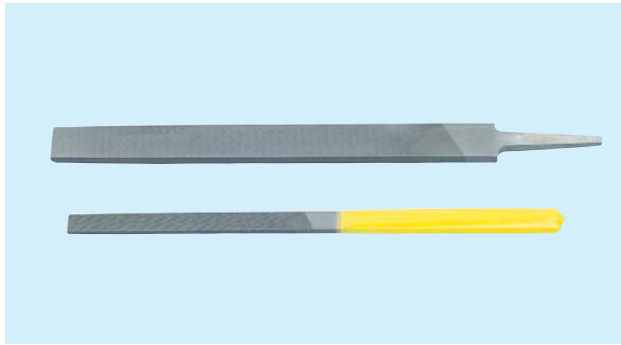


快速切削銼刀

QUICK CUT FILES

610 620



■ 把傳統的銼刀刃部經電介研磨 (PAT) 加工後, 使刃物的刃部變得銳利。因為凹部比較深, 適用於硬化塑膠, 膠木, 木材, 輕金屬等容易積屑的材料。

■ Use

“Electro-Polished Files.”
For Hard Plastic, Bakelite, Wood, Light-Metals, etc.

鉗工銼類

QUICK CUT FILES (ENGINEER'S TYPE)

610

規格表 STANDARD TABLE

INCH	mm	SHAPE DIMEN- SION	扁	半圓	圓	方	三角
			HAND	HALF ROUND	ROUND	SQUARE	TRIANGULAR
			W × T mm	W × T mm	W mm	W mm	W mm
6	150	WXT/W	16 × 4	16 × 4.5	φ6	6	12
		kg-doz	0.82	0.74	0.46	0.56	1.10
		BOX pcs	12	12	12	12	12
		ITEM No.	QHI 150*	QHA 150*	QMA 150*	QKA 150*	QSA 150*
8	200	WXT/W	21 × 5	21 × 6	φ8	8	15
		kg-doz	1.72	1.82	1.00	1.20	2.08
		BOX pcs	6	6	6	6	6
		ITEM No.	QHI 200*	QHA 200*	QMA 200*	QKA 200*	QSA 200*
10	250	WXT/W	25 × 6	25 × 7	φ10	10	17
		kg-doz	3.22	3.00	1.88	2.26	3.24
		BOX pcs	6	6	6	6	6
		ITEM No.	QHI 250*	QHA 250*	QMA 250*	QKA 250*	QSA 250*
12	300	WXT/W	30 × 7	30 × 8.5	φ12	12	20
		kg-doz	5.50	5.26	3.32	4.00	5.28
		BOX pcs	6	6	6	6	6
		ITEM No.	QHI 300*	QHA 300*	QMA 300*	QKA 300*	QSA 300*
14	350	WXT/W	34 × 7.5	34 × 10	φ15	15	22
		kg-doz	8.00	8.12	5.62	7.08	7.14
		BOX pcs	6	6	6	6	6
		ITEM No.	QHI 350*	QHA 350*	QMA 350*	QKA 350*	QSA 350*

ITEM No. * assorted	齒紋粗度 ROUGHNESS	*
	粗齒 Bastard	1
	中齒 Second	2
	細齒 Smooth	3
	油齒 Dead Smooth	4

什錦銼類

QUICK CUT FILES (ASSORTED TYPE)

620

規格表 STANDARD TABLE

TYPE	DIMEN- SION		套裝 SET	扁	半圓	圓	方	三角
	L	l		HAND	HALF ROUND	ROUND	SQUARE	TRIANGULAR
		mm		W × T mm	W × T mm	W mm	W mm	W mm
5支裝 5-PCS	215L	110 l	—	11 × 3.5	12 × 3.8	φ5.5	5.5	9.0
	kg-25pcs		1.38	1.48	1.43	1.13	1.30	1.44
	No./1set		5 (each 1)	5	5	5	5	5
	ITEM No.		QST 005*	QHI 005*	QHA 005*	QMA 005*	QKA 005*	QSA 005*
8支裝 8-PCS	200L	100 l	—	9 × 3.0	9.5 × 3.0	φ4.3	4.3	7.5
	kg-25pcs		0.88	0.96	1.01	0.66	0.78	1.01
	No./1set		5 (each 1)	5	5	5	5	5
	ITEM No.		QST 008*	QHI 008*	QHA 008*	QMA 008*	QKA 008*	QSA 008*
10支裝 10-PCS	185L	85 l	—	7 × 2.5	7.3 × 2.5	φ3.2	3.2	6.0
	kg-25pcs		0.56	0.69	0.64	0.37	0.40	0.69
	No./1set		5 (each 1)	5	5	5	5	5
	ITEM No.		QST 010*	QHI 010*	QHA 010*	QMA 010*	QKA 010*	QSA 010*
12支裝 12-PCS	170L	70 l	—	4 × 2.0	4.2 × 2.0	φ2.5	2.5	4.0
	kg-25pcs		0.29	0.33	0.31	0.25	0.25	0.29
	No./1set		5 (each 1)	5	5	5	5	5
	ITEM No.		QST 012*	QHI 012*	QHA 012*	QMA 012*	QKA 012*	QSA 012*

