Clifa®
press-in nut/stud ...

Clifa®-press-in nuts and Clifa® studs are threaded inserts made of steel with a specially formed shank or head.

Clifa®-press-in nuts and Clifa® studs can also be supplied in rust-proof material, and the nuts additionally in light alloy.

Clifa®-threaded inserts are pressed into moulded components with prepunched receiving holes. During this process, the material flows out of the area of the hole wall into the gear ring / the annular grooves of the Clifa® threaded inserts. A permanent connection is formed.

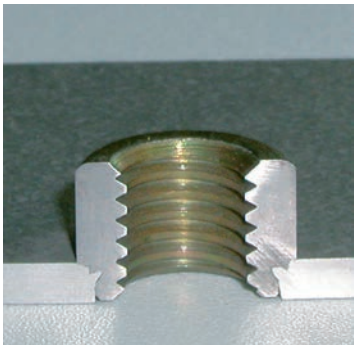
Several Clifa® inserts can be installed in a single work process. The fastening screw is always screwed in from the opposite side.

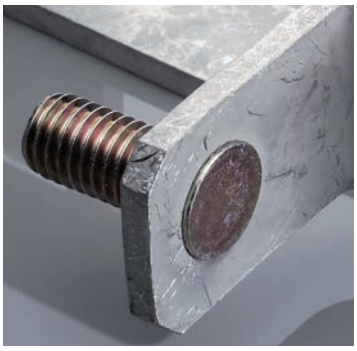
Fields of application

Clifa® press-in elements serve as a screw point mainly on moulded parts of steel or light metal. They may also be used as spacers.

Product features

- Clifa® is torque-proof, capable of withstanding high loads.
- It has minimal outside dimensions for space and weight-saving
- The thread is wear-resistant, clean and true to gauge
- Mounting in drilled, punched or lasered receiving holes
- Do not countersink drill holes in the component
- Can be used in surface-treated, galvanized or unweldable materials
- Clifa® is not pressed out during the screwing process.
- The component material must be softer than the Clifa® element





Specifications

Works Standard sheets Clifa®
Pages 11 to 20

High-performance installation equip ment for short cycle times in largescale production on request.

Clifa® installation ...

Installation

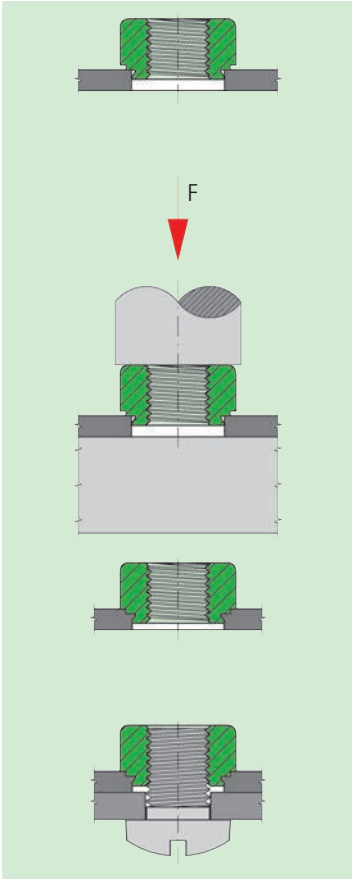
The receiving hole is punched, lasered or drilled **but not deburred or countersunk.**

With punched holes, Clifa® is pressed in from the punching burr side. The press-in process takes place on a plane parallel basis using a customary press with adjustable pressure level, until the surface of the shoulder in the Clifa® pressin nut comes to rest flat against the surface of the sheet metal.

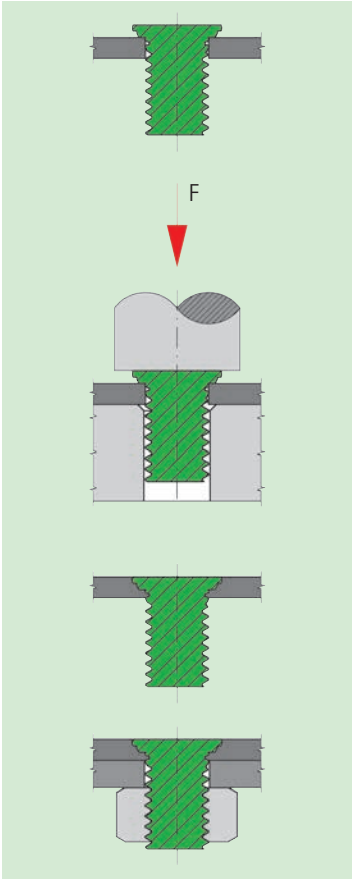
In the case of the Clifa®-SP/SPD/SPS stud, the head must be fully pressed in and come to rest flush with the surface of the sheet metal.

