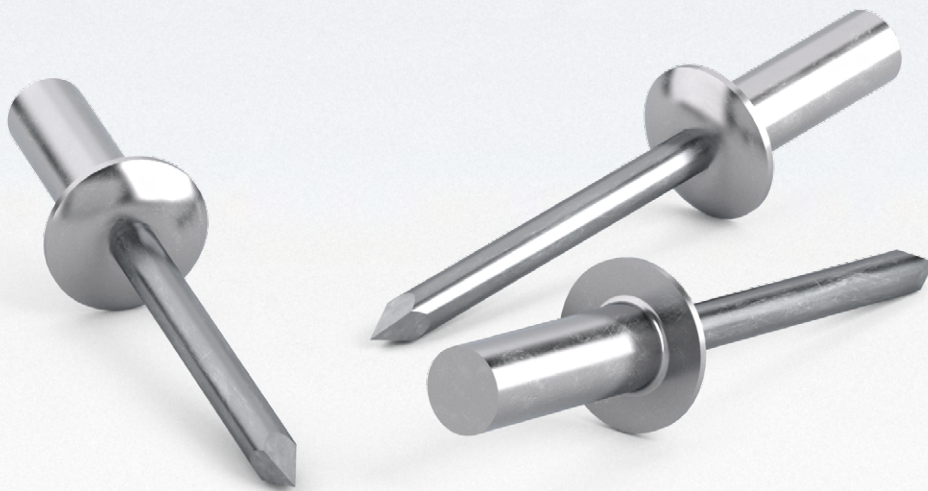


Fastening Technology / Blind Rivets

TIFAS[®] Closed End Blind Rivets







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TIFAS® closed end blind rivets



The proven benefits that come with blind rivet technology are becoming recognised and employed by an increasing number of users: for example, in electrical engineering, vehicle construction, medical technology, mechanical engineering, household appliances, energy management, the toy and furniture industries, or even in the automotive and plant engineering sectors. Unlike welded joints, which cause the material to warp, rivets can be quickly installed on one side and with little heat. Even on hollow profiles and pipes, the joints are guaranteed to fit perfectly and maintain their dimensional accuracy.

TIFAS® closed end blind rivets have a cup-shaped sleeve that creates a closed and thus airtight, dust-tight and watertight footprint on the blind side. The high shear bearing resistance of TIFAS® closed end blind rivets makes for a very tight fastening. The mandrel remains securely retained in the sleeve. The stainless steel versions offer high corrosion resistance.





Coloured plastic caps

Plastic caps in an array of RAL colours can be supplied for the TIFAS® closed end blind rivet line.

Airtight, dust-tight and watertight footprint

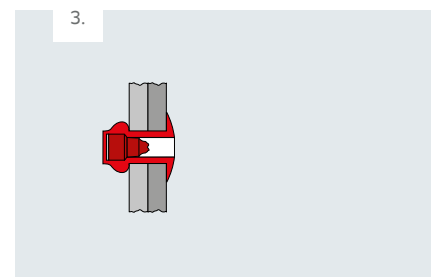
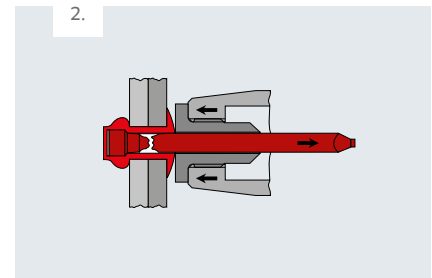
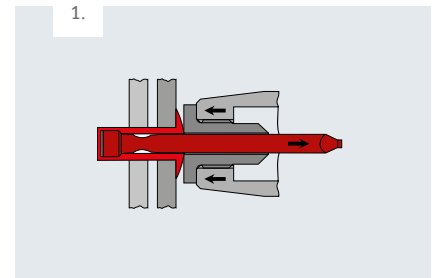
For suitably prepared holes, TIFAS® closed end blind rivets are exceptionally watertight in the field. For pressure-tight applications or retained media, an additional seal will be required between the rivet body and the bored hole in the component. Loose or mechanically fitted neoprene O-rings as well as TIFAS® closed end blind rivets with pre-applied sealant can be supplied on request.

