

# T-A PRO<sup>®</sup> DRILL AND CHAMFER

NUOVI MANDRINI STANDARD  
PER FORARE E SMUSSARE



**Una soluzione standard ora a catalogo:**  
i nuovi mandrini Drill & Chamfer uniscono foratura e smussatura in un  
unico utensile, eliminando passaggi successivi e rendendo subito  
pronta la sede per la filettatura



[febametal.com](http://febametal.com)

**Mandrini per Forare e smussare T-A Pro**

Intervallo di diametro: 9.50 mm - 47.80 mm (0.3739" - 1.8820")

A

DRILLING

B

BORING

**MANDRINI  
PER FORARE E SMUSSARE**

- Ø: 9.50 mm – 47.80 mm.
- Prefori di filettatura con smusso di almeno 1mm x 45°.
- Progettati in conformità alle specifiche di filetti più utilizzate.
- Vasta gamma di diametri di foratura con un unico mandrino.
- Nessun bisogno di lavorazioni aggiuntive come smussatura o sbavatura.
- Ideale per esecuzione di prefiori 2xD per punte AMEC extralunghe da 10XD a 15XD.

C

REAMING

**SOLUZIONI DI SMUSSATURA SEMPLIFICATE.**

I diametri tabellati per le dimensioni standard delle filettature facilitano la scelta dell'utensile da parte dell'utente.

**1** Seleziona la dimensione del filetto dalla tabella.**2** Seleziona l'inserto T-A PRO® in base al materiale da forare.**3** Seleziona la forma dell'attacco.**4** Verifica la profondità in Z.

D

BURISHING

ISO Metric Standard Threads

Serie	Dimensioni del filetto	Ø Maggiore Filetto	inserto pilota	Mandrino
	M11 x 1.5	11.00	TA#Y-9.50	HTAYAC45-XXXX
	M12 x 1.75	12.00	TA#Y-10.30	
	M14 x 2	14.00	TA#Z-12.00	HTAZAC45-XXXX
	M16 x 2	16.00	TA#0-14.00	HTA0AC45-XXXX
	M18 x 2.5	18.00	TA#0-15.50	HTA0CC45-XXXX
	M20 x 2.5	20.00	TA#0-17.50	
	M22 x 2.5	22.00	TA#1-19.50	HTA1AC45-XXXX
(M)	M24 x 3	24.00	TA#1-21.00	HTA1CC45-XXXX
	M27 x 3	27.00	TA#1-24.00	
	M30 x 3.5	30.00	TA#2-26.50	HTA2AC45-XXXX
	M33 x 3.5	33.00	TA#2-29.50	
	M36 x 4	36.00	TA#2-32.00	HTA2CC45-XXXX
	M39 x 4	39.00	TA#2-35.00	

# - Indica materiale ISO (P (acciaio), K (ghisa), N (non ferroso), M (acciaio inossidabile), X (substrato in acciaio inossidabile)).

**Profondità Z****Drill & Chamfer per Filettare**

$$\text{Profondità Z} = \left( \frac{\varnothing \text{ maggiore filetto} - D_{1 \text{ min}}}{2} \right) + (L_s) + (\text{Dimensione smusso})$$

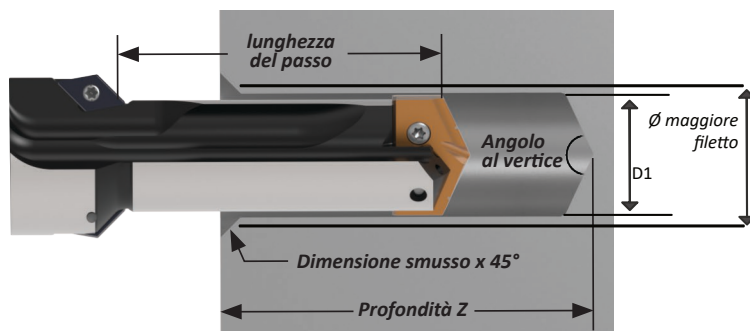
**Drill & Chamfer per smussare**

$$\text{Profondità Z} = \left( \frac{D_1 - D_{1 \text{ min}}}{2} \right) + (L_s) + (\text{Dimensione smusso})$$

**Lunghezza del passo**

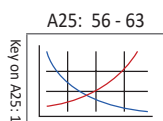
$$\text{Lunghezza del passo} = \left( \frac{D_1 - D_{1 \text{ min}}}{2} \right) + (L_s) - \left( \frac{D_1}{2 \tan(\text{Angolo al vertice}/2)} \right)$$

NOTA: L'angolo al vertice standard della punta è di 132°.

D<sub>1</sub> min = Ø preforo filetto

X

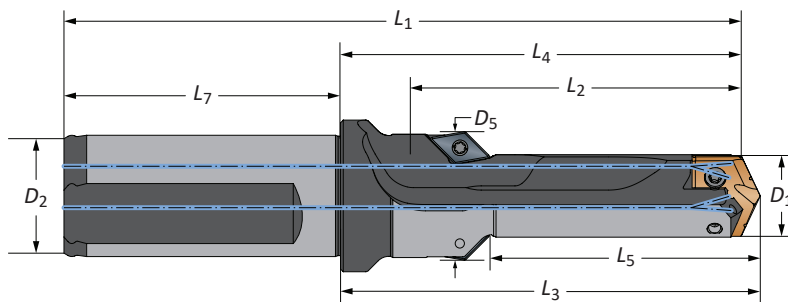
SPECIALS





### T-A Pro Drill Chamfer Holders

Diameter Range: 9.50 mm - 47.80 mm (0.3739" - 1.8820")



