



FOR OUTDOOR APPLICATIONS

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HARDWOOD SCREWS WITH SMALL HEAD



Small head with ribs for flush countersinking



Milling ribs on the hank for lower torque





Special wax for lower screwing-in torque



Quick and precise installation













HARDWOOD SCREWS WITH SMALL HEAD, T-DRIVE

PWHTG

DoP: PWHTG001







d [mm]	l [mm]	Art. Nr.	EAN code	тх	dk [mm]			
SMA	ALL PACKING							
	40	PWHTGK40040 C2	5410439318976	TX 15	6	100	5400	144000
4.0	45	PWHTGK40045 C2	5410439320139	TX 15	6	100	5400	144000
4,0	50	PWHTGK40050 C2	5410439318983	TX 15	6	100	5400	144000
	60	PWHTGK40060 C2	5410439320085	TX 15	6	100	5400	144000
STA	NDARD PACKI	NG						
	40	PWHTGG40040 C2	5410439402934	TX 15	6	200	7200	172800
4.0	45	PWHTGG40045 C2	5410439402941	TX 15	6	200	7200	172800
4,0	50	PWHTGG40050 C2	5410439402958	TX 15	6	200	7200	172800
	60	PWHTGG40060 C2	5410439402965	TX 15	6	200	4800	115200
SMA	ALL PACKING							
	50	PWHTGK45050 C2	5410439320092	TX 20	7	50	2700	72000
4.5	60	PWHTGK45060 C2	5410439320146	TX 20	7	50	2700	72000
4,5	70	PWHTGK45070 C2	5410439320153	TX 20	7	50	2700	72000
	80	PWHTGK45080 C2	5410439320160	TX 20	7	50	2700	72000
STA	NDARD PACKI	NG						
	50	PWHTGG45050 C2	5410439402989	TX 20	7	200	7200	172800
4.5	60	PWHTGG45060 C2	5410439402996	TX 20	7	200	4800	115200
4,5	70	PWHTGG45070 C2	5410439403009	TX 20	7	200	3200	76800
	80	PWHTGG45080 C2	5410439403016	TX 20	7	200	3200	76800
SMA	ALL PACKING							
	50	PWHTGK50050 C2	5410439320177	TX 25	8	50	2700	72000
5,0	60	PWHTGK50060 C2	5410439320184	TX 25	8	50	2700	72000
3,0	70	PWHTGK50070 C2	5410439320191	TX 25	8	50	2700	72000
	80	PWHTGK50080 C2	5410439320207	TX 25	8	50	2700	72000
STA	NDARD PACKI	NG						
	40	PWHTGG50040 C2	5410439352284	TX 25	8	200	7200	172800
	50	PWHTGG50050 C2	5410439403023	TX 25	8	200	4800	115200
5,0	60	PWHTGG50060 C2	5410439403030	TX 25	8	200	3200	76800
	70	PWHTGG50070 C2	5410439403047	TX 25	8	200	3200	76800
	80	PWHTGG50080 C2	5410439403054	TX 25	8	200	3200	76800

INFO

AISI 410



- Not suitable for woods containing high amounts of tanning agents.
- Not acid resistant and not suitable for use in chlorous environments.
- Screws made of AISI 410 are hardended and polished. Due to its natural properties
 this matensitic stainless steel is (slightly) magnetised.











HARDWOOD SCREW WITH BLACK PAINTED HEAD, T-DRIVE

PWHTG

DoP: PWHTG001

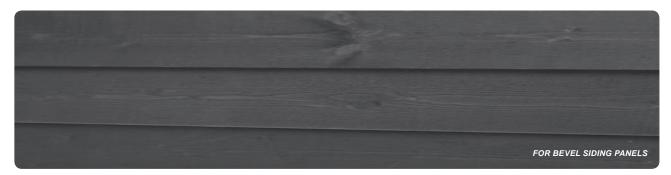








d [mm]	l [mm]	Art. Nr.	EAN code	тх	dk [mm]			V.
STANDARD P	ACKING							
4,0	50	PWHTGG40050 C2Z	5410439297011	TX 15	6	200	7200	172800
	40	PWHTGG50040 C2Z	5410439297240	TX 25	8	200	7200	172800
	50	PWHTGG50050 C2Z	5410439297042	TX 25	8	200	4800	115200
5,0	60	PWHTGG50060 C2Z	5410439297059	TX 25	8	200	3200	76800
	70	PWHTGG50070 C2Z	5410439297257	TX 25	8	200	3200	76800
	80	PWHTGG50080 C2Z	5410439297264	TX 25	8	200	3200	76800













