

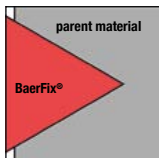
BaerFix® Thread Inserts, self-tapping with cutting slots



BaerFix® Thread Inserts have a conical lead with cutting slots on the metric external thread. They are designed to cut their own threads as they are being driven into a drilled hole (= self-tapping). This provides a secure and high-strength anchor in the parent material. BaerFix® Thread Inserts create wear-free and vibration resistant bolted connections because of its close tolerances and the self-tapped thread. In some cases the Insert has a minimal inward springing action, which creates a screw locking effect. If this is not wished, you can use BaerFix® Thread Inserts with cutting holes. These are suitable for creating highly durable and wear resistant bolted connections in materials with low shear resistance.

BaerFix® Thread Inserts, self-tapping with cutting holes

BaerFix® self-tapping Thread Inserts with cutting holes are constructed especially for materials with difficult machining characteristics. The thick wall allows higher cutting forces, which are distributed over three cutting holes.

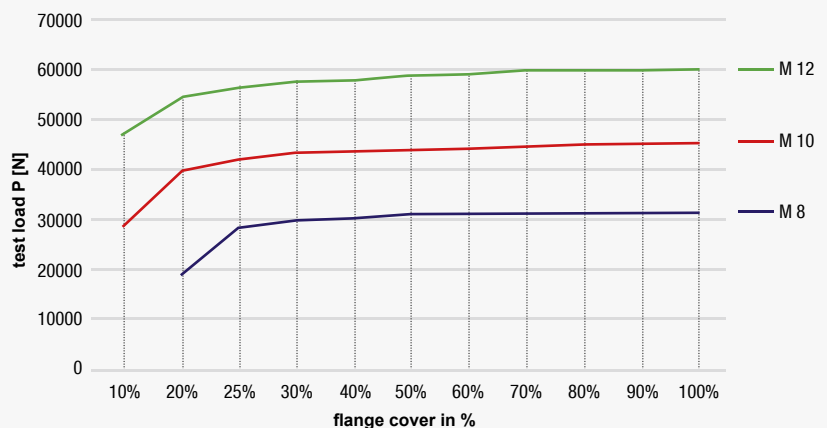
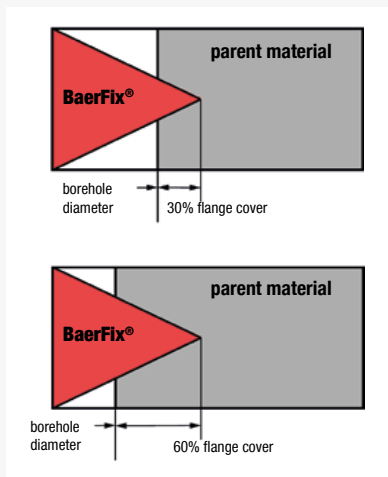


Large effective shearing surface

The BaerFix® Thread Insert has a larger effective surface, which ensures a higher degree of pull-out strength, i.e. an M 5 is often sufficient instead of a cut M 6 thread.

Flange cover

In a work piece made of a light alloy, the BaerFix® Insert achieves almost maximum pull-out strength with only 30 % flange cover.



Pull-out strength

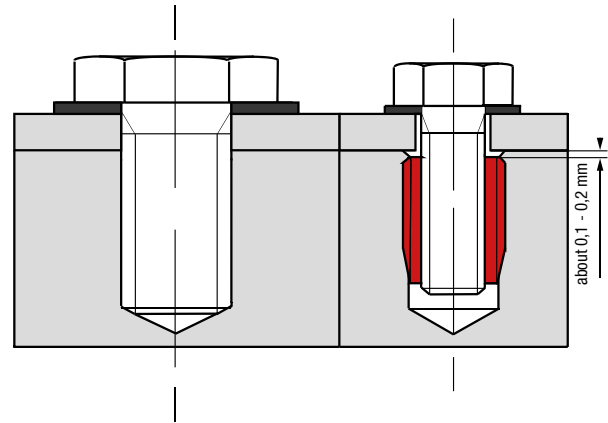
A BaerFix® Thread Insert is highly durable. Using in light alloys for example, helps achieving a pull-out strength which far exceeds the yield strength of a screw 8.8.

Corrosion resistance

The superior corrosion resistant characteristics of BaerFix® Inserts assure their adaptability to most materials and usual environmental conditions.

Minimize weight & space

Weight saving is unmatched - an important design feature for many products, particularly airborne equipment. Space saving is maximized, permitting the use of standard configurations with oversize requirements - as is necessary to accommodate solid bushings. A bigger radius equal to the nominal bolt size fit for higher load and forces.



