TOOLING
YOUR
WORLD®



Threading & Tapping – Taps & Tapping Holders

G3 TOOLING

SOWA TAPS

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Recommended cutting conditions for HSSE-V3 high performance taps with ANSI shank.



Blue Ring – For Soft Steels

Materials Main Group	Materials Sub-Group	Condition	Hardness (HRC)	Cutting Speed (FPM)
Low Carbon	1018, 1010, 1035	Normalized	<25	20-50
Medium Carbon	1045, 1050, 1065	Normalized	<25	20-40
Aluminum	Unalloyed, Cast	–	-	30-80
Brass/Bronze	–	–	-	30-80
Copper	–	–	-	25-60
Cast Iron	–	As Cast	<15	20-40



Yellow Ring – For Tough Materials

Materials Main Group	Materials Sub-Group	Condition	Hardness (HRC)	Cutting Speed (FPM)
Tool Steels	01, A-2, D-2, H-13, P-20	Annealed	<35	15-25
Medium Carbon	1030, 1035, 1038, 1040, 1045, 1050	Normalized	<28	20-40
Alloyed High Carbon	1065, 1070, 1080, 1090,1095, 1561,1572	Normalized	<32	20-30
High Strength	4140, 4340	Normalized	<32	20-30
Titanium	Commercially Pure	Annealed	<32	15-30
Stainless Steel	–	Annealed	<29	20-30
Aluminum	Cast, Wrought	–	–	30-90



Orange Ring – For Stainless Steel & Carbon Steels

Materials Main Group	Materials Sub-Group	Condition	Hardness (HRC)	Cutting Speed (FPM)
Stainless Steel	200 Series	Annealed	<28	20-35
	300 Series, 17-4 PH, 15-5, A286	Annealed	<28	20-35
	400 Series	Annealed	<29	20-35
	400 Series	Hardened	35-42	15-20
	17-4PH, 15-5, A286	Hardened	35-42	15-20
Low Carbon Steel	1010, 1018	Normalized	<20	25-50
Alloyed High Carbon	1050, 1065, 1070, 1080, 1090, 1095, 1561, 1572	Normalized	<25	20-30
Beryllium	–	–	<25	20-30



Green Series – For Aluminum

Materials Main Group	Materials Sub-Group	Condition	Hardness (HRC)	Cutting Speed (FPM)
Steels	Sheet, Low/Medium Carbon, Stainless Steel	Hardened	<20	20-50
Aluminum	Pure/Low	–	–	30-60
Aluminum	Die Cast	–	–	30-60

Blue Ring – HSSE-V3 Black Oxide ANSI Shank Taps – Intermediate & Bottoming Styles

Spiral Point



4.5 Pitch Lead (Intermediate)

HOLE TYPE

Tap	Thds Per In	No. Fl.	Thd Lim	OAL (in.)	Thd Lgth (in.)	Code No.
Inch						
4	40	2	H2	1-7/8	0.433	**119700**
6	32	3	H3	2	0.512	**119701**
6	40	3	H2	2	0.512	**119722**
8	32	3	H3	2-1/8	0.512	**119702**
10	24	2	H3	2-3/8	0.512	**119703**
10	24	3	H3	2-3/8	0.512	**119704**
10	32	2	H3	2-3/8	0.512	**119723**
10	32	3	H3	2-3/8	0.512	**119724**
12	24	3	H3	2-3/8	0.512	**119705**
1/4	20	2	H3	2-1/2	0.630	**119706**
1/4	20	3	H3	2-1/2	0.630	**119707**
1/4	28	2	H3	2-1/2	0.630	**119725**
1/4	28	3	H3	2-1/2	0.630	**119726**
5/16	18	2	H3	2-23/32	0.748	**119708**
5/16	18	3	H3	2-23/32	0.748	**119709**
5/16	24	2	H3	2-23/32	0.748	**119727**
5/16	24	3	H3	2-23/32	0.748	**119728**
3/8	16	2	H3	2-15/16	0.748	**119710**
3/8	16	3	H3	2-15/16	0.748	**119711**
3/8	24	2	H3	2-15/16	0.748	**119729**
3/8	24	3	H3	2-15/16	0.748	**119730**
7/16	14	3	H3	3-5/32	0.866	**119712**
7/16	20	3	H3	3-5/32	0.866	**119731**
1/2	13	3	H3	3-3/8	0.945	**119713**
1/2	20	3	H3	3-3/8	0.945	**119732**
5/8	11	3	H3	3-13/16	1.102	**119714**
5/8	18	3	H3	3-13/16	1.102	**119733**
3/4	10	3	H3	4-1/4	1.220	**119715**
3/4	16	3	H3	4-1/4	1.220	**119734**
7/8	9	3	H4	4-11/16	1.339	**119716**
7/8	14	3	H4	4-11/16	1.339	**119735**
1	8	3	H4	5-1/8	1.496	**119717**
1	12	3	H4	5-1/8	1.496	**119736**
1-1/8	7	4	H4	5-7/16	1.732	**119718**
1-1/8	12	4	H4	5-7/16	1.732	**119737**
1-1/4	7	4	H4	5-3/4	1.732	**119719**
1-1/4	12	4	H4	5-3/4	1.732	**119738**
1-3/8	6	4	H4	6-1/16	2.000	**119720**
1-3/8	12	4	H4	6-1/16	2.000	**119739**
1-1/2	6	4	H4	6-3/8	2.000	**119721**
1-1/2	12	4	H4	6-3/8	2.000	**119740**

Tap	No Fl.	Thd Lim	OAL (in.)	Thd Lgth (in.)	Code No.
Metric					
M2 x .4	2	D3	1-3/4	0.433	**119750**
M2.5 x .45	2	D3	1-13/16	0.512	**119751**
M3 x .5	3	D3	1-15/16	0.433	**119752**
M3.5 x .6	3	D4	2	0.512	**119753**
M4 x .7	3	D4	2-1/8	0.512	**119754**
M4.5 x .75	3	D4	2-3/8	0.512	**119755**
M5 x .8	3	D4	2-3/8	0.512	**119756**
M6 x 1	3	D5	2-1/2	0.630	**119757**
M7 x 1	3	D5	2-23/32	0.630	**119758**
M8 x 1	3	D5	2-23/32	0.748	**119759**
M8 x 1.25	3	D5	2-23/32	0.748	**119760**
M10 x 1.25	3	D5	2-15/16	0.748	**119761**
M10 x 1.5	3	D6	2-15/16	0.748	**119762**
M12 x 1.25	3	D5	3-3/8	0.945	**119763**
M12 x 1.75	3	D6	3-3/8	0.945	**119764**
M14 x 1.5	3	D6	3-19/32	0.984	**119765**
M14 x 2	3	D7	3-19/32	0.984	**119766**
M16 x 1.5	3	D6	3-13/16	1.102	**119767**
M16 x 2	3	D7	3-13/16	1.102	**119768**
M18 x 1.5	3	D6	4-1/32	1.102	**119769**
M18 x 2.5	3	D7	4-1/32	1.102	**119770**
M20 x 1.5	3	D5	4-15/32	1.220	**119771**
M20 x 2.5	3	D6	4-15/32	1.220	**119772**
M22 x 1.5	3	D6	4-11/16	1.339	**119773**
M22 x 2.5	3	D6	4-11/16	1.339	**119774**
M24 x 1.5	3	D5	4-29/32	1.339	**119775**
M24 x 3	3	D7	4-29/32	1.339	**119776**
M27 x 1.5	4	D7	5-1/8	1.181	**119777**
M27 x 3	4	D7	5-1/8	1.181	**119778**
M30 x 1.5	4	D7	5-7/16	1.378	**119779**
M30 x 3.5	4	D7	5-7/16	1.378	**119780**

Spiral Flute



2.5 Pitch Lead (Bottoming)

HOLE TYPE

Tap	Thds Per In	No. Fl.	Thd Lim	OAL (in.)	Thd Lgth (in.)	Code No.
Inch						
4	40	2	H2	1-7/8	0.433	**119800**
6	32	3	H3	2	0.512	**119801**
8	32	3	H3	2-1/8	0.512	**119802**
10	24	3	H3	2-3/8	0.512	**119803**
10	32	3	H3	2-3/8	0.512	**119817**
1/4	20	3	H3	2-3/8	0.630	**119804**
1/4	28	3	H3	2-1/2	0.630	**119818**
5/16	18	3	H3	2-1/2	0.748	**119805**
5/16	24	3	H3	2-23/32	0.748	**119819**
3/8	16	3	H3	2-23/32	0.748	**119806**
3/8	24	3	H3	2-15/16	0.748	**119820**
7/16	14	3	H3	2-15/16	0.866	**119807**
7/16	20	3	H3	2-15/16	0.866	**119830**
1/2	13	3	H3	3-3/8	0.945	**119808**
1/2	20	3	H3	3-3/8	0.945	**119821**
5/8	11	4	H3	3-13/16	1.102	**119809**
5/8	18	4	H3	3-13/16	1.102	**119822**
3/4	10	4	H3	4-1/4	1.220	**119810**
3/4	16	4	H3	4-1/4	1.220	**119823**
7/8	9	4	H4	4-11/16	1.339	**119811**
7/8	14	4	H4	4-11/16	1.339	**119824**
1	8	4	H4	5-1/8	1.496	**119812**
1	12	4	H4	5-1/8	1.496	**119825**
1-1/8	7	4	H4	5-7/16	1.732	**119813**
1-1/8	12	4	H4	5-7/16	1.732	**119826**
1-1/4	7	4	H4	5-3/4	1.732	**119814**
1-1/4	12	4	H4	5-3/4	1.732	**119827**
1-3/8	6	4	H4	6-1/16	2.000	**119815**
1-3/8	12	4	H4	6-1/16	2.000	**119828**
1-1/2	6	4	H4	6-3/8	2.000	**119816**
1-1/2	12	4	H4	6-3/8	2.000	**119829**

