



SILVER LINE LIVE CENTERS



Made in Czech Republic



**SKODA - YOUR
BULLET TO HIT
THE TARGET**



- » *Improved bearings and sealing*
- » *Unique hologram on the body for authenticity*
- » *Special ring gasket helps prevent coolant, dirt and swarf from entering the bearing space of the live center*

SILVER LINE HEAVY DUTY LIVE CENTERS

Standard Features:

- The rotating spindle is extended right through the tapered shank
- Two specially designed adjustable needle-roller bearings carry all radial loads
- A heavy duty ball thrust bearing takes all axial thrust

Morse Taper	Center Point Angle	Maximum Weight of Work Piece	Code No.	SALE \$
2	60°	750 lb	310-110	114.75
3	60°	880 lb	310-115	143.48
4	60°	2860 lb	310-120	181.88
5	60°	4400 lb	310-125	251.93
6	60°	8800 lb	310-130	436.65



WORK HOLDING & SHARPENING

QUALITY MACHINE VISES

- Vises are matched
- Interchangeable soft jaws
- Chip cover protects leadscrew from damage
- An integral key and large fasteners reduce deflection by 50%

10 year warranty



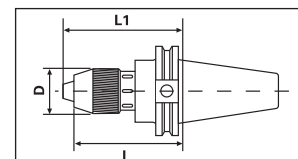
- 6" X 7.5" Opening: \$395.00 - Code # 327-275M**
- 6" X 8.9" Opening: \$439.00 - Code # 327-290M**
- 8" X 10" Opening: \$895.00 - Code # 327-300**

CAT TAPER INTEGRAL KEYLESS DRILL CHUCKS



These chucks provide exceptionally high torque - up to three times the gripping strength of conventional drill chuck / taper holder combinations. The design eliminates any possibility of chuck / holder misalignment, and it ensures separation safety

- High precision, premium tolerance
- The jaws feature a TiN coated surface treatment to ensure durability.



Taper	Cap.	L	L1	D	Code No.	SALE \$
CAT40						
CT40	1/4"	3.35"	3.59"	1.34"	531-480	194.00
CT40	1/2"	4.16"	4.61"	1.97"	531-482	204.80
CT40	5/8"	4.16"	4.61"	2.24"	531-483	302.40
CAT50						
CT50	1/2"	4.16"	4.61"	1.97"	531-484	237.12
CT50	5/8"	4.16"	4.61"	2.24"	531-485	331.84

FREE 29pc TiAlN Tip Drill Set When You Purchase A Premium Drill Sharpening Machine

Model DM213

Code No. 326-130
Reg List \$1,434.40

Drill Diameter: Ø2mm - Ø13mm
Point Angle: 85° ~ 140°
R.P.M.: 6000RPM
Weight: 10 kg

Standard Accessories

- ER20 Collets, 2.5mm-13mm (12pcs).
- CBN Dia. wheel #200x1pc (for HSS drill).
- 3mm and 4mm Hexagon (Hex.) wrench x 1 pc each.

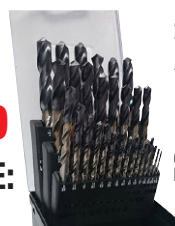


Electrical
Safety
Authority
Approved



\$1,042.00

**PROMO CODE:
500-783**



29PC HSS TIALN TIP JOBBER LENGTH DRILL SET

A stronger self repairing coating leading to longer tool life compared to TiN Coating. TiAlN Tip also allows increased speeds and feeds.

1/16 - 1/2 x 64ths Fractional Set

Code No. 127-050
Reg List \$128.10



Model DM1226

Code No. 326-134
Reg List \$3,284.00

Drill Diameter: Ø8mm - Ø30mm
Point Angle: 85° ~ 140°
R.P.M.: 4000RPM
Weight: 25 kg

Standard Accessories

- ER40 Collets, 12mm-26mm (15pcs).
- CBN Dia. wheel #200x1pc (for HSS drill).
- 3mm and 4mm Hexagon (Hex.) wrench x 1 pc each.

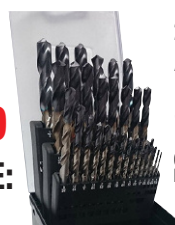


Electrical
Safety
Authority
Approved



\$2,274.00

**PROMO CODE:
500-784**



29PC HSS TIALN TIP JOBBER LENGTH DRILL SET

A stronger self repairing coating leading to longer tool life compared to TiN Coating. TiAlN Tip also allows increased speeds and feeds.

1/16 - 1/2 x 64ths Fractional Set

Code No. 127-050
Reg List \$128.10





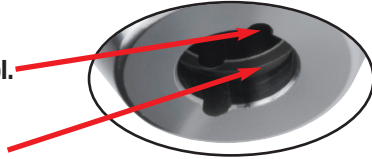
DIRECT COOLANT HOLDERS

NOW 3 COOLANT OPTIONS ALL IN ONE!

Special promo pricing only while quantities last

- 100% forged construction
- Certified balanced up to 30,000 rpm
- Precision ground throughout
- DIN coolant thru the flange - standard
- Coolant thru the spindle
- Coolant thru the body

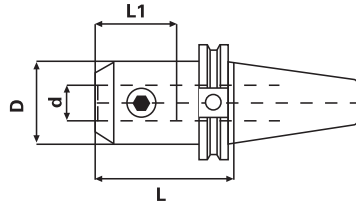
Coolant thru slots for directing coolant onto the tool.



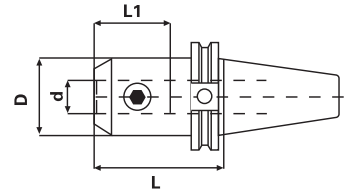
O-Ring Seal for Non Direct Coolant Operations.



