



Shark Line

Material specific application taps

New products 2018



SHARK LINE



INTRODUCTION

Our material specific application-based range of DIN Shark Taps offer high **performance** and **process security**. This range has been expanded with two new tap designs for blind hole threading up to 3xD in stainless steels and steels.

FEATURES AND BENEFITS

- **COLOR RING CODING**

The color ring on the tool shank identifies suitability for specific materials and enables **quick and easy tool selection**.



- **ADVANCED GEOMETRY**

Significant reduction in axial forces and torque compared to conventional taps. This ensures **problem-free threading** of 3xD blind holes in stainless steels and steels with tensile strength up to 1200 N/mm².

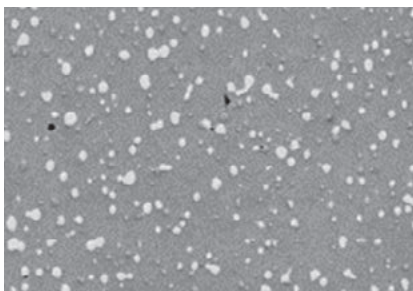
- **EDGE TREATMENT (Red, Yellow, Blue Shark)**

Spiral flute taps incorporate a special edge treatment to increase strength and reduce the chance of micro-chipping on the cutting edges. This considerably improves **performance and tool life**.

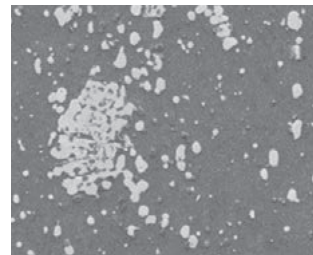


MATERIAL

Shark taps are manufactured from a unique powder metallurgy tool steel different from any other HSS-E-PM. This provides an unbeatable combination of toughness and edge strength, allowing the taps to perform at higher cutting temperatures while offering excellent performance and longer tool life.



Unique HSS-E-PM material used for **SHARK TAPS**
(note the evenly dispersed grain structure)



Traditional HSS-E (M35)
material

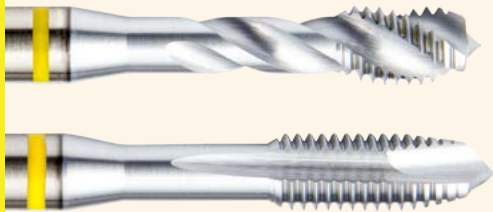
GEOMETRY AND CHAMFER



The new E412 & E414 taps feature a 48° spiral flute with constant rake angle and are back tapered. This supports:

- Threading up to 3xD
- Low torque
- Excellent threads at both high and low speeds
- Superior surface finish
- Process security



**STRUCTURAL, PLAIN CARBON & LOW ALLOY STEELS****YELLOW SHARK**

- **SURFACE TREATMENT**

Hard chrome plating (Cr) with an additional edge treatment prevents built up edge when tapping in materials prone to sticking to the cutting edges.

- **FLUTE GEOMETRY**

Available in spiral point for through holes and spiral flute (40° angle) for blind holes. Special flute geometry on Yellow Shark spiral flute taps prevents nest formation of chips, reducing the risk of re-cutting chips on reversal.

- **THREAD FORMS**

Metric and Metric Fine

- **PRODUCT CODES**

E297, E298, E299, E300

YELLOW SHARK**3xD NEW**

- **SURFACE TREATMENT**

TiAlN-Top coating with an additional edge treatment.

- **FLUTE GEOMETRY**

Spiral flute angle of 48° facilitates smooth and fast chip evacuation, making it suitable for threading deep blind holes (3xD). The increased thread relief also enables higher cutting speeds in high strength steels.

- **CUTTING GEOMETRY**

The special 3-radii profile with a constant rake angle all along the flute length leads to a better control of cutting properties and prevents nest formation of chips.

- **BACK TAPERED**

Back taper further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.

- **TOOL HOLDING recommendation**

When using 48° spiral flute Yellow Shark taps, it is recommended to use a tool holder with minimal float or soft start.

