

Think threads with
YAMAWA

Check Pin Series

『精準的螺紋』取決於底孔徑的管理!!
操作簡單並能正確的檢測攻牙前底孔徑!!

■ 螺絲攻底孔徑檢測棒 ■

CPC-S CPC-T CP-RY

切削式螺絲攻用底孔徑檢測棒 (平行型)

切削式螺絲攻用底孔徑檢測棒 (錐度型)

無溝絲攻用底孔徑檢測棒



重要!

螺絲攻的底孔徑，您確認了嗎？

■ 螺絲攻底孔徑檢測棒 ■

CPC-S Check pin for Cutting Straight

切削式螺絲攻用底孔徑檢測棒(平行型)
CPC-S(5支1組)

HSS



CPC-T Check pin for Cutting Taper

切削式螺絲攻用底孔徑檢測棒(錐度型)
CPC-T(單支)

HSS



CPR-S Check pin for Forming Straight

擠壓絲攻用底孔徑檢測棒(平行型)
CPR-S

HSS



CPR-T Check pin for Forming Taper

擠壓絲攻用底孔徑檢測棒(錐度型)
CPR-T

HSS



■ 一般攻牙加工工程



底孔徑檢測棒可同時檢測
底孔徑形狀及底孔徑尺寸!!



使用要點!!



正確的
底孔徑

- 提升螺絲攻壽命
- 提升內螺紋品質

降低綜合成本



■ 底孔形狀的確認

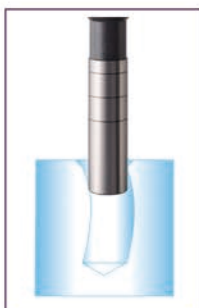


底孔加工異常的情況：



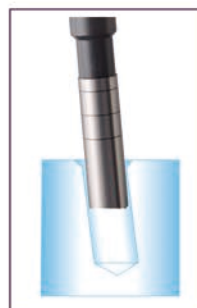
異常情況. **1**
—— 彎曲 ——

底孔彎曲變形



異常情況. **2**
—— 歪斜 ——

底孔歪斜



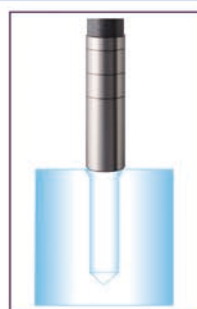
異常情況. **3**
—— 孔口擴孔 ——

底孔口徑過大



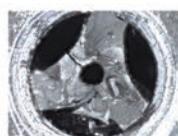
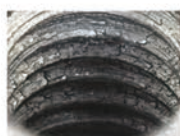
異常情況. **4**
- 底孔徑過小 -

底孔徑過小



■ 底孔徑異常所產生之加工問題

- 1) 底孔彎曲
- 2) 底孔歪斜
- 3) 擴孔
- 4) 底孔徑過小



加工合適並準確精良的底孔徑，能減少攻牙加工問題及提高絲攻壽命，所以有效管理攻牙前之底孔徑是很重要的！！

CPC-S Check pin for Cutting Straight

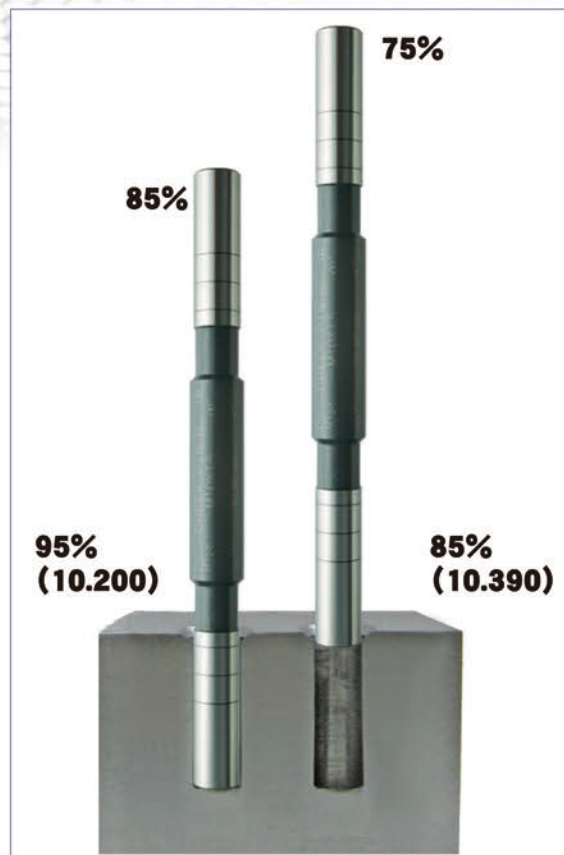
切削是螺絲攻用底孔徑檢測棒(平行型) CPC-S (5支1組)



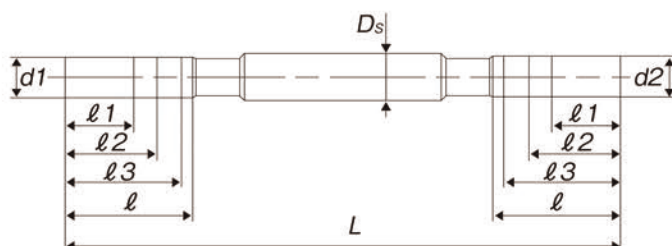
特長

1. 由5支為1組，可檢測多種底孔徑及底孔深度。
2. 使用高速鋼材製成，以提升檢測棒耐磨耗性。
3. 可適用於通孔與盲孔的底孔徑檢測。

■ 例：M12×1.75(底孔徑Φ10.37)



■ 底孔徑檢測棒形狀與規格



(單位：mm)