■ 1套5支裝。

硬鉸銼-900

BRIGHT-900 Series

650 660



「硬鉸銼-900系列」是壺三獨創的製品，同時適用於軟質材料和硬質材料。特別是不易積屑。具有耐磨性，耐久性，良好排屑等卓越性能。

由於在銼刀素材上採用了壺三獨創的光亮鍍層技術，其表面硬度實現了革新。

特長

- 較之普通銼刀其耐久性提高了3-6倍。
(因被切削材料而異)
- 防銹，防腐蝕性能卓越。能有效改善因海洋及多濕環境導致銼刀銹蝕而劣化的狀況。
- 剝離切削性能卓越，杜絕銼刀積屑現象發生。因為能去除切削粉，故能持續進行順暢的切削作業。

用途

- HV900 (HRC67) 的卓越表面硬度實現了用一支銼刀可以處理從木工製品，蠟，塑膠製品，鋁材，模具鋼，不銹鋼，陶器等軟質材料和硬質材料。

Use

By TSUBOSAN original technology of the Hard Coating, "BRIGHT-900 Series" raised its function of Steel Files up to the superior status which could be used for the wide range between Soft-Metal and Hard-Metal.

"BRIGHT-900 Series" resist against its own defacement, corrosion and clog (3 characters).

The File surface of "BRIGHT-900 Series" has HV900(HRC67) hardness, so the File life would be expanded in 3~6 times longer than non-coating Steel File.

For example,

"BRIGHT-900 Series" are availed on Wood, Plastic, Soft-Metal (Al · Cu···), Stainless Steel, Mold-Die Steel, Ceramic, Glass, etc..

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硬鉸銼-900鉗工銼

BRIGHT-900 (ENGINEER'S TYPE)

650

規格表 STANDARD TABLE

INCH		mm		SHAPE	扁 HAND	半圓 HALF ROUND	圓 ROUND
DIMEN- SION		DIMEN- SION			W × T mm	W mm	W mm
6	150	W × T			16 × 4	16 × 4.5	φ6
		kg-do2			0.82	0.74	0.46
		BOX pcs			12	12	12
		ITEM No.			BRHI 150*	BRHA 150*	BRMA 150*
8	200	W × T			21 × 5	21 × 6	φ8
		kg-do2			1.72	1.82	1.00
		BOX pcs			6	6	6
		ITEM No.			BRHI 200*	BRHA 200*	BRMA 200*
10	250	W × T			25 × 6	25 × 7	φ10
		kg-do2			3.22	3.00	1.88
		BOX pcs			6	6	6
		ITEM No.			BRHI 250*	BRHA 250*	BRMA 250*

ITEM No. *
assorted

齒紋粗度 ROUGHNESS	*
中齒 Second	2
細齒 Smooth	3

硬鉸銼-900什錦銼

BRIGHT-900 (DIE SINKERS TYPE)

660

規格表 STANDARD TABLE

TYPE	DIMEN- SION		套裝 SET	扁 HAND	半圓 HALF ROUND	圓 ROUND	方 SQUARE	三角 TRIANGULAR
	L	l		W × T mm	W × T mm	W mm	W mm	W mm
5支裝 5-PCS	215L	110 l	—	11 × 3.5	12 × 3.8	φ5.5	5.5	9.0
	kg-25pcs		1.38	1.48	1.43	1.13	1.30	1.44
	No./1set		5 (each 1)	5	5	5	5	5
	ITEM No.		BRST 505*	BRHI 505*	BRHA 505*	BRMA 505*	BRKA 505*	BRSA 505*

