

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
1.1	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

BSP - British Standard Pipe
DIN 5156



Size - Pitch	Overall Length	Thread Length	Shank Dia.	Square Size	Weight each	Order Code SWT-185
1/8" x 28	90.0	20.0	7.0	5.5	16g	-0902Y
1/4" x 19	100.0	22.0	11.0	9.0	48g	-0904Y

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 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
M3.5 x 0.60	56.0	7.0	4.0	3.0	6g	-0512Y
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

BSP - British Standard Pipe Bright Finish
DIN 5156



Size - Pitch	Overall Length	Thread Length	Shank Dia.	Square Size	Weight each	Order Code SWT-185
1/8" x 28	90.0	20.0	7.0	5.5	16g	-0932Y
1/4" x 19	100.0	22.0	11.0	9.0	48g	-0934Y
3/8" x 19	100.0	22.0	12.0	9.0	69g	-0936Y
1/2" x 14	125.0	25.0	16.0	12.0	152g	-0938Y



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
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

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 69.

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

UNC - Unified National Coarse Bright Finish

Tapping tolerance to **2B**.

Size - Pitch	Overall Length	Thread Length	Shank Dia.	Square Size	Weight each	Order Code SWT-185
No.6 x 32	56.0	13.0	4.0	3.0	9g	-3106B
1/4" x 20	80.0	17.0	7.0	5.5	21g	-3110B
5/16" x 18	90.0	20.0	8.0	6.2	34g	-3111B
3/8" x 16	90.0	20.0	9.0	7.0	45g	-3112B
1/2" x 13	110.0	24.0	9.0	7.0	79g	-3114B

UNF - Unified National Fine Bright Finish

Tapping tolerance to **2B**.

Size - Pitch	Overall Length	Thread Length	Shank Dia.	Square Size	Weight each	Order Code SWT-185
1/4" x 28	80.0	17.0	4.5	3.4	15g	-3210B
5/16" x 24	90.0	22.0	6.0	4.9	27g	-3211B
3/8" x 24	90.0	22.0	7.0	5.5	37g	-3212B

BSP - British Standard Pipe Bright Finish

Size - Pitch	Overall Length	Thread Length	Shank Dia.	Square Size	Weight each	Order Code SWT-185
1/8" x 28	90.0	22.0	7.0	5.5	16g	-3402B
1/4" x 19	100.0	24.0	11.0	9.0	48g	-3404B
3/8" x 19	100.0	24.0	12.0	9.0	69g	-3406B

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

SPIRAL FLUTE FOR BLIND HOLES

HSS-EV



'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

UNC - Unified National Coarse Bright Finish

Tapping tolerance to **2B**.

Size - Pitch	Overall Length	Thread Length	Shank Dia.	Square Size	Weight each	Order Code SWT-185
No.6 x 32	56.0	13.0	4.0	3.0	9g	-3136B
1/4" x 20	80.0	17.0	7.0	5.5	21g	-3141B
5/16" x 16	90.0	20.0	9.0	7.0	45g	-3143B
1/2" x 13	110.0	24.0	9.0	7.0	79g	-3145B

UNF - Unified National Fine Bright Finish

Tapping tolerance to **2B**.

Size - Pitch	Overall Length	Thread Length	Shank Dia.	Square Size	Weight each	Order Code SWT-185
No.10 x 32	70.0	16.0	3.5	2.7	24g	-3239B
1/4" x 28	80.0	17.0	4.5	3.4	15g	-3241B
7/16" x 20	90.0	20.0	8.0	6.2	50g	-3244B
1/2" x 20	100.0	22.0	9.0	7.0	71g	-3245B



HSS 'White Ring' Taps

HSS-EV



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 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
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-3509W
M3.5 x 0.60	56.0	13.0	4.0	3.0	7g	-3512W
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

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
M2.5 x 0.45	50.0	9.0	2.8	2.1	4g	-4006W
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
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
M14.0 x 2.00	110.0	30.0	11.0	9.0	78g	-4036W

HSS 'Purple Ring' Taps

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
M3.5 x 0.60	56.0	13.0	4.0	3.0	6g	-4512P
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-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 POINT FOR THROUGH 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
M3.5 x 0.60	56.0	7.0	4.0	3.0	6g	-5012P
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 '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
M3.5 x 0.60	56.0	13.0	4.0	3.0	7g	-5512N
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
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 POINT FOR THROUGH 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
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
M16.0 x 2.00	110.0	18.0	12.0	9.0	95g	-6039N

SWISS+TECH HSS 'Green 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
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 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



DIN 371/6

HSS-EV

Metalworking

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 Finish
For 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

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
M16.0 x 2.00	110.0	32.0	12.0	9.0	108g	-6539G

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
M2.5 x 0.45	50.0	9.0	2.8	2.1	5g	-7006G
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
M7.0 x 1.00	80.0	19.0	7.0	5.5	19	-7024G
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

HSS 'Green Ring' Fluteless Taps

Lubrication grooves are a feature of all taps of M3.0 and over. Manufactured to **DIN 371/376**.

HSS-EV FLUTELESS

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



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	-7503G
M3.0 x 0.50	56.0	11.0	3.5	2.7	5g	-7509G
M3.5 x 0.60	56.0	12.0	4.0	3.0	7g	-7512G
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

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



HSS-E 'Black Ring' Taps

MULTI APPLICATION

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



METRIC



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code SWT-185
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



METRIC



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code SWT-185
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



Group	Materials Colour defines similar machineability	Hardness		Tensile Strength N/mm ²	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



METRIC



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code SWT-185
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**.

Spiral Point



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 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 SWT-185
Spiral Point	5	-9900X
Spiral Flute	5	-9910X