Complete with certificate



Complete with certificate



CAT40 DIRECT COOLANT END MILL HOLDERS

Taper	Hole Dia. (d)	Gage Length (L)	L1	D	Set Screw	Code No.	SALE \$
CT40	1/4"	1.38"*	1.18"	0.79"	1/4-28	522-014	76.56
CT40	1/4"	2.50"	1.10"	0.79"	1/4-28	522-016	80.28
CT40	1/4"	4.00"	1.10"	0.79"	1/4-28	522-018	84.18
CT40	5/16"	1.38"*	1.34"	0.87"	5/16-24	522-022	76.56
CT40	5/16"	2.50"	1.26"	0.87"	5/16-24	522-024	80.28
CT40	5/16"	4.00"	1.26"	0.87"	5/16-24	522-026	84.18
CT40	3/8"	1.38"*	1.34"	1.00"	3/8-24	522-030	76.56
CT40	3/8"	2.50"	1.26"	1.00"	3/8-24	522-032	80.28
CT40	3/8"	4.00"	1.26"	1.00"	3/8-24	522-034	84.18
CT40	3/8"	5.00"	1.26"	1.00"	3/8-24	522-036	91.50
CT40	1/2"	1.75"*	1.50"	1.38"	7/16-20	522-046	76.56
CT40	1/2"	2.50"	1.50"	1.38"	7/16-20	522-048	80.28
CT40	1/2"	4.00"	1.50"	1.38"	7/16-20	522-050	84.18
CT40	1/2"	5.00"	1.50"	1.38"	7/16-20	522-052	95.10
CT40	1/2"	9.00"	1.50"	1.38"	7/16-20	522-054 •	160.80
CT40	5/8"	1.75"*	1.61"	1.65"	9/16-18	522-056	76.56
CT40	5/8"	3.00"	1.61"	1.65"	9/16-18	522-058	80.28
CT40	5/8"	4.00"	1.61"	1.65"	9/16-18	522-060	84.18
CT40	5/8"	5.50"	1.61"	1.65"	9/16-18	522-062 •	91.50
CT40	3/4"	1.75"*	1.77"	1.89"	5/8-18	522-066	76.56
CT40	3/4"	3.00"	1.77"	1.75"	5/8-18	522-068	80.28
CT40	3/4"	4.00"	1.77"	1.75"	5/8-18	522-070	84.18
CT40	3/4"	5.50"	1.77"	1.75"	5/8-18	522-072	91.50
CT40	3/4"	9.00"	1.77"	1.75"	5/8-18	522-074 •	160.80
CT40	1"	2.00"*	2.36"	2.25"	3/4-16	522-080	76.56
CT40	1"	4.00"	2.36"	2.36"	3/4-16	522-082	84.18
CT40	1"	6.00"	2.36"	2.36"	3/4-16	522-084 •	96.06
CT40	1-1/4"	2.00"*	2.28"	2.25"	3/4-16	522-088	76.56
CT40	1-1/4"	4.00"	2.55"	2.48"	3/4-16	522-090	84.18
CT40	1-1/2"	4.50"	2.55"	2.99"	3/4-16	522-094	96.60

* Stubby Length

• Available only while quantities last

CAT50 DIRECT COOLANT END MILL HOLDERS

Taper	Hole Dia. (d)	Gage Length (L)	L1	D	Set Screw	Code No.	SALE \$
CT50	1/4"	2.50"	1.10"	0.79"	1/4-28	522-102	118.14
CT50	1/4"	4.00"	1.10"	0.79"	1/4-28	522-104	118.14
CT50	1/4"	6.00"	1.10"	0.79"	1/4-28	522-106 •	128.46
CT50	5/16"	4.00"	1.26"	0.87"	5/16-24	522-112	118.14
CT50	5/16"	6.00"	1.26"	0.87"	5/16-24	522-114 •	128.46
CT50	3/8"	2.50"	1.26"	1.00"	3/8-24	522-118	107.76
CT50	3/8"	4.00"	1.26"	1.00"	3/8-24	522-120	118.14
CT50	3/8"	6.00"	1.26"	1.00"	3/8-24	522-122	128.46
CT50	3/8"	8.00"	1.26"	1.00"	3/8-24	522-124	150.06
CT50	7/16"	2.50"	1.50"	1.38"	7/16-20	522-128 •	107.76
CT50	7/16"	4.00"	1.50"	1.38"	7/16-20	522-130	118.14
CT50	1/2"	1.75"*	1.50"	1.38"	7/16-20	522-134	107.76
CT50	1/2"	4.00"	1.50"	1.38"	7/16-20	522-138	118.14
CT50	1/2"	6.00"	1.50"	1.38"	7/16-20	522-140	128.46
CT50	1/2"	8.00"	1.48"	1.38"	7/16-20	522-142	150.06
CT50	5/8"	1.75"*	1.61"	1.65"	9/16-18	522-148	107.76
CT50	5/8"	3.00"	1.61"	1.65"	9/16-18	522-150	107.76
CT50	5/8"	4.00"	1.61"	1.65"	9/16-18	522-152	118.14
CT50	5/8"	6.00"	1.61"	1.65"	9/16-18	522-154	128.46
CT50	3/4"	1.75"*	1.77"	1.89"	5/8-18	522-158	107.76
CT50	3/4"	3.00"	1.77"	1.89"	5/8-18	522-160	107.76
CT50	3/4"	6.00"	1.77"	1.89"	5/8-18	522-164	128.46
CT50	3/4"	8.00"	1.77"	1.89"	5/8-18	522-166	150.06
CT50	1"	2.00"*	2.36"	2.36"	3/4-16	522-176	107.76
CT50	1"	6.00"	2.36"	2.36"	3/4-16	522-180	128.76
CT50	1"	8.00"	2.36"	2.36"	3/4-16	522-182	150.06
CT50	1"	12.00"	2.36"	2.36"	3/4-16	522-183	185.22
CT50	1-1/4"	2.00"*	2.55"	2.75"	3/4-16	522-186	122.88
CT50	1-1/4"	6.00"	2.55"	2.48"	3/4-16	522-190	142.74
CT50	1-1/2"	2.25"*	2.83"	2.75"	3/4-16	522-196	122.88
CT50	1-1/2"	4.50"	2.83"	2.99"	3/4-16	522-198	128.76
CT50	2"	3.63"*	3.34"	3.74"	1"-14	522-204	143.76
CT50	2"	5.37"	3.34"	3.74"	1"-14	522-206	157.74
CT50	2"	8.00"	3.34"	3.74"	1"-14	522-208	173.10
CT50	2"	10.00"	3.34"	3.74"	1"-14	522-210	195.54