A4 stainless steel TIFAS® closed end blind rivets

In keeping with the trend towards increasingly better-quality materials and finishes, TIFAS® closed end blind rivets are now available in A4 stainless steel. Although this version is especially used in plant and container construction, they are also put to use in marine applications, in shipyards, or in areas of power stations where safety is a major concern.

Benefits at a glance

- Quick and secure installation
- Up to 60% cost savings compared to screws or welding (fewer components and faster installation)
- Permanent fastener guards against unauthorised removal.
- Airtight, dust-tight and watertight footprint on the blind side; suitable for watertight and pressure-tight applications
- Optionally available with added surface coating
- Additional seal under the rivet head available on request
- Universal use
- Captive mandrel
- Heatless installation means component will not warp
- Combines various materials such as metals and plastics
- Eliminates extensive refinishing
- Ideal for lightweight constructions



The areas of application and therefore the demand for TIFAS® closed end blind rivets have grown steadily over the past few years. This is due to a parallel rise in the demands that the industry is placing on quality and workmanship.

Sample applications:

- General industry
- Marine applications (onshore & offshore, coupled with TIBULB® and M-Lock®)
- Power stations (coupled with TIBULB® and M-Lock®)
- Food industry
- Pharmaceutical industry
- Automotive industry
- Tank and apparatus construction
- Bodywork and vehicle manufacture
- Construction industry



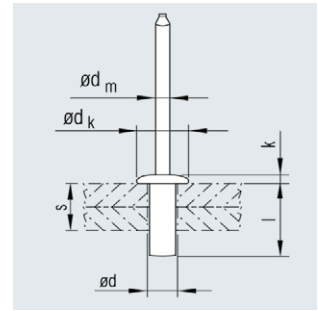
TIFAS® closed end blind rivets

Truss head

Material

■ Sleeve:
Aluminum AlMg5

■ Mandrel:
Steel



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve $l \pm 1.0-0.2$ [mm]	Blind rivet head		Mandrel \varnothing d _m nom. [mm]	Nominal strength at break		Article No.
				\varnothing dk ± 0.9 [mm]	Height k max [mm]		Shear [N]	Tensile [N]	
3.2	3.3	0.5 - 2.0	6.5	6.3	1.4	1.75	1070	1250	420 629 906
		2.0 - 3.5	8.0	6.3	1.4	1.75	1070	1250	420 630 906
		3.5 - 5.0	9.5	6.3	1.4	1.75	1070	1250	420 631 906
		5.0 - 6.5	11.0	6.3	1.4	1.75	1070	1250	420 632 906
		6.5 - 8.0	12.5	6.3	1.4	1.75	1070	1250	420 633 906
4.0	4.1	1.5 - 3.5	8.0	7.7	1.7	2.15	1600	2200	420 670 906
		3.5 - 5.0	9.5	7.7	1.7	2.15	1600	2200	420 671 906
		4.0 - 5.5	10.0	7.7	1.7	2.15	1600	2200	420 672 906
		5.0 - 6.5	11.0	7.7	1.7	2.15	1600	2200	420 673 906
		6.5 - 8.0	12.5	7.7	1.7	2.15	1600	2200	420 674 906
		8.0 - 10.0	14.5	7.7	1.7	2.15	1600	2200	420 675 906
4.8	4.9	2.0 - 3.0	8.0	9.2	2.0	2.65	2200	3100	420 720 906
		3.5 - 5.0	9.5	9.2	2.0	2.65	2200	3100	420 721 906
		5.0 - 6.5	11.0	9.2	2.0	2.65	2200	3100	420 722 906
		6.0 - 7.5	12.0	9.2	2.0	2.65	2200	3100	420 723 906
		8.0 - 9.5	14.5	9.2	2.0	2.65	2200	3100	420 724 906
		9.5 - 11.0	16.0	9.2	2.0	2.65	2200	3100	420 725 906
		11.0 - 13.0	18.0	9.2	2.0	2.65	2200	3100	420 726 906
13.0 - 16.0	21.0	9.2	2.0	2.65	2200	3100	420 727 907		
6.4	6.5	1.5 - 6.0	12.5	12.5	2.7	3.65	3600	4900	420 761 906
		7.0 - 8.5	16.0	12.5	2.7	3.65	3600	4900	420 762 906