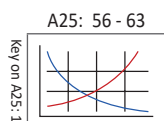
Series	Sub Series	D <sub>1</sub> Range		Step		Body				Shank			Flat	Part No.
		Min	Max	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>			
m	Y	A	9.50	11.09	18.7	31.8	44.6	59.3	61.3	109.3	50.0	20	Yes	HTAYAC45-20FM
		A	9.50	11.09	18.7	31.8	44.6	59.3	61.3	109.3	50.0	20	No	HTAYAC45-20CM
	Z	A	11.10	12.69	20.3	38.1	50.0	65.1	67.1	115.1	50.0	20	Yes	HTAZAC45-20FM
		A	11.10	12.69	20.3	38.1	50.0	65.1	67.1	115.1	50.0	20	No	HTAZAC45-20CM
	0	A	12.70	15.07	21.9	44.5	57.9	70.7	73.4	120.7	50.0	20	Yes	HTA0AC45-20FM
		A	12.70	15.07	21.9	44.5	57.9	70.7	73.4	120.7	50.0	20	No	HTA0AC45-20CM
		C	15.08	17.64	24.3	50.8	61.9	76.3	79.0	126.3	50.0	20	Yes	HTA0CC45-20FM
	1	C	15.08	17.64	24.3	50.8	61.9	76.3	79.0	126.3	50.0	20	No	HTA0CC45-20CM
		A	17.65	20.59	26.9	57.2	68.7	84.3	87.9	140.3	56.0	25	Yes	HTA1AC45-25FM
		A	17.65	20.59	26.9	57.2	68.7	84.3	87.9	140.3	56.0	25	No	HTA1AC45-25CM
		C	20.60	24.37	29.9	63.5	74.4	90.0	93.6	146.1	56.0	25	Yes	HTA1CC45-25FM
	2	C	20.60	24.37	29.9	63.5	74.4	90.0	93.6	146.1	56.0	25	No	HTA1CC45-25CM
A		24.38	28.49	39.1	63.5	83.2	102.9	106.5	162.9	60.0	32	Yes	HTA2AC45-32FM	
A		24.38	28.49	39.1	63.5	83.2	102.9	106.5	162.9	60.0	32	No	HTA2AC45-32CM	
C		28.50	35.04	43.2	82.6	99.8	120.3	123.9	180.3	60.0	32	Yes	HTA2CC45-32FM	
3	C	28.50	35.04	43.2	82.6	99.8	120.3	123.9	180.3	60.0	32	No	HTA2CC45-32CM	
	A	35.05	40.99	49.8	95.3	112.1	138.0	142.7	208.0	70.0	40	Yes	HTA3AC45-40FM	
	A	35.05	40.99	49.8	95.3	112.1	138.0	142.7	208.0	70.0	40	No	HTA3AC45-40CM	
	C	41.00	47.80	55.7	108.0	123.7	152.0	156.7	222.0	70.0	40	Yes	HTA3CC45-40FM	
i	Y	C	41.00	47.80	55.7	108.0	123.7	152.0	156.7	222.0	70.0	40	No	HTA3CC45-40CM
		A	0.3739	0.4368	0.735	1.250	1.754	2.333	2.413	4.363	2.030	3/4	Yes	HTAYAC45-075F
	Z	A	0.3739	0.4368	0.735	1.250	1.754	2.333	2.413	4.363	2.030	3/4	No	HTAYAC45-075C
		A	0.4369	0.4998	0.800	1.500	1.970	2.562	2.642	4.592	2.030	3/4	Yes	HTAZAC45-075F
	0	A	0.4369	0.4998	0.800	1.500	1.970	2.562	2.642	4.592	2.030	3/4	No	HTAZAC45-075C
		A	0.4999	0.5935	0.864	1.750	2.278	2.782	2.889	4.812	2.030	3/4	Yes	HTA0AC45-075F
		A	0.4999	0.5935	0.864	1.750	2.278	2.782	2.889	4.812	2.030	3/4	No	HTA0AC45-075C
	1	C	0.5936	0.6946	0.958	2.000	2.438	3.003	3.110	5.033	2.030	3/4	Yes	HTA0CC45-075F
		C	0.5936	0.6946	0.958	2.000	2.438	3.003	3.110	5.033	2.030	3/4	No	HTA0CC45-075C
		A	0.6947	0.8108	1.060	2.250	2.705	3.320	3.460	5.600	2.280	1	Yes	HTA1AC45-100F
		A	0.6947	0.8108	1.060	2.250	2.705	3.320	3.460	5.600	2.280	1	No	HTA1AC45-100C
	2	C	0.8109	0.9596	1.176	2.500	2.930	3.545	3.685	5.825	2.280	1	Yes	HTA1CC45-100F
C		0.8109	0.9596	1.176	2.500	2.930	3.545	3.685	5.825	2.280	1	No	HTA1CC45-100C	
A		0.9597	1.1218	1.540	2.500	3.277	4.051	4.191	6.331	2.280	1-1/4	Yes	HTA2AC45-125F	
A		0.9597	1.1218	1.540	2.500	3.277	4.051	4.191	6.331	2.280	1-1/4	No	HTA2AC45-125C	
3	C	1.1219	1.3797	1.700	3.250	3.927	4.737	4.877	7.017	2.280	1-1/4	Yes	HTA2CC45-125F	
	C	1.1219	1.3797	1.700	3.250	3.927	4.737	4.877	7.017	2.280	1-1/4	No	HTA2CC45-125C	
	A	1.3798	1.6139	1.960	3.750	4.412	5.432	5.619	8.120	2.688	1-1/2	Yes	HTA3AC45-150F	
	A	1.3798	1.6139	1.960	3.750	4.412	5.432	5.619	8.120	2.688	1-1/2	No	HTA3AC45-150C	
3	C	1.6140	1.8820	2.194	4.250	4.872	5.984	6.171	8.672	2.688	1-1/2	Yes	HTA3CC45-150F	
	C	1.6140	1.8820	2.194	4.250	4.872	5.984	6.171	8.672	2.688	1-1/2	No	HTA3CC45-150C	

