

For general production machining. Centre cutting. Threaded shank to **DIN 1835D**. Cutting diameter to **e8**. Shank diameter to **h6**.


Series 28
Short Series - SDH-2TS Dimensions to **DIN 327**

Diameter (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight per 10
2.00	4.0	6.0	48.0	102g
2.50	5.0	6.0	49.0	102g
3.00	5.0	6.0	49.0	102g
4.00	7.0	6.0	51.0	105g
5.00	8.0	6.0	52.0	110g
6.00	8.0	6.0	52.0	110g
7.00	10.0	10.0	60.0	380g
8.00	11.0	10.0	61.0	338g
9.00	11.0	10.0	61.0	353g
10.00	13.0	10.0	63.0	369g
11.00	13.0	12.0	70.0	456g
12.00	16.0	12.0	73.0	600g
14.00	16.0	12.0	73.0	631g
16.00	19.0	16.0	79.0	1134g
18.00	19.0	16.0	79.0	1200g
20.00	22.0	20.0	88.0	1900g

HSS-Co 8% Uncoated

For general production machining.

HSS-Co 8% TiCN Coated

Extends cutter tool life and improves work material surface finish.



SDH-2TS HSS-Co 8%		SDN-2TS TiCN Coated	
Order Code	SWT-163	Order Code	SWT-163
-2802A		-2832A	
-2802L		-2832L	
-2803A		-2833A	
-2804A		-2834A	
-2805A		-2835A	
-2806A		-2836A	
-2807A		-2837A	
-2808A		-2838A	
-2809A		-2839A	
-2810A		-2840A	
-2811A		-2841A	
-2812A		-2842A	
-2814A		-2844A	
-2816A		-2846A	
-2818A		-2848A	
-2820A		-2850A	

HSS-Co 8% Threaded Shank End Mills 4 & 6 Flute

For general production machining. Centre cutting. Threaded shank to **DIN 1835D**. Shank cutting diameter to +0.04 -0.0.


HSS-Co 8%

Series 36
Regular Series - EMH-4TR Dimensions to **DIN 844**

Diameter (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	No. of Flutes	Weight per 10
2.00	7.0	6.0	51.0	4	108g
3.00	8.0	6.0	52.0	4	111g
4.00	11.0	6.0	55.0	4	114g
5.00	13.0	6.0	57.0	4	126g
6.00	13.0	6.0	57.0	4	133g
8.00	19.0	10.0	69.0	4	375g
10.00	22.0	10.0	72.0	4	423g
12.00	26.0	12.0	83.0	4	688g
14.00	26.0	12.0	83.0	4	728g
16.00	32.0	16.0	92.0	4	1220g
18.00	32.0	16.0	92.0	4	1534g
20.00	38.0	20.0	104.0	4	2114g
25.00	45.0	25.0	121.0	6	2668g

EMH-4TR HSS-Co 8%		EMN-4TR TiCN Coated	
Order Code	SWT-163	Order Code	SWT-163
-3602A		-	
-3603A		-3633A	
-3604A		-3634A	
-3605A		-	
-3606A		-3636A	
-3608A		-3638A	
-3610A		-3640A	
-3612A		-3642A	
-3614A		-3644A	
-3616A		-3646A	
-3618A		-3648A	
-3620A		-3650A	
-3625A ⁽⁴⁾		-3655A ⁽²⁾	

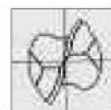
Series 37
Long Series - EMH-4TL Dimensions to **DIN 844**


Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (mm)	No. of Flutes	Weight per 5	Order Code
4.00	19.0	6.0	63.0	4	61g	-3704A
5.00	24.0	6.0	68.0	4	67g	-3705A
6.00	24.0	6.0	68.0	4	74g	-3706A
8.00	38.0	10.0	88.0	4	215g	-3708A

Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (mm)	No. of Flutes	Weight per 5	Order Code
10.00	45.0	10.0	95.0	4	260g	-3710A
12.00	53.0	12.0	110.0	4	408g	-3712A
16.00	63.0	16.0	123.0	4	806g	-3716A
20.00	75.0	20.0	141.0	4	1433g	-3720A

HSS-Co 8% Threaded Shank Ball Nosed Slot Drills 2 Flute

Centre cutting. Threaded shank to **DIN 1835D**. Cutting diameter to **e8**. Shank diameter to **h6**.


Series 39
Short Series - SBH-2TS Dimensions to **DIN 327**

Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (mm)	Weight per 5	Order Code
2.00	5.0	6.0	49.0	52g	-3902A
3.00	5.0	6.0	49.0	54g	-3903A
5.00	8.0	6.0	52.0	58g	-3905A
6.00	8.0	6.0	52.0	60g	-3906A
8.00	11.0	10.0	61.0	170g	-3908A

Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (mm)	Weight per 5	Order Code
9.00	13.0	10.0	63.0	184g	-3909A
10.00	13.0	10.0	63.0	188g	-3910A
12.00	16.0	12.0	73.0	306g	-3912A
16.00	19.0	16.0	79.0	535g	-3916A
20.00	22.0	20.0	88.0	944g	-3920A

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For general production machining. Centre cutting. Threaded shank to DIN 1835D. Cutting diameter to e8. Shank diameter to h6.

HSS-Co 8% Uncoated

For general production machining.

HSS-Co 8% TiCN Coated

Extends cutter tool life and improves work material surface finish.



Series 32

Short Series - SDH-3TS Dimensions to DIN 327

Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight each	Order Code
3.00	5.0	6.0	49.0	10g	-3203A
4.00	7.0	6.0	51.0	10g	-3204A
5.00	8.0	6.0	52.0	10g	-3205A
6.00	8.0	6.0	61.0	11g	-3206A
8.00	11.0	10.0	63.0	34g	-3208A

Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight each	Order Code
10.00	13.0	10.0	73.0	37g	-3210A
12.00	16.0	12.0	73.0	62g	-3212A
14.00	16.0	12.0	79.0	62g	-3214A
16.00	19.0	16.0	88.0	104g	-3216A
20.00	22.0	20.0	88.0	187g	-3220A

Series 33

Regular Series Dimensions to DIN 844

HSS-Co 8%

TiCN



Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (mm)	Weight each	SDH-3TR HSS-Co 8%		SDN-3TR TiCN Coated	
					Order Code	SWT-163	Order Code	SWT-163
3.00	8.0	6.0	52.0	10g	-3303A		-3333A	
4.00	11.0	6.0	55.0	10g	-3304A		-3334A	
5.00	13.0	6.0	57.0	10g	-3305A		-3335A	
6.00	13.0	6.0	57.0	12g	-3306A		-3336A	
8.00	19.0	10.0	69.0	36g	-3308A		-3338A	
10.00	22.0	10.0	72.0	40g	-3310A		-3340A	
12.00	26.0	12.0	83.0	66g	-3312A		-3342A	
14.00	26.0	12.0	83.0	68g	-3314A		-3344A	
16.00	32.0	16.0	92.0	121g	-3316A		-3346A	
20.00	38.0	20.0	104.0	206g	-3320A		-3350A	
22.00	38.0	20.0	104.0	219g	-3322A		-	

Series 34

Long Series Dimensions to DIN 844

HSS-Co 8%

TiCN



Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (mm)	Weight each	SDH-3TL HSS-Co 8%		SDN-3TL TiCN Coated	
					Order Code	SWT-163	Order Code	SWT-163
4.00	19.0	6.0	63.0	11g	-3404A		-3434A	
6.00	24.0	6.0	68.0	14g	-3406A		-3436A	
8.00	38.0	10.0	88.0	40g	-3408A		-3438A	
10.00	45.0	10.0	95.0	49g	-3410A		-3440A	
12.00	53.0	12.0	110.0	79g	-3412A		-3442A	
14.00	53.0	12.0	110.0	85g	-3414A		-3444A	
16.00	63.0	16.0	123.0	142g	-3416A		-3446A	
20.00	75.0	20.0	141.0	259g	-3420A		-3450A	

HSS-Co 5% Threaded Shank Coarse Pitch Roughing Cutters

Knuckle Form

For use when heavy metal removal and good surface finish are required. Bright finish. Flute type: 25° spiral, roughing truncated. Shank diameter to **js14**.

Standard Series **K412T**

HSS-Co 5%
COARSE PITCH

Metric Tolerances	Inch Tolerances
Diameter $\pm 0.127\text{mm}$	Diameter $\pm 0.005''$



Dia. (mm)	Flute Length	Overall Length	Shank Dia.	Number of Flutes	Weight each	Order Code SHR-061
6.00	16.0	60.5	6.0	3	26g	-6701A
8.00	18.0	63.5	10.0	3	66g	-6702B
10.00	21.0	66.5	10.0	3	85g	-6705E
12.00	24.0	70.0	12.0	4	116g	-6708H
14.00	28.5	73.0	12.0	4	131g	-6710K
16.00	26.0	77.0	16.0	4	212g	-6714P
18.00	35.0	80.0	16.0	4	282g	-6716R
20.00	38.0	83.5	25.0	4	300g	-6717S

HSS-EV Threaded Shank Coarse Pitch Ripper Cutters

Industrial quality for shaping and forming metal components. Four flute ripper cutters. Manufactured from sintered HSS-EV extra vanadium steel. Knuckle form, **h8** tolerance, standard length. Shank to **DIN 1835B**.

Regular Series

HSS-EV
COARSE PITCH



Dia. (mm)	Flute Length	Overall Length	Shank Dia.	Number of Flutes	Weight each	Order Code SHR-061
6.00	13.0	57.0	6.0	4	13g	-2540A
8.00	19.0	69.0	10.0	4	35g	-2541B
10.00	22.0	72.0	10.0	4	37g	-2542C
12.00	26.0	83.0	12.0	4	71g	-2543D
16.00	32.0	92.0	16.0	4	131g	-2544E
20.00	38.0	104.0	20.0	4	228g	-2545F
25.00	45.0	121.0	25.0	4	407g	-2546G

HSS-Co 5% Threaded Shank Coarse Pitch Roughing Cutters

Knuckle Form

For use when high metal removal rates area required. Bright finish. Flute type: 25° spiral, roughing truncated. Shank diameter to **js14**.

Long Series Type **K432T**

HSS-Co 5%
COARSE PITCH



Dia. (mm)	Flute Length	Overall Length	Shank Dia.	Number of Flutes	Weight each	Order Code SHR-061
10.00	37.0	82.5	10.0	3	44g	-6760A
12.00	49.5	95.0	12.0	4	69g	-6763D

SHANK MILLING CUTTERS

GROUP
061

HSS-EV Threaded Shank Fine Pitch Ripper Cutters

Four flute ripper cutters. Manufactured from sintered HSS-EV extra vanadium steel. Knuckle form, **h8** tolerance. Standard length. Dimensions to **DIN 844**. Shank to **DIN 1835D**.

HSS-EV
FINE PITCH



Regular Series

Dia. (mm)	Flute Length	Overall Length	Shank Dia.	Number of Flutes	Weight each	Order Code SHR-061
6.00	15.0	58.0	6.0	4	13g	-2600A
8.00	20.0	70.0	10.0	4	36g	-2601B
10.00	28.0	75.0	10.0	4	36g	-2602C
12.00	33.0	85.0	12.0	4	71g	-2603D
16.00	38.0	90.0	16.0	4	131g	-2604E
20.00	47.0	110.0	20.0	4	228g	-2605F
25.00	52.0	125.0	25.0	4	401g	-2606G

HSS-EV TiCN Coated Screwed Shank Fine Pitch Ripper Cutters

Four flute ripper cutters. Manufactured from sintered HSS-EV extra vanadium steel. Knuckle form, **h8** tolerance. Dimensions to **DIN 844**. Shank to **DIN 1835B**.

Regular Series

HSS-EV TiCN
FINE PITCH



Dia. (mm)	Flute Length	Overall Length	Shank Dia.	Number of Flutes	Weight each	Order Code SHR-061
8.00	20.0	70.0	10.0	4	35g	-2801B
10.00	28.0	75.0	10.0	4	37g	-2802C
12.00	33.0	85.0	12.0	4	71g	-2803D
16.00	38.0	90.0	16.0	4	131g	-2804E
20.00	47.0	110.0	20.0	4	228g	-2805F
25.00	52.0	125.0	25.0	4	407g	-2806G

PRODUCTS ARE ONLY AVAILABLE VIA YOUR DISTRIBUTOR

Centre cutting. Weldon shank to **DIN 1835B**.
Cutting diameter to **e8**. Shank diameter to **h6**.



HSS-Co 8% Uncoated

For general production
machining.

HSS-Co 8% TiCN Coated

Extends cutter tool life and
improves work material
surface finish.



Series 01

Short Series Dimensions to **DIN 327**



Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight per 10	SDH-2WS HSS-Co 8%		SDN-2WS TiCN Coated	
					Order Code SWT-163		Order Code SWT-163	
2.00	4.0	6.0	48.0	104g	-0102A	51.00	-	
2.50	5.0	6.0	49.0	108g	-0102L	51.00	-0132L	58.00
3.00	5.0	6.0	49.0	110g	-0103A	51.00	-0133A	61.00
4.00	7.0	6.0	51.0	112g	-0104A	51.00	-0134A	67.00
5.00	8.0	6.0	52.0	117g	-0105A	51.00	-0135A	67.00
6.00	8.0	6.0	52.0	121g	-0106A	51.00	-0136A	62.00
8.00	11.0	10.0	61.0	345g	-0108A	64.00	-0138A	79.00
10.00	13.0	13.0	63.0	476g	-0110A	69.00	-0140A	86.00
12.00	16.0	12.0	73.0	613g	-0112A	97.00	-0142A	120.00
14.00	16.0	12.0	73.0	615g	-0114A	149.00	-0144A	175.00
16.00	19.0	16.0	79.0	1025g	-0116A	149.00	-0146A	182.00
18.00	19.0	16.0	79.0	1086g	-0118A	175.00	-	
20.00	22.0	20.0	88.0	1423g	-0120A	209.00	-	

Series 02

Regular Series Dimensions to **DIN 844**



Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight per 10	SDH-2WR HSS-Co 8%		SDN-2WR TiCN Coated	
					Order Code SWT-163	RM	Order Code SWT-163	RM
2.00	7.0	6.0	51.0	108g	-0202A	62.00	-	
3.00	8.0	6.0	52.0	108g	-0203A	62.00	-	
4.00	11.0	6.0	55.0	114g	-0204A	62.00	-0234A	70.00
5.00	13.0	6.0	57.0	121g	-0205A	62.00	-	
6.00	13.0	6.0	57.0	150g	-0206A	62.00	-0236A	87.00
8.00	19.0	10.0	69.0	361g	-0208A	84.00	-0238A	114.00
10.00	22.0	10.0	72.0	402g	-0210A	84.00	-0240A	117.00
12.00	26.0	12.0	83.0	652g	-0212A	112.00	-0242A	137.00
14.00	26.0	12.0	83.0	710g	-0214A	122.00	-	
16.00	32.0	16.0	92.0	950g	-0216A	149.00	-0246A	219.00
20.00	38.0	20.0	104.0	2114g	-0220A	221.00	-0250A	234.00
25.00	45.0	25.0	121.0	2400g	-0225A	355.00	-	

Series 03

Long Series Dimensions to **DIN 844**



Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight per 10	SDH-2WL HSS-Co 8%		SDN-2WL TiCN Coated	
					Order Code SWT-163		Order Code SWT-163	
2.00	7.0	6.0	54.0	110g	-0302A	68.00	-	
3.00	8.0	6.0	56.0	116g	-0303A	68.00	-	
4.00	11.0	6.0	63.0	120g	-0304A	73.00	-	
6.00	13.0	6.0	68.0	153g	-0306A	73.00	-0336A	71.00
8.00	19.0	10.0	88.0	442g	-0308A	103.00	-0338A	136.00
10.00	22.0	10.0	95.0	528g	-0310A	103.00	-0340A	139.00
12.00	26.0	12.0	110.0	736g	-0312A	127.00	-0342A	172.00
16.00	32.0	16.0	123.0	1734g	-0316A	178.00	-0346A	190.00
20.00	38.0	20.0	141.0	3064g	-0320A	263.00	-0350A	248.00
25.00	45.0	25.0	166.0	5550g	-0325A	N/A	-0355A	388.00

**SWISS+TECH****HSS-Co 8% Weldon Shank
Slot Drills 3 Flute**

Centre cutting. Weldon shank to **DIN 1835B**.
Cutting diameter to **e8**.
Shank diameter to **h6**.

SHANK MILLING CUTTERS**GROUP
061****HSS-Co 8%****TiCN****TiAlN****HSS-Co 8% Uncoated**

For general production
machining.

HSS-Co 8% TiCN Coated

Extends cutter tool life and
improves work material surface
finish.

HSS-Co 8% TiAlN Coated

Dissipates and resists heat, reduces
surface friction coupled with high surface
hardness.

**Series 05****Short Series** Dimensions to **DIN 327**

Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight per 10	SDH-3WS HSS-Co 8%	SDN-3WS TiCN Coated	SDL-3WS TiAlN Coated
					Order Code SWT-163	Order Code SWT-163	Order Code SWT-163
2.00	4.0	6.0	48.0	107g	-0502A	-0532A	-0562A
3.00	5.0	6.0	49.0	109g	-0503A	-0533A	-0563A
4.00	7.0	6.0	51.0	112g	-0504A	-0534A	-0564A
5.00	8.0	6.0	52.0	117g	-0505A	-0535A	-0565A
6.00	8.0	6.0	52.0	123g	-0506A	-0536A	-0566A
8.00	11.0	10.0	61.0	353g	-0508A	-0538A	-0568A
10.00	13.0	10.0	63.0	382g	-0510A	-0540A	-0570A
12.00	16.0	12.0	73.0	617g	-0512A	-0542A	-0572A
14.00	16.0	12.0	73.0	688g	-0514A	-0544A	-0574A
16.00	19.0	16.0	79.0	1220g	-0516A	-0546A	-0576A
20.00	22.0	20.0	88.0	1894g	-0520A	-0550A	-

**Series 06****Regular Series** Dimensions to **DIN 844**

Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight per 10	SDH-3WR HSS-Co 8%	SDN-3WR TiCN Coated	SDL-3WR TiAlN Coated
					Order Code SWT-163	Order Code SWT-163	Order Code SWT-163
3.00	8.0	6.0	52.0	111g	-0603A	-0633A	-0663A
4.00	11.0	6.0	55.0	114g	-0604A	-0634A	-0664A
5.00	13.0	6.0	57.0	129g	-0605A	-0635A	-0665A
6.00	13.0	6.0	57.0	128g	-0606A	-0636A	-0666A
8.00	19.0	10.0	69.0	368g	-0608A	-0638A	-0668A
9.00	19.0	10.0	69.0	-	-0609A	-0639A	-
10.00	22.0	10.0	72.0	404g	-0610A	-0640A	-0670A
12.00	26.0	12.0	83.0	666g	-0612A	-0642A	-0672A
14.00	26.0	12.0	83.0	710g	-0614A	-0644A	-0674A
16.00	32.0	16.0	92.0	950g	-0616A	-0646A	-0676A
20.00	38.0	20.0	104.0	2114g	-0620A	-0650A	-0680A
25.00	45.0	25.0	121.0	2400g	-0625A	-	-

**Series 07****Long Series** Dimensions to **DIN 844**

Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight per 10	SDH-3WL HSS-Co 8%	SDN-3WL TiCN Coated	SDL-3WL TiAlN Coated
					Order Code SWT-163	Order Code SWT-163	Order Code SWT-163
3.00	12.0	6.0	56.0	49g	-0703A	-0733A	-0763A
4.00	19.0	6.0	63.0	59g	-0704A	-0734A	-0764A
5.00	24.0	6.0	68.0	69g	-0705A	-0735A	-
6.00	24.0	6.0	68.0	72g	-0706A	-0736A	-0766A
8.00	38.0	10.0	88.0	206g	-0708A	-0738A	-0768A
10.00	45.0	10.0	95.0	245g	-0710A	-0740A	-0770A
12.00	53.0	12.0	110.0	379g	-0712A	-0742A	-0772A
14.00	53.0	12.0	110.0	420g	-0714A	-0744A	-0774A
16.00	63.0	16.0	123.0	746g	-0716A	-0746A	-0776A
20.00	75.0	20.0	141.0	1314g	-0720A	-	-
25.00	90.0	25.0	166.0	2415g	-0725A	-	-

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Centre cutting. Weldon shank to **DIN 1835B**.

Shank cutting diameter

3 - 6mm to +0.04 -0.0.

8 - 20mm to +0.05 -0.0.

HSS-Co 8% Uncoated

For general production machining.

HSS-Co 8% TiCN Coated

Extends cutter tool life and improves work material surface finish.

HSS-Co 8% TiAlN Coated

Dissipates and resists heat, reduces surface friction coupled with high surface hardness.

**Series 09**Regular Series Dimensions to **DIN 844**

Diameter (mm)	Flute Length	Shank Diameter	Overall Length	No. of Flutes	Weight per 10	EMH-4WR HSS-Co 8%	EMN-4WR TiCN Coated	EML-4WR TiAlN Coated
						Order Code SWT-163	Order Code SWT-163	Order Code SWT-163
2.00	7.0	6.0	51.0	4	108g	-0902A	-0932A	-0962A
3.00	8.0	6.0	52.0	4	111g	-0903A	-0933A	-0963A
4.00	11.0	6.0	55.0	4	117g	-0904A	-0934A	-0964A
5.00	13.0	6.0	57.0	4	126g	-0905A	-0935A	-0965A
6.00	13.0	6.0	57.0	4	133g	-0906A	-0936A	-0966A
7.00	16.0	10.0	66.0	4	332g	-0907A	-	-
8.00	19.0	10.0	69.0	4	375g	-0908A	-0938A	-0968A
9.00	19.0	10.0	69.0	4	-	-0909A	-	-
10.00	22.0	10.0	72.0	4	423g	-0910A	-0940A	-0970A
11.00	22.0	12.0	79.0	4	-	-0911A	-	-
12.00	26.0	12.0	83.0	4	688g	-0912A	-0942A	-0972A
13.00	26.0	12.0	83.0	4	-	-0913A	-	-
14.00	26.0	12.0	83.0	4	725g	-0914A	-0944A	-0974A
15.00	26.0	12.0	83.0	4	-	-0915A	-	-
16.00	32.0	16.0	92.0	4	1037g	-0916A	-0946A	-0976A
17.00	32.0	16.0	92.0	4	-	-0917A	-	-
18.00	32.0	16.0	92.0	4	1390g	-0918A	-0948A	-0978A
19.00	32.0	16.0	92.0	4	-	-0919A	-	-
20.00	38.0	20.0	104.0	4	2114g	-0920A	-0950A	-0980A
25.00	45.0	25.0	121.0	6	2400g	-0925A ⁽¹⁾	-0955A ⁽²⁾	-0985A ⁽³⁾

⁽¹⁾ EMH-6WR HSS-Co 8%⁽²⁾ EMN-6WR TiCN Coated⁽³⁾ EML-6WR TiAlN Coated**Series 10**Long Series Dimensions to **DIN 844**

Diameter (mm)	Flute Length	Shank Diameter	Overall Length	No. of Flutes	Weight per 5	EMH-4WL HSS-Co 8%	EMN-4WL TiCN Coated	EML-4WL TiAlN Coated
						Order Code SWT-163	Order Code SWT-163	Order Code SWT-163
3.00	12.0	6.0	56.0	4	55g	-1003A	-1033A	-1063A
4.00	19.0	6.0	63.0	4	61g	-1004A	-1034A	-1064A
5.00	24.0	6.0	68.0	4	67g	-1005A	-1035A	-1065A
6.00	24.0	6.0	68.0	4	74g	-1006A	-1036A	-1066A
8.00	38.0	10.0	88.0	4	215g	-1008A	-1038A	-1068A
10.00	45.0	10.0	95.0	4	260g	-1010A	-1040A	-1070A
12.00	53.0	12.0	110.0	4	408g	-1012A	-1042A	-1072A
14.00	53.0	12.0	110.0	4	471g	-1014A	-1044A	-1074A
16.00	63.0	16.0	123.0	4	806g	-1016A	-1046A	-1076A
20.00	75.0	20.0	141.0	4	1433g	-1020A	-1050A	-1080A

HSS-Co 8% Weldon Shank Ball Nose Slot Drills 2 Flute

Centre cutting.

Weldon shank to **DIN 1835B**.Cutting diameter to **e8**.Shank diameter to **h6**.**Series 11**Short Series Dimensions to **DIN 327**

Diameter (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight per 5	SBH-2WS HSS-Co 8%	SBN-2WS TiCN Coated
					Order Code SWT-163	Order Code SWT-163
2.00	5.0	6.0	49.0	52g	-1102A	-
3.00	5.0	6.0	49.0	54g	-1103A	-
4.00	7.0	6.0	51.0	55g	-1104A	-1134A
5.00	8.0	6.0	52.0	58g	-1105A	-
6.00	8.0	6.0	52.0	60g	-1106A	-1136A
8.00	11.0	10.0	61.0	170g	-1108A	-1138A
10.00	13.0	10.0	63.0	188g	-1110A	-1140A
12.00	16.0	12.0	73.0	306g	-1112A	-1142A
16.00	19.0	16.0	79.0	535g	-1116A	-1146A
20.00	22.0	20.0	88.0	944g	-1120A	-1150A

For general production machining. Centre cutting.
Weldon shank to **DIN 1835B**.
Cutting diameter to **js12**.
Shank diameter to **h6**.


Series 17
Regular Series Dimensions to DIN 844

Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	No. of Flutes	Weight Per 5	RCH-4WR HSS-Co 8%		RCN-4WR TiCN Coated	
						Order Code SWT-163		Order Code SWT-163	
6.00	13.0	6.0	57.0	3	129g	-1706A ⁽¹⁾		-1736A ⁽²⁾	
8.00	19.0	10.0	69.0	3	311g	-1708A ⁽¹⁾		-1738A ⁽²⁾	
10.00	22.0	10.0	72.0	4	337g	-1710A		-1740A	
12.00	26.0	12.0	83.0	4	690g	-1712A		-1742A	
16.00	32.0	16.0	92.0	4	1280g	-1716A		-1746A	
20.00	38.0	20.0	104.0	4	2224g	-1720A		-1750A	
25.00	45.0	25.0	121.0	5	4074g	-1725A ⁽⁴⁾		-1755A ⁽⁵⁾	

⁽¹⁾ RCH-3WL HSS-Co 8%

**HSS-Co 8% Weldon Shank Coarse Pitch
Ripper Cutters**

Centre cutting. Weldon shank to **DIN 1835B**.
Cutting diameter to **js12**.
Shank diameter to **h6**.

Series 18
Long Series Dimensions to DIN 844

Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	No. of Flutes	Weight Per 5	RCH-4WL HSS-Co 8%		RCN-4WL TiCN Coated	
						Order Code SWT-163		Order Code SWT-163	
8.00	38.0	10.0	88.0	3	215g	-1808A ⁽¹⁾		-1838A ⁽²⁾	
10.00	45.0	10.0	95.0	4	259g	-1810A		-1840A	
12.00	53.0	12.0	110.0	4	401g	-1812A		-1842A	
16.00	63.0	16.0	123.0	4	804g	-1816A		-1846A	
20.00	75.0	20.0	141.0	4	1132g	-1820A		-1850A	

⁽¹⁾ RCH-3WL HSS-Co 8%

⁽⁴⁾ RCH-5WL HSS-Co 8%

**HSS-Co 8% Weldon Shank Coarse Pitch
37° High Helix for Aluminium
Roughing End Mills 3 Flute**

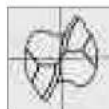
Centre cutting. Weldon shank to **DIN 1835B**.
Shank diameter to **h6**.

Series 20
Regular Length Dimensions to DIN 844

Dia. (mm)	Flute Length (mm)	Shank Dia. (mm)	Overall Length (mm)	Weight each	RHH-3WR HSS-Co 8%		RHN-3WR TiN	
					Order Code SWT-163		Order Code SWT-163	
6.00	13.0	6.0	57.0	12g	-2006A		-	
8.00	19.0	10.0	69.0	36g	-2008A		-2028A	
10.00	22.0	10.0	72.0	40g	-2010A		-2030A	
12.00	26.0	12.0	83.0	67g	-2012A		-2032A	
16.00	32.0	16.0	93.0	124g	-2016A		-2036A	
20.00	38.0	20.0	104.0	215g	-2020A		-2040A	

**HSS-Co 8% Weldon Shank
42° High Helix Slot Drills 2 Flute
For Aluminium**

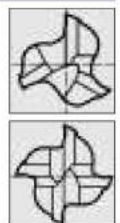
For general production machining. Centre cutting.
Weldon shank to **DIN 1835B**.
Shank cutting diameter to +0.04 -0.0.