* Stubby Length

• Available only while quantities last



DUAL CONTACT HOLDERS

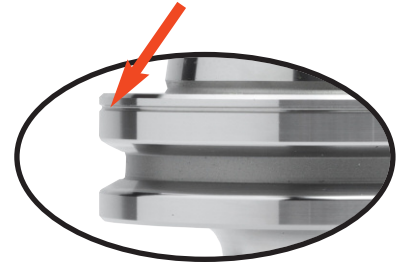
FOR DUAL CONTACT SPINDLES

(CAN ALSO BE USED ON STANDARD SPINDLES)

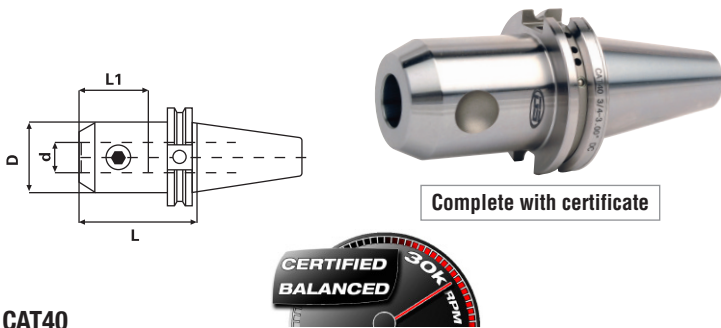
- 100% forged construction
- Certified balanced up to 30,000 rpm (not Shell Mill or Milling Chucks)
- Precision ground throughout
- DIN coolant thru the flange - standard
- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life

Special promo pricing only while quantities last

Eliminates the gap between the flange and the spindle for increased rigidity



CAT40/50 DUAL CONTACT END MILL HOLDERS



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	83.10
CT40	1/2"	4.00"	1.50"	1.38"	7/16"-20	521-028	87.24
CT40	1/2"	5.00"	1.50"	1.38"	7/16"-20	521-030	98.40
CT40	5/8"	3.00"	1.61"	1.65"	9/16"-18	521-034	83.10
CT40	5/8"	4.00"	1.61"	1.65"	9/16"-18	521-036	87.24
CT40	3/4"	3.00"	1.77"	1.75"	5/8"-18	521-042	83.10
CT40	3/4"	4.00"	1.77"	1.75"	5/8"-18	521-044	87.24
CT40	3/4"	5.50"	1.77"	1.75"	5/8"-18	521-046	94.80
CT40	1"	2.00"	2.36"	2.36"	3/4"-16	521-054	79.14
CT40	1"	4.00"	2.36"	2.36"	3/4"-16	521-056	87.24
CT40	1"	6.00"	2.36"	2.36"	3/4"-16	521-058	99.48
CT40	1-1/4"	2.00**	2.28"	2.25"	3/4"-16	521-060•	79.14
CT40	1-1/4"	4.00"	2.55"	2.48"	3/4"-16	521-062	87.24
CT40	1-1/4"	6.00"	2.55"	2.48"	3/4"-16	521-064	99.48
CT40	1-1/2"	4.50"	2.55"	2.99"	3/4"-16	521-066	100.08

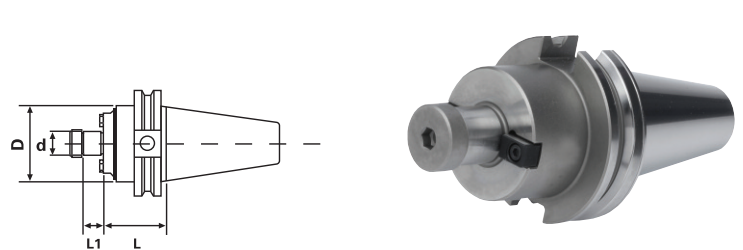
* Stubby Length

• Non-Coolant thru the flange

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	122.22
CT50	1/2"	6.00"	1.50"	1.38"	7/16"-20	521-122	132.84
CT50	5/8"	4.00"	1.61"	1.65"	9/16"-18	521-130	188.94
CT50	5/8"	6.00"	1.61"	1.65"	9/16"-18	521-132	149.40
CT50	3/4"	3.00"	1.77"	1.89"	5/8"-18	521-138	111.48
CT50	3/4"	4.00"	1.77"	1.89"	5/8"-18	521-140	122.22
CT50	3/4"	6.00"	1.77"	1.89"	5/8"-18	521-142	132.84
CT50	1"	4.00"	2.36"	2.36"	3/4"-16	521-154	114.24
CT50	1"	6.00"	2.36"	2.36"	3/4"-16	521-156	133.32
CT50	1"	8.00"	2.36"	2.36"	3/4"-16	521-158	155.28
CT50	1-1/4"	4.00"	2.55"	2.48"	3/4"-16	521-162	133.32
CT50	1-1/4"	6.00"	2.55"	2.48"	3/4"-16	521-164	147.72
CT50	1-1/4"	8.00"	2.55"	2.48"	3/4"-16	521-166	169.98
CT50	1-1/2"	4.50"	2.83"	2.99"	3/4"-16	521-170	133.32
CT50	1-1/2"	7.00"	2.83"	2.99"	3/4"-16	521-172	154.92
CT50	2"	5.37"	3.34"	3.74"	1"-14	521-178	163.14

CAT40/50 DUAL CONTACT SHELL MILL HOLDERS



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	106.26
CT40	3/4"	4.00"	1.75"	0.67"	5/16"	3/8"-24	521-194	123.36
CT40	3/4"	6.00"	1.75"	0.67"	5/16"	3/8"-24	521-195	198.78
CT40	1"	1.75"	2.38"	0.67"	3/8"	1/2"-20	521-196	106.26
CT40	1"	4.00"	2.38"	0.67"	3/8"	1/2"-20	521-198	123.36
CT40	1"	6.00"	2.38"	0.67"	3/8"	1/2"-20	521-199	200.64
CT40	1-1/4"	2.00"	2.88"	0.67"	1/2"	5/8"-18	521-200	106.26
CT40	1-1/4"	4.00"	2.88"	0.67"	1/2"	5/8"-18	521-202	123.36
CT40	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	521-204	106.26
CT40	1-1/2"	4.00"	3.80"	0.93"	5/8"	3/4"-16	521-206	123.36

