

**INSERTS**

**FOR**

**PLASTICS**

塑膠專用螺母

*Wherever you are...*

*we have the solution!*

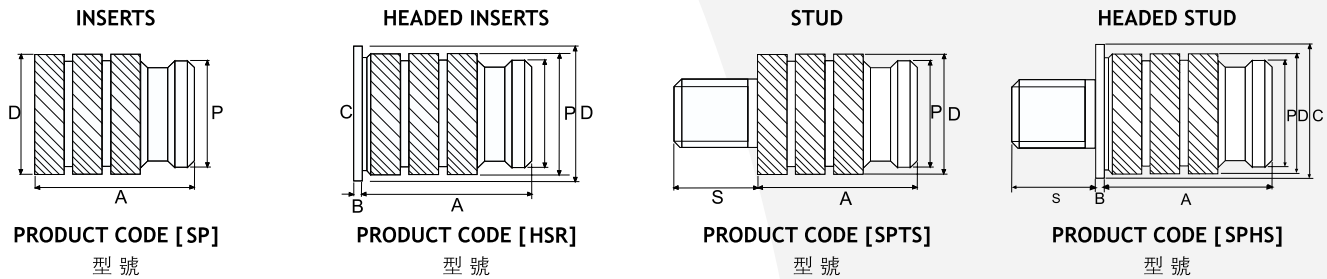
## ADVANTAGES

- Easy press-in insertion
- High torque resistance
- Low bursting stress allows the use of thinner wall bosses
- reducing the risk of sink marks
- Self-aligning--Assists Installation

## 特點

- 可用以壓入的方式快速裝置。
- 提供高扭拉力之性能。
- 特殊花紋設計可降低埋植時所產生的應力。
- 可使用自動埋植方式。

## SELECTION OF INSERT OR STUD



## ISO METRIC (公制)

Unit: Millimetres

Product Code 型	Thread Size 螺牙	Insert Length A 標準長度	Stud Lengths (For FLTS & FLHS only) S 公件長度										Head Height B 頭厚	Head $\phi$ C 頭外徑	Insert $\phi$ D 外徑	Pilot End $\phi$ P 圓頭	Rec. Hole Size -0.00 +0.10 孔直徑	Min. Wall Thickness 最少肉厚
			5	6	8	10	12	14	16	18	20	25						
SP-B	M2	4.1	5	6	8	10	12	14	16	18	20	25	0.51	4.8	3.3	3.0	3.1	1.6
	M2.5	5.3	5	6	8	10	12	14	16	18	20	25	0.58	5.5	4.2	3.7	3.8	2.0
HSR-B	M3	5.3	5	6	8	10	12	14	16	18	20	25	0.58	5.5	4.2	3.7	3.8	2.0
	M3.5	6.3	5	6	8	10	12	14	16	18	20	25	0.74	6.4	5.0	4.5	4.6	2.5
SPTS-B	M4	7.4	5	6	8	10	12	14	16	18	20	25	0.89	7.1	5.8	5.3	5.4	2.5
	M5	8.3	5	6	8	10	12	14	16	18	20	25	1.07	7.9	6.6	6.1	6.2	2.5
SPHS-B	M6	9.2	5	6	8	10	12	14	16	18	20	25	1.32	9.5	8.2	7.7	7.8	2.8
	M8	9.2	5	6	8	10	12	14	16	18	20	25	1.32	11.1	9.7	9.3	9.3	3.8
	M10	9.2	5	6	8	10	12	14	16	18	20	25	1.57	14.0	12.7	12.2	12.3	5.0

Other lengths possible on quotation. 其它長度也可估價。

## UNIFIED (英制)

Unit: Inches

Product Code 型	Thread Size 螺牙	Insert Length A 標準長度	Stud Lengths (For SPTS & SPHS only) S 公件長度										Head Height B 頭厚	Head $\phi$ C 頭外徑	Insert $\phi$ D 外徑	Pilot End $\phi$ P 圓頭	Rec. Hole Size -0.004 +0.004 孔直徑	Min. Wall Thickness 最少肉厚
			3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1						
SP-B HSR-B SPTS-B SPHS-B	2-56	.162	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.020	.187	.131	.117	.122	.063
	4-40	.208	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.023	.217	.165	.146	.150	.079
	6-32	.247	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.029	.250	.196	.178	.181	.098
	8-32	.292	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.035	.281	.228	.209	.213	.098
	10-24	.326	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.042	.312	.259	.241	.244	.098
	10-32	.326	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.042	.312	.259	.241	.244	.098
	1/4-20	.362	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.375	.332	.304	.307	.110
	1/4-28	.362	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.375	.332	.304	.307	.110
	5/16-18	.362	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.437	.383	.365	.366	.150
	5/16-24	.362	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.437	.383	.365	.366	.150
	3/8-46	.362	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.062	.551	.499	.481	.484	.197
	3/8-24	.362	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.062	.551	.499	.481	.484	.197

