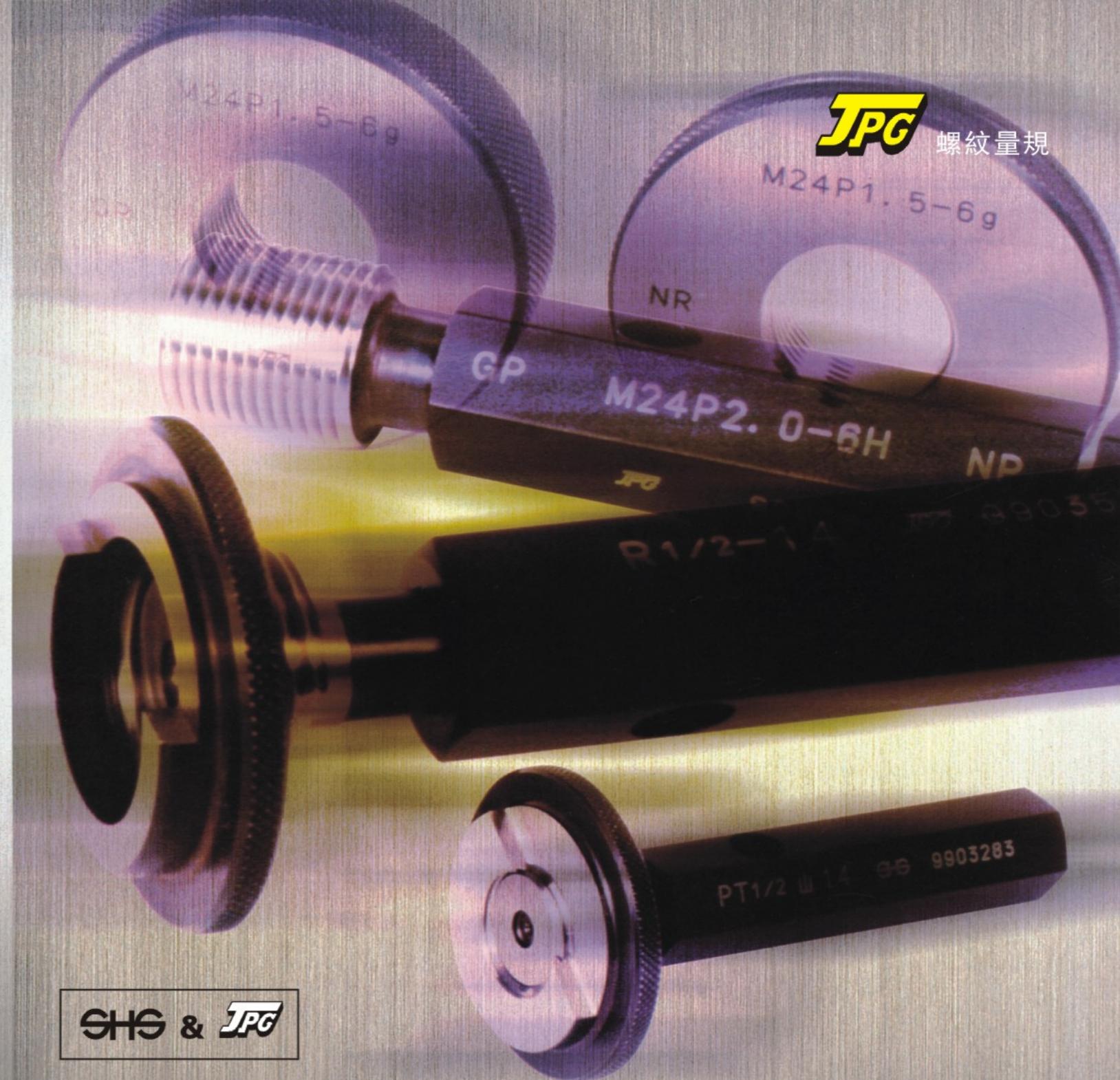




螺紋量規



SHS & JPG

JAPAN PRECISION GAGES

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SOKUHANSHA.CO.LTD

corporate guide & catalog



日本测范社----简介

在快速发展的高度信息社会的背景之下，市场需求也朝着多样化，复杂化发展。

以机电一体化，人工智能等为代表的技术革新正在进行，在保证各种领域的产品之间的互换性，且强化其合理性，量规起着不可取代的社会作用。

日本测范社自创业以来，作为专业的量规制造公司，以精密加工技术为基础，一直用心为以机械工业为主的各行各业的发展贡献着绵薄之力。

从毫米到微米，再到纳米，满足对精密度的不断加深！

测范社公司在精密测定仪器这方面，力至于针对客户的不同需求制作相应的产品！今后将继续担当这一重要使命，不断的努力，为产业经济的进一步发展作出应有的贡献！

公司概要

公司名称

测范社股份有限公司

SOKUHANSHA.CO.LTD

创 业 1961年2月1日

所在地 东京都大田区东六乡3-19-3

TEL 03-3732-0673

FAX 03-3736-5326

设 立 1961年12月2日

注册资本 1500万日元

法人代表 董事长 长谷部 明

主要产品 螺纹塞规，极限塞规，光面塞规，各种量规以及精密部件的设计、开发以及制造，特殊治具的设计，开发，制造及一系列的服务。

业务采往银行：芝信用银行 梅屋敷支行

东日本银行 蒲田支行

三井住友银行 蒲田西支行

历 史

1961年2月在东京都大田区东六乡创建测范社

1961年12月 为了事业的发展，更改为测范社有限公司和法人代表组织。注册资金50万日元

1982年10月 加入日本精密测定机器工业协会

1988年8月 测范社变更为股份有限公司，注册资金增至1000万日元

1991年8月 新的公司与工厂顺利建成

1992年9月 注册资金增至1500万日元

2004年3月 取得ISO9001国际质量品质认证

2007年3月 更新了ISO9001国际质量品质认证

ISO9000系列

ISO 9000 Series

ISO是什么? What does ISO stand for?

是制定国际规格的国际标准化机构。经过ISO决定的规格在国际上是通用的。

The International Organization for Standardization (ISO) is a worldwide federation of national standards bodies.

ISO9000系列是什么? What is ISO 9000 Series?

于1987年制定的关于品质管理，品质保证等一系列国际品质标准，每4年修订一次。

The standard intended for quality management system assessment and registration is ISO 9000

It was published by issue of ISO management system in March, 1987, and it is revised every four years.

和JISZ9000系列的关系是什么? What is the relationship with JISZ 9900?

将ISO9001加以翻译于1991年更改为JIS

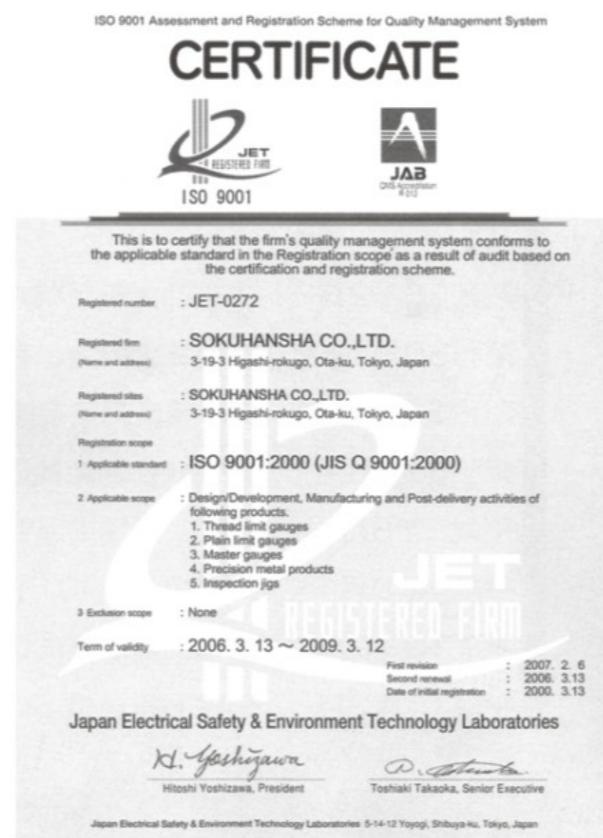
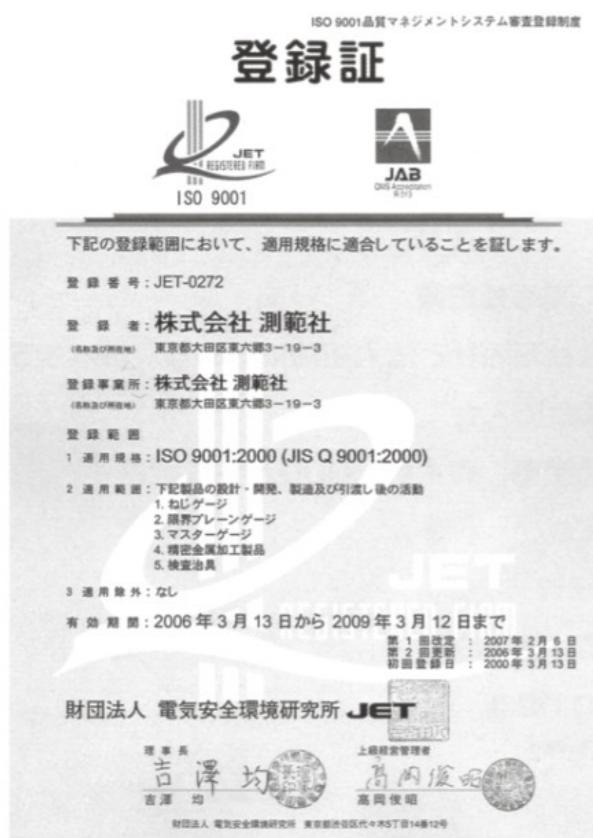
JIS=9001=ISO9001

The ISO 9000 is renamed to JIS 9900 in 1991 by translating.

JISZ 9901=ISO 9001

我公司是取得国际质量认证ISO9001的厂家

SOKUHANSHA CO.,LTD is a National Quality Management Systems registrar providing a recognized certification to the ISO9001.



给客户提供基于ISO9000标准的售后服务

We are supporting Users'ISO 9000 Series

量规的校正 The proofreading of Gauge |

从螺纹量规到界限量规等的校正。

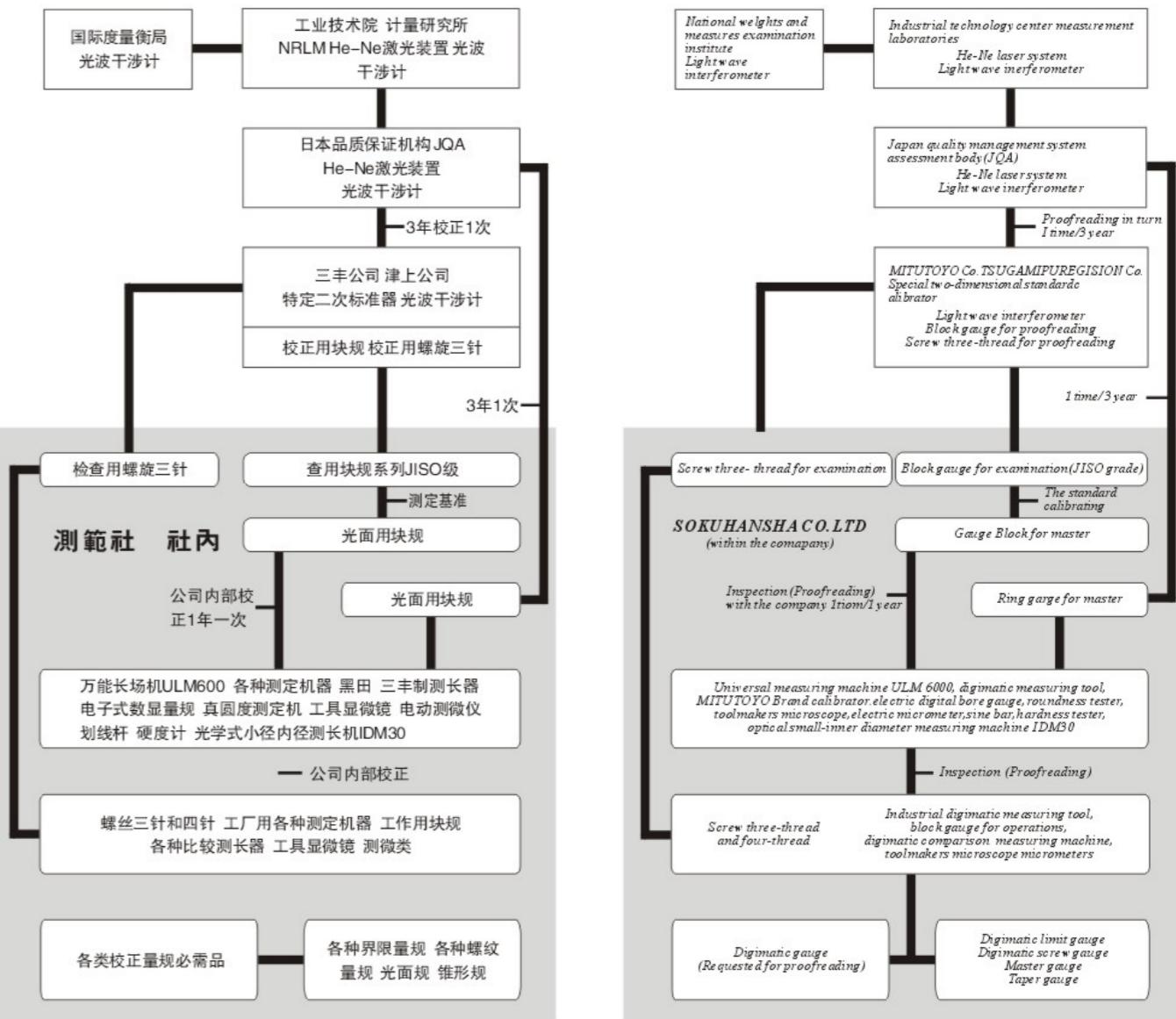
当然也出具校正证明书。

其他厂家的量规也给予检查与校正，具体事项请与本公司营业部或代理店联系。

We are proofreading many kinds of gauges from a screw Thread Gauge to a Limit ones. We also have issued the certificates for each proofreading.