HSS-Co 8%

Series 15
Regular Length Dimensions to DIN 844

Diameter (mm)	Flute Length	Shank Diameter	Overall Length	Weight per 5	Order Code SWT-163
3.00	8.0	6.0	52.0	55g	-1503A
4.00	11.0	6.0	55.0	56g	-1504A
5.00	13.0	6.0	57.0	60g	-1505A
6.00	13.0	6.0	57.0	62g	-1506A
8.00	19.0	10.0	69.0	175g	-1508A
10.00	22.0	10.0	72.0	190g	-1510A
12.00	26.0	12.0	83.0	326g	-1512A
16.00	32.0	16.0	92.0	603g	-1516A
20.00	38.0	20.0	104.0	1054g	-1520A

**HSS-E PM Coarse Pitch Ripper
Peak Power Set**
HSS-E PM
PEAK POWER

Weldon Shank
Centre cutting.
To **Manufacturers Standards**.
Weldon shank to **DIN 1835B**.
Shank diameter to **h6**.
Dimensions to **DIN 844**.
Contents: 8, 10, 12,
16 and 20mm.


**5
PIECES**
Series 99

Number
of Pieces
5

Order Code
SWT-165
-9950A

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Centre cutting.
Weldon shank to **DIN 1835B**.
Cutting diameter to **js12**.
Shank diameter to **h6**.

**HSS-Co 8% Uncoated**

For general production
machining.

HSS-Co 8% TiCN Coated

Extends cutter tool life and improves
work material surface finish.

HSS-Co 8% TiAlN Coated

Dissipates and resists heat, reduces
surface friction coupled with high surface
hardness.

**Series 25****Regular Series** Dimensions to **DIN 844**

Diameter (mm)	Flute Length	Shank Diameter	Overall Length	No. of Flutes	Weight per 5	RFH-4WR HSS-Co 8%	RFN-4WR TiCN Coated	RFL-4WR TiAlN Coated
						Order Code SWT-163	Order Code SWT-163	Order Code SWT-163
6.00	13.0	6.0	57.0	3	65g	-2506A ⁽¹⁾	-2536A ⁽²⁾	-2566A ⁽³⁾
8.00	19.0	10.0	69.0	3	186g	-2508A ⁽¹⁾	-2538A ⁽²⁾	-2568A ⁽³⁾
10.00	22.0	10.0	72.0	4	212g	-2510A	-2540A	-2570A
12.00	26.0	12.0	83.0	4	356g	-2512A	-2542A	-2572A
16.00	32.0	16.0	92.0	4	642g	-2516A	-2546A	-2576A
20.00	38.0	20.0	104.0	4	1123g	-2520A	-2550A	-2580A
25.00	45.0	25.0	121.0	5	1310g	-2525A ⁽⁴⁾	-2555A ⁽⁵⁾	-2585A ⁽⁶⁾

⁽¹⁾ RFH-3WR HSS Co 8%⁽²⁾ RFN-3WR TiCN Coated⁽³⁾ RFL-3WR TiAlN Coated**Series 26****Long Series** Dimensions to **DIN 844**

Diameter (mm)	Flute Length	Shank Diameter	Overall Length	No. of Flutes	Weight per 5	RFH-4WL HSS-Co 8%	RFN-4WL TiCN Coated
						Order Code SWT-163	Order Code SWT-163
6.00	24.0	6.0	68.0	3	80g	-2606A ⁽¹⁾	N/A
8.00	38.0	10.0	88.0	3	212g	-2608A ⁽¹⁾	-2636A ⁽²⁾
10.00	45.0	10.0	95.0	4	264g	-2610A	-2638A ⁽²⁾
12.00	53.0	12.0	110.0	4	408g	-2612A	-2640A
16.00	63.0	16.0	123.0	4	790g	-2616A	-2642A
20.00	75.0	20.0	141.0	4	1411g	-2620A	-2646A

⁽¹⁾ RFH-3WL HSS Co 8%⁽²⁾ RFN-3WL TiCN Coated**HSS-E Weldon Shank Coarse
Pitch Ripper Cutters**

Industrial quality for shaping and forming metal components.
4 flute ripper cutters.
Manufactured from sintered HSS-E extra vanadium steel.
Knuckle form, **h8** tolerance, standard length.
Shank to **DIN 1835D**.

COARSE PITCH HSS-EV**Regular Series**

Dia. (mm)	Flute Length	Overall Length	Shank Dia.	No. of Flutes	Weight each	Order Code SHR-061
6.00	13.0	57.0	6.0	4	13g	-2560A
8.00	19.0	69.0	10.0	4	36g	-2561B
10.00	22.0	72.0	10.0	4	40g	-2562C
12.00	26.0	83.0	12.0	4	71g	-2563D
16.00	32.0	92.0	16.0	4	134g	-2564E
20.00	38.0	104.0	20.0	4	221g	-2565F
25.00	45.0	121.0	25.0	4	427g	-2566G

HSS-EV Weldon Shank Fine Pitch Ripper Cutters

4 flute ripper cutters.
Manufactured from sintered HSS-EV extra vanadium steel.
Knuckle form, **h8** tolerance. Standard length.
Dimensions to **DIN 844**.
Shank to **DIN 1835D**.

FINE PITCH HSS-EV**Regular Series**

Dia. (mm)	Flute Length	Overall Length	Shank Dia.	No. of Flutes	Weight each	Order Code SHR-061
6.00	15.0	58.0	6.0	4	16g	-2620A
8.00	20.0	70.0	10.0	4	36g	-2621B
10.00	28.0	75.0	10.0	4	41g	-2622C
12.00	33.0	85.0	12.0	4	74g	-2623D
16.00	38.0	90.0	16.0	4	125g	-2624E
20.00	47.0	110.0	20.0	4	232g	-2625F
25.00	52.0	125.0	25.0	4	402g	-2625G

**SWISS+TECH****Carbide Plain Shank
Milling Cutters**Centre cutting. To **Manufacturers Standards**.**SHANK MILLING CUTTERS****GROUP
061****CARBIDE TiCN****HSS-Co 8% Uncoated**

For general production machining.

HSS-Co 8% TiCN Coated

Extends cutter tool life and improves work material surface finish.

HSS-Co 8% TiAlN Coated

Dissipates and resists heat, reduces surface friction coupled with high surface hardness.

extended
range**Series 45****2 Flute - Short Series** Dimensions to **DIN 6535 HA**

Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Weight each	SDC-2PS Carbide	SDT-2PS TiCN Coated
					Order Code SWT-161	Order Code SWT-161
2.00	8.0	32.0	2.0	3g	-4502A	-4532A
2.50	8.0	32.0	2.5	4g	-4502L	-4532L
3.00	12.0	32.0	3.0	4g	-4503A	-4533A
4.00	12.0	40.0	4.0	7g	-4504A	-4534A
5.00	14.0	50.0	5.0	13g	-4505A	-4535A
6.00	16.0	50.0	6.0	18g	-4506A	-4536A
8.00	20.0	60.0	8.0	37g	-4508A	-4538A
10.00	22.0	70.0	10.0	68g	-4510A	-4540A
12.00	22.0	70.0	12.0	96g	-4512A	-4542A
16.00	25.0	75.0	16.0	172g	-4516A	-4546A

**CARBIDE TiCN****Series 48****3 Flute - Short Series**

Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Weight each	SDC-3PS Carbide	SDT-3PS TiCN Coated
					Order Code SWT-161	Order Code SWT-161
1.00	4.0	40.5	4.0	7g	-4801A	-4831A
1.50	4.5	40.0	4.0	7g	-4801L	-4831L
2.00	8.0	32.0	2.0	3g	-4802A	-4832A
2.50	8.0	32.0	2.5	3g	-4802L	-4832L
3.00	12.0	32.0	3.0	4g	-4803A	-4833A
3.50	12.0	32.0	3.5	4g	-4803L	-4833L
4.00	12.0	40.0	4.0	7g	-4804A	-4834A
5.00	14.0	50.0	6.0	13g	-4805A	-4835A
6.00	16.0	50.0	6.0	18g	-4806A	-4836A
7.00	20.0	50.0	8.0	50g	-4807A	-4837A
8.00	20.0	60.0	8.0	57g	-4808A	-4838A
9.00	20.0	60.0	9.0	60g	-4809A	-4839A
10.00	22.0	60.0	10.0	71g	-4810A	-4840A
12.00	22.0	60.0	12.0	100g	-4812A	-4842A
16.00	25.0	75.0	16.0	175g	-4816A	-
20.00	32.0	100.0	20.0	367g	-4820A	-

**CARBIDE TiCN****Series 50****4 Flute - Short Series**

Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Weight each	EMC-4PS Carbide	EMT-4PS TiCN Coated
					Order Code SWT-161	Order Code SWT-161
2.00	8.0	32.0	2.0	3g	-5002A	-5032A
2.50	8.0	32.0	2.5	3g	-5002L	-
3.00	12.0	32.0	3.0	4g	-5003A	-5033A
3.50	12.0	32.0	3.5	4g	-5003L	-
4.00	12.0	40.0	4.0	7g	-5004A	-5034A
5.00	14.0	50.0	5.0	14g	-5005A	-5035A
6.00	16.0	50.0	6.0	19g	-5006A	-5036A
7.00	20.0	60.0	7.0	49g	-5007A	-5037A
8.00	20.0	60.0	8.0	57g	-5008A	-5038A
9.00	20.0	60.0	9.0	60g	-5009A	-5039A
10.00	20.0	70.0	10.0	71g	-5010A	-5040A
11.00	22.0	60.0	12.0	90g	-	-5041A
12.00	22.0	70.0	12.0	102g	-5012A	-5042A
14.00	25.0	75.0	14.0	184g	-5014A	-5044A
16.00	25.0	75.0	16.0	386g	-5016A	-5046A
20.00	32.0	100.0	20.0	892g	-5020A	-5050A
25.00	46.0	150.0	25.0	895g	-5025A	-5055A

6 Piece SetsDimensions to **DIN 844**. Cutting diameter to **js12**.
Shank diameter to **h6**.**Contents:** 3, 4, 5, 6, 8 and 10mm.**6
PIECES****CARBIDE**

Number of Flutes	Series Number	Order Code SWT-161
2	45	-4526A
3	48	-4890A
4	50	-5028A

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**2 Flute**

For optimum performance and maximum swarf removal when plunging, slotting and routing in light alloys, brass, aluminium, non-ferrous and other soft materials. Manufactured to **Works Standards**.

Diameter Metric	Tolerances		Diameter Inch	Tolerance	
	+	-		+	-
Over 1.00 ~ up to 6.00	0.000	0.050	Over 1/16" ~ up to 1/4"	0.000	0.002
Over 6.00 ~ up to 25.00	0.000	0.080	Over 1/4" ~ up to 1"	0.000	0.003

Regular Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
1.00	3.0	40.0	4.0	15g	-0020K
1.50	4.0	40.0	4.0	15g	-0030K
2.00	8.0	32.0	2.0	15g	-0040K
2.50	8.0	32.0	2.5	15g	-0050K
3.00	12.0	32.0	3.0	15g	-0060K
3.50	12.0	32.0	3.5	20g	-0070K
4.00	12.0	40.0	4.0	20g	-0080K
4.50	14.0	50.0	4.5	20g	-0090K
5.00	14.0	50.0	5.0	30g	-0100K
6.00	16.0	50.0	6.0	35g	-0120K
7.00	20.0	60.0	7.0	40g	-0140K
8.00	20.0	60.0	8.0	40g	-0160K
9.00	20.0	60.0	9.0	60g	-0180K
10.00	22.0	70.0	10.0	100g	-0200K
11.00	22.0	70.0	11.0	120g	-0220K
12.00	22.0	70.0	12.0	130g	-0240K
14.00	25.0	75.0	14.0	180g	-0280K
16.00	25.0	75.0	16.0	230g	-0320K
18.00	25.0	75.0	18.0	230g	-0360K
20.00	32.0	100.0	20.0	240g	-0400K

**Regular Series - Inch**

Diameter (inch)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
1/8"	1/2"	1 1/2"	1/8"	10g	-0580K
3/16"	5/8"	2"	3/16"	20g	-0620K
1/4"	3/4"	2 1/2"	1/4"	30g	-0660K
5/16"	13/16"	2 1/2"	5/16"	45g	-0700K
3/8"	1"	2 1/2"	3/8"	60g	-0740K
1/2"	1"	3"	1/2"	165g	-0820K
3/4"	1 1/2"	4"	1"	640g	-0980K

3 Flute

Centre cutting as standard. Offer a combination of advantages achieved with two and four flutes giving profile and peripheral milling capability in addition to slotting and plunging. Manufactured to **Works Standards**.

CARBIDE

Regular Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
1.00	3.0	40.0	4.0	15g	-3020K
1.50	4.5	40.0	4.0	15g	-3030K
2.00	8.0	32.0	2.0	15g	-3040K
2.50	8.0	32.0	2.5	15g	-3050K
3.00	12.0	32.0	3.0	15g	-3060K
3.50	12.0	32.0	3.5	20g	-3070K
4.00	14.0	40.0	4.0	20g	-3080K
4.50	14.0	50.0	4.5	20g	-3090K
5.00	14.0	50.0	5.0	30g	-3100K
6.00	16.0	50.0	6.0	35g	-3120K
7.00	20.0	60.0	7.0	40g	-3140K
8.00	20.0	60.0	8.0	40g	-3160K
9.00	20.0	60.0	10.0	60g	-3180K
10.00	22.0	70.0	10.0	100g	-3200K
11.00	22.0	70.0	11.0	120g	-3220K
12.00	22.0	70.0	12.0	130g	-3240K
14.00	25.0	75.0	14.0	180g	-3280K
16.00	25.0	75.0	16.0	230g	-3320K
18.00	25.0	75.0	18.0	230g	-3360K
20.00	32.0	100.0	20.0	240g	-3400K
25.00	38.0	150.0	25.0	640g	-3500K

**Regular Series - Inch**

Diameter (inch)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
1/16"	3/16"	1 1/2"	1/8"	10g	-3540K
3/32"	9/32"	1 1/2"	1/8"	10g	-3560K
1/8"	3/8"	1 1/2"	1/8"	10g	-3580K
3/16"	5/8"	2"	3/16"	20g	-3620K
1/4"	3/4"	2 1/2"	1/4"	30g	-3660K
5/16"	13/16"	2 1/2"	5/16"	45g	-3700K
3/8"	1"	2 1/2"	3/8"	60g	-3740K
1/2"	1"	3"	1/2"	140g	-3820K
5/8"	1 1/4"	3 1/2"	5/8"	230g	-3900K

4 Flute

Centre cutting as standard. For maximum strength when milling harder materials where rapid swarf removal is not needed. Four flute milling cutters have one of the strongest tooth structures available in solid cutters. Manufactured to **Works Standards**.

CARBIDE

Regular Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
1.00	3.0	40.0	4.0	15g	-6020K
1.50	4.5	40.0	4.0	15g	-6030K
2.00	8.0	32.0	2.0	15g	-6040K
2.50	9.5	32.0	2.5	15g	-6050K
3.00	12.0	32.0	3.0	15g	-6060K
3.50	12.0	32.0	3.5	20g	-6070K
4.00	14.0	40.0	4.0	20g	-6080K
4.50	14.0	50.0	4.5	20g	-6090K
5.00	14.0	50.0	5.0	30g	-6100K
6.00	16.0	50.0	6.0	35g	-6120K
7.00	20.0	60.0	8.0	40g	-6140K
8.00	20.0	60.0	8.0	40g	-6160K
9.00	20.0	60.0	9.0	60g	-6180K
10.00	22.0	70.0	10.0	100g	-6200K
11.00	22.0	70.0	11.0	120g	-6220K
12.00	22.0	70.0	12.0	130g	-6240K
14.00	25.0	75.0	14.0	180g	-6280K
16.00	25.0	75.0	16.0	230g	-6320K
18.00	25.0	75.0	18.0	230g	-6360K
20.00	32.0	100.0	20.0	240g	-6400K
25.00	38.0	100.0	25.0	640g	-6500K

**Regular Series - Inch**

Diameter (inch)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
1/16"	3/16"	1 1/2"	1/8"	10g	-6540K
3/32"	3/8"	1 1/2"	1/8"	10g	-6560K
1/8"	1/2"	1 1/2"	1/8"	10g	-6580K
3/16"	5/8"	2"	3/16"	20g	-6620K
7/32"	5/8"	2 1/2"	1/4"	30g	-6640K
1/4"	3/4"	2 1/2"	1/4"	30g	-6660K
5/16"	13/16"	2 1/2"	5/16"	45g	-6700K
3/8"	1"	2 1/2"	3/8"	60g	-6740K
1/2"	1"	3"	1/2"	165g	-6820K



Carbide Micrograin Plain Shank Slot Drills

Long Series - 2 Flute

For optimum performance and maximum swarf removal when plunging, slotting and routing in most materials including brass, aluminium, non-ferrous and other soft materials. Manufactured to **USCTI Standards**.

Diameter Metric	Tolerances		Diameter Inch	Tolerance	
	+	-		+	-
Over 1.00 ~ up to 6.00	0.000	0.050	Over 1/16" ~ up to 1/4"	0.000	0.002
Over 6.00 ~ up to 25.00	0.000	0.080	Over 1/4" ~ up to 1"	0.000	0.003

CARBIDE



Long Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
3.00	20.0	60.0	3.0	15g	-1003K
4.00	20.0	60.0	4.0	20g	-1004K
5.00	25.0	75.0	5.0	30g	-1005K
6.00	30.0	75.0	6.0	35g	-1006K
8.00	30.0	75.0	8.0	40g	-1008K
10.00	40.0	100.0	10.0	100g	-1010K
12.00	45.0	100.0	12.0	130g	-1012K
16.00	65.0	150.0	16.0	230g	-1016K
20.00	65.0	150.0	16.0	240g	-1020K

Long Series - 3 Flute

CARBIDE



Long Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
3.00	25.0	75.0	3.0	15g	-4003K
4.00	25.0	75.0	4.0	20g	-4004K
5.00	25.0	75.0	6.0	30g	-4005K
6.00	25.0	75.0	6.0	35g	-4006K
8.00	25.0	75.0	8.0	40g	-4008K
10.00	38.0	100.0	10.0	100g	-4010K
12.00	50.0	100.0	12.0	130g	-4012K
16.00	75.0	150.0	16.0	230g	-4016K

Long Series - 4 Flute

CARBIDE



Long Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
3.00	20.0	60.0	3.0	15g	-9203K
4.00	20.0	60.0	4.0	20g	-9204K
5.00	25.0	75.0	5.0	30g	-9205K
6.00	30.0	75.0	6.0	35g	-9206K
8.00	30.0	75.0	8.0	40g	-9208K
10.00	40.0	100.0	10.0	100g	-9210K
12.00	45.0	100.0	12.0	130g	-9212K
16.00	65.0	150.0	16.0	230g	-9216K
20.00	65.0	150.0	20.0	240g	-9220K



Carbide Micrograin Plain Shank Milling Cutters

For optimum performance and maximum swarf removal when plunging, slotting and routing in light alloys, brass, aluminium, non-ferrous and other soft materials. Manufactured to **USCTI Standards**.
Two flute for maximum swarf clearance. Four flute for maximum rigidity.
(Three flute price/1 a combination of the advantages achieved with two and four flutes.)

CARBIDE



Regular Series

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each
2.00	7.0	39.0	3.0	15g
2.50	8.0	39.0	3.0	
3.00	10.0	39.0	3.0	15g
3.50	12.0	51.0	4.0	
4.00	14.0	51.0	4.0	20g
4.50	14.0	51.0	5.0	25g
5.00	16.0	51.0	5.0	30g
5.50	19.0	64.0	6.0	
6.00	19.0	64.0	6.0	35g
6.50	19.0	70.0	8.0	
7.00	19.0	64.0	8.0	40g
8.00	21.0	64.0	8.0	40g
8.50	22.0	70.0	10.0	
9.00	22.0	70.0	10.0	60g
10.00	25.0	70.0	10.0	100g
11.00	25.0	70.0	11.0	
12.00	25.0	76.0	12.0	130g
13.00	30.0	89.0	14.0	
14.00	30.0	89.0	14.0	180g
15.00	32.0	89.0	15.0	
16.00	32.0	89.0	16.0	230g
20.00	38.0	100.0	20.0	240g

2 FLUTE



Order Code SHR-161
-0040K
-0050K
-0060K
-0070K
-0080K
-0090K
-0100K
-
-0120K
-
-0140K
-0160K
-
-0180K
-0200K
-
-0240K
-
-0280K
-
-0320K
-0400K

3 FLUTE



Order Code SHR-161
-3040K
-3050K
-3060K
-3070K
-3080K
-3090K
-3100K
-3110K
-3120K
-3130K
-3140K
-3160K
-3170K
-3180K
-3200K
-3220K
-3240K
-3260K
-3280K
-3300K
-3320K
-3400K

4 FLUTE



Order Code SHR-161
-6040K
-6050K
-6060K
-6070K
-6080K
-6090K
-6100K
-
-6120K
-6130K
-6140K
-6160K
-6170K
-6180K
-6200K
-6220K
-6240K
-
-6280K
-
-6320K
-6400K

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Carbide Micrograin Plain Shank Slot Drills 2 Flute Ball Nosed

For optimum performance and maximum swarf removal when plunging, slotting and routing in most materials including brass, aluminium, non-ferrous and other soft materials. Manufactured to **USCTi Standards**.

Diameter Metric	Tolerances	
	+	-
Over 1.00 ~ up to 6.00	0.000	0.050
Over 6.00 ~ up to 25.00	0.000	0.080



Regular Series

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code SHR-161
2.00	4.0	38.0	3.0	10g	-1040K
3.00	6.0	38.0	3.0	10g	-1060K
4.00	8.0	50.0	4.0	15g	-1080K
5.00	10.0	50.0	6.0	25g	-1100K
6.00	12.0	50.0	6.0	25g	-1120K
7.00	19.0	63.0	8.0	45g	-1140K
8.00	20.0	63.0	8.0	55g	-1160K
10.00	22.0	75.0	10.0	90g	-1200K
12.00	25.0	75.0	12.0	120g	-1240K
16.00	32.0	89.0	16.0	250g	-1320K
20.00	38.0	100.0	20.0	420g	-1400K

CARBIDE



Solid Carbide Micrograin Plain Shank End Mills 4 Flute Ball Nosed

For maximum strength when milling harder materials where rapid swarf removal is not needed. Four flute milling cutters have one of the strongest tooth structures available in solid cutters. Centre cutting as standard. Manufactured to **ANSI Standards**.



CARBIDE



Diameter Metric	Tolerances	
	+	-
Over 1.00 ~ up to 6.00	0.000	0.050
Over 6.00 ~ up to 25.00	0.000	0.080



Regular Series

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code SHR-161
2.00	6.3	38.0	3.0	10g	-7040K
3.00	12.0	38.0	3.0	10g	-7060K
4.00	14.0	50.0	4.0	15g	-7080K
5.00	16.0	50.0	6.0	25g	-7100K
6.00	19.0	50.0	6.0	25g	-7120K
8.00	20.0	63.0	8.0	55g	-7160K
10.00	22.0	75.0	10.0	90g	-7200K
12.00	25.0	75.0	12.0	120g	-7240K
16.00	32.0	89.0	16.0	250g	-7320K
20.00	38.0	100.0	20.0	420g	-7400K

SWISS+TECH

Carbide Plain Shank Slot Drills 2 Flute Ball Nosed

Centre cutting.
To **Manufacturers Standards**.



Series 53 Short Series

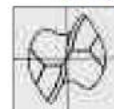
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Weight each
2.00	4.0	48.0	6.0	17g
3.00	4.0	48.0	6.0	18g
4.00	6.0	50.0	6.0	19g
5.00	7.0	51.0	6.0	20g
6.00	7.0	51.0	6.0	20g
8.00	9.0	59.0	8.0	40g
10.00	10.0	60.0	10.0	63g
12.00	14.0	71.0	12.0	103g
16.00	16.0	76.0	16.0	186g

Carbide Uncoated

For general production machining.

TiCN Coated

Extends cutter tool life and improves work material surface finish.



SBC-2PS Carbide

SBT-2PS TiCN Coated

Order Code

Order Code

SWT-161

SWT-161

-5302A

-

-5303A

-5333A

-5304A

-5334A

-5305A

-5335A

-5306A

-5336A

-5308A

-5338A

-5310A

-5340A

-5312A

-5342A

-5316A

-



Solid Carbide Micrograin Plain Shank End Mills Double Ended

4 Flute

For maximum strength when milling harder materials where rapid swarf removal is not needed. Four flute milling cutters have one of the strongest tooth structures available in solid cutters. Centre cutting. Manufactured to **ANSI Standards**.



CARBIDE



4 Flute - Regular Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
2.00	4.0	38.0	3.0	10g	-8040K
3.00	6.0	38.0	3.0	10g	-8060K
4.00	8.0	50.0	4.0	15g	-8080K
5.00	10.0	63.0	5.0	20g	-8100K
6.00	12.0	63.0	6.0	30g	-8120K
7.00	12.0	63.0	8.0	45g	-8140K
8.00	12.0	63.0	8.0	50g	-8160K
10.00	14.0	75.0	10.0	80g	-8200K
12.00	16.0	75.0	12.0	120g	-8240K

Carbide Plain Shank Al-Karb Ultrafine Micrograin Milling Cutters Slot Drills for Aluminium

2 Flute

Centre cutting as standard. An advanced tool geometry designed for cutting aluminium and other non-metallic, non-ferrous materials requiring high machining rates. Al-Karb cutters will out-perform conventional end mills on these materials as the flute design allows maximum chip removal.

new

CARBIDE



Short Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
3.00	8.0	57.0	6.0	15g	-9700K
4.00	11.0	57.0	6.0	15g	-9720K
5.00	13.0	57.0	6.0	30g	-9740K
6.00	13.0	57.0	6.0	35g	-9750K
8.00	19.0	63.0	8.0	40g	-9760K
10.00	22.0	72.0	10.0	100g	-9770K
12.00	26.0	83.0	12.0	130g	-9780K
16.00	26.0	83.0	14.0	230g	-9790K

2 Flute

For optimum performance and maximum swarf removal when plunging, slotting and routing in most materials including brass, aluminium, non-ferrous and other soft materials. Manufactured to **USCTi Standards**.

Regular Series - 2 Flute

Regular Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
2.00	6.0	38.0	3.0	10g	-1040K
3.00	7.0	57.0	6.0	10g	-1060K
4.00	8.0	57.0	6.0	15g	-1080K
5.00	10.0	57.0	6.0	25g	-1100K
6.00	10.0	57.0	6.0	25g	-1120K
7.00	19.0	63.0	8.0	45g	-1140K
8.00	16.0	63.0	8.0	55g	-1160K
10.00	19.0	75.0	10.0	90g	-1200K
12.00	22.0	83.0	12.0	120g	-1240K
16.00	26.0	92.0	16.0	250g	-1320K
20.00	32.0	104.0	20.0	420g	-1400K

Regular Series - 2 Flute - Inch

Diameter (Inch)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
1/8"	1/2"	1 1/2"	3/8"	10g	-1580K
3/16"	5/8"	2"	3/16"	15g	-1620K
1/4"	3/4"	2 1/2"	1/4"	35g	-1660K
1/2"	1"	3"	1/2"	140g	-1820K

3 Flute

Offer a combination of advantages achieved with two and four flutes giving profile and peripheral milling capability in addition to slotting and plunging. Chatter is also significantly reduced. Centre cutting as standard. Manufactured to **ANSI Standards**.

Regular Series - 3 Flute

Regular Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
2.00	6.0	38.0	3.0	15g	-4040K
3.00	10.0	38.0	3.0	15g	-4060K
4.00	14.0	50.0	4.0	20g	-4080K
5.00	16.0	50.0	6.0	30g	-4100K
6.00	19.0	50.0	6.0	35g	-4120K
8.00	20.0	63.0	8.0	40g	-4160K
10.00	22.0	75.0	10.0	100g	-4200K
12.00	25.0	75.0	12.0	130g	-4240K

4 Flute Four flute milling cutters have one of the strongest tooth structures available in solid cutters. Centre cutting as standard. Manufactured to **ANSI Standards**.