Other lengths possible on quotation. 其它長度也可估價。

STANDARD MATERIAL: BRASS (B) 標準材質: 黃銅 (B)  
Other materials possible on quotation 其它長度也可估價。

## SPECIFYING AN INSERT & STUD

INSERTS (METRIC)					STUDS (METRIC)									
	SP	-	B	-	M3		SPTS	-	B	-	M3	×	5.0	
	PRODUCT CODE		MATERIAL		THREAD SIZE		PRODUCT CODE		MATERIAL		THREAD SIZE		STUD LENGTH	
	型號		材質		螺牙		型號		材質		螺牙		公件長度	
	HSP	-	B	-	632		SPHS	-	B	-	632	×	3/16	
INSERTS (INCHES)					STUDS (INCHES)									

## BOSS DESIGN SPECIFICATION

### HOLE PREPARATION

Holes for Spiro inserts should be moulded to remove the danger of drill induced stresses. The taper on a moulded hole should be 1° inclusive and the hole diameter recommended should apply at the point reached by the bottom of the insert. The top of the hole should not be chamfered or counterbored and care must be taken to avoid bell mouching. Hole diameter tolerance: -0.00 +0.10mm.

### INSTALLATION

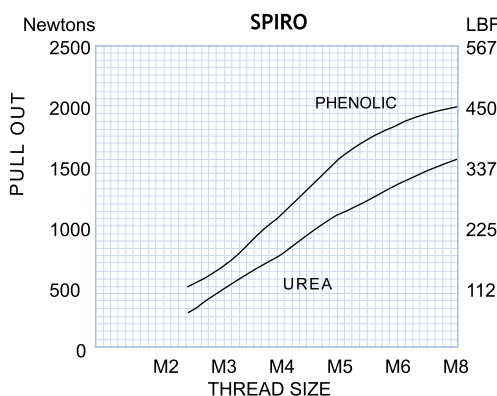
The insert must be installed using a squeeze action press, NEVER a hammer blow. The insert must be allowed to rotate in the direction of the knurl during installation. This is best achieved by the use of a punch having either a polished face or a thrust bearing. The insert must be kept axially square during installation, as any tilting will induce side loads on the boss wall. The recommended hole size must not be increase beyond the top tolerance limit since oversize holes reduce or remove the self aligning effects, producing side loads and consequent risk of boss cracking.

### WALL THICKNESS

A general guide to minimum wall thickness is given in the data table but this will vary depending upon the nature of the plastic. Where thinner walls are required these can often be accommodated, but consultation with the P.S.M Technology Centre or Local Sales Office and pre-production testing is strongly advised.

### PERFORMANCE DATA

The complexity of materials and variations in service conditions make it impossible to detail fastener performance for specific applications. The chart below gives a general guide and show the relative performance of the inserts in the range.



### 塑膠孔徑之設計

1. 螺母規格之塑膠孔徑建議值，請參考規格表。
2. 塑膠孔徑內之脫模斜度應於 1 度以內。
3. 塑膠內孔徑公差值請設於 -0.00+0.10mm 的範圍。
4. 塑膠孔上方可以不設計導角。

### 裝置

1. 可使用定速加壓方式壓入。
2. 不可用瞬間衝壓或鐵錘打入。

### 塑膠肉厚

1. 建議肉厚，請參考規格表。
2. 肉厚可視不同塑膠材質，而略作調整，請先與巴 P.S.M 技術人員聯繫，必要時我們將協助測試及作最適當之建議。

### 測試數據

1. P.S.M 使用各種精密之測試儀器，針對常用之塑膠材料作出各類型螺母可承受之拉力的測試參考數據。
2. P.S.M 為服務客戶，非常歡迎客戶委托代作測試，我們將提供完整及詳盡之測試報告及必要之建議。