_The all-rounders for small and medium batch sizes.

TC115 / TC216 PERFORM CUT TAPS

EXPIRES OCTOBER 31st, 2024

NEW TO THE RANGE

DIMENSION RANGE: TC115/TC216 Perform

DIN/ANSI	DIN
UNC 6-32 - UNC 3/4-10	UNC 6-32 - UNC 3/4-10
UNF 10-32 - UNF 3/4 - 16	M1.6 - M20
	MF 8X1 - MF 18X1.5

WALTER PROTOTYP

THE TOOLS: TC115/TC216

- Universal HSS-E cut taps
- Excellent self guidance due to low relief angles: no axial miscut in soft materials
- TC115: deep threads possible thanks to 45° helix angle

THE APPLICATION

- TC115: blind hole threads up to 3 x D_N
- TC216: through hole threads up to 3 x D_N
- ISO P, M, K and N materials up to 300 HB
  - unalloyed and alloyed steels
  - austenitic stainless steels
  - nodular cast iron (GJS)
  - Al wrought alloys, AlSi alloys up to 7% silicon content
- Floating chucks can be utilized even in very soft materials

THE GRADE

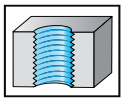
- WY80AA (HSS-E + TIN): good wear resistance and higher cutting speed

HSS-E machine taps
TC216 Perform Inch shank

– Universal cut tap

UNC
ASME B1.1

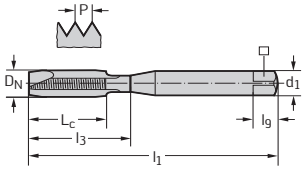
2B



≤ 3×D_N | B=3.5-5 | 300HB / 100HB

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●●			

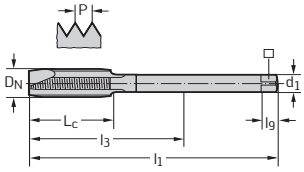
DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80AA
TC216.UNC6-C0-	UNC 6-32	0.138	2.205	0.433	0.787	0.141	0.110	0.188	3	●
TC216.UNC8-C0-	UNC 8-32	0.164	2.480	0.472	0.827	0.168	0.131	0.250	3	●
TC216.UNC10-C0-	UNC 10-24	0.190	2.756	0.512	0.984	0.194	0.152	0.250	3	●
TC216.UNC1/4-C0-	UNC 1/4-20	0.250	3.150	0.591	1.181	0.255	0.191	0.313	3	●
TC216.UNC5/16-C0-	UNC 5/16-18	0.313	3.543	0.709	1.378	0.318	0.238	0.375	3	●
TC216.UNC3/8-C0-	UNC 3/8-16	0.375	3.937	0.787	1.535	0.381	0.286	0.438	3	●

Order example for grade WY80AA: TC216.UNC6-C0-WY80AA

DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80AA
TC216.UNC1/2-L0-	UNC 1/2-13	0.500	4.331	0.906	3.224	0.367	0.275	0.438	4	●
TC216.UNC5/8-L0-	UNC 5/8-11	0.625	4.331	0.984	2.587	0.480	0.360	0.563	4	●
TC216.UNC3/4-L0-	UNC 3/4-10	0.750	4.921	1.181	3.051	0.590	0.442	0.688	4	●

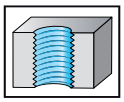
Order example for grade WY80AA: TC216.UNC1/2-L0-WY80AA

