

SELF TAPPING THREADED INSERTS



Self-tapping inserts

Without pre-tapping, quick and easy installation

Suppression of wear in light alloys, plastic materials, in cases of frequent unscrewing

Repairing damaged threads

Materials: Galvanized Steel, Brass, AISI303, AISI316

Key Inserts - Inserts with anchor keys

The keys make the insert mechanically locked against unscrewing by rotation or vibration.

AISI303 material to obtain high resistance threads on different materials, from light alloys to steels or to repair damaged threads.

They can be installed easily as the host thread is standard and therefore does not require the use of special taps.

It can possibly be removed and replaced.



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Self-tapping threaded inserts – Self-tapping

The self-tapping metal threaded inserts have an internal thread intended to receive the screw and an external thread with a tapping function.

They are applied in low or medium resistant materials (composites, carbon fiber, cast iron, light alloy, copper, resins, thermosetting, thermoplastic) where it is necessary to have threads with better characteristics of resistance to traction and wear or if it is necessary to repair threads ruined.

The 0112 series threaded bushings with cut are for general use and due to the slight bending generated by the installation pressure they have a moderate braking effect on the screw. They are available in galvanized steel, brass, AISI303 or AISI316 stainless steel

The 0218 series threaded bushes do not have the milled gap like the 0112 ones, therefore they do not generate the slight braking effect of the screw, they are more suitable for installation on more resistant materials and are available in the short 0218C or long 0218L version. The 0218C series is also particularly suitable for thin-wall applications.

The materials that can be supplied are galvanized steel or AISI303 stainless steel

The bushings can be installed on holes without the need to perform a preparation thread.

Versions with dimensions on request can be supplied in a relatively short time.

Specials can be supplied with dimensions or materials not in the catalogue.

Inserts with anchor keys

High resistance threaded inserts in stainless steel AISI303 1.4305, available in metric coarse and fine pitch sizes, UNC-UNF.

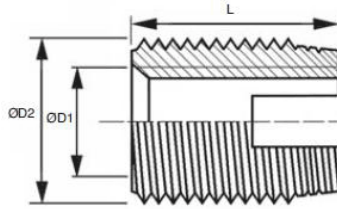
They have 2 or 4 anchoring keys which, once positioned, make the insert mechanically blocked against unscrewing by rotation or vibrations. They are used to obtain high resistance threads on different materials, from light alloys to steels or to repair damaged threads.

They can be installed in a simple way as the host thread is standard so it does not require the use of special males, they can be removed and replaced if necessary.

The inserts are supplied with the anchor keys already positioned inside the grooves. The pre-positioned keys also act as a limit switch so that by screwing the insert it automatically positions itself at the correct installation depth.

Specials can be supplied with dimensions or materials not in the catalogue.

SERIES 0112
(other possible codes 302 - 0212)



Steel Galvanized	COD.			Thread		Length L	Drilling diameter			Blind Hole Min. Depth
	Brass	SS AISI 303	SS AISI 316	Internal Thread Q1	External Thread D2xP		Plastic	Light Leagues Aluminum	Cast iron	
0112M2	0112M2B	0112M2SS	0112M2S16	M2x0.4	4.5x0.5	6	4.0 - 4.1	4.1 - 4.2	4.2 - 4.3	8
0112M2.5	0112M2.5B	0112M2.5SS	0112M2.5S16	M2.5x0.45	4.5x0.5	6	4.0 - 4.1	4.1 - 4.2	4.2 - 4.3	8
0112M3	0112M3B	0112M3SS	0112M3S16	M3x0.5	5x0.5	6	4.5 - 4.6	4.6 - 4.7	4.7 - 4.8	8
0112M3.5	0112M3.5B	0112M3.5SS	0112M3.5S16	M3x0.5	6x0.75	8	5.3 - 5.4	5.5 - 5.6	5.6 - 5.7	10
0112M4	0112M4B	0112M4SS	0112M4S16	M4x0.7	6.5x0.75	8	5.8 - 5.9	6.0 - 6.1	6.1 - 6.2	10
0112M5	0112M5B	0112M5SS	0112M5S16	M5x0.8	8x1	10	7.1 - 7.2	7.3 - 7.5	7.5 - 7.6	13
0112M6A	0112M6AB	0112M6ASS	0112M6AS16	M6(A)x1	9x1	12	8.1 - 8.2	8.3 - 8.5	8.5 - 8.6	15
0112M6	0112M6B	0112M6SS	0112M6S16	M6x1	10x1.5	14	8.6 - 8.8	9.0 - 9.3	9.2 - 9.4	17
0112M8	0112M8B	0112M8SS	0112M8S16	M8x1.25	12x1.5	15	10.6 - 10.8	11.0 - 11.3	11.2 - 11.4	18
0112M10	0112M10B	0112M10SS	0112M10S16	M10x1.5	14x1.5	18	12.6 - 12.8	13.0 - 13.3	13.2 - 13.4	22
0112M12	0112M12B	0112M12SS	0112M12S16	M12x1.75	16x1.5	22	14.6 - 14.8	15.0 - 15.3	15.2 - 15.4	26
0112M14	0112M14B	0112M14SS	0112M14S16	M14x2	18x1.5	24	16.6 - 16.8	17.0 - 17.3	17.2 - 17.5	28
0112M16	0112M16B	0112M16SS	0112M16S16	M16x2	20x1.5	22	18.6 - 18.8	19.0 - 19.3	19.2 - 19.4	27
0112M18	0112M18B	0112M18SS	0112M18S16	M18x2.5	22x1.5	24	20.6 - 20.8	21.0 - 21.3	21.2 - 21.4	29
0112M20	0112M20B	0112M20SS	0112M20S16	M20x2.5	26x1.5	27	24.6 - 24.8	25.0 - 25.3	25.2 - 25.4	32
0112M22	0112M22B	0112M22SS	0112M22S16	M22x2.5	26x1.5	30	24.6 - 24.8	25.0 - 25.3	25.2 - 25.4	36
0112M24	0112M24B	0112M24SS	0112M24S16	M24x3	30x1.5	30	28.6 - 28.8	29.0 - 29.3	29.2 - 29.4	36
0112M27	0112M27B	0112M27SS	0112M27S16	M27x3	34x1.5	30	32.6 - 32.8	33.0 - 33.3	33.2 - 33.4	36
0112M30	0112M30B	0112M30SS	0112M30S16	M30x3.5	36x1.5	40	34.6 - 34.8	35.0 - 35.3	35.2 - 35.4	46