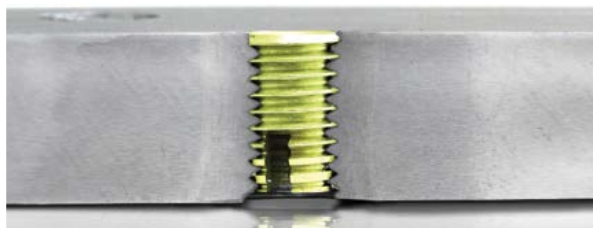
Minimize total costs

Overall production cost savings may be realised by using a less expensive material and still maintain the required thread strength with BaerFix® Inserts. Costs savings apply in many directions - lower insert costs, lower installation costs and smaller bolts do all result savings.



Thread Repair

In addition to thread reinforcement the BaerFix® Inserts also are used for repairing broken threads. In this process rejected components can be reclaimed by installing a thread insert. The created thread will keep its original dimension and also gets reinforced by raising the pull-out strength and corrosion resistance. Costs of acquisition and processing can be saved by repairing threads with BaerFix® Thread Inserts.



Applications

It's especially suitable for following materials:

- aluminum and aluminum alloy
- brass, bronze, cast iron
- magnesium alloy
- hermosetting plastics and thermoplastics (no rubber-soft thermoplastics)

Examples for applications:

- Automotive industry: engines, transmissions, radiators, autobody etc.
- Electrical and laboratory techniques: medical equipment, capacitors, boxes etc.
- Household appliance: vacuum cleaners, electric iron, washing machines, cameras, mobile phones etc.
- Plant and equipment construction: pumps, construction machines, different components etc.
- Military machines: aircrafts, weapons etc.

Materials

Case-hardened steel,
zinc-plated, yellow
chromated (conform to
RoHS, free of ChromVI)

Stainless steel 1.4305

AISI 303

X8CrNiS18-9

Brass

Stainless steel 1.4105*

AISI 430 F

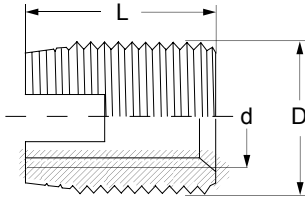
X6CrMoS17

Other materials and surfaces on request.

* on request

Compatibility

BaerFix® Inserts are manufactured according to tolerance ISO 2768-m. BaerFix® products are compatible with thread inserts and tools from other manufactures.



Case-hardened steel, zinc-plated, conform to RoHS



Stainless steel 1.4305 (AISI 303)



Stainless steel 1.4571 (AISI 316Ti)



Brass

d	D	L	No.	pa- cking unit	€ pack. unit	No.	packing unit	€ pack. unit	No.	packing unit	€ pack. unit	No.	pa- cking unit	€ pack. unit
M														
M 2 x 0,4	M 4,5 x 0,5	6 mm	FE02	10	11,16									
			1-FE02	100	42,44									
M 2,5 x 0,45	M 4,5 x 0,5	6 mm	FE025	10	11,28									
			1-FE025	100	42,90									
M 3 x 0,5	M 5 x 0,5	6 mm	FE03	10	4,75	FA43	10	20,70	FAE03	10	36,54	1-FMS43	100	15,00
			1-FE03	100	19,13	1-FA43	100	73,70	1-FAE03	100	110,67			
M 4 x 0,7	M 6,5 x 0,75	8 mm	FE04	10	6,21	FA44	10	20,83	FAE04	10	42,21			
			1-FE04	100	23,85	1-FA44	100	74,45	1-FAE04	100	127,89	1-FMS44	100	20,63
M 5 x 0,8	M 8 x 1,0	10 mm	FE05	10	7,15	FA45	10	20,23	FAE05	10	47,15			
			1-FE05	100	27,09	1-FA45	100	76,40	1-FAE05	100	143,01	1-FMS45	100	26,88
M 6 x 1,0	M 9 x 1,0	12 mm	FE069	10	9,44	FA469	10	20,83	FAE069	10	55,44			
			1-FE069	100	32,26	1-FA469	100	83,88	1-FAE069	100	168,11	1-FMS469	100	36,12
M 6 x 1,0	M 10 x 1,5	14 mm	FE06	10	9,46	FA46	10	20,83	FAE06	10	55,44			
			1-FE06	100	35,91	1-FA46	100	86,56	1-FAE06	100	168,11	1-FMS46	100	36,12
M 8 x 1,25	M 12 x 1,5	15 mm	FE08	10	11,97	FA48	10	29,59	FAE08	10	62,74			
			1-FE08	100	45,85	1-FA48	100	116,59	1-FAE08	100	190,16	1-FMS48	100	55,99
M 10 x 1,5	M 14 x 1,5	18 mm	FE10	10	18,83	FA410	10	41,57	FAE10	10	98,91			
			1-FE10	100	68,64	1-FA410	100	170,87	1-FAE10	100	299,78	1-FMS410	100	89,36
M 12 x 1,5	M 16 x 1,5	22 mm	FE125	5	18,09									
			1-FE125	100	115,97									
M 12 x 1,75	M 16 x 1,5	22 mm	FE12	5	18,83	FA412	10	69,27	FAE12	10	111,20			
			1-FE12	100	98,51	1-FA412	100	284,81	1-FAE12	100	342,41	1-FMS412	100	*
M 14 x 1,5	M 18 x 1,5	24 mm	FE145	5	20,70									
			1-FE14	50	59,47									
M 16 x 2,0	M 20 x 1,5	22 mm	FE16	5	16,24	FA416	5	82,00						
			1-FE16	50	77,56	1-FA416	50	281,73				1-FMS416	50	*
M 18 x 2,5	M 22 x 1,5	24 mm	FE18	50	291,17									
M 20 x 2,5	M 26 x 1,5	27 mm	FE20	5	43,17	FA420	5	84,89						
			1-FE20	50	157,42	1-FA420	50	417,38						
M 22 x 2,5	M 26 x 1,5	30 mm	FE22	50	250,44									
M 24 x 3,0	M 30 x 1,5	30 mm	FE24	5	63,87									
			1-FE24	50	250,44	1-FA424	50	*						