Pressure which is too high or applied only on one side as well as inclined support surfaces must be avoided wherever possible.

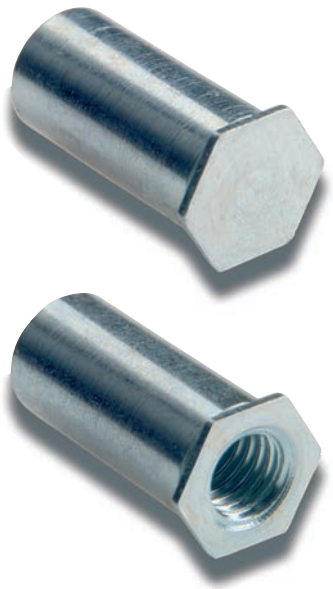
Examples for mounting



Press-in nut Clifa® Fig. 7



Press-in stud Clifa®-SP Fig. 8



Special request

short length
standoff bushings for metals
standoff bushings for plastics threaded press-in stud
Flush surface on the press-in side of the nut element (/- thread closed on one side)
Grub screw for thin sheet thicknesses
Grub screw for high load values
threaded press-in stud for lower press-in force

We recommend

Clifa®-M	(Works Standard 500 0 to 503 0)
Clifa®-AM	(Works Standard 503 8 to 525 8)
Clifa®-AL	(Works Standard 503 6 to 525 6)
Clifa®-ABO/-ABG	(Works Standard 570 0 to 571 0)
Clifa®-SPD	(Works Standard 5.. 2)
Clifa®-SA	(Works Standard 515 4 to 534 4)
Clifa®-SAD	(Works Standard 515 9 to 534 9)

Kerb Konus

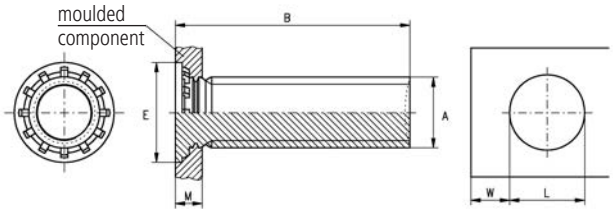
Press-in stud
Press-fit geometrie flush fit processed

Clifa®-SP
Works Standard
506 0 to 534 0

Application

Clifa®-SP press-in grub screws are processed flush with the surface – see diagram –, and are used to manufacture wear-resistant, highly resilient screw connections in thin-walled moulded parts made of:

- Steel
- Stainless steel
- Brass
- Copper
- Light metal, etc.



Dimensions in mm

Article number	Internal thread A	Workpiece thickness ≥ M	External diameter E	Hole diameter L +0,05	Minimum spacing ≥ W	Tightening torque of the nut (guidline values for sheet metal) ≤ Nm
5.. 000 025 ...	M 2,5	1,0	4,0	2,5	3,5	0,7
5.. 000 030 ...	M 3	1,0	4,6	3,0	4,0	1,5
5.. 000 040 ...	M 4	1,0	5,9	4,0	5,0	2,9
5.. 000 050 ...	M 5	1,0	6,5	5,0	5,0	6,0
5.. 000 060 ...	M 6	1,5	8,5	6,0	5,0	10,0
5.. 000 080 ...	M 8	1,5	10,0	8,0	6,0	20,0

Article number <u>first group</u> of digits (selection series)	Length B*) ±0,2	Available					
		M 2,5	M 3	M 4	M 5	M 6	M 8
506 000	6,0	X	X	X	X		
508 000	8,0	X	X	X	X	X	
510 000	10,0	X	X	X	X	X	X
515 000	15,0	X	X	X	X	X	X
520 000	20,0	X	X	X	X	X	X
525 000	25,0	X	X	X	X	X	X
530 000	30,0			X	X	X	X
534 000	34,0			X	X	X	X

Example for finding the article number
Press-in stud Clifa®-SP, M3 tempered, zinc plated and blue passivated steel, 10 mm long, with serrations at the head for sheet metal thickness 1,2 mm: Clifa®-SP 510 000 030.110

Materials

Steel tempered, zinc plated, blue passivated **	Article no. (**fourth** group of digits) 110
Steel tempered, zinc-nickel plated, transparent passivated **	Article no. (**fourth** group of digits) 143
Stainless steel	Article no. (**fourth** group of digits) 500

Further dimensions on request.

Threaded ends
Press-in grub screws with differing threaded ends on request, see data sheet, page 25.

Tolerances
ISO 2768-m

Thread
Stud thread A: as per ISO 6g, imperial thread available in all customary sizes.