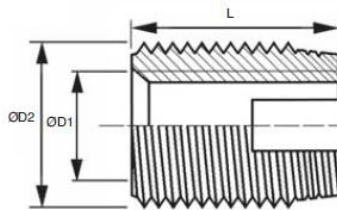
Other measures available on request

SERIES 0113 (other possible codes 303)

Steel Galvanized	COD.		Thread		Length L	Drilling diameter	Blind Hole Min. Depth
	SS AISI 303	SS AISI 316	Internal Thread Q1	External Thread D2xP			
0113M3	0113M3SS	0113M3S16	M3x0.5	4.5x0.5	6	4.2 - 4.3	8
0113M4	0113M4SS	0113M4S16	M4x0.7	6x0.7	6	5.6 - 5.7	8
0113M5	0113M5SS	0113M5S16	M5x0.8	7x0.8	8	6.6 - 6.7	10
0113M6	0113M6SS	0113M6S16	M6x1	8x1	10	7.5 - 7.6	13
0113M8	0113M8SS	0113M8S16	M8x1.25	10x1.25	12	9.2 - 9.4	15
0113M10	0113M10SS	0113M10S16	M10x1.5	12x1.5	15	11.2 - 11.4	18

Other measures available on request

SERIES 0112 A
(other possible codes 302 - 0212)



Steel Galvanized	COD.			Thread		Length L	Drilling diameter			Blind Hole Min. Depth
	Brass	SS AISI 303	SS AISI 316	Internal Thread Q1	External Thread D2xP		Plastic	Light Alloys Aluminum	Cast iron	
0112C025	0112C025B	0112C025SS	0112C025S16	2-56UNC	4.5x0.5	6	4.0 - 4.1	4.1 - 4.2	4.2 - 4.3	8
0112C04	0112C04B	0112C04SS	0112C04S16	4-40UNC	5x0.5	6	4.5 - 4.6	4.6 - 4.7	4.7 - 4.8	8
0112C06	0112C06B	0112C06SS	0112C06S16	6-32UNC	6x0.75	8	5.3 - 5.4	5.5 - 5.6	5.6 - 5.7	10
0112C08	0112C08B	0112C08SS	0112C08S16	8-32UNC	6.5x0.75	8	5.8 - 5.9	6.0 - 6.1	6.1 - 6.2	10
0112C3	0112C3B	0112C3SS	0112C3S16	10-24UNC	8x1	10	7.1 - 7.2	7.3 - 7.5	7.5 - 7.6	13
0112C4	0112C4B	0112C4SS	0112C4S16	1/4-20UNC	10x1.5	14	8.6 - 8.8	9.0 - 9.3	9.2 - 9.4	17
0112C5	0112C5B	0112C5SS	0112C5S16	5/16-18UNC	12x1.5	15	10.6 - 10.8	11.0 - 11.3	11.2 - 11.4	18
0112C6	0112C6B	0112C6SS	0112C6S16	3/8-16UNC	14x1.5	18	12.6 - 12.8	13.0 - 13.3	13.2 - 13.4	22
0112C7	0112C7B	0112C7SS	0112C7S16	7/16-14UNC	16x1.5	16	14.6 - 14.8	15.0 - 15.3	15.2 - 15.4	26
0112C8	0112C8B	0112C8SS	0112C8S16	1/2-13UNC	18x1.5	24	16.6 - 16.8	17.0 - 17.3	17.2 - 17.5	28
0112C10	0112C10B	0112C10SS	0112C10S16	5/8-11UNC	20x1.5	22	18.6 - 18.8	19.0 - 19.3	19.2 - 19.5	27

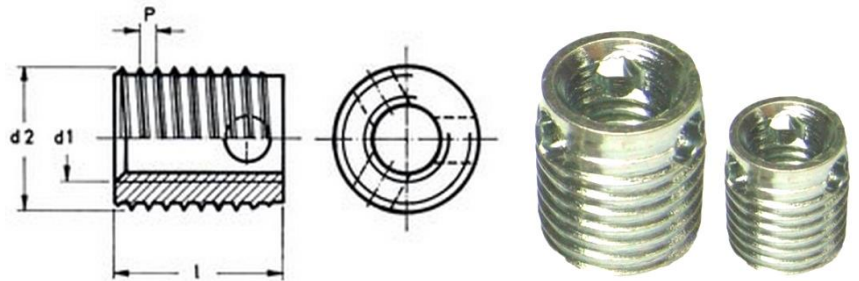
Other measures available on request

SERIES 0218C

(other possible codes 307 – 0318C)

SERIES 0218L

(other possible codes 308 – 0318L)