We have examined the other companies' gauges with the process of proofreading, so please feel free to contact us if you have any questions about it.

The organization of Traceability



极限螺纹量规 ISO方式 JISB0251 · 0252

Limit thread gauge of gauging system for ISO class



平行螺纹量规量一般的方式是极限式。利用量规的通、止规管理产品螺纹的极限，保证精确度。极限式量规大致可以分为ISO等级测量方式和以前的JIS等级测量方式。以前的JIS测量方式是在量规的止端有检查用和加工用的区别。ISO测量方式则没有这样的区别，它完全被简单化了。测量外观用的卡规也是一样的。具体使用方法为界限螺纹量规的通可以轻松穿过，止规的螺纹拧进不到2圈的话，这样测量等级则是合格的。

In the thread gauges system, the limit type is most common. Thread of workpiece is ensured by controlling the GO and NOT GO limit. The types of limit thread gauges systems are broadly divided into ISO class and conventional JIS class. There were two different types of conventional JIS gauges, one for inspection and one for production use. The ISO system is simpler and does not have two types.

表示方法 Example



螺纹用的主要界限量规之使用方法 Major gauges for the threads of workpieces

● ISO等级的美标螺纹，管用平行螺纹用的量规都适用。

Gauging system for ISO class Metric, Parallel pipe(G)

● GP,GR等用手拧进螺纹，并轻松的穿过。

Screw this gauge in a worked thread by hand smoothly. GP,GP must go through over the whole length of thread.

● NP,NR等用手拧进螺纹，螺纹拧进最多不的超过2圈。

Screw this gauge into a worked thread smoothly by hand NP,NR shall not be screwed in it more than two revolutions from either sides.

● GW,NW等用手拧进的同时，螺纹拧进最多不的超过一圈。

GR, NR shall not be screwed in more than one revolution from either sides when screwing this check plug smoothly.

■ 极限螺纹规用表示记号

被查产品	被查处	螺纹用界限量规			
		名 称	型 号	名 称	型 号
外螺纹	中 径	螺纹环规通规	GR	螺纹环规通规用点检赛规通规	GRGF
				螺纹环规通规用点检赛规止规	GRNF
				螺纹环规通规用点检磨损赛规	GW
	中 径	螺纹环规止规	NR	螺纹环规止规用点检赛规通规	NRGF
				螺纹环规止规用点检赛规止规	NRNF
				螺纹环规止规用点检磨损赛规	NW
内螺纹	大 径	外形用环规	PR	—	—
		外形用夹钳量规	PC	—	—
	中 径	螺纹塞规通规	GP	—	—
		螺纹塞规止规	NP	—	—
	小 径	小径用螺纹塞规	PP	—	—

极限螺纹量规 JISB0251 · 0252 (付本)

Limit thread gauge of gauging system for JIS class



极限量规是被决定着所要测定的螺纹等级和相同量规的等级。该量规是通过使用通止两端有尺寸差异的螺纹，来检查螺纹部件预先所规定的尺寸精度的最大限度及最小限度，所以被叫做极限量规。使用方法为：极限量规的通规可以轻松穿过，止规拧进最多不能超过2圈，若如此检查结果判定是合格的。我公司，除了大量生产JIS规格的界限螺纹量规之外，其他所有规格的螺纹量规也设计生产。

有库存

表示方法 Example



螺纹用的主要界限量规之使用方法 Major gauges for the threads of workpieces

● 以前的JIS测量方式用的量规：尺寸螺纹，(1-3纹)统一螺纹，平行管螺纹量规都适用。

Metric(class 1,2,3) Unified, Thread, Parallel Pipe(PF)

● GP,GR可以轻松的穿过。

Screw this gauge in a worked thread by hand smoothly. GP,GP must go through over the whole length of thread.

● WP,WR拧进最多不超过2圈以上

● IP,IR拧进最多不超过2圈以上

Screw this gauge into a worked thread smoothly by hand, WP,WR,IP,IR,shall not be screwed in more than two revolutions included two revolutions,from either sides.

● GW不能穿过

GR shall not go through from either side when screwing this check plug by hand smoothly.

● IW,WW不能穿过(我公司自行规定的)

IW,WW shall not go through from either side when screwing this check plug by hand smoothly.

■ 螺纹用极限量规表示记号

被查产品	被查处	螺纹用界限量规			
		名 称	型 号	名 称	型 号
外螺纹	中 径	螺纹环规通规	GR	通端是咬合点检螺纹塞规	GF
				磨耗点检查塞规通规	GW
				止方工作用咬合点检螺纹塞规	WF
	大 径	工作用螺纹环规止规	WR	止方检查用咬台点检螺纹塞规	IF
				工作用极限夹钳量规	—
				检查用极限夹钳量规	—
内螺纹	中 径	螺纹环规通规(工作用 检查用共用)	GP	—	—
				—	—
				—	—
	小 径	工作用螺纹塞规止规	WP	—	—
				—	—
				—	—

管用平行极限螺纹量规(G) ISO方式 JIS, B0254,

Limit thread gauge for parallel pipe threads (G) ISO class



该产品是在导入ISO规格之后按照JIS标准所生产，用于检查不要求密封性的机械连接为主要目的的螺纹。和以往的管用平行螺纹量规的相差点如下：体使用方法为界限螺纹量规的通规可以轻松穿过，止规的螺纹拧进不到2圈的话，这样测量等级则是合格的。

Pipe with parallel thread coming under the ISO standard, where the main purpose is liquids but a tight mechanical connection is not required, is inspected using a parallel limit gauge(G). This includes such items as pipe connections, plumbing parts and equipment to handle liquids.

(1) 等级的有无

- 内螺纹用的螺纹量规等级是没有的
- 外螺纹用的螺纹量规分为A级和B级，只有GR是A级B级共用的。

Tolerance class on thread plug gauges is unspecified.

However there are two classes(A and B) for thread ring gauges. The GR(GO) is commonly used for the A and B classes.

(2) 通端和止端没有了检查用和加工用的区别

GO and NOT GO of the ISO gauge system is made with same dimentions for both inspection and working.

(3) 判定螺纹环规是否合格

GP, NR等，根据通规或止规两端的插头(GRGF, GRNF, NRGF, NRNF)来检查

For the ISO class gauge system, the thread gauge for check fitting of the thread eing gauge is the GO and NOT GO limit type.

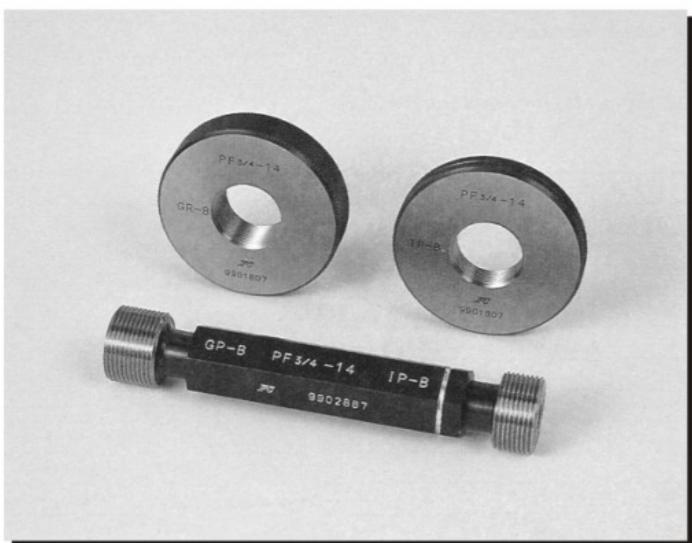
(4) 磨损点检查的插头

NR用的磨损点检塞规(NW)是新导入的

New barjone wear check plug for NOT GO thread ring gauge.

平行管用极限量规(PF) JIS, B0254(付属书)

Limit thread gauge for parallel pipe threads (PF) conventional JIS class



该量规用于管，管用零部件，液体器械的连接，且不需要密封性的以机械的结合为主要目的螺纹检查。这种量规被检查的螺纹的等级有相应的A级和B级两个等级，通规的A级B级的尺寸是共通的，止规分为检查用和加工用。

The ISO standard has no specification for this item. Parallel thread (PF) are used mainly for plumbing connections, that is, equipment involving fluids.

There are two classes,A and B.

there are also two types of gauges. One is for inspection and the other is for metal working. The GO gauges(both plug and ring) are commonly used for both A and B classes.

ISO测量方式的特长和以前的JIS测量方式的不同

Difference between conventional JIS gauges and ISO-based JIS gauges

■ 通端止端没有检查用和加工用的区别。

以前的JIS测量方式在量规的止端有检查用和加工用的区别，ISO测量方式则没有，凡是在规格要求之内无论是何种形式的螺纹(在允许磨损的范围之内)，显示符合的话该产品则为合格。

GO and NOT GO of the ISO gauge system is made with same dimentions for both inspection and working.

■ 作为外螺纹的外用量规，满足了以前的卡规和新的环规的功能。

The ISO system adds a ring gauge for male thread(outside diameter)inspecion.

■ 判定螺纹环规的合格与否

以前的JIS测量方式的螺纹环规，嵌合点检量规螺纹被嵌合不能轻易松动则判定产品为合格。ISO测量方式的螺纹环规是根据通止两端的点检用塞规通规来检查的。通规的点检用塞规通规(GRGF)可以轻松穿过，止规的点检用塞规(GRNF)拧进不超过一圈就被卡住的话就判定为合格的。止规的点检用塞规(GRGF, NRNF)的判断方法同通规。

The inspection method for ring thread gauges is different from the conventional JIS systems.

Under the conventional system, acceptance is given when the inspection gauge fits perfectly.

In the ISO-based system, acceptance is given when the GO inspection plug(GRGF) passes through the GO thread ring gauge (GR) and the stop inspection plug(GRNF) cannot be turned more than one and a halfturns from either side of the screw.

Inspection plugs(NRGF)(NRNF)are used similarly for NOT GO ring gauges (NR).

■ 磨损点检用塞规：

磨损点检用塞规的止端是考虑到量规寿命的增大和螺纹产品合格率的减少这一情况而适当规定的，它没有被JIS化而是新的ISO规定的产品被导入JIS系统中。

The conventional JIS gauge inspection specifies the use of a worn inspection plug to check GO thread ring gauges only. The ISO-based system specifies its use for NOT GO thread ring gauges as well.

