



力帆&力本精密工业（中国）有限公司

Wire Thread Inserts
Keylocking Threaded Inserts
Solid Threaded Inserts for Metal
钢丝螺套、插销螺套、涂胶螺套

In-sail®



PROFILE

COMPANY 公司简介

力帆&力本（中国）运营中心

力帆&力本（中国）运营中心隸屬於力山企業集團。集團自1982年於臺灣成立以來，一直堅持向客戶快速、準確地提供緊固系統零件、自動化零件、電子五金件、模具配件、機械加工工具等各種高質量的工業零部件。集團多年來致力於研發創新，以核心技術為中心，包括：環保製程技術、精密模具技術、數控加工技術、粉末冶金技術等。集團不僅具完善的研發管理制度，更在智權管理上努力耕耘，積極地以提升華人之國際競爭力為己任，並在企業社會責任與節能、減排、綠化、循環等環境保護方面全力推動與奉獻；

力山企業集團成立33年來，已經建立起5個產品製造中心，分佈於臺灣，新加坡，墨西哥，江蘇和廣東。購置了大量的精密製造設備，如數控車床，數控銑床，數控磨床，精密壓機和注塑機等3600餘套，具備系統的工業零件製造能力。也組建獨立運營中心3個（臺灣運營中心，新加坡運營中心和深圳運營中心），負責全球客戶的商務合作和技術支持。

力帆精密&力本五金，以力山企業集團為依託，將與注重品質和交期的客戶攜手共進、為全球製造工業的發展貢獻我們的智慧和力量。

- 1、各式組裝系統零件（緊固件，焊接件等）
- 2、精密金屬加工零件與工程塑膠組件
- 3、汽車，醫療，3C產品用之機械精密零組件
- 4、自動化用各種精密零組件
- 5、塑膠和衝壓模具用精密配件
- 6、各式機械加工工具和量具



In-sail® Build the Chinese Dream!
力帆，扬帆中国梦!

In-sail® & Leadum(China)Operation Center

In-sail® & Leadum (China) Operation Center is part of Leasan Enterprise. Since its establishment in Taiwan in 1982, Leasan Enterprise Group has always insisted on quickly and accurately provide customers with various high-quality parts like fastening system parts, automation parts, electronic hardware, mold parts, and machining tools. The group has been committed to R&D and innovation for many years, focusing on core technologies, including environmental protection technology, precision molds technology, CNC machining technology, powder metallurgy technology. The group not only a sound R&D management system but also works actively to enhance the international competitiveness of the Chinese mission in the management and fully promotes corporate social responsibility and energy conservation, emission reduction, greening, recycling, and other environmental protection and dedication.

Leasan Enterprise Group was established 33 years ago, it has established 5 manufacturing centers, which there are located in Taiwan, Singapore, Mexico, Jiangsu, and Guangdong. The purchase of a large number of high-precision manufacturing equipment, such as CNC lathes, CNC milling machines, CNC grinders, precision presses, and injection molding machines are more than 3,600 sets, with a systematic industrial part manufacturing capabilities. 3 independent operation centers (Taiwan operation center, operation center in Singapore, and Shenzhen operation center) have also been established to be responsible for business cooperation and technical support for the global customers.

In-sail® & Leadum Precision relying on Leasan Enterprise Group will work together with customers who focus on quality and delivery and contribute our wisdom and strength to the development of the global manufacturing industry.

1. All kinds of assembled parts system (fasteners, welding parts, etc.)
2. Precision metal machining parts and engineering plastic components
and mechanical precision components
3. The automotive, medical, 3C products using
4. Automation of various precision components
5. Plastic precision parts and stamping dies
6. Kinds of machining tools and gauges

Product Capability / 制造能力



01



02



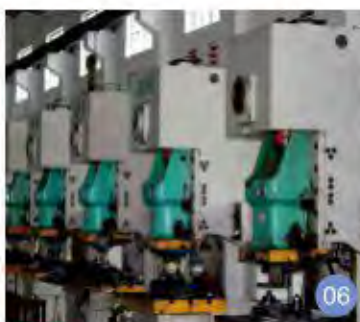
03



04



05



06



07



08

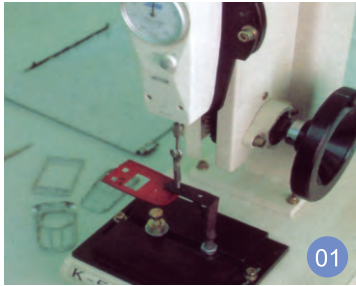
- Auto-lathe turning:
PE : $\Phi 0.5-20\text{mm}$ Tol. $\pm 0.01\text{mm}$
- CNC lathe turning:
PE : $\Phi 0.5-250\text{mm}$ Tol. $\pm 0.005\text{mm}$
- CNC Milling:
800X600mm (LxW), Tol. $\pm 0.01\text{mm}$
- Grinding:
Tol. $\pm 0.002\text{mm}$
- Screw heading & rolling:
Metric M0.8-M36
Unified Imperial #0-2"
- Stamping:
1200T max
- 自动车床加工: 直径0.5-20mm
公差 0.01mm
- 数控车床加工: 直径0.5-250mm
公差 0.005mm
- 数控铣削加工: 800X600mm
公差 $\pm 0.01\text{mm}$
- 外圆磨削加工: 公差 $\pm 0.002\text{mm}$
- 螺丝加工: 公制 M0.8-M36
英制 #0-2"
- 冲压加工: 1200 吨位内

- 01 Automatic Lathe / 自动车床
- 02 Ultraprecision Machining / 超精加工
- 03 CNC Lathe / 数控车床
- 04 CNC Machine / CNC 加工中心
- 05 Screw Machine / 螺丝机
- 06 Stamping Equipment / 冲压设备
- 07 Injection machine / 注塑机
- 08 Precision Grinding / 精密磨削

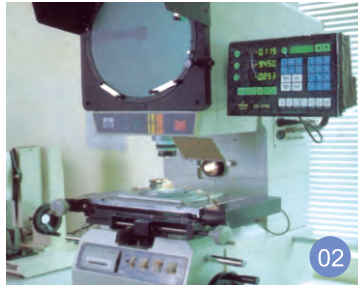
In-saiL® & Leadum is your choice!

力帆&力本 值得信赖!

Quality Management / 品质控制



01



02



03



04

Superior product quality whilst protecting resources as much as possible is a matter of course for us. After all, precision is our business.

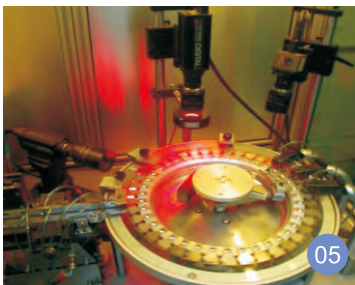
We set up total management quality systems following ISO9001:2018, from the IQC to IPQC to OQC, we strictly execute customer quality requirement to achieve quality target.

In-sail woned advanced quality control and inspection facilities, is capable to perform mechanical property, diemension & contour and corrosion-resistance test at the incoming, in-process, and outgoing stages.

高质量的产品和环境保护都是我们所要追求的目标，我们产品的高质量最多的体现于高精度。

力帆精密依照ISO9001: 2018建立了完整的品质系统，从IQC到PQC再到OQC，严格管制，全员参与。严格遵照客户要求，达成品质目标。

力帆精密有先进的品质管控和检测设备，能够来料加工，制程和成品检查各阶段实施诸如机械性能检测，尺寸和轮廓检测及耐腐蚀验证等。



05



06



07



08

Types of machines

- 1 Pull Tester / 拉力计
- 2 Projector / 投影仪
- 3 Durometer / 硬度计
- 4 Coating Analyzer / 镀层分析仪
- 5 Automatic Optic Inspector / 全自动品检机
- 6 CMM / 三次元
- 7 Salt Spray Tester / 盐雾测试机
- 8 Automated Screw Threaded Inspection / 螺纹全检机

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Wire Thread Inserts 钢丝螺套



L4010/L4012
Plus

09

Thread inserts create high-strength, wear-resistant, heat-resistant threads of highest precision. They are available in free running and screwlock version.

螺纹嵌件能够提供高强度的、耐热和具耐磨性能的高精度螺纹，其包含自锁和非自锁两种。



L4010/L4012
Plus UNC/NC

18

Thread inserts create high-strength, wear-resistant, heat-resistant threads of highest precision. They are available in free running and screwlock version.

螺纹嵌件能够提供高强度的、耐热和具耐磨性能的高精度螺纹，其包含自锁和非自锁两种。



L4010/L4012
Classic UNC/NC

20

Thread inserts create high-strength, wear-resistant, heat-resistant threads of highest precision. They are available in free running and screwlock version.

螺纹嵌件能够提供高强度的、耐热和具耐磨性能的高精度螺纹，其包含自锁和非自锁两种。



L4010/L4012
Plus UNF/NF

21

Thread inserts create high-strength, wear-resistant, heat-resistant threads of highest precision. They are available in free running and screwlock version.

螺纹嵌件能够提供高强度的、耐热和具耐磨性能的高精度螺纹，其包含自锁和非自锁两种。



L4010/L4012
Classic UNF/NF

22

Thread inserts create high-strength, wear-resistant, heat-resistant threads of highest precision. They are available in free running and screwlock version.

螺纹嵌件能够提供高强度的、耐热和具耐磨性能的高精度螺纹，其包含自锁和非自锁两种。



L4020/L4022
Tangfree

24

No tang break and no tang removal. Therefore the thread can be installed on both sides without loss of quality.

无尾柄，缩短了安装时间，应用于去除柄会引起质量问题的场合。

Installation instruction about wire thread inserts.

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Keylocking Threaded Inserts 插销螺套



L5010/L5012
Miniature

1

Miniature keylocking threaded inserts, keylocking threaded inserts are used to quickly repair stripped, damaged or worn out threads with new stronger threads use in original equipment.

微型-
纹，和

插销螺套，有效的增强螺
受受损的螺纹。



L5020/L5022
Lightweight

2

Lightweight keylocking threaded inserts, keylocking threaded inserts are used to quickly repair stripped, damaged or worn out threads with new stronger threads use in original equipment.

轻量型
纹，和

插销螺套，有效的增强螺
受受损的螺纹。



L5030/L5032
Heavy Duty

3

Heavy duty keylocking threaded Inserts, keylocking threaded inserts are used to quickly repair stripped, damaged or worn out threads with new stronger threads use in original equipment.

重型-
纹，和

插销螺套，有效的增强螺
受受损的螺纹。

	L5040/L5042 Extra Heavy Duty	33	Extra heavy duty keylocking threaded inserts, keylocking threaded inserts are used to quickly repair stripped, damaged or worn out threads with new stronger threads or for use in original equipment.	超重型-插销螺套，有效的增强螺纹，和修复受损的螺纹。
	L5050/L5052 Blind End	34	Blind end keylocking threaded inserts,	盲孔插销螺套。
	L5060/L5062 Floating	36	Floating keylocking threaded inserts, compensate for misalignment automatically. Ideal for use on curved surfaces or for use with flathead screws.	浮动插销螺套，自动补偿安装公差。
	L5070/L5072 Solid	37	Solid keylocking threaded inserts, for relocating holes that have been drilled or tapped in the wrong location, to fill holes, or salvage expensive castings.	实心插销螺套，填补错误的安装孔。
	L508 Hydraulic 1	39	Hydraulic inserts, for complete port protection in hydraulic or fuel systems.	密封插销螺套，良好的密封性，保证液压。
	L509 Hydraulic 2	40	Hydraulic inserts, for complete port protection in hydraulic or fuel systems.	密封插销螺套，良好的密封性，保证液压。
Installation instruction about keylocking threaded insert			42	

Solid Threaded Inserts for Metal 涂胶螺套

	Stand Wall-Carbon Steel	44	Stand wall- carbon steel, installation is simple, fast, convenient, and enhance the strength of the screw holes.	碳钢标准型，安装简单，快速，方便，增强螺丝孔的强度。
	Thin Wall-Carbon Steel	47	Thin wall- carbon steel, installation is simple, fast, convenient, and enhance the strength of the screw holes.	碳钢薄壁型，安装简单，快速，方便，增强螺丝孔的强度。
	Extra Heavy Wall- Carbon Steel	48	Extra heavy wall- carbon steel, installation is simple, fast, convenient, and enhance the strength of the screw holes.	碳钢厚壁型，安装简单，快速，方便，增强螺丝孔的强度。
	Screw Locking-Carbon Steel	49	Screw locking- carbon steel, installation is simple, fast, convenient, and enhance the strength of the screw holes.	碳钢锁紧型，安装简单，快速，方便，增强螺丝孔的强度。

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Automotive-Carbon Steel

50

Automotive-carbon steel installation is simple, fast, convenient, and enhance the strength of the screw holes.

汽车专用型，安装简单、快速、方便，增强螺丝孔的强度。



Stainless Steel Thread Insert

51

Stainless steel thread insert installation is simple, fast, convenient, and enhance the strength of the screw holes.

不锈钢材质，安装简单、快速、方便，增强螺丝孔的强度。

Installation instruction about solid threaded inserts for metal

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Wire Thread Insert ...

Structural component - thread reinforcement and repair:

Wire thread inserts are thread reinforcement and repair.

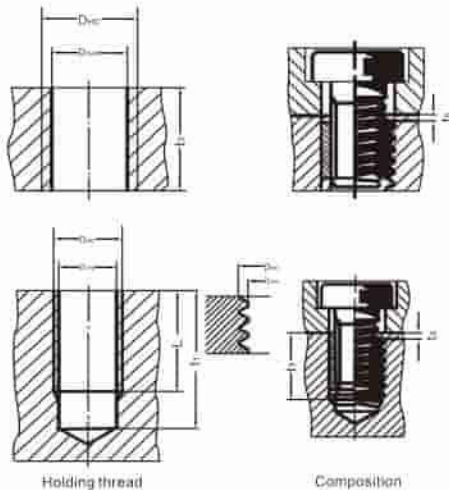
Threads are reinforced whenever low strength materials (e.g. aluminium, aluminium-magnesium alloys and fibre-reinforced plastics) are used. The nut thread is wear-resistant even in cases of frequent use.

Wire thread inserts allows miniaturisation and lightweight construction for the development of production parts. The wire thread inserts have been tried and tested for more than 60 years and have become a widely used in structural component. Worldwide, the wire thread inserts are approved for economical and lasting repair of damaged or worn out thread. Apart from repair of valuable individual components, parts used in large-scale production which have been rejected due to faults during thread production can be reintegrated in the production process.



The free running and screwlock thread insert control values are W and d, when not inserted.

Its length can only be measured when the insert is in position.



d = thread diameter
P = pitch
d₁ = outer diameter of thread insert prior to installation
D_{nc} = outer thread of tapped hole
D_{nc} = thread core diameter
B = recommended twist drill diameter

t₁ = minimum depth of core hole according to DIN 76
L = nominal length of thread insert and minimum length of holding thread
t₂ = maximum screw-in depth if tang has not broken off
t₃ = distance of thread insert from separating surface=0.25P, if t₂ complies with the above mentioned minimum value

Example for finding the article number:

L4012115-1
0=Free running type; 2=Screwlock type.
L4012115-1
0=Stainless steel A2, X5 CrNi 18 10
1=Bronze, CuSn 6
2=Nimonic 90, NiCr 20 Co 18 Ti, Silver plated
3=Stainless steel A4, X6 CrNiMoTi 17 12 2
4=Inconel X 750, NiCr 15 Fe 7 TiAL, silver plated
5=Inconel X750, NiCr 15 Fe 7 TiAL, polished
6=Stainless steel A2, X5 CrNi 18 10, cadmiun plated

7=Stainless steel A2, X5 CrNi 18 10, magazine loaded
8=Bronze, CuSn 6, magazine loaded
Other materials upon request.

Tolerances Thread:
ISO 2768-m

Fields of application:

- Gear box housing of magnesium alloys
- Thread reinforcement for oil drain plugs
- Exhaust systems
- Satellite technology
- Aeroplane engines
- Repeated installations
- Maintenance and repair
- Lamps
- Electrical appliances
- Hammer drills
- Printing presses



L4010 / L4012

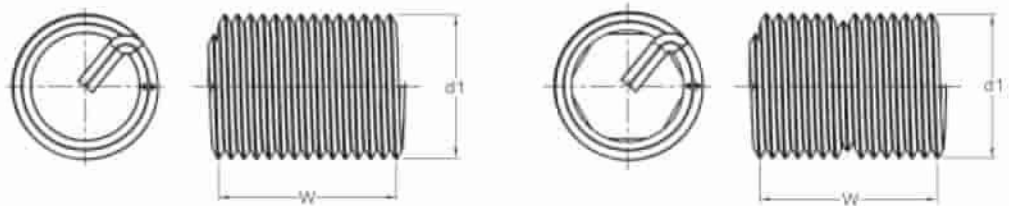
Features

- Easy and fast installation.
- Corrosion and temperature resistant.
- Optimization of thread characteristics.
- They are available in free running and screw lock version.