HARDWOOD SCREW WITH BROWN PAINTED HEAD, SQUARE RECESS

PWHVG

DoP: PWHVG001



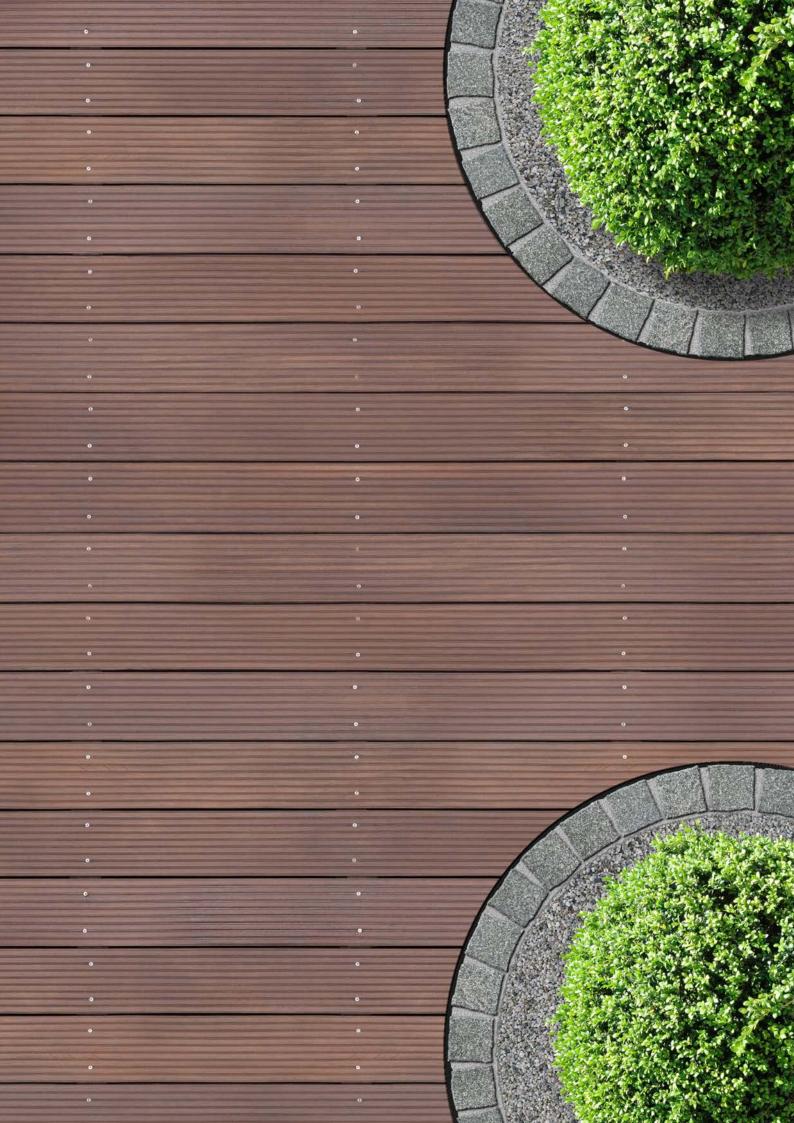




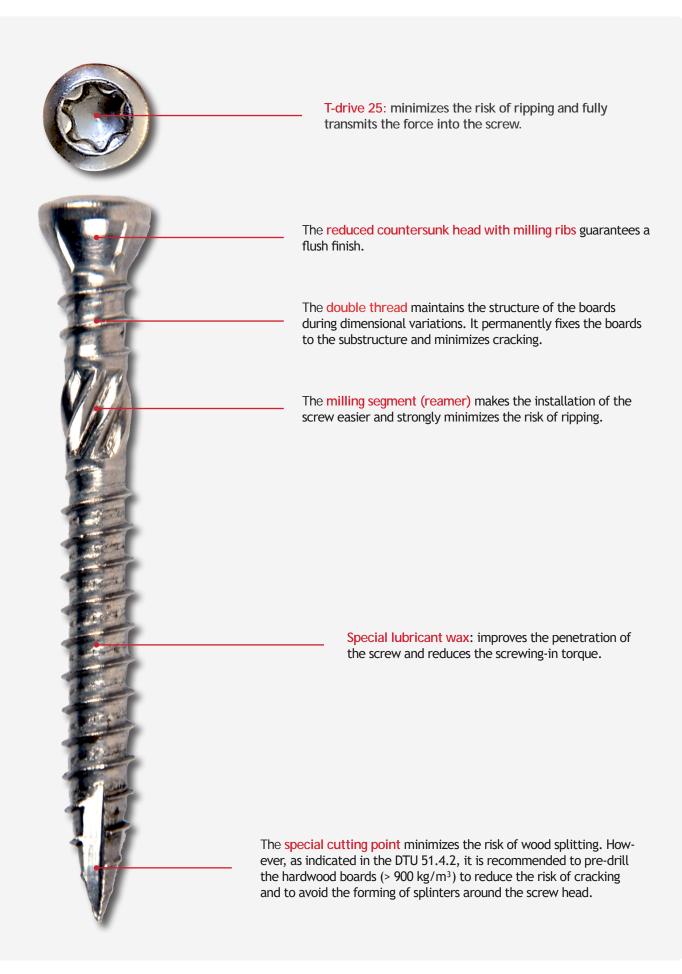


d [mm]	l [mm]	Art. Nr.	EAN code	SQ	dk [mm]			W.
STANDARD F	PACKING							
5.0	50	PWHVGG50050 C2B	5410439435666	SQ 3	8	200	4800	115200
5,0	60	PWHVGG50060 C2B	5410439435673	SQ3	8	200	3200	76800





