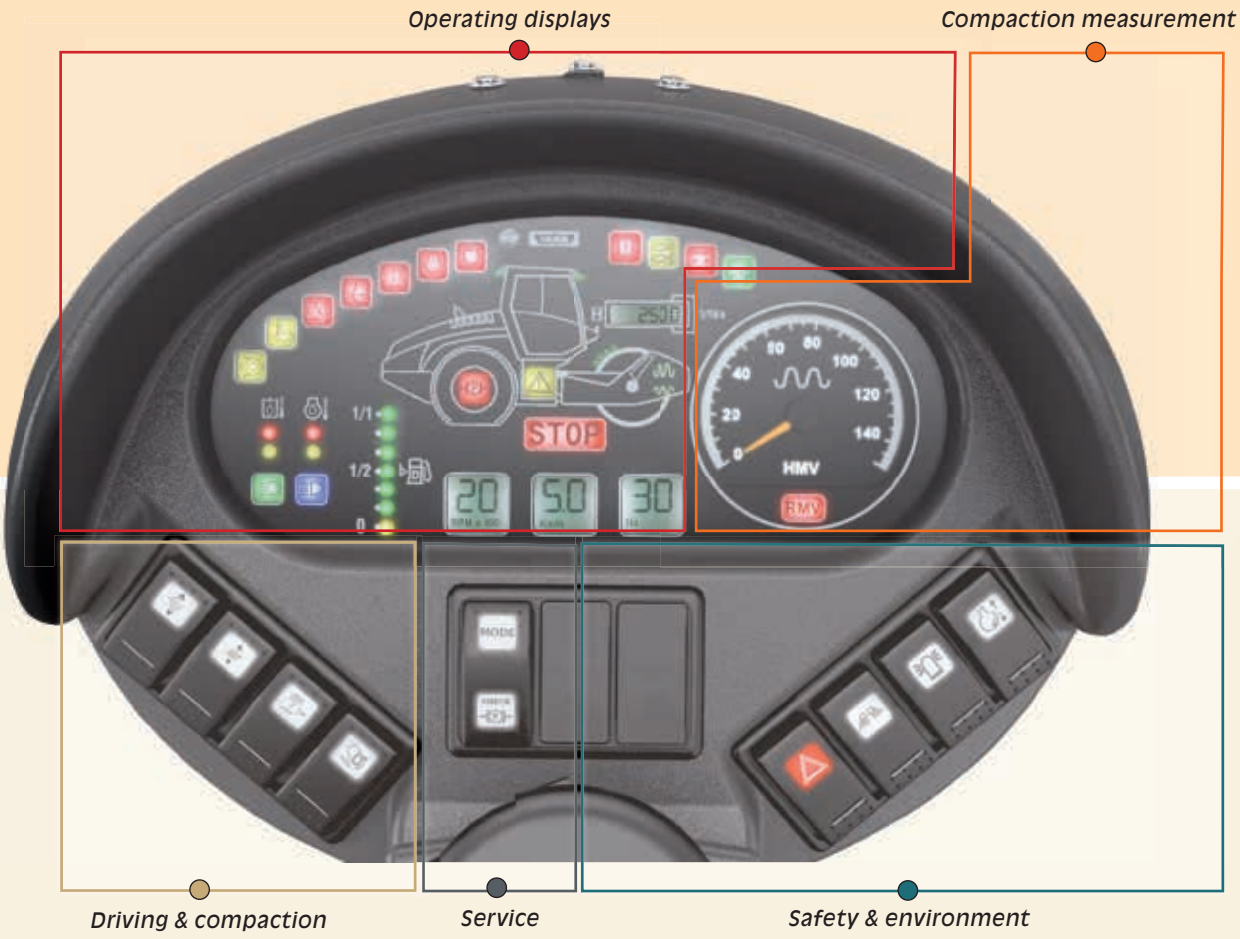
10 Three-point articulation joint

Outstanding off-road mobility, unique driving stability and directional stability provide for secure maneuvering even on uneven terrain.

9 Steps

Easy access with three wide steps.

Intuitive operation



The angle of the steering column is adjustable.

