



TOOLING
YOUR
WORLD.



August 1 – November 30, 2022

Milling
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Page 8



Choose GS Tooling, the
Gold Standard
in vises.



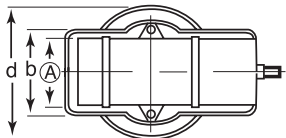
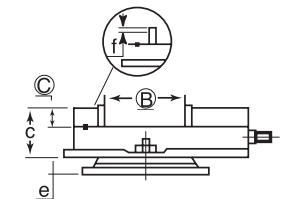
We're changing the color
on the GS Tooling vises
you know and trust.



GS810 8" Precision Milling Machine Vise

- Vises are matched (Bed Height: 3.310")
- An integral key and large fasteners reduce deflection by 50%
- 4-jaw plate positions allow extra capacity with the jaw plates in the outside position
- The swivel base is graduated 360° in one degree increments
- Chip cover protects leadscrew from damage
- The quality movable jaw does not lift off the bed, and the deflection of the stationary jaw is minimized

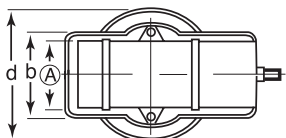
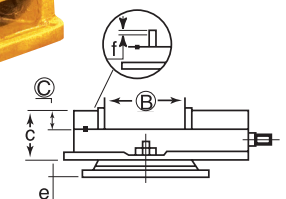
											(Inch)	
Jaw Width A	Jaw Open B	C	O.A.L.	b	c	d	e	f	Plain Ship Wt	Code No.	Reg. Price \$	SALE \$
8	10.0	2.25	21.8	11.62	5.55	15.0	1.85	0.43	158lbs	327300	2,198.25	1,648.69



GS675 6" Precision Milling Machine Vise

- Vises are matched (Bed Height: 2.875")
- An integral key and large fasteners reduce deflection by 50%
- 4-jaw plate positions allow extra capacity with the jaw plates in the outside position
- The swivel base is graduated 360° in one degree increments
- Chip cover protects leadscrew from damage
- The quality movable jaw does not lift off the bed, and the deflection of the stationary jaw is minimized

											(Inch)	
Jaw Width A	Jaw Open B	C	O.A.L.	b	c	d	e	f	Plain Ship Wt	Code No.	Reg. Price \$	SALE \$
6	7.5	1.77	17.2	9.13	4.6	12	1.65	0.39	80lbs	327275M	698.78	524.09



Sowa carbide end mills have
moved to the GS Tooling line.

The only change is the logo.

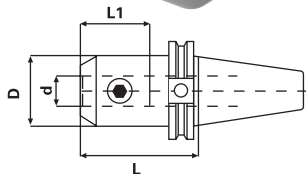
Call 1-800-265-8221 or visit www.SowaTool.com to order.

DUAL CONTACT End Mill Holders

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life
- DIN coolant option - standard
- All ground body, bore, nose, flange
- TIR, 0.0001" / 0.003mm OD to ID
- AT2 Taper Accuracy
- Certified Steel
- RFID chip hole



FOR DUAL
CONTACT
SPINDLES



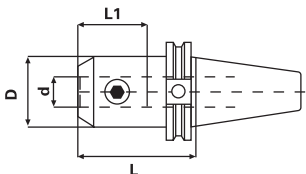
CAT40

Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.	Reg. Price \$	SALE \$
CT40	1/2	5.00	2.56	1.38	7/16-20	521030	230.01	172.51
CT40	1-1/4	4.00	3.54	2.48	3/4-16	521062	232.25	174.19

PREMIUM BALANCE

G6.3 at 30,000rpm

CERTIFICATE INCLUDED



CAT50

Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.	Reg. Price \$	SALE \$
CT50	1/2	4.00	1.77	1.38	7/16-20	521120	325.38	244.04
CT50	1/2	6.00	1.77	1.38	7/16-20	521122	322.01	241.51
CT50	5/8	4.00	1.77	1.65	9/16-18	521130	314.16	235.62
CT50	5/8	6.00	1.77	1.65	9/16-18	521132	392.70	294.53
CT50	3/4	4.00	3.86	1.89	5/8-18	521140	319.77	239.83
CT50	3/4	6.00	3.86	1.89	5/8-18	521142	325.38	244.04
CT50	1	4.00	4.21	2.36	3/4-16	521154	325.38	244.04
CT50	1	6.00	4.21	2.36	3/4-16	521156	332.11	249.08
CT50	1-1/2	4.50	3.15	2.99	3/4-16	521170	347.82	260.87

PREMIUM BALANCE

G6.3 at 25,000rpm

CERTIFICATE INCLUDED

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.	Reg. Price \$	SALE \$
VTW-30	#30	168mm	326210	50.16	37.62
VTW-40	#40	159mm	326215	50.16	37.62
VTW-50	#50	265mm	326220	72.71	54.53

Retention Knobs

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



Can't find your retention knob?

We invite your inquiries.
Please have ready the following information when calling:

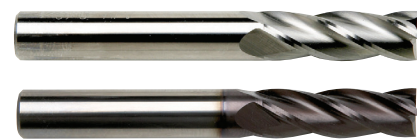
- Taper of Machine
- Make and Model No. of the Machine
- Draw Bar Thread Diameter and Pitch
- Taper Angle required underneath head of stud



