



SOWA

METALWORKING SOLUTIONS



2015 Winter/Spring Flyer
Pricing valid from February 1 to May 31 2015



ANGLE HEADS

MADE IN ITALY

STOCK IN USA



SPECIAL

Fixed Right Angle Heads

Taper	Model	Collet System	Code No.	SALE \$
CAT 40	GFX10	ER16	381-020	5,589.00
CAT 40	GFX16	ER25	381-100	6,429.00
CAT 40	GFX20	ER32	381-148	7,122.00

Pivoting Right Angle Head

Taper	Model	Collet System	Code No.	SALE \$
CAT 50	GPV20	ER32	381-150	9,496.20

For Complete Offering



Download The Brochure From
www.Sowatool.com
Or Call For Your Copy Today.



STARTER PACKAGES

- CAT40 Taper Tooling Balanced to 30,000 RPM
- CAT50 Taper Tooling Balanced to 25,000 RPM
- DIN Coolant Thru The Flange Option - Standard
- All Ground Body
- 100% Forged Construction



CAT40 PACKAGE

\$555.00
REG LIST \$924.70

CAT 40 Package

Promo # 500-743

Code No.	Qty.	Description	
531002	1 pc	CAT40-1/4-2.50"	End Mill Holder
531014	1 pc.	CAT40-3/8-2.50"	End Mill Holder
531026	1 pc.	CAT40-1/2-2.50"	End Mill Holder
531042	1 pc.	CAT40-3/4-3.00"	End Mill Holder
531056	1 pc.	CAT40-1"-4.00"	End Mill Holder
531196	1 pc.	CAT40-1"-1.75"	Shell Mill Holder
531421	2 pcs.	CAT40 ER32-2.5"	Collet Chuck

CAT50 PACKAGE

\$815.00
REG LIST \$1,356.60

CAT 50 Package

Promo # 500-744

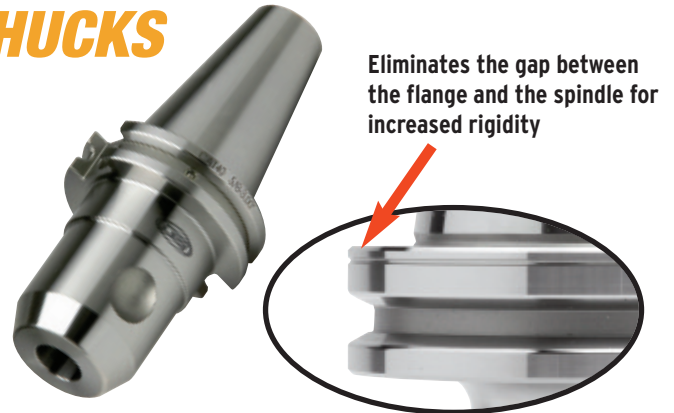
Code No.	Qty.	Description	
531120	1 pc.	CAT50 1/2-4.00"	End Mill Holder
531130	1 pc.	CAT50 5/8-4.00"	End Mill Holder
531140	1 pc.	CAT50 3/4-4.00"	End Mill Holder
531154	1 pc.	CAT50 1"-4.00"	End Mill Holder
531162	1 pc.	CAT50 1-1/4-4.00"	End Mill Holder
531224	1 pc.	CAT50 1-1/4-1.75"	Shell Mill Holder
531454	2 pcs.	CAT50 ER32-4.00"	Collet Chuck

DUAL CONTACT HOLDERS & CHUCKS FOR DUAL CONTACT SPINDLES

Features:

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- Premium Balanced up to 30,000 rpm
- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction