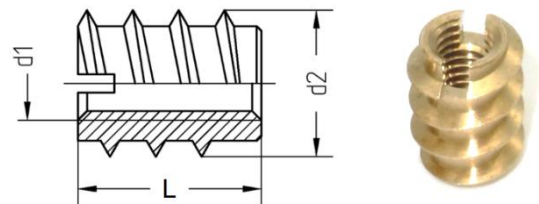


Code 0218C Short Series		Code 0218L Long Series		Thread		Length		Drilling diameter		Blind Hole Min. Depth	
Steel Galvanized	SS AISI 303	Steel Galvanized	SS AISI 303	Internal Thread Q1	External Thread D2xP	0218C	0218L	Soft Alloys Aluminum	Cast iron	0218C	0218L
0218CM3	0218CM3SS	0218LM3	0218LM3SS	M3x0.5	5x0.6	4	6	4.6-4.7	4.7-4.8	6	8
0218CM4	0218CM4SS	0218LM4	0218LM4SS	M4x0.7	6.5x0.8	6	8	6.0-6.1	6.1-6.2	8	10
0218CM5	0218CM5SS	0218LM5	0218LM5SS	M5x0.8	8x1	7	10	7.4-7.5	7.6-7.7	9	13
0218CM6	0218CM6SS	0218LM6	0218LM6SS	M6x1	10x1.25	8	12	9.3-9.4	9.5-9.6	10	15
0218CM8	0218CM8SS	0218LM8	0218LM8SS	M8x1.25	12x1.5	9	14	11.1-11.2	11.3-11.5	11	17
0218CM10	0218CM10SS	0218LM10	0218LM10SS	M10x1.5	14x1.5	10	18	13.1-13.2	13.3-13.5	13	22
0218CM12	0218CM12SS	0218LM12	0218LM12SS	M12x1.75	16x1.75	12	22	15-15.1	15.2-15.4	15	26
0218CM14	0218CM14SS	0218LM14	0218LM14SS	M14x2	18x2	14	24	17-17.1	17.2-17.4	17	28
0218CM16	0218CM16SS	0218LM16	0218LM16SS	M16x2	20x2	14	24	19-19.1	19.2-19.4	17	28

Other measures available on request

SERIES 0219 (upon request)

(other possible codes 309 - 0319)



COD.		Thread		Length L	Drilling diameter		Blind Hole Min. Depth
Brass (on demand)	SS AISI 303 (on demand)	Internal Thread Q1	External Thread D2xP		Materials Cute	Materials Hard	
0219M2.5B	0219M2.5SS	M2.5x0.45	5x1.6	6	3.5	3.6-3.8	8
0219M3B	0219M3SS	M3x0.5	5.5x1.6	6	4.1	4.2-4.3	9
0219M4B	0219M4SS	M4x0.7	7x2.5	10	5.1	5.2-5.3	13
0219M5B	0219M5SS	M5x0.8	9x3	12	6.6	6.7-6.9	15
0219M6B	0219M6SS	M6x1	10x4	14	7.6	7.7-7.9	17
0219M8B	0219M8SS	M8x1.25	13x4	20	9.9	10.1-10.3	23
0219M10B	0219M10SS	M10x1.5	16x5	23	12.4	12.6-12.8	26
0219M12B	0219M12SS	M12x1.75	19x5	26	15.4	15.6-15.8	30

*on demand

AVAILABLE SPECIAL SIZES AND CONFIGURATIONS ON REQUEST

TOOLS FOR INSTALLING METRIC INSERT

Insert	Code	L	S type		
			d. Stem	Attack Square	Attack Hexagonal
M 2	M2/H(S)	57	6	5	7
M 2.5	M2.5/H(S)	57	6	5	7
M 3	M3/H(S)	57	6	5	7
m 4	M4/H(S)	57	6	5	7
m 5	M5/H(S)	76	12	8	13
M6(a), M6	M6/H(S)	76	12	8	13
M 8	M8/H(S)	76	12	8	13
M 10	M10/H(S)	100	16	12	17
M 12	M12/H(S)	100	16	12	17
M 14	M14/H(S)	100	17	12	19
M 16	M16/H(S)	124	20	16	22



DRILLING: Drill according to the indicated diameters

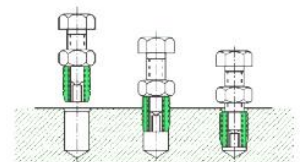
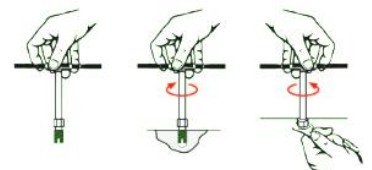
COUNTERSINK It is always preferable to countersink the entrance of the hole to a depth equal to about once the pitch of the external thread of the insert. Countersink is essential on plastic materials, especially stratified ones, to prevent the upper layer from lifting.

- Light alloys and plastic materials: 60° countersink
- Hard and brittle plastic materials: counterbore with diameter $D1=D+0,2-4$ mm

INSTALL METHOD Semi-automatic: use a tap

By hand: Fix the tool to a tap wrench and proceed as for normal hand threading

With makeshift means: through a screw and a nut



KEY INSERTS - THREAD INSERTS W/KEYS



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Technical characteristics of Key Inserts

High resistance threaded inserts in stainless steel AISI303 1.4305.

As standard they are available in metric coarse pitch, on request metric fine pitch, UNC-UNF and other materials and/or surface treatments.

They are in the Free Running or Locking version, the self-locking version has a Dry-Lube surface treatment.