尺寸	全長 L	ℓ	Ds	d1 (咬合率)	d2 (咬合率)	產品編號	ℓ1 (1.50)	ℓ2 (2.0)	ℓ3 (2.50)
M2 × 0.4	41.5	5.5	3.0	1.567 (100%)	1.610 (90%)	CPCS2.0EA	3.0	4.0	5.0
				1.589 (95%)	1.632 (85%)	CPCS2.0EB			
				1.610 (90%)	1.654 (80%)	CPCS2.0EC			
				1.632 (85%)	1.675 (75%)	CPCS2.0ED			
				1.654 (80%)	1.697 (70%)	CPCS2.0EE			
				1.675 (75%)	1.719 (65%)	CPCS2.0EF			
				100%~70% (5本セット)		CPCS2.0ES			
				95%~65% (5本セット)		CPCS2.0EM			
				2.013 (100%)	2.062 (90%)	CPCS2.5FA			
				2.037 (95%)	2.086 (85%)	CPCS2.5FB			
M2.5 × 0.45	45	7.5	3.0	2.062 (90%)	2.110 (80%)	CPCS2.5FC	3.8	5.0	6.3
				2.086 (85%)	2.135 (75%)	CPCS2.5FD			
				2.110 (80%)	2.159 (70%)	CPCS2.5FE			
				2.135 (75%)	2.183 (65%)	CPCS2.5FF			
				100%~70% (5本セット)		CPCS2.5FS			
				95%~65% (5本セット)		CPCS2.5FM			
				2.121 (100%)	2.159 (90%)	CPCS2.5DA			
				2.140 (95%)	2.178 (85%)	CPCS2.5DB			
				2.159 (90%)	2.197 (80%)	CPCS2.5DC			
				2.178 (85%)	2.216 (75%)	CPCS2.5DD			
M2.5 × 0.35	45	7.5	3.0	2.197 (80%)	2.235 (70%)	CPCS2.5DE	3.8	5.0	6.3
				2.216 (75%)	2.254 (65%)	CPCS2.5DF			
				100%~70% (5本セット)		CPCS2.5DS			
				95%~65% (5本セット)		CPCS2.5DM			
				2.459 (100%)	2.513 (90%)	CPCS3.0GA			
				2.486 (95%)	2.540 (85%)	CPCS3.0GB			
				2.513 (90%)	2.567 (80%)	CPCS3.0GC			
				2.540 (85%)	2.594 (75%)	CPCS3.0GD			
				2.567 (80%)	2.621 (70%)	CPCS3.0GE			
				2.594 (75%)	2.648 (65%)	CPCS3.0GF			
M3 × 0.5	49	9.0	4.0	100%~70% (5本セット)		CPCS3.0GS	4.5	6.0	7.5
				95%~65% (5本セット)		CPCS3.0GM			

尺寸	全長 L	ℓ	Ds	d1 (咬合率)	d2 (咬合率)	產品編號	ℓ1 (1.50)	ℓ2 (2.0)	ℓ3 (2.50)
M3 × 0.35	49	9.0	4.0	2.621 (100%)	2.659 (90%)	CPCS3.0DA	4.5	6.0	7.5
				2.640 (95%)	2.678 (85%)	CPCS3.0DB			
				2.659 (90%)	2.697 (80%)	CPCS3.0DC			
				2.678 (85%)	2.716 (75%)	CPCS3.0DD			
				2.697 (80%)	2.735 (70%)	CPCS3.0DE			
				2.716 (75%)	2.754 (65%)	CPCS3.0DF			
				100%~70% (5本セット)		CPCS3.0DS			
				95%~65% (5本セット)		CPCS3.0DM			
				2.850 (100%)	2.915 (90%)	CPCS3.5HA			
				2.883 (95%)	2.948 (85%)	CPCS3.5HB			
M3.5 × 0.6	57	11.0	5.0	2.915 (90%)	2.980 (80%)	CPCS3.5HC	5.3	7.0	8.8
				2.948 (85%)	3.013 (75%)	CPCS3.5HD			
				2.980 (80%)	3.045 (70%)	CPCS3.5HE			
				3.013 (75%)	3.078 (65%)	CPCS3.5HF			
				100%~70% (5本セット)		CPCS3.5HS			
				95%~65% (5本セット)		CPCS3.5HM			
				3.121 (100%)	3.159 (90%)	CPCS3.5DA			
				3.140 (95%)	3.178 (85%)	CPCS3.5DB			
				3.159 (90%)	3.197 (80%)	CPCS3.5DC			
				3.178 (85%)	3.216 (75%)	CPCS3.5DD			
M3.5 × 0.35	57	11.0	5.0	3.197 (80%)	3.235 (70%)	CPCS3.5DE	5.3	7.0	8.8
				3.216 (75%)	3.254 (65%)	CPCS3.5DF			
				100%~70% (5本セット)		CPCS3.5DS			
				95%~65% (5本セット)		CPCS3.0DM			
				3.242 (100%)	3.318 (90%)	CPCS4.0IA			
				3.280 (95%)	3.356 (85%)	CPCS4.0IB			
				3.318 (90%)	3.394 (80%)	CPCS4.0IC			
				3.356 (85%)	3.432 (75%)	CPCS4.0ID			
				3.394 (80%)	3.470 (70%)	CPCS4.0IE			
				3.432 (75%)	3.507 (65%)	CPCS4.0IF			
M4 × 0.7	57	11.0	5.0	100%~70% (5本セット)		CPCS4.0IS	6.0	8.0	10.0
				95%~65% (5本セット)		CPCS4.0IM			

(単位: mm)