HSS-E machine taps
TC216 Perform Inch shank

– Universal cut tap

UNF
ASME B1.1

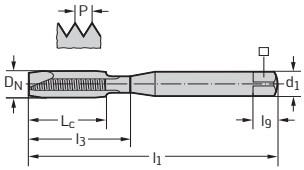
2B



≤ 3×D_N | B=3.5-5 | 300HB / 100HB

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●●			

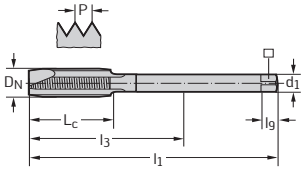
DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80AA
TC216.UNF10-C0-	UNF 10-32	0.190	2.756	0.512	0.984	0.194	0.152	0.250	3	●
TC216.UNF1/4-C0-	UNF 1/4-28	0.250	3.150	0.591	1.181	0.255	0.191	0.313	3	●
TC216.UNF5/16-C0-	UNF 5/16-24	0.313	3.543	0.709	1.378	0.318	0.238	0.380	3	●
TC216.UNF3/8-C0-	UNF 3/8-24	0.375	3.937	0.787	1.535	0.381	0.286	0.437	3	●
TC216.UNF7/16-L0-	UNF 7/16-20	0.438	3.937	0.787	2.862	0.323	0.242	0.406	3	●
TC216.UNF1/2-L0-	UNF 1/2-20	0.500	3.937	0.827	2.831	0.367	0.275	0.437	4	●

Order example for grade WY80AA: TC216.UNF10-C0-WY80AA

DIN/ANSI



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TC216.UNF9/16-L0-	UNF 9/16-18	0.563	3.937	0.827	2.768	0.429	0.322	0.500	4	●
TC216.UNF5/8-L0-	UNF 5/8-18	0.625	3.937	0.827	2.193	0.480	0.360	0.563	4	●
TC216.UNF3/4-L0-	UNF 3/4-16	0.750	4.331	0.945	2.461	0.590	0.442	0.689	4	●

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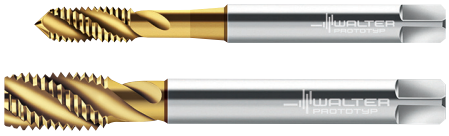
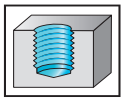
HSS-E machine taps
TC115 Perform Inch shank



– Universal cut tap

UNC
ASME B1.1

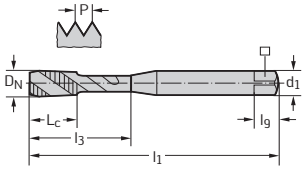
2B



≤ 3×D_N | C=2-3 | 45° | 300HB / 100HB

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●			

DIN/ANSI



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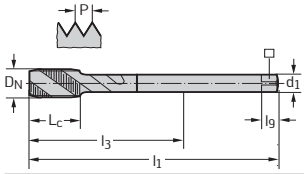

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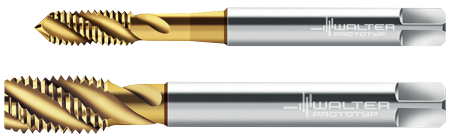
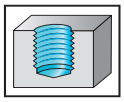


– Universal cut tap

UNF
ASME B1.1

2B



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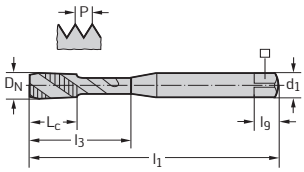

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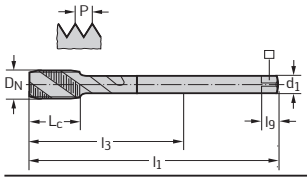

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Order example for grade WY80AA: TC115.UNF9/16-L0-WY80AA

EXPIRES OCTOBER 31st, 2024

CALL FOR PRICING OR EMAIL SUPPORT@TOOLANDCUTTER.COM

ALSO AVAILABLE IN METRIC:
DIN 374 – Reduced shank MF
DIN 376 – Reduced shank
DIN 371 – Reinforced shank

Cutting data for tapping

MULTIPY M/MIN BY 3.28 FOR SFM

The specified cutting data represents average standard values.
For specific applications, adjustment is recommended.