Press-in force
Guideline values for press-in force, see page 24

***) Length B**
available up to 60 mm

****)**
Press-in stud in tempered steel, available in customary strength classes.

Kerb Konus

Press-in stud
Press-fit geometrie flush fit processed

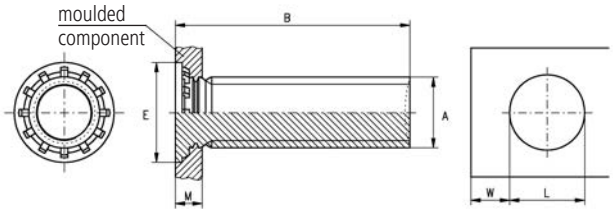
Clifa®-SPD
Works Standard
506 2 to 534 2

Application

Clifa®-SPD press-in grub screws are processed flush with the surface – see diagram –, and are used to manufacture wear-resistant, highly resilient screw connections in thin-walled moulded parts made of:

- Steel
- Stainless steel
- Brass
- Copper
- Light metal, etc.

Due to the low height of the serrations, Clifa®-SPD is suitable for use in lower moulding strengths than necessary with Clifa®-SP.



Dimensions in mm

Article number	Internal thread A	Workpiece thickness ≥ M	External diameter E	Hole diameter L +0,05	Minimum spacing ≥ W	Tightening torque of the nut (guidline values for sheet metal) ≤ Nm
5.. 200 025 ...	M 2,5	0,8	4,0	2,5	3,5	0,7
5.. 200 030 ...	M 3	0,8	4,6	3,0	4,0	1,5
5.. 200 040 ...	M 4	0,8	5,9	4,0	5,0	2,9
5.. 200 050 ...	M 5	0,8	6,5	5,0	5,0	6,0
5.. 200 060 ...	M 6	0,8	8,5	6,0	5,0	10,0
5.. 200 080 ...	M 8	0,8	10,0	8,0	6,0	20,0

Article number first group of digits (selection series)	Length B*) ±0,2	Available					
		M 2,5	M 3	M 4	M 5	M 6	M 8
506 200	6,0	X	X	X	X		
508 200	8,0	X	X	X	X	X	
510 200	10,0	X	X	X	X	X	X
515 200	15,0	X	X	X	X	X	X
520 200	20,0	X	X	X	X	X	X
525 200	25,0	X	X	X	X	X	X
530 200	30,0			X	X	X	X
534 200	34,0			X	X	X	X

Example for finding the article number

Press-in stud Clifa®-SPD, M3 tempered, zinc plated and blue passivated steel, 10 mm long, with serrations at the head for sheet metal thickness 0,8 mm: Clifa®-SPD 510 200 030.110

Materials

Steel tempered, zinc plated, blue passivated **	Article no. (**fourth** group of digits) 110
Steel tempered, zinc-nickel plated, transparent passivated **	Article no. (**fourth** group of digits) 143
Stainless steel	Article no. (**fourth** group of digits) 500

Further dimensions on request.

Threaded ends

Press-in grub screws with differing threaded ends on request, see data sheet, page 25.

Tolerances

ISO 2768-m

Thread

Stud thread A: as per ISO 6g, imperial thread available in all customary sizes.

Press-in force

Guideline values for press-in force, see page 24

***) Length B**

available up to 60 mm

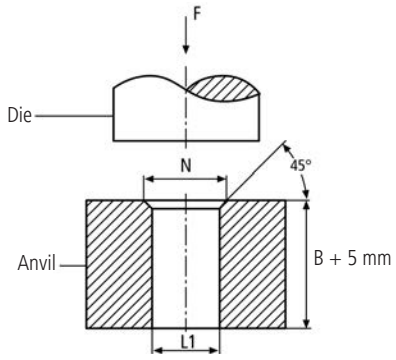
****)**

Press-in stud in tempered steel, available in customary strength classes.

Press-in stud
Press-in forces

Clifa®-SP/SPD

Dimensions in mm



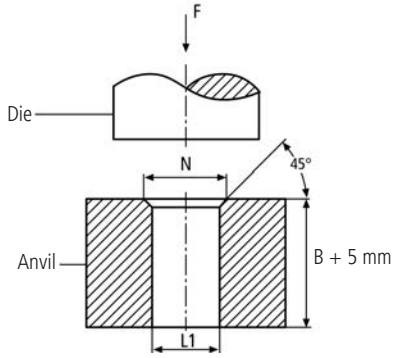
Anvil for: Clifa®	Hole L1 +0,1	Countersink for serrations N +0,1	Press-in force kN
M 2,5	2,6	3,4	8,9 to 12
M 3	3,1	4,0	10,5 to 19
M 4	4,1	5,2	16 to 25
M 5	5,1	6,4	29 to 35
M 6	6,1	7,6	30 to 50
M 8	8,1	10,2	30 to 60

The press-in force F is dependent on the Clifa® dimension, the material and the thickness of the shaped component and also the type of serration at the head. The Clifa® head must be fully embedded and must come to rest flush with the surface of the sheet metal.
Excessive force must be avoided. The hole diameter of the part to be screwed on ≈ A +0,6 mm.

