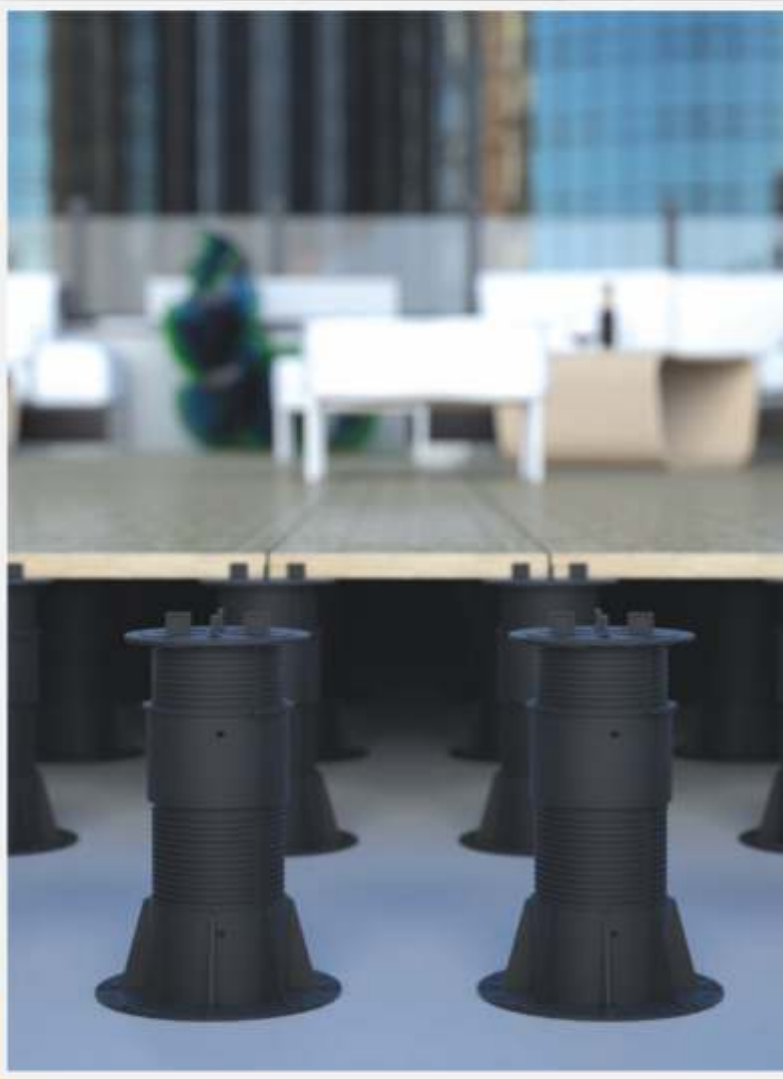




True North
STRUCTURAL SYSTEMS



PLASTIC

ADJUSTABLE

RAISED

FLOORING

PEDESTALS

PEDESTAL PAVER SYSTEMS

www.truenorthstructural.com

We clean
4,000 tons plastic waste
from nature with our annual production
capacity every year.