HARDWOOD SCREWS WITH DOUBLE THREAD















HARDWOOD SCREWS WITH DOUBLE THREAD, T-DRIVE

PWDTG

DoP: PWDTG001

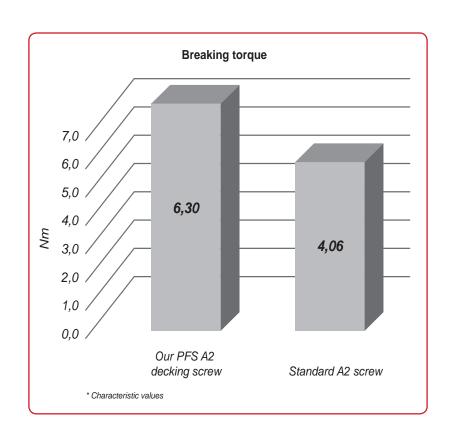






d [mm]	l [mm]	dk [mm]	Art. Nr.	EAN code	тх			
STANDARD	PACKING							
4,0	40	6,0	PWDTGG40040 A2	5410439474269	TX 15	200	7200	172800
	50	7,0	PWDTGG45050 A2	5410439474276	TX 15	200	7200	172800
4,5	60	7,0	PWDTGG45060 A2	5410439474283	TX 15	200	4800	115200
	70	7,0	PWDTGG45070 A2	5410439474290	TX 15	200	3200	76800
	40	8,0	PWDTGG50040 A2	5410439474306	TX 25	200	7200	172800
	50	8,0	PWDTGG50050 A2	5410439474313	TX 25	200	4800	115200
5,0	60	8,0	PWDTGG50060 A2	5410439474320	TX 25	200	3200	76800
	70	8,0	PWDTGG50070 A2	5410439474337	TX 25	200	3200	76800
	80	8,0	PWDTGG50080 A2	5410439474344	TX 25	200	3200	76800

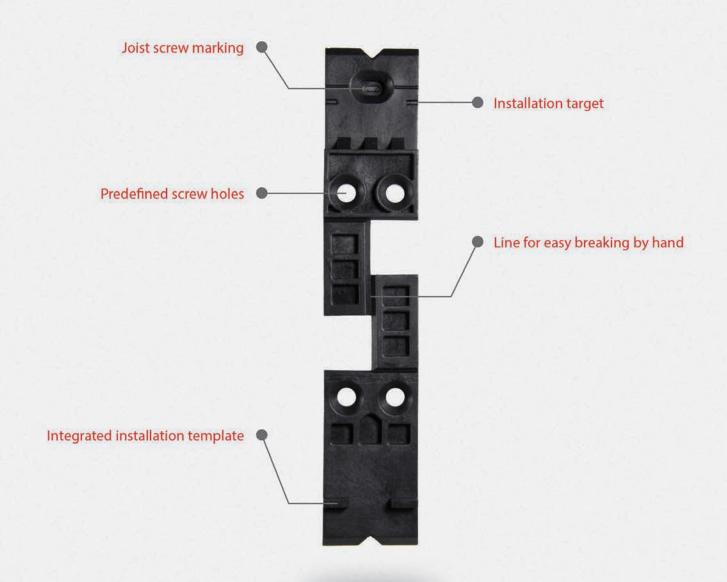
d [mm]	l [mm]	dk [mm]	Art. Nr.	EAN code	тх			
STANDARD PACKING								
	50	8,0	PWDTGG50050 A4	5410439474351	TX 25	200	4800	115200
<i>-</i> 0	60	8,0	PWDTGG50060 A4	5410439474368	TX 25	200	3200	76800
5,0	70	8,0	PWDTGG50070 A4	5410439474375	TX 25	200	3200	76800
	80	8,0	PWDTGG50080 A4	5410439474900	TX 25	200	3200	76800







INVISIBLE FIXING







HAPAX FIXING PRO HIDDEN FASTENING SYSTEM











CHARACTERISTICS

- Totally invisible.
- Rot-proof.
- Weather resistant and pulling endurance of 650kg.
- Very strong hold.
- Adjustable.
- Excellent ventilation.
- Complete with stainless steel screws AISI 410.
- Universal: for boards with 90 to 200 mm width and 19 to 40 mm height.
- Material: fibreglass reinforced composit.
- Freeze resistant: -40°C.
- Heath resistant: 110°C.
- Maximal spacing: 50 cm.
- Possible to change 1 board without damaging the rest.

ADVANTAGES

Fast.

Front view

- UV resistant and resistant to extreme temperatures.
- 100 % recyclable.
- Can be used with any type of joist but also (if required) directly on the tile or concrete (when the available height does not allow the use of a joist).
- Assures an excellent ventilation between the boards and the joists: the use of bituminous strips is not longer necessary.
- 100% invisible: No metal parts or screws are visible. The spacings between the boards are regular. Esthetical and professional result. Moreover, the Hapax Fixing Pro system does not require special parts for the first and last board.
- Easy and guick installation: installed with two stainless steel screws under the boards.
- No profile is necessary.
- Meets the requirements of DTU 51.4.



