



X Performer Forming Taps

XPF SERIES

Volume 8



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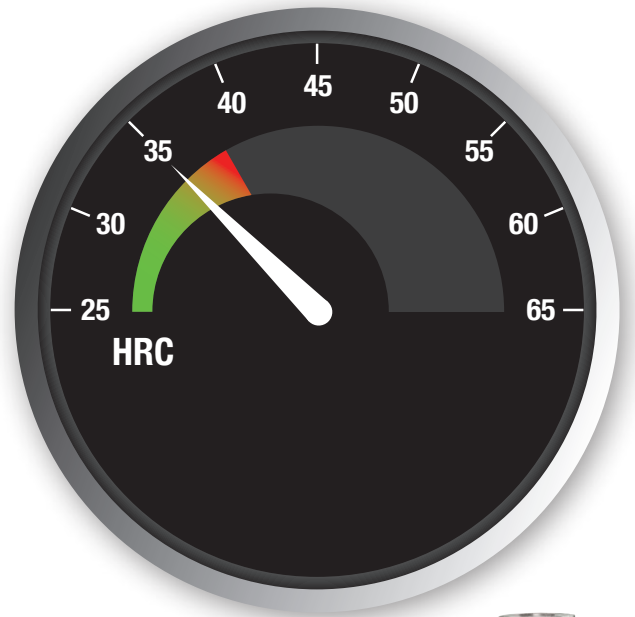
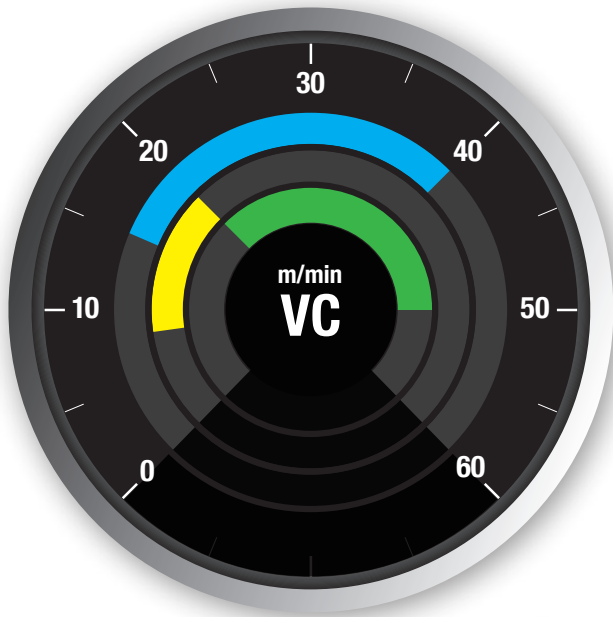
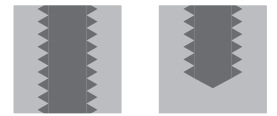
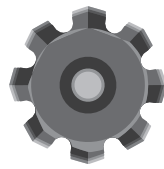
X PERFORMER FORMING TAP SERIES (XPF)

1 Low-torque spec with specially designed threading

2 V-Coating : extreme wear resistance

3 Size range from M1 to M45





A-XPF Series

First choice in quality and performance

Powder metal forming tap for through & blind holes

Multilayer V coating: extreme wear resistance

High speed tapping in general steels, aluminium, stainless steels



S-XPF Series

First choice in quality and performance

HSSE forming tap for through & blind holes

Multilayer V coating: extreme wear resistance

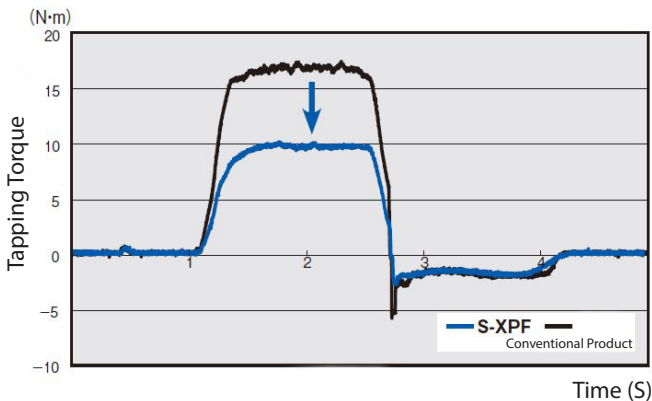
For general steels, stainless steels, aluminium



XPF IS DIFFERENT FROM OTHERS !

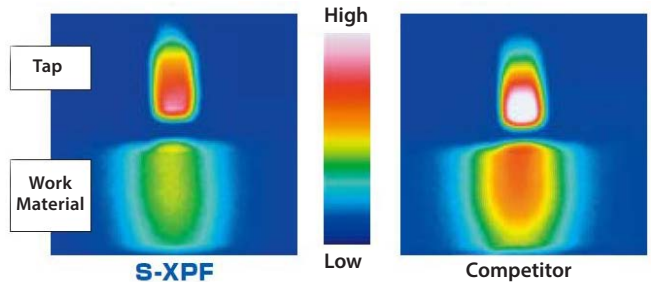


Reducing approx. **40%** of machining torque



Reducing approx. **20%** of heat generation

A thermograph image taken immediately after tapping



* To photograph the process, machining was carried out by applying paste instead of using coolant. However, during normal machining, coolant should be used.



Minimum Quantity Lubrication

XPF has a high durability even machining with chlorine-free coolant. S-OIL-XPF is also suitable for MQL machining operation.



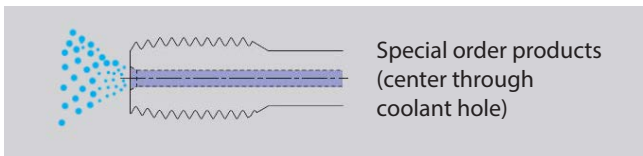
USEFUL TIPS

Deciding Cutting Speed

Does low cutting speed contribute to long tool life? It doesn't apply to XPF. Slow speed tapping, which generates less heat, causes bigger cutting resistance and tool wear. Cutting speed should be adjusted properly to find the most appropriate cutting speed for tool life.

Comparison of durability by the difference in cutting speed

Tool	S-OIL-XPF M8 x 1,25
Work Material	S50C
Hole Size	Ø 7,4 x 23 mm (Blind)
Tapping Length	18 mm (2,3D) (Blind)
Cutting Speed	10~40 m/min
Coolant	MQL 50cc/h (Internal)
Machine	Horizontal Machining Center



Cutting Speed	Tapping Holes					
	1.000	2.000	3.000	4.000	5.000	
10m/min	2.500 (Holes)					Excessive Wear
	3.000 (Holes)					Excessive Wear
20m/min	4.500 (Holes)					Excessive Wear
	4.375 (Holes)					GP-OUT
30m/min	3.806 (Holes)					Excessive Rubbing Noise
	3.355 (Holes)					GP-OUT
40m/min	1.606 (Holes)					GP-OUT
	812 (Holes)					GP-OUT

Choosing the Appropriate Coolant

High lubricant water-soluble coolant is highly recommended as well as non-soluble coolant. Water-soluble coolant must be used for high speed cutting. Non-soluble coolant can be used is only 20m/min or below.

Machining Holder and Work Holding

Please select the appropriate equipment depending on the maximum torque, torque curve, and others of the machine. XPF generates lower torque, as compared with the conventional forming taps.

USEFUL TIPS

Calculation for torque

XPF achieves 30% reduction of torque, according to the calculation. The tapping data on page 3 shows 40% reduction of torque in synergy with appropriate cutting speed. Please refer to the following table for large diameter tapping and the formula for calculating torque.

Calculated machining torque of large diameter taps by work materials

Thread Size	Pitch Diameter	Coefficient of Work Material					
		2	4	8	11	12	14
		AC	ADC	Bs	SS400	S45C	SCM (~35HRC)
M18 X 2,5	16,376	14	28	56	77	84	98
M18 X 1,5	17,026	5	11	21	29	32	37
M20 X 2,5	18,376	16	32	63	87	95	110
M20 X 1,5	19,026	6	12	24	32	35	41
M22 X 2,5	20,376	17	35	70	96	105	122
M22 X 1,5	21,026	6	13	26	36	39	45
M24 X 3,0	22,051	27	54	109	150	163	191
M24 X 1,5	23,026	7	14	28	39	43	50
M27 X 3,0	25,051	31	62	124	170	186	217
M30 X 3,5	27,727	47	93	187	256	280	326
M33 X 3,5	30,727	52	103	207	284	310	362
M36 X 4,0	33,402	73	147	293	404	440	514
M42 X 4,5	39,077	109	217	435	597	652	760
M45 X 4,5	42,077	117	234	468	643	702	819

* Please note that this shows the theoretical values of machining torques in case of the external supply of water-soluble coolant

* It does not guarantee the actual torque.

Following formulas are used for calculating torque

Torque calculation for forming Tap

Conventional forming taps

$$T = 0,09806 \times K \times E \times P^2$$

T : Torque

K : Coefficient of work material

XPF series

$$T = 0,06864 \times K \times E \times P^2$$

E : Pitch diameter

P : Pitch

In case of M30 X 3,5 working on SCM440

$$T = 0,06864 \times 14 \times 27,727 \times 3,5^2 = 326 \text{ N/m}$$

Work Material	Coefficient
Aluminium Alloy	2
Aluminium Die Casting	3~4
Brass	6~8
Mild Steel	10~11
Carbon Steel	11~12
Alloy Steel (Hardened Steel)	13~14

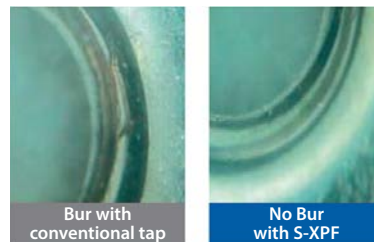
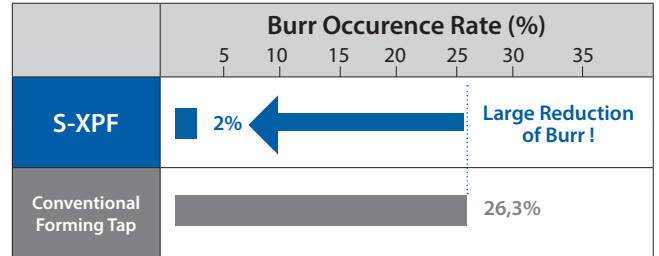
The above formulas are the guideline in case of the external supply of water-soluble coolant. Please note that the actual torque changes depending on the work environment.