尺寸	全長 L	ℓ	Ds	d1 (咬合率)	d2 (咬合率)	產品編號	ℓ1 (1.5D)	ℓ2 (2D)	ℓ3 (2.5D)
M4 × 0.5	57	11.0	5.0	3.459 (100%)	3.513 (90%)	CPCS4.0GA	6.0	8.0	10.0
				3.486 (95%)	3.540 (85%)	CPCS4.0GB			
				3.513 (90%)	3.567 (80%)	CPCS4.0GC			
				3.540 (85%)	3.594 (75%)	CPCS4.0GD			
				3.567 (80%)	3.621 (70%)	CPCS4.0GE			
				3.594 (75%)	3.648 (65%)	CPCS4.0GF			
				100% - 70% (5本セット)		CPCS4.0GS			
				95% - 65% (5本セット)		CPCS4.0GM			
M4.5 × 0.75	65	14.0	5.5	3.688 (100%)	3.769 (90%)	CPCS4.5JA	6.8	9.0	11.3
				3.729 (95%)	3.810 (85%)	CPCS4.5JB			
				3.769 (90%)	3.850 (80%)	CPCS4.5JC			
				3.810 (85%)	3.891 (75%)	CPCS4.5JD			
				3.850 (80%)	3.932 (70%)	CPCS4.5JE			
				3.891 (75%)	3.972 (65%)	CPCS4.5JF			
				100% - 70% (5本セット)		CPCS4.5JS			
				95% - 65% (5本セット)		CPCS4.5JM			
M4.5 × 0.5	65	14.0	5.5	3.959 (100%)	4.013 (90%)	CPCS4.5GA	6.8	9.0	11.3
				3.986 (95%)	4.040 (85%)	CPCS4.5GB			
				4.013 (90%)	4.067 (80%)	CPCS4.5GC			
				4.040 (85%)	4.094 (75%)	CPCS4.5GD			
				4.067 (80%)	4.121 (70%)	CPCS4.5GE			
				4.094 (75%)	4.148 (65%)	CPCS4.5GF			
				100% - 70% (5本セット)		CPCS4.5GS			
				95% - 65% (5本セット)		CPCS4.5GM			
M5 × 0.8	65	14.0	5.5	4.134 (100%)	4.221 (90%)	CPCS5.0KA	7.5	10.0	12.5
				4.177 (95%)	4.264 (85%)	CPCS5.0KB			
				4.221 (90%)	4.307 (80%)	CPCS5.0KC			
				4.264 (85%)	4.350 (75%)	CPCS5.0KD			
				4.307 (80%)	4.394 (70%)	CPCS5.0KE			
				4.350 (75%)	4.437 (65%)	CPCS5.0KF			
				100% - 70% (5本セット)		CPCS5.0KS			
				95% - 65% (5本セット)		CPCS5.0KM			
M5 × 0.5	65	14.0	5.5	4.459 (100%)	4.513 (90%)	CPCS5.0GA	7.5	10.0	12.5
				4.486 (95%)	4.540 (85%)	CPCS5.0GB			
				4.513 (90%)	4.567 (80%)	CPCS5.0GC			
				4.540 (85%)	4.594 (75%)	CPCS5.0GD			
				4.567 (80%)	4.621 (70%)	CPCS5.0GE			
				4.594 (75%)	4.648 (65%)	CPCS5.0GF			
				100% - 70% (5本セット)		CPCS5.0GS			
				95% - 65% (5本セット)		CPCS5.0GM			
M6 × 1	73	16.5	6.0	4.917 (100%)	5.026 (90%)	CPCS6.0MA	9.0	12.0	15.0
				4.972 (95%)	5.080 (85%)	CPCS6.0MB			
				5.026 (90%)	5.134 (80%)	CPCS6.0MC			
				5.080 (85%)	5.188 (75%)	CPCS6.0MD			
				5.134 (80%)	5.242 (70%)	CPCS6.0ME			
				5.188 (75%)	5.296 (65%)	CPCS6.0MF			
				100% - 70% (5本セット)		CPCS6.0MS			
				95% - 65% (5本セット)		CPCS6.0MM			
M6 × 0.75	73	16.5	6.0	5.188 (100%)	5.269 (90%)	CPCS6.0JA	9.0	12.0	15.0
				5.229 (95%)	5.310 (85%)	CPCS6.0JB			
				5.269 (90%)	5.350 (80%)	CPCS6.0JC			
				5.310 (85%)	5.391 (75%)	CPCS6.0JD			
				5.350 (80%)	5.432 (70%)	CPCS6.0JE			
				5.391 (75%)	5.472 (65%)	CPCS6.0JF			
				100% - 70% (5本セット)		CPCS6.0JS			
				95% - 65% (5本セット)		CPCS6.0JM			
M7 × 1	99	22.0	8.0	5.917 (100%)	6.026 (90%)	CPCS7.0MA	10.5	14.0	17.5
				5.972 (95%)	6.080 (85%)	CPCS7.0MB			
				6.026 (90%)	6.134 (80%)	CPCS7.0MC			
				6.080 (85%)	6.188 (75%)	CPCS7.0MD			
				6.134 (80%)	6.242 (70%)	CPCS7.0ME			
				6.188 (75%)	6.296 (65%)	CPCS7.0MF			
				100% - 70% (5本セット)		CPCS7.0MS			
				95% - 65% (5本セット)		CPCS7.0MM			
M7 × 0.75	99	22.0	8.0	6.188 (100%)	6.269 (90%)	CPCS7.0JA	10.5	14.0	17.5
				6.229 (95%)	6.310 (85%)	CPCS7.0JB			
				6.269 (90%)	6.350 (80%)	CPCS7.0JC			
				6.310 (85%)	6.391 (75%)	CPCS7.0JD			
				6.350 (80%)	6.432 (70%)	CPCS7.0JE			
				6.391 (75%)	6.472 (65%)	CPCS7.0JF			
				100% - 70% (5本セット)		CPCS7.0JS			
				95% - 65% (5本セット)		CPCS7.0JM			
M8 × 1.25	99	22.0	8.0	6.647 (100%)	6.782 (90%)	CPCS8.0NA	12.0	16.0	20.0
				6.714 (95%)	6.850 (85%)	CPCS8.0NB			
				6.782 (90%)	6.917 (80%)	CPCS8.0NC			
				6.850 (85%)	6.985 (75%)	CPCS8.0ND			
				6.917 (80%)	7.053 (70%)	CPCS8.0NE			
				6.985 (75%)	7.120 (65%)	CPCS8.0NF			
				100% - 70% (5本セット)		CPCS8.0NS			
				95% - 65% (5本セット)		CPCS8.0NM			
M8 × 1	99	22.0	8.0	6.917 (100%)	7.026 (90%)	CPCS8.0MA	12.0	16.0	20.0
				6.972 (95%)	7.080 (85%)	CPCS8.0MB			
				7.026 (90%)	7.134 (80%)	CPCS8.0MC			
				7.080 (85%)	7.188 (75%)	CPCS8.0MD			
				7.134 (80%)	7.242 (70%)	CPCS8.0ME			
				7.188 (75%)	7.296 (65%)	CPCS8.0MF			
				100% - 70% (5本セット)		CPCS8.0MS			
				95% - 65% (5本セット)		CPCS8.0MM			
M8 × 0.75	99	22.0	8.0	7.188 (100%)	7.269 (90%)	CPCS8.0JA	12.0	16.0	20.0
				7.229 (95%)	7.310 (85%)	CPCS8.0JB			
				7.269 (90%)	7.350 (80%)	CPCS8.0JC			
				7.310 (85%)	7.391 (75%)	CPCS8.0JD			
				7.350 (80%)	7.432 (70%)	CPCS8.0JE			
				7.391 (75%)	7.472 (65%)	CPCS8.0JF			
				100% - 70% (5本セット)		CPCS8.0JS			
				95% - 65% (5本セット)		CPCS8.0JM			
M9 × 1.25	110	27.5	10.0	7.647 (100%)	7.782 (90%)	CPCS9.0NA	13.5	18.0	22.5
				7.714 (95%)	7.850 (85%)	CPCS9.0NB			
				7.782 (90%)	7.917 (80%)	CPCS9.0NC			
				7.850 (85%)	7.985 (75%)	CPCS9.0ND			
				7.917 (80%)	8.053 (70%)	CPCS9.0NE			
				7.985 (75%)	8.120 (65%)	CPCS9.0NF			
				100% - 70% (5本セット)		CPCS9.0NS			
				95% - 65% (5本セット)		CPCS9.0NM			