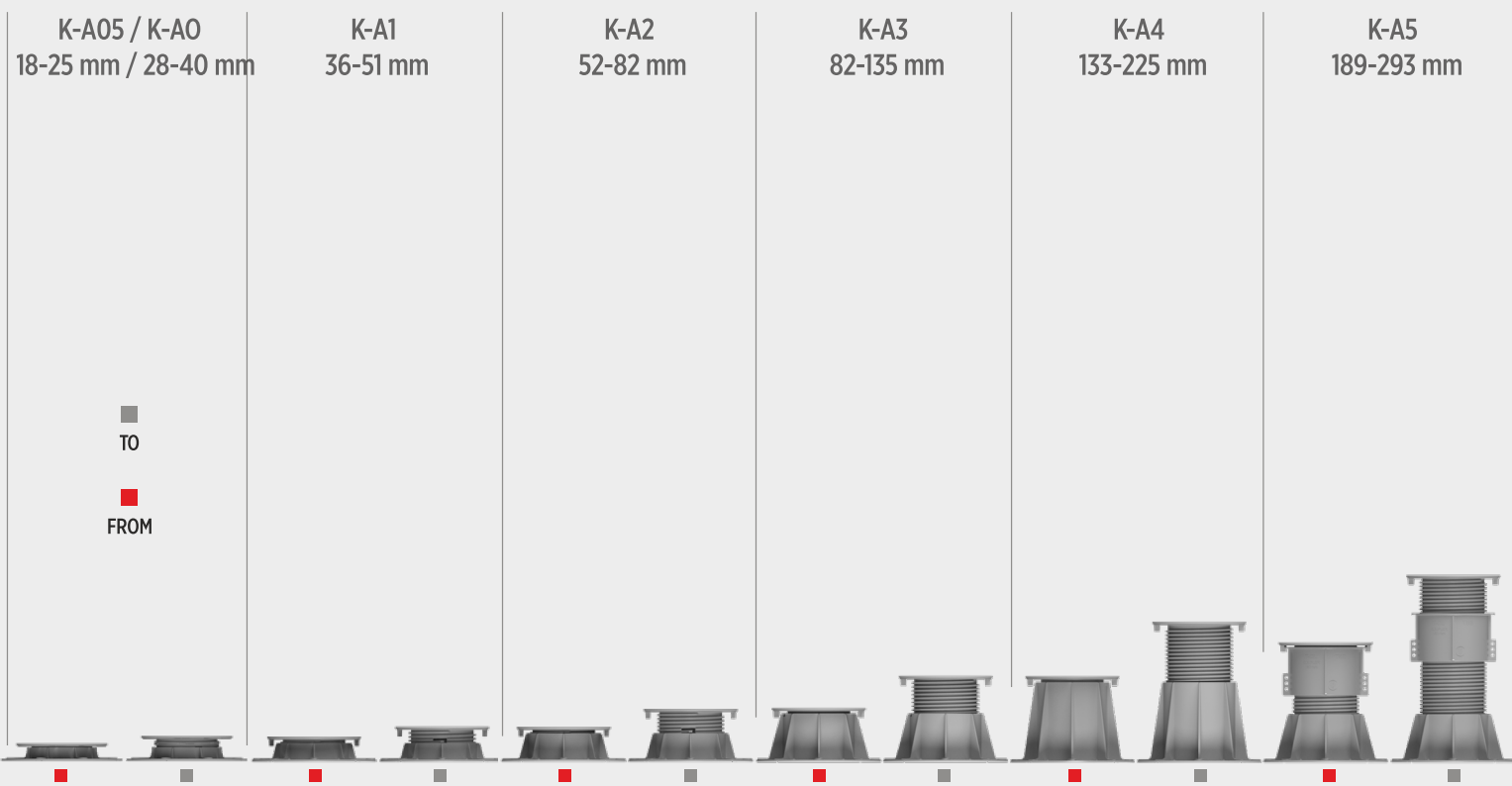
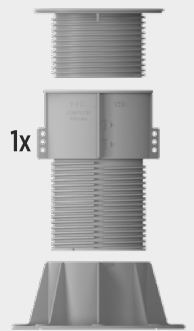


We consume 80% recycled raw material for our production.
The recycled raw materials used in our production and plastic waste collected from nature are transformed into products. These products are left in concrete for their use. Thus, its release to nature is prevented.
With our annual production capacity, approximately 4,000 tons of plastic waste is cleaned from nature every year.

BASE TYPES AND ADJUSTABLE INTERVALS

KAROAPP	RANGE	FROM	TO
K-A05	18 - 25 mm	18 mm	25 mm
K-A0	28 - 40 mm	28 mm	40 mm
K-A1	36 - 51 mm	36 mm	51 mm
K-A2	52 - 82 mm	52 mm	82 mm
K-A3	82 - 135 mm	82 mm	135 mm
K-A4	133 - 225 mm	133 mm	255 mm
K-A5	189 - 293 mm	189 mm	293 mm
K-A6	260 - 365 mm	260 mm	365 mm
K-A7	364 - 507 mm	364 mm	507 mm
K-A8	471 - 651 mm	471 mm	651 mm
K-A9	576 - 795 mm	576 mm	795 mm
K-A10	682 - 939 mm	682 mm	939 mm
K-A11	786 - 1083 mm	786 mm	1083 mm