USEFUL TIPS

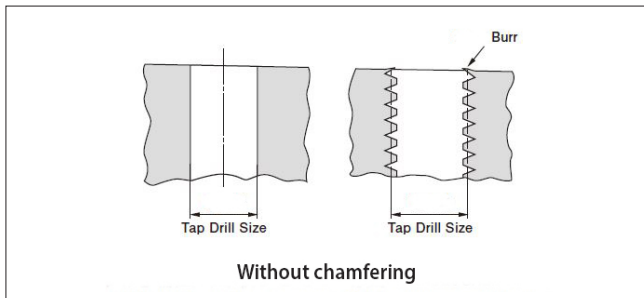
Countermeasure for Burr

Comparing with the conventional forming taps, XPF reduces burr with low-torque spec.

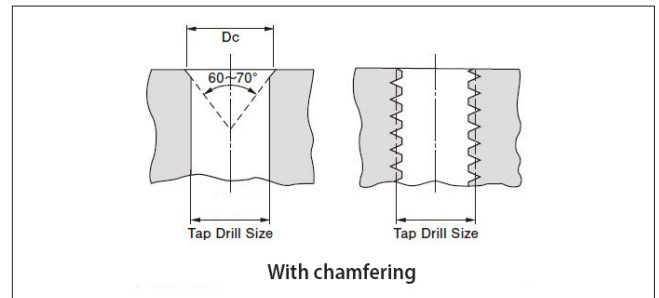
Tool	S-XPF M3x0,5 4P	Conv. Forming Tap
Work Material	Brass	
Hole Size	Ø 2,76 x 3mm (Through)	
Tapping Length	3mm (Through)	
Cutting Speed	(N/A)	
Coolant	Non-Water Soluble	
Machine	Specialized Machine	



Recommending 60° for the chamfer



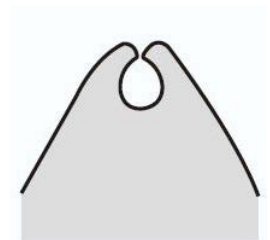
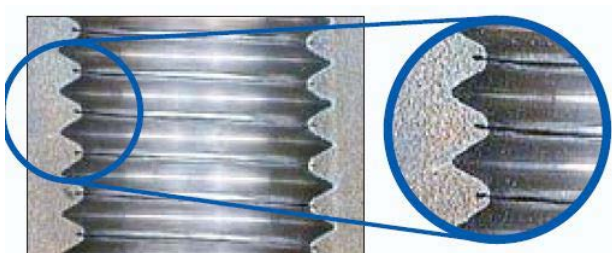
Forming tap forms the screw thread by plastic deformation. Therefore, without having chamfering, burr is made on the edge of the hole. To prevent burr, chamfering with 60° is highly recommended



If 118° of chamfering is required for drilling, burr is prevented by setting the diameter of chamfering to screw size + 2 pitches
(Example: M10x1,5 ⇒ 10mm (1,5x2)=13mm)

Shape of complete thread and it's difference

The formed thread has a small slit at the crest.



PROCESSING DATA

Forming taps are even 35HRC

Tool	S-XPf M6x1 4P
Work Material	SCM440 (35HRC)
Hole Size	Ø5,51~Ø5,52 x 16mm (Through)
Tapping Length	16mm (Through)
Cutting Speed	15m/min (796 min ⁻¹)
Coolant	Water Soluble Chlorine Free (External)
Machine	Horizontal Machine Center

	Tapping Holes			
	200	400	600	800
S-XPf	664 (Holes)			
	579 (Holes)			
Conventional Product	170 (Holes)			
	223 (Holes)			
Competitor Product	136 (Holes)			
	117 (Holes)			

Thread-rolling process of M45 is no longer a dream

Tool	S-XPf M45x4,5 2P
Work Material	SS400
Hole Size	Ø42,65~Ø42,68 x 45,5mm (Blind)
Tapping Length	36mm (0,8D) (Blind)
Cutting Speed	5m/min (133 min ⁻¹)
Coolant	Water Soluble Chlorine Free (External)
Machine	Horizontal Machine Center



Torque for above machining process is equivalent to 674N-M. Water-soluble coolant and paste are also appropriate for this case.

Achieving high efficiency with MQL

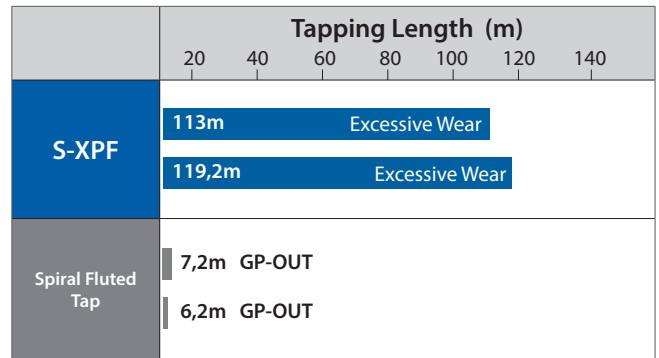
Tool	S-OIL-XPf M12x1,75 2P	Conventional Forming Tap
Work Material	SCM420	
Hole Size	Ø11,1x45mm (Blind)	
Tapping Length	36mm (3D) (Blind)	
Cutting Speed	40m/min (1.062 min ⁻¹)	
Coolant	MQL (Internal)	Water Soluble Chlorine Free (External)
Machine	Horizontal Machine Center	

	Tapping Holes	
	5	10
S-OIL-XPf	8 (Holes) Still Running	
Conventional Forming Tap	0 (Hole)	

PROCESSING DATA

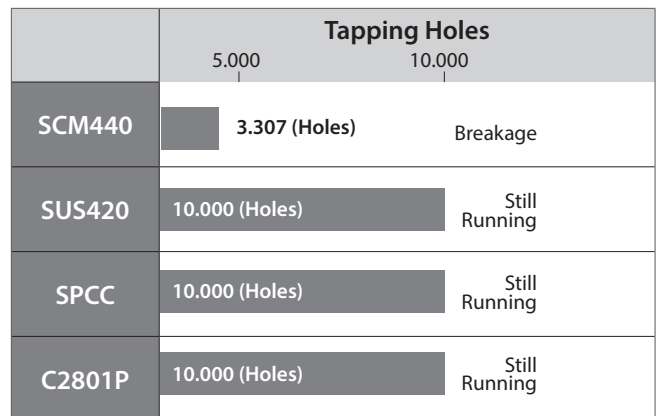
17 times the durability of cutting taps !

Tool	S-XPF M6x1 2P		Spiral fluted Tap M6x1
Work Material	S45C (90HRB)		
Hole Size	Ø5,55x25m- m(Through)	Ø5x15mm(Through)	
Tapping Length	18mm (3D) (Blind)	12mm (2D) (Blind)	
Cutting Speed	15m/min (796 min ⁻¹)	10m/min (530 min ⁻¹)	
Coolant	Water Soluble Chlorine Free (10%)		
Machine	Horizontal Machine Center		



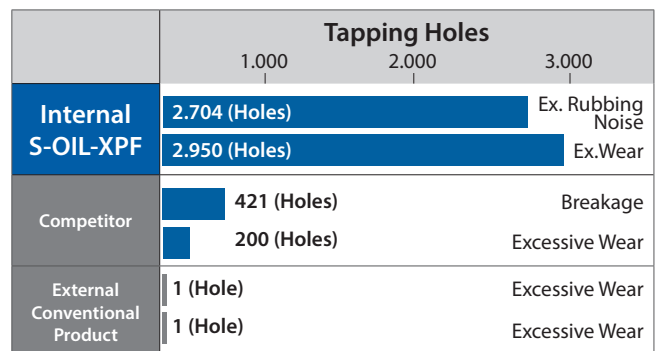
Ideal for work material especially for small diameter threads

Tool	S-XPF M1x0,25 2P			
Work Material	SCM440 Chrome Molybde- num Alloy	SUS420 (30HRC) Stainless Steel	SPCC Cold Rolled Steel	C2801P Brass
Hole Size	Ø0,89 ~ 0,90 x 4mm (Through)			
Tapping Length	2mm (2D) (Blind)			
Cutting Speed	5m/min (1.590 min ⁻¹)		10m/min (3.180 min ⁻¹)	
Coolant	Water Soluble Chlorine Free (10%)			
Machine	Vertical Machine Center			



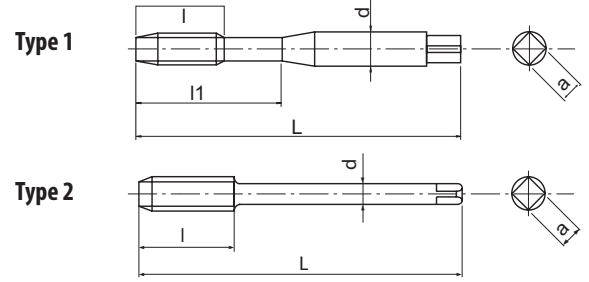
Internally-fed coolant improve tool life

Tool	S-OIL-XPF M10x1,5 2P	
Work Material	SCM440 (35HRC)	
Hole Size	Ø9,3x24mm (Through)	
Tapping Length	20mm (2D) (Blind)	
Cutting Speed	20m/min	
Coolant	Water Soluble Chlorine Free (5%)	
Machine	Horizontal Machine Center	



A-XPf

Threading | Forming taps | Metric



- First choice in quality and performance
- Powder metal forming tap for through & blind holes
- Multilayer TiCN coating
- High speed tapping in general steels, aluminium, stainless steels
- Powder metal for long tool life

Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC		m/min
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20		

