

BÖLLHOFF

KAPTI NUT®

High-strength press nuts for sheets



KAPTI NUT® – Captive Nuts

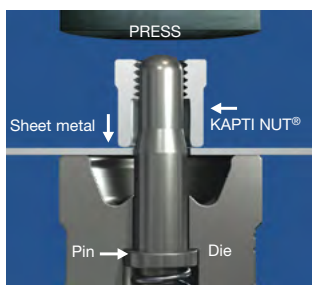


KAPTI NUT® is a high strength captive threaded fasteners system. It allows a range of nuts to be permanently attached to a panel or component by a mechanical process. The system is ideally suited to multiple insertion (in-die process) into thin steel strip and sheet and for certain aluminum alloys and stainless steel.

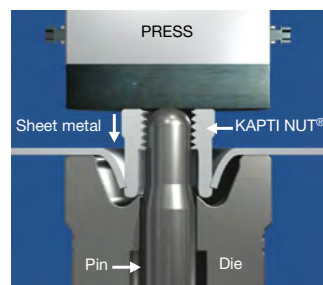
Advantages

- High mechanical resistance
- Compatible with 8.8 screw
- One side 100% flush
- The thread can be used from either side
- Installation also in precoated materials
- Joining of several fasteners in one production step
- Manufactured in accordance with IATF 16949:2016
- Load-bearing thread
- Only one KAPTI NUT® per type of thread for different sheet metal thicknesses
- Installation in two sheets metal possible
- The workpiece is not exposed to thermal stress
- Single stroke press operation
- Installed as part of the press process operation
- Reduced equipment costs
- Multiple setting in a single operation
- Minimum electrical power consumption
- Environmentally friendly
- The installation process creates no fumes no heat
- Easy visual inspection

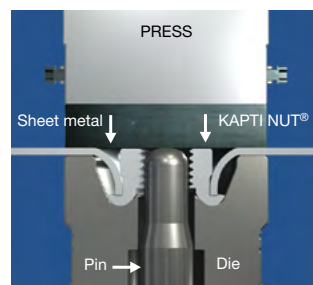
Installation process



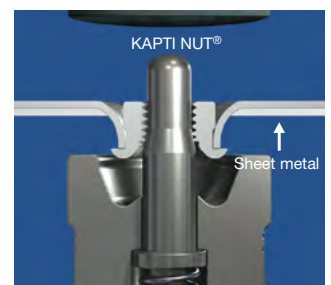
Locate the KAPTI NUT® and the panel/component onto the tool pin.



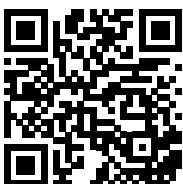
Start the installation (pressing) process.



The KAPTI NUT® uses the tool die to roll back the leading edge on itself to create the flange.



The two parts are now locked providing a high strength threaded attachment point.

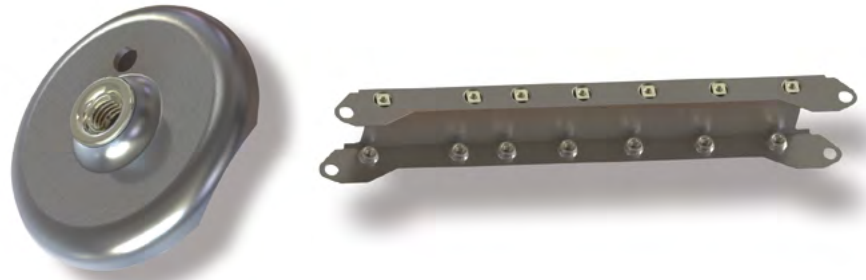


<https://www.boellhoff.com/videos/kapti-nut>

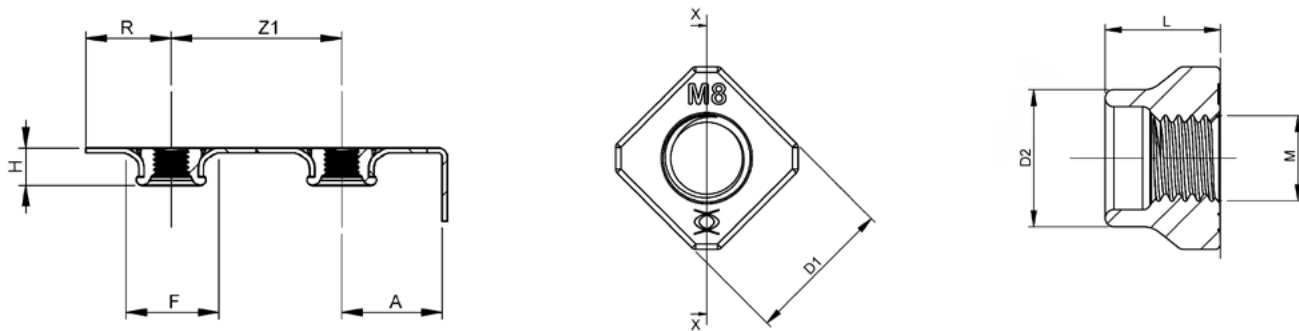
KAPTI NUT® – Variants

Function

KAPTI NUT® is a high strength press nut to be installed into pre-punch sheet in a mechanical process.