* Strengths at break relate to rivet failure.

Other designs available on request.



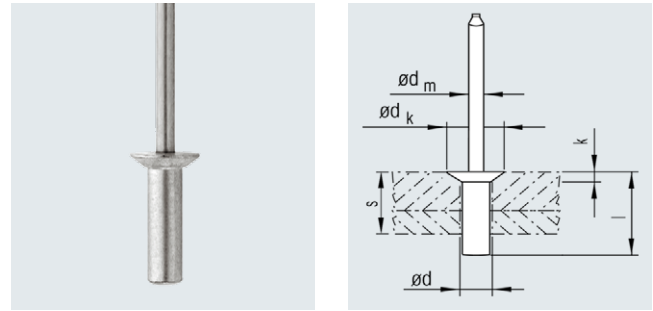
TIFAS® closed end blind rivets

Countersunk 120°

Material

■ Sleeve:
Aluminum AlMg5

■ Mandrel:
Steel



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve $l \pm 1.0-0.2$ [mm]	Blind rivet head		Mandrel \varnothing d_m nom. [mm]	Nominal strength at break		Article No.
				\varnothing $dk \pm 0.9$ [mm]	Height k max [mm]		Shear [N]	Tensile [N]	
3.2	3.3	2.0 - 3.5	8.0	6.2	1.3	1.75	1070	1245	420 639 906
		3.5 - 5.0	9.5	6.2	1.3	1.75	1070	1245	420 640 906
		5.0 - 6.5	11.0	6.2	1.3	1.75	1070	1245	420 641 906
		6.5 - 8.0	12.5	6.2	1.3	1.75	1070	1245	420 642 906
		8.0 - 9.0	13.5	6.2	1.3	1.75	1070	1245	420 643 907
4.0	4.1	3.0 - 4.5	9.5	7.7	1.7	2.15	1600	2200	420 680 906
		4.5 - 6.5	11.0	7.7	1.7	2.15	1600	2200	420 681 906
		6.5 - 8.0	12.5	7.7	1.7	2.15	1600	2200	420 682 906
		8.0 - 10.0	14.5	7.7	1.7	2.15	1600	2200	420 683 907
4.8	4.9	3.5 - 4.5	9.5	9.2	2.0	2.65	2200	3070	420 730 906
		5.0 - 6.0	11.0	9.2	2.0	2.65	2200	3070	420 731 906
		6.5 - 8.0	13.0	9.2	2.0	2.65	2200	3070	420 732 906
		8.0 - 9.5	14.5	9.2	2.0	2.65	2200	3070	420 733 906
		9.5 - 11.0	16.0	9.2	2.0	2.65	2200	3070	420 734 906
		11.0 - 13.0	18.0	9.2	2.0	2.65	2200	3070	420 735 906
		13.0 - 16.0	21.0	9.2	2.0	2.65	2200	3070	420 736 906

* Strengths at break relate to rivet failure.

Other designs available on request.