- **THREAD FORMS**

Metric

- **PRODUCT CODE**

E412



STAINLESS STEELS

BLUE SHARK



- **SURFACE TREATMENT**

Steam-tempered or Super-B (TiAlN + WC/C) coated with an additional edge treatment.

- **FLUTE GEOMETRY**

Available in spiral point for through holes and spiral flute (40° angle) for blind holes.

- **BACK TAPERED**

Back taper on spiral flute taps further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.

- **THREAD FORMS**

Metric, Metric Fine and G(BSP)

- **PRODUCT CODES**

E238, E239, E240, E241, E382, E383, E384

BLUE SHARK

3xD NEW



- **SURFACE TREATMENT**

Super-B (TiAlN + WC/C) coating with an additional edge treatment.

- **FLUTE GEOMETRY**

Spiral flute angle of 48° facilitates smooth and fast chip evacuation, making it suitable for threading deep blind holes (3xD). The increased thread relief ensures process security when tapping resilient materials such as stainless steel.

- **CUTTING GEOMETRY**

The special 3-radii profile with a constant rake angle all along the flute length leads to a better control of cutting properties and prevents nest formation of chips.

- **BACK TAPERED**

Back taper further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.

- **TOOL HOLDING recommendation**

When using 48° spiral flute Blue Shark taps, it is recommended to use a tool holder with minimal float or soft start.

- **THREAD FORMS**

Metric

- **PRODUCT CODE**

E414

SHARK LINE**ALLOY STEELS****RED SHARK****• SURFACE TREATMENT**

Bright or TiAlN-Top coated with an additional edge treatment.

• FLUTE GEOMETRY

Available in spiral point for through holes and spiral flute (45° angle) for blind holes. Special flute geometry on the spiral flute taps prevents nest formation of chips.

• BACK TAPERED

Back taper on spiral flute taps further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.

• CUTTING GEOMETRY (Spiral Flute Taps)

The special 3-radii profile with a constant rake angle all along the flute length leads to better control of cutting properties and prevents nest formation of chips.

• TOOL HOLDING Recommendation

When using spiral flute Red Shark taps, it is recommended to use a tool holder with minimal float or soft start.

• THREAD FORMS

Metric

• PRODUCT CODES

E255, E256, E260, E261

SHARK

MATERIAL SPECIFIC APPLICATION TAPS



NON-FERROUS MATERIALS

GREEN SHARK



- **SURFACE TREATMENT**
Bright or Super-B (TiAlN + WC/C) coated with an additional edge treatment.
- **FLUTE GEOMETRY**
Available in spiral point for through holes and spiral flute (35° angle) for blind holes.
- **CUTTING GEOMETRY**
The special 3-radii profile with a constant rake angle all along the flute length leads to a better control of cutting properties and prevents nest formation of chips.
- **THREAD FORMS**
Metric
- **PRODUCT CODES**
E471, E472, E473, E474

CAST IRONS

WHITE SHARK



- **SURFACE TREATMENT**
Steam-tempered or TiAlN-Top coated.
- **FLUTE GEOMETRY**
Straight flute design gives excellent performance when threading both through and blind holes in short chipping materials.
- **THREAD FORMS**
Metric
- **PRODUCT CODES**
E201, E252, E390