Tap	No Fl.	Thd Lim	OAL (in.)	Thd Lgth (in.)	Code No.
Metric					
M3 x .5	3	D3	1-15/16	0.433	**119840**
M3.5 x .6	3	D4	2	0.512	**119841**
M4 x .7	3	D4	2-1/8	0.512	**119842**
M5 x .8	3	D4	2-3/8	0.512	**119843**
M6 x 1	3	D5	2-1/2	0.630	**119844**
M7 x 1	3	D5	2-23/32	0.630	**119845**
M8 x 1	3	D5	2-23/32	0.748	**119846**
M8 x 1.25	3	D5	2-23/32	0.748	**119847**
M10 x 1.25	3	D5	2-15/16	0.748	**119848**
M10 x 1.5	3	D6	2-15/16	0.748	**119849**
M12 x 1.25	3	D5	3-3/8	0.945	**119850**
M12 x 1.75	3	D6	3-3/8	0.945	**119851**
M14 x 1.5	3	D6	3-19/32	0.984	**119852**
M14 x 2	3	D7	3-19/32	0.984	**119853**
M16 x 1.5	3	D6	3-13/16	1.102	**119854**
M16 x 2	3	D7	3-13/16	1.102	**119855**
M18 x 1.5	4	D6	4-1/32	1.102	**119856**
M18 x 2.5	4	D7	4-1/32	1.102	**119857**
M20 x 1.5	4	D5	4-15/32	1.220	**119858**
M20 x 2.5	4	D6	4-15/32	1.220	**119859**
M22 x 1.5	4	D6	4-11/16	1.339	**119860**
M22 x 2.5	4	D6	4-11/16	1.339	**119861**
M24 x 1.5	4	D5	4-29/32	1.339	**119862**
M24 x 3	4	D7	4-29/32	1.339	**119863**
M27 x 1.5	4	D7	5-1/8	1.181	**119864**
M27 x 3	4	D7	5-1/8	1.181	**119865**
M30 x 1.5	4	D7	5-7/16	1.378	**119866**
M30 x 3.5	4	D7	5-7/16	1.378	**119867**

Blue Ring – HSSE-V3 Black Oxide + 0.005" Spiral Point Taps – Intermediate Style

Features a unique free-cutting design with a special tempering and geometry which contributes to extra tool life.



4.5 Pitch Lead (Intermediate)

HOLE TYPE

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
6	32	3	2	0.512	**119925**
8	32	3	2-1/8	0.512	**119926**
10	32	3	2-3/8	0.512	**119939**
1/4	20	3	2-1/2	0.630	**119927**
1/4	28	3	2-1/2	0.630	**119934**
5/16	18	3	2-23/32	0.748	**119928**
5/16	24	3	2-23/32	0.748	**119935**
3/8	16	3	2-15/16	0.748	**119929**
3/8	24	3	2-15/16	0.748	**119936**
7/16	14	3	3-5/32	0.866	**119930**
7/16	20	3	3-5/32	0.866	**119937**
1/2	13	3	3-3/8	0.945	**119931**
1/2	20	3	3-3/8	0.945	**119938**
5/8	11	3	3-13/16	1.102	**119932**
3/4	10	3	4-1/4	1.220	**119933**

Blue Ring – HSSE-V3 Blue-Gold TiN Coated Spiral Point Taps – Intermediate & Bottoming Styles

Spiral Point



4.5 Pitch Lead (Intermediate)

HOLE TYPE

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
1/4-28	3	H3	2-1/2	0.630	**119884**
5/16-18	3	H3	2-23/32	0.748	**119875**
1/2-13	3	H3	3-3/8	0.945	**119878**
5/8-11	3	H3	3-13/16	1.102	**119879**
3/4-10	3	H3	4-1/4	1.220	**119880**

Spiral Flute



2.5 Pitch Lead (Bottoming)

45°

HOLE TYPE

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
5/16-24	3	H3	2-23/32	0.551	**119915**
3/8-24	3	H3	2-15/16	0.630	**119916**
5/8-11	4	H3	3-13/16	0.906	**119909**

Yellow Ring – HSSE-V3 Black Oxide ANSI Shank Taps – Intermediate & Bottoming Styles



Spiral Point

4.5 Pitch Lead (Intermediate) HOLE TYPE

Tap	No Fl.	Thd Lim	OAL (in.)	Thd Lgth (in.)	Code No.
Inch					
2-56	2	H2	1-3/4	0.433	122550
3-48	2	H2	1-13/16	0.512	122552
4-40	2	H2	1-7/8	0.433	123296
4-40	2	H3	1-7/8	0.433	122554
4-40	2	H2	4	0.433	122700
6-32	3	H3	2	0.512	123300
6-32	3	H3	4	0.512	122702
6-40	3	H3	2	0.512	123334
8-32	3	H3	2-1/8	0.512	123302
8-32	3	H3	4	0.512	122704
10-24	3	H3	2-3/8	0.512	123304
10-24	3	H3	6	0.512	122706
10-32	3	H3	2-3/8	0.512	123338
10-32	3	H3	6	0.512	122708
12-24	3	H3	2-3/8	0.512	123306
1/4-20	3	H3	2-1/2	0.630	123308
1/4-20	3	H3	6	0.630	122710
1/4-28	3	H3	2-1/2	0.630	123342
1/4-28	3	H3	6	0.630	122712
5/16-18	3	H3	2-23/32	0.748	123310
5/16-18	3	H3	6	0.748	122714
5/16-24	3	H3	2-23/32	0.748	123344
5/16-24	3	H3	6	0.748	122716
3/8-16	3	H3	2-15/16	0.748	123312
3/8-16	3	H3	6	0.748	122718
3/8-24	3	H3	2-15/16	0.748	123346
3/8-24	3	H3	6	0.748	122720
7/16-14	3	H3	3-5/32	0.866	123314
7/16-14	3	H3	6	0.866	122722
7/16-20	3	H3	3-5/32	0.866	123348
7/16-20	3	H3	6	0.866	122724
1/2-13	3	H3	3-3/8	0.945	123316
1/2-13	3	H3	6	0.945	122726
1/2-20	3	H3	3-3/8	0.945	123350
1/2-20	3	H3	6	0.945	122728
5/8-11	3	H3	3-13/16	1.102	123318
5/8-11	3	H3	6	1.102	122730
5/8-18	3	H3	3-13/16	1.102	123352
3/4-10	3	H3	4-1/4	1.220	123320
3/4-10	3	H3	6	1.220	122731
3/4-16	3	H3	4-1/4	1.220	123353
7/8-9	3	H4	4-11/16	1.339	123321
7/8-9	3	H4	6	1.339	122732
7/8-14	3	H4	4-11/16	1.339	123359
1-8	4	H4	5-1/8	1.496	123323
1-8	4	H4	6	1.496	122733
1-12	4	H4	5-1/8	1.496	123361
1-14	4	H4	5-1/8	1.496	123360
1-1/8-7	4	H4	5-7/16	1.732	123364
1-1/8-12	4	H4	5-7/16	1.732	123365
1-1/4-7	4	H4	5-3/4	1.732	123367
1-1/4-12	4	H4	5-3/4	1.732	123369
1-3/8-6	4	H4	6-1/16	2.000	123371
1-3/8-12	4	H4	6-1/16	2.000	123373
1-1/2-6	4	H4	6-3/8	2.000	123363
1-1/2-12	4	H4	6-3/8	2.000	123375

Tap	No Fl.	Thd Lim	OAL (in.)	Thd Lgth (in.)	Code No.
Metric					
M2 x 0.4	2	D3	1-3/4	0.433	123502
M2.5 x 0.45	2	D3	1-13/16	0.512	123504
M3 x 0.5	3	D3	1-15/16	0.433	123505
M3.5 x 0.6	3	D4	2	0.512	123506
M4 x 0.7	3	D4	2-1/8	0.512	123507
M4.5 x 0.75	3	D4	2-3/8	0.512	123508
M5 x 0.8	3	D4	2-3/8	0.512	123509
M6 x 1	3	D5	2-1/2	0.630	123510
M7 x 1	3	D5	2-23/32	0.630	123511
M8 x 1	3	D5	2-23/32	0.748	123512
M8 x 1.25	3	D5	2-23/32	0.748	123513
M10 x 1.25	3	D5	2-15/16	0.748	123516
M10 x 1.5	3	D6	2-15/16	0.748	123515
M12 x 1.25	3	D5	3-3/8	0.945	123518
M12 x 1.75	3	D6	3-3/8	0.945	123517
M14 x 1.5	3	D7	3-19/32	0.984	123519
M14 x 2	3	D6	3-19/32	0.984	123520
M16 x 1.5	3	D6	3-13/16	1.102	123522
M16 x 2	3	D7	3-13/16	1.102	123521
M18 x 1.5	4	D6	4-1/32	1.102	123523
M18 x 2.5	4	D7	4-1/32	1.102	123524
M20 x 1.5	4	D5	4-15/32	1.220	123525
M20 x 2.5	4	D6	4-15/32	1.220	123526
M22 x 1.5	4	D6	4-11/16	1.339	123527
M22 x 2.5	4	D6	4-11/16	1.339	123528
M24 x 1.5	4	D5	4-29/32	1.339	123529
M24 x 3	4	D7	4-29/32	1.339	123530
M27 x 1.5	4	D7	5-1/8	1.181	123531
M27 x 3	4	D7	5-1/8	1.181	123532
M30 x 1.5	4	D7	5-7/16	1.378	123533
M30 x 3.5	4	D7	5-7/16	1.378	123534