Regular Series - 4 Flute

Regular Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
2.0	6.3	38.0	3.0	10g	-7040K
3.0	12.0	38.0	3.0	10g	-7060K
4.0	14.0	50.0	4.0	15g	-7080K
5.0	16.0	50.0	6.0	25g	-7100K
6.0	19.0	50.0	6.0	25g	-7120K
7.0	19.0	63.0	8.0	45g	-7140K
8.0	20.0	63.0	8.0	55g	-7160K
10.0	22.0	75.0	10.0	90g	-7200K
12.0	25.0	75.0	12.0	120g	-7240K

Diameter Metric	Tolerances	
	+	-
Over 1.00 ~ up to 6.00	0.000	0.050
Over 6.00 ~ up to 25.00	0.000	0.080

CARBIDE

Long Series - 2 Flute

Long Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Order Code KEN-161
3.00	30.0	75.0	3.0	-1930K
4.00	30.0	75.0	4.0	-1940K
5.00	40.0	100.0	5.0	-1950K
6.00	50.0	150.0	6.0	-1960K
8.00	50.0	150.0	8.0	-1980K
10.00	60.0	150.0	10.0	-1990K
12.00	50.0	150.0	15.0	-2000K
16.00	75.0	150.0	16.0	-2010K

Long Series - 3 Flute

Long Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
3.00	25.0	75.0	3.0	15g	-4930K
4.00	25.0	75.0	4.0	15g	-4940K
5.00	25.0	75.0	5.0	30g	-4950K
6.00	25.0	75.0	6.0	30g	-4960K
8.00	25.0	75.0	8.0	40g	-4980K
10.00	38.0	100.0	10.0	100g	-4990K
12.00	50.0	100.0	12.0	130g	-4992K

CARBIDE

Long Series - 4 Flute

Long Series - Metric

Diameter (mm)	Flute Length	Overall Length	Shank Dia.	Weight each	Order Code KEN-161
3.00	25.0	75.0	3.0	15g	-7930K
4.00	25.0	75.0	4.0	25g	-7940K
5.00	25.0	75.0	5.0	30g	-7950K
6.00	25.0	75.0	6.0	30g	-7960K
10.00	38.0	100.0	10.0	100g	-7990K

CARBIDE


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The combination of **HSS-E PM** and **TiALN**

produces a cutter that is ideally suited to dry and semi dry machining of:

- Materials up to 45 HRC.
- Stainless steels
- Aerospace alloys.

HSS-E PM HSS-E PM is a sintered powder metallurgy HSS that combines the toughness associated with HSS-Co and the hardness benefits of carbide.

- Up to 25% higher cutting speed than HSS/HSS-Co. cutters.
- Up to 125% higher feed rates.
- Up to 100% longer cutter life.
- Reduced manufacturing costs.
- Improved productivity.
- Lower coolant usage and disposal costs.

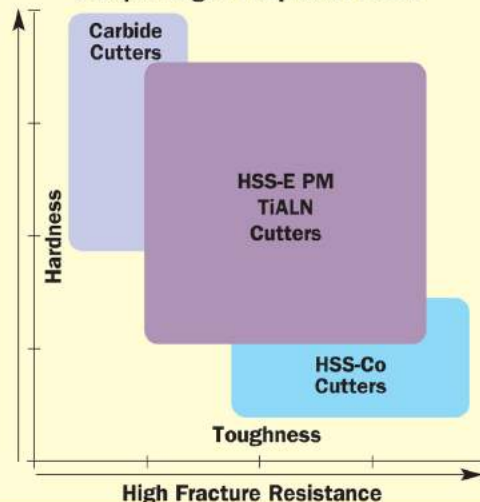
TiALN TiALN is a multi-layer coating capable of operating at higher speed and feed.

- Protects cutting edge under extreme conditions.
- Surface hardness 3000HV.
- Surface coefficient against steel 0.4.
- Thickness of coating 3 - 4µm.
- Maximum working temperature 800°C.
- Re-coating service also available.

HSS-E PM Cutters TiALN Coated

**Toughness & Hardness,
the Best of Both . . .**

High Wear Resistance - Fast Cutting -
Sharper Edges - Improved Finish



Weldon Shank HSS-E PM TiALN Coated 45° High Helix Milling Cutters

Centre cutting.
Weldon shank to **DIN 1835B**.
Cutting diameter to **k10**.
Shank diameter to **h6**.

HSS-E PM TiALN



Series 90 Regular Series Dimensions to DIN 844

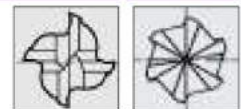
EHP-4WR PM Coated					
Diameter (mm)	Flute Length	Overall Length	Shank Dia.	No. of Flutes	Order Code SWT-165
6.00	13.0	57.0	6.0	4	-9006A
8.00	19.0	69.0	10.0	4	-9008A
10.00	22.0	72.0	10.0	4	-9010A
12.00	26.0	83.0	12.0	4	-9012A
16.00	32.0	93.0	16.0	6	-9016A
20.00	38.0	104.0	20.0	6	-9020A
25.00	45.0	121.0	25.0	6	-9025A ⁽¹⁾

⁽¹⁾ RFP-6WR PM Coated

Weldon Shank HSS-E PM TiALN Coated High Helix Cutters

Centre cutting.
Weldon shank to **DIN 1835B**.
Cutting diameter to **k10**.
Shank diameter to **h6**.

HSS-E PM TiALN



Series 92 Long Series Dimensions to DIN 844

EHP-4WL PM Coated					
Diameter (mm)	Flute Length	Overall Length	Shank Dia.	No. of Flutes	Order Code SWT-165
6.00	24.0	68.0	6.0	4	-9206A
8.00	38.0	78.0	10.0	4	-9208A
10.00	45.0	95.0	10.0	4	-9210A
12.00	53.0	110.0	12.0	4	-9212A
16.00	45.0	100.0	16.0	6	-9216A
20.00	58.0	122.0	20.0	6	-9220A
25.00	90.0	166.0	25.0	6	-9225A ⁽¹⁾

⁽¹⁾ EHP-6WL PM Coated

Weldon Shank HSS-E PM TiALN Coated Fine Pitch Ripper Cutters

Centre cutting. Shank to **DIN 1835B**. Cutting diameter to **js12**. Shank diameter to **h6**.

HSS-E PM TiALN



Series 96 Long Series Dimensions to DIN 844

RFP-4WL PM Coated					
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Number of Flutes	Order Code SWT-165
6.00	24.0	68.0	6.0	4	-9606A
8.00	38.0	88.0	10.0	4	-9608A
10.00	45.0	95.0	10.0	5	-9610A
12.00	53.0	110.0	12.0	5	-9612A
16.00	63.0	123.0	16.0	5	-9616A
20.00	75.0	141.0	20.0	5	-9620A
25.00	90.0	166.0	25.0	6	-9625A ⁽¹⁾

⁽¹⁾ RFP-6WL PM Coated

SWISS+TECH

HSS-E PM 2 Flute Slot Drill Peak Power Set

Weldon Shank
Centre cutting.
To **Manufacturers Standards**.
Weldon shank to **DIN 1835B**.
Shank diameter to **h6**.
Dimensions to **DIN 844**.

Contents: 3, 4, 5, 6, 8, 10 and 12mm.

HSS-E PM

PEAK POWER



**7
PIECES**



Series 91

Number of Pieces	Order Code
7	SWT-165 -9150A

HSS-E PM 2 Flute Ball Nose Slot Drill Peak Power Set

Weldon Shank
Centre cutting.
To **Manufacturers Standards**.
Weldon shank to **DIN 1835B**.
Shank diameter to **h6**.
Dimensions to **DIN 844**.

Contents: 3, 4, 5, 6, 8, 10 and 12mm.

HSS-E PM

PEAK POWER



**7
PIECES**



Series 97

Number of Pieces	Order Code
7	SWT-165 -9750A

HSS-E PM High Helix Fine Pitch Ripper Peak Power Set

Weldon Shank
Centre cutting.
To **Manufacturers Standards**.
Weldon shank to **DIN 1835B**.
Shank diameter to **h6**.
Dimensions to **DIN 844**.

Contents: 5, 6, 8, 10, 12 and 16mm.

HSS-E PM

PEAK POWER



**6
PIECES**



Series 98

Number of Pieces	Order Code
6	SWT-165 -9850A

HSS-E PM Coarse Pitch Ripper Peak Power Set

Weldon Shank - 5 Piece Set
Centre cutting.
To **Manufacturers Standards**.
Weldon shank to **DIN 1835B**.
Shank diameter to **h6**.
Dimensions to **DIN 844**.

Contents: 8, 10, 12, 16 and 20mm.

HSS-E PM

PEAK POWER



**5
PIECES**



Series 99

Number of Pieces	Order Code
5	SWT-165 -9950A

Carbide Cutters Q-Coat Coated

Q-Coat

has been specifically developed to give carbide cutters the 'edge' when faced with severe machining conditions.

- Materials up to 66HRC.
- Dry Cutting.
- Die and Mould Machining
- Improved Productivity.
- Reduced coolant usage and disposal.
- Up to 100% longer cutter life.
- Reduced manufacturing costs.

A multi-layer coating capable of operating at higher speed and feed.

- Excellent oxidation resistance.
- High speed machining.
- Surface hardness 3300HV.
- Surface coefficient against steel 0.25.
- Thickness of coating 3 - 5µm.
- Maximum working temperature 850°C.
- Re-coating service also available.

Carbide Plain Shank Slot Drills 2 Flute

Centre cutting.
To **Manufacturers Standards**.
Cutting diameter to **h10**.
Shank diameter to **h6**.
SDQ-2PS Carbide Q-Coat.

CARBIDE Q-Coat



Series 60 Short Series Dimensions to DIN 844

SDQ-2PS Carbide Q-Coat				
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Order Code SWT-165
2.00	6.0	45.0	4.0	-6002A
3.00	8.0	45.0	6.0	-6003A
4.00	11.0	45.0	6.0	-6004A
5.00	13.0	50.0	6.0	-6005A
6.00	13.0	50.0	6.0	-6006A
7.00	16.0	60.0	8.0	-6007A
8.00	19.0	60.0	8.0	-6008A
9.00	19.0	70.0	8.0	-6009A
10.00	22.0	70.0	10.0	-6010A
12.00	26.0	75.0	12.0	-6012A
16.00	32.0	100.0	16.0	-6016A

Carbide Plain Shank Slot Drills 2 Flute

Centre cutting. To **Manufacturers Standards**.
Cutting diameter to **h10**. Shank diameter to **h6**.
SDQ-2PS Carbide Q-Coat.

CARBIDE Q-Coat



Series 62 Long Series Dimensions to DIN 844

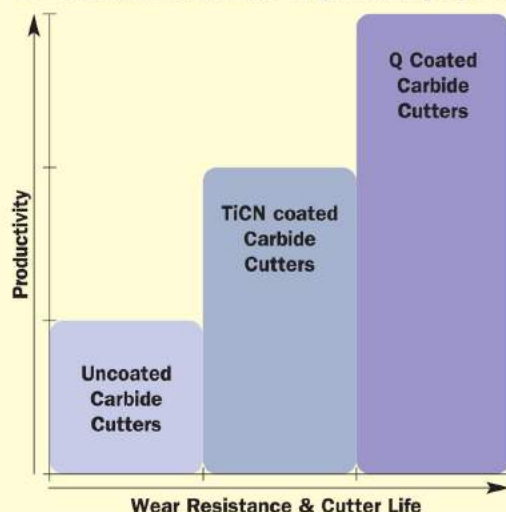
SDQ-2PL Carbide Q-Coat				
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Order Code SWT-165
3.00	12.0	50.0	6.0	-6203A
4.00	15.0	50.0	6.0	-6204A
6.00	20.0	60.0	6.0	-6206A
8.00	25.0	70.0	8.0	-6208A
10.00	30.0	90.0	10.0	-6210A
12.00	30.0	90.0	12.0	-6212A
16.00	50.0	110.0	16.0	-6216A
20.00	55.0	110.0	20.0	-6220A

SHANK MILLING CUTTERS - DIE & MOULD



A Step Beyond Carbide . . .

For Extreme Conditions - High Cutting Speeds



Carbide Plain Shank End Mills 4 Flute

Centre cutting.
To **Manufacturers Standards**. Cutting diameter to **h10**.
Shank diameter to **h6**.
EMQ-4PS/L Carbide Q-Coat.

CARBIDE Q-Coat



Series 66 Short Series Dimensions to DIN 844

EMQ-4PS Carbide Q-Coat				
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Order Code SWT-165
2.00	6.0	40.0	4.0	-6602A
3.00	8.0	45.0	6.0	-6603A
4.00	11.0	45.0	6.0	-6604A
5.00	13.0	50.0	6.0	-6605A
6.00	13.0	50.0	6.0	-6606A
7.00	16.0	60.0	8.0	-6607A
8.00	19.0	60.0	8.0	-6608A
9.00	19.0	70.0	10.0	-6609A
10.00	22.0	70.0	10.0	-6610A
11.00	22.0	75.0	12.0	-6611A
12.00	26.0	75.0	12.0	-6612A
14.00	26.0	85.0	14.0	-6614A
16.00	32.0	100.0	16.0	-6616A
18.00	32.0	100.0	18.0	-6618A
20.00	38.0	105.0	20.0	-6620A
25.00	45.0	120.0	25.0	-6625A

Carbide Plain Shank End Mills 4 Flute

Centre cutting. To **Manufacturers Standards**.
Cutting diameter to **h10**. Shank diameter to **h6**.
EMQ-4PS/L Carbide Q-Coat.

CARBIDE Q-Coat



Series 68 Long Series Dimensions to DIN 844

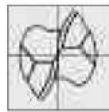
EMQ-4PL Carbide Q-Coat				
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Order Code SWT-165
3.00	12.0	50.0	6.0	-6803A
4.00	15.0	50.0	6.0	-6804A
5.00	20.0	60.0	6.0	-6805A
6.00	20.0	60.0	6.0	-6806A
8.00	25.0	70.0	8.0	-6808A
10.00	30.0	90.0	10.0	-6810A
12.00	30.0	90.0	12.0	-6812A
16.00	50.0	110.0	16.0	-6816A

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SWISS+TECH
**Carbide Plain Shank Slot Drills
2 Flute Ball Nose**

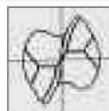
Centre cutting.
To **Manufacturers Standards**.
Cutting diameter to **e8**.
Shank diameter to **h6**.
Carbide Q-Coat.

CARBIDE
Q-Coat

Series 73 Long Reach

Carbide Q-Coat					
Dia. (mm)	Shank Dia	Length of Cut	Length Below Shank	Overall Length	Neck Dia.
0.60	4.0	0.9	6.0	35.0	0.55
0.80	4.0	1.2	8.0	45.0	0.75
1.00	4.0	1.5	8.0	45.0	0.95
1.50	4.0	2.3	20.0	55.0	1.39
2.00	4.0	3.0	16.0	50.0	1.91
2.00	4.0	3.0	20.0	55.0	1.89

**Carbide Plain Shank Slot Drills
Ball Nosed 2 Flute**

Centre cutting.
To **Manufacturers Standards**.
Cutting diameter to **e8**.
Shank diameter to **h6**.
SBQ-2PR Carbide Q-Coat.

CARBIDE Q-Coat

Series 78 Regular Length

SBQ-2PR Carbide Q-Coat					
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Order Code	
2.00	5.0	50.0	6.0	-7802A	
2.50	6.0	60.0	6.0	-7802L	
3.00	8.0	60.0	6.0	-7803A	
4.00	8.0	70.0	6.0	-7804A	
5.00	10.0	80.0	6.0	-7805A	
6.00	12.0	90.0	6.0	-7806A	
8.00	14.0	100.0	8.0	-7808A	
10.00	18.0	100.0	10.0	-7810A	
12.00	22.0	110.0	12.0	-7812A	
16.00	30.0	140.0	16.0	-7816A	
20.00	38.0	160.0	20.0	-7820A	

Carbide Plain Shank Slot Drills 2 Flute

Centre cutting.
To **Manufacturers Standards**.
Cutting diameter to **h10**.
Shank diameter to **h6**.
Carbide Q-Coat.

CARBIDE Q-Coat

Series 74 Long Reach

Carbide Q-Coat					
Dia. (mm)	Shank Dia. (d1)	Length of Cut (l1)	Length Below Shank (l2)	Overall Length (l3)	Neck Dia. (d3)
0.50	4.0	0.7	6.0	45.0	0.45
0.60	4.0	0.9	4.0	45.0	0.55
0.80	4.0	1.2	4.0	45.0	0.75
1.00	4.0	1.5	8.0	45.0	0.95
1.00	4.0	1.5	10.0	45.0	0.95
1.20	4.0	1.8	12.0	45.0	1.13
1.50	4.0	2.3	16.0	50.0	1.41
2.00	4.0	3.0	14.0	50.0	1.93
2.00	4.0	3.0	20.0	55.0	1.89
2.50	4.0	3.7	20.0	60.0	2.40
3.00	6.0	4.5	14.0	50.0	2.85
3.00	6.0	4.5	25.0	65.0	2.85

Carbide Plain Shank End Mills Ball Nosed 4 Flute

Centre cutting.
To **Manufacturers Standards**.
Cutting diameter to **e8**. Shank diameter to **h6**.
EBQ-4PR Carbide Q-Coat.

CARBIDE Q-Coat

Series 80 - Regular Length Dimensions to DIN 844

EBQ-4PR Q-Coat				
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Order Code
2.00	5.0	50.0	6.0	-8002A
4.00	8.0	70.0	6.0	-8004A
5.00	10.0	80.0	6.0	-8005A
6.00	12.0	90.0	6.0	-8006A
8.00	14.0	100.0	8.0	-8008A
10.00	18.0	100.0	10.0	-8010A
12.00	22.0	110.0	12.0	-8012A

**Carbide Plain Shank Corner Radius
End Mills 4 Flute**

Centre cutting. To **Manufacturers Standards**.
Cutting diameter to **e8**. Shank diameter to **h6**.
ECQ-4PR Carbide Q-Coat.

CARBIDE
Q-Coat

Series 86 - Regular Length

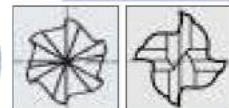
ECQ-4PR Q-Coat				
Diameter x Corner Radius (mm)	Flute Length	Overall Length	Shank Diameter	Order Code
6.00 x 0.5	20.0	60.0	6.0	-8604K
6.00 x 1.0	20.0	60.0	6.0	-8605K
8.00 x 0.5	25.0	70.0	8.0	-8606K
8.00 x 1.0	25.0	70.0	8.0	-8607K
8.00 x 1.5	25.0	70.0	8.0	-8608K
8.00 x 2.0	25.0	70.0	8.0	-8609K
10.00 x 0.5	30.0	90.0	10.0	-8610K
10.00 x 1.0	30.0	90.0	10.0	-8611K
10.00 x 1.5	30.0	90.0	10.0	-8612K
10.00 x 2.0	30.0	90.0	10.0	-8613K
12.00 x 0.5	30.0	90.0	12.0	-8614K
12.00 x 1.0	30.0	90.0	12.0	-8615K
12.00 x 1.5	30.0	90.0	12.0	-8616K

Carbide Plain Shank End Mills High Helix

Centre cutting. To **Manufacturers Standards**.
Cutting diameter to **e8**. Shank diameter to **h6**.
EHQ-6*PR Carbide Q-Coat.

Q-Coat
CARBIDE

*Number varies according to the number of flutes.


Series 72 Regular Length

EHQ-6PR Carbide Q-Coat					
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	No. of Flutes	Order Code
3.00	8.0	57.0	6.0	4.0	-7203A
4.00	11.0	57.0	6.0	4.0	-7204A
5.00	13.0	57.0	6.0	4.0	-7205A
6.00	13.0	57.0	6.0	6.0	-7206A
8.00	19.0	63.0	8.0	6.0	-7208A
10.00	22.0	72.0	10.0	6.0	-7210A
12.00	26.0	83.0	12.0	6.0	-7212A
16.00	32.0	92.0	16.0	6.0	-7216A
20.00	38.0	104.0	20.0	8.0	-7220A

Carbide Plain Shank Ripper Fine Pitch

Centre cutting. To **Manufacturers Standards**.
Cutting diameter to **e8**. Shank diameter to **h6**.
RFQ-3*PR Carbide Q-Coat.

Q-Coat
CARBIDE

*Number varies according to the number of flutes.


Series 82 - Regular Length Dimensions to DIN 844

RFQ-3PR Q-Coat				
Diameter (mm)	Flute Length	Overall Length	Shank Diameter	Number of Flutes
6.00	16.0	57.0	6.0	3.0
8.00	16.0	63.0	8.0	3.0
10.00	22.0	72.0	10.0	4.0
12.00	26.0	83.0	12.0	4.0
16.00	32.0	92.0	16.0	4.0
20.00	38.0	104.0	20.0	4.0
25.00	54.0	122.0	25.0	5.0

HSS-Co 5% KC3 3* Flute Throwaway Milling Cutters

Suitable for slot drilling and end milling. Cutters are held in adaptors/chucks by the action of a set screw which locates on the shank flat giving quick and easy cutter change.

*Except: 1mm cutters, 2mm and 1/16" ball nose cutters all of which have two flutes.

Diameter Metric		Tolerances		Diameter Inch	
		+	-		
Over 1.00 ~ up to 3.00	0.013	0.033		Over 1/16" ~ up to 1/4"	0.0005
Over 3.00 ~ up to 6.00	0.020	0.020			0.0013

Short Series

HSS-Co 5%


Shank Diameter: 1.00 ~ 6.00 = 6.00mm, 7.00 ~ 10.00 = 10.00mm

Diameter (mm)	Flute Length	Overall Length	Chuck Clearance	Weight each	Order Code KEN-062
1.00	2.0	24.5	8.5	10g	-0010K
1.50	2.5	24.5	8.5	10g	-0020K
2.00	3.0	25.5	9.5	10g	-0040K
2.50	4.0	26.0	10.5	10g	-0060K
3.00	4.5	28.0	11.0	10g	-0080K
3.50	5.5	30.0	12.0	10g	-0100K
4.00	6.5	32.5	12.5	10g	-0120K
5.00	7.5	36.0	13.5	10g	-0160K
5.50	7.5	36.0	13.5	10g	-0190K
6.00	9.5	36.0	15.0	10g	-0200K
8.00	11.0	47.5	19.7	30g	-0240K
10.00	13.0	51.5	20.5	35g	-0280K

Long Series

HSS-Co 5%


Diameter (mm)	Flute Length	Overall Length	Chuck Clearance	Weight each	Order Code KEN-062
1.50	4.0	28.0	10.0	10g	-1020K
2.00	4.5	29.0	11.0	10g	-1040K
2.50	6.5	32.0	12.5	10g	-1060K
3.00	7.5	34.0	14.5	10g	-1080K
3.50	8.5	36.5	15.0	10g	-1100K
4.00	9.5	39.0	16.0	10g	-1120K
4.50	11.0	42.0	17.5	10g	-1140K
5.00	12.5	44.5	17.5	10g	-1160K
5.50	14.5	46.0	19.0	10g	-1180K
6.00	16.0	44.5	20.5	10g	-1200K
8.00	19.0	55.5	27.9	30g	-1240K
10.00	22.5	61.5	31.6	40g	-1280K

Long Series



Diameter (mm)	Flute Length	Overall Length	Chuck Clearance	Weight each	Order Code KEN-062
1.50	4.0	28.0	10.0	10g	-6020K
2.00	4.5	29.0	11.0	10g	-6040K
2.50	6.5	32.0	12.5	10g	-6060K
3.00	7.5	34.0	14.5	10g	-6080K
4.00	9.5	39.0	16.0	10g	-6120K
4.50	11.0	42.0	17.5	10g	-6140K
5.00	12.5	44.5	17.5	10g	-6160K
5.50	14.5	46.0	19.0	10g	-6180K
6.00	16.0	44.5	20.5	10g	-6200K

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THROWAWAY MILLING CUTTERS

GROUP
062

HSS-Co 5% TiN KC3 Coated Throwaway Milling Cutters

TiN-Coated to allow elevated cutting speeds and help to extend tool life.

HSS-Co 5% TiN

Short Series



Diameter (mm)	Flute Length	Overall Length	Chuck Clearance	Weight each	Order Code KEN-062
1.00	2.0	24.5	8.5	10g	-3010K
1.50	2.5	24.5	8.5	10g	-3020K
2.00	3.0	25.5	9.5	10g	-3040K
2.50	4.0	26.0	10.5	10g	-3060K
3.00	4.5	28.0	11.0	10g	-3080K
3.50	5.5	30.0	12.0	10g	-3100K
4.00	6.5	32.5	12.5	10g	-3120K
5.00	7.5	36.0	13.5	10g	-3160K
6.00	9.5	36.0	15.0	10g	-3200K

Long Series

HSS-Co 5% TiN


Diameter (mm)	Flute Length	Overall Length	Chuck Clearance	Weight each	Order Code KEN-062
1.50	4.0	28.0	10.0	10g	-4020K
2.00	4.5	29.0	11.0	10g	-4040K
2.50	6.5	32.0	12.5	10g	-4060K
3.00	7.5	34.0	14.5	10g	-4080K
4.00	9.5	39.0	16.0	10g	-4120K
4.50	11.0	42.0	17.5	10g	-4140K
5.00	12.5	44.5	17.5	10g	-4160K
5.50	14.5	46.0	19.0	10g	-4180K
6.00	16.0	44.5	20.5	10g	-4200K

HSS-Co 5% TiCN-Coated Throwaway Milling Cutters

HSS-Co 5% TiCN

With a micro hardness of 3000HV and a maximum working temperature of 400°C, giving them a better resistance to abrasive wear than TiN coated cutters.



Short Series

Diameter (mm)	Flute Length	Overall Length	Chuck Clearance	Weight each	Order Code KEN-062
1.00	2.0	24.5	8.5	10g	-5010K
1.50	2.5	24.5	8.5	10g	-5020K
2.00	3.0	25.5	9.5	10g	-5040K
2.50	4.0	26.0	10.5	10g	-5060K
3.00	4.5	28.0	11.0	10g	-5080K
3.50	5.5	30.0	12.0	10g	-5100K
4.00	6.5	32.5	12.5	10g	-5120K
5.00	7.5	36.0	13.5	10g	-5160K
6.00	9.5	36.0	15.0	10g	-5200K

HSS-Co 5% TiCN


**Straight Shank
Machine Reamers**

Left hand spiral flute, right hand cutting.
Manufactured to **BS 328-4**.

Diameter Metric	Tolerance	
	High +	Low -
up to 3.00	0.008	0.004
Over 3.00 ~ up to 6.00	0.010	0.005
Over 6.00 ~ up to 10.00	0.012	0.006
Over 10.00 ~ up to 18.00	0.015	0.008

**HSS**

Diameter (mm)	Flute Length	Overall Length	Weight each	Order Code SHR-065
1.50	21.0	44.0	3g	-2219X
2.00	25.0	50.0	3g	-2220A
2.50	29.0	58.0	3g	-2221B
3.00	31.0	62.0	3g	-2222C
3.50	33.0	66.0	4g	-2223D
4.00	38.0	76.0	5g	-2224E
4.50	41.0	81.0	6g	-2225F
5.00	44.0	87.0	8g	-2226G
5.50	47.0	93.0	12g	-2227H
6.00	47.0	93.0	18g	-2228J

Diameter (mm)	Flute Length	Overall Length	Weight each	Order Code SHR-065
7.00	54.0	107.0	17g	-2229K
8.00	58.0	115.0	20g	-2230L
9.00	62.0	124.0	31g	-2231M
10.00	66.0	133.0	55g	-2232N
11.00	71.0	142.0	69g	-2232R
12.00	76.0	152.0	87g	-2233P
13.00	78.0	152.0	97g	-2234Q
14.00	81.0	163.0	184g	-2235R
16.00	87.0	175.0	235g	-2236S

Cobalt Straight Shank Chucking Reamers

Manufactured to **DIN 212**.

Diameter Metric	Tolerances (to H7) Tolerance	
	+	-
up to 5.50	0.004	0.000
Over 5.50	0.005	0.000

HSS-E

Diameter (mm)	Flute Length	Overall Length	Weight each	Order Code SHR-065
2.00	11.0	49.0	3g	-2655K
2.50	14.0	57.0	4g	-2657M
3.00	15.0	61.0	5g	-2659P
3.50	18.0	70.0	8g	-2661R
4.00	19.0	75.0	9g	-2662S
5.00	23.0	86.0	14g	-2664V
5.50	26.0	93.0	21g	-2665G
6.00	26.0	93.0	25g	-2665W
7.00	31.0	109.0	31g	-2666X
8.00	33.0	117.0	41g	-2667Y

Diameter (mm)	Flute Length	Overall Length	Weight each	Order Code SHR-065
9.00	36.0	125.0	56g	-2668Z
10.00	38.0	133.0	73g	-2669A
11.00	41.0	142.0	84g	-2670B
12.00	44.0	151.0	90g	-2671C
13.00	44.0	151.0	96g	-2672D
14.00	47.0	160.0	101g	-2673E
16.00	52.0	170.0	117g	-2675G

Straight Shank Parallel Hand Reamers

Used to produce a close tolerance surface
finish by hand in almost any environment
i.e. on site or in a workshop.
Manufactured to **BS 328-4** and **DIN 206B**.