Taper	Model	Coolant Through	Thread	Code No.	Reg. Price \$	SALE \$
BT30	GS585X60	N	M12x1.75	366002	31.70	23.78
BT40	GSC444X15	Y	M16x2	366004	42.27	31.70
BT40	GS444X45	N	M16x2	366006	31.08	23.31
BT40	GS444X60	N	M16x2	366008	31.70	23.78
BT40	GSC444X45	Y	M16x2	366012	33.67	25.25
BT40	GSC444X60	Y	M16x2	366014	34.34	25.76
BT40	GSC477	Y	M16x2	366024	39.85	29.89
CT40	GS474	N	5/8x11	366036	25.90	19.43
CT40	GS532X15	N	5/8x11	366048	26.42	19.82
CT40	GS532X60	N	5/8x11	366052	26.42	19.82
CT40	GSC532X60	Y	5/8x11	366060	26.42	19.82
CT40	GSC532X90	Y	5/8x11	366062	26.42	19.82
BT50	GS446X45	N	M24x3	366084	62.08	46.56
CT50	GS275	N	1x8	366092	33.02	24.77
CT50	GS536X45	N	1x8	366098	33.02	24.77
CT50	GS536X60	N	1x8	366100	32.37	24.28
CT50	GS536X90	N	1x8	366102	33.02	24.77
CT50	GSC536X45	Y	1x8	366104	32.37	24.28
CT50	GSC536X90	Y	1x8	366108	32.37	24.28

4-Flute Long Length Carbide End Mills

Long length end mills combine added flute and overall length for greater reach when deep slotting or milling. These end mills have the capability to mill thicker material in one pass, eliminating the interrupted cut that may be present with regular length end mills.



Cutting Dia.	Shank Dia.	Flute Length	Overall Length	Bright Code No.	Reg. Price \$	SALE \$	TiAlN Code No.	Reg. Price \$	SALE \$
Inch									
1/8	1/8	3/4	2-1/4	102981	26.47	19.85	102922	30.72	23.04
3/16	3/16	3/4	2-1/4	102982	29.20	21.90	102924	34.62	25.97
1/4	1/4	1-1/8	3	102983	33.81	25.36	102926	41.00	30.75
5/16	5/16	1-1/8	3	102984	41.75	31.31	102928	52.48	39.36
3/8	3/8	1-1/8	3	102985	46.96	35.22	102930	57.71	43.28
7/16	7/16	2	4	102986	70.98	53.24	102932	86.76	65.07
1/2	1/2	2	4	102987	75.49	56.62	102934	91.28	68.46
5/8	5/8	2-1/4	5	102988	155.59	116.69	102936	181.79	136.34
3/4	3/4	2-1/4	5	102989	247.85	185.89	102938	278.19	208.64
1	1	2-1/4	5	102990	421.37	316.03	102940	460.72	345.54
Metric									
3	3	19	57	101600	16.40	12.30	102901	31.33	23.50
4	4	19	57	101601	17.23	12.92	102903	33.89	25.42
5	5	25	64	101602	30.74	23.06	102905	37.88	28.41
6	6	28	76	101603	35.64	26.73	102907	42.76	32.07
8	8	29	76	101604	43.97	32.98	102909	54.66	41.00
10	10	32	76	101605	50.99	38.24	102911	63.18	47.39
12	12	51	102	101606	80.05	60.04	102913	95.83	71.87
14	14	57	127	101607	109.90	82.43	102915	169.47	127.10
18	18	57	127	101609	233.92	175.44	102919	181.79	136.34
20	20	57	127	101610	261.10	195.83	102917	300.49	225.37
25	25	57	127	101611	402.35	301.76	-	-	-

4-Flute Variable Helix Carbide End Mill — Typhoon

- Helix changes along flutes
- Increased stability during cutting action
- Substantial increase in speed
- Small corner radius for added strength and smoother cutting action

- AlTiN coated for improved tool life and increased production output
- Made from premium sub-micron grain carbide



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Corner Radius	With Radius Code No.	Reg. Price \$	SALE \$	Without Radius Code No.	Reg. Price \$	SALE \$
1/8	1/8	1/2	1-1/2	0.010-0.015	153000	18.50	13.88	153250	16.44	12.33
3/16	3/16	3/8	1-1/2	0.010-0.015	153001	23.22	17.42	-	-	-
3/16	3/16	5/8	2	0.015-0.020	153002	23.22	17.42	153252	20.73	15.55
1/4	1/4	1/2	2	0.015-0.020	153004	28.61	21.46	153254	28.61	21.46
1/4	1/4	3/4	2-1/2	0.015-0.020	153006	31.68	23.76	153256	27.97	20.98
1/4	1/4	1-1/8	3	0.015-0.020	153008	46.95	35.21	153258	46.95	35.21
5/16	5/16	1/2	2	0.015-0.020	153010	39.08	29.31	153260	34.09	25.57
5/16	5/16	13/16	2-1/2	0.015-0.020	153012	42.95	32.21	153262	39.89	29.92
5/16	5/16	1-1/8	3	0.015-0.020	153014	59.87	44.90	153264	59.87	44.90
3/8	3/8	5/8	2	0.015-0.020	153016	46.11	34.58	153266	47.06	35.30
3/8	3/8	1	2-1/2	0.015-0.020	153018	50.15	37.61	153268	47.06	35.30
3/8	3/8	1-1/8	3	0.015-0.020	153020	65.99	49.49	153270	65.99	49.49
7/16	7/16	1	2-3/4	0.015-0.020	153022	60.63	45.47	153272	56.58	42.44
1/2	1/2	5/8	2-1/2	0.025-0.030	153024	76.64	57.48	153274	65.89	49.42
1/2	1/2	1	3	0.025-0.030	153026	85.53	64.15	153276	70.38	52.79
1/2	1/2	1-1/4	3	0.025-0.030	153027	85.53	64.15	153277	70.38	52.79
1/2	1/2	2	4	0.025-0.030	153028	101.08	75.81	153278	95.26	71.45
5/8	5/8	3/4	3	0.030-0.035	153030	132.49	99.37	153280	126.20	94.65
5/8	5/8	1-1/4	3-1/2	0.030-0.035	153032	136.19	102.14	153282	129.89	97.42
5/8	5/8	2-1/4	5	0.030-0.035	153034	203.77	152.83	153284	203.77	152.83
3/4	3/4	1	3	0.030-0.035	153036	191.14	143.36	153286	181.44	136.08
3/4	3/4	1-1/2	4	0.030-0.035	153038	195.29	146.47	153288	185.40	139.05
3/4	3/4	2-1/4	5	0.030-0.035	153040	270.88	203.16	153290	248.86	186.65
1	1	1-1/2	4	0.030-0.035	153042	333.41	250.06	153292	276.99	207.74
1	1	2-1/4	5	0.030-0.035	153041	410.22	307.67	153293	370.79	278.09
1-1/4	1-1/4	2-1/4	5	0.030-0.035	153043	888.29	666.22	153294	710.57	532.93

2-Flute For Aluminum

This carbide aluminum end mill has been designed specially for milling aluminum and all non-ferrous materials. The unique geometry permits much higher speed and feed rates without loading. Spindle and feed rates can be increased by fifty percent for greater productivity with excellent piece/part finishes.