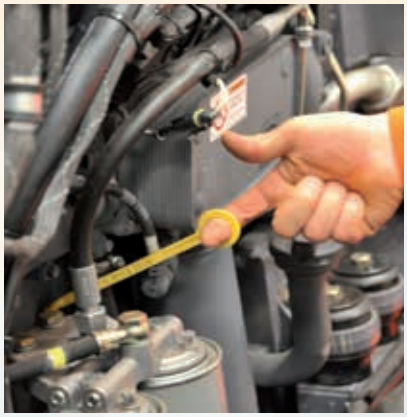
From the seat, the operator has a clear view of the machine and work site.

Simple, logical and language-neutral

Intuitive operation is one of the hallmarks of HAMM. This principle has been systematically developed in the new H series compactors.

All the important displays and operating elements are located on the operating console. The clear symbols and logical layout facilitate intuitive operation. Moreover, all displays are language-neutral. Only the controls for the wipers and air conditioner are integrated into the cab ceiling.

Maintenance and service? Simply easy.



The easy-access maintenance points ...

... make maintenance work extremely easy.

Fold-out condenser for the air-conditioning unit over the engine fluid cooler.

Ergonomics and efficiency in day-to-day maintenance

Easy access to the engine compartment ensures that the minimal servicing and maintenance work required by the H series compactors is always performed in next to no time. All service points and the battery are in easy reach. Cleaning and changing the innovative air filter is now easier than ever.

The H series rollers also come standard with a secure storage space under the engine cover in which to keep a toolbox for example.

On the larger H 18i – H 25i models, an electric hood opening/closing system makes it easier to open and close the engine cover.

Excellent visibility in all directions

Everything in view

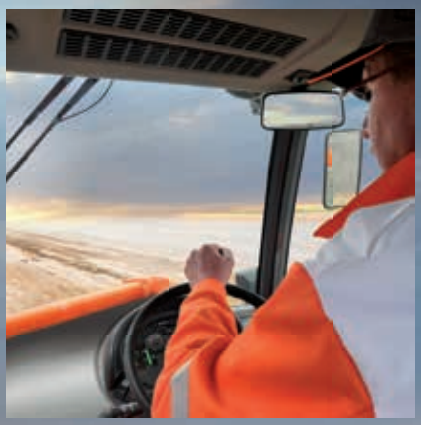
With an ingenious frame structure and a slender engine cover, drivers of the H series compactors enjoy a clear view of the ground to be compacted. The exhaust does not intrude either, being cleverly integrated into the structure in such a way as not to impede the view.

Good rear-view vision as well

Additional safety is provided by the rear view camera (optional). A display allows the driver to check for the presence of people or obstructions in the area immediately behind the roller at any time. The camera can also be fitted as an upgrade to existing machines.

Don't get left in the dark

The H series compactors are fitted with halogen work lights on the cab as well as machine mounted driving lights. As an alternative, especially long-lasting LED lamps can also be installed on the cab.



Unrestricted view of the drum.

Camera with infrared LEDs for improved night vision.

World class design

Since 1998, HAMM has received at least one design award for every newly developed machine series. The H series maintains this tradition in impressive style, having received a total of five international design awards. Here, in addition to visual design, particular attention is placed on factors such as the workmanship, degree of innovation, environmental impact, functionality and ergonomics. HAMM leads the field in all these categories.

product design award 2012

GOOD DESIGN

reddot design award honourable mention 2012

German Design Award SPECIAL MENTION 2013

product design award 2013

WIRTGEN AMERICA

HAMM Compaction Equipment
6030 Dana Way
Antioch, TN 37013
Tel 615-501-0600
Fax 615-501-0691
www.wirtgenamerica.com

A WIRTGEN GROUP COMPANY

HAMM

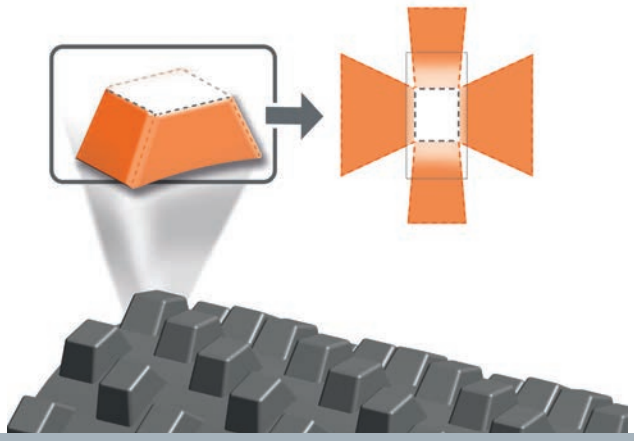
PADFOOT SHELLS

TECHNICAL DATA:

PADFOOT SHELLS		3000 series		H CL series		H series	
		3410-3516	3518-3520	H 5i	H 7i	H 10i - H 16i	H 18i - H 20i
Drum	Width (mm)	2140	2220	1370	1680	2140	2140
Padfeet	End face area per foot (cm²)	156	156	100	100	156	156
	Number per drum	150	150	60	84	120	150
Shells	Number of segments	3	3	2	2	3	3
Weight	per drum (kg)	1650	1860	454	650	1263	1830
Scraper	Padfoot scraper (steel)	•	•	•	•	•	•
	Combination scraper			•	•	•	•

OVERVIEW:

- Application: Compacting cohesive soils and mixed soils and as part of cold recycling; faster drying of cohesive material thanks to the increased size of the roller surface
- Quick and easy conversion from a compactor with smooth drum to a padfoot compactor.
  This expands the setting options for a compactor with smooth drum.
- Simple assembly and disassembly
- Increased driving comfort thanks to the special configuration

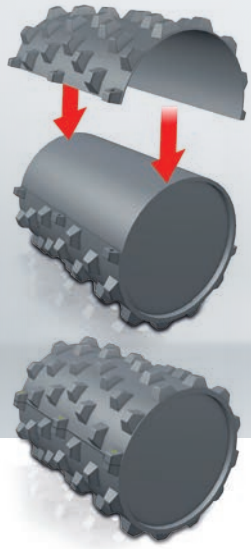


Surface of the padfoot shell

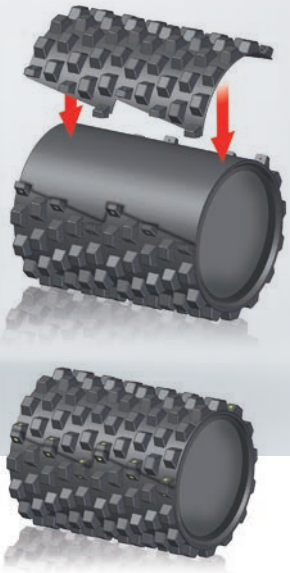
HAMM

VARIANTS:

2-part
(for H 5i and H 7i)



3-part
(for H 11i–H 20i and for 3410–3520)



COMBINATION SCRAPER:

- Combination scrapers contain smooth scrapers (plastic) and scraper teeth (steel) for padfoot shells.
- The corresponding bracket means that the scraper that is not required can be stored safely and securely.
- The scrapers can be swapped quickly and easily.
- Option for the H CompactLine Series and H Series

HAMM AG
Hammstrasse 1
D-95643 Tirschenreuth
Tel +49 9631/ 80-0
Fax +49 9631/ 80-111
www.wirtgen-group.com/hamm

A WIRTGEN GROUP COMPANY

HAMM

HAMM COMPACTION METER (HCM)

OVERVIEW:

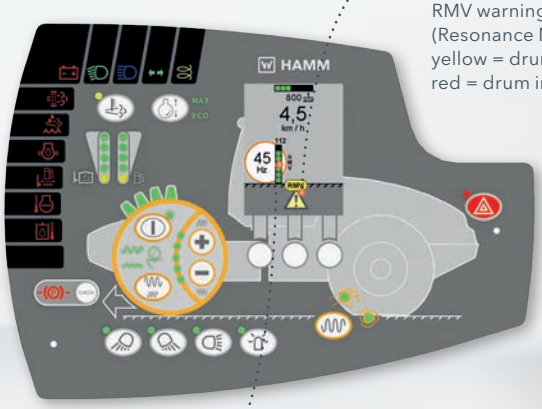
- Available on the **3000, H CompactLine, H, HD CompactLine, HD+, DV+ series**
- Module for measuring and displaying the rigidity of the substrate
- HAMM Compaction Meter, VIO: Option to measure the compaction in the vibration and oscillation mode; available for H 7i VIO and H 13i VIO.
- Automatic activation for dynamic compaction
- Measurement via the acceleration sensor on the vibrating drum
  > Recording the drum acceleration
  > Evaluating the proportion of the soil reaction
  > Continuous calculation of a relative rigidity value
  > Display as a HAMM Measurement Value (HMV)
  > Calibration for continuous compaction control, e.g. via static or dynamic load plate

ADVANTAGES:

- No risk of over-compaction
- Fast localisation of positions with high demand for compaction or material that cannot be compacted
- Reduction in overrunning and therefore in the work time thanks to the detection of sufficiently compacted positions = cost reduction
- Reduced particle crushing, no re-loosening
- Maximum, efficient and homogeneous compaction

COMPONENTS ON THE EXAMPLE OF THE H SERIES:

Computer unit in the central electrical system



RMV warning indicator
(Resonance Meter Value:
yellow = drum about to jump position;
red = drum in jump operation)

Display unit
For the current
HMV value

Acceleration sensor

HAMM

BASIC REQUIREMENTS FOR CONTINUOUS COMPACTION CONTROL MEASUREMENTS:

- Homogeneous and identical material
- Constant water content
- Constant working speed
- Constant amplitude
- Constant frequency
- Constant dumping height
- Measurement only in one direction of travel

⚠ Changing a parameter causes the measured values to be changed.

INTERPRETATION OF THE HMV VALUES:

Increasing values	Material can also be compacted
Constant values	Maximum compaction is reached (using this roller) **Recommendation:** Switchover to small amplitude or oscillation, or stop compaction ⚠ Additional passes may result in re-loosening and destruction of the material
Decreasing values	Re-loosening of the material **Possible cause:** Material cannot be compacted (e.g. proportion of water is too high) Low values as an indicator of less compacted positions
Jump operation	⚠ Switchover to small amplitude or to the oscillation and/or stop compaction ⚠ **Possible damage to the machine in jump operation**

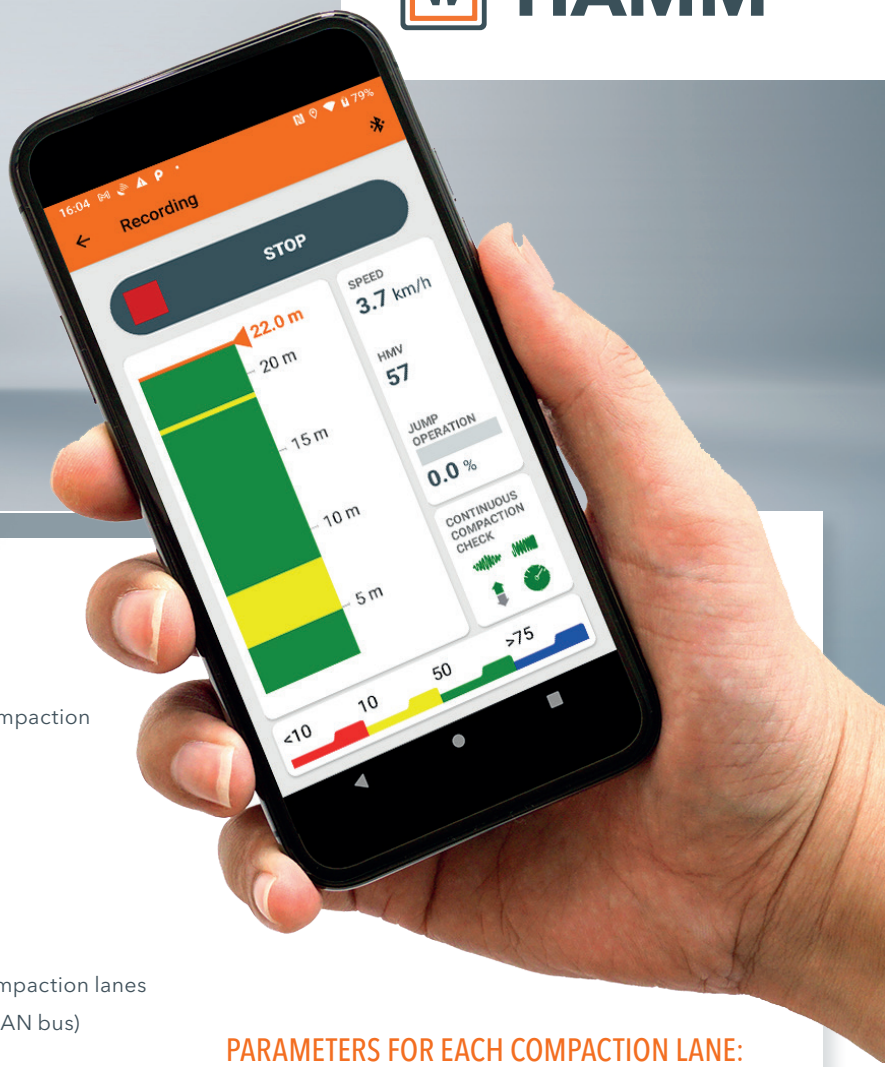
TIPS AND GUIDE VALUES:

Types of ground	Compaction	Recommended range for HMV values	Rigidity (asphalt) and/or load-bearing capacity (earthworks)
Silty / clayey soils with **excessive** water content	Big amplitude Maximum frequency Speed: 2–2.5 km/h	0 - 5	Low
Silty / clayey soils with **correct** water content	Big amplitude Maximum frequency Speed: 2–2.5 km/h	5 - 15	Low
Sandy / gravelly soils	Small amplitude Reduction in frequency by 5–8 Hz (only possible with Hammtronic!) Speed: 2.5–3 km/h	15 - 30	Medium
Frost protection / base course material / hydraulically bound support layer	Small amplitude Reduction in frequency by 5–8 Hz (only possible with Hammtronic!) Speed: 2.5–3.5 km/h	30 - 50	High
Rock	Small amplitude Reduction in frequency by 5–8 Hz (only possible with Hammtronic!) Speed: 2.5–3.5 km/h	50 - 100	Very high

HAMM AG
Hammstrasse 1
D-95643 Tirschenreuth
Tel +49 9631/ 80-0
www.wirtgen-group.com/hamm

A WIRTGEN GROUP COMPANY

HAMM



SMART DOC

- Free app for documenting and self-monitoring the compaction process in earthworks (without GPS positioning)
- Availability: H CompactLine series, H series
- **Download: Google Play Store (Android)**

FUNCTIONS:

- Create projects with inspection lots and individual compaction lanes
- Connect to the machine via Bluetooth® Low Energy (CAN bus)
- Visualise the compaction increase in live mode
- Create and send a PDF compaction report

REQUIRED HARDWARE:

- HAMM Compaction Meter (HCM)
- Bluetooth® interface
- Additional for the H CompactLine: Speedometer, frequency display

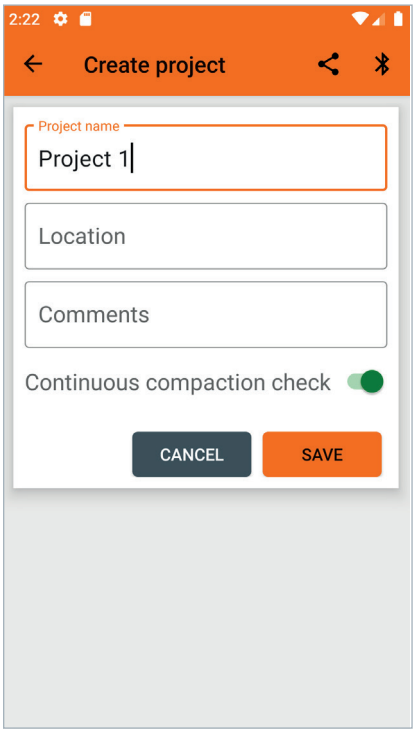
PARAMETERS FOR EACH COMPACTION LANE:

- Frequency
- Amplitude
- Speed
- HMV compaction value
- Jump operation, proportional
- Vibration on/off
- Direction of travel

