

KEENSERTS® THREADED INSERTS

**CERTAINLY THE PERFECT
FIT FOR HEAVY DUTY
APPLICATIONS**



JOINED TO LAST.





› KVT-Fastening Group is an internationally well-known specialist for high-quality fastening and sealing applications. In both areas, KVT offers engineering solutions based on the wide product portfolio of the leading manufacturers in the market.

› Whether for the electronics and energy sector, the automotive and transportation industries, aviation and aerospace, engineering and construction, precision engineering, or medical equipment, high-performance solutions from KVT are found wherever absolutely secure seals or fasteners are required. These small but extremely resilient components are applied where it matters most.

› KVT does not just supply standard products and individual components, but also provides close and active customer support in the search for ideal solutions, particularly when specific requirements must be fulfilled. This portfolio is complemented by a range of innovative tools and machines as well as, if needed, the integration into automated, serial production workflows.

› With over 80 years of engineering experience, solution-oriented expertise, as well as unique development and consulting skills, the KVT-Fastening Group stands for best-in-class reliability.

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LEADING COMPETENCE FOR HIGH-PERFORMANCE CONNECTIONS

KEENSERTS® THREADED INSERTS - GUARANTEED RELIABLE FASTENING SOLUTION

KEENSERTS® threaded inserts are the perfect solution to prevent threads from becoming stripped in fields like mechanical or precision engineering, aviation and aerospace. KEENSERTS® are made of stainless steel 1.4305 / AISI 303. They are extremely durable and withstand numerous loosening and tightening cycles without thread stripping. They can be readily used in light metal, steel or cast iron application. They can also be used as an easy and efficient replacement for damaged threads in expensive components.

KEENSERTS® threaded inserts are pre-assembled with special keys that lock the KEENSERTS® into place to absolutely eliminate rotation and vibration even in heavy-duty applications. Depending on the thread size, KEENSERTS® are available with two or four key locks, both either with normal or self-locking thread.

BENEFITS

- › Easy installation
- › Highly durable
- › Repair of damaged threads
- › Pre-assembled key locks





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THREADED INSERTS

2 KEY LOCKS

Types KNCM, KNM, KNHM

Material

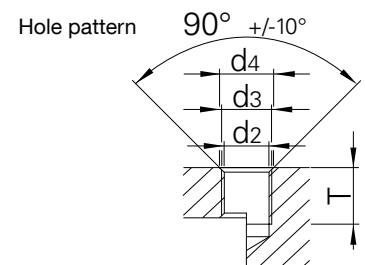
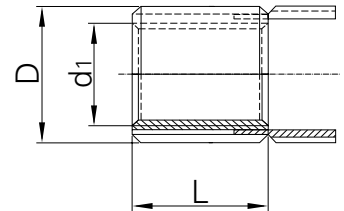
Stainless steel 1.4305 / AISI 303

Extraction force [N]

Shear engagement „A [mm²]“ x ultimate shear strength of parent material „R_m [N/mm²]“

KEENSERTS® with UNC- or UNF threads, MS and NAS specification are available upon request.

KEENSERTS®



Type KNCM, small series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,25	d ₂	d ₃ 6H	d ₄	T min.	A [mm ²]
M3	M5x0,80	KNCM 3 x 0,5	4,25	4,4	M5x0,80	5,1	6,0	33,1
M4	M6x0,75	KNCM 4 x 0,7	5,25	5,5	M6x0,75	6,1	7,5	58,4

Type KNM, standard series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,3	d ₂	d ₃ 6H	d ₄	T min.	A [mm ²]
M5	M8x1,25	KNM 5 x 0,8	8,0	6,9	M8x1,25	8,25	10,5	104,9
M6	M10x1,25	KNM 6 x 1	10,0	8,8	M10x1,25	10,25	13,0	177,7

Type KNHM, heavy-duty series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,3	d ₂	d ₃ 6H	d ₄	T min.	A [mm ²]
M5	M10x1,25	KNHM 5 x 0,8	10,0	8,8	M10x1,25	10,25	13,0	177,7
M6	M12x1,25	KNHM 6 x 1	12,0	10,8	M12x1,25	12,25	15,5	266,7



THREADED INSERTS

2 KEY LOCKS, SELF-LOCKING

Types KNML, KNHML

The self-locking feature is designed similarly to MIL-N-25027 and supplied with MIL-L8937 lubrication.