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	133.44
CT50	3/4"	4.00"	2.00"	0.67"	5/16"	3/8"-24	521-210	146.34
CT50	3/4"	6.00"	2.00"	0.67"	5/16"	3/8"-24	521-212	150.72
CT50	1"	1.75"	2.75"	0.69"	3/8"	1/2"-20	521-216	133.44
CT50	1"	4.00"	2.75"	0.69"	3/8"	1/2"-20	521-218	146.34
CT50	1"	6.00"	2.75"	0.69"	3/8"	1/2"-20	521-220	150.72
CT50	1"	8.00"	2.75"	0.69"	3/8"	1/2"-20	521-222	182.88
CT50	1-1/4"	1.75"	2.88"	0.69"	1/2"	5/8"-18	521-224	136.26
CT50	1-1/4"	4.00"	2.88"	0.69"	1/2"	5/8"-18	521-226	150.36
CT50	1-1/4"	6.00"	2.88"	0.69"	1/2"	5/8"-18	521-228	164.34
CT50	1-1/4"	8.00"	2.88"	0.69"	1/2"	5/8"-18	521-230	188.94
CT50	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	521-232	149.40
CT50	1-1/2"	4.00"	3.80"	0.93"	5/8"	3/4"-16	521-234	163.92
CT50	1-1/2"	6.00"	3.80"	0.93"	5/8"	3/4"-16	521-236	178.08
CT50	1-1/2"	8.00"	3.80"	0.93"	5/8"	3/4"-16	521-238	207.36
CT50	2"	2.00"	4.38"	0.93"	3/4"	1"-14	521-240	168.54
CT50	2"	4.00"	4.38"	0.93"	3/4"	1"-14	521-242	194.88



DUAL CONTACT HOLDERS

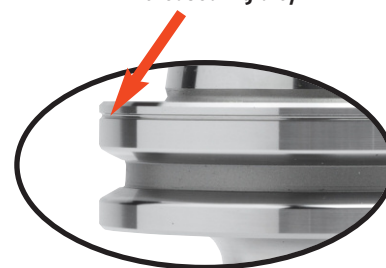
FOR DUAL CONTACT SPINDLES

(CAN ALSO BE USED ON STANDARD SPINDLES)

- 100% forged construction
- Certified balanced up to 30,000 rpm (not Shell Mill or Milling Chucks)
- Precision ground throughout
- DIN coolant thru the flange - standard
- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life

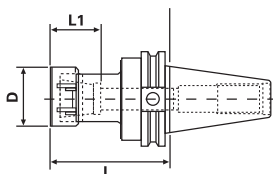
Special promo pricing
only while quantities last

Eliminates the gap between
the flange and the spindle for
increased rigidity



CAT40 DUAL CONTACT ER COLLET CHUCKS

- TIR, 0.0003" at 4xDia.



Complete with certificate

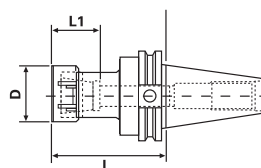


Taper	Collet Series	Collet Range	L	L1	D	Tightening Torque (Nm)	Code No.	SALE \$
CT40	ER16**	.019-.413"	2.50"	0.87"	1.26"	56.9	521-406	112.08
CT40	ER16**	.019-.413"	4.00"	0.87"	1.26"	56.9	521-405	130.50
CT40	ER16**	.019-.413"	6.00"	0.87"	1.26"	56.9	521-410	135.18
CT40	ER32	.078-.787"	3.13"	1.34"	1.97"	169.5	521-424	133.50
CT40	ER32	.078-.787"	4.00"	1.34"	1.97"	169.5	521-423	138.60
CT40	ER32	.078-.787"	6.00"	1.34"	1.97"	169.5	521-425	148.38

** Hex Nut

CAT50 DUAL CONTACT ER COLLET CHUCKS

- TIR, 0.0003" at 4xDia.



Complete with certificate

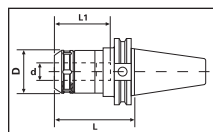


Taper	Collet Series	Collet Range	L	L1	D	Tightening Torque (Nm)	Code No.	SALE \$
CT50	ER16**	.019-.413"	4.12"	0.87"	1.26"	56.9	521-432	186.36
CT50	ER16**	.019-.413"	6.00"	0.87"	1.26"	56.9	521-434	202.02
CT50	ER16**	.019-.413"	8.00"	0.87"	1.26"	56.9	521-436	231.78
CT50	ER32	.078-.787"	4.00"	1.34"	1.97"	169.5	521-454	194.58
CT50	ER32	.078-.787"	6.00"	1.34"	1.97"	169.5	521-456	200.34
CT50	ER32	.078-.787"	8.00"	1.34"	1.97"	169.5	521-458	241.02

** Hex Nut

CAT40 DUAL CONTACT MILLING CHUCKS

- DIN coolant thru the flange at no extra charge
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- 0.0002" TIR for maximum tool life and accuracy
- 360° gripping contact
- Extreme rigidity over taper collets

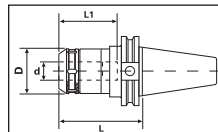


Taper	Collet Series	Collet Range	d	L	L1	D	Tightening Torque (Nm)	Code No.	SALE \$
CT40	GS 3/4"	.125-.750"	.750"	3.54"	3.15"	2.05"	50-70	521-253	212.52
CT40	GS 1-1/4"	.187-1.25"	1.25"	3.54"	3.34"	2.88"	60-80	521-257	212.52

• Non-Coolant thru the flange

CAT50 DUAL CONTACT MILLING CHUCKS

- DIN coolant thru the flange at no extra charge
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- 0.0002" TIR for maximum tool life and accuracy
- 360° gripping contact
- Extreme rigidity over taper collets



Taper	Collet Series	Collet Range	d	L	L1	D	Tightening Torque (Nm)	Code No.	SALE \$
CT50	GS 1-1/4"	.187-1.25"	1.25"	4.14"	4.73"	2.88"	60-80	521-266	265.56

ER COLLET SETS

- Shipped as set, no plastic container

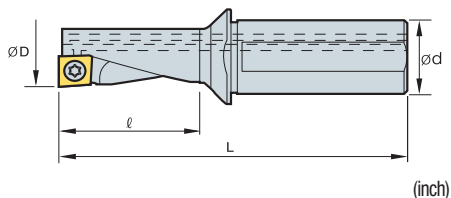
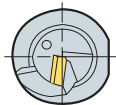
QUALITY
IMPORT