UNC

UNC 1/4 x 20*	M 10 x 1,5	14 mm	FE74	10	14,13									
			1-FE74	100	*									
UNC 5/16 x 18*	M 12 x 1,5	15 mm	FE75	10	18,00									
			1-FE75	100	*									
UNC 3/8 x 16*	M 14 x 1,5	18 mm	FE76	5	15,46									
			1-FE76	100	*									
UNC 7/16 x 14*	M 16 x 1,5	22 mm	FE77	5	18,72									
			1-FE77	100	*									
UNC 1/2 x 13*	M 18 x 1,5	22 mm	FE78	5	22,59									
			1-FE78	100	*									
UNC 5/8 x 11*	M 20 x 1,5	22 mm	FE79		*									

UNF

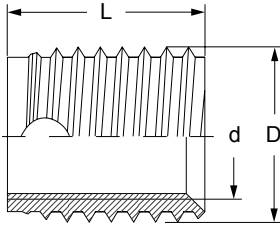
UNF 1/4 x 28*	M 10 x 1,5	14 mm	FE84	10	14,13									
			1-FE84	100	*									
UNF 5/16 x 24*	M 12 x 1,5	15 mm	FE85	10	18,00									
			1-FE85	100	*									
UNF 3/8 x 24*	M 14 x 1,5	18 mm	FE86	5	15,46									
			1-FE86	100	*									
UNF 7/16 x 20*	M 16 x 1,5	22 mm	FE87	5	18,72									
			1-FE87	100	*									
UNF 1/2 x 20*	M 18 x 1,5	22 mm	FE88	5	22,59									
			1-FE88	100	*									
UNF 5/8 x 18*	M 20 x 1,5	22 mm	FE89		*									

Stainless steel 1.4105, and other materials on request

i Please see borehole- and further technical information on page 22 - 23.