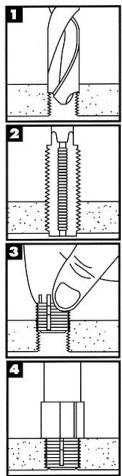
They have 2 or 4 anchoring keys which, once positioned, make the insert mechanically blocked against unscrewing by rotation or vibrations. They are used to obtain high resistance threads on different materials, from light alloys to steels or to repair damaged threads.

They can be installed in a simple way as the host thread is standard so it does not require the use of special males, they can be removed and replaced if necessary.

The inserts are supplied with the anchor keys already positioned inside the grooves. The pre-positioned keys mean that by screwing the insert it automatically positions itself at the correct installation depth.

Install Inserts with Keys

INSTALLATION



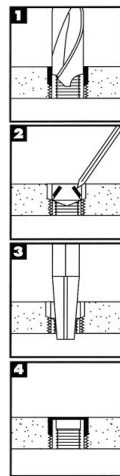
1 Drill with a standard drill bit and countersink to 82°-100° with a standard countersink

2 Tap with a standard tap

3 Screw the insert in by hand or with its setting tool (the insert automatically fits into the correct installation depth)

4 Using the installation tool, drive the anchor keys into the material using a hammer or a press

REMOVAL



1 Drill with a standard drill bit to remove material holding the anchor keys in place (see catalog tables for drill diameter)

2 Flex the keys inside and break them

3 Unscrew the insert with an extraction tool

4 Screw in a new insert exactly the same as the one removed and fit the keys in correspondence with the imprints of the previous ones