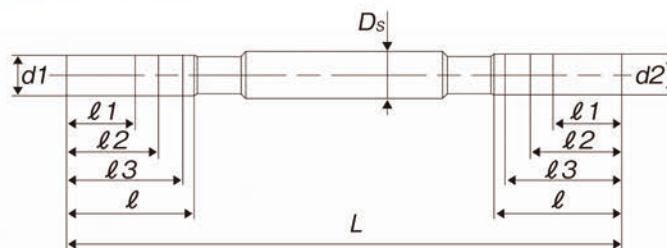
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CPC-S (美制牙) Check pin for Cutting Straight for Unified Threads

切削式螺絲攻用底孔徑檢測棒(平行型) CPC-S (5支1組)



■ 底孔徑檢測棒形狀與規格



(單位: mm)

尺寸	全長 L	ℓ	D _s	d1 (咬合率)	d2 (咬合率)	產品編號	ℓ1 (1.50)	ℓ2 (20)	ℓ3 (2.50)
2-56UNC	41.5	5.5	3	1.695 (100%)	1.742 (90%)	CPCSUN2EA	3.3	4.4	5.5
				1.718 (95%)	1.767 (85%)	CPCSUN2EB			
				1.742 (90%)	1.791 (80%)	CPCSUN2EC			
				1.767 (85%)	1.816 (75%)	CPCSUN2ED			
				1.791 (80%)	1.840 (70%)	CPCSUN2EE			
				(5支1組)		CPCSUN2ES			
2-64UNF	41.5	5.5	3	1.756 (100%)	1.797 (90%)	CPCSUN2DA	3.3	4.4	5.5
				1.776 (95%)	1.819 (85%)	CPCSUN2DB			
				1.797 (90%)	1.840 (80%)	CPCSUN2DC			
				1.819 (85%)	1.862 (75%)	CPCSUN2DD			
				1.840 (80%)	1.883 (70%)	CPCSUN2DE			
				(5支1組)		CPCSUN2DS			
3-48UNC	45	7.5	3	1.941 (100%)	1.999 (90%)	CPCSUN3FA	3.8	5.0	6.3
				1.971 (95%)	2.028 (85%)	CPCSUN3FB			
				1.999 (90%)	2.057 (80%)	CPCSUN3FC			
				2.028 (85%)	2.085 (75%)	CPCSUN3FD			
				2.057 (80%)	2.114 (70%)	CPCSUN3FE			
				(5支1組)		CPCSUN3FS			
3-56UNF	45	7.5	3	2.025 (100%)	2.073 (90%)	CPCSUN3EA	3.8	5.0	6.3
				2.049 (95%)	2.098 (85%)	CPCSUN3EB			
				2.073 (90%)	2.122 (80%)	CPCSUN3EC			
				2.098 (85%)	2.147 (75%)	CPCSUN3ED			
				2.122 (80%)	2.171 (70%)	CPCSUN3EE			
				(5支1組)		CPCSUN3ES			
4-40UNC	45	7.5	3	2.157 (100%)	2.226 (90%)	CPCSUN4HA	4.3	5.7	7.1
				2.192 (95%)	2.261 (85%)	CPCSUN4HB			
				2.226 (90%)	2.295 (80%)	CPCSUN4HC			
				2.261 (85%)	2.329 (75%)	CPCSUN4HD			
				2.295 (80%)	2.364 (70%)	CPCSUN4HE			
				(5支1組)		CPCSUN4HS			

尺寸	全長 L	ℓ	D _s	d1 (咬合率)	d2 (咬合率)	產品編號	ℓ1 (1.50)	ℓ2 (20)	ℓ3 (2.50)
4-48UNF	45	7.5	3	2.271 (100%)	2.329 (90%)	CPCSUN4FA	4.3	5.7	7.1
				2.301 (95%)	2.358 (85%)	CPCSUN4FB			
				2.329 (90%)	2.387 (80%)	CPCSUN4FC			
				2.358 (85%)	2.415 (75%)	CPCSUN4FD			
				2.387 (80%)	2.444 (70%)	CPCSUN4FE			
				(5支1組)		CPCSUN4FS			
5-40UNC	49	9	4	2.487 (100%)	2.556 (90%)	CPCSUN5HA	4.8	6.4	7.9
				2.522 (95%)	2.591 (85%)	CPCSUN5HB			
				2.556 (90%)	2.625 (80%)	CPCSUN5HC			
				2.591 (85%)	2.659 (75%)	CPCSUN5HD			
				2.625 (80%)	2.694 (70%)	CPCSUN5HE			
				(5支1組)		CPCSUN5HS			
5-44UNF	49	9	4	2.551 (100%)	2.613 (90%)	CPCSUN5GA	4.8	6.4	7.9
				2.581 (95%)	2.644 (85%)	CPCSUN5GB			
				2.613 (90%)	2.675 (80%)	CPCSUN5GC			
				2.644 (85%)	2.706 (75%)	CPCSUN5GD			
				2.675 (80%)	2.738 (70%)	CPCSUN5GE			
				(5支1組)		CPCSUN5GS			
6-32UNC	49	9	4	2.642 (100%)	2.732 (90%)	CPCSUN6JA	5.3	7.0	8.8
				2.689 (95%)	2.775 (85%)	CPCSUN6JB			
				2.732 (90%)	2.818 (80%)	CPCSUN6JC			
				2.775 (85%)	2.861 (75%)	CPCSUN6JD			
				2.818 (80%)	2.903 (70%)	CPCSUN6JE			
				(5支1組)		CPCSUN6JS			
6-40UNF	49	9	4	2.820 (100%)	2.886 (90%)	CPCSUN6HA	5.3	7.0	8.8
				2.852 (95%)	2.921 (85%)	CPCSUN6HB			
				2.886 (90%)	2.955 (80%)	CPCSUN6HC			
				2.921 (85%)	2.989 (75%)	CPCSUN6HD			
				2.955 (80%)	3.024 (70%)	CPCSUN6HE			
				(5支1組)		CPCSUN6HS			

(単位 : mm)