特征

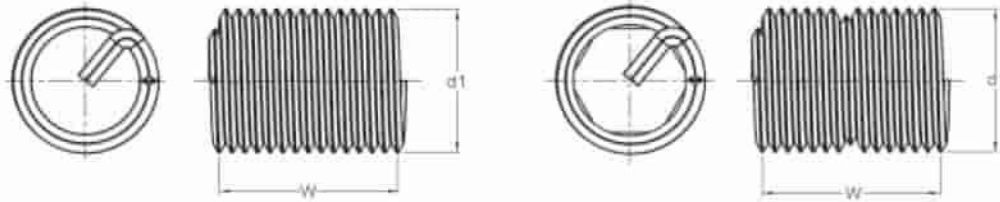
- 简单快速安装。
- 抗高温、耐腐蚀。
- 优化螺纹特性。
- 提供自锁和非自锁类型。

Technical Data



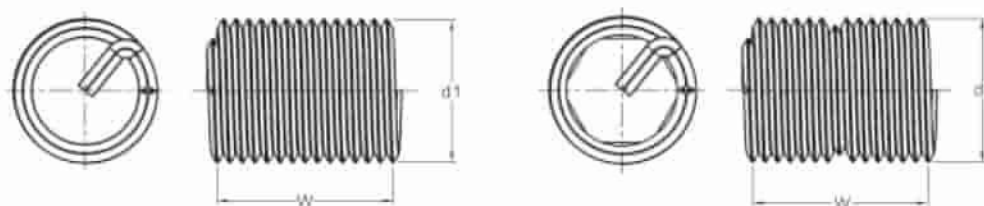
Drawing No.		d x P	K x d	L	W	d1 min max.	B Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010011	L4012011	M2X0.40	1d	2.0	2.9	2.6 – 2.8	2.1	1.8
L4010012	L4012012		1.5d	3.0	4.9			2.8
L4010013	L4012013		2d	4.0	6.9			3.8
L4010014	L4012014		2.5d	5.0	8.9			4.8
L4010015	L4012015		3d	6.0	10.9			5.8
L4010021	L4012021	M2.5X0.45	1d	2.5	3.5	3.3 – 3.5	2.6	2.3
L4010022	L4012022		1.5d	3.75	5.9			3.5
L4010023	L4012023		2d	5.0	8.1			4.8
L4010024	L4012024		2.5d	6.25	10.5			6.0
L4010025	L4012025		3d	7.5	12.9			7.3
L4010031	L4012031	M3X0.5	1d	3.0	3.9	3.8 – 4.0	3.2	2.7
L4010032	L4012032		1.5d	4.5	6.3			4.2
L4010033	L4012033		2d	6.0	8.7			5.7
L4010034	L4012034		2.5d	7.5	11.1			7.2
L4010035	L4012035		3d	9.0	13.5			8.7
L4010041	L4012041	M3.5X0.6	1d	3.5	3.7	4.42 – 4.60	3.7	3.2
L4010042	L4012042		1.5d	5.25	6.3			5.0
L4010043	L4012043		2d	7.0	8.7			6.7
L4010044	L4012044		2.5d	8.75	11.2			8.5
L4010045	L4012045		3d	10.5	13.3			10.2

Technical Data



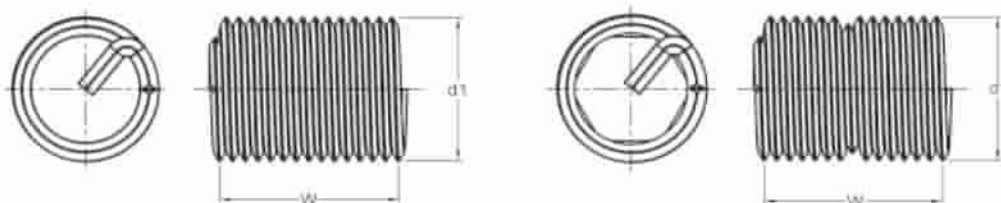
Free-Running	Screw-Lock	d x P	K x d	L	W	d1 min. max.	Tap Drill Size	I3 max.
L4010051	L4012051	M4X0.7	1d	4.0	3.7	5.05 – 5.25	4.2	3.6
L4010052	L4012052		1.5d	6.0	6.1			5.6
L4010053	L4012053		2d	8.0	8.4			7.6
L4010054	L4012054		2.5d	10.0	10.9			9.6
L4010055	L4012055		3d	12.0	13.2			11.6
L4010061	L4012061	M5X0.8	1d	5.0	4.3	6.35 – 6.6	5.2	4.6
L4010062	L4012062		1.5d	7.5	6.9			7.1
L4010063	L4012063		2d	10.0	9.7			9.6
L4010064	L4012064		2.5d	12.5	12.3			12.1
L4010065	L4012065		3d	15.0	14.8			14.6
L4010071	L4012071	M6X1.0	1d	6.0	4.2	7.6 – 7.85	6.3	5.5
L4010072	L4012072		1.5d	9.0	6.9			8.5
L4010073	L4012073		2d	12.0	9.6			11.5
L4010074	L4012074		2.5d	15.0	12.3			14.5
L4010075	L4012075		3d	18.0	14.6			17.5
L4010081	L4012081	M7X1.0	1d	7.0	5.3	8.65 – 8.9	7.3	6.5
L4010082	L4012082		1.5d	10.5	8.2			10.0
L4010083	L4012083		2d	14.0	11.1			13.5
L4010084	L4012084		2.5d	17.5	14.3			17.0
L4010085	L4012085		3d	21.0	17.4			20.5
L4010091	L4012091	M8X1.25	1d	8.0	4.7	9.85 – 10.1	8.4	7.4
L4010092	L4012092		1.5d	12.0	7.4			11.4
L4010093	L4012093		2d	16.0	10.6			15.4
L4010094	L4012094		2.5d	20.0	13.5			19.4
L4010095	L4012095		3d	24.0	16.4			23.4
L4010101	L4012101	M8X1.0	1d	8.0	6.1	9.85 – 10.1	8.3	7.5
L4010102	L4012102		1.5d	12.0	9.5			11.5
L4010103	L4012103		2d	16.0	12.9			15.5
L4010104	L4012104		2.5d	20.0	16.5			19.5
L4010105	L4012105		3d	24.0	19.9			23.5
L4010111	L4012111	M9X1.25	1d	9.0	5.3	10.85 – 11.1	9.4	8.4
L4010112	L4012112		1.5d	13.5	8.6			12.9
L4010113	L4012113		2d	18.0	11.9			17.4
L4010114	L4012114		2.5d	22.5	15.3			21.9
L4010115	L4012115		3d	27.0	18.1			26.4

Technical Data



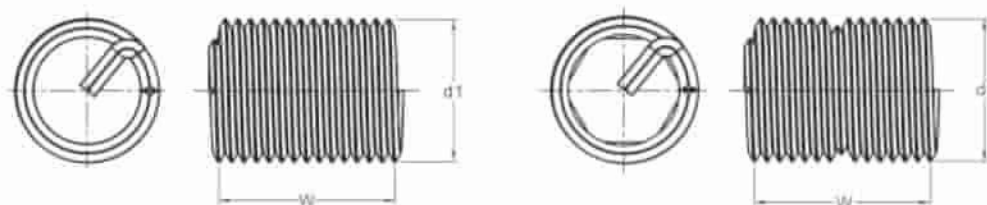
Drawing No.		d x P	K x d	L	W	d1 min. max.	B Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010121	L4012121	M10X1.5	1d	10.0	5.0	12.1 - 12.5	10.50	9.2
L4010122	L4012122		1.5d	15.0	8.1			14.2
L4010123	L4012123		2d	20.0	11.2			19.2
L4010124	L4012124		2.5d	25.0	14.2			24.2
L4010125	L4012125		3d	30.0	17.2			29.2
L4010131	L4012131	M10X1.0	1d	10.0	7.6	12.1 - 12.5	10.25	9.5
L4010132	L4012132		1.5d	15.0	12.1			14.5
L4010133	L4012133		2d	20.0	16.3			19.5
L4010134	L4012134		2.5d	25.0	20.7			24.5
L4010135	L4012135		3d	30.0	25.0			29.5
L4010141	L4012141	M10X1.25	1d	10.0	6.0	12.1 - 12.5	10.40	9.4
L4010142	L4012142		1.5d	15.0	9.7			14.4
L4010143	L4012143		2d	20.0	13.1			19.4
L4010144	L4012144		2.5d	25.0	16.9			24.4
L4010145	L4012145		3d	30.0	20.1			29.4
L4010151	L4012151	M11X1.5	1d	11.0	5.6	13.1 - 13.5	11.50	10.2
L4010152	L4012152		1.5d	16.5	9.0			15.7
L4010153	L4012153		2d	22.0	12.3			21.2
L4010154	L4012154		2.5d	27.5	15.7			26.7
L4010155	L4012155		3d	33.0	19.1			32.2
L4010161	L4012161	M12X1.75	1d	12.0	5.2	14.4 - 14.8	12.50	11.1
L4010162	L4012162		1.5d	18.0	8.4			17.1
L4010163	L4012163		2d	24.0	11.7			23.1
L4010164	L4012164		2.5d	30.0	14.7			29.1
L4010165	L4012165		3d	36.0	18.0			35.1
L4010171	L4012171	M12X1.0	1d	12.0	9.3	14.4 - 14.8	12.25	11.5
L4010172	L4012172		1.5d	18.0	14.5			17.5
L4010173	L4012173		2d	24.0	19.5			23.5
L4010174	L4012174		2.5d	30.0	24.8			29.5
L4010175	L4012175		3d	36.0	30.0			35.5
L4010181	L4012181	M12X1.25	1d	12.0	7.4	14.4 - 14.8	12.25	11.4
L4010182	L4012182		1.5d	18.0	11.6			17.4
L4010183	L4012183		2d	24.0	15.9			23.4
L4010184	L4012184		2.5d	30.0	20.0			29.4
L4010185	L4012185		3d	36.0	24.3			35.4

Technical Data



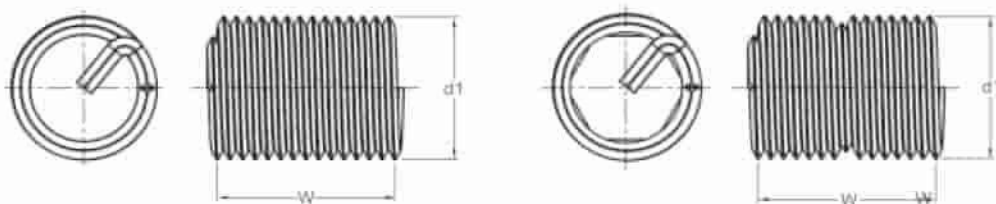
Drawing No.		$d \times P$	$K \times d$	L	W	$d1$ min max	B Tap Drill Size	t3 mm
Free Running	Screw- Lock							
L4010191	L4012191	M12X1.5	1d	12.0	6.2	14.4 – 14.8	12.50	11.2
L4010192	L4012192		1.5d	18.0	9.8			17.2
L4010193	L4012193		2d	24.0	13.5			23.2
L4010194	L4012194		2.5d	30.0	17.1			29.2
L4010195	L4012195		3d	36.0	20.8			35.2
L4010201	L4012201	M14X2.0	1d	14.0	5.6	16.8 – 17.2	14.50	13.0
L4010202	L4012202		1.5d	21.0	8.8			20.0
L4010203	L4012203		2d	28.0	12.0			27.0
L4010204	L4012204		2.5d	35.0	15.2			34.0
L4010211	L4012211	M14X1.0	1d	14.0	11.2	16.8 – 17.2	14.25	13.5
L4010212	L4012212		1.5d	21.0	17.2			20.5
L4010213	L4012213		2d	28.0	23.2			27.5
L4010214	L4012214		2.5d	35.0	29.2			34.5
L4010221	L4012221	M14X1.25	spark plug thread	8.4	4.6	16.8 – 17.2	14.25	7.8
L4010222	L4012222			12.4	7.4			11.8
L4010223	L4012223			14.4	9.1			13.8
L4010224	L4012224			16.4	10.2			15.8
L4010231	L4012231	M14X1.5	1d	14.0	7.4	16.8 – 17.2	14.50	13.2
L4010232	L4012232		1.5d	21.0	11.6			20.2
L4010233	L4012233		2d	28.0	15.7			27.2
L4010234	L4012234		2.5d	35.0	19.9			34.2
L4010241	L4012241	M16X2.0	1d	16.0	6.5	19.0 – 19.4	16.50	15.0
L4010242	L4012242		1.5d	24.0	10.1			23.0
L4010243	L4012243		2d	32.0	13.8			31.0
L4010244	L4012244		2.5d	40.0	17.5			39.0
L4010251	L4012251	M16X1.5	1d	16.0	8.7	19.0 – 19.4	16.50	15.2
L4010252	L4012252		1.5d	24.0	13.4			23.2
L4010253	L4012253		2d	32.0	18.1			31.2
L4010254	L4012254		2.5d	40.0	22.9			39.2
L4010261	L4012261	M18X2.5	0.5d	9.0	2.3	21.5 – 22.0	18.75	7.7
L4010262	L4012262		0.75d	13.5	3.8			12.2
L4010263	L4012263		1d	18.0	5.6			16.7
L4010264	L4012264		1.5d	27.0	9.0			25.7
L4010265	L4012265		2d	36.0	12.3			34.7

Technical Data



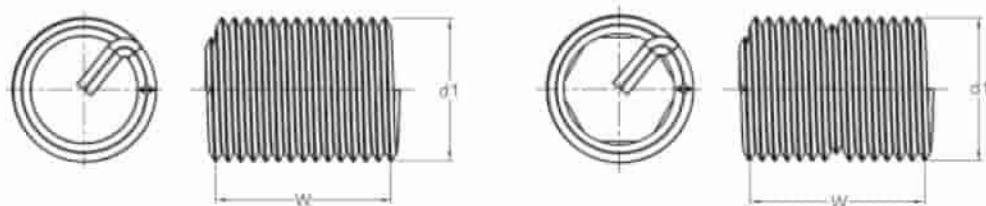
Drawing No.		$d \times P$	$K \times d$	L	W	d_1 min. max.	B Tap Drill Size	ϕ max.
Free Running	Screw- Lock							
L4010271	L4012271	M18X1.5	0.5d	9.0	4.2	21.5 - 22.0	18.50	8.2
L4010272	L4012272		0.75d	13.5	7.0			12.7
L4010273	L4012273		1d	18.0	9.5			17.2
L4010274	L4012274		1.5d	27.0	14.9			26.2
L4010275	L4012275		2d	36.0	20.2			35.2
L4010281	L4012281	M18X2.0	0.5d	9.0	3.1	21.5 - 22.0	18.50	8.0
L4010282	L4012282		0.75d	13.5	5.1			12.5
L4010283	L4012283		1d	18.0	7.1			17.0
L4010284	L4012284		1.5d	27.0	11.2			26.0
L4010285	L4012285		2d	36.0	15.1			35.0
L4010291	L4012291	M20X2.5	0.5d	10.0	2.7	23.7 - 24.2	20.75	8.7
L4010292	L4012292		0.75d	15.0	4.5			13.7
L4010293	L4012293		1d	20.0	6.3			18.7
L4010294	L4012294		1.5d	30.0	10.0			28.7
L4010295	L4012295		2d	40.0	13.7			38.7
L4010301	L4012301	M20X1.5	0.5d	10.0	4.9	23.7 - 24.2	20.50	9.2
L4010302	L4012302		0.75d	15.0	7.9			14.2
L4010303	L4012303		1d	20.0	10.7			19.2
L4010304	L4012304		1.5d	30.0	16.7			29.2
L4010305	L4012305		2d	40.0	22.4			39.2
L4010311	L4012311	M20X2.0	0.5d	10.0	3.5	23.7 - 24.2	20.50	9.0
L4010312	L4012312		0.75d	15.0	5.8			14.0
L4010313	L4012313		1d	20.0	8.0			19.0
L4010314	L4012314		1.5d	30.0	12.5			29.0
L4010315	L4012315		2d	40.0	16.8			39.0
L4010321	L4012321	M22X2.5	0.5d	11.0	3.0	26.3 - 26.8	22.75	9.7
L4010322	L4012322		0.75d	16.5	5.0			15.2
L4010323	L4012323		1d	22.0	6.9			20.7
L4010324	L4012324		1.5d	33.0	10.9			31.7
L4010325	L4012325		2d	44.0	15.0			42.7
L4010331	L4012331	M22X1.5	0.5d	11.0	5.5	26.3 - 26.8	22.50	10.2
L4010332	L4012332		0.75d	16.5	8.6			15.7
L4010333	L4012333		1d	22.0	11.7			21.2
L4010334	L4012334		1.5d	33.0	18.1			32.2
L4010335	L4012335		2d	44.0	24.5			43.2

Technical Data



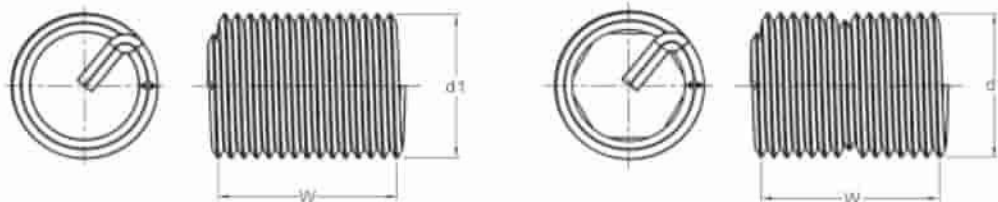
Drawing No.		d x P	K x d	L	W	d1 min max.	B Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010341	L4012341	M22X2.0	0.5d	11.0	3.9	26.3 – 26.8	22.50	10.0
L4010342	L4012342		0.75d	16.5	6.4			15.5
L4010343	L4012343		1d	22.0	8.7			21.0
L4010344	L4012344		1.5d	33.0	13.6			32.0
L4010345	L4012345		2d	44.0	18.4			43.0
L4010351	L4012351	M24X3.0	0.5d	12.0	2.6	28.6 – 29.1	24.75	10.5
L4010352	L4012352		0.75d	18.0	4.5			16.5
L4010353	L4012353		1d	24.0	6.2			22.5
L4010354	L4012354		1.5d	36.0	10.0			34.5
L4010355	L4012355		2d	48.0	14.0			46.5
L4010361	L4012361	M24X1.5	0.5d	12.0	6.0	28.6 – 29.1	24.50	11.2
L4010362	L4012362		0.75d	18.0	9.5			17.2
L4010363	L4012363		1d	24.0	12.9			23.2
L4010364	L4012364		1.5d	36.0	19.8			35.2
L4010365	L4012365		2d	48.0	26.7			47.2
L4010371	L4012371	M24X2.0	0.5d	12.0	4.3	28.6 – 29.1	24.50	11.0
L4010372	L4012372		0.75d	18.0	7.0			17.0
L4010373	L4012373		1d	24.0	9.6			23.0
L4010374	L4012374		1.5d	36.0	15.0			35.0
L4010375	L4012375		2d	48.0	20.2			47.0
L4010381	L4012381	M26X1.5	0.5d	13.0	6.5	31.0 – 31.5	26.50	12.2
L4010382	L4012382		0.75d	19.5	10.3			18.7
L4010383	L4012383		1d	26.0	14.0			25.2
L4010384	L4012384		1.5d	39.0	21.6			38.2
L4010385	L4012385		2d	52.0	29.1			51.2
L4010391	L4012391	M27X3.0	0.5d	13.5	3.2	32.2 – 32.7	27.75	12.0
L4010392	L4012392		0.75d	20.3	5.0			18.8
L4010393	L4012393		1d	27.0	7.1			25.5
L4010394	L4012394		1.5d	40.5	11.4			39.0
L4010395	L4012395		2d	54.0	15.4			52.5
L4010401	L4012401	M27X1.5	0.5d	13.5	6.7	32.2 – 32.7	27.50	12.7
L4010402	L4012402		0.75d	20.3	10.7			19.5
L4010403	L4012403		1d	27.0	14.6			26.2
L4010404	L4012404		1.5d	40.5	22.6			39.7
L4010405	L4012405		2d	54.0	30.0			53.2