K-A3 + K-CL



BASE TYPES AND ADJUSTABLE INTERVALS

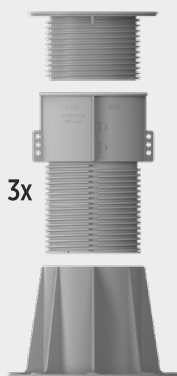
K-A4 + K-CL



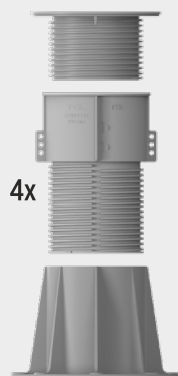
K-A4 + 2xK-CL



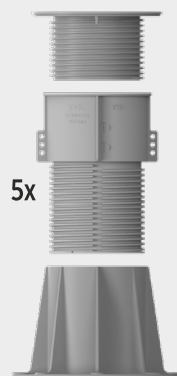
K-A4 + 3xK-CL



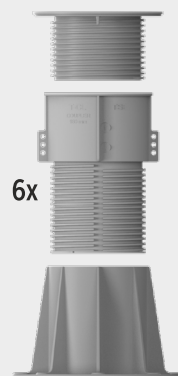
K-A4 + 4xK-CL



K-A4 + 5xK-CL



K-A4 + 6xK-CL



K-A6
260-365 mm

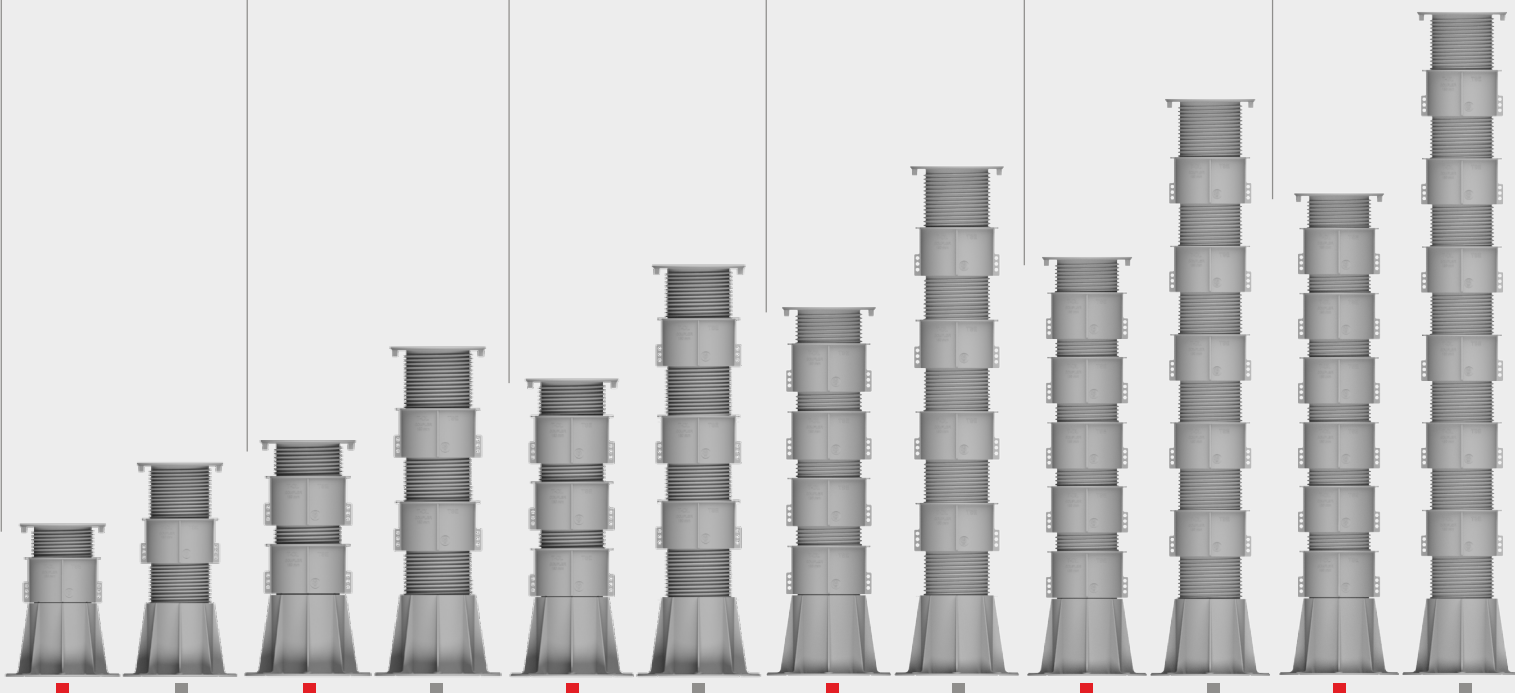
K-A7
364-507 mm

K-A8
471-651 mm

K-A9
576-795 mm

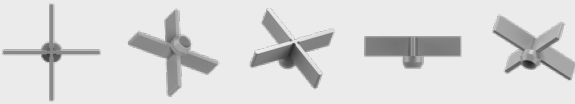
K-A10
682-939 mm

K-A11
786-1083 mm



PAVING ACCESSORIES

K-SP



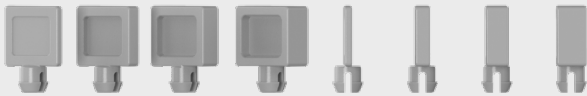
It is + shaped joint strip which is fixed on the top of Pedestals head to make space between surface covering materials such as tiles or pavers. Thickness are variable such as 2-3-4 and 5 mm.