**SAVE
20%**



CAT40/50 DUAL CONTACT End Mill Holders

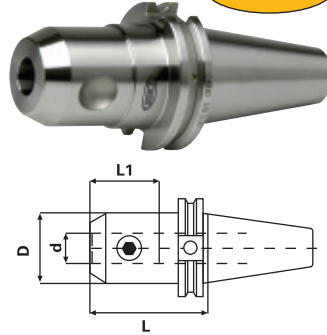
New

FOR DUAL CONTACT SPINDLES

CAT 40
Premium
Balanced
30x
RPM

CAT 50
Premium
Balanced
25x
RPM

Complete with certificate



CAT40

Taper	Hole Dia. (d)	Gage Length (L)	L1	D	Set Screw	Code No.	SALE \$
CT40	1/2"	2.50"	1.50"	1.38"	7/16-20	521-026	110.80
CT40	1/2"	4.00"	1.50"	1.38"	7/16-20	521-028	116.32
CT40	1/2"	5.00"	1.50"	1.38"	7/16-20	521-030	131.20
CT40	5/8"	3.00"	1.61"	1.65"	9/16-18	521-034	110.80
CT40	5/8"	4.00"	1.61"	1.65"	9/16-18	521-036	116.32
CT40	5/8"	5.50"	1.61"	1.65"	9/16-18	521-038	126.40
CT40	3/4"	3.00"	1.77"	1.75"	5/8-18	521-042	110.80
CT40	3/4"	4.00"	1.77"	1.75"	5/8-18	521-044	116.32
CT40	3/4"	5.50"	1.77"	1.75"	5/8-18	521-046	126.40
CT40	1"	2.00"	2.36"	2.36"	3/4-16	521-054	105.52
CT40	1"	4.00"	2.36"	2.36"	3/4-16	521-056	116.32
CT40	1"	6.00"	2.36"	2.36"	3/4-16	521-058	132.64
CT40	1-1/4"	2.00"*	2.28"	2.25"	3/4-16	521-060	105.52
CT40	1-1/4"	4.00"	2.55"	2.48"	3/4-16	521-062	116.32
CT40	1-1/4"	6.00"	2.55"	2.48"	3/4-16	521-064	132.64
CT40	1-1/2"	4.50"	2.55"	2.99"	3/4-16	521-066	133.44

CAT50

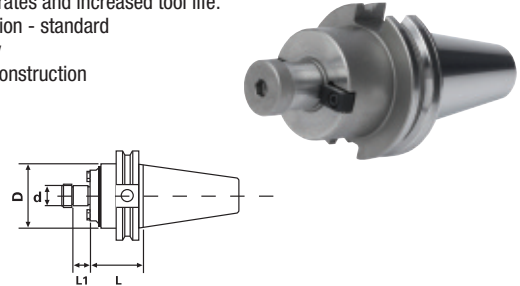
Taper	Hole Dia. (d)	Gage Length (L)	L1	D	Set Screw	Code No.	SALE \$
CT50	1/2"	4.00"	1.50"	1.38"	7/16-20	521-120	162.96
CT50	1/2"	6.00"	1.50"	1.38"	7/16-20	521-122	177.12
CT50	5/8"	4.00"	1.61"	1.65"	9/16-18	521-130	162.96
CT50	5/8"	6.00"	1.61"	1.65"	9/16-18	521-132	177.12
CT50	3/4"	3.00"	1.77"	1.89"	5/8-18	521-138	148.64
CT50	3/4"	4.00"	1.77"	1.89"	5/8-18	521-140	162.96
CT50	3/4"	6.00"	1.77"	1.89"	5/8-18	521-142	177.12
CT50	1"	4.00"	2.36"	2.36"	3/4-16	521-154	152.32
CT50	1"	6.00"	2.36"	2.36"	3/4-16	521-156	177.76
CT50	1"	8.00"	2.36"	2.36"	3/4-16	521-158	207.04
CT50	1-1/4"	4.00"	2.55"	2.48"	3/4-16	521-162	177.76
CT50	1-1/4"	6.00"	2.55"	2.48"	3/4-16	521-164	196.96
CT50	1-1/4"	8.00"	2.55"	2.48"	3/4-16	521-166	226.64
CT50	1-1/2"	4.50"	2.83"	2.99"	3/4-16	521-170	177.76
CT50	1-1/2"	7.00"	2.83"	2.99"	3/4-16	521-172	206.56
CT50	2"	5.37"	3.34"	3.74"	1"-14	521-178	217.52

CAT40/50 DUAL CONTACT Shell Mill Holders

New

FOR DUAL CONTACT SPINDLES

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction



CAT40

Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.	SALE \$
CT40	3/4"	1.75"	1.75"	0.67"	5/16"	3/8"-24	521-192	141.68
CT40	3/4"	4.00"	1.75"	0.67"	5/16"	3/8"-24	521-194	164.48
CT40	3/4"	6.00"	1.75"	0.67"	5/16"	3/8"-24	521-195	265.04
CT40	1"	1.75"	2.38"	0.67"	3/8"	1/2"-20	521-196	141.68
CT40	1"	4.00"	2.38"	0.67"	3/8"	1/2"-20	521-198	164.48
CT40	1"	6.00"	2.38"	0.67"	3/8"	1/2"-20	521-199	267.52
CT40	1-1/4"	2.00"	2.88"	0.67"	1/2"	5/8"-18	521-200	141.68
CT40	1-1/4"	4.00"	2.88"	0.67"	1/2"	5/8"-18	521-202	164.48
CT40	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	521-204	141.68
CT40	1-1/2"	4.00"	3.80"	0.93"	5/8"	3/4"-16	521-206	164.48