Diameter Metric	Tolerance	
	+	-
up to 3.00	0.008	0.007
Over 3.00 ~ up to 6.00	0.010	0.005
Over 6.00 ~ up to 10.00	0.012	0.006
Over 10.00 ~ up to 18.00	0.015	0.008
Over 18.00 ~ up to 30.00	0.017	0.009
Over 30.00 ~ up to 50.00	0.021	0.012

HSS

Diameter (mm)	Flute Length	Overall Length	Weight each	Order Code SHR-065
1.50	20.0	41.0	2g	-2100A
2.00	25.0	50.0	3g	-2103D
2.50	29.0	58.0	4g	-2105F
3.00	31.0	62.0	5g	-2107H
3.50	35.0	71.0	6g	-2109K
4.00	38.0	76.0	7g	-2110L
4.50	41.0	81.0	8g	-2111M
5.00	44.0	87.0	10g	-2112N
5.50	47.0	93.0	13g	-2113P
6.00	47.0	93.0	19g	-2114Q
6.50	50.0	100.0	23g	-2115R
7.00	54.0	107.0	26g	-2116S
7.50	54.0	107.0	30g	-2117T
8.00	58.0	115.0	38g	-2118V
8.50	58.0	115.0	43g	-2119W
9.00	62.0	124.0	56g	-2120X
9.50	62.0	124.0	59g	-2121Y
10.00	66.0	133.0	69g	-2122Z
10.50	66.0	133.0	78g	-2124A
11.00	71.0	142.0	91g	-2125B
11.50	71.0	142.0	100g	-2126C

Diameter (mm)	Flute Length	Overall Length	Weight each	Order Code SHR-065
12.00	76.0	152.0	114g	-2127D
12.50	76.0	152.0	121g	-2128E
13.00	76.0	152.0	133g	-2129F
13.50	81.0	163.0	163g	-2130G
14.00	81.0	163.0	163g	-2131H
14.50	90.0	162.0	190g	-2132J
15.00	81.0	163.0	187g	-2133K
16.00	87.0	175.0	237g	-2134L
17.00	87.0	175.0	269g	-2135M
18.00	93.0	188.0	319g	-2136N
19.00	93.0	188.0	336g	-2137P
20.00	100.0	201.0	348g	-2138Q
21.00	100.0	201.0	578g	-2139R
22.00	107.0	215.0	500g	-2140S
23.00	107.0	215.0	650g	-2141T
24.00	115.0	231.0	729g	-2142V
25.00	115.0	231.0	785g	-2143W
30.00	124.0	247.0	1200g	-2148B
36.00	142.0	284.0	2490g	-2154H
40.00	152.0	305.0	2500g	-2158M

N/A



Taper Shank Machine Reamers

Used to produce a close tolerance surface finish by enlarging pre-drilled holes to a finished size. 45° bevelled lead.
Manufactured to **BS 328-4**.

REAMERS - TAPER SHANK

GROUP
065



HSS

Tolerances (to H7)		
Diameter	Tolerance	
Metric	+	-
up to 3.00	0.008	0.004
Over 3.00 ~ up to 6.00	0.010	0.005
Over 6.00 ~ up to 10.00	0.012	0.006
Over 10.00 ~ up to 18.00	0.015	0.008
Over 18.00 ~ up to 30.00	0.017	0.009
Over 30.00 ~ up to 50.00	0.021	0.012
Over 50.00 ~ up to 80.00	0.025	0.014
Over 80.00 ~ up to 120.00	0.029	0.016



Diameter (mm)	Flute Length	Overall Length	Morse Taper	Weight each	Order Code
					SHR-065
3.00	33.0	112.0	1	52g	-2350A
3.50	35.0	115.0	1	52g	-2351B
4.00	38.0	117.0	1	52g	-2352C
4.50	41.0	120.0	1	55g	-2353D
5.00	44.0	124.0	1	56g	-2354E
5.50	47.0	127.0	1	56g	-2355F
6.00	47.0	127.0	1	58g	-2356G
6.50	50.0	130.0	1	59g	-2357H
7.00	54.0	134.0	1	64g	-2358J
7.50	54.0	134.0	1	66g	-2359K
8.00	58.0	138.0	1	67g	-2360L
8.50	58.0	138.0	1	70g	-2361M
9.00	62.0	142.0	1	72g	-2362N
9.50	62.0	142.0	1	76g	-2363P
10.00	66.0	144.0	1	79g	-2364Q
10.50	66.0	144.0	1	81g	-2365R
11.00	71.0	151.0	1	88g	-2366S
11.50	71.0	151.0	1	96g	-2367T
12.00	76.0	156.0	1	108g	-2368V
12.50	76.0	156.0	1	111g	-2369W
13.00	76.0	156.0	1	122g	-2370X
13.50	81.0	161.0	1	130g	-2371Y
14.00	81.0	163.0	1	126g	-2372Z
14.50	81.0	181.0	2	200g	-2374A
15.00	81.0	181.0	2	230g	-2375B
15.50	87.0	187.0	2	245g	-2376C

Diameter (mm)	Flute Length	Overall Length	Morse Taper	Weight each	Order Code
					SHR-065
16.00	87.0	187.0	2	262g	-2377D
16.50	87.0	187.0	2	270g	-2378E
17.00	87.0	187.0	2	273g	-2379F
17.50	93.0	193.0	2	292g	-2379R
18.00	93.0	193.0	2	305g	-2380G
18.50	93.0	193.0	2	317g	-2380S
19.00	93.0	193.0	2	323g	-2381H
19.50	100.0	200.0	2	324g	-2381T
20.00	100.0	200.0	2	350g	-2382J
21.00	100.0	200.0	2	365g	-2383K
22.00	107.0	207.0	2	419g	-2384L
23.00	107.0	207.0	2	467g	-2385M
24.00	115.0	242.0	3	686g	-2386N
25.00	115.0	242.0	3	740g	-2387P
26.00	115.0	242.0	3	747g	-2388Q
27.00	124.0	251.0	3	901g	-2389R
28.00	124.0	251.0	3	884g	-2390S
30.00	124.0	251.0	3	990g	-2392V
32.00	133.0	293.0	4	1510g	-2394X
35.00	142.0	302.0	4	1751g	-2398A
40.00	152.0	312.0	4	2250g	-2403F
45.00	163.0	323.0	4	2900g	-2408L
50.00	174.0	334.0	4	3630g	-2413R

Taper Shank Extra Length Machine Reamers

Used to produce a close tolerance surface finish in drilled holes to allow the fitting of hardened and ground taper pins in the building of jigs, fixtures and dies.
Manufactured to **BS 328-4**.

HSS

CUTTING TOOLS



Diameter (mm)	Flute Length	Overall Length	Morse Taper	Weight each	Order Code
					SHR-064
6.00	124.0	203.0	1	80g	-2500A
8.00	124.0	203.0	1	103g	-2502C
10.00	124.0	203.0	1	114g	-2504E
10.00	175.0	254.0	1	129g	-2505F
12.00	124.0	203.0	1	132g	-2507H

Diameter (mm)	Flute Length	Overall Length	Morse Taper	Weight each	Order Code
					SHR-064
12.00	175.0	254.0	1	188g	-2508J
12.00	225.0	305.0	1	228g	-2509K
16.00	154.0	254.0	2	361g	-2510L
16.00	205.0	305.0	2	411g	-2511M

Straight Shank Hand Taper Pin Reamers

Used to produce a close tolerance surface finish in taper holes to allow the fitting of hardened and ground taper pins in the building of jigs, fixtures and dies.
Manufactured to **BS 328-4 and DIN 9A**.

HSS

Tolerances		
Diameter	Tolerance	
Metric	+	-
Over 1.50 ~ up to 5.00	0.075	0.000
Over 5.00 ~ up to 20.00	0.125	0.000



Diameter (mm)	Dia. Range min	Dia. Range max	Flute Length	Overall Length	Weight each	Order Code
						SHR-065
1.50	1.4	2.40	37	57	4g	-2800A
2.00	1.9	2.86	48	68	4g	-2801B
2.50	2.4	3.36	48	68	5g	-2802C
3.00	2.9	4.06	58	80	7g	-2803D
4.00	3.9	5.26	38	93	9g	-2804E
5.00	4.9	6.36	73	100	48g	-2805F
6.00	5.9	8.00	105	135	38g	-2806G

Diameter (mm)	Dia. Range min	Dia. Range max	Flute Length	Overall Length	Weight each	Order Code
						SHR-065
8.00	7.9	10.80	145	180	39g	-2807H
10.00	9.9	13.40	175	215	89g	-2808J
12.00	11.8	16.00	210	255	145g	-2809K
13.00	12.8	16.74	210	255	295g	-2810L
14.00	13.8	17.74	210	255	355g	-2811M
16.00	15.8	20.40	230	280	475g	-2812N
20.00	19.8	24.80	250	310	814g	-2813P

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GROUP
072/075 SAW BLADES/SCREW EXTRACTORS



HSS Slitting Saws
Fine/Coarse



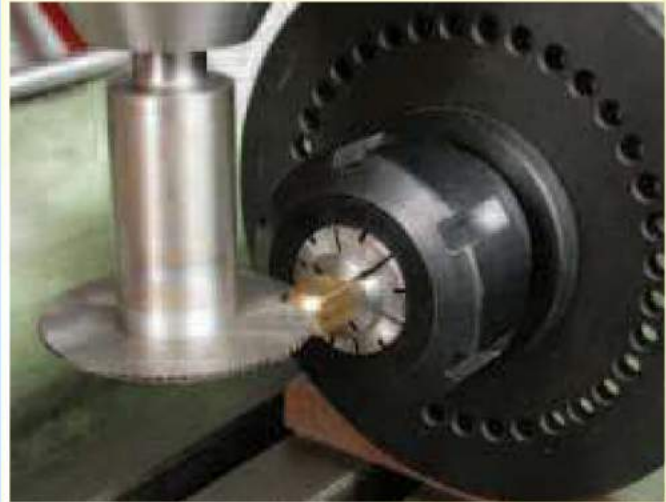
High speed steel slitting saws are hollow ground to give the clearance necessary for deep cutting. Available in coarse and fine teeth, number of teeth specified below. Supplied with keyways as standard. Manufactured to BS122.

Metric



Diameter (mm)	Thickness	Bore	Teeth	Order Code SHR-072
25.00	0.50	8.0	64	-6025A
25.00	1.00	8.0	48	-6028D
25.00	1.60	8.0	40	-6030F
32.00	0.60	8.0	64	-6045Y
40.00	1.00	10.0	64	-6067X
40.00	1.60	10.0	64	-6069Z
50.00	2.00	13.0	64	-6098E
63.00	0.40	16.0	128	-6112V
63.00	1.00	16.0	100	-6121D
80.00	1.00	22.0	100	-6149K
80.00	2.00	22.0	80	-6155R
80.00	3.00	22.0	80	-6159W
100.00	1.00	22.0	128	-6176N

Inch



Diameter (Inch)	Thickness	Bore	Teeth	Order Code SHR-072
2 1/2"	1/64"	1"	62	-5008Z
3"	1/64"	1"	74	-5020G
3"	1/32"	1"	74	-5020Q
3"	3/64"	1"	74	-5021R
3"	1/16"	1"	30	-5022N
3"	1/16"	1"	74	-5022S
3"	5/64"	1"	74	-5023T
3"	3/32"	1"	74	-5024V
3"	1/8"	1"	30	-5026S
4"	1/64"	1"	100	-5034X
4"	3/64"	1"	100	-5036M
4"	1/16"	1"	100	-5037N
4"	1/8"	1"	36	-5041H
5"	3/32"	1"	40	-5052V

CUTTING TOOLS



Industrial Quality
Screw Extractors

Recommended for simple, low cost removal of broken screws, bolts etc, without damaging the threads of the component.



Extractor Number	Inch diameter for removing screws sized	Weight each	Order Code KEN-075
1	3/32 to 5/32	40g	-1010K
2	5/32 to 7/32	80g	-1020K
3	7/32 to 9/32	160g	-1030K
4	9/32 to 3/8	40g	-1040K
5	3/8 to 5/8	70g	-1050K
6	5/8 to 7/8	130g	-1060K
7	7/8 to 1 1/8	210g	-1070K
8	1 1/8 to 1 3/8	410g	-1080K
9	1 3/8 & above	690g	-1090K

Screw Extractor Sets

4 Piece Sizes: No. 2, 3, 4 and 5.

6 Piece Sizes: No. 1, 2, 3, 4, 5 and 6.



Number of Pieces	Weight each	Order Code KEN-075
4	130g	-1140K
6	250g	-1160K

ISO 529	SHERWOOD		METRIC COARSE	METRIC FINE	UNC	UNF	BSW	BSF	BA	BSP	BSPT	NPT NPTF	NPS NPSF
HSS Ground Thread For Hand & General Use	Taper-Second Plug		Page 90	Page 92	Page 94	Page 96	Page 97	Page 98	Page 99	Page 100	Page 101	Page 102	Page 102
	Sets of Three		Page 90	Page 92	Page 94	Page 96	Page 97	Page 98	Page 99	Page 100	Page 101	*	*
	Spiral Point/ Gun Nose		Page 91	Page 93	Page 95	Page 96	Page 97	Page 98	Page 99	Page 100	*	*	*
	Spiral Flute		Page 91	Page 93	Page 95	Page 96	Page 97	Page 98	Page 99	Page 100	*	*	*
	Fluteless		Page 91	*	Page 95	*	*	*	*	*	*	*	*
	Long Series		Page 91	*	*	*	*	*	*	*	*	*	*
	Dies		Page 90	Page 92	Page 94	Page 95	Page 97	Page 165	Page 99	Page 100	Page 101	Page 92	Page 92
	Die Nuts		Page 90	Page 92	Page 94	Page 95	Page 97	Page 165	*	Page 100	Page 101	Page 92	Page 92
	Left Hand Taps & Dies		Page 91	*	*	*	*	*	*	*	*	*	*

*Where indicated these products are not shown in this catalogue but can be supplied on request. Please contact your local branch for more information.

Production Taps

DIN 371/6	SWISS+TECH		METRIC COARSE	BSP
BLACK RING MULTI APPLICATION	Spiral Point For Through Holes		Page 106	-
	Spiral Flute For Blind Holes		Page 106	-
YELLOW RING FOR STEELS	Spiral Point For Through Holes		Page 107	Page 107
	Spiral Flute For Blind Holes		Page 107	Page 107
BLUE RING FOR STAINLESS	Spiral Point For Through Holes		Page 108	-
	Spiral Flute - BLF For Shorter Blind Holes		Page 108	-
	Spiral Flute - BLT For Deeper Blind Holes		Page 108	-
RED RING FOR ALLOY STEELS	Spiral Point For Through Holes		Page 107	-
	Spiral Flute For Blind Holes		Page 107	-
WHITE RING FOR CAST IRON	Straight Flute For Through Holes		Page 108	-
	Straight Flute For Blind Holes		Page 108	-
PURPLE RING FOR TITANIUM ALLOYS	Left Hand Spiral Flute For Through Holes		Page 109	-
	Spiral Flute For Blind Holes		Page 109	-
ORANGE RING FOR HI-TEMP ALLOYS	Spiral Point For Through Holes		Page 109	-
	Spiral Flute For Blind Holes		Page 109	-
GREEN RING FOR ALUMINIUM ALLOYS	Spiral Point For Through Holes		Page 110	-
	Spiral Flute For Blind Holes		Page 110	-
FOR BRASS/ALUMINIUM	Fluteless For Through & Blind Holes		Page 110	-



Group 144



Group 085



CUTTING TOOLS

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(1) Diameter and pitch not mentioned in ISO.



Size - Pitch (mm)	Thread Length	Overall Length	Shank Diameter	Weight each	Taper	Second	Plug
					Order Code SHR-085	Order Code SHR-085	Order Code SHR-085
M1.0 x 0.25	5.5	38.5	2.50	3g	-0100A	-0100B	-0100C
M1.4 x 0.30	7.0	40.0	2.50	3g	-0120A	-0120B	-0120C
M1.6 x 0.35	8.0	41.0	2.50	3g	-0130A	-0130B	-0130C
M2.0 x 0.40	8.0	41.0	2.50	3g	-0160A	-0160B	-0160C
M2.2 x 0.45	9.5	44.5	2.80	4g	-0180A	-0180B	-0180C
M2.5 x 0.45	9.5	44.5	2.80	4g	-0200A	-0200B	-0200C
M3.0 x 0.50	11.0	48.0	3.15	4g	-0230A	-0230B	-0230C
M3.0 x 0.60	14.5	48.0	3.15	4g	-0240A	-0240B	-0240C
M3.5 x 0.60	13.0	50.0	3.55	4g	-0260A	-0260B	-0260C
M4.0 x 0.70	13.0	53.0	4.00	6g	-0280A	-0280B	-0280C
M4.0 x 0.75	17.0	53.0	4.00	6g	-0290A	-0290B	-0290C
M4.5 x 0.75	12.0	53.0	4.50	6g	-0310A	-0310B	-0310C
M5.0 x 0.80	12.0	58.0	5.00	8g	-0330A	-0330B	-0330C
M5.0 x 0.90	12.0	58.0	5.00	6g	-0340A	-0340B	-0340C
M6.0 x 1.00	19.0	66.0	6.30	14g	-0370A	-0370B	-0370C
M7.0 x 1.00	17.0	66.0	7.10	21g	-0390A	-0390B	-0390C
M8.0 x 1.25	22.0	72.0	8.00	23g	-0410A	-0410B	-0410C
M9.0 x 1.25	22.0	72.0	9.00	32g	-0420A	-0420B	-0420C
M10.0 x 1.50	24.0	80.0	10.00	39g	-0450A	-0450B	-0450C
M11.0 x 1.50	20.0	85.0	8.00	41g	-0460A	-0460B	-0460C
M12.0 x 1.75	23.0	89.0	9.00	48g	-0480A	-0480B	-0480C
M14.0 x 2.00	25.0	95.0	11.20	76g	-0510A	-0510B	-0510C
M16.0 x 2.00	25.0	102.0	12.50	100g	-0530A	-0530B	-0530C
M18.0 x 2.50	30.0	112.0	14.00	133g	-0550A	-0550B	-0550C
M20.0 x 2.50	30.0	112.0	14.00	144g	-0570A	-0570B	-0570C
M22.0 x 2.50	30.0	118.0	16.00	194g	-0590A	-0590B	-0590C
M24.0 x 3.00	36.0	130.0	18.00	260g	-0610A	-0610B	-0610C
M27.0 x 3.00	36.0	135.0	20.00	256g	-0640A	-0640B	-0640C
M30.0 x 3.50	42.0	138.0	20.00	380g	-0660A	-0660B	-0660C
M36.0 x 4.00	48.0	162.0	25.00	646g	-0690A	-0690B	-0690C
M42.0 x 4.50	54.0	170.0	28.00	915g	-0710A	-0710B	-0710C

Metric Coarse HSS Ground Thread Dies
BS 1127For use in diestocks to produce external
screw threads.

Size - Pitch (mm)	Outside Diameter	Thickness	Weight each	Order Code SHR-086
M1.6 x 0.35	13/16"	1/4"	17g	-0090K
M2.0 x 0.40	13/16"	1/4"	13g	-0110K
M2.5 x 0.45	13/16"	1/4"	12g	-0130K
M3.0 x 0.50	13/16"	1/4"	14g	-0140K
M3.5 x 0.60	13/16"	1/4"	13g	-0150K
M4.0 x 0.70	13/16"	1/4"	13g	-0160K
M4.0 x 0.70	1"	3/8"	25g	-0410K
M5.0 x 0.80	1"	3/8"	24g	-0430K
M5.0 x 0.80	13/16"	1/4"	12g	-0180K
M6.0 x 1.00	13/16"	1/4"	12g	-0200K
M6.0 x 1.00	1"	3/8"	27g	-0440K
M6.0 x 1.00	15/16"	7/16"	54g	-0590K
M7.0 x 1.00	13/16"	1/4"	11g	-0210K
M8.0 x 1.25	1"	3/8"	27g	-0460K
M8.0 x 1.25	15/16"	7/16"	62g	-0610K
M8.0 x 1.25	1 1/2"	1/2"	85g	-0790K
M9.0 x 1.25	1"	3/8"	26g	-0470K
M9.0 x 1.25	15/16"	3/8"	26g	-0620K
M10.0 x 1.50	1"	3/8"	26g	-0480K
M10.0 x 1.50	15/16"	7/16"	51g	-0630K
M10.0 x 1.50	1 1/2"	1/2"	85g	-0810K
M11.0 x 1.50	15/16"	7/16"	54g	-0640K
M12.0 x 1.75	15/16"	7/16"	54g	-0650K
M12.0 x 1.75	1 1/2"	1/2"	78g	-0830K
M12.0 x 1.75	2"	5/8"	156g	-1020K
M14.0 x 2.00	15/16"	7/16"	50g	-0660K
M14.0 x 2.00	1 1/2"	1/2"	73g	-0840K
M14.0 x 2.00	2"	5/8"	167g	-1030K
M16.0 x 2.00	1 1/2"	1/2"	72g	-0850K
M16.0 x 2.00	2"	5/8"	167g	-1040K
M18.0 x 2.50	1 1/2"	1/2"	96g	-0860K
M18.0 x 2.50	2"	5/8"	160g	-1050K
M20.0 x 2.50	1 1/2"	1/2"	66g	-0870K
M20.0 x 2.50	2"	5/8"	160g	-1060K
M22.0 x 2.50	2"	5/8"	157g	-1070K
M24.0 x 3.00	2"	5/8"	152g	-1080K
M27.0 x 3.00	2"	5/8"	180g	-1090K
M30.0 x 3.50	2"	7/8"	471g	-1220K
M36.0 x 4.00	3"	7/8"		-1240K



Sets of Three

1 each, taper, second and plug lead

Square AF	Tap Drill Size	Set of 3 Order Code SHR-085
2.00	0.75	-0100D
2.00	1.00	-0120D
2.00	1.25	-0130D
2.00	1.60	-0160D
2.24	1.75	-0180D
2.24	2.05	-0200D
2.50	2.40	-0230D
2.50	2.50	-0240D
2.80	2.90	-0260D
3.15	3.30	-0280D
3.15	3.30	-0290D
3.55	3.70	-0310D
4.00	4.20	-0330D
4.00	4.20	-0340D
5.00	5.00	-0370D
5.60	6.00	-0390D
6.30	6.80	-0410D
7.10	7.80	-0420D
8.00	8.50	-0450D
6.30	9.50	-0460D
7.10	10.20	-0480D
9.00	12.00	-0510D
10.00	14.00	-0530D
11.20	15.50	-0550D
11.20	17.50	-0570D
12.50	19.50	-0590D
14.00	21.00	-0610D
16.00	24.00	-0640D
16.00	26.50	-0660D
20.00	32.00	-0690D
22.40	37.50	-0710D

Metric Coarse HSS Ground Thread Die Nuts
BS 1127For use with spanners to clean
and repair existing external
screw threads.

Size - Pitch (mm)	Outside Diameter	Thickness	Weight each	Order Code SHR-086
M3.0 x 0.50	0.71"	1/4"	11g	-1310K
M4.0 x 0.70	0.71"	1/4"	10g	-1330K
M5.0 x 0.80	0.71"	1/4"	11g	-1350K
M6.0 x 1.00	0.71"	1/4"	10g	-1360K
M7.0 x 1.00	0.82"	5/16"	16g	-1440K
M8.0 x 1.25	0.82"	5/16"	16g	-1450K
M9.0 x 1.25	0.92"	3/8"	25g	-1490K
M10.0 x 1.50	0.92"	3/8"	24g	-1500K
M11.0 x 1.50	1.01"	7/16"		-1540K
M12.0 x 1.75	1.10"	1/2"	36g	-1570K
M14.0 x 2.00	1.30"	5/8"	45g	-1600K
M16.0 x 2.00	1.30"	5/8"	48g	-1610K
M18.0 x 2.50	1.48"	1 1/16"	106g	-1640K
M20.0 x 2.50	1.48"	1 1/16"	140g	-1650K
M22.0 x 2.50	1.67"	1 3/16"	147g	-1690K
M24.0 x 3.00	2.05"	1 5/16"	274g	-1720K
M27.0 x 3.00	2.22"	1 1/16"	355g	-1750K
M30.0 x 3.50	2.22"	1 1/16"	330g	-1760K
M36.0 x 4.00	2.76"	1 1/4"	489g	-1790K



Size - Pitch (mm)	Shank Dia.	A/F Square	Weight Each	Order Code
M1.6 x 0.35	2.50	2.00	9g	-0130E
M2.0 x 0.40	2.50	2.00	9g	-0160E
M2.5 x 0.45	2.80	2.24	9g	-0200E
M3.0 x 0.50	3.15	2.50	12g	-0230E
M3.5 x 0.60	3.55	2.80	12g	-0260E
M4.0 x 0.70	4.00	3.15	18g	-0280E
M4.5 x 0.75	4.50	3.55	18g	-0310E
M5.0 x 0.80	5.00	4.00	18g	-0330E
M6.0 x 1.00	6.30	5.00	45g	-0370E
M7.0 x 1.00	7.10	5.60	54g	-0390E
M8.0 x 1.25	8.00	6.30	72g	-0410E
M10.0 x 1.50	10.00	8.00	120g	-0450E
M12.0 x 1.75	9.00	7.10	149g	-0480E
M14.0 x 2.00	11.20	9.00	233g	-0510E
M16.0 x 2.00	12.50	10.00	307g	-0530E
M18.0 x 2.50	14.00	11.20	427g	-0550E
M20.0 x 2.50	14.00	11.20	459g	-0570E
M22.0 x 2.50	16.00	12.50	599g	-0590E
M24.0 x 3.00	18.00	14.00	826g	-0610E

Straight Flute Long Series
Also Available in UNC/F and BSW/F Thread Forms
METRIC COARSE HSS


Size - Pitch (mm)	Thread Overall Length	Shank Diameter	Weight Each	Taper	Second	Plug
				Order Code SHR-085	Order Code SHR-085	Order Code SHR-085
M3.0 x 0.50	11	66	2.24 5g	-0230G	-0230H	-0230J
M4.0 x 0.70	13	73	3.15 9g	-0280G	-0280H	-0280J
M5.0 x 0.80	16	79	4.00 13g	-0330G	-0330H	-0330J
M6.0 x 1.00	19	89	4.50 16g	-0370G	-0370H	-0370J
M8.0 x 1.25	22	97	6.30 30g	-0410G	-0410H	-0410J
M10.0 x 1.50	24	108	8.00 48g	-0450G	-0450H	-0450J
M12.0 x 1.75	29	119	9.00 68g	-0480G	-0480H	-0480J
M14.0 x 2.00	30	127	11.20 102g	-0510G	-0510H	-0510J
M16.0 x 2.00	32	137	12.50 130g	-0530G	-0530H	-0530J
M20.0 x 2.50	37	149	14.00 198g	-	-0570H	-0570J

Metric Coarse Left Hand Straight Flute Ground Thread Taps
ISO 529
METRIC COARSE

Straight Flute Individual Sizes

Size - Pitch (mm)	Taper Order Code	Second Order Code	Plug Order Code
M3.0 x 0.50	-0230L	-0230M	-0230N
M4.0 x 0.70	-0280L	-0280M	-0280N
M5.0 x 0.80	-0330L	-0330M	-0330N
M6.0 x 1.00	-0370L	-0370M	-0370N
M8.0 x 1.25	-0410L	-0410M	-0410N
M10.0 x 1.50	-0450L	-0450M	-0450N
M12.0 x 1.75	-0480L	-0480M	-0480N
M14.0 x 2.00	-0510L	-0510M	-0510N
M16.0 x 2.00	-0530L	-0530M	-0530N
M20.0 x 2.50	-0570L	-0570M	-0570N

Sets of Three
1 each, taper, second and plug lead.