Material

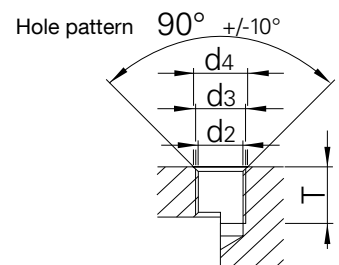
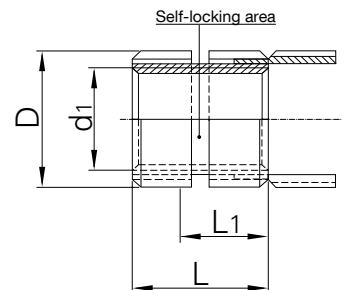
Stainless steel 1.4305 / AISI 303 with Molykote® surface treatment

Extraction force [N]

Shear engagement „A [mm²]“ x ultimate shear strength of parent material „R_m [N/mm²]“

KEENSERTS® with UNC- or UNF threads, MS and NAS specification are available upon request.

KEENSERTS®



Type KNML, standard series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,3	L ₁ *	d ₂	d ₃ 6H	d ₄	T min.	A [mm²]
M5	M8x1,25	KNML 5 x 0,8	8,0	7,6	6,9	M8x1,25	8,25	10,5	83,1
M6	M10x1,25	KNML 6 x 1	10,0	8,2	8,8	M10x1,25	10,25	13,0	152,7

Type KNHML, heavy-duty series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,3	L ₁ *	d ₂	d ₃ 6H	d ₄	T min.	A [mm²]
M5	M10x1,25	KNHML 5 x 0,8	10,0	8,7	8,8	M10x1,25	10,25	13,0	152,7
M6	M12x1,25	KNHML 6 x 1	12,0	9,5	10,8	M12x1,25	12,25	15,5	242,5

* L₁ = minimum screw-in depth



THREADED INSERTS

4 KEY LOCKS

Types KNM, KNHM

Material

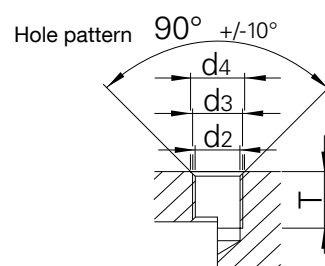
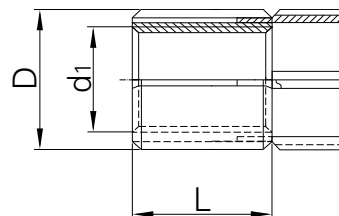
Stainless steel 1.4305 / AISI 303

Extraction force [N]

Shear engagement „A [mm²]“ x ultimate shear strength of parent material „R_m [N/mm²]“

KEENSERTS® with UNC- or UNF threads, MS and NAS specification are available upon request.

KEENSERTS®



Type KNM, standard series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,3	d ₂	d ₃ 6H	d ₄	T min.	A [mm ²]
M8	M12x1,25	KNM 8 x 1,25	12,0	10,80	M12x1,25	12,25	15,5	266,7
M10	M14x1,50	KNM 10 x 1,5	14,0	12,80	M14x1,50	14,25	18,0	341,6
M12	M16x1,50	KNM 12 x 1,75	16,0	14,75	M16x1,50	16,25	20,0	470,2

Type KNHM, heavy-duty series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,3	d ₂	d ₃ 6H	d ₄	T min.	A [mm ²]
M8	M14x1,50	KNHM 8 x 1,25	14,0	12,80	M14x1,5	14,25	18,0	341,6
M10	M16x1,50	KNHM 10 x 1,5	16,0	14,75	M16x1,5	16,25	20,0	470,2
M12	M18x1,50	KNHM 12 x 1,75	18,0	16,75	M18x1,5	18,25	23,0	608,5
M16	M22x1,50	KNHM 16 x 2	22,0	20,50	M22x1,5	22,25	27,0	896,8



THREADED INSERTS

4 KEY LOCKS, SELF-LOCKING

Types KNML, KNHML

The self-locking feature is designed similarly to MIL-N-25027 and supplied with MIL-L8937 lubrication.

Material

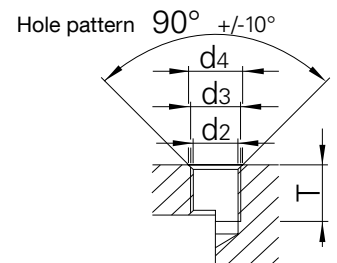
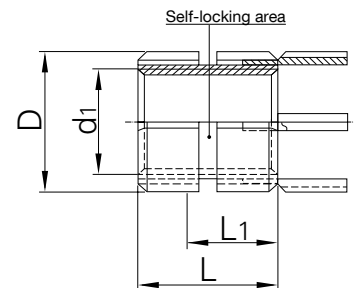
Stainless steel 1.4305 / AISI 303 with Molykote® surface treatment

Extraction force [N]

Shear engagement „A [mm²]“ x ultimate shear strength of parent material „R_m [N/mm²]“

KEENSERTS® with UNC- or UNF threads, MS and NAS specification are available upon request.