由咬合精度区别而来的ISO等级和JIS等级的比较

■ 米制粗牙螺纹

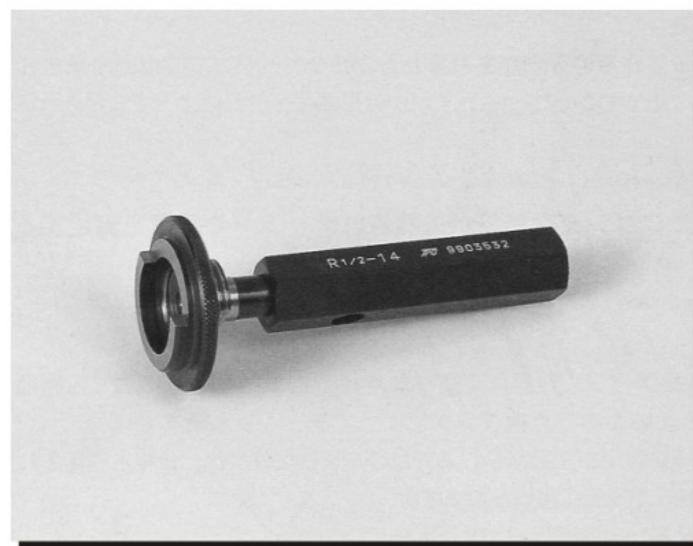
咬合区分	内外螺纹	使用范围	等级选择优先顺序	
			I (ISO等级) 等级	II (JIS等级) 等级
精	内螺纹	M1以上	4H(M1.4以下) 5H(M1.6以上)	1级
	外螺纹	M1以上	4h	
中	内螺纹	M1以上	5H(M1.4以下) 6H (M1.6以上)	2级
	外螺纹	M1以上	6h(M1.4以下) 6g(M1.6以上)	
粗	内螺纹	M3以上	7H	3级
	外螺纹	M5以上	8g	

■ 米制细牙螺纹

咬合区分	内外螺纹	使用范围	等级选择优先顺序	
			I (ISO等级) 等级	II (JIS等级) 等级
精	内螺纹	M1×0.2以上	4H(M1.8×0.2以下) 5H(M2×0.25以上)	1级
	外螺纹	M1×0.2以上	4h	
中	内螺纹	M2.5×0.35以上	6H	2级
	外螺纹	M1×0.2以上	6h(M1.4×0.2以下) 6g(M1.6×0.2以上)	
粗	内螺纹	M4×0.5以上	7H	3级
	外螺纹	M8×1.0以上	8g	

圆锥管螺纹量规(R) ISO方式 JIS B0253

Gauges for taper pipe threads(R) ISO class



该产品是在导入ISO规格之后按照JIS标准所生产的，用于检查严密性高黏合为主要目的的螺纹的检查使用(R,RC,RP)。R和PT的产品螺纹是同一尺寸的，但测量方式是不同的。管或者管接头处的末端在量规的切口长度的范围内的话就是合格的。以前的管用锥型螺纹量规PT的不同之处如下：

Taper threads specified by the ISO standard are used to achieve tightness against fluids at connecting thread parts. Taper thread gauges are used for inspection of this type of thread.

Thread of workpieces R and PT are similar in dimensions but the gauging systems are different. It passes if the pipe or the end of the pipefittings is within the range of the length of the notch of the gauge. Major differences listed below.

(1) 锥螺纹环规的磨损极限：锥螺纹环规的磨损极限是被规定的。

For R thread gauges, the wear limit is specified.

(2) 点检塞规：磨损极限是锥螺纹塞规的点检塞规来检查的。

For the R thread gauges, the thread ring gauges and thread and plug gauge are independent and for the thread ring gauge, the cpg (CP) is used.

■螺纹及量规的种类标准

被检查量规	螺纹用量规种类	量规检测用量规
锥形管外螺纹(R)	锥形螺纹环规(R)	锥形螺纹环规(R) 锥形螺纹环规用检测量规(CP)
锥形管内螺纹		
锥形管内螺纹(RP)	锥形螺纹塞规(RC)	

■量规的使用方法

(1) 成品螺纹的检查

方式	被检查的螺纹制品		量规的使用方法(全部用手拧进)
	记号	种类	
I	R	锥形管外螺纹	锥形螺纹环规的最小面于最大凹槽之间有管端就合格
S	RC	锥形管内螺纹	锥形螺纹塞规的最小面于最大凹槽之间有管端就合格
O	RP	管用平行螺帽量规	管用平行螺帽量规

管用平行螺帽是与管用螺丝配套使用的，与管用平行螺帽G及PF的尺寸容许差有所不同

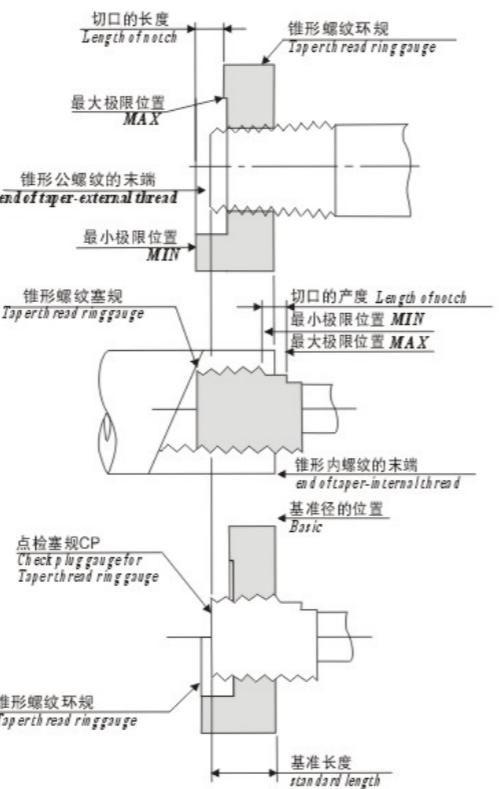
(2) 锥形螺纹环规的检查

被检查的量规	被用于检查的量规的使用方法(全部用手拧进)
型号	种类
R	锥形螺纹环规

CP的基本凹槽和锥形螺纹环规的最大面是否有偏差的测定，在规定范围内便合格

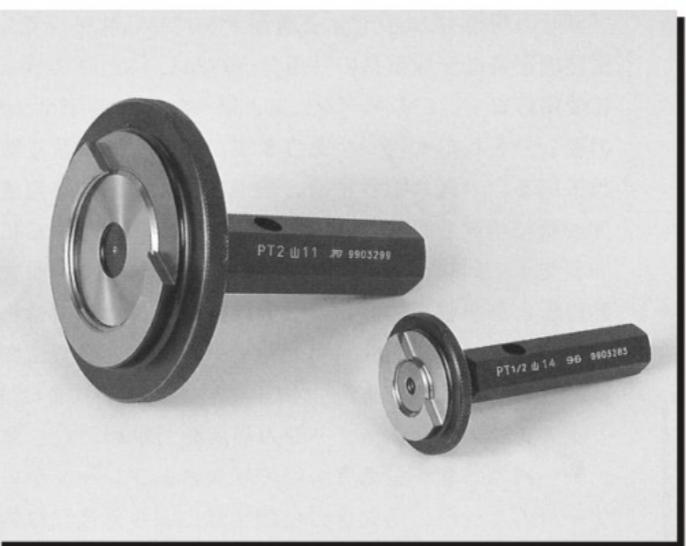
■管和量规的关系图

Related positions of pipe and gauges



圆锥管螺纹量规(PT) JIS B0253(付属书)

Gauges for taper pipe threads(PT) conventional JIS class

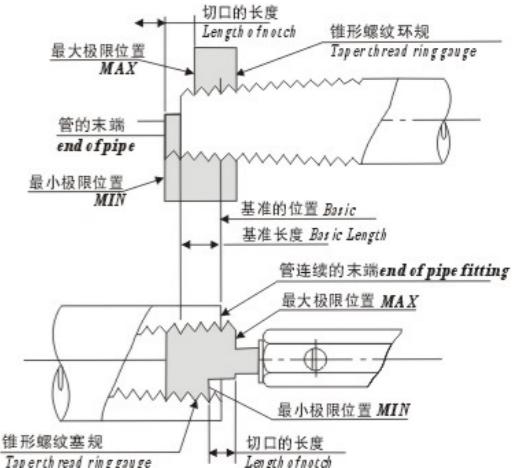


该产品用于检查管，管用零部件，液体机器等的链接且要求高密封性的黏合为主要目的的螺纹所用。

The ISO 7/1 standard makes no specification although there is a JIS specification (document attached). This type of thread is for joining in plumbing and equipment handling fluids, etc. Where tight connections are required. Taper thread gauges for pipe thread (PT) are used for inspection.

■管和量规的关系图

Related positions of pipe and gauges



■螺纹与量规的种类与标记

被检查产品	量规种类	备注
平行管内螺纹(PS)	锥形螺纹环规(PT)	
锥形管内螺纹(PT)	锥形螺纹塞规(PT)	锥形螺纹塞规和环规可以组成一套

■量规的使用方法

(1) 成品螺纹的检查

方式	被检查的产品		量规的使用方法：均是手动拧入
	记号	种类	
J	PT	锥形管外螺纹	锥形螺纹环规的最小端面和最大切口之间是管末端的话就是合格
I	PT	锥形管内螺纹	锥形螺纹塞规的最小端面和最大切口之间是管末端的话就是合格
S	PS	平行管内螺纹	

管用平行螺帽是与管用螺丝配套使用的，与管用平行螺帽G及PF的尺寸容许差有所不同

(2) 锥形螺纹环规的检查

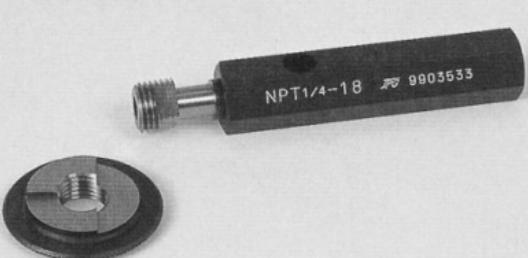
型号	量规的使用方法		检查用量规使用方法 检查用的量规的使用方法均是手动拧入
	种类		
PT	锥形螺纹环规		测定锥形螺纹塞规的小端面和锥形螺纹环规的最小端面的偏差，在规定范围内便是合格

美标圆锥管螺纹量规(NPT)

Gauges for American National standard taper pipe threads (NPT)



该产品是符合美国规格(ANSI)螺纹管塞规，在要求高密封性的一般零件的管用螺纹(NPT)的检查时使用。这种量规，可以测量各个断面，一般被使用最多的是测量小位置，基准位置，大位置的3个切口的量规。锥形管螺纹的测量用手拧进的时候，管的末端是量规的最大位置和最小位置的切口之范围内的话就判定为合格。此外，NPT是将螺纹顶部切下的高度来决定内外径尺寸，这种检查被推荐使用于NPT平面锥形量规。根据锥形螺纹量规的三处切口和平面锥形量规的六处切口的位置的吻合状况就很容易检查。



Gauge for Taper pipe thread gauge by American Standard (ANSI)(Caution number and angle of thread ridge are different from Rthread of JIS B 0253) features a three segmented notch(MAX,BASIC,MIN),and passes when between MAX and MIN as shown in the diagram.

管和量规的关系图 Related positions of pipe and gauges

外螺管和内螺纹孔管的末端在量规的最大位置，最小位置的切口范围内的话就是合格的。

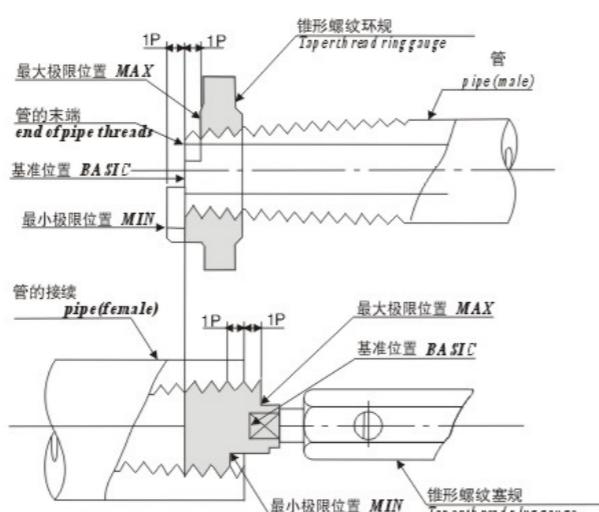
平面锥形量规的使用方法举例表示。

- 用锥形螺纹环规靠近管的末端检查基准位置的时候，管末端的外径尺寸在平面锥形环规的B切口范围内（界限基准位置）的话就是合格的。

- 用锥形螺纹塞规靠近内螺纹孔的末端检查基准位置的时候，管的末端的内径尺寸在平面锥形塞规的B切口范围内（界限基准位置）的话就是合格的。

■管和量规的关系图

Related positions of pipe and gauges

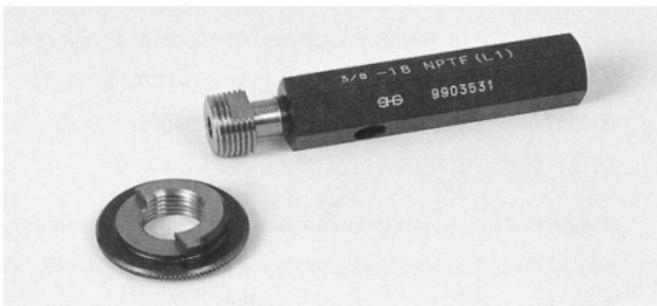


锥形管螺纹量规(NPTF)

Gauges for dryseal American National standard taper pipe threads (NPTF)



该产品是符合美国规格的锥形螺纹量规(ANSI)，NPTF是被应用于轮船，汽车，飞机等的燃料，供油管等的结合，即使不用普通的粘贴材料也能保证充分的密封性。NPTF螺纹量规检查手握紧部分L1螺纹插头塞规，L1螺纹环规检查和柄连接部分，而L3螺纹塞规，L2螺纹环规，对于产品螺纹的检查这两方面的量规都必须用到。该量规在基准位置有切口的量规和最大，最小界限这两个地方有切口的量规，但一般由子后者使用简单而在被大量使用。



Although similar to the NPT, the taper pipe thread gauge by American Standard(ANSI)differs from the NPT thread gauge by having a two-segmented notch, and passes if it is between MAX and MIN. the typical gauge is L1 others are L2 and L3.