尺寸	全長 L	ℓ	Ds	d1 (咬合率)	d2 (咬合率)	產品編號	ℓ1 (1.5D)	ℓ2 (2D)	ℓ3 (2.5D)
8-32UNC	57	11	5	3.302 (100%)	3.394 (90%)	CPCSUN8JA	6.3	8.3	10.4
				3.351 (95%)	3.437 (85%)	CPCSUN8JB			
				3.394 (90%)	3.480 (80%)	CPCSUN8JC			
				3.437 (85%)	3.523 (75%)	CPCSUN8JD			
				3.480 (80%)	3.565 (70%)	CPCSUN8JE			
				(5支1組)		CPCSUN8JS			
8-36UNF	57	11	5	3.404 (100%)	3.480 (90%)	CPCSUN8IA	6.3	8.3	10.4
				3.441 (95%)	3.518 (85%)	CPCSUN8IB			
				3.480 (90%)	3.556 (80%)	CPCSUN8IC			
				3.518 (85%)	3.594 (75%)	CPCSUN8ID			
				3.556 (80%)	3.632 (70%)	CPCSUN8IE			
				(5支1組)		CPCSUN8IS			
10-24UNC	65	14	5.5	3.683 (100%)	3.795 (90%)	CPCSUNAMA	7.2	9.7	12.1
				3.738 (95%)	3.852 (85%)	CPCSUNAMB			
				3.795 (90%)	3.909 (80%)	CPCSUNAMC			
				3.852 (85%)	3.967 (75%)	CPCSUNAMD			
				3.909 (80%)	4.024 (70%)	CPCSUNAME			
				(5支1組)		CPCSUNAMS			
10-32UNF	65	14	5.5	3.963 (100%)	4.053 (90%)	CPCSUNAJA	7.2	9.7	12.1
				4.010 (95%)	4.096 (85%)	CPCSUNAJB			
				4.053 (90%)	4.139 (80%)	CPCSUNAJC			
				4.096 (85%)	4.182 (75%)	CPCSUNAJD			
				4.139 (80%)	4.224 (70%)	CPCSUNAJE			
				(5支1組)		CPCSUNAJS			
12-24UNC	65	14	5.5	4.344 (100%)	4.455 (90%)	CPCSUNCMA	8.2	11.0	13.7
				4.398 (95%)	4.512 (85%)	CPCSUNCMB			
				4.455 (90%)	4.569 (80%)	CPCSUNCMC			
				4.512 (85%)	4.627 (75%)	CPCSUNCMD			
				4.569 (80%)	4.684 (70%)	CPCSUNCME			
				(5支1組)		CPCSUNCMS			
12-28UNF	65	14	5.5	4.496 (100%)	4.602 (90%)	CPCSUNCKA	8.2	11.0	13.7
				4.553 (95%)	4.651 (85%)	CPCSUNCKB			
				4.602 (90%)	4.700 (80%)	CPCSUNCKC			
				4.651 (85%)	4.749 (75%)	CPCSUNCKD			
				4.700 (80%)	4.799 (70%)	CPCSUNCKE			
				(5支1組)		CPCSUNCKS			
1/4-20UNC	73	16.5	6	4.979 (100%)	5.113 (90%)	CPCSU04NA	9.5	12.7	15.9
				5.044 (95%)	5.181 (85%)	CPCSU04NB			
				5.113 (90%)	5.250 (80%)	CPCSU04NC			
				5.181 (85%)	5.319 (75%)	CPCSU04ND			
				5.250 (80%)	5.388 (70%)	CPCSU04NE			
				(5支1組)		CPCSU04NS			
1/4-28UNF	73	16.5	6	5.360 (100%)	5.466 (90%)	CPCSU04KA	9.5	12.7	15.9
				5.417 (95%)	5.515 (85%)	CPCSU04KB			
				5.466 (90%)	5.564 (80%)	CPCSU04KC			
				5.515 (85%)	5.613 (75%)	CPCSU04KD			
				5.564 (80%)	5.663 (70%)	CPCSU04KE			
				(5支1組)		CPCSU04KS			
5/16-18UNC	99	22	8	6.401 (100%)	6.563 (90%)	CPCSU050A	11.9	15.9	19.8
				6.487 (95%)	6.639 (85%)	CPCSU050B			
				6.563 (90%)	6.716 (80%)	CPCSU050C			
				6.639 (85%)	6.792 (75%)	CPCSU050D			
				6.716 (80%)	6.869 (70%)	CPCSU050E			
				(5支1組)		CPCSU050S			
5/16-24UNF	99	22	8	6.782 (100%)	6.907 (90%)	CPCSU05MA	11.9	15.9	19.8
				6.850 (95%)	6.964 (85%)	CPCSU05MB			
				6.907 (90%)	7.021 (80%)	CPCSU05MC			
				6.964 (85%)	7.079 (75%)	CPCSU05MD			
				7.021 (80%)	7.136 (70%)	CPCSU05ME			
				(5支1組)		CPCSU05MS			
3/8-16UNC	110	27.5	10	7.798 (100%)	7.978 (90%)	CPCSU06PA	14.3	19.1	23.8
				7.892 (95%)	8.064 (85%)	CPCSU06PB			
				7.978 (90%)	8.150 (80%)	CPCSU06PC			
				8.064 (85%)	8.236 (75%)	CPCSU06PD			
				8.150 (80%)	8.322 (70%)	CPCSU06PE			
				(5支1組)		CPCSU06PS			
3/8-24UNF	110	27.5	10	8.382 (100%)	8.494 (90%)	CPCSU06MA	14.3	19.1	23.8
				8.437 (95%)	8.551 (85%)	CPCSU06MB			
				8.494 (90%)	8.608 (80%)	CPCSU06MC			
				8.551 (85%)	8.666 (75%)	CPCSU06MD			
				8.608 (80%)	8.723 (70%)	CPCSU06ME			
				(5支1組)		CPCSU06MS			
7/16-14UNC	121	33	12	9.144 (100%)	9.345 (90%)	CPCSU07QA	16.7	22.2	27.8
				9.247 (95%)	9.443 (85%)	CPCSU07QB			
				9.345 (90%)	9.542 (80%)	CPCSU07QC			
				9.443 (85%)	9.640 (75%)	CPCSU07QD			
				9.542 (80%)	9.738 (70%)	CPCSU07QE			
				(5支1組)		CPCSU07QS			
7/16-20UNF	121	33	12	9.729 (100%)	9.876 (90%)	CPCSU07NA	16.7	22.2	27.8
				9.807 (95%)	9.944 (85%)	CPCSU07NB			
				9.876 (90%)	10.013(80%)	CPCSU07NC			
				9.944 (85%)	10.082(75%)	CPCSU07ND			
				10.013 (80%)	10.151(70%)	CPCSU07NE			
				(5支1組)		CPCSU07NS			
1/2-13UNC	121	33	12	10.592(100%)	10.796(90%)	CPCSU08RA	19.1	25.4	31.8
				10.691 (95%)	10.902(85%)	CPCSU08RB			
				10.796 (90%)	11.008(80%)	CPCSU08RC			
				10.902 (85%)	11.114(75%)	CPCSU08RD			
				11.008 (80%)	11.219(70%)	CPCSU08RE			
				(5支1組)		CPCSU08RS			
1/2-20UNF	121	33	12	11.329(100%)	11.463(90%)	CPCSU08NA	19.1	25.4	31.8
				11.394 (95%)	11.531(85%)	CPCSU08NB			
				11.463 (90%)	11.600(80%)	CPCSU08NC			
				11.531 (85%)	11.669(75%)	CPCSU08ND			
				11.600 (80%)	11.738(70%)	CPCSU08NE			
				(5支1組)		CPCSU08NS			