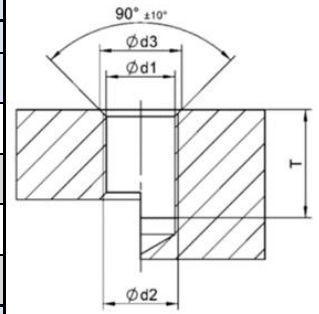
Tools for Install



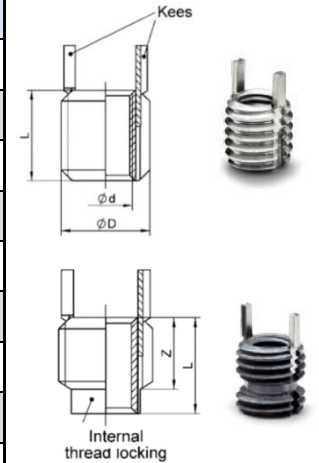
Tool Code	Key Insert Code	Key Insert Code	Tool Code	Key Insert Code	Key Insert Code	Tool Code	Key Insert Code	Key Insert Code
KTTW-M2	KN-M4X0.7	KNCM(L)2x0.4_IN	KTTW-02	KN-UNC2	KNC(L)0256_IN	KTHD-1011	KN-UNF14	KNH(L)1011_IN
KTTW-M2.5	KN-M4.5X0.75	KNCM(L)2.5x0.45_IN	KTTW-04	KN-UNF3	KNC(L)0440_IN	KTHD-1018	KN-UNF14	KNH(L)1018_IN
KTTW-M3	KN-M5X0.8	KNCM(L)3x0.5_IN	KTTW-06	KN-UNF1	KNC(L)0632_IN	KTHD-1210	KN-UNF18	KNH(L)1210_IN
KTTW-M4	KN-M6X0.75	KNCM(L)4x0.7_IN	KTTW-08	KN-UNF4	KNC(L)A0832_IN	KTHD-1216	KN-UNF18	KNH(L)1216_IN
KTTW-M5	KN-M8X1.25	KNM(L)5x0.8_IN	KTTW-1024	KN-UNC5	KN(L)1024_IN	KTHD-1409	KN-UNF20	KNH(L)1409_IN
KTTW-M6	KN-M10X1.25	KNM(L)6x1_IN	KTTW-1032	KN-UNC5	KN(L)1032_IN	KTHD-1414	KN-UNF20	KNH(L)1414_IN
KTTW-M8	KN-M12X1.25	KNM(L)8x1.25_IN	KTTW-420	KN-UNC6	KN(L)420_IN	KTHD-1608	KN-UNF22	KNH(L)1608_IN
KTTW-M8X1	KN-M12X1.25	KNM(L)8x1_IN	KTTW-428	KN-UNC6	KN(L)428_IN	KTHD-1612	KN-UNF22	KNH(L)1612_IN
KTTW-M10	KN-M14X1.5	KNM(L)10x1.5_IN	KTTW-518	KN-UNC7	KN(L)518_IN	KTXHD-1024	KN-UNC7	KNHXL(L)1024_IN
KTTW-M10X1.25	KN-M14X1.5	KNM(L)10x1.25_IN	KTTW-524	KN-UNC7	KN(L)524_IN	KTXHD-1032	KN-UNC7	KNHXL(L)1032_IN
KTTW-M12	KN-M16X1.5	KNM(L)12x1.75_IN	KTTW-616	KN-UNC8	KN(L)616_IN	KTXHD-420	KN-UNC8	KNHXL(L)420_IN
KTTW-M12X1.5	KN-M16X1.5	KNM(L)12x1.5_IN	KTTW-624	KN-UNC8	KN(L)624_IN	KTXHD-428	KN-UNC8	KNHXL(L)428_IN
KTTW-M12X1.25	KN-M16X1.5	KNM(L)12x1.25_IN	KTTW-714	KN-UNC9	KN(L)714_IN	KTXHD-518	KN-UNC9	KNHXL(L)518_IN
KTHD-M4	KN-M8X1.25	KNHM(L)4x0.7_IN	KTTW-720	KN-UNC9	KN(L)720_IN	KTXHD-524	KN-UNC9	KNHXL(L)524_IN
KTHD-M5	KN-M10X1.25	KNHM(L)5x0.8_IN	KTTW-813	KN-UNC10	KN(L)813_IN	KTXHD-616	KN-UNC10	KNHXL(L)616_IN
KTHD-M6	KN-M12X1.25	KNHM(L)6x1.0_IN	KTTW-820	KN-UNC10	KN(L)820_IN	KTXHD-624	KN-UNC10	KNHXL(L)624_IN
KTHD-M8	KN-M14X1.5	KNHM(L)8x1.25_IN	KTHD-0832	KN-UNC5	KNH(L)0832_IN	KTXHD-714	KN-111611NS	KNHXL(L)714_IN
KTHD-M10	KN-M16X1.5	KNHM(L)10x1.5_IN	KTHD-1024	KN-UNC6	KNH(L)1024_IN	KTXHD-720	KN-111611NS	KNHXL(L)720_IN
KTHD-M10X1.25	KN-M16X1.5	KNHM(L)10x1.25_IN	KTHD-1032	KN-UNC6	KNH(L)1032_IN	KTXHD-813	KN-131616A	KNHXL(L)813_IN
KTHD-M12	KN-M18X1.5	KNHM(L)12x1.25_IN	KTHD-420	KN-UNC7	KNH(L)420_IN	KTXHD-820	KN-131616A	KNHXL(L)820_IN
KTHD-M12X1.25	KN-M18X1.5	KNHM(L)12x1.75_IN	KTHD-428	KN-UNC7	KNH(L)428_IN	KTXHD-912	KN-UNF14	KNHXL(L)912_IN
KTHD-M12X1.5	KN-M18X1.5	KNHM(L)12x1.5_IN	KTHD-518	KN-UNC8	KNH(L)518_IN	KTXHD-918	KN-UNF14	KNHXL(L)918_IN
KTHD-M14	KN-M20X1.5	KNHM(L)14x2.0_IN	KTHD-524	KN-UNC8	KNH(L)524_IN	KTXHD-1011	KN-UNF16	KNHXL(L)1011_IN
KTHD-M14X1.5	KN-M20X1.5	KNHM(L)14x1.5_IN	KTHD-616	KN-UNC9	KNH(L)616_IN	KTXHD-1018	KN-UNF16	KNHXL(L)1018_IN
KTHD-M16	KN-M22X1.5	KNHM(L)16x2.0_IN	KTHD-624	KN-UNC9	KNH(L)624_IN	KTXHD-1210	KN-UNF20	KNHXL(L)1210_IN
KTHD-M18X1.5	KN-M24X1.5	KNHM(L)18x1.5_IN	KTHD-714	KN-UNC10	KNH(L)714_IN	KTXHD-1216	KN-UNF20	KNHXL(L)1216_IN
KTHD-M20X2.0	KN-M30X2.0	KNHM(L)20x2.0_IN	KTHD-720	KN-UNC10	KNH(L)720_IN	KTXHD-1409	KN-UNF22	KNHXL(L)1409_IN
KTHD-M20X1.5	KN-M20X1.5	KNHM(L)20x2.5_IN	KTHD-813	KN-111611NS	KNH(L)813_IN	KTXHD-1414	KN-UNF22	KNHXL(L)1414_IN
KTHD-M22X1.5	KN-M32X2.0	KNHM(L)22x1.5_IN	KTHD-820	KN-111611NS	KNH(L)820_IN	KTXHD-1608	KN-UNF25	KNHXL(L)1608_IN
KTHD-M24	KN-M33X2.0	KNHM(L)24x3.0_IN	KTHD-912	KN-131616A	KNH(L)912_IN	KTXHD-1612	KN-UNF24	KNHXL(L)1612_IN
KTHD-M24X1.5	KN-M33X2.0	KNHM(L)24x1.5_IN	KTHD-918	KN-131616A	KNH(L)918_IN			

Key Inserts Thread Inserts with Keys Industrial Version Metric

Miniatures series												
Code Standard Locking	Dimensions				Installation				Removal			
	Internal Ød 6H	External ØD	L ±0.25	Z	d1 drill hole	d3 csink	d2 6H	T min.	Drill Diam.	Depth		
KNCM2x0.4_IN KNCML2x0.4_IN	M2x0.4	M4x0.7	3	2.2	3.4	+0.080 -0.025	4.1	M4x0.7	4.0	2.8	2.00	
KNCM2.5x0.45_IN KNCML2.5x0.45_IN	M2.5x0.45	M4.5x0.75	3.8	2.7	3.9	+0.080 -0.025	4.6	M4.5x0.75	5.0	3.0	2.00	
KNCM3x0.5_IN KNCML3x0.5_IN	M3x0.5	M5x0.8	4.25	3.1	4.4	+0.080 -0.025	5.1	M5x0.8	5.5	3.5	2.25	
KNCM4x0.7_IN KNCML4x0.7_IN	M4x0.7	M6x0.75	5.25	4.1	5.5	+0.080 -0.025	6.1	M6x0.75	6.5	4.6	2.50	