CAT50

Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.	SALE \$
CT50	3/4"	1.75"	2.00"	0.67"	5/16"	3/8"-24	521-208	177.92
CT50	3/4"	4.00"	2.00"	0.67"	5/16"	3/8"-24	521-210	195.12
CT50	3/4"	6.00"	2.00"	0.67"	5/16"	3/8"-24	521-212	200.96
CT50	1"	1.75"	2.75"	0.69"	3/8"	1/2"-20	521-216	177.92
CT50	1"	4.00"	2.75"	0.69"	3/8"	1/2"-20	521-218	195.12
CT50	1"	6.00"	2.75"	0.69"	3/8"	1/2"-20	521-220	200.96
CT50	1"	8.00"	2.75"	0.69"	3/8"	1/2"-20	521-222	243.84
CT50	1-1/4"	1.75"	2.88"	0.69"	1/2"	5/8"-18	521-224	181.68
CT50	1-1/4"	4.00"	2.88"	0.69"	1/2"	5/8"-18	521-226	200.48
CT50	1-1/4"	6.00"	2.88"	0.69"	1/2"	5/8"-18	521-228	219.12
CT50	1-1/4"	8.00"	2.88"	0.69"	1/2"	5/8"-18	521-230	251.92
CT50	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	521-232	199.20
CT50	1-1/2"	4.00"	3.80"	0.93"	5/8"	3/4"-16	521-234	218.56
CT50	1-1/2"	6.00"	3.80"	0.93"	5/8"	3/4"-16	521-236	237.44
CT50	1-1/2"	8.00"	3.80"	0.93"	5/8"	3/4"-16	521-238	276.48
CT50	2"	2.00"	4.38"	0.93"	3/4"	1"-14	521-240	224.72
CT50	2"	4.00"	4.38"	0.93"	3/4"	1"-14	521-242	259.84

DUAL CONTACT HOLDERS & CHUCKS

FOR DUAL CONTACT SPINDLES

Features:

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- Premium Balanced up to 30,000 rpm
- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction

**SAVE
20%**



CAT40 DUAL CONTACT ER Collet Chucks

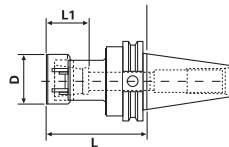
New

FOR DUAL CONTACT SPINDLES

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction
- Wrench not included



Complete with certificate



CAT 40
Premium
Balanced
30x
RPM

Taper	Collet Series	Collet Range	L	L1	D	Code No.	SALE \$
CT40	ER16	.019-.406"	2.50"	0.87"	1.26"	521-406	149.44
CT40	ER16	.019-.406"	4.00"	0.87"	1.26"	521-405	174.00
CT40	ER16	.019-.406"	6.00"	0.87"	1.26"	521-410	180.24
CT40	ER32	.078-.787"	3.13"	1.34"	1.97"	521-424	178.00
CT40	ER32	.078-.787"	4.00"	1.34"	1.97"	521-423	184.80
CT40	ER32	.078-.787"	6.00"	1.34"	1.97"	521-425	197.84

CAT50 DUAL CONTACT ER Collet Chucks

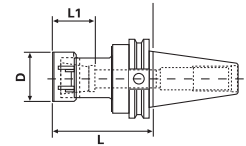
New

FOR DUAL CONTACT SPINDLES

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction
- Wrench not included



Complete with certificate



CAT 50
Premium
Balanced
25x
RPM

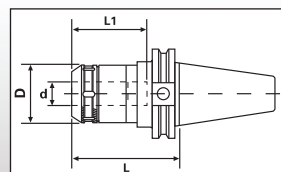
Taper	Collet Series	Collet Range	L	L1	D	Code No.	SALE \$
CT50	ER16	.019-.406"	4.12"	0.87"	1.26"	521-432	248.48
CT50	ER16	.019-.406"	6.00"	0.87"	1.26"	521-434	269.36
CT50	ER16	.019-.406"	8.00"	0.87"	1.26"	521-436	309.04
CT50	ER32	.078-.787"	4.00"	1.34"	1.97"	521-454	259.44
CT50	ER32	.078-.787"	6.00"	1.34"	1.97"	521-456	267.12
CT50	ER32	.078-.787"	8.00"	1.34"	1.97"	521-458	321.36