CPC-T

Check pin for Cutting Taper

切削式螺絲攻用底孔徑檢測棒(錐度型)

CPC-T (單支裝)



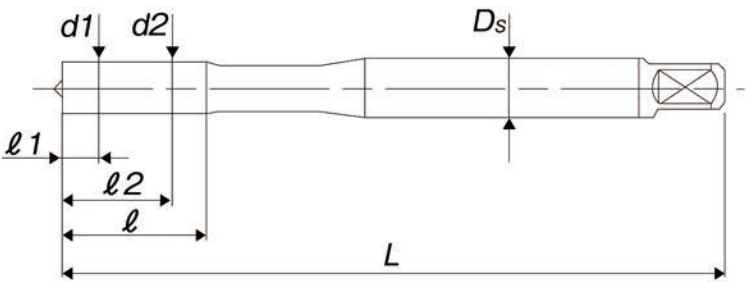
特長

1. 只要1支底孔徑檢測棒，就可以簡單檢測底孔徑。
2. 使用高速鋼材製成，以提升檢測棒耐磨耗性。
3. 適用於通孔及比較有深度的盲孔底孔徑檢測。

■ 以底孔徑Φ10.37為例



■ 底孔徑檢測棒的形狀與規格



(單位：mm)

尺寸	全長 L	l	D_s	$d1$ (咬合率)	$d2$ (咬合率)	產品編號	($l1$)	($l2$)
M2 ×0.4	42	7	3	1.567 (100%)	1.679 (74%)	CPCT2.0E	1	6
M2.5×0.45	46	8	3	2.013 (100%)	2.138 (74%)	CPCT2.5F	1.5	6.5
M3 ×0.5	46	8.5	4	2.459 (100%)	2.599 (74%)	CPCT3.0G	1.5	7
M4 ×0.7	52	11	5	3.242 (100%)	3.422 (76%)	CPCT4.0I	2.3	8.3
M5 ×0.8	59.5	13	5.5	4.134 (100%)	4.334 (77%)	CPCT5.0K	2.5	10
M6 ×1	61.5	17	6	4.917 (100%)	5.153 (78%)	CPCT6.0M	3.8	12.8
M8 ×1.25	90	19	8	6.647 (100%)	6.912 (80%)	CPCT8.0N	4.7	14.7
M10×1.5	100	23	10	8.376 (100%)	8.676 (82%)	CPCT0100	6.7	16.7
M12×1.75	110	27	12	10.106 (100%)	10.441 (82%)	CPCT012P	7.7	19.7

CPR-S Check pin for Forming Straight

擠壓絲攻用底孔徑檢測棒(平行型) CPR-S



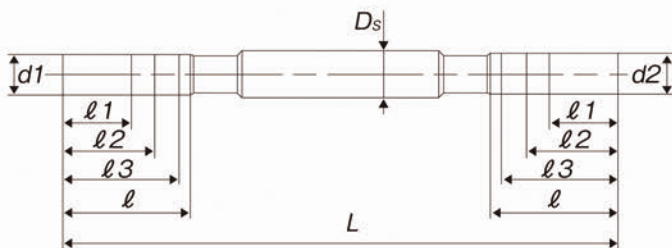
- 特長
1.

數種類的底孔徑及下孔深度檢測・
2.

為提升檢測棒耐磨耗性・
使用高速鋼材製成・
3.

適用於盲孔檢測使用・

底孔徑檢測棒的形狀與規格



(單位：mm)

尺寸	全長 L	l	D_s	d_1	d_2	產品編號	l_1	l_2	l_3
M2X0.4	41.5	5.5	3	1.790	1.840	CPRS2.0E	3	4	5
M2.5X0.45	41.5	5.5	3	2.270	2.340	CPRS2.5F	3.75	5	6.25
M2.6X0.45	41.5	5.5	3	2.370	2.440	CPRS2.6F	3.9	5.2	6.5
M3X0.5	49	9	4	2.750	2.820	CPRS3.0G	4.5	6	7.5
M4X0.7	57	11	5	3.650	3.720	CPRS4.0I	6	8	10
M5X0.8	65	14	5.5	4.590	4.670	CPRS5.0K	7.5	10	12.5
M6X1	73	16.5	6	5.490	5.590	CPRS6.0M	9	12	15
M8X1.25	99	22	8	7.360	7.490	CPRS8.0N	12	16	20
M10X1.5	110	27.5	10	9.220	9.340	CPRS010O	15	20	25
M10X1.25	110	27.5	10	9.350	9.490	CPRS010N	15	20	25
M12X1.75	121	33	12	11.090	11.230	CPRS012P	18	24	30
M12X1.5	121	33	12	11.220	11.340	CPRS012O	18	24	30
M12X1.25	121	33	12	11.360	11.500	CPRS012N	18	24	30
2-56UNC	41.5	5.5	3	1.960	2.040	CPRSUN2E	3.3	4.4	5.5
2-64UNF	41.5	5.5	3	1.980	2.060	CPRSUN2D	3.3	4.4	5.5
3-48UNC	45	7.5	3	2.250	2.350	CPRSUN3F	3.8	5.0	6.3
3-56UNF	45	7.5	3	2.290	2.370	CPRSUN3E	3.8	5.0	6.3
4-40UNC	49	9	4	2.540	2.640	CPRSUN4H	4.3	5.7	7.1
4-48UNF	49	9	4	2.590	2.680	CPRSUN4F	4.3	5.7	7.1
5-40UNC	49	9	4	2.870	2.970	CPRSUN5H	4.8	6.4	7.9