Light Series												
Code Standard Locking	Dimensions				Installation				Removal			
	Internal Ød 6H	External ØD	L ±0.30	L1	d1 drill hole	d3 Swas.	d2 6H	T min.	Drill Diam.	Depth		
KNM5x0.8_IN KNML5x0.8_IN	M5x0.8	M8x1.25	8	7.6	6.90	+0.100 -0.025	8.25	M8x1.25	9.5	5.5	4.00	
KNM6x1_IN KNML6x1_IN	M6x1.0	M10x1.25	10	7.0	8.80	+0.100 -0.025	10.25	M10x1.25	11.5	7.5	4.75	
KNM8x1_IN KNML8x1_IN	M8x1	M12x1.25	12	8.2	10.80	+0.100 -0.025	12.25	M12x1.25	13.5	9.5	4.75	
KNM8x1.25_IN KNML8x1.25_IN	M8x1.25	M12x1.25	12	9.5	10.80	+0.100 -0.025	12.25	M12x1.25	13.5	9.5	4.75	
KNM10x1.25_IN KNML10x1.25_IN	M10x1.25	M14x1.5	14	9.0	12.80	+0.130 -0.025	14.25	M14x1.5	15.5	11.5	4.75	
KNM10x1.5_IN KNML10x1.5_IN	M10x1.5	M14x1.5	14	10.0	12.80	+0.130 -0.025	14.25	M14x1.5	15.5	11.5	4.75	
KNM12x1.25_IN KNML12x1.25_IN	M12x1.25	M16x1.5	16	9.5	14.75	+0.130 -0.025	16.25	M16x1.5	17.5	13.5	4.75	
KNM12x1.5_IN KNML12x1.5_IN	M12x1.5	M16x1.5	16	11.2	14.75	+0.130 -0.025	16.25	M16x1.5	17.5	13.5	4.75	
KNM12x1.75_IN KNML12x1.75_IN	M12x1.75	M16x1.5	16	10.2	14.75	+0.130 -0.025	16.25	M16x1.5	17.5	13.5	4.75	



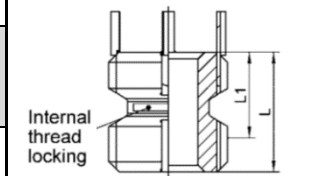
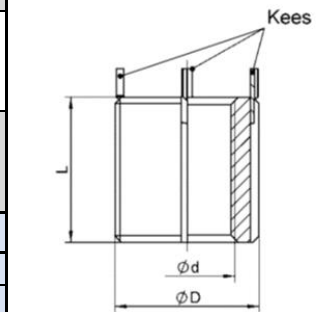
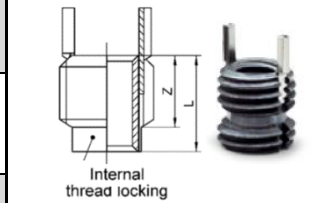
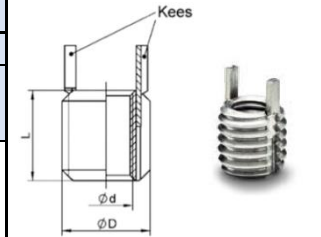
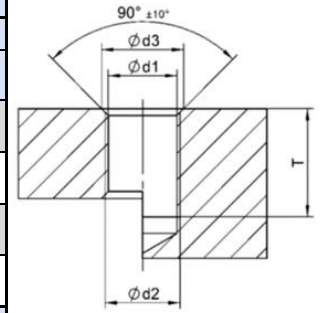
Heavy Duty Series												
Code Standard Locking	Dimensions				Installation				Removal			
	Internal Ød 6H	External ØD	L ±0.30	L1	d1 drill hole	d3 csink	d2 6H	T min.	Drill Diam.	Depth		
KNHM4x0.7_IN KNHML4x0.7_IN	M4x0.7	M8x1.25	8	8.0	6.9	+0.100 -0.025	8.25	M8x1.25	9.5	5.5	4.00	
KNHM5x0.8_IN KNHML5x0.8_IN	M5x0.8	M10x1.25	10	8.7	8.8	+0.100 -0.025	10.25	M10x1.25	11.5	7.5	4.75	
KNHM6x1.0_IN KNHML6x1.0_IN	M6x1.0	M12x1.25	12	9.5	10.8	+0.100 -0.025	12.25	M12x1.25	13.5	9.5	4.75	
KNHM8x1.25_IN KNHML8x1.25_IN	M8x1.25	M14x1.5	14	10.0	12.8	+0.100 -0.025	14.25	M14x1.5	15.5	11.5	4.75	
KNHM10x1.25_IN KNHML10x1.25_IN	M10x1.25	M16x1.5	16	10.0	14.8	+0.130 -0.025	16.25	M16x1.5	17.5	13.5	4.75	
KNHM10x1.5_IN KNHML10x1.5_IN	M10x1.5	M16x1.5	16	10.0	14.8	+0.130 -0.025	16.25	M16x1.5	17.5	13.5	4.75	
KNHM12x1.25_IN KNHML12x1.25_IN	M12x1.25	M18x1.5	18	10.7	16.8	+0.130 -0.025	18.25	M18x1.5	19.5	15.5	4.75	
KNHM12x1.5_IN KNHML12x1.5_IN	M12x1.5	M18x1.5	18	10.7	16.8	+0.130 -0.025	18.25	M18x1.5	19.5	15.5	4.75	
KNHM12x1.75_IN KNHML12x1.75_IN	M12x1.75	M18x1.5	18	10.7	16.8	+0.130 -0.025	18.25	M18x1.5	19.5	15.5	4.75	
KNHM14x1.5_IN KNHML14x1.5_IN	M14x1.5	M20x1.5	20	12.4	17.85	+0.130 -0.025	20.25	M20x1.5	22.5	17.50	4.75	
KNHM14x2.0_IN KNHML14x2.0_IN	M14x2.0	M20x1.5	20	12.4	17.85	+0.130 -0.025	20.25	M20x1.5	22.5	17.50	4.75	
KNHM16x2.0_IN KNHML16x2.0_IN	M16x2.0	M22x1.5	22	12.4	20.5	+0.130 -0.025	22.25	M22x1.5	24.5	17.75	4.75	
KNHM18x1.5_IN KNHML18x1.5_IN	M18x1.5	M24x1.5	24	16.8	22.5	+0.130 -0.025	24.25	M24x1.5	26.5	19.75	6.35	
KNHM20x1.5_IN KNHML20x1.5_IN	M20x1.5	M30x2.0	30	17.5	28	+0.130 -0.025	30.25	M30x2.0	34.5	25.75	6.35	
KNHM20x2.5_IN KNHML20x2.5_IN	M20x2.5	M30x2.0	30	17.5	28	+0.130 -0.025	30.25	M30x2.0	34.5	25.75	6.35	
KNHM22x1.5_IN KNHML22x1.5_IN	M22x1.5	M32x2.0	32	18.3	30	+0.130 -0.025	32.25	M32x2.0	36.5	27.75	6.35	
KNHM24x2.0_IN KNHML24x2.0_IN	M24x2.0	M33x2.0	33	19	31	+0.130 -0.025	37.5	M33x2.0	37.5	28.75	6.35	
KNHM24x3.0_IN KNHML24x3.0_IN	M24x3.0	M33x2.0	33	19	31	+0.130 -0.025	37.5	M33x2.0	37.5	28.75	6.35	