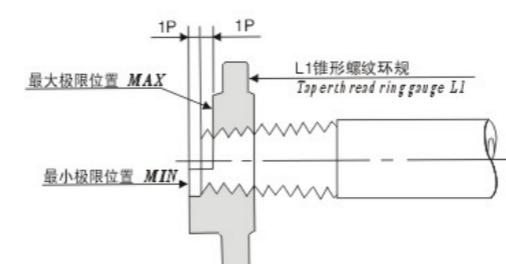
管和量规的关系图

使用量规的时候，L1螺纹塞规L3螺纹环规，还有L1螺纹环规L2螺纹环规的切口的关联位置拧进1/2圈以下。保证产品螺纹的锥度，通过截螺纹的直径是通过各种量规的切口和管或管接续的末端的连接程度来检查的。还有，螺纹的外径以及内径的尺寸和NPT使用的偏差是一样的，推荐使用NPTF平面锥形量规来检查。

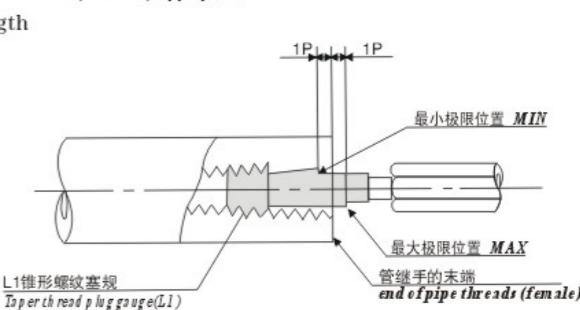
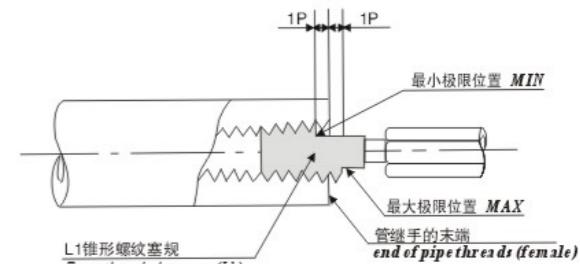
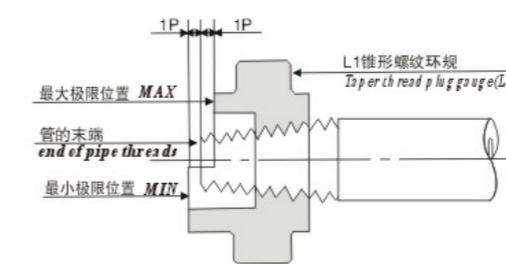
■管和量规的关系图

Related positions of pipe and gauges

- L1(手紧的范围) Inspection of hand clamping length



- L2・L3(机械拧紧的范围) Inspection of wrench clamping length



标准螺纹量规 JMAS 规格

Standard thread gauges

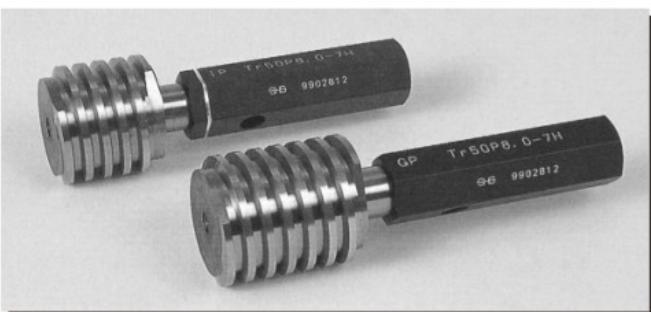


标准螺纹量规由一组相互精密配合的螺纹环规和螺纹塞规组成，此外被制作成接近于螺纹的基准尺寸，这种量规主要在直接与产品的螺纹镶嵌中使用。定期检查的时候是和塞规镶嵌为一对，能够检查螺纹环规的磨损程度。和产品的螺纹直接接触使用的时候，可以轻松通过产品螺纹的全长，轻松地拧进到极限的时候是松缓的而不是紧嵌合的话，说明被制作的螺纹就是粗糙的不合格的。另外，量规的磨损严重的话，即使与量规完全吻合的螺丝与螺帽也会出现咬不紧的情况，请充分注意量规的管理。

A standard thread gauge is comprise of a precisely connected pair of thread ring gauges and thread plug gauges. Unlike the limit system gauge, it is an accurately manufactured gauge to fit into the thread's basic angle so it passes when the thread ring gauge and the thread plug go through the thread of workpiece. Use the limit thread gauge when precise fitting of the product is needed.

特殊螺纹量规

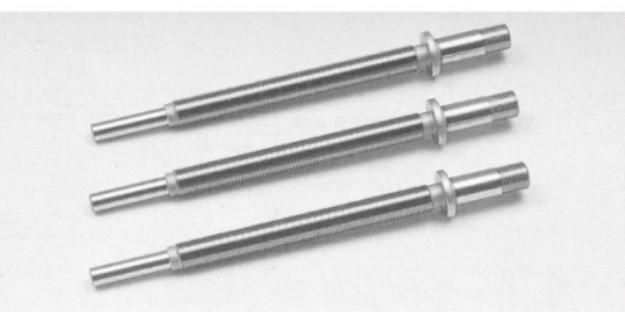
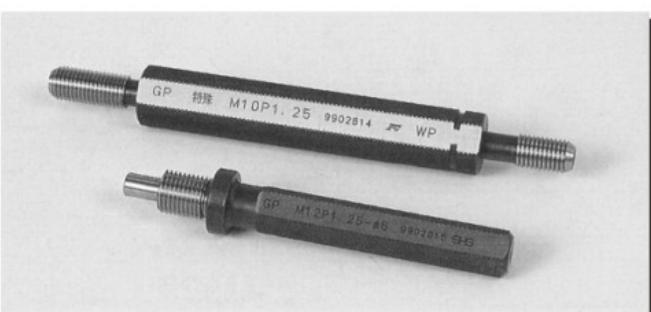
Special thread gauges



- 梯形螺纹量规 Trapezoidal thread gauges
- 智能量规 Whitworth thread gauges
- 多条螺纹量规 Multi-start thread gauges
- 同轴度检查用螺纹量规 Thread gauges for concentricity
- 直角度检查用螺纹量规 Thread gauge for perpendicularity