#### Chamfer Inserts (Wohlhaupter® 146 Geometry) | Connection Accessories

Y - 1 Series			2 - 3 Series			P	K	N	M	S	H
Part No.	TORX®	Driver	Part No.	TORX®	Driver						
397968WHC88	115676-1	8T-8	397591WHC88	115673-1	8T-15	●	—	●	●	●	—
397968WHC81	115676-1	8T-8	397591WHC81	115673-1	8T-15	●	●	—	—	—	●

● First Choice ● Second Choice

Pilot insert screws and drivers can be found on the respective series holder page.



i = Imperial (in)  
m = Metric (mm)

Screws sold in multiples of 10.

**T-A Pro Drill Chamfer Thread Size & Pilot Insert | Metric**

UNC | UNF | UNEF | MC | MF

**Unified Standard Threads**

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Coarse (UNC)	7/16" - 14	11.10	TA#Y-9.50	HTAYAC45-XXXX
	1/2" - 13	12.70	TA#Y-10.80	
	9/16" - 12	14.27	TA#Z-12.20	HTAZAC45-XXXX
	5/8" - 11	15.88	TA#0-13.50	HTA0AC45-XXXX
	3/4" - 10	19.05	TA#0-16.50	HTA0CC45-XXXX
	7/8" - 9	22.23	TA#1-19.50	HTA1AC45-XXXX
	1" - 8	25.40	TA#1-22.30	HTA1CC45-XXXX
	1-1/8" - 7	28.58	TA#2-25.00	HTA2AC45-XXXX
	1-1/4" - 7	31.75	TA#2-28.20	
	1-3/8" - 6	34.93	TA#2-31.00	HTA2CC45-XXXX
	1-1/2" - 6	38.10	TA#2-34.00	
	1-3/4" - 5	44.45	TA#3-39.50	HTA3AC45-XXXX
2" - 4.5	50.80	TA#3-45.00	HTA3CC45-XXXX	
Fine (UNF)	7/16" - 20	11.10	TA#Y-9.90	HTAYAC45-XXXX
	1/2" - 20	12.70	TA#Z-11.50	HTAZAC45-XXXX
	9/16" - 18	14.27	TA#0-12.90	HTA0AC45-XXXX
	5/8" - 18	15.88	TA#0-14.50	
	3/4" - 16	19.05	TA#0-17.50	HTA0CC45-XXXX
	7/8" - 14	22.23	TA#1-20.50	HTA1AC45-XXXX
	1" - 12	25.40	TA#1-23.30	HTA1CC45-XXXX
	1-1/8" - 12	28.58	TA#2-26.50	HTA2AC45-XXXX
	1-1/4" - 12	31.75	TA#2-29.70	
	1-3/8" - 12	34.93	TA#2-32.90	HTA2CC45-XXXX
	1-1/2" - 12	38.10	TA#2-36.00	
	1-3/4" - 12	44.45	TA#3-39.50	HTA3AC45-XXXX
Extra Fine (UNEF)	7/16" - 28	11.10	TA#Y-10.20	HTAYAC45-XXXX
	1/2" - 28	12.70	TA#Z-11.80	HTAZAC45-XXXX
	9/16" - 24	14.27	TA#0-13.30	HTA0AC45-XXXX
	5/8" - 24	15.88	TA#0-14.90	
	3/4" - 20	19.05	TA#1-17.80	HTA1AC45-XXXX
	7/8" - 20	22.23	TA#1-21.00	HTA1CC45-XXXX
	1" - 20	25.40	TA#1-24.20	
	1-1/8" - 18	28.58	TA#2-27.20	HTA2AC45-XXXX
	1-1/4" - 18	31.75	TA#2-30.40	
	1-3/8" - 18	34.93	TA#2-33.60	HTA2CC45-XXXX
	1-1/2" - 18	38.10	TA#2-36.70	
	1-3/4" - 18	44.45	TA#3-39.50	HTA3AC45-XXXX
2" - 4.5	50.80	TA#3-45.00	HTA3CC45-XXXX	