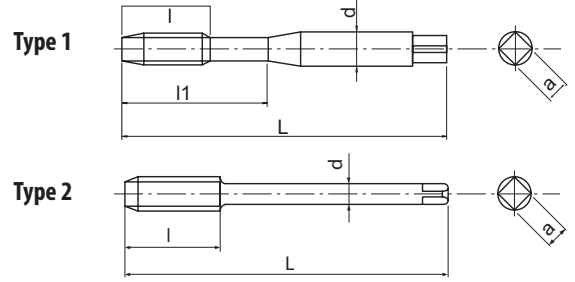
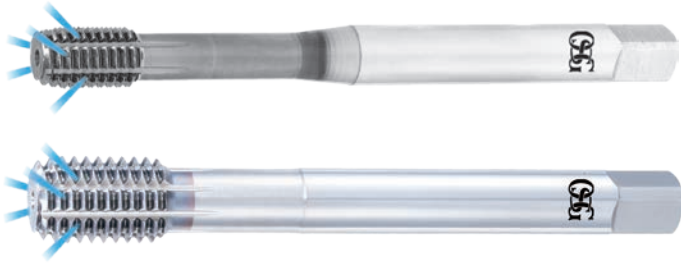
A	M	PM	V	ISO 2 6HX	C/2,5			DIN 2174	DIN 2174
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EDP	M	P	L	l	l1	d	a	Z	Ø	Type	DIN
48133138	3	0,5	56	-	18	3,5	2,7	4	2,77~2,82	1	DIN2174
48133144	4	0,7	63	-	21	4,5	3,4	4	3,66~3,72	1	DIN2174
48133149	5	0,8	70	-	25	6	4,9	5	4,62~4,68	1	DIN2174
48133155	6	1	80	-	30	6	4,9	5	5,51~5,59	1	DIN2174
48133161	8	1,25	90	-	35	8	6,2	5	7,37~7,45	1	DIN2174
48133169	10	1,5	100	-	39	10	8	8	9,24~9,33	1	DIN2174
48133179	12	1,75	110	17	-	9	7	8	11,10~11,20	2	DIN2174
48133191	14	2	110	20	-	11	9	8	12,96~13,08	2	DIN2174
48133202	16	2	110	20	-	12	9	8	14,96~15,08	2	DIN2174
48133214	18	2,5	125	20	-	14	11	8	16,66~16,81	2	DIN2174
48133228	20	2,5	140	20	-	16	12	8	18,66~18,81	2	DIN2174
48133238	22	2,5	140	20	-	18	14,5	8	20,66~20,81	2	DIN2174
48133247	24	3	160	24	-	18	14,5	8	22,39~22,56	2	DIN2174
48133262	27	3	160	18	-	20	16	8	25,39~25,56	2	DIN2174
48133271	30	3,5	180	21	-	22	18	8	28,09~28,68	2	DIN2174



A-OIL-XPF

Threading | Forming taps | Metric



- First choice in quality and performance
- Powder metal forming tap for through & blind holes
- Multilayer TiCN coating
- High speed tapping in general steels, aluminium, stainless steels
- Side through coolant

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC, ADC	H 25-35 HRC	5-20	m/min
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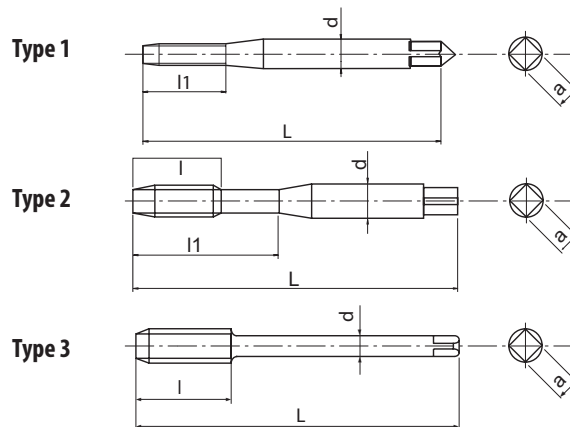
A	M	PM	V	ISO 2 6HX	C/2,5			DIN 2174	DIN 2174
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EDP	M	P	L	l	l1	d	a	Z	\varnothing	Type	DIN
48225149	5	0,8	70	-	25	6	4,9	5	4,62 ~ 4,68	1	DIN2174
48225155	6	1	80	-	30	6	4,9	5	5,51 ~ 5,59	1	DIN2174
48225161	8	1,25	90	-	35	8	6,2	5	7,37 ~ 7,45	1	DIN2174
48225169	10	1,5	100	-	39	10	8	8	9,24 ~ 9,33	1	DIN2174
48225179	12	1,75	110	17	-	9	7	8	11,10 ~ 11,20	2	DIN2174
48225191	14	2	110	20	-	11	9	8	12,96 ~ 13,08	2	DIN2174
48225202	16	2	110	20	-	12	9	8	14,96 ~ 15,08	2	DIN2174
48225214	18	2,5	125	20	-	14	11	8	16,66 ~ 16,81	2	DIN2174
48225228	20	2,5	140	20	-	16	12	8	18,66 ~ 18,81	2	DIN2174
48225238	22	2,5	140	20	-	18	14,5	8	20,66 ~ 20,81	2	DIN2174
48225247	24	3	160	24	-	18	14,5	8	22,39 ~ 22,56	2	DIN2174
48225262	27	3	160	18	-	20	16	8	25,39 ~ 25,56	2	DIN2174
48225271	30	3,5	180	21	-	22	18	8	28,09 ~ 28,28	2	DIN2174
48225281	33	3,5	180	21	-	25	20	8	31,09 ~ 31,28	2	DIN2174
48225294	36	4	200	32	-	28	22	8	33,80 ~ 34,01	2	DIN2174
48225304	39	4	200	32	-	32	24	9	36,80 ~ 37,01	2	DIN2174
48225314	42	4,5	200	36	-	32	24	9	39,52 ~ 39,73	2	DIN2174
48225319	45	4,5	220	36	-	36	29	9	42,52 ~ 42,73	2	DIN2174

Threading | Forming taps | Metric



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium



Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC		m/min
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20		



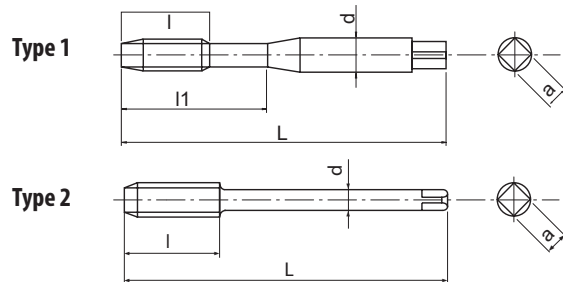
* Tolerance 4HX

EDP	M	P	L	l	l1	d	a	Z	Ø	Type	DIN
*48030111	1	0,25	40	-	5,5	2,5	2,1	4	0,89 ~ 0,90	1	DIN2174
*48030112	1,1	0,25	40	-	5,5	2,5	2,1	4	0,99 ~ 1,00	1	DIN2174
*48030113	1,2	0,25	40	-	5,5	2,5	2,1	4	1,09 ~ 1,10	1	DIN2174
*48030115	1,4	0,3	40	-	7	2,5	2,1	4	1,26 ~ 1,28	1	DIN2174
48030118	1,6	0,35	40	-	8	2,5	2,1	4	1,45 ~ 1,48	1	DIN2174
48030119	1,7	0,35	40	-	8	2,5	2,1	4	1,55 ~ 1,58	1	DIN2174
48030120	1,8	0,35	40	-	8	2,5	2,1	4	1,65 ~ 1,68	1	DIN2174
48030125	2	0,4	45	-	8	2,8	2,1	4	1,82 ~ 1,85	1	DIN2174
48030127	2,2	0,45	45	-	9	2,8	2,1	4	2,00 ~ 2,04	1	DIN2174
48030128	2,3	0,4	45	-	9	2,8	2,1	4	2,12 ~ 2,15	1	DIN2174
48030133	2,5	0,45	50	-	9	2,8	2,1	4	2,30 ~ 2,34	1	DIN2174
48030136	2,6	0,45	50	-	9	2,8	2,1	4	2,40 ~ 2,44	1	DIN2174
48030138	3	0,5	56	-	18	3,5	2,7	4	2,77 ~ 2,82	2	DIN2174
48030142	3,5	0,6	56	-	20	4	3	4	3,23 ~ 3,28	2	DIN2174
48030144	4	0,7	63	-	21	4,5	3,4	4	3,67 ~ 3,72	2	DIN2174
48030147 <small>NEW</small>	4,5	0,75	70	-	25	6	4,9	5	4,14 ~ 4,20	2	DIN2174
48030149	5	0,8	70	-	25	6	4,9	5	4,62 ~ 4,68	2	DIN2174
48030152 <small>NEW</small>	5,5	0,9	80	-	30	6	4,9	5	5,06 ~ 5,13	2	DIN2174
48030155	6	1	80	-	30	6	4,9	5	5,51 ~ 5,59	2	DIN2174
48030158	7	1	80	-	30	7	5,5	5	6,51 ~ 6,59	2	DIN2174
48030161	8	1,25	90	-	35	8	6,2	5	7,37 ~ 7,45	2	DIN2174
48030165 <small>NEW</small>	9	1,25	90	12	35	9	7	8	8,37 ~ 8,45	2	DIN2174
48030169	10	1,5	100	-	39	10	8	8	9,24 ~ 9,33	2	DIN2174
48030175 <small>NEW</small>	11	1,5	100	15	-	8	6,2	8	10,24 ~ 10,33	2	DIN2174
48030179	12	1,75	110	17	-	9	7	8	11,10 ~ 11,20	3	DIN2174
48030191	14	2	110	20	-	11	9	8	12,96 ~ 13,08	3	DIN2174
48030202	16	2	110	20	-	12	9	8	14,96 ~ 15,08	3	DIN2174
48069214	18	2,5	125	20	-	14	11	8	16,66 ~ 16,81	3	DIN2174
48069228	20	2,5	140	20	-	16	12	8	18,66 ~ 18,81	3	DIN2174
48069238	22	2,5	140	20	-	18	14,5	8	20,66 ~ 20,81	3	DIN2174
48069247	24	3	160	24	-	18	14,5	8	22,39 ~ 22,56	3	DIN2174
48069262	27	3	160	18	-	20	16	8	25,39 ~ 25,56	3	DIN2174
48069271	30	3,5	180	21	-	22	18	8	28,09 ~ 28,28	3	DIN2174

Metric

S-OIL-XPF

Threading | Forming taps | Metric



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Side through coolant

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC	m/min
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	

A	M	HSS-Co	V	ISO 2 6HX	C/2,5	DIN 2174	DIN 2174
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EDP	M	P	L	l	l1	d	a	Z	Ø	Type	DIN
48042149	5	0,8	70	-	25	6	4,9	5	4,62 ~ 4,68	1	DIN2174
48042155	6	1	80	-	30	6	4,9	5	5,51 ~ 5,59	1	DIN2174
48042161	8	1,25	90	-	35	8	6,2	5	7,37 ~ 7,45	1	DIN2174
48042169	10	1,5	100	-	39	10	8	8	9,24 ~ 9,33	1	DIN2174
48042179	12	1,75	110	17	-	9	7	8	11,10 ~ 11,20	2	DIN2174
48042191	14	2	110	20	-	11	9	8	12,96 ~ 13,08	2	DIN2174
48042202	16	2	110	20	-	12	9	8	14,96 ~ 15,08	2	DIN2174
48071214	18	2,5	125	20	-	14	11	8	16,66 ~ 16,81	2	DIN2174
48071228	20	2,5	140	20	-	16	12	8	18,66 ~ 18,81	2	DIN2174
48071238	22	2,5	140	20	-	18	14,5	8	20,66 ~ 20,81	2	DIN2174
48071247	24	3	160	24	-	18	14,5	8	22,39 ~ 22,56	2	DIN2174
48071262	27	3	160	18	-	20	16	8	25,39 ~ 25,56	2	DIN2174
48071271	30	3,5	180	21	-	22	18	8	28,09 ~ 28,28	2	DIN2174
48071281	33	3,5	180	21	-	25	20	8	31,09 ~ 31,28	2	DIN2174
48071294	36	4	200	24	-	28	22	8	33,80 ~ 34,01	2	DIN2174
48071304	39	4	200	24	-	32	24	9	36,80 ~ 37,01	2	DIN2174
48071314	42	4,5	200	27	-	32	24	9	39,52 ~ 39,73	2	DIN2174
48071319	45	4,5	220	27	-	36	29	9	42,52 ~ 42,73	2	DIN2174