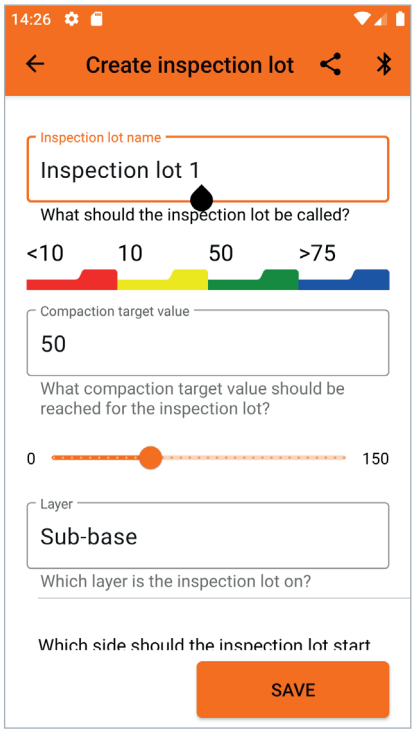
GET IT ON Google Play

HAMM

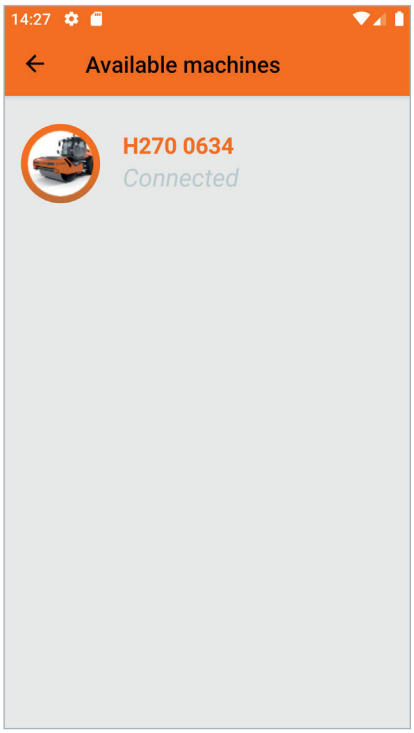
1 CREATE A PROJECT



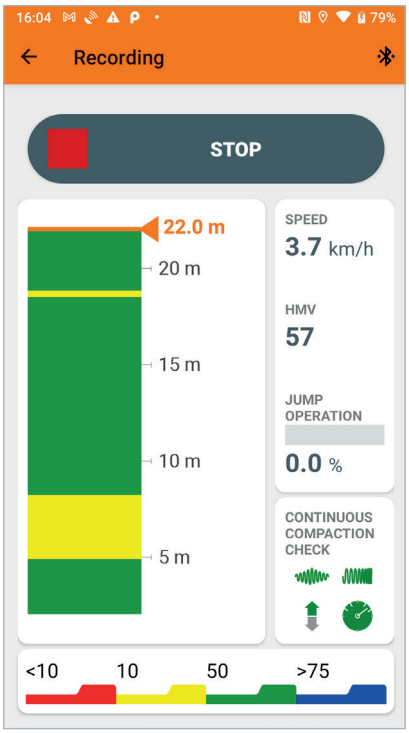
2 CREATE AN INSPECTION LOT



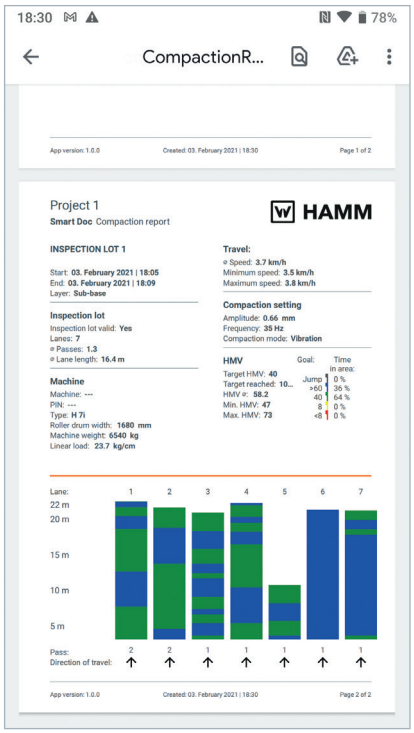
3 CONNECT TO THE MACHINE



4 START THE RECORDING AND START THE COMPACTION



5 SHARE THE COMPACTION REPORT



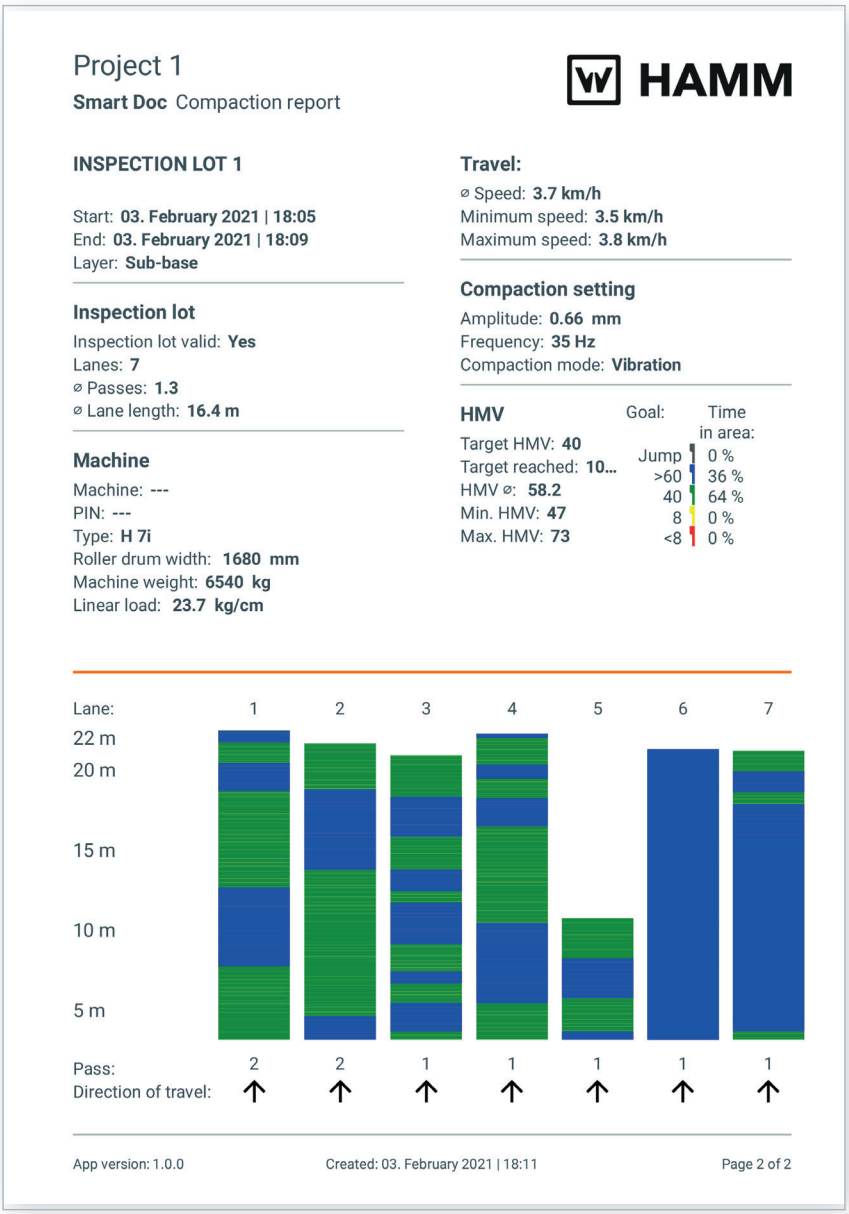
HAMM

ADDITIONAL FUNCTIONS – OPTIONS:

- Automatic start and/or stop of the recording when the vibration is switched on or off
- Automatic creation of the next pass
- Optional: Automatic creation of the next track
- Optional: Display of a map in the compaction report

BENEFITS:

- Economical option for self-monitoring the compaction process in earthworks
- High-quality compaction with fewer passes
- Compliance with the minimum requirements for continuous compaction control
- Smart Doc as a valuable instrument for inexperienced roller drivers (learning effect)
- Simple connection via Bluetooth® Low Energy