CAT 40 DUAL CONTACT Milling Chucks

New

FOR DUAL CONTACT SPINDLES

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- DIN coolant thru the flange at no extra charge
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- '360°' gripping contact
- Extreme rigidity over taper collets
- 0.0002" TIR for maximum tool life and accuracy
- Wrench not included



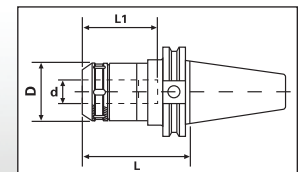
Taper	Collet Series	Collet Range	d	L	L1	D	Code No.	SALE \$
CT40	GS 3/4"	.125-.750"	.750"	3.54"	3.15"	2.05"	521-253	283.36
CT40	GS 1"	.125-1.00"	1.00"	3.54"	3.15"	2.41"	521-255	283.36
CT40	GS 1-1/4"	.187-1.25"	1.25"	3.54"	3.34"	2.88"	521-257	283.36

CAT 50 DUAL CONTACT Milling Chucks

New

FOR DUAL CONTACT SPINDLES

- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- DIN coolant thru the flange at no extra charge
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- '360°' gripping contact
- Extreme rigidity over taper collets
- 0.0002" TIR for maximum tool life and accuracy
- Wrench not included



Taper	Collet Series	Collet Range	d	L	L1	D	Code No.	SALE \$
CT50	GS 3/4"	.125-.750"	.750"	4.14"	3.15"	2.05"	521-260	354.08
CT50	GS 1"	.125-1.00"	1.00"	4.14"	3.15"	2.41"	521-264	354.08
CT50	GS 1-1/4"	.187-1.25"	1.25"	4.14"	4.73"	2.88"	521-266	354.08

ER COLLET CHUCKS

FEATURES:

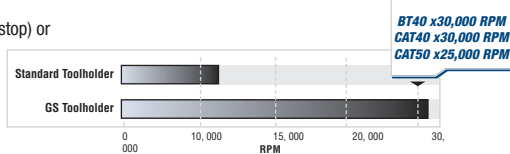
- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction
- Factory Balanced to save spindle life, tool life and increase productivity
- Threaded through holes for a back-up screw (tool stop) or coolant through when removed
- Wrench not included



PREMIUM BALANCED



Each holder comes complete with certificate



BT 40 CAT 40 CAT 50

Collet Series	Collet Range	Gage Length	Code No.	SALE \$	Code No.	SALE \$	Code No.	SALE \$
ER11	.019-.275"	2.50"	532-174	119.28	531-400	119.28	-	-
ER11	.019-.275"	4.00"	532-176	119.28	531-402	119.28	-	-
ER11	.019-.275"	6.00"	532-178	128.72	531-404	128.72	-	-
ER16	.019-.406"	2.50"	-	-	531-406	106.72	-	-
ER16	.019-.406"	3.50"	532-180	119.28	531-408	119.28	-	-
ER16	.019-.406"	4.00"	-	-	531-405	124.24	531-432	177.44
ER16	.019-.406"	BT-5" .00 CAT-6.00"	532-182	128.72	531-410	128.72	531-434	127.12
ER16	.019-.406"	8.00"	-	-	-	-	531-436	220.72
ER20	.039-.511"	2.50"	532-184	120.16	531-412	120.16	531-438	178.32
ER20	.039-.511"	4.00"	532-186	120.16	531-414	120.16	531-440	178.32
ER20	.039-.511"	6.00"	532-188	132.00	531-416	132.00	531-442	196.96
ER20	.039-.511"	8.00"	-	-	-	-	531-444	221.92
ER25	.039-.629"	BT-2.25" CAT-2.50"	532-190	124.72	531-418	124.72	531-446	182.80
ER25	.039-.629"	4.00"	532-192	124.72	531-420	124.72	531-448	182.80
ER25	.039-.629"	6.00"	532-194	140.32	531-422	136.96	531-450	197.12
ER25	.039-.629"	8.00"	-	-	-	-	531-452	260.80
ER32	.078-.787"	2.50"	-	-	531-421	119.52	-	-
ER32	.078-.787"	3.13"	532-196	127.12	531-424	127.12	-	-
ER32	.078-.787"	4.00"	-	-	531-423	132.00	531-454	185.28
ER32	.078-.787"	5.00"	532-198	136.56	531-426	136.56	-	-
ER32	.078-.787"	6.00"	-	-	531-425	141.28	531-456	190.80
ER32	.078-.787"	8.00"	-	-	-	-	531-458	229.52
ER40	.118-1.023"	2.50"	-	-	531-427	128.40	-	-
ER40	.118-1.023"	3.13"	532-200	133.28	531-428	133.28	-	-
ER40	.118-1.023"	4.00"	-	-	531-429	137.84	531-460	191.44
ER40	.118-1.023"	5.00"	532-202	142.56	531-430	142.56	-	-
ER40	.118-1.023"	6.00"	-	-	531-431	147.28	531-462	206.32
ER40	.118-1.023"	8.00"	-	-	-	-	531-464	236.56