Threading | Forming taps
Metric



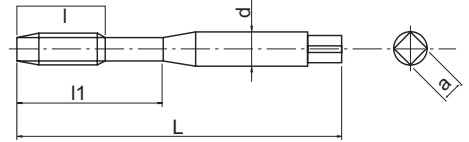
Metric

S-XPF 6GX

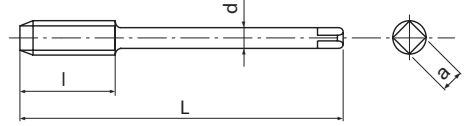
Threading | Forming taps | Metric



Type 1



Type 2



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- For 6G internal thread tolerance

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC, ADC	H 25-35 HRC		
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min	

A	M	HSS-Co	V	ISO 3 6GX	C/2,5			DIN 2174	DIN 2174
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EDP	M	P	oversize	L	l	l1	d	a	Z	∅	Type	DIN
48086125	2	0,4	+0,019	45	-	8	2,8	2,1	4	1,85 ~ 1,88	1	DIN2174
48086133	2,5	0,45	+0,020	50	-	9	2,8	2,1	4	2,32 ~ 2,35	1	DIN2174
48086138	3	0,5	+0,020	56	-	18	3,5	2,7	4	2,79 ~ 2,83	1	DIN2174
48086142	3,5	0,6	+0,021	56	-	20	4	3	4	3,24 ~ 3,29	1	DIN2174
48086144	4	0,7	+0,022	63	-	21	4,5	3,4	4	3,69 ~ 3,75	1	DIN2174
48086149	5	0,8	+0,024	70	-	25	6	4,9	5	4,64 ~ 4,71	1	DIN2174
48086155	6	1	+0,026	80	-	30	6	4,9	5	5,55 ~ 5,63	1	DIN2174
48086161	8	1,25	+0,028	90	-	35	8	6,2	5	7,40 ~ 7,47	1	DIN2174
48086169	10	1,5	+0,032	100	-	39	10	8	8	9,26 ~ 9,35	1	DIN2174
48086179	12	1,75	+0,034	110	17	-	9	7	8	11,14 ~ 11,24	2	DIN2174
48086191	14	2	+0,038	110	20	-	11	9	8	13,00 ~ 13,12	2	DIN2174
48086202	16	2	+0,038	110	20	-	12	9	8	15,00 ~ 15,12	2	DIN2174

Threading | Forming taps

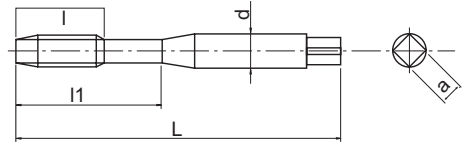
Metric

S-XPF 7GX

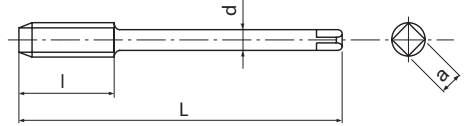
Threading | Forming taps | Metric



Type 1



Type 2



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- For 7G internal thread tolerance

Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min



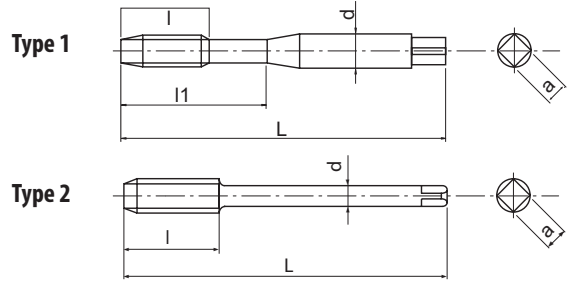
Metric

EDP	M	P	oversize	L	l	l1	d	a	Z	\emptyset	Type	DIN
48087125	2	0,4	+0,038	45	-	8	2,8	2,1	4	1,86 ~ 1,90	1	DIN2174
48087133	2,5	0,45	+0,040	50	-	9	2,8	2,1	4	2,34 ~ 2,38	1	DIN2174
48087138	3	0,5	+0,040	56	-	18	3,5	2,7	4	2,81 ~ 2,85	1	DIN2174
48087142	3,5	0,6	+0,044	56	-	20	4	3	4	3,27 ~ 3,31	1	DIN2174
48087144	4	0,7	+0,044	63	-	21	4,5	3,4	4	3,71 ~ 3,77	1	DIN2174
48087149	5	0,8	+0,048	70	-	25	6	4,9	5	4,67 ~ 4,73	1	DIN2174
48087155	6	1	+0,052	80	-	30	6	4,9	5	5,56 ~ 5,64	1	DIN2174
48087161	8	1,25	+0,056	90	-	35	8	6,2	5	7,42 ~ 7,50	1	DIN2174
48087169	10	1,5	+0,064	100	-	39	10	8	8	9,30 ~ 9,39	1	DIN2174
48087179	12	1,75	+0,068	110	17	-	9	7	8	11,17 ~ 11,28	2	DIN2174
48087191	14	2	+0,076	110	20	-	11	9	8	13,04 ~ 13,16	2	DIN2174
48087202	16	2	+0,076	110	20	-	12	9	8	15,04 ~ 15,16	2	DIN2174

S-XPF+0.1 NEW

Available from December 2017

Threading | Forming taps | Metric



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Oversized tap for 6H +0,1mm thread tolerance

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

A	M	HSS-Co	V	6HX +0.1	C/2,5		DIN 2174	DIN 2174
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EDP	M	P	L	l	l1	d	a	Z	ϕ	Type	DIN
48298138	3	0,5	56	-	18	3,5	2,7	4	2.87~2.92	1	DIN2174
48298144	4	0,7	63	-	21	4,5	3,4	4	3.77 ~ 3.82	1	DIN2174
48298149	5	0,8	70	-	25	6	4,9	5	4.72~4.78	1	DIN2174
48298155	6	1	80	-	30	6	4,9	5	5.61 ~ 5.69	1	DIN2174
48298161	8	1,25	90	-	35	8	6,2	5	7.47 ~ 7.55	1	DIN2174
48298169	10	1,5	100	-	39	10	8	8	9.34 ~ 9.43	1	DIN2174
48298179	12	1,75	110	18	-	9	7	8	11.20 ~ 11.30	2	DIN2174
48298202	16	2	110	20	-	12	9	8	15.06 ~ 15.18	2	DIN2174

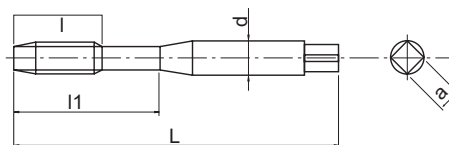
S-OIL-XPF FORM E NEW

Available from January 2018

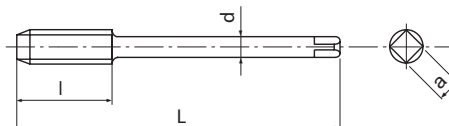
Threading | Forming taps | Metric



Type 1

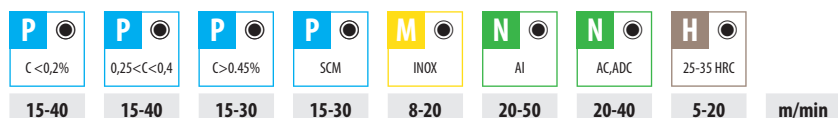


Type 2



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Side through coolant, chamfer Form E

Threading | Forming taps



EDP	M	P	L	l	l1	d	a	Z	\varnothing	Type	DIN
48294149	5	0,8	70	-	25	6	4,9	5	4,62 ~ 4,68	1	DIN2174
48294155	6	1	80	-	30	6	4,9	5	5,51 ~ 5,59	1	DIN2174
48294161	8	1,25	90	-	35	8	6,2	5	7,37 ~ 7,45	1	DIN2174
48294169	10	1,5	100	-	39	10	8	8	9,24 ~ 9,33	1	DIN2174
48294179	12	1,75	110	18	-	9	7	8	11,10 ~ 11,20	2	DIN2174
48294191	14	2	110	20	-	11	9	8	12,96 ~ 13,08	2	DIN2174
48294202	16	2	110	20	-	12	9	8	14,96 ~ 15,08	2	DIN2174



Metric

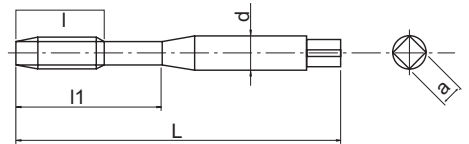
S-OIL-LT-XPF NEW

Available from January 2018

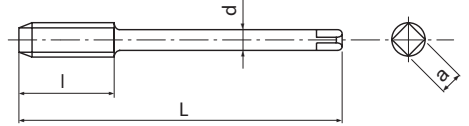
Threading | Forming taps | Metric



Type 1



Type 2



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- With long shank for deep threading, side through coolant

Threading | Forming taps

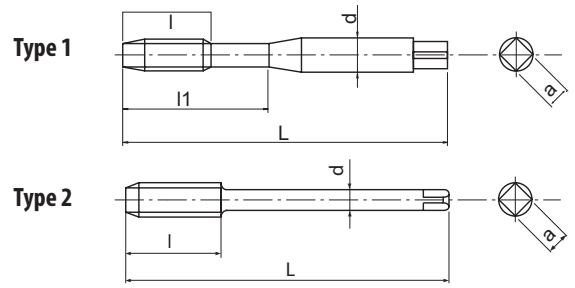
P	P	P	P	M	N	N	H	
C < 0,2%	0,25 < C < 0,4	C > 0,45%	SCM	INOX	Al	AC,ADC	25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