Collet	Description	Range	Code No.	SALE \$
ER16	Inch 11pc Collet Set	1/16"-3/8" x 32nds	337-440	90.00
ER25	Inch 17pc Collet Set	1/8"-5/8" x 32nds	337-442	100.20
ER32	Inch 21pc Collet Set	1/8"-3/4" x 32nds	337-444	177.00

SOWA INDEXABLE TOOLING

COMBO TURNING & DRILLING



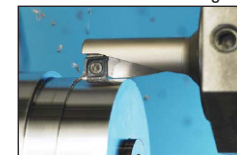
(inch)

Features

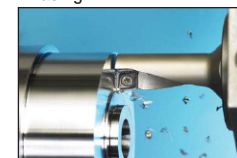
- Double coolant system
- Excellent chip evacuation and tool life
- Ideal flute design minimizing stress concentrations

Uses:

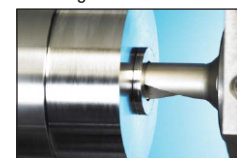
- External/Internal turning



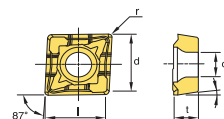
- Facing



- Drilling



Designation	Code No.	SALE \$	$\varnothing D$	$\varnothing d$	l	L	Insert
CTD10R-2.25D	147-993	214.86	0.394	0.472	0.886	2.736	QCMT 050204-CM
CTD12R-2.25D	147-243	221.46	0.472	0.630	1.063	1.890	QCMT 060204-CM
CTD14R-2.25D	147-698	226.02	0.551	0.630	1.240	3.287	QCMT 070304-CM
CTD16R-2.25D	147-008	230.58	0.630	0.787	1.417	3.701	QCMT 080304-CM
CTD20R-2.25D	147-061	271.32	0.787	0.984	1.772	4.370	QCMT 10T304-CM



Designation	ISO	Coated Carbide								Cermet	Uncoated Carbide	l	d	t	r	$d1$
		PT20C	PT22C	PM30C	PM30P	PM35P	PTM50P	KT10C	MM30P							
QCMT-050204 CM 10MM							147-241 \$10.71	147-242 \$10.71				0.197	0.213	0.038	0.016	0.091
QCMT-060204-CM 12MM							147-436 \$10.71	147-437 \$10.71				0.236	0.252	0.094	0.016	0.098
QCMT-070204-CM 14MM							146-364 \$10.71					0.276	0.291	0.125	0.016	0.110
QCMT-080204-CM 16MM							147-044 \$10.99	147-060 \$10.99				0.315	0.331	0.125	0.016	0.134
QCMT-10T304-CM 20MM							147-472 \$12.88	147-540 \$12.88				0.394	0.409	0.156	0.016	0.157

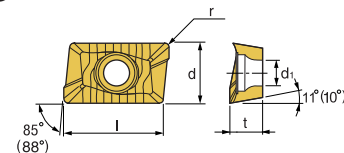


APMT - INDEXABLE MILLING INSERTS

Interchangeable with most international brand names



- Features
Excellent free cutting geometries for a variety of applications



Quick Choice Grade Selection



Description	Grade	l	d	t	r	$d1$	Code No.	SALE \$
APMT0602PDR-A	KTM10U	0.236	0.167	0.102	0.016	0.079	148-528	7.49
APMT0602PDR-M	PM30P	0.236	0.167	0.102	0.016	0.079	149-021	8.40
APMT0602PDR-M	PTM50P	0.236	0.167	0.102	0.016	0.079	147-103	8.40
APMT0602PDR-M	MM30P	0.236	0.167	0.102	0.016	0.079	147-104	8.40
APMT11T3PDR-M	PM25C	0.441	0.255	0.142	0.020	0.112	148-547	8.75
APMT11T3PDR-M	PM30P	0.441	0.255	0.142	0.020	0.112	148-548	8.75
APMT11T3PDR-M	MM30P	0.441	0.255	0.142	0.020	0.112	148-555	8.75
APMT1604PDR-M	PM25C	0.646	0.370	0.227	0.031	0.177	148-589	10.71
APMT1806PDR-M	PTM50P	0.685	0.432	0.250	0.047	0.177	145-641	12.25

SOWA HIGH PERFORMANCE

5PC VARIABLE HELIX CARBIDE END MILL SET

- 4 Flute
- Small corner radius for added strength and smoother cutting action
- AlTiN coated for improved tool life and increased production output



Set Includes:



Cutting Dia. (in.)	With Radius Code No.	List \$
3/16	153-002	13.80
1/4	153-006	19.00
5/16	153-012	26.40
3/8	153-018	27.10
1/2	153-027	49.60

CODE:
153-005

\$135.90

More Variable Helix End Mills available here



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 submicron grain carbide



Inch

Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Corner Radius	With Radius Code No.		Without Radius Code No.	
					List \$		List \$	
1/8	1/8	1/2	1-1/2	.010-.015	153-000	11.20	153-250	8.90
3/16	3/16	3/8	1-1/2	.010-.015	153-001	13.80		
3/16	3/16	5/8	2	.015-.020	153-002	13.80	153-252	13.80
1/4	1/4	1/2	2	.015-.020	153-004	16.80	153-254	16.80
1/4	1/4	3/4	2-1/2	.015-.020	153-006	19.00	153-256	19.00
1/4	1/4	1-1/8	3	.015-.020	153-008	26.60	153-258	26.60
5/16	5/16	13/16	2-1/2	.015-.020	153-012	26.40	153-262	26.40
3/8	3/8	5/8	2	.015-.020	153-016	27.60	153-266	27.60
3/8	3/8	1	2-1/2	.015-.020	153-018	27.10	153-268	29.80
3/8	3/8	1-1/8	3	.015-.020	153-020	36.70	153-270	36.70
7/16	7/16	1	2-3/4	.015-.020	153-022	42.60	153-272	42.60
1/2	1/2	1	3	.025-.030	153-026	45.10	153-276	44.50
1/2	1/2	1-1/4	3	.025-.030	153-027	49.60	153-277	53.60