ER HIGH PRECISION COLLETS

- MADE FROM ALLOY STEEL
- STEEL SEALED AVAILABLE



ER 40 INCH

Size	Code No.	SALE \$
1/8	337-728	18.76
5/32	337-729	18.76
3/16	337-731	18.76
7/32	337-732	18.76
1/4	337-733	18.76
9/32	337-734	18.76
5/16	337-736	18.76
11/32	337-737	18.76
3/8	337-738	18.76
13/32	337-739	18.76
7/16	337-741	18.76
15/32	337-742	18.76
1/2	337-743	18.76
17/32	337-744	18.76
9/16	337-746	18.76
19/32	337-747	18.76
5/8	337-748	18.76
21/32	337-749	18.76
11/16	337-751	18.76
23/32	337-752	18.76
3/4	337-753	18.76
25/32	337-754	18.76
13/16	337-756	18.76
27/32	337-757	18.76
7/8	337-758	18.76
29/32	337-759	18.76
15/16	337-761	18.76
31/32	337-762	18.76
1	337-763	18.76

ER 11 INCH

Size	Code No.	SALE \$
3/16	337-651	13.44
13/64	337-653	13.44
7/32	337-655	13.44
15/64	337-657	13.44
1/4	337-659	13.44
17/64	337-661	13.44

ER 16 INCH

Size	Code No.	SALE \$
1/16	337-531	13.44
3/32	337-532	13.44
1/8	337-533	13.44
5/32	337-534	13.44
3/16	337-535	13.44
7/32	337-536	13.44
1/4	337-537	13.44
9/32	337-538	13.44
5/16	337-540	13.44
11/32	337-541	13.44
3/8	337-542	13.44
13/32	337-543	13.44

ER 20 INCH

Size	Code No.	SALE \$
1/8	337-663	13.44
5/32	337-665	13.44
3/16	337-667	13.44
7/32	337-669	13.44
1/4	337-671	13.44
9/32	337-673	13.44
5/16	337-675	13.44
11/32	337-676	13.44
3/8	337-677	13.44
13/32	337-678	13.44
7/16	337-679	13.44
15/32	337-681	13.44
1/2	337-682	13.44

ER 25 INCH

Size	Code No.	SALE \$
1/8	337-683	14.07
5/32	337-684	14.07
3/16	337-685	14.07
7/32	337-686	14.07
1/4	337-687	14.07
9/32	337-688	14.07
5/16	337-689	14.07
11/32	337-691	14.07
3/8	337-692	14.07
13/32	337-693	14.07
7/16	337-694	14.07
15/32	337-696	14.07
1/2	337-697	14.07
17/32	337-698	14.07
9/16	337-699	14.07
19/32	337-701	14.07
5/8	337-702	14.07

ER 32 INCH

Size	Code No.	SALE \$
1/8	337-703	14.77
5/32	337-704	14.77
3/16	337-706	14.77
7/32	337-707	14.77
1/4	337-708	14.77
9/32	337-709	14.77
5/16	337-711	14.77
11/32	337-712	14.77
3/8	337-713	14.77
13/32	337-714	14.77
7/16	337-716	14.77
15/32	337-717	14.77
1/2	337-718	14.77
17/32	337-719	14.77
9/16	337-721	14.77
19/32	337-722	14.77
5/8	337-723	14.77
21/32	337-724	14.77
11/16	337-725	14.77
23/32	337-726	14.77
3/4	337-727	14.77