Dimensions (mm):



Thread 6h	D ₁	D ₂	L	Panel thickness	Pilot hole Ø	Ø F	H	A	Z ₁	R	Assembly force (T)	Part number
M 5	8.9	7.9	8.0	0.7	4.0	14	4.2 - 5.5	10	19	9	≈ 3.5	8510 005 0011
M 5	8.9	7.9	8.0	1.0	4.1	14	4.2 - 5.5	10	19	9	≈ 3.5	8510 005 0011
M 5	8.9	7.9	8.0	1.2	4.2	14	4.2 - 5.5	10	19	9	≈ 3.5	8510 005 0011
M 5	8.9	7.9	8.0	1.5	4.4	14	4.2 - 5.5	10	19	9	≈ 3.5	8510 005 0011
M 6	11.9	9.9	9.1	0.7	4.9	19	5.0 - 6.3	12	22	12	≈ 4.5	8510 006 0011
M 6	11.9	9.9	9.1	1.0	4.9	19	5.0 - 6.3	12	22	12	≈ 4.5	8510 006 0011
M 6	11.9	9.9	9.1	1.2	5.0	19	5.0 - 6.3	12	22	12	≈ 4.5	8510 006 0011
M 6	11.9	9.9	9.1	1.5	6.3	19	5.0 - 6.3	12	22	12	≈ 4.5	8510 006 0011
M 6	11.9	9.9	9.1	1.8	6.5	19	5.0 - 6.3	12	22	12	≈ 4.5	8510 006 0011
M 8	13.9	12.9	10.9	0.7	6.6	24	6.0 - 7.3	15	29	14	≈ 6.5	8510 008 0011
M 8	13.9	12.9	10.9	1.0	6.7	24	6.0 - 7.3	15	29	14	≈ 6.5	8510 008 0011
M 8	13.9	12.9	10.9	1.2	6.9	24	6.0 - 7.3	15	29	14	≈ 6.5	8510 008 0011
M 8	13.9	12.9	10.9	1.5	7.0	24	6.0 - 7.3	15	29	14	≈ 6.5	8510 008 0011
M 8	13.9	12.9	10.9	1.8	7.1	24	6.0 - 7.3	15	29	14	≈ 6.5	8510 008 0011
M 8	13.9	12.9	10.9	2.0	7.2	24	6.0 - 7.3	15	29	14	≈ 6.5	8510 008 0011
M 8	13.9	12.9	10.9	2.3	7.3	24	6.0 - 7.3	15	29	14	≈ 6.5	8510 008 0011
M 10	17.9	15.9	13.0	1.5	8.3	28	7.0 - 9.0	20	38	17	≈ 9	8510 010 0011
M 10	17.9	15.9	13.0	1.8	8.5	28	7.0 - 9.0	20	38	17	≈ 9	8510 010 0011
M 10	17.9	15.9	13.0	2.0	8.6	28	7.0 - 9.0	20	38	17	≈ 9	8510 010 0011
M 10	17.9	15.9	13.0	2.3	9.0	28	7.0 - 9.0	20	38	17	≈ 9	8510 010 0011
M 10	17.9	15.9	13.0	2.5	9.3	28	7.0 - 9.0	20	38	17	≈ 9	8510 010 0011

The assembly force depends on the used base material. These are only indicative values.

Surface treatment

The standard surface treatment for KAPTI NUT® is Zinc trivalent (7 – 12 µ providing 360 hours to red rust) according to ISO 2081 specification.