* prices are on request

BaerFix® Thread Inserts with cutting slots



Material

Case-hardened steel, zinc-plated, conform to RoHS

d	D	L	No.	packing unit	€ per pack. unit
M 3 x 0,5	M 5 x 0,6	4 mm	FEL03	10	7,61
M 3 x 0,5	M 5 x 0,6	6 mm	1-FEL03	100	30,80
M 3 x 0,5	M 5 x 0,6	6 mm	FEL04	10	9,30
M 4 x 0,7	M 6,5 x 0,8	6 mm	1-FEL04	100	37,32
M 4 x 0,7	M 6,5 x 0,8	8 mm	1-FELLO4	100	38,64
M 5 x 0,8	M 8 x 1,0	7 mm	FEL05	10	10,14
M 5 x 0,8	M 8 x 1,0	10 mm	1-FEL05	100	40,81
M 5 x 0,8	M 8 x 1,0	10 mm	1-FELLO5	100	42,50
M 6 x 1,0	M 10 x 1,25	8 mm	FEL06	10	10,63
M 6 x 1,0	M 10 x 1,25	12 mm	1-FEL06	100	46,61
M 6 x 1,0	M 10 x 1,25	12 mm	1-FELLO6	100	53,02
M 8 x 1,25	M 12 x 1,5	9 mm	FEL08	10	12,93
M 8 x 1,25	M 12 x 1,5	14 mm	1-FEL08	100	51,57
M 8 x 1,25	M 12 x 1,5	14 mm	1-FELLO8	100	64,00
M 10 x 1,5	M 14 x 1,5	10 mm	FEL10	10	17,51
M 10 x 1,5	M 14 x 1,5	18 mm	1-FEL10	100	68,83
M 10 x 1,5	M 14 x 1,5	18 mm	1-FELLO10	100	80,90
M 12 x 1,75	M 16 x 1,75	12 mm	FEL12	10	24,09
M 12 x 1,75	M 16 x 1,75	12 mm	1-FEL12	100	96,60
M 12 x 1,75	M 16 x 1,75	22 mm	1-FELLO12	100	121,96
M 16 x 2,0	M 20 x 2,0	14 mm	FEL16	5	18,11
M 16 x 2,0	M 20 x 2,0	14 mm	1-FEL16	50	78,49
M 16 x 2,0	M 20 x 2,0	24 mm	1-FELLO16	50	102,64



Further dimensions on request

Material

Stainless steel 1.4305 (AISI 303)

d	D	L	No.	packing unit	€ per pack. unit
M 3 x 0,5	M 5 x 0,6	4 mm	FAL03	10	22,52
M 3 x 0,5	M 5 x 0,6	6 mm	1-FAL03	100	87,18
M 3 x 0,5	M 5 x 0,6	6 mm	1-FALLO3	100	104,94
M 4 x 0,7	M 6,5 x 0,8	6 mm	FAL04	10	24,15
M 4 x 0,7	M 6,5 x 0,8	8 mm	1-FAL04	100	96,00
M 4 x 0,7	M 6,5 x 0,8	8 mm	1-FALLO4	100	112,67
M 5 x 0,8	M 8 x 1,0	7 mm	FAL05	10	26,32
M 5 x 0,8	M 8 x 1,0	10 mm	1-FAL05	100	104,94
M 5 x 0,8	M 8 x 1,0	10 mm	1-FALLO5	100	128,00
M 6 x 1,0	M 10 x 1,25	8 mm	FAL06	10	42,26
M 6 x 1,0	M 10 x 1,25	12 mm	1-FAL06	100	119,06
M 6 x 1,0	M 10 x 1,25	12 mm	1-FALLO6	100	140,79
M 8 x 1,25	M 12 x 1,5	9 mm	FAL08	10	32,12
M 8 x 1,25	M 12 x 1,5	14 mm	1-FAL08	100	128,00
M 8 x 1,25	M 12 x 1,5	14 mm	1-FALLO8	100	152,33
M 10 x 1,5	M 14 x 1,5	10 mm	FAL10	10	43,47
M 10 x 1,5	M 14 x 1,5	18 mm	1-FAL10	100	172,80
M 10 x 1,5	M 14 x 1,5	18 mm	1-FALLO10	100	198,40
M 12 x 1,75	M 16 x 1,75	12 mm	FAL12	10	72,02
M 12 x 1,75	M 16 x 1,75	12 mm	1-FAL12	100	287,99




Further dimensions on request

BaerFix® Thread Inserts with cutting holes for spark plug

Material

Case-hardened steel, zinc-plated

d	D	L		No.	packing unit	€ pro VPE
M 10 x 1,0	special size	8 mm	12,4 mm	FE101008	5	16,31
M 10 x 1,0	special size	13 mm	12,4 mm	FE101013	5	16,31
M 12 x 1,25	special size	10 mm	14,5 mm	FE121210	5	16,31
M 12 x 1,25	special size	14 mm	14,5 mm	FE121214	5	16,31
M 14 x 1,25	M 17,7 x 1,25	9 mm	17,0 mm	FE141259	5	25,48
M 14 x 1,25	M 17,7 x 1,25	15 mm	17,0 mm	FE141251	5	31,94



BaerFix® Thread Inserts for special applications

BAER Company develops and produces customer-oriented thread inserts and threading tools. Special applications can have special requirements to materials, dimensions, corrosion resistance, force effects, lifting capacities, pull out-strength or many more. Please send us your inquiry or give us a call. We enjoy to consult you in your applications.