ER METRIC SIZES ALSO AVAILABLE

HSSE-V3% VANADIUM CNC MACHINE TAPS

YELLOW RING SPIRAL POINT TAPS

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



• 4.5 PITCH LEAD (INTERMEDIATE)

SPIRAL POINT TAPS INCH							
Tap	Threads Per Inch	No. Flutes	Thread Limits	O/A Length (in)	Thread Length (in)	Code No.	Price \$
2	56	2	H2	1-3/4	.433	122-550	8.96
3	48	2	H2	1-13/16	.512	122-552	8.96
4	40	2	H2	1-7/8	.433	123-296	8.96
4	40	2	*H3	1-7/8	.433	122-554*	8.96
6	32	3	H3	2	.512	123-300	8.00
6	40	3	H3	2	.512	123-334	8.00
8	32	3	H3	2-1/8	.512	123-302	8.48
10	24	3	H3	2-3/8	.512	123-304	8.72
10	32	3	H3	2-3/8	.512	123-338	8.72
12	24	3	H3	2-3/8	.512	123-306	9.36
1/4	20	3	H3	2-1/2	.630	123-308	9.84
1/4	28	3	H3	2-1/2	.630	123-342	9.84
5/16	18	3	H3	2-23/32	.748	123-310	12.00
5/16	24	3	H3	2-23/32	.748	123-344	12.00
3/8	16	3	H3	2-15/16	.748	123-312	14.48
3/8	24	3	H3	2-15/16	.748	123-346	14.56
7/16	14	3	H3	3-5/32	.866	123-314	18.96
7/16	20	3	H3	3-5/32	.866	123-348	18.96
1/2	13	3	H3	3-3/8	.945	123-316	21.04
1/2	20	3	H3	3-3/8	.945	123-350	21.04
5/8	11	3	H3	3-13/16	1.102	123-318	33.20
5/8	18	3	H3	3-13/16	1.102	123-352	33.20
3/4	10	3	H3	4-1/4	1.220	123-320	55.68
3/4	16	3	H3	4-1/4	1.220	123-353	55.68
7/8	9	3	H4	4-11/16	1.339	123-321	77.68
7/8	14	3	H4	4-11/16	1.339	123-359	77.68
1	8	4	H4	5-1/8	1.496	123-323	104.32
1	12	4	H4	5-1/8	1.496	123-361	104.32
1	14	4	H4	5-1/8	1.496	123-360	104.32
1-1/8	7	4	H4	5-7/16	1.732	123-364	147.76
1-1/8	12	4	H4	5-7/16	1.732	123-365	147.76
1-1/4	7	4	H4	5-3/4	1.732	123-367	172.00
1-1/4	12	4	H4	5-3/4	1.732	123-369	172.00
1-3/8	6	4	H4	6-1/16	2.000	123-371	226.16
1-3/8	12	4	H4	6-1/16	2.000	123-373	226.08
1-1/2	6	4	H4	6-3/8	2.000	123-363	290.00
1-1/2	12	4	H4	6-3/8	2.000	123-375	290.00

• 4.5 PITCH LEAD (INTERMEDIATE)