On demand

- Additional surface treatments
- Additional thread dimensions
- Specific tolerances
- Special requests:
 - KAPTI NUT® compatible with screw 10,9
 - KAPTI NUT® with spacer function
 - KAPTI NUT® with special geometry and function

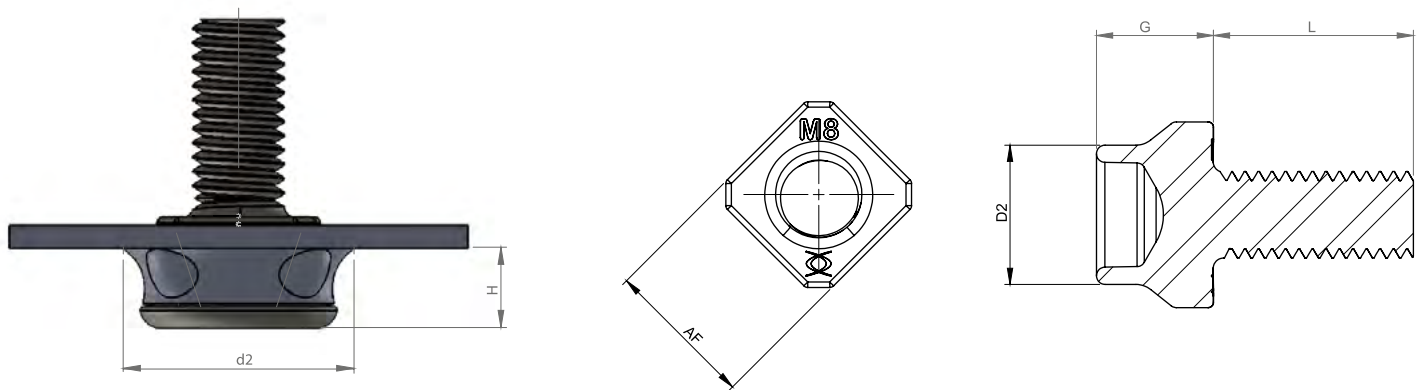
KAPTI NUT® – Variants

Function

KAPTI NUT® Stud is a press nut with integrated screw, to be installed into pre-punched sheet in a mechanical process.



Dimensions (mm):



Thread 6h	A/F	D ₂	L	G	Ø d ₂	H	Assembly force (T)	Torque on screw (Nm)	Part number
M 6	11.9	9.9	12	9.1	19	5.0 - 6.3	≈ 4.5	10	8513 006 1211
M 6	11.9	9.9	15	9.1	19	5.0 - 6.3	≈ 4.5	10	8513 006 1511
M 6	11.9	9.9	20	9.1	19	5.0 - 6.3	≈ 4.5	10	8513 006 2011
M 6	11.9	9.9	25	9.1	19	5.0 - 6.3	≈ 4.5	10	8513 006 2511
M 6	11.9	9.9	30	9.1	19	5.0 - 6.3	≈ 4.5	10	8513 006 3011
M 8	13.9	12.9	15	10.9	24	6.0 - 7.3	≈ 6.5	24	8513 008 1511
M 8	13.9	12.9	20	10.9	24	6.0 - 7.3	≈ 6.5	24	8513 008 2011
M 8	13.9	12.9	25	10.9	24	6.0 - 7.3	≈ 6.5	24	8513 008 2511
M 8	13.9	12.9	30	10.9	24	6.0 - 7.3	≈ 6.5	24	8513 008 3011

The assembly force depends on the used base material. These are only indicative values.

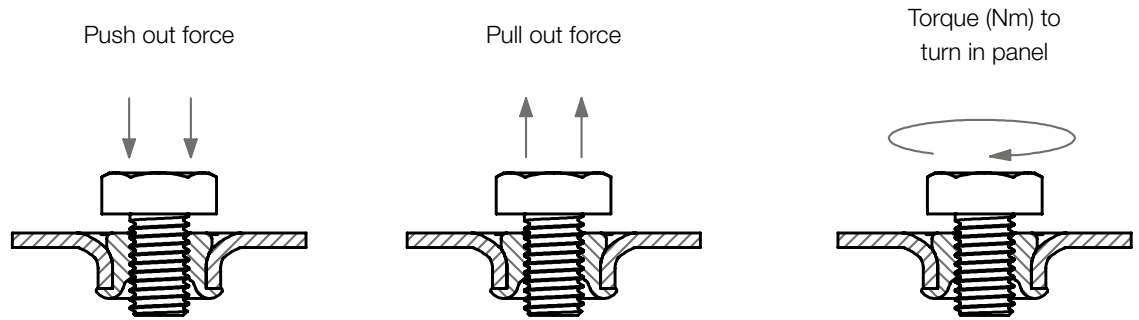
Surface treatment

Our standard surface treatment is Zinc trivalent (7–12 µ providing 360 hours to red rust) according to ISO 2081 specification.