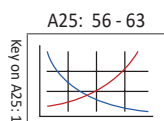
**ISO Metric Standard Threads**

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.	
Coarse (MC)	M11 x 1	11.00	TA#Y-10.00	HTAYAC45-XXXX	
	M11 x 0.75	11.00	TA#Y-10.30		
	M12 x 1.5	12.00	TA#Y-10.50		HTAZAC45-XXXX
	M12 x 1.25	12.00	TA#Y-10.80		
	M12 x 1	12.00	TA#Y-11.00	HTA0AC45-XXXX	
	M14 x 1.5	14.00	TA#Z-12.50		
	M14 x 1.25	14.00	TA#0-12.80	HTA0CC45-XXXX	
	M14 x 1	14.00	TA#0-13.00		
	M16 x 1.5	16.00	TA#0-14.50	HTA0AC45-XXXX	
	M16 x 1	16.00	TA#0-15.00		
	M18 x 2	18.00	TA#0-16.00	HTA0CC45-XXXX	
	M18 x 1.5	18.00	TA#0-16.50		
	M18 x 1	18.00	TA#0-17.00	HTA0AC45-XXXX	
	M20 x 2	20.00	TA#1-18.00		
	M20 x 1.5	20.00	TA#1-18.50	HTA1AC45-XXXX	
	M20 x 1	20.00	TA#1-19.00		
	M22 x 2	22.00	TA#1-20.00	HTA1CC45-XXXX	
	M22 x 1.5	22.00	TA#1-20.50		
	M22 x 1	22.00	TA#1-21.00	HTA1AC45-XXXX	
	M24 x 2	24.00	TA#1-22.00		
	M24 x 1.5	24.00	TA#1-22.50	HTA1CC45-XXXX	
	M24 x 1	24.00	TA#1-23.00		
	M27 x 2	27.00	TA#2-25.00	HTA2AC45-XXXX	
	M27 x 1.5	27.00	TA#2-25.50		
M27 x 1	27.00	TA#2-26.00	HTA2AC45-XXXX		
M30 x 3	30.00	TA#2-27.00			
M30 x 2	30.00	TA#2-28.00	HTA2CC45-XXXX		
M30 x 1.5	30.00	TA#2-28.50			
M30 x 1	30.00	TA#2-29.00	HTA2AC45-XXXX		
M33 x 3	33.00	TA#2-30.00			
M33 x 2	33.00	TA#2-31.00	HTA2CC45-XXXX		
M33 x 1.5	33.00	TA#2-31.50			
M36 x 3	36.00	TA#2-33.00	HTA3AC45-XXXX		
M36 x 2	36.00	TA#2-34.00			
M36 x 1.5	36.00	TA#2-34.50	HTA3CC45-XXXX		
M39 x 3	39.00	TA#3-36.00			
M39 x 2	39.00	TA#3-37.00	HTA3AC45-XXXX		
M39 x 1.5	39.00	TA#3-37.50			
M42 x 4	42.00	TA#3-38.00	HTA3AC45-XXXX		
M42 x 3	42.00	TA#3-39.00			
M42 x 2	42.00	TA#3-40.00	HTA3CC45-XXXX		
M42 x 1.5	42.00	TA#3-40.50			
M45 x 4	45.00	TA#3-41.00	HTA3AC45-XXXX		
M45 x 3	45.00	TA#3-42.00			
M45 x 2	45.00	TA#3-43.00	HTA3CC45-XXXX		
M45 x 1.5	45.00	TA#3-43.50			
M48 x 4	48.00	TA#3-44.00	HTA3AC45-XXXX		
M48 x 3	48.00	TA#3-45.00			
M48 x 2	48.00	TA#3-46.00	HTA3CC45-XXXX		
M48 x 1.5	48.00	TA#3-46.50			

**ISO Metric Standard Threads**

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Coarse (MC)	M11 x 1.5	11.00	TA#Y-9.50	HTAYAC45-XXXX
	M12 x 1.75	12.00	TA#Y-10.30	
	M14 x 2	14.00	TA#Z-12.00	HTAZAC45-XXXX
	M16 x 2	16.00	TA#0-14.00	HTA0AC45-XXXX
	M18 x 2.5	18.00	TA#0-15.50	HTA0CC45-XXXX
	M20 x 2.5	20.00	TA#0-17.50	
	M22 x 2.5	22.00	TA#1-19.50	HTA1AC45-XXXX
	M24 x 3	24.00	TA#1-21.00	HTA1CC45-XXXX
	M27 x 3	27.00	TA#1-24.00	
	M30 x 3.5	30.00	TA#2-26.50	HTA2AC45-XXXX
	M33 x 3.5	33.00	TA#2-29.50	HTA2CC45-XXXX
	M36 x 4	36.00	TA#2-32.00	
	M39 x 4	39.00	TA#2-35.00	HTA3AC45-XXXX
	M42 x 4.5	42.00	TA#3-37.50	
	M45 x 4.5	45.00	TA#3-40.50	HTA3CC45-XXXX
	M48 x 5	48.00	TA#3-43.00	
	M52 x 5	52.00	TA#3-47.00	HTA3CC45-XXXX

**NOTE:** All diameters listed are for cutting taps and thread mills.  
 # - Denotes insert ISO code (P (steel), K (cast iron), N (nonferrous), M (stainless steel), X (high-speed steel substrate)).



A DRILLING

B BORING

C REAMING

D BURNISHING

E THREADING

X SPECIALS

**T-A Pro Drill Chamfer Thread Size & Pilot Insert | Metric**

NPT | NPS | BSW | BSF | BSPT | BSPP

**American National Standard Pipe Threads**

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Tapered without Reamer (NPT)	1/4" - 18	13.72	TA#Z-11.11	HTAZAC45-XXXX
	3/8" - 18	17.15	TA#0-14.60	HTA0AC45-XXXX
	1/2" - 14	21.34	TA#1-17.90	HTA1AC45-XXXX
	3/4" - 14	26.67	TA#1-23.30	HTA1CC45-XXXX
	1" - 11.5	33.40	TA#2-29.00	HTA2CC45-XXXX
	1-1/4" - 11.5	42.16	TA#3-37.70	HTA3AC45-XXXX
	1-1/2" - 11.5	48.26	TA#3-43.70	HTA3CC45-XXXX
Tapered with Reamer (NPT)	1/4" - 18	13.72	TA#Y-10.70	HTAYAC45-XXXX
	3/8" - 18	17.15	TA#0-14.20	HTA0AC45-XXXX
	1/2" - 14	21.34	TA#0-17.50	HTA0CC45-XXXX
	3/4" - 14	26.67	TA#1-22.90	HTA1CC45-XXXX
	1" - 11.5	33.40	TA#2-28.60	HTA2CC45-XXXX
	1-1/4" - 11.5	42.16	TA#3-37.30	HTA3AC45-XXXX
	1-1/2" - 11.5	48.26	TA#3-43.30	HTA3CC45-XXXX
Straight (NPS)	1/4" - 18	13.36	TA#Z-11.50	HTAZAC45-XXXX
	3/8" - 18	16.76	TA#0-15.00	HTA0AC45-XXXX
	1/2" - 14	20.90	TA#1-18.30	HTA1AC45-XXXX
	3/4" - 14	26.26	TA#1-23.70	HTA1CC45-XXXX
	1" - 11.5	32.84	TA#2-29.40	HTA2CC45-XXXX
	1-1/4" - 11.5	41.61	TA#3-38.10	HTA3AC45-XXXX
	1-1/2" - 11.5	47.68	TA#3-44.10	HTA3CC45-XXXX