- BaerFix® Thread Inserts with cutting holes, self-tapping
- BaerFix® Thread Inserts with hexagonal socket, self-tapping
- BaerFix® Thread Inserts for cold installation
- BaerFix® Thread Inserts for heat installation
- BaerFix® Thread Inserts for ultrasonic installation
- BaerFix® Thread Inserts for Screwing into a threaded hole
- Custom-made thread thread inserts (detail drawing or samples)



Instruction for use

1

Drilling

Clear the damaged thread with a drill bit or create a new hole in the parent material. For strong, hard and tough materials it is recommended to tap the thread (max. intermediate tap) before the installation of BaerFix® Inserts.



2

Screwing BaerFix® Insert on the inserting tool

Screw the BaerFix® Insert, with cutting slots or holes pointing downwards, on the inserting tool. Lock the BaerFix® Insert with the nut by wrench.



3

Installing the insert

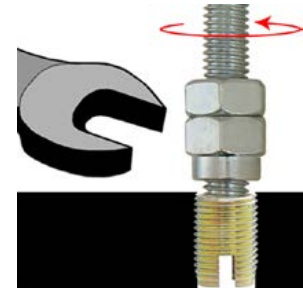
Screw the BaerFix® Insert into the borehole. The BaerFix® Thread Insert is self-tapping. The inserting tool has a 1/4" hexagonal shank and can be used by a cordless screwdriver or a wrench socket.



4

Screwing off the inserting tool

Unlock the counternut by a wrench and screw off the inserting tool. Created bolted connections with BaerFix® Inserts are vibration resistant, wear-free and have a high load capacity in materials with low shearing strength.



Installation by machine

1

Drilling

Clear the damaged thread with a drill bit or create a new hole in the parent material. For strong, hard and tough materials it is recommended to tap the thread (max. intermediate tap) before the installation of BaerFix® Inserts.



2

Configure the machine

Position the workpiece to ensure that hole and machine spindle are in alignment. Set the dimensions, speed values and driving depth (about 0,1 mm till 0,2 mm under the workpiece surface). Turn the external shell, so the stop pin can hold and drive the shell while rotating in clockwise direction. Screw the BaerFix® Insert, with cutting slots or holes pointing downwards, 2 till 4 windings on the inserting tool.



3

Installing the insert

Actuate the machine for screwing the insert into the hole, until the chosen driving depth is reached. Avoid a hard touchdown of the inserting tool on the workpiece to prevent damages on the inserting tool, thread insert or workpiece.



4

Screwing off the inserting tool

Set the machine on reverse running. The stop pin holds the shell while rotating in counterclockwise direction and screws out the inserting tool.



i Please see values for speed and installation torque on page 23.



BaerFix[®]