Spiral Flute

2.5 Pitch Lead (Bottoming) 45° HOLE TYPE

Tap	No Fl.	Thd Lim	OAL (in.)	Thd Lgth (in.)	Code No.
Inch					
2-56	2	H2	1-3/4	0.433	122500
3-48	2	H2	1-13/16	0.512	122502
4-40	2	H2	1-7/8	0.433	123362
4-40	2	H3	1-7/8	0.433	122506
4-40	2	H2	4	0.433	123060
6-32	3	H2	2	0.512	123366
6-32	3	H3	4	0.512	123061
8-32	3	H2	2-1/8	0.512	123368
8-32	3	H3	4	0.512	123062
10-24	3	H3	2-3/8	0.512	123370
10-24	3	H3	4	0.512	123063
10-32	3	H3	2-3/8	0.512	123382
10-32	3	H3	6	0.512	123073
1/4-20	3	H3	2-1/2	0.512	123372
1/4-20	3	H3	6	0.630	123064
1/4-28	3	H3	2-1/2	0.512	123384
1/4-28	3	H3	6	0.630	123074
5/16-18	3	H3	2-23/32	0.630	123374
5/16-18	3	H3	6	0.748	123065
5/16-24	3	H3	2-23/32	0.630	123386
5/16-24	3	H3	6	0.748	123075
3/8-16	3	H3	2-15/16	0.748	123376
3/8-16	3	H3	6	0.748	123066
3/8-24	3	H3	2-15/16	0.748	123388
3/8-24	3	H3	6	0.748	123076
7/16-14	3	H3	3-5/32	0.748	123378
7/16-14	3	H3	6	0.866	123067
7/16-20	3	H3	3-5/32	0.748	123389
7/16-20	3	H3	6	0.866	123077
1/2-13	3	H3	3-3/8	0.866	123380
1/2-13	3	H3	6	0.945	123068
1/2-20	3	H3	3-3/8	0.866	123392
1/2-20	3	H3	6	0.945	123078
5/8-11	4	H3	3-13/16	0.945	123452
5/8-11	4	H3	6	1.102	123069
5/8-18	4	H3	3-13/16	0.945	123462
3/4-10	4	H3	4-1/4	1.102	123454
3/4-10	4	H3	6	1.220	123070
3/4-16	4	H3	4-1/4	1.102	123464
7/8-9	4	H4	4-11/16	1.220	123466
7/8-9	4	H4	6	1.339	123071
7/8-14	4	H4	4-11/16	1.220	123468
1-8	4	H4	5-1/8	1.339	123469
1-8	4	H4	6	1.496	123072
1-12	4	H4	5-1/8	1.339	123470
1-14	4	H4	5-1/8	1.496	123465
1-1/8-7	4	H4	5-7/16	1.496	123471
1-1/8-12	4	H4	5-7/16	1.496	123472
1-1/4-7	4	H4	5-3/4	1.732	123473
1-1/4-12	4	H4	5-3/4	1.732	123474
1-3/8-6	4	H4	6-1/16	1.732	123475
1-3/8-12	4	H4	6-1/16	1.732	123476
1-1/2-6	4	H4	6-3/8	2.000	123477
1-1/2-12	4	H4	6-3/8	2.000	123478

Tap	No Fl.	Thd Lim	OAL (in.)	Thd Lgth (in.)	Code No.
Metric					
M3 x 0.5	3	D3	1-15/16	0.197	123650
M3.5 x 0.6	3	D4	2	0.236	123651
M4 x 0.7	3	D4	2-1/8	0.276	123652
M5 x .8	3	D4	2-3/8	0.315	123654
M6 x 1	3	D5	2-1/2	0.394	123656
M7 x 1	3	D5	2-23/32	0.394	123657
M8 x 1	3	D5	2-23/32	0.492	123659
M8 x 1.25	3	D5	2-23/32	0.492	123658
M10 x 1.25	3	D5	2-15/16	0.591	123661
M10 x 1.5	3	D6	2-15/16	0.591	123660
M12 x 1.25	3	D5	3-3/8	0.689	123663
M12 x 1.75	3	D6	3-3/8	0.689	123662
M14 x 1.5	3	D6	3-19/32	0.787	123665
M14 x 2	3	D7	3-19/32	0.787	123667
M16 x 1.5	3	D6	3-13/16	0.787	123668
M16 x 2	3	D7	3-13/16	0.787	123669
M18 x 1.5	4	D6	4-1/32	0.984	123670
M18 x 2.5	4	D7	4-1/32	0.984	123671
M20 x 1.5	4	D5	4-15/32	0.984	123672
M20 x 2.5	4	D6	4-15/32	0.984	123673
M22 x 1.5	4	D6	4-11/16	0.984	123674
M22 x 2.5	4	D6	4-11/16	0.984	123675
M24 x 1.5	4	D5	4-29/32	1.181	123676
M24 x 3	4	D7	4-29/32	1.181	123677
M27 x 1.5	4	D7	5-1/8	1.181	123678
M27 x 3	4	D7	5-1/8	1.181	123679
M30 x 1.5	4	D7	5-7/16	1.378	123680
M30 x 3.5	4	D7	5-7/16	1.378	123681

Yellow Ring – HSSE-V3 Black Oxide DIN Length ANSI Shank Taps – Intermediate & Bottoming

These taps combine ANSI shank specifications with advantage of DIN lengths for added reach.

Spiral Point



4.5 Pitch lead (Intermediate) HOLE TYPE

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
10-24	3	H3	2.756	0.591	124820
1/4-20	3	H3	3.150	0.669	124822
5/16-18	3	H3	3.543	0.669	124824
3/8-16	3	H3	3.937	0.787	124826
7/16-14	3	H3	3.937	0.866	124828
1/2-13	3	H3	4.331	0.984	124830
5/8-11	3	H3	4.331	1.063	124832
3/4-10	3	H3	4.921	1.181	124834

Spiral Flute



2.5 Pitch lead (Bottoming) 40° HOLE TYPE

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
10-24	3	H3	2.756	0.417	124800
1/4-20	3	H3	3.150	0.500	124802
5/16-18	3	H3	3.543	0.556	124804
3/8-16	3	H3	3.937	0.625	124806
7/16-14	3	H3	3.937	0.714	124808
1/2-13	3	H3	4.331	0.769	124810
5/8-11	4	H3	4.331	0.909	124812
3/4-10	4	H3	4.921	1.000	124814

Yellow Ring Taps – HSSE-V3 Black Oxide UN8 DIN Length ANSI Shank – Bottoming Styles

Spiral Flute



2.5 Pitch lead (Bottoming) 40° HOLE TYPE

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
1-8	4	H7	6.299	1.417	123055
1-1/8-8	4	H9	7.087	1.575	123056
1-1/4-8	4	H9	7.087	1.575	123079
1-3/8-8	5	H9	7.874	1.654	123080
1-1/2-8	5	H9	7.874	1.654	123057
1-3/4-8	6	H9	7.874	1.772	123058
2-8	6	H10	8.858	1.969	123059

Yellow Ring – HSSE-V3 Black Oxide Spiral Flute NPT Pipe Taps – Bottoming Style

Spiral Flute



2.5 Pitch lead (Bottoming) 15° HOLE TYPE

Tap	No. Flutes	Overall Length (in.)	Thread Length (in.)	Code No.
1/16-27	4	2-1/8	0.688	123400
1/8-27	4	2-1/8	0.750	123402
1/4-18	4	2-7/16	1.063	123404
3/8-18	4	2-9/16	1.063	123406
1/2-14	4	3-1/8	1.375	123410
3/4-14	5	3-1/4	1.375	123412
1-11-1/2	5	3-3/4	1.750	123414
1-1/4-11-1/2	5	4	1.750	123416
1-1/2-11-1/2	5	4-1/4	1.750	123418
2-11-1/2	5	4-1/2	1.750	123420

Orange Ring – HSSE-V3 Black Oxide ANSI Shank Taps – Intermediate & Bottoming Styles

Spiral Point



4.5 Pitch Lead (Intermediate) HOLE TYPE

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
Inch					
2-56	2	H2	1-3/4	0.433	124926
3-48	2	H2	1-13/16	0.512	124927
4-40	2	H2	1-7/8	0.433	124930
6-32	3	H3	2	0.512	124931
8-32	3	H3	2-1/8	0.512	124932
10-24	3	H3	2-3/8	0.512	124933
10-32	3	H3	2-3/8	0.512	124945
1/4-20	3	H3	2-1/2	0.630	124934
1/4-28	3	H3	2-1/2	0.630	124946
5/16-18	3	H3	2-23/32	0.748	124935
5/16-24	3	H3	2-23/32	0.748	124947
3/8-16	3	H3	2-15/16	0.748	124936
3/8-24	3	H3	2-15/16	0.748	124948
7/16-14	3	H3	3-5/32	0.866	124937
7/16-20	3	H3	3-5/32	0.866	124949
1/2-13	3	H3	3-3/8	0.945	124938
1/2-20	3	H3	3-3/8	0.945	124950
5/8-11	3	H3	3-13/16	1.102	124939
5/8-18	3	H3	3-13/16	1.102	124951
3/4-10	3	H3	4-1/4	1.220	124940
3/4-16	3	H3	4-1/4	1.220	124952
7/8-9	3	H4	4-11/16	1.339	124941
7/8-14	3	H4	4-11/16	1.339	124953
1-8	3	H4	5-1/8	1.496	124942
1-12	3	H4	5-1/8	1.496	124954
Metric					
M3 x 0.5	3	D3	1-15/16	0.433	124955
M4 x 0.7	3	D4	2-1/8	0.512	124956
M5 x 0.8	3	D4	2-3/8	0.512	124957
M6 x 1	3	D5	2-1/2	0.630	124958
M8 x 1.25	3	D5	2-23/32	0.748	124959
M10 x 1.25	3	D5	2-15/16	0.748	124960
M10 x 1.5	3	D6	2-15/16	0.748	124961
M12 x 1.75	3	D6	3-3/8	0.945	124962
M14 x 2	3	D6	3-19/32	0.984	124897
M16 x 2	3	D7	3-13/16	1.102	124899
M18 x 2.5	3	D7	4-1/32	1.102	124901
M20 x 2.5	3	D6	4-1/4	1.220	124903
M22 x 2.5	3	D6	4-11/16	1.339	124905
M24 x 3	3	D7	4-29/32	1.339	124907