**British Standard Threads**

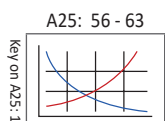
Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Coarse (BSW)	1/2" - 12	12.70	TA#Y-10.50	HTAYAC45-XXXX
	9/16" - 12	14.29	TA#Z-12.00	HTAZAC45-XXXX
	5/8" - 11	15.88	TA#0-13.40	HTA0AC45-XXXX
	11/16" - 11	17.46	TA#0-14.80	HTA0AC45-XXXX
	3/4" - 10	19.05	TA#0-16.40	HTA0CC45-XXXX
	7/8" - 9	22.23	TA#1-19.25	HTA1AC45-XXXX
	1" - 8	25.40	TA#1-22.00	HTA1CC45-XXXX
	1-1/8" - 7	28.58	TA#2-24.70	HTA2AC45-XXXX
	1-1/4" - 7	31.75	TA#2-27.50	HTA2AC45-XXXX
	1-3/8" - 6	34.93	TA#2-30.00	HTA2CC45-XXXX
	1-1/2" - 6	38.10	TA#2-33.50	HTA2CC45-XXXX
	1-3/4" - 5	44.45	TA#3-39.00	HTA3AC45-XXXX
	2" - 4.5	50.80	TA#3-44.50	HTA3CC45-XXXX
	Fine (BSF)	1/2" - 16	12.70	TA#Y-11.00
9/16" - 16		14.29	TA#Z-12.60	HTAZAC45-XXXX
5/8" - 14		15.88	TA#0-14.00	HTA0AC45-XXXX
11/16" - 14		17.46	TA#0-15.50	HTA0CC45-XXXX
3/4" - 12		19.05	TA#0-16.80	HTA0CC45-XXXX
7/8" - 11		22.23	TA#1-19.80	HTA1AC45-XXXX
1" - 10		25.40	TA#1-22.70	HTA1CC45-XXXX
1-1/8" - 9		28.58	TA#2-25.50	HTA2AC45-XXXX
1-1/4" - 9		31.75	TA#2-28.50	HTA2AC45-XXXX
1-3/8" - 8		34.93	TA#2-31.50	HTA2CC45-XXXX
1-1/2" - 8		38.10	TA#2-34.50	HTA2CC45-XXXX

**British Standard Pipe Threads**

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.	
Rc Series without Reamer (BSPT)	1/4" - 19	13.16	TA#Y-11.00	HTAYAC45-XXXX	
	3/8" - 19	16.66	TA#0-14.50	HTA0AC45-XXXX	
	1/2" - 14	20.99	TA#1-18.10	HTA1AC45-XXXX	
	3/4" - 14	26.44	TA#1-23.50	HTA1CC45-XXXX	
	1" - 11	33.25	TA#2-29.60	HTA2CC45-XXXX	
	1-1/4" - 11	41.91	TA#3-38.10	HTA3AC45-XXXX	
	1-1/2" - 11	47.80	TA#3-44.00	HTA3CC45-XXXX	
Rc Series with Reamer (BSPT)	1/4" - 19	13.16	TA#Y-10.60	HTAYAC45-XXXX	
	3/8" - 19	16.66	TA#0-14.10	HTA0AC45-XXXX	
	1/2" - 14	20.99	TA#1-17.70	HTA1AC45-XXXX	
	3/4" - 14	26.44	TA#1-23.10	HTA1CC45-XXXX	
	1" - 11	33.25	TA#2-29.20	HTA2CC45-XXXX	
	1-1/4" - 11	41.91	TA#3-37.70	HTA3AC45-XXXX	
	1-1/2" - 11	47.80	TA#3-43.60	HTA3CC45-XXXX	
Rp Series (BSPT)	1/4" - 19	13.16	TA#Z-11.50	HTAZAC45-XXXX	
	3/8" - 19	16.66	TA#0-15.00	HTA0AC45-XXXX	
	1/2" - 14	20.96	TA#1-18.50	HTA1AC45-XXXX	
	5/8" - 14	21.96	TA#1-20.50	HTA1AC45-XXXX	
	3/4" - 14	26.44	TA#1-24.00	HTA1CC45-XXXX	
	1" - 11	33.25	TA#2-30.30	HTA2CC45-XXXX	
	1-1/4" - 11	41.91	TA#3-39.00	HTA3AC45-XXXX	
	1-1/2" - 11	47.80	TA#3-45.00	HTA3CC45-XXXX	
	G Series (BSPP)	1/4" - 19	13.16	TA#Z-11.80	HTAZAC45-XXXX
		3/8" - 19	16.66	TA#0-15.25	HTA0CC45-XXXX
1/2" - 14		20.96	TA#1-19.00	HTA1AC45-XXXX	
5/8" - 14		26.44	TA#1-21.00	HTA1CC45-XXXX	
3/4" - 14		26.44	TA#2-24.50	HTA2AC45-XXXX	
7/8" - 14		31.24	TA#2-28.20	HTA2AC45-XXXX	
1" - 11		33.25	TA#2-30.75	HTA2CC45-XXXX	
1-1/8" - 11		34.25	TA#3-35.50	HTA2CC45-XXXX	
1-1/4" - 11		41.91	TA#3-39.50	HTA3AC45-XXXX	
1-3/8" - 11		42.91	TA#3-41.90	HTA3AC45-XXXX	
1-1/2" - 11	47.80	TA#3-45.20	HTA3CC45-XXXX		

**NOTE:** All diameters listed are for cutting taps and thread mills.

# - Denotes insert ISO code (P (steel), K (cast iron), N (nonferrous), M (stainless steel), X (high-speed steel substrate)).