A	M	HSS-Co	V	ISO 2 6HX	C/2,5					
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EDP	M	P	L	l	l1	d	a	Z	Ø	Type
48295155	6	1	160	-	30	6	4,9	5	5.51 ~ 5.59	1
48295161	8	1,25	180	-	35	8	6,2	5	7.37 ~ 7.45	1
48295169	10	1,5	200	-	39	10	8	8	9.24 ~ 9.33	1
48295179	12	1,75	200	18	-	9	7	8	11.10 ~ 11.20	2

S-XPF-LH

Threading | Forming taps | Metric



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- For left-hand threads

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC, ADC	H 25-35 HRC		m/min
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20		

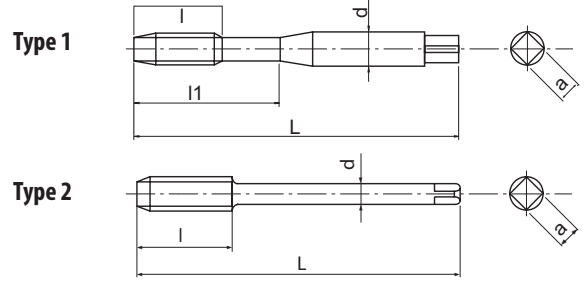
A	M	HSS-Co	V	ISO 2 6HX	C/2,5							LH
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EDP	M	P	L	l	l1	d	a	Z	∅	Type	DIN
48219138	3	0,5	56	-	18	3,5	2,7	4	2,77 ~ 2,82	1	DIN2174
48219144	4	0,7	63	-	21	4,5	3,4	4	3,67 ~ 3,72	1	DIN2174
48219149	5	0,8	70	-	25	6	4,9	5	4,62 ~ 4,68	1	DIN2174
48219155	6	1	80	-	30	6	4,9	5	5,51 ~ 5,59	1	DIN2174
48219161	8	1,25	90	-	35	8	6,2	5	7,37 ~ 7,45	1	DIN2174
48219169	10	1,5	100	-	39	10	8	8	9,24 ~ 9,33	1	DIN2174
48219179	12	1,75	110	17	-	9	7	8	11,10 ~ 11,20	2	DIN2174
48219191	14	2	110	20	-	11	9	8	12,96 ~ 13,08	2	DIN2174
48219202	16	2	110	20	-	12	9	8	14,96 ~ 15,08	2	DIN2174
48219214	18	2,5	125	20	-	14	11	8	16,66 ~ 16,81	2	DIN2174
48219228	20	2,5	140	20	-	16	12	8	18,66 ~ 18,81	2	DIN2174
48219238	22	2,5	140	20	-	18	14,5	8	20,66 ~ 20,81	2	DIN2174
48219247	24	3	160	24	-	18	14,5	8	22,39 ~ 22,56	2	DIN2174



S-XPF-HB Weldon

Threading | Forming taps | Metric



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- With Weldon shank

Threading | Forming taps

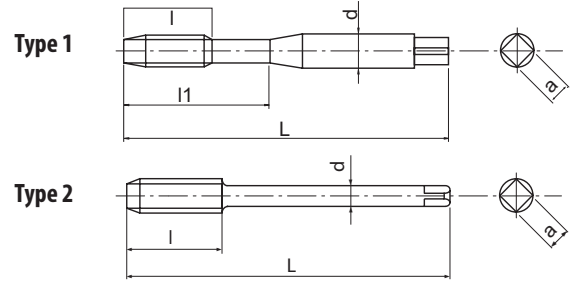
P	P	P	P	M	N	N	H	
C < 0,2%	0,25 < C < 0,4	C > 0,45%	SCM	INOX	Al	AC,ADC	25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

A	M	HSS-Co	V	ISO 2 6HX	C/2,5	DIN 2174	DIN 2174	DIN 1835	HB
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Metric

EDP	M	P	L	l	l1	d	a	Z	\varnothing	Type	DIN
48222138	3	0,5	56	-	18	6	4,9	4	2,77 ~ 2,82	1	DIN2174/1835
48222144	4	0,7	63	-	21	6	4,9	4	3,67 ~ 3,72	1	DIN2174/1835
48222149	5	0,8	70	-	25	6	4,9	5	4,62 ~ 4,68	1	DIN2174/1835
48222155	6	1	80	-	30	6	4,9	5	5,51 ~ 5,59	1	DIN2174/1835
48222161	8	1,25	90	-	35	8	6,2	5	7,37 ~ 7,45	1	DIN2174/1835
48222169	10	1,5	100	-	39	10	8	8	9,24 ~ 9,33	1	DIN2174/1835
48222179	12	1,75	110	17	-	12	9	8	11,10 ~ 11,20	2	DIN2174/1835
48222191	14	2	110	20	-	14	11	8	12,96 ~ 13,08	2	DIN2174/1835
48222202	16	2	110	20	-	16	12	8	14,96 ~ 15,08	2	DIN2174/1835

Threading | Forming taps | Metric



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Without oil grooves for higher rigidity

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC, ADC	
10-20	10-20	10-20	10-20	8-15	10-15	10-15	m/min

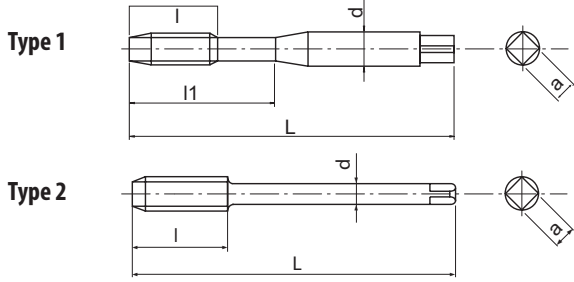
A **M** **HSS-Co** **V** **ISO 2 6HX** **C/2,5** **DIN 2174** **DIN 2174**

EDP	M	P	L	l	l1	d	a	Z	Ø	Type	DIN
48296138	3	0,5	56	4	18	3,5	2,7	0	2,77 ~ 2,82	1	DIN2174
48296144	4	0,7	63	5,6	21	4,5	3,4	0	3,67 ~ 3,72	1	DIN2174
48296149	5	0,8	70	6,4	25	6	4,9	0	4,62 ~ 4,68	1	DIN2174
48296155	6	1	80	8	30	6	4,9	0	5,51 ~ 5,59	1	DIN2174
48296161	8	1,25	90	10	35	8	6,2	0	7,37 ~ 7,45	1	DIN2174
48296169	10	1,5	100	12	39	10	8	0	9,24 ~ 9,33	1	DIN2174
48296179	12	1,75	110	17	-	9	7	0	11,10 ~ 11,20	2	DIN2174

S-XPF-GL 6GX NEW

Available from January 2018

Threading | Forming taps | Metric



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Without oil grooves for higher rigidity, for 6G internal thread tolerance

Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	
10-20	10-20	10-20	10-20	8-15	10-15	10-15	m/min

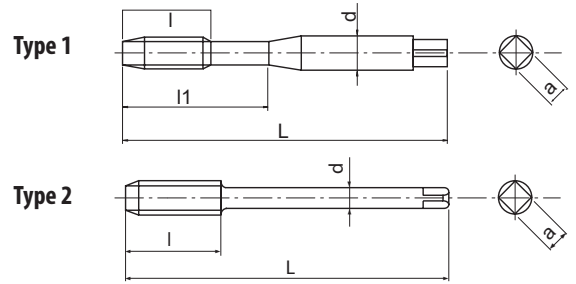
A	M	HSS-Co	V	ISO 3 6GX	C/2,5			DIN 2174	DIN 2174
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Metric

EDP	M	P	oversize	L	l	l1	d	a	Z	Ø	Type	DIN
48297138	3	0,5	+0,020	56	-	18	3,5	2,7	0	2.79 ~ 2.83	1	DIN2174
48297144	4	0,7	+0,022	63	-	21	4,5	3,4	0	3.69 ~ 3.75	1	DIN2174
48297149	5	0,8	+0,024	70	-	25	6	4,9	0	4.64 ~ 4.71	1	DIN2174
48297155	6	1	+0,026	80	-	30	6	4,9	0	5.55 ~ 5.63	1	DIN2174
48297161	8	1,25	+0,028	90	-	35	8	6,2	0	7.40 ~ 7.47	1	DIN2174
48297169	10	1,5	+0,032	100	-	39	10	8	0	9.26 ~ 9.35	1	DIN2174
48297179	12	1,75	+0,034	110	18	-	9	7	0	11.14 ~ 11.24	2	DIN2174

C-OIL-XPF

Threading | Forming taps | Metric



- First choice in quality and performance
- Carbide forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- With side through coolant

P	P	P	P	M	N	N	H		
C < 0,2%	0,25 < C < 0,4	C > 0,45%	SCM	INOX	Al	AC,ADC	25-35 HRC		
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20		m/min

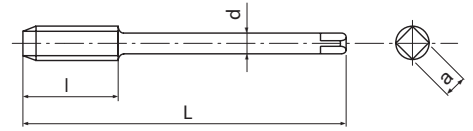
A	M	CARBIDE	V	ISO 2 6HX						
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EDP	M	P	L	l	l1	d	a	Z	\emptyset	Type	DIN
48226149	5	0,8	70	-	25	6	4,9	5	4,62 ~ 4,68	1	DIN2174
48226155	6	1	80	-	30	6	4,9	5	5,51 ~ 5,59	1	DIN2174
48226161	8	1,25	90	-	35	8	6,2	5	7,37 ~ 7,45	1	DIN2174
48226169	10	1,5	100	-	39	10	8	8	9,24 ~ 9,33	1	DIN2174
48226179	12	1,75	110	17	-	9	7	8	11,10 ~ 11,20	2	DIN2174
48226191	14	2	110	20	-	11	9	8	12,96 ~ 13,08	2	DIN2174
48226202	16	2	110	20	-	12	9	8	14,96 ~ 15,08	2	DIN2174



A-XPF

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- Powder metal forming tap for through & blind holes
- Multilayer TiCN coating
- High speed tapping in general steels, aluminium, stainless steels
- Powder metal for long tool life