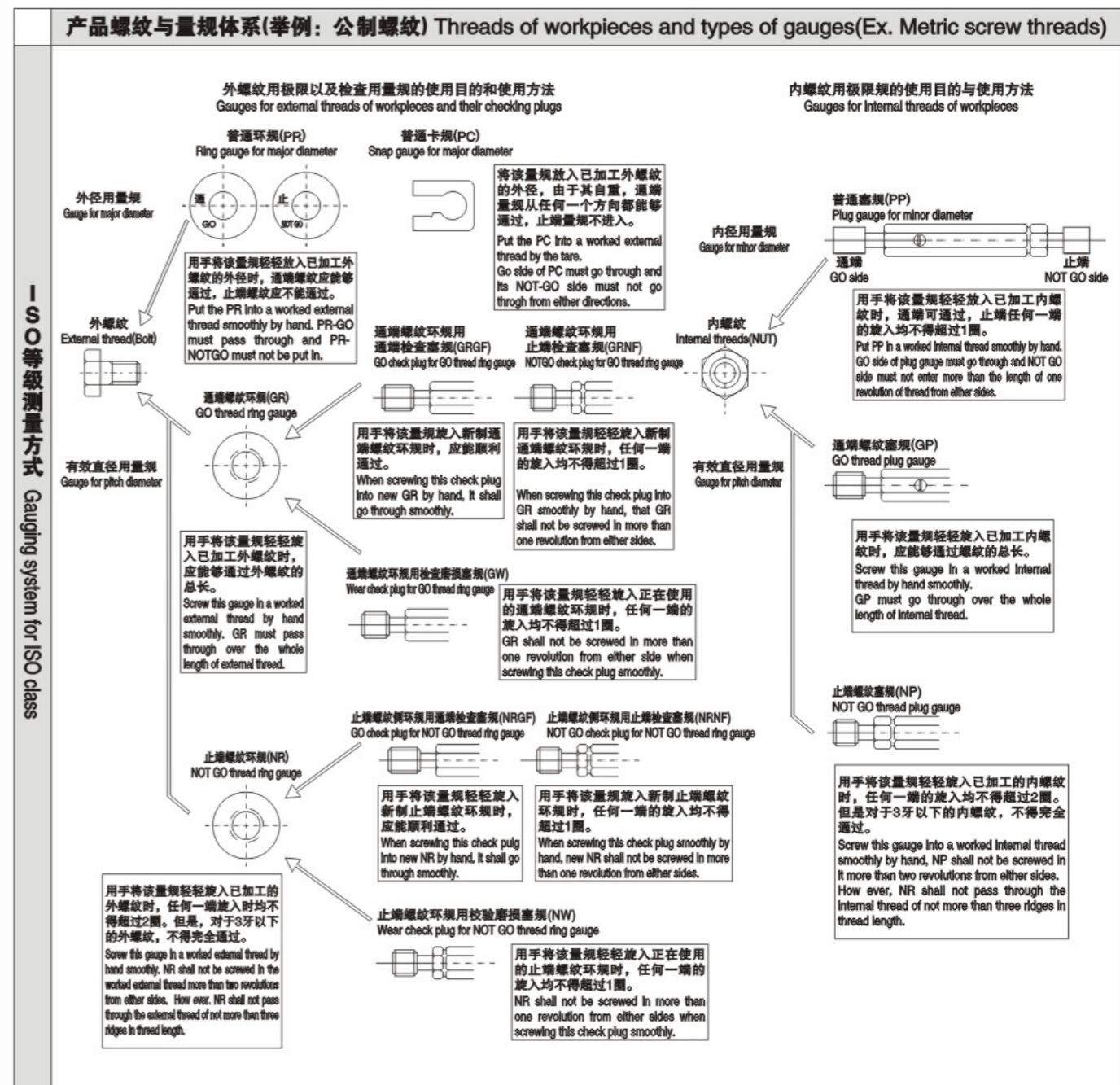
为了提高所有产品的质量，为了降低产品的成本，建议您使用量规。

测范杜公司还可以按照非检查品的图样或规格以及检查方法的例样，为您特别设计制造。



螺纹测量系统

Thread Gauging System

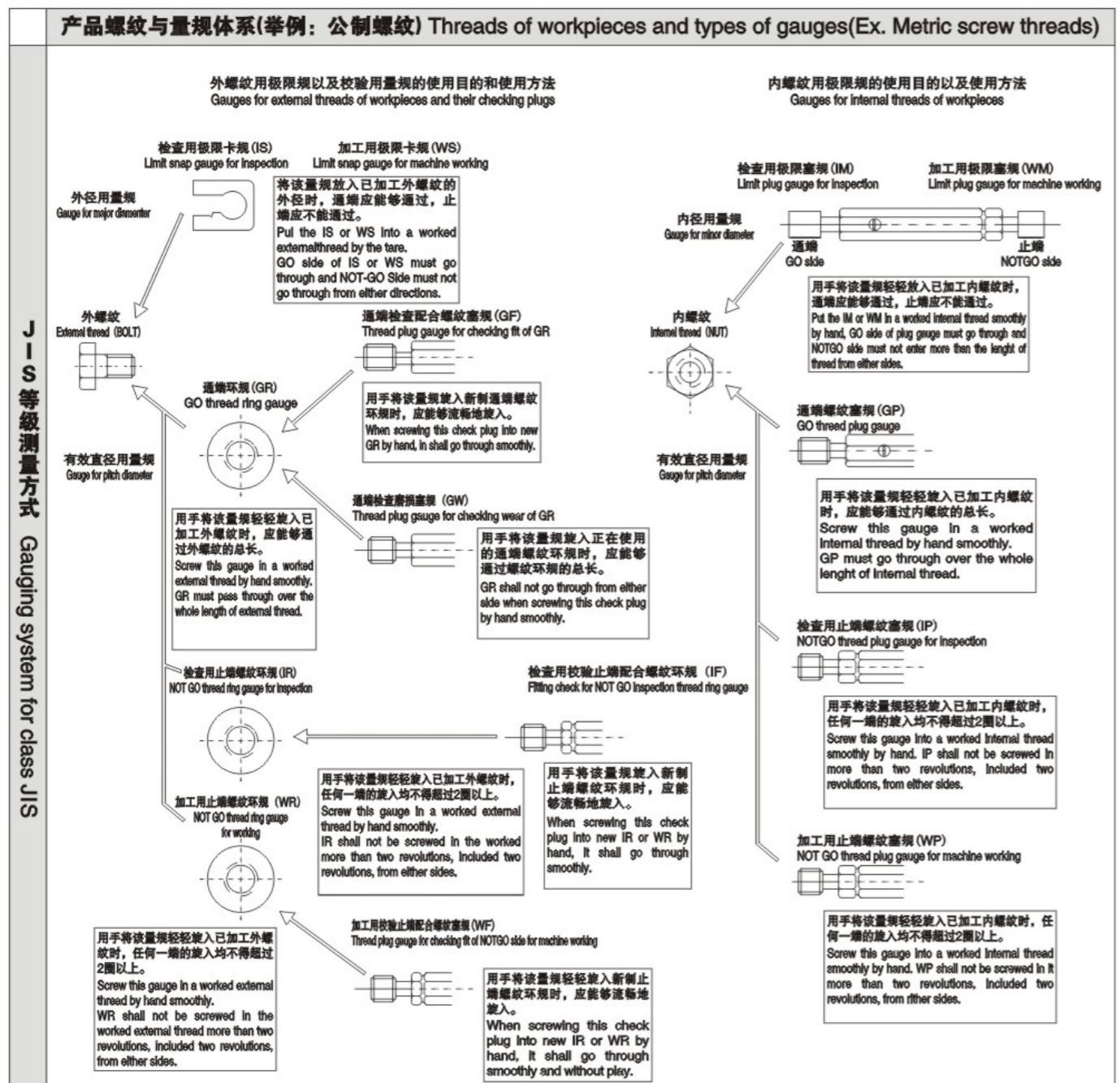


使用时的注意事项 Caution when using

- 使用量规时，请首先清除产品螺纹的毛刺和飞边。(请特别注意螺纹牙前端的锐利。)
- 请避免混用ISO等级测量方式和JIS等级测量方式。(从JIS等级方式转换为ISO等级方式时，请明确产品螺纹的公差区域等级，切实进行转换。)
- 验收方和生产方制作同样的螺纹环规时，建议采用同一检查塞规。可减少产品螺纹制成为极限附近时的判定差异。
(如果客户拥有自己的检查塞规，请在订购螺纹环规时告知。)
- 螺纹环规使用一段时间后会出现磨损，请定期采用校验磨损塞规进行检查。
- Use the gauge only after removing flushes and burns from the thread of the workpiece (especially note if the threading on the tip has been smashed).
- Do not use ISO class and class JIS gauge systems together. (When switching gauge systems between the ISO class and class JIS making sure that the thread of work pieces class is clearly identified.)
- If the manufacturer and recipient use thread ring gauge, it is recommended that check plug of same class be used to minimize assessment differences in case the product threads are made near the limit.
(If you have your own check plug, please inform us when ordering a thread ring gauge).
- It is recommended to make regular checks with a wear check plug gauge, since the gauges could be worn by using it.

螺纹测量系统

Thread Gauging System



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订购时

When Ordering Thread Gauges

订购螺纹用极限规的记载实例 [Refer to the items below when ordering thread gauges.]

- | | |
|-------------------------------------------------------|--------------------------------------------------------------------|
| ① M5×0.8-6g用、通端螺纹环规
[例] M5×0.8-6g GR
ex. | ④ M5×0.8-6H用、普通塞规(光面塞规)
[例] M5×0.8-6H PP
ex. |
| ② M5×0.8-6g用、普通卡规
[例] M5×0.8-6g PC
ex. | ⑤ 通端螺纹环规用、通端检查塞规(M5×0.8-6g GR用)
[例] M5×0.8-6g GRF
ex. |
| ③ M5×0.8-6H用、通端螺纹塞规
[例] M5×0.8-6H GP
ex. | ⑥ 通端螺纹环规用、检查磨损塞规(M5×0.8-6g GR用)
[例] M5×0.8-6g GW
ex. |

订购螺纹量规时，请参考以下项目。 Refer to the items below when ordering thread gauges.	举例 Example
螺纹种类、螺纹标称 × 间距(或者牙数) Type, nominal diameter X pitch (or T.P.I.)	M14P1.5 No.0-80UNF Tr20×2 R 1/2
指定左螺纹，多头螺纹(未指定时，为右单头螺纹) left-hand thread, multi-start thread	双头 double-start thread 双头引线6(间距3) double-start thread lead 6 (pitch 3) 左 LH (left-hand)
螺纹的等级或者公差区域类型 (注)指定标准中没有的等级时，请再次由本公司确认。即使一览表中有等级，如果有不明确之处，请咨询本公司。请确认产品尺寸。 (note) when ordering an unspecified class, please reconfirm with us. If you have any questions regarding this list, please ask. All dimensions will be verified.	7H·6g·2A·2B 无(请指示此时的产品尺寸以及公差) None (In this case, please state the desired dimensions of the item)
量规记号(检查用·加工用等) (注)适用于螺纹的量规记号，请参考一览表。 gauge symbol (inspection·machine work etc.) (note) Refer to the list to determine the proper gauge symbols that correspond to your purpose.	WR·IR GR·NR 标准螺纹塞规 锥形螺纹环规
特殊螺纹时 • 电镀余量(直径)或者电镀厚度 • 形状(请利用传真等寄送简单草图) • 刻印标注、材质 For special threads • plating allowance (diameter) or thickness of plating • shapes and dimensions • marking and material	电镀前(+0.03) Before plated (+0.03mm) 负公差尺寸(-0.15) Undersize (-0.15mm) GR量规长度15mm GR gauge length 15mm 增加刻印 P.D9.188 Inscription added ※也可以仅寄送产品图纸。 *Drawing of the item is accepted

除了上述之外，如有不详之处，请咨询本公司。

关于正确使用量规

For Problem Free Use Of Gauges

有关安全的注意事项

- 请勿将量规用于检查之外的目的。例如，将螺纹量规用做螺母以及螺栓。不仅不能起到连接作用，还可能会成为降低量规的精度以及导致损坏的原因。此外，绝对不要替代工具(锤子、丝锥、板牙等)使用。仅仅一次用作其他用途，不仅无法保证作为量规的功能，有时还可能会影响安全性。
- 根据功能上的要求，量规存在着锐利部分，请充分注意受伤等。特别是螺纹用极限规，螺牙以及不完全螺牙十分锐利，在剥离特殊防锈表面保护剂、防锈纸的时候，请十分慎重。
- 量规以及手柄长时间使用后可能会出现松动。大型量规由于手柄松动坠落时，可能会发生意外事故，请充分注意。
- 产品处于运动状态时，绝对不要使用量规进行检查。由于坠落、破损、飞溅等，可能会导致重大事故。即使幸免于事故，也会发生量规的异常磨损、发热等，对量规寿命产生不良影响。
- 使用挥发性防锈纸(VPI用纸)后，请用肥皂水或者清水洗手。详细情况，请咨询日本防锈技术协会。

使用前的注意事项

- 使用量规前，请用清洗油或者汽油等仔细洗净量规以及产品，或者用清洁的干布等仔细擦拭。
- 使用前，请确认量规是否生锈、损伤、有否毛刺等，一旦发现铁锈、损伤、毛刺、请用砂轮等仔细清除。
- 剥离特殊防锈表面保护剂时，请仔细剥离，以便保管时再次使用。

使用时的注意事项

- 使用前，请在量规上充分涂抹润滑油，确认已经充分擦拭产品上的尘埃、切屑等，然后开始量规。特别是产品上一旦粘着灰尘，会明显加快量规的磨损。
- 首先确认量规能够通过通端，再确认无法通过止端。使用螺纹用极限规时，进行数次旋入、旋出，挤出多余的润滑油以及残留在螺牙的垃圾等，效果会更好。判定是否合格时，分别依照量规的判定基准。
- 关于利用量规检查产品时的力度，使用极限普通量规时，原则上为量规的自重(卡规时，为动作负荷)。使用较小的量规时，最好是类似用铅笔写字那样的力。虽然根据性别、人种、熟练程度、年龄等因素存在着差异，但是只要在秤上书写一下就可以知道了，通常为3~5N。使用螺纹用极限规时，也同样认为应采用类似用铅笔写字那样的力，但是实际上通常会大于该力度。根据资料，该力大约为1N左右。至少除非手柄特别粗大，不可以用手掌握住手柄后旋入。使用螺纹用极限规时，固定量规后将产品放在手中进行旋入，将不会增加过分的力矩。
- 利用管用锥形螺纹量规检查产品螺纹时，快速将量规旋入至最后，可能会由于冲击性旋入而无法拔出，请慎重进行最后的旋入。
- 请注意产品的入口状态。如果存在敲击痕迹、毛刺等，会使判定出现误差。特别是螺纹产品时，由于不完全牙的歪斜，容易产生判定误差。
- 量规与产品如果不相互对准轴心后旋入，会出现“卡住”，导致既无法通过也无法拔出。此时，不仅会损伤产品，还可能会损伤量规。特别是直径较大或者螺纹间距较细时，请特别慎重。
- (万一陷入这种状态，请用木棒或者塑料棒轻轻敲击，对准相互之间的轴心。也可以少许加热环一侧，使其膨胀后拔出。)
- 注意量规的滚落以及倒下。不慎掉在地面等时，请仔细确认损伤程度，用砂轮等清除毛刺等，进行恰当的处理。当物品掉落在量规上或者量规相互碰撞后，也应进行同样处理。
- 被磁化的量规会粘附铁质等，加快量规的磨损，此时，请进行消磁。
- 长时间手握量规或者产品后，由于手的热量，会产生尺寸变化。判定是否合格时，必须考虑由此而导致的膨胀量。利用量规检查刚刚加工后的產品时，同样必须考虑产品与量规的温差。当产品为薄壁环等时，会随着冷却而出现收缩，会成为类似量规被热压配合那样的状态，请充分注意。

保管时的注意事项

- 请勿在产品和量规或者塞规与环规组合的状态下保管。可能会成为导致密切贴合、生锈等原因。
- 保管时，请仔细清除尘埃、切屑和指纹，并采取防锈措施。此外，量规应保管在无潮湿，较少温度变化的场所。作为防锈措施有：①仔细擦拭量规，用清洗油或者汽油清洗，涂抹指纹中和剂后涂抹防锈油，或者浸在油中；②仔细清洗量规，然后用防锈纸包裹，或者在量规面涂抹防锈剂；③仔细清洗后，用特殊防锈表面保护剂包裹等。

尺寸管理方面的注意事项

- 应注意量规的磨损，考虑使用频度等，定期进行检查。不得使用超过磨损极限的量规。由于前端容易磨损，请测定前端。
- 根据规定，量规尺寸为20℃的尺寸，当环境温度不是20℃时，请换算为20℃，然后判定尺寸。进行比较测定时，请注意与块规的温差。
- 进行检查时，为防止生锈以及由于温度上升导致的尺寸变化，请使用手套和镊子等，请尽量避免赤手接触。

Safety precautions

- Do not use the gauges except for inspection purposes. For example, if you use thread gauges instead of nuts and bolts, the stated purpose cannot be achieved; it will result in loss of gauge precision and damage. Never use as a substitute for tools (do not use as a hammer, tap, die or deburring) if used in such a way, the gauges are no longer guaranteed to function, or may become unsafe to use.
- Exercise extreme care to avoid injury. Gauges contain sharp parts according to operational needs. Especially in the case of thread limit gauges, top and edge of thread are sharp, so exercise care when removing the special rust-inhibiting protective layer or rust-inhibiting paper, etc.
- Gauges and handles may loosen over a long period of time. Be on guard against unexpected accidents caused by a large size gauge falling due to a loose handle.
- Do not apply gauge to moving part. The possibility exists a serious accident caused by dropping, damaging or scattering, etc. Even if an accident does not occur, it may cause abnormal conditions, wears, or overheating of the gauge, shortening the life of the gauge.
- Wash hands in soapy water or clean water after handling the special rust inhibiting paper (VPI paper). Please contact the Japan Rust-Inhibiting Technical Organization for details.