A  
DRILLING  
B  
BORING  
C  
REAMING  
D  
BURNISHING  
E  
THREADING  
X  
SPECIALS

**T-A Pro Drill Chamfer Thread Size & Pilot Insert | Imperial**

UNC | UNF | UNEF | MC | MF

**Unified Standard Threads**

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Coarse (UNC)	7/16" - 14	0.4370	TA#Y-9.50	HTAYAC45-XXXX
	1/2" - 13	0.5000	TA#Y-10.72	
	9/16" - 12	0.5620	TA#Z-12.30	HTAZAC45-XXXX
	5/8" - 11	0.6250	TA#0-13.49	HTA0AC45-XXXX
	3/4" - 10	0.7500	TA#0-16.67	HTA0CC45-XXXX
	7/8" - 9	0.8750	TA#1-19.45	HTA1AC45-XXXX
	1" - 8	1.0000	TA#1-22.23	HTA1CC45-XXXX
	1-1/8" - 7	1.1250	TA#2-25.00	HTA2AC45-XXXX
	1-1/4" - 7	1.2500	TA#2-28.17	
	1-3/8" - 6	1.3750	TA#2-30.96	HTA2CC45-XXXX
	1-1/2" - 6	1.5000	TA#2-34.13	
	1-3/4" - 5	1.7500	TA#3-39.29	HTA3AC45-XXXX
2" - 4.5	2.0000	TA#3-45.24	HTA3CC45-XXXX	
Fine (UNF)	7/16" - 20	0.4370	TA#Y-9.92	HTAYAC45-XXXX
	1/2" - 20	0.5000	TA#Z-11.51	HTAZAC45-XXXX
	9/16" - 18	0.5620	TA#0-12.90	HTA0AC45-XXXX
	5/8" - 18	0.6250	TA#0-14.50	
	3/4" - 16	0.7500	TA#0-17.46	HTA0CC45-XXXX
	7/8" - 14	0.8750	TA#1-20.50	HTA1AC45-XXXX
	1" - 12	1.0000	TA#1-23.42	HTA1CC45-XXXX
	1-1/8" - 12	1.1250	TA#2-26.59	HTA2AC45-XXXX
	1-1/4" - 12	1.2500	TA#2-29.70	
	1-3/8" - 12	1.3750	TA#2-32.90	HTA2CC45-XXXX
	1-1/2" - 12	1.5000	TA#2-36.00	
	Extra Fine (UNEF)	7/16" - 28	0.4370	TA#Y-10.20
1/2" - 28		0.5000	TA#Z-11.80	HTAZAC45-XXXX
9/16" - 24		0.5620	TA#0-13.30	HTA0AC45-XXXX
5/8" - 24		0.6250	TA#0-14.90	
3/4" - 20		0.7500	TA#1-17.86	HTA1AC45-XXXX
7/8" - 20		0.8750	TA#1-21.00	HTA1CC45-XXXX
1" - 20		1.0000	TA#1-24.20	
1-1/8" - 18		1.1250	TA#2-27.20	HTA2AC45-XXXX
1-1/4" - 18		1.2500	TA#2-30.40	HTA2CC45-XXXX
1-3/8" - 18		1.3750	TA#2-33.60	
1-1/2" - 18		1.5000	TA#2-36.70	HTA3AC45-XXXX

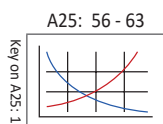
**ISO Metric Standard Threads**

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Coarse (MC)	M11 x 1	0.4331	TA#Y-10.00	HTAYAC45-XXXX
	M11 x 0.75	0.4331	TA#Y-10.30	
	M12 x 1.5	0.4724	TA#Y-10.50	
	M12 x 1.25	0.4724	TA#Y-10.80	
	M12 x 1	0.4724	TA#Y-11.00	HTAZAC45-XXXX
	M14 x 1.5	0.5512	TA#Z-12.50	
	M14 x 1.25	0.5512	TA#0-12.80	HTA0AC45-XXXX
	M14 x 1	0.5512	TA#0-13.00	
	M16 x 1.5	0.6299	TA#0-14.50	
	M16 x 1	0.6299	TA#0-15.00	
	M18 x 2	0.7087	TA#0-16.00	HTA0CC45-XXXX
	M18 x 1.5	0.7087	TA#0-16.50	
	M18 x 1	0.7087	TA#0-17.00	HTA1AC45-XXXX
	M20 x 2	0.7874	TA#1-18.00	
	M20 x 1.5	0.7874	TA#1-18.50	
	M20 x 1	0.7874	TA#1-19.00	
	M22 x 2	0.8661	TA#1-20.00	HTA1CC45-XXXX
	M22 x 1.5	0.8661	TA#1-20.50	
	M22 x 1	0.8661	TA#1-21.00	
	M24 x 2	0.9449	TA#1-22.00	
	M24 x 1.5	0.9449	TA#1-22.50	HTA2AC45-XXXX
	M24 x 1	0.9449	TA#1-23.00	
	M27 x 2	1.0630	TA#2-25.00	
	M27 x 1.5	1.0630	TA#2-25.50	
M27 x 1	1.0630	TA#2-26.00	HTA2CC45-XXXX	
M30 x 3	1.1811	TA#2-27.00		
M30 x 2	1.1811	TA#2-28.00		
M30 x 1.5	1.1811	TA#2-28.50		
M30 x 1	1.1811	TA#2-29.00	HTA3AC45-XXXX	
M33 x 3	1.2992	TA#2-30.00		
M33 x 2	1.2992	TA#2-31.00		
M33 x 1.5	1.2992	TA#2-31.50		
M36 x 3	1.4173	TA#2-33.00	HTA3CC45-XXXX	
M36 x 2	1.4173	TA#2-34.00		
M36 x 1.5	1.4173	TA#2-34.50		
M39 x 3	1.5354	TA#3-36.00		
M39 x 2	1.5354	TA#3-37.00	HTA3AC45-XXXX	
M39 x 1.5	1.5354	TA#3-37.50		
M42 x 4	1.6535	TA#3-38.00		
M42 x 3	1.6535	TA#3-39.00		
M42 x 2	1.6535	TA#3-40.00	HTA3CC45-XXXX	
M42 x 1.5	1.6535	TA#3-40.50		
M45 x 4	1.7717	TA#3-41.00		
M45 x 3	1.7717	TA#3-42.00		
M45 x 2	1.7717	TA#3-43.00	HTA3CC45-XXXX	
M45 x 1.5	1.7717	TA#3-43.50		
M48 x 4	1.8898	TA#3-44.00		
M48 x 3	1.8898	TA#3-45.00		
M48 x 2	1.8898	TA#3-46.00	HTA3CC45-XXXX	
M48 x 1.5	1.8898	TA#3-46.50		