Number of Keys: 2 keys up to M6, 4 keys from M8 to M12 | Internal thread: M 6H
Standard material: 303 CRES inserts – 302 CRES keys

Key Inserts Thread Inserts with Keys Industrial Version UN

Miniatures series											
Code Standard Locking	Dimensions				Installation				Removal		
	Internal Ød 2B	External ØD 2A	L	Z	d1 drill hole	d3 csink	d2	T min.	Drill Diam.	Depth	
KNCA0256_IN KNCAL0256_IN	2-56 A C	8-32 UNF	.09	.120	.161	$^{+.003}$ $_{-.001}$.134	8-32 UNF	.140	#33 (.113)	1/16
KNCA0440_IN KNCAL0440_IN	4-40 A C	10-32 UNF	.17	.125	.161	$^{+.003}$ $_{-.001}$.194	10-32 UNF	.160	#29 (.136)	3/32
KNC0632_IN KNCL0632_IN	6-32 A C	12-28 UNF	.17	.125	.187	$^{+.003}$ $_{-.001}$.220	12-28 UNF	.160	#21 (.159)	3/32
KNCA0832_IN KNCAL0832_IN	8-32 A C	1/4-28 UNF	.22	.175	.228	$^{+.003}$ $_{-.001}$.255	1/4-28 UNF	.210	#8 (.199)	1/8
Light Series											
Code Standard Locking	Dimensions				Installation				Removal		
	Internal Ød	External ØD	L	L1	d1 drill hole	d3 csink	d2	T min.	Drill Diam.	Depth	
KN1024_IN KNL1024_IN	10-24 A C	5/16-18	.31	.22	.272	.323	5/16-18	.37	7/32	5/32	
KN1032_IN KNL1032_IN	10-32 UNF										
KN420_IN KNL420_IN	1/4-20 A C	3/8-16	.37	.22	.332	.385	3/8-16	.43	9/32	3/16	
KN428_IN KNL428_IN	1/4-28 UNF										
KN518_IN KNL518_IN	5/16-18 A C	7/16-14	.43	.22	.397	.447	7/16-14	.5	11/32	3/16	
KN524_IN KNL524_IN	5/16-24 UNF										
KN616_IN KNL616_IN	3/8-16 A C	1/2-13	.50	.24	.453	.510	1/2-13	.56	13/32	3/16	
KN624_IN KNL624_IN	8/3-24 UNF										
KN714_IN KNL714_IN	7/16-14 A C	9/16-12	.56	.27	.516	.572	9/16-12	.62	15/32	3/16	
KN720_IN KNL720_IN	7/16-20 UNF										
KN813_IN KNL813_IN	1/2-13 A C	5/8-11	.62	.28	.578	.635	5/8-11	.68	17/32	3/16	
KN820_IN KNL820_IN	1/2-20 UNF										
Heavy Duty Series											
Code Standard Locking	Dimensions				Installation				Removal		
	Internal Ød	External ØD	L	L1	d1 drill hole	d3 csink	d2	T min.	Drill Diam.	Depth	
KNH0832_IN KNHL0832_IN	8-32 A C	5/16-18	.31	.22	.272	.323	5/16-18	.37	7/32	1/8	
KNH1024_IN KNHL1024_IN	10-24 A C										
KNH1032_IN KNHL1032_IN	10-32 UNF	3/8-16	.31	.22	.332	.385	3/8-16	.37	9/32	1/8	
KNH420_IN KNHL420_IN	1/4-20 A C										
KNH428_IN KNHL428_IN	1/4-28 UNF	7/16-14	.37	.22	.397	.447	7/16-14	.43	11/32	3/16	
KNH518_IN KNHL518_IN	5/16-18 A C										
KNH524_IN KNHL524_IN	5/16-24 UNF	1/2-13	.43	.22	.453	.510	1/2-13	.50	13/32	3/16	
KNH616_IN KNHL616_IN	3/8-16 A C										
KNH624_IN KNHL624_IN	8/3-24 UNF	9/16-12	.50	.25	.516	.572	9/16-12	.56	15/32	3/16	
KNH714_IN KNHL714_IN	7/16-14 A C										
KNH720_IN KNHL720_IN	7/16-20 UNF	5/8-11	.62	.28	.578	.635	5/8-11	.68	17/32	3/16	
KNH813_IN KNHL813_IN	1/2-13 A C										
KNH820_IN KNHL820_IN	1/2-20 UNF	11/16-11	.68	.28	.641	.700	11/16-11	.75	19/32	3/16	