HSS
LEFT HAND
METRIC COARSE


Square AF	Tap Drill Size	Set of 3 Order Code
2.50	2.40	-0230P
3.15	3.30	-0280P
4.00	4.20	-0330P
5.00	5.00	-0370P
6.30	6.80	-0410P
8.00	8.50	-0450P
7.10	10.20	-0480P
9.00	12.00	-0510P
10.00	14.00	-0530P
11.20	17.50	-0570P

Metric HSS Left Hand Dies
BS 1127

For use in diestocks to produce external screw threads.

LEFT HAND
METRIC COARSE


Size - Pitch (mm)	Outside Diameter	Order Code
M3.0 x 0.50	13/16"	-2320K
M4.0 x 0.70	13/16"	-2340K
M5.0 x 0.80	13/16"	-2360K
M6.0 x 1.00	13/16"	-2380K
M6.0 x 1.00	1"	-2530K
M8.0 x 1.25	1"	-2550K
M10.0 x 1.50	1"	-2570K
M12.0 x 1.75	1 5/16"	-2740K
M16.0 x 2.00	1 1/2"	-2970K

PRODUCTS ARE ONLY AVAILABLE VIA YOUR DISTRIBUTOR

Metric Fine
HSS Ground Thread TapsISO 529
Straight Flute Individual Sizes

(1) Diameter and pitch not mentioned in ISO.



Size - Pitch (mm)	Thread Length	Overall Length	Shank Diameter	Weight each	Taper	Second	Plug
					Order Code SHR-085	Order Code SHR-085	Order Code SHR-085
Metric Fine							
M3.0 x 0.35	11.0	48.0	3.15	3g	-0220A	-0220B	-0220C
M3.5 x 0.35	13.0	50.0	3.55	4g	-0250A	-0250B	-0250C
M4.0 x 0.50	13.0	53.0	4.00	6g	-0270A	-0270B	-0270C
M5.0 x 0.50	16.0	58.0	5.00	9g	-0320A	-0320B	-0320C
M6.0 x 0.75	19.0	66.0	6.30	17g	-0360A	-0360B	-0360C
M8.0 x 1.00 ⁽¹⁾	19.0	72.0	8.00	21g	-0400A	-0400B	-0400C
M10.0 x 1.25 ⁽¹⁾	20.0	80.0	10.00	45g	-0440A	-0440B	-0440C
M12.0 x 1.25	29.0	89.0	9.00	46g	-0470A	-0470B	-0470C
M14.0 x 1.00	30.0	95.0	11.20	71g	-0485A	-0485B	-0485C
M14.0 x 1.50	30.0	95.0	11.20	76g	-0500A	-0500B	-0500C
M16.0 x 1.50	32.0	102.0	12.50	101g	-0520A	-0520B	-0520C
M18.0 x 1.50	45.0	95.0	14.00	132g	-0540A	-0540B	-0540C
M18.0 x 2.00	37.0	112.0	14.00	138g	-0545A	-0545B	-0545C
M20.0 x 1.50	37.0	112.0	14.00	144g	-0560A	-0560B	-0560C
M22.0 x 1.50	38.0	118.0	16.00	86g	-0580A	-0580B	-0580C
M24.0 x 2.00	45.0	130.0	18.00	250g	-0600A	-0600B	-0600C
M27.0 x 2.00	37.0	127.0	20.00	320g	-0630A	-0630B	-0630C
M30.0 x 1.50	37.0	127.0	20.00	398g	-0645A	-0645B	-0645C
M30.0 x 2.00	37.0	127.0	20.00	366g	-0650A	-0650B	-0650C
ISO Metric Special Pitch							
M2.0 x 0.45	8.0	41.0	2.50	3g	-0170A	-0170B	-0170C
M6.0 x 0.50	15.0	55.0	6.00	7g	-0355A	-0355B	-0355C
M8.0 x 0.75	19.0	72.0	8.00	22g	-0395A	-0395B	-0395C
M10.0 x 0.75	20.0	80.0	10.00	36g	-0425A	-0425B	-0425C
M10.0 x 1.00 ⁽¹⁾	24.0	80.0	10.00	38g	-0430A	-0430B	-0430C
M12.0 x 1.00	29.0	89.0	9.00	44g	-0465A	-0465B	-0465C
M12.0 x 1.50	29.0	89.0	9.00	48g	-0475A	-0475B	-0475C
M14.0 x 1.25	30.0	95.0	11.20	72g	-0490A	-0490B	-0490C
M16.0 x 1.00	32.0	102.0	12.50	96g	-0515A	-0515B	-0515C
M18.0 x 1.00	37.0	112.0	14.00	130g	-0535A	-0535B	-0535C
M20.0 x 1.00	37.0	112.0	14.00	146g	-0555A	-0555B	-0555C
M20.0 x 2.00	37.0	112.0	14.00	132g	-0565A	-0565B	-0565C
M24.0 x 1.50	45.0	130.0	18.00	254g	-0595A	-0595B	-0595C
M25.0 x 1.50	45.0	130.0	18.00	260g	-0620A	-0620B	-0620C
M32.0 x 1.50	37.0	137.0	22.40	488g	-0670A	-0670B	-0670C

Left Hand
Also
Available

METRIC FINE



Sets of Three

1 each, taper, second and plug lead.

Square AF	Tap Drill Size	Set of 3
		Order Code SHR-085
Metric Fine		
2.50	2.65	-0220D
2.80	3.15	-0250D
3.15	3.50	-0270D
4.00	4.50	-0320D
5.00	5.20	-0360D
6.30	7.00	-0400D
8.00	8.80	-0440D
7.10	10.80	-0470D
9.00	13.00	-0485D
9.00	12.50	-0500D
10.00	14.50	-0520D
11.20	16.80	-0540D
11.20	16.00	-0545D
11.20	18.50	-0560D
12.50	20.50	-0580D
14.00	22.50	-0600D
16.00	25.00	-0630D
16.00	28.50	-0645D
16.00	28.00	-0650D
ISO Metric Special Pitch		
2.00	1.55	-0170D
5.00	5.50	-0355D
6.34	7.20	-0395D
8.00	9.20	-0425D
8.00	9.00	-0430D
7.10	11.00	-0465D
7.10	10.50	-0475D
9.00	12.80	-0490D
10.00	15.00	-0515D
11.20	17.00	-0535D
11.20	19.00	-0555D
11.20	18.00	-0565D
14.00	22.50	-0595D
14.00	23.50	-0620D
18.00	30.50	-

Metric Fine HSS Ground Thread Dies

BS 1127

For use in diestocks to produce external screw threads.

HSS
METRIC FINE

Size - Pitch (mm)	Outside Diameter	Thickness	Weight each	Order Code SHR-086
Metric Fine				
M4.0 x 0.50	13/16"	1/4"	12g	-1930K
M5.0 x 0.50	13/16"	1/4"	12g	-1950K
M6.0 x 0.50	13/16"	1/4"	12g	-0190K
M6.0 x 0.75	13/16"	1/4"	12g	-1980K
M8.0 x 1.00	1"	3/8"	27g	-2040K
M10.0 x 1.25	1"	3/8"	25g	-2080K
M10.0 x 1.25	1 5/16"	7/16"	53g	-2130K
M12.0 x 1.25	1 5/16"	7/16"	53g	-2150K
M14.0 x 1.00	1 5/16"	7/16"	48g	-0655K
M14.0 x 1.50	1 5/16"	7/16"	49g	-2180K
M16.0 x 1.50	1 1/2"	1/2"	73g	-2220K
M18.0 x 1.00	2"	5/8"	82g	-1045K
M18.0 x 1.50	1 1/2"	1/2"	74g	-2230K
M20.0 x 1.50	1 1/2"	1/2"	66g	-2250K
M20.0 x 1.50	2"	5/8"	154g	-2330K
M22.0 x 1.50	2"	5/8"	178g	-2350K
M24.0 x 2.00	2"	5/8"	153g	-2380K
ISO Metric Special Pitch				
M4.0 x 0.75	13/16"	1/4"	12g	-0165K
M4.5 x 0.75	13/16"	1/4"	12g	-0170K
M5.0 x 0.90	13/16"	1/4"	12g	-0185K
M8.0 x 0.75	1"	3/8"	27g	-2030K
M10.0 x 1.00	1"	3/8"	25g	-2070K
M12.0 x 1.00	1 5/16"	7/16"	50g	-2140K
M12.0 x 1.50	1 5/16"	7/16"	53g	-2160K
M14.0 x 1.25	1 5/16"	7/16"	48g	-2170K
M16.0 x 1.00	1 1/2"	1/2"	68g	-2210K
M20.0 x 1.00	1 1/2"	1/2"	64g	-2240K
M24.0 x 1.50	2"	5/8"	145g	-2370K
M25.0 x 1.50	2"	5/8"	145g	-2390K
M30.0 x 1.50	3"	7/8"	230g	-1215K

Metric Fine HSS Ground Thread Die Nuts

BS 1127

For use with spanners to clean and repair existing external screw threads.

HSS
METRIC FINE

Group 582



Size - Pitch (mm)	Width	Thickness	Weight each	Order Code SHR-086
Metric Fine				
M6.0 x 0.75	0.71"	1/4"	10g	-2550K
M8.0 x 1.00	0.82"	5/16"	16g	-2590K
M10.0 x 1.25	0.92"	3/8"	24g	-2640K
M12.0 x 1.25	1.10"	1/2"	46g	-2660K
M14.0 x 1.50	1.30"	5/8"	77g	-2770K
M16.0 x 1.50	1.30"	5/8"	71g	-2790K
M18.0 x 1.50	1.48"	11/16"	102g	-2810K
M20.0 x 1.50	1.48"	11/16"	92g	-2830K
M22.0 x 1.50	1.67"	13/16"	146g	-2860K
M24.0 x 2.00	2.05"	15/16"	249g	-2890K
ISO Metric Special Pitch				
M10.0 x 0.75	0.92"	3/8"	22g	-1495K
M10.0 x 1.00	0.92"	3/8"	22g	-2630K
M12.0 x 1.00	1.10"	1/2"	35g	-2650K
M12.0 x 1.50	1.10"	1/2"	52g	-2670K
M14.0 x 1.25	1.30"	5/8"	70g	-2760K
M20.0 x 1.00	1.48"	11/16"	95g	-2820K
M20.0 x 2.00	1.48"	11/16"	99g	-2840K
M24.0 x 1.50	2.05"	15/16"	249g	-2880K



Size - Pitch (mm)	Shank Diameter	A/F Square	Weight each	Order Code SHR-085
Metric Fine				
M5.0 x 0.50	5.00	4.00	10g	-0320E
M6.0 x 0.75	6.30	5.00	27g	-0360E
M8.0 x 1.00	8.00	6.30	23g	-0400E
M10.0 x 1.25	10.00	8.00	40g	-0440E
M12.0 x 1.25	9.00	7.10	48g	-0470E
M14.0 x 1.50	11.20	9.00	78g	-0500E
M16.0 x 1.50	12.50	10.00	82g	-0520E
M18.0 x 1.50	14.00	11.20	132g	-0540E
M20.0 x 1.50	14.00	11.20	159g	-0560E
M22.0 x 1.50	16.00	12.50	185g	-0580E
ISO Metric Special Pitch				
M10.0 x 1.00†	10.00	8.00	40g	-0430E
M12.0 x 1.50	9.00	7.10	40g	-0475E



Size - Pitch (mm)	Shank Diameter	A/F Square	Weight each	Order Code SHR-085
Metric Fine				
M4.0 x 0.50	4.00	3.15	6g	-0270F
M5.0 x 0.50	5.00	4.00	10g	-0320F
M8.0 x 1.00	8.00	6.30	22g	-0400F
M10.0 x 1.25	10.00	8.00	37g	-0440F
M12.0 x 1.25	9.00	7.10	47g	-0470F
M14.0 x 1.50	11.20	9.00	75g	-0500F
M16.0 x 1.50	12.50	10.00	82g	-0520F
M18.0 x 1.50†	14.00	11.00	148g	-0540F
M20.0 x 1.50*	14.00	11.20	131g	-0560F
M22.0 x 1.50	16.00	12.50	184g	-0580F
ISO Metric Special Pitch				
M10.0 x 1.00†	10.00	8.00	38g	-0430F
M12.0 x 1.50	9.00	7.10	48g	-0475F
M14.0 x 1.25†	11.20	9.00	75g	-0490F


**28
PIECES**
METRIC Taps M3 ~ M12
+ Tapping Drills
2.5 ~ 10.2
28 Piece Tap & Drill Set
Taps (Taper, Second and Bottom)

M3 M4	M5 M6	M8 M10	M12
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Tapping Drills

(mm) 2.5	3.3 4.2	5.0 6.8	8.5 10.2
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Number of Pieces	Order Code
28	SHR-025 -9960K

Machine Tapping Speeds

Group	Materials Colour defines similar machineability	Hardness		Tensile Strength N/mm ²	Cutting Speed M/min	Hole Type	Tap Type
		Brinell HB	Rockwell HRC				
Carbon	1.1 Mild Steel	<130	-	<400	15 - 20	Various Through Hole Blind Hole	Straight Flute
	1.2 Case Hardening & Structural Steel	<200	-	<700	15 - 20		Spiral Point/ Gun Nose
	1.3 Medium Carbon Steel	<260	<26	<850	15 - 20		Spiral Flute
Alloy	1.4 Low Alloy Steel	<260	<26	<850	10 - 15	Through Hole Blind Hole	Spiral Point/ Gun Nose Spiral Flute
	1.5 Medium to High Alloy Steel	260 - 340	26 - 36	850 - 1200	6 - 10		
	1.6 Heat Treated Steel	340 - 450	36 - 48	1200 - 1500	4 - 6		
Stainless Steels	2.1 Free Machining Stainless	<230	<20	<800	8 - 10	Through Hole Blind Hole	Spiral Point/ Gun Nose Spiral Flute
	2.2 Medium Strength Austenitic Stainless	<290	<30	<1000	6 - 8		
	2.3 Difficult to Machine, Duplex Stainless	<340	<36	<1200	4 - 6		
	3.1 Grey Cast Iron - Soft	<180	-	-	18 - 25	Blind & Through Hole	Straight Flute
Cast Iron	3.2 Grey Cast Iron - Hard	180 - 300	-	-	15 - 18		
	3.3 Malleable & Nodular Iron	<220	-	-	8 - 12	Through Hole	Spiral Point/ Gun Nose
	3.4 Malleable & Nodular Iron - Hard	200 - 300	-	-	4 - 6		
Aluminium	7.1 Unalloyed Aluminium - Zinc - Magnesium	-	-	<150	20 - 25	Blind & Through Hole	Fluteless
	7.2 Aluminium Alloy less than 5% Si	-	-	150 - 300	17 - 22		
	7.3 Aluminium Alloy 5% to 10% Si	-	-	200 - 500	15 - 20		
	7.4 Aluminium Alloy above 10% Si	-	-	200 - 500	12 - 15	Blind & Through Hole	Straight Flute (for Cast Irons)

Power Requirements For Taps

Many factors are involved when considering power requirements for a particular application. Factors such as the choice of tap design, tapping drill size, depth of threaded hole, lubricant and tapping speed all play a part in determining these requirements.

To estimate the power requirements for varying percentage thread depths, the following general formula and constants may be used:

$$\text{Tapping Power (KW)} = \frac{C \times D \times p^2 \times N \times K}{10000}$$

$$\text{HP} = \text{KW} \times 1.341$$

Where **D** = Thread Diameter (mm)
P = Pitch (mm)

N = Spindle speed RPM

K = Material Factor Constant

C = A constant based on % thread depth, as follows:

C	% Thread Depth
0.231	60
0.326	75
0.433	80

GROUP
085

HSS TAPS & DIES



**UNC (Unified Coarse)
HSS Ground Thread Taps**

ISO 529

**Left Hand
Also
Available**

Sets of Three

1 each, taper, second and plug lead.



UNC HSS



Straight Flute Individual Sizes

Size - Pitch	Thread Length	Overall Length	Shank Diameter	Weight each	Taper Order Code SHR-085	Second Order Code SHR-085	Plug Order Code SHR-085
No.1 x 64	8.0	41.0	2.50	3g	-0760A	-0760B	-0760C
No.2 x 56	9.5	44.5	2.80	3g	-0770A	-0770B	-0770C
No.4 x 40	11.0	48.0	3.15	3g	-0790A	-0790B	-0790C
No.5 x 40	11.0	48.0	3.15	4g	-0800A	-0800B	-0800C
No.6 x 32	13.0	50.0	3.55	4g	-0810A	-0810B	-0810C
No.8 x 32	13.0	53.0	4.50	7g	-0820A	-0820B	-0820C
No.10 x 24	16.0	58.0	5.00	8g	-0830A	-0830B	-0830C
No.12 x 24	17.0	62.0	5.60	11g	-0840A	-0840B	-0840C
1/4" x 20	19.0	66.0	6.30	14g	-0850A	-0850B	-0850C
5/16" x 18	22.0	72.0	8.00	22g	-0860A	-0860B	-0860C
3/8" x 16	24.0	80.0	10.00	38g	-0870A	-0870B	-0870C
7/16" x 14	25.0	85.0	8.00	38g	-0880A	-0880B	-0880C
1/2" x 13	29.0	89.0	9.00	50g	-0890A	-0890B	-0890C
9/16" x 12	30.0	95.0	11.20	75g	-0900A	-0900B	-0900C
5/8" x 11	32.0	102.0	12.50	82g	-0910A	-0910B	-0910C
3/4" x 10	37.0	112.0	14.00	142g	-0920A	-0920B	-0920C
7/8" x 9	38.0	118.0	16.00	193g	-0930A	-0930B	-0930C
1" x 8	45.0	130.0	18.00	323g	-0940A	-0940B	-0940C

Square AF	Tap Drill Size	Set of 3 Order Code SHR-085
2.00	1.55	-0760D
2.24	1.85	-0770D
2.50	2.35	-0790D
2.50	2.65	-0800D
2.80	2.85	-0810D
3.55	3.50	-0820D
4.00	3.90	-0830D
4.50	4.50	-0840D
5.00	5.10	-0850D
6.30	6.60	-0860D
8.00	8.00	-0870D
6.30	9.40	-0880D
7.10	10.80	-0890D
9.00	12.20	-0900D
10.00	13.50	-0910D
11.20	16.50	-0920D
12.50	19.50	-0930D
14.00	22.25	-0940D

UNC (Unified Coarse) HSS Ground Thread Dies

BS 1127

For use in diestocks to produce external screw threads.

UNC HSS



Group 518



Size - Pitch	Outside Diameter	Thickness	Weight each	Order Code SHR-086
No.2 x 56	13/16"	1/4"	12g	-2980K
No.4 x 40	13/16"	1/4"	12g	-3000K
No.6 x 32	13/16"	1/4"	7g	-3020K
No.8 x 32	13/16"	1/4"	13g	-3030K
No.10 x 24	13/16"	1/4"	17g	-3040K
1/4" x 20	13/16"	3/8"	12g	-3060K
1/4" x 20	1"	3/8"	26g	-3220K
1/4" x 20	1 5/16"	7/16"	46g	-3340K
5/16" x 18	1"	3/8"	27g	-3230K
5/16" x 18	1 5/16"	7/16"	47g	-3350K
3/8" x 16	1"	3/8"	24g	-3240K
3/8" x 16	1 5/16"	7/16"	62g	-3360K
7/16" x 14	1"	3/8"	27g	-3250K
1/2" x 13	1 5/16"	7/16"	52g	-3380K
1/2" x 13	1 1/2"	1 1/2"	79g	-3480K
9/16" x 12	1 5/16"	7/16"	37g	-3390K
9/16" x 12	1 1/2"	7/16"	71g	-3490K
5/8" x 11	1 1/2"	1 1/2"	71g	-3500K
3/4" x 10	1 1/2"	1 1/2"	70g	-3510K
7/8" x 9	2"	5/8"	149g	-3660K
1" x 8	2"	5/8"	157g	-3670K

UNC (Unified Coarse) HSS Ground Thread Die Nuts

BS 1127

For use with spanners to clean and repair existing external screw threads.

UNC HSS



Group 582



Size - Pitch	Width	Thickness	Weight each	Order Code SHR-086
1/4" x 20	0.71"	3/4"	13g	-3920K
5/16" x 18	0.82"	5/16"	12g	-3950K
3/8" x 16	0.92"	3/8"	11g	-3970K
7/16" x 14	1.01"	7/16"	33g	-3990K
1/2" x 13	1.10"	1/2"	45g	-4010K
1/2" x 13	1.10"	1/2"	44	-4020K
5/8" x 11	1.30"	5/8"	72g	-4040K
3/4" x 10	1.48"	1 1/16"	102g	-4070K
7/8" x 9	1.67"	1 3/16"	145g	-4090K
1" x 8	2.05"	1 5/16"	269g	-4110K



UNC (Unified Coarse) HSS Ground Thread Taps

ISO 529

Spiral Point/Gun Nose

UNC HSS



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
No.1 x 64	2.50	2.00	1g	-0760E
No.2 x 56	2.80	2.24	1g	-0770E
No.4 x 40	3.15	2.50	1g	-0790E
No.5 x 40	3.15	2.50	2g	-0800E
No.6 x 32	3.55	2.80	2g	-0810E
No.8 x 32	4.50	3.55	4g	-0820E
No.10 x 24	5.00	4.00	5g	-0830E
No.12 x 24	5.60	4.50	8g	-0840E
1/4" x 20	6.30	5.00	11g	-0850E
5/16" x 18	8.00	6.30	17g	-0860E
3/8" x 16	10.00	8.00	33g	-0870E
7/16" x 14	8.00	6.30	38g	-0880E
1/2" x 13	9.00	7.10	44g	-0890E
9/16" x 12	11.20	9.00	62g	-0900E
5/8" x 11	12.50	10.00	91g	-0910E
3/4" x 10	14.00	11.20	130g	-0920E
7/8" x 9	16.00	12.20	173g	-0930E
1" x 8	18.00	14.00	294g	-0940E

Fluteless

UNC HSS



Size-Pitch	Shank Diameter	Weight each	Order Code SHR-085
No.4 x 40	3.15	2g	-0790K
No.6 x 32	3.55	3g	-0810K
No.8 x 32	4.50	8g	-0820K
1/4" x 20	6.30	11g	-0850K

HSS TAPS & DIES

GROUP
085

UNC HSS



Spiral Flute



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
No.4 x 40	3.15	2.50	1g	-0790F
No.5 x 40	3.15	2.50	2g	-0800F
No.6 x 32	3.55	2.80	3g	-0810F
No.8 x 32	4.50	3.55	4g	-0820F
No.10 x 24	5.00	4.00	5g	-0830F
1/4" x 20	6.30	5.00	11g	-0850F
5/16" x 18	8.00	6.30	19g	-0860F
3/8" x 16	10.00	8.00	31g	-0870F
7/16" x 14	8.00	6.30	31g	-0880F
1/2" x 13	9.00	7.10	41g	-0890F
5/8" x 11	12.50	10.00	89g	-0910F
3/4" x 10	14.00	11.20	123g	-0920F
7/8" x 9	16.00	12.50	180g	-0930F
1" x 8	18.00	14.00	240g	-0940F

UNC Threading Set

UNC HSS

No.10 - 3/4" UNC:

HSSGT Straight Flute Taps:

Taper: No. 10 x 24, 1/4" x 20, 5/16" x 18, 3/8" x 16.

Second: 7/16" x 14, 1/2" x 13, 5/8" x 11, 3/4" x 10.

Plug: No. 10 x 24, 1/4" x 20, 5/16" x 18, 3/8" x 16.

Bar Type Tap Wrenches: 1/16" - 1/4" and 1/4" - 3/4".

Tapping Drills to suit: HSS S/S.

3.90, 5.10, 6.60,
8.00, 9.40,
10.80mm

HSS 1" O/D Dies:
1/4" x 20, 5/16" x 18,
3/8" x 16.

Distock:
1" O/D.

HSS Die Nuts:
7/16" x 14, 1/2" x 13,
5/8" x 11, 3/4" x 10.



Range	Number of Pieces	Order Code SHR-086
10 - 3/4" UNC	28	-9994K

**28
PIECES**

CUTTING TOOLS

Thread Restoring Files

Restore internal and external threads by filing, where the use of taps and dies are impractical. The restorer file overlaps several good threads and files the damaged ones. Restore right and left hand, internal and external threads.

Long lasting, fast cutting teeth. Thread restoring files are available in ISO, Whit/BSF, UNF/UNC and BSP thread types.



GROUP
620



External
thread

Thread Type	Range	Weight each	Order Code SHR-017
ISO	.80 to 3mm	133g	-9020C
Whit/BSF	10 tpi to 24 tpi	132g	-9001A
UNF/UNC	11 tpi to 24 tpi	130g	-9010B
BSP	11 tpi to 28 tpi	127g	-9030D

PRODUCTS ARE ONLY AVAILABLE VIA YOUR DISTRIBUTOR

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95

Left Hand
Also
AvailableSets of Three
1 each, taper, second and plug lead.HSS
UNF

Straight Flute Individual Sizes

Size - Pitch	Thread Length	Overall Length	Shank Diameter	Taper Order Code SHR-085	Second Order Code SHR-085	Plug Order Code SHR-085
No.4 x 48	9.45	44.5	2.80	-1050A	-1050B	-1050C
No.5 x 44	11.0	48.0	3.15	-1060A	-1060B	-1060C
No.6 x 40	13.0	50.0	3.55	-1070A	-1070B	-1070C
No.8 x 36	13.0	53.0	4.50	-1080A	-1080B	-1080C
No.10 x 32	16.0	58.0	5.00	-1090A	-1090B	-1090C
No.12 x 28	17.0	62.0	5.60	-1100A	-1100B	-1100C
1/4" x 28	19.0	66.0	6.30	-1110A	-1110B	-1110C
5/16" x 24	19.0	69.0	8.00	-1120A	-1120B	-1120C
3/8" x 24	20.0	76.0	10.00	-1130A	-1130B	-1130C
7/16" x 20	25.0	85.0	8.00	-1140A	-1140B	-1140C
1/2" x 20	29.0	89.0	9.00	-1150A	-1150B	-1150C
9/16" x 18	30.0	95.0	11.20	-1160A	-1160B	-1160C
5/8" x 18	32.0	102.0	12.50	-1170A	-1170B	-1170C
3/4" x 16	37.0	112.0	14.00	-1180A	-1180B	-1180C
7/8" x 14	38.0	118.0	16.00	-1190A	-1190B	-1190C
1" x 12	45.0	130.0	18.00	-1200A	-1200B	-1200C

Square AF	Tap Drill Size	Set of 3 Order Code SHR-085
2.50	2.40	-1050D
2.50	2.70	-1060D
2.80	2.95	-1070D
3.55	3.50	-1080D
4.00	4.10	-1090D
4.50	4.70	-1100D
5.00	5.50	-1110D
6.30	6.90	-1120D
8.00	8.50	-1130D
6.30	9.90	-1140D
7.10	11.50	-1150D
9.00	12.90	-1160D
10.00	14.50	-1170D
11.20	17.50	-1180D
12.50	20.50	-1190D
14.00	23.25	-1200D

UNF (Unified Fine) HSS Ground Thread Taps

Spiral Point/Gun Nose

UNF HSS



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
No.4 x 48	3.15	2.50	4g	-1050E
No.5 x 44	3.15	2.50	3g	-1060E
No.6 x 40	3.55	2.80	5g	-1070E
No.8 x 36	4.50	3.55	7g	-1080E
No.10 x 32	5.00	4.00	7g	-1090E
No.12 x 28	5.60	4.50	11g	-1100E
1/4" x 28	6.30	5.00	15g	-1110E
5/16" x 24	8.00	6.30	23g	-1120E
3/8" x 24	10.00	8.00	37g	-1130E
7/16" x 20	8.00	6.30	33g	-1140E
1/2" x 20	9.00	7.10	52g	-1150E
9/16" x 18	11.20	9.00	71g	-1160E
5/8" x 18	12.50	10.00	100g	-1170E
3/4" x 16	14.00	11.20	156g	-1180E
7/8" x 14	16.00	12.50	185g	-1190E
1" x 12	18.00	14.00	222g	-1200E

UNF (Unified Fine)
HSS Ground Thread Dies

ISO 529

For use in diestocks to produce
external screw threads.

