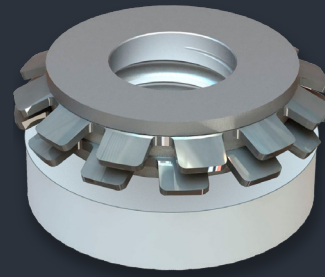




KEEP-NUT™ SINK ANCHOR GUIDE

Specialinsert®

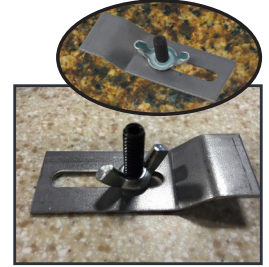








KEEP-NUT™ Sink Anchor Inserts for Under-Mount Sinks

KEEP-NUT™ Press-In self-anchoring sink fasteners are the strongest and most efficient mounting system for attaching undermount sinks to granite, quartz, solid surface, porcelain, and a variety of other hard surfaces. Originally designed to support building facades, vertical wall panels and furniture, the **KEEP-NUT™** also offers exceptional performance for sink mounting.

- Quick Assembly by Pressure
- No Need for Resins or Adhesives
- Strongest Anchor on the Market
- Save Time & Money
- Can be drilled with standard tools (CNC, Grinder or by Hand)
- Average Strength of 562 lbs per Insert
- Crowns (or Teeth) Provide Axial Strength and Flex, Providing Higher Strength



- Works on:**
-  GRANITE
 -  MARBLE
 -  ENGINEERED STONE
 -  UHPC
 -  PORCELAIN
 -  SOLID SURFACE
 -  GLASS
 -  COMPOSITES

Drilling Methods: CNC (All Surfaces)



Hand Drill (Solid Surface)



KEEP-NUT™ Drilling Machine (All Surfaces)

KDM110
KEEP-NUT™ Drilling Machine

Use 11.8 drill bits only

CCH-KN-KDM110
(Vacuum Drilling Machine w/Polisher)

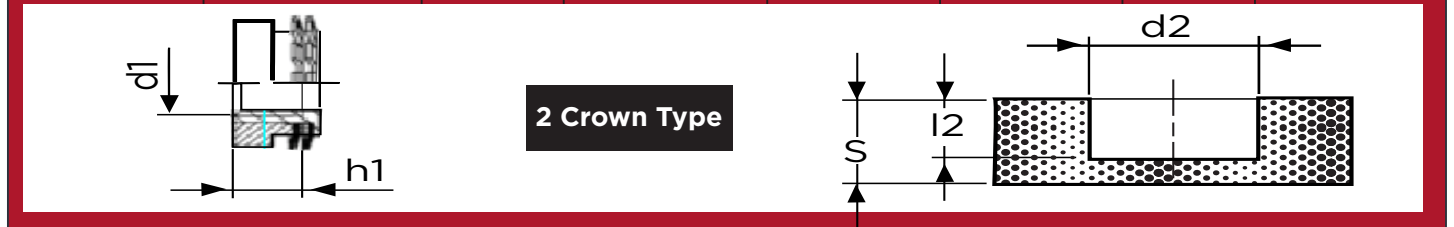


Which Bit is Right for Me?

Type of Bit	Drilling Method	Surfaces
11.8 mm 5/8-11 Thread Grinder Bit	KEEP-NUT™ Drilling Machine	Natural/Engineered Stone
11.8 mm 1/2 GAS CNC Bit	CNC	Natural/Engineered Stone
11.4 mm 5/8-11 Thread Grinder Bit	Manual (without KEEP-NUT™ Drilling Machine)	Natural/Engineered Stone
11.8 mm Hand Drill / Drill Press Bit	Manual	Solid Surface/Plastics

KEEP-NUT™ Insert & Pull-Out Strength

Part	Minimum Surface Depth(s)	Thread (d1)	Hole Depth (l2)	Hole Diameter (d2)	Threaded Post Depth (h1)	Number of Crowns	Average Pull-Out Strength
IM2S/P14-.20/H6	0.34" 8.5 mm	1/4-20	0.26" 6.5 mm	11.8 mm	0.22" 5.5 mm	2	562 lbf 2.5 kN



KEEP-NUT™ Parts and Kits

As a fabricator you may want to purchase all items from us or just the **KEEP-NUT™** Inserts by themselves, see part numbers and kits below:

By **Specialinsert™**

Individual Items:

KEEP-NUT™ SKU: IM2S/P1.4-20/H6		1M2S/P1.4-20/M6—2 crown KEEP-NUT™ 1/4 - 20" thread pictured left / <i>Part numbers ex: (Type/Thread/Height Code)</i>
Z-Shaped Sink Clips SKU: CCH732G		Z-Shaped Sink Clip used to support the undermount Sink
Allen Posts SKU: CCH-KNPOST-1/4-20X1		1/4-20 Thread x 1-1/4" Length Male Posts <i>Additional 1-1/2"L Post, 1/4-20 Thread sizes available 1-3/4"L Post, 1/4-20 Thread</i>
Wingnuts SKU: CCH730S		1/4-20 Thread Wingnut
Star Washers SKU: CCH731		1/4-20 Thread Flat Star Washer
Lock-Nuts SKU: CCH734K		1/4-20 Thread Lock Nut (Optional, replaces Wingnut & Star Washer)

Drill Bits & Installation Accessories:

11.8 mm CNC Drill Bit SKU: CCH-KNBITGRI-11.8MM		11.8 mm Diameter 1/2 GAS CNC Drill Bit for Drilling Natural Stone and Quartz
11.8 mm Manual Stone Drill Bit w/Stop Collar SKU: CCH-KNBITGRI-11.8MM		11.8 mm Diameter, 5/8-11 Thread Manual Drill Bit for use w/ KEEP-NUT™ Drilling Machine
11.8 mm Hand Drill Bit w/Stop Collar SKU: CCH-KNBITGRI-11.8MM		11.8 mm Diameter Hand Drill Bit for Solid Surface and Plastics
Go/No-Go Hole Tester/Depth Gauge SKU: CCH-KNKSET-1/4		Tool used to check the diameter and depth of each drilled hole prior to pressing-in KEEP-NUT™ (highly recommended when manually drilling)
Insertion/Setting Tool SKU: CCH-KNGAUGE		Insertion tool for KEEP-NUT™ to deflect impact from mallet when pressing KEEP-NUT™ into surface.

Full Sets:

KEEP-NUT™ Starter Kit For Undermount Sinks

Full KEEP-NUT™ Set SKU: CCH-KEEPNUT-1/4-KIT		All items needed for KEEP-NUT™ Sink Anchors Including: <ul style="list-style-type: none"> • IM2S/P1.4-20/H6 KEEP-NUT™ • 1 1/4" Length Post • Z-Shaped Sink Clip • Wingnut and Washer
Full KEEP-NUT™ 100 pc Starter Set w/Tooling SKU: CCH-KEEPNUT-STRKIT 1 <small>Use 11.8 drill bits only with KEEP-NUT™ DRILLING MACHINE</small>		KEEP-NUT™ 100 pc kit includes: <ul style="list-style-type: none"> • 100—IM2S/P1.4-20/H6 KEEP-NUT™ • 100—1 1/4" Length Post • 100—Z-Shaped Sink Clip • 100—Wingnut and Washer <ul style="list-style-type: none"> • Drill Bit of Choice • Go-No-Go Hole Tester • Setting Tool
Full KEEP-NUT™ 500 pc Starter Set w/Tooling SKU: CCH-KEEPNUT-STRKIT 5 <small>Use 11.8 drill bits only with KEEP-NUT™ DRILLING MACHINE</small>		KEEP-NUT™ 500 pc kit includes: <ul style="list-style-type: none"> • 500—IM2S/P1.4-20/H6 KEEP-NUT™ • 500—Z-Shaped Sink Clip • 500—IM2S/P1.4-20/H6 KEEP-NUT™ • 500—Z-Shaped Sink Clip <ul style="list-style-type: none"> • Drill Bit of Choice • Go-No-Go Hole Tester • Setting Tool

KEEP-NUT™ Drilling Machine

KDM110 —KEEP-NUT™ Drilling Machine w/Polisher

- Vacuum-foot for secure attachment to rough or even vertical surfaces
- Drill holes in granite for sink install
- Water cooled and air-operated
- Fast, efficient drilling on hard surfaces
- Lightweight and easy to operate
- Built in depth stop for precise, repeatable results



Use 11.8 drill bits only with
**KEEP-NUT™
DRILLING MACHINE**

1. Alpha High Performance Pneumatic Polisher used for Drilling, Wet Polishing & Profiling
2. 15 ft. Central Water Feed Hose, Water Inlet: 1/8" BSPP
3. 15 ft. Air Hose, Requires 85 PSI, Air Inlet: 1/4" BSPP
4. Vacuum Base for Precision Drilling
5. 5/8-11 Thread Spindle with 11.4mm Manual **KEEP-NUT™** Drill Bit for **KEEP-NUT™** Drilling
6. Stopper for Precision Drill Depth