Spiral Flute

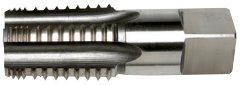


2.5 Pitch Lead (Bottoming) 45° HOLE TYPE

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
Inch					
2-56	2	H2	1-3/4	0.433	124928
3-48	2	H2	1-13/16	0.512	124929
4-40	2	H2	1-7/8	0.250	124965
6-32	3	H2	2	0.313	124966
8-32	3	H2	2-1/8	0.313	124967
10-24	3	H3	2-3/8	0.417	124968
10-32	3	H3	2-3/8	0.417	124979
1/4-20	3	H3	2-1/2	0.500	124969
1/4-28	3	H3	2-1/2	0.500	124980
5/16-18	3	H3	2-23/32	0.556	124970
5/16-24	3	H3	2-23/32	0.556	124981
3/8-16	3	H3	2-15/16	0.625	124971
3/8-24	3	H3	2-15/16	0.625	124982
7/16-14	3	H3	3-5/32	0.714	124972
7/16-20	3	H3	3-5/32	0.714	124964
1/2-13	3	H3	3-3/8	0.769	124973
1/2-20	3	H3	3-3/8	0.769	124983
9/16-12	4	H3	3-19/32	0.880	124974
5/8-11	4	H3	3-13/16	0.909	124975
5/8-18	4	H3	3-13/16	0.909	124984
3/4-10	4	H3	4-1/4	1.000	124976
3/4-16	4	H3	4-1/4	1.000	124985
7/8-9	4	H4	4-11/16	1.111	124977
7/8-14	4	H4	4-11/16	1.111	124986
1-8	4	H4	5-1/8	1.250	124978
1-12	4	H4	5-1/8	1.250	124987
Metric					
M3 x 0.5	3	D3	1-15/16	0.197	124988
M4 x 0.7	3	D4	2-1/8	0.276	124989
M5 x 0.8	3	D4	2-3/8	0.315	124990
M6 x 1	3	D5	2-1/2	0.394	124991
M8 x 1.25	3	D5	2-23/32	0.492	124992
M10 x 1.25	3	D5	2-15/16	0.591	124993
M10 x 1.5	3	D6	2-15/16	0.591	124994
M12 x 1.75	3	D6	3-3/8	0.689	124995
M14 x 2	3	D7	3-19/32	0.787	124996
M16 x 2	3	D7	3-13/16	0.787	124997
M18 x 2.5	4	D7	4-1/32	0.984	124998
M20 x 2.5	4	D6	4-15/32	0.984	124999
M22 x 2.5	4	D6	4-11/16	0.984	124943
M24 x 3	4	D7	4-29/32	1.181	124944

Green Series HSS Bright NPT Interrupted Thread

These taps are designed to produce less cutting pressure in a variety of applications.



Tap	No. Flutes	Overall Length (in.)	Thread Length (in.)	Code No.
1/8-27	4	2-1/8	0.750	123700
1/4-18	4	2-7/16	1.063	123702
3/8-18	4	2-9/16	1.063	123704
1/2-14	4	3-1/8	1.375	123706
3/4-14	5	3-1/4	1.375	123708
1-11-1/2	5	3-3/4	1.750	123710

Green Series HSSE-V3 Bright Spiral Flute For Aluminum – Bottoming Style

High performance taps with special geometries and bright finish for Aluminum.





2.5 Pitch lead (Bottoming)

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
Inch					
4-40	2	H2	1-7/8	0.250	124400
6-32	2	H3	2	0.313	124405
8-32	2	H3	2-1/8	0.313	124415
10-24	2	H3	2-3/8	0.417	124420
10-32	2	H3	2-3/8	0.417	124425
1/4-20	2	H3	2-1/2	0.500	124430
1/4-28	2	H3	2-1/2	0.500	124440
5/16-18	2	H3	2-23/32	0.556	124445
5/16-24	2	H3	2-23/32	0.556	124455
3/8-16	2	H3	2-15/16	0.625	124465
3/8-24	2	H3	2-15/16	0.625	124475
Metric					
M3 x 0.5	2	D3	1-15/16	0.197	124600
M4 x 0.7	2	D4	2-1/8	0.276	124605
M5 x 0.8	2	D5	2-3/8	0.315	124610
M6 x 1.0	2	D5	2-1/2	0.394	124615
M8 x 1.25	2	D5	2-23/32	0.492	124620
M10 x 1.25	2	D5	2-15/16	0.591	124625
M10 x 1.5	2	D6	2-15/16	0.591	124630

Green Series HSS Bright Roll Form Taps

Extended life results from tap geometry that allows optimum cutting performance and close control over tapped hole size. Superior wear resistance, heat treated for toughness. Used for thread forming in copper, brass, aluminum, die castings, leaded steels, low carbon steels and stainless steels.



Tap	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.
Inch				
4-40	H5	1-7/8	0.560	124650
6-32	H5	2	0.480	124655
8-32	H5	2-1/8	0.500	124660
10-24	H6	2-3/8	0.640	124665
10-32	H6	2-3/8	0.640	124670
1/4-20	H6	2-1/2	0.830	124675
1/4-28	H6	2-1/2	0.830	124680
5/16-18	H7	2-23/32	0.930	124685
5/16-24	H7	2-23/32	0.930	124690
3/8-16	H7	2-15/16	0.980	124695
3/8-24	H7	2-15/16	0.980	124700
1/2-13	H8	2-23/32	0.930	124705
1/2-20	H8	2-15/16	0.980	124710
Metric				
M3 x 0.5	D5	1-15/16	0.620	124750
M4 x 0.7	D6	2-1/8	0.500	124755
M5 x 0.8	D7	2-3/8	0.640	124760
M6 x 1.0	D8	2-1/2	0.830	124765
M8 x 1.25	D9	2-23/32	0.930	124770
M10 x 1.5	D10	2-15/16	0.980	124775

Green Series HSS Bright NPT Taps

Ground thread High Speed Steel pipe taps. 6" long series high speed steel pipe taps for longer reach applications.



Tap	No. Flutes	Overall Length (in.)	Thread Length (in.)	Code No.
1/16-27	4	2-1/8	0.688	123430
1/8-27	4	2-1/8	0.750	123432
1/4-18	4	2-7/16	1.063	123434
3/8-18	4	2-9/16	1.063	123436
1/2-14	4	3-1/8	1.375	123438
3/4-14	5	3-1/4	1.375	123440
1-11-1/2	5	3-3/4	1.750	123442
1-1/4-11-1/2	5	4	1.750	123444
1-1/2-11-1/2	7	4-1/4	1.750	123446
2-11-1/2	7	4-1/2	1.750	123448
1/16-27	4	6	0.688	122430
1/4-18	4	6	1.063	122434
3/8-18	4	6	1.063	122436
1/2-14	4	6	1.375	122438

Green Series Bright Hand Taps – Taper, Plug & Bottoming Styles

High Speed Steel for hand tapping of through or blind holes in ferrous and non-ferrous alloys.



Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Taper Code No.	Plug Code No.	Bottom Code No.
Inch							
6-32	3	H3	2	0.688	123032	123034	123036
8-32	4	H3	2-1/8	0.750	123038	123040	123042
10-24	4	H3	2-3/8	0.875	123044	123046	123048
10-32	4	H3	2-3/8	0.875	123104	123106	123108
12-24	4	H3	2-3/8	0.938	123050	123052	123054
1/4-20	4	H3	2-1/2	1.000	123116	123118	123120
1/4-28	4	H3	2-1/2	1.000	123200	123202	123204
5/16-18	4	H3	2-23/32	1.125	123122	123124	123126
5/16-24	4	H3	2-23/32	1.125	123206	123208	123210
3/8-16	4	H3	2-15/16	1.250	123128	123130	123132
3/8-24	4	H3	2-15/16	1.250	123212	123214	123216
7/16-14	4	H3	3-5/32	1.438	123134	123136	123138
7/16-20	4	H3	3-5/32	1.438	123218	123220	123222
1/2-13	4	H3	3-3/8	1.656	123140	123142	123144
1/2-20	4	H3	3-3/8	1.656	123224	123226	123228
9/16-12	4	H3	3-19/32	1.656	123146	123148	123150
9/16-18	4	H3	3-19/32	1.656	123230	123232	123234
5/8-11	4	H3	3-13/16	1.813	123152	123154	123156
5/8-18	4	H3	3-13/16	1.813	123236	123238	123240
3/4-10	4	H3	4-1/4	2.000	123158	123160	123162
3/4-16	4	H3	4-1/4	2.000	123242	123244	123246
7/8-9	4	H4	4-11/16	2.219	123164	123166	123168
7/8-14	4	H4	4-11/16	2.219	123248	123250	123252
1-8	4	H4	5-1/8	2.500	123170	123172	123174
1-12	4	H4	5-1/8	2.500	123254	123256	123258
1-14	4	H4	5-1/8	2.500	123260	123262	123264
1-1/8-7	4	H4	5-7/16	2.562	123176	123178	123180
1-1/8-12	4	H4	5-7/16	2.562	123266	123268	123270
1-1/4-7	4	H4	5-3/4	2.562	123272	123274	123276
1-1/4-12	6	H4	5-3/4	2.562	123536	123538	123540
1-3/8-6	4	H4	6-1/16	3.000	123278	123280	123282
1-3/8-12	6	H4	6-1/16	3.000	123542	123544	123546
1-1/2-6	4	H4	6-3/8	3.000	123284	123286	123288
1-1/2-12	6	H4	6-3/8	3.000	123548	123550	123552
Metric							
M3 x 0.5	3	D3	1-15/16	5/8	123479	123480	123481
M4 x 0.7	3	D4	2-1/8	3/4	123496	123482	123483
M5 x 0.8	3	D4	2-3/8	7/8	123497	123484	123485
M6 x 1.0	4	D5	2-1/2	1	123498	123486	123487
M8 x 1.25	4	D5	2-23/32	1-1/8	123499	123488	123489
M10 x 1.25	4	D5	2-15/16	1-1/4	123500	123490	123491
M10 x 1.5	4	D6	2-15/16	1-1/4	123501	123492	123493
M12 x 1.75	4	D6	3-3/8	1-21/32	123503	123494	123495
M14 x 2.0	4	D7	3-19/32	1-21/32	123081	123082	123083
M16 x 2.0	4	D7	3-13/16	1-13/16	123084	123085	123086
M18 x 2.5	4	D7	4-1/32	1-13/16	123087	123088	123089
M20 x 2.5	4	D6	4-15/32	2	123090	123091	123092
M22 x 2.5	4	D6	4-11/16	2-7/32	123093	123094	123095
M24 x 3.0	4	D7	4-29/32	2-7/32	123096	123098	123097

Speeds & Feeds:

Tap Storage

Other Tap Storage options available.