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Code No.	Reg. Price \$	SALE \$
Inch						
1/4	1/4	3/4	2-1/2	101020	20.82	15.62
1/4	1/4	1-1/2	4	101022	37.60	28.20
5/16	5/16	13/16	2-1/2	101024	43.93	32.95
5/16	5/16	1-5/8	4	101026	49.03	36.77
3/8	3/8	1	2-1/2	101028	36.34	27.26
3/8	3/8	1-3/4	4	101030	54.30	40.73
1/2	1/2	1	3	101032	58.23	43.67
1/2	1/2	2	4	101034	79.46	59.60
5/8	5/8	1-1/4	3-1/2	101036	112.26	84.20
5/8	5/8	2-1/4	5	101038	163.78	122.84
3/4	3/4	1-1/2	4	101040	164.62	123.47
3/4	3/4	2-1/4	5	101042	255.98	191.99
1	1	2-1/4	5	101044	246.23	184.67
1	1	3	6	101046	443.58	332.69
Metric						
6	6	38	102	101391	38.82	29.12
8	8	41	102	101393	46.39	34.79
10	10	25	70	101394	44.24	33.18
10	10	51	102	101395	67.90	50.93
12	12	26	76	101396	61.14	45.86
12	12	51	102	101397	84.23	63.17
16	16	32	89	101398	117.87	88.40
16	16	57	127	101399	163.78	122.84
20	20	38	102	101400	219.76	164.82
20	20	57	127	101401	274.85	206.14
25	25	76	152	101403	423.54	317.66

SOWA > **GS TOOLING**

Sowa carbide end mills have moved to the GS Tooling line.

52pc Machinist Clamping Kit



Contains:

- 24 Studs 4 each 3, 4, 5, 6, 7, 8" lengths
- 6 T-slot nuts
- 6 Flange nuts
- 4 Coupling nuts
- 6 Step blocks
- 6 Serrated end clamps
- 1 T-slot cleaner
- 1 Metal holder

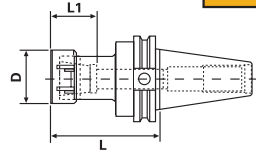
Table T-Slot Size	Stud Size	Code No.	Reg. Price \$	SALE \$
With 1" Thick Steel Step Blocks				
5/8	1/2-13	333550	153.98	115.49

Comes with 5/8" height t-nuts

Order before **3:00pm EST** and we'll ship **same day**.

DUAL CONTACT ER Collet Chucks

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life
- DIN coolant option - standard
- All ground body
- TIR, 0.0003" at 4xDia.
- AT2 Taper Accuracy
- RFID Chip Hole



FOR DUAL CONTACT SPINDLES



PREMIUM BALANCE

G2.5 at 30,000rpm

CERTIFICATE INCLUDED

CT40



TOOLING

PREMIUM BALANCE

G2.5 at 25,000rpm

CERTIFICATE INCLUDED

CT50

CAT40

Taper	Collet Series	Collet Range	L	L1	D	Tightening Torque (Nm)	Code No.	Reg. Price \$	SALE \$
CT40	ER32	0.078-0.787	6.00	1.34	1.97	169.5	521425	317.53	238.15

CAT50

Taper	Collet Series	Collet Range	L	L1	D	Tightening Torque (Nm)	Code No.	Reg. Price \$	SALE \$
CT50	ER16**	0.019-0.406	4.12	0.87	1.26	56.9	521432	419.63	314.72
CT50	ER16**	0.019-0.406	6.00	0.87	1.26	56.9	521434	438.70	329.03
CT50	ER32	0.078-0.787	4.00	1.34	1.97	169.5	521454	411.77	308.83
CT50	ER32	0.078-0.787	6.00	1.34	1.97	169.5	521456	499.29	374.47
CT50	ER32	0.078-0.787	8.00	1.34	1.97	169.5	521458	481.34	361.01

** Hex Nut

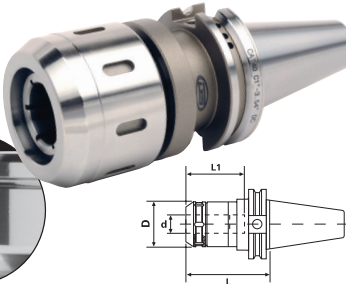
DUAL CONTACT Milling Chucks

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life
- DIN coolant through the flange at no extra charge
- Rough milling or 'hogging' operations
- '360°' gripping contact
- Improved tool life over regular end mill holders
- Extreme rigidity taper collets
- TIR, 0.0002"
- RFID chip hole
- AT2 Taper Accuracy



TOOLING

FOR DUAL CONTACT SPINDLES



CAT40

Taper	Collet Series	Collet Range	d	L	L1	D	Tightening Torque (Nm)	Code No.	Reg. Price \$	SALE \$
CT40	GS 3/4	0.125-0.750	0.75	3.54	3.15	2.05	50-70	521253	596.90	447.68
CT40	GS 1	0.125-1.00	1.00	3.54	3.15	2.41	50-70	521255	596.90	447.68
CT40	GS 1-1/4	0.187-1.25	1.25	3.54	3.34	2.88	60-80	521257	596.90	447.68