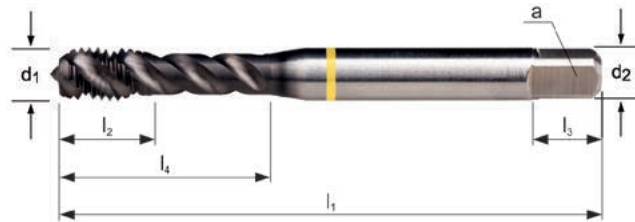
	M	M	M	M	M	M	M	M	M	M	M	M	M	
	DIN 371	DIN 376	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	DIN 371₁₀ 376>12	
	6HX	6HX	6HX	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	
	2XD	2XD	2XD	2.5XD	2.5XD	2.5XD	2.5XD	2.5XD	2.5XD	2.5XD	2XD	3XD	2.5XD	
	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	
	C 2-3	C 2-3	C 2-3	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3	
	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	SHARK LINE	
	E201	E252	E390	E297	E255	E256	E240	E241	E471	E472	E298	E412	E260	
	M3 - M10	M8 - M24	M3 - M20	M3 - M30	M3 - M20	M3 - M20	M3 - M30	M3 - M20	M3 - M20	M3 - M20	M3 - M30	M3 - M30	M3 - M20	
												NEW		
	228	228	228	237	238	238	239	239	240	240	248	249	250	
AMG														ISO
1.1			■25						●25		■25	■50		P 1
1.2			■22						●22		■22	■50		P 1
1.3			■18						●18	●18	■18	■35		P 2
1.4			●16	■16	■30				●16		●16	■30	■16	P 3
1.5			●10	●7	■17		●7		●10		●10	■16	●7	P 4
1.6				●4	●11								●4	H 1
1.7														H 3
1.8														H 4
2.1							■8	■14				●14		M 1
2.2							■7	■10				●10		M 3
2.3							■5	■6				●6		M 2
2.4														S 2
3.1	■15	■15	■30											K 1
3.2	■8	■8	■25											K 2
3.3	■15	■15	■35											K 3
3.4	●8	●8	●25											K 4
4.1														S 1
4.2					●2	●3							●2	S 2
4.3														S 3
5.1														S 1
5.2					●2	●3							●2	S 2
5.3														S 3
6.1			■12						●12		■12			N 3
6.2	●20	●20	●30	●30				■30	■45	■45	●30			N 4
6.3			■20					■20	●35	■20				N 3
6.4	●5	●5	●5											N 4
7.1									■16	●35		●16		N 1
7.2									■35	■45		●16		N 1
7.3									■20	■30		●35		N 1
7.4	●15	●15	●20						●15	■20		●35		N 2
8.1									■25	●30				O
8.2	■10	■10	■15											O
8.3														O
9.1														H
10.1														O

	M	M	M	M	M	M	MF	MF	MF	MF	G		
	DIN 371410 376312	DIN 371410 376312	DIN 371410 376312	DIN 371410 376312	DIN 371410 376312	DIN 371410 376312	DIN 374	DIN 374	DIN 374	DIN 374	DIN 5156		
	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	Normal		
	2.5XD	2.5XD	2.5XD	3XD	2.5XD	2.5XD	2.5XD	2.5XD	2XD	2XD	2XD		
	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM		
	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3		
	$\lambda 45^\circ$	$\lambda 40^\circ$	$\lambda 40^\circ$	$\lambda 48^\circ$	$\lambda 35^\circ$	$\lambda 35^\circ$			$\lambda 40^\circ$	$\lambda 40^\circ$	$\lambda 40^\circ$		
	TAIN Top	ST	Super B	Super B	Super B	Super B	Cr	ST	Cr	ST	ST		
	SHARK LINE E261	SHARK LINE E238	SHARK LINE E239	SHARK LINE E414	SHARK LINE E473	SHARK LINE E474	SHARK LINE E299	SHARK LINE E384	SHARK LINE E300	SHARK LINE E383	SHARK LINE E382	L114	
	M3 - M20	M3 - M30	M3 - M20	M3 - M20	M3 - M20	M3 - M20	M4 - M30	M6 - M20	M4 - M30	M6 - M20	1/8 - 1"	Set	
	250	251	251	252	253	253	271	272	276	277	318	334	
AMG													ISO
1.1					●25		■25		■25				P 1
1.2					●22		■22		■22				P 1
1.3			●22		●18	●40	■18		■18				P 2
1.4	■35		●16	●32	●18	●32	■16		●16				P 3
1.5	■20	●7	●10	●27	●13		●10	●7	●10	●7	●7		P 4
1.6	●11												H 1
1.7													H 3
1.8													H 4
2.1		■8	■14	■16				■8		■8	■8		M 1
2.2		■7	■10	■12				■7		■7	■7		M 3
2.3		■5	■6	■8				■5		■5	■5		M 2
2.4				■6									S 2
3.1													K 1
3.2													K 2
3.3													K 3
3.4													K 4
4.1													S 1
4.2	●3												S 2
4.3													S 3
5.1													S 1
5.2	●3												S 2
5.3													S 3
6.1					●12		■12		■12				N 3
6.2					■30	■45	●30		●30				N 4
6.3					■20	●35	■20		■20				N 3
6.4													N 4
7.1					■16	●35							N 1
7.2					■35	■45							N 1
7.3					■20	■30							N 1
7.4					●15	■20							N 2
8.1					■25	●30							O
8.2													O
8.3													O
9.1													H
10.1													O