Press-in stud
Press-in forces

Clifa®-SPS

Dimensions in mm



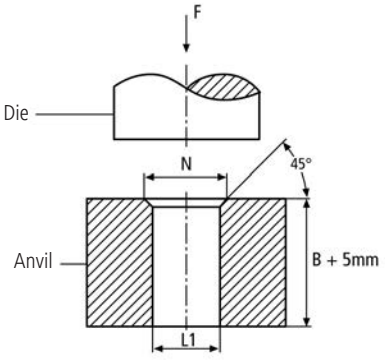
Anvil for: Clifa®	Hole L1 +0,1	Countersink for serrations N +0,1	Press-in force kN
Ø 5,0	5,1	6,4	29 to 35

The press-in force F is dependent on the Clifa® dimension, the material and the thickness of the shaped component and also the type of serration at the head. The Clifa® head must be fully embedded and must come to rest flush with the surface of the sheet metal.
Excessive force must be avoided. The hole diameter of the part to be screwed on ≈ A +0,6 mm.

Press-in stud
Press-in forces

Clifa®-SA/SAD

Dimensions in mm



Anvil for: Clifa®	Hole L1 +0,1	Countersink for serrations N+0,1	Press-in force kN
M 3	3,1	4,0	9,0 to 15,0
M 4	4,1	5,2	14,5 to 38
M 5	5,1	6,4	21 to 42
M 6	6,1	7,6	21 to 50
M 8	8,1	10,2	21 to 60
M 10	10,1	12,2	32 to 84

The press-in force F is dependent on the Clifa® dimension, the material and the thickness of the shaped component and also the type of serration at the head. Excessive force must be avoided. The hole diameter of the part to be screwed on ≈ A +0,6 mm.

Kerb Konus

Threaded ends for press-in grub screws

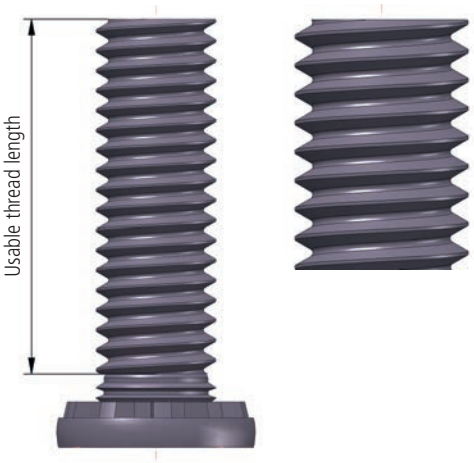
Clifa®-SP/-SPD
Clifa®-SA/-SAD

Application

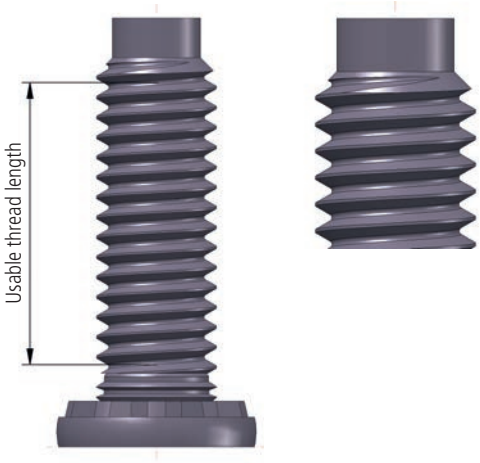
Depending on the demands placed on the Clifa® press-in grub screws, we offer a variety of threaded ends. Further threaded ends on request.

Sub-function	Type of threaded end			
	KKV	KK	PN	KK-MAG
Protection of start of thread	↘	↗	↗	↗
Larger displacement when fastening	↘	→	↗	↗
Prevention of tilting when fastening	↘	→	→	↗
Usable thread length (Version for components of the same length)	↗	→	→	↘

Type of threaded end: **KKV**
DIN EN ISO 4753 (RL)



Type of threaded end: **KK**



Type of threaded end: **PN**

Type of threaded end: **KK-MAG**

Fasteners for special applications ...

Press-in stud with special part-end

Rivet bushing with Double riveting contour

Press-in nut with Three cross-holes

Press-in stud with segmented head

Rivet bushing with fine thread on outer diameter

Rivet bushing with special sealing contour

Bolt with t-groove for fixing/locking of screw-in elements

Press-in nut with hexagonal head

Press-in nut with three knurls on outer diameter