SKU: CCH-KN-KDM110
(Vacuum Drilling Machine w/Polisher)

SKU: CCH-KN-KDM51
(Vacuum Drill Stand Only)

SKU: CCH-KN-KDM680C
(Modified Alpha AIR-680 Polisher Only)

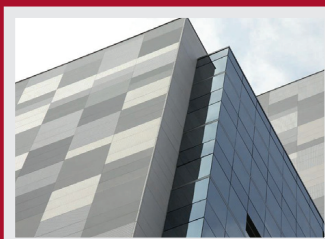


Supports up to 562 lbs. per anchor

Although the **KEEP-NUT™** anchoring system works excellent with CNC drilling, a qualified fabricator can achieve accurate, repeatable holes using manual equipment with the proper tooling. The following guidelines should be followed for best results.

KEEP-NUT™ CNC set up information:

- Hole Diameter 12mm (+/-2mm)
- Bit Diameter 11.8mm
- Depth: 6.5mm (.26")
- RPM 3500
- Feed rate 1.5 in./min.
- Anchor placement:
-approx. 2" from cut out on center



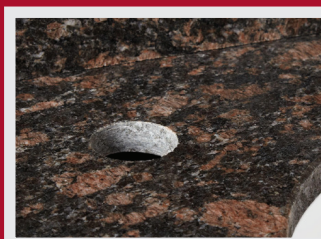
Ventilated Facades



**Under-mount
Sink Anchor**



**Panel and Ceiling
Hanging**



Faucet Hole Drilling

KEEP-NUT® INSERTS

Keep-Nut® is a press-in threaded insert that utilises a mechanical anchoring feature, to provide permanent threads in panels made of marble, granite or other stones, as well as composites, carbon, Corian®, HPL, glass and others solid surface materials.

Keep-Nut is manufactured in stainless steel and consists of a threaded bush, a set of toothed spring washers (crowns), and a plastic ring holding the parts together. Available in different lengths, with or without flange, to fit several different panel thicknesses, Keep-Nut can be installed quickly since the user simply needs to drill the material with the correct hole diameter and press-in the insert. Keep-Nut can also be customised with different versions and sizes, to meet specific customer requirements.

The Keep-Nut insert is specifically developed to fasten ventilated façades, wall-coverings, décor and interiors, furniture, kitchen and sanitary elements, as well as a variety of other applications.

Keep-Nut inserts have several advantages compared to other fasteners for stone and solid materials. The preparation needed is just a cylindrical hole – an undercut hole is not required – which means that standard tools can be used. In addition, assembly by pressure is quick and easy and does not require use of any additional resins or adhesives. Keep-Nut inserts can be used for hidden assemblies without any protruding parts, facilitating the handling and installation of a variety of materials.

In use, the crowns are engaged by axial force, acting radially against the hole wall, effectively permanently locking the insert in place. In addition, the internal thread does not run completely through the bush, which prevents extraction as a result of the use of an excessively long screw.

Keep-Nut is a trademark of SPECIALINSERT S.r.l., Corian is a trademark of E. I. du Pont de Nemours and Company.



Comparison of results from tests carried out on a range of materials.

Material	Keep-Nut Type	Average pull-out load on a single insert (lb)*
Granite 20mm—.79"	SPE-IM4S/**/H8.5	1080
Marble 20mm—.79"	SPE-IM4S/**/H8.5	848
Travertine 20mm—.7"	SPE-IM4S/**/H8.5	496
Fibre cement (high density) 12mm—.47"	SPE-IM4S/**/H8.5	606
Fibre cement (high density) 10mm—.39"	SPE-IM4S/**/H8.5	526
Fibre cement (high density) 8mm—.31"	SPE-IM2S/**/H6	275
HPL 12mm—.47"	SPE-IM4S/**/H8.5	1192
HPL 10mm—.39"	SPE-IM4S/**/H8.5	1347
HPL 8mm—.39"	SPE-IM2S/**/H6	595
Corian 12mm—.47"	SPE-IM4S/**/H8.5	1067
Corian 10mm—.39"	SPE-IM2S/**/H6	650
Agglomerate stone 15mm—.59"	SPE-IM4S/**/H8.5	672
Tempered glass 5mm—.19"	SPE-IM1S/**/H5	165

* Tests were carried out under laboratory conditions. Pull-out figures are indicative only and are offered for guidance purposes. It is recommended that you undertake your own tests in the actual application panel material.



1 Prepare hole in base material to correct specification.



2 Verify hole diameter using Go/No-Go gauge. Check hole depth against reference line on Go side of gauge.



3 To ensure correct installation it is recommended that a threaded mandrel is used. Fully screw on the insert and drive into the hole.