Caution before use

- Before using gauges, clean gauges or product thoroughly in cleaning solvent or benzene, or wipe off thoroughly with a clean dry cloth.
- After using, check for rust, cracks, or burns on the gauge. If found, remove completely with a oil stone, etc.
- It is advisable to carefully remove the rust preventive compound and reuse it when storing the gauge.

Caution during use

- Apply lubrication oil on the gauge. Use the gauge after thoroughly wiping free all dust and chips. Especially if sand is sticking to the product, wear to the gauge accelerated.
- Perform NO GO gauge Inspection after verifying the GO gauge Inspection properly operates. For thread limit gauges, it is advisable to screw in and back out several times, remove excess lubricating oil and dust from the thread ridge. GO and NO GO check depends on the assessing criteria of the gauge.
- As a general rule, the force used by the gauge when inspecting is the gauge's own weight. (operating weight for snap gauge) For small diameter gauges, the force exerted when writing with a pencil is desirable. Although this may vary depending on one's gender, race, skill, and age, by writing on a scale you can measure this force. The 3-5N range is considered normal. With regard to thread limit gauges, the same force used to write with a pencil is recommended, although in actuality, the gauge is usually screwed with a force of 1N. In any case, do not screw in by holding the handle with your whole hand except on exceptionally large gauges. For thread gauges, it is advisable to anchor the gauge, hold the product in your hand and then screw in, avoiding excess torque.
- Regarding the inspection of products with the taper pipe threads by using taper thread gauge, you screw too far and/or too fast, the excess force will cause the gauge to freeze up. Please screw in carefully near the end.
- Take note of the condition of the starting edge of thread. Nicks or burns can cause a misjudgment. Especially in the case of screw products, a collapsed, imperfect thread is likely to cause an error in misjudgment.
- At times, the gauge and product will be jammed and be unable to go through, or unscrew if the center of the shaft and the gauge can not be aligned. Damage may occur not only to the product but also to the gauge in this case. When dealing with a large diameter or fine thread, be especially careful. (In this situation, you should gently tap with a wood or plastic handle to align the center of each other, or heat the side of the ring in order to make it expand and take it off.)
- Do not let the gauge roll over and drop, or fall over. In cases when the gauge is accidentally dropped, check its damage and give it suitable way to do so. Remove any burns with oil stone. The same way applies if something is dropped on or hit against the gauge.
- Magnetized gauges can make iron and other metals stick to them. This accelerates wear on the gauge. Under such conditions, please demagnetize.
- Holding the gauge or product for a long time may change the dimensions as a result of the heat from your hand. This expanded value should be considered when judging inspection result like satisfactory or negative. The same as above, temperature difference between product and gauge should be considered when inspecting product soon after machining. If the product is like thin ring, carefully inspect it not to make plug gauge stick to ring because thin ring is easy to shrink due to cooling.

Caution while storing

- Do not store gauges with screwed together or fit in condition. They may freeze up and/or rust.
- When storing take anti-rust precautions by thoroughly removing any dust, chips or fingerprints. Store gauges in a non-humid and at a constant temperature. For anti-rust control - (1) Wipe the gauges thoroughly and clean them in cleaning solvent or benzene, or after applying a fingerprint neutralization agent, coat or soak in rust-inhibiting oil. (2) After washing the gauge thoroughly, wrap in rust-inhibiting paper or coat the surface of the gauge with a rust-inhibitor. (3) After washing, coat with a special rust-inhibiting surface protecting compound.

Caution for dimensional control

- Gauges need to be carefully checked for wear. Conduct regular checking according to usage. Do not use gauges that have exceeded wear limits. Be sure to measure the tip since it can wear easily.
- Gauge dimensions are set at 20°C. If the environment temperature is not 20°C, conduct dimensional assessments after acclimating to 20°C. Beware of temperature differences when using the block gauge to perform comparative measurements.
- When inspecting, wear gloves and tweezers. Avoid direct contact to reduce dimensional changes caused by temperature and rust.

主要螺纹规格一览表

List of major thread specifications

平行螺纹规格 Parallel thread specifications

螺纹种类	记号	规格	牙形角	尺寸范围	精度等级	量规规格
公制螺纹(粗牙)	M	JIS B 0205 B 0215	60°	1~68	4H, 5H, 6H, 7H	JIS B 0251
公制螺纹(细牙)		JIS B 0207 B 0215		1~300	4h, 6h, 6g, 8g	JIS B 0252
公制螺纹(粗牙)附属书		JIS B 0205 本体・附属书		1~68	1级、2级、3级	JIS B 0251附属书
公制螺纹(细牙)附属书		JIS B 0209 附属书		1~300	1级、2级、3级	JIS B 0252附属书
美标统一螺纹(粗牙)		JIS B 0206		No.1~4	3B, 2B, 1B	JIS B 0255
美标统一螺纹(细牙)		JIS B 0210		No.0-1 ^{1/2}	3A, 2A, 1A	JIS B 0256
UNC		JIS B 0208		No.1~4	ANSI B 1.2	
UNF		JIS B 0212		No.0-1 ^{1/2}	3B, 2B, 1B	
UNEF				No.12-1 ^{1/2}	3A, 2A, 1A	
UNS				No.10-6		
4UN, 6UN	ANSI B 1.1			5/16~6		
8UN, 12UN				0.073~0.164	3B, 2B, 1B	NBS HAND BOOK H28
16UN, 20UN				0.060~1.5	3A, 2A, 1A	
28UN, 32UN				1.75~6		
UNC				0.073~4	3B, 2B, 1B	
UNF				0.060~1.5	3A, 2A, 1A	
12UN				0.216~1.6875	3B, 3A	NBS HAND BOOK H28
UNJC				1.0625~4		
UNJF				0.625~6		
UNJEF				0.4375~6		
8UNJ	MIL-S-7742B			'1/16~6	A级, B级(只限于外螺纹)	JIS B 0254
12UNJ				'1/8~12	A级, B级	JIS B 0254附属书
16UNJ				16~104		
12UNJ				19~75		
16UNJ				'1/4~4		
NPSC				'1/8~6	2B, 2A	ANSI/ASME B 1.20.1
NPSM				'1/8~12		
NPSL				'1/4~4		
NPSH				'1/8~1		
NPSF				'1/8~1		
NPSI	MIL-S-8879A				5G, 4G, 3G, 2G	ANSI B 1.5
ACME					6C, 5C, 4C, 3C, 2C	
ACME						
STUB ACME						
BUTT						
BC						
SM						
U						
M						
TV						
Tr	30°	JIS B 0216, B 0218		8~300	7H, 8H, 8e, 8e	
TM		JIS B 0216附属书(废止)		10~300		
TW		JIS B 0222		10~100		
ACME		ANSI B 1.5		'1/4~5		
ACME		ANSI B 1.8			2, 3	ANSI B 1.9
STUB ACME						
BUTT						
BC						
SM						
U						
M	60°	JIS B 7103		13.5~95	2, 3	JMAS 4002
JIS B 8031				10S~14S, M4 × 0.7		
(STUD)M		JIS B 1173		4~20		
TV		JIS D 7207		5~17		
CTV		JIS D 9422		5, 8		
E		JIS C 7709		100~40		
TV		JIS B 2061		13, 20, 25		
CTV				26, 44, 59, 62		
M						
JIS Z 1604						

锥形螺纹规格 Tapar thread specifications

锥度规种类	记号	规格	螺纹圆角度</

公尺螺纹尺寸和间隙

Metric limit thread gauge of nominal diameter and pitch

螺纹尺寸	井目间隙	细目间隙			螺纹尺寸	井目间隙	细目间隙		
		0.2	0.3	0.4			1.0	0.8	0.6
M1	0.25	0.2			M52	☆5	☆4	☆3	2
M1.1	☆0.25	☆0.2			M55		☆4	☆3	2
M1.2	0.25	0.2			M56	☆5.5	☆4	☆3	☆2
M1.4	0.3	0.2			M58		☆4	☆3	2
M1.6	☆0.35	☆0.2			M60	☆5.5	☆4	☆3	2
M1.7	○0.35	●0.2			M62		☆4	☆3	2
M1.8	☆0.35	☆0.2			M64	☆6	☆4	☆3	☆2
M2	0.4	0.25			M65		☆4	☆3	2
M2.2	☆0.45	☆0.25			M68	☆6	☆4	☆3	2
M2.3	○0.4	●0.25			M70		☆6	☆4	☆3
M2.5	☆0.45	☆0.35			M72		☆6	☆4	☆3
M2.6	○0.45	●0.35			M75		☆4	☆3	2
M3	☆0.5				M76		☆6	☆4	☆3
M3	●0.6	0.35			M78				2
M3.5	0.6	0.35			M80		☆6	☆4	☆3
M4	☆0.7				M82				2
M4	●0.75	0.5			M85		☆6	☆4	☆3
M4.5	0.75	0.5			M88				●2
M5	☆0.8				M90		☆6	☆4	☆3
M5	●0.9	0.5			M92				●2
M5.5	●0.9	0.5			M95		☆6	☆4	☆3
M6	1	0.75	●0.5		M98				●2
M7	1	0.75	●0.5		M100		☆6	☆4	☆3
M8	1.25	1	0.75	●0.5	M102				●2
M9	1.25	1	0.75	●0.5	M105		☆6	☆4	☆3
M10	1.5	1.25	1	☆0.75	M108				●2
M11	☆1.5	●1.25	1	☆0.75	M110		☆6	☆4	☆3
M12	1.75	1.5	☆1.25	1	M112				●2
M13		●1.5		●1	M115		☆6	☆4	☆3
M14	2	1.5	☆1.25	1	M118				●2
M15		1.5	1	●0.5	M120		☆6	☆4	☆3
M16	2	1.5	1	●0.5	M122				●2
M17		☆1.5	☆1		M125		☆6	☆4	☆3
M18	2.5	2	1.5	1	●0.5	M128			●2
M20	2.5	2	1.5	1	●0.5	M130		☆6	☆4
M22	2.5	2	1.5	1	●0.5	M132			●2
M24	3	2	1.5	1	●0.5	M135		☆6	☆4
M25		2	1.5	1	●0.5	M138			●2
M26		●2	1.5	●1	●0.5	M140		☆6	☆4
M27	3	☆2	1.5	☆1		M142			●2
M28		2	1.5	1	●0.5	M145		☆6	☆4
M30	3.5	☆3	2	1.5	1	●0.5	M148		
M32			2	1.5	●1	●0.5	M150		☆6
M33	3.5	☆3	☆2	1.5			M155		☆6
M34			●2	●1.5	●1	●0.5	M160		☆6
M35				1.5			M165		☆6
M36	4	☆3	2	1.5	●1	●0.5	M170		☆6
M38			●2	1.5	●1	●0.5	M175		☆6
M39	4	☆3	☆2	☆1.5			M180		☆6
M40		☆3	2	1.5	●1		M185		☆6
M42	4.5	☆4	☆3	2	1.5	●1	M190		☆6
M45	4.5	☆4	☆3	2	1.5	●1	M195		☆6
M48	5	☆4	☆3	2	1.5	●1	M200		☆6
M50			☆3	2	1.5	●1			

美制螺纹的尺寸和间隙

Unified limit thread gauge of nominal diameter and pitch

尺寸	外径(英寸)	圈数(圈/英寸)			圈数(圈/英寸).....螺纹系列									尺寸
		UNC	UNF	UNEF	4UN	6UN	8UN	12UN	16UN	20UN	28UN	32UN		
No.0	No.1	0.06	-	80	-	-	-	-	-	-	-	-	No.0	
		0.073	64	72	-	-	-	-	-	-	-	-	No.1	
No.2	No.3	0.086	56	64	-	-	-	-	-	-	-	-	No.2	
		0.099	48	56	-	-	-	-	-	-	-	-	No.3	
No.4		0.112	40	48	-	-	-	-	-	-	-	-	No.4	
No.5		0.125	40	44	-	-	-	-	-	-	-	-	No.5	
No.6		0.138	32	40	-	-	-	-	-	-	-	-	No.6	
No.8		0.164	32	36	-	-	-	-	-	-	-	-	No.8	
No.10		0.19	24	32	-	-	-	-	-	-	-	-	No.10	
	No.12	0.216	24	28	32	-	-	-	-	-	-	-	No.12	
1/4		0.25	20	28	32	-	-	-	-	-	-	-	1/4	
5/16		0.3125	18	24	32	-	-	-	-	-	20	28	-	
3/8		0.375	16	24	32	-	-	-	-	-	20	28	-	
7/16		0.4375	14	20	28	-	-	-	-	-	16	-	32	
1/2		0.5	13	20	28	-	-	-	-	-	16	-	32	
9/16		0.5625	12	18	24	-	-	-	-	-	16	20	28	
5/8	11/16	0.625	11	18	24	-	-	-	-	-	12	16	20	
		0.6875	-	24	-	-	-	-	-	-	12	16	28	
3/4	13/16	0.75	10	16	20	-	-	-	-	-	12	-	32	
		0.8125	-	20	-	-	-	-	-	-	12	16	32	
7/8	15/16	0.875	9	14	20	-	-	-	-	-	12	16	28	
		0.9375	-	20	-	-	-	-	-	-	12	16	32	
1		1	8	12	20	-	-	-	-	-	16	-	28	
1 1/8	11/16	1.0625	-	18	-	-	-	-	-	-	8	12	20	
		1.125	7	12	18	-	-	-	-	-	8	-	20	
1 1/4	3 1/16	1.1875	-	18	-	-	-	-	-	-	8	12	28	
		1.25	7	12	18	-	-	-	-	-	8	-	28	
1 3/8	1 5/16	1.3125	-	18	-									