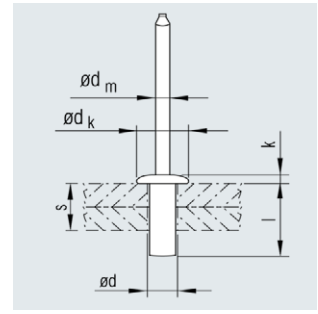
TIFAS® closed end blind rivets

Truss head

Material

■ Sleeve:
Aluminum AlMg5

■ Mandrel:
Stainless steel



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve l $\pm 1.0-0.2$ [mm]	Blind rivet head		Mandrel \varnothing d _m nom. [mm]	Nominal strength at break		Article No.
				\varnothing dk ± 0.9 [mm]	Height k max [mm]		Shear [N]	Tensile [N]	
3.2	3.3	0.5 - 2.0	6.5	6.3	1.4	1.75	1070	1250	420 910 906
		2.0 - 3.5	8.0	6.3	1.4	1.75	1070	1250	420 911 906
		3.5 - 5.0	9.5	6.3	1.4	1.75	1070	1250	420 912 906
		5.0 - 6.5	11.0	6.3	1.4	1.75	1070	1250	420 913 906
		6.5 - 8.0	12.5	6.3	1.4	1.75	1070	1250	420 914 906
4.0	4.1	1.5 - 3.5	8.0	7.7	1.7	2.15	1600	2200	420 920 906
		3.5 - 4.5	9.5	7.7	1.7	2.15	1600	2200	420 921 906
		4.0 - 5.5	10.0	7.7	1.7	2.15	1600	2200	420 922 906
		5.0 - 6.5	11.0	7.7	1.7	2.15	1600	2200	420 923 906
		6.5 - 8.0	12.5	7.7	1.7	2.15	1600	2200	420 924 906
4.8	4.9	2.0 - 3.0	8.0	9.2	2.0	2.65	2200	3100	420 930 906
		3.5 - 4.5	9.5	9.2	2.0	2.65	2200	3100	420 931 906
		5.0 - 6.0	11.0	9.2	2.0	2.65	2200	3100	420 932 906
		6.0 - 7.5	12.5	9.2	2.0	2.65	2200	3100	420 934 907
		7.5 - 9.0	14.0	9.2	2.0	2.65	2200	3100	420 935 907
		9.5 - 11.0	16.0	9.2	2.0	2.65	2200	3100	420 936 906
		11.0 - 13.0	18.0	9.2	2.0	2.65	2200	3100	420 937 906
13.0 - 16.0	21.0	9.2	2.0	2.65	2200	3100	420 938 907		

* Strengths at break relate to rivet failure.

Other designs available on request.