Technical Data



Automatensähle, kaltgezogen			
Stahlart	Werkstoff-Nr.	Werkstoff-Nr. (alt)	Werkstoff-Nr. (neu)
A 1	1.0303	1.0303	1.0303
A 2	1.0305	1.0305	1.0305
A 3	1.0307	1.0307	1.0307
A 4	1.0309	1.0309	1.0309
A 5	1.0311	1.0311	1.0311
A 6	1.0313	1.0313	1.0313
A 7	1.0315	1.0315	1.0315
A 8	1.0317	1.0317	1.0317
A 9	1.0319	1.0319	1.0319
A 10	1.0321	1.0321	1.0321
A 11	1.0323	1.0323	1.0323
A 12	1.0325	1.0325	1.0325
A 13	1.0327	1.0327	1.0327
A 14	1.0329	1.0329	1.0329
A 15	1.0331	1.0331	1.0331
A 16	1.0333	1.0333	1.0333
A 17	1.0335	1.0335	1.0335
A 18	1.0337	1.0337	1.0337
A 19	1.0339	1.0339	1.0339
A 20	1.0341	1.0341	1.0341
A 21	1.0343	1.0343	1.0343
A 22	1.0345	1.0345	1.0345
A 23	1.0347	1.0347	1.0347
A 24	1.0349	1.0349	1.0349
A 25	1.0351	1.0351	1.0351
A 26	1.0353	1.0353	1.0353
A 27	1.0355	1.0355	1.0355
A 28	1.0357	1.0357	1.0357
A 29	1.0359	1.0359	1.0359
A 30	1.0361	1.0361	1.0361
A 31	1.0363	1.0363	1.0363
A 32	1.0365	1.0365	1.0365
A 33	1.0367	1.0367	1.0367
A 34	1.0369	1.0369	1.0369
A 35	1.0371	1.0371	1.0371
A 36	1.0373	1.0373	1.0373
A 37	1.0375	1.0375	1.0375
A 38	1.0377	1.0377	1.0377
A 39	1.0379	1.0379	1.0379
A 40	1.0381	1.0381	1.0381
A 41	1.0383	1.0383	1.0383
A 42	1.0385	1.0385	1.0385
A 43	1.0387	1.0387	1.0387
A 44	1.0389	1.0389	1.0389
A 45	1.0391	1.0391	1.0391
A 46	1.0393	1.0393	1.0393
A 47	1.0395	1.0395	1.0395
A 48	1.0397	1.0397	1.0397
A 49	1.0399	1.0399	1.0399
A 50	1.0401	1.0401	1.0401
A 51	1.0403	1.0403	1.0403
A 52	1.0405	1.0405	1.0405
A 53	1.0407	1.0407	1.0407
A 54	1.0409	1.0409	1.0409
A 55	1.0411	1.0411	1.0411
A 56	1.0413	1.0413	1.0413
A 57	1.0415	1.0415	1.0415
A 58	1.0417	1.0417	1.0417
A 59	1.0419	1.0419	1.0419
A 60	1.0421	1.0421	1.0421
A 61	1.0423	1.0423	1.0423
A 62	1.0425	1.0425	1.0425
A 63	1.0427	1.0427	1.0427
A 64	1.0429	1.0429	1.0429
A 65	1.0431	1.0431	1.0431
A 66	1.0433	1.0433	1.0433
A 67	1.0435	1.0435	1.0435
A 68	1.0437	1.0437	1.0437
A 69	1.0439	1.0439	1.0439
A 70	1.0441	1.0441	1.0441
A 71	1.0443	1.0443	1.0443
A 72	1.0445	1.0445	1.0445
A 73	1.0447	1.0447	1.0447
A 74	1.0449	1.0449	1.0449
A 75	1.0451	1.0451	1.0451
A 76	1.0453	1.0453	1.0453
A 77	1.0455	1.0455	1.0455
A 78	1.0457	1.0457	1.0457
A 79	1.0459	1.0459	1.0459
A 80	1.0461	1.0461	1.0461
A 81	1.0463	1.0463	1.0463
A 82	1.0465	1.0465	1.0465
A 83	1.0467	1.0467	1.0467
A 84	1.0469	1.0469	1.0469
A 85	1.0471	1.0471	1.0471
A 86	1.0473	1.0473	1.0473
A 87	1.0475	1.0475	1.0475
A 88	1.0477	1.0477	1.0477
A 89	1.0479	1.0479	1.0479
A 90	1.0481	1.0481	1.0481
A 91	1.0483	1.0483	1.0483
A 92	1.0485	1.0485	1.0485
A 93	1.0487	1.0487	1.0487
A 94	1.0489	1.0489	1.0489
A 95	1.0491	1.0491	1.0491
A 96	1.0493	1.0493	1.0493
A 97	1.0495	1.0495	1.0495
A 98	1.0497	1.0497	1.0497
A 99	1.0499	1.0499	1.0499
A 100	1.0501	1.0501	1.0501

Recommended borehole diameter

		BaerFix® Thread Inserts with cutting slots				BaerFix® Thread Inserts with cutting holes			
materials	Light alloys tensile strength [N/mm²]	<div style="display: flex; justify-content: space-between;"> < 250 N/mm² < 300 N/mm² < 350 N/mm² > 350 N/mm² </div>				<div style="display: flex; justify-content: space-between;"> < 300 N/mm² < 350 N/mm² > 350 N/mm² </div>			
	Brass, NF-metals, bronze	<div style="display: flex; justify-content: space-between;"> < 150 HB < 200 HB > 200 HB </div>				<div style="display: flex; justify-content: space-between;"> < 150 HB < 200 HB > 200 HB </div>			
	Cast iron brinell hardness [HB]								
internal thread	M 2 x 0,4		4,1 mm	4,2 mm	4,3 mm				
	M 2,5 x 0,45		4,1 mm	4,2 mm	4,3 mm				
	M 3 x 0,5		4,6 mm	4,7 mm	4,8 mm	4,6 mm	4,7 mm	4,8 mm	
	M 4 x 0,7	5,9 mm	6,0 mm	6,1 mm	6,2 mm	6,0 mm	6,1 mm	6,2 mm	
	M 5 x 0,8	7,2 mm	7,3 mm	7,5 mm	7,6 mm	7,4 mm	7,5 mm	7,6 mm	7,7 mm
	M 6 x 1,0 thin walled	8,2 mm	8,3 mm	8,5 mm	8,6 mm				
	M 6 x 1,0	8,8 mm	9,0 mm	9,2 mm	9,4 mm	9,3 mm	9,4 mm	9,5 mm	9,6 mm
	M 8 x 1,25	10,8 mm	11,0 mm	11,2 mm	11,4 mm	11,1 mm	11,2 mm	11,3 mm	11,5 mm
	M 10 x 1,5	12,8 mm	13,0 mm	13,2 mm	13,4 mm	13,1 mm	13,2 mm	13,3 mm	13,5 mm
	M 12 x 1,75	14,8 mm	15,0 mm	15,2 mm	15,4 mm	15,0 mm	15,1 mm	15,2 mm	15,4 mm
	M 14 x 2,0	16,8 mm	17,0 mm	17,2 mm	17,4 mm	17,0 mm	17,1 mm	17,2 mm	17,4 mm
	M 16 x 2,0	18,8 mm	19,0 mm	19,2 mm	19,4 mm	19,0 mm	19,1 mm	19,2 mm	19,4 mm
	M 18 x 2,5	20,8 mm	21,0 mm	21,2 mm	21,4 mm				
	M 20 x 2,5	24,8 mm	25,0 mm	25,2 mm	25,4 mm				
	M 22 x 2,5	24,8 mm	25,0 mm	25,2 mm	25,4 mm				
	M 24 x 3,0	28,8 mm	29,0 mm	29,2 mm	29,4 mm				
	M 27 x 3,0	32,8 mm	33,0 mm	33,2 mm	33,4 mm				
	M 30 x 3,5	34,8 mm	35,0 mm	35,2 mm	35,4 mm				
Flange cover	ca. 60%	ca. 50%	ca. 40%	ca. 30%	ca. 80%	ca. 70%	ca. 60%	ca. 50%	