USABLE WITH

Can be used with the following types of wood: Ipê, African Padauk, bamboo, ash, poplar and oak, accoya, kiln dried cumaru, kiln dried tali, kiln dried Afrormosia, Afzélia, kiln dried Bankirai, kiln dried Iroko, Merbau, Moabi, Sapelli, Sipo, kiln dried Tatajuba, Teak, Canadian Western Red Cedar.



35 mm Side view 13 mm





Manual



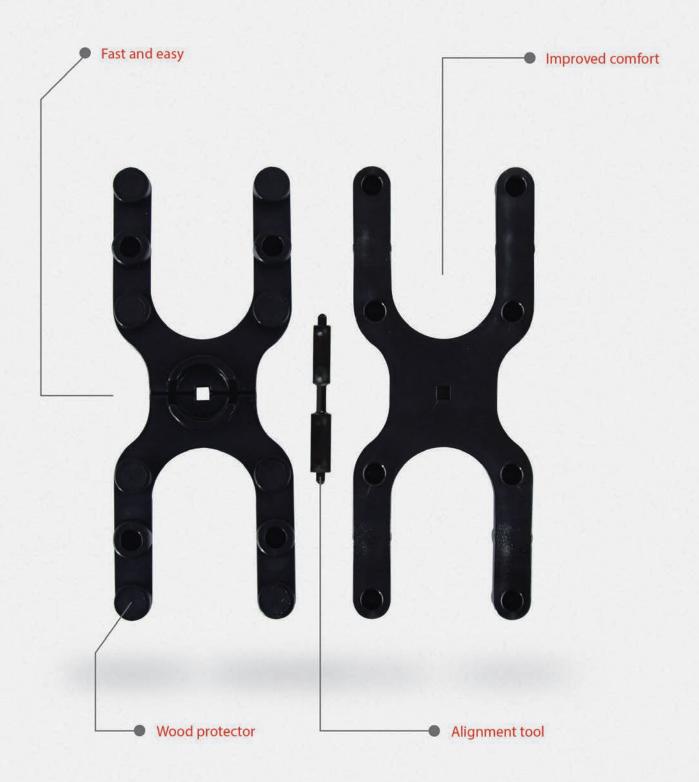
100 x Fixing 200 x 5,5 x 30 mm 100 x 5,5 x 35 mm 5,5 x 30 35 x 13 x 180 HAP01035180AA4 5410439475983 5,5 x 35 100 x Fixing 5,5 x 35 35 x 13 x 180 HAP01035180B 5410439473699

88 boxes

88 boxes

300 x 5,5 x 35 mm

VISIBLE FIXING



HAPAX D-PRO VISIBLE FASTENING SYSTEM











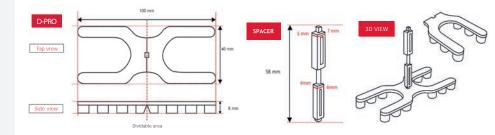
CHARACTERISTICS

- Eliminate thermal bridges.
- Alternative for bitumen strip.
- Removable shims.
- Material: recycled composit.
- Freeze resistant: -40°C.
- Heath resistant: 110°C.
- Poids: 2,350 kg.

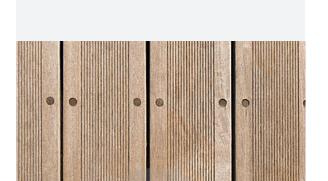


ADVANTAGES

- UV resistant and resistant to extreme temperatures.
- Significantly reduces the risk of deformation of the boards and shearing of the screws.
- Creates excellent ventilation between the boards and joists to improve the stability of the wooden deck.
- Removes water traps between the wooden boards and the joists reduces the risk of rotting.
- Spacers integrated and removable. Allows regular spacing of 4, 5, 6 or 7 mm between the boards of your wooden deck.
- Improves the comfort of the deck thanks to its shock absorbing characteristics.
- 100 % recyclable.
- Meets the requirements of DTU 51.4.



Manual







d x l [mm]	D-PRO [mm]	Art. Nr.	EAN code		
5 x 60 A2	8 x 100 x 40	HAP02040100A	5410439473736	100 x D-PRO 20 x 4 x 5 x 6 x 7 mm 200 x 5 x 60 mm	192 boxes
5 x 60 A4	8 x 100 x 40	HAP02040100AA4	5410439479271	100 x D-PRO 20 x 4 x 5 x 6 x 7 mm 200 x 5 x 60 mm	192 boxes
5 x 70 A2	8 x 100 x 40	HAP02040100B	5410439473743	100 x D-PRO 20 x 4 x 5 x 6 x 7 mm 200 x 5 x 70 mm	192 boxes
5 x 70 A4	8 x 100 x 40	HAP02040100BA4	5410439479288	100 x D-PRO 20 x 4 x 5 x 6 x 7 mm 200 x 5 x 70 mm	192 boxes

HAPAX ROCK SCREW FOUNDATION



HAPAX ROCK SCREW FOUNDATION



CHARACTERISTICS

- Replaces the concrete foundations.
- Permanent adjustment within a range of 35-250 mm
- Beam support.
- Extension: additionally up to 160 mm more height.
- Up to 5 lengths can be installed to 1 Hapax Rock for a total height of 112 cm.
- Head diameter: 123 mm for joist of 120x200 mm.
- Material: polypropylene.
- Freeze resistant: -50°C.
- Heath resistant: 90°C.
- Maximum weight per Hapax Rock: 1500 kg.