Threading | Forming taps

									m/min
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20		

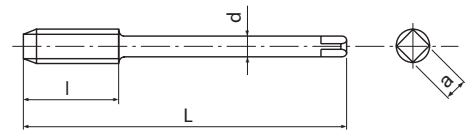
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EDP	MF	P	L	l	d	a	Z	Ø	DIN
48133162	8	1	90	10	6	4,9	5	7,51 ~ 7,59	DIN2174
48133171	10	1	90	12	7	5,5	8	9,51 ~ 9,59	DIN2174
48133170	10	1,25	100	12	7	5,5	8	9,37 ~ 9,45	DIN2174
48133182	12	1	100	15	9	7	8	11,52 ~ 11,60	DIN2174
48133181	12	1,25	100	15	9	7	8	11,39 ~ 11,46	DIN2174
48133180	12	1,5	100	15	9	7	8	11,25 ~ 11,34	DIN2174
48133193	14	1,25	100	12	11	9	8	13,39 ~ 13,46	DIN2174
48133192	14	1,5	100	15	11	9	8	13,25 ~ 13,34	DIN2174
48133203	16	1,5	100	15	12	9	8	15,25 ~ 15,34	DIN2174
48133216	18	1,5	110	15	14	11	8	17,25 ~ 17,34	DIN2174
48133230	20	1,5	125	15	16	12	8	19,25 ~ 19,34	DIN2174
48133240	22	1,5	125	15	18	14,5	8	21,25 ~ 21,34	DIN2174
48133250	24	1,5	140	15	18	14,5	8	23,25 ~ 23,34	DIN2174

Metric Fine

S-XPf

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium

Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

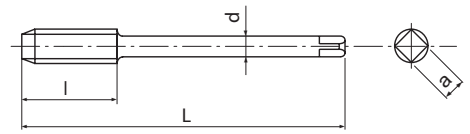
A	MF	HSS-Co	V	ISO 2 6HX	C/2,5				DIN 2174
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EDP	MF	P	L	l	d	a	Z	\emptyset	DIN
48030145	4	0,5	63	8	4,5	3,4	4	3,77 ~ 3,82	DIN2174
48030151	5	0,5	70	8	6	4,9	5	4,77 ~ 4,82	DIN2174
48030157	6	0,5	80	8	6	4,9	5	5,79 ~ 5,83	DIN2174
48030156	6	0,75	80	8	6	4,9	5	5,65 ~ 5,71	DIN2174
48030160	7	0,75	80	8	7	5,5	5	6,65 ~ 6,71	DIN2174
48030164	8	0,5	80	10	6	4,9	5	7,79 ~ 7,83	DIN2174
48030163	8	0,75	80	10	6	4,9	5	7,65 ~ 7,71	DIN2174
48030162	8	1	90	10	6	4,9	5	7,51 ~ 7,59	DIN2174
48030171	10	1	90	12	7	5,5	8	9,51 ~ 9,59	DIN2174
48030170	10	1,25	100	12	7	5,5	8	9,37 ~ 9,45	DIN2174
48030182	12	1	100	15	9	7	8	11,52 ~ 11,60	DIN2174
48030181	12	1,25	100	15	9	7	8	11,39 ~ 11,46	DIN2174
48030180	12	1,5	100	15	9	7	8	11,25 ~ 11,34	DIN2174
48030194	14	1	100	15	11	9	8	13,52 ~ 13,60	DIN2174
48030193	14	1,25	100	15	11	9	8	13,39 ~ 13,46	DIN2174
48030192	14	1,5	100	15	11	9	8	13,25 ~ 13,34	DIN2174
48030204	16	1	100	15	12	9	8	15,52 ~ 15,60	DIN2174
48030203	16	1,5	100	15	12	9	8	15,25 ~ 15,34	DIN2174
48030218	18	1	110	15	14	11	8	17,52 ~ 17,60	DIN2174
48030216	18	1,5	110	15	14	11	8	17,25 ~ 17,34	DIN2174
48030232	20	1	125	15	16	12	8	19,52 ~ 19,60	DIN2174
48030230	20	1,5	125	15	16	12	8	19,25 ~ 19,34	DIN2174
48030240	22	1,5	125	15	18	14,5	8	21,25 ~ 21,34	DIN2174
48030250	24	1,5	140	15	18	14,5	8	23,25 ~ 23,34	DIN2174

Metric Fine

S-OIL-XPF

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Side through coolant

Material	Speed (m/min)
P C < 0,2%	15-40
P 0,25 < C < 0,4	15-40
P C > 0,45%	15-30
P SCM	15-30
M INOX	8-20
N Al	20-50
N AC, ADC	20-40
H 25-35 HRC	5-20

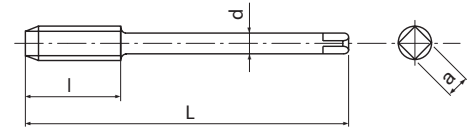
Coating	Forming	Material	Flute	ISO	Flute Profile	ISO	Flute Profile	ISO	Flute Profile	ISO
A	MF	HSS-Co	V	ISO 2 6HX	C/2,5					DIN 2174

EDP	MF	P	L	l	d	a	Z	\varnothing	DIN
48042162	8	1	90	10	6	4,9	5	7,51 ~ 7,59	DIN2174
48042171	10	1	90	12	7	5,5	8	9,51 ~ 9,59	DIN2174
48042170	10	1,25	100	12	7	5,5	8	9,37 ~ 9,45	DIN2174
48042182	12	1	100	15	9	7	8	11,52 ~ 11,60	DIN2174
48042181	12	1,25	100	15	9	7	8	11,39 ~ 11,46	DIN2174
48042180	12	1,5	100	15	9	7	8	11,25 ~ 11,34	DIN2174
48042194	14	1	100	15	11	9	8	13,52 ~ 13,60	DIN2174
48042193	14	1,25	100	12	11	9	8	13,39 ~ 13,46	DIN2174
48042192	14	1,5	100	15	11	9	8	13,25 ~ 13,34	DIN2174
48042204	16	1	100	15	12	9	8	15,52 ~ 15,60	DIN2174
48042203	16	1,5	100	15	12	9	8	15,25 ~ 15,34	DIN2174
48042218	18	1	110	15	14	11	8	17,52 ~ 17,60	DIN2174
48042216	18	1,5	110	15	14	11	8	17,25 ~ 17,34	DIN2174
48042232	20	1	125	15	16	12	8	19,52 ~ 19,60	DIN2174
48071230	20	1,5	125	15	16	12	8	19,25 ~ 19,34	DIN2174
48071240	22	1,5	125	15	18	14,5	8	21,25 ~ 21,34	DIN2174
48071250	24	1,5	140	15	18	14,5	8	23,25 ~ 23,34	DIN2174



S-XPF 6GX

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- For 6G internal thread tolerance

Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

A	MF	HSS-Co	V	ISO 3 6GX	C/2,5				DIN 2174
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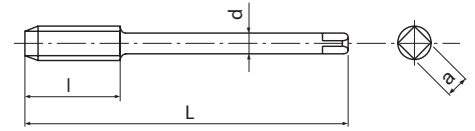
Metric Fine

EDP	MF	P	oversize	L	l	d	a	Z	Ø	DIN
48086162	8	1	+0,026	90	12	6	4,9	5	7,55 ~ 7,62	DIN2174
48086171	10	1	+0,026	90	12	7	5,5	8	9,54 ~ 9,62	DIN2174
48086170	10	1,25	+0,028	100	12	7	5,5	8	9,40 ~ 9,47	DIN2174
48086182	12	1	+0,026	100	15	9	7	8	11,55 ~ 11,63	DIN2174
48086181	12	1,25	+0,028	100	15	9	7	8	11,41 ~ 11,49	DIN2174
48086180	12	1,5	+0,032	100	15	9	7	8	11,27 ~ 11,36	DIN2174
48086193	14	1,25	+0,028	100	12	11	9	8	13,41 ~ 13,49	DIN2174
48086192	14	1,5	+0,032	100	15	11	9	8	13,27 ~ 13,36	DIN2174
48086203	16	1,5	+0,032	100	15	12	9	8	15,27 ~ 15,36	DIN2174
48086216	18	1,5	+0,032	110	15	14	11	8	17,27 ~ 17,36	DIN2174
48086230	20	1,5	+0,032	125	15	16	12	8	19,27 ~ 19,36	DIN2174
48086240	22	1,5	+0,032	125	15	18	14,5	8	21,27 ~ 21,36	DIN2174
48086250	24	1,5	+0,032	140	15	18	14,5	8	23,29 ~ 23,38	DIN2174

S-OIL-XPF 6GX NEW

Available from January 2018

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- For 6G internal thread tolerance, side through coolant

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC		m/min
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20		



EDP	MF	P	oversize	L	l	d	a	Z	\emptyset	DIN
48293162	8	1	+0,026	90	10	6	4,9	5	7.54 ~ 7.62	DIN2174
48293171	10	1	+0,026	90	10	7	5,5	8	9.54 ~ 9.62	DIN2174
48293170	10	1,25	+0,028	100	12	7	5,5	8	9.40 ~ 9.47	DIN2174
48293182	12	1	+0,026	100	12	9	7	8	11.55 ~ 11.63	DIN2174
48293181	12	1,25	+0,028	100	12	9	7	8	11.41 ~ 11.49	DIN2174
48293180	12	1,5	+0,032	100	15	9	7	8	11.27 ~ 11.36	DIN2174
48293193	14	1,25	+0,028	100	16	11	9	8	13.41 ~ 13.49	DIN2174
48293192	14	1,5	+0,032	100	16	11	9	8	13.27 ~ 13.36	DIN2174
48293203	16	1,5	+0,032	100	15	12	9	8	15.27 ~ 15.36	DIN2174
48293216	18	1,5	+0,032	110	15	14	11	8	17.27 ~ 17.36	DIN2174
48293230	20	1,5	+0,032	125	15	16	12	8	19.27 ~ 19.36	DIN2174
48293240	22	1,5	+0,032	125	15	18	14,5	8	21.27 ~ 21.36	DIN2174
48293250	24	1,5	+0,032	140	15	18	14,5	8	23.29 ~ 23.38	DIN2174

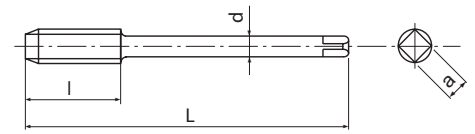
Threading | Forming taps

Metric Fine



S-XPF FORM D

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- HSSE forming tap for through holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Chamfer Form D

Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC, ADC	H 25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

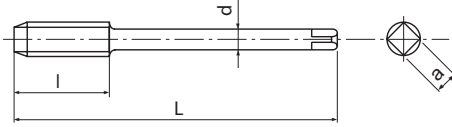
A	MF	HSS-Co	V	ISO 2 6HX	D/4	DIN 2174
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Metric Fine