4 Unscrew the mandrel and the insert is installed and ready for use.

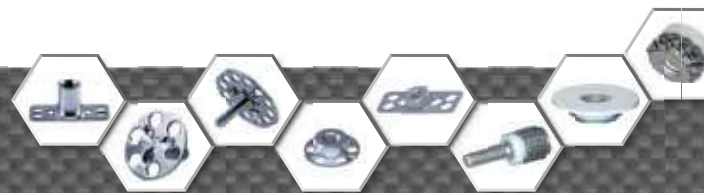


5 Example assembly

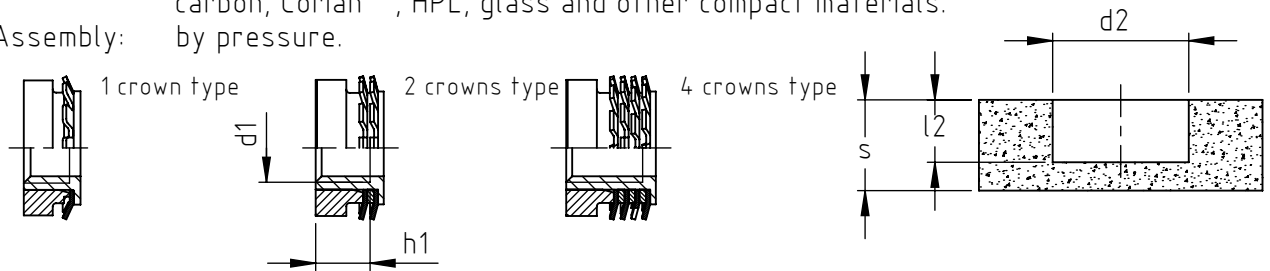


Advantages

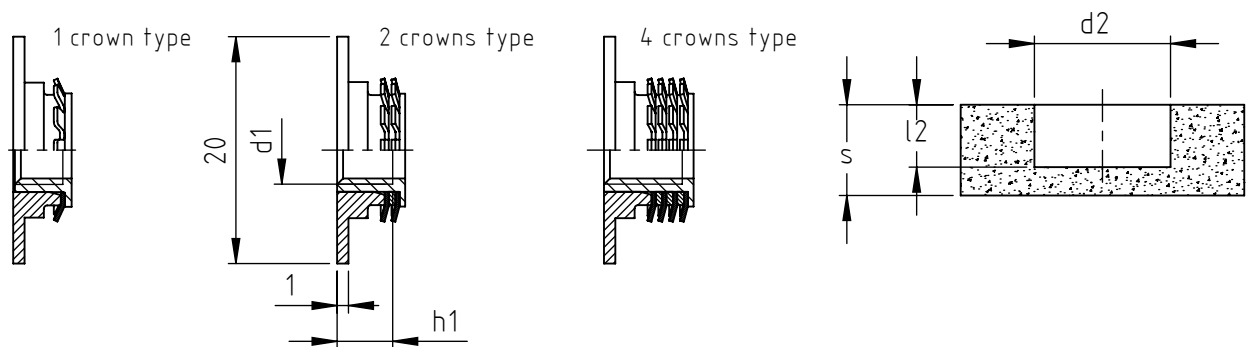
- Simple hole preparation
- Quick installation
- No need for resins or adhesives
- Radial force is produced only while the insert is under tensile load. The crowns spread the load into the parent material, allowing large loads to be carried
- Thread stops before end of insert, avoiding extraction as a result of the use of an excessively long bolt



Application: marble, granite and stone materials, as well as on composites, carbon, Corian[®], HPL, glass and other compact materials.
Assembly: by pressure.



code	grip min. ** S	thread d1	length thread h1	hole diameter d2 +0,2/-0,2	hole depth l2 +1,0/-0,0	number crowns	average assembly press-in force * kN	average pull-out strenght * kN
IM1S/P1-4.20/H5	8	UNC1/4-20	4,5	12	5,5	1	0,2	0,9
IM2S/P1-4.20/H6	8,5	UNC1/4-20	5,5	12	6,5	2	0,4	2,5
IM4S/P1-4.20/H8.5	11	UNC1/4-20	7,5	12	9	4	1	3,5
IM4S/P1-4.20/H14.5	17,5	UNC1/4-20	14	12	15,5	4	1	4,2



code	grip min. ** S	thread d1	length thread h1	hole diameter d2 +0,2/-0,2	hole depth l2 +1,0/-0,0	number crowns	average assembly press-in force * kN	average pull-out strenght * kN
IM1T/P1-4.20/H5	7	UNC1/4-20	4,5	12	4,5	1	0,2	0,5
IM2T/P1-4.20/H6	7,5	UNC1/4-20	5,5	12	5,5	2	0,4	1,7
IM4T/P1-4.20/H8.5	10	UNC1/4-20	7,5	12	8	4	1	2,9

Non binding dimensions, expressed in mm.