**ISO Metric Standard Threads**

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Coarse (MC)	M11 x 1.5	0.4331	TA#Y-9.50	HTAYAC45-XXXX
	M12 x 1.75	0.4724	TA#Y-10.30	
	M14 x 2	0.5512	TA#Z-12.00	HTAZAC45-XXXX
	M16 x 2	0.6299	TA#0-14.00	HTA0AC45-XXXX
	M18 x 2.5	0.7087	TA#0-15.50	HTA0CC45-XXXX
	M20 x 2.5	0.7874	TA#0-17.50	
	M22 x 2.5	0.8661	TA#1-19.50	HTA1AC45-XXXX
	M24 x 3	0.9449	TA#1-21.00	HTA1CC45-XXXX
	M27 x 3	1.0630	TA#1-24.00	
	M30 x 3.5	1.1811	TA#2-26.50	HTA2AC45-XXXX
	M33 x 3.5	1.2992	TA#2-29.50	HTA2CC45-XXXX
	M36 x 4	1.4173	TA#2-32.00	
	M39 x 4	1.5354	TA#2-35.00	HTA3AC45-XXXX
	M42 x 4.5	1.6535	TA#3-37.50	
	M45 x 4.5	1.7717	TA#3-40.50	
	M48 x 5	1.8898	TA#3-43.00	
	M52 x 5	2.0472	TA#3-47.00	HTA3CC45-XXXX

**NOTE:** All diameters listed are for cutting taps and thread mills.  
 # - Denotes insert ISO code (P (steel), K (cast iron), N (nonferrous), M (stainless steel), X (high-speed steel substrate)).



A DRILLING

B BORING

C REAMING

D BURISHING

E THREADING

X SPECIALS

## T-A Pro Drill Chamfer Thread Size & Pilot Insert | Imperial

NPT | NPS | BSW | BSF | BSPT | BSPP

### American National Standard Pipe Threads

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Tapered without Reamer (NPT)	1/4" - 18	0.5400	TA#Z-11.11	HTAZAC45-XXXX
	3/8" - 18	0.6750	TA#O-14.68	HTA0AC45-XXXX
	1/2" - 14	0.8400	TA#1-17.86	HTA1AC45-XXXX
	3/4" - 14	1.0500	TA#1-23.02	HTA1CC45-XXXX
	1" - 11.5	1.3150	TA#2-28.97	HTA2CC45-XXXX
	1-1/4" - 11.5	1.6600	TA#3-37.70	HTA3AC45-XXXX
	1-1/2" - 11.5	1.9000	TA#3-43.66	HTA3CC45-XXXX
Tapered with Reamer (NPT)	1/4" - 18	0.5400	TA#Y-10.72	HTAYAC45-XXXX
	3/8" - 18	0.6750	TA#O-14.29	HTA0AC45-XXXX
	1/2" - 14	0.8400	TA#O-17.46	HTA0CC45-XXXX
	3/4" - 14	1.0500	TA#1-22.62	HTA1CC45-XXXX
	1" - 11.5	1.3150	TA#2-28.58	HTA2CC45-XXXX
	1-1/4" - 11.5	1.6600	TA#3-37.31	HTA3AC45-XXXX
	1-1/2" - 11.5	1.9000	TA#3-43.26	HTA3CC45-XXXX
Straight (NPS)	1/4" - 18	0.5260	TA#Z-11.51	HTAZAC45-XXXX
	3/8" - 18	0.6600	TA#O-15.08	HTA0CC45-XXXX
	1/2" - 14	0.8230	TA#1-18.26	HTA1AC45-XXXX
	3/4" - 14	1.0340	TA#1-23.42	HTA1CC45-XXXX
	1" - 11.5	1.2930	TA#2-29.37	HTA2CC45-XXXX
	1-1/4" - 11.5	1.6380	TA#3-38.10	HTA3AC45-XXXX
	1-1/2" - 11.5	1.8770	TA#3-44.05	HTA3CC45-XXXX