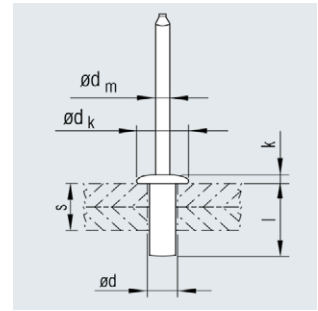
TIFAS® closed end blind rivets

Truss head with grooved mandrel

Material

Sleeve:
Steel, galvanised
passivated

Mandrel:
Steel, galvanised



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve l $\pm 1.0-0.2$ [mm]	Blind rivet head		Mandrel \varnothing dm max. [mm]	Nominal strength at break		Article No.
				\varnothing dk ± 0.9 [mm]	Height k max [mm]		Shear [N]	Tensile [N]	
3.2	3.3	0.5 - 1.5	6.0	6.5	1.3	1.9	1150	1300	420 400 907
		1.5 - 3.0	8.0	6.5	1.3	1.9	1150	1300	420 401 907
		3.0 - 5.0	10.0	6.5	1.3	1.9	1150	1300	420 402 907
		5.0 - 6.5	12.0	6.5	1.3	1.9	1150	1300	420 403 907
4.0	4.1	0.5 - 1.5	6.0	8.0	1.7	2.3	1700	1860	420 405 907
		1.5 - 3.0	8.0	8.0	1.7	2.3	1700	1860	420 406 907
		3.0 - 5.0	10.0	8.0	1.7	2.3	1700	1860	420 407 907
		5.0 - 6.5	12.0	8.0	1.7	2.3	1700	1860	420 408 907
		6.5 - 10.0	15.0	8.0	1.7	2.3	1700	1860	420 409 907
4.8	4.9	1.0 - 3.0	8.0	9.5	2.0	2.9	2400	2800	420 410 907
		3.0 - 5.0	10.0	9.5	2.0	2.9	2400	2800	420 411 907
		5.0 - 7.0	12.5	9.5	2.0	2.9	2400	2800	420 412 907
		7.0 - 9.5	15.0	9.5	2.0	2.9	2400	2800	420 413 907
		9.5 - 12.5	18.0	9.5	2.0	2.9	2400	2800	420 414 907
		13.0 - 16.0	21.0	9.5	2.0	2.9	2400	2800	420 415 907
6.4	6.5	3.0 - 6.5	15.0	12.8	2.7	3.8	3600	4000	420 420 907
		6.5 - 8.0	16.0	12.8	2.7	3.8	3600	4000	420 421 907
		8.0 - 12.5	21.0	12.8	2.7	3.8	3600	4000	420 422 907

* Strengths at break relate to rivet failure.

Other designs available on request.



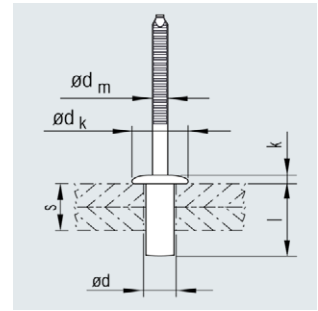
TIFAS® closed end blind rivets

Truss head with grooved mandrel

Material

Sleeve:
Stainless steel
A2 AISI 304

Mandrel:
Stainless steel
C1 AISI 420



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve $l \pm 1.0-0.2$ [mm]	Blind rivet head		Mandrel \varnothing d _m nom. [mm]	Nominal strength at break		Article No.
				\varnothing dk ± 0.9 [mm]	Height k max [mm]		Shear [N]	Tensile [N]	
3.2	3.3	0.5 - 1.5	6.0	6.3	1.4	1.9	2000	2200	420 940 906
		1.5 - 3.0	8.0	6.3	1.4	1.9	2000	2200	420 941 906
		3.0 - 5.0	10.0	6.3	1.4	1.9	2000	2200	420 942 906
		5.0 - 6.5	12.0	6.3	1.4	1.9	2000	2200	420 943 906
4.0	4.1	0.5 - 1.5	6.0	7.7	1.7	2.25	3000	3500	420 950 906
		1.5 - 3.0	8.0	7.7	1.7	2.25	3000	3500	420 951 906
		3.0 - 5.0	10.0	7.7	1.7	2.25	3000	3500	420 952 906
		5.0 - 6.5	12.0	7.7	1.7	2.25	3000	3500	420 953 906
		6.5 - 8.0	14.0	7.7	1.7	2.25	3000	3500	420 954 906
		8.0 - 11.0	16.0	7.7	1.7	2.25	3000	3500	420 955 906
4.8	4.9	1.5 - 3.0	8.0	9.2	2.0	2.9	4000	4400	420 960 906
		3.0 - 5.0	10.0	9.2	2.0	2.9	4000	4400	420 961 906
		5.0 - 6.5	12.0	9.2	2.0	2.9	4000	4400	420 962 906
		6.5 - 8.0	14.0	9.2	2.0	2.9	4000	4400	420 964 907
		8.0 - 9.0	16.0	9.2	2.0	2.9	4000	4400	420 963 906
		9.5 - 11.0	18.0	9.2	2.0	2.9	4000	4400	420 966 907
		11.0 - 12.0	20.0	9.2	2.0	2.9	4000	4400	420 965 906
6.4	6.5	1.5 - 6.0	12.0	12.5	2.7	3.8	6000	8000	420 970 907
		6.0 - 8.0	16.0	12.5	2.7	3.8	6000	8000	420 971 907
		8.0 - 10.0	18.0	12.5	2.7	3.8	6000	8000	420 972 907
		10.0 - 12.0	20.0	12.5	2.7	3.8	6000	8000	420 973 906
		12.0 - 17.0	25.0	12.5	2.7	3.8	6000	8000	420 974 906

* Strengths at break relate to rivet failure.