基准光面环规

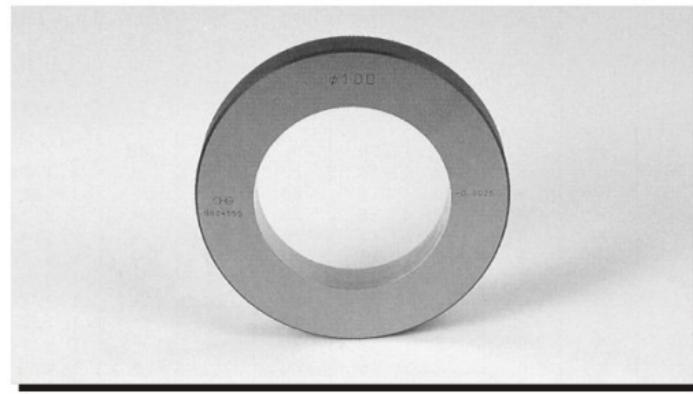
Master ring gauges



基准光面环规，是被用来做为测定仪的基准的量规，用做精密测定仪的基准的，是根据JMAS(日本精密测定机器工业会规格)其中，量规部分的圆度，圆筒度，直径的允许值都被规定的。光面环规的尺寸和实际测量值，都被刻在上面。

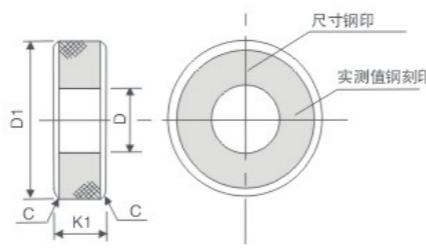
Master ring gauges are used for setting -up of relative measuring instruments, as dimensional standards.

- 材质:SKS3
- 硬度:HRC58~62
- 低温处理、安定化处理剂
- 包装完好



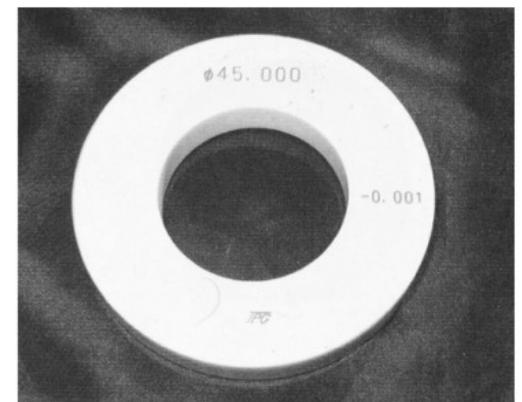
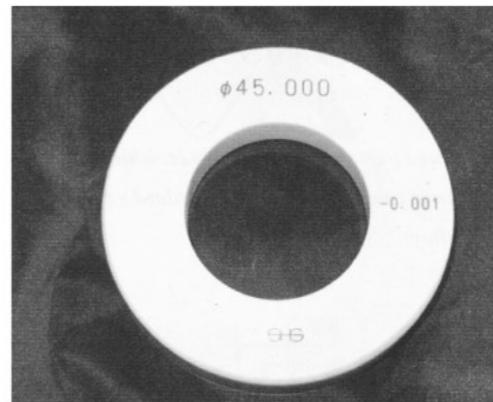
有库存

尺寸D	外径D	厚度K1	(参考) C	制作公差	真圆度 圆筒度
1~3	25	4	0.6	± 0.001	0.0005
3~6	30	6	0.8	± 0.001	0.0005
6~10	30	8	0.8	± 0.001	0.0005
10~14	40	10	1	± 0.001	0.0006
14~18	50	12	1.5	± 0.001	0.0006
18~24	50	15	1.5	± 0.001	0.0008
24~30	65	15	1.5	± 0.001	0.0008
30~40	80	18	1.5	± 0.0015	0.0008
40~50	95	20	1.5	± 0.0015	0.0008
50~65	110	20	1.5	± 0.002	0.001
65~80	125	22	2	± 0.002	0.001
80~90	140	22	2	± 0.0025	0.0012
90~100	160	25	2	± 0.0025	0.0012
100~110	180	30	2.4	± 0.003	0.0015
110~120	190	35	2.4	± 0.003	0.0015
120~130	200	35	2.4	± 0.004	0.002
130~140	210	35	2.4	± 0.004	0.002
140~150	220	40	2.4	± 0.004	0.002
150~160	230	40	2.4	± 0.005	0.0025
160~180	260	40	2.4	± 0.005	0.0025
180~200	280	40	2.4	± 0.005	0.0025



氧化锆陶瓷光面环规

氧化锆陶瓷具有高韧性，高强度，耐磨损性的优点，即使在陶瓷中，也是有着出众的高韧性，解决了容易破碎问题的一种材料。



■陶瓷环规使用了陶瓷材料中的高强度，高韧性的氧化锆陶瓷为素材，一般的使用当中不用担心被打破。

CERARING are made of zirconia-based ceramics, which have superior hardness and toughness compared with other types of ceramic materials. They will not break or crack in ordinary applications.

材 质 Material	CERARING (ZrO ₂)	Steel (钢)	Carbide (WC-Co)(超硬)	Silicon nitride (Si ₃ N ₄)(氮化矽)
硬 度 Hardness	1350	800	1650	1500
热膨胀度 (HV)	10±1	11.5±1	5	2
弯 曲 度 Thermal expansion coefficient($10^{-6}/K$)	130	200	200	60
破 壓 韧 度 Flexural strength (three-point bending)	7	> 20	12	6.5
老 化 率 (kgf/mm^2)	2.1	2.1	6.3	2.9
柏 松 比 Fracture toughness Kic	0.3	0.3	0.2	0.3
比 重 ($\text{MN/M}^{1.5}$)	6.0	7.8	14.8	3.2
导 热 率 Young's modulus	0.007	0.13	0.19	0.04

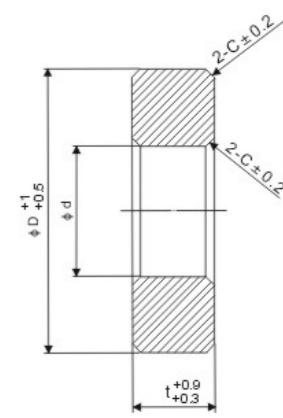
陶制环规 氧化锆

■形状

φd(mm)	φ D(mm)	t(mm)	2-c
φ 6.0	φ 25	7	1.0
φ 8.0	φ 32	10	1.1
φ 10.0	φ 32	10	1.1
φ 11.0	φ 32	10	1.1
φ 12.0	φ 32	10	1.1
φ 15.0	φ 32	10	1.1
φ 16.0	φ 45	10	1.2
φ 17.0	φ 45	10	1.2
φ 18.0	φ 45	10	1.2
φ 20.0	φ 45	10	1.2
φ 22.0	φ 45	10	1.2
φ 24.0	φ 45	10	1.2
φ 25.0	φ 53	15	1.8
φ 27.0	φ 53	15	1.8
φ 28.0	φ 53	15	1.8
φ 30.0	φ 71	15	2.0
φ 32.0	φ 71	15	2.0
φ 35.0	φ 71	15	2.0
φ 38.0	φ 71	15	2.0
φ 40.0	φ 71	15	2.0
φ 42.0	φ 71	15	2.0
φ 45.0	φ 85	15	2.3

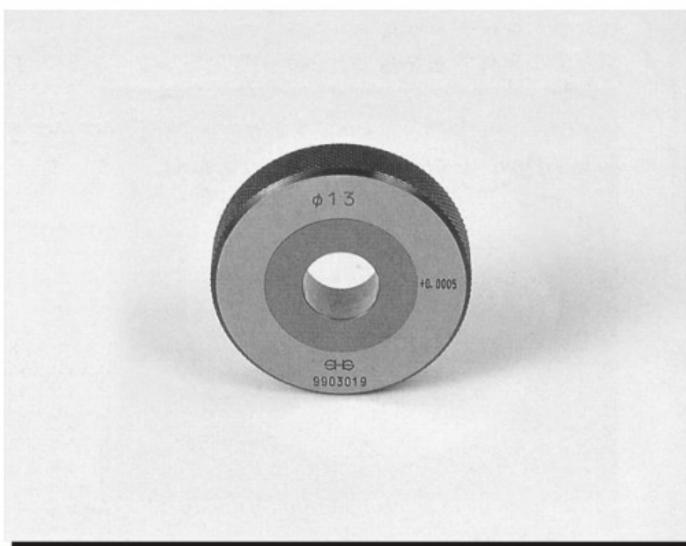
■精度

φd(mm)	公差(mm)	真圆度(mm)
6~30	± 0.001	0.001以内
30~45	± 0.0015	0.0015以内



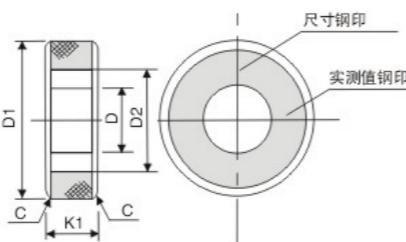
超硬光面环规

Master ring gauges of cemented carbide



超硬光面环规，因为有着耐磨损的优点，是可以长期使用的量规。热膨胀系数也很少，是容易保管的量规。我公司生产的超硬光面环规的表面是做过镜面处理的。

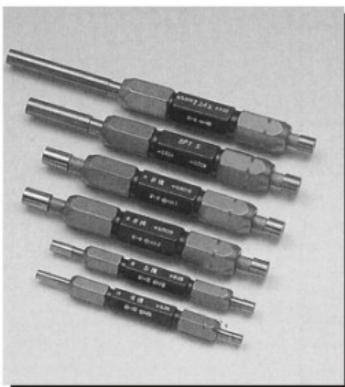
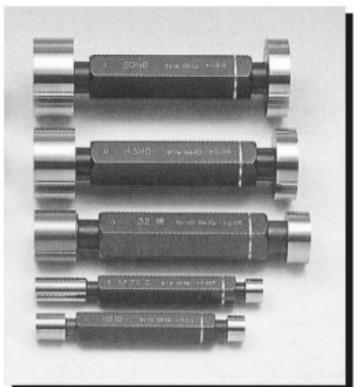
The gauge part material is carbide, which has excellent wear resistance compared with the standard gauge material SKS (stee alloy).