K-SP Straight



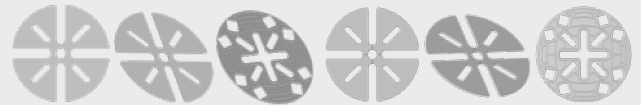
K-SP Straight is a spacing strip for big size tiles and make gaps between them when there is no corner. It has variations 3-4 and 5 mm.

K-ST



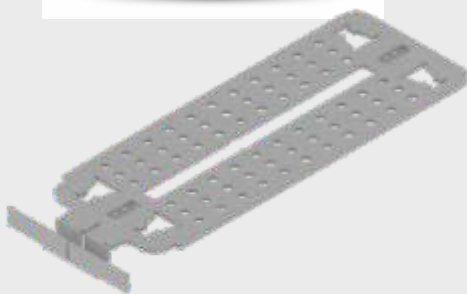
It is an alternative solution for letting space between surface covering materials and it can be found in 2-4-6 and 8 mm. thicknesses, it is to be used with 360 degrees and used with more aesthetic special design surface covering materials.

K-S



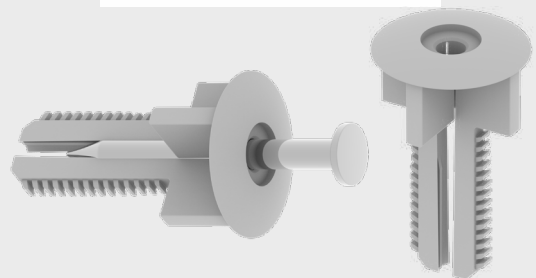
It is 2 mm. or 1 mm. shim for rigid surface covering materials to compensate differences at the bottom of floor covering material. While stabilizing pavers it also helps to reduce acoustic discomfort, it can be divided into 4 parts and can be used as additional levelling product too.

K-WS



It can be used with all ranges of Karoapp pedestals. It creates a gap between pedestal and wall. So it enables perfect water flow even in hard weather conditic.(Heavy rainfall, snow etc.)

K-WP

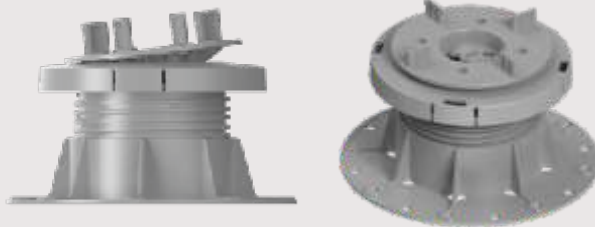


It prevents to the paving systems to lifting in case of strong winds. K-WS is available different colors.

PAVING ACCESSORIES



K-RSC P



It is a raised flooring accessory that enables to compensate slopes up to %7 degree, which come from the ground. It has 3-4-5mm fixed spacer on.

APPLICATION PHOTOS



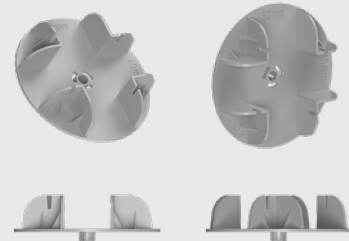
DECKING AND FRAMING ACCESSORIES

K-AR



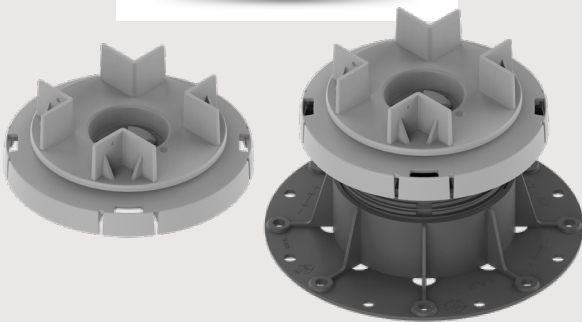
K-AR is beam mounting accessory which can turn around 360 degrees and easily attached into holes on top of our pedestals head. Fixing it with a screw to the beam gives you very firm frame to support deck boards.

K-AX



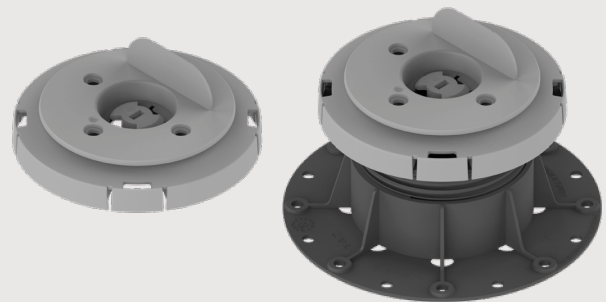
K-AX is a deck board support frame assembly accessory with the ability to hold for 40mm. – 50mm ones.