EXTENSION | 26 CM

HAP040140260





E-DRIVER HAP040100002





6 min / Rock

1 box

SCREW AID

HAP040100001

2000

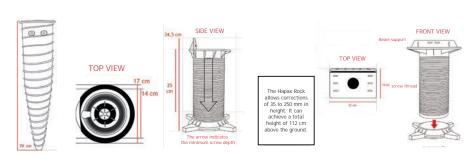


5410439473811

EAN code		
5410439473811	1	1 box

ADVANTAGES

- Weather-resistant.
- Completely removable and recyclable.
- Ecological: leaves no trace in the environment.
- Easy and fast installation.
- Simple installation by drilling a hole at a certain place in the ground using a manual or electric screw driver. It only takes a few minutes.
- Adjustable in height from 35-250 mm.
- The head has an integrated adjustable lever, for easy leveling.









d [mm]	l [mm]	Art. Nr.	EAN code		No.
140	700	HAP040140700	5410439473842	1	50 boxes

CALCULATION - DOUBLE CONSTRUCTION

Quick calculation for the number of supports: m² x 0,6

BEAMS FROM EXOTIC WOOD

Minimum section: 45*70 mm Distance between the beams: 1,20 m Distance between the beams: 1,50 m

BEAMS FROM CONIFEROUS OR DECIDUOUS TREES

Minimum section: 63*150 mm Distance between the beams: 1,50 m Distance between the beams: 2 m



G-DECK



HAPAX G-DECK TEMPLATE FOR MOUNTING DECK SCREW



CHARACTERISTICS

- Material: anodised industrial alluminium.
- Width: 80 mm.
- Overall length (open): 200 mm.
- Thickness: 6 mm.
- Adjustable: 90 à 200 mm.

ADVANTAGES

- Template for a fast and easy installation.
- Essential construction tool.
- Very precise alignment of the screws.
- Esthetical and professional result.

REFERENCE

pgb code	EAN13	
HAP030200001	5410439473774	1



HAPAX TOOL DECKING BOARD WRENCH



CHARACTERISTICS

- Dismountable and reversible.
- Material: anodized industrial alluminium.
- Weight: 1550 g.
- Powerfull: 20kg of pressures on the handle results in a force of 85 kg.
- Maximal force: 180 kg.

REFERENCE

pgb code	EAN13	
HAP030100001	5410439473750	1

HAPAX DRILL BIT WITH STOP FUNCTION



CHARACTERISTICS

- HSS M2 steel drill bit for hardwood drilling.
- HSS M2 steel cutter .
- Wings for collecting wood shavings.
- Bearing.
- Allen key screw for replacing drill bits.
- · Adjustment shim for milling depth.
- Drilling depth: max 30 mm (regulated)
- Cutter diameter:
 - ø4: 12mm | ø5: 12mm | ø6: 15mm
- Milling depth: adjustment in the range of 4 to 16 mm.
- Also for making holes with a diameter of 12 for wood plugs (ø 4mm and ø 6mm).

REFERENCES

pgb code	EAN13	
HAP030300040	5410439473781	1
HAP030300050	5410439473798	1
HAP030300060	5410439473804	1

INCLUDED

- 1 x drill
- 1 x socket key

HAPAX SPACER | 4/5/6/7 MM FOR 4 JOINT WIDTHS



CHARACTERISTICS

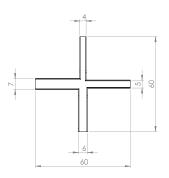
- Spacer: 4-5-6-7mm
- The wavy design prevents getting stuck between the boards.
- The spacings between the boards are regular.
- Consider the requirements of your timber supplier to determine the appropriate joint width.