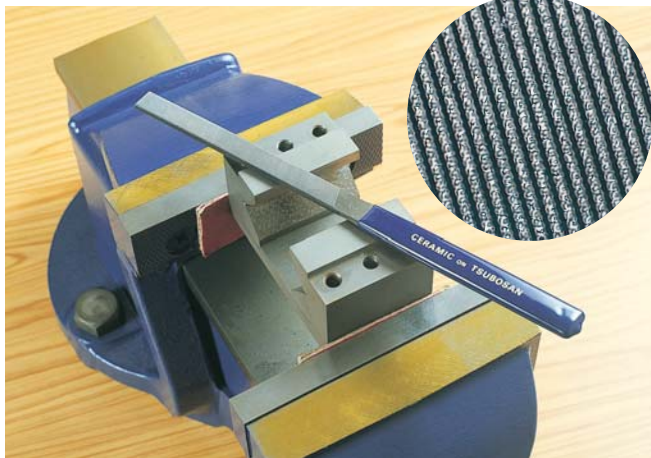
■ 1套5支裝。

■ 和鉗工銼類，什錦銼類一樣，可根據客戶要求定制不同形狀，不同尺寸和齒紋粗度的銼刀。

渗陶瓷銼刀

CERAMICS COATING FILES

510



■把陶瓷扩散渗透到母材料中的最新技术。
VC (Carbon Vanadium) is permeated on the file surface.

- 特長
- 表面硬度HRC65以上。
 - 耐磨性和耐腐蚀性出色。
 - 使用寿命延长5-10倍。
 - 有效剥离切削粉。

- 用途
- 铁系金属，锻造SC材料，大理石，玻璃，磨刀石。
 - 能有效防止黄铜粉末，铝末堵住齿纹的现象。
 - 能长期使用于海上，海滨等潮湿环境。

■Characteristic :

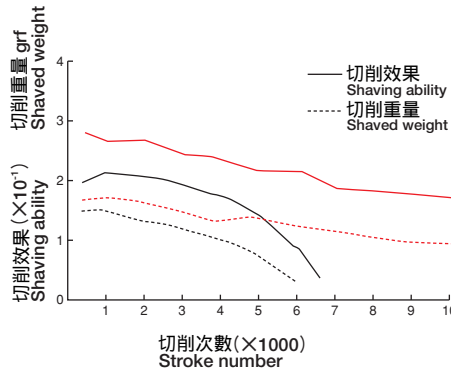
Superior to the hardness, Corrosion, Defacement, Clog. The hardness on file surface is more than HRC65, and it's life is 5~10 times as much as steel-files.

- Use : Carbon steel (C≤0.5%), Glass, etc.
For KEY repairing work, Marine work, etc.

■渗陶瓷銼刀切削试验
(Shaving Test of CERAMICS COATING FILES)

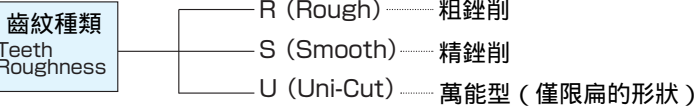
紅線...陶瓷光亮處理
黑線...通常處理

- 試驗內容
被切削材料HRC41·φ16mm圓片
工作壓力: 4kg f 切削速度: 7.5m/min
工作行程長度: 100mm
- 試驗結果
通常處理的銼刀經5000次切削後，其銼削感及銼削品質下降，性能減退。經陶瓷光亮處理後的銼刀經10,000次試驗也能充分發揮其出色性能。



RED LINE...CERAMICS COATING
BLACK LINE...STANDARD

- Test condition
Test piece : φ16mm, HRC41
Direct pressure : 4kg f
Shaving speed : 7.5m/min
Stroke : 100mm
- Test results
Standard Files :
Functionable upto 5,000 strokes.
Ceramics Coating Files :
Even functionable over 10,000 strokes.



ITEM No. * assorted

	粗銼削 Rough	精銼削 Smooth	萬能型 Uni Cut
*	R	S	U

■1套5支裝。

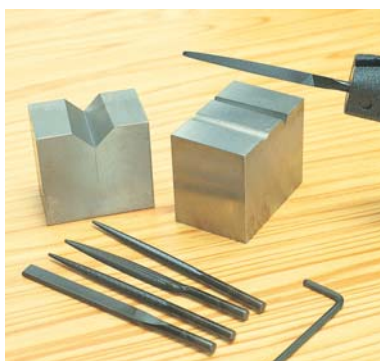
规格表 STANDARD TABLE

DIMEN- SION	L		套裝 SET	扁 HAND	半圓 HALF ROUND	圓 ROUND	方 SQUARE	三角 TRIANGULAR	每箱數量
	mm	mm							
5支裝 5-PCS	215L	110ℓ	—	11.0 × 3.5	12.0 × 3.8	φ5.5	5.5	9.0	BOX pcs 25
	kg-25pcs		1.49	1.69	1.48	1.34	1.36	1.62	
	No./1set		5 (each 1)	5	5	5	5	5	
ITEM No.		ST 005C *		HI 005C *	HA 005C *	MA 005C *	KA 005C *	SA 005C *	
10支裝 10-PCS	185L	85ℓ	—	7.0 × 2.5	7.3 × 2.5	φ3.2	3.2	6.0	BOX pcs 25
	kg-25pcs		0.63	0.76	0.70	0.45	0.49	0.72	
	No./1set		5 (each 1)	5	5	5	5	5	
ITEM No.		ST 010C *		HI 010C *	HA 010C *	MA 010C *	KA 010C *	SA 010C *	