尺寸	全長 L	l	D_s	d_1	d_2	產品編號	l_1	l_2	l_3
5-44UNF	49	9	4	2.900	2.990	CPRSUN5G	4.8	6.4	7.9
6-32UNC	57	11	5	3.110	3.220	CPRSUN6J	5.3	7.0	8.8
6-40UNF	57	11	5	3.190	3.290	CPRSUN6H	5.3	7.0	8.8
8-32UNC	57	11	5	3.780	3.890	CPRSUN8J	6.3	8.3	10.4
8-36UNF	57	11	5	3.810	3.910	CPRSUN8I	6.3	8.3	10.4
10-24UNC	65	14	5.5	4.300	4.440	CPRSUNAM	7.2	9.7	12.1
10-32UNF	65	14	5.5	4.440	4.530	CPRSUNAJ	7.2	9.7	12.1
12-24UNC	73	16.5	6	4.960	5.070	CPRSUNCM	8.2	11	13.7
12-28UNF	73	16.5	6	5.030	5.130	CPRSUNCK	8.2	11	13.7
1/4-20UNC	73	16.5	6	5.730	5.860	CPRSU04N	9.5	12.7	15.9
1/4-28UNF	73	16.5	6	5.910	6.000	CPRSU04K	9.5	12.7	15.9
5/16-18UNC	99	22	8	7.230	7.380	CPRSU05O	12	16	20
5/16-24UNF	99	22	8	7.420	7.530	CPRSU05M	12	16	20
3/8-16UNC	110	27.5	10	8.720	8.890	CPRSU06P	14.3	19.1	23.8
3/8-24UNF	110	27.5	10	8.990	9.100	CPRSU06M	14.3	19.1	23.8
7/16-14UNC	121	33	12	10.200	10.400	CPRSU07O	16.7	22.2	27.8
7/16-20UNF	121	33	12	10.480	10.620	CPRSU07N	16.7	22.2	27.8
1/2-13UNC	110	33	12	11.700	11.920	CPRSU08R	19.1	25.4	31.8
1/2-20UNF	110	33	12	12.060	12.200	CPRSU08N	19.1	25.4	31.8

CPR-T Check pin for Forming Straight

擠壓絲攻用底孔徑檢測棒 (錐度型) CPR-T



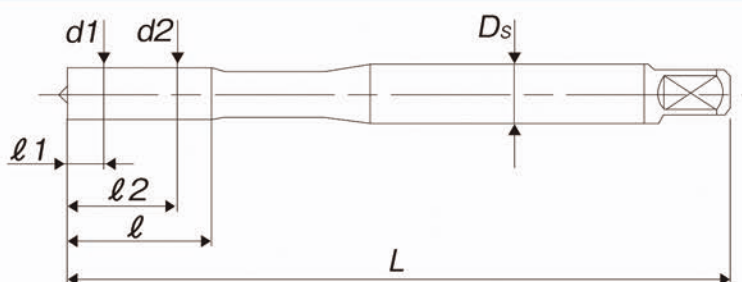
特長

1. 只要1支底孔徑檢測棒，就可以
很簡單檢測底孔徑。

2. 為提升檢測棒耐磨耗性，
使用高速鋼材製成。

3. 適用於通孔或比較深的盲孔底孔檢測。

底孔徑檢測棒的形狀與規格



(單位: mm)

尺寸	全長 L	l	D_s	d_1	d_2	產品編號	l_1	l_2
M2X0.4	42	7	3	1.790	1.840	CPRT2.0E	1	6
M2.5X0.45	46	8	3	2.270	2.340	CPRT2.5F	1.5	6.5
M2.6X0.45	46	8	4	2.370	2.440	CPRT2.6F	1.5	6.5
M3X0.5	46	8.5	4	2.750	2.820	CPRT3.0G	1.5	7
M4X0.7	52	10.5	5	3.650	3.720	CPRT4.0I	2.3	8.3
M5X0.8	59.5	12.5	5.5	4.590	4.670	CPRT5.0K	2.5	10
M6X1	61.5	16.5	6	5.490	5.590	CPRT6.0M	3.8	12.8
M8X1.25	90	19.4	8	7.360	7.490	CPRT8.0N	4.7	14.7
M10X1.5	100	23.4	10	9.220	9.340	CPRT0100	6.7	16.7
M10X1.25	100	23.4	10	9.350	9.490	CPRT010N	6.7	16.7
M12X1.75	110	27.4	12	11.090	11.230	CPRT012P	7.7	19.7
M12X1.5	110	27.4	12	11.220	11.340	CPRT0120	7.7	19.7
M12X1.25	110	27.4	12	11.360	11.500	CPRT012N	7.7	19.7
2-56UNC	46	8	3	1.960	2.040	CPRTUN2E	1.5	6.5
2-64UNF	46	8	3	1.980	2.060	CPRTUN2D	1.5	6.5
3-48UNC	46	8	3	2.250	2.350	CPRTUN3F	1.5	6.5
3-56UNF	46	8	3	2.290	2.370	CPRTUN3E	1.5	6.5
4-40UNC	46	8.5	4	2.540	2.640	CPRTUN4H	1.5	7
4-48UNF	46	8.5	4	2.590	2.680	CPRTUN4F	1.5	7
5-40UNC	46	8.5	4	2.870	2.970	CPRTUN5H	1.5	7

尺寸	全長 L	l	D_s	d_1	d_2	產品編號	l_1	l_2
5-44UNF	46	8.5	4	2.900	2.990	CPRTUN5G	1.5	7
6-32UNC	52	10.5	5	3.110	3.220	CPRTUN6J	2.25	8.3
6-40UNF	52	10.5	5	3.190	3.290	CPRTUN6H	2.25	8.3
8-32UNC	52	10.5	5	3.780	3.890	CPRTUN8J	2.25	8.3
8-36UNF	52	10.5	5	3.810	3.910	CPRTUN8I	2.25	8.3
10-24UNC	59.5	12.5	5.5	4.300	4.440	CPRTUNAM	2.5	10
10-32UNF	59.5	12.5	5.5	4.440	4.530	CPRTUNAJ	2.5	10
12-24UNC	61.5	16.5	6	4.960	5.070	CPRTUNCM	3.75	12.8
12-28UNF	61.5	16.5	6	5.030	5.130	CPRTUNCK	3.75	12.8
1/4-20UNC	61.5	16.5	6	5.730	5.860	CPRTU04N	3.75	12.8
1/4-28UNF	61.5	16.5	6	5.910	6.000	CPRTU04K	3.75	12.8
5/16-18UNC	90	19.4	8	7.230	7.380	CPRTU050	4.7	14.7
5/16-24UNF	90	19.4	8	7.420	7.530	CPRTU05M	4.7	14.7
3/8-16UNC	100	23.4	10	8.720	8.890	CPRTU06P	6.7	16.7
3/8-24UNF	100	23.4	10	8.990	9.100	CPRTU06M	6.7	16.7
7/16-14UNC	110	27.4	12	10.200	10.400	CPRTU070	7.7	19.7
7/16-20UNF	110	27.4	12	10.480	10.620	CPRTU07N	7.7	19.7
1/2-13UNC	110	27.4	12	11.700	11.920	CPRTU08R	7.7	19.7
1/2-20UNF	110	27.4	12	12.060	12.200	CPRTU08N	7.7	19.7

底孔徑的檢測



切削式螺絲攻用底孔徑檢測棒使用範例：
M6 X 1 6H級內螺紋底孔徑檢測!!