possibly lubrication required

Minimum wall thickness for BaerFix® inserts

	BaerFix® Thread Inserts with cutting slots			BaerFix® Thread Inserts with cutting holes		
	light alloys	cast iron	plastics	light alloys	cast iron	plastics
M 2 x 0,4	0,90 mm	1,35 mm	1,13 mm			
M 2,5 x 0,45	0,90 mm	1,35 mm	1,13 mm			
M 3 x 0,5	1,00 mm	1,50 mm	1,25 mm	1,00 mm	1,50 mm	1,25 mm
M 4 x 0,7	1,30 mm	1,95 mm	1,63 mm	1,30 mm	1,95 mm	1,63 mm
M 5 x 0,8	1,60 mm	2,40 mm	2,00 mm	1,60 mm	2,40 mm	2,00 mm
M 6 x 1,0	2,00 mm	3,00 mm	2,50 mm	2,00 mm	3,00 mm	2,50 mm
M 8 x 1,25	2,40 mm	3,60 mm	3,00 mm	2,40 mm	3,60 mm	3,00 mm
M 10 x 1,5	2,80 mm	4,20 mm	3,50 mm	2,80 mm	4,20 mm	3,50 mm
M 12 x 1,75	3,20 mm	4,80 mm	4,00 mm	3,20 mm	4,80 mm	4,00 mm
M 14 x 2,0	3,60 mm	5,40 mm	4,50 mm	3,60 mm	5,40 mm	4,50 mm
M 16 x 2,0	4,00 mm	6,00 mm	5,00 mm	4,00 mm	6,00 mm	5,00 mm
M 18 x 2,5	4,40 mm	6,60 mm	5,50 mm			
M 20 x 2,5	5,20 mm	7,80 mm	6,50 mm			
M 22 x 2,5	5,20 mm	7,80 mm	6,50 mm			
M 24 x 3,0	6,00 mm	9,00 mm	7,50 mm			
M 27 x 3,0	6,80 mm	10,20 mm	8,50 mm			
M 30 x 3,5	7,20 mm	10,80 mm	9,00 mm			

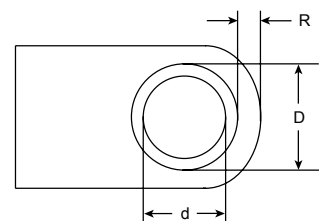
Calculation for minimum values

d = internal diameter BaerFix® Insert
D = external diameter BaerFix® Insert
R = remaining wall thickness