Description	Code No.
Grey #2-56 - #12-28 Tap Dispenser	113835
Red 1/8-27 NPT - 3/4-16 NF Tap and Die Counter Display	917041

Yellow Ring – Tap & Drill Set

Yellow Ring Spiral Point Taps for tough materials including:

- High Carbon Steel
- High Alloy
- Titanium
- Aluminum

Premium HSS Drills with 135° split points.
Comes in a metal case.



Description	Code No.
Taps - 6-32 to 1/2-13 **Drills** - #36, #29, #25, #21, #7, F, 5/16, U, 27/64	113651
Taps - 6-40 to 1/2-20 **Drills** - #36, #29, #25, #21, #7, F, 5/16, U, 27/64	113656
Metric Taps - M2.5 to M12 **Drills** - #46, 40, 33, 30, 19, 9, H, Q	113657

HSS Hand Tap & Drill Sets

High speed steel taps and drills. Comes in a metal case.



Description	Code No.
NC hand taps #6-1/2 NC tap and drill set containing: **Taps** - 6-32, 8-32, 10-24, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13 **Drills** - #36, #29, #7, F, 5/16, U, 27/64	113650
NF hand taps #6-1/2 NF tap and drill set containing: **Taps** - 6-40, 8-36, 10-32, 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20 **Drills** - #33, #29, #21, #3, #1, Q, 25/64, 29/64	113655

HSS Hand Tap Sets

Includes: 1pc ea. Taper, Plug and Bottoming



Thread Size	Thread Form	Limit	No. of Flutes	Code No.
6-32	UNC	H2	3	113037
10-24	UNC	H2	4	113049
10-32	UNF	H2	4	113109
12-24	UNC	H3	4	113055
1/4-20	UNC	H1	4	113121
1/4-28	UNF	H3	4	113205
5/16-18	UNC	H3	4	113127
5/16-24	UNF	H3	4	113211
3/8-16	UNC	H3	4	113133
3/8-24	UNF	H3	4	113217
7/16-14	UNC	H3	4	113139
7/16-20	UNF	H3	4	113223
1/2-13	UNC	H3	4	113145
1/2-20	UNF	H3	4	113229

Tap & Die Sets



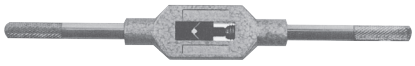




Set No.	Description	Metal case sets consist of the following:	Code No.
P.V. 12	**29 piece set** 3 - 12 mm, 3 taps per size	• 3, 4, 6, 8, 10, 12mm taps (Taper, Plug, Bottom) • 3, 4, 6, 8, 10, 12mm dies • 1 bar type, 1 ratchet type tap wrench • 1 die stock, 1 screw pitch gauge, 1 screw driver	113620
P.V. 2	**52 piece set** 3-20 mm, 3 taps per size	• 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20mm taps (T, P, B) • 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20mm dies • 2 bar type, 2 ratchet type tap wrenches • 2 die stocks, 1 screw pitch gauge, 1 screw driver	113630

Set No.	Description	Wooden case sets consist of the following:	Code No.
521	1/4" - 1/2" NC, 2 taps per size	• 1/4", 5/16", 3/8", 7/16", 1/2" taps and dies • 1" and 1-1/2" die stocks, #1 and #3 tap wrenches	113620
	1/4" - 1/2" NC, 3 taps per size		113625
527	1/4" - 3/4" NC, 2 taps per size	• 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4" taps and dies • 1" and 1-1/2" die stocks, #1 and #3 tap wrenches	113630
	1/4" - 3/4" NF, 2 taps per size		113633
	1/4" - 3/4" NC, 3 taps per size		113635
5	1/4" - 3/4" NC, 2 taps per size	• 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" taps & dies • 1" and 1-1/2" dies stocks, #1 and #3 tap wrenches	113610
	1/4" - 3/4" NF, 2 taps per size		113612
533	1/4" - 1" NC, 2 taps per size	• 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 1" taps and dies • 1" and 1-1/2" die stocks, #1 and #3 tap wrenches	113640
	1/4" - 1" NF, 2 taps per size		113643

Adjustable Tap Wrench



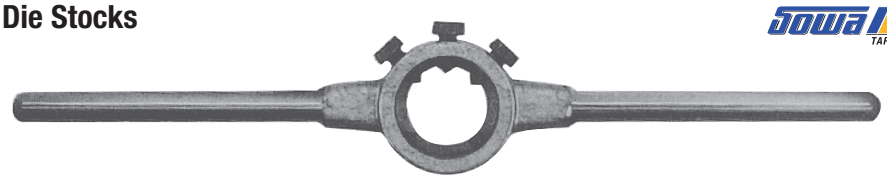
Tool No.	For DIN Tap Size	For ANSI Tap	Square	Sq. Max	Length (mm)	Code No.
130/0	M1-8 1/16-1/4	M6 1/4	2.0-5.0	0.197	130	113717
130/1.5	M1-12 1/16-1/2 NPT-1/8	M10 3/8	2.1-8.0	0.315	176	113794
130/2	M4-12 5/32-1/2 NPT-1/8	M14 9/16	3.0-9.0	0.354	280	113725
130/3	M5-20 7/32-3/4 NPT-1/8-1/2	M18 3/4	4.9-12	0.472	380	113730
130/4	M11-27 7/16-1" NPT-1/4-3/4	M25 1"	5.5-16	0.630	505	113735
130/5L	M13-32 1/2-1-1/4 NPT-1/4-1	M30 1-1/4	7-20	0.787	700	113740

Adjustable Tap Wrench – 'T' Ratchet Type



Tool No.	For DIN Tap Size	For ANSI Tap	Length (mm)	Square	Sq. Max	Code No.
100/1	M3-10 1/8 - 3/8	M6 1/4	85	2.4-5.5	0.217	113700
100/2	M5-12 7/32 - 1/2	M12 1/2	100	4.5-8.0	0.315	113705
100/10	M3-10 1/8 - 3/8	M6 1/4	250	2.4-5.5	0.217	113710
100/20	M5-12 7/32 - 1/2	M12 1/2	300	4.5-8.0	0.315	113715

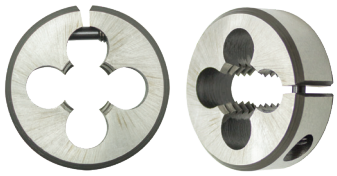
Die Stocks



Tool No.	(mm)	(in.)	Length (mm)	Code No.
13/16	20.6 x 6.35	13/16 x 1/4	200	113750
1	25.4 x 9.5	1 x 3/8	224	113755
1-1/2	38.1 x 12.7	1-1/2 x 1/2	315	113760
2	50.8 x 15.9	2 x 5/8	560	113765

HSS Round Split Adjustable Dies

HSS ISO Threads/Right Hand
- High Speed Steel
- Outside diameter in inches



Coarse Threads – Inch

Size	TPI	Code No.
13/16" O.D.		
2	56	140310
4	40	140320
5	40	140325
6	32	140330
8	32	140335
10	24	140340
12	24	140345
1/4	20	140350
5/16	18	140355
1" O.D.		
6	32	140360
8	32	140365
10	24	140370
12	24	140375
1/4	20	140380
5/16	18	140385
3/8	16	140390
7/16	14	140395
1/2	13	140400
1-1/2" O.D.		
1/4	20	140405
5/16	18	140410
3/8	16	140415
7/16	14	140420
1/2	13	140425
9/16	12	140430
5/8	11	140435
3/4	10	140437
2" O.D		
5/8	11	140440
3/4	10	140445
7/8	9	140450
1	8	140455

Fine Threads – Inch

Size	TPI	Code No.
13/16" O.D.		
0	80	140460
2	64	140470
4	48	140480
5	44	140485
6	40	140490
8	36	140495
10	32	140500
12	28	140505
1/4	28	140510
5/16	24	140515
1" O.D.		
6	40	140520
8	36	140525
10	32	140530
12	28	140535
1/4	28	140540
5/16	24	140545
3/8	24	140550
7/16	20	140555
1/2	20	140560
1-1/2" O.D.		
1/4	28	140565
5/16	24	140570
3/8	24	140575
7/16	20	140580
1/2	20	140585
9/16	18	140590
5/8	18	140595
3/4	16	140597
2" O.D.		
5/8	18	140600
3/4	16	140605
7/8	14	140610
1	14	140615

Coarse Threads – Metric

Size	Pitch (mm)	Code No.
13/16" O.D.		
M1	0.25	140700
M1.2	0.25	140701
M1.8	0.35	140703
M2.5	0.45	140705
M4	0.70	140706
M4	0.75	140707
M5	0.8	140708
1" O.D.		
M2	0.4	140709
M2.2	0.45	140710
M2.3	0.4	140711
M2.5	0.45	140712
M2.6	0.45	140713
M3	0.5	140714
M3.5	0.5	140715
M3.5	0.6	140716
M4	0.7	140717
M4.5	0.75	140718
M5	1	140719
M5	0.8	140720
M5.5	0.9	140721
M6	1	140722
M6	1.25	140723
M6.3	1	140724
M7	1	140725
M8	1.25	140726
M9	1.25	140727
M10	1.5	140728
M11	1.5	140729
1-1/2" O.D.		
M10	1.5	140731
M11	1.5	140732
M12	1.75	140733
M14	2	140734
M16	2	140735
M18	2.5	140736
M20	2.5	140737
2" O.D.		
M18	2.5	140738
M20	2.5	140739
M22	2.5	140740
M24	3	140741
M27	3	140742
M30	3.5	140743
2-1/2" O.D.		
M36	4	140744
3" O.D.		
M42	4.5	140745
M45	4.50	140746
M48	5	140747