称呼尺寸d	外径D1	厚度K1	(参考)C	(参考)D2	制作公差
1~3	30	4	0.6	13	±0.001
4~6	40	6	0.8	18	±0.001
7~10	40	10	0.8	21	±0.001
11~13	40	10	1	23	±0.001
14~18	50	15	1	28	±0.001
19~20	50	15	1	28	±0.001
21~24	65	15	1	34	±0.001
25~30	65	15	1.5	36	±0.001
31~35	80	18	1.5	50	±0.0015
36~40	80	18	1.5	50	±0.0015
41~45	95	20	2	56	±0.0015
46~50	110	22	2	62	±0.0015
51~55	110	22	2	68	±0.002

混合性塞规

Half plug gauge



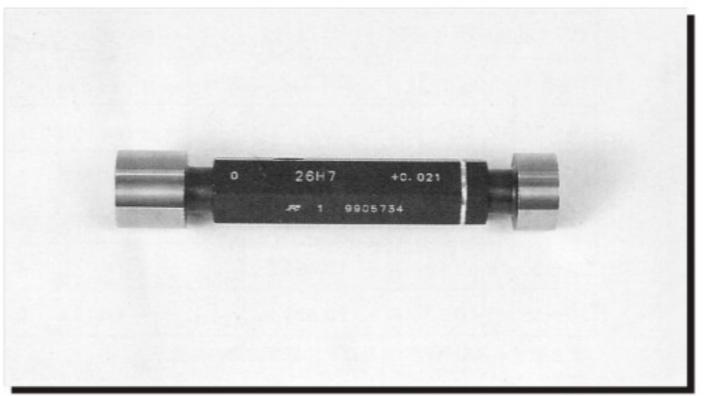
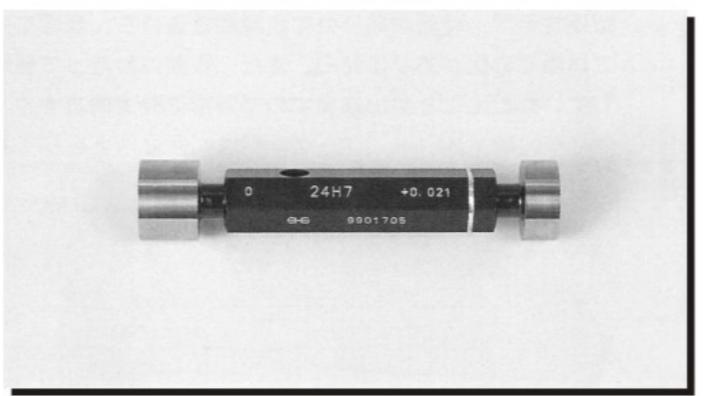
高品质 低价格

这款量规是我公司的自创产品，仅在使用频率高的通端使用超硬合金，止端用的是根据以前的SKS3种类相当的材料，具有耐磨损性和价格低两方面的优点。

Go plug gauge of cemented carbide NOT GO plug gauge of SKS (stee alloy).

光滑极限塞规(栓塞规)

Limit gauges



有库存



光滑极限塞规是一种具备以孔的最大实际尺寸为基准的测定面以及量小实际尺寸为基准的测定面的一种量规。

Limit gauges which has gauging surfaces based on maximum material limit and least material limit of hole.

光滑极限塞规使用目的及使用方法
Purpose and procedures for use of limit gauges

■通端塞规: Go plug gauge

本量规用于检查孔的直径是否大于被规定的最大实体尺寸，要能够轻易的通过孔的全长。

This is a gauge to inspect whether the diameter of hole is larger than the specified MML or not, and this shall pass through the overall length of hole without any difficulty.

■止端塞规: Not Go plug gauge

本量规用于检查孔的直径是否小于被规定的最小实体尺寸，不能进入孔。

This is a gauge to inspect whether the diameter of hole is smaller than the specified LML or not, and this shall not enter into the hole.

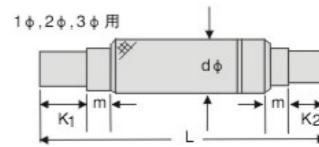


图1

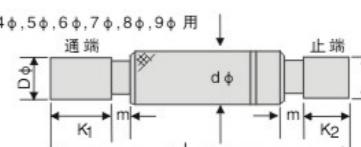


图2

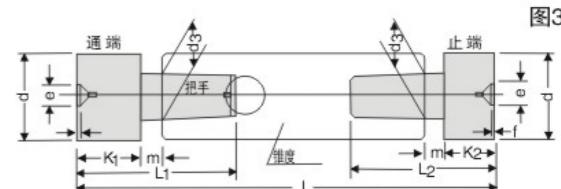


图3

称呼尺寸d	通端		止端		dφ	L	图序号
D φ	K1	m	K2	m	-	-	-
1~2	7	6	5	6	6	60	图1
2~4	7	6	5	6	7	60	
4~6	10	6	5	6	8	70	图2
7~8	12	6	7	6	9	80	
9~9.5	12	6	7	6	10	80	

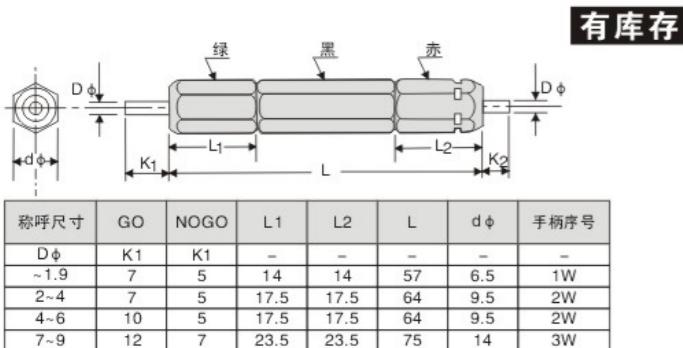
※除上所述尺寸之外的特殊产品请随时联系我公司

称呼尺寸d	通端		止端		m	d3		参考			手柄 序号	图序号
	K1	L1	K2	L2		基准寸法	许容差	e	f	r	L (最大)	
10~14	13	38	7	32	7.874	0	-0.025	-			107	2
14~18	17	42	10	35	6	10.414		6	1		119	3
18~24	22	52			43	15.491					141	4
24~30	25	60			48	8					157	5
30~40												
40~50												
50~65	32	67	17	52	9.5	20.574		8	1.5	1.6		

※除上所述尺寸之外的特殊产品请随时联系我公司

超硬栓塞规

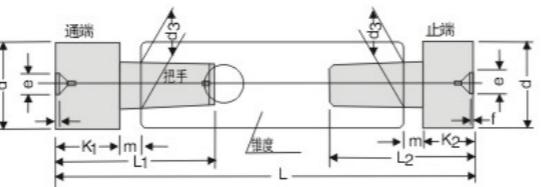
Limit gauges of cemented carbide



※除上述尺寸之外的特殊产品请随时联系我公司

超硬合金有着硬度高耐磨损的特点而不用担心赛规的表面会划伤。另外它经久耐用，非常经济。

The gauge part material is carbide, which has excellent wear resistance compared with the standard gauge material SKS (stee alloy).

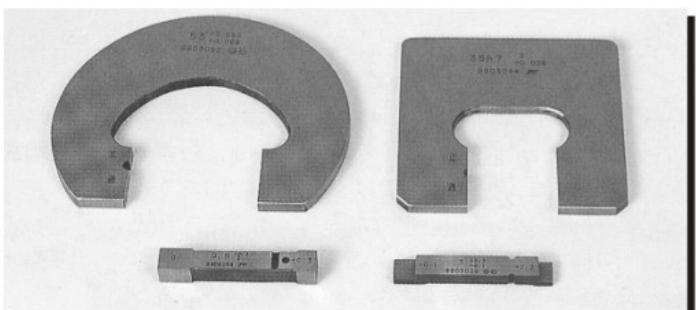


称呼尺寸	通端		止端		m	d3		参考		手柄序号
	K1	L1	K2	L2		e	f	r	$\frac{L}{(最大)}$	
9~10	12	37	7	32	-	6,096	0	-0.050	-	101
11~13	12	37	7	32	-	7,874	0	-0.050	-	107
14~24	17	42	10	35	-	10,414	0	-0.050	-	119
24~30	22	52	13	43	-	15,479	0	-0.050	-	141
30~50	25	60	13	48	-	20,574	0	-0.050	-	163

※除上述尺寸之外的特殊产品请随时联系我公司

板规 卡规

Limit gauge



卡规的使用目的及使用方法 Purpose and Procedures for use of gap gauges

■通端是卡规 Go gap gauge

本量规用于检查轴的直径是否比被规定的最大实体尺寸小。将量规的一侧口对准轴将此作为支点摇晃，在另一侧的量规面轻卡住支点的对称点（测定点），至少在直角的两个方向进行检查，在轴向根据其长度至少检查三处以上。全部部位都必须在动作负荷的情况下，轻易通过。

This is a gauge to inspect whether the diameter of shaft is smaller than the specified MML or not, and operated in such a manner that one opening end of gauging surface is applied to the shaft as the fulcrum and the gauge is turned slowly so that another gauging surface bites the point opposite of the fulcrum (measuring point). The inspection shall be carried out at least in two directions perpendicular each other and in the axial direction at positions adequate to the length not less than three. The gauge shall not pass at all the measuring points at the working load without any difficulty.

■止端卡规 Not Go gap gauge

本量规用于检查轴的直径是否比被规定的最小实体尺寸大，至少在直角方向检查两处，在轴向根据其长度至少检查三处以上。将量规施加动作负荷的状态下，不能通过轴的所有部分。

This is a gauge to inspect whether the diameter of shaft is larger than the specified LML or not, and the inspection shall be carried out at least in two directions perpendicular each other and in the axial direction at positions adequate to the length not less than three. The gauge shall not pass at all the measuring points at the working load applied to the gauge.

圆锥量规 加圆锥试验棒

Taper gauges · Test bars

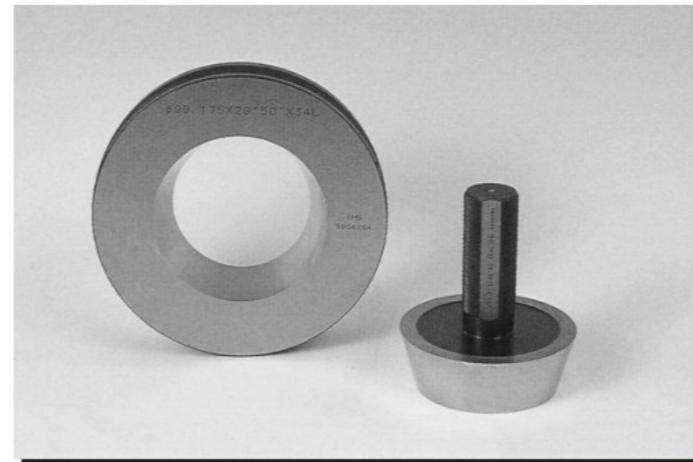


锥形量规是用于检查锥形产品的锥度

以及锥度的基本直径（大端直径或小端直径）。通常是由锥形塞规和锥形环规组成的一组标准量规。此外，也可以生产带有切口的锥度规，用来确认该产品在最后端面的标准止端。

Taper gauges are used to inspect gauge taper and the taper's standard diameter (the diameter at the large or small end). Generally comprised of a taper plug gauge and a taper ring gauge, the connected pair forms a standard gauge. However, this gauge can also be manufactured with a notch in order to identify this product's standard stopping position on the end face. (see diagram).

锥度规的使用法 How to use taper gauges



用锥形量规检查锥形产品的时候，一般在检查锥形孔时以锥形塞规的大端侧为基准线，或者一端面作为基准，在检查锥形轴时，以锥形侧面的小端侧面为基准，根据与产品孔或者轴的端面的偏差量来判定是否合格。锥度是根据接触的状况进行检查的。检查接触状况时，在塞规的表面均匀的涂一层薄薄的蓝色的糊剂（润滑油一类的），放入锥形孔旋转几下塞规然后拔出。接触的部分已被量规磨落蓝色糊剂或者红铅粉，由此判定接触状况。为了充分进行检查接触状况，需注意以下几点：

For inspecting tapered products by taper gauges. Generally the inspection of the taper hole is done at the base of the standard line of the large end of the taper plug gauge or at the end face of the taper plug gauge. The inspection of the taper shaft is generally done at the small end of the end face. Pass or fail is determined by the amount of deviation from the hole of the product or end face of the shaft. In addition, the taper is inspected by contact. To inspect by contact 05 taper, apply a light coat of Prussian blue or light cinnabar evenly on the surface of the plug, and insert it in the tapered hole, then turn the plug a little and remove. As good contact of the applied blue or light cinnabar is removed from the gauge. Furthermore to perform satisfactory inspection of contact, the following precautions should be noted.

1. 仔细清洁量规以及产品，特别是不得粘附切屑等。
Clean the gauge and product well, removing any accumulated dust.
2. 在量规上均匀的涂蓝色的糊剂（润滑油一类的）或者红铅粉，涂得时候以颜色来判定。凝固后的颜色变化为相当不同的浅颜色为止细心的涂满产品全身，这点非常重要。
Apply Prussian blue or light cinnabar evenly over the gauge. It is necessary to apply it thoroughly before it changes into a lighter color.
3. 将量规放入产品的过程中应防止相互碰撞，请充分注意。
Be careful to avoid scraping the gauge and product against each other or putting the gauge in only halfway.
4. 通常，使塞规直立状态下保持或者固定，环规则用相同的力向下轻轻推动环规，使其旋转约八分之一，恢复原状。
Under normal conditions, hold or anchor the plug in an upright position; then turn the ring about 1/8 while pressing down lightly with even force; then replace it.
5. 小心的将量规和产品分开。此时，请不要让产品和量规相互碰撞，此外，量规之间的相互检查，也采用接触检查。
Separate the gauge and product gently. Be careful not to scrape this time as well. Contact can also be used for between gauge inspection.