SOWA COBALT 3 FLUTE COUNTERSINKS

EUROPEAN MADE



82° COBALT 3 FLUTE COUNTERSINKS

- M35 Cobalt
- Wide flutes provide good chip evacuation
- Positive cut
- Constant profile aids regrinding of the tool
- Self-centering of the cutting mill (three bearing points) virtually eliminates vibration



Diameter	O.A.L.	Shank Diameter	Code No.	SALE \$
1/4"	45mm	1/4"	121-875	15.08
5/16"	45mm	1/4"	121-876	17.48
3/8"	50mm	1/4"	121-877	19.88
1/2"	50mm	1/4"	121-878	24.68
5/8"	60mm	3/8"	121-879	28.65
3/4"	60mm	3/8"	121-880	33.38
1"	70mm	3/8"	121-881	40.58
7pc Set			121-861	179.70

82° COBALT 3 FLUTE COUNTERSINKS - TiN COATED

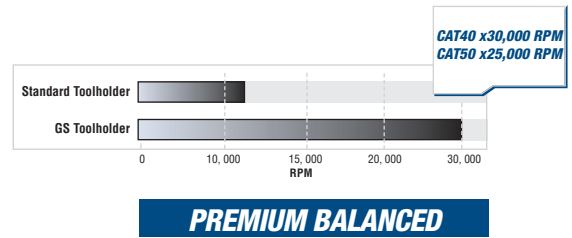
- M35 Cobalt - TiN coated
- Wide flutes provide good chip evacuation
- Positive cut
- Constant profile aids regrinding of the tool
- Self-centering of the cutting mill (three bearing points) virtually eliminates vibration



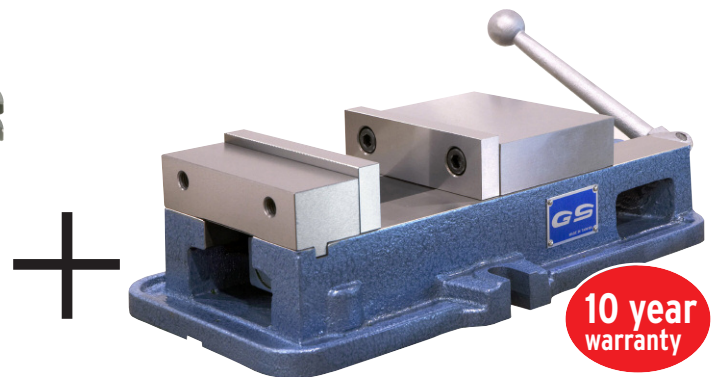
Diameter	O.A.L.	Shank Diameter	Code No.	SALE \$
10.4mm	50mm	6mm	121-882	28.65
16.5mm	61mm	10mm	121-883	41.33
20.5mm	64mm	10mm	121-884	47.70
25.0mm	68mm	10mm	121-885	56.93
31.0mm	73mm	12mm	121-886	81.08
5pc Set			121-870	351.96

CAT TAPER & VISE PACKAGES

- CAT40 Certified Balanced to 30,000 RPM
- CAT50 Certified Balanced to 25,000 RPM
- 100% Forged Construction
- Precision Ground Throughout
- DIN Coolant Thru The Flange - Standard



- Vises are matched
- Interchangeable soft jaws
- Chip cover protects leadscrew from damage
- An integral key and large fasteners reduce deflection by 50%



CAT40 PACKAGE \$989.82

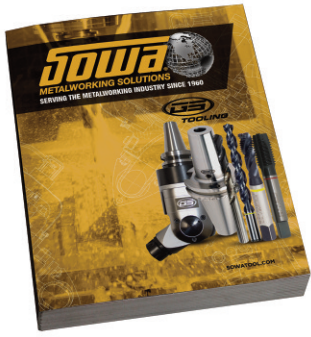
PLUS VISE REG LIST \$1,649.70

CAT 40 Package		Promo # 500-814	
Code No.	Qty.	Description	
531-002	1 pc.	CAT40-1/4-2.50"	End Mill Holder
531-014	1 pc.	CAT40-3/8-2.50"	End Mill Holder
531-026	1 pc.	CAT40-1/2-2.50"	End Mill Holder
531-042	1 pc.	CAT40-3/4-3.00"	End Mill Holder
531-056	1 pc.	CAT40-1"-4.00"	End Mill Holder
531-196	1 pc.	CAT40-1"-1.75"	Shell Mill Holder
531-421	2 pcs.	CAT40 ER32-2.5"	Collet Chucks
327-290M	1 pc.	6"x8.9" Opening	Vise

CAT50 PACKAGE \$1,244.76

PLUS VISE REG LIST \$2,074.60

CAT 50 Package		Promo # 500-815	
Code No.	Qty.	Description	
531-120	1 pc.	CAT50 1/2-4.00"	End Mill Holder
531-130	1 pc.	CAT50 5/8-4.00"	End Mill Holder
531-140	1 pc.	CAT50 3/4-4.00"	End Mill Holder
531-154	1 pc.	CAT50 1"-4.00"	End Mill Holder
531-162	1 pc.	CAT50 1-1/4-4.00"	End Mill Holder
531-218	1 pc.	CAT50 1"-4.00"	Shell Mill Holder
531-454	2 pcs.	CAT50 ER32-4.00"	Collet Chucks
327-290M	1 pc.	6"x8.9" Opening	Vise



We aren't just Rotary Tools, Vises, and Metrology. Below is a small sample of the many new products that have been added to our US Master Catalog.