Fine Threads – Metric

Size	Pitch (mm)	Code No.
13/16" O.D.		
M4	0.5	140748
1" O.D.		
M4	0.5	140749
M4.5	0.5	140750
M5	0.5	140751
M6	0.75	140752
M6	0.5	140753
M7	0.75	140754
M8	1	140755
M8	0.75	140756
M10	1.25	140757
M10	1	140758
M10	0.75	140759
M12	1	140760
1-1/2" O.D.		
M9	1	140761
M10	1.25	140762
M10	1	140763
M10	0.75	140764
M11	1	140765
M12	1.5	140766
M12	1.25	140767
M14	1.5	140768
M14	1.25	140769
M14	1	140770
M15	1.5	140771
M16	1.5	140772
M16	1	140773
M17	1.5	140774
M18	2	140775
M18	1.5	140776
M18	1	140777
M20	1.5	140778
M20	1	140779
2" O.D.		
M20	2	140780
M20	1.5	140781
M20	1	140782
M22	2	140783
M22	1.5	140784
M22	1	140785
M24	2	140786
M24	1.5	140787
M26	1.5	140788
M27	2	140789
M28	1.5	140790
M30	2	140791
M30	1.5	140792
2-1/2" O.D.		
M33	2	140793
3" O.D.		
M21	3	140794

Carbon Steel Hex Rethreading Dies



ISO Threads/Right Hand
Used for rethreading and cleaning threads

Coarse Threads – Inch

Size	TPI	Code No.
2	56	140800
4	40	140801
5	40	140803
6	32	140805
8	32	140807
10	24	140809
12	24	140811
1/4	20	140813
5/16	18	140815
3/8	16	140817
7/16	14	140819
1/2	13	140821
9/16	12	140823
5/8	11	140825
11/16	11	140827
3/4	10	140829
7/8	9	140831
1	8	140833
1-1/8	7	140836
1-1/4	7	140838
1-3/8	6	140840
1-1/2	6	140842
1-5/8	5-1/2	140844
1-3/4	5	140845
2	4-1/2	140846
2-1/4	4-1/2	140847
2-1/2	4	140848
2-3/4	4	140849
3	4	140850
3-1/4	4	140851
3-1/2	4	140852
3-3/4	4	140853
4	4	140854

Fine Threads – Inch

Size	TPI	Code No.
4	48	140802
5	44	140804
6	40	140806
8	36	140808
10	32	140810
12	28	140812
1/4	28	140814
5/16	24	140816
3/8	24	140818
7/16	20	140820
1/2	20	140822
9/16	18	140824
5/8	18	140826
11/16	16	140828
3/4	16	140830
7/8	14	140832
1	12	140834
1	14	140835
1-1/8	12	140837
1-1/4	12	140839
1-3/8	12	140841
1-1/2	12	140843

Metric

Size (mm)	Pitch (mm)	Code No.
M3	0.5	140864
M3	0.6	140865
M3.5	0.5	140866
M3.5	0.6	140867
M4	0.7	140868
M4	0.75	140869
M4.5	0.75	140870
M5	0.8	140871
M5	0.9	140872
M6	1.00	140873
M6.3	1.00	140874
M7	1.00	140875
M8	0.75	140876
M8	1.00	140877
M8	1.25	140878
M9	1.00	140879
M9	1.25	140880
M10	1.25	140881
M10	1.50	140882
M11	1.50	140883
M12	1.25	140884
M12	1.50	140885
M12	1.75	140886
M14	1.25	140887
M14	1.50	140888
M14	2.00	140889
M16	1.50	140890
M16	2	140891
M18	1.50	140892
M18	2.00	140893
M20	1.50	140894
M20	2.00	140895
M22	1.50	140896
M22	2.5	140897
M24	2.00	140898
M24	3.00	140899
M27	2.00	140900
M27	3.00	140901
M30	1.50	140902
M30	2.00	140903
M30	3.00	140904
M33	2.00	140905
M33	3.50	140906
M36	3.00	140907
M36	4.00	140908
M39	3.00	140909
M39	4.00	140910
M42	3.00	140911

Carbon Steel NPT Hex Rethreading Dies

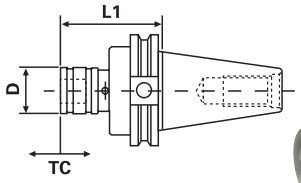
Used for rethreading and cleaning threads

Size	TPI	Code No.
1/8	27	140855
1/4	18	140856
3/8	18	140857
1/2	14	140858
3/4	14	140859
1	11-1/2	140860
1-1/4	11-1/2	140861
1-1/2	11-1/2	140862
2	11-1/2	140863

Speeds & Feeds:

Tension/Compression Tap Holders

- Quick-change - push back on the holder sleeve and the adapter with tool is removable
- Press on the end of the adapter nose and the tool is removable - all in a few seconds
- Smooth stroke - even under full torque load, the tension-compression stroke is full and free
- Interchangeability - our adapters and holders are interchangeable with Universal-Bilz quick change holders and adapters
- AT2 Taper Accuracy
- RFID Chip Hole

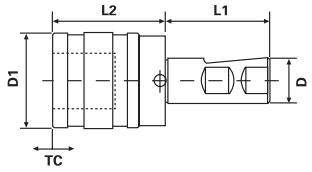




Tap Range Hand	Tap Range Pipe	System	L	D	Tension & Compression	Code No.
CAT40						
#0-9/16	1/8	#1	2.93	1.43	0.29/0.29	**531543**
#0-9/16	1/8	#1	4.00	1.43	0.29/0.29	**531540**
#0-9/16	1/8	#1	4.47	1.25	0.79/0.39	**531542**
5/16-7/8	1/4-1/2	#2	4.50	2.09	0.49/0.49	**531544**
5/16-7/8	1/4-1/2	#2	6.66	2.00	0.85/0.49	**531546**
13/16-1-3/8	3/4-1	#3	5.75	3.07	0.79/0.79	**531549**
13/16-1-3/8	3/4-1	#3	8.00	3.07	0.79/0.79	**531548**
13/16-1-3/8	3/4-1	#3	9.19	2.87	0.98/0.59	**531550**
CAT50						
#0-9/16	1/8	#1	4.00	1.43	0.29/0.29	**531552**
#0-9/16	1/8	#1	5.02	1.25	0.79/0.39	**531554**
5/16-7/8	1/4-1/2	#2	4.50	2.09	0.49/0.49	**531556**
5/16-7/8	1/4-1/2	#2	5.66	2.00	0.85/0.49	**531558**
13/16-1-3/8	3/4-1	#3	6.25	3.07	0.79/0.79	**531560**
13/16-1-3/8	3/4-1	#3	7.72	2.87	0.98/0.59	**531562**
BT30						
#0-9/16	1/8	#1	2.40	1.43	0.29/0.29	**532261**
#0-9/16	1/8	#1	4.25	1.43	0.29/0.29	**532260**
#0-9/16	1/8	#1	4.92	1.25	0.79/0.39	**532262**
BT40						
#0-9/16	1/8	#1	2.62	1.43	0.29/0.29	**532267**
#0-9/16	1/8	#1	3.80	1.43	0.29/0.29	**532264**
#0-9/16	1/8	#1	4.33	1.25	0.79/0.39	**532266**
5/16-7/8	1/4-1/2	#2	4.50	2.09	0.49/0.49	**532268**
5/16-7/8	1/4-1/2	#2	6.34	2.00	0.85/0.49	**532270**
13/16-1-3/8	3/4-1	#3	7.50	3.07	0.79/0.79	**532272**
13/16-1-3/8	3/4-1	#3	9.00	2.87	0.98/0.59	**532274**
BT50						
5/16-7/8	1/4-1/2	#2	6.34	2.00	0.85/0.49	**532277**
HSK63						
#0-9/16	1/8	#1	5.30	1.43	0.29/0.29	**536196**
5/16-7/8	1/4-1/2	#2	6.10	2.09	0.49/0.49	**536198**
HSK100						
#0-9/16	1/8	#1	5.30	1.43	0.29/0.29	**536202**
5/16-7/8	1/4-1/2	#2	6.30	2.09	0.49/0.49	**536204**
NMTB40						
#0-9/16	1/8	#1	3.90	1.25	0.79/0.39	**534500**

Weldon Shank Tension/ Compression Tap Holders

- Precision ground surfaces
- Compact length
- Provide additional mating flexibility
- Provides axial float
- Adjustable entry force

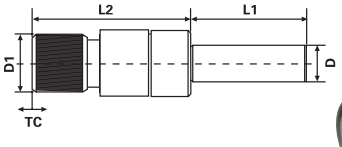




Tap Range Hand	Tap Range Pipe	System	Shank Dia. D	D1	L1	L2	Tension & Compression	Code No.
#0-9/16	1/8	#1	1	1.25	2.28	4.13	0.79/0.39	**534520**
#0-9/16	1/8	#1	1	1.43	2.28	1.53	0.79/0.39	**534522**
#0-9/16	1/8	#1	1-1/2	1.25	2.69	4.13	0.79/0.39	**534532**
5/16-7/8	1/4-1/2	#2	1-1/4	2.00	2.28	5.55	0.85/0.49	**534530**
5/16-7/8	1/4-1/2	#2	1-1/2	2.00	2.69	5.55	0.85/0.49	**534534**

Straight Shank Tension/Compression Tap Holders

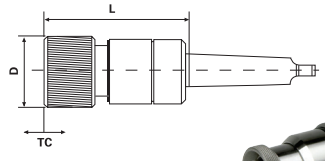
- Straight shank tooling may be used to extend tooling reach for extended length operations
- This option is less costly than extended length integral shank tooling
- They may be used with any size machining centre or lathe
- When loaded into larger holders, their reduced O.D. permits tapping applications within large holes or whenever tight clearances are encountered