Technical Data



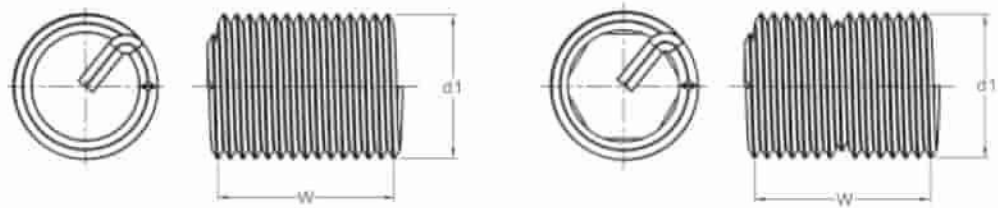
Drawing No.		d x P	K x d	L	W	d1 min. max.	B Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010411	L4012411	M27X2.0	0.5d	13.5	5.1	32.2 – 32.7	27.50	12.5
L4010412	L4012412		0.75d	20.3	7.9			19.3
L4010413	L4012413		1d	27.0	10.8			26.0
L4010414	L4012414		1.5d	40.5	16.8			39.5
L4010415	L4012415		2d	54.0	22.6			53.0
L4010421	L4012421	M28X1.5	0.5d	14.0	7.1	33.1 – 33.6	28.50	13.2
L4010422	L4012422		0.75d	21.0	11.1			20.2
L4010423	L4012423		1d	28.0	15.2			27.2
L4010424	L4012424		1.5d	42.0	23.3			41.2
L4010425	L4012425		2d	56.0	31.4			55.2
L4010431	L4012431	M30X3.5	0.5d	15.0	3.0	35.2 – 35.7	31.00	13.2
L4010432	L4012432		0.75d	22.5	4.9			20.7
L4010433	L4012433		1d	30.0	7.0			28.2
L4010434	L4012434		1.5d	45.0	11.0			43.2
L4010435	L4012435		2d	60.0	14.9			58.2
L4010441	L4012441	M30X1.5	0.5d	15.0	7.8	35.2 – 35.7	30.50	14.2
L4010442	L4012442		0.75d	22.5	12.2			21.7
L4010443	L4012443		1d	30.0	16.5			29.2
L4010444	L4012444		1.5d	45.0	25.3			44.2
L4010445	L4012445		2d	60.0	34.0			59.2
L4010451	L4012451	M30X2.0	0.5d	15.0	5.7	35.2 – 35.7	30.50	14.0
L4010452	L4012452		0.75d	22.5	9.0			21.5
L4010453	L4012453		1d	30.0	12.3			29.0
L4010454	L4012454		1.5d	45.0	19.0			44.0
L4010455	L4012455		2d	60.0	25.5			59.0
L4010461	L4012461	M33X3.5	0.5d	16.5	3.4	38.3 – 38.8	34.00	14.7
L4010462	L4012462		0.75d	24.8	5.6			23.0
L4010463	L4012463		1d	33.0	7.8			31.2
L4010464	L4012464		1.5d	49.5	12.2			47.7
L4010465	L4012465		2d	66.0	16.5			64.2
L4010471	L4012471	M33X2.0	0.5d	16.5	6.4	38.3 – 38.8		
L4010472	L4012472		0.75d	24.8	10.1			
L4010473	L4012473		1d	33.0	13.7			
L4010474	L4012474		1.5d	49.5	21.2			
L4010475	L4012475		2d	66.0	28.4			

Technical Data



Drawing No.		d x P	K x d	L	W	d1 min. max.	B Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010481	L4012481	M36X4.0	0.5d	18.0	3.2	42.1 – 42.6	37.00	16.0
L4010482	L4012482		0.75d	27.0	5.0			25.0
L4010483	L4012483		1d	36.0	7.0			34.0
L4010484	L4012484		1.5d	54.0	11.1			52.0
L4010485	L4012485		2d	72.0	15.2			70.0
L4010491	L4012491	M36X1.5	0.5d	18.0	9.5	42.1 – 42.6	36.50	17.2
L4010492	L4012492		0.75d	27.0	14.7			26.2
L4010493	L4012493		1d	36.0	19.9			35.2
L4010494	L4012494		1.5d	54.0	30.5			53.2
L4010495	L4012495		2d	72.0	41.0			71.2
L4010501	L4012501	M36X2.0	0.5d	18.0	6.8	42.1 – 42.6	36.50	17.0
L4010502	L4012502		0.75d	27.0	10.3			26.0
L4010503	L4012503		1d	36.0	14.1			35.0
L4010504	L4012504		1.5d	54.0	21.9			53.0
L4010505	L4012505		2d	72.0	31.1			71.0
L4010511	L4012511	M36X3.0	0.5d	18.0	4.4	42.1 – 42.6	37.00	16.5
L4010512	L4012512		0.75d	27.0	7.2			25.5
L4010513	L4012513		1d	36.0	9.9			34.5
L4010514	L4012514		1.5d	54.0	15.3			52.5
L4010515	L4012515		2d	72.0	20.5			70.5
L4010521	L4012521	M39X4.0	0.75d	29.3	5.5	45.1 – 45.6	40.00	23.4
L4010522	L4012522		1d	39.0	7.7			33.1
L4010523	L4012523		1.25d	48.8	9.9			42.9
L4010524	L4012524		1.5d	58.5	12.3			52.6
L4010525	L4012525		2d	78.0	16.6			72.1
L4010531	L4012531	M39X2.0	0.5d	19.5	7.5	45.1 – 45.6	39.50	16.6
L4010532	L4012532		0.75d	29.3	11.9			26.3
L4010533	L4012533		1d	39.0	16.3			36.1
L4010534	L4012534		1.25d	48.8	20.6			45.8
L4010535	L4012535		1.5d	58.5	25.0			55.6
L4010541	L4012541	M39X3.0	0.5d	19.5	4.9	45.1 – 45.6	40.00	15.1
L4010542	L4012542		0.75d	29.3	7.8			24.8
L4010543	L4012543		1d	39.0	10.8			34.6
L4010544	L4012544		1.25d	48.8	13.7			44.3
L4010545	L4012545		1.5d	58.5	16.8			54.1

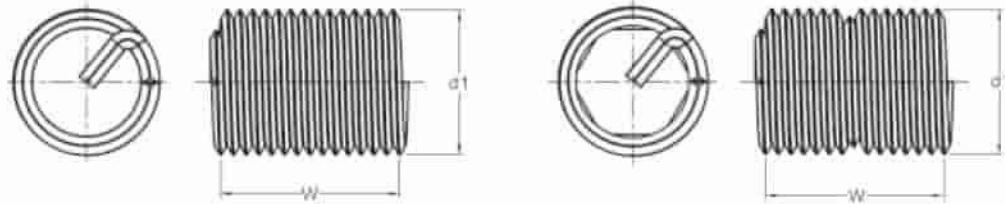
Technical Data



Drawing No.		d x P	K x d	L	W	d1 min. max	B Tap Drill Size	t3 max
Free Running	Screw- Lock							
L4010551	L4012551	M42X4,5	0.5d	21.0	3.3	48.5 – 49.0	43.00	18.7
L4010552	L4012552		0.75d	35.0	6.2			32.7
L4010553	L4012553		1d	42.0	7.3			39.7
L4010554	L4012554		1.25d	52.5	9.5			50.2
L4010555	L4012555		1.5d	63.0	11.6			60.7
L4010556	L4012556		2d	84.0	15.6			81.7

Other sizes, special designs and materials on request.

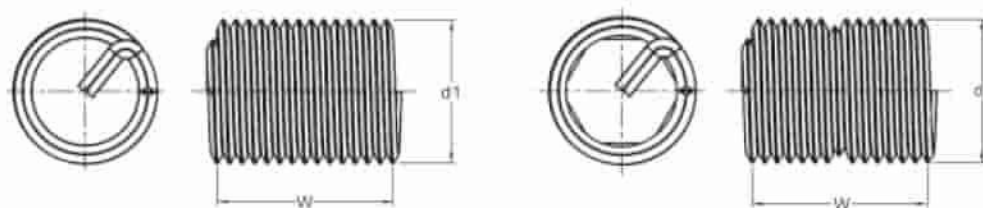
Technical Data



Wire Plus - UNC/NC

Drawing No.		d	K x d	L	W	d1 min. max.	B Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010561	L4012561	2-56	1d	2.2	3.0	2.7 - 2.9	2.4	1.8
L4010562	L4012562		1.5d	3.3	5.25			2.9
L4010563	L4012563		2d	4.4	7.4			3.9
L4010564	L4012564		2.5d	5.5	9.6			5.0
L4010571	L4012571	4-40	1d	2.9	2.8	3.6 - 4.0	3.1	2.5
L4010572	L4012572		1.5d	4.3	4.8			3.9
L4010573	L4012573		2d	5.8	6.8			5.4
L4010574	L4012574		2.5d	7.2	8.8			6.8
L4010581	L4012581	5-40	1d	3.2	3.3	4.0 - 4.4	3.4	2.8
L4010582	L4012582		1.5d	4.8	5.5			4.3
L4010583	L4012583		2d	6.4	7.8			6.0
L4010584	L4012584		2.5d	7.9	10.0			7.5
L4010591	L4012591	6-32	1d	3.5	2.8	4.5 - 4.9	3.8	3.1
L4010592	L4012592		1.5d	5.3	4.8			4.9
L4010593	L4012593		2d	7.0	6.7			6.6
L4010594	L4012594		2.5d	8.8	8.7			8.4
L4010601	L4012601	8-32	1d	4.2	3.5	5.2 - 5.6	4.4	3.8
L4010602	L4012602		1.5d	6.3	5.9			5.9
L4010603	L4012603		2d	8.3	8.3			8.0
L4010604	L4012604		2.5d	10.5	10.7			10.1
L4010611	L4012611	10-24	1d	4.8	2.9	6.2 - 6.6	5.2	4.3
L4010612	L4012612		1.5d	7.2	5.0			6.7
L4010613	L4012613		2d	9.6	7.1			9.1
L4010614	L4012614		2.5d	12.1	9.2			11.6
L4010621	L4012621	12-24	1d	5.5	3.5	6.8 - 7.2	5.8	5.0
L4010622	L4012622		1.5d	8.2	5.9			7.7
L4010623	L4012623		2d	11.0	8.3			10.5
L4010624	L4012624		2.5d	13.7	10.7			13.2
L4010631	L4012631	1/4"-20	1d	6.4	3.4	8.0 - 8.4	6.7	5.8
L4010632	L4012632		1.5d	9.5	5.7			8.9
L4010633	L4012633		2d	12.7	8.0			12.1
L4010634	L4012634		2.5d	15.9	10.3			15.3
L4010641	L4012641	5/16"-18	1d	7.9	4.0	9.7 - 10.2	8.4	7.2
L4010642	L4012642		1.5d	11.9	6.6			11.2
L4010643	L4012643		2d	15.9	9.3			15.2
L4010644	L4012644		2.5d	19.8	11.9			19.1

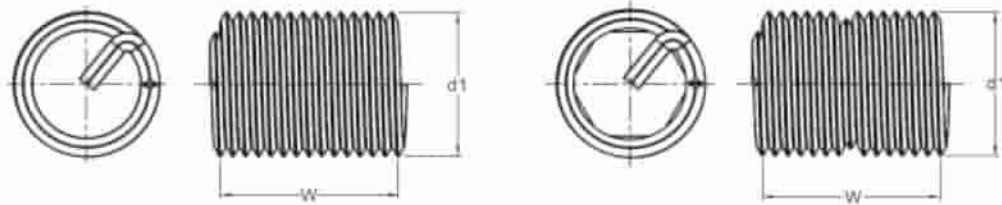
Technical Data



Drawing No.		d	K x d	L	W	d1 min. max.	Ø Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010651	L4012651	3/8"-16	1d	9.5	4.4	11.5 - 12.0	10.0	8.7
L4010652	L4012652		1.5d	14.3	7.2			13.5
L4010653	L4012653		2d	19.1	10.1			18.3
L4010654	L4012654		2.5d	23.8	12.9			23.0
L4010661	L4012661	7/16"-14	1d	11.1	4.5	13.4 - 14.0	11.6	10.2
L4010662	L4012662		1.5d	16.7	7.4			15.8
L4010663	L4012663		2d	22.2	10.3			21.3
L4010664	L4012664		2.5d	27.8	13.1			26.9
L4010671	L4012671	1/2"-13	1d	12.7	4.8	15.2 - 15.8	13.2	11.7
L4010672	L4012672		1.5d	19.1	7.9			18.1
L4010673	L4012673		2d	25.4	10.9			24.4
L4010674	L4012674		2.5d	31.8	13.9			30.8

Other sizes, special designs and materials on request.

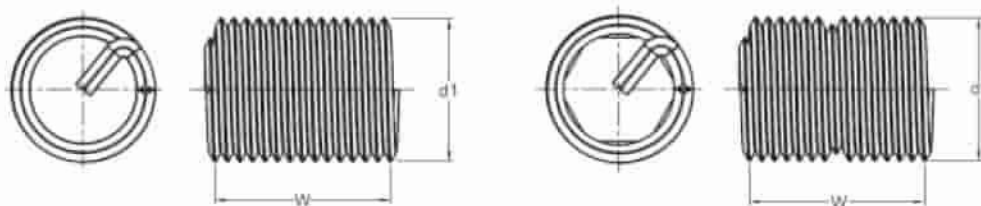
Technical Data



Wire Classic - UNC/NC

Drawing No.		d	K x d	L	W	d1 min. max.	B Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010681	L4012681	9/16"-12	1d	14.3	5.1	17.0 - 17.6	14.9	13.2
L4010682	L4012682		1.5d	21.5	8.3			20.4
L4010683	L4012683		2d	28.6	11.5			27.5
L4010684	L4012684		2.5d	35.7	14.7			34.6
L4010691	L4012691	5/8"-11	1d	15.9	5.3	18.9 - 19.5	16.6	14.7
L4010692	L4012692		1.5d	23.8	8.3			22.6
L4010693	L4012693		2d	31.8	11.8			30.6
L4010694	L4012694		2.5d	39.7	15.0			38.5
L4010701	L4012701	3/4"-10	1d	19.1	5.9	22.4 - 23.0	19.7	17.8
L4010702	L4012702		1.5d	28.6	9.4			27.3
L4010703	L4012703		2d	38.1	13.0			36.8
L4010704	L4012704		2.5d	47.6	16.6			46.3
L4010711	L4012711	7/8"-9	1d	22.2	6.3	26.0 - 26.7	23.0	20.8
L4010712	L4012712		1.5d	33.3	10.0			31.9
L4010713	L4012713		2d	44.5	13.7			43.1
L4010714	L4012714		2.5d	55.6	17.4			54.2
L4010721	L4012721	1"-8	1d	25.4	6.4	29.6 - 30.4	26.2	23.8
L4010722	L4012722		1.5d	38.1	10.2			36.5
L4010723	L4012723		2d	50.8	14.0			49.2
L4010724	L4012724		2.5d	63.5	17.8			61.9
L4010731	L4012731	1 1/8"-7	1d	28.6	6.3	33.4 - 34.4	29.5	26.8
L4010732	L4012732		1.5d	42.9	10.0			41.1
L4010733	L4012733		2d	57.2	13.8			55.4
L4010734	L4012734		2.5d	-	-			-
L4010741	L4012741	1 1/4"-7	1d	31.8	7.1	36.7 - 37.7	33.0	30.0
L4010742	L4012742		1.5d	47.6	11.3			45.8
L4010743	L4012743		2d	63.5	15.4			61.7
L4010744	L4012744		2.5d	-	-			-
L4010751	L4012751	1 3/8"-6	1d	34.9	6.6	40.6 - 41.7	36.0	32.8
L4010752	L4012752		1.5d	52.4	10.6			50.3
L4010753	L4012753		2d	69.9	14.4			67.8
L4010754	L4012754		2.5d	-	-			-
L4010761	L4012761	1 1/2"-6	1d	38.1	7.4	43.9 - 45.0	39.5	36.0
L4010762	L4012762		1.5d	57.2	11.6			55.1
L4010763	L4012763		2d	76.2	15.9			74.1
L4010764	L4012764		2.5d	-	-			-

