SWISS+TECH 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.**

Suitable for the following Material Groups

DIN 371/6

Group	Materials Colour defines similar machineability	Hardness Brinell HB	Hardness Rockwell HRC	Tensile Strength N/mm2	Tapping Speed M/min
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 Point/Gun Nose - HSS-E Bright Finish

SPIRAL POINT FOR THROUGH HOLES — HSS-E — METRIC

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



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code SWT-185	Price/1 THB
M3 x 0.50	3.5	2.7	56	2.5	5g	-8509X	956.00
M4 x 0.70	4.5	3.4	63	3.3	8g	-8515X	987.00
M5 x 0.80	6.0	4.9	70	4.2	14g	-8518X	1040.00
M6 x 1.00	6.0	4.9	80	5.0	18g	-8521X	1061.00
M8 x 1.25	8.0	6.2	90	6.8	33g	-8527X	1176.00
M10 x 1.50	10.0	8.0	100	8.5	56g	-8530X	1428.00
M12 x 1.75	9.0	7.0	110	10.2	61g	-8533X	1806.00
M16 x 2.00	12.0	9.0	110	14.0	100g	-8539X	2552.00
M20 x 2.50	16.0	12.0	140	17.5	210g	-8542X	3528.00

Spiral Point Long Series

SPIRAL FLUTE FOR BLIND HOLES — HSS-E — METRIC

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°



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code SWT-185	Price/1 THB
M6 x 1.00	6.0	4.9	160	17.0	30g	-9806X	1260.00
M8 x 1.25	6.0	4.9	180	20.0	60g	-9808X	2804.00
M10 x 1.50	7.0	5.5	200	22.0	100g	-9810X	3444.00
M12 x 1.75	9.0	7.0	220	24.0	200g	-9812X	4389.00

Spiral Flute

SPIRAL FLUTE FOR BLIND HOLES — HSS-E — METRIC

For blind holes.
Taper lead to **DIN form C**.
Tapping tolerance to **6H**.



ISO Metric

Size - Pitch (mm)	(d2) Shank Dia.	A/F Square	(l1) Overall Length	(l2) Thread Length	Weight each	Order Code SWT-185	Price/1 THB
M3 x 0.50	3.5	2.7	56	2.5	5g	-8559X	1029.00
M4 x 0.70	4.5	3.4	63	3.3	8g	-8565X	1040.00
M5 x 0.80	6.0	4.9	70	4.2	14g	-8568X	1082.00
M6 x 1.00	6.0	4.9	80	5.0	17g	-8571X	1092.00
M8 x 1.25	8.0	6.2	90	6.8	31g	-8577X	1281.00
M10 x 1.50	10.0	8.0	100	8.5	53g	-8580X	1229.00
M12 x 1.75	9.0	7.0	110	10.2	57g	-8583X	1974.00
M16 x 2.00	12.0	9.0	110	14.0	91g	-8589X	2699.00
M20 x 2.50	16.0	12.0	140	17.5	195g	-8592X	4053.00

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 SWT-185	Price/1 THB
Spiral Point	5	-9900X	4988.00
Spiral Flute	5	-9910X	5261.00

© 2020

OS21_APAC_TH_0066.indd 1 07/12/2021 09:50