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength R_m N/mm²	Machining group [1]	HSS-E (PM) taps, Coated, v_c [m/min] 1,5 × D_N	2 × D_N	2,5 × D_N	Coolant recommendation
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	430	P1	37	30	26	E
		C > 0.25 to ≤ 0.55%	Annealed	190	640	P2	37	31	26	E
		C > 0.25 to ≤ 0.55%	Heat-treated	210	710	P3	23	19	17	E
		C > 0.55%	Annealed	190	640	P4	23	19	16	E
		C > 0.55%	Heat-treated	300	1010	P5	14	12	10	E
		Free-machining steel (short-chipping)	Annealed	220	750	P6	23	19	16	E
	Low-alloy steel	Annealed		175	590	P7	37	30	26	E
		Heat-treated		285	960	P8	12	10	9	E
		Heat-treated		380	1280	P9	7	6	5	E
		Heat-treated		430	1480	P10	5			O
	High-alloy steel and high-alloy tool steel	Annealed		200	680	P11	23	19	16	E
		Hardened and tempered		300	1010	P12	14	12	10	E
		Hardened and tempered		380	1280	P13	7	6	5	O
	Stainless steel	Ferritic/martensitic, annealed		200	680	P14	7	6	5	E
		Martensitic, heat-treated		330	1110	P15	5	4	3	E
M	Stainless steel	Austenitic, quench hardened		200	680	M1	8	7	6	E
		Austenitic, precipitation hardened (PH)		300	1010	M2	5	4	3	E
		Austenitic/ferritic, duplex		230	780	M3	6	5	4	E
K	Malleable cast iron	Ferritic		200	400	K1	22	18	16	E
		Pearlitic		260	700	K2	11	9	8	E
	Grey cast iron	Low strength		180	200	K3	44	36	32	E
		High strength/austenitic		245	350	K4	17	14	12	E
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	22	18	16	E
		Pearlitic		265	700	K6	12	10	9	E
	GGV (CGI)			230	400	K7	10	8	7	E
N	Wrought aluminium alloys	Not hardenable		30	–	N1	8	7	6	E
		Hardenable, hardened		100	340	N2	32	26	22	E
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	22	18	16	E
		≤ 12% Si, hardenable, hardened		90	310	N4	22	18	16	E
		> 12% Si, not hardenable		130	450	N5	25	21	18	E
	Magnesium-based alloys			70	250	N6	34	28	24	O
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	N7	14	12	10	E
		Brass, bronze, red brass		90	310	N8	36	29	25	E
		Cu alloys, short-chipping		110	380	N9	48	40	34	E
		High-tensile, Ampco		300	1010	N10				E
S	Heat-resistant alloys	Fe-based	Annealed	200	680	S1				E
			Hardened	280	940	S2	3			E
		Ni- or Co-based	Annealed	250	840	S3				E
			Hardened	350	1180	S4	3			O
			Cast	320	1080	S5	3			O
	Titanium alloys	Pure titanium		200	680	S6	8	7	6	E
		α and β alloys, hardened		375	1260	S7	4	4		O
		β alloys		410	1400	S8	4	4		O
	Tungsten alloys			300	1010	S9	2	2		O
	Molybdenum alloys			300	1010	S10	7	5		O
H	Hardened steel	Hardened and tempered		50 HRC	–	H1				O
		Hardened and tempered		55 HRC	–	H2				O
		Hardened and tempered		60 HRC	–	H3				O
	Hardened cast iron	Hardened and tempered		55 HRC	–	H4				O
O	Thermoplastics	Without abrasive fillers				O1	22	18	15	E
	Thermosets	Without abrasive fillers				O2	13	10	9	E
	Plastic, glass-fibre-reinforced	GFRP				O3	8	6	5	E
	Plastic, carbon-fibre-reinforced	CFRP				O4	8	6	5	E
	Plastic, aramid-fibre-reinforced	AFRP				O5	8	6	5	E
	Graphite (technical)			80 Shore		O6	19	16	13	E