‡ Not DIN Coolant

Replacement ER Chuck Nuts



TOOLING



Collet Nut for ER32 Shorty Collet Chuck

Description	Code No.	Steam Oxide		Balanced & Bright	
		Reg. Price \$	SALE \$	Reg. Price \$	SALE \$
ER11 Nut (Hex)	337680	60.72	45.54	534790	36.96
ER16 Nut (Hex)	337389	60.72	45.54		
ER20 Nut (Hex)	337391	60.72	45.54	534794	42.24
ER25 Nut (Notched)	337390	66.00	49.50		
ER32 Nut (Notched)	337392	64.68	48.51	534798	51.48
ER40 Nut (Notched)	337393	69.96	52.47		
ER50 Nut (Notched)	337385	155.76	118.82		
ER32 Shorty Collet Nut					
Fits ER32 Shorty Chucks (M40 x 1.5 Thread)				337411	110.13

ER32 Collets

Our ER collet system is made of special alloy steel material under excellent heat treatment and precise grinding process, so it has precise accuracy, powerful clamping ability, and is durable. This collet can clamp for a specific standard size and its next size. It can be widely used for boring, milling, drilling and tapping as well as for grinding operation, and is available for all sizes.

AA Collets have a runout of only 5 microns (0.005mm)



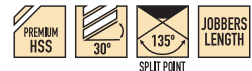
Size (in.)	Code No.	Reg. Price \$	SALE \$	AA Code No.	Reg. Price \$	SALE \$
3/32				336851	65.05	48.79
1/8	337703*	35.57	26.68	336854*	52.85	39.64
5/32	337704*	35.57	26.68	336856*	52.85	39.64
3/16	337706*	35.57	26.68	336859*	52.85	39.64
7/32	337707*	35.57	26.68	336862*	52.85	39.64
1/4	337708*	35.57	26.68	336865*	52.85	39.64
9/32	337709*	35.57	26.68	336867*	52.85	39.64
5/16	337711*	35.57	26.68	336869*	52.85	39.64
11/32	337712*	35.57	26.68	336872*	52.85	39.64
3/8	337713*	35.57	26.68	336875*	52.85	39.64
13/32	337714*	35.57	26.68	336877*	52.85	39.64
7/16	337716*	35.57	26.68	336880*	52.85	39.64
15/32	337717*	35.57	26.68	336882*	52.85	39.64
1/2	337718*	35.57	26.68	336885*	52.85	39.64
17/32	337719*	35.57	26.68	336887*	52.85	39.64
9/16	337721*	35.57	26.68	336890*	52.85	39.64
19/32	337722*	35.57	26.68	336893*	52.85	39.64
5/8	337723*	35.57	26.68	336895*	52.85	39.64
21/32	337724*	35.57	26.68	336898*	52.85	39.64
11/16	337725*	35.57	26.68	336900*	52.85	39.64
23/32	337726*	35.57	26.68	336903*	52.85	39.64
3/4	337727*	35.57	26.68	336906*	52.85	39.64
25/32	337605	35.57	26.68	336908	52.85	39.64
21pc Set 1/8-3/4	337407	747.05	560.29	336996	1,109.91	832.43

* Part of Set

Premium HSS Jobber Length Drills



These Premium HSS drills can be used in a variety of applications. Their surface treatment increases abrasion resistance, which reduces the amount of chip welding and improves chip flow.



Size (in.)	Decimal Equivalent	Flute Length (in.)	Overall Length (in.)	Code No.	Reg. Price \$	SALE \$
1/16	0.0625	7/8	1-7/8	128001	2.59	1.94
5/64	0.0781	1	2	128002	2.59	1.94
3/32	0.0938	1-1/4	2-1/4	128003	2.59	1.94
7/64	0.1094	1-1/2	2-5/8	128004	2.95	2.21
1/8	0.1250	1-5/8	2-3/4	128005	2.95	2.21
9/64	0.1406	1-3/4	2-7/8	128006	2.93	2.20
5/32	0.1562	2	3-1/8	128007	2.93	2.20
11/64	0.1719	2-1/8	3-1/4	128008	3.08	2.31
3/16	0.1875	2-5/16	3-1/2	128009	3.44	2.58
13/64	0.2031	2-7/16	3-5/8	128010	3.83	2.87
7/32	0.2188	2-1/2	3-3/4	128011	4.43	3.32
15/64	0.2344	2-5/8	3-7/8	128012	4.80	3.60
1/4	0.2500	2-3/4	4	128013	5.06	3.80
17/64	0.2656	2-7/8	4-1/8	128014	6.40	4.80
9/32	0.2812	2-15/16	4-1/4	128015	6.40	4.80
19/64	0.2969	3-1/16	4-3/8	128016	7.51	5.63
5/16	0.3125	3-3/16	4-1/2	128017	7.87	5.90
21/64	0.3281	3-5/16	4-5/8	128018	8.86	6.65
11/32	0.3438	3-7/16	4-3/4	128019	9.57	7.18
23/64	0.3594	3-1/2	4-7/8	128020	10.69	8.02
3/8	0.3750	3-5/8	5	128021	10.96	8.22
25/64	0.3906	3-3/4	5-1/8	128022	12.79	9.59
13/32	0.4062	3-7/8	5-1/4	128023	13.02	9.77
27/64	0.4219	3-15/16	5-3/8	128024	14.75	11.06
7/16	0.4375	4-1/16	5-1/2	128025	14.87	11.15
29/64	0.4531	4-3/16	5-5/8	128026	17.49	13.12
15/32	0.4688	4-5/16	5-3/4	128027	17.94	13.46
31/64	0.4844	4-3/8	5-7/8	128028	19.07	14.30
1/2	0.5000	4-1/2	6	128029	18.93	14.20

Centre Drills HSS

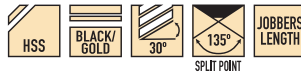
These drills are used for starting and centering screw machine operations. Their short flute and overall length increase rigidity while minimizing runout.