INCLUDED

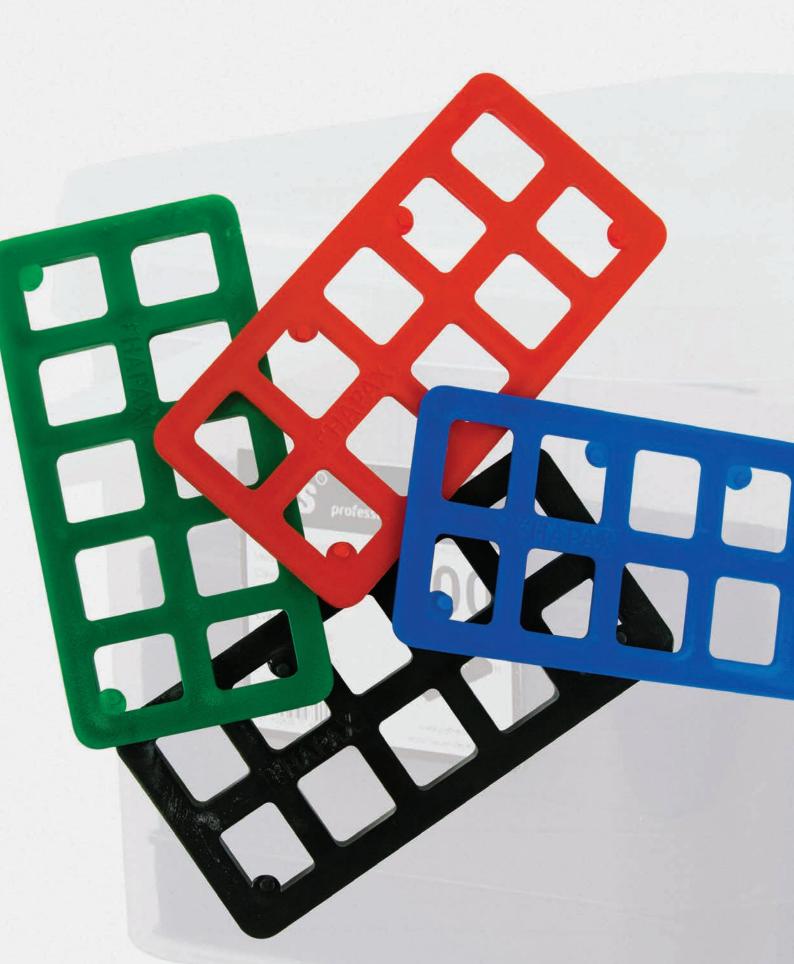
3 x spacers

REFERENCE

pgb code	EAN13		
HAP030400001	5410439476768	3	



HAPAX CALES



HAPAX PACKER SHIMS FOR WEDGING AND LEVELLING AT A LOW HEIGHT





d [mm]	w [mm]	l [mm]	Art. Nr.	EAN code	Colour		
1	22	95	HAP050100010	5410439473859		1000	72
2	22	95	HAP050100020	5410439473866		1000	72
3	22	95	HAP050100030	5410439473873		1000	72
4	22	95	HAP050100040	5410439473880		1000	72
5	22	95	HAP050100050	5410439473897		1000	72
1 - 5	22	95	HAP0501SET01	5410439473903	mixed	40 x 1 mm 40 x 2 mm 40 x 3 mm 40 x 4 mm 40 x 5 mm	189
1 - 5	22	95	HAP0501SET02	5410439473910	mixed	100 x 1 mm 100 x 2 mm 100 x 3 mm 100 x 4 mm 100 x 5 mm	112
	ALSO AVAILABLE IN DIY PACKAGING						

HAPAX HANGER SHIMS FOR WEDGING AND LEVELLING DURING VERTICAL CONSTRUCTION WORKS





d [mm]	w [mm]	l [mm]	Art. Nr.	EAN code	Colour		W.
1	40	55	HAP050200010	5410439473927		1000	72
2	40	55	HAP050200020	5410439473934		1000	72
3	40	55	HAP050200030	5410439473941		1000	48
4	40	55	HAP050200040	5410439473958		1000	48
5	40	55	HAP050200050	5410439473965		1000	40
1 - 5	40	55	HAP0502SET01	5410439473972	mixed	40 x 1 mm 40 x 2 mm 40 x 3 mm 40 x 4 mm 40 x 5 mm	189
1 - 5	40	55	HAP0502SET02	5410439473989	mixed	100 x 1 mm 100 x 2 mm 100 x 3 mm 100 x 4 mm 100 x 5 mm	50
ALSO AVAILABLE IN DIY PACKAGING							