SPIRAL POINT TAPS METRIC							
Nominal Size and Pitch	No. Flutes	Thread Limits	O/A Length (in)	Thread Length (in)	Code No.	Price \$	
M2 x .4	2	D3	1-3/4	.433	123-502	12.88	
M2.5 x .45	2	D3	1-13/16	.512	123-504	11.36	
M3 x .5	3	D3	1-15/16	.433	123-505	9.60	
M3.5 x .6	3	D4	2	.512	123-506	8.00	
M4 x .7	3	D4	2-1/8	.512	123-507	8.48	
M4.5 x .75	3	D4	2-3/8	.512	123-508	8.72	
M5 x .8	3	D4	2-3/8	.512	123-509	8.72	
M6 x 1	3	D5	2-1/2	.630	123-510	9.84	
M7 x 1	3	D5	2-23/32	.630	123-511	12.00	
M8 x 1	3	D5	2-23/32	.748	123-512	12.00	
M8 x 1.25	3	D5	2-23/32	.748	123-513	12.00	
M10 x 1.25	3	D5	2-15/16	.748	123-516	16.32	
M10 x 1.5	3	D6	2-15/16	.748	123-515	16.32	
M12 x 1.25	3	D5	3-3/8	.945	123-518	21.04	
M12 x 1.75	3	D6	3-3/8	.945	123-517	21.04	
M14 x 1.5	3	D7	3-19/32	.984	123-519	28.08	
M14 x 2	3	D6	3-19/32	.984	123-520	28.08	
M16 x 1.5	3	D6	3-13/16	1.102	123-522	33.20	
M16 x 2	3	D7	3-13/16	1.102	123-521	33.20	
M18 x 1.5	4	D6	4-1/32	1.102	123-523	55.68	
M18 x 2.5	4	D7	4-1/32	1.102	123-524	55.68	
M20 x 1.5	4	D5	4-15/32	1.220	123-525	66.64	
M20 x 2.5	4	D6	4-15/32	1.220	123-526	66.64	
M22 x 1.5	4	D6	4-11/16	1.339	123-527	77.68	
M22 x 2.5	4	D6	4-11/16	1.339	123-528	77.68	
M24 x 1.5	4	D5	4-29/32	1.339	123-529	104.32	
M24 x 3	4	D7	4-29/32	1.339	123-530	104.32	
M27 x 1.5	4	D7	5-1/8	1.181	123-531	147.76	
M27 x 3	4	D7	5-1/8	1.181	123-532	147.76	
M30 x 1.5	4	D7	5-7/16	1.378	123-533	172.00	
M30 x 3.5	4	D7	5-7/16	1.378	123-534	172.00	

BRIGHT FINISH ALSO AVAILABLE

*SPECIAL LIMIT

MADE IN JAPAN



HSSE YELLOW RING TAPS

HSSE-V3% VANADIUM CNC MACHINE TAPS

YELLOW RING SPIRAL FLUTE TAPS

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



• 2.5 PITCH LEAD (BOTTOMING)

SPIRAL FLUTE TAPS INCH							
Tap	Threads Per Inch	No. Flutes	Thread Limits	O/A Length (in)	Thread Length (in)	Code No.	Price \$
2	56	2	H2	1-3/4	.433	122-500	13.36
3	48	2	H2	1-13/16	.512	122-502	13.36
4	40	2	H2	1-7/8	.250	123-362	11.20
4	40	2	*H3	1-7/8	.250	122-506*	11.20
6	32	3	H2	2	.313	123-366	11.20
8	32	3	H2	2-1/8	.313	123-368	11.20
10	24	3	H3	2-3/8	.417	123-370	11.20
10	32	3	H3	2-3/8	.417	123-382	11.20
1/4	20	3	H3	2-1/2	.500	123-372	11.84
1/4	28	3	H3	2-1/2	.500	123-384	11.84
5/16	18	3	H3	2-23/32	.556	123-374	14.24
5/16	24	3	H3	2-23/32	.556	123-386	14.24
3/8	16	3	H3	2-15/16	.625	123-376	17.12
3/8	24	3	H3	2-15/16	.625	123-388	17.12
7/16	14	3	H3	3-5/32	.714	123-378	25.60
7/16	20	3	H3	3-5/32	.714	123-389	28.16
1/2	13	3	H3	3-3/8	.769	123-380	29.36
1/2	20	3	H3	3-3/8	.769	123-392	29.36
5/8	11	4	H3	3-13/16	.909	123-452	44.40
5/8	18	4	H3	3-13/16	.909	123-462	44.40
3/4	10	4	H3	4-1/4	1.000	123-454	60.80
3/4	16	4	H3	4-1/4	1.000	123-464	60.80
7/8	9	4	H4	4-11/16	1.111	123-466	86.56
1	8	4	H4	5-1/8	1.250	123-469	116.88
1	12	4	H4	5-1/8	1.250	123-470	116.88
1	14	4	H4	5-1/8	1.250	123-465	120.96
1-1/8	12	4	H4	5-7/16	1.429	123-472	167.12
1-1/4	7	4	H4	5-3/4	1.429	123-473	179.36
1-1/4	12	4	H4	5-3/4	1.429	123-474	179.36
1-3/8	12	4	H4	6-1/16	1.667	123-476	240.56
1-1/2	6	4	H4	6-3/8	1.667	123-477	290.00
1-1/2	12	4	H4	6-3/8	1.667	123-478	290.00

*SPECIAL LIMIT

• 2.5 PITCH LEAD (BOTTOMING)