Other designs available on request.



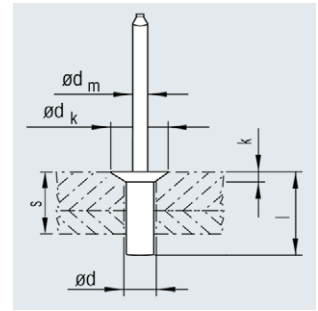
TIFAS® closed end blind rivets

Countersunk 120° with grooved mandrel

Material

Sleeve:
Stainless steel
A2 AISI 304

Mandrel:
Stainless steel
C1 AISI 420



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve l ± 0.5 [mm]	Blind rivet head		Mandrel \varnothing d _m nom. [mm]	Nominal strength at break		Article No.
				\varnothing dk ± 0.5 [mm]	Height k ± 0.2 [mm]		Shear [N]	Tensile [N]	
4.8	4.9	4.0 - 6.5	12.0	9.5	2.0	2.9	4000	4400	420 984 907
		5.0 - 8.2	13.5	9.5	2.0	2.9	4000	4400	420 985 907
		8.0 - 11.0	16.6	9.5	2.0	2.9	4000	4400	420 986 907

* Strengths at break relate to rivet failure.

Other designs available on request.



TIFAS® closed end blind rivets

Truss head with grooved mandrel

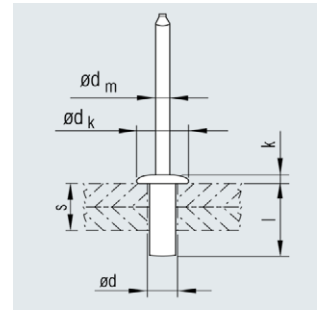
Material

Blind sleeve:
Stainless steel A4

Mandrel:
Stainless steel A4



Extra-high corrosion resistance



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve $l \pm 1.0-0.2$ [mm]	Blind rivet head		Mandrel \varnothing d _m max. [mm]	Nominal strength at break		Article No.
				\varnothing dk [mm]	Height k max [mm]		Shear [N]	Tensile [N]	
3.2	3.3	1.0 - 1.5	6.0	6.5	1.3	1.9	2000	2200	420 450 907
		2.0 - 3.0	8.0	6.5	1.3	1.9	2000	2200	420 451 907
		3.0 - 4.5	10.0	6.5	1.3	1.9	2000	2200	420 452 907
		4.5 - 6.5	12.0	6.5	1.3	1.9	2000	2200	420 453 907
		6.5 - 8.5	14.0	6.5	1.3	1.9	2000	2200	420 454 907
4.0	4.1	1.0 - 1.5	6.0	8.0	1.7	2.3	3000	3500	420 455 907
		1.5 - 3.0	8.0	8.0	1.7	2.3	3000	3500	420 456 907
		3.0 - 5.0	10.0	8.0	1.7	2.3	3000	3500	420 457 907
		5.0 - 6.5	12.0	8.0	1.7	2.3	3000	3500	420 458 907
		6.5 - 8.0	14.0	8.0	1.7	2.3	3000	3500	420 459 907
4.8	4.9	1.5 - 3.0	8.0	9.5	2.0	2.9	4000	4400	420 461 907
		3.0 - 5.0	10.0	9.5	2.0	2.9	4000	4400	420 462 907
		5.0 - 6.5	12.0	9.5	2.0	2.9	4000	4400	420 463 907
		6.5 - 8.0	14.0	9.5	2.0	2.9	4000	4400	420 464 907
		8.0 - 9.0	16.0	9.5	2.0	2.9	4000	4400	420 465 907

* Strengths at break relate to rivet failure.