Size	Decimal Equiv. (in.)	Flute Length (in.)	Overall Length (in.)	HSS Code No.	Reg. Price \$	SALE \$
#56	0.0465	3/8	1-3/16	116358	3.77	2.83
1/16	0.0625	3/8	1-3/16	116359	3.77	2.83
5/64	0.0781	3/4	1-1/4	116360	3.77	2.83
3/32	0.0938	3/4	1-1/4	116361	4.21	3.16
#41	0.0960	3/4	1-1/4	116362	4.21	3.16
#40	0.0980	3/4	1-1/4	116363	4.66	3.50
7/64	0.1094	3/4	1-1/4	116364	4.21	3.16
1/8	0.1250	3/4	1-1/4	116365	3.44	2.58
#30	0.1285	3/4	1-1/4	116366	3.67	2.75
9/64	0.1406	3/4	1-1/4	116367	5.55	4.16
5/32	0.1562	1	1-1/2	116368	6.10	4.58
#21	0.1590	1	1-1/2	116369	6.10	4.58
#20	0.1610	1	1-1/2	116370	6.10	4.58
11/64	0.1719	1	1-1/2	116371	6.10	4.58
3/16	0.1875	1	1-1/2	116372	6.10	4.58
13/64	0.2031	1	1-1/2	116373	6.10	4.58
#5	0.2055	1	1-1/2	116374	6.10	4.58
7/32	0.2188	1	1-1/2	116375	6.10	4.58
1/4	0.2500	1	1-1/2	116376	6.76	5.07
9/32	0.2812	1	1-1/2	116377	9.31	6.98
5/16	0.3125	1	1-1/2	116378	11.08	8.31
29/64	0.4531	1	1-1/2	116379	17.85	13.39

Black/Gold Jobber Length Drills

- Black/Gold finish extends tool life
- 135° split point penetrates faster and prevents bit "walk"



Size (in.)	Decimal Equivalent	Flute Length (in.)	Overall Length (in.)	Code No.	Reg. Price \$	SALE \$
1/16	0.0625	7/8	1-7/8	105381	0.96	0.72
5/64	0.0781	1	2	105382	0.96	0.72
3/32	0.0938	1-1/4	2-1/4	105383	1.13	0.85
7/64	0.1094	1-1/2	2-5/8	105384	1.15	0.86
1/8	0.1250	1-5/8	2-3/4	105385	1.39	1.04
9/64	0.1406	1-3/4	2-7/8	105386	1.32	0.99
5/32	0.1562	2	3-1/8	105387	1.40	1.05
11/64	0.1719	2-1/8	3-1/4	105388	1.45	1.09
3/16	0.1875	2-5/16	3-1/2	105389	1.86	1.40
13/64	0.2031	2-7/16	3-5/8	105390	1.93	1.45
7/32	0.2188	2-1/2	3-3/4	105391	2.11	1.58
15/64	0.2344	2-5/8	3-7/8	105392	2.38	1.79
1/4	0.2500	2-3/4	4	105393	2.64	1.98
17/64	0.2656	2-7/8	4-1/8	105394	3.13	2.35
9/32	0.2812	2-15/16	4-1/4	105395	3.37	2.53
19/64	0.2969	3-1/16	4-3/8	105396	3.53	2.65
5/16	0.3125	3-3/16	4-1/2	105397	3.78	2.84
21/64	0.3281	3-5/16	4-5/8	105398	4.27	3.20
11/32	0.3438	3-7/16	4-3/4	105399	5.18	3.89
23/64	0.3594	3-1/2	4-7/8	105400	5.28	3.96
3/8	0.3750	3-5/8	5	105401	5.96	4.47
25/64	0.3906	3-3/4	5-1/8	105402	5.83	4.37
13/32	0.4062	3-7/8	5-1/4	105403	6.46	4.85
27/64	0.4219	3-15/16	5-3/8	105404	7.29	5.47
7/16	0.4375	4-1/16	5-1/2	105405	7.46	5.60
29/64	0.4531	4-3/16	5-5/8	105406	7.59	5.69
15/32	0.4688	4-5/16	5-3/4	105407	8.24	6.18
31/64	0.4844	4-3/8	5-7/8	105408	9.34	7.01
1/2	0.5000	4-1/2	6	105409	9.93	7.45

Full range on promotion. Visit SovaTool.com or see page B15 of our new catalogue.

ER Chuck Nut Wrenches



Wrench for ER32 Shorty Collet Chuck



Description	Code No.	Reg. Price \$	SALE \$
Fits ER11 Chucks (Hex)	337388	25.08	18.81
Fits ER16 Chucks (Hex)	337395	25.08	18.81
Fits ER20 Chucks (Hex)	337397	36.96	27.72
Fits ER25 Chucks (Notched)	337396	30.36	22.77
Fits ER32 Chucks (Notched)	337398	36.96	27.72
Fits ER40 Chucks (Notched)	337399	43.56	32.67
ER32 Shorty Chuck Wrench			
Fits ER32 Shorty Chucks	337381	118.89	89.17

M1 Oil – All Purpose Lubricant – Aerosol Can



- Dries to leave a dry-lubricating, surface-protecting film
- Prevents short circuits caused by moisture
- Prevents rust and stops squeaks



Size	Code No.	Reg. Price \$	SALE \$
12 oz.	629428	14.50	10.88

Air Blow Gun

- 4" nozzle length
- Recommended air pressure: 75-120 psi
- Max 150 psi
- Air inlet: 1/4"



Model No.	Code No.	Reg. Price \$	SALE \$
BG2504	174068	16.90	12.68

Air Blow Gun

- 13" bent steel nozzle
- Recommended air pressure: 75-120 psi
- Max 150 psi
- Air inlet: 1/4"



Model No.	Code No.	Reg. Price \$	SALE \$
BG25013	174070	23.30	17.48

Air Micro Die Grinder

Contains:

- 1pc TP-501-1 Grinder
- 1pc 3 mm collet
- 10pcs 1/8" (3 mm) grinding stones
- 2pcs spanners
- 1pc blow case

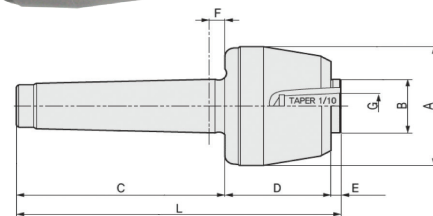
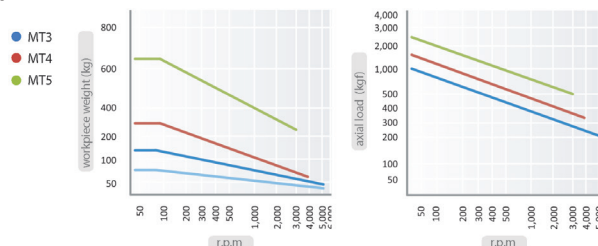


Description	Code No.	Reg. Price \$	SALE \$
1/8" die grinder kit	174002	253.18	189.89

Interchangeable Points Live Centres

Each holder comes with the 60° H insert. Other inserts available individually below.

- Accuracy for centre inner diameter guaranteed to 0.003mm
- Accuracy after point locking guaranteed to 0.005mm
- Excellent for individual production of various workpieces through different insert shafts
- Heat treated point to 60±2HRC
- 4 types of standard point are available
- 4-Bearing System: a double row angular contact bearing, a radial ball bearing, and a rear needle roller bearing combine to provide excellent rigidity and superior performance
- Because of the insert shafts the allowed workpiece weight is limited
- Mounting taper of point is 1/10
- Drop forged (50±2HRC) body
- Shaft borehole for easy, efficient dismounting



Dimensions

MT	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	L (mm)	Workpiece Weight	Max RPM	Weight	Max Runout	Code No.	Reg. Price \$	SALE \$
3	50	25	85	43.5	5	6	12	133.5	150 kg	5,000	0.8 kg	0.005mm	311020	675.38	506.54
4	69	32	108	55	5	8	15	168	250 kg	3,800	1.7 kg	0.005mm	311021	776.00	582.00
5	88	40	136	70	6	8	22	212	650 kg	3,000	3.9 kg	0.005mm	311022	840.79	630.59

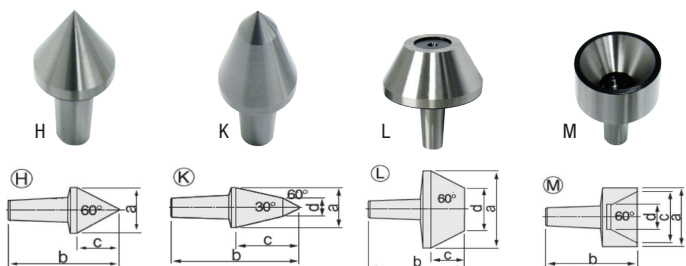
Individual Interchangeable Points

Each holder comes with the 60° H insert and a point lever.

- Accuracy for centre inner diameter guaranteed to 0.003mm
- Accuracy after point locking guaranteed to 0.005mm
- Mounting taper of point is 1/10



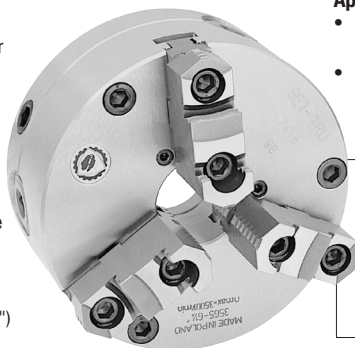
MT	Inserts	a (mm)	b (mm)	c (mm)	d (mm)	Code No.	Reg. Price \$	SALE \$
3	H	24	51.5	20	-	311037	57.17	42.88
	K	18	54	25	8	311038	57.17	42.88
	L	45	51	17.5	25	311039	66.87	50.15
	M	22	60	18	6.5	311040	143.93	107.95
	Disassembling Tool					311068	27.91	20.93
4	H	28	61.5	23.5	-	311041	76.38	57.29
	K	26	73	36	12	311042	91.88	68.91
	L	55	61.5	21.5	30.2	311043	107.36	80.52
	M	40	55	35	16.5	311044	192.25	144.19
	Disassembling Tool					311069	27.91	20.93
5	H	38	78	32	-	311045	95.61	71.71
	K	32	90	46	13	311046	115.01	86.26
	L	70	74	20	40	311047	134.40	100.80
	M	52	65	45	25.4	311048	241.59	181.19
	Disassembling Tool					311070	27.91	20.93



3-Jaw F/A Precision Steel Body Scroll Chucks — 2pc Hard Rev. Jaws

Features:

- 3-Jaw, self-centering scroll chuck
- Steel body extends machine life while providing higher rigidity and greater wear resistance
- Hardened and ground working surfaces ensure longer life with maintained accuracy and repeatability
- Balanced scroll plate and chuck allows higher rotation speeds without excess vibration
- Repeatability: 0.0006"
- Superior accuracy: small screws on the outside enable the chuck to be adjusted to position with nearly zero runout (adjusting accuracy within 0.0002")
- The clamped workpiece is adjusted to the required concentricity by means of 4 (8 for sizes 16", 20" & 25") radially arranged adjusting screws

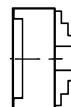


Application:

- This precision chuck, with increased gripping accuracy, is made for universal use, but particularly advantageous for grinding machines, indexing heads, and lathes
- Especially suitable for machining parts with top concentricity

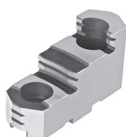


Mounting
3565
Plain Back

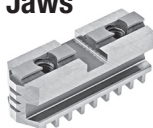


Chuck Size	6"	8"	10"
Hole Size	1.6535	2.1653	2.9921
Weight lbs.	20	35	57
Code No.	435625	435630	435635
Reg. Price \$	1,912.28	2,092.33	2,374.02
SALE \$	1,434.21	1,569.25	1,780.52