UNF HSS



UNF (Unified Fine)

Size - Pitch	Outside Diameter	Thickness	Weight each	Order Code SHR-086
No.6 x 40	13/16"	1/4"	11g	-4280K
No.10 x 32	13/16"	1/4"	12g	-4300K
No.10 x 32	1"	3/8"	12g	-4470K
1/4" x 28	13/16"	1/4"	12g	-4320K
1/4" x 28	1"	3/8"	28g	-4490K
5/16" x 24	1"	3/8"	42g	-4500K
3/8" x 24	1"	3/8"	42g	-4510K
3/8" x 24	1 5/16"	7/16"	55g	-4640K
7/16" x 20	1"	3/8"	23g	-4520K
7/16" x 20	1 5/16"	7/16"	53g	-4650K
1/2" x 20	1 5/16"	7/16"	51g	-4660K
1/2" x 20	1 1/2"	1/2"	73g	-4780K
9/16" x 18	1 1/2"	1/2"	74g	-4790K
9/16" x 18	1 5/16"	7/16"	49g	-4670K
5/8" x 18	1 1/2"	1/2"	72g	-4800K
3/4" x 16	1 1/2"	1/2"	69g	-4810K
3/4" x 16	2"	5/8"	165g	-4970K
7/8" x 14	2"	5/8"	159g	-4980K
1" x 12	2"	5/8"	156g	-4990K

Spiral Flute

UNF HSS



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
No.4 x 48	3.15	2.50	4g	-1050F
No.5 x 44	3.15	2.50	8g	-1060F
No.8 x 36	4.50	3.55	6g	-1070F
No.8 x 36	4.50	3.55	6g	-1080F
No.10 x 32	5.00	4.00	7g	-1090F
1/4" x 28	6.30	5.00	14g	-1110F
5/16" x 24	8.00	6.30	22g	-1120F
3/8" x 24	10.00	8.00	37g	-1130F
7/16" x 20	8.00	6.30	39g	-1140F
1/2" x 20	9.00	7.10	48g	-1150F
9/16" x 18	11.20	9.00	75g	-1160F
5/8" x 18	12.50	10.00	95g	-1170F
3/4" x 16	14.00	11.20	131g	-1180F
7/8" x 14	16.00	12.50	192g	-1190F

UNF (Unified Fine)
HSS Ground Thread Die Nuts

UNF HSS

BS 1127

For use with spanners to clean and repair existing external screw threads.



UNF (Fine)

Size - Pitch	Width	Thickness	Weight each	Order Code SHR-086
1/4" x 28	0.71"	1/4"	10g	-5280K
5/16" x 24	0.82"	5/16"	20g	-5310K
3/8" x 24	0.92"	3/8"	24g	-5330K
7/16" x 20	1.10"	7/16"	33g	-5350K
1/2" x 20	1.10"	1/2"	44g	-5370K
9/16" x 18	1.30"	5/8"	76g	-5390K
5/8" x 18	1.30"	5/8"	72g	-5400K
3/4" x 16	1.48"	1 1/16"	101g	-5430K
7/8" x 14	1.67"	1 3/16"	148g	-5450K
1" x 12	2.05"	1 5/16"	272g	-5470K



BSW (British Standard Whitworth) HSS Ground Thread Taps

ISO 529



Straight Flute Individual Sizes

Size - Pitch	Thread Length	Overall Length	Shank Diameter	Weight each	Taper	Second	Plug
					Order Code SHR-085	Order Code SHR-085	Order Code SHR-085
1/8" x 40	16.0	48.0	3.15	1g	-1320A	-1320B	-1320C
3/16" x 24	16.0	58.0	5.00	8g	-1340A	-1340B	-1340C
1/4" x 20	19.0	66.0	6.30	14g	-1360A	-1360B	-1360C
5/16" x 18	22.0	72.0	8.00	23g	-1370A	-1370B	-1370C
3/8" x 16	24.0	80.0	10.00	38g	-1380A	-1380B	-1380C
7/16" x 14	25.0	85.0	8.00	37g	-1390A	-1390B	-1390C
1/2" x 12	29.0	89.0	9.00	49g	-1400A	-1400B	-1400C
5/8" x 11	32.0	102.0	12.50	98g	-1420A	-1420B	-1420C
3/4" x 10	37.0	112.0	14.00	143g	-1430A	-1430B	-1430C
7/8" x 9	38.0	118.0	16.00	195g	-1440A	-1440B	-1440C
1" x 8	45.0	130.0	18.00	269g	-1450A	-1450B	-1450C

BSW (British Standard Whitworth) HSS Ground Thread Taps

ISO 529

Spiral Point/Gun Nose



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
1/8" x 40	3.15	2.50	3g	-1320E
3/16" x 24	5.00	4.00	8g	-1340E
1/4" x 20	6.30	5.00	15g	-1360E
5/16" x 18	8.00	6.30	23g	-1370E
3/8" x 16	10.00	8.00	38g	-1380E
7/16" x 14	8.00	6.30	25g	-1390E
5/8" x 11	12.50	10.00	62g	-1420E
3/4" x 10	14.00	11.20	85g	-1430E
7/8" x 9	16.00	12.50	113g	-1440E
1" x 8	18.00	14.00	221g	-1450E

Spiral Flute



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
1/8" x 40	3.15	2.50	2g	-1320F
3/16" x 24	5.00	4.00	6g	-1340F
1/4" x 20	6.30	5.00	14g	-1360F
5/16" x 18	8.00	6.30	26g	-1370F
3/8" x 16	10.00	8.00	37g	-1380F
7/16" x 14	8.00	6.30	21g	-1390F
1/2" x 12	9.00	7.10	46g	-1400F
5/8" x 11	12.50	10.00	60g	-1420F
3/4" x 10	14.00	11.20	75g	-1430F
7/8" x 9	16.00	15.50	107g	-1440F

BSW Threading Set

3/16" - 3/4" BSW:

HSSGT Straight Flute Taps:

Taper: 3/16" x 24, 1/4" x 20, 5/16" x 18, 3/8" x 16.

Second: 7/16" x 14, 1/2" x 12, 5/8" x 11, 3/4" x 10.

Plug: 3/8" x 16, 5/16" x 18, 1/4" x 20, 3/16" x 24.

Bar Type Tap Wrenches:

1/4" - 3/4" and 1/16" - 1/4".

Tapping Drills to Suit:

HSS S/S: 3.70, 5.10, 6.50, 7.90, 9.30, 10.50mm.

HSS 1" O/D Dies:

1/4" x 2, 5/16" x 18 and 3/8" x 16.

Diestock: 1" O/D.

HSS Die Nuts: 7/16" x 14, 1/2" x 12, 5/8" x 11 and 3/4" x 10.



Range	Number of Pieces	Order Code SHR-086
3/16" - 3/4" BSW	28	-9992K

**28
PIECES**

HSS TAPS & DIES

GROUP
085

Sets of Three

1 each, taper, second and plug lead.



HSS

BSW



Square AF	Tap Drill Size	Set of 3 Order Code SHR-085
2.50	2.55	-1320D
4.00	3.70	-1340D
5.00	5.10	-1360D
6.30	6.50	-1370D
8.00	7.90	-1380D
6.30	9.30	-1390D
7.10	10.50	-1400D
10.00	13.50	-1420D
11.20	16.25	-1430D
12.50	19.25	-1440D
14.00	22.00	-1450D

BSW (British Standard Whitworth) HSS Ground Thread Dies

BS 1127

For use in diestocks to produce external screw threads.

BSW **HSS**



Size - Pitch	Outside Diameter	Thickness	Weight each	Order Code SHR-086
1/8" x 40	13/16"	1/4"	13g	-5600K
3/16" x 24	13/16"	1/4"	12g	-5620K
1/4" x 20	13/16"	1/4"	12g	-5640K
1/4" x 20	1"	3/8"	27g	-5730K
5/16" x 18	1"	3/8"	27g	-5740K
3/8" x 16	1"	3/8"	26g	-5750K
3/8" x 16	1 5/16"	7/16"	54g	-5810K
7/16" x 14	1 5/16"	7/16"	53g	-5820K
1/2" x 12	1 5/16"	7/16"	53g	-5830K
1/2" x 12	1 1/2"	1/2"	52g	-5940K
5/8" x 11	1 1/2"	1/2"	71g	-5960K
3/4" x 10	1 1/2"	1/2"	66g	-5980K
7/8" x 9	2"	5/8"	135g	-6140K
1" x 8	2"	5/8"	140g	-6160K

BSW (British Standard Whitworth) HSS Ground Thread Die Nuts

BS 1127

For use with spanners to clean and repair existing external screw threads.

BSW **HSS**



Size - Pitch	Width	Thickness	Weight each	Order Code SHR-086
3/16" x 24	0.71"	1/4"	11g	-6470K
1/4" x 20	0.71"	1/4"	10g	-6490K
5/16" x 18	0.82"	5/16"	16g	-6570K
3/8" x 16	0.92"	3/8"	25g	-6590K
7/16" x 14	1.01"	7/16"	35g	-6610K
1/2" x 12	1.10"	1/2"	44g	-6630K
5/8" x 11	1.30"	5/8"	78g	-6660K
3/4" x 10	1.48"	1 1/16"	102g	-6700K
7/8" x 9	1.67"	1 3/16"	144g	-6740K
1" x 8	2.05"	1 5/16"	265g	-6780K

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GROUP
085

HSS TAPS & DIES



**BSF (British Standard Fine)
HSS Ground Thread Taps**

ISO 529

**Left Hand
Also
Available**

Sets of Three
1 each, taper, second and plug lead.



BSF HSS



Straight Flute Individual Sizes

Size - Pitch	Thread Length	Overall Length	Shank Diameter	Weight each	Taper	Second	Plug
					Order Code SHR-085	Order Code SHR-085	Order Code SHR-085
3/16" x 32	16.0	58.0	5.0	8g	-1600A	-1600B	-1600C
1/4" x 26	19.0	66.0	6.3	14g	-1610A	-1610B	-1610C
5/16" x 22	22.0	72.0	8.0	23g	-1630A	-1630B	-1630C
3/8" x 20	24.0	80.0	10.0	38g	-1640A	-1640B	-1640C
7/16" x 18	25.0	85.0	8.0	24g	-1650A	-1650B	-1650C
1/2" x 16	29.0	89.0	9.0	30g	-1660A	-1660B	-1660C
5/8" x 14	32.0	102.0	12.5	60g	-	-1680B	-1680C
3/4" x 12	37.0	112.0	14.0	85g	-1690A	-1690B	-1690C
7/8" x 11	38.0	118.0	16.0	187g	N/A	-1700B	-1700C

Square AF	Tap Drill Size	Set of 3
		Order Code SHR-085
4.00	4.00	-1600D
5.00	5.30	-1610D
6.30	6.80	-1630D
8.00	8.30	-1640D
6.30	9.70	-1650D
7.10	11.10	-1660D
10.00	14.00	-1680D
11.20	15.50	-1690D
12.50	19.75	-1700D

BSF (British Standard Fine) HSS Ground Thread Dies

BS 1127

For use in diestocks to produce
external screw threads.

BSF HSS



Size - Pitch	Outside Diameter	Thickness	Weight each	Order Code SHR-086
3/16" x 32	13/16"	1/4"	12g	-6950K
1/4" x 26	13/16"	1/4"	12g	-6980K
1/4" x 26	1"	3/8"	27g	-7020K
5/16" x 22	1"	3/8"	27g	-7030K
3/8" x 20	1"	3/8"	26g	-7040K
3/8" x 20	1 5/16"	7/16"	51g	-7100K
7/16" x 18	1 5/16"	7/16"	56g	-7110K
1/2" x 16	1 5/16"	7/16"	54g	-7120K
1" x 10	2"	5/8"	148g	-7420K
5/8" x 14	1 1/2"	1/2"	73g	-7250K
3/4" x 12	1 1/2"	1/2"	67g	-7270K

BSF (British Standard Fine) HSS Ground Thread Taps

ISO 529

Spiral Point/Gun Nose



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
3/16" x 32	5.0	4.0	8g	-1600E
1/4" x 26	6.3	5.0	15g	-1610E
5/16" x 22	8.0	6.3	23g	-1630E
3/8" x 20	10.0	8.0	40g	-1640E
7/16" x 18	8.0	6.3	35g	-1650E
1/2" x 16	9.0	7.1	54g	-1660E
5/8" x 14	12.5	10.0	100g	-1680E
3/4" x 12	14.0	11.2	143g	-1690E

N/A

BSF (British Standard Fine) HSS Ground Thread Die Nuts

BS 1127

For use with spanners to clean
and repair existing external
screw threads.

BSF HSS



Size - Pitch	Width	Thickness	Weight each	Order Code SHR-086
3/16" x 32	0.71"	1/4"	10g	-7700K
1/4" x 26	0.71"	1/4"	10g	-7720K
5/16" x 22	0.82"	5/16"	17g	-7760K
3/8" x 20	0.92"	3/8"	24g	-7780K
7/16" x 18	1.01"	7/16"	34g	-7800K
1/2" x 16	1.10"	1/2"	48g	-7820K
5/8" x 14	1.30"	5/8"	78g	-7850K
3/4" x 12	1.48"	1 1/16"	108g	-7890K
7/8" x 11	1.67"	1 3/16"	149g	-7920K
1" x 10	2.05"	1 5/16"	274g	-7940K

BSF (British Standard Fine) HSS Ground Thread Taps

ISO 529

Spiral Flute



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
3/16" x 32	5.0	4.0	8g	-1600F
1/4" x 26	6.3	5.0	15g	-1610F
5/16" x 22	8.0	6.3	23g	-1630F
3/8" x 20	10.0	8.0	40g	-1640F
7/16" x 18	8.0	6.3	40g	-1650F
1/2" x 16	9.0	7.1	50g	-1660F
5/8" x 14	12.5	10.0	99g	-1680F
3/4" x 12	14.0	11.2	120g	-1690F



ISO 529 - 1975 (E)

Nominal Dia. of Tap	Maximum Deviation on Thread Length
Over	
-	5.5mm
5.5mm	12.0mm
12.0mm	39.0mm
39.0mm	-
	+ 0.0 - 2.5
	+ 0.0 - 3.2
	+ 0.0 - 5.0
	+ 0.0 - 6.5



Sets of Three

1 each, taper, second and plug lead.



Straight Flute Individual Sizes

Size - Pitch	Shank Diameter	Weight each	Taper Order Code SHR-085	Second Order Code SHR-085	Plug Order Code SHR-085
No.0 x 0.0394	6.30	14g	-1800A	-1800B	-1800C
No.1 x 0.0354	5.60	10g	-1810A	-1810B	-1810C
No.2 x 0.0319	5.00	8g	-1820A	-1820B	-1820C
No.4 x 0.0260	3.55	4g	-1840A	-1840B	-1840C
No.5 x 0.0232	3.15	4g	-1850A	-1850B	-1850C
No.6 x 0.0209	2.80	3g	-1860A	-1860B	-1860C
No.8 x 0.0169	2.80	3g	-1880A	-1880B	-1880C
No.10 x 0.0138	2.50	3g	-1900A	-	-1900C

Square AF	Tap Drill Size	Set of 3 Order Code SHR-085
5.00	5.10	-1800D
		-1810D
4.00	4.00	-1820D
2.80	3.00	-1840D
2.50	2.65	-1850D
2.24	2.30	-1860D
2.24	1.80	-1880D
		-1900D

Spiral Point/Gun Nose

BA HSS



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085
No.1 x 0.0354	5.60	4.50	11g	-1810E
No.2 x 0.0319	5.00	4.00	9g	-1820E
No.4 x 0.0260	3.55	2.80	4g	-1840E
No.5 x 0.0232	3.15	2.50	4g	-1850E
No.6 x 0.0209	2.80	2.24	3g	-1860E
No.8 x 0.0169	2.80	2.24	3g	-1880E
No.10 x 0.0138	2.50	2.00	8g	-1900E

Spiral Flute

BA HSS



Size - Pitch	Shank Dia.	A/F Square	Weight each	Order Code SHR-085	
No.0 x 0.0394	6.30	5.00	14g	-1800F	N/A
No.1 x 0.0354	5.60	4.50	6g	-1810F	
No.2 x 0.0319	5.00	4.00	6g	-1820F	
No.4 x 0.0260	3.55	2.80	4g	-1840F	
No.6 x 0.0209	2.80	2.24	3g	-1860F	
No.8 x 0.0169	2.80	2.24	3g	-1880F	

BA (British Association)
HSS Ground Thread Dies

BA HSS

BS 1127

For use in diestocks to produce external screw threads.



Pitch	Outside Diameter	Thickness	Weight each	Order Code SHR-086
No.6	13/16"	1/4"	11g	-8200K
No.5	13/16"	1/4"	10g	-8210K
No.4	13/16"	1/4"	12g	-8220K
No.3	13/16"	1/4"	12g	-8230K
No.2	13/16"	1/4"	12g	-8240K
No.1	13/16"	1/4"	13g	-8250K
No.0	13/16"	1/4"	11g	-8260K

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**GROUP
085**

HSS TAPS & DIES



**BSP(F) (British Standard Pipe Fitting)
HSS Ground Thread Taps**

ISO 529

**Left Hand
Also
Available**



Straight Flute Individual Sizes

Size - Pitch	Thread Length (mm)	Overall Length (mm)	Shank Diameter (mm)	Weight each	Taper	Second	Plug
					Order Code SHR-085	Order Code SHR-085	Order Code SHR-085
1/8" x 28	15.0	59.0	8.0	26g	-2010A	-2010B	-2010C
1/4" x 19	19.0	67.0	10.0	47g	-2020A	-2020B	-2020C
3/8" x 19	21.0	75.0	12.5	75g	-2030A	-2030B	-2030C
1/2" x 14	26.0	87.0	16.0	137g	-2040A	-2040B	-2040C
5/8" x 14	26.0	91.0	18.0	191g	-2050A	-2050B	-2050C
3/4" x 14	28.0	96.0	20.0	228g	-2060A	-2060B	-2060C
7/8" x 14	29.0	102.0	22.4	228g	-	-2070B	-
1" x 11	33.0	109.0	25.0	446g	-2080A	-2080B	-2080C

Sets of Three

1 each, taper, second and plug lead.



BSP HSS



Square AF	Tap Drill Size	Set of 3
		Order Code SHR-085
6.30	8.80	-2010D
8.00	11.80	-2020D
10.00	15.25	-2030D
12.50	19.00	-2040D
14.00	21.00	-2050D
16.00	24.50	-2060D
18.00	28.25	-
20.00	30.75	-2080D

**BSP(F) (British Standard Pipe Fine)
HSS Ground Thread Taps**

ISO 529

Spiral Point/Gun Nose

BSP HSS



Size - Pitch	Shank Dia. (mm)	A/F Square (mm)	Weight each	Order Code SHR-085
1/8" x 28	8.0	6.3	24g	-2010E
1/4" x 19	10.0	8.0	51g	-2020E
3/8" x 19	12.5	10.0	85g	-2030E
1/2" x 14	16.0	12.5	143g	-2040E
3/4" x 14	20.0	16.0	250g	-2060E

**BSP(F) (British Standard Pipe Fitting)
HSS Ground Thread Dies**

BS 1127

For use in diestocks to produce
external screw threads.

BSP HSS



Size - Pitch	Outside Diameter	Thickness	Weight each	Order Code SHR-086
1/8" x 28	1"	3/8"	26g	-8620K
1/8" x 28	1 5/16"	7/16"	50g	-8640K
1/4" x 19	1 5/16"	7/16"	50g	-8650K
1/4" x 19	1 1/2"	1/2"	76g	-8690K
3/8" x 19	1 1/2"	1/2"	75g	-8700K
1/2" x 14	2"	5/8"	158g	-8760K
5/8" x 14	2"	5/8"	144g	-8770K
3/4" x 14	2"	5/8"	144g	-8780K
1" x 11	2 1/4"	1 1/16"	174g	-8860K

**BSP(F) (British Standard Pipe Fitting)
HSS Ground Thread Taps**

ISO 529

Spiral Flute

BSP HSS



Size - Pitch	Shank Dia. (mm)	A/F Square (mm)	Weight each	Order Code SHR-085
1/8" x 28	8.0	6.3	24g	-2010F
1/4" x 19	10.0	8.0	51g	-2020F
3/8" x 19	12.5	10.0	85g	-2030F
1/2" x 14	16.0	12.5	143g	-2040F
5/8" x 14	18.0	14.0	193g	-2050F
3/4" x 14	20.0	16.0	250g	-2060F

**BSP(F) (British Standard Pipe Fitting)
HSS Ground Thread Die Nuts**

BS 1127

For use with spanners to clean and
repair existing external screw threads.

BSP HSS



Size - Pitch	Width	Thickness	Weight each	Order Code SHR-086
1/8" x 28	0.92"	3/8"	23g	-8940K
1/4" x 19	1.10"	1/2"	43g	-8960K
3/8" x 19	1.30"	5/8"	80g	-8980K
1/2" x 14	1.67"	1 3/16"	161g	-9000K
5/8" x 14	1.67"	1 3/16"	142g	-9010K
3/4" x 14	2.05"	1 5/16"	247g	-9040K
1" x 11	2.58"	1 7/8"	428g	-9080K
1 1/4" x 11	2.76"	1 3/4"	619g	-9100K

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BSP HSS
SHERWOOD QUALITY CUTTING TOOLS **BSP(F) Threading Set**
HSSGT Straight Flute Taps:
Taper: 1/8" x 28, 1/4" x 19, 3/8" x 19 and 1/2" x 14.

Second: 3/4" x 14.

Plug: 1/8" x 28, 1/4" x 19, 3/8" x 19 and 1/2" x 14.

Outside Diameter HSS Dies
BSPF x 1 5/16":

1/8" x 28, 1/4" x 19 and 3/8" x 19.

BSPF HSS Hexagon
Die Nuts: 1/2" x 14 and

3/4" x 14.

HSS Straight Shank Jobber
Drills: 8.80 and 11.80mm,

Parallel Shank Drills 1/2":

15.25, 19.00 and 24.50mm.

Holders: 1 5/16" outside diameter diestock.

Traditional Tap Wrenches:

1/16" - 1/4" and 1/4" - 3/4".

**22
PIECES**


Range	Number of Pieces	Order Code
1/16" - 3/4" BSPF	22	SHR-086 -9989K

BSPT (British Standard Pipe Taper) HSS Ground Thread Taps
ISO 529
Straight Flute

BSPT HSS
**Left Hand
Also
Available**

R = With Reamer
NR = Without Reamer

Size - Pitch	Thread Length (mm)	Shank Diameter (mm)	Overall Length (mm)	Weight each	Square AF	Tap Drill Size (mm) R	Tap Drill Size (mm) NR	Taper Order Code SHR-085	Second Order Code SHR-085	Plug Order Code SHR-085
1/8" x 28	15.0	8.0	59.0	29g	6.30	8.00	8.40	-	-	-2200C
1/4" x 19	19.0	10.0	67.0	50g	8.00	10.80	11.20	-	-	-2210C
3/8" x 19	21.0	12.5	75.0	66g	10.00	14.25	14.75	-	-	-2220C
1/2" x 14	26.0	16.0	87.0	142g	12.50	17.75	18.25	-	-	-2230C
3/4" x 14	28.0	20.0	96.0	241g	16.00	23.00	23.75	-	-	-2240C
1" x 11	33.0	25.0	109.0	267g	20.00	29.00	30.00	-	-	-2250C

BSPT (British Standard Pipe Taper) HSS Ground Thread Dies
ISO 2284

For use in diestocks to produce external screw threads.


BSPT (British Standard Pipe Taper) HSS Ground Thread Die Nuts
BS 1127

For use with spanners to clean and repair existing external screw threads.



Size - Pitch	Outside Diameter	Thickness	Weight each	Order Code
1/8" x 28	1"	3/8"	26g	-9150K
1/4" x 19	1 5/16"	7/16"	62g	-9170K
3/8" x 19	1 1/2"	7/8"	75g	-9200K
1/2" x 14	2"	5/8"	175g	-9230K

Size - Pitch	Width	Thickness	Weight each	Order Code
1/8" x 28	0.92"	3/8"	40g	-9300K
1/4" x 19	1.10"	1/2"	43g	-9310K
3/8" x 19	1.30"	5/8"	80g	-9320K
1/2" x 14	1.67"	1 3/16"	142g	-9330K

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NPT (National Pipe Taper) HSS Ground Thread Taps

ANSI 94.9

Straight Flute



Size - Pitch	Thread Length	Overall Length (mm)	Shank Diameter	Weight each	Taper	Second	Plug
					Order Code SHR-085	Order Code SHR-085	Order Code SHR-085
1/16" x 27	1 1/16"	0.312	2 1/8"	20g	-	-	-3010C
1/8" x 27	3/4"	0.437	2 1/8"	50g	-	-	-3020C
1/4" x 18	1 1/16"	0.562	2 7/16"	70g	-	-	-3030C
3/8" x 18	1 1/16"	0.700	2 9/16"	100g	-	-	-3040C
1/2" x 14	1 3/8"	0.687	3 1/8"	180g	-	-	-3050C
3/4" x 14	1 3/8"	0.906	3 1/4"	230g	-	-	-3060C
1" x 11.5	1 3/4"	1.125	3 3/4"	420g	-	-	-3070C

**Left Hand
Also
Available**

Sets of Three

1 each, taper, second and plug lead.



NPT

HSS



R = With Reamer
NR = Without Reamer

Set of 3				
Square AF	Tap R	Drill Size NR	Order Code SHR-085	
0.234	6.00	6.30	-	-
0.328	8.40	8.70	-	-
0.421	10.70	11.10	-3030D	
0.531	14.25	14.50	-3040D	
0.515	17.50	18.00	-	-
0.679	22.75	23.25	-	-
0.843	28.50	29.00	-3070D	

NPS (National Pipe Standard) HSS Ground Thread Taps

ANSI 94.9

Straight Flute

NPS

HSS

new



Size - Pitch	Thread Length	Shank Diameter (mm)	Overall Length	Weight each	Order Code SHR-085
1/8" x 27	3/4"	0.437	2 1/8"	50g	-2800C

NPT (National Pipe Taper) HSS Ground Thread Die Nuts

For use with spanners to clean and repair
existing external screw threads.

NPT

HSS



Size - Pitch	Width	Thickness	Weight each	Order Code SHR-086
1/4" x 18	1.10"	1/2"	51g	-9580K
3/8" x 18	1.50"	5/8"	67g	-9590K
1/2" x 14	1.67"	13/16"	147g	-9600K
3/4" x 14	2.05"	15/16"	225g	-9610K

NPT (National Pipe Taper) HSS Ground Thread Dies

For use in diestocks to produce external
screw threads.

NPT

HSS



Size - Pitch	Outside Diameter	Thickness	Weight each	Order Code SHR-086
1/8" x 27	1 5/16"	7/16"	44g	-9400K
1/4" x 18	1 3/16"	7/16"	69g	-9410K
1/4" x 18	1 1/2"	1/2"	88g	-9430K
3/8" x 18	1 1/2"	1/2"	80g	-9440K
1/2" x 14	2"	5/8"	159g	-9470K
3/4" x 14	2"	5/8"	189g	-9480K

Straight Flute Interrupted Thread

For reduced tapping friction.

INTERRUPTED

HSS



Size - Pitch	Thread Length	Shank Diameter (mm)	Overall Length	Weight each	Order Code SHR-085
1/4" x 18	1 1/16"	0.562	2 7/16"	70g	-3220C
3/8" x 18	1 1/16"	0.700	2 9/16"	100g	-3230C
1/2" x 14	1 3/8"	0.687	3 1/8"	180g	-3240C

NPTF (National Pipe Taper Fuel) HSS Ground Thread Taps

ANSI 94.9

Straight Flute

NPTF

HSS



Size - Pitch	Thread Length	Shank Diameter (mm)	Overall Length	Weight each	Order Code SHR-085
1/16" x 27	1 1/16"	0.312	2 1/8"	20g	-3400C
1/8" x 27	3/4"	0.437	2 1/8"	50g	-3410C
1/4" x 18	1 1/16"	0.562	2 7/16"	91g	-3420C
3/8" x 18	1 1/16"	0.700	2 9/16"	105g	-3430C
1/2" x 14	1 3/8"	0.687	3 1/8"	205g	-3440C

NPSF (National Pipe Standard Fuel) HSS Ground Thread Taps

ANSI 94.9

Straight Flute

NPSF

HSS



Size - Pitch	Thread Length	Overall Length	Shank Diameter (mm)	Weight each	Order Code SHR-085
1/8" x 27	3/4"	2 1/8"	0.437	45g	-2910C
1/2" x 14	1 3/8"	3 1/8"	0.687	-	-2940C
3/4" x 14	1 3/8"	3 1/4"	0.906	-	-2950C

**SENATOR**
QUALITY TOOLING**Carbon Steel Threading Set**

Metric coarse and metric fine combined set of machine ground carbon steel taps and dies. For general workshop and maintenance use only. Supplied in a robust plastic case.