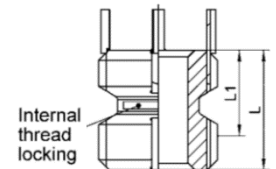
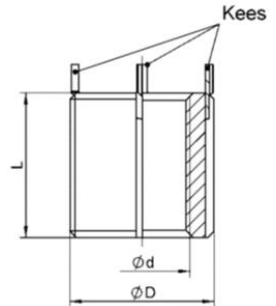
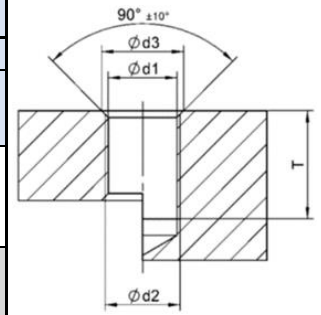


L1 = max. distance to end of thread lock

Number of Keys: 2 keys up to 1/4", 4 keys 5/16"
 Standard material: 303 CRES inserts – 302 CRES keys
 Internal thread: 2B

Key Inserts Thread Inserts with Keys Industrial Version UN

Heavy Duty Series											
Code Standard Locking	Dimensions				Installation				Removal		
	Internal Ød	External ØD	L	L1	d1 drill hole	d3 csink	d2	T min.	Drill Diam.	Depth	
KNH912_IN KNHL912_IN A C	9/16-12	13/16-16	.81	.32	.766	.822	13/16-16	.94	23/32	3/16	
KNH918_IN KNHL918_IN UNF											
KNH1011_IN KNHL1011_IN A C	5/8-11	7/8-14	.87	.33	.828	.885	7/8-14	1.00	25/32	3/16	
KNH1018_IN KNHL1018_IN UNF											
KNH1210_IN KNHL1210_IN A C	¾-10	1-1/8-12	1.12	.49	1.062	1.145	1-1/8-12	1.31	31/32	5/16	
KNH1216_IN KNHL1216_IN UNF											
KNH1409_IN KNHL1409_IN A C	7/8-9	1-1/4-12	1.25	.49	1.187	1,270	1-1/4-12	1.44	1-3/32	5/16	
KNH1414_IN KNHL1414_IN UNF											
KNH1608_IN KNHL1608_IN A C	1-8	1-3/8-12	1.37	.55	1,312	1,395	1-3/8-12	1.56	1-7/32	5/16	
KNH1612_IN KNHL1612_IN UNF											
Extra Heavy Duty Series											
Code Standard Locking	Dimensions				Installation				Removal		
	Internal Ød	External ØD	L	L1	d1 drill hole	d3 csink	d2	T min.	Drill Diam.	Depth	
KNHXH1024_IN KNHXHL1024_IN A C	10-24	7/16-14	.31	.22	.397	.447	7/16-14	.37	11/32	3/16	
KNHXH1032_IN KNHXHL1032_IN UNF											
KNHXH420_IN KNHXHL420_IN A C	1/4-20	1/2-13	.37	.22	.453	.510	1/2-13	.43	13/32	3/16	
KNHXH428_IN KNHXHL428_IN UNF											
KNHXH518_IN KNHXHL518_IN A C	5/16-18	9/16-12	.43	.22	.516	.572	9/16-12	.50	15/32	3/16	
KNHXH524_IN KNHXHL524_IN UNF											
KNHXH616_IN KNHXHL616_IN A C	3/8-16	5/8-11	.50	.25	.578	.635	5/8-11	.56	17/32	3/16	
KNHXH624_IN KNHXHL624_IN UNF											
KNHXH714_IN KNHXHL714_IN A C	7/16-14	11/16-11	.62	.28	.641	.700	11/16-11	.68	19/32	3/16	
KNHXH720_IN KNHXHL720_IN UNF											
KNHXH813_IN KNHXHL813_IN A C	1/2-13	13/16-16	.68	.28	.766	.822	13/16-16	.75	23/32	3/16	
KNHXH820_IN KNHXHL820_IN UNF											
KNHXH912_IN KNHXHL912_IN A C	9/16-12	7/8-14	.81	.32	.828	.885	7/8-14	.94	25/32	3/16	
KNHXH918_IN KNHXHL918_IN UNF											
KNH XH 1011_IN KNHXH L1011_IN A C	5/8-11	1-12	.87	.33	.937	1.020	1-12	1.00	27/32	5/16	
KNH XH 1018_IN KNHXH L1018_IN UNF											
KNHXH1210_IN KNHXHL1210_IN A C	¾-10	1-1/4-12	1.12	.49	1.187	1,270	1-1/4-12	1.31	1-3/32	5/16	
KNHXH1216_IN KNHXHL1216_IN UNF											
KNH XH 1409_IN KNHXH L1409_IN A C	7/8-9	1-3/8-12	1.25	.49	1,312	1,395	1-3/8-12	1.44	1-7/32	5/16	
KNH XH 1414_IN KNHXH L1414_IN UNF											
KNHXH1608_IN KNHXHL1608_IN A C	1-8	1-1/2-12	1.37	.55	1,437	1,520	1-1/2-12	1.56	1-11/32	5/16	
KNHXH1612_IN KNHXHL1612_IN UNF											



L1 = max. distance to end of thread lock

Number of Keys: 2 keys up to 1/4", 4 keys 5/16"
 Standard material: 303 CRES inserts – 302 CRES keys
 Internal thread: 2B