陶瓷机用銼

SUPER SAW (CERAMICS COATING FILES)

511



规格表 STANDARD TABLE

DIMEN- SION	L		套裝 SET	扁 HAND	半圓 HALF ROUND	圓 ROUND	方 SQUARE	三角 TRIANGULAR	每箱數量
	mm	mm							
105L	φ5.0A	—	—	7.2 × 3.1	8.4 × 3.2	φ5.2	4.6	6.3	BOX pcs 25
	kg-25pcs		0.43	0.45	0.39	0.43	0.40	0.40	
	No./1set		5 (each 1)	5	5	5	5	5	
ITEM No.		ST 105C2		HI 105C2	HA 105C2	MA 105C2	KA 105C2	SA 105C2	

■請裝置在电动，气压工具上使用。

■Use : By airforced or electric tool.

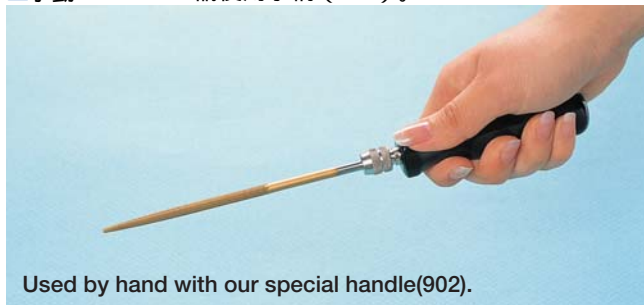
塗鈦超級機用銼

TIN SUPER HAND (Titanium Coated)

520



■手動 BY HAND 請使用手柄 (902)。



Used by hand with our special handle(902).

■行業內首次使用耐磨性，耐熱性卓越的高速鋼SKH-51。

■特長

●延長使用壽命。

(使用電動，氣壓工具時能承受每分鐘3700衝程的切削速度)

SKH-51鋼

C	Cr	W	Mo	V
0.84%	4.03%	6.05%	5.10%	1.81%

■Material : SKH-51 (JIS) High Speed Steel

It's hardened under a vacuum environment, further more Tin (Titanium Nitride) is plated on the file-teeth.

■Use :

By the coating Tin, Both heat resisting and wear resistance grow up highly. It's superior to the high hardness, corrosion, Defacement, Clog.

It can endure the shaving speed at the rate of 3,700 strokes per min.

■氣壓，電動工具



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規格表 STANDARD TABLE

			套裝 SET	扁 HAND W × T mm	半圓 HALF ROUND W × T mm	圓 ROUND W mm	方 SQUARE W mm	三角 TRIANGULAR W mm
150L	100 l	φ5.0A	—	7.0 × 2.5	8.2 × 2.8	φ5.0	5.5 × 3.2	6.0
kg- 5 pcs			0.16	0.16	0.15	0.16	0.15	0.16
BOX pcs			5 (each 1)	5	5	5	5	5
ITEM No.			ST 1550T	HI 1550T	HA 1550T	MA 1550T	KA 1550T	SA 1550T
			套裝圓 R-SET	圓-3.0 ROUND-3.0 W mm	圓-3.5 ROUND-3.5 W mm	圓-4.0 ROUND-4.0 W mm	圓-4.5 ROUND-4.5 W mm	圓-5.0 ROUND-5.0 W mm
150L	75(100) l	φ5.0A	—	φ3.0	φ3.5	φ4.0	φ4.5	φ5.0
kg- 5 pcs			0.14	0.12	0.13	0.13	0.14	0.16
BOX pcs			5 (each 1)	5	5	5	5	5
ITEM No.			ST 15MAT	MA 1530T	MA 1535T	MA 1540T	MA 1545T	MA 1550T

■1套5支裝。

手柄 HANDLE (FOR TIN SUPER HAND)

902

			BOX pcs	ITEM NO.
120A	21.5B	kg- 50pcs	50	PE 902S



902