CPC-S (平行型)使用範例

Step. 1 M6×1 6H內螺紋內徑尺寸確認：(Min 4.917mm~Max 5.153mm)

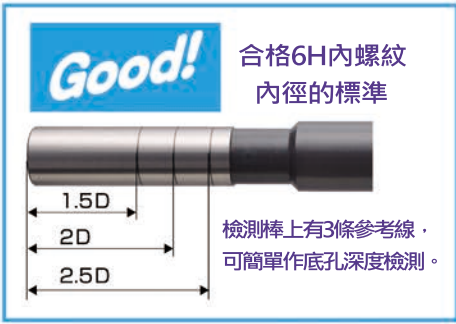
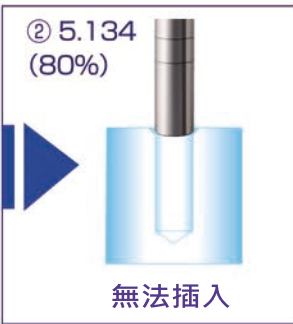
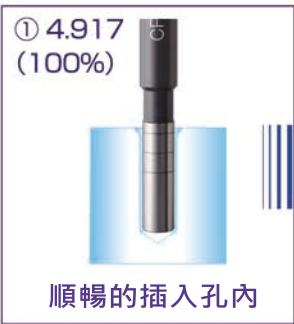
Step. 2 M6×1 底孔徑檢測值

尺寸	全長 L	ℓ	D_s	$d1$ (咬合率)	$d2$ (咬合率)
M6 × 1	73	16.5	6	4.917 (100%)	5.026 (90%)
				4.972 (95%)	5.080 (85%)
				5.026 (90%)	5.134 (80%)
				5.080 (85%)	5.188 (75%)
				5.134 (80%)	5.242 (70%)

對照左邊表格6H內螺紋的內徑，來選擇最接近最大值與最小值的檢測棒。

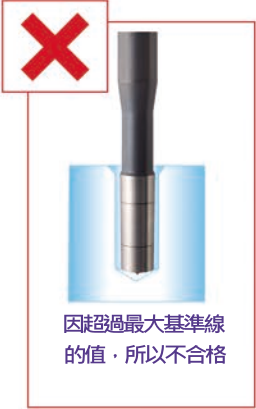
⇒ ①4.917(100%) 與 ②5.134(80%)

Step. 3 將在Step.2選定的1及 2 的檢測棒插入底孔作檢測。



CPC-T (錐度型)使用範例

尺寸	全長 L	ℓ	D_s	$d1$ (咬合率)	$d2$ (咬合率)	產品編號	($\ell 1$)	($\ell 2$)
M6 × 1	61.5	17	6	4.917 (100%)	5.153 (78%)	CPCT6.0M	3.8	12.8



参考資料

① 內螺紋的底孔徑與咬合率

底孔徑與咬合率的關係

(單位mm)

螺紋尺寸	底孔徑 ⁽²⁾							內螺紋小徑 ⁽³⁾			
	咬合率 (%)							最小尺寸	最大尺寸		
	100	95	90	85	80	75	70		5 H (M 1.6以上) 1級	6 H (M 1.6以上) 2級	7 H 3級
M2X0.4	1.57	1.59	1.61	1.63	1.65	1.68	1.70	1.567	1.657	1.679	—
M2.5X0.45	2.01	2.04	2.06	2.09	2.11	2.13	2.16	2.013	2.113	2.138	—
M3X0.5	2.4	2.49	2.51	2.54	2.57	2.59	2.62	2.459	2.571	2.599	2.639
M4X0.7	3.24	3.28	3.32	3.36	3.39	3.43	3.47	3.242	3.382	3.422	3.466
M5X0.8	4.13	4.18	4.22	4.26	4.31	4.35	4.39	4.134	4.294	4.334	4.384
M6X1	4.92	4.97	5.03	5.08	5.13	5.19	5.24	4.917	5.107	5.153	5.217
M8X1.25	6.65	6.71	6.78	6.85	6.92	6.99	7.05	6.647	6.859	6.912	6.982
M10X1.5	8.38	8.46	8.54	8.62	8.70	8.78	8.86	8.376	8.612	8.676	8.751
M12X1.75	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.106	10.371	10.441	10.531

----- 代表 5H (JIS I級) ----- 代表 6H (JIS II級) ----- 代表 7H (JIS III級)

② 咬合率

咬合率 (%) / Percentage of Thread Engagement

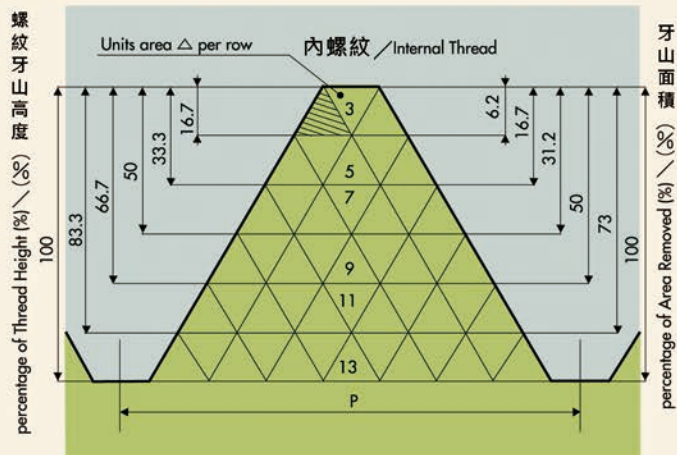
$$\frac{\text{外徑基準尺寸} - \text{底孔徑}}{2 \times (\text{標準的咬合率高度})} \times 100$$

$$\frac{\text{Basic Major Dia.} - \text{Hole Size Before Tapping}}{2 \times (\text{Basic Thread Overlap})} \times 100$$

標準的咬和率高度 / Basic Thread Overlap:

公制螺紋、美制螺紋 / Metric & Unified Thread 0.5413P
 英制螺紋 / Whitworth Thread 0.5664P
 管用螺紋 (Rc, Rp, G, PT, PS, PF) / Pipe Thread 0.6403P

P= 牙距、Pitch



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 ●ホームページアドレス: <http://www.yamawa.jp>

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 低環境汙染。