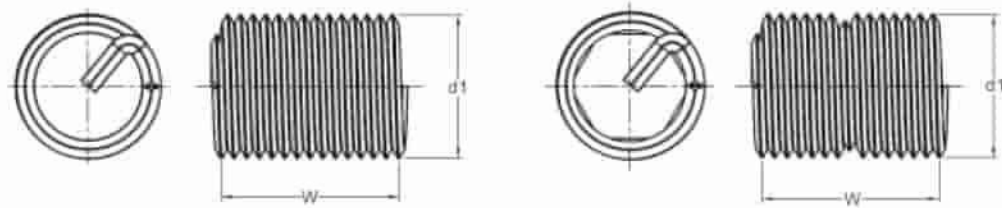
Technical Data



Wire Plus - UNF/NF

Drawing No.		d	K x d	L	W	d1 min. max.	B Tap Drill Size	13 max.
Free Running	Screw- Lock							
L4010771	L4012771	4-48	1d	2.8	3.4	3.7 - 4.1	3.0	2.5
L4010772	L4012772		1.5d	4.3	5.6			4.0
L4010773	L4012773		2d	5.7	7.9			5.4
L4010774	L4012774		2.5d	7.1	10.3			6.7
L4010781	L4012781	6-40	1d	3.5	3.6	4.5 - 4.9	3.8	3.1
L4010782	L4012782		1.5d	5.3	6.0			4.9
L4010783	L4012783		2d	7.0	8.4			6.6
L4010784	L4012784		2.5d	8.8	10.8			8.4
L4010791	L4012791	8-36	1d	4.2	4.0	5.3 - 5.7	4.4	3.8
L4010792	L4012792		1.5d	6.3	6.6			5.9
L4010793	L4012793		2d	8.3	9.1			7.9
L4010794	L4012794		2.5d	10.5	11.7			10.1
L4010801	L4012801	10-32	1d	4.8	4.1	6.1 - 6.5	5.1	4.4
L4010802	L4012802		1.5d	7.2	6.8			6.8
L4010803	L4012803		2d	9.6	9.5			9.2
L4010804	L4012804		2.5d	12.1	12.1			11.7
L4010811	L4012811	1/4"-28	1d	6.4	5.0	7.8 - 8.3	6.7	5.9
L4010812	L4012812		1.5d	9.5	8.1			9.0
L4010813	L4012813		2d	12.7	11.3			12.2
L4010814	L4012814		2.5d	15.9	14.4			15.4
L4010821	L4012821	5/16"-24	1d	7.9	5.5	9.7 - 10.2	8.2	7.4
L4010822	L4012822		1.5d	11.9	8.9			11.4
L4010823	L4012823		2d	15.9	12.2			15.4
L4010824	L4012824		2.5d	19.8	15.6			19.3
L4010831	L4012831	3/8"-24	1d	9.5	6.9	11.4 - 11.9	9.8	9.0
L4010832	L4012832		1.5d	14.3	10.9			13.8
L4010833	L4012833		2d	19.1	14.9			18.6
L4010834	L4012834		2.5d	23.8	19.0			23.3
L4010841	L4012841	7/16"-20	1d	11.1	6.6	13.4 - 13.9	11.5	10.5
L4010842	L4012842		1.5d	16.7	10.6			16.1
L4010843	L4012843		2d	22.2	14.5			21.6
L4010844	L4012844		2.5d	27.8	18.4			27.2
L4010851	L4012851	1/2"-20	1d	12.7	7.8	15.1 - 15.7	13.1	12.1
L4010852	L4012852		1.5d	19.1	12.3			18.5
L4010853	L4012853		2d	25.4	16.8			24.8
L4010854	L4012854		2.5d	31.8	21.3			31.2

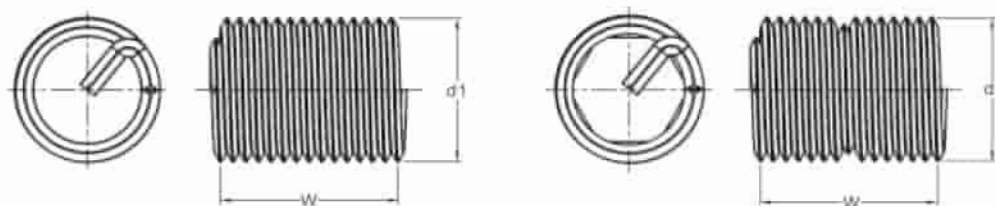
Technical Data



Wire Classic - UNF/NF

Drawing No.		d	K x d	L	W	d1 min. max.	B Tap Drill Size	t3 max.
Free Running	Screw- Lock							
L4010861	L4012861	9/16"-18	1d	14.3	7.9	16.9 - 17.6	14.7	13.6
L4010862	L4012862		1.5d	21.5	12.5			20.8
L4010863	L4012863		2d	28.6	17.1			27.9
L4010864	L4012864		2.5d	35.7	21.6			35.0
L4010871	L4012871	5/8"-18	1d	15.9	8.9	18.6 - 19.3	16.3	15.2
L4010872	L4012872		1.5d	23.8	14.1			23.1
L4010873	L4012873		2d	31.8	19.1			31.1
L4010874	L4012874		2.5d	39.7	24.3			39.0
L4010881	L4012881	3/4"-16	1d	19.1	9.7	22.2 - 22.9	19.5	18.3
L4010882	L4012882		1.5d	28.6	15.1			27.8
L4010883	L4012883		2d	38.1	20.6			37.3
L4010884	L4012884		2.5d	47.7	26.0			46.9
L4010891	L4012891	7/8"-14	1d	22.2	9.9	26.0 - 26.7	22.7	21.3
L4010892	L4012892		1.5d	33.3	15.4			32.4
L4010893	L4012893		2d	44.5	21.0			43.6
L4010894	L4012894		2.5d	55.6	26.6			54.7
L4010901	L4012901	1"-14	1d	25.4	11.5	29.4 - 30.1	26.0	24.5
L4010902	L4012902		1.5d	38.1	17.9			37.2
L4010903	L4012903		2d	50.8	24.3			49.9
L4010904	L4012904		2.5d	63.5	30.6			62.6
L4010911	L4012911	1"-12	1d	25.4	9.7	29.7 - 30.4	26.0	24.3
L4010912	L4012912		1.5d	38.1	15.1			37.0
L4010913	L4012913		2d	50.8	20.6			49.7
L4010914	L4012914		2.5d	63.5	26.1			62.4
L4010921	L4012921	1 1/8"-12	1d	28.6	10.1	33.2 - 33.9	29.0	27.5
L4010922	L4012922		1.5d	42.9	17.3			41.8
L4010923	L4012923		2d	57.2	23.4			56.1
L4010924	L4012924		2.5d	-	-			-
L4010931	L4012931	1 1/4"-12	1d	31.8	12.4	36.6 - 37.3	32.5	30.7
L4010932	L4012932		1.5d	47.6	19.3			46.5
L4010933	L4012933		2d	63.5	26.1			62.4
L4010934	L4012934		2.5d	-	-			-
L4010941	L4012941	1 3/8"-12	1d	34.9	13.8	40.0 - 40.9	35.5	33.8
L4010942	L4012942		1.5d	52.4	21.3			51.3
L4010943	L4012943		2d	69.9	28.9			68.8
L4010944	L4012944		2.5d	-	-			-

Technical Data



Drawing No.		d	K x d	L	W	d1 min. max	B Tap Drill Size	t3 max
Free Running	Screw- Lock							
L4010951	L4012951	1 1/2"-12	1d	38.1	15.2	43.4 - 44.3	38.5	37.0
L4010952	L4012952		1.5d	57.2	23.4			56.1
L4010953	L4012953		2d	76.2	31.6			75.1
L4010954	L4012954		2.5d	-	-			-

Other sizes, special designs and materials on request.



L4020 /L4022

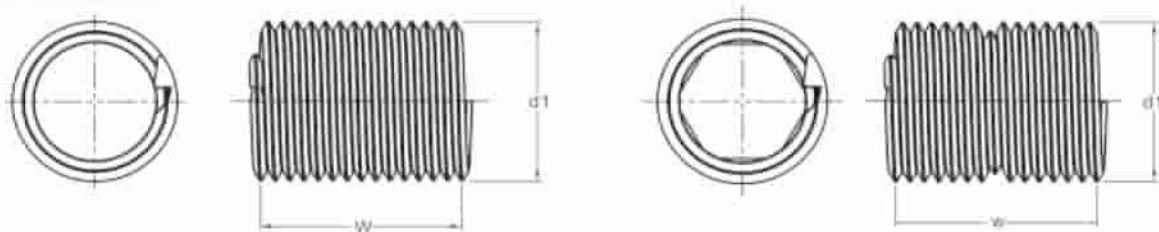
Features

- Easy and fast installation.
- Corrosion and temperature resistant.
- Optimization of thread characteristics.
- They are available in free running and screw lock version.

特征

- 简单快速安装。
- 抗高温耐侵蚀。
- 优化螺纹特性。
- 提供自锁和非自锁类型。

Technical Data



Drawing No.		d x P	K x d	L	W	d1 min.	d1 max.	B Tap-Drill Size
Free Running	Screw- Lock							
L4020011	L4022011		1d	3.00	3.750	3.80	4.35	3.20
L4020012	L4022012	M3X0.5	1.5d	4.50	6.375	3.80	4.35	3.20
L4020013	L4022013		2d	6.00	8.875	3.80	4.35	3.20
L4020021	L4022021		1d	4.00	3.625	5.05	5.60	4.20
L4020022	L4022022	M4X0.7	1.5d	6.00	6.125	5.05	5.60	4.20
L4020023	L4022023		2d	8.00	8.625	5.05	5.60	4.20
L4020031	L4022031		1d	5.00	4.125	6.25	6.80	5.20
L4020032	L4022032	M5X0.8	1.5d	7.50	6.875	6.25	6.80	5.20
L4020033	L4022033		2d	10.00	9.625	6.25	6.80	5.20
L4020041	L4022041		1d	6.00	4.000	7.40	7.95	6.30
L4020042	L4022042	M6X1.0	1.5d	9.00	6.750	7.40	7.95	6.30
L4020043	L4022043		2d	12.00	9.500	7.40	7.95	6.30
L4020051	L4022051		1d	8.00	4.500	9.80	10.35	8.40
L4020052	L4022052	M8X1.25	1.5d	12.00	7.375	9.80	10.35	8.40
L4020053	L4022053		2d	16.00	10.250	9.80	10.35	8.40
L4020061	L4022061		1d	10.00	4.875	11.95	12.50	10.50
L4020062	L4022062	M10X1.5	1.5d	15.00	8.000	11.95	12.50	10.50
L4020063	L4022063		2d	20.00	11.125	11.95	12.50	10.50
L4020071	L4022071		1d	12.00	5.000	14.30	15.00	12.50
L4020072	L4022072	M12X1.75	1.5d	18.00	8.250	14.30	15.00	12.50
L4020073	L4022073		2d	24.00	11.500	14.30	15.00	12.50
L4020081	L4022081		1d	14.00	5.250	16.80	17.50	14.50
L4020082	L4022082	M14X2.0	1.5d	21.00	8.575	16.80	17.50	14.50
L4020083	L4022083		2d	28.00	11.900	16.80	17.50	14.50

Other sizes, special designs and materials on request.



L4020 / L4022

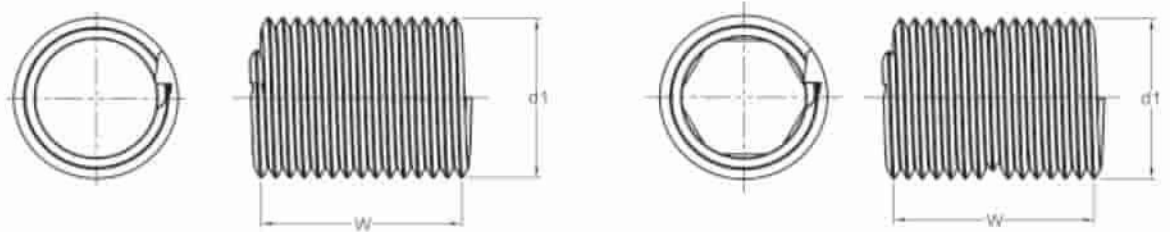
Features

- 1. Easy and fast installation.
- 2. Corrosion and temperature resistant.
- 3. Optimization of thread characteristics.
- 4. They are available in free running and screw lock version.

特征

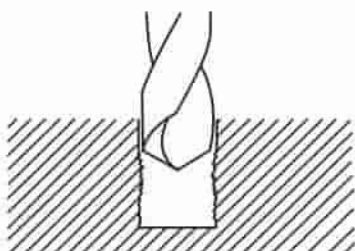
- 简单快速安装。
- 抗高温耐腐蚀。
- 优化螺纹特性。
- 提供自锁和非自锁类型。

Technical Data



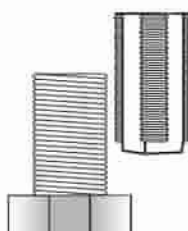
Drawing No.		d	P	K x d	L	W	d1 min.	d1 max.	B Tap Drill Size
Free Running	Screw-Lock								
L4020091	L4022091	4-40 UNC	0.635	1d	2.9	2.750	3.66	4.04	3.10
L4020092	L4022092			1.5d	4.3	4.750	3.66	4.04	3.10
L4020093	L4022093			2d	5.8	6.750	3.66	4.04	3.10
L4020101	L4022101	6-32 UNC	0.794	1d	3.5	2.750	4.52	4.90	3.80
L4020102	L4022102			1.5d	5.3	4.750	4.52	4.90	3.80
L4020103	L4022103			2d	7.0	6.875	4.52	4.90	3.80
L4020111	L4022111	8-32 UNC	0.794	1d	4.2	3.500	5.21	5.59	4.40
L4020112	L4022112			1.5d	6.3	6.000	5.21	5.59	4.40
L4020113	L4022113			2d	8.3	8.375	5.21	5.59	4.40
L4020121	L4022121	10-24 UNC	1.058	1d	4.8	2.875	6.20	6.58	5.20
L4020122	L4022122			1.5d	7.2	5.000	6.20	6.58	5.20
L4020123	L4022123			2d	9.6	7.125	6.20	6.58	5.20
L4020131	L4022131	1/4-20 UNC	1.270	1d	6.4	3.375	7.87	8.38	6.70
L4020132	L4022132			1.5d	9.5	5.750	7.87	8.38	6.70
L4020133	L4022133			2d	12.7	8.000	7.87	8.38	6.70
L4020141	L4022141	10-32 UNF	0.794	1d	4.8	4.125	5.99	6.50	5.10
L4020142	L4022142			1.5d	7.2	6.875	5.99	6.50	5.10
L4020143	L4022143			2d	9.6	9.500	5.99	6.50	5.10
L4020151	L4022151	1/4-28 UNF	0.907	1d	6.4	5.000	7.77	8.28	6.70
L4020152	L4022152			1.5d	9.5	8.250	7.77	8.28	6.70
L4020153	L4022153			2d	12.7	11.375	7.77	8.28	6.70

Other sizes, special designs and materials on request.



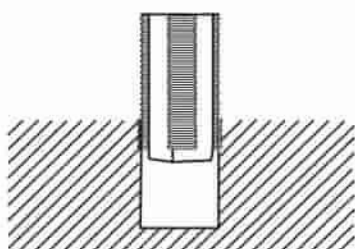
Step 1:

Drill out the hole with the specified drill size.
钻相应尺寸的孔。



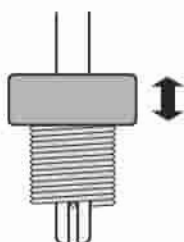
Step 2:

Confirm that the thread and pitch of the bolt match the tap.
选择和钢丝螺套匹配的丝锥。



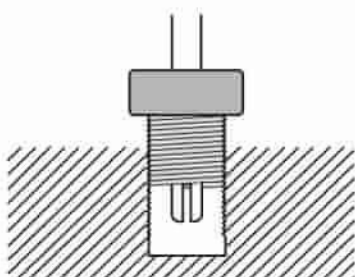
Step 3:

Tap the hole with the specified tap.
攻相对应的牙。



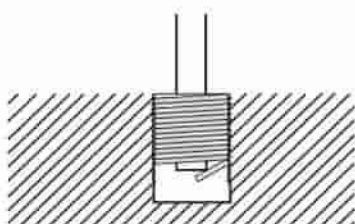
Step 4:

Set the stop on the installation tool so the tang is centered in the slot.
选择相对应的安装工具。



Step 5:

Wind the insert into the hole with a slight downward pressure until 1/4 or 1/2 turn below the surface.
安装时，需有一定的向下压力，直到1/4到1/2圈表面以下。



Step 6:

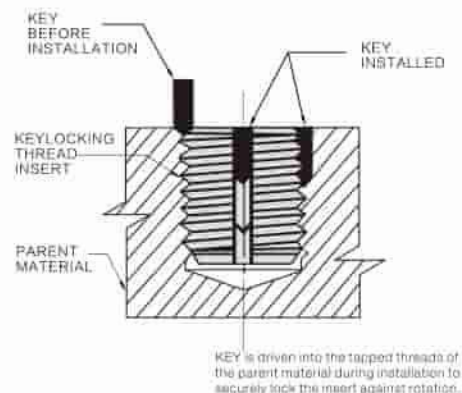
Place the tang break off tool on the tang and tap down sharply with a hammer.
用去尾工具，施加压力去尾。

Keylocking threaded inserts...

Product features:

Keylocking threaded inserts are used to quickly repair stripped, damaged or worn out threads with new -stronger threads or for use in original equipment. The inserts are easy to install and easy to remove. No special drills, taps or pre-winder tools are required. The keys are driven down into the threads of the surrounding base material, locking the inserts in place.

- Solid, one-piece insert construction provides a high degree of pull-out strength
- Key supply a positive mechanical lock against rotation
- Easy installation and removal
- Installed with standard drills and taps
- No pre-winder tool required
- No tang to break-off
- May be used in many types of materials



Hole prepared with standard taps and drills. Installs in seconds with Tridar power installation tool. Available in many sizes in heavy duty and extra heavy duty configuration. Meets the following configuration specifications: MS51831, MS51832, MS51833, MS51834 SERIES. internal thread locking feature meets the requirements of ML-I-45914. Exclusive external thread design provides maximum pull-out strength with a minimum outside diameter.



Materials:

In-sail can manufacture Keylocking Threaded Inserts to meet your special requirements.