Contents: Tap Wrench, 'T' Type Tap Wrench Die Holder, Die Adaptor, Flat Bladed Screwdriver.

Tap & Die Sizes:

Coarse: M6 x 1.00, M8 x 1.25, M10 x 1.50, M12 x 1.75, M14 x 2.00, M16 x 2.00, M18 x 1.50, M20 x 2.50, M22 x 1.50, M24 x 3.00

Fine: M6 x 0.75, M8 x 1.00, M10 x 1.25, M12 x 1.50, M14 x 1.50, M16 x 1.50, M18 x 1.50, M20 x 1.50, M22 x 1.50, M24 x 1.50.

45
PIECES

Range	Number of Pieces	Order Code
M6 - M24	45	SEN-086 -9910K

HSS Threading Set

Machine ground HSS taps and dies for general workshop and maintenance use. Conforms to **ISO529** and **BS1127**.

Contents:

Tap & Die Sizes: M3 x 0.50, M4 x 0.70, M5 x 0.80 and M6 x 1.00mm.

'T' Type Tap Wrench (capacity M3 - M6).

Die Holder 1" O/D.

10
PIECES

Range	Number of Pieces	Order Code
M3 - M6	10	SEN-086 -9920K

Metric Threading Set**Metric M3 - M12**

Comprehensive threading set containing machine ground HSS Taps and Dies in a metal box.

Contents:

O/D Split Dies: M3, M4, M5, M6, M8, M10 and M12.

Ground Thread Taps (1 of each, taper, second and plug lead): M3, M4, M5, M6, M8, M10 and M12.

Bar Type Tap Wrench: M1 - M12 x 210mm.

Die Stock: 25 x 9 x 210mm.

Metric Thread Pitch Gauge.

Flat Bladed Screwdriver: 6mm.

HSS**32**
PIECES

Range	Number of Pieces	Order Code
M3 - M12	32	SEN-086 -9980K

HSS TAPS & DIES**GROUP**
085**Metric Threading Set****Metric M3 - M12**

Machine ground carbon steel taps and dies supplied in a metal box. For general workshop and maintenance use only.

Contents:

O/D Split Dies: M3, M4, M5, M6, M8, M10 and M12.

Ground Thread Taps (1 of each, taper, second and plug lead): M3, M4, M5, M6, M8, M10 and M12.

Bar Type Tap Wrenches: M1 - M12 x 210mm.

Die Stock: 25 x 9 x 210mm.

Metric Thread Pitch Gauge.

Flat Bladed Screwdriver: 6mm.

32
PIECES**CARBON STEEL**

Range	Number of Pieces	Order Code
M3 - M12	32	SEN-086 -3990K

SHERWOOD
QUALITY CUTTING TOOLS**Metric Threading Set****M2 - M16:****HSS Ground Thread**

Taper and Second Taps: M2 x 0.40, M3 x 0.50, M4 x 0.70, M5 x 0.80, M6 x 1.00, M8 x 1.25, M10 x 1.50 and M12 x .75. Manufactured to **ISO 529**.

Bar Type Tap Wrenches: 1/16" - 1/4" and 3/16" - 1/2".

Tapping Drills to Suit: 1.6, 2.5, 3.3, 4.2, 5.0, 6.8, 8.5 and 10.2mm. Made to **BS 328/DIN 338N**.

13/16" O/D Split Dies: M2 x 0.40, M3 x 0.50, M4 x 0.70, M5 x 0.80 and M6 x 1.00.

1" O/D Split Dies:

M8 x 1.25 and

M10 x 1.50.

Manufactured to **BS 1127**.

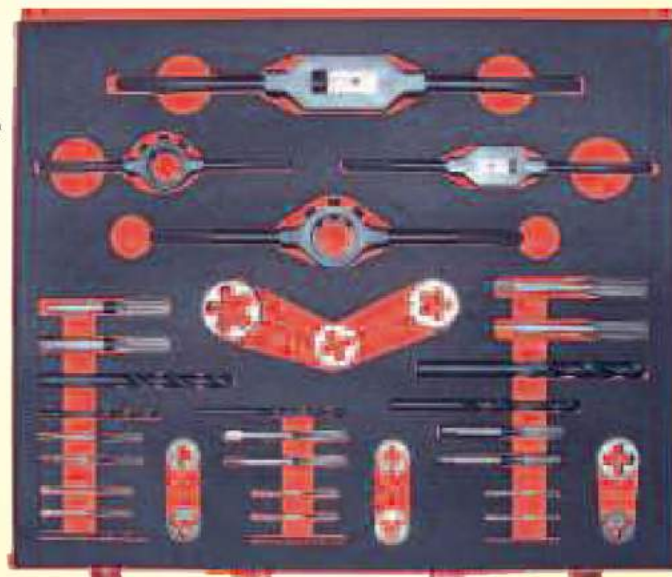
Diastocks: 13/16" O/D and 1" O/D.

HSS Die Nuts:

M12 x 1.75 and

M16 x 2.00.

Manufactured to **BS 1127**.

METRIC COARSE**HSS****37**
PIECES

Range	Number of Pieces	Order Code
M2 - M16	37	SHR-086 -9990K

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CUTTING TOOLS

Threading
Sets

HSS

28
PIECES

BSF Threading Set

 $\frac{3}{16}$ " - $\frac{3}{4}$ " BSF:

HSSGT Straight Flute Taps:

Taper: $\frac{3}{16}$ " x 32, $\frac{1}{4}$ " x 26, $\frac{5}{16}$ " x 22 and $\frac{3}{8}$ " x 20.Second: $\frac{3}{4}$ " x 12, $\frac{7}{16}$ " x 18, $\frac{5}{8}$ " x 14 and $\frac{1}{2}$ " x 16.Plug: $\frac{3}{16}$ " x 32, $\frac{1}{4}$ " x 26, $\frac{5}{16}$ " x 22 and $\frac{3}{8}$ " x 20.Bar Type Tap Wrenches: $\frac{1}{16}$ " - $\frac{1}{4}$ " and $\frac{1}{4}$ " - $\frac{3}{4}$ ".

Tapping Drills to Suit: HSS S/S.

4.00, 5.30, 6.80, 8.30, 9.70 and 11.10mm.

HSS 1" O/D Split Dies: $\frac{1}{4}$ " x 26, $\frac{5}{16}$ " x 22 and $\frac{3}{8}$ " x 20.

Distock: 1" O/D.

HSS Die Nuts: $\frac{7}{16}$ " x 18, $\frac{1}{2}$ " x 16, $\frac{5}{8}$ " x 14 and $\frac{3}{4}$ " x 12.

BSF

28
PIECES

BSW Threading Set

 $\frac{3}{16}$ " - $\frac{3}{4}$ " BSW:

HSSGT Straight Flute Taps:

Taper: $\frac{3}{16}$ " x 24, $\frac{1}{4}$ " x 20, $\frac{5}{16}$ " x 18, $\frac{3}{8}$ " x 16.Second: $\frac{7}{16}$ " x 14, $\frac{1}{2}$ " x 12, $\frac{5}{8}$ " x 11, $\frac{3}{4}$ " x 10.Plug: $\frac{3}{8}$ " x 16, $\frac{5}{16}$ " x 18, $\frac{1}{4}$ " x 20, $\frac{3}{16}$ " x 24.Bar Type Tap Wrenches: $\frac{1}{4}$ " - $\frac{3}{4}$ " and $\frac{1}{16}$ " - $\frac{1}{4}$ ".

Tapping Drills to Suit: HSS S/S.

3.70, 5.10, 6.50, 7.90, 9.30, 10.50mm

HSS 1" O/D Dies: $\frac{1}{4}$ " x 2, $\frac{5}{16}$ " x 18 and $\frac{3}{8}$ " x 16.

Distock: 1" O/D.

HSS Die Nuts: $\frac{7}{16}$ " x 14, $\frac{1}{2}$ " x 12, $\frac{5}{8}$ " x 11 and $\frac{3}{4}$ " x 10.

BSW

Range	Number of Pieces	Order Code
$\frac{3}{16}$ - $\frac{3}{4}$ " BSF	28	-9991K
$\frac{3}{16}$ - $\frac{3}{4}$ " BSW	28	-9992K

BSP(F) Threading Set

HSSGT Straight Flute Taps:

Taper: $\frac{1}{8}$ " x 28, $\frac{1}{4}$ " x 19, $\frac{3}{8}$ " x 19 and $\frac{1}{2}$ " x 14.Second: $\frac{3}{4}$ " x 14.Plug: $\frac{1}{8}$ " x 28, $\frac{1}{4}$ " x 19, $\frac{3}{8}$ " x 19 and $\frac{1}{2}$ " x 14.Outside Diameter HSS Dies BSPF x $1\frac{5}{16}$ ": $\frac{1}{8}$ " x 28, $\frac{1}{4}$ " x 19 and $\frac{3}{8}$ " x 19.BSPF HSS Hexagon Die Nuts: $\frac{1}{2}$ " x 14and $\frac{3}{4}$ " x 14.

HSS Straight Shank Jobber Drills:

8.80 and 11.80mm,

Parallel Shank Drills $\frac{1}{2}$ " : 15.25, 19.00

and 24.50mm.

Holders: $1\frac{5}{16}$ " outside diameter distock.Traditional Tap Wrenches: $\frac{1}{16}$ " - $\frac{1}{4}$ "and $\frac{1}{4}$ " - $\frac{3}{4}$ ".

BSP

22
PIECES

Range	Number of Pieces	Order Code
$\frac{1}{16}$ " - $\frac{3}{4}$ " BSPF	22	-9989K

UNC Threading Set

No.10 - $\frac{3}{4}$ " UNC:

HSSGT Straight Flute Taps:

Taper: No. 10 x 24, $\frac{1}{4}$ " x 20, $\frac{5}{16}$ " x 18, $\frac{3}{8}$ " x 16.Second: $\frac{7}{16}$ " x 14, $\frac{1}{2}$ " x 13, $\frac{5}{8}$ " x 11, $\frac{3}{4}$ " x 10.Plug: No.10 x 24, $\frac{1}{4}$ " x 20, $\frac{5}{16}$ " x 18, $\frac{3}{8}$ " x 16.Bar Type Tap Wrenches: $\frac{1}{16}$ " - $\frac{1}{4}$ " and $\frac{1}{4}$ " - $\frac{3}{4}$ ".

Tapping Drills to suit: HSS S/S.

3.90, 5.10, 6.60, 8.00, 9.40, 10.80mm

HSS 1" O/D Dies: $\frac{1}{4}$ " x 20, $\frac{5}{16}$ " x 18, $\frac{3}{8}$ " x 16.

Distock: 1" O/D.

HSS Die Nuts: $\frac{7}{16}$ " x 14, $\frac{1}{2}$ " x 13, $\frac{5}{8}$ " x 11, $\frac{3}{4}$ " x 10.

UNC

28
PIECES

Range	Number of Pieces	Order Code
10 - $\frac{3}{4}$ " UNC	28	-9994K

UNF Threading Set

No.10 - $\frac{3}{4}$ " UNF:

HSSGT Straight Flute Taps:

Taper: No.10 x 32, $\frac{1}{4}$ " x 28, $\frac{5}{16}$ " x 24, and $\frac{3}{8}$ " x 24.Second: $\frac{3}{4}$ " x 16, $\frac{7}{16}$ " x 20, $\frac{5}{8}$ " x 18 and $\frac{1}{2}$ " x 20.Plug: No.10 x 32, $\frac{1}{4}$ " x 28, $\frac{5}{16}$ " x 24and $\frac{3}{8}$ " x 24.Bar Type Tap Wrenches: $\frac{1}{16}$ " - $\frac{1}{4}$ "and $\frac{1}{4}$ " - $\frac{3}{4}$ ".

Tapping Drills to Suit: HSS S/S.

4.10, 5.50, 6.90, 8.50, 9.50 and 11.50mm.

HSS 1" O/D Dies: $\frac{1}{4}$ " x 28, $\frac{5}{16}$ " x 24and $\frac{3}{8}$ " x 24.

Distock: 1" O/D.

HSS Die Nuts: $\frac{7}{16}$ " x 20, $\frac{1}{2}$ " x 20, $\frac{5}{8}$ " x 18and $\frac{3}{4}$ " x 16.

UNF

28
PIECES

Range	Number of Pieces	Order Code
10 - $\frac{3}{4}$ " UNF	28	-9993K

Engineers Reference Data Charts

Now with 38 pages of engineering data. Each page coated with an anti-glare matt lamination to protect against the dirt and grease.

Contents:

- Basic forms of heat treatment
- Material groups
- Tensile strength and hardness
- Lubricant selection
- Hole and shaft tolerances
- Metric screw and hole sizes
- Thread notation
- Standard thread forms;
- Dimensions of common shank types
- Standards for engineering drawings
- Abbreviations used in engineering drawings
- Common CNC codes
- Axis nomenclature for machine tools
- Trigonometry formulae
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Pocket Size
164 x 84mm

38 Pages

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-2621A

Engineers Reference Handbook

- Booklet of data charts and tables
- Suitable for the drawing office, toolroom or workshop
- 9 sections

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148 x 100mm

209 PAGES

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EDITIONOrder Code
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-0356A

SWISS+TECH

High Performance as Standard . . .

...Taking Productivity to New Heights



**Cutting Tools For Production Industry
Drills - Milling Cutters - Taps**

The tool geometry (with up to 138 parameters) has been developed and optimised during long-term tests in co operation with users for the different sections of structural steel, aluminum casting, machining steel, VA steels, heat-resistant steels and tool steels. Selected hard coatings increase the range of applications.

The objective of developing Swiss+Tech's 'Black Ring' Taps was the realisation of narrower tolerances and more efficient cutting times for the thread production.

The unique general purpose properties of these taps guarantee high productivity by reducing the amount of time spent changing taps for different materials and at the same time reduces the number of taps required by the machine shop.

Swiss+Tech 'Black Ring' machine taps with their wide range of applications are the result of years of experience in metal cutting. Responsible for our developments were the following demands from our main customers:

- Increase of a tap's versatility.
- Reducing the confusing type variety.
- Reducing the storage costs for the tools.
- Reducing the tool changing times.

For general tapping applications. For production tapping of specific materials a specialist tap may be more suitable. Manufactured to **DIN 371/376**.

Spiral Point/Gun Nose - HSS-E Bright Finish

For through holes.

Taper lead to **DIN form B**. Tapping tolerance to **6H**.

SPIRAL POINT FOR
THROUGH HOLES

HSS-E

METRIC



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code
M3 x 0.50	3.5	2.7	56	2.5	5g	-8509X
M4 x 0.70	4.5	3.4	63	3.3	8g	-8515X
M5 x 0.80	6.0	4.9	70	4.2	14g	-8518X
M6 x 1.00	6.0	4.9	80	5.0	18g	-8521X
M8 x 1.25	8.0	6.2	90	6.8	33g	-8527X
M10 x 1.50	10.0	8.0	100	8.5	56g	-8530X
M12 x 1.75	9.0	7.0	110	10.2	61g	-8533X
M16 x 2.00	12.0	9.0	110	14.0	100g	-8539X
M20 x 2.50	16.0	12.0	140	17.5	210g	-8542X

Spiral Point Long Series

For blind holes.

Taper lead to **DIN 13 form B**

(with gun nose chamber lead 4/5 thread)

Tapping tolerance to **6H**.

Thread angle 60°

SPIRAL FLUTE FOR
BLIND HOLES

HSS-E

METRIC



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code
M6 x 1.00	6.0	4.9	160	17.0	30g	-9806X
M8 x 1.25	6.0	4.9	180	20.0	60g	-9808X
M10 x 1.50	7.0	5.5	200	22.0	100g	-9810X
M12 x 1.75	9.0	7.0	220	24.0	200g	-9812X

Suitable for the following
Material Groups

DIN
371/6



Group	Materials Colour defines similar machinability	Hardness		Tensile Strength N/mm²	Tapping Speed M/min
		Brinell HB	Rockwell HRC		
1.1	Mild Steel	<130	-	<400	10 - 15
1.2	Case Hardening & Structural Steel	<200	-	<700	10 - 15
1.3	Medium Carbon Steel	<260	<26	<850	5 - 10
1.4	Low Alloy Steel	<260	<26	<850	4 - 8
2.1	Free Machining Stainless	<230	<20	<800	2 - 5
2.2	Medium Strength Austenitic Stainless	<260	<26	<850	2 - 5
7.1	Unalloyed Aluminium Zinc - Magnesium	-	-	<150	15 - 20
7.2	Aluminium Alloy less than 5% Si	-	-	150 - 300	15 - 20
7.3	Aluminium Alloy 5% to 10% Si	<230	<20	<800	5 - 10



Spiral Flute

For blind holes.

Taper lead to **DIN form C**.

Tapping tolerance to **6H**.

SPIRAL FLUTE FOR
BLIND HOLES

HSS-E

METRIC



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code
M3 x 0.50	3.5	2.7	56	2.5	5g	-8559X
M4 x 0.70	4.5	3.4	63	3.3	8g	-8565X
M5 x 0.80	6.0	4.9	70	4.2	14g	-8568X
M6 x 1.00	6.0	4.9	80	5.0	17g	-8571X
M8 x 1.25	8.0	6.2	90	6.8	31g	-8577X
M10 x 1.50	10.0	8.0	100	8.5	53g	-8580X
M12 x 1.75	9.0	7.0	110	10.2	57g	-8583X
M16 x 2.00	12.0	9.0	110	14.0	91g	-8589X
M20 x 2.50	16.0	12.0	140	17.5	195g	-8592X

HSS-E 'Black Ring' M3 - M8 5 Piece Tap Sets

'Black Ring' machine taps for general tapping applications suitable for steels, low alloy steels, stainless steels and non-ferrous materials.

Manufactured to **DIN371/376**.

Tapping tolerance to **6H**.

M3 - M8 Spiral Point/Gun Nose

Spiral Point/Gun Nose - HSS-E Bright Finish

For through holes. Taper lead to **DIN form B**.

M3 - M8 Spiral Flute

Spiral Flute - HSS-E Bright Finish

For blind holes. Taper lead to **DIN form C**.

Spiral
Point



Spiral
Flute



Contents for each set:

Pitch sizes	Thread length
M3 x 0.5mm	2.5mm
M4 x 0.7mm	3.3mm
M5 x 0.8mm	4.2mm
M6 x 1.0mm	5.0mm
M8 x 1.25mm	6.8mm

**5
PIECES**

Type	Number of Pieces	Order Code
Spiral Point	5	-9900X
Spiral Flute	5	-9910X

Suitable for the following Material Groups

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
1.1	Mild soft steel & free machining non-alloy low carbon steel	up to 130	up to 400	10 - 20
1.2	Non-alloy case hardening, structural & low to medium carbon steel	up to 200	up to 700	10 - 15
1.3	Non-alloy, plain and medium carbon steel and castings	up to 260	up to 850	5 - 10

Spiral Point/Gun Nose - HSS-EV Oxidised Finish
For through holes.
Taper lead to **DIN form B**. (3.5 x P to 5.5 x P).
Tapping tolerance to **6H**.


HSS-EV

SPIRAL POINT FOR THROUGH HOLES

ISO Metric Coarse

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	4g	-0003Y
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-0009Y
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-0015Y
M5.0 x 0.80	70.0	15.0	6.0	4.9	13g	-0018Y
M6.0 x 1.00	80.0	17.0	6.0	4.9	17g	-0021Y
M8.0 x 1.25	90.0	20.0	8.0	6.0	32g	-0027Y
M10.0 x 1.50	100.0	22.0	10.0	8.0	55g	-0030Y
M12.0 x 1.75	110.0	24.0	9.0	7.0	61g	-0033Y
M16.0 x 2.00	110.0	27.0	12.0	9.0	108g	-0039Y

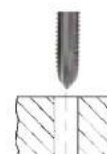
HSS 'Red Ring' Taps

 Manufactured to **DIN 371/376**

Suitable for the following Material Groups

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
1.4	Generally low to medium alloy steel and castings	up to 260	up to 850	5 - 10
1.5	Medium to high alloy steel tool steel and steel castings	up to 340	up to 1200	4 - 8

Spiral Point/Gun Nose - HSS-Co Bright Finish
For through holes.
Taper lead to **DIN form B**. (3.5 x P to 5.5 x P).
Tapping tolerance to **6HX**.


HSS-Co

SPIRAL POINT FOR THROUGH HOLES

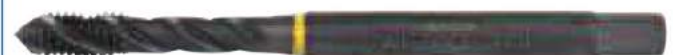
ISO Metric Coarse

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	4g	-1003R
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-1009R
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-1015R
M5.0 x 0.80	70.0	15.0	6.0	4.9	13g	-1018R
M6.0 x 1.00	80.0	17.0	6.0	4.9	17g	-1021R
M8.0 x 1.25	90.0	20.0	8.0	6.2	32g	-1027R
M10.0 x 1.50	100.0	22.0	10.0	8.0	58g	-1030R
M12.0 x 1.75	110.0	24.0	9.0	7.0	61g	-1033R
M16.0 x 2.00	110.0	27.0	12.0	9.0	108g	-1039R

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
1.4	Generally low to medium alloy steel and castings	up to 260	up to 850	4 - 9
2.1	Soft & generally easy to machine ferritic, martensitic stainless steel & castings	up to 230	up to 880	4 - 6
6.3	Brass (beta - short chip) & soft bronze	-	up to 500	15 - 20

Spiral Flute - HSS-EV Oxidised Finish
For blind holes.
Taper lead to **DIN form C** (3 x P).
Tapping tolerance:
Spiral flute to **6H**.


HSS-EV

SPIRAL FLUTE FOR BLIND HOLES

ISO Metric Coarse

 Helix angle 40°. Tapping depth **2.5 x D**.

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	5g	-0503Y
M3.0 x 0.50	56.0	6.0	3.5	2.7	5g	-0509Y
M4.0 x 0.70	63.0	7.0	4.5	3.4	8g	-0515Y
M5.0 x 0.80	70.0	8.0	6.0	4.9	13g	-0518Y
M6.0 x 1.00	80.0	10.0	6.0	4.9	16g	-0521Y
M8.0 x 1.25	90.0	13.0	8.0	6.2	30g	-0527Y
M10.0 x 1.50	100.0	15.0	10.0	8.0	45g	-0530Y
M12.0 x 1.75	110.0	18.0	9.0	7.0	56g	-0533Y
M16.0 x 2.00	110.0	20.0	12.0	9.0	95g	-0539Y



Spiral Flute - HSS-EV Oxidised Finish
For blind holes.
Taper lead to **DIN form C** (3 x P).
Tapping tolerance:
spiral flute to **6H**.


HSS-EV

SPIRAL FLUTE FOR BLIND HOLES

ISO Metric Coarse

 Helix angle 40°. Tapping depth **2.5 x D**.

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185	
M2.0 x 0.40	45.0	3.0	2.8	2.1	5g	-1503R	N/A
M3.0 x 0.50	56.0	6.0	3.5	2.7	5g	-1509R	
M4.0 x 0.70	63.0	7.0	4.5	3.4	8g	-1515R	
M5.0 x 0.80	70.0	8.0	6.0	4.9	13g	-1518R	
M6.0 x 1.00	80.0	10.0	6.0	4.9	16g	-1521R	
M8.0 x 1.25	90.0	13.0	8.0	6.2	30g	-1527R	
M10.0 x 1.50	100.0	15.0	10.0	8.0	45g	-1530R	
M12.0 x 1.75	110.0	18.0	9.0	7.0	56g	-1533R	
M16.0 x 2.00	110.0	20.0	12.0	9.0	95g	-1539R	

PRODUCTS ARE ONLY AVAILABLE VIA YOUR DISTRIBUTOR

SWISS+TECH HSS 'Blue Ring' Taps

Manufactured to DIN 371/376

Suitable for the following Material Groups

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
2.1	Soft and generally easy to machine ferritic & martensitic stainless steel and castings	up to 230	up to 800	4 - 6
2.2	Medium strength & reasonable to machine austenitic stainless steel and castings	up to 290	up to 1000	4 - 6
2.3	Hard & generally difficult to machine ferritic & austenitic stainless steel & castings	up to 340	up to 1200	3 - 6

Note: Fluteless taps may also be used on stainless steel.
See 'Green Ring' **FLUTELESS** on page 110.

Spiral Point/Gun Nose - HSS-EV Oxidised Finish

For through holes.

Taper lead to DIN form B

(3.5 x P to 5.5 x P).

Tapping tolerance to 6HX.

**HSS-EV****SPIRAL POINT FOR THROUGH HOLES****ISO Metric Coarse**

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	4g	-2003B
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-2009B
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-2015B
M5.0 x 0.80	70.0	15.0	6.0	4.9	13g	-2018B
M6.0 x 1.00	80.0	17.0	6.0	4.9	17g	-2021B
M8.0 x 1.25	90.0	20.0	8.0	6.0	32g	-2027B
M10.0 x 1.50	100.0	22.0	10.0	8.0	55g	-2030B
M12.0 x 1.75	110.0	24.0	9.0	7.0	61g	-2033B
M16.0 x 2.00	110.0	27.0	12.0	9.0	108g	-2039B

HSS 'White Ring' Taps

Manufactured to DIN 371/376

Suitable for the following Material Groups

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
3.1	Grey cast iron Hardness soft to medium	up to 130	up to 400	8 - 12
3.2	Grey cast iron Hardness medium to hard	up to 200	up to 700	4 - 6

Straight Flute - HSS-EV Nitride Finish

For through holes. Taper lead to

DIN form D (taper) (3.5 x P to 5 x P).

Tapping tolerance to 6HX.

STRAIGHT FLUTE FOR THROUGH HOLES**METRIC COARSE****ISO Metric Coarse**

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	14g	-3503W
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-3509W
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-3515W
M5.0 x 0.80	70.0	16.0	6.0	4.9	13g	-3518W
M6.0 x 1.00	80.0	17.0	6.0	4.9	17g	-3521W
M8.0 x 1.25	90.0	22.0	8.0	6.2	32g	-3527W
M10.0 x 1.50	100.0	24.0	10.0	8.0	55g	-3530W
M12.0 x 1.75	110.0	29.0	9.0	7.0	61g	-3533W

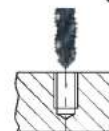
N/A

Spiral Flute (BLT) - HSS-EV Oxidised Finish

For deep blind holes.

Taper lead to DIN form C (2 x P to 3 x P).

Tapping tolerance to 6H.

DIN 371/6**HSS-EV****SPIRAL FLUTE FOR BLIND HOLES****'Biteless Taper' ISO Metric Coarse**

Helix angle 45°

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	5g	-2503B
M3.0 x 0.50	56.0	6.0	3.5	2.7	5g	-2509B
M4.0 x 0.70	63.0	7.0	4.5	3.4	8g	-2515B
M5.0 x 0.80	70.0	8.0	6.0	4.9	13g	-2518B
M6.0 x 1.00	80.0	11.0	6.0	4.9	16g	-2521B
M8.0 x 1.25	90.0	13.0	8.0	6.2	30g	-2527B
M10.0 x 1.50	100.0	15.0	10.0	8.0	45g	-2530B
M12.0 x 1.75	110.0	18.0	9.0	7.0	56g	-2533B
M16.0 x 2.00	110.0	20.0	12.0	9.0	95g	-2539B

Spiral Flute (BLF) - HSS-EV Oxidised Finish

For shorter blind holes. Taper lead to DIN form C (3 x P).

Tapping tolerance to 6H.

'Biteless Flat' ISO Metric Coarse

Helix angle 45°

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M3.0 x 0.50	56.0	6.0	3.5	2.7	5g	-3009B
M4.0 x 0.70	63.0	7.0	4.5	3.4	8g	-3015B
M5.0 x 0.80	70.0	8.0	6.0	4.9	13g	-3018B
M6.0 x 1.00	80.0	11.0	6.0	4.9	16g	-3021B
M8.0 x 1.25	90.0	13.0	8.0	6.2	30g	-3027B
M10.0 x 1.50	100.0	15.0	10.0	8.0	45g	-3030B
M12.0 x 1.75	110.0	18.0	9.0	7.0	56g	-3033B
M16.0 x 2.00	110.0	20.0	12.0	9.0	95g	-3039B

HSS-EV

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
3.3	Malleable and nodular irons Hardness soft to medium	up to 220	up to 850	4 - 6
3.4	Malleable and nodular irons Hardness medium to hard	up to 300	up to 700	4 - 6

Straight Flute - HSS-EV Nitride Finish

For blind holes. Plug/bottoming lead to

DIN form C (2 x P to 3 x P).