Tap Range Hand	Tap Range Pipe	System	Shank Dia. D	D1	L1	L2	Tension & Compression	Code No.
#0-9/16	1/8	#1	1	1.25	3.50	4.13	0.79/0.39	**534510**
5/16-7/8	1/4-1/2	#2	1	2.00	3.50	5.55	0.85/0.49	**534512**
#0-9/16	1/8	#1	1-1/4	1.25	4.00	4.13	0.79/0.39	**534514**

Morse Taper Tension/ Compression Tap Holders

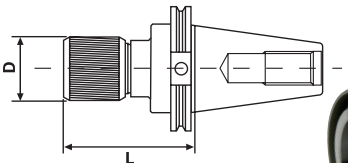




Morse Taper	Tap Range Hand	Tap Range Pipe	System	D	L	Tension & Compression	Code No.
3	#0-9/16	1/8	#1	1.25	4.750	0.79/0.39	**534550**
3	5/16-7/8	1/4-1/2	#2	2.00	5.870	0.85/0.49	**534552**
4	#0-9/16	1/8	#1	1.25	4.72	0.79/0.39	**534554**
4	5/16-7/8	1/4-1/2	#2	2.00	5.94	0.85/0.49	**534556**

Rigid Tap Holders

- Quick-change - push back on the holder sleeve and the adapter with tool is removable
- Press on the end of the adapter nose and the tool is removable - all in a few seconds
- Interchangeability - our adapters and holders are interchangeable with Universal-Bilz quick change holders and adapters
- AT2 Taper Accuracy
- RFID Chip Hole

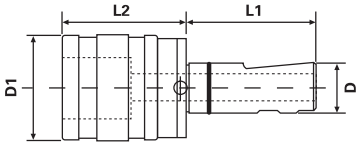




Tap Range Hand	Tap Range Pipe	System	L	D	Code No.
CAT40					
#0-9/16	1/8	#1	2.95	1.25	**531564**
5/16-7/8	1/4-1/2	#2	3.74	2.00	**531566**
13/16-1-3/8	3/4-1	#3	4.72	2.87	**531568**
CAT50					
#0-9/16	1/8	#1	3.02	1.25	**531570**
5/16-7/8	1/4-1/2	#2	3.91	2.00	**531572**
13/16-1-3/8	3/4-1	#3	5.11	2.87	**531574**
BT30					
#0-9/16	1/8	#1	2.44	1.25	**532276**
BT40					
#0-9/16	1/8	#1	2.95	1.25	**532278**
5/16-7/8	1/4-1/2	#2	3.74	2.00	**532280**
13/16-1-3/8	3/4-1	#3	4.72	2.87	**532282**
BT50					
#0-9/16	1/8	#1	3.03	1.25	**532281**
5/16-7/8	1/4-1/2	#2	3.74	2.00	**532283**
13/16-1-3/8	3/4-1	#3	4.92	2.87	**532284**
HSK63					
#0-9/16	1/8	#1	3.34	1.26	**536184**
5/16-7/8	1/4-1/2	#2	4.00	1.97	**536186**
HSK100					
#0-9/16	1/8	#1	3.54	1.43	**536190**
5/16-7/8	1/4-1/2	#2	3.74	2.09	**536192**

Weldon Shank Rigid Tap Holders

- Precision ground surfaces
- Compact length
- Provides axial float
- Adjustable entry force
- Provide additional mating flexibility





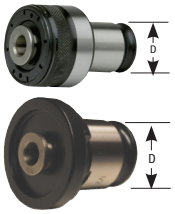
Tap Range Hand	Tap Range Pipe	System	Shank Dia. D	D1	L1	L2	Code No.
#0-9/16	1/8	#1	1	1.26	2.28	1.46	**534540**
5/16-7/8	1/4-1/2	#2	1	1.97	2.28	2.12	**534542**
13/16-1-3/8	3/4-1	#3	1-1/2	2.83	2.69	3.27	**534544**

Torque Control & Positive Drive Tap Collets & Reducers

Tap System #1 – Tap Collets are fully compatible with Bilz System #1. Size Range: #0 - 9/16" hand tap and 1/8" pipe tap.

Tap System #2 – Tap Collets are fully compatible with Bilz System #2. Size Range: 5/16" - 7/8" hand tap and 1/4" - 1/2" pipe tap.

Tap System #3 – Tap Collets are fully compatible with Bilz System #3. Size Range: 3/8" - 1-3/8" hand tap and 1/2" - 1" pipe tap.



Tap System	Tap Size	D	Tap Shank	Square	Torque Control Code No.	Positive Drive Code No.
#1	#0-#6	0.748	0.141	0.110	**337260**	**337052**
	#8	0.748	0.168	0.131	**337261**	**337054**
	#10	0.748	0.194	0.152	**337262**	**337056**
	#12	0.748	0.220	0.165	**337263**	**337058**
	1/4	0.748	0.255	0.191	**337264**	**337060**
	5/16	0.748	0.318	0.238	**337265**	**337062**
	3/8	0.748	0.381	0.286	**337266**	**337064**
	7/16	0.748	0.323	0.242	**337267**	**337066**
	1/2	0.748	0.367	0.275	**337268**	**337068**
	9/16	0.748	0.429	0.322	**337269**	**337070**
	1/8 **NPT**	0.748	0.438	0.328	**337270**	**337072**
#2	5/16	1.220	0.318	0.238	**337275**	**337074**
	3/8	1.220	0.381	0.286	**337276**	**337076**
	7/16	1.220	0.323	0.242	**337277**	**337078**
	1/2	1.220	0.367	0.275	**337278**	**337080**
	9/16	1.220	0.429	0.322	**337279**	**337082**
	5/8	1.220	0.480	0.360	**337280**	**337084**
	11/16	1.220	0.542	0.406	**337281**	**337086**
	3/4	1.220	0.590	0.442	**337282**	**337088**
	13/16	1.220	0.652	0.489	**337283**	**337090**
	7/8	1.220	0.697	0.523	**337284**	**337092**
	1/4 **NPT**	1.220	0.562	0.421	**337285**	**337094**
	3/8 **NPT**	1.220	0.700	0.531	**337286**	**337096**
	1/2 **NPT**	1.220	0.687	0.515	**337287**	**337098**
#3	3/8	1.891	0.381	0.286	-	**337111**
	1/2	1.891	0.367	0.275	**337230**	**337089**
	9/16	1.891	0.429	0.322	**337231**	**337091**
	5/8	1.891	0.480	0.360	**337233**	**337093**
	11/16	1.891	0.542	0.406	**337234**	**337095**
	3/4	1.891	0.590	0.442	**337235**	**337097**
	13/16	1.891	0.652	0.489	**337237**	**337100**
	7/8	1.891	0.697	0.523	**337238**	**337102**
	15/16	1.891	0.760	0.570	**337239**	**337104**
	1	1.891	0.800	0.600	**337241**	**337106**
	1-1/8	1.891	0.896	0.672	**337242**	**337108**
	1-1/4	1.891	1.021	0.766	**337243**	**337110**
	1-3/8	1.891	1.108	0.831	**337245**	**337112**
	1/2 **NPT**	1.891	0.687	0.515	-	**337113**
	3/4 **NPT**	1.891	0.906	0.679	**337246**	**337114**
	1 **NPT**	1.891	1.125	0.843	**337247**	**337116**
Reducers	Type #2 - #1				-	**337118**
	Type #3 - #2				-	**337119**
Sets	Type #1 - 11pc	#0-9/16, 1/8 **NPT**			**337271**	**337073**
	Type #2 - 13pc	5/16-7/8, 1/4, 3/8, 1/2 **NPT**			**337288**	**337099**
	Type #3 - 9pc	13/16-1-3/8, 3/4, 1 **NPT**			-	**337117**
	Type #3 - 16pc	3/8-1-3/8, 3/8, 3/4, 1 **NPT**			-	**337121**

Retention Knobs

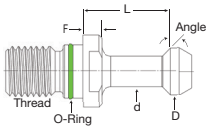
Ground Pilot with Flat O-Ring on Pilot to prevent coolant penetration into the spindle.

Can't find your retention knob?

Call 1-800-265-8221 or email sales@sowatool.com.

Please have the following information ready:

1. Taper of Machine
2. Make and Model No. of the Machine
3. Draw Bar Thread Diameter and Pitch
4. Taper Angle required underneath head of stud