On demand

- Additional surface treatments
- Additional thread dimensions
- Specific tolerances
- Special requests
- M 5 and M 10 studs
- Additional lengths of the stud
- Dog-point (easy entry)
- Centering pin (without thread)

KAPTI NUT® – Mechanical performance



Mechanical performance of **KAPTI NUT®**

Thread 6h	Panel thickness (mm)	Push out force (kN)	Pull out force (kN)	Torque on screw applied (Nm)	Torque to turn in panel (Nm)
M 5	1.3	5.6	7.5	6	9
M 6	1.6	7.0	14.0	10	16
M 8	2.0	7.6	19.5	25	38
M 10	2.5	14.6	37.0	49	72

Mechanical performance of **KAPTI NUT® Stud**

Thread 6h	Panel thickness (mm)	Push out force (kN)	Pull out force (kN)	Torque on screw applied (Nm)
M 6	1.6	7.0	14.0	10
M 8	2.0	7.6	19.5	24

These tests are made with steel plate DC01, different types of steel could have different values.

KAPTI NUT® – Tool dies

KAPTI NUT®

Thread 6h	Panel thickness (mm)	Description	Tool die part number
M 5	0.7	TD 05-01	8519 972 1390
M 5	1.0	TD 05-01	8519 972 1390
M 5	1.2	TD 05-01	8519 972 1390
M 5	1.5	TD 05-01	8519 972 1390
M 6	0.7	TD 06-01	8519 973 1290
M 6	1.0	TD 06-01	8519 973 1290
M 6	1.2	TD 06-01	8519 973 1290
M 6	1.5	TD 06-02	8519 974 1690
M 6	1.8	TD 06-02	8519 974 1690
M 8	0.7	TD 08-01	8519 974 2090
M 8	1.0	TD 08-01	8519 974 2090
M 8	1.2	TD 08-02	8519 974 2090
M 8	1.5	TD 08-02	8519 974 2090
M 8	1.8	TD 08-02	8519 974 2090
M 8	2.0	TD 08-02	8519 974 2090
M 8	2.3	TD 08-02	8519 974 2090
M 10	1.5	TD 10-02	8519 975 2590
M 10	1.8	TD 10-02	8519 975 2590
M 10	2.0	TD 10-02	8519 975 2590
M 10	2.3	TD 10-02	8519 975 2590
M10	2.5	TD 10-02	8519 975 2590


KAPTI NUT® Stud

Thread 6h	Panel thickness (mm)	Description	Tool die part number
M 6	0.7	TDS 06-01	8519 883 0890
M 6	1.0	TDS 06-01	8519 883 0890
M 6	1.2	TDS 06-01	8519 883 0890
M 6	1.5	TDS 06-02	8519 883 1590
M 6	1.8	TDS 06-02	8519 883 1590
M 8	0.7	TDS 08-01	8519 885 0190
M 8	1.0	TDS 08-01	8519 885 0190
M 8	1.2	TDS 08-02	8519 885 0290
M 8	1.5	TDS 08-02	8519 885 0290
M 8	1.8	TDS 08-02	8519 885 0290
M 8	2.0	TDS 08-02	8519 885 0290
M 8	2.3	TDS 08-02	8519 885 0290

KAPTI NUT® – Automation

KAPTI NUT®	Distance between feeder & insertion head (m)	Spm/ outlet	KAPTI NUT® Stud	Distance between feeder & insertion head (m)	Spm/ outlet
M 5	4	50	M 6	4	35
M 6	4	50	M 8	4	35
M 8	4	50	M 10*	4	25
M 10	4	40			
M 12*	4	40			

* On demand

Options

- Capable of multiple insertions per stroke of the press
- 1 or 2 vibrating bowls are available
 - 1 bowl: max 2 exits, for the same type of the KAPTI NUT®
 - 2 bowls: max 4 exits, for up to two different types of KAPTI NUT®
- Multi-language control system (HDMI)
- Low and easy maintenance
- Different uses: in transfer, progression, off-line presses and included in a robotic cell

Cart with one vibrating bowl and two exits.



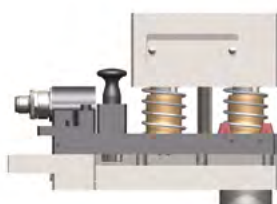
Cart with two vibrating bowls and four exits.

Two different types of KAPTI NUT® can be processed.



Feeder components

Head



Pusher



Pipe



BÖLLHOFF



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Innovative partner for joining technology with assembly and logistics solutions.

Find your local partner at www.boellhoff.com or contact us at fat@boellhoff.com.

Passion for successful joining.