Tapping tolerance to 6HX.

STRAIGHT FLUTE FOR BLIND HOLES**METRIC COARSE****ISO Metric Coarse**

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	4g	-4003W
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-4009W
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-4015W
M5.0 x 0.80	70.0	16.0	6.0	4.9	13g	-4018W
M6.0 x 1.00	80.0	17.0	6.0	4.9	17g	-4021W
M8.0 x 1.25	90.0	22.0	8.0	6.2	32g	-4027W
M10.0 x 1.50	100.0	24.0	10.0	8.0	58g	-4030W
M12.0 x 1.75	110.0	29.0	9.0	7.0	61g	-4033W

Suitable for the following Material Groups

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
4.1	Titanium alloy (also pure nickel)	-		3 - 9

Right Hand Cutting - Left Hand Spiral Flute - HSS-PM Nitride Finish
For through holes. Left hand spiral. Taper lead to **DIN form D** (3.5 x P to 5 x P). Tapping tolerance to **6HX**.

LEFT HAND SPIRAL FLUTE FOR THROUGH HOLES
METRIC COARSE

ISO Metric Coarse Helix angle 15°.

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-4509P
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-4515P
M5.0 x 0.80	70.0	16.0	6.0	4.9	14g	-4518P
M6.0 x 1.00	80.0	19.0	6.0	4.9	17g	-4521P
M8.0 x 1.25	90.0	22.0	8.0	6.2	32g	-4527P
M10.0 x 1.50	100.0	24.0	10.0	8.0	55g	-4530P
M12.0 x 1.75	110.0	29.0	9.0	7.0	63g	-4533P

HSS 'Orange Ring' Taps

Suitable for the following Material Groups

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
4.3	Titanium alloys of a hard and very hard to machine nature	-	up to 1250	3 - 6
5.1	Heat resistant super alloys including iron based high temperature alloys	-	up to 500	6 - 6

Spiral Point/Gun Nose - HSS-PM Nitride & Oxide Finish
For through holes. Taper lead to **DIN form B** (3.5 x P to 5.5 x P). Tapping tolerance to **6HX**.

SPIRAL POINT FOR THROUGH HOLES
METRIC COARSE

ISO Metric Coarse

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-5509N
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-5515N
M5.0 x 0.80	70.0	16.0	6.0	4.9	13g	-5518N
M6.0 x 1.00	80.0	19.0	6.0	4.9	17g	-5521N
M8.0 x 1.25	90.0	22.0	8.0	6.2	32g	-5527N
M10.0 x 1.50	100.0	24.0	10.0	8.0	55g	-5530N
M12.0 x 1.75	110.0	29.0	9.0	7.0	61g	-5533N

HSS-PM

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
4.2	Titanium alloy medium and hard to machine	-	up to 900	6 - 9
4.3	Titanium alloys of a hard and very hard to machine nature	-	up to 1200	6 - 9

Spiral Flute - HSS-PM Nitride Finish
For blind holes. Taper lead to **DIN form B** (3 x P). Tapping tolerance to **6HX**.

SPIRAL FLUTE FOR BLIND HOLES
METRIC COARSE

ISO Metric Coarse Helix angle 15°. Tapping depth 2.5 x D.

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M3.0 x 0.50	56.0	5.0	3.5	2.7	5g	-5009P
M4.0 x 0.70	63.0	7.0	4.5	3.4	8g	-5015P
M5.0 x 0.80	70.0	9.0	6.0	4.9	14g	-5018P
M6.0 x 1.00	80.0	11.0	6.0	4.9	17g	-5021P
M8.0 x 1.25	90.0	12.0	8.0	6.2	32g	-5027P
M10.0 x 1.50	100.0	13.0	10.0	8.0	55g	-5030P
M12.0 x 1.75	110.0	15.0	9.0	7.0	63g	-5033P

HSS-PM

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
5.2	Heat resistant super alloys, cobalt or nickel based medium to hard to machine	-	up to 900	3 - 6
5.3	Heat resistant super alloys, cobalt or nickel based hard to very hard to machine	-	up to 1200	3 - 6

Spiral Flute - HSS-PM Nitride & Oxide Finish
For blind holes. Taper lead to **DIN form C**. This tap has the special chamfer lead of (3 x P). Tapping tolerance: spiral flute to **6H**.

SPIRAL FLUTE FOR BLIND HOLES
METRIC COARSE

ISO Metric Coarse Helix angle 40°. Tapping depth 2.5 x D.

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M4.0 x 0.70	63.0	7.0	4.5	3.4	9g	-6015N
M5.0 x 0.80	70.0	9.0	6.0	4.9	13g	-6018N
M6.0 x 1.00	80.0	11.0	6.0	4.9	16g	-6021N
M8.0 x 1.25	90.0	12.0	8.0	6.2	30g	-6027N
M10.0 x 1.50	100.0	13.0	10.0	8.0	51g	-6030N
M12.0 x 1.75	110.0	15.0	9.0	7.0	56g	-6033N
M14.0 x 2.00	110.0	18.0	11.0	9.0	63g	-6036N
M16.0 x 2.00	110.0	18.0	12.0	9.0	95g	-6039N

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
7.1	Unalloyed aluminium, magnesium and zinc	-	up to 150	20 - 30
7.2	Aluminium alloy less than 5% silicon magnesium & zinc alloys (long chip)	-	up to 1200	20 - 30

Spiral Point/Gun Nose - HSS-EV Nitride FinishFor through holes. Taper lead to **DIN form B**

(3.5 x P to 5.5 x P).

Tapping tolerance to **6HX**.**SPIRAL POINT FOR THROUGH HOLES****METRIC COARSE****ISO Metric Coarse**

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	4g	-6503G
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-6509G
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-6515G
M5.0 x 0.80	70.0	16.0	6.0	4.9	13g	-6518G
M6.0 x 1.00	80.0	19.0	6.0	4.9	17g	-6521G
M8.0 x 1.25	90.0	22.0	8.0	6.2	32g	-6527G
M10.0 x 1.50	100.0	24.0	10.0	8.0	58g	-6530G
M12.0 x 1.75	110.0	29.0	9.0	7.0	61g	-6533G

HSS 'Green Ring' Fluteless TapsLubrication grooves are a feature of all taps of M3.0 and over. Manufactured to **DIN 371/376**.**Suitable for the following Material Groups**

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
6.1	Copper	-	up to 500	8 - 12
6.2	Brass (alpha - long chip)	-	up to 800	15 - 20

Fluteless - HSS-EV Bright Finish

For through and blind holes.

Taper lead to **DIN form B**(3.5 x P to 5.5 x P). Tapping tolerance to **6H**.**FLUTELESS FOR THROUGH AND BLIND HOLES****METRIC COARSE****ISO Metric Coarse**

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	4g	-7503G
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-7509G
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-7515G
M5.0 x 0.80	70.0	15.0	6.0	4.9	13g	-7518G
M6.0 x 1.00	80.0	17.0	6.0	4.9	17g	-7521G
M8.0 x 1.25	90.0	20.0	8.0	6.2	32g	-7527G
M10.0 x 1.50	100.0	22.0	10.0	8.0	58g	-7530G
M12.0 x 1.75	110.0	24.0	9.0	7.0	61g	-7533G

N/A

Group	Materials	Brinell Hardness HB	Tensile Strength N/mm ²	Tapping Speed M/min
7.3	Aluminium alloy 5% to 10% silicon	-	up to 500	15 - 20
7.4	Aluminium alloy 5% to 10% silicon	-	up to 500	15 - 20

Spiral Flute - HSS-EV Nitride FinishFor blind holes. Taper lead to **DIN form C**(2 x P to 3 x P). Tapping tolerance to **6H**.**SPIRAL FLUTE FOR BLIND HOLES****METRIC COARSE****ISO Metric Coarse** Helix angle 45°. Tapping depth 2.5 x D.

Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	5g	-7003G
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-7009G
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-7015G
M5.0 x 0.80	70.0	16.0	6.0	4.9	13g	-7018G
M6.0 x 1.00	80.0	19.0	6.0	4.9	16g	-7021G
M8.0 x 1.25	90.0	22.0	8.0	6.2	30g	-7027G
M10.0 x 1.50	100.0	24.0	10.0	8.0	45g	-7030G
M12.0 x 1.75	110.0	29.0	9.0	7.0	56g	-7033G

Fluteless - HSS-EV (TiN Coated)

For through and blind holes.

Taper lead to **DIN form B**(3.5 x P to 5.5 x P). Tapping tolerance to **6H**.**FLUTELESS FOR THROUGH AND BLIND HOLES****METRIC COARSE****ISO Metric Coarse**

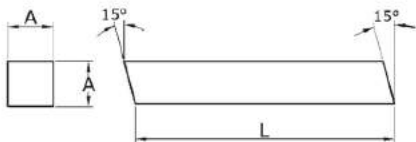
Size - Pitch (mm)	Overall Length	Thread Length	Shank Dia.	A/F Square	Weight each	Order Code SWT-185
M2.0 x 0.40	45.0	8.0	2.8	2.1	4g	-8003G
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-8009G
M4.0 x 0.70	63.0	13.0	4.5	3.4	8g	-8015G
M5.0 x 0.80	70.0	15.0	6.0	4.9	13g	-8018G
M6.0 x 1.00	80.0	17.0	6.0	4.9	17g	-8021G
M8.0 x 1.25	90.0	20.0	8.0	6.2	32g	-8027G
M10.0 x 1.50	100.0	22.0	10.0	8.0	58g	-8030G
M12.0 x 1.75	110.0	24.0	9.0	7.0	61g	-8033G

N/A



KENNEDY Toolbits
QUALITY INDUSTRIAL TOOLING

Cut faster, 'stand up' longer and reduce costs. Square and rectangular toolbits supplied with 15° bevelled ends. Parting-off blades supplied with 2° side taper, 10° bevel (top and bottom).

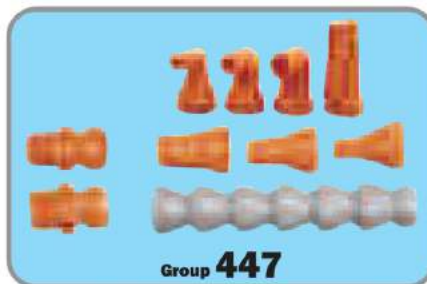


HSS Square Inch

A	L	Weight each	Order Code KEN-090
3/16"	2 1/2"	12g	-0040K
1/4"	2 1/2"	21g	-0050K
1/4"	3"	25g	-0060K
1/4"	4"	33g	-0070K
5/16"	2 1/2"	32g	-0100K
5/16"	3"	40g	-0110K
5/16"	4"	52g	-0130K
5/16"	6"	80g	-0140K
3/8"	3"	56g	-0160K
3/8"	4"	75g	-0180K
3/8"	6"	112g	-0190K
7/16"	4"	100g	-0220K
1/2"	3"	100g	-0250K
1/2"	4"	130g	-0270K
1/2"	6"	200g	-0280K
5/8"	4"	210g	-0300K
5/8"	6"	310g	-0330K
3/4"	4"	300g	-0350K
3/4"	5"	374g	-0360K
3/4"	6"	450g	-0370K
3/4"	8"	600g	-0380K
1"	6"	800g	-0390K



Group
732



Group
447

TOOLBITS & PARTING-OFF BLADES

GROUP
090

5% Cobalt Rectangular Inch

HSS-Co 5%



B x A	L	Weight each	Order Code KEN-090
3/16" - 1/2"	6"	72g	-5100K
1/4" - 3/8"	4"	50g	-5110K
1/4" - 1/2"	4"	70g	-5120K
5/16" - 1/2"	6"	120g	-5130K
3/8" - 1/2"	4"	100g	-5140K
3/8" - 1/2"	6"	150g	-5150K
3/8" - 5/8"	4"	125g	-5160K
3/8" - 5/8"	6"	190g	-5170K
3/8" - 3/4"	4"	150g	-5180K
3/8" - 3/4"	6"	230g	-5190K
3/8" - 1"	6"	300g	-5200K
1/2" - 5/8"	6"	240g	-5210K
1/2" - 3/4"	4"	200g	-5220K
1/2" - 3/4"	6"	315g	-5240K
1/2" - 1"	6"	390g	-5250K
5/8" - 3/4"	6"	370g	-5270K
5/8" - 1"	6"	490g	-5290K

5% Cobalt Square Metric

HSS-Co 5%

A (mm)	L (mm)	Weight each	Order Code KEN-090
5.00	80.0	10g	-3500K
6.00	40.0	15g	-3600K
6.00	80.0	22g	-3610K
6.00	100.0	30g	-3620K
6.00	160.0	44g	-3640K
8.00	80.0	50g	-3670K
8.00	100.0	52g	-3680K
8.00	160.0	90g	-3700K
8.00	200.0	110g	-3710K
10.00	80.0	70g	-3730K
10.00	100.0	81g	-3740K
10.00	125.0	110g	-3750K
10.00	160.0	122g	-3760K
12.00	100.0	120g	-3800K
12.00	125.0	152g	-3810K
12.00	160.0	190g	-3820K
14.00	100.0	155g	-3860K
14.00	160.0	240g	-3880K
16.00	100.0	210g	-3920K
16.00	160.0	335g	-3925K
20.00	160.0	440g	-3930K
20.00	200.0	650g	-3940K
25.00	160.0	760g	-3950K
25.00	200.0	1010g	-3960K

5% Cobalt Square Inch

HSS-Co 5%

A	L	Weight each	Order Code KEN-090
3/16"	2 1/2"	12g	-3020K
3/16"	3"	14g	-3030K
3/16"	4"	14g	-3040K
1/4"	2 1/2"	21g	-3050K
1/4"	3"	25g	-3060K
1/4"	4"	33g	-3070K
1/4"	6"	50g	-3080K
5/16"	2 1/2"	32g	-3100K
5/16"	3"	40g	-3110K
5/16"	4"	52g	-3130K
5/16"	6"	80g	-3140K
3/8"	3"	56g	-3160K
3/8"	4"	75g	-3180K
3/8"	6"	112g	-3190K
1/2"	3"	100g	-3250K
1/2"	4"	130g	-3270K
1/2"	6"	200g	-3280K
5/8"	4"	210g	-3300K
5/8"	6"	310g	-3330K
3/4"	4"	300g	-3350K
3/4"	6"	450g	-3370K
1"	6"	800g	-3390K

HSS Round Inch

HSS



A	L	Weight each	Order Code KEN-090
3/16"	3"	11g	-1100K
1/4"	3"	20g	-1140K
1/4"	4"	27g	-1150K
5/16"	3"	31g	-1170K
5/16"	4"	42g	-1180K
3/8"	3"	45g	-1200K
3/8"	4"	60g	-1210K
1/2"	4"	110g	-1260K
1/2"	6"	160g	-1280K
5/8"	4"	170g	-1290K
5/8"	6"	250g	-1300K
3/4"	4"	240g	-1310K
3/4"	6"	360g	-1320K

5% Cobalt Round Inch

HSS-Co 5%

A	L	Weight each	Order Code KEN-090
1/8"	3"	5g	-4010K
3/16"	3"	11g	-4100K
3/16"	4"	15g	-4110K
1/4"	2 1/2"	17g	-4120K
1/4"	4"	27g	-4150K
5/16"	3"	31g	-4170K
5/16"	4"	42g	-4180K
3/8"	3"	50g	-4200K
3/8"	4"	60g	-4210K
3/8"	6"	80g	-4230K
1/2"	4"	110g	-4260K
1/2"	6"	160g	-4280K
5/8"	4"	170g	-4290K
3/4"	4"	240g	-4310K
3/4"	6"	360g	-4320K
1"	8"	860g	-4380K

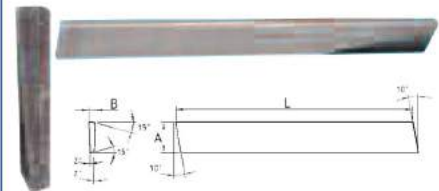
5% Cobalt Round Metric

HSS-Co 5%

A (mm)	L (mm)	Weight each	Order Code KEN-090
4.00	80.0	8g	-4510K
5.00	80.0	12g	-4530K
6.00	80.0	18g	-4550K
6.00	100.0	24g	-4570K
8.00	80.0	31g	-4590K
8.00	100.0	40g	-4630K
8.00	125.0	60g	-4610K
8.00	160.0	63g	-4650K
10.00	80.0	50g	-4670K
10.00	100.0	65g	-4690K
10.00	125.0	90g	-4710K
12.00	63.0	65g	-4730K
12.00	80.0	70g	-4750K
12.00	100.0	94g	-4770K
12.00	160.0	141g	-4810K
14.00	125.0	190g	-4830K
16.00	125.0	160g	-4870K
16.00	160.0	250g	-4890K
20.00	100.0	260g	-4930K
20.00	160.0	390g	-4950K

5% Cobalt Parting-Off Inch

HSS-Co 5%



B x A	L	Weight each	Order Code KEN-090
3/32" - 1/2"	4 1/2"	22g	-5410K
3/32" - 5/8"	5"	30g	-5430K
1/8" - 3/4"	6"	60g	-5450K
1/8" - 7/8"	7"	80g	-5470K
3/16" - 1"	8"	160g	-5490K
3/16" - 1 1/8"	9"	200g	-5510K

CUTTING TOOLS

PRODUCTS ARE ONLY AVAILABLE VIA YOUR DISTRIBUTOR

Manufactured in three standard grades (all sizes are nominal).
Manufactured to **ISO DIN BHMA Standards**.

P40 **P40:** Roughing to heavy roughing of steel and steel castings using heavy feeds and low to medium cutting speeds. Also used under unfavourable conditions, particularly where intermittent cutting is involved. This grade is also suitable for planing operations and for machining manganese steel.

P30 **P30:** Carbide tipped tools are suitable for heavy duty turning and boring on all classes of steel. Suitable also for interrupted cutting and machining at low speeds and heavy feeds.

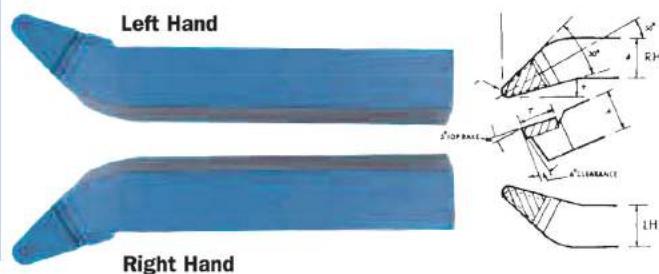
K20 **K20:** General purpose tools for most applications. Ideal for machining cast iron, non-ferrous metals, bakelite etc. Combines wear resistance with toughness when rough turning at moderate cutting speeds. Suitable for high feed rates.

Straight Round Nosed Turning Tools



Tool No.	Cut	Shank Height x Width	Weight each	Order Code KEN-100		
				P40	P30	K20
010	N	3/8" x 3/8"	160g	-	-0100K	-
012	N	1/2" x 1/2"	190g	-	-0140K	-0150K
016	N	5/8" x 5/8"	240g	-	-0190K	-0200K
020	N	3/4" x 3/4"	410g	-	-0230K	-0240K
024	N	1" x 3/4"	520g	-	-0270K	-
026	N	1" x 1"	760g	-	-0310K	-

Cranked Round Nosed Turning Tools



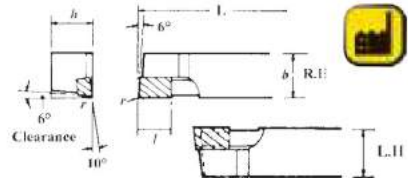
Tool No.	Cut	Shank Height x Width	Weight each	Order Code KEN-100		
				P40	P30	K20
12	RH	1/2" x 1/2"	110g	-	-0510K	-0520K
13	LH	1/2" x 1/2"	110g	-	-0530K	-0540K
16	RH	5/8" x 5/8"	240g	-	-0590K	-0600K
17	LH	5/8" x 5/8"	240g	-	-0610K	-
20	RH	3/4" x 3/4"	410g	-	-0690K	-0700K
21	LH	3/4" x 3/4"	410g	-	-0710K	-0720K
26	RH	1" x 1"	720g	-	-0820K	-
27	LH	1" x 1"	720g	-	-0840K	-

Light Turning & Boring Tools



Tool No.	Cut	Shank Height x Width	Weight each	Order Code KEN-100		
				P40	P30	K20
40	N	3/8" x 3/8"	70g	-	-1000K	-
44	N	1/2" x 1/2"	120g	-	-1060K	-1070K
60	N	3/4" x 3/4"	430g	-	-1660K	-

Bar Turning Tools



Left Hand



Right Hand

Tool No.	Cut	Shank Height x Width	Weight each	Order Code KEN-100		
				P40	P30	K20
100	RH	3/8" x 3/8"	70g	-	-2010K	-
101	LH	3/8" x 3/8"	70g	-	-2040K	-
102	RH	1/2" x 1/2"	120g	-2055K	-2060K	-2080K
103	LH	1/2" x 1/2"	120g	-	-2100K	-2110K
106	RH	5/8" x 5/8"	260g	-	-2180K	-
110	RH	3/4" x 3/4"	440g	-	-2280K	-2290K
111	LH	3/4" x 3/4"	440g	-	-2300K	-

Bar & Knee Turning Tools



Left Hand



Right Hand

Tool No.	Cut	Shank Height x Width	Weight each	Order Code KEN-100		
				P40	P30	K20
132	RH	1/2" x 1/2"	120g	-	-2550K	-
140	RH	3/4" x 3/4"	430g	-	-2610K	-
141	LH	3/4" x 3/4"	430g	-	-2630K	-

Cranked Turning Tools



Left Hand



Right Hand

Tool No.	Cut	Shank Height x Width	Weight each	Order Code KEN-100		
				P40	P30	K20
160	RH	3/8" x 3/8"	70g	-	-2780K	-2790K
161	LH	3/8" x 3/8"	70g	-	-2800K	-
162	RH	1/2" x 1/2"	130g	-	-2830K	-2860K
163	LH	1/2" x 1/2"	130g	-	-2870K	-2880K
166	RH	5/8" x 5/8"	270g	-	-2940K	-
167	LH	5/8" x 5/8"	270g	-	-	-2990K
170	RH	3/4" x 3/4"	460g	-	-3040K	-3070K
171	LH	3/4" x 3/4"	460g	-	-3080K	-3090K

External Toolholders - ISO Designation

1 Clamping System

C	Clamp
D	"One-Double"
M	Clamp & Pin
P	Lever
S	Screw

3 Lead Angle

B 75°	C 90°	D 45°	F 90°
G 90°	J 93°	K 75°	L 95°
N 63°	S 45°	T 60°	U 93°
V 72½°	W 60°		

5 Hand

R	
L	
N	

9 Cutting Edge Length

Expressed in millimetres	
C, D K, V	S
T	
R	W

1 2 3 4 5 6 7 8 9
P C K N R 20 20 K 12

2 Insert Shape

C	D	K
R	S	T
V	W	

4 Clearance

B 5°	
C 7°	
N 0°	
P 11°	

6 Shank Height

Expressed in millimetres
Single Digit Nos. preceded by '0' e.g: h = 8mm is indicated by 08

7 Shank Width

Expressed in millimetres
Single Digit Nos. preceded by '0' e.g: b = 8mm is indicated by 08

8 Tool Length

Length in millimetres			
D	60	M	150
E	70	P	170
F	80	Q	180
H	100	R	200
K	125	S	250

Boring Bars - Additional Designation

1 Bar Type

S	Solid Steel Bar
A	Solid Steel With Through Coolant
C	Carbide Shank
E	Carbide Shank with Through Coolant
T	Anti-Vibration Carbide Reinforced Steel Shank

3 Bar Length

Length in millimetres			
J	110	S	250
K	125	T	300
M	150	U	350
Q	180	V	400
R	200	W	450

Cartridges - Additional Designation

Note:
Cutting Edge Lengths are detailed to the lowest whole number e.g. 12.7mm = 12mm

- 1 Clamping System
- 2 Insert Shape
- 3 Lead Angle
- 4 Clearance
- 5 Hand
- 8 Cutting Edge Length

Note: Details as above see External Toolholders

1 2 3 4 5 6 7 8 9
S 50 W P S K N R 19

1 2 3 4 5 6 7 8
P T F N R 16 CA 16

2 Basic Diameter

Expressed in millimetres
Single Digit Nos. preceded by '0' e.g: b = 8mm is indicated by 08

- 4 Clamping System
- 5 Insert Shape
- 6 Lead Angle
- 7 Clearance
- 8 Hand
- 9 Cutting Edge Length

Note: Details as above see External Toolholders

6 Cutting Edge Height

Expressed in millimetres
Single Digit Nos. preceded by '0' e.g: h1 = 8mm is indicated by 08

7 Type of Tool

'C'	Indicates Cartridge
'A'	Indicates that Holder is designed to ISO 5611.

THREADING TOOLHOLDERS - ISO DESIGNATION
1 Clamping System

D	Top Clamp + Screw-on
S	Screw-on
C	Top Clamp

3 Hand

R	
L	

6 Tool Length

Length in millimetres			
H	100	S	250
K	125		
M	150		
P	170		
R	200		

7 Cutting Edge length

06	6mm	5/32"
08	8mm	3/16"
11	11mm	1/4"
16	16.5mm	3/8"
22	22mm	1/2"

1 2 3 4 5 6 7
D E R 16 16 H 16

2 Type of holder

E	External
I or N	Internal

4 Shank Height

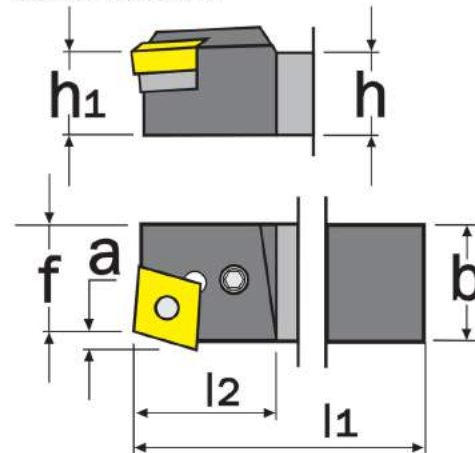
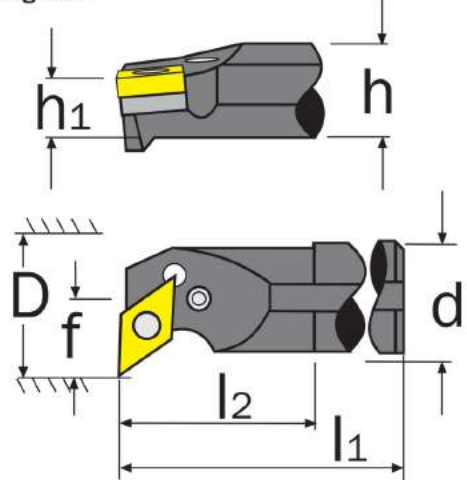
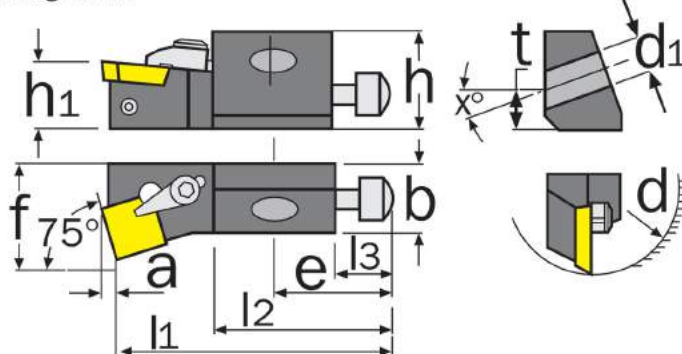
Round Shank (Boring Bars) = 00
For Rectangular Shanks, Height is expressed in mm
Single Digit Nos. preceded by '0'
E.g. h = 8mm is indicated by 08

5 Shank Width

Round Shank (Boring Bars) = Diameter in mm
For Rectangular Shanks, Width is expressed in mm
Single Digit Nos. preceded by '0'
E.g. h = 8mm is indicated by 08

Dimensional Notation

h = Shank Height or A/F Dmin
h₁ = Tip Height
b = Shank Width
d = Shank Diameter
f = Width Offset
a = Insert Approach Length
D = Min. Boring Diameter
l₁ = Overall Length to Tip
l₂ = Neck Length
l₃ = Min. Adjustment Length
d₁ = Clamp Screw Bore Diameter
d₂ = Neck Diameter
x = Clamp Screw Angle
e = Clamp Screw Centre

External Toolholders

Boring Bars

Cartridge Units

Threading Toolholders