Some of our capabilities are listed below:

Inserts Materials -

- 1=303 Stainless Steel
- 2=304 Stainless Steel
- 3=316 Stainless Steel
- 4=17-4 PH Stainless
- 5=A286 Stainless
- 6=Nitronic 60 stainless steel
- 7=4140 Alloy
- 8=Inconel 718
- 9=Carbon Steel

Keys Materials -

- 1=302 Stainless Steel
- 2=420 Stainless (Self-Broaching)

Finishes:

- 1=Zinc Phosphate
- 2=Passivate
- 3=Cadmium
- 4=Dry-Film Lube
- 5=Silver
- 6=Nickel

Tolerances Thread:

ISO : 2768-m

Example for finding the article number:

L503019-1-1-2

0=Non-Locking; 2=Self-Locking

L503019-1-1-2 Inserts materials

L503019-1-1-2 Keys materials

L503019-1-1-2 Finished

Miniature - L5010 / L5012



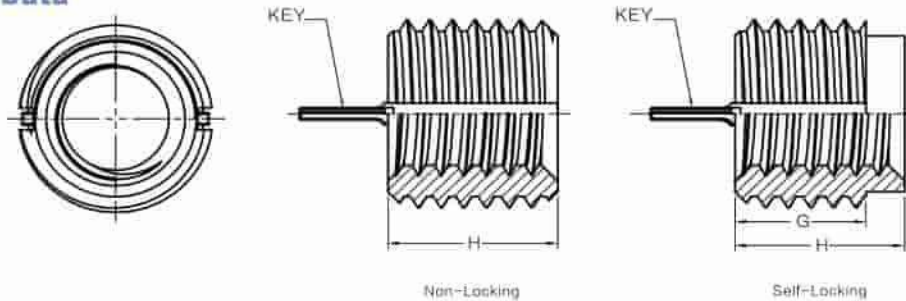
Features

- Miniature -Keylocking Threaded Inserts.
- Miniature Inserts are furnished with 2 locking keys.

特征

- 微型-插销螺套。
- 微型螺套都配有2锁定键。

Technical Data



Miniature - Inch

Drawing No.		Insert				Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	G Thread Length	H Length	Tap Drill Size +.003 -0.001	C'Sink Dia. +.010 -0.000	Thread Tap Size Class 2B	Min. Depth	Size	Depth
L501001	L501201	2-56	8-32	.090	.120	.134	.166	8-32	.140	#33	1/16
L501002	L501202	4-40	10-32	.125	.170	.161	.194	10-32	.160	#29	3/32
L501003	L501203	6-32	12-28	.125	.170	.187	.220	12-28	.160	#21	3/32
L501004	L501204	8-32	1/4-28	.175	.220	.228	.255	1/4-28	.210	#8	1/8

Miniature - Metric

Drawing No.		Insert				Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 4H6H	External Thread Class 4h	G Thread Length	H Length	Tap Drill Size +.080 -0.025	C'Sink Dia. +.25 -0.00	Thread Tap Size Class 6H	Min. Depth	Size	Depth
L501005	L501205	M2X0.4	M4X0.7	2.20	3.00	3.4	4.1	M4X0.7	4.0	2.8	2.00
L501006	L501206	M2.5X0.45	M4.5X0.75	2.70	3.81	3.9	4.6	M4.5X0.75	5.0	3.0	2.00
L501007	L501207	M3X0.5	M5X0.8	3.10	4.25	4.4	5.1	M5X0.8	5.5	3.5	2.25
L501008	L501208	M4X0.7	M6X0.75	4.11	5.25	5.5	6.1	M6X0.75	6.5	4.6	2.50

Other sizes, special designs and materials on request.

+ Modified minor diameter.

Lightweight - L5020 / L5022



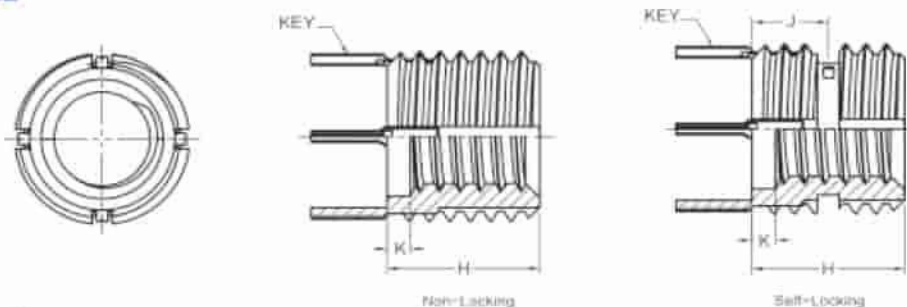
Features

- Lightweight-Keylocking Threaded Inserts. Inserts with an internal thread size of M6 or 5/16 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.

特征

- 轻量型-插销螺套。螺纹M6(或者5/16)以及更大规格配有4PCS锁定键，更小规格配有2PCS锁定键。

Technical Data



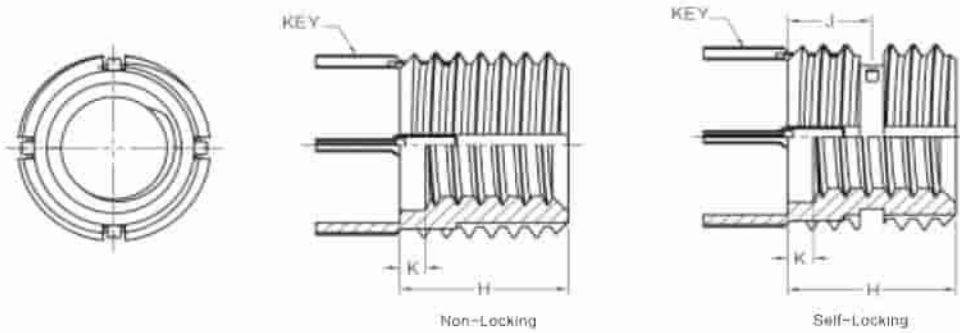
Lightweight - Inch

Drawing No.		Insert					Installation			Removal	
Non-Locking	Self-Locking	Internal Thread Class 3E	External Thread Class 2A	H Length	J $\pm .030$	K C'Bore Depth	Tap Drill Size	C'Sink Dia. $+.010$ $-.000$	Thread Tap Size Class 2B Min. Depth	Drill Size	Depth
L502001	L502201	10-24	5/16-18	.312	.22	.07	.272	.323	5/16-18 .37	7/32	5/32
L502002	L502202	10-32	3/8-16	.375	.22	.07	.332	.385	3/8-16 .43	9/32	3/16
L502003	L502203	1/4-20	7/16-14	.437	.22	.07	.397	.447	7/16-14 .50	11/32	3/16
L502004	L502204	1/4-28	1/2-13	.500	.24	.07	.453	.510	1/2-13 .56	13/32	3/16
L502005	L502205	5/16-18	9/16-12	.562	.27	.07	.516	.572	9/16-12 .62	15/32	3/16
L502006	L502206	5/16-24	5/8-11	.625	.28	.07	.578	.635	5/8-11 .68	17/32	3/16
L502007	L502207	3/8-16									
L502008	L502208	3/8-24									
L502009	L502209	7/16-14									
L502010	L502210	7/16-20									
L502011	L502211	1/2-13									
L502012	L502212	1/2-20									

Other sizes, special designs and materials on request.

Tap drill hole tolerance: .234 to .500 = $+.004/- .001$
over .500 = $+.005/- .001$

Technical Data



Lightweight - Metric

Drawing No.		Insert					Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 4H5H	External Thread Class 4h	H Length	J $\pm .76$	K C'Bore Depth	Tap Drill Size	C'Sink Dia. $+ .25$ $- .00$	Thread Tap Size Class 6H	Min. Depth	Drill Size	Depth
L502013	L502213	M5X0.8	M8X1.25	8.0	3.73	1.27	6.90	8.25	M8X1.25	9.5	5.50	4.00
L502014	L502214	M5X0.5	M8X1.25	8.0	3.73	1.27	6.90	8.25	M8X1.25	9.5	5.50	4.00
L502015	L502215	M6X1.0	M10X1.25	10.0	6.02	1.78	8.80	10.25	M10X1.25	11.5	7.50	4.75
L502016	L502216	M6X0.75	M10X1.25	10.0	6.02	1.78	8.80	10.25	M10X1.25	11.5	7.50	4.75
L502017	L502217	M8X1.25	M12X1.25	12.0	6.28	1.78	10.80	12.25	M12X1.25	13.5	9.50	4.75
L502018	L502218	M8X1.0	M12X1.25	12.0	6.28	1.78	10.80	12.25	M12X1.25	13.5	9.50	4.75
L502019	L502219	M10X1.5	M14X1.5	14.0	6.46	2.29	12.80	14.25	M14X1.5	15.5	11.50	4.75
L502020	L502220	M10X1.25	M14X1.5	14.0	6.46	2.29	12.80	14.25	M14X1.5	15.5	11.50	4.75
L502021	L502221	M12X1.75	M16X1.5	16.0	6.46	2.29	14.75	16.25	M16X1.5	17.5	13.50	4.75
L502022	L502222	M12X1.25	M16X1.5	16.0	6.46	2.29	14.75	16.25	M16X1.5	17.5	13.50	4.75

Other sizes, special designs and materials on request.

Thread class on M5 internal thread is 4H6H.

Tap drill hole tolerance: 6.90 to 10.80 = $+0.100/-0.025$
over 12.80 = $+0.130/-0.025$

Heavy Duty - L5030 / L5032



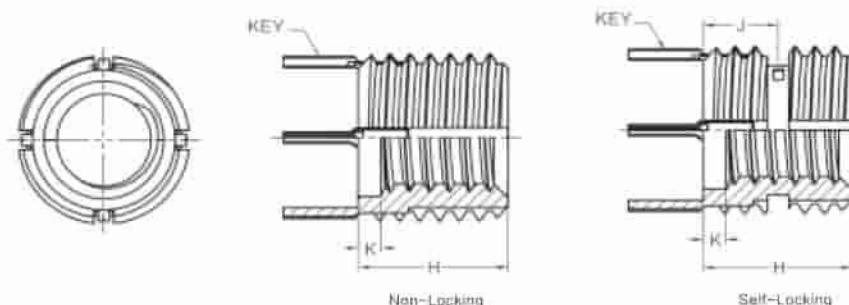
Features

- Heavy Duty-Keylocking Threaded Inserts. Inserts with an internal thread size of M6 or 5/16 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.

特征

- 重型-插销螺套。螺纹M6(或者5/16)以及更大规格配有4PCS锁定键，更小规格配有2PCS锁定键。

Technical Data



Heavy Duty - Metric

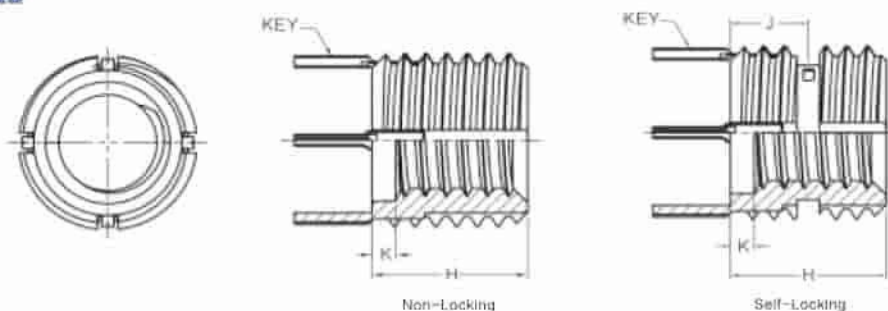
Drawing No.		Insert					Installation			Removal		
Non-Locking	Self-Locking	Internal Thread Class 4H5H	External Thread Class 4h	H Length	J $\pm .76$	K C'Bore Depth	Tap Drill Size	C'Sink Dia. $+.25$ $-.00$	Thread Tap Size Class 6H	Min. Depth	Size	Depth
L503001	L503201	M4X0.7	M8X1.25	8.0	5.00	1.27	6.90	8.25	M8X1.25	9.5	5.50	4.00
L503002	L503202	M5X0.8	M10X1.25	10.0	5.50	1.27	8.80	10.25	M10X1.25	12.5	7.50	4.75
L503003	L503203	M6X1.0	M12X1.25	12.0	6.46	1.78	10.80	12.25	M12X1.25	14.5	9.50	4.75
L503004	L503204	M8X1.25	M14X1.5	14.0	6.46	1.78	12.80	14.25	M14X1.5	16.5	11.50	4.75
L503005	L503205	M8X1.0										
L503006	L503206	M10X1.5	M16X1.5	16.0	6.46	2.29	14.75	16.25	M16X1.5	18.5	13.50	4.75
L503007	L503207	M10X1.25										
L503008	L503208	M12X1.75	M18X1.5	18.0	7.23	2.29	16.75	18.25	M18X1.5	20.5	15.50	4.75
L503009	L503209	M12X1.25										
L503010	L503210	M14X2.0	M20X1.5	20.0	7.73	2.79	18.75	20.25	M20X1.5	22.5	17.50	4.75
L503011	L503211	M14X1.5										
L503012	L503212	M16X2.0	M22X1.5	22.0	8.50	2.79	20.50	22.25	M22X1.5	24.5	17.75	6.35
L503013	L503213	M16X1.5										
L503014	L503214	M18X1.5	M24X2.0	24.0	9.25	2.79	22.50	24.25	M24X2.0	28.5	19.75	6.35
L503015	L503215	M20X2.5	M30X2.0	30.0	12.51	2.79	28.00	30.25	M30X2.0	34.5	25.75	6.35
L503016	L503216	M20X1.5										
L503017	L503217	M22X1.5	M32X2.0	32.0	12.51	2.79	30.00	32.25	M32X2.0	36.5	27.75	6.35
L503018	L503218	M24X3.0	M33X2.0	33.0	13.97	3.81	31.00	33.25	M33X2.0	37.5	28.75	6.35
L503019	L503219	M24X2.0										

Other sizes, special designs and materials on request.

Thread class on M5 internal thread is 4H6H.

Tap drill hole tolerance: 6.90 to 10.80 = +0.100/-0.025
over 12.80 = +0.130/-0.025

Technical Data



Heavy Duty - Inch

Drawing No.		Insert					Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	H Length	J $\pm .030$	K C'Bore Depth	Tap Drill Size	C'Sink Dia. $+.010$ $-.000$	Thread Tap Size Class 2B	Tap Min. Depth	Drill Size	Depth
L503020	L503220	8-32	5/16-18	.312	.22	.04	.272	.323	5/16-18	.37	7/32	1/8
L503021	L503221	10-24	3/8-16	.312	.22	.07	.332	.385	3/8-16	.37	9/32	1/8
L503022	L503222	10-32	7/16-14	.375	.22	.07	.397	.447	7/16-14	.43	11/32	3/16
L503023	L503223	1/4-20										
L503024	L503224	1/4-28										
L503025	L503225	5/16-18	1/2-13	.437	.22	.07	.453	.510	1/2-13	.50	13/32	3/16
L503026	L503226	5/16-24	9/16-12	.500	.25	.07	.516	.572	9/16-12	.56	15/32	3/16
L503027	L503227	3/8-16										
L503028	L503228	3/8-24										
L503029	L503229	7/16-14	5/8-11	.625	.28	.10	.578	.635	5/8-11	.68	17/32	3/16
L503030	L503230	7/16-20	11/16-11 NS	.688	.28	.10	.641	.700	11/16-11 NS	.75	19/32	3/16
L503031	L503231	1/2-13										
L503032	L503232	1/2-20										
L503033	L503233	9/16-12	13/16-16	.812	.32	.10	.766	.822	13/16-16	.94	23/32	3/16
L503034	L503234	9/16-18	7/8-14	.875	.33	.10	.828	.885	7/8-14	1.00	25/32	3/16
L503035	L503235	5/8-11										
L503036	L503236	5/8-18										
L503037	L503237	3/4-10	1-1/8-12	1.125	-	.10	1.062	1.145	1-1/8-12	1.31	31/32	5/16
L503038	L503238	3/4-16		1.250	.49					1.44		
L503039	L503239	3/4-10										
L503040	L503240	3/4-16	1-1/4-12	1.250	-	.10	1.187	1.270	1-1/4-12	1.44	1-3/32	5/16
L503041	L503241	7/8-9										
L503042	L503242	7/8-14										
L503043	L503243	7/8-9	1-3/8-12	1.375	.49	.10	1.312	1.395	1-3/8-12	1.56	1-7/32	5/16
L503044	L503244	7/8-14										
L503045	L503245	1"-8										
L503046	L503246	1"-12	1-3/8-12	1.375	-	.10	1.312	1.395	1-3/8-12	1.56	1-7/32	5/16
L503047	L503247	1"-8										
L503048	L503248	1"-12										

Other sizes, special designs and materials on request.

Tap drill hole tolerance: .234 to .500 = $+.004/- .001$
over .500 = $+.005/- .001$

Extra Heavy Duty - L5040 / L5042



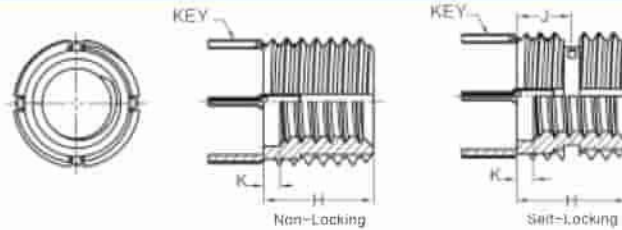
Features

- Extra Heavy Duty-Keylocking Threaded Inserts.
- Inserts with an internal thread size of 1/4" and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.