Other designs available on request.



TIFAS® closed end blind rivets

Truss head

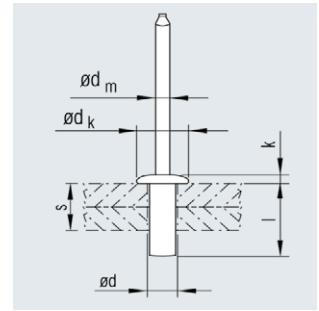
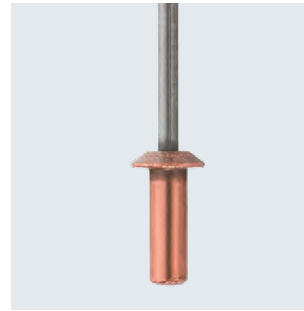
Material



Sleeve:
Copper



Mandrel:
Steel



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve l $\pm 1.0-0.2$ [mm]	Blind rivet head		Mandrel \varnothing d _m max. [mm]	Nominal strength at break		Article No.
				\varnothing dk [mm]	Height k max [mm]		Shear [N]	Tensile [N]	
3.2	3.3	0.5 - 2.0	6.5	6.3	1.3	1.75	850	1300	420 801 906
		2.0 - 3.5	8.0	6.3	1.3	1.75	850	1300	420 802 906
		3.5 - 5.0	9.5	6.3	1.3	1.75	850	1300	420 803 906
		6.5 - 8.0	12.5	6.3	1.3	1.75	850	1300	420 805 906
4.0	4.1	1.5 - 3.0	8.0	7.7	1.7	2.2	1350	2000	420 820 906
		3.0 - 5.0	10.0	7.7	1.7	2.2	1350	2000	420 821 907
		5.0 - 6.5	12.0	7.7	1.7	2.2	1350	2000	420 822 907
		6.5 - 10.0	15.0	7.7	1.7	2.2	1350	2000	420 823 907
4.8	4.9	3.5 - 5.0	9.5	9.2	2.0	2.65	1950	2800	420 840 906
		5.5 - 6.5	11.5	9.2	2.0	2.65	1950	2800	420 842 906

* Strengths at break relate to rivet failure.

Other designs available on request.



TIFAS® closed end blind rivets

Truss head

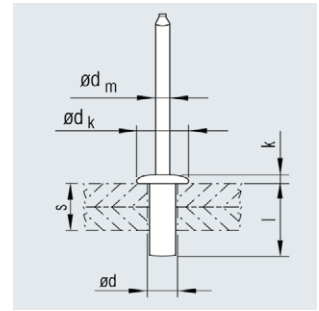
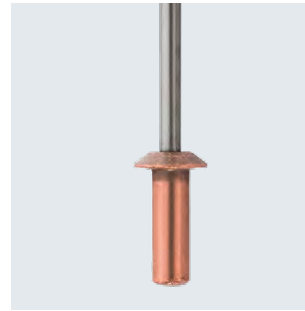
Material



Sleeve:
Copper



Mandrel:
Stainless steel



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve l $\pm 1.0-0.2$ [mm]	Blind rivet head		Mandrel \varnothing dm max. [mm]	Nominal strength at break		Article No.
				\varnothing dk [mm]	Height k max [mm]		Shear [N]	Tensile [N]	
3.2	3.3	0.5 - 2.0	6.5	6.3	1.3	1.75	850	1300	420 810 906
		2.0 - 3.5	8.0	6.3	1.3	1.75	850	1300	420 811 906
		3.5 - 5.0	9.5	6.3	1.3	1.75	850	1300	420 812 906
		6.5 - 8.0	12.5	6.3	1.3	1.75	850	1300	420 813 906
4.0	4.1	1.5 - 3.0	8.0	7.7	1.7	2.2	1350	2000	420 816 906
		3.0 - 5.0	10.0	7.7	1.7	2.2	1350	2000	420 817 906

* Strengths at break relate to rivet failure.

