Specialinsert®

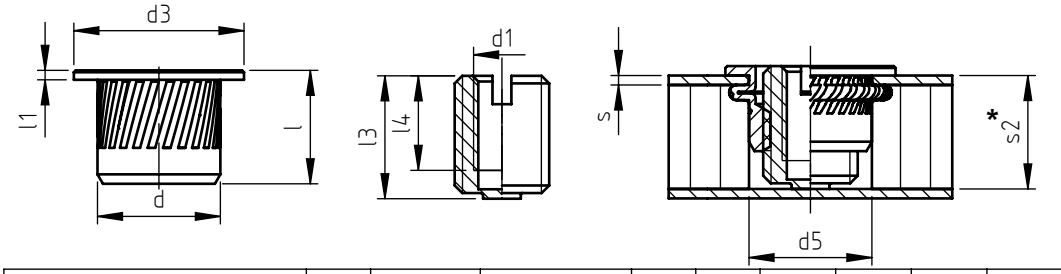
THREADED TUBULAR RIVET NUT FOR SANDWICH PANEL

Deform-nut series TC/SC/1 and TF/SC/1 -Patented-

Application: on sandwich panel.

Assembly: by manual or pneumatic tools with the aid of structural adhesives.

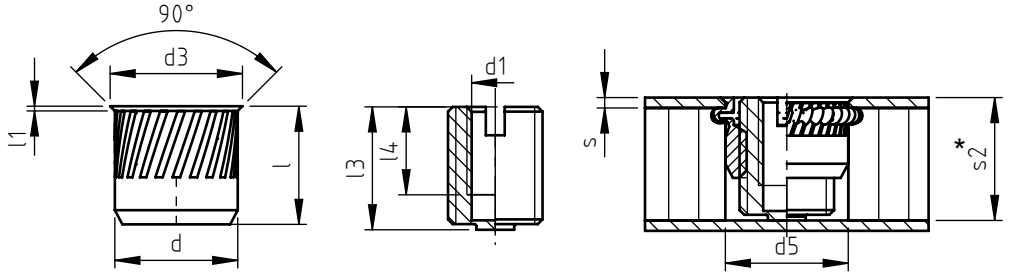
CYLINDRICAL HEAD



* Dimension s2 variable according to the s thickness and adjusting bush setup.

code	d1 6H	s skin thickness	s2 * min.panel thickness	l3	l4 min.	l	d	d3	l1	d5 +0,15/0
TC/DM10__ZI-M6/10__	M6	0,5 ÷ 2,0	10	10	5,5	10,5	13	18	1	13
TC/DM10__ZI-M6/12,5__			12,5	12,5	8					
TC/DM10__ZI-M6/15__			15	15	10,5					
TC/DM10__ZI-M6/17,5__			17,5	17,5	13					
TC/DM10__ZI-M6/20__			20	20	15,5					
TC/DM10__ZI-M6/22,5__			22,5	22,5	18					

LOW PROFILE HEAD



* Dimension s2 variable according to the s thickness and adjusting bush setup.

code	d1 6H	s skin thickness	s2 * min.panel thickness	l3	l4 min.	l	d	d3	l1	d5 +0,15/0
TF/DM10__ZI-M6/10__	M6	0,5 ÷ 2,0	10	10	5,5	10,5	13	14,5	0,9	13
TF/DM10__ZI-M6/12,5__			12,5	12,5	8					
TF/DM10__ZI-M6/15__			15	15	10,5					
TF/DM10__ZI-M6/17,5__			17,5	17,5	13					
TF/DM10__ZI-M6/20__			20	20	15,5					
TF/DM10__ZI-M6/22,5__			22,5	22,5	18					

Non binding dimensions, expressed in mm.

Other shapes and threads are available on demand, for more information please contact Specialinsert© technical department.

In order to use the product correctly, it is advisable to carry out fastening tests to determine the appropriate type of adhesive and the correct grain height.

Material: X=stainless steel nr. 1.4305 (standard)
L=aluminum EN AW 2011 AlCu6BiPb (on demand)

Finishing: natural

Tolerance: where not specified, according to UNI standards EN 22768-1 ISO 2768-m.

Thread: ISO 6 H metric

Example: knurled threaded tubular rivet with cylindrical head for sandwich panel, panel thickness (s2) 18.5 mm, skin thickness 1.0 mm, M6 thread, hole 13mm, stainless steel: TC/DM10XZI-M6/17.5X

Patented system

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Specialinsert®	Installation instructions and safety information	Deform-nut TC/SC/1 and TF/SC/1 -Patented-

WHAT IS IT FOR:
The Deform-nut T_/SC/1 is used to create threaded seats on sandwich panel materials (with honeycomb or composite internal structure).