K-RSC X



It is an additional accessory which is fixed on top of Karoapp pedestals to compensate up to 7% slopes on the ground.

K-RSC D



Similar function as K-RSC X but here you can use beams up to 80 mm.

K-AW



K-AW is deckboard or paver supporting frame assembly accessory which is screwed to the beam and attached to the hole on top of our pedestals head and enables to arrange distance between pedestal support.



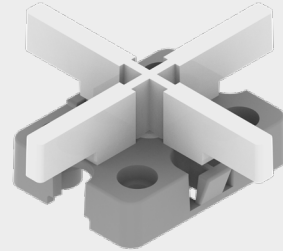
OTHER ACCESSORIES

K-AL



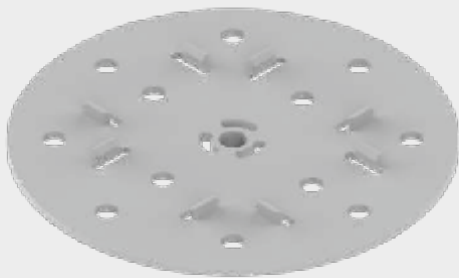
It offers a solution which adapted to all kinds of ceramic and terrace board applications with high strength and reliability as well as lightness.

K-AJ



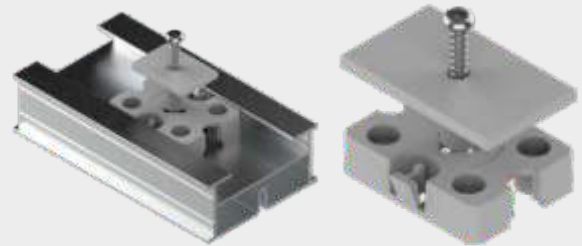
It can be assembled all kind of pedestals easily. It gains time saving and increasing the stability of all structures.

K-AP

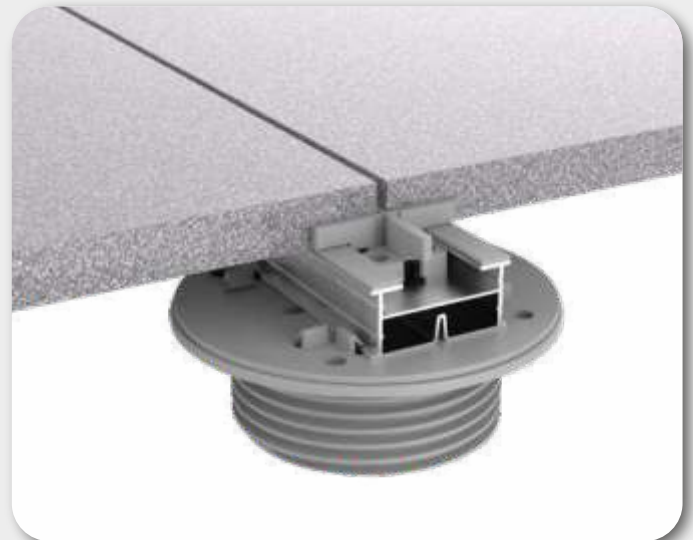
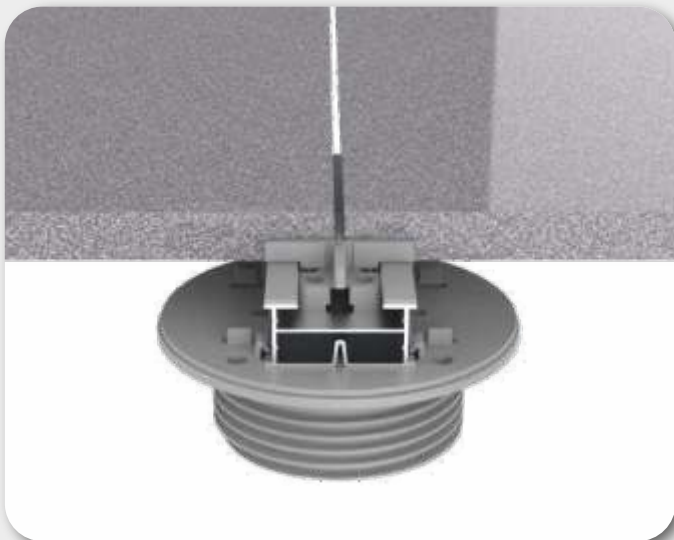


K-AP is locked on the center hole of pedestal which fixes "K-AL" (Aluminium Joint) on the pedestal.