特征

- 超重型-插销螺套。
- 螺纹1/4"以及更大规格配有4PCS锁定键，更小规格配有2PCS锁定键。

Technical Data



Extra Heavy Duty - Inch

Drawing No.		Insert					Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	H Length	J ±.030	K C'Bore Depth	Tap Drill Size	C'Sink Dia. +.010 -0.000	Thread Tap Size Class 2B	Min. Depth	Drill Size	Depth
L504001	L504201	10-24	7/16-14	.312	.22	.07	.397	.447	7/16-14	.37	11/32	3/16
L504002	L504202	10-32		.312	.22	.07	.397	.447	7/16-14	.37	11/32	3/16
L504003	L504203	1/4-20	1/2-13	.375	.22	.07	.453	.510	1/2-13	.44	13/32	3/16
L504004	L504204	1/4-28	9/16-12	.437	.22	.07	.516	.572	9/16-12	.50	15/32	3/16
L504005	L504205	5/16-18										
L504006	L504206	5/16-24	5/8-11	.500	.25	.07	.578	.635	5/8-11	.56	17/32	3/16
L504007	L504207	3/8-16										
L504008	L504208	3/8-24	11/16-11 NS	.625	.28	.10	.641	.700	11/16-11 NS	.68	19/32	3/16
L504009	L504209	7/16-14										
L504010	L504210	7/16-20	13/16-16	.688	.28	.10	.766	.822	13/16-16	.75	23/32	3/16
L504011	L504211	1/2-13										
L504012	L504212	1/2-20	7/8-14	.812	.32	.10	.828	.885	7/8-14	.94	25/32	3/16
L504013	L504213	9/16-12										
L504014	L504214	9/16-18	1"-12	.875	.33	.10	.937	1.020	1"-12	1.00	27/32	5/16
L504015	L504215	5/8-11										
L504016	L504216	5/8-18	1-1/4-12	1.125	-	.10	1.187	1.270	1-1/4-12	1.31	1-3/32	5/16
L504017	L504217	3/4-10										
L504018	L504218	3/4-16	1-1/2-12	1.250	.49	.10	1.437	1.520	1-1/2-12	1.56	1-11/32	5/16
L504019	L504219	3/4-10										
L504020	L504220	3/4-16	1-3/8-12	1.375	.49	.10	1.312	1.395	1-3/8-12	1.56	1-7/32	5/16
L504021	L504221	7/8-9										
L504022	L504222	7/8-14	1-3/8-12	1.375	.49	.10	1.312	1.395	1-3/8-12	1.56	1-7/32	5/16
L504023	L504223	7/8-9										
L504024	L504224	7/8-14	1-1/2-12	1.375	-	.10	1.437	1.520	1-1/2-12	1.56	1-11/32	5/16
L504025	L504225	1"-8										
L504026	L504226	1"-12	1-1/2-12	1.500	.55	.10	1.437	1.520	1-1/2-12	1.68	1-11/32	5/16
L504027	L504227	1"-8										
L504028	L504228	1"-12	1-1/2-12	1.500	.55	.10	1.437	1.520	1-1/2-12	1.68	1-11/32	5/16
L504029	L504229	1"-12										

Other sizes, special designs and materials on request.

Blind End - L5050 / L5052



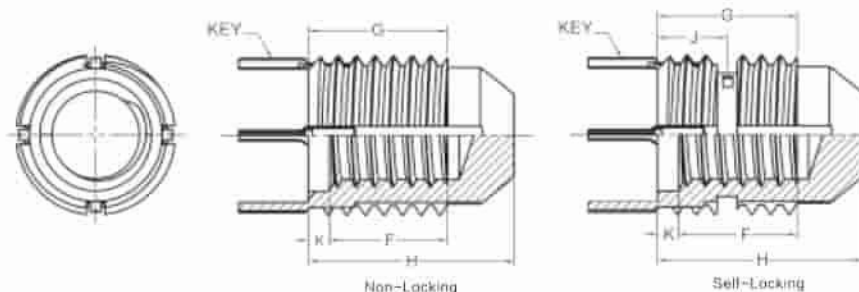
Features

- Blind End Keylocking Threaded Inserts.
- Inserts with an internal thread size of 5/16 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.

特征

- 盲孔插销螺套。
- 螺纹5/16以及更大规格配有4PCS锁定键，更小规格配有2PCS锁定键。

Technical Data



Miniature - Inch

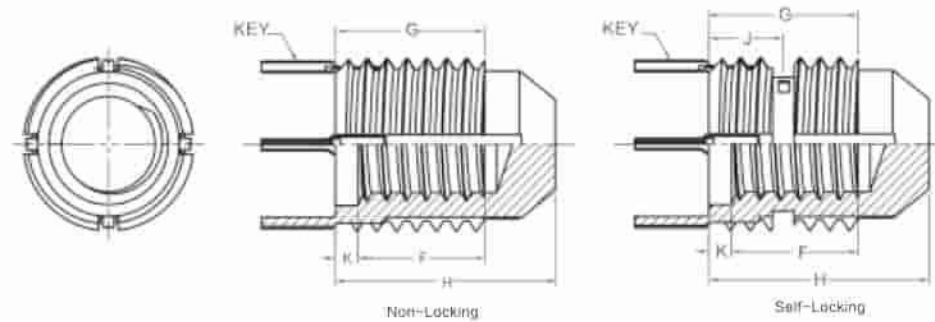
Drawing No.		Insert							Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	F Int Thd (min)	G Ext Thd	H Lgth	J $\pm .030$	K C'Bore Depth	Tap Drill Size	C'Sink Dia. $+.010$ $-.000$	Thread Tap Size Class 2B	Min. Depth	Drill Size	Depth
L505001	L505201	2-56	8-32	.13	.18	.24	.10	C'Sink	.134	.166	8-32	.24	#33	1/16
L505002	L505202	4-40	10-32	.17	.22	.31	.12	C'Sink	.161	.194	10-32	.28	#29	3/32
L505003	L505203	6-32	12-28	.21	.22	.39	.12	C'Sink	.187	.220	12-28	.28	#21	3/32
L505004	L505204	8-32	1/4-28	.25	.24	.43	.13	C'Sink	.228	.255	1/4-28	.30	#8	3/32

Lightweight - Inch

Drawing No.		Insert							Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	F Int Thd (min)	G Ext Thd	H Lgth	J $\pm .030$	K C'Bore Depth	Tap Drill Size	C'Sink Dia. $+.010$ $-.000$	Thread Tap Size Class 2B	Min. Depth	Drill Size	Depth
L505005	L505205	10-24	5/16-18	.31	.31	.50	.22	.07	.272	.323	5/16-18	.37	7/32	5/32
L505006	L505206	10-32												
L505007	L505207	1/4-20	3/8-16	.37	.37	.62	.22	.07	.332	.385	3/8-16	.43	9/32	3/16
L505008	L505208	1/4-28												
L505009	L505209	5/16-18	7/16-14	.43	.43	.75	.22	.07	.397	.447	7/16-14	.50	11/32	3/16
L505010	L505210	5/16-24												
L505011	L505211	3/8-16	1/2-13	.50	.50	.81	.24	.07	.453	.510	1/2-13	.56	13/32	3/16
L505012	L505212	3/8-24												
L505013	L505213	7/16-14	9/16-12	.56	.56	.87	.27	.07	.516	.572	9/16-12	.62	15/32	3/16
L505014	L505214	7/16-20												
L505015	L505215	1/2-13	5/8-11	.62	.62	1.06	.28	.07	.578	.635	5/8-11	.68	17/32	3/16
L505016	L505216	1/2-20												

Other sizes, special designs and materials on request.

Technical Data



Heavy Duty - Inch

Drawing No.		Insert							Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	F Int Thd (min)	G Ext Thd	H Lgth	J $\pm .030$	K C Bore Depth	Tap Drill Size	C/Sink Dia. $+.010$ $-.000$	Thread Size Class 2B	Min. Depth	Drill Size	Depth
L505017	L505217	8-32	5/16-18	.31	.31	.50	.22	.04	.272	.323	5/16-18	.37	7/32	1/8
L505018	L505218	10-24	3/8-16	.31	.31	.56	.22	.07	.332	.385	3/8-16	.37	9/32	1/8
L505019	L505219	10-32												
L505020	L505220	1/4-20	7/16-14	.37	.37	.62	.22	.07	.397	.447	7/16-14	.43	11/32	3/16
L505021	L505221	1/4-28												
L505022	L505222	5/16-18	1/2-13	.43	.43	.75	.22	.07	.453	.510	1/2-13	.50	13/32	3/16
L505023	L505223	5/16-24												
L505024	L505224	3/8-16	9/16-12	.50	.50	.81	.25	.07	.516	.572	9/16-12	.56	15/32	3/16
L505025	L505225	3/8-24												
L505026	L505226	7/16-14	5/8-11	.62	.62	1.00	.28	.10	.578	.635	5/8-11	.68	17/32	3/16
L505027	L505227	7/16-20												
L505028	L505228	1/2-13	1 1/16-11 NS	.68	.68	1.06	.28	.10	.641	.700	1 1/16-11 NS	.75	19/32	3/16
L505029	L505229	1/2-20												
L505030	L505230	9/16-12	1 3/16-16	.81	.81	1.25	.32	.10	.766	.822	1 3/16-16	.94	23/32	3/16
L505031	L505231	9/16-18												
L505032	L505232	5/8-11	7/8-14	.87	.87	1.31	.33	.10	.828	.885	7/8-14	1.00	25/32	3/16
L505033	L505233	5/8-18												
L505034	L505234	3/4-10	1-1/8-12	1.25	1.25	1.75	.49	.10	1.062	1.145	1-1/8-12	1.44	31/32	5/16
L505035	L505235	3/4-16												
L505036	L505236	7/8-9	1-1/4-12	1.37	1.37	1.94	.49	.10	1.187	1.270	1-1/4-12	1.56	1-3/32	5/16
L505037	L505237	7/8-14												
L505038	L505238	1"-8	1-3/8-12	1.50	1.50	2.12	.55	.10	1.312	1.395	1-3/8-12	1.68	1-7/32	5/16
L505039	L505239	1"-12												

Other sizes, special designs and materials on request.

+Modified minor diameter.

Tap drill hole tolerance: .130 to .233 = $+.003/- .001$

.234 to .500 = $+.004/- .001$

over .500 = $+.005/- .001$

Floating - L5060 / L5062



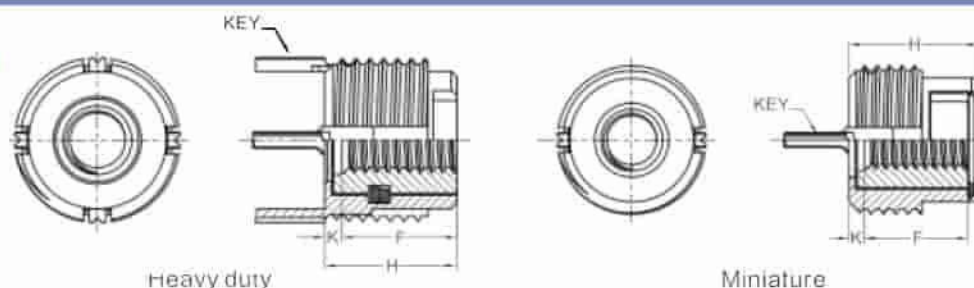
Features

- Miniature-Floating Keylocking Threaded Inserts Miniature Inserts are furnished with 2 locking keys. Inserts with an internal thread size of 5/16 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.

特征

- 浮动插销螺套。
微型螺套都配有2锁定键。
螺纹5/16以及更大规格配有4PCS锁定键，更小规格配有2PCS锁定键。

Technical Data



Miniature - Inch

Drawing No.		Insert						Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	F Internal Thd Lgth	H Lgth ±.015	K Dist. to 1st Thd (Approx)	Min. C-C Float	Tap Drill Size	C'Sink Dia. +.010 - .000	Thread Tap Size Class 2B	Min. Depth	Drill Size	Depth
L506001	L506201	2-56	1/4-28+	.10	.19	.05	.015	.228	.250	1/4-28	.12	#8	3/32
L506002	L506202	4-40	5/16-24	.21	.32	.07	.020	.272	.323	5/16-24	.31	7/32	1/8
L506003	L506203	6-32	3/8-24	.22	.36	.08	.030	.332	.385	3/8-24	.38	9/32	1/8
L506004	L506204	8-32	3/8-24	.22	.36	.08	.030	.332	.385	3/8-24	.38	9/32	1/8

Heavy Duty - Inch

Drawing No.		Insert						Installation				Removal	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	F Internal Thd Lgth	H Lgth ±.015	K Dist. to 1st Thd (Approx)	Min. C-C Float	Tap Drill Size	C'Sink Dia. +.010 - .000	Thread Tap Size Class 2B	Min. Depth	Drill Size	Depth
L506006	L506206	10-24	7/16-20	.25	.40	.15	.040	.406	.447	7/16-20	.39	11/32	5/32
L506007	L506207	10-32											
L506008	L506208	1/4-20	1/2-20	.25	.40	.15	.040	.468	.510	1/2-20	.39	13/32	5/32
L506009	L506209	1/4-28											
L506010	L506210	5/16-18	5/8-18	.39	.53	.13	.040	.578	.635	5/8-18	.50	17/32	3/16
L506011	L506211	5/16-24											
L506012	L506212	3/8-16	3/4-16	.45	.65	.20	.040	.703	.760	3/4-16	.62	21/32	3/16
L506013	L506213	3/8-24											
L506014	L506214	7/16-14	7/8-14	.45	.67	.20	.040	.828	.885	7/8-14	.62	25/32	3/16
L506015	L506215	7/16-20											
L506016	L506216	1/2-13	1"-12	.50	.73	.23	.040	.937	1.020	1"-12	.65	27/32	5/16
L506017	L506217	1/2-20											

Other sizes, special designs and materials on request.

+Modified minor diameter.

Tap drill hole tolerance: .130 to .233 = +.003/- .001

.234 to .500 = +.004/- .001

over .500 = +.005/- .001

Solid - L5070 / L5072

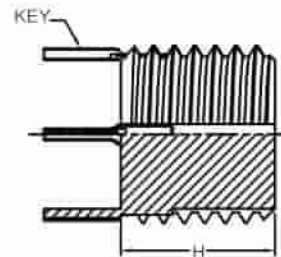
Features

- Solid Keylocking Threaded Inserts. Inserts with an external thread size of 7/16 or M 12 and larger have 4 locking keys. Smaller sizes have 2 locking keys.

特征

- 实心插销螺母。螺纹7/16、M12以及更大规格配有4PCS锁定键，更小规格配有2PCS锁定键。

Technical Data



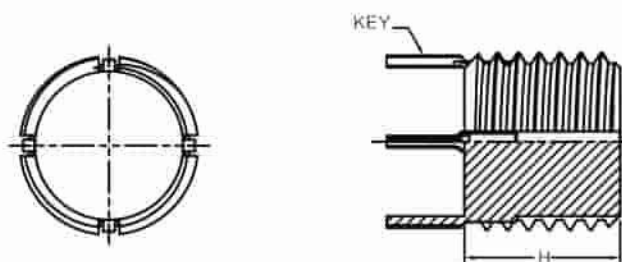
Solid - Inch

Drawing No.		Insert		Installation				Removal	
Carbon Steel	Stainless Steel	External Thread Class 2A	H Length	Tap Drill Size	C'Sink Dia. $+0.010$ -0.000	Thread Tap Size Class 2B	Min. Depth	Drill Size	Depth
L507001	L507201	5/16-18	.31	.272	.32	5/16-18	.37	7/32	1/8
L507002	L507202	3/8-16	.31	.332	.38	3/8-16	.37	9/32	1/8
L507003	L507203	7/16-14	.37	.397	.44	7/16-14	.43	11/32	3/16
L507004	L507204	1/2-13	.43	.453	.51	1/2-13	.50	13/32	3/16
L507005	L507205	9/16-12	.50	.516	.57	9/16-12	.56	15/32	3/16
L507006	L507206	5/8-11	.62	.578	.63	5/8-11	.68	17/32	3/16
L507007	L507207	11/16-11 NS	.68	.641	.70	11/16-11 NS	.75	19/32	3/16
L507008	L507208	3/4-16	.68	.703	.76	3/4-16	.75	21/32	3/16
L507009	L507209	13/16-16	.81	.766	.82	13/16-16	.94	23/32	3/16
L507010	L507210	7/8-14	.87	.828	.88	7/8-14	1.00	25/32	5/16
L507011	L507211	1"-12	.87	.937	1.02	1"-12	1.00	27/32	5/16
L507012	L507212	1-1/8-12	1.12	1.062	1.14	1-1/8-12	1.31	31/32	5/16
L507013	L507213	1-1/4-12	1.25	1.187	1.27	1-1/4-12	1.44	1-3/32	5/16
L507014	L507214	1-3/8-12	1.37	1.312	1.39	1-3/8-12	1.56	1-7/32	5/16

Other sizes, special designs and materials on request.

Tap drill hole tolerance: .234 to .500 = $+0.004/-0.001$
over .500 = $+0.005/-0.001$

Technical Data



Solid - Metric

Drawing No.		Insert		Installation				Removal	
Carbon Steel	Stainless Steel	External Thread Class 6g	H Length	Tap Drill Size	C'Sink Dia. $+0.25/-0.00$	Thread Tap Size Class 6H		Drill Size	Depth
L507015	L507215	M8X1.25	8.0	6.90	8.25	M8X1.25	9.5	5.50	4.00
L507016	L507216	M10X1.25	10.0	8.80	10.25	M10X1.25	12.5	7.50	4.75
L507017	L507217	M12X1.25	12.0	10.80	12.25	M12X1.25	14.5	9.50	4.75
L507018	L507218	M14X1.5	14.0	12.80	14.25	M14X1.5	16.5	11.50	4.75
L507019	L507219	M16X1.5	16.0	14.75	16.25	M16X1.5	18.5	13.50	4.75
L507020	L507220	M18X1.5	18.0	16.75	18.25	M18X1.5	20.5	15.50	4.75
L507021	L507221	M20X1.5	20.0	18.75	20.25	M20X1.5	22.5	17.50	4.75
L507022	L507222	M22X1.5	22.0	20.50	22.25	M22X1.5	24.5	17.75	6.35
L507023	L507223	M24X1.5	24.0	22.50	24.25	M24X1.5	26.5	19.75	6.35
L507024	L507224	M30X2.0	30.0	28.00	30.25	M30X2.0	34.5	25.75	6.35
L507025	L507225	M32X2.0	32.0	30.00	32.25	M32X2.0	36.5	27.75	6.35
L507026	L507226	M33X2.0	33.0	31.00	33.25	M33X2.0	37.5	28.75	6.35

Other sizes, special designs and materials on request.

Tap drill hole tolerance: 6.90 to 10.80 = $+0.100/-0.025$
over 12.80 = $+0.130/-0.025$

Hydraulic 1 - L508

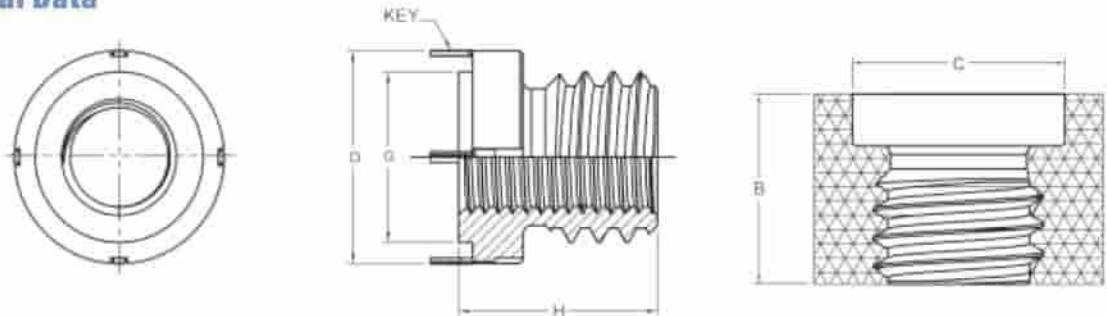
Features

- Hydraulic inserts, one piece unit complete with teflon seal.