EDP	MF	P	L	l	d	a	Z	Ø	DIN
48088162	8	1	90	10	6	4,9	5	7,51 ~ 7,59	DIN2174
48088171	10	1	90	12	7	5,5	8	9,51 ~ 9,59	DIN2174
48088170	10	1,25	100	12	7	5,5	8	9,37 ~ 9,45	DIN2174
48088182	12	1	100	15	9	7	8	11,52 ~ 11,60	DIN2174
48088181	12	1,25	100	15	9	7	8	11,39 ~ 11,46	DIN2174
48088180	12	1,5	100	15	9	7	8	11,25 ~ 11,34	DIN2174
48088192	14	1,5	100	15	11	9	8	13,25 ~ 13,34	DIN2174
48088203	16	1,5	100	15	12	9	8	15,25 ~ 15,34	DIN2174
48088216	18	1,5	110	15	14	11	8	17,25 ~ 17,34	DIN2174
48088230	20	1,5	125	15	16	12	8	19,25 ~ 19,34	DIN2174

S-XPFF FORM E

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Chamfer Form E

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC, ADC	H 25-35 HRC	m/min
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	

A	MF	HSS-Co	V	ISO 2 6HX	E/1,5	DIN 2174
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EDP	MF	P	L	l	d	a	Z	\varnothing	DIN
48089171	10	1	90	12	7	5,5	8	9,51 ~ 9,59	DIN2174
48089180	12	1,5	100	15	9	7	8	11,25 ~ 11,34	DIN2174
48089192	14	1,5	100	15	11	9	8	13,25 ~ 13,34	DIN2174
48089203	16	1,5	100	15	12	9	8	15,25 ~ 15,34	DIN2174

Threading | Forming taps

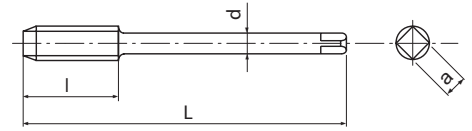
Metric Fine



S-OIL-XPF FORM E NEW

Available from February 2018

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Chamfer Form E, side through coolant

Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC		
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min	

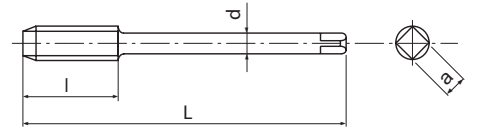


Metric Fine

EDP	MF	P	L	l	d	a	Z	∅	DIN
48294162	8	1	90	10	6	4,9	5	7.51 ~ 7.59	DIN2174
48294171	10	1	90	10	7	5,5	8	9.51 ~ 9.59	DIN2174
48294170	10	1,25	100	12	7	5,5	8	9.37 ~ 9.45	DIN2174
48294182	12	1	100	12	9	7	8	11.52 ~ 11.60	DIN2174
48294181	12	1,25	100	12	9	7	8	11.39 ~ 11.46	DIN2174
48294180	12	1,5	100	15	9	7	8	11.25 ~ 11.34	DIN2174
48294193	14	1,25	100	16	11	9	8	13.39 ~ 13.46	DIN2174
48294192	14	1,5	100	16	11	9	8	13.25 ~ 13.34	DIN2174
48294203	16	1,5	100	15	12	9	8	15.25 ~ 15.34	DIN2174
48294216	18	1,5	110	15	14	11	8	17.25 ~ 17.34	DIN2174
48294230	20	1,5	125	15	16	12	8	19.25 ~ 19.34	DIN2174
48294240	22	1,5	125	15	18	14,5	8	21.25 ~ 21.34	DIN2174
48294250	24	1,5	140	15	18	14,5	8	23.25 ~ 23.34	DIN2174

C-OIL-XPF

Threading | Forming taps | Metric Fine



- First choice in quality and performance
- Carbide forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Side through coolant

Threading | Forming taps

P (blue)	P (blue)	P (blue)	P (blue)	M (yellow)	N (green)	N (green)	H (brown)	
C < 0,2%	0,25 < C < 0,4	C > 0,45%	SCM	INOX	Al	AC,ADC	25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

A
MF
CARBIDE
V
ISO 2 6HX
C/2,5

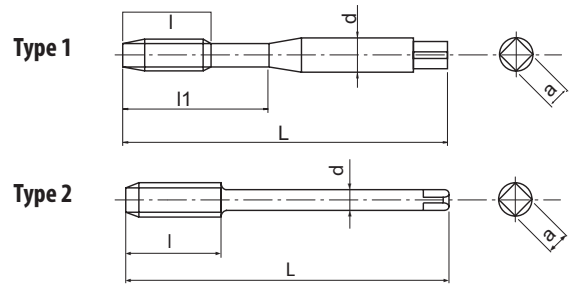
DIN 2174

EDP	MF	P	L	l	d	a	Z	ϕ	DIN
48226162	8	1	90	10	6	4,9	5	7,51 ~ 7,59	DIN2174
48226171	10	1	90	12	7	5,5	8	9,51 ~ 9,59	DIN2174
48226180	12	1,5	100	15	9	7	8	11,25 ~ 11,34	DIN2174
48226192	14	1,5	100	15	11	9	8	13,25 ~ 13,34	DIN2174
48226203	16	1,5	100	15	12	9	8	15,25 ~ 15,34	DIN2174

Metric Fine

S-XPF

Threading | Forming taps | UNC



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium

P C <0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC, ADC	H 25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

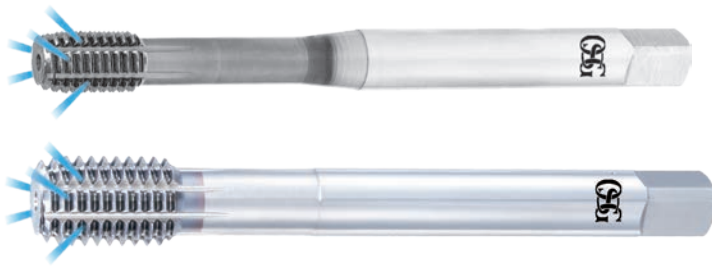


EDP	UNC	P	L	l	l1	d	a	Z	∅	Type	DIN
48091459	5	40	56	-	18	3,5	2,7	4	2,86 ~ 2,93	1	DIN2184-1
48091461	6	32	56	-	20	4	3	4	3,09 ~ 3,17	1	DIN2184-1
48091464	8	32	63	-	21	4,5	3,4	4	3,76 ~ 3,84	1	DIN2184-1
48091466	10	24	70	-	25	6	4,9	5	4,26 ~ 4,35	1	DIN2184-1
48091471	1/4	20	80	-	30	7	5,5	5	5,66 ~ 5,76	1	DIN2184-1
48091474	5/16	18	90	-	35	8	6,2	5	7,18 ~ 7,29	1	DIN2184-1
48091479	3/8	16	100	-	35	9	7	8	8,66 ~ 8,78	1	DIN2184-1
48091484	7/16	14	100	18,1	-	8	6,2	8	10,12 ~ 10,27	2	DIN2184-1
48091489	1/2	13	110	19,5	-	9	7	8	11,62 ~ 11,78	2	DIN2184-1
48091494	9/16	12	110	21,1	-	11	9	8	13,14 ~ 13,28	2	DIN2184-1
48091501	5/8	11	110	23,1	-	12	9	8	14,61 ~ 14,76	2	DIN2184-1
48091515	3/4	10	125	20,3	-	14	11	8	17,65 ~ 17,80	2	DIN2184-1
48091526	7/8	9	140	22,6	-	18	14,5	8	20,66 ~ 20,84	2	DIN2184-1
48091538	1	8	160	25,4	-	18	14,5	8	23,63 ~ 23,84	2	DIN2184-1

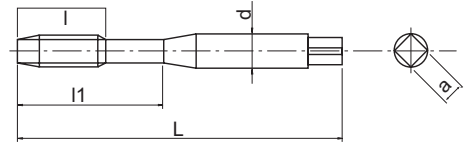
S-OIL-XPF NEW

Available from February 2018

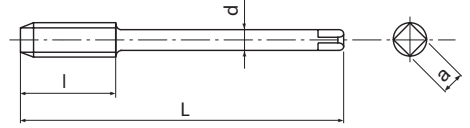
Threading | Forming taps | UNC



Type 1



Type 2



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Side through coolant

Threading | Forming taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min



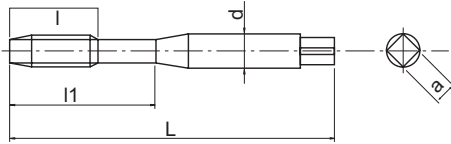
EDP	UNC	P	L	l	l1	d	a	Z	Ø	Type	DIN
48042471	1/4	20	80	13	30	7	5,5	5	5.66 ~ 5.76	1	DIN2184-1
48042474	5/16	18	90	14	35	8	6,2	5	7.18 ~ 7.29	1	DIN2184-1
48042479	3/8	16	100	11	39	10	8	8	8.66 ~ 8.78	1	DIN2184-1
48042484	7/16	14	100	14	-	8	6,2	8	10.12 ~ 10.27	2	DIN2184-1
48042489	1/2	13	110	20	-	9	7	8	11.62 ~ 11.78	2	DIN2184-1
48042494	9/16	12	110	22	-	11	9	8	13.14 ~ 13.28	2	DIN2184-1
48042501	5/8	11	110	14	-	12	9	8	14.61 ~ 14.76	2	DIN2184-1
48042515	3/4	10	125	25,4	-	14	11	8	17.65 ~ 17.80	2	DIN2184-1
48042526	7/8	9	140	24	-	18	14,5	8	20.66 ~ 20.84	2	DIN2184-1
48042538	1	8	160	31,8	-	18	14,5	8	23.63 ~ 23.84	2	DIN2184-1

S-XPf

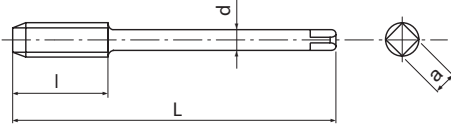
Threading | Cutting taps | UNF



Type 1



Type 2



- First choice in quality and performance
- HSSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium

P	P	P	P	M	N	N	H	
C < 0,2%	0,25 < C < 0,4	C > 0,45%	SCM	INOX	Al	AC,ADC	25-35 HRC	m/min
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	



EDP	UNF	P	L	l	l1	d	a	Z	ϕ	Type	DIN
48091462	6	40	56	-	20	4	3	4	3,19 ~ 3,26	1	DIN2184-1
48091467	10	32	70	-	25	6	4,9	5	4,41 ~ 4,47	1	DIN2184-1
48091472	1/4	28	80	-	30	7	5,5	5	5,87 ~ 5,94	1	DIN2184-1
48091476	5/16	24	90	-	35	8	6,2	5	7,39 ~ 7,47	1	DIN2184-1
48091481	3/8	24	90	-	35	9	7	8	8,98 ~ 9,06	1	DIN2184-1
48091486	7/16	20	100	12,7	-	8	6,2	8	10,45 ~ 10,55	2	DIN2184-1
48091491	1/2	20	100	12,7	-	9	7	8	12,04 ~ 12,14	2	DIN2184-1
48091496	9/16	18	100	14,1	-	11	9	8	13,56 ~ 13,64	2	DIN2184-1
48091504	5/8	18	100	14,1	-	12	9	8	15,15 ~ 15,23	2	DIN2184-1
48091517	3/4	16	110	12,7	-	14	12	8	18,22 ~ 18,30	2	DIN2184-1
48091528	7/8	14	125	14,5	-	18	14,5	8	21,27 ~ 21,38	2	DIN2184-1
48091539	1	12	125	16,9	-	18	14,5	8	24,26 ~ 24,37	2	DIN2184-1