SPIRAL FLUTE TAPS METRIC						
Nominal Size and Pitch	No. Flutes	Thread Limits	O/A Length (in)	Thread Length (in)	Code No.	Price \$
M3 x .5	3	D3	2-3/8	.197	123-650	14.56
M3.5 x .6	3	D4	2-3/8	.236	123-651	14.56
M4 x .7	3	D4	2-3/8	.276	123-652	14.56
M5 x .8	3	D4	2-3/8	.315	123-654	14.56
M6 x 1	3	D5	2-1/2	.394	123-656	14.56
M7 x 1	3	D5	2-23/32	.394	123-657	17.92
M8 x 1	3	D5	2-23/32	.492	123-659	17.92
M8 x 1.25	3	D5	2-23/32	.492	123-658	17.92
M10 x 1.25	3	D5	2-15/16	.591	123-661	26.80
M10 x 1.5	3	D6	2-15/16	.591	123-660	26.80
M12 x 1.25	3	D5	3-3/8	.689	123-663	32.24
M12 x 1.75	3	D6	3-3/8	.689	123-662	32.24
M14 x 1.5	3	D6	3-19/32	.787	123-665	43.20
M16 x 1.5	3	D6	3-13/16	.787	123-668	46.80
M16 x 2	3	D7	3-13/16	.787	123-669	46.80
M18 x 1.5	4	D6	4-1/32	.984	123-670	74.56
M18 x 2.5	4	D7	4-1/32	.984	123-671	74.56
M20 x 1.5	4	D5	4-15/32	.984	123-672	94.00
M20 x 2.5	4	D6	4-15/32	.984	123-673	94.00
M22 x 1.5	4	D6	4-11/16	.984	123-674	111.76
M22 x 2.5	4	D6	4-11/16	.984	123-675	111.76
M24 x 1.5	4	D5	4-29/32	1.181	123-676	120.16
M24 x 3	4	D7	4-29/32	1.181	123-677	120.16
M27 x 1.5	4	D7	5-1/8	1.181	123-678	195.04
M27 x 3	4	D7	5-1/8	1.181	123-679	195.04
M30 x 1.5	4	D7	5-7/16	1.378	123-680	209.28
M30 x 3.5	4	D7	5-7/16	1.378	123-681	209.28

BRIGHT FINISH ALSO AVAILABLE

MADE IN JAPAN



675, 890, 810 Quality Machine Vises

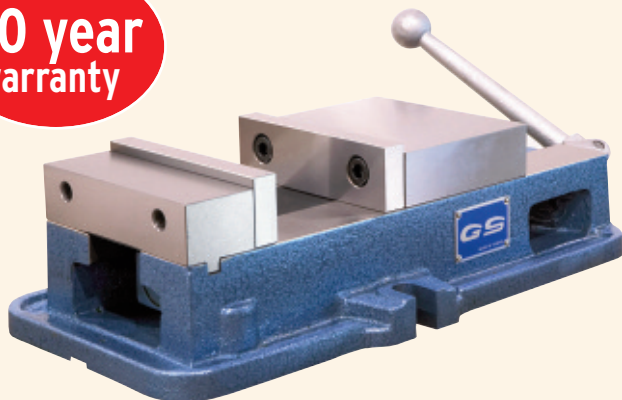
- **MATCHED VISES**
- **INTERCHANGEABLE SOFT JAWS**

6" X 7.5" Opening: **\$423.84** - Code # 327-275M

6" X 8.9" Opening: **\$475.52** - Code # 327-290M

8" X 10" Opening: **\$982.94** - Code # 327-300

**10 year
warranty**



Double Clamp Vises

Features and Benefits:

- One handle simultaneously operates two moveable jaws and clamps 2 pieces of workpiece of same or different size or one large workpiece
- The moveable jaw ANTI-LIFT mechanism provides alignment to workpiece without jaw lift
- There are 6 kinds of clamping ways to meet workpieces of different shapes and sizes
- The whole body is precisely ground and height tolerance is within $\pm 0.025\text{mm}$ ($\pm 0.001"$), therefore several vises can be lined up for production
- The rigid construction prevents base distortion



Model	Jaw Width	Jaw Openings	Code No.	SALE \$
TLD-40G/HV	4"	3.54"	382-610	1,555.12
TLD-60G/HV	6"	4.9"	382-600	1,732.40

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