特征

- 密封插销螺套，装配时配合密封圈使用。

Technical Data



Drawing No.	Insert						Installation		Removal	
	Tubing O.D.	D + .000 - .002	H + .000 - .020	G ± .002	Internal Thread UNJF-3B	External Thread UNJF-3A	C ± .001	B min.	Drill	
									Size	Depth
L508001	1/8	.757	.812	.604	5/16-24	1/2-20	.760	.87	11/16	3/16
L508002	3/16	.819	.812	.667	3/8-24	9/16-18	.822	.87	13/16	3/16
L508003	1/4	1.007	.812	.730	7/16-20	3/4-16	1.010	.87	15/16	3/16
L508004	5/16	1.007	.812	.792	1/2-20	3/4-16	1.010	.87	15/16	3/16
L508005	3/8	1.132	.875	.854	9/16-18	7/8-14	1.135	.93	1-1/16	3/16
L508006	1/2	1.410	1.000	1.042	3/4-16	1-1/16-12	1.413	1.06	1-11/32	3/16
L508007	5/8	1.663	1.125	1.167	7/8-14	1-5/16-12	1.666	1.25	1-9/16	3/16
L508008	3/4	1.977	1.250	1.417	1-1/16-12	1-5/8-12	1.980	1.37	1-7/8	3/16

Other sizes, special designs and materials on request.

How to install

1. Lubricate insert and O-Ring and assemble, cover threads prior to assembly of O-Ring.
2. Screw insert/O-Ring assembly into tapped hole, until properly seated using tool specified.
3. Turn tool over and drive home the four keys, using tool and ordinary hammer or press.

Hydraulic 2 - L509

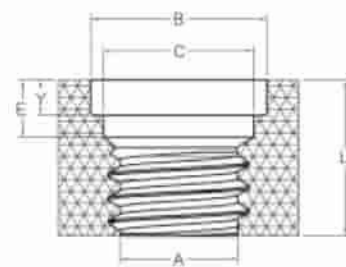
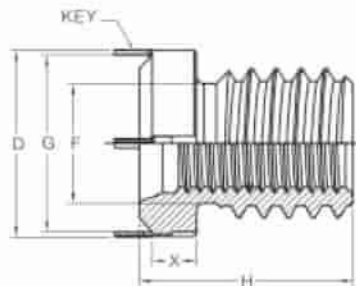
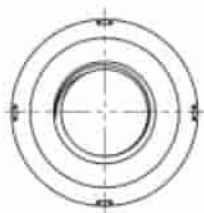
Features

- Hydraulic inserts, one piece unit complete with teflon seal.

特征

- 密封插销螺套，装配时配合密封面使用。

Technical Data



Drawing No.	Dimensions							
	Tubing O.D.	D Dia. ±.002	H ±.020	Internal Thread Class 3B	External Thread Class 3A	F Dia. ±.002	G Dia. ±.002	X Depth of Flange
L509001	1/8	.676	.658	5/16-24 UNJF	1/2-20 UNF	.399	.604	.210/.200
L509002	3/16	.739	.658	3/8-24 UNJF	9/16-18 UNF	.462	.667	.210/.200
L509003	1/4	.802	.667	7/16-20 UNJF	5/8-18 UNF	.524	.730	.210/.200
L509004	5/16	.864	.676	1/2-20 UNJF	3/4-16 UNF	.649	.792	.210/.200
L509005	3/8	.926	.685	9/16-18 UNJF	3/4-16 UNF	.649	.854	.210/.200
L509006	7/16	.989	.748	5/8-18 UNJF	13/16-16 UN	.711	.917	.210/.200
L509007	1/2	1.176	.805	3/4-16 UNJF	15/16-16 UN	.837	1.042	.330/.320
L509008	9/16	1.238	.840	13/16-16 UNJ	1-16 UN	.899	1.104	.330/.320
L509009	5/8	1.301	.880	7/8-14 UNJF	1-1/16-16 UN	.962	1.167	.330/.320
L509010	11/16	1.488	.900	1-12 UNJF	1-3/16-16 UN	1.087	1.354	.330/.320
L509011	3/4	1.551	.919	1-1/16-12 UNJ	1-1/4-16 UN	1.149	1.417	.330/.320
L509012	7/8	1.676	.942	1-3/8-16 UNJ	1-3/8-16 UN	1.274	1.542	.330/.320
L509013	1	1.801	.966	1-5/16-12 UNJ	1-1/2-16 UN	1.399	1.667	.330/.320

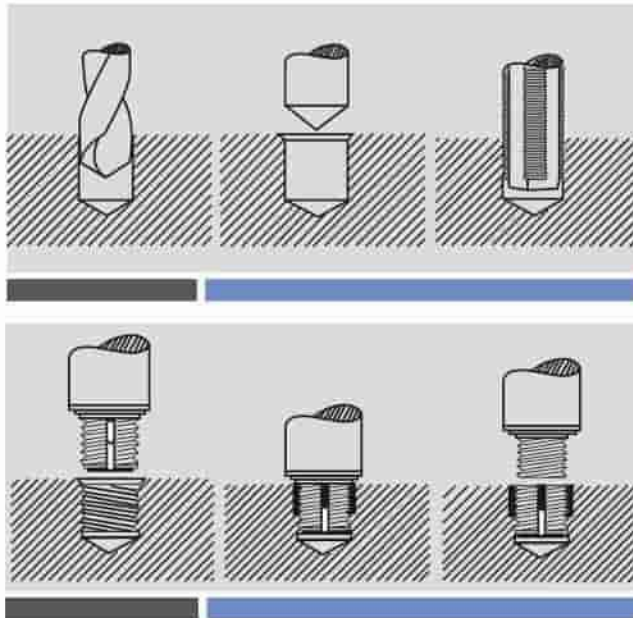
Technical Data

Drawing No.	Installation							Removal	
	A	B	Y	C	E	I	L	Drill	
	Dia. +.005 - .001	Dia. ± .001	Depth of C Bore	Dia. +.005 - .000	+ .015 - .000	Thread Class 3B	min.	Size	Depth
L509001	.453	.680	.205/.215	.562	.351	1/2-20 UNF	.72	5/8	1/8
L509002	.515	.743	.205/.215	.625	.351	9/16-18 UNF	.72	11/16	1/8
L509003	.578	.806	.205/.215	.687	.351	5/8-18 UNF	.73	3/4	1/8
L509004	.687	.868	.205/.215	.812	.351	3/4-16 UNF	.74	13/16	1/8
L509005	.687	.930	.205/.215	.812	.351	3/4-16 UNF	.75	7/8	1/8
L509006	.750	.993	.205/.215	.875	.351	13/16-16 UN	.81	15/16	1/8
L509007	.875	1.180	.335/.325	1.000	.470	15/16-16 UN	.87	1-1/16	3/16
L509008	.937	1.242	.335/.325	1.062	.470	1-16 UN	.90	1-1/8	3/16
L509009	1.000	1.305	.335/.325	1.125	.470	1-1/16-16 UN	.94	1-3/16	3/16
L509010	1.125	1.492	.335/.325	1.250	.470	1-3/16-16 UN	.96	1-3/8	3/16
L509011	1.188	1.555	.335/.325	1.312	.470	1-1/4-16 UN	.98	1-7/16	3/16
L509012	1.312	1.680	.335/.325	1.437	.470	1-3/8-16 UN	1.00	1-9/16	3/16
L509013	1.438	1.805	.335/.325	1.562	.470	1-1/2-16 UN	1.03	1-11/16	3/16

Other sizes, special designs and materials on request.

Installation comparison in hard materials

Time saved using self-broaching KEENSERTS inserts and studs has been estimated at upwards of 7 minutes per individual installation.



Self-broaching keenserts inserts and studs

1. Drill with a standard drill.
2. Countersink with a standard countersink.
3. Tap with a standard unified thread series tap.

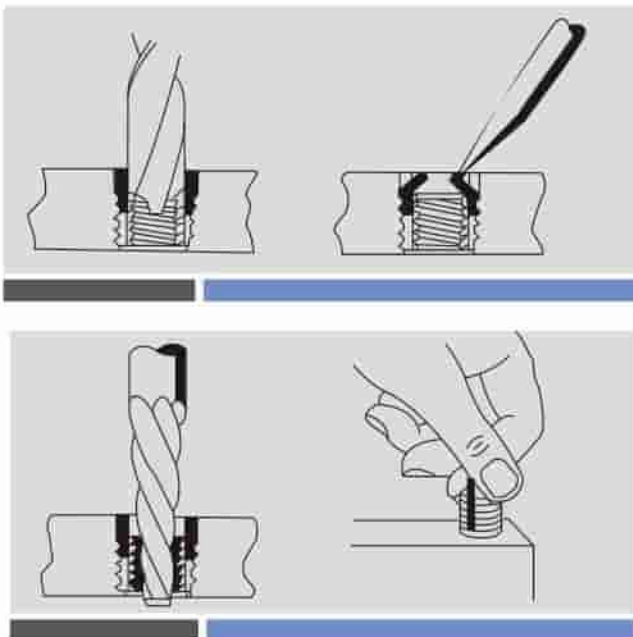
1. 钻出相对应的孔。
2. 打标准的沉头。
3. 攻相对应的螺纹。

4. Screw in insert or stud using tool.
5. Drive KEY.
6. Remove installation tool.

4. 选用安装工具进行安装。
5. 用合适的工具将护套固定键压入。
6. 取出安装工具。

Removal

If removal is necessary follow these simple steps.



1. Use standard drill to remove insert material between KEY.

2. Deflect KEY inward and break off.

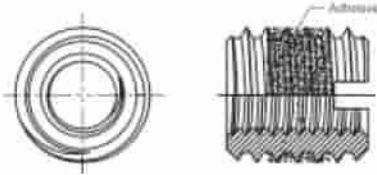
3. Remove insert.

4. An identical insert can now be installed in the original hole. No re-work of the hole will be necessary.

1. 将护套钻掉一部分。
2. 将固定键向内折弯。
3. 用“易卸工具”或类似工具将护套旋出。
4. 在拆卸的孔中可重新安装新的插销螺套。

Solid threaded inserts for metal...

Product features:



- Solid Threaded Inserts for Metal are ideal for repairing or reinforcing threaded holes in soft metals like aluminum, magnesium, and cast iron. All solid threaded inserts install with standard tools. No special taps or installation tools needed.
- External threads are standard size and pitch to permit the use of standard drills and taps. Solid threaded inserts can be installed with a screwdriver, bolt/jam nut (except IC series), or optional power drive tool.
- Solid threaded inserts for metal will not back out or vibrate loose. Immediately upon installation, the preapplied micro encapsulated adhesive begins to set and the new newly installed insert is fastener-ready in 3-5 minutes. The adhesive seals against liquids and gases to 6,000 psi when fully cured (72 hours).

Materials:

Carbon steel
303 Stainless steel
316 Stainless steel

Tolerances Thread:

ISO 2768-m

Product Advantages:

- Strong: screw machined out of solid steel for greater strength
- Easy to Install: simply drill, tap, and thread in like an ordinary fastener
- Standard OD Threads: permit the use of standard drills and taps
- Self-Locking: preapplied adhesive activates upon installation
- Vibration Resistant: adhesive secures the insert in place so it won't back out
- Seals against Liquids/Gases to pressures of 6,000 psi

Products Types:

- Stand wall - Carbon steel
- Thin wall - Carbon steel
- Extra heavy wall - Carbon steel
- Screw Locking - Carbon steel
- Automotive - Carbon steel
- Stainless steel types





Stand Wall - Carbon Steel

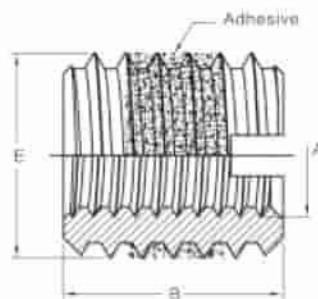
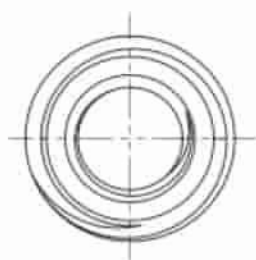
Features

- Self-Locking: preapplied adhesive activates upon installation.
- Vibration Resistant: adhesive secures the insert in place so it won't back out.
- Seals against Liquids/Gases to pressures of 6,000 psi.

特征

- 自锁：预涂的粘合剂有自锁功能。
- 防震：粘合剂具有防松功能。
- 可以承受6000Psi的压力。

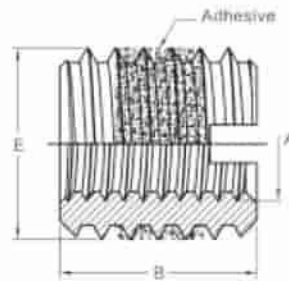
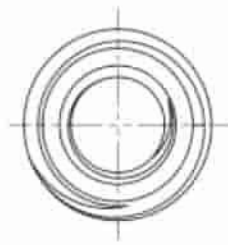
Technical Data



Coarse thread sizes

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L329-004	4-40	10-32	.250	5/32	10-32	9/32
L329-006	6-32	1/4-20	.280	7	1/4-20	11/32
L329-008	8-32	5/16-18	.290	F	5/16-18	7/16
L329-3	10-24	3/8-16	.406	5/16	3/8-16	15/32
L329-4	1/4-20	7/16-14	.437	23/64	7/16-14	1/2
L329-401	1/4-20	7/16-14	1.000	23/64	7/16-14	1-1/8
L329-5	5/16-18	1/2-13	.484	27/64	1/2-13	9/16
L329-501	5/16-18	1/2-13	1.000	27/64	1/2-13	1-1/8
L329-6	3/8-16	9/16-12	.515	31/64	9/16-12	19/32
L329-601	3/8-16	9/16-12	1.000	31/64	9/16-12	1-1/8
L329-7	7/16-14	5/8-11	.656	17/32	5/8-11	23/32
L329-8	1/2-13	3/4-10	.656	21/32	3/4-10	3/4
L329-801	1/2-13	3/4-10	1.000	21/32	3/4-10	1-1/8
L329-9	9/16-12	3/4-10	.656	21/32	3/4-10	3/4
L329-10	5/8-11	7/8-9	.687	49/64	7/8-9	13/16
L329-1018	5/8-11	7/8-9	1.125	49/64	7/8-9	1-1/4
L329-12	3/4-10	1-8	.781	7/8	1-8	7/8
L329-14	7/8-9	1-1/4-7	1.125	1-7/64	1-1/4-7	1-1/4
L329-16	1-8	1-3/8-12	1.250	1-9/32	1-3/8-12	1-3/8

Technical Data



Fine thread sizes

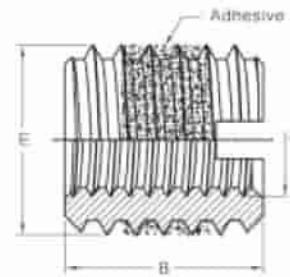
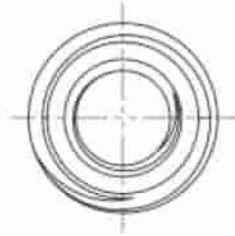
Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L329-332	10-32	3/8-16	.406	5/16	3/8-16	15/32
L329-428	1/4-28	7/16-14	.437	23/64	7/16-14	1/2
L329-524	5/16-24	1/2-13	.484	27/64	1/2-13	9/16
L329-624	3/8-24	9/16-12	.515	31/64	9/16-12	19/32
L329-720	7/16-20	5/8-11	.656	17/32	5/8-11	23/32
L329-820	1/2-20	3/4-10	.656	21/32	3/4-10	3/4
L329-918	9/16-18	3/4-10	.656	21/32	3/4-10	3/4
L329-10F	5/8-18	7/8-9	.687	49/64	7/8-9	13/16
L329-1216	3/4-16	1-8	.781	7/8	1-8	7/8
L329-1414	7/8-14	1-1/4-7	1.125	1-7/64	1-1/4-7	1-1/4
L329-1614	1-14	1-3/8-12	1.250	1-9/32	1-3/8-12	1-3/8

Metric thread sizes-metric internal/metric external

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L450-3	M3-0.5	M6-1.0	6.5mm	5.1mm	M6-1.0	7.8mm
L450-4	M4-0.7	M8-1.25	7.5mm	6.9mm	M8-1.25	9.0mm
L450-5	M5-0.8	M8-1.25	7.5mm	6.9mm	M8-1.25	9.0mm
L450-6	M6-1.0	M10-1.5	10.5mm	8.6mm	M10-1.5	12.0mm
L450-8	M8-1.25	M12-1.75	12.5mm	10.4mm	M12-1.75	14.5mm
L450-10	M10-1.5	M16-2.0	17.0mm	14.0mm	M16-2.0	19.0mm
L450-12	M12-1.75	M16-2.0	17.0mm	14.0mm	M16-2.0	19.0mm
L450-16	M16-2.0	M24-3.0	20.0mm	21.0mm	M24-3.0	24.0mm
L450-20	M20-2.5	M36-4.0	30.0mm	33.0mm	M36-4.0	35.0mm

Other sizes, special designs and materials on request.