K-AD

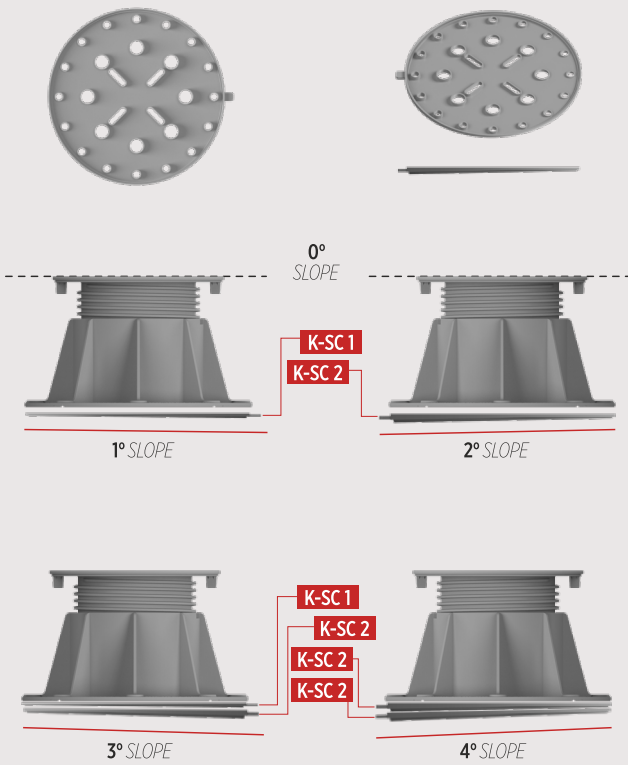


It fixes aluminium and deckboard eachother.



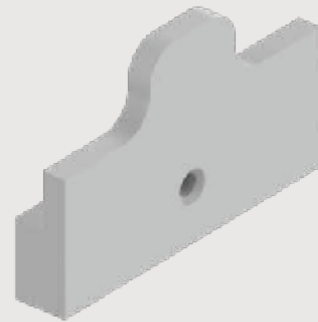
OTHER ACCESSORIES

K-SC



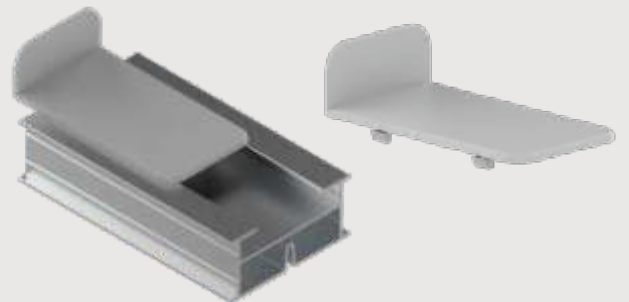
It is slope correcting accessory which is used under pedestals, it has variations for 1% and 2%. It can also be used on top of each other up to 5 layers.

K-AS



It is a horizontal aluminum ending apparatus.

K-AT

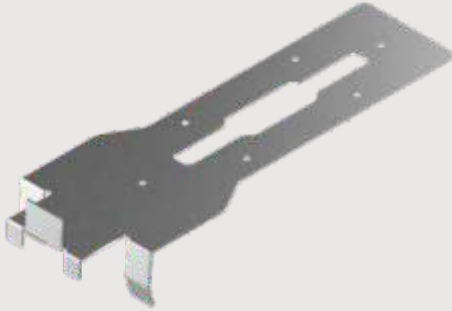


It is a vertical aluminum ending apparatus.



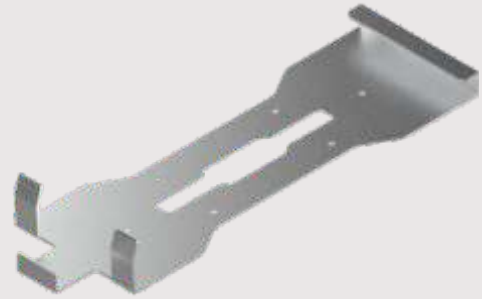
OTHER ACCESSORIES

K-ET

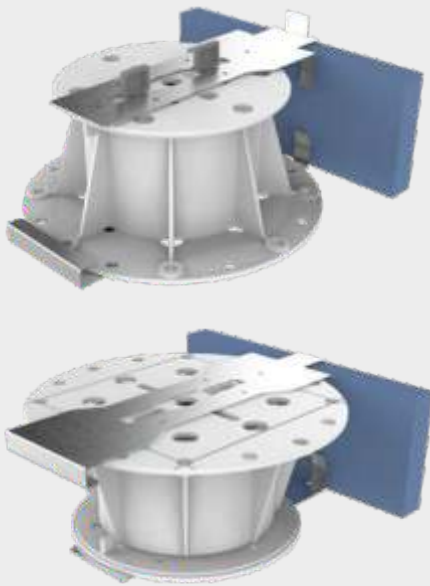


It is upper part used with K-EB that provides vertical edge of the platform in paving areas without wall.