Download your copy today
<http://www.sowatool.com/News/29>



SMALL ARM TYPE AIR TAPPING UNIT - VAT-1412



Features:

- Air tapping spindle
- Parallel arm
- Table mounting column
- Air combination
- 6 ANSI Tap Collets #10-1/2"
- Radial jib, increases arm reach by 500mm
- Air pressure: 6~8 kgs/cm3
- Air Cylinders included
- Requires: 5HP compressor
- Without stand plate



* Base not included

Tap Range	Speed RPM	Work Range	Weight (kg)	Code No.	SALE \$
#10 - 1/2"	400	Rmax 1400mm Rmin 200mm	18	326-705	2,357.25

MAGNETIC BASE WITH MAGNIFYING GLASS



- 2X magnification
- M8x1.25 threaded mount

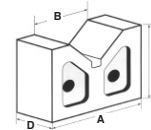


Model	Base Size LxWxH (mm)	Holding Power (kg)	Arm OD x L (mm)	Weight (kg)	Code No.	SALE \$
VML-M	60x50x55	80	15x325	1.7	326-880	59.29

VEE BLOCKS - CAST IRON



- Made from close grained cast iron, these blocks are precisely ground and machined square and parallel.
- The vees are 90° centered in true.
- The blocks are manufactured and supplied in numbered pairs and come in handy for holding large jobs where clamping is not necessary.
- Squareness and Parallelism of Vee grooves: within 0.0012" (30 microns)

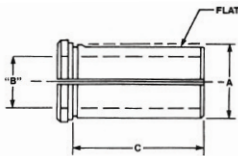


Width (A) (in.)	Vee Width (B) (in.)	Height (C) (in.)	Thickness (D) (in.)	Model No.	Code No.	SALE \$
6	3-1/16	3-1/2	2-7/16	VB/C-6	231-108	84.91

TYPE B CNC TOOLHOLDER BUSHINGS



- Split style
- Shorter length
- Clamp on flat
- Bushing collapses to hold tool.
- Used for Drills, Boring Bars, and other tools

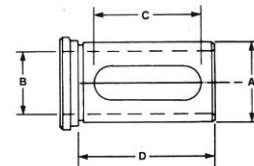


Bushing Type	Dia. (A)	Bore (B)	Length Under Head (C)	Code No.	SALE \$
B	1-1/2"	1/2"	2-1/2"	470-510	36.47
B	1-1/2"	5/8"	2-1/2"	470-511	36.47
B	1-1/2"	3/4"	2-1/2"	470-512	36.47
B	1-1/2"	1"	2-1/2"	470-513	36.47
B	1-1/2"	1-1/4"	2-1/2"	470-514	36.47
B	2"	5/8"	3-1/2"	470-515	59.22
B	2"	3/4"	3-1/2"	470-516	59.22
B	2"	1"	3-1/2"	470-517	59.22
B	2"	1-1/4"	3-1/2"	470-518	59.22
B	2"	1-1/2"	3-1/2"	470-519	59.22
B	2"	1-3/4"	3-1/2"	470-520	59.22

TYPE C CNC TOOLHOLDER BUSHINGS



- Designed for use on all CNC Turning Machines
- Elongated slot
- For use with Drills, Boring Bars, Reamers, etc.
- Precision ground throughout



Bushing Type	Dia. (A)	Bore (B)	Length of Slot (C)	Length Under Head (D)	Code No.	SALE \$
C	1-1/2"	1/2"	3"	3-3/8"	470-500	39.62
C	1-1/2"	5/8"	3"	3-3/8"	470-501	39.62
C	1-1/2"	3/4"	3"	3-3/8"	470-502	39.62
C	1-1/2"	1"	3"	3-3/8"	470-503	39.62
C	1-1/2"	1-1/4"	3"	3-3/8"	470-504	39.62
C	2"	3/4"	3-5/8"	4"	470-505	60.27
C	2"	1"	3-5/8"	4"	470-506	60.27
C	2"	1-1/4"	3-5/8"	4"	470-507	60.27
C	2"	1-1/2"	3-5/8"	4"	470-508	60.27
C	2"	1-3/4"	3-5/8"	4"	470-509	60.27

ASIMETO PRECISION TOOLS

ABOUT ASIMETO

Precision is not only defined by degrees of exactness. It is defined by the vision and skill of engineers. By problems solved, challenges overcome and reputations made. The real value of precision is the power it gives engineers to turn plans into reality.

Asimeto was founded in 2007 by renowned German metrologist Manfred Eisinger. Since then, the company has rapidly established a reputation for manufacturing high-performance precision tools and solutions and delivering them at unexpectedly affordable prices.

Asimeto continues to win market share by applying German metrological design, American technological innovation and Asian manufacturing competitiveness across a broad range of integrated precision solutions, distributed through a global network. Every tool is ISO17025 certified for dependable accuracy and to ensure calibration is compliant with the regulatory requirements of each local market. Increasingly, Asimeto is the choice of engineers the world over including companies like Volkswagen, Guhring and Boeing. We invite you to discover why.



To supplement the industry standard 12 month warranty an additional 12 month warranty is available by registering your individual purchase online at www.asimeto.com within 30 days from the date of purchase.

IP67 Coolant Proof Digital Calipers

- Resolution: .0005" / 0.01mm
- Absolute function, there is no need to set the zero
- Hold function for easy reading
- Absolute and incremental measuring modes
- Inch/Metric conversion
- Metal Housing: the design will allow the caliper to be used in normal workshop conditions and is resistant to coolant, water, dust, and oil
- Auto power on/off
- Power: 3V lithium battery
- Comes with long form calibration certificate



Range	Accuracy	Code No.	List \$	SALE \$
0-6"/0-150mm	±.001"/±0.02mm	7305062	197.30	138.11
0-8"/0-200mm	±.0015"/±0.03mm	7305082	261.20	182.84
0-12"/0-300mm	±.0015"/±0.03mm	7305122	325.50	227.85

Digital Height Gages with Hand Wheel

- Resolution: .0005" / 0.01mm
- Large LCD display
- Hand wheel design for fine adjustment
- Metric/Inch conversion at any position
- Zero setting on any position
- Carbide tipped scriber provided
- Manual power On/Off
- Comes with long form calibration certificate



Range	Accuracy	Code No.	List \$	SALE \$
0-12"/0-300mm	±.0015"/±0.04mm	7626120	531.70	372.19
0-24"/0-600mm	±.0020"/±0.05mm	7626240	815.50	570.85

Centering Indicator

- Graduation .0005" / 0.01mm
- Provides a simplified method of centering a work piece or fixture on horizontal for vertical machines, internal or external diameters. Face of indicator remains stationary in any desired position while the machine spindle rotates, leaving the operator with both hands free to accurately position the machine table
- Shank Dia.: Ø3/8" / Ø10mm
- Operating speed not to exceed 800rpm
- Range
Internal: 5/32" - 12"/ 4 - 300mm
External: Up to 12"/ 300mm
- Comes with long form calibration certificate