- App is free of charge



Project 1

Smart Doc Compaction report

HAMM

INSPECTION LOT 1

Start: **03. February 2021 | 18:05**
End: **03. February 2021 | 18:09**
Layer: **Sub-base**

Inspection lot

Inspection lot valid: **Yes**
Lanes: **7**
⌀ Passes: **1.3**
⌀ Lane length: **16.4 m**

Machine

Machine: **---**
PIN: **---**
Type: **H 7i**
Roller drum width: **1680 mm**
Machine weight: **6540 kg**
Linear load: **23.7 kg/cm**

Travel:

⌀ Speed: **3.7 km/h**
Minimum speed: **3.5 km/h**
Maximum speed: **3.8 km/h**

Compaction setting

Amplitude: **0.66 mm**
Frequency: **35 Hz**
Compaction mode: **Vibration**

HMV

Target HMV: **40**
Target reached: **10...**
HMV ⌀: **58.2**
Min. HMV: **47**
Max. HMV: **73**

Goal:	Time in area:
Jump	0 %
>60	36 %
40	64 %
8	0 %
<8	0 %

App version: 1.0.0 Created: 03. February 2021 | 18:11 Page 2 of 2

Compaction Report (PDF) – example

HAMM AG
Hammstrasse 1
95643 Tirschenreuth, Germany
Tel. +49 (0) 9631 80 0
www.wirtgen-group.com/smart-doc-hamm