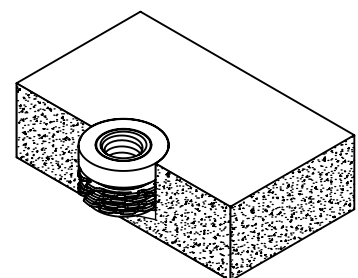
* Values reported above are indicative and not binding as results from laboratory tests that might not be repeatable in different conditions.

** "S" values is variable and related to the characteristics of receiving material. It is recommended to perform assembly test to define the correct value.

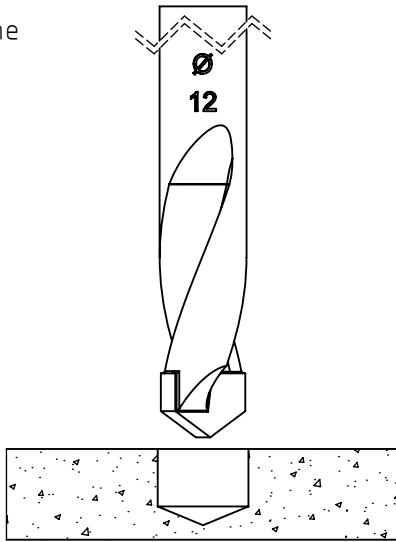
 Standard

 On demand

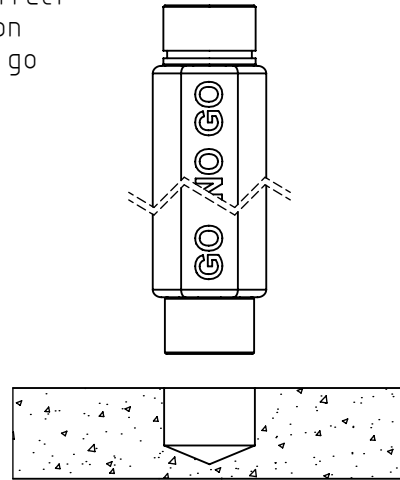
Material: bushing: stainless steel Finishing: natural
 crowns: stainless steel
 body: plastic



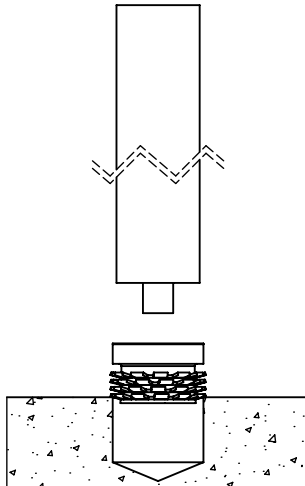
Prepare the hole in the receiving material.



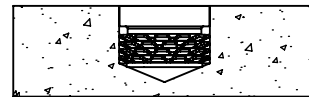
Check the correct hole dimension with a go/no go gauge.



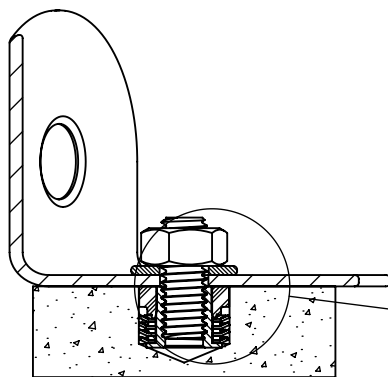
Install the insert by pressure.



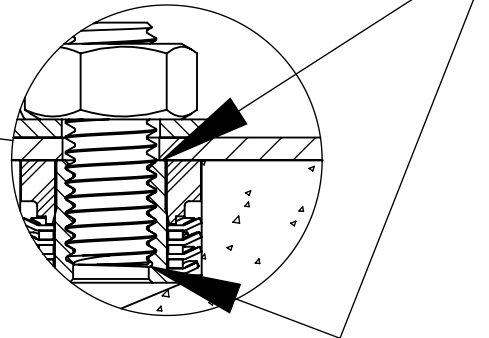
The insert is ready for the assembly.



The insert is structurally fastened and assembled.



For a proper assembly it is recommended to screw the pin on the total length of the useful thread and that the element to be fixed is in contact with the internal metal bush of the insert Keep-Nut



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