Dial Range	Accuracy	Code No.	List \$	SALE \$
0-.15"	±0.002"	7469008	237.50	166.25

ASIMETO PRECISION TOOLS




Canada
Kitchener, Ontario


U.S.A.
Maumee, Ohio

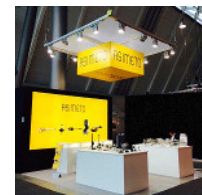

Germany
Weißbach


China
Guangzhou


Hong Kong
Shatin, N.T.,

Upcoming Shows

Show Name: EMO Hannover, Germany
Date: September 18th to 27th, 2017
Booth: TBC



Outside Micrometer Sets

- Graduation
Inch: .0001"
- Flatness: 0.000024" / 0.6µm
- Carbide tipped measuring faces
- Ratchet Stop
- Grey painted steel frame
- Comes with long form calibration certificate



Range	Graduation	Code No.	List \$	SALE \$
0-3"	.0001"	7101637	203.00	142.10
0-4"	.0001"	7101647	276.30	193.41
0-6"	.0001"	7101667	463.10	324.17

AGD2 Dial Indicators

- Graduation Inch: .0001", .0005", .001"
- Metric: 0.01mm
- Dial face dia.: Ø2.20" / Ø58mm
- Dial Reading: 0-100
- Internal tolerance marker
- Flat back (attached) and lug back supplied
- With counter pointer
- Comes with long form calibration certificate



Range	Grad.	Range /Rev	Accuracy	Code No.	List \$	SALE \$
.05"	.0001"	.01"	±.0007"	7402011	114.50	80.15
.50"	.001"	.1"	±.002"	7402121	56.80	39.76
1"	.001"	.1"	±.002"	7402261	57.80	40.46

Asimeto Indicator/Mag Base Kit #2

- Includes 1 each of the following:
- 7602031 (Type III triple jointed magnetic base)
 - 7402261 (0-1" .001" AGD2 dial indicator)



Code No.	List \$	SALE \$
500-730	157.10	109.97

Ultimate Asimeto Metrology Kit

Kit contains:

- 6" x .001" Aluminum Diecast Dial Caliper (7304065)
- 6" x .0005" Absolute Digital Caliper (7307563)
- 0-1" x .001" Outside Micrometer (7101011)
- 0-1" IP65 Digital Micrometer (7105015)
- 1/2" x .001" 0-100 AGD2 Dial Indicator (7402121)
- 1/2" x .0005" Digital Indicator (7405951)
- .03" x .005" 0-15-0 Dial Test Indicator (7501733)
- Articulating Arm Magnetic Base (7602021)



Code No.	List \$	SALE \$
7285086	1,045.60	731.92



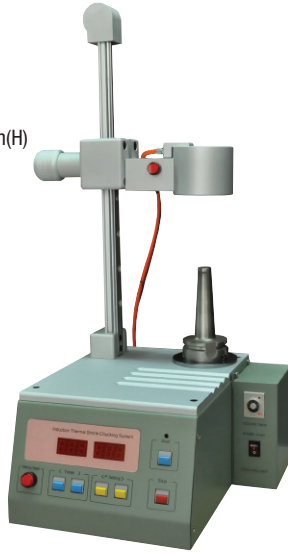
SHRINK FIT MACHINES

Model GTS-306 LUXE

- Heating: Induction
- Shrinking Time: 6-15 seconds
- Power: 220VAC 50/60HZ single phase
- Rated Ampere: 20A
- Power Consumption: 4KW
- Dimensions: 292mm(W) x 302mm(D) x 660mm(H)
- Induction Head Inside Diameter: 35mm
- Taper support: All HSK, BT, CAT & SK Tapers
- Display: LED
- For use with Carbide tools only
- Max. Tool Diameter 25mm
- Cooling: Shop air attached to head 0-10 min.

Code No.: 536-650

\$5,872.86

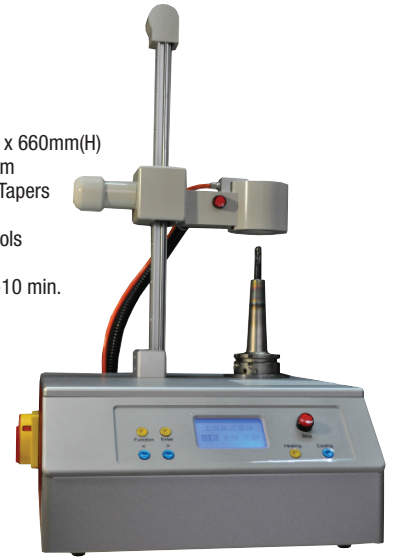


Model GTS-9000M

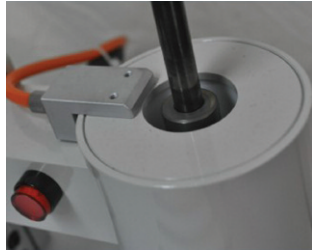
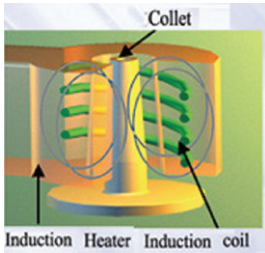
- Heating: Induction
- Shrinking Time: 3-5 seconds
- Power: 220VAC 50/60HZ 3 phase
- Rated Ampere: 27A
- Power Consumption: 10KW
- Dimensions: 350mm(W) x 400mm(D) x 660mm(H)
- Induction Head Inside Diameter: 35mm
- Taper support: All HSK, BT, CAT & SK Tapers
- Display: LCD
- For use with Carbide, HSC0 & HSS tools
- Max. Tool Diameter 25mm
- Cooling: Shop air attached to head 0-10 min.

Code No.: 536-655

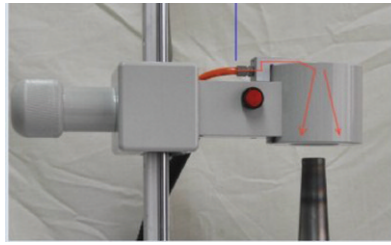
\$10,750.02



Heat generated by high frequency magnetic field



Air Cooling



Go to our YouTube channel to see a demonstration video for the GTS-306.
www.youtube.com/user/Sowamarketing



Distributed By:



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