

Spiral Point SHEARTAP™

High Speed Steel
Plug Style

"ShearTap" offers exceptional value for high volume production tapping in carbon steels, and stainless steels up to 35 Rc hardness.

Steam Oxide Over Nitride resists chip welding, increases lubricity and helps to retain cutting fluid. **TiN Coating** increases hardness and lubricity for improved thread quality, higher speeds and longer tool life.

Primarily designed for tapping through holes. The spiral point forces the chips ahead of the tap.

Taraud à entrée hélicoïdale

Machuelo con punta en espiral



List No. 2090 — Steam Oxide Over Nitride

List No. 2090G — TiN Coated

STANDARD Machine Screw Sizes — 12 each

PACKAGE Fractional Sizes 1/4" thru 1/2" — 12 each

9/16" thru 3/4" — 3 each

7/8" thru 2" — 1 each

CNC Reduced Neck Design

Cutting Speeds: Page 165

SIZE	THREAD TYPE	NO. OF FLUTES	THREAD LENGTH	NECK LENGTH	OAL	SURFACE TREATED				TIN COATED			
						H2	H3	H4	H5	H2	H3	H4	H5
#4-40	NC	2	.313	.250	1 7/8	34400	34401	—	34402	94400	94401	—	94402
#6-32	NC	2	.375	.313	2	34404	34405	—	34406	94404	94405	—	94406
#8-32	NC	3	.375	.375	2 1/8	34407	34408	—	34409	94407	94408	—	94409
#10-24	NC	3	.500	.375	2 3/8	—	34410	—	—	—	94410	—	—
#10-32	NF	3	.500	.375	2 3/8	34411	34412	—	34413	94411	94412	—	94413
1/4-20	NC	3	.625	.375	2 1/2	34416	34417	—	34418	94416	94417	—	94418
1/4-28	NF	3	.625	.375	2 1/2	34419	34420	34421	—	94419	94420	94421	—
5/16-18	NC	3	.688	.438	2 23/32	—	34422	—	34423	—	94422	—	94423
5/16-24	NF	3	.688	.438	2 23/32	—	34424	34425	—	—	94424	94425	—
3/8-16	NC	3	.750	.500	2 15/16	—	34426	—	34427	—	94426	—	94427
3/8-24	NF	3	.750	.500	2 15/16	—	34428	34429	—	—	94428	94429	—
7/16-14	NC	3	.875	.563	3 5/32	—	34430	—	34431	—	94430	—	94431
7/16-20	NF	3	.875	.563	3 5/32	—	34432	—	34433	—	94432	—	94433
1/2-13	NC	3	.938	.719	3 3/8	—	34434	—	34435	—	94434	—	94435
1/2-20	NF	3	.938	.719	3 3/8	—	34436	—	34437	—	94436	—	94437
9/16-12	NC	4	1.000	.673	3 19/32	—	34438	—	—	—	94438	—	—
9/16-18	NF	4	1.000	.673	3 19/32	—	34439	—	—	—	94439	—	—
5/8-11	NC	4	1.125	.673	3 13/16	—	34440	—	—	—	94440	—	—
5/8-18	NF	4	1.125	.673	3 13/16	—	34441	—	—	—	94441	—	—
3/4-10	NC	4	1.219	.766	4 1/4	—	34444	—	—	—	94444	—	—
3/4-16	NF	4	1.219	.766	4 1/4	—	34445	—	—	—	94445	—	—
7/8-9	NC	4	1.344	.875	4 11/16	—	—	34500	—	—	—	94500	—
7/8-14	NF	4	1.344	.875	4 11/16	—	—	34501	—	—	—	94501	—
1-8	NC	4	1.500	1.000	5 1/8	—	—	34502	—	—	—	94502	—
1-12	NF	4	1.500	1.000	5 1/8	—	—	34503	—	—	—	94503	—
1 1/8-7	NC	4	1.719	.843	5 7/16	—	—	34504	—	—	—	94504	—
1 1/8-12	NF	4	1.719	.843	5 7/16	—	—	34505	—	—	—	94505	—
1 1/4-7	NC	4	1.719	.843	5 3/4	—	—	34506	—	—	—	94506	—
1 1/4-12	NF	4	1.719	.843	5 3/4	—	—	34507	—	—	—	94507	—
1 3/8-6	NC	4	2.000	1.000	6 1/16	—	—	34508	—	—	—	94508	—
1 3/8-12	NF	4	2.000	1.000	6 1/16	—	—	34509	—	—	—	94509	—
1 1/2-6	NC	6	2.000	1.000	6 3/8	—	—	34510	—	—	—	94510	—
1 1/2-12	NF	6	2.000	1.000	6 3/8	—	—	34511	—	—	—	94511	—
1 3/4-5*	NC	6	2.406	.782	7	—	—	—	34512*	—	—	—	94512*
2-4 1/2*	NC	6	2.688	.874	7 5/8	—	—	—	34514*	—	—	—	94514*

*H7 Pitch Dia. Limit (Sizes 1 3/4-5 and 2-4 1/2)

Spiral Flute SHEARTAP™

High Speed Steel - 48° Helix Angle
Semi-Bottoming Style

Primarily designed for tapping blind holes. The spiral flutes draw the chips out of the hole.

"ShearTap" offers exceptional value for high volume production tapping in carbon steels, and stainless steels up to 35 Rc Hardness

Steam Oxide Over Nitride resists chip welding, increases lubricity and helps to retain cutting fluid. **TiN Coating** increases hardness and lubricity for improved thread quality, higher speeds and longer tool life.

CNC Reduced Neck Design

Taraud à gorges hélicoïdales

Machuelo de roscar con gavilanes en espiral



List No. 2091 — Steam Oxide Over Nitride

List No. 2091G — TiN Coated

STANDARD Machine Screw Sizes — 12 each

PACKAGE Fractional Sizes 1/4" thru 1/2" — 12 each
9/16" thru 3/4" — 3 each
7/8" thru 2" — 1 each

SIZE	THREAD TYPE	NO. OF FLUTES	THREAD LENGTH	NECK LENGTH	OAL	SURFACE TREATED				TIN COATED			
						H2	H3	H4	H5	H2	H3	H4	H5
#4-40	NC	3	.236	.327	1 7/8	34450	34451	—	—	94450	94451	—	—
#6-32	NC	3	.236	.452	2	34453	34454	—	34455	94453	94454	—	94455
#8-32	NC	3	.236	.514	2 1/8	34456	34457	—	34458	94456	94457	—	94458
#10-24	NC	3	.354	.521	2 3/8	34459	34460	—	—	94459	94460	—	—
#10-32	NF	3	.354	.521	2 3/8	34461	34462	—	34463	94461	94462	—	94463
1/4-20	NC	3	.433	.567	2 1/2	—	34466	—	34467	—	94466	—	94467
1/4-28	NF	3	.433	.567	2 1/2	—	34468	34469	—	—	94468	94469	—
5/16-18	NC	3	.472	.653	2 23/32	—	34470	—	34471	—	94470	—	94471
5/16-24	NF	3	.472	.653	2 23/32	—	34472	34473	—	—	94472	94473	—
3/8-16	NC	3	.551	.699	2 15/16	—	34474	—	34475	—	94474	—	94475
3/8-24	NF	3	.551	.699	2 15/16	—	34476	34477	—	—	94476	94477	—
7/16-14	NC	3	.591	.847	3 5/32	—	34478	—	34479	—	94478	—	94479
7/16-20	NF	3	.591	.847	3 5/32	—	34480	—	34481	—	94480	—	94481
1/2-13	NC	3	.630	1.026	3 3/8	—	34482	—	34483	—	94482	—	94483
1/2-20	NF	3	.630	1.026	3 3/8	—	34484	—	34485	—	94484	—	94485
9/16-12	NC	3	.690	.983	3 19/32	—	34486	—	—	—	94486	—	—
9/16-18	NF	3	.690	.983	3 19/32	—	34487	—	—	—	94487	—	—
5/8-11	NC	3	.745	1.052	3 13/16	—	34488	—	—	—	94488	—	—
5/8-18	NF	3	.745	1.052	3 13/16	—	34489	—	—	—	94489	—	—
3/4-10	NC	4	.820	1.165	4 1/4	—	34492	—	—	—	94492	—	—
3/4-16	NF	4	.820	1.165	4 1/4	—	34493	—	—	—	94493	—	—
7/8-9	NC	4	.911	1.308	4 11/16	—	—	34520	—	—	—	94520	—
7/8-14	NF	4	.911	1.308	4 11/16	—	—	34521	—	—	—	94521	—
1-8	NC	4	1.025	1.475	5 1/8	—	—	34522	—	—	—	94522	—
1-12	NF	4	1.025	1.475	5 1/8	—	—	34523	—	—	—	94523	—
1 1/8-7	NC	4	1.143	1.419	5 7/16	—	—	34524	—	—	—	94524	—
1 1/8-12	NF	4	1.143	1.419	5 7/16	—	—	34525	—	—	—	94525	—
1 1/4-7	NC	4	1.143	1.419	5 3/4	—	—	34526	—	—	—	94526	—
1 1/4-12	NF	4	1.143	1.419	5 3/4	—	—	34527	—	—	—	94527	—
1 3/8-6	NC	4	1.333	1.667	6 1/16	—	—	34528	—	—	—	94528	—
1 3/8-12	NF	4	1.333	1.667	6 1/16	—	—	34529	—	—	—	94529	—
1 1/2-6	NC	4	1.333	1.667	6 3/8	—	—	34530	—	—	—	94530	—
1 1/2-12	NF	4	1.333	1.667	6 3/8	—	—	34531	—	—	—	94531	—
1 3/4-5*	NC	6	1.600	1.588	7	—	—	—	34532*	—	—	—	94532*
2-4 1/2*	NC	6	1.777	1.588	7 3/8	—	—	—	34534*	—	—	—	94534*

*H7 Pitch Dia. Limit (Sizes 1 3/4-5 and 2-4 1/2)

Metric Spiral Point SHEARTAP™

Taraud à entrée hélicoïdale

Machuelo con punta en espiral

CNC Reduced Neck Design

List No. 2090M — Steam Oxide Over Nitride

List No. 2090G — TiN Coated

SIZE	PITCH	PITCH DIA. LIMIT	NO. OF FLUTES	THREAD LENGTH	NECK LENGTH	OAL	SURFACE TREATED	
							EDP NO.	TIN COATED EDP NO.
M3	0.5	D3	2	.313	.313	1 ¹⁵ / ₁₆	35240	95240
M3.5	0.6	D4	2	.375	.313	2	35241	95241
M4	0.7	D4	3	.375	.375	2 ¹ / ₈	35242	95242
M5	0.8	D4	3	.500	.375	2 ³ / ₈	35243	95243
M6	1	D5	3	.625	.375	2 ¹ / ₂	35244	95244
M7	1	D5	3	.688	.438	2 ²³ / ₃₂	35245	95245
M8	1	D5	3	.688	.438	2 ²³ / ₃₂	35246	95246
M8	1.25	D5	3	.688	.438	2 ²³ / ₃₂	35247	95247
M10	1.25	D5	3	.750	.500	2 ¹⁵ / ₁₆	35248	95248
M10	1.5	D6	3	.750	.500	2 ¹⁵ / ₁₆	35249	95249
M12	1.25	D5	3	.938	.719	3 ³ / ₈	35250	95250
M12	1.75	D6	3	.938	.719	3 ³ / ₈	35251	95251
M14	1.5	D6	4	1.000	.673	3 ¹⁹ / ₃₂	35252	95252
M14	2	D7	4	1.000	.673	3 ¹⁹ / ₃₂	35253	95253
M16	1.5	D6	4	1.125	.673	3 ¹³ / ₁₆	35254	95254
M16	2	D7	4	1.125	.673	3 ¹³ / ₁₆	35255	95255
M18	1.5	D6	4	1.125	.719	4 ¹ / ₃₂	35256	95256
M18	2.5	D7	4	1.125	.719	4 ¹ / ₃₂	35257	95257
M20	1.5	D6	4	1.188	.812	4 ¹⁵ / ₃₂	35280	95280
M20	2.5	D7	4	1.188	.812	4 ¹⁵ / ₃₂	35281	95281
M22	1.5	D6	4	1.188	1.031	4 ¹¹ / ₁₆	35282	95282
M22	2.5	D7	4	1.188	1.031	4 ¹¹ / ₁₆	35283	95283
M24	2	D7	4	1.422	.797	4 ²⁹ / ₃₂	35284	95284
M24	3	D8	4	1.422	.797	4 ²⁹ / ₃₂	35285	95285



STANDARD PACKAGE

M3-M12 - 12 each
M14-M18 - 3 each
M20-M24 - 1 each

Cutting Speeds:
Page 165

Metric Spiral Flute SHEARTAP™

Taraud à gorges hélicoïdales

Machuelo de roscar con gavilanes en espiral

List No. 2091M — Steam Oxide Over Nitride

List No. 2091G — TiN Coated

SIZE	PITCH	PITCH DIA. LIMIT	NO. OF FLUTES	THREAD LENGTH	NECK LENGTH	OAL	SURFACE TREATED	
							EDP NO.	TIN COATED EDP NO.
M3	0.5	D3	3	.236	.389	1 ¹⁵ / ₁₆	35258	95258
M3.5	0.6	D4	3	.236	.452	2	35259	95259
M4	0.7	D4	3	.236	.514	2 ¹ / ₈	35260	95260
M5	0.8	D4	3	.354	.521	2 ³ / ₈	35261	95261
M6	1	D5	3	.433	.567	2 ¹ / ₂	35262	95262
M7	1	D5	3	.472	.653	2 ²³ / ₃₂	35263	95263
M8	1	D5	3	.472	.653	2 ²³ / ₃₂	35264	95264
M8	1.25	D5	3	.472	.653	2 ²³ / ₃₂	35265	95265
M10	1.25	D5	3	.551	.699	2 ¹⁵ / ₁₆	35266	95266
M10	1.5	D6	3	.551	.699	2 ¹⁵ / ₁₆	35267	95267
M12	1.25	D5	3	.630	1.026	3 ³ / ₈	35268	95268
M12	1.75	D6	3	.630	1.026	3 ³ / ₈	35269	95269
M14	1.5	D6	3	.690	.983	3 ¹⁹ / ₃₂	35270	95270
M14	2	D7	3	.690	.983	3 ¹⁹ / ₃₂	35271	95271
M16	1.5	D6	3	.745	1.052	3 ¹³ / ₁₆	35272	95272
M16	2	D7	3	.745	1.052	3 ¹³ / ₁₆	35273	95273
M18	1.5	D6	4	.813	.983	4 ¹ / ₃₂	35274	95274
M18	2.5	D7	4	.813	.983	4 ¹ / ₃₂	35275	95275
M20	1.5	D6	4	.790	1.210	4 ¹⁵ / ₃₂	35290	95290
M20	2.5	D7	4	.790	1.210	4 ¹⁵ / ₃₂	35291	95291
M22	1.5	D6	4	.790	1.428	4 ¹¹ / ₁₆	35292	95292
M22	2.5	D7	4	.790	1.428	4 ¹¹ / ₁₆	35293	95293
M24	2	D7	4	.940	1.279	4 ²⁹ / ₃₂	35294	95294
M24	3	D8	4	.940	1.279	4 ²⁹ / ₃₂	35295	95295



STANDARD PACKAGE

M3-M12 - 12 each
M14-M18 - 3 each
M20-M24 - 1 each

Pitch diameter limits are
those recommended
for 6H class of thread.

Oversize ShearTap™

Taraud surdimensionné

Machuelo de roscar extra grande

“ShearTap” offers exceptional value for high volume production tapping in carbon steels, and stainless steels up to 35 Rc Hardness

Steam Oxide Over Nitride resists chip welding, increases lubricity and helps to retain cutting fluid. **TiN Coating** increases hardness and lubricity for improved thread quality, higher speeds and longer tool life.

CNC Reduced Neck Design

SIZE	THREAD TYPE	PITCH DIA. LIMIT	Spiral Point		Spiral Flute	
			SURFACE TREATED EDP NO.	TIN COATED EDP NO.	SURFACE TREATED EDP NO.	TIN COATED EDP NO.
6-32	NC	H7	34542	94542	34592	94592
8-32	NC	H7	34544	94544	34594	94594
10-24	NC	H7	34546	94546	34596	94596
10-32	NF	H7	34548	94548	34598	94598
1/4-20	NC	H7	34550	94550	34600	94600
1/4-20	NC	H11	34551	94551	34601	94601
1/4-28	NF	H7	34552	94552	34602	94602
1/4-28	NF	H11	34553	94553	34603	94603
5/16-18	NC	H7	34554	94554	34604	94604
5/16-18	NC	H11	34555	94555	34605	94605
5/16-24	NF	H7	34556	94556	34606	94606
5/16-24	NF	H11	34557	94557	34607	94607
3/8-16	NC	H7	34558	94558	34608	94608
3/8-16	NC	H11	34559	94559	34609	94609
3/8-24	NF	H7	34560	94560	34610	94610
3/8-24	NF	H11	34561	94561	34611	94611
7/16-14	NC	H11	34563	94563	34613	94613
7/16-20	NF	H11	34565	94565	34615	94615
1/2-13	NC	H11	34567	94567	34617	94617
1/2-20	NF	H11	34569	94569	34619	94619
9/16-12	NC	H11	34571	94571	34621	94621
9/16-18	NF	H11	34573	94573	34623	94623
5/8-11	NC	H11	34575	94575	34625	94625
5/8-18	NF	H11	34577	94577	34627	94627
3/4-10	NC	H11	34579	94579	34629	94629
3/4-16	NF	H11	34581	94581	34631	94631
7/8-9	NC	H11	34583	94583	34633	94633
7/8-14	NF	H11	34585	94585	34635	94635
1-8	NC	H11	34587	94587	34637	94637
1-12	NF	H11	34589	94589	34639	94639
METRIC						
M3 x 0.5		H7	34670	94670	34680	94690
M4 x 0.7		H7	34671	94671	34681	94691
M5 x 0.8		H7	34672	94672	34682	94692
M6 x 1		H11	34673	94673	34683	94693
M8 x 1.25		H11	34674	94674	34684	94694
M10 x 1.5		H11	34675	94675	34685	94695
M12 x 1.75		H11	34676	94676	34686	94696

Oversize taps are mainly used for parts that will be plated or heat treated after tapping. Also used in materials that tend to shrink after tapping.

PITCH DIA. LIMIT	AMOUNT LARGER THAN BASIC PITCH DIA.
H7	.0030"-.0035"
H11	.0050"-.0055"

Spiral Point Plug Style

Primarily designed for tapping through holes. The spiral point forces the chips ahead of the tap.



Inch

List No. 2090 — Steam Oxide Over Nitride

List No. 2090G — TiN Coated

Metric

List No. 2090M — Steam Oxide Over Nitride

List No. 2090G — TiN Coated

Spiral Flute Semi-Bottoming Style 48° Helix Angle

Primarily designed for tapping blind holes. The spiral flutes draw the chips out of the hole.



Inch

List No. 2091 — Steam Oxide Over Nitride

List No. 2091G — TiN Coated

Metric

List No. 2091M — Steam Oxide Over Nitride

List No. 2091G — TiN Coated

Eight Pitch SHEARTAP™

Eight Pitch taps are often required for applications in the power generation industry and general construction.

“ShearTap” offers exceptional value for high volume production tapping in carbon steels and stainless steels up to 35 Rc Hardness.

Steam Oxide Over Nitride resists chip welding, increases lubricity and helps to retain cutting fluid. TiN Coating increases hardness and lubricity for improved thread quality, higher speeds and longer tool life.



List No. 2090 — Steam Oxide Over Nitride

List No. 2090G — TiN Coated

Spiral Point Eight Pitch SHEARTAP™ Plug Style

Taraud à entrée hélicoïdale

Machuelo con punta en espiral

Cutting Speeds: Page 165

Primarily designed for tapping through holes. The spiral point forces the chips ahead of the tap.

SIZE	NO. OF FLUTES	THREAD LENGTH	NECK LENGTH	OAL	PITCH DIA. LIMIT	SURFACE TREATED	TIN COATED
						EDP NO.	EDP NO.
1-1/8-8	4	1.719	.843	5 ⁷ / ₁₆	H5	34650	94650
1-1/4-8	4	1.719	.843	5 ³ / ₄	H5	34651	94651
1-3/8-8	4	2.000	1.000	6 ¹ / ₁₆	H5	34652	94652
1-1/2-8	6	2.000	1.000	6 ³ / ₈	H5	34653	94653
1-5/8-8	6	2.000	1.187	6 ¹¹ / ₁₆	H6	34654	94654
1-3/4-8	6	2.406	.782	7	H6	34655	94655
1-7/8-8	6	2.406	1.156	7 ⁹ / ₁₆	H6	34656	94656
2-8	6	2.688	.874	7 ⁵ / ₈	H6	34657	94657

Spiral Flute Eight Pitch SHEARTAP™ 48° Helix Angle Semi-Bottoming Style

Primarily designed for tapping blind holes. The spiral flutes draw the chips out of the hole.

Taraud à gorges hélicoïdales
Machuelo de roscar con gavilanes en espiral



List No. 2091 — Steam Oxide Over Nitride

List No. 2091G — TiN Coated

SIZE	NO. OF FLUTES	THREAD LENGTH	NECK LENGTH	OAL	PITCH DIA. LIMIT	SURFACE TREATED	TIN COATED
						EDP NO.	EDP NO.
1-1/8-8	4	1.143	1.419	5 ⁷ / ₁₆	H5	34660	94660
1-1/4-8	4	1.143	1.419	5 ³ / ₄	H5	34661	94661
1-3/8-8	4	1.333	1.667	6 ¹ / ₁₆	H5	34662	94662
1-1/2-8	4	1.333	1.667	6 ³ / ₈	H5	34663	94663
1-5/8-8	6	1.333	1.854	6 ¹¹ / ₁₆	H6	34664	94664
1-3/4-8	6	1.600	1.588	7	H6	34665	94665
1-7/8-8	6	1.600	1.962	7 ⁹ / ₁₆	H6	34666	94666
2-8	6	1.777	1.588	7 ⁵ / ₈	H6	34667	94667

SHEARTAP™ Cutting Speeds

WORKPIECE MATERIAL	BRINELL HARDNESS (BHN)	SURFACE SPEED (SFM)
Low Carbon Steel - 1118, 12L12, 1108, 1213	≤120	65
Low & Medium Carbon Steel - 1018, 1551, 11L44	120 - 250	40
Medium Carbon and Alloyed Steel - 1040, 1140, 4340, 8640	≤250	40
Free Machining Stainless Steels - 303, 410, 416, 440F	≤260	35
Moderate Machining Stainless Steels - 304, 316	≤300	20

SPEEDS shown are suggested starting **points** and may be increased or decreased depending on actual material and machining conditions. Start conservatively and increase until machining cycle is optimized.

TAP SPEEDS may be **increased** for coated taps, spiral point taps, fine pitch taps, and when the percentage of thread is decreased.

TAP SPEEDS may need to be **decreased** for uncoated taps, spiral flute taps, coarse pitch taps, bottoming taps, difficult materials, longer thread lengths, and when the percentage of thread is increased.

TOOL COATINGS

Tool Coatings enhance cutting tool performance for increased productivity and lower overall tooling cost. Benefits include increased surface hardness, lubricity & heat resistance and decreased chemical reactivity. Results include reduced friction & torque, higher speeds & feeds, increased tool life, decreased galling & chip welding and improved surface finish.

TiN - Titanium Nitride

A good general purpose coating for a wide range of ferrous materials. Not recommended for non-ferrous materials. Has higher heat resistance than TiCN coating.

TiCN - Titanium Carbonitride

Enhanced toughness, hardness & wear resistance for aggressive speeds & feeds. Recommended for difficult-to-machine, gummy & abrasive materials where moderate cutting temperatures are generated.

TiALN - Titanium Aluminum Nitride

ALTiN - Aluminum Titanium Nitride

Excellent all around coatings featuring high heat resistance. Recommended for high thermal stress applications including dry machining, abrasive materials and hard-to-machine materials that generate higher cutting temperatures. ALTiN has higher AL content for increased hardness & heat resistance.

CrN - Chromium Nitride

CrC - Chromium Carbide

Especially recommended for titanium and non-ferrous materials including aluminum, copper & brass. CrC has slightly higher hardness than CrN. These coatings resist adhesion of the material being machined and resist chipping and cracking.

DLC - Diamond Like Carbon

A thin carbon based amorphous (non-crystalline) coating featuring very high hardness & low coefficient of friction. Highly recommended for non-ferrous materials including plastic, aluminum, copper & brass. Typically used on solid carbide tools.