Threading | Cutting taps

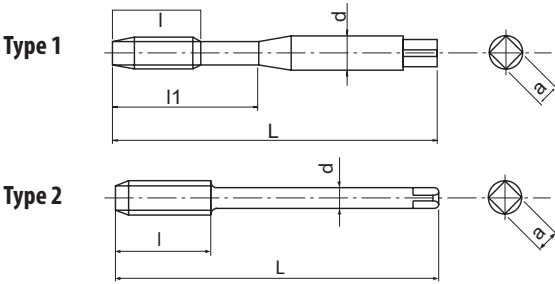
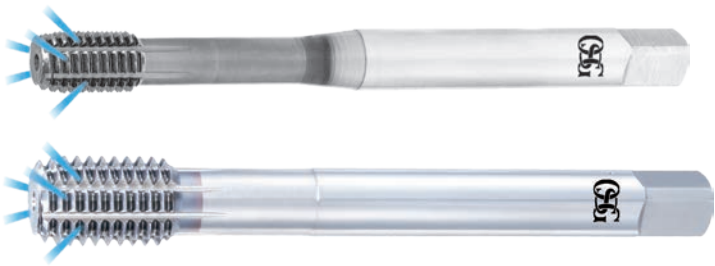


UNF

S-OIL-XPF NEW

Available from February 2018

Threading | Cutting taps | UNF



- First choice in quality and performance
- HSE forming tap for through & blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Side through coolant

Threading | Cutting taps

P C < 0,2%	P 0,25 < C < 0,4	P C > 0,45%	P SCM	M INOX	N Al	N AC,ADC	H 25-35 HRC	
15-40	15-40	15-30	15-30	8-20	20-50	20-40	5-20	m/min

A	UNF	HSS-Co	V	ANSI 2BX	C/2,5				DIN 2184-1	DIN 2184-1
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EDP	UNF	P	L	l	l1	d	a	Z	$\frac{\pi}{8}$	Type	DIN
48042472	1/4	28	80	9,1	30	7	5,5	5	5.87 ~ 5.94	1	DIN2184-1
48042476	5/16	24	90	10,6	35	8	6,2	5	7.39 ~ 7.47	1	DIN2184-1
48042481	3/8	24	90	10,6	35	10	8	8	8.98 ~ 9.06	1	DIN2184-1
48042486	7/16	20	100	12,7	-	8	6,2	8	10.45 ~ 10.55	2	DIN2184-1
48042491	1/2	20	100	12,7	-	9	7	8	12.04 ~ 12.14	2	DIN2184-1
48042496	9/16	18	100	14,1	-	11	9	8	13.56 ~ 13.64	2	DIN2184-1
48042504	5/8	18	100	14,1	-	12	9	8	15.15 ~ 15.23	2	DIN2184-1
48042517	3/4	16	110	12,7	-	14	11	8	18.22 ~ 18.30	2	DIN2184-1
48042528	7/8	14	125	14,5	-	18	14,5	8	21.27 ~ 21.38	2	DIN2184-1
48042539	1	12	140	16,9	-	18	14,5	8	24.26 ~ 24.37	2	DIN2184-1

SWEDEN

Branch office of OSG SCANDINAVIA
Abrahams Gränd 8
295 35 Bromölla
Sweden
Tel: +46 40 41 22 55
Fax: +46 40 41 32 55
osg@osg-scandinavia.com

OSG SCANDINAVIA

(For Scandinavian countries)
Langebjergvaenget 16
4000 Roskilde
Denmark
Tel.: +45 46 75 65 55
Fax: +45 46 75 67 00
osg@osg-scandinavia.com

OSG NETHERLANDS

Bedrijfsweg 5 - 3481 MG Harmelen
Postbus 50 - 3480 DB Harmelen
The Netherlands
Tel.: +31 348 44 2764
Fax: +31 348 44 2144
info@osg-nl.com

OSG UK

Shelton house, 5 Bentalls
Pipps Hill Ind Est, Basildon Essex SS14 3BY
United Kingdom
Tel.: +44 845 305 1066
Fax: +44 845 305 1067
sales@osg-uk.com

OSG EUROPE LOGISTICS

Avenue Lavoisier 1
B-1300 Z.I. Wavre - Nord
Belgium
Tel.: +32 10 23 05 07
Fax: +32 10 23 05 11
info@osgeurope.com

OSG BELUX

Avenue Lavoisier 1
B-1300 Z.I. Wavre - Nord
Belgium
Tel.: +32 10 23 05 11
Fax: +32 10 23 05 31
info@osg-belgium.com

OSG COMAHER

Bekolarra 4
E - 01010 Vitoria-Gasteiz
Spain
Tel.: +34 945 242 400
Fax: +34 945 228 883
osg-comaher@osg-comaher.com

OSG FRANCE

Parc Icade, Paris Nord 2
Immeuble "Le Rimbaud"
22 Avenue des Nations
CS66191 - 93420 Villepinte
France
Tel.: +33 1 49 90 10 10
Fax: +33 1 49 90 10 15
sales@osg-france.com





SLOVAKIA

Branch office of OSG Belgium s.a.
Tel: +32 10 23 05 04
Fax: +32 10 23 05 31
info@osg-belgium.com

OSG POLAND

59 Złota St
00-120 Warsaw
Poland

OSG RUSSIA

Butlerova street, 17B, office 5069
117342 Moscow
Russia
Tel: +7 (495) 150 41 54
info@osg-russia.com

ROMSAN INTERNATIONAL CO. SRL

Reprezentant Exclusiv OSG
23-25, Nerva Traian Street
031044 Bucuresti
România
Tel: +40 021 322 07 47
Fax: +40 021 321 56 00
romsan.int@romsan.ro

OSG TURKEY

Rami Kişla Cad.No:56 Eyüp
Istanbul 34056
Turkey
Tel:+90 212 565 24 00
Fax: +90 212 565 44 00
info@osg-turkey.com

OSG ITALIA

Via Cirenaiica n. 52 int. 61/63
I - 10142 Torino
Italy
Tel.: +39 0117705211
Fax: +39 0117071402
info@osg-italia.it

OSG GERMANY

Karl-Ehmann-Str. 25
D - 73037 Göppingen
Germany
Tel.: +49 7161 6064 - 0
Fax: +49 7161 6064 - 444
info@osg-germany.de



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OSG EUROPE LOGISTICS

Avenue Lavoisier 1
B-1300 Z.I. Wavre - Nord - Belgium
Tel: +32 10 23 05 07
Fax: +32 10 23 05 51
info@osgeurope.com

OSG BELUX

Avenue Lavoisier 1
B-1300 Z.I. Wavre - Nord - Belgium
Tel: +32 10 23 05 11
Fax: +32 10 23 05 31
info@osg-belgium.com

OSG FRANCE

Parc Icade, Paris Nord 2
Immeuble "Le Rimbaud"
22 Avenue des Nations
CS66191 - 93420 Villepinte - France
Tel: +33 1 49 90 10 10
Fax: +33 1 49 90 10 15
sales@osg-france.com

OSG NETHERLANDS

Bedrijfsweg 5 - 3481 MG Harmelen
Tel: +31 348 44 2764
Fax: +31 348 44 2144
info@osg-nl.com

OSG UK

Shelton house, 5 Bentalls
Pipps Hill Ind Est, Basildon Essex SS14 3BY
Tel: +44 845 305 1066
Fax: +44 845 305 1067
sales@osg-uk.com

SLOVAKIA

Branch office of OSG Europe Logistics s.a.
Tel (SK) +421 2 4329 1295
Tel (BE) +32 10 23 05 07
Fax (BE) +32 10 23 05 51
sales-osgsvk@osgeurope.com

OSG POLAND Sp. z.o.o.

ul. Spółdzielcza 57
05-074 Halinów - Poland
Tel: +22 760 82 71
Fax: +22 760 82 71
osg@osg-poland.com

OSG GERMANY

Karl-Ehmann-Str. 25
D - 73037 Göppingen - Germany
Tel: +49 7161 6064 - 0
Fax: +49 7161 6064 - 444
info@osg-germany.de

OSG SCANDINAVIA

(For Scandinavian countries)
Langebjergvaenget 16
4000 Roskilde - Denmark
Tel: +45 46 75 65 55
Fax: +45 46 75 67 00
osg@osg-scandinavia.com

SWEDEN

Branch office of OSG SCANDINAVIA
Abrahams Gränd 8
295 35 Bromölla - Sweden
Tel: +46 40 41 22 55
Fax: +46 40 41 32 55
osg@osg-scandinavia.com

OSG COMAHER

Bekolarra 4
E - 01010 Vitoria-Gasteiz - Spain
Tel: +34 945 242 400
Fax: +34 945 228 883
osg-comaher@osg-comaher.com

RUSSIA

Butlerova street, 17B, office 5069
117342 Moscow - Russia
Tel: +7 (495) 150 41 54
info@osg-russia.com

OSG TURKEY

Rami Kişla Cad.No:56 Eyüp
Istanbul 34056 - Turkey
Tel:+90 212 565 24 00
Fax: +90 212 565 44 00
info@osg-turkey.com

ROMSAN INTERNATIONAL CO. SRL

Reprezentant Exclusiv OSG
23-25, Nerva Traian Street
031044 Bucuresti - România
Tel: +40 021 322 07 47
Fax: +40 021 321 56 00
romsan.int@romsan.ro

AUSTRIA

Branch office of OSG GERMANY
Messestraße 11
A-6850 Dornbirn
Tel: +49 7161 6064-0
Fax: +49 7161 6064-444
info@osg-germany.de

OSG ITALIA

Via Cirenaiica n. 52 int. 61/63
I - 10142 Torino - Italy
Tel: +39 0117705211
Fax: +39 0117071402
info@osg-italia.it

WEXO PRÄZISIONSWERKZEUGE GmbH

Siemensstraße 13
D-61352 Bad Homburg
Tel: (06172) 10 62 06
Fax: (06172) 10 62 13
verkauf@wexo.com

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