$$R_{\min} \text{ (light alloys)} = 0,2 \times D$$

$$R_{\min} \text{ (cast iron)} = 0,3 \times D$$

$$R_{\min} \text{ (plastics)} = 0,25 \times D$$



Minimal borehole depth

BaerFix® Thread Inserts with cutting slots



Internal Thread	Min. borehole depth for through holes	Min. borehole depth for blind holes
M 2 x 0,4	6,00 mm	8,00 mm
M 2,5 x 0,45	6,00 mm	8,00 mm
M 3 x 0,5	6,00 mm	8,00 mm
M 4 x 0,7	8,00 mm	10,00 mm
M 5 x 0,8	10,00 mm	13,00 mm
M 6 x 1,0	14,00 mm	17,00 mm
M 8 x 1,25	15,00 mm	18,00 mm
M 10 x 1,5	18,00 mm	22,00 mm
M 12 x 1,75	22,00 mm	26,00 mm
M 14 x 2,0	24,00 mm	28,00 mm
M 16 x 2,0	22,00 mm	27,00 mm
M 18 x 2,5	24,00 mm	29,00 mm
M 20 x 2,5	27,00 mm	32,00 mm
M 22 x 2,5	30,00 mm	36,00 mm
M 24 x 3,0	30,00 mm	36,00 mm
M 27 x 3,0	30,00 mm	36,00 mm
M 30 x 3,5	40,00 mm	46,00 mm

BaerFix® Thread Inserts with cutting holes



Internal Thread	Length	Min. borehole depth for through holes	Min. borehole depth for blind holes
M 3 x 0,5	4,00 mm	4,00 mm	6,00 mm
M 3 x 0,5	6,00 mm	6,00 mm	8,00 mm
M 4 x 0,7	6,00 mm	6,00 mm	8,00 mm
M 4 x 0,7	8,00 mm	8,00 mm	10,00 mm
M 5 x 0,8	7,00 mm	7,00 mm	9,00 mm
M 5 x 0,8	10,00 mm	10,00 mm	13,00 mm
M 6 x 1,0	8,00 mm	8,00 mm	10,00 mm
M 6 x 1,0	12,00 mm	12,00 mm	15,00 mm
M 8 x 1,25	9,00 mm	9,00 mm	11,00 mm
M 8 x 1,25	14,00 mm	14,00 mm	17,00 mm
M 10 x 1,5	10,00 mm	10,00 mm	13,00 mm
M 10 x 1,5	18,00 mm	18,00 mm	22,00 mm
M 12 x 1,75	12,00 mm	12,00 mm	15,00 mm
M 12 x 1,75	22,00 mm	22,00 mm	26,00 mm
M 16 x 2,0	24,00 mm	24,00 mm	28,00 mm

BaerFix® Thread Inserts with cutting slots



Internal Thread	Min. borehole depth for through holes	Min. borehole depth for blind holes
UNC 4 x 40	6,00 mm	8,00 mm
UNC 6 x 32	8,00 mm	10,00 mm
UNC 8 x 32	8,00 mm	10,00 mm
UNC 10 x 24	10,00 mm	13,00 mm
UNC 1/4 x 20	14,00 mm	17,00 mm
UNC 5/16 x 18	15,00 mm	18,00 mm
UNC 3/8 x 16	18,00 mm	22,00 mm
UNC 7/16 x 14	22,00 mm	26,00 mm
UNC 1/2 x 13	22,00 mm	28,00 mm
UNC 5/8 x 11	22,00 mm	27,00 mm

BaerFix® Thread Inserts with cutting slots



Internal Thread	Min. borehole depth for through holes	Min. borehole depth for blind holes
UNF 4 x 48	6,00 mm	8,00 mm
UNF 6 x 40	8,00 mm	10,00 mm
UNF 8 x 36	8,00 mm	10,00 mm
UNF 10 x 32	10,00 mm	13,00 mm
UNF 1/4 x 28	14,00 mm	17,00 mm
UNF 5/16 x 24	15,00 mm	18,00 mm
UNF 3/8 x 24	18,00 mm	22,00 mm
UNF 7/16 x 20	22,00 mm	26,00 mm
UNF 1/2 x 20	22,00 mm	28,00 mm
UNF 5/8 x 18	22,00 mm	27,00 mm

Tolerances

BaerFix® Inserts are produced according to ISO 2768-m

Internal metric threads: ISO 6H

External metric threads: works standard

Recommended values for machine installation

Speed values for light alloys

BaerFix® Internal Thread	Speed per min
M 2,5 - M 3	650 - 900
M 4 - M 5	400 - 600
M 6 - M 8	280 - 400
M 10 - M 12	200 - 300
M 14 - M 16	150 - 200
M 18 - M 20	120 - 200
M 22 - M 24	100 - 160
M 27 - M 30	80 - 140

Values for installation torque

BaerFix® Internal Thread	Torque [Nm]
M 2,5 x 0,45	1, 5 Nm
M 3 x 0,5	2, 5 Nm
M 4 x 0,7	5, 5 Nm
M 5 x 0,8	10, 0 Nm
M 6 x 1,0	15, 0 Nm
M 8 x 1,25	28, 0 Nm
M 10 x 1,5	40, 0 Nm
M 12 x 1,75	60, 0 Nm



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