Technical Data



Metric thread sizes-u.s. internal/metric external

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L550-006	6-32	M6-1.0	6.5mm	5.1mm	M6-1.0	7.8mm
L550-008	8-32	M8-1.25	7.5mm	6.9mm	M8-1.25	9.0mm
L550-1024	10-24	M8-1.25	7.5mm	6.9mm	M8-1.25	12.0mm
L550-1032	10-32	M8-1.25	7.5mm	6.9mm	M8-1.25	12.0mm
L550-1420	1/4-20	M10-1.5	10.5mm	8.6mm	M10-1.5	14.5mm
L550-5	5/16-18	M12-1.75	12.5mm	10.4mm	M12-1.75	14.5mm
L550-6	3/8-16	M16-2.0	17.0mm	14.0mm	M16-2.0	19.0mm
L550-8	1/2-13	M16-2.0	17.0mm	14.0mm	M16-2.0	19.0mm

Metric thread sizes-metric internal/U.S. external

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L650-6	M6-1.0	3/8-16	.406	5/16	3/8-16	15/32
L650-8	M8-1.25	1/2-13	.484	27/64	1/2-13	9/16
L650-10	M10-1.50	9/16-12	.515	31/64	9/16-12	19/32
L650-10F	M10-1.25	9/16-12	.515	31/64	9/16-12	19/32
L650-12	M12-1.75	3/4-10	.656	21/32	3/4-10	3/4
L650-14	M14-2.0	7/8-9	.687	49/64	7/8-9	13/16
L650-16	M16-2.0	1-8	.781	7/8	1-8	7-8

Other sizes, special designs and materials on request.

Thin Wall - Carbon Steel



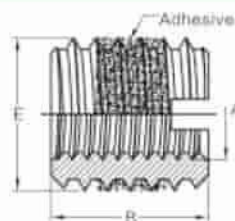
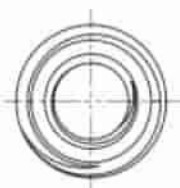
Features

- Self-locking: preapplied adhesive activates upon installation.
- Vibration resistant: adhesive secures the insert in place so it won't back out.
- Seals against liquids/gases to pressures of 6,000 psi.

特征

- 自锁：预涂的粘合剂有自锁功能。
- 防震：粘合剂具有防松功能。
- 可以承受6000Psi的压力。

Technical Data



Thin wall- coarse thread sizes

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L319-3	10-24	5/16-18	.312	I	5/16-18	.375
L319-4	1/4-20	3/8-16	.375	Q	3/8-16	.437
L319-5	5/16-18	7/16-14	.437	X	7/16-14	.500
L319-6	3/8-16	1/2-13	.500	29/64	1/2-13	.560
L319-7	7/16-14	9/16-12	.560	33/64	9/16-12	.620
L319-8	1/2-13	5/8-11	.620	37/64	5/8-11	.680

Thin wall- fine thread sizes

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L319-332	10-32	5/16-18	.312	I	5/16-18	.375
L319-428	1/4-28	3/8-16	.375	Q	3/8-16	.437
L319-524	5/16-24	7/16-14	.437	X	7/16-14	.500
L319-624	3/8-24	1/2-13	.500	29/64	1/2-13	.560
L319-720	7/16-20	9/16-12	.560	33/64	9/16-12	.620
L319-820	1/2-20	5/8-11	.620	37/64	5/8-11	.680

Thin wall- metric thread sizes

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L319-M4	M4-0.7	5/16-18	.312	I	5/16-18	.375
L319-M5	M5-0.8	5/16-18	.312	I	5/16-18	.375
L319-M6	M6-1.0	3/8-16	.375	Q	3/8-16	.437
L319-M8	M8-1.25	7/16-14	.437	X	7/16-14	.500
L319-M10	M10-1.5	1/2-13	.500	29/64	1/2-13	.560
M319-M12	M12-1.75	5/8-11	.620	37/64	5/8-11	.680

Other sizes, special designs and materials on request.



Extra Heavy Wall - Carbon Steel

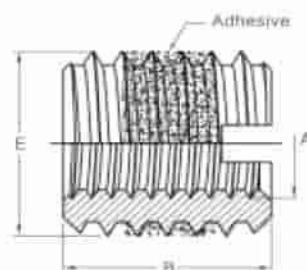
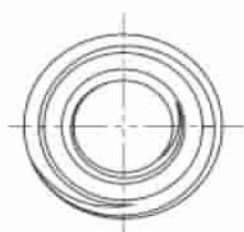
Features

- Self-locking: preapplied adhesive activates upon installation.
- Vibration resistant: adhesive secures the insert in place so it won't back out.
- Seals against liquids/gases to pressures of 6,000 psi.

特征

- 自锁：预涂的粘合剂有自锁功能。
- 防震：粘合剂具有防松功能。
- 可以承受6000Psi的压力。

Technical Data



Extra Heavy Wall- coarse thread size

Drawing No.	A Internal Thread	E External Thread	B Length In	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L335-4	1/4-20	1/2-13	.484	27/64	1/2-13	9/16
L335-5	5/16-18	9/16-12	.515	31/64	9/16-12	19/32
L335-6	3/8-16	5/8-11	.656	17/32	5/8-11	23/32
L335-8	1/2-13	7/8-9	.687	49/64	7/8-9	13/16
L335-10	5/8-11	1-8	.781	7/8	1-8	7/8

Other sizes, special designs and materials on request.



Screw Locking - Carbon Steel

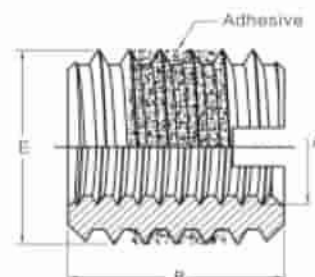
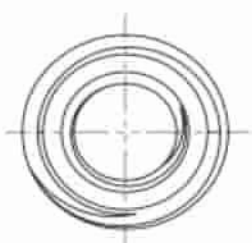
Features

- Self-locking: preapplied adhesive activates upon installation. Vibration resistant: adhesive secures the insert in place so it won't back out.
- Seals against liquids/gases to pressures of 6,000 psi.

特征

- 自锁：预涂的粘合剂有自锁功能。
- 防震：粘合剂具有防松功能。
- 可以承受6000Psi的压力。

Technical Data



Screw-Locking Inserts

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L329-3-IC	10-24	3/8-16	.406	5/16	3/8-16	15/32
L329-332-IC	10-32	3/8-16	.406	5/16	3/8-16	15/32
L329-4-IC	1/4-20	7/16-14	.437	23/64	7/16-14	1/2
L329-5-IC	5/16-18	1/2-13	.484	27/64	1/2-13	9/16
L329-6-IC	3/8-16	9/16-12	.515	31/64	9/16-12	19/32
L329-8-IC	1/2-13	3/4-10	.656	21/32	3/4-10	3/4

These are our standard heavy wall inserts with thread locking adhesive applied to the internal threads providing a permanent screw-locking feature. The adhesive activates when a fastener is threaded into the insert. Install these inserts with a screwdriver or drive tool, allowing 3-5 minutes for the external thread adhesive to set-up prior to threading in the fastener. A bolt can be used for installation as long as you do not intend to remove it. Removing the bolt after installation destroys adhesive effectiveness.

Other sizes, special designs and materials on request.



Automotive - Carbon Steel

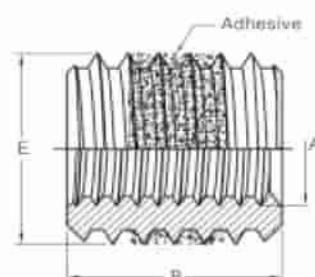
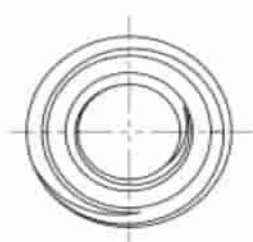
Features

- Self-locking: preapplied adhesive activates upon installation.
- Vibration resistant: adhesive secures the insert in place so it won't back out.
- Seals against liquids/gases to pressures of 6,000 psi.

特征

- 自锁：预涂的粘合剂有自锁功能。
- 防震：粘合剂具有防松功能。
- 可以承受6000Psi的压力。

Technical Data



Automotive Designs

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Tap Size
SPARK PLUG SIZES					
L329-1008	M10-1.0	9/16-18	.453	33/64	9/16-18
L329-1208	M12-1.25	5/8-18	.453	37/64	5/8-18
L329-1212	M12-1.25	5/8-18	.703	37/64	5/8-18
L750-14	M14-1.25	M18-1.5	11.5mm	16.5mm	M18-1.5
L329-1406	M14-1.25	3/4-16	.328	11/16	3/4-16
L329-1408	M14-1.25	3/4-16	.453	11/16	3/4-16
L329-1412	M14-1.25	3/4-16	.703	11/16	3/4-16
L329-1808	M18-1.5	1-12	.453	59/64	1-12
VW CASE SAVERS					
L330-10(Open)	M10-1.50	9/16-12	1.000	31/64	9/16-12
L330-11(Close)	M10-1.50	9/16-12	1.000	31/64	9/16-12

Other sizes, special designs and materials on request.



Stainless steel thread insert

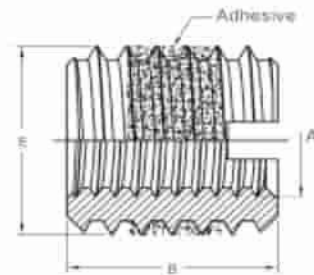
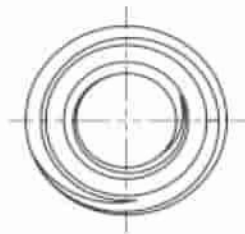
Features

- Self-Locking: preapplied adhesive activates upon installation.
- Vibration resistant: adhesive secures the insert in place so it won't back out.
- Seals against liquids/gases to pressures of 6,000 psi.

特征

- 自锁：预涂的粘合剂有自锁功能。
- 防震：粘合剂具有防松功能。
- 可以承受6000Psi的压力。

Technical Data



coarse thread sizes in 303 stainless steel

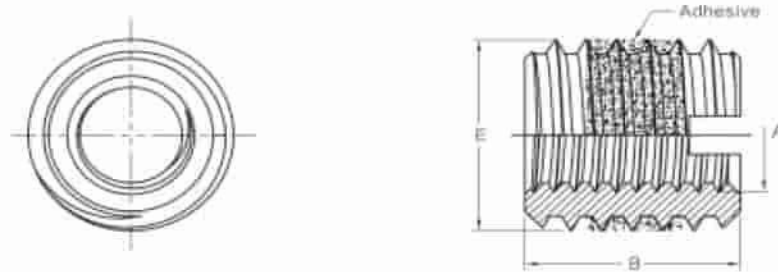
Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap/Drill Size	Thread Tap	T Min. Borehole Depth
L303-004	4-40	10-32	.250	5/32	10-32	9/32
L303-006	6-32	1/4-20	.280	7	1/4-20	11/32
L303-008	8-32	5/16-18	.290	F	5/16-18	7/16
L303-3	10-24	3/8-16	.406	5/16	3/8-16	15/32
L303-4	1/4-20	7/16-14	.437	23/64	7/16-14	1/2
L303-5	5/16-18	1/2-13	.484	27/64	1/2-13	9/16
L303-6	3/8-16	9/16-12	.515	31/64	9/16-12	19/32
L303-7	7/16-14	5/8-11	.656	17/32	5/8-11	23/32
L303-8	1/2-13	3/4-10	.656	21/32	3/4-10	3/4
L303-10	5/8-11	7/8-9	.687	49/64	7/8-9	13/16
L303-12	3/4-10	1-8	.781	7/8	1-8	7/8

Fine thread sizes in 303 stainless steel

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap/Drill Size	Thread Tap	T Min. Borehole Depth
L303-332	10-32	3/8-16	.406	5/16	3/8-16	15/32
L303-428	1/4-28	7/16-14	.437	23/64	7/16-14	1/2
L303-524	5/16-24	1/2-13	.484	27/64	1/2-13	9/16
L303-624	3/8-24	9/16-12	.515	31/64	9/16-12	19/32
L303-720	7/16-20	5/8-11	.656	17/32	5/8-11	23/32
L303-820	1/2-20	3/4-10	.656	21/32	3/4-10	3/4

Other sizes, special designs and materials on request.

Technical Data



Metric thread sizes in 303 stainless steel-metric internal/metric external

Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L453-3	M3-0.5	M6-1.0	6.5mm	5.1mm	M6-1.0	7.8mm
L453-4	M4-0.7	M8-1.25	7.5mm	6.9mm	M8-1.25	9.0mm
L453-5	M5-0.8	M8-1.25	7.5mm	6.9mm	M8-1.25	9.0mm
L453-6	M6-1.0	M10-1.5	10.5mm	8.6mm	M10-1.5	12.0mm
L453-8	M8-1.25	M12-1.75	12.5mm	10.4mm	M12-1.75	14.5mm
L453-10	M10-1.5	M16-2.0	17.0mm	14.0mm	M16-2.0	19.0mm
L453-12	M12-1.75	M16-2.0	17.0mm	14.0mm	M16-2.0	19.0mm
L453-16	M16-2.0	M24-3.0	20.0mm	21.0mm	M24-3.0	24.0mm

Metric thread sizes in 303 stainless steel-metric internal/U.S. external

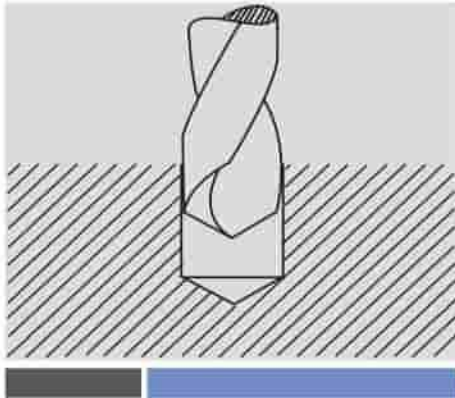
Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L653-6	M6-1.0	3/8-16	.406	5/16	3/8-16	15/32
L653-8	M8-1.25	1/2-13	.484	27/64	1/2-13	9/16
L653-10	M10-1.50	9/16-12	.515	31/64	9/16-12	19/32
L653-10F	M10-1.25	9/16-12	.515	31/64	9/16-12	19/32
L653-12	M12-1.75	3/4-10	.656	21/32	3/4-10	3/4
L653-14	M14-2.0	7/8-9	.687	49/64	7/8-9	13/16
L653-16	M16-2.0	1-8	.781	7/8	1-8	7/8

Coarse/Fine thread sizes in 316 stainless steel

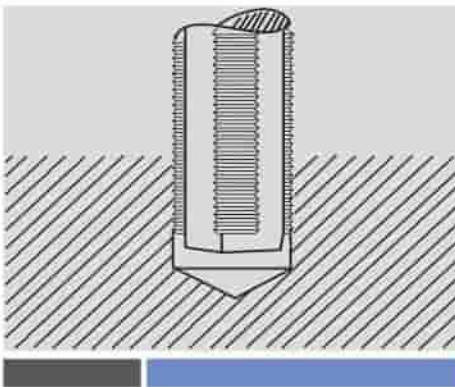
Drawing No.	A Internal Thread	E External Thread	B Length In.	Tap Drill Size	Thread Tap	T Min. Borehole Depth
L316-008	8-32	5/16-18	.290	F	5/16-18	7/16
L316-3	10-24	3/8-16	.406	5/16	3/8-16	15/32
L316-332	10-32	3/8-16	.406	5/16	3/8-16	15/32
L316-4	1/4-20	7/16-14	.437	23/64	7/16-14	1.125
L316-5	5/16-18	1/2-13	.484	27/64	1/2-13	1.125
L316-6	3/8-16	9/16-12	.515	31/64	9/16-12	1.125

Other sizes, special designs and materials on request.

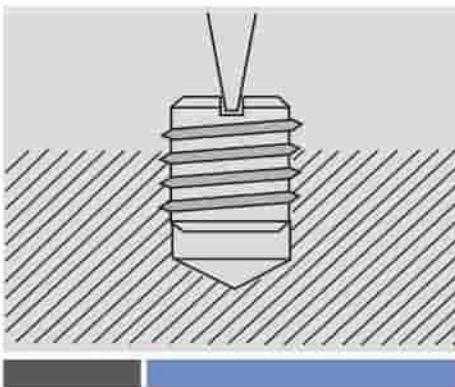
Unlike other inserts, which require a special tap and installation tool, solid threaded inserts for metal are installed using standard tools. Simply drill the appropriately sized hole with a standard drill... tap the hole with a standard tap... and then turn in the solid threaded inserts for metal like an ordinary fastener with a screwdriver, bolt and jam nut, or an solid threaded inserts for metal drive tool.



1. Drill hole with standard drill.
钻出相对应的孔。



2. Tap hole with standard hole.
攻相对应的螺纹。



3. Thread into place with screwdriver, bolt/jam nut, or optional drive tool.
用合适的工具将螺套旋入。

塑胶专用螺母 Thread Inserts for Plastic Parts



螺套系列 Threaded Inserts



面板紧固件 Fasteners for sheet Metal



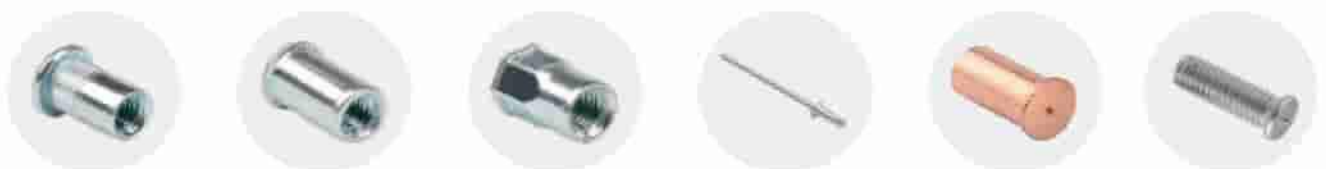
PCB端子 PCB Terminals



球头柱塞系列 Plungers



拉铆螺母和铆焊钉 Rivet nuts/Rivets/Welding Fasteners



车、铣、冲压类 CNC Machining milling Stamping



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地址：中国广东省深圳市龙华街道昌永路和平工业园金星大厦13C

Jinxing Building 13C, Heping Industrial Park, Changyong Road,
Longhua District, Shenzhen City, Guangdong Province, China.

Tel: +86-755-2900 2800

E-mail: sales@in-sail.com

Fax: +86-755-2900 2700

Website: <http://www.in-sail.com>

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