HAPAX INTERLOCKING WEDGES FOR WOODEN SURFACES

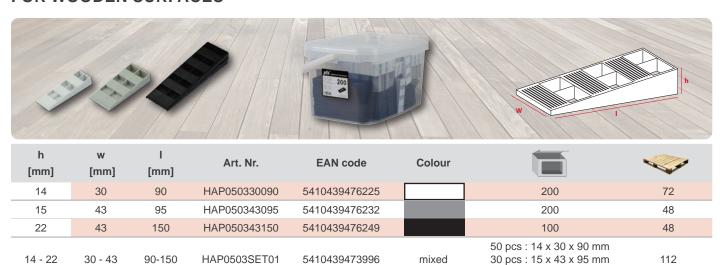
14 - 22

30 - 43

90-150

HAP0503SET02





5410439474009 mixed 60 pcs : 15 x 43 x 95 mm 50 50 pcs : 22 x 43 x 150 mm

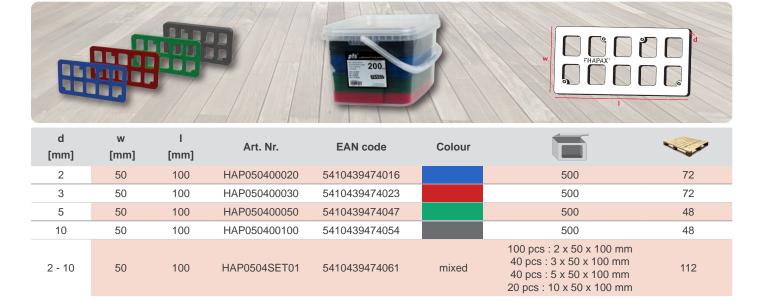
ALSO AVAILABLE IN DIY PACKAGING

ı

10 pcs : 22 x 43 x 150 mm 90 pcs : 14 x 30 x 90 mm

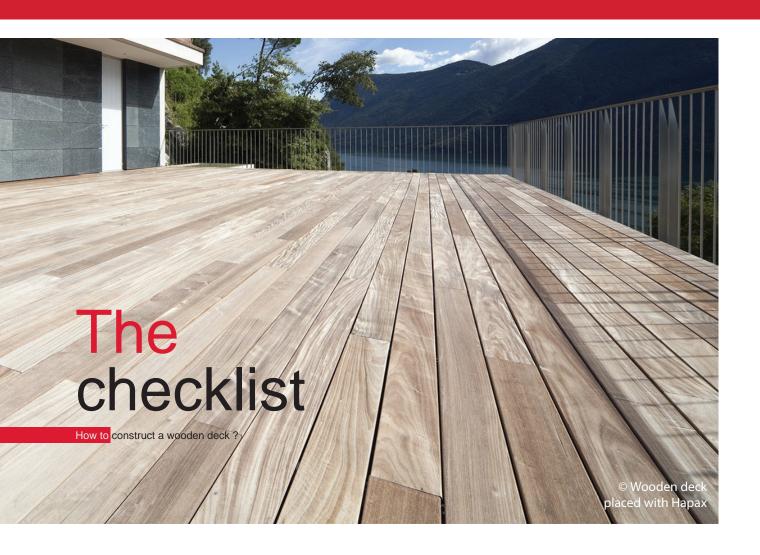
HAPAX HIGH DENSITY PACKERS FOR WEDGING AND LEVELLING HEAVY LOADS











INSTALLATION RECOMMENDATIONS

A quality wooden deck

ood, a noble and living material, is often exposed to intense stress when used during the installation process of a terrace: bad weather conditions, differences in humidity and temperature, moisture from underneath, UV, mechanical stress,

Achieving an outdoor terrace of quality, which is stable and lasts for a minimum of 20 years, requires great rigor in the design and choice of materials. Quality is a key issue to satisfy customers as well as it gives back the

nobility that a wooden deck deserves.

When placing a wooden deck, your choices about materials and implementation techniques will have a strong influence on two aspects:

Sustainability: A wooden deck can be degraded more or less quickly (between 5 and 30 years) under the effect of various biological circumstances (insects, moisture), depending on the quality of the materials, ventilation and compliance with the correct method of implementation.

Stability: Wood is subjected to weather, it swells and shrinks significantly, which can lead to deformation such as warp, uplift, cupping and bending, ... of the wooden decks.



THE WOOD

Choose the decking

Respect the width-thickness ratio of the wooden deck

The width of the deck should be a maximum of 7 times its thickness. For example : 21 * 7 = 147 mm maximum width. In case of non-compliance with this rule, the higher the risk of deformation of the decks.

Choose your decks carefully

Be careful when you choose your decks. Make sure the decks are not bent or cupped or show irregular patterns in the wood fibre.

Remember to check whether the thickness of your decks is in line with the thickness proposed by your wood supplier.

Check the dryness of the deck

Some species of wood have more grains than others: Cumaru, Yellow Balau, Massaranduba, It is necessary that these wood species are KD dried (Kiln Dried). On average, the dryness of the decks should be around 16 %. Check the dryness with your timber dealer and require the information to be stated on the invoice (in case of dispute, you will be protected). If necessary, you can use a moisture meter to check the dryness of your decks.

Choose the wood structure

Service class

The service class structure of the wood is mandatory or greater than that of the decking. It is easier to replace a deck board than a complete structure. It is better to focus more on the quality of the wood than the deck structure.

Ventilation

Never put the wood structure in direct contact with the ground to avoid premature rotting of the wood. Always use shims or polymer pads to isolate the joists on the ground. It is important to have some space between the deck and the substructure, by using a thermal bridge such as Hapax D-Pro or the invisible Hapax Fixing.

Set the distance between the joists

It is better to reduce the distance between the joists, because it will reduce the risk of deformation of the deck boards.

The joists

The minimum height and width of the joists has to be 40 x 60 mm.



DESIGN

General rules

Never place the wood in direct contact with the ground

The space between the decking and the ground allows the terrace to be well ventilated, which improves the stability and the life span of the terrace. Always use shims or polymer pads to isolate the joists on the ground. The distance between the decks is about 4 and 6 mm for a terrace that is about 10 cm high.

Create or maintain a drainage slope for rainwater

Make sure to provide a slope of 0,5 to 1 cm per meter.

Always create a decking frame

The decking frame is made of several joists, placed at a certain distance from each other, forming a rectangular structure. This structure offers more strength and stability to the wooden deck.

Double the joists

Always double the joists. It will offer better support to the wooden deck and lower the risk of water damage.

A terrace on soft ground



Use a geotextile

Start placing your geotextile on the ground to prevent the regrowth of plants through the terrace.