E412 • M Machine Tap Spiral Flute 48°, Back Tapered, Yellow Shark

E412	▪	1.1	1.2	1.3	1.4	1.5	
	•	2.1	2.2	2.3	7.1	7.2	7.3

E412	M	DIN 371 ≤ 10 376 > 12	6H		3XD	HSS-E PM	C 2-3		λ48°		TiAlN Top
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M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	z		l ₄ mm	E412
3	0.50	56	6	3.5	2.7	6	3	2.5	18	E412M3
4	0.70	63	7	4.5	3.4	6	3	3.3	21	E412M4
5	0.80	70	8	6.0	4.9	8	3	4.2	25	E412M5
6	1.00	80	10	6.0	4.9	8	3	5.0	30	E412M6
8	1.25	90	13	8.0	6.2	9	3	6.8	35	E412M8
10	1.50	100	15	10.0	8.0	11	3	8.5	39	E412M10
12	1.75	110	18	9.0	7.0	10	3	10.3	-	E412M12
14	2.00	110	20	11.0	9.0	12	3	12.0	-	E412M14
16	2.00	110	20	12.0	9.0	12	4	14.0	-	E412M16
20	2.50	140	25	16.0	12.0	15	4	17.5	-	E412M20
22	2.50	140	25	18.0	14.5	17	4	19.5	-	E412M22
24	3.00	160	30	18.0	14.5	17	4	21.0	-	E412M24
27	3.00	160	30	20.0	16.0	19	4	24.0	-	E412M27
30	3.50	180	36	22.0	18.0	21	4	26.5	-	E412M30

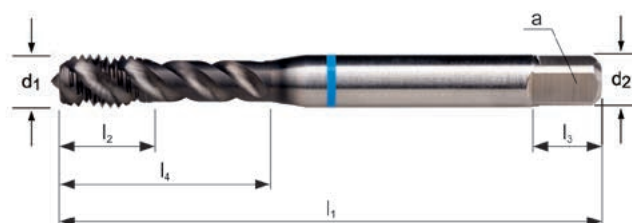


Only new items are represented here. For more information on existing Shark products please refer to this icon on p8-9 for the relevant page number from the Dormer 2018 catalog.

E414 • M Machine Tap Spiral Flute 48°, Back Tapered, Blue Shark

E414 ■ 2.1 2.2 2.3 2.4
 • 1.3 1.4 1.5

E414 **M** **6H** **HSS-E PM** **C 2-3**



M	P mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	□ a mm	l ₃ mm	z		l ₄ mm	E414
3	0.50	56	6	3.5	2.7	6	3	2.5	18	E414M3
4	0.70	63	7	4.5	3.4	6	3	3.3	21	E414M4
5	0.80	70	8	6.0	4.9	8	3	4.2	25	E414M5
6	1.00	80	10	6.0	4.9	8	3	5.0	30	E414M6
8	1.25	90	13	8.0	6.2	9	3	6.8	35	E414M8
10	1.50	100	15	10.0	8.0	11	3	8.5	39	E414M10
12	1.75	110	18	9.0	7.0	10	3	10.3	-	E414M12
14	2.00	110	20	11.0	9.0	12	3	12.0	-	E414M14
16	2.00	110	20	12.0	9.0	12	4	14.0	-	E414M16
20	2.50	140	25	16.0	12.0	15	4	17.5	-	E414M20

SIMPLY RELIABLE

As a professional you can judge the quality of work by just looking at the chip. Our chip is a clean and uncomplicated shape that in itself tells a story. It is a clear and consistent signal and that's why we use it as a symbol for being **simply reliable**.

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DOR-BRO-SHARK-2018-EN

DORMER PRAMET

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