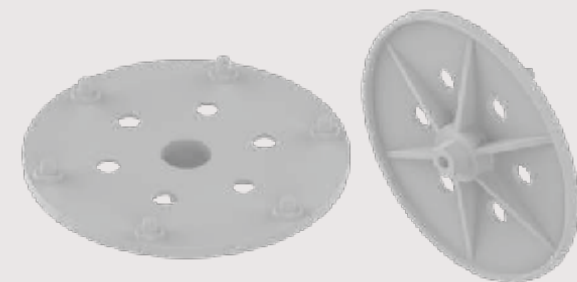
K-EB



It is base part used with K-ET that provides vertical edge of the platform in paving areas without wall.



K-TT



K-TT is turning tools is an accessory which is developed to shorten the time to spend on regulating the height of our adjustable pedestals

K-L

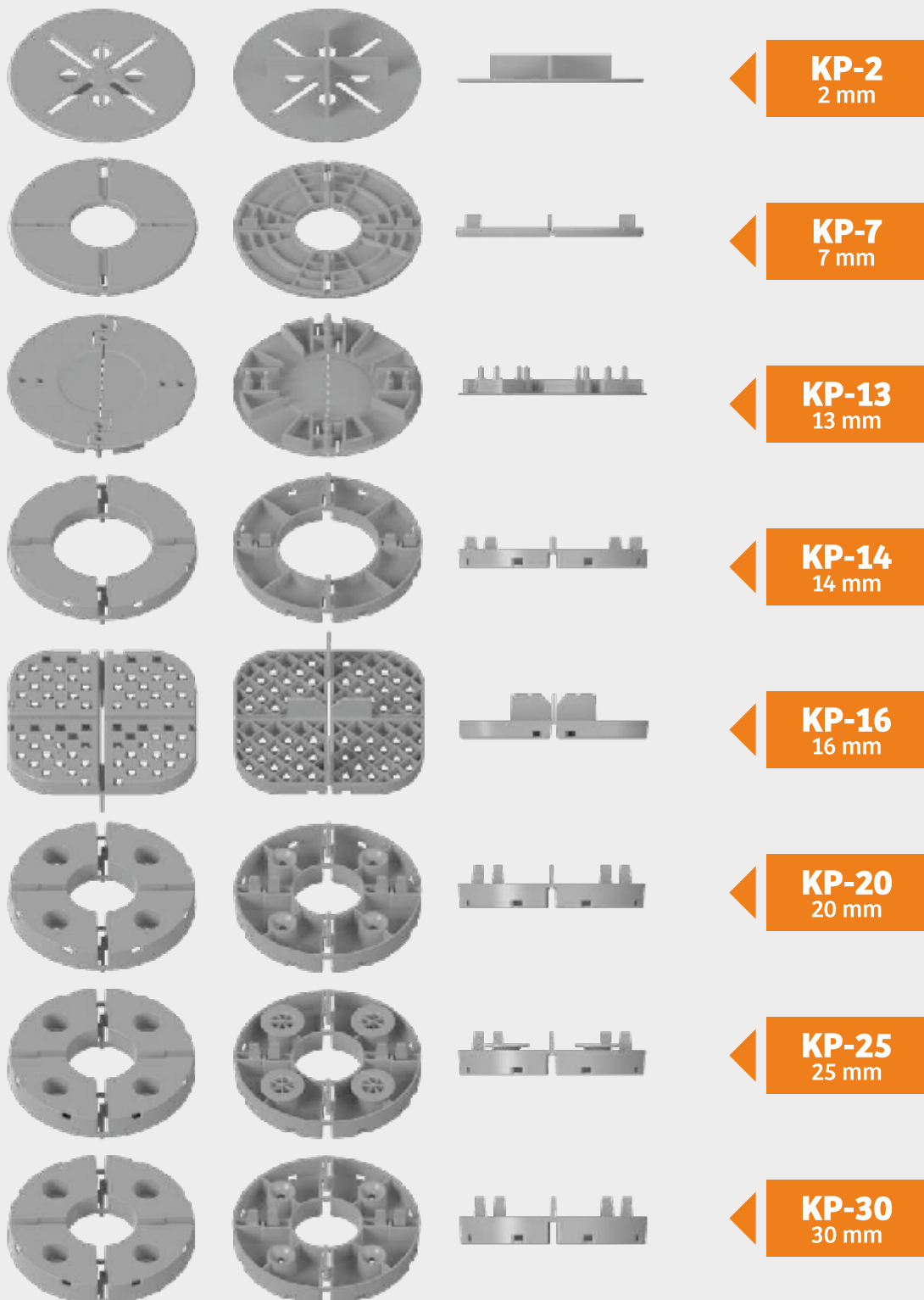


Fixing Ring: It fixes garder between base and coupler parts for high height applications.