### British Standard Threads

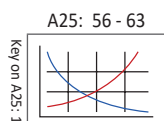
Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.
Coarse (BSW)	1/2" - 12	0.5000	TA#Y-10.32	HTAYAC45-XXXX
	9/16" - 12	0.5626	TA#Z-11.91	HTAZAC45-XXXX
	5/8" - 11	0.6252	TA#O-13.10	HTA0AC45-XXXX
	11/16" - 11	0.6874	TA#O-14.68	HTA0AC45-XXXX
	3/4" - 10	0.7500	TA#O-16.27	HTA0CC45-XXXX
	7/8" - 9	0.8752	TA#1-19.05	HTA1AC45-XXXX
	1" - 8	1.0000	TA#1-21.83	HTA1CC45-XXXX
	1-1/8" - 7	1.1252	TA#2-24.61	HTA2AC45-XXXX
	1-1/4" - 7	1.2500	TA#2-27.38	HTA2AC45-XXXX
	1-3/8" - 6	1.3752	TA#2-29.77	HTA2CC45-XXXX
	1-1/2" - 6	1.5000	TA#2-33.34	HTA2CC45-XXXX
	1-3/4" - 5	1.7500	TA#3-38.50	HTA3AC45-XXXX
	2" - 4.5	2.0000	TA#3-44.05	HTA3CC45-XXXX
	Fine (BSF)	1/2" - 16	0.5000	TA#Z-11.11
9/16" - 16		0.5626	TA#O-12.70	HTA0AC45-XXXX
5/8" - 14		0.6252	TA#O-13.89	HTA0AC45-XXXX
11/16" - 14		0.6874	TA#O-15.48	HTA0CC45-XXXX
3/4" - 12		0.7500	TA#O-16.67	HTA0CC45-XXXX
7/8" - 11		0.8752	TA#1-19.45	HTA1AC45-XXXX
1" - 10		1.0000	TA#1-22.62	HTA1CC45-XXXX
1-1/8" - 9		1.1252	TA#2-25.40	HTA2AC45-XXXX
1-1/4" - 9		1.2500	TA#2-28.58	HTA2AC45-XXXX
1-3/8" - 8		1.3752	TA#2-31.35	HTA2CC45-XXXX
1-1/2" - 8		1.5000	TA#2-34.58	HTA2CC45-XXXX

### British Standard Pipe Threads

Series	Thread Size	Thread Major	Pilot Insert No.	Holder Part No.	
Rc Series without Reamer (BSPT)	1/4" - 19	0.5181	TA#Z-11.11	HTAZAC45-XXXX	
	3/8" - 19	0.6559	TA#O-14.68	HTA0AC45-XXXX	
	1/2" - 14	0.8264	TA#1-18.26	HTA1AC45-XXXX	
	3/4" - 14	1.0409	TA#1-23.81	HTA1CC45-XXXX	
	1" - 11	1.3091	TA#2-29.77	HTA2CC45-XXXX	
	1-1/4" - 11	1.6500	TA#3-38.50	HTA3AC45-XXXX	
	1-1/2" - 11	1.8819	TA#3-44.45	HTA3CC45-XXXX	
Rc Series with Reamer (BSPT)	1/4" - 19	0.5181	TA#Y-10.72	HTAYAC45-XXXX	
	3/8" - 19	0.6559	TA#O-14.29	HTA0AC45-XXXX	
	1/2" - 14	0.8264	TA#1-17.86	HTA1AC45-XXXX	
	3/4" - 14	1.0409	TA#1-23.42	HTA1CC45-XXXX	
	1" - 11	1.3091	TA#2-29.37	HTA2CC45-XXXX	
	1-1/4" - 11	1.6500	TA#3-38.10	HTA3AC45-XXXX	
	1-1/2" - 11	1.8819	TA#3-44.05	HTA3CC45-XXXX	
Rp Series (BSPT)	1/4" - 19	0.5181	TA#Z-11.51	HTAZAC45-XXXX	
	3/8" - 19	0.6559	TA#O-15.08	HTA0CC45-XXXX	
	1/2" - 14	0.8252	TA#1-19.05	HTA1AC45-XXXX	
	5/8" - 14	0.8646	TA#1-20.64	HTA1CC45-XXXX	
	3/4" - 14	1.0409	TA#1-21.03	HTA1CC45-XXXX	
	1" - 11	1.3091	TA#2-30.56	HTA2CC45-XXXX	
	1-1/4" - 11	1.6500	TA#3-39.29	HTA3AC45-XXXX	
	1-1/2" - 11	1.8819	TA#3-45.24	HTA3CC45-XXXX	
	G Series (BSPP)	1/4" - 19	0.5181	TA#Z-11.51	HTAZAC45-XXXX
		3/8" - 19	0.6559	TA#O-15.08	HTA0CC45-XXXX
1/2" - 14		0.8252	TA#1-19.05	HTA1AC45-XXXX	
5/8" - 14		1.0409	TA#1-21.03	HTA1CC45-XXXX	
3/4" - 14		1.0409	TA#2-24.61	HTA2AC45-XXXX	
7/8" - 14		1.2299	TA#2-28.17	HTA2AC45-XXXX	
1" - 11		1.3091	TA#2-30.56	HTA2CC45-XXXX	
1-1/8" - 11		1.3484	TA#3-35.32	HTA3AC45-XXXX	
1-1/4" - 11		1.6500	TA#3-39.29	HTA3AC45-XXXX	
1-3/8" - 11		1.6894	TA#3-41.67	HTA3AC45-XXXX	
1-1/2" - 11	1.8819	TA#3-45.24	HTA3CC45-XXXX		

NOTE: All diameters listed are for cutting taps and thread mills.

# - Denotes insert ISO code (P (steel), K (cast iron), N (nonferrous), M (stainless steel), X (high-speed steel substrate)).



A  
DRILLING  
B  
BORING  
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SPECIALS