Use a fixed batten on the wall

When the terrace has to be attached to the house, you can use a fixed batten. This batten will function as a general reference for the entire terrace and it will serve as one of the primary support joists.

Use an environmental friendly construction

Use the Hapax Rock screw foundations instead of a concrete foundation for your terrace. The soil will remain intact and the resistance of the screw foundation is similar to the concrete one.

A roof terrace



Use shims or adjustable polymer pads

Never perforate the waterproof membrane of the roof to avoid the risk of water infiltrating the building. Use shims or adjustable polymer pads to isolate the joists on the waterproof membrane. The shims or pads make sure the membrane is not perforated and still allows drainage of the rainwater.

A terrace on hard ground



Use shims or adjustable polymer pads

When installing a terrace, it is necessary to use shims or adjustable polymer pads to isolate the joists on the floor.

Fixing the structure to the floor

In most cases you will drill holes in the floor to attach the joists using concrete screws or hammer nail plugs.



Hapax Rock screw foundation

INSTALLATION

General rules

The space between the deck boards

The spacing between the deck boards depends on the moisture content in the decks and the height of the deck. The higher the terrace, the lesser space between the deck boards. The average spacing is 4 to 6 mm for a terrace height of 10 cm.

Alignment

It is essential to treat the alignment of the first deck boards row. For this we will use a masonry cord. Check the alignment every 7 boards.

Use a thermal bridge

It is essential to use a thermal bridge between the decks and the joists to avoid moisture stagnation. For example: Hapax D-Pro, Hapax Fixing, ...

Fixing with screws







Choice of screws

It is mandatory to use special terrace screws to ensure a good performance of the screw in the decks. It is important to calculate the length of the screw: minimum 2 x the thickness of the deck. It is better to choose a longer screw than one that is too short.

Screwing instructions

The screw must be placed at least 2,5 cm from the edge of the decking boards.

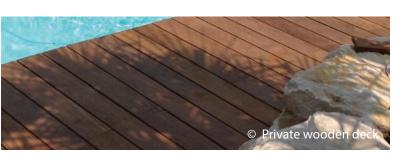
Finishing

For a perfect finish, we recommend pre-drilling the decking boards. This pre-drilling is imperative for hardwood screws with a density of 850 kg/m³. Also keep in mind the alignment of the screws. At this time, the Hapax G-Deck tool will come in handy.

Hidden fastener

Screw placement

Follow the instructions of the installation scheme.





FINISHING

General rules

Alignment between the deck boards

The decks should be aligned perfectly. They will have the same width and regular spacing.

The use of finishing decks

The finishing decks are used to hide the structure that hold the actual terrace. However, always make sure there is enough space for ventilation to protect the terrace from moisture. This finish gives the terrace a really professional look.

Sanding

The final sanding with 80 grit will eliminate any wood surface defects, such as oil stains, your pencil marks and splinters caused by sawing the decks.

Maintenance

Remove moss and debris

Once a year, during the spring, you will have to apply maintenance to your wooden deck. Use a brush to wipe of all the moss and debris. Once you have done that, use your pressure cleaner to remove the remaining dirt and stains.

Preserve the natural colour of the deck

Over time, the beauty of a natural wood deck can lose its lustre as the UV (ultraviolet) rays from the sun break down the wood's structure. If the deck has taken on a dull grey look, the problem may be easier to fix than it looks. You can clean your wooden deck with soap and water or bleach, or any other commercial powder or liquid concentrates on the market. This should solve the problem. After cleaning the deck, you can apply a finish that contains UV blockers and a pigment to keep the UV rays from turning the deck grey again.







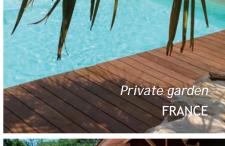
















Private garden FRANCE





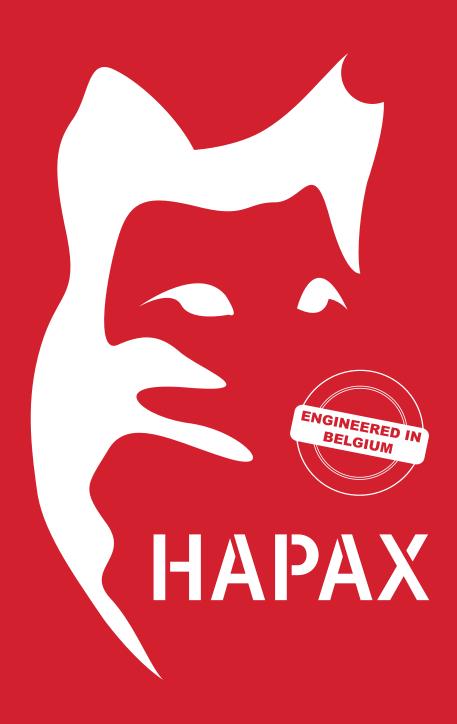






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pgb-Europe nv | Logistics center Gontrode Heirweg 170 | 9090 Melle, Belgium T: +32 (0)9 272 70 70 | F: +32 (0)9 272 70 99 www.pgb-europe.com | info@pgb-europe.com