Other designs available on request.

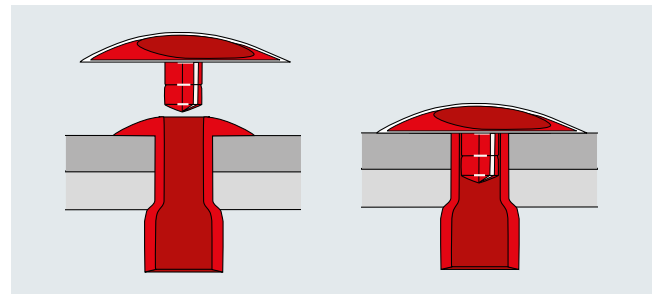


Fillers for TIFAS® blind rivets

For sealing and covering the rivet head side of TIFAS® blind rivets with a standard truss head.

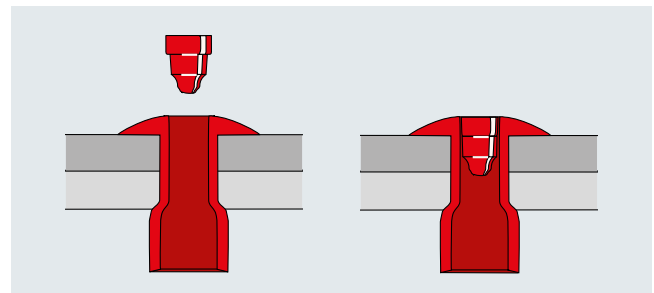
Plastic fillers with cap for TIFAS® blind rivets

ø [mm]	Material	Colour	similar to RAL	Filler dim. [mm]	Article No.
3.0 / 3.2	Al alloy	white	9010	8.0 x 2.0 x 1.5	408 360
		black	9011	8.0 x 2.0 x 1.5	408 361
4.8 / 5.0	Steel, stainless steel	white	9010	13.0 x 3.2 x 4.0	408 367
		black	9011	13.0 x 3.2 x 4.0	408 368
		silver	9006	13.0 x 3.2 x 4.0	408 369
	Al alloy	silver	9006	13.0 x 2.6 x 4.0	408 374
		white	9010	13.0 x 2.6 x 4.0	408 380
		black	9011	13.0 x 2.6 x 4.0	408 381



Plastic fillers for TIFAS® blind rivets - standard version

ø [mm]	Material	Colour	Article No.
3.0 / 3.2	Al alloy, steel, stainless steel	white	408 333
4.0	Al alloy, steel, stainless steel	white	408 334
4.8 / 5.0	Steel, stainless steel	white	408 335
	Al alloy	grey	408 341
6.4	Steel	white	408 336



Washers

ø [mm]	Material	Colour	Article No.
Neoprene	6.5 x 3.8 x 1	black	408 235
	10 x 3.5 x 1	black	408 232
	10 x 3.8 x 1	black	408 230
	11 x 6.0 x 1	black	408 146
Brass	12 x 3.3 x 1	-	408 147
	12 x 4.1 x 1	-	408 114
	12 x 4.9 x 1	-	408 148
Steel	9 x 4.3 x 1	galvanised	408 214
	10 x 3.1 x 1	galvanised	408 213
	12 x 3.1 x 1	galvanised	408 203
	12 x 4.1 x 1	galvanised	408 204
	12 x 5.1 x 1	galvanised	408 205
Stainless steel	12 x 4.7 x 1	-	408 100
	12 x 5.0 x 1	-	408 101