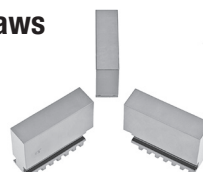
Hard Top Jaws 3pc set



Hard Master Jaws 3pc set



Soft Solid Jaws Sold in sets



Wrenches



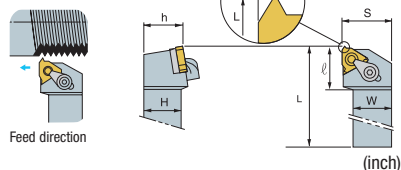
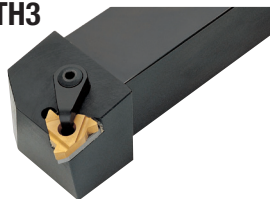
Chuck Dia.	3-Jaw Code No.	Reg. Price \$	SALE \$
6	460710	416.72	312.54
8	460715	442.86	332.15
10	460720	482.06	361.55

Chuck Dia.	3-Jaw Code No.	Reg. Price \$	SALE \$
6	467360	418.18	313.64
8	467365	454.48	340.86
10	467370	514.01	385.51

Chuck Dia.	Code No.	Reg. Price \$	SALE \$
6	467760	187.31	140.48
10	467770	312.18	234.14

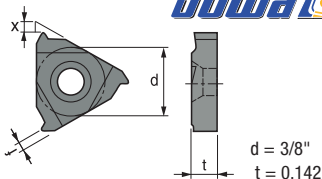
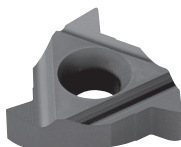
Wrench 3 & 6-Jaw				
Chuck Dia.	Code No.	Reg. Price \$	SALE \$	Square Size
6	460415	92.93	69.70	0.43
8	460415	92.93	69.70	0.43
10	460425	113.26	84.95	0.55

External Threading Holders ETH3



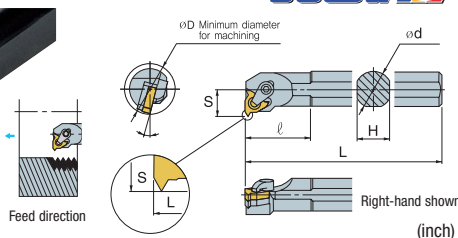
Ref	Holder Style			Application				
Comment				External Threading				
ETH3	Code No.	Reg. Price \$	SALE \$	H=(h)	W	L	S	l
3/4"	146708	115.66	86.75	0.750	0.750	6.000	1.205	1.100
1"	146290	128.86	96.65	1.000	1.000	6.000	1.205	1.100

External Threading Inserts ECTR



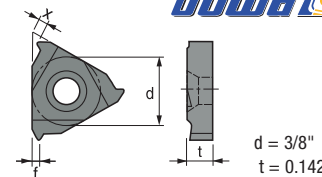
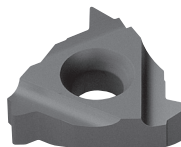
	Coated Carbide	Reg. Price \$	SALE \$	(inch)				
Designation	PM30P			Pitch	f	θ	x	Cutting Edge
ECTR 20UN	146524	48.34	36.26	20	0.039	60°	0.051	A
ECTR 16UN	146489	39.11	29.33	16	0.039	60°	0.051	A
ECTR 10UN	146249	48.34	36.26	10	0.059	60°	0.059	A
ECTR 300 8-28	146597	48.34	36.26	28-8	0.039	60°	0.051	D

Internal Threading Holders ITH3



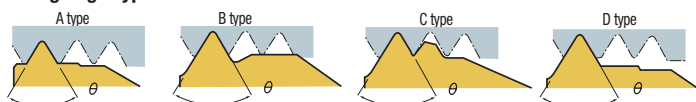
Ref	Holder Style			Application				
Comment				Internal Threading				
ITH3	Code No.	Reg. Price \$	SALE \$	øD	ød	H	L	l
3/4"	146255	175.45	131.59	0.950	0.750	0.625	7.00	2.00
1"	146254	208.52	156.39	1.150	1.000	0.750	8.00	2.50
1.25"	146256	276.80	207.60	1.460	1.250	1.250	10.00	2.50

Internal Threading Inserts ICTR



	Coated Carbide	Reg. Price \$	SALE \$	(inch)				
Designation	PM30P			Pitch	f	θ	x	Cutting Edge
ICTR 16UN	146514	40.26	30.20	16	0.039	60°	0.051	A
ICTR 10UN	146252	48.34	36.26	10	0.059	60°	0.059	A
ICTR 300 8-28	146610	48.34	36.26	28-8	0.039	60°	0.051	D

Cutting Edge Type



Yellow Ring HSSE-V3 DIN Length ANSI Shank Spiral Point Taps



HSSE-V3% Vanadium

- Superior performance in hardened tool steels such as 4140, 4340, H13, D2
- Up to 35HRC

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



• 4.5 Pitch lead (Intermediate)

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.	Reg. Price \$	SALE \$
10-24	3	H3	2.756	0.591	124820	12.68	9.51
1/4-20	3	H3	3.150	0.669	124822	14.00	10.50
5/16-18	3	H3	3.543	0.669	124824	15.65	11.74
3/8-16	3	H3	3.937	0.787	124826	28.55	21.41
7/16-14	3	H3	3.937	0.866	124828	23.04	17.28
1/2-13	3	H3	4.331	0.984	124830	26.68	20.01
5/8-11	3	H3	4.331	1.063	124832	48.39	36.29
3/4-10	3	H3	4.921	1.181	124834	75.85	56.89

Yellow Ring HSSE-V3 DIN Length ANSI Shank Spiral Flute Taps



HSSE-V3% Vanadium

- Superior performance in hardened tool steels such as 4140, 4340, H13, D2
- Up to 35HRC