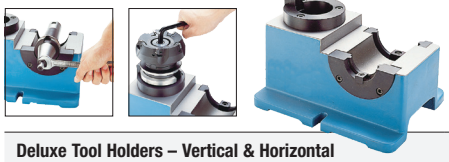




Taper	Model	Coolant Through	D	d	L	F	Angle	Thread	Code No.
BT30	GS585X45	N	0.433	0.276	0.709	0.197	45	M12x1.75	366000
	GS585X60	N	0.433	0.276	0.709	0.197	60	M12x1.75	366002
BT40	PS444X15	N	0.748	0.551	0.905	0.275	15	M16x2	366003
	GSC444X15	Y	0.748	0.551	0.905	0.275	15	M16x2	366004
	GS444X45	N	0.590	0.390	1.102	0.236	45	M16x2	366006
	GS444X60	N	0.590	0.390	1.102	0.236	60	M16x2	366008
	PS444X90	N	0.590	0.390	1.102	0.236	90	M16x2	366010
	GSC444X45	Y	0.590	0.390	1.102	0.236	45	M16x2	366012
	GSC444X60	Y	0.590	0.390	1.102	0.236	60	M16x2	366014
	PSC444X90	Y	0.590	0.390	1.102	0.236	90	M16x2	366016
	PS477	N	0.740	0.490	0.552	0.236	45	M16X2	366018
	PSC478	Y	0.740	0.490	0.440	0.120	45	M16x2	366020
	PSC479	Y	0.740	0.490	0.552	0.120	45	M16x2	366022
	GSC477	Y	0.740	0.490	0.552	0.236	45	M16x2	366024
	PSC480X15	Y	0.748	0.551	0.900	0.157	15	M16x2	366026
	PS534X45	N	0.590	0.390	0.990	0.236	45	M16x2	366028
	PS554	N	0.594	0.406	1.250	0.187	45	M16x2	366030
	PSC554	Y	0.594	0.406	1.250	0.187	45	M16x2	366032
CT40	GSC470X15	Y	0.748	0.551	0.787	0.157	15	5/8x11	366034
	GS474	N	0.740	0.490	0.440	0.118	45	5/8x11	366036
	GSC474	Y	0.740	0.490	0.440	0.118	45	5/8x11	366038
	GSC475	Y	0.740	0.490	0.440	0.120	45	5/8x11	366040
	GS475	N	0.740	0.490	0.440	0.120	45	5/8x11	366042
	PS498	N	0.590	0.390	0.777	0.200	90	5/8x11	366044
	PS531X45	N	0.590	0.390	1.000	0.236	45	5/8x11	366046
	GS532X15	N	0.748	0.551	0.792	0.275	15	5/8x11	366048
	GS532X45	N	0.590	0.390	0.990	0.236	45	5/8x11	366050
	GS532X60	N	0.590	0.390	0.990	0.236	60	5/8x11	366052
	GS532X90	N	0.590	0.390	0.990	0.236	90	5/8x11	366054
	GSC532X15	Y	0.748	0.551	0.792	0.275	15	5/8x11	366056
	GSC532X45	Y	0.590	0.390	0.990	0.236	45	5/8x11	366058
	GSC532X60	Y	0.590	0.390	0.990	0.236	60	5/8x11	366060
	GSC532X90	Y	0.590	0.390	0.990	0.236	90	5/8x11	366062
	PS552	N	0.594	0.406	1.139	0.187	45	5/8x11	366064
	PSC552	Y	0.594	0.406	1.139	0.187	45	5/8x11	366066
	GS572X45	N	0.590	0.390	0.990	0.120	45	5/8x11	366068
	PS572X60	N	0.590	0.390	0.990	0.120	60	5/8x11	366070
	PS572X90	N	0.590	0.390	0.990	0.120	90	5/8x11	366072
	PSC572X45	Y	0.590	0.390	0.990	0.120	45	5/8x11	366074
	PSC572X60	Y	0.590	0.390	0.990	0.120	60	5/8x11	366076
	PSC572X90	Y	0.590	0.390	0.990	0.120	90	5/8x11	366078
CT45	PSC375	Y	0.940	0.605	0.580	0.160	45	3/4x10	366080
BT50	PSC278	Y	1.140	0.820	0.700	0.200	45	M24x3	366082
	GS446X45	N	0.906	0.669	1.378	0.394	45	M24x3	366084
	PS446X60	N	0.906	0.669	1.378	0.394	60	M24x3	366086
	PS446X90	N	0.906	0.669	1.378	0.394	90	M24x3	366088
	GSC446X45	Y	0.906	0.669	1.378	0.394	45	M24x3	366090
CT50	GS275	N	1.140	0.820	0.700	0.200	45	1x8	366092
	PSC274	Y	1.140	0.820	0.700	0.200	45	1x8	366094
	GSC275	Y	1.140	0.820	0.700	0.200	45	1x8	366096
	GS536X45	N	0.906	0.669	1.386	0.394	45	1x8	366098
	GS536X60	N	0.906	0.669	1.386	0.394	60	1x8	366100
	GS536X90	N	0.906	0.669	1.386	0.394	90	1x8	366102
	GSC536X45	Y	0.906	0.669	1.386	0.394	45	1x8	366104
	GSC536X60	Y	0.906	0.669	1.386	0.394	60	1x8	366106
	GSC536X90	Y	0.906	0.669	1.386	0.394	90	1x8	366108

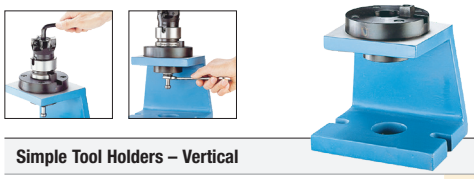
Tool Holder Tightening Fixtures/Setting Stands

Quick and easy way to change cutters and retention knobs safely. Protects the taper of holder with protective insert.



Select between horizontal or vertical tool holding; quick and simple operation.

Deluxe Tool Holders – Vertical & Horizontal	Code No.
Vertical - 40 Taper (CAT, BT & NMTB) Horizontal - 40 Taper x 2 (only BT & NMTB)	335250
Vertical - 50 Taper (CAT, BT & NMTB) Horizontal - 50 Taper x 2 (only BT & NMTB)	335260



Simple Tool Holders – Vertical	Code No.
40 Taper (CAT, BT & NMTB)	335210
50 Taper (CAT, BT & NMTB)	335220

Simple Tool Holders – Vertical	Code No.
30 Taper (CAT, BT & NMTB)	335270
40 Taper (CAT, BT & NMTB)	335275
50 Taper (Only CAT50 & NMTB50)	335280

Spindle Taper Wipers

- For easily and quickly cleaning spindle holes
- Plastic body, the taper wiper is made of special cotton material therefore not damaging the spindle
- The BT & DIN tapers are the same



Model No.	Taper	Total Length	Code No.
VTW-30	#30	168mm	326210
VTW-40	#40	159mm	326215
VTW-50	#50	265mm	326220
VTW-50H	HSK50	159mm	326225
VTW-63H	HSK63	167mm	326230

NC/CNC Tool Trolley Cart

Complete tool trolley with 4 bolt-in tool trays and replaceable inserts. Replacement inserts available on our Webstore.

(W)1002mm x (D)650mm x (H)830mm, Weight: 51kgs



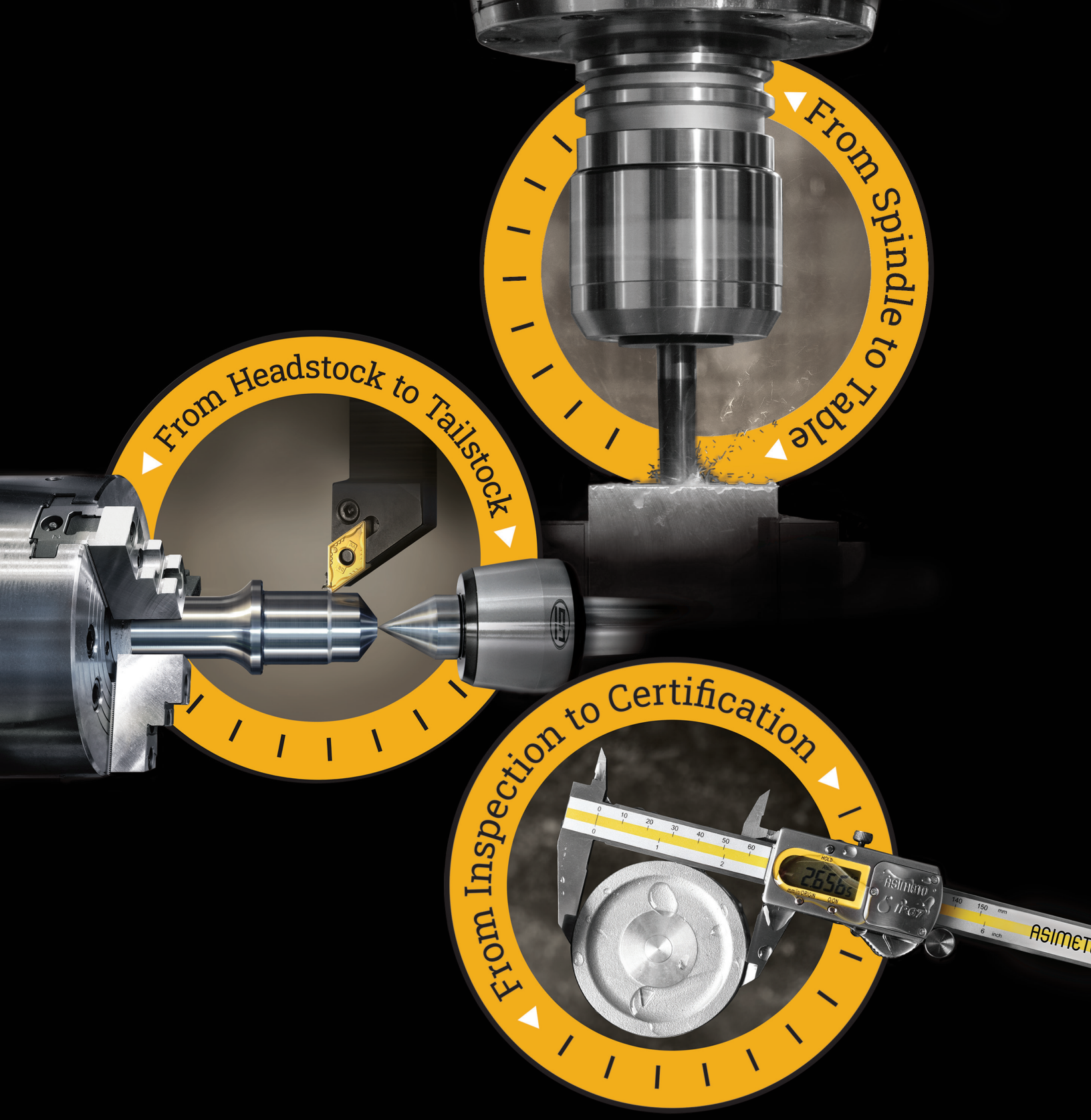
Description	Code No.
40 Taper Type Trolley with 7 inserts per tray *(4 trays hold 28 inserts)*	326985
50 Taper Type Trolley with 5 inserts per tray *(4 trays hold 20 inserts)*	326995

Thread Measuring Wire Set

- 48 wires - 16 different sizes
- Measures all threads from 3 - 48 threads per inch
- Measures all metric threads from 0.5mm to 6mm
- Also measures ACME threads
- Laminated chart included



Description	Code No.
Thread Wire Set	7697300



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