FIXED PEDESTALS

FIXED BASES

*Fixed bases are used below floor tile.
The heights of the fixed types is not adjustable. It is preferred mostly for terraces.*

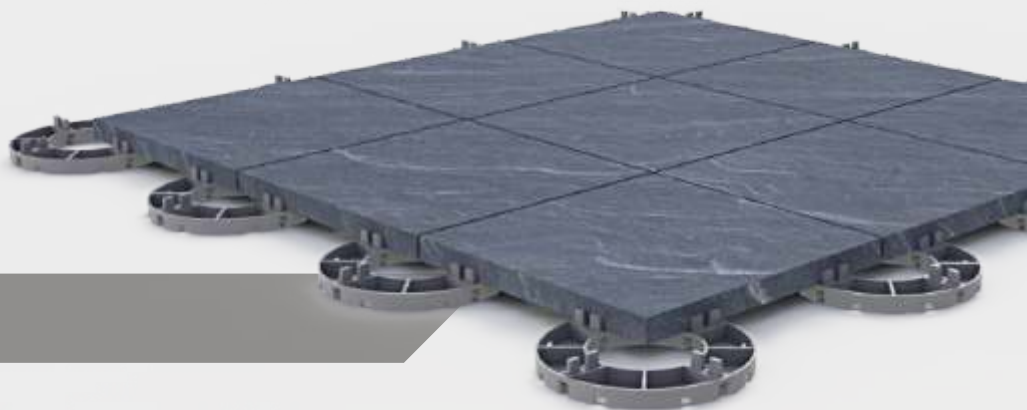
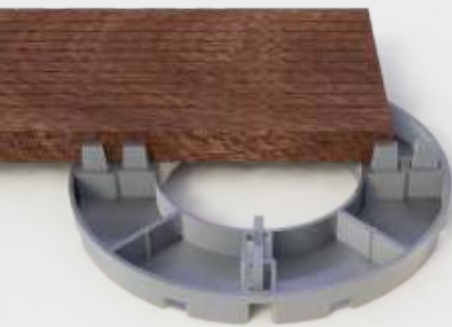


CALCULATIONS

FIXED KAROAPP

FIXED BASES PROVIDES MINIMUM CONSUMPTION

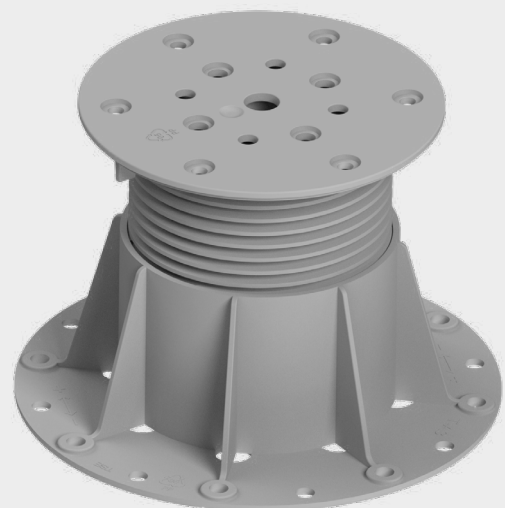
TILE SIZES	SQM
30X30 CM	13,11
40X40 CM	6,25
30X60 CM	5,56
40X60 CM	4,17
50X50 CM	4,00
60X60 CM	2,78



ADJUSTABLE KAROAPP

IF TILE SIZES INCREASE, THE CONSUMPTION RATE REDUCES

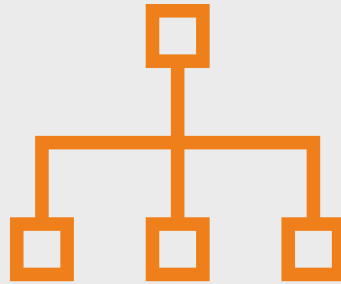
TILE SIZES	SQM
30X30 CM	13,80
40X40 CM	7,80
30X60 CM	6,70
40X60 CM	5,20
50X50 CM	5,00
60X60 CM	3,50



APPLICATIONS



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True North

STRUCTURAL SYSTEMS



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