KEENSERTS®



Type KNML, standard series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,3	L ₁ *	d ₂	d ₃ 6H	d ₄	T min.	A [mm²]
M8	M12x1,25	KNML 8 x 1,25	12,0	9,5	10,80	M12x1,25	12,25	15,5	242,5
M10	M14x1,50	KNML 10 x 1,5	14,0	10,0	12,80	M14x1,50	14,25	18,0	316,4
M12	M16x1,50	KNML 12 x 1,75	16,0	11,2	14,75	M16x1,50	16,25	20,0	441,4

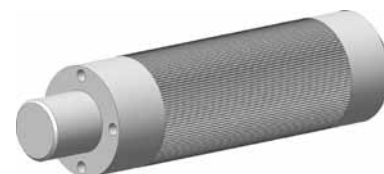
Type KNHML, heavy duty series

Thread size d ₁ 5H	Thread size D 4h	Order reference	L ± 0,3	L ₁ *	d ₂	d ₃ 6H	d ₄	T min.	A [mm²]
M8	M14x1,50	KNHML 8 x 1,25	14,0	10,0	12,80	M14x1,5	14,25	18,0	316,4
M10	M16x1,50	KNHML 10 x 1,5	16,0	10,0	14,75	M16x1,5	16,25	20,0	441,4
M12	M18x1,50	KNHML 12 x 1,75	18,0	10,7	16,75	M18x1,5	18,25	23,0	561,8
M16	M22x1,50	KNHML 16 x 2	22,0	12,4	20,50	M22x1,5	22,25	27,0	855,2

* L₁ = minimum screw-in depth

TOOL INSTALLATION

TOOL FOR THREADED INSERTS WITH 2 OR 4 KEY LOCKS



Internal thread KEENSEERTS®	Types KNCM small series and KNM, KNML standard series	Types KNHN, KNHML heavy duty series
	Order reference	Order reference
M3	KRTM 3 – 01	
M4	KRTM 4 – 01	
M5	KRTM 5 – 01	KRTM 5 – 02
M6	KRTM 6 – 01	KRTM 6 – 02
M8	KRTM 8 – 01	KRTM 8 – 02
M10	KRTM 10 – 01	KRTM 10 – 02
M12	KRTM 12 – 01	KRTM 12 – 02
M16		KRTM 16 – 02

INSTALLATION

1. Manually screw the **KEENSEERTS®** threaded insert on the mandrel using 2 - 3 turns.
2. Attach the installation tool, including the spigot, and turn it until the key locks snap in the bore hole.
3. Continue the screwing process until the **KEENSEERTS®** threaded insert is fully screwed in.
4. Hitting the tool with a hammer, drive the snapped in key locks in until they touch the material.
5. Slightly lift the tool and it turn clockwise by about 45°.
6. Hitting the tool with a hammer, drive the keylocks in completely until the tool is once again flush with the surface.
7. Installation complete.



KVT FASTENING AND SEALING TECHNOLOGY



› KOENIG-EXPANDER® Plugs



› Blind rivet nuts



› Blind rivet technology



› Thread inserts



› Self-clinching fasteners



› Stud welding systems



› Lock nuts



› Bonding fasteners



› Access solutions



› Quick fastening elements and clips



› Quick release pins and spring plungers



› Adhesives and sealants¹⁾



› Construction fasteners²⁾



› Special processes¹⁾



› Pressure intensifiers³⁾

FASTENING, SEALING AND FLOW CONTROL SOLUTIONS FOR COMPLEX APPLICATIONS

The extensive KVT portfolio offers optimal solutions for your most challenging applications. The products included in this catalog represent only a selection from our entire product portfolio.

Upon request, we will be pleased to provide additional information or an individual consultation to you. Feel free to contact us!

For more information about our range of products and order at our E-shop, please visit

› www.kvt-fastening.com



› Screw technology



› Installation technology



› Quick connectors⁴⁾

¹⁾ Not available in Germany

²⁾ Only available in Switzerland

³⁾ Not available in Switzerland

⁴⁾ Only available in Germany



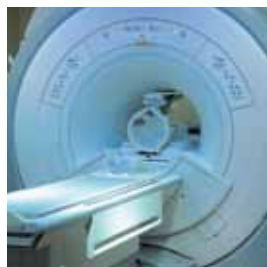
› Electrical engineering



› Energy technology



› Automotive



› Medical technology



› Transportation



› Construction industry



› Precision engineering



› Aviation and aerospace



› Hydraulics and industry



› Mechanical engineering

THE TRUSTED WORLD LEADER IN FASTENING, SEALING AND FLOW CONTROL SOLUTIONS

Whether it is about choosing the optimal fastening, sealing or flow control element or about developing special solutions for complex process and construction procedures – efficiency and project safety are key in every single task.

Browse our website or contact us to find out more about the entire range of products and solutions in the field of high-end fastening, sealing and flow control technology.

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