ADVANTAGES
In order to create threaded seats on sandwich panel materials often are used expensive or complex solutions such as resin potting or bonding of bushes and tie rods.
With the Deform-nut T_/SC/1 you have some important advantages:
-The Deform-nut T_/SC/1 allows you to use the same type of product also for a wide range of thicknesses of sandwich panel materials.
-The deformation of the insert ensures an immediate mechanical fastening without the delay for the drying of resins and adhesives.
-The Deform-nut T_/SC/1 is easy and quick to install, it doesn't require specialized personnel and no further processes (injection of resin) or finishing.
The Deform-nut T_/SC/1can be used for any composite material panel, resins, carbon fiber, light alloy, and more.
- The installation can be also made using automatic or pneumatic tools

RECOMMENDATIONS FOR A CORRECT ASSEMBLY

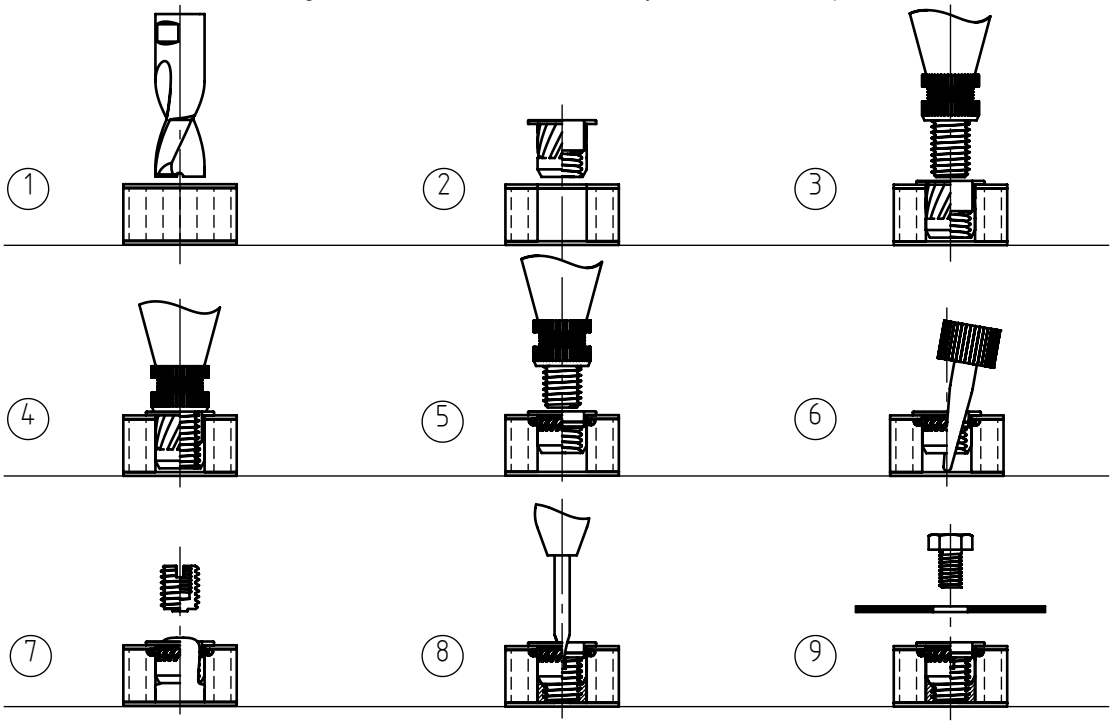
⚠ STRUCTURAL FASTENING ADHESIVE
The adhesive that joins the honeycomb and the insert shall be properly chosen to be compatible to the used materials in order to achieve a structural fixing.

⚠ INJECTION OF ADHESIVE
The injection of the adhesive shall be accurate in order to ensure the complete filling of the internal cells of the honeycomb including the section of the threaded insert Deform-Nut T_/SC/1 already deformed on the skin of the sandwich.
It's not possible to define the right quantity of adhesive needed since it depends on the shape of the internal cells of the honeycomb after drilling.

The correct combination of the various elements, panel, adhesive and insert, it has been defined by laboratory tests, that shall not be replicable in different conditions.
On application already tested, where some changes of components has been introduced it will be needed to repeat lab test to verify the suitability of the system.

⚠ HOW IS INSTALLED
Choose the rivet nut, the adjusting threaded bush and the adhesive according to features of the receiving material:
thread size, thickness of the panel (skin and internal core), material etc..

1) Drill the correct hole from one side of the panel (blind hole) in order to receive the tubular rivet and threaded adjusting bush
2) Insert the tubular rivet inside the hole
3) Insert the spindle of the deformation tool inside the tubular rivet
4) Activate the tool in order to deform the tubular rivet, which therefore will clamped on the skin of the sandwich panel.
5) Unscrew the tool from the deformed tubular rivet
6) Inject the structural adhesive inside the tubular rivet
7) Insert the threaded adjusting bush inside the tubular insert
8) Using a tool, screw the adjusting bush until it reaches the skin on the other side of the sandwich panel
9) Withdraw the tool and use the anchoring threaded obtained for the assembly of the detail as required



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