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



• 2.5 Pitch lead (Bottoming)

Tap	No. Flutes	Thread Limits	Overall Length (in.)	Thread Length (in.)	Code No.	Reg. Price \$	SALE \$
10-24	3	H3	2.756	0.417	124800	18.52	13.89
1/4-20	3	H3	3.150	0.500	124802	20.06	15.05
5/16-18	3	H3	3.543	0.556	124804	24.59	18.44
3/8-16	3	H3	3.937	0.625	124806	28.55	21.41
7/16-14	3	H3	3.937	0.714	124808	42.66	32.00
1/2-13	3	H3	4.331	0.769	124810	50.27	37.70
5/8-11	4	H3	4.331	0.909	124812	88.52	66.39
3/4-10	4	H3	4.921	1.000	124814	113.88	85.41

Die Stocks



Tool No.	(mm)	(in.)	Length (mm)	Code No.	Reg. Price \$	SALE \$
13/16	20.6 x 6.35	13/16 x 1/4	200	113750	17.12	12.84
1	25.4 x 9.5	1 x 3/8	224	113755	17.87	13.40
1 1/2	38.1 x 12.7	1-1/2 x 1/2	315	113760	29.39	22.04
2	50.8 x 15.9	2 x 5/8	560	113765	65.23	48.92

HSS Adjustable Round Split Dies — Inch



QUALITY IMPORT

Coarse Threads

	Size	TPI	Code No.	Reg. Price \$	SALE \$
1" O.D.					
	5/16	18	140385	23.90	17.93
	3/8	16	140390	23.90	17.93
1-1/2" O.D.					
	3/8	16	140415	40.18	30.14
	1/2	13	140425	40.18	30.14
	5/8	11	140435	40.18	30.14
2" O.D.					
	3/4	10	140445	68.76	51.57

Outside Micrometers Sets — Inch

ASIMETO

- Locking clamp
- Carbide faces
- Satin chrome finish



Range	Grad.	Notes	Code No.	Reg. Price \$	SALE \$
0-3" (3pc)	0.0001"	0-1"+1-2" Friction 2-3" Ratchet	7101637	151.57	113.68
0-6" (6pc)	0.0001"	0-1"+1-2" Friction 2-3" to 5-6" Ratchet	7101667	371.65	278.74
6-12" (6pc)	0.0001"	All Ratchet Stop	7101827	1,259.58	944.69
0-12" (12pc)	0.0001"	0-1"+1-2" Friction 2-3" to 11-12" Ratchet	7101727	899.00	674.25

Dial Calipers — Stainless Steel

ASIMETO

- Hardened Stainless Steel
- Preloaded dual pinions eliminate backlash and provides better repeatability



Range	Graduation	Range per Rev	Accuracy	Code No.	Reg. Price \$	SALE \$
0-6"	0.001"	0.100"	±0.001"	7303061	87.15	65.36
0-8"	0.001"	0.100"	±0.0015"	7303081	115.42	86.57
0-12"	0.001"	0.100"	±0.0015"	7303121	211.20	158.40

Holders With Fine Adjustment On Top

New Fine Adjustment on top with universal clamp.

- Holds 6mm, 3/8", dovetail and lug back
- Unique central locking mechanism with spring loaded bearing
- Dial gauge holder is 3 dimensional
- Powerful on/off magnetic base
- Instant fixation in any position
- Fast and easy to set up gauges into required position
- Black finished arms



NOGA

Arm Length and Diameter			Code No.	Reg. Price \$	SALE \$
Model	Bottom Arm Length(mm)	Top Arm Length(mm)			
NF61003	56	51	165498	199.74	149.81
DG61003	110	101	165500	252.45	189.34
MG61003	133	113	165502	317.01	237.76

Proudly distributed by:

AGD2 Dial Indicators

ASIMETO

- Dial face dia. 2.20"
- Lug Back
- Easy to read dial face



7402265

Range	Grad.	Dial Reading	Range per Rev.	Stem Dia.	Code No.	Reg. Price \$	SALE \$
Inch							
0-0.05"	0.0001"	0-50-0	0.01"	3/8	7402013	132.21	99.16
0-0.05"	0.0001"	10-0	0.01"	3/8	7402011	132.21	99.16
0-0.05"	0.0001"	0-5-0	0.01"	3/8	7402015	166.23	124.67
0-0.25"	0.0005"	0-25-0	0.05"	3/8	7402065	79.99	59.99
0-0.5"	0.0005"	0-50	0.05"	3/8	7402125	61.98	46.49
0-1"	0.0005"	0-50	0.05"	3/8	7402265	63.80	47.85
0-0.25"	0.001"	0-100	0.1"	3/8	7402061	53.62	40.22
0-0.25"	0.001"	0-50-0	0.1"	3/8	7402063	79.99	59.99
0-0.5"	0.001"	0-100	0.1"	3/8	7402121	56.27	42.20
0-0.5"	0.001"	0-50-0	0.1"	3/8	7402123	63.56	47.67
0-1"	0.001"	0-100	0.1"	3/8	7402261	45.27	33.95
0-1"	0.001"	0-50-0	0.1"	3/8	7402263	63.80	47.85
0-2"	0.001"	0-100	0.1"	3/8	7402511	122.99	92.24

Single Beam Digital Height Gauges With Hand Wheel

ASIMETO

- Large LCD display
- Hand wheel design for fine adjustment
- Inch/Metric conversion
- Carbide tipped scribe
- Zero setting on any position



Range	Resolution	Accuracy	Code No.	Reg. Price \$	SALE \$
0-12" / 0-300mm	0.0005" / 0.01mm	±0.0015"/0.04mm	7626120	699.00	524.25
0-18" / 0-450mm	0.0005" / 0.01mm	±0.0015"/0.04mm	7626180	1,029.68	772.26
0-24" / 0-600mm	0.0005" / 0.01mm	±0.0